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# BRITISH MEDICAL JOURNAL:

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## AN ADDRESS
ON
## OUR DUTY TO THE CONSUMPTIVE BREADEARNER.

*Delivered to the Oxford and District and Reading and Upper Thames Branches of the British Medical Association, June 28th, 1901.*

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Towards the end of next month, as you all know, a Congress will be held in London "for the prevention of tuberculosis." It will, without doubt, receive the cordial support of the medical profession, but this support cannot be given effectively unless we have beforehand some more precise notion than is expressed in the word "prevention" of the purposes for the accomplishment of which we are invited to meet. We may, I trust, take it for granted that the aim of the Congress will be practical rather than scientific, that we shall meet rather to act than to discuss pathological or even etiological questions. The researches of the past twenty years have taught us much that we did not know before both as to the nature and causes of tuberculous diseases, and have thereby furnished us with generally accepted principles for our guidance. What now chiefly concerns us is to come to right conclusions as to the way in which these principles ought to be applied.

### Preventive and General Sanitary Measures.

These practical considerations may be divided according as they concern on the one hand the individual invalid whom we desire to benefit, or on the other the community which we desire to protect. Among the measures to be used for the former purpose we may further distinguish between those which aim at the relief of the patient's symptoms by medical treatment, and those which tend to the re-establishment of his health and working power. It is to this last subject (as I trust the title of my address will have indicated) that I wish specially to invite your attention: but before I go further I must, to avoid misunderstanding, say a word as to prevention.

The promoters of the great movement which culminated in the Berlin Congress of 1899, "*Zur Bekämpfung der Tuberculose*" (How to Conduct the War against Tuberculosis), worked along the two parallel lines I have just referred to—the preventive and the sanatory. That movement originated, I need not say, in Germany; but let us not forget that the admirable work which has been recently done in that country relating to the etiology of tubercle was founded on the inquiries made some forty years ago under Sir John Simon's direction by the late Sir George Buchanan and Dr. Headlam Greenhow. It was they and their chief that first taught us to regard phthisis as a preventable disease. The influence of the knowledge thus gained was no doubt enhanced by its practical exemplification in the diminution of the mortality from phthisis which resulted from sanitary improvement; for the observation of what had been thus accomplished many years before in England certainly exercised a considerable influence in bringing about the movement in Germany to which I have referred.

As to the practical carrying out of preventive measures against phthisis there is happily little difference of opinion. No one, so far as I know, doubts that the overcrowded, sordid dwellings that the poorer class of working people are compelled to occupy contain in themselves sources of danger, nor does anyone question the disease-producing influence of poverty. In like manner, the researches conducted by Dr. Martin for the first Tuberculosis Commission have taught us what we chiefly required to know as to the dangers of meat and milk; and those of Professor Cornet in Berlin have informed us as to the mechanism and sources of pulmonary infection. In these various ways the data for a new prophylactic code have been furnished, as to the effectiveness of which there is little room for discussion.

### Our Duty as Citizens and as Christians to the Consumptive Toiler.

As I said just now there are two parallel lines of action along which the combat with pulmonary tubercle must be carried on. Let me now ask you, leaving questions of prophylaxis for the moment out of consideration, to fix your attention on the vast population of persons who gain their bread by labour, and to bear in mind that of these a large proportion do not earn enough to maintain themselves and their families in anything like comfort. They may not be destitute and are not objects of charity, but the conditions under which they live are so unfavourable as to render them more liable than the well-to-do classes to the invasion of the tuberculous infection. When such a person becomes phthisical, he loses the one possession which constitutes his fortune. He loses his earning power. As the disease progresses the burden of poverty becomes harder and harder to bear. He suffers himself, and those who are dependent on him for their subsistence suffer with him. Their condition is helpless, and, unless more effectual means of aiding him than are at present available can be devised, hopeless. No one doubts that we are bound in common Christian charity to do what we can for those whom sickness has brought by no fault of their own into destitution, but most people find it much more difficult to understand that the earning power of the workman is a commodity far too valuable to be wasted, and that the duty of preserving it is no less incumbent on us as citizens than as Christians. The question I desire to place before you relates to both of these obligations, but chiefly to the second. I would ask you for the moment to consider the case of the workman in the first stage of consumption with exclusive reference to his loss of earning power. Let us assume that it is only half of what it was a year earlier and that in still greater proportion his value to the community has diminished. How can we help him to guard against its falling to a lower level? How can we help him so to husband the strength that remains to him, that life may be still worth living—not a mere slow descent into the dark valley?

### The Kind of Help the Consumptive Bread-earner requires.

The answer to the question, How is this to be done? depends on what we know of the character of the evil we have to combat. And here I must ask your permission for a moment to speak as if I were addressing laymen. We call the disease consumption—phthisis—because it gradually but surely deprives its victim of health and strength, but it is not less characteristic of it that the decline is not a continuous one. We habitually divide it into stages—an initial stage characterised by gradual impairment of all functions, and, as regards the affected organ, by consolidation; and a second stage, by fever, rapid emaciation, cough, and expectoration, and the "physical signs" of disintegration. But although it is convenient to call them stages, the two condi-

tions are not consecutive. The first stage is not an even downward progress, but a progress broken by catarrhal and febrile accessions, each of which is attended by signs of disintegration. During these attacks the patient is unfit for work and requires bodily rest in bed. In general, the tendency of the attack is to pass off. If the patient is taken care of he returns after a few weeks' illness to the same general condition that he was in before, but a little weaker, a little more incapable. Finally comes the time when the process of breaking down goes on more rapidly, the tendency to a fatal termination of the disease is more decided, when, instead of moderate health interrupted by occasional illness, you have illness with occasional intervals of partial recovery.

I have referred to these familiar facts in order to make it clear that the kind of help to be given must be determined by the condition of the individual that we desire to benefit. Our main purpose is *to enable the breadearner whose health has been impaired by disease to make the best of the strength that remains to him.*

With this view two things are necessary. The first is to bring within his reach havens of refuge, to which he can betake himself with the assurance that he will find an immediate welcome during the periods of temporary illness to which he is liable. The second is to furnish him with the means of relieving himself from the burden of overwork from the moment that the progress of the disease makes him incapable of sustaining it.

### Importance of Prompt Admission to Hospital whenever the State of the Patient requires it.

Of these two requirements the first can be dealt with much more easily than the second. Wherever there is actual suffering, Christian charity and pity are at hand to alleviate it. The enormous sums which are annually contributed by the charitable for the relief of consumptive patients might, if rightly used, almost suffice for the purpose. Unfortunately, the same vicious principle which prevails in the administration of other medical charities supported by voluntary contributions is all-powerful in our hospitals for consumption. Benefactors are not satisfied with the assurance that their gifts are administered by competent persons in the most effectual way for securing the end which they profess to have in view. They are unwilling to forego their undeniable right to do what they will with their own. Like those charitable donors of whom we read in Holy Scripture, they must needs "keep back part of the price"—not indeed in the form of money, but in the exercise of a paltry kind of patronage.

What is required is roughly that there should be a haven of refuge in every industrial centre (consisting of a hospital ward or a hospital) to which the need of the sufferer—in this case the existence of the physical signs and symptoms of advancing phthisis—should be the only claim for admission, and that every admission should be conditional on liability to removal at the discretion of the medical authority in charge. By the enforcement of this condition the risk of converting the temporary refuge into a permanent asylum would be guarded against, while at the same time the workman who had found the tide of adversity too strong for him would be enabled to regain his footing, and once more resume the struggle, if not with renewed vigour, at least with some renewal of hope and courage.

Now it cannot be said that anything effectual has as yet been done in the direction I have indicated. In London the phthisical workman has no great difficulty in obtaining an out-patient letter for a general or special hospital; but from the moment that the progress of his disease renders him unable to attend, his position becomes a painful one. The nature of his disease shuts against him the doors of the general hospital, and if by good luck he obtains an "in-patient letter" for a special hospital, the delay which undue regard for the rights of governors necessarily entails is so long that he does not arrive at his desired haven until too late. Prompt admission might have restored him to comparative health, but the time for successful treatment has been spent under the unfavourable conditions of his home, where he has not only undergone suffering that might have been prevented, but has been a source of danger to his neighbours. The risk of allowing a patient with acute symptoms to live among others is indeed, irrespectively of the detriment to himself, a sufficient reason for his immediate removal from his surroundings.

### Measures to be taken for the Prolongation of the Life of the Consumptive Breadearner and for the Maintenance of his Earning Power.

Let us now go on to the second of the two requirements to which I referred a few minutes ago. The obligation to make adequate provision for the prompt medical relief of the phthisical workman during the acute accessions to which he is liable is one which no one will be inclined to disregard, but it is only a small part of the duty that is imposed upon us. The motive which actuates us should be rather economic than charitable. Our aim should be not so much the relief of suffering as the maintenance of earning power. The important problem we have in hand is to determine the line of action which ought to be adopted to help those who, although they are in a certain true sense invalids, neither desire nor require the intervention of charity.

For this end the first step to be taken is to obtain information as to the persons whom we desire to benefit. This information is of value as a guide in carrying out sanitary improvements, for we know that the prevalence of phthisis is now recognised as one of the most certain indications of sanitary defects. It is not, however, for purposes of sanitary administration that it is chiefly required, but as enabling us to enter into personal relation with the workman in the initial stage of the disease, this being the first step towards giving him the aid that he needs. To a certain extent the investigations of the prevalence and distribution of phthisis which have been made at Brighton, in Oxford, and a few other places by zealous medical officers of health have, so far as these places are concerned, accomplished this end. The results have at all events been sufficiently good to show that if the system of voluntary registration could be extended all over the country it would afford an excellent foundation for prophylactic measures; but *sanitary improvement is only one of the lines along which we have to work in the combat with pulmonary tuberculosis.* The knowledge that we gain as to the prevalence of phthisis, whether obtained by registration or otherwise, will be of little use to the man who has lost his working power, unless we are in a position to aid him in regaining it. Now there is no difficulty in indicating by what means this must be accomplished.

To the phthisical invalid who without requiring much doctoring or nursing finds his strength gone and his earning capacity reduced to half of what it was before, the one restorative that is indispensable is temporary immunity from labour. To this the other two items of sanitary treatment, namely, good air and good food, are consequential. If we were now concerned with well-to-do persons, whether breadearners or not, we should have to consider whether the home is not in many cases the best resting place, but no such question can for a moment be entertained in dealing with the invalid workman. Consequently for him, if he is to have rest, good air, and good food, a resting place away from his home must be provided. In other words, sanatoria for the poor are a necessity.

### Origin of the Sanatorium Movement in Germany.

It is ten years since this great necessity was recognised in Germany. It has not even yet been recognised in England. There are several reasons for this, but the chief one is that there are difficulties in establishing such sanatoria, which do not exist in any other European country. Why can we not do what has been successfully done elsewhere? I shall, I think, best answer this by giving you a sketch of the origin and progress of what may be called the sanatorium movement in Germany.

The initiation of the movement was somewhat as follows: The experience of sanatoria for persons in good circumstances had shown that in cases of consumption in the first stage judiciously selected, health could be maintained and life prolonged by placing these persons under favourable climatic influences combined with good food and moderate exercise. But the result would hardly have been brought about had not Dr. von Leyden, who has for years occupied a most prominent position as a physician in Berlin, given to the movement the required impulse by certain addresses delivered to the medical

societies of Berlin in 1888 and 1889, in which he treated of the prevalence of consumption among the working population as a matter of national concern, and insisted on the necessity of establishing sanatoria for the poor as the only means by which it could be combated. The result of these discussions, and more particularly of that which took place at the International Congress in 1890, was that von Leyden's suggestions were warmly taken up by leading men in and out of the profession, who at once set to work to devise practical ways of carrying the principle of sanatoria for the poor into effect. At the present moment sanatoria of this kind for men and women exist throughout the German Empire. Their number is still far below the requirement, but every year new institutions are added to the list. The success with which the work has been carried out can be best judged of by the following figures:

At the date of the last International Medical Congress (August, 1900) there were in the German Empire 49 sanatoria for the poor, of which the plans of 41 were exhibited in the Department of Hygiene of the Great Exhibition. There were at that time 11 others in course of construction[1] (besides 28 projected), so that there are probably about 60 of these institutions in operation at the present moment. The 49 sanatoria which were open a year ago contained 4,000 beds. The cost of their erection amounted to about a million pounds, so that the cost per bed, including all internal fittings, may be estimated at £250. It is, however, held that in future this initial cost will not exceed £200 per bed.

The yearly expenditure for each occupied bed is estimated at £65, but about a fifth of this sum is not expended within the walls of the sanatorium, but goes to the maintenance when necessary of the families of the occupants during their period of residence. From this it follows that the total annual expenditure for maintaining the sanatoria was a year ago about a quarter of a million. It is anticipated that when the system is complete its maintenance will cost about five times as much from a million to a million and a-half annually, that is, that this enormous sum will be required to bring within the reach of every working man and woman in Germany who is threatened with phthisis the means of doing the best that can be done for the maintenance of his earning capacity.

### Compulsory Insurance.

As I have already indicated, the reason why we in England have not followed the example which we have had before us for so many years is that in Germany facilities exist for organising a sanatorial system, which we are deprived of. The nature of these facilities I must now explain. The questions which present themselves *in limine* are: First, where does the money come from? and secondly, How is the system brought into relation with the right people? The first question may be answered at once by saying that the resources of the sanatoria are derived partly from organised charity, but chiefly from contributions of the workmen themselves—that, in short, the whole explanation of the success is expressed by the two words, *compulsory insurance*.[2] In Germany every workman whose income is less than £100 a year is required by a law which came into full operation about ten years ago to insure himself against the two greatest ills that flesh is heir to—sickness and old age.

In this way a national fund is brought into existence, which is applicable to any purpose directly beneficial to the contributors, whether it be the therapeutical or the sanatory treatment of the breadearner himself or the maintenance of relatives dependent on him for their subsistence during the period of his incapacity for work. The number of contributors is about 13 millions, of whom not much more than 1 per cent. are at any one time on the list of recipients as incapacitated for work by illness. Among these one in every three is phthisical. It is estimated that of the initial cost of the sanatoria for the poor which were in operation at the date of the International Medical Congress last autumn, half was furnished by the insurance funds, and that of the annual expenditure about three-quarters were derived from the same source. The remaining half-million for initial expenditure, and £60,000 for maintenance, were contributed by private liberality, by charitable organisations, or, in some cases, by municipal or other local authorities.

### Selection of Suitable Persons for Treatment in Sanatoria.

As regards the second question, that of the selection of suitable cases for sanatory treatment, the facilities which compulsory—that is, universal—insurance offers for obtaining exact information as to the incidence of phthisis among the working population are obvious. By means of it the poorer breadearners are brought together into a well-defined class within the limits of which every person who is disabled by phthisis, provided that his disease is not too advanced, has offered to him at the moment that he requires it the advantage of temporary rest in a sanatorium, with the assurance that he will not be turned out after a certain number of weeks, in obedience to a senseless rule of the institution, but will remain as long as in the judgment of the medical superintendent it is for his advantage to do so, whether it is for a few weeks or as many months. In this way the cases admitted into the sanatoria are to a certain extent *selected*—it is, at all events, possible to exclude those which are obviously unlikely to derive benefit.

This, however, is not the only or the chief use to which the data furnished by national insurance can be put. For our present purpose the information which it is capable of yielding as to the degree in which those who are admitted to sanatoria are benefited is still more important.

### Relation between Poverty and Prevalence of Phthisis.

Before referring to these data let us for a moment consider the kind of people with whom we are concerned and the circumstances which affect their liability to disease. They are for the most part men in the prime of life, at an age when pulmonary tuberculosis is shown by insurance statistics to contribute no less than half of the total percentage of disability. Of the various external conditions which account for this liability poverty is by far the most influential. For if a comparison be made of persons who earn £1 a week (more or less) with those who earn from £2 to £3 a week, the annual mortality from phthisis is 4 per 1,000 of the former class as against 2 per 1,000 of the latter. It is clear, therefore, that the workmen on whom in Germany the obligation to insure themselves against disease and old age is imposed by law, constitute a class in which the liability to pulmonary tuberculosis is greater than in any other. And inasmuch as these individuals do not all avail themselves of the sanatoria, it is possible to compare those who are so treated with those who are not.

### Beneficial Influence of Residence in Sanatoria.

It is by a comparison of this kind, in which the life-history of persons treated in sanatoria is contrasted with that of persons of the same class who remain at home, that it can be best ascertained whether or not substantial benefit accrues to the community or to the individual from the sanatorial system. That system has not been in operation for a sufficient time for it to be possible to follow out the final result of sanatorial treatment. There are, however, facts which are sufficient to show the contrast between the two classes. In persons who, while receiving support when disabled by illness, are not removed from the unfavourable influences to which they are exposed in their homes, the duration of life after the beginning of illness is very much shorter than we are accustomed to find it among patients in easy circumstances. Among the latter, according to the very reliable estimate of Dr. C. T. Williams, the expectation of life is about 7½ years; whereas of every 100 workmen in the initial stage of phthisis earning a little more or less than £1 a week, 50 will have died in three years. Had these 100 persons been treated sanatorially, statistics seem to me to show clearly that in about 70 per cent. health would have been so far maintained or restored, that they would have been able to support themselves and their families, and that if their condition had been investigated two years later, that is, three years after the first indications of illness, there would have been some fifty persons still capable of earning their daily bread. Of the remainder, some would no doubt have died, others would be in various degrees of illness or incapacity, but a large proportion would have been able to do partial days-works. This result does not at first sight seem very brilliant. If it were so, we might be sure

that it was untrue. But the benefit conferred is nevertheless real and substantial. No delusive hope of cure is held out to the consumptive toiler, but a new lease of life, though a short one, has been vouchsafed to him. A certain amount of earning power, which would otherwise have been lost, has been restored to him, and through him to the community of which he is a member. As regards the individual, it may seem of little importance whether the struggle is long or short, whether he dies now or two or three years hence, whether he is wholly incapacitated or able to earn a certain proportion only of what he earned before: but if any means can be devised whereby a respite of even a few years may be secured to our tens of thousands of phthisical workmen, we are bound as Christians and as citizens to use them.

How can Sanatoria be supplied in England?

And now I come to my last point—to the most difficult question of all. Granted that sanatoria for the poor are a national necessity, how can this need be supplied in England?

Many will, I know, be inclined to shelve the question, considering it scarcely worth while to prolong a struggle which in each case must eventually and at no distant period end in death, or that no practical result can come of discussing it: but those who admit that human life is of more value than anything else in the world, and that we have to gather up the fragments that remain even of consumptive life, that nothing be lost, will join with me in considering calmly and without prejudice whether there is any way by which the consumptive toiler can be effectually helped to keep hold of that remainder.

I do not recommend that we should imitate what has been done in Germany, but that we should ascertain what have been the essential conditions of success, and what are the reasons why they should not be realised in this country. These essential conditions relate:

1. To the choice of suitable sites and the erection and maintenance of suitable buildings.
2. To the selection of suitable cases, and to their prompt admission.
3. To the regulation under medical supervision of the time of residence of each invalid; and
4. To the medical supervision of invalids after their discharge from the sanatorium.

It is obvious that the carrying out of these indications all over England could not fail to require an enormous initial and annual expenditure of money. We have seen that German sanatoria have already cost more than a million for building and installation, and that their maintenance already costs a quarter of a million, and will soon cost three or four times as much, There is no reason for supposing that if we followed their example we should do so more economically.

It may, perhaps, facilitate the consideration of the subject if we assume, as I think we may, that the cost of erection of sanatoria might be met by grants from public bodies or by private benevolence. But it can scarcely be supposed that the current expenditure of these institutions could be supplied by voluntary contributions. Here, as in Germany, the sanatoria ought to be self-supporting: they must depend for their maintenance on the earnings of those benefited by them.

The German system of compulsory insurance against sickness is in reality a tax on labour, to the payment of which employers and employed contribute in something like equal proportion. Although, however, in principle there can be no more objection to the imposition of a tax on the earning of a workman who receives under £2 a week than to the tax which those whose incomes are not so very much larger submit to at the present moment with so little grumbling, it is not the less certain that in England any attempt to levy such a tax on the working man would not be tolerated. The most feasible way of accomplishing the end in view seems to be that the employers of labour should consent to levy upon themselves a contribution of which the amount would be proportional to and deductible in whole or in part from the wages paid to their workmen, on whom therefore their due share of the burden would ultimately fall. Such a system would be but a poor substitute for a compulsory system including earners of every class. Within its limited scope it would give equal or greater advantages to the insured, and would probably yield the means of maintaining a sufficient number of sanatoria for their reception when incapacitated by illness. But so far from being universal, it would exclude toilers of the poorer class—those who in Germany chiefly benefit from the operation of compulsory insurance. It would, moreover, fail as a means of promoting the timely removal of phthisical breadearners from their homes and thus preventing the spread of phthisis among the overcrowded population of our towns.

I have now come to the end of my task. I have placed before you the question of sanatoria for the sons and daughters of toil with all its difficulties. I have endeavoured neither to over-estimate its drawbacks nor to exaggerate its advantages.

The question is in the hands of the medical profession. In all matters which concern the bodily welfare of the people, our function is to furnish to those who are responsible for the government of the country guiding principles.

With reference to the present subject an experiment on a very large scale has been made for us in Germany. It is our duty to examine into the results, not for the purpose of imitating or adopting German methods, but with the view of making up our minds on a question of principle.

This question is whether on the one hand we should leave the consumptive breadearner to struggle against his disease as best he may, contenting ourselves with promoting sanitary improvement and prophylactic measures against contagion, or on the other hand should, without in the least disregarding these objects or relaxing our efforts to prevent the spread of the disease, strive to organise a plan for enabling him to make the best of his life and earning power.

I venture to hope that this great question will be taken up by the approaching Congress and that the medical profession will be thereby awakened to its importance.

Note and Reference.

[1] Engelmann, Die deutschen Lungenheilstätten auf der Weltausstellung, *Zeitschrift für Tuberculose*, etc., vol. i, p. 217. [2] For information as to the system of compulsory insurance see Düttmann and Gebhard's *Handausgabe des Invaliden-versicherungs-gesetzes*, Altenburg, 1900.

# A CLINICAL LECTURE
on
# THE ARREST OF PULMONARY TUBERCULOSIS.

*Delivered at the London Medical Graduates' College and Polyclinic, June 12th, 1901,*

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Gentlemen,—The subject of the arrest of tuberculosis has been chosen for the clinical lecture to-day because the approaching British Congress of Tuberculosis and the great attention given to open-air treatment of the disease has brought the subject much to the front, and various and and widely differing interpretations of the term "cure" are at present in circulation.

The expression is not a happy one, especially when applied to a disease marked by insidious spread, and whose subjects are always ready to take a too hopeful view of their own cases. "Arrest" is a better term, but should only be accepted with the proviso that it is to include both local and general condition of the patient, as unless both are satisfactory the arrest of tuberculosis cannot be considered complete.

Quiescent and Obsolescent Tubercle.

Let us first trace out the pathology of the arrest of tubercle. Supposing a tuberculous mass has become quiescent and gives rise to no signs or symptoms, we generally assume that it is encapsuled in a fibrous envelope, and that all connection with a bronchus is cut off.

Such masses, generally caseous, are often found at necropsies in the lungs of consumptives, and in these caseous masses tubercle bacilli can often be detected. In many instances grey or miliary tubercle is transformed into

fibroid tissue, that conversion being well described by Professor Hamilton,[1] who demonstrates step by step how the periplast of the adjoining giant cells form processes which, stretching out, become united, and constitute a fibrous structure, and later on a reticular one, in the meshes of which the original nuclei lie embedded. Thus the miliary tubercle is converted into fibroid tissue.

In this last case it is difficult to conceive that the tissue can break down, but in the case of imprisoned caseous masses their softening and absorption, leading to fresh local infection, is quite intelligible.

### Emphysema around Obsolescent Tubercle.

Another form of arrest is where a tuberculous nodule, or mass, becomes obsolescent and is surrounded by chronic local pulmonary emphysema, which often prevents the detection of the tubercle by physical signs. This has been well described by the late Sir William Jenner,[2] who points out the close connection of this form of emphysema with apical tubercle.

When tubercles obsolesce or calcify at the apex of the lung, a considerable portion of the lung tissue in their vicinity is usually the seat of chronic congestion and exudation of lymph. This portion of lung loses its porosity, becomes tough, inelastic, and puckered, that is, irregularly contracted, but here and there some portion of lung is damaged, not destroyed, so that some air vesicles still admit air. In health the inspiratory and expiratory forces are at a minimuum at the apex, but during expiratary efforts with closed glottis, as in severe cough, the air is driven from the more compressed parts into the little compressed apex, and thus the vesicles still pervious to air are distended, and as their walls have, from the previous changes in the tissues of the apex of the lung, lost much of their elasticity, the over-distension is permanent.

How often we detect over an apex well-marked resonance where dulness formerly prevailed, and in some cases we note, especially during cough, a bulging above the clavicle which is quite characteristic of emphysema. In some patients the emphysema is far more extensive, and is to be found along the anterior border and at the base of the lung and not rarely throughout both organs.

This is one of the commonest endings of tubercle and the owner of the lungs which have gone through this process is generally a short-breathed individual with a large motionless chest, and often liable to wheezing. He is credited with being an asthmatic and sometimes suffers from paroxysmal dyspnœa. After death his lungs are found largely emphysematous, and when incised show several old cavities, which have undergone partial contraction and have their bronchi blocked. Such lungs are usually deeply pigmented and the bronchial glands swollen and also pigmented. This last is an interesting feature, as its explains the occurrence of asthma. The bronchial glands during the process of absorption of the disintegrated tubercle become swollen and thus press on the pulmonary plexuses and induce bronchial spasm.

The *rôle* of the bronchial glands must always be taken into account in old tuberculous cases. The wheezy short-breathed individual, with a chronic cough, is by no means a rare example of arrested phthisis and I have known such patients become fat and ruddy and present all the appearance of good health, barring the short breath. Many eventually perish by an attack of hæmoptysis through the cracking of some degenerated vessel exposed in the old cavity or the bursting of a small pulmonary aneurysm.

### Contraction of Cavities.

A not infrequent and conspicuous form of arrest of consumption is that in which a cavity, situated in the upper lobe of one lung, undergoes contraction, and we are able by physical signs to recognise the various steps of the process. The increase of fibrosis causes a shrinking of the whole lung, the walls of the cavity approximate, and in some cases meet and cicatrise. We note the shifting of the area of cavernous sounds first upwards and then backwards to the interscapular region, whence they may in time disappear altogether; then accompanying this is the displacement of neighbouring organs, the opposite lung being drawn across the median line, the heart, and stomach, or liver (according to the side) drawn up, sometimes the lower lobe of the lung replacing the upper lobe containing the cavity, and the chest wall being flattened, the circumference lessened, and, in extreme cases, the spine curved and the shoulder of that side lowered.

*Post-mortem* observations show that complete cicatrisation of a cavity is a very rare event but its contraction a fairly common one. In cutting through a lung invaded by fibrosis we often come across old cavities evidently shrunk in capacity, and with the bronchus leading to them blocked. Such a cavity, it need hardly be remarked, would give rise to no auscultatory signs, and would yield no sputum for analysis.

### Calcareous Degeneration.

In addition to the fibrous transformation of tubercle there is the calcareous degeneration, which is often seen in necropsies, and specimens of which are frequently expectorated during life.

Calcareous matter is generally found either in the centre of large caseous masses in the lung, or is scattered through fibrotic lungs, representing apparently the extinct or obsolete tubercle. Sometimes a calcareous mass of considerable size is found in the upper lobe of a lung surrounded by fibrosis, the remains of a former cavity.

Calcareous matter undoubtedly indicates the obsolescence of tubercle, but it is found oftener in the bronchial glands than in the lung tissue itself, and much of the calcareous expectoration comes from the bronchial glands opening into bronchi by ulceration and thus discharging their contents.

Calcareous expectoration by itself must not be accepted as a proof of the arrest of tuberculosis, for a patient may be expectorating cretaceous matter and at the same time present signs and symptoms of active disease proceeding. In more than one instance I remember calcareous expectoration has been followed by profuse hœmoptysis, and in others I have noted it in cases of pyrexial phthisis.

Naturally we infer that in the first case we have the detachment of a calcareous mass from a cavity wall causing rupture of a degenerated blood vessel, and in the second that obsolescent tubercle may be present in one lung, or a part of it, and active tuberculosis in another part or else in the opposite lung. It is one of the disappointing features of consumption that continuance of quiescence cannot always be reckoned on, but that the disease may be stirred into activity by exciting causes as will presently be shown.

These are the modes of arrest of pulmonary tuberculosis, and I propose in their light to consider the probabilities of the arrest of consumption, and then to apply the knowledge they teach to the numerous clinical examples of arrest we see in daily practice.

### Clinical Aspects of Arrested Phthisis.

There are a number of young men and women of ages between 18 and 30, who give a history of phthisical symptoms of some weeks or months, have tubercle bacilli in their sputum and present physical signs of consolidation at one or both apices. These under appropriate treatment for half a year or a year lose their symptoms, the tubercle bacilli in the sputum disappear and most of their physical signs; and after high altitude treatment frequently all the signs. They have generally gained in strength and largely in weight. These patients are often classed as "cures."

As for the pathological condition of their lungs, it is probable that the tubercle at the apex has undergone in part caseation and in part fibrosis, and that their apices contain some small caseous masses embedded in fibrotic and healthy lung. No doubt in most of these patients the disease is arrested, but it cannot be called cured, for a change of surroundings from healthy to unhealthy, or overwork, or an attack of some lowering disease like influenza will cause a return of the phthisical symptoms, tubercle bacilli will reappear in the sputum, softening of the apex will follow and a cavity be duly detected by physical signs. This may occur after long periods of good health, as is shown by the following:

A shorthand writer, aged 23, who was largely engaged in night work, broke down and presented symptoms and signs of tubercle at the right apex in April, 1879. He was sent to Davos and returned after three months' stay in good health and free from physical signs, with some gain of weight and with his chest enlarged.

By my advice he changed his occupation for one less sedentary and laborious, and went on well till 1881, when he had acute pneumonia, from which he completely recovered, and the lungs after the attack presented no signs of fresh tuberculous mischief. He remained well and quite stout till the winter of 1900, when he had several profuse hæmoptyses and tubercle bacilli were detected in the blood expectorated. The physical signs demonstrated the formation of a cavity in the upper lobe of the right lung.

This patient has since recovered and returned to work, but nineteen years of immunity from symptoms did not protect him from a recurrence of the disease, and the quiescent

tubercle was lit up afresh. Some authorities would regard this as an instance of fresh infection, but in any case the constitution was still liable to attack.

A military officer, aged 20, seen by me on September 9th, 1886, with Surgeon-Major Parry, had well-marked tuberculosis of the left upper lobe with a phthisical history. He was ordered to St. Moritz, and returned to England in May, 1887, having quite recovered in spite of a severe accident to his shoulder when tobogganing. I detected still some thickening at the left apex, but the thorax was greatly enlarged, the breathing was excellent, and the patient appeared the picture of health. He returned to regimental duty, and continued well and active for eleven years, when his voice became affected owing to catarrh, which passed off, but cough with expectoration continued, moist crepitation became audible at the left apex, and he was sent to an English sanatorium for three months. Here he improved, and gained 1⅛ stone in weight, became well bronzed by exposure, but though returned to me "a cured case," had still cough and expectoration, and physical signs at the left apex.

This shows that even after eleven years an arrested case is not quite free from the danger of relapse. Other instances might be cited from my notebooks, though there is as a rule less liability to relapse in early cases of tuberculisation than in those in which a cavity has formed. These we will now consider.

In many cases of contracted cavity the lung is found shrunk to the size of a fist, and to consist of a dark fibroid tissue, containing cretaceous matter, and on section the old cavity is seen much diminished in size and partly cicatrised, with the bronchi leading to it blocked. I present you an example of this, and an inspection of the specimen will show why no further breaking down of the lung took place during the patient's life. The case was one of three instances of rapid contraction of cavities in phthisis communicated by me to the Clinical Society in 1871.

The patient was a woman, aged 53, a widow, who was admitted into the Brompton Hospital under my care with one year's history of pleurisy followed by phthisis, and a well-marked cavity in the left upper lobe, the sounds being audible from the clavicle to the third rib. She came into the wards in April, 1871, and in three months cavernous sounds were no longer audible, and the patient had lost her cough and expectoration, and had gained 1⅛ stone in weight. The physical signs showed the right lung to be drawn across the median line, the heart was drawn up, and the stomach note reached to the fourth rib. In April, 1872, she had a severe attack of capillary bronchitis, in which the dyspnœa was so great and the lividity so marked that it seemed impossible for her to survive, but she recovered on this occasion, and died in an attack of congestion of the lungs in January, 1875.

The *post-mortem* examination showed the left lung to be contracted, not weighing more than 9 ozs., and with a greatly thickened pleura. The lung lay at the back of the pleural cavity having evidently contracted toward its own root. It was dark grey in colour, and in a state of fibrosis. At about an inch below the apex, nearer to the posterior than the anterior margin, were the remains of an old cavity of very irregular shape, the size of a date stone. The cavity was partly cicatrised, and the rest of the lung contained some cretaceous material. The right lung was highly emphysematous.

When fibrosis is so extensive and firm as in this case, there is not much fear of any breaking down of the lung during life, but this patient was greatly incommoded by shortness of breath. She, however, did not die of phthisis, and the contracted cavity did not break down.

That patients are not always so fortunate may be shown by the following case:

A banker's clerk, aged 27, seen by me in consultation with Mr. Kempster, of Battersea, in 1871, suffered from acute phthisis of six weeks' duration and fistula in ano. The pulse was 120, and the temperature 102.2° F. A cavity sufficiently extensive to give rise to tinkling sounds rapidly formed in the upper left lung, but as rapidly began to contract, and after two months it could no longer be detected. The man gained weight, and lost his cough, and returned to professional work, remaining well till the close of 1875, when after sundry catarrhal attacks the larynx became affected, cavities formed in the upper lobes of both lungs, and tubercle spread throughout the lower lobes. He died December, 1878, eight years after his first symptoms.

Here we must conclude that the lung tissue was not completely converted into fibrous tissue, but that caseous matter remained in the neighbourhood of the old cavity, separated but not completely cut off from the channels of infection, and under the depressing circumstances of the patient became softened and afterwards absorbed, and hence the breaking down of the apices and the dissemination of miliary tubercle.

From this evidence you will have no difficulty in coming to the conclusion that the permanent arrest of tuberculosis is not such a simple matter, but surrounded by considerable difficulties, and, glancing at the foregoing instances, one is tempted to imitate Solon's famous dictum and say—Pronounce no case one of arrested tuberculosis till you have seen the necropsy.

### The Statistics of Arrest.

On the other hand, there are certainly a large number of instances of arrest of consumption revealed to us in the *post-mortem* room. Dr. Kingston Fowler[3] noted in 2,400 necropsies at the Middlesex Hospital obsolete tuberculous lesions in 9 per cent. How often do we find in the necropsies of patients dying from other diseases the remains of old tubercle at the apices of the lungs, and can trace in the history of the case an account of phthisical symptoms. How often do we during life find in a patient brought us for bronchitis or asthma some signs of an old quiescent cavity, the discharge from which has been looked upon as bronchitic, or else a contracted cavity with no discharge at all. When, however, we read without explanation in the statistics of German sanatoria, supplied by Dr. Rufenacht Walter's excellent work,[4] that at one sanatorium 11 per cent. were "cured," and 15.6 per cent. nearly cured; and at another 22.23 per cent. "apparently cured"; and in another 81 per cent. first-stage cases "apparently cured," we hold our breath and wish to know a little more about these cases. Some sanatoria appear to be more modest in their description of results, and are content to give only "improved" and "worse," and it must be admitted as proved that the number of "improved" of all cases, varying from 62 to 95.3 is most satisfactory. But one sanatorium claims 81 per cent. "apparently cured" and 100 per cent. "improved"!

In very few is any distinction made between general and local results, which is most important, for though a patient may add 1 or even 3 stone to weight, become brown as a berry, and even regain strength, if the cough continues and signs of active mischief are still detected in the lungs, this general improvement may at any time vanish when the tubercle spreads or assumes fresh activity. In Dr. Gebhard's careful statistics of the Hanseatic and Old Age Insurance Company a difference between general and local results is attempted and the contrast is striking. General improvement took place in 85.5 per cent. and local improvement in only 58.1 per cent.

Another test of arrest of disease is the one used by the Imperial Board of Insurance of Germany, namely, the ability of the consumptive to return to work, and, according to Mr. Rube's paper,[5] of 8,200 insured men and women 71 per cent. left the sanatoria fit for work. There is much to recommend this form of test, but it cannot be accepted as a scientific proof of arrest of tuberculosis, for a large portion of the Brompton out-patients continue their work, being obliged to do so to support themselves or their families, though an examination of their chests would hardly show all these cases to be ones of arrest of tuberculosis. The fact of a man returning to work proves a certain standard of strength or improvement but not necessarily that the disease is arrested, and this can only be proved by the local condition being pronounced satisfactory. With respect to the use of the term "cured," I am conscious of being open to criticism for having employed it myself in a paper in the *Medico-Chirurgical Transactions*, but though I took pains to define it to prevent misconception, I regret I used this word, and have avoided it ever since. Arrest is a more appropriate term, and should only be applied when all general symptoms have ceased, when there is no longer cough and expectoration, night sweats or wasting, and the physical signs are either absent altogether, or, in the case of former cavities, signs of consolidation or contracted cavity have replaced those of the active cavity.

References.

[1] *Pathology of Bronchitis*, p. 137. [2] *Reynolds's System of Medicine*, vol. iii. [3] *Diseases of the Lungs* [4] *Sanatoria for Consumptives*, p. 53. [5] *Tuberculosis*, January, 1901.

Presentations.—Dr. J. Lloyd Roberts, lately President of the North Wales Branch of the British Medical Association, has been presented, on the occasion of leaving Denbigh to reside at Colwyn Bay, with an illuminated address and a purse of sovereigns, in recognition of his services for twenty-six years as an honorary medical officer of the Denbighshire Infirmary. The past and present resident medical and nursing staffs presented him at the same time with a silver coffee-jug. — Dr. Stewart Lockie, Consulting Physician to the Cumberland Infirmary, Carlisle, has been presented with a testimonial consisting of a cheque of £300, a silver flower bowl, and an album containing the names of the subscribers, who place on record their appreciation of his services, especially in connection with the medical charities of the city and district.

# A CLINICAL LECTURE

INTRODUCTORY TO

# THE USE OF INSPECTION IN DISEASES OF THE LUNGS AND PLEURÆ.

*Delivered at the Queen's Hospital, Birmingham,*

By Sir JAMES SAWYER, M.D.Lond., F.R.C.P.,
Senior Consulting Physician.

[Abstract.]
As a clinical observer ripens in experience, inspection continually appreciates for him in value. In time, at least, inspection takes precedence of palpation, percussion, and auscultation in particular cases of systematic physical exploration of the signs of disease and of the characteristics of health. After the employment of these other usual methods of clinical exploration, inspection may be used again to confirm their evidence, or to correct or amplify it.

Inspection, palpation, mensuration, succussion, percussion, and auscultation are the six chief methods of physical diagnosis. Severally and jointly, they find their most general and widest application in the discovery and observation of diseases of the chest. I propose to make some statements concerning the inspection of the chest in disease. I assume that my hearers have a fair acquaintance with the anatomy of the thorax, the physiology of the contents of that cavity, the clinical topography of the chest, the form of the healthy chest, and the healthy movements of the chest walls. Inspection as a method of physical diagnosis in the case in question, simply means surveying the surface of the chest. This survey must be a skilled one, and in it, as in all visual judgments, the mind supplies more than the sense receives.

I propose to place our subject before you now only in what may be called its broader outlines; its finer lines and fuller details will be filled in by your later work.

Inspection enables us to judge of the size and of the shape of the thorax, to watch the movements of the thoracic parietes, to observe the beat of the heart, and to ascertain the character of the respiration. For such inspection a good light is necessary, and the surfaces to be examined must be fully exposed to view. Partial inspections really lead to no complete results, and are fertile of errors—of errors both of non-observation and of mal-observation. Inspection may be accomplished when the patient is in the erect, the sitting, or the recumbent postures, and sometimes examinations in two or in all of these postures may be pursued in turn with advantage. The sitting posture, however, is usually preferred. All mechanical restraints of the thoracic movements must be removed, care being taken that nothing hampers the free expansion of the chest.

The front of the thorax should be systematically inspected first, and then the chest should be viewed from behind, and afterwards from each side. The two sides of the chest should be compared point by point from every aspect as to their size, configuration, and movement. Sometimes valuable information is afforded by inspection from above, with the patient in a sitting posture, and by inspection from below, from the patient's feet, when he is lying down upon his back, or when he is lying prone. Inspection of the chest from above and from below furnish us with two important developments of this method of physical diagnosis, which I designed some years ago, which I have since found of great clinical utility, and which I do not remember to have found insisted upon or taught by other clinical teachers or writers. Inspection of the chest from above is useful in the detection of hypertrophous pulmonary emphysema, of cardiac enlargement, of pleural expansion or retraction, and of pulmonary shrinkage and of some other morbid changes. Especially is it useful in the demonstration of shrinkage of the apex of a lung. The patient is seated in a chair, the chest being stripped of all clothing, with his head a little bent forwards and downwards. The observer stands close behind the patient's chair, and explores with his eyes the outlines of the chest as seen from above, comparing in turn the outlines on each side with their correspondents on the other side, observing the shape and size of the supraclavicular hollows, and the play of the thoracic parietes in the movements of respiration, and observing other points as experience may suggest them.

Inspection from below is also very useful, bringing out strikingly many morbid alterations of shape and movements. The patient lies flat, either prone or on his back, with the chest bare of clothing. The observer stands about a yard from the patient's feet, and "takes a sight" either along the anterior middle line of the patient's trunk or along his dorsal spine. Lateral deviations from symmetry are often more apparent in inspection from this aspect than from others. The observer, by moving his head a little, may notice a variety of striking profiles. I may also now tell you that, outside the examination of the thorax, what may be called inspection from the feet finds an excellent clinical application in many abdominal maladies, and may often give signal service as a variety of the method of physical diagnosis under our present consideration.

Now let us examine the chief diagnostic indications given by inspection in diseases of the lungs and pleuræ. In various diseased processes many important changes occur in the form, size, and movements of the chest, and inspection is of striking value in the detection of these morbid alterations. For teaching purposes it will conduce to clearness of exposition to speak of these morbid changes in the first place in general terms, and to explain the names which are usually used in the description of those changes. We may notice in the first place the various morbid changes in the shape of the whole of the chest, or of parts of it; then we may afterwards observe the manifold modifications of the thoracic movements which mark certain different thoracic affections.

## Morbid Changes in the Form of the Chest.

1. *Expansion.*—Expansion means a general prominence of the whole of the chest, or of one of its sides. In abundant pleural effusion, in pneumothorax, and in hydropneumothorax, one side of the chest is expanded, and is evidently larger than the other side. General large-lunged vesicular emphysema produces general expansion of both sides of the chest. Such vesicular emphysema of one lung only, a very exceptional condition, may be the cause of unilateral expansion. When large-lunged vesicular emphysema exists to a greater degree on one side of the chest than on the other, both sides are expanded but unequally so.

2. *Bulging.*—Bulging is a local expansion. Bulging may appear at the lower part of the chest in pleural effusion, and it may be seen in large-lunged vesicular emphysema in the supraclavicular and infraclavicular regions. A local expansion of the chest-wall, bulging, may be due to an intrathoracic tumour (to a neoplasm or to an aneurysm), and bulging may be seen in a case of empyema when pleural pus is making its way towards the external surface. A liver which is enlarged may cause the ribs and costal cartilages under which it lies to bulge. An enlarged spleen may lead, though less usually, to a similar condition on the left side. In pericardial effusion, especially in young subjects, or when the heart is hypertrophied, the ribs in front of the cardiac region may bulge, the intercostal spaces being also widened. An aneurysm of the arch of the aorta is likely at some stage of its course to be marked by bulging of the chest wall.

3. *Retraction.*—Retraction, or "contraction," as the condition is often called, is the term applied to a general sinking in of the wall of the chest on one side. Retraction usually marks either pulmonary shrinkage from fibroid changes or the reduced pulmonary bulk which follows compression of a lung by pleural fluid, and which reduced bulk may persist in some measure after such fluid shall have been removed.

## Healthy and Morbid Movements of the Walls of the Chest.

Note well the respiratory movements of the chest in health. You will observe that the capacity of the chest is increased in all directions during inspiration. This movement is most apparent anteriorly and laterally. The respiratory movements may roughly be regarded as healthy when the anterior and lateral parts of the chest dilate equally, distinctly, and moderately during inspiration.

That prince of clinical topographers, Dr. Sibson, in his great work on *Medical Anatomy*, has furnished us with a

classical description of the normal movements of the chest in breathing. He says: "During inspiration the clavicles, first ribs, and through them the sternum, and all the annexed ribs are raised. The upper ribs converge, the lower diverge; the upper cartilages form a right angle with the sternum and the lower cartilages of the opposite sides, from the seventh downwards, move further asunder, so as to widen the abdominal space between them, just below the xiphoid cartilage, the effect being to raise, widen, and deepen the whole chest, to shorten the neck, and apparently to lengthen the abdomen. During expiration the position of the ribs and cartilages is reversed, the sternum and ribs descend, the upper ribs diverge, and the lower converge; the upper cartilages form a more obtuse angle with the sternum, and the lower cartilages of opposite sides approximate, so as to narrow the abdominal space between them, just below the xiphoid, the effect being to lower, narrow, and flatten the whole chest, to lengthen the neck, and apparently to shorten the abdomen." I advise you to observe these changes over and over again in your observation of healthy chests, until all their details are familiar to you, until they pass securely into your unconscious cerebration, there to rest as a standard of comparison by which morbid deviations will be revealed to you with unerring certainty, and soon with immediate quickness. You will observe that the movements of the chest wall are made up, in inspiration, of expansion and elevation, and, in expiration, of retraction and depression. In either of the sexes and at different ages there are natural and characteristic modifications of the respiratory movements. In young children inspiration depends mainly upon the contraction of the diaphragm. In them, therefore, the movement of the abdomen is relatively very marked. This type of respiration is named abdominal. The healthy differences between the respiratory movements of a man's chest and of a woman's are marked. In women, the movement of the upper part of the chest in inspiration and in expiration is more obvious than that of the lower portion; in men, the movements of the lower parts of the chest are more apparent than those of its upper portions. The healthy sexual types of the respiratory movements have been named, respectively, the superior costal and the inferior costal. You will further notice that there is nothing abrupt, nothing jerky, nothing laboured, nothing unequal between the play of the two sides of the chest in the healthy respiratory movements. These movements have an ease and rhythm and wave-like flow of their own. The eye can observe no interval between the end of the movements of inspiration and the beginning of the next succeeding movements of expiration. An interval of rest from movement can be seen at the end of each expiration between it and the next succeeding inspiration. This interval is relatively short. If the whole time occupied by a respiratory act and its succeeding pause be represented by 10, the value of the duration of the inspiratory movement may be estimated at 5, of the expiratory at 4, and of the pause between the expiratory and next inspiratory movement at 1. In calm breathing, in health, from 16 to 20 inspirations occur in a minute of time, corresponding to the beats of the heart in about the proportion of 1 to 4. You may notice in examining healthy chests that the impulse of the apex of the heart in its normal position is usually visible. But it is not always so. Absence of a visible cardiac beat is not necessarily a morbid sign.

The possible modifications of the respiratory movements of the chest, which are morbid signs, are numerous. Let us now notice the chief of them in a few general and particular conclusions. You will have observed that the movement of the chest wall in healthy inspiration is a movement in which expansion and elevation are concurrently combined, occurring together at the same time, but in varying proportions, at every part of the thoracic surface. When some portion of lung is increased in solidity, when it is relatively airless, the expansion of the corresponding part of the chest wall is impaired, and, by contrast, the elevation of this part often becomes unusually evident. This is especially obvious upon the occurrence of what is called forced inspiration. Volition may drag the chest wall upwards, but it cannot expand impermeable lung. This elevation of the chest wall, without expansion, or with less of it than is normal, is seen in the infraclavicular region of one or of both sides in phthisical consolidation of the pulmonary apex or apices. In large-lunged vesicular emphysema the inspiratory expansion of the lungs is less than in health, and inspiratory elevation is seen in relative and exaggerated prominence. Further, there is a healthy balance between the respiratory movements of the thorax and the corresponding respiratory movements of the abdomen, which you must observe and learn to recognise at once. This balance may be upset in disease in the forms of impairment or of excess in either direction. For instance, the thoracic respiratory movements are diminished and the abdominal are increased in pleurodynia and in the early and painful stage of pleurisy. The abdominal respiratory movements are diminished and the corresponding thoracic movements are increased in many diseases of the abdominal contents, in peritonitis, and in painful rheumatic affections of the abdominal muscles and of the diaphragm. These changes are involuntary. To explain them, the phrase the "consensual avoidance of pain" has been used. In many and in various diseases the respiratory movements of the chest are diminished. These movements are diminished in disease, either locally or generally, and in varying degrees of intensity and extent of distribution, according to the position, extent, and nature of the cause, when there is a physical obstacle to pulmonary expansion, as in pleural accumulations, liquid, solid, or gaseous, in consolidation or in emphysematous distension of pulmonary tissue, in obstructions in any part of the air passages, and as in paralysis of some of the respiratory muscles.

The respiratory movements may be excessive when dyspnœa—which is a morbid state which is due to many and varied causes—compels increased respiratory effort to overcome some difficulty in respiration.

When a mechanical and substantial obstruction to the entrance of air into the lungs exists high up in the air passages—namely, in the fauces, in the larynx, or in the trachea—in the form of some morbid product, or as a foreign body introduced from without, a retraction of the lower and lateral parts of chest walls may be observed during inspiration. This form of retraction, under the circumstances I have just sketched for you, is more marked in children than in other persons. In croup the very elastic chest walls of a child may become extremely retracted at the sides, while at the same time the suprasternal hollow is greatly enlarged and the abdominal walls unduly protruded. Again, you will remember the normal duration of the expiratory movements of the walls of the chest as compared with that of the inspiratory movements in each respiratory act. Relatively to that of the inspiratory, the duration of each set of expiratory movements is increased whenever the exit of air from the lungs is impeded, either from impairment of pulmonary elasticity or from obstruction in the air passages.

## ON THE DIAGNOSIS OF PLEURAL EFFUSION BY THE ROENTGEN RAYS.

By HUGH WALSHAM, M.A., M.D.Cantab., F.R.C.P.Lond.,
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That the Roentgen rays are capable of showing the presence of fluid in the pleural cavity is now a fact beyond question. Not only, however, are the rays capable of revealing fluid in the pleura, they are also equal to the task of showing the composition of that fluid, whether it be pus or serum. The difficulty sometimes experienced in detecting fluid in the pleura, especially in childhood, is acknowledged by all. A method, therefore, by which the shadow of the fluid can be actually seen must obviously be of great use in diagnosis as the following case will illustrate:

Case 1.—A boy, aged 6, was brought to me by my colleague, Dr. Clifford Beale, for an *x*-ray examination of the chest. The case was an obscure one. There was no heart displacement there was dulness to percussion, with bronchial breathing over the left base behind, but no skodaic resonance was detected. An *x*-ray examination, however, at once cleared up

any doubt between a solid lung and a pleural effusion. On looking at the skiagraph Fig. 1 (the chest is viewed from the

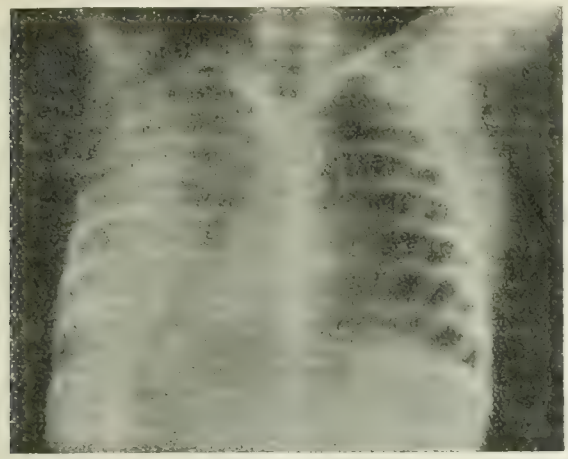


Fig. 1.

back) we see on the left side a moderately dense uniform shadow, with a well-defined curved margin extending down, wards and inwards from near the apex to the articulation of the seventh rib, where the shadow becomes continuous from spine to ribs until it merges into the shadow of the diaphragm. The shadow is not sufficiently dense to obliterate the outline of the ribs, but is sufficiently dense to obscure the outline of the heart, which is not displaced to the right. On looking at the ribs on the affected side an alteration in their normal curve is seen as compared with the opposite side. The ribs have suffered a rotation upwards and outwards. A clear oval space is observed between the well-defined edge of the shadow and the spine, corresponding, no doubt, to the compressed but not altogether airless lung. The diagnosis of fluid in the chest was made. The chest was tapped and 30 ounces of serum withdrawn. Another point worthy of note is that the skiagraph showed no evidence of tubercle. The after-history of this case has quite justified the opinion expressed at the time the chest was tapped, that the effusion was a simple one, and not complicated with any tuberculous mischief of the lung or pleura.

Case II.—A male, aged 19, was admitted to the City of London Hospital for Diseases of the Chest, with the diagnosis of an empyæma of the right side. On taking a skiagraph of this patient's chest it was at once seen (Fig. 2) that the whole of



Fig. 2.—Chest viewed from the back.

the right chest was occupied by a very dense uniform shadow, completely obliterating the outline of the ribs on that side, and blending with the heart shadow, which was displaced to the left. The chest was tapped and the pus withdrawn. The skiagraph (Fig. 3) was taken after the patient's convalescence. The difference between the two skiagraphs is



Fig. 3.—Chest viewed from the back.

very striking. The heart has returned to its normal position. The right side of the chest is nearly as clear as the left, but not quite, some pleural thickening remaining as the shadow shows: a curved line may be noticed to the right of the X, this corresponding to the track of the sinus, and extending down to the scar left in the chest wall. Again, in this case the skiagraph shows no evidence of tubercle. The patient still remains quite well.

As the above cases illustrate, in doubtful cases of pleural effusion the Roentgen rays will enable us to say if fluid be present or not, and from the density of the shadow to give an opinion as to whether such fluid be serum or pus.

## FOUR CASES OF PRIMARY THROMBOSIS OF CEREBRAL VEINS AND SINUSES IN CHILDREN.*

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The morbid anatomy of hemiplegia of acute onset occurring in children still remains in great measure a mystery. Encephalitis is possibly responsible for some cases, while thrombosis of veins or arteries may be present in others; but *post-mortem* evidence of the existence of either inflammation of the brain substance or of acute affections of the cerebral vessels is small. Even in those instances where the hemiplegia has complicated acute disease of serious nature necropsies are rare. Thus in 30 cases of hemiplegia occurring in diphtheria collected by Thomas,[1] only two necropsies are mentioned. In one there was thrombosis of the middle cerebral artery, and in the other a small hæmorrhage in the lenticular nucleus. In another case of diphtheria recorded by Dr. Edgeworth,[2] in which I made the necropsy the thrombosis of the basilar artery was present. Sir William Gowers[3] has suggested thrombosis of the cerebral veins as a cause of infantile hemiplegia, and quotes a case recorded by Angel Money of such thrombosis occurring after scarlet fever. A case mentioned by Abercrombie[4] is also sometimes referred to, but that is by no means a clear example of hemiplegia secondary to thrombosis of a cerebral vein. A more suggestive case is one recorded by Handford,[5] which proves that primary thrombosis

* Read before the Society for the Study of Disease in Children.

may occur in the venous circulation of the brain of an apparently healthy child. But apart from the question of the possibility of infantile hemiplegia being caused by thrombosis of the cerebral veins, the occurrence of such thrombosis is interesting on account of its rarity. Osler, for example, has only met with two instances and they were associated with meningitis.[6] In the following cases there was no disease of the cerebral meninges that could have been responsible for the thrombosis.

CASE I. *History and State on Examination.*—A girl, aged 4, was admitted November 23rd, 1896, into the Bristol Royal Infirmary, under the care of Dr. Shingleton Smith, suffering from ascites of short duration. Swelling of the abdomen had been noticed for a week only. The abdomen measured 25 inches at the level of the umbilicus. A week later the dimension of the abdomen was 1 inch less. On December 1st, at 10.15 P.M., the child had an attack of convulsions which lasted 3 minutes. The convulsions were followed by twitchings of the left side which persisted for 8 hours. On December 2nd and 3rd twitchings occurred again at intervals, and on the 4th her mouth was noticed to be drawn to the right. On December 5th the left upper and lower extremities were found to be paralysed. It may be worthy of mention that on the night of the convulsions the temperature rose to 100° F., and on the following day it reached 103°, but in the course of the next two days returned to the normal. In spite of the hemiplegic attack the child in many ways seemed to be improving. The abdomen steadily decreased in size, and on December 19th measured 4⅝ inches less in circumference than at the time of admission. On December 21st, however, nearly three weeks after the onset of the convulsions, the child complained of sore throat; membranous tonsillitis proved to be present, but no diphtheria bacilli were found. The larynx became implicated, and the child died.

*Necropsy.*—The superior longitudinal sinus was found to contain partially decolorised and softening thrombus throughout its length, which, however, was not sufficient to obstruct more than half the diameter of the lumen. On removal of the dura mater all the veins running up to the superior longitudinal sinuses on the right side of the brain were seen to be full of pale thrombus, and a large number of veins over the left cerebral hemisphere were also thrombosed. The appearance and consistence of the clot in the veins on the two sides of the brain did not materially differ, but it was evident from the difference in aspect of the convolutions of the two hemispheres that thrombosis had commenced on the right side. While the convolutions of the left side preserved a natural appearance except for congestion of the meninges covering them, the convolutions of the right hemisphere were greatly swollen, and had become flattened against the dura mater by the pressure to which their increased size had subjected them. The upper end of the right ascending parietal convolution measured three times as much across as the same convolution on the opposite side. The convolutions most affected were extremely soft, and dotted over with punctiform hæmorrhages. The frontal, parietal, and occipital lobes had all suffered, but the upper parts of the frontal and and parietal lobes were most affected. The lateral sinuses on both sides also contained patches of *ante-mortem* thrombus, and the right internal jugular was blocked throughout its course by adherent but softening clot. Examination of the tympanic cavities showed that the right contained mucus only, but the left contained some muco-pus. This, however, was probably of recent date, and secondary to the membranous tonsillitis which was present. The peritoneal cavity contained only a few ounces of fluid, but well-marked cirrhosis of the liver was present. Several divisions of the portal vein contained pale thrombus. The blocking of these vessels had led to some congestion of the small intestine. There was nothing noteworthy in any of the other organs except the larynx and bronchi. Membranous exudation extended from the larynx to the small bronchial tubes. Some broncho-pneumonia of the lobes of the lower lungs was present.

It is worthy of note that the onset of the cerebral symptoms occurred nearly a month before death. This suggests that the cerebral veins were first affected. Thrombosis of the right jugular vein probably followed considerably later, and the clotting found in the branches of the portal vein must have been of quite recent origin, since the ascites had been steadily disappearing, and at the time of death no longer existed. The presence of diphtheria, a disease which sometimes gives rise to *ante-mortem* clotting, may have led to rapid increase of the thrombosis. The disappearance of the ascites has already been referred to. Peritoneal fluid was being rapidly absorbed when the hemiplegia occurred, and it seems possible that some organic body, absorbed from the peritoneal cavity, may have started the thrombosis. Twice I have seen extensive thrombosis of pulmonary veins in chronic peritonitis with effusion. No cultures, however, were taken from the clot in this case, so that the presence of micro-organisms cannot be excluded, but the discovery of such organisms would not have proved the primary cause of the thrombosis to have been infection, since microbic invasion possibly followed the membranous tonsillitis. Whatever may have been the cause of the thrombosis of the cerebral veins, we may with some reason conclude that the thrombosis of the veins over the right cerebral hemisphere occurred at the time of the onset of the convulsions; and it is also probable that, had it not been for an attack of membranous tonsillitis and laryngitis, the child would have left the infirmary temporarily free from ascites, but with left hemiplegia.

CASE II. *History and State on Examination.*—A child, aged 2, was admitted into the Bristol Royal Infirmary, under the care of Mr. Munro Smith, in September, 1897, for noma of the left cheek. A few days after admission cerebral symptoms, which were thought to indicate meningitis, set in. Twenty-four hours after their onset the child died.

*Necropsy.*—The superior longitudinal sinus was found free from *ante-mortem* clot, but the meningeal veins over both hemispheres were thrombosed, the meninges intensely congested, and the convolutions studded with petechiæ. Both lateral sinuses contained a little *ante-mortem* clot. The right tympanum contained a little muco-pus, but the left was quite free. Dr. Symes found a bacillus, both in the discharge from the ulcer on the cheek and in a culture taken from one of the thrombosed cerebral vessels, which he considered corresponded to the bacillus described by Schimmelbusch as occurring in cases of noma.

The next case is of greater interest, but instead of the superficial veins being affected, the choroid plexuses and veins of Galen were thrombosed. The thrombosis was secondary to summer diarrhœa.

CASE III. *History and State on Examination.*—A female infant, aged 5 months, was admitted into the Bristol Royal Infirmary under the care of Dr. Prowse for diarrhœa and vomiting on August 5th, 1899. Four days later spasmodic opisthotonos set in and continued at frequent intervals for forty-eight hours. Some rigidity of all the limbs was present. There was convergent squint of both eyes, and some lateral and vertical nystagmus. After the opisthotonos passed off, rigidity of the left side remained. The knee-jerks were exaggerated on both sides. The diarrhœa ceased, but the child remained ill. The temperature, which was 100.4° F. on admission, continued high: it reached 106° on the second day of the opisthotonos, but it was usually at some point between 103° F. and 104° F. On the day of death, which took place on August 14th, seven days after the onset of the opisthotonos, the temperature rose to 106° F.

*Necropsy.*—The exterior of the brain presented a perfectly normal appearance. No tubercles were present, and there was no trace of meningitis. The arteries and veins were everywhere quite normal and free from *ante-mortem* thrombus. On resting the brain upon its base the cerebral hemispheres fell apart, owing to softening of the corpus callosum. The exposed ependyma of the lateral ventricles was much congested, and the brain substance in places dotted over with punctiform hæmorrhages. Further examination showed the veins of Galen to be distended with pale *ante-mortem* clot. The choroid plexuses presented an unusual appearance. The left choroid plexus was five or six times its normal size, and the right also was much enlarged. Both were of dirty-white colour, and the surface of each was smooth compared with that of a normal choroid plexus. The appearance was found to be due to their distension with hard thrombus. A few small thrombi stood out from the commencement of the straight sinus, but the sinus itself was free from *ante mortem* clot. All the other sinuses were also free from *ante-mortem* thrombus. The optic thalami were softened, but there was no hæmorrhage into their substance. Both tympanic cavities contained a little muco-pus. Some broncho-pneumonia was present at the bases of both lungs, but none of the other organs presented anything abnormal. Unfortunately the intestines had been washed out before coverslip preparations had been obtained. Cultures from the thrombosed plexuses proved sterile. Microscopic sections of a thrombosed choroid plexus showed the venous spaces filled with granular disintegrating clot. In many of the arterioles similar disintegrating clot was present, but others showed normal blood cells. The villi were glued together by fibrinous exudation, which in some parts was still fibrinous, but in others granular. In many places the epithelium over the villi was proliferating, and desquamated cells were entangled in the fibrinous exudation. No micro-organisms could be discovered.

Although no micro-organisms were discovered in the thrombosed plexuses it seems probable that the thrombosis was produced by bacterial invasion from the intestine. In connection with this point it may be worthy of mention that the previous summer in a case of death from summer diarrhœa in a child in which thrombosis of the right renal vein was found, cultures from the thrombus showed streptococci, and coverslip preparations from the contents of the small intestine also showed streptococci. The presence of marked opisthotonos in this case is possibly of some interest. Dr. Herringham has recorded a case in which a small glioma in the centre of the iter gave rise to attacks of this rigidity, and has suggested that it is produced by irritation of the grey matter which is continued upwards from the spinal cord.[7] It is of interest to note in this connection that Dr. Goodall has recorded a case of thrombosis of the veins of Galen and choroid plexuses in a girl aged 8 years recovering from scarlet fever, in which general rigidity followed convulsions,[8] and in another case occurring in a woman aged 25, recorded by Gibson and Stewart[9]; opisthotonos was present.

CASE IV. *History and State on Examination.*—A boy, aged 11 months, was admitted into the Bristol Royal Infirmary, under the care of Dr. Shingleton Smith, on February 23rd, 1900, with broncho-pneumonia. He had been ill for a week. He was drowsy when admitted. His head was held somewhat retracted during the first week he was in the infirmary, but no symptoms manifested themselves which led to the suspicion of any cerebral affection. The drowsiness, however, continued. The temperature was raised, sometimes nearly reaching 105° F., but occasionally dropping to the normal, or even below. He died three weeks after admission.

*Necropsy.*—On opening the dura mater, an excessive amount of cerebro-spinal fluid flowed away. Several of the cerebral veins contained the long ribbon-like pale thrombi not infrequently seen, which, if not entirely *post mortem*, must be formed very shortly before death. In addition to these flat thrombi, thrombosis of more definite *ante-mortem*

character was present. A vein over the centre of the right parietal lobe was distended with hard pale *ante-mortem* clot. The left middle cerebral vein was also fully distended with hard stratified pale thrombus, and equalled a quill pen in diameter. The superior longitudinal sinus was quite free from *ante-mortem* clot; the straight sinus was also free, but attached to the anterior end of the straight sinus were two thrombi apparently drawn from the veins of Galen. In the left lateral sinus, where it passes below the tentorium cerebelli, was a star-shaped thrombus drawn out of veins entering from the occipital lobe. The sinus was partially filled with *ante-mortem* clot at this point for about the space of half an inch, but elsewhere was free. There was no *ante-mortem* thrombus in the right lateral sinus, but the left cavernous sinus contained mixed *ante-mortem* and *post-mortem* clot. There was some congestion of the meninges in the neighbourhood of the thrombi. No distension of the ventricles was present. Both tympanic cavities contained pus, but this is so common an occurrence in acute diseases in children that any relation to the thrombosis of the cerebral veins must be considered doubtful. The upper lobe of the right lung was solid throughout, but of the mottled character which frequently distinguishes a confluent broncho-pneumonia from a fibrinous pneumonia, and in this case there were also three or four small areas of commencing suppuration. There was nothing else noteworthy except in the large intestine, where the solitary follicles were much swollen, and here and there small islets of swollen mucous membrane surrounded several enlarged follicles. Cultures from the thrombosed veins and from the lungs showed the presence of streptococci.

In this case the absence of localising symptoms was noteworthy. The middle cerebral vein was completely blocked by the thrombus, and, although the clot was not commencing to break down, it was stratified, and probably had been in process of deposition during several days before death. There was, however, little congestion of the meninges in the neighbourhood, and no evidence of softening of the brain substance.

Two at least of the above cases illustrate the fact that thrombosis of the cerebral veins and sinuses may be a cause of cerebral symptoms, when they arise as a complication of disease in children. Especially is this likely to be the case when the disease is one in which micro-organisms are likely to obtain access to the circulation. In two of the above cases micro-organisms were found in the thrombus, and in a third, although not discovered, they were probably present in the blood. In the remaining case micro-organisms were not looked for, and, although we have thought it probable that thrombosis occurred independently of infection, we have no proof that such infection was absent.

A more interesting question than the causation of thrombosis of cerebral veins in children is the possibility of this thrombosis being a lesion which may give rise to hemiplegia in a healthy child. In one of the above cases hemiplegia resulted from thrombosis, which in the character of its onset resembled some cases of infantile hemiplegia. Generally the paralysis develops more rapidly, but apparently thrombosis of cerebral veins may occasion hemiplegia, which sets in suddenly. A brief history referring to a specimen recently added to the St. Bartholomew's Hospital Museum illustrates this point. The thrombosis occurred, not in a child, but in a woman aged 24 years. The age of the patient does not, however, materially detract from the value of one feature of the case.

After suffering from headache and pain in the back for a week she was admitted to the Brook Fever Hospital, Shooter's Hill. Within five hours of admission she was seized with complete right hemiplegia and aphasia, without loss of consciousness. Epileptiform fits followed, but she did not lose consciousness until just before death, which occurred five days later. The superior longitudinal sinus and right lateral sinus were found thrombosed, together with many of the surface veins opening into them.[10]

Yet although the hemiplegia set in suddenly in this case it had been preceded by headache and thus differs from most cases of hemiplegia occurring in children who are old enough to complain of their ailments. A perusal of a few of the recorded cases of thrombosis of cerebral veins and sinuses occurring in adults seems to show that headache which lasts for some days almost invariably precedes any local or general convulsions. This appears to be the case even when the thrombosis is limited to cerebral veins.[11]

In a case, however, occurring in a child, a girl aged 7 years, recorded by Dr. Phear, the first symptom appears to have been toothache, which preceded unconsciousness of sudden onset only by a few hours,[12] and in another case recorded by Sir Dyce Duckworth, in a girl, aged 14 years, localised convulsions of the left hand occurred as a symptom of thrombosis of the superior longitudinal sinus and the veins entering it from the right side of the brain on the day headache was first complained of. In this case, however, the focal symptoms set in with much greater severity the following day. They were ushered in by a scream, but were associated with no loss of consciousness.[13] In Phear's case the child also screamed at the onset of the cerebral attack. Twice I have known mothers describe the onset of unconsciousness preceding hemiplegia in a child in apparently good health as being ushered in with a scream. One does not lay any stress upon this. A fit due to any cause may announce its onset by a scream, but Phear's case is interesting as showing that even thrombosis of a cerebral vein or sinus may manifest its presence by an attack of apoplectic suddenness, resembling that seen in infantile hemiplegia.

Allowing, however, that thrombosis of a vein may give rise to cerebral symptoms of acute onset, the cause of the thrombosis has still to be considered. When the thrombosis occurs as a complication of some disease, although the immediate factor in the causation of the *ante-mortem* clotting may not be obvious, its presence is comparatively easy of explanation. Thrombosis of a cerebral brain or sinus in a healthy child is an occurrence more difficult to understand, especially if it manifest itself without being preceded by symptoms that suggest even indisposition. Infection of some kind would be the most probable cause of the thrombosis, and one would expect more or less indication of an abnormal state of the blood before clotting in a vein takes place.

Yet this point cannot be strongly urged against the view that thrombosis is the cause of infantile hemiplegia. Consideration of other morbid conditions of the blood due to infection—for example, some varieties of purpura—shows that they may display themselves suddenly without warning. If, however, thrombosis of cerebral veins of infective origin be the cause of infantile hemiplegia, one would expect in at least a small percentage of cases that the thrombosis would be progressive and lead to a fatal ending. It is scarcely necessary to remark that such an event is virtually unknown. Yet it must be remembered that even when hemiplegia occurs as a complication of some acute disease, and in such cases vascular thrombosis is known to exist, the great majority of the children attacked recover.

A possible explanation for the thrombosis might be that it is set up, not by a blood infection, but by a toxin absorbed from the stomach or intestines. Belief, however, in such an origin would not enable one more readily to understand some of the features of infantile hemiplegia. It would not be clear why the dose of toxin should always be sufficient only to cause clotting limited to a few cerebral veins, and why it should not be repeated more than once during childhood.

We have been speaking of *ante-mortem* clotting in the veins. It is more easy to believe that thrombosis may occur in a healthy cerebral vein than in a healthy cerebral artery, but the occasional occurrence of thrombosis in a cerebral artery as a complication of some febrile states in children shows that arterial thrombosis must be considered as one of the possible causes of infantile hemiplegia.

If, however, the theory of cerebral vascular thrombosis as a cause of infantile hemiplegia be rejected, it seems necessary to look upon the presence of encephalitis as the only reasonable alternative. Here again we meet with difficulty. Although, when viewed from the clinical standpoint, infantile hemiplegia may not very closely resemble most of the recorded cases of thrombosis of cerebral veins and sinuses, it has still less in common with the descriptions of cases of encephalitis. In inflammation of the brain substance, premonitory symptoms are well marked, unconsciousness or mental confusion is prolonged, while the focal symptoms are variable, and often long in making their appearance. If encephalitis be the cause of infantile hemiplegia, it must be encephalitis of specific character.

[Since writing the above a case has been under my care at the Bristol Children's Hospital that seems to lend support to the vascular thrombosis theory of infantile hemiplegia. A girl aged 10 years, who was brought to the out-patient department for some slight ailment, had a large tortuous vein running up from the centre of the right groin over the right half of the abdomen. This was said to have appeared when the child was 18 months of age, towards the end of an attack of repeated convulsions, associated with unconsciousness, of a week's duration. The right leg and thigh were much swollen at the time the enlarged vein was first noticed. The child is

now weak-minded. She cannot read or be trusted with the most simple errand. Before the convulsions, however, she is said to have been bright and intelligent, and could say several words. It may be of interest to add that the mother attributed the convulsions to the falling of the child into a dirty stream two or three weeks before their onset. The child was nearly drowned, and after being pulled out vomited much dirty water. In this case it is obvious that blockage of the right external or common iliac vein is present, which may with reason be attributed to thrombosis occurring at the time the enlarged abdominal vein was first noticed. The evidence of thrombosis in one vein suggests that the associated cerebral symptoms were due to thrombosis within the cranial cavity. This thrombosis may have been of infective nature consequent upon the entrance of micro-organisms contained in swallowed dirty water into the blood.]

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## SYPHILITIC MENINGO-MYELITIS: ERYSIPELAS: RECOVERY.

BY E. F. TREVELYAN, M.D., M.R.C.P.,

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THE following case presents several points of interest:

*History.*—A woman, aged 23, had a miscarriage a few months after her marriage three years before the onset of the paralysis. Her first and second child died 7 and 2 months respectively after birth. She herself had been under treatment at the Leeds General Infirmary for syphilis, and her husband was known to be syphilitic. Six weeks before the commencement of the paraplegia she complained of pain and cramp in the left, and later in the right leg. This was followed by girdle pain. On February 24th, 1900, her right leg became weak on her way up to the dispensary, and she could only continue her journey with difficulty and with assistance. When she woke up on the morning of February 26th she had lost power in the left leg, and the paraplegia soon became complete. There was loss of sensation in the legs, and all the reflexes were slightly exaggerated. There was incontinence of urine, and a large sacral bedsore was noticed on March 11th.

*Condition on Admission.*—The patient was admitted into the Leeds Infirmary under my care on March 17th. There was at this time an almost complete paraplegia with considerable rigidity, but no wasting. The reflexes were all increased, but no ankle clonus could be obtained. There was incontinence of urine and to a less extent of fæces. The urine was alkaline, and contained a small quantity of pus. Tactile sensation was impaired. There was the remains of a syphilitic rash on the chest, as well as scars about the mouth.

*After-History.*—On March 24th an attack of facial erysipelas supervened. Two injections of antistreptococcus serum were given. The temperature became normal on March 30th, but there was a further slight rise of short duration on April 6th. On April 3rd it was noticed that she could move her toes, and the power in the legs began to return rather rapidly. Unfortunately, owing to the cleaning of the wards she had to be sent home on April 14th, and she was again attended from the dispensary. On June 12th she walked up to the out-patient room with the help of a stick. The knee-jerks were exaggerated, especially on the left side. All forms of sensation appeared to to be normal. The bladder had recovered completely. On June 28th she walked up without a stick, and on July 19th the recovery appeared to be quite complete. On April 11th, 1901, she was carefully examined. She was quite well, with the exception of a slight weakness of the anal sphincter; thus she said that she could not hold her motions for more than a minute. The sphincter did not grasp the finger at all strongly.

The diagnosis of an incomplete myelitis involving the lumbar enlargement and part of the lower dorsal cord was based on the spastic paralysis, loss of sensation, paralysis of the sphincters, and bedsore. The presence of pains and cramps in the legs showed that the meninges were also involved. The meningo-myelitis was believed to be syphilitic for the following reasons: (1) There was not only undoubted evidence of past syphilis, but the patient still presented manifestations of active syphilis when the paralysis supervened. (2) The presence of paralysis combined with rigidity and exaggeration of the reflexes, is known to occur in spinal syphilis; and (3) the absolute absence of any other effective cause. There was apparently some variation in the severity of the symptoms during the early stage of the disease, and this also has been associated with spinal syphilis by some writers. It was imagined that the lesions consisted of an inflammation of the pia-arachnoid, most probably of a genuinely syphilitic nature, and that the disease had spread into the cord which it affected in a patchy fashion, and not uniformly.

A point of peculiar interest in the case was the attack of erysipelas, which was followed, at least in point of time, by improvement in the paralytic symptoms. There is nothing preposterous in assuming a direct relationship between the erysipelas and the recovery, as one infection has been known both experimentally and clinically to antagonise another and independent infection. By some curious oversight the patient received no antisyphilitic treatment between the onset of the paralysis and June 28th. There is reason to believe, though unfortunately the out-patient notes cannot be found, that the patient was under antisyphilitic treatment during at least a part of the twelve months preceding the paralysis.

The importance of the recognition of cases of spinal syphilis is twofold, namely, on account of its relation to (*a*) prognosis and (*b*) treatment, although the above-related case hardly exemplifies the latter statement. Williamson (of Manchester) in his interesting paper on spinal syphilis[1] mentions 32 cases of various forms of the disease. Of the 32 cases 10 recovered and 9 died, the remaining 13 passing from observation without any great change in their condition. Five out of 6 cases of acute syphilitic paraplegia died. While insisting on the importance of antisyphilitic treatment Dr. Williamson makes the very guarded statement that the prognosis of spinal syphilis is on the whole better than that of other affections of the spinal cord. Obviously the extent to which the spinal cord is involved in these cases is of the first importance in the prognosis.

Unless the actual lesions present in the membranes and cord are syphilitic (gummatous) in character or perhaps due to syphilitic vascular disease, little hope of any good can be expected of antisyphilitic treatment. As, however, we are mostly not in a position to say whether these lesions are genuinely syphilitic or not, a course of antisyphilitic treatment consisting in mercurial inunction and potassium iodide should always be had recourse to unless it is certain that the patient has recently been efficiently treated in this way. If no result is obtained in a few weeks such treatment should be abandoned, at least for some time, as it may possibly do injury instead of good.

I have to thank Mr. H. R. Cross, one of the resident medical officers to the dispensary, and Mr. Hirst, the clinical clerk to the case, for additional notes of the case.

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## CASE OF CEREBRAL TUMOUR AT THE PARIETO-OCCIPITAL FISSURE.

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THE following record of a case of cerebral tumour presents several points of interest with respect to the localisation of cerebral lesions.

G. P., aged 43, was admitted to the Ancoats Hospital on December 31st, 1900, complaining of headache and failure of sight.

*History.*—His illness had commenced nineteen weeks previously with troublesome headache and sleeplessness. At that time vision was not affected. After the headache had continued for two or three weeks he began to be troubled with slight twitchings in the left leg; these continued from time to time all the morning and afternoon, and prevented him from walking about. The same day, about 5 P.M., the twitchings in the left leg became suddenly more severe and rapid, and developed into a true clonic convulsion. The twitchings spread from the left leg to the left arm and left side of the face. The face was drawn to the left, and the tongue bitten. After a few minutes the patient lost consciousness, and finally the right side of the body was convulsed also, but not so markedly as the left. The attack was therefore a true unilateral convulsion (Jacksonian epilepsy) beginning in the left leg. The duration of the fit was about twenty minutes. The patient fell asleep afterwards, and he remained in a semi-conscious state for four days. About thirty hours after the first convulsion there was a second of a similar nature, and again about twenty hours later there was a third. In all three fits the spasm commenced in the left leg; it then spread to the left arm and left side of the face, and remained unilateral for some time before the right side was affected. The patient recovered consciousness completely at the end of four days. There was no paralysis. The sight began to fail

about sixteen weeks before his admission into hospital, and vomiting occurred occasionally. There had never been any paralysis of the limbs. There was no history of injury to the head, of syphilis, or of any antecedent to which the illness could be attributed.

*State on Admission.*—The patient could walk, and perform all the movements of the limbs quite well. The knee-jerks and plantar reflexes were present; ankle clonus was absent. There was no anæsthesia. The bladder and rectum were not affected. The patient complained much of headache, which was most severe in the right frontal region. There was a tender spot on percussion just above and behind the right frontal eminence. There was no affection of the facial, ocular, or tongue muscles. The senses of smell and hearing were not affected. There was no anæsthesia in the distribution of the fifth nerve. The pupils were equal, and reacted to light and accommodation. The vision was impaired, but he could count fingers and read large print with each eye. Ophthalmoscopic examination revealed intense double optic neuritis, with marked swelling of the discs. The fields of vision were tested with the finger, but no hemianopsia could be detected. There were no mental symptoms. Examination of the heart, lungs, and abdomen reveal nothing abnormal. The urine had a specific gravity of 1025; albumen and sugar were absent.

*Progress.*—The patient's condition gradually became worse: vomiting occurred occasionally. The fields of vision were examined a second time, but no hemianopsia could be detected. The failure of sight increased, owing to the optic neuritis, and further examination of the visual fields was impossible. Soon the patient became quite blind. The changes in the optic discs were intense, and numerous hæmorrhages were scattered over the retina. The headache became very severe and continued to be most intense in the right frontal and temporal regions. There was marked tenderness just behind and above the right frontal eminence; this persisted until the operation. When the skull was auscultated with a stethoscope in various regions, whilst the patient was whispering on the whispering sound was best heard at the region of tenderness just behind and above the frontal eminence. At this point the whispering sound was better heard on the right side than on the left. The patient became more and more apathetic, and in a few weeks after admission to the hospital he appeared to be in a semi-conscious condition. He remained quiet all day long, he never spoke to anyone, and always appeared to be asleep, but if spoken to he would answer quite clearly and describe his symptoms in the most intelligent manner. On January 10th it was found that he was not able to dorsiflex the left foot so well as the right; all the other movements of the legs could be performed. The knee-jerks were present. No paresis of the arms, facial, ocular, or tongue muscles could be detected. There was no impairment of sensation in the face, arms, or legs. There was no affection of the muscles of the trunk. As the headache in the frontal region was so intense and prevented him from sleeping at night, the patient wished to have some operative treatment.

*Operation.*—On February 13th my colleague, Dr. Tytler, trephined the skull at the seat of the greatest pain and at the region where there was tenderness on percussion, that is, at a point just above and behind the right frontal eminence. He removed a small circle of bone, but did not open the dura mater. A fine hypodermic exploring needle was pushed through the dura mater into the brain substance of the frontal region, but no pus or fluid was detected. No bad symptoms followed the trephining. The temperature remained normal and the wound healed by first intention. The trephining relieved the headache markedly, and after the operation there was very little headache. At the end of February the patient became more dull mentally, but there was no delirium. Finally coma developed and death occurred on March 13th, 1901.

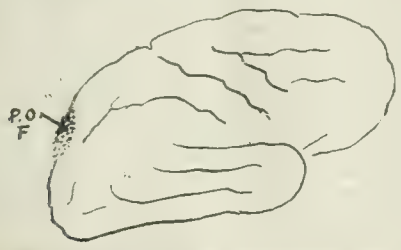



Fig. 1.—Convex surface of right cerebral hemisphere. Dotted area = position of tumour. P.O.F. = parieto-occipital fissure.

*Necropsy* (head only).—The dura mater appeared normal on its outer surface. The surface of the brain was rather pale, but otherwise normal, except at the region of the parieto-occipital fissure of the right cerebral hemisphere. At this region there was a tumour growth which was slightly adherent to the dura mater. The growth was about 1 inch in the antero-posterior diameter, and about ¾ inch transversely (on the surface of the cerebral cortex). It extended both on the median and convex surfaces of the hemisphere; it appeared wedged into the right parieto-occipital fissure, and invaded the brain substance on each side of the fissure; but the growth extended more into the occipital than into the parietal lobe. On the convex surface of the occipital lobe it invaded the superior (or first) occipital convolution just behind the parieto-occipital fissure; on the median side it occupied the upper anterior angle of the cuneus lobe. In front of the parieto-occipital fissure it invaded, for about half an inch, the most posterior part of the superior parietal lobule on the convex surface of the cerebral hemisphere, and, for the same distance, the most posterior part of the quadrate lobule (precuneus) on the median surface of the hemisphere. (See diagrams.). On section the growth was seen to be roughly spherical, and its diameter was about 1 inch. The outer part of the growth was greyish-red, the centre slightly yellowish and somewhat gelatinous, and crossed by paler tracts of firmer tissue. Microscopically the growth was a mixed-celled sarcoma. In the centre there had been apparently some old blood extravasation. The frontal lobes, the other parts of the parietal and occipital lobes, and all other parts of the brain were unaffected by tumour growth, and were quite normal.

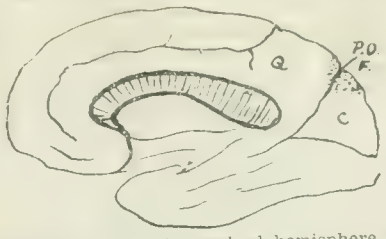



Fig. 2.—Median surface of right cerebral hemisphere. Dotted area = position of tumour. P.O.F. = parieto-occipital fissure. C = cuneus. Q = quadrate lobule.

The symptoms of this case pointed clearly to a cerebral tumour. From the history of the three fits, each commencing in the left leg, and from the fact that the leg did not become paralysed, it appeared probable that the growth was situated in the right cerebral cortex close to, but not destroying, the leg centre (that is, just in front of, or just behind the leg centre). At the early period no hemianopsia could be detected, but soon the blindness, due to the optic neuritis, rendered further examination of the fields of vision impossible; so that no conclusions could be drawn with reference to the effect of the growth on the visual fields. The only mental symptoms were dulness and delay in commencing to answer questions.

In the absence of any sign indicating whether the growth was in front of, or behind the leg centre, the frontal headache, and the tenderness on percussion just behind and above the frontal eminence appeared to be in favour of the former localisation. But as the locality of headache and tenderness is so often unreliable as regards the position of a lesion, the localisation of the growth, during life, did not appear sufficiently definite to justify any attempt to remove it. Hence, though the skull was trephined, the dura mater was not divided. The removal of the bone was followed by very marked relief of the headache. The patient had been blind for several weeks before the operation, and, of course, no return of vision followed the trephining.

The chief interest of the case was the locality of the tumour and the three unilateral convulsions beginning in the left leg. The case shows that a tumour at the most anterior part of the occipital lobe and at the parieto-occipital fissure, may produce convulsions commencing in the leg on the opposite side, through the extension of the growth into the most posterior part of the superior parietal and quadrate lobules for about half-an-inch. This would coincide with the view that the leg centre extends backwards both on the convex and median surfaces of the cortex (in the superior parietal and quadrate lobules) almost up to the parieto-occipital fissure. The ascending frontal and ascending parietal convolutions and the paracentral lobule were unaffected. It was only the most posterior portions (half-an-inch) of the superior parietal and quadrate lobules that were invaded by the growth. Another point of interest was the impaired power of dorsiflexion of the left foot, noted a short time before death. This was due, no doubt, to the involvement of the most posterior part of the superior parietal and quadrate lobules.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

### THE DURATION OF DREAMS.

As the opportunity for comparing the duration of a dream with the rate of thought of the dreamer is rare, the following instance may be of interest to some.

Some little time ago I had occasion to administer nitrous oxide gas to a sailor for the purpose of tooth extraction. He was a petty officer in the merchant service, and an intelligent man. He took the anæsthetic well, the tooth was duly extracted, and he recovered consciousness with the usual rapidity. However, just at the moment of waking up, he

sprang wildly forward clutching in all directions with his hands, and with a wild and terrified look upon his face, shrieked out, "Hold me, hold me, or I shall be drawn back again!" And then in an instant he was wide awake but sweating with terror, and still trembling with fright.

After an interval of time, when the man had completely recovered his self-possession, I questioned him as to what he meant when he called out that he would be drawn back if he were not held. He said that he had been shipwrecked a year before, and that he had dreamt of the entire episode with every detail, finishing with the breaking of a rope while he was being dragged out of the surf, his last shout being a call upon those on shore to catch hold of him.

His dream was an exact reproduction of previous impressions. The original and real wreck lasted, so far as he was concerned, for three hours and three-quarters, commencing with his being aroused from his sleep by being thrown from his bunk on to the floor, by the striking of the ship upon the rocks, and terminating with his being dragged up the beach through the surf.

The dream certainly did not last more than ten seconds—the production of the original impressions took three hours and three-quarters.

I questioned the man very closely as to the first wreck, and am thoroughly satisfied he spoke the truth.

Old Burlington Street, W. G. B. Flux.

## HEPATIC CIRRHOSIS CAUSED BY OBSTRUCTION OF THE BILE DUCTS.

In November, 1895, I was called to see P. B., a farmer, with gastric pain: this pain was quickly relieved, but a few days afterwards it occurred again with vomiting, and from this on the attacks became more frequent and of greater intensity, till at last they culminated in severe paroxysms of pain of a stabbing character, the intensity of which was so great that a hypodermic of morphine on two occasions failed to relieve.

Dr. J. Magee Finny, of Dublin, saw him in consultation, and he diagnosed gall stones. He was placed on appropriate diet and treatment, and the stools were washed and examined carefully for the discovery of calculi. One day, when the patient was sitting on the night chair, he heard something hard strike the bottom of the vessel, and this substance was taken out and kept for me. On examination it proved to be a hepatic calculus, cigar or torpedo-shaped and black in colour; it was the size of a large oat grain. After a day or two it crumbled to powder, and the centre proved to be of a deep yellow colour. He passed three or four of these calculi, and in three weeks was quite convalescent, and since that he never suffered from these attacks of pain. He was able to attend to his business, but from time to time suffered from attacks of slight jaundice, with pain in the back and over the liver, which was enlarged.

He died on April 10th, 1900, from hypertrophic cirrhosis of the liver without ascites four years and five months after his attack of hepatic calculi. It is quite evident that in this case the obstruction of the bile ducts produced the cirrhosis.

Rhode, King's Co. W. T. Mills.

## THE STAINING OF THE TUBERCLE BACILLUS.

For the rapid detection of the bacillus tuberculosis in sputum and urine I have found the following method very satisfactory with the Ziehl-Neelsen carbol-fuchsin stain.

I employ extra thin slips of white crown glass, 76 mm. by 25 mm., and circular cover glasses (16 mm. = ⅝″). On a slip cleared of all grease by means of ether and rectified spirit, three separate films are spread in the usual way, and "fixed" by passing the slide rapidly over the flame of a spirit lamp. By means of a small pipette filled with the stain, two or three drops of carbol-fuchsin are placed on each film. The slip is then held about 10 inches above the flame and gently moved about, the fluid being allowed to "steam" for five minutes without boiling. Fresh stain is dropped on with the pipette to prevent the films drying. The slide is then washed and decolorised in the usual way by dipping it into 25 per cent. of nitric or sulphuric acid, etc. A spot of Loeffler's methylene blue is placed on each film, the slide is gently warmed for a few seconds, and then washed.

The bacilli are usually stained perfectly.

By this method (1) three specimens can be prepared at once; (2) by applying the film to the slide and not to the cover glass all chances of breaking or dropping the latter and of losing the specimen are avoided. The circular cover glass is more easily manipulated and is less fragile than the square, and it encloses the largest space in the smallest boundary. By holding the slide in the fingers when "steaming," and not with Cornet's or other forceps, overheating is prevented.

This also does away with heating the film in a capsule over a sand bath, which takes a much longer time; and if in this process a cover glass is used it is stained on both sides, and matters are complicated. Forceps holding a slide or cover glass get smeared at their points with carbol-fuchsin, and may re-stain the film after it has been decolorised by the acid. By the other method this is avoided.

For saving time in clinical work and at examinations it is rapid and effective.

Herbert W. G. Macleod,
Streatham, S.W. M.D.Edin., D.P.H.Camb. and Lond.

## POSITION OF THE AORTIC REGURGITANT MURMUR.

If a needle is passed through the third left intercostal space, close to the sternum and the upper margin of the fourth cartilage, it will traverse first the pulmonary conus and, next, the underlying aortic conus. At the moment of the creation of an aortic *bruit* by regurgitating blood, the walls of the pulmonary conus are in contact; hence there is a continuous solid mass between the aortic conus and the auscultating ear; and the earliest recognition of the murmur is for this reason usually obtained at or about the fourth left costal cartilage near the sternum. If the murmur is audible anywhere it will usually be heard at this point also; it may be audible at no other point. In children, women, and persons with a short chest the *bruit* may be a little higher; in old cases, with greatly enlarged heart, it is lower. I have many times demonstrated the position of this *bruit* and the position of the channels (British Medical Journal of November 4th, 1899, page 1292-3), and I agree with Dr. Syers (Journal, June 1st, page 1335) that unless the murmur is very loud it is not as a rule audible in the second space on the right side of the sternum.

Leeds. T. Churton, M.D.

## *ANOPHELES* IN IRELAND.

In the British Medical Journal of June 15th, p. 1473, in Dr. Nuttall's contribution, Hibernation of *Anopheles* in England, I notice in the last portion the following statement: "I might state that I caught a male *A. bifurcatus* on May 7th at Clonbrock, co. Galway, this being the first recorded finding of a member of the genus in Western Ireland." To add to the distribution of *Anopheles* in Ireland, I may mention that I captured a female *A. bifurcatus* near here on April 12th last at a flower of sallow, while out mothing, and have in the month of May last procured half-a-dozen specimens of this species. My insect was identified by Mr. Verrall. I have also obtained another species—most probably *A. nigripes*—and have sent it to Professor Blanchard, of Paris, for identification.

Courtmacsherry, co. Cork. C. Donovan, M.D., F.E.S., Captain, I.M.S.

## ANOMALIES OF THE LABIAL FRÆNUM.

Peculiarities in the formation of the labial frænum are not uncommon. Sometimes the frænum persists as a fibrous cord extending from the mucous membrane of the lip, and passing between and separating the central incisor teeth, and continuing its attachment along the mid-line of the premaxillary portion of the palate, as far as the orifice of the anterior palatine canal. The redundant frænum is frequently noticeable as a fleshy body, appearing below the upper lip, and resting between the two front teeth. It will be seen upon examination that the movements of the lip pull upon this bridle, ultimately causing separation of the teeth. Permanent unsightly gaps between the central incisor teeth are greatly due to this cause in adults. Other causes are deficient lateral pressure from absence of teeth, and various other dental causes. Heredity plays an important part in its causation.

As regards the etiology of this anomaly the following seems a plausible explanation: A portion of epiblast from which the epithelial structures are derived is included during the union of the mesial nasal processes of the fronto-nasal processes, which forms the os incisivum (endo-quattrion). Sometimes owing to deficient union or delayed union, this portion of epiblast fails to be sufficiently absorbed, and persists as a redundant frænum. The inferior labial frænum is formed by an involution of epiblast between the mandibular plates (first branchial arches). This inclusion of epiblast takes place at a very early period of intrauterine life, as all the various fissures of the face should have closed by the tenth week.

The treatment for this condition is to divide the frænum midway with a pair of blunt-pointed scissors, and then to cauterise the cut surface with pure carbolic acid or silver nitrate. In some cases, where there is much redundant tissue, it is necessary to remove a small V-shaped portion. The frænum should not be divided higher up than midway between the free margin of the gum and the reflection of mucous membrane of the lip. A mechanical apparatus is often necessary to draw the teeth together.

Old Burlington Street. Percy A. Longhurst.

# REPORTS
ON
# MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

## NORTH LONDON CONSUMPTION HOSPITAL.

### TWO CASES OF PHTHISIS UNDER OPEN-AIR TREATMENT.

(Under the care of Dr. J. E. Squire.)

[Reported by Robert G. Johnson, M.B.]

Case I.

J. F., aged 30, a draper's assistant, did not give any family history of consumption. She had been perfectly healthy till two years and a-half before, when she became very languid and found her occupation very trying. Cough commenced a couple of months later and continued, being severe during the last year, accompanied with copious expectoration. No hæmoptysis had occurred, but loss of flesh had been marked.

*Condition on Admission.*—The apex beat was in the fifth left space a quarter of an inch outside the nipple. There was retraction above both clavicles and in the first left space; the chest was well formed. Movement on the left side was diminished. There was diminished resonance at both apices, more marked on the left side, and extending into the upper part of the left axilla. Breath sounds were bronchial at both apices to the fourth rib in front, in both supraspinous fossæ, and in the upper part of the left axilla. Dry crepitations were heard at the right apex to the fourth rib in front and along the interlobar border behind; while in the left lung crepitations and moist *râles* were heard over the front, axilla, and back as low down as the angle of the scapula. The patient's general condition was bad; she was emaciated (6 st. 8 lbs.), and very anæmic. During the first week the temperature (in the mouth) averaged 99° in the morning and 100.6° in the evening. The pulse was about 100.

*Treatment and Course.*—The patient was put under full open-air treatment, being in bed day and night on the open balcony, and taking ol. morrhuæ ℥ij t.d.s; forced feeding was not resorted to. At the end of five weeks she expressed herself as feeling better, and the temperature was a little lower, being 99.6° at night, but there was a loss of 2½ lbs. in weight, and the physical signs were much the same. Creasotal ℥ss in milk t.d.s. was ordered. Six weeks later there was no fever, and the weight had increased by 8 lbs. over that on admission. Physical signs showed distinct improvement, only one or two crepitations being heard on the right side; while on the left the adventitious sounds, though heard over the same area, were much drier in character. The patient was now up for the greater part of the day, taking gentle exercise in the grounds. Two months later, though up all day, and taking plenty of exercise, there was no fever, no adventitious sounds were heard over the right lung, and over the left a few sticky *râles* in front, and a few dry crepitations in the interscapular region behind could be made out. Great improvement had also taken place in her general condition, the anæmia and appearance of ill-health having passed off. She returned to her work having a slight cough, and expectorating a little in the early morning.

Case II.

R. W., aged 17, a domestic servant, had a good family history.

*History.*—About a year previous to admission she gradually developed a sore throat with some loss of voice, and had attended another hospital as out-patient for "lupus of the throat." During the past year she had been getting weaker, and there had been amenorrhœa for the last six months, the catamenia having previously been regular. Cough, which was never troublesome, had come on within the last three months, accompanied by occasional expectoration. She had steadily lost flesh, and night sweats had occurred a few times. There had been no hæmoptysis.

*Condition on Admission.*—The chest was well developed and movement good, though slightly less on the left side. The apex beat was normal in position, though the point of maximum intensity was in the fourth space inside the nipple line. There was diminished resonance over the left apex as far down as the third rib in front and the spine of the scapula behind. Breath sounds were weak in front at the apex, while behind they were bronchial. Crepitations were heard as far down as the fourth rib in front, and over the apices of both lobes of the left lung behind. The right lung was normal. The epiglottis, false cords, and arytenoid regions were thickened and nodular, the nodules being small and resembling the tiny nodules of granulation tissue. The left posterior pillar of the fauces and the uvula showed a similar condition. The patient's general condition seemed good. Her weight was 6 st. 10¾ lbs. The evening temperature during the first week in the hospital, taken in the open-air ward, averaged 98.8° F. Expectoration was slight and infrequent, and what little there was possibly came from the throat. Tubercle bacilli were not found.

*Treatment and Course.*—For the throat, Mr. Richard Lake, who considered the condition typically one of lupus, advised insufflations of equal parts of orthoform and amyliform twice daily. As regards the lungs open-air treatment was followed, the patient sleeping at night in a ward with all the windows wide open, and being in the grounds through the day. Internally, ol. morrhuæ ℥ij t.d.s. was administered. Steady improvement followed in every respect. At the end of fifteen weeks, when the patient was discharged, 34 lbs. in weight had been gained (an average of over 2 lbs. a week). There was neither fever nor cough. The throat was greatly improved, and no crepitations could be heard on auscultating the lungs. Two months after discharge she was again seen, and had held her ground well, and was still entirely without cough.

Remarks.—Case I illustrates considerable improvement occurring despite long-standing and advanced disease. The very distinct improvement in the physical signs in the lungs in so short a time is noteworthy, it usually requiring a longer period to effect so much. The administration of creasotal in large doses certainly seemed to be of service, as almost immediately following its being ordered the patient began steadily to amend. Case II is interesting as being almost undoubtedly a case of pulmonary tuberculosis, although tubercle bacilli were not obtained, the disease being in an early stage. An early diagnosis, before there is any expectoration to examine bacteriologically, can be made in some cases much to the well-being of the patient. The combination of phthisis and lupus of the larynx is not very often met with, but in no respect did the throat in this case resemble the ordinary tuberculous laryngitis. The case is further interesting in showing a gain in weight of 34 lbs. in fifteen weeks, entirely apart from "forced feeding."

Intramuscular Injections in Syphilis.—Dr. Conolly mentioned incidentally in a discussion which took place at the Conference of Medical Officers of the Federated Malay States last year a case of syphilis treated in the jungle "with intramuscular injections of mercury through the primitive means of a piece of bamboo and a bit of old kerosene tin made into a tube."

# REPORTS OF SOCIETIES.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—At a meeting on June 26th, Dr. A. J. HARRISON, President, in the chair, Dr. RADCLIFFE CROCKER proposed that a vote of condolence should be conveyed to the family of the late Dr. Cavafy, and referred to the serious loss sustained by the Society and by British dermatology in his death. The vote of condolence was passed unanimously by the meeting. Dr. T. D. SAVILL showed a case of bromide eruption in a child, aged 5½ years, who had been under Dr. Fletcher Beach, and had been given 15-gr. doses of potassium bromide thrice daily for 19 days.—Dr. PHINEAS ABRAHAM showed: (1) A case of lupus vulgaris in a child, aged 13; the eruption had improved rapidly under treatment with *x*-rays; (2) a second case of lupus, which had benefited by the same treatment.—Dr. GRAHAM LITTLE showed: (1) A case of favus in a young lad, a Russian Jew; there were typical yellow scutula on the scalp and extensive loss of hair; (2) a case of leucodermia and melanodermia combined, of four years' duration, in a boy aged 12; (3) a case of hypertrophy of the upper lip in a boy aged 10; the swelling had been present for the last five months; there was a strong tuberculous history, and it was possibly a tuberculous swelling: (4) a case of multiple lupus vulgaris, with a distribution and aspect of psoriasis, and in addition an eruption of lichen scrofulosorum on both legs. Dr. Graham Little also showed a microscopic specimen of a favus hair, stained to demonstrate the invasion of the hair shaft by the typical fungus.

NEUROLOGICAL SOCIETY.—The Neurological Society of London met on June 22nd at Manchester on the invitation of the Manchester members. Professor DRESCHFELD acted as President. Specimens were shown by Dr. BRUCE, Dr. JUDSON BURY, Professor DELÉPINE, Professor J. DRESCHFELD, Dr. MOORE, Dr. MOTT, Dr. ORR, Dr. E. S. REYNOLDS, Professor SHERRINGTON, Professor STIRLING, Dr. TREVELYAN, Professor YOUNG, Dr. WARRINGTON, and Dr. WILLIAMSON. Clinical cases were shown by Dr. ASHBY, Dr. JUDSON BURY, Professor DRESCHFELD, Dr. HARING, Dr. HARRIS, Dr. DIXON MANN, Dr. REYNOLDS, and Dr. WILLIAMSON. In the afternoon the Society was entertained at the Royal Asylum, Cheadle, at the invitation of Dr. and Mrs. Mould and the Committee of Management. In the evening the Society dined at the Queen's Hotel.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on June 18th, Mr. MIALL in the chair, Dr. KERR showed a patient operated on for mastoid disease.—Mr. HORROCKS read notes on a case of double hernia with unusual complications:

The patient was a male child, aged 9½ months, who had a double inguinal hernia, and also a spina bifida. On the left side the sac was tense, and there was no impulse on crying. The skin of the part was red and œdematous. The right hernia was irreducible, and the external ring was very large. The bowels were acting. On opening the sac on the left side a few drops of pus escaped, and a narrow band, ulcerated at its extremity, was found leading up through the ring to the small intestine. This turned out to be a Meckel's diverticulum. It was removed, and the stump inverted. The sac and testicle, being infiltrated with pus, were removed together, and the ring closed with catgut sutures. The wound healed well. A fortnight later the hernia on the right side was operated on. The sac was found to contain the lower part of the cæcum, which was free; the posterior and inner aspect of the latter were devoid of peritoneal investment. The testicle was in its natural position. The bowel was gently reduced without interfering with its vascular supply, and the peritoneum closed and the ring sutured. The wound healed well.

—Mr. ALTHORP described a case of appendicitis with unusual complications, and showed the vermiform appendix containing a concretion, and also a small ovarian tumour removed from the same patient, a woman aged 22, who during two years had six attacks of appendicitis.

On July 4th, 1900, the appendix, which was found to be fixed in the pelvis and matted by dense adhesions to the right ovary, was removed. The patient recovered from the operation, but was not relieved from her symptoms. A tumour was discovered in the position of the right broad ligament, and the abdomen was opened on May 8th, 1901, when a fluid tumour the size of a small orange was shelled out from between the layers of the broad ligament. The woman made a good recovery and went home well.

Mr. Althorp remarked that the right ovarian artery gave a branch to the appendix, and also that the lymphatics of the two organs were somewhat intimately connected, and suggested that this connection might account for the simultaneous occurrence of disease in the right ovary and appendix.

—Mr. R. MERCER read notes on 3 anomalous cerebral cases.

(1) A woman of 25. She was suddenly (October, 1900) seized with giddiness, headache, and vomiting. These passed off, and in two days she was back at work again. She remained at work a fortnight, and then suddenly became unconscious and had an epileptiform attack. The fits recurred every half hour to an hour, and did not cease for 24 hours after the onset. She vomited from time to time, and passed urine unconsciously. The urine contained a trace of albumen. There was no evidence of muscular weakness. Optic discs normal; pulse slow and full—50 to 60 per minute. Temperature slightly above normal; respirations stertorous. It was three weeks before she regained full consciousness. During this time she objected to the light, and after she began to talk again said things were upside down. Examination of the field of vision showed left nasal hemianopia. The pupils reacted normally. The patient was now (June, 1901) in excellent health, and seemed to have no recollection of her illness previous to the complete return of consciousness.

A diagnosis of tumour of the occipital lobe was made, but the subsequent recovery of the patient would seem to negative this.

(2) A woman, aged 32, emaciated, anæmic, and the subject of mitral incompetence and bronchitis. On April 28th she returned home from work feeling dizzy. She vomited frequently, and towards night became unconscious. She resisted attempts at examination, and rolled about the bed. Temperature 103°, pulse 120, tongue dry and coated. The eyes were kept closed and the limbs rigid. Urine and fæces were passed involuntarily. She vomited during the next day, and remained unconscious for four days. Double optic neuritis was present. No albumen or sugar in urine. There was noticed to be pigmentation of the skin and of the mucous membrane of the mouth. This combined, with the great prostration, would justify a diagnosis of Addison's disease, possibly associated with tuberculous deposit in the brain. The patient had a second attack of coma, in which she died. No *post-mortem* examination. (3) A woman, aged 53, complained on July 10th, 1896, of severe pain at the back of the head. No vomiting and no optic neuritis. After a week she began to have a staggering gait, and moved about with her eyes half shut. Her memory failed, and she neglected her dress and person. She became somnolent and took to her bed. Towards the end of August slight weakness of the right hand was observed, and optic neuritis was detected. A diagnosis of cerebral tumour in the left arm centre was made. She was trephined on September 10th over the left Rolandic area. The brain bulged but no tumour was found. A trocar was inserted into the lateral ventricle and a quantity of fluid evacuated. The patient died twelve hours after the operation. At the *post-mortem* examination a tumour the size of a walnut was found in the left frontal lobe. The tumour was a glioma and was not multiple. An erroneous diagnosis as to the position of the tumour was founded on the paresis of the right hand. Similar cases had been described by Bruns and Ferrier.

—Mr. J. PHILLIPS read notes on a case of perforating dysenteric ulcer of colon with complications.

A woman, aged 32, was admitted to the Bradford Royal Infirmary, under the care of Mr. Althorp, with sinuses in the right loin. There was a history of influenza twelve months before, followed by "inflammation of bowels" eight months before the latter illness, causing her to keep her bed for two or three months, and was followed by right-sided pleurisy. Two months later a lump formed in the right loin, which was opened and had discharged ever since. The largest of three sinuses in the loin admitted the finger, which passed up under the diaphragm. Chest normal. Urine normal. On April 24th the sinuses were scraped, and a quantity of foul granulations removed. The sinus passed upwards and to the right, beyond the reach of the finger. Two days later, on removing the packing, egg and milk came from the wound. A duodenal perforation was diagnosed, and an anterior gastro-enterostomy performed, but the patient died of pneumonia two days later. Necropsy: On removing the colon, pus was found burrowing up behind the ascending colon to the subphrenic cavity, which was bounded above by the diaphragm, below and in front by the liver, and on the inner side by the kidney and duodenum. In the latter was an aperture admitting two fingers. The diaphragm was perforated, and the lower lobe of the right lung in a condition of septic pneumonia. The retro-colic pus was due to perforation of two small ulcers just above the cæcum.

The case appeared to be one of dysentery with perforation of a colic ulcer, followed by right subphrenic abscess, and last by perforation of the abscess through the diaphragm and duodenum.—Dr. BAXTER TYRIE read notes on some cases of empyema.

THE King of Italy has *motu proprio* conferred the Grand Cordon of the Order of SS. Maurice and Lazarus on Professor Ottavio Morisani of Naples, who officiated as accoucheur at the recent confinement of the Queen of Italy. Professor Morisani's name is well known in the medical world owing to the prominent taken by him in the revival of the operation of symphysiotomy.

JOHNS HOPKINS UNIVERSITY.—Professor Ira Remsen has been elected President of the Johns Hopkins University, Baltimore, in succession to Dr. Daniel C. Gilman, who resigned recently. Professor Remsen, who was born in 1846, is a graduate of the College of Physicians and Surgeons, New York. He has also received the degree of Ph.D. from the University of Göttingen, and that of LL.D. from Columbia and Princeton. He was Professor of Chemistry at Williams College from 1872 to 1876, when he was called to the same chair in the Johns Hopkins University.

# REVIEWS.

## NEUROLOGICAL WORKS.

### Clinical.

Professor Oppenheim's work on *Myasthenic Paralysis or Bulbar Paralysis without Anatomical Changes*[1] is an interesting and valuable monograph on a disease which has attracted considerable attention of late. In this country it is usually known by Jolly's synonym "Myasthenia gravis pseudo-paralytica." Professor Oppenheim adopts the longer title in order to emphasise the fact that the disease has no morbid anatomy. It is worthy of mention that Sir Samuel Wilks described the first case on record as "bulbar paralysis without anatomical changes." The characteristics of myasthenic paralysis, according to Oppenheim, are: The combination of bulbar symptoms with incomplete ophthalmoplegia externa, and weakness of the muscles of the trunk and extremities; an onset neither sudden nor acute but mostly gradual and progressive; marked weakness of the muscles of deglutition and palpebral muscles, with frequent involvement of the cervical musculature. It is a purely motor affection, with general muscular weakness rather than paralysis of single muscles. There is absence of muscular atrophy and of corresponding changes in electrical reactions. Finally, there is the characteristic myasthenic reaction to faradism. The duration of the disease varies from five to six weeks to fifteen years. It may occur at any age from infancy up to sixty years. It may be mentioned, however, that the genuineness of some cases recorded in early childhood, and also that of cases of unusually short duration are open to question. Females and males are attacked in the proportion of 3 to 2. The etiology of the affection is fully discussed. In a number of instances no apparent cause can be discovered. Influenza, typhus fever, erysipelas, diphtheria, pneumonia, malaria, tuberculosis, alcoholism, difficult labour, overwork, and masturbation have all preceded its onset. But the author, justly we think, concludes that such diseases and conditions are not strictly causes of myasthenic paralysis, but only draw attention to or aggravate symptoms of the disease hitherto unnoticed. He believes that a congenital deficiency of the lower motor neurons from their central ganglia to their termination in the muscles, explains the phenomena. In favour of this view he adduces the strongly-marked neurotic family history which obtains, the tendency to congenital malformations, and also to other nervous affections, such as Graves's disease and migraine, in the patients themselves. The view more generally held is that myasthenic paralysis is dependent upon some obscure toxæmia, though at present little evidence of such a cause is forthcoming. The differential diagnosis is fully and completely given, and it is stated that of the 58 cases recorded 26 ended fatally. Treatment is extremely unsatisfactory. Beyond securing for the patients mental and physical rest there is little or nothing to be done. Galvanism, he thinks, may do good, and cannot do harm. Massage, diaphoresis, and hydrotherapy may possibly be of service.

Dr. Cree, as the result of his study of the tabetic arthropathies, arrives at two main conclusions, which, together with the evidence on which they are based, he has embodied in a small book.[2] The first conclusion is that the joint changes which are characteristic of what are usually known in this country as Charcot's joints are not actually the result of the disease tabes dorsalis, but are due to more general pathological changes in the central nervous system, of which the clinical entity we call locomotor ataxia is itself the product. The other main conclusion is that the changes of tissue nutrition manifested in tabes dorsalis and in other allied diseases are due, not, as is more usually believed, to a disturbance of the vasomotor influence, but to interference with the function of special trophic nerves. In support of these ideas he makes copious extracts from the writings of many French neurologists and others, using their premisses, in not a few instances, to controvert their own conclusions. The author would have us believe that the joint changes of tabes dorsalis correspond in their essential causation with those of syringomyelia, rheumatism, rickets, osteomalacia, and with the more diffuse changes of osteitis deformans, myositis ossificans, acromegaly, and scleroderma. Parenthetically he remarks that the real cause of tabes is in his opinion nothing else than nervous heredity, and that syphilis, like lead or ergot, is merely a favouring influence in causing the disease in predisposed subjects. The part of the sympathetic system in tabes, he argues, is a nutritive one, maintaining that the special trophic fibres concerned pass out from the cord both by the anterior and posterior nerve roots along with the vasomotor fibres, but quite distinct alike from them and from the motor and sensory fibres. Although the main argument is highly ingenious, it is far from convincing; and while we cannot admit that the author has proved the propositions he assumes, yet we gladly acknowledge that his pamphlet is of value in being highly provocative of thought.

About seven-eighths of Dr. Hinshelwood's *Letter, Word, and Mind Blindness*[3] has already appeared in print in the columns of our respected contemporary the *Lancet*. We are not prepared to say that it does not contain anything new on the theoretical side of its subject, but it contains several new clinical cases of real value. Although it cannot, of course, be compared with the exhaustive book recently given to us by Dr. Charlton Bastian, yet, because it is elementary as well as clear and accurate, it will probably be, in its comparatively limited field, of more immediate service to those in active general practice, who are interested in the subject of aphasia and associated speech defects, than that monumental work itself. To give an example of its quality we quote the following from a chapter on mind blindness, in which it is compared with what we may call sight blindness, that, namely, due to defects of the visual perceptive centres in the occipital lobes.

> But the act of vision is infinitely more complex than the simple perception of an object as occupying a particular position in the visual field. It involves complex judgments, and, above all, a constant comparison of present visual impressions with the vast series of past visual impressions, the accumulated riches of our life experience which are stored up in a special cerebral area, the visual memory centre, occupying the supramarginal and angular gyri. Derangements of this centre are evidenced by the various forms of mind blindness.

By way of negative criticism we would remark that the value of the book is not increased by the substantial repetition of this excellent statement of the case on two other of its pages. In future editions a more complete index would be in keeping with the real merit of the book. Its peculiar worth to the specialist depends on its new clinical cases, to the general practitioner on its simple and accurate exposition of an extremely difficult subject.

Professor Oppenheim embodies in this pamphlet on Neuropathy and Education[4] the substance of a lecture delivered before the Psychological Society of Berlin dealing with the important subject of the neuropathic condition in children, and the special points to be looked after in their education. He lays down a scheme of treatment under the headings of diet, bodily and mental hygiene, and special methods of education to be pursued. Neurotic children show a special irritability, an undue intolerance of noise and sport, an undue dislike of slight discomforts, and a tendency towards solitude. Healthy children are generally free from such traits. The teacher should try to cultivate in the child a more robust and tolerant spirit, he should be made to take exercise freely in the open air, and should have, if possible, the advantages of a country life. The neurotic child is easily exhausted by intellectual work and requires an ample amount of sleep for recuperation of brain energy. The baneful effects of masturbation are emphasised, and the importance of selecting healthy literature, of the class which teaches facts and enforces the value of action, is insisted on: all emotional and morbid literature should be eschewed. Overwork at school for temporary distinction is a will-o'-the-wisp. With puberty and adolescence there arise greater

[1] *Die myasthenische Paralyse. Bulbar Paralyse ohne anatomischen Befund.* By Dr. H. Oppenheim in Berlin. London: Williams and Norgate. 1901. (Roy. 8vo, pp. 172, 3 plates, 4 illustrations. 6s.)

[2] *Étude des Arthropathies Tabétiques et de l'Influence des Nerfs Trophiques sur la Nutrition* [A Study of the Tabetic Arthropathies and the Influence of Trophic Nerves on Nutrition]. Par J. A. Cree, M.B. Paris: Vigot Frères. 1899. (Royal 8vo, pp. 102.)

[3] *Letter, Word, and Mind Blindness.* By James Hinshelwood, M.A., M.D., F.F.P.S.G. London: H. K. Lewis. 1900. (Crown 8vo, pp. 88. 2s.)

[4] *Nervenleiden und Erziehung* [Neuropathy and Education]. Von Professor H. Oppenheim. Berlin: S. Karger. 1899. (Royal 8vo, pp. 56. M.1.20.)

dangers, requiring greater care and guidance as regards mental and moral training. The remarks are on the whole sound and judicious, and display no little practical wisdom.

Dr. Joseph Collins, of New York, has attempted in his *Treatment of Diseases of the Nervous System*[5] to give a comprehensive and detailed account of the treatment of nervous disorders. That a work dealing with the principles and details of treatment has been long needed there can be no question. In the preparation of the work Dr. Collins has endeavoured to keep in mind the needs of the general practitioner, and to set forth clearly and adequately the most approved current methods of treating nervous diseases. In the ordinary text-books of nervous diseases diet, massage, hydrotherapy, rest and exercise, and electricity, as well as the administration of drugs are briefly discussed, and these methods have been treated in the present work with more practical detail in the first 135 pages. A brief account of psychotherapy (suggestion, hypnotic treatment) follows. The various organic and functional diseases are next taken up. Thus we have details for the treatment of meningitis and encephalitis in their various forms, of multiple sclerosis, of cerebral tumours and apoplexy, of aphasia, of the various ataxias (congenital and acquired), of acute and chronic myelitis, of the muscular atrophies and dystrophies, of the various palsies and neuralgias, of functional neuroses like neurasthenia and hysteria, and of various other focal or system diseases. There is much instructive matter in these chapters, though a great deal of repetition is unavoidable. Prescriptions are often given in full, which is a decided advantage for practitioners called upon to treat cases. An index of 10 pages makes reference easy, though it might be enlarged with advantage. The text, on the other hand, has a fair amount of matter which would well bear pruning. Dr. Collins has written a useful book, one for reference rather than for reading. The style is somewhat dull and lacking in smoothness and facility of language. We may single out for special mention the very practical descriptions of the treatment of tabes and of neurasthenia as examples of the author's best, and the meagre account of the treatment of occupation neuroses as a contribution which does not reach even mediocrity. Such inequalities are bound to occur in the first edition of a work, which seems also to bear in some parts evidences of incomplete supervision and care in compilation.

Dr. Letchworth's book on the insane established his reputation as a painstaking compiler of information with regard to institutions, and his present volume on the *Care and Treatment of Epileptics*[6] will do much to increase it. It must not, however, be thought that the book is merely a compilation, for it contains much thoughtful and discriminating comment upon the condition of the epileptic in relation not only to medical treatment, but to his claims upon society at large. The characteristics of epilepsy are set forth in the words of Drs. Peterson, Wildermuth, and other medical authorities; its causation is discussed at some length, and much stress is laid upon the frequency of nervous heredity as a causative factor, 60 per cent. at least of the cases being traceable to "morbid hereditary tendencies." It is interesting to notice that though until recent years insanity has been less frequent amongst the coloured than amongst the white population of the States, the occurrence of epilepsy appears to be more frequent. From aggregating the statistics of various local populations in America, Dr. Letchworth concludes that the ratio of epileptics to population is about 2 per 1,000, which is somewhat in excess of the estimates made by local authorities in Belgium and Germany, which represent it at from 1 to 1.5 per 1,000. In Italy, however, the ratio is given by Hirsch as 2.4 per 1,000. In England it has been calculated that there are at least 46,000 epileptics, in Scotland 6,000, and in Ireland 7,000. In five States only of the forty-five of the Union have State institutions exclusively for the use of epileptics been established. There are, indeed, many epileptic children in the State institutions for the feeble-minded, but it is coming to be recognised that these institutions do not meet the requirements for epileptics. The plan of the State co-operating with private benevolence (as in Germany) is advocated by the author as tending to the conduct of epileptic institutions on a "higher plane of disinterestedness" than when solely in the hands of State officials. The colony plan is set forth as the best for such institutions, and much valuable information is given as to the necessary conditions of site, organisation, construction, and management. The importance of appropriate education in the case of epileptic children is urged with considerable vigour, and the advantage of manual and industrial training, not only in view of a livelihood, but as a curative agent, is properly pointed out. Above all, work in the open air is eminently beneficial. The training of nurses and attendants is rightly regarded as a desirable function of the epileptic institution, moral agencies being an important part of treatment. As regards cost of maintenance, we observe that the author refers with some reserve (if not incredulity) to the assertion that epileptic colonies can be made nearly or quite self-supporting. However this may be, there can be no doubt that the segregation of epileptics from the ordinary population is a distinct social gain, for which the latter must be prepared to pay if need be. Full descriptions, with full-page illustrations, are given of the epileptic colonies established by the States of Ohio, New York (including the Craig Colony), Massachusetts, New Jersey, and Texas: and afterwards of the charitable foundations in Pennsylvania, Maryland, and Missouri. The mixed homes (for feeble-minded and epileptic children) in other States are also described: under this latter category Canada is briefly alluded to, the Ontario Asylum comprehending 140 epileptics amongst its imbecile inmates. The history of the movement in England for the care of epileptics is given in considerable detail, twenty pages being devoted to this branch of the subject. Continental institutions, including of course Laforce, Bielefeld, Wuhlgarten, occupy the closing chapters of the book, which we can cordially recommend as a comprehensive and lucid account of what has been done throughout the world for the benefit of epileptics.

The first part of the recent volume of *Clinical and Therapeutical Researches on Epilepsy, Hysteria, and Idiocy*[7] edited by M. Bourneville, is as usual statistical, and gives an account of the work done during 1898 at the Bicêtre and the Fondation Vallée. Dr. Bourneville again advocates the creation of special classes for backward and feeble-minded children who cannot be taught in the ordinary schools, and describes the arrangements that have been made for them in Switzerland, England, and Belgium. The second part of the book consists of thirteen essays. The first details the treatment of a case of chorea by increasing doses of bromide of camphor, the interesting point being that under this treatment rapid improvement took place. In the third an account is given of a case of double athetosis with chronic convulsive movements of the face. In the sixth two of Bourneville's assistants report the result of their inquiry into the condition of the pyramidal fibres in the bulb and spinal cord in 4 cases of infantile spasmodic contraction, the spasmodic rigidity of Little. In all the cases the pyramidal fibres were found to be normal. They are of opinion that the cause of the disease is more likely to be found in the ganglionic cells of the anterior horns of the spinal cord. The eighth essay gives an account of alcoholism in a child, aged 13 years, who drank daily a litre of beer or cider. Mental instability and moral imbecility followed, but the patient was cured by isolation and the medico-pedagogic treatment in use at the Bicêtre. In the last essay Bourneville gives his experience of the action of alcohol on the production of idiocy and epilepsy: 1,773 patients suffering from these diseases had been under his treatment, and of these the parents of 747 drank to excess. There are some excellent plates of brains from cases related in the

[5] *The Treatment of Diseases of the Nervous System: A Manual for Practitioners.* By Joseph Collins, M.D., Professor of Nervous and Mental Diseases in the New York Post-Graduate Medical School. Illustrated by 23 engravings. New York: William Wood and Co. 1900. (Imp. 8vo, pp. 602. Dols. 5.)

[6] *The Care and Treatment of Epileptics.* By W. P. Letchworth, LL.D. New York and London: G. P. Putnam's Sons. 1900. (Demy 8vo, pp. 246, 72 illustrations. 16s.)

[7] *Recherches Cliniques et Thérapeutiques sur l'Epilepsie, l'Hystérie, et l'Idiotie.* Par Bourneville, avec la collaboration de MM. Cestan, Chapotin, Katz, J. Noir, Philippe, Sebilleau et Boyer. Vol. xix. Paris: Felix Alcan. 1899. (Demy 8vo, pp. 322, 13 plates, and 13 figures. Frs.5.)

book, showing clearly the morbid conditions which had been described.

DRS. FLATAU and JACOBSOHN continue in the second issue of their annual summary[8] a work which must be regarded as indispensable to all original workers in neurology and psychiatry. The present bulky volume of 1400 pages is a veritable monument of Teutonic industry, only possible in a nation where such scientific work is largely a labour of love. It deals with the anatomy, physiology, pathological anatomy, and therapeutics of the nervous system. This occupies nearly 1,100 pages. The rest is devoted to the psychology, general etiology, and clinical characters of the insanities, to criminal anthropology, to forensic psychiatry, and to therapeutics of mental diseases. Valuable critical digests, and very exhaustive bibliographical lists are furnished of publications in every department of neurology and psychiatry published during the year 1898, and the accuracy and usefulness of the work are beyond praise.

### ANATOMICAL.

The number of works published recently dealing with the anatomy of the brain is a sign of the progress which has been made in this intricate study, but their very number make them somewhat embarrassing to the reviewer; in the case of some of those now to be mentioned, some apology is due to the authors for the late appearance of the notice.

The English translation of the first edition of Professor OBERSTEINER'S classical work (which was reviewed in the BRITISH MEDICAL JOURNAL of June 28th, 1890, p. 1487) was made by the Master of Downing from the first German edition. The volume now before us[9] is an instance of the appearance of an English translation of a foreign book before it had been published in its native country. For although this, the second English edition, has been translated from the third German edition, yet the author has sent to the translator for incorporation all the alterations and additions he had prepared for the fourth German edition. At this time of day it is quite unnecessary to dilate on the multitudinous excellencies of Dr. Obersteiner's monumental work or on the faithful translation and valuable additions to it by Dr. Alex Hill. Suffice it to say that the last German edition has been completely remodelled on neo-neurological lines and many fresh illustrations added. An indispensable requisite for such a work as this—a copious index—has been supplied.

Dr. EDINGER'S textbook of the *Anatomy of the Central Nervous System of Man and of Vertebrates*[10] has been long, and favourably known to neurologists as a work of originality clearness, and general excellence. The American translation of an earlier German edition had a widespread popularity. The present translation is as readable and smooth as its predecessors, and has the advantage of presenting the newer facts and discoveries made in the field of neurology and nervous anatomy. The opening chapters deal with historical facts, and with the fundamental conceptions of the ganglion cell and the central nervous organ, a lucid exposition occupying 44 pages being given of the subject. The part which follows this deals with the development and comparative anatomy of the brain and nervous system. Here within the scope of 130 pages we have a concise account of this important subject. It must be remembered that this is a field in which Edinger has worked for many years, and which he has himself enriched with many original contributions. The subject is presented with the insight and easy mastery of subject characteristic of the thinker and original worker, and it is safe to say that this part will remain a classic for a long time. For the reader who wishes to gain a sound insight into the significance and developmental history of the pallium, basal ganglia, and other parts of the encephalon on broad and philosophic lines, a careful study of this portion of the work can be recommended. The remainder of the work deals with the human brain and spinal cord. The convolutions, tracts, and centres are all described with great clearness. Indeed the work, while partaking of the elaborateness of Kölliker and of Déjerine in some respects—for example, as regards the nature and connections of the centres and tracts in the basal ganglia and brain stem—yet manages in shorter space to condense a wonderful amount of information. The drawings are mostly original, and in sufficient abundance to add to the value of the text. The text is remarkably free from errors, except for an occasional wrong spelling of a proper name—for example, Viault for Vialet, Bevor for Beevor, etc. The only drawback in the body of the work is the absence of reference to original memoirs. With this reservation the work can be highly commended to the neurologist and to all students and investigators of the brain and nervous system. There is a good index. A sixth German edition just issued, and dated 1900, has a few additional illustrations, but apart from the addition of a few details on cytology and cutaneous nerve supply, is essentially the same as the previous edition.

The work of Mr. RYLAND WHITAKER on the *Anatomy of the Brain and Spinal Cord*[11] is cast in an essentially different mould. It is a small and unambitious work, compiled by the author while a student, and intended for the use of medical students. The revision and rewriting of the present edition is not satisfactory. The account of the tracts in the spinal cord cannot be accepted as sufficient; bare mention is made of the "comma tract," and none of the "oval field" of Flechsig or of Gombault and Philippe's zone. The relations of the tracts of Gowers and Lowenthal to one another are not correctly given. To the reader accustomed to the descriptions of Obersteiner, Quain, or Cunningham the reading of this work will cause some disappointment. The cortical localisation of hearing and touch (figured on Plate XIV), and the diagram below it cannot be commended on the score of accuracy. The best illustrations are those taken from Edinger, Obersteiner, Retzius, and Cajal. The book is a praiseworthy attempt, but its scientific standard and general accuracy are not high.

Professor R. H. WHITEHEAD'S book on the *Anatomy of the Brain*[12] is, he tells us, intended to furnish medical students with a clear, accurate, and concise account of the anatomy of the brain, and it may be conceded that these objects have been fairly well attained. For the sake of clearness minor details have, of set purpose, been excluded, as also have, as far as the author has found possible, subjects which are still matters of controversy. Yet, in view of the latter statement, it may be remarked that the author definitely locates the termination of the sensory pathway in that portion of the cortex which "practically" coincides with the motor cortex. This surely is yet controversial matter. The illustrations, many of which are derived from Edinger, van Gehuchten, or His, are, of course, in the main excellent. The book, no doubt, gives a clear and comparatively simple account of the structure of the central nervous system, and, in spite of considerable laxity of writing and much redundancy, it may be recommended. It contains a fair index.

The work on the *Nervous System and its Constituent Neurones*,[13] by Dr. LEWELLYS F. BARKER of the Johns Hopkins University, consists of an extension of a series of articles, which was begun in the *New York Medical Journal* in 1897, dealing

[8] *Jahresbericht über die Leistungen und Fortschritte auf dem Gebiete der Neurologie und Psychiatrie.* Herausgegeben von Dr. E. Flatau and Dr. L. Jacobsohn. II Jahrgang. Berlin. 1899. (Roy. 8vo, pp. 1406. 27s.)

[9] *The Anatomy of the Central Nervous Organs in Health and Disease.* By Professor Heinrich Obersteiner, of the University of Vienna. Translated by Alex Hill, M.A., M.D., Master of Downing College, Cambridge. Second edition. London: Charles Griffin and Co., Ltd. 1900. (Demy 8vo, pp. 566, 224 illustrations. 30s.)

[10] *The Anatomy of the Central Nervous System of Man and of Vertebrates.* By Ludwig Edinger, M.D. Translated from the 5th German edition by W. S. Hall, Ph.D., assisted by P. L. Holland, M.D., and E. P. Carlton, B.S. Philadelphia: The F. A. Davis Co. 1899. (Roy. 8vo, pp. 458; 258 illustrations. Dols. 3.)

[11] *Anatomy of the Brain and Spinal Cord.* By J. Ryland Whitaker, B.A., M.B.Lond., Lecturer on Anatomy, Surgeons' Hall, Edinburgh. Third Edition. Edinburgh: E. and S. Livingstone. 1899. (Cr. 8vo, pp. 222. 5s.)

*The Anatomy of the Brain.* By Richard H. Whitehead, M.D., Professor of Anatomy in the University of North Carolina. Philadelphia, New York, and Chicago: The F. A. Davis Company. 1900. (Roy. 8vo, pp. 96, 41 illustrations. Dol. 1.)

[13] *The Nervous System and its Constituent Neurones*, by Dr. Lewellys F. Barker, M.B., Associate Professor of Anatomy in the Johns Hopkins University. New York: D. Appleton and Co. 1899. (Roy. 8vo, pp 1122, 2 coloured plates, and 676 illustrations. 25s.)

with the main facts of the newer researches into the anatomy and physiology of the nervous system. The articles themselves form the introductory chapters, but the body of the book is absolutely new. The first section treats of the history of the development of the idea of the neuron (the term "neuron" being used as meaning a nerve cell with all its processes), from the time of Schwann and Purkinje to the time of Ramon y Cajal and van Gehuchten, and indeed up to the actual date of publication. The second section is concerned with the external form of the cell and its processes; the third with the internal structure of nerve cells, as for example elucidated by the now well-known Nissl's method; the fourth describes the development of the neurons in the central and peripheral nervous system; in the fifth, which is perhaps the most interesting, the question of the neuron as the unit in physiological and pathological processes is discussed. The degeneration and regeneration of neurons, the irritability of neurons, the direction of nervous conduction, the relation of trophic to nervous function, and the alterations which occur in the neurons as the result of the action of poisons, such as arsenic, phosphorus, strychnine, and tetanus toxin, and as the result of traumatism, are dealt with in order. The greater part of the book, however—its latter two-thirds—is devoted to what may be called the physiological anatomy of the nervous system, the grouping and chaining together of the neurons in a complex system, such as that of the higher animals and of man. The book as a whole—as it would appeal to the specialist—is wonderfully full and accurate, even the methods for the histological examination of neurons are excellently given; the best illustrations in modern literature are reproduced, and those which are original are clearly designed, beautifully executed, and distinctly illuminating. The book is rather to be consulted than read throughout. In parts it supposes a profound knowledge of the basal sciences of neurology; but if accurate, abundant, and recent information be desired on neurological points directly bearing on practical medicine, such as Dr. Sherrington's work on sensory skin fields, which suggested so much of the subsequent work on the same subject, on the question of cortical representation of movement and special sensation, or even on the more abstract matter of the functions of different nerve tracts, the practitioner can hardly do better than consult this book. No more accurate, full, and, apart from technical details, more generally understandable book on this important subject exists in the English language, or, as far as we are aware, in any other.

The production of a work with the title *The Gross and Minute Anatomy of the Central Nervous System*[14] demands at the present day exceptional qualifications. The remarkable epoch-making works of Ramon y Cajal, of Kölliker, of Edinger, and of Déjerine—both as textbooks and as monuments of original work—have raised the standard of neurological works very high, and it is practically useless for authors to give us anything but of the best in this department of science. Dr. GORDINIER'S work has all the advantage that American publications of the best kind have accustomed us to, namely, excellence of printing, paper, and illustrations, with the exception of the coloured drawings, which are poor in detail and lacking in instructiveness. Having conceded this much, the subject matter and its presentation demand notice. The work begins with a fairly accurate and concise account of the histological elements of the nervous system, and the first 185 pages deal with the minute anatomy of the spinal cord and bulb. This is followed by an account of the cerebellum (23 pages), the mid-brain (33 pages), and the region of the third ventricle (34 pages). The cerebral hemispheres are next dealt with as regards naked-eye anatomy, cortical histology, tracts and fibres of the white substance, blood supply and cortical localisation, to all of which 200 pages are devoted. Then follow brief accounts dealing with lesions of the rest of the encephalon and of the bulbo-spinal system, and the work concludes with a summary of the embryology and methods of technique of the nervous system. The work is thus wide in scope, and a certain amount of physiological teaching is incorporated with the text. There are no references in the text to original works or to the literature of the subject—an unfortunate omission for a work of any pretensions, and one which unfits it for the use of neurologists and advanced students. The work is more suitable for elementary reading, and may be recommended as a compendium of fair merit and of moderate usefulness for beginners.

We have received the second edition of Professor HASSE'S *Hand Atlas*,[15] the first edition of which was noticed in the BRITISH MEDICAL JOURNAL of April 20th, 1895. It is enlarged from 36 to 40 tables, and is said to be revised, but the plates are still severely anatomical; no overlapping of sensory fields is indicated, and no particular reference is made to the supply of nerve roots as distinguished from nerve trunks, while the prefrontal regions are still credited with being the motor areas for the trunk. On the whole, therefore, although this well-known atlas has many excelleneies, it cannot be considered quite up to date.

Dr. BYRON ROBINSON'S work on the *Abdominal Brain*,[16]—in other words, the solar plexus and its ganglia—is the work of a specialist in gynæcology, and an enthusiast in the study of the sympathetic nervous system. It is not a hasty production, but gives evidence of careful and patient study. It may be contended that in asserting that tabes dorsalis, epilepsy, progressive muscular atrophy, and insomnia are "diseases certainly or probably connected with the sympathetic nervous system" Dr. Robinson goes beyond the evidence of facts. There is much clinical guesswork and speculation in this work, but there is also much of interest—and a good deal of truth—in what he tells us concerning the rhythm and activities of the viscera—the stomach, liver, spleen, intestines, pelvic viscera, and genitals. On such subjects as vomiting, pregnancy, the menopause, constipation, enteralgia, and disorders of menstruation and of sexual life he has much to tell us that is of interest. The general treatment is discursive, and there is much unnecessary repetition. Yet one rises from the perusal of the book with a feeling of having received some knowledge of fresh facts and data, although by no means convinced of the author's thesis that the sympathetic nerves and centres are the *fons et origo* of so many ailments.

The needs of a handbook of neuro-histological technique giving useful and practical methods have been met by the publication of Dr. POLLACK'S work. In the present French edition[17] (translated by M. Jean Nicolaïdi) the text has been brought up to date. The methods of preparing and staining invented by Weigert and Golgi, Cox and Cajal, Ehrlich and Marchi, and others, are clearly detailed. The general remarks on the methods and processes employed are suggestive and full of information, and a concise but useful and up-to-date bibliography is appended. The present edition will be welcome to those who have not the English translation in their possession, as that work is now nearly four years old. Both translation and printing show clearness of topography and of meaning, and the little work has merits of a decided and practical character.

[14] *The Gross and Minute Anatomy of the Central Nervous System.* By H. C. Gordinier, A.M., M.D., Professor of Neurology in the Albany Medical College. London: Rebman, Limited. 1900. (Imp. 8vo, pp. 600, 48 plates, 213 illustrations (some in colours) 25s.)

[15] *Hand-Atlas der Hirn-und Rückenmarksnerven in ihren sensiblen und motorischen Gebieten.* [Hand Atlas of the Cerebral and Spinal Nerves in their Sensory and Motor Distribution.] Von Professor Dr. C. Hasse, Geb. Medicinalrath und Vorsteher der Kgl. Anatomie zu Breslau. Second edition. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1900. (Roy. 8vo, 40 tables. 12s. 9d.)

[16] *The Abdominal Brain and Automatic Visceral Ganglia.* By Byron Robinson, B.S., M.D., Professor of Gynecology and Abdominal Surgery, Chicago Post-graduate School, etc. Chicago: Clinic Publishing Company. 1899. (Demy 8vo, pp. 272. Dols.3.)

[17] *Préparation et Coloration du Système Nerveux.* Par B. Pollack. Traduit de l'Allemand par M. Jean Nicolaïdi. Paris: Georges Carré et C. Naud. 1900. (Demy 8vo, pp. xiv, 212. Fr.5.)

PASTEUR INSTITUTE, LILLE.—From the opening of the Pasteur Institute at Lille on February 15th, 1895, to January 1st, 1901, the total number of patients treated there has been 1,498. Of that number four have died of hydrophobia, and of these four one refused after a few inoculations to go on with the treatment. The total mortality rate, therefore, is 0.26 per cent.

# REPORTS AND ANALYSES

AND

# DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

## MEDICINAL AND DIETETIC PREPARATIONS.

*Albargin.*—Under this title Messrs. Meister, Lucius and Brüning (51, St. Mary Axe, E.C.) introduce an organic silver compound. It is a combination of silver and gelatose (a degradation product of gelatine). It is stated to contain 15 per cent. of silver, and we have confirmed this by analysis. As it contains a much larger proportion of silver than other preparations of a similar nature, less concentrated, and therefore thinner, solutions can be employed. It is claimed that on this account solutions of albargin readily penetrate into the folds and crevices of the urinary canal. It has been shown experimentally that the rate of dialysis of a solution of albargin is about five times that of a solution of protargol containing the same amount of silver. This points to the fact that the silver is combined with a smaller proteid molecule, and hence has greater penetrative power. Albargin is a yellow granular substance, and readily dissolves in cold water to form a neutral solution. As a rule, 0.2 per cent. aqueous solutions are employed; if symptoms of severe inflammation are present, however, 0.1 to 0.15 per cent. solutions are first used. A sample of tablets has also been received; each contains 0.2 gram.

*Cypridol.*—This preparation has been brought to our notice by Messrs. Wilcox, Jozeau, and Co., 49, Haymarket, S.W. It consists of an aseptic oil containing 1 per cent. of mercuric iodide in solution, and is claimed to be an advance, inasmuch as only very dilute solutions were hitherto obtainable. We cannot agree with this statement, however, for it is well known that a 2 per cent. solution of mercuric iodide in castor oil can be easily prepared. It may be noted that the odour and taste of cypridol are suggestive of castor oil. With regard to therapeutic advantages, it is claimed that when mercuric iodide is administered in this form the irritating properties of the drug are materially reduced, and the digestive organs and system generally experience no deleterious effects, such as are usual under prolonged treatment by mercuric iodide and other mercurial preparations. Cypridol is supplied in capsules, each containing 3 minims (about $\frac{1}{12}$ gr. mercuric iodide), and in tubes each containing 1 fluid drachm for hypodermic injection.

## MEDICAL AND SURGICAL APPLIANCES.

*The Sterilisation of Soft Catheters.*—We have received from Messrs. S. Maw, Son and Sons a communication with reference to the letter of Dr. J. MacMunn in the British Medical Journal of June 8th, p. 1449, in the course of which he recommended slitting open rubber catheters for cleaning, and also mentioned the fact that a soft rubber catheter is more easily introduced when made with an inside cannula to within 3 inches of the tip. Messrs. Maw state that they have supplied a catheter slit in the way recommended for the last ten years, and they have sent to us one of their original samples. The specimen is a soft rubber catheter slit to within an inch of the tip, and with a terminal opening. Though the idea is the same, we note that Dr. MacMunn in his letter laid stress on the importance of a solid extremity; the terminal inch of Messrs. Maw's catheter being closed makes the instrument less easily cleaned mechanically than one solid at the extremity and slit right to its lateral opening. Messrs. Maw also send a rubber catheter into the proximal half of which a fine elastic gum cannula is fixed. We have tested the utility of the device, and find that it affords increased facility in handling; the inner surface of the cannula is, however, rough, and it will not stand boiling. If a cannula is used, it appears to us necessary that it should be made of a material which will stand sterilisation by heat, otherwise one of the great advantages of the soft rubber catheter is gone. Messrs. Maw state that the inside cannula was suggested to them by Sir Thomas Smith.

# BRITISH MEDICAL ASSOCIATION.

## SIXTY-NINTH ANNUAL MEETING.

The sixty-ninth annual meeting of the British Medical Association will be held at Cheltenham on Tuesday, Wednesday, Thursday, and Friday, July 30th, 31st, August 1st, and 2nd, 1901.

*President:* William Alfred Elliston, M.D., Consulting Surgeon to the East Suffolk and Ipswich Hospital.

*President-Elect:* George Bagot Ferguson, M.D., Senior Surgeon to the Cheltenham Hospital.

*President of the Council:* John Roberts Thomson, M.D., F.R.C.P.Lond., Consulting Physician to the Royal Victoria Hospital and to the National Sanatorium for Diseases of the Chest, Bournemouth.

*Treasurer:* Andrew Clark, F.R.C.S., Surgeon to the Middlesex Hospital and Lecturer on the Principles and Practice of Surgery, Middlesex Hospital School.

An Address in Medicine will be delivered by James Frederick Goodhart, M.D., LL.D., Consulting Physician, Guy's Hospital.

An Address in Surgery will be delivered by Sir William Thomson, C.B., M.D., F.R.C.S.I., Surgeon to the Richmond Surgical Hospital, and Honorary Surgeon to His Majesty the King in Ireland.

The Scientific Business of the Meeting will be conducted in thirteen Sections, as follows, namely:

### A.—Medicine.

*Ladies' College: Education Room.*

*President:* Edward Thomas Wilson, M.B., F.R.C.P. *Vice-Presidents:* Rayner W. Batten, M.D., F.R.C.P.; Samuel West, M.D., F.R.C.P.; Oscar Clark, M.B. *Honorary Secretaries:* Robert Kirkland, M.B., 5, Crescent Terrace, Cheltenham; Frederick John Smith, M.D., F.R.C.P., 138, Harley Street, W.

The following discussions have been arranged:

Wednesday, July 31st.—Chronic Diseases of Joints commonly included in the terms Chronic Rheumatism, Osteo-arthritis, and Rheumatic Gout. To be opened by Dr. A. E. Garrod. The following will take part in the discussion: Professor Osler, Dr. A. P. Luff, Dr. Herringham, Dr. Hawthorne, Dr. Calwell, Miss J. Cock, M.D., Dr. E. J. Cave, Dr. L. Knowsley Sibley, Dr. Sarat K. Mullick, and Dr. Armstrong.

Thursday, August 1st.—Peripheral Neuritis in Beer Drinkers, its Precise Causation and Diagnosis. To be opened by Dr. E. S. Reynolds; to be illustrated with lantern slides of cases. The following gentlemen will take part in the discussion: Professor Dixon Mann, Dr. A. P. Luff, Dr. Kelynack, Dr. Michell Clarke, Dr. Nathan Raw, and Dr. Henry Waldo.

The following papers have been announced:

Bampton, A. H., M.D. Arsenic as a Blood Tonic: its Failure as demonstrated during the late Epidemic amongst Beer Drinkers.
Bardswell, Noel, M.D. Clinical and Experimental Observations on the Effects of Forced Feeding in Normal and Tuberculous People.
Campbell, Harry, M.D. Treatment of Bronchitis.
Campbell, H. J., M.D. The Treatment of Cardio-arterial Disease.
Caton, Richard, M.D. The Means of Arresting Acute Endocarditis.
Chowry-Muthu, D. J. A., M.D. The Presence of Tubercle Bacilli in Cases of Phthisis.
Ewart, William, M.D. 1. A Preliminary Note on Intravenous Injection of Protargol in Acute Pneumonia, with General Remarks on the "Silver" Treatment of Pneumonia. 2. A Note on a Method for the Surgical Treatment of Tuberculous Meningitis.
Hawthorne, C. O., M.D. Occurrence of Optic Neuritis in Anæmia.
Jones, E. Lloyd, M.D. On the Physical Examination of the Pulmonary Apices.
Low, W. Stuart, L.R.C.P. Mucin in Gastro-intestinal Irritation and Ulceration.
Luff, A. P., M.D. On the Composition and Therapeutic Uses of the Cheltenham Waters.
Mullick, Sarat K., M.B. Factors in the Diagnosis of Disease.
Oldfield, Josiah, L.R.C.P. Dietary and the Use of Oil in Chronic Constipation.
Raw, Nathan, M.D. Pneumococcic Arthritis, with Reference to Seven Cases.
Rist, Dr. (Paris). On the Bacteriology of Fœtid and Gangrenous Suppuration, which will be illustrated with microscopic slides and agar culture tubes.
Thomson, StClair, M.D. Meningitis from Sphenoidal Suppuration, Two Cases with One Necropsy.
Williams, Chisholm, L.R.C.P. High Frequency Electrical Currents in the Treatment of Pulmonary Tuberculosis.

Three tubes sent by Professor Dixon Mann will be exhibited, showing under the microscope arsenical crystals from (1) horny scales due to hyperkeratosis of the epiderm, (2) from hair, (3) from nail clippings. All from cases suffering from arsenical beer poisoning.

### B.—Surgery.

*Ladies' College: Division III.*

*President:* Reginald Harrison, F.R.C.S. *Vice-Presidents:* Henry Edward Waddy, M.R.C.S.; Gilbert Barling, F.R.C.S.; William Robert Buckell, F.R.C.S. *Honorary Secretaries:* Frederick William Storry, M.R.C.S., Dirleton House, Stroud, Gloucester; Herbert Bramwell, M.D., F.R.C.S.Edin., 32, Promenade, Cheltenham; John Murray, F.R.C.S., 110, Harley Street, W.

The following discussions have been arranged:

1. Renal Tension; its Treatment by Surgical Means. To be opened by Mr. Reginald Harrison, F.R.C.S. The following gentlemen will take part in the discussion: Mr. W. D. Spanton, F.R.C.S., Dr. David Newman, and Dr. J. Ward Cousins, F.R.C.S.

2. Gastro-jejunostomy in Ulcer of the Stomach and Duodenum and Pyloric Stenosis. To be opened by Mr. Gilbert Barling, F.R.C.S. The following gentlemen will take part in the discussion: Mr. A. W. Mayo Robson, F.R.C.S, Mr. George Heaton, F.R.C.S., Mr. Thomas Sinclair, F.R.C.S., Mr. B. G. A. Moynihan, F.R.C.S., Mr. L. A. Bidwell, F.R.C.S., Mr. Sinclair White, F.R.C.S., Mr. A. B. Mitchell, F.R.C.S.I., Mr. F. C. Wallis, F.R.C.S., Mr. C. A. Morton, F.R.C.S., Mr. J. Rutherford Morison, F.R.C.S., Dr. J. Ward Cousins, F.R.C.S., and Mr. J. Lynn Thomas, F.R.C.S.

3. Injuries of Joints, with special Reference to their immediate and Remote Treatment by Massage and Movement. To be opened by Mr. Howard Marsh, F.R.C.S. The following gentlemen will take part in the discussion: Mr. R. H. Anglin Whitelocke, F.R.C.S., Mr. T. V. Jackson, F.R.C.S.E., Mr. F. F. Burghard, F.R.C.S., Mr. W. H. Brown, F.R.C.S.I., Mr. J. Jackson Clarke, F.R.C.S., and Dr. J. Ward Cousins, F.R.C.S.

The following papers have been announced:

Beatson, Geo. T., M.D. The Treatment of Cancer of the Breast by Oöphorectomy and Thyroid Extract.

Bramwell, Herbert, F.R.C.S.Edin. Short notes on a case of Movable Kidney producing Pyloric Stenosis and Constriction of the Duodenum by Peritoneal Bands, with specimen.

Burghard, F. F., F.R.C.S. The Treatment, Operative and Non-operative, of Congenital Dislocation of the Hip.

Dunbar, Eliza Walker, M.D. The Reduction of Old Dislocations, illustrated by two cases of five and six years' standing.

Ferguson, G. B., M.D. Four Operations for Perforated Gastric Ulcer.

Heaton, G., F.R.C.S. A case of Partial Excision of the Pancreas for Multilocular Cystic Tumour.

Hutchinson, J., jun., F.R.C.S. Recent Improvements in the Operative Treatment of Renal Calculus.

Morison, J. Rutherford, F.R.C.S. The After-history of a series of cases of Gastric Ulcer and Pyloric Stenosis treated by Pyloroplasty.

Newman, David, M.D., F.R.C.S. The Symptomatology and Surgical Treatment of Movable Kidney.

Parry, R. H., F.R.C.S. On Operation for Femoral Hernia.

Whitelocke, A. H. Anglin, F.R.C.S. A Case of Hydatid of the Right Pleura successfully treated by Operation.

### C.—Obstetrics and Gynæcology.

*Ladies' College: Nos. 1 and 2.*

*President:* Professor John William Byers, M.D. *Vice-Presidents:* Alfred Square Cooke, M.R.C.S.; William Duncan, M.D. *Honorary Secretaries:* Miss Eveline A. Cargill, M.D., Lansdown Lodge, Lansdown Road, Cheltenham; Comyns Berkeley, M.D., 53, Wimpole Street, W.

The following discussions have been arranged:

1. The Causation, Prevention, and Treatment of Miscarriage. To be opened by Dr. Peter Horrocks. The following gentlemen will take part in the discussion: Dr. Hellier, Dr. Munro Kerr, Dr. A. E. Aust Lawrence, Dr. A. V. Macan, Dr. Alfred J. Smith, Dr. W. J. Smyly, Dr. John Williams, Dr. Thomas Wilson, Dr. Halliday Croom, Dr. Alexander Dempsey, Dr. Fred Edge, Mr. G. A. Hawkins-Ambler, Dr. Lycett, Dr. Robert P. R. Lyle, Dr. McCall and Dr. J. Dysart McCaw.

2. The Diagnosis and Treatment of Metritis and its Relationship to Malignant Disease. To be opened by Dr. John Campbell, F.R.C.S. The following will take part in the discussion: Dr. Mary Scharlieb, Dr. Herbert Snow, Dr. Hellier, Dr. Munro Kerr, Dr. A. E. Aust Lawrence, Dr. A. V. Macan, Dr. Alfred J. Smith, Dr. W. J. Smyly, Dr. Thomas Wilson, Dr. Inglis Parsons, Dr. James Murphy, and Dr. C. E. Purslow.

The following papers have been announced:

Boyd, Mrs. F., M.D. A Case of Twin Pregnancy, Extrauterine and Intrauterine.

Croom, Halliday, M.D. Deciduoma Malignum.

Duncan, W., M.D. The Treatment of Pregnancy and Labour Complicated by Pelvic Obstruction.

Hastings, Gilford, F.R.C.S.Ed. Ovarian Pregnancy.

Haultain, F. W. N., M.D. The Reduction of Chronic Uterine Inversion by Abdominal Hysterectomy, with a Successful Case.

Hawkins-Ambler, G. A., F.R.C.S. On Shock in Abdominal Operations.

Hellier, J. B., M.D. (Title not received.)

Horrocks, P., M.D., will show a Specimen with Microscopic Sections of Deciduoma Malignum.

Kerr, Munro, M.B. Notes on Three Successful Cases of Cæsarean Section.

Lockyer, C. H. J., M.D. A Case of Cystic Fibromyoma in a Single Woman of 23 years; Myomectomy, Recovery.

Martin, Christopher, F.R.C.S. On Extirpation of the Vagina and Uterus in Cases of Intractable Prolapse.

Murphy, James, M.D. Notes on Six Cases of Inversion of the Uterus.

Parsons, J. Inglis, M.D. Further Report on a New Operation for Prolapse of the Uterus with Notes of 40 Cases.

Scharlieb, Mrs. Mary, M.D. On Metritis.

Smith, Alfred J., M.B. A Successful Laparotomy for Abdominal Pregnancy with Removal of the Fœtus (full term), Placenta and Gestation sac *en masse*. The specimen will be shown.

Snow, Herbert, M.D. Prevention in Gynæcology.

### D.—State Medicine.

*Ladies' College: Cambridge Room.*

*President:* Shirley Murphy, M.R.C.S. *Vice-Presidents:* George Haynes Fosbroke, D.P.H.; Archibald Kerr Chalmers, M.D. *Honorary Secretaries:* John Henry Garrett, M.D., 24, Promenade, Cheltenham; John Charles Jackson, D.P.H., Town Hall, Fulham, S.W.

The following discussions have been arranged:

Wednesday, July 31st.—The Relation between County and District Sanitary Administrations. To be opened by Dr. F. T. Bond. The following gentlemen will take part in the discussion: Dr. Handford, Dr. Lloyd Roberts, Dr. De'Ath, Dr. Tubb Thomas, and Dr. Fosbroke.

Thursday, August 1st.—Enteric Fever in its Public Health Aspects. To be opened by Dr. Houston. The following gentlemen will take part in the discussion: Dr. C. H. W. Parkinson, Dr. E. M. Smith, and others.

Papers have been promised by Dr. Savage, Dr. W. Brown, Dr. Bryett, Dr. Kenwood, Dr. Priestley, Dr. Handford, Dr. Cooper-Pattin, and Dr. Dixey.

Friday, August 2nd.—The Diseases of Occupations. To be opened by Dr. T. M. Legge.

Papers have been promised by Dr. T. Oliver, Dr. Reid, Dr. Murray, Dr. Dearden, Dr. D'Arcy Ellis, Dr. Haworth, Dr. Greavee, Dr. Prosser White, Dr. H. H. Scott, and Dr. Clayton.

The following papers have also been announced:

Adams, P. Targett, M.R.C.S. Port Sanitary Administration and Control of Plague.

Beardmore, Russell, M.D. (Title not received.)

Dhingra, M.L., M.D. The Fallacy of the Permanganate Disinfection of Wells.

Macleod, H. G., M.D. The Neglect of Sanitation in Everyday Life.

### E.—Psychological Medicine.

*Ladies' College: No. 5.*

*President:* James Beveridge Spence, M.D. *Vice-Presidents:* James Greig Soutar, M.B.; James Chambers, M.D. *Honorary Secretaries:* Maurice Craig, M.D., Bethlem Royal Hospital, Lambeth Road, S.E.; Arthur Allen Deykin Townsend, M.R.C.S., Barnwood House, Gloucester.

The following discussions have been arranged:

Wednesday, July 31st.—The *Rôle* of Toxic Action in the Pathogenesis of Insanity. To be opened by Dr. Ford Robertson.

Thursday, August 1st.—Puerperal Insanity. To be opened by Dr. Robert Jones.

Friday, August 2nd.—Feeble-Minded Children: Diagnosis and Treatment. To be opened by Dr. Francis Warner.

The following will take part in the discussions: Dr. David Bower, Dr. Shuttleworth, Dr. Outterson Wood, Dr. Fletcher Beach, Dr. Handfield Haslett, Dr. Nathan Raw, Dr. Soutar, Dr. Robert Jones, Dr. Edwin Goodall, Dr. Edridge-Green, Dr. Weatherly, Dr. Seymour Tuke, Dr. A. Helen Boyle, and Dr. Pasmore.

The following papers have been announced:

ANDRIEZEN, Lloyd, M.D. The Psychology of the Degenerate with Remarks on Treatment.
EDRIDGE-GREEN, F. W., M.D. The Evolution of a Perception Centre.
GOODALL, Edwin, M.D. (for Drs. GOODALL and PEERS MACLULICH). Remarks upon the Anthropological Examination of Asylum Patients with a Scheme for same, and the Average Results of Examination of Twenty-seven Control Cases.
SCHOFIELD, A., M.D. Some Conditions of Success in the Treatment of Neurosthenia.
SHAW, CLAYE, M.D. Colitis or Asylum Dysentery.
STEEN, R. H., M.D. Debated Points in Asylum Plans.
TUKE, Seymour, M.B. Modern Treatment of the Insane.
TURNER, John, M.B. The Physical Basis of Melancholia.
WEATHERLY, L., M.D. The Evolution of Delusions in Melancholia.

## F.—ANATOMY AND PHYSIOLOGY.

*Ladies' College: No. 10.*

*President:* Professor ALEX. MACALISTER, M.D., F.R.S. *Vice-Presidents:* THOMAS SMITH ELLIS, M.R.C.S.; WILLIAM HENRY THOMPSON, M.D., F.R.C.S. *Honorary Secretaries:* ERNEST CHRISTISON CARTER, M.D., Napier House, Pittville Gates, Cheltenham; RICHARD JAMES ARTHUR BERRY, M.D., F.R.S.E., 4, Howard Place, Edinburgh.

The following discussions have been arranged:

1. The Topographical Anatomy of the Thoracic and Abdominal Viscera from a Systematic and Clinical Standpoint. To be opened by Professor Christopher Addison.

2. Experimental Glycosuria. To be opened by Dr. F. W. Pavy, F.R.S. The following gentlemen will take part in the discussion: Professor Vaughan Harley, M.D., Professor W. H. Thompson, M.D., F.R.C.S., Dr. A. P. Luff, Dr. R. Hutchison, etc.

The following papers have been announced:

EDINGTON, G. H., M.D. A Short Account of a Specimen in which Bilateral Deviation of the Internal Carotid Artery was present.
EDRIDGE-GREEN, F. W., M.D. On the Function of the Rods and Cones of the Retina.
ELLIS, T. S., M.R.C.S. The Physiology of the Lower Limb and the Military March.
SHERRINGTON, Professor C. S. (Title not yet received).

## G.—PATHOLOGY AND BACTERIOLOGY.

*Ladies' College: Oxford Room.*

*President:* JOHN WICHENFORD WASHBOURN, M.D., F.R.C.P. *Vice-Presidents:* HAROLD J. STILES, M.B.; Professor RUBERT WILLIAM BOYCE, M.B. *Honorary Secretaries:* WALTER SYDNEY LAZARUS-BARLOW, M.D., Westminster Hospital, S.W.; EDGAR GEORGE TREVITHICK, M.D., 24, Promenade, Cheltenham.

The following discussions have been arranged:

Wednesday, July 31st.—The Pathology of Lymphadenoma. To be opened by Professor J. Michell Clarke, M.D.

Thursday, August 1st.—Pathological Conditions Caused by the Pneumococcus. To be opened by Mr. A. G. R. Foulerton, F.R.C.S.

The following papers have been announced:

DOUGLAS, J. J., M.D. Note on the arrangement of "Nissl Bodies."
EYRE, J. W., M.D. Further notes on Media of Standard Reaction.
FOULERTON, A. G. R., F.R.C.S., and HILLIER, W. F., L.R.C.P. Note on the Conditions of the Urine in Tuberculous Infections.
GLEY, Professor (Paris). Variations of Iodine in the Thyroid in Graves's Disease and Principally in the Blood after Removal of the Thyroid.
GOLDSMITH, G. Harvey, M.B. The Hæmoglobin Value of the Red Blood Corpuscles.
HUNTER, William, M.B. The Diagnosis of the Presence of B. Coli Communis by means of Neutral Red.
LAZARUS-BARLOW, W. S., M.D. Typhoid Fever without Intestinal Lesion.
LONGRIDGE, C. J. N., M.D. Focal Necroses of Liver.
NUTTALL, A. W., F.R.C.S., and HUNTER, W., M.B. The Bacteriology of Cerebro-spinal Meningitis.
POYNTON, F. J., M.D., and PAINE, A., M.D. The Bacteriology of Rheumatic Fever.
SOLLY, E., F.R.C.S. The Causation of Rheumatoid Arthritis.
STEEN, R. H., M.D. An Electrothermal Paraffin Bath. (Demonstration.)
SYMES, J. Odery, M.D. The Bacteriological Examination of the Blood.

## H.—OPHTHALMOLOGY.

*Ladies' College: No. 3.*

*President:* WALTER HAMILTON HYLTON JESSOP, M.B., F.R.C.S. *Vice-Presidents:* ERNEST DYKES BOWER, F.R.C.S.Ed.; JOHN TATHAM THOMPSON, M.B. *Honorary Secretaries:* RAYNER DERBY BATTEN, M.D., 124, Harley Street, W.; JOHN ALEX. BOWER, M.B., Portland House, Cheltenham.

The following discussions have been arranged:

1. The Diagnosis, Prognosis, and Treatment (Non-operative) of Progressive Myopia. To be opened by Mr. Priestley Smith, F.R.C.S.

2. The Relation of Gonorrhœa to Diseases of the Eye (exclusive of Purulent Ophthalmia). To be opened by Mr. J. B. Lawford, F.R.C.S.

3. The Varieties and Treatment of After-Cataract. To be opened by Mr. Richardson Cross, F.R.C.S.

The following will take part in the discussions: Dr. Landolt (Paris), Professor Nordensen, Mr. Henry Power, Mr. Quarry Silcock, Mr. D. Little, Mr. T. H. Bickerton, Mr. Simeon Snell, Mr. C. E. Shaw, Mr. Hugh Thompson, Mr. Kenneth Campbell, Mr. Reginald Yeld, Miss Ellaby, Mr. Karl Grossmann, Mr. Jno. Hern, Mr. R. S. Hamilton, Mr. A. S. Percival, and Mr. Doyne.

The following papers have been announced:

BLAIR, Charles, F.R.C.S. (1) An Unusual Form of Keratitis associated with a General Skin Eruption, with drawing. (2) A New Portable Refractometer.
DARIER, A., M.D. Paris. The latest Therapeutical Discoveries in Ophthalmology—Acoine, Dionine, Epinephrine, etc.
EDRIDGE-GREEN, F. W., F.R.C.S. The Essentials of a Test for Colour Blindness.
ELLABY, Charlotte, M.D. The Diagnostic Value of Certain Forms of Retinal Hæmorrhage, with cases and drawings.
FERGUS, Freeland, M.D. (1) Treatment of Hypopyon Ulcers. (2) Further Observations on Sympathetic Nerve Degenerations.
GROSSMAN, Karl, M.D. Ivory Exostosis of Orbit, observed for over sixteen years, and operated on in 1886, 1892, 1895, 1898.
HAMILTON, Robert J., F.R.C.S.Edin. Hypopyon Ulcers of the Cornea.
HERBERT, H., F.R.C.S., Major I.M.S. (1) Treatment of Hypopyon Ulcers of the Cornea. (2) Preliminary Note on a Form of Superficial Keratitis with a Special Micro-organism. With microscopic slides.
HERN, Jno., M.D., F.R.C.S.Ed. The Results of Peritomy in Cases of Keratitis and Episcleritis.
PERCIVAL, A. S., M.B. Periscopic Glasses.
WILLIAMS, Richard, M.R.C.S. Treatment of Ulcers with Hypopyon.

The Secretaries have received some promises of the loan of original drawings and pathological specimens, but would be glad of more, so as to render the exhibit more comprehensive.

## I.—DISEASES OF CHILDREN.

*Ladies' College: No. 4.*

*President:* FREDERIC EVE, F.R.C.S. *Vice-Presidents:* CHARLES FIRMIN CUTHBERT, M.R.C.S.; EDWARD MANSEL SYMPSON, M.D. *Honorary Secretaries:* A. GRAHAM FOLJAMBE FORSTER, M.D., 4, Imperial Square, Cheltenham; FREDERICK E. BATTEN, M.D., 124, Harley Street, W.

The following discussions have been arranged:

Wednesday, July 31st.—The Treatment of Intussusception. To be opened by Mr. Bernard Pitts, F.R.C.S. The following gentlemen will take part in the discussion: Dr. D. B. Lees, Mr. D'Arcy Power, Mr. McAdam Eccles, Mr. F. C. Abbott, Mr. Jordan Lloyd, and Mr. H. S. Collier.

Thursday, August 1st.—Early Diagnosis of Acute Specific Fevers. To be opened by Dr. F. Foord Caiger. The following gentlemen will take part in the discussion: Dr. E. W. Goodall, Dr. F. J. Poynton, and Dr. J. H. Thursfield.

The following papers have been announced:

ABBOTT, F. C., M.B., F.R.C.S. Intrauterine Rickets.
BATTEN, F. E., M.D. Suppurative Pericarditis in Children.
EWART, William, M.D., and DICKINSON, W. Lee, M.D. Two Cases of Chronic Hydrocephalus in Infants treated by Repeated Tappings and by the Introduction of Aseptic Air in the place of the Fluid.
HERRINGHAM, W. P., M.D. General Œdema without Albuminuria.
PRITCHARD, Eric, M.D. Overfeeding of Infants.
STILL, G. F., M.D. Suppurative Pericarditis in Children.
THURSFIELD, J. H., M.D. Widal's Serum Reaction in the Diagnosis of Typhoid Fever in Children.
TUBBY, A. H., M.B., F.R.C.S. Ultimate Results of Tendon Grafting.
WHITE, Sinclair, F.R.C.S. Ultimate results of Tendon Grafting in Infantile Paralysis.

## J.—LARYNGOLOGY AND OTOLOGY.

*Ladies' College: No. 9.*

*President:* T. MARK HOVELL, F.R.C.S.Edin. *Vice-Presidents:* ARTHUR WIGELSWORTH ORWIN, M.D.; ROBERT HENRY WOODS, M.B. *Honorary Secretaries:* WILLIAM LAMB, M.D., 22, Temple Row, Birmingham; JAMES CHRISTOPHER REGINALD BRAINE-HARTNELL, M.R.C.S., Cotswold Sanatorium, near Stroud.

The following discussions have been arranged:

1. The Treatment of Nasal Obstruction from Intranasal Causes other than Mucous Polypus. To be opened by Mr. F. Marsh, Dr. Brown Kelly, and Mr. C. A. Parker.

2. The Local Treatment of Tuberculosis of the Larynx. To be opened by Dr. Middlemass Hunt, Dr. Barclay Baron, and Mr. Richard Lake.

The following gentlemen will take part in the discussions: Professor Ferd. Massei (Naples), Dr. Watson Williams, Dr. Frederick Spicer, Dr. Charles Warden, Dr. L. H. Pegler, Dr.

Logan Turner, Dr. Adolph Bronner, Dr. Dundas Grant, Mr. G. P. Field and Dr. StClair Thomson.

The following papers have been announced:

Bronner, Adolph, M.D. Notes of a Case of Multiple Papillomata of the Larynx treated Locally by Formalin.
Collier, Mayo, M.S.Lond., F.R.C.S. Chronic Non-Suppurative Disease of the Middle Ear: its Causation and Treatment.
Grant, Dundas, M.D. Title not received.
Haring, N. C., M.B. Multiple Papillomata of the Larynx.
Lack, Lambert, M.D. The Removal of Tonsils in Adults.
Lamb, W., M.D. Notes of Two Cases, in which Hypertrophic Catarrh of the Larynx preceded the Development of Papillomata.
Mackenzie, Hunter, M.D., The Treatment of Laryngeal Growths in Children.
Mackie, Dr. (1) Practical Points in the Treatment of Nasal Suppuration, especially of the Accessory Sinuses. (2) Note on the Use of Ethyl Chloride as a General Anæsthetic in Nasal Surgery.
Milligan, W., M.D. Some Practical Points in connection with the Technique of Skin Grafting in Mastoid Operations.
Onodi, Professor. (1) Demonstration of Photographs of Preparations, showing the Relation of the Lower Laryngeal Nerves to the Cardiac and Sympathetic Nerves. (2) Case of Bone below the Glottis.
Spicer, Scanes, M.D. The Correction of certain cases of Nasal Deformity, such as Pug-nose and Sunken Bridge by the Subcutaneous Injection of Sterilised Vaseline.
Tilley, Herbert, M.D. (Title not received.)
Wingrave, Wyatt, M.D. Conditions simulating Adenoids.
Woods, R. H., M.B. A case of Thyrotomy for Laryngeal Tuberculosis.

A lantern demonstration with stereoscopic slides will be given by Dr. Watson Williams.

## K.—Tropical Diseases.

*Ladies' College: Calisthenic Room.*

*President:* Major Ronald Ross, F.R.C.S., F.R.S., I.M.S. (retired). *Vice-Presidents:* William Johnson Smith, F.R.C.S.; James Cantlie, F.R.C.S. *Honorary Secretaries:* Max F. Simon, M.D., C.M.G., 429, Strand, W.C.; John Francis Johns, M.D., 3, Lansdown Place, Cheltenham.

The following discussions have been arranged:

Wednesday, July 31st.—Stone in the Tropics. To be opened by Mr. P. J. Freyer.

Thursday, August 1st.—The Prevention of Malaria.

Friday, August 2nd.—The Maladies of European Children in Hot Climates. To be opened by Dr. A. Crombie.

On Wednesday the business will be introduced by a short address from the President, Major Ronald Ross, F.R.S.

The following gentlemen will take part in the discussions: Dr. Patrick Manson, Mr. James Cantlie, Dr. A. Crombie, Mr. P. J. Freyer, Dr. M. F. Simon, Dr. Edward Henderson, and others.

The following papers have been announced:

Annett, H. E., M.D. The Life-History of Ankylostoma Duodenale.
Buchanan, W. J., Major, I.M.S. A Further Note on the Etiology of Epidemic Cerebro-Spinal Meningitis.
Cantlie, James, F.R.C.S. The Consumption of Opium in Malarial Countries.
Duncan, Andrew, M.D. Tropical Typhoid.
Dutton, J. Everett, M.B. Some Points Connected with Human Filariasis.
Galloway, D. J., M.D. (Singapore). The Oral Condition in Sprue.
MacGregor, Sir William, K.C.M.G. Notes on Antimalarial Measures now being taken in Lagos.
Manwell, Preston, M.B. Filarial Abscess.
Maynard, F. P., F.R.C.S., Major I.M.S. Ophthalmic Complications in Plague.
Nuttall, G. H. F., M.D. (Title not received.)
Ross, Major Ronald, F.R.S. Remarks on the Selection of the Proper Measures to be adopted against Malaria under Varying Local Conditions.
Smith, W. Johnson, F.R.C.S. (Title not received.)
Stewart, C. Balfour, M.B. Notes on Plague.
Williamson, G., M.D. (Larnaca, Cyprus). Notes on Cyprus Fever.
Young, J. M., M.D. The Prevention of Malaria in Hong Kong.

## L.—Navy, Army, and Ambulance.

*Ladies' College: Kindergarten.*

*President:* Deputy-Surgeon-General W. G. Don, M.D. (ret.), A.M.S., *Vice-Presidents:* Andrew Clark, F.R.C.S.; Surgeon-General Thomas O'Farrell, A.M.S. *Honorary Secretaries:* Surgeon-Captain William Balfour Fergusson, M.D., Hazelbury House, Painswick; Surgeon-Captain Thomas Hugh Dickson, M.B., H.M.'s Customs House, Lower Thames Street, E.C.

The Section will be opened with a short address by the President.

The following discussion has been arranged:

On the Organisation of the Military Medical Services. The following gentlemen will take part in the discussion: Surgeon-General J. B. Hamilton, M.D., Surgeon-General R. Harvey, C.B., D.S.O., Surgeon-Major Hutton, Surgeon-Lieutenant-Colonel J. E. Squire, M.D., Surgeon-Major Caverhill, M.B., Surgeon-Captain J. Cantlie, M.B., and Surgeon-Captain A. Macgregor, M.D.

Papers will be read on The Disposal of Wounded in Naval Actions, and on the Healthfulness of Modern Warships by Fleet-Surgeon G. Kirker, R.N., Staff-Surgeon W. E. Home, R.N., and Surgeon F. H. A. Clayton, M.D., R.N., followed by a discussion in which Admiral Borlaise Warren, Inspector-General Belgrave Ninnis, M.D., R.N., Inspector-General A. Turnbull, M.D., R.N., and Surgeon-Lieutenant-Colonel J. E. Squire, M.D., will take part.

The following papers have also been announced:

Cantlie, Surgeon-Captain J., M.B. Medical Cadet Corps.
Caverhill, Surgeon-Major, M.B. Some Notes on Typhoid Inoculation. (Followed by a discussion).
Collie, R. J., M.D. Civil First Aid and Ambulance in Towns.
Hall-Edwards, J., L.R.C.P. Roentgen-Ray Work in South Africa.
Ward, Captain W. A., R.A.M.C. Field Transport for Sick and Wounded.

## M.—Dermatology.

*Ladies' College: Library.*

*President:* John James Pringle, M.B. *Vice-Presidents:* Edward Dillon Mapother, M.D., Wallace Beatty, M.D. *Honorary Secretaries:* Alfred Eddowes, M.D., 28, Wimpole Street, W.; D. G. McLeod Munro, M.B., 1, Oriel Villas, Cheltenham.

The arrangements are as follows:

Wednesday, July 31st.—9 A.M. Clinical Demonstrations. 10.15 A.M. Discussion on the *Rôle* of Staphylococci and Streptococci in the Etiology of Skin Diseases. To be opened by Dr. Sabouraud, of Paris, whose paper will be illustrated by many lantern slides, etc., followed by Dr. James Galloway. The following gentlemen will take part in the discussion: Dr. H. G. Brooke, Dr. Arthur Whitfield, Dr. Norman Walker, Dr. T. D. Savill, and Mr. G. Pernet.

Thursday, August 1st.—9 A.M. Clinical Demonstrations. 10 A.M. Discussion on the Treatment of Skin Diseases by Finsen's Light Method and X Rays. To be opened by Mr. Malcolm Morris, followed by Dr. A. B. Blacker, and Dr. Sequeira. The following gentlemen will take part in the discussion: Dr. Allan Jamieson, Dr. H. G. Brooke, Dr. Norman Walker, Dr. G. Stopford Taylor, Mr. J. Hall-Edwards, Dr. Willmott Evans, and Mr. G. Pernet.

Friday, August 2nd.—9 A.M. Clinical Demonstrations. 10 A.M. Discussion on Seborrhœa. To be opened by Dr. Colcott Fox, followed by Dr. Sabouraud. The following gentlemen will take part in the discussion: Dr. Allan Jamieson, Dr. Thin, Dr. H. G. Brooke, Dr. James Limont, Dr. Norman Walker, Dr. J. M. H. Macleod, Dr. Morgan Dockrell, Dr. Henry Waldo, Dr. Wallace Beatty, and Mr. G. Pernet.

The following papers have been announced:

Beatty, Wallace, M.D. On Pityriasis Rubra Pilaris.
Brooke, H. G., M.B. On Arsenical Eruptions.
Crocker, H. Radcliffe, M.D., and Pernet, G., M.R.C.S. Epithelioma Supervening upon Arsenical Keratosis.
Dockrell, Morgan, M.D. The Relation of Psoriasis to Seborrhœic Dermatitis.
Dubreuilh, Professor (Bordeaux). A case of Paget's Disease of the Vulva. (With Lantern Slides.)
Eddowes, Alfred, M.D. Leucodermic Alopecia.
Evans, Willmott, M.B. 1. The Microbiology of Chronic Eczema. 2. A New Medium for Growing the Fungi of Tinea Tonsurans.
Fox, T. Colcott, M.B. On Hydroa Æstivale.
Fox, T. Colcott, M.B., and Macleod, J. M. H., M.D. On Parakeratosis Variegata.
Hall, Arthur, M.B. A Case of Multiple Disseminate Lupus following Measles, ending by Tuberculous Meningitis.
Hall-Edwards, J., L.R.C.P. The Treatment of Lupus by the X Rays.
Harman, N. B., M.B. Observations on Veld and Natal Sores, with Drawings and Cultures.
Liddell, John, M.D. The Treatment of Psoriasis.
Little, Graham E., M.D. Cases of Fatal Purpura Associated with Hæmorrhage into the Suprarenal Capsules.
Macleod, J. M. H., M.D. A Contribution to the Histopathology of Yaws.
Roberts, Leslie, M.D. The Action of Arsenic on the Skin.
Sequeira, J. H., M.D. The Influence of High Frequency Currents in X-Ray treatment.
Snow, Herbert, M.D. The Treatment of Lupus.
Waldo, Henry, M.D. Some Points in the Management of Eczema.
Whitfield, Arthur, M.D. On Erythema Induratum.

A Demonstration will be given by Dr. J. A. Fordyce (New York) of lantern slides illustrating Clinical and Pathological Conditions in Dermatology.

## Programme of Proceedings.

### Tuesday, July 30th, 1901.

9.30 A.M.—Meeting of 1900-1901 Council.
11.30 A.M.—Church Service at St. Matthew's Church. Sermon by the Very Rev. the Dean of Gloucester.
2.30 P.M.—First General Meeting. Report of Council. Reports of Committees; and other business. After 4 P.M., Garden Party by Colonel Rogers, J.P. and Mrs. Rogers, of Battledown Court.
8.30 P.M.—Adjourned General Meeting from 2.30 P.M. President's Address at the Princess Hall of the Ladies' College.

### Wednesday, July 31st, 1901.

9.30 A.M.—Meeting of 1901-1902 Council.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Second General Meeting. After 4 P.M., Garden Party by the Mayor and Mayoress of Cheltenham at Pittville Park.
8 P.M.—Address in Medicine at the Princess Hall by J. F. Goodhart, M.D., F.R.C.P., Consulting Physician to Guy's Hospital. After 9 P.M., Illuminated Fête in Montpellier Gardens, given by the Mayor and Mayoress.

### Thursday, August 1st, 1901.

9.30 A.M.—Meeting of Council.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Third General Meeting. Address in Surgery at the Princess Hall by Sir William Thomson, C.B., F.R.C.S.I., Honorary Surgeon to the King in Ireland. Presentation of Stewart Prize. After 4 P.M., Garden Parties by Lieutenant-Colonel and Mrs. J. C. Griffith (Deanwood), Mr. and Mrs. MacKnight-Crawfurd (Fullwood Park), and Alderman and Mrs. Jas. B. Winterbotham (Cranley Lodge).
4.30 P.M. Exhibition of Instruments, illustrated by Cinematograph, by Dr. Doyen of Paris, at the Theatre.
7 P.M.—Public Dinner of the Association at the Boys' College. At 9 P.M., Ladies' Reception at the same place.

### Friday, August 2nd, 1901.

10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Concluding General Meeting, and afterwards Excursion to Gloucester. After 8 P.M., *Soirée* at the Ladies' College, followed by Dancing.

### Saturday, August 3rd, 1901.

Excursions, of which the longer ones will be:
1. To the Speech House (Forest of Dean) and Wye Valley.
2. To Tewkesbury and Malvern.
3. To Cirencester.

Shorter Excursions to 1. Birdlip; 2. Chedworth and Withington; 3. Tewkesbury.

The *Honorary Local Secretaries* are: Mr. G. Arthur Cardew, 5, Fauconberg Villas, Cheltenham; S. Tristram Pruen, M.D., Sherborne Lodge, Cheltenham; W. W. Grosvenor, M.D., Clarence Street, Gloucester.

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### Reception Rooms.

The Imperial Rooms, Promenade, Cheltenham, will be opened on Monday, July 29th, from 4 P.M. to 9 P.M., and on Tuesday, July 30th, and the following days from 9 o'clock to 6 P.M., for the issue of tickets to members and for supplying all necessary information. It is particularly requested that all members on their arrival will at once proceed to the reception room, enter their names and addresses, and obtain their tickets and Daily Journals containing programme, inquire for letters and telegrams, consult list of lodgings, hotels, etc.

### Special Railway Arrangements.

To members and their friends attending the annual meeting the railway companies of the United Kingdom will grant return tickets on payment at the time of booking of a single fare and a quarter. To secure this concession each passenger must produce a special voucher, and these can be obtained on application to the General Secretary, 429, Strand, London, W.C. The reduced fares will be available from July 27th to August 6th, both dates inclusive.

Those members desiring to travel to the places where they reside during the meeting of the Association can obtain return tickets at a single fare and a quarter for the double journey (minimum charge 1s.) (on production of cards of membership) from Cheltenham to any station not more than fifty miles distant to which through bookings are in operation, available to return on the same or following day.

Periodical tickets available during the meeting will also be issued to members from Cheltenham to any station not more than fifty miles distant at a charge of not less than the accumulated fares per diem under the preceding clause, and will be available for more than one journey, to enable the members sleeping out to return to their hosts for dinner.

The reduced fares indicated herein will not apply between Gloucester and Cheltenham.

### Annual Dinner.

The annual dinner of the Association will be held in the College, Cheltenham, on Thursday, August 1st, 1901, at 7 o'clock. Early application should be made for tickets.

### Foreign Guests.

Guests of the Association and visitors from abroad should apply for all information at the Reception Room, Imperial Rooms, Cheltenham, where all letters and telegrams should be addressed. Visitors will notice that the membership ticket will admit them to meetings of the Association and to the various addresses, but tickets for entertainments and excursions should be applied for in the Reception Room. An interpreter will be in attendance.

### Pathological Museum.

Specimens of interest for exhibition in the Museum should be forwarded, addressed to the Secretary of the Pathological Museum, British Medical Association, Winter Gardens, Cheltenham, during the last week in July; and a brief description of each exhibit will be inserted in the Museum catalogue. Secretary of the Pathological Museum, Mrs. Stewart Billings, M.B., B.S., 3, Pittville Parade, Cheltenham. All specimens must be mounted ready for exhibition.

### Clubs.

The New Club will make honorary members for the week of 120 of the members of the Association, and these will have a special card issued to them on application at the Reception Room.

### Golf.

Members of the Association desirous of playing golf will be made honorary members of the Cheltenham Golf Club. A match will be arranged, and members of the Association wishing to play are requested to communicate with Dr. Bansall Todd, Keynsham Lodge, Cheltenham, stating their handicaps.

## EXCURSIONS.

*Railway Arrangements.*—Cheap excursion tickets will be issued to Malvern, Raglan, Kerne Bridge, Symond's Yat, Monmouth, Stroud, Lydbrook, Tintern, Wye Valley, Newnham and Sharpness, Lydney, Chedworth, Tewkesbury, Severn Bridge, Speech House Road, Chepstow, Stratford-on-Avon, Ross, Hereford, Ledbury, Newent, Dursley, and Evesham, by special permission of the Great Western, Midland and South-Western Junction, and Midland Railways.

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## ANNUAL MUSEUM.

The Annual Museum in connection with the sixty-ninth meeting of the British Medical Association will be arranged in the following Sections:

Section A.—Food and drugs, including prepared foods, chemical and pharmaceutical preparations, etc.

Section B.—Instruments, comprising medical and surgical instruments and appliances, electrical instruments, microscopes, etc.

Section C.—Books, including diagrams, charts, etc.

Section D.—Sanitary appliances and ambulances.

Section E.—Carriages and Automobiles.

The Exhibition and Museum will be held in the Winter Garden, an imposing structure standing in a square of grass lawns in the principal street of the town, close to the Ladies' College (where the meetings will be held), the principal club, and the Reception Room.

The building has recently been renovated from the designs of Mr. J. Hall, A.M.I.C.E., at the cost of £10,000, and the ventilation and lighting are all that can be desired.

The space being unusually ample will allow all the Sections of the Exhibition, *as well as the Pathological Section*, to be housed in the one hall.

## COMPULSORY REGISTRATION OF MIDWIVES.

By permission of the Lady Balfour of Burleigh the eighth annual general meeting of the Association for Promoting Compulsory Registration of Midwives was held at 47, Cadogan Square, on June 28th.

The chair was taken by Mr. Heywood Johnstone, M.P., who read a telegram from Mr. Jonathan Hutchinson regretting his inability to attend, and expressing his strong sympathy with the objects of the meeting. The Chairman said that the position of the Association was based upon a legal platform that was absolutely impregnable. In this country anyone could call herself a midwife, however ignorant she might be of the duties of her office, with the consequence that a large amount of suffering and permanent injury to women and children was caused by the want of skill of many of these women practising as midwives without training. The two principles of the Association were the establishment by legislation of the proper training of these women and the supervision of their practice. He could not shut his eyes to the fact that if they were to secure any real success with their Bill they must persuade the Government of the day to take it up. All their efforts should be directed towards impressing on the Government the necessity of this step, and also towards showing that the resistance to be expected to a Government measure dealing with this subject would be very trifling, and that it could be overcome by a small amount of resolution. He thought the Government were prepared for it, and he did not believe the subject had passed out of their mind. He hoped in due season the Government would be able to bring in a Bill for them. To secure the effective interest of the electorate a Subcommittee had been formed to bring this matter before the working classes by addressing meetings of poor mothers, and instilling into their minds the fact that their husbands could work for the Bill by means of their votes.

Lord Balfour of Burleigh moved the adoption of the report, and said he had no right to attend that meeting as a member of the Government; he was there only in his private and unofficial capacity. The objects of that Association had first come under his notice before he had become a member of His Majesty's Government. He could never forget the first beginning of the persuasion which was exercised upon him to bring this somewhat difficult and unpleasant subject before the House of Lords. He did so because when he looked into the case for the Bill he found it was so strong that it would have been a dereliction of duty if he had not done everything in his power to help on the cause. As for the usefulness of deputations to the Government, he might say that during six years of his official life he had had to deal with many deputations, and he had not a very profound belief in the utility of deputations. Perhaps that was because he saw too much from the inside of the working of those matters. He had, however, never in the whole course of his experience had to do with a case which on its pure merits, apart from all other considerations, seemed to him to present such an overwhelming need for legislation. He himself thought that many deputations knew that they ought not to be granted what they asked for, and a considerable proportion felt that it would not be good for them if they were. That being his view of the ordinary case as presented by a deputation, he wished them to notice that the cause of their Association was the one outstanding exception which justified the most persistent and the most continual agitation until they were successful. They had greatly strengthened their position since the days when he had first come into the Association; and they were, he thought, assured, if they would only go on on the same lines, of a certain and not far distant triumph. They need not fear public discussion. The more the matter was discussed, the greater would be the conviction of the extreme strength of their case. Their cause was that of the great majority of the wives of the working men, and of the more humble portion of the population of this country. The case against them was that of those who were interested in maintaining the existing state of affairs. He considered that those who had been midwives, and who practised under that name, were entitled to fair consideration. A large majority were competent, and their interests must be considered, otherwise it would be unjust to those who were honestly endeavouring to make a living, and who in the main were doing their very best. The fact, however, that there were grave and far-reaching abuses under the present conditions of affairs made it clear that no private interest ought to be allowed to stand in the way of reform. He would rather not speak of the other class who were interested in the proposed measure. He referred to the professional opposition to their Bill: he considered that where it was not merely selfish it was foolish, because the Association did not want, and he thought it was a point to be emphasised, it did not want to do anything to undermine professional etiquette or attack the proper medical status of professional men. He had always pointed out that the medical profession, being beyond all others a humane and unselfish profession, its first anxiety was to do the best for a patient at the earliest possible time for the saving of life. If therefore medical men were assisted by skilled midwives they would be more certain of having early information that danger existed than if the patients were attended by unskilled women ignorant of danger or possibly too selfish to trouble, or perhaps afraid of allowing anything to be known. He believed it to be a necessity that in the classes concerned the attendance in those cases must be furnished by women for women. What they wanted to provide for was the minority of cases, where danger, often a question merely of hours, could be foreseen and thus avoided. He believed that in those circumstances the elementary training which their Association sought to secure for those attendants would make it more certain that the medical man would have the note of warning sounded in his ears and thus early intelligence would be furnished to those who could best remedy the danger. He was recently at the College for the Blind at Norwood, and the director of the institution told him that on admission every child, and there were always some hundreds there, was examined by a skilled oculist. Over a long series of years experience led that gentleman to say with certainty that about 72 or 73 per cent. of those who passed through the College need not have been sent there if they had enjoyed the benefit of proper care in their early years. He did not say all those people by that early attention could have been made into really seeing people in the ordinary acceptation of the term, but they would have had the power of perception of light from darkness and of movement from absolute rest. He did not say that 70 per cent. of the cases of blindness were caused by improper care at birth, but certainly a large proportion were so, he believed it amounted to about 30 per cent. Now that fact of itself was most startling, and he believed it to be an undoubted fact, and one that might well be brought into prominence in the leaflets of the Association. His advice was that they should keep their Bill out of the morass of Government measures, and go on as they had been doing. They should endeavour to get a discussion on the earliest possible Wednesday next session, and then strive to take off as much of the opposition to it as they could. Thereupon pressure could be brought to bear in the proper quarters on those who managed those things, so as to give the Bill a chance. He could only assure them that if opportunity offered for the consideration of the possibility of giving this most serious and necessary legislation a helping hand from the inside, they might, so far as his duty allowed it, always count upon him. There were, however, limitations, and they must remember that, if he could not do all that he would like to do, it was certainly not from want of interest, and he wished their Association the earliest possible success.

Mr. Crombie, M.P., said that for centuries every civilised country had exercised a wise restriction over the practice of medicine and surgery. In this country it was illegal for any one to practise as a doctor unless qualified, but in regard to midwifery the exact opposite prevailed. Anyone, however unskilled or disreputable, was allowed to place a plate on the door and practise midwifery. Such a state of affairs could only be followed by appalling consequences. A Committee of the House of Commons had reported favourably on the Bill of that Association, and he reminded the meeting that the General Medical Council was also in favour of the measure. There were two arguments against the Bill—first, they were told that in poor districts women would not be able to afford a duly-qualified midwife, and the Bill prevented friendly help from a neighbour in case of emergency, but no

such provision was in the measure; in the second place they were told that if the House of Commons passed the Bill serious cases would be more likely to be treated without the doctor. It seemed to him that a skilled midwife was more likely to recognise a serious case and know when it was necessary to send for help than one who had no knowledge. He was persuaded that unless the Government took up the measure it would never pass. Were the Government likely to do that? They had clearly a great friend in the Cabinet in Lord Balfour of Burleigh, but he did not know that even there he would be able to entirely separate his official and non-official capacity. He had no doubt he would use his influence. Before they could expect the Ministry to give them aid they must make out a clear case and have a large and overwhelming majority in the House of Commons. The constituencies must be persuaded that the measure was needed, and their influence must be used in this direction.

The report and balance sheet having been adopted, a resolution was carried, proposed by Dr. CULLINGWORTH and seconded by Miss LUCY ROBINSON, that the Association should urge on the Government the need of supervision of midwives in this country. Dr. Cullingworth considered that the opposition to the proposed legislation was very much less that it had been. The interest among the laity was greater and the opposition on the professional side was less. He concluded by describing how the Obstetrical Society had examined and placed upon their roll of midwives somewhere about 4,000 names.

The meeting ended with a vote of thanks, proposed by Dr. FARQUHARSON, M.P., to Lord Balfour of Burleigh.

## THE OBSTETRICAL SOCIETY OF LONDON AND THE EXAMINATION OF MIDWIVES.

THE action of the Obstetrical Society of London, in instituting an examination for midwives, as the result of which a certificate is given to the successful candidates, has excited so much interest in recent years that it has seemed desirable to ascertain the conditions under which the certificate may be obtained.

Although in the interpretation and administration of laws and regulations the intentions of those by whom they were instituted or framed cannot be permitted to have any weight, since the administrator must be guided by the letter, yet in order to judge of the policy it is well to understand the spirit in which such laws and regulations were drawn up.

The examination of midwives was instituted by the Obstetrical Society at its annual general meeting on January 3rd, 1872, when a Committee which had been appointed to consider the subject brought up a report recommending the formation of an Examining Board, and submitting regulations setting out the conditions under which candidates would be admitted to the examination, and the nature of such examination.

The President of the Society (the late Dr. Braxton Hicks), in his annual address delivered on the same occasion, made the following observations:[1]

> It will be seen that in the scheme the *minimum* of study, considered absolutely necessary, has been prescribed for women acting as midwives under medical supervision, or, as Miss Nightingale defines it, "midwifery nurses."
>
> No doubt, after experience gained by further practice and reading, they would be more reliable. But with this amount of knowledge they never could be trusted to act quite separately from, nor in antagonism to, fully qualified men. If ever it should come to pass that women are allowed to practise midwifery separately from us, then it will be necessary for them to be educated as fully and as completely as men, in unity with them so far, at least, as that the professors of one are professors of the other, and not in separate schools. Either this, or simply helpers.
>
> Picture to yourselves half-educated persons handling the sound, hysterotome, the crochet, and other dangerous instruments of midwifery. Imagine their treatment of those dangerous complications which attend women in either pregnancy, parturition, or lying-in. Imagine the condition of a school of midwifery carried on by women, or by anyone not thoroughly acquainted with general medicine or surgery, continuing the education of others in a similar manner. I need not point out the state of stagnation in which they would find themselves in a few years.

In the course of the speech in which he moved the adoption of the scheme, which, it should be added, was carried unanimously, the late Dr. Graily Hewitt, who said that the subject had first been seriously considered by the Council of the Society while he had the honour of holding the office of president, made the following observations:[2]

[1] *Obstetrical Transactions*, vol. xiv, p. 26.
[2] *Ibid.*, p. 23.

> The plan recommended involved the institution of an Examining Board composed of six Fellows of the Society, the examination to be held quarterly, to consist of a practical testing of the competency of the candidates to practise as midwives, and of the possession on their part of such an amount of knowledge as would enable them to recognise the presence of difficulties, and the necessity for at once procuring competent professional aid for their patients. It could hardly be necessary for him to dilate on what was so well known to the profession, namely, the great ignorance and incompetence of vast numbers of practising midwives, nor of the loss of life which thus resulted. The attention of the Society had been forcibly drawn to that in the reports on the subject of infantile mortality procured recently from London and the provinces. That a formal guarantee of the efficiency of practising midwives was urgently required no one could doubt. This examination would supply that. It might be said, possibly, that the institution of such an examination was the duty of the Government or of the Royal College of Physicians or Surgeons, or the Society of Apothecaries. He was afraid that little was to be expected from Government action at present, though ultimately it might be hoped that this action of the Society would result in legislation on the subject, nor was it to be expected from the general governing medical bodies. In fact, what was everyone's business was the business of no one; and, under these circumstances, this Society had stepped forward to initiate what was, he believed, universally admitted to be a laudable object, one, indeed, of pressing necessity.

Dr. C. H. F. Routh, who seconded the adoption of the scheme, expressed the following opinion in the course of his speech:

> These resolutions of the Society would also, perhaps, induce smaller colleges and hospitals to open classes for teaching midwifery to these women. When our legislators found the machinery existing and the good so done, then they would soon make such examinations compulsory as a matter of course.

Previous to 1895 the Society issued to successful candidates at this examination a certificate, with the crest of the Society, the figure of Juno Lucina, at the top, the whole printed on a large sheet of cartridge paper in the following terms:

> OBSTETRICAL SOCIETY OF LONDON.
>
> We hereby certify that
>
> .....
>
> has passed to our satisfaction the Examination instituted by the Obstetrical Society of London, and that she is in our opinion a skilled Midwife, competent to attend Natural Labour.
>
> [This was signed by the President, the Chairman, the Hon. Secretaries, and the Examiners. Then comes the following undertaking signed by the midwife.]
>
> "I undertake to abide by all the rules and regulations of the Obstetrical Society with regard to the duties and conduct of midwives and to submit to the jurisdiction of its Council in the decision of all matters relating to my conduct as a midwife. I further agree that in case I shall hereafter be convicted of any criminal offence or be guilty of any act or conduct which in the opinion of the Council renders me unfit or unworthy to hold its diploma, the same may be forfeited by a resolution of the Council, in which case I will, on receiving notice in writing of such resolution to be served either personally or by leaving the same at my then present or last known place of abode in the United Kingdom forthwith give up such diploma to the President or to one of the Secretaries for the time being of the Society, and I agree that my name may be removed from the Register of Midwives kept by the Society and I promise thenceforward to desist from the use of any designation or title implying possession of such diploma.
>
> The document was sealed with the seal of the Society.

In May, 1895, in consequence of the attention which had been called to the form of this certificate, the Society undertook to give up the use of this elaborate certificate and to issue the following:

> No. ..... London, ....., 18.....
>
> OBSTETRICAL SOCIETY OF LONDON.
>
> We hereby certify that
>
> .....
>
> has passed to our satisfaction the Examination in Midwifery instituted by the Obstetrical Society of London.
>
> ..... Chairman of Examiners.
>
> ..... Honorary Secretary.
>
> NOTE.—This certificate confers no legal qualification to practise under the Medical Acts.

Successful candidates are required to sign the following:

> DECLARATION.
>
> To.....
>
> President of the Obstetrical Society of London.
>
> I undertake to abide by all the rules and regulations[3] of the Obstetrical Society with regard to the duties and conduct of midwives, and to submit to the jurisdiction of its Council in the decision of all matters relating to my conduct as a midwife. I further agree that in case I shall hereafter be convicted of any criminal offence, or be guilty of any act or conduct which in the opinion of the Council renders me unfit or unworthy to hold its certificate, the same may be forfeited by a resolution of the Council, in which case I will, on receiving notice in writing of such resolution, to be served either personally or by leaving the same at my then present or last known place of abode in the United Kingdom, forthwith give up such certificate to you or to one of the Secretaries for the time being of the Society, and I agree that my name may be removed from the Register of Midwives kept by the Society; and I promise thenceforward to desist from the use of any designation or title implying possession of such certificate.

[3] A copy of the rules is sent herewith.

The regulations of 1872, which appear to have been in force until 1896, contain the following :

That, on satisfying the Board of Examiners as to her qualifications, the midwife should receive a diploma certifying that she is a skilled midwife, competent to attend natural labours.

This paragraph does not appear on the schedule now issued.

Having now stated what appear to be some essential historical facts, we proceed to give particulars with regard to the system which has grown up under the regulations of the Society.

### REGULATIONS FOR THE EXAMINATION.

The following are the regulations to be observed before the candidate is admitted to the examination.

Three certificates must be produced :

1. One of good moral character, signed by a person of approved position who has known the candidate for a period of at least twelve months.

2. One of birth showing that the candidate is not under 21 years of age[4].

3. One showing that the candidate prior to the date of the certificate has personally attended and examined not fewer than 20 patients during labour, and has watched the progress of an equal number of cases (not necessarily the same) during the week following labour. This certificate must be in the form given in the schedule, and must be filled up and signed by either a registered medical practitioner, the matron of a recognised hospital, or a certificated midwife holding an official position satisfactory to the Board of Examiners.

The meaning of the phrase "personally attended and examined" does not appear to be anywhere defined. Would it be permissible to reckon a case if the pupil has spent a few minutes in examining the patient during the first or second stage, and then returned in time to see the expression of the placenta? Or must she have been with the patient from the commencement of labour to its termination? The Obstetrical Society issues a book of rules to be observed by midwives holding its certificate, but nothing is said therein about the conduct of the pupil. How much is implied by—Watch the progress of a case during the week following labour? Does it mean to nurse the woman and live in the house with her, or merely to pay daily visits to the patient? If the latter, how much or how little will satisfy the requirements of the Society, or are there no requirements on this head?

It will be observed that no length of time for the training is mentioned, and twenty cases need by no means necessarily take as long as three months. On the recommendation of the Midwives Institute a woman can go to some midwife and pay £1 1s. a week (this sum includes board, lodging, and practical instruction) till she has seen her cases, but the institute advises an intending candidate, we are informed, to stay longer, "as the requirements of the L.O.S. are so small." In connection with this point, it is interesting to learn[5] that the Matron of Queen Charlotte's Hospital does not consider three months' training absolutely sufficient; also the Nursing Sisters of St. John the Divine in their prospectus state that pupils are not taken for less than four months.

We do not find any regulation requiring a candidate to have attended a course of lectures, but it appears to be usual to do so, and was an original requirement of the Obstetrical Society.

### THE EXAMINATION.

The examination consists of two parts, (1) a written, (2) an oral and practical examination.

It seems worth while to print together the regulations for the examination as adopted in 1872 and those in force at the present time :

| 1872. | 1901. |
|---|---|
| 1. The elementary anatomy of the female pelvis and generative organs. | 1. The elementary anatomy of the female pelvis and generative organs. |
| 2. The symptoms, mechanism, course, and management of natural labour. | 2. The symptoms, mechanism, course, and management of natural labour. |
| 3. The indications of abnormal labour, and the emergencies which may occur in practice. | 3. The signs that a labour is abnormal. |
| 4. A general knowledge of the puerperal state. | 4. Hæmorrhage : its varieties, and the treatment of each. |
| 5. The management of newborn children and infants. | 5. Antiseptics in midwifery, and the way to use them. |
| 6. The conditions as to air, food, cleanliness, etc., necessary for health. | 6. The management of the puerperal state, including the use of the thermometer and the use of the catheter. |
| | 7. The management (feeding included) of newborn children. |
| 7. The duties of the midwife with regard to the patient, and with regard to the seeking of medical advice. | 8. The duties of the midwife with regard to the seeking of medical advice. |

We have before us a printed paper of questions set at some of the examinations. This paper can be obtained, price 1s., on application to the Secretary and Librarian, Obstetrical Society of London, 20, Hanover Square. Granted that such an examination should be held at all, it will not be doubted that the majority of the questions are such as should properly be set, but some strike us as perhaps going outside and encouraging what is undesirable, inasmuch as they may tend to make a candidate who has answered them successfully suppose that she is competent to treat some of the diseases of infancy and some of the more serious complications of the puerperal state.

*January 11th, 1893.*

4. What are the causes of fits in the newborn child during the first month? Give the treatment.

*January 10th, 1894.*

3. Describe the appearance of a white leg (phlegmasia dolens). State the course of such a case from onset to termination, and the treatment you would adopt.

*April 11th, 1894.*

4. Under what circumstances would you advise that a newborn child should be circumcised; and what harm may follow from not having done it in proper cases?

*July 11th, 1894.*

4. What are the rashes which may be seen on the skin of a child during the first month of its life, and how would you distinguish them?

The Society does not take the responsibility of recommending books in which the varied information required to answer these questions would be found, and a study of the schedule printed above does not make clear the headings under which answers to these questions would be included. Does a case of phlegmasia dolens come under (6) the management of the puerperal state, and is it a case which a midwife would be expected to attend without sharing the responsibility with a qualified medical practitioner? As to circumcision, it would be interesting to know whether the elementary anatomy of the female pelvis and generative organs includes that of the male, or why a midwife should advise on a case for operative surgery. The question about rashes would surely imply a knowledge of eruptive fevers, but there is no mention of these in the schedule.

As to the standard of knowledge required from successful candidates at the examination, there does not appear to be any official information.

No statement is published, so far as we have observed, as to the percentage of marks required to pass. The only light we have on the subject is that given by Mr. F. R. Humphreys, who states in the BRITISH MEDICAL JOURNAL of May 25th, p. 1303, that "at one time the examination was much more severe than it is at present; on the other hand, it is becoming harder than it was a year or two ago."

The certificate as to the cases seen which must be produced before the candidate can enter for the examination has to be "signed by either a registered medical practitioner, the matron of a recognised hospital, or a certificated midwife holding an official position satisfactory to the Board of Examiners." Whom does the list include? Does the Board consider the last condition fulfilled by a woman who after a few months' training in midwifery sets up a private establishment to which she gives some high-sounding designation such as training school, arrogates to herself the title of matron, calls all her untrained pupils "nurses" and insists on their wearing "uniform" indoors and out-of-doors?

Again, who signs the certificates for the less pretentious midwife who merely puts her name and qualifications on a brass plate on her door and takes in one or two pupils at a time?

[4] In the original regulations adopted in 1872 the following words were added : "and not over 30 years of age," and there was a proviso that up to 1877 candidates above 30 would be admitted under special circumstances.

[5] *Hospital Nursing Mirror*, June 1st, 1901.

### The Education.

*Places.*

It would appear that a candidate can obtain instruction preparatory to the examination:

1. At certain hospitals in London and other parts of Great Britain and Ireland.
2. From district nursing associations and charitable societies supplying nurses for the poor.
3. At private enterprises established by midwives, having lectures given to the pupils by medical men.
4. At (*a*) the Midwives Institute, and (*b*) the Belgrave midwifery classes.

At the places classified under 1, 2, and 3 both practical and theoretical training is given. At the places mentioned in 4 lectures only are given, at (*a*) the Midwives Institute by Mr. Humphreys, M.R.C.S., L.R.C.P., Honorary Secretary to the Midwives Registration Bill Committee; at (*b*) by Mr. Framjee Shapurjëe Gotla, L.R.C.P, L.R.C.S.Edin., the practical work being done elsewhere under midwives who do not appear to be under the supervision of the medical man in either instance.

*Previous Education.*

It is usually stipulated that the intending pupil shall fill up the application form before entering any training school, in her own handwriting. Questions are asked as to age, health, parentage, previous experience (if any) in nursing; and references are required. Some hospitals and infirmaries give midwifery training to their probationers only; while at Aldershot, Chatham, and Woolwich there are hospitals which only train the wives of soldiers. At Queen Charlotte's Hospital[6] there is an age limit, 23 to 40 years; and each pupil must have three months' training in monthly nursing before entering on her midwifery course. The matron expresses a preference for trained nurses, but there is no stipulation to that effect. At Kensington Infirmary a year's previous training in a recognised general hospital is a *sine quâ non*. The Manchester Maternity Hospital makes a reduction in terms and length of time to trained nurses, while the Cheltenham, and Stroud District Nursing Associations will not take any pupils except trained nurses. A reduction of fees—sometimes an offer of free training—is often made in proprietary establishments for those who have had training in medical and surgical nursing.

From this we gather that the consensus of opinion among those who undertake the training of midwives is in favour of pupils having previous experience in general nursing. We may mention in passing, however, that we have heard of a midwife who does not "hold to trained nurses as pupils because they are so fussy about dirt and such like"; and of another who "objects to them on the score that they have ideas of their own," which possibly might not agree with those of the midwife.

*Length of Special Training.*

With the exception of the Rotunda, Coombe, and National Lying-in Hospitals, Dublin, where the course is six months, and the institution of the Nursing Sisters of St. John the Divine, where the course is four months, the period usually assigned to special midwifery training is three months. Many hospitals and institutions have an examination of their own, which the pupils are expected to pass as well as that of the Obstetrical Society. If a pupil left before the expiration of the stated period she would not obtain the certificate of the hospital, but there would be nothing to prevent her going in for the Obstetrical Society's examination if she had seen twenty cases before leaving. One private establishment holds out as an attraction a maternity certificate (whatever that may mean), and offers facilities for the pupils to learn massage while doing their midwifery training so as to save time!

Where the pupil goes to a midwife by the week she need only stay till she has seen her cases. Dr. Gotla's prospectus states that as the maternities are very large, a pupil can get a good knowledge of the work in six to eight weeks. We believe there is a midwife who prefers to take only one pupil at a time, and "finish her off in six weeks."

*The Cost of Training.*

At many of the recognised hospitals the fees are 25 guineas. This the matron of Queen Charlotte's Hospital considers very moderate, bearing in mind that a pupil, if she be industrious, is able to earn her living at the end of her course.

The Clapham School of Midwifery charges £27 6s., while at Kensington Infirmary the fee is only £10. Where the work is only in districts, £15 15s. is a sum often mentioned, though the charges vary from £11 11s. to £17 17s. These sums include board, lodging, practical instruction and lectures from medical practitioners during thirteen weeks—a training up to the standard of the Obstetrical Society's examination. For the examination the Society charges a fee of £1 1s.

*The Training—Practical and Theoretical.*

In hospitals the theoretical part of the training is generally given by medical practitioners, but is usually supplemented by lectures given by the matron or midwife.

The practical work is done either in the wards or at the patient's home in the district, or sometimes in both. As an example, Queen Charlotte's Hospital may be taken. The pupil first does three months of monthly nursing. She starts the first month of her midwifery training on day duty in the lying-in wards; the second month is devoted to the labour ward. She completes her education by doing district work during the third month under the superintendent of the out-patient department of the hospital and the resident midwife of the district. It is particularly mentioned that the pupils are never allowed to go to the patients alone, but are invariably accompanied by a midwife. Ten lectures are given every week; four are clinical, two are given by the matron, two by the visiting physician, and two by the house-surgeon.

At the Clapham School of Midwifery, which is entirely officered by medical women, a noticeable feature is a special class in operative midwifery (fee £3 6s.) given to nurses who intend to work abroad.

For district work the following is a typical method of procedure. When a call comes at night, the pupil must be ready to accompany the midwife in ten minutes. On arriving at the patient's house the midwife—in accordance with the Obstetrical Society's rules for midwives holding its certificate, and it is to be presumed that the pupil ought to follow her example—should "wash her hands thoroughly in a strong corrosive sublimate solution, and before making a vaginal examination lubricate the finger with corrosive sublimate glycerine." "She should wash the patient's external parts with soap and water, and then swab them with corrosive sublimate (1 in 1,000); for this purpose absorbent wool must be used, and on no account ordinary sponges or flannels." "No more internal examinations should be made than are absolutely necessary."

We have heard of a pupil who arrived at a midwife's one day, and was taken to a case the same night. She was told to examine the patient and state the size of the os. This girl had never heard of a uterus, much less of its os.

If the second stage has commenced the midwife, according to the rules of the Society, must not leave the patient, but must stay with the woman at least one hour after the expulsion of the after-birth in a normal labour.

In cases of abnormal labour or in threatened danger, she must always await the arrival of the doctor, remain with the case as long as he thinks necessary, and faithfully carry out his instructions.

In cases of threatened danger or of abnormal conditions occurring in women either pregnant, in labour, or lying-in, or in their newborn children, or on the sudden death of a pregnant or lying-in woman, the midwife must insist upon a registered medical practitioner being called in at once.

The labour being completed the patient is washed and made comfortable a binder put on, her temperature taken; the baby is washed and dressed.

### After-attendance.

Each institution has its own rules as to how many visits the midwife pays to the patient and whether she accompanies the pupil on any or every visit. The rule of the Obstetrical Society is as follows:

The midwife is responsible for the cleanliness, comfort, and proper dieting of the mother and child during the lying-in period, which shall be held, for the purpose of these regulations and in a normal case, to mean the time occupied by the labour and a period of ten days thereafter.

A private midwife would appear to do more or less as she thinks fit, but as a rule a pupil has to visit the patient daily for ten days, and has to note the following points:

1. The temperature and pulse of the patient.
2. Whether the uterus has contracted, and the relative positions of the fundus and umbilicus.

[6] All details about Queen Charlotte's Hospital are taken from the *Hospital Nursing Mirror*, June 1st, 1901.

3. The state of the lochia.
4. The condition of the bowels, whether urine has been passed, and give a douche, enema, or pass the catheter if necessary.
5. The condition of the breasts.
6. She has to wash the patient, put on the binder, wash the baby, and dress the umbilical cord.

This work done thoroughly would occupy about three-quarters of an hour.

When the pupil goes alone on her daily visits she is, in effect, responsible for the lives of mother and child, for if from ignorance or carelessness she reports wrongly or overlooks any symptom, or again if the midwife does not understand or realise the importance of some detail reported, medical aid may not be sought till the mischief is irreparable.

### THE NUMBER OF PERSONS HOLDING THE CERTIFICATE OF THE OBSTETRICAL SOCIETY.

The register of the Obstetrical Society is not open to public inspection. Anyone who wishes to learn whether a particular woman is on it or not must apply to the secretaries in writing, giving the name and address of the person about whom the inquiry is made. As a matter of courtesy the information may then be given. In the *Transactions of the Obstetrical Society*, under the heading "Report of the Board of Examiners," the number of candidates, and of those successful, unsuccessful, and absent is given but does not appear to be otherwise published. A list containing the names of successful candidates is sent "as a matter of courtesy" to *Nursing Notes*.

The following tabular statement has been compiled from the annual *Transactions* of the Society:

*The Examination of the Obstetrical Society of London.*

| Year. | Total Candidates. | Passes. | Failures. | Absentees. | Fees. |
|---|---|---|---|---|---|
| 1872 | 8 | 6 | 2 | — | |
| 1873 | 12 | 11 | 1 | — | |
| 1874 | 4 | 4 | 0 | — | £25 3 0 |
| 1875 | 3 | 2 | 1 | — | |
| 1876 | 4 | 3 | 1 | — | |
| 1877 | 4 | 4 | 0 | — | |
| 1878 | 6 | 5 | 1 | — | £48 11 0 |
| 1879 | 1 | 1 | 0 | — | |
| 1880 | 24 | 22 | 2 | — | |
| 1881 | 44 | 39 | 5 | — | |
| 1882 | 42 | 37 | 5 | — | |
| 1883 | 64 | 53 | 11 | — | £270 11 0 |
| 1884 | 63 | 49 | 14 | — | |
| 1885 | 82 | 68 | 14 | — | |
| 1886 | 102 | 80 | 22 | 0 | |
| 1887 | 125 | 96 | 29 | 2 | |
| 1888 | 153 | 127 | 22 | 4 | £696 6 0 |
| 1889 | 170 | 143 | 25 | 2 | |
| 1890 | 202 | 159 | 43 | 3 | |
| 1891 | 258 | 204 | 52 | 2 | |
| 1892 | 289 | 252 | 34 | 3 | |
| 1893 | 339 | 296 | 40 | 3 | £1,884 14 6 |
| 1894 | 432 | 390 | 40 | 2 | |
| 1895 | 467 | 420 | 33 | 14 | |
| *Obst. Trans.* 1895, gives totals... | 2,915 | 2,482 | 396 | 37 | Fees £2,925 5 6 |
| 1896 | 511 | 461 | 40 | 10 | |
| 1897 | 590 | 523 | 49 | 18 | |
| 1898 | 688 | 604 | 75 | 9 | £3,943 10 0 |
| 1899 | 842 | 705 | 119 | 18 | |
| 1900 | 925 | 754 | 155 | 16 | |
| | 6,471 | 5,529 | 834 | 108 | £6,657 7 |

### LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 420, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

# THE PLAGUE.

### PREVALENCE OF THE DISEASE.

#### CAPE COLONY.

FOR the week ending June 29th 14 fresh cases of plague were reported in Cape Colony, and 13 deaths from the disease. The approximation in numbers of the fresh cases and deaths almost always indicates the subsidence of an outbreak, and this would appear to be the case in the present instance.

Since plague appeared in Cape Colony there have been 749 seizures and 367 deaths from the disease.

At Port Elizabeth a few cases occur almost sporadically, but it would appear that the disease is not gaining a serious hold in that town. Considering the peculiar circumstances of Cape Colony at the present time, the authorities are to be congratulated on the way in which the outbreak of plague has been minimised and South Africa saved from a serious situation.

#### PORTUGAL.

The report of an outbreak of plague in Oporto, said to have occurred during the fourth week in June, is, by a telegram dated June 30th, officially declared to be untrue.

#### INDIA.

During the week ending June 8th, 829 deaths only were reported from all India as being due to plague. This is a marked decrease from the previous week, when 1,658 deaths resulted from plague.

In Bombay City for the week ending June 8th, 123 persons were seized by plague and 109 deaths were caused by the disease; compared with the previous week there has been a decided abatement in the epidemic, 177 persons dying of plague during the week ending June 1st.

In Bengal, exclusive of Calcutta, there has been a decided improvement, the deaths from plague having fallen from 141 during the week ending June 1st to 50 during the week ending June 8th. In Calcutta the deaths from plague are exceeding the fresh seizures, an indication that the outbreak is on the wane; some 5 to 10 cases occur in Calcutta daily.

In the Mysore State a slight increase in the number of plague cases has occurred, the numbers being 37 and 42 for the weeks ending June 1st and 8th respectively. At the Kolar Gold Fields plague continues to claim a few victims weekly, 6 persons dying of plague at the mines during the week ending June 8th.

In the Sialkot District of the Punjab plague seems to be spreading, as many as 400 cases and 240 deaths from the disease being reported from Sialkot during the week ending June 1st. There is considerable trouble in the villages, many refusing to turn out of their homes when requested to do so, and in many affected districts the inhabitants deny the existence of the disease.

#### EGYPT.

The outbreak in Egypt seems to be insignificant as regards the virulence of the disease, and the threatened spread is abating. Zagazig still continues the most seriously-affected locality, and isolated cases only have been reported from Mansourah, Minieh, Alexandria, and Port Said. Great credit is due to the Director-General of the Sanitary Department of Egypt and to those associated with him for the care with which the cases of plague have been diagnosed and isolated, and for the vigilance exercised in Egypt against the importation and the spread of plague.

#### MAURITIUS.

No cases of plague were reported in Mauritius during the week ending June 27th.

#### HONG KONG.

An official telegram from the Governor of Hong Kong states that 62 cases of plague and 61 deaths were reported in the week ending June 29th.

## THE PREVENTION OF CONSUMPTION.

### QUEEN VICTORIA MEMORIALS: TUBERCULOSIS SANATORIA.

A LETTER under the above heading from Dr. J. Lloyd Roberts appeared in the *Liverpool Courier* for June 4th, suggesting that no better memorials to Her late Majesty Queen Victoria could be decided upon by local bodies than the establishment of sanatoria for consumptives for counties or groups of counties. He points out that, since the well-being of her subjects was the thing nearest to the late Queen's heart, such institutions would have had her most cordial support; and, as the results of three months' treatment in existing sanatoria is to restore from 75 to 80 per cent. of patients to their friends and 50 per cent. to their work, these sanatoria would be important factors in the continuance of the nation's greatness. Having once started the sanatoria by public subscription, the maintenance could be provided for under the powers given to sanitary authorities by Section CXXXI of the Public Health Act (1875). The suggestion is certainly well worthy of consideration, and the branches of the National Association for the Prevention of Consumption throughout the country might well press the matter on the various memorial committees, not only on behalf of the numerous sufferers from consumption, but of the community at large, which will benefit by the prophylactic effects of such institutions.

The report of Dr. Ehlers on leprosy in Crete is to the effect that he has ascertained the existence of 400 lepers in the island, but he estimates the total at about 600.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1901.

SUBSCRIPTIONS to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY JULY 6TH, 1901.

## THE R.A.M.C. EXPERT COMMITTEE.

WE gather from the statement made by the Secretary of State for War in announcing the names of the members of "the Committee of Experts" appointed to consider the scheme which he has drawn up for the future organisation of the Army Medical Service, that it is intended that the inquiry shall be limited strictly to the Royal Army Medical Corps and Army Medical Staff, and that it will not embrace questions connected with the organisation of the medical services of the auxiliary forces. The nomination of Surgeon-General Hooper, C.S.I., President of the Medical Board, India Office, to be a member of the Committee has given rise to a very general belief that it would consider the relation of the medical service of the British army to the Indian Medical Service. This is, however, a question of great complexity, and it will not be surprising if the Committee refrains from taking it up. But as in considering the term of foreign service of officers of the R.A.M.C. many questions relating to the conditions of service and cost of living in India must arise. Surgeon-General Hooper's experience will doubtless be of great value.

The present position of the Royal Army Medical Corps is in fact one of some urgency, and the sooner the Committee reports the better from every point of view. Indeed, Mr. Brodrick, in reply to a question by Dr. Farquharson, hinted that it might be necessary to make some temporary arrangement until the Corps had been "put on a permanently good footing." The task before the Committee is no light one, and its appointment so short a time before the summer holidays must, it is to be feared, lead to some delay.

The constitution of the Committee is somewhat unusual. It does not contain any senior officer of the Army Medical Staff: it does not include any civilian member of the profession who before this war was known to have taken particular interest in army medical questions, except Professor Ogston, and it does not contain any representative teacher in the medical schools of Ireland—a most regrettable omission. Of the civilian members five have had experience during the war in South Africa. Dr. Tooth, who is Assistant Physician to St. Bartholomew's Hospital, was Physician to the Portland Hospital in South Africa, and his experience there as to the prevention of enteric fever and dysentery in South Africa, and the method of dealing with cases of these diseases, is no doubt one reason for his selection. Sir Frederick Treves and Mr. Makins were both consulting surgeons with the army in South Africa, and the experience gained by the former during the early operations in Natal, and by the latter during Lord Methuen's advance and Lord Roberts's subsequent campaign will doubtless be of great value to the Committee. Professor Ogston of Aberdeen, spent some time in South Africa during the war in a private capacity. Although the views which he expressed on questions of reorganisation in the address which he delivered before the British Medical Association at its annual meeting at Portsmouth in 1899 were distasteful to some, there can be no sort of doubt that he has the best interests of the service at heart. He has had practical experience during two campaigns, has made a special study of the needs of a military medical service, and has an intimate knowledge of the army medical systems of Germany and France, so that his views are certain to carry great weight with the Committee. Mr. Alfred Fripp, who is Assistant Surgeon to Guy's Hospital, was chief surgeon of the Imperial Yeomanry in South Africa. We take it that we shall not be far wrong if we assume that he has been asked to serve on the Committee owing to the experience which he gained in organising that hospital in this country, in establishing it in South Africa, and in its working there. The hospital was the largest voluntary hospital sent to South Africa, and it was undoubtedly very successful. In its organisation Mr. Fripp introduced certain innovations, the most important of which were the large staff of nurses, 40 altogether, who did admirable work, the staff of student dressers, and the appointments of specialists for eye and dental cases, and for *x*-ray work. Dr. Perry, who was given by Mr. Brodrick as the representative of the Senate of the University of London, was doubtless selected because as Medical Superintendent of Guy's Hospital he has an extensive experience in the management of a large civil hospital. Lieutenant-Colonel Keogh, C.B., and Major H. E. R. James, the Secretary of the Committee, are both officers of the Royal Army Medical Corps. Colonel Keogh's technical knowledge of the requirements of the corps and of the grievances of its officers and men will, we do not doubt, very materially help in involving a scheme of reform.

Mr. Brodrick, in the speech which he made last February, used the somewhat unfortunate phrase, "drastic reforms." Many reforms are needed, but we take leave to say that the only drastic reform required is in the attitude and relations of the high officials of the War Office and of the Horse Guards to the medical department of the army. This miserable conflict has gone on now for nearly half a century. Every reform which has been effected has been due not to the War Office, but to the persistent efforts of the medical profession, which with infinite patience has argued every point, proved the absolute necessity of each change, and at length succeeded in wringing it out of an unwilling and obstructive War Office. Each reform thus won, when it has been allowed fair play and has not been whittled away by the absurd jealousy of a military caste, has been followed by increased efficiency, until the medical arrangements of the numerous small wars in which the empire is engaged have become a model for other nations to imitate. In the great

war in which we have been engaged for the last nineteen months the medical arrangements for the army which the War Office supposed would be adequate for the task were complete, and worked admirably. But the War Office estimates of an army adequate for the task were all wrong. When it was seen that not two but five or six army corps or their equivalent were required, the War Office had to begin to improvise. It had to organise yeomanry and militia, and to call for volunteers in all departments. The medical staff for this large force had also to be improvised. No doubt mistakes were made, but useful lessons have been learnt, and we hope that one of the subjects which the Committee will consider and upon which it will make definite recommendations is the organisation which is needed to bring the Director-General's office into continuous friendly relation with the civil profession and with the great medical schools, so that in any future great war the skeleton of an organisation for supplying the civilian assistance which must always be required will be in existence.

Mr. Sidney Herbert's Commission recommended that the medical officer should be placed in a position "to ensure to his advice and opinion that weight and influence in the administration of the army which are necessary to secure the health and maintain the efficiency of the troops." To carry this into effect three main reforms were required: First, that the medical staff should be a part of the army, not an appendage to be encouraged or slighted according to the taste of a commander-in-chief, or the caprice of a general, and that its officers should have definite army rank. This reform was carried through in 1898, just forty years after the Herbert Commission reported, and we cannot conceive that any War Minister will dream of undoing the great good then achieved by Lord Lansdowne. The second reform is that the head of the medical staff of the army should be placed in a position in which he can make his voice heard effectively in the counsels of the War Office. To this end he should be a member of the Army Board, entitled to express and support his opinions on every subject involving medical or sanitary considerations. We hope that Mr. Brodrick's Committee will make a distinct recommendation on this point, and that he will carry it into effect. He will be supported by public opinion, which is thoroughly tired of the obstruction which it is well aware every reform in the medical service and in medical arrangements has always encountered from a certain section of highly-placed officials. The third reform under this head is that the principal medical officer of a force should be on the staff of the general, and in a position not only to give advice, but, subject of course to the supreme authority of the general, to see that it is carried out. This reform will be bitterly opposed. We shall be told that it is quite impracticable, that on no account must any plan be approved under which a medical officer should give orders which a combatant officer might have to obey. But in Heaven's name, why not? The country is promised that the army shall be run on business principles. Here is a case for their application. Again we say that Mr. Brodrick will have public opinion with him. The country only wants to see the work of tending the sick and wounded men of its army well done, and is heartily sick of the recurrent outcries and "scandals." It knows that wars cannot be made with rose water, but it is not satisfied that the inevitable sufferings of war should be increased to soothe the *amour propre* of combatant officers who do not know the A. B. C. of preventive medicine.

It will be for the Committee to consider carefully the causes which have contributed to deter young medical men from entering the army, and to devise means for rendering the service more attractive. The points to be considered will include the nature of and the necessity for the examination for admission. If retained, it should be modified and directed mainly to advanced medicine, surgery, bacteriology, and hygiene. Means should be devised to encourage those students who are ambitious to hold the office of house-surgeon or house-physician before entering the corps to become candidates; such men at the present time find themselves under a great disadvantage, since they must rank junior to others who have entered the service immediately after obtaining a registrable diploma. Means ought also to be found to reward professional excellence in officers of the corps, so that their advancement may not depend upon seniority alone, but largely upon professional and administrative merit. Whether any system of examination for promotion could be made to fulfil the necessary conditions is very open to question. It is not always the best man in the practice of his profession or in administrative work who does best at examinations, and we are disposed to believe that the system of brevet, which is already fully understood and generally followed in the combatant branch of the army, would be a better alternative.

Another question which will have to be considered by the Committee is that of pay. The pay of the junior ranks when serving at home is inadequate to act as an inducement to young men to enter the service. This difficulty has been brought into prominence by changes in the medical economy due to the institution of the five years curriculum, and to the enforcement by the General Medical Council of the regulations against the employment of unqualified assistants. Consideration ought also to be given to the pay in India, which is inadequate not only in the junior ranks, but also in the upper executive grades.

Another matter upon which definite regulations are urgently needed is with regard to "study leave." Mr. Sidney Herbert's Committee recommended that leave of absence should be granted for attendance at hospitals and medical schools, and this recommendation has been repeated again and again, but owing mainly to the undermanning of the service it has not been possible to carry it out in a systematic manner. The question is not free from difficulty, for the best solution must depend in part on the conditions of admission to the Corps, and in part on the way in which the subdivision of the United Kingdom for the organisation of army corps is carried out. Upon one point we are clear, and that is that the regulations for "study leave" must be such as to leave the officer free to choose the particular course of study he feels himself best adapted to follow, and to spend his leave in civil hospitals or teaching institutions. We do not believe that the special course of study should be combined with duty in a military hospital. If a good system of this kind could be

worked out, it would have the added advantage of rendering it possible for officers of the Corps with special aptitudes to specialise in certain departments of practice. One of the wants of the the army which is likely to have increasing importance in the future might thus be met.

A substantial increase to the strength of the executive ranks would be necessary and would tend also to shorten foreign and increase home service. At present the proportion of foreign (chiefly tropical) service is altogether too great, and many medical officers pass three-fourths of their time abroad to the detriment of their health and their professional knowledge.

On the whole we look forward with hope to the result of the labours of the Committee, and we have no doubt that suggestions brought before it by witnesses will be fully considered. We assume that witnesses will be heard and that the rumours to the contrary are *canards*.

## THE ARMY MEDICAL CONTROVERSY.

Since yet another Committee has been appointed to report upon another reorganisation of the Army Medical Service, it may be convenient to recapitulate very briefly the main facts in the history of the prolonged controversy which has taken place with regard to the medical service of the British army.

The Crimean war found the British army after a long peace by no means an effective instrument of war, and with regard to the medical arrangements there was a breakdown which roused the public conscience. In consequence of the defects in the arrangements for the care of the sick and wounded disclosed at this time, a Royal Commission was appointed in 1857, with Mr. Sidney Herbert as Chairman, to inquire into the constitution of the medical department of the army, the mode of appointment of its officers, the system which regulated their pay, promotion, and retirement, and the condition and administration of the army hospitals, with the view to maintaining and improving the health of all ranks of the army at home and abroad, and of providing for their medical care and treatment in cases of disease, wounds, and other casualties. The report of this Commission was a valuable document, and the objects of the recommendations made are best stated in the following paragraphs from the report itself:

> We have endeavoured by the recommendations which we have made to raise the standard of attainment among those to whom the care of the health of the army is chiefly entrusted, and to direct their attention to the study of that sanitary science, on the proper application of which the prevention of sickness and the preservation of life in armies mainly depend.
>
> We have endeavoured to place the medical officer in the position to which the dignity of his profession and the great services he renders justly entitle him, and to ensure to his advice and opinion that weight and influence in the administration of the army which are necessary to secure the health and to maintain the efficiency of the troops.

The Royal Warrant issued in 1858 as a consequence of the recommendations of the Royal Commission has been called the Magna Charta of the medical department, and if it had been acted upon in its spirit as well as in its letter, many of the difficulties which have since hampered the work of the medical department would never have arisen. The warrant gave the officers of the Army Medical Department relative rank in the army. It would appear as if military opinion of that day was inclined to look upon the medical department as an appendage, and not an integral part of the army, and upon its officers and men as camp followers. The reforms embodied in the Warrant of 1858 were resented and to a large extent neutralised by a policy of obstruction and by slights put upon military medical officers. In 1873 Mr. Cardwell abolished the regimental system, and though this was a movement in the right direction, it was done with so little consideration as to cause a strong feeling of irritation; the regimental medical officers left the service in numbers, and matters culminated in 1879, when fifty commissions were offered and only five candidates came forward, so that no examination was held.

A new warrant was issued in 1879 under which medical officers were admitted up to the age of 32, and after ten years' service were liable to discharge with a gratuity of £1,000, a select few being retained to fill the higher ranks. This scheme proved a failure, and another warrant abolishing the "thousand-pounder" brought matters back to the old system. Incidentally the changes had inflicted a serious pecuniary loss upon medical officers serving in India, for charge money for regiments and hill stations was abolished. Again matters were brought to a crisis by the issue of a warrant in 1887 by which two kinds of rank in the army only were recognised—substantive and honorary—officers of the Army Medical Department having neither the one nor the other. Numerous protests were made, the medical schools headed by the British Medical Association took the matter up, and the Commission over which the Earl of Camperdown presided was appointed in 1889; its report was after some further agitation followed by the Royal Warrant of 1891, which gave to the officers of the army medical staff substantive rank with compound titles.

Finally in 1898 the warrant constituting the Royal Army Medical Corps, giving substantive rank in that Corps, was issued. We believe that the effect of the formation of the Royal Army Medical Corps has been an unmixed good, and that if only sufficient time is given for the army to become thoroughly accustomed to it, it will, so far as questions connected with rank in the army are concerned, be productive of the best results for the efficiency of the Corps both in peace and in war. Unfortunately its good effects had not had time fully to declare themselves before the outbreak in the autumn of 1899 of the war of South Africa. This war, developing as it did to proportions not in the least foreseen when it was commenced, has put a strain upon our military organisation which has had to be met by various expedients for obtaining officers and men in every department of the army, and the strain fell with the greatest severity upon the Royal Army Medical Corps, which had fallen far below its adequate peace footing.

## THE DUTY OF THE STATE TOWARDS THE CONSUMPTIVE BREADWINNER.

The address delivered by Sir J. Burdon-Sanderson before a combined meeting of two Branches of the British Medical Association at Oxford last week, and published elsewhere in this issue, raises questions of great social importance, upon which the medical profession appears

called upon to take the lead. He has approached them from the economic side, and there can be no doubt that any scheme for the prevention of tuberculosis on a large national scale must have regard to questions of this order. Such considerations bring into prominence the extreme importance of the early recognition of pulmonary tuberculosis, for, as is pointed out in the address, successful treatment, so far as the individual is concerned, is almost synonymous with early treatment. As matters at present stand, however, even when the diagnosis is made early, it happens too often that the consumptive breadwinner is still treated in ordinary out-patient departments, as long as he can attend, and then is often refused admission because he does not belong to any of the classes of cases which derive most benefit from in-patient treatment at a general hospital. Owing to the increased attention now directed to the subject, and to the establishment during recent years of much fresh hospital and sanatorium accommodation, exceptions to this unfortunate rule are becoming more numerous. Many cases of consumption amongst the working classes are no doubt diagnosed at earlier stages of the disease, and a certain proportion of early cases are arrested by timely sanatorium treatment. With these fortunate patients must be contrasted the great number in whom the disease is already far advanced when their lungs are first examined and the disease diagnosed, and the equally great number of those who fail to obtain timely admission to a suitable sanatorium or special hospital, although the disease has been early detected and the general condition of the patient would justify a hopeful prognosis.

It is hardly necessary to give proofs of the results of sanatorium treatment amongst the poorer classes, so generally recognised is its beneficial influence in suitable cases. Amongst the more recent figures relating to the lasting effect of treatment those of the popular sanatorium of Krankenheim at Goerbersdorf may probably be taken as fairly representative. Dr. Weicker says that of the 200 patients in the year 1896 as many as 89 per cent. were able to resume work after treatment; 56.5 per cent. were ascertained to be still at work in 1898; 45.7 in 1899; and 40.8 per cent. in 1900.

Dr. Theodore Williams, in a clinical lecture also published in this issue, points out that the fact of a man returning to work proves a certain standard of strength or improvement, but not necessarily that the disease is arrested. This is certainly true, and, strictly speaking, the disease cannot be said to have been cured or permanently arrested until this has been proved by a *post-mortem* examination. From the economic point of view, however, the prolongation of the power of doing useful work and in whole or part earning a livelihood is what is required; this constitutes the true standard of the efficacy of sanatorium treatment for the working classes, and it is satisfactory to find that 40.8 per cent. of such patients are doing their work in the fourth year after treatment. The statistics in regard to ultimate results by modern methods of treatment are therefore sufficiently encouraging to justify the strenuous efforts that are being made to provide sufficient sanatorium accommodation for the consumptive poor. Indeed it becomes the imperative duty of the State, and not merely of the directors of private charities, to see that everything possible shall be done in this direction. Not only are many more sanatoria for early and favourable cases required, but homes are needed in which advanced and unfavourable cases can be permanently taken care of. Special accommodation should be provided also for the prompt reception of acute cases at any stage of the disease.

Can all this be accomplished solely by private charity? We suspect that the answer must be in the negative. How, then, is it to be effected? Apparently only by some system of universal compulsory assurance, analogous to that which in late years has yielded such excellent results in Germany. In England such a scheme would perhaps be more extensively aided by private charity, which would have to be administered in harmony with the State institutions. Sir J. Burdon-Sanderson thinks that the German system could not be imitated in England, but of this we are not convinced. Public opinion is somewhat changing, and it will not be surprising should questions of this order assume paramount importance in politics. Already the Liberal Unionist party has coquetted with a scheme for old-age pensions, and in a few years a more complete and less complicated scheme than that which has been gradually evolved in Germany might be successfully introduced in England. If this be so, then it would be well that the medical profession should show the public that, owing to the accumulated experience of recent years, it can at last agree on some general plan. The approaching congress on tuberculosis will, we may hope, effect something in this direction. We believe that the majority of the public would ultimately come to follow a unanimously expressed medical opinion, and, by influence on their representatives in Parliament, make the introduction of some State scheme possible. In fact, we believe that, on this subject at all events, any plan unanimously supported by the medical profession would become the popular plan, that is, would be supported by the majority of the people, if not at once, at all events after some years. It is possible that the introduction of a scheme of universal assurance in England would lead to beneficial results in many other directions besides that of tuberculosis: but in the latter direction, if properly aided by the vast resources of English private charity, such a scheme might enable England to take the leading position amongst the nations of the world in the international struggle against avoidable disease.

## PERSONATION AT EXAMINATIONS.

It is well known that under the Medical Act, 1858, any person who wilfully procures or attempts to procure himself to be registered by making or producing or causing to be made false or fraudulent representations or declarations either verbally or in writing is guilty of a misdemeanour in England or Ireland, and of a crime or offence in Scotland, and is liable on conviction to imprisonment for a term not exceeding twelve months. It is also a misdemeanour to impersonate another as a Parliamentary or municipal voter, but according to a case just concluded in the Court of Appeal in Ireland for a person to present himself at an examination and personate another and by passing the examination enable another to gain credit for the same and obtain the advantages which accrue to a successful candidate is apparently not an offence of which the law will take cognisance. The case to which we refer was "Rex *v.* Joseph Haddock." It was reserved by Mr. Justice Kenny from the February commis-

sion at Dublin. The case was reported in the British Medical Journal of February 23rd, p. 496. The charge was of having fraudulently personated Robert F. Cooper at the Conjoint Examinations for the Royal College of Surgeons and the Royal College of Physicians held for the purpose of enabling medical students to qualify and be on the *Register* of medical students, and thereby to acquire for Robert F. Cooper the status of medical student; and also for personating Alexander Fyffe on September 26th and 27th, 1900. The jury found the defendant guilty, but certain points were reserved for appeal to the High Court. The contention of the learned counsel for the defence, as reported in the *Freeman's Journal*, was that Haddock had committed no offence, and that the facts disclosed no crime known to the law. He submitted that the offence (if any) was merely a moral one, namely, the telling of a lie, which could not be made the subject of a criminal action, and that as there was no intent to defraud anyone so no crime was perpetrated. The questions reserved for the Appeal Court were: (1) Did the evidence disclose any criminal offence known to the law? (2) was the evidence sufficient to sustain the verdict? (3) did the judge rightly direct the jury? Counsel for the defendant contended before the judges that there was no offence, and cited cases in proof thereof. The Crown supported the conviction, and submitted that the offence charged was a fraud upon the public, and that the indictment was valid and sufficient. The Lord Chief Justice, in delivering judgment, said that the case was important. The personation charged was that Haddock took the place of the two young men in an examination for the medical profession. Haddock, in an artful way, went through this, and the students were admitted as having passed. "We have not the regulations of the College of Surgeons. We hold the evidence was in this respect insufficient to sustain the charges, and we must accordingly quash the conviction." The other members of the Court concurred. From the report before us of the decision of the judges it is not made clear whether the regulations of the College of Surgeons of Ireland if they had been produced would have altered the judgment. If the case failed on the ground of "want of proof," then it is a grave misfortune that the necessary evidence was not presented to the court at the trial. It is a serious moral offence at least to personate another at an examination, and we should certainly, previous to this action, have thought that it was an indictable offence as well. The end and aim of the passing of a preliminary examination for a medical student is the admission later to the *Medical Register*, and we should have considered that the personation disclosed in this case would have brought the personator and his fellows within the section of the Medical Act, 1858, quoted at the commencement of this note. The case is most unsatisfactory as it at present stands, and we presume that it will be for the General Medical Council to reconsider the position, and if any appeal can be raised in the House of Lords to carry it further. We do not imagine that cases of personation are numerous, but that such an offence is possible is certain, and must be guarded against in every manner provided by the law. The Council has not, however, shown any great zeal in dealing with this question, for at its last meeting the consideration of the report on the prevention of personation found its usual place at the very end of the business. It was brought up, within an hour or two before the final adjournment, by Mr. Horsley, the Chairman of the Committee, who explained that upon the Council accepting its recommendations as principles he would ask for the reappointment of the Committee to formulate resolutions which would give effect to them. It was, however, objected that some of the recommendations of the Committee were cast in such form as to give practical effect to the principles involved by abrogating by-laws or portions of by-laws, and therefore could not be treated as mere enunciation of principle. This objection, which, whilst it had some force, was not insuperable, as it might have been met by moving amendments to the several clauses which should alter them so far as was needful in this direction, was adopted by some members of the Council, who appeared rather anxious to shelve the question once more. So it was referred back to the Committee to formulate definite regulations upon all points, and the difficulty of debating the principle at one and the same time as the wording of working regulations will have to be met as best it may at the next session of the Council.

## ANTIVIVISECTIONISTS AND THE GENTLE ART OF GARBLING.

In every controversy charges of garbling are thrown about, often without sufficient reason. The mere omission of irrelevant passages, or verbal alterations which make no material difference in the sense, do not fall within the definition of garbling, which, we are told by lexicographic oracles, consists in mutilating so as to convey a false impression. For illustrations of this gentle art any successor of Isaac D'Israeli who should think of writing a book on Curiosities of Controversy, would find no richer collection of materials for his purpose than the writings of one kind or another produced by the antivivisectionist fraternity. Garbling is the badge of all their tribe. We have recently presented our readers with a few choice specimens, and Mr. Victor Horsley at a meeting of the Church Congress some years ago exhibited some fine examples taken from a book by Miss Frances Power Cobbe. A considerable addition to the growing museum of this form of moral pathology has lately been made by Professor William W. Keen, the distinguished surgeon of Philadelphia. In the "Hearing" on the Bill for the Further Prevention of Cruelty to Animals held before the Senate Committee at Washington in the early part of last year, Professor Keen, referring to a pamphlet issued by the American Humane Association, said that many of the statements made therein were so vague and indefinite that he could not look them up, while of those he could, some were "garbled and inaccurate." This remark led to a correspondence between Professor Keen and Mr. James M. Brown, President of the American Humane Association.[1] In response to a challenge from Mr. Brown to produce evidence of vagueness and indefiniteness in the references given in the pamphlet, Professor Keen shows that many serious charges were made on the authority of anonymous correspondents of the London *Morning Leader* and *Daily Chronicle*, and other English and foreign newspapers, sometimes without indication of the day, month, or even year. Professor Keen also gives instances of charges made on the authority of Dr. This or Professor That, without any reference by which the alleged statement can be investigated. With regard to garbling, he gives several instances of quotations deliberately mutilated so as to produce a false impression. Thus quotations purporting to be extracts from a report by Dr. Berkley on the results of the administration of thyroid to insane patients, are garbled by omission of the words enclosed in brackets: "Two patients became frenzied, and of these one died before the excitement had subsided [the immediate cause of the exitus being an acute disseminated tuberculosis]." Again: "The thyroid extract was now discontinued, but the excitement kept up....for seven weeks, at the end of which time she died." As Professor Keen says, one would think this was the end of the sentence, and that the patient's death was due to the thyroid medication. This impression is produced by the simple device of leaving out the words "with the clinical evidences of acute miliary tuberculosis," which follow "died" in the original. That the garbling was in-

[1] Published in the *Philadelphia Medical Journal* of February 23rd, 1901.

tended to produce this impression is evident from the comment of the writer of the pamphlet, who says, "This patient was, therefore, scientifically murdered." This reflection, however, appears to have been too strong even for the ostrich-like digestion of an antivivisection society, and in the reprint it was omitted, but characteristically without any indication of the omission. Again, a report of cases of lumbar puncture by Dr. Wentworth, of Boston, is so manipulated as to make it appear that convulsions and death due to disease were direct results of the operation. Professor Keen follows the writer of the pamphlet ruthlessly through his farrago of garbled quotations, interpolations, and deliberate mistranslations; the exposure is complete, and so crushing that no reply has been attempted except what the *Journal of the American Medical Association* calls "a defence which amounts to a practical acknowledgement of the truth of his criticisms." Professor Keen calls attention to "the utter misapprehension which the citation of detached sentences and paragraphs from medical articles is calculated to create in the mind of a non-medical reader." He goes on to say: "Even when the words are quoted correctly, they are likely, when detached from the context, to give rise to entirely false impressions. This is a criticism which applies not only to other examples cited in this pamphlet, but to a very large number of reports of experiments and of quotations from medical journals and books current in antivivisectionist writings, and the resulting dissemination of erroneous conceptions is often greater even than that caused by inaccurate or garbled quotations." We have quoted this passage because every word of it applies to our native antivivisectionists as well as to the American variety.

## CREMATION IN FRANCE.

IN a paragraph under this heading, which appeared in the BRITISH MEDICAL JOURNAL of June 15th, p. 1505, it ought to have been stated that the statistics concerning cremation societies and crematoria throughout Great Britain and every other country in Europe, except France, and for America, were collected with great labour by Sir Henry Thompson, and published in the fourth edition of his work *Modern Cremation*, which was recently noticed in our columns. In looking again at the report of the annual meeting of the Société pour la Propagation de l'Incineration, from which we took most of the figures and facts given in the paragraph referred to, we note that M. Georges Salomon, the Secretary-General of the French Society, referred to the *renseignements très intéressants* contained in Sir Henry Thompson's book. We think it right to mention this in order that there may be no misapprehension as to the source of the facts extracted by us from the report of the Paris Society.

## THE CENTENARY OF A HOSPITAL FOR THE INSANE.

IT was in July, 1801, that the institution now known as Wonford House Hospital for the Insane, Exeter, was opened. It was, like many similar philanthropic schemes, begun in a small way by a few of the leading men of the district in 1795. Their object was to provide a hospital for the insane in Devonshire "to relieve the most helpless and pitiable class who cannot consistently with the care of the patients be received into the county hospital." The proposal was laid before the grand jury at their meeting at the Castle at Exeter, and it was resolved "that the above proposal be considered as fully deserving our approbations, and that the foreman be requested to sign this resolution." Subscriptions amounting to £3,000 in all were raised. This, however, was insufficient to buy the necessary land and build a hospital, but in November, 1799, Bowhill House and grounds were purchased and altered to suit the requirements of the founders. In the accounts just before the hospital was opened there appeared the following quaint item: "Paid to the Rev. M. Manning for expense of furniture for two beds £6 4s., and for a pair of handcuffs and leg lock he purchased in London of John Hillman, 8s."! The new hospital was finally declared opened for the reception of patients on July 1st, 1801, and Mr. James Buller was elected the first President. This peaceful and benevolent work was carried through by Mr. Buller and his colleagues at a time when England was suffering from the pressure of a great war, and, as the Committee in its report states, it is an interesting coincidence that when the hospital is completing the first century of its existence the empire should be passing through another great crisis, and that Mr. Buller's descendant should have been one of its leading soldiers. When Wonford House was opened there were only three public hospitals for the insane in England—Manchester Lunatic Hospital, York Lunatic Hospital, and the Friends' Retreat at York. There were no county asylums, and the various private asylums were mere places for detaining the lunatics. Their treatment was a hideous mockery, and consisted largely of mechanical restraint. In 1802, as the House was quite full, steps were taken to build a new wing, and by midsummer, 1805, the additions were completed. In 1824 the number of patients had increased to 50. In 1845 the first great Lunacy Act was passed, and Bowhill House was "registered" as "St. Thomas's Registered Hospital." In 1846 the total benefactions had reached £17,000, and the income £510 a year. In 1863, to meet the growing requirements of the hospital, 20 acres of land in the parish of Heavitree were purchased and a new asylum was built, the contract price being £28,210. The new building was named Wonford House, and was opened on August 17th, 1869, when about 70 patients were removed from the original house; and it is interesting to note that of these twelve are now still alive and living at Wonford House. In 1870 the new hospital was first visited by Dr. Nairne and Mr. John Forster, two of the then Commissioners in Lunacy, who reported in very satisfactory terms of the accommodation and charitable resources at the disposal of the Committee. In 1876 a newly-built chapel was opened. As showing the steady advance of the hospital under liberal and enlightened management, it is worthy of mention that whereas in 1871 the number of patients was 77, with an amount received for their board of £5,656, in 1900 the number of patients was 134, and they paid no less than £15,548 for their board. Another point of importance is that the number of patients now residing in the institution at reduced rates is not far short of the total number of patients in 1869, which shows that the Committee of Management has not been unmindful of the principle upon which the hospital was founded. There is now among the many additions and improvements made during the last thirty years a convalescent home at Dawlish for a few well-to-do patients, while the estate on which the hospital stands has been added to by the acquisition of forty additional acres of land. In three years' time the original mortgage debt of £15,000 will be extinguished, and £2,500 has been repaid on a second loan of £6,000, borrowed when the additional land was purchased, so that in a short time the hospital will be absolutely free of debt. From July 1st, 1801, to December 31st, 1900, 2,835 patients were admitted; of these, 1,245 were discharged recovered, and about 200 relieved. Truly a good record. With regard to the year 1900, the amount received for the board of the patients—£15,548—is a record. The average weekly cost of maintenance was £1 14s. 10d. Dr. P. Maury Deas, who has been Physician-Superintendent for the last seventeen years, states that of the 34 cases admitted during the year 1900, 15 were considered favourable cases as regards prospect of recovery, and that the total percentage of recoveries on those newly-certified reaches the satisfactory

rate of 52 per cent. With regard to longevity among the insane he says "that insanity, apart from certain forms of brain disease, does not tend to shorten life, but on the contrary the insane, well cared for as they now are, and free from much of the strain and stress of life, are perhaps more likely to attain to an advanced age than the sane." Could this be said of their condition, with their handcuffs and leg locks, when Wonford House was started in 1801? and could nobler testimony be borne to the part it has so worthily taken in promoting the care and treatment of "the most helpless and pitiable class" for whom its worthy founders opened its doors 100 years ago?

## THE DESTRUCTION OF MOSQUITOS.

THE Division of Entomology of the United States Department of Agriculture has (as we learn from the *New York Medical Journal*) issued a circular concerning mosquitos and fleas. The circular bears the signature of Mr. L. O. Howard, an entomologist whose special competence in the matter is acknowledged throughout the scientific world. While recognising that the thorough screening of windows and the use of the bed net are the best means to employ against the access of mosquitos in dwellings, he makes suggestions as to the destruction of these mosquitos which, in spite of these measures, do inflict their bites even in the best regulated families. Thus he points out that the slow burning of cones made of moistened pyrethrum powder gives great relief from the attacks of mosquitos in a room; it does not, however, kill the insects, but is only a palliative. Mosquitos found on the ceiling of a bedroom may be killed easily and quickly by placing under them a shallow tin vessel nailed to the end of a stick and moistened on the inside with kerosene. But the most satisfactory means of fighting mosquitos is to destroy their larvæ or abolish their breeding places by draining ponds and marshes, by stocking pools with fish, and by the use of kerosene on the surface of the water. Approximately, an ounce of the oil to every fifteen square feet of surface is sufficient, and generally the application need be made only once a month. Mr. Howard doubts, however, if it will prove feasible to treat extensive salt marshes in this way. Cesspools, cisterns, etc., should be treated in the same manner. If drinking water is drawn from the bottom of a tank, as is commonly the case, there is no objection to coating the surface of the water with kerosene. In the matter of tanks, cisterns, cesspools, etc., there should be concerted action in a district, for a family may suffer from their neighbour's mosquitos.

## THE STUDY OF TROPICAL DISEASES IN THE PHILIPPINE ISLANDS.

A MEDICAL circular on tropical diseases has been issued from the office of the Chief Surgeon of the Division of the Philippines. Under the authority of the Surgeon-General of the United States Army, this circular was ordered to be prepared by First Lieutenant R. P. Strong, Assistant Surgeon, U.S.A., with the view of presenting to the medical officers on duty in those islands a concise report of the diseases with which they have to deal. Dr. Strong has prepared a series of interesting reports, or tracts, on some of the infections which cause intestinal disorders especially. The amœba dysenteriæ is described minutely. It was encountered in the stools of nearly 500 cases of dysentery. The parasite was found in the mucosa, submucosa, and intermuscular septa. These amœbæ were also found in 18 abscesses of the liver; on two occasions these abscesses had penetrated the lung cavity, and the parasites were found there. In an interesting paper on the infusoria, Dr. Strong describes the *balantidium coli*, which is also a cause of intestinal disease. The cestodes or worms, are much the same in the Philippine Islands as in the United States. The common forms are the tænia saginata and the tænia solium. The ecchinococcus is not common. The troops have been much infested with the common lumbricoid worm. Not the least of the soldiers' troubles in the Philippines is caused by a small leech, which works its way into the skin even through the shoe-laces.

## WOMEN AND HOSPITAL APPOINTMENTS

FROM a paper by Miss Helen MacMurchy, M.B., of Toronto, in the *New York Medical Journal*, we gather (for we confess we have not verified the reference) that Mrs. Garrett Anderson not long ago took occasion to confide her sentiments on matters medical to that glass of feminine fashion, *The Gentlewoman*. Speaking of resident appointments in hospitals, the Dean of the London School of Medicine for Women is reported to have said with easy generalisation: "They are unusually valuable, and the men get them." Now it is needless for us to express our agreement with the first part of the sentence we have quoted; but as to the second, we must distinguish. The men get most of them, no doubt, but they do not get them all. There is a story of a famous sartorial artist meeting a well-known politician at a foreign watering place, and saying to him, with the propitiatory hand-rubbing of his craft: "The company here seems rather mixed"; which drew from the politician the mild expostulation, "You would not have them *all* tailors, would you?" Our feeling for Mrs. Garrett Anderson amounts to reverence, and we have the deepest respect for the ladies who, by joining us in the cultivation of our liberal art, help to keep our manners from being ferocious. But as Artemus Ward said of his black "brother," though we are prepared to accept the medical woman as our professional sister, we do not feel called upon to receive her as our mother and our cousin and our aunt in the country. She is welcome to her share in such poor loaves and fishes as are available for distribution among us; but she need not grudge her brother his portion. Miss MacMurchy indeed shows that she has no cause to be jealous. As she points out, it is but half a century since women began to practise medicine, and in a spirit of sweet reasonableness for which we are humbly grateful she asks if, considering the short time, the great competition for these posts, and the years required for great movements to develop, the number of appointments held by female practitioners is as small as it seems. To aid in supplying an answer to this question a list has been compiled for the Women's Medical College, Toronto. This list, which Miss MacMurchy gives at full length, shows a total of 559 medical appointments—Government, municipal, and hospital—held by medical women. Of these 215 are resident; 302, of which 114 are resident, are in the United States, and 188, including 99 resident, are in the British Empire. Truly a goodly list of valuable appointments which men do *not* get.

## QUACKERY AND DRINK CURES IN AMERICA.

DR. T. D. CROTHERS, editor of the American *Journal of Inebriety*, has recently delivered his soul on charlatanism in the cure of alcohol, opium, and other forms of inebriety. He says the recognition of the curability of inebriety has brought into the field a large class of empirics who bring to the work a degree of sharpness and bold assumption not found in quacks in other fields. They are all of the dramatic type, who pose for sudden tremendous effect, and after a meteoric career vanish; very few of them are before the world more than five or ten years. In his long experience as editor of a journal devoted to this speciality, and as superintendent of an asylum for the treatment of inebriates, Dr. Crothers has come in contact with many of these quacks, and he found that all the leading spirits had been or were spirit or drug takers, and were buoyed up by delusional exaltations of gains, both pecuniary and physical. They were practically inebriates incapable of persevering

effort, and unable to bear misfortunes or disappointments. One concern started with a million dollars pledged, and extravagant expectations on paper; disappointments of the first six months practically drove them out of business, yet their plans and management were of the very highest order. Another firm was officered by two inebriates who, in a state of great mental exaltation, spent ten thousand dollars in circulars and paper plans, became discouraged and drank themselves to death. Another syndicate went about purchasing property, and at one time had over three hundred different asylums in operation; then owing to some trivial causes broke up and abandoned them all. Nearly all these projects were under the leadership of physicians who had been inebriates and believed they could do far more good with their experience and knowledge of drugs than had been done before. The prescriptions used by them were all combinations of strychnine, hydrastin, apomorphine, and cinchona barks. Some few mild vegetable narcotics which had been discarded by the profession were taken up again, but there were no remedies that were new to the profession. The chief object of the treatment was to destroy the alcoholic appetite, and this was claimed to be a cure. In many instances the surprise and joy in the patient's mind at the disappearance of all desire for spirits was accepted as evidence of final cure. This was followed by a species of hypnotism which lasted for a variable time, and was in many cases very powerful; but when separated from the mystery and the surrounding psychical influence reaction took place in the opposite direction. Dr. Crothers has repeatedly offered to test remedies offered as "specifics" and report the results, only asking that the drug be known, and the matter done openly and on scientific lines. This has generally been refused, but whenever the prescription has been shown it has been found to contain the common usual drugs of that class. The most prosperous of these quacks are those who send out drugs to be given in tea and coffee secretly to destroy the appetite. This has become an enormous traffic in some places, and many of these quacks have made large amounts of money. While homes and sanataria for the treatment of inebriates by specific methods have decreased rapidly in America within the last few years, their number is still large, and their work a menace to all scientific study. Such institutions have no regular organisation, follow quack methods of attracting and holding patients, and are usually managed by unknown and so-called reformed men. Their remedies are always kept secret, and they depend entirely upon vaunted claims of remarkable cures. These sanataria assume exemption from all supervision and control by authorities on the ground that they only receive spirit and drug takers, and that these are moral disorders not recognised as insanity; hence anyone may open any kind of an asylum at any time and place, and receive inebriates of all degrees, delirious, delusional, imbecile and insane, and treat them in any way and by any means, and turn them out at the will of the management. All institutions of this class, Dr. Crothers thinks, should be licensed like insane asylums, and come under some public supervision. He holds that inebriety and other drug disorders are not cured by specific remedies or means of any kind, or secret remedies. However much persons may be mistaken as to the effect of drugs, there have so far been no discoveries warranting the assertion that the degeneration from the drink craze can be cured in a few weeks or months. He thinks, however, that the prevalence of these quack cures indicates the existence of a vast army of neurotics who are suffering from drug habits of one kind or another. Inebriety and other drug diseases should be recognised and taught as distinct neuroses occurring in every community and amenable to medical treatment. Then, he believes, the reign of the quack and his methods will disappear.

## THE MEDICAL SERVICE OF THE UNITED STATES ARMY.

The Army Act recently passed by the United States Legislature has caused great dissatisfaction among medical officers and the profession generally. At the meeting of the American Medical Association in May resolutions emphatically condemning the measure were passed. As a direct result of the Act the supply of candidates for the service has practically ceased. Surgeon-General Sternberg foretold that the provisions of the Act, by increasing the establishment in the lower ranks without a proportionate increment in the upper ranks, would keep medical men from entering the service; and his prediction has been verified by the dissolution of the Boards created to examine applicants for medical commissions in the army on the ground that they have not been able to secure a sufficiency of candidates. The fatuous impolicy of framing schemes for the medical service of armies without taking into account the wishes or feelings of the class principally concerned would appear to be confined to no one country; it must therefore be innate in the official mind. History has been defined as "philosophy teaching by examples;" and for purposes of political education, contemporary events in foreign countries may be treated as history. We therefore venture to recommend Mr. Brodrick to devote some attention to the study of reorganisation as lately applied to the Medical Department of the United States Army.

## CHRISTIAN SECTS AND CHRISTIAN SCIENCE.

Christian Science is making such headway in the United States that the other churches are becoming alarmed at its progress. The *New York Herald* recently interviewed clergymen of the most diverse shades of theological opinion, and found them fully agreed in denouncing the new sect as blasphemous, a dangerous delusion full of spiritual and physical evil, and so on throughout the gamut of ecclesiastical anathema. There would seem to be solid reason for their alarm, for it is said there are no fewer than 625 Christian Science organisations "all over the United States." It is thought to be not unlikely that a concerted movement of the churches will be started against it. But will there ever be a concert of the churches about anything? In Canada, too, where Christian Science is said to have some 5,000 adherents and 32 churches, it is vigorously condemned from many pulpits. The *Deutsche evangelische Kirchen-Zeitung*, the leading Protestant organ in Germany, bitterly complains that of late "the so-called 'Christian Science' has been imported from America, and is now being spread by Americans residing in Berlin." Our contemporary declares that the movement is making rapid progress among the higher, and even the highest, classes, although so far exclusively among women. The German police have a short and effective way of dealing with vendors of quack remedies, but such methods are inapplicable to "Christian Science" which comes in the guise of a religion. It is hardly to be wondered at that the churches should feel some uneasiness at the appearance of a rival system in which spiritual ministration is reinforced by physical healing, and which appeals in a special manner to the devout female sex. The clergy have as a body a decided leaning towards quackery; there is therefore a comic element in their dislike of the new religion that is particularly amusing to medical men. We feel tempted to say with the poor gipsy in *Barnaby Rudge* when going to execution with Dennis, "See the hangman when it comes home to him!" American politicians have also lately found that "Christian Science" is a force to be reckoned with. Not long ago the sect succeeded in preventing the passage of the Bell Bill for the repression of quackery in New York. A member of the New York State Legislature is reported to have said that the "Christian Scientists" in their efforts to defeat the Bill went into the district of

every member of the Assembly, and canvassed the electorate to such good purpose that they were in a position to inform the representative of each district that if he did not vote against the Bill he would not be returned to the Assembly. It was said that this threat was accompanied by a statement of the number of votes controlled by the "Christian Scientists," with means for verifying them. It may be added that the question of Mrs. Eddy's successor is exercising the minds of many of her disciples. The echoes of a rumour to the effect that she had said her successor would be a man having reached her ears, she has issued the following manifesto: I did say a man would be my future successor. By this I did not mean Mr. Alfred Farlow nor any other man to-day on earth. *Science and Health* makes it plain to all Christian Scientists that the manhood and womanhood of God have already been revealed in a degree through Christ Jesus and Christian Science, his two witnesses. What remains to lead on the centuries and reveal my successor, is man in the full image and likeness of the Fath-Mother God, man the generic term for mankind." Which words being interpreted would seem to mean that the Prophetess of Christian Science will, like some other prophets, leave her mantle to be fought for by those who come after her.

## LAPSES OF MEMORY.

DURING the last week or so the psychologists who write for the lay press have been much exercised concerning the case of a girl who is said to have been the subject of a sudden attack of alienation of memory. The facts have not as yet been recorded by a skilled observer, and the important, if unsensational, details of personal and family history are lacking; enough points of medical interest have, however, been raised to render the incident worthy of comment. It appears, then, that an intelligent girl, aged 16, had been somewhat over-worked in her occupation as shorthand clerk. In order to afford her some remedial exercise, a bicycle was given her: on June 12th she started out for a quarter of an hour's ride. Of the incidents of the ride nothing is known; but late in the evening the girl was found in a dazed condition at Tunbridge Wells, thirty-five miles from her home. She could not remember her name or the circumstances of her arrival; when restored to her relatives she failed to recognise them, though it is said that she could distinguish strangers from friends. Since then she has been physically quite well, save for a slight headache. Her memory of passing events is quite good, and she is rapidly relearning the identity of people. Curiously enough, though she cannot remember that she ever did any work or even the appearance of a typewriter, she has not forgotten her music, though it is stated that she does not play so readily as formerly. This type of case, which is far from rare, presents two main clinical features. There is, first, automatism, an unconscious and uncontrollable impulse to do something, usually to push on without determinate object. This is followed by mental confusion and loss of memory for incidents occurring during the automatic period, and perhaps for antecedent events as well. This combination of symptoms is frequently found after attacks of *petit mal*, in which the motor affection is so slight as to pass unnoticed. The "epileptic drain," to use Dr. Hughlings Jackson's apt expression, through which the patient passes, is closely simulated by some of the phases of acute alcoholism, for a drunken man may also perform automatic, though not so often well-ordered, acts of which he has subsequently no remembrance. In another class of cases, admirably depicted by Charles Reade in his great novel *Hard Cash*, the loss of memory is the sudden effect of a cerebral shock, as from a violent blow on the head; many striking examples of this are quoted in Ribot's well-known work. There are also well-authenticated instances of loss of memory occurring in hysterical subjects; a typical case is recorded by Dr. F. P. Davies.[1] Here, as he admits, it is very difficult to exclude malingering, and even genuine examples of this form may be complicated by deception. Finally, aberrations of memory are, of course, common in various forms of insanity. The case evidently falls under either the first or third heading. Further than this cannot be concluded from the published accounts, but it may be suggested that in either event journalistic publicity is hardly likely to be an aid to permanent and complete recovery.

## TUBERCULOSIS AND EMIGRATION.

IT is stated in the American journals that the recent order excluding sufferers from tuberculosis from the United States is the result of a ruling on the subject asked for in consequence of a declaration by the Surgeon-General of the Marine Hospital Service that pulmonary tuberculosis is a dangerous contagious disease. On the strength of that pronouncement the Superintendent of Immigration was instructed to issue an order that in future immigrants affected with tuberculosis of the lungs must be debarred from all ports of the United States regardless of Boards of Special Inquiry which heretofore have used their discretion in the matter. Formerly the Board of Special Inquiry at the port of New York, after receiving the report on a case of tuberculosis from the Chief of the Medical Division of the Immigration Service, could exercise discretion as to the admission of the person, and, according to the *Medical Record*, there have been instances in which a child ill of the disease has been permitted to land with its parents. Henceforth no one suffering from consumption will be admitted to the United States. The rule will apply also to alien passengers in the first and second cabins as well as to those in the steerage.

## CONFERENCE ON THE LONDON HOUSING QUESTION.

LAST week a conference was held at the London County Hall, under the chairmanship of Mr. Torrance, at which representatives of the Metropolitan Borough Councils met representatives of the London County Council to interchange views as to their respective spheres of action under Part III of the Housing of the Working Classes Act, 1890, as amended by the Act of 1900. The City Corporation, the London County Council, and the new Borough Councils, it will be remembered, have now concurrent jurisdiction in acquiring land either within or without their own districts for housing purposes. It is evident there is danger lest what is everybody's duty may come to be nobody's duty, or that more than one authority may be in treaty for the same piece of land, and thus it is eminently desirable that, to avoid overlapping and secure harmonious action, some recognised plan of procedure should be mutually agreed upon. The Conference rejected the proposal to set up an Advisory Board composed of representatives of the various councils in favour of a resolution affirming that no scheme should be proceeded with without communication and consultation between the County Council and the Borough Council concerned. A desire was expressed to cast some portion of the cost of housing schemes undertaken by borough councils upon the county funds. Such contribution is not provided for under the existing law and it may well be urged that if the metropolitan purse is to be largely employed the occasion for giving these powers to the local bodies to a great extent disappears, and it is not improbable that further experience may show that any adequate handling of the housing question, closely related as it is to the question of locomotion, must be planned from the centre, and carried out mainly under central control and out of the county purse.

[1] *American Journal of Insanity*, vol. xliii.

## THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

A NOTICE has been sent to the Governors of the National Hospital for the Paralysed and Epileptic that a special general meeting of governors and subscribers will take place at the hospital on Saturday, July 6th, at 12 noon to receive and consider the report of the Committee of Inquiry, a full abstract of which appeared in the BRITISH MEDICAL JOURNAL of June 22nd. The business to be transacted at the meeting will include the consideration of the following motions: (1) That the report of the Committee of Inquiry be adopted. (2) That a Committee be appointed to represent the governors in making such arrangements as may be necessary for dealing with all matters consequential upon, or arising out of, the adoption of the previous resolution. (3) That such Committee consist of nine persons, three of whom shall be nominated by the Board of Management, two by the medical staff, and four by the Committee appointed on March 23rd, and that four shall form a quorum.

## A MODIFIED HIPPOCRATIC OATH FOR NURSES.

WE learn from the *Boston Medical and Surgical Journal* that the graduating exercises of the training school for nurses at the City Hospital, Blackwell's Island, were held on June 1st. There were fifty-two graduates. A novel feature in the ceremony was the administration of a modified Hippocratic oath to the class. Among the clauses of the oath are the following: "That you will be loyal to the physicians under whom you serve, as a good soldier is loyal to his officers. That whatsoever you shall see or hear of the lives of men and women, whether they be your patients or members of their households, you will keep inviolably secret, whether you are in other households or among your own friends." We are of the opinion of the sensible person in *Punch* who replied to the fair temperance proselytiser that "people should keep sober without taking hoaths about it." But granting the need of an oath for nurses, the one from which we have quoted seems to be good enough for its purpose.

## VISUAL ACUITY IN ITS RELATION TO TRADES.

AT the recent meeting of the American Medical Association Dr. H. V. Wuerdemann, of Milwaukee, read a paper on Economic Limitations of the Visual Acuity in the Various Trades and Professions. According to an abstract published in the *Philadelphia Medical Journal* of June 15th, he said that the meaning of blindness as used in daily life is a much narrower one than is embraced in the scientific term. It has been determined that ordinary coarse work like that of a common labourer does not require more than one-half of the normal for a condition of success, but on the other hand, a corresponding diminution in the vision of a skilled mechanic would so decrease the clearness of the retinal impressions to which he has been accustomed in the performance of his duties as to hamper him seriously. Individual members of certain occupations do not have the same visual demands exacted from them. Dr. Wuerdemann divides the occupation into two groups. The occupations requiring higher degrees of visual acuity and a range from 0.75 to 0.15 are, medicine, theology, law, art, engineering, students of all professions, fine mechanics, iron and steel workers, rolling mill workers, machinists and metal workers, musical instrument makers, the linen industry, the textile industry, the silk industry, paper workers, leather workers, garment makers, printers, marine employees, mine workers, railway and steamship employees (including city roads), soldiers and sailors, telegraph operators, and skilled labour generally. The trades requiring lower degrees of visual acuity, and a range from 0.50 to 0.05, are glassblowers, mineral workers, quarrymen, builders, pottery makers, brickmakers, workers in the chemical industries, employees in gas and water works, paper makers, wood workers, mill employees, manufacturers of food articles, sugar factory employees, brewers and maltsters, tobacco workers, chimney sweepers, street railway employees (horse cars), employees in lifts and wine cellars, teamsters, bargemen on inland waters (rivers, etc.), farmers, day labourers, unskilled labour, etc.

## NEW MEDICAL LABORATORIES IN THE UNIVERSITY OF PENNSYLVANIA.

THE University of Pennsylvania has decided to build a great laboratory at a cost of £100,000, for the use of the departments of physiology, pathology, and pharmaco-dynamics. The building will be two storeys in height, with a central court, thus ensuring perfect lighting. The first floor will be devoted to the departments of physiology, pharmaco-dynamics, and pharmacy, the entire second floor to the department of pathology. The plans include two lecture rooms, with a seating capacity of 400, and two demonstration rooms, to accommodate 185 students. In all departments abundant space has been reserved for advanced and research work. In the pathological laboratory there will also be special laboratories for work in surgical, comparative, and experimental pathology, the pathology of the nervous system, and advanced bacteriology, thus making of this department a pathological institute, in which opportunity will be afforded for any line of work in pathology or bacteriology.

WE are glad to learn that Mr. Jordan Lloyd of Birmingham, who has recently suffered a severe attack of appendicitis necessitating operation, is making satisfactory progress towards recovery.

WE have received the half-yearly issue of the *Minutes* of the General Medical Council and of its various Committees and Branch Councils. It embraces the period from January 1st to June 11th, 1901, and will form the first part of vol. xxxviii. It contains ten appendices, including the report on the finances of the Council by the financial expert.

AT a meeting of the Council of the University College of South Wales and Monmouthshire, Cardiff, it was unanimously decided to invite Dr. Isambard Owen to undertake the duties of Principal of the College, in succession to the late Principal J. Viriamu Jones. We understand that Dr. Owen has taken time to consider his reply.

PROFESSOR RUDOLF VIRCHOW has been elected a Knight, with the right to vote, of the Prussian Order "Pour le Mérite" for Sciences and Art. The venerable Professor is to be congratulated on having received what is justly considered the highest distinction his intellectual peers in his own country can bestow on him. But the medical profession of all countries will share our wonder that the well-deserved honour should have been so long delayed.

WE are asked to state that the complimentary dinner to be given by the profession to Surgeon-General Jameson, C.B., late Director-General Army Medical Staff, will take place at the Hotel Cecil, Strand, W.C., on Wednesday, July 24th, when Sir William Church will take the chair at 7.30 P.M. We printed in the BRITISH MEDICAL JOURNAL of June 15th, p. 1513, a list of some of those who intend to be present, and among those who have since intimated their intention to attend are Lord Haliburton, Colonel Sir Howard Vincent, M.P., Sir John Furley, Sir Samuel Wilks, Bart., Dr. Ball, Regius Professor of Surgery, Trinity College, Dublin; Dr. James Little, Regius Professor of Physic, University of Dublin; Surgeon-General Harvey, C.B., Director-General I.M.S.; Surgeon-General Marston, Surgeon-General Hooper, C.S.I., I.M.S.; Mr. Thomas Bryant, Mr. Pearce Gould, and Mr. A. D. Fripp, C.B.

# MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

**The Committee on the Army Medical Service.** — After several postponements Mr. Brodrick announced on Thursday, June 27th, in answer to Mr. Burdett-Coutts and Dr. Thompson, the composition of the Committee. He said that he had received a number of suggestions from various quarters, and a committee of experts to consider a scheme which he had drawn up would shortly be appointed. The Committee would consist of the following members: Mr. Howard H. Tooth, C.M.G., M.D., F.R.C.P., St. Bartholomew's Hospital; Mr. George H. Makins, C.B., F.R.C.S., St. Thomas's Hospital; Mr. Alfred D. Fripp, C.B., M.S., F.R.C.S., Guy's Hospital; Sir F. Treves, K.C.V.O., C.B., F.R.C.S., London Hospital; Mr. Alexander Ogston, M.D., Scotland; Lieutenant-Colonel Keogh, M.D., C.B., R.A.M.C., Ireland; Mr. E. C. Perry, M.D., F.R.C.P., Senate of London University; Surgeon-General Hooper, C.S.I., President of Medical Board, India Office; and two officers to be named by the Commander-in-Chief to represent the army. The secretary would be Major H. E. R. James, R.A.M.C., and Mr. Brodrick, the Secretary of State for War, would himself preside. Dr. Farquharson further questioned the Secretary of State as to when the Committee would close its sittings, but Mr. Brodrick, while admitting the difficulty of getting candidates for the medical service of the army, thought it would be better to make temporary arrangements and put the corps on a permanently good footing rather than to hurry the Committee in their report. Dr. Thompson (Omagh) asked Mr. Brodrick whether he could undertake that medical officers should be allowed to give evidence before the Committee as to their grievances, and Mr. Brodrick said that he could not give an undertaking. The object of the Committee was to consider a scheme for the reorganisation of the Army Medical Service, and there was no idea of taking evidence as to the grievances and general condition of the officers and the service.

**The Factory and Workshops Acts Amendment Bill** occupied the Standing Committee on Trade for some hours on June 27th, and Clauses 7 to 10 were disposed of. Clauses 7 and 8 were agreed to after some discussion without amendment. On Clause 9 Mr. Renshaw moved to add the words "and addresses" after "names," so that the lists kept by the occupier of a workshop should contain the addresses of the workers as well as their names. After a debate this amendment was carried by 28 to 20. Sir Charles Dilke afterwards secured by an amendment that the lists of workers should be sent to the Inspector of the District as well as to the District Councils. The inspection of the lists was made open to any officer duly authorised by the District Council instead of to any officer, and on the motion of Mr. William Redmond the fine for a second offence under the clause was raised to a sum not exceeding £5. The clause as amended was carried by 32 to 14. In Clause 10 only some drafting amendments were made. On Monday last Clause 11, which prohibits home work in places injurious to health, was considered. Sir Charles Dilke moved to omit the first subsection of the clause, with the view of keeping the administration in this respect in the hands of the Home Office instead of delegating it to local authorities. Mr. Ritchie opposed the amendment on the ground that the local authority was the proper body to do sanitary inspection. He, however, undertook, in case of default on the part of the district council, that the Home Office should step in. After considerable discussion the amendment was rejected by 35 to 15. The clause was then passed, as also Clause 12. On the next clause an amendment was carried against the Government, making it the duty of the Home Office to give notice to domestic workshops and factories of the provisions of the Acts instead of delegating the duty to the District Council. Here, oddly enough, the same principle which was rejected on Clause 10 was affirmed by 34 votes to 16, in spite of Mr. Ritchie's earnest opposition. The rest of the sitting of the Committee was spent in a long discussion over the Ventilation Clause (15). Mr. Emmott sought to amend the clause by throwing on the owner of a factory the cost of structural alterations for ventilation and making the occupier responsible for maintaining the ventilation. This amendment was finally negatived by 36 to 8, and the subject of the control of the Home Office over ventilation was then raised and debated till the Committee adjourned.

**The Vaccination Prosecutions Bill** is a measure introduced by Mr. Channing to enact that no prosecution shall be initiated by a vaccination officer against a parent or other person under section XXXI of the Vaccination Act 1867, except with the express sanction and authority in each case of the guardians of the union or parish for which he acts. The Bill is backed by Sir John Rolleston, Mr. Goddard, Mr. Cremer, Mr. Briggs, Mr. Carlile, Mr. Bell, and Mr. Broadhurst. Like the other Bill for abolishing compulsory vaccination it has no chance of passing this session.

**The Registration of Births and Deaths Bill** is a short Government Bill introduced by the Local Government Board to amend the laws with respect to districts for registration purposes and the appointment of superintendent-registrars of births and deaths in certain unions. It consists of only two clauses, one of which is the title and is apparently a measure merely to improve and adapt administrative machinery to altered conditions. Mr. Grant Lawson and Mr. Walter Long are in charge of it.

**Irish Dispensary Officers** have, it appears from a question put on Monday by Mr. Tully, been called upon by the Local Government Board to discharge a new duty of attending to the empty cases in which medicine contractors supply medicines. The inquiry was made as to whether any additional remuneration would be given for this new work, and the saving to the Treasury which would be effected. The Chief Secretary explained that the regulations apply to all medical officers, on whom the charge of the drugs naturally devolved, and that there would be no extra remuneration for the work, which would mostly be discharged by the caretaker. The rates and not the Treasury would reap any saving effected.

**The Roentgen Rays in South African Hospitals.**—Sir Benjamin Stone asked the Secretary of State for War last week whether any report had been made as to the application and value of the use of Roentgen rays in the military hospitals during the war, and whether expert instruction had been given in the service hospitals in applying the rays. In reply it was stated that no report had been made, and that until the war was over instruction could only be given at home. Any records obtained would most probably be preserved for the Army Medical School.

**Transports and Remounts.**—On the Consolidated Fund Bill No. 2 there was an animated debate last week, in which the deficiencies in transports and the great waste of horses and their cost were discussed. Sir Walter Foster specially drew attention to the care of the Yeomanry on board the *Mongolian*. The ship was infested with vermin of all kinds when she took the troops on board, and occupied thirty-two days in her voyage home. During that time it was stated that the machinery broke down several times, and the boilers had to be mended by two of the Yeomen; 31 cases of typhoid fever developed during the voyage, and 7 men died. Complaints were made that the supply of soda water was exhausted four days after the ship left Capetown, and that the water supply was cut off for hours during the day in the tropics. The drugs were said to have run out, and there was complaint of a serious kind as to the food. Lord Stanley, in reply, said the ship had been discharged from transport duty, that the matter had been referred to the Admiralty for inquiry, and that every possible care would be taken to prevent a recurrence of what was complained of. In the course of a long discussion on the terrible waste of horseflesh and the waste of money in purchasing remounts, it was stated that some 300,000 men and 260,000 animals had been sent out to South Africa.

**Bills of Medical Interest.**—The Medical Acts Amendment Bill, the Sewage and Drainage (Local Authorities Bill), the Local Government (Scotland) Act, 1894, Amendment Bill, and the Inebriates Acts Amendment Bill have all been dropped. The Rivers Pollution Bill and the Public Health Bill, both in the charge of Sir Francis Powell, are still on the paper, and will be persevered with, although the chance of either passing is very remote.

# NOVA ET VETERA.

## THE BONES OF ST. CUTHBERT.

There has long been a doubt in the minds of many as to whether the grave of St. Cuthbert in Durham Cathedral contains the body of the Saint, or whether at the Reformation a skeleton was hastily substituted for the long cherished relic. This question was fully argued by the Rev. Father Brown, who published in 1897 a clever *ex parte* statement under the title, "Where is St. Cuthbert Buried?"

The current volume of *Archæologia* (vol. lvii, part i, pp. 11-28) contains a most interesting account of a recent examination of the tomb of St. Cuthbert in Durham Cathedral.

St. Cuthbert was born of humble parents dwelling in the Lothians, and suffered as a boy from a disease of the knee, which was miraculously cured. He herded sheep for a time about a day's journey from Old Melrose on the Tweed. Into this abbey he was welcomed by Prior Boisil, and received the tonsure at the hands of Eata its abbot. About 661 Cuthbert was seized with the plague, and, though he recovered from the disease, it is said to have left him with an internal tumour from which he suffered for the rest of his life.

Cuthbert became Prior of Melrose on the death of Boisil, and about 664 the Abbot of Lindisfarne appointed him prior of his house, that he might introduce the observance of the Roman rule into the convent, for Cuthbert had adopted that rule after the Synod of Whitby, though before it he had been a staunch upholder of the Celtic usage.

In 676 Cuthbert became a hermit, first in the cave near Howburn and afterwards on Farne Island. Here he passed nine years in the strictest seclusion, only once going as far as Coquet Island to meet Elfiaed, abbess of Whitby, and in the practice of such austerities that he would lie out all night on the shore till he was so cold that the very otters in mercy licked him back to life. For this reason Cuthbert is often represented as accompanied by an otter. In 685 he was consecrated Bishop of Lindisfarne at York, and in the presence of Ecgfrith the King. Two years afterwards, feeling the hand of death heavy upon him, he gave up his bishopric and returned to his cell on Holy Island. Ten months later, on February 27th, 687, he suddenly fell sick of the tumour from which he had suffered since he recovered from the plague. For five days he remained too weak and ill to help himself or to move from the little hut built at the landing place to his hermitage, and during all this time he was only able to moisten his mouth with part of an onion. On the fifth day Henfrith, abbot of Lindisfarne, whose coming had been delayed by foul weather, ministered to him, gave him some warm wine, washed one of his feet which was ulcerated, and left some of the brethren to take care of him. He died on the night of March 20th, 687, and his death was signalled to the mainland by a monk with a lighted torch. The body was buried on the south side of the altar at Lindisfarne, and eleven years later it was translated to a shrine on the floor of the church, where it was left undisturbed until 875, passing unscathed through an incursion of the Danes. Eardwulf the Bishop, fearing a pagan invasion, then carried it to Cumberland in a wooden coffin, and for seven years the monks wandered with their sacred burden until in 883 Guthred, the Christian King of the Danes, gave Eardwulf Chester-le-Street for his see, and Cuthbert's body, still incorrupt say the faithful, was laid in the church. Here it remained until Bishop Ealdhun, fearing another Danish invasion, carried it to Ripon, whence it was afterwards deposited at Durham, first in a little chapel made of branches of trees, then in a wooden church, and on September 4th, 998, it was removed to Ealdhun's church, built of stone. The monks of Durham carried the body back to Lindisfarne when William the Conquerer ravaged the north country in 1069; but in the next year they brought it back, and in 1104 the precious relic was transferred to the great cathedral church built by Bishop William. Here it remained until 1537-1542, when the magnificent shrine enclosing it was defaced and the body was buried in the floor below it secretly and with some doubt as to its authenticity. The tomb was reopened on May 17th, 1827, and again on March 1st, 1899. Dr. Selby Plummer made a careful examination of the bones, and the following is a summary of his report, which may be read *in extenso* in a very valuable paper which he published in the *Northumberland and Durham Medical Journal*, 1899.

"The bones of the skeleton supposed to be that of St. Cuthbert were uniformly of a deep brownish tint, and being quite different in appearance, texture, and formation from those of other relics found in the vault left, by their similarities as well as by their position in the grave, no doubt that they belonged to the same skeleton. They were those of a man of considerable muscularity, as was evidenced by the strongly-marked muscular ridges. They were in many places covered with a membranous layer, particles of which being burnt gave off a marked animal odour. The sutures of the skull were completely ossified. The partially worn though otherwise perfect condition of the teeth, the condition of the lower jaw, the partial ossification of the larynx, the comparative thinness and lightness of the scapulæ, warrant us in assigning the age of their owner as of about 55 years. Calculating from the length of the humerus and the skeleton when laid out, the stature during life would be about 5 feet 8 or 9 inches. On the right side the sterno-clavicular joint is ankylosed, and about ¾ inch of the right clavicle remains adherent. The superior border of both sternum and adjacent clavicle on the right side shows very distinct traces of erosion and necrosis, and many perforations due to some ulcerative process. This eroded surface is 2 inches in length, extends into the interclavicular notch, and covers the entire surface of the superior borders. Both before and behind at the edges of this eroded surface is marked thickening due to new bony growth. On the right lower border, and about the situation of the sterno-clavicular joint, and immediately below the eroded upper border is an almost circular perforation, ½ inch in diameter, with rough edges. There was no sequestrum within the cavity. The fourth and fifth cervical vertebræ were ossified together, the anterior surface of the fourth cervical vertebra being flattened in a postero-anterior direction. A bony skeleton of the partly ossified thyroid cartilage remains in a very perfect state. The skull is one of a mixed type, with no strongly marked racial features. Inclining to the dolichocephalic type, it is a well-balanced head, and the face in life probably showed great 'character,' the nose being a prominent feature. It is in a very perfect state of preservation. The supraorbital notches are very well marked, the left one being converted into a foramen by a bridge of bone. The nasal bones project at rather a sharp angle. The mental protuberance of the lower jaw is very marked. Most of the incisor teeth have disappeared from the skull, and have evidently become detached after death. The remaining teeth show considerable wear, but are one and all in an excellent state of preservation, with no trace of decay. There were no signs that the wisdom teeth had ever erupted. From the appearance of the jaws the upper teeth projected anteriorly more than usual.

"It is worthy of note that every recorded illness of St. Cuthbert is connected with a swelling, and that all his troubles were in the region of joints—namely, the acrid tumour of the knee, the 'bubo' in the groin, the callosity at the junction of the foot and leg, and lastly the ulcer of the foot. This is, I think, almost diagnostic of tuberculous mischief, or shall we say of strumous diathesis? St. Cuthbert's stature is described as neither very tall nor very short. The height indicated by the bones of this skeleton answers to this description. His age at death was about 50, and there can be no question that the skeleton is that of a man of about Cuthbert's acknowledged age.

"It is quite possible that the remains existed for a long time in a mummified condition, and the adherence of a membranous covering or layer still discernible on the bones is strong evidence of such a fact. The interment in a stone coffin in the sandy soil of Lindisfarne may be a sufficient cause of mummification.

"Passing to the consideration of the evidence of disease exhibited by the bones of the skeleton, there is the condition of the right clavicle and sternum and the ossification and disease of the fourth and fifth cervical vertebræ. But though we have no direct evidence that St. Cuthbert during life suffered from any trouble in these regions, with regard to disease of the vertebræ, this was of such a character that there need not have been any outward manifestation during life. It is difficult, however, to believe that the extensive

disease of the sternum and clavicle should not have given visible evidence during life. Be that as it may, and allowing for the fact that such a sinus as must have resulted would hardly, if known, have been forgotten by so painstaking a historian as Bede, with his faithful record of other 'swellings,' it should not be forgotten that there need not have been more external sign than a small sinus, and that the skin over the clavicle quickly ulcerating through, there would be no prolonged accumulation of pus to attract attention. Again, it is possible the disease continued through St. Cuthbert's anchorite life, and, moreover, it was in such a position as would not entail lameness or temporary disuse of the limb, as in the case of his knee. Not only that, but he could easily attend to it himself without assistance, and he would doubtless, from its very situation, be keenly anxious to hide the sore from the knowledge of others. But, though the signs of disease found on the bones do not demonstrate any known lesion existing in life, there is very great difficulty in believing that if a 'made-up' skeleton were substituted for the genuine St. Cuthbert at or after the visit of the Commissioners in 1537, one would be chosen from the Cathedral graveyard—as is alleged by the Benedictines—which would agree so closely with the particulars we know relating to St. Cuthbert."

Dr. Selby Plummer supposes, therefore, that the skeleton recently exhumed and reverently interred again is in all probability that of St. Cuthbert himself. He adds to his paper a description of St. Oswald's skull, which is always associated with the bones of St. Cuthbert and is buried with him. It appears that the Saint-King was struck a tremendous sword blow from the left side. The skull is cleanly cut through half an inch in front of the coronal suture, and there is evidence that the king received a second and more vertical blow from the right side after he had fallen. He was fighting against Penda, August 5th, 642, at Maserfelth (? Oswestry).

## LITERARY NOTES.

MESSRS. CASSELL AND CO. have in the press a new book by Mr. Howard Marsh. It is entitled *Clinical Essays and Lectures*, and its contents will include, amongst other interesting matter, the Cavendish Lecture for 1898, on Growth as an Agent in the Removal of Deformities; and essays on Sources of Mistakes in Diagnosis; Rare Forms of Ankylosis; Muscles: their Injuries and Displacements; Malignant Disease imitating Tuberculous Disease of the Joints, and The Present Value of the Operation of Excision of the Knee-Joint.

The Government of India has sanctioned the purchase of 450 copies of *The Sanitation of British Troops in India*, by Major E. Carrick Freeman, R.A.M.C., for distribution to British corps, etc., in that country. A review of the work appeared in the BRITISH MEDICAL JOURNAL of May 27th, 1899. We understand that many of the suggestions made in it have already been acted on by the authorities.

The *Journal of Mental Pathology* is the title of a new psychological journal edited by Louise G. Robinovitch, B.-ès L., M.D., and published in New York. The numbers are to be issued monthly, except in the months of August and September. The editorial board includes Dr. V. Magnan, Dr. A. Joffroy, and Professor F. Raymond, of Paris; Dr. Charles K. Mills, of Philadelphia; Dr. J. Morel, of Belgium; Dr. C. H. Hughes, of St. Louis, and Dr. E. Régis, of Bordeaux.

The last edition of the *Harrow School Register* was issued in 1894. It has been thoroughly edited and brought up to the present date by M. G. Dauglish, and has just been issued by Messrs. Longmans, Green and Co. The aim of the book is to give the name and, where possible, details of the career of every boy who was a member of the school during the nineteenth century.

A new series of articles dealing with the practical side of microscopy, together with notes and queries, correspondence, and description of new apparatus, are appearing each month in *Knowledge*, under the editorship of M. I. Cross, joint author of the handbook, *Modern Microscopy*.

*Bibliographia Medica Hungariæ* is the title of an important work which has recently been published at Buda-Pesth. It is described as "Catalogus librorum medicinalium qui in Hungaria vel rem medicinalem patriæ nostræ attingentes etiam extra Hungariam in lucem prodierant," that is to say, a catalogue of medical books published in Hungary and of books published elsewhere which refer to medical matters in Hungary. The bibliography covers a period of more than five hundred years, from 1472 to 1899. The editor of the work is Dr. Tiberius von György, to whom the heavy task has been a labour of love.

There have been many apparently "authoritative" statements as to the original of the "Doctor" in *Innocents Abroad*. Many admirers of Mark Twain will doubtless be glad to have the question definitively settled by the great American humourist himself. Dr. W. Allen Pusey, of Chicago, writes in a recent number of the *Journal of the American Medical Association*:

> Every little while there appears a statement in one of our medical journals concerning some doctor who is, or was—for this statement usually appears in an obituary notice—"the original of Mark Twain's doctor in *Innocents Abroad*. There is, accordingly, a possibility that the original doctor of *Innocents Abroad* may become as numerous as the original Uncle Tom of Mrs. Stowe's famous novel. I have no doubt that these statements are all made in good faith; the explanation doubtless being that the particular person of whom the statement is made has been such a jovial, clever, good fellow that he might have been the original of Mark Twain's doctor even if he is not, and so the tradition had gradually grown up around him.
>
> In order to settle the question, I wrote to Mr. S. L. Clemens (Mark Twain) a few days ago calling attention to the number of the originals of his doctor, and asking him to let me know who, if anybody, was the original. The following reply from him answers that question:
>
> New York, April 15th, 1901.
>
> Dear Sir,—It is true, as you say, that doctor is multiplying from year to year. I have six of them on my list already. I do not remember the one which you enclose. The real one was Dr. A. Reeves Jackson of Chicago, whose too early death I still lament.—Very truly yours,
>
> S. L. CLEMENS.
>
> William Allen Pusey, Esq., Chicago, Ill.

It must be a source of some satisfaction to those who knew Dr. Jackson with all his charming and original qualities, to know that these have been immortalised in Mark Train's famous character.

According to the *Daily Chronicle* the fondest recollection of Dr. Jackson in connection with the trip described in *Innocents Abroad* was not the fact that he had been immortalised as the "doctor" who criticised the handwriting of "ze great Christopher Colombo," and asked for "a nice fresh corpse" in place of the "vile, secondhand" mummy, but that during the trip he met the young lady who was to become his wife. Mrs. Jackson, who still lives in Chicago, has many recollections of the famous journey. She says that Mark Twain, who was not then known to fame, was a pleasant fellow, but that small things worried him extremely, and he would sometimes retire to his state room and give vent to his feelings in the picturesque language employed by pilots.

According to the *Athenæum*, among a number of medical books lately handed over by the Royal Infirmary, Sheffield, for their better preservation to the library of Sheffield University College, is Rabelais's own copy of the *editio princeps* of Galen issued by Aldus in 1525 in five volumes folio. The title page of vol. i is inscribed "Francisci Rabelesi," that of vol. ii "Francisci Rabelesi *και των αυτου φιλων*," that of vol. iii "Franci Rabelesi *και των αὐτοῦ φιλων*." The set afterwards belonged to "Francus Perrellus," and in the eighteenth century to Alexander Cooke, M.D., of Ripon (once of Clare College, Cambridge). As part of Dr. Cooke's collection it passed to the Sheffield Infirmary about a hundred years ago. Among the Cooke books of the Sheffield collection is also the Aldine *Hippocrates* of 1526. Although this does not contain Rabelais's autograph, the same is the case with one volume at least of the Galen (the remaining volume has lost its title page), so that it is possible the *Hippocrates* was also his, and has had the same history as the *Galen*. A comparison of the autographs in the *Galen*, with the *facsimiles* of Rabelais's autograph given by M. Dubouchet (*Rabelais à Montpellier*, Montpellier, 1887), leaves, says our contemporary, no shadow of doubt of their authenticity. On page 113 M. Doubouchet reproduces a title page of a book printed in 1539, which is inscribed by Rabelais in practically the same formula which he used in the *Galen*: "*εκ των βιβλιων* Francisci Rabelesi *και ταύτοῦ φιλων*." The *Galen* contains marginalia, chiefly glosses. The majority appear to be in the hand of Perrellus, but some may well be in Rabelais's own.

Dr. de Havilland Hall writes:

> In an annotation on page 1506 of the JOURNAL of June 15th occurs the following sentence: "There have been cases of death within the precincts of our own Legislative Chambers, Lord Chatham being an ancient and Dr. Wallace a modern instance." With respect to Lord Chatham the statement is not strictly correct. It is true that he had an apoplectic fit in the

House, but he was carried to the residence of one of the officers of Parliament, and was so far restored as to be able to bear the journey to Hayes, where he died a few weeks later.

Dr. Susie Carson Rijnhart, in her book, *With the Thibetans in Tent and Temple*, says that there is no medical art worthy to be called such in Thibet. She writes:

For headache, large sticking plasters are applied to the patient's head and forehead; for rheumatism, often a needle is buried in the arm or shoulder; a tooth is extracted by tying a rope to it and jerking it out, sometimes bringing out a part of the jaw at the same time; a sufferer with stomach-ache may be subjected to a good pounding, or to the application of a piece of wick soaked in burning butter grease, or, if medicine is to be taken internally, it will consist propably of a piece of paper on which a prayer is written, rolled up in the form of a pellet, and, if this fails to produce the desired effect, another pellet is administered composed of the bones of some pious priest.

## THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

### Council Election.

The ballot for the election of three members of the Council of the Royal College of Surgeons of England took place on July 4th, with the following results:

| | Votes. |
|---|---|
| Mr. Arthur William Mayo Robson ... | **332** |
| Mr. William Watson Cheyne ... ... | **302** |
| Mr. Richard Clement Lucas ... ... | **259** |
| Mr. John Hammond Morgan ... ... | 236 |
| Mr. Charles William Mansell Moullin | 235 |
| Mr. Henry Hugh Clutton ... ... | 145 |
| Mr. John Bland-Sutton ... ... ... | 193 |
| Mr. Jordan Lloyd ... ... ... ... | 93 |

750 Fellows voted by paper, 18 in person.

The President declared Mr. Mayo Robson and Mr. Watson Cheyne duly re-elected, and Mr. R. C. Lucas duly elected.

# ASSOCIATION INTELLIGENCE.

## COUNCIL.

### NOTICE OF MEETING.

A Meeting of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 10th day of July, at 2 o'clock in the afternoon.

The following Committees will also meet:—

*Tuesday, July 9th.*—2.0 p.m. Subcommittee on the Amendment of the Coroners Act.—2.45 p.m. Public Health Subcommittee.—3.0 p.m. West African Medical Service Committee.—3.30 p.m. Premises and Library Committee.—4.0 p.m. General Practitioners and Ethical Committee.—5.0 p.m. Parliamentary Bills Committee. *Wednesday, July 10th.* 10.0 a.m. Journal and Finance Committee.—(At the close of Journal and Finance Committee), Indian Military Medical Service Subcommittee.

July 2nd, 1901. Francis Fowke, *General Secretary.*

### NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1901.

Meetings of the Council will be held on July 10th and October 23rd. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the latter meeting—namely, October 2nd.

#### Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

## BRANCH MEETINGS TO BE HELD.

North Wales Branch.—The fifty-second annual meeting of this Branch will be held at the Bulkeley Arms Hotel, Beaumaris, on Tuesday, July 9th, at 2 p.m. After preliminary Branch business the President will deliver his address. A resolution *re* clubs from the Shropshire and Mid-Wales Branch will be considered. The following communications will be read:—Mr. R. James Hughes: Enlarged Prostate treated by Vasectomy. Dr. H. Grey Edwards: Septicæmia with very High Temperature; Recovery. Mr. Hugh Jones: Inversion of the Uterus. Dr. J. E. Thomas: Case of Triplets with Hydramnios. Mr. Phillip J. White: First Year's Medical Course at the University College of North Wales, Bangor. Dr. J. Hill Abram: To draw attention to the Old Students' Association of University College, Liverpool, as a Source for Assistants and *Locums*. Mr. Edmund Owen: What is Intussusception and How should it be Dealt with? At 4.45 p.m. the members will dine together, and meet some of the staff and members of the Committee of the Welsh Hospital. Tickets 5s. each.—W. Jones-Morris, Is-y-coed, Portmadoc; H. Jones Roberts, Gwydd-fôr, Pen-y-groes, Honorary Secretaries.

Oxford and District Branch.—The annual meeting of this Branch will be held in the Parish Hall, Clifton Hampden, after luncheon. Dr. Freeborn, President-elect, will preside. Luncheon, 1.30 p.m.—Wm. Collier, St. Mary's Entry, Oxford, Honorary Secretary.

North of Ireland Branch.—The annual meeting of this Branch will be held in Belfast on Thursday, July 18th. Any member who has any business to bring before the meeting, or any members to propose, should inform the Secretary on or before Wednesday, July 10th.—W. Calwell, M.D., 1, College Square North, Belfast, Honorary Secretary.

## SOUTH-EASTERN BRANCH.

The fifty-seventh annual meeting of this Branch was held at Worthing on June 26th. Mr. W. S. Simpson (President-elect) kindly invited members to luncheon at his house.

*President's Address.*—The President described the climatic advantages of Worthing, dwelling on the water supply and the large amount of sunshine enjoyed. He concluded an interesting address by pointing out the ways in which he considered the authorities might add to the health and pleasure of residents.

*Votes of Thanks.*—Votes of thanks were passed to the various Branch officers of the past year.

*Report of Council.*—This alluded especially to the report lately issued by the Constitution Committee, laying stress on the importance of obtaining, in the mode proposed or in some other manner, unity and strength in the interests both of the profession and the public.

*Financial Report.*—The Treasurer announced a satisfactory balance in favour of the Branch, and it was decided to make grants of 25 guineas to the Royal Medical Benevolent College and the British Medical Benevolent Fund.

*Annual Meeting, 1902.*—Ramsgate was selected as the place of meeting; and it was resolved that Dr. Halstead should be asked to preside.

*Officers and Council.*—The following were elected for 1901-2: —*Representatives on the Association Council:* Dr. Galton, Dr. Tyson, Mr. Verrall. *Representatives on the Parliamentary Bills Committee:* Dr. Bowles, Dr. Holman. *Honorary Secretary and Treasurer:* Mr. Verrall. *Branch Council.—President:* Mr. Simpson. *Vice-President:* Mr. Collet. *Council:* The Honorary Secretary and Representative Members on the Association Council; the members of the Local Committee; and the following elected members: Dr. Adeney, Dr. B. H. Allen, Dr. Allfrey, Dr. Bagshawe, Dr. Bowles, Mr. A. H. Dodd, Dr. T. Eastes, Sir Joseph Ewart, Dr. E. P. Furber, Mr. Hallowes, Dr. Hoar, Dr. Holman, Dr. Hayman, Dr. Hott, Surgeon-General Jeffcoat, Mr. E. Kaye-Smith, Mr. Mellwaine, Dr. Ogle, Dr. Oldman, Dr. C. Parsons, Dr. Ranking, Dr. T. W. Reid, Dr. Starling, Dr. Stowers, Mr. F. Sturges, Mr. O. R. Travers, Mr. W. K. Treves, Mr. J. Sidney Turner.

## BATH AND BRISTOL BRANCH.

The annual meeting of this Branch was held at Bath on June 26th, when Mr. Prichard resigned the chair to Dr. Tayler, the incoming President, who delivered the Presidential address.

*Vote of Thanks.*—A vote of thanks to the President for his address was moved by Mr. C. E. S. FLEMMING, seconded by Dr. SHINGLETON SMITH, and carried unanimously.

*Report of Council.*—Mr. W. M. BEAUMONT, Honorary Secretary for the Bath District, read the report of the Council, which showed that the condition of the Branch was financially sound, but the Council regretted to have to record the loss of five members by death in addition to two resignations. On the other hand, fourteen new members had been elected, making a nett gain to the Branch of seven. The Council lamented the death, at the age of 75, of Dr. Wm. Johnstone Fyffe, Deputy Surgeon-General. He was very highly esteemed by a large circle of friends, not only in Clifton, but also in various parts of the country. From 1848 to 1873, as surgeon in the army, his duty took him to many parts of the world, and he was present at the battle of the Alma and during part of the siege of Sebastopol. He was afterwards Professor of Medicine at Netley. In 1873 he settled in Clifton, and was soon afterwards appointed Physician to Clifton College. He held this post till 1897, when failing health compelled him to retire. No one who knew him can ever forget the courtesy of his manner and the sympathetic interest he took in everything and everybody, and the Branch will much miss his presence at its meetings and annual dinners. Dr. James Edward Prichard was the second son of the late Augustin Prichard, and grandson of Dr. James Cowles Prichard, F.R.S. He was born in 1849, and was one of the first group of boys which constituted the nucleus from which the Clifton College had since grown. He then went to Oxford, where he studied for the Church, obtaining a scholarship in Hebrew, but later he turned his thoughts towards medicine, which he studied at University College, London. He obtained his medical degree in 1879, and after many hospital and other appointments, and much study in many places he was appointed in 1889 Surgeon to H.M. Prison at Horfield, Bristol. He was a member of the Horfield School Board and of many scientific societies. Dr. Prichard would be long remembered by his many friends as one of the most kind-hearted and most unassuming of men. The balance sheet for the last year was as follows: Total receipts, £84 10s. 4d.; expenses, £49 17s. 3d.; balance, £34 13s. 1d. The Council recommended that a donation of £10 10s. should be given to the Medical Benevolent Fund, and one of £5 5s. to Epsom College. During the past year there had been a good supply of interesting and instructive papers, and the debate on gonorrhœa and its sequelæ—for which the Branch was indebted to Mr. Monro Smith—was ably opened and the subject fully discussed. Two evenings were devoted to the consideration of the provisional report of the Constitution Committee, and in addition a local meeting was held at Trowbridge. Subcommittees were appointed to consider the "wage limit" question, and their reports had been published in the BRITISH MEDICAL JOURNAL. The following gentlemen had been elected to fill the vacancies on the Council:—For the Bristol District: Messrs. Dobson, Monro-Smith, Jas. Taylor, and Cross. For the Bath District: Messrs. Flemming and Pollard.—On the motion of Dr. CAVE, seconded by Dr. BANNATYNE, it was resolved unanimously:

That the report and financial statement now read be received and adopted.

*Election of Officers.*—Dr. SKERRITT proposed, Dr. WEATHERLY seconded, and it was carried unanimously, that Dr. Aust Lawrence be appointed President-elect. Mr. HARSANT proposed, and Mr. TUBB-THOMAS seconded, that Dr. Markham Skerritt and Dr. Cave be reappointed Representatives of the Branch on the Council of the Association. Carried unanimously. Dr. A. J. Harrison, on the motion of Dr. BARCLAY BARON, seconded by Mr. RICHARDSON CROSS, was reappointed Representative of the Branch on the Parliamentary Bills Committee of the Association.

*Votes of Thanks.*—A vote of thanks to the retiring President (Mr. A. W. Prichard) for his courteous conduct conduct in the chair during the past year was proposed by Dr. AUST LAWRENCE, seconded by Mr. BLOXAM, and carried by acclamation; and a vote of thanks to the Council and to the Secretaries for their services during the past year, with a request to the latter to remain in office, was proposed by Dr. HARDYMAN, seconded by Mr. GREEN, and carried unanimously. A vote of thanks to the President and Governors of the Royal Mineral Water Hospital for the use of their board-room for the meeting was proposed from the chair and carried by acclamation.

*Dinner.*—Thirty-eight members and guests afterwards dined together at the Grand Pump Room Hotel.

## BORDER COUNTIES BRANCH.

THE annual meeting of this Branch was held at Carlisle on June 28th, Dr. HIGHET (Workington), President, in the chair. Twenty members were present.

*Confirmation of Minutes.*—The minutes of the last meeting were read, approved, and signed by the President.

*Report of Council.*—The report of the Council was read and approved.

*Attendances at Council Meetings.*—The attendances of members of Council at Council meetings held during the preceding year were announced, namely (total number of meetings, 7): J. Highet, 6; W. Blair, 4; R. Maclaren, 2; R. Somerville, 1; G. G. Bannerman, 1; J. S. Bell, 0; J. E. Bowser, 3; F. H. Clarke, 1; J. B. Fisher, 4; C. W. Graham, 3; R. D. Helm, 3; J. Carlyle Johnstone, 3; J. Macdonald, 1; W. F. Farquharson, 6.

*Election of Officers.*—The following were elected office-bearers for the ensuing year:—*President-elect:* F. Ormrod, Workington. *Council:* G. G. Bannerman, Hawick; H. Barnes, Carlisle; J. E. Bowser, Penrith; W. Hall Calvert, Melrose; F. A. Clarke, Dumfries; C. W. Graham, Carlisle; J. Carlyle Johnstone, Melrose; J. Macdonald, Carlisle; M. Ogilvy-Ramsay, Carlisle. *Representatives on Council on Association:* R. Maclaren, Carlisle; R. Somerville, Galashiels. *Representatives on Parliamentary Bills Committee:* R. Somerville. *Auditors:* J. B. Bird, Carlisle; G. Murphy, Carlisle. *Local Secretaries:* W. L. Cullen, St. Boswells; T. G. Mathews, Whitehaven; J. S. Bell, Lockerbie. *Honorary Secretary and Treasurer:* W. F. Farquharson, Garlands, Carlisle.

*Places of Meetings.*—It was resolved to hold meetings during the ensuing year at Jedburgh, Whitehaven, and Locherbie.

*Introduction of New President.*—Dr. HIGHET thanked the members of the Branch for the courtesy he had received during his year of office, and vacated the chair in favour of Dr. Blair of Jedburgh. On the motion of Dr. BARNES, the retiring President was thanked for his services during the past year, and he was elected a Vice-President of the Branch for life.

*President's Address.*—After some introductory remarks, and referring to the proposed new constitution, Dr. BLAIR observed that the attendance at the several meetings convened for the consideration of the Committee's recommendations in the different districts did not seem to be attended by any large proportion of members, and he believed that greater activity amongst the members in smaller local areas would conduce to greater vigour and robustness in the Branch in country districts especially. He proceeded to address the meeting on the subject of heredity and environment, directing attention only to a few outstanding facts thereon. He noted the biblical belief, as expressed in the Scotch paraphrase,

> At once the lion and the worm
> Sprang from the teeming earth.

The subject divided itself roughly into three periods: the patriarchal or Jacobean, the mediæval or Lamarckian, the modern or Darwinian. He stated that Lamarck believed and taught that the evolution of plants and animals had been mainly accomplished by the transmission of acquired characters, by the inheritance, generation after generation, of functionally produced modifications, together with changes resulting from the influence of surroundings or environment. On the authority of Pflüger, Hansen, Haeckel, Weismann, and others, he said, up to the present time the Lamarckian theory of the transmission of acquired characters from the parent body to the germ and from the germ cell to the body of the offspring was neither proved as a fact, nor had its assumption been shown to be absolutely necessary. He pointed out that Weismann's conclusions defined heredity to depend on the continuity of the molecular substance of the germ plasm or *Keim* plasm from generation to generation—that there was no alteration in the cells which form the body (the somatic cells), but only modifications of the reproductive cells, and hence from commingling

of the distinct parental germ plasm the specific hereditary tendencies (taints) of the first generation made themselves felt. On the subject of environment as connected with heredity, he said that an individual might to a limited extent counteract or modify the effects of heredity, but in the case of environment he could actually defeat its influence, giving instances, such as d'Alembert and Robert Burns. The gipsy race was shown to have transmitted the same inherent characteristics through many hundreds of years. As an example of hereditary influence on mental power he noted Sir Walter Scott and his forebears, and the strong objections to drugs peculiar to the Montaigne family through several generations. He suggested that the trustees of Mr. Carnegie's benefaction might well favourably consider the matter and contribute to the more systematic teaching of this important subject in the Scotch universities.

*Vote of Thanks.*—On the motion of Dr. Highet, seconded by Dr. Barnes, the President was accorded a hearty vote of thanks for his address, and he was requested to print it and circulate it amongst the members of the Branch.—The President replied.

*Communications.*—Dr. Crerar (Maryport) read a note on the treatment of delayed union in fractures.—Dr. Arnott (Brampton) read notes of a case of successful trephining for middle meningeal hæmorrhage.

## CAMBRIDGE AND HUNTINGDON BRANCH.

The annual meeting of this Branch was held at Huntingdon on June 26th under the presidency of Mr. Herbert Lucas.

*Election of Officers.*—The business meeting was held in the Town Hall, when Mr. Wherry was unanimously appointed to the Presidency for the ensuing year: Mr. Balding was re-elected as representative of the Branch on the Parliamentary Bills Committee; Dr. Stear was re-elected as representative on Council of Association; Mr. Deighton, Dr. Giles, and Mr. Penberthy were chosen as additional members of the Council of the Branch; Dr. Lloyd Jones was re-elected Treasurer and Honorary Secretary.

*New Members.*—Seventeen new members were elected.

*Luncheon.*—After the meeting had been adjourned till the afternoon, the members, 44 in number, were entertain at luncheon by the President at Bosworth House. Among the toasts that of "The President" was proposed by Sir Michael Foster, and "The Medical Profession" by the Mayor of Huntingdon.

*President's Address.*—After luncheon the members met once more in the Town Hall to hear the President's address.

*Communications.*—Dr. J. R. Garrod gave an interesting demonstration of *Culex* and *Anopheles*, showing specimens caught in Huntingdonshire.—Dr. M. G. Foster gave an account of his experience of the open-air treatment of phthisis at home and abroad.—Dr. Griffiths followed with a communication on Colles's fracture and its treatment, and showed a method of reduction and a splint which gave uniformly satisfactory results.—Mr. D. B. Balding read a paper on the coroner's court, and the duties of the medical profession in reference thereto.

*Tea.*—The members adjourned on the conclusion of Mr. Balding's paper for tea, given by the President and Mr. Lucas, and many of them paid a visit to the Castle grounds.

## YORKSHIRE BRANCH.

The annual meeting of this Branch was held at the Eye and Ear Hospital, Bradford, on June 26th, under the Presidency of Dr. Cuff (Scarborough).

*Confirmation of Minutes.*—The minutes of the last general meeting were read and confirmed.

*Election of Officers.*—The following office-bearers were elected for the ensuing year: *President:* Dr. Major. *Honorary Secretary and Treasurer:* Dr. Bronner: *Representatives on the General Council:* Mr. Jessop, Dr. Dyson, Dr. Dolan, and Dr. Goyder.

*Address.*—The President (Dr. Major) read a most interesting address: Some Considerations in relation to the Investigation of Cancer.

*Papers.*—The following papers were read: (1) Mr. Jessop (Leeds): Temporo-sphenoidal Abscess following Chronic Otitis Media. (2) Dr. Arthur Hall (Sheffield): (*a*) Case of Multiple Cutaneous Tubercles following Measles, with sections of skin and photographs; (*b*) Case of Elephantiasis of Legs; (*c*) Lymphangioma of Skin; (*d*) Case of Pneumonia in a Patient with Transposition of Viscera. (3) Mr. Simeon Snell (Sheffield): (*a*) On the use of Cuprol in Granular Ophthalmia: (*b*) On Injury to Vision in each Eye, resulting from Exposure to Eclipse of the Sun.

*Dinner.*—The annual dinner was held at the Midland Hotel, at which 35 members were present.

## SYDNEY AND NEW SOUTH WALES BRANCH.

The regular monthly meeting of the Branch was held at the Royal Society's Rooms on April 26th: Dr. Foreman, President, in the chair. There were twenty-six members present, and one visitor.

*Confirmation of Minutes.*—The minutes of the previous meeting were read and confirmed.

*Communications.*—Dr. Rennie read notes on a case of cerebellar defect.—Dr. Maitland read notes on a case of extra-peritoneal ureterolithotomy. Drs. Jamieson and Hankins made remarks; and Dr. Maitland replied.—Dr. Cleland read a paper on a case of cerebro-spinal meningitis. A discussion ensued, in which Drs. Sinclair Gillies, Corlette, and Rennie took part; Dr. Cleland replied.

*Medical Institute M.U.*—The Hon. Secretary reported that the attempt to obtain a conference with the officers of the Medical Institute, M.U., had failed, and the Council had decided that the Medical Institution, M.U., was an association prejudicial to the interests of the profession in the terms of the Article of Association, 35*a*, and that the medical officers on being informed of the Council's decision had each given one month's notice of resigning their positions.

A special general meeting of the Branch was held at the Royal Society's room on May 3rd, Dr. J. Foreman, President, in the chair. There were present twenty-three members and one visitor. The circular convening the meeting was read by the President.

*Report of the Constitution Committee.*—A letter from the Chairman of the Constitution Committee was read with reference to the proposed alterations in the constitution of the British Medical Association. The report of the Subcommittee appointed to draw up the resolutions dealing with the matter was placed before the meeting, and it was decided to deal with each recommendation *seriatim*. The following are the resolutions:

1. That the New South Wales Branch, while approving generally of the Constitution Committee's scheme for the reorganisation of the Association, does not feel justified in taking an active part in the discussion of its details except in so far as they affect the members in the Australian States.

2. That the New South Wales Branch holds that the new constitution should specifically provide that the Australian Branches shall have complete autonomy, subject to the fundamental laws of the Association, as declared in the Memorandum and Articles of Association of the Company.

3. That the New South Wales Branch holds that the fundamental laws of the Association ought, under no circumstances, to be declared in By-laws or otherwise than in the Memorandum and Articles of Association (see Recommendation 14 of the Constitution Committee).

4. That the New South Wales Branch holds that there is grave risk to the future usefulness of the British Medical Association as a factor in advancing and maintaining the interests of the medical profession in Australia unless the Australian Branches are free to make and give effect to their own rules for the admission and expulsion of members.

5. That the New South Wales Branch holds that the annual subscription of the members of the Association in the Australian Branches should not be made to include any sum contemplated to be made a refund in the form of a "capitation grant," as proposed in the first, third, and fourth paragraphs of the Constitution Committee's Recommendation 20; and that the Australian Branches and Divisions be empowered to make rules regulating the subscriptions of their members, which shall include the annual subscription of their members to the Association.

6. That the Association, in the event of the recommendations for local organisation, by means of divisions and the agglomeration of such divisions into Branches, being adopted, be asked to approve of the New South Wales Branch remaining undivided (see Recommendation 3), and so of being regarded as a division for the purposes defined in the recommendations.

7. That a copy of these resolutions, 1 to 6, be forwarded to the General Secretary, with the reply sent to the letter of date, January 31st, received from the Chairman of the Constitution Committee.

8. That a letter be sent from the New South Wales Branch to the Association, asking that, in the event of the Association adopting a new constitution, or any modification of that now in existence, special provision be made therein to the effect that the Australian Branches of the Association shall be autonomous, that is to say, shall have power to make their own rules and regulations, subject only to the fundamental laws of the Association, as declared in the Memorandum and Articles of Association of the British Medical Association, or in the Charter thereof, as the case may be, and that such fundamental laws shall not prohibit the Australian Branches from making rules and regulations for the admission and expulsion of members, and asking, further, that the annual subscription to the Association of the members of such Branches be not made to include any "capitation grant" as that proposed in Recommendation 20 of the Constitution Committee's Provisional Report to the Branches.

After discussion, in which Drs. GOODE, TODD, HANKINS, CRAGO, and SPENCER took part, the resolutions were adopted without amendment. Dr. SPENCER proposed to add a rider to the resolutions, but it was not seconded.

*Votes of Thanks.*—Dr. TAYLOR YOUNG proposed that a vote of thanks be accorded to Drs. Rennie, Hankins, and Todd for their work in connection with the report. This was carried.—Dr. G. L. O'NEILL proposed that a vote of thanks be accorded to Drs. Murray Will, Palmer, John Harris, and Kater for their readiness in falling in with the views of the members and resigning their positions on the Medical Institute, M.U. This was carried by acclamation.

## BRITISH GUIANA BRANCH.

THE second quarterly meeting of this Branch was held at the Public Hospital, Georgetown, on May 2nd, Dr. F. H. EDMONDS, President, in the chair.

*Confirmation of Minutes.*—The minutes of the last meeting were read and confirmed.

*Royal Medical Benevolent College.*—The PRESIDENT thanked those members who had contributed to the Royal Medical Benevolent College, and passed round an account of the amount he had received.

*Representative of Branch on Central Council.*—Dr. C. W. Daniels, London School of Tropical Medicine, was appointed representative of the Branch on the Council of the Association.

*Report of the Constitution Committee.*—The reconstitution of the rules of the Association was then fully discussed by most of the members present, and the following motion was passed, namely:

That this Branch accepts the provisional report subject to local adaptations.

*Cases, etc.*—Dr. Q. B. DE FREITAS read notes of a case of hepatic cirrhosis simulating hepatic abscess. A vote of thanks was passed to Dr. de Freitas for this paper.—The HONORARY SECRETARY read notes and exhibited the patients (1) of a rapidly-growing recurrent sarcoma of the shoulder after amputation of arm at shoulder-joint; (2) a case of elephantiasis of the leg which he had operated on by removing large portions of the elephantoid tissue, and with apparent success so far. A vote of thanks was accorded to Dr. Fowler.—The PRESIDENT read notes of a case of lumbar abscess with most successful result from treatment, who was also accorded a most cordial vote of thanks.

## GRAHAMSTOWN AND EASTERN PROVINCE BRANCH.

A GENERAL meeting of this Branch was held at the Bacteriological Institute, Grahamstown, on April 12th, Dr. DRURY, President, in the chair. Drs. Greathead, Fitzgerald, Saunders, Hamilton, Edington, Ledou, and Grenfell were present.

*Election of Officers.*—Dr. Fitzgerald was elected President for 1901; Dr. Robertson was re-elected Vice-President; Dr. Grenfell was elected Honorary Secretary and Treasurer; Dr. Greathead, Dr. Edington, and Dr. Drury were elected Resident Members of Council; Dr. Conway, Dr. Pearson, and Dr. Jones were re-elected Non-resident Members of Council.

*Votes of Thanks.*—Votes of thanks were passed to Dr. Bays for his services as Honorary Secretary and Honorary Treasurer, and to Dr. Drury for his services as President.

*Election of Dr. Hamilton.*—It was proposed that Dr. Hamilton be elected a member of this Branch. Dr. Hamilton claims to be one of the oldest members of this Branch.

*Report of the Constitution Committee.*—The following resolution was passed:

That this meeting approves of the principles embodied in the Provisional Report of the Constitution Committee.

*Bubonic Plague.*—Dr. EDINGTON read a paper on Bubonic Plague, especially dealing with the mortality among the rats in the present epidemic at Capetown. The discussion which followed was joined in by all the members present.

# SPECIAL CORRESPONDENCE.

## BERLIN.

*Professor Virchow.—Small-pox.—Medical Tours to German Seaside Resorts and Spas.—The Attack on the Emperor.—Institute for the Examination of New Remedies.—Spitting and Coughing in School.—A Congress of Nurses.—Children's Seaside Sanatoria.—Oxygen Depôts.*

PROFESSOR VIRCHOW, who has recently been made by the German Emperor a Knight of the Order "Pour le Mérite," has quite recovered from his slight accident, and has taken up his multifarious duties as usual. His 80th birthday (in October next) will call forth numberless tokens of the veneration in which he is held by the great "Internationale" of science. The German Academy of Sciences has decided to accompany its congratulations by a plaque with Virchow's portrait, the execution of which has been entrusted to the sculptor, Herr Kruse.

A few isolated cases of small-pox have occurred in Berlin of late. Precautionary measures against the spread of the disease were at once taken by the authorities, and there seems no fear whatever of an epidemic. Some of the cases brought to the Charité proved to be chicken-pox.

Two Committees have been formed with the object of organising tours to German watering places for medical men. Professors von Leyden and Liebreich are at the head of the one Committee, which proposes to visit the North Sea Island watering places, Sylt, Wyk on Föhr, Heligoland, Quist, Borkum, ending up at Cuxhaven. For this purpose arrangements have been made with the North Sea Steamer Company, in one of whose first-class steamers the tourists will be conveyed, starting from Hamburg on the last day of the Congress of German Naturalists, that is, September 25th. The other tour, organised by Professor Baginsky, is to be directed by Stangen (the German "Cook"), and will take its way to Central Germany, where the chief brine-bath watering places and children's sanatoria are to be visited. The end of August is the time chosen for this tour.

The German Supreme Court of Justice (the Reichsgericht in Leipzig), acting on the opinion of medical experts, has refused to prosecute the epileptic Weylandt, who some time ago threw a piece of iron at the Emperor in Bremen. Weylandt is pronounced to have been irresponsible for his acts, and he will be confined in an asylum for further observation.

An institute for the official examination and analysis of new drugs and remedies is to be affiliated to the Imperial Board of Health in Berlin. Possibly this may do something towards checking the present overproduction in new remedies; from 1899 to 1900 no fewer than 126 new remedies—all, of course, of paramount value—were brought on the market in Germany!

Acting on the Ministerial rescript about tuberculosis and the means of combating it, the Berlin Municipal School Committee has decided to place water spittoons in the classrooms and corridors of all the municipal schools, and spitting "at large" is to be strictly prohibited. Further, all teachers and pupils suffering from chronic cough with expectoration are to be encouraged to carry portable spittoons, and in attacks of coughing to hold a handkerchief over the mouth.

From August 16th to 18th a congress of trained nurses (male and female) is to be held in Breslau.

The Society for Children's Sanatoria at German Seaside Places can look back on its last year's work with satisfaction: 1,751 children in all (618 of whom came from Berlin) were

treated in the four sanatoria of the society (at Norderney, Wyk on Föhr, Gross-Müritz and Zoppot), the length of their stay averaging six weeks, but varying, of course, according to circumstances. The total number of days—counting all the four establishments—was 77,222 : 14,633 warm baths and 15,184 cold baths were given ; 830 of the little patients were dismissed cured, and 765 much improved.

All the Berlin Fire Brigade depôts are now furnished with a quantity of oxygen gas—renewed as often as necessary—which can be made use of gratuitously by the public in cases of poisoning by morphine, illuminating gas, etc. As the twenty depôts are, of course, scattered all over the city, this new arrangement is likely to prove of the greatest value where speedy help is required.

# CORRESPONDENCE.

## THE COMMISSION ON THE R.A.M.C.

Sir,—I have tried to take some little trouble to urge on the Secretary of State for War the grievances of the Royal Army Medical Department. The right honourable gentleman has been good enough to assure me that he will do his very best to study the subject along with the other Commissioners, and that his desire is to make the R.A.M.C. thoroughly satisfactory and efficient.

I thoroughly believe in Mr. Brodrick's good intentions, and as he is a strong man there is every probability that at last the R.A.M.C. may hope for better days. Mr. Brodrick has allowed me to send in for the consideration of the Commission a tabulated statement of the views of those very numerous medical officers who have been good enough to communicate their opinions and suggestions to me. I trust, therefore, the little trouble we have taken in the House of Commons and out of it will bear good and useful fruit.—I am, etc.,

House of Commons, July 2nd. Edward Thompson, F.R.C.S.I.

## THE GENERAL MEDICAL COUNCIL ELECTION, 1901.

Sir,—Referring to the Editorial note to Mr. Garrett Horder's letter in the British Medical Journal of June 29th, let me say that it is my intention to offer myself for re-election as Direct Representative for England and Wales in the General Medical Council.—I am, etc.,

Highbury Place, N., July 3rd. James Grey Glover.

Sir,—Since the appearance of my letter it has been suggested to me that the best possible place for a meeting of medical men would be Cheltenham during the annual meeting of the Association.

With this suggestion I cordially agree, and I hope to be in a position next week to announce the day on which it will be held.

In the meantime might I suggest that meetings of medical men in the various districts should be held to consider the propriety of making nominations? It is impossible for us to take too active an interest in such an important election.—I am, etc.,

Cardiff, July 1st. T. Garrett Horder.

Sir,—We have been requested by our Committee to forward you the following resolution for publication :

That this Association strongly supports the candidature of Dr. S. Woodcock for the General Medical Council, and hopes that he will be elected.

We are, etc.,

W. B. Pritchard, } Hon. Secs. Manchester
F. H. Westmacott, } Medico-Ethical Association.

Manchester, July 3rd.

## THE DIFFERENCE BETWEEN THE GENERAL MEDICAL COUNCIL AND THE CONJOINT BOARD.

Sir,—Having been forced to take great interest in the preliminary scientific education of medical students during the last two years, my experience and conclusions may interest your readers.

(1) In the autumn of 1899 I applied at the office of the General Medical Council for information as to where the first year of studentship might be passed, and was given the list of schools recognised by the Conjoint Board as being a reliable guide. In January, 1900, my eldest son, who had entered at one of these schools, was told, when he applied to register, that the list of the Conjoint Board was no longer recognised by the Council, and that his case must be considered specially. Eventually, after a period of suspense, his time was recognised. In July, 1900, I wrote to the Registrar of the General Medical Council for a list of the schools recognised, as another son had matriculated, and I did not wish to send him to lodgings in London when he was barely 17. The Registrar wrote: "The question of the approval of these institutions is still under consideration; each case is meanwhile considered on its merits." The question remained under consideration for the whole of 1900, no doubt to the great inconvenience of many others besides myself and my son. I fixed on a public school recognised by the Conjoint Board, which had four boys in its "Science Sixth" who had passed the Preliminary Scientific London, and others preparing for it, and inquired of the Registrar whether my second son's time would be recognised if spent there. His answer was to the effect that the Council objected to that class of school, but at the same time he recommended a university college in the same town, at which my son would have none of the great advantages of school life: for example, games, supervision, etc. Eventually I had to enter him at a London hospital (paying £50) to enable him to register, and send him to an unrecognised school besides, as I wanted him to pass the Preliminary Scientific without unnecessary delay. If you inquire of students you will be astonished to find how many of the London hospitals cannot be relied upon to pass their candidates for that examination. Some are safe on the zoological side, but cannot teach students the necessary chemistry and physics; with others it is the opposite, and probably there are some that can teach both, but the unrecognised school does best.

My conclusions are that the General Medical Council has not given due consideration to the convenience of medical students and their guardians. Full notice of these alterations should have been made public and sent to the schools concerned. (Two of the schools learned the news from me nine months after their tacit recognition by the Council had ceased). The year and a-half of suspense has probably been a great inconvenience to many, and there should be strong grounds to excuse it. The final decision is likely to be very detrimental to students in future. Firstly, by preventing the youth of 16 or 17 who is anxious to press forward in the medical profession from spending the usual final year at school, where he learns much that is good for him as monitor, leader in games, and such like, to say nothing of the great physical advantages school life has over life in London lodgings. These deprivations I regard as positively cruel towards the student and injurious to our profession, which depends on the good qualities of its members for the position which it holds. If the rising generation of medical practitioners be forced into cheap lodgings in big cities at an early age, we may safely foretell retrogression. (2) In many cases the youth will have to forego a good system of education for an inferior one.

The Conjoint Board may have been too free with its recognitions, but certainly the Council has not been free enough. Surely all schools which can pass students for the Preliminary Scientific Examination (London) regularly might be recognised by the Council; or, better still, students who pass the preliminary scientific or first professional examination of any licensing body, might be accredited with having done the period of studentship allotted to preparation for it by medical schools. Why should a system of protection through registration be afforded to the recognised medical schools and a few others, when their education in elementary science is not always the best?

There is a general opinion that the great argument in favour of the five years curriculum was that medical students had not enough practical work in their courses, and that part of the fifth year at least was to be devoted to assisting physicians, surgeons, or general practitioners in hospital or

outside. Now that it is instituted we find students forced to spend at least a year at preliminary subjects, and the same old want of real experience facing the newly-fledged licentiate, though he has spent more time and more money in getting qualified than his father did (for all the hospitals have raised their fees).

May the memory that unlike his father he spent much time and energy in hunting for the ovaries of earthworms and the lymphatic hearts of frogs console him in his trouble over failure to put his first good private patient on a satisfactory diet. Is this elaborate training in elementary science really advisable? It is possible to give students too much of a good thing.—I am, etc.,

July 2nd MEDICUS ET PATER.

## A DEGREE FOR LONDON DIPLOMATES.

SIR,—I have read with much interest the communications which you have published from diplomates of the London Royal Colleges of Physicians and Surgeons, and I venture to express the hope that they will continue to press their cause until they have obtained redress for their undoubted grievance. Their position is altogether anomalous, and places them, in the public estimation, at a disadvantage with graduates of provincial and Scottish universities who possess no higher social, educational, or professional qualifications. More than a generation has passed since the public were indifferent as to whether the general practitioner of medicine and surgery were a graduate. There is now a widespread feeling, which has been growing, that the diplomate belongs to an inferior order of practitioners, and it is against the increasing disabilities which that opinion involves that the diplomates of the London Colleges are rightly protesting. A large proportion are *alumni* of the London medical schools, and, owing to the anomaly that London has been endowed with no teaching university or faculty of medicine in which a man could take a pass degree, they have been placed in the position of having to choose one of two alternatives. Either they had to forego the inestimable advantage of receiving their education in one or other of the finest medical schools in the world, and in so doing turn their backs on such teachers as Paget, Holden, Wilkes, Bryant, Jenner, Wilson Fox, Erichsen, Murchison, Bristowe, Broadbent, Douglas Powell, Playfair, and others too numerous to mention, and betake themselves to some provincial town and hospital for at least two years of their medical curriculum, at the same time severing themselves from the home and associations which they had made for themselves in London: or, on the other hand, to abandon the hope of securing what is now coming to be regarded as an indispensable academic distinction. To a great extent the London diplomates are, therefore, paying the penalty of faithfulness to their educational advantages and associations in London, and of the apathy, in past generations, of those who allowed the great medical schools of London to grow and develop without providing for their students such academic advantages as are freely offered in the provinces.

The letter which appears in your issue of June 22nd under the heading, "Where are the Undergraduates?" adds point to the considerations to which I have adverted, and it would be difficult for anyone to come forward with an answer to your correspondent's inquiry: "Who are the recognised learners of the newly-constituted London University proceeding to its medical degrees?" Practically there is as yet no answer to that question, and therein lies the injustice to which present and past *alumni* of the London medical schools are subjected. I trust that the suggestion of a "Recognised Teacher" may commend itself to the Senate of the University, and that that body will accept, as the first undergraduates of the University, the present body of admitted students of medicine. But I hope that they will see the justice and expediency of going a step further and of admitting London diplomates who have been for, say, five years in actual practice to an examination similar to that which qualifies registered practitioners, who have attained the age of forty years, to the Membership of the College of Physicians, or to some such written and *vivâ voce* examination as is held by the University of Durham, and was annually held at St. Andrews until the latter was unjustly deprived of the right to confer degrees on diplomates of fifteen years' standing. I cannot doubt that the Royal Colleges of London would lend their weight to an appeal on behalf of their diplomates for such an act of justice in view of the position of increasing disparity and disparagement under which they will otherwise labour. Practitioners who have qualified in medicine and surgery to the satisfaction of their teachers, the Royal Colleges, the Apothecaries' Company, and the General Medical Council, are entitled to ask for reasonable opportunities of obtaining a degree in the reconstituted University which bears the name of the great city in which they prosecuted their collegiate studies.—I am, etc.,

Upper Brook Street, July 1st. W. BEZLY THORNE.

## LONDON UNIVERSITY AND MEDICAL DEGREES.

SIR,—It is with interest that I have read the recent articles in the BRITISH MEDICAL JOURNAL anent the London University. When the new charter was granted to it one of the chief objections was that there was a danger of lowering the value of the London degree. The articles in the JOURNAL above referred to seem to point in the direction of that lowering with considerable clearness, especially when one reads about all students at the hospitals in London being regarded as undergraduates of the University irrespective of their entrance examination. The conclusions one is forced to by reading these and other articles that have from time to time appeared on the same subject are:

1. That the present London student has not sufficient brains to pass the examinations for the London degree. Such a view of looking at the question does not seem a very complimentary one to the London student. May I, as a London student, venture to call this in question? The average London student is perfectly capable of passing all the examinations for the degree of M.B.Lond., including the London matriculation, if he works. If he does not work, well, he can only blame himself, not the London University; or,

2. That the present agitation is got up with a view of attracting more students to the London schools, and that the bait held out is a London degree, a degree lowered in value so as to be obtainable without trouble, but yet living on the past reputation of a university which I may say is regarded not only in England, but also in the Colonies, as a model of fairness in all its requirements. The medical profession as a learned profession has to hold its own with not only the Church, but also Law and Arts.

May I ask whether the medical man feels himself so well equipped in general education that he can afford to lower the standard of general knowledge that is required by one at least of the examining bodies for degrees in medicine.

In conclusion may I say that it seems to me:

1. That medical education in London and elsewhere will not be benefited by lowering the standard of examinations till they ultimately reach the level of those held by certain examining bodies in the United States and on the Continent, where the requirements from a candidate seem to be determined more by the length of his purse than of his knowledge.

2. That a stop should be at once put to the proposed tinkering with the London degrees, a tinkering which when once started no one knows when it may end; a tinkering that under a war cry of a degree for the average student advocates a policy which will certainly in the long run prove detrimental both to London University and to London students, as the latter will not enter for the University degrees in medicine, as not being in their lowered value worth getting compared with those of the older universities—for example, Oxford and Cambridge; and though men will still come to London as heretofore on account of its unrivalled field for clinical material, yet when they want a degree it will not be that of the London University they will take.—I am, etc.,

June 27th. LONDON GRADUATE AND DIPLOMATE.

## THE MEDICAL PROFESSION AND THE MIDWIVES QUESTION.

SIR,—I have carefully followed the correspondence about the midwives question, and as a general practitioner to whom midwifery practice is of importance, with your permission should like to make a few remarks on the subject.

The chief object of the Midwives Registration Bill is, I take

it, the benefit of the "poor'; now, who are the poor for whom this legislation is said to be required?

From my own experience I should say that they consist almost entirely of the unskilled labouring classes, and may be divided into the following divisions: (1) Those who are maintained entirely at the cost of the State; (2) those who do some work, but receive a considerable amount of State assistance; (3) those who are in regular work, but do not earn enough to pay the doctor's fees. It is for the second and third of these I presume that the midwives are required. Above these, again, come the artisan class, who are quite capable of looking after themselves. Of course the class I have alluded to exist in much larger numbers in the towns, but I think the classification applies equally well to the country. As Dr. Malins remarks in his interesting and learned address,

Maternity hospitals, maternity clubs, provident dispensaries, charitable societies all provide for help at the time of childbirth and subsequent recovery.

He then describes the method adopted by the maternity charity in his town—namely, a midwife in each district and a doctor in emergency. This no doubt is of its kind a most excellent arrangement, but why not have a doctor to attend the cases and a nurse to do the nursing?

I notice Dr. Malins brings out the old stock argument of the antiquity of midwives, as if this could have anything whatever to do with the present times. We might as well go back to barber-surgeons and blacksmith-dentists.

That the helpless poor should have proper skilled attention is undoubted, but the real cause of this agitation about registering midwives, in my opinion, comes from another source, and that is the increase of the general population, and the altered education and ideas of the women of the present day. A very few years ago the daughters of farmers, small tradesmen, and artisans went out almost invariably as domestic servants, nursery governesses, or governesses. They no longer do so; whatever may be the reason the result has been that nursing as a means of livelihood has become overcrowded, and so, as is usual under the circumstances, other fields have been sought. Midwifery offers a fair opportunity of making a living, and, consequently, every year hundreds of women take the L.O.S.

It is quite obvious that the large number who obtain this licence are not required for attendance on the poor, therefore if they are to maintain themselves by practising this branch of our profession, it must be by competition with us, and I know of one case where a number of respectable artisans, who could perfectly well afford to pay a guinea, were induced to go to a subsidised midwife, with the result of loss to the doctor, and the pauperising of the individual.

If this demand for midwives was only brought forward by laymen, one could understand it, but when one sees that it is most strenuously urged by those members of the medical profession who are not in any way injured by it, but on the contrary by those who have something to gain either in advertisement, or fees, one cannot help doubting their *bona fides*, and may be forgiven if one puts down the whole matter to interested motives.—I am, etc.,

Friern Road, S.E., June 24th. ALLAN MACLEAN.

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SIR,—With reference to the fact mentioned by Mr. Humphreys that the Registrar-General's return showed that in 1899 there was no registration district in England or Wales in which there was no maternal death in childbirth, except in those 75 districts in which no children were born, I have looked over the schedules sent to me weekly for the Hatfield Registration district, and I find that there were 206 births registered, and 1 death registered as follows: Age 31, heart disease (double aortic), dropsy one month, confined July 12th and died August 13th, and no other connected with childbirth. I knew the woman well, as having suffered from repeated attacks of rheumatic fever and certainly twice from endocarditis. I did not attend her in her confinement, but I have no reason to question the certificate. No doubt other registration districts could be found where maternal deaths in childbirth could be shown to be caused by disease, and not from any cause connected with delivery. The fact is, Mr. Humphreys must show a large prevalence of puerperal sepsis in the country to prove his point, and I would suggest that he should tell us in how many reports of medical officers of health is an undue prevalence of puerperal sepsis referred to. It is a matter of common knowledge that cases in which it is well known beforehand that the life of the mother is shaky are not undertaken by midwives.

It appears to me desirable that Dr. Boulton should explain the nature of the steps which, as he stated recently, the Obstetrical Society are taking to put a stop to the use of that Society's certificate as a licence to practise midwifery. It is obvious from the advertisements which are enclosed that the certificate is used as a licence, and is very generally accepted as such.—I am, etc.,

Hatfield, July 1st. LOVELL DRAGE.

*** The enclosures consist of advertisement pages taken from recent issues of *The Hospital (Nursing Mirror)*; advertisements of Poor-law authorities specify that the applicants must possess "the Obstetrical Society's licence," "must have the diploma of the London Obstetrical Society or some similar institution." Other advertisements are from nurses who describe themselves as "L.O.S.," "fully trained and qualified district midwife, L.O.S. diploma," "Midwife or lady's monthly nurse, L.O.S. diploma," "District midwife, hospital trained, L.O.S.," "Diploma City of London, L.O.S.," and so on. Again, "Accouchement case before and during received in home of Trained Nurse (L.O.S.)," and there is one advertisement of an "Old-established West-End Midwifery practice" for sale, "suitable for two nurses. Present practitioner retiring."

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SIR,—The question whether the medical profession (as a whole) is for or against legislation for licensing midwives to attend cases by themselves is of the utmost importance, because being the only body in the position to judge the value and probable results of such legislation, the law-makers should be guided by its views.

The promoters of the Midwives Bill hold that the profession (as a whole) is in favour of their views. The opposers claim the reverse. The only way, therefore, of solving this question is to weigh the evidence that each side is able to bring forward.

Mr. Humphreys (Honorary Secretary, Midwives Bill Committee) says:

May I again point out that the medical profession (as a whole) is not in agreement with "M.R.C.S." in opposing legislation for the licensing of midwives? In proof this there is, to take only one instance, the Bill of the British Medical Association, founded on the same principles as the last Bill introduced into Parliament. The profession recognises the necessity for legislation, and, wisely, has drafted a Bill on the lines laid down by the Select Committee of the House of Commons.

Before giving my reasons for claiming that the bulk of the profession is opposed to such legislation, I will show Mr. Humphreys's "proof" to be a fallacy.

The profession did *not* draft the Bill referred to by Mr. Humphreys, neither has it been approved of by the British Medical Association in general meeting assembled. It was adopted by the Parliamentary Bills Committee of the Association, and subsequently by the Council, but I cannot admit that this fact entitles Mr. Humphreys to flatter himself that the Bill represents the views of the profession.

Now, to prove that the bulk of the profession is opposed to legislation to license midwives, and is in agreement with Dr. McCook Weir's principle of supplying the poor with both doctor and nurse, may I refer Mr. Humphreys to the BRITISH MEDICAL JOURNAL of August 3rd, 1895, pages 326 to 332, where he will see an account of by far the largest annual general meeting that the Association had ever held? At this meeting of thousands of members the following resolution was carried unanimously after the *pros* and *cons* of the question had been thoroughly threshed out:

That we, the members of the British Medical Association, while anxious to improve the training and supervision, and, if need be, to support a practical scheme for the registration of medical, surgical, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical or surgical or midwifery practitioners other than those recognised under the Medical Act, 1886, as now existing.

The Council, however, ignored this resolution, but nevertheless there is the opinion of the bulk of the profession, and this pronouncement has never been reversed. Surely then

Mr. Humphreys is playing with facts in asserting that the profession favours legislation for licensing midwives. Similar resolutions had been passed previously to this at the Clifton and other meetings all over the country.

Again, when the promoters of the Midwives Bill tried to induce the Lord President of the Privy Council to believe that they had the support of the profession, he replied, "My experience is just the reverse." The members of the Incorporated Medical Practitioners' Association, nearly all of whom are in general practice, are to a man opposed to registration of midwives, and it is noteworthy that two of the candidates (opposed to registration) nominated by this body for seats as direct representatives on the General Medical Council at the last election, were elected by large majorities over those who were in favour of registration.

Mr. Humphreys says that he cannot see how the Act of 1886 touches midwives, or what it has to do with the L.O.S. certificate. I did not say that it had anything to do with either. What I did say was, that as it is necessary for public safety that medical men should not be allowed to practise midwifery unless they have fully qualified in all three branches, surely midwives with a few weeks' partial training in only one branch cannot be safe to practise.

I thought Mr. Humphreys would find it impossible to say anything logical against the Sick and Obstetric Nurses Bill: he simply criticises the way it is drafted, which matters not as it is evidently merely to show the principle. He wisely does not attempt to refute the main principle of it. It will be very interesting to see if Mr. Humphreys can answer the following questions in a straightforward manner:

1. Would not the poor be better off with a doctor and nurse than with a midwife?

2. Does Mr. Humphreys agree with me that the expense of a Bill in practice is a trivial consideration when it is a matter of life and death?

I am sorry to have confused Dr. Broadbent's scheme with Dr. McCook Weir's Bill, but by what I can see it contains the same fundamental principles, and is therefore excellent.

I see in the BRITISH MEDICAL JOURNAL of June 22nd an extremely interesting presidential address on Midwifery and Midwives, which was delivered by Dr. Edward Malins at the annual meeting of the Birmingham and Midland Counties Branch of the British Medical Association on June 13th. Although his address is profoundly interesting from a historical point of view, I absolutely fail to see the logic of his reasons for supporting midwives and the Midwives Bill. Apparently his chief argument that midwives should be licensed is that they have existed from time immemorial. May I point out to him that sin is also ancient, but that is no reason why it should be encouraged?

If Dr. Malins had been in existence some thousand years ago, when doctors and midwives were somewhat on an equality as regards education, his contention that midwives should be licensed and educated might have held water, but since medical education has reached its present standard it would surely be making a retrograde step to license midwives with a few weeks' or even months' training, and so start them about a thousand years too late. No! everything should be up to date, and let those women who desire to practise on the lives of others honestly pass the present-day medical examinations according to the Medical Act of 1886, and become "lady medicals"; don't let them slip into the back door of the medical profession with the L.O.S. certificate and a few weeks' or months' training.—I am, etc.,

M.R.C.S.ENG.

## A SCHEME FOR SETTLING THE MIDWIVES QUESTION.

SIR,—I beg to say in reply to Dr. Broadbent, of Manchester, that his "scheme" is neither more nor less that a reproduction of my "Sick and Obstetric Nurses Bill," and in reply to Mr. Humphreys, that my Bill, although perhaps imperfectly drafted, has had a much more friendly reception than his own, doubtless because it provides for the urgent wants of poor parturient women who at present die in large numbers, as he points out, not from the malpraxis of his brother practitioners as he insinuates, but from the neglect of incompetent midwives and the grossly scandalous nursing to which they are subjected. I am in a position to give startling evidence to this effect before any properly-constituted tribunal; and it is a gross libel on the profession to insinuate that the blame rests on medical men rather than on the midwives whom he is prepared to register, without making provision for the nursing of thousands of poor women who are literally left by the midwives (new and old) after about the third day of delivery. Is Mr. Humphreys aware that medical men seldom lose sight of their confinement cases for fourteen days after delivery, and that it is hardly possible to get a respectable woman with any knowledge whatever of nursing to do what is necessary for these poor women? Your versatile correspondent belongs to the class of armchair legislators who consider "impracticable" everything outside the radius of their narrow and perverted judgment.

It is not a question of the registration of midwives, but the nursing of the poor parturient woman and those who think with me will not cease to contend for this until it is *un fait accompli*.—I am, etc.,

Liverpool, June 20th. ALEX. MCCOOK WEIR.

## ALFRED HUGHES MEMORIAL AT KING'S COLLEGE, LONDON.

SIR,—A movement has been set on foot to establish a memorial to the late Professor Hughes at King's College. It has been felt that his memory should be perpetuated in London as well as in Wales, for the last years of his life were spent with characteristic energy among London students. His anatomical collection has, in accordance with his expressed wish, been presented to King's College by Mrs. Hughes, and will bear his name. It is hoped that the fund now being collected will enable us to erect a memorial tablet in the Anatomical Museum or College Chapel, and also to found a scholarship or medal in anatomy to be awarded annually, and to be named after our late colleague.

With this object in view a large number of circulars have been posted to members of the medical profession, prominent anatomists and others. Already a considerable number of subscriptions have been sent in. These include £5 from Lord Lister, £5 from the Hon. W. F. D. Smith, M.P. (Treasurer of King's College), £2 2s. from the Archbishop of York, and a number of others, principally from members of the council, staff, and students of King's College.

The object of this letter is to make the fund still more widely known. There are doubtless many of Professor Hughes's friends and old students, whom it is difficult to reach in other ways, who would like to show their appreciation of his worth by sending donations to the fund. A full list of subscribers will be published later. Contributions should be sent to me.—I am, etc.,

King's College, Strand, June 30th. W. D. HALLIBURTON.

## DEFECTIVE VACCINATION.

SIR,—My experience—a great many years—does not agree with that of "Tolerans" in the BRITISH MEDICAL JOURNAL of June 15th, as, when I used to vaccinate from arm to arm, if only two out of five places took, I, as a rule, did the three that failed over again on the day of inspection, and they were almost invariably successful, although in a more or less modified form. If only one took the first time (which very rarely happened) the four re-done would take fully, in no way modified by the one.—I am, etc.,

Rhymney, June 27th. T. HALL REDWOOD.

## SUMMER ATTIRE.

SIR,—With regard to the question of dress at the annual British Medical Association meetings, it would be a blessing indeed if this correspondence could put a stop to such eccentricities of attire as are painfully in evidence on these occasions. What can be more absurd than to go for long country drives and boating excursions in silk hats and frock coats, yet this is the costume in which a large number of our profession appear, instead of putting themselves into straw hats and summer suits like ordinary common-sense persons.—I am, etc.,

June 30th. C. E. W.

## STEREOSCOPIC RADIOGRAPHY.

SIR,—With reference to Mr. Hall-Edwards's letter in the BRITISH MEDICAL JOURNAL of June 29th, I should like, in the interests of "historical accuracy," to say that, so far as I know, I was the first in this country to call attention to the above subject. This I did so long ago as March 5th, 1898, when in an article published in the *Lancet* under the heading of "Radio-stereoscopy" I described its advantages and explained its method (that of Marie and Ribaut). I also showed (I think about the same time) at the request of the Royal Society stereoscopic radiographs taken by myself.—I am, etc.,

Mansfield Street, W., June 30th. W. S. HEDLEY.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## THE ROYAL NAVAL HOSPITAL, HASLAR.

THE session of instruction at the Royal Naval Hospital, Haslar, terminated on June 26th, when the fourteen surgeons under instruction, who had obtained their commissions after the competitive examination in London some months previously, received appointments to His Majesty's ships on the determination of their seniority by the sum total of the marks obtained in London and at Haslar.

The following prizes were awarded: The gold medal to Surgeon A. J. Wernet, and the microscope and the silver medal and books to Surgeon E. Cox. The Director-General of the Medical Department of the Navy, Sir Henry Norbury, K.C.B., M.D., in distributing them, complimented all the officers highly on the very favourable report which he had received from the Inspector-General and the officers of the professorial staff as to the great interest they had shown in the subjects which formed the course, as well as on the general zeal and ability they had evinced during the time they had been under instruction:

*Surgeons in Order of Seniority.*

| | | Marks. | | | Marks. |
|---|---|---|---|---|---|
| 1. | Surgeon E. Cox, B.A., M.B. | 6,659 | 8. | Surgeon T. F. O'Keeffe, M.B. | 4,081 |
| 2. | ,, J. MacDonald, M.D. | 6,168 | 9. | ,, E. F. Ellis ... ... | 4,472 |
| 3. | ,, A. La T. Darley ... | 5,056 | 10. | ,, D. V. Lowndes ... | 4,250 |
| 4. | ,, A. J. Wernet ... | 5,031 | 11. | ,, G. C. C. Ross, B.A., M.B. ... ... | 4,245 |
| 5. | ,, C. E. C. Stanford, M.B.... ... | 5,203 | 12. | ,, P. F. Alderson ... | 4,032 |
| 6. | ,, A. R. Thomas ... | 4,055 | 13. | ,, H. C. Woodyatt ... | 3,855 |
| 7. | ,, W. E. Ruttledge ... | 4,826 | 14. | ,, J. Thornhill, M.B. | 3,848 |

## THE GIFT OF THE *MAINE*.

ON Monday last the First Lord of the Admiralty stated in the House of Lords that Mr. B. N. Baker, of the Atlantic Transport Company, had generously presented the hospital ship *Maine* to the Admiralty as an expression of his appreciation as a citizen of the United States of the long protection afforded to his interests under the British flag, and as an example of the noble work of American women in the cause of humanity. "May it be an emblem," he said, "of the cordial relations existing between the two countries."

The provision of this extemporised hospital ship by philanthropic American ladies for the treatment and transport of the sick and wounded of the South African war and the Chinese military operations will be familiar to our readers. She has proved most conclusively the advantages of a hospital ship for the Mediterranean or other fleet, not only for the treatment of the sick and wounded, but for the relief of the cruising ships from their patients when desirable and their conveyance to hospital. She has proved also the benefit which such a ship may be to convalescents from the naval hospitals, as well as for the transport of invalids to England.

The *Maine*, an iron screw steamer of 2,228 tons and a speed of 11½ knots, was built at North Shields fifteen years ago as a cargo and cattle boat for the Atlantic Transport Company. When chartered for a hospital ship an upper deck of wood planking was constructed with wood spar awning fittings over, forward and aft, for the protection of convalescents when on deck; the original iron decks subdivided into wards for patients are matchboarded over. The galley, scullery, and smoking room are on deck.

On the main deck aft is the officers' mess room, before this the Roentgen ray room, antiseptic operating room with cement flooring, well lighted by day and electric light, and supplied with hot and cold water supply sinks and basins with plugged drain pipes, instrument cabinet, steriliser, steam coil copper boilers, electric heating fittings for kettles, shelving for antiseptic solution bottles, dressing and bandage bottles, antiseptic operating table, and a metal framed, glass-shelved, castored table for instruments. Forward of this and communicating therewith is the Trafalgar Ward, with 33 fixed open iron cot frames, a single tier, with bed pulley fittings over, and a metal bed table to each cot frame; this bed table is supported by an iron rod rotating in socket and ring attached to the side of the cot, and has holes for the security of tumblers on it; sponge baskets for fruit, etc., also hang on the side of the cots, also a cork life belt.

Each ward is provided with a hot press for drying clothing, an ice chest, electric fittings for boiling kettles and saucepans, which proved most valuable, camp stools, used also for the folded clothing of bed patients, steam radiator, and Berkefeld filters to cold water supply. Foul air uptake shafts are provided.

The main deck wards have square ports, opening when practicable for through ventilation, and with centered opening side lights furnishing day light when closed. The height between main and upper deck is only 6½ feet, the upper plank deck proved leaky, a source of great inconvenience. The matchboarding over this iron main deck is contrary to all antiseptic ideas: these defects would of course be remedied in any future vessel built or fitted as a hospital ship.

Before the Trafalgar Ward and communicating with it are the tiled lavatories, baths, and trough w.c. with constant water flush, also iron sinks, for cleansing utensils, etc. These sanitary arrangements should not communicate directly with the wards.

Forward of this is a complete modern laundry with electric motor power, and a steam-heated compartment with clothes horses for drying (which proved invaluable), centrifugal wringing apparatus, and Washington-Lyons superheated steam disinfector.

The enclosed engine room, with officers' cabins on either side, was forward of the laundry, and the crew's berths in front of this again.

Towards the ship's bows is the officer patients' ward, with nine fixed and three swinging cots, under the lower half of the former is a small chest of drawers. Their mess room adjoined, and their bath, lavatory, and w.c. are bulkheaded off.

Still further forward in the bows of the ship is a bacteriological laboratory and mortuary; lavatory, bath, and w.c. for nursing sisters when borne.

On the lower deck forward is the St. Vincent Ward, the height between lower and main deck is a little less than 6 feet; this ward has 28 fixed cots. The Britannia Ward is aft on this deck, with 47 fixed cots. These lower deck wards are lighted and, when practical, ventilated by side scuttles. The other arrangements are the same as in the main deck wards, but with the addition of special electric fan ventilating shafts. The hatchways also contribute to ventilation, the stairways are wide, with broad steps and of easy gradient. A suitable lift enables ships' cots with patients in them to be lowered to the wards from the upper deck, and by a specially-designed frame cots are readily and safely hoisted inboard from boats alongside. The *Maine* is also provided with a bakery which furnished fresh bread for the sick, and with cold storage and an efficient ice machine. No suitable provision, however, exists for the isolation of infectious diseases or other cases for segregation.

We are informed that the vessel was lent by the Atlantic Transport Company to the American Ladies Committee until July, and on her return from China this Committee placed her at the disposal of the Admiralty for the remaining period with most of the stores and equipment; the offer was accepted, and two naval medical officers, with an assistant paymaster and a sick berth staff of 13, were appointed, the special hospital equipment being still further liberally supplemented as regards surgical appliances, etc., by the Admiralty.

In the building of hospital ships in the future, or the fitting out of chartered ships for the purpose, the experience of the *Maine* both as to its efficiency and its deficiencies should prove invaluable.

## ARMY MEDICAL SCHOOL, NETLEY.

### PRESENTATION OF PRIZES.

THE distribution of prizes took place at the close of the summer session on Saturday, June 29th. The Earl of Northbrook, G.C.S.I., presided. In addition to the Principal Medical Officer, the professors, and the staff of the hospital and school, there were present Directors-General Preston and Harvey, Sir Joseph Fayrer, Bart., Surgeon-General W. R. Hooper, C.S.I., and a large gathering of ladies and gentlemen.

The report of the session was read by Colonel McLeod, M.D., LL.D., I.M.S., Secretary to the Senate. The names of surgeons on probation belonging to the R.A.M.C. and Indian Medical Service, who, after having undergone instruction and been found qualified by examination, were recommended for commissions, are shown in the following lists, which also indicate the number of marks obtained by each, and those to whom prizes were awarded. The report bore testimony to the character and attainments of the surgeons on probation, and intimated that a new prize consisting of a bronze medal and £5 had been established by Mrs. Marshall Webb in memory of the late Surgeon-Major-General William Marshall Webb, R.A.M.C. The subject of competition selected by the Senate, to whom the choice had been entrusted by Mrs. Marshall Webb, was hospital administration one of great importance, and peculiarly appropriate in view of the fact that Surgeon-Major-General Marshall Webb had occupied the position of Assistant Professor of Medicine in the Army Medical School, an office to which the duty belongs of giving instruction in this subject.

### ROYAL ARMY MEDICAL CORPS.

LIST of Surgeons on probation who were successful at both the London and Netley examinations. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows:

| | Combined Marks. | | Combined Marks. |
|---|---|---|---|
| F. W. Lambelle ... ... ... | 5,289 | M. C. Beatty ... ... ... | 3,047 |
| L. J. S. Cahill ... ... ... | 4,703 | J. R. Welland ... ... ... | 3,686 |
| *W. C. Stevenson ... ... | 4,165 | H. W. Long ... ... ... | 3,335 |

List of Surgeons on Probation who are recommended for commissions in the Royal Army Medical Corps at the close of the eighty-second session. These gentlemen were nominated to the Army Medical School:

| | Netley Marks. | | Netley Marks. |
|---|---|---|---|
| T. F. Ritchie ... ... ... | 2,105 | H. Rogers ... ... ... | 1,636 |
| A. W. Sampey ... ... ... | 1,786 | W. J. S. Harvey... ... ... | 1,608 |
| T. J. Potter ... ... ... | 1,778 | W. Davis ... ... ... | 1,570 |
| A. J. Williamson ... ... | 1,751 | J. C. Hastings ... ... ... | 1,426 |
| E. V. Aylen ... ... ... | 1,681 | D. O'Donoghue ... ... ... | 1,399 |

* Gained the de Chaumont Prize in Hygiene.

### INDIAN MEDICAL SERVICE.

LIST of surgeons on probation who were successful at both the London and Netley examinations. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School.

The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows:

| | Marks. | | Marks. |
|---|---|---|---|
| *G. E. Charles ... ... ... | 6,168 | H. B. Foster ... ... ... | 4,030 |
| †A. G. McKendrick ... ... ... | 5,959 | G. B. Butt ... ... ... ... | 4,544 |
| ‡O. St. J. Moses ... ... ... | 5,672 | G. C. L. Kerans ... ... ... | 4,507 |
| J. W. Little... ... ... ... | 5,413 | C. B. McConaghy ... ... | 4,438 |
| §F. W. Sumner ... ... ... | 5,285 | H. W. Illius ... ... ... | 4,395 |
| H. R. Nutt ... ... ... ... | 5,234 | E. W. Browne ... ... ... | 4,390 |
| J. A. Barnes ... ... ... | 5,073 | J. B. Christian ... ... ... | 4,216 |
| W. D. Ritchie ... ... ... | 5,014 | A. Murphy ... ... ... | 4,161 |
| N. E. H. Scott ... ... ... | 4,914 | F. T. Thompson ... ... ... | 4,124 |
| J. K. S. Fleming ... ... ... | 4,873 | L. P. Brassey ... ... ... | 3,881 |
| E. C. Hepper ... ... ... | 4,819 | C. F. Marr ... ... ... ... | 3,843 |
| C. E. Southon ... ... ... | 4,803 | S. Bose ... ... ... ... | 3,761 |
| G. Fowler ... ... ... ... | 4,685 | P. L. O'Neill ... ... ... | 3,547 |
| J. Husband... ... ... ... | 4,680 | | |

* Gained the Herbert Prize of £20, the Martin Memorial Medal, the Parkes Memorial Medal, and the Second Montefiore Prize.
† Gained the Maclean Prize in clinical and ward work.
‡ Gained the First Montefiore Prize of £21 and Medal.
§ Gained the Prize in Pathology presented by Surgeon-General Sir Joseph Fayrer, Bart., K.C.S.I.

The prizes having been handed to the successful competitors by Lord NORTHBROOK, he delivered a most appropriate and interesting address, in which he congratulated the prize-takers on their success, which indicated ability and application. He reminded the class that academical distinctions were not necessarily a measure and forerunner of success in the great competition of life which evoked capacities and attainments of a different kind. The prizes which they had obtained possessed a special interest and value in that they had for the most part been established for the purpose of perpetuating the memory of men who had occupied a distinguished position in life, and had been associated with the foundation, history, and working of this school. The name of Sidney Herbert, the originator of the institution, held as it ought a prominent place in the honoured list, and it was a gratification to him to recall the circumstance that he had held office as Assistant Secretary of State for War under that good man and great Minister. He was glad to observe that a new prize had been instituted in memory of the late Surgeon-Major-General William Marshall Webb, R.A.M.C., and that hospital administration had been chosen as the subject of competition. The South African war had brought into great prominence the importance of hospital administration. No question had arisen regarding the ability and devotion with which medical officers had fulfilled on the field and at the base their duties to the sick and wounded, but complaints had been raised, as they were no doubt aware, regarding the hospital arrangements at the front. Every war taught its lessons as regards military and medical administration. The Crimean war revealed great imperfections in every department of the army, and great reforms had been accomplished in consequence of the teachings of that disastrous campaign. The South African war had also evolved experiences which were now being made the subject of careful inquiry and consideration. As concerned the medical department the commencement of the war found the service seriously undermanned, a circumstance which, he was bound to say, was not due to any neglect on the part of the medical authorities to represent the facts of the case and what they believed to be the causes. It was found difficult to supply the medical requirements of the two army corps—say 72,000 men—which it was at first considered sufficient to despatch to the seat of war. But when the army had to be increased to the equivalent of six army corps, it became a subject of wonder how medical establishment and material were supplied in sufficiency. The same spirit of patriotism which drove men to fight under the flag of the empire also impelled members of the medical profession to recruit the broken ranks of the Royal Army Medical Corps, and to take service as civil surgeons in support of and co-operation with their brethren of the army. Militia and volunteer medical officers readily responded to the call. Men left their practices and appointments for the front, and the colonies lent efficient help. Thus were obtained, as stated by Mr. Brodrick in a recent speech, "700 admirable recruits in time of need." There was no lack of workers, thanks to the patriotic response made by the medical profession to their country's call, to the sympathy which exists between all branches of that profession, and to the energetic and wise efforts of the head of the Medical Service—Surgeon-General Jameson and those acting with and under him. These public medical agencies were efficiently supplemented by the magnificent private hospitals and hospital ships which had been organised, manned and equipped through the public spirit and liberality of individuals and communities. How admirably the work of aiding and treating the sick and wounded was done might be gathered from the report of the Royal Commission, from the letters of press correspondents, officers, soldiers, and onlookers, from books which had been published, and from the goodly share of distinctions and promotions which had been conferred on medical men, military and civil, who had rendered distinguished service. Among these he would mention the names of four officers of the Royal Army Medical Corps on whom the decoration of the Victoria Cross had been conferred—Lieutenant-Colonel Babtie, Captains Nickerson and Inkson, and Lieutenant Douglas. While it was beyond doubt that the medical department had done well in this campaign, imperfections and shortcomings had been pointed out which were now engaging the attention of the Secretary of State for War, who sought, in the words of a speech recently delivered at a public dinner, to make the medical department of the army the "best medical organisation in the world." As regards the purely professional teachings of the war he was not competent to speak. They had had the advantage of learning from Colonel Stevenson, C.B., who had as Principal Medical Officer on the Headquarters Staff done such excellent and distinguished service, what lessons had been taught by the war in regard to the nature and treatment of injuries caused by modern weapons and missiles. As is usual in protracted campaigns, disease had caused much more serious loss than injury, and the prevalence and fatality of enteric fever prompted a fervent hope that the labours of Professor Wright and others would result in the discovery of a prophylactic against this the chief scourge of armies in the field. Lord Northbrook concluded by making a touching reference to Queen Victoria's last visit to Netley, and expressed his conviction that her successor King Edward VII entertained the same feelings of lively interest in the institution and its inmates as had been so repeatedly manifested by our late lamented Sovereign.

Sir Joseph Fayrer briefly addressed the surgeons on probation, and the proceedings terminated by a short speech by the Principal Medical Officer, Colonel Charlton, R.A.M.C., in which he dwelt on the great advantages which the Netley instruction conferred on candidates for commissions in the medical department of the army; and expressed hearty thanks to Lord Northbrook for presiding on this occasion and delivering such an able and sympathetic address.

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### ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: THOMAS BOLSTER, Inspector-General to Plymouth Hospital, undated; EDMUND CORCORAN, Staff Surgeon, to the *Magdala*, June 26th; WILLIAM G. K. BARNES, Staff Surgeon, to the *Resolution*, June 26th; W. E. RUTLEDGE, A. J. WERNET, and H. C. WOODYATT, Surgeon, to the *Pembroke*, for disposal, undated; D. V. LOWNDES and A. R. THOMAS, Surgeons, to the

*Wildfire*, for disposal, undated; C. E. C. STANFORD, E. F. ELLIS, and P. F. ALDERSON, Surgeons, to the *Duke of Wellington*, for disposal, undated; T. F. O'KEEFE, G. C. C. ROSS, and J. THORNHILL, Surgeons, to the *Vivid*, for disposal, undated; MALCOLM CAMERON, M.B., Surgeon, to the *Harrier*, July 1st; ROBERT D. JAMESON, to the *Northampton*, July 1st.

### ARMY MEDICAL SERVICE.

SURGEON-MAJOR W. C. BEEVOR, M.B., Scots Guards, is seconded for service with the South African Constabulary, January 22nd. Surgeon-Major Beevor joined the Scots Guards, November 28th, 1885.

### ROYAL ARMY MEDICAL CORPS.

THE undermentioned officers have been discharged from hospital in South Africa to duty: Lieutenant-Colonel R. W. E. H. NICHOLSON, Lieutenant-Colonel W. P. SQUIRE, Lieutenant G. G. DELAP, Civil Surgeons GLASSE, J. A. BLACK.

The following are returning home: Maior H. T. KNAGGS, Civil Surgeons E. C. TAYLOR, J. S. P. PARKER.

The progress report states that Civil Surgeon WILBOND is out of danger, June 26th.

### ARMY MEDICAL RESERVE.

SURGEON-MAJORS G. HARRISON and C. H. HOUGH, having resigned their Volunteer appointments, cease to belong to the Army Medical Reserve, July 3rd.

### INDIAN MEDICAL SERVICE.

MAJOR G. H. FINK, Bengal Establishment, Civil Surgeon, Assam, is permitted to retire from the service from July 4th. He was appointed Surgeon, April 1st, 1884, and Surgeon-Major twelve years thereafter.

### LESSONS OF THE WAR IN SOUTH AFRICA.

WE have received a letter from "A Major, R.A.M.C." at present serving in South Africa, in which he expresses his views as to the lessons which may be drawn from the conduct of the medical service in the war. They may be epitomised as follows:

*Personnel.*

Owing to the persistent undermanning of the Royal Army Medical Corps, the medical service has of necessity been largely entrusted to civil surgeons and to partially-trained men as hospital orderlies and attendants. To a certain extent this will be the case in future campaigns. Civil surgeons should not be placed in charge of regiments, as they are not possessed of the necessary military and sanitary experience; their most useful sphere is in the stationary and general hospitals, the administration of which should, however, remain in the hands of R.A.M.C. officers. Places might also be found for one civil surgeon in the bearer company and two in the field hospital. Volunteer bearers and members of the St. John Ambulance Brigade should be employed in the bearer companies and the field hospitals; they have been trained in stretcher drill and first aid, but know nothing of hospital duties. The trained R.A.M.C. orderlies are, on the other hand, most usefully employed in the work of nursing in the stationary and general hospitals.

The plan of attaching consulting surgeons to the staffs of the divisions has worked admirably.

On the lines of communication the want of officers with special sanitary experience has been felt, and such should also be appointed to every base and every standing camp. Knowledge of military administration would be necessary to such officers.

Nursing sisters should be placed in charge of the wards of stationary and base hospitals, the ward orderlies being under their orders; there are many objections to their employment in field hospitals. Finally an experienced hospital matron at the base would be of great use in making selections from local candidates for appointments.

*Organisation.*

Field hospitals and bearer companies should be amalgamated to form one unit; at present, if there is anything to interfere with the harmonious working of the bearer company with its field hospital the latter is useless, and when not in action the bearer company has no occupation.

There is no reason why general hospitals should not be organised for 800 or 1,000 patients instead of 520 as at present; in this war their establishment has been in every case incomplete, and the reputation of the trained orderlies has suffered from the faults of the untrained men who have unavoidably been employed in large numbers. In future general hospitals will probably be fewer, but with a larger staff to each; nearer the front stationary hospitals of 200 beds will be more numerous and, if circumstances require, may be combined.

*Matériel.*

The ambulance waggons and stretchers at present in use are much too heavy. The hospital marquees are cumbrous, and bearer companies and field hospitals should be supplied with "Tortoise" tents, the other hospitals with the square tent of the Indian service. The field medical and surgical equipment should be simplified, but the equipment of field hospitals requires to be supplemented by supplies of clothing, light stretcher beds, nursing utensils, etc. For general hospitals the supply of instruments requires additions, and a bacteriological outfit should be available. A small engine of about 8-horse power would be useful for supplying electric power for x-ray work, ice making, and soda-water making. The bearer companies and field hospitals should have their own transport, and it should not be taken from them under any circumstances.

*Public Assistance.*

The efficiency of private hospitals would be increased by the addition of a military quartermaster and a R.A.M.C. sergeant-major. A distinct understanding is necessary that they are available for any sick in accordance with the exigencies of the moment, and must be prepared to treat men of any nationality and of any branch of the service from whatever complaint they may be suffering. Much trouble has arisen from the non-observance of this rule.

The work of the Red Cross societies has been admirable; they knew what to give and gave it; this rendered their early disappearance from the scene the more regrettable.

The supply of "comforts for the sick" has suffered from the want of a sorting depôt at the base to separate the useless and damaged articles from the useful.

*The Medical Service and the Army.*

The relations of the medical service with the Army Service Corps and the Ordnance Department have been most harmonious. The war has demonstrated the fact that the place of the Principal Medical Officer is with the General commanding the force. Until the P.M.O.'s of divisions and armies have a definite position on the divisional and general staffs, the general medical arrangements must suffer, the selection of hospital and camp sites, etc., must be unsatisfactory, and the medical service fail to be used to its full advantage.

### RETIREMENT OF COLONEL LAWRIE, I.M.S.

COLONEL LAWRIE, I.M.S., has resigned the position of Residency Surgeon and Director of the Medical Department of the Nizam of Hyderadad which he has held for sixteen years.

A farewell dinner was given to him at the United Service Club, Hyderabad, on May 14th.

Colonel C. M. Thompson, P.M.O., of the Secunderabad District, in proposing the health of the guest of the evening, said Colonel Lawrie and Mrs. Lawrie had been so long associated with the station that their departure could not fail to leave a void in Hyderabad and Secunderabad society which it would be impossible to fill. By Colonel Lawrie's retirement His Highness the Nizam would lose the services of an able medical administrator, who had for many years been at the of the medical service of the Hyderabad State, and to whose exertions and advice must be ascribed the comparative immunity which the State had enjoyed from the terrible disease which had been for many years so fatally prevalent in other parts of India. By Colonel Lawrie's retirement the Government of India would lose the services of an eminent and distinguished medical officer, whose original investigations and researches into the diseases of that country had placed him in a high position amongst the general body of the medical profession and in the rank of the service to which he belonged. It was due to the indefatigable zeal and energy of Colonel Lawrie that His Highness the Nizam was induced to appoint the Hyderabad Chloroform Commission, and it was due to his skill and patience that the work of the Commission was brought to a successful issue, and a large amount of most important evidence collected and recorded, bearing on the action of chloroform on the heart, with the greatest benefit to humanity. That his services had been appreciated by the poor was shown by the large number of sick who crowded around him at his daily visit to hospital, and the large number who unreservedly and confidently placed themselves under his treatment as in-patients: that his services had been appreciated by His Highness and the gentlemen of Hyderabad was proved, if proof were wanting, by the presence there that night to do him honour of a large number of the leading officials of Hyderabad State.

Colonel Lawrie, after acknowledging the toast in fitting terms, said that when he came out to India in 1872 he had the good fortune to serve under or be associated with three great surgeons in the Medical College Hospital, Calcutta. The first was Sir Joseph Fayrer, the second was Partridge, the third was Kenneth McLeod, one of the cleverest surgeons and men ever produced or matured in India. In the second place any good he had attained to in surgery was due, not to himself, but principally to the support and encouragement he had invariably received from his colleagues and assistants, both European and Indian. The third cause of his getting on was a stroke of luck at the beginning of his service; when doing medical duty with a cavalry regiment he was obliged to perform a small operation for a lady in the regiment, and there was no one to give chloroform. He sent for the colonel's wife, and made her sit down on the bed beside the patient and do it under his direction. It turned out that she was a niece of the then Surgeon-General of the Indian Medical Service, and he believed it was solely in consequence of the description she wrote to him of the wonderful manner in which she had administered the chloroform, for which she gave him all the credit, that he was so soon afterwards transferred to Calcutta and given the opportunity as Resident Surgeon of the Medical College Hospital of learning surgery under the three great men he had mentioned.

## MEDICO-LEGAL AND MEDICO-ETHICAL.

### AN ACTION FOR LIBEL.

DR. W. MARSTON CLARK, a medical practitioner living at Twickenham, was the plaintiff in the High Court recently in an action brought against Mr. Collings for libel.

From the report in the *Richmond Times* we gather that the libellous statements were made by Mr. Collings in respect of the alleged neglect on the part of Dr. Clark by reason of his not administering chloroform to the defendant's son whilst removing a piece of bone from an injured finger. It appeared that the accident occurred on July 2nd, 1900, whilst the defendant and his two sons were on the river. The plaintiff attended to the boy and administered first aid, but it being apparent that a portion of bone would require removal it was arranged that the patient should attend at St. John's Hospital, to which the plaintiff was attached as surgeon, for the operation. The operation was performed, it not being considered necessary to administer an anæsthetic. Later the defendant wrote a letter to the committee of the hospital, in which he stated: "I have to report that in an operation conducted by him—the plaintiff—on Sunday last, although Dr. Clark assured me that he would put my son under chloroform he failed to do so, and the patient was compelled to suffer throughout the

whole operation. In the case of my son the mischief is done, but in the interest of the general public I submit that such inhuman treatment at any hospital is a disgrace to the institution." The letter being brought before the plaintiff by the authorities of the hospital, the allegations contained therein were denied, and the defendant was asked for an explanation. Later the defendant wrote again to the Committee "in adhering to the facts set forth in my former communication to you I now supplement my charge against Dr. Clark by affirming that he is a man utterly devoid of honour, and as such he should not be associated with an institution where the highest humanitarian principles should obtain. Dr. Clark seeks to cover his inhuman conduct by falsehood, misrepresentation, and intimidation." No apology having been tendered by the defendant, the action was brought by Dr. Clark. The defence was justification.

The plaintiff's counsel stated to the court that the plaintiff did not seek to make any profit out of the action, and would have been content with an apology and the payment by the defendant of a sum of money to a charitable institution, failing which he only asked for reasonable damages.

Dr. Clark denied in his evidence that he had ever promised to administer chloroform, and denied that in the case it would have been advisable at all.

The defendant asserted the truth of his allegations and was supported in his evidence by his two sons.

The Jury conferred for a few minutes in the box and found for the plaintiff with £20 damages, which they suggested should be given to a local hospital.

### A PAINTER AND "PLASTERER."

AN inquest was held lately, according to a report in the *South Wales Daily News*, on the body of an infant aged 21 months, the child of Mr. D. M. Davies, of Ebbw Vale. It appeared from the evidence that the child had sustained an injury to his knee owing to having been knocked down by a cart. The parent of the child took him to John Rudman, a painter by trade, and a "plasterer," who, after examining the leg, told the woman that he had no ointment weak enough for one so young. It occurred to him, however, that he had a "piece" which would do, and applied some on linen, stating that if it did no good it would do no harm. He told the woman he made no charge, but trusted to people's honour. The ointment used, he stated, was composed of olive oil, ground ivy, and elder leaf, which he had found would "kill inflammation." His aunt had given him the receipt for it fifty years ago. On seeing the child a second time he found it better, and repeated the application.

It appeared from the medical evidence that the application used by the plasterer contained animal grease, sulphate of iron, with traces of copper and lead, though not in sufficient quantity to injuriously affect the wound. The wound required antiseptic treatment, but it could not be said that death was accelerated by the use of the plaster.

Rudman, the plasterer, was recalled, and stated that he did use sulphate of iron, but there was none in the ointment. He had it with a powder and some other things in a pot, and probably some of it got into the plaster accidentally.

The Coroner strongly deprecated what he termed the practice of ignorant quacks, and foolishness of people in dispensing with medical treatment.

The jury found that death was due to the accident, and, considering the nature of the evidence, did not wish to censure Rudman too severely.

The Coroner stated that the jury desired him to say to Rudman that they much regretted that he undertook the treatment of the child, and they thought he ought to have advised the parents at once to have continued medical treatment.

### MEDICAL ADVERTISING.

T. W. M. writes to complain of a letter over the signature of a resident practitioner in a local paper advocating the foundation of a cottage hospital in the district, and asks our opinion of it.

*** Cottage hospitals are useful institutions, and the publication of this letter does not appear to be blameworthy, although a better plan might have been to have called a meeting of the local profession, who could have sent a joint letter to the press with all their names appended.

### INTRODUCTION OF A PARTNER.

UNIVERSITY GRADUATE writes that he gave one and a-half year's purchase for a share in an old-established practice, and that there is but little scope for obtaining patients who can be considered his own individual patients, as the great majority have already belonged to the senior partner. He asks whether it would not be fair and right that he should as much as possible visit the patients alternately with the senior partner, unless the patients have any particular objection.

*** Our correspondent's views of the rights of a junior partner are somewhat extensive. No doubt his partner will be glad of his assistance at times, but he is hardly likely to admit a right on the part of the junior to see his patients alternately with himself even if the patients themselves were willing, which would be more than doubtful. If our correspondent will only have patience, he will in due course get an ample introduction, without requiring the novel expedient he suggests, which might, if carried out, considerably reduce the practice to which he desires an introduction.

COLOURED MEDICAL PRACTITIONERS IN WASHINGTON.—Among the negro population of Washington are 53 medical practitioners, 12 trained nurses, and 10 dentists, and among their organisations are a medical society, a dental society, and a society of trained nurses.

# UNIVERSITIES AND COLLEGES.

### UNIVERSITY OF BIRMINGHAM.

FIRST EXAMINATION FOR THE DEGREE OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY.—The following candidates have satisfied the Examiners in the subjects undernoted:

*Elementary Biology (Part I).*—H. N. Crowe, H. A. Evans, R. S. W. Hunt, G. F. Jotham, N. V. Williams.

*Chemistry and Physics (Part II).*—Class I: F. R. D'A. Glissan, N. J. L. Rollason. Class II: R. W. Aitken, R. H. Astbury, E. L. Bunting, Helen Gertrude Greener, L. L. Hadley, W. C. Horton, W. C. Houghton, H. P. Pickerill.

DEGREES OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY.—The following candidates have satisfied the Examiners:

*H. W. Langley-Browne, *E. Cureton, *C. Leedham-Green, *J. Lloyd, *D. C. Lloyd-Owen, *P. Smith, *T. L. Webb, *E. B. Whitcombe, †G. C. Belcher, †R. S. Burd, †A. Cant, †G. W. Charsley, †A. Emery, †T. W. Fowler, †J. E. Godson, †F. J. V. Hall, †C. H. Harcourt, †A. Hawley, †G. L. Hill, †W. A. L. Jackson: †T. Longmore, †H. P. Motteram, †H. J. Orford, †J. O. Orton, †E. F. Page, H. W. Pepper, †H. W. Pooler, †A. B. Prosser, †W. Sisam, †A. J. Stanley, †A. A. D. Townsend, †G. A. Wilkes, ‡M. J. Quirke.

DEGREE OF BACHELOR OF DENTAL SURGERY.—The following candidates have satisfied the Examiners:

*J. D. Whittles, †H. Round.

* Associates. † Past students of the Birmingham Medical School.
‡ Under ordinary Regulations.

DIPLOMA OF PUBLIC HEALTH.—The following candidates have satisfied the Examiners:

R. A. Lyster, R. Turner.

SPECIAL SECOND EXAMINATION FOR THE DEGREES OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY.—The following candidates have satisfied the Examiners:

*Class I.*—A. E. R. Weaver, F. Wilkinson.

*Class II.*—W. G. Aviss, W. Cook, C. K. Gettings, R. B. D. Hird, L. G. J. Mackey, E. Wilkinson.

### THE LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

THE distribution of prizes took place at this School on June 27th. Mrs. Garrett Anderson, Dean of the School, presided, and the prizes were given by Mrs. Westlake.

In a short address to the students Mrs. Westlake expressed her faith in the capability of women to fill posts in all learned professions. The report of the London Intermediate examination showed that during the past school year, out of 54 successful candidates from all schools, 24 were women. The striking progress in education during the last thirty years was not confined to women nor to the medical profession. In all professions the standard had been raised. This was true of so many occupations that, even in the domain of sports, there was now little room for the poor amateur anywhere. She trusted they would set their faces against the indolence, luxury, and "giving up" after illness which was becoming common, and urge upon their patients to make life itself a strenuous and a real profession.

Mrs. Garrett Anderson, M.D., spoke of the progress of the School and of pressing matters of finance. She expressed a wish that some kind friend would endow one or more of the lectureships, more especially the Chemical Chair, which was a very expensive one. More students were wanted, and she would welcome well-educated women, with a sense of responsibility, and of the type of character that went to make good physicians. She believed that in the future a great deal of ordinary practice would pass entirely into the hands of women; but there would still be room for men, as there was a great demand for them in the army and elsewhere.

The prize list was as follows:—*Materia Medica*, Miss Whitlock. *Practical Organic Chemistry*, Miss Slater. *Practical Inorganic Chemistry*, Miss Schiele. *Histology and Practical Histology*, Miss French. *Pathology*, Mrs. Willey. *Gynæcology*, 1st Durham prize, Miss Ivens; 2nd prize, Miss V. Bennett. *Anatomy*, senior, Miss Kensington; junior, Miss Symington. *Practical Anatomy*, 1st prize, Miss Hacking; 2nd prize, Miss Kensington. *Physiology*, senior, Miss Frazer; junior, Miss Sommer. *Organic Chemistry*, Miss Bolton. *Inorganic Chemistry*, Miss Magill. *Biology*, Miss Coupland and Miss Magill. *Medicine*, Miss Hickman. *Surgery*, Miss Hooper. *Operative Midwifery* (Evans prize), Miss A. C. Scott. The *Entrance Scholarship* given by the Executive Council was awarded to Miss Coupland. The *S. Dunstan Scholarship* given by the Governors of the Endowed Charities of S. Dunstan's in the East, value £60 a year for three years, was gained by Miss N. Smith. *Mackay Prize*, value £20, Miss Slater; 2nd prize, value £20, Miss Chambers.

At the M.B. Examination of the University of London in November, 1900, Miss Woodcock was one of the six candidates in the first division, and of 48 names in the second division 12 belong to students of the School. In the Honours examination 9 out of 25 honours were gained by students of the School. Miss Ivens obtained the Gold Medal and Scholarship in Obstetrics, and Miss MacDougall the Gold Medal in Medicine. At the Intermediate M.B. (London) Examination in July, 1900, Miss Slater obtained marks qualifying for the Gold Medal in Materia Medica.

Mr. Holroyd Chaplin proposed a vote of thanks to Mrs. Westlake, and Dr. Brodie seconded.

Mrs. Westlake replied.

Mr. Turle proposed a vote of thanks to Mrs. Garrett Anderson, and was himself accorded a spontaneous round of cheers, his friendship and generosity to the School being warmly appreciated by the students.

ITALIAN PÆDIATRIC CONGRESS.—The fourth meeting of the Italian Pædiatric Congress will be held at Florence from October 15th to 20th. The President of the Organising Committee is Professor Giuseppe Mya, Director of the Clinic of Children's Diseases in the Royal Institute of Superior Studies.

# PUBLIC HEALTH
AND
# POOR-LAW MEDICAL SERVICES.

## THE HEALTH OF EDINBURGH.

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH

SIR HENRY LITTLEJOHN has just issued his report on the health of the City of Edinburgh for the year 1900.

*The Population* of the extended City of Edinburgh, as shown by the last census returns, is 316,443. The increase of the last ten years is 14.62 per cent.

*The Death-Rates and Birth-Rates* for 22 years are shown, and when those for 1861 or 1871 are compared with those for 1901 the great diminution of the death-rate and also of the birth-rate is obvious:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| In 1861 the death-rate per 1,000 was | 23.15 | and the birth-rate | 33.40 |
| ,, 1871 | ,, | ,, | ,, | 27.86 | ,, | ,, | 34.89 |
| ,, 1881 | ,, | ,, | ,, | 18.86 | ,, | ,, | 32.23 |
| ,, 1891 | ,, | ,, | ,, | 20.06 | ,, | ,, | 28.17 |
| ,, 1900 | ,, | ,, | ,, | 17.85 | ,, | ,, | 26.89 |

In the twenty-two years noted the birth-rate of 1900 is the lowest save that of 1894, when it was 26.63, and also the lowest death-rate (16.07) of these years. In a city like Edinburgh there are fewer early marriages than in the great industrial centres. Only in one town of the eight principal towns of the Registrar-General for Scotland was the birth-rate lower than in Edinburgh, namely, Perth, with 25.7, while the birth-rate all over the country has for years shown a distinct progressive decrease, the consistent regularity and extent of the decrease in Edinburgh is noteworthy. Four hundred and eighty-one persons who came from various parts of the country for treatment in the medical institutions of the city died. Of the total deaths 1,635 occurred under 5 years of age, or 30.3 per cent.; of these 1,080, or almost two-thirds, occurred under 1 year of age, 324 in the 2nd year, 114 in the 3rd year, 73 in the 4th year, and 44 in the 5th year of life. In 1899 the deaths under 5 years numbered 1,818, and of these 1,214 were under 1 year of age. The infantile death rate, which is usually expressed as the proportion of deaths of infants under 1 year of age to 1,000 births, was 132, whereas the corresponding rate in 1899 was 147. The death-rate under 5 years was 56.06 per 1,000 of the estimated population living under 5 years. This compares favourably with the corresponding death-rate during the previous year, namely, 62.41, and from the above figures it is seen that both the infantile and general death rate under 5 years of age shows a most satisfactory reduction. Of the total deaths 2,657 (19.2 per 1,000) were males, and 2,739 (16.6 per 1,000) were females.

*Measles* caused 120 deaths, as compared with 82 in 1899, the respective death-rates being 0.41 and 0.27, while the average death-rate per 1,000 of the population during the previous five years was 0.54. An increase in the number of deaths from measles last year was only to be expected, since nothing is more regular and consistent in the statistical records of Edinburgh than the biennial recrudescence of measles, and consequent increase in the mortality every alternate year. Of the 126 deaths, 65 were males and 61 females, while no fewer than 115 of the deaths occurred under 5 years of age, 87 of these being children under 2 years. The fact that the fatality of measles is almost entirely confined to young children under 5 years is a strong argument against the not uncommonly expressed opinion that it is well to let the other members of the family take the disease, when one is suffering from it, so as "to get it over." The above figures, as well as statistics in general, prove that the chances of death from an attack after the fifth year of life are very slight as compared with attacks in younger children; hence every year that a mother can postpone the occurrence of measles in her family enormously decreases the chances of a fatal result ensuing.

*Diphtheria and Membranous Croup* caused 52 deaths, or a death-rate of 0.17 per 1,000, compared with 32 deaths and a rate of 0.10 in 1899. The disease was very prevalent during the year, in fact a larger number of cases was reported than in any year since notification came into force, but fortunately the type of the disease was mild.

*Influenza.*—A great increase in the number of deaths from this cause is recorded, namely, 148, as against only 61 in 1899. Of these, 52 were males and 96 females. The great majority occurred at advanced age periods, but it is significant of the loose manner in which the term influenza is used to denote causes of death of an indefinite character, to find that the deaths of 2 infants under 1 year of age were certified as resulting from influenza.

*Diarrhœa.*—The deaths from this cause fell from 68 in 1899 to 60 last year. As was pointed out in the last annual report the prevalence and fatality of diarrhœa cannot be adjudged, at least so far as Edinburgh is concerned, simply by the number of deaths which have been certified as due to diarrhœa. Many medical men denote the same cause of death by the term "enteritis," while others employ other terms, all indicating the same condition. In arriving, therefore, at a conclusion as to the prevalence of epidemic diarrhœa, or infantile diarrhœa, we must take into consideration and include the deaths recorded under the heading enteritis in Table XV of the report. This shows that 64 deaths were certified as due to enteritis in subjects under the age of 5 years, of which 33 were under the age of 1 year.

*Mortality amongst Illegitimate Children.*—The chances of an illegitimate child surviving the first few years of life are enormously less than in the case of a legitimate infant. The reason for this is not very far to seek, when the circumstances under which illegitimate children are born and brought up are considered. The mother very seldom nurses such a child herself. It is placed under the care of any woman who is willing to receive it for a small consideration, and too frequently it receives from the very first but scant attention, and wholly unsuitable food. It is very seldom that such illegitimate children receive the solicitude which a mother expends upon her own child, and which comes naturally to her, with the result that all the ailments which play havoc with infant life flourish to a degree practically unknown amongst the more fortunate infants born in lawful wedlock. Last year 632 illegitimate children were born, of which 110 died before attainining the age of 1 year, while of 7,407 legitimate children 833 died under 1 year—in other words, of 1,000 illegitimate children born 174 would have died before reaching the age of 1 year, whereas, in the same number of legitimate children, the number of deaths was only 129. The deaths of illegitimate children last year according to the age at death and the causes which produced it have been classified in a table.

*Case Mortality of Zymotic Diseases.*—The case mortality of typhus fever was exceedingly low, namely, 8.57 per cent., compared with 25 in the year 1890. All the cases of this disease which occurred were treated in the Fever Hospital. The death-rate from typhoid fever was 10.04. Of the total of 249 cases reported 181 were treated in hospital, with the result that 14 deaths occurred there, equal to a death-rate per cent. of 7.7. Of the remaining cases, 68 in number, which were treated at home, 11 died, equal to a death-rate of 16.1 per cent., or more than double the death-rate of the hospital cases. The diphtheria mortality-rate for all cases was 10.7, as compared with 10.03 in 1899, and 14.12 in 1898. The great reduction in the fatality of this disease must be largely attributed to the beneficent influence of antitoxin in the treatment of such cases. All the cases of small-pox were removed to the hospital at Colinton Mains, and made good recoveries. Scarlet fever showed itself to be considerably less fatal last year than in the previous three years, the percentage of deaths to cases being 2.72. Of the total cases which occurred in the city, namely, 991, 676 were treated in hospital, and of these 21 died, giving a mortality-rate of 3.1 per cent. Of the 315 cases treated at home 6 died, equal to 1.9 per cent. The explanation of the lower mortality-rate outside as compared with inside the hospital is, probably, that the majority of cases treated at home were specially mild in type. The mortality-rate of measles was 2.86, somewhat higher than in 1899; 798 of these patients, chiefly severe cases, were treated in hospital, of whom 43 died, giving a mortality of 5.3 per cent. Of the 2,599 cases treated at home 83 died, equal to 3.1 per cent.

## HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,377 births and 3,247 deaths were registered during the week ending Saturday last, June 29th. The annual rate of mortality in these towns, which had been 14.5 and 15.0 per 1,000 in the two preceding weeks, declined again last week to 14.8 per 1,000. The rates in the several towns ranged from 8.5 in Cardiff, 9.3 in Croydon, 9.8 in Leicester, and 10.1 in Bristol, to 17.8 in Oldham, 19.1 in Newcastle, 20.2 in Liverpool, and 21.7 in Preston. In the thirty-two provincial towns the mean death-rate was 15.4 per 1,000, and exceeded by 1.5 the rate recorded in London, which was 13.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.8 per 1,000; in London this death-rate was equal to 1.5 per 1,000, while it averaged 2.0 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.6 in Salford, 2.9 in Blackburn, 3.0 in Sheffield, 3.3 in Wolverhampton and in Birkenhead, and 3.7 in Bradford. Measles caused a death-rate of 1.0 in Birmingham, 1.1 in Wolverhampton, 1.4 in West Ham and in Gateshead, 1.7 in Hull, and 1.9 in Birkenhead; scarlet fever of 1.4 in Preston; whooping-cough of 1.1 in Wolverhampton, 2.2 in Swansea, and 2.8 in Bradford; and diarrhœal diseases of 1.0 in Liverpool and in Sheffield, 1.2 in Bolton, and 2.0 in Blackburn. The death-rate from "fever" did not reach 1.0 per 1,000 in any of the large towns. The 53 deaths from diphtheria in the thirty-three towns included 18 in London, 8 in Sheffield, 5 in Bristol, and 3 in Manchester. One fatal case of small-pox was registered last week in London, but not one in any of the thirty-two large provincial towns. Four small-pox patients were admitted into the Metropolitan Asylums Hospitals during the week, and 5 remained under treatment on Saturday last, June 29th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 1,522 to 2,707 at the end of the nine preceding weeks, had further risen to 2,821 on Saturday last; 408 new cases were admitted during the week, against 314, 323, and 368 in the three preceding weeks.

## HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, June 29th, 1,017 births and 552 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 16.9 and 18.6 per 1,000 in the two preceding weeks, declined again last week to 17.3 per 1,000, but was 2.5 per 1,000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 9.5 in Perth and 10.0 in Leith, to 18.6 in Glasgow and 19.0 in Dundee. The zymotic death-rate in these towns averaged 2.7 per 1,000, the highest rates being recorded in Dundee and Paisley. The 273 deaths registered in Glasgow included one from small-pox, 15 from measles, 2 from scarlet fever, 4 from diphtheria, 14 from whooping cough, and 11 from diarrhœa. Seven fatal cases of whooping cough, and 4 of diarrhœa were recorded in Edinburgh. Four deaths from measles, 5 from whooping cough, and 3 from diarrhœa occurred in Dundee; 2 from whooping cough, and 3 from diarrhœa in Paisley; 2 from measles in Leith; and 2 from measles and 2 from diarrhœa in Greenock.

# OBITUARY.

We regret to observe the announcement of the death of Civil Surgeon Donald Graham, of enteric fever, at Rietfontein West, on June 23rd. He received his medical education at the Extra-mural School, Edinburgh, and had an exceptionally distinguished career, obtaining three silver medals and four prizes, besides first-class honours certificates. He obtained the triple qualification in 1898, and after acting as assistant in England for a short time, became Medical Officer to the Kincardine Parish, Ross-shire, his native place. On resigning this appointment he received a valuable testimonial.

Dr. Russell Stritch (Ardgay, Ross-shire), writes thus with regard to his deceased friend, as follows: "His life forms a part of that price which we are paying for the honour and integrity of our Empire; but who can estimate the mental and physical losses our country and the world must have sacrificed in the present war? A chivalric and thoroughly kind-hearted disposition ensured Dr. Graham the love and esteem of all his friends; and the sincerest sympathy is felt for his parents and sisters, whose only son and brother he was."

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WE regret to announce the death at sea of FRANCIS CHARLES LENEHAN, L.R.C.P.&L.M., L.R.C.S., L.M.I., late Colonial and West Indian Service, and fifth son of Mr. Edward Lenehan, of 1, St. Edwards Terrace, Garville Avenue, Rathgar, co. Dublin. Dr. Leneham, who was aged 33, was educated in the Royal College of Surgeons Ireland, the School of Medicine, Trinity College Dublin, the Carmichael School of Medicine, and the School of Medicine Catholic University of Ireland; was appointed Assistant Colonial Surgeon, Gold Coast Colony in 1893. He was Resident Surgeon to the Colonial Hospital, Accra, Gold Coast Colony, and was Surgeon to the Hausa forces during the Ashanti expedition 1893-94, when he was mentioned in despatches. He was surgeon to the Hausa forces, Kevabu, Ashanti, 1894-96; District Commissioner, Gold Coast Colony, 1896; Government Medical Officer, Turks and Caicos Islands, 1897; Assistant Surgeon, San Fernando Hospital, 1897; Supernumerary Surgeon, Trinidad, 1897. He was Public Vaccinator, Caicos Islands, and a Member of Board of Health and Quarantine and Pilotage Boards of these islands.

# MEDICAL NEWS.

WE are asked to state that the Continental Anglo-American Medical Society proposes to hold a luncheon in Cheltenham during the annual meeting of the British Medical Association; the date and place will be announced later.

THE King has consented to grant his patronage to the National Sanatorium for Consumption and Diseases of the Chest at Bournemouth. Her late Majesty, Queen Victoria, became Patron of the Institution in 1869.

THE Hon. Ella Campbell Scarlett, M.D., daughter of Lady Abinger, sailed on June 26th in the transport *Assay* for South Africa, having been appointed by the Colonial Office one of the doctors to the Refugee Camp in the Orange River Colony.

NEW MEDICAL MAGISTRATES.—Earl Egerton, the Lord Lieutenant, has inserted in the Commission of the Peace for the County of Chester the names of Dr. George Thomas Joynson, Parkfield, Northwich, and Dr. Frederick Howard Tinker, Talbot House, Hyde.

BRUSSELS MEDICAL GRADUATES' ASSOCIATION.—The general meeting of the members of this association will take place at the Hotel Cecil on Tuesday, July 9th, at 6.30 P.M. At 7.30 P.M. the members and their friends will dine together. Any Brussels medical graduate desiring to be present is requested to give notice to the Hon. Secretary, Dr. Major Greenwood, 243, Hackney Road, N.E. Dinner 7s. 6d., exclusive of wine.

Dr. J. W. WASHBOURN, Assistant Physician to Guy's Hospital, who went out to South Africa with the Imperial Yeomanry Hospital as its physician in February, 1900, has now returned home. He has made a satisfactory report to the Committee, and states that when he left a branch hospital was being established at Elandsfontein.

THE BUXTON BATHS.—During the past winter the Buxton Hot-air Baths at the east end of the Crescent have been enlarged and newly furnished. There is a central entrance hall with lobbies on either side communicating with the corridors leading to the separate sides of the building set apart for ladies and gentlemen. On passing through the lobbies the visitor comes first to the waiting and cooling rooms, which are large and handsome apartments, comfortably furnished; following these are extensive ranges of immersion baths, and in the rear are the various appliances for treatment with vapour, either in combination with immersion baths, or otherwise; also a suite of massage-rooms and cubicles. A massage department has been adapted on the first floor, and a hydraulic passenger lift has been provided.

A PAPAL DECORATION FOR A CANADIAN SURGEON.—Sir William Hingston, of Montreal, has received from the Pope the Cross *Pro Ecclesiâ et pro Pontifice* in recognition of his eminent services in the cause of charity and his unalterable devotion to the Church. Archbishop Bruchesi conveyed to Sir William the gift of the sovereign Pontiff, which was accompanied by the following letter from Cardinal Rampolla, the Papal Secretary of State: "His Holiness has deigned to accord 'the Cross for the Church and Pontiff' to Sir William Hingston, as a recognition of his devotion and fidelity to the Church and its Supreme Head. The Cardinal Secretary of State has the pleasure to transmit him the diploma and the said cross, in order that he may wear it on his breast, as it is customary to do with other decorations."

ANTIMALARIA CAMPAIGN IN ITALY.—It has been decided that in addition to the stations of observation and experiment in the provinces of Rome, Milan, Cremona, Mantua, Gercara, Foggia, Lecce, others shall be established in the provinces of Udine, Verona, Vicenza, Padua, Ravenna, Pisa, Basilicata, and Syracuse. Besides epidemiological researches applications on a large scale will be made of preventive measures for the protection of the agricultural population against the scourge. Another extensive experiment on the prophylaxis of malaria will be made on the Emilian littoral. Moreover, in all the malarious regions of the Italian Peninsula the provincial and communal administrations and many private persons will co-operate in the application of preventive measures. From all this it may be gathered that during the summer and autumn the war against malaria will be carried on in Italy with great vigour and thoroughness.

THE annual dinner of the Association of British Postal Medical Officers, which took place on July 3rd, at the Hôtel Métropole, London, was largely attended. The chair was taken by Dr. J. Walton Browne, of Belfast, who after dinner conducted the company with much skill through a very long toast list. The toast of "The Imperial Forces" was given by Mr. Edmund Owen; that of "The Royal Colleges in England," given by Sir Joseph Fayrer, was acknowledged by Sir Dyce Duckworth and Sir William MacCormac. The toast of the evening was given by Sir J. Leng, M.P., who referred at some length to the proposals in the Factory Bill which would curtail the functions of the Postal Medical Officers. He commended the Memorandum recently issued by their Association (BRITISH MEDICAL JOURNAL, June 29th, p. 1653), and said that the best answer they could make to criticisms was to go on doing their duty in pointing out sanitary defects without fear or favour. Dr. Walton Browne, who replied, spoke briefly of the work done by the Association in the past and of the tasks before it, and thanked the members for re-electing him to the office of President. Other toasts followed or preceded this.

DURHAM UNIVERSITY MEDICAL GRADUATES' ASSOCIATION.—The annual meeting was held at the rooms of the Medical Society of London on June 27th, when the following officers were elected for the year 1901-2:—*President:* Frederick S. Palmer, M.D., M.R.C.P. *Vice-Presidents:* W. D. Arnison, M.D., and Frederick Spicer, M.D. *Members of Council:* Drs. Mitchell Bird, Charles Blair, Percy Jakins, T. Beattie, R. A. Bolam, E. W. Diver, J. W. Hembrough, Charles W. Chapman, W. G. Richardson, J. Eyre, J. T. James, and A. Cox. *Honorary Treasurer:* Dr. Selby W. Plummer. *Honorary Secretaries:* H. Brunton Angus, M.S., M.B., T. Outterson Wood, M.D. In the evening the members and guests, to the number of 77, dined together at the Café Royal, Dr. Frederick S. Palmer, the President, in the chair. After the usual patriotic toasts had been proposed by the President, he gave the toast of "The University of Durham," and Dr. Selby Plummer, member of Senate of the University, replied. Sir James Crichton-Browne, in eloquent terms, proposed "Success to the Durham University Medical Graduates' Association," recalling his connection with the Medical College where he was formerly lecturer on mental diseases, and Mr. H. Brunton Angus, the Northern Secretary replied, congratulating the Association upon its success, the number of members now reaching close on 400. The health of "The President" was proposed by Mr. Christopher Heath, the

health of "The Visitors" by Dr. Frederick Spicer, for whom Sir Richard Douglas Powell, Bart., K.C.V.O., replied, and the President proposed the health of Dr. Outterson Wood, the Honorary Secretary for the South.

ASSOCIATION OF PUBLIC VACCINATORS.—The Association of Public Vaccinators held their annual dinner on June 28th at the Hotel Great Central under the presidency of Dr. E. Climson Greenwood, who, in proposing the toast of "The Local Government Board," said that it was a difficult matter to realise the changes the Vaccination Act had brought about. The name of Monckton Copeman would always be associated with the Act as being practically the introducer of glycerinated calf lymph; had it not been for his researches the present system could not have been carried through. In responding to the toast, Dr. S. Monckton Copeman referred to the assistance afforded by Dr. Blaxall and Dr. Tremlin. The number of cases of alleged death or injury from vaccination had largely decreased since the new Act had been passed. Dr. R. Macartney proposed "The Association," and drew attention to the fact that public vaccinators were subject in some cases to the caprice of uneducated persons imbued with anti-vaccination ideas; he complained of the Government allowing insufficient and inefficient vaccination by medical men in private practice. The toast was acknowledged by Dr. A. E. Cope, one of the Hon. Secretaries, who said that the number of members was over 400. Every public vaccinator should become a member so as to enable the usefulness of the Association to be increased. Owing to interviews with Mr. Chaplin on the passing of the last Act the minimum fee had been fixed at 5s. instead of at 3s. 6d. as proposed. Dr. Lloyd Brown gave the toast of "The Guests," which was acknowledged by Dr. Danford Thomas and Dr. Bateman. "The Health of the President," given by Dr. Wells, concluded the evening.

## MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN UNIVERSITY.—(1) Examiner for Graduation in Anatomy and Physiology (2) Examiner for the Diploma in Public Health. Applications to the Secretary by July 13th.

BATH: ROYAL UNITED HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by July 13th.

BETHNAL GREEN INFIRMARY, Cambridge Road, N.E.—First Assistant Medical Officer; unmarried. Salary, £150 per annum, with board, lodging, and washing. Applications, on forms provided, to be sent to the Medical Superintendent by July 8th.

BIRMINGHAM: QUEEN'S HOSPITAL.—House-Surgeon. Post tenable till August 31st, 1902. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Secretary by July 24th.

BRISTOL ROYAL INFIRMARY.—(1) Anæsthetist and Junior House-Surgeon. (2) Casualty Officer. Appointments for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Secretary by August 1st.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with furnished apartments, board, and washing. Applications, endorsed "Assistant House-Surgeon," to be sent to the Secretary.

CAMBERWELL PARISH INFIRMARY.—Third Assistant Medical Officer. Salary, £50 per annum, with apartments, board, and washing. Applications on forms provided to be sent to the Town Clerk to the Guardians, 29, Peckham Road, S.E., by July 8th.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—Assistant House Surgeon; unmarried. Salary, £60 per annum, with board and lodging. Applications to the Secretary by July 26th.

CARLISLE: CUMBERLAND AND WESTMORLAND ASYLUM, Garlands.—Senior Assistant Medical Officer; unmarried, not over 30 years of age. Salary, £150 per annum, rising to £180, with board, lodging, etc. Applications to the Medical Superintendent.

CARLISLE DISPENSARY. Resident Surgeon; unmarried. Salary, £150 per annum, with apartments. Applications to the Honorary Secretary, Mr. G. A. Lightfoot, 23, Lowther Street, Carlisle.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Second House-Physician. Appointment for six months. Salary at the rate of £30 per annum, with board, residence, and washing. Applications to the Secretary by July 8th.

DENTAL HOSPITAL OF LONDON, Leicester Square.—Two Assistant Anæsthetists. Applications to the Secretary by July 8th.

DUDLEY: GUEST HOSPITAL.—(1) Assistant House-Surgeon. Appointment for six months. Salary at the rate of £40 per annum, with residence, board, and washing. (2) Vacancy on the Honorary Surgical Staff. Applications to the Secretary for (1) by July 11th, and for (2) by July 12th.

GERMAN HOSPITAL, Dalston.—(1) Honorary Assistant Physician. (2) Honorary Assistant Surgeon. Applications to the Secretary by July 22nd.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer (male); unmarried, and age not over 30. Salary, £170 per annum, with board, lodging, washing, and attendance. Applications to the Medical Superintendent by July 20th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, N.—(1) House-Physician. Salary at the rate of £60 per annum. (2) June House-Physician. Salary at the rate of £30 per annum. (3) Non-Resident Assistant House-Surgeon. Salary at the rate of £30 per annum. Board, lodging, and washing provided for (1) and (2), and luncheon and dinner provided for (3). Appointments for six months. Applications to the Secretary by July 15th.

GREENOCK INFIRMARY. House-Surgeon. Salary, £60 per annum, with board and residence. Applications to the Secretary by July 13th.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £75, with board, residence, and laundry. Applications to the Honorary Secretary.

HEXHAM RURAL DISTRICT COUNCIL: Medical Officer of Health. Salary, 30 guineas per annum. Applications on forms provided to be sent to the Clerk, Midland Bank Chambers, Hexham, by July 13th

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.—(1) Medical Registrar. Honorarium 50 guineas. (2) Clinical Pathologist and Bacteriologist. Honorarium, 50 guineas. (3) Second Anæsthetist. Honorarium, 15 guineas. (4) House-Surgeon, unmarried. Appointment for six months. Salary, £20, with washing allowance, board, and residence. Appointments for (1), (3), and (3) for one year, but (1) is eligible for re-election. Applications, on forms provided, to be sent to the Secretary by July 18th.

HULL ROYAL INFIRMARY.—Junior Assistant House-Surgeon. Salary, £60 per annum, with board and lodging. Applications to the Chairman of the House Committee.

KING'S COLLEGE, London.—Professor of General Pathology and Bacteriology. Applications to the Secretary by July 22nd.

KING'S COLLEGE HOSPITAL, London.—Assistant Physician (or Surgeon) for Diseases of the Throat. Applications to the Secretary by July 22nd.

LINCOLN: LAWN HOSPITAL FOR INSANE.—Assistant Medical Officer. Salary, £100 per annum. Applications to the Medical Superintendent.

LIVERPOOL: DAVID LEWIS NORTHERN HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with residence and maintenance. Applications to the Chairman by July 24th.

LIVERPOOL STANLEY HOSPITAL.—Honorary Assistant Physician. Applications to the Honorary Secretary by July 15th.

LONDON COUNTY ASYLUM, Banstead.—Medical Superintendent. Salary, £1,000 per annum, with unfurnished house, etc. Applications on forms provided to be sent to the Clerk of the Asylums Committee, 6, Waterloo Place, S.W., by July 17th.

LONDON COUNTY ASYLUM, Claybury.—Junior Assistant Medical Officer; unmarried, between 23 and 30 years of age. Salary, £150 per annum, with board, furnished apartments, and washing. Applications, on forms provided, to be sent to the Clerk of the Asylums Committee, 6, Waterloo Place, S.W., by July 10th.

LONDON LOCK HOSPITAL, 91, Dean Street, W.—House-Surgeon to the Male Hospital. Salary, £60 per annum, with board, lodging, and washing. Applications to the Secretary by July 15th.

MANCHESTER: OWENS COLLEGE.—(1) Senior Demonstrator in Physiology. Stipend, £100, rising to £200. (2) Junior Demonstrator in Physiology. Stipend, £100, rising to £150. Applications to the Registrar by July 18th.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Honorary Surgeon for the Ophthalmic Department. Applications to the Secretary, 26, Dock Street, Newport, Monmouthshire, by July 12th.

NORTHAMPTON GENERAL INFIRMARY.—Honorary Physician, not under 25 years of age. Applications to the Secretary by July 12th.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—(1) House-Surgeon. (2) House Physician. (3) Dental Surgeon, £100 per annum. Appointment for (1) and (2) for six months, with salary at the rate of £80 per annum each, with board, residence, and laundry allowance. Applications to the Secretary at the City Office, 27, Clement's Lane, E.C., for (1) by July 17th, and (2) by July 15th.

NORTH-WESTERN FEVER HOSPITAL, Hampstead, N.W.—Locum Tenens. Salary at the rate of £160 per annum, with board, lodging, and washing. Applications to the Medical Superintendent.

NOTTINGHAM GENERAL DISPENSARY.—(1) Senior Resident Surgeon. Salary, £200 per annum, increasing £15 yearly. (2) Two Assistant Resident Surgeons. Salaries £160 per annum, increasing £10 yearly. Furnished apartments, attendance, etc., provided in each case. Applications to the Secretary, Mr. M. I. Preston, Journal Chambers, Nottingham.

OLDHAM INFIRMARY.—Senior House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Candidates to state if willing to accept Junior post at £75 per annum. Applications to the Honorary Secretary by July 15th.

PLYMOUTH BOROUGH ASYLUM.—Assistant Medical Officer; unmarried. Salary, £150 per annum, rising to £200 per annum, with furnished apartments, board, and washing. Applications, endorsed "Assistant Medical Officer," to be sent to Dr. W. H. Bowes, Medical Superintendent, by July 20th.

PORTSMOUTH: BOROUGH ASYLUM.—Junior Assistant Medical Officer. Salary, £120 per annum, increasing to £150, with board, lodging, and washing. Applications to the Medical Superintendent.

ROCHESTER: ST. BARTHOLOMEW'S HOSPITAL.—Assistant House-Surgeon. Salary, £100 per annum, with board, etc. Applications marked "Application for Assistant House-Surgeon," to be sent to the Clerk to the Trustees by July 9th.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Road, S.E.—Assistant Surgeon; must be F.R.C.S.Eng. Applications to the Secretary by July 23rd.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Appointment for six months. Salary at the rate of £60 per annum, with furnished apartments, board, and washing. Applications to the Secretary by July 8th.

ROYAL ORTHOPÆDIC HOSPITAL, Oxford Street, W.—Resident House-Surgeon and Registrar; unmarried. Appointment for six months but eligible for re-election. Salary, £100 per annum, with full board. Applications to the Secretary by July 27th.

ST. ANDREWS UNIVERSITY.—Additional Examiners for Graduation in Anatomy, Materia Medica and Therapeutics, Pathology, Medical Jurisprudence and Public Health, Surgery (Systematic and Clinical), Medicine (Systematic and Clinical), and Midwifery. Applications to the Secretary by July 8th.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington.—Demonstrator of Anatomy. Salary, £70 per annum. Applications to the Dean by July 8th.

SALISBURY: FISHERTON ASYLUM.—Assistant Medical Officer. Salary, £150 per annum, with board, lodging, and washing. Applications to Dr. Finch, Salisbury.

SHOREDITCH INFIRMARY, Hoxton Street, N.—Second Assistant Medical Officer. Appointment in first place for six months. Salary at the rate of £100 per annum, with rations, washing, and furnished apartments. Applications on forms provided, to be sent to the Clerk to the Guardians, 213, Kingsland Road, N.E., by July 9th.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months but capable of renewal. Salary at the rate of £40 per annum, with board and washing. Applications to the Secretary.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon. Salary at the rate of £50 per annum, with rooms, board, and washing. Applications to the Secretary by July 19th.

TAUNTON: TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £60 per annum, with board, lodging, and laundry. Applications to the Honorary Secretary.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon, unmarried. Salary, £100 per annum, increasing £10 a year, with board and apartments. Applications to the Secretary.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, Chelsea.—(1) Surgeon to In-patients. (2) Assistant Surgeon to the Out-patients. Applications to the Secretary by July 13th.

WADSLEY: WEST RIDING ASYLUM.—(1) Third Assistant Medical Officer. Salary, £150 per annum, rising to £200. (2) Fifth Assistant Medical Officer. Salary, £140 per annum, rising to £160. Board, etc., provided in each case. Applications to the Medical Superintendent by July 10th.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House Surgeon; unmarried. Salary, £80 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by July 10th.

WESTERN GENERAL DISPENSARY, Marylebone Road, W.—Second House-Surgeon; unmarried. Salary, £80 per annum, with board, residence, and laundry. Applications to the Honorary Secretary.

## MEDICAL APPOINTMENTS.

BULL, G. C. R., M.B.Lond., F.R.C.S.Eng., appointed District Medical Officer of the Newport Pagnell Union.

CRINION, L. J., M.B., B.Ch., R.U.I., appointed Medical Officer for the Blessington No. 1 Dispensary District of the Naas Union, *vice* Dr. Bleakley.

GRIERSON, John Turner, M.B., Ch.B.Vict., appointed Resident Medical Officer to the Liverpool Corporation Hospitals.

GULLAN, A. Gordon, M.D.Lond., F.R.C.S.Eng., appointed Honorary Physician to the Stanley Hospital, Liverpool, *vice* R. J. M. Buchanan, M.D.Vict., elected Honorary Assistant to the Liverpool Royal Infirmary.

HALPIN, R., L.R.C.P.I., M.R.C.S.Eng., appointed Certifying Factory Surgeon for the Arklow District of the county of Wicklow.

HEATHER, Lewis D., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of Health to the Hay and Bradwardine Rural District Council.

HOOD, Noel Lockwood, M.D.Camb., B.C., appointed an Honorary Surgical Officer to the York County Hospital.

JONES, O. Clayton, M.B.Oxon., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator for the Ilfracombe District of the Barnstaple Union, *vice* G. L. Thornton, M.R.C.S., L.R.C.P.Lond.

LITTEJOHN, Thomas H., M.B., C.M.Edin., D.P.H., appointed Medical Officer of Health for the Metropolitan Borough of Hampstead, *vice* Edmund Gwynn, M.D.St And.

MARSH, John Hedley, M.R.C.S., L.R.C.P.Lond., appointed Honorary Surgeon to the Macclesfield General Infirmary.

MCCALL, Eva, M.B., B.S.Glasg., appointed Assistant Resident Medical Officer to the Birkenhead Union Infirmary.

MCCARTHY, M. Beckett, L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed one of the Honorary Surgeons of the Masterton Hospital (Masterton, New Zealand).

MOORE, Samson G., M.B., Ch.B.Vict., D.P.H.Eng., appointed Medical Officer of Health for the Borough of Huddersfield, *vice* E. G. Annis, M.R.C.S., L.R.C.P.Lond., D.P.H. R.C.P.S.I., resigned.

ROBINSON, J. C. R., M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Harleston District of Norfolk.

SAUNDERS, J. C., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer for the Bootle Division of the West Derby Union.

SMITH, J. W., M.B., C.M.Edin., F.R.C.S.Eng., appointed Honorary Assistant Surgeon to the Manchester Royal Infirmary, *vice* Joseph Collier, M.B.Lond., F.R.C.S.Eng., appointed Honorary Surgeon.

STOCK, W. S. V., M.B.Lond., M.R.C.S.Eng., appointed Resident Medical Officer to the Manchester Royal Infirmary.

TOMS, P. M., M.R.C.S.Eng., L.S.A., appointed District Medical Officer of the East Ham Union.

## DIARY FOR NEXT WEEK.

### MONDAY.

**Medical Graduates' College and** Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Jas. Galloway: Consultation (Skin).

### TUESDAY.

**Society for the Study of Inebriety,** 11, Chandos Street, Cavendish Square, W., 4 P.M.—Dr. T. N. Kelynack and Mr. W. Kirkby: On Arsenical Poisoning from Beer Drinking in its Relation to the Study of Inebriety.

**Medical Graduates' College and** Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. W. Ewart: Consultation (Medical).

### WEDNESDAY.

**Medical Graduates' College and** Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Cantlie: Consultation (Surgical).

**Hospital for Consumption and** Diseases of the Chest, Brompton, 4 P.M.—Dr Acland: Cases Illustrating Various Types of Pleurisy

**Dermatological Society of London,** 11, Chandos Street, Cavendish Square, W., 5.15 P.M.—Consultation on Cases of Clinical Interest.

### THURSDAY.

**Medical Graduates' College and** Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Hutchinson: Consultation (Surgical).

**British Gynæcological Society,** 20, Hanover Square, W., 8 P.M.—Dr H. P. Noble, of Philadelphia: On the Degenerations and Complications of Uterine Fibromyomata. Specimens illustrating the paper will be shown.

**Charing Cross Hospital Post-**Graduate Course, 4 P.M.—Dr. Willcocks: Medical Cases.

**Hospital for Sick Children,** Great Ormond Street, W.C., 4 P.M.—Dr. Still: Abdominal Tuberculosis.

### FRIDAY.

**Medical Graduates' College and** Polyclinic 22, Chenies Street, W.C., 4 P.M.—Mr. Work Dodd: Consultation (Eye).

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### MARRIAGES.

ALDERSON—BREWIS.—At Christ Church, Sunderland, on June 29th, by the Rev. C. G. Hopkinson, M.A., Vicar, assisted by the Rev. W. M. Davidson, M.A., M.Sc., of Gosforth, Wilfred Ernest Alderson, M.D., M.S., third son of Thomas Albion Alderson, of Newcastle upon-Tyne, to Ida May, elder daughter of Thomas Brewis, of Sunderland. At home, 5, Eldon Square, Newcastle-upon-Tyne, July 25th and 26th.

BARLOW—PONSFORD.—On June 27th, at Stanford, Kent, by the Rev. T. Disney Barlow, assisted by the Rev. H. Smith, Rector of the parish, Herbert Cecil Barlow, M.B.Lond., L.R.C.P., M.R.C.S., of St. Ives, Farnborough, Hants, eldest son of the Rev. T. Disney Barlow, of Park House, Blaby, Leicester, to Muriel, second daughter of the late Rev. W. Ponsford, formerly Chaplain to the Forces, and late Rector of Stanford, Kent.

EVANS—GRANGER.—June 20th, at St. Stephen's Church, Battersea, by the Rev. C. Walter Russell, B.D., Vicar, John William Evans, LL.B., D.Sc., late State Geologist and Chief Inspector of Mines in Mysore, son of the late Evan Evans, M.D., R.N., of the city of London, to Jessie Downie Granger, M.B., Ch.B.Glasg., daughter of the late Dr. J. E. Granger, of Glasgow, and of Mrs. Granger, of 2, Grosvenor Terrace, Glasgow.

GILL—KING.—On June 6th, at the Friends' Meeting House, Bull Street, Birmingham, Samuel E. Gill, M.D., of 96, Mansfield Road, Nottingham, to Ethel, daughter of William R. King, of Edgbaston, Birmingham.

MACTIER—PIERCE.—June 25th, at St. Mark's, Cheltenham, by the Rev. H. D. Williamson, M.A., Association Secretary C.M.S., assisted by the Rev. G. F. Cooke, of Litton, Somerset, cousins of the bride, Henry Carter Mactier, B.A., M.B., B.Ch., B.A.O.T.C.D., elder son of the late James Mactier, of Vernant Lodge, Belfast, and Castlebar, co. Mayo, to Adeline Herbert, elder daughter of the late Hugh Pierce, of Birkenhead and Gresford, and Mrs. Pierce, Brookfield, Cheltenham.

TURNER—WAINWRIGHT.—On June 6th, at Holy Trinity, Lambeth, by the Rev. Gilbert Weigall, M.A., assisted by the Rev. H. R. Hatherley, M.A., Curate of St. Andrew's, Worthing, Sydney Duke Turner, M.B., B.S., D.P.H., of Purley, Surrey, eldest son of Richard Turner, M.R.C.S., late of Lewes, to Lilian Maud, fourth daughter of James Gadesden Wainwright, Treasurer of St. Thomas's Hospital.

### DEATHS.

LOVEGROVE.—On May 23rd, at Perth, Western Australia, Gertrude, the beloved wife of Frederic Lovegrove, M.B., M.R.C.S., late of Liverpool, England.

SOPER.—On July 2nd, 1901, Hugh Thomas Burrell, aged 21 years, the dearly-loved son of William Soper, M.R.C.S., of 307, Clapham Road, London.

## LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the NOTICES to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

### QUERIES.

F.B.M. asks for references to descriptions of recently-erected dispensaries, particularly any with illustrations.

CANDIDE wishes to know where he can obtain the most recent analyses of infant foods (proprietary) after these are prepared ready for the infant's meal.

G. desires to hear of a good school which a young gentleman, aged 20, physically strong, but mentally weak, could attend daily. He speaks indistinctly, can read slowly, spelling long words; writes slowly, and can add up a few figures. He is good-natured, studious, and anxious for information. He has improved slowly under a tutor during the last three years. The school should be in England, and preferably in Somersetshire.

TREATMENT OF HYPERIDROSIS.

K. asks for advice in the treatment of a patient who suffers from excessive perspiration, apparently nervous, on slight physical exertion or mental excitement. It produces no feeling of weakness, but causes slight chills, which he combats with small doses of sodium salicylate. He has to change his entire underclothing several times daily. The usual remedies have been prescribed without benefit.

PATIENTS AND DOCTORS.

A CORRESPONDENT desires to know who is the author of the following well-known lines:

> "God and the Doctor we alike adore
> When on the brink of danger, not before;
> The danger past, both are alike requited;
> God is forgotten, and the Doctor slighted."

*** The lines are quoted in Styrap's *Code of Medical Ethics* (London, 1890, p. 75), but the author's name is not mentioned. They have a generic resemblance to the Latin quatrain said to have been written by a mediæval physician, whose name escapes us:

> "Tres medicus facies habet: unam quando rogatur,
> Angelicam; mox est, cum juvat, ipse Deus;
> Post, ubi curato poscit sua præmia morbo,
> Horridus apparet, terribilisque Sathan!"

The following translation of this epigram is taken from Timothie Kendall's *Flowers of Epigrams* (1577):

> "Three faces the Phisition hath.
> First as an Angell he,
> When he is sought; next when he helpes,
> A god he seems to be;
> And last of all, when he hath made
> The sicke, deseased well,
> And asks his guerdon, then he semes
> An oughly Fiend of Hell."

It has been cynically suggested that the gratitude of the patient is a part of his disease. It comes on with the fever, improves during convalescence, and disappears on the return of health.

ARTIFICIAL LEGS.

S. G. H. writes: I have a patient, a man, aged 36, on whom it has been necessary to perform double amputation of the legs six inches above the knee, for spontaneous symmetrical gangrene of the feet and legs proper. As he is engaged in business, and is comfortably well off, he is anxious to get a pair of artificial limbs if possible. How much can be expected from artificial limbs in such a case? Will he be able to walk at all, with or without the aid of crutches or sticks? What is the kind of artificial limbs most likely to suit?

*** This patient should be able to walk after a little practice with crutches and any well-made and well-fitted artificial limb, or with a stick and a pair of bucket legs. With more practice and care, a young man should, in time, be able to walk even with artificial limbs and one stick. By artificial limbs is meant such as have feet and joints at the knee and ankle. There are many occasions on which an active man

would prefer a pair of bucket legs to more elaborate artificial limbs; but experience shows that men and women of every class are never content with bucket limbs until they have tried "artificial legs." Almost every first-class surgical instrument maker supplies good limbs; but the surgeon should always be very particular to insist upon a careful fit, which is more important.

## ANSWERS.

### Temporary Removal of Horse Shoes.

Dr. W. H. Spurgin (Grangerville South, Newcastle-on-Tyne) writes: In reply to "County Practitioner," presuming the horse is out "at grass," good will follow removal of shoes. If the ground is dry and hard tips must be applied to the fore feet and examined at the end of three weeks. If the ground is soft no shoes are necessary.

### The Sterilisation of Filters.

Major W. H. Horrocks, R.A.M.C. (Sholing, Hants), in reply to Dr. Andrew Wilson's question, writes: The Pasteur-Chamberland filter requires sterilisation when the pores or lacunar spaces of the filtering material become so occluded by the deposit of suspended material in the water as to reduce the output of filtered water to a negligible quantity. "Material" refers to the porous porcelain of the filtering cylinder. "Imperfections in the fittings" refer in the case of a single candle or cylinder to the junction of the filtering substance to the glazed porcelain or metal cap which delivers the filtrate, and in the case of filters composed of several candles, also to imperfections in the diaphragm which usually separates the filtered from the raw water. In my experience flaws in the actual filtering material are rare, but imperfections in the junction of the material to the cap are not uncommon.

### Treatment of Chronic Ulcers of the Leg.

Dr. H. Oppenheimer (London) writes: In reply to "Grafton," I should suggest a trial of Unna's zinc glue, which I have found to be a practically infallible remedy in ulcer of the leg. The formula is: Gelatinæ albæ, zinci oxydatis ää 3iij, glycerini 3v, aquæ fontanæ 3ix. M. Ft. massa gelatinosa. Before use the mass is heated in the water bath. It is then applied over the ulcer in several layers, whilst a thin gauze or muslin bandage is made to encircle the affected part in such a manner as to become thoroughly imbibed in the glue. The bandage is left alone for about ten days or a fortnight, when it is removed in a hot bath. The application is then at once renewed. Since I find four to five applications in most cases sufficient to effect a cure, the treatment may be considered as simple as it is effective. If the ulcers are very torpid a short preliminary course of treatment with a boracic lotion and a stimulating ointment, containing about 10 grs. of nitrate of silver and 20 grs. of Peruvian balsam to the ounce of vaseline may accelerate the healing process.

## LETTERS, NOTES, Etc.

### Catheters and their Preservation.

M.D.Lond. writes: Mr. Herring takes exception to my recommendation of glycerine with carbolic acid (1 to 60) as a lubricant, alleging that glycerine is an irritant to the urethra, but I see by a paper of his in the British Medical Journal of May 25th that he objects to all chemically antiseptic lubricants on account of their irritating qualities. They are of course generally supposed to facilitate and soothe the passage of an instrument, and I have yet to be convinced that glycerine "fortified," as I phrased it, by carbolic acid (1 to 60) is more irritating than any other, and it possesses unquestionable advantages not belonging to others which I pointed out in my former brief communication. Mr. Herring further seems to accuse me of discarding all aseptic precautions beyond this hurtful lubrication. If the thorough washing and cleansing of hands and instruments, on which I laid stress, is in no degree aseptic, by what name is it to be designated? As regards irritation produced by chemically antiseptic catheters, I referred in my last, as may be seen, to cases of chronic prostatic obstruction, and not to those of an inflamed urinary passage, for in such cases the passing of any instrument, lubricated or not, though it may be quite necessary, will increase, temporarily, at any rate the existing irritation, but where no such inflammatory condition exists I have no evidence of glycerine producing irritation.

In the reaction which only within this generation has occurred from what may be styled the dirty stage of the art of surgery, there is the danger of being driven into an absurd extreme. Lord Lister himself, the great originator and apostle of antiseptic surgery, to whom the debt of the profession and the public is incalculable, yet the other day at the opening of the new operating theatre of St. Thomas's, made some pregnant remarks bearing on this topic. "He could not but regard some of the elaborate arrangements as luxuries rather than essentials, and he hoped that the teachers of surgery, while enjoying their recent inventions, would remind their students that good results might also be obtained by much more simple means." I think I may venture to say that Lord Lister would agree that the very complexity of some arrangements often defeats their own end, and leads to a breakdown which more simple measures would have averted.

### An "Amalgamated University" for the United Kingdom.

Mr. Arthur Atkinson, M.R.C.S.Eng., L.R.C.P.Edin. (Lydget Green, Bradford), writes: May I venture to place before you a proposal which has been in my mind for many years past? It is that an amalgamated university for the granting of medical degrees should be formed from all those medical corporations which at the present time, like the various Royal Colleges, grant only licentiateships. The prestige of these various bodies is such that they deserve a much higher recognition and status than is usually accorded to them. It is well recognised now that the profession has nothing to gain from the multiplication of qualifying bodies, but the simplicity of this scheme has very much to recommend it, inasmuch as its details could be worked out in accordance with the regulations of the General Medical Council, Medical Acts, and the aspirations of the profession itself. My original idea was that the examinations should be held simultaneously in the various capitals of Great Britain and Ireland, that the title of the new university should be the Amalgamated University of Great Britain and Ireland, and that the students of the various kingdoms should repair to the nearest centre for examination purposes: finally, this would obviate the necessity for creating further universities for many years, and would do very much towards bringing about the much-desired one-portal system.

### Maggots in Internal Auditory Meatus.

Dr. J. Ferench-Mullen, District Medical Officer (Plantain Garden River, Jamaica), writes: With reference to Lieutenant Godkin's communication in the British Medical Journal of May 11th on the subject of maggots in the internal auditory meatus, in similar cases seen by me syringing would have been too painful a process. I cured my cases quickly and painlessly by the dropping in of a pinch of calomel. The maggots soon after the application begin to wriggle out.

LETTERS, COMMUNICATIONS, Etc., have been received from

**A** Mr. A. Atkinson, Bradford. **B** Brookside: A. C. Barron, M.B., Dailly; Mr. W. M. Beaumont, Bath; Dr. W. H. Brazil, Bolton; Messrs. Burroughs, Wellcome and Co., London; Mr. L. C. Baker, Southsea; Dr. A. Bronner, Bradford. **C** Miss E. A. Cargill, M.D., Cheltenham; Mr. W. R. E. Coles, London; C. E. W.; Dr. A. Cafferata, Spa; Mr. F. W. Collingwood, London; Mr. H. Cox, London; Mr. A. H. Copeman, Cowes, I. of W.; Mr. E. Caudwell, Harleston; Candide. **D** J. A. C. Doonan, M.B., Northwich; Director-General Sanitary Department, Cairo; Mr. P. G. Dyer, Liskeard; Dr. L. Drage, Hatfield; Mr. J. Donkin, Bournemouth. **E** Dr. W. Ewart, London; E. A. W. English, M.B., Leicester. **F** F. E. A.; Fiat Justitia; Dr. W. E. Fothergill, Manchester; Dr. W. F. Farquharson, Carlisle. **G** Dr. A. W. Gilchrist, Nice; Mr. J. P. Granger, Glasgow; Dr. J. Galloway, London. **H** Mr. F. G. Harvey, London; Health; Dr. W. S. Hedley, London; Mr. G. T. Hankins, Sydney; Mr. D. Howel-Jones, Bristol; W. J. Horne, M.B., London; Mr. T. G. Horder, Cardiff. **J** Jesmond; W. H. H. Jessop, M.B., London; Mr. G. S. Jones, Horsham; Dr. W. M. M. Jackson, London. **K** Mr. C. R. B. Keetley, London; J. King, M.B., Leigh; C. S. Kilner, M.B., Bury St. Edmunds. **L** London Graduate and Diplomate; J. Lloyd-Roberts, M.B., Colwyn Bay; Mr. T. Laffan, Cashel; Mr. N. V. Lenehan, Dublin; Mr. V. A. Lawson, Cirencester. **M** J. T. J. Morrison, M.B., Birmingham; Dr. T. Mitchell, Gorseinon; M.D.Lond.; Dr. J. H. MacArthur, Dawson, Y.T.; W. Mitchell, M.B., Bradford; Dr. H. W. G. Macleod, London; Dr. S. Mackenzie, London; Marcus; M.R.C.S.Eng.; Medicus et Pater. **N** Mr. R. A. Neilson, Abertillery. **O** Dr. H. Oppenheimer, London; Mr. J. Oldfield, London; Mr. C. O'Gorman, Dublin; Oculus. **P** Patient Griselda; Mr. R. Pollock, London; Dr. J. Phillips, London; Phenad. **Q** Mr. W. Quarrier, Bridge of Weir. **R** Dr. C. E. Reinhardt, Wallingford; Mr. C. F. Ritch, London; Mr. R. T. Richardson, Trowbridge; Dr. T. H. Redwood, Rhymney; Mr. F. M. L. Reid, Edinburgh; R.A.M.C. (retired); Mr. A. Rollason, Dudley; Rob. **S** Dr. J. B. Spence, Lichfield; Silex; Mr. W. H. Spurgin, Newcastle-on-Tyne; Dr. H. Smith, London; Dr. J. H. Swanton, London; Dr. F. W. Smith, Harrogate; Messrs. J. P. Segg and Co., London. **T** T. P. Tuckey, M.B., Par Station; Dr. W. B. Thorne, London; Dr. E. Thompson, M.P., London. **W** E. T. Wilson, M.B., Cheltenham; Dr. A. O. Ward, London; Mr. C. F. Wightman, London; Dr. A. McC. Weir, Liverpool; Dr. F. Willcocks, London; W. O. W.; Westmoreland; Wagnor; W. L.

## BOOKS, Etc., RECEIVED.

Surgical Diseases of the Kidney and Ureter. By Henry Morris, M.A., M.B., F.R.C.S. In two volumes. London: Cassell and Co. 1901.

A Manual of Surgical Treatment. By W. Watson Cheyne, C.B., M.B., F.R.C.S., F.R.S., and F. F. Burghard, M.D., M.S., F.R.C.S. Part V. London: Longmans, Green and Co. 1901. 18s.

Handbook of Public Health Laboratory Work and Food Inspection. By O. W. Andrews, M.B., B.S., M.R.C.S., D.P.H., R.N. London: Bailliere, Tindall and Cox. 1901. 2s. 6d.

A Catechism of Home Nursing. By J. Brown, L.R.C.P., L.R.C.S., and J. M. Carvell, M.R.C.S., L.S.A. London: St. John Ambulance Association. 6d.

Spinales Sensibilitätsschema für die Segmentdiagnose der Rückenmarkskrankheiten zum Einzeichnen der Befunde am Krankenbett. Von Dr. W. Seiffer. Berlin: A. Hirschwald. 1901. M.1.20.

Local London: a Municipal Directory for the Metropolis and its Suburbs, 1901-1902. London: P. S. King and Co. 6d.

Medical Opinions on the Population Question. Edited by Dr. C. R. Drysdale. London: G. Standring. 1901.

Les Processus Généraux. I. Par A. Chantemesse et W. W. Podwyssotsky. Paris: C. Naud. 1901.

Cliniques Médicales Iconographiques. Par P. Haushalter, G. Etienne, L. Spillmann, et C. Thiry. Fasc. I. Paris: C. Naud. 1901.

The Edinburgh Medical Journal. Vol. x. Edinburgh and London: Young J. Pentland. 1901.

Chirurgie Gastro-Intestinale. Par H. Hartmann. Paris: G. Steinheil. 1901. Frs 8.

Die Serum, Bakteriotoxin, und Organ-Präparate. Von Dr. M. v. Waldheim. Wien: A. Hartleben. M.6.

Laboratory Work in Histology. By G. C. Huber, M.D. Third edition. Ann Arbor, Michigan: George Wahr.

School Hygiene. By E. R. Shaw. London and New York: Macmillan and Co. 1901. 4s. 6d.

*.* In forwarding books the publishers are requested to state the selling price.


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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restantes* addressed either in initials or numbers.

# LEUCOMA OR LEUCOPLAKIA OF THE VULVA AND CANCER.

BY H. T. BUTLIN, F.R.C.S., D.C.L.,
Surgeon to St. Bartholomew's Hospital.

WHITE areas of more or less horny epithelium occur on the vulva just as they do on the buccal mucous membrane. They may be associated with cancer, as the following cases will show. These conditions of leucoma or leucoplakia of the vulva have received so little attention in this country that I am not acquainted with any work or paper on the subject, or even with published cases. On that account, and on account of the probable importance of the disease as a predisposing cause of cancer of the vulva, I have set down here what I have seen and read of the disease. The sketch of the naked-eye appearances (Fig. 1) is not taken directly from a patient, for all my three cases were in private practice. But Dr. Mark has succeeded in producing a very good representation of the characters from my description of it.

*Case 1.*

In April, 1894, I was consulted by a maiden lady, 44 years old, who was troubled about a peculiar condition of the vulva. There were numerous white areas, covering a large part of the surface of the greater and lesser labia. Some of the areas were quite thin and bluish white; others of them were thick and opaque. I had never seen such a condition before, and was immediately struck with the resemblance of the disease to the plaques which are so frequent on the surface of the tongue, and which are now classed together as the result of chronic superficial inflammation. The patient was quite unaware whether the vulva had been the seat of this disease for a long time. She had only noticed it recently, but it might have been there for months or years for all she could tell to the contrary.

In July of the same year she came to show me an indurated ulcer at the upper part of the right labium majus in the midst of the white plaques. The ulcer had all the appearance of epithelioma in an early stage, and I advised her to have it removed. She actually made arrangements to undergo the operation, but circumstances occurred to lead to deferment for a time, and I heard no more of her for more than a year. I then happened to meet the medical man who attended her in the country, and he told me that Miss M. had died about six months after I last saw her of some kind of anæmia and general debility. Whether he had seen the vulva or not I could not be sure.

It seems to me likely that the patient died of a pernicious anæmia in connection with malignant disease of the vulva, and probably of the glands, but there is now no means of knowing in what condition the ulcer of the vulva was between the time I saw her and her death a few months later.

I was very much impressed with this case, and wondered whether the disease had been seen and described before. I had quite forgotten that in the first edition of my book on *Diseases of the Tongue*, published in 1885, I had referred to the occurrence of leucoma of the vulva in the following terms: "The disease occurs, though rarely, on the gums and palate, and in one instance it has been discovered on the vulva" (page 141).

*Case 2.*

A widow lady, aged 73, was brought to me by her medical attendant in May, 1899. She was suffering from a circular ulcerated epithelioma of the right labium majus. The ulcer was situated in a plaque of very thin white leucoma, and there were similar areas, which covered all the upper part of both labia on both sides, and the central portion of the vulva about the orifice of the urethra and the clitoris. She did not know of their existence, and had apparently suffered no inconvenience from them until the cancer had commenced to form. I removed the cancer freely, and at the same time dissected the plaques away. Microscopic sections of the ulcer proved that it was squamous-celled carcinoma. Sections were also prepared of one of the leucomatous areas, and the accompanying drawings have been made from them.

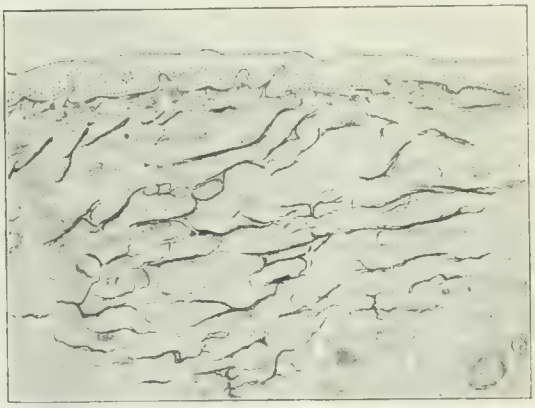
*Case 3.*

An unmarried lady, aged 66, came to me with her medical man in September, 1899. A large part of the left labium majus had been removed by an obstetric physician in August, 1898, for what was reported to have been epithelial cancer. She was brought to me on account of secondary affection of the glands in the groin, the pelvis, and abdomen, quite beyond the reach of any operation. On examination of the vulva, there were thick and very white areas of leucoma of the mucous surface of the right labium majus. She did not appear to be aware of their existence, and they had never

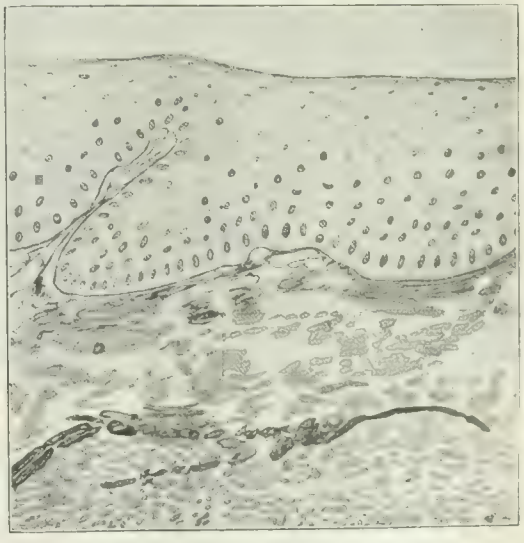
Microscopic drawings of a leucomatous area on the labium majus.



No. I.—With a very low power to show the outline of the epithelia covering.



No. II.—With a higher power, to show the horny surface of the epithelial layer, and the absence of cell-growth in the tissues beneath the epithelium.



No. III.—Drawn with a much higher power.

These drawings may be well compared with Figs. 1, 3, and plate iv of vol. lxi of the *Medico-Chirurgical Transactions*, 1878

excited the attention of her doctor, probably because she had not particularly consulted him about the cancer of the other labium, but had gone directly to the obstetric physician.

### Remarks.

Here, then, are three cases of leucoma or leucoplakia of the vulva, the first complicated with an ulcer which was almost certainly cancerous; the second with an ulcer which was quite certainly cancerous; the third also with cancerous disease. The cases impressed me the more because I do not see many cases of disease of the vulva either in hospital or private practice, and the proportion of cases of this leucomatous disease to the total number of cases of disease of the vulva which have come under my notice during the last five or six years is therefore very large indeed. I spoke to some of my obstetric and gynæcological friends on the subject, but those to whom I spoke had not seen any cases of the disease.

Dr. Henshaw was good enough to look up foreign references to the disease, and I have placed them at the end of this paper. I think one of the best descriptions is that by Schwarz, and I believe the first description is by R. F. Weir in 1875; while the case to which I referred in 1885 is more probably one described by Schwimmer in 1877.

The occurrence of such a condition of the vulva raises several questions of interest. The plaques form only on the mucous surface, not on the skin. They are precisely similar in appearance, feel, and variety of form to the white plaques which form upon the mucous surface of the mouth. In more than one instance, the vulva and the mouth have been attacked in the same patient. There is therefore reason to believe that it is the same disease in both situations. If so, the influence of tobacco and of the direct contact of alcohol in the production of the disease loses some of its importance. There was no reason in any of my three patients to suspect the existence of syphilis, inherited or acquired. On the other hand, the influence of gout and rheumatism may have even a higher value in the etiology than I have assigned to them in the second edition of *Diseases of the Tongue*. The signs of active inflammation are so little evident in the section of leucoma of the vulva that the doubt may well arise whether the condition is not rather a degeneration than an inflammation or even the result of past inflammation. In the tongue and interior of the mouth the altered surface is exposed to such, and such frequent, irritation that inflammation is comparatively rarely absent; but it may be largely an accident in the life of the disease. My own cases and several of those which have been published show the predisposition of the altered surface to the growth of cancer. Under these circumstances the question is pressing of the desirability of free removal of all such plaques from the vulva, whether the signs of development of cancer are present or not.

[During May, 1901, I have had another case of leucoma of the vulva, with epithelioma, under my care in St. Bartholomew's Hospital, and have removed the epithelioma.]

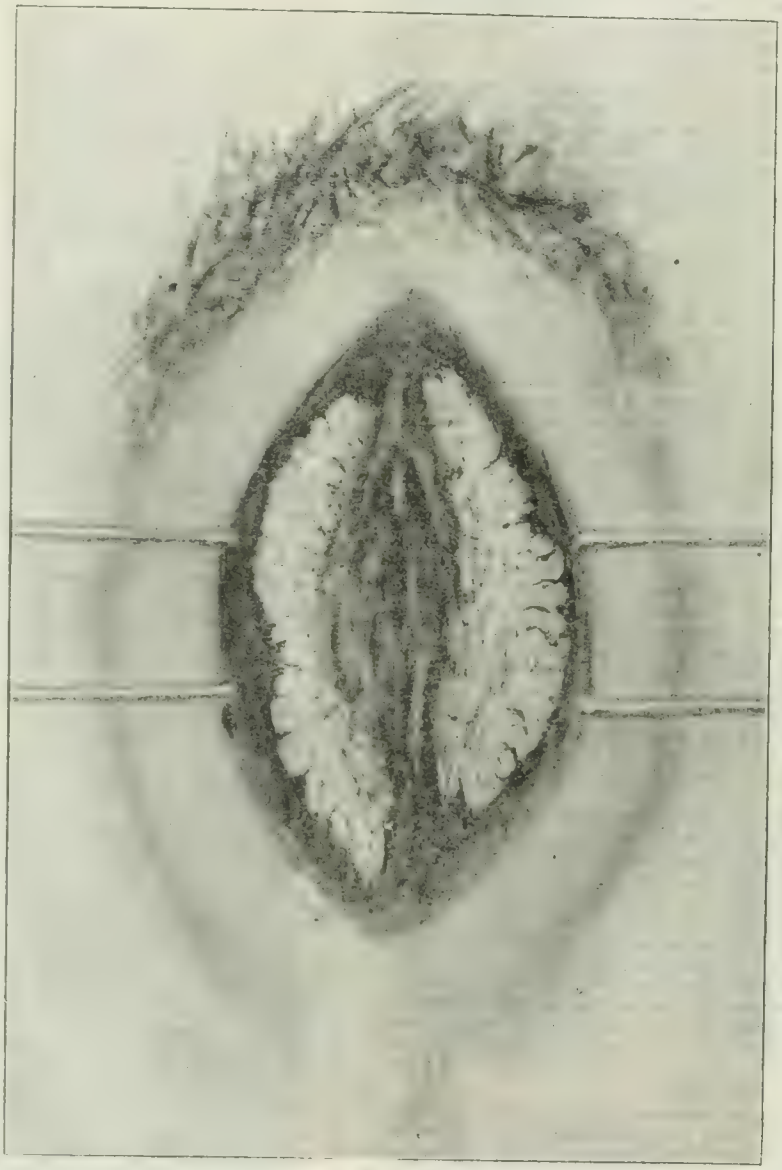


Fig. 1

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Patient and Practitioner.—A case bearing on the legal relation of the medical man to his patients has recently been tried before the Supreme Court of California. A practitioner of acknowledged ability was called to attend a young married woman, and after due consideration advised an operation. When the time came for the operation to be done, the patient refused to submit to it, and, as he had intimated would be the result, the practitioner relinquished the case. A second practitioner who arrived an hour later thought it unnecessary to operate. The first practitioner was sued, and a verdict was returned against him to the amount of £400. The Court defined the duty of the physician as follows:

> It is undoubtedly the law that a physician may elect whether or not he will give his services to a case; but, having accepted his employment and entered upon the discharge of his duties, he is bound to devote to the patient his best skill and attention, and to abandon the case only under one of two conditions: First, where the contract is terminated by the employer, which termination may be made immediately. Second, where it is terminated by the physician, which can only be done after due notice and an ample opportunity to secure the presence of other medical attendance..... He can never be justified in abandoning the case as did this defendant, and the circumstances show a negligence in its character well-nigh to brutality.

This finding seems to involve the principle that a patient may wisely be allowed to direct the treatment of his own case.

# ON FIBROIDS OF THE CERVIX UTERI.*

By ARTHUR H. N. LEWERS, M.D.Lond., F.R.C.P.Lond.,
Obstetric Physician to the London Hospital.

As is well known, fibroid tumours arising in the cervix are much less common than those occurring in the body of the uterus. The classification usually adopted for fibroid tumours of the uterine body may equally well be used for those originating in the cervix. Thus we have interstitial fibroids of the cervix, subperitoneal fibroids of the cervix, submucous fibroids of the cervix, and fibroid polypi of the cervix. A submucous fibroid of the cervix is one where the greater part of the tumour projects freely towards the cervical canal, one that is attached to the cervix by a constricted portion or neck. Very little of such a tumour remains embedded in the thickness of the cervical wall. I propose to say nothing further in the present paper about submucous fibroids or fibroid polypi of the cervix, since their treatment from below is well understood, and generally the same as when such tumours spring from the body of the uterus.

As regards interstitial and subperitoneal fibroids of the cervix the case is, however, different. Very little is said about them in most of the textbooks on gynæcology, and they have not, I think, attracted as much attention elsewhere as their importance deserves. I may here refer to a short communication on Myomata of the Neck of the Uterus by Mr. Bland-Sutton, in the *Transactions of the Obstetrical Society of London*, vol. xxxix, p. 160, in which two cases are well described. The importance of interstitial fibroids of the cervix is largely a matter of size. Thus a small interstitial fibroid of the cervix will probably cause no symptoms, and especially no menorrhagia; while an interstitial fibroid of the body of the uterus may cause profuse menorrhagia even when comparatively small. As regards subperitoneal fibroids when arising from the cervix, symptoms due to injurious pressure will arise with a tumour of comparatively moderate size, the size for instance of the fœtal head at or near term, while a subperitoneal fibroid of the same size arising from the body or fundus of the uterus may cause no symptoms at all. A subperitoneal fibroid of the size mentioned arising from the cervix is fixed, owing to the fact that it opens up the folds of the broad ligament and raises the peritoneum from the pelvic cavity. It also causes the rest of the uterus to be fixed: whereas a similar subperitoneal fibroid of the fundus or body of the uterus remains freely movable, unless peritoneal adhesions should be formed.

It appears to me that when either an interstitial or a subperitoneal fibroid of the cervix has reached the size of a cocoanut and upwards, the tumour should be removed. In either case, owing to the fixity of the tumour, pressure that can hardly fail to be injurious, especially to the ureters, is likely to occur in course of time. As a matter of fact, troubles connected with micturition figure prominently in the history of these cases.

As regards the effect produced on menstruation by interstitial fibroids of the cervix, sometimes there is profuse menorrhagia (as in Case I in this paper); sometimes, on the other hand, menstruation is scanty, or may even be absent for long intervals, as in Case II. It may be suggested that whether in a particular case menstruation will be excessive or scanty depends very much on whether the convex aspect of the tumour towards the cervical canal is merely covered by the thinned cervical mucous membrane, or whether, on the other hand, the tumour in process of its growth upwards has invaded the lower part of the body of the uterus, and so caused hypertrophy of the mucous membrane there.

In two of the cases recorded in this paper (Cases I and II) the cervical fibroid was solitary; no other fibroid was present in other parts of the uterus. In Case I there was menorrhagia sufficient to make the patient profoundly anæmic; while in Case II menstruation had always been scanty, and had, in fact, only occurred on three occasions in the two years before she came to see me. In Case I the cervical fibroid was an interstitial tumour of the anterior wall; in Case II it lay in the posterior wall. In Case IV the cervical tumour was partly interstitial and partly subperitoneal; but there were also fibroids in the body of the uterus, as well as a left ovarian cyst, so that the part played by the cervical fibroid in producing the menorrhagia cannot be determined. In all my cases of large interstitial fibroid of the cervix the os uteri was found to be dilated at least sufficiently to admit the finger. In Case III, one of large subperitoneal fibroid of the cervix, the os was not patulous.

An important point in diagnosis is to recognise the difference between a submucous fibroid of the cervix or body which is felt through the dilated os uteri, and a fibroid of the cervix that is truly interstitial. In the former case, of course, the tumour may be safely removed by *morcellement* through the vagina, whereas an attempt to remove a large interstitial fibroid of the cervix in that manner would almost certainly be disastrous. This will, I think, be clear on examination of the specimen in Case I. If there is any difficulty in deciding as to what the exact position of the tumour is it may be cleared up by careful examination under anæsthesia, when the finger can be passed sufficiently high into the uterus to recognise what proportion of the tumour is really projecting free towards the canal of the cervix.

As regards the changes likely to occur in cervical fibroids if not removed, I am able to refer to two cases. In one case, recorded in a paper of mine read before the Harveian Society in 1899, a large interstitial fibroid of the cervix sloughed, and was discharged through an opening spontaneously formed in the posterior lip of the cervix. The mass, which was horribly fœtid, weighed over two pounds, and left a correspondingly large cavity for absorption in the wall of the cervix and body of the uterus. The patient ultimately died worn out by septic fever. In another and more recent case, not among those here recorded, I removed a large interstitial fibroid of the posterior wall of the cervix, and on section found it to be undergoing mucoid change.

As regards the difficulties met with in removing these large cervical fibroids, the cases have all this in common that the uterus and tumour are practically fixed, and therefore, no matter what may be the size of the abdominal incision, they cannot be drawn up out of the wound till the deep cervical attachments of the tumour have been more or less completely separated. In this respect these cases differ very much from large fibroids of the body of the uterus requiring hysterectomy. For there, apart from the presence of adhesions, when the incision is large enough, the uterus and tumours can be drawn out of the wound, when the attachments can be much more easily dealt with.

Another point is as to the treatment of the stump. In an ordinary abdominal hysterectomy for fibroids when the cervix is not involved my custom is to dissect out a cone-shaped piece of the cervical mucous membrane, and then to pass sutures through the anterior and posterior walls of the stump, and tie them as tightly as possible. In cases, however, of interstitial fibroid of the cervix the wall of the cervix from which the tumour has been removed is very thin, and the opposite unaffected wall has also become very thin, owing to stretching as the tumour grew. In Cases I and II I tied these thin cervical walls together so as to shut off communication with the vagina, but no doubt a portion of the silk used must have appeared on the distal (vaginal) aspect. No trouble ensued in these cases from this method. An alternative is to merely pass ligatures through each cut edge of the stump independently where necessary to control bleeding, leaving the communication with the vagina widely open, and drawing the ends of the ligatures through the cervical canal into the vagina. A gauze drain may also be used passed through the cervix similarly into the vagina. I adopted this method in a recent case not recorded in this paper, and the result has been quite satisfactory. The following are the notes of the four cases on which this communication is based:

Case I.

A. T., a single woman, aged 38, a housekeeper by occupation, was admitted under my care into the London Hospital on October 4th, 1899.

*History.*—She said that the periods had been excessive for the past three years and had been attended with pain. During this time the menstrual period had generally lasted for a fortnight or more, and the amount lost at each period has gradually increased. Menstruation began at the age of 11, and she was quite regular every four weeks, the periods lasting about three days, and the loss being less than the average, till three years ago. Till then her general health had been good, and she had suffered from no illness, except measles, which she had at the age of 21. Of late she has noticed that her feet have swelled. During the last two years she has had

* Read before the Medical Society of London, February 25th, 1901.

a great deal of worry. Her appetite has been fair, but the bowels as a rule have been constipated.

*Present State.*—On admission the patient was profoundly anæmic. There was a loud systolic *bruit* heard over the cardiac area, soft and blowing at the apex and harsh at the base. The *bruit* was also heard in the left axilla, and at the angle of the left scapula. The pulse was 114, soft and regular. The urine was normal.

On examining the abdomen old lineæ albicantes were seen on the lower abdomen. A hard fairly central swelling was felt rising out of the pelvis, and extending to within three fingerbreadths of the umbilicus. *Per vaginam* a hard mass was felt bulging down the anterior fornix, it was continuous with the swelling in the hypogastric region. The external os was very far back and difficult to reach: it admitted the finger easily, and a short way within the os the finger came on a hard convex body projecting from the anterior wall into the cavity of the cervix. The patient was so very anæmic that I decided to keep her at rest in bed taking iron and other tonics for some weeks before attempting any operation. By November 5th her colour had improved a good deal, and on that day she was examined under anæsthesia. I intended if the tumour had been found to be definitely submucous, that is to say, one where the bulk of the tumour lies free in the cavity of the uterus and only a small fraction lies in the thickness of the uterine wall, to have removed it by *morcellement* after further dilating the cervix. Under the anæsthetic, however, it was evident that the tumour was really interstitial, and about the size of a cocoanut. The uterus was practically fixed, so that the cervix could not be drawn down at all. Under these circumstances it seemed to me much more dangerous to try and deal with the tumour from below than to perform abdominal hysterectomy, so that

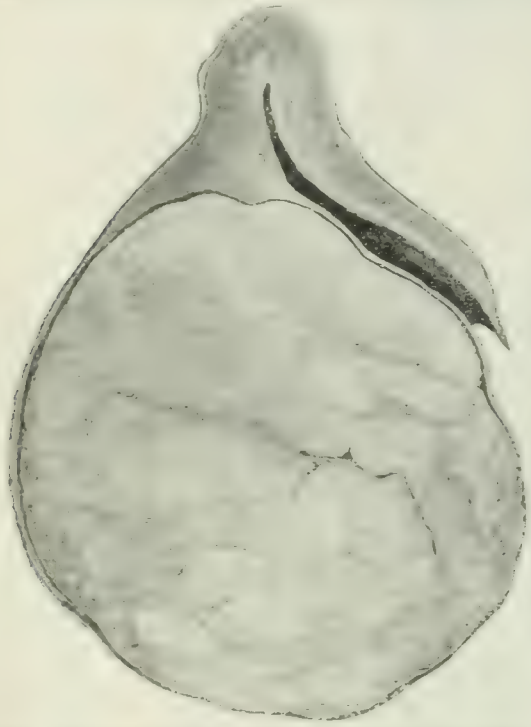


Fig. 1.—Case I. Interstitial fibroid of the cervix—anterior wall.

on that occasion nothing more was done, and the patient was put back to bed. After the examination the patient bled a little every day up to November 8th. Her period began on November 12th, and continued till the 20th; the loss was very considerable, and large clots were passed. She then felt very weak, and was again much more anæmic. On December 11th the patient had a severe flooding; the bleeding was checked by hypodermic injections of ergotin and hot vaginal douches; it continued, however, though the loss was only slight, till December 18th. The position of matters was thoroughly explained to the patient, and she readily consented to abdominal hysterectomy.

*Operation, December 28th, 1899.*—The abdomen was opened by the usual incision in the middle line. It was then seen that the fundus and upper part of the body of the uterus were of about the normal size, and perched upon the top of the tumour, which was evidently situated chiefly in the cervix. The whole mass was firmly fixed, though there were no adhesions, so that at this stage it could not be pulled up at all. The upper part of the right broad ligament was divided between double ligatures, and the same thing was done on the left side, thus securing both sets of ovarian vessels. Still the tumour was quite immovable. Anterior and posterior peritoneal flaps were then made, and the bladder separated well down from the front of the mass. The abdominal incision was prolonged upwards for about one inch, and an assistant pressed the mass firmly upwards from the vagina. The right uterine artery was then found and tied, the left uterine being secured with Wells's forceps, and tied at a later stage. The mass was then pulled up as firmly as possible, and by a circular incision the body of the uterus and the cervical tumour were separated from the small portion of the cervix remaining below the position of the fibroid, and removed. The cervical canal was swabbed out with 1 in 20 carbolic acid, and the edges of the cervix were closely sutured together. Owing to the stretching of the cervix by the upward growth of the tumour the walls of the cervix were very thin, in places no thicker than about one-twelfth of an inch. Several oozing points in the neighbourhood of the stump required ligatures. The peritoneal flaps were then sewn together over the stump, and a Keith's tube having been inserted, the rest of the abdominal wound was closed in the usual way. The patient made an uneventful recovery, and left the hospital on January 27th, 1900.

*Note on the Specimen.*—The mass removed weighed 4 lbs. 5 ozs. It was roughly the size and shape of a large cocoanut, except for a projecting knob at the top, which is the unaltered fundus and upper part of the body of the uterus. On sagittal section it is seen that the fibroid is truly interstitial in position, the thickness of uterine tissue being the same over the outer and inner aspects, and in both directions the lamella of uterine tissue is only very thin. The tumour lies for the most part in the anterior wall of the cervix, a small portion of the upper part of it may have encroached on the lower part of the body of the uterus. A small shaving was taken off the lower part of the tumour in removing it from the stump during the operation. This was taken away from the stump subsequently. Before making a sagittal section of the mass the opening into the cavity of the uterus admitted four fingers.

### Case II.

Mrs. M., aged 37, was sent to see me by Dr. Reeve, of Leytonstone, on March 26th, 1900. She had been married seven years, but had had no children. She had an incomplete miscarriage about two years ago, and I

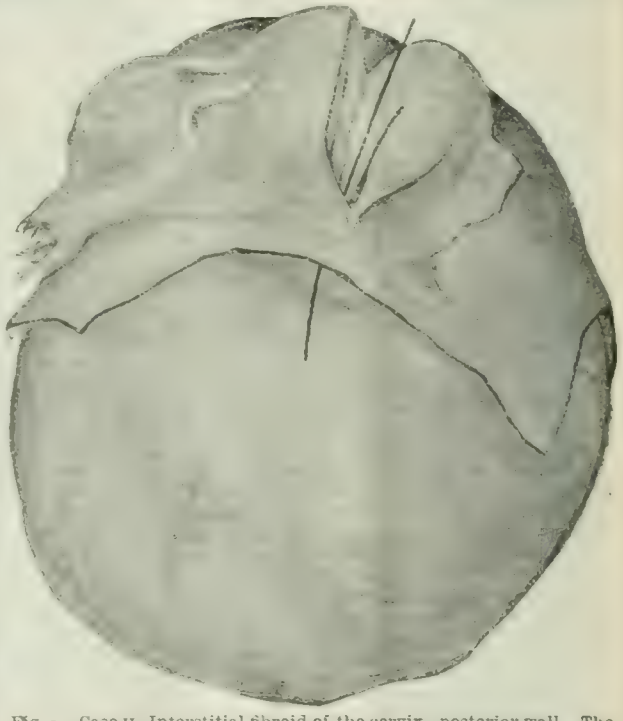


Fig. 2.—Case II. Interstitial fibroid of the cervix—posterior wall. The extremely thin anterior cervical wall is well seen. The body of the uterus practically unaltered.

was called in to remove the part of the ovum that had been retained. On the present occasion she complained of soreness in the lower part of the back, going round to both iliac regions, which she had had for some time. About six months ago she had been unable to pass water for a whole day. For the past three or four months she has been troubled by a difficulty in holding the water. Menstruation appeared when she was between 13 and 14. She has never been regular, generally going more than a month between the periods. The loss has always been slight, and has been unattended with pain. She has only menstruated three times since the miscarriage. The last period occurred about ten days ago, and was very slight; before that she had "seen nothing" for six months. The bowels have latterly been much constipated.

*On examining the abdomen* a hard swelling was felt rising from the pelvis, and reaching nearly to the umbilicus; a portion of the tumour about the size of an egg was felt in the middle line and at the upper part of the general swelling, which could be moved somewhat on the underlying portion. (This subsequently proved to be the fundus and body of the uterus practically unaltered.) A loud uterine *souffle* was heard all over the tumour. The breasts showed no changes.

*On vaginal examination* the upper part of the vagina was found to be occupied by a smooth convex swelling. The external os, widely dilated, so as to form a crescentic slit with the convexity forwards, lay in front of the mass. The anterior lip of the cervix was thin, and exactly like its condition during the first stage of labour. The mass was evidently an interstitial fibroid of the posterior wall of the cervix, which on the one hand had carried the body and fundus of the uterus unaltered in shape

upwards to the neighbourhood of the umbilicus, and on the other hand had burrowed downwards into the posterior lip of the cervix, so as to completely obliterate it. The mass had little or no mobility.

The patient went into Fitzroy House shortly afterwards, and on April 7th, 1900, I performed abdominal hysterectomy. The same difficulty was met with as in the preceding case—the tumour could not be brought out of the wound, even after the upper part of the broad ligaments and the round ligaments had been divided, and the anterior and posterior peritoneal flaps had been dissected down. A somewhat circular incision was made rather low down into the tumour; anteriorly this divided the anterior wall of the cervix, which was extremely thin, and was spread out tightly over the tumour lying behind it. The circular incision posteriorly opened a thin capsule of cervical tissue, out of which the lowest portion of the tumour was with some difficulty enucleated. The most noticeable points about the case here were the extreme thinness of the walls of the cervix constituting the stump, and the wide communication with the vagina. The question occurred to me whether to leave this open for drainage, or to close it. I decided to close it, and therefore sutured the anterior and posterior walls of the cervix together, endeavouring to let as little as possible of the suture (silk) appear on the vaginal aspect. The peritoneal flaps were then sutured over the stump, and a Keith's tube having been inserted the rest of the abdominal wound was closed in the usual way. The patient made an uninterrupted recovery. I saw her about five months afterwards. She was quite well. On examination what remained of the vaginal portion of the cervix was freely movable, and in what represented the external os some silk was seen. This was not loose, and as it was giving no trouble I made no attempt to remove it.

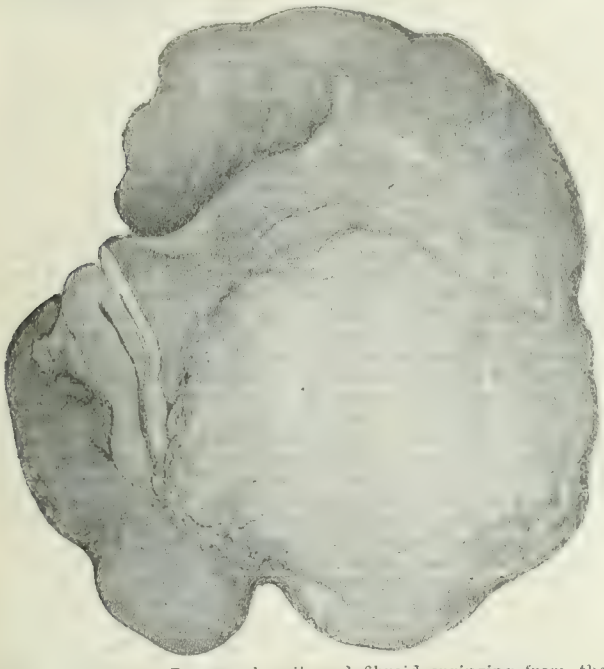


Fig. 3.—Case III. Large subperitoneal fibroid springing from the posterior aspect of the cervix. Body of uterus little altered.

*Note on the Specimen.*—The specimen consists of the body of the uterus and the upper part of the cervix with the right uterine appendages. The posterior wall of the cervix is occupied by a large interstitial fibroid; the lowest convex portion of the tumour is what represented the posterior lip of the cervix on vaginal examination. The tumour measures 7 inches vertically, 5 inches transversely, and 3 inches from before back. The fundus and anterior wall of the uterus are not at all involved by the tumour. The anterior wall of the cervix has been stretched and thinned so as to constitute a layer only about one-tenth of an inch in thickness. The tumour extends upwards so as to involve the posterior wall of the body of the uterus to within a quarter of an inch of the fundus.

### CASE III.

A. M., a single woman, aged 49, a housekeeper, was admitted under my care into the London Hospital on January 25th, 1900. She was sent to me by Dr. Birch, of Dalston, and Dr. Marston, of Clapton. She gave the following history:

She was fairly well till May, 1898, then she had difficulty and pain in passing water, which lasted for about four months; at that time she noticed the abdomen was rather swollen. The greatest difficulty on micturition occurred after the menstrual periods. Menstruation began at the age of 13, and she has been regular every three weeks since, the period lasting about seven days. The amount lost has never been excessive. She has always had pain for a few days before the flow, relieved by it. For the last year and eight months the catamenia have been less and less. She has thought the swelling in the abdomen became greater at the menstrual period, and that recently it has not diminished in size afterwards as it used to do. She first noticed the swelling in the abdomen a year and eight months ago. At that time she began to be troubled with frequent desire to pass water, and often inability to do so for many hours. At such times she said the abdomen swelled considerably, and that her feet and legs also swelled. She has never had a catheter passed. She has not lost flesh.

January 29th. *Abdominal Examination.*—The abdomen is irregularly prominent from the lower part of the epigastric region to the pubes. An irregular hard tumour is felt rising from the pelvis and reaching to a handsbreadth above the umbilicus. Laterally the tumour reaches outwards and a little beyond the anterior superior iliac spine on each side. The tumour has a slight range of mobility, both up and down, and from side to side. A loud uterine *souffle* is heard over the centre and left side of the tumour.

*On vaginal examination* a hard lump is felt bulging down the posterior fornix and the left lateral fornix. This lump is continuous with the tumour felt in the abdomen. A projecting part of the tumour, thought to be the body of the uterus, is felt anteriorly, but it could not be separated from the rest of the tumour. The lump in the posterior fornix is fixed. The vaginal portion of the cervix is not involved; a small mucous polypus projects from the os uteri. The sound passes 4½ inches. It could only be passed after fixing the cervix with a volsella.

*Operation, February 9th, 1900.*—The abdomen was opened by an incision from a point 2 inches above the umbilicus to within 1½ inch of the pubes. It was subsequently necessary to extend the incision upwards. When the peritoneal cavity was opened it was found that as regards the greater part of the incision—that from the level of the umbilicus downwards—there was no peritoneal cavity to the left of the incision, the peritoneum was reflected from the surface of the tumour to the abdominal wall on the left side about 1 inch from the incision. The sigmoid flexure lay to the right of and partly above the umbilicus. The body of the uterus was easily seen about the centre of the anterior aspect of the tumour. The uterus lay somewhat obliquely, so that its anterior surface looked to the right. The upper part of the right broad ligament was secured and divided, so that the right ovary was not removed. The left ovary was removed with the tumour. There was no pouch of Douglas nor any peritoneal cavity in the left of the pelvis: there was a small pouch of peritoneum in the right side of the pelvis. The tumour had grown from somewhere about the back of the cervix, and had raised the peritoneum entirely from the pouch of Douglas and the left side of the pelvis, also from the greater part of the left iliac fossa.

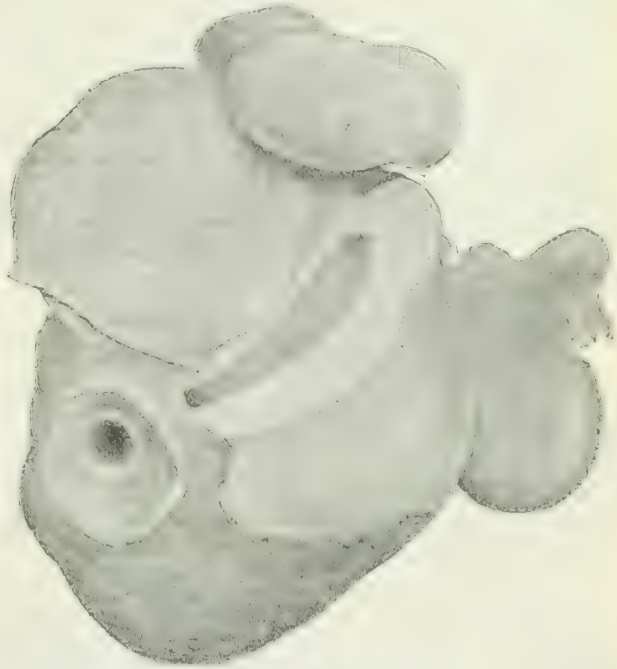


Fig. 4.—Case IV. Fibroid of cervix partly interstitial—projecting into cervical canal—partly and chiefly subperitoneal. Panhysterectomy. Other fibroids of uterine body. Small (left) ovarian cyst.

All the usual relations were therefore entirely altered. The tumour was removed by first incising the peritoneum over it, and then carefully enucleating it from the extensive retro-peritoneal bed indicated above. Large vessels going to the tumour were tied as they came into view; ultimately the region of the cervix was reached. The lower part of the cervix was not involved by the growth, and accordingly it was possible to make a cervical stump in the usual way. The incision made into the peritoneum in order to enucleate the tumour was then stitched together, a Keith's tube was inserted, and the abdominal incision closed in the usual way.

The tumour consisted of two main masses with secondary outgrowths: (1) The larger lay entirely under the peritoneum of the left broad ligament, the left side of the pelvis, and part of that in the left iliac fossa. (2) The smaller part lay under the peritoneum that should have formed Douglas's pouch. The body of the uterus, comparatively little altered, is seen about the middle of the specimen. The whole mass weighed 9½ lbs.

*After-Progress.*—In spite of the severity of the operation, which I think was the most difficult one of the kind that has occurred in my practice,

the patient did very well. The stitches were removed on the tenth day, when the wound was looking well. It was strapped as usual, but unfortunately burst open as to its upper 3 inches, the part above the umbilicus, the next day. It was resutured, and no bad symptoms ensued. The rest of the convalescence was uninterrupted, and she went home on March 17th. I have heard of her recently, and she remains quite well.

CASE IV.

Miss S., a single woman, aged 32, a bookkeeper at a hotel, came to see me on June 14th, 1900.

She said that she had noticed a lump in her abdomen for eighteen months, and that lately it had greatly increased in size. For some years she has lost a great deal at the menstrual periods; the last two periods have not been quite so profuse as usual. At Easter she had a very excessive loss, the period lasted ten days, and large clots were passed. She has not had much pain at the periods. There has been no trouble with micturition, and the bowels have been regular. She has not felt strong for some time, and has suffered from neuralgic headaches.

On examining the abdomen, a hard, irregular tumour was felt, reaching to the umbilicus. A softer portion of the tumour to the left suggested that there might be a small ovarian tumour as well. On vaginal examination the os uteri was found to be displaced forwards and dilated sufficiently to admit the finger. A hard tumour was felt within the os, projecting towards the cervical canal. The sound passed 5½ ins. The diagnosis was a more or less insterstitial fibroid of the cervix, with multiple fibroids, and possibly a small ovarian cyst on the left side. The patient was very anæmic. She was admitted into the London Hospital shortly afterwards.

*Operation, June 28th, 1900.*—An abdominal panhysterectomy was performed. The ligatures on the uterine vessels were left long, and together with those on the cut edges of the vaginal walls were drawn down into the vagina. A strip of iodoform gauze was also drawn from above into the vagina; about 1 inch of it was left projecting into the peritoneal cavity. The rest of the wound was then closed in the usual manner. The patient made a good recovery.

*Note on the Specimen.*—The specimen consists of the whole uterus with the left ovary and Fallopian tube. There is a portion of the vaginal mucous membrane behind the cervix. There is an interstitial and partly subperitoneal fibroid of the posterior wall of the uterus rather to the left side. It measures 6 inches long, 4½ broad, and 4 inches thick. It is largely cervical in position, reaching down almost to the external os, which is about the diameter of a shilling. There are several subperitoneal fibroids, chiefly to the right and behind, the largest about the size of the fœtal head at seven months. The left ovary forms a unilocular cyst of about the same size.

## EXTRAUTERINE FŒTATION.*

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THE phenomena of an extrauterine fœtation are very remarkable, and in studying the subject it is important to remember that a child conceived outside the womb may develop to the full term of ordinary intrauterine life without causing the mother sufficient distress to induce her to consult a medical man, and even without causing her any anxiety. She may believe herself pregnant in the ordinary way up to and beyond the full period of gestation.

### OVARIAN AND INTRAPERITONEAL GESTATION.

It has been a source of doubt whether the ovum may be impregnated and develop anywhere outside the uterus except in the Fallopian tube, but at a meeting of the Obstetrical Society of London last January, it was very generally accepted that occasionally the impregnated ovum may be found in the ovary. It is also a matter of dispute whether an extrauterine gestation may occur in the peritoneal cavity. It is not really known how and why the ovum passes from the ovary into the Fallopian tube, and there is good reason to believe that an ovum from one ovary may pass into the uterus through the Fallopian tube of the opposite side. There seems, therefore, no reason why an ovum should not be fertilised after it leaves the ovary and before it reaches the tube. If conception should take place in this section of its journey towards the uterus, the ovum would be very apt to drop or be pushed into a part of the peritoneal cavity at a greater or less distance from ovary and tube. Our knowledge of the peritoneum would lead us to believe that an abundant blood supply might be derived from any portion of its inner surface, and a free blood supply seems to be all that the ovum requires for its development. It appears to me, therefore, quite likely that, sooner or later, proof will be forthcoming that a true intraperitoneal extrauterine gestation may arise.

### TUBAL GESTATION.

Even when developed in the tube an ovum may be not strictly extrauterine. It may be situated in that part of the tube which passes through the uterine wall. Hence Lawson Tait called his book on this subject *Ectopic Gestation*. Gestation "out of place," of course, includes those cases in which the ovum develops in the part of the tube nearest the uterine cavity, as well as those which may be described as truly outside the wall of the uterus.

There is no doubt, however, that in the great majority of cases of ectopic gestation the ovum becomes arrested in and attached to the inner surface of that portion of the Fallopian tube which is outside the uterus, and I propose in the following remarks to simplify the subject by describing only the conditions which follow the development of a pregnancy in that part of the Fallopian tube which is truly extrauterine.

When a child is conceived outside the uterus its mere bulk at term is not a cause of trouble. But although the size of a pregnancy is of no significance as regards the belly wall, it is all important as regards the relations of the fœtus to the tube. When submitted to gradual pressure, as in some cases of chronic and especially in tuberculous salpingitis, the Fallopian tube may distend to a very great extent, but it is not capable under any circumstances of sufficient expansion to allow of its accommodating a full-term child within its lumen. Hence the tube must give way if the normal development of the fœtation continues, and the period of its rupture may be one of great danger to the existence of the fœtus and to its mother. At present, however, I am endeavouring to follow the development of an embryo which progresses to full term with little or no disturbance of any kind.

It was at one time thought that when the tube ruptured without terminating the existence of the pregnancy the fœtus escaped into the peritoneal cavity, where it developed free among the intestines. It is almost inconceivable that a fœtus could escape into the peritoneal cavity without setting up an amount of inflammation which would necessarily attract attention, and would eventually cause the formation of some sort of sac limited by inflammatory adhesions. If the child and the mother could survive, the sac when formed might possibly serve the purpose of the membranes in a normal pregnancy. Nevertheless it appeared to be a fact that the fœtus might and did develop in the unchanged peritoneal cavity, for cases are recorded in which the child was supposed to have been found thus free. These records were made, however, from inexact information.

Dr. John W. Taylor, of Birmingham, during an operation which he performed on December 11th, 1896, observed certain facts from which he deduced the true explanation of the phenomena under consideration. He noted that the cavity in which the fœtus lay was everywhere bounded by a membrane stretching over the peritoneum, but so thin that it was only visible when the intestines were placed so as to show it passing from coil to coil. He traced this membrane to the placenta, and he believed it to be the amnion. Hence he argued that unless the amnion is intact the pregnancy cannot advance, but the fœtus must die in a very short time. This view is much more reasonable than the idea that a child may develop free in the peritoneal cavity, and it almost carries conviction with it as soon as it is suggested. Moreover, subsequent observations have fully confirmed Dr. Taylor's teaching.

### COURSE OF EXTRAUTERINE GESTATION.

In the earlier stages of the development of a fœtus the outer membrane of the embryo consists of one membrane—the chorion—covered everywhere by villi, and, if in the uterus, enveloped by the decidua reflexa, which is a mass of cells heaped up around and over the ovum by the mucous membrane of the uterus, the whole being well supplied with blood. At one part of the chorion the placenta develops, and then the rest of its circumference becomes less vascular. The amnion or inner lining of the sac containing the fœtus develops round the embryo inside the chorion at an early stage of the pregnancy. It forms the outer covering of the umbilical cord, and is continuous with the child's skin at the navel. Its outer surface is at first separated from the chorion by a space, but after a time it becomes approximated to the chorion as the air-tight bladder of a football is pressed against the leather. The amnion and chorion unite to form "the membranes," but, according to Playfair,[1] there sometimes remains between them a fluid analogous to Wharton's jelly, which may be in

* A paper read before the Watford Medical Society.

such quantities at term as to give rise to the idea that the waters have burst when only the chorion has given way.

Hence it would appear that the union between the chorion and amnion may be, and probably at first always is, very lax except at the site of the placenta. When a fœtus develops in a Fallopian tube, if the tube ruptures, the chorion, deprived of its support, would seem, in some cases at any rate, also to rupture, or it may gradually give way later, and thus the amnion may protrude into the peritoneal cavity. No doubt the amnion also frequently ruptures with the chorion and tube. The amnion is, however, described by Playfair[4] as "a perfectly smooth, transparent, but tough membrane." It is, therefore, just the kind of tissue that would fulfil the functions required in these cases. Its smoothness, with the fact that it is originally developed free between two fluids, explains how it can grow and develop without causing irritation of the peritoneum; its transparency accounts, in part at least, for the fact that it so long escaped detection by operating surgeons and pathologists; and toughness is obviously necessary to prevent its rupture both in normal and in extrauterine pregnancy. If, therefore, the Fallopian tube surrounding the fœtus and the chorion gives way whilst the amnion remains intact, and if nothing occurs to interfere with the attachments of the placenta, the child would appear to have every opportunity of developing to full term.

I have assumed that the bursting of the Fallopian tube must permit of the escape of its contents into the peritoneal cavity. But the tube runs along the top of the broad ligament outwards beyond the ovary, and it may be that when over distended the tube will rupture where the two layers of peritoneum forming the broad ligament or mesosalpinx are reflected from it. Between these layers of broad ligament there is a space filled with connective tissue through which the blood vessels approach the tube. If a rupture of the Fallopian tube occurs at this, its line of attachment and vascular supply, its contents will escape into the connective tissue between the layers of peritoneum, and this tissue is continuous with all the pelvic, subperitoneal connective tissue. It is obvious that if the amnion escapes between the layers of the broad ligament and remains intact, it can exist as well there and will cause as little irritation there as in the peritoneal cavity.

When growing in the cellular tissue the fœtus is comparable to an ovarian tumour developing deeply between the folds of the broad ligament. The peritoneum and the Fallopian tube are raised high above the fœtus, and the uterus is apt to be pushed or dragged up also, perhaps so far that it is quite out of reach of the finger examining the vagina. Moreover just as an ovarian tumour may push up the peritoneum only on one side, or more in front or more behind, so an extrauterine fœtation may displace the peritoneum into a great variety of positions, leaving more or less of a pouch of Douglas, perhaps only a cavity like the finger of a glove, or obliterating the space altogether. The placenta will usually lie somewhere out of the pelvis, and a *souffle* may be heard on listening with a stethoscope over it. When on the other hand rupture takes place into the peritoneal cavity there is more likely to be a pediculate attachment to the broad ligament, and the placenta will usually be in the pelvis, whilst the uterus is not likely to be dragged upwards. In fact, an extrauterine fœtation grows in very much the same position, and in very much the same way as an ovarian tumour. It has an equally great variety of relationship to neighbouring structures and, therefore, it also may give trouble by getting wedged in the pelvis, or by pressure or traction on adjacent organs.

Although when the tube ruptures the placenta must at first be entirely adherent to the inner lining membrane of the Fallopian tube, it is obvious that a sufficient area for the attachment of a full-time placenta cannot be obtained on the inner surface of this tube, and therefore as the placenta grows it attaches itself to neighbouring tissues. It must be very much a matter of chance as to what parts of the abdominal walls or their contents are implicated, but the connections formed with adjoining tissues by the placenta are of very great importance, as on them chiefly depends the ease or difficulty of dealing with a case by operation.

If we consider the great mobility of the Fallopian tube, the consequent uncertainty of its exact position when an extrauterine fœtation ruptures, the possibility of its being fixed by inflammatory adhesions, the fact that the embryo with its amnion may escape into the peritoneal cavity or into the subperitoneal connective tissue, and the necessity for the placenta attaching itself to whatever structures happen to be adjacent to its original site in the Fallopian tube, it will easily be understood that hardly any two cases of extrauterine fœtation are alike.

### Accidents and Complications.

When an ovum develops outside the uterus the condition must terminate sooner or later in the death of the ovum or fœtus unless operative measures are adopted at term, and perhaps the most satisfactory consideration in connection with extrauterine fœtation is that in the great majority of cases this termination by fœtal death comes early—that is, within a few weeks of conception.

If the fœtus dies for any reason connected with its own vitality, there seems to be a fairly strong probability that it may shrivel up and be absorbed or become encysted, the bones alone remaining if it has reached a sufficiently advanced stage of existence for their formation. Sometimes the fœtus is preserved complete, and with little alteration in its appearance. I have not met with this last condition, but I have seen an operation in which the bones of a fœtus which had advanced to about the third month of gestation were removed from an apparently unruptured Fallopian tube. The date at which conception had taken place was not clearly indicated by the history. It had, however, been long enough before the operation to allow of complete removal of all the soft tissues of the fœtus. I have also seen and removed the bones of a partially-macerated fœtus of about three months' development in a case in which the history clearly indicated that the child had died a year before the operation. In yet another case I removed the bones of a fœtus seven years after an extrauterine fœtation had been diagnosed. These bones had given rise to little trouble except about the time that the child died, and then the patient would not submit to surgical treatment, although she had been urged to do so. In operating for an ovarian tumour which had subsequently developed, I found it impossible to avoid disturbing the bones, which lay between the ovarian cyst and adherent coils of small intestine. The patient died, chiefly, I think, because she absolutely refused to submit to the necessary treatment until she was completely exhausted, and had no strength to recover from the very severe operative procedure which was necessary. If the ovarian tumour had not developed in this patient, the fœtal remnants would no doubt have remained quiescent indefinitely.

When the pregnancy goes on to term the child must of course die unless removed by incision. After death the fœtus may shrivel up and be preserved, or it may be absorbed, but very often inflammatory changes take place. Although the living amnion containing a living child and associated with a living placenta may cause no trouble, yet the dead amnion containing a dead child and associated with a dead placenta may be a source of great irritation. If suppuration occurs there is a possibility that a cure by the discharge of the contents of the abscess may take place. Unfortunately some portion of the bowel usually offers the most accessible free surface, and when the lumen of the gut becomes continuous with a very large cavity, such as that containing a full-term child, the risk of death from sepsis and exhaustion is very great. Nevertheless, the bones of a fœtus, especially one that has not attained full development, may be discharged by the bowel, and of course this is most likely to happen if the point of exit is near the lower end of the large intestine. In several cases that have come under my observation the small intestine has opened into the cavity containing the fœtus, and this seems to me a peculiarly hopeless complication. It might perhaps be thought that in these days it would be possible to resect the gut and remove the fœtus at the same time. But the fact that the small intestine has opened into the cavity implies that every portion of the sac of the dead amnion has become firmly adherent to every coil of intestine it has touched, and resection of the small gut is practically out of the question under such conditions. The only treatment is to get the fœtus away without any unnecessary interference, and to keep the cavity from which it is removed as clean as possible. There may be some chance of the fistula

closing, but it is obvious that if the patient lives for a time the numerous coils of adherent intestine must be constantly dragged upon as the cavity which had contained the fœtus diminishes, and this traction will be very apt to cause sufficient obstruction in the bowel to prevent the closure of a fistula, if not to bring about the death of the patient from inability to take nourishment. My colleague, Mr. Alban Doran, read a case before the Obstetrical Society last year in which inanition due to traction on the intestines was clearly the cause of death. The best surgery cannot save a patient under these circumstances.

### Hæmorrhage.

Apart from the death of the fœtus due to causes connected with its own vitality or due to the fact that it has reached the limit of possible intra-maternal life, there are other, and in some respects more important, causes of its death which are directly due to its abnormal position. In the great majority of cases in which the fœtus develops in the Fallopian tube its death occurs in the first few weeks of its existence, owing usually to a disturbance of the relations between the placenta and the maternal structures. This is associated with very great danger to the mother as well as to the embryo.

In normal pregnancy the uterus develops so that the part of its inner surface to which the placenta is attached enlarges with the growth of the placenta. If the placenta becomes separated anywhere cicatrisation may occur so as to permit of the continuance of gestation, but any considerable separation of the placenta is apt to bring about an abortion, and then the fœtus is expelled, and the blood vessels are closed by the contraction of the uterus. If the latter does not contract, very free hæmorrhage takes place and may prove fatal.

In the tube the chances that a separation of the placenta from the maternal structures may take place are very great; there is no normal contractile power to check the hæmorrhage, and the supply of blood to the parts is probably as copious as when the child is *in utero*, for there is always a great hypertrophy and multiplication of the vessels around an extrauterine gestation.

When the tube gives way it must retract on account of its elasticity, it having been over-distended. Any blood vessels in the part ruptured will therefore lose the support they have had from pressure and may bleed. Probably hæmorrhage of this kind would not give rise to much trouble, because the tube becomes greatly attenuated before it gives way, but if the site of the placental attachment be affected either directly by the rupture taking place over it, or indirectly by the elastic retraction of the walls of the tube, the fœtal connection with the maternal circulation may be severed, and then hæmorrhage must ensue. By depleting the parts this would allow a still greater contraction of the tube, and if the amnion should rupture also the tube may diminish in diameter very considerably. There is, however, no provision for the placenta diminishing, and therefore the extent of its surface becomes more and more out of proportion to that part of the tube to which it is attached, and the vascular connections between the two necessarily separate just as they would in a contracting uterus, and as a consequence hæmorrhage must become more free or be repeated. At this stage, in the case of the uterus, physiological contractions of the organ would usually take place and expel the child, but the Fallopian tube is paralysed by its over-distension, and the contraction that takes place is elastic only. After a time the overstretched muscle will recover its tone if the patient survives, but for a time no vital contraction occurs in the muscular wall of the tube, and hæmorrhage can only be arrested by coagulation and changes in the blood vessels. Moreover, when tone is recovered by the muscular tissue of the tube, its contraction must tend to further increase the difference between the extent of the surface of the placenta and that of the part of the tube to which it had been attached, and so to induce more hæmorrhage. The condition is fairly comparable to that when the intrauterine placenta separates, and the uterus fails to contract sufficiently to expel it, and the danger depends mainly on the extent to which the placenta is separated. When the ovum is situated near the fimbriated extremity, the placenta may also become detached from the tube without rupture of the latter. Probably as the ovum grows, it tends to extrude itself from the open, trumpet-shaped end of the tube, and thus drags on and severs its connection with the mucous membrane.

Whether the hæmorrhage occurs from the open end of the Fallopian tube or from a rupture in its wall, the amount of blood lost may vary very much. It may be arrested for a time and burst out again, and there is no rule as to whether subsequent hæmorrhages will be more or less severe than the first. When only a moderate amount of blood is lost it is held in the neighbourhood of its escape by the surrounding structures, and a very peculiar change takes place in its surface.

It is well known that adhesions very readily take place between healthy peritoneum and any raw surface to which it is exposed. When peritoneum is exposed to blood it throws out serum which with the blood becomes organised into a sort of membrane which may be of considerable thickness and strength. This forms a capsule round the blood, and the enclosed portion is usually of a syrup-like consistence or in the form of a dark clot. The capsule adheres to the peritoneum which has helped to form it, sometimes slightly, but sometimes very firmly. At the point of rupture of the tube or at its open mouth a limiting membrane does not form unless the rupture is very small. I have seen an encapsuled clot forming a kind of cap to the open end of the tube as if it had been blown out like a soap bubble. It was only lightly adherent to any peritoneum, and not more adherent round the ostium of the tube than elsewhere, so that it could be peeled off this part without difficulty, and when removed it exhibited an opening corresponding to that of the tube. When such a gap in the capsule exists at the point whence the blood escapes from the tube, it is obvious that if a fresh hæmorrhage occurs the blood will flow into the artificial sac which has been formed, and will distend or burst it. On the other hand, when very firm adhesions form to intestines and neighbouring parts, these with the capsule may exercise a sufficient pressure to restrain or even arrest the bleeding.

The mass of blood may vary almost indefinitely both in position and in size, and when it unites firmly to neighbouring structures the parts may be identified only with much difficulty. There is a tendency for the blood to gravitate into the pouch of Douglas, but it may be found in the upper part of the pelvis, or it may fill the pouch and rise into the abdomen. In one patient sent to me I found Douglas's pouch distended and pushed down by a large rounded mass, which rose as high as half way to the umbilicus, and stood out very considerably in front of the general level of the abdominal wall. Its upper surface presented various rounded prominences, and the whole was very tender. Evidently there had been repeated hæmorrhages, which accounted for the irregular shape. I diagnosed an extrauterine fœtation, and sent the patient straight from my house to a nursing home. A very slight blow or a fresh hæmorrhage might have produced the most disastrous results. I operated the day after the patient consulted me, and found a mass of clotted blood firmly adhering to everything it touched. The operation was one of very great severity, but when the patient recovered from the shock she gave little or no further trouble.

It is obvious that, as in the case of a fœtus developing to term, so in the case of hæmorrhage occurring when the tube ruptures, the escape may be into the peritoneal cavity, or into the cellular tissue between the layers of the broad ligament. In this latter case there is, of course, a much stronger tendency to limitation of the amount of the blood lost, but the connective tissue is fairly loose, and the extent of the bleeding is determined by the relative strength of the connective tissue and of the blood flow.

It occasionally happens that a flow of blood takes place into the peritoneal cavity so full and free that no coagulation takes place, and the patient simply dies from loss of blood after a few hours—from three or four to twenty or more. This may be preceded by smaller hæmorrhages, or the first hæmorrhage may be thus copious. Hæmorrhage, whether slight or profuse, usually occurs in the first few weeks of gestation in connection with rupture of the tube. Later, when the placenta has escaped from the tube and has obtained a firm hold of the neighbouring structures, separation of the fœtal from the maternal tissues is less easy, hæmorrhage is rare, and death of the fœtus is more likely to

be due to causes connected with its own condition, to inflammatory changes in the sac containing it, to injuries of that sac, or to completion of the full term of gestation. To resume very briefly:

When an ovum develops in a Fallopian tube it may burst through that tube into the peritoneal cavity, or into the connective tissue between the layers of the broad ligament. The chorionic covering of the embryo seems to rupture with the tube or later, but if the amnion remains intact, and the attachment of the placenta is not severed, the child may develop to full term. When the tube ruptures the placenta frequently becomes detached, and more or less free hæmorrhage takes place into the peritoneal cavity or into the connective tissue between the layers of the broad ligament. In the connective tissue the hæmorrhage is to some extent circumscribed, and in the peritoneal cavity it may either become circumscribed by the formation of an adventitious membrane, or the blood may flow so freely into the peritoneal cavity that the patient dies in a very short time from anæmia. If the amnion ruptures the embryo dies,

### Diagnosis.

There are two divisions of the evidence pointing to the existence of an extrauterine fœtation:

1. The history and symptoms.
2. The physical conditions found.

As regards the history, the patient must be in the child-bearing period, and it has been noted that an extrauterine gestation is not infrequently preceded by a long interval of sterility in a woman who has already borne children. This, however, is not a very important, and certainly not an essential point. In one case on which I operated for Dr. Burnett, the President of this Society, it was estimated that an extrauterine conception had occurred in a woman aged 23, about a week after marriage, and last summer I operated on a woman, also 23 years of age, and also in her first pregnancy, which was extrauterine, she having conceived about six months after marriage. Both these women had been perfectly healthy in every way before conception, and were particularly well developed. The symptoms which accompany an extrauterine gestation going on to full term may be exactly those of a normal pregnancy. Probably the tendency is to develop complete amenorrhœa so long as the child is living, but the very great enlargement of the blood supply to the affected parts, which is an invariable accompaniment of the condition, must favour the occurrence of a discharge of blood from the uterus, and, even when the fœtus is developing without serious trouble the periods usually come on, with perhaps a little delay. There may be two or three months missed, but more commonly the patient goes a week or two beyond her time, and then has a more or less constant loss, or a frequently recurring uterine flux of a few days' duration may be noted. A deciduous membrane forms in the uterus when an extrauterine conception occurs, and is thrown off at some period of the gestation, either as a complete cast of the uterus or in shreds of varying size. It often separates about the end of the third month, and then the patient may suppose that she has miscarried, and may assert as a fact that she has done so. The discharge of the decidua may coincide with the rupture of the tube and death of the embryo.

Thus the points which usually attract attention are a slight delay in menstruation, followed by irregularity, in a patient who has been previously regular. If after two or three months a deciduous membrane is passed, and the woman has never passed one before, an extrauterine gestation may be diagnosed almost with certainty from the history alone, and if milk appears in the breasts the presumption is still more strong. There may be no pain, and no other trouble of any kind. Under such circumstances an examination should be made, and if there is an extrauterine fœtation an abnormal mass will be found in the pelvis, or in the pelvis and abdomen, with the uterus separate from it. If, however, the fœtus develops in the Fallopian tube within the wall of the womb, the uterus would not be felt separate, but it would probably form, with the gestation, an irregular mass, unlike an ordinary pregnant uterus. Still, it might be very difficult to differentiate such a condition from a normal pregnancy with accidental hæmorrhages. Excluding this condition the mass found, assuming the child to be alive, would correspond to the growth of the fœtus, dating from about the time of the first irregularity of menstruation. In the later months the fœtus would be distinguishable by palpation. It might be felt far more easily than in the normal condition, and its movements might also be more obvious. They are often described as being more painful to the mother than when the child is in the uterus. Beyond these there may be no symptoms, or only some slight sickness, which perhaps would be attributed to normal pregnancy, and also there may be some dragging pains such as might arise in the case of an ovarian tumour or an intrauterine pregnancy. On the other hand, pain due to pressure and traction may be severe, and it may be almost impossible to define the fœtus by palpation on account of its position in relation to the intestines.

At full term a spurious labour may take place. After the child dies probably inflammatory changes will occur if matters are allowed to go so far, and it must be remembered that perhaps the patient may not be seen by any medical man until after the child is dead.

In the early stage, before the tube bursts, the ovum in the tube exhibits to palpation a very characteristic spindle shape, from which alone it has been said that a diagnosis may be made, but I doubt whether an extrauterine gestation is ever diagnosed without the aid of the history.

In the more common form of an extrauterine gestation in which the placenta becomes detached, the history differs in no way from that in which the gestation proceeds to term except that it is cut short in the earlier stages. There is the same amenorrhœa or slight delay or irregularity of menstruation, for which a medical practitioner may or may not be consulted. He is, however, usually called in in connection with the symptoms arising from the hæmorrhage. Very often about the time of the rupture of the tube a deciduous membrane is expelled from the uterus, and this completes the evidence to be derived from the patient's history. The sudden hæmorrhage into the peritoneal cavity or connnective tissue gives rise to acute pain with vomiting, quick pulse, faintness, and pallor, the three last being in proportion to the amount of blood lost.

An examination made immediately after the first hæmorrhage will reveal a boggy swelling in the pelvis more or less free from the uterus, if the blood has escaped into the peritoneal cavity, but if it is in the connective tissue it will push over and fix the uterus, pressing close up to its walls. The blood in the peritoneal cavity becomes a definite firm mass when an adventitious capsule forms around it. If the patient be kept quiet, and no fresh hæmorrhage arises, there is usually some elevation of temperature and pulse for a few days, and the tendency is for the blood to be absorbed, whether it be intraperitoneal or extraperitoneal. But fresh hæmorrhages may occur; after each there will be an alteration in the size and probably in the shape of the abnormal mass, which may become very large. With such a history, with these symptoms and with these physical conditions, there should be no hesitation in diagnosing an extrauterine gestation.

### Copious Unrestrained Hæmorrhage.

Fortunately this condition is rarer than that in which the slighter hæmorrhages occur, and, I think, also rarer than the cases which go on to term. The history is as in the other conditions described, but this accident frequently occurs very early, so there may be little evidence, and the patient may not be in a fit state to give any information. There is, however, very likely an account of good health until she was suddenly seized with pain. On examination there will probably be a small indefinite swelling in relation with one Fallopian tube, but as the tube has just ruptured and probably the membranes also have ruptured, and as the parts are freely depleted by the bleeding, the remains of the conception and its products may be soft and difficult to define. The blood in the peritoneal cavity being fluid cannot be felt, and blood in this situation can seldom be identified by percussion. It does not flow easily and collect in the dependent parts like serous fluid. Hence the chief evidence in these very dangerous cases is formed by the symptoms, which are acute pain in the abdomen, faintness, perhaps to the point of insensibility, profuse perspiration, breathlessness, increasing restlessness, a rapidly rising pulse-rate and increasing pallor—the symptoms, in fact, of hæmorrhage—but the blood, of course,

cannot be seen. It is a very difficult thing sometimes to tell when a patient's condition is due to loss of blood and when it depends on the shock of pain or of such an accident as the rupture or strangulation of bowel, but there is a steady progression of the adverse signs in the case of hæmorrhage which is, I think, characteristic.

The chief points then, are previous good health, perhaps a little irregularity of menstruation, very sudden and increasing collapse, with possibly a small swelling felt at the side of the uterus. There may be a history of recent slight attacks of pain and faintness and a deciduous membrane may have been discharged. Such evidence would aid in making a definite diagnosis of extrauterine fœtation, but the medical man may find that there is little or nothing to guide him to a diagnosis except the symptoms of hæmorrhage.

### Difficulties in Diagnosis.

It is obvious that as the history is so important an aid to the recognition of an extrauterine fœtation, especially in its earlier stages, the difficulty in identifying this condition must be greatly increased if it occurs after irregular menstruation of long standing. Then the diagnosis must depend mainly on the physical signs and symptoms. The symptoms may not be very urgent or definite, and an encapsuled mass of blood in the pelvis, unless there were rapid changes in its size and shape, would be very difficult to differentiate from other pathological states. It is only very rarely that we can be sure under such circumstances that the mass felt is not of long duration. In the following case, for instance, I had no suspicion that the patient had an extrauterine conception.

Last August a woman was sent to me, 40 years of age, married twenty years and with two children, the younger of them being 18 years old. She was unhealthy looking, and had complained of uterine discharge and menstrual irregularities for fifteen or sixteen years. She had been seized with sudden illness some weeks before I saw her, and on examination a big mass was found in the pelvis. When the febrile symptoms and pain with which she had been attacked had subsided she was sent up to see me from the country. There was a rounded tumour, filling Douglas's pouch, and fixed there. I thought from the history that it was probably an ovarian tumour which had become inflamed in consequence of twisting of its pedicle, or that there might be a large abscess in the left Fallopian tube. I recommended operation, and found that the mass was a collection of encapsuled blood due to rupture of the Fallopian tube.

In connection with the important evidence of the existence of an extrauterine fœtation which is afforded by the expulsion of a deciduous membrane, it is well to remember that some women form and throw off a decidua with almost every period.

### Treatment.

If a profuse hæmorrhage is diagnosed, no avoidable delay in resorting to surgical interference is justifiable. Nothing else will save the patient, and she may be almost certainly saved by prompt removal of the affected tube. The question may arise as to whether the patient is too ill to be operated on, but the worse she is the more urgent is the need for arresting hæmorrhage. The operation should, of course, be supplemented by saline transfusion, the two operations being performed as nearly simultaneously as possible.

When slighter hæmorrhages occur, complete rest may lead to absorption of the blood and the patient may have no more trouble, but where there are evidences of repeated hæmorrhages it may be better to operate and avoid the risk of further complications.

When the child is believed to be alive I consider the proper treatment to be to remove it by operation without delay. If the condition is diagnosed before the tube bursts the operation should be simple and safe, and there cannot be any object in waiting to see how much hæmorrhage will take place or whether the pregnancy will go on to term. Later, if the fœtus has escaped the dangers connected with the rupture of the Fallopian tube, to delay in operating is still to wait to see if a worse thing will happen. Under any and all circumstances it seems to me that, so long as the embryo is alive, danger must increase, and the risks of an operation must become greater with delay, whilst there is no reasonable prospect of avoiding an operation altogether. The only circumstances in which I should be inclined to waver in advising immediate operation when the child is alive would be those in which a pregnancy had advanced to the end of the sixth or the seventh month and it was considered desirable to save the life of the child at some risk to that of its mother. If, however, I were to sanction delay under these conditions I should state very clearly that I considered the risk to the mother to be increased by the waiting, and I should leave to the patient and her relations the responsibility of deciding in favour of postponing the operation.

It has been recommended that at term surgical interference should be put off until after the child is dead, so that the placenta may die and the risks of hæmorrhage may be avoided. Sometimes, however, the placenta may be easily removed by operation without loss of blood, if, for instance, it is mainly attached to the broad ligament and omentum. Undoubtedly difficulties from hæmorrhage may be very great. Notwithstanding this, it seems to me that any advantage gained in making hæmorrhage less likely by waiting till the child is dead will be fully counterbalanced by the extra risk of strong adhesions forming to the intestines in consequence of the presence of a dead fœtus and amnion amongst them. I have already pointed out that the living amnion and fœtus seem to cause little irritation.

The advice to operate with all convenient expedition on every case of extrauterine gestation in which the child is believed to be living may not meet with universal approval. But I have no hesitation in urging that to watch a living fœtus developing outside the uterus will in a very great majority of cases, if not in every case, expose the patient to greater risks than those of an operation.

References.
[1] Playfair's *Midwifery*, 1878, p. 95. [2] *Loc. cit.*, p. 96.

## THE DIAGNOSIS OF CANCER OF THE WOMB.*

By FREDERICK J. McCANN, M.D., C.M.Edin., M.R.C.P.Lond.,
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It has now been proved beyond doubt that if cancer of the womb be diagnosed at a sufficiently early stage in its course it can be cured by operation. I will first narrate a typical example of cancer affecting the neck of the womb, and then indicate some of the pitfalls in diagnosis.

A married woman, aged 54, was admitted into the Samaritan Free Hospital under my care on July 13th, 1896.

*History.*—At the end of February, 1896, she noticed a discharge of blood from the vagina, which continued daily until her admission into hospital. It was never offensive. She did not complain of any pain, and was always able to work, but was losing flesh. The menopause had occurred seven years previously, and she had had no blood loss until her present trouble commenced. She had had five children (twins twice) and two miscarriages. She was fairly well nourished, with no cachexia. Her appetite was good and she slept well.

On bimanual examination the uterus was found to be freely movable. There was no infiltration of the broad ligaments. A nodular growth was felt involving chiefly the posterior lip of the cervix, and extending upwards into the cervical canal. The appearance of the growth by the speculum suggested malignant disease, the surface bleeding readily when touched.

*Operation.*—On July 17th I performed vaginal hysterectomy. The operation occupied thirty-five minutes. The patient recovered and has remained free from recurrence. The growth was proved by microscopical examination to be a columnar-celled carcinoma.

*Hæmorrhage.*—This case illustrates the importance of hæmorrhage as an early sign of cancer of the neck of the womb. The bleeding may at first be small, occurring only after sexual intercourse. Later it may be evidenced by increased menstrual flow, and when this ceases a sanious watery discharge remains. In other cases a somewhat profuse bleeding suddenly occurs which may be regarded as a miscarriage. If, however, bleeding appears after the menopause a thorough examination of the pelvic organs should be made, as this is always a sign of some pathological process. The same is true of the profuse hæmorrhages which occur at the climacteric.

There is still a widespread belief that the great sign of cancer of the womb is a putrid discharge, but in early cases the discharge is not foul smelling, and the septicity of the discharge indicates sloughing of the cancerous surface, due either to an advanced stage of the disease, or to infection by fingers, syringe, or other instruments. In fact a cancerous growth may attain considerable proportions without causing any fœtid discharge. The fœtor is due to

* A paper read before the North London District of the Metropolitan Counties Branch of the British Medical Association.

infection with septic organisms, and is no part of the cancerous process.

*Pain* is a late symptom of cancer. Women, especially among the lower classes, will disregard hæmorrhage and putrid discharges; but pain, especially if it interferes with sleep, prompts the sufferers to seek relief. Unfortunately, however, pain, if at all severe, indicates that the disease has spread to the pelvic peritoneum and cellular tissues, and that it is too advanced for eradication.

*Wasting* and cancerous cachexia are the result of pain, sleeplessness, hæmorrhage, absorption of septic discharge, and possibly also of some product produced by the cancerous growth.

*Later signs and symptoms* of cancer are due to the spread of the disease. They are bladder troubles and fistulæ (recto-vaginal and vesico-vaginal), blocking of the ureters, followed by hydronephrosis and uræmia; pressure on the iliac veins, causing thrombosis, and swelling of one or both legs.

*Death* occurs from marasmus, uræmia, or peritonitis in one to two and a-half years in untreated cases.

### Diagnosis.

I will now indicate some common mistakes in diagnosis, choosing for this purpose cases which have been sent to me under the impression that they were cancerous.

1. *Cervical erosions*, especially the cockscomb-like erosion which hangs from the cervix and bleeds readily when touched. An early cancerous growth has a sharp, prominent, clearly-raised, and somewhat infiltrated margin: the base is irregularly nodulated; it is raised above the surface, and is yellowish-pink in colour. The erosion is bright red, tears very readily, and has no hard or infiltrated edge.

2. *Mucous polypi* occurring in women after the menopause, with ulceration and sloughing of the surface. A case of this kind was sent to me under the impression that the patient had advanced cancer. Three polypi were found hanging by a stalk from the cervix; their surface was ulcerating, causing an offensive purulent discharge. The discovery of the stalk and the appearance of the polypi settled the diagnosis. The stalk was ligatured and the polypi removed.

3. *Chronic endocervicitis*, with plugged follicles (Nabothian ovules), causing hardness of the cervix and irregularity of the external os uteri. Puncture of the follicles with a knife, allowing the escape of the glairy mucoid contents, will settle the diagnosis.

4. *Fibromyomatous polypus*, with sloughing of the surface, causing a profuse stinking discharge, is frequently mistaken for malignant disease. If, however, a careful local examination be made, the polypoid nature of the swelling, together with the fact that the surrounding neck of the womb is healthy, will exclude malignant disease.

5. *Fungous endometritis* (uterine adenoids), when the hypertrophied nodules project through the external os uteri, has caused errors in diagnosis. Here it will be necessary to explore the uterine cavity, and also to examine portions of the growth. Such cases, however, are more apt to be mistaken for cancer of the body of the uterus.

6. I had a patient sent to me supposed to have a cervical myoma. The cervix was enlarged, having on the left side a swelling which certainly felt not unlike a small myoma. The external os was a little expanded, and on introducing the finger it entered into a crateriform cavity, which extended in the direction of the left broad ligament. This then was an example of cancer beginning in the cervical canal. It is the most malignant form affecting the neck of the womb, because the growth is in the direct line of the lymph channels which run in the base of the broad ligaments, and moreover the disease is usually well advanced before it is detected. In such cases it is necessary to insinuate the finger into the cervical canal, or if necessary to dilate the external os in order to facilitate the introduction of the finger.*

### Cancer of Body of Uterus.

I shall now narrate a case of cancer of the body of the uterus.

A lady, aged 53 years, was seen by me in August, 1900.

*History.*—For eighteen months her menstrual periods had been irregular, and had ceased for three months before I saw her. The menstrual flow had been very profuse and accompanied by clots. For six months she had had pain in the lower part of the back during the period. Between the period she had no pain or blood loss, but for six months she had a profuse muco-purulent discharge, which became offensive six weeks before I saw her (I believe the result of being examined). She stated that she was losing flesh. She had had one child 28 years ago, and 15 years later a miscarriage at the third month.

*Examination.*—She was well nourished, and appeared to be in fairly good health. She suffered very little pain, and was able to attend to her household. On bimanual examination the uterus was found to be of the size of a three months' pregnancy. It was freely movable, and from its interior a copious purulent discharge issued. On looking through the speculum the cervical canal was seen to be occupied by necrotic tissue. I diagnosed cancer of the body of the uterus, and advised operation.

*Operation.*—The uterus was removed by vaginal hysterectomy on August 5th, 1900. The patient recovered and has remained well.

This case exemplifies the important signs of cancer of the body of the uterus, namely, hæmorrhage, discharge, and enlargement of the uterus.

Pain is stated to be an earlier symptom than in cancer of cervical cancer. The periodic attacks of severe pain may be due to uterine contractions produced by accumulated secretions. I believe, however, that pain is not an early symptom, and that the disease advances considerably before causing any painful sensations.

Malignant disease of the body of the uterus is more chronic than that of the cervix, and in some cases appears to be preceded by a benign form of adenoma.

### Diagnosis of Cancer of the Body.

Cancer of the body of the uterus has to be distinguished from

1. *Pregnancy* in the earlier months, associated with hæmorrhage and discharge. Here the history and physical signs will serve to exclude malignant disease. The condition of the breasts should be noted. On vaginal examination, the purple discoloration of the vulva is a confirmatory sign. By bimanual examination the uterus will be found enlarged and the cervix softened. The character of the uterine enlargement is important, for in the early months of pregnancy the uterus retains its pear shape, and the internal fingers may be made to meet those of the external hand where the cervix joins the body of the uterus. In cases of malignant disease the enlargement is more uniform, and the cervix is not softened to any appreciable extent. In cases in which the blood loss is continuous dilatation of the cervix will be called for and the diagnosis thus completed. Retained portions of placenta or membranes may also lead to mistakes. The history of the case and the result of dilatation will decide.

2. *Intrauterine tumours* (polypi) present certain difficulties in diagnosis. The amount of hæmorrhage is usually greater even than in cases of cancer. Exploratory dilatation and examination with the finger *in utero* will determine the true nature of the case.

3. *Fungous endometritis*, if well marked, gives rise to considerable difficulty in diagnosis. The scrapings should be examined by a microscopist versed in uterine pathology. When the disease recurs again and again after curetting a guarded prognosis should be given, as malignant disease may be a later development.

4. *Senile endometritis* is an interesting disease, which must always be carefully watched, as cancer may be a sequela. The patients I have seen have been over 60 years of age. There is generally little or no pain, but a more or less constant purulent discharge, at times blood-tinged. The purulent discharge is thin and greenish-yellow in colour, with a fœtid odour. It is different from the discharge in advanced cancer, as it never contains pieces of growth. Further, the discharge may come on quite suddenly and be very copious, or even exhibit considerable variation in amount from time to time. It is probable that the discharge in these cases collects in the uterus forming a pyometra, and is voided at intervals. When the uterine cavity is dilated nothing abnormal may be appreciable to the finger, or a patch of diseased mucous membrane may be detected which may prove on examination to be commencing malignant disease. The uterus affected by senile endometritis is usually not much enlarged.

5. *Myoma.*—The enlargement of the uterus from myoma may be difficult to distinguish from that due to malignant disease; a uterus affected by cancer of the body may attain a

* The appearance of cancer affecting the cervix uteri was demonstrated on a series of specimens removed by the writer. Three main clinical types may be distinguished: (1) Where ulceration exceeds growth as in those cases of deep ulcer, where it is difficult to locate the orifice of the cervical canal; (2) where ulceration and growth are equal, as in the case narrated; (3) where growth exceeds ulceration, as in the so-called cauliflower excrescence. This last form is relatively rare.

considerable size. I have myself removed by abdominal panhysterectomy a uterus which reached above the umbilicus, and whose cavity was filled with that cheesy purulent material so frequently seen in cancer of the uterine body. Cancer may develop in the body of a myomatous uterus. It is not uncommon to find after removing the uterus that the two diseases coexist. A myomatous uterus containing in its interior a sloughing polypus may easily be confounded with cancer. Exploratory dilatation of the uterine cavity will in the majority of cases settle the diagnosis. A microscopical examination of any tissue removed from the interior of the organ will aid in doubtful cases. Moreover it is well to have obtained your patient's permission to do hysterectomy if necessary, and so avoid the necessity of a second operation.

In conclusion, it may be stated that any enlargement of the uterus found after the menopause should be carefully watched, and if it increases the organ should be removed.

## ACUTE LEAD POISONING IN WOMEN RESULTING FROM THE USE OF DIACHYLON AS AN ABORTIFACIENT.

BY W. WRANGHAM, M.D.LOND.,
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IT is now nearly eight years ago since Dr. Pope of Leicester published the notes of two cases of lead poisoning in women caused by taking diachylon pills, both of which ended fatally. Since that date cases have been recorded by Dr. Crooke,[1] Dr. C. B. Taylor[2] and Dr. Branson,[3] and finally, a year ago, Dr. Ransom[4] published an article dealing with the subject, and giving notes of several cases. The subject, therefore, is no new one, and my reason for publishing these cases is partly on account of the severity of the type and the rather unusual symptoms which some of them presented, and partly to emphasise the fact that, in the cases of lead poisoning in women, diachylon as a possible cause must always be remembered.

That the consumption of this preparation for illegal purposes is prevalent in the districts of Leicester, Nottingham, and Birmingham I think there can be no doubt from the cases that have been recognised there. It would now appear that this pernicious practice is carried on in Sheffield, for the fifth case in my series occurred in this town.

For permission to make use of the notes of Cases III and IV I am indebted to Dr. Pope, and of Case II to Dr. Headley Neale.

CASE I.—M. A. C., a single woman, aged 22, was admitted into the Leicester Infirmary on June 7th, 1898, suffering from blindness and loss of power in arms and legs.

*History.*—Patient says she had a child a few weeks ago: she is not certain of the date, but she was very ill after it, and for a week previously. She was not conscious of what was happening until May 29th, 1898. When she "woke up" on May 29th, she was not able to tell by touch "glass from wood, or wood from anything else." She was not able to raise her hand at the wrist at all, and was quite blind. She had been in the habit of taking three pills a day since October, 1897, until this illness (which began apparently about March, 1898). Then she was away from work for eight weeks. During the greater part of this time she was in bed owing to severe attacks of pain in the abdomen, which came on suddenly and doubled her up. Soon after this she was confined. Since then the abdominal pains have been less frequent, and have now been absent for some time. The blindness, she says, came on since her confinement. At the time of her confinement she is said to had convulsions.

*State on Admission.*—The most noticeable features in the patient's condition were the ocular symptoms and the extreme general weakness. There was considerable proptosis of the right eye, and the lids only just came together when she closed it. There was great weakness of all the ocular muscles. On the left side the globe was almost immobile: on the right the movements were only slightly less limited, for although there was some power in an upward and downward direction, there was very slight movement to the inner side, and none outwards. The pupils were dilated; the left contracted to light; the right did not, but varied in size on attempting to move the eyes. The right eye was quite blind; in the left there was perception of light, but fingers could not be counted. On examination of the fundus, intense papillitis was found in both eyes, and a few quite small retinal hæmorrhages. The media were clear.

There was extreme muscular weakness, and the patient was unable to stand unsupported. There was wasting of the muscles about the shoulder joint, and of the thenar and hypothenar eminences. The extensors of the wrist were very weak, causing wrist drop. In the legs, the extensors of the feet were weak, and there was much flabbiness of all the muscles of the limbs. In the left hand, sensation to touch was defective over the thumb; there was an oblique line of hyperæsthesia in the palm, and beyond this impairment again, with delayed sensation. Painful stimuli were readily felt. In the right hand there was delayed sensation, and some irregular hyperæsthesia. In the feet and legs there was great deficiency in localisation, a touch on the foot sometimes being referred to the thigh. The superficial reflexes were for the most part exaggerated. The knee-jerks and elbow-jerks were absent on both sides. Her mental condition was dull, and her memory defective. There was a very definite blue-black line on both gums (which had quite disappeared by July 4th).

During her stay in the infirmary she suffered from pains in the abdomen, limbs, and head and neck. On one occasion she had a hysterical emotional outburst. She was discharged relieved on September 10th, 1898, having regained almost complete power in the affected muscles. Her eyes, however, had suffered irreparable damage. There was no longer any ocular palsy, but vision in the right eye was restricted to perception of light; with the left eye she could count fingers at a distance of a metre. There was consecutive atrophy in both eyes, with much distortion of the right disc.

The child of this woman was born at about full term, removed from the mother, and brought up carefully by hand. It lived a month, and at death only weighed 2 lbs. 11¾ ozs. An inquest was held. The liver and kidneys were examined for lead, but none was detected.

CASE II.—R.B., married, aged 24, was admitted into the Leicester Infirmary on June 25th, 1898, complaining of pain in the head, sickness, and failing sight.

*History.*—Patient first felt ill on May 29th, 1898, when she had a bad bilious attack which lasted a fortnight. She had much pain in the head, neck, and shoulders, and was continually vomiting green, bitter material. She took but little food, and that was returned almost immediately. These symptoms all came on suddenly. The attacks of vomiting continued at frequent intervals for four weeks. There was not much abdominal pain, and none of a colicky nature. She had weakness of the right hand and arm, so that she was unable to grasp things properly or to fully extend the wrist. The left hand and arm were hardly, if at all, affected. She had only noticed that her sight was failing a day or two before. Patient admitted that she had been taking lead pills for a fortnight before her illness began, and continued to take them until June 14th, on which date she had a miscarriage. She thinks she was pregnant about a month. She had three children living who were well, and had never previously had a miscarriage.

*State on Examination.*—There was paresis of the external rectus muscle of the right eye, causing internal squint and diplopia. In the left eye the muscles were unaffected. The pupils were of equal size, and reacted normally to light and on accommodation. Optic neuritis was found in both eyes, the discs being red and swollen, and the edges indistinct. No retinal hæmorrhages were seen. The grasp of both hands was weak, the right being most affected. There was no wrist-drop or foot-drop. The knee-jerks could not be elicited. There was a well-marked bluish-black deposit under the gums at the alveolar margin, and also under the mucous membrane of the lower lip. The pulse was slow, 56 to the minute, full, but compressible; the tongue was furred, and there was considerable anæmia.

*Progress.*—On the fourth day after admission she became delirious, being talkative and noisy, sleepless, quite irrational, and was constantly getting out of bed or trying to do so. Her mental condition improved in a few days, and on July 8th she left the infirmary at her own request. The grasp of the hands was a little stronger, but the knee-jerks were still absent. The blue line was still very marked.

As a result of the inquest on M.A.C.'s child, the police took the matter up, and after a time a woman who had given evidence at the inquest and from whom these two patients had obtained pills, was arrested and charged with administering noxious drugs to them for an illegal purpose. The two cases were tried separately. Among the pills seized by the police was one composed of oleate of lead. On both occasions the woman was acquitted.

CASE III.—A. B., a married woman, was admitted into the Leicester Infirmary June 11th, 1899, on account of severe abdominal pain.

*History.*—Two months before she began to complain of pain in the abdomen and back, which had continued on and off up to the time of admission. At the same time she had gatherings in both hands. She had lost much flesh during this period and had been very constipated. She was blistered on the abdomen with turpentine on June 9th, but with no relief to the pain. The catamenia were regular, except that the last period was a week over time. She had suffered from "growing pains," but had never had rheumatic fever or chorea, or sore throat. Her husband stated it had come to his knowledge some months ago that his wife had been taking some pills to prevent her having any more children. He had remonstrated with her and forbidden her to continue them. Lately he suspected that she had been taking them again.

*State on Admission.*—She was very weak. The pulse was 90, regular, and of fair volume. The cardiac dulness was not increased, but a slight thrill was felt at the apex, and a short presystolic *bruit* was detected on auscultation. The knee-jerks were absent; the plantar reflex was present and not exaggerated. The tongue was furred, and a thin blue line was present on the alveolar margin of the gums, particularly noticeable over the right central incisors and upper and lower canines. She spoke in a whisper, and was quietly delirious at times. There was no ocular paralysis or papillitis.

*Progress.*—Patient continued to be restless and delirious and slept badly. The bowels were constipated. On June 20th the tongue was clean. She had slept well after paraldehyde 5j, and her mental condition seemed somewhat improved.

On June 22nd there was pain in the calves of the legs on pressure, and great weakness of the legs and hands. The knee-jerks were still absent. The pulse was 122. She was delirious again.

On June 26th the pulse-rate had increased to 160 to the minute. The delirium continued. She still spoke in a whisper. No laryngoscopic examination could be made. Breathing was more rapid, the chest moved badly, and there was deficient air entry; moist *rales* were heard over the lower lobes of both lungs. There was marked weakness of the diaphragm,

and on gently raising the patient up in bed the abdominal muscles remain quite flaccid.

She continued to get worse. The temperature rose to 100.4° F. (hitherto it had never been above 99° F.); profuse sweating came on; she became comatose, respiration and pulse both rapidly failing, and she died on the evening of June 27th.

The following case perhaps ought not to be included with the others as definitely due to diachylon, since I could obtain no history of taking such pills. But I feel justified in regarding it as due to this cause, for the woman was obviously suffering from severe lead poisoning, and there was nothing in her occupation or surroundings to cause it. It is in such a case as this that one is at a loss to account for the symptoms, unless self-administration be remembered. Therefore, even when full allowance is made for the fallacies of *a priori* argument, I still hold the most probable cause of the lead poisoning was diachylon. The denial of taking such pills counts for very little, since a woman naturally observes secrecy on such a matter. This fact is well illustrated in the last of my cases.

CASE IV.—B.C., aged 21, a glove hand, was admitted into the Leicester Infirmary, June 27th, 1899, for sickness and anæmia.

*History.*—Patient had had three children; the first was living, the second died when 7 months old, the third when 5 months old. At Easter, three months before, patient had a miscarriage when two months' pregnant. Since that time she had been gradually getting paler and weaker; had been sick after food and had lost flesh. There had been constipation, and she had suffered much from headache and backache. Amenorrhœa had been present since Easter.

*State on Admission.*—She was anæmic; the tongue was furred, and she was sick after taking milk. She complained of continous headache. Nothing abnormal was detected in the chest; a loud venous hum was heard in the neck; the pulse was 66, and rather high in tension. Examination of the blood showed:

$$\frac{\text{Hæmoglobin}}{\text{Red corpuscles}} = \frac{50}{84}$$

There was no localised tenderness in the abdomen. A characteristic bluish black line existed at the margins of the upper and lower gums. The urine contained no albumen. The knee-jerks were absent. There was an alternating internal squint, causing diplopia. The left external rectus was capable of a small amount of movement, but the right was quite paralysed. If, while the left eye was closed, an object was held a short distance external to the vertical plane of the right eye, it was projected by the patient an inch beyond its true position. Examination of the fundi revealed redness, striation, and swelling of both discs, with indistinctness of outline, and inflammation of the retina around the discs. The vessels were tortuous, and the arteries refractile. This condition was more pronounced on the left side.

*Progress.*—For the first fortnight after admission the sickness continued despite the most careful feeding and treatment. On July 4th menstruation occurred and continued until the 6th; the pulse continued slow, about 60 to the minute. On the 13th the catamenia returned again. For the next fortnight she seemed to improve, was less sick, and better able to take nourishment; but on the morning of the 25th she vomited half a pint of deeply bile-stained watery vomit, and stated that she felt giddy. On the evening of the 26th she had an epileptiform attack, becoming convulsed and cyanosed, the fit lasting for two or three minutes. She was quite conscious up to the time of the convulsion but never regained consciousness. She had another fit at midnight, the arms and legs were drawn up and began to twitch, the head and eyes were first turned to the right and then they changed steadily round to the left; urine was passed during the fit. On July 27th and 28th patient had more slight convulsions, some being general, others only right sided. The temperature, which hitherto had been normal, now oscillated between 100° and 101° F. There was no control over the sphincters. She was obviously becoming exhausted. The pulse was 104, respiration 36. There was rattling of mucus in the throat, rhonchus and coarse *râles* were heard over the chest. All the muscles were relaxed and flaccid, and the patient died in a state of coma on the evening of July 28th. The urine contained no albumen.

*Necropsy.* The lungs were congested and œdematous; there was no disease in any of the organs. In the brain the vessels of the arachno-pia were engorged, and the centrum ovale somewhat injected. There was nothing else found.

The last patient in this series was admitted on a certificate of unsoundness of mind into the South Yorkshire Asylum. At first it was thought she might be suffering from an intracranial tumour, but there was something in her appearance which reminded me at once of the previous cases—the anæmic and, at the same time jaundiced look; the dilated pupils, the eyes unable to move outwards, and the profound weakness—and, on looking at the gums there was no longer any doubt. In this case the cause of the lead poisoning was not long in being discovered. The husband on being questioned brought up some pills which he asserted his wife had been taking; on examination they were found to consist almost entirely of oleate of lead. Yet the woman had persistently denied having taken any pills.

CASE V.—M. E. F., married, aged 28, was admitted into the South Yorkshire Asylum, Wadsley, on March 7th, 1901.

*History* (obtained from the husband).—Seven weeks before admission patient imagined herself pregnant, and consulted a midwife, as she did not wish to have any more children. She obtained some pills, which she took daily. At the end of a fortnight she had to take to bed on account of sickness, pain in the epigastrium, and weakness. She continued in bed for five weeks, until, in fact, she was brought to the asylum. She had had three children, the youngest being 6 years old.

*State on Admission.*—She was restless, had hallucinations of sight, attempting to pick things off her dress, and heard imaginary voices. She was in a very weak condition, and could not walk without assistance. The pulse was 140, and irregular; there was a trace of albumen in the urine; the skin had an icteric tint, and there was a pronounced slaty blue line on both gums. There was diplopia, with much impairment of vision, and an alternating internal squint caused by paresis of both external recti. The pupils were equal and dilated, and reacted sluggishly to light. On examination of the fundi, intense double optic neuritis was found, with inflammation of the adjacent retina; there were two small hæmorrhages just above the right disc, and both maculæ were inflamed. General muscular weakness existed; the grasp of the hands was feeble, and the power of wrist extension was impaired though not lost. The legs were weak, and she dragged them in walking (when assisted). The knee-jerks were present.

*Progress.*—She was sent to bed, but was restless, and slept badly, and was in a frightened condition, fearing she would not recover. At times she conversed quite sensibly, and could give fair particulars of her illness. She improved after a time, and then hallucinations of sight again reappeared, with fear of falling down steps, and similar delusions. After April 1st she made rapid headway, taking her food well, and putting on flesh. By April 5th power had returned in both external recti, so that she could turn both eyes outwards without squinting, but occasionally, if the eyes were fatigued, the squint reappeared. Vision was R. = $\frac{6}{9}$, and L. = $\frac{6}{9}$, with no scotoma in either eye; with the ophthalmoscope the discs were found to be less swollen and hyperæmic; there was some stippling around the right macula. The blue line on the gums was replaced by blackish puncta. The urine was free from albumen. Her mental condition was clear, and she was now considered almost completely recovered.

In all these cases the effect of the poison was manifested chiefly in the nervous system, although gastro-intestinal trouble and abdominal pain were also present. The ocular symptoms were particularly noticeable, no fewer than four of the patients presenting optic neuritis and ocular paralysis. The former condition, when present, is rightly regarded as indicative of danger, and in all the cases exhibiting it mental disturbance was present, although convulsions only occurred in Cases I and IV, in the latter rapidly proving fatal. Involvement of the ocular muscles seems to be a much rarer occurence. Dr. Buzzard has recorded a case of paralysis of the third nerve, and one of Dr. Ransom's patients had weakness of the external rectus of one eye. Yet, out out of these five patients four suffered from ocular paralysis. Case I had almost complete external ophthalmoplegia; Cases IV and V presented sixth nerve palsy on both sides, and Case II had paralysis of the right sixth nerve only. These cases are too few to draw any definite conclusion from, but they suggest the fact that the sixth is, of the ocular nerves, especially vulnerable to lead. Such a selective action is familiar in the antibrachial, brachial, and Aran-Duchenne types of lead palsy. Case III died with symptoms of an acute multiple neuritis, the paralysis extending from the limbs to the muscles of the trunk and diaphragm, and involving probably also the pneumogastries.

Another fact which is well brought out is the length of the incubation period of lead, if one may use the term, for although large quantities of the metal were ingested, it was some weeks before serious symptoms appeared. These, again, persisted, or even grew worse after the patients had ceased taking the pills.

The question of combating this practice is a serious one. The ethical side may be disregarded here, but that some effort should be made to protect women from permanent injury or death at their own hands, or from the advice of so-called "midwives," must surely be granted. Moreover, not only do the mothers themselves suffer, but the children, when born alive, frequently succumb early. The Home Secretary expects notification of cases of lead poisoning resulting from industrial occupations. Why should the notification of cases be restricted to industrial forms? If all cases of lead poisoning were notified to the district medical officer of health, the latter would no doubt be able to estimate which were the result of illegal practices.

REFERENCES.

1 *Lancet*, July, 1898. 2 *Lancet*, September, 1898. 3 BRITISH MEDICAL JOURNAL, December, 1899. 4 BRITISH MEDICAL JOURNAL, June, 1900.

THE Canadian Tuberculosis Association has recommended to the Canadian Government restrictions similar to those recently issued by the United States Superintendent of Immigration in refusing to allow into the United States immigrants suffering from tuberculosis.

## A CASE OF RUPTURED UTERUS IN A MULTIPARA.

By J. POLLOCK SIMPSON, M.D.,
London.

The following case is the first case of the kind I have met with in an experience of over 2,000 midwifery cases.

A charwoman, a widow, aged 33, whose husband had been dead twelve months, was taken in labour with her fourth child at full term on the morning of May 29th, 1901; none of her neighbours knew she was in the family way, not even her mother or sisters, two of whom she saw frequently, and it was only when she had been in labour several hours that she confided in her next-door neighbour that she was about to give birth to a child, and as she felt very bad, asked her to send for a doctor. This must have been after she had cut the arm off the child and after rupture of the uterus, as the arm was found when the neighbours entered her room. I was out when sent for, and on reaching home I proceeded to her at once and found a midwife already there, who showed me the right forearm of the child lying in a clothes-basket. The patient was *in extremis*, unable to speak, almost pulseless, and gasping occasionally: there was little or no external hæmorrhage. The stump of the right arm was protruding from the vulva, the forearm having been separated with a breakfast knife. The right arm had presented, and, I believe, the poor woman knowing the child could not be born without her relatives and neighbours knowing, in her pain and desperation cut the forearm off just at the epiphysis of the olecranon process of the humerus, and this act, in my opinion, was the cause of her undoing. I tried to deliver as she was gasping her last, but I could not find a foot to lay hold of, and as she was pulseless I desisted from any further attempt at extraction.

A *post-mortem* examination was made two days after death. The body was well nourished. On opening the abdomen the child and placenta was found in the peritoneal cavity, with the exception of the stump of the right arm and the head, which were in the cavity of the uterus. The reason so much of the child had escaped into the abdominal cavity was no doubt the movement in putting the body into the coffin and in bringing it to the mortuary, as only the feet and placenta had escaped into the cavity when I examined her just before death; the peritoneal cavity was filled with blood clot and fluid blood. The rupture, about four inches in length, was on the left side, just at the point where the peritoneum is reflected to form the broad ligament. The edges of the tear were uneven, but the tear did not involve the fundus nor the vaginal portion. The uterine tissue appeared healthy to the naked eye, and no trace of organic disease could be discovered. The other organs of the body were healthy.

My theory as to the cause of the rupture is this: The head of the child—a strong male—was lying in the left ilio-hypogastric region with its back to the outlet of the pelvis; this being so and the body being doubled on itself the feet would be in the region of the left sacro-iliac synchondrosis. When the mother amputated the forearm it produced strong reflex action in the child, causing it to plunge with its feet against the uterine walls, which would be in a relaxed and weakened condition, causing rupture at this point. Thus it escaped with its feet first into the peritoneal cavity, and dragged the placenta with it.

The causes of rupture given in textbooks are many and varied. Obstruction to labour either from narrowed pelvis or tumour, pressure of the head against the sacral promontory or the ileo-pectineal lines, fatty degeneration of the uterine fibres, more than normal, softening and thinning of the uterine walls, disease of the walls—for example, cancer—and obliquity of the uterus. Ergot is said to be responsible for many cases when given injudiciously: blame could not be given to ergot in this case. The frequency of rupture according to Jolly is from 1 in 1,300 to 1 in 3,403 deliveries. Guy's Hospital Charity coincides with Jolly's statistics, as according to Galabin when assistance was given sparingly and forceps cases were in the proportion of 1 in 200 deliveries rupture occurred in the ratio of 1 in 3,371 deliveries subsequently where forceps cases were 1 in 93 the cases of rupture were 1 in 5,098, thus proving that the legitimate and timely use of forceps has considerably reduced the chances of this terrible danger to the parturient woman, and so saving life.

## INFECTION BY THE URINE IN CONVALESCENCE FROM TYPHOID FEVER.

By T. CLIFFORD ALLBUTT, M.D., F.R.S.,
Regius Professor of Physic, University of Cambridge.

In the British Medical Journal for November 24th, 1900, Dr. Walker, of Peterborough, published a very important article on the dangerous quality of the urine of persons convalescent from typhoid fever. Dr. Walker traced an infection of certain wells to the urine of a convalescent trooper from South Africa. These wells, as subsequent investigation showed, had supplied to the inmates of a particular house water contaminated by sewage: but with no apparent ill consequences, until the trooper came thither, who had been discharged from hospital in South Africa convalescent from enteric fever. On the seventeenth day after his arrival at the house 12 persons were laid up with the fever. Dr. Walker urged on sanitary authorities their responsibility in this matter. Seeing that in urotropine we have a ready means of disinfecting the urine of such convalescents,* I also would urge medical practitioners to satisfy themselves of the purification of the urine of convalescents from typhoid before allowing them to go at large. That the bacilli may live in the urine for many weeks at least has been impressed upon us by Dr. Horton-Smith; and since the publication of his Goulstonian Lectures a case has been recorded by Dr. Cushing in which the bacilli are said to have lived in the urine for a period of no less than five years![1] On account of many engagements I was unable at the time of Dr. Walker's communication to try to enforce his lesson, and to arouse professional opinion to a sense of this new duty; but I write now, as the enforcement is still necessary.

The reason why I should myself enter upon this homily is that I have been in the habit for many years of pressing upon my pupils the danger of letting convalescent "typhoids" go free without thorough disinfection of the stools for many weeks after recovery. It now turns out that I bestowed my labour erroneously; my suspicions were justified, but my advice was ill-directed. Many years ago I published the following history, in what journal I do not remember, and it is no matter now. Briefly it was as follows: I had then been called to a large farm in the neighbourhood of Maryport, where the head of the house lay ill of typhoid fever. The very intelligent medical man who met me told me that the case was a test of Budd's law of the specificity of the infection, then attracting attention. This law had been verified by my reports of two outbreaks of the disease, at Bramham College and at the Flounders Institute at Ackworth, in both of which cases the drinking water had been long fouled with sewage, but without engendering enteric fever until in each case, a typhoid patient had been introduced into the area from a distance. In the Bramham College a boy returned to school sickening with the disease; in the other institution a visitor from Wakefield fell ill with it after being but a day or two at Ackworth. In these cases typhoid stools had found their way into the water sources; but my friend assured me that on the Cumberland farm there had been no such importation. The farm, rather a large community, was isolated and remote. The goings of every inmate were well known; no visitor had entered its precincts. Yet on a certain day enteric fever broke out, and as it seemed, "spontaneously."

I was unable to return home the same night, so having some time on my hands I set to work to unravel the coil. After all chat with the family had proved unavailing, I asked to have all the dependents of the place called together, that I might obtain direct information from each. In this way I lighted upon a charwoman from Carlisle who admitted at once that she had had the disease recently, but had been well for some weeks before accepting an engagement to work at

* It is much to be regretted that recent experience has shown that the use of this remedy is not free from certain risks.

the farm, where she had been occupied for two or three weeks (I have not my original paper at hand). I asked her if when she came to the farm she had any diarrhœa, but this she denied. She assured me that during these intervening weeks she had been in good health.

At this point arose a further remarkable problem. She had fallen ill at another remote farm, where she had been working; so that unless there had been fever there our difficulty was but thrown one step backward. At this farm accordingly I had full inquiries made, and with the parallel result that there, too, typhoid fever had been unknown till this woman fell ill (whether other cases had arisen there I forget, but I think it was so). Thus, as I say, our difficulties were not solved, only pushed back a step. To cut a long story short, it turned out that to this second isolated farm, then and always before free from typhoid, had come a kinsman of the occupier, who was convalescent from the disease contracted in Liverpool. He came to the farm for country air after, as was supposed, a perfect recovery had been made.

On the basis of these observations of mine I begged Dr. Dreschfeld, when engaged upon the article on Enteric Fever for my *System of Medicine*,[2] to go closely into this matter, urging upon him that the bacilli survived for indefinite terms in the stools—in the *stools*, there was my error. Dr. Dreschfeld, with unwearied kindness, examined again and again the stools of convalescents from typhoid, but with no success in this respect. With the help of Dr. Richmond the fullest investigation was made into the alleged survival, but in vain. In the stools the bacilli certainly do not survive long into convalescence, even if until convalescence. To suspect the urine never occurred to me. The victims of the arrows of Apollo fell at our feet but we failed to see whence they came.

Dr. Hugh Walsham has been so good as to demonstrate to me that tubercle bacilli are usually excreted by the kidney without the formation of "tubercle" in the organ; and Dr. Horton-Smith and others assure us that typhoid bacilli thus excreted may come through in millions, and for a period long enough to poison a county. I repeat, then, that upon all practitioners, and medical officers of health especially, it is incumbent to see that the disinfection of the urine urged by Dr. Walker is carried out systematically in every case before the patient is allowed to mix again freely with his kind.

REFERENCE.

[1] Richardson, *Journal of Experimental Medicine*, January, 1899. [2] *System of Medicine*, vol. 1, 1896, pp. 799 and 800.

## ON THE EVOLUTION OF MYELOPATHIC ALBUMOSURIA.

By T. R. BRADSHAW, B.A., M.D., M.R.C.P.,

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It is now more than three years since I first brought the subject of myelopathic albumosuria to the notice of the Royal Medical and Chirurgical Society. The disease was then unknown to the profession in this country, and only 8 clear cases were to be found recorded in the medical literature of Europe.

Since that time 7 more cases have been published, more or less fully, bringing the total up to 16. Of these I have personally examined 2, and in a third case I have been enabled to make a thorough investigation of the urine. There is one point in the clinical history of the disease which has never been determined—namely, the manner in which the albumose appears first in the urine. In all recorded cases it has been present in massive quantities, but it has never been ascertained whether it begins to appear in minimal quantities and gradually increases, or whether the onset is sudden, the maximal amount appearing almost from the first. The possibility of the latter mode of onset is suggested by what we know of the onset of pancreatic diabetes.

I have lately been consulted by a physician of eminence practising on the Continent of Europe, who is the subject of myelopathic albumosuria, and owing to exceptional circumstances it was possible to detect the abnormal condition of the urine at an early stage. As this is the first case of the disease which has been recognised as such in a country with a population of more than 50 millions, it is not surprising that the exact condition of the urine was at first apparently not understood, the albumose being mistaken for albumen; but at the present time the reactions are highly characteristic, and apart from the symptoms which have recently become prominent, they leave no possibility of doubt as to the nature of the case.

The albumose was first observed in December, 1899, when the patient, who was then 53 years of age, had an attack of mild pneumonia. The quantity was at that time minute, but it has subsequently gone on continually increasing, and has reached a maximum of 10 parts per 1,000. Until the middle of May in the present year the patient felt no inconvenience and was able to follow his profession, but since then he has grown pale and lost flesh and strength. He has also found a soft tumour about the size of a hen's egg, in connection with one of his ribs.

The foregoing account of the case does not claim to be in any way complete, but it illustrates two important points, one of which is new.

1. The presence of the albumose in the urine is the earliest symptom of the disease, and may be observed for many months before there are any other indications of failing health, or any local signs of alterations in the skeleton.

2. If we may be permitted to generalise from the only case in which the point has been investigated, the albumose is first excreted in small amounts; but, owing to the fact that at this stage the subject of the disease does not suffer any inconvenience from it, he is not likely to consult a medical practitioner, and so the urine is generally not examined until the albumose has risen to a large amount. Its early discovery in the present instance was doubtless due to the fact that its onset closely coincided in time with an acute illness, and that the subject of it a member of our own profession.

## ON SOME CASES OF HÆMORRHAGE INTO THE SKIN AND SUPRARENAL CAPSULES.

BY

PERCY S. BLAKER, L.R.C.P.Lond., M.R.C.S.Eng., Resident Medical Officer, East London Hospital for Children, Shadwell.

and

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The following four cases are apparently of sufficient rarity to justify us in putting them on record; at all events they are the first cases that have ever been noted in this hospital.

CASE I.

G. F., a male child, aged 11 months, was admitted to the East London Hospital for Children, Shadwell, on February 4th, 1901.

*History.*—On the day previous to admission the child was running about and playing, apparently quite well. At 9 P.M. he went to sleep, but a quarter of an hour later he woke up and vomited slightly. He was very restless all night, and on waking in the morning he did not seem at all well, and the mother noticed one or two dark spots on the back. At 7 A.M. violent diarrhœa began, the stools being very frequent, watery, and yellow-green. He did not again vomit. From this time he got rapidly worse, and at 9 A.M. was brought to the hospital. The child was a breast-fed baby, but on the day before admission he had had in addition some potato, some bread and butter, and a little toast. He had had no previous illness of any kind, and had never been vaccinated. The family history was good, but there was a slight history of rheumatism.

*Condition on Admission.*—The patient, who was extremely well nourished, was moribund; his eyes were half open, respirations were slow and shallow, and the pulse rapid, but scarcely perceptible. The face and lips were cyanosed and the extremities cold, though the body felt hot. All over the surface of the body there were numerous subcutaneous hæmorrhages, irregular in shape and of various sizes from a pin's head to a threepenny piece. These were most numerous on the back, where they were of a larger size than elsewhere. On the face they were small and not very numerous, and were distributed for the most part on the forehead and behind the ears. There were a few on the scalp, and they were very numerous on the upper and lower extremities. All over the chest coarse rhonchi were heard; the heart sounds were feeble; the abdomen was natural to palpation.

*Death.*—The patient died at 11.15 A.M., having been ill fourteen hours altogether.

*Post-mortem Examination.*—The body was extremely well nourished. Subcutaneous hæmorrhages were present as above described. The lungs showed some areas of emphysema and collapse, but there were no subpleural hæmorrhages. The heart was natural. The thymus was very large and natural. The stomach was natural. The Peyer's patches throughout the whole length of the small intestines were very much swollen and prominent, as in the early stage of typhoid fever, but there was no ulceration. There were a few minute petechial spots on the peritoneal surface of the bowel. The mucous membrane of the large intestine

was rugose from muscular contraction, and also appeared thickened: there was no marked hyperplasia of the solitary follicles; at one point a minute hæmorrhagic spot was seen in the mucous membrane. The mesenteric glands were much enlarged. The liver and spleen were natural. In the kidneys the bases of the pyramids were much congested. The suprarenal capsules were both very large and markedly hæmorrhagic on the surface and on section. The brain and meninges were natural. Microscopically the suprarenal bodies proved to be evenly filled with extravasated blood.

CASE II.

W. G., male, aged 1 year, was brought to the hospital, at 9 A.M., on April 4th, 1901.

*History.*—The child was quite well until the previous afternoon, when he became fretful, and in the evening was "very queer," being very hot and feverish. About midnight he awoke vomiting, and for the remainder of the night was very restless. In the early morning he began breathing badly. His general condition became worse until he was brought to the hospital, before which he again vomited. He had had no diarrhœa, cough, fits, or twitching. He had had measles four or five months previously, from which he quite recovered. He was vaccinated when two or three months old, with good result. He had been hand-fed, being brought up on condensed milk, and had had nothing unusual in diet previous to the attack. The family history was very good.

*Condition on Admission.*—He was extremely well nourished, but was very collapsed, with an extremely feeble and rapid pulse; the breathing was rapid and shallow, and the alæ nasi were working. The face was dusky, and the lips livid, the body generally presenting a dusky, mottled appearance. Over the left side of the forehead, the upper part of the chest and back, and upper arms were a number of small subcutaneous hæmorrhages. These, according to the mother, were not present when she left home for the hospital. A few scattered rhonchi were heard over the front of the chest. The heart and abdomen were apparently natural.

*Death.*—The child died a few minutes after admission, having been ill about twelve hours altogether.

*Post-mortem Examination.*—Subcutaneous hæmorrhages as above described were present. There were two good vaccination marks on the left arm. The lungs showed scattered but not very extensive patches of collapse, with much engorgement, but no consolidation or hæmorrhagic spots. The heart and pericardium were natural except for distension of the right heart with blood clot; it showed no hæmorrhages, and the thoracic glands were natural. The liver was slightly fatty; the stomach was natural, and free from hæmorrhages. The Peyer's patches were distinctly swollen, especially in the jejunum. There was no enlargement of the solitary follicles in the colon, and no hæmorrhages. The mesenteric glands were large and very firm. The spleen was firm, mottled with dark areas on section, but not enlarged. The kidneys were congested, and presented a few hæmorrhagic points at the bases of the pyramids, but were otherwise natural. Both the suprarenal bodies were enlarged, and of a dark, purplish-red colour on the surface; on section they presented a laminated appearance, the whole dark, but some areas rather lighter than others. The suprarenal vessels appeared normal; there was no evidence of infarction. The brain and meninges were engorged, but otherwise natural.

CASE III.

M. B., female child, aged 7 months, was admitted on April 19th, 1901.

*History.*—The child was a healthy and well-developed baby at birth but soon afterwards he began to waste. He had snuffles and a rash about the buttocks about two months after birth. The present illness began suddenly with diarrhœa on the day of admission. There had been no vomiting. The patient had been a breast-fed child, and for the last two months was given Ridge's food and crusts of bread. There was no history of any previous illness and he had never been vaccinated. Family history: The father and mother were healthy; there were two other children in the family, both of whom were healthy. Mother had had one child born dead and one miscarriage.

*Condition on Admission.*—The patient was very thin and collapsed; the face was dusky and the lips livid; the pulse was 156 and feeble, the respirations 48, and the temperature 102.6°. A few scattered *râles* were heard in the chest; the heart's action was rapid; the liver was slightly enlarged but nothing further abnormal was detected in the abdomen. Death took place eighteen hours after admission, the child having got rapidly worse. A few hours before death two dark purpuric spots appeared, one on the lobule of the right ear and one on the right forearm. There were no convulsions.

*Post-mortem Examination.*—A few subcutaneous hæmorrhages were seen on the surface. The lungs were engorged and œdematous, here and there was some patchy collapse. The heart was natural; the liver was somewhat enlarged; the spleen and the kidneys were natural; the left suprarenal capsule was large, dark, and purplish red, and hæmorrhagic on section, the medulla being of a darker colour than the cortex. The right suprarenal capsule was also hæmorrhagic, but had a pale patch of apparently healthy tissue anteriorly. The intestines were unfortunately not opened and examined. There were no other hæmorrhages anywhere.

CASE IV.

A. H., a female child, aged 1 year, was admitted to the hospital at 12.30 P.M. on April 27th, 1901.

*History.*—The patient when put to bed on the previous night was "well and hearty." At 9 P.M. she had some barley broth, and was sick immediately after it. She was restless all the night, and at 5 A.M. was violently sick, bringing up curdled milk. She again vomited half an hour later, the vomited matter being of a yellow colour. At 6 A.M. the patient was brought to the hospital. The temperature then was 102°, but otherwise the child did not seem to be ill, and was consequently treated as an out-patient. At midday the child was again brought to the hospital, but in a very collapsed condition, and was admitted. Half an hour before admission the patient passed a very dark stool. The child had been brought up on the breast. On the day previous to admission she had had some bread and butter, a little potato, and a small piece of sausage. There was no history of any previous illness. This child had also never been vaccinated. The family history was very good.

*Condition on Admission.*—The patient was extremely ill. The eyes were half open; respirations were shallow, and 72 to the minute; the pulse was 164, and of very small volume, but regular in rhythm. The face and lips were cyanosed, and the rectal temperature was 97°. The body was generally mottled, but there were no petechiæ anywhere. Scattered throughout the chest some rhonchi were heard. The heart's action was feeble and rapid. The abdomen was natural. On admission the child was put into a mustard bath, and was stimulated with brandy and hypodermic injections of strychnine. At 2 P.M. the temperature rose to 102.6°, and twelve hours later the thermometer registered 106.4°. A boracic enema, at 75°, was then given, and the temperature dropped to 98.6°. A few hours later it again went up to 103.6°. The patient had altogether five stools after admission; these were yellowish-green and slimy in character. There had been no vomiting all the time the child had been in hospital. Death took place at 7.50 A.M., nineteen hours after admission.

*Post-mortem Examination.*—The body was that of a very well-nourished child. There was much mottling of skin generally, and over the centre of the back two small petechial spots were present. Both lungs were engorged, and there was some collapse in both lower lobes. The heart was natural. The thoracic glands were natural. In the abdomen the liver and spleen were both normal. The stomach was natural. There was marked hyperplasia of Peyer's patches and of the solitary follicles throughout the small intestines. There were also many subperitoneal punctiform hæmorrhages. The mesenteric glands were large and soft. The kidneys were natural. The left suprarenal capsule was injected on the surface, and the medulla was very dark-red on section. The right suprarenal capsule was slightly injected. The brain and meninges were engorged.

The interesting feature about these cases is the sudden onset, rapid course, and fatal termination. Not one of the patients was over a year old. The history throws absolutely no light on the causation of the disease: the question of food does not appear to bear any causative relation to it. The presence of hæmorrhages in the skin and suprarenal capsules would seem to make it more than probable that the cause of the disease is to be found in some form of toxæmia.

In two of the cases the blood from the unopened heart was examined bacteriologically with a negative result. In its extremely rapid and fatal termination the disease somewhat resembles the epidemic diarrhœa and vomiting of infants, and it is probable that the mode of infection is similar, and that the poison belongs to the same group. The similarity, however, ends here, since diarrhœa and vomiting were evidently not the main symptoms in the cases above mentioned, and in the many *post-mortem* examinations held here on cases of epidemic diarrhœa and vomiting, we have not met with a single instance in which hæmorrhage took place into the skin or suprarenal capsules.

The general condition of the patients was moreover totally different. They did not present the sunken eyes and inelastic skin so frequently met with in the epidemic diarrhœa. On the other hand the deep cyanosis present in these cases is very rarely, if ever, seen in the latter disease. Apart from the hæmorrhages that took place into the skin and suprarenal capsules, the fact that the Peyer's patches were much swollen is interesting. Macroscopically, the condition was extremely like that presented by the patches in the early stages of typhoid fever. Referring, again, to epidemic diarrhœa and vomiting, the intestinal lesion is in most cases limited to the large intestine, where the solitary follicles are very prominent. We do not remember ever having seen so distinctly an hyperplasic condition of Peyer's patches in diarrhœa and vomiting as was present in three out of the four of our cases. No history of hæmophilia was obtained.

The question now arises, What is this disease? Is it an unknown disease *sui generis*, or are the symptoms only a rare manifestation of some known specific disease? If we are disposed to place these cases under the latter heading, then we cannot put out of account the possibility that they may be cases of hæmorrhagic small-pox of the fulminating variety. One of our cases, however, had two very good vaccination scars: the other three had not been vaccinated. There was, moreover, no hæmorrhage into the conjunctivæ in any of the cases. In addition to this, there was no previous small-pox in the neighbourhood, and, as far as we know, no cases occurred subsequently. Again, it might be said that if these children had lived long enough they might have developed symptoms of some one of our well-known specific diseases. Infantile scurvy may suggest itself to some, but there was no sponginess of the gums and no tenderness in any of the limbs. Besides, the onset was so sudden and the fatal termination so rapid that both these points would strongly go against this view. On the whole it is probable that the symptoms are the manifestation of a special disease, and that the cause of this disease is a blood poisoning of some form, the nature of the poison being at present unknown.

Dr. Eustace Talbot reported two cases of hæmorrhage into the suprarenal capsules in the *St. Bartholomew's Hospital Reports* for 1900, in which he also refers to two cases reported by Drs. Andrews, Garrod, and Drysdale in the Pathological Society's *Transactions* for 1898. These four cases were all unvaccinated, were apparently healthy children, suddenly taken ill, with a rapid and fatal termination. Subcutaneous hæmorrhages occurred in the two latter cases only, and convulsions seem to have been a prominent symptom in the two cases reported by Dr. Talbot. It will be noted that in our cases no convulsions occurred. The only morbid changes found *post mortem* in all these four cases was hæmorrhage into the suprarenal capsules, all the other organs being apparently healthy.

In conclusion, we desire to express our gratitude to Drs. Eustace Smith and J. A. Coutts for permission to publish these cases, and we also have to thank Dr. Clive Riviere, Pathologist to the hospital, for the use of the *post-mortem* examination notes.

## EXPERIMENTAL MALARIA: RECURRENCE AFTER NINE MONTHS.

By P. THURBURN MANSON, M.B.Lond.,
Aberdeen.

A SUCCESSFUL experiment, of which I was the subject, on the production of malarial infection by mosquito bite, is recorded in the BRITISH MEDICAL JOURNAL of September 29th, 1900. The sequel is of interest.

As a result of the bites of mosquitos fed in Rome on a case of benign tertian ague, I developed a double tertian fever. The first symptoms appeared on September 13th, 1900, after an incubation period of between ten and sixteen days. The illness lasted from September 13th to September 17th, when, the presence of the parasite having been fully confirmed, 10 grs. of quinine were given. This treatment was followed by 5 grs. three times a day for a week, and a subsequent after-treatment of 5 grs. of quinine three times a day on Sundays for the following three months. There was no recurrence at that time of symptoms of malarial infection after the first dose of quinine, and I kept in normal health till May 30th, 1901, a period of nine months. I changed my abode from London to Aberdeen on April 15th, 1901, having resided in London since the original attack. On May 30th, 1901, I commenced without obvious reason to have prodromal symptoms of illness; these were *malaise* and pain in the splenic region. Two days later—on June 1st—a definite malarial paroxysm occurred. The following are the notes of my case:

June 1st. For the previous two days I had been feeling out of sorts, and had experienced slight aching in the splenic region. At 2 P.M. on this date I had a sensation of chilliness, accompanied with extreme lethargy and boneache. The temperature was 99.8° F. At 5 P.M. I became extremely chilly, but no actual rigor occurred: temperature 101.2° F. I went to bed, and at 6 P.M. began to feel warmer; temperature 102.6° F. At 9 P.M. profuse sweating set in; this gave considerable relief. At 10 P.M. the temperature was 103° F., and diaphoresis became more marked. The edge of the spleen was palpable, the splenic dulness increased, and the organ was both painful and tender. During the day there had been complete anorexia. Blood films were prepared, but were not examined till June 3rd.

June 2nd. Woke at 4 A.M., having slept well and sweated profusely during the night. At 6 A.M. the temperature was 99.8° F., by 10 A.M. it had fallen to 98.6° F.; during the rest of the day there was no pyrexia. Though feeling languid I was able to get about, and ate fairly well

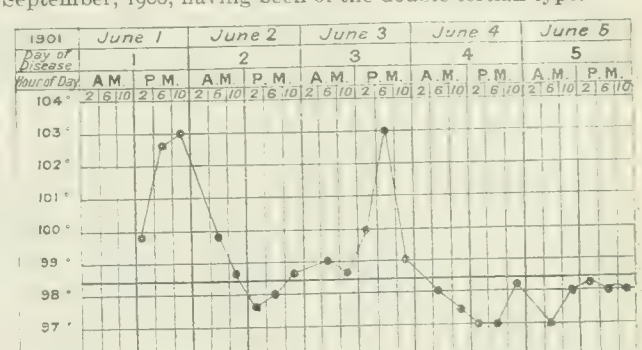
June 3rd. After a good night's rest I woke at 6 A.M., feeling quite well, with a temperature of 99° F. At 10 A.M. the temperature was 98.4° F. A small crop of herpes had developed at the angle of the mouth. I examined fresh films of blood drawn at 10 A.M., and found benign tertian parasites. At 12.30 P.M. shivering set in. Dr. Duncan, Assistant to the Professor of Pathology, Aberdeen University, then stained and examined blood films, finding young and older forms of the benign tertian parasite. During the rest of the day the parasites were found on several occasions, both in fresh and stained specimens. At 3 P.M. the hot stage supervened, and at 6.30 P.M., the temperature being 103° F., pronounced diaphoresis occurred affording marked relief. By 10 P.M. the paroxysm was over, the temperature having fallen to 99° F., and no inconvenience beyond slight pain in the splenic region remained. The spleen was still enlarged and slightly tender. During the day there was little desire for food. Quinine grs. X was taken. The films prepared on June 1st were stained and examined, and were found to contain a considerable number of young and older forms of the benign tertian parasite.

June 4th. During the day the temperature remained normal or subnormal. Spleen still palpable. The parasite was readily demonstrated in stained and fresh specimens during the whole day. A treatment of quinine grs. v three times a day was adopted, and continued during the following week.

June 5th. No recrudescence of fever. Parasites, though fewer, were still present. The spleen was no longer palpable nor tender.

June 12th. During the week there was no recurrence of fever and I am in normal health. Quinine grs. v has been taken three times daily. A further treatment of quinine grs. v three times a day on Sundays for the next three months will be adopted.

From a consideration of the facts above recorded, and from the temperature chart, it will be seen that the case was one of simple benign tertian malaria, the original infection in September, 1900, having been of the double tertian type.




I am indebted to Professor Hamilton, Professor of Pathology, Aberdeen University, for confirming the presence of the parasite both in fresh and stained blood films; to Dr. Duncan, Assistant to the Professor of Pathology, Aberdeen University, for preparing films, staining and confirming the presence of the parasite; and to Mr. A. L. N. Maclean, of Aberdeen University, for preparing films. Dr. Manson, of the London School of Tropical Medicine, to whom stained specimens were sent, also confirmed the presence of the parasite of benign tertian malaria.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

### A RECTAL PROSTATIC SINUS.

THESE notes may be worth recording. A. B., aged 30, came to me over two years ago on account of a frequently recurring discharge from the rectum, and various unpleasant sensations, such as "stabbing" and throbbing about the prostatic locality, which induced a state of almost confirmed melancholia. I had treated him six years before for gonorrhœal prostatic gleet, but he never had a prostatic abscess.

On examination I found a perfectly white discharge oozing from a small sac about half an inch from the margin of the anus. Pressure on this sac caused about a drachm of the fluid to exude. The prostate seemed normal to touch. A probe passed into the sac went three-quarters of an inch in the direction of this gland The microscope showed pure prostatic secretion, but no pus cells.

I told my patient, who was exceptionally intelligent, that I was doubtful as to the course to pursue, for if I opened up and packed the sinus, I was afraid the discharge might still continue. I told him I would first try the passage of large sounds, with the possibility of encouraging the secretion to escape through its natural channels by opening the ducts, and also to remove inflammatory relics.

This treatment did no good whatever. It was suggested that the regular performance of the function of the sexual organs, by keeping the plethoric prostatic ducts less full, might prevent the secretion appearing at the abnormal site, and such was the case. Yet the consciousness of the existence of the abnormality in itself kept my patient on the confines of insanity. Emaciation and insomnia became marked, and I feared suicide. It was remarked there was a certain periodicity about the escape of the fluid at the sinus. My patient next saw a distinguished surgeon. The latter naturally enough considered that he had an abscess, and proposed to lay it open. This was done.

This treatment was also ineffectual. I therefore tried the more radical expedient first suggested—that is, I slit up not

only the sac, but the sinus which led to it from the prostate as far as I could pass a probe, and packed every day the opening made. A perfect cure happily ensued, and in two months all discharge had ceased, but it took this time.

I trust the publication of this case may be at least interesting on account of its rarity. I may have searched the literature very badly, but I have been unable to find the record of such a case—namely, a rectal prostatic sinus without pre-existing abscess. Again, the intermittent character of the discharge is not without interest in a physiological light.

Finsbury Pavement, E.C. James MacMunn.

### DISLOCATION OF THE NINTH RIB.

A young woman, aged about 30, rather slightly built, came to me complaining of acute pain in the left side. Three or four days previously she had been putting up a big picture and this slipped suddenly, throwing all the weight on the left arm. She felt acute pain in the left side and thought she had strained herself. The next day she found the side swollen, so she rubbed in some embrocation and rested. Finding that the swelling went down but the pain did not subside she came to me. I found slight swelling and some tenderness in the left side and acute pain on breathing deeply, and on examination I found that the cartilage of the ninth rib was dislocated at its junction with that of the eighth, and that the swelling and tenderness were in this situation. This is, I believe, a rare accident, particularly from indirect violence.

Isleworth. S. G. Harrison, M.R.C.S.Eng., L.R.C.P.Lond.

### FOREIGN BODY IMPACTED IN THE RIGHT BRONCHUS.

A. B., a man aged 59, consulted me "for bronchitis." A week previously he had "accidentally swallowed a rabbit bone." He had no difficulty in swallowing, and careful examination of the pharynx and larynx failed to reveal anything abnormal. Two days later he complained of a sharp pain "like a knife" about the centre of the sternum, and his temperature rose rapidly to 104°. A severe attack of right broncho-pneumonia supervened, but without any signs of collapse of any portion of the lung. Convalescence was somewhat tardy owing to an extremely feeble heart, and even when the patient was able to resume work a kind of intermittent bronchitis remained. Four months later a violent attack of coughing, accompanied by a purulent expectoration, expelled a piece of bone about one inch in length by a quarter of an inch in breadth, with sharp jagged edges, and pointed at either end. The "bronchitis" has since completely disappeared.

Bolton. W. E. Bamber, M.B., M.Sc., M.R.C.S.

### ENLARGED TONSILS IN A WOMAN, AGED 57.

Mackenzie, in his analysis of 1,000 patients, gives only 3 cases of enlarged tonsil between the ages of 50 and 60. The great rarity of these cases has induced me to place the following on record:

Mrs. M., aged 57, consulted me last month for sore throat. Eleven years ago I removed a large portion of each tonsil. There was then nothing further to be seen. About twelve months ago she began to feel a fulness again in her throat, from which she had occasional hæmorrhages when it was sore. On examination, the surface of the old wound was perfectly flat and healthy. From the back of each tonsil, however, and extending down the pharynx, was a large mass about the size of a walnut. These secondary tonsils were greatly affected with follicular disease. There was absolutely no sign of malignancy about the growths, which are shrinking up under the application of the galvano-cautery. I did not think it was a case for amputation owing to the age of the patient and the occasional hæmorrhages.

W. R. H. Stewart,
Aural Surgeon to the Great Northern Central Hospital.

### A CURIOUS METHOD OF OPIUM POISONING.

At 11.30 P.M. on March 31st, Mrs. Y. brought her baby, aged 3 months, saying that it was dying. The infant was very pale and cold; its pupils were minutely contracted, and it could with great difficulty be roused up. I inquired if any sleeping draught or soothing syrup had been administered, but this was denied. Mrs. Y., however, mentioned that she had put a pledget of cotton-wool soaked in laudanum in her tooth, which was aching during the evening. She was quite sure the baby had had none. Under the circumstances I washed out the baby's stomach, by means of a soft rubber catheter, with very weak Condy's fluid, and left in a drop of liquid extract of belladonna (P., D. and Co.). I also gave small enemata of black coffee and roused up the infant. In about half an hour I sent it home, telling them to keep it warm but awake. They sent for me about 1 A.M., and I found the child awake, pupils very big, and skin rather flushed from the belladonna. I ordered a warm bath, and next day found the child quite well.

On questioning Mrs. Y. I ascertained that she was in the habit of moistening the teat of the baby's bottle in her mouth before giving it the child, as "it took to it better." She did not think she had done this more than twice or three times during the time she had the laudanum in her mouth. She was sure the child could have got the poison in no other way.

Edgbaston. J. A. Henton White.

# REPORTS
ON
## MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

### HOSPITAL FOR WOMEN AND CHILDREN, LEEDS.

A CASE OF OVARIAN CYST IN WHICH COMPLETE SEVERANCE OF THE PEDICLE HAD RESULTED FROM TORSION.

(By E. Octavius Croft, M.D., M.R.C.S., Honorary Surgeon to the Hospital and Demonstrator of Obstetrics in the Yorkshire College.)

*History.*—Mrs. P., married, aged 41, was sent to me by Dr. Hawkyard, of Leeds, on November 12th, 1900. Menstruation, which commenced at 14, was regular and normal until marriage. Her only child was born thirteen years ago, the labour being tedious but normal. She had had uterine prolapse ever since a few months after the confinement, having obtained relief from time to time by pessaries. Recently the menstrual periods have been regular but free. The general health was good. Five years ago she had a severe attack of "inflammation in the body with stoppage of the bowels." This illness kept her in bed for several weeks. A similar but less severe attack occurred about three weeks before admission.

*Condition on Examination.*—A tumour was felt in the lower abdomen reaching nearly to the umbilicus. On vaginal examination the cervix was low, the os rather patulous, and the uterus enlarged. The tumour could be felt in front and rather to the right of the uterus, but moved with the latter and could not be separated from it. Owing to the doubt as to whether the tumour was possibly uterine rather than ovarian, I examined the patient under ether with the following result: Prolapse of cervix, uterus enlarged; tumour movable with uterus; on pulling down uterus the tumour is dragged with it. Sound passes 4 inches, and does not pass directly into swelling, which seems to be in front of uterus and rather to its right. The tumour and fundus cannot be separated. By recto-abdominal examination, the sound remaining *in utero*, the fundus can be felt behind, and the tumour distinctly attached to it above and rather more to the right. Owing to some rather free bleeding the uterus was curetted and packed with gauze.

*Operation.*—The abdomen was opened a few days later. The omentum was firmly adherent to the growth, and was ligatured and divided. There were numerous general adhesions to the abdominal wall and bowel. These were separated, and on searching for a pedicle none could be found in the usual situation on either side. The tumour remained firmly attached to the upper and anterior part of the fundus uteri, and to some extent to the anterior surface of the right broad ligament. These attachments were dense adhesions, which were troublesome to separate. The tumour was then removed, the only ligatures used being those on the divided omentum. The pelvis was carefully examined, the patient

being raised into the Trendelenburg position and Doyen's retractor employed. The right ovary and tube were normal and free, but on the left side the tumour was represented by a stump about three-quarters of an inch long projecting from the left cornu of the uterus, and having a perfectly smooth, rounded end free from adhesion. After cleansing, the wound was closed without drainage. The patient made an excellent recovery.

*Specimen.*—The cyst removed was about the size of a cocoanut; its walls were thickened, and its contents consisted of thick, dark-brown fluid. The remains of the distal portion of the tube could be traced adherent to the outer surface of the cyst. The cyst was unilocular, but did not present the features of a dermoid.

REMARKS.—The interest of the case lies in the rarity of the occurrence of complete separation of the pedicle. The coincident hypertrophy of the uterus, together with the close adhesion of the tense thick-walled cyst to the fundus, and the absence of a pedicle, rendered the diagnosis between an ovarian and uterine tumour very difficult. Owing to the density of the adhesions, and the healed appearance of the stump, it was probable that the separation might have occurred during the illness five years before. It was also interesting to note that the tumour, though originating in the left ovary, had become adherent to the right broad ligament and the right side of the abdominal cavity.

# REPORTS OF SOCIETIES.

## EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

A. G. MILLER, M.D., F.R.C.S.E., President, in the Chair.

*Wednesday, July 3rd, 1901.*

DISCUSSION ON ALCOHOL IN ITS MEDICAL AND SCIENTIFIC ASPECTS.

PROFESSOR G. SIMS WOODHEAD asked, Was alcohol a poison, a drug, or a food? Or, if all three, as some maintained, in which did it play the most important *rôle?* As a food, or even as a drug, did it play a part anything like so prominent as it did as a poison? All were agreed that alcohol was a narcotic poison, and certainly as a pathogenetic agent it was a protoplasmic poison. Alcohol was a drug, but not a panacea for all ills, and it ought to be used and prescribed as any other drug, not loosely, but with a definite end in view, and at any rate with some show of scientific precision. It was the view of alcohol as a food that rendered it responsible for the greater part of the diseases now ascribed to its action. It produced a certain amount of heat, but was unable to supply the number of calories required by the body, and easily given by carbohydrates and fat. Ehrlich held that certain bonds or links were necessary for the application of nutritive substances to the use and nutrition of the cell, and that all these links appeared to be connected with the nitrogenous element, and alcohol did not contain this element. Alcohol entered into combination with the protoplasm, but in quite a different way from the nutrient substances ordinarily utilised by the cell, and acting rather as a toxic than as a nutrient substance. Madden had pointed out that there was absolutely no evidence to prove that alcohol could act as a respiratory food, or that it was converted into a reserve supply of fats, but that instead of protecting nitrogenous tissues from undue waste (as did the fats and carbohydrates), alcohol actually hastened their waste. Another important feature was the extraordinary avidity of alcohol for oxygen. This was probably one of the prime factors in producing certain forms of fatty degeneration. Under ordinary circumstances fat and carbodydrates taken into the body were oxidised by the respiratory oxygen. With alcohol the process was much more active. It appeared to convert to its own use oxygen which normally was used to protect nitrogenous tissues from undue waste, thus leading to derangement of their function and metabolism. It interfered with the normal oxidation of carbohydrates and fats, and to that extent set up abnormal metabolic processes which ended in the destruction of protoplasm and in the accumulation of the resulting fatty degenerative products. There was the danger of assuming that, because it was readily oxidised in the tissues, alcohol was to be looked on as a substance useful in the animal economy. But the fact was the degenerative action on the cells occurred without any accompanying nutrient action. It was because of this want of the nutrient element that the protoplasmic cells did not in time become accustomed to the poisonous action of alcohol as they did to the poisonous action of the proteid toxins. As a result of tissue reaction between the toxin and the cell the tissues of the body as a whole might in time become capable of withstanding enormous doses of certain proteid toxins. In the case of alcohol the process of immunisation was only slightly—then only apparently—increased, the degenerative changes affording evidence that the tissues at any rate did not become immune to its action. The combined action of alcohol and arsenic was referred to, and it was also pointed out that alcohol might in some act as a predisposing cause to specific infective disease. Observations on animals in regard to the latter point were described. Dr. Laitenen had asserted that the use of alcohol in the treatment of anthrax, tuberculosis, and diphtheria, at any rate, was not only useless, but probably actually deleterious. Alcohol, he also said, slightly diminished the alkalinity of the blood, and led to a slight decrease of its bactericidal power, and therefore to an increased susceptibility to the action of infective agents. The normal temperature and that in disease were often temporarily but slightly reduced by alcohol, and this was the most favourable moment for the invasion of infective agents. There was direct evidence that alcohol, even in small doses, predisposed to phthisis, and thus it might be a serious factor in bringing about an accumulation of fat in the liver, and in setting up a fatty degeneration in this and other organs. Mitchell Bruce was satisfied that dilatation of the heart and alteration in the myocardium were of frequent occurrence as the direct result of alcoholism. Professor Woodhead had seen 2 cases of young and otherwise healthy people who had died from acute alcoholism where there was acute myocarditis without any endocarditis or pericarditis. The heart appeared to be affected by alcohol long before any organic change could be made out in its tissues. Leonard Hill asserted that alcohol rendered the systolic output incomplete, increased the diastolic pressure and the dilatation of the heart. The action of alcohol on nerve cells, on Purkinje's cells in the cerebellar cortex, and on the multipolar cells of the spinal cord were alluded to, and it was suggested that the condition found was a toxic one such as was met in connection with diphtheria, tetanus, and other poisons. The lesions of the neurons were not peculiar to the effect of alcohol, but might be reproduced by any virulent drug or bacterial toxic product. We had thus the material on which to found a study of the pathological changes set up by alcohol. Now that the conditions which produced these changes were understood, and could to a certain extent be controlled, we were more satisfactorily placed for studying the direct changes which took place in these and other tissues, and might soon obtain information on many controversial points.

Professor T. R. FRASER said that there were those, on the one hand, who thought that alcohol was of the highest value, and on the other who thought that it had no value whatever. It must be admitted that it was a toxic agent, yet it had actions which might be of service in many directions, for example, to patients suffering from certain diseases, and even in certain circumstances to society at large. Enough care had not always been taken to discriminate between the effects produced by small doses as contrasted with the effects of large doses. The effects were entirely different. In small doses alcohol stimulated the heart, while in large doses it paralysed it. It was a substance which either improved or destroyed digestive processes, and because of the ease with which it was burned up in the body might give energy and so be of use in certain cases. Professor Fraser discussed (1) Its Effects on the Circulation: In small doses, without doubt, alcohol acted directly on the heart so as to increase the force of its contractions and to quicken its action. This rapid stimulating action of alcohol was of value to the circulation as contrasted with the majority of other drugs. Alcohol was readily absorbed, and so its effects were speedily produced. There was no subsequent depression following on this cardiac stimulation. The heart merely returned to its normal state, and was not enfeebled. It had a

direct action on the blood vessels, as a result of which they dilated. As a result of the increase of cardiac action, together with the muscular dilatation of the vessels, there was a widely distributed acceleration of the blood supply, and a consequent stimulation of distant tissues and cells of the body when these might be perishing for want of nourishment. (2) Its Effects on Digestion: It had been absolutely proved that alcohol stimulated salivary secretion without deteriorating its power. It also increased the peptonising power of the gastric secretion, as well as stimulating the peristalsis. Increase in the absorption of nitrogenous substances from the stomach wall must result. Alcohol was a very satisfactory agent in stimulating primary digestion. It was a tonic to digestion, but only when the dose was moderate. (3) As regards Nutritition: Alcohol was very easily oxidised. After taking alcohol the output of carbonic acid and the intake of oxygen were increased. Only an insignificant amount of alcohol was to be discovered in any of the excretions. Such facts showed that alcohol was absolutely burned up in the body, and it must therefore generate energy and force. It was much more readily consumed than either carbohydrates or fats. It was not to be placed high as a food substance. Its only value lay in allowing us to tide over an emergency, as where a patient was unable to retain any food in the stomach, and where death threatened. By giving alcohol in suitable cases one could ward off this, and so surmount crises. One could cure such cases by giving alcohol, as it proved not only a food but also acted by stimulating the circulation. (4) Its Action on the Temperature: Even in normal conditions as well as in pyrexia alcohol reduced the temperature. This was due to radiation of heat from the body, and not from any inhibition of heat production. Alcohol therefore proved very satisfactory in reducing pyrexic conditions. (5) Action on the Nervous System: As physicians they had not much to do with this aspect of the question. The chronic action of alcohol on the nervous system was something totally different however. (6) As regards the action of alcohol in infection, Professor Fraser said that the incidence of plague amongst an absolutely teetotal population gave a case mortality of 95 per cent. in Calcutta, whilst amongst the Europeans, who drank alcohol, it was only 20 per cent. The same results were seen in the recent outbreak of the disease in Glasgow.

Dr. CLOUSTON pointed out that alcohol was the most frequent exciting cause of attacks of mental disease, amounting to from 20 to 25 per cent. of the cases, but he said that such figures needed explanation, for insanity was as prevalent among the Society of Friends as in the general population, and was found to a large extent in perfectly sober families and communities. He pointed out that alcohol in small doses promoted the metabolism of the cortical brain cell, thereby causing pleasure and social enjoyment, a fact which was the keynote to its extensive use among mankind. The more sensitive and unstable the brain the greater was the danger of excess and of establishing a craving. He urged the Society to press every Government of the day for two legislative measures: (1) To appoint a commission of experts to focus and report to Parliament and the public the bearings of the latest scientific investigations into alcoholic physiology, pathology, and psychology, on public health and social conditions. (2) To pass a really official Inebriates Act, so that medical men might be able to treat the various forms of alcoholism effectually. He also urged the medical profession to educate in every way their masters the public—as to the dangers of alcohol, and to put forth at regular intervals authoritative statements on this grave question.

Dr. AFFLECK believed that the virtues of alcohol as a therapeutic agent had probably been overestimated. It acted best as an emergency remedy, although here, too, it often disappointed us. In the fevers, and especially in pneumonia, where it was often recommended to be given in large doses, it frequently failed to make any impression on a grave case; and when it acted beneficially in these diseases probably more good was obtained from small than from large quantities. The value of its habitual use as an aid to digestion was very doubtful; and such apparent benefit as was observed might be dearly purchased at the expense of tissue degradation which might make itself felt in the later period of life. There was no remedy so frequently suggested by patients and their friends, and young practitioners especially would do well to be on their guard against prescribing alcohol where their better judgment might suggest its being dispensed with.

Dr. W. LESLIE MACKENZIE said alcohol was related to public health in two ways—directly, as a factor in the food environment, in causing fatal diseases, predisposing to others and complicating others; predisposition and fatality being alike preventable, because due to a removable cause; indirectly, as a factor in the moving equilibrium of the social organism, in lessening social responsibility, producing low standards of living, economic inefficiency, failure in routine living, uncleanliness. On the other side, the persistent mental erethism of the slightly over-normal drinker lessened worry and ordinary wear and tear, and something positive had to be allowed for this. As to whether alcohol predisposed to infectious diseases, Professor Woodhead's results were matters of fact; but in actual conditions the majority of infectious cases occurred among children and young adults—the non-alcoholic ages. In them, alcohol might be excluded as a predisposing factor. Diphtheria, scarlet fever, measles, whooping-cough, chicken-pox, mumps, German measles had no particular relation to alcohol. The same was true, with two or three exceptions, of enteric fever, small-pox, typhus, erysipelas, plague, cholera, beri-beri, tuberculosis, septicæmia, croupous pneumonia, etc. It was admitted that, other things being equal, the risk to the alcoholic on exposure was more serious; but, except in pneumonia and the septicæmic diseases, the directly predisposing effect of alcohol was not striking. Cholera did not discriminate much between the "four-ouncer" and the "under-two-ouncer," and the fact that it prevailed among non-alcoholic races even more than among alcoholic races indicated that alcohol, though affecting the prognosis, was not the main factor in creating predispositions. Pneumonia would probably benefit most by the abolition of alcohol from the environment. Was alcohol a necessary and indispensable part of the food environment? This depended on whether the "craving" was a primary or a secondary appetite. It had not been proved that the craving was a primary appetite, and therefore alcohol could not, like water, be held to be necessary and indispensable. The existence of the non-alcoholic races implied that alcoholic "craving" was not a primary and fundamental organic appetite. Abstinence, however, increased in each generation the percentage of "susceptibles," since abstinence always made a man more responsive to smaller doses. But susceptibility did not imply craving. It was not necessary to assume transmission to the child of an appetite acquired by the parent; but drunkenness of the fœtus *in utero* might conceivably initiate a "craving." This was a matter for proof, and had not been proved, and it also needed as much proof to show that an appetite so initiated could be transmitted to the third generation without any more than the intrauterine intoxication of the parent. It followed that each generation must take care of itself. What could public health authorities do to prevent the evils? By Food and Drugs Acts they might roughly control the purity of the alcohol sold; keep arsenic out of beer and water out of whisky. They might improve housing, relieve domestic temptations by lessening drudgery by day nurseries, public washhouses, and amusements. But alcohol was a consequence no less than a cause; the more sober nations might outdistance the less sober in the production and distribution of wealth, but the cessation of drunkenness, or drinking, did not touch the fundamental economic problems.

Dr. C. B. KER said that the experiments on animals quoted by Dr. Woodhead gave plenty of food for reflection. He himself was not at all bigoted in favour of alcohol in the acute infections; for instance, he doubted if more than one in ten of his typhoid cases received any alcohol at all; but he would be extremely sorry to treat diphtheria without it; in fact, diphtheria was the only disease in which he believed in the routine use of alcohol. The fact that a substance was toxic was no argument against its use as a therapeutic agent. He asked what could replace alcohol in certain cases, especially those of emergency?

Dr. JAMES RITCHIE said that while isolated cases and laboratory experiments had their value, well-authenticated facts under natural conditions of life and on a large scale

yielded a more reliable basis for guidance. He considered that such facts were to be found in the experiences of life insurance companies. He referred to the collective investigations of the Scotch Associated Offices, which showed that the extra of 20s. per cent. was not sufficient to cover the increased risk of those in the liquor traffic. He gave the results of investigations by the Sceptre and the United Kingdom Temperance and General Insurance Companies, both of which had two classes of policyholders—abstainers and moderate drinkers; also the experience of the Rechabites and the Foresters in relation to sickness, and the practice of accident insurance companies, from all of which it was evident that in relation to (1) duration of life, (2) liability to sickness, and (3) liability to accident, the abstainer was in a much better position than the man who was supposed to be a moderate drinker. His experience showed that in gout and rheumatism alcohol should not be used: that in the treatment of heart affections alcohol had a very limited use; that in acute dilatation of the heart and in dilatation due to failure of compensation it was hurtful; that in failing heart with hypertonus, not due to alcohol, it gave temporary relief, but that the relief was better obtained by other remedies.

The discussion was also taken part in by Drs. FOULIS, W. TAYLOR, CHURCH, and P. A. YOUNG; and Professors FRASER SIMS WOODHEAD replied.

## OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

G. ANDERSON CRITCHETT, M.A., F.R.C.S.E., President, in the Chair.

*Friday, July 5th, 1901.*

### BLINDNESS RESULTING FROM SODIUM SALICYLATE.

MR. SIMEON SNELL related the following case:

The patient, a girl, suffered from acute articular rheumatism, for which sodium salicylate was prescribed. She woke from sleep at 7.30 A.M. and said that everything was dark in front of her. At the medical attendant's visit between 11 and 12 he found her unable to distinguish between light and darkness. The next day Mr. Snell saw her and found her perfectly blind. The ophthalmoscope disclosed nothing abnormal in either fundus. The following day he again saw her, when she was succumbing to pericarditis with endocarditis. Again nothing abnormal in either fundus was detected. There was no return of vision, and she died that same evening. It was calculated that the total quantity of sodium salicylate taken must have been 140 grs., if not 160 grs., in sixty hours.

Mr. Snell said he thought that there could be very little question that the sodium salicylate was the cause of blindness in this instance. The number of similar cases recorded was very limited.

### SARCOMA OF CONJUNCTIVA.

MR. J. B. LAWFORD reported further notes of a case of sarcoma of the conjunctiva.

The patient was a woman whose conjunctiva showed marked and increasing pigmentation when she was shown to the Society on June 11th, 1896. In July, 1896, two pinkish nodules appeared. In August, 1896, the cornea became hazy and the conjunctiva raised. In October, 1896, the eyeball and conjunctiva were removed, and were examined by Mr. Devereux Marshall, who reported the growth to be a pigmented sarcoma. The pinkish nodules consisted of connective tissue, cells, and blood vessels. There was no growth whatever within the eyeball. In May, 1897, the patient had a serious illness with brain symptoms, and it was thought an intracranial growth was present. However she got better. In October, 1897, some new growth was seen in the orbit, and the general health was not good. On October, 1897, the growth was removed and was examined, and found to be a sarcoma. In August, 1898, another recurrence was seen. On September 1st, 1898, the growth was removed and examined by Dr. Jenner, and found to be a sarcoma. In April, 1899, another pigmented spot was seen, and in the following September another had appeared in the upper lid. On September 14th, 1899, the whole contents of the orbit were removed. On March 20th, 1900, the patient was very ill, and died on April 28th, 1900, but no necropsy was obtained. Mr. Lawford unfortunately did not hear of her death until some weeks later, and owing to the patient's very irregular attendance, and also to her refusing to have a radical operation in the early stage of the disease, her chances of cure were much diminished.

### CONJUNCTIVAL BRIDGES AND POUCHES: UNION OF RETROTARSAL FOLDS.

MAJOR H. HERBERT, I.M.S. (Bombay), described a condition found in 9 upper lids of 7 patients of all ages. One or more retrotarsal folds had contracted permanent adhesions with the tarsal conjunctiva, evidently while displaced downwards through swelling in some previous inflammatory attack. The adhesions were sometimes multiple along the summit of the one fold; in other cases smaller adhesions of underlying folds were found beneath the principal ones. The folds had retracted, except when held by the adhesions, thus leaving the permanently displaced portions as broad or narrow bands, or bridges of conjunctiva connecting tarsus and fornix, and freely admitting the passage of a probe beneath them. There was no history of injury in any case, but in the majority there was, or had been, trachoma. Two cases were also mentioned in which small bridges of union had formed between folds in the lower fornix. In another patient recovering from acute conjunctivitis (membranous or pseudomembranous) the actual formation of these adhesions was seen. The union was primarily by means of fibrinous exudation, which apparently became organised. Finally another upper lid was mentioned in which a broad fold came down over the tarsus, and had adhesions not only at its summit but also over the greater part of its surface, leaving only a shallow pouch or pocket under each curved lateral margin.

MR. BISHOP HARMAN stated that he had seen a similar condition in a patient in South Africa.

### SYMPATHETIC IRIDO-CYCLITIS.

MR. SYDNEY STEPHENSON communicated notes of a case of mild sympathetic irido-cyclitis in a child fifty-four days after removal of an injured eye. The interval between the original injury and the enucleation of the eye was twenty days. The injured eye was affected with puro-plastic cyclitis, but micro-organisms could not be recognised. The patient when seen sixteen and a-half months after the accident had made a complete recovery.

MR. DEVEREUX MARSHALL asked Mr. Stephenson if this was a record case. He himself had seen a mild case develop between two and three weeks after an eye had been removed for injury, but he had never seen a case develop so long as fifty-four days after enucleation.

MR. STEPHENSON said that he was not certain what was the longest interval observed, but he did not think that his case was a record.

### CARD SPECIMENS.

The following card specimens were shown:—MR. C. WRAY: Gumma of the orbit, which occurred forty years after primary syphilitic infection.—MR. W. C. ROCKLIFFE: Cystic growth of the retina (probably carcinoma) secondary to a primary scirrhus of the breast. There was evidence of both eyes being affected.—MR. MARCUS GUNN: Exceptional appearance of a choroidal lesion, probably tuberculous.—MR. INGLIS TAYLOR: Peculiar form of vitreous opacity.—MR. BISHOP HARMAN: Hole in macula.

## OBSTETRICAL SOCIETY OF LONDON.

PETER HORROCKS, M.D., F.R.C.P., President, in the Chair.

*Wednesday, July 3rd, 1901.*

### RUPTURE OF THE UTERUS IN PLACENTA PRÆVIA.

MR. J. PRESTON MAXWELL (Amoy, China) read a paper on spontaneous rupture of the uterus in placenta prævia. He had met with three cases of this accident. In the first, the woman died undelivered within a few minutes of the rupture; in the second, the uterus was found ruptured posteriorly after delivery, and she had dangerous hæmorrhage, but recovered after antiseptic gauze-packing of the rent. The details of the third case were as follows:

S., a primipara, aged 23, had been in poor health during her pregnancy. Fortunately she was more enlightened than the majority of Chinese women, and called him in when labour began. She had weak, poor pains, and the child was evidently at full term; the cervix dilated very poorly, especially posteriorly. There was a little more bleeding than usual, and this, combined with the irregular dilatation of the os, which would admit two fingers, caused a suspicion of placenta prævia, and the edge of the placenta was felt behind. As she lived close by, it was decided to get her into a better condition by procuring some sleep, and to that end she was given a dose of chloral and bromide. She went to sleep, and when next visited about twelve hours after, the cervix had closed up, and admitted one finger with difficulty. There was no further hæmorrhage, and at the end of fourteen days labour came on and the os dilated, but still it did not dilate well behind. When nearly dilated he left the room for some 2 or 3 minutes, but returning, found she was beginning to bleed badly, and he at once ruptured the membranes, and, the child's head coming down, placed his hand on the uterus and kept it there, but without in any way stimulating it. At the end of 10 minutes the child was born without assistance. The moment it was out of the vagina blood simply pumped out, and death appeared imminent. Turning her on to her back, he quickly expressed the placenta, and with his hand on the abdomen pressed the uterus forcibly downwards and backwards, and administered ergot by the mouth and by hypodermic injection. The bleedings, which had been checked by the pressure, came from a rent of the posterior wall of the uterus and the cervix, and the examining fingers could be passed directly into Douglas's pouch. He packed the rent with gauze wrung out of biniodide of mercury lotion, and kept up pressure on the uterus for

two hours. The gauze was removed in 24 hours. No douche was given, and no septic symptom arose, and her recovery was uneventful. The child weighed 5 lbs., and was puny. At the end of three weeks it developed pneumonia owing to a chill, and died after two days' illness. The placenta was a placenta prævia marginata, and the rupture had occurred through the entire cervix and lower portion of the placental site.

It was well known that in cases of placenta prævia the wall of the uterus was not strong, and in some cases fatty degeneration of the uterine muscle had been discovered. What exactly set up the rupture in these cases was difficult to tell. A severe pain, accompanied by an expulsive effort, was sufficient to start the rent, and once started it was apt to enlarge mechanically. As to the treatment, laparotomy and suture would have been extremely difficult and almost certainly fatal. And it was impossible to suture the rent *per vaginam*, especially in a dirty Chinese home.

Dr. F. H. CHAMPNEYS said that the case was remarkable in several ways; the small size of the child, the absence of malpresentation, the absence of interference, and the absence of anything in the history to account for the accident combined to make it worthy of record. As to the treatment, he thought it was perfectly correct; the plugging of the rent with gauze was the most successful treatment in cases in which the fœtus and placenta had not escaped into the peritoneal cavity.

Dr. G. E. HERMAN concurred with what Dr. Champneys had said as to the merit of the paper. Dr. Maxwell had quoted some current statements, without however endorsing them as his own, and therefore he could hardly be held responsible for them. He said that in placenta prævia the uterus had been observed to be soft. It was true that some writers had said so; others had said it was hard. He himself did not think there was any marked or constant difference in consistence between the uterus with placenta prævia and any other pregnant uterus. It had also been said that spontaneous rupture of the uterus was due to fatty degeneration, and in that he followed the statements of eminent writers on midwifery. But he (Dr. Herman) knew of no good evidence to show that fatty degeneration of the uterus was present in cases of rupture of the uterus. Fatty degeneration of the uterus had been said to take place in the puerperium, but the more recent researches of Helme showed that it was no part of the process.

Dr. DRUMMOND ROBINSON, in reference to points raised by Dr. Herman regarding fatty changes in the involuting uterus, stated that he had had the opportunity of examining microscopically two specimens of involuting human uterus. Careful staining with osmic acid failed in both instances to demonstrate the presence of fat.

Dr. HERBERT SPENCER said that the case was one of unusual interest, and had been judiciously treated and well recorded. He was pleased to find that in two cases mentioned by the author in which gauze-packing had been employed recovery ensued. Dr. Spencer had called attention to this method of treatment in a paper read before the Society last year, giving notes of four cases successfully treated in this way. His previous experience had been that every case of rupture of the uterus, about 8 in all, had died. At the present time it was usual to recommend abdominal section for complete rupture of the uterus; but that operation, especially if followed by hysterectomy, was generally too severe a shock for a patient suffering from a rupture of the uterus, and if those with experience of this accident would publish all their cases as he had done, he had no doubt that the results of hysterectomy would compare very unfavourably with those given by gauze packing.

Dr. AMAND ROUTH had seen one case of spontaneous rupture of the uterus with placenta prævia. The patient was eight months pregnant, and had had several attacks of hæmorrhage. Under deep anæsthesia the cervix was found rigid, and it was not easy to insert the finger. An anterior marginal placentation was found. The tongue of placenta was separated from the lower uterine segment, podalic version performed, and the leg brought down to the half-breech, which was left *in situ* for nature to complete the delivery. In about twenty-four hours, the patient's doctor being then in charge, labour pains came on, and the child and after-birth were spontaneously expelled. In two days septicæmia was evident, and the doctor then found that the uterus had ruptured anteriorly. In spite of all treatment the patient died. He had no doubt that Dr. Maxwell's treatment by packing the rent with antiseptic gauze was the correct one to adopt, arresting hæmorrhage and securing drainage.

The PRESIDENT thought the treatment was not only excellent in "a dirty Chinese home," but was the very best treatment in a London or any other hospital with every appliance available. The treatment of rupture of the uterus by packing with gauze was most successful in saving life. He certainly considered that much of this success was due to the fact that the parts had not been rendered septic by the accoucheur's hands. He related details of a most extensive rupture of the uterus which was treated by packing, this being renewed under chloroform every day for twelve days in succession and then less frequently. The patient then became very ill, and at last a large slough was extracted from the right broad ligament, and ultimately the patient recovered.

SPECIMENS.

The following were shown:—Dr. CUTHBERT LOCKYER: Menstrual membrane from a case of exfoliative endometritis.—Dr. RICHARD ALCOCK: Microscopical sections of a cyst of a corpus luteum.—Dr. J. S. FAIRBAIRN: (1) Primary carcinoma of the ovary; (2) incomplete tubal abortion.—Mr. A. C. BUTLER-SMYTHE: (1) A cancerous uterus removed eighteen years after double ovariotomy; (2) diverging traction forceps for vaginal hysterectomy.—Dr. WILLIAM DUNCAN: Two fibro-myomatous uteri (one cystic) removed by abdominal hysterectomy.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—The provincial meeting of this Society was held at Liverpool on June 29th, under the presidency of Mr. ROBERT JONES, Surgeon to the Royal Southern Hospital. Some seventy members and visitors attended the meeting at the Medical Institution, Hope Street. Many interesting cases were shown, and several papers read. Thirty-one new members were elected. In the evening the members dined at the Adelphi Hotel, Dr. A. ERNEST SANSOM in the chair. On June 30th the Society drove to Heshall to inspect the site of the proposed new building of the Liverpool County Hospital for Chronic Diseases of Children.

# REVIEWS.

## TWO BOOKS ON THE WAR.

IN the volume entitled *A Civilian War Hospital*[1] we have a lucid and interesting account of the work of the Portland Hospital, and its experience of wounds and sickness in South Africa during the six months of 1900, when it was employed as a part of the medical organisation of the Field Force. The Portland Hospital, it will be remembered, owed its name to the generosity and initiative of the Duke of Portland, who with 250 other subscribers supplied the funds for its organisation and equipment. The contents of the volume practically divide themselves into three parts—first, an account and criticism of the *personnel*, equipment, and interior economy of the hospital by Colonel Kilkelly, who was in military command, next an account of the medical work by Dr. Tooth, assisted by Mr. J. E. G. Calverley, M.B., B.S., and finally a similar review of the surgical work by Mr. Bowlby and Mr. Cuthbert Wallace. The hospital was organised as a fifth section of a general hospital or for 104 beds, and for this unit the selection of four civil surgeons appears to have been adequate. The authors are very definite in the view that all hospitals at the seat of war should have one R.A.M.C. officer at least for charge of the office work, the orderlies, transport, and commissariat. This opinion is no doubt sound, for a civilian surgeon, as a rule, has no knowledge or experience as to military duties of orderlies, pitching camps, making latrines, requisitioning rations or transport, and of the various matters needed to enable him to be as much use as possible to others. The R.A.M.C. officer is the necessary link between the civilian surgeon and the army with which he works. Imbued with this idea of the relation between the purely military and civil elements, and fortunate in the R.A.M.C. officers with them, it is not surprising to learn that the working of this hospital was consistently harmonious. Only four nurses were sanctioned by the military authorities, but the need of a fifth was frequently felt to meet the difficulties of

[1] *A Civilian War Hospital.* By the Professional Staff. London: John Murray. 1901. (Demy 8vo, pp. 356. 12s.

organised night superintendence. The allowance of twenty-six orderlies, exclusive of two R.A.M.C. sergeants and of servants, cooks, etc., seems to have been sufficient; but it is clear from the experiences of this hospital and of others that the indiscriminate choosing of these men is liable to severely handicap the usefulness of the unit to which they are attached. They should be chosen so as to have representatives of different trades; for though each is primarily engaged for duty as a sick attendant, still a knowledge of carpentering, packing, smithy work, etc., among these men is of priceless value in camp. Some useful criticisms are offered on tents. The authors had experience of "tortoise tents," "E. P. tents," "hospital marquees," and "ordnance tents." They consider that of these the "hospital marquee" is the least satisfactory, being cumbersome, heavy, difficult to pitch, and liable to be seriously affected by wind. This opinion will no doubt be confirmed by many, but others will prefer the "E. P." or European Privates' tent to the "tortoise" when campaigning out of Europe. It is warmer in cold weather and cooler in a hot sun. It is not much more difficult to pack and pitch, but perhaps less roomy and commodious. Some very pertinent hints as to selection of bedding and beds are given, with which we cordially agree, and as far as drugs, antiseptics, and dressings are concerned, we are glad to see that the authors are all in favour of simplicity. In selecting splints and instruments, the sound advice is given to depend mainly on hinged angular wooden splints of various sizes for injuries of the arm and forearm; they are light and easily packed. For the lower extremity selection must be more varied. Hodgin's splint is well spoken of, but owing to its unportability it may be questioned whether it presents marked advantages over the long straight splint provided with the necessary interruptions by means of brackets. For the leg some metal back splints with Salter's swings and wooden side-pieces are essential. Two or three McIntyre splints of different sizes with a few Cline's and Dupuytren's wooden splints will probably make up all that is needed. It is rightly held that all splints that can be made of aluminium should be preferred for the sake of their lightness. In the matter of *x*-ray details the Portland Hospital was fully equipped. Although an influence machine was taken it was not found satisfactory; the main work was done by coil, using two lithanode batteries of six cells each and of 30 A.H. capacity. These needed to be charged only three times, a small ½ horse-power horizontal engine, boiler, and dynamo being part of the hospital equipment. The War Office might learn with advantage some practical lessons in this branch from the experience of this civilian war hospital. As to ambulances it has been said over and over again that a perfect waggon for carriage of wounded and sick has yet to be devised. Mr. Bowlby and his colleagues unhesitatingly condemn the army pattern. They speak well of the Indian tonga and one can but express a hope that the Imperial and Indian Governments will recognise the public service which Mr. Dhanjibhoy of Rawul Pindi did when he equipped and sent out his tongas to South Africa. The section dealing with the medical work of this civilian war hospital, written by Drs. Tooth and Calverley, is well done. The authors are to be complimented on confining their remarks mainly to the two great diseases which are the scourge of all field forces — these are enteric fever and dysentery. The former disease is discussed at considerable length, but the points were practically summarised by Dr. Tooth in the paper which he read before the Clinical Society in March last.[2] Some instructive cases of colitis and dysentery are ably discussed. The authors are disposed to regard diarrhœa and dysentery as having a common origin; the conclusion is, we think, as sound as it is obvious from camp experience, and we are disposed to think that it is wise to look upon every case of simple diarrhœa as a possible focus for further dissemination of the disease, and that persons infected from a slight case may develop dysentery in its severest form. The surgical work done by this hospital is excellently put forward by Messrs. Bowlby and Wallace. The writers cover the usual ground from descriptions of rifles and projectiles to the surgical management of perforative peritonitis. It is impossible to review the multitude of details noted in these chapters; but we are impressed by the note of warning sounded when the authors say, speaking of operative interference in perforating wounds of the abdomen, "we are aware of cases which would have been so treated but for the too favourable opinions of the course of such injuries which were generally prevalent." The appendices giving details as to the staff and equipment are extremely interesting, and not unlikely to be of value in the future when some similar emergency to that of 1899 calls for the organisation of another civilian war hospital. We cordially commend the book to the study of both the military and civil sections of the profession.

[2] BRITISH MEDICAL JOURNAL, March 16th, 1901, p. 642.

Dr. R. SCOT SKIRVING, late Consulting Surgeon to the Australian Contingent, who has given a short account of his experiences in *Our Army in South Africa*,[3] has a fine breezy style, and expresses his opinions with a good-natured frankness which takes the sting out of some of his severest criticisms. Of Tommy Atkins he says that he is a machine, "his training makes him so; but he is a brave, patient mechanism with many fine qualities"; he is "a good deal of the grown-up child. If he is thirsty he drinks at the first sewer he comes across." The non-commissioned officers as a body are "the very backbone of the British army. They carried an active sense of responsibility, and practised and worked at their trade in a serious business-like spirit." Of the commissioned officer he says that "he is the best dressed, most gentlemanly, most hospitable, most brave and casual individual whom a bad system has ever produced"—not fully master of his trade. The second chapter is entitled The Medical Arrangements of the Campaign. On this head Dr. Scot Skirving starts with some general propositions. First, that the War Office was utterly mistaken in its estimate of the probable course of the war and of the force which would be necessary, so that "the medical arrangements were apparently planned to meet the needs of a smaller and more successful army"; secondly, that "even the polite, apologetic warfare of that best of men, Lord Roberts, had at times to be cruel, at least to the sick Britisher," for

> It must not be forgotten that, whatever humanitarians may say to the contrary, the military exigencies of the case must take precedence of the medical..... To take an extreme example: it is horrible to think of 500 sick or wounded men lying uncovered, with no medical comforts; but it would be even worse if 5,000 able-bodied troops were cut to pieces or forced to surrender because there were no biscuits or bullets.

He believes that the larger part of the "horrors" which Mr. Burdett-Coutts took as his text were "wholly unavoidable, for they were due to the exigencies of war at a great distance from the base, to difficulties of transport, etc." On the other hand, he thinks

> That some were partially avoidable, and certain reforms which might prevent their recurrence suggest themselves to those who observed the points of failure.

But he is

> Sanguine enough to believe that reformation is possible without the noise of troublesome women or of ill-informed lady-like men who are not gifted with great judgment. It is difficult, indeed, when one thinks of some of the doings of those persons, to refrain from using more pungent adjectives.

As to the errors committed and the reforms needed, Dr. Scot Skirving is not quite so definite as might be wished. He apparently thinks that in some places too much respect was shown for the regulation which directs medical officers to utilise existing buildings as hospitals. This is very probably true, for private houses are nearly always badly constructed for the purpose, and further the use of many such houses entails a subdivision of the staff which must interfere with efficiency. But one of the accusations of the self-appointed critics of the corps was that houses were not requisitioned in sufficient numbers! He thinks that too much reliance was placed on filters, that the only true policy is to boil, and that at some stationary camps a greater effort might have been made to get coal for boiling cauldrons of water. A good apparatus for boiling water quickly with a small quantity of fuel is wanted; probably something on the plan of the water-tube boiler will eventually be invented, but there does not seem to be any practicable apparatus forthcoming at present. He condemns the army ambulance as heavy and cumbersome and rough; the Australian ambulances were much lighter and better, but far from perfection, for "the huge-shafted two-wheeled carts of the New South Wales A.M.C. were a veritable menace to life, a hindrance to mobility, and the ruin of horseflesh. They stuck in every bad donga which

[3] Sydney and Melbourne: Angus and Robertson; London: The Australian Book Company, 38, West Smithfield, E.C. 1901. 2s.

was crossed, and ought speedily to be abolished." He thinks that medical units ought to possess their own transports. The "power of self-transport enabled the New South Wales Army Medical Corps to be of special value." We know from the evidence of others that this is true, and believe that sooner or later there must be a move in this direction. Though no regulations can ever prevent a general in an emergency from cutting down transport as Lord Kitchener did when the force started for the relief of Kimberley, yet the existence of such regulations would operate to prevent the R.A.M.C. from being deprived practically of all transport, as was, we understand, the case during the halt at Bloemfontein. Dr. Scot Skirving expresses the opinion that there is "among military men too great a desire to shift on the sick anyhow," so that the convoys often move

> Without those medical comforts that could be provided by a little delay and trouble: without that able-bodied, to say nothing of skilled, assistance which is desirable with so many helpless sick men; and also without sufficient foresight as to the means of transport required to bring them to their destination..... If this anxiety to pass on patients rapidly and at all hazards were a little less in evidence in both the combatant and medical branches of the service, I should think more highly of the practical professional care and skill of both these departments.

Probably part of this anxiety was due to the special circumstances of the sparsely settled and ill-supplied tracts of country in which the operations were carried on, and might not be so pressing in Europe, but it is no doubt true that when a force is on the move its field hospitals must keep up, rendering hurried evacuation sometimes a necessity. At the same time the criticism is one which deserves to be carefully weighed, for it is easy to drop into a routine. The third chapter is headed "The Royal Army Medical Corps," and in this he says:

> Personally I believe that no more honourable, hardworking, and willing set of public servants are to be found in Her Majesty's service. Many of the cruel things I have heard said of these men, who give freely of their best to the State, fill me with indignation. None the less, any outside observer can see plenty of faults, both in the professional training of the men and the routine of the department.

He expresses the opinion that

> The majority of military surgeons enter the service with rather less than the average amount of professional education. It is not common, for instance, to find that they have served as house-surgeon in a civil hospital before entering Netley.

Of course everything must depend on what is meant by "average"; so far as the examination test applies, they are not below the average, but the fact that so few have served as house-surgeons is an evil which ought to be remedied, so far as that is possible, by giving facilities to candidates who could hold such appointments, but do not do so for fear of losing seniority. The next point made, though expressed in too sweeping terms, has more substance:

> After they have passed into the service their mode of life in the army seems to me, as a rule, to be fatal to further professional study and self-improvement. No doubt, when actually at Netley, they have great opportunities of learning certain subjects, but the system of medical or surgical charge in military hospitals does not conduce to an intelligent and sustained personal interest in the cases under treatment.

The remedy suggested is:

> He must either be granted time and opportunity to keep up his professional knowledge, or failing this, he must be allowed to act simply as an executive organising officer, delegating the actual treatment of the sick in war to a large extent, to civil surgeons.

We do not believe the second alternative could be entertained for a moment. To do his duty to the army in peace, to say nothing of war little or big, the R.A.M.C. officer must be as good an all-round practitioner as it is possible to help him to become. In discussing the matter Dr. Scot Skirving touches upon a point as to which there is some difference of opinion and practice between the civil and military sections of the profession, he says:—

> Moreover, the existing methods of treatment at the large military hospitals would have to be altered, so that the juniors may take a more active responsible charge of the cases therein treated.

To this criticism, which Dr. Scot Skirving is not alone in making, it is replied, as we understand, that the military system requires that the officer at the head of a hospital must be responsible to his superiors for all that is done in it and that the following paragraph from the regulations for the Army Medical Service recognises the principle of professional responsibility:

> Paragraph 222. Medical officers will draw the attention of the officer in charge of the division to all serious and important cases in their wards, immediately on such coming under their observation, and will in all cases of professional doubt or difficulty seek his advice and consult with him as to the course to be pursued; this will not, however, relieve from responsibility the medical officer under whose immediate charge the case is placed, who will still be held responsible for the proper treatment of patients under his care.

The regulation says nothing as to the conduct of the senior officer towards the junior. The wise senior, of course, needs no regulation to teach him what his conduct should be towards his junior in professional matters, but rules and regulations are not made for the wise. The following by-law of the Royal College of Physicians of London may perhaps be studied with advantage by those responsible for framing or amending the regulations for the service:

> By-law CLXXIV. *Physicians Conduct in Consultation.*—If two or more physicians, Fellows or Members of the College, be called in consultation, they shall confer together with the utmost forbearance, and no one of them shall prescribe, or even suggest, in the presence of the patient, or the patient's attendants, any opinion as to what ought to be done, before the method of treatment has been determined by the consultation of himself and his colleagues; and the physician first called to a patient shall, unless he decline doing so, write a prescription for the medicines agreed upon, and shall sign the initials of the physician or physicians called in consultation, he placing his own initials the last. If any difference of opinion should arise, the greatest moderation and forbearance shall be observed, and the fact of such difference of opinion shall be communicated to the patient or the attendants by the physician who was first in attendance, in order that it may distress the patient and his friends as little as possible.

Dr. Scot Skirving has done well to put his views on record while the impression of his experience in South Africa was fresh. No one will accept all his conclusions, but everyone interested in the bettering of the military medical service can learn something both from his praise and his blame.

## NOTES ON BOOKS.

### GUIDE BOOKS.

WHEN an expert writes an elementary book on his own subject, the reviewer can do little more than express the thanks of the public for the condescension. This is our position before Mr. Coolidge's *Guide to Switzerland*.[1] It embraces what may be called "tourist Switzerland," that is to say, it includes certain parts of the Alps, such as Chamounix and the Italian Lakes, which lie beyond the confines of the Swiss Republic. Its general plan is good, and we know of no guide-book which would give the tourist unacquainted with the Alps a better idea of where he should go. It deals with the regular round and with the most frequented resorts at length, but gives hints to the tourist who wants to get out of the beaten track. The volume contains some excellent sketch maps, and a few reproductions of photographs which appear to be rather out of place, adding to the bulk of the book. A "cycling supplement" has been added by Mr. Charles L. Freeston, who gives advice as to the choice and management of the machine best suited for the country, and the routes best adapted to it.

Among a series of guides published by Messrs. Ward, Lock, and Co., at a uniform price of one shilling each, is one for *Switzerland*. It describes the various routes from London to Switzerland, and gives particulars of the chief tours and tourist resorts in that country and Savoy. Particulars are given as to hotels, there is a general map, and reproductions of photographs from a number of well-known places. Altogether the volume, which is in its third edition, is a wonderful production for the price, and gives all the information needed by a tourist who keeps to the more frequented parts. In the same series is a guide to *Belgium and Holland*, which seems to be very complete and accurate. A guide to the *English Lakes*, with maps, plans, and many illustrations, embraces the country from Carnforth to Penrith and from Shap to the Furness coast, and is in its eleventh edition. Another volume is concerned with *Oban*, *Fort William*, and the *Western Highlands*, including the Caledonian Canal, Iona, and Staffa, and has maps, plans, and illustrations. The guide to the *Donegal Highlands* describes a picturesque district which is every year becoming more frequented. It is illustrated, and has a map of Donegal and Antrim showing the new roads, car routes, and light railways. Another volume which has for its main title *Llandudno*, includes the north coast of Wales from Chester to Carnarvon, gives particulars of excursions to Snowdon, Bettws-y-Coed, etc., and contains an ap-

[1] *Guide to Switzerland*, by W. A. B. Coolidge, Fellow of Magdalen College, Oxford, and formerly editor of the *Alpine Journal*, with cycling supplement by Charles L. Freeston. (London: A. and C. Black. 1901. Small 8vo pp. 276; 8 maps. 3s. 6d.)

pendix of information for anglers and cyclists. The volume entitled *Lowestoft* embraces also Yarmouth, Norwich, and the Broads. Particulars as to cycling routes are given, and some hints as to sport on the Broads. The guide to the *Isle of Wight* is also a useful volume, giving much trustworthy information as to the beautiful coast and inland scenery of that favoured island. Finally, we have the twenty-third edition of a guide to *London*, which contains numerous useful plans and section maps and an immense collection of information, well arranged and adequately indexed about the great metropolis, some parts of which are *terra incognita* even to its most active inhabitants. All the volumes have rounded corners and plain limp bindings, so that they are suitable for the pocket.

The North British Railway has issued a small pocketbook (price 4d.) entitled *From Fort William to Mallaig*, well printed and illustrated, describing the country on and near its route between these two places, and the excursions which may be made from the various stations.

MR. H. K. LEWIS, 136, Gower Street, London, asks us to state that he is the English agent for the translation of Edinger's *Anatomy of the Central Nervous System of Man and of Vertebrates*, a review of which appeared in the BRITISH MEDICAL JOURNAL of July 6th, p. 19, and that the price of the book is 15s. net.

# REPORTS AND ANALYSES
AND
# DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

## MEDICINAL AND DIETETIC PREPARATIONS.

*Elixir Bromyl.*—A specimen of this elixir has been submitted to us by the makers, Messrs. Squire and Sons, 413, Oxford Street, W. It is a preparation containing hexamethylene-tetramine-bromethylate in an elegant and agreeable form. This body is a compound of hexamethylene-tetramine (urotropine) and ethyl bromide, and is obtained by bringing these substances together in alcoholic solution. It has been used as a nervous sedative and anti-epileptic. It is said to possess the therapeutic properties of the metallic bromides without provoking any of their secondary effects, and to be well tolerated by women and children, and also by patients who have shown a certain repugnance to the metallic bromides. It is also stated that it does not produce the bromide eruption. The dose is the same as that of the metallic bromides, though the percentage of halogen present is very much smaller. The elixir contains 10 grs. of the compound in each fluid drachm. Messrs. Squire also supply the substance itself for dispensing purposes.

*Mercuramine.*—From the same firm we have also received a specimen of a solution of a new germicidal salt of mercury (hydrarg-ethylenediamine citrate). This solution has been named "mercuramine," and corresponds in strength with a 1 in 50 solution of mercuric chloride, and can be diluted accordingly. When compared with solutions of mercuric chloride it is found that solutions of mercuramine of the same relative strength have the same germicidal power: they have the great advantage, however, of not coagulating albumen, and hence have a more penetrative action. The solution has lately been used as a hand disinfectant, as it does not produce the same irritating effect on the skin as many other preparations used for this purpose.

*Tabloids of Codeine and Nux Vomica.*—Messrs. Burroughs, Wellcome and Co. (Snow Hill Buildings, E.C.) submit a sample of these tabloids, each of which is stated to contain codeine phosphate gr. j, extract of nux vomica gr. ¼. The sample appears to come up to a high standard of excellence.

*A Pipe Mouthpiece.*—As we have reason to believe that many members of the Association are smokers, we may perhaps draw attention to a pipe which has been brought under our notice. The main feature of novelty is that the vulcanite mouthpiece is split longitudinally, and the two parts are held together by a pin, around which they revolve. The smoke channel is a trough in each half of the mouthpiece, and by rotating one half on the other the channels are laid bare, and can, of course, be thoroughly cleaned. It was once said that the chief advantage of living in the country was that it was always possible to find a stem of grass to clean a pipe, but this invention appears to do away with this rural superiority. The mouthpiece when closed and pushed into the pipe, which it fits accurately, appears to be sufficiently air-tight for all practical purposes. The pipes can be obtained at the M.P. Pipe Company's Warehouse, 29, Ludgate Hill, E.C., price 2s. 6d. and 5s.

## THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

A SPECIAL general meeting of the governors and subscribers of the National Hospital for the Paralysed and Epileptic was held at the hospital, Queen Square, Bloomsbury, on July 7th, under the chairmanship of Mr. PEARMAN, to receive the report of the Committee of Inquiry.

Mr. MELVILL GREEN, in moving the adoption of the report of the Committee of Inquiry appointed on March 23rd, said he would read first of all Clause 13, in which the Committee said that they had inquired into the truth of the several allegations complained of in the statement of the medical staff, and found that some of the most important of them were true, that some had a foundation of fact, but were exaggerated, and that others were unsupported by any sufficient evidence. He then read certain clauses of the report as follows:

Clause 53. "We can find no foundation for the fears entertained that the character of the hospital as a religious and philanthropic institution will be imperilled by the presence of two medical men on the Board of Management and we are therefore quite unable to concur with the present Board when they characterise the demands of the medical staff as 'encroachments calculated to destroy the religious and philanthropic character of the hospitals, and to subordinate to purely professional objects institutions maintained by the benevolent for benevolent purposes.'" Clause 50 (part of): "Another of the objections urged to the direct representation of the medical staff on the Board of Management is that it will give undue influence to the scientific element in the hospital and will tend to subordinate the immediate benefit of the patients to the pursuit of medical knowledge."

The Committee had investigated that thoroughly and had dismissed the suspicion suggested as unfounded. Then the report said:

Clause 14. "It is our opinion that the defects in management to which attention was drawn by the statement were deserving of notice and correction: but that they were never sufficient in magnitude and frequency to render the treatment in the hospital otherwise than good as a whole."

In regard to finance, when it was mentioned that there were irregularities in finance people were apt to get frightened. It was true that there were irregularities in finance, that is to say, there ought to be three trustees and there were only two, but that was a mere technical detail. A sum of money had been placed to one account that ought to have been placed to another, that is to say, it had been invested in what it ought not to have been, but the matter of finance was absolutely all right in the popular sense of the word. In Clause 66 the Committee express the opinion that the supervision of the affairs of the hospital by the Board of Management has not been adequate to the needs of the institution. That Mr. Green thought was so. By adopting the report that would be affirmed. He then read the following:

Clause 55. "We recommend that the Board of Management be increased by the addition of two members chosen by the Medical Committee from the medical staff."

Clause 48: "We are of opinion that the mode of representation desired by the medical staff is a very proper one, and is the smallest concession which is reasonable."

By carrying the resolution submitted they would determine and decide that that should be the rule of the hospital henceforth. It was true that the motion did not alter the rule; the rules must be altered at some subsequent meeting, and therefore a second motion would be put before the meeting to appoint a Committee to prepare these alterations. He hoped it was quite understood that they decided beyond all controversy and question that the staff should be represented by two of its members elected by itself on the Board. Clause 79 of the report says, "We are of opinion that the office of General Director in the hospital should be abolished." Without any question or doubt, if the motion was carried that the report be adopted, it was determined that there would be no General Director in the hospital. In Clause 67, the action alike of the Secretary-Director and of the Board of Management was shown to have tended to hinder the free access of communication from the medical officers to the Board. That was a finding of fact. In Clause 68 an extraordinary occurrence was related. A member of the medical staff in 1890, eleven years ago, sent to

Mr. Rawlings a sealed letter for the Chairman at the next Board meeting through the hands of the Secretary, who declined to deliver it, and returned it with the remark that he could not think he was justified in acquiescing in an effacement of the position that the Board of Management had done him the honour to assign him. In the next clause (69) there was related a very remarkable incident. Before he read it he would tell them that nothing had struck him more forcibly than the forbearance of the staff. The medical staff made a complaint to the Board, and the Board found it to be well founded, and then at a subsequent meeting they sent—they were not sending to a parcel of schoolboys—for the staff. Did they send in order to get information or to consult the staff? No, not a bit of it. They sent for them to reprimand them and scold them. This was the minute of the Board:

The Chairman referred to the matter brought under the notice of the Board at their last meeting, and said that the Board had thought it desirable to invite the members of the staff to meet them in order that the Board might have an opportunity of saying that as the Secretary-Director was entrusted with the control and general direction of the hospital, and with the authority of the Board of Management in their absence it was desirable he should be informed at once if anything came to the notice of the members of the staff or others which appeared detrimental to the interests of the hospital or to call for action. The Board were further of opinion that when a need arose for inquiry and investigation, it should be made by the Secretary-Director and not by any other officer, whether medical or lay.

The minute did not tell what happened. Mr. Green then read from the report Clause 77:

It should be added in justice to Mr. Rawlings that the course he pursued in the case of this child, and in most of, or perhaps all, his dealings with the medical staff received the approval and support of the Board of Management. That, in our opinion, he was throughout acting in the manner which he thought to be his duty, and which was in the spirit of the instructions which he received from the Board, and that on them rather than on him rests the responsibility for the attitude he assumed towards the medical staff.

There was nothing to blame Mr. Burford Rawlings for except that he did not perceive the falseness of his position. He acted according to his directions, and did what the Board wanted him to do, and the blame, if blame there were, rested with the Board. He was not surprised on receiving a letter from him announcing his intention to resign. One could not be blind to the fact that there was a good deal of censure of the Board in the words quoted. He understood that the members of the Board who were present would give an explanation which might be satisfactory, though it did not appear to have been satisfactory to the Committee of Inquiry. He did not want to suggest that the members of the Board should resign. He did not want to suggest that the Governors should say so, because the Governors had no power to do so. The members of the Board had told them for some time with great vigour that it was quite impossible to work a Board with two members of the medical staff on it, because the two members of the staff would domineer over the other members, who would have to give way to the staff when they ought not, and that they could not conduct the hospital. He did not know if the Board was responsible for the article which appeared in the *Nineteenth Century and After*, which expressed in the clearest way what seemed to be the view of the Board. If those gentlemen, notwithstanding the opinions they had entertained so strongly, were willing still to govern the hospital with rather more industry, though perhaps not with more heart, than formerly, he had nothing to say to it, and certainly the report said nothing about it. He hoped the meeting was going to vote for the adoption of the report, and so absolutely decide the three points: the staff on the Board, the Director nowhere, and the revision of the rules.

Sir James Crichton-Browne, in seconding the adoption of the report, said that it could not now be denied that the main contentions of the medical staff had been amply justified, and that they had correctly indicated the sources from which all defects in the administration of the hospital had arisen. A tenfold debt of gratitude was owed to the medical staff. They had not only given their professional and scientific services to the hospital, but they had saved it from ruin. Without the action of the medical staff there would have been no Committee of Inquiry, and without the Committee of Inquiry all these abuses which had been exposed would have gone on increasing. That must have resulted in the resignation of the staff and the sinking of the hospital into a position that it was pitiable to contemplate.

Mr. Nelson said that as far as his own opinion went it had always been that for the Board to maintain that the admission of two members of the medical staff to its numbers, two out of twelve, would involve the predominance of medical influence was ridiculous. Two alternatives were suggested in the report, one that the Board should take the position of Mr. Rawlings, that is to say, should be responsible. How could that plan possibly succeed? There would be no sequence or method in the way in which the administration of the hospital was conducted. The other alternative was to appoint a doctor as the head of the whole hospital.

Dr. Bastian said no definite recommendation was made but there were two alternative schemes. It lay with the Committee that was about to be appointed to look into the details, and when the Committee had arrived at their conclusions their report would come before a subsequent meeting of the Governors.

Mr. Stobart said he was bound to refer to the way in which the governing body had neglected their duty. It would be a very good thing to have a few members of the medical staff on the Board, but what would be the use if the Board meetings were to consist of one member of the Board, as seemed to have been the case on many occasions? [Loud cries of "No, no."]

The Chairman said that the report in speaking of "one member" dealt with the House Committee and not with the Board.

Mr. Stobart said he did not think that made very much difference. The point was were they going to alter the management of this hospital or not?

The report of the Committee of Inquiry was then adopted unanimously.

Mr. Melvill Green moved:

That a Committee be appointed to represent the Governors in making such arrangements as may be necessary for dealing with all matters consequential upon, or arising out of, the adoption of the previous resolution.

Sir Sydney Waterlow seconded the resolution, subject to the addition of the words "and reporting their recommendations and actions to the Governors."

Mr. Victor Horsley desired to ask a question relative to the duties of the Committee. It was with regard to the expenses of the inquiry. He was anxious on behalf of the charity that it should not be unreasonably taxed for that horrible dispute.

The Chairman said he thought the question was hardly in order on the resolution. The proposal had nothing to do with these expenses.

Mr. Victor Horsley said he was going to ask whether the Committee were to take into consideration that paragraph in the report which referred to the expenses of that inquiry.

The Chairman said the Committee to be appointed would have power to consider all the recommendations of the report.

Mr. Victor Horsley said he was referring to the Committee which was proposed to be appointed by that resolution, which was a Committee of Organisation. Inasmuch as the medical staff had not put the hospital to a single halfpenny of expense and the Board had involved and were involving it in the expenditure of hundreds of pounds, he wanted to know on behalf of the patients for whom the hospital was carried on, whether the charity was going to be taxed or not? That was his point.

The Chairman said he did not think Mr. Horsley was in order.

Mr. Victor Horsley said he was simply asking whether the Committee of Organisation would deal with Paragraph 109 and bring it before a general meeting.

The Chairman said the Committee would deal with the whole of the report.

Mr. Victor Horsley said that that answered his question.

Sir John R. Paget explained the position taken up by the Committee of Selection and Committee of Inquiry in regard to these expenses.

Mr. Melvill Green said the Governors at the March meeting empowered the Committee of Inquiry to provide all necessary and proper expenses. The Committee of Selection thought they empowered the Committee of Inquiry. It seemed to him that the matter of those expenses had been decided by the Governors. The Governors, at the meeting in

March, determined that the question should be left to the Committees. Both those Committees had determined that necessary and proper expenses should be allowed, and the law charges were to be taxed.

The CHAIRMAN said that the Board had assented to the admission of two members of the medical staff to the Board and to the abolition of the office of Secretary-Director. There were other things in the report which more or less perhaps looked like condemnations. He had heard with some surprise that a good deal of blame had been attached to the Board. The Board certainly did not profess to be immaculate. They did not claim that their management was absolutely perfect in every respect, but they claimed that the hospital was what it was in consequence of the action of the Board of Management. No doubt the great name of the hospital was largely due to the eminence of its medical staff, but the Board of Management claimed that some credit was due to them for the appointment of the medical staff. As members of the Board they must all admit that there were defects of some sort. The defects such as they were which had been pointed out by the Committee of Inquiry, the most important of them at least, were those which were not brought to the knowledge of the Board. [Cries of "Oh."] He thought that notwithstanding what was said by the Committee of Inquiry, and he could hardly think the medical staff themselves could be disposed to deny, that they ought to have brought those matters before the Board. [Loud cries of "We did."] All he could say was, speaking for himself as one member of the Board of Management who had attended practically regularly for the last thirty-five years, that those defects were not brought to his knowledge, and he could not help feeling that if they had been brought to the knowledge of the Board as a whole, it was absolutely impossible that he should not have heard of it.

Mr. VICTOR HORSLEY said in the name of the staff he begged to protest against the statement, which was wholly contrary to fact, in respect to the medical staff not drawing the attention of the Board to the defects. He noticed the Chairman's words very carefully—they were perhaps legally inspired: he said "the Board as a whole." The medical staff had called the attention of the Secretary-Director to all those things, and they had been ordered by the Board in a contumelious fashion, as they had heard in that discussion, to do that very thing, and when they did it no notice was taken, and yet the Chairman came there and had the audacity to tell them that the medical staff had not done this very thing. He protested in the name of the medical staff against the Chairman's words.

The CHAIRMAN, in replying to Mr. Horsley, said he hoped he did not suggest that he intended to be disingenuous. What he said was that if any notice of these complaints had been given to the Board, he did not see how it was possible that he, as a constant attendant, did not know of it, and he individually did not know of it.

Mr. VICTOR HORSLEY said he must accept the explanation, but he did not consider it satisfactory.

The resolution with the addition mentioned was carried unanimously.

Mr. MELVILL GREEN proposed, and Sir SYDNEY WATERLOW seconded:

That such Committee consist of nine persons, three of whom shall be appointed by the Board of Management, two by the medical staff, and four by the Committee appointed on March 23rd, and that four shall form a quorum, and that in the event of death the body by whom the appointment was made shall be at liberty to supply the vacancy.

Sir FELIX SEMON said the medical staff agreed to the resolution very much against their wish, and they agreed to it really in the interests of peace. It would have been better if the Committee had been constituted by the Governors without any delegates from the Board or medical staff, just in the same way as the Committee of Selection was appointed. It would have been open to that Committee to ask for technical references from the Board and from the staff. They very much feared that a Committee constituted in the manner proposed would simply be a repetition of what had happened on previous occasions. They hoped that the gentlemen appointed by the Governors would hold the scales, otherwise it would have been better simply to have had a Committee nominated by the Committee of Selection without reference to the Board of Management.

The resolution was carried unanimously.

The gentlemen appointed on the Committee of Organisation by the Committee of Selection were Mr. Timothy Holmes, Mr. J. D. Power, Mr. James Wigan, and Mr. Melvill Green; the medical staff appointed Sir Felix Semon and Dr. Ormerod; and the Board of Management after considerable pressure appointed Mr. Pearman, Mr. Campbell and Mr. G. Russell.

The proceedings terminated with the usual vote of thanks to the Chairman.

The meeting was not so numerously attended as on previous occasions, scarcely more than eighty people being present at any one time.

## THE ROYAL MEDICAL BENEVOLENT COLLEGE, EPSOM.

THE twenty-eighth festival dinner of the Royal Medical Benevolent College, Epsom, was held at the Hotel Cecil on Tuesday, July 9th, under the chairmanship of Lord ROSEBERY, the President of the College. The guests numbered nearly 400, and among those present were Sir William Broadbent, Sir R. D. Powell, Sir J. Fayrer, Sir Thomas Smith, Dr. Farquharson, M.P., Sir T. Lawrence, Mr. Hutchinson, Sir J. Crichton-Browne, Surgeon-General Jameson, Dr. F. T. Roberts, Mr. T. Wakley, jun., Dr. Pavy, Sir F. Semon, Mr. Stanley Boyd, Sir J. W. Moore, Mr. H. T. Butlin, Mr. Malcolm Morris, Mr. H. W. Allingham, and Mr. Christopher Heath.

Lord ROSEBERY, in proposing "The Health of the King," said it was the first time that he had proposed His Majesty's health. He would only remind them that His Majesty had been pleased to succeed the late Queen as Patron of Epsom College, and had thereby added one more to the many proofs he had often given of his interest in the medical profession.

Lord ROSEBERY next proposed "The Health of the Queen, the Duke and Duchess of Cornwall and York, and the other Members of the Royal Family."

Lord ROSEBERY, again rising, proposed the toast of "Success to the Royal Medical Benevolent College." He said: I have presided at many dinners, but I do not know that I ever presided at a more alarming dinner than this. In the first place, one's diet becomes a subject of anxious consideration when dinner is carried on under the eyes of so many score of competent critics; and in the next place I cannot but be aware that everyone probably in this room is better informed on the subject on which I am to address you than I myself. That is a more familiar feeling to me than the other. But neither of them is perfectly agreeable. The other day in a solitude abroad I read in a London paper that one of our bishops had issued a charge to his clergy complaining of the undue shortness of sermons in the present day. I confess that struck me with a melancholy feeling. I shall avoid that diocese, for I am under the impression that the sermon that is too short has yet to be written. To-night, with that awful example before me, I at any rate shall be brief. On the subject which brings us together, as I have said, most of you know more than I do; it is the subject of the Royal Medical Benevolent College of Epsom, and the only complaint I have to make on that topic is this, that the adjectives are superabundant, and that we should be happier and better—I speak as the President of Epsom College—if we could drop these adjectives altogether. I do not know that there may not be legal technicalities which prevent us dropping the adjectives, but I should have thought if you called it Epsom College and in brackets below put "with the Royal Medical Foundation," you would have answered every object that can be suggested. I am perfectly certain that a long name is of no advantage to the College, but quite the reverse. I know that even the boys at that school dislike the present superabundance of epithets, and I cannot conceive why Epsom College, which is about the same length as Eton College in point of terminology, should not rise to an even greater height among secondary schools than at present. I make that suggestion trembling, as your Treasurer may rise with technical objections, but it is one of the objects very near my heart, and I am quite sure that when your Governing Body asked me to preside at this dinner they must have known

that I could not refrain from expressing that view. As to the statistics of Epsom College, they are, I think, pretty well familiar to you. They are embodied in the papers which are circulated in this hall. The facts are these: That there are foundation scholars—I leave out the pensioners from my consideration to-night, I do not quite know how they became connected with Epsom College, but for the purpose of my argument to-night I wish to omit them—there are fifty foundation scholars in Epsom College for whom exhibitions have to be found from some fund or other, and then there is a difference which has to be met from public funds, and that represents a sum, I fancy, of some £6,000 a year. The fixed income of the establishment being not one-third of that, if as much, it is quite obvious that considerable reinforcements are required from outside; and indeed, when I think of the task the treasurer has to face, I feel that if anything were to happen to Sir Michael Hicks-Beach in the present condition of national finance, I should wish our treasurer to succeed him. Now, these are points upon which I have no practical acquaintance, but I can tell you something of the school, because I am a neighbour. I take the greatest interest in the school, am privileged to attend their matches, and even their speech-days, and I have known some of the lads as they passed from the school personally. You cannot see finer lads anywhere than you see in Epsom College. I do not believe that anyone who is conversant with the position of the school curriculum, with the position which those boys hold, and which that school holds, could refrain from giving it their enthusiastic support. That is personal evidence, but I think, considering the nature and conditions of the College, how closely it is allied to the medical profession, we have some right to ask for a larger support from the public and the profession—from the profession, perhaps, first, but also from those who are benefited by it. I think we are perhaps a little too apt to imitate the devil in that characteristic couplet of which we know the refrain—"The devil was sick, the devil a saint would be"; and then the second line points out in language almost profane that when the devil was better—he changed his mind. I do not mean to associate us poor mortals with so eminent and so sinister a person, nor do I take the exact line of that couplet, but I do feel that when a human being is sick he is apt to regard with great justice his medical attendant as a ministering angel, and that when he is well he is apt to forget to whom it is that he owes that he is well. I think that all agree with me, though there are many brilliant exceptions to the rule, that it is perhaps not unnatural and only human nature for a man when he has recovered from an attack of sickness and oppression, to try and shake off the association of that period and even the best associations of all, the doctor and the nurse. But when it is brought to our minds, I do not think that we who have been ill and who owe much to those who have cured us, can forget on an occasion of this kind how much we owe to them, and how in an indirect way we by assistance to this great institution can show in some measure our gratitude. But that after all is only a personal view. That is the personal gratitude of the patient to the profession. Do we not all—all humanity—owe a debt which we cannot estimate or limit to the medical profession? I suppose that in this audience I am at any rate sure of a ready concurrence in the opinion that that profession is one of the noblest, if not the noblest, of all professions. It must be associated with much of pain, where the physician is baffled by the inexorable forces of Nature, but all professions, all callings have their pain; and of the medical profession, alone perhaps of all secular professions, it may be said that a man on his setting out to do his day's work knows that he can have no other than a beneficent object—to heal and to assuage pain; to combat, with ultimate ill-success, indeed, the chill angel of death. That, I think, is a consideration which comprehends all humanity in a debt to the medical profession; but, on the other hand, that profession is equal to its duty, and I do not think anyone doubts that it is equal to its duty, whether on the battlefields of South Africa, or perhaps in the not less arduous task of combating disease in the evil conditions of life at home. If that be so, surely if they be ready to perform their duty under all these conditions, it is obvious that they pursue that task only at the cost of their own lives. Of course it is very easy in an assembly like this to fancy that the medical profession is nothing but a brilliant and lucrative one; but when you come to think that there are some two thousand medical graduates turned out every year, that there are some thirty thousand in Great Britain or perhaps outside of Great Britain just now, one cannot but feel that the number of blanks in that profession must be out of all proportion to the number of prizes. We have the princes and the prizemen at this table, but that is only a small proportion of the great number in country and in towns who are at the beck and call of disease and pain, by day and by night, in every weather, at every hour—at the call of suffering and want. It is a noble profession, but it is in many cases a profession of forlorn hopes. Those men when they die, die as truly in the service of their country as many of the men who fall on the battlefield. They may leave behind them a wife whom they cannot maintain, children whom they cannot educate. It is for these children that we plead to-night. There was one medical student—the worst physician, I believe, but the most famous medical student—who in the eighteenth century lay dying not far from here, and as he lay dying there was an episode that I could never forget. They gathered round him and asked him, "Is your mind at ease?" and I will quote the answer in the words of Lord Macaulay, which have never been obliterated from my mind since I read them. "No, it is not," were the last recorded words of Oliver Goldsmith. We must remember that they are the words of thousands who die with that feeling and who belong to the great profession to which so many here belong. I ask you to come to-night to the assistance of Epsom College, with the assurance that everything you give will be well and worthily expended, and that you will have done no better deed in your lives than by assisting to maintain this noble institution. With this toast I couple the name of the Treasurer, Dr. Holman.

Dr. C. Holman (Treasurer), in responding to the toast, said that in the last Act of Parliament procured by the Council of the College power was obtained to do away with the adjectives "Medical and Benevolent," and the legal right was obtained to admit others than the sons of medical men to the institution. If the Council were provided with £50,000 they would wipe away the adjectives from the name, but otherwise he did not think they would be justified in so doing. It was impossible that in a profession like the medical there should not be cases of failure, because everyone could not come to the front. In such cases there might be dreadful misery. Owing to his connection with the Royal Medical Benevolent College for twenty-five years and with the charitable work of the British Medical Benevolent Fund he had seen how help was needed and how sorely it was required. It must occur that a professional man might die in his attempt to live and he need only take the case which occurred some three or four years ago and caused much sympathy, where a medical practitioner riding over the Wiltshire downs to bring relief and succour to a burnt child was himself struck by lightning and killed. What could be more terrible than the case of a wife and family whose bread-winner was suddenly taken away by death. What was the wife with five or six children to do except to come to Epsom College, and it was for those that he pleaded. The idea of the founder, John Propert, was not to form a class school, but a mixed school, because he thought that a mixed school was the best way in which to supply the education required. It was hard work to find the £6,000 a year which was wanted to meet the needs of the institution, but he was glad to say that during his term of office as treasurer a sum of between £70,000 and £80,000 had been raised. During the earlier years the numbers of the pensioners and foundation scholars was a variable quantity, but it had now been fixed at fifty pensioners and fifty foundation scholars. To diminish the amount of assistance afforded would be painful to a degree, for the misery that would be caused by ceasing to afford that help would be incalculable. He would leave his cause in their hands, and when he saw around him men who had helped him loyally for so many years in carrying out the aims of the institution, he felt with the greatest confidence that he would go home that night with the debt clean wiped out, and the Council thus left unfettered in the future to carry on their work.

The toast of "The Chairman" was proposed by Mr. J. L. PROPERT, who referred to the many-sided activity of Lord Rosebery, and thanked him for the interest which he had shown in the College.

Dr. HOLMAN announced that a friend, after listening to Lord Rosebery's speech, had just promised him a donation of 1,000 guineas.

The SECRETARY read the subscription list, which amounted to £4,127, including the above-mentioned sum of 1,000 guineas.

Lord ROSEBERY, in reply, thanked Mr. Propert for the kind expressions he had used, and added that no speech could be so effective as the words just uttered by the Treasurer.

## MEDICAL SICKNESS AND ACCIDENT SOCIETY.

THE usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on June 28th. There were present Dr. de HAVILLAND HALL (in the chair), Dr. J. B. Ball, Dr. Frank S. Palmer, Mr. J. Brindley James, Mr. F. S. Edwards, Dr. M. Greenwood, Dr. St. C. B. Shadwell, and Mr. Horatio P. Symonds (Oxford).

The accounts of the Society showed that during the spring of this year the number of new entrants has been appreciably above that for the corresponding period of last year. In the earlier part of the year the number of members requiring sick pay is always specially heavy, mainly from the extra claims arising from bronchial and throat affections. So far the total sickness experience for 1901 has been well under the expectation, and few serious cases of illness have been reported. Rather less than the usual number of accident cases have arisen, and this is specially the case in respect of injuries arising from riding and driving. Scarcely any bicycle mishaps have been experienced by the members. The list of permanently disabled members grows slowly. One or two more names are added to it each year, and about the same number are removed by death. Nearly £2,000 a year is now disbursed to cases in which it is feared that the permanent provision made by the Society will be drawn to the end.

Prospectuses and all particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

## THE PREVENTION OF CONSUMPTION.

### PERTH.

THROUGH the liberality of Sir Robert and Lady Pullar, the Society for the Relief of Incurables and Treatment of Chronic Diseases, including Consumption, in Perth and Perthshire will shortly be enabled to add the sanatorium treatment of early consumptives to the good work which it has for many years carried out. The sanatorium, which has cost some £8,000, will accommodate 20 patients. It stands in its own grounds of over six acres on the western slope of Kinnoull Hill, facing south, and commanding a magnificent view. The building has been specially designed for the purpose of carrying out the open-air treatment of consumption. The sanatorium, fully equipped, will very shortly be handed over to the Society, which is making strenuous efforts to raise funds to endow at least 8 beds for the very poor. For this purpose about £10,000 is required, of which nearly half has been received or promised.

### DURHAM.

The pamphlet on *Consumption: its Prevention and Cure*, which is issued by the Society for the Prevention and Cure of Consumption in the County of Durham, for the use of the members of sanitary authorities, guardians of the poor, consumptives, and the general public is excellent. The enormous prevalence of the disease throughout the country and in the county itself is first emphasised, and then the chief sources of infection and the unfavourable conditions which pave the way for the disease are discussed. The possibility of prevention is illustrated by a chart showing the decline of the disease during the past sixty years, and the measures by which prevention is to be carried out are then mentioned. These measures are grouped according as they come under the control of sanitary authorities, Boards of Guardians, or the consumptives and their friends. The subject matter as well as its arrangement is excellent, and the distribution of the pamphlet should produce most useful results.

### EDINBURGH.

On a proposal to pass a resolution making compulsory the notification of consumption, the Town Council of the City of Edinburgh, at their meeting on Tuesday, July 9th, decided by 19 votes to 18 to delay the matter, especially in view of the forthcoming Congress in London.

## THE PLAGUE.

### PREVALENCE OF THE DISEASE.

#### CAPE COLONY.

THE plague outbreak is subsiding; only a few cases are reported weekly in Capetown. On July 4th a Reuter's telegram announced that a case of plague had occurred at Salt River, and a fresh case at Port Elizabeth. A further telegram, dated July 7th, states that one case only of plague had been reported in Capetown during the previous forty-eight hours, and 3 cases at Port Elizabeth. Again, on July 8th, a fresh case is reported from Port Elizabeth. From these returns it would appear that Port Elizabeth is more seriously affected than Capetown, but in the former town the outbreak is not serious. For the present the scare at the Cape may be said to be over, and there is every appearance of a complete subsidence of the disease.

On June 30th considerable alarm was occasioned by four soldiers developing symptoms which raised suspicions of plague at Imvani station, midway between Cathcart and Queenstown, Eastern Province. At this station a plague-infected rat was found on June 25th, and a case of plague developed in one of the servants employed on the railway on June 27th. Nothing further, however, has been heard of this outbreak.

#### MARSEILLES.

On board a transport, which arrived at this port on July 7th, 2 deaths from plague had occurred and several persons had developed suspicious symptoms during the voyage. The vessel was subjected to ten days' quarantine.

#### CONSTANTINOPLE.

Two cases of plague occurred in Constantinople on July 4th. The diagnosis of the cases was confirmed by bacteriological examination. A suspected case of plague was reported from the Stambul quarter of the city on July 2nd, The sanitary authorities have directed that all persons leaving the city shall be medically examined.

#### EGYPT.

The latest news from Egypt is highly satisfactory as regards plague. The so-called "scare" which former telegrams announced as existing at Zagazig has subsided if it ever existed. The Director-General of the Sanitary Department states officially that 9 cases of plague were reported in all Egypt for the week ending June 30th. Eight of these cases occurred in Zagazig and one in Alexandria. A telegram from Cairo, dated Cairo, July 9th, states that the number of cases of bubonic plague at present throughout Egypt is 26, distributed as follows: 21 at Zagazig, 1 at Minieh, 2 at Alexandria, and 2 at Port Said. The total number of cases since April 7th, is 88, of which 37 have proved fatal, while 25 have been cured.

#### INDIA.

The plague returns for all India for the week ending June 15th record 847 deaths from the disease. This is a slight increase upon the previous week when the numbers stood at 829.

In Bombay city, for the week ending June 15th, 73 deaths were recorded from plague against 109 during the preceding week. In the Bombay districts 440 deaths from plague occurred during the week ending June 15th. This is by far the most seriously affected part of India at present. During the week in question there were in Calcutta 48 deaths from plague; in the Bengal districts 12; in the Punjab 176, and in Karachi 18. No deaths from plague were reported from the North West Provinces, or from Oudh.

#### HONG KONG.

During the week ending July 6th, 47 cases and 46 deaths were reported.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.—The sixtieth annual meeting of the Medico-Psychological Association of Great Britain and Ireland will take place at Queen's College, Cork, on Thursday and Friday, July 25th and 26th, under the presidency of Dr. Oscar T. Woods. On Thursday morning the business meeting will be held. In the afternoon the President will deliver an address, after which medals and prizes will be distributed. Subsequently papers will be read by Dr. John Carswell on The Working of the Inebriates Act, by Dr. Thomas Drapes on Insanity and Phthisis, by Dr. J. M. Nolan on Residual Lunatics and Recent Legislation, by Dr. F. W. Edridge-Green on The Evolution of the Colour Sense, by Dr. E. D. O'Neill on The Superannuation Question. On Friday sessions will be held both in the morning and afternoon, when further papers will be read; the President will be at home in the afternoon at the District Asylum, Cork. The annual dinner will take place in Cork on July 25th, and an excursion will probably be made to Killarney on the Saturday.

# UNIVERSITIES AND COLLEGES.

## UNIVERSITY OF BIRMINGHAM.

### DEGREE DAY.

AFTER an existence of fifteen months the first Degree Day of the Birmingham University was celebrated on Saturday, July 6th. The Town Hall was filled to overflowing by a large audience, which had come to take part in what was to the great majority of them the opening ceremony of the University.

The ceremony commenced in the Town Hall at noon punctually, but before then Council and staff of the University had assembled in the University Buildings, and a procession was formed, which in full academicals and robes slowly wended its way from the University Buildings to the Town Hall. Following the mace-bearers came, first of all, the junior Demonstrators and Lecturers of the various Chairs, and these were followed by the more senior Lecturers and Demonstrators. Then came the various members of the professorial staff in order of seniority, and after them the members of the Senate. Following the Senate came the Deans of the various Faculties, Professor Sonnenschein, Professor Poynting, Professor Windle, and the Vice-Principal (Professor Heath). The Principal of the University (Dr. Oliver Lodge) was followed by the Pro-Vice-Chancellor (Alderman Clayton), the Vice-Chancellor (Alderman Beale), the Lord Mayor of the City, and, finally, the Chancellor of the University (the Right Honourable Joseph Chamberlain).

The Chancellor having taken his seat declared the Convocation open. The Principal of the University, Dr. Oliver Lodge, was first of all presented to the Chancellor, who conferred upon him the degree of Master of Science. The Principal then delivered a short opening address, in which he gave some explanation of the objects of the present Convocation. He then presented his various colleagues to the Chancellor, first of all the Vice-Principal and the Deans of the various Faculties, and then in turn each professor. Each one as his name was called advanced to the daïs, and was taken by the right hand by the Chancellor, who said: "By virtue of my authority as Chancellor I admit you to the degree" of Master of Arts or Master of Science as the case might be.

The following is the official list of the degrees thus granted:

Robert Samuel Heath, Vice-Principal and Professor of Mathematics—Master of Science; John Henry Poynting, Dean of the Faculty of Science and Professor of Physics—Master of Science; Edward Adolf Sonnenschein, Dean of the Faculty of Arts and Professor of Classics—Master of Arts; Bertram Coghill Alan Windle, Dean of the Faculty of Medicine and Professor of Anatomy—Master of Science.

*For the Degree of Master of Arts.*—Hermann Georg Fiedler, Professor of German; Clovis Bévenot, Professor of French; William MacNeile Dixon, Professor of English Literature; John Henry Muirhead, Professor of Mental and Moral Philosophy.

*For the Degree of Master of Science.*—Thomas William Bridge, Professor of Zoology; Charles Lapworth, Professor of Geology; William Hillhouse, Professor of Botany; Percy Faraday Frankland, Professor of Chemistry; Frederick William Burstall, Professor of Engineering; Adrian John Brown, Professor of Brewing; Bostock Hill, Professor of Public Health; Gilbert Barling, Professor of Surgery; Bennett May, Professor of Surgery; Edmond Bancks, Whitcombe, Professor of Mental Diseases; Alfred Henry Carter, Professor of Medicine; Robert Saundby, Professor of Medicine; Edward Malins, Professor of Midwifery; Priestley Smith, Professor of Ophthalmology; Arthur Foxwell, Professor of Therapeutics; Robert Francis Calder Leith, Professor of Pathology; James Thomas Jackman Morrison, Professor of Forensic Medicine; Edmond William Wace Carlier, Professor of Physiology; John William Taylor, Professor of Gynæcology.

*For the Degree of Master of Dental Surgery.*—John Humphreys, Frank Earle Huxley.

After the official degrees had been granted the Deans of the various Faculties in turn presented the successful students to the Chancellor, who conferred upon them the degrees obtained under their respective faculty.

The Dean of the Faculty of Medicine presented the following gentlemen who were granted the degrees of Bachelor of Medicine and Bachelor of Surgery:

*Associates of the University.*—Henry William Langley Browne, Edward Cureton, Charles Leedham-Green, David Charles Lloyd Owen, Priestley Smith, Thomas Law Webb, Edmond Bancks Whitcombe.

*Past Students of the Birmingham Medical School who as Qualified Medical Men had been Admitted to the Final Examination for the Degrees of M.B., B.S.*—George Clement Belcher, Reginald Shirley Burd, Arthur Cant, Gilbert William Charsley, Arthur Emery, Thomas Webb Fowler, John Edward Godson, Frederick James Vincent Hall, Charles Harold Harcourt, Arthur Hawley, George Leonard Hill, Wilfrid Anthony Legh Jackson, Tom Longmore, Henry Prince Motteram, Herbert John Orford, John Orton Orton, Edward Ferdinand Page, Henry William Pepper, Harry William Pooler, Astley Bennett Prosser, William Sisam, Arthur John Stanley, Arthur Allen Deykin Townsend, George Arthur Wilkes.

*Ordinary Regulations.*—Michael Joseph Quirke.

The Chancellor of the University then delivered an address. He alluded first to the interesting fact that the ancient University of Glasgow had just been celebrating the 450th anniversary of its foundation with just pomp and pride, while they, the most modern and latest born, were holding their first Congregation. The contrast suggested many reflections, and among them the one that the work of a university was a perennial one. The older universities in whose steps they were about to follow had gradually entwined themselves with the national life, and through all the vicissitudes of social and political revolution had fulfilled the original intentions of their founders, and kept alight the lamp of learning. Though they could not boast of venerable traditions which had made the older universities national in a sense to which they could not aspire, and which had secured for them an influence and a position which they had yet to earn, they could yet follow their examples, could adopt their high ideals, and perhaps as the years went by might strike out for themselves some new path to distinction, which would make them not unworthy of their companionship. He would venture to lay down four qualifications for the ideal university. In the first place, it should be an institution where all existing knowledge was taught. No student in any branch of learning desirous of instruction should ever be turned hungry away from its doors. Doubtless a certain amount of specialisation in the teaching of knowledge was at present necessary, and universities for that reason did so specialise. But it would be fatal, if in the desire to give a special development to the practical and thorough teaching of science, they were to exclude or to neglect the older branches of learning. In the second place a university was a place where existing knowledge was tested, and in that connection he would only say that in the multiplication of examining bodies nothing would be done by them or by their successors to lower the standard of proficiency. The third feature to which he would call attention, and which he was inclined to regard as the most important, was that a university should be a place where knowledge was increased, and where the limits of learning were extended. Original research, the addition of something to the total sum of human understanding, must always be an essential part of their proposals. And lastly a university was a place where the application of knowledge should be indicated and directed. That perhaps brought them nearer to the distinctive feature of their own university. Theirs was a very ambitious programme for an infant university. As they had advanced in the work their horizon had extended, and at present he was not satisfied to put any limits to their aspirations. He regarded the opening of the twentieth century as a critical turn in the history of British education, and was convinced that unless the British people overcame their innate conservatism in regard to new discoveries, in regard to the application of the highest science to the common industries and manufactures, they would certainly fall far behind in the race. Such schemes required enormous funds. The buildings which were necessary on the scientific side of the university, with their full equipment of machinery and furniture, libraries, and museums, could not be secured for a less cost than half a million of money. This sum was a mere nothing when they considered the immense sums spent in Germany on technical schools, and was only a fourth part of the sum lately given by Mr. Carnegie to the universities of Scotland. He concluded by an appeal to the wealthy to come forward and help in the endowment of the great work. What boon more transcendentally important could be conceived of than could be given by any man who would endow a great school of medical research, which should carry forward and apply the discoveries of the last few years? Or again, what more patriotic act could be done than one which should create a great school of scientific training, which would bring under its care those who, as the managers and manufacturers of the future, would practically have in their hands the destinies of the country, the prosperity of its people, and the welfare of its whole population?

## ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia was held on Thursday, July 4th, the President, Sir W. S. Church, Bart., M.D., in the chair. Brief reference was made by the President to the recent celebration of the ninth jubilee of the University of Glasgow, which was attended by himself and the Treasurer as delegates of the College, and at which the degree of D.C.L had been conferred upon him.

*Appointment of Lecturers and Scholar.*

The President announced that Dr. G. F. Still had been appointed Goulstonian Lecturer and Dr. F. T. Roberts Lumleian Lecturer for the ensuing year, and Dr. C. E. Beevor Croonian Lecturer for the year 1903. The Jenks Memorial Scholarship had been awarded to Mr. H. Holroyd of the London Hospital.

*Report of Special Committee.*

A report dated May 6th from a Special Committee of the two Royal Colleges appointed to consider their financial position in relation to the maintenance of the laboratories, and recommending that the laboratories be closed at the end of the present summer session, was received and adopted.

*Communications.*

A communication was received from the Secretary of the Royal College of Surgeons reporting certain proceedings of their Council on May 9th and June 21st, and forwarding a report of their finance committee, dated June 5th, making proposals for meeting the working expenses of the laboratories during the ensuing year.

A communication was also received from the Dublin Sanitary Association suggesting the transfer of pneumonia from the respiratory to the zymotic class in the *Nomenclature of Diseases*, together with letters from the Registrar-General for Ireland and the Irish Royal College of Physicians.

REPORT OF LABORATORIES COMMITTEE.

A report, dated June 7th, from the Laboratories Committee, was received and adopted. The Superintendent of the Bacteriological Department reported that during the previous three months 5,450 doses of diphtheria antitoxin, each containing 3,000 units, had been supplied to the hospitals of the Metropolitan Asylums Board, making a total of 16,350,000 units. Under the grant from the Goldsmiths Company 350 doses of antitoxin, containing 3,000 units, had been supplied to the general and children's hospitals in or near London since March 8th last. During the quarter further batches of antitoxin, supplied by Messrs. Parke, Davis, and Company, had been tested in the laboratory, and a certificate granted showing the strength, sterility, and freedom from excess of antiseptic.

RECOGNITION OF TEACHING INSTITUTIONS.

A report, dated June 10th, from the Committee of Management, was also received and adopted. The Committee of Management recommend that the following institutions, all of which had been visited by a member of the Committee and reported on favourably, should be added to the list of institutions recognised by the Examining Board in England: (1) For instruction in chemistry, physics, and practical chemistry: Municipal Technical Schools, Banbury; Municipal Technical and Art School, Leicester. (2) For instruction in biology: Stonyhurst College, Blackburn. (This college is already recognised for chemistry, physics, and practical chemistry.) The Committee of Management also recommended that the Royal South Hants and Southampton Hospital be added to the list of hospitals recognised by the Examining Board in England.

*By-laws Relating to the Licence.*

The Registrar moved the amendment and re-enactment for the first time of certain by-laws relating to the licence to make them conformable to the amended regulations of the Conjoint Board, adopted May 9th, 1901.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following is the official return of the voting at the election to the Council of the Royal College of Surgeons of England. Seven hundred and sixty-eight Fellows voted, 750 sending their votes through the post and 18 voting in person. The result of the poll was as follows:—

| | Total Votes. | Plumpers. |
|---|---|---|
| Mr. Arthur William Mayo Robson ... ... ... | 332 ... ... | 4 |
| Mr. William Watson Cheyne ... ... ... ... | 302 ... ... | 3 |
| Mr. Richard Clement Lucas ... ... ... ... | 259 ... ... | 61 |
| The above were elected. | | |
| Mr. Charles William Mansell Moullin ... ... | 235 ... ... | 67 |
| Mr. John Hammond Morgan ... ... ... ... | 226 ... ... | 32 |
| Mr. John Bland-Sutton ... ... ... ... ... | 193 ... ... | 25 |
| Mr. Henry Hugh Clutton... ... ... ... ... | 145 ... ... | 10 |
| Mr. George Jordan Lloyd... ... ... ... ... | 93 ... ... | 4 |

In the figures published last week there was an error in the number of votes assigned to Mr. C. Mansell Moullin and Mr. J. H. Morgan.

## UNIVERSITY OF EDINBURGH.

FINAL EXAMINATION FOR DEGREES IN MEDICINE AND SURGERY.—The following candidates have passed this Examination:

*Old Regulations.*—M. N. Bose, S. Dawood, A. T. Gavin, P. E. H. Giuseppi, J. H. Meikle, M.A., B.Sc., W. H. Meyer, W. H. Swaffield, J. Wallace.

*New Regulations.*—D. M. Aitken, M.A., J. F. Allan, C. M. Anderson, R. V. C. Ash, R. T. Baillie (with distinction), J. W. Barrack, A. C. Begg, R. Belilios, J. H. M. Bell, V. C. de Boinville, R. J. Bradley, E. S. Brett, J. Brocket, E. E. Brown, Golfina Maude Brown, W. Brown, J. Brownlee, R. W. Buchanan, M.A., B.Sc., H. Buist, G. C. Burgess, E. P. Calder, K. Chapel, C. C. Choyce, A. W. S. Christie, R. V. Clark, M.A., B.Sc., H. L. Clift, W. J. Crow, Barbara Martin Cunningham (with distinction), J. Dalgliesh, G. A. Davidson, W. H. Dickinson, W. E. C. Dickson, B.Sc. (with distinction), T. G. B. Dodds, H. Dodgson, C. Douglas, J. L. Duncan, W. A. Duncan, W. I. Dunn, J. R. Edward, W. Eggeling, O. J. Evans, J. W. Falconer, M.A., A. H. Firth, M.A., G. A. Forrest, S. Garvin, J. C. Gilchrist, E. M. Glanville, R. A. Glegg, T. Graham, R. M. Grant, A. L. Gurney, A. R. Hallam, J. Halliday, Agnes Moore Hamilton (with distinction), R. Hamilton, W. Hamilton, N. C. R. Hansen, B.A., R. A. J. Harper (with distinction), P. J. Hay, Eleanor Russell Henderson, D. C. Henry, C. W. Howe, A. Hunter, M.A., B.Sc. (with distinction); A. E. Hunter, A. R. Johnston, G. A. Jolly, E. Jones, A. C. Keay, J. P. Kennedy, P. V. Langmore, A. K. Lauddie, W. Lee (with distinction), C. H. Lindsay, S. Lyle, J. G. M'Bride, L. T. M'Clintock, H. K. Macdonald, W. MacDougall, M.A., P. F. M'Farlan, G. M'Farland, A. F. Mackay, F. D. S. Mackenzie, J. M'Kenzie, W. M'Lachlan, W. Mair, M.A., B.Sc.; G. W. P. Maitland, A. M. Malcolmson (with distinction), E. C. C. Maunsell, G. R. Mill, T. Mill, W. Miller, J. Miskelly, A. Mouat, D. Munro, M.A.; G. S. Murray, P. Murray, W. Murray, E. G. O. Nixon, D. A. Ogilvie, J. F. Orr, W. Paterson, W. S. Patton, J. G. Peebles, S. G. Peill, G. Pereira, H. G. Pesel, L. W. Pole, E. T. Potts, W. H. Prentice, M.A.; L. T. Price, H. St. J. Randell, F. L. Rigby, H. M. Roberts, G. C. I. Robertson, M.A.; J. K. A. Robertson, M. W. Robertson (with distinction), W. A. Robinson, B.A., B.Sc.; A. L. Roxburgh, L. Rundall, C. W. Saleeby (with distinction), T. B. Shaw (with distinction), Margaret Merry Smith, T. A. Smyth, Kate Southon, H. L. Spark, W. C. Speirs, B. A. Spence, A. J. de Spiganovicz, C. S. Steavenson, Maud Muriel Stevenson, D. A. Stewart, M.A.; I. S. Stewart, J. Sullivan, M. A. Swan, G. L. Thompson, T. L. Thomson, J. B. Thorburn, W. L. Trafford, E. J. Tyrrell, E. A. Walker, A. R. Wallis, E. Wells, T. S. B. Williams (with distinction), F. E. Wilson, J. Woods, D. Young.

## CONJOINT BOARD IN SCOTLAND.

DIPLOMA IN PUBLIC HEALTH.—The following candidates have received this diploma:

Euphemia Stoker, L.R.C.P.&S.E.; Major R. Caldwell, F.R.C.S.Eng. R.A.M.C.; G. Melville, M.B., C.M.; and J. S. Tait, F.R.C.S.E.

## ROYAL UNIVERSITY OF IRELAND.

FIRST EXAMINATION IN MEDICINE.—The examiners have recommended that the under-mentioned candidates be adjudged to have passed the examination.

J. W. Beirne, University College, Dublin; C. D. Bell, Queen's College, Belfast; S. Bradbury, Queen's College, Belfast; H. W. Brennan, University College, Dublin; H. W. Carson, Queen's College, Belfast; R. Chambers, LL.B., Queen's College, Belfast; R. G. Clements, Queen's College, Belfast; R. G. G. Croly, Queen's College, Cork; A. G. Cummins, Queen's College, Cork; J. S. Dickey, Queen's College, Belfast; J. Donnelly, Queen's College, Belfast; J. Finnegan, Queen's College, Belfast; I. Flack, Queen's College, Galway; J. Flack, Queen's College, Galway; J. R. Hackett, Queen's College, Cork; A. Hill, Queen's College, Belfast; W. J. Hill, Queen's College, Belfast; R. Jameson, Sch., Queen's College, Belfast; E. J. Kavanagh, University College, Dublin; J. Kelleher, Queen's College, Cork; R. J. Ladlie, Queen's College, Belfast; A. Leith, Queen's College, Belfast; J. Lilley, Queen's College, Belfast; R. J. Lytle, Queen's College, Belfast; D. T. MacCarthy, University College, Dublin; W. McKee, Queen's College, Belfast; A. V. McMaster, Queen's College, Belfast; S. McMurray, Queen's College, Belfast; J. Magill, Queen's College, Belfast; T. J. Magill, Queen's College, Belfast; T. Meagher, University College, Dublin; Charlotte E. Mitchell, Queen's College, Belfast; T. O'Driscoll, University College, Dublin; M. J. O'Grady, University College, Dublin; E. M. O'Neill, University College, Dublin; J. J. O'Reilly, University College, Dublin; W. B. Purdon, Queen's College, Belfast; C. G. Robb, Queen's College, Belfast; G. V. Ryan, University College, Dublin; M. P. Scanlon, University College, Dublin; J. Shaw, Queen's College, Belfast; M. Shipsley, Queen's College, Cork; P. Steen, University College, Dublin; W. M. Thomson, Queen's College, Belfast; S. M. Walsh, University College, Dublin; J. Warnock, Queen's College, Galway; H. C. Watson, Queen's College, Belfast; Jemima B. White, Queen's College, Belfast; W. Whitfield, Queen's College, Belfast.

## CONJOINT BOARD IN IRELAND.

FIRST PROFESSIONAL EXAMINATION.—Candidates have passed this examination as undernoted:

*In all Subjects.*—1. *Honours (in Order of Merit).*—E. L. Sheridan, I. Allaun, W. W. Boyce, Miss C. E. O'Meara, R. A. Brown, T. W. Brown. 2. *Pass (Alphabetically).*—A. C. Adams, J. M. Alcorn, R. V. Burbage, W. C. Carson, S. C. Clarke, T. Coffey, E. G. Condon, J. Corboy, F. X. Costello, V. J. Cullen, R. F. O'T. Dickenson, T. A. Flynn, D. Hampson, B. C. McC. Hannan, P. E. Hayden, J. M. Hayes, R. Hayes, J. Leonard, E. P. Maher, W. P. Morton, D. M'Cormack, W. J. M'Cormack, H. V. McKeogh, A. N. McLaughlin, B. A. Odlum, W. C. T. Robey, E. Smith, R. H. Smythe, P. D. Sullivan, W. Walsh.

*Completed the Examination.*—M. Ambrose, L. L. Davys, T. J. Golding, H. Hosty, D. McLaughlin, T. J. Sinnott, G. B. Spencer, G. F. Wright.

DIPLOMA IN PUBLIC HEALTH.—The following candidates have passed this examination:

H. A. Gray, M.D., Univ. Dub.; J. P. Frengley, F.R.C.S.I.; J. G. Warren, L.R.C.P.&S.I.; T. Donnelly, M.D., Univ. Dub.; A. W. S. M'Comiskey, M.B., R.U.I.; J. Stevenson, M.B., R.U.I.

## SOCIETY OF APOTHECARIES OF LONDON.

PRIMARY EXAMINATION, PART II., July 1st, 3rd, and 4th, 1901.—The following candidates passed in:

*Anatomy.*—A. J. Ambrose, Westminster Hospital; G. C. M. Davies, Charing Cross Hospital; B. C. Ghosh, Cambridge; T. W. S. Hills, Cambridge; H. M. Huggins, St. Bartholomew's Hospital; C. Kellgren, Royal Free Hospital; G. Nunn, Guy's Hospital; C. H. Osmond, Glasgow; O. P. N. Pearn, Westminster Hospital; E. H. Price, Birmingham; R. C. Richards, University College Hospital; R. J. S. Verity, Charing Cross Hospital; S. J. Weinberg, Manchester.

*Physiology.*—H. Bacon, Cambridge and Guy's Hospital; G. C. M. Davies, Charing Cross Hospital; B. C. Ghosh, Cambridge; T. W. S. Hills, Cambridge; H. M. Huggins, St. Bartholomew's Hospital; A. C.

Jenkins, London Hospital; T. L. A. Jones, Cardiff; C. Kellgren, Royal Free Hospital; G. Nunn, Guy's Hospital; O. P. N. Pearn, Westminster Hospital; E. H. Price, Birmingham; G. H. Rains, Westminster Hospital; R. C. Richard, University College Hospital; S. H. Sugden, Manchester; S. J. Weinberg, Manchester.

PRIMARY EXAMINATION, PART I.—The following candidates passed in:

*Biology.*—G. E. Austin, Royal Free Hospital; F. C. M. Gabites, Edinburgh; C. A. Sampson, Charing Cross Hospital.

*Chemistry.*—G. E. Austin, Royal Free Hospital; F. C. M. Gabites, Edinburgh.

*Materia Medica and Pharmacy.*—A. Bernfield, Royal Free Hospital; A. G. Gamble, Leeds; G. B. Messenger, Liverpool; C. A. Sampson, Charing Cross Hospital; C. J. Taylor, Bristol; B. B. Westlake, Guy's Hospital.

# INDIA AND THE COLONIES.

## INDIA.

*Bombay.*—The report for 1899 of both provincial and metropolitan institutions, prepared by Surgeon-General G. Bainbridge, M.D., are under the order of Government much shorter than usual. They display the statistics of attendance, diseases treated, and operations performed, in elaborate detail, but are deficient in information regarding the public health and general hospital administration. Both in the Presidency and town of Bombay the prevalence of the plague interfered with the business of ordinary medical relief. These reports show that a recovery has taken place, and that the work of both hospitals and dispensaries has resumed its normal bulk with a tendency to increase. The number of provincial institutions was augmented in 1899 by 29, the metropolitan institutions remaining the same. The attendance of both indoor and outdoor patients exhibited a marked increase on that of the previous year, and a restoration to the level of 1895. The death-rate among indoor patients was in the provincial hospitals 11.6 per cent., and in the metropolitan 12.0. The diseases treated exhibited the usual proportion. Plague cases were mostly sent to special hospitals. The Government notices the increased number of cases of phthisis treated in the Jamsetjee Jejeebehoy Hospital since the commencement of the plague epidemic, and a corresponding increase in deaths from this cause revealed by municipal death registration. Opinions differ regarding the explanation of this increase, which is apparently a well-established fact. The classification of surgical operations has undergone change, and trivial procedures have been eliminated. Allowing for this, the returns show a satisfactory and increasing amount of surgical work. The financial condition of these institutions is sound. A considerable sum is received from paying patients.

*North-Western Provinces and Oudh.*—The report for 1899, submitted by Colonel D. Hutcheson, M.D., I.M.S., is restricted to brief comments upon the usual statistical tables and a short review by the Local Government. It includes the transactions of 374 institutions, an increase of 5 on the preceding year. There was a substantial increase of attendance both indoor and outdoor. The percentage of the population which sought relief was 8.52, against 8.22 in 1898. The death-rate among indoor patients was 4.80 per cent., against 5.03. The provision for hospital treatment is more than equal to the demand. The year was a healthy one, but less so than the exceptionally healthy preceding year. More cholera and small-pox cases were treated. Special arrangements were also made for outbreaks of cholera and fever. Quinine to the value of Rs.2,604 was distributed and sold through the agency of the post office. The surgical practice of the hospitals in these provinces has always been very active and successful, and the record of 1899 indicates sustained excellence. The return of operations includes 5,778 extractions of lens, 438 lithotomies, 15 ovariotomies, 7 Porro's operations, and 4 Cæsarean sections. There are 55 hospitals and dispensaries for females in these provinces, in which are employed 15 women doctors, 36 female hospital assistants, 5 matrons, 20 nurses, 221 midwives, 56 compounders, and 373 dressers. The number of females who were visited at their homes was 3,222; 296 were midwifery cases. The financial state of these institutions is satisfactory: Government contributes nearly one-third of the total income. Rs.10,104 were received from paying patients.

*Punjab.*—The number of institutions open at the close of 1899 was 272, an increase of 5 on the preceding year. The number of indoor patients treated, which had been declining since 1894, was higher than in 1898. The death-rate was 4.41 per cent., against 4.2 per cent. The accommodation provided was not fully utilised. There was a marked increase in attendance of outdoor patients. The year was a healthy one, and there was a decrease in the number of cases of malarial fever treated. There was a satisfactory increase in the number of surgical operations performed, including 5,321 cataract extractions, 260 lithotomies, 1,844 lithotomies, and 14 ovariotomies. The death-rate of cutting operations for stone was 11.7 per cent. and of crushing operations 3.2. The question of erecting a central asylum for lepers is under consideration. The important subject of female medical training and aid continues to receive attention, and considerable progress has been accomplished in many districts in this matter. A new hospital for Europeans which is much needed is to be constructed in Simla through the generosity of Mr. James Lewis Walker, an old resident. The hospitals and dispensaries of the Punjab are mainly supported by municipal and local funds. The Government contribution is Rs. 23,561 out of a total of Rs. 587,693. Rs. 10,930 were recovered from paying patients on account of diet. The report is submitted by Colonel B. Franklin, I.M.S.

*Burmah.*—The report for 1880, submitted by Colonel C. C. Little, M.D., I.M.S., Inspector-General of Civil Hospitals, is concise and interesting. Five new dispensaries were opened during the year, the number in operation at the close of the year being 110, in which were treated 819,039 patients. The mortality among indoor patients was 8 per cent. Fewer women were treated on account of the absence of special arrangements. There was, however, an increase in the number of children treated. The year is reported to have been a healthy one, and there was a decrease in malarial fevers which constitute the main cause of resort. There was a severe outbreak of small-pox at Rangoon. The number of cases of cholera and leprosy treated was larger. Venereal diseases constituted a large item in the list of diseases. The number of surgical operations underwent increase, but is in the judgment of the Local Government short of what is desirable. The income of these institutions amounted to Rs. 613,800, of which Government contributed about 40 per cent. The report contains some interesting information on the subject of beri-beri, which is common in the province, and attacks men employed in lighthouses and lightships. Improved diet and more frequent reliefs has reduced its prevalence in this class. Captain Barry, I.M.S., has written an important report founded on 944 cases treated in Rangoon general hospital. The mortality was 50 per cent. He found that the patients were mostly coolies imported from India for the paddy harvest, who "live in houses of poor construction, mat walls, and thatched roofs, and sleep on the damp ground; their diet is deficient in nitrogenous elements, consisting of rice, vegetables, and dried fish." They develop the disease after about a year's residence in Burmah.

## TRINIDAD.

THE annual report of the Surgeon-General of Trinidad for the year 1900 contains matter of great interest. It is largely composed of reports from the medical officers in charge of public institutions or of districts, and shows much careful study of local diseases. The mosquito phases of malaria and filaria nocturna have both been worked out. These results are important, but the mosquitos implicated should be identified. Tuberculosis is responsible for about a fifth of the deaths, and appears to be on the increase. Only 98 cases of ankylostoma are reported from the institutions; these all recovered. In the same institutions there were 654 cases of anæmia with 76 deaths. These figures and the rare references to the ankylostoma in the district medical officer's reports indicate that the importance of this parasite is still insufficiently appreciated. Yaws is on the increase, and the out-patient dispensary system has proved a failure. Detailed accounts of the expenses and working of the institutions are given, and show economical and effective administration. A tabular statement of the position, emoluments, and leave (sick or otherwise) granted to each medical officer is given. We observe with regret that vacancies in the staff are not being filled, and that there is an insufficient reserve of medical officers. An efficient medical service, such as that of Trinidad, is more easily destroyed than formed, and without such a service little practical use can be made of recent advances in knowledge of tropical medicine. Such reductions in ordinary seasons are false economy, and the results in case of any serious epidemic would be disastrous.

# HOSPITAL AND DISPENSARY MANAGEMENT.

## METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

THE objects of this Society, which has now been in existence for twenty years, are "to provide, upon principles of mutual assurance (by means of small periodical payments), efficient medical treatment and medicine for those members of the working classes and their families who are unable to pay the ordinary medical fees"; and "to co-operate with the governing bodies of the metropolitan hospitals, in order that they may be relieved of the large number of ordinary cases of illness that at present overcrowd their out-patient departments, and also have referred to them from the provident branches cases requiring special hospital treatment or nursing, or which are suitable for clinical instruction." The Association has at present 21 branches, 16 dispensaries, and 5 medical clubs; its staff consists of 102 medical men and 15 dental surgeons. The receipts during the past year amounted to £6,289, of which 60 per cent. accrued to the medical staff and 26 per cent. was expended on dispensing and drugs. In conjunction with the Hospital Saturday Fund the medical staff are accustomed to certify whether any applicant is most suited for a general hospital, a chest hospital, or for treatment at a branch of the Association, and letters of recommendation are granted accordingly. In view of the largely increased work of the Association an urgent appeal is made for increased public support.

# OBITUARY.

DR. R. E. BURGES, of Hoole, Chester, who died on June 29th after a short illness, had been in indifferent health for some years past. He was born in 1850, and was educated at Queen's College, Cork, the Carmichael School, Dublin, and the Rotunda Hospital. He graduated B.A. in the Royal University of Ireland in 1871, M.D., M.Ch. in 1872, and M.A.O. in 1885. He was Resident Surgeon at the Richmond Hospital, Dublin, and also Surgeon in the Liverpool, Brazil, and River Plate Service. He first settled in practice in Kettering, Northants, but removed to Hoole, Chester, in 1889. He took considerable interest in local affairs, and was a member of the Hoole Local Board, and subsequently of the Hoole Urban District Council, an office which he resigned in 1896, when he was appointed Medical Officer of Health for Hoole. His kindly and straightforward nature won for him the respect of all those with whom he came in contact, and he was held in the highest esteem by his professional brethren.

MEDICAL MAGISTRATE.—Dr. F. H. Tinker, of Hyde, has been appointed to the Commission of Peace for the county of Cheshire.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1901.

SUBSCRIPTIONS to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY JULY 13TH, 1901.

## THE MEDICAL DEGREES OF THE UNIVERSITY OF BIRMINGHAM.

THE University of Birmingham has taken a new departure by making its regulations for medical and surgical degrees require a tolerably satisfactory record of work during the years of study as an indispensable antecedent to the admission to the final examination, and indeed to other examinations. Before a student can present himself for any examination he has to produce to the Registrar a certificate that he has attended at least two-thirds of the lectures or practical classes of the course, certified illness alone being accepted as an excuse, and that he has attended the class examinations and has satisfied his teacher. So much is in the printed regulation, but we are informed that these class examinations are to constitute an important element. The marks there obtained will be recorded, and will be added to the marks obtained in the examinations for degrees. If a student fails to obtain a minimum number of marks in the class examinations the professor will refuse him permission to go up for the degree examinations. This is an experiment which, so far as we are aware, has not hitherto been tried in this country. It is true that in certain schools the teachers habitually dissuade those who have done badly in class from offering themselves as candidates before the Examining Boards, but in the University of Birmingham bad term work is to be made an absolute barrier. Hence the teachers will have a control over their pupils not generally attainable, and the student will be unable to be very idle for his earlier years and then to make up for it by cramming at the last. Even if we admit that cramming may be, as it sometimes certainly is, good teaching, yet knowledge acquired in haste is likely, almost certain indeed, to leak away with a rapidity proportionate to that with which it was gathered.

That the examination test alone is not absolutely satisfactory is recognised by many, though perhaps few will go so far as Dr. Oliver Lodge, the Principal of the University of Birmingham, in his distrust of examinations, and we shall watch with much interest the working of the system.

In the examinations themselves no encouragement is given to the system of cram by tolerating the piecemeal plan of passing in one subject at a time; the candidate must pass in all the subjects of the examination at the same time, though a partial exception to this rule is allowed in regard to the subjects of chemistry, physics, and biology. The new University is a local university, and does not intend to throw open its doors by accepting as candidates for its degrees persons who have received their education, and perhaps passed all but their final examinations, elsewhere. It requires that at least the first four years of study shall have been carried through at the Birmingham University; for the last year students may, if they please, go elsewhere. When they become candidates for the final examination for the degrees of M.B., B.S., they will be required to produce certificates showing that they have diligently attended to clinical work during their year of absence from Birmingham.

These special conditions being somewhat novel, it was almost a necessity to waive them to some extent in the case of students already in the midst of the curriculum, else no medical degrees could be conferred for at least five years from the foundation of the University. Hence students entered at Mason College or at the University are not required to attend over again courses which they have completed under old conditions, and past students who have pursued their studies at Birmingham and have obtained a registrable qualification are, up to October 1905, allowed to present themselves for the final examination. Of this privilege it would appear that a considerable number are likely to avail themselves, for on the occasion of the first examination no fewer than thirty-three associates and past students of the school obtained the degree.

The examinations are conducted by the professors and lecturers of the University, but with them are associated external examiners who are not teachers in the University. There must be "at least one external examiner in each subject or group of subjects." On the whole this appears to be a start upon very good lines, and in the interests of medical education we wish the University every success.

Another novel feature is the institution of a "higher degree" in dentistry, which is open only to those who have obtained a registrable licence elsewhere at least a year previously. This degree involves sundry extra courses beyond those required of the student for his first qualification, and the examination embraces a wider field, both in the special subjects and in those common to it and to medicine and surgery. In anatomy and physiology candidates are required to pass the same examinations as ordinary medical students, but in this case also there is a period of grace during which old students of the school will be allowed to come up for the final examination without going back to attend again some of the subjects. The University does not propose, at present at all events, to institute any qualifying examination or licence in dental surgery, and as this degree is styled a Bachelorship of Dental Surgery it seems probable that it will never do so, for it is difficult to see what title other than this could be given for a university degree.

Birmingham is thus to be essentially a teaching, not a mere degree-conferring, University, and its regulations, which appear to have been drawn up with much care, may be usefully studied by those who are formulating schemes for the reorganisation of the London University, especially perhaps those which make provision for the granting of medical degrees by examination to old Birmingham students who are registered medical practitioners.

## IRISH AUXILIARY ASYLUMS.

THE question of how to deal with the increase of lunacy in Ireland is and has been for years agitating the public mind. The population is diminishing. It is the young and healthy who emigrate, and so the percentage of insane persons tends rapidly to increase. Thus the burden upon the ratepayers grows daily heavier, with little prospect of relief. In Ireland the pauper lunatic asylums receive a grant of 4s. *per caput* out of certain funds derived from Imperial taxation in Ireland, but the average cost *per caput* varies from 8s. to 10s. or more, and the difference has to be raised by direct taxation, and is therefore more felt by the peasantry who compose the bulk of the population.

Formerly the Irish workhouses contained large numbers of lunatics, but year by year the medical officers have been availing themselves of every opportunity to transfer such lunatics to the district asylums, Irish workhouses being entirely unfit for the treatment of insane patients.

The Irish Local Government Act of 1898 transferred the management of district asylums from the Board of Control, a body nominated by the Crown, and to whose exertions the highly satisfactory condition of the Irish asylums is due, to a joint Committee consisting of equal numbers of county councillors and governors nominated by the Lord Lieutenant. It also provided

(Section LXXVI) that the Council for a county may either by the exercise of their powers under the Act or by taking over for the purpose any workhouse or other suitable building in the possession of the guardians provide an auxiliary asylum for the reception of chronic lunatics who not being dangerous to themselves or others are certified by the resident medical superintendent of an asylum of such Council not to require special care and treatment in a fully equipped lunatic asylum, and any such asylum shall be either a separate asylum within the meaning of the Lunatic Asylum Acts, or, if the Lord Lieutenant so directs, a department of such asylum.

Provided that the sum payable out of the local taxation account in respect of the net charge for any lunatic therein may be paid when the net charge equals or exceeds 3s. 6d. a week, but that sum shall not exceed 2s. a week.

The above translated into ordinary English means that the Government offers a capitation grant of 2s. a week to auxiliary asylums, as against 4s. a week to district asylums. Clause 2 provides for the transfer of workhouses vacated for that purpose to the county council, and also that where such auxiliary asylum has been established no more lunatics shall be sent to workhouses.

Probably the first thing that will occur to any medical man reading the above is that no person having any practical knowledge of insanity as understood at the end of the nineteenth century could have been so unwise as to embody in an Act of Parliament words to the effect that a lunatic can at any time be regarded as harmless until he is dead. It is an unfortunate expression, one which has cost many a life in the past and will probably cost many more in time to come.

Another mark of the layman's hand is the implied possibility that any class of chronic lunatics can be decently fed, clothed, housed, and attended to for 3s. 6d. a week. For at the present time there are few Irish workhouses where the insane inmates do not cost more than that for food and clothing alone without counting attendance.

Again the Act shows a lamentable ignorance of the structure of the average Irish workhouse when it suggests that any existing workhouse is fit for the reception of lunatics unless the barbarous system of treating the pauper as a criminal from which we are slowly emerging, is to be perpetuated in auxiliary asylums. For, to say nothing of their structural and sanitary defects, very few of these buildings possess sufficient ground to provide the insane inmates with employment, and it is most unlikely that the local councils, who are bent upon economy, would spend money in acquiring such land merely to carry out "the fads of doctors."

The Act of 1898 had not been long in operation when agitation to put in force those clauses relating to "harmless lunatics" commenced. Guardians and county councillors saw that here was the chance of a lifetime, the chance of applying the workhouse system not alone to the insane inmates of workhouses, but also to the chronics who compose a considerable section of the inmates of district asylums, and to support all such at a cost upon the rates of 1s. 6d. a head per week, instead of from 4s. to 6s. a head in the asylums.

How it was to be done was a secondary consideration. Whether it would conduce to the welfare of these poor people was of no importance; the only thing they saw, or wanted to see, were the economic results. In a sense this is not to be wondered at. The Act of 1898 placed the Local Government of Ireland in the hands of wholly inexperienced and often half-educated men, whose single mandate from their constituents was to keep down the rates.

Up to the present the only Asylum Committee which has taken any definite steps to set up an auxilliary asylum for "harmless lunatics" has been that of Co. Cork, and about a year ago they proposed to take over a disused workhouse situate at Youghall, thirty miles from Cork, for that purpose. A long correspondence ensued between the local authority, the Lunacy Commissioners, and the Local Government Board. The Commissioners insisting upon such structural alterations as would make this old Irish workhouse a suitable habitation for demented people, and the Asylum Committee objecting to provide structural and sanitary alterations in accordance with modern views. Needless to say, the everlasting political element was introduced, and the efforts of the Commissioners to secure proper treatment for the insane was held up as another instance of the Government's determination to crush the ratepayers. Eventually, on March 2nd ult., the Lord-Lieutenant decided to let the Asylum Committee have their way, probably with the intention of watching the experiment.

We gather from letters addressed to the press by, among others, the Roman Catholic Bishop of Ross, who has taken a great interest in the scheme, that they intend to put a lay manager, otherwise a workhouse master, in charge, that they purpose employing as attendants "a few strong vigorous women, neither squeamish nor over-refined," and a visiting physician to attend daily, and to expend the sum of 5s. 6d. a head per week to secure to the inmates every reasonable comfort. Yet in a workhouse it costs from 6s. to 10s. a head per week to provide food, clothing, lodging, and attendance for the general body of inmates.

This experiment will be watched with much interest and we trust other Asylum Committees will be wise enough to await results before plunging into what may prove useless expenditure.

That some means is required of dealing with the chronic lunatics and idiots at present inhabiting the lunatic wards of Irish workhouses, and taking up much-needed space in district asylums, admits of no question; and we think it is a most unfortunate thing that the Government, when they had the opportunity in 1898, did not embody in the Act the permission to board out such people. Most of these people of weak intellect or semi-idiocy, who comprise the bulk of the class referred to as "chronics," live longer, thrive better even on poor food, and are freer from outbreaks of violence when residing in peasant's houses and mixing with sane people, than when herded together with numbers of others in various stages of insanity. The boarding-out system could have been carried out more cheaply and better in Ireland than in any part of the United Kingdom, and would be more economical than auxiliary asylums.

On February 26th, 1901, the Local Government Board issued a circular to the Irish County Councils proposing three alternatives: "(1) Either to build a separate auxiliary asylum for chronic harmless lunatics, with a resident medical superintendent, and at least one assistant medical officer; (2) to add, subject to the Lord Lieutenant's directions, by the erection of buildings less elaborate than the original ones, a new department to an existing asylum, and to place it under the resident medical superintendent of that asylum; (3) to acquire and adapt some workhouse or other building either as a separate auxiliary asylum, or, if the Lord Lieutenant should so direct, as a department of some existing asylum."

Of the alternatives proposed, the third, which was adopted by the Cork Committee, involving, as it does, all the most objectionable practices of the workhouse system appears to us to be the worst. The workhouse treatment of the poor has long been effete, and the efforts made to patch it and adapt it to twentieth century notions of humanity are mostly expensive failures.

If one of the three suggested alternatives must be adopted it appears to us that in the long run the second would be the cheapest.

Going back only to 1895 there were in Irish workhouses 4,246 lunatics and idiots; in 1896, 4,125; in 1897, 4,160; and in the last report (up to March 31st, 1900), 4,117, showing a steady diminution in the numbers. Divided among the twenty-two district asylums it would only be an addition of 187 inmates to each of them. It is not a very large number, and the provision of accommodation for these in buildings adjoining existing asylums would, we are persuaded, be less costly than the conversion of any existing building, and it would enable asylum managers to gain the extra room they need so much for acute cases. It must also be borne in mind that many of those classed as lunatics in Irish workhouses are only persons of weak intellect who go out and work when the fancy takes them and when they get tired of it come into the workhouse again. Such people, and they probably comprise one-fourth, could not be forcibly deported to asylums and would become beggars and tramps. The workhouse medical officer must for his own protection class them as idiot or insane, but that by no means implies they are fit subjects for restraint indeed, restraint would only make them dangerous lunatics.

It would probably be Utopian to expect that any suggestions or observations of ours would have much influence upon the matter in hand; nevertheless, on the principle that the outsider often sees most of the game, we venture to remark to the Asylum Committees that pounds may be wasted in misdirected efforts to save a few coppers.

As for the Lunacy Commissioners and the Local Government Board, the sooner they perceive that the Irish Poor Law is rotten root and branch, and only held together with strings of red tape, the sooner may a drastic remedy be found for the scandals of Irish Poor-law administration.

## THE R.A.M.C. EXPERT COMMITTEE.

This Committee, which has been enlarged by the addition of Colonel Sir James Willcocks, K.C.M.G., and Colonel Sir E. W. D. Ward, Permanent Under Secretary, met for the first time on July 5th, and again on July 8th, and will continue to meet twice a week. The Irish medical schools have made strong representations to the Secretary of State for War, pointing out the advisability of nominating a representative of these schools on the Committee, and we believe that Mr. Brodrick has expressed his willingness to accede to the request if a representative can be suggested who will undertake to attend regularly the meetings of the Committee. We understand that the Committee was at its first two meetings occupied in the consideration of the scheme drawn up by Mr. Brodrick, and that among other points the question of pay, and in particular that of pay in India, has been investigated. We referred last week to what we were then inclined to regard merely as a rumour to the effect that Mr. Brodrick did not intend that the Committee should call evidence; this rumour appeared to be completely confirmed by the tenour of Mr. Brodrick's answer to a direct question by Dr. Farquharson in the House of Commons, but we are informed that the question whether evidence should be taken or not will be left absolutely to the discretion of the Committee. We can only again express the expectation that the Committee will see the wisdom of taking evidence. The membership of the Committee is not completely representative, a fact which we believe Mr. Brodrick himself recognises, and this circumstance renders it all the more desirable that the Committee should take evidence. We believe that the British Medical Association would be prepared to tender evidence likely to be of great value to the Committee, and that the senior officers of the service believe that their experience would be likely to be of advantage to the Committee in considering many of the questions which must come before it. We have every confidence that the Committee has begun its work in the best possible spirit, and it would be a disaster if its report were to disclose that it had not considered fully any aspects of the question which are essential to finding a satisfactory solution. One essential element in success is that the wants, the feelings, and the aspirations of officers now or recently serving should be thoroughly understood, for a contented service will be the best recruiting agency.

## THE UNIVERSITY OF LONDON.

The long vacation is almost upon us, with its close time for any effective action in regard to administrative change, and it is not unnatural to inquire how much of the reconstitution of the University of London promised under the Act of 1898 has been as yet accomplished. The new Senate, we are willing to believe, has given ungrudging

labour, but the news that the outside world receives of the result of such labour is not impressive by reason of the amplitude or the rapidity of the process of reform. We understand that the initial question of the nature of the much-criticised entrance or matriculation examination has recently engaged the earnest attention of the Senate, but that further discussion has been adjourned until the autumn without any decision having been arrived at. In the important question of the election of a Principal to rule and direct (under the Senate) the two sides of the University and give effect to its policy we await information. We understand that on Thursday this question came before the Senate, and that the names of Dr. Garnett, of the Technical Education Board, and Professor Rücker, F.R.S., have been freely mentioned as willing to undertake the office. The scheme for internal students graduation has not as yet emerged, but is no doubt engaging the mind of the Academic Council. Last Saturday, at Birmingham, Mr. Chamberlain fairly summarised the duties of an ideal university as being the imparting, testing, increasing, and applying knowledge of every kind. The second of these functions has doubtless in the past been discharged with considerable success by the University of London. We look for the ability and the wealth requisite to inspire and develop the not less important functions of production, application, and diffusion, and in the capital of the Empire the search should not be a vain one.

## THE HUGHES-BENNETT LABORATORY.

On Saturday, July 20th, a ceremony takes place at the University of Edinburgh, which will be of interest to the friends, pupils, and admirers of the late Professor John Hughes-Bennett. His daughter, Mrs. Cox, with the view of perpetuating his memory, has caused to be erected an experimental physiological laboratory with theatre attached and all the accessories needful for modern teaching and research. This, along with a life-sized medallion in bronze of Hughes-Bennett, will be formally handed over to and accepted by the University authorities at a public ceremony, which will take place in the McEwan Hall. This ceremony will be eventful and impressive. An address will be delivered by Sir J. Burdon-Sanderson, Bart., M.D., LL.D., F.R.S., and it is hoped that all those interested in the late scientist, physician, and teacher, who can possibly do so, will attend.

## SIR MICHAEL FOSTER ON THE LONDON UNIVERSITY.

After distributing the prizes to the successful students at St. Mary's Hospital, Paddington, on June 27th, Sir Michael Foster, M.P., F.R.S., gave an address on the future of the University of London. Parliament had rough-hewed, and certain Commissioners had tried to perfect, the statutes of the new university, but these statutes were dry bones, and in order to make the University a living thing those dry bones must be clothed with flesh and blood. As was well known, small round discs of a yellowish colour were an essential element in blood, and the University of London needed a large and ample transfusion of that sort of blood from without. The old universities gathered youths together from all parts of the kingdom to drink in instruction and knowledge in academic groves; but the distinctive feature of the University of London was that it would bring instruction and knowledge to the doors of everyone in this great metropolis. London was a great manufacturing, commercial, and industrial centre, and it was the duty of the new University of London to bring university learning to the aid of manufactures, commerce, and industry. The strong part of the University in the past had been the medical part, because that was in close relation with practical life; and what had been done with regard to the medical profession was now to be done with regard to other branches of practical life. Certain studies were spoken of as the "Humanities," and distinctions had been drawn between these and "breadwinning" studies. In their isolation from practical life there had grown up in the older universities the idea that there was antagonism between the two sets of studies, and a complaint was sometimes made that the universities stood aloof from practical life, and did not associate themselves with the movements of the people. The distinction which had been drawn was unreal, and there was a great opportunity for the University of London to deal alike with the "breadwinning" studies and the "Humanities" in a way which, in that great centre of literature and art, could not be surpassed. If the University were to be successful, those who belonged to no school must work with those who did belong to schools, and *vice versâ*, in such a way as to promote the common welfare, while those who belonged to one school must not seek their own ends irrespective of the ends of the other schools.

## DURATION OF THE RESULTS IN SANATORIUM TREATMENT OF POOR CONSUMPTIVES.

This subject is notoriously one or which it is very difficult to obtain satisfactory statistics. The workmen's insurance system of Germany, however, makes calculations of this kind possible, and the report which has just been issued by the Hanse Towns Insurance Institution contains some interesting figures. From November, 1900, to March, 1901, extensive inquiries were made to ascertain the present condition of the patients previously treated at sanatoria: (*a*) in regard to local signs in the lungs, (*b*) in regard to general condition, (*c*) in regard to earning power. A large number of former patients were specially examined for this purpose, and in other cases information was obtained indirectly. Information has not always been obtained, but is available in 2,450 patients, 1,600 males and 850 females. Out of this number 510 have died, 421 males and 89 females. When patients have been treated more than once, they have been classified under the year of their first stay at one of the sanatoria. In 484 patients who are still living and whose sanatorium treatment took place more than three and less than five years ago, the ascertained present condition is as follows: (1) In 65 the lungs show no abnormal signs. In 15 of these 65 the physical signs were pronounced normal when the patients left the sanatoria. In 93 the local signs are better than on leaving the sanatoria. In 217 they remain the same. In 102 they are slightly worse. In 6 they are much worse. In 1 case tuberculosis has developed elsewhere than in the lungs. (2) In 83 the general condition has improved since leaving the sanatoria. In 255 it remains the same. In 135 it is slightly worse. In 11 it is much worse. (3) In 162 the earning power is complete, and under favourable conditions promises to last. In 267 the earning power is at present complete, but there is doubt whether it is likely to remain so. In 48 the earning power has improved. In 7 there is no earning power, at least in the (legal) insurance sense, that is to say, the earning power is reduced to less than one-third. Seventy-four patients who received sanatorium treatment during the two years in question, that is, 74 out of a total of 558, are known to have died.

## THE PRECARIOUS STATE OF THE CREMATION BILL.

The Cremation Bill is now in a most precarious position, for unless the parents of the numberless amendments which are suffocating its simple principle will sacrifice them and give the measure air, and unless the Government will affix the official star which implies more than benevolent neutrality, its days for this session are numbered. Its quite unnecessary and unexpected demise will then have been due, not to any legitimate and statesmanlike opposition, but to the persistent efforts of a little gang of obstructionists whose openly-avowed intention was to talk at large

and at random on everything and anything in order to keep off the much-dreaded Deceased Wife's Sister Bill. So successful were their tactics that when half-past five sounded they had the satisfaction of knowing that they had practically killed a useful measure which had already been read a second time and passed the ordeal of a Grand Committee. We sympathise with Sir Walter Foster, whose tact and dexterity were never better shown than on this occasion. He has not abandoned hope, but, whatever the result, we trust that it will be recognised that along with this Bill there ought to be legislative proposals to improve the present loose and elastic law for death registration and certification. The Committee presided over by Sir Walter Foster brought out the disquieting fact that thousands of people are every year smuggled into their graves without official inquiry, and in consequence of this, Sir Henry Thompson has always insisted that nobody shall be cremated by the Society over which he so ably presides unless the death has been certified by two medical men, and that any doubtful case must be cleared up by *post-mortem* examination. It is owing to this wise precaution that the modern method of disposing of the dead by fire has not only avoided all suspicion, but is rapidly growing in public estimation. The second recommendation of the Committee was that there should be attached to every district a public official corresponding to the *médecin vérificateur* of the French, whose duty it shall be to give independent testimony as to the cause of death when the circumstances appear to render it desirable that an inquiry should be made. We understand that this principle will be incorporated in a Bill which Sir Henry Thompson is framing, and which will be introduced to the House by Dr. Farquharson.

## GUARDIANS AND WORKHOUSE MEDICAL OFFICERS.

We learn from the *Western Morning News* that the Plymouth Board of Guardians have recently received an application from the medical officer of their workhouse for an increase of salary, on the ground that since his appointment to office, seven years back, a considerable area has been added to the borough of Plymouth, which necessitated the creation of an additional medical district, with its additional district medical officer, as well as an additional relieving officer. It must be at once apparent that, as the Plymouth workhouse now receives its inmates from a larger district than formerly, the work of the medical officer of the house must be materially, if not proportionately increased, and under such circumstances we should have thought that he might have fairly looked forward to a proper increase of salary, even without any application. To our surprise, however, we find that the Committee to which this subject was referred by the Board decided not to recommend any increase of stipend at present, on the ground that the medical officer did not devote a great deal of time to his duties, and that some children formerly located in the house have now been removed. We understand that there are over 600 inmates in this workhouse, and that the sick among these number 150; that there are 60 or 70 imbeciles, and a large proportion of infirm inmates. Such a workhouse as this requires, of course, a prolonged daily visit, and we much question whether the numerous duties of its medical officer could be properly performed under two, three, or even four hours. This would, of course, be in addition to any casualties he might have to attend at any hour of the day or night. The salary paid by the guardians for all this work, and for the many and serious responsibilities pertaining to the office is £100 per annum, without any extra fees whatever, even for midwifery. This works out at less than 5s. 6d. a day. The Committee to which this question was referred stated in their report that they had made inquiries in reference to the salaries paid to the medical officers of 17 other workhouses, and they had ascertained that some of these received more and some less than their own. But the committee might well have spared itself the trouble of this inquiry, for the request of the medical officer of the Plymouth Workhouse for an increase of salary in consequence of an increase of work is reasonable in itself. If there is any absence of reason in the case at all, it is in the unjust decision which has been arrived at. We commend this case to the notice of the Local Government Board. We cannot at present understand how that supreme authority can have sanctioned so serious an amount of additional labour being thrown on any of its medical officers without an increase of remuneration, as has, by an accidental change, been thrown on to the medical officer of the Plymouth Workhouse. Why should the Plymouth guardians be acting so unfairly? If there is anything to explain, we hope an explanation will soon be given. If not, a public inquiry seems called for.

## THE NEW PATHOLOGICAL INSTITUTE AT THE LONDON HOSPITAL.

Sir Henry E. Roscoe, Vice-Chancellor of the University of London, opened the new Pathological Institute of the London Hospital on July 10th. Among those present were Lord Lister, Professor Clifford Allbutt, Mr. Sydney Holland, and Mr. Jonathan Hutchinson. Sir Henry Roscoe dwelt on the value of the Institute in the progress of medicine, and of its importance to the Medical College. The building was unique among the large hospitals of London, and was most completely equipped. Whatever might be the ultimate decision of the University of London in regard to the establishment of central institutes for chemistry, physics, and other subjects in the earlier training of medical students, it was only in connection with large hospitals that pathological anatomy could be studied satisfactorily. The study of pathological anatomy could be said to be territorially fixed in the neighbourhood of large hospitals. The House Committee of the London Hospital had recognised the great facilities afforded by the hospital for advancing this branch of medicine, and had not contented themselves with erecting a new *post-mortem* room and mortuary, but had crowned them with a set of laboratories for the anatomical, microscopical, bacteriological, and chemical study of the products of disease. It might be asked by those who have not adequately followed the progress of modern medicine, what was the necessity for such a laboratory? In some cases, simply to open a body would suffice, but in many others the actual cause of death even, could only be discovered after careful chemical, bacteriological, or microscopical examination, and further, without such investigation preventive measures against the disease in other cases would be hindered. The institute was to form an introductory stage for entrance to that still higher and more advanced school of research which had its home in the Jenner Institute at Chelsea. There, as in its elder sister, the Pasteur Institute in Paris, all the studies aiming at the solution of the highest and most intricate problems of preventive medicine could now be thoroughly studied, and the Jenner Institute would welcome all who passed into its laboratories from the new Pathological Institute at the London Hospital. Lord Lister said a few words in praise of the House Committee for their efforts in founding such a pathological institute in spite of the clamour of certain narrow people who asserted that hospitals existed only for the treatment of patients, and not for the study of the means of preventing disease. Mr. Sydney Holland and his friends had acted wisely in recognising the great value of the most profound pathological study. Professor Clifford Allbutt, Dr. Stephen Mackenzie, and Mr. Sydney Holland also addressed the meeting, which was preceded by a large gathering in the library of the hospital, at which the prizes were distributed to successful students and nurses.

## THE CERTIFICATION OF PAUPER LUNATICS.

A recent issue of the *Walsall Observer* contains a letter which Dr. Lynch, who is a magistrate for the borough, has written to the guardians, drawing their attention to the practice which prevails there as to the "committal of lunatics to asylums," which he considers open to grave objections. Dr. Lynch says that it is the custom for the medical man to select magistrates to act in the case instead of magistrates selecting the medical man. We can quite understand that in actual practice it may often happen that the medical man would suggest the name of a magistrate. In fact, in some cases of urgency it must, almost of necessity, occur often, and we question if it would be for the good of the patient or of the public if the practice which Dr. Lynch appears anxious to condemn were at once terminated. The law is clear that the magistrate who acts in the case is authorised to call to his assistance any medical practitioner he pleases, and this law is not contravened by the medical practitioner who has charge of the case suggesting to the overseer the name of a magistrate who would be likely to undertake the duty of sending a patient to an asylum if on investigation he found it to be a proper case. We notice that Dr. Lynch speaks more than once about "committing" lunatics to workhouses and asylums. We cannot regard this as a happy term, as it appears to imply criminality, and we are not aware that it is anywhere used in the Lunacy Acts in reference to these cases to which Dr. Lynch applies it. Dr. Lynch's opinion that half a guinea is a proper fee for medical certification of all pauper lunatics is not generally held, and we think that it would be a mistake for any magistrate to make a rigid a rule to this effect. In our opinion the responsibility incurred by medical certification of a lunatic for an asylum is a very serious one, for which even one guinea is bare remuneration.

## OBITER DICTA.

Coroners' juries, as everyone knows, often return most remarkable verdicts, and occasionally they make recommendations with a light heart which, if carried out, would involve far-reaching economic changes. At Fulham, recently, the jury of an inquest held by Mr. C. L. Drew added to their verdict a rider in the following terms: "We desire to record, and the proper authorities informed, that in no case should the relieving officer refuse to give medical assistance when applied to. It is dangerous that a man should be refused in this way, and it should not be left to the discretion of the relieving officer to determine whether it is a case for medical attendance or not." The case, as we learn from the *Fulham Observer*, was that of a man who died of acute pericarditis of about a week's duration complicated by more recent pleurisy. He had applied to the relieving officer who, according to the evidence, had not refused relief but had offered it "in the way of a loan." The man took offence at some of the questions addressed to him, and left without taking the relief. By giving relief "on loan," it is meant that the cost of the order is recoverable if it should subsequently turn out that the case was not one of real destitution. As our contemporary remarks, this appears to be "a very desirable safeguard to the ratepayer. If the view taken by the jury were to be allowed to prevail then anybody would be able to claim medical attendance at the cost of the rates, and the work of Poor-law medical officers would be so enormously increased that their number and their salaries would have to be multiplied many times. It is not, however, worth while to discuss the rider at length, it was evidently adopted without adequate thought, and may be ignored.

## THE FACTORY AND WORKSHOPS ACT IN GRAND COMMITTEE.

That usually wideawake body, the Committee of Selection, must surely have been in a semi-somnolent condition when they appointed the fifteen added members to the Grand Committee for the Factory and Workshops Bill. The surgeons who help to administer the Act in its present form have practical and legitimate grievances which they earnestly wish to place before the Legislature for remedy, and they were anxious that Sir Michael Foster and Sir Walter Foster should plead their cause. We understand that these gentlemen were willing to serve, and we were therefore much surprised to find, when the Committee was finally framed, that not a single medical man had found a place among the other varied interests so profusely represented. This is a grave oversight, and on looking down the long list of amendments we can find none which meet the necessities of the surgeons' case. But Mr. Tennant, inspired by his accomplished wife, has already shown a sincere and intelligent interest in the hygienic comfort and personal safety of industrial workers, and we hope that he will come to their assistance now.

## THE ROYAL MEDICAL BENEVOLENT COLLEGE.

The festival of the Royal Medical Benevolent College, Epsom, which took place in London on July 9th, was an unqualified success. The speech in which the Earl of Rosebery, the President of the College, proposed success to the institution was admirable in tone, substance, and delivery, and will be read by those who were not fortunate enough to be present with something of the same pleasure as was experienced by the audience to which it was delivered. The objects of the institution are really twofold, and we may hope that in the future they may become distinct. In the first place there is Epsom College, a public school for boys, the sons of medical men and others. The school has a medical foundation; that is to say, it has fifty foundation scholarships, chiefly for the necessitous orphans of medical men, who are educated, boarded, and clothed at the College free of cost. Epsom College occupies a distinguished place among the public schools of the country, and it is everywhere gaining in reputation owing to the success won by the boys at the universities and also in the playing fields. The other side of the work of the institution is purely benevolent. Under this head it gives annuities to registered medical practitioners, their widows, or daughters who may be in necessitous circumstances. It also possesses foundation scholarships at the school of St. Anne's Society for female orphans of medical men. It is on account of this benevolent side of its work, in which must be included the foundation scholarships for boys, that the institution has to appeal for the assistance of the benevolent. A sum of £6,000 a year is required to meet the special expenses. This sum is raised every year through the indefatigable exertions of the Treasurer, Dr. Holman, and of his co-operators in many parts of the country. Recently certain special expenses had to be incurred for the remedying of structural defects which time had disclosed in the building and drainage, and this led to the special appeal made on Tuesday last with so much success. The result has been to put the institution out of debt, but it will need the continued generous support of the profession to ensure the maintenance of its efficiency, and not of the profession alone, because, as Lord Rosebery said, humanity owes a debt which cannot be estimated or limited to the medical profession.

## THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

The special meeting of the governors and subscribers of the National Hospital for the Paralysed and Epileptic, Queen Square, which was held last Saturday, adopted the report of the Committee of Inquiry without a dissentient voice, and the governors had previously received a letter from Mr. Burford Rawlings resigning the office of Secretary-Director on the ground that while he could not admit the justice of many of the findings of the committee he recognised that

there was practically no appeal, and that the report involved his retirement. As will be seen from the detailed report of the meeting published in another column, the members of the Board of Management, which is responsible for the conflict which has occurred, practically attempted no defence; we must, therefore, assume that they accept the justice of the condemnation passed upon them in the report of the Committee of Inquiry and that they now realise that the course which they adopted and maintained for many years was of such a nature as seriously to interfere with the good administration of the hospital. Mr. Burford Rawlings has been the not unwilling instrument of these most ill-advised proceedings and decisions of the Board, which he served only too faithfully. The unanimous adoption of the report involves the recognition of the principle that the medical staff shall in future be represented on the Board of Management, and the abolition of the anomalous office of Secretary-Director. A special Committee of Organisation has been appointed to carry into effect the recommendations of the report of the Committee of Inquiry. The constitution of this Committee is not altogether satisfactory, inasmuch as it is a mixed one, consisting of four representatives chosen by the Committee of Selection, two chosen by the medical staff, and three by the Board of Management, but it was accepted by Sir Felix Semon on behalf of the medical staff as a compromise, and we can only express the hope that it may succeed in evolving a good scheme which shall ensure the efficient and harmonious working of the hospital in the future by giving to the medical staff the necessary weight in the counsels of the institution and by providing that the Board of Management and its committees shall give more serious attention to their duties in the future than has been the case in the past.

## THE AFRICAN SOCIETY.

THE interest aroused by the writings and lectures of the late Miss Mary Kingsley with reference to the natives of West Africa, their customs and racial characteristics, led some months ago to the formation of an association with the title "The Mary Kingsley Society of West Africa;" donations amounting to £700 were collected, and branch societies were established on the West Coast of Africa. Recently those interested in the movement have decided to extend its scope, and the title of the society has accordingly been altered to "The African Society." West Africa, from which the Society has already received much support and encouragement, will receive its first attention, but it will eventually extend its operations to the study of all subjects connected with the African continent, with the exception of such fields as may already be occupied by any learned institution at present existing, such as those which are engaged in the study of the ancient civilisations of Egypt and Carthage. The first object of the society will be the study of native usages, institutions, customs, religions, and antiquities, but it will also give attention to the climate, trade, products, fauna, and flora, and the mineral resources, to questions of hygiene and to matters relating to the study of the symptoms and prevention of prevalent diseases. The Society, in fact, hopes to become a working Information Bureau for Africa. It will issue a periodical journal, will arrange for lectures and discussions, and so soon as funds permit, will establish headquarters in London with a library, reading room, and if possible a museum. The annual subscription is one guinea, and further particulars can be obtained from Mr. Robert Sewell, 22, Albemarle Street, London, W., where the offices of the Society are at present established. Among those who have joined the Society are Mr. A. J. Balfour, Mr. H. H. Asquith, K.C., Sir Lauder Brunton, Viscount Cromer, Lieutenant-General Sir Andrew Clarke, Sir George Taubman Goldie, Dr. F. H. H. Guillemard, Professor A. C. Haddon, Sir Alfred Lyall, Sir William McGregor, Dr. Patrick Manson, Professor A. Macalister, Mr. John Morley, and Professor E. B. Tylor.

## THE CONSTITUTION COMMITTEE.

THE final meeting of the Committee appointed by the Annual Meeting at Ipswich on August 1st, 1900 "to consider and report upon the best means of reorganising the constitution of the British Medical Association" was held on Monday last, July 8th. The terms of the Report to be presented to the Annual Meeting at Cheltenham were settled, and it is proposed to publish the Report as a supplement to the next number of the BRITISH MEDICAL JOURNAL. At the conclusion of the business a vote of thanks to Mr. Edmund Owen for the ability and impartiality with which he had filled the chair of the Committee was proposed in a short and cordial speech by Mr. Victor Horsley, seconded by the President of the Association (Dr. W. A. Elliston), and carried by acclamation. The thanks of the Committee were also expressed to Dr. J. Smith Whitaker, of Yarmouth, for the extremely valuable services which he had rendered in the conduct of the business.

## THE GENERAL MEDICAL COUNCIL ELECTION.

As will have been seen from letters published in the BRITISH MEDICAL JOURNAL during the last few weeks, a suggestion has been made that a meeting of the profession should be held with reference to the election of direct representatives on the General Medical Council which will take place this autumn. A proposal having been made that such a meeting should take place at Cheltenham during the annual meeting of the British Medical Association, the matter was brought before the Council of the Association by the President-elect, and the Council has approved the provision of the accommodation desired by the promoters of the meeting. Though objection may be felt to the Association, under existing conditions, taking a part in these elections in the interests of any candidate or candidates, yet it appears to be desirable that facilities should be afforded to members attending the annual meeting to discuss the matter at a meeting to be held in the same place, and to have an opportunity of becoming acquainted with the personality and the views of candidates. It will, however, obviously be only right that the meeting shall be open to any member of the profession who may wish to attend, and that any candidate who proposes to offer himself shall be given an opportunity to be present.

## THE TUBERCULOSIS CONGRESS.

ALL the arrangements for the British Congress of Tuberculosis are now practically complete; the inaugural ceremony will take place at St. James's Hall on the afternoon of Monday, July 22nd, when the Duke of Cambridge will open the Congress on behalf of the King. The second general meeting, when Professor Koch will give an address on the fight against tuberculosis regarded in the light of the experience gained in the successful combat of other infectious diseases, and the third general meeting, when Professor Brouardel, of Paris, will give an address, will also be held in St. James's Hall. The remaining general meetings will be held in the Queen's Hall, where the reception room for registration and distribution of tickets will be situated. Foreign delegates have been nominated by Government departments, and various medical and hygienic societies of the United States of America, Belgium, Denmark, France, Germany, Holland, Hungary, Monaco, Norway, Spain, and Italy to the number altogether of 69. A large number of foreign members have also signified their intention to be present; the number actually registered this week was 219, but this will probably be con-

siderably increased. In addition to the four sections—(i) State and Municipal, (ii) Medical (including Climatology and Sanatoria), (iii) Pathology (including Bacteriology), and (iv) Veterinary, there will be a museum divided into three sections—(1) Pathology and Bacteriology, (2) Public Health, (3) Architecture. Further particulars can be obtained from the Secretary-General of the Congress, 20, Hanover Square, London, W., who would, we believe, forward a printed programme to members.

## THE ANTICIGARETTE CRUSADE IN AMERICA.

The war against the cigarette in America is assuming the proportions of a veritable crusade. In Chicago, it is announced that the law requiring a special licence to sell cigarettes will be strictly enforced, and all dealers will be reported to the police officials who fail to meet its requirements. An ordinance has been introduced into the Council prohibiting the sale of cigarettes, cigarette paper, or cigarette tobacco within 600 feet of a school house, and also forbidding the giving away of such articles by persons unlicensed to sell them. In the Western States the Oklahoma anticigarette law, which came into force on May 1st, contains the following drastic regulations passed, it is stated in the Act, because the public welfare requires it:

Section I. That it shall be a misdemeanour for any person, firm, or corporation to sell, offer to sell, or to bring into the territory for the purpose of selling, giving away or otherwise disposing of, any cigarettes, cigarette paper, or any substitute for the same. Section II. Be it further enacted that it shall be a misdemeanour for any person, except parents or guardians, either for himself or another, to give away cigars, chewing tobacco or tobacco in any form, to a minor under the age of 15 years. Section III, Any person convicted of the above misdemeanour, or for selling or giving away cigarettes or tobacco, or paper for the purpose of making such cigarettes, shall be fined for each offence in any sum not less than $50 (£10) nor more than $200 (£40), and any person, except parents or guardians, convicted of selling or giving away cigars, chewing tobacco, or tobacco in any form, to any minor under the age of 15 years, shall be fined in any sum not less than $10 (£2), nor more than $50 (£10) for each offence.

But there are signs of a reaction against this excess of sanitary zeal. It was recently announced that Dr. Dudley S. Reynolds, one of the founders of the Louisville Hospital College of Medicine and a member of its Faculty from its inception, has been dismissed from the institution because of his antagonism to cigarette smoking. He is now suing Central University, of which the medical school is a part, for $15,000 damages. Dr. Reynolds, in his lectures to his classes, denounced cigarette smoking and smokers in unqualified terms. The students took offence, and refused to attend his lectures unless the Professor offered an apology. This he declined to do. At a meeting of the junior and senior classes of the Hospital College of Medicine, held subsequently to take action on the charge made by Dr. Reynolds that the Faculty of the school had acted with the students in their boycott of him, the president of the senior class, in discussing the matter, said: "The Faculty had nothing whatever to do with the boycott of Dr. Reynolds. He made objectionable and obnoxious statements to the students, and they made up their minds to ignore him entirely. We petitioned the Faculty for a successor to Dr. Reynolds, and if they had not removed him we should have left the school." It would be unseemly on our part to take sides in a family quarrel of this kind, even if we were in possession of all the facts of the case. But it has been truly said that there is a good deal of human nature in man, and there is perhaps a little more than the average amount in medical students. We sympathise with the boycotted professor, but we cannot affect to be surprised at the fate which befell him. Canada is joining in the movement. The Toronto Ministerial Association is memorialising the Dominion House of Parliament to enact legislation prohibiting the manufacture, importation, and sale of the cigarette and the material for its preparation, and to make it a misdemeanour for any person under the age of eighteen to be found using or having in his possession tobacco in any form.

## MENTAL OBSESSIONS.

Mental "obsessions" refer to imperative ideas, often of a ludicrous, indecent, or dangerous nature, which arise in the mind regardless of the proprieties of time and place, and often subject the patient to much distress and anxiety, and may even be the prelude to insanity. In the *Revue Neurologique* for April, Haskonce, of Prague, has an interesting paper dealing with these aberrant mental phenomena. Some observers, with Pitres and Regis, say that "obsessions" are often only morbid fears (phobias) in an aggravated form, and operating in the intellectual sphere, that is, that primarily they are morbid affective processes. Others hold that they are primarily intellectual conditions like "fixed ideas." In a study of 110 different cases Haskonce found that while some were primary lesions of intellectual origin the majority were of affective origin. Fixed ideas belong to the first class, while phobias belong to the second. In some cases it was impossible to say to what category a case belonged (transitional cases). "Sometimes the visual image provoked the mental obsession, without there being at the time, as before it, any emotional reaction." The medico-legal importance of these cases was great. The patient sees, for example, a hatchet, and is suddenly beset with the idea of killing a person who is near. In such a case the presence of the person, and the internal conflict between the obsession and normal feeling, produce a secondary emotional disturbance in the patient, namely, distress and anxiety lest he be impelled to do the deed. In some cases the anguish experienced is so great that self-control fails, resistance is overcome, and the crime is perpetrated. Epilepsy may be present as a complication, but apart from its presence true obsessions are attended with lucidity of consciousness, whereas with epilepsy there is usually mental automatism and amnesia, but seldom lucidity. Haskonce records the case of a young man, aged 20, who was subject to the obsession, suddenly recurring, of his not being really alive or existent. There was no phobia or anxiety in this case, and the patient was free from headaches and slept well. Phobias and obsessions are prone to occur after disturbances of the sexual organs, including menstruation and abortion. Some phobias occurred after brain over-exertion, poisoning by coffee or gas, dyspepsia, constipation, and in exophthalmic goitre. In some of these toxic action played a determining part. A curious case of obsession was that of a man, aged 26, of backward intelligence, and the subject of *folie du doute*. He had an irresistible tendency to stop and look at objects on the ground (bits of paper, matches, etc.), and to ask questions as to whence they came, why, etc. "Plus les choses sont futiles, plus j'y porte intérêt." In another case a married woman, aged 33, childless, and of nervous parentage, there was a morbid fear of carriages, agoraphobia, and feelings of suffocation, and oppression on seeing objects suspended from ceilings or walls, while she could never hold any closed object—for example, a bottle or letter—in her hand, without having it opened first. To see a corked-up bottle made her feel "choky." She was liable to nightmare. Another case is mentioned of a man, aged 60, a neurasthenic bachelor, who since the age of 3 experienced fright on seeing sunbeams indoors in a house or church. True obsessions and phobias *per se* should be distinguished from the prodromes of such mental disorders as melancholia, paranoia, or general paralysis.

At a meeting of the Council of the Royal College of Surgeons of England on July 11th, Mr. Howse was elected President, Mr. Jessop, Senior Vice-President, and Mr. Howard Marsh, the Junior Vice-President.

# MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

**The Committee on the Army Medical Department.**—Dr. Farquharson questioned the Secretary of State for War with reference to the proceedings of this Committee last week. Mr. Brodrick replied that so far as at present arranged the Committee would not take evidence, and its proceedings would be conducted in private. It would of course be open to any member of the Committee to submit alternative proposals to the scheme of reform placed before the Committee by the Secretary of State. The Committee, it is generally understood, will in the first instance consider Mr. Brodrick's proposals, and out of the discussion of these it is to be hoped some useful reforms may be agreed upon. The grievances of the R.A.M.C. will not be specially inquired into, but it is expected that the Committee will be able to formulate them in the course of the proceedings.

**The Health of Ladysmith, Kimberley, and Mafeking.**—Mr. Brodrick, in answer to Mr. Platt Higgins, gave some interesting details of the health of these towns during their investment by the Boers. At Ladysmith the civil population numbered about 8,000. These people were not permitted to leave by the Boer general after the commencement of the siege. The returns did not give the numbers of sick or of deaths among the civil population. The sickness among the troops was very heavy, and at one time equalled about one-fifth of the available strength, After the water main was cut by the enemy the supply from the Klip river was very foul, and accounted for much of the illness. At Kimberley the civil population numbered over 40,000 ; the deaths during the siege were 1,694. At Mafeking the white civil population numbered about 700; in seven months there were 36 deaths among them, or about 5 per cent. There was no precise information as to the deaths or sickness among the native population.

**Medical Leave for Indian Officials.**—The peculiar position of the Viceroy, the Commander-in-Chief in India, and the Governors of Madras and Bombay was brought up in the House of Lords last week. It appears that these four high officials are the only ones in the British empire who are debarred from coming to Europe on medical leave. The question first arose when a Bill was introduced to enable the Duke of Connaught to come home, and further legislation was then promised. In 1892 the attempt was made but did not succeed, and Lord Hardwicke on behalf of the Government last week deprecated any attempt to legislate at present. It was thought that the absence of the Viceroy from India for any reason would have a bad effect on the native population, and with regard to the other three officials, if the health of any of them broke down it would be better for them to resign.

**The Constituents of Butter.**—Under the Food and Drugs Act Act 1899, power was given to the Board of Agriculture to appoint a Departmental Coumittee to inquire and report on what regulations, if any, might with advantage be made for fixing a butter standard. The Irish members have repeatedly asked questions on the subject during this session, and Mr. Hanbury, in conjunction with Mr. Horace Plunkett, the Vice-President of the Agricultural Department in Ireland has appointed a joint committee for the purpose. It consists of the following members: Mr, Horace Plunkett, Chairman; Sir Charles Cameron, C.B., M.D., M.O.H. for Dublin; Professor J. E. Thorpe, C.B., LL.D., F.R.S., of the Government laboratories; Major Craigie, of the Board of Agriculture; Mr. R. A. Anderson, Irish Agricultural Organisation Society; Mr. C. Dunn, Chairman of the Trustees of Cork Butter Market; Mr. George Gibbons, Mr. J. Gilchrist, Mr. Hudson Kearley, M.P., and Professor Thompson, LL.D., President of the Institute of Chemistry. Mr. A. E. Balleine, of the Board of Agriculture, will act as Secretary.

**The Factory and Workshops Acts in Standing Committee** made some progress at the second sitting last week. Mr. Ritchie carried a new clause giving the Home Secretary power to prescribe a standard of sufficient ventilation. He also submitted a clause giving power to the occupier who has made structural alterations required under the Acts to apply to a court of summary jurisdiction to apportion the cost between himself and the owner. This clause was postponed for further consideration. A long discussion followed on an amendment proposed by Mr. Tennant to the subsection of Clause 17, which provides for the draining of wet floors in factories, and eventually it was agreed that the subsection should read "in every factory or workshop or part thereof in which any process is carried on which renders the floor liable to be wet, adequate means shall be provided for draining off the wet to such an extent as it is capable of being removed by drainage." Clause 17 was then agreed to. Clause 18, which declares that a child shall not be allowed to clear any place under machinery other than overhead mill-gearing while the machinery is in motion was discussed at length, and after four divisions, in which amendments were rejected, the clause was passed. Clause 19 was under discussion when the Committee rose. On Monday the Committee resumed and passed Clause 19 with some amendments. The next four clauses were discussed at some length and amended. Then in Clause 24 an amendment was carried against the Government, requiring that the hours of women and young persons should be continuous, barring meal times. The Attorney-General, in the absence of the Home Secretary, opposed the amendment, which was adopted by 21 to 18. The defeat was regarded as serious by the Government, but a hope was expressed in the Committee that they would not attempt to revise it. The Committee then adjourned.

**Courts Martial and Sickness among Troops in South Africa.**—In answer to Dr. Farquharson, Lord Stanley informed the House on Monday that the number of courts martial held in South Africa was 6,355, and elsewhere 9,937. No information of civilians being tried by court martial if such cases have occurred was available. In answer to a question later in the day put by Mr. McNeill it was stated that there were now in South Africa 251,000 troops, of whom about 14,000 were sick.

**The Hospital Ship "Maine."**—Mr. C. H. Wilson asked the First Lord of the Treasury on Monday whether the Government had had the gratuitous services during the war of the hospital steamer *Maine*, and whether this vessel had been offered as a gift to the British nation by Mr. Baker, a member of the mercantile marine of the United States of America, and had been accepted by the Government, and if so what public acknowledgment had been made, or was intended to be made, of Mr. Baker's gift. Mr. Balfour in reply said: I think that the utmost publicity has been given to the thanks of this country for the most noble and generous gift in the recognition given by the First Lord of the Admiralty in another place, and by my hon. friend the Secretary to the Admiralty in this House. There is no mode of giving publicity to national thanks more effective than this.

**Bills of Medical Interest.**—The Public Health Bill still remains on the paper, and is down for second reading on Monday next. Sir Francis Powell made an attempt to get it through its second stage on Tuesday night after 12 o'clock, but was unsuccessful. Lord Henry Bentinck still keeps his blocking notice on the paper. The Vaccination Bill, which Mr. Broadhurst introduced to abolish compulsory vaccination, was dropped on Wednesday The Rivers Pollution Bill has been put off till August 1st. Sir Walter Foster appears not to have given up hope as regards the Cremation Bill, and has put it down for next Wednesday, relying no doubt on the fact that the Government is favourably inclined towards the measure. The promotors of the Midwives Bill of last year are now taking counsel together as to action next session, and they called a meeting on Tuesday of members favourable to their views for the purpose of considering what form their efforts are to take next year.

# ASSOCIATION INTELLIGENCE.

## COUNCIL.

### NOTICE OF MEETINGS.

MEETINGS of the Council will be held in No. 8 Room, Ladies' College, Cheltenham, on Tuesday, July 30th, Wednesday, July 31st, and Thursday, August 1st next, at 9.30 o'clock in the forenoon of each day.

July, 1901. GUY ELLISTON, *Acting General Secretary.*

### BRANCH MEETINGS TO BE HELD.

NORTH OF IRELAND BRANCH.—The annual meeting of this Branch will be held in Belfast on Thursday, July 18th.—W. CALWELL, M.D., 1, College Square North, Belfast, Honorary Secretary.

DORSET AND WEST HANTS BRANCH.—The next meeting of this Branch will be held at the Haven Hotel, Poole Harbour, on Wednesday, July 17th, at 3.15 P.M. Agenda: Election of new members of the Branch. Place of the autumn meeting. Communication from the Shropshire and Mid-Wales Branch. Discussion—Cardio-vascular Therapeutics; to be opened by Dr. Lys, one of the Vice-Presidents. Communications, specimens to be shown—Dr. Lawrie: (1) Fibroid Uterus, with an unusual condition, removed by Doyen's method of pan-hysterectomy; (2) Fibroid Uterus removed by sub-peritoneal hysterectomy. Dinner at the hotel at 5 P.M., price 6s. each, without wine. It is absolutely necessary that members intending to be present should inform Dr. Davison, Streate Place, Bournemouth, of their intention not later than the first delivery on Monday, July 15th.—WILLIAM VAWDREY LUSH, M.D., Weymouth, C. H. WATTS PARKINSON, Wimborne, Honorary Secretaries.

## ABSTRACT OF PROCEEDINGS OF COUNCIL.

DR. ROBERTS THOMSON, President of Council, in the Chair. AT a numerously attended meeting of the Council, held in the Council Room at the offices of the Association, 429, Strand, W.C., on Wednesday, July 10th, 1901, it was

Resolved: That the Report of the Council be received, approved, and published in the JOURNAL for presentation to the annual meeting in Cheltenham on July 30th.

Resolved: That the Report of the Parliamentary Bills Committee be received, approved, and published in the JOURNAL for presentation to the annual meeting in Cheltenham on July 30th. (See p. 106).

Resolved: That the Report of the Scientific Grants Committee be received, approved, and published in the JOURNAL for presentation at the annual meeting in Cheltenham on July 30th. (See p. 106).

Resolved: That the Report of the General Practitioners and Ethical Committee be received, approved, and published in the JOURNAL for presentation to the annual meeting in Cheltenham on July 30th. (See p. 113).

Resolved: That the Report of the Medical Charities Committee be received, approved, and published in the JOURNAL for presentation to the annual meeting in Cheltenham on July 30th. (See p. 113).

Resolved: That the Preliminary Report of the West African Medical Service Committee be received, and published in the JOURNAL for presentation to the annual meeting in Cheltenham on July 30th. (See p. 113).

Resolved: That the Report of the Indian Military Medical Services Subcommittee be received, approved, and published in the JOURNAL for presentation to the annual meeting in Cheltenham on July 30th. (See p. 114).

[*The remainder of the Proceedings of Council will be published in a future number of the* BRITISH MEDICAL JOURNAL.]

[*The following Reports of the Council and of the Committees will be presented at the Annual Meeting to be held at Cheltenham, on July 30th, 31st, August 1st and 2nd, and are published in accordance with the regulations for the conduct of Annual Meetings, which require that all Reports of the Committees of the Association shall be printed in the* JOURNAL *before the Annual Meeting.*]

## REPORT OF COUNCIL, 1901.

IN submitting its Report for the past year, the Council is reminded that Cheltenham is one of the towns which entertained the Association in its earlier days. It is sixty-three years since the Association met there, and there must be few, if any, members alive who could have been present at that meeting. In those days the Association consisted of three Branches, with a membership of 756. Now our Branches number 68, and the roll of membership amounts to over 18,000. The former meeting at Cheltenham was memorable in that it was held in the same year in which our late Sovereign ascended the Throne. By a remarkable coincidence the second meeting will be also memorable in that it is held in the year of the accession of King Edward VII.

### DEATH OF THE QUEEN.

Upon receiving the mournful intelligence of the death of the Queen, your President, Dr. Elliston, forwarded a telegram, of which the following is a copy:

To H.R.H. the Prince of Wales, Osborne.

On behalf of the British Medical Association, the President, with dutiful respect, desires to convey to His Royal Highness, and other members of the Royal Family his deep sympathy in the bereavement they and the Empire have sustained by the death of their beloved Sovereign Lady, Queen Victoria. ELLISTON.

Reply:

O.H.M.S., Osborne, 2.55 p.m.

To the President of the British Medical Association.

The Prince of Wales desires to thank the British Medical Association for their kind expressions of sympathy. EQUERRY.

### THE HONORARY MEMBERSHIP OF THE PRINCE OF WALES.

It will be remembered that at the last annual meeting, with his gracious consent, His Royal Highness the Prince of Wales was unanimously elected an honorary member of the Association. Upon his accession he was again approached to ascertain if he would continue to be an honorary member, but he replied, through the Keeper of the Privy Purse, that he was unable to continue an honorary member of the Association.

### PATRONAGE OF THE KING.

The King has since graciously signified his willingness to accede to the wish, expressed through your President-elect, to become Patron.

### THE DUKE OF EDINBURGH AND SAXE-COBURG-GOTHA.

The following resolution was unanimously passed at the annual meeting, held at Ipswich, upon the death of the Duke of Edinburgh:

Resolved: That this meeting of members of the British Medical Association, assembled at Ipswich, desire to express their deep sympathy with Her Most Gracious Majesty the Queen, and with Her Royal Highness the Duchess of Edinburgh, and with the members of the Royal Family, on the sad and sudden death of His Royal Highness the Duke of Edinburgh and Saxe-Coburg-Gotha.

### DEATH OF MEMBERS OF THE COUNCIL.

Death has again taken from us several members of the Council, among them being the two senior Vice-Presidents of the Association—namely, Sir Henry Acland and Mr. Benjamin Barrow. The Council passed the following resolutions of sympathy:

Resolved: That the Council of the British Medical Association desire to record their deep sense of the loss sustained by the profession and by the Association through the death of Sir Henry Acland, Bart., K.C.B., M.D., F.R.S., Vice-President of the Association. The Council recall the distinguished services he rendered to the Association during his Presidency in 1868. They remember the warm and active interest he at all times took in every question affecting the welfare and honour of the profession, and the great influence he exercised by so long a connection with the University of Oxford. The Council desire also to convey to his sorrowing relatives their deep sympathy with them in their bereavement.

Resolved: That the Council of the British Medical Association desires to express its deep sympathy with Mrs. Barrow on the occasion of the sad death of her husband, Mr. Benjamin Barrow, senior Vice-President of the Association. Mr. Barrow's generous hospitality as President at the annual meeting of the Association held at Ryde in 1881, his genial manners, and the great and unceasing interest which he took in all the work of the Association, entitle his name and services to be held in grateful memory by his colleagues on the Council and by the Association at large.

### 1901.

The number of members last year was 18,382. During the year 1,010 new members have been elected, 238 have died, and 752 have resigned or been taken off for arrears, leaving on the register 18,402.

### Revenue and Expenditure.

The revenue for the past year has been £43,419; the expenditure, including £500 written off for depreciation of plant, £200 from furniture, and £1,427 for losses on subscriptions, was £38,943, leaving a surplus balance of £4,476. During the year railway debenture stock which was bought at a cost of £10,813, was sold for £12,807, and the amount applied to the reduction of the mortgage loan. The surplus for the year was also applied for the same purpose. The mortgage loan, which when it was first incurred in 1898 stood at £38,000, is now reduced to £10,000. Amongst the scientific work to which the Association has contributed was £100 for the Congress on Tuberculosis, £575 for Research Scholarships, and £340 for Scientific Grants.

### Reconstruction of the Association.

At the last annual meeting held at Ipswich the Council received a deputation from the Manchester Conference with reference to improving the organisation of the Association; and at a subsequent general meeting of members a Committee was appointed, in acordance with the following resolutions, proposed by Mr. Victor Horsley, to consider the question.

1. That a Committee be appointed to consider and report upon the best means of reorganising the constitution of the British Medical Association, the said Committee to furnish a provisional report to the Branches not later than February 1st, 1901.

2. That the Committee consist of Dr. A. G. Bateman, Dr. R. C. Buist, Mr. H. T. Butlin, Professor J. W. Byers, Mr. James Cantlie, Mr. Andrew Clark, Dr. J. Ward Cousins, Dr. H. R. Crocker, Dr. Alfred Cox, Dr. C. G. Gooding, Dr. W. Gordon, Surgeon-General J. B. Hamilton, Mr. Victor Horsley, Dr. J. C. McVail, Dr. C. H. Milburn, Sir John William Moore, Dr. C. G. D. Morier, Mr. Edmund Owen, Dr. A. Brown Ritchie: Dr. R. Saundby, Dr. J. Roberts Thomson, Mr. T. J. Verrall, Mr. J. S. Whitaker, and Dr. S. Woodcock.

The Committee consists of the President and President-elect *ex-officio* and the foregoing members. The Committee will report to you during the annual meeting at Cheltenham.

### Appointment of Solicitor to the Association.

The Council has had under consideration the appointment of a Solicitor to the Association in the place of Mr. J. R. Upton, who has resigned, after serving the Association for nearly thirty years. Upon Mr. Upton's resignation, the Council passed the following resolution:—

Resolved: That this Council has received with great regret the resignation of Mr. James Richard Upton, as solicitor to the Association. The Council desires to express its sense of the services Mr. Upton has rendered to the Association for the period of twenty-seven years during which he has acted as its legal adviser. He has shown tact, courtesy, and firmness, while his decisions have invariably been the outcome of good judgment. The Council desires to express the hope that he may be long spared to enjoy his well-earned retirement.

The Council decided that the appointment should be annual, and after consideration resolved to ask Mr. W. E. Hempson to accept the appointment.

### The Case of a Medical Officer and the Colonial Office.

The case of an officer, who was dismissed from his post as Chief Medical Officer to the Gold Coast Government Railways by the Chief Resident Engineer, £107 for his services being due to him at the time, in consequence of his refusal to carry out the latter's instructions to proceed a distance of twenty miles to make a *post-mortem* examination, came before the Council, who requested the gentleman to draw up a statement of his case, which the President of Council forwarded to the Secretary of State for the Colonies, with a request that the case be reconsidered. Mr. Secretary Chamberlain replied that the case had been carefully considered, and that he saw no ground on which he would be justified in interfering with the Governor's decision. The Council fears nothing more can be done in this case.

### The West African Committee.

Owing to the unsatisfactory nature of the conditions of the medical service in the West African and Crown Colonies and Protectorates, your Council appointed a Committee to consider the subject, and it has waited to receive further evidence from the West Coast of Africa and has only been able to present a preliminary report.

### The Journal.

The publication of the proceedings of the annual meeting of the Association at Ipswich was begun in the British Medical Journal immediately after the conclusion of that meeting, and owing to the special arrangements which have been in force for some years it was possible, with the assistance of members who read papers in the Sections—assistance as a rule readily given—to complete the publication of the proceedings before the end of October. The Association is thus able not only to afford to papers read before it a very wide circulation both at home and abroad, but also to secure their publication at an early date. Since the completion of these reports a large number of lectures and articles on clinical subjects have been published from week to week, and a certain number of papers on pathology and bacteriology; abstracts of papers published in foreign periodicals are classified in the Epitome of Current Literature, which is kept up to date as far as the limited space will permit. The proceedings of the International Congress of Medicine held in Paris last autumn and of the Congress of Deontology held there about the same time were reported. The meetings of the German Congress of Naturalists and Medical Practitioners, and of the German Medical and Surgical Congresses have also been reported by special representatives of the Journal, who were most cordially received by the officers of these congresses. The outbreak of plague in Glasgow having shown in the most forcible manner the risk of importation, the issue of the Journal for October 27th, 1900, was mainly devoted to a series of articles on the symptoms and pathology of the disease, and on the means which can be taken for its prevention. An application for a thousand reprints of this series of articles, received from the Cape Government, was gladly acceded to.

The provisional report of the Constitution Committee was issued as a supplement, but the reports of meetings for its discussion and many letters and articles on the subject have been published in the British Medical Journal, and have, it is believed, helped to the formation of opinion on the many questions affecting the welfare of the Association which are involved.

The business done by the General Medical Council in public during its two sessions has been fully reported, and the work of its Committees has been noticed and discussed as occasion offered, but it is to be regretted that the Council still does much important business *in camerâ*, and that the reports of its Committees are not as a rule published until after they have been debated and voted on.

A review of the present state of the law and of administration in regard to death certification was published in the British Medical Journal at the end of 1900, and it has again been shown that many evils and irregularities exist, injurious to the public and to the medical profession. The matter is one to which the attention of the Association needs to be given continuously in order to bring about the reforms recognised as desirable.

Recently a wanton attack made by the Secretary of an Anti-vivisection Society upon the humanity and the good faith of the medical profession has called for a strong protest from the British Medical Journal as representing so large a part of the profession.

The medical and surgical lessons of the war in South Africa, the condition of the military hospitals, and the attacks made upon the undermanned medical corps of the army, have led to the publication of a large number of articles and letters which have put these matters in a true light. The report of the Special Committee of the Association on the reorganisation of the Army Medical Service, which was published as a supplement to the British Medical Journal of May 4th, has placed some of the facts in an authoritative form before the authorities, and the Council hopes that Mr. Brodrick's Committee will arrive at no decision until witnesses have been examined and their evidence considered.

### The Library.

The Library has fully maintained its usefulness during the past twelve months, as is evidenced by the 4,561 attendances recorded, though, on account of the rooms having been required for other purposes, there have been more interruptions than during any previous year of its existence. There have been 1,030 volumes presented—comprising new books, new editions, and society reports and *Transactions*, as well as a number of older duplicate volumes, which have made it possible in many instances to place upon our shelves much better copies than were formerly possessed.

The current volumes of the *Transactions* of all the leading medical societies may be seen in the Library, as well as an increased selection of the files of many of the most important medical and surgical periodicals (English and Continental) up to the year 1900, and the series of public health reports and French *Thèses* are also being perpetuated.

During the year numerous applications have been received for grants of books from local Branches, and in response to these books have in each case been selected and forwarded. Arrangements have been made to receive, as published, a copy of the Royal Society's International Catalogue of Scientific Literature, which will be an index of all books, memoirs, and articles in the scientific journals of all countries containing original matter of scientific interest. The latest important addition to the Library is the recently completed *Dictionary of National Biography*, which contains an account of the life and work of every member of the medical profession of this realm who has written his name in the history of medicine or that of his country.

### MIDDLEMORE PRIZE.

The Middlemore Prize—a prize founded by the late Richard Middlemore, F.R.C.S., of Birmingham, to be awarded triennially for the best essay on the scientific and practical value of the improvements in Ophthalmic Medicine and Surgery during the previous three years—was awarded and presented last year at Ipswich to Dr. Ernest E. Maddox for his researches into the normal and defective action of the ocular muscles. The prize consisted of an illuminated certificate and a cheque for £50.

### STEWART PRIZE.

The Stewart Prize—a prize founded by the late Alexander Patrick Stewart, M.D.—to be awarded biennially for the recognition of important work already done, or of researches instituted, and promising good results regarding the origin, spread, and prevention of epidemic disease with a view to encourage the continuance of the same, consisting of an illuminated certificate and cheque for £50, has this year been awarded to Dr. Patrick Manson, C.M.G., F.R.S.

### ANÆSTHETICS COMMITTEE.

The report of the Anæsthetics Committee, which it will be remembered was appointed at the Bournemouth meeting held in 1891, has been completed. The report consists of 134 pages and a considerable number of tables, and contains much that is valuable and important. Your Council feels that the thanks of the Association are due to the Subcommittee who bestowed much labour on this report, and who are to be congratulated on the results. The reports are now for sale.

### SCIENTIFIC GRANTS COMMITTEE.

The Scientific Grants Committee has allowed £350 for scientific grants and £650 for research scholarships, and the Committee presents a report. In the latter sum is included the separate scholarship known as the (£200) Ernest Hart Memorial Scholarship. The total amount which has been spent in scientific research through this Committee since its institution in 1874 is £15,998, independently of £1,650 granted to societies and bodies outside the Association.

### FRIENDLY SOCIETIES COMMITTEE.

A Committee appointed to consider the question of a Conciliation Board for the settlement of questions with Friendly Societies, consisting of the President, Dr. W. A. Elliston, Dr. Bruce Goff, Dr. J. W. J. Oswald, Dr. A. Cox, Dr. C. A. Milburn, and Dr. James Craig, held a conference with the representatives of the Friendly Societies, consisting of Mr. Stockwell, President, Mr. Chapman, of the Ancient Order of Foresters, Mr. Stead, Secretary of the Ancient Order of Foresters, Mr. Bunn, Hearts of Oak, and Mr. Cleveland, Secretary to the National Conference of Friendly Societies. The result of this conference was not altogether satisfactory, as the Friendly Societies refused to give way upon the question of a wage limit. The representatives, however, ultimately promised to bring the matter before their conference at Birmingham. The proceedings of this conference have been reported in the BRITISH MEDICAL JOURNAL, from which it will be gathered that the proposal of a wage limit was rejected after a debate, which shows that, however difficult the organisation of a Conciliation Board may be, it is much to be desired. The Committee was reappointed as a Watching Committee. The Council decided to ask for a deputation to meet the General Medical Council to report the result of the conference with the representatives of the Friendly Societies. This meeting took place early in June, when a free interchange of views took place. The Committee of the General Medical Council has asked to be communicated with when there is any further matter to report.

### GENERAL PRACTITIONERS AND ETHICAL COMMITTEE.

The attention of the Council having been called to a resolution of the General Practitioners and Ethical Committee to the advertisements in the lay press of courses of lectures on midwifery, the Council passed the following resolutions:

Resolved: That this Council, while approving of the training of midwifery nurses, disapproves of the action of those members of the British Medical Association who lecture on midwifery to women who have not been trained in the wards of a lying-in hospital with a view to the granting of diplomas representing the holders to be competent to practise midwifery. This Council also disapproves of advertising lectures in the lay press.

This resolution was ordered to be sent to the President of the Obstetrical Society of London, the Secretary of St. Mary's Hospital, Manchester, and the Manager of the Southern Hospital for Women, Manchester. The bodies which took notice of the resolution were the Obstetrical Society of London, the President of that Society simply acknowledging the receipt of the resolution, and the Manchester Southern Hospital, who wrote stating that the conditions laid down in the foregoing resolution were literally fulfilled.

### MEDICAL CHARITIES COMMITTEE.

The Medical Charities Committee has held meetings during the past year, and decided to forward the same set of questions relating to hospital abuse to the secretaries of provincial hospitals as were sent to the London hospitals. This has met with a certain degree of success. The Committee also decided to send a circular letter to the Hospital Medical Boards of both the London and provincial hospitals, asking if they would assist the Committee in endeavouring to stop the abuse of hospitals. Satisfactory replies have been received to this communication.

### THERAPEUTIC COMMITTEE.

During the past year the Therapeutic Committee has continued its investigations upon the actions of senecio Jacobœa, hydrastis, formic aldehyde, resorcin, and salicylic acid, but the results are not yet ready for publication.

It is hoped that at an early date the Committee may be able to investigate the pharmacological and therapeutic actions of some of the drugs recently included in the Indian and Colonial Addendum to the *British Pharmacopœia*.

### JOINT COMMITTEE ON FEES TO MEDICAL WITNESSES.

This Committee has held four formal meetings. It has also, collectively and individually, attended several times at the House of Commons and interviewed members who have interested themselves in the subject. A letter was sent to the *Times* in October, 1899. It was also sent to several provincial newspapers, and was forwarded to many of the candidates at the last parliamentary election, as well as a letter from Dr. Hartill with the editorial comments thereon. (*See below.*) Though no legislation has resulted the Committee hopes that sufficient attention has been called to the matter to ensure something practical being done next session. The Committee thought that joining with the Coroners Amendment Act Subcommittee would strengthen the hands of both, and it made overtures with that idea, but the latter did not approve of the proposed combination. The Committee recommends that steps be taken to get a Select Committee of the House of Commons to examine into the whole question of medical witnesses' fees.

*To the Editor of the* BRITISH MEDICAL JOURNAL.

SIR,—If you think the publication of the letter written by me to the solicitors acting for the Treasury in a recent case of alleged murder, sent herewith, likely to lead to any practical result, such as a combined action by the Council of the Association with the Secretaries of every Branch of the Association, intended to lead to the better payment of medical witnesses, please publish it.

The solicitors replied: "We have communicated with the Treasury with regard to your letter, but they inform us that they have no control over the taxing officer, who appears to have allowed the full amount authorised by the scale."

It is, however, clear that either the scale has been altered adversely to the profession, or the practice of the present taxing master differs from that of former masters.

I am, etc.,

Willenhall, August 25th. JOHN T. HARTILL.

*** Dr. Hartill's letter draws attention to a persistent and very real grievance under which the medical profession in England continues to labour. It is to be observed from his letter to the solicitors acting for the Treasury that Dr. Hartill, after giving up three working days to attend before the magistrates and at the assizes, involving him in considerable additional work and inconvenience, received a most inadequate remuneration of £2 10s. 6d. Under the existing statutory orders there can, we regret to say, be no doubt that this is the full amount authorised, and we do not quite understand our correspondent's allusion to an experience of his thirty years ago when he had three cases at the assizes and was paid one guinea a day for each case, as the scale, which was then as now in force, only provides that medical witnesses may be allowed a sum not exceeding £1 1s. for each day they necessarily attend the court to give evidence. Probably, however, in that case the taxing officer put a generous construction upon the order. However this may be, there can be no question that the remuneration to medical witnesses in this country, who, as our correspondent points out, are in a very different position (at any rate in cases where they are called upon to give professional evidence) from other witnesses, is most inadequate, and there appears unfortunately to be but little hope of immediate remedy. In 1895 Mr. Asquith, the then Home Secretary, in reply to a deputation from the United Kingdom Police Surgeons' Association upon the subject, while admitting the inadequacy of the remuneration, declined in effect to make any alteration. In 1898 the Council of the British Medical Association, which has not been backward in attempting to remedy the state of things, prepared a memorial on the subject for presentation to the present Home Secretary, and asked that a deputation should be received, but this request was refused, as a similar request from the Police Surgeons' Association was refused in 1896. It is evident, therefore, that unless some great effort is made, and the grievance is persistently urged, future Home Secretaries will assume the same *non possumus* attitude as their predecessors, an attitude which appears utterly inexplicable, as an increased rate of allowance to medical witnesses could be but a very slight additional burden upon the public purse, and medical witnesses standing as we have said in a peculiar and wholly different position from other witnesses, an increase of their allowances could hardly be construed as a precedent for increasing the rates of allowances to other classes of witnesses. The injustice to the profession in England is rendered more conspicuous by the fact that a considerably higher allowance is made to medical witnesses in Scotland and Ireland. Our correspondent may, however, rest assured that the matter is not being allowed to sleep, for in the course of last year a joint Committee of the British Medical Association and the Police Surgeons' Association was formed to press the matter on, and we have every confidence that this Committee will leave nothing undone to endeavour to remedy a very great and admitted hardship, and one felt very generally by the medical men of this country, though naturally, owing to the entire engrossment of the public attention by the war, it has not been found possible by the Committee to take any active step during the past year beyond the publication in the public press of an admirable letter upon the nature of the grievance. We venture to think that the question might be considerably advanced by medical members of Parliament pressing the Home Secretary with questions upon the subject in the House of Commons, and generally we think medical men would do well to impress the importance of the matter upon Parliamentary candidates at the present time.

## BRANCHES.

The following changes in the hon. secretaryship and treasurership of the Branches have taken place:

Dr. D. H. Young has been appointed Hon. Treasurer to the West Australian Branch in place of Dr. F. Trotman. Mr. G. Montague Marston has been appointed Hon. Secretary and Treasurer to the Hong Kong and China Branch in the place of Dr. F. W. Clark. Dr. F. W. Jenkins, one of the Secretaries to the Glasgow and West of Scotland Branch, has died, and Dr. James Hamilton has succeeded him. Dr. W. Russell Strapp has been appointed Hon. Secretary to the Natal Branch in place of Dr. Bonnar; Dr. Campbell Watt has been appointed Treasurer in the place of Dr. Harrison. Dr. G. F. da Costa has been appointed Treasurer and Secretary of the Jamaica Branch in place of Dr. Lockett resigned. Dr. T. L. Anderson has been appointed Secretary to the West Australian Branch, in the place of Dr. Horrocks. Dr. W. H. De Silva has resigned the post of Secretary and Treasurer of the Ceylon Branch; Dr. H. G. Thomas has been appointed Secretary and Treasurer in his place. Dr. E. M. Hainworth, of Albion Street, Hull, is now Secretary and Treasurer of the East Yorks and North Lincoln Branch in place of Dr. A. G. Francis resigned. Dr. G. Young Eales is appointed Secretary of the South-Western Branch in place of Dr. Webber resigned. Dr. Edgar G. Barnes and Dr. Michael Beverley retire from the East Anglian Branch, and Dr. R. W. Philip from the Edinburgh Branch. The warm thanks of the Association are due to these gentlemen for many years of valuable services so willingly and courteously rendered.

The thanks of the Association are due to those members of Parliament who introduced the various Bills. The state of legislation in Parliament has totally prevented any attempt to bring forward medical matters, such as the Lunacy Acts Amendment. The Public Health Bill and the Inebriates Bill have only been introduced and read a first time in consequence. The thanks of your Council are due to those who have introduced these, and it trusts that they will bring the Bills forward again in the next session. These Committees, therefore will not make any further report this year.

## OBITUARY.

Your Council regrets to have to report the deaths, among other members, of Mr. Robert Argles, Dr. J. A. Baird, Surgeon-General J. Y. Donaldson, M.D., Surgeon-Lieutenant-Colonel James S. Forrester, Mr. W. C. Storer Bennett, F.R.C.S., Dr. Dennis Barry O'Flinn, Miss Alice Marston, L.R.C.P.I., Deputy-Inspector-General Rinso Robert Siccama, R.N., Dr. William Charnley, at one time President Shropshire and Mid-Wales Branch of the Association; Mr. E. A. T. Steele, Captain John Stuart Stevenson, Dr. Frederic B. Mallett, J.P., Professor Pierce A. Simpson, Dr. William Marshall, Dr. Thomas M. Sibbald, R.N., who died at Taku; Surgeon-Major John T. Toll, M.R.C.S.E., Dr. James Aymer, J.P., Mr. John Arthur Ensor, Dr. Jose Gerson Da Cunha, Lieutenant-Colonel Michael Richard Ryan, Mr. Thomas Moore, F.R.C.S., Sir Louis De Verteuil, M.D., K.C.M.G., Dr. Richard Sarell, Dr. Arthur H. Leete, Dr. James D. Bradshaw, Lieutenant-Colonel Samuel T. Flood, Dr. Benjamin J. Massiah, Mr. Montague G. Robinson, Dr. R. Stratford Smith, Dr. Alec Stevenson, Mr. Richard H. Cowen, Major John Semple, R.A.M.C., Mr. Oded Lowsley, Sir Henry Acland, Bart., K.C.B., who was President of the Association, 1868; Mr. Alexander S. Brown, F.R.C.S., Mr. Arthur S. Eccles, Dr. Richard H. Milson, Dr. William D. Wood, Mr. Samuel H. Swayne, Deputy-Inspector-General George T. Galbraith, Mr. William Anderson, F.R.C.S., Dr. Francis John Boxwell Quinlan, Dr. J. J. F. Barnes, Mr. Aubrey Johnston, Mr. Richard B. Anderson, F.R.C.S., Dr. Alexander G. Davey, Dr. John Cockle, F.R.C.P., Dr. James Paterson, Dr. Jocelyn J. Seaton, Dr. Richard Neale, author of the *Medical Digest*; Deputy-Surgeon-General George Mackay, M.D., J.P.; Dr. James F. Barnes, Dr. Reuben Bolton, Dr. Henry G. Rawdon, Dr. Roger Edwards, Dr. G. Hutchinson Milnes, Dr. John J. Bevan, Mr. Frederic E. Hubbard, Dr. John Howard Champ, Dr. James Irving, first President of the New Zealand Branch; Mr. Charles Williams; Surgeon-General G. V. Currie, Dr. Alexander D. Davidson, Dr. James Menzies, President of the Border Counties Branch; Dr. Richard B. Burke, Dr. Horace S. Howell, Dr. Alfred E. Nuttall, Dr. James Morris, Mr. James Hough, F.R.C.S., Captain Dudley Cater Johnston, I.M.S., murdered by a Ghazi in the Loralai Bazaar; Deputy-Surgeon-General James Keess, M.D., Surgeon-Lieutenant-Colonel Saunders B. Haliday, Captain Bernard H. F. Leumann, M.B., Mr. Edward B. Holwell Dr. Edward H. Cree, Mr. William H. Kempster, Mr. Albert W. Sheperd, Dr. Thomas Tinley, J.P., Dr. Edward Farrell, Dr. Albert N. Cookson, Civil Surgeon, Englebach; Mr. John Knowles, Dr. John Taylor Rowland, Dr. George Myles, Dr. Eugene Goddard, Mr. Richard P. Long, Dr. James E. Prichard, Dr. J. J. Steel, Dr. Arthur H. Jones, President of the South Midland Branch; Mr. Alfred B. Rugg, Mr. James Rose, Dr. John Cooper Stawell, Honorary Secretary of the South-Eastern of Ireland Branch; Dr. William Pope Mears, Mr. Henry William Scratchley, Dr. William James Fleming, Major Henry E. H. Smith, Lieutenant-Colonel Charles B. Maitland, I.M.S., Dr. Sidney H. Berry, Surgeon-General Albert A. Gore, C.B., M.D., Mr. Benjamin Barrow, F.R.C.S., who was President of the Association in 1881: Lieutenant-Colonel James Grove W. Crofts, Sir Edwin Saunders, F.R.C.S., Surgeon-Dentist to the late Queen Victoria; Dr. James Dunlop, Dr. Henry J. Sharpe, Brigade-Surgeon James C. Johnston, Dr. L. E. F. Neill, Mr. John L. Growse, Major H. E. Hill Smith, Dr. John Sykes, Dr. Ivor A. Lewis, Mr. George Stone, Mr. James Mare Taylor, Mr. Henry Vevers, Dr. James Wilding, Dr. Arthur Samuels, Dr. William Galletly, Mr. J. A. Lorimer, Dr. Arthur Edmonstone Watson, Dr. John Cavafy, Dr. Charles H. Braddon, Dr. Charles Nattrass, Dr. Robert John Sprakeling, J.P., Dr. James Aitken Myrtle, Mr. Thomas Cayzer, Dr. John Phillip Topping, Dr. Francis William Warrington, J.P., Mr. Richard P. Roberts, Lieutenant-Colonel George Walker, M.D.,

and Sir William Stokes, who succumbed to an attack of pleurisy in the Base Hospital at Pietermaritzburg (Sir William Stokes delivered the Address in Surgery at the annual meeting held at Worcester in 1882, and held several offices in the Surgical Section at various meetings, and was President of the Dublin Branch): Professor A. W. Hughes, who died of enteric fever during the South African campaign; Dr. Christopher Mercer Durrant, J.P., who was three times President of the East Anglian Branch, fifty years intervening between his first and third periods of holding office.

JOHN ROBERTS THOMSON, M.D., Chairman.

## REPORT OF THE PARLIAMENTARY BILLS COMMITTEE.

THE Committee has held four meetings during the year. Dr. Farquharson, M.P., having declined to be nominated for the chairmanship of the Committee, Dr. Samuel Woodcock, of Manchester, was elected Chairman. The cordial thanks of the Association are due to Dr. Farquharson for his able and courteous conduct in the chair during the past two years, and for his continued assistance in the work of the Committee in Parliament.

The Committee received a complaint from the Nottingham Medico-Chirurgical Society, calling the attention of the medical profession to the frequent use of diachylon as an abortifacient in that city. The attention of the Pharmaceutical Society was called to the matter, and they were asked to take steps to have diachylon scheduled as a poison.

A Special Committee of the Council of the Pharmaceutical Society has been appointed to consider the desirability of extending the Schedule to the Pharmacy Act, 1868, and to that Committee the communication from the Nottingham Medico-Chirurgical Society has been remitted.

Several subcommittees were reappointed to introduce various Bills into Parliament, and to take action thereupon. Amongst these Bills were the Irish Poor-law Officers' Superannuation, the Superannuation of Poor-law Medical Officers and other Public Medical Officers, under the title of the Public Health Bill (backed by Sir Francis Powell, Sir Walter Foster, and Dr. Farquharson); the Fixity of Tenure of Poor-law Medical Officers of Scotland (backed by Mr. Cathcart Wason, Sir William Arrol, etc.) Owing to the extraordinary pressure in the House of Commons it has not been possible to carry these Bills further than simply introduction and a first reading. The same reason has prevented any action being taken by the subcommittees appointed on the various Bills brought in in previous Parliaments but not passed, such as the Medical Acts Amendment Bill, the Midwifery Nurses Bill, and the Lunacy Acts Amendment Bill. One of the principal actions the Parliamentary Bills Committee has taken during this year has been to reappoint the subcommittee to consider and watch the legislation on the Medical Services of the Army, Navy, and Auxiliary Forces and in accordance with a resolution of the Navy, Army and Ambulance Section held at Ipswich, to draw up a scheme to be forwarded to Government for the reorganisation of the medical services of the auxiliary forces on the basis of the system in the R.A.M.C., and for the purpose of bringing the medical services of the regular and auxiliary forces into unison. This subcommittee drew up a scheme and forwarded it to the Government, and Mr. Brodrick, in acknowledging its receipt, promised to give it full consideration.

A resolution on the question of the wage limit passed at the annual meeting at Ipswich, and asking that circulars be sent to the Branches for their opinion on the wage limit, has at present only been replied to by nine Branches. This delay on the part of the Branches is not encouraging, either to this Committee or the Council of the Association. The Committee urges the Branches to give this important matter their careful and early attention.

SAMUEL WOODCOCK, M.D., Chairman.

## REPORT OF THE SCIENTIFIC GRANTS COMMITTEE.

THE Scientific Grants Committee begs to report that during the past year, 1900-1901, the sum of £1,000 allotted by the Council for the promotion of scientific investigation by means of scholarships and separate grants was distributed as follows:

### FOUR SCHOLARSHIPS.

Three Scholarships of the value of £150 a year, and one Ernest Hart Memorial Scholarship of the value of £200 a year. (The appointment is for one year only; but a scholar is eligible for re-election on the recommendation of the Scientific Grants Committee, provided that his whole term of office shall not in any case exceed three years.)

| No. | Scholar's Name. | Subject of Investigation. |
|---|---|---|
| 1. | J. SMYTH MACDONALD, L.R.C.P. | Demarcation Current of Mammalian Nerve. |
| 2. | STUART MCDONALD, M.B. ... | Investigations into the Bacteriology of Posterior Basal Meningitis. |
| 3. | J. HERBERT PARSONS, M.B. ... | Neurology of the Eye. |
| 4. | JOHN EYRE, M.D. ... ... ... (Ernest Hart Memorial Scholar). | Investigation into the Bacteriologic Flora of Normal Milk and Retail Milk, and into the conveyance of Pathogenic Organisms by this Article of Food. |

| | £ | s. | d. |
|---|---|---|---|
| BAIN, WILLIAM, M.D., Strarthorpe, York Place, Harrogate. The physiological action of adenine, allantoin, alloxanthin, and other alloxur bases. The action of glutainine acid and other proteid decomposition products. To ascertain if any of these substances play a part in the production of gout ... ... | 10 | 0 | 0 |
| BARDSWELL, NOEL, M.D., Pathological Chemical Department, University College, Gower Street, W.C.—The metabolic changes of phthisis during normal and forced feeding. To see the utility of forced feeding in the various clinical types of the disease ... ... ... ... ... | 10 | 0 | 0 |
| BARRATT, JOHN O. WAKELIN, M.D., Department of Pathological Chemistry, University College, London.—Inoculation of subdural membranes into the subdural space of cats, dogs, and monkeys, with the object of studying the nature of subdural membrane formation ... ... ... ... ... | 5 | 0 | |
| BIRCH, DE BURGH, M.D., Physiological Department, Medical Department, Yorkshire College, Leeds.—An investigation into the vasomotor mechanism situated in the midbrain. An experimental as well as a histological investigation into localisation of function ... ... ... ... | 25 | 0 | 0 |
| BOKENHAM, T. J., L.R.C.P., in association with Sir LAUDER BRUNTON, F.R.S., 10, Devonshire Street, Portland Place, W.—On the action of the liver.—1. In preventing passage of toxins from the intestinal canal to the general circulation. 2. In excreting substances absorbed (*a*) from the intestinal canal, or (*b*) injected into the blood. 3. As a destroyer of organic substances—albumoses, toxins, alkaloids, etc. 4. It retaining in the body substances useful in the organism (*a*) inorganic, (*b*) organic, antitoxins, etc. 5. As an instrument in the conversion of poisonous substances into others possessing non-poisonous or protective properties ... ... | 21 | 0 | 0 |
| BRADSHAW, THOS. R., M.D., 51, Rodney Street, Liverpool.—To work out the chemical properties of the proteids occurring in the urine ... ... ... ... ... ... | 5 | 0 | 0 |
| BUNCH, J. L., M.D., University College, London.—An investigation of the various cultural forms of ringworm fungus met with in the human subject, and of the different chemical substances produced during its growth ... ... ... | 10 | 0 | 0 |
| EDGEWORTH, F. H., M.B., 35, Pembroke Road, Clifton, Bristol.—Investigation of the facial nucleus in the medulla, chiefly by Nissl's method. The results expected are the representation of the various branches of the facial nerve in the various cell groups of which the facial nucleus consists ... ... | 10 | 0 | 0 |
| ELLIOT, Surg.-Capt. R. H., M.B., F.R.C.S., I.M.S., Coonoor, The Nilgiris, S. India.—Snake venom ... ... ... | 10 | 0 | 0 |
| EMERY, W. D'ESTE, M.D., 54, Newhall Street, Birmingham. The investigation of the relative irritating properties possessed by antiseptic and other drugs ... ... ... ... | 5 | 0 | 0 |
| FOULERTON, ALEX. G. R., F.R.C.S.; HILLIER, WILLIAM THOS., M.R.C.S., The Middlesex Hospital, Berners Street, W.—Investigation on certain conditions of the urine in pulmonary and other forms of tuberculosis. It is hoped that the results obtained may be of some help in the diagnosis of tuberculosis ... ... ... ... | 10 | 0 | 0 |
| GOODBODY, FRANCIS W., M.D., Pathological Chemical Department, University College, Gower Street, W.C.—An investigation into the chemical changes in the blood after ligature of the ureters or removal of the kidneys... ... ... | 30 | 0 | 0 |
| HORNE, W. JOBSON, M.D., 27, New Cavendish Street, W.—The part played by the lymphatic glands in arresting, modifying, or spreading infection, and in preventing the recurrence of the disease ... ... ... ... ... ... | 15 | 0 | 0 |
| LENEY, LYDIA, M.D.Brux., etc., 93, Gower Street, W.C.—An investigation into the value of subcutaneous, intravenous, and intraperitoneal injection of fats, proteids, and carbohydrates ... ... ... ... ... | 10 | 0 | 0 |
| LEVY, ALFRED G., M.D., 16 York Place, Portman Square, W.—Fatigue of central nervous tissue ... ... ... | 25 | 0 | 0 |
| Total ... ... | £201 | 0 | 0 |

| | £ | s. | d. |
|---|---|---|---|
| Brought forward ... ... ... ... ... | 201 | 0 | 0 |
| MACLEOD, J. J. R., M.B., Senior Demonstrator 'Physiology, London Hospital College, Mile End, E.—(*a*). To ascertain the relations between the excretion of creatinine and of urea in the body metabolism. (*b*) To investigate the changes which occur in the blood of a muscle during muscular activity, especially as regards P-holding compounds ... ... | 10 | 0 | 0 |
| MILROY, JOHN ALEXANDER, M.B., The Medical School, Thoresby Place, The Yorkshire College, Leeds.—The object of the proposed work is a research into the products of the decomposition of hæmatin with the object of ascertaining whether any of the pigments found in bile or urine may be obtained from it by chemical means ... ... ... ... | 5 | 0 | 0 |
| MONSARRAT, KEITH W., M.B., 77, Mount Pleasant, Liverpool.—Experimental work on the subject of the presence of a specific parasite in cancer ... ... ... ... | 10 | 0 | 0 |
| MULLICK, SARAT K., M.B., University College Laboratory (Pathol. Chem.), London.—Investigation of the structure of optic thalamus and tracing of fibres entering its component centres by degeneration method ... ... ... | 10 | 0 | 0 |
| NABARRO, DAVID, M.D.Lond., Pathological Laboratory, University College, Gower Street, W.C.—An investigation into the pathology, especially the bacteriology, of posterior basic meningitis ... ... ... ... ... ... | 5 | 0 | 0 |
| PEMBREY, M. S., M.D., Physiological Laboratory, Guy's Hospital, S.E.—Continuation of experiments upon the regulation of temperature and the effect of section of spinal cord and of anæsthetics upon temperature and respiratory exchange ... | 20 | 0 | 0 |
| REID, EDWARD WAYMOUTH, M.B., F.R.S., University College, Dundee.—Continuation of experiments upon intestinal absorption ... ... ... ... ... ... | 20 | 0 | 0 |
| SELIGMANN, C. G., M.R.C.S., St. Thomas's Hospital, S.E.—Investigation of the physiology and pharmacology with possible bearing on therapeutics of ipoh—a poison made from a species of antiaris—used for poisoning blowpipe darts by natives of Sarawak, Borneo; also of the various plants used by them to poison water for tribal fishing purposes ... | 15 | 0 | 0 |
| SHAW, H. BATTY, M.D., Pathological Laboratory, University College, Gower Street, W.C.—An investigation into the source, etc., of the white corpuscles of the blood ... ... | 5 | 0 | 0 |
| SHERRINGTON, C. S., M.D., F.R.S., University College, Liverpool.—The object of the investigation is study of the deep spinal reflexes by laboratory methods on the rabbit, cat, dog, and monkey. Also the paths of conduction in the spinal cord ... ... ... ... ... ... | 10 | 0 | 0 |
| SUTHERLAND, D. G., M.B., Mannamead, 49, Victoria Park, Cambridge.—To settle some points as to the best methods of demonstrating and diagnosing the contamination of water supplies; and, in particular, to decide the comparative value of the methods commonly in use for finding out sewage contamination... ... ... ... ... | 10 | 0 | 0 |
| WARRINGTON, W. B., M.D., 69, Rodney Street, Liverpool.—Neurological investigations—chiefly anatomical. Experimental and morbid anatomy from material of Royal Infirmary, Liverpool, and Stanley Hospital, to which he is pathologist ... ... ... ... ... ... | 14 | 0 | 0 |
| WHITE, ARTHUR H., L.R.C.P.I.—Research into the regeneration of the cellular and other constituents of the blood after hæmorrhage, with especial reference to the parts played in such regeneration by hæmopoïetic organs ... | 10 | 0 | 0 |
| WRIGHT, William, Anatomical Department, The University, Birmingham.—The arrangement of the fasciæ in higher mammals ... ... ... ... ... ... | 5 | 0 | 0 |
| Total ... | £350 | 0 | 0 |

Of the foregoing grants the following sums have been returned as unused:

| | £ | s. | d. |
|---|---|---|---|
| Dr. De Burgh Birch ... ... | 24 | 0 | 0 |
| Dr. F. H. Edgeworth ... ... | 10 | 0 | 0 |
| Dr. W. d'Este Emery ... ... | 4 | 0 | 6 |
| Dr. A. G. R. Foulerton ... ... | 6 | 15 | 0 |
| Dr. F. W. Goodbody ... ... | 30 | 0 | 0 |
| Dr. K. Monsarrat ... ... | 3 | 0 | 6 |
| Dr. D. Nabarro ... ... ... | 0 | 14 | 0 |
| Dr. M. S. Pembrey ... ... | 2 | 18 | 7 |
| Dr. A. H. White ... ... ... | 10 | 0 | 0 |
| Mr. Wm. Wright ... ... ... | 0 | 7 | 6 |
| Total ... ... | £91 | 16 | 1 |

The reports are grouped together under the following arrangement:

I. PHYSIOLOGICAL AND PATHOLOGICAL INVESTIGATIONS.
- (*a*) Nervous System.
- (*b*) Alimentary Canal.
- (*c*) General and Special Metabolism.
- (*d*) Vascular System.
- (*e*) Anatomy.
- (*f*) General Physiology.

II. BACTERIOLOGICAL INVESTIGATIONS.

III. THERAPEUTICAL INVESTIGATIONS.

### I. (*a*) NERVOUS SYSTEM.

Dr. J. O. W. BARRATT: Inoculation of subdural membrane into the subdural space has been made upon ten animals (cats and dogs) and in addition four animals have been used for control experiments. At varying intervals after the inoculation the animals have been killed and the condition of the membranes of the brain noted. In several animals a pellicle has been formed in the subdural space, the pathological nature of which is still under investigation. The work is not yet sufficiently advanced for any definite conclusions to be formulated, so that the present communication is of necessity only a preliminary report. He hopes shortly to have completed his examination of the condition of the animals operated upon and to be in a position to give further details. In conclusion he must tender his best thanks to Professor Vaughan Harley for his kind assistance in the operative part of this work.

Dr. A. G. LEVY: The work which has been performed by me with the aid of the grant of last July has consisted principally in repeating and confirming experiments described in a former report upon central nervous fatigue, produced by electrical stimulations. I have thus obtained more consistent and reliable results. A series of experiments have also been made upon the cerebral motor cortex, with intermittent stimuli, showing the course of fatigues. I have published a paper in the *Journal of Physiology*, February, 1901, embodying many of the results, and I am publishing a second and final paper shortly.

Dr. J. S. MACDONALD (Research Scholar); The research carried out in the last year of tenure of the Association scholarship has been made the subject of communications to the proceedings of the Royal Society in three short preliminary papers, and will shortly be published in a more extended form. Its aim has been the study of the electrical phenomena spoken of as the injury current of nerve from a physical point of view and conducted in as exact and accurate a form as possible. Its result is considered to be the accumulation of evidence conclusively proving many of the phenomena observed to be the artificial product of the means of investigation, but nevertheless of an interest by no means diminished by this fact. The evidence seems thereby to gain rather in value, since it points towards a peculiarity in the physical structure of the nerve which may with some confidence be considered to be of especial significance in considering the normal functions of the nerve. It has always been held by some authorities, since the discovery of electricity, as possible that each nerve fibre is an electrical cable, and it is still considered by some that the nature of the normal nervous impulse is that of an undulating electrical change traversing the nerve. The nature of the chemical composition necessary to confer upon a moist conductor, like nerve or any of the tissues of the body, properties at all similar or comparable to those of the wires used in electrical cables has only been recently understood. It is now known that to function as a "wire" to any extent a moist conductor must be a solution of electrolytes containing "ions," electrically charged particles, owing to the fact of their separation and the charge which they convey to the process of solution. The facts of the present research are considered to prove that the electrical phenomena of the injury current are secondary phenomena produced by the placing of electrodes upon a structure (the nerve) containing as a core a strong solution of electrolytes separated from the weaker surface solution by membranes capable of acting as barriers to processes of diffusion, and therefore of maintaining this separation. The experimental results, therefore, can be used as evidence of the existence of such a disposition of physical structures within the nerve as previously was concluded to be present upon the basis of information given by the polarisation phenomena of nerve, and as is required by the electrical theory of nerve function; but it is considered that they may also serve as a basis upon which to form definite conclusions in proof or disproof of this theory, inasmuch as they serve not only to indicate differences of physical structure within the nerve, and a peculiar arrangement of such structures, but also as data from which exact measurements of the differences present may be obtained.

Dr. J. HERBERT PARSONS (Research Scholar).—During his tenure of an Association Research Scholarship he has investigated the following points in connection with the neurology of the eye: (1) The nerve supply of the lachrymal gland (*Royal London Ophthalmic Hospital Reports*). (2)

Dilatation of the pupil from stimulation of the cortex cerebri in cats, dogs, and monkeys: (preliminary communications in BRITISH MEDICAL JOURNAL, September 15th, 1900, and *Proceedings* of the Physiological Society, March 16th, 1901. Full paper in *Journal of Physiology*, vol. xxvi, No. 5). (3) The effect of nicotine upon nerve cells (*Proceedings* of the Physiological Society, March 16th, 1901). The results are embodied in a note upon the pathology of toxic amblyopia (BRITISH MEDICAL JOURNAL, June 8th, p. 1400). (4) Preliminary investigations upon the various methods of preparing and staining Nissl granules in nerve cells, and the Orr-Marchi method. In the Nissl method, Mann's solution is the best for fixing, followed by toluidin blue for staining. The results are only comparable when the method is kept quite uniform. He has not satisfied himself that Orr's method is reliable, and has therefore reverted to the older Marchi method. (5) Degenerations of the optic nerves and tracts in guinea-pigs, cats, and monkeys: (*a*) By section of one optic nerve after previous section of the other, time having elapsed for complete degeneration; (*b*) by the production of localised lesions of the retina. (6) Degenerations following removal of one occipital lobe in monkeys, and subsequent investigation by the Marchi and Nissl methods. Researches (5) and (6) will soon be ready for publication.

Professor C. S. SHERRINGTON, F.R.S., and Dr. E. C. LASLETT: The research undertaken with the assistance of the grant kindly allowed by the Association has been as follows: The dependence of the direction and guidance of the movements of the eyeballs upon sensations arising in the ocular muscles has long been a question of dispute. Helmholtz and Hering, as is well known, have both denied the existence of a muscular sense factor in these co-ordinations. A first step was to examine the eye muscle for sensory organs; this was done, and has given answer in the affirmative. As stated by one of us some years ago, no "spindles" are present in those muscles, but nevertheless there are many nerve fibres entering into and ending within the tendons of these muscles. These nerve fibres ending in the tendons of the eye muscles terminate in fine arborisations in the manner recently described by Carl Huber; with his description our preparations conform, and we have nothing essential to add to his report of them. We are at one with him in seeing no possibility for them to be anything else than sensory. We estimate that several hundred of them exist in the tendon of each eye muscle in the monkey. As to the origin of these sensory nerve fibres we have to report as follows: Section of the fifth cranial nerve leaves these fibres still intact. Section of the oculomotorius causes them to degenerate in all the muscles except superior oblique and external rectus. Sections of the fourth nerve causes them to degenerate in the superior oblique. Section of the sixth nerve causes them to degenerate in the external rectus. We are therefore driven to the conclusion that the oculo-motorius, the patheticus, and the abducens are sensori-motor nerves, not pure motor nerves as always hitherto taught. This unexpected result might perhaps throw light on the ocular squints and other disturbances so frequent in tabes dorsalis, a disease that, as is well known, stands as a type of degeneration of afferent rather than efferent nervous channels. The details will be communicated at the annual meeting of the Association (Physiology Section).

Dr. WARRINGTON has published during the past year two papers: (1) In the *Journal of Physiology* on the effects of section of afferent and efferent fibres in cells of the spinal cord; (2) in *Brain* (Winter number, 1900), on the course of the optic nerve fibres. He is now engaged on studying the meaning of the cell groups in the spinal cord, especially in the thoracic region, but results are not yet ready for publication. Several observations have also been made on the central changes in peripheral neuritis.

### I. (*b*) ALIMENTARY CANAL.

Dr. J. L. BUNCH has published the results of his investigation "On the Changes in Volume of the Submaxillary Gland during Activity" in the *Journal of Physiology*, Nos. 1 and 2, vol. xxvi, page 1, 1900, and in the *Transactions* of the British Association for 1900. When estimating the total diminution in volume of the submaxillary gland due to stimulation of the chorda tympani nerve, the diminution in volume of the gland was first determined in an etherised dog before the administration of atropine, and then the increase in volume of the same gland after the administration of a dose of atropine sufficient to paralyse the secretory fibres of the chorda. By adding the two amounts together the total loss of gland contents due to chorda stimulation was obtained. On comparing this with the amount of secretion poured out in the same time it was found that at least nine-tenths of the secretion was derived from the extravascular portions of the gland. Since there is no diminution in the lymph flow from the gland, but a rather slight increase during the period of stimulation, we must conclude that the effect of the secretory nerves is simply and solely upon the secretory cells, the increased exudation from the blood vessels which must in the last instance supply the fluid for the secretions being a secondary phenomenon determined entirely by the metabolic changes of the cells, and lagging behind these to a very considerable extent. An investigation "On Ringworm Infection in Man and Animals" was published by Dr. Bunch in the BRITISH MEDICAL JOURNAL of February 9th, 1901.

Professor WAYMOUTH REID, F.R.S.: Report upon Experiments on Intestinal Absorption.—The experiments upon the comparative intestinal absorption of maltose and glucose mentioned in the last report have been continued, and the results will appear in a forthcoming number of the *Journal of Physiology*. Briefly the points are as follows: Though in the dialysis of solutions of maltose and glucose into serum through parchment paper the maltose passes considerably more slowly than the glucose, in the intestine (dog) over periods of five, fifteen, and thirty minutes, the rate of the uptake of the substances from the gut lumen is exactly the same in the two cases. This result, so long as the intestinal epithelium is intact, analysis shows is not due to a conversion of the maltose into glucose within the gut lumen previous to uptake. By severe injury to the gut wall the dialysis ratio can be realised in the gut, but with simple anæmic removal of the epithelium, though the maltose is taken up rather more slowly than the glucose, the dialysis ratio is never obtained. This is found to be due to the fact that renewal of epithelium allows so much maltose-hydrolysing ferment to enter the gut cavity, or so increases the velocity of its action, that the maltose introduced is very largely converted to glucose before it begins to dialyse into the vessels of the villi denuded of epithelium. The main conclusion drawn is that maltose and glucose are first taken up by the gut epithelium at the same rate in the two cases, and that the seat of origin of the maltose-hydrolysing ferment or possibly of something which makes its action more rapid is beneath the deep ends of the epithelial cells and probably in some of the specialised cells of the villous stroma. Other experiments have been conducted concerning the effects of the physiological condition of the intestine (especially during digestion) upon the phenomena of absorption of a substance in solution, glucose being chosen on account of the accuracy of estimation and the fact that it is not a foreign substance. The interesting fact has come to light that with weak solutions of glucose, original of equal concentration but arranged by salting to concentrate or not during their sojourn in the gut, in the state of digestion it is possible to have more glucose absorbed from the solution of lower final concentration in that substance provided the epithelium is in no way injured—a fact impossible to explain upon a simple dialysis theory of absorption of glucose. Other experiments have dealt with the effects of sodium and potassium ions on the uptake of glucose from isotonic solutions, and it has been found that when these ions are intr duced in the chlorides of the metals the potassium ion favour the absorption of glucose as gauged by that occurring in the presence of the sodium ion. Still other experiments have been devoted to an examination of the effect of raising the osmotic pressure of the blood by injection of sodium chloride, upon the absorption of water from the gut. A limit is here set to the amount of sodic chloride which can be injecte into the blood, in dogs under chloroform and morphine, by the excessive peristalsis which occurs if a certain concentration of the salt in the circulating blood is exceeded. This limit is at about 0.7 to 0.75 per cent. of sodic chloride in the blood, the lower or freezing point of such blood being about 0.65° C. Only about 0.3 g. of sodic chloride per kilo. is admissible. Under these conditions of raising the osmotic pressure of the blood, and in cases where an analysis of th

gut contents after the injection shows no increase over normal in the sodic chloride therein, no increase in water absorption from the intestine has been observed. These and several other series of experiments are still in progress, and the publication of the results must be for the present deferred.

I. (*c*) GENERAL AND SPECIAL METABOLISM.

Dr. WILLIAM BAIN.: The experiments in the conduction of which the grant has been expended have consisted in a study of the results obtained by the administration of the following alloxur basis—xanthin, hypoxanthin, quanin, alloxan, alloxantine, and allantoine. Adenine he failed to obtain. A first series of experiments are completed, and a second will shortly be finished, when the full results will be ready for publication.

Dr. NOEL BARDSWELL: The research on the metabolism of ordinary and forced feeding on normal persons and sufferers from pulmonary tuberculosis has been carried out at University College, London (Professor Harley's laboratory), the patients being inmates of Brompton Hospital, under the care of Dr. K. Fowler. An abstract of the paper will be sent as soon as completed. The research is by no means complete, though, he thinks, a valuable contribution to a very big subject.

Dr. T. R. BRADSHAW: Some months have been occupied in preparing pure albumin, and during these operations he has obtained very fine crystals of egg albumin and of serum albumin from the horse. The latter body was found to crystallise in hexagonal prisms, and the optical and other characters of the crystals were determined. Further experiments have been made tending to confirm his previous statements with regard to the heat coagulation of albumin. The presence of salt as well as of acid appears to be necessary in order that it should be complete. He also found that coagulated serum albumin is readily dissolved by a weak alkaline solution without the formation of an albuminate. Egg albumin seems to behave somewhat differently in this respect. He has obtained considerable quantities of urine containing Bence-Jones albumose, two fresh cases of myelopathic albumosuria having been brought to his notice since this time last year. He has isolated a considerable amount of the albumose in a state of comparative purity, and has submitted it to various tests. The results obtained have been somewhat paradoxical, and do not at present justify any positive statement as to the behaviour of this body beyond those already published. They seem, however, to indicate that the albumose undergoes molecular changes affecting its solubility and coagulability under circumstances which have not yet been fully determined. He hopes that if he is enabled to continue these investigations some definite results may be obtained.

Dr. LYDIA LENEY has pursued her research on "The Value of Subcutaneous Feeding with Substances such as Fat Proteid or Carbohydrates." It was necessary to proceed as follows:—Before starting the research each dog was placed under observation and the amount of food regulated until the daily weight became constant. The following diet was then administered:—Meat, 60 grams; biscuit, 60 grams: water, 400 c.cm. For a period of four days, during which time the weight remained constant, the urine and fæces were daily examined follows:—Urine: Amount measured, specific gravity taken, and the quantity of nitrogen and urea estimated respectively by Kjeldahl and Hüfner's methods. Fæces: Weight taken, and amount of solids and water estimated, the total quantity of nitrogen obtained by Kjeldahl's method, and the amount of fat estimated by means of Soxhlet's apparatus, 25 c.cm. of cod-liver oil were then added to the diet, it being thought advisable to estimate preliminarily the value of cod-liver oil when given in the usual manner, by the mouth. During two successive periods of respectively four and seven days, the urine and the fæces were daily measured, and the amount of nitrogen and urea in the urine, and of nitrogen and fat on the fæces estimated. During a subsequent period of eight days the cod-liver oil was increased to 40 c.cm. daily, and the urine and fæces were again treated as in the preceding period. No definite conclusions have yet been made, but she hopes shortly to be able to furnish a paper with full details.

Dr. J. J. R. MACLEOD: Regarding the metabolism of creatinine, he has carried out several investigations on healthy individuals to show that the creatinine excreted by the urine may be divided into an endogenous and an exogenous quotient, the former arising from the metabolism of the tissues, the latter from the creatine and creatinine introduced in the food. Further, that during endogenous and exogenous diets containing approximately the same amount of nitrogen and of calories, the amount of urinary nitrogen and of urea remains the same. This confirms the work of Voit, that no urea can be produced from exogenous creatine or creatinine. He has also studied the variations in the amount of endogenous creatinine under different physiological conditions, and in various diseases. In cases of muscular atrophy he obtained no marked diminution, but in cases of splenic enlargement (leucocythæmia and leucopenia) a diminution amounting to nearly 50 per cent. of the normal was found. Since the diminution is independent of the number of leucocytes, it seems probable that the spleen exercises some influence on the endogenous quotient. He is at present engaged studying the effect of splenectomy, etc., on the endogenous quotient in dogs. He has also worked out a rapid method for estimating creatinine in urine. The endogenous alloxuric excretion was also estimated in the case of leucopenia (leucocytes 2,000 per c.mm.), a slight increase over the normal being determined. Such result seems to show that the number of leucocytes in the blood does not, as Horbaczewski asserts, determine the amount of urinary alloxuric excretion.

I. (*d*) VASCULAR SYSTEM.

Dr. J. A. MILROY: By the action of reducing agents on hæmatin dissolved in glacial acetic acid, he has obtained, amongst other products, metallic hæmatoporphyrin. On further reduction of the metallic hæmatoporphyrin a body showing, on spectroscopic examination, two absorption bands identical in position and character with those of bilicyanin in acid solution was obtained. Still further reduction of this body by means of aluminium in caustic soda resulted in the formation of a body spectroscopically resembling urobilin.

Dr. H. BATTY SHAW: Artificial leucocytosis was produced in carnivora (cat, dog) by injection of sodium cinnemate suspended in normal saline. In the former animal anæsthesia was secured by the use of ether, and a quarter of gram of the above salt was injected into the jugular vein as recommended by Richter and Spiro. The animal was kept continuously under ether for several hours, and the leucocytes estimated at 1¼, 3¼, and 4½ hours after, the samples of blood being drawn from the splenic and jugular vein. In 3¼ hours the leucocytes were increased to as much as 62½ per cent. An analysis showed that this was a considerable increase in the number of "transitional cells," and the simplest forms were in the cells with a slightly uniform nucleus, or a nucleus shaped like the letter U, and in some cases the free ends were approximated so that the nucleus appeared like a circular strap with a clear central portion. More cells of this nature were visible in the blood drawn from the spleen than in the jugular vein; on the other hand, there were more small lymphocytes present in the blood drawn from the jugular vein than from the splenic vein. Hence arises the possibility of such changes from small lymphocyte to transitional forms occurring in the spleen. Further investigations are being carried out to determine this point.

I. (*e*) ANATOMY.

Professor WILLIAM WRIGHT: The Arrangement of the Fasciæ in Mammals.—He has made dissections of the limb-fasciæ of the following animals: Indian fruit bat, coypu, peccary, marmoset, squirrel, monkey, baboon, and chimpanzee. The observations he has made agree with those of others already published with the following, so far as he knows, additions and exceptions: The costo-coracoid ligament in all the above animals, with the exception of the fruit bat, could be traced beyond the coracoid process; in the coypu it could be traced over the coracoid process to blend with the fascia over the dorsum scapulæ. His view of its nature is that it is a degenerated portion of a sterno-scapularis, the subclavius being the remaining muscular portion. The costo-coracoid ligament in the peccary was very indistinct, and in that animal the sterno-scapularis was well developed. The coraco-acromial ligament

was in all cases in part continuous with the short head of the biceps where that head was present—it being absent in the peccary. The ligament in the fruit bat and coypu was attached to the acromial end of the clavicle, and not to the acromion process. The transverse humeral ligament: Some light is thrown upon the morphology of this ligament by a consideration of the insertion of the panniculus dorsi in the baboon; there it is inserted into a dense fascia which passes outwards to blend with the deep surface of the tendon of insertion of the pectoralis major and which sends well-marked expansions upwards and downwards over the biceps, the upward expansion covers the biceps tendon in the bicipital groove. In the coypu a thin but distinct fascia, corresponding to fascial insertion of panniculus dorsi in the baboon, exists, and its upper part presents a thickening in the form of two or three somewhat transverse bands, which form the transverse humeral ligament. He infers, therefore, that this ligament is merely a thickening of the upward expansion from the insertion of the panniculus dorsi, the ligament has remained, being of service in retaining the biceps tendon in its groove; the rest of the panniculus dorsi has disappeared, although possibly he thinks the vertical fibres on the deep surface of the tendon of insertion of the pectoralis major in man may be derived from part of the panniculus. Fascia over the infraspinatus: In the peccary this fascia could clearly be seen to be formed by the interlacement of the fibres of insertion of the following muscles:—Trapezius, panniculus dorsi, omo-atlanticus, post-deltoid, and the long head of the triceps. He argues, therefore, that the above fascia is formed by degenerated portions of those muscles. Internal intermuscular septum was in all much less distinct than in man. In the marmoset it was merely represented by an interdigitation of the muscular fibres of origin of the inner head of the triceps and brachialis anticus. External intermuscular septum was distinctly present only in the chimpanzee and the baboon; in the marmoset it was quite absent. Oblique ligament on the forearm was well marked in all the monkeys, especially in the marmoset, in which animal on the other hand the interosseous membrane was extremely thin and structureless. He considers it most likely results from a fibroid retrogression of fibres of the supinator radii brevis. Anterior annular ligament of the wrist: He found it well marked in all the monkeys, and it consisted of two layers, a superficial which resulted from the degenerated proximal ends of the short muscles of the thumb and little finger and a deep layer which was a thickening in the fascia covering the flexor sublimis digitorum. Palmar fascia was exceptionally well marked in cynocephalus where it was directly continuous with the palmaris longus tendon, and where its four digital prolongations could be readily traced inside the flexor tendon sheaths—not blending with the sheaths—where they formed an expansion over the flexor tendons and passed to the lateral margins of the proximal phalanges. The palmar fascia in the chimpanzee was less distinct than in any other of the monkeys. Fascia over the gluteus medius: In the marmoset this fascia was replaced by muscular fibres which converted the tensor fasciæ femoris and the gluteus maximus into a single sheet-like muscle which completely covered the gluteus medius. He explained the above fascia and the upper part of the ileo-tibal band as the result of retrogression of the central portion of that muscular sheet, the anterior and posterior marginal portions forming the tensor fasciæ femoris and gluteus maximus respectively. Internal lateral ligament of the knee-joint: In none of the animals which he dissected could he find any continuity between this ligament and the tendon of the adductor magnus, and in the cases of the fruit bat and the coypu, especially the former, it seemed difficult to suppose there could have been any connection between them; they suggested rather that the ligament might be formed from tibialis anticus. Lower band of anterior annular ligament in the coypu resembles the condition in which it is met with in man rather than that met with in monkeys. Plantar fascia continuous with the plantaris and presented in monkeys exactly similar relation to the flexor tendon sheaths as did the palmar fascia.

### I. (*f*) General Physiology.

Dr. M. S. Pembrey: The first series of experiments upon the effect of muscular work upon the temperature of healthy men has been finished. The paper will be published shortly. The results show that the temperature of the rectum or urine may rise as high as 38.5°C. (101.3°F.) during muscular work without the production of distress or any pathological effects. The temperature of the mouth may show only a slight rise or even a fall in temperature. This want of agreement is due to the cooling of the mouth, internally by the inspired air, externally by the loss of heat from the face and neck by radiation and evaporation of sweat. This research is a preliminary to a wider investigation upon the various causes which produce "falling out" and "heat stroke" in soldiers." Experiments upon the effect of clothes and other factors are in progress. Experiments upon nitrogenous metabolism are also being carried on and the apparatus for that work has been available for a research by Dr. Spriggs and for the investigation of "the nitrogenous metabolism in chronic Bright's disease" by Messrs. French and Butler.

### II. Bacteriological Investigations.

Mr. T. J. Bokenham is investigating the action of the liver on bacteria and toxins, with special regard to the part possibly played by this organ in the production and maintenance of immunity. The research is not by any means finished, but the following important results have already been obtained: (1) Diphtheria or coli-toxin of known strength was caused to circulate through isolated livers. On testing the affluent liquids they were found to be deprived of the greater part of their toxicity. (2) Solutions of indol were in like manner destroyed by the liver, nor was it possible to recover the indol from the organ by subsequent distillation. (3) Cultures of B. coli were injected into the mesenteric veins of cats and rabbits, plate-cultures being subsequently made from (*a*) a superficial systemic vein; (*b*) the suprahepatic vein; (*c*) the bile duct. With cultures of low virulence the liver acted both as a filter in keeping the bacilli from the general circulation, and had the further action of fixing them in its substance and depriving them of pathological and vegetive activity. Using more virulent cultures, the results were less marked or even negative in normal animals, but in others previously prepared by administration of "coli-serum," the livers behaved to these virulent organisms just as in the case of the non-virulent ones. (4) Cultures when injected into a systemic vein, disappeared at once from the general circulation, but could be detected in the liver substance. These observations, taken in conjunction with those of Werigo, confirm the idea that the liver plays an important part in preventing microbic invasion as well as in protecting the body from the effects of absorption of poisonous products of digestion. From the fact that this protective action can be increased by means of specific serums in certain cases, their use may be desirable in cases of auto-intoxication and in other conditions of disordered intestinal and hepatic action. Mr. Bokenham has a paper in preparation on this subject, and is continuing his investigations thereon.

Dr. Eyre (Ernest Hart Memorial Research Scholar).—He has continued his research on the lines indicated in his last report. Some of his results have been communicated to the Pathological Society, the Institute of Public Health, etc., whilst further papers are in preparation for presentation at the forthcoming meeting of the Association at Cheltenham. He refers to the new centrifugal machine mentioned in his previous report, and states that his first model was not altogether perfect, as the high gearing necessary to obtain the requisite speed for milk examination entailed excessive muscular exertion when driving the machine by hand. By means of a new motion, however, this difficulty has been obviated, and the second model (now practically finished) has in its trials worked easily and well—a speed of 3,000 revolutions per minute being attained with remarkably little expenditure of energy. During the course of his experiments on the detection of the tubercle bacillus in milk by means of animal inoculations, he made a series of observations on the body temperature of the normal guinea-pig, the results of which were communicated to the Physiological Society. In this portion of the work he remarks on the prevalence of "spontaneous" tuberculosis in the animals (guinea-pigs) bred and supplied by the dealers for experimental purposes, necessitating the employment of the tuberculin test upon every fresh batch of pigs before they can be

used for the diagnosis of the tubercle bacillus. His observations upon the rate of multiplication and duration of life of various pathogenic bacteria in milk are also approaching completion, as are also some experiments on the influence of associated non-pathogenic "milk" bacteria upon pathogenic organisms present in this medium. He has also studied the influence of the various media used in enumerating the organisms present in milk samples, upon the resulting "count." The numbers obtained show wide differences, which are in many cases directly due to differences in the reaction of the media employed, thus emphasising the necessity for using media of standard reaction for quantitative work of the nature.

Dr. A. G. R. FOULERTON and Mr. W. T. HILLIER: A considerable number of specimens of urine from 21 cases of tuberculosis have been examined in detail, and experiments with a view of studying the toxicity of the secretion in the disease have been carried out. The results of his work so far are not so conclusive with regard to the points under investigation as to be available for publication. The work is, however, in active progress, and a preliminary communication on the subject will be read in the Pathological Section at the annual meeting at Cheltenham.

Dr. JOBSON HORNE reports that the research proposed by him has been conducted more particularly with reference to the nature and origin of, and changes incidental to, the tumour-like formations known under the terms lymph-adenoma, lymphoma, and lympho-sarcoma. A good deal of material has been collected, the examination of which is not not completed, and a full report cannot be made. The histological structure of their formations has been examined, and the conclusions so far arrived at are: (1) That the increase in the bulk of the gland cannot be regarded as, strictly speaking, neoplastic; (2) that a tissue classification of the growth as commonly adopted is confusing without being useful. Opportunities have occurred for investigating the etiology of so-called "idiopathic" cases. It has been found that the increase in the glands is the outcome of parasitic invasion, and the path of infection has been ascertained. It is proposed to continue this part of the research.

Dr. STUART MCDONALD (Research Scholar).—(1) Investigation into the bacteriology of posterior basal meningitis; examination of cases of this disease, which have been observed in the Royal Hospital for Sick Children, Edinburgh, since last September; bacteriological examination during life by means of lumbar puncture; and bacteriological and histological examination in such of the cases as proved fatal. Attempt to distinguish this disease—pathologically—from epidemic cerebro-spinal meningitis. Descriptions of the organisms obtained on media prepared from artificial meat extracts (the preparation of media, accurately standarised by present methods, having been tried and found unsatisfactory). Effects of inoculation of pure cultures of the organisms obtained by lumbar puncture during life into rabbits, guinea-pigs, and mice. Endeavour to raise the virulence of the micro-organisms by successive growths of the organism in the peritoneal cavities of rabbits and guinea-pigs. Descriptions of some cases of the so-called simple posterior basal form of meningitis, with a distribution of the purulent exudate on vertex of brain and in cord exactly as in a case of vertical meningitis; associated with the same micro-organism as was found in other cases having the typical basal distribution. (2) Examination of a spinal cord in which the pneumococcus was demonstrated for a period of two and a-half months before death; repeated lumbar punctures being performed, the same organism being demonstrated in pure culture at the *post-mortem* examination. (3) Bacteriological and histological examination of a case of acute hæmorrhagic septicæmia in pregnancy: having some distinct points of resemblance to a case of acute yellow atrophy. Description of a diplococcus and a bacillus separated from the liver, with an account of the effect of their inoculation into the portal vein of rabbits, etc.

Dr. KEITH MONSARRAT: Researches on the nature of so-called cancer bodies.—These researches, in continuation of those published last year, have been carried on during the last twelve months, but as far as demonstration by inoculation is concerned without further results of much importance. It has, as before, been found possible to cultivate an organism of peculiar characteristics from carcinoma mammæ, and in ordinary nutrient bouillon as readily as on other media of more complex composition. Out of sixteen specimens of cancer of the breast, two only have yielded cultures of the organism indicated. Its nature is doubtful. The animals used for inoculation have been guinea-pigs and dogs. In both there was a positive reaction, but none of the growths resulting can be legitimately spoken of as carcinoma, although they possess certain characteristics similar to those of the latter. It is not proposed to publish the researches (although they have elucidated some minor but important points) until a more definite opinion has been formed, by further research, as to the relation of the organisms found to the cancer process.

Dr. DAVID NABARRO: The pathology and bacteriology of meningitis, especially posterior basic meningitis. In all, 5 cases of meningitis have been investigated, 4 of them posterior basic meningitis and 1 of cerebro-spinal meningitis. Case I.—Boy, aged 10 years, in University College Hospital, under Sir Thomas Barlow. At the necropsy the case was definitely one of posterior basic meningitis, but the organisms found were (1) a variety of B. proteus and (2) a diplococcus, stained by Gram's method. Case II.—Girl, aged 5 months, also under the care of Sir T. Barlow. Duration of illness fourteen weeks with ordinary symptoms of posterior basic meningitis, namely, screaming, head retraction, and rigidity. Four and a half-hours *post mortem* some turbid fluid was withdrawn from cranial cavity and found to contain diplococci, many apparently within the leucocytes. The diplococcus grew well in broth, but subcultures on various media failed to grow. It did not stain by Gram's method. Case III.—Child, aged 6 months. Left eye excised by Mr. Percy Flemming for ophthalmitis (pseudoglioma). Symptoms of posterior basic meningitis present, no discharge from ears, which were examined and thought to be normal. At the necropsy the membranes at the base of the brain were matted together by fibrous exudation, and much lymph was present; ventricles greatly distended, left middle ear contained much pus; the fluid in third ventricle and the basal lymph on cultivation showed pus cocci, bacilli, and diplococci staining by Gram's method. This diplococcus may be a variety of Still's diplococcus which stains by Gram or a variety of staphylococcus. A broth culture killed a mouse in forty hours from the heart blood, spleen, and liver. Single cocci and diplococci were obtained in films, subcultures, and sections. The broth was also pathogenic for guinea pigs. Case IV.—Also one of posterior basic meningitis showing much basal lymph *post mortem*. Films of the lymph contained some bacilli and many diplococci not stained by Gram's method. Case 5.—Man, aged 43, under care of Dr. Frederick Roberts, in University Hospital. Patient was admitted in a semi-comatose state, and thought to be suffering from ptomaine poisoning, as his symptoms came on shortly after a meal of mackerel. At first delirium was present, but later, gradually deepening coma, and patient died in about three days. At the necropsy the brain was found covered with lymph, as was also the spinal cord. Films of the pus on the brain showed many diplococci in the pus cells. They did not stain by Gram, and were probably the diplococcus of Weichselbaum. Broth cultures produced slight cloudiness in two days, but all subcultures failed to grow. He is indebted to Sir Thomas Barlow, Mr. Percy Flemming, and Dr. Frederick Roberts for allowing him to investigate these cases and to make use of the clinical reports; also to Dr. Sidney Martin, for permission to carry out the investigations in the Pathological Laboratory of University College, London.

Dr. D. G. SUTHERLAND: With regard to the spore-bearing anaërobes, the main line of his research was a study of some of the spore-bearing anaërobes inoculated into, and surviving in milk, heated to 80° C. for twelve minutes, and afterwards incubated at 37° C. The materials from which he supplied himself with the organisms referred to were chiefly artificial manures (four varieties), fæces of some of the domestic animals, as the horse, cow, dog; also street mud, crude sewage, sewage effluents, polluted water courses, and the excreta of a child and an adult suffering from diarrhœa, associated with gaseous distension of the bowels. Incidentally, not a few collateral investigations had to be made, so as to eliminate spore-bearing aërobes, and also some of those aërobes which are facultatively anaërobic. When all is said and done

research work of this kind is largely a matter of classification and identity of particular organisms or groups of organisms. Believing in the value of the bacillus enteritidis sporogenes as an indicator of contamination in water supplies, as well as a pathogenic organism, it was essential to know it thoroughly, in all circumstances and in every kind of medium: and he was most kindly supplied by Dr. Klein with pure cultures of this organism, and also with cultures of bacillus butyricus (Botkin) and bacillus cadaveris sporogenes, with both of which the former is not infrequently confused. So far as his experience goes, these three organisms are quite distinct and different from each other, though each can be found in the materials referred to. One reason which seems to him to explain this confusion of identity is that supposing a droplet of the whey of a typically-changed milk is taken and spread over the surface of an appropriate medium (namely, agar slope in a Buchner tube at 37° C.) the B. cadaveris grows comparatively much more conspicuously than the B. enteritidis sporogenes, which latter in fact is not so visible to the naked eye; and even a careful observer may pick up a colony of the B. cadaveris and subculture it, thinking all the time he is working with the B. enteritidis sporongenes. B. butyricus (Botkin) in its growth on agar slope is also less visible than B. cadaveris, and he can easily conceive how the latter, growing more rapidly, might suppress, overshadow, or oust either of the other two. As regards media, he has jound the stab and shake culture of glucose-formate-agar best for growing these three organisms, the B. cadaveris and B. Botkin not showing such good colonies in shakes as does the B. enteritidis sporogenes. The stab cultures of B. enteritidis and B. Botkin in one or two days are not unlike each other in diameter and outline, but the stab growth of B. cadaveris of the same age is about three times larger, and it struck him as being not unlike the stab culture of malignant œdema. The B. enteritidis sporogenes and B. Botkin do not form spores in this glucose-formate-agar, and a piece of this medium put into sterile milk and incubated anaërobically at 37° C. does not change it typically in either case; but the B. cadaveris does form spores in that medium, and a piece of it transferred to milk and incubated anaërobically in a Buchner tube at 37° C. does change the milk, characteristically for it, in four to six days, the milk thinning at the top, showing whey of a light-yellow brown colour, and a curd forming soft and flocculent matter, especially in the lower part of the test tube. This milk smells badly and is alkaline, whereas the typically-changed milk, caused by the action of a substance containing the B. enteritidis sporogenes is so changed in one to two days (often within twenty-four hours) is acid in reaction, with much gas formation and an agreeable smell of butyric acid. On making a shake subculture from a stab of B. cadaveris, in another glucose-formate-agar tube, next day there are to be seen myriads of very tiny colonies not larger than needle-points, grey-brown in colour, with gas formation, and a horizontal splitting of the medium into several pieces, with accumulation of gas between the pieces. This effect is still more marked on the second day after; and on digging out a small piece of the medium for microscopic purposes there is felt a sickening smell as of rotten bones being burnt. A similar subculture of B. Botkin for the purpose of getting a set of colonies well distributed in the depth of the medium he has not found so satisfactory; and it will be remembered that neither it nor the B. enteritidis sporogenes forms in this medium, nor will a piece of the stab culture conveyed into milk change it typically. So that one may say, if a spore-bearing organism is got from a shake or a stab in glucose-formate-agar, it is not B. enteritidis sporogenes nor B. Botkin, but B. cadaveris sporogenes. As to the conditions under which the B. enteritidis sporogenes will form spores he is not able now to say, but he is experimenting with several varieties of media composed of alkaline blood serum, etc. This being only a short report of an unfinished but most interesting research, he can only refer to one or two other points. The B. enteriditis sporogenes, as evidenced by a typically changed milk (for example, by definite quantities of sewage dilution) seems to be inhibited by the presence of some acid-forming organism, namely, a few drops of a "typical" whey transferred into sterile milk and incubated anaërobically will produce a typical change in this new medium, and from the latter into a series of subsequent milk tubes; but if a spore-bearing aërobe or other organism which produces an acid reaction in litmus milk is at work, in the milk medium, prior to or contemporaneously with the B. enteritidis sporogenes, the latter seems to be inhibited or prevented from producing its typical change. Whether this supposed antagonism of some acid-producing organism will explain why, in some milks the B. enteritidis sporogenes is not virulent, or whether, if some means (insufficient to kill the B. enteritidis sporogenes) are taken to delay or suppress this acid production or souring in milk, the B. enteritidis sporogenes is then permitted to develop its virulence he cannot say. Further investigation is required to show whether the B. enteritidis sporogenes is dependent on some other organism or organisms, alkali-forming or pellicle-forming, which render the milk under the cream layer of a suitable reaction and practically an anaërobic medium, at a sufficient temperature, as may happen in hot weather, when milk is stored in an insanitary environment. He wishes to acknowledge with much gratitude Professor Sims Woodhead's kindness and valuable suggestions while engaged on this research.

### III. THERAPEUTICAL INVESTIGATIONS.

DR. W. D'ESTE EMERY: The object of his research was to determine the relative irritating power of the various antiseptic and other drugs which are usually applied to the skin or living tissues. A considerable amount of experimental work was done before the method could be perfected and all fallacies eliminated, and owing to other occupations he was unable to examine all the drugs which he had intended to do; he has returned the greater part of his grant, but should like to have it renewed. The method is founded on the well-known experiment of inducing reflex action in a decapitated frog by the applications of solutions of irritating drugs to the skin; the object being to determine the smallest dilution of a drug which is necessary to cause such reflex action as compared with the smallest dilution of a drug which is taken as a standard and which produces the same effect. The factors which determine the induction or non-induction of reflex action when an irritating solution is applied to the skin are (1) the relative irritant potency of the substance, (2) the strength of the solution, (3) the reflex activity of the nervous system, (4) the area of skin on which the solution acts, and (5) the length of time during which it is applied. The first of these has to be determined, the second is known, and the others are allowed for by the method by which the experimental results are compared one with another. A considerable amount of experimentation with various sorts of apparatus which were devised led to their being abandoned in favour of an exceedingly simple method. A frog was decapitated and suspended by means of a glass hook (metals are inadmissible on account of the electric currents which they may induce) in a moist chamber for one hour to allow it to recover from shock. A known quantity of water (usually 30 c.cm.) is then placed in a small beaker and a known quantity of a standard solution of the substance to be tested is added. The frog's foot is then immersed in this up to a definite anatomical point, usually the origin of the third digit. The solution is allowed to act for thirty seconds, and, if no reflex action has taken place, is then withdrawn and the foot washed with normal saline solution. After an interval of five minutes a small addition of the standard solution is made to the beaker, and the solution is reapplied to the foot to the same level as before. This process is repeated until the dilution at which reflex action is just induced in thirty seconds is found. After this a similar process is carried out with another drug; the dilution of the two drugs which induce reflex action is thus found. This would be proportionate to their relative potency if the reflex activity of the frog had not changed during the experiment. To eliminate this fallacy the observations are repeated in the reverse order and the results averaged. For example, standard solutions of carbolic acid (2 per cent.) and lysol (1 per cent.) were added to 30 c.cm. water. The right leg reacted when 1 c.cm. of carbolic acid was used, and subsequently when 0.8 c.cm. of lysol was used. The left leg reacted when 0.6 c.cm. lysol was added to the 30 c.cm. water, and subsequently when 1.cm. of carbolic acid was used, the frog having increased slightly in reflex activity. The average for the lysol was 0.7 c.cm., which

is equal to 0.023 per cent. The average of the carbolic acid is 1.05, which is equal to 0.07 per cent. In other words, lysol is more irritating than carbolic acid in the proportion of 70 to 23. Other experiments have given results coinciding almost exactly with this. Different drugs are compared with one another by comparing them with one drug which is kept as a standard in all cases. He has used carbolic acid for this previously, but has been somewhat suspicious of some of the results which he has obtained, as occasionally the carbolic acid seems to cause a great increase in the reflex activity of the frog, and this may last for a long time. The following are some of the results which have been calculated out in this way, lysol (which is the most irritating drug with which he has worked) being taken as 100: Lysol, 100; izal, 66; carbolic acid, 38; perchloride of mercury, 31; formalin, 8; alcohol, 0.6. That is, a lotion of lysol of a strength of 1 in 100 will cause as much irritation in the skin of a frog as a lotion of carbolic acid of a strength of 3 in 100. The relatively high irritative potency of izal he believes to be partly apparent only, and due in some measure to the fact that this substance is not soluble in water; it forms an emulsion, and some of the particles remain soluble and adherent to the skin in spite of the washing in normal saline solution.

Mr. C. G. SELIGMANN: On the Sarawak dart poison ipoh.—Provenance: A supply of the poison was obtained from the Kenzah, a large and powerful tribe inhabiting the upper reaches of the Barum River. Chemistry: The active principle, antiarin, was obtained as an N-free glucoside melting point 190° C. occurring as needle-shaped crystals or flat plates. The formula that agrees best with the results of three analyses is $C_{21}H_{30}O_8$. Physiological action: Fish and small fresh water crustacea were left in a watery solution of ipoh for some time without any effect being produced. On frogs and mammals a well-marked digitalis effect is produced, accompanied by irregular clonic and tonic spasms, ending in paralysis. Granular degeneration of the kidneys is produced by sublethal doses. With antiarin spasms are absent, and the kidneys are unaffected or only slightly affected. Immunity: Fowls are highly, but not absolutely, immune, individual fowls varying in their susceptibility to the drug. So far, attempts to exalt their already great natural immunity have failed, as have feeding experiments on other animals.

JOHN ROBERTS THOMSON, M.D.,
President of Council.

## REPORT OF THE GENERAL PRACTITIONERS AND ETHICAL COMMITTEE.

YOUR Committee has held three meetings during the past year, and has had under consideration various matters of grave importance to the medical profession. The question of allowing reprints from the BRITISH MEDICAL JOURNAL for advertising purposes has arisen from time to time, and in all cases such applications have been refused.

Your Committee passed a resolution, which was adopted by the Council, as follows:

That the publication in non-medical newspapers of biographical notices of medical practitioners (accompanied or not by photographs) partaking more or less of the nature of advertisements is undesirable and improper, and this Committee condemns the practice.

Your Committee also has to deprecate the publication in the lay press of advertisements of courses of lectures on "midwifery," and has urged the Council to do all in its power to check such abuse, and on this recommendation the following resolution was passed by the Council:

Resolved: That this Council, while approving of the training of midwifery nurses, disapproves of the action of those members of the British Medical Association who lecture on midwifery to women who have not been trained in the wards of a lying-in hospital, with a view to the granting of diplomas representing the holders to be competent to practise midwifery. This Council also disapproves of advertising lectures in the lay press.

Copies of this resolution were forwarded to various bodies.

JOHN WARD COUSINS, M.D., Chairman.

## REPORT OF MEDICAL CHARITIES COMMITTEE.

DURING the past year the Medical Charities Committee has met on three occasions and has devoted its attention more especially to an endeavour to stop the abuse of charity at London and provincial hospitals. With this idea in view, your Committee has sent out the same circular letter, together with a copy of the recommendations and poster to the provincial hospitals, as had already been sent to the London hospitals. Almost every provincial hospital has considered the request of your Committee, and replies have been received as follows: 37 medical charities are prepared either to adopt the principle advocated by your Committee, or have already similar regulations in force; 20 hospitals replied that, while taking every care to prevent abuse, they are unable to adopt the regulations in their entirety; while 11 charities declined altogether to take the matter into consideration. Your Committee proposes to further carefully consider all the correspondence, and will endeavour to influence those charities that have declined to assist in preventing abuse to modify their decisions. Your Committee also sent a circular letter to the Medical Boards of both London and provincial hospitals inquiring if they were willing to assist in the endeavour to stop the abuse of hospitals. To this communication 65 favourable replies were received, but your Committee regrets to report that 7 Medical Boards decline to assist in stopping such abuse. A scheme is being drawn up which contains the proposals of your Committee, and will be circulated among the various hospitals with a view to minimising the abuse of medical charities.

Your Committee realises that there is yet much to be done before making a complete report of the results of its efforts, but it hopes to have satisfactory results to report either during the coming year or by the next annual meeting.

THOMAS BRIDGWATER, LL.D., Chairman.

## PRELIMINARY REPORT OF THE WEST AFRICAN MEDICAL SERVICE COMMITTEE.

IN expressing an opinion upon the Colonial Medical Service the Committee feels that the Service is a general service in which men may be moved from one place to another, and that, therefore, the most complete unification obtainable is to be sought.

That although it may be expedient to organise as a temporary measure the conditions of service in particular districts, no satisfactory permanent result is obtainable by any piecemeal dealing with the subject.

SUGGESTIONS.

1. That the service be called the Colonial Medical Service.

2. Candidates for appointments in the Colonial Medical Service should hold qualifications which are registrable in Great Britain, or such other medical qualifications as may hereafter be determined and approved.

3. It is desirable to hold an open competitive examination in London under the authority of the Colonial Office for admission to the Service.

4. Candidates should not be over 30 years of age, and be physically eligible to undertake duty in warm climates.

5. All successful candidates who have not previously taken up a course of tropical medicine, and produced evidence of proficiency, shall be required to do so before proceeding to take up their appointments. During the period of receiving instruction a small daily allowance should be made to cover expenses of training, this to include lodging and mess allowance.

6. Definite grades and uniform nomenclature should be established throughout the service.

(*a*) All candidates on appointment should be given suitable designation and titles to distinguish them as belonging to the Colonial Medical Service and to designate their grade.

(*b*) The following titles appear convenient:

1. Assistant Colonial Surgeon, 1 to 5 years service.
2. Colonial Surgeon, 5 to 8 years.
3. Senior Colonial Surgeon, 10 to 15 years.
4. Principal Colonial Surgeon, 15 to 25 years.
5. Deputy-Inspectors-General, 25 years and upwards.
6. Inspector-General, Colonial Medical Service.

This Colonial medical officer to be responsible for the administration of the service throughout the Crown Colonies and Protectorates under the Colonial Secretary.

A Colonial Medical Board would be attached to his office for duty.

(c) The service being thus unified, opportunities for change of station on promotion from grade to grade should be encouraged. A medical officer should be able, however, to proceed from grade to grade without changing station should he desire it.

(d) Promotion for meritorious service should be entertained on the recommendation of the Governor in Council.

I.—ORGANISATION.

The medical officers employed in each Crown colony or protectorate should be organised into a medical service, at the head of which should be the senior medical officer who should be an *ex-officio* member of the Council of the colony or protectorate.

II.—PAY.

The pay should not be less than £350 at the commencement. Seeing that the conditions and expenses of living differ so materially in different colonies, additional allowances would have to be established by the local Councils for all medical officers serving in that colony.

For such extra duties as *post-mortems*, inquests, travelling claims, etc., extra pay should be granted.

For every twelve months spent in the West Coast of Africa leave for six months should be granted to the medical officer as to other officers in the colonial service.

There should be no restrictions as to the invaliding of sick officers by a properly constituted Board.

III.—GRATUITY.

7. After 10 years' service, a Colonial medical officer should have the option of leaving the service on a gratuity of £1,000, thereby waiving all pension claims, and after 15 years' service a gratuity of £1,500.

IV.—PENSION.

8. A medical officer should be entitled to retire after 20 years service on a pension of £1 a day, and after further service with increasing increments of 2s. 9d. per day for every 2½ years of service. Fifteen years service on the West Coast of Africa to count as 20 elsewhere.

V.—QUARTERS.

Properly constructed tropical quarters in accordance with the teachings of sanitary science should be provided, and, where this is not practicable, an adequate allowance should be made.

VI.—MESSING.

That suitable mess quarters should be provided for the medical officers, and facilities given for organising the mess.

J. J. LAMPREY, Lieut.-Col., R.A.M.C., Chairman.

## REPORT OF THE INDIAN MILITARY MEDICAL SERVICES SUBCOMMITTEE.

THIS Committee has met twice to consider the subject referred to it from the annual meeting held at Ipswich. The Committee has received a letter from Surgeon-General Harvey repudiating the charges put forth by Dr. Mullick against the I.M.S. The Committee has requested Dr. Mullick to furnish it with a summary of his evidence in support of his statements, but he has failed to communicate with the Committee in any way.

The Committee deprecates the attitude of Dr. Mullick in preferring charges against the administration of an important public service which he has failed to substantiate.

JAMES BARR, M.D., Chairman.

## PROCEEDINGS OF BRANCHES.

### NORTHERN COUNTIES OF SCOTLAND BRANCH.

THE annual meeting of this Branch was held at Rosemarkie on June 19th, under the Presidency of Dr. ADAM (Dingwall). Eighteen members of the Branch were present.

*Confirmation of Minutes.*—The minutes of the previous meeting were read and approved.

*New Members.*—Dr. Cameron (Fortrose), Dr. Kelly (Inverness), and Dr. Leach (Beauly) were elected members of the Branch.

*Vote of Condolence.*—It was resolved:

That the Secretary be requested to convey to Mrs. Gellattly (Elgin) the sympathy of the Branch in the bereavement she has sustained.

*Election of Office-bearers.*—The following were elected office-bearers for the ensuing year:—*President:* Dr. Adam (Dingwall). *President-Elect:* Dr. Ogilvie Grant (Inverness). *Vice-Presidents:* Dr. Murray (Inverness), Dr. Mann (Nairn). *Council:* Dr. J. W. N. Mackay (Elgin), Dr. Bruce (Dingwall), Dr. Forsyth (Inverness), Dr. T. R. MacDonald (Inverness), Dr. Mackay (Inverness). *Representative on the Council of the Association and Parliamentary Bills Committee:* Dr. James Murray (Inverness). *Honorary Secretary and Treasurer:* Dr. J. Munro Moir (Inverness).

### EAST ANGLIAN BRANCH.

THE annual general meeting of this Branch was held at the Masonic Hall, Bury St. Edmunds, on Friday, June 28th, at 11.30 A.M.; the PRESIDENT (Dr. E. L. Fenn) in the chair.

*Confirmation of Minutes.*—The minutes of the last meeting were read and confirmed.

*New Members.*—The following gentlemen were unanimously elected members of the Association and Branch: J. G. Stracey Forrest, L.R.C.P., etc. (Bury St. Edmunds), Thos. Stretton Robson, L.R.C.P., etc. (St. Osyth, Essex). The following members of the Association were unanimously elected members of the Branch: R. Anderson, F.R.C.S.Edin., Lieutenant-Colonel, R.A.M.C. (Bury St. Edmunds): E. P. Dickin, M.D. (Brightlingsea, Essex): H. L. Heath, L.S.A. (Ipswich); G. Master, M.B., Bury St. Edmunds.

*Report of Council.*—The following report of the Council was received and adopted:—

It is now two years since your Council last submitted a report of the progress of the East Anglian Branch, the reason for this being that by your vote at a meeting held at Felixstowe in September, 1899, you decided that your Council and officers should remain unaltered for this period, and that no meetings should be held during 1900, in consequence of the British Medical Association holding its annual meeting in Ipswich during that year.

With regard to the number of members of the East Anglian Branch, your Council beg to report that 22 new members joined the Branch during the year 1899–1900 and 33 during the year 1900–01: and that after deducting losses by deaths and resignations, the number of members of the Branch stands to-day at 341, being an increase of 10 since the last report.

The annual meeting of the Branch in 1899 was held at Colchester under the presidency of Dr. E. L. Fenn, at which meeting it was resolved to invite the British Medical Association to hold its annual meeting at Ipswich in 1900, and that Dr. W. A. Elliston be recommended as President-elect, and a deputation was appointed to attend the meeting at Portsmouth and convey the invitation, which was accepted by the Association. The President-elect (Dr. Fenn) entertained the members present (49 in number) at luncheon, and Dr. and Mrs. Fenn gave a garden party to members and ladies accompanying them at their residence subsequently, and the cordial thanks of the Branch were given to them for their hospitality.

At a meeting held at Felixstowe on September 28th, 1899, Dr. W. A. Elliston resigned the position of representative of the Branch on the Council of the Association, which he had held for twenty-two years, and a cordial vote of thanks was accorded him for his services during that period. The vacancy thus occasioned was filled by your Council in accordance with the by-laws by the election of Dr. Edgar Barnes. The members present (27 in number) and ladies accompanying them were hospitably entertained at afternoon tea in the Ranelagh Gardens by the members of the East Anglian Branch resident in Felixstowe.

A special meeting of the Branch to consider the Midwives Bill was held at Ipswich on May 8th, 1900, at which 15 members were present.

Special meetings of the Branch to consider the Provisional Report of the Constitution Committee were held at Norwich, at which 41 members were present; at Bury St. Edmunds, at which 0 members and 3 unattached members were present; at Colchester, at which 3 members, 1 member of the Metropolitan Counties Branch, and 1 unattached member were present; and at Ipswich, at which 16 members were present. The resolutions passed at these meetings appear in the minutes which have been read to-day.

Amongst the losses by death which have occurred since the last report are some of those who have been members of this Branch for many years. Amongst these we may specially notice Mr. G. Cordy Edwards of Felixstowe, for many years a well-known practitioner in Ipswich; Mr. J. B. Pitt of Scarning, formerly of Norwich, who was one of the Secretaries of the Branch for 34 years from 1846 to 1880; and Dr. C. M. Durrant of Ipswich, who was President of this Branch three times, namely, at the first of its annual meetings in 1843, and again in 1858, and in 1893. These three gentlemen were the last survivors of those who were members of this Branch at its first annual meeting in 1843. Amongst others of our members who have passed away during the two years which this report covers are Mr. Webster Adams of Ipswich, Mr. J. L. Growse of Bildeston, Mr. G. J. Hennell of Bury St. Edmunds, Mr. F. E. Hubbard of Diss, Mr. R. C. Lyle of Dunmow, Lieutenant-Colonel C. J. W. Meadows of the Indian Medical Service, Mr. E. A. T. Steele of Southend, Mr. G. Taylor of Mattishall, and Mr. Walter Waring, who died in the service of his country in South Africa.

The great event of the year 1900 was the General Meeting of the Association, which was held at Ipswich on July 31st and August 1st, 2nd, and 3rd. This meeting was considered by the members present to have been

an extremely successful one. It was attended by about 600 members, who were accompanied by 200 ladies; and at this meeting His Royal Highness the Prince of Wales, having graciously expressed his assent, was elected an honorary member of the British Medical Association. The scientific parts of the meeting were valuable and were equal to the usual standards of the meetings of this great Association. The business transacted at the meeting was of the utmost importance, and will have far reaching effects on the future of the Association through the appointment of a Committee charged with the duty of revising and improving the constitution of the Association, and adapting it to the large requirements of its rapidly increasing membership; whilst the social part was equally well sustained through the hospitality of the President and Mrs. Elliston, of the Mayor of Ipswich, of many residents in and near Ipswich, and by the members of the East Anglian Branch itself. Your Council think it advisable that a list of the members of the East Anglian Branch who took official part in organising the meeting should be recorded on the minutes with this report.

The Council have to report that two of the Secretaries of this Branch, Dr. Beverley and Dr. Barnes, have resigned office, the former having served the Branch for twenty-one years and the latter for twelve years. They are pleased to add that in their opinion very efficient successors have been obtained in Mr. H. A. Ballance, of Norwich, and Dr. Francis Ward, of Ipswich.

The Council recommend the autumnal meeting should be held at Clacton-on-Sea during September.

*Addresses to Retiring Secretaries.*—Dr. ELLISTON proposed, and it was seconded by Dr. FENN, and unanimously resolved:

That a subcommittee be appointed to prepare suitable addresses to the retiring Honorary Secretaries, and that such subcommittee consist of Dr. Fenn, Dr. Kilner, Dr. W. A. Elliston, and Dr. Barton.

*Treasurer's Report.*—The Treasurer's Report for the past two years was read, the balance in favour of the Branch amounting to £65 4s. 6d.

*Election of Officers.*—The General Secretary reported that the following members had been elected office bearers for the year 1901–2:—*President-elect:* W. E. Wyllys (Great Yarmouth); *Honorary Secretaries:* Norfolk: H. A. Ballance M.S. (Norwich); Suffolk: Francis Ward, M.D. (Ipswich); Essex: B. H. Nicholson, M.B. (Colchester). *General Secretary for Branch:* B. H. Nicholson, M.B. (Colchester). *Two Representatives on the Council of the Association:* Edgar G. Barnes, M.D. (Eye); M. Beverley, M.D. (Norwich). *Two Representatives on the Parliamentary Bills Committee:* R. W. Brogden, M.B. (Ipswich); J. C. Thresh, M.D. (Chelmsford). *Members of Branch Council:* S. J. Barton, M.D. (Norwich): G. S. Elliston (Ipswich); R. H. Lucas (Bury St. Edmunds); C. E. Addison (Colchester); H. B. Walker (Lowestoft); J. S. Whitaker (Great Yarmouth); S. H. Long, M.B. (Norwich).

*Wage Limit.*—A discussion took place on a letter from the General Secretary of the Association on the question of "wage limit" as applied to clubs, provident dispensaries, societies, etc., in which Dr. BEVERLEY, Dr. W. A. ELLISTON, Mr. MOXON, Mr. PICKWORTH, Mr. SOFFE, Mr. WYLLYS, and Dr. BARTON took part, and the following resolution was passed *nem. con.:*

That circulars be issued to the members of the East Anglian Branch of the British Medical Association, and that a subcommittee be appointed to prepare a series of questions to be submitted to members on the question of a wage limit, such committee to consist of Mr. Moxon, Mr. Whitaker, and Mr. Ballance.

*Luncheon.*—The meeting then adjourned, and the members, with visitors (73 in all) were hospitably entertained at luncheon at York House by the President-Elect (Dr. C. S. Kilner).

*New President.*—On resuming, Dr. FENN introduced the new President (Dr. Kilner).

*Vote of Thanks.*—A cordial vote of thanks was unanimously voted to Dr. Fenn for the able manner in which he had discharged his duties as President, and for the hospitable manner in which he had entertained the members of the Branch.

*President's Address.*—The PRESIDENT then delivered his address on Advances in Abdominal Surgery, for which a cordial vote of thanks was awarded him.

*Papers.*—The following papers were then read:—Dr. W. A. ELLISTON: The Surgical Treatment of Internal Hæmorrhoids.—Mrs. GARRETT ANDERSON, M.D.: Neurasthenia.—Dr. PRESTON KING: Bath Waters and Joint Disease.—Mr. R. H. LUCAS: Xeroderma Pigmentosa, with Case.

*Exhibition.*—In an adjoining room there was an exhibition of surgical instruments by Messrs. Down Brothers; of pharmaceutical preparations, by Messrs. Parke, Davis, and Co. and by the Bayer Company, Limited; of plasmon and its preparations, by International Plasmon, Limited; and of food specialities by Bovril, Limited.

*Visits.*—The Suffolk General Hospital, the Abbey Grounds, Moyse's Hall, St. Mary's Church, and St. James's Church were open to members and ladies all day, and the Rev. F. L'Estrange Fawcett kindly showed a party round St. Mary's Church, and an organ recital was given in the church by Mr. George W. Boutell.

*Garden Party.*—Members and ladies accompanying them were entertained by the members of the Branch resident in Bury St. Edmunds at a garden party in the Abbey Grounds.

## SHROPSHIRE AND MID-WALES BRANCH.

A SPECIAL general meeting of this Branch was held at the Salop Infirmary on May 28th to discuss the whole question of club practice within the Branch area. Twenty-eight members were present. In the unavoidable absence of the President, Dr. Tredinnick of Craven Arms, the chair was taken by Mr. J. D. HARRIES.—The CHAIRMAN in opening the meeting discussed some of the various phases of club practice, and gave his experience of the best methods of regulating the same. He also informed the Branch of the action taken by the Council of the Association in reference to this matter.—Dr. O'CONOR (Oswestry) related his experiences in his own district, and how the medical men of Oswestry had resigned their club appointments rather than submit to a reduced scale. This concerted action resulted in a return to the old scale.—Dr. BRADSHAW (Wattleboro') and several other members entered into the discussion, and Dr. O'CONOR afterwards proposed the following resolution:

That this meeting of the Shropshire and Mid-Wales Branch having discussed the whole question of club practice within its area, desires to place on record its conviction that the present system of contract practice is inadequate, and considers that no medical man residing in the Branch area ought to accept less than 5s. per annum per adult member.

This was seconded by Dr. BRADSHAW, and on being put to the meeting was carried unanimously.—The following resolution was next proposed by Dr. WRIGHT (Overton), seconded by Dr. DYSON (Broseley) and carried unanimously:

That a notice embodying the foregoing resolution be sent to the secretary of every Branch of the Association, and to every medical man practising in this Branch area.

## NOTICES OF MOTION.

The PRESIDENT OF COUNCIL gives notice (acting on the suggestion of Mr. VICTOR HORSLEY) that he will at the Annual Meeting at Cheltenham move the following alteration to By-law 37:

37. No by-law shall be made, altered, or repealed, except at an annual *or other General* Meeting *duly convened*, nor unless a written notice, specifying the nature and object of the proposed *addition, alteration, or repeal (as the case may be)* shall have been given to the Council at least one month previously. Such notice shall be forthwith published in the JOURNAL.

Dr. BRASSEY BRIERLEY gives notice that he will move:

To call attention to the resolutions passed at the Portsmouth meeting in reference to lectures on midwifery by unauthorised persons to other than duly-recognised students of medicine, and the issue of diplomas. Also to the resolution upon medical defence.

And will propose:

This meeting deprecates the action of the Central Council in neglecting to carry these resolutions into effect.

Upon the presentation of the Report of the Reconstitution Committee he will propose:

That the Committee be reappointed with the addition of seven members nominated and elected by this meeting, with instructions to prepare a scheme for altering the by-laws of the Association so that—

1st. All members of the Association shall be members of a Branch.

2nd. Provision for division of Branches in order to facilitate access to meetings.

3rd. Provide a more efficient and comprehensive method of administering the finances. The Finance Committee to be entirely independent of the Journal and all other Committees.

4th. Construction of a Committee of Council or of the Annual Meeting to meet at least once a month and to act as Executive; the meetings of such Committee to take place alternately in London and a provincial town.

5th. Provision for the payment by the Association, and not by the Branches, of expenses of members of Council, and all committees and subcommittees.

6th. Arrangements for proxy voting.

Mr. GEORGE JACKSON gives notice that he will move:

That every member of the Branch shall give a personal pledge not to oppose any other member of the Branch in any course of action which he may take in connection with any public appointment which he may hold, so long as such a course of action is sanctioned by, or arises out of advice given by, the Council.

*Form of Pledge suggested.*

I, the undersigned, being a member of the – ——— Branch or Division of the British Medical Association, hereby agree that I will not become a candidate for any public appointment which has become vacated by any member of the Branch acting upon the advice given to him by the Branch Council, and that I will not oppose or enter into competition with any member of the Branch in connection with any public appointment where he is endeavouring, by the advice of the Council, to obtain a higher rate of remuneration, or to secure an increase of salary.

That any member of the Branch violating these rules, or breaking the above pledge, shall be suspended or expelled from the membership of the Branch, but that such suspension or expulsion shall not take place unless it is carried by a majority consisting of three-fourths of those present at a meeting of the whole Branch at which the matter is discussed.

Dr. JOHN BROWN (Bacup) gives notice that he will move:

That the Council be requested to make arrangements, as far as practicable, so that the Annual Meetings be held in collegiate towns, and that the place of meetings be so arranged that the members in any parts of Great Britain and Ireland may be within reasonable travelling distance at least once in every four years.

That the Council be empowered to provide a sum not exceeding £500 towards the expenses of the Annual Meeting.

Mr. GEORGE BROWN gives notice that he will move:

1. That in view of recent public statements to the effect that the medical profession is in favour of the measure for the registration of midwives adopted by the Association for promoting the compulsory registration of midwives, this meeting of members of the British Medical Association enters an emphatic protest against any legislation which has for its object the formation of a class of midwifery practitioners other than those recognised under the Medical Act of 1886.

2. That the Council of the British Medical Association be requested to take steps at an early date to obtain by means of a circular letter to be sent to all members of the Association resident in England or Wales, replies to the following questions:

(i) Are you in favour of the Midwives Registration Bill as adopted by the Association for Promoting the Compulsory Registration of Midwives? or (as an alternative measure),

(ii) Are you in favour of a Bill to be promoted by the British Medical Association to provide for the better education and registration by local authorities of persons who undertake for gain the care and nursing of women during the lying-in period.

July 11th, 1901. GUY ELLISTON, *Acting General Secretary.*

# SPECIAL CORRESPONDENCE.

## PARIS.

*Académie de Médecine: MM. Lancereaux and Paulesco on the Therapeutic Uses of Lecithine.—Nomination of a Commission to Consider the Poisonous Alcoholic Essences.—M. Troisier elected a Member in the Section of Medical Pathology.—The Question of the Thesis.—Farewell Lecture of Professor Panas.—Vital Statistics.*

M. LANCEREAUX recently communicated to the Académie de Médecine a note, in collaboration with M. Paulesco, on the therapeutic uses of lecithine. Recent works by Gautier, Danilewski, Gilbert, Fournier, and others have shown the part played by lecithine in the nutrition of the organism in general, and of the nervous system in particular; among other good effects an increase in weight has been noted both in man and in animals. M. Lancereaux read notes on 2 cases of pancreatic diabetes, in an advanced stage with daily wasting in spite of all treatment. Under the influence of ovo-lecithine given in large doses (50 centigrams daily) not only was the wasting arrested, but the patients increased rapidly in weight and their general health improved in proportion. Whenever rapid wasting occurs lecithine is of great value, and constitutes an excellent food. The use of lecithine in several wasting diseases was always followed by an increase in weight. A young man, aged 18, with tuberculous bone disease and amyloid degeneration of the kidneys with abundant albuminuria, was given lecithine (15 cg. daily) for fifteen days; his weight increased 3 kilos. A child, aged 10, extremely thin and wasted, with a cough and evening rise of temperature due to incipient tubercle, during one month was given 20 cg. of lecithine daily; the weight increased 2 kilos. in this time, and the general condition showed a remarkable improvement. A girl, aged 8, with pleuro-pneumonia, considerably wasted, was given 20 cg. of lecithine daily for one month; the general condition improved, and the weight increased 2 kilos. M. Robin stated that under the influence of lecithine, the uric acid excreted was considerably increased.

The President of the Académie de Médecine announced that the study of the conclusions in the recent report of M. Laborde, in conformity with the motion voted by Parliament indicating the liquors, "*aperitifs*," and drinks containing essences most dangerous to the public health, with a view to preventing their manufacture and sale, would be submitted to the Commission on Alcoholism, who would report on the matter. This Commission is composed of MM. Laborde, Lancereaux, Riche, Magnan, Motet, and Cornil.

M. Troisier has been elected a member of the Académie de Médecine in the Section of Medical Pathology, replacing Professor Potain, deceased.

The thesis question has recently been occupying the attention of the Faculty of Medicine, and Professor Pinard has laid before that body a short and interesting report on the modifications possible in the present system. In the opinion of many, the thesis for the doctor's degree should be abolished. The Commission of the Faculty has decided, with only one dissentient voice, that this last test shall be maintained, favouring as it does the production and development of ideas. By a convention existing between the Minister of Public Instruction and foreign universities, all academic publications, and especially the theses, must be sent to these universities in exchange for their own. "Recognising," says Professor Pinard in his report, "that the collection of our theses does little to maintain or increase the prestige of our Faculty, it has been thought possible to make a choice, and only send the good ones." As this is forbidden by existing conditions, another expedient must be found. The following are the proposals of M. Pinard:

1. The thesis is maintained in principle.
2. Every candidate for the thesis must choose his president, and be accepted by him after the sixteenth inscription (at end of fourth year).
3. The thesis for the degree of Doctor in Medicine consists in a dissertation on any subject comprised in the medical sciences.
4. This dissertation, either printed or typewritten, shall be handed to the president at least one month before the candidate presents himself for examination thereon.
5. The candidate must deposit six copies of this dissertation at the Faculty fifteen days before he presents himself for examination.
6. The jury shall decide (1) if the candidate be received; (2) if the thesis be judged worthy of forming part of the academic publications, in which case the candidates shall present to the Faculty 200 printed copies of his dissertation. If not so judged the dissertation shall remain in the archives of the Faculty.

Each year more than 650 theses are presented, and are mathematically divided amongst the thirty professors of the Faculty: this gives them each more than twenty theses to examine. A popular professor is overwhelmed with demands to preside over his students' theses, for example, one professor in three years was president 313 times. The difficulty is for the professor to have the time to read all these original works, so as to be able to examine the candidate in a satisfactory manner. During the academic year 1900-1901 which is just closing, 696 theses will have been presented before the Paris Faculty of Medicine.

Professor Panas, who is retiring from the chair of Clinical Ophthalmology, which he has held for twenty-two years, recently gave his farewell lecture before a large number of friends and old pupils. At the end of the lecture M. Terrien, the *chef de clinique*, made a speech of regret at their loss, to which the Professor, who was deeply moved, replied.

The following table shows the number of fresh cases notified and deaths from small-pox, diphtheria, and typhoid fever respectively in Paris during the twenty-fourth, twenty-fifth, and twenty-sixth weeks:

| | Small-pox. | | Diphtheria. | | Typhoid Fever. | |
|---|---|---|---|---|---|---|
| | Fresh Cases. | Deaths. | Fresh Cases. | Deaths. | Fresh Cases. | Deaths. |
| Twenty-fourth week | 65 | 20 | 101 | 18 | 26 | 3 |
| Twenty-fifth week ... | 64 | 11 | 126 | 25 | 28 | 7 |
| Twenty-sixth week... | 88 | 10 | 108 | 6 | 32 | 4 |

From January 1st to June 15th small-pox has caused 254 deaths in Paris, 97 males and 157 females. This great difference in the mortality of the two sexes is only seen among adults, as the following table shows:

| Deaths. | Males. | Females. |
|---|---|---|
| 0—4 years ... ... ... ... | 45 | 43 |
| 5—19 years ... ... ... ... | 6 | 11 |
| 20—39 years ... ... ... ... | 32 | 82 |
| 40—59 years ... ... ... ... | 23 | 1 |
| 60 years and over ... ... ... | 6 | 10 |
| | 97 | 157 |

The difference is probably due to the fact that males are more likely to be revaccinated than females, as all males who do military service are compulsorily revaccinated.

# CORRESPONDENCE.

## VIRCHOW'S EIGHTIETH BIRTHDAY.

SIR,—I learn from Professor Waldeyer that Virchow's 80th birthday will be celebrated in Berlin on Saturday, October 12th, when he will personally receive delegates with congratulatory addresses from various scientific bodies, foreign as well as German.

A preliminary notice of the intended celebration was given by Sir William Turner at the meeting of the General Medical Council last November to the representatives of the universities and medical corporations on that body: and if such of them as desire to be represented on the occasion will kindly send to me as soon as convenient the names of the delegates appointed, I will communicate them to Professor Waldeyer, who is the President of the Executive Committee. Further particulars as to arrangements will be furnished later.

The insertion of this letter in your columns will oblige.—I am, etc.,

Park Crescent, W., July 6th. LISTER.

## OUR DUTY TO THE CONSUMPTIVE BREADEARNER.

SIR,—In the admirable address by Sir John Burdon-Sanderson on the public obligation to provide for cases of phthisis among the poorer classes (BRITISH MEDICAL JOURNAL, July 8th, 1901), there are two passages (both secondary to the general scope of the author) which seem to admit of modification.

The first is the statement that "the nature of this disease (phthisis) shuts against him the doors of the general hospitals." This seems to be a general belief, but it is only very partially true. Of the four largest general hospitals in London, I believe that none shut their wards against cases of phthisis. At St. Thomas's such cases are certainly admitted. At Guy's Hospital, during thirty years' service, I have never failed to see cases among the in-patients. My own wards have scarcely ever been without phthisical patients, and sometimes have harboured as many as four or five. In fact, I believe that it is often easier to get admission for cases of phthisis into a large general hospital than into one intended for consumption and diseases of the chest.

My other point is, that the description of the stages of consumption and the reference to a "delusive hope of cure" and to the struggle being long or short, may tend to confirm an impression which is widespread among all classes, and is a great obstacle to successful treatment, namely, that consumption is an incurable and hopeless disease. That any hope of an infallible cure by sanatoria, or by tuberculin, by cod-liver oil, or by change of climate, by creosote or any other drug, is at present delusive, is certain. But that multitudes who have suffered from tuberculous disease of the lungs are helped to recover of their disease, that is, are cured, and live useful lives up to three score years and more, is proved not only by the evidence of arrested and even obsolete phthisis which we see in the dead-house, but also by clinical experience which every physician must have had the good fortune to meet with. In fact, so far from being desperate, phthisis is a curable and not infrequently a cured disease.

It is because Sir John Burdon-Sanderson's address will have just authority with the public, because his judicial statements—as moderate as they are forcible—will have influence with statesmen, that I venture to draw attention to the two particulars in which public opinion might be misled: for it is on public opinion, duly instructed and advised, that our hopes of effectually dealing with phthisis on a large scale must be based.—I am, etc.,

Brook Street, W., July 6th. P. H. PYE-SMITH.

SIR,—At a time like the present when the prevention and cure of consumption is receiving such earnest attention, not only in this country but all the world over and from all classes of men, an address such as that of Sir J. Burdon-Sanderson cannot fail to be welcomed and closely studied. It is recognised on all sides that the problems before us are difficult and far-reaching, and the essential point is to get on lines of action which will lead to practical results. In dealing with the subject of "Our Duty to the Consumptive Breadwinner" Sir J. Burdon-Sanderson brings us at once to the fighting front where we have the enemy within range and he indicates a plan of attack which, in a rich and humanitarian country like ours, should not fail in the long run to be rewarded with, at least, a considerable degree of success. It is to be observed that he fully recognises the enormous expenditure which would be involved and that he does not attempt to carry us away with bright sanguine views as to the result. But he gives us good reason to hope for the relief of suffering, the prolongation of of life, and the extension of the wage-earning period among our consumptive working people. And surely these objects alone are well worthy of a strong national effort while, at the same time, we need not deny ourselves the comfort of anticipating a certain proportion of cures—temporary or permanent. Perhaps I might be permitted to refer here to some remarks which I made at a meeting of the Glasgow Medico-Chirurgical Society[1] on February 8th—regarding a section particularly deserving of sympathy—and which are thus reported in the *Glasgow Medical Journal* for July:—

> I gather from the statement which was made to us at last meeting by Mr. Motion, that ample hospital accommodation will be provided in the near future for pauper poor who are affected with phthisis. As to the consumptive poor who are not paupers, and who are in the early stage of the disease, provision is being made for them at the Sanatorium, Bridge of Weir. There still remains a section of sufferers whose claims are strong, and yet for whom there is no provision. I mean the poor who are not paupers, and who are in the advanced stage of phthisis. Such cases are practically excluded from our general hospitals because they are infectious; they are not wanted at a sanatorium because they are regarded as incurable, and they decline to go to the parochial hospitals because they are not paupers. It seems clear to me that this is the class of cases for which immediate provision should be made by erecting a "hospital," or "home," or "rest," where they would receive skilled treatment, and have their sufferings relieved. (Of course, the hope of a possible cure would not be lost sight of even in these bad cases.) I propose that this "hospital" or "home" should be composed of comfortable wooden huts or small pavilions, and that it might be erected in a corner of one of our public parks. There need be nothing depressing about the appearance of such a hospital. Let the huts be painted in bright, cheerful colours, and surrounded by trees, shrubs, and flowers. If necessary, it could be cut off from view by a belt of trees. It might be built and maintained by the municipal authority on the ground urged by Dr. Erskine, namely, that it is a provision for the isolation and treatment of a form of infectious disease; or it might be created and supported by private charity and voluntary contributions.
>
> It is to be borne in mind that in thus separating the advanced cases of consumption from crowded localities and crowded houses, we would be taking a very important step in checking the spread of the disease. It seems clear to me that if we keep our attention concentrated on the question of providing for this class of cases (that is the non-pauper tuberculous poor in the advanced stage of the disease) we will very much narrow the scope of this discussion, and be more likely to come to some definite conclusion.

No doubt this class of sufferers is to be found in all sections of the country, and in the discussions at the London Congress and elsewhere their claims should not be overlooked. Trusting that Sir J. Burdon-Sanderson's "havens of refuge" may take tangible shape in the very near future,—I am, etc.,

Glasgow, July 6th. JAMES W. ALLAN.

[1] Adjourned discussion on the "Provision for the Treatment and Relief of the Tuberculous Poor."

## THE MEDICAL PROFESSION AND THE MIDWIVES QUESTION.

SIR,—In the BRITISH MEDICAL JOURNAL of June 29th I contended that the medical profession, as a whole, was in favour of the licensing of midwives, and instanced the Bill of the British Medical Association as a proof of this. Your

correspondent, "M.R.C.S.Eng.," argues that as the Bill was not adopted by a general meeting of the Association, therefore it is not the Association's Bill, and he points to a resolution passed in 1895 by a general meeting as proving this.

The Bill of the Association, however, was drafted in 1897-8, and in the report of the Parliamentary Bills Committee [1] the following paragraph occurs:

*Midwifery Nurses Bill.*—The Committee of the Parliamentary Bills Committee having drafted a Bill upon the various proposals of the Branches, again forwarded it to the Branches for further consideration, and the Bill was finally redrafted, sent round to members of the Council, adopted, and sent out to every member of Parliament,

and it is constantly referred to as the Bill of the Association, which it undoubtedly is. I might mention also, in furtherance of my contention, that the Royal Colleges of Physicians and Surgeons, and the General Medical Council, have all declared in favour of legislation. Surely the voices of these bodies have some weight as an expression of professional opinion.

The impossibility of effecting any reform without legislation is now recognised by the profession generally, just as it was recognised by the Obstetrical Society thirty years ago, and the licensing of midwives has been put forward as the method to be adopted. Even those two direct representatives to whom your correspondent refers agree that legislation is necessary and inevitable. Thus, in a report of the Parliamentary Bills Committee [2] it is stated that a resolution was moved by Mr. Victor Horsley and seconded by Mr. George Brown, that the Memorandum on the Bill drafted by the Association should be circulated amongst M.P.'s. In this Memorandum the following paragraph occurs:

What is required in the interests of the public is that women undertaking to act as midwives for gain should be obliged to give evidence of competency for the conduct of natural labour, and that they should be prevented from assuming responsibility which they are not qualified to undertake, that any violation of regulations laid down by a statutory controlling authority should be penalised.

The Memorandum and the Bill were circulated together. Mr. George Brown is, I believe, a leading member of the Incorporated Medical Practitioners' Association. In spite of "M.R.C.S.Eng.'s" statement to the contrary, it is, I think, therefore, evident that this body is not "to a man opposed to registration of midwives."

Mr. Allan MacLean's suggestion that it is not lay persons who see the necessity for legislation, but only interested medical men, is not borne out by facts. Thus, on July 18th, 1899, the Lord President of the Council received a deputation of women's organisations, nursing organisations, medical men, and others, including the President of the Coroners' Society. The women's societies alone represented at the deputation amounted to 100,000 persons at a low estimate. In his reply the Lord President said:

I am bound to admit that a representation so made, and supported by so much authority as you have been able to bring to bear upon it, is one which is deserving of the most serious consideration.....I can promise you that I will bring the matter fully and fairly before my colleagues, with a view, if possible, of inducing them to take the matter in hand for the next session.

Again, a very strong memorial was presented to Mr. A. J. Balfour last year, urging him to facilitate the progress of the Bill. It was signed by 138 coroners, 98 medical officers of health, several bishops and magistrates, representatives of many hospitals and nursing associations, besides many obstetric physicians and many very well known and representative people. In your present issue (July 6th) Lord Balfour of Burleigh, in a speech reported therein, said: "He had never, in the whole course of his experience, had to do with a case which, on its pure merits, apart from all other considerations, seemed to him to present such overwhelming need for legislation" as the case for the Midwives Bill.

I need not further multiply proofs of the interest the public are taking in the matter. With regard to the "professional opposition to the Bill, he (Lord Balfour) considered that where it was not merely selfish it was foolish," and it would be well if "M.R.C.S.Eng." and his friends would take this remark to heart.

"M.R.C.S.Eng." challenges me to answer two questions which have nothing to do with the licensing of midwives, for the question before us is *not* whether the poor would be better off with doctor and nurse or with midwife, or as to whether expense in practically carrying out the Bill is or is not a trifling matter. We have to deal with things as they are, the growth of centuries of custom which has hedged midwives about with a protecting hedge so strong that even the House of Commons would not venture to attempt to break through it. I do not propose, therefore, to attempt to answer his conundrums, but I should like to point out that in order to have every woman in her confinement attended by a medical practitioner, it would be necessary to include in any Bill to that end a clause making it compulsory upon any medical man, when called upon to do so, to attend any confinement; otherwise the numbers of available medical men would be insufficient in many parts of the country. Again, it would require at least 77,000 trained nurses (of course your correspondent would wish for a resident trained nurse in every case) to attend the births, now amounting to close upon a million annually. These are important details which "M.R.C.S.Eng." would appear to have overlooked. Medical men now attend only half the confinements in the country, yet I think most of them would not care to increase their number to any extent.

I made an error, I regret to say, in the figures I gave in the JOURNAL of June 29th, in that the 75 places mentioned as having had no births, and on that account no deaths in childbirth, were all places in which there were births. So that the figures should have read that of the 631 Registration Districts there were only 75 in which, in 1899, there were no deaths in childbirth. Hatfield is one of the 75, and therefore Dr. Lovell Drage's suggestion of a fallacy in my figures owing to the inclusion of deaths from heart disease, etc., occurring about the time of childbirth, but really independent of it, is not true in the case of Hatfield.

A leading article in the JOURNAL for September 17th, 1898, on "Puerperal Mortality: Real, Supposed, and Ideal," concludes: "The real puerperal mortality is very much what it was thirty years ago"—that is, before the introduction of antiseptic methods. In this article reference is made to a paper in the same issue of the JOURNAL which shows that the returns of the Registrar-General underrate the death-rate in childbirth, for the very reason that "they do not include the deaths from non-puerperal diseases, even although the deaths occur during the puerperium."

Dr. Boxall has shown that the deaths in childbirth, accidents, and puerperal fever (the Registrar-General's subdivisions) alike rise and fall with the deaths in puerperal fever, and that the death-rate in childbirth in any locality depends upon sepsis and not upon "accidents." Therefore it is undoubtedly true, as I showed in my last letter, that there is a very large amount of puerperal fever in the country, in many parts amounting to epidemics.

I have indicated, therefore, in my various letters the truth of the following points: That there is a very large amount of puerperal fever in this country; that in the practice of trained midwives the death-rate is extremely low, while in that of untrained midwives it is very high; and that no reform is possible until legislation to that end has been obtained. The licensing of midwives subsequent to adequate training and examination is generally agreed to as the best method of effecting reform, and as the one most likely to meet with Parliamentary sanction. The subsequent supervision of midwives, it is believed, will best be carried out locally by the local authorities under rules promulgated by a central authority. It is quite certain that after all this acrimonious disputation Parliament will not place midwives unreservedly in the hands of the medical profession, and it is useless to expect it. The rights of the medical profession run parallel with those of the public in so far that medical attendance becomes a necessity as soon as the midwife has reached her limits, and midwives must therefore be carefully restricted within those limits. But, on the other hand, there is a ground common to both midwives and doctors, and within that neutral zone it is not right that midwives should be unreasonably dealt with or unfairly restricted.—I am, etc.,

Fellows Road, N.W., July 6th. F. R. HUMPHREYS.

[1] BRITISH MEDICAL JOURNAL, July 16th, 1898, p. 165.
[2] BRITISH MEDICAL JOURNAL, March 26th, 1898, p. 851.

## THE ANNUAL MEETING AND SUMMER ATTIRE.

SIR,—The question of dress has been considered. Summer attire will be the order of the day, and the Mayor hopes that the members will be so dressed at the garden party given by himself and the Mayoress at Pittville Park.

Evening dress will be necessary for the dinner and *soirée*, and is desirable for the President's address. Ladies will be in evening dress on these occasions.

G. ARTHUR CARDEW, S. T. PRUEN, W. W. GROSVENOR, Hon. Local Secretaries.

Cheltenham, July 10th.

## THE LATE MR. R. B. ANDERSON.

SIR,—We shall feel much obliged if you will give us your powerful aid in bringing before the medical profession and the public the following facts in connection with the late Mr. R. B. Anderson, F.R.C.S., whose widow and two orphan sons are now living in Tobago, and are in the most straitened circumstances.

A strong representative Committee—with power to add to their number—has been formed with the view of appealing for assistance to those members of the medical profession and of the public who knew and sympathised with the hard case of Mr. Anderson, which aroused more interest and sympathy than any other professional case of recent years, and raised a most vital point in medical ethics.

Shortly the history of this case is that, after being for some time in attendance on a private patient in Tobago, Mr. Anderson refused to continue his attendance, owing to her husband's personal rudeness to himself. On this an action was brought against him by the patient and her husband, and Chief Justice Gorrie (of Trinidad and Tobago) gave damages against Mr. Anderson for neglect in retiring from the case, although the attendance of another medical man had been immediately secured, and no injury to the patient was proved.

Mr. Anderson resisted this judgment; excessive bail was demanded from him, and in default he was imprisoned, and in the end ruined, by this and other illegal acts of judicial oppression. Mr. Anderson then came to England, a Committee was formed to assist him in carrying the West Indian judgments in appeal to the Privy Council, and Mr. Anderson in person brought an action before the late Chief Justice Coleridge in the Queen's Bench for the recovery of damages against the Colonial judges. An English special jury gave a general verdict in his favour, with £500 against one of the judges—Chief Justice Gorrie having died just prior to the trial—but Lord Coleridge gave judgment for the judge, against Mr. Anderson and the verdict in his favour, on the ground that no civil action for damages would lie against judges for acts done in their judicial capacity. This judgment was confirmed on appeal, and from want of funds a further appeal to the House of Lords and the proposed Colonial appeal to the Privy Council were rendered impossible. Finding his legal remedies unsuccessful, owing to the insufficient support he received from the corporations and associations of the profession, Mr. Anderson began an active campaign of medical reform, by which means alone he saw any hope of proving the justice of his case, and securing for the future the rights of the profession which were involved in his case, together with others which, in his opinion, required protection.

His life terminated suddenly from heart disease, under pathetic circumstances, on November 8th last, and our Committee feel that many in the profession, as well as others, will be ready—whether or not they were in agreement with Mr. Anderson's views and methods—to respond to this appeal on behalf of his necessitous family.

Donations "for the late R. B. Anderson Fund," sent and made payable to the Manager, Union Bank of London, Chancery Lane, London, will be duly acknowledged, and the amount subscribed will be dealt with as our Committee, by resolution, may decide.—We are, etc.,

STAMFORD, Chairman.
TIMOTHY HOLMES, Hon. Sec.

July 4th.

P.S.—The list of present subscriptions is as follows:

| | £ | s. | d. |
|---|---|---|---|
| The Earl of Stamford (chairman) ... ... ... | 10 | 0 | 0 |
| Timothy Holmes, Esq., F.R.C.S. (Hon. Treasurer) | 5 | 0 | 0 |
| H. E. Juler, Esq., F.R.C.S. | 2 | 2 | 0 |
| Dr. Higham Hill ... ... | 1 | 1 | 0 |
| Dr. Lorimer Hart ... ... | 1 | 1 | 0 |
| Dr. Alfred Cox ... ... | 1 | 1 | 0 |
| Dr. Wheeler O'Bryen ... | 0 | 10 | 6 |
| Dr. Milner Browne ... | 0 | 10 | 6 |
| Walter Monnington, Esq. Hon. Secretary) ... ... | 1 | 1 | 0 |

## CHRISTIAN SCIENCE AND RELIGIOUS PAPERS.

SIR,—There is evidently more alarm in the Church than among medical men at the spread of "Christian Science." This hue and cry on the part of the Church seems absurd enough, when in religious journals, practically without exception, there are more wondrous marvels recorded week by week than any claimed by Christian Science.

In a religious journal I have read for years I find the following sentence:

It would surely be worth while for doctors to watch the Christian Science journals, and warn the public more emphatically than they have yet done against amateur healers.

In another column of the same I read:

The new patent discs completely overcome deafness and head noises, no matter of how long standing.

I find also infallible cures for consumption, gout, gravel, gall stones, etc.

I have several times appealed to the journal referred to as to the wrong deliberately and consciously done in inserting these advertisements, but no notice was taken. Most of the religious journals are organs of large Christian bodies, with a wide circulation and numerous advertisements. One cannot help feeling indignant at the appeals they make to medical men when their own interests are threatened, and if medical men are to undertake a crusade against "Christian Science," I do not suppose it will be in partnership with those who for the sake of gain insert lying advertisements week by week, and entirely forget allegiance to the higher order of things they profess to advocate.—I am, etc.,

J. H. K.

July 9th.

## APPOINTMENTS IN INDIA NOT UNDER GOVERNMENT.

SIR,—From time to time advertisements appear for medical men to fill non-Government appointments in India, so I would feel obliged if you will publish my remarks for the guidance of possible applicants.

Terms frequently sound good until they are investigated. Full particulars should be obtained as to the geography of the scene of labour, its mileage, the state of the roads, rainfall, local conditions regarding food, and the distance of the nearest railway from which certain supplies must come. The requisite number of horses and the cost of their keepers, grass-cutters, food and shoeing, also the number of bungalow servants and their rates of pay should be ascertained. A free residence and good water supply to be kept in good condition are essential. The conditions as to sick leave should be clearly stated.

If the foregoing conditions are as satisfactory as can reasonably be expected of this country, no European should entertain the idea of coming out for less than Rs. 600 per mensem, horse allowance to be extra. If there are certain special expenses or disadvantages, the conditions or pay, or both, should be commensurate. Before signing the customary agreement a lawyer should look through it to see that the clauses are not entirely one-sided.

To say the least there are many drawbacks to residence in "the glorious East," and the cost of food, servants, and horseflesh has steadily increased for the past few years. Unless reasonable terms, as indicated, are given, it would be much wiser not to come out here.

As it might be prejudicial to me for my name or address to appear, I enclose my card.—I am, etc.,

VICTIM.

June 17th.

## A DEGREE FOR LONDON DIPLOMATES.

SIR,—It may be interesting to many of your readers if at the present moment you reprint the concluding paragraphs of an address I had the honour of delivering in 1885 as President of the Staffordshire Branch of the British Medical Association, which was afterwards printed by desire of some of the members;

And, lastly, let me say a few words about the examining Boards, many of which need reforming. The regulations now enforced are to a great extent absurd. Our students require fewer lectures and much more of bedside teaching. The old system of apprenticeship had much in it to commend it. A year's, or even two years', compulsory attendance as assistant in a general practice would be of immense benefit to most young men. We want it to be more possible for an Englishman, as distinct from a Scotchman or an Irishman, to get the title of Doctor of Medicine in England than it is now. The University of London requires

matriculation before commencing professional studies, and will not permit attendance at hospitals to count for anything until after the matriculation examination has been passed. What can be more absurd? I myself passed preliminary examinations conducted by the Universities of Oxford and Cambridge when a boy at school, and then went straight to St. Bartholomew's Hospital and obtained double qualifications three months after completion of my twenty-first year. I then wrote to the University of London, asking permission to present myself for matriculation, if they would allow my four years of hospital study before matriculating to count. They refused to grant the concession, so that to get its M.D. degree I must have matriculated and gone through all my hospital residence and studies again. This is no isolated case; there are plenty who have had the like experience. I had to earn my living, so with reluctance gave up the hope of getting that title. Some of the universities issue printed conditions in which they state practitioners of fifteen years' standing may be examined for the M.D. degree without residence or complying with the rules applicable to students. They know a man may qualify at 21, so that he ought, when 36, to be admissible for examination: but the same regulations which state he can present himself after fifteen years' practice state also he must produce evidence he is at least 40. Anomalies of this kind need to be expunged from the regulations of the various examining Boards. It ought to "be within the power of all well-educated medical students to obtain a degree in medicine" in England. Whilst desiring "to maintain the standard and scientific character of the medical degrees" of the University of London, we should press for "such alterations as would render the University more popular and more able to move with the times." We want less of physics, zoology, botany, and chemistry in our preliminary education, and far more of bedside tuition and practical teaching over the dead body in our student days. Our students require to be taught the paramount necessity of accuracy of observation, and the need of cultivating the faculty of judgment even at an early period of their college career. We want the University of London or some other corporate body or bodies to organise into one harmonious whole the various educational institutions of London, so that there may be a *real* teaching as well as examining university, having affiliated to it the great medical schools as colleges wherein students might be taught with or without residence within the college, and other places of instruction suitable for the education of gentlemen for the Church, the Bar, a degree in arts, or following the profession of a lawyer, a civil engineer, or a schoolmaster. Is it too much to hope that a few years hence there may be a great teaching and examining university in Birmingham? The Mason Science College, the medical colleges, the sectarian training institutions, and other educational establishments with which I am not so familiar, might possibly afford an excellent nucleus for so desirable an institution in the Midlands. Whatever changes this Association assists in bringing about, let us hope they will be well adapted to answer the designed ends; and that they will contribute to the better bedside education of the great body of medical students, and thus, in the highest degree, to the relief of human suffering and to the well-being of the public and the profession alike.

I had the greatest possible satisfaction at being present on Saturday last at the granting of the first degrees in medicine, science, and arts by the newly-established University of Birmingham, and I note also with equal satisfaction the efforts which are still being made to make it more possible for an Englishman, as distinct from a Scotchman or an Irishman, to obtain a degree in medicine in London at least equal in value to that of the Irish, Scotch, and provincial universities, for I am assured that it is well known that the London Diplomates as a body are as highly educated as graduates of these universities—a result one would naturally expect, since it cannot be denied that the London teachers are unsurpassed in their vocation, and that London itself affords greater opportunities for acquiring practical experience than any other place.—I am, etc.,

Willenhall, July 7th. JOHN T. HARTILL.

## THE REPORT OF THE CONSTITUTION COMMITTEE.

SIR,—In the article on the "report of the Constitution Committee" (BRITISH MEDICAL JOURNAL, June 22nd, 1901) it is stated that no Branch meetings were held by the Dorset and West Hants Branch, only District meetings; but the two meetings held were both Branch meetings, all the members of the Branch being summoned.—I am, etc.,

WILLIAM VAWDREY LUSH,
Weymouth, July 3rd. Hon. Sec. Dorset and West Hants Branch.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## DESPATCHES FROM SOUTH AFRICA.

THE *London Gazette* of Tuesday last contains a despatch from Lord Kitchener, dated May 8th, relating the operations in South Africa during March and April. Lists are appended of officers and men selected for special notice, from which the following are extracted:

Attached R.A.M.C.: Captain L. J. Weatherbe, Medical Officer, Paget's Horse, rendered valuable service throughout the day, and took out an ambulance twice under heavy fire. Civilians: Miss E. Matthews and Miss Hamman tended the wounded all day, though the hospital was under fire 10th Company Imperial Yeomanry: (Colonel Money, 1st Northumberland Fusiliers, despatch on Boer attack on Lydenburg, March 3rd). 5th Victorian Mounted Rifles: Lieutenant J. H. Patterson, Medical Officer, on May 7th, near Rhenoster Kop, proceeded under fire to within 70 yards of the enemy in order to assist wounded men, and remained under close fire for over two hours, and though constantly shot at, continued to attend to the wounded, and remained behind with them when the patrol withdrew, though he was without red cross brassard.

Royal Army Medical Corps: Corporal E. J. Beverley did good work throughout the day. On one occasion proceeded alone to a wounded man after stretcher-bearers had been forced to retire.—(Colonel Money's despatch, March 5th).—Promoted Corporal by Commander-in-Chief.

Royal Army Medical Corps: Corporal Underwood, Private Grant, and Private Shaw all did excellent work.—(Colonel Money's despatch on Boer attack on Lydenburg, March 3rd.)

### ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: ROBERT W. ANDERSON, Staff Surgeon, to the *Andromache*, July 1st; ERNEST A. SHAW, B.A., M.B., Surgeon, to the *Apollo*, July 1st; GILBERT KIRKER, Fleet Surgeon, to Haslar Hospital, July 22nd; FREDERICK J. BURNS, Staff Surgeon, to the *Trafalgar*, July 22nd; CHARLES T. BAXTER, Surgeon, to the *Repulse*, July 5th; H. V. WILLS, Surgeon, to the *Niobe*, July 6th; PERCY T. SUTCLIFFE, Surgeon, to the *Duke of Wellington* from the *Maine*, undated, and to the *Hibernia* from the *Maine*, July 6th.

Inspector-General THOMAS HENRY KNOTT died at the Camberley on July 5th, at the age of 59. He was appointed Surgeon November 12th, 1867; Staff Surgeon December 31st, 1872; Fleet Surgeon, February 19th, 1883; Deputy-Inspector-General, May 30th, 1892; and Inspector-General, April 4th, 1898. He had received Sir Gilbert Blane's gold medal.

### ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL R. W. BARNES, retired, is granted the local rank of Colonel whilst in charge of a general hospital in South Africa, June 8th, 1900.

The following have been discharged from hospital in South Africa to duty: Major W. TURNER, Civil Surgeons J. BROWN, J. POLLARD, and C. W. WILSON.

Civil Surgeon H. M. ROBERTS was severely wounded in the left ankle near Edenburg, South Africa, on July 3rd.

The name and description of Surgeon-Lieutenant-Colonel EDMUND BARON HARTLEY, V.C., Cape Mounted Rifles, who was appointed a Companion of the Most Distinguished Order of St. Michael and St George in the *London Gazette* of April 19th, is as now and not as previously stated.

The undermentioned officers are on passage home from South Africa: Surgeon-Captain J. WREFORD, Civil Surgeon W. H. CROLY, G. ARNOTT, J. A. BLACK, T. L. DAVIS, J. F. DIXON, A. P. GIBBONS, T. F. BOND, W. J. LINDSAY, H. H. HALLICK. Returning invalided: Lieutenants H. E. M. DOUGLAS and M. G. STERLING, Civil Surgeon D. KERNAHAN.

### INDIAN MEDICAL SERVICE.

COLONELS A. M. BRANFOOT, M.B., C.I.E., and A. F. DOBSON, M.B., both of the Madras Establishment, are appointed Principal Medical Officer at Bangalore and Rangoon respectively.

Lieutenant-Colonel J. F. MACLAREN, M.B., Bengal Establishment, has been awarded the Volunteer Officers' Decoration.

Inspector-General JAMES ALEXANDER DUNBAR, M.D., late Bengal Establishment, died at 44, Northside, Clapham Common, on June 6th, in the 86th year of his age.

### MILITIA MEDICAL STAFF CORPS.

THE following announcement is substituted for that regarding Surgeon Captain W. Fletcher, M.B., D.S.O., which appeared in the *London Gazette* of February 15th: Surgeon-Lieutenant W. FLETCHER, M.B., D.S.O., to be Surgeon-Captain, and to remain seconded, December 1st, 1900.

Surgeon-Captain A. H. BENSON and Surgeon-Lieutenant J. CLERKE are seconded for service with the R.A.M.C. in South Africa, the former from October 3rd, 1899, the latter from February 23rd, 1900.

### IMPERIAL YEOMANRY.

SURGEON-CAPTAIN W. STUART PALM, M.B., Fifeshire and Forfarshire Imperial Yeomanry, resigns his commission, July 6th.

### THE VOLUNTEERS.

MR. GEORGE H. GOLDSMITH, M.B., is appointed Surgeon-Lieutenant in the 1st Bedfordshire Engineers, July 6th.

The undermentioned officers resign their commissions from July 6th: Surgeon-Lieutenant T. W. A. DAMAN, M.B., 1st Volunteer Battalion the Lincolnshire Regiment; Surgeon-Lieutenant H. ROBERTS, 1st Volunteer Battalion the Duke of Cornwall's Light Infantry; Surgeon-Captain A. EDDOWES, M.D., 24th Middlesex Rifles.

Surgeon-Lieutenant J. OLDFIELD, 1st Volunteer Battalion the Essex Regiment, is promoted to be Surgeon-Captain, July 6th.

Honorary Assistant Surgeons W. PRITCHARD and G. W. SPARKE, 4th (Nottinghamshire) Volunteer Battalion the Derbyshire Regiment (Sherwood Foresters), retire under Paragraph 111, Volunteer Regulations, retaining their uniform, July 6th.

Surgeon-Lieutenant-Colonel W. G. STEVENS, 2nd (Renfrewshire) Volunteer Battalion the Argyll and Sutherland Highlanders, resigns his commission, retaining his rank and uniform, July 6th.

### CHARGE PAY.

C.P. writes: Among the many suggestions for the reform of the R.A.M.C. I think a most important point is too frequently forgotten, namely, the restoration charge pay. This was taken from us on the abolition of the regimental system under a promise that it would be restored as charge pay for charges of station hospitals. This, however, has never been done. I have held charges of station hospitals almost uninterruptedly for fifteen years, but never drew a halfpenny of charge pay.

# MEDICO-LEGAL AND MEDICO-ETHICAL.

### ILLEGAL PRACTICE OF MEDICINE BY HERBALIST.

An inquest on the body of Mrs. Lucy Rex, a married woman, who had lived with her husband at North Hall Street, Kirkstall Road, Leeds, was held on June 28th by Mr. Malcolm, the Coroner for the city. From the evidence as reported in the *Yorkshire Daily Post*, it appeared that the woman had pills and a mixture supplied her by a herbalist named Harvey, that shortly after taking the medicines she died, and that death resulted from blood poisoning following abortion. Harvey stated in his evidence that the mixture contained "pennyroyal, rue, tansy, featherfew, and motherwort," and that the pills he supplied were obtained from a firm of wholesale chemists, but he was not sure that those produced in court were what he had sold the deceased. According to the analysis of the pills made by Dr. Stevenson, of Guy's Hospital, they contained aloes and iron, and he stated in his report that two of these taken three times a day, and for several days, would set up irritation. The jury found that the deceased had died from acute general peritonitis from taking certain medicine; that the medicine was supplied with a knowledge of the purpose for which it was required by John Harvey, a botanist. They added that the sale of such drugs by non-professional men afforded facilities for the crime of procuring abortion. The husband and Harvey, they thought, should be severely censured, and Harvey should cease to sell such medicines for such purposes.

The Coroner, in censuring Harvey, said that supplying such medicines might place him in a very serious position. The sale of such articles held out great temptations to a certain class of people, and led to irreparable mischief and crime. He added that the jury had taken a merciful view of the case.

Assuming the report as given to be correct, it would appear that the jury were of opinion that Harvey sold the drugs in question with the knowledge that they were to be used for the purpose to which they were applied, and we can only note the verdict with surprise, and fail to understand why so lenient a view of the position was taken by them. It is to be hoped that the matter will not be allowed to rest here, as it certainly seems to be one for further investigation and inquiry.

### THE VIAVI COMPANY.

The following paragraph appeared in *Truth* of July 4th:

"It is scarcely creditable to the Leeds Corporation that the Town Hall should have been used last week for a 'Viavi Health Lecture.' Before the building is let the object for which it is required should surely be ascertained, and the least inquiry would have elicited the fact that this so-called 'health lecture' is merely an elaborate puff of the quack concern which is carried on under the name of the Viavi Company. The whole business is not only a fraud, but a fraud of a peculiarly wicked and dangerous character, through which silly women jeopardise their health and lives, besides being humbugged out of their money. This has been proved more than once at inquests on victims of the company, and only a few weeks ago a crushing exposure of these pestilent quacks was given in a trial before Judge Parry at Manchester County Court."

Leeds is by no means the only corporation, and the Viavi Company is by no means the only enterprise as to which similar remarks might be made. It seems to us a most extraordinary thing that corporations should permit the municipal buildings to be used for such purposes. The fact that they have been so used has in some instances subsequently been advertised in such a way as to convey to the public the impression that the quack remedies had some kind of municipal sanction and approval.

### T. JOHN AMBULANCE EXAMINATIONS.

Observer writes: In the British Medical Journal of June 29th, p. 1655, "X. Y. Z.," enters a protest against examinations of candidates in St. John Ambulance work being associated with a tea and concert, and also that the examiner is of the same place as the teacher and class. He then goes on to allude to this as a method of indirect touting.

I have been engaged in St. John Ambulance work for nearly twenty years, and have never seen either of these things done. As an examiner I am sent, for miles around, but have never examined a class in the first instance in the town I live, and under all circumstances the classes are examined free from any demonstration, the candidates, secretary, and occasionally the medical teacher, alone being present. I quite agree with "X. Y. Z." that what he says is most undesirable, and I am sure that on representation to the Chief Secretary such a demonstration would be strongly objected to, and means taken to prevent it.

The appeal to the General Medical Council to prevent indirect touting is deserving of much consideration. If a solicitor is guilty of such, and is reported, his position is a very serious one. In the medical profession it is a daily glaring act, and the only punishment a man gets is the loss of respect that amongst honourable men would be his. It is impossible in a letter of this sort to enumerate the many methods adopted to secure patients, from the man who sends flowers to another's patients, to the one who has tea parties to people below him in social position, and the other who visits another's patients for an evening pipe, and talks scrappy medicine. There are many gradations, one as dishonourable as the other. These to my mind are the things that want putting a stop to. But, how? Solve that problem and the profession would soon be clean. I often think that those men who adopt these tactics think that they are not observed—that is part of the egotism that prompts them to such low play.

### THE LAW OF TRESPASS.

"Jesmond" asks what is the law of trespass as applied to medical men. He says that he is under the impression that a medical man when going his rounds on foot has the right to cross any land or fields, and that no farmer can legally prevent him.

*** Under the common law a foot passenger, on finding the highway blocked by an inundation or other natural obstacle, has a right to cross the adjoining land, so as to clear the obstacle, and cannot be sued for so doing. But a medical man has no more right than anyone else to trespass on the land of his neighbours when going his rounds. Few farmers would object to a doctor making a short cut over their land if he did no harm, but all would object to his claiming it of right.

### ASSISTANTS AND FEES FOR MEDICAL EVIDENCE.

Cellulitis.—In the absence of an agreement to the contrary an assistant is entitled to none of the fees received for giving evidence either at inquests or in courts of law, where the matter on which he gives evidence has arisen in the course of his principal's practice.

# PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

### HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,250 births and 3,325 deaths were registered during the week ending Saturday last, July 6th. The annual rate of mortality in these towns, which had been 15.0 and 14.8 per 1,000 in the two preceding weeks, rose again last week to 15.1. The rates in the several towns ranged from 9.3 in Leicester, 10.7 in Burnley, 11.0 in Swansea, 11.3 in Derby, and 11.6 in Norwich, to 19.3 in Gateshead and in Newcastle, 19.6 in Blackburn, 20.2 in Birkenhead, and 21.9 in Liverpool. In the thirty-two large provincial towns the mean death-rate was 15.6 per 1,000, and exceeded by 1.2 the rate recorded in London, which was 14.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London this death-rate was equal to 1.8 per 1,000, while it averaged 2.1 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 3.3 in West Ham and in Portsmouth, 3.4 in Bolton, 3.8 in Liverpool, and 5.6 in Birkenhead. Measles caused a death-rate of 1.1 in Wolverhampton, 1.4 in West Ham, and 2.8 in Birkenhead, scarlet fever of 1.0 Derby and 1.2 in Blackburn; whooping-cough of 1.3 in Bradford: and diarrhœal diseases of 1.2 in Bolton, 1.5 in Leeds, 2.2 in Portsmouth and in Liverpool, and 2.3 in Birkenhead. In none of the thirty-three towns did the death-rate from "fever" reach 1.0 per 1,000. The 63 deaths from diphtheria in the thirty-three towns included 27 in London, 7 in Leeds, 4 in Liverpool, and 4 in Manchester. No fatal case of small-pox was registered last week either in London or in any of the thirty-two large provincial towns: 2 small-pox patients were admitted into the Metropolitan Asylums Hospitals during the week, and 6 remained under treatment on Saturday last, July 6th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 1,522 to 2,821 at the end of the ten preceding weeks, had further risen to 2,895 on Saturday last; 363 new cases were admitted during the week, against 323, 369, and 408 in the three preceding weeks.

### HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, July 6th, 1,014 births and 606 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.6 and 17.3 per 1,000 in the two preceding weeks, rose again to 19.0 last week, and was 3.9 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 6.3 in Perth and 15.1 in Dundee, to 20.6 in Glasgow and 24.8 in Leith. The zymotic death-rate in these towns averaged 2.5 per 1,000, the highest rates being recorded in Dundee and Leith. The 303 deaths registered in Glasgow included one from small-pox, 16 from measles, 4 from scarlet fever, 3 from diphtheria, 12 from whooping cough, and 7 from diarrhœa. Two fatal cases of measles, and 4 of whooping cough were recorded in Edinburgh. Four deaths from measles, 3 from whooping cough, and 4 from diarrhœa occurred in Dundee; 2 from whooping cough, in Paisley; 2 from measles, 3 from whooping cough, and 3 from diarrhœa in Leith; and 3 from diarrhœa in Greenock.

# MEDICAL NEWS.

Mr. James Cantlie, F.R.C.S., has been appointed Surgeon in London to the North-Eastern Railway.

Dr. A. Jasper Anderson, medical officer of health for Blackpool, has been appointed medical officer of health for Capetown, and will leave England in September.

Medical Magistrate.—Dr. R. Purnell of Newlyn, Wells, took the oath as a county magistrate at the recent Somerset Quarter Sessions.

The Meath Cottage of Comfort at Hayling Island will be opened on July 20th, when the anniversary festival of the Meath Home will take place.

Queen Alexandra will present certificates at Marlborough House on July 19th to the eighth and ninth thousand nurses who have joined the Royal National Pension Fund for Nurses.

The King of Italy has conferred on Mr. Distin Maddick, the senior surgeon to the Italian Hospital in London, the Cross

of Cavaliere della Corona d'Italia, and will present him with the insignia of the order.

We regret to notice the announcement of the sudden death of Dr. G. H. De'Ath, Medical Officer of Health for Buckingham, and coroner for the Winslow Division of Bucks, which occurred on July 7th, after a short illness.

At a meeting of the Burslem Town Council on July 8th it was decided to send a circular to the members of the medical profession in the borough informing them that the Council would supply them with antitoxin to be used in cases of diphtheria where the patients or their friends were too poor to purchase it.

Annual Temperance Breakfast.—Mr. John Turner Rae, General Secretary of the National Temperance League, 34, Paternoster Row, London, E.C., asks us to state that a breakfast will be given by the National Temperance League in the Parish Room, St. James's Square, Cheltenham, on Thursday morning, August 1st, at 8 A.M. Mr. Rae will be glad to send an invitation to any member of the Association desirous of attending.

Edinburgh Royal Infirmary.—The Rev. John Balfour Atkinson, rector since 1887 of Larling, Thetford, who died on March 6th last, has bequeathed, in trust for the Royal Infirmary of Edinburgh, the sum of £10,000, and, subject to the payment of the income thereof to the testator's sister, he has left the residue of his property (the nett value being £59,305) in trust for the Royal Infirmary.

The Princess Louise, who was accompanied by the Duke of Argyll, opened the Kensington Dispensary and Children's Hospital on July 8th. Her Royal Highness was received by the Chairman of the Committee of Management, Mr. Edward Spicer; the Chairman of the House Committee, Surgeon-General Hamilton; Dr. Webber, the Chairman of the Medical Board; and Dr. Corbould, one of the members of the medical staff, together with the Honorary Secretary, Mr. Holgate Batten. The institution was inspected, and afterwards an address was presented to the Princess, in which it was stated that the dispensary was founded in the year 1840, but that it had recently been felt that it was desirable to provide a children's ward. The Princess then declared the ward open.

Presentations.—Dr. F. C. Wood, instructor of the first-aid class of the St. John Ambulance Association at Ripley, was recently presented with a walking stick by the members of the class in appreciation of his services. At Oswestry, Dr. R. de la Poer Beresford, the instructor of the ambulance class of the Cambrian Railways Centre of the Association, was presented, on the occasion of his marriage, with an illuminated address testifying to the regard of the members of the class and their appreciation of the great services he had rendered, and in acknowledgment of the labour and self-sacrifice he had given largely in excess of the requirements of his office.

Annual Prize Distribution at Guy's.—Lord James of Hereford presented the prizes and medals to the successful students of Guy's Hospital on July 10th. After the distribution he gave an address, in the course of which he directed the attention of the students to the great career opening before them. He referred to the condition of the people at the opening of Queen Victoria's reign, and remarked that our gaols are emptying, the schools filling, and contentment and loyalty evident at the present time. These changes he believed to be due to the spread of sympathy between class and class, as evidenced by education, recreations, and other benefits extended to the poorer classes. No one, he said, had greater opportunities for the display of sympathy than the doctor. But he who came only to save or cure only fulfilled half his duty; he must also bring assistance to the spirit of the sick, and consolation, aid, and guidance to those who stand by the bedside. On moving the vote of thanks to Lord James, Mr. Cosmo Bonsor, the Treasurer, referred to some of the events of the past year. He announced the retirement of Dr. L. E. Shaw from the post of Dean, and the acceptance of that post by Dr. Fawcett. The Club's Union had elected Sir F. Wills as President. He then referred to those Guy's men in other lands; to the success of the Yeomanry Hospital, organised by Guy's men and chiefly staffed with Guy's men and nurses. Finally he announced the receipt of a donation of 1,000 guineas from Lord Portman as a thank offering for recovery from illness.

The Fourteenth International Medical Congress.—The fourteenth meeting of the International Medical Congress is to be held in Madrid from April 23rd to 30th, 1903. On June 11th the Organising Committee held a meeting, at which the Minister of Public Instruction and the Alcaide of Madrid were present, and respectively gave promises of support on behalf of the Government and the municipality. The Secretary of the Committee, Dr. Fernandez Caro, submitted a provisional scheme of the arrangements, with the names of the presidents and secretaries of the various sections. Professor Calleja, the President of the Organising Committee, made an eloquent appeal to the Government to help them to organise a meeting that should present Spanish medicine to the scientific world in a favourable light. The work of the Congress is to be divided into sixteen sections, as follows: (1) Anatomy (Anthropology, Comparative Anatomy, Embryology, Descriptive Anatomy, Normal Histology and Feratology); (2) Physiology, Biological Physics, and Chemistry; (3) General Pathology, Pathological Anatomy, and Bacteriology; (4) Therapeutics, Pharmacology, and Materia Medica; (5) Internal Pathology; (6) Neuropathology, Mental Diseases, and Criminal Anthropology; (7) Pædiatry; (8) Dermatology and Syphilography; (9) Surgery and Surgical Operations; (10) Ophthalmology; (11) Otology, Rhinology and Laryngology; (12) Odontology; (13) Obstetrics and Gynæcology; (14) Military and Naval Medicine and Hygiene; (15) Epidemiology and Technical Sanitary Science; (16) Forensic Medicine. The Congress will be held under the patronage of King Alfonso and the Queen Regent. The subscription for ordinary members is 30 pesetas. Ladies belonging to the families of members and accompanying them may, on payment of 12 pesetas, procure a special card which will enable them to obtain the reductions of railway fares offered to members, and to be present at all the ceremonies and festivities of the Congress.

## MEDICAL VACANCIES.

The following vacancies are announced:

BELFAST DISTRICT LUNATIC ASYLUM.—Locum Tenens. Salary, £3 3s. per week, with residence and allowances. Applications to the Medical Superintendent.

BIRMINGHAM: GENERAL HOSPITAL.—House-Surgeon. Appointment for six months. No salary, but residence, board, and washing provided. Applications to the House Governor by July 26th.

BIRMINGHAM: QUEEN'S HOSPITAL.—House-Surgeon. Post tenable till August 31st, 1902. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Secretary by July 24th.

BISHOP AUCKLAND: RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary, £350 per annum. Applications to the Clerk to the Council, Union Offices, Bishop Auckland, by July 31st.

BRENTWOOD: ESSEX COUNTY ASYLUM.—Junior Assistant Medical Officer; not over 25 years. Salary, £120 per annum. Applications to the Medical Superintendent.

BRIGHTON, HOVE, AND SUSSEX THROAT AND EAR HOSPITAL.—Non-resident House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £75 per annum. Applications to the Secretary, 10, Black Lion Street, Brighton.

BRISTOL ROYAL INFIRMARY.—(1) Anæsthetist and Junior House-Surgeon. (2) Casualty Officer. Appointments for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Secretary by August 1st.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with furnished apartments, board, and washing. Applications, endorsed "Assistant House-Surgeon," to be sent to the Secretary.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon; unmarried. Salary, £60 per annum, with board and lodging. Applications to the Secretary by July 26th.

CARLISLE: CUMBERLAND AND WESTMORLAND ASYLUM, Garlands.—Senior Assistant Medical Officer; unmarried, not over 30 years of age. Salary, £150 per annum, rising to £180, with board, lodging, etc. Applications to the Medical Superintendent.

CARLISLE DISPENSARY.—Resident Surgeon; unmarried. Salary, £150 per annum, with apartments. Applications to the Honorary Secretary, Mr. G. A. Lightfoot, 23, Lowther Street, Carlisle.

CHESTER GENERAL INFIRMARY.—(1) House-Surgeon. (2) House-Physician. Salary, £100 and £90 per annum respectively, with residence and maintenance. Applications to the Chairman of the Board of Management, 29, Eastgate Row North, Chester.

CROYDON UNION INFIRMARY. Resident Assistant Medical Superintendent and Dispenser. Salary, £120 per annum, increasing by £10 yearly to £150, with furnished apartments, rations, and washing. Applications on forms provided to be sent to the Clerk to the Guardians, Union Offices, May Day Road, Croydon, by July 15th.

DENBIGH: DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary, £100 per annum to commence, with board, residence, and washing. Applications to the Secretary.

GERMAN HOSPITAL, Dalston.—(1) Honorary Assistant Physician; (2) Honorary Assistant Surgeon. Applications to the Secretary by July 22nd.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer (male) unmarried, and age not over 30. Salary, £170 per annum, with board, lodging, washing, and attendance. Applications to the Medical Superintendent by July 20th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, N.—(1) House-Physician. Salary at the rate of £60 per annum. (2) Junior House-Physician. Salary at the rate of £30 per annum. (3) Non-Resident Assistant House-Surgeon. Salary at the rate of £30 per annum. Board, lodging, and washing provided for (1) and (2), and luncheon and dinner provided for (3). Appointments for six months. Applications to the Secretary by July 15th.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £75 per annum, with board, residence, and laundry. Applications to the Honorary Secretary.

HOSPITAL FOR DISEASES OF THE SKIN, Stamford Street, S.E.—Honorary Assistant Surgeon or Assistant Physician. Applications to the Secretary by July 20th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.—(1) Medical Registrar. Honorarium 50 guineas. (2) Clinical Pathologist and Bacteriologist. Honorarium, 50 guineas. (3) Second Anæsthetist. Honorarium, 15 guineas. (4) House-Surgeon, unmarried. Appointment for six months. Salary, £20, with washing allowance, board, and residence. Appointments for (1), (2), and (3) for one year, but (1) is eligible for re-election. Applications, on forms provided, to be sent to the Secretary by July 18th.

HULL ROYAL INFIRMARY.—Casualty Officer. Salary, £60 per annum, with board and lodging. Applications to the Chairman of the House Committee.

KING'S COLLEGE, London.—Professor of General Pathology and Bacteriology. Applications to the Secretary by July 22nd.

KING'S COLLEGE HOSPITAL, London.—Assistant Physician (or Surgeon) for Diseases of the Throat. Applications to the Secretary by July 22nd.

LEICESTER INFIRMARY.—Clinical Clerk and Dresser. Honorarium £10 10s. for six months, with apartments, board, and washing. Applications to the Secretary.

LIVERPOOL: DAVID LEWIS NORTHERN HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with residence and maintenance. Applications to the Chairman by July 24th.

LIVERPOOL PORT SANITARY AUTHORITY.—Assistant Medical Officer of Health. Salary, £300 per annum. Applications, endorsed "Assistant Medical Officer of Health," to be sent to the Town Clerk, Municipal Buildings, Liverpool, by July 19th.

LIVERPOOL STANLEY HOSPITAL.—Honorary Assistant Physician. Applications to the Honorary Secretary by July 15th.

LONDON COUNTY ASYLUM, Banstead.—Medical Superintendent. Salary, £1,000 per annum, with unfurnished house, etc. Applications on forms provided to be sent to the Clerk of the Asylums Committee, 6, Waterloo Place, S.W., by July 17th.

LONDON LOCK HOSPITAL, 91, Dean Street, W.—House-Surgeon to the Male Hospital. Salary, £60 per annum, with board, lodging, and washing. Applications to the Secretary by July 19th.

MACCLESFIELD: CHESHIRE COUNTY ASYLUM.—Locum Tenens for Assistant Medical Officer. Terms, £3 3s. per week, with railway fare both ways. Applications to the Medical Superintendent.

MANCHESTER: HULME DISPENSARY.—Honorary Physician. Applications to the Honorary Secretary of the Medical Committee by July 24th.

MANCHESTER: OWENS COLLEGE.—(1) Senior Demonstrator in Physiology. Stipend, £100, rising to £200. (2) Junior Demonstrator in Physiology. Stipend, £100, rising to £150. Applications to the Registrar by July 18th.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House-Surgeon. Salary, £80 per annum, with residence, board, and washing. Applications, endorsed "House-Surgeon," to be sent to the Chairman of the Board of Management by July 18th.

NEWCASTLE UPON-TYNE CITY LUNATIC ASYLUM.—Second Assistant Medical Officer; unmarried and under 30 years of age. Salary, £140 per annum, rising to £160. Applications to the Medical Superintendent.

NEWCASTLE-ON-TYNE: HOSPITAL FOR SICK CHILDREN.—Male Resident Medical Officer. Salary, £100 per annum, with board, lodgings, and laundry. Applications to the Secretary.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—(1) House-Surgeon. (2) House Physician. (3) Dental Surgeon, £100 per annum. Appointment for (1) and (2) for six months, with salary at the rate of £80 per annum each, with board, residence, and laundry allowance. Applications to the Secretary at the City Office, 27, Clement's Lane, E.C., for (1) by July 17th, and (2) by July 15th.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill, Stoke upon-Trent.—Assistant House-Surgeon. Board, apartments, and washing provided, and at least £10 honorarium at the end of six months. Applications to the Surgeon by July 29th.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Assistant Physician. Applications to the Secretary by July 23rd.

NOTTINGHAM GENERAL DISPENSARY.—(1) Senior Resident Surgeon. Salary, £200 per annum, increasing £15 yearly. (2) Two Assistant Resident Surgeons. Salaries £160 per annum, increasing £10 yearly. Furnished apartments, attendance, etc., provided in each case. Applications to the Secretary, Mr. M. I. Preston, Journal Chambers, Nottingham.

OLDHAM INFIRMARY.—Senior House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Candidates to state if willing to accept Junior post at £75 per annum. Applications to the Honorary Secretary by July 15th.

PLYMOUTH BOROUGH ASYLUM.—Assistant Medical Officer; unmarried. Salary, £150 per annum, rising to £250 per annum, with furnished apartments, board, and washing. Applications, endorsed "Assistant Medical Officer," to be sent to Dr. W. H. Bowes, Medical Superintendent, by July 20th.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Road, S.E.—Assistant Surgeon; must be F.R.C.S.Eng. Applications to the Secretary by July 23rd.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Appointment for six months. Salary at the rate of £60 per annum, with furnished apartments, board, and washing. Applications to the Secretary by July 29th.

ROYAL ORTHOPÆDIC HOSPITAL, Oxford Street, W.—Resident House-Surgeon and Registrar; unmarried. Appointment for six months but eligible for re-election. Salary, £100 per annum, with full board. Applications to the Secretary by July 27th.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months but capable of renewal. Salary at the rate of £40 per annum, with board and washing. Applications to the Secretary.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon. Salary at the rate of £50 per annum, with rooms, board, and washing. Applications to the Secretary by July 19th.

SWANSEA UNION WORKHOUSE.—Assistant Medical Officer; not over 40 years of age. Knowledge of Welsh desirable. Salary, £200 per annum. Applications on forms provided to be sent to the Clerk by July 24th.

TAUNTON: TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £60 per annum, with board, lodging, and laundry. Applications to the Honorary Secretary.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon, unmarried. Salary, £100 per annum, increasing £10 a year, with board and apartments. Applications to the Secretary.

WADSLEY: WEST RIDING ASYLUM.—(1) Third Assistant Medical Officer. (2) Fifth Assistant Medical Officer. Salary, £150 per annum rising to £200, and £140 rising to £160 per annum respectively, with board, etc. Applications to the Medical Superintendent.

WEST HAM HOSPITAL, Stratford, E.—Junior House-Surgeon. Salary, £75 per annum, with board, residence, etc. Appointment for one year, but eligible for Senior House-Surgeon for a further year; salary, £100. Applications, marked "Junior House-Surgeon," to be sent to the Secretary by July 20th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Assistant House-Surgeon. (2) Assistant House-Physician. Appointments for six months. Honorarium at the rate of £75 per annum, with board, lodging, and washing in each case. Applications to the House Governor by July 22nd.

WORKSOP DISPENSARY AND VICTORIA HOSPITAL.—House-Surgeon and Dispenser. Salary, £150 per annum, with rooms and attendance. Applications to Mr. C. A. Whall, 44, Bridge Street, Worksop.

## MEDICAL APPOINTMENTS.

ALEXANDER, W. H. M., M.B., Ch.M.Glasg., appointed District Medical Officer of the Goole Union, *vice* M. W. Renton, M.B., C.M.Aberd., resigned.

ANDERSON, T. L., M.B.Melb., appointed Special Medical Officer for Plague at Fremantle, Western Australia.

BARLOW, Thos. Wm. N., M.R.C.S., L.R.C.P.Lond., D.P.H.Camb., appointed Medical Officer of Health for the Borough of Bootle, Visiting Medical Officer to the Linacre Hospital, and Surgeon to the Police Force and Fire Brigade.

BISHOP, C. T., M.D.Lond., appointed Assistant Medical Officer at the Central London Sick Asylum District at Hendon.

BLACKBURNE, G. H. S., M.B., Ch.B.Melb., appointed Special Medical Officer for Plague at Perth, Western Australia.

BONNEY, W. F. Victor, M.D., M.S.Lond., F.R.C.S., M.R.C.S., appointed Registrar to the Chelsea Hospital for Women.

BREW, Richard Hugh, L.R.C.P., appointed Medical Officer of Health for the Sutton Rural District, *vice* A. H. Whicher, resigned.

COAD, S. A., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Luton Union, *vice* H. C. Pauli, L.R.C.P., L.R.C.S.Edin.

COOPER, Ludford, M.R.C.S., L.R.C.P.Lond., appointed Assistant Ophthalmic Surgeon to St. Bartholomew's Hospital, Rochester.

EVERED, A. C., L.R.C.P., L.R.C.S.Edin., appointed Special Medical Officer for Plague at Perth, Western Australia.

GODFREY, P. J., L.R.C.P.Edin., appointed Health Officer at Port Strahan, and also Medical Officer at Port Macquarie, Tasmania.

HARPER, G. C., M.B., appointed House-Physician to the Perth Public Hospital, *vice* G. H. S. Blackburne, M.B., Ch.B.Melb., resigned.

HENDERSON, J. L., M.B., appointed Health Officer at North Ovens, Victoria.

HENDRY, A., M.B., Ch.B., appointed Resident Surgeon to the Southland Hospital, Invercargill, New Zealand.

HOUNSELL, F. C. W., M.R.C.S.Eng., L.R.C.P.Lond., appointed District Medical Officer of the Weobley Union, *vice* J. J. Wallace, M.B., B.Ch.R.U.I.

INGOLDBY, F. J., M.R.C.S.Eng., L.R.C.P.Edin., appointed Quarantine Officer at Albany, Western Australia.

LEETHBRIDGE, E. W., M.B., Ch.M., appointed Medical Superintendent of the Sunbury Lunatic Asylum, Victoria, *vice* J. A. O'Brien, M.B., Ch.M.Glasg.

MATURIN, F. H., M.R.C.S.Eng., L.R.C.P.Lond., appointed District Medical Officer of the Lymington Union.

MCKENZIE, J., M.A., M.B., Ch.B.Aberd., appointed House-Surgeon to the West London Hospital.

MEIKLE, H. H., M.B., M.S.Glasg., appointed Medical Officer of Health to the Darlington Rural Council.

MORRIS, E. W., M.R.C.S., appointed Assistant Health Officer at Port Adelaide, South Australia.

PENDLEBURY, Herbert S., F.R.C.S., appointed Surgeon to the Royal Hospital for Children and Women, Waterloo Bridge Road.

POTTS, A. W., M.A.Cantab., M.D., C.M.Edin., appointed Assistant to the Professor of Therapeutics in the University of Birmingham.

RENSHAW, Knowles, M.A., M.D., D.P.H.Cantab., appointed Assistant Medical Officer to the Manchester Hospital for Consumption and Diseases of the Throat and Chest.

SHEILD, A. Marmaduke, F.R.C.S., appointed Consulting Surgeon to the Royal Hospital for Children and Women, Waterloo Bridge Road.

SHEPARD, A. H., M.B., B.S.Dub., appointed District Medical Officer of the Macclesfield Union.

SPENCER, W., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Bolsover District of the Chesterfield Union, *vice* T. W. Cole, M.B.Dub., resigned.

TURNER, B. R., M.B.Camb., appointed District Medical Officer of the Oundle Union.

WIMBERLEY, E. C., L.S.A., appointed District Medical Officer of the Towcester Union.

WITHERS, Oliver, M.D.Durh., M.R.C.S.Eng., appointed Medical Officer of Health to the Sale District Council, *vice* J. Sheldon Withers, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

## DIARY FOR NEXT WEEK.

### MONDAY.

**Medical Graduates' College and Polyclinic,** 22, Chenies Street, W.C., 4 P.M.—Consultation (Skin).

### TUESDAY.

**Medical Graduates' College and Polyclinic,** 22, Chenies Street, W.C., 4 P.M.—Consultation (Medical).

### WEDNESDAY.

**Medical Graduates' College and Polyclinic,** 22, Chenies Street, W.C., 4 P.M.—: Consultation (Surgical).

**Hospital for Consumption and** Diseases of the Chest, Brompton, 4 P.M. —Lecture on Cardiac Pain.

### THURSDAY.

**Medical Graduates' College and Polyclinic,** 22, Chenies Street, W.C., 4 P.M.—Consultation (Surgical).

**Hospital for Sick Children,** Great Ormond Street, W.C., 4 P.M.—Demonstration of Ophthalmic Cases.

### FRIDAY.

**Medical Graduates' College and Polyclinic,** 22, Chenies Street, W.C., 4 P.M.—Consultation (Throat).

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

BENNETTS.—On July 1st, at Bozeat, Northants, the wife of F. Bennetts, M.R.C.S., L.R.C.P., of a daughter.

NICHOL.—On July 6th, at 11, Ethelbert Terrace, Margate, the wife of Frank Edward Nichol, of a daughter.

SCORER.—On July 7th, at Maplestead, Old Christchurch Road, Bournemouth, the wife of Frank Scorer, of a son.

WYNDHAM.—On June 27th, at Croft Lodge, Goring-on Thames, Winifred, the wife of T. Lancelot Wyndham, of Bromley, Kent, of a daughter.

### MARRIAGES.

HEWETSON—WOOLLEY.—On July 6th, at the Methodist Free Church, Foxhill Bank, Accrington, by the Rev. W. O. Rank, the Rev. John Greenwood, and the Rev. J. J. Layland, John T. Hewetson, M.D., F.R.C.S.Eng., son of Mr. Pearson Hewetson, of Townfoot, Brampton, Cumberland, to Bertha, younger daughter of Mr Edward Woolley, of Accrington. At home, 85, Edmund Street, Birmingham, September 10th, 11th, and 12th.

PILCHER—EDMONDSON.—On July 8th, at St Margaret's, Whalley Range, by the Rev. W. Canton, A. McL. Pilcher, M.B., Ch.B., of Mosboro, Sheffield, son of Henry Pilcher, Manchester, to Eleanor, daughter of the late Henry Paterson Edmondson, of Manchester.

RISELEY—CLEAVER.—On July 4th, at St John's Church, Ranmoor, Sheffield, by the Rev. J. G. Williams, Vicar, Dr. Stanley Riseley, son of Henry L. Riseley, Esq., of Bristol, to Gladys Muriel, only child of the late Dr. W. J. Cleaver and Mrs. Cleaver, of Rutland Park, Sheffield.

# LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

## QUERIES.

WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided.

J. C. L. wishes to know of a bracing town where a sufferer from neurasthenia might reside.

C. F. W. asks for information as to how the Italian method by injecting arsenic and iron in cases of anæmia is carried out. What preparations of these drugs are used, and in what doses, and how often, and what (if any) precautions have to be taken?

### TREATMENT OF SENILE PRURITUS.

S. H. J. asks for suggestions for the treatment of an inveterate case of senile pruritus, which has resisted all the usual remedies, both internal and external.

### PRACTICE IN AUSTRALIA.

ROB asks whether it would be advantageous for an F.R.C.S.Edin., and L.R.C.P., who intends going to an up-country station or small town inland in Australia to take the D.P.H. qualification before going out? Would the pay for an appointment as M.O.H. in Australia be remunerative to one who does not wish to give up private practice? Are limitations as to private practice enforced on M.O.H.?

*** There are many appointments as Government Medical Officer in country towns. In the large towns the office of M.O.H. is fairly remunerated, and, except in the capitals (Sydney, Melbourne, etc.), private practice is, we are told, usually allowed.

## ANSWERS.

### TEMPORARY REMOVAL OF HORSESHOES.

DR. T. M. MARTIN (Lochwinnoch) writes: It is always better that the hardworked horse of a country practitioner should have a rest every year for a period of one month or two, according to convenience of country work. If the animal's shoes are fairly well worn, and the hoofs do not need paring, turn the animal out to grass. The soft ground keeps the feet healthy, and adds to the general comfort of the animal. I would only remove the shoes to pare the hoofs, and then adjust a thin plain plate to keep the hoofs from breaking. If other animals are in field remove the hind shoes entirely. August and September are the best months to graze a horse.

## LETTERS, NOTES, Etc.

### MEDICAL ATTIRE.

CENTURIO writes: Why should not the medical profession, not only at the British Medical Association meetings, but for the future, dress as "gentlemen," as is done in all other countries? Why should we continue to dress in a manner which in all other men would not only be absolutely "bad form," but would also show utter ignorance as to how to dress properly? Moreover, as the frock-coat suit and top hat are the most expensive of costumes to purchase and keep in order, they are frequently adhered to till their condition can only be called "greasy," which does not add to the public respect for the profession. Is it not very advisable that we should dress not "professionally" but "correctly"?

### GLYCERINE AS A CATHETER LUBRICANT.

R. S. P. writes: I can corroborate, from practical experience, the condemnatory remarks of Mr. Herring on glycerine as a catheter lubricant. "M.D.London" "fortifies" his glycerine with carbolic acid. The glycerine of which I have experience is that strongly recommended as an antiseptic catheter lubricant by an eminent authority; this is glycerine "fortified" with borax. My case was one of prostatic hypertrophy, and the irritation produced by this lubricant was so severe that I was compelled to give up its use. It seems only reasonable that glycerine should be unsatisfactory; it is a local stimulant, and also is so markedly hygroscopic that one could hardly doubt that it would be unsuitable, and certainly carbolic acid would not, I imagine, have any soothing effect, perhaps slightly the contrary, and it is doubtful whether carbolic acid would act as an antiseptic when so much diluted.

### INTESTINAL SAND.

DR. A. C. PARRON (Dailly, Ayrshire, N.B.) writes: I have been investigating the possible origin of this substance since I communicated two cases of intestinal sand to the BRITISH MEDICAL JOURNAL of April 13th, 1901, p. 888. In five cases I have found the source to be as follows: In the first case from hard water, corroborated by the identity of the intestinal sand with the deposit found in the patient's kettle and also teapot, and confirmed by pounding quartz of the locality; second case from dates previously washed; third from raisins; fourth from stewed green gooseberries, fifth from pulv. glycyrrhizæ co. Later I hope to publish a detailed account of the cases and analysis of the sands found.

### NEURITIS OF ANTERIOR CRURAL NERVE IN CHILDBED.

PROFESSOR LEOPOLD MEYER (Copenhagen) writes: In the abstract of my paper on Neuritis of Anterior Crural Nerve in Childbed, in the EPITOME of the BRITISH MEDICAL JOURNAL of July 6th, par. 7, which is in all other respects is very complete, the reviewer has omitted two points of great importance, which you will permit me to point out to you—namely, (1) that in all cases the patients could not lift the stretched leg from the bed (paresis of the ileo-psoas muscle; and (2) that in all cases the symptoms disappeared spontaneously in five to eight days.

LETTERS, COMMUNICATIONS, ETC., have been received from

**A** Apomorphine; J. W. Allan, M.B., Glasgow; Alpha. **B** Dr. J. W. Byers, Belfast; Mr. A. E. Barker, London; Mr. C. Ballard, Oxford; Mr. W. J. F. Burges, Chester; Dr. E. G. Barnes, Eye; Dr. N. D. Bardswell, Banchory; Mr. J. B. W. Blyth, London; Mr. G. H. Broadbent, Manchester; Mr. E. Bellis, London. **C** A. H. Cook, M.B., London; Dr. W. Collier, Oxford; Dr. C. J. Cooke, Plymouth; J. W. Crerar, M.B., Maryport; Charge Pay; Centurion; T. Carwardine, M.B., Clifton; Dr. E. Carter, Cheltenham; Mr. A. H. Copeman, Cowes, Isle of Wight; C. A. W. **D** Dispenser. **E** Dr. G. J. Engelmann, Boston, Mass.; E.; E. L. F. **F** Mrs. Fuller, Woolwich; Mr. J. M. Ferguson, Burnley; F.R.C.P. **G** Dr. J. G. Glover, London; Mr. S. A. E. Griffiths, Gravesend; Dr. E. Goodall, Carmarthen; H. J. Godwin, M.B., Pretoria; Mr. W. T. Greene, London; Mr. W. W. Griffin, Walsall. **H** Dr. Hall, Peebles; Miss E. M. Henley, Ilminster; Mr. R. Harrison, London; Mr. F. W. Holman, Plymouth; Dr. S. Harris, Gilmar; Dr. M. Hahn, Munich; Mr. J. T. Hartill, Willenhall; J. B. Hall, M.B., Bradford; Dr. W. S. Hedley, London; Mr. F. R. Humphreys, London; Mr. W. H. Hubert, Billingshurst Dr. H. Hollis, Wellingborough; J. F. Hodgson, M.B., Oldham; Dr. J. G. Havelock, Montrose. **I** Iota. **J** Dr. G. P. Johnson, Stoke-on-Trent; Dr. R. Jones, Woodford Bridge; J. C. L.; J. H. K.; Mr. G. S. Jones, Horsham. **K** Mr. L. Knuthsen, Shifnal. **L** Mr. A. B. Liptrot, Norwich; Mr. J. P. Larcombe, jun., London; Dr. W. V. Lush, Weymouth; Mr. W. A. Loxton, Birmingham; Right Hon. Lord Lister, London; Locomotor; Mr. H. K. Lewis, London; W. Love, M.B., Brisbane. **M** F. B. Musgrave, M.B., Leeds; T. M. Martin, M.B., Lochwinnoch; Mr. H. H. B. Macleod, Shrewsbury; P. T. Manson, M.B., Aberdeen; Mr. W. Mornington, London; Mr. J. C. McWalter, Dublin Mr. S. F. Murphy, London; Mr. J. D. Marshall, London; Dr. C. W. M. Moullin, London Dr. J. M. Moir, Inverness; Mr. R. W. Maude, London; Dr. L. Meyer, Copenhagen. **N** N. S. P. **O** Mr. E. Owen, London; Observer; Obstetrical Society of London, Secretary of, London. **P** Mr. F. E. Pollen, London; Mr. C. B. Pasley, Cahir; Dr. R. Purnell, Wells; Dr. P. H. Pye-Smith, London; Mr. R. Parker, Liverpool; Miss F. E Parkes, Lostock Gralam; Phenol; Dr. G. Parker, Clifton. **R** Registrar; Messrs. Reynolds and Branson, Leeds; Rusticus; Mr. J. Robertson, Edinburgh; Dr. R. R. Rentoul, Liverpool; Mr. J. T. Rae, London; Rusticanus. **S** Dr. M. F. Simon, London Swinbourn; Dr. F. H. Spencer, Exeter; A. E. Salter, M.B., Sydney; Mr. R. Stewa London; S. H. I.; S. Stephenson, M.B., London; Dr. J. B. Simpson, Golspie J. Shirlaw, M.B., Wigan. **T** Mr. H. Todd, Deal; Mr. G. E. Twynam, London; Dr. G. Th London; Mr. F. H. Tinker, Hyde. **V** Victim. **W** Mr. A. G. Wells, London; Mr. W. B. Winckworth, Taunton; West Australian Branch, Secretary of, Fremantle; Mr. H. E. Wells, London; Mr. T. M. Watt, Hull; Mr. L. H. Wilson, Bath; etc.

## BOOKS, ETC., RECEIVED.

Glasgow Hospital Reports. Vol. III. Glasgow: James MacLehose and Sons. 1901.

Bibliographia Lactaria. Par Dr. H. de Rothschild. Premier Supplément. Paris: Octave Doin. 1901.

Die Protozoen als Parasiten und Krankheiterreger nach biologischen Gesichtspunkten dargestellt. Von Dr. F. Doflein. Jena: Gustav Fischer. 1901. M. 7.

Atlas der Krankheiten der Nase, ihrer Nebenhöhlen, u d des Nasenrachenraumes. Von Dr. P. H. Gerber. Dritte Lieferung. London: Williams and Norgate. 1901. M. 6.

Pemphigus des Auges. Von Dr. E. Fergons. London: Williams and Norgate. 1901. 2s.

Transactions of the Intercolonial Medical Congress of Australia. Fifth Session 1899. Brisbane: E. Gregory. 1901.

Les Sourds-Muets en Norvège. Par Pro V. Uchermann. Traduit du Norvégien par J. Nicolaysen et T. Chauvin. Parties I et II. Christiania: A. Cammermeyer. 1901.

The Theory and Practice of Military Hygiene. By E. L. Munson, A.M., M.D., London: Baillière, Tindall, and Cox. 1901. 32s.

*** In forwarding books the publishers are requested to state the selling price.


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# A CLINICAL LECTURE
ON
# TOTAL EXTIRPATION OF THE PROSTATE FOR RADICAL CURE OF ENLARGEMENT OF THAT ORGAN:

WITH FOUR SUCCESSFUL CASES.

*Delivered at the Medical Graduates' College, London, June 26th.*

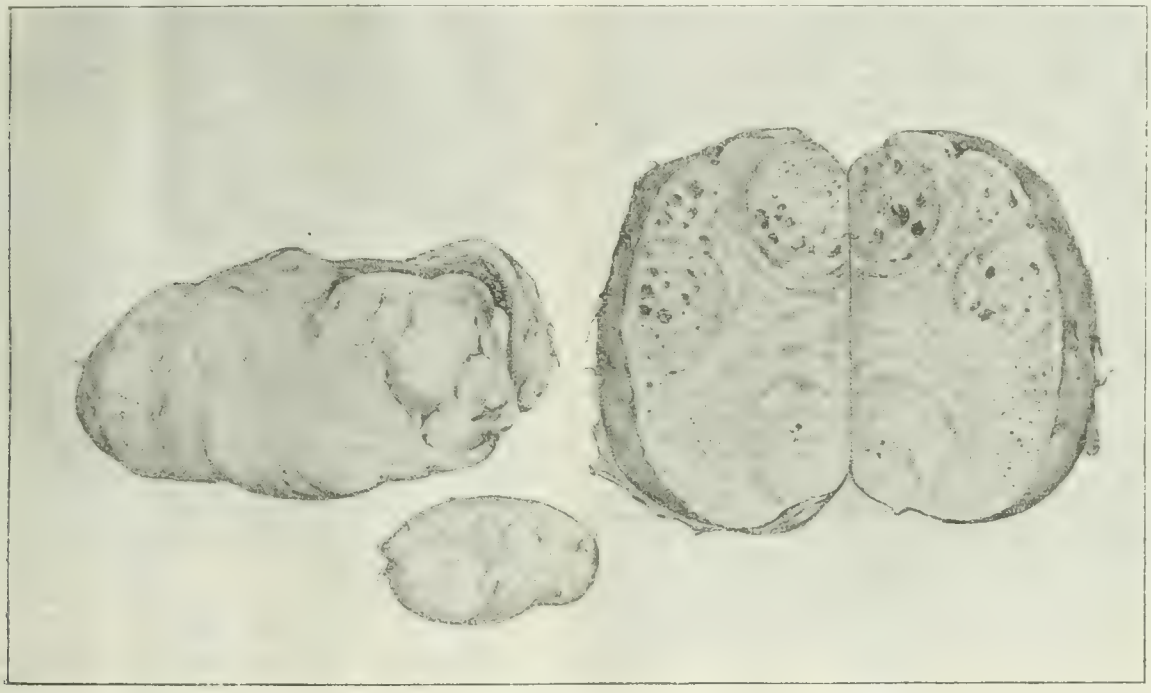
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In a series of lectures delivered by me in this College in November last, and subsequently published in the form of a small book,[1] I endeavoured to give a practical summary of our recent knowledge of the disease most generally known as "hypertrophy of the prostate," describing its pathology, symptoms, diagnosis, and various methods of treatment. We then saw that there is, perhaps, no other disease in the whole range of surgery for which so many and diverse modes of treatment have been advocated—a fact in itself suggestive of the unsatisfactory nature of most if not all of them, so that at the present time catheterism pure and simple, with all its drawbacks and disadvantages, reigns supreme in the practice of most surgeons as the least objectionable of all.

From time to time various methods of so-called radical cure by partial prostatectomy, whether by the urethral, perineal, or suprapubic route, have been introduced. I ventured to hold that partial prostatectomy by the suprapubic route, first performed by Belfield, of America, but best known in this country in connection with the name of McGill, who first brought it prominently before the profession in 1888, was the most valuable, as most commonly applicable, and, on the whole, most satisfactory in its results.

The operation consists in opening the bladder suprapubically, and removing the outgrowth into that viscus, or as much of it as possible, by scissors, forceps, and the finger. I myself have performed this operation frequently and with considerable success; but, apart from the mortality attending the procedure, it possesses the disadvantage that though, as a rule, followed by subsidence of the most prominent symptoms, temporarily at least, and rendering catheterism more easy, in a large proportion of cases the bladder fails to regain its expulsive power. This is simply due to the fact that the outgrowth into the bladder is, as a rule, not the only source of obstruction, which is mainly due to pressure on the urethra by the enlarged lateral lobes. Indeed, I am not aware of a single instance in which, after the bladder had completely lost its expulsive power, namely, when all the urine had to be drawn off by the catheter, that power has been restored by this operation. Add to this the fact that, as only the prominent portions of the prostate are removed, there is no immunity against recurrent outgrowth, or general enlargement of the organ, and we realise in what a limited sense this operation can be regarded as radical.

During the period that has elapsed since these lectures were delivered I have in four cases undertaken a new and, at first sight, very formidable operation for radical cure of the enlarged organ, namely, total extirpation of the prostate, in one and all with entire success. These four operations have completely revolutionised my views with regard to the treatment of this painful and widespread malady, and I submit that the complete success with which they have been attended opens up a new and promising era in this field of surgery with far reaching results. I make no apology for entering into each of the cases in detail, so that the method of operating may be fully brought home to you. And in order that you may be in a position to judge of the results I have brought two of the patients here to-day, so that you may question and examine them, and ascertain for yourselves that they are now in perfect health.



B C A

Fig. 1.—Three lobes of enlarged prostate removed from patient aged 69, actual size. A, right lobe cut through, showing the adenomatous nature of growth. B, left lobe. C, "middle lobe."

CASE 1.—The first patient which I show you, aged 69, was admitted to St. Peter's Hospital on November 21st, 1900. He first attended as an out-patient in September, 1899. Symptoms: Increased frequency of micturition—every hour and a-half by day and hourly by night, difficulty in starting the stream, dribbling at the end of micturition, pain above the pubes before the act. Both the lateral lobes were felt

much enlarged by the rectum, and soft, except that there was a hard nodule in the right. Residual urine, 6½ ounces: directed to use the catheter twice daily. Relieved for a time, but grew worse later on.

From the general enlargement felt by the rectum and the lobes being soft, the case was considered one which, from my own experience and that of my colleagues, vasectomy might be expected to be followed by favourable results. Accordingly, early in January, 1900, double vasectomy was performed, but the results were disappointing.

On February 20th the note was: "No improvement—right lobe hard and painful." Attended as out-patient on and off, the symptoms getting gradually worse, so that he was entirely dependent on his catheter. Sounded two or three times, but with negative results.

I cystoscoped him under an anæsthetic on November 28th, 1900. A large bilobed tumour, with transparent membrane stretched between the lobes, was seen projecting into the bladder. This was diagnosed to be an irregular enlargement of the median lobe, the cystoscope being supposed to have entered beside the pedicle.

On December 1st I performed suprapubic cystotomy. On introducing my finger into the bladder I found that the tumour, which by the cystoscope was regarded as a bifurcated middle lobe, consisted in reality of the two lateral lobes of the prostate, enormously enlarged, projecting into the bladder, with the adjacent surfaces closely approximated, and a thin band of mucous membrane stretched across between them at their upper aspects. The rubber catheter introduced for distension of the bladder lay on the trigone, the orifice of the urethra being below and between the tumours.

The most prominent portion of the right lobe was caught by long forceps, and the mucous membrane covering it snipped by scissors. Through this incision the tip of the fore-finger of the left hand was introduced, and this tumour (Fig. 1, A), which constituted the right lobe, separated from its surroundings and enucleated without difficulty. The left lobe (Fig. 1, B) was similarly dealt with. The middle lobe, which at first was not noticeable, was now felt prominent on the floor beneath the mucous membrane. By inserting the finger through the first incision, and hooking it round the middle lobe, this latter, in the form of this rounded tumour (Fig. 1, C), was enucleated, and removed through the incision, the mucous membrane covering it being left intact. During the removal of the lateral lobes the finger passed forwards as far as the triangular ligament. The introduction of an assistant's fingers in the rectum pushed upwards and steadied the tumours, and thus facilitated their removal. There was considerable bleeding at first, but this was easily controlled by irrigation with hot hazeline solution. No vessels were tied, and no sutures introduced into the mucous membrane. After removal of the tumour, with a finger in the bladder and another in the rectum, I could feel that there was no prostatic substance left behind. A half-inch drainage tube was inserted in the suprapubic wound for forty-eight hours. The bladder was irrigated daily through a large rubber catheter passed into the urethra, the fluid flowing out by the suprapubic wound.

On December 13th the patient passed 12 ounces of urine naturally, and all urine passed subsequently through the urethra. The wound was quite healed by December 21st, when his urine was retained two hours and a-half by day and three or four hours by night. His discharge from hospital was delayed till January 23rd owing to an attack of gout. I have now the pleasure of showing you this patient in perfect health. He can retain his urine three or four hours by day and six or seven hours by night, and can pass it at will as easily as ever he did in his life. His urine is quite clear, free from albumen, and normal in all respects. There is no residual urine.

The three tumours removed (Fig. 1) are similar in structure. Each is encapsuled by a strong, thin, fibrous capsule, and contains several smaller tumours, also encapsuled, as seen on section (Fig. 1, A). Microscopically they are found to be adenomata. The three tumours weighed 2¼ ozs. on removal.

Case II.—The second case was one in private practice. This gentleman, aged 67, hearing of this lecture kindly volunteered in the interests of science and humanity to show himself to you to-day. Three years and a-half ago he had symptoms of enlarged prostate, namely, increasing frequency, difficulty in starting the stream, dribbling, and intermittency of the flow. His private doctor taught him to pass a catheter every night, which he continued to do until January of last year, when he came under my care. I found that the symptoms had continued gradually to get worse, and that there were now 9½ ounces of residual urine. In addition to the other symptoms he had much pain above the pubes, and suffered periodically from gout. I found both lobes of the prostate much enlarged, rounded, slightly nodular, and soft by the rectum; and came to the conclusion that the case was one of adenomatous enlargement of the organ. I advised him to pass his catheter three or four times daily. I saw him from time to time, and on March 19th last he had lost all expulsive power in the bladder, the whole of the urine having been passed for some months by catheter, which he now used five or six times daily. His urine was thick and offensive, containing pus and epithelial cells.

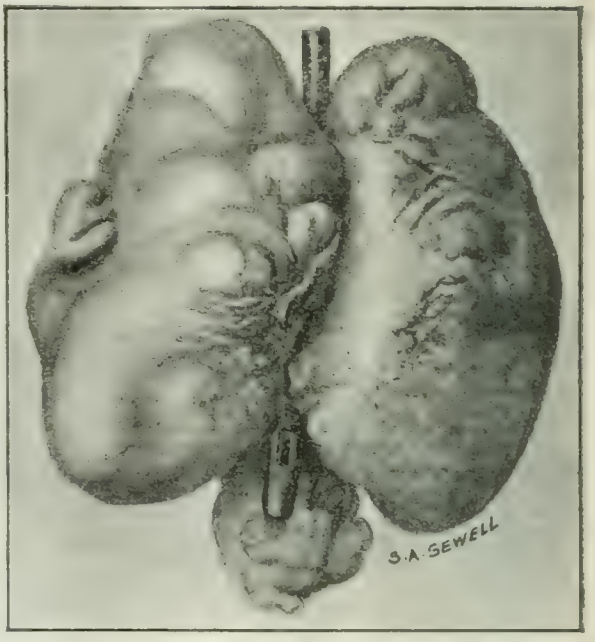



Fig. 2.—Three lobes of prostate removed from a patient aged 67, grouped as before removal, with catheter placed where the urethra lay. Actual size after removal.

On cystoscopy I found that there were two large tumours each the size of a chestnut, representing the lateral lobes of the prostate, projecting into the bladder, with a vertical slit between. On the base of the bladder there was a smaller tumour, the size of a gooseberry, and nodulated. On March 30th I opened the bladder suprapubically, and found the conditions as seen by the cystoscope. It is unnecessary for me to go through the steps of the operation in this case, which was almost a facsimile of the previous one. I show you the three tumours, constituting the prostate, which I enucleated: and this drawing (Fig. 2) shows their exact size, and their grouping before removal, with a catheter placed in the position occupied by the urethra. The tumours were encapsuled, smooth, but nodulated, and structurally similar to those removed in Case 1. The lateral tumours measured each 2¾ ins. by 1¾ in. and 1¼ in., and the three weighed 2¾ ounces. Captain Hayward Pinch has prepared microscopic sections of these tumours, which, you will see, are pure adenomata. The difference between them and prostatic tissue is that the unstriped muscular fibres have been replaced by fibrous tissue. The acini have no ducts, which is a feature of all adenomata.

This patient made an uninterrupted and complete recovery and left the Surgical Home on May 2nd. He can pass his water without the aid of a catheter without the least difficulty. He can retain it four or five hours by day, and is not dis-

turbed by night. The urine is perfectly clear and normal in all respects; and as you see, and the gentleman tells you, he is in perfect health, and can pass and retain his urine as well as ever he did in his life. He informs me that not alone has his sexual power, which was lost for two years before the operation, returned, but he has emissions of semen, showing that the ejaculatory ducts were unharmed in the operation.

CASE III.—This was a carriage fitter, aged 69, who was admitted to St. Peter's Hospital, April 26th, 1901, for complete retention of urine from enlarged prostate. The usual symptoms of the disease had existed for seven years, but during the last five years they had been extremely acute and distressing. On September 25th, 1897, his bladder was opened suprapubically by a surgeon at one of the large London hospitals (who has kindly given me details of the condition found) for prostatic retention, which neither the patient nor house-surgeon could relieve by the catheter. Vasectomy was also performed, and the bladder allowed to close. No enlargement into the bladder was found. The patient was eleven weeks in hospital and then attended for nine months as an out-patient. He remained fairly well for about ten months after this operation, since which time he had been gradually getting worse. Has passed a catheter on an average five or six times daily for three years, with difficulty sometimes, so that he had to have recourse to various hospitals from time to time to have his urine drawn off. The urine contained pus and blood, and he has had great pain, the symptoms generally being most distressing. He was in great agony on admission to St. Peter's, and, in addition to the bladder troubles, complained of great pain in the loins. Mr. Frankling, the house-surgeon, introduced a coudée catheter, and drew off 5 ounces of foul and bloody urine. As the bladder was distended with blood clot, a lithotrite was introduced and the clot broken up and then evacuated through a cannula by an aspirator. Bleeding continuing and all voluntary power of micturition being lost, a large-sized coudée catheter was tied in. The patient suffered great agony that night, which was only partially relieved by opiates. The following morning he was extremely ill, bawling with agony, from which he was simply distracted. Consequently I was urgently summoned, and forthwith opened the bladder suprapubically. On passing my finger into the bladder I felt an enormous rounded, soft, semi-elastic tumour projecting into its cavity; it lay completely on the left of the urethral opening, the catheter entering the bladder on its right. With a finger of the other hand in the rectum, I felt the tumour in the position of the left lobe of the prostate the size of a large orange. I could detect no right lobe of the prostate. Adenoma of the prostate was diagnosed, but the patient was in such a desperate condition that no attempt at its removal was justifiable. He was extremely collapsed under the anæsthetic; indeed, he seemed moribund. A large drainage tube was inserted in the wound.

Next day the patient had rallied, but was suffering from a severe form of bronchitis which had existed for weeks, and was attended by profuse expectoration of nummular-like sputum. Much to my surprise he rapidly improved in health, and the suprapubic wound was closed in fourteen days, when, however, all his old difficulties returned again, and a catheter had to be tied in, so I determined to remove the tumour.

On May 25th I again opened the bladder suprapubically, making a rather free incision. The mucous membrane over the most prominent part of the tumour was caught up and incised, and the tip of my forefinger introduced through the wound thus made. The tumour was then gradually enucleated from the surrounding structures. This process was slow and somewhat difficult, the tumour being so large that it tightly filled the space between the pubic arch and rectum, so that the finger was passed round it by using considerable force. Tough fibrous bands attached to the sides of the tumour had to be torn through, no easy matter for the finger working in such a confined space. Eventually the tumour was felt lying free in its bed; but it was so large that it could not be delivered thence into the bladder. Hooking my finger round it, with some force I split the tumour in two through its horizontal axis, and then delivered each half separately into the bladder, whence they were withdrawn by forceps through the suprapubic wound. A finger of my other hand in the rectum facilitated the enucleation by steadying the tumour and pushing it into the bladder. The urethra (in which a catheter was left lying during the operation) with its accompanying structures were left intact, the tumour being stripped off from them. No vessel had to be ligatured, the bleeding being trifling and easily controlled by irrigation by hot boric lotion. A drainage tube was placed in the suprapubic wound for two days, and the bladder irrigated daily through the urethra and out by the wound.

The patient, though extremely weak for a few days and coughing up enormous quantities of offensive sputum, began soon to pick up strength. He passed some urine naturally on June 10th, and wholly in this way after June 13th, when he began to sit up daily. He is now quite convalescent and will be discharged in a few days. His urine is quite clear, passed naturally without the least difficulty, and is retained for two or three hours. This frequency I can state with confidence from my experience of Cases I and II will pass off as the parts settle down to their natural condition.

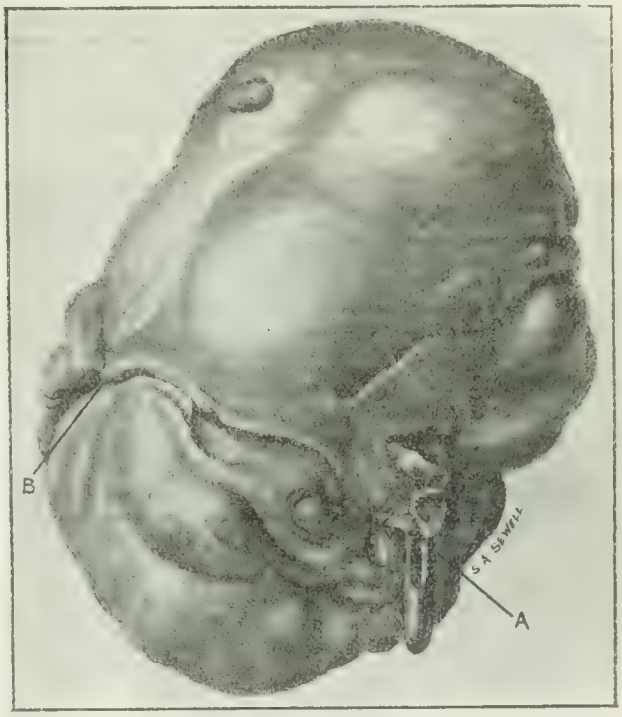



Fig. 3.—Enlarged prostate, weighing 4¼ ounces, removed from patient aged 69, exact size. A, catheter placed in position of urethra, on right of tumour. The irregular line between A and B shows where the two lobes were slit asunder during removal.

I pass round the tumour, which weighed 4¼ ozs., also a drawing (Fig. 3), which represents its exact size and conformation on removal. It is more or less ovoid in shape, the vertical diameter being 3½ ins. and the horizontal 2½ ins. The surface is smooth but nodulated, and nearly the whole is covered by a thin, strong, fibrous capsule.

A catheter is placed in the furrow about the middle of the inner (right) aspect, showing where the urethra lay. This horizontal slit (Fig. 3, A, B) indicates where the tumour was severed by my finger to facilitate its removal; and, on careful examination, I have come to the conclusion that this slit indicates the natural partition that exists between the two lateral lobes, which gave way before my finger. That is to say, the tumour, which from its position seemed only to involve the left lobe, consists in reality of the whole prostate, which in its gradual enlargement was, for some unaccountable reason, drawn from the horizontal into the vertical position, so that the lower half represents the left lobe and the upper half the right. This disposition accounts for the urethra passing on the right aspect of the tumour, which is in reality its base—an anomaly which will be apparent at

once if we place the right side with contained catheter downwards.

[This patient was discharged from hospital on July 2nd in fairly good health, the cough and expectoration having almost disappeared. His urine was quite clear, passed naturally without any difficulty. On two or three occasions he had pain and tenderness in the left loin, followed by a discharge of pus in the urine, which, however, cleared up in twenty-four hours. No doubt the kidneys were affected as the result of an ascending pyelitis from the prostatic obstruction and cystitis, a complication which renders the recovery from the operation the more remarkable.]

CASE 4.—This gentleman, aged 62, sent by Dr. Douglas, of Newbury, consulted me on May 7th, 1901, for prostatic symptoms which had existed about a year. Six months before he was taught by Dr. Douglas to pass a coudée catheter and wash out his bladder. I found him suffering from the usual symptoms of enlarged prostate, with acute cystitis. He was in great pain, and had to pass urine ever half hour by day and hourly by night. He passed his catheter only once daily. I found 8 ounces of residual urine, which contained much pus. Both lobes of prostate enlarged by rectum. He entered a Surgical Home, and I washed his bladder out daily with astringents. Though the cystitis subsided the pain and frequency continued; and he was particularly worried by sudden stoppage of urine.

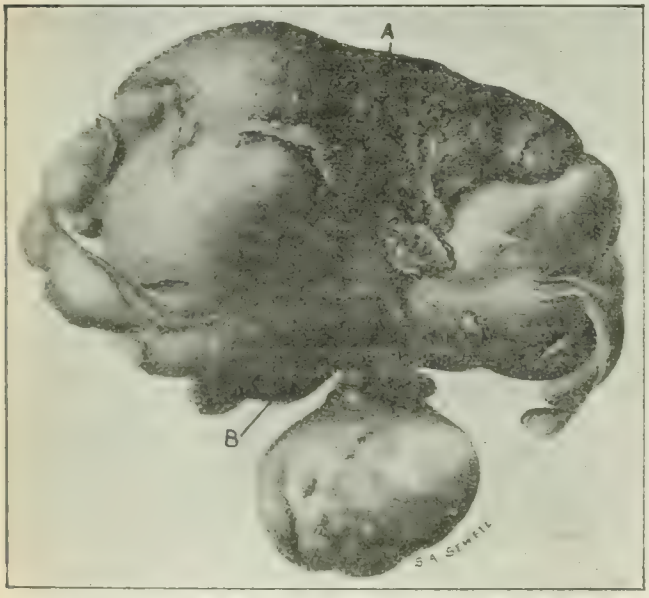



Fig. 4.—Prostate removed as a whole from patient aged 62, showing pedunculated "middle lobe" attached to posterior aspect of right lobe, exact size. The groove A B indicates where the urethra lay: the catheter entered the bladder on the left of the pedicle of the "middle lobe."

On May 13th I cystoscoped him, and found the lateral lobes projecting somewhat into the bladder. The middle lobe was the size of a large gooseberry and pedunculated, acting as a valve to the inner orifice of the urethra. He went home to the country on May 17th; but the symptoms continuing, on the advice of Dr. Douglas, he returned for operation as proposed by me.

On June 7th I opened the bladder suprapubically, Mr. H. Frankling assisting me, and found matters as seen by the cystoscope. I have never felt or seen a more distinctly pedunculated middle lobe—a regular ball-valve, in fact, to the urethra. The catheter passed in on the left side of the pedicle. Grasping the lobe by forceps I incised the mucous membrane on top, and with the finger-nail stripped this off the tumour, the pedicle of which I found tough and strong, attached to the posterior of the prostate. Enlarging the opening in the mucous membrane with my finger I gradually enucleated the left lobe from its bed, commencing first at the base and then going on to the side and front, the finger passing forward to the triangular ligament. Then I attacked the right lobe in the same way. The whole prostate (Fig. 4) came away from beneath the urethra, which passed along a groove (Fig. 4, A, B) on its upper surface. Strong bands of fibrous tissue had to be torn across by the finger in the course of the enucleation. The finger of my other hand in the rectum much facilitated the removal; in fact, without this manipulation it would be impossible to enucleate the organ. The hæmorrhage was trifling and easily subdued by irrigation by hot lotion.

The enucleated prostate (Fig. 4) weighed 2¼ ounces. The lateral lobes are less lobulated than in any of the other three specimens, the adenomatous growth being less advanced. It is difficult to say whether what appears to be a middle lobe springs from the "median portion" of the prostate or from the posterior aspect of the right lobe.

It is unnecessary to enter into details of the after-treatment, which were the same as in the other cases. The urine being ammoniacal at the time of operation, there was much formation of phosphatic grit in the wound, which retarded its closure, On June 12th several ounces of urine were passed naturally, and since then the quantity passed in this way has daily increased. There has been scarcely any rise of temperature throughout and the patient is now convalescent.

[This gentleman left the surgical home for the country to pursue his usual occupation on July 11th. Before his departure I had the pleasure of showing him in excellent health, untroubled by any urinary symptoms, to my friend Dr. Farquharson, M.P., and other well-known medical men. He passes his urine, which is normal in all respects, as freely and easily as he did at any period of his life, and can retain it all night and for four or five hours in the daytime.]

Captain Hayward Pinch reports: "All four specimens of prostatic tumours removed by Mr. Freyer when examined microscopically prove to be true adenomata. Some slight variations in structure were observed in the different specimens, the chief one of which was a varying tendency to cystic degeneration. This condition obtains most in Cases III and IV, more particularly the latter. The character of the epithelium lining the acini was short columnar, and in every respect identical with that present in the normal prostate. The stroma, however, differed in that the amount of unstriped muscular tissue was very small, and was replaced almost entirely by fibrous tissue."

The first question that will naturally suggest itself to your minds in connection with the operation is this, What happens to the prostatic portion of the urethra during its performance? In order that you may clearly grasp what takes place with regard to this canal, as well as some other features of the operation, I will briefly recall the structural features and external relations of the prostate.

This body is in reality composed of twin organs, of purely sexual function, which in some of the lower animals remain separate and distinct throughout life, as they do in the human male during the first four months of fœtal life. After that period they approach each other, and their inner aspects become agglutinated together, except along the course of the urethra, which they envelop in their embrace. But the two glandular organs constituting the two lateral lobes of the prostate, though welded together, as it were, remain, so far as their secreting substance and functions are concerned, practically as distinct as the testes, their respective gland ducts opening into the urethra on either side of the veru montanum. Each of these two glandular bodies is enveloped by a thin, strong, fibrous capsule. These latter, except those portions of them that cover the opposing aspects of the glandular bodies, or lobes, which dip inwards and disappear in the substance of the prostate, together constitute the true capsule of the prostate as a whole. This extends over the greater portion of that organ, being deficient only along the upper and lower commissures, or bridges of tissue that unite the lateral lobes above and below the urethra, thus filling the gaps between them. (For descriptive purposes the prostate is supposed to lie with its rectal aspect downwards.)

The urethra, accompanied by its surrounding structures—namely, its longitudinal and circular coats of muscle, continued forward from the bladder, its fibrous and elastic

tissues, its vessel and nerves, passes forward between, and is embraced by, the inner aspects of the two glands. The ejaculatory ducts enter the prostate close together, in an interlobular depression, at the lower part of its posterior aspect, each coursing along the inner surface of the corresponding lobe. They do not penetrate the capsules of the lobes, but pass forward in the interlobular tissue, to open into the urethra. The prostate, thus constituted and enveloped by its true capsule, is further encased in a second capsule, or sheath, formed from the pelvic fascia, numerous connecting bands passing between the two. In the space between these two capsules lies the prostatic plexus of veins, particularly in front (above) and on the sides of the prostate; and these veins in subjects of enlarged prostate are frequently of enormous size. The larger branches of arteries also lie between the true capsule and the sheath, numerous small branches passing from them through the capsule for the supply of the prostatic substance.

In most, if not in all, cases of enlargement of the prostate the overgrowth is of a purely adenomatous character, numerous encapsuled tumours being found embedded within the substance of the lobes, as seen in Fig. 1, A; and sometimes protruding from their surfaces in the form of polypoid outgrowths, which, however, are invariably enclosed within the true capsule, which is pushed before them.

Now, as the lateral lobes enlarge, they bulge out and have a tendency, each contained within its own capsule, to become more defined and isolated, thus recalling their separate condition in early fœtal life. They separate and shake themselves more or less loose from the commissures, or bridges of tissue that in the normal prostate unite them above and below the urethra. And in the course of this change the urethra, with its accompanying structures, is pushed towards the surface of least resistance. Thus in Cases I and II (Figs. 1, 2) it lay beneath and between the lateral lobes. In Case III (Fig. 3) it lay on the right side, though in reality at the base and between the lateral lobes, the whole organ in its enlargement, for some unaccountable reason, having turned on its edge, so that its base was placed vertically and looking to the right. In Case IV (Fig. 4) the urethra lay above and between the lobes, which had separated from each other in this direction, but remained still attached along the lower commissure.

In the removal of the prostate by the method under consideration, whether as a whole or in separate lobes, the organ is enucleated in its capsule from the surrounding sheath, and then stripped off the urethra, which with its enveloping tissues is left intact.

The ejaculatory ducts are also left uninjured when the lobes come away separately, or the urethra is pushed beneath them. But I am not certain as to what happens—whether they remain intact or are torn across—when, as in Case IV, the prostate comes away as a whole, and the lobes are not detached from each other along the inferior commissure. But this is a matter of trifling importance at an age when, as a rule, the reproductive power is lost.

In enucleating the prostate out of its sheath, the fibrous bands that pass between the sheath and the true capsule are torn through, but the prostatic plexus of veins and large branches of arteries are left behind, only the smaller vessels passing to and from the prostatic substance through the capsule being severed. This accounts for the trifling hæmorrhage that takes place in this operation in comparison with the profuse bleeding that sometimes occurs in various forms of partial prostatectomy when the prominent parts in the bladder are cut, or torn off by forceps, the large veins and arteries being thus opened up.

The large cavity left after enucleation of the prostate rapidly contracts, by the inherent elasticity of the sheath, the contractility of the surrounding muscles, and pressure from the neighbouring parts. Indeed, after irrigation by hot lotion to control the bleeding, there is scarcely any cavity felt by the finger in the bladder. Its surfaces are brought into close apposition with the tissues round the urethra, and, both tissues being very vascular, union in large part by first intention probably takes place. To obviate the danger of pus accumulating in this cavity the idea of passing a drainage tube from it out through the perineum has been entertained; but I have hitherto not found this necessary. This could, however, be easily accomplished, if thought desirable, without opening the urethra.

One of the most remarkable features of this operation is the complete restoration of the power of voluntary micturition after habitual catheterism had been employed for lengthened periods, in Case III for five or six years. It may interest you to hear the opinions of two eminent surgeons, one in this country and one on the Continent, as to the possibility of this occurring. Sir H. Thompson in the last edition of his *Diseases of the Urinary Organs* writes: "When it has been necessary to practise habitual catheterism for retention from enlarged prostate during a period of one or two years, the coats of the bladder lose their power and are incapable, I believe, of regaining it in almost any case after that lapse of time, and would fail to expel their contents, even supposing the obstruction to be entirely removed. There is good ground for concluding that no operation would restore a *status quo* on account of our inability to restore the expelling function to a bladder which has long ceased to exercise it."

And M. Guyon in his *Leçons Cliniques* (1888) writes: "Voyez, en avant, ces lourdes masses qui représentent les lobes latéraux, fortement appliqués l'un contre l'autre et qui opposent un obstacle certainement plus considérable que le lobe moyen à l'écoulement de l'urine. *Croyez-vous qu'il soit jamais possible d'en pratiquer aussi l'ablation?*

"Et quand un tel prodige opératoire deviendrait réalisable, *croyez-vous que la vessie, après avoir été plus ou moins longtemps soumise à la distension, pourrait recouvrer son intégrité anatomique et fonctionelle?* Croyez-vous que les lésions histologiques dont sa couche musculaire et sa muqueuse sont atteintes, et celles qui portent sur la substance rénale, seraient aussi susceptibles de rétrograder? Il est évident que toutes ces lésions, et vous savez qu'elles sont à peu près constantes, mêmes dès le début de la maladie, ne peuvent relever d'aucune intervention opératoire, et *je puis ainsi conclure que le traitement radicale de l'hypertrophie de la prostate n'existe pas et ne saurait exister.*"

The italics are mine. The very decided opinions expressed by these two distinguished surgeons—opinions based on purely theoretical grounds—have, happily, been entirely falsified by the results of these four cases; for not only has the enlarged prostate been ablated in each instance, but the expulsive power of the bladder has been completely restored after that power had been lost for periods varying from six months to four or five years.

When we reflect that a very large proportion of the male population beyond 50 years of age suffer from this distressing malady, and that the majority of these are eventually carried off by the disease after a life of misery, and frequently of agony, we can imagine the blessing to humanity of any operation that effects a radical cure. I think I shall not be accused of exaggeration when I state that all previous so-called methods of radical cure of enlarged prostate are unsatisfactory, and that catheterism, though the least objectionable mode of treatment in the vast majority of cases, is liable sooner or later to terminate in cystitis or other dangerous complication. I submit that the thoroughly successful results obtained in these four cases of total extirpation of the enlarged prostate encourage us in the hope that we have at last arrived at a rational method of dealing with this painful and frequently fatal malady.

REFERENCE

[1] *Clinical Lectures on Stricture of the Urethra and Hypertrophy of the Prostate.* Baillière, Tindal, and Cox, London.

ARSENICAL POISONING IN INFANCY.—A case of arsenical poisoning has recently been recorded in an infant, aged 6 months, which lay in a bassinet lined with blue "satinette." The urine contained albumen, blood, and hyaline casts, in addition to arsensic, and arsenic was found in the blue lining of the bassinet.

DINNER TO PROFESSOR KOCH.—On July 24th, in connection with the Tuberculosis Congress, a dinner will be given by the Royal Institute of Public Health in honour of Professor Robert Koch, M.D. Among others who are expected to be present are Lord Lister, Lord Strathcona, G.C.M.G.; Lord Edmond Fitzmaurice, Sir William Broadbent, Sir James Blyth, Sir J. Crichton-Browne, Professor Brouardel, the Hon. F. W. Peel, M.P.; and the Right Hon. J. A. Campbell, M.P.

# THE TREATMENT OF STAMMERING (AND "LALLING").

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[The following article has been written at the suggestion of Professor Wyllie, who did not see his way at the present time to comply with the request of the Editor for a contribution upon the treatment of stammering. Written, therefore, by one of his former pupils, the greater portion of this article is based substantially upon Professor Wyllie's teaching on this subject; but the writer would not wish him in any way to be held as homologating all that is stated therein.]

The condition of stammering or stuttering is so frequently met with amongst patients that it is somewhat extraordinary how little attention is given to the consideration of it in the ordinary textbooks. The amount and degree of mental suffering endured by the unfortunate stammerer can scarcely be estimated except by those who have experienced it: and yet, for various reasons, it comes about that parents, who may be ready enough to call in the services of their medical adviser for merely trifling and passing ailments in any member of their family, seldom bring their children to a doctor on account of this comparatively common and extremely important defect of speech. It thus unfortunately happens not infrequently that the habit of stammering, which is usually acquired during the years of childhood, has become so deeply rooted by the time the patient reaches an age at which he has to enter upon his future career, that he finds himself heavily handicapped: for it is a striking fact (though the question of the etiology of the condition is not under consideration at present) how much greater is the frequency of stammering amongst males than amongst females. What the writer aims at doing in the present article, therefore, is to draw attention to a method of treating this very important and frequent, but yet obstinate, defect of speech, which not only has proved eminently satisfactory in his own experience, but has the great merit of being applicable by any practitioner who has once carefully mastered the simple principles upon which it is based. Too often it happens, if the advice of the family practitioner is sought at all in reference to the condition, that he is unable, for want of any clear and precise methods of instruction on the subject in the ordinary textbooks, either to undertake the treatment of the patient himself, or even suggest to the parents how to proceed in seeking advice. Of so-called "stammer-curers" there is no lack, but the secrecy of the methods adopted by the great majority of these is scarcely in their favour, even if the methods generally practised by them were more physiological than is usually the case. It is, therefore, with a view to endeavouring to meet such a want that the following summary is here given of the method which the writer himself was taught, and which he has since frequently practised with markedly satisfactory results. Those desiring a much fuller and more elaborate consideration of the principles upon which it is based will find it in Professor Wyllie's book on *Disorders of Speech*.

## General Considerations.

In commencing treatment it is most important at the outset to explain clearly to the patient the mechanism normally employed in speaking, especially emphasising the double nature of the process—vocalisation and articulation, showing him the part played by the larynx in producing the sound, and that played by the tongue, lips, etc., in modifying the same. The stammerer should then be made to understand that his defect consists essentially in a want of the proper harmony between the working of those two mechanisms. In a very large majority of cases the main error lies in the fact that so much attention is directed by the patient to his articulation of words that their vocalisation is neglected, and it is therefore to this (by far the commonest) type of stammering that attention will here be directed. Professor Wyllie's example of the violin player utilising in his performance two co-ordinated but separate mechanisms—namely, the "bow hand" producing the sounds and the "string hand" modifying these—is one which can be understood by any patient, who can readily be made to see how effectually the player will "stammer" (or stick) if he concentrates so much attention upon the "string hand" (the "articulation," the common error of stammerers) that he neglects to produce the sound by the "bow hand" (the "vocal" mechanism). Moreover, the significance of the well-known fact that scarcely any one ever stammers in singing (where the "bow hand" is so much more in evidence than the (articulating) "string hand") is at once grasped by practically every pupil.

Should the stammerer have a "musical ear" the future treatment of his condition will be considerably facilitated, but the most unmusical patient will usually recognise that even *his* attempts at melodious (?) utterance are distinctly less difficult than speaking in his ordinary conversational tone. If the patient is unfortunately destitute of any "ear for music" the teacher should endeavour to get him to adopt the method of intoning (for example, as in church services), not, of course, for permanent use in talking, but in order that he may thus have firmly stamped on his mind, by practical illustration, the all-important part played by the cultivation of the *vocal* element in the cure of stammering. In this connection it may be of interest to point out another method which the writer frequently found of the greatest practical value, especially in the earlier stages of treatment. This consists in adopting when speaking the style, but still more the *tones*, of someone with whose voice the learner is familiar, when even the most difficult stumbling blocks were found to be easily surmountable. This faculty of imitating the tone and style of others (for example, a teacher or friend), is, of course, not possessed by all or in equal perfection, but where it can be utilised such a method of "getting out" a difficult word or phrase will be found, with a little practice, to be not only extremely easy and unobtrusive, but may even be made to appear quite natural in the circumstances. A similar advantage, of course, can be gained when the unfortunate patient is called upon to *read aloud*, if he adopts a "voice" different from his natural one. With his attention thus, as it were, constantly fixed upon the *sound* of the sentences, the *articulation* of them becomes much less of a difficulty than when he reads in his ordinary tones.

The general principle having thus been made clear to the patient of utilising to the full every opportunity of calling into action the vocal as contrasted with the articulatory mechanism in speaking, he should then be taught how, in the light of such principles, each individual letter of the alphabet is to be dealt with. This question is very fully discussed by Wyllie in the work above referred to. Here it is only necessary to reproduce in tabular form—with his kind sanction—what he terms the "Physiological Alphabet," with its illustrative sentences. These sentences, which enable the teacher to retain easily in his memory the Physiological Alphabet, and illustrate the relative positions of the various component consonants, must be clearly distinguished from the sets of sentences (to be subsequently given) which are for use in *treating cases of stammering*. In explaining this "alphabet" to the stammerer, it will be sufficient for the teacher to go over, *seriatim*, the individual letters as therein arranged, and practically demonstrate to him not only the existence of the "stop positions," but the articulatory mechanism called into action in producing the various consonantal sounds.

## Vowels.

The importance of calling the full voice into play in all vowel sounds should be strongly urged on the patient, and for teaching purposes the Latin sounds should be given to them. Wyllie points out that, *physiologically*, the order in which the vowels are produced in the oral mechanism is pronounced thus:

| i | e | a | o | u |
|---|---|---|---|---|
| ēē | ēh | ah | oh | ōō |

namely, "in an order which will represent a gradual transition from the narrowest and tightest shape of the vocal resonating chamber on to the hollowest and largest shapes" (p. 7). This is well shown by his illustrative sentence: "Even ancient elves are awed over oozing." Moreover, there are few more *practically* important points for the stammerer to recognise than the significance of the fact that the initial Y in phonetically practically equivalent to ēē, there being

*A Physiological Alphabet. (Wyllie.)*

*I.—Vowels.*

Y — I E A O U — W.

These should be pronounced in the Latin manner, as ēē, eh, ah, oh, oo: y and w are Consonants, not Vowels, but are placed here for reasons given in the text.

*II.—Consonants.*

| | Voiceless Oral. | Voiced Oral. | Voiced Nasal Resonants. |
|---|---|---|---|
| Labials (First stop position) | *P* (W) | *B* W | M |
| Labio-Dentals | F | V | |
| Linguo-Dentals | Th¹ S | Th² Z | |
| Anterior Linguo-Palatals (Second stop position) | Sh *T* (L) | Zh *D* L R | N |
| Posterior Linguo-Palatals (Third stop position) | *K* H or Ch | *G* Y (R) | Ng |

The voiceless W and the voiceless L have been given in brackets, the former being now almost confined to Scotland, the latter being peculiar to Wales. The uvular (burring) R is also in brackets.

*Illustrative Sentences.*

*I.—Vowels.*

"Even ancient elves are awed over oozing."

*II.—Consonants.*

Peter Brown made white wax.

Fine villages.

Thinkest thou so, zealot?

She leisurely took down nine large roses.

Can Gilbert bring Loch Hourn youths?

merely a slightly fricative element added. For as initial Y pronounced as "yeh" is very frequently a source of great difficulty to stammerers, who are quite surprised at the ease with which they can utter the same word if only it is pronounced as if it began with "ee" thus: "ee-onder" instead of "yonder." The initial Y is therefore bracketed in the physiological alphabet along with the vowels. Similarly, the initial W (except when followed by "h" is to be regarded by the pupil as a *vowel*, and pronounced, as Wyllie says, like "a tight ōō" with a slight element of friction, for example, "ōō-ill" instead of "will," "ōō-ater" representing "water." Y and W are thus, to borrow Wyllie's phrase, "stepping stones between vowels and consonants," and such a frequently recurring phrase as "Will you?" (which has always contained a *double* difficulty for the stammerer) becomes quite easy to him if pronounced as though it were spelled "ōōill ēē-ōō?"

CONSONANTS.

[Each of these is considered here "as it is pronounced during the enunciation of a syllable containing it."] The table shows the consonants arranged in vertical and horizontal columns, the *vertical* columns containing (1) the *voiceless* oral, (2) the *voiced* oral consonants, and (3) those voiced consonants which have in addition a *nasal* element imparted to them. The *horizontal* grouping, on the other hand, has reference to the part of the oral mechanism at which they are produced.

The significance of the "stop-positions" (that is, positions in the oral chamber where the air current from the larynx can be checked or modified) should of course be explained to the patient: but, what is far more essential, great stress must be laid upon the difference between the *voiceless* and the *voiced* consonants. The teacher should make perfectly certain that the pupil has firmly grasped the fact that some of the consonants have no voice in themselves, and from the outset he should see that the stammerer allows ample voice to all those consonants possessing it. It is in this that one of the greatest strides is made in gaining the mastery over his difficulty. For probably the commonest error present in stammerers consists in the fact that they *omit* the voice from consonants which physiologically contain it, and endeavour to *impart* it to others into which it should *not* enter. Accordingly when the pupil has learned not merely to recognise clearly that the initial B is (so to speak) equal to P with "voice" added, and similarly D is a *voiced* T, but has also learned to emphasise these facts practically (by thus giving due value to the vocal element in these consonants) he will discover that he has gained a large part of the victory. The stammerer should be taught to emphasise always (wherever possible) the voice element in consonants, whilst those which are physiologically voiceless are to be touched off in articulation as lightly as possible, the effort of the pupil being, as it were, directed to the ensuing vowel or voiced consonant. Thus in saying, for example, "*B*old Peter *d*id fight," the pupil should lay stress upon the letters as italicised, the voiceless "P" and "f" being merely formed, so to speak, in the articulatory mechanism, but in no way emphasised.

It is, perhaps, worthy of noting that in listening to the pupil trying his exercises, the teacher in many cases should be able (without knowing actually the word he is trying to enunciate) to tell whether it begins with a *voiced* consonant or not. Thus, in saying "Tom Pinch," no sound is audible during the formation of the voiceless T and P, so that no one could tell what letter the pupil was trying to produce; it is merely an explosive character that is being *silently* prepared for the ensuing vowel. On the other hand, in pronouncing, for example, "dog biscuit," the pupil should give *audible* evidence that he is producing a *voiced* consonant, almost as if it were spelt (phonetically) "*ud*(-og) *ub*(-iscuit)."

It is unnecessary here to go over individually each letter as arranged in Wyllie's table here reproduced; but the teacher should make clear to the patient the reason for the classification therein adopted, and not rest content with merely explaining the terms applied to the various groups of letters. It is sometimes well to insist upon the pupil learning by *practical experiment* how, and in what part of the articulatory mechanism, each of the consonants is produced, so that he may be able to state whether any given letter is—for example, a "linguo-palatal (voiced)" or a "voiceless labio-dental"—not merely from having learnt the place it occupies in the alphabetical table, but from *practical testing* of its production in his own articulatory mechanism. A few notes upon some of the less evident points in the table may be of service, and for convenience these may be grouped under the following headings:

(1) *Voiceless Consonants.*

The pupil's attention must of course be called to the difference between the *voiceless* "th," in the word "think" as contrasted with the *voiced* "thou." He should also be made to understand clearly that the "hard" c in the English language is really K; the "voiced" equivalent of which we shall see is G as in "got."

The aspirate "h," which has been the subject of considerable dispute amongst writers on this question, would appear to be rightly described as a "voiceless fricative of the posterior stop position" by Wyllie, who also points out that the "soft" ch (as in the word "loch") is practically an exaggerated aspirate at the end of a syllable.

(2) *Voiced Consonants.*

As mentioned above, W should be regarded by the pupil as practically equivalent to "ōō," and therefore having all the "voice" of a vowel sound.

It may be well to insert here a few words with reference to the most satisfactory method of dealing with one of the common stumbling-blocks of stammerers, namely, words beginning with "wh." If, as is usually the case, it is found that the pupil attempts to pronounce the combined "wh" *voicelessly*, he will experience the greatest difficulty in uttering such words, but if he is taught to regard the initial letters as being really (phonetically) in the *reverse order* (namely, "hw"), and further that the "w" here represents the vowel sound ("a tight ōō"), he will find with a little practice that such words as "when," "what," "whether," can be easily uttered if they are pronounced as if they were spelt "hōō-en," "hōō-awt," "hōō-ether."

Stammerers frequently experience a similar difficulty in pronouncing words beginning with "sw," for example, "swim," "sweet;" but this likewise they will easily surmount if they are taught to pronounce such words as if they were spelt (phonetically) thus—"sōō-im," "sōō-eet."

"Zh" of course is never spelt so in English, nor is it used at the beginning of a word, but, as pointed out by Wyllie, it is the equivalent of J in the French "Jean," etc. L and R, two initial letters that often give great trouble to stammerers, are both "voiced fricatives," and the pupil should be made to emphasise the vocal element in his practising, as his error commonly lies in attempting to pronounce them as "voiceless" consonants.

(3) *Voiced Nasal Resonants.*

The two consonants under this heading are very frequently a source of great difficulty to the stammerer. The teacher should therefore specially see that his pupil bears constantly in mind the *voiced* character possessed by them both, for there is possibly no commoner error amongst such stammerers than that of attempting to pronounce, for example, "never mind," as though the first voiced letter in each word was the *vowel*. Instead of emitting the voice feebly and interruptedly, he should be taught to pronounce the initial letter strongly and with a continuous hum. These nasal resonants are preeminently two instances where the teacher should be able (as previously mentioned) to foretell that it is a "voiced" consonant that the pupil is attempting to pronounce, from the fact that the *initial vocal element* is distinctly *audible*, as if it were pronounced thus (phonetically) (un)"never (um)mind."

It will be evident that some of the letters in the ordinary alphabet do not appear in the "physiological alphabet." The omissions, however, are readily accounted for: C if "hard" is equivalent to K, while if "soft" it becomes equal to S; again, J is phonetically really represented by "dzh" (for example, "Dzhoo" is the phonetic spelling of Jew), the same remark applying also to G when pronounced "soft" as in "George." These two letters, J and G (soft), occasion so much difficulty to stammerers from a failure to recognise the part played in their composition by the fully-voiced D that the teacher should frequently recur to them in order to impress the solution of the difficulty clearly upon the pupil's mind. Names such as John, James, George, etc., are so common that the stammerer should constantly bear in mind the initial D that they all contain. It is interesting to note that, as is well pointed out by Wyllie, the corresponding *voiceless* compound sound is seen in our use of the soft "ch," as in "chew," which phonetically is really "tshoo."

Q, of course, is really = kw—for example, "quail" becomes "kwail," while similarly X is equivalent to "ks" (for example, "ksiphoid"). It is thus evident that while apparently incomplete, the physiological alphabet contains all the existing consonantal and vowel sounds in ordinary use.

The requisite material having thus been supplied for the instruction of the stammerer, it is only necessary now to summarise here the method recommended by Wyllie in the management of such cases. Briefly it is as follows:

The important distinction between vocalisation and articulation should first be made perfectly plain to the patient, and the example of the violin player clearly impressed upon his mind, so that he may distinctly understand that it is his "bowhand" which is at fault, and that no exaggerated action on the part of the *articulatory* mechanism can ever make up for deficiency of the *vocal* element.

He should be encouraged to speak with a full voice, and in specially difficult cases to practise speaking on a fixed key, or intoning, especially if he has a defective "musical ear."

He should then be taught the physiological alphabet very carefully, and more especially in connection with this the ("stammerers") set of sentences here given.

This second set of sentences, reproduced here by Professor Wyllie's kind sanction, is specially arranged for the *treatment* of stammering pupils, representing as they do the consonants as they are arranged in the *vertical* columns of the "Physiological Alphabet," thus bringing out clearly what is the all-important point in teaching the pupil—namely, the distinction between those that are "voiceless" and those that are "voiced." Thus:

A. *Initials that contain voice.*—(In pronouncing these the voice must be thrown boldly into the initial):

1. "Even ancient elves are awed over oozing."
2. "We visit the Zulus like ramblers yearly."
3. "My nephew."
4. "Best gold dust."

B. *Initials that do not contain voice.*—(These must be touched off lightly, and the voice be promptly brought out in the succeeding vowel or voiced consonant):

1. Far shores seem thinly hazy.
2. Two poor comrades.

With a view to greater practice upon some of the more difficult initials, the following sentences are also here reproduced:

A. *Those containing voice:*

Billy Button bought a buttered biscuit.
Davy Doldrum dreamt he drove a dragon.
Gaffer Gilpin got a goose and gander.
Mother make more mustard: no, no, not now.

B. *Those that do not contain voice:*

Peter Piper picked a peck of pepper.
Tiptoe Tommy turned a Turk for twopence.
Kimbo Kemball kicked his kinsman's kettle.

In practising these the pupil should be told specially to notice what letters cause him the greatest difficulty, and, after having had the physiological method of overcoming these explained carefully by his teacher, he should be encouraged not only to practise repeatedly sentences containing these difficult letters, but also to draw up further illustrative ones. At first it is well to give the pupil only sentences that contain initial consonants that are of *similar character* (that is "voiceless" or "voiced"); but after one or two lessons he should be given sentences that contain words with initial consonants of *dissimilar* character, so that he may learn readily to emphasise the "voiced" and touch off the "voiceless" initials as is required. After the pupil has thoroughly grasped the principles of the "Physiological Alphabet," he can readily draw up for himself illustrative sentences, especially such as contain the letters that prove the greatest difficulty to himself.

He should be instructed to read aloud for ten or fifteen minutes daily, his lesson commencing always with the "stammerers" set of sentences given above, and after going carefully through those and the exercises upon the specially difficult consonants, he should proceed to read poetry and then prose.

In these daily lessons he must be told to notice always what letters give rise to difficulty, in order that he may have these explained to him by his teacher if the pupil himself is unable to discover from the "Alphabet" how they ought to be pronounced. If necessary such daily lessons should be continued for months. He should always speak and read (as Wyllie says) "with voice, making music with the voice, and *listening* to it as he speaks."

He must learn to take inspirations at short intervals, so that he may have ample breath for giving the full vocal element to all vowels and those consonants requiring it.

With a pupil of average intelligence it is usually sufficient if two or three lessons (at intervals of a few days) are given upon the main principles, and especially the "Physiological Alphabet" and the second set of sentences, after which time all that is necessary is an occasional visit from the pupil in order to see that he is carrying out the rules accurately.

In not a few cases stammering is associated with indications of a neurotic constitution, and in some with too great an emotional excitability; and as its persistence is apt to increase this excitability, an early cure of the condition is highly important.

It will be noticed that the writer has not in this article made any distinction between stammering and stuttering. Stammering is best used as the general term which should include two varieties: (1) That in which the patient *stutters* in his speech; (2) that in which he *silently sticks*, making compressive efforts with his oral articulatory mechanism without emitting audible sounds. Since some authors, however, have included under the term stammering the condition known as "lalling," a few words must here be said regarding this condition, and more especially its treatment.

### LALLING.

The nature and varieties of this phenomenon are very fully discussed by Wyllie, to whose work the writer would refer anyone seeking further information on the subject. Here it is sufficient to state that "lalling" is essentially "baby-speech," being presented in the speech of every child at its earliest stage of talking. It is a *morbid* phenomenon only when it persists for an unusually long time, as is the case in all children who are backward in mental development. Essentially it is a defect *not* in phonation, but in the *education of the oral articulatory mechanism*. The speech is (as Wyllie says) "scamped," the difficult articulatory movements being slurred over, so that the word may be made easy of pronunciation, as in the speech of babies, the easier consonants being substituted for the more difficult ones.

In treating such cases, if the patient be an intelligent adult, the instruction should of course be given to him or herself; when it is a child, the parents must be taught how to remedy the defect. The first essential is to find out upon what particular letters the patient "lalls." For this purpose the patient should be made to pronounce after his teacher (1) each of the *vowels* given simply; (2) each of the *consonants*: but *these* must be given by the teacher in three different ways, the pupil attempting to imitate him exactly, namely, (*a*) as *initial*, (*b*) as *terminal*, (*c*) as *mid letter*. The *whole* "Physiological Alphabet" must be gone through so that every defective letter may be detected by the teacher and noted down. Thus, for example, the letter P should be given to the pupil as Papa, apap, appa; similarly M as Mama, amam, amma, and so on.

The whole alphabet having been gone through in this fashion, the defectively pronounced letters being underlined, the teacher can afterwards concentrate his pupil's attention upon those on which he "lalls," and teach him, by demonstration in his own articulatory mechanism, how they ought to be pronounced. If the patient be intelligent and of sufficient age, careful instruction in this fashion will often effect a wonderfully rapid cure.

## ON ŒDEMATOUS AND ERYSIPELATOUS ANTHRAX.

By JOHN HENRY BELL, M.D.,

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OUR knowledge of the various forms of anthrax as they affect man in this country has been very slowly acquired. The external form known as "malignant pustule," or rather cutaneous anthrax, was not observed in England till the year 1854 (published in 1863). The pulmonary form, although it was known in the Bradford worsted district as "woolsorters' disease" from the year 1846, was not recognised as anthrax till thirty-three years afterwards—1879. During these years cutaneous anthrax must have been seen frequently, but it was not diagnosed as anthrax till 1880; neither were such cases previously attributed to infection from wool. Other varieties of external anthrax, as the *œdème malin* of Bourgeois, or malignant anthrax œdema, which I prefer to call œdematous anthrax and erysipelatous anthrax, in accordance with the symptoms, although not uncommon in some countries of Europe, do not appear to have been observed in England previous to the cases now recorded.

Erysipelatous anthrax has been so called solely on account of its resemblance to erysipelas, and not that it is a compound of erysipelas and anthrax.

It is, perhaps, appropriate that these varieties of external anthrax and the pulmonary form of internal anthrax should have been first detected in the Bradford worsted district, where the disease as it affects both man and animals is more prevalent than in any other part of Great Britain. Primary intestinal anthrax has not yet been met with in England; but knowing that such cases are not infrequent in various parts of Europe, it is possible that they do occur here occasionally and hitherto have escaped detection.

The first cases of *adéma malin* were noticed by Bourgeois in Provence, France, in 1834, and his observations were published in 1843. He wrote afterwards a very complete description of the disease in his book on *La Pustule Maligne et l'Œdéme Malin* (1861). All subsequent writers on anthrax have been almost entirely indebted to this author for their statements respecting malignant anthrax œdema, none have written from their own observations. This form of anthrax is rare. Dr. Nicholai states that out of 300 cases of external inoculation he had only seen two cases of this kind.

### CAUSE.

How the virus becomes introduced locally when no point of inoculation can be seen is questionable; it may pass through natural openings of the skin or mucous membrane, and this may determine the production of a diffuse inflammation rather than the ordinary external lesion such as occurs when introduced through an abrasion or wound.

### SYMPTOMS.

Bourgeois says, "It begins as a pale swelling, soft and without pain. It is only after several days and marked development that vesicles and eschar form, notably on the eyelids, but at the onset the skin is smooth and has no trace of pimple."

*General symptoms* are of a negative character. The freedom from pain and distress is remarkable. The pulse may not be much over natural and the temperature not more than normal.

*Local symptoms* are the extensive œdema which may extend from the scalp to the pubes, with much swelling. In the first case seen by Bourgeois in 1834 the lips of the patient protruded like the snout of a pig. In slight cases there is no redness, vesication, or eschar; in severer cases much redness, late vesication and eschar, or gangrenous appearance of the skin. In none has there been any pain, only tightness from stretching of the skin.

### DIAGNOSIS.

The course of erysipelatous anthrax is on lines so nearly parallel with ordinary erysipelas that the differences might easily be overlooked. The late Dr. Fagge, in his work on *Medicine*, states that "Zülzer speaks of the œdematous form of charbon as being sometimes mistaken for erysipelas." When a person has been exposed to contagion and is found to have considerable acute swelling of any part, especially of an exposed part of the body, unlike ordinary diseases, and without much pain, distress, or fever, this form of anthrax may be suspected. It may be distinguished from acute emphysematous gangrene and its congeners by the absence of injury, pain, emphysema, much fever, and constitutional disturbance. The only proof, however, is the finding of the bacillus by cultures or physiological tests with blood or serum taken from the body. In a slight case with œdema only it is probable that a few minims of blood taken from this part and injected under the skin of a white mouse would cause death from anthrax. Cultures are not so certain a test for anthrax as physiological experiments, but in doubtful cases they are more to be depended on for determining the kind of bacillus.

### PROGNOSIS.

Every systematic writer on anthrax copies from Bourgeois's work. He states that *œdème malin* is infinitely more dangerous than the pustule. Up to 1859 all the cases observed had terminated fatally. In 1861 he excepted some cases which had affected the eyelids. Of the 6 cases here recorded—if all may be taken as of this nature—it will be noticed that 3 were fatal.

*Case 1.—Œdematous Anthrax.*

Dr. Rabagliati has kindly allowed me to copy from his diary the following notes of the illness of a gentleman, a wool-comber, who had been exposed to the infection of anthrax in the ordinary round of his business.

C. H., aged 48 years, on June 15th, 1898, complained that his upper lip was swollen, numb, and stiff; there was also some œdema of the cheek towards the right eye. The pulse was 60, which was natural to him. The ailment began on the previous afternoon. He was visited again during the evening, when swelling of the upper lip was less, but the lower lip felt numb and stiff, and about ten minutes afterwards it swelled suddenly to a great size, which was more marked towards the left side of the face. The pulse was 60 and the temperature 98° F.

*Third Day.*—The swelling was reduced and he felt well. During the afternoon he was seen again, when the diagnosis was arrived at that he had the œdematous form of anthrax. On examining his mouth a small sore on the gum was found over the root of the upper right lateral incisor tooth. This had suppurated slightly from time to time for some months. The pulse was 58, the temperature 98.8°.

*Fourth Day.*—In the morning he was much better; the pulse was 56, and the temperature 99.4°. During the evening he had felt chilly once or twice. At 10 P.M., when seen again, he had some numbness, swelling, and stiffness on the dorsum of the penis. On the following morning, that is, the fifth day, the œdema was less; the pulse was 48, and the temperature 98°. He felt anxious, was restless, and did not want to be left alone. The hands and feet were cold, with cold perspiration on face. On the sixth day he was better; the pulse was 48, and the temperature 98.4°. His progress afterwards was favourable. Blood from œdematous parts was not examined.

*Case 2.—Erysipelatous Anthrax.*

R. R., aged 30, an overlooker of woolsorters, where camels' hair, Persian, and East Indian wools were used, called to see me in the afternoon of November 4th, 1898. His right lower eyelid was swollen as if from erysipelas, but without redness of the skin. It had been noticed the previous evening, and the swelling had increased since. On careful examination with a 2½ inch convex lens no papule or abraded spot could be found. The pulse was 88, temperature 99.8°. He had no pain, and did not feel ill.

*Third Day.*—When visited in the morning he stated that he had passed a fairly good night. The right eyelids were completely closed; the œdema, without any redness of surface, had extended to 2 inches above the right eyebrow, to the inner end of the left eyebrow, and to within one inch of the right ear. On the lower right eyelid three-quarters of an inch below and outwards from the inner canthus, the skin was of a slightly darker colour, as if it might vesicate. The tongue was clean, and he had vomited twice after breakfast, when he felt slightly cold, but had no chill. The pulse was 106, and the temperature 103.4°. At 8 P.M., the œdema had extended in all directions: on the right side to behind the ear, but did not involve the ear itself. There were two or three vesicles below and external to the inner canthus, of a light brown colour, but there was no grey or dark discoloration. The pulse was 116, and the temperature 103.2°.

*Fourth Day.*—11 A.M. Pulse 104; temperature, 102°. He had slept moderately, had no pain in the head, and his mind was clear. The swelling had extended; the right submaxillary glands were painful, and the left eyelids half closed. At 9 P.M. Pulse 100; temperature 101.3°. He had slept at times during the day, and had no pain. He had vomited at 8 P.M.

*Fifth Day.*—11 A.M. He had slept fairly well, had no pain except from tension of the skin. The tongue was clean, the appetite moderate, and there was no vomiting. The bowels had been moved. The urine was dark coloured. Pulse 92; temperature 100.8°; respirations 20.

*Sixth Day.*—Pulse 74, temperature 100.4°. The inflammation and swelling were not extending; the eyelids were very hard. Incisions were made to let out the serum in the hope of preventing sloughing.

*Seventh Day.*—Pulse 70, temperature 100°. He had slept well, and felt better; the appetite was moderate. There was some superficial sloughing of the lower eyelid, and much chemosis of conjunctiva. This was incised, and much serum discharged. Progress continued favourable. Clear serum taken on the fourth day was inoculated, with a negative result.

*Case 3.—Erysipelatous Anthrax.*

F. W., aged 35, woolsorter, had the best of health till he returned home on December 5th, 1898, after sorting Persian wool. He was seen an hour afterwards by Dr. Jackson, of Denholme, when he complained of his left arm being stiff and swollen. The skin over the deltoid appeared as if it had been rubbed or scratched with the fingernails about the extent of two fingerbreadths; the redness and swelling extended downwards to the elbow and upwards over the shoulder, but not across the chest. There was no abrasion or vesication of the skin. On the following day the swelling had extended in all directions; his temperature was below normal, he had no pain, no cough, and there was no eschar, although the skin over the deltoid was of a darker colour than natural. On the third day the temperature was lower, he appeared to be sinking, and died forty-eight hours after leaving his work.

*Post-mortem Examination.*—At the examination of the body twenty-eight hours after death the skin over the upper parts of the body was of a dark colour, and also the finger nails. There was some fluid in the right side of the chest. Serum taken from the arm and chest contained the bacillus anthracis.

*Case 4.*

E. S., aged 60, was a jobber in a wool-carding room. On December 31st, 1898, he got up as usual at 6 A.M., but felt well. Three hours afterwards the right side of his neck was noticed to be swollen. He was about all the day, and slept well the following night. On Monday morning there was more swelling, some redness, no pain, and no shivering. The appetite was moderate. He was seen by Dr. Taylor, of West Bowling, at 3 P.M.; the pulse was 100, full and strong, and the temperature normal. On Tuesday morning he felt fairly well, but weak when he sat up; the pulse was small and scarcely perceptible. The temperature in the axilla was below normal, he perspired freely. At 3 P.M. the respirations were 24, the pulse 120, and the temperature in the axilla was 95.6° F., in the mouth 94.8°, and in the rectum 100° F. The redness had extended to the right shoulder and side of the chest, the œdema several inches beyond this and on the left side half way between the sternum and axilla. At 9 P.M. the temperature in the axilla was 96° F., in the mouth 95° F., and in the rectum 100° F.; the respirations were 40 and the pulse 120. There was no cough, and no pain except in the feet. Death occurred four hours afterwards.

*Post-mortem Examination.*—At the examination of the body forty-four hours after death, rigidity was marked. There was much swelling and dark purple discoloration of the face, neck, and chest, with general œdema all over the body and limbs. The epidermis was loose and detached over the chest and right side; there were also large blebs on the left side of the neck, the loins, and the back, which were filled with clear serum. The fingers were dark-coloured and the nails black. The pleural and pericardial fluids were not much in excess. There were several hæmorrhagic patches under the mucous membrane of the intestines, mostly on the lower part of the ileum and also in the mesentery. Other organs were apparently normal. The blood was fluid. Anthrax bacilli were very numerous in fluids taken from the body.

*Case 5.—Erysipelatous Anthrax.*

On March 12th, 1899, I visited with Dr. Thomas for Dr. March, Bradford, J. G., aged 29, a willeyer of low class foreign wools. On March 7th he was "out of sorts," and did not go to work.

On the second day a small pimple was noticed at the outer canthus of his right eyelids, which were both swollen.

On the third day the right eyelids were much swollen, and the upper was red.

On the fourth day the swelling had extended; he could scarcely open the eye, and the right submaxillary glands were swollen and tender.

On the fifth day there was vesication of the right eyelids, the neck, right side of the nose, and the left eyelids were swollen and inflamed.

On the sixth day the right upper eyelid was greatly swollen, red and hard, and had two blebs the size of kidney beans; there was one also on the lower lid, and another at the outer canthus. These contained a clear, gelatinous, straw-coloured serum. The pulse was 88, and the temperature 100.5°.

On the seventh day the swelling had increased. Neither eye could be opened, the right ear was doubled on itself, the mucous membrane of the cheek was much swollen, the submaxillary glands and the anterior aspect of the neck were greatly swollen, the scalp pitted on pressure, and he was slightly delirious. The pulse was 76 and the temperature 101.8°.



Fig. 1.—Photograph of J. G. taken on the seventh day.

*Eight Day.*—He had slept four hours. There were other vesicles on cheek; the swelling was very tense; the tumour in the mouth from œdema was subsiding; the left eye could be opened; the occiput was much swollen. The pulse was 88 and the temperature 101.8°.

*Ninth Day.*—The brawny swelling of the face, lips, and in the mouth was less, and he had taken nourishment better. The pulse was 88 and the temperature 102.8°.

*Tenth Day.*—The swelling was going down, the blebs were dry; there were black eschars on the right lower eyelid, much fluid from the conjunctiva, and many small vesicles on the cheeks. He could now close his mouth and was able to drink. The pulse was 78 and the temperature 100.6°.

*Eleventh Day.*—Pulse 72, temperature 98.9°. He continued to make good progress to recovery.

Serum taken on the sixth day from one of the blebs for cultivation on gelatine yielded positive results

*Case 6.—Erysipelatous Anthrax.*

J. W., aged 27, a willeyer of Persian wool, was at work on April 28th, 1899, when he noticed a small pimple on the front aspect of his left shoulder; it did not alter much for several days following. On May 1st he had some tinned salmon, and did not feel well afterwards. Next day he vomited and was poorly, felt cold, and could not sleep; the spot on the shoulder was itchy and more swollen.

On the third day it was worse and blistered, but not painful. He was seen by Dr. Angus, of Bingley. The pulse was very feeble, and temperature 100° F.

On the fourth day in the morning he stated that he had passed a good night, had no pain or appreciation of his serious condition, but felt as if he could get up and go to his work. He had a fresh and healthy complexion, without any distressful look. The pulse could not be counted at the wrists; over the heart it was 118; the temperature in the mouth was 99.5°, in the rectum 101.4°. On the anterior aspect of the left shoulder was an irregular-shaped blister about 2 inches in diameter, which partly exposed a raw surface. The skin around this—6 inches in one direction and 5 inches in another—was of a flesh-red colour, which did not disappear on pressure. Beyond this the skin was of a bright red rose colour, which disappeared on pressure. The œdema extended around the shoulder over the left arm, across the neck to the right side of the face, the submaxillary glands and side of the chest, much more on the right side of the body than on the left, probably from not being able to lie on his left side. The glands in the axilla and neck were enlarged, but not painful on pressure. During the afternoon, when Dr. Angus again visited him, he was dressed and downstairs, sitting in front of the fire, although he was pulseless at the wrists. At 9 P.M. he had slept well since the doctor's previous visit, and did not feel ill; the tongue was moist, the appetite moderate, and there was no cough. The pulse over the heart was 107; the temperature in the mouth was 98.6°, and in the rectum 99.4°. The respirations were 22. The mind was clear; but the heart sounds were more feeble. Much clear straw-coloured serum flowed from the vesicles. There was no apparent eschar. He died at 11 P.M. on May 5th.

*Examination of Body Thirty-Six Hours after Death.*—Rigidity of the limbs was well-marked. The discoloration of decomposition on all parts of the body was such as is more usually seen a fortnight after death. There was much dark purple discoloration of the skin over the anterior part of the neck and the upper part of the chest with much œdema and emphysema. The anterior aspect of the left shoulder was stripped of epidermis as if it had been blistered, and the exposed skin was of a flesh-red colour excepting an irregular patch over and 3 inches across in different directions, which was black and gangrenous. The œdema extended all over the chest and abdomen; the superficial veins of the body and limbs were sharply defined, and were of a dark purple colour; the ends of the fingers were a dark-blue colour; the toes were natural. On section of the skin over the chest much clear fluid escaped. Air was present in the cellular tissue beneath the sternum; the left lung was extensively adherent to the side (old). The right side of the chest contained about a pint of serum. Within the external layer of the pericardium were several infarcts of blood varying from one-third of an inch to 1 inch across. The heart appeared to be natural; it contained fluid blood, and the internal surface was deeply stained; the aortic and pulmonary valves were of a dark chocolate colour; the lining of the large vessels was of a bright cherry colour. Several patches of extravasated blood were present beneath the external coat of the stomach, the bowels, and the mesentery; one of these on the ileum was 2½ inches in length, and extended all round the bowels. The spleen was soft. The liver and kidneys were congested owing to the fluid state of the blood. The brain appeared to be free from disease.

Capillary tubes charged with serum taken from the body were sent for examination to a well-known clinical laboratory, the report from which did not confirm the diagnosis of anthrax (examination not early enough). Cultivations on gelatine and agar-agar with serum from similarly charged tubes were tried, with a negative result. The contents of three other tubes were given to a guinea-pig, which was found dead seventy-three hours afterwards. In fluids from this, anthrax bacilli were very abundant.

### TREATMENT.

It is evident that the treatment generally adopted in localised anthrax lesions by excision, cautery, or caustics is not suitable for the diffused inflammatory form. In Case 2, which recovered, chinosol was given by the mouth (gr. i every three hours), by the lungs (nebulizer, 4 per cent.), and by daily injections into the cellular tissue at several points. When the skin of the eyelids was much swollen and hard, incisions were made to relieve tension and prevent sloughing; afterwards chinosol lotion was applied. Perhaps the most promising method of treatment is the intravenous injection of non-toxic germicides.

## A CASE OF MULTIPLE MALIGNANT PUSTULES (ANTHRAX).

BY R. LAWFORD KNAGGS, M.C., F.R.C.S.,
Assistant Surgeon to the Leeds General Infirmary.

MALIGNANT pustule, or external anthrax, is nearly always single. The following case, in which three, and perhaps four, were present, is therefore of special interest. The careful record of the facts is due to Mr. F. Talbot, M.B., the acting casualty officer.

The treatment by excision of the pustule is nearly always followed by rapid disappearance of all serious symptoms and by prompt convalescence. This result may be counted upon if the bacilli have not penetrated the lymphatics and been carried beyond the local disease. Infection of the resulting wound by bacilli from the sore which is being excised cannot be a really serious danger. The writer has seen many pustules excised, but never once any recurrence in the wounds.

G. A., aged 20, a groom, was sent up to the Leeds General Infirmary on September 7th, 1900, by a medical man because of the suspicious appearance of four sores upon his forearms. The sores had a very strong resemblance to anthrax pustules, but there were no vesicles around the central eschars, and the surrounding zones of inflammation were very limited. The patient was not suffering from any marked constitutional disturbance, though he stated he had felt somewhat ill since the appearance of the first sore, and one day his temperature had been 104°. The conditions present on the 7th were not sufficiently clear to justify a certain diagnosis, but the man was warned and told to present himself daily for inspection. The next day (September 8th) the largest of the sores had put on a very serious aspect, and he was at once admitted. He then gave the following information, which he had withheld on September 7th, although he knew that anthrax was suspected.

On August 30th he took part in a *post-mortem* examination on a cow said to have died of anthrax. He received a small wound near the web of the thumb of the left hand on its posterior surface. This apparently healed. On September 3rd a small pimple appeared just below the bend of the left elbow. This gradually grew to the condition presently to be described. On September 6th another pimple appeared on the ulnar side of the right forearm, and on September 7th another at the bend of the right elbow. When admitted on September 8th the sores presented the following appearances. That at the bend of the left elbow was an ulcer 1 inch in diameter, somewhat circular in shape, and with a base composed of dark-brown or black sloughing tissue. Surrounding the ulcer was a ring of yellow swollen and œdematous skin upon which were several large and irregular blisters. There was a considerable area of surrounding cellulitis, and the lymphatic trunks upon the inner side of the arm were much inflamed. The epitrochlear and axillary glands were enlarged. The sore on the ulnar side of the right forearm was about the size of a sixpence. It showed a central black eschar and a small zone of surrounding inflammation. There were no very evident vesicles. That at the bend of the right elbow was smaller. Its centre was yellow and had not yet become an eschar. It was not unlike a vaccination pock about the eighth day. Here also the surrounding inflammatory zone was very slight. The original wound on the left hand looked like a small copy of the second sore, and as if the disease at that centre had aborted. The other three sores were actively progressing. Though the patient's temperature was 102.4° his general condition was good. Anthrax bacilli were demonstrated in the exudation taken from the largest sore.

The same night the patient was anæsthetised, and all four sores were widely excised by Mr. Talbot. All the tissues down to the deep fascia were removed, and pure carbolic acid was applied to the wounds. The temperature at once began to fall, and was normal on the evening of September 10th. The wounds quickly healed, the large one being assisted by skin grafts. The patient left the hospital on September 29th.

## A CASE OF ANTHRAX WITH EXTENSIVE MENINGEAL HÆMORRHAGE.

BY JOSEPH C. STURDY, L.R.C.P.&S.EDIN.,
Bradford.

F. B., aged 33, a woolsorter, while at work on March 5th, was seized with shivering, pains all over, and slight nausea. On the following day the temperature was 102°, and pulse 110. The tongue was furred; breathing was normal; and the pains in the limbs were as before. He appeared to be suffering from influenza. On March 7th the temperature was 99°, and the pulse 98. The pains were relieved, and there were no chest symptoms.

On March 8th the patient found "a lump" on his neck. When visited his temperature was 99°, and the pulse 108, and very weak. The swelling was on the right side of the neck, 3 inches above the clavicle, and 1 inch behind the outer border of the sterno-cleido mastoid muscle. It was the size of a sixpence, and raised ⅛ inch above the surrounding skin. The edge was vesicular, and of a greyish colour. There was no inflammatory area round it, nor was there any induration or œdema in the tissues. The glands were not enlarged. Recognising that it was a case of anthrax, with the help of Dr. Sergeant the swelling was excised, leaving a wound 2½ by 1¼ inches; this was swabbed with a spirituous solution of carbolic acid (1 in 10), some of which was also injected into the surrounding tissues.

On the following morning (March 9th) the patient said that he had passed a good night, and was free from pain. The temperature was 99°, and the pulse 98. About 1 P.M. he suddenly became blind, complained of pain in his head, vomited, and in half an hour was unconscious and very restless. At 5.30 P.M. the temperature in the axilla was 99.7°; in the rectum 102.2°. He was so violent—requiring two persons on

each side of the bed to restrain him—that the pulse could not be counted. There was no œdema or inflammation about the wound. The hands and feet were cold, the ends of the fingers were of a dark blue colour: the blood appeared to be stagnating in his limbs. The pupils were widely dilated, and there was left divergent strabismus. He continued unconscious, tossing about the bed until shortly before his death at 11 o'clock the same evening. Capillary tubes charged with blood taken from the ear at 5.30 P.M., when cultivated on gelatine, developed the bacillus anthracis abundantly.

On examination of the body forty-five hours after death there was much dark discoloration of the skin over and above the clavicle on the right side. The veins were very noticeable on both arms and sides of the chest. The finger nails were a dark colour, but the toes were natural in appearance. On opening the chest fluid was found in both pleural spaces. The pericardium contained an ounce and a-half of serum. The heart muscle was dark-coloured, and contained no clots. The valves were normal. The liver, kidneys, and spleen were engorged, and heavier than usual. On removing the calvarium and dura mater the brain was covered with blood effused between the arachnoid and pia mater, extending also round to the base but not into the ventricles. The brain appeared natural. Anthrax bacilli were numerous in the pleural and peritoneal fluids.

## THE DANGER OF ANTHRAX FROM THE MANIPULATION OF HORSEHAIR, AND ITS PREVENTION.

By ALEXANDER SCOTT, M.D.Glasg.,
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### Mode of Infection.

Some time ago, as certifying factory surgeon, I had to report on a fatal case of anthrax, and while making my investigation I was deeply interested in the diagnosis, the genesis, and the prophylaxis of that dreaded disease. The notification of anthrax is obligatory, but on reviewing the literature on the subject, I was convinced that some cases, especially of the so-called internal type, were never recognised.

*History.*—I. C., aged 24, who had always enjoyed good health, was employed as a duster or cleaner in a showroom of a cabinetmaker's warehouse. On the morning of September 12th, 1900, she had a distinct rigor, and for 48 hours suffered from general *malaise*, headache, and vomiting. This was followed by swelling of the left cheek and the development of a boil or pimple below the malar bone. The forewoman assured me that she had observed this pimple three days before the girl had the rigor. On September 17th the swelling, which was now hard, brawny, and intensely painful, had increased to an alarming extent. On September 20th she complained of intense pain in the epigastrium and abdomen, and next morning she was removed to Belvidere Hospital, where she died three hours after admission, on the tenth day of her illness.

*Progress.*—(For the following notes I am indebted to Dr. J. C. McClure, Senior Assistant, Belvidere Hospital). Since the onset of her illness, the patient had suffered from sickness, vomiting, and ever-increasing pain. On admission the girl was collapsed; temperature normal; pulse practically uncountable; and respirations sighing. The pustule on the left cheek had increased in size till now it measured 2½ inches across. Scrapings of the pustule during life showed typical anthrax bacilli.

*Post-mortem Examination.*—Within 24 hours after death a *post-mortem* examination was made, and cultures of anthrax bacilli were obtained from pericardial fluid, ascitic fluid, spleen, and heart muscle. Malignant pustules of large size were found in the stomach, while numerous smaller ones were found in the intestines. It is interesting to note in connection with the presence of these pustules in the stomach and intestines that her brother voluntarily stated that the patient was in the habit of chewing hair.

This direct inoculation of the mucous membrane was a new phase of the disease, so unlike that produced by the digestion of infected meat that I was led to make further inquiry. The nature of the woman's work when sweeping the floor and dusting the furniture caused the air to be impregnated not only with dust, but also with small pieces of hair, and the forewoman declared that she had frequently seen such bits of hair adhering to the lips and angles of the mouth of the deceased, and that these were nipped by her incisors. This, I think, explains the brother's statement.

When endeavouring to trace the source of the infection I was permitted, through the courtesy of the employers, to examine their workroom journal, and learned that from September 1st consignments of hair had been received on the following dates: September 3rd, 7th, 8th, and 10th; but as to the original source of the hair I could get no information. The period of incubation in anthrax cannot be definitely stated, for it varies under certain conditions: the bacillus acts much more quickly than the dried spore, and in the form of inoculation it depends entirely on the receptive condition of the abraded surface. Bearing in mind then that the eschar was first noticed on the woman's cheek on September 9th, we may safely assume that the bale received on September 3rd was the one which carried the poison. All the hair received on the dates mentioned had been supplied by one firm, at whose factory I learned that two of their employees had suffered from anthrax. One woman had died suddenly on September 4th, and on bacteriological examination of her blood it was found to teem with anthrax bacilli. The other case recovered.

Owing to the veterinary regulations of our public slaughter-houses, the dangers from anthrax in native hair—which is chiefly used in this factory—are almost precluded, and in nearly every case the source of infection has been traced to Chinese, Russian, or Siberian hair.

About August 24th this firm had received a consignment of hair from Russia, which had been sent in bales, uncovered, and bound together with cords. To carry these into the factory the carter hoisted them on his shoulder, while the next to actually handle this hair was the unfortunate woman. Both were apparently infected about the same time. The life of the carter was saved by an operation on September 8th, but the poor woman, whose wretched habits and environment had greatly reduced her vitality, succumbed on September 4th. After being prepared, this suspected bale was mixed with other hair and despatched on September 3rd to the cabinetmaker's workshop; but it still carried with it the living and virulent germs, and I. C. was the next victim. It has now been used in stuffing mattresses, and unless these germs be finally annihilated—say by some beneficent fire—they may go forth once more to slaughter the innocent. No animal plague is so widespread, no disease is more far-reaching and dangerous in its results, and no disease is in its etiology so true to the physical condition of germ-laden dust.

In 1878-9 Dr. Russell, in a report to the Local Government Board, described 9 cases of illness, 5 of which were fatal, in horsehair factories in Glasgow. These were definitely ascertained by bacteriological examination to be due to anthrax, and in all these cases the infection was conveyed by Russian hair. The danger arising from the dust and dirt of foreign hair is so great that many persons not actually connected with these factories have been infected with the disease. Dr. Kübler, in his report on this disease to the German Imperial Health Office, states that between 1884 and 1888 two women had died of the disease who had mended the clothes of their husbands who were engaged in horsehair factories; that the mother of a workwoman had died of malignant pustule on the neck from having worn the scarf of her daughter, who had worn it round her neck at work in a hair factory; that a man engaged in using, as a manure, dust from a horsehair factory, developed a pustule on the arm; that in 1897 a man died at Nuremberg of internal anthrax who had associated much with brushworkers, and had regularly taken his meals with them, but had never been in a horsehair factory; that cases of anthrax had occurred among cattle in the neighbourhood of horsehair factories, and on such farms as had used hair refuse as manure. In his last report on anthrax, the Medical Inspector of Factories states that "the number of cases reported in 1899 is double that of 1898, and is due very largely to special incidence on the horsehair industry, which has not been observed in previous years." He also states that in the previous years cases had occurred which had not been reported. Certainly it is the case that the bacilli are sometimes so numerous in the poisoned blood as to interfere with the motions of the red corpuscles, and to prevent their forming rouleaux, and even give rise to hæmorrhages: but it is a curious fact that in the gastric or pneumonic variety of the malady no large development of these organisms seems to occur till just before or just after death. Further, it has been observed in the pustular form of the affection that while bacilli may be present in the serum of the vesicle, they may be entirely absent from the blood taken at its base. It may be assumed, then, that an early

diagnosis is by no means an easy matter, unless the history points definitely to infection in the occupation of the patient.

In these factories the germs of anthrax can only be conveyed by the hairs of animals that have died of the disease, or have been contaminated with blood or discharges from such animals. The process of sorting simply pollutes the air with germ-laden dust; while the hands of the workers and other exposed parts get covered with the dirt from the hair.

### Prevention.

In the prevention of the disease there are three main points to contend against: (1) The dust arising from the dry hairs: (2) the contaminated discharges which adhere to the hairs; and (3) the germs—bacilli and spores—of the disease.

1. *The Dust.*—The germs are more easily disseminated in the dry state; hence if the hairs could be moistened at a temperature either high enough to destroy them, or low enough to prevent cultivation, the danger could only arise from actual contact on an abraded surface.

2. *The Discharges.*—These contain the spores, and are agglutinated to the hairs, from which it is almost impossible to separate them. This appears to me to be a most serious difficulty in the way of disinfection, for no mechanical appliance seems to be efficient in extracting them satisfactorily.

3. *The Germs.*—With the bacillus there is little or no difficulty, inasmuch as when it is exposed to a temperature of 50° C. for ten minutes it is destroyed. On the other hand, the spore in the dried state is the most resistant of known organisms. It can retain its vitality in a temperature long after the fabric to which it is attached has been absolutely burned, and can only be destroyed by strong germicides, continued boiling, or steam at a very high pressure. The power of growth may remain for many years. In the report by Dr. Russell, to which I have already referred, he writes (p. 328): "I think it is the same writer (Rayer) who records the still more remarkable case of three persons who were attacked with the disease after cleaning some hair that had for many years served as stuffing of an easy chair." Further, the factory people declared that the hair which I suspected could not carry infection, inasmuch as it had been (1) boiled in dye for two hours, (2) boiled in copperas for one hour, and (3) stoved at a temperature of 150° to 186° F. for forty-eight hours. Dr. Kübler found the spores capable of development after three hours boiling, and Koch found that they retained their vitality for ten days in a 5 per cent. solution of copper sulphate.

In the prevention of anthrax in this industry there are two main considerations to be kept in view, first, that the means used are sufficient to absolutely destroy these resistant spores, and, secondly, that the commercial value of the raw material is not reduced thereby. Koch, in his work published in 1881, writes: "In practice, for disinfection of anthrax only such means are worthy of notice as can destroy all germs of organic life within twenty-four hours." In his experiments at the German Imperial Health Office, and after having failed with formalin and oil of turpentine, Dr. Kübler declares that current steam is a trustworthy means of disinfection, but it requires to be applied under pressure, and this excessive pressure causes the ends of the hairs to curl up, to lose their elasticity, and become brittle, so that there is considerable loss of material when put through the "willey." This high pressure also causes white hair to become yellow. Dr. Legge, H.M. Medical Inspector of Factories, in his last report, says: Adequate steam disinfection, provided the bales are opened and the horsehair spread out (in which operations, of course, danger is incurred), can give a certain guarantee of the destruction of the anthrax contagion, but if attempts are made to disinfect unopened bales, especially when hydraulically pressed, the steam will not penetrate to the centre.

After careful consideration I would suggest the following precautions for the prevention of the disease, in the hope that they might be found not only successful but practicable:

1. That all workers should wear overalls.

2. That no one with any cut, sore, or abrasion of the skin should be allowed to work unless it can be absolutely protected from contamination.

3. That all workers should wash themselves frequently, and especially before taking food.

4. That all cases of illness, especially if connected with any swelling or boil, should be immediately intimated to the manager, in order that the disease may be attacked in its earliest stages, and that other workers similarly exposed may be warned of their danger.

5. That the bales should be immediately immersed in water, and that no handling of the raw material be permitted, except in the wet state. This will prevent dust, and the risk of contagion then will only be possible through an abrasion of the skin. I have no faith in the use of fans, respirators, or currents of air. The germ must be killed; by these means it is simply shifted. Unlike other dangerous trades this microbe is wafted on the breeze until it settles, and there awaits—it may be for years—a suitable soil in man or beast in which to grow and develop.

6. That the hair should be boiled—say for thirty minutes—in order to cleanse it, and soften the agglutinated discharges which may contain the germs, and that afterwards steam should be applied for the same time at a pressure of 0.15 atmospheres. If, however, it be desired to effectually disinfect by boiling, without continuing it so long as to destroy the material, it could be accomplished by using a 2 per cent. solution of potassium permanganate, and afterwards bleaching with a 3 per cent. solution of sulphurous acid.

7. That all dust and residue be carefully burned.

I am of opinion that these precautions might be used without encountering any material or industrial difficulties, and that they would afford a complete immunity from the disease.

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# AN ADDRESS

ON THE

# REORGANISATION OF THE BRITISH MEDICAL ASSOCIATION, AND ON CERTAIN PROPOSED ALTERATIONS IN MEDICAL EDUCATION.

*Delivered at the Annual Meeting of the Metropolitan Counties Branch of the British Medical Association, June 25th, 1901.*

By STEPHEN MACKENZIE, M.D., F.R.C.P.,
President of the Branch.

### The Reorganisation of the Association.

Gentlemen,—The present has been an eventful year in the history of the British Medical Association, and we are still in the midst, if not of a constitutional crisis, of a consideration of a remodelling of the Association. The present constitution of the Association, adopted in 1874, is that of a limited liability company, registered under the Companies Act as an Association not for profit. Since 1874 the Association has largely increased, and now has upwards of 18,000 members. It is not surprising that many are of opinion that a constitution that sufficed when the Association was much smaller has now become inadequate. This Branch has already given its adhesion to the general principles of the scheme submitted by the Constitution Committee, and also, with a few modifications, to its details. It is realised no doubt by most that a large number of members are really completely indifferent whether any alterations are made in the constitution of the Association or not. Many also, I daresay, are satisfied with the existing organisation, but there are others desirous of a more perfect form of Government and organisation of an Association of such numbers, which, united and capable of expressing the fully and clearly ascertained views of the majority, ought to be a power in the land in laying before Parliament or public bodies an authoritative expression of the opinions and desires of the great bulk of the profession.

The main principles of the proposed reformation are:

1. The institution of small primary units of organisation.

2. The enrolment of every member of the Association in the local organisations.

3. The appointment of delegates of the primary units of organisation to represent the opinions of the latter, and to take an important part in the management of the Association.

These general principles seem, from the reports of the meetings of Branches, and correspondence in the Journal, to meet with general acceptance. It is in the application of

these principles in practice that difficulties have been recognised, and divergence in views have become apparent, and though we ought, as asked by the Constitution Committee, at this stage to confine attention to the principles they have adopted in their recommendations, so much depends upon the manner in which they are carried out that we cannot altogether shut them out from consideration. It is to be hoped that the difficulties which are recognised will be overcome, and that the divergencies of opinion that exist outside will be met by the same conciliatory spirit of compromise that was shown in the Constitution Committee and the Branch meetings, and that the scheme may thus be carried to a satisfactory conclusion.

I am sure we are all impressed with the ability and lucidity of the Constitution Committee's report, with the care, self-restraint, grasp of the subject, and organising ability displayed by the members of that Committee, and return our grateful thanks to them for the time and attention they devoted to a scheme having for its object the removal of defects in the existing constitution and the reorganisation of the Association so as to render it more useful and more effective.

1. *The Institution of Small Primary Units of Organisation.*

This proposal seems open to no important objection. It may be a little difficult to arrange the areas of the Divisions, but these difficulties will be overcome by the Special Committee it is proposed to form, and which will consist of the secretaries of all the Branches, who, with the other members appointed by the Council, will combine local knowledge with administrative capacity. I think it would have been better to call the units "Districts"—a term already in use in our Branch for somewhat similar bodies—rather than "Divisions," as more expressive of locality, but the criticism is verbal merely.

2. *The Enrolment of all Members in the Local Organisations.*

I think this is approved by all, except possibly the unattached members themselves. I do not suppose anyone can accurately foretell how far the unattached members will submit to this ordinance and the additional payment of 4s. a year which is proposed. One can scarcely believe that the additional cost will have much, if any, influence in determining whether the unattached members remain members of the Association, and it is to be hoped that as a whole they will not object to be brought into closer organic connection with the Association, of which they are already members, when they reflect that their doing so will strengthen the Association, and greatly increase the weight that will attach to any expression of opinion or action when it voices its members. Still, the fact that the unattached members constitute about one-third of the Association should make us pause before committing ourselves to any serious increase of expenditure.

3. *Delegates.*

The third principle, that of delegates, is undoubtedly that which presents the greatest difficulties, and causes the greatest divergence of opinion, as seen in the Constitution Committee, the discussion on the Report in the Branches, and correspondence in the JOURNAL. There are two points in connection with the institution of delegates that require separate consideration: (*a*) their functions or duties: (*b*) their payment. As regards the first point, the Constitution Committee recommend that delegates be appointed by every Division to obtain their instructions, and vote on any subject submitted to the Divisions by the Council of the Association when it is desirable to obtain the opinion of the whole body of the Association. It is further proposed that there be a meeting of delegates at the Annual Meeting of the Association. It is clear that the duties and powers of this meeting of delegates will be very far-reaching, for in the recommendations of the Constitution Committee it is proposed that a resolution of the Delegate Meeting on any question lawfully brought before it shall be regarded as a decision of the Association, and be binding on the Council and all subordinate bodies. But means are provided that these considerable powers are held in check by requiring that such resolution must be affirmed by a majority of at least two-thirds of the votes given thereon, and if affecting the disposition of the funds of the Association, be duly confirmed by the Annual General Business Meeting, and by the further check of the Referendum on the part of the Council when that body is of opinion that any resolution submitted by the meeting of delegates does not properly represent the wishes of the Association. A great deal of discussion has arisen as to whether the delegates should simply record the decisions of their Division or should act as a deliberative body. The Constitution Committee carefully considered this point, as also whether the resolutions arrived at by the meetings of delegates should be simply advisory or binding on the Council, subject to the Referendum. They remark as regards the first point that if the duties of the delegates consisted simply in registering the resolutions of the Divisions, as is advocated by many, or by communication to the General Secretary, which would be simpler and less expensive, it would "require that the opinions of the Divisions should be expressed as the simple affirmative or negative of proposals placed before all the Divisions in identical terms." They propose on the other hand, as is the practice in existing delegate bodies, that the Delegate Meeting shall be really deliberative, and "bring together persons representing various shades of opinion in order that by discussion and reasonable compromise a practical decision may be arrived at, fairly representing the wishes of the whole Association." It is recommended that the decisions of the Delegate Meetings shall, with the safeguard of the Referendum, be binding and not merely advisory, in this way controlling the Council, which is not in its constitution so representative as will be the Delegate Meeting. I think the reasons advanced by the Constitution Committee are convincing, and that the simple registration of the decisions of the Divisions would be less satisfactory. I hope the delegates, in close touch with all the members, may prove a valuable feature in the working of the Association. The main difficulty to be foreseen is that the immense number of delegates, calculated by some as between three and four hundred and by others as not less than four or five hundred, will be found an unwieldy body in which it will be difficult to transact business. Whether in practice it would be possible for the meeting of delegates to overcome these difficulties in the time at their disposal remains to be seen.

As regards the payment of delegates, whilst not opposed to it in principle, as it is not essential to the scheme of reorganisation, and there is an uncertainty what effects the new rules, if carried into effect, will have on the unattached members, which involves a financial uncertainty of considerable magnitude, I am in agreement with those who think decision on this point should be deferred until the number of delegates and the probable future income of the Association are ascertained.

One other objection occurs as to the institution of Delegate Meetings, and it is that in the opinion of the Constitution Committee they would not supersede the necessity for an Annual General Business Meeting, and thus there would be annually two meetings of shareholders at the session of the annual gathering, which would be unusual and anomalous. The Constitution Committee, however, points out that under the Companies Act it is necessary, and that the evils connected with it will be checked and controlled by requiring the delegates to be present. Not a single valid reason other than the legal necessity has been advanced in favour of retaining the business meeting, which has in the past proved most unsatisfactory in its working. There is considerable force in Mr. Victor Horsley's contention that in the circumstances it would be better to wind up the Association as a limited company, and start our new constitution unfettered by its restrictions under a charter. It appears, however, to a majority of the Constitution Committee that

> all the elements of such a constitution which are practically required at present can be obtained under the Companies Act, and it is not worth while, for the sake of obtaining a more symmetrical constitution, to plunge immediately into the uncertain and probably tedious and costly process of winding up under the Companies Act, and reorganisation under a charter.

I have not been able to touch on several points, such as co-optation, which I regard as desirable, but after full consideration of the proposed changes, the most important of which—the units of organisation, the inclusion of the unattached members, and the institution of delegates—seem to me to make for the good of the Association in the future. I think

that when the recommendations of the Constitution Committee, with such modifications as are generally agreed upon, are confirmed by a general meeting, we shall have a constitution that will satisfy the aspirations of those dissatisfied with the present organisation, and which will promote the efficiency and usefulness of the British Medical Association to its members, the profession, and the State.

### Proposed Alterations in Medical Education.

The Metropolitan Counties Branch has previously given much attention to the subject of medical education, which formed part of the inaugural address of Mr. Macnamara, the President in 1884. As a consequence, a Committee was formed, which submitted a report to the Council, and was by them laid before a general meeting of the Branch. No doubt this report had considerable weight in awakening and moulding professional opinion as to the necessity of the reorganisation of the London University, and I am of opinion that the Branch might with advantage take the subject of medical education again into consideration.

#### *Present Position of the Subject.*

A Committee of the Medical Faculty of the London University has been recently appointed to confer with the medical schools of the University to secure common courses of instruction for internal medical students in the preliminary and intermediate portion of their studies under appointed or recognised teachers at one or more centres. This concentration of studies, it will be remembered, was favourably regarded by the Statutory Commission, and it was incorporated in the statutes, but the Commission thought it better that it should be left to the Senate of the University to formulate a scheme and carry it into effect. So far as the University of London is concerned this proposed concentration of teaching affects only the internal medical students, but some would go further, and advocate concentration in the early subjects of medical education for all the students of London, whether or not University undergraduates.

It is generally agreed that medical education naturally divides itself into three periods or stages:

1. Preliminary Scientific: chemistry, physics, biology.
2. Early Medical or Intermediate: anatomy, physiology.
3. Medical proper: medicine, surgery, including pathology and therapeutics.

No one proposes any concentration of teaching in the third period, but not a few are in favour of concentration in the teaching of the first and second periods, and various schemes have been put forward.

#### *Concentration.*

This subject has for years been under consideration, but up to the present there has not been any sufficient consensus of opinion to overcome the resistance of those who do not, for various reasons, desire any change. Schemes for a single central institution have seemed so impracticable that many, whilst of opinion that concentration is necessary, are in favour of three or four central institutions, which may be either altogether new buildings, or some of the existing medical schools. A writer, whose name is not disclosed, has urged with great ability and lucidity a scheme[1] by which all the teaching in Periods 1 and 2 in London might be carried out.

[1] A single central institute should be established under the auspices of the London University, at which all the medical students in London, whether university undergraduates or not, should be able to obtain all the necessary instruction in the subjects of the preliminary and early periods of study. The University and the London College of Physicians and Surgeons should not recognise instruction in these subjects by any other institutions in London. The constituent Medical Colleges should undertake not to provide instruction in these subjects for their students. The Royal Colleges and the constituent Medical Colleges should be given seats upon the Board of Management of the institute. The Royal Colleges should be permitted to conduct conjointly with the Senate some of the medical examinations of the preliminary and early periods. Such an institution would, if the number of medical students remained at its present standard, have an entry of about 500 new students a year, and a total roll call of between 1,200 and 1,500. If the fee were fixed at 25 guineas a year the average annual income would be over £30,000. The average duration of each student's course would be two and a-half years. It should certainly be possible to provide professorships in all the subjects taught at the institute of a value to attract to and keep in London men of the very first rank, even if the institute failed to obtain direct endowments, and the University found itself unable to do more than provide the buildings.

Before criticising this scheme I must, however, call your attention to the fact that the problem of concentration or teaching in the first two periods of medical education is, or may be, entirely modified by a recent decision of the General Medical Council. The practical effect of a vote carried at the last meeting of the General Medical Council, if confirmed at a subsequent meeting of the Council, will be to abolish the studies of Period 1, chemistry, physics and biology, from the medical curriculum, and the student will be required to have passed a satisfying examination in these subjects before entering upon his proper medical studies. It seems not improbable that the members of the General Medical Council were influenced in their voting on a resolution which scarcely indicated the important issue which became attached to it, by various considerations: some being of opinion that the preliminary scientific subjects could be as efficiently, and perhaps more conveniently, taught before entering at the medical schools, whilst others saw in voting as they did a means of establishing a *modus vivendi* between the General Medical Council and the Royal Colleges, and the avoidance of a break up of the concert that the Council has established between the various qualifying bodies. The matter has been referred to the Education Committee of the General Medical Council to make "a practical and wise suggestion" for carrying into effect the proposed alteration. Awaiting the recommendations of the Education Committee and confirmation by the Council, it is desirable that opinions on this subject should be freely expressed outside the Council. As a matter of fact, the two Royal Colleges have already recognised instruction in the studies of Period 1 at other institutions than the medical schools and universities, and it is this action of theirs that has brought about a conflict between them and the General Medical Council, which at the present moment has resulted in a victory to the Royal Colleges. These are no doubt weighty arguments in favour of the instruction in chemistry, physics, and biology, being completed before the student enters upon his medical studies. Sir Wm. Gairdner, one of the wisest and most broadminded members of the Council, stated his opinion that the English Colleges were right in throwing back the scientific subjects on the schools—the endowed and high class schools—and that the facilities for giving instruction during school life in the particular subjects in question were not only much greater than they were five or six years ago, but were still increasing. That, in his opinion, was the whole tendency in education. That, also, is the opinion of many outside the Council who are interested in education in its widest sense. To many it appears that if the student is tested by a sufficient examination it is immaterial where he obtains his knowledge. But surely it is an abuse of terms to call the tuition in a high class school the first year of medical study. This was recognised and emphasised in the discussion at the General Medical Council, and also that if this scheme is carried out the five years of medical study is at an end. Medical students will be able to obtain their diploma to practise four years after passing this examination. This is a matter of grave importance, and I think the great majority of the profession will be unwilling that the medical curriculum should be practically reduced to four years.

But there are further reasons why the first year of study, the period of preliminary scientific study, should not only be retained in the medical curriculum, but should be spent at a medical school. Under present arrangements the student in his first year attends the necessary lectures and classes on chemistry, physics, and biology. But these subjects do not absorb the whole of his time and energies, and he further studies anatomy and practical anatomy (dissecting) and also attends a course of demonstrations or lectures on practical surgery, so that after his first summer session he is ready and prepared to enter upon out-patient dressing. If his first two and a-half years were spent at a central institution, he would still require the preliminary teaching in minor surgery before he commenced dressing, otherwise he would be quite unprepared to do the necessary work and profit by his opportunities: he would come to the medical school perfectly raw, and this would throw him back in his practical work, and still further tend to crowd the already heavy list of subjects he has to take up in the remainder of his medical curriculum.

*Concentration of Teaching in Anatomy and Physiology.*

If Period 1 is altogether removed from the medical curriculum, the need of concentration of teaching in this period goes by the board, and the question of concentration of teaching only concerns Period 2, anatomy and physiology, though probably the University of London, as it becomes a teaching university, will of necessity have courses on these subjects in a Science or other Faculty. It is doubtful if the anatomy and physiology taught at one or more centres not connected with a medical school would be so suited to the wants of those entering the profession as that taught in the medical schools. The arguments advanced in favour of concentration of the first and second periods together are greatly weakened when the first is removed, and I must confess I do not see that any convincing arguments have been brought forward in favour of the concentration of teaching of anatomy and physiology alone. The main benefits claimed for concentration of teaching are that by "concentrating" the fees of the student the central institution would be able to secure professors of the very first rank, and that it "would do away with the keen competition" promoted by the rivalry of the schools, and which, in conjunction with the examinational system, causes the competition to be in the direction of cram and not of true education.

As regards the first point it would no doubt be possible to secure the services at the institute of the men most distinguished in the science and teaching of anatomy and physiology, but the number of students attending classes in these subjects (computed by the advocate of the single institute already alluded to to be between 1,200 and 1,500, without the additional and uncertain number entering for the courses of physiology and anatomy taken by students for a degree in science) would be so enormous that subdivision would immediately become necessary, and the students would have to be formed into classes not differing much in size from those in the medical schools, or at least in the larger of these. The whole tendency at the present time is to subdivide rather than to concentrate the teaching into classes of such size that the student may receive the individual attention of his teachers. This surely is more likely to discourage cramming than very large classes, where the student can be scarcely known to his teachers.

But the arguments against concentration of teaching have been so ably and forcibly put by Dr. A. D. Waller, himself a distinguished teacher in one of the subjects, and whose opinion must carry greater weight than mine, that I prefer to quote what he has written on the subject in the pages of the JOURNAL:-

[Dr. Mackenzie then read that part of Dr. Waller's paper published in the BRITISH MEDICAL JOURNAL of May 4th, 1901, p. 1067, in which he stated the objections to the concentration of the teaching of anatomy and physiology in one institute. Dr. Waller pointed out that the effects of over-concentration felt in Continental capitals would be still greater in London. He stated that it had been recognised by its advocates that an unwieldy congestion would thus be produced, and that the scheme for concentration in one centre had been supplanted by a scheme for concentration in three or four centres. He considered that the practical objections to this half measure were very great; partial concentration in, say, four schools would be manifestly unjust to the eight excluded. Apart from such considerations, he believed that while the transfer of resources and functions from twelve to three or four participants would no doubt improve the efficiency of the latter, it would certainly not provide the University of London with three or four first-class institutes in each of the three early medical subjects. Even if the entry to such an institute were limited to 150 new students a year, it would suffer from congestion, and could not satisfy both the elementary and practical needs of over 300 students and the interests of research. Further, while it might be hoped that the University would in a not distant future possess one first-class institute in anatomy and physiology, inclusive of pharmacology, no teacher acquainted with the duties and functions of a first-class institute would dream of the University of London to possess three or four such institutes in each of the sciences. It was evident that "the proposers of concentration in three or four institutes have in view, not institutes of learning of the highest grade, but principally high-class teaching institutions, and that the far-reaching influence upon teaching institutions of a single first-class institute of learning has not yet entered into their conception of the interests of medical education in London. Concentration in one unendowed or scantily endowed central university institute of elementary instruction in Parts I and II, and an undertaking by the medical schools not to provide instruction in the subjects of Parts I and II may at once be rejected as involving the surrender of much that is good under the present English system of individual enterprise, and the adoption of much that is evil under the Continental system of large State-endowed universities overburdened with elementary teaching which is efficiently conducted as to its practical departments. Concentration in three or four unendowed or scantily-endowed university institutes of the elementary instruction of Parts I and II, and an undertaking by eight or nine remaining medical schools not to provide instruction in these subjects is, in somewhat mitigated form, liable to the same defects as concentration in one central institute, and possesses in addition defects of its own that have been set forth above.]

To my mind Dr. Waller's reasoning is so convincing that it seems almost unnecessary to add to it; but there are some additional reasons which may be advanced against a central institute. It is suggested that the London University might be able to provide the buildings. I am not sufficiently acquainted with present buildings lent to the University to know if they are capable of affording the requisite accommodation for the teaching of anatomy and physiology, and they were certainly not constructed for that purpose. I presume, however, that a new and specially constructed building is contemplated. Where would this be situated? It must, I presume, be near the present University or in some central position. How would South Kensington, or other central locality, view the erection of an enormous anatomical teaching establishment with its huge dissecting rooms in its midst? This, it may be argued is mere sentimentality, but it has to be reckoned with in practical life. Under the plan suggested with 1,200 to 1,500 students studying anatomy there would be required, say 185 to 200 bodies at a time for dissection. Would this, if known, be tolerated, especially when there are at the medical schools all the appliances for teaching anatomy already provided? Moreover, one cannot lose sight of the possibility of losing the anatomical supply, which at present is only with the greatest difficulty maintained, mainly from local sources and by local influence. Only those who have been closely concerned in the management of the medical schools know what a real difficulty this is in existing circumstances. Into the serious question of the expense of the erection of one or more central institutes I have not time to go. It would be very great. Where is the money to come from, and what if it did not prove financially successful, how is the deficit to be met?

There are further difficulties to be pointed out. To prematurely enact that all students at the London medical schools must be students of the London University would probably have the effect of driving away many London students to medical educational establishments elsewhere. It would be a disastrous thing that the great wealth of opportunities of clinical teaching available in this greatest city in the world should be diminished by schemes for the improvement in teaching in one or two important but subordinate subjects. At present, I believe I am right in stating that the number of students in London is not greater, or at least not much greater, than is necessary for carrying on the work of the hospitals and allowing of every student holding the posts of dresser and clinical clerk, and of training them to hold the valuable resident appointments after qualification. But it must be borne in mind that there has been an almost steady decline in the number of students in the London medical schools during the last twenty-one years. Taking the figures given in the medical papers each year, which if not entirely accurate are as correct for one year as another, the number of full students entering at the medical schools in London, which in 1880-81 were 778, fell in 1900-1 to 465. The fall in numbers has been, as I have said, almost a steady and continuous one, as will be seen by dividing this period into hemi-decades. In the first, 1880-81 to 1884-85, the number was 681.2; in the second, 1885-86 to 1889-90, it was 661; in the third, 1890-91 to 1894-95, it was 613.2; in the fourth, 1895-96 to 1899-1900, it was 527.6; whilst last year, 1900-01, it was reduced to 465.

To curtail the strictly medical curriculum to four years would be a disastrous change. At present with five years the curriculum it is all too short. Besides the teaching in the first and second periods of medical study, the following have to be crowded in—six months in-patient clerking, six months in-patients dressing, three months obstetrical clerking, three months *post-mortem* clerking (which at present may be held concurrently with in-patient clerking or dressing but which at one of the schools it is proposed to make more instructive by requiring that the three months during which it is held shall be devoted entirely to pathology), practical midwifery, lectures on medicine, surgery, pathology, demonstrations on pathological histology, lectures on forensic medicine, midwifery, Public Health and operative surgery, as well as lunacy and the study of fevers, the two latter having to be gained

outside the hospital. It is difficult enough at present to find time for all these subjects, and the difficulty will become almost insuperable if the medical curriculum is reduced by a year. The medical student is already burthened with his studies, do not let us increase it to point of the breaking strain.

Amongst the advantages of competing schools is that the student is able to obtain the whole of his professional education at one institution. All the five years he is at a medical school he is living in what may be called a medical or clinical atmosphere, and gradually acquiring medical impressions, knowledge, and thoughts which ultimately fit him for the practice of his profession. If by chance he fails in any subject he is still able to push on towards his next stage while attending a special "referred" class in his weak subject. It must be remembered that rejections at the Conjoint Board in anatomy and physiology is not far short of 40 per cent. (37 per cent. in the last two years). Rejection does not necessarily imply stupidity, but may be simply due to the student not being sufficiently prepared. It would be a hardship to him to have to give up a great part of his time for three or six months for further instruction in one subject at another institution which might be at some distance from his medical school.

Moreover, if there was only one central institute, or two or three centres other than medical schools, arrangements would still be necessary at the medical schools for the teaching of anatomy and physiology for students going in for the higher examinations in surgery and physiology. It would be a great hardship to these, the best class of medical students, to have to go elsewhere for opportunities of study in these subjects, when a great part of their time was spent in the wards of a hospital. The same applies to senior students and recently-qualified men, some of whom are able to give an hour or two a day to original research in physiology and anatomy in the laboratories or dissecting rooms of these medical colleges—a most desirable thing to encourage—which might be impossible if the opportunities of study were taken away from the medical schools. Again, arrangements would still have to be made at the medical schools for subjects for the teaching of operative surgery. The discipline of the students could not be so well maintained if all the students in their first two and a-half years were congregated in one large centre, or even in three or four centres. It is entirely fallacious to compare the students in London with those at Cambridge or any other resident University where there are effective arrangements for dealing with the discipline of undergraduates. I do not believe residential colleges would be likely to arise in connection with one or more central institutions to meet the difficulty. They have not proved a financial success.

At present I understand that quite three-fourths of the medical students in London are not proceeding to the London University degrees. I devoutly hope that in the future all students will take this degree, but it will, in the most favourable circumstances, take years to bring this about, and after all it may not come to pass; but the medical schools will, I imagine, be glad to be brought into closer organic connection with the University, and assist, under the control and advice of the Senate, in any way in their power in putting its degree within the reach of every London student.

To give up the tuition of students in their first year of study is, I think, undesirable, but this first year of study it seems possible may be removed from the medical curriculum. To give up the teaching of anatomy and physiology at the medical schools would, I think, be a still greater mistake.

*Central Institutes for Research and Higher Education.*

Dr. Waller urges a plan of "centralisation" differing from any previously proposed as an alternative to "concentration" in one centre, and suggests the establishment of a central institute of first class, fully provided, both as to teachers and equipment for research and higher education in all branches of each of the principal subjects of the curriculum. It is proposed by Dr. Waller that the establishment or recognition of central institutes should be determined by the Senate in accordance with its decisions as to the relative importance of subjects of learning and the resources at its disposal. The time at my disposal does not allow of my stating in full Dr. Waller's scheme, which should be carefully studied. He believes, however, that by increased and effective control by the Senate and the influence of the quality of work at this institute a gradual concentration by the survival of the fittest of the existing medical schools will be effected. This appears to me the best, the most practical, and the most economical method of improving medical teaching in all its branches in London, without inflicting hardship or penalty on the medical schools, which have, under scarcely appreciated difficulties and cost, endeavoured to improve their teaching, both as regards teaching and equipment, in correspondence with the progress of scientific knowledge and the necessities of the medical profession.

REFERENCES.

[1] On the Concentration of Medical Education in London. Extracted from a communication addressed to the University of London Statutory Commission, 1899. [2] BRITISH MEDICAL JOURNAL, May 4th, 1901.

# AN ADDRESS

ON THE

# PROGRESS OF ABDOMINAL SURGERY.

*Read at the Annual Meeting of the East Anglian Branch of the British Medical Association, held at Bury St. Edmunds June 28th, 1901.*

BY CHARLES SCOTT KILNER, M.B., C.M.EDIN., D.P.H.CAMB.,

Medical Officer, Suffolk General Hospital; Medical Officer of Health, Thingoe Rural District, etc.,

[IN a few introductory remarks the President thanked the members for his election, welcomed them to Bury St. Edmunds, and referred to the foundation there in 1835 of the Eastern Provincial Medical and Surgical Association, the forerunner of the East Anglian Branch of the British Medical Association. He referred also to the death of Queen Victoria, who had shown so much interest in the medical profession, and to the fact that King Edward had recently shown his appreciation of the profession by graciously consenting to become a patron of the British Medical Association. He then proceeded:]

THE HISTORY OF ABDOMINAL SURGERY.

A greater advance has perhaps been made in abdominal surgery in recent years than in any other branch of surgery, and of many of the results we are justly proud. At the same time, on looking back at the many failures, and at times the retrogression instead of advance, there is much that the candid observer must regret.

Abdominal surgery is not so new as some people would have us imagine; in fact, the technique of abdominal surgery was more perfect two centuries ago than it was 50 years ago, for we read that in the middle of the eighteenth century Heister advocated the drainage of the lower abdomen, and the washing out by "vulnerary decoctions," and Dionis in 1733 gave directions for closing an abdominal wound, very similar to the method employed to-day. This and other useful work has, however, been ignored or overlooked in comparatively recent times. The progress of abdominal surgery has all through been marked by waves of advance and retrogression; in fact, the history of this branch of surgery reads almost like a romance.

The nomenclature itself has frequently changed; thus the operation for opening the abdominal cavity was for a long time known as gastrotomy, and this name was also applied to Cæsarean section. The Greek word γαστηρ corresponded more to the vulgar than to the anatomical word stomach. Gastrotomy to-day is confined to making an incision into the stomach, more especially with a view to removing a foreign body. Other words have also been employed for opening the abdominal cavity, such as laparotomy and abdominal section, both of which ought to be abandoned, the first being employed chiefly for operations performed for intestinal obstruction, while an abdominal section is really made on a frozen cadaver, with a saw for anatomical purposes.

At last Harris, of Philadelphia, found a classically correct word in cœliotomy (from koilia—belly) and this word has been adopted by Greig Smith and many other authors. It is now recognised that it is more convenient to use words or com-

pound words that indicate the various methods of procedure than words which convey no real meaning: for example, cœliohysterotomy would technically name Cæsarean section and cœlio-hysterectomy Porro's operation. The names, however, of some operations, though scientifically inaccurate, are so well known that it would be unwise to displace them.

The practical surgery of the abdomen presents many features peculiar and special to itself; section of the abdominal parietes alone demanding surgical skill and knowledge, and its subsequent closure requiring more care than that of ordinary surgical wounds; the manipulations within in the peritoneal cavity having often to be performed at some distance from the surface and frequently out of sight are of a difficult and delicate nature—the careful avoidance of injury to vulnerable organs, the minute and continuous attention to absolute cleanliness of hands, instruments, sponges, etc., the environment of the patient and the after-management—these and many other most important details are common to all abdominal operations; and the man who performs a successful abdominal operation is a master of details and must be looked upon not only as a surgeon but in the light of a general.

The improvement in the general environment of the patient on which such great stress was laid by Keith and which is now universally appreciated, viz., the arrangement of the operating room and sick room, the admission of visitors, the purification of the atmosphere, the beds, bedding, and clothing, and last, but not least, the nursing, all denote a marked advance in abdominal surgery. For another advance one has only to examine the up-to-date operating theatre of the present day with all the surgical appliances, all the antiseptic solutions, the sterilisers and the means employed for rendering everything as nearly aseptic as possible, and compare these with the operating theatre and appliances of less than a quarter of a century ago.

On looking back over the past century we behold two of the greatest discoveries the world of medical science has known, and without which there would be no abdominal surgery as practised to-day. The first is the use of anæsthetics. In the days before chloroform a limb could be sufficiently controlled to allow of its being amputated; but no wonder that, with a shrieking, struggling patient, rapidity was one of the chief aims of a good surgeon. Imagine, however, a gastro-jejunostomy or other delicate abdominal operation being performed on a patient under similar circumstances. Such a procedure would be next to impossible, and the surgeon would certainly be unable to perform the necessary manipulations in the quiet methodical manner so essential to success. Probably a good method of treating an abdominal wound in those days was one not infrequently employed in the Middle Ages, and called the "sympathetic treatment," which consisted of leaving the wound alone, and of anointing with ointments and healing salves the instrument which inflicted it.

For dulling pain "nepenthes" or sedative draughts were used by the ancients, and "drowsy syrups" during the Middle Ages, both of which contained opium or other narcotic. These and alcohol, with which to cause intoxication, were the chief means employed for dulling pain during an operation till 1844, when Horace Wells first conceived the idea of nitrous oxide gas as an anæsthetic, and had one of his own molar teeth extracted when under its influence. The properties of ether were fairly well known in 1785, but it was not till 1846 that it was first administered in England, and was beginning to win its way as a safe anæsthetic, when in 1847 Sir James Simpson made his world-famed discovery of chloroform as "a new anæsthetic in surgery and midwifery." It is perhaps worthy of note that our late Queen, ever forward in welcoming the advance of science, allowed herself to be placed under its influence on the occasion of the birth of the late Duke of Albany, and this, too, in the days when chloroform was in its infancy, and was being denounced as a "decoy of Satan." It is to Morton and Simpson that we are in a great measure indebted for the impetus given to abdominal surgery.

The second great discovery, perhaps one of the most remarkable of a remarkable age, was that of Lord Lister. A quarter of a century ago I had the privilege of watching Lister, in the old infirmary at Edinburgh, carrying out his grand idea and opening up and unravelling the then mystery of antiseptics, and many a time has my hand ached with using a hand-bellows to spray a wound during a prolonged operation or dressing, and right glad was I, and many of my fellow-students as well, when this means of applying antiseptics gave way to the steam spray. The steam spray has since disappeared from antiseptic surgery, and antiseptic surgery has to a great extent given place to the more perfect aseptic surgery. No words can, I think, better or more concisely express the extent of the debt which the world owes to the author of antiseptic surgery, than those made use of by Mr. Bayard, late American Ambassador in this country, when he proposed the toast of the Royal Society and its then President, Lord Lister. Towards the close of a speech in which eloquent and appreciative reference was made to the immense importance and beneficent effects of Lord Lister's great life work, Mr. Bayard addressed him directly in these words: "My lord, it is not a profession, it is not a nation, it is humanity itself which with uncovered head salutes you."

*Ovariotomy.*

The operation of ovariotomy must undoubtedly be regarded as the starting point of abdominal surgery, and Dr. Ephraim McDowell, of Kentucky, as the father of this great operation. There is reason to believe that to his studies under Mr. John Bell in my own Alma Mater, Edinburgh, he owed the suggestion which he successfully put into practice in 1809. In his first case he made a nine-inch incision parallel to the fibres of the left rectus, the pedicle was secured by a ligature merely tied round it, and the long ends brought out at the lower end of the wound, which was closed by interrupted sutures fortified by strips of adhesive plaster. The patient made a good recovery. Subsequently he operated 13 times with 8 favourable results.

Dr. Nathan Smith, of Yale, Connecticut, operated in 1821, without previous knowledge of McDowell's work, and his method was nearly perfect. His incision was only three inches in length; he waited till all bleeding had stopped before opening the peritoneum, he used animal ligatures, cutting them short, and he dropped the pedicle back into the abdomen. Since then Alban Smith, Atlee, Peaslee, Kimball, and Dunlap have been most influential in establishing the operation in America.

In England East Anglia comes to the fore and especially Suffolk, three out of the first four cases performed in Great Britain having been performed in this county. Mr. Jeaffreson, of Framlingham, performed a successful ovariotomy in 1837. He made a short incision, cut short the ligatures, and dropped the pedicle back into the abdominal cavity. In the same year King, of Saxmundham, and in the following year Crisp, of Harleston, scored similar triumphs.

In 1840 Dr. Clay, of Manchester, set to work in a methodical manner, but for some reason did not make a strong impression on the profession. Hence Clay's work was and is still under-rated.

In 1858 Spencer Wells began his long list of operations, and he was followed in 1862 by Keith, with brilliant results, and five years later by Lawson Tait. Spencer Wells was a bold operator, but his boldest innovation was the "toilet of the peritoneum," as he feared not to sponge out the contents of the peritoneum till it was clean. Lawson Tait, in later years, introduced flushing of the peritoneum, and Keith distinguished himself by the use of the drainage tube, more needed before the days of antisepsis and asepsis than at present.

Up to 1850 the mortality in America was 41.6 per cent., and in England 36.2 per cent. Then in the next 20 years it rose to an alarming extent, and in America, out of 739 cases, it reached the terribly high mortality of 70 per cent. The long ligature, and later the clamp, appear to be the chief causes of this lamentable failure. On discarding the clamp, and with improved technique, and the advancement of Lister's principles, this operation has now become one of the safest of abdominal operations, and is performed in almost every civilised country of the world.

I had the privilege of performing the first ovariotomy in the Suffolk General Hospital, and I am glad to be able to say that up to the present date we have not met with a single fatal case in our hospital.

*Hysterectomy.*—Hysterectomy is a very ancient operation, having been performed by the ancient Greeks, for Soranus of Ephesus, in his work published a century before Christ, speaks of this operation.

Coming to modern times, in 1861 Spencer Wells did his first hysterectomy, but up to 1876 his results were most discouraging, the mortality being 66.6 per cent. Since then there has been a marked improvement, and Keith published 38 cases between 1874 and 1885 with only 3 deaths, or less than 8 per cent. From this and from what has already been said of ovariotomy, the year 1876 may, I think, be regarded as the turning point in abdominal surgery, for before 1876 all was dark and uncertain. Since then dawn has appeared and darkness has given place to light.

*The Surgery of the Stomach.*

*Gastrotomy.*—The operation of gastrotomy is ancient, for in 1602 Crolius is said to have successfully removed a knife from the stomach, and a similar operation for a similar purpose was performed in 1613 and again in 1637. This latter operation is fully described in a valuable ancient manuscript now in the library of the Suffolk General Hospital. Since then this operation has been performed at intervals with striking results.

*Gastrostomy.*—Compared with gastrotomy, gastrostomy is a comparatively recent operation. It was first recommended by Egebert, of Norway, in 1837, but it is to Sedillot that the merit is due of having first performed the operation on the human subject some nine years later, and it is noteworthy that Sedillot was probably ignorant of Egebert's proposal. This procedure was opposed by most surgeons of the day, but Sedillot maintained the propriety of the operation. In 1858 Cooper Forster operated for the first time in England, and in 1866 Bryant and Curling operated, but all with fatal results. It was not till 1874 that Sydney Jones of St. Thomas's Hospital achieved a success. From this time forward the operation rapidly advanced in success and repute, partly no doubt due to a better understanding of the technique of abdominal surgery and antisepsis, and partly perhaps due to the re-introduction by Howse of dividing the operations into two parts.

*Operations for Pyloric Stricture.*—For stricture of the pyloric orifice various operations have recently been introduced, the first being the dilatation of the pylorus, which was introduced by Loreta of Bologna in 1882. A scientific advance on Loreta's operation is pyloroplasty, which was independently conceived by Heineke in 1886 and Mikulicz in 1887. In 1893 pyloroplasty had been performed 53 times,[1] and since then it has doubtless been performed many more times, I myself having performed it on one occasion. The operation has been attended with rather a high rate of mortality, owing in a great measure to the enfeebled state of the patient before the operation is performed. Pylorectomy was first performed by Bilroth in 1881, and gastrectomy in 1883; these are both very serious operations, and should only be contemplated in very carefully selected cases, the latter operation, up to the present time, having a mortality of 50 per cent.

*Operations for Gastric Ulcer.*—The cure of gastric ulcer by operation has lately attracted the attention of surgeons, but it cannot be said that it has met with universal support even by surgeons, and it is looked upon generally with disfavour by physicians. The operation was first performed by Rydygier in 1881,[2] who resected the diseased tissues. In 1882 Czerny and Van Keef also operated successfully, and up to the beginning of this year Mayo Robson has collected 188 cases with 154 recoveries. During the last six months there has been a great increase in the number of operations, with a proportional decrease in the mortality. A gastro-enterostomy was performed by Doyen of Rheims in 1895, and since then by several other surgeons, the idea being to apply by surgical means the principle of rest, which the physicians seek to secure by abstention from food and rectal feeding. When gastric ulcer has caused stenosis of the pyloric opening Curtis, of New York, Doyer, and others have performed pyloroplasty. For acute perforating gastric ulcer operative interference is required. The death-rate in these cases is always high. However, with an early diagnosis, an early operation, and improved technique the death-rate has been reduced, and the operation is not only justifiable but almost imperative.

*Operations on the Intestines.*

The surgery of the intestines provides the widest and most varied field of work in the whole range of abdominal surgery, although the advance has not been so great as has been the case in some of the other abdominal organs. This is due in part to the variety in the technical methods employed, which have almost passed legitimate bounds, and to the multiplication of instruments and apparatus. Proved truths have also been overlooked or forgotten, and methods already tried and condemned have been resuscitated.

Perhaps the most scientific and valuable advance in the whole range of abdominal surgery has been the various operations for anastomosis between the stomach and intestines and between different portions of the intestinal canal, for the principle of which and rendering it of practical utility we are mainly indebted to Professor Senn.

As an example of the variety of modes employed in performing some operations to which allusion has just now been made, Bishop,[3] in a paper on Enterrorhaphy, was able some years ago to collect no fewer than thirty-three distinct methods of performing the operation, and since that time no fewer than thirty more methods, or variety of methods, have been introduced. All, roughly speaking, come under one of three headings, namely (1) end to end, (2) end to side, (3) side to side, and are either direct by sutures or mediate by the addition of some apparatus besides sutures, such as decalcified bone bobbins, bone tubes, metal buttons, catgut rings, bone plates, etc. Probably the best of these are made of decalcified bone, which was introduced by Neuber in 1884 and afterwards by Mayo Robson. It may, however, be mentioned that the employment of cylinders to aid in the junction of divided intestine dates back for many centuries,[4] for we read that the "four masters" who practised in Paris towards the end of the thirteenth century used a calf's trachea for the purpose, and that Fabricius ab Aquapendente, who flourished in the latter half of the sixteenth century, speaks of the practice in the following words:

> There are some fools who, before suturing the intestine, insert a canula composed of elder pith or a piece of dried artery of some animal, or a bit of another intestine, to avoid having the sutures carried away in the passage of food.

*Resection of Intestine* is by no means a novel procedure, for in 1727 Ramdohr[5] successfully removed two feet of gangrenous bowel, and up to 1836 the same operation had been performed ten times by English, French, and German surgeons. It was not, however, till 1875, when Langenbeck revived it, that it became a recognised operation. I may, perhaps, be allowed to mention one satisfactory case in my own practice. In 1898 I saw in consultation with Dr. Nichols a patient with intestinal obstruction for which I performed a colotomy; subsequently I removed the strictum, which was situated just above the sigmoid flexure, together with about five inches of gut. The patient did well, and I lost sight of her till I received a letter from Dr. Nichols a short time ago, in which he said: I found her busy attending customers in her shop.....I see very little change in her personal appearance, and she was trotting about as nimbly as ever."

*Colotomy* was first proposed by Littre[6] in 1710, his method being to make an incision in the left inguinal region; but it is doubtful whether he ever actually performed the operation. In 1776 Pillore of Rouen operated by opening the cæcum in the right inguinal region. Twenty years later Callisen suggested reaching the colon without opening the peritoneal cavity. He failed to do this on the dead body, and never attempted it on the living. Amussat, however, about 1838, actually performed the retroperitoneal operation. The tendency of the present day is, however, to return to the original method of Littre. This is due partly to the comparative impunity that attaches to the opening of the peritoneal cavity, thanks to aseptic surgery.

Appendicitis is another most important intra-abdominal lesion, which has a history of its own. The earliest authentic record of this disease was by Saracenus[7] in 1642. Melier was the first to recognise that disease of the vermiform appendix was distinct and separate from that of the cæcum, and in 1827 he wrote: "If it were possible to establish with certainty the diagnosis of this affection, we could see the possibility of curing the patient by operation," and he goes on to say, "We will perhaps some day arrive at this result." That day has now arrived. The real founder of our modern knowledge of appendicitis was Fitz of Boston, who in 1888 not only accurately described it, but urged the importance of an early operation, and it is greatly due to him and to our American

brethren that we owe the treatment of this disease as practised to-day.

*Gynæcological Operations.*

Time fails me to enter more fully into the many operations of each individual organ contained in the abdominal cavity. I have, however, been much struck with the fact that each organ has quite a history of its own, in some cases dating back to past ages. Allusion, however, must be made to the treatment of diseases of the female generative organs by the gynæcologist of to-day, whereby many of our suffering sisters are being daily restored to health who would otherwise pass into a chronic hopeless state of invalidism; while the mere mention of such procedures of nephrectomy and nephrolithotomy, of suprapubic cystotomy, of cholicystomy, choledochotomy, and cholecyst-enterostomy, of the surgical treatment of septic and tuberculous peritonitis, of radical cure of hernia, and of many other operations shows how rapidly progressive is the abdominal surgery of to-day.

*Conclusion.*

It is, however, to the last quarter of a century that we look for the introduction of the many brilliant, heroic and often difficult operations which are now daily being performed, and the necessity for which is becoming rapidly more fully appreciated. New operations are still being introduced, while changes in the methods and procedure of various recognised operations are of frequent occurrence. Time will, however, show what is worth retaining and what we may safely cast aside.

Let us, however, bear in mind the exhortation of Hupeland: "Thine is a high and holy office: see that thou exercise it purely, not to thine own advancement, not for thine own honour, but for the glory of God and the good of thy neighbour."

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# AN ADDRESS
## ON
# SOME CONSIDERATIONS IN RELATION TO THE INVESTIGATION OF CANCER.

*Delivered at the Annual Meeting of the Yorkshire Branch of the British Medical Association, June 26th, 1901.*

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AFTER some introductory remarks, in which he referred to the fact that the national statistics of the causes of death, during the last thirty years, have shown a steady and progressive increase in the registered mortality from cancer, Dr. Major said:

THE ALLEGED INCREASE OF CANCER.

It is difficult, indeed, to refuse assent to the painful conclusion that a real increase of cancer has of late years occurred. Even when the precaution is taken of basing the calculations upon the registered mortality at different age-groups, which appears to be the more correct method of computation—from 25 to 35, 35 to 45 and so on, per 1,000 of the population living at such age-groups—the results show a great increase in the cancer mortality. Apart also from the national statistics we find similar evidence in other quarters. Thus the figures of the medical officer of health for the County of London are to the same effect. In his report for 1899 he states:

> the death-rate from cancer maintains the progressive increase, which has now been in evidence for many years, an increase which, though not wholly real, is recognised as being partly so.

Then turning to the statistics of other countries—America, France, Germany, Russia, Sweden, and certain of our Colonies—we find, there also, records parallel with our own. I am not aware that a decline of the cancer mortality has anywhere been recorded, but on all sides apparently we observe an increase, usually striking, in the registered proportion of cancer deaths.

If, however, it be admitted that the majority of authorities, here and abroad, see no adequate explanation of such facts except upon the hypothesis of a greater liability to malignant disease in the human race, we know that this formidable conclusion has in some quarters been resisted as, at any rate, non-proven. Dr. Arthur Newsholme[1] has contended that the apparent increase is mainly due to more careful and accurate certification of the causes of death. He sees evidence of this, more especially in the marked reduction which has occurred in the number of certified deaths having to be included under the heading of "ill-defined diseases" in the Registrar-General's tables. He thinks it probable that many cases formerly thus classified, owing to indefinite certification, were in reality cases of cancer, which now, under better diagnosis and certification, would be received into the cancer columns. He considers that this view obtains support from the fact that the registered increase of the disease has been greatest among males, in whom, as is known, malignant disease is, in a larger proportion than in the case of females, deep-seated and obscure, and argues that this might be expected to occur, apart from any real increase, under the influence of more accurate diagnosis and certification in fatal cases. It is important, I think, to observe that Dr. Newsholme, from the nature of the inquiry and its dependence upon imperfect statistical data, does not profess to speak with certainty. He argues forcibly, however, from the considerations referred to and others which he adduces, that we have good grounds for thinking it probable that the recorded increase of cancer is apparent only, and that at the present time the data do not certainly justify the conclusion that a real increase of malignant disease has occurred in this country.

These views of Dr. Newsholme's have been supported by Mr. Gilbert Barling, F.R.C.S., in his interesting address entitled A Modern View of Cancer, delivered last winter before the West Somerset Branch of our Association. Upon the other hand, we find that Sir William Banks (Lettsomian Lecture for 1900) states specifically that he does not consider Dr. Newsholme's contention to be well founded, and expresses the belief that increase of cancer must be considered certainly to have occurred. Professor Adami, of McGill University, Montreal, in his recent comprehensive and important address on the Causation of Cancerous and other New Growths[2] is evidently satisfied that the alleged increase of the disease is real. Then, with respect to Continental opinion, I have been able to observe no prominent expressions of doubt, unless it be that of Dr. Pfeiffer, to be referred to later, as to the significance of the increase of the cancer mortality as indicated by the statistics. The latter view, then in favour of a general and alarming increase of malignant disease, I take to represent the prevailing opinion in our ranks, abroad as in this country.

But now, conceding that the weight of the evidence is strongly in favour of this sad conclusion, I yet venture to urge that, as regards our own data at any rate, the facts and considerations adduced by Dr. Newsholme, as modifying the significance of the national statistical tables, have at least to be reckoned with. And beyond this, it appears to me that, to the classes previously enumerated, among which it was supposed that we might assort ourselves in relation to this question, another class might be added which also would be not without representatives. I mean one comprising those who, realising the grave imperfections—to use no stronger expression—of our death certificates, taking them in the aggregate, feel that they must, upon this ground, suspend their judgment in regard to this cancer increase question until more accurate and reliable data shall be available. Now proverbially, great caution is necessary in dealing with mere statistics and in accepting the conclusions to which they appear to point.

IMPERFECT DEATH CERTIFICATION.

Is there anything then connected with these cancer-mortality statistics, compiled from our certificates, which should bid us pause before accepting them as anything like correct and reliable for purposes of scientific deduction? I confess frankly that when I reflect upon the instances of defective certification—as I have considered them—which have come to my personal knowledge; upon the lack of scientific precision frequently shown, or of precision, on the other hand,

where this has not been justified by definite knowledge; when I consider the evidence of want of care and the apparent lack of sense of responsibility for accuracy, which not infrequently have come publicly to light, I confess that I am led to regard our national statistics of the causes of death with the greatest distrust, and if this applies to causes of death in general, my impression is that it does so in an especial manner in regard to a disease such as cancer. The fault for such defective accuracy does not, of course, always rest with us, yet, to a great extent, I believe, it does.

Possibly some may think that I go too far in thus expressing myself. Then, with respect to cancer, permit me to refer to certain facts mentioned by Dr. Newsholme in his paper before quoted. During the year 1896, he points out, letters of inquiry were sent by the Registrar-General to practitioners with respect to unsatisfactory certificates, which inquiries resulted in as many as 597 deaths—597 in a single year—being transferred from various vague causes to cancer. Again, in 1889, as the result of similar inquiries by the Registrar-General, 421 deaths were transferred to the cancer list. Once more, in 1896, out of 111 deaths returned as due to "stricture of the œsophagus," 74 were, upon investigation, considered to be cases of cancerous disease, and corrected accordingly.

Thus, then, it would appear possible, under present conditions, to have two periods with equal real cancer mortality, yet showing considerable variation by statistics, dependent upon the degree of zeal on the part of the Registrar-General in pushing inquiries with respect to doubtful certificates! Do we not, it may fairly be asked, do we not as a body stand self-convicted in this matter by such facts as those I have quoted? Yet we know that the statistics founded upon our death certificates are, or should be, of material importance. We know that upon them may depend many questions of grave practical moment. Take, for instance, the question of the local incidence of cancer, which, in this country, has been investigated by Mr. Alfred Haviland, by the Birmingham and Midland Counties Branch of our Association, and (with respect particularly to East Essex) by Dr. Melmoth Scott, of Witham. Now, whereas we find both Mr. Haviland and the Birmingham and Midland Branch inquirers arriving at the same conclusion—namely, that a damp and waterlogged soil in low-lying localities is specially liable to be associated with high cancer incidence and death-rate, Dr. Scott's investigations on the contrary,[3] which I venture to consider a model of careful and impartial inquiry, failed to establish any such relationship. Such investigations, in their earnest striving to throw light upon a very important and interesting question, are indeed worthy of all praise. But with what feelings, I would ask, can we regard the results arrived at, or with what heart can we proceed to inquire into the reasons for their divergence, a study which should be so instructive, when we reflect that these results depend essentially upon the substantial accuracy of our cancer mortality statistics, which accuracy, as I believe I have shown, is so gravely open to question?

If now the foregoing criticism is justified, then it follows (still keeping to the question of cancer) that certification thus defective admits of improvement, whilst, further, it will be admitted to be desirable that, if improvable, it should be improved. We know, indeed, that but few among us are able to engage in the difficult and highly special microscopical and other investigations now in progress respecting the nature and origin of cancer. But one thing at least I venture to urge we all may and should do, and that is to make our certificates in regard to fatal cases of malignant disease under our care more accurate, reliable, and valuable than these have been, speaking of course generally, in the past, so that, in so far as in our power may lie, each and every case of cancer may not fail to contribute its share of solid fact to the collective statistical results. Above all, that through no want of care or endeavour on our part, shall our certificates be calculated to mislead, bearing it in mind that, otherwise, we are only working to create fallacies and obscure facts.

And now, supposing such views to animate all of us, what might be expected to follow as to our procedure? There would be, I think, more earnest endeavours on our part to verify diagnosis by *post-mortem* examination, however partial and limited in character, whenever necessary. We should make the effort to educate the public in this direction by pointing out, as occasion should offer, the interests of the community which are involved in accurate certification in such cases. We should endeavour to state, in every case, the exact nature of the morbid growth together with its primary seat. Where this nature could not at once be stated we should be willing to certify provisionally, and to forward subsequently to the Registrar-General a more exact statement when the nature of the growth should have been determined by microscopical examination, such as nowadays is readily obtainable by us if we are not in a position to make it ourselves. In a word, we shall be willing to give time and trouble to any reasonable extent to promote accuracy in our statistics, as on our part, a matter of serious duty and obligation.

I may be reminded that all this, granting its desirableness, is easier in theory—easier, for instance, from a presidential chair—than to be carried out in practice, which is undoubtedly true. Yet I venture to urge that it is not more than may reasonably be expected of us. After all, in private practice—and my remarks are principally directed to general practice—we do not, happily, have to do with fatal cases of malignant disease every day; and, when these do occur, we need not grudge whatever time and trouble may be requisite to ensure the final elucidation and correct certification of the case, especially when in so doing we are advancing our own professional knowledge.

Since writing the foregoing observations in regard to defective certification, I have seen with interest that the views expressed are supported by Dr. L. Pfeiffer, a member of the German Cancer Investigation Committee, who at a recent meeting of that Committee[4] urged that their statistics were not sufficiently exact to allow of any certain conclusions being based upon them. If, however (he argued), all operation and *post-mortem* material were investigated in the laboratories, and if an agreement were come to on the interpretation of the term "carcinoma," to the exclusion of other malignant growths, statistics would then be of value in showing whether it was true that cancer was really on the increase, and whether it occurred endemically.

I venture to hope that these facts and considerations may be deemed worthy of your attention, and that I shall not be guilty of presumption if I urge that the question of the more careful and accurate certification of the causes of death by us is one meriting the earnest consideration of the entire profession in this country.

### Specific Parasites in Cancer.

The question of the existence of specific micro-organisms in cancer is one which, notwithstanding the definitely affirmative results reported by several able and experienced investigators, must, it is feared, be considered as still undecided. The problem before us may, I suppose, be stated thus: "Is the origin of malignant growth to be referred to the presence of cells which, in some manner, have become implanted in tissues other than those of their own type, and which, under irritation and other influences not understood, aided, probably, by diminished resistance of neighbouring tissues, assume a perverted or irregular growth, independently of any parasitic influence from without; or is such abnormal growth on the part of the cells attributable to the introduction of some parasitic organism?

Upon the one side we find distinguished histologists in this country and abroad, who, employing the best and newest methods—fully aware, also, of the sources of fallacy liable to occur, and employing all precautions to guard against them—have definitely described such organisms as of constant occurrence in cancer, and peculiar to it. Nothing can well be more confident and precise, for instance, than the statement of Mr. H. G. Plimmer, of St. Mary's Hospital, based upon his own original work and observations, in his well-known article in the Cancer Number of the *Practitioner* (April, 1899):

> There is in cancer an endocellular parasite. The cancerous tumour is best considered as the result of the reaction of the organism against the invasion of a part by a parasite—the parasite of cancer. They (the cancer parasites) are not to be found in any other tissue, nor in any degenerated or inflamed tissue, nor in any neoplastic tissue—save only sarcoma, which is nothing but a cancer of the connective tissues. They can and do multiply in cancer kept outside the body, and they can be grown outside the body.

Upon the other hand, we find other eminent observers who, whilst not questioning the occurrence of the so-called cancer bodies (which, indeed, cannot apparently be done), yet decline to admit that these are of the nature of specific or-

ganisms, attributing them to degenerative changes in the cancer cells or nuclei, or even to various stages of degeneration in the red blood cells (Professor Olt). In the face of such conflicting evidence, it has come to be remarked that, not to microscopical observations alone, but to experimental work, must we look for the settlement of the question at issue, and that little further light can be expected from the mere histological study of the so-called parasites in sections of tumours. Now experimental inoculations with cultivations of the "cancer bodies" appear to afford evidence strongly corroborative of the existence of specific organisms, and thus also probably of the parasitic origin of the disease. We find that several investigators have in this way, and working independently, reported the production of new formations in certain animals; and whilst, for some time, the neoplasms thus produced, appeared to be of an endothelial nature and not cancerous, it has now been reported by Dr. Nils Sjöbring that he has been successful in producing a new growth, of truly cancerous type, in white mice in two instances, by the subcutaneous injection of organisms derived from cancer. Sanfelice and also Bra have recorded each one similar positive result. It is important also to note that, in the new growths thus induced, forms resembling the "cancer bodies" of human carcinoma are stated to have been found. Here again it is difficult to discredit the definite results reported by these skilled investigators, even though, as is the case, others, working upon similar lines, have not been able to repeat and confirm them. It is to be admitted indeed that, at the important Congress of the German Surgical Society, recently held in Berlin, at which Dr. Sjöbring was present and exhibited his specimens, these failed to satisfy fully the authorities who examined them, the view being expressed that more conclusive demonstration of the reproduction of carcinomatous growth by means of inoculation was desirable. I do not know what will be the general opinion as to the importance of the check thus encountered by Sjöbring. It behoves one to speak cautiously. To me, however, it does not seem that his conclusions, the result of long and laborious observation, need be considered to have been seriously weakened by criticism, however influential, based upon what, I suppose, will have been a more or less imperfect examination and study of microscopical specimens at a congress, especially when we reflect that, as already mentioned, Sjöbring does not stand alone, but is supported by the independent conclusions of others.

It appears to me, then, that it may fairly be asked, Can we admit—especially when the difficult and highly-special nature of the investigation is considered—can we admit that any number of failures should, necessarily, negative or outweigh these apparently definite successes of Sjöbring and others in producing true cancer by inoculation, few though these successes have as yet been? May it not, on the contrary, be reasonably considered that those results are probably well founded, and that it is for the failure of other workers (including the negative results of Sjöbring himself in so many instances, it is important to reflect), to be sought out and explained by further investigation?

If this view be accepted as reasonable and probable, what should our attitude be with respect to the great question of the parasitic origin of cancer? The reply, I fear, must be 'One of expectancy still." The matter is too important -too vital—to allow of its being accepted by appeal to anything short of conclusive demonstration and proof. Probabilities will not do, and certainty is apparently not yet reached. We must bear in mind also that, should the seal of certainty be placed, by further investigation, on the results reported by Sjöbring, it will be but one step gained, although indeed a great one. The real nature of the organism, its origin, its life-history, its mode of entrance into the human economy—all this will have to be traced and brought out, ere the grand consummation—prevention—can possibly be realised. Thus it is that one of our most able and experienced pathologists, one without doubt fully acquainted with every fact and phase of the subject under discussion, in response to my request for his present opinion in regard to it, would only say that, in his judgment, we must await further data and more light.

We may, however, I think, entertain the reasonable expectation that the work and researches now being carried on in this country and abroad with so much zeal and determination by numerous skilled investigators in hospital and other laboratories will not fail, in the not-distant future, to give us that further light for which we have to watch and labour and wait. Had time permitted, I could have wished to refer to some of the chief centres of this work. Now, however, I would only observe that, whilst it may be true that, in this country, less is done for the encouragement of research than should be, yet it is also true that in this direction much has recently been provided, so that here, as abroad, the cancer problem is being grappled with in a manner and upon a scale never previously attempted. And we know that if the means are greater, so likewise the workers themselves are more highly trained and better equipped than in the past. As Professor Sir J. Burdon-Sanderson recently remarked:

> So far as concerns British pathology, the fact which affords the strongest grounds for confidence as regards the future is that, while thirty years ago you could with difficulty find anyone possessing the qualities for genuine scientific work, such men are now forthcoming at every hospital.

To such skilled investigators, then, wherever working, we may well look with confidence and with hope. Whilst looking, however, to such workers as these, we must surely realise that we also—we of the professional rank and file—have our part to do. For not only in the laboratories, but in other ways and directions, must the problems surrounding the origin of cancer be attacked. I have already referred to the collective inquiry of the Birmingham and Midland Counties Branch of our Association on the local incidence of the disease as an example of praiseworthy effort. And here allusion may, perhaps, be made to the emphatic opinion expressed in the report on the results of that inquiry to the effect that the medical man in general practice, in spite of his scanty leisure, has, more than any other, the greatest facilities for observing at first hand the effects both of environment and heredity in the etiology of the disease. In this relation, also, permit me the pleasure of referring to a little incident mentioned by Mr. D'Arcy Power in his article in the *Practitioner* (April, 1899) on the Local Distribution of Cancer and Cancer Houses. Mr. Power there tells of one of our *confrères*, who not only housed Mr. Power whilst the latter was pursuing his researches in a certain district, but was also "at infinite pains to tabulate for him the cases of cancer which had come before him (the local doctor) during his long practice of 35 years in the neighbourhood." One would rather like to know the name of the worthy doctor who thus distinguished himself. That, indeed, is the spirit of true, unselfish co-operation in the good cause, for which the doer, whether known to fame or not, has assuredly his reward. Then, in Germany, one may note that a great and extensive collective investigation movement among all classes of practitioners, and headed by the illustrious Professor von Leyden, dealing with the subject of cancer and cognate growths, has been organised recently. The results of that far-reaching inquiry will be awaited with interest, especially considering the eminence and ability of the Committee charged with the immense labour of analysis of the collected data. Thus, in one way or another, there is or should be work for all, and, if we are unable to do more, we may, at any rate, as I previously ventured to urge, raise the character and statistical value of our certificates in regard to fatal cases occurring in our practice. Dr. Tatham, the Superintendent of Statistics at Somerset House, informs me that he will always be glad to receive from practitioners any particulars respecting the nature of tumours, etc., ascertained by them subsequently to the granting of the formal certificate of death, and that he would be grateful for the special assistance thus rendered by them in the preparation of the national statistics.

## Conclusion.

We must be patient in dealing with this great question, whilst never ceasing our determined efforts for its solution. Let us all, however, I would urge, as we value progress, beware of hasty conceptions, of a too ready acceptance of crude theories, of founding conclusions upon insufficiently tested data, and so adding to what Mr. Plimmer has termed, somewhat bitterly, "the mass of ill-digested, unproven chaff which forms so large a part of the literature of cancer." Let us think of Socrates of old, that creator of science, as Professor Seeley has called him, and his earnest pleading—

never, surely, needless or out of date—for caution in the enunciation of theories, in the statement of propositions, in the forming of conclusions, except upon adequate and assured premisses and upon the firm basis of demonstrated facts. If the time seems long and the solution of the problem be still withheld, let us remember the wise words of Dr. Samuel Johnson that "to be ignorant is painful, but it is dangerous to quiet our uneasiness by the delusive opiate of hasty persuasion."

We know that in every field great questions which have baffled the ages have at last been answered—answered as the result of no happy guesses, no sudden inspiration, but by earnest workers, labouring with infinite patience. It is to the qualities which in all times such pioneers have displayed—their slow and sure persistency, their sustained effort, their conquering spirit, to which, on the part of all sorts and conditions of true workers, we look for the long-delayed solution of this great question of the origin of cancer and the means for its prevention—look with hope, with expectation, nay more, I would say, with confidence of ultimate victory.

REFERENCES.
[1] *Practitioner*, April, 1899. [2] BRITISH MEDICAL JOURNAL, March 16th, 1901, p. 621. [3] *Ibid.*, August 18th, 1900, p. 420. [4] *Ibid.*, May 25th, 1901, p. 1281.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

### CASE OF SNAKE-BITE.

A SCHOOLBOY, aged 14 years, picnicking in Surrey on April 23rd, was bitten in the thumb by a common adder which he had caught and intended to take home.

A friend who was present immediately sucked the wound, drawing blood, and probably some poison. The boy stated that he felt as if he had been stung by a nettle, and that the flesh round the wound rose up in a hard white lump. In twenty minutes from the bite he felt sick and cold, with severe pain like cramp in the stomach, quivering of the knees, and felt that he must kneel down. He was driven home, about eight miles, but has no recollection of the drive.

I saw him about two hours and a-half after the accident, by which time he was very collapsed, with a small rapid pulse, and sweating profusely, constantly vomiting bilious fluid, and crying out with severe cramps in the stomach and great pain in the hand and forearm. I gave him a hypodermic injection of strychnine gr. $\frac{1}{60}$, and morphine acet. gr. $\frac{1}{4}$, and ordered him Valentine's meat juice with soda water, and locally hot fomentations to the hand and forearm, which were both swollen. When I saw him three hours later he was much easier, and the vomiting had ceased.

On the following day the whole hand was very swollen and brawny, and presented a remarkable appearance, being covered (on both dorsal and palmar surface) with large blebs, one of which was as large as half-a-crown. The forearm and arm were swollen to twice the normal size, and very tense and shining, but there were no blisters above the wrist. The axillary glands were very tender, and he could not bear the slightest movement. His general condition was now good; there was no vomiting and his temperature was 99° F. I punctured the blebs, and ordered very hot arm baths of chinosol—1 in 2,400—every hour, the forearm to be enveloped in antiseptic wool in the intervals.

On April 25th I was sent for early by the father, who said that the swelling had extended over the chest and into the neck, and that there was difficulty in swallowing. I found that the swelling had extended to the root of the neck, quite obliterating the outline of the clavicle. The whole arm was more swollen and the axillary glands more tender. There was a fresh crop of blebs on the hand, which were punctured. The boy was in great pain, but his general condition was good, and the difficulty in swallowing had passed off. At this time I was rather inclined to make free incisions in the whole arm, but decided to wait and trust to the arm baths to reduce the cellulitis. He was given a saline, which operated well.

On April 26th the general swelling was much less, there were more blebs on the hand. The clavicular outline was now visible. The swelling had not extended further over the chest, and its margin was raised and pink, mottled with small blisters, like the margin of erysipelas. There was much less pain, and he could raise the forearm.

On April 27th the blush had faded, and the swelling rapidly decreased. The only treatment now required was the removal of sloughs, the whole skin of the hand being eventually thrown off as slough.

By April 30th the patient was well, and able to use his hand, though there was still some some stiffness in the fingers and elbow. There was no suppuration throughout.

Westerham. J. RONALDSON RUSSELL.

### A CASE IN WHICH TRACHEOTOMY WAS TWICE PERFORMED IN THE ADULT.

W. F., a seaman in the Royal Navy for eleven years, contracted diphtheria, March, 1896, on board ship and was landed at Haslar Hospital. Tracheotomy was performed. He states that he was an in-patient for three months, and was afterwards treated as an out-patient for three months. The cannula was not removed, and he was permanently invalided from the service.

*State on Examination One Year After.*—He had slight fever, the tracheal wound was inflamed; the cannula was extremely offensive. There was moderate dyspnœa on closing the cannula; laryngoscopic examination was negative.

*Subsequent History.*—He was advised to cork up the cannula as much as possible; laryngeal respiration greatly improved in a few weeks, and he was advised to dispense with cannula. He distrusted this advice for two years, but the cannula was removed three and a-half years after its first introduction. The patient was kept in the house of the medical attendant for a week to give confidence and diminish risk of accident. The tracheal opening was curetted, and closure was complete in a month. Breathing was then normal and continued so for three months. He then had influenzal laryngitis, and tracheotomy was again performed and the cannula reintroduced. Intubation with the largest size O'Dwyer's tubes was found possible. The case was read before the Manchester Medical Society. A few days later the patient came with cannula in his hand; one half of the outer tube was wanting. He had taken it out to clean it and found it broken and a fragment missing. He could offer no explanation. At the Manchester Royal Infirmary he was investigated with the *x* rays with a negative result. The tracheal opening was again closed and the patient is all right.

*Remarks.*—A long-continued partial abeyance of laryngeal function seems to render a subsequent simple laryngitis much more serious than ordinary, and more likely to necessitate a secondary tracheotomy. The accident to the outer tube might have been serious if the fragment had been lodged in the trachea or bronchus. It points to the advisability of periodic inspections of cannulæ in patients obliged to wear them permanently or for long periods.

Harpurhey, Manchester. J. STAVELEY DICK, M.B.R.U.I.

### THE TREATMENT OF WHOOPING COUGH BY IRRIGATION OF THE NARES.

THE plan of treating whooping-cough by irrigating the nares is in my opinion well worth more extended trial, and as the management of the little patients is a matter of importance, I would venture to make the following suggestions.

The child should be rolled up in a shawl, so as to confine the arms, and laid face downwards on the nurse's lap. The end of a tube fitting the nostril (soft indiarubber is as good as anything), and attached to a suitable syringe, should then be introduced, and the child having been told to open its mouth, tepid water should be slowly pumped in, followed by an antiseptic solution, which should be weak at first, so as to let the child get accustomed to it by degrees.

As the nares may be more or less blocked by secretion, if the fluid is pumped up quickly, some of it may pass down the throat; hence the necessity of proceeding slowly, and of using only plain warm water at first. Both sides should be done.

Southam. WALTER LATTEY, M.D.

# REPORTS

ON

# MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

## VICTORIA COTTAGE HOSPITAL, GUERNSEY.

### FOUR CASES OF OPERATION FOR APPENDICITIS.

(By E. Laurie Robinson, M.R.C.S., Surgeon to the Hospital.)

Case I.

*History, and State on Examination.*—A. W., male, aged 25, never having suffered before from any trouble in the appendix, on April 11th, 1900, was suddenly attacked with severe abdominal pain, and when seen had all the typical symptoms of acute appendicitis. When he was admitted into the hospital on April 13th the temperature ranged from 102° to 103°, and the pulse was 118. Under treatment by rest, warmth, etc., all the symptoms subsided, and on April 16th the temperature was normal and the pulse quiet. On April 18th the temperature began to rise, and the pulse quickened, and the induration above Poupart's ligaments, which had been lessening in size, began to increase.

*Operation.*—The operation was performed on April 22nd, and about half a pint of fœtid pus was let out. As the appendix could not be felt in the abscess cavity no further exploration was done. A drainage tube was put in and dressing applied. The symptoms all subsided at once, and the patient went on steadily towards recovery. Eight months afterwards he reported himself as being quite well.

Case II.

*History and State on Examination.*—A female, aged 22, who was admitted into the hospital on September 22nd, 1900, had suffered from vague pains in the neighbourhood of the appendix for about four months. These were increased by walking. Some tenderness and resistance on deep pressure was elicited. There had been loss of flesh, and at times a temperature of 99°, the motions being very offensive. On two occasions she was ordered to bed for periods of about four weeks, when each time, the symptoms entirely disappeared, only to reappear directly she began to move about. She had never suffered from a typical attack of acute appendicitis. Operation was advised, as it was quite probable that she would shortly have to go abroad, perhaps into places where it would be impossible to obtain efficient surgical help.

*Operation.*—The operation was performed on September 23rd, 1900. There were no adhesions, but the appendix was quite 6 inches in length, its end was bulbous and extremely tense, and in it was found a small seed and some very hard fæces. The appendix was removed, and recovery was uneventful. The patient reported some five months after that she was putting on flesh, and felt quite well.

Case III.

*History and State on Examination.*—A female, aged 19, was admitted into the hospital on October 2nd, 1900. She had suffered from an acute attack of pain in the lower part of abdomen in the previous May, which laid her up for a few weeks, since which time she had never felt really well, and at the end of September she had another attack. On admission she was seen to be a very delicate girl. Her temperature ranged from 100° to 103°. There were signs of old pleurisy on the right side, but no other symptom of lung trouble. There was distinct lateral curvature of the spine. There was a great deal of tenderness and induration about the neighbourhood of the appendix. She also had a cyst in Douglas's pouch, extending to the left of the uterus, which was diagnosed as a left pyo-salpinx. She was kept under observation for four weeks, but as the symptoms did not subside, and she began to lose ground, operation was decided on.

*Operation.*—The operation was performed on October 28th, and turned out to be extremely difficult, lasting about one hour and a-half. The incision was made in the middle line, and after getting through the abdominal wall the adhesions were everywhere so firm and extensive that great difficulty was experienced in entering the cavity. While separating some adhesions in the neighbourhood of the appendix a rent was made in the cæcum. This was immediately secured by means of Lembert sutures. The appendix, which was much bound down and kinked, was removed. After further great difficulties the pyo-salpinx was removed, but just at the final stage the cyst was slightly torn, letting out some most offensive pus into the cavity of the pelvis. The abdominal cavity was thoroughly flushed out, and a glass drainage tube introduced and the dressing applied. The patient was very much collapsed for the first twenty-four hours, but then gradually recovered. About a week after, as drainage did not appear to be sufficient, a counter-opening was made through the vagina. The patient never did really well, although she recovered sufficiently to sit up and go downstairs. About eight weeks after the operation she developed symptoms of tuberculous meningitis and died after a few days' illness.

Case IV.

*History and State on Examination.*—A female, aged 17, was admitted into hospital on November 29th, 1900. She had never had a typical attack of appendicitis but only vague pains and tenderness on deep pressure, for which she had been kept in bed for a few weeks before with relief to the symptoms, but which returned almost as soon as she began to get about again.

*Operation.*—The operation was performed on December 1st. The appendix was free but about 6 inches in length, very tense and bulbous at the extremity, and stuffed with lumps of hardened fæces. The recovery was uneventful. She reported herself four and a half months after the operation as feeling quite well and free from all her old pains.

Remarks.—Case I is interesting as illustrating the fact that a first attack of appendicitis may be a very serious one, and also shows how in such cases it is not necessary to remove the appendix unless it is found easily. Cases II and IV are, I think, most interesting, because the general rule is that after the second attack of acute appendicitis operation should be urged. But with regard to these two cases, could they be said ever to have suffered from typical appendicitis? In both cases, however, the operations were shown to be justifiable, as conditions were found which would have inevitably led to more and perhaps serious trouble. On the strength of these two cases I would argue that, "given pain, however slight, which becomes more or less persistent, with tenderness on pressure over the appendix, relieved perhaps by prolonged rest only to reappear when the patient gets about again, the conclusion should be the appendix is diseased beyond recovery, and is therefore better removed." Case III is interesting as showing that these cases may be tuberculous, and also on account of the severity of the operation.

# REVIEWS.

## HOSPITAL MANAGEMENT.

We always receive Sir H. Burdett's Annual[1] with real pleasure, and can give this issue of it the same unstinted praise which we have bestowed on its predecessors as an authoritative and copious source of information on all the many charities of which it treats.

There are numerous matters of opinion intermingled with these matters of fact in this work, and on many of them we should have been glad to have commented had space permitted. The chief interest, however, of the present volume lies in the way in which the problem of "Medical and Lay Administration of Hospitals" is treated in chapter ii. That question has, as Sir H. Burdett says, "been prominently before the public during the last year of the old century, owing to the differences which have arisen between the honorary medical staff and the Board of Governors at the National Hospital for the Paralysed and Epileptic." Now, we cannot help expressing our very real and very earnest regret that in treating a subject of such grave importance Sir Henry should advocate views so entirely opposed to those which we desire to see prevail, and which have hitherto decidedly prevailed at the hospital in question, so far as the controversy has yet been carried. Sir H. Burdett is, we are sorry to see, entirely in favour of the separation of the lay and medical elements in the government of a hospital—a principle which the report of the Committee of Inquiry at the National Hospital so energetically repudiated. "For our own part," he says, "....We are confident that, rightly understood and properly enforced, the interests of the honorary staff of a hospital, collectively and individually, are best secured by the system which constitutes the medical staff, through its committee, a sort of House of Lords" (p. 73).

Then he goes on to mention as, in his opinion, inferior systems of management: (1) That which admits the medical staff in a definite proportion to the managing body; and (2) that which gives each member of the staff the right *ex officio* to sit and vote on that body. These latter methods he rejects as "open to the objection that they open the door to intrigue, to the making public of differences of opinion which may exist between members of a large medical staff" (*ibid.*), and that the medical staff may thus lose influence with the Governors. And he states (p. 72) that "a very high authority—an eminent member of the medical profession, now dead—laid it down that it was desirable in the interests of the medical men themselves that none of their number should serve as members of the Board of Management." Who this authority was we are not told; but the force of his argument is destroyed by his assumption (which immediately follows the passage quoted) that all doubtful matters would be referred by the Lay Board to the medical staff, whose opinion "would be adopted without question by the lay management." The experience of the National Hospital shows how far this assumption is from the fact.

[1] *Burdett's Hospitals and Charities, 1901.* The Year Book of Philanthropy and Hospital Annual. Twelfth year. By Sir Henry Burdett, K.C.B. London: The Scientific Press. (Cr. 8vo, pp. 1054. 5s.)

But Sir Henry must forgive us for saying that the whole of this argument is wide of the mark. The question is not which course is best for the doctors, but which is best for the hospital. Even if the private interests of some of the doctors might be promoted by a pretence of some impossible unanimity between the whole medical staff (though we believe nothing of the kind), how could the hospital be thereby benefited? All questions, medical and others, are best settled by open discussion at a sufficiently numerous Board of Management composed both of medical men and laymen. It is a narrow prejudice which assumes or asserts that laymen are not able to form an opinion on questions of management (not medical treatment, of course), and that medical officers are not able to form an intelligent opinion on matters of finance and general management. And it would seem obvious that good management is hardly possible if all matters which are at once doubtful and important have to be settled between two independent bodies, neither of which has any members who have the right of sitting also on the other. Such an arrangement involves the utmost possible waste of time, and the most unbusinesslike method of discussing matters. Things which half-an-hour's personal intercourse would put in a clear light may drag on through weeks or months of correspondence without any proper understanding of the matter being ever reached. And the great anomaly of the arrangement is that the medical men, who on many of the most important matters of hospital management—for example, diet, nursing, proportion of nurses, accommodation of nurses and servants, hours, service of the wards, and other such matters too numerous to particularise—must be better informed than their lay colleagues, are not allowed even to explain them to the latter. Surely so senseless a rule could only be dictated by some inveterate prejudice, Nor is this prejudice far to seek. The lay mind is constantly haunted by a vision of some ill-understood "medical etiquette," which is supposed to unite a medical staff together in defence of their own interests, and in opposition to those of the patients and of the other governors. If that delusion were got rid of, by allowing the members of the medical staff to exchange their ideas freely with the lay governors and with each other, it would soon be seen that they differ amongst themselves (as, indeed, Sir H. Burdett admits is inevitable), and that they have no interests in any way conflicting with those of the institution which they serve.

The only separation which, as it seems to us, ought to be made between lay and medical men in the management of a hospital is that the former should be excluded from interfering with any question of medical treatment and education. These being retained as the province of the medical committee, the managing Board and its committees should be equally open to all governors, whether members of the medical staff or not.

In what sense the medical committee of a hospital can be said to resemble the House of Lords is very hard to see; but it is not hard to understand that no good whatever can be done to doctors, hospitals, or patients by pretending that the doctors all think alike, or by assuming that they have not the courage necessary to advocate their own opinions in public, even when they differ from those of other members of the staff.

The very phrase "medical and lay administration of hospitals" seems to us objectionable, as involving the assumption that either the one class or the other must rule. No such disastrous alternative is involved in the problem of hospital management. Those hospitals are the best managed in which there is the least separation made between the two classes of governors, where the doctors are allowed to take as great a share in the general management as their other avocations permit, and where the medical and lay governors meet freely and on equal terms and discuss all matters openly and without prejudice. That Sir H. Burdett's great experience should have led him to a different conclusion is, to our mind, a blot on his very useful publication, but the question is so imperfectly argued in the pages before us that we venture to hope that further inquiry will show the author that in the many hospitals whose medical officers sit on the Boards of Management neither the interests of the staff nor those of the institution suffer from the co-operation of the medical and lay elements.

## AMBULANCE AND NURSING HANDBOOKS.

Surgeon-Captains Warwick and Tunstall have compiled an excellent handbook on "*First Aid*" *to the Injured and Sick*.[1] It treats the subject more seriously and more fully than the majority of the booklets on the subject. The immediate treatment of accidents before the arrival of skilled surgical assistance, and without special surgical appliances, is an important matter worthy of careful study. The authors seem to have appreciated the wide difference between the dangerous "little knowledge" and the valuable "knowledge of a little"—the meddlesome interference of the self-sufficient but ignorant person who has picked up a smattering of information on minor surgery, and the useful help of one who with no knowledge of surgery has thoroughly learned first aid. The first 64 pages are devoted to the structure and functions of the body. The information is elementary but exact, concisely and clearly expressed, and illustrated by good diagrams and plates. Forty well-illustrated pages explain the principles of bandaging and the mode of applying the triangular and roller bandages. Then follows the "first aid" treatment of common injuries and accidents, and finally the transport of sick and injured. There is a good index and over 150 illustrations. To all teachers of first aid the book will be most useful, and to students of the subject it may well serve as an advanced textbook.

Dr. Drinkwater explains in his preface to *First Aid to the Injured and Ambulance Drill*[2] that he has endeavoured to supply a want chiefly caused by the excess of theoretical matter and the unsatisfactory nature of the illustrations in other works on "first aid." He has therefore omitted "all anatomical and physiological details that do not bear directly upon the practical work of the syllabus" of the St. John Ambulance Association. If the only aim of the student is to obtain the certificate of the Association, this may be a useful feature in the book. The illustrations comprise a number of photographs of various bandages applied for different injuries, and of the methods of forming improvised seats and of lifting patients. These are a distinct advantage to the student, and give the book a value of its own. The diagrams are less satisfactory.

The new edition of Dr. Roberts's *Lectures on Nursing and Hygiene*,[3] a companion book to that on "ambulance work," will be found a useful guide for men and women attending a course of lectures on the subject, as well as a good book of reference for those who, by force of circumstances, are called upon to minister to the comfort of sick relatives at home. It is an expansion of the ordinary syllabus of the St. John nursing course, and from beginning to end the explanations given are clear and to the point. Where necessary suitable illustrations are introduced; hints on hygiene are to be found throughout the book, and in the concluding lecture an account of the St. John Ambulance Brigade and Nursing Guild is given.

*Home Nursing*[4] would be much improved by rearrangement for easy reference. If the subject matter were placed under alphabetical headings and classified, the measures, doses, etc., tabulated, and the recipes taken out of the body of the work and grouped at the end, it would serve its purpose better. The scheme of the author being to help in domestic sickness, it would surely have been wiser to lay down first principles of nursing, with practical hints on matters of detail, instead of endeavouring to make the home like a hospital.

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[1] "*First Aid*" *to the Injured and Sick*. An Ambulance Handbook. By F. J. Warwick, B.A., M.B., Surgeon-Captain V.M.S.C., and A. C. Tunstall, M.D., F.R.C.S.Edin., Surgeon-Captain E. Lond. Vol. Brigade Bearer Company. Bristol: J. Wright and Co.; and London: Simpkin, Marshall and Co. 1901. (Cr. 8vo, pp. 244. 2s. 6d.)

[2] *First Aid to the Injured and Ambulance Drill*. By H. Drinkwater, M.D. London: J. M. Dent and Co. 1900. (Fcap. 8vo, pp. 104. 1s.)

[3] *Illustrated Lectures on Nursing and Hygiene*. By R. Lawton Roberts, M.D., D.P.H. Third edition. London: H. K. Lewis. 1900. (Cr. 8vo, pp. 223, 71 illustrations. 2s. 6d.)

[4] *Home Nursing: Modern Scientific Methods for the Care of the Sick*. By Eveleen Harrison. New York and London: Macmillan and Co. 1900. (Crown 8vo, pp. 248. 4s. 6d.)

*Practical Points in Nursing*[5] comes up to its title; it is practical, not too technical, and contains nearly everything that would be of use to a private nurse. The author endeavours to forestall the difficulties which may arise in the home, whilst avoiding the temptation to prescribe or direct treatment. Some of the instruction has unwisely been curtailed, notably that referring to the artificial feeding of infants and the nursing of diphtheria. The writer hardly prepares the nurse for the emergency of a coughed-out tube. An appendix contains hints on feeding, recipes, dose list, etc.; and there is a glossary.

Dr. PAUL RISSMANN in his handbook for monthly nurses[6] has attempted to provide a textbook for the third member of the German obstetric hierarchy as distinguished from the midwife and the doctor, and as such he asks us to judge it. As such it is fairly successful, though it occasionally gives instructions on matters, and this is particularly the case in infant feeding, which we should never think of delegating to a nurse. From the pupils' point of view some of the illustrations are too diagrammatic to be instructive, but that will be easily remedied. The diction has the merit of being simple and clear.

The merits of Professor E. P. DAVIS's manual of *Obstetric and Gynecologic Nursing*,[7] especially in its obstetric section, quite justify its addition to the list of nursing books before the public. Almost all through the author has been sensible in drawing the line between what the nurse may do and what she must only do when specially directed, and he is precise and definite in the directions he gives for the action of the nurse in the various events and emergencies she will meet in the course of her work. Among other good features of the book should be mentioned the sensible remarks on the nursing, or rather hygiene, of normal pregnancy, and the many notes of caution to the nurse in speaking of or to her patient. The nurse is also warned against assuming, even at the request of the medical attendant, tasks such as intrauterine douching or the examination of the perineum for tears or the placenta for incompleteness, for which her knowledge is inadequate. The only serious error is common to several American writers, Hirst being a notable exception. It is that the temperature of water for the hot douche is given as 100° to 110° F., whereas it should not be lower than 115° to 120°. Murray has shown experimentally that this is the essential for efficient muscular contraction.

The receipts for cookery which occupy half the *Art of Feeding the Invalid*[8] should prove valuable to many nurses for purposes of reference. The chapters which deal with the general serving of food and with children's diet respectively contain sound if not very novel advice. With regard, however, to the discussion of special diseases, the authors might well have omitted the question of etiology, and, considering the class to whom the book avowedly appeals, would have done well to give their advice more definitely, even dogmatically.

The success of her *Textbook of Materia Medica for Nurses*[9] in America, where, as we are told in the preface, it is in general use among pupil and graduate nurses, has led the authoress to think it might be found useful by British nurses. Where nurses have to dispense, or matrons of cottage hospitals are left in sole charge, it is doubtless convenient to have such a work for reference, but a considerable amount of revision and many excisions are required before it can be safely recommended as a textbook for pupil nurses here. Thus under the head of Chloroform we find instructions given for its administration by nurses in labour cases. Our advice to the nurse in such a case would be, *don't*. Port wine, *vinum portense* (?), contains, we are told, from 30 to 40 per cent. of alcohol, but, it is added, is rarely pure, which latter statement we can quite believe. Linseed poultices are directed to be made by boiling over a fire until a consistency is reached "not thick enough to be stiff not thin enough to run," and the boiling is to continue until the poultice is made. As the average heat at which a poultice can be borne on the skin does not exceed 122° F., this seems rather a waste of energy.

A sick-room chart[10] designed by Mr. Cecil Osborne has twelve columns for the day report and the same for the night on one opening. The headings are "hour," "pulse," "respiration," "temperature," "evacuations," "mental condition," "sleep," "diet," "stimulant," "medicine," "report of nurse;" at the foot of the page is medical attendant's instructions to nurse; and there is a weekly record chart, with shaded columns for the night. It will thus be seen that the chart gives an exhaustive report of the patient's condition for each twenty-four hours: but we must confess to a doubt of the wisdom of encouraging such elaborate charting; it may divert the nurse's attention from the more important duties of the sick-room. The price is beyond the purse of the rank and file of the nurses.

We have also received a casebook[11] which is a combination of temperature charts and nurses' record of medicine, stimulants, and food taken, of sleep obtained, and urine and stools passed. It is well arranged and adapted for cases of severe illness. Each page is devoted to one day's record; and each book contains charts and records for a three week's illness.

Mr. Henry Kimpton, 13, Furnival Street, London, E.C., asks us to state that he is the English agent for Barker's *Nervous System and its Constituent Neurones*, a review of which appeared in the BRITISH MEDICAL JOURNAL of July 6th, p. 19.

## NOTES ON BOOKS.

THE edition of Sir Henry Burdett's handbook, *The Nursing Profession, How and Where to Train*, for the year 1901 (London: The Scientific Press. 2s.) has been issued. The book contains a great deal of useful information, but we still think that its value would be enhanced by a fuller statement in the introductory chapter on the length of training and the value of certificates and the conditions under which they may be obtained. It ought, we think, for instance, to be clearly explained that a nurse who has only had a training for two years is under considerable disadvantage when she seeks to obtain appointments in after-life.

Miss Isabel A. Pollock has written a short pamphlet on *Lip-reading, what it is and what it does for the Partially Deaf* (London: Simpkin, Marshall, and Co. 6d. net.) in which, writing from personal experience, she strongly recommends persons who have lost their hearing, or who have become too deaf to follow ordinary conversation, to acquire the art of lip-reading, which she states can be learned in a few months. The oral system, so-called, of teaching totally deaf children is well known, and has been in use in special School Board classes for a good many years, but it is probable that this pamphlet will be useful in suggesting to the particular class addressed the advisability of studying the movement of the lips with a view of understanding what the speaker is saying. Many people who have become deaf, or very hard of hearing, have learned to interpret the movements of the lips without any instruction, but no doubt a skilled teacher can very much facilitate the acquisition of this power.

[5] *Practical Points in Nursing.* By E. A. M. Stoney, Graduate of the Training School for Nurses, Massachusetts, U.S.A. Second Edition. London: W. B. Saunders and Co. 1900. (Demy 8vo, pp. 456, 81 illustrations. 7s. 6d.).

[6] *Lehrbuch für Wochenbettpflegerinnen.* [Handbook for Monthly Nurses.] Von Dr. Paul Rissmann. Berlin: S. Karger; and London: Williams and Norgate. 1901. (Demy 8vo, pp. 68, 9 illustrations. 1s. 9d.)

[7] *Obstetric and Gynecologic Nursing.* By Edward P. Davis, A.M., M.D., Professor of Obstetrics in the Jefferson Medical College, Philadelphia, etc. Illustrated. London and Philadelphia: W. B. Saunders and Co. 1901. (Demy 8vo, pp. 402. 8s.)

[8] *The Art of Feeding the Invalid.* By a Medical Practitioner and a Lady Professor of Cookery. London: The Scientific Press. (Crown 8vo, pp. 260. 1s. 6d.)

[9] *Textbook of Materia Medica for Nurses.* Compiled by Lavinia L. Dock, graduate of Bellevue Training School for Nurses. New York and London: G. P. Putnam's Sons. 1900. (Demy 8vo, pp. 276. 6s.)

[10] *Weekly Day and Night Sick-room Chart.* Designed by Cecil A. P. Osborne, F.R.C.S.E. London: Jarrold and Sons. Price 1s.

[11] *The Combined Clinical Casebook with Daily and Four-Hourly and Sick-room Temperature Charts.* By T. G. London: Wodderspoon and Co. 1s.

SUCCESSFUL VACCINATION.—Dr. J. A. Hunt, of Borrowash, Derby, has again been awarded the Government grant for successful vaccination in his district.

# REPORTS AND ANALYSES
AND
# DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

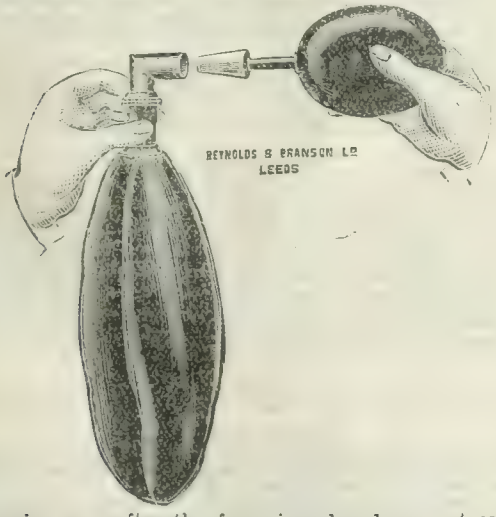
## MEDICINAL AND DIETETIC PREPARATIONS.

*Nargol.*—This is a new organic silver compound introduced by Messrs. Parke, Davis, and Co. (111, Queen Victoria Street, E.C.). Chemically it is a compound of silver and nucleinic acid containing about 10 per cent. of silver. It is a brown powder soluble in water. Its therapeutic properties are similar to those of other organic silver compounds which are now too well known to need pointing out. The advantages claimed for nargol are that it is stable, readily soluble, is almost entirely free from irritating effects, and has antiseptic properties.

*Suprarenal Preparations.*—Solutions of adrenalin chloride and suprarenal liquid (with chloretone) are also submitted by Messrs. Parke, Davis, and Co. Adrenalin occurs in minute fusiform crystals, and is said to be the active principle of the suprarenal gland. It is stated that one drop of a 1 in 10,000 solution of adrenalin instilled into the eye bleaches the conjunctiva, ocular and palpebral, in from 30 seconds to 1 minute. Owing to the fact that some difficulty is experienced in preparing solutions of this substance, the makers supply a preparation containing 1 part of adrenalin chloride in 1,000 parts of normal saline solution, and it is suggested that being of known and constant strength it may be advantageously employed internally as a cardiac stimulant, instead of the preparations made from the gland itself. In the combination of suprarenal liquid and chloretone, it is claimed that the latter substance not only preserves the activity of the liquid and keeps it sterile, but also exerts its own local anæsthetic and antiseptic properties. These properties are therefore combined with the valuable styptic qualities of the suprarenal gland. Its anæsthetic action is similar to that of a 2 per cent. cocaine solution, and it is suggested that in minor surgical operations it may be substituted for the latter with profit. Both are elegant preparations, and appear to possess good keeping qualities.

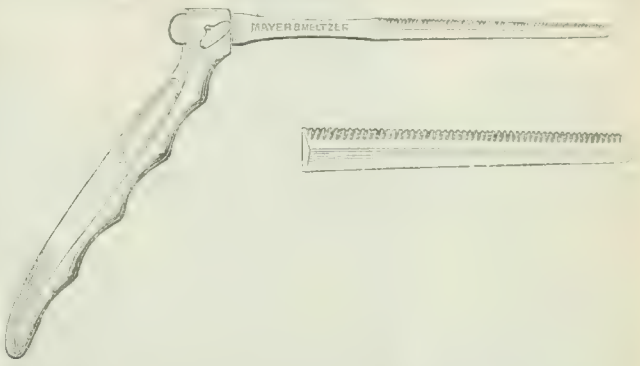
## MEDICAL AND SURGICAL APPLIANCES.

*Pump for Inflating the Ether Bag.*—Mr. HERBERT J. ROBSON, M.R.C.S., L.R.C.P. (Leeds), writes: There are times during the administration of ether when the bag collapses and when it has to be inflated. Then, too, at the commencement of




anæsthesia, soon after the face-piece has been put over the patient's face, it is a great convenience to have a bag nearly full of air ready to affix to the ether apparatus. Hitherto the anæsthetist has often had to inflate the bag with his own breath, a practice by no means pleasant or advisable either for patient or doctor. With this form of pump the difficulty is easily overcome, and already I have found it very useful in my practice. It was shown at the meeting of the Yorkshire Branch of the British Medical Association on March 27th, 1901. It was made for me by Messrs. Reynolds and Branson, Limited, Leeds.

*A Nasal Saw.*—Dr. PERCY G. GOLDSMITH (Registrar Central London Throat and Ear Hospital) writes: Those who have occasion to remove septal irregularities with a saw must be frequently annoyed by the slipping, jambing, or bending of the instrument. To obviate this, saws in general use have been made of thicker steel, but in so doing the cutting qualities of the instrument have been markedly impaired. To overcome these difficulties I have had a saw made for me, the




handle of which fits well to the palm of the hand, and owing to the fact that it forms with the blade almost a right angle, permits an uninterrupted view of the operation. The blades are made with a bevelled edge, so that no matter what the thickness of the blade may be the cutting edge is quite sharp. Two blades are supplied which fit into the same handle. They are applied with the plane surface next to the septum; the one used to cut downward on the right side may, by being reversed, be used to cut upward on the left side, and *vice versa*. The instrument is made by Messrs. Mayer and Meltzer, of Great Portland Street.

## THE PROPOSED UNIVERSITY OF LIVERPOOL.

[FROM OUR SPECIAL CORRESPONDENT IN LIVERPOOL.]

PUBLIC opinion in Liverpool is almost unanimously in favour of the proposal to create a local university. This view, however, is not shared by the authorities of Victoria University, with which Liverpool University College is affiliated, and which has its headquarters in Manchester. Opposition from this quarter is, perhaps, only what might be expected. Those who have been concerned in the promotion of Victoria University are not likely to sympathise with any scheme which would deprive it of one of its most flourishing constituent Colleges, and would establish in a city removed by less than one hour's journey a similar institution, which would be a formidable rival. No doubt it is true that Victoria University is, in theory, no more a university for Manchester than it is for Liverpool and Leeds, which have Colleges affiliated to it, but in practice it is otherwise. The mere fact that the members residing in Manchester are on the spot, whereas those residing in Leeds and Liverpool cannot attend without a considerable sacrifice of time, is enough to give the former an advantage. Moreover, the official buildings, the visible embodiment of the University, are in Manchester; students have to attend there to have their degrees conferred, and so in reality, though not in name, Victoria University is in great measure the University of Manchester.

The opponents of the proposed alteration take up the position that the multiplication of universities will tend to depreciate the value of degrees, and that the confederation of colleges in centres with varied interests and ways of looking at things is more likely to give due weight to the various subjects of study than a number of smaller bodies, which

would be to a great extent influenced by local interests or traditions. With regard to the former objection, there is no reason to suppose that Liverpool University, amply endowed as it undoubtedly would be, would have any inducement to lower its standards for degrees; with regard to the second, it is absurd to suppose that a small university would require less all-round knowledge than is expected of the graduates of any other university. On the other hand, if it is meant to imply that a small university would endeavour more especially to encourage the study of certain subjects suggested by the needs or opportunities of the locality that would be in no sense an argument against the formation of such a university, but rather an argument in its favour.

At a meeting of the Court of Governors of Victoria University, held recently in Manchester, very strong views were expressed against the proposal to create a University for Liverpool. The Marquis of Ripon and Mr. James Bryce wrote expressing disapproval. On the motion of the Right Honourable Sir J. T. Hibbert, seconded by Professor Ricker, it was resolved:

That, in order more fully to deal with the resolution of University College in reference to the establishment of a University in Liverpool, a Committee of this Court be appointed to consider and report, in the event of an application for a university charter being made by University College, Liverpool, what action, if any, should be taken by the Court of this University; and that the authorities of University College be requested to keep the Committee informed of any steps they may propose to take in the matter.

Principal Dale, of Liverpool University College, while accepting the motion, spoke in favour of a separate University for Liverpool, and showed that the objections which had been made against it could not be maintained. The members of the Committee appointed were Sir F. S. Powell, Bart., M.P., Sir W. Houldsworth, Bart., M.P., Sir J. T. Hibbert, Mr. J. W. Alsop, Mr. J. A. Brooke, Principal Bodington, Principal Dale, Mr. M. Haworth, Mr. J. E. King, Mr. E. K. Muspratt, Professor Lamb, Professor Lupton, Professor Paterson, Mr. Steinthal, Professor Smithells, Mr. Thompson, Mr. Worthington, and Professor Tout. Of these only four represent Liverpool interests.

The Liverpool City Council has warmly taken up the subject. At a recent meeting the following resolution was moved by Alderman Burgess:

That this Council has observed with much satisfaction the growth and progress of the University College, and in view of the fact that the College authorities are taking steps to procure the establishment of a separate University for Liverpool, records its opinion that it is desirable, in the interests of higher education in the city, that such a University should be founded.

He said that University College, when founded in 1881, began with 6 professors, 5 lecturers, and 45 day students. In 1900 it had 25 professors, 40 lecturers, 490 science and art and 166 medical students, with 1,000 others attending evening lectures and classes. The expenditure on the College had amounted to nearly £500,000. When they had the Principal of the College declaring that the College could not do all it was capable of doing until it stood alone, and when the Council of the College was unanimous in their opinion that a University should be established in Liverpool, the City Council ought to help the institution to attain a position of still greater utility and distinction.

The motion was supported by members of both political parties in the Council, and it was carried unanimously.

It is understood that a considerable sum of money has been privately promised towards the establishment of a Liverpool University. There can be no doubt that the people of Liverpool are resolved to have a University of their own, that they are able and willing to pay for it, and that the granting of a charter will follow in due course.

## BRUSSELS MEDICAL GRADUATES' ASSOCIATION.

The annual meeting of this Association took place on July 9th at the Hotel Cecil, Strand. Dr. Achard was elected President for the following year, and Dr. Snape, Vice-President. The following gentlemen were elected members of the Council:—Drs. A. C. Haydon, F. H. Edwards, E. Furness Potter, Arthur E. Cowburn, F. Norman, Jas. Maughan, A. Ward, F. Sayres, Chas. B. Langton, F. R. Miller, and Walter Reeve. Dr. Walter Smith was elected Treasurer in the place of Dr. Younger, and Dr. M. Greenwood was re-elected Honorary Secretary.

After the meeting the members and their friends dined together, and among those present were Dr. Heron, Mr. F. Openshaw, Mr. Barnard, Dr. Danford Thomas, Mr. Dene Sweeting, Dr. Morgan Dockrell, Dr. Ball, and Captain Hayward Pinch.

The President, Dr. Achard, proposed the "Health of the Guests," which was replied to by Dr. Heron, Mr. Sweeting, and Dr. Ball. Mr. Openshaw gave the toast of the "Brussels Medical Graduates' Association," and in the course of his remarks strongly insisted on the claim of the members to be allowed to register their degrees as additional medical qualification as being founded on right and justice.

The Honorary Secretary, in responding, alluded to the work of the Association, and pointed out that registration of their degrees could not be obtained without an alteration of the present law. When a suitable opportunity arose and medical legislation was in progress they might obtain the right they claimed. At the present time there was a Bill before Parliament which proposed to allow colonial graduates the right of registration in this country. If colonial practitioners were to be allowed to register without possessing any British qualifications, it surely might be conceded to British practitioners already on the *Register* to inscribe their foreign degrees as additional qualifications.

# THE PLAGUE.

## Prevalence of the Disease.

### Marseilles.

On July 10th a fourth man of the Arab stokers on board the ss. *Laos*, which arrived at Marseilles on July 7th, died of plague. On the same date, also, a suspicious case occurred amongst those of the stokers who were regarded as well. The ship in which plague broke out had come from China with 382 passengers on board, of whom 140 were soldiers. Fourteen of the stokers were found to be ill when the ship reached Marseilles. These men were separated, and placed in hospital two kilometres from the healthy passengers. The quarantine station for Marseilles is at Frioul, an island situated several miles off the harbour; as all communication with Frioul is cut off, it is difficult to obtain accurate information of what is happening there.

### Constantinople.

Four cases of plague are stated (unofficially) to have occurred in Constantinople. It is in the most filthy and unhealthy quarter of Constantinople that the disease is reported to exist. The neighbouring countries have taken fright, and Roumania, Bulgaria, and Greece more especially, are adopting stringent frontier regulations. The Orient express has been stopped at Sofia, and the whole of the Balkan States are evidently acutely apprehensive of the possibility of infection by plague. At present Bulgaria and Eastern Roumelia are closed at all points except at Burgas, Khibibehevo, and Tsuribrod, where an eleven days' quarantine is imposed. The Turkish Government has invited a British bacteriologist to Constantinople.

At present the disease is merely in a sporadic form, and it is to be hoped the alarm will do good by keeping alive a sense of the danger of an outbreak. Europe is more likely to be seriously infected by way of Turkey than by the appearance of a few plague-stricken passengers on board ships arriving at the ports having trade with the Far East.

### Cape Colony.

In the Governor's report to the Secretary of State for the Colonies for the week ending July 6th, the deaths from plague, including corpses found, were according to nationality: Coloured 1, Malay 1, native 1, European 0, Indian 0, Chinese 0. Of the total seizures since the initial outbreak the numbers are: Coloured 330, Malay 50, native 141, European 185, Indian 11, Chinese 1, total 727. The total deaths from plague have been; Coloured 175, Malay 42, native 61, European 65, Indian 9, Chinese 0, total 350. At Port Elizabeth for week ending July 6th, the number of cases were: European 1, Indian 1, native 3, total 5, deaths 0. The total plague cases and deaths in Port Elizabeth were returned on July 6th as 23 and 9 respectively. In other parts of the Cape the number of plague cases has been 10, and the deaths caused by plague 2.

### Mauritius.

For the week ending July 11th 2 cases of plague proved fatal in Mauritius.

### Hong Kong.

For the week ending July 13th, 26 fresh cases of plague occurred in Hong Kong, and 21 deaths from the disease. This is a further diminution upon the returns for the previous week, and the sharp outbreak is apparently passing away. The Hong Kong community is said to be preparing a petition to the Secretary of State for the Colonies, asking that a Commission be appointed to inquire into the sanitary state of Hong Kong. Sanitary experts have visited Hong Kong before, but in few instances was their advice taken or their warning heeded.



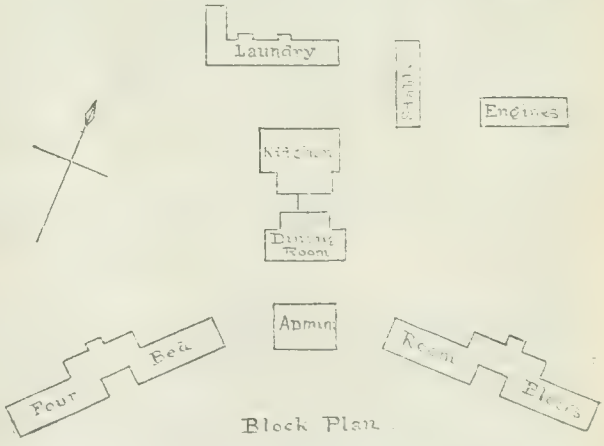
Pinewood Sanatorium.

## THE LONDON OPEN-AIR SANATORIUM.

It is at the present day abundantly clear that the so-called open-air treatment of consumption has become an established system not only in the sphere of therapeutics but also in that of State medicine. In this country there is now fairly ample means, afforded by private enterprise, for its administration to the wealthy, and in certain localities local authorities are taking steps to provide it for the very poor; but similar facilities, open to those who are neither rich nor very poor, have been decidedly few.

On July 22nd the Pinewood Sanatorium will be opened by the London Open-Air Sanatorium Association for the reception of these moderately well-off phthisical patients. The inception of the scheme dates from the historical meeting of the National Association for the Prevention of Consumption, which was held at Marlborough House towards the end of 1898. Shortly thereafter the London partners of the firm of Messrs. Wernher, Beit and Co. offered to find the sum of £20,000 for the erection, equipment, and maintenance of a sanatorium for consumption, on the understanding that after all disbursements had been made they should receive interest on the capital advanced at the rate of 2½ per cent. per annum, and that the surplus (if any) should be devoted to the objects of the institution. The committee of the sanatorium, which consists of seven members, four representing the National Association for the Prevention of Consumption and three the financial interests concerned, have, however, estimated that a sum of £30,000 will eventually be required for the completion of the undertaking. For the present the charge to patients has been fixed at three guineas a week.

The London Open-Air Sanatorium, "Pinewood," is in Berkshire, on the Nine Mile Ride, near Easthampstead Park and Wokingham; it is two miles from Wellington College Station on the South Eastern Railway, and three and a-half from Bracknell, on the London and South Western Railway. It is situated on a well-wooded estate consisting of 82 acres of freehold land, 240 feet above sea-level. The soil is Bagshot sand, and the estate has extensive pinewoods stretching away on every side. It provides accommodation for 64 patients, two resident medical officers, and for a staff of about 24 persons. One of the medical officers, Dr. C. C. Chidell, who is already in residence, has had much experience both in general hospital work and in that special to the institution.




The buildings, which are of red brick with red-tiled roofs, are arranged on the cottage-hospital plan (see figure); in front elevation they consist of two isolated blocks, containing the bedroom accommodation on each side of a central administrative block. Behind this, but not connected with it, is the dining-room block, where the patients and doctors, with a few of the staff will dine together: behind the dining-room are the kitchen and servants' accommodation; and in another isolated block, still further to the rear, is the laundry, which is fitted with a disinfector for sterilising

used linen by superheated steam before it is washed (see block plan).

The bedroom blocks face nearly due south; they contain in all 64 bedrooms, each patient having his own bedroom, and are arranged in two floors, 8 on each, in the four isolated blocks. Each bedroom has a cubic capacity of about 1,100 feet, and is provided with a small open fireplace. The front of each is practically all window, consisting of two casements and a fanlight. There are no verandahs to the bedroom blocks. The woodwork throughout is of the plainest type, having no mouldings or other angles for the lodgment of dust: even the staircases are absolutely free from angles, the steps being about an inch and a-half clear of the wall, and having a space between the riser and the tread. The buildings are throughout lighted by electricity generated on the estate by a dynamo driven by oil engines. There is a good water supply obtained from the Wokingham Water Company. The institution includes, moreover, a dispensary, douche and other baths, a bacteriological laboratory, and a *post-mortem* room. The sewage disposal is by means of a septic tank and three filter beds.

It may confidently be expected that the care and judgment exercised in the construction of this sanatorium, and in its arrangement down to its smallest detail, will result in a large measure of success in the relief and cure of what a few years ago was proverbial as a hopeless disease.

## THE PREVENTION OF CONSUMPTION.

### BATH.

THE Committee of the Bath Board of Guardians appointed to deal with the question of consumption has reported that the subject should be taken in hand at once. Amongst other recommendations the Committee suggested the reservation of a male and a female ward for the treatment of consumptives. Also that for the out-of-door treatment a specified piece of ground be broken up, mounds and banks formed upon which pines and larches should be planted in the autumn, and asphalte walks made with protection from the prevailing winds; also that a dining room of the simplest kind should be made in each plot of ground, and that revolving shelters be placed in the best positions. It was agreed to circulate the report, and consider it at some future date.

### BIRMINGHAM.

At a recent meeting of the Birmingham Board of Guardians Mr. W. F. Robinson moved the appointment of a special committee to report on the desirability of erecting a sanatorium for consumptives "with a view to their speedy cure and restoration to home and family." He stated that there were in Birmingham some 800 deaths from consumption last year, and commented on the absence of special prophylactic measures in the city. The resolution, which was seconded by Mr. Manton, was agreed to unanimously, and a Committee appointed.

### DUNDEE.

Very satisfactory progress is being made in the work of the Athronhall Sanatorium, on the Ochill Hills, the west wing of which is already almost finished. It is expected that the whole structure will be ready for the roof in September.

### GLOUCESTER.

Under the auspices of the Gloucestershire, Somersetshire, and Wiltshire Branch of the National Association for the Prevention of Consumption, a public meeting was held in the Gloucester Guildhall on July 2nd in aid of the erection of a sanatorium for the poor consumptives of the three counties. The Mayor, who presided, made an excellent speech, showing a thorough grasp of the subject.

Dr. Maguire, who attended to represent the National Association, drew the special attention of the meeting to the fact that tuberculosis included many serious affections besides consumption. He instanced spinal caries, hip-joint disease, tuberculous meningitis, and other affections causing much suffering and disability, which were not popularly recognised as tuberculosis, the prevalence of which would be diminished by the steps proposed for preventing consumption. The proposal to have "many small sanatoria which the doctors of the neighbourhood could look after" ignored the essential importance of continuous medical supervision of all patients whilst under treatment.

Dr. Weatherly (Chairman of the Executive Committee of the proposed sanatorium) stated that the sanatorium would accommodate from 60 to 100 patients. A site in the very centre of the three counties had been obtained, and those residents in the neighbourhood who at first had opposed the building of the sanatorium in their midst, had now withdrawn their opposition and given their help to the scheme. It was proposed, with the King's permission, to call the sanatorium "The Royal Victoria Memorial Sanatorium for Gloucestershire, Somersetshire, and Wiltshire." A meeting in connection with the proposed sanatorium was also held at Cheltenham on July 4th, under the presidency of the Mayor, at which a resolution expressing cordial support was carried unanimously.

### PERTHSHIRE.

On the afternoon of July 15th, and under very favourable circumstances, Sir Robert and Lady Pullar conveyed to the local Society for the Relief of Incurables and Convalescents a well-designed and well-equipped hospital for phthisical patients.

The Society has done excellent work for more than a quarter of a century, and it is greatly owing to the exertions of the honorary medical officer, Dr. D. H. Stirling, during the whole of that time that active interest in the affairs of the Society has been maintained and the modest foundation extended in its beneficent operations. He felt that the time had come to make an effort to accommodate phthisical patients in accordance with modern methods, and the result was the presentation of a model hospital on six acres of freehold ground on the southern slopes of Kinnoull Hill, sheltered from the north and east, and well elevated above the level of the city of Perth. This noble gift will be inspected by those interested in this special form of hospital construction with great interest, and it cannot fail to be of signal service to the city and county of Perth for many years to come.

Sir W. T. Gairdner delivered an inaugural address on the opening of the hospital, and his interesting words fell on a most attentive audience. He declared that no hospital was worthy of the money spent on it if it did not teach the patients the right manner of life. We have every confidence that the staff, encouraged by his wise words of counsel and guidance, will so order matters that those committed to their charge will benefit not only while resident in the new hospital, but also after their departure to their own homes and their own surroundings.

Perth has been fortunate in thus leading the way in an important department of medicine, and it only remains to the city and county to see that the hospital is adequately endowed and supported. It has been resolved to hold a bazaar to aid in that direction in the autumn of this year. We wish it every success.

### WORCESTERSHIRE.

The Committee appointed by the Birmingham guardians to consider the desirability of erecting a sanatorium for consumptives have found a suitable site at Romsley, near Clent, which Viscount Cobham has offered on advantageous terms. It is proposed to raise the £6,500 which is required at once by public subscription.

## MOTOR CARS FOR MEDICAL MEN.

J. W. C. asks what is the life expectation of a motor car of first quality, and what is the relative differences in expectation between a car with high-speed and one with low-speed engine.

*** We are indebted to Dr. Edward Phillips (Coventry) for the following answers to our correspondent's queries: (1) A well-made car, properly attended to in its wearing parts, well lubricated and cleaned, should last as long as the material of which it was constructed, but parts would have to be renewed from time to time. Other things being equal, the lighter cars without chains and belts would have a longer life than those with. (2) A high-speed engine will wear itself out much sooner than a low speed. The ratio is 2 to 1. The least wear possible comes upon a low-speed double cylinder. It vibrates less, is better adapted to its work, starts more easily, and is more readily silenced.

### MOTOR CYCLES.

DR. JAMES B. SIMPSON (Golspie, Sutherland) writes: I read Dr. Whitehall-Cooke's answer to "Automobile's" query (see BRITISH MEDICAL JOURNAL, May 11th, p. 1170, and June 1st, p. 1361), and was interested to

find that he recommends a motor bicycle in preference to a tricycle. I have within the last month or two ridden about 600 miles, while working my practice, on an Excelsior motor bicycle built by Bayliss, Thomas and Co., Coventry. My machine corresponds almost exactly to Dr. Cooke's description of the Minerva, except that the engine is 1¾ horse power instead of 1 horse power. I can say from my small experience that the machine does its work well when properly driven, and with a little experience and painstaking the driving is not difficult. For the first few weeks I must confess I thought the machine was going to be a failure, for it worked very irregularly, and I was always uncertain as to how it meant to behave when I went out. However, having read Dr. Groves's advice in the JOURNAL about working out one's own salvation, I persevered, and am now convinced that the faults were my own and not the motor's. I can endorse Dr. Cooke's statements as to the machine being free from vibration, and I have had no trouble so far from sideslip; in fact, the cycle runs so steadily that I can run along a level road with my hands off the handles and feel quite safe. My ordinary speed while running is about fifteen miles an hour; I can do eighteen or twenty if required, but I prefer a slower pace and a longer life for my engine. Climbing hills is a pleasure, and a little pedalling helps to warm oneself and keep the engine cool. I must warn any man who goes in for a machine of this kind that unless he gives it his personal attention, and thoroughly understands how to keep his engine well oiled and his accumulator and wires, etc., in good order, he will be disappointed. These points are, however, very easily learnt, and the results are well worth the trouble. I hope to see one of the Excelsior motors on view at Cheltenham next month.

## REGULATIONS FOR DIPLOMAS IN PUBLIC HEALTH.

THE following resolution has, we are informed, been passed by the Teachers of Public Health after discussing the new regulations of the General Medical Council concerning candidates for the diploma of Public Health.

That in the opinion of this meeting of the Teachers of Public Health in London it is very desirable that a candidate for the diploma of Public Health should be required to attend a systematic course of three months' practical instruction in public health at a recognised school in lieu of three months' attendance with a medical officer of health. This course to run concurrently with those on bacteriology and chemistry.

After this course the candidate should be required to attend day by day for three months with a medical officer of health, and be associated with him in the discharge of his duties, routine and special, of public health administration.

It is, we understand, felt by the teachers that the regulations as laid down by the General Medical Council, even if they are not impracticable, will not produce as good results as the scheme suggested by the teachers.

## CONTRACT MEDICAL PRACTICE.

### THE WAGE LIMIT.

WE learn from the *Nottingham Guardian* that at the biennial conference of the United Ancient Order of Druids held last month the following resolution was adopted:

That this meeting hereby strongly objects to the principle of a wage limit as suggested on behalf of the medical officers by their Association to the Committee of the Friendly Societies Conference, believing it to be entirely detrimental to the interests of Friendly Societies.

# OBITUARY.

### GEORGE HANBY DE'ATH, L.R.C.P.LOND., M.R.C.S.ENG., Buckingham.

WE announced briefly last week with much regret the death of Mr. G. H. DE'ATH at Buckingham on July 7th, in his 40th year, which occurred suddenly from heart failure brought about by overwork. Mr. De'Ath may truly be described as one of the victims of the strain and stress of professional life.

He was educated at Westminster School and Guy's Hospital, where he had a distinguished career as a student. He took up the practice made by his father, Mr. Robert De'Ath, who had died in 1886, shortly after he had qualified, and rapidly worked himself into the position of one of the leading practitioners of North Bucks. At the time of his decease Mr. De'Ath held the offices of Coroner for the Winslow Division of North Bucks, Medical Officer of Health for the Borough of Buckingham, Medical Officer and Public Vaccinator to the Buckingham Union, Surgeon to the Buckingham Nursing Home, the Oddfellows, and other Societies. A member of the British Medical Association for many years, he had filled the important post of President of the South Midland Branch in 1896, and was about to take part in the discussions at the annual meeting at Cheltenham in the Section of State Medicine.

These various appointments, in addition to an extensive private practice amongst the leading families of the county, made many and constant demands upon his health and strength, which in his devotion to his professional work he never considered. Of a warm-hearted and unselfish nature, he was the friend of all classes; a practised and eloquent speaker, he took his part in the public life of his native town, and was in much request as a political speaker; an accomplished amateur actor, he was the best of good company and everywhere welcome. By his patients he was regarded with trust and esteem. Successful as a practitioner, he left no stone unturned to benefit those who consulted him, and his loss will be severely and extensively felt in his native town and its neighbourhood.

Mr. De'Ath did not contribute much to medical literature. He was the author of works on cholera, infant feeding, and sanitation. He read a remarkable paper to the Guy's Physical Society on medical practice, afterwards published in the BRITISH MEDICAL JOURNAL, which drew from Sir Samuel Wilks, who was in the chair, a high compliment on its excellence and on the manner in which he had kept the sacred confidence of his patients.

Mr. De'Ath was married in 1886, and leaves a widow and two young sons to lament his untimely loss, in which sorrow they will have the hearty sympathy of a host of friends and neighbours.

Mr. De'Ath was buried at Buckingham on July 11th. The funeral was attended by the Mayor and Corporation of the borough, a large number of mourners, including many of his former fellow students, residents of the surrounding districts, and fellow townspeople drawn from all classes. The town showed every mark of respect and sympathy by closing shops and houses, whilst not a person was to be seen out of black, recalling in some measure our late time of national mourning.

### DEPUTY INSPECTOR-GENERAL RICHARD DOMENICHETTI, M.D., Honorary Physician to the King.

DR. DOMENICHETTI died at his residence, Woodhall Spa, on July 12th, in his 79th year. His commissions were thus dated: Assistant Surgeon, April 3rd, 1846; Surgeon, June 10th, 1857; Surgeon-Major, April 3rd, 1866. He retired on half-pay with the honorary rank of Deputy Inspector-General, April 24th, 1872. He was the only son of an officer of the 95th regiment, and took the degree of M.D. Edinburgh in 1845. He afterwards served in the 8th King's Regiment, and the 1st Gordon Highlanders (75th Foot). He was on the staff of Sir Willoughby Cotton, and afterwards on that of Sir Henry Havelock, and was present as senior medical officer in the actions preceding the capture of Cawnpore and the relief of Lucknow. For his services in Lucknow in 1857 he received the thanks of the President of the Council of India, and the medal and clasp. In Maude's *Memories of the Mutiny* the following observation occurs:

I am forced to limit my observations to the *personnel* of Havelock's column, and to select from among them the men I have personally known, whose services were the most brilliant, but yet who have received the minimum of recognition or reward. Foremost among these I would enumerate Delafosse, Dodson, and Domenichetti: the last named, though a non-combatant, was present at every engagement until he was left behind in the Alum Bagh with the sick and wounded, in medical charge of its tiny garrison, under MacIntyre, of the 78th Highlanders.

After his retirement he held the office of M.O.H. for Louth, Lincolnshire. He was appointed Honorary Physician to Queen Victoria in 1895, and Honorary Physician to the King after the accession; he received the Queen's Jubilee medal in 1897.

FROM Accra, on the Gold Coast of West Africa, comes the announcement of the death of Mr. JAMES STALKER, M.R.C.S.Eng., L.R.C.P.Lond., D.P.H.Camb., of the Colonial Medical Service. Mr. Stalker was the son of the late Mr. J. P. Stalker, of Scarborough, was educated at the Yorkshire College and the Leeds Medical School, and obtained his qualifications to practise in 1891. He was for some time

resident at the Liverpool North Dispensary. He succumbed to malaria fever. He was a member of the British Medical Association.

We greatly regret to have to record the somewhat sudden death of Dr. Henry Knight Hitchcock, J.P., of Branksome Park, Bournemouth, which occurred while he was staying with friends at Amesbury, near Salisbury. He was quite well on the evening of July 10th, but was seized with illness during the night and died the next morning. Dr. Hitchcock, who was a Wiltshire man, was born in 1846. After receiving his medical education at St. Thomas's Hospital he entered general practice, but retired after only a few years. Twenty years ago he went to live at Bournemouth, where he became a public man of considerable influence in local affairs. Among other positions which he held was that of Chairman of the Branksome District Council and Vice-Chairman of the Poole Board of Guardians. In 1893 he was appointed a Magistrate for the Wimborne Division. He had also been Vice-President of the Dorset and West Hants Branch of the British Medical Association and President of the West Kent Medico-Chirurgical Society; of this Society he was also Secretary for six years. His death has come as a shock and a great loss to a large circle of friends and to the community among which he lived.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## REFORM AND REORGANISATION OF THE ARMY MEDICAL SERVICE.

As the Secretary of State for War has announced that he had already drawn up a scheme for the reorganisation of the medical service, which he has invited a Committee of "experts" to report upon, it might almost seem that, pending full public knowledge of the scheme, further discussion of reforms is already belated. But it would be wrong to assume this, for the Committee are not likely to be unduly hurried, and it is well they should be informed of such opinions and suggestions as emanate from within the service itself.

We may first notice that in the *United Service Magazine* for June Brigade-Surgeon-Lieutenant-Colonel William Hill-Climo reiterates views of reforms which he has advocated for years, and now claims that some of his vaticinations have been fulfilled during the war. While unable to endorse all his views many of them are sound. He broadly considers the present organisation of the medical service too military, and thinks salvation is to be found in a return to a modified regimental system; but were his views logically carried out it would seem that the end would be a recurrence to the old dual system of administration in our medical establishments, with disastrous results to harmony and efficiency. In most matters he is much in accord with the recommendations of the Subcommittee of the Parliamentary Bills Committee, whose report was lately submitted to the War Office, but would go further in the formation of an army medical cadet school in London, and of a subordinate medical service for the army similar to that in India.

An Indian correspondent writes that the recommendations of the Subcommittee were exciting considerable attention in that country. He holds that not only junior but senior pay is insufficient; £500 a year plus allowances is not enough for a medical officer of twenty-five years' service; colonial allowances do not always meet enhanced cost of living; married medical officers who may unfortunately be invalided from the effects of climate are crippled in having to pay passages for wives and families; social difficulties mainly flow from the inferior position of medical officers as regards command and general military authority; amalgamation between the R.A.M.C. and I.M.S. would not be unpopular, at all events with the former.

On this latter point an Indian medical officer, on the other hand, writes: "Is it possible that it was ever proposed to sacrifice that efficient and popular service—the I.M.S.—in order to popularise and build up the unpopular and undermanned service—the R.A.M.C.?"

Military amalgamation has, we understand, repeatedly been proposed, even by Indian Viceroys. He would proceed in a totally opposite direction as follows: "To enlarge and increase the I.M.S. up to sufficient strength to enable it to perform all medical work, and let the R.A.M.C. be confined in its labours to Great Britain and the Colonies."

Another correspondent protests against Dr. Thompson's proposal to abolish the right of retirement on £1 a day after twenty years; it was the chief inducement for him to enter the service; the additional daily half-crown after twenty-five years' service would be no compensation to many. We are aware this proposal has evoked a storm of protests. The privilege of voluntary retirement at twenty years is not only a boon to individuals but an advantage to the State. Many men are so broken in health through long foreign service as to be unfit to serve on to twenty-five years.

M.B., writing from South Africa, says that he and many others with whom he had discussed the matter considered the recommendations of the Subcommittee of the Parliamentary Bills Committee extremely good as a whole, but hopes the suggestion as to the abolition of the competitive examination will not be adopted. It would destroy the healthy state of the R.A.M.C.; the different schools in making nominations would set up different standards of qualifications, and the consequence would be a very mixed body of candidates. He considers the pay of all ranks, senior as well as junior, is insufficient. A young man on entering the service may be in a somewhat better position financially than his contemporaries in civil practice, but in a few years he finds his position signally reversed.

Patient Griselda writes: Dr. Thompson's proposal to abolish rights of retirement on £1 a day at twenty years' service seems the result of a superficial knowledge of the subject; it has been the one redeeming feature in an otherwise justly unpopular service; it stands in the way of no reform that can be imagined.

Chieveley writes: Mr. Watson Cheyne in his article, The Organisation of Medical Aid in a Great War, says that he would place base hospitals in the hands of civilians, with one army medical officer, and a small clerical staff to see to returns and records of cases. But he fears "friction and contempt" between them. In my experience in South Africa these conditions were conspicuous by their absence when the military and civil surgeons worked together. He states, "Women cannot naturally move with an army at the front," yet an admirable staff of women nurses accompanied General Buller's army in the neighbourhood of Potgieter's Drift. Mr. Cheyne considers that "the actual organising staff and nursing arrangements would probably be best in the hands of civilians." In this opinion he must surely have failed to see that the working of hospitals in war and the administration of a large military hospital can be carried out only by those specially trained and thoroughly experienced in the work. What he would propose to do with the senior medical officers of the R.A.M.C. in war he does not state.

## CHANGES OF STATION.

The following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

| | From. | To. |
|---|---|---|
| Surgeon-General A. F. Preston, M.B. | Ireland... | War Office. |
| Lieutenant-Colonel G. Coutts, M.B. | South Africa... | Devonport. |
| Major R. L. R. Macleod, M.B. | — | — |
| ,, S. G. Allen | Crete | Malta. |
| ,, S. G. Black, M.D. | Devonport | South Africa. |
| ,, J. V. Salvage, M.D. | Malta | Crete. |
| ,, C. R. Elliott, M.D. | Punjab... | Bombay. |
| ,, C. W. Reilly | Hong Kong | York. |
| Captain H. P. Johnson | Chester | Preston. |
| ,, C. B. Lawson, M.B. | Canterbury | Dover. |
| ,, H. A. Hinge | — | Aldershot. |
| Lieutenant A. A. Seeds, M.D. | Cork | Dublin. |
| ,, L. W. Lloyd | South Africa... | Bermuda. |
| ,, H. E. Weston | Devonport | South Africa. |
| ,, W. S. Crosthwait | South Africa... | Shorncliffe. |
| ,, H. A. Davidson, M.B. | Lichfield | West Africa. |
| ,, T. Finucane, M.B. | Limerick | Punjab. |
| ,, J. W. West, M.B. | Aldershot | South Africa. |
| Quartermaster W. M. Clarke | — | Aldershot |
| ,, H. W. Glover | South Africa... | ,, |

The undermentioned Lieutenant-Colonels of Army Medical Reserve have been brought on the establishment and placed in medical charge of troops at the stations named:—W. Finlay, Jersey; T. O'Reilly, Guernsey; F. G. Adye Curran, M.D., Dublin; B. B. Connolly, Woolwich; P. J. McQuaid, M.D., Portmouth; H. J. Robins, Parkhurst.

## ROYAL NAVY MEDICAL SERVICE.

Staff-Surgeon John Andrews has been appointed to the *Fox*, on commissioning for the manœuvres, July 16th.

Deputy-Inspector-General Thomas Beswick Purchas, M.D., died on the 6th instant, aged 76. He was appointed Surgeon, January 16th, 1847; Staff-Surgeon, January 24th, 1857; Fleet-Surgeon, December 6th, 1869; and Honorary Deputy-Inspector-General, on retirement, November 30th, 1876.

## ROYAL ARMY MEDICAL CORPS.

Major P. M. Carleton, M.D., retires on retired pay, July 13th. He entered the service as Surgeon, March 6th, 1880, becoming Surgeon-Major twelve years later. He was Senior Medical Officer with the North Chin Hill Field Force, Burma, in 1882-83.

Surgeon-Major Luke Barron, M.D., died in London on July 5th. He was appointed Assistant Surgeon, July 10th, 1840; Surgeon, September 25th, 1849; and Surgeon-Major, May 7th, 1863. He retired on half pay, June 15th, 1866.

Assistant Surgeon Richard Armstrong Hyde died at Hove on May 31st. He joined the department as Assistant Surgeon, August 17th, 1857, and retired on half pay, February 3rd, 1871.

Lieutenant-Colonel W. Keays has been granted increased pay under Article 302 of the Royal Warrant.

At Aldershot Training School, Major H. E. R. James has been confirmed in the appointment of Officer Commanding; Captain E. McK. Williams has been temporarily appointed Assistant; and Captain H. A. Hinge has been placed in temporary command of C. Company.

Surgeon-Lieutenant-Colonel H. N. Edwards, Militia Medical Staff Corps, has been transferred from Tipperary to Shrewsbury.

Major E. R. da Costa, late Madras Establishment, has been placed in medical charge of troops at Woolwich.

Lieutenant James Barkley resigns his commission on July 17th. He joined the Department, November 14th, 1900, and went to South Africa in January last.

Civil-Surgeon Ernest G. Ffrench is appointed Lieutenant, May 28th.

The undermentioned officers have been discharged to duty from hospital in South Africa: Civil-Surgeon J. H. Reford, A. S. Roberts, J. E. Kerr.

The following are on passage home: Majors D. M. O'Callaghan and G. E. Hale, Civil-Surgeon A. Strange, P. M. Eversheb, M. Munro.

## ARMY MEDICAL RESERVE.

Surgeon-Captain C. L. Fraser is promoted to be Surgeon-Major, July 13th.

## BRITISH MEDICAL ASSOCIATION.

### SUBSCRIPTIONS FOR 1901.

SUBSCRIPTIONS to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.


# British Medical Journal.

SATURDAY, JULY 20TH, 1901.


## FINAL REPORT OF THE CONSTITUTION COMMITTEE.

THE Report to be presented by the Constitution Committee to the annual general meeting of the Association is published this week as a supplement to the BRITISH MEDICAL JOURNAL, and will doubtless receive the careful consideration of all members who take an active interest in the affairs of the Association, and particularly of those, we hope a large number, who intend to take part in the consideration of the Report at Cheltenham.

The recommendations contained in the present Report are in their main features identical with those of the provisional report to the Branches issued last February. This was, of course, to be anticipated, as the replies of the majority of Branches were generally favourable to those proposals. Those details upon which the replies showed something approaching a general agreement as to modifications desired will be found to have been amended. In several other respects changes, some of considerable importance, appear as the result of the thorough revision which the scheme has undergone at the hands of the Committee since the replies from the Branches were received.

In the earlier part of the Report will be found a summary of the chief points of difference between the present recommendations and those provisionally submitted in February, and also indications of the reasons which have led in some cases to the modification, in others to the retention after re-examination, of certain of the earlier suggestions. In examining the reasons so given, and also in comparing clause for clause the present with the provisional scheme, there will be noted on the one hand the care exercised to maintain unimpaired the leading principles thought to be essential, and on the other hand the desire to meet the convenience and wishes of localities, and to conciliate the sentiments and traditions bound up with time-honoured portions of the existing fabric.

The Committee recognises that one change in its original proposals generally desired by the Branches is that greater elasticity should be given to the mode of formation of Divisions and to local organisation generally. The first way in which this desire has been met in the revised scheme is that suggested by many Branches —namely, by the subordination of correspondence with Parliamentary constituencies to local convenience in the definition of the Division. We believe, however, that the fears on this head aroused by the wording of Clause 2 of the Provisional Report were largely unnecessary, for the words "or such amalgamation, etc.," would appear to have been calculated to afford ample scope for local freedom of action. More significant in reference to the real difficulty is the change in Clause 16 (formerly 17) as to the constituencies whereby the representatives of Divisions are to be elected. The last sentence of paragraph (*e*) on page 3 of the Report should be read in this connection. The drift of the whole matter is made clearer by considering at the same time the almost precisely parallel case of the size of Branches and their representation on the Council.[1] The case of the Branch shows also that the difficulty is not a new one introduced by the scheme of reorganisation, but existing in the present constitution. In each case, Branch or Division, we have a local body formed primarily for local purposes, by means of which every individual member should be enabled without undue loss of time and energy to play his part in the work of the Association.

These are fundamentally, then, the units of local organisation, and this is the standard by which any of their attributes—size or boundaries, for instance—must first of all be judged. The problem is to combine these local bodies for certain general purposes into a central organisation, the work of which shall be carried on through two elected bodies, the Council and the Representative Meeting. The members of these central bodies must be elected by certain constituencies or electoral units, and it is obvious that, while the aggregate membership of the Association remains the same, the size of each elective body must be inversely proportional to that of the average constituency represented by a single member. If, as has been the practice of the Association as to the Council and Branch, and as the Committee provisionally recommended for the Representative Meeting and Division, the electoral unit is made identical with the unit of local organisation, the organic connection between the local and central bodies is strengthened; but the disadvantage arises that the size of a local unit, which should be determined primarily by considerations of local utility, comes to determine also the size of the central body, which should be regulated with a view chiefly to its efficient working when assembled. Thus, in the case of the Council, either it must be suffered to become too large as in the past, or the Branch must be restricted from being below a certain size (as provisionally proposed by the Committee), or a distinction must be recognised between the units for electoral purposes and for local organisation respectively. In other words, Branches below a certain limit of membership must be grouped to form electoral units, the solution now proposed. The difficulty as to Divisions and the Representative Meeting is met by the Committee in precisely the same way, by proposing that there should be practically complete freedom in forming Divisions, but that those below a certain size should be grouped to form electoral units, thus making possible a limitation of the size, and consequent expense, of the Representative Meeting. No plan on a matter of this kind can please all parties, but

[1] Compare Clauses 4 and 14 (ii) of those now recommended with 4 and 15 (i) of the Provisional Report. See also paragraphs (*a*) second sentence, and (*c*) second sentence, on page 3 of the present Report.

the desire of the Committee is evident that its scheme should give the greatest liberty to localities consistent with efficiency at the centre. The conviction of the Committee that the efficiency of the Council as an executive body will be increased by reducing its numbers is further shown by other changes in the scheme, originating in the Committee itself, by which it is proposed that the representation of very large Branches should be reduced, and the *ex officio* element on the Council still further diminished.

The most important change introduced by the Committee on its own initiative is that relating to the work of the Representative Meeting, which it is proposed should be extended to include the consideration of By-laws, while it is recommended that the decisions of this meeting on matters affecting finances should not be subject to the approval of the general meeting. On the latter point the recommendation in the Provisional Report was made under the impression that it was required by the Companies Acts. Having regard to the terms of Clause 4 of Mr. Beaufort Palmer's opinion, given after the provisional scheme had been completed, the Committee has found itself free to avoid any overlapping of the work of the two meetings, and to carry out more completely the principle of representative government.

Suggestions foreshadowed in the provisional report for the reconstitution by By-law of certain standing committees and the formation of others are now formally presented in Recommendation 21. In addition to a Journal and Finance, a Premises and Library, and an Ethical Committee which already exist, it is proposed that there should be as standing committees of the Council a Public Health Committee, a Colonial Committee, a Naval and Military Committee, and an Organisation Committee, the latter to be as far as possible representative of the various districts of the Association, and to have power to add to its numbers for special purposes. It is also recommended that the Parliamentary Bills Committee should be remodelled, its size greatly reduced, its duties extended, and that in consequence its name should be changed to the "Medico-Political Committee." It is proposed that nearly half of this committee and half the Ethical Committee should be nominated by the Representative meeting, and that these two committees and the Organisation Committee should have a special salaried officer or officers. Power is given to the Council to appoint on the standing committees, with the exception of the Journal and Finance Committee, members who are not members of the Council.

With regard to the rules for expulsion, changes were in particular desired by the Colonial Branches, and it will be seen that while the Committee recommends that a final appeal should lie to the Central Council in all cases, the New South Wales Branch desires that Colonial Branches should have the power of absolute expulsion. The Committee appears to have felt that to confer upon distant bodies, some of them less numerous than many Branches in the United Kingdom, the power of expelling not merely from their own ranks but absolutely and finally from the Association, would be to take a step calling, at all events, for the gravest and most mature consideration. A reply was received by the Constitution Committee at its last meeting making suggestions with regard to Colonial Branches which would introduce principles quite new to the Association, and it has felt unable, at this stage of its work, to give these demands the full attention necessary for recommending that they should be definitely accepted or refused. The whole question of the relation of Colonial Branches to the parent body appears to be one requiring separate consideration in order that it may be dealt with broadly and comprehensively, and the appointment of a special committee for this purpose is advised.

It is inevitable that on constitutional reorganisation, a matter of such fundamental importance to the Association and, we may fairly add, to all members of the medical profession, differences of opinion should exist, but whatever the divergence of views on the scheme itself, we believe that all will agree in recognising the unselfish devotion which the members of the Committee have brought to the laborious task confided to them by the last annual meeting.

## A TEMPERANCE EXPERIMENT.

The scheme for reforming public-houses, usually spoken of as Earl Grey's Public-house Trust Scheme, owing to the share which he has taken in at least one practical application, is well deserving of study, and the experiments now to be tried on a large scale in various parts of Great Britain will be watched with interest by all those who believe that temperance may best be encouraged by diminishing the temptations to drink. It seems only reasonable to hope that good will result from a scheme which will bring about a diminution of the public-houses of the existing "gin-palace" type, and their replacement by refreshment rooms where wholesome food at popular prices, and tea, coffee, etc., can be obtained as easily as alcoholic drinks; where likewise the crowded drinking bar will be largely replaced by seats and tables at which customers can eat as well as drink in comfort. The proprietors or managers of ordinary public-houses are encouraged to push the sale of alcoholic drinks in preference to tea, coffee, and ordinary refreshments on account of the larger profits to be obtained from intoxicating liquors. In country villages it is suggested that the houses of the Public-house Trust should have club, recreation, and reading rooms, as well as the old-fashioned bowling green, and other outdoor counter-attractions to the tap-room.

Lord Grey stated some three months ago that the response to appeals from the Bishop of Chester and others in behalf of the Public-house Trust movement had been so widespread and satisfactory that a central association was to be formed in London to which the different Public-house Trust Companies could apply for assistance and advice. Mr. Oliver Williams, the Secretary, at the temporary offices of the Association, 71, King William Street, E.C., has informed us that among the subscriptions received towards the work of propaganda is one from Mr. Ernest Andree, of Gothenburg, who mentions that the English movement has caused deep interest among a large number of the leading people in Sweden, in which country the so-called "Gothenburg system," an analogous scheme, started some years ago, has met with much success and is rapidly extending. The Hampshire Public-house Trust Company has already issued its prospectus, and the Kent prospectus is expected

in a week or two; companies for the East of Scotland, Glasgow, Renfrewshire, Northumberland, and Belfast are in process of formation, and companies for other counties are to be floated later on.

The scheme as described in the prospectus of the Hampshire Company, a model which will, we presume, be followed in other counties, is that a carefully selected manager shall be placed in each house, and that one leading feature of the management of the Company's public-houses shall be that the manager will be paid a fixed salary, with no commission on the sale of alchol drinks. In order to promote the sale of non-intoxicants a commission on the sale of food and non-alcoholic liquors will be allowed, or a bonus will be given for good management. Tea, coffee, temperance drinks, or light refreshments will be made as readily accessible at the bars as beer or spirits, and the promoters hope that this arrangement will aid in deposing intoxicants from the objectionable prominence into which, from motives of profit, they are pushed in the ordinary public-house. The Company's aim will be to conduct the trade on the lines of refreshment houses instead of mere drinking bars. It is stated also that great care will be taken that everything supplied, whether alcoholic or non-alcoholic, shall be of the best and most wholesome quality procurable in the open market.

The Company will have a council consisting of the Lord Lieutenant and the Bishop of the diocese (*ex officio*), and of three other gentlemen well known in the county; it will have three directors, also men well known in the county, and its capital will be £25,000; £24,999 will be in ordinary shares of £1 each, but there will be 20 deferred shares of 1s. each, which are to form an important feature in the scheme. In each year, after provision has been made for a dividend of not more than 5 per cent. on the ordinary shares, and for the formation of a reserve fund to cover depreciation of properties and other contingencies—but eventually, should there be legislation for the nationalisation or municipalisation of licensed houses, to be utilised for the repayment of the capital—the surplus profits will be paid to the deferred shareholders as trustees for the council, to be administered by them for such purposes as in their opinion will contribute to the public benefit, keeping mainly in view the provision of counter-attractions to public-houses. The Company will adopt the policy followed by the People's Refreshment House Association, Limited, of which the Bishop of Chester is president, and which at present controls eighteen inns; these inns have been conducted by the Association mentioned with, it is stated, social and financial success. The Company will seek to acquire licences at places where the growth of the population induces the magistrates to grant them, will establish canteens and refreshment bars at large public works and elsewhere, and will purchase, hire, or manage existing public-houses.

The experiment is a bold one, and can only be justified by success both on the financial and social side. There is no doubt that drinking to intoxication has diminished among the educated classes since the early part of the last century. It has ceased to be the fashion, and has come to be a reproach and disgrace. We can only hope that this new movement may bring about a like result in the other classes of the population. The considerable success which has attended the Gothenburg scheme in the country in which it originated and the accounts which are received of the Bishop of Chester's People's Refreshment House Association are encouraging. That the scheme will commend itself to the more ardent advocates of total abstinence can hardly be expected; but to onlookers it has sometimes seemed that the uncompromising attitude assumed by them has stood in the way of the realisation of improvements which fall short of their ideal, and that, as in many other instances, "best" has been the enemy of "good."

## "THE VOICE OF THE MEDICAL PROFESSION."

THAT, as has been said, "Man is a creature who lives not upon bread alone, but principally by catchwords," is not easily to be controverted, still less easily to be remedied. Something, however, may at any rate be done to check the evil by occasionally examining our catchwords, and even more carefully those expressions which are in the way to become such, with a view to ascertaining the real meaning and worth (if any) of each. The phrase at the head of this article is one so frequently and so loosely employed as to be, if not already a catchword, at least in imminent danger of sinking to that position. "The habit of using words without taking the trouble to form the ideas which ought to correspond to them" is so fatally easy that any phrase which has an impressive sound, but the use of which in its full and legitimate sense circumstances do not often warrant, is peculiarly subject to degeneration. The importance to the community of the work and the duly considered utterances of the medical profession increases with the advance of civilisation; but the occasions when we can with propriety speak of "the voice of the profession" are at present only too few, those when the term can be used plausibly too many. It is therefore a fitting object of concern to the profession that this phrase shall not be emptied of that honourable significance which it should rightfully possess and become a mere catchword, or even in course of time perhaps a byword.

The prime difficulty is, no doubt, that the profession at present has no properly accredited means of giving utterance to its opinions on many important matters. Consequently it is open to any two or three enthusiastic persons gathered together to exclaim in the fulness of their hearts that they "voice the opinion of the profession."

When, as on the midwifery question, we have two such knots of enthusiasts representing diametrically opposite views, one set doing all they can to bring about the registration of midwives, and the others declaring that the midwife is an anachronism and an anomaly which ought to be abolished; and when each set claims more or less plausibly to speak with the voice of all but a negligible minority of the profession, the chief result is that medical opinion is in a fair way to be ignored altogether. The public, looking to us for guidance and receiving so confused and discordant a reply, becomes disposed to say with Touchstone, "Truly, gentlemen, though there be no great matter in the ditty yet is the note very untuneable. I count it but time lost to hear such a foolish song. God mend your voices." The position of the medical profession in the eyes of the public must be eventually, if it is not already, discredited by our inability as a body to form an opinion and guide

that of the State on so important a matter of public health. Dr. Moxon's letter, published elsewhere in this issue, is an indication of a desire among practitioners who have hitherto taken no active part in this controversy to seek a more excellent way. As our correspondent points out—if public opinion is to be led by medical opinion on a matter of this kind, it should be, wherever possible, by the voice of the profession as a whole and not merely by that of any section, however eminent its members may be.

The midwives question is not only interesting at the present time, but illustrates many of the difficulties attending the utterance of a representative professional opinion. One of these difficulties aptly exemplified is that of the distinction to be drawn in respect of the subject on which an opinion is sought. Clearly an authoritative deliverance on all matters is not to be obtained by organisation alone and the counting of heads. The work of the medical profession is based on science, and science knows no authority but fact, and bows neither to a majority nor to individual prestige. This is mere commonplace. But many questions on which medical opinion should be expressed are not purely scientific, but involve other considerations where knowledge, experience, or capacity of a non-scientific kind must play an important part. Other questions, again, which call for decision are neither of scientific fact nor yet, properly speaking, of opinion, but of the actual wishes of those whose interests are concerned.

Thus, in any solution of the midwives question, science must have its voice. We need only allude to the important practical bearing of the discoveries of the last half-century as to the origin, nature, and prevention of puerperal septic conditions. Other discoveries may in the future profoundly affect the success of any action now taken. But as a public question, knowledge of the varying conditions and habits of the community in different parts of the kingdom must also have due influence, and this is not the monopoly of any section of medical men. The judgment of a country practitioner on certain points may be entitled to greater weight than that of the most eminent London obstetric physician, did we but know the right man. Not knowing him, we should take steps to give him a proper opportunity of forming and expressing his views along with those of his fellows in a duly obtained collective utterance. Finally, the interests of the medical profession are entitled to consideration, because in the end they are also those of the community. History shows that the institution of a new order of practitioners, trained and authorised to practice a part of the whole medical art, is not an imaginary danger; nor will the State be advantaged by the degradation of its medical body.

The midwives' is the most prominent but by no means the only question in regard to which the voice of the profession is claimed to be in favour of unauthorised programmes. Nor is it merely in national matters that the tendency exists to treat the opinions on public questions of a few as those of the general body. The same phenomenon is familiar in more local matters, nor can it be met, so far as we can see, except by the more general union and organisation of the profession, and by loyalty to the profession on the part of all its members. Organisation is not a panacea for all ills, but to recognise the great variety of subjects which are more appropriately dealt with by individual exertions is not to say that organisation should not be resorted to, and when resorted to made as efficient as possible within its own range.

Though one avowed objection of the changes proposed in the constitution of the Association is to fit it for acting as the organisation of the profession, the reorganisation itself, of course, will not immediately bring about such a result, and no useful object is served by confusing the two matters. If and when the membership of the Association much more nearly corresponds with that of the profession, the declarations of the Association may without impropriety be accepted as the voice of the profession. Till then the Association will show a fitting regard for its own dignity and that of the profession by declining to be placed in a false position, and in refusing to claim for its decision an authority which it does not completely possess. It is true that even at present the Association is frequently approached by outside bodies and invited to act on behalf of the profession. In one notable instance, that of the Friendly Societies Conciliation Conference, the General Medical Council invited the Association to represent the profession in negotiations in which the other negotiators were strictly representative of the other interests concerned, The committee appointed by the Council of the Association to meet the representatives of the Friendly societies consisted of members of the Association well acquainted with the subject in hand, but they were not elected representatives, and the Council by whom they were appointed could not pledge the assent of the members of the Association, much less that of the members of the profession outside the Association. The recognition of this fact emphasises the need of really representative professional organisation for our own credit's sake when we have to deal with organised bodies of the public. Should the members of the Association decide at Cheltenham to reform its constitution on the lines proposed in the report of the Committee, published this week, there is good reason to hope that an important step will have been taken towards giving the profession an organisation that will be capable of uttering its voice.

## THE UNIVERSITY OF LONDON.

At the last meeting of the Senate Professor Rücker, F.R.S., was elected Principal of the University at a salary of £2,000 a year, and with a vacation of three months annually. Professor Rücker is M.A. of Oxford and D.Sc. of Victoria, and Secretary to the Royal Society. He was born in 1848, and educated at Clapham Grammar School and Brasenose College, Oxford. He was formerly Professor of Mathematics at Leeds, and latterly Professor of Physics in the Royal College of Science at South Kensington. He is the author of many communications to the *Transactions* of the Royal Society and the *Philosophical Transactions*, and on two occasions he unsuccessfully stood for Parliament, first as a Liberal for North Leeds, and in 1886 as a Liberal-Unionist for the Pudsey Division of the West Riding. He was a member of the old Senate, and also of the new, but resigned in the early part of this year. The Senate has also appointed Mr. Wallace, M.A.(Oxford), to be Secretary to the Senate; Mr. Wallace is well known in London in connection with the organisa-

tion of University Extension work, and is a man of great energy and popularity. We understand that the proposed grant of £10,000 a year to the University from the Technical Education Board is contingent upon the assumption by the University of teaching functions, and its applicability will be limited to such subjects as come within the statutory definition of technical instruction. It is scarcely surprising that the Academic Council should desire to learn what precise signification is to be held to attach to the term "assumption of teaching functions." We understand that the implication intended is that grants from this source can only be made to aid the supply of instruction actually provided by the University itself, and not to it as an intermediary for the teaching by some other body or institution. This principle is obviously a far-reaching one, and again raises the question, to which a satisfactory answer has not as yet been vouchsafed, "Where and who are the undergraduates of the new University of London?" It would materially assist parents and students alike, especially in the medical faculty, if the able Principal of the University would, long before the first of October arrives, inform the public on this fundamental and most important question.

## THE HUGHES-BENNETT LABORATORY OF PHYSIOLOGY AT THE UNIVERSITY OF EDINBURGH.

At the time the new medical buildings in connection with the University of Edinburgh were built, some twenty years ago, it was supposed that sufficient accommodation was provided for the adequate teaching of physiology; but such has been the progress in this subject and in its mode of teaching, that the space available is quite inadequate. When Mrs. Cox indicated to the University authorities a wish to perpetuate the memory of her father, Professor Hughes Bennett, by something in connection with the University of which he was so long an ornament, the addition to the Physiological Laboratory referred to last week was resolved on. This addition is on the south side of the medical school, is in direct communication with the existing physiological laboratories, and consists of a large laboratory to be fitted with all appliances necessary for the practical work of each individual student, and, secondly, of a small theatre (for 90 or 100 students) for demonstrations by the Professor. The latter is so arranged that every student will be able to see the experiments of the Professor, is somewhat similar, though somewhat larger than the Cambridge demonstration theatre, and lit entirely from the roof, has a horizontal dark blind, and a powerful electric lantern. The large laboratory has three large skylights and a good deal of light at the east end, which end is separated from the rest of the room by a glass partition, this separated part being meant for microscopic demonstrations. A bronze bas-relief of Hughes Bennett by Mr. MacGillivray, R.S.A., in the south wall of the large laboratory will indicate the memorial character of the new building, and will set forth that he was the first teacher in this country to use the microscope in the clinical investigation of disease. As already announced there is to be a formal and ceremonial opening of the new building on Saturday, July 20th, when it will be handed over by the donor, and an address given in the McEwan Hall by one of Hugh Bennett's most eminent pupils, Sir John Burdon-Sanderson, Bart., F.R.S., Regius Professor of Medicine in the University of Oxford.

## CANADIAN MEMBERS AND THE CHELTENHAM MEETING.

It is hoped that Dr. Alexander Macphedran, Professor of Medicine in the University of Toronto, and Dr. John Taylor Fotheringham, one of the teachers in Trinity Medical College, Toronto, who are now in London, will be present at the annual meeting of the Association, when, we are sure, they will be made very welcome. Dr. Blackader of Montreal is also on his way to Cheltenham. We remember that when the Association met in Montreal, a wish was widely expressed (and we are under the impression that Dr. Cameron shared in it) that the various Medical Societies in the city of Toronto might see their way to fusing themselves into one body which should constitute the Toronto Branch of the British Medical Association, the "Units" at the same time retaining their autonomy and distinctive characters so far as their special work is concerned. Supposing that the scheme for the improved Constitution of the British Medical Association should find favour at the general Meeting, it would be a very happy commencement of the new era if so important a Canadian centre as that of Toronto could arrange to fall in line with us. We are, of course, unable to say how the Council would view the question of "autonomy," but from the tenour of the discussions in the Constitution Committee we have no hesitation in saying that the ideas of that Committee were characterised by a liberality of thought and a breadth of feeling towards "Divisions" and Branches—British, Colonial, and Indian—which promised most satisfactory results. We venture to express the hope that our Canadian brethren will take an active personal interest both in the business and in the scientific part of the forthcoming meeting, and that they will also be able to carry back to Canada pleasant recollections of the social part of the programme. Never was the time more opportune than it is at present for a general and complete Association of British medical men, every one of whom is with ourselves, no doubt, equally desirous of helping in the great work of organisation.

## FOREIGN PRACTITIONERS IN ITALY.

It may be presumed that when the Privy Council in March last extended reciprocity of recognition of medical qualifications to the kingdom of Italy, as some thought rather prematurely, it did so in the expectation that thereby a pleasanter state of feeling would be engendered, and that no more would be heard of the effort to exclude British practitioners from that country. Such an expectation—if it was entertained—has not been fulfilled, for at a recent meeting of the Ordine dei Medici in Rome, held specially for the purpose of considering the relations with foreign medical men, something of the old feeling was manifested. It appears that a medical graduate of the University of Berne applied through the Minister of Public Instruction for admission to the final examination for the degree of the University of Pisa. His credentials were all that they should have been; he had served as clinical assistant to Professor Kocher, and his application was in accord with existing law. Accordingly he was admitted, and passed the examination. Thereupon the faculty of the University, constrained by the law to grant him his degree, unanimously passed a resolution which was in effect a remonstrance addressed to the Minister, and urged that no permission to practise should be granted to foreign graduates unless they went through all of the examinations, paid the same fees, and in all respects did what was required of the Italian student. An exception was, however, made in favour of the graduates of those States which granted reciprocity. The Minister replied that the law had been complied with, and that the question of any special provisions for permitting foreign practitioners to practise did not arise on the matter, but the University Faculty stuck to its guns and reaffirmed, again unanimously, its first resolution. It would thus seem to have been acknowledged that the medical graduates of States granting reciprocity stood in a different position to others. But the discussions and resolutions of the Ordine dei Medici show that that body applauded the action of the University Faculty, which they designated a noble

agitation on behalf of the dignity of their studies for the safety of their academic titles, and for the protection of their legitimate professional interests, and they fully endorsed it. But they refused a hearing to a statement setting forth the action of Great Britain in establishing reciprocity on the purely technical ground that it was not official, and we are informed that they went on to pass other resolutions, the exact text of which is not before us, the general tendency of which was to endeavour to place obstacles in the way of British and other foreign practitioners. A contention was raised, which is new to us, that some of the laws by which facilities are afforded to foreign graduates were passed prior to the unification of the kingdom, and that though they may have been appropriate enough at that time, when the country was disturbed and even Italian subjects often sought their education elsewhere, they had now become an anachronism and ought to be repealed. The general impression to be gathered from a perusal of the document, the principles of which were adopted by the meeting, is that the feeling is the same as before, and that the agitation is likely to continue on the same lines. It therefore behoves the Privy Council, which has assumed the responsibility by taking the matter into its own hands, to keep a careful watch upon any proposed legislation in Italy, and not to suppose that all danger to the interests of British medical men, and to the British community of having to do without the attendance of their own country folk, is at an end.

## POISONOUS GAS IN WELLS.

On July 12th a very distressing accident, involving the loss of four lives, occurred in a well at the Three Mills Distillery, West Ham. The well, which was used for obtaining surface water, was about 25 feet deep. The cover had been removed, and a ladder lowered with a view to sounding the well. A man descended the ladder with the sounding rod; after sounding the well he came up the ladder again, and had just handed the rod to one of the men on the surface, when he fell back into the water. Mr. Godfrey Nicholson, managing director of the distillery, who was present at the time, at once descended to his assistance, got hold of him, and was endeavouring to bring him up, when he himself also fell over into the water. With equal bravery two other men went down, but both shared the same fate. A fifth man went down with a rope round him, but became unconscious before he could render any assistance. He was pulled up by the rope. According to his statement at the inquest, he noticed nothing as he went down to show that the air was foul. He tasted nothing, and there was no foul smell. He did not notice anything until he "felt as if he was going to sleep." He felt no pain of any sort. His evidence appears definitely to exclude the supposition that the men were overcome by either carbonic acid or sulphuretted hydrogen. The former gas, when present in dangerous amount, can be at once perceived, as it both excites the respiratory mucous membrane, and causes violent panting, while sulphuretted hydrogen would have been detected by its smell. No other poisonous gas is at all likely to have been present, so that, although unfortunately no analysis of the air was made, all the evidence points to the conclusion that the men lost consciousness through deficiency in the percentage of oxygen in the air. In the case of a man going into air which is dangerously deficient in oxygen loss of consciousness usually occurs suddenly and without any distinct warning symptoms. Any muscular exertion, such as that of climbing on a ladder, greatly increases the danger. An investigation of the suffocative gas, or "choke-damp," found in ordinary wells was recently published by Dr. Haldane in the *Transactions of the Institution of Mining Engineers*. He found that, like the "black-damp" of coal mines, it consists, when unmixed with air, of nitrogen containing about 10 per cent., or often much less, of carbonic acid, evidently formed by oxidation processes occurring in the strata round the well. The air which penetrates the strata is deprived of its oxygen, and issues into the well as nitrogen mixed with a little carbonic acid. The process often occurs in wells round which there are no possible sources of organic impurity. In many, if not all, wells the air is perfectly pure with a rising barometer, as fresh air is passing down the well and out into the surrounding strata; whereas with a falling barometer the well may not only be full of choke-damp, but the gas may be rapidly issuing from the top. Even a quite shallow well only a few feet deep may be full of chokedamp. The changing condition of the air in wells often leads to accidents, as a negative test made at one time with a candle is apt to be taken as sufficient evidence that the well will also be clear at other times. The accident at Three Mills Distillery occurred during a long period of steady barometric pressure and high temperature. The air of the well was therefore probably almost stagnant, although, to judge from its effects, it must have contained at least 5 per cent. of oxygen. In view of the treacherous behaviour of the gas in wells, and the fact that when an accident occurs there are no warning symptoms, it cannot be too strongly emphasised that no well should be descended at any time without taking a candle or first lowering one. The candle is extinguished when the proportion of oxygen is about 17 per cent.; at this point of vitiation there is no danger to man. A rescuer should never go down without a rope round his own body, and a spare rope ready to place round the man to be rescued; he should also carefully avoid all hurry and extra exertion. Probably the readiest way of temporarily clearing the air is to lower a bucket of glowing coals.

## NURSES FOR THE MIDDLE CLASSES.

A correspondent writing to us on the occasion of the presentation of the Queen Victoria Jubilee Nurses, remarks that "the whole scheme of nursing appears to have been developed to the advantage of two classes, the very rich and the very poor," and goes on to point out the difficulty of meeting the nursing cost of a severe or long illness with a moderate income. We quite agree with the writer; the middle classes are in this as in many other points at a serious disadvantage, but we confess that we do not see from whence a remedy is to come. Of the many plans which have been tried, the only one that has survived is the nursing of the middle classes on the same lines as that of the district nurses, by means of the "visiting" or "daily" nurse, the fees being arranged on such a scale as, given a sufficiency of patients, the nurse is properly remunerated. In the case of many forms of illness this attendance is sufficient, but when the patient's condition is very grave, more continuous nursing is required and the expenditure is increased. Another scheme that has been tried is the hospital for the middle classes, but with the high rents and taxes and the cost of living it has been found impossible to work such a hospital on a small scale at fees within the reach of the patient, and there are other objections to this plan which need not now be particularised. The nurse's fee of two guineas a week, though it sounds high, is only sufficient to keep her during her short period of earning, and leaves very little for old age or sickness.

## THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The institution of voting papers has greatly diminished the number of visitors to the College on the day of elections of members of Council. Only 18 voted in person on July 4th; yet many more than 18 Fellows of the College came up to Lincoln's Inn Fields on that day, and no doubt it is in great part the annual show that induced them to

brave the tropical heat which prevailed during that afternoon. The feature of most general interest in the show of additions to the museum was the series of new and remounted specimens of brains which were so placed in the bottles as to afford the best possible view of the convolutions, etc. These preparations deserve the attention of all curators, and still more of all teachers of human and comparative anatomy. The pathological series was enriched by some specimens of excisions performed about forty years ago, a femoral hernia with rupture of the crural sheath, foreign bodies from the bronchi, phosphatic calculi developed on pubic hairs introduced during passage of the catheter, and Dr. Anning and Mr. Littlewood's fine specimen of primary ovarian pregnancy with rupture only fourteen days after the last menstrual period, reported in the current volume of the *Transactions of the Obstetrical Society of London*. The kidney, showing secondary deposits from a case of deciduoma malignum (No. 3,597, K.) must make many a pathologist and obstetrician reflect. How comes it that down till 1888 the disease was unknown? It would seem that it by no means signifies sarcoma irritated and stimulated into active growth by pregnancy, and many are of opinion that it is a new malady due to some unknown influence. Among the instruments is a shark's tooth mounted on a handle, the contrivance being used by the "leeches," as we may call them, of Funafuti in the Ellice Isles. The anthropologist, so keen about stone and bronze ages should inform us whether the Ellice islanders are still in the Palæodontic or Neodontic stage of civilisation. The instrument is used for opening abscesses. It is probably less painful than the flint-heads of the Palæolithic age, which seem undoubtedly to have been employed for surgical purposes. The additions to the morphological series include some fine brains of the anthropoid apes and of the aye-aye.

## THE PREVENTION OF AGUE IN SPAIN.

Dr. Macdonald published in the British Medical Journal of September 16th, 1899, an interesting note on the mosquitos found in the part of Spain in which Rio Tinto is situated, and in his thesis presented this year for the doctor's degree of the University of Paris[1] he describes the practical results of his studies of the relations existing between mosquitos and malaria in that district. He has confirmed the researches which have established the connection of the development of the parasite in the body of the mosquito with the infection of man with malarial fever. The most interesting part of the thesis is his account of what has been done at Rio Tinto to prevent the malarial fevers which are prevalent in that district. Around Rio Tinto *A. claviger* seems to be the chief agent in causing fever. This variety rarely bites during the day but is very fierce in the evening, the children in the villages suffering terribly from it and from the œdema of the face which the bites cause. The larvæ of *Anopheles* are plentiful in the small pools in the ravines. These pools are not, as a rule, stagnant, but have a slow current, the water in them being very clear. In the muddy pools which are sometimes adjacent the larvæ of *Culex* are found. Algæ are often present in the pools which contain *Anopheles* larvæ, which are nourished on them, but sometimes the pools contain nothing but sand and stones. The larvæ lie parallel to the stones, and are difficult to see, but they are easily detected when they are on the surface of the algæ. During the day *Anopheles* are rarely seen in the ravines, because at that time they take refuge in houses, stables, or in holes which protect them from the breeze and light. In order to extirpate malaria from the district the following methods were tried under Dr. Macdonald's directions: (1) Destruction of larvæ around the villages for a radius of a kilometre; (2) protection of inhabitants in their houses by closing every opening with wire grating with a very fine mesh; and (3) mosquito nets for individuals. The first method was carried out by (*a*) draining the pools wherever possible; (*b*) filling them with earth; (*c*) throwing into the larger pools with slow currents copper mineral of little value, which produced a solution of sulphuric acid. Some old wells were treated by petroleum every ten days. Dr. Macdonald, to his surprise, found that the attempted destruction of larvæ had no success although carried out with patience and under his personal supervision. It was evident either that some pools had escaped observation, or that *Anopheles* had come from another village situated beyond the kilometre radius. The other method of protecting houses by wire grating and the use of mosquito nets was perfectly successful. Whole families, for the first time in their lives, passed the summer without having fever. For a general discussion of the best methods of protecting persons from being attacked by *Anopheles* in malarial countries, we refer all those interested in the subject to Dr. Macdonald's thesis. His views on prophylaxis are based on experiments carefully carried out during the last two years. We are glad to know that Dr. Macdonald's studies and experiments in this direction are still being continued.

[1] *La Propagation du Paludisme par les Moustiques, avec une note sur leur rôle à Rio Tinto (Sud d'Espagne)*. Par le Dr. Ian Macdonald, M.D. (Edimbourg), de l'Université de Paris, Médecin à la Compagnie de Rio Tinto (Espagne). (Avec une planche microphotographique.) Paris: A. Maloine, éditeur, 23-25 Rue de l'École de Médecine. 1901.

## CITY MILK.

Professor W. Hallock Park, Assistant Director of the Research Laboratory of the Department of Health, New York City, has published in the July number of the *Journal of Hygiene* an interesting paper in which he discusses the question whether the great bacterial contamination of the milk of cities can be lessened by the action of health authorities. He thinks it strange that those who care for the health of communities, while striving so earnestly to protect milk from chemical adulteration, do nothing to compel or even to encourage the farmer and dealer to supply milk free from an excessive number of bacteria and their toxins. He gives some particulars of a special study which he has recently made of the milk of New York, and expresses the opinion that the milk now consumed in most cities is unnecessarily contamined and unwholesome, owing largely to the almost complete ignorance of the persons commercially interested, who do not appreciate the fact that bacteria arising from contamination by stable or barnyard dirt are capable, unless inhibited by cold, of an enormous development during the time of transportation, and may render good milk utterly unfit for food. He reports a series of investigations which leads him to the conclusion that it is perfectly practicable for the farmer and dealer, without appreciable increase of expense, to sell cows' milk with far less bacterial contamination than of that now supplied. The number of bacteria present in the milk of healthy cows depends almost entirely on four things: (1) The original amount of germicidal substance in the milk; (2) the amount of bacterial contamination on or after milking; (3) the length of time which has elapsed since milking; (4) the temperature at which the milk has been kept. While the germicidal qualities of milk are beyond control, cleanliness in procuring milk can be ensured by proper regulations. The degree to which milk is cooled and the length of time it is kept can also be almost completely controlled. The amount of bactericidal substances in freshly-drawn milk is slight and variable, but at temperatures under 50° F. they act efficiently in inhibiting bacterial growth, unless the milk is filthy, for from 12 to 24 hours; at higher temperatures their effect is very soon completely exhausted, and the bacteria in such milk then rapidly increase. Thus it was found that the bacteria in fresh milk which originally numbered 5,000 per c.cm., decreased to 2,400 in a portion kept at 42° F. for 24 hours, but rose to

7,000 in that kept at 50° F., to 280,000 in that kept at 65° F., and to 12,500,000,000 in a portion kept at 95° F. In New York city he found that during the coldest weather the milk in the shops contained an average of over 300,000 bacteria per c.cm., during cool weather about 1,000,000, and during hot weather about 5,000,000. That this number of bacteria can be greatly diminished by efficient treatment of the milk is shown by the fact that in the best of the special dairies the milk was found to contain only from 10,000 to 30,000 bacteria according to the season of the year. He admits that it is at present impossible to state exactly how many bacteria must be present in milk to render it distinctly dangerous; some varieties are more harmful than others, but there is no way of restricting the kinds that will fall into milk except by enforcing cleanliness. Further, it must be remembered that milk is as a rule not entirely consumed till some twelve hours after being purchased, and that during all this time the bacteria in it are rapidly multiplying, especially where, as among the poor, no provision for cooling it is made. As slight changes in the milk which might be harmless to one child would in another produce disturbances which might lead to serious disease, he argues that the only safe conclusion is that no more bacterial contamination should be allowed than it is practicable to avoid. As a remedy he suggests that the first step must be to establish the principle that excessive bacterial multiplication in milk is harmful, and that it will be wiser to seek to obtain the co-operation of all those who deal with milk to do their best to limit this multiplication than to fix any definite number of bacteria as the limit above which milk must be destroyed. Some figure, however, must be adopted by the authorities, even at first, beyond which milk should not be allowed to be distributed. For the first year he proposes that a practical standard would be 500,000 per c.cm. for milk entering New York, and 1,000,000 per c.cm. for milk delivered to the consumer. If no milk worse than the above was brought in or distributed there would be a vast improvement over previous years, and, as a matter of fact no dealer could afford to try and approach the limit, for if he did he would frequently go beyond it. Thus even by enforcing a standard allowing at least tenfold the number of bacteria which should be present in milk, a great improvement in milk supply and a compulsory education of the farmer in the need of cleanliness, the preservative effect of cold, and a few of the elementary laws governing the transmission, the multiplication and the products of bacteria would be secured. The Department of Health of New York City adopted measures last May to prevent, after a reasonable time of warning, the introduction into New York city of milk which contained an unnecessary number of bacteria, and as a first step issued a circular of information for farmers relating to the collection and care of milk.

## THE CARNEGIE TRUST.

The Executive Committee of the Carnegie Trust met on Monday, July 15th, in the Hall of the Edinburgh University Court. There were present the Earl of Elgin, Lord Balfour of Burleigh, Lord Kinnear, Mr. Thomas Shaw, M.P., the Lord Provost of Edinburgh, the Lord Provost of Glasgow, Sir William Turner, representing the University of Edinburgh, and Professor Matthew Hay, representing the University of Aberdeen. Sir Henry Roscoe was the only member absent. A letter from Mr. Carnegie to the chairman was read, in the course of which he expressed the belief that the conditions of application for students ensured a sufficient standard of merit, that the honest pride for which his countrymen were distinguished would prevent claims from those who did not require assistance, and that thus the invidious task of inquiring into the circumstances of each candidate need not be imposed upon the trustees. His own experience with young men led him to believe that some students in after life would value the privilege of repaying advances received from the trustees, although these were free gifts. He hoped that the trustees would gladly welcome such repayments, as this would enable such students as preferred to do so to consider the payments made on their account merely as advances which they resolved to repay if ever in a position to do so. This would protect and foster the spirit of manly independence so dear to the Scot. It was agreed to appoint Mr. Ross, solicitor (Dunfermline), Treasurer of the Trust, and interim Secretary. It was reported that the transfer of the bonds from which the income of the Trust would be derived had just been intimated, but that the first dividend would not be received till the autumn. Mr. Carnegie, however, had expressed the wish that arrangements should be made for the payment of students' fees without delay, and had engaged that the necessary funds should be available next October. The Committee considered the forms of application to be required from those who claimed to participate under this part of the Trust Deed. So soon as these forms are printed an advertisement will be inserted in the newspapers giving information when and how they could be obtained, and applicants will be requested to send in forms completely filled up on or before September 15th. The Committee recognised that on this, the first occasion, difficulties might suggest themselves in giving some of the particulars required by the forms, which might not recur in future when they were better understood, and was of opinion that in place of attempting to deal with these as they came in, it would be expedient to have them stated collectively for the decision of the Committee at a meeting to be held as soon as convenient after September 15th. It was hoped that students would co-operate with the Committee, both by lodging their applications in good time, annexing, if necessary, a statement of any special circumstances, and by awaiting the communication of the result, which would be intimated to each applicant with as little delay as possible. It was resolved to forward a copy of the Trust Deed and constitution to the Secretary to the University Court of each University, calling attention to the provisions of Clause A: "One-half of the nett annual income will be applied towards the improvement and expansion of the Universities of Scotland, in the Faculties of Science and Medicine, also for improving and extending the opportunities for scientific study and research, and for increasing the facilities for acquiring a knowledge of history, economics, English literature," etc. The Court of each University is asked to send in a statement of the more urgent needs of the University, and the manner in which these wants may best be supplied. The Secretary was instructed to direct special attention to the fact that the Committee was authorised to take into consideration efforts made by other agencies for the same purpose, and to say that it would desire to have full information of any such movements with a view to co-operation.

## BATH AND THE HOUSING OF THE WORKING CLASSES ACT.

Lord Rosebery has said that "in rookeries and slums an imperial race can never be raised," for rookeries and slums are inimical to a healthy, self-respecting, and vigorous race. The housing of the working classes is, therefore, a national question of prime importance, and it is satisfactory to note the large amount of attention the subject is at present receiving throughout Great Britain. The general impression left upon the visitor to Bath is that the community is well housed and reaches a high average of general prosperity; yet even there Dr. Symons, the medical officer of health, is able to show a great need for action under the Housing of the Working Classes Acts. The density of the population of Bath, according to the census of 1901, is 14.8 persons per acre, but the population is, of

course, unevenly distributed about the city. There are, for instance, in the parish of Bathwick an average of 7.4 persons to the acre, while in the central city parishes there are 77; and, according to the Registrar-General's return for 1891, 4.11 per cent. of the population of Bath were considered to be living in overcrowded tenements. In 1891 there were in Bath over 3,000 persons living as families of 3 or more individuals in tenements of one or two rooms, and there were 39 persons living, 4, 5, or 6 persons in a single room. Dr. Symons, in his recent report on the Housing of the Working Classes in Bath, expresses an opinion which will meet with general acceptance when he says that the least number of rooms for decent family life is 3 to each family, and as children of the two sexes grow up 4 rooms are necessary. In the year 1896 a Provisional Order was obtained by the Bath sanitary authority for a street improvement scheme in the Dolemeads, which necessitated the demolition of 17 dwellings occupied by the working classes on the south bank of the river Avon. The approval of the Local Government Board to the scheme was secured in the year 1899, and in less than 12 months 16 houses had been completed, which it is proposed to let at sums varying from 5s. to 6s. 6d. per week. Altogether 40 dwellings will be erected under the scheme, but it is certain, as Dr. Symons infers, that these will be occupied by the well-to-do artisan class, and they cannot be considered as making provision for the very poor, for he states that there are, even in Bath, hundreds of families who cannot afford to pay more than 2s. 6d. a week for their dwelling. It is to be hoped, therefore, that many of the houses still to be erected under the scheme will afford accommodation at such a rental that the poorest people displaced may be enabled to occupy them.

## VACCINATION AND THE PUBLIC HEALTH SERVICE.

THE short discussion which took place in the House of Commons on Tuesday with regard to the refusal of the Local Government Board to sanction the appointment of Dr. W. Scott Tebb, a professing anti-vaccinist, as Medical Officer of Health for Penge will, we venture to hope, prevent any similar attempt in the future. It is satisfactory to find that the Local Government Board has acted with decision, and the words of the President in the House of Commons show that the importance of the matter is thoroughly understood by those in authority. In the event of an outbreak of small-pox the chief sanitary means used to combat it would be to encourage and promote in every possible way the vaccination of every one in the affected area. At such a time to have the chief sanitary officer of the district conscientiously advising all the inhabitants to refuse to be vaccinated would be calculated to lead to a sanitary deadlock, which none but anti-vaccinists could contemplate with equanimity. While vaccination is the law of the land few, we trust, will sympathise with attempts to drag it into contempt, as the recent action of the Penge Borough Council, if ratified, must have done.

## IRISH LUNATIC ASYLUMS.

In connection with the observations made in an article on harmless lunatics and the proposed Irish auxiliary asylums published in the BRITISH MEDICAL JOURNAL of July 13th, it is interesting to note the report of an inquest held upon the body of an inmate of the Castlebar (co. Mayo) District Asylum. He was kicked to death by another inmate on June 19th, in the presence of the attendant. At the inquest it was sworn that this attendant was in sole charge of fifty-two men, no doubt lunatics declared "harmless" by Act of Parliament. The medical superintendent swore that the staff of attendants was quite insufficient, but the Asylum Committee held a different view. The coroner's jury brought in a verdict in accordance with the medical evidence that death was due to peritonitis, the result of kicks, and exonerating all the officials from blame. They added a rider that the number of attendants was insufficient. We expect the county councillors who compose the Asylum Committee will regard the verdict as an impertinent comment upon their superior judgment.

MR. JOHN WHEELER DOWDEN, M.B., C.M., F.R.C.S.Ed., has been appointed Assistant Surgeon to the Edinburgh Royal Infirmary.

IN connection with the British Congress on Tuberculosis a dinner will be given to the foreign vice-presidents and foreign delegates at the Hotel Cecil on July 26th at 8 p.m., when the chair will be taken by the Earl of Derby, K.G.

WE understand that Mr. Brodrick has invited Sir William Thomson, of Dublin, to act upon the Army Medical Expert Committee, but that Sir William Thomson has been unable to accept owing to the times at thich the meetings of the Committee are held. There is, however, we are informed, reason to believe that the difficulty will be overcome.

THE Council has granted leave of absence to Mr. Fowke, the General Secretary of the Association, and has, during his absence, appointed Mr. Guy Elliston (the Assistant Secretary) to be Acting General Secretary. It will be a cause of much regret to the members of the Association that they will be deprived of Mr. Fowke's services during the annual meeting, and they will, we feel sure, follow him during his rest, with their best wishes for thorough restoration to health and a speedy return to his official duties.

THE King held an investiture on July 16th, when he conferred the honour of knighthood on Sir Thomas Smith, Bart., F.R.C.S., Deputy Surgeon-General Henry Julius Blanc, and Mr. William Henry Bennett, F.R.C.S., and invested them with the insignia of Knight Commanders of the Royal Victorian Order. The King on the same occasion invested the following gentlemen with the insignia of Commanders of the Order: Dr. Donald W. Hood, Mr. John H. Morgan, F.R.C.S., and Mr. Charles Arthur Morris, F.R.C.S.

THE Council of the Royal Society has awarded the Mackinnon Studentship to Mr. J. J. R. Macleod, M.B., Demonstrator of Physiology in the London Hospital Medical College, for the purpose of enabling him to carry out researches in pathological chemistry. The Studentship is founded under a bequest to the Royal Society by the late Sir William Mackinnon, Director-General of the Medical Department of the Army, for the foundation and endowment of prizes or scholarships for the special purpose of furthering natural and physical science, and of furthering original research and investigation in pathology. For the Studentship, which is of the annual value of £150, there were 14 applications.

IN addition to those whose names have already been announced the following have expressed their intention to be present at the complimentary dinner to Surgeon-General Jameson, late Director-General Army Medical Staff: Sir George H. Philipson, Surgeon-General Preston, Dr. Conan Doyle, Surgeon-General Reade, Surgeon-General Martin, Surgeon-General De Renzy, Dr. H. H. Tooth, C.B., Mr. Thomas Wakley, jun., Dr. Dudley Buxton, Dr. Alfred Hillier, Dr. H. Tilley, and Mr. Woodhouse Braine. The dinner will take place on Wednesday next at the Hotel Cecil, Strand, under the chairmanship of Sir William Church, Bart. The price of the dinner ticket is 25s., and further particulars can be obtained from the Honorary

Secretaries—Mr. G. Lenthal Cheatle, C.B., F.R.C.S., 117 Harley Street; and Mr. Cuthbert Wallace, F.R.C.S., 75 Lambeth Palace Road, S.E.

# MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

**The Factory and Workshops Acts Amendment Bill** was considered in Grand Committee for the sixth time at the end of last week, and the discussion on Clause 24 resumed. The amendments made in the clause as regards the employment of women and young persons were considered by some to be unduly stringent. Mr. Ritchie concurred in this view, and said that when the Bill came before the House he should move to reinstate the words omitted. After this the motion to reject the clause was refused by 34 to 20. Clause 25, which provides that a certificate of fitness in respect to a young person may be justified by the condition of works led to some debate. Mr. Ritchie agreed to give the certifying surgeon the same power as an inspector as regards the processes in which a child or young person was employed, and the clause was further amended by withdrawing the power to deduct the certifying surgeon's fee from wages. The Laundry Clause No. 26 was postponed after a discussion of some length. On Monday, when the Committee resumed, there was an attempt made to amend the subsection of Clause 28 which deals with underground bakehouses, but the Secretary of State stood firm, and the clause was only amended so as to give to the occupier of a bakehouse a right to appeal to a Court of Summary Jurisdiction against the decision of the District Council. The clause dealing with humidity in factories was amended as regards cotton-spinning mills, and afterwards the clause was passed by 39 to 5. Clause 30 was also agreed to. There was a good deal of difference of opinion over the clause requiring that workers should not take their meals in places where poisonous substances were used. One or two attempts were made to render the clause less stringent, and after three divisions the warmth of the debate rose considerably, and some sharp words passed between members as to the delay caused by some supporters of the Government who had put down a great number of amendments. The Home Secretary resented these remarks, and said he hoped to pass the Bill through the Committee in two or three more sittings. The clause was then passed, and after some amendment Clause 32 was added to the Bill, and the Committee adjourned.

**The Second Worcester Regiment.**—Sir Walter Foster raised again last week the question as to the outbreak of fever in this regiment after its arrival at Bloemfontein, and elicited the following statement from Lord Stanley: The regiment reached Bloemfontein in the week ending April 6th, 1900, and had 19 admissions to hospital from all causes during the march thither from Norvalspont; of these, 12 were discharged to duty soon after arrival. During their stay at Bloemfontein up to May 25th there were 14 deaths from enteric fever, and from May 25th to July 27th 13 deaths. No further statistics were available.

**Boer Refugee Camps.**—Lord Windsor raised the question of the general management of these camps in the House of Lords on Monday last, and in the interesting debate which followed Lord Raglan gave an account of the mortality in them for the month ending June 30th. It appears that in Natal, with 901 men, 1,902 women, and 5,037 children, the deaths were 5 men, 15 women, and 84 children. In Cape Colony, with 31 men, 85 women, and 274 children, there were no deaths. In the Orange River Colony, with 5,116 men 9,646 women, and 17,953 children, the deaths were 32 men, 75 women, and 182 children. In the Transvaal, with 8,576 men, 16,078 women, and 19,811 children, the deaths were 26 men, 48 women, and 310 children. For the total of 14,624 men, 27,711 women, 43,075 children, the deaths were 63 men, 138 women, and 576 children. With regard to the coloured inmates, in Natal with 7 men, 2 women, and 11 children there were no deaths; in the Orange River Colony, with 2,076 men, 7,313 women, and 11,201 children, there were no deaths; and in the Transvaal, with 244 men, 800 women, and 1,835 children, there were 5 deaths. The mortality, which had at one time been very high, Lord Raglan said was steadily decreasing.

**The Vote for the Local Government Board.**—In Committee of Supply, when the vote for the Local Government Board came on last Tuesday, there was a very interesting debate. The speakers raised many questions, but the chief interest of the discussion was concentrated on the housing question and the treatment of the children of the State. On the housing question there seemed to be general agreement that if possible longer terms should be allowed for the repayment of loans. As regards the treatment of pauper children, there was general condemnation of the Barrack school system, and a strong desire that the recommendation of the Departmental Committee should be more speedily enforced. The President of the Local Government Board pointed out that the extension of time for the repayment of loans within the limits allowed by existing law would make but little difference. As regards the barrack school system, he said the Board were proceeding as rapidly as possible in the directions recommended by the Committee. In the course of the evening, the case of Dr. Tebb was brought up, and finally a division was taken on the case, on the motion of Mr. Corry Grant. Dr. Tebb, it appeared, had been elected by the District Council of Penge to the office of medical officer of health, but the Local Government Board refused to sanction the appointment on the ground that by his writings he had identified himself with the opposition to vaccination. Sir Michael Foster, and afterwards Sir Walter Foster, in the course of a speech reviewing the whole debate, supported the action of the Local Government Board, and when the division was taken the motion for reducing the vote was rejected by 171 to 93. The subjects of increasing the areas for rural medical officers of health and the appointment of medical men where possible at a salary sufficient to enable them to do without private practice were alluded to. A strong plea was also advanced for the appointment of a medical officer by each county council.

**Soldiers' Teeth.**—Colonel Brookfield asked on Tuesday if the Secretary of State for War had given attention to the suffering caused among the troops in South Africa by the diseased and neglected condition of the soldiers' teeth, and what arrangements had been made for providing dental assistance to the field force. Mr. Brodrick, in reply, said that the subject was engaging the careful attention of the military authorities. Four dental surgeons had been sent out in June, and a number of refugee dentists had been engaged for the benefit of the troops. The Secretary of State did not say that the matter would come under the notice of the Committee now considering reforms in the Army Medical Department.

THE library of the late Dr. Felix Victor Birch-Hirschfeld, Professor of Pathology and Pathological Anatomy at the University of Leipzig, and Director of the Leipzig Pathological Institute, which consists of about 5,000 volumes, and is said to be one of the most valuable pathological libraries in existence, has recently been acquired by the Cornell University College.

MALARIAL RESEARCH IN INDIA.—On the recommendation of the Director-General I.M.S., the Government of India is distributing among civil surgeons and other medical officers the work, *Malaria according to New Researches*, by Professor Angelo Celli, Director of the Institute of Hygiene, University of Rome. The book, which was translated into English by Dr. J. J. Eyre, was reviewed in our columns on December 15th, 1900, p. 1714.

THE OLDEST NURSE.—Mdlle. Bottard, who, according to *Le Progrès Médical*, is the oldest living lay nurse, is about to retire. She entered the service of the Salpêtrière in 1840 at the age of 18, and gives up charge of her ward on August 1st, but she will not leave the Salpêtrière, for under a rule dating from the time of Mazarin every nurse of more than twenty years' service has the right to board and lodging for the rest of her life. Mdlle. Bottard has served for sixty-one years, the longest period on record, and will claim the benefits of the foundation of 1656.

# ASSOCIATION INTELLIGENCE.

## COUNCIL.

### NOTICE OF MEETINGS.

MEETINGS of the Council will be held in No. 8 Room, Ladies' College, Cheltenham, on Tuesday, July 30th, Wednesday, July 31st, and Thursday, August 1st next, at 9.30 o'clock in the forenoon of each day.

July, 1901. GUY ELLISTON, *Acting General Secretary*.

### NOTICE OF QUARTERLY MEETING OF COUNCIL FOR 1901.

A MEETING of the Council will be held on October 23rd. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before that meeting—namely, October 2nd.

## PROCEEDINGS OF COUNCIL.

AT a meeting of the Council held at the office of the Association, 429, Strand, London, W.C., on Wednesday, July 10th, 1901.

*Present:*

Dr. JOHN ROBERTS THOMSON, President of the Council, in the Chair.
Dr. WILLIAM ALFRED ELLISTON, President.
Dr. GEORGE BAGOT FERGUSON, President-elect.
Mr. ANDREW CLARK, Treasurer.

Dr. EDGAR G. BARNES, Eye.
Dr. JAMES BARR, Liverpool.
Dr. RAYNER W. BATTEN, Gloucester.
Dr. MICHAEL BEVERLEY, Norwich.
Dr. THOMAS BRIDGWATER, Harrow-on-the-Hill.
Mr. LANGLEY BROWNE, West Bromwich.
Dr. R. C. BUIST, Dundee.
Mr. HENRY T. BUTLIN, London.
Mr. COLIN CAMPBELL, Saddleworth.
Mr. JAMES CANTLIE, London.
Dr. ALFRED H. CARTER, Birmingham.
Dr. EDWARD J. CAVE, Bath.
Mr. THOMAS H. CHEATLE, Burford.
Mr. JOHN WARD COUSINS, Portsmouth.
Dr. H. RADCLIFFE CROCKER, London.
Dr. P. MAURY DEAS, Exeter.
Dr. T. M. DOLAN, Halifax.
Brigade-Surgeon-Lieut.-Col. E. F. DRAKE-BROCKMAN, F.R.C.S., London.
Dr. WILLIAM DYSON, Sheffield.
Mr. GEORGE EASTES, M.B., London.
Professor DAVID W. FINLAY, Aberdeen.
Dr. BRUCE GOFF, Bothwell.
Dr. JOSEPH GROVES, Carisbrooke.
Surg.-Gen. J. B. HAMILTON, M.D., London.
Dr. HENRY HANDFORD, Nottingham.
Dr. W. MORTON HARMAN, Winchester.
Dr. ELDON HARVEY, London (Bermuda).
Mr. JOHN D. HARRIES, Shrewsbury.
Dr. T. ARTHUR HELME, Manchester.
Dr. HOLMAN, London.
Mr. VICTOR HORSLEY, F.R.S., London.
Mr. T. VINCENT JACKSON, Wolverhampton.
Mr. T. R. JESSOP, Leeds.
Mr. EVAN JONES, Aberdare.
Mr. R. H. KINSEY, Bedford.
Mr. N. C. MACNAMARA, London.
Dr. C. H. MILBURN, Hull.
Sir JOHN WILLIAM MOORE, M.D., Dublin.
Mr. W. JONES MORRIS, Portmadoc.
Dr. JAMES MURPHY, Sunderland.
Surgeon-General T. F. O'DWYER, Aldershot.
Mr. D. A. O'SULLIVAN, Southport.
Mr. C. H. WATTS PARKINSON, Wimborne Minster.
Dr. R. W. PHILIP, Edinburgh.
Dr. FRANK M. POPE, Leicester.
Dr. A. BROWN RITCHIE, Hulme.
Dr. ROBERT SAUNDBY, Birmingham.
Dr. ALFRED SHEEN, Cardiff.
Dr. G. E. SHUTTLEWORTH, Richmond Hill.
Dr. R. SOMERVILLE, Galashiels.
Mr. C. S. TOMES, F.R.S., London.
Dr. W. J. TYSON, Folkestone.
Mr. T. JENNER VERRALL, Brighton.
Dr. NORMAN WALKER, Edinburgh.
Mr. DENIS WALSHE, Graigue.
Dr. W. L. WINTERBOTHAM, Bridgwater.
Dr. S. WOODCOCK, Old Trafford.

The minutes of the last meeting having been printed and circulated, and no objection received, were taken as read and signed as correct.

Read letters of apology for non-attendance from Sir Walter Foster, M.P., Dr. Henry Barnes, Dr. T. Beattie, Professor J. W. Byers, Dr. G. W. Crowe, Dr. Freeland Fergus, Dr. J. H. Galton, Mr. Jordan Lloyd, Dr. A. W. Mackintosh, Dr. R. Maclaren, Brigade-Surgeon T. B. Moriarty, Dr. James Murray, Dr. C. Parsons, Sir G. H. Philipson, Dr. H. H. Phillips-Conn, Dr. J. Rolston, Dr. Markham Skerritt, Mr. H. Stear, and Dr. W. Young.

The PRESIDENT introduced Dr. Eldon Harvey, attending the Council meeting for the first time as the representative of the Bermuda Branch.

Read letter from Sir Dighton Probyn, announcing that His Majesty the King would be pleased to become Patron of the Association:

Sandringham, Norfolk,
May 8th, 1901.

Dear Dr. Ferguson,—The request contained in your letter of the 18th of last month that the King would be pleased to become Patron of the British Medical Association I have submitted to His Majesty, and I now have the pleasure of conveying to you his willingness to accede to the same.

I remain, yours faithfully,
D. M. PROBYN, General,
Keeper of H.M. Privy Purse.

To George Bagot Ferguson, Esq., M.D.,
President-elect,
British Medical Association.

Resolved: That the same be received and entered on the minutes.

Read reply from the Home Secretary to the Vote of Condolence ordered to be forwarded to His Majesty the King at the last meeting of the Council:

Home Office, Whitehall,
April 29th, 1901.

SIR,—I am commanded by the King to convey to you hereby His Majesty's thanks for the loyal and dutiful message of the members of the Council of the British Medical Association, expressing their sympathy with His Majesty and the Royal Family on the occasion of the lamented death of Her late Majesty Queen Victoria.

I am, Sir,
Your obedient Servant,
CHAS. T. RITCHIE.

J. Roberts Thomson, M.D.,
British Medical Association,
429, Strand, W.C.

Resolved: That the same be received and entered on the minutes.

Read letter acknowledging resolution of condolence passed upon the death of Mr. Benjamin Barrow:

10, New Court, Lincoln's Inn, April 25th, 1901.—

My dear Sir,—Your letter to my sister, Mrs. Barrow, with copy of resolution of your Council, of date April 22nd, has been handed to me, and owing to my sister's state of health I have to ask the permission of your Council to be allowed, on her behalf, to return to them her very sincere thanks for the kindly appreciation of her late husband conveyed to her by the resolution, and am equally to thank them deeply for the sympathy they express for her in her bereavement.—I remain, yours very truly,

The Secretary, ALFRED H. ARNOULD, D.C.L.
British Medical Association, 429, Strand.

Resolved: That the same be received and entered on the minutes.

The President of Council reported that he had received a communication from the General Secretary applying for leave of absence on account of his recent illness and domestic bereavement.

Resolved: That the President of Council convey to Mr. Fowke the deep sympathy of the Council with him and his family in the sad loss they have sustained, and that in doing so he will also express the hope of the Council that Mr. Fowke's health may speedily be re-established by the rest and leave of absence which the Council is very pleased to grant him.

Resolved: That in Mr. Fowke's absence the duties of General Secretary devolve upon Mr. Guy Elliston, the Assistant Secretary, and that Mr. Guy Elliston be empowered to sign cheques.

The minutes of the Journal and Finance Committee were then considered.

Resolved: That the minutes of the Journal and Finance Committee be received.

Resolved: That a sum of £10 be voted to the Jenner Society.

Resolved: That the accounts for the quarter ending June 30th last, amounting to £8,943 16s. 10d., be received and approved, and it be recommended that the Treasurer be empowered to pay those remaining unpaid, amounting to £2,810 13s. 10d.

Resolved: That a letter be sent to the member who had written to the Editor to the effect that this Committee has seen the correspondence; that it approves of the line the Editor took; and it is confident that the charge of discourtesy has no foundation; but that in order to meet any objection it has been decided that the names of those conducting clinical consultations, demonstrations, etc., at the Polyclinic or like institutions, should not in future appear in the Diary.

Resolved: That the Report of the Auditors be received and entered on the minutes.

Resolved: That the extra £25 voted by the Scientific Grants Committee be sanctioned.

The minutes of the Joint Committee on Fees to Medical Witnesses were then considered.

Resolved: That the minutes of the Joint Committee on Fees to Medical Witnesses be received.

The minutes of the Medical Charities Committee were then considered.

Resolved: That the minutes of the Medical Charities Committee be received and approved.

The minutes of the West African Medical Service Committee were then considered.

Resolved: That the minutes of the West African Medical Service Committee be received.

The minutes of the Premises and Library Committee were then considered.

Resolved: That the minutes of the Premises and Library Committee be received and approved.

The Minutes of the General Practitioners and Ethical Committee were then considered.

Resolved: That the minutes of the General Practitioners and Ethical Committee be received and approved.

The minutes of the Parliamentary Bills Committee were then considered. (See page 169.)

Resolved: That the minutes of the Parliamentary Bills Committee be received and approved.

The minutes of the Scientific Grants Committee were then considered.

Resolved: That the minutes of the Scientific Grants Committee be received.

Resolved: That Dr. A. S. F. Grünbaum be appointed to the Ernest Hart Memorial Scholarship occasioned by the lapse of the appointment of Dr. J. J. Eyre.

Resolved: That Dr. Stuart McDonald and Dr. J. H. Parsons, the present scholars, be reappointed for a further period of one year.

Resolved: That Dr. Thomas Houston be appointed to the vacant Research Scholarship occasioned by the lapse of the appointment of Mr. J. S. Macdonald.

Resolved: That it be an instruction to the Research Scholars that the result of their work be first published in the JOURNAL in full or in substance.

Resolved: That the following amounts be voted for Research Scholarships and Scientific Grants:

| | £ | s. | d. |
|---|---|---|---|
| Amount of Renewed Grants ... ... ... | 192 | 0 | 0 |
| Amount of New Grants... ... ... ... | 183 | 0 | 0 |
| Total of Grants ... ... ... ... ... | 375 | 0 | 0 |
| Total of Research Scholarships ... ... | 650 | 0 | 0 |
| Total ... ... ... ... | 1,025 | 0 | 0 |

Read letter from Dr. A. D. Waller, F.R.S., asking the Council to appoint a Committee "to study the methods of quantitative determination of chloroform in air, in fluids, and in the bodies of animals variously chloroformed."

Weston Lodge, 16, Grove End Road, N.W.,
May 20th, 1901.

To the President and Council of
the British Medical Association.

Sirs,—I am anxious to again bring under the serious consideration of the British Medical Association the question of accidents during anæsthesia.

The numerous attempts to obtain further knowledge and consequent diminution of death-rate are well known to me, and I do not think the time, labour, and money bestowed upon inquiry into the subject have produced the results hoped for, namely, a diminution of death-rate. Nevertheless, I believe that one clear fact has come to light, namely, that deaths (chiefly under chloroform) are in the overwhelming majority of instances attributable to overdose.

When, however, an attempt is made to teach this important principle by an appeal to numerical data, it is found that such data are not in existence.

We do not know by direct experiment how much chloroform is contained in the body of an animal fully "anæsthetised" to a surgical degree, or deliberately anæsthetised to death. Nor does any thoroughly well-tested quantitative method exist by which these principal facts could be determined. I venture to think that it would greatly contribute to diminish danger if it should be clearly established that accidental death is due to accidental overdose, and if data could be obtained enabling us to estimate and teach what are "sufficient" and "excessive" quantities of absorbed chloroform under given conditions.

I do not think that such knowledge would be of *direct* value to the practical anæsthetist, but I do believe that its *indirect* value in laying the foundations of his knowledge, and affording a positive basis of teaching, would ultimately be very great. And I consider that a rough but wholly impartial indication of the influence of such knowledge might be looked for in the annual death-rate under anæsthesia, as returned in the reports of the Registrar-General.

On these grounds, in particular on the ground that this method of approaching the subject has not yet been adopted, I venture to suggest to the Council of the Association the formation of a small committee with the definite and restricted instruction *to study the methods of quantitative determination of chloroform in air, in fluids, and in the bodies of animals variously chloroformed.*

I venture further to suggest that a definite problem of this nature will require not merely close and critical control by experienced members of such a committee, but the undivided attention and daily work of some one person giving his undivided attention to the subject, and that the nature of the inquiry is such that the Council of the Association or its Scientific Grants Committee may think fit to devote to it one of the Research Scholarships of the Association.

I am, Sirs, your obedient servant,
AUGUSTUS D. WALLER.

Resolved: (1) That a Special Chloroform Committee be appointed to investigate methods of quantitatively determining the presence of chloroform in the air and in the living body.

(2) That the Special Chloroform Committee have power to co-opt two members, and to enter on an expenditure of £100.

(3) That the Committee be constituted as follows: Dr. Waller, Dr. Buxton, Dr. Barr, Dr. Sherrington, and Mr. Victor Horsley.

Read communication from the Jenner Institute of Preventive Medicine asking the Council to appoint a representative.

Resolved: That Dr. Bridgwater be re-elected a representative on the Council of the Institute.

Read report of adjudicators of Stewart Prize:

AWARD OF ADJUDICATORS OF THE STEWART PRIZE.

The Committee of Selection recommend that the Stewart Prize be awarded to Patrick Manson, C.M.G., M.D., F.R.S., for his researches in the pathology of tropical diseases, especially in regard to the malaria of man and to the life-history of the malarial parasite both in man and in the mosquito, and in recognition also of the stimulating influence which he has exerted for many years on the study of tropical diseases in the British Empire.

R. DOUGLAS POWELL,
JOHN WM. MOORE,
A. K. CHALMERS,
J. ROBERTS THOMSON.

429, Strand, June 26th, 1901.

Resolved: That the Stewart Prize be awarded to Dr. Patrick Manson.

Resolved: That the thanks of the Council be given to Sir R. Douglas Powell, Bart., Sir John Wm. Moore, Dr. A. K. Chalmers, and the President of Council for acting as adjudicators of the Stewart Prize.

Resolved: That the following be allowed to have a room for meeting at the annual meeting, namely: Irish Medical Schools' and Graduates' Association, New Sydenham Society, the United Kingdom Police Surgeons' Association, and Mr. Garrett Horder.

The election of candidates was then considered.

Resolved: That the 106 candidates whose names appear on the circular convening the meeting be and they are hereby elected members of the British Medical Association.

It was reported that an address had been presented by the President on behalf of the British Medical Association to the University of Glasgow on the occasion of its ninth jubilee celebrations. The same was ordered to be entered on the minutes.

Read reply from the Manchester Southern and Maternity Hospital to Minute of Council 5077 disapproving of the action of members of the Association lecturing on midwifery to women who have not been trained in the wards of a lying-in hospital.

Manchester Southern and Maternity Hospital, June 17th, 1901.

Dear Sir,—In reply to the circular received some little time ago, the Committee of this hospital represent to the Council of the British Medical Association, in reference to the resolution received from them with regard to the working of the maternity branch of the hospital, that, if the Council had taken the slightest trouble to inquire into the teaching of midwifery at the maternity branch of the hospital, they would have found that the conditions which the Council lay down as necessary are literally fulfilled, whatever may be the case with regard to such teaching elsewhere. The Committee desire to point out that no diplomas are issued from the maternity branch of the hospital, but simple certificates, in a form approved of by the General Medical Council as suitable for women who have recived such instruction.

With regard to the advertising of the lectures, the Committee ask the Council of the British Medical Association what efficient substitute for advertisements they are prepared to recommend, such as would be likely to reach the persons interested.—I am, yours faithfully,

GEO. WM. FOX,
Hon. Sec.

The Secretary,
General Council of the
British Medical Association, Strand, London.

Resolved: That the following reply be forwarded to the Manchester Southern Maternity Hospital:

Dear Sir,—The letter dated June 17th, 1901, from your Committee was duly laid before the Council of the British Medical Association on July 10th, 1901. The Council of the British Medical Association instruct me to reply that your Committee have not fully understood the application of the terms of the Council's resolution dated January 16th, 1901.

The Council of the Association fully recognise that the Manchester Southern and Maternity Hospital train their midwifery nurses under the conditions which the Council feel are necessary for the safety of the public.

At the same time the Council being aware that certificates in a form approved of by the General Medical Council, represent their holders to the uninstructed public as being qualified to practise midwifery, must adhere to their view that such certificates, though not objected to by the General Medical Council, exceed their intended purpose, and are used in contravention of the Medical Act, 1886.

With regard to the question of advertising, the Council consider that notification of the work of the hospital in its published report is sufficient, especially as such reports receive prominence in the lay press.

The President reported that the Friendly Societies Committee had attended the General Medical Council as a deputation on June 8th, 1901.

Resolved: That it be a recommendation to the Annual Meeting that the best thanks of the Association be given to the Right Honourable Walter Hume Long, P.C., M.P., for his strenuous efforts to stamp out hydrophobia.

Read communication to the President of Council on the appointment of a Committee by Mr. Brodrick to consider the future organisation of the Army Medical Service.

Resolved: That a letter be written to the Secretary of State for War, by the President of Council, on behalf of the Council of the British Medical Association, in which Mr. Brodrick be asked if he will now, or at a later period, hear witnesses in support of the terms of the Report which has been submitted to him; and, if he consents, that the names of witnesses shall be submitted to him by the President of Council.

The President of Council reported that he had been in correspondence with the Right Honourable Sir Herbert Maxwell, Bart., M.P., F.R.S., relative to the appointment of further representation of the medical profession on the committee appointed to consider the amendment of the first schedule annexed to the Pharmacy Act, 1868, namely:

Sir Herbert Maxwell, Bart., M.P., F.R.S. (Chairman); Mr. Alexander Cross, M.P.; Professor T. E. Thorpe, C.B., F.R.S.; Professor W. A. Tilden, F.R.S.; Dr. Thomas Stevenson; Mr. William Martindale, F.C.S.; and Mr. J. H. Harrison.

The President of Council also stated that Sir Herbert Maxwell had replied that in the opinion of the Lord President of the Council the Committee was sufficiently represented from a medical point of view.

Resolved: That the following Sections be thrown open to the public at the Annual Meeting at Cheltenham:—State Medicine Section, Psychological Medicine Section, and Navy, Army, and Ambulance Section.

## PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee was held at the office of the Association, 429, Strand, W.C., on Tuesday, July 9th, 1901.

*Present:*

Dr. S. WOODCOCK, Chairman, in the Chair.
Dr. W. A. ELLISTON, President.
Dr. G. B. FERGUSON, President-elect.
Dr. J. ROBERTS THOMSON, President of Council.
Mr. ANDREW CLARK, Treasurer.

Mr. D. B. BALDING, Royston.
Dr. JAMES BARR, Liverpool.
Dr. R. L. BOWLES, London.
Dr. T. R. BRADSHAW, Liverpool.
Dr. R. C. BUIST, Dundee.
Dr. J. S. CAMERON, Leeds.
Mr. COLIN CAMPBELL, Saddleworth.
Mr. JAMES CANTLIE, London.
Dr. W. A. CARLINE, Lincoln.
Mr. J. WARD COUSINS, Southsea.
Dr. ALFRED COX, Gateshead.
Dr. P. M. DEAS, Exeter.
Dr. T. M. DOLAN, Halifax.
Dr. W. DOUGLAS, London.
Brig.-Surg.-Lieut.-Col. E. F. DRAKE-BROCKMAN, London.
Dr. BRUCE GOFF, Bothwell.
Dr. MAJOR GREENWOOD, London.
Dr. J. GROVES, Carisbrooke.
Surg.-Gen. J. B. HAMILTON, M.D., London.
Dr. A. J. HARRISON, Clifton.
Mr. EVAN JONES, Aberdare.
Dr. C. H. MILBURN, Hull.
Sir JOHN WM. MOORE, M.D., Dublin.
Dr. W. NEWMAN, Stamford.
Mr. C. H. W. PARKINSON, Wimborne Minster.
Dr. F. M. POPE, Leicester.
Dr. A. BROWN RITCHIE, Hulme.
Dr. R. SOMERVILLE, Galashiels.
Mr. W. G. SPANTON, Hanley.
Mr. C. R. STRATON, Wilton.
Dr. J. C. THRESH, Chelmsford.
Dr. MARTINDALE WARD, Twickenham.
Dr. DAWSON WILLIAMS, London.
Dr. W. L. WINTERBOTHAM, Bridgwater.

The minutes of the last meeting having been printed and circulated, were taken as read and signed as correct.

### THE WAGE LIMIT QUESTION.

The CHAIRMAN reported that three more answers had been received from Branches on the question of the wage limit.

### THE DRAFT ANNUAL REPORT.

The draft annual report was discussed, and after emendation was adopted. (See BRITISH MEDICAL JOURNAL, July 13th, p. 106.)

### THE AMENDMENT OF THE CORONERS ACT.

Dr. MARTINDALE WARD, in moving the adoption of the minutes of the Subcommitee for the amendment of the Coroners Act, which had met that day, said that the Subcommittee had prepared the following general lines on which they wished the proposed Bill to be drafted:

(1) Each and every qualified medical witness, without exception, summoned by the coroner to give evidence at an inquest, or who, by his order, has made a *post-mortem* examination of the body on which an inquest is held, shall be entitled to receive remuneration as follows:

(*a*) For every day, and for each adjournment at which the practitioner attends by request of the coroner to give evidence at an inquest, one guinea; and

(*b*) For making a *post-mortem* examination of the body of the deceased, one guinea.

(*c*) If the contents of the stomach are required to be examined by analysis, it should be the duty of the coroner to instruct an expert for that purpose.

(2) Payment of fees to medical practitioners who have at the request of the coroner,

(*a*) Afforded him special medical evidence when an inquiry into the death of a person has been made but no inquest held. If an inquest is held after such preliminary evidence has been taken by the coroner, the doctor who gave such evidence shall be called and give evidence in court, but shall only be paid for giving such evidence in court.

(*b*) Payment to coroners for such preliminary investigation.

(3) Reasonable fees to coroners for attendance at any court of justice in order to prove "depositions" taken at inquests when committal of a prisoner had taken place.

(4) Compulsory notification by all registrars to coroners of all deaths reported to them in which the cause of death has not been "ascertained" and certified to by duly registered medical practitioners.

The motion was seconded by Dr. ROBERTS THOMSON, and carried.

### THE FACTORY AND WORKSHOPS AMENDMENT BILL.

Dr. SPOTTISWOODE CAMERON, in moving the adoption of the minutes of the Public Health Subcommittee, said that the Subcommittee had met that day and had considered the replies with regard to the regulations as to medical practice in the Colonies, and they would ask to be allowed to continue the consideration of the subject and to report to a later meeting.

The Subcommittee had also considered a communication from the Secretary of the Association of Certifying Factory Surgeons, having reference to the new Factory and Workshops Bill now Parliament. It was considered exceedingly important that certain alterations should be made in the Bill as it at present stood. The present Factory Act required that certain accidents should be reported to the certifying surgeon, who then made an examination and report, and by Clause 35 of the new Bill such notice would only be sent to the certifying surgeon after being ordered by the Secretary of State. The Subcommittee proposed that the Council of the British Medical Association should be recommended to support the action of the Association of Certifying Factory Surgeons to have the words "if so requested by the Secretary of State" omitted. The other matter was a financial one. At the present time a certifying surgeon was required to make an annual report which was of great value, and entailed considerable labour, but for which he received no remuneration, the Association of Certifying Factory Surgeons suggested that a clause should be introduced into the Bill authorising a small payment to be made for this annual report.

The motion was seconded by Dr. GROVES, and carried.

THE VACCINATION QUESTION.

Dr. COLIN CAMPBELL said that he knew that inspectors of the Local Government Board were endeavouring to get up material with reference to some amendment of the new Vaccination Act when it expired. He thought it very desirable that the attention of the Vaccination Subcommittee should be called to the matter.

The CHAIRMAN undertook that the matter should be brought to the notice of the Chairman of the Vaccination Subcommittee.

## METROPOLITAN COUNTIES BRANCH.

THE annual meeting of the Branch was held at the Hotel Cecil on Tuesday, June 25th, and was attended by 43 members and visitors.

*Term of Office of Members of Council.*—The amendment to Rule 10 of the By-laws of the Branch, providing that no ordinary member of Council shall remain in that office for more than three consecutive years, was submitted by the Council to the meeting for corroboration, and was unanimously adopted.

*President's Address.*—After the usual business the new President, Dr. STEPHEN MACKENZIE, was inducted in the chair, and delivered the address, which is published at p. 137. A hearty vote of thanks was given to the outgoing President, Mr. George Eastes, for his great services to the Branch during the past year, and a similar compliment was paid to the retiring vice-presidents and Council, and to Dr. Mackenzie for his address.

*Annual Dinner.*—The annual dinner followed the meeting. After the loyal toasts Mr. BUTLIN proposed the "Medical Services of the Imperial Forces," which was responded to by Colonel DRAKE-BROCKMAN. The "British Medical Association" was proposed by Dr. KIALLMARK, and Mr. ANDREW CLARK replied. Mr. S. J. HUTCHINSON then proposed the "Metropolitan Counties Branch," which was replied to by the PRESIDENT.—The toasts of the "Visitors" and the "Secretaries" completed the list. It was much regretted that both the outgoing President, Mr. George Eastes, and the Senior Secretary, Mr. H. B. Robinson, were prevented by family bereavements from attending the dinner.

## LANCASHIRE AND CHESHIRE BRANCH.

THE sixty-fifth annual meeting of this Branch was held at Oldham on June 26th. The members assembled at noon at the Town Hall, where they were received by the Mayor (Mr. John Hood), who was supported by the President (Mr. R. C. Brown, M.B., Preston), the President-elect (James Corns, M.D., Oldham), the Hon. Secretary (T. Arthur Helme, M.D., Manchester), and the Hon. Local Secretary (Mr. G. Robertson, M.B., Oldham).

*Luncheon.*—Subsequently they were entertained at luncheon by the members residing in Oldham.

GENERAL MEETING.

At 2.30 P.M. the general meeting took place, and was attended by about 80 members. The chair was taken by the retiring President (Dr. BROWN).

*Confirmation of Minutes.*—The minutes of the last annual and intermediate meetings were confirmed.

*Report of Council.*—The report of the Council was read as follows:

The Council of the Lancashire and Cheshire Branch of the British Medical Association has much pleasure in presenting its report for 1900-1 to the members of the Branch. The Council has held ten meetings during the year, and has assiduously watched all matters pertaining to the welfare of this Branch, the Association, and the profession generally. In the report of last year it was stated that

In view of the resolution of this Branch that, when matters of general policy or affecting the profession at large are about to be discussed by the Central Council of the Association, the Branches should have an opportunity of expressing an opinion on such matters, the Council instructed the representatives to bring the matter before the Central Council. After some discussion the General Council of the Association resolved to accept the principle for the necessity of consulting the Branches on all important questions, and this matter, along with others connected with the organisation of the Association, was referred to the Journal and Finance Committee, in order that a well-considered scheme of reform should be drawn up.

The result of this reference was that, in spite of the most earnest opposition and advice on the part of the representatives of this Branch, the Central Council launched a scheme of reconstitution of the Association whereby the Central Council would have become an autocratic body from whose decisions there would be practically no appeal. The Branch Council thereupon issued a memorandum, which was sent to all members of the Association residing within the areas of the Lancashire and Cheshire and the Metropolitan Counties Branches, pointing out the dangers of the proposed scheme, and urging members to attend the special meeting of the Association called for the purpose of adopting the proposed scheme in London on July 18th, 1900, in order to protect the interests and privileges of the members of the Association. This resulted in the emphatic rejection of the scheme, and in consequence, at the ensuing annual meeting of the Association held at Ipswich, a Special Committee was appointed to consider the whole question of the reconstitution of the Association, and to issue a provisional report for discussion by the Branches. This Branch was fortunate in that two of its members, Drs. Woodcock and Ritchie, had seats upon this Committee. The provisional report was issued in March, 1901, and in order to facilitate the discussion of its principles by members of this Branch, the Council arranged for meetings of members to be held in twenty-four suitable centres. These meetings were attended by 226 members (attached and unattached), and the principles of the proposed scheme of reorganisation were almost unanimously approved. Subsequently a general meeting of the Branch was held, when official sanction was given to the approval of the scheme manifested in the divisional meetings. The Council reports with pleasure the continued growth of the Branch. During the past twelve months 93 new members have been elected, while the number has been depleted by 24 deaths and 35 resignations, leaving a present membership of 1,236. There still remain about 250 unattached members of the Association residing in this district. The members who have been removed by death, and whose loss the Council sincerely deplores, are Professor D. J. Leech, of Manchester, who was President of the Branch in 1890, Vice-President in 1880, and Honorary Secretary from 1876 to 1878; Professor Tom Jones and Dr. Massiah, of Manchester, who were both Vice-Presidents in 1898; and Drs. J. Barr (Bolton), Braddon, Bredin, Butterworth, Cannell, Carson Clarke, Cowan, A. Fisher, Gibson, Heap, Heppard, Hodgson, McAulay, Mallett, Pearcey, Ramsden, Robertson, A. Samuels, H. A. Scott, G. Stone, and Todd. Financially the Branch is in a satisfactory position, the balance at the end of last year being £448 8s. 7d.

*Financial Statement.*—The statement of account as at December 31st, 1900, was as follows:

*Receipts.*

| 1900. | £ | s. | d. |
|---|---|---|---|
| Balance from 1899 ... | 414 | 16 | 9 |
| Interest, less commission | 11 | 7 | 10 |
| Subscriptions ... ... | 146 | 15 | 0 |
| | 572 | 19 | 7 |

*Disbursements.*

| 1900. | £ | s. | d. |
|---|---|---|---|
| Printing, stationery, and printer's postages ... | 81 | 18 | 7 |
| Secretary's postages and telegrams ... ... ... | 4 | 6 | 4 |
| Travelling expenses — P. B. C. ... ... ... | 15 | 9 | 4 |
| Travelling expenses—J. and Finance C. ... ... | 2 | 18 | 0 |
| Travelling expenses — Secretary ... ... ... | 3 | 10 | 9 |
| Representatives at funeral of Dr. Leech ... ... | 0 | 12 | [illegible] |
| Manchester meeting ... | 3 | 3 | 0 |
| Council meetings ... ... | 0 | 7 | 6 |
| Conference on medical organisation ... ... | 7 | 10 | [illegible] |
| Memorial to candidates for S. Manchester ... | 2 | 5 | [illegible] |
| Clerk's work ... ... ... | 2 | 10 | [illegible] |
| Balance in bank ... ... | 448 | 8 | [illegible] |
| | 572 | 19 | 7 |

T. ARTHUR HELME, Hon. Secretary.

Audited and found correct, June 5th, 1901.

DANIEL A. O'SULLIVAN, Hon. Auditor.

On the motion of Dr. THORP (Todmorden), seconded by Dr. BRASSEY BRIERLEY (Manchester), it was resolved:

That the report of the Council and the financial statement be adopted.

*Report of Representatives.*—Dr. RITCHIE gave a short account

of the work done by the representatives of the Branch on the General Council of the Association and on the Parliamentary Bills Committee, and a discussion followed in which Drs. WOLSTENHOLME, COLIN CAMPBELL, BARR, WOODCOCK BRIERLEY, G. H. BROADBENT, CRAWSHAW, and others took part.

*Election of Officers.*—The PRESIDENT announced that the following gentlemen were elected in accordance with the laws of the Branch:—*President:* James Corns, M.D., Oldham. *President-elect:* A. C. E. Harris, M.D., Birkenhead. *Vice-Presidents:* J. Dixon-Mann, M.D., Manchester, and W. Armstrong, Buxton. *Honorary Secretary:* T. Arthur Helme, M.D., Manchester. *Seven Representatives in the Council of the Association:* J. Barr, M.D., Liverpool; J. Brassey Brierley, M.D., Manchester; Colin Campbell, Uppermill; A. Godson, M.B., Cheadle; T. Arthur Helme, M.D., Manchester; A. B. Ritchie, M.B., Manchester; S. Woodcock, M.D., Manchester. *Five Representatives in the Parliamentary Bills Committee:* J. Barr, M.D., Liverpool; T. R. Bradshaw, M.D., Liverpool; A. Brown Ritchie, M.B., Manchester; S. Woodcock, M.D., Manchester; D. A. O'Sullivan, M.D., London. *Fifty Ordinary Members of Council:* J. P. Aitchison, M.D., Blackburn; J. Lawton Andrew, M.D., Heaton Norris; *J. Atkinson, M.D., Crewe; F. H. Barendt, M.D., Liverpool; *E. W. Barnes, Liverpool; W. Berry, F.R.C.S.I., Wigan; H. W. Boddy, M.D., Manchester; W. G. Booth, Manchester; Owen Bowen, Everton; *R. C. Brown, M.B., Preston; *John Brown, Bacup; J. B. Brierley, M.D., Manchester; Wm. Campbell, M.D., Liverpool; William Carter, M.D., Liverpool; *S. Crawshaw, M.D., Ashton-under-Lyne; J. Nelson Cregeen, Liverpool; E. T. Davies, M.D., Liverpool; W. J. Robertson Dunn, Liverpool; E. A. Fox, M.D., Warrington; T. W. H. Garstang, Bowdon; C. R. Graham, Wigan; K. Grossmann, M.D., Liverpool; J. Henry, M.D., Rochdale; *R. Harris, M.B., Southport; *B. W. Housman, Stockport; Horace Jeffries, Bolton; *B. Jones, Leigh; *H. W. King, M.D., Chester; J. Lambert, M.D., Birkenhead; *F. C. Larkin, Liverpool; C. J. Macalister, M.D., Liverpool; Charles Macfie, M.D., Bolton; A. P. Mooney, M.B., Preston; E. H. T. Nash, Accrington; *D. Owen, Irlams-o'-th'-Height; H. Laird Pearson, Birkenhead; Edwin Rayner, M.D., Stockport; C. J. Renshaw, M.D., Ashton-on-Mersey; D. Turnbull Smith, M.B., Preston; A. Stewart, M.D., Pendleton; *G. Thompson, M.D., Oldham; J. Thornley, M.D., Bolton; C. W. Thorp, Dobroyd; J. J. Tisdall, Liverpool; Francis Vacher, Birkenhead; G. C. Walker, M.D., Southport; J. W. Watkins, M.D., Newton-le-Willows; *Walter Whitehead, Manchester; T. M. Wills, Bootle; R. H. Wolstenholme, Salford. (* New nominations.)

*Appointment of Auditors.*—Dr. Thornley (Bolton) and Mr. Westmacott (Manchester) were elected Auditors.

*Vote of Thanks to the Retiring President.*—It was proposed by Dr. S. WOODCOCK (Manchester), seconded by Dr. COLLINSON (Preston), and resolved with acclamation that a very hearty vote of thanks be accorded to the retiring President for his conduct of the chair during the past twelve months. Dr. R. C. BROWN replied:

*Votes of Thanks.*—It was proposed by Dr. MACNEILAGE (Manchester), seconded by Dr. ELLIS JONES (Chorley), and resolved that a hearty vote of thanks be accorded to the office-bearers, members of Council, and auditors, one of whom, Dr. O'Sullivan, retires from office owing to his removal from the district. The HONORARY SECRETARY alluded to the work done for the Branch by Dr. O'Sullivan, whom they were all sorry to lose. Dr. O'Sullivan had written stating his regrets that he was unable to be present at the annual meeting, and expressing the most kindly sentiments towards the Branch with which he had been so long associated. The Honorary Secretary said he was sure these sentiments would be most warmly reciprocated towards Dr. O'Sullivan, whom the Branch had that day elected as one of their Representatives on the Parliamentary Bills Committee.

*Next Annual Meeting.*—The HONORARY SECRETARY stated that an invitation had been received from the members of the Branch residing in Birkenhead to hold the next annual meeting in that town. It was proposed by Dr. S. WOODCOCK, seconded by Mr. W. BERRY, and resolved.

That the annual meeting of 1902 be held in Birkenhead.

*Induction of New President.*—Dr. R. C. BROWN, the retiring President, then introduced his successor to the presidential chair, Dr. James Corns (Oldham).

*President's Address.*—The PRESIDENT, after thanking the members for the honour conferred upon him, proceeded to give his inaugural address upon Some Points in the Medical Aspect of Oldham, an instructive and valuable account of the methods successfully adopted in Oldham for the solution of problems which were a source of difficulty in many towns, involving the protection of the public and the honour of the profession. On the proposition of Dr. JAMES BARR (Liverpool), seconded by Mr. W. BERRY (Wigan), it was resolved:

That a very hearty vote of thanks be accorded to the President for his valuable and interesting address.

To which Dr. CORNS replied.

*Vote of Thanks to the Mayor and Corporation of Oldham.*—On the proposition of the PRESIDENT (Dr. Corns), seconded by the HONORARY SECRETARY (Dr. T. Arthur Helme), it was resolved:

That a very hearty vote of thanks be accorded to the Mayor and Corporation of Oldham for the use of the Town Hall on the occasion of the annual meeting of the Branch.

The MAYOR OF OLDHAM replied.

*The General Medical Council Election.*—On the proposition of Dr. S. CRAWSHAW (Ashton-under-Lyne), seconded by Dr. T. ARTHUR HELME (Manchester), it was unanimously resolved:

That it is advisable to secure a representative from the North of England on the General Medical Council.

As the hour of 4 o'clock had now arrived, the meeting was closed in order that the members might avail themselves of the excellent excursion arrangements provided by the local members of the Branch.

*Specimens and Cases.*—The following were exhibited: (1) Radiograph and bullet, from a case where the bullet had lodged in hollow between left ear and lower jaw, too deep to be palpable, causing difficulty in opening mouth. Wound of entry in left temple. Bullet extracted under chloroform. Partial left facial paralysis, which cleared off entirely in three months. Bullet flattened by bone—shown by Dr. J. W. TALENT (Ashton-under-Lyne); (2) removal of vesiculi seminales for tuberculosis—patient and specimen shown by Dr. G. ROBERTSON; (3) large fibromyoma removed by hysteromyomectomy—patient and specimen shown by Dr. G. ROBERTSON; (4) malignant papilloma of ovaries and omentum—specimen and patient shown by Dr. G. ROBERTSON: (5) young woman from whom the uterus and appendages were removed before puberty—Dr. FAWSITT: (6) fistula persisting after removal of the Fallopian tubes—Dr. FAWSITT; (7) Case of ankylosis of lower jaw remedied by operation—Dr. FAWSITT; (8) cirsoid aneurysm of thigh—Dr. HODGSON; (9) three cases of empyema treated by his method—Dr. G. ROBERTSON, etc.

*Exhibits.*—There was a large exhibition of surgical instruments, drugs, foods, medicinal and aerated waters, books, etc.

### EXCURSIONS.

At 4 P.M. the members were driven in brakes, provided by members residing in Oldham, on the following excursions: (1) To the Oldham Waterworks, the party being conducted by Dr. Carson: (2) to the Fire Station, Park, and Infirmary, conducted by Dr. Fort and Dr. Robertson, at whose residence the members were most hospitably entertained at afternoon tea by Mrs. Robertson.

### DINNER.

In the evening over seventy members and guests sat down to dinner in the Town Hall. Dr. CORNS occupied the chair, and was supported by the following gentlemen, who were the guests: The Mayor of Oldham (Mr. J. Hood), the Town Clerk (Mr. A. Nicholson), Mr. Joseph Dronfield, Mr. John Dodd, Rev. P. Lancashire, Rev. Dean O'Callaghan, and Rev. John Leathley. After "The King" had been duly honoured, "The Lancashire and Cheshire Branch" was proposed by the Rev. P. LANCASHIRE and responded to by Dr. T. ARTHUR HELME; and "The Town of Oldham" was proposed by Dr. R. C. BROWN and responded to by the MAYOR. Dr. FAWSITT proposed "The Guests," and Mr. DODD, Rev. DEAN O'CALLAGHAN, and Rev. J. LEATHLEY responded; and finally "The President's Health" was given by Dr. S. WOODCOCK.

An excellent musical programme had been provided by Dr. Ford, who ably superintended the arrangements for luncheon and dinner, and this contributed in no small measure to the enjoyment of the guests. Altogether a most enjoyable day was spent, and the President and Local Committee (which was

fortunate in having so energetic and amiable a Local Secretary. Dr. Robertson) have the satisfaction of knowing that owing to their lavish hospitality and excellent arrangements the Oldham meeting was a complete success. No small measure of this success was due to the Town Hall being placed at the disposal of the members for the purposes of the annual meeting by the Mayor and Corporation, who desired, in so doing, to show their appreciation of the efforts made by the local members of the profession in promoting the welfare of the people and town of Oldham.

## SOUTHERN BRANCH.

THE twenty-eighth annual meeting of this Branch was held in the Drill Hall, Portsmouth, on the 4th inst.. Mr. C. A. STRATON, of Wilton, presiding over a large attendance of members.

*Election of Officers.*—The result of the ballot for officers for the ensuing year was announced as follows:—*President*: Mr. C. Knott. *President-elect*: Mr. D. Browne. *Vice-Presidents*: Professor McLeod, M.D., and J. Cowper, M.B.. *Members of Council*: C. C. Claremont, M.D., Southsea; Mr. L. S. Luckham, Salisbury; Surgeon-General Cuffe, C.B., Southsea; Norman Aldridge, M.B., Southampton; T. A. Buck, M.B., Ryde; and Mr. J. F. Briscoe, Alton. *Honorary Secretaries of Districts*: Isle of Wight, Brigade Surgeon Thomas (Sandown); Southampton, A. B. Wade, M.B.; Winchester, T. C. Langdon, F.R.C.S.; South Wiltshire, Mr. J. E. Gordon; South-East Hants, J. G. Blackman, M.D. *Representative on Parliamentary Bills Committee*: Mr. C. R. Straton, Wilton. *Representatives on the Council of the Association*: J. Groves, M.B.; W. M. Harman, M.D. *Honorary Secretary and Treasurer*: Mr. H. J. Manning.

*Finances.*—The TREASURER reported that a sum of £50 had been placed on deposit as a reserve fund, and that a sum of two guineas had been contributed to the expenses of the forthcoming Congress on Tuberculosis. A sum of five guineas was voted to the funds of the Royal Medical Benevolent College, Epsom.

*Papers and Demonstrations.*—Dr. CLAREMONT (Southsea) exhibited a new pattern atomiser, and explained its structure and advantages.—Dr. WARD COUSINS (Southsea) exhibited photographs of patients on whom he had performed excision of the knee-joint, and of abdominal tumours which he had removed.—Mr. BRISCOE (Alton) read notes of a case of mental disorder, accompanied by suicidal and homicidal impulses.—A paper by Dr. PURVIS (Southampton) was postponed for want of time.

*Luncheon.*—The members were hospitably entertained at luncheon by Mr. C. Knott (Southsea), the Mayor of Portsmouth, and other members of the Town Council being among the invited guests.

*Visit to H.M.S. Vernon.*—After the meeting the members paid a visit to H.M.S. *Vernon*, torpedo school ship, in Portsmouth Harbour, which was greatly enjoyed.

## WEST SOMERSET BRANCH.

THE fifty-eighth annual meeting was held at the Langport Arms, Langport, on Wednesday, July 3rd. The chair was taken by the new PRESIDENT, Mr. J. P. Johnstone (Langport), and there were present sixteen members and one guest.

*Confirmation of Minutes.*—The minutes of the last meeting and of the special meeting were read and approved.

*Report of Council and Treasurer's Accounts.*—The report of Council and the Treasurer's accounts, which had been audited and showed a balance of £5 13s., were read and adopted.

*Election of Officers.*—The following officers were elected for the ensuing year:—*President-elect*: Mr. E. E. Frossard (Bishop's Lydeard). Dr. Winterbotham (Bridgwater) was re-elected representative on the General Council and Parliamentary Bills Committee. *Honorary Secretary and Treasurer*: Mr. W. B. Winckworth (Taunton), *vice* Dr. R. Liddon Meade-King (Taunton), resigned. Dr. Meade-King was elected, and Messrs. Marsh (Yeovil) and Gordon Henry (Minehead) were re-elected, to the Branch Council.

*Vote of Thanks to Dr. Meade-King.*—A hearty vote of thanks was unanimously accorded to Dr. Meade-King for his past services as Honorary Secretary and Treasurer, and the regret of the members at his resignation was expressed.

*Future Meetings.*—It was decided to hold the next annual meeting at Bishop's Lydeard, and to leave the arrangement of the intermediate meetings to the Council.

*President's Address.*—The PRESIDENT read a paper on an analysis of 900 consecutive cases of midwifery, after which, on the proposition of Dr. MACDONALD, seconded by Mr. SYDENHAM, a vote of thanks to him was carried with acclamation.

## WEST AUSTRALIAN BRANCH.

THE ordinary meeting of the Branch for June was held on June 1st at Fremantle. Dr. DAVY, Vice-President, was in the chair.

### REPORT OF CONSTITUTION COMMITTEE.

The Report of the Constitution Committee was considered, and the following resolutions were carried unanimously:

1. That the West Australian Branch, while approving generally of the Constitution Committee's scheme for the reorganisation of the Association, does not feel justified in taking an active part in the discussion of its details, except in so far as they affect the members in the Australian States.

2. That the West Australian Branch holds that the new constitution should specifically provide that the Australian Branches shall have complete autonomy, subject to the fundamental laws of the Association, as declared in the Memorandum and Articles of Association of the Company.

3. That the West Australian Branch holds that the fundamental laws of the Association ought, under no circumstances, to be declared in by-laws or otherwise than in the Memorandum and Articles of Association.

4. That the West Australian Branch holds that there is grave risk to the future usefulness of the British Medical Association as a factor in advancing and maintaining the interests of the medical profession in Australia, unless the Australian Branches are free to make and give effect to their own rules for the admission and expulsion of members.

5. That the West Australian Branch holds that the annual subscription of the members of the Association in the Australian Branches should not be made to include any sum contemplated to be made a refund in the form of a "capitation grant" as proposed in the first, third, and fourth paragraphs of the Constitution Committee's Recommendation 20; and that the Australian Branches and Divisions be empowered to make rules regulating the subscriptions of their members, which shall include the annual subscription of their members to the Association.

6. That the Association, in the event of the Recommendations for Local Organisation by means of Divisions, and the agglomeration of such Divisions into Branches being adopted, be asked to approve of the West Australian Branch remaining undivided, and so of being regarded as a Division for the purposes defined in the Recommendations.

The following further resolutions were adopted:

7. That a copy of these resolutions, 1 to 6, be forwarded to the General Secretary, London; and also to the Secretary of the New South Wales Branch, intimating that we agree with the recommendations of the New South Wales Branch.

8. That a letter be sent from the West Australian Branch to the Chairman of the Constitution Committee, asking that in the event of the Association adopting a new Constitution or any modification of that now in existence, special provision be made therein to the effect that the Australian Branches of the Association shall be autonomous, that is to say, shall have power to make their own rules and regulations, subject only to the fundamental laws of the Association, as declared in the Memorandum and Articles of Association of the British Medical Association, or in the Charter thereof, as the case may be, and that such fundamental laws shall not prohibit the Australian Branches from making rules and regulations for the admission and expulsion of members, and asking, further, that the annual subscription to the Association of the members of such Branches be not made to include any "capitation grant" as that proposed in Recommendation 20 of the Constitution Committee's Provisional Report to the Branches.

9. That the West Australian Branch holds that the British Medical Association should use every effort to assist in the federation of the Australian organisations with a view of exercising their autonomy according to the provisions of Resolution 2, 3, 4, and 5.

10. That from the profit on the BRITISH MEDICAL JOURNAL a due proportion be remitted to the Australian Federated Organisation, for scientific, literary, and other purposes.

## NEW ZEALAND BRANCH.

THE fifth annual meeting of the New Zealand Branch opened in Wanganui on March 4th. Dr. THOMAS, President, occupied the chair, and, after welcoming those present, the general business of the Branch was proceeded with.

*Annual Report and Statement of Account.*—The annual report and statement of account were accepted, and the financial position of the Branch was shown to be in a sound condition, and improving yearly.

*Next Annual Meeting.*—The PRESIDENT announced that the Council had accepted an invitation from the Otago Section to hold the next annual meeting in Dunedin.

*Election of Officers.*—The following officers were elected for the current year: *President-elect:* D. Colquhoun, M.D., Dunedin. *Chairman of Council:* W. Collins, Wellington. *General Secretary and Parliamentary Secretary:* Graham Campbell, Christchurch. *Editor:* J. M. Mason, Wellington.

*Chairman of Council.*—In reference to the position of Chairman of the Council, certain members objected to the position being hereditary, and considered that the President of the Wellington Section should have the option of refusing it. Dr. Collins, the President of the Wellington Section, was elected to fill the vacancy for the present year, but it was generally understood that this was not to be considered a precedent. It was also resolved to request the several Sections of the Branch to co-operate with the editor of the *Journal* by appointing local sub-editors.

*Expulsion.*—The action of the Council in expelling a practitioner from membership of the Branch for unprofessional conduct, was confirmed by the general meeting. It was resolved that all the papers in this matter be referred to the Council in London, with a request that action be taken, and that Dr. W. Young, who represents this Branch on the General Council at the annual meeting, be requested to move in the matter.

*Induction of the President.*—After completing the general business, Dr. THOMAS, the retiring President, thanked the members for the honour conferred on him by having given him the opportunity of occupying the presidential chair, and for the cordial way in which they had supported him in his duties. He then inducted Dr. G. R. Saunders as President for the year, and stated that Dr. Saunders was such a regular attendant at annual meetings, and was consequently so well up in the business details that no better successor could have been selected.

*President's Address.*—In his presidential address (Some Diseases Incidental to School Life in New Zealand, with suggested Methods for Combating them), Dr. SAUNDERS gave a masterly discourse on many of the ailments of school children, drawing particular attention to deterioration of vision, curvature of the spine, heart strain, and mental exhaustion, showing how many of these were exaggerated by the faulty methods and appliances of the present day.

*Papers.*—Many of the papers contributed were of a particularly interesting nature, the chief being: Some Life Assurance Questions (Wilson), which dealt with the relations of the medical examiner to the company, and brought out many points which should be most valuable to the latter, as it showed how many of them were imposed upon by their travelling agents; Malpositions of the Uterus, their Treatment, Operative and Otherwise (Cleghorn), which raised an animated discussion as to the relative merits of ventro-suspension, vaginal fixation, the Alexander-Adams operation, and intra-abdominal shortening of the round ligaments; Artificial Limbs (Valintine), which was a personal experience, and pointed out the necessity of patience and perseverance on the part of the wearer in adapting himself to their use; The Relation of Megrim to Granular Kidney (Cleghorn); The Feeding of Infants (Purdy); and Acute Intestinal Obstructions (Fell).

*Excursions.*—The social aspect of the meeting was not neglected, as a most enjoyable trip up the Wanganui River was arranged for, and some 25 of the visitors took advantage of it. This is one of the "sights" of New Zealand, and the trip was well worth the little discomforts entailed in accomplishing it.

*Annual Dinner.*—The annual dinner, which is a distinctive feature of these meetings, was an undoubted success, and proves that many members of the Branch are as capable of singing a song or telling a good story as of carrying on a discussion on some knotty and abstruse medical point.

*Garden Party, etc.*—Mrs. Earle (the wife of the President of the Wanganui Section) gave a charming garden party in honour of the visitors, and numerous little dinners, lunches, etc., filled up the other vacancies.

The Wanganui Section of the Branch which had charge of the arrangements for the meeting, is to be congratulated on the success which met its efforts, as everything went off without a hitch, and everyone present thoroughly enjoyed himself.

These meetings are becoming a great feature in the *Annus Medicus* of all members of the profession in New Zealand, and on each occasion new recruits are admitted to the Association, which is becoming a very powerful body.

## JAMAICA BRANCH.

AN ordinary meeting of this Branch was held at the Public Hospital on May 29th. There were present Drs. Henderson, Castle, C. W. M. Allwood, Ragg, Armstrong, Harry, Lockett, D. Neish, and Da Costa (Secretary).

*Confirmation of Minutes.*—The minutes of the previous meeting were read and confirmed.

*New Members.*—Drs. R. Dowden and F. de L. Myers were elected members of the Branch.

*A Case of Enteric Fever treated by Dr. John Woodridge's Method.*—Dr. RAGG described the "abortive" treatment as consisting in the very frequent administration of antiseptics and eliminants in tablet and capsular form, minute doses being exhibited during the first forty-eight hours every fifteen minutes, and afterwards with less frequency, and he claimed that it not only aborted the disease, but greatly lessened its virulence and reduced the mortality to *nil*. In the case reported—a moderately severe case of typhoid fever—the treatment was started on the sixth day of disease and carried out to the letter. Although disease was in no way aborted, it was thought that the patient had done better than would have been possible under the ordinary antiseptic treatment. The highest temperature recorded was 105.5° F., and throughout the second week the thermometer registered or closely approximated 105° daily, but the patient never once had a headache, was never listless or apathetic, but bright, cheerful, and lively; there was no tympanites, meteorism, or abdominal pain, and there was throughout the disease a general state of well-being unequalled in his experience in cases of much less severity. The case was complicated by a sharp attack of bronchitis of ten days duration, and a thrombosis of one of the crural veins, which occurred on the twenty-second day of disease, retarding convalescence. The patient was out of bed and on a liberal diet in six and a-half weeks.

*Abdominal Aortic Aneurysm.*—Dr. G. V. LOCKETT described the symptoms of two cases:

CASE I was a man about 40, black. He was thin and spare, slightly anæmic, perhaps slight emaciated, and his symptoms were constant pain round his waist and constipation. The liver dulness was enlarged, but an exploratory laparotomy revealed healthy liver. On either side, however, of the spinal column there was a smooth, semi-solid, non-pulsating mass that extend from the crura of the diaphragm down to the kidneys and pushed both these organs forward. About a week later he complained of pain in the right side of his chest, and the signs of fluid were present, but no *bruit*. On putting in a trocar and cannula about the ninth space, front axillary line, blood came away, and on passing a long probe the dorsal spinal column was found bare. He died about ten days after of asthenia. The *sectio* disclosed an enormous false aneurysm of the aorta beginning about the fifth vertebra, filling a portion of the right side of the chest, compressing the right lung upwards, pushing the liver down and pushing both kidneys forward. Case II. A male, aged 38, who had been exposed to hard life, and was thin and spare. For some six months previously off and on he had complained occasionally of pain in the left lumbar region. His symptoms were as follow: Pain left lumbar region, region of erector spinæ, of a more or less constant nature. On several occasions had exacerbations of pain when he got up in the morning and emptied his bladder. He could only get to sleep in certain position with pillows, etc., against his loin, and as a rule lying on his left side. Later on he had paroxysms of pain referred to the whole of front and inner aspect of left thigh. Of signs there were only the *en garde* condition of the left erector spinæ. He left the hospital after seven weeks, worse than he came in. Some three or four days after he left his private doctor discovered a huge mass in the region an enlarged spleen would occupy. Seven days after he left hospital, when he was again seen, there was the huge pulsating mass, with a loud *bruit*, extending from the outer edge of the right rectus right down into the left pelvis, and filling the abdomen and loin. The aneurysm eventually ruptured into the abdomen.

These patients presented some conditions in common. (1) Both spare, thin, and haggard; (2) a long continuous history of constant pain; (3) neither in the early stage gave any *bruit* on auscultation.

*Impermeable Stricture of the Urethra.*—Dr. ALLWOOD described 3 cases illustrating this condition. The method of dealing with these cases which he advocated was to provide an exit for the urine behind the stricture until the stricture had been thoroughly dilated, the patency of the urethra restored, and any laceration of the mucous membrane healed.

To do this the neck of the bladder should be punctured through the perineum by Cock's method, a big gum elastic catheter passed through the wound into the bladder, and tied in. In this way the patient's urgent condition was relieved as simply and expeditiously as possible, and time was given to establish the passage at leisure, either by forcible dilatation with large instruments (the perineal catheter being replaced after every instrumentation) or by dilatation *plus* an internal urethrotomy. Any operative procedure which had for its object the tieing into the urethra a catheter after dilatation of a stricture was held to be unsound surgery and unsafe. The only danger of the former operationwas wounding the root of the urethra, but this was rather difficult to do.

*Correction.*—With reference to the discussion opened by Dr. Henderson at the last Branch meeting on the treatment of hydrocele, Dr. RAGG desired to correct the report that he had injected the liniment of iodine. The Edinburgh tincture (1 in 16) was the strongest preparation he had used for this purpose.

*Specimen.*—Dr. LOCKETT showed a fibroma of the breast over which the gland was stretched.

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# BRITISH MEDICAL ASSOCIATION.

## SIXTY-NINTH ANNUAL MEETING.

THE sixty-ninth annual meeting of the British Medical Association will be held at Cheltenham on Tuesday, Wednesday, Thursday, and Friday, July 30th, 31st, August 1st, and 2nd, 1901.

*President:* WILLIAM ALFRED ELLISTON, M.D., Consulting Surgeon to the East Suffolk and Ipswich Hospital.

*President-Elect:* GEORGE BAGOT FERGUSON, M.D., Senior Surgeon to the Cheltenham Hospital.

*President of the Council:* JOHN ROBERTS THOMSON, M.D., F.R.C.P.Lond., Consulting Physician to the Royal Victoria Hospital and to the National Sanatorium for Diseases of the Chest, Bournemouth.

*Treasurer:* ANDREW CLARK, F.R.C.S., Surgeon to the Middlesex Hospital and Lecturer on the Principles and Practice of Surgery, Middlesex Hospital School.

An Address in Medicine will be delivered by JAMES FREDERICK GOODHART, M.D., LL.D., Consulting Physician, Guy's Hospital.

An Address in Surgery will be delivered by Sir WILLIAM THOMSON, C.B., M.D., F.R.C.S.I., Surgeon to the Richmond Surgical Hospital, and Honorary Surgeon to His Majesty the King in Ireland.

The Scientific Business of the Meeting will be conducted in thirteen Sections, as follows, namely:

### A.—MEDICINE.

*Ladies' College: Education Room.*

*President:* EDWARD THOMAS WILSON, M.B., F.R.C.P. *Vice-Presidents:* RAYNER W. BATTEN, M.D., F.R.C.P.; SAMUEL WEST, M.D., F.R.C.P.; OSCAR CLARK, M.B. *Honorary Secretaries:* ROBERT KIRKLAND, M.B., 5, Crescent Terrace, Cheltenham; FREDERICK JOHN SMITH, M.D., F.R.C.P., 138, Harley Street, W.

The following discussions have been arranged:

Wednesday, July 31st.—Chronic Diseases of Joints commonly included in the terms Chronic Rheumatism, Osteo-arthritis, and Rheumatic Gout. To be opened by Dr. A. E. Garrod. The following will take part in the discussion: Professor Osler, Dr. A. P. Luff, Dr. Herringham, Dr. Hawthorne, Dr. Calwell, Miss J. Cock, M.D., Dr. E. J. Cave, Dr. L. Knowsley Sibley, Dr. Sarat K. Mullick, and Dr. Armstrong.

Thursday, August 1st.—Peripheral Neuritis in Beer Drinkers, its Precise Causation and Diagnosis. To be opened by Dr. E. S. Reynolds; to be illustrated with lantern slides of cases. The following gentlemen will take part in the discussion: Professor Dixon Mann, Dr. A. P. Luff, Dr. Kelynack, Dr. Michell Clarke, Dr. Nathan Raw, and Dr. Henry Waldo.

The following papers have been announced:

BAMFTON, A. H., M.D. Arsenic as a Blood Tonic; its Failure as demonstrated during the late Epidemic amongst Beer Drinkers.

BARDSWELL, Noel, M.D. Clinical and Experimental Observations on the Effects of Forced Feeding in Normal and Tuberculous People.

CAMPBELL, Harry, M.D. Treatment of Bronchitis.

CAMPBELL, H. J., M.D. The Treatment of Cardio-arterial Disease.

CATON, Richard, M.D. The Means of Arresting Acute Endocarditis.

CHOWRY-MUTHU, D. J. A., M.D. 1. The Presence of Tubercle Bacilli in Cases of Phthisis. 2. The Inhalation of Formaldehyde as an Aid in the Open-air Treatment of Phthisis.

DEMPSEY, Alex., M.D. Case of Acute Lymphatic Leukæmia, with Pathological Report.

EWART, William, M.D. 1. A Preliminary Note on Intravenous Injection of Protargol in Acute Pneumonia, with General Remarks on the "Silver" Treatment of Pneumonia. 2. A Note on a Method for the Surgical Treatment of Tuberculous Meningitis.

HADDON, John, M.D. Symptoms of the So-called Change of Life in Women occurring in Men and both due to Dietetic Errors.

HAWTHORNE, C. O., M.D. Occurrence of Optic Neuritis in Anæmia.

JONES, E. Lloyd, M.D. On the Physical Examination of the Pulmonary Apices.

LOW, W. Stuart, L.R.C.P. Mucin in Gastro-intestinal Irritation and Ulceration.

LUFF, A. P., M.D. On the Composition and Therapeutic Uses of the Cheltenham Waters.

MULLICK, Sarat K., M.B. Factors in the Diagnosis of Disease.

OLDFIELD, Josiah, L.R.C.P. Dietary and the Use of Oil in Chronic Constipation.

RAW, Nathan, M.D. Pneumococcic Arthritis, with Reference to Seven Cases.

RIST, Dr. (Paris). On the Bacteriology of Fœtid and Gangrenous Suppuration, which will be illustrated with microscopic slides and agar culture tubes.

RIVIÈRE, Dr. (Paris). Calomel in the Treatment of Alimentary Diseases.

THOMSON, StClair, M.D. Meningitis from Sphenoidal Suppuration, Two Cases with One Necropsy.

WILKIN, Griffith, C., L.R.C.P. Rheumatic Endocarditis.

WILLIAMS, Chisholm, L.R.C.P. High Frequency Electrical Currents in the Treatment of Pulmonary Tuberculosis.

Three tubes sent by Professor Dixon Mann will be exhibited, showing under the microscope arsenical crystals from (1) horny scales due to hyperkeratosis of the epidermis, (2) from hair, (3) from nail clippings. All from cases suffering from arsenical beer poisoning.

### B.—SURGERY.

*Ladies' College: Division III.*

*President:* REGINALD HARRISON, F.R.C.S. *Vice-Presidents:* HENRY EDWARD WADDY, M.R.C.S.; GILBERT BARLING, F.R.C.S.; WILLIAM ROBERT BUCKELL, F.R.C.S. *Honorary Secretaries:* FREDERICK WILLIAM STORRY, M.R.C.S., Dirleton House, Stroud, Gloucester; HERBERT BRAMWELL, M.D., F.R.C.S.Edin., 32, Promenade, Cheltenham; JOHN MURRAY, F.R.C.S., 110, Harley Street, W.

The following discussions have been arranged:

1. Renal Tension; its Treatment by Surgical Means. To be opened by Mr. Reginald Harrison, F.R.C.S. The following gentlemen will take part in the discussion: Mr. W. D. Spanton, F.R.C.S., Dr. David Newman, and Dr. J. Ward Cousins, F.R.C.S.

2. Gastro-jejunostomy in Ulcer of the Stomach and Duodenum and Pyloric Stenosis. To be opened by Mr. Gilbert Barling, F.R.C.S. The following gentlemen will take part in the discussion: Mr. A. W. Mayo Robson, F.R.C.S., Mr. George Heaton, F.R.C.S., Mr. Thomas Sinclair, F.R.C.S., Mr. B. G. A. Moynihan, F.R.C.S., Mr. L. A. Bidwell, F.R.C.S., Mr. Sinclair White, F.R.C.S., Mr. A. B. Mitchell, F.R.C.S.I., Mr. F. C. Wallis, F.R.C.S., Mr. C. A. Morton, F.R.C.S., Mr. J. Rutherford Morison, F.R.C.S., Dr. J. Ward Cousins, F.R.C.S., and Mr. J. Lynn Thomas, F.R.C.S.

3. Injuries of Joints, with special Reference to their immediate and Remote Treatment by Massage and Movement. To be opened by Mr. Howard Marsh, F.R.C.S. The following gentlemen will take part in the discussion: Mr. R. H. Anglin Whitelocke, F.R.C.S., Mr. T. V. Jackson, F.R.C.S.E., Mr. F. F. Burghard, F.R.C.S., Mr. W. H. Brown, F.R.C.S.I., Mr. J. Jackson Clarke, F.R.C.S., and Dr. J. Ward Cousins, F.R.C.S.

The following papers have been announced:

BEATSON, Geo. T., M.D. The Treatment of Cancer of the Breast by Oöphorectomy and Thyroid Extract.

BRAMWELL, Herbert, F.R.C.S.Edin. Short notes on a case of Movable Kidney producing Pyloric Stenosis and Constriction of the Duodenum by Peritoneal Bands, with specimen.

BURGHARD, F. F., F.R.C.S. The Treatment, Operative and Non-operative, of Congenital Dislocation of the Hip.

DUNBAR, Eliza Walker, M.D. The Reduction of Old Dislocations, illustrated by two cases of five and six years' standing.

FERGUSON, G. B., M.D. Four Operations for Perforated Gastric Ulcer.

HEATON, G., F.R.C.S. A case of Partial Excision of the Pancreas for Multilocular Cystic Tumour.

HUTCHINSON, J., jun., F.R.C.S. Recent Improvements in the Operative Treatment of Renal Calculus.
MORISON, J. Rutherford, F.R.C.S. The After-history of a series of cases of Gastric Ulcer and Pyloric Stenosis treated by Pyloroplasty.
NEWMAN, David, M.D., F.R.C.S. The Symptomatology and Surgical Treatment of Movable Kidney.
PARRY, R. H., F.R.C.S. On Operation for Femoral Hernia.
WHITELOCKE, A. H. Anglin, F.R.C.S. A Case of Hydatid of the Right Pleura successfully treated by Operation.

### C.—OBSTETRICS AND GYNÆCOLOGY.

*Ladies' College: Nos. 1 and 2.*

*President:* Professor JOHN WILLIAM BYERS, M.D. *Vice-Presidents:* ALFRED SQUARE COOKE, M.R.C.S.; WILLIAM DUNCAN, M.D. *Honorary Secretaries:* Miss EVELINE A. CARGILL, M.D., Lansdown Lodge, Lansdown Road, Cheltenham; COMYNS BERKELEY, M.D., 53, Wimpole Street, W.

The following discussions have been arranged:

1. The Causation, Prevention, and Treatment of Miscarriage. To be opened by Dr. Peter Horrocks. The following gentlemen will take part in the discussion: Dr. Hellier, Dr. Munro Kerr, Dr. A. E. Aust Lawrence, Dr. A. V. Macan, Dr. Alfred J. Smith, Dr. W. J. Smyly, Dr. John Williams, Dr. Thomas Wilson, Dr. Halliday Croom, Dr. Alexander Dempsey, Dr. Fred Edge, Mr. G. A. Hawkins-Ambler, Dr. Lycett, Dr. Robert P. R. Lyle, Dr. McCall, Dr. Wm. Duncan, Dr. J. Dysart McCaw, and Dr. Amand Routh.

2. The Diagnosis and Treatment of Metritis and its Relationship to Malignant Disease. To be opened by Dr. John Campbell, F.R.C.S. The following will take part in the discussion: Dr. Mary Scharlieb, Dr. Herbert Snow, Dr. Hellier, Dr. Munro Kerr, Dr. A. E. Aust Lawrence, Dr. A. V. Macan, Dr. Alfred J. Smith, Dr. W. J. Smyly, Dr. Thomas Wilson, Dr. Inglis Parsons, Dr. James Murphy, Dr. Jessett, Dr. Wm. Duncan, Dr. Amand Routh, and Dr. C. E. Purslow.

The following papers have been announced:

BOYD, Mrs. F., M.D. A Case of Twin Pregnancy, Extrauterine and Intrauterine.
CROOM, Halliday, M.D. Deciduoma Malignum.
DUNCAN, W., M.D. When and How to Operate on Uterine Fibroids.
HASTINGS, Gilford, F.R.C.S.Ed Ovarian Pregnancy.
HAULTAIN, F. W. N., M.D. The Reduction of Chronic Uterine Inversion by Abdominal Hysterotomy, with a Successful Case.
HAWKINS-AMBLER, G. A., F.R.C.S. On Shock in Abdominal Operations.
HELLIER, J. B., M.D. (Title not received.)
HORROCKS, P., M.D., will show a Specimen with Microscopic Sections of Deciduoma Malignum.
KERR, Munro, M.B. Notes on Three Successful Cases of Cæsarean Section.
LOCKYER, C. H. J., M.D. A Case of Cystic Fibromyoma in a Single Woman of 23 years; Myomectomy, Recovery.
MARTIN, Christopher, F.R.C.S. On Extirpation of the Vagina and Uterus in Cases of Intractable Prolapse.
MURPHY, James, M.D. Notes on Six Cases of Inversion of the Uterus.
PARSONS, J. Inglis, M.D. Further Report on a New Operation for Prolapse of the Uterus with Notes of 40 Cases.
SCHARLIEB, Mrs. Mary, M.D. On Metritis.
SMITH, Alfred J., M.B. A Successful Laparotomy for Abdominal Pregnancy with Removal of the Fœtus (full term), Placenta and Gestation sac *en masse*. The specimen will be shown.
SNOW, Herbert, M.D. Prevention in Gynæcology.

### D.—STATE MEDICINE.

*Ladies' College: Oxford Room.*

*President:* SHIRLEY MURPHY, M.R.C.S. *Vice-Presidents:* GEORGE HAYNES FOSBROKE, D.P.H.; ARCHIBALD KERR CHALMERS, M.D. *Honorary Secretaries:* JOHN HENRY GARRETT, M.D., 24, Promenade, Cheltenham; JOHN CHARLES JACKSON, D.P.H., Town Hall, Fulham, S.W.

The following discussions have been arranged:

Wednesday, July 31st.—The Relation between County and District Sanitary Administrations. To be opened by Dr. F. T. Bond. The following gentlemen will take part in the discussion: Dr. Handford, Dr. Lloyd Roberts, Dr. Tubb Thomas, and Dr. Fosbroke.

Thursday, August 1st.—Enteric Fever in its Public Health Aspects. To be opened by Dr. Houston. The following gentlemen will take part in the discussion: Dr. C. H. W. Parkinson, Dr. E. M. Smith, and others.

Papers have been promised by Dr. Savage, Dr. W. Brown, Dr. Bryett, Dr. Kenwood, Dr. Priestley, Dr. Handford, Dr. Cooper-Pattin, and Dr. Dixey.

Friday, August 2nd.—The Diseases of Occupations. To be opened by Dr. T. M. Legge.

Papers have been promised by Dr. T. Oliver, Dr. Reid, Dr. Murray, Dr. Dearden, Dr. D'Arcy Ellis, Dr. Haworth, Dr. Greaves, Dr. Prosser White, Dr. H. H. Scott, and Dr. Clayton.

The following papers have also been announced:

ADAMS, P. Targett, M.R.C.S. Port Sanitary Administration and Control of Plague.
BEARDMORE, Russell, M.D. (Title not received.)
DHINGRA, M.L., M.D. The Fallacy of the Permanganate Disinfection of Wells.
MACLEOD, H. G., M.D. The Neglect of Sanitation in Everyday Life.

### E.—PSYCHOLOGICAL MEDICINE.

*Wednesday, July 31st, Ladies' College, No. 5: Thursday and Friday, August 1st and 2nd, Ladies' College, Cambridge Room.*

*President:* JAMES BEVERIDGE SPENCE, M.D. *Vice-Presidents:* JAMES GREIG SOUTAR, M.B.; JAMES CHAMBERS, M.D. *Honorary Secretaries:* MAURICE CRAIG, M.D., Bethlem Royal Hospital, Lambeth Road, S.E.; ARTHUR ALLEN DEYKIN TOWNSEND, M.R.C.S., Barnwood House, Gloucester.

The following discussions have been arranged:

Wednesday, July 31st.—The *Rôle* of Toxic Action in the Pathogenesis of Insanity. To be opened by Dr. Ford Robertson.

Thursday, August 1st.—Puerperal Insanity. To be opened by Dr. Robert Jones.

Friday, August 2nd.—Feeble-Minded Children; Diagnosis and Treatment. To be opened by Dr. Francis Warner.

The following will take part in the discussions: Dr. David Bower, Dr. Shuttleworth, Dr. Outterson Wood, Dr. Fletcher Beach, Dr. Handfield Haslett, Dr. Nathan Raw, Dr. Soutar, Dr. Robert Jones, Dr. Edwin Goodall, Dr. Edridge-Green, Dr. Weatherly, Dr. Seymour Tuke, Dr. A. Helen Boyle, and Dr. Pasmore.

The following papers have been announced:

ANDRIEZEN, Lloyd, M.D. The Psychology of the Degenerate with Remarks on Treatment.
EDRIDGE-GREEN, F. W., M.D. The Evolution of a Perception Centre.
GOODALL, Edwin, M.D. (for Drs. GOODALL and PEERS MACLULICH). Remarks upon the Anthropological Examination of Asylum Patients with a Scheme for same, and the Average Results of Examination of Twenty-seven Control Cases.
SCHOFIELD, A., M.D. Some Conditions of Success in the Treatment of Neurosthenia.
SHAW, Claye, M.D. Colitis or Asylum Dysentery.
STEEN, R. H., M.D. Debated Points in Asylum Plans.
TUKE, Seymour, M.B. Modern Treatment of the Insane.
TURNER, John, M.B. The Physical Basis of Melancholia.
WEATHERLY, L., M.D. The Evolution of Delusions in Melancholia.

### F.—ANATOMY AND PHYSIOLOGY.

*Ladies' College: No. 10.*

*President:* Professor ALEX. MACALISTER, M.D., F.R.S. *Vice-Presidents:* THOMAS SMITH ELLIS, M.R.C.S.; WILLIAM HENRY THOMPSON, M.D., F.R.C.S. *Honorary Secretaries:* ERNEST CHRISTISON CARTER, M.D., Napier House, Pittville Gates, Cheltenham; RICHARD JAMES ARTHUR BERRY, M.D., F.R.S.E., 4, Howard Place, Edinburgh.

The following discussions have been arranged:

1. The Topographical Anatomy of the Thoracic and Abdominal Viscera from a Systematic and Clinical Standpoint. To be opened by Professor Christopher Addison.

2. Experimental Glycosuria. To be opened by Dr. F. W. Pavy, F.R.S. The following gentlemen will take part in the discussion: Professor Vaughan Harley, M.D., Professor W. H. Thompson, M.D., F.R.C.S., Dr. A. P. Luff, Dr. R. Hutchison, etc.

The following papers have been announced:

EDINGTON, G. H., M.D. A Short Account of a Specimen in which Bilateral Deviation of the Internal Carotid Artery was present.
EDRIDGE-GREEN, F. W., M.D. On the Function of the Rods and Cones of the Retina.
ELLIS, T. S., M.R.C.S. The Physiology of the Lower Limb and the Military March.
HARMAN, N. Bishop, M.B. 1. Socia Thymi Cervicalis and Accessory Thymus. 2. Facial Lachrymal Bones in a Native African Skull.
MACWILLIAM, Professor J. A. Observations on the State of the Vascular System in Death by Asphyxia.
SHERRINGTON, Professor C. S. (Title not yet received).

### G.—PATHOLOGY AND BACTERIOLOGY.

*Wednesday, July 31st, Ladies' College, Cambridge Room: Thursday and Friday, August 1st and 2nd, Ladies' College, No. 5.*

*President:* JOHN WICHENFORD WASHBOURN, M.D., F.R.C.P. C.M.G. *Vice-Presidents:* HAROLD J. STILES, M.B.; Professor RUBERT WILLIAM BOYCE, M.B. *Honorary Secretaries:* WALTER SYDNEY LAZARUS-BARLOW, M.D., Westminster Hospital, S.W.; EDGAR GEORGE TREVITHICK, M.D., 24, Promenade, Cheltenham.

The following discussions have been arranged:

Wednesday, July 31st.—The Pathology of Lymphadenoma. To be opened by Professor J. Michell Clarke, M.D.

Thursday, August 1st.—Pathological Conditions Caused by the Pneumococcus. To be opened by Mr. A. G. R. Foulerton, F.R.C.S.

The following papers have been announced:

DOUGLAS, J. J., M.D. Note on the arrangement of "Nissl Bodies."
EYRE, J. W., M.D. Further notes on Media of Standard Reaction.
FOULERTON, A. G. R., F.R.C.S., and HILLIER, W. F., L.R.C.P. Note on the Conditions of the Urine in Tuberculous Infections.
GLEY, Professor (Paris). Variations of Iodine in the Thyroid in Graves's Disease and Principally in the Blood after Removal of the Thyroid.
GOLDSMITH, G. Harvey, M.B. The Hæmoglobin Value of the Red Blood Corpuscles.
HUNTER, William, M.B. The Diagnosis of the Presence of B. Coli Communis by means of Neutral Red.
LAZARUS-BARLOW, W. S., M.D. Typhoid Fever without Intestinal Lesion.
LONGRIDGE, C. J. N., M.D. Focal Necroses of Liver.
NUTTALL, A. W., F.R.C.S., and HUNTER, W., M.B. The Bacteriology of Cerebro-spinal Meningitis.
POYNTON, F. J., M.D., and PAINE, A., M.D. The Bacteriology of Rheumatic Fever.
SOLLY, E., F.R.C.S. The Causation of Rheumatoid Arthritis.
STEEN, R. H., M.D. An Electrothermal Paraffin Bath. (Demonstration.)
SYMES, J. Odery, M.D. The Bacteriological Examination of the Blood.

## H.—OPHTHALMOLOGY.

*Ladies' College: No. 3.*

*President:* WALTER HAMILTON HYLTON JESSOP, M.B., F.R.C.S. *Vice-Presidents:* ERNEST DYKES BOWER, F.R.C.S.Ed.; JOHN TATHAM THOMPSON, M.B. *Honorary Secretaries:* RAYNER DERBY BATTEN, M.D., 124, Harley Street, W.; JOHN ALEX. BOWER, M.B., Portland House, Cheltenham.

The following discussions have been arranged:

1. The Diagnosis, Prognosis, and Treatment (Non-operative) of Progressive Myopia. To be opened by Mr. Priestley Smith, F.R.C.S.

2. The Relation of Gonorrhœa to Diseases of the Eye (exclusive of Purulent Ophthalmia). To be opened by Mr. J. B. Lawford, F.R.C.S.

3. The Varieties and Treatment of After-Cataract. To be opened by Mr. Richardson Cross, F.R.C.S.

The following will take part in the discussions: Dr. Landolt (Paris), Professor Nordensen, Mr. Henry Power, Mr. Quarry Silcock, Mr. D. Little, Mr. T. H. Bickerton, Mr. Simeon Snell, Mr. C. E. Shaw, Mr. Hugh Thompson, Mr. Kenneth Campbell, Mr. Reginald Yeld, Miss Ellaby, Mr. Karl Grossmann, Mr. Jno. Hern, Mr. R. S. Hamilton, Mr. A. S. Percival, and Mr. Doyne.

The following papers have been announced:

BLAIR, Charles, F.R.C.S. (1) An Unusual Form of Keratitis associated with a General Skin Eruption, with drawing. (2) A New Portable Refractometer.
DARIER, A., M.D.Paris. The latest Therapeutical Discoveries in Ophthalmology—Acoine, Dionine, Epinepheine, etc.
EDRIDGE-GREEN, F. W., F.R.C.S. The Essentials of a Test for Colour Blindness.
ELLABY, Charlotte, M.D. The Diagnostic Value of Certain Forms of Retinal Hæmorrhage, with cases and drawings.
FERGUS, Freeland, M.D. Further Observations on Sympathetic Nerve Degenerations.
GROSSMAN, Karl, M.D. Ivory Exostosis of Orbit, observed for over sixteen years, and operated on in 1886, 1892, 1895, 1898.
HAMILTON, Robert J., F.R.C.S.Edin. Hypopyon Ulcers of the Cornea.
HERBERT, H., F.R.C.S., Major I.M.S. (1) Treatment of Hypopyon Ulcers of the Cornea. (2) Preliminary Note on a Form of Superficial Keratitis with a Special Micro-organism. With microscopic slides.
HERN, Jno., M.D., F.R.C.S.Ed. The Results of Peritomy in Cases of Keratitis and Episcleritis.
PERCIVAL, A. S., M.B. Periscopic Glasses.
WILLIAMS, Richard, M.R.C.S. Treatment of Ulcers with Hypopyon.

The Secretaries have received some promises of the loan of original drawings and pathological specimens, but would be glad of more, so as to render the exhibit more comprehensive.

## I.—DISEASES OF CHILDREN.

*Ladies' College: No. 4.*

*President:* FREDERIC EVE, F.R.C.S. *Vice-Presidents:* CHARLES FIRMIN CUTHBERT, M.R.C.S.; EDWARD MANSEL SYMPSON, M.D. *Honorary Secretaries:* A. GRAHAM FOLJAMBE FORSTER, M.D., 4, Imperial Square, Cheltenham; FREDERICK E. BATTEN, M.D., 124, Harley Street, W.

The following discussions have been arranged:

Wednesday, July 31st.—The Treatment of Intussusception. To be opened by Mr. Bernard Pitts, F.R.C.S. The following gentlemen will take part in the discussion: Dr. D. B. Lees, Mr. D'Arcy Power, Mr. McAdam Eccles, Mr. F. C. Abbott, Mr. Jordan Lloyd, Mr. H. S. Collier, Mr. James Murphy and Mr. James Paul Bush.

Thursday, August 1st.—Early Diagnosis of Acute Specific Fevers. To be opened by Dr. F. Foord Caiger. The following gentlemen will take part in the discussion: Dr. E. W. Goodall, Dr. F. J. Poynton, Dr. J. H. Thursfield, Dr. Henry Ashby, and Dr. W. T. Tyson.

The following papers have been announced:

ABBOTT, F. C., M.B., F.R.C.S. Intrauterine Rickets.
BAMPTON, A. H., M.D. Mumps associated with Endocarditis.
BATTEN, F. E., M.D. Suppurative Pericarditis in Children.
EWART, William, M.D., and DICKINSON, W. Lee, M.D. Two Cases of Chronic Hydrocephalus in Infants treated by Tapping and by the Introduction of Aseptic Air in the place of the Fluid.
HERRINGHAM, W. P., M.D. General Œdema without Albuminuria.
PRITCHARD, Eric, M.D. Overfeeding of Infants.
STILL, G. F., M.D. Suppurative Pericarditis in Children.
THURSFIELD, J. H., M.D. Widal's Serum Reaction in the Diagnosis of Typhoid Fever in Children.
TUBBY, A. H., M.B., F.R.C.S. Results of Tendon Grafting.
WHITE, Sinclair, F.R.C.S. Ultimate results of Tendon Grafting in Infantile Paralysis.

## J.—LARYNGOLOGY AND OTOLOGY.

*Ladies' College: No. 9.*

*President:* T. MARK HOVELL, F.R.C.S.Edin. *Vice-Presidents:* ARTHUR WIGELSWORTH ORWIN, M.D.; ROBERT HENRY WOODS, M.B. *Honorary Secretaries:* WILLIAM LAMB, M.D., 22, Temple Row, Birmingham; JAMES CHRISTOPHER REGINALD BRAINE-HARTNELL, M.R.C.S., Cotswold Sanatorium, near Stroud.

The following discussions have been arranged:

1. The Treatment of Nasal Obstruction from Intranasal Causes other than Mucous Polypus. To be opened by Mr. F. Marsh, Dr. Brown Kelly, and Mr. C. A. Parker.

2. The Local Treatment of Tuberculosis of the Larynx. To be opened by Dr. Middlemass Hunt, Dr. Barclay Baron, and Mr. Richard Lake.

The following gentlemen will take part in the discussions: Professor Ferd. Massei (Naples), Dr. Watson Williams, Dr. Frederick Spicer, Dr. Charles Warden, Dr. L. H. Pegler, Dr Logan Turner, Dr. Adolph Bronner, Dr. Dundas Grant, Mr. G. P. Field and Dr. St Clair Thomson.

The following papers have been announced:

BRONNER, Adolph, M.D. Notes of a Case of Multiple Papillomata of the Larynx treated Locally by Formalin.
COLLIER, Mayo, M.S.Lond., F.R.C.S. Chronic Non-Suppurative Disease of the Middle Ear; its Causation and Treatment.
GRANT, Dundas, M.D. Title not received.
HARING, N. C., M.B. Multiple Papillomata of the Larynx.
LACK, Lambert, M.D. The Removal of Tonsils in Adults.
LAMB, W., M.D. Notes of Two Cases, in which Hypertrophic Catarrh of the Larynx preceded the Development of Papillomata.
MACKENZIE, Hunter, M.D., The Treatment of Laryngeal Growths in Children.
MACKIE, Dr. (1) Practical Points in the Treatment of Nasal Suppuration, especially of the Accessory Sinuses. (2) Note on the Use of Ethyl Chloride as a General Anæsthetic in Nasal Surgery.
MILLIGAN, W., M.D. Some Practical Points in connection with the Technique of Skin Grafting in Mastoid Operations.
ONODI, Professor. (1) Demonstration of Photographs of Preparations, showing the Relation of the Lower Laryngeal Nerves to the Cardiac and Sympathetic Nerves. (2) Case of Bone below the Glottis.
SPICER, Scanes, M.D. The Correction of certain cases of Nasal Deformity, such as Pug-nose and Sunken Bridge by the Subcutaneous Injection of Sterilised Vaseline.
TILLEY, Herbert, M.D. (Title not received.)
WINGRAVE, Wyatt, M.D. Conditions simulating Adenoids.
WOODS, R. H., M.B. A case of Thyrotomy for Laryngeal Tuberculosis.

A lantern demonstration with stereoscopic slides will be given by Dr. Watson Williams.

## K.—TROPICAL DISEASES.

*Ladies' College: Calisthenic Room.*

*President:* Major RONALD ROSS, F.R.C.S., F.R.S., I.M.S. (retired). *Vice-Presidents:* WILLIAM JOHNSON SMITH, F.R.C.S.; JAMES CANTLIE, F.R.C.S. *Honorary Secretaries:* MAX F. SIMON, M.D., C.M.G., 429, Strand, W.C.; JOHN FRANCIS JOHNS, M.D., 3, Lansdown Place, Cheltenham.

The following discussions have been arranged:

Wednesday, July 31st.—Stone in the Tropics. To be opened by Mr. P. J. Freyer.

Thursday, August 1st.—The Prevention of Malaria.

Friday, August 2nd.—The Maladies of European Children in Hot Climates. To be opened by Dr. A. Crombie.

On Wednesday the business will be introduced by a short address from the President, Major Ronald Ross, F.R.S.

The following gentlemen will take part in the discussions:

Dr. Patrick Manson, Mr. James Cantlie, Dr. A. Crombie, Mr. P. J. Freyer, Dr. M. F. Simon, Dr. Edward Henderson, and others.

The following papers have been announced:

Annett, H. E., M.D. The Life-History of Ankylostoma Duodenale.
Buchanan, W. J., Major, I.M.S. A Further Note on the Etiology of Epidemic Cerebro-Spinal Meningitis.
Cantlie, James, F.R.C.S. The Consumption of Opium in Malarial Countries.
Dockrell, Morgan, M.D. Parangi.
Duncan, Andrew, M.D. Tropical Typhoid.
Dutton, J. Everett, M.B. Some Points Connected with Human Filariasis.
Ellis, W. Gilmore, M.D. Some Notes on Lunacy in the Straits Settlements.
Galloway, D. J., M.D. (Singapore). The Oral Condition in Sprue.
Gimlette, J. D., L.R.C.P. (Pahang, Federated Malay States). On an Epidemic of Zinc Poisoning in the Tropics.
MacGregor, Sir William, K.C.M.G. Notes on Antimalarial Measures now being taken in Lagos.
Maxwell, Preston, M.B. Filarial Abscess.
Maynard, F. P., F.R.C.S., Major I.M.S. Ophthalmic Complications in Plague.
Nuttall, G. H. F., M.D. (Title not received.)
Ross, Major Ronald, F.R.S. Remarks on the Selection of the Proper Measures to be adopted against Malaria under Varying Local Conditions.
Sandwith, F. M., M.D. Note on the Entrance of Ankylostoma Embryos into the Human Body by Means of the Skin.
Smith, W. Johnson, F.R.C.S. (Title not received.)
Stewart, C. Balfour, M.B. Notes on Plague.
Williamson, G., M.D. (Larnaca, Cyprus). Notes on Cyprus Fever.
Young, J. M., M.D. The Prevention of Malaria in Hong Kong.

## L.—Navy, Army, and Ambulance.

*Ladies' College: Kindergarten.*

*President:* Deputy-Surgeon-General W. G. Don, M.D. (ret.), A.M.S., *Vice-Presidents:* Andrew Clark, F.R.C.S.; Surgeon-General Thomas O'Farrell, A.M.S. *Honorary Secretaries:* Surgeon-Captain William Balfour Fergusson, M.D., Hazelbury House, Painswick; Surgeon-Captain Thomas Hugh Dickson, M.B., H.M.'s Customs House, Lower Thames Street, E.C.

The Section will be opened with a short address by the President.

The following discussion has been arranged:

On the Organisation of the Military Medical Services. The following gentlemen will take part in the discussion: Surgeon-General J. B. Hamilton, M.D., Surgeon-General R. Harvey, C.B., D.S.O., Surgeon-Major Hutton, Surgeon-Lieutenant-Colonel J. E. Squire, M.D., Surgeon-Major Caverhill, M.B., Surgeon-Captain J. Cantlie, M.B., and Surgeon-Captain A. Macgregor, M.D.

Papers will be read on The Disposal of Wounded in Naval Actions, and on the Healthfulness of Modern Warships by Fleet-Surgeon G. Kirker, R.N., Staff-Surgeon W. E. Home, R.N., and Surgeon F. H. A. Clayton, M.D., R.N., followed by a discussion in which Admiral Borlaise Warren, Inspector-General Belgrave Ninnis, M.D., R.N., Inspector-General A. Turnbull, M.D., R.N., and Surgeon-Lieutenant-Colonel J. E. Squire, M.D., will take part.

The following papers have also been announced:

Cantlie, Surgeon-Captain J., M.B. Medical Cadet Corps.
Caverhill, Surgeon-Major, M.B. Some Notes on Typhoid Inoculation. (Followed by a discussion)
Collie, R. J., M.D. Civil First Aid and Ambulance in Towns.
Hall-Edwards, J., L.R.C.P. Roentgen-Ray Work in South Africa.
Ward, Captain W. A., R.A.M.C. Field Transport for Sick and Wounded.

## M.—Dermatology.

*Ladies' College: Library.*

*President:* John James Pringle, M.B. *Vice-Presidents:* Edward Dillon Mapother, M.D., Wallace Beatty, M.D. *Honorary Secretaries:* Alfred Eddowes, M.D., 28, Wimpole Street, W.; D. G. McLeod Munro, M.B., 1, Oriel Villas, Cheltenham.

The arrangements are as follows:

Wednesday, July 31st.—9 A.M. Clinical Demonstrations. 10.15 A.M. Discussion on the *Rôle* of Staphylococci and Streptococci in the Etiology of Skin Diseases. To be opened by Dr. Sabouraud, of Paris, whose paper will be illustrated by many lantern slides, etc., followed by Dr. James Galloway. The following gentlemen will take part in the discussion: Dr. H. G. Brooke, Dr. Arthur Whitfield, Dr. Norman Walker, Dr. T. D. Savill, and Mr. G. Pernet.

Thursday, August 1st.—9 A.M. Clinical Demonstrations. 10 A.M. Discussion on the Treatment of Skin Diseases by Finsen's Light Method and *X* Rays. To be opened by Mr. Malcolm Morris, followed by Dr. A. B. Blacker, and Dr. Sequeira. The following gentlemen will take part in the discussion: Dr. Allan Jamieson, Dr. H. G. Brooke, Dr. Norman Walker, Dr. G. Stopford Taylor, Mr. J. Hall-Edwards, Dr. Willmott Evans, Mr. G. Pernet, and Mr. James Startin.

Friday, August 2nd.—9 A.M. Clinical Demonstrations. 10 A.M. Discussion on Seborrhœa. To be opened by Dr. Colcott Fox, followed by Dr. Sabouraud. The following gentlemen will take part in the discussion: Dr. Allan Jamieson, Dr. Thin, Dr. H. G. Brooke, Dr. James Limont, Dr. Norman Walker, Dr. J. M. H. Macleod, Dr. Morgan Dockrell, Dr. Henry Waldo, Dr. Wallace Beatty, Mr. G. Pernet, and Dr T. D. Savill.

The following papers have been announced:

Beatty, Wallace, M.D. On Pityriasis Rubra Pilaris.
Brooke, H. G., M.B. On Arsenical Eruptions.
Crocker, H. Radcliffe, M.D., and Pernet, G., M.R.C.S. Epithelioma Supervening upon Arsenical Keratosis.
Dockrell, Morgan, M.D. The Relation of Psoriasis to Seborrhœic Dermatitis.
Dubreuilh, Professor (Bordeaux). A case of Paget's Disease of the Vulva. (With Lantern Slides.)
Eddowes, Alfred, M.D. Leucodermic Alopecia.
Evans, Willmott, M.B. 1. The Microbiology of Chronic Eczema. 2. A New Medium for Growing the Fungi of Tinea Tonsurans.
Fox, T. Colcott, M.B. On Hydroa Æstivale.
Fox, T. Colcott, M.B., and Macleod, J. M. H., M.D. On Parakeratosis Variegata.
Hall, Arthur, M.B. A Case of Multiple Disseminate Lupus following Measles, ending by Tuberculous Meningitis.
Hall-Edwards, J., L.R.C.P. The Treatment of Lupus by the *X* Rays.
Harman, N. B., M.B. Observations on Veld and Natal Sores, with Drawings and Cultures.
Liddell, John, M.D. The Treatment of Psoriasis.
Little, Graham E., M.D. Cases of Fatal Purpura Associated with Hæmorrhage into the Suprarenal Capsules.
Macleod, J. M. H., M.D. A Contribution to the Histopathology of Yaws.
Pratt, Eldon, M.D. A Case of Purpura Hæmorrhagica associated with General Tuberculosis.
Roberts, Leslie, M.D. The Action of Arsenic on the Skin.
Sequeira, J. H., M.D. The Influence of High Frequency Currents in *X*-Ray treatment.
Snow, Herbert, M.D. The Treatment of Lupus.
Waldo, Henry, M.D. Some Points in the Management of Eczema.
Whitfield, Arthur, M.D. On Erythema Induratum.

A Demonstration will be given by Dr. J. A. Fordyce (New York) of lantern slides illustrating Clinical and Pathological Conditions in Dermatology.

## Programme of Proceedings.

Monday, July 29th, 1901.

8.30 P.M. to 11 P.M.—"At Home" at the Annual Museum and Exhibition. Opening Ceremony by the Mayor and Mayoress of Cheltenham.

Tuesday, July 30th, 1901.

9.30 A.M.—Meeting of 1900-1901 Council, No. 8 Room, Ladies' College.

11.30 A.M.—Church Service at St. Matthew's Church. Sermon by the Very Rev. the Dean of Gloucester.

2.30 P.M.—First General Meeting, Princess Hall, Ladies' College. Report of Council. Reports of Committees; and other business. After 4 P.M., Garden Party by Colonel Rogers, J.P. and Mrs. Rogers of Battledown Court.

8.30 P.M.—Adjourned General Meeting from 2.30 P.M. President's Address at the Princess Hall, Ladies' College.

Wednesday, July 31st, 1901.

9.30 A.M.—Meeting of 1901-1902 Council, No. 8 Room, Ladies' College.

10 A.M. to 1 P.M.—Sectional Meetings.

2.30 P.M.—Second General Meeting, Princess Hall, Ladies' College. After 4 P.M., Garden Party by the Mayor and Mayoress of Cheltenham at Pittville Park.

8 P.M.—Address in Medicine, Princess Hall, Ladies' College, by J. F. Goodhart, M.D., F.R.C.P., Consulting Physician to Guy's Hospital. After 9 P.M., Illuminated Fête in Montpellier Gardens, given by the Mayor and Mayoress.

Thursday, August 1st, 1901.

9.30 A.M.—Meeting of Council, No. 8 Room, Ladies' College.

10 A.M. to 1 P.M.—Sectional Meetings.

2.30 P.M.—Third General Meeting, Princess Hall, Ladies' College. Address in Surgery by Sir William Thomson, C.B., F.R.C.S.I., Honorary Surgeon to the King in Ireland. Presentation of Stewart Prize. After 4 P.M., Garden Parties by Lieutenant-Colonel and Mrs. J. C. Griffith (Deanwood), Mr. and Mrs. MacKnight-Crawfurd (Fullwood Park), and Alderman and Mrs. Jas B. Winterbotham (Cranley Lodge).

4.30 P.M. Exhibition of Instruments, illustrated by Cinematograph, by Dr. Doyen of Paris, at the Theatre.
7 P.M.—Public Dinner of the Association at the Boys' College. At 9 P.M., Ladies' Reception at the same place.

FRIDAY, AUGUST 2ND, 1901.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Concluding General Meeting, Princess Hall, Ladies' College, and afterwards Excursion to Gloucester. After 8 P.M., *Soirée* at the Ladies' College, followed by Dancing.

SATURDAY, AUGUST 3RD, 1901.
Excursion to Wye Valley.

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The *Honorary Local Secretaries* are: Mr. G. ARTHUR CARDEW, 5, Fauconberg Villas, Cheltenham; S. TRISTRAM PRUEN, M.D., Sherborne Lodge, Cheltenham; W. W. GROSVENOR, M.D., Clarence Street, Gloucester.

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### RECEPTION ROOMS.

The Imperial Rooms, Promenade, Cheltenham, will be opened on Monday, July 29th, from 4 P.M. to 9 P.M., and on Tuesday, July 30th, and the following days from 9 o'clock to 6 P.M., for the issue of tickets to members and for supplying all necessary information. It is particularly requested that all members on their arrival will at once proceed to the reception room, enter their names and addresses, and obtain their tickets and Daily Journals containing programme, inquire for letters and telegrams, consult list of lodgings, hotels, etc.

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### SPECIAL RAILWAY ARRANGEMENTS.

To members and their friends attending the annual meeting the railway companies of the United Kingdom will grant return tickets on payment at the time of booking of a single fare and a quarter. To secure this concession each passenger must produce a special voucher, and these can be obtained on application to the General Secretary, 429, Strand, London, W.C. The reduced fares will be available from July 27th to August 6th, both dates inclusive.

Those members desiring to travel to the places where they reside during the meeting of the Association can obtain return tickets at a single fare and a quarter for the double journey (minimum charge 1s.) (on production of cards of membership) from Cheltenham to any station not more than fifty miles distant to which through bookings are in operation, available to return on the same or following day.

Periodical tickets available during the meeting will also be issued to members from Cheltenham to any station not more than fifty miles distant at a charge of not less than the accumulated fares per diem under the preceding clause, and will be available for more than one journey, to enable the members sleeping out to return to their hosts for dinner.

The reduced fares indicated herein will not apply between Gloucester and Cheltenham.

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### ANNUAL DINNER.

The annual dinner of the Association will be held in the College, Cheltenham, on Thursday, August 1st, 1901, at 7 o'clock. Early application should be made for tickets.

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### FOREIGN GUESTS.

Guests of the Association and visitors from abroad should apply for all information at the Reception Room, Imperial Rooms, Cheltenham, where all letters and telegrams should be addressed. Visitors will notice that the membership ticket will admit them to meetings of the Association and to the various addresses, but tickets for entertainments and excursions should be applied for in the Reception Room. An interpreter will be in attendance.

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### PATHOLOGICAL MUSEUM.

Specimens of interest for exhibition in the Museum should be forwarded, addressed to the Secretary of the Pathological Museum, British Medical Association, Winter Gardens, Cheltenham, during the last week in July; and a brief description of each exhibit will be inserted in the Museum catalogue. Secretary of the Pathological Museum, Mrs. Stewart Billings, M.B., B.S., 3, Pittville Parade, Cheltenham. All specimens must be mounted ready for exhibition.

### CLUBS.

The New Club will make honorary members for the week of 120 of the members of the Association, and these will have a special card issued to them on application at the Reception Room.

### GOLF.

Members of the Association desirous of playing golf will be made honorary members of the Cheltenham Golf Club. A match will be arranged, and members of the Association wishing to play are requested to communicate with Dr. Bansall Todd, Keynsham Lodge, Cheltenham, stating their handicaps.

### EXCURSIONS.

*Railway Arrangements.*—Cheap excursion tickets will be issued to Malvern, Raglan, Kerne Bridge, Symond's Yat, Monmouth, Stroud, Lydbrook, Tintern, Wye Valley, Newnham and Sharpness, Lydney, Chedworth, Tewkesbury, Severn Bridge, Speech House Road, Chepstow, Stratford-on-Avon, Ross, Hereford, Ledbury, Newent, Dursley, and Evesham, by special permission of the Great Western, Midland and South-Western Junction, and Midland Railways.

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### ANNUAL MUSEUM.

THE Annual Museum in connection with the sixty-ninth meeting of the British Medical Association will be arranged in the following Sections:

SECTION A.—Food and drugs, including prepared foods, chemical and pharmaceutical preparations, etc.

SECTION B.—Instruments, comprising medical and surgical instruments and appliances, electrical instruments, microscopes, etc.

SECTION C.—Books, including diagrams, charts, etc.

SECTION D.—Sanitary appliances and ambulances.

SECTION E.—Carriages and Automobiles.

The Exhibition and Museum will be held in the Winter Garden, an imposing structure standing in a square of grass lawns in the principal street of the town, close to the Ladies' College (where the meetings will be held), the principal club, and the Reception Room.

The building has recently been renovated from the designs of Mr. J. Hall, A.M.I.C.E., at the cost of £10,000, and the ventilation and lighting are all that can be desired.

The space being unusually ample will allow all the Sections of the Exhibition, *as well as the Pathological Section*, to be housed in the one hall.

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### NOTICE OF MOTION.

Dr. SARAT K. MULLICK gives notice that he will move:

1. That the present system of filling professorial chairs in the medical colleges of India by virtue of grade rank is apparently prejudicial to the interests of medical education, and is a bar to the advancement of original research in India. This meeting is of opinion that some change is necessary, and hereby appoints a Committee to consider the matter and report to the Council.

(2) That having regard to the fact that persons possessing no knowledge of medicine are by law allowed the same rights to practise in India as fully-qualified practitioners, this Association considers it advisable that there should be a system of registration to protect the public from charlatans.

July 18th, 1901. GUY ELLISTON, *Acting General Secretary.*

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# SPECIAL CORRESPONDENCE.

## BERLIN.

*Spitting and Plainspeaking.—Proposed Monument to Brehmer.—Hospital for Troops returning from China.—Day Sanatoria.—A "Virchow Haus."*

THOSE who were present at the last meeting of the German Society for Popular Hygiene in the Berlin City Hall must have felt with a certain grim satisfaction that the old Teutonic plain speaking of home truths, in coarse words if necessary—a characteristic which found its highest expres-

sion in Luther and in Bismarck—has not quite died out, even in our own day of fastidious and often over-refined speech. The programme for the meeting stood as "The Struggle against Spitting and Dress Trains," and Professor von Hansemann (the first speaker of the evening), after a forcible invective against man as "a dirty animal," described the process by which ladies' trains were first dipped into the filth of the streets (composed, he said, chiefly of horse dung, dog dung, and human expectoration) afterwards mixing and whirling them up all together in the shape of filthy dust. A train looked mighty elegant from the outside, he said, but beware of examining it inside! Professor von Leyden then spoke serious and weighty words on the danger of spitting as regards infectious disease. He affirmed that nine-tenths of all consumption cases were brought on by infection from the expectoration of other consumptives, that whooping-cough and measles were largely spread by coughing in one's face, and that many other diseases were transferred from one to the other by the mouth, that is, by kissing, coughing, and expectoration. He advocated strongly that omnibus and car conductors, and railway guards should be empowered to forbid spitting in their conveyances, and even to eject passengers who refused to obey. Two energetic ladies, Frau Pochhammer and Frau Lina Morgenstern delivered addresses on the "train" subject, calling upon womankind to emancipate itself from the tyranny of fashion, which in this case constituted a serious danger to one's fellow-beings. Finally, two resolutions were proposed and enthusiastically carried:

1. That the Committee present a petition in the proper quarter, asking for the prohibition of spitting in public conveyances.
2. That women rouse themselves to do away with dress "trains" outside the house.

An appeal for funds for a monument to the memory of Brehmer, the great innovator, who was the first in Germany to carry out the modern treatment of tuberculosis, has appeared, and is signed by the Duke of Ratibor, Prince Corvey, Prince Hohenlohe-Waldenburg-Schillingsfürst, the Committee of the Tuberculosis Congress Association, and Professor O. Liebreich, as President of the Balneological Society and originator of the idea. Contributions will be received by the banking-house of E. Laudau, No. 71, Wilhelmstrasse, Berlin.

A barrack hospital of about 1,000 beds is to be put up for the German troops on their way home from China. It will find a place on a drill-ground close to the garrison hospital in the Scharnhorststrasse, of which it is to form a branch. The German Emperor and Empress have promised to visit the hospital in the course of September.

A boon to persons of reduced health and small means are the two day sanatoria of the Red Cross Society in the neighbourhood of Berlin—"places in which to spend a healthy day" they may be called. Comfortable lying chairs under the pine trees or under a shelter, pleasant walks through the forest, together with good food and plenty of milk, form the therapeutic attractions. The costs are borne partly by the Red Cross Society and partly by the various sick clubs, whose members enjoy the benefits of these novel sanatoria free of charge. One of the establishments is for men, the other for women, and the rules are stretched a little so as to allow mothers to bring a child or two. The railway authorities issue tickets at reduced prices for the benefit of the patients, and altogether it is no wonder that the two establishments are already found insufficient for the great number of applications, and that two more are planned and will shortly be opened.

Among the honours to be paid to Rudolf Virchow on the occasion of his eightieth birthday will be the foundation of a *Virchow Haus*, with objects similar to those of the *Langenbeck Haus* and the *Hofmann Haus*.

## LIVERPOOL.

*An Epileptic Colony in Cheshire.—The Proposed Sanitary Commission for the West Coast of Africa.—The Prevention of Tuberculosis.—The Birkenhead Guardians and Medical Women.*

THE David Lewis Trust which has supplied the funds for the erection of the new Liverpool Northern Hospital, and for the establishment of other important philanthropic undertakings, is being employed to provide on a large scale a colony for the treatment and education of epileptics. A few gentlemen in Manchester impressed with the necessity of making some provision for epileptics who do not come within the scope of the Poor-law, some time ago banded themselves together to appeal to the public and, if possible, to do something practical upon however small a scale. A committee was formed and between £7,000 and £8,000 was raised. Eventually they decided to appeal to the David Lewis Trust, and when the objects of the committee were laid before Mr. B. W. Levy, the legatee of Mr. David Lewis, he deprecated a small scheme, and thought that something should be done which would be an example to the whole country and might even clear the way for the State to take up the treatment of epileptics. He accordingly asked a medical man, an architect, and his own Secretary to visit the principal epileptic institutions on the Continent and gather information as to the most modern buildings and treatment. In consultation with the Lewis Trustees the Committee ultimately acquired an estate at Warford, near Alderley Edge. The estate is upwards of 500 acres in extent, and the Lewis Trustees have allocated 130 acres for the purposes of the colony. It is expected that in two years, or even earlier, the colony will be ready to receive patients. Provision is to be made at first for 200, and already from Great Britain and Ireland more than that number of applications have been received. There is sufficient margin of land for considerable enlargements of the accommodation as these become necessary. The plans show an extensive set of buildings. A drive from the entrance gates will lead first to the administrative block, which will stand at one end of an oval enclosure. Within the oval the next building beyond the administrative block will be a recreation hall and chapel; then will come two observation wards, where new patients will remain for one month, and the infirmary: and yet further within the oval will be the central kitchen. The living houses are to be outside the oval, on one side for men and on the other for women, and there are to be orchards and gardens between those houses and the other buildings. There will be a playing ground and school for children, and workshops, aundry, and machine-rooms for the adults. The intention is that the patients should be given useful and healthy occupations in the open air, and it is probable that some scale of payment will be allowed them. Their market-garden produce will be sent to the nearest towns to be sold, and they will be taught trades and crafts which they will find useful to them when they have left the colony. Most of the patients will pay according to the class in which they elect to be placed; but, certain provision will be made for cases in which payment is impossible. The institution will be handed over to the control of the Manchester Committee fully equipped and furnished and free of debt. To a large extent it will thereafter be self-supporting, but not quite. The public will be invited to establish an endowment fund of perhaps £20,000, and in addition provide a certain sum in annual contributions. The cost of founding the colony, which will be entirely borne by the David Lewis Trust, will be from first to last about £120,000.

At a conference convened by the African Trade Section of the Incorporated Chamber of Commerce of Liverpool, held recently in the Board-room of the Chamber of Commerce, the Chairman, Mr. Alfred L. Jones, raised the question as to what was to be done in regard to the arrangements for carrying into effect the proposals of the Colonial Secretary that a commission representing the Chambers of Commerce of London, Liverpool, and Manchester, should be appointed to report on the resources and possibilities for improving the sanitary condition of the West Coast of Africa. The conference nominated the following gentlemen to represent the three Chambers as the mercantile members of the proposed commission, namely, Liverpool: Mr. C. Tambacci; London: Mr. J. H. Batty; Manchester: Mr. T. Welsh; subject to the approval of the respective Chambers. Major Ronald Ross was nominated as medical expert, and the opinion was expressed that it would be desirable that a sanitary engineer should accompany the commission. It was also suggested that the Chambers of Commerce on the West Coast should be written to in order to prepare them for the arrival of the commission and to facilitate its objects, and that the Hamburg and other Chambers should be informed of the steps that were being taken, in order to give them the opportunity of

following the example set by His Majesty's Government on matters relating to the health of the coast. It was recommended that the commission should start in October.

The recently founded Liverpool and District Branch of the National Association for the Prevention of Consumption has issued a circular inviting the public to join. The annual subscription of five shillings is to be entirely devoted to the local needs of the Branch, and members will receive the quarterly journal of the association free of charge.

The scarcity of medical practitioners which it is customary to attribute to the war has placed the Birkenhead Guardians in a somewhat ridiculous position. A short time ago they refused to sanction the appointment of a lady practitioner who had been nominated for the post of Resident Medical Officer to the Birkenhead Workhouse, and issued a second advertisement inviting applications from male candidates only. To this no replies were received, and the board had to select one of the ladies who had answered the first advertisement. Miss Eva M'Call, M.B.Glasg., was appointed for twelve months at a salary of £120. One of the two house-surgeons in the Liverpool Toxteth Workhouse is also a lady.

# CORRESPONDENCE.

## THE MIDWIVES BILL.

### Is a Round-table Conference Possible?

Sir,—Surely the time has arrived for the opposing parties to cry a halt and hold a parley. Much has been written for and against the Bill, and much more will be written. *Cui bono?* That the House of Commons will eventually legislate on the matter must be obvious to all but those who won't see, and it should be equally obvious that the only proper and efficient guidance for such legislation should come from the medical profession as a body. As matters stand the profession is not only not in a position to so advise, but is actually becoming a by-word in the public estimation on this question. Surely this is a pity as well as a mistaken policy.

Would it not be possible for our Association to bring together a small number of persons, representative of the leading sections of opinion, in conference with a view to a proper and business-like discussion which might result in recommendations that would thus carry the weight of practically the opinions of the whole profession? It cannot be doubted that those at both extremes are actuated by honourable motives, and in all likelihood the give and take that should obtain in personal discussion would result in the drafting of a proposed Bill which would be satisfactory to the profession and worthy of its dignity. Should this suggestion find favour there ought to be no difficulty in the organisation of such a round-table conference.—I am, etc.,

Great Yarmouth, July 14th. Alban H. Moxon.

## THE MEDICAL PROFESSION AND THE MIDWIVES QUESTION.

Sir,—If Mr. Humphreys really thought that he could number me among the supporters of the Bill for the Registration of Midwives, promoted by the Midwives' Association, of which he is the Honorary Secretary, as he would have your readers infer from his remarks in the British Medical Journal of July 13th (p. 118), his childlike faith must have received a rude shock when he read the notices of motion printed under my name on page 116 of the same issue. I can assure Mr. Humphreys that I am as strongly convinced of the mischievous character of the Bill he favours for the registration of midwives as I was when I gave evidence against the measure before the Special Committee of the House of Commons in 1892, and I am sorry he has been misled by the fact that I seconded the proposal to circulate amongst M.P.'s the proposed Bill for the better education and supervision of "midwifery nurses" drafted by the Parliamentary Bills Committee of the British Medical Association. I supported the proposal for reasons which I thought to be amply sufficient. This Bill is intended to apply to women who act as midwifery nurses, and is not nearly so objectionable as the Bill favoured by Mr. Humphreys. I had been led to believe, rightly or wrongly, that if members of the House of Commons knew that an alternative measure dealing with the whole question of midwifery nursing had been prepared by the Parliamentary Bills Committee of the British Medical Association it would have considerable influence in retarding the progress through Parliament of the Bill promoted by the Midwives' Association. In any case nothing could be gained by attempting to conceal the fact that the Council of the British Medical Association had adopted an alternative and less objectionable measure, and later I had the satisfaction of knowing that the Bill of the Midwives' Association failed to obtain the sanction of the House of Commons.

One word as to the statement made by Mr. Crombie, M.P.,[1] and often repeated by others as to the Bill of the Midwives' Association having received the approval of the General Medical Council. This statement is not strictly accurate. The verdict of the General Medical Council was[2] that the Bill could not be regarded as offering a satisfactory solution of the question, and the Council earnestly deprecated its passing into law unless amended in several important particulars. These amendments have not been introduced in their entirety, and until they are I trust the Council will oppose the Bill when it is again brought forward.—I am, etc.,

George Brown,
Direct Representative for England and Wales on General Medical Council.

Gibson Square, N., July 16th.

Sir,—Private circumstances will prohibit my replying to Mr. Humphrey's last letter for the present, but, although it is enough in itself to support my argument that the profession is opposed to the Midwives Bill, I will, with your permission, deal with it at a later date. I hope the profession will prove my contention at the annual meeting this month by strongly opposing legislation for licensing midwives, and supporting a Bill such as the Sick and Obstetric Nurses Bill to provide the public with both doctor and nurse.—I am, etc.,

July 12th. M.R.C.S.Eng.

Sir,—I do not propose to follow Mr. Humphreys any further, except to remark that the misuse of statistics has characterised the campaign of his friends and allies from the first, and to quote the words of Dr. R. Scot Skirving which was published in the British Medical Journal of July 13th: "I am sanguine enough to believe that reformation is possible without the noise of troublesome women or of ill-informed lady-like men who are not gifted with great judgment.—I am, etc.,

Hatfield, July 14th. Lovell Drage.

## MIDWIVES OR OBSTETRIC NURSES?

Sir,—The issue as between midwife registration, on the one hand, and the provision of obstetric nurses for the parturient poor, on the other, is now perfectly clear, and the profession will soon be called upon to pronounce its verdict for one or the other. Indifference to such an issue will be criminal. The advocates of registration know their own minds and are determined to carry their point. With them it is not a question of nursing at all; their object is to secure the practice of midwifery to women, and to oust the "man midwife" from the lying-in room for good and all. The statements of their spokesman prove this to the hilt, and in order to accomplish this their Registration Bill is made to include *all* existing midwives by virtue of their office and quite regardless of previous training of any kind, the supposition being that Parliament *must* protect vested interests rather than the lives of parturient women! Those who oppose this doctrine are called "selfish and foolish." But how can the opponents of this pernicious doctrine be "selfish" if, as your correspondent (Mr. Humphreys) says, "only half the confinements in the country are attended by medical men"? And where is the "folly" of resisting this organised attempt to foist on the public and the profession a class of uneducated Gamps who, as registered midwives, will pose as the equals of fully-qualified medical practitioners? Your correspondent's attempt to saddle his professional brethren with the puerperal mortality has crumbled into dust, for in order to bolster up his case he has had to deduct half the confinements by which

[1] British Medical Journal, July 6th, 1901, p. 26.
[2] Minutes, vol. xxxv, p. 42.

he saddles the existing midwives with at least *half* of the puerperal mortality! This style of argument is as "foolish" as it is disingenuous. Let your correspondent be candid, and say yes or no to these questions:

(1) Are you, or are you not, prepared to abolish the untrained and uneducated midwife?

(2) Are you willing to introduce a clause into your Bill making the trained midwife personally responsible for the nursing of her patient for at least 10 days after her confinement?

(3) Will you introduce another clause making provision for the payment of medical men "called in consultation" by the registered midwives?

I consider the above to be the irreducible minimum on grounds of logic, common sense, and simple justice. We need not quarrel about a name. If "midwife" sounds more musical or more professional than "obstetric nurse" be it so. It is an old Saxon word, I think, and appears to be as hoary as some of the "Gamps" themselves, and to be related to the Scottish "auld wife," such as one finds smoking a cutty pipe in the chimney corner. Poor old soul, she has no idea of the honours awaiting her under the Midwife Registration Bill! I daresay Mr. Humphreys is prepared to lecture her into modern methods, and the ladies at 12, Buckingham Street to fit her with an up-to-date cap and gown.

Mr. Humphreys's silence is more eloquent than his speech. He has not a word to say about the manufacture of midwives by the Obstetrical Society, as exposed in the British Medical Journal of July 6th. It is but fair to say that the compiler and writer of that article has done more to damage the cause of midwife registration than all your correspondents put together. And every member of the Association must admire the courage and impartiality of the Editor for inserting the same. There is no gainsaying the fact that the Obstetrical Society has added close on £7,000 to its income during the past quarter of a century by the examination of midwives. Why not a Bill for their registration, therefore? I will say nothing about extra-mural lectures and lecturers lest I should be personal. This article should be re-printed and circulated broadcast among the profession, the public, and members of Parliament, as no doubt it will be at the right moment. And yet your correspondent has the audacity to ignore all this and to say, in reply to Mr. MacLean, that "medical men" have no self-interest in the matter! Let me put it, as the article only too abundantly proves, viz., that the whole of the arguments advanced by the promoters of midwife registration are merely intended to hoodwink that section of the public who find thinking for themselves too troublesome and who will do anything in the name of philanthropy, and, at the same time, to throw dust in the eyes of unwary medical men who can be found to give their time and their presence for the promotion of a cause which has its roots in self-interest, and its branches rustling with windy verbiage wherein is no fruit, save that of a phantom or a mole, or a monster in the shape of a Bill for which no one cares.—I am, etc.,

Liverpool, July 13th. Alexander McCook Weir.

## PRELIMINARY GENERAL EDUCATION.

Sir,—No one who has carefully considered the existing requirements of the General Medical Council as regards preliminary general education can have been surprised when an effort was made by the Council some time ago to considerably raise its standard of examination; and probably most of us were very much astonished and disappointed when, on "expert" advice, that effort was practically abandoned.

The time has come, with the growing responsibilities which growing knowledge is creating for our profession, when a medical man should be, in the modern sense, a "man of education"; yet few will suggest that the individual who just attains to the minimum standard required by the General Medical Council can claim to be so regarded.

The scope of the examination is inadequate.

1. English language, including grammar and composition.
2. Latin, including grammar, translation from specified authors, and translation of easy passages not taken from such authors.
3. Mathematics, comprising (*a*) arithmetic; (*b*) algebra, as far as simple equations inclusive; (*c*) geometry, the subject matter of Euclid, Books I. II, and III, with easy deductions.
4. One of the following optional subjects: (*a*) Greek, (*b*) French, (*c*) German, (*d*) Italian, (*e*) any other modern Language.

A sorry list!

The standard of questions is also inadequate, since we know an intelligent lad of 15 can pass it. Taking scope and standard of questions into account together, the present requirements may be fairly described as scandalously inadequate.

That the General Medical Council is really desirous of amending this extraordinary state of things there is no doubt. It has lately become the fashion to decry the General Medical Council, and many of us are too apt to forget that the greatest benefit conferred on the profession in recent years, namely, the establishment of the five years curriculum, was its work—a work so sound that whoever may hereafter endeavour to undo it, will have to prove both to the profession and to the public that the endeavour is free from all suspicion of self-seeking.

But the Council has been checked in its endeavours after an improved standard of preliminary general education, and may now reasonably look to the profession to express clearly the general opinion on a matter of such general importance. The British Medical Association represents the profession in the fullest sense at present possible, and therefore the matter will be brought before its annual meeting, in the hope that the Association will bring it to the notice of the General Medical Council, and thus hasten a reform which is urgently needed, in the public interest as well as in our own.—I am, etc.,

Exeter, July 17th. W. Gordon.

## OUR DUTY TO THE CONSUMPTIVE BREADEARNER.

Sir,—Dr. Pye-Smith, in his letter in the British Medical Journal of July 6th on this subject, refers to two points of very great interest.

He rightly points out that the doors of the general hospitals are not closed against the consumptive breadearner; but is it not a fact that a growing disinclination exists against the admission of these patients to our general wards, on the ground that they are a very real source of danger to other patients in the wards who are recovering from various acute lung troubles?

The other point is as to the curability of phthisis. He states that so far from being desperate phthisis is a curable, and not infrequently a cured disease. Is this statement true as far as our hospital patients are concerned? I doubt it. Patients seek advice at our hospital out-patient departments generally after they have been ill some weeks or months, and we find definite evidence of disease in their lungs. I believe that very few of these cases ever recover.

Some years ago we started a Ventnor Fund connected with the Radcliffe Infirmary at Oxford, and retained a small number of beds at the Ventnor Consumptive Hospital, to which we sent our most promising cases of early phthisis, and the results were for the time most striking and satisfactory. The patients after a few months at Ventnor would return to Oxford different beings. All their symptoms had abated, and often the Resident Medical Officer at Ventnor would report them as cases in which the disease was arrested. For a few years every Christmas I wrote to the friends of patients who had been at Ventnor the year before to inquire about them, and I invariably found that within a few weeks or months of their return to their old surroundings the disease had broken out again, and I was never able to find evidence of a single case cured or permanently arrested; in a longer or shorter time they all died. The patient who can afford to winter abroad or go to an English health resort for a time generally returns to a tolerably healthy home and gets the best food, and, as we know, the results are often extremely good. I fancy in the majority of these cases it is a very long time before they get rid of their tubercle bacilli. With the poor it is a very different matter. They go to a hospital for a few months, or to the seaside for a like period, and then they return to their old, unhealthy, overcrowded, badly ventilated houses, and are often insufficiently fed; as a result the old trouble breaks out again with renewed vigour. It would be well if those who were so strongly urging the immediate erection of sanatoria would give us some kind of idea as to how long the average patient should be treated in these establishments.—I am, etc.,

Oxford, July 15th. Wm. Collier.

## INDIAN MEDICAL REFORM AND THE BRITISH MEDICAL ASSOCIATION.

Sir,—In the current issue of the British Medical Journal, Dr. Barr, signing the report of the Indian Medical Service Sub-committee, accuses me of having "failed to communicate with the Committee in any way," and "deprecates" my conduct. The matter refers to the important resolution which I carried with an overwhelming majority at Ipswich last year. Nothing could be more inaccurate than Dr. Barr's statement. The resolution was passed in August. I heard nothing of the matter for over five months. I communicated with the Parliamentary Bills Committee in order to wake them up, and offered to serve on any Sub-committee they appointed, and also to be examined and cross-examined to their heart's content. I received a letter on April 29th asking me to get information from India, and submit it to the Committee within three months. I have already done so, and the three months are not yet over. With what truth can Dr. Barr state that I have failed to communicate with the Committee? I challenge Dr. Barr to disprove any of my statements. His attitude on the question shows that the Committee are utterly unfit to deal with such an important question affecting the welfare of 280 millions of His Majesty's subjects. If the *ipse dixit* of Surgeon-General Harvey in a letter is sufficient to dispose of the question, then what necessity is there for anybody to adduce facts to the contrary? Dr. Barr is in too great a hurry to occupy the moral chair and preach ethical platitudes about other people's failing in sententious language. If the Committee were not aware of the facts, they should have held their peace, for when ignorance is bliss it is folly to be wise. The covert censure in their report was quite uncalled for. Even inferior mortals may be allowed to possess some degree of self-respect and not be guilty of the conduct of the street urchin who throws a stone at a window and runs away. For that is what it amounts to when it is stated that the "Committee deprecate the attitude of Dr. Mullick in preferring charges against the administration of an important public service which he has failed to substantiate." The matter will not rest here. I trust you will do me the justice of publishing this rejoinder, for that is the only way I can meet the insinuations of Dr. Barr and his colleagues before the matter goes further.—I am, etc.,

New Cavendish Street, W., July 15th. Sarat K. Mullick.

## THE GENERAL MEDICAL COUNCIL ELECTION.

Sir,—The Council of the Association having given permission to hold a meeting at Cheltenham, it has been arranged to hold it at St. Mary's Hall on Friday morning at 9.15. All the present direct representatives have been invited to attend and speak on medical politics, and the same courtesy will be extended to any gentlemen who intend to become candidates. The meeting will be open to all practitioners whether members of the British Medical Association or not. As it is probable that there will be a considerable number of gentlemen desirous of speaking, a time limit will be fixed.—I am, etc.,

32, Windsor Place, Cardiff, July 16th. T. Garrett Horder.

P.S.—I shall be glad to receive communications from any gentlemen who wish to take part in the meeting.

## THE MORTALITY FROM ENTERIC FEVER AT LADYSMITH.

Sir,—In the British Medical Journal of April 20th, I notice a paper on enteric fever at Ladysmith by one of my staff, Dr. D. Melville, which will be of greater interest and value when considered with the whole situation at the time.

Dr. Melville states that during the months of April, May, and June at the General Hospital, Ladysmith, he treated 295 cases of enteric fever, resulting in 7 deaths, giving a mortality of 2.38 per cent. During the period in question there were in all 813 cases of enteric fever, of which 150 proved fatal: the death-rate was thus 18.44 per cent. for the total number of cases treated.

It is necessary to point out this interesting fact, since Dr. Melville concludes that inoculation had an unfavourable influence on the mortality. In his table he shows 6.67 per cent. of deaths among this class, an interesting comparison with the total death-rate. He also attributes his low mortality to the use of carbolic internally, sponging, and excellent nursing, treatment which has been carried out elsewhere without such desirable results.—I am, etc.,

S. Westcott,
Major R.A.M.C., Late P.M.O. General Hospital, Ladysmith.
Harrismith, O.R.C., June 20th.

# UNIVERSITIES AND COLLEGES.

## UNIVERSITY OF GLASGOW.

Fourth (Final) Professional Examination.—The following have passed this examination:

*For M.B., C.M.*—D. Davie, W. H. Ferran, S. K. Roy, J. P. Small, D. W. Smith.

*For M.B., Ch.B.*—Martha Adams, J. Anderson, T. Anderson, W. Archibald, J. O. Barclay, J. S. Barr, W. H. Brown, W. M. Brown, G. F. Buchan, E. C. Burnett, P. T. Cairns, S. J. Cameron, R. D. Campbell, J. B. W. Cook, E. H. Cramb, A. Currie, D. B. Davidson, J. Davidson, M.A., G. H. G. Davie, A. Doig, R. N. Dunlop, G. B. Eadie, W. Elder, W. W. Farrar, J. Forrest, J. A. Garden, A. P. Granger, J. Gregor, Mabel Hardie, G. P. Harlan, F. J. Henry, D. W. Hunter, M. Hunter, W. J. Isbister, T. H. Jack, D. R. Kilpatrick, D. Kyle, M.A., J. Lambie, F. J. Lochrane, J. W. M'Dougall, T. M'Laren, H. A. M'Lean, G. W. M'Millan, J. M'Pherson, M.A., E. Magoveny, J. Mains, J. G. Millar, R. J. Mills, W. A. Mills, W. A. Milne, S. J. Moore, Alice Moorhouse, A. H. Muir, R. Paterson, J. Paton, J. K. Patrick, Mary Janet Pirret, R. Ramsey, P. M. Reid, W. Robertson, T. R. Rodger, C. J. Ross, B.A., D. Shannon, Agnes Bankier Sloan, Elizabeth Macfarlane Sloan, D. Steel, J. Strathearn, A. D. Thompson, J. N. Todd, J. G. Tomkinson, J. W. Turner, R. W. Valentine, A. E. Wainwright, J. Walker, G. S. Wallace, P. M. Waugh, W. W. W. Wilson.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A quarterly Council was held on July 11th, 1901, Sir William MacCormac, Bart, K.C.B., K.C.V.O., President, in the chair.

*Dental Surgery.*

The Board of Examiners in dental surgery presented revised regulations for the L.D.S. It recommended that the second professional examination should consist of two parts: (1) general anatomy and physiology, general pathology and surgery; (2) dental anatomy and physiology, dental pathology and surgery and practical dental surgery. This recommendation to come into force at once. It recommended also that additional courses of dental bacteriology and dental materia medica should be required; this regulation to apply to students who enter at a recognised dental hospital and school on and after May 1st next. It recommended that the fee for the L.D.S. should be twenty guineas, payable as to three guineas at the preliminary science examination, as to two guineas at the first professional examination as to two guineas at the first part of the second professional examination as to three guineas at the second part of the second professional examination, with a final payment of ten guineas before granting of diploma. The recommendations were adopted.

*Donation to the Library.*

The Council accepted with thanks from Mr. Henry Morris the original drawings illustrating his work on surgical diseases of the kidney and ureter: together with several volumes of anatomical plates, including the works of Albinus.

*Elections for the Ensuing Year.*

The following were elected.—*President*: Mr. H. G. Howse. *Vice-Presidents*: Mr. T. R. Jessop, Mr. F. Howard Marsh. *Hunterian Professors*: Charles Stewart, Frederick Gymer Parsons, William McAdam Eccles. *Arris and Gale Lecturer*: Thomas Gregor Brodie. *Erasmus Wilson Lecturer*: Charles Powell White.

*Vote of Thanks.*

The thanks of the Council were accorded to the retiring President, Sir William MacCormac, Bart., K.C.B., K.C.V.O., for the manner in which he had discharged the duties of the office of President during the preceding five years.

## ROYAL COLLEGE OF SURGEONS IN IRELAND.

The following prizes and scholarships have been awarded in the summer Session: Carmichael Scholarship: £15, W. R. Ormsby. Mayne Scholarship, £15, J. P. Byrne. Gold and Silver Medals in Operative Surgery: Gold medal, C. W. Ewing; silver medal, A. Charles. Stoney Memorial Gold Medal in Anatomy: R. W. Burkitt. Practical Histology: A. N. Crawford, first prize (£3) and medal; J. S. Sheill, second prize (£1) and certificate. Practical Chemistry: E. J. Clarke, first prize (£3) and medal; J. M. Hayes, second prize (£1) and certificate. Public Health and Forensic Medicine: Miss J. C. Hargrave, first prize (£3) and medal; S. B. Hanbury, second prize (£1) and certificate. Materia Medica: J. S. Sheill, first prize (£3) and medal; J. McQuillan, second prize (£1) and certificate. Practical Pharmacy: Miss C. O'Meara, first prize (£3) and medal; J. M. Alcorn, second prize (£1) and certificate. Biology: R. Bury, first prize (£3) and medal; F. X. Costello, second prize (£1) and certificate.

The Schools of Surgery will resume work after the summer recess on Tuesday, October 1st.

## THE SCHOOL OF MEDICINE OF THE ROYAL COLLEGES, EDINBURGH.

At a meeting of the Governing Board of the School of Medicine of the Royal Colleges, Edinburgh, the Secretary, Mr. R. N. Ramsay, reported that the number of students attending the School during the winter session 1900-1901 was 1,160, and during the summer session 1901 the number was 1,119.

# PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

## HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,483 births and 3,439 deaths were registered during the week ending Saturday last, July 13th. The annual rate of mortality in these towns, which had been 14.8 and 15.1 per 1,000 in the two preceding weeks, further rose last week to 15.6. The rates in the several towns ranged from 9.4 in Halifax, 10.1 in Croydon and in Plymouth, and 10.3 in Derby, to 20.0 in Portsmouth, 21.2 in Preston, 25.0 in Liverpool, and 26.7 in Birkenhead. In the thirty-two large provincial towns the mean death-rate was 16.6 per 1,000, and exceeded by 2.4 the rate recorded in London, which was 14.2 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.6 per 1,000; in London this death-rate was equal to 1.9 per 1,000, while it averaged 3.0 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 4.1 in Portsmouth and in Sheffield, 7.3 in Liverpool, and 9.4 in Birkenhead. Measles caused a death-rate of 1.4 in Gateshead, and 2.3 in Birkenhead; whooping-cough of 1.1 in Swansea and 1.3 in Bradford; and diarrhœal diseases of 2.1 in Leeds, 2.2 in Portsmouth, 2.9 in Sheffield, 6.0 in Liverpool, and 6.6 in Birkenhead. In none of the thirty-three towns did the death-rate from scarlet fever or from "fever" reach 1.0 per 1,000. The 63 deaths from diphtheria in the thirty-three towns included 24 in London, 6 in Liverpool, 5 in Manchester, 4 in Leicester, and 4 in Leeds. One death from small-pox was registered last week in Liverpool, but not one in any other of the thirty-two large provincial towns; 6 small-pox patients were admitted into the Metropolitan Asylums Hospitals during the week, and 12 remained under treatment on Saturday last, July 13th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 1,522 to 2,805 at the end of the eleven preceding weeks, further rose to 2,918 on Saturday last; 324 new cases were admitted during the week, against 369, 408, and 363 in the three preceding weeks.

## HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, July 13th, 990 births and 549 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.3 and 19.0 per 1,000 in the two preceding weeks, fell again to 17.2 last week, and was 1.6 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 11.5 in Aberdeen and 12.7 in Leith, to 23.6 in Greenock and 24.2 in Dundee. The zymotic death-rate in these towns averaged 2.8 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 253 deaths registered in Glasgow included one from small-pox, 14 from measles, 5 from scarlet fever, 2 from diphtheria, 14 from whooping cough, 2 from fever, and 15 from diarrhœa. Six fatal cases of whooping cough and 3 of diarrhœa were recorded in Edinburgh. Six deaths from measles and 5 from diarrhœa occurred in Dundee; 2 from scarlet fever and 2 from diarrhœa in Greenock; and 2 from diarrhœa in Paisley and in Perth.

## VITAL STATISTICS OF LONDON DURING THE SECOND QUARTER OF 1901.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

IN the accompanying table will be found summarised the vital statistics of the cities and boroughs in the county of London, based upon the Registrar-General's returns for the second, or spring, quarter of the year 1001. The mortality figures relate to the deaths of persons actually belonging to the various metropolitan boroughs, and are the result of a complete system of distribution of deaths occurring in the public institutions of London among the various boroughs in which the patients had previously resided.

The 32,656 births registered in London during the three months ending June last were equal to an annual rate of 28.8 per 1,000 of the population, provisionally estimated at 4,543,757 persons in the middle of this year; this rate was 0.5 per 1,000 below that recorded in the corresponding period of last year; and was 1.4 below the average rate in the second quarters of the ten preceding years, 1891-1900. The birth-rates in the various boroughs showed the usual wide variations, owing principally to differences in the sex and age distribution of their populations. In Kensington, the City of Westminster, Hampstead, Stoke Newington, and the City of London the birth-rates were considerably below the average; while they showed the largest excess in Finsbury, Shoreditch, Bethnal Green, Stepney, and Poplar.

The 17,509 deaths of persons belonging to London, registered during the three months ending June last, were equal to an annual rate of 15.5 per 1,000, against 16.2, 16.5, and 17.5 per 1,000 in the three preceding second quarters; the death-rate in London in the corresponding quarters of the ten preceding years averaged 17.7 per 1,000. The lowest death-rates last quarter in the various metropolitan boroughs were 9.9 in Hampstead, 11.2 in Lewisham, 12.1 in Wandsworth, 12.3 in Paddington and in Stoke Newington, and 13.1 in Kensington; the highest rates were 18.5 in Stepney, 19.4 in Shoreditch, 19.5 in Bermondsey, 20.0 in Southwark, 20.1 in Finsbury, and 20.9 in the City of London.

During the quarter under notice, 1,823 deaths resulted from the principal zymotic diseases in London; of these, 2 were referred to small-pox, 543 to measles, 163 to scarlet fever, 229 to diphtheria, 606 to whooping-cough, 1 to typhus, 66 to enteric fever, and 213 to diarrhœal diseases. These 1,823 deaths were equal to an annual rate of 1.60 per 1,000, against an average of 2.37 in the corresponding periods of the ten preceding years. In the second quarters of the three preceding years the rates had been 2.26, 1.67, and 1.80 respectively. The lowest zymotic death-rates last quarter were 0.60 in the City of London, 0.78 in Hampstead, 0.80 in Lewisham, 0.82 in Woolwich, 0.94 in Stoke Newington, and 0.96 in Kensington; the highest rates were 2.13 in Shoreditch, 2.16 in Bethnal Green, 2.41 in Greenwich, 2.45 in Southwark, 2.53 in Poplar, and 2.71 in Bermondsey. Of the two fatal cases of small-pox, one belonged to St Marylebone and one to Bethnal Green; measles showed the highes

*Analysis of the Vital Statistics of the Cities and Boroughs in the County of London after Distribution of Deaths occurring in Public Institutions during the Second Quarter of 1901.*

| CITIES AND BOROUGHS. | Estimated Population middle of 1901. | Births. | Deaths. | Annual Rate per 1,000 Living. Births. | Deaths. | Principal Zymotic Diseases. | Deaths from Principal Zymotic Diseases. | Small-pox. | Measles. | Scarlet Fever. | Diphtheria. | Whooping-Cough. | Typhus. | Enteric Fever. | Simple and Undetermined Fever. | Diarrhœal Diseases. | Phthisis. | Deaths of Children under 1 year of age to 1,000 Births. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COUNTY OF LONDON | 4,543,757 | 32,656 | 17,509 | 28.8 | 15.5 | 1.60 | 1,823 | 2 | 543 | 163 | 229 | 606 | 1 | 66 | — | 213 | 1,784 | 112 |
| Paddington ... ... | 144,154 | 826 | 442 | 23.0 | 12.3 | 1.08 | 39 | — | — | 2 | 7 | 24 | — | 3 | — | 3 | 40 | 100 |
| Kensington ... ... | 176,787 | 909 | 578 | 20.6 | 13.1 | 0.96 | 43 | — | 5 | 1 | 10 | 20 | 1 | 1 | — | 5 | 60 | 117 |
| Hammersmith ... | 112,619 | 772 | 397 | 27.5 | 14.1 | 1.92 | 54 | — | 2 | 3 | 6 | 36 | — | 2 | — | 5 | 40 | 128 |
| Fulham ... ... ... | 138,426 | 1,136 | 466 | 32.9 | 13.5 | 1.93 | 67 | — | 5 | 7 | 7 | 37 | — | 1 | — | 10 | 46 | 109 |
| Chelsea ... ... .. | 73,879 | 401 | 305 | 21.8 | 16.6 | 1.01 | 19 | — | 8 | 1 | 1 | 5 | — | 1 | — | 3 | 32 | 130 |
| City of Westminster ... | 182,502 | 821 | 690 | 18.0 | 15.2 | 1.21 | 55 | — | 7 | 4 | 4 | 28 | — | 6 | — | 6 | 94 | 110 |
| St. Marylebone ... | 133,060 | 1,024 | 524 | 30.9 | 15.8 | 1.17 | 39 | 1 | 2 | 4 | 8 | 17 | — | 1 | — | 9 | 52 | 83 |
| Hampstead ... ... | 82,287 | 340 | 203 | 16.6 | 9.9 | 0.78 | 16 | — | — | — | 4 | 9 | — | — | — | 3 | 14 | 85 |
| St. Pancras ... ... | 235,297 | 1,549 | 933 | 26.4 | 15.9 | 1.61 | 94 | — | 15 | 11 | 14 | 36 | — | 4 | — | 14 | 101 | 119 |
| Islington ... ... | 335,325 | 2,246 | 1,251 | 26.9 | 15.0 | 1.03 | 87 | — | 17 | 6 | 22 | 28 | — | 6 | — | 8 | 114 | 114 |
| Stoke Newington ... | 51,328 | 272 | 157 | 21.3 | 12.3 | 0.94 | 12 | — | 3 | 1 | 2 | 3 | — | 1 | — | 2 | 19 | 85 |
| Hackney ... ... ... | 219,780 | 1,564 | 796 | 28.5 | 14.5 | 1.53 | 84 | — | 27 | 9 | 25 | 17 | — | 2 | — | 4 | 76 | 102 |
| Holborn ... ... ... | 59,805 | 403 | 259 | 27.3 | 17.5 | 1.28 | 19 | — | 9 | 1 | 3 | 3 | — | — | — | 3 | 35 | 102 |
| Finsbury ... ... ... | 101,263 | 891 | 507 | 35.3 | 20.1 | 1.71 | 43 | — | 8 | 6 | 7 | 8 | — | — | — | 14 | 59 | 127 |
| City of London ... ... | 26,627 | 100 | 139 | 15.1 | 20.9 | 0.60 | 4 | — | — | 1 | 2 | — | — | — | — | 1 | 15 | 110 |
| Shoreditch ... ... | 118,554 | 1,069 | 572 | 36.1 | 19.4 | 2.13 | 63 | — | 12 | 13 | 3 | 22 | — | 3 | — | 10 | 55 | 140 |
| Bethnal Green ... ... | 129,700 | 1,098 | 541 | 34.0 | 16.7 | 2.16 | 70 | 1 | 21 | 20 | 10 | 12 | — | 1 | — | 5 | 68 | 89 |
| Stepney ... ... ... | 298,884 | 2,968 | 1,376 | 39.8 | 18.5 | 1.98 | 148 | — | 74 | 10 | 13 | 22 | — | 7 | — | 22 | 141 | 113 |
| Poplar ... ... ... | 168,887 | 1,468 | 737 | 34.7 | 17.5 | 2.55 | 108 | — | 40 | 5 | 9 | 33 | — | 4 | — | 14 | 84 | 117 |
| Southwark ... ... | 206,219 | 1,733 | 1,028 | 33.7 | 20.0 | 2.45 | 126 | — | 53 | 10 | 9 | 38 | — | 5 | — | 11 | 138 | 135 |
| Bermondsey ... ... | 130,348 | 1,052 | 635 | 32.4 | 19.5 | 2.71 | 88 | — | 37 | 8 | 8 | 26 | — | 3 | — | 5 | 57 | 152 |
| Lambeth ... ... ... | 302,460 | 2,267 | 1,185 | 30.1 | 15.7 | 1.40 | 106 | — | 31 | 7 | 7 | 47 | — | 2 | — | 12 | 121 | 106 |
| Battersea ... ... | 169,364 | 1,267 | 580 | 30.0 | 13.7 | 2.04 | 86 | — | 30 | 2 | 6 | 34 | — | 1 | — | 13 | 62 | 114 |
| Wandsworth ... ... | 233,943 | 1,446 | 704 | 24.8 | 12.1 | 1.04 | 61 | — | 22 | 2 | 4 | 20 | — | 3 | — | 10 | 57 | 111 |
| Camberwell ... ... | 259,897 | 1,826 | 989 | 28.2 | 15.3 | 1.98 | 128 | — | 61 | 12 | 18 | 26 | — | 4 | — | 7 | 90 | 118 |
| Deptford ... ... | 110,732 | 803 | 427 | 29.1 | 15.5 | 2.03 | 56 | — | 23 | 2 | 3 | 17 | — | 2 | — | 3 | 31 | 111 |
| Greenwich ... ... | 96,188 | 671 | 334 | 28.0 | 13.9 | 2.41 | 58 | — | 25 | 2 | 4 | 23 | — | 2 | — | 2 | 28 | 98 |
| Lewisham ... ... | 128,423 | 853 | 360 | 26.6 | 11.2 | 0.80 | 26 | — | 4 | 2 | 7 | 8 | — | 1 | — | 4 | 30 | 82 |
| Woolwich ... ... | 117,619 | 880 | 394 | 30.2 | 13.4 | 0.82 | 24 | — | 2 | 2 | 6 | 7 | — | — | — | 7 | 45 | 90 |

proportional fatality in Poplar, Stepney, Southwark, Bermondsey, Camberwell, and Greenwich: scarlet fever in Fulham, Finsbury, Shoreditch, Bethnal Green, Bermondsey, and Deptford; diphtheria in Islington, Hackney, Finsbury, the City of London, Bethnal Green, and Camberwell; whooping-cough in Hammersmith, Fulham, Poplar, Bermondsey, Battersea, and Greenwich; "fever" in Paddington, the City of Westminster, Stoke Newington, Shoreditch, Southwark, Bermondsey, and Greenwich; and diarrhœal diseases in Fulham, Finsbury, Shoreditch, Stepney, Poplar, and Battersea.

During the second quarter of this year 1,784 deaths from phthisis were registered, equal to an annual rate of 1.57 per 1,000, against 1.67, 1.72, and 1.74 in the corresponding quarters of the three preceding years. Among the various metropolitan boroughs the lowest phthisis death-rates last quarter were recorded in Paddington, Hampstead, Wandsworth, Deptford, Greenwich, and Lewisham; and the highest rates in the City of Westminster, Holborn, Finsbury, the City of London, Bethnal Green, and Southwark.

Infant mortality, measured by the proportion of deaths under one year of age to registered births, was equal to 112 per 1,000 last quarter, against 126, 113, and 124 in the corresponding quarters of the three preceding years. The rates of infant mortality during the quarter under notice were lowest in St. Marylebone, Hampstead, Stoke Newington, Bethnal Green, Lewisham, and Woolwich; while the highest rates were recorded in Hammersmith, Chelsea, Finsbury, Shoreditch, Southwark, and Bermondsey.

## THE FACTORY AND WORKSHOPS ACTS AMENDMENT BILL.

SIR FORTESCUE FLANNERY, M.P., has given notice of his intention to move the following new clause to this Bill:—

"With every notification by a doctor or other interested person of a case of anthrax (suspected) poisoning, the medical practioner attending the patient shall immediately forward a specimen of the serum to a bacteriological expert, appointed by the Secretary of State, for microscopical examination, and in each fatal case of anthrax a specimen of the serum taken as soon after death as possible shall also be forwarded to such expert by the doctors who certifies the death."

The Bradford and West Riding Medico-Ethical Union have presented a memorial objecting to this clause, and pointing out that it "is an entirely new departure in legislation; for not only does it render it obligatory upon medical practitioners not in the service of the State to perform medical services without remuneration and at the bidding of Parliament, but under the proposed clause medical men would be under the obligation to abstract blood (serum) from the bodies of their patients, without consulting the wishes of their patients or of their patients' friends, and this notwithstanding that medical men themselves might in some cases think it undesirable, in the interests of their patients, to do so." It is urged that this is a grave interference with the liberty of the public and the privileges of the medical profession, and further that this abstraction of serum is quite unnecessary according to the statement of the Home Secretary, who, when urged to adopt the clause in the Bill declined to do so on the grounds "that it has been found that the existing powers are adequate for the purpose."

The memorialists maintain also that the clause would fail to achieve its ostensible object, and is so indefinitely drafted that it could not be acted upon because (1) a medical practitioner is not required to notify cases of suspected anthrax, but only such as he believes to be anthrax, and the clause does not provide for a case of undoubted anthrax; (2) the medical practitioner would have no power to compel a suspected sufferer from anthrax to submit to the withdrawal of blood; (3) the bacillus is rarely found microscopically at an early stage even in fatal cases of anthrax; (4) a medical practitioner would have no right to take a specimen after death, and as such cases are usually the subject of an inquest, would come into collision with the coroner by interfering before the inquiry was held; further serum taken after death might give negative results in an undoubted case. The memorialists therefore pray that the clause should not be adopted, on the ground that it is "unnecessary, indefinite, unworkable, and unconstitutional."

The memorial also prays that the words in Clause 35, "if so requested by an order of the Secretary of State," shall be omitted on the ground that they will seriously interfere with the working of the Act, and render the emoluments of certifying factory surgeons uncertain. The memorialists further pray that the proposal in Clause 17 of the Bill requiring medical officers of health to report specifically on the administration of the Factory Acts in workshops and workplaces shall be rejected "on the grounds that the education and experience of medical officers of health does not qualify them to report on the condition of machinery and the risks attending the working in factories. The Diploma in Public Health does not require candidates for that distinction to know anything about such subjects, and the duties and experience of medical officers of health is entirely sanitary. They therefore urge that the reports required from medical officers of health as to factories and workplaces should be limited to the sanitary conditions of these places."

## THE ROYAL COMMISSION ON ARSENICAL POISONING.

HEALTH writes: In reference to M. O. H.'s communication in the BRITISH MEDICAL JOURNAL, of June 22nd, 1901, p. 1,592, I wrote to the Secretary of the above Commission and asked what fee they proposed to pay for the amount of work it would involve to answer the long series of questions received from them. The enclosed reply seems to me another sample of the way medical men, both civil and military, are treated by the Government, together with an occasional insult to the whole profession as was thrown in by Mr. Chamberlain in Parliament the night before the Whitsuntide holidays. My brother health officers may act as they think well, but, for my part, I shall not fill in the form of questions.

Royal Commission on Arsenical Poisoning,
8, Delahay Street, Westminster, S.W., June 25th, 1901.

Dear Sir,—In reply to your communication of the 22nd inst. I may remind you that this Commission, as explained in the letter accompanying the circular to which you refer, is inviting the co-operation of Medical Officers of Health in an important matter affecting the public health.

It is not the custom for Royal Commissions to make any payment to professional or other witnesses whom they call before them to give evidence in pursuance of their powers under Royal Warrant, and the same practice must needs be followed where information is requested by correspondence.

I am, dear Sir, yours faithfully,
G. S. BUCHANAN, Secretary.

## INCREASE OF SALARY OF M.O.H.

THE Llangyfelach Rural District Council has unanimously resolved to raise the salary of their medical officer of health, Dr. Trafford Mitchell, from £60 to £100 a year.

## CHARGE FOR MAINTENANCE IN A FEVER HOSPITAL.

DR. G. PETGRAVE JOHNSON (Stoke-on-Trent) writes: In the BRITISH MEDICAL JOURNAL of May 4th, p. 1124, under "Charge for Maintenance in a Fever Hospital," you refer to a case in the Queen's Bench Division on May 20th, 1898, before Judges Ridley and Channell. I should be glad if you would let me have a note of the exact case, as I am unable to find it.

*** The following is a note of the case referred to. The plaintiffs sued in the Hull County Court for recovery of £6 7s. from the defendant for maintenance of his child suffering from scarlet fever in a temporary hospital belonging to the plaintiffs. The county court judge gave judgment for the plaintiffs without costs, and also gave defendant leave to appeal.

*On Appeal:* Mr. Justice Ridley was of opinion that the decision of the county court could not be upheld. The liability under Section CXXXII of the Public Health Act, 1875, is cast on the "patient" only. The question was not considered in the case whether, apart from the statute, the parent had contracted either expressly or by implication, to pay for the maintenance of the child in the hospital. Mr. Justice Channell concurred that there was no statutory liability attaching to the parent. The appeal was dismissed.

*Reference.*—Hull Corporation *v.* Maclaren, May 20th, 1898. (*Local Government Chronicle*, 1828, p. 585.)

# MEDICO-LEGAL AND MEDICO-ETHICAL.

## MEDICAL WITNESSES SUMMONED BY CORONERS.

A CORRESPONDENT asks our opinion on the following case: A. is called to an accident, which proves fatal, and at the same time the regular medical attendant B. of the patient is summoned by telegraph (he lives at some distance), and arrives before death. A. is subpœnaed by the coroner to give evidence, and after the inquest B. writes to A., accusing him of acting unprofessionally in taking the inquest, which ought to have come to him. Is B. warranted in thus criticising A.'s conduct?

*** No: A. was quite justified—indeed, was bound to attend on the coroner's order—and B. had no right to blame him for so doing. The coroner has absolute discretion as to whom he shall call to give evidence, and in such cases as the one our correspondent describes he sometimes sends the summons to A., sometimes to B.; but whichever course he adopts neither A. nor B. has any just cause of complaint.

## MIDWIFERY FEES AND CONTRACTS.

BROOKSIDE writes that he was engaged by a lady to attend her in her confinement a short time ago, and that in order not to be away when the time drew nigh he gave up a holiday he was about to take. Shortly after he found that the patient had called in someone else to attend her. He wishes to know if he can sue the patient.

*** The fee agreed upon could be sued for in the county court provided that our correspondent can prove that there was a contract between himself and the patient, and that he has been always prepared to perform his part of it.

## HOSPITAL REGULATIONS.

PHENOL.—While it is the usual practice of all general hospitals to refuse to admit insane persons, a regulation closing the hospital to cases of attempted suicide is extraordinary, and probably will be found to be impracticable, as the hospital is often the only available place for the prompt and efficient treatment of such cases at all hours of the day and night. We think the regulation may have been made under a misapprehension, and that an explanation should be sought in a friendly manner.

## MEDICAL COMPETITION.

RUSTICUS writes: A. and B. have practices in two neighbouring villages. A. is comparatively a newcomer. He purchased his practice only a year ago, but is desirous, for the convenience of his growing connection, to start a surgery in B.'s village. B. already has two branch surgeries in A.'s district, and his partner lives in A.'s village. He asks would A. be justified in starting a surgery in B.'s village.

*** If A. and B. have the district in common, and practise indifferently in all parts of it, there can be no objection to A. establishing a surgery for his convenience where he pleases.

### MEDICAL ETIQUETTE.

IOTA.—In a small town it is usual for the newcomer to call on all resident medical practitioners as soon as he can after his arrival; in larger places it is sufficient to call upon his immediate neighbours. The resident doctors should then return his call. There is no obligation upon their wives to call upon the wife of the newcomer; these ladies will act quite independently of their husbands, and follow the usual rules of society.

### BOND IN RESTRAINT OF PRACTICE.

X. Y. Z. has assisted a practitioner for two years, having given the ordinary bond. He is about to terminate this engagement, and he asks whether it is open to him to accept the post of *locum tenens* for three weeks to another practitioner residing near his principal.

*** Certainly not, without his late principal's consent. All the usual bonds given by assistants preclude them from practising within a certain radius of their late principal's house for a given period after the termination of their engagement.

### CLUB APPOINTMENTS.

A CORRESPONDENT writes asking if the acceptance of certain club appointments, of which he gives a somewhat general description, would render him liable to be dealt with by the General Medical Council.

*** There does not appear from his statement to be anything in the appointments that is expressly forbidden by the General Medical Council; but we should advise him, if he has any doubts as to its ethical character, to consult the Council of the Branch of the British Medical Association through its Honorary Secretary.

### VALUE OF SHARE IN PRACTICE.

M. writes: A. and B. are in partnership in a first-class, well-established country practice. C. has been acting as assistant for a year and a-half, when it is proposed that he should join A. and B. in partnership: (1) How many years' purchase is usually required for a share in such a practice? (2) How long should elapse before C. is allowed to buy and realise his full third share?

*** (1) About a year and a-half's purchase. (2) It would be usual to allow C. to buy and realise his full share when admitted into partnership.

# MEDICAL NEWS.

SUCCESSFUL VACCINATION.—Dr. Wright-Grant, of Woburn Sands, has received for the fourth time in succession the Local Government grant for successful vaccination.

MEDICAL MAGISTRATE.—Dr. Frederick Dale, of Scarborough, has been appointed a magistrate for the North Riding of Yorkshire.

THE Congress of the Royal Institute of Public Health will commence at Eastbourne on July 25th, when it will be opened by the Duke of Devonshire. It will conclude on July 30th, and excursions will take place on July 31st.

THE guardians of the Chepstow Union have increased the salary of their medical officer, Dr. C. Nelson Thomas, of Lydney, Gloucestershire, by £10 per annum. Dr. Thomas was appointed Medical Officer of the Lydney District in 1898.

DR. JOHN NORTON, late Medical Officer of Health for Westminster, has been appointed by the Secretary of State to succeed the late Mr. Thomas Bond as Surgeon to the A Division of Metropolitan Police attached to Great Scotland Yard and to the police of the Commissioner's Office who reside in the A Division Section-house.

GIFTS TO THE SWANSEA HOSPITAL.—An unknown benefactor has offered to give the sum of £5,000 towards the establishment and maintenance of a convalescent home in connection with the Swansea hospital. Another anonymous benefactor has given £1,250 towards the refurnishing of one of the empty wards.

GERMAN LOSSES IN CHINA.—The total losses of the German Expeditionary Force in China up to the present amounts to 1 officer killed, 12 wounded, 5 dead from disease or accident; 32 non-commissioned officers and men killed, 110 wounded, and 133 dead from disease or accident; to these have to be added 7 missing. The total casualties amount to 300 (18 officers) killed, wounded, and dead from disease or missing.

PRESENTATION.—Dr. J. J. Hanly, of Oakhill, near Bath, was presented with an illuminated address and a set of silver-mounted toilet brushes by his former patients and friends, chiefly from among the poor, on the occasion of his leaving the district to practise in the Channel Islands. Mrs. Hanly was also presented with a gold bracelet, set with opals and diamonds, subscribed for by the workers and poor of ten parishes adjoining Oakhill.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A Quarterly Court of the Directors of the Society was held on July 10th. The chair was taken by the President, Mr. Christopher Heath. Seven new members were elected, the deaths of 4 members were reported, and the election of a member declared void. Two fresh applications for grants were read from widows, and grants at the rate of £50 a year made. It was resolved that a sum of £1,284 be distributed among the 52 widows, 14 orphans, and 6 recipients from the Copeland Fund. The expenses of the quarter amounted to £45 13s.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—The July meeting of this Association was held on July 2nd at the New Hospital for Women, Mrs. Stanley Boyd, M.D., President, in the chair. After preliminary business, Miss Aldrich Blake, M.D., M.S., read a paper on a case of empyema of the gall bladder. In describing the condition of the parts before the operation, she said the gall bladder was small, projecting only a quarter of an inch below the margin of the liver, and it was adherent to the abdominal wall. It contained about half an ounce of pus, and two stones the size of acorns. A circumscribed abscess was found in the much thickened abdominal wall an inch and a quarter below, somewhat internal to the line of the gall bladder; no sinus could be traced connecting the two. The edges of the incision in the gall bladder could not be sutured to the parietes, owing to the overlapping by the edge of the liver; a gauze pack was therefore put round the tube. Convalescence was uneventful. Miss Leney, M.D., gave an account of her researches into the volatile acids of the stomach, in a paper entitled gastric flatulence and its relation to the gastric secretion. She discussed flatulence in its relation to the motility of the stomach, and to the proportion between free hydrochloric acid and the volatile acids. She found that in all cases where the volatile acids were increased the free hydrochloric acid was proportionately diminished, and that there was likewise an increased proportion of volatile acids present, when the motility was below the normal standard.

LONDON SCHOOL NURSES' SOCIETY.—The annual meeting of this Society was held at the residence of Lady Windsor, on July 17th inst., the President, the Countess of Aberdeen, in the Chair. The Report, presented by the Honorary Secretary, Miss Honnor Morten, stated that 63 schools had been visited during the year by the four nurses who had been employed by the Association, that it was desired to double this number of nurses and to extend their usefulness; and for this an income of £500 a year was required instead of £237, as shown by the balance sheet for last year. Testimonies had been given by school managers and by several medical authorities as to the value of the nurses' services. The adoption of the report was moved by Dr. Shuttleworth, who spoke of the advantage of the work of the school nurses in arresting small ills at the beginning (for example, by prompt attention to sore eyelids and chilled toes), and preventing much avoidable suffering, and sometimes spread of contagious ailments, by supplying the lack of knowledge and care so frequent amongst the parents of the poorest scholars. The Society did not wish their nurses to usurp the place of doctors, and as a matter of fact they not infrequently were the means of inducing parents to procure medical aid. Their functions, indeed, were to a large extent preventive; and the diminution of dirt in the schools in which the nurses ministered was often remarkable. The resolution was seconded by Miss Petty, who gave instances of her experience when working as a nurse for the Society.

DISPENSARIES FOR INFANTS IN FRANCE.—There are in France twelve dispensaries solely for the treatment of disease in children. Ten of these are in Paris, the first having been opened so long ago as 1892 by Professor Budin, and one in Bordeaux was started in 1899 by Dr. Saint-Phillipe. In the latter, during the past two years, nearly 1,000 infants have been treated. The chief work of the dispensaries is to give instruction in infant feeding.

Imperial Yeomanry Hospital.—At a general meeting of the Imperial Yeomanry Hospitals Committee the following resolution was proposed by Lady Chesham, seconded by the Duchess of Beaufort, and carried unanimously: "The Committee of the Imperial Yeomanry Hospital wish to express their sincere and warm appreciation of the noble work that was so loyally and well carried out to their entire satisfaction by the medical officers, the nursing staff, the orderlies, non-commissioned officers and men belonging to the staff of the Imperial Yeomanry Hospital at Deelfontein." Numerous letters have been received by members of the Committee expressing the gratification of patients who have benefited by the care and attention they received in the Deelfontein Hospital. There are at present in the hospital 28 officers and 335 non-commissioned officers and men, the total admissions to date being 4,533, in addition to 954 out-patients.

Glanders in London.—At the last meeting of the London County Council a report of the Public Control Committee was considered which dealt with the mode of dealing with glanders in London. The number of cases reported in 1900 were 1,387, showing an increase upon the years 1894-1899. This increase is, however, largely due to the use of mallein as a diagnostic, since by its agency cases are discovered which in the absence of physical signs would not have been previously regarded as glanders. The trustworthiness of mallein as a diagnostic is doubted in some quarters and we understand that the Board of Agriculture is engaged in experimental researches in obedience to the recommendation of Lord Stanley's Committee of 1898 with a view to clear up the doubtful pathological questions which hamper local authorities in dealing with this insidious pest.

Pathological Society of London.—At a meeting of this Society held on Saturday, July 6th, at the University of Oxford, the following communications were made. Dr. James Ritchie: The relation of resistance to tetanus toxin to antitoxin power of serum. Dr. Sidney Martin: Inhibition of growth of the typhoid bacillus. Dr. J. S. Haldane: Hæmoglobinometer. Dr. Purves Stewart: Degenerations following transverse lesions of the cord. Dr. Waters: Demonstration of tumours. Mr. H. L. Barnard: Calcified aneurysm of the renal artery. Drs. F. J. Poynton and Alexander Paine: Experimental arthritis produced by a diplococcus from acute rheumatism. The authors summarised their observations as follows: The arthritis was frequent but not invariable. It was a polyarthritis affecting especially the larger joints. It was recoverable from, but was of varying severity. There might be acute swelling of the fibrous tissues, gelatinous in appearance, or chronic fibrous thickening of the joint capsule. The exudations were clear, bloodstained, turbid, or fibrino-cellular. The diplococcus was demonstrable in the exudations, but with difficulty in the most acute and chronic phases. The micro-organism was destroyed by the leucocytes and endothelial cells, and probably gained access to the joints by the minute blood capillaries in the areolar layer of the joint capsule.

## MEDICAL VACANCIES.

The following vacancies are announced:

AYR COUNTY HOSPITAL.—House-Surgeon. Salary, £70 per annum, with residence, board, and washing. Applications to the Secretary by August 7th.

BETHNAL GREEN INFIRMARY, Cambridge Road, N.E.—First Assistant Medical Officer; unmarried. Salary at the rate of £150 per annum, with board, lodging, and washing. Applications, on forms provided, to be sent to the Medical Superintendent by August 5th.

BIRMINGHAM: GENERAL HOSPITAL.—House-Surgeon. Appointment for six months. No salary, but residence, board, and washing provided. Applications to the House Governor by July 26th.

BIRMINGHAM: QUEEN'S HOSPITAL.—House-Surgeon. Post tenable till August 31st, 1902. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Secretary by July 24th.

BISHOP AUCKLAND: RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary, £350 per annum. Applications to the Clerk to the Council, Union Offices, Bishop Auckland, by July 31st.

BRADFORD POOR-LAW UNION.—Second Assistant Medical Officer for the Hospital and Workhouse; unmarried. Salary, £100 per annum, with prescribed rations, apartments, and washing. Applications to the Clerk to the Guardians, 22, Manor Row, Bradford, by August 13th.

BRIDGNORTH AND SOUTH SHROPSHIRE INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board and lodgings. Applications to the Secretary, The Infirmary, Bridgnorth.

BRISTOL ROYAL INFIRMARY. (1) Anæsthetist and Junior House-Surgeon. (2) Casualty Officer. Appointments for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Secretary by August 1st.

CAMBERWELL INFIRMARY.—Assistant Medical Superintendent. Salary, £150 per annum, with apartments, board, and washing. Applications, on forms provided, to be sent to the Clerk to the Guardians, 29, Peckham Road, S.E., by July 20th.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon; unmarried. Salary, £60 per annum, with board and lodging. Applications to the Secretary by July 26th.

CARLISLE DISPENSARY.—Resident Surgeon; unmarried. Salary, £150 per annum, with apartments. Applications to the Honorary Secretary, Mr. G. A. Lightfoot, 23, Lowther Street, Carlisle.

DENBIGH: DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary, £100 per annum to commence, with board, residence, and washing. Applications to the Secretary.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee.

DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £40 per annum, with residence, board, and washing. Applications to the Secretary by August 8th.

GERMAN HOSPITAL, Dalston.—(1) Honorary Assistant Physician. (2) Honorary Assistant Surgeon. Applications to the Secretary by July 22nd.

HULL ROYAL INFIRMARY.—(1) Casualty Officer. (2) Junior Assistant House-Surgeon. Salary, £60 per annum, with board and lodging in each case. Applications to the Chairman of the House Committee.

IPSWICH: EAST SUFFOLK AND IPSWICH HOSPITAL.—Second House-Surgeon unmarried. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary.

KING'S COLLEGE, London.—Professor of General Pathology and Bacteriology. Applications to the Secretary by July 22nd.

KING'S COLLEGE HOSPITAL, London.—Assistant Physician (or Surgeon) for Diseases of the Throat. Applications to the Secretary by July 22nd.

LEICESTER INFIRMARY.—Clinical Clerk and Dresser. Honorarium £10 10s. for six months, with apartments, board, and washing. Applications to the Secretary.

LIVERPOOL: DAVID LEWIS NORTHERN HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with residence and maintenance. Applications to the Chairman by July 24th.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN.—Honorary Physician for Diseases of Children. Applications to the Secretary, 38, Barton Arcade, Manchester, by July 31st.

MANCHESTER: HULME DISPENSARY.—Honorary Physician. Applications to the Honorary Secretary of the Medical Committee by July 24th.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead.—Junior Resident Medical Officer. Appointment for six months. Honorarium at the rate of £60 per annum. Applications to the Secretary at the offices, 41, Fitzroy Square, W.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill, Stoke upon-Trent.—Assistant House-Surgeon. Board, apartments, and washing provided, and at least £10 honorarium at the end of six months. Applications to the Secretary by July 29th.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Assistant Physician. Applications to the Secretary by July 23rd.

NOTTINGHAM GENERAL DISPENSARY.—Two Assistant Resident Surgeons; unmarried. Salary, £160 per annum each, increasing by £10 yearly, with furnished apartments, etc. Applications to the Secretary, Mr. M. I. Preston, Journal Chambers, Nottingham.

OLDHAM INFIRMARY.—Senior House-Surgeon. Salary, £100 per annum, with board, washing, and residence. Candidates to state if willing to accept Junior post at £75 per annum. Applications to the Honorary Secretary by July 27th.

ROCHESTER: ST. BARTHOLOMEW'S HOSPITAL.—Assistant House-Surgeon. Salary, £100 per annum, with board, apartments, washing, etc. Applications, marked "Application for Assistant House-Surgeon," to be sent to the Clerk to the Trustees by July 23rd.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Road, S.E.—Assistant Surgeon; must be F.R.C.S.Eng. Applications to the Secretary by July 23rd.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Appointment for six months. Salary at the rate of £60 per annum, with furnished apartments, board, and washing. Applications to the Secretary by July 29th.

ROYAL ORTHOPEDIC HOSPITAL, Oxford Street, W.—Resident House-Surgeon and Registrar; unmarried. Appointment for six months but eligible for re-election. Salary, £100 per annum, with full board. Applications to the Secretary by July 27th.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months but capable of renewal. Salary at the rate of £40 per annum, with board and washing. Applications to the Secretary.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—(1) Junior House-Surgeon. Salary at the rate of £50 per annum, with rooms, board, and washing. (2) Locum Tenens by August 1st for post of Junior House-Surgeon. Applications to the Secretary for (1) by August 1st.

SWANSEA UNION WORKHOUSE.—Assistant Medical Officer; not over 40 years of age. Knowledge of Welsh desirable. Salary, £200 per annum. Applications on forms provided to be sent to the Clerk by July 24th.

SYDNEY UNIVERSITY.—Professorship of Pathology, not more than 40 years of age. Salary, £800 per annum, and £100 allowed for passage expenses. Applications to the Agent-General for New South Wales, 9, Victoria Street, London, S.W., by September 14th.

WEST BROMWICH DISTRICT HOSPITAL.—House-Surgeon; unmarried. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary, Mr. T. F. Bache, Churchill House, West Bromwich, by July 22nd.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Assistant House-Surgeon. (2) Assistant House-Physician. Appointments for six months. Honorarium at the rate of £75 per annum, with board, lodging, and washing in each case. Applications to the House Governor by July 22nd.

WORCESTER GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £70 per annum, with board, residence, and washing. Applications to the Secretary by August 5th.

WORKSOP DISPENSARY AND VICTORIA HOSPITAL.—House-Surgeon and Dispenser. Salary, £150 per annum, with rooms and attendance. Applications to Mr. C. A. Whall, 44, Bridge Street, Worksop.

YORK DISPENSARY.—Resident Medical Officer; unmarried. Salary, £110 per annum, with board, lodging, and attendance. Applications to Mr. W. Draper, De Grey House, York.

## MEDICAL APPOINTMENTS.

Astin, W., M.B., C.M.Aberd., appointed Certifying Factory Surgeon for the Loughton District of Essex.

Bull, G. C. R., M.B.Lond., F.R.C.S.Eng., appointed Medical Officer for the Turvey District of the Bedford Union, *vice* M. F. Cock, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

Cargill, L. Vernon, F.R.C.S., appointed Surgeon to the Royal Eye Hospital, Southwark.

Ealand, H. F., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Farnham Union, *vice* J. A. Lorimer, M.R.C.S., L.R.C.P.Lond.

Elliott, G., L.R.C.P., L.R.C.S.Edin., appointed District and Workhouse Medical Officer of the Stamford Union, *vice* R. C. Middlemist, M.R.C.S., L.R.C.P.Lond., resigned.

Fagan, P. J., F.R.C.S.I., appointed Lecturer on Elementary Physics in the Catholic University Medical School, Dublin.

Farrant, C., M.R.C.S.Eng., L.R.C.P.Lond., appointed District Medical Officer of the Taunton Union, *vice* S. Farrant, M.R.C.S.Eng., resigned.

Findlay, John Waimman, M.D., appointed Dispensary (or Assistant) Physician to the Glasgow Royal Infirmary.

Forster, R. T., L.S.A., appointed Medical Officer for the Third District of the Bridlington Union, *vice* C. A. Young, M.R.C.S., L.R.C.P.Lond., resigned.

HEATHER, Lewis D., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Hay Union, *vice* G. W. B. Featherstone, M.R.C.S., L.R.C.P.Lond., resigned.

HORN, A. E., M.B.Lond., appointed First Assistant Medical Officer of the Chelsea Infirmary, *vice* W. J. E. Davies, M.R.C.S., L.R.C.P.Lond., resigned.

HUGHES, James Brierley, M.R.C.S.Eng., L.S.A., appointed Consulting Medical Officer to the Macclesfield General Infirmary.

HUGHES, John Brierley, B.A., M.B., B.C.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., appointed Member of the Honorary Medical Staff of the Macclesfield General Infirmary.

LAVER, J. W., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Grimston Division of the Freebridge Lynn Union, *vice* A. L. Saunders, M.R.C.S., L.R.C.P.Lond.

MARTIN, S. E., M.D., M.Ch.R.U.I., appointed Certifying Factory Surgeon for the Newry District.

MAYO, C. C. W., M.R.C.S., L.R.C.P.Lond., appointed Resident Assistant Medical Officer to the Ecclesall Bierlow Union Workhouse.

MUIRHEAD, James, M.B., B.S.Durh., appointed Senior House-Physician to the Royal Infirmary, Newcastle-on-Tyne.

NORTON, John, M.D.Durh., M.R.C.S.Eng., D.P.H.Eng., appointed Surgeon to the A Division Metropolitan Police (Great Scotland Yard), *vice* Thos. Bond, F.R.C.S., deceased.

O'CONNELL, T., L.R.C.S.I., L.A.H.Dub., appointed Certifying Factory Surgeon for the Fethard and Tullamain Dispensary Districts, co. Tipperary.

PALLETT, T. E., M.D.Brux., L.S.A., appointed Medical Officer for the Tenth District of the Lexden and Winstree Union, *vice* J. Taylor, M.R.C.S.Eng.

PECK, Herbert, M.D., D.P.H., reappointed Medical Officer of Health for the Borough of Chesterfield.

PROBYN-WILLIAMS, P. J., M.D., appointed Lecturer and Instructor in Anæsthetics at the London Hospital.

ROBINSON, T. W., M.D., Ch.M., appointed District Medical Officer at Albany, Western Australia, and Vaccinator for the District of Albany, *vice* Ingoldby, M.R.C.S.Eng., L.R.C.P.Edin.

ROSEBY, Edmund R., M.B., appointed Resident Medical Officer at the Adelaide Hospital, South Australia.

ROUTH, Amand, M.D., B.S., F.R.C.P.Lond., appointed Consulting Physician to the Samaritan Free Hospital for Women, London.

SILVER, G. J., M.R., C.M.Aberd., appointed District Medical Officer of the Walsall Union, *vice* W. H. Cooke, M.D.Aberd., resigned.

SIMMONS, R. B., M.B., appointed Medical Officer at Clermont, Queensland.

SIMPSON, W., M.B., B.S.Durh., appointed Medical Officer for the Seventh District of the Newcastle-upon-Tyne Union, *vice* J. Dalgliesh, M.R.C.S.Eng., resigned.

STANG, Thos., L.R.C.P., appointed Health Officer for the Shire of Echuca, Victoria.

STEEGMANN, E. J., M.B.Durh., D.P.H.Eng., appointed Medical Officer of Health for the Heston and Isleworth Urban District, *vice* H. H. Brind, M.R.C.S., L.R.C.P.Lond., resigned.

STEELL, John, M.B., Ch.M., appointed Medical Superintendent of the Ballarat Lunatic Asylum, *vice* R. W. Lethbridge, M.B., Ch.M.Edin.

SWINDALE, J. A., M.B., B.S.Durh., appointed Medical Officer for the Binfield District of the Easthampstead Union, *vice* J. Swindale, M.R.C.S.Eng., resigned.

VALENTINE, Thos. H. A., M.R.C.S.Eng., D.P.H., appointed Health Officer for Wellington District, New Zealand.

VALLACK, A. S., M.B., Ch.M., appointed Medical Officer and Vaccinator at Bowral.

WADE, Charles, M.R.C.S.Eng., L.R.C.P.Lond., appointed District Medical Officer of the Boscastle District of the Camelford Union, *vice* Arthur Wade, M.R.C.S.Eng., L.S.A. Lond., resigned.

## DIARY FOR NEXT WEEK.

### MONDAY.

**British Congress on Tuberculosis.** St. James's Hall, Piccadilly, 3 P.M.—Opening meeting.

### TUESDAY.

**British Congress on Tuberculosis.** 9.30 A.M.—Queen's Hall, Sectional meetings; 3 P.M.—St. James's Hall, address by Professor Koch.

### WEDNESDAY.

**British Congress on Tuberculosis.** 9.30 A.M.—Queen's Hall, Sectional meetings; 3 P.M.—St. James's Hall, address by Professor Brouardel.

### THURSDAY.

**British Congress on Tuberculosis.** 9.30 A.M.—Queen's Hall, Sectional meetings; 3 P.M., Queen's Hall, address by Professor McFadyean.

**Hospital for Sick Children.** Great Ormond Street, W.C., 4 P.M.—Demonstration of selected cases.

### FRIDAY.

**British Congress on Tuberculosis.** 9.30 A.M.—Sectional meetings: 3 P.M.—Queen's Hall, final general meeting.

**Society for the Study of Disease in Children,** 11, Chandos Street, Cavendish Square, W., 5.30 P.M.—Annual general meeting, report of Council, election of Council and officers.

**Medical Graduates' College and Polyclinic,** 22, Chenies Street, W.C.—Lectures and demonstrations will be given at 4 P.M. as follows: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

BATES.—On July 12th, at 4, Lingfield Road, Wimbledon, the wife of J. Edwin Bates, M.B., of a son.

HALL.—On July 13th, at 342, Glossop Road, Sheffield, the wife of Arthur Hall, M.A., M.B.Cantab., M.R.C.P., of a son.

MCGEAGH.—On July 13th, at Gransden Hall, Hunts, the wife of William McGeagh, M.D., of a son.

SCOTT.—On July 12th, at Madeira House, Shanklin, the wife of William W. Scott, L.R.C.S.I., L.R.C.P.I., of a son.

### MARRIAGES.

LUND—SILLEY.—On July 11th, at S. Barnabas's, Kensington, by the Rev. T. W. M. Lund, assisted by the Rev. G. R. Thornton, Kenneth Frasar Lund, of 2, Fopstone Road, Kensington, S.W., to Elsie Lisette, eldest daughter of George M. Silley, of Warwick Gardens, Kensington, W.

THORP—WRIGHT.—On July 16th, at St. Paul's Church, York, by the Rev. Canon Argles, Henry Carter Thorp, M.A., M.B., B.C.Cantab., of Ryde, son of the late Henry Bell Thorp, York, to Annie Florence, third daughter of Samuel Wright, J.P.

### DEATH.

HITCHCOCK.—On July 11th, at the Red House, Amesbury, suddenly, Harry Knight Hitchcock, M.D., J.P., of "Christowell," Branksome Park, Bournemouth, aged 55 years.

## LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the NOTICES to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

### QUERIES.

R.W. asks for an opinion, formed from practical experience, of Davidson's optometer (for sight testing) in general practice.

R. would be glad to hear of some school or establishment where a boy aged 11 could be treated for stammering.

J. M. W. desires to hear of a temporary home for a mild hysterical patient where she would get medical supervision and kind, firm treatment generally; terms about £1 to 25s. per week, as means are small.

MOSQUITO desires to hear of a home where a gentleman who has been thirty years in India, and now suffers from a mild form of chronic bronchitis, could be received on payment of 10s. or 15s. a week; he is able to go about except in bad weather.

HAY FEVER.

J. W. has a patient who for two months every year suffers severely from hay fever, but is quite free while at the seaside. If this patient resided at the seaside all the year round, would he be free from the complaint, or is the benefit experienced due to the change?

INCOME TAX.

N. asks whether all or any of the following can be deducted from gross income in making the return for income tax: (1) Travelling expenses incurred in connection with a public appointment. (2) What proportion (if any) of rental paid for rooms or house. (3) Cost of drugs and instruments. (4) Subscriptions to learned societies. (5) Educational and examination fees. He also asks whether there are any other permissible deductions.

*** The proportion of rent may be any part not exceeding two-thirds, as allowed by general commissioners. Travelling expenses, cost of drugs and instruments, subscriptions and examination fees are allowable deductions. There are others set forth in the professional balance sheets, for use of medical men, published by the Income Tax Repayment Agency, 6, Chichester Road, Paddington, W.

REFRACTION.

OCULUS writes: I am in general practice, and often feel my inability to test my patients' sight for spectacles. I should be glad to be able to do this, and would feel obliged if you could tell me of some concise book which would enable me with a little practice to do what I require. Also where can I get sight-testing cards?

*** Among the numerous books published concerning the testing of the sight may be mentioned *The Refraction of the Eye*, by G. Hartridge, F.R.C.S., eighth edition (London: J. and A. Churchill, 1896. 6s.). A small book with a similar title by A. Stanford Morton, sixth edition (London: H. K. Lewis, 1897. 3s. 6d.). *Refraction and how to Refract*, by J. Thorington, A.M., M.D. (London: Rebman, Limited, 1900. 7s. 6d.); while a book that can be highly recommended, and which treats of the whole subject of ophthalmology is *Diseases of the Eye*, by H. R. Swanzy, A.M., M.B., seventh [edition (London: H. K. Lewis, 1900. 12s. 6d.). Test types can be obtained from Curry and Paxton, 193, Great Portland Street, W., as well as from most opticians.

### ANSWERS.

PILGRIM has omitted to forward his name; the correspondent who sends us a copy of the *Guide to Woodhall Spa* has also failed to verify his observations thereon by his name.

TREATMENT OF SENILE PRURITUS.

A. D. writes: In reply to query of "S. H. J." may I suggest a trial of vinegar and hot water, equal parts, to be applied to skin and let dry? The internal administration of potassium nitrate at the same time has succeeded in my hands. If the vinegar applications fail, I should try carbolic acid solution, 1 in 40, locally.

### PREPARATION OF OSTEOLOGICAL SPECIMENS.

W. M.—The two best methods of preparing osteological specimens are (1) slow maceration in water, (2) burying in sand. In the case of each method as much as possible of the muscles and tendons should be removed from the bones with a knife.

1. *Maceration in Water.*—After the removal of the muscles place the bones in stoneware jars or pans, and cover them with water: replace the water as it evaporates, keeping the bones always covered. Examine the bones at intervals of two or three weeks: and as the periosteum and cartilage and the remains of the muscles and tendons become softened and disorganised, remove them by scraping with a blunt knife and by rubbing with a stiff brush. Leave the bones in water for a month or two after the periosteum and cartilage have been removed, then take them out, and if they are discoloured bleach them by passing them through very weak solutions of chloride of lime, about a tablespoonful of lime to each gallon of water. Even if the bones are dark brown in colour when they are removed from the water they will bleach to a perfectly normal colour, though the process may take a considerable time.

2. *Burying in Sand.*—This method requires a fairly large heap of sea sand, which should be placed on a stone or cement floor exposed to the weather. The bones are merely to be buried in the sand, care being taken to keep them always covered, and after a longer or shorter period, depending upon the weather and the original condition of the bones, all the soft parts will disappear, and the bones may be taken out, washed, bleached if necessary, and dried.

## LETTERS, NOTES, Etc.

DR. T. WILSON PARRY (Bakewell) has written a song entitled "The Freemason," for which he has also composed the music. It is dedicated to His Royal Highness the Duke of Connaught, K.G., who on July 17th was installed Grand Master of the English Freemasons. The song, which is published by George Kenning and Son, Great Queen Street, (1s. 6d. net), is to be sold for the benefit of the Royal Masonic Institute for Girls.

### MEDICAL ATTIRE.

SUBURBAN writes: The letters that have appeared in the BRITISH MEDICAL JOURNAL as to the dress that we should wear at the annual meeting have given us most curious and instructive reading, and throw interesting sidelights on the mental attitude of some of our professional brethren towards others of the same ilk. With those who rebel against the conventional silk hat and frock coat on the grounds of health and comfort, I am most heartily in sympathy, but I should wish to protest against the tone that some of your correspondents adopt, and especially "Centurion" in the JOURNAL of July 13th. He insinuates that those who wear these objectionable articles do not know how "gentlemen" dress, and the same idea pervades some of the other letters, to say nothing of meaner insinuations. I do not think your correspondents realise that there is a great difference between the dress that may be "correctly" worn in the country and what is necessary in and near town, where a doctor, like everybody else, is expected to be more precise in his dress, as in many other respects. I do not wish to pose as another authority on the "correct" dress of a "gentleman," but would like to refer "Centurion" to two photographs, both of summer and out-of-door gatherings, that appear, appositely enough, in this week's issue of Mr. Clement Shorter's new venture, *The Tatler*. One is a photograph of the promenade between the innings at the Oxford and Cambridge cricket match at Lord's, and the other of the gathering on the terrace at Harrow on Speech Day. I presume that in both cases those present may fairly be assumed to be "gentlemen," and yet "Centurion" will find that among the hundreds present nearly all the men are arrayed in silk hat and frock coat.

### PATIENTS AND DOCTORS.

DR. W. L'HEUREUX BLENKARNE (Worthing) writes: These clever and too true lines were quoted by the late Dr. Moxon in his introductory lecture, How should we study medicine?" at Guy's Hospital in 1868, which lecture I had the never forgotten pleasure of hearing, and a printed copy of which now lies before me. Dr. Moxon's quotation is somewhat different to that in the BRITISH MEDICAL JOURNAL of July 8th, page 59. The lines are as follows:—

> "God and the doctor *they* alike adore
> *Just in the hour* of danger and *no more*.
> The danger o'er, both are alike requited:
> God is forgotten, and the doctor slighted."

I have italicised the words which differ in Dr. Moxon's quotation. The lecture in which they appear is comprised in Dr. Moxon's inimitable and original work *Pilocercas Senilis*, page 108, published by Sampson Low and Co., 1887, a work which one is never tired of taking up and dipping into now and again.

### IS THE ANGLO-SAXON WOMAN DEGENERATING?

DR. E. MUIRHEAD LITTLE (London) writes: The paragraph in the BRITISH MEDICAL JOURNAL of June 8th, headed "Is the Anglo-Saxon Woman Degenerating?" suggests to me to ask the question whether very tall women are not really "sports," showing a variation towards the male type? If so, these "sports" would probably be less fit for the duty of reproducing the species than their shorter sisters, and their existence rather to be regretted than otherwise from the interests-of-the-race point of view. It would be instructive if members who have large experience in midwifery were to tell us whether tall or short women are, in their opinion, the better child-bearers and mothers, both as regards quality and quantity of the product. I have an impression that tall women suffer more in childbed than do those of low or medium stature.

MISS G. B. JACOBI, L.R.C.P.&S.Ed., L.F.P.S.G. (London, S.W.) writes with reference to the same paragraph: I advise everyone who is in danger of becoming infected by Dr. Reed's optimism as to the satisfactory physique of the Anglo-Saxon woman to stand at lunch time outside any factory where women are employed and watch the workers coming out. He will frequently fail to discover a single young woman who is tall and well built. Next take a good look at the shop girl and servant girl of the present generation, because these are the women who form the majority. Those who can afford to improve their physique by "cycling, lawn tennis, and hockey" form perhaps less than 25 per cent. of all the women of Great Britain.

### ANTIRHEUMATIC RINGS.

DR. ALBERT MOUILLOT (Harrogate) writes: Those of us who have much to do with gouty patients must have been struck by the number of them who wear what are called "antirheumatic" rings. These rings are composed of two metals, and doubtless there is a mild constant current between them. The result is that on the rings themselves and on the portions of the fingers covered by them there is found a red deposit, which the vendors and wearers of the articles say is uric acid, and it is under this belief that the rings are worn. I got a patient to collect a quantity of the substance, which on examination I found to be composed of epithelial scales and an amorphous deposit probably due to electrolytic action on the perspiration. I also sent a portion to Captain Pinch at the Polyclinic, who after careful examination reports positively that it contained neither uric acid or any form of urates. I do not for one moment suppose that any doctor who thought about the matter could have any other opinion; but the belief that the substance deposited is uric acid is so deeply rooted in the minds of the laity that I thought it worth while to have an authoritative examination made.

### GLYCERINE AS A CATHETER LUBRICANT.

DR. A. HIRST (London) writes: With regard to the best lubricant for the catheter when there are two or three strictures to pass through, I have found nothing to equal castor oil. I have seen it facilitate matters very much when the strictures have been extremely narrow and one has begun to get doubtful as to being able to pass anything thin.

LETTERS, COMMUNICATIONS, ETC., have been received from

**A** W. G. Alexander, M.B., Stalbridge. A. B. C.; Mr. R. Y. Aitken, Blackburn; A.D. **B** Mr. A. H. Bennett, Watford; Mr. W. L'H. Blenkarne, Worthing; Dr. C. S. Blair, London; Mr. G. H. Broadbent, Manchester; Mr. F. Broadbent, North Collingham; F. Beach, M.B., Kingston Hill; Dr. A. H. Bennetts, London; Messrs. Brand and Co., London; Mr. J. B. Blackett, London; Bush Practitioner; Dr. W. Burgess, London; Mr. G. Brown, London. **C** Civil Surgeon; Dr. L. Canney, London; Mr. G. B. Carter, London; Dr. E. C. Carter, Cheltenham; Messrs. H. W. Cox, Limited, London; Dr. W. Collier, Oxford. **D** Mr. T. Duncan, Edinburgh; G. F. Da Costa, M.B., Kingston, Jamaica; Dr. C. Dukes, Rugby; Dr. F. Dale, Scarborough; Dr. L. Drage, Hatfield. **E** Enquirer. **F** Fisherman. **G** Mr. H. H. Graham, London; Dr. E. Goodall, Carmarthen; D. McI. Glen, M.B., Rutherglen; Mr. D. G. Greenfield, London. **H** Mr. J. A. Hunt, Borrowash; Mr. T. M. Hovell, London; Dr. T. A. Helme, Manchester; Mr. C. O. Haas, Coventry; H. S. B.; Dr. A. Hirst, London; Mr. T. G. Horder, Cardiff; Dr. C. K. Hitchcock, Bootham. **I** Iatrcs. **J** J. B.; J. M. W.; J. B. B.; Dr. W. M. M. Jackson, Epsom. **K** Mr. H. Kimpton, London; R. King, M.B., Grimsby; Mr. H. W. Kiallmark, London; K. F.; D. H. Kyle, M.B., St. Andrews. **M** Dr. H. W. G. Macleod, London; Dr. W. Moxon, Matlock Bridge; Mr. G. H. Morley, Birmingham; M.D., F.R.C.S.; Dr. J. Mason, Windermere; Dr. A. Mouillot, Harrogate; M.R.C.S.Eng.; Mr. A. H. Moxon, Great Yarmouth; Dr. S. K. Mullick, London; Mr. H. J. Manning, Salisbury; F. Marsdin, M.B., Eastbourne; W. Mitchell, M.B., Bradford. **N** Neat but not Gaudy Dr. D. N. Nabarro, London; Mr. M. J. Nolan, Downpatrick. **P** Dr. E. Phillips, Coventry; Dr. T. W. Barry, Bakewell; Pilgrim; Public Safety. **R** Mr. G. Rowell, London; G. A. Reid, M.B., Southsea; Miss N. Robinson, Dover; Mr. J. D. Rice, London; Dr. R. R. Rentoul, Liverpool; Dr. T. H. Redwood, Rhymney. **S** Dr. M. F. Simon, London; Dr. F. H. Spencer, Exeter; S. Stephenson, M.B., London; Suburban; W. L. Strain, M.B., Sao Paulo, Brazil; S. Stephenson, M.B., London; Dr. R. Stockman, Glasgow. **T** C. N. Thomas, M.B., Lydney; Dr. H. Tilley, London; "Temperance Critic," Editor of the, London; Toga. **U** Dr. A. R. Urquhart, Perth. **V** V. V. V. **W** Dr. R. Wilkinson, London; Dr. A. McC. Weir, Liverpool; Mr. J. Worthington, Stockport Mr. J. C. Wilson, Haworth, etc.

## BOOKS, ETC., RECEIVED.

Typhoid the Destroyer of Armies and its Abolition. By L. Canney, M.D. London: Bailliere, Tindall, and Cox. 1901. 1s.

The Ophthalmoscope. By G. Hartridge, F.R.C.S. Fourth edition. London: J. and A. Churchill. 1901. 4s. 6d.

Optics. By A. S. Percival, M.A., M.B. London: Macmillan and Co. 1899. 10s.

Transactions of the Twenty-second Annual Meeting of the American Laryngological Association held in Washington, 1900. New York: Carey Printing Co. 1901.

A Retrospect of Surgery during the past Century. By J. Poland, F.R.C.S. London: Smith, Elder, and Co. 1901. 5s.

*.* In forwarding books the publishers are requested to state the selling price.


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# British Congress on Tuberculosis.

*LONDON, JULY 22nd to 26th, 1901.*

## AN ADDRESS
ON
## THE FIGHT AGAINST TUBERCULOSIS
### IN THE LIGHT OF THE EXPERIENCE THAT HAS BEEN GAINED IN THE SUCCESSFUL COMBAT OF OTHER INFECTIOUS DISEASES.

BY GEH. MED.RATH PROFESSOR DR. ROBERT KOCH,
Direktor des Instituts für Infektionskrankheiten in Berlin.

THE task with which this Congress will have to busy itself is one of the most difficult, but it is also one in which labour is most sure of its reward.

I need not point again to the innumerable victims tuberculosis annually claims in all countries, nor to the boundless misery it brings on the families it attacks. You all know that there is no disease which inflicts such deep wounds on mankind as this. All the greater, however, would be the general joy and satisfaction if the efforts that are being made to rid mankind of this enemy, which consumes its inmost marrow, were crowned with success.

There are many, indeed, who doubt the possibility of successfully combating this disease, which has existed for thousands of years, and has spread all over the world. This is by no means my opinion. This is a conflict into which we may enter with a surely founded prospect of success, and I will tell you the reasons on which I base this conviction.

#### TUBERCULOSIS A PREVENTABLE DISEASE.

Only a few decades ago the real nature of tuberculosis was unknown to us; it was regarded as a consequence, as the expression, so to speak, of social misery, and, as this supposed cause could not be got rid of by simple means, people relied on the probable gradual improvement of social conditions, and did nothing. All this is altered now. We know that social misery does indeed go far to foster tuberculosis, but the real cause of the disease is a parasite—that is, a visible and palpable enemy, which we can pursue and annihilate, just as we can pursue and annihilate other parasitic enemies of mankind.

Strictly speaking, the fact that tuberculosis is a preventable disease ought to have become clear as soon as the tubercle bacillus was discovered, and the properties of this parasite and the manner of its transmission became known. I may add that I, for my part, was aware of the full significance of this discovery from the first, and so will everybody have been who had convinced himself of the causal relation between tuberculosis and the tubercle bacillus. But the strength of a small number of medical men was inadequate to the conflict with a disease so deeply rooted in our habits and customs. Such a conflict requires the co-operation of many, if possible of all, medical men, shoulder to shoulder with the State and the whole population. But now the moment when such co-operation is possible seems to have come. I suppose there is hardly any medical man now who denies the parasitic nature of tuberculosis, and among the non-medical public, too, the knowledge of the nature of the disease has been widely propagated.

Another favourable circumstance is that success has recently been achieved in combating several parasitic diseases, and that we have learned from these examples how the conflict with pestilences is to be carried on.

#### SPECIAL PREVENTIVE MEASURES NEEDED FOR VARIOUS DISEASES.

The most important lesson we have learned from the said experience is that it is a great blunder to treat pestilences uniformly. This was done in former times; no matter whether the pestilence in question was cholera, plague, or leprosy: isolation, quarantine, useless disinfection were always resorted to. But now we know that every disease must be treated according to its own special individuality, and that the measures to be taken against it must be most accurately adapted to its special nature, to its etiology. We are entitled to hope for success in combating tuberculosis only if we keep this lesson constantly in view. As so extremely much depends just on this point, I shall take the liberty to illustrate it by several examples.

#### *Plague.*

The pestilence which is at this moment in the foreground of interest, the bubonic plague, may be instructive to us in several respects.

People used to act upon the conviction that a plague patient was in the highest degree a centre of infection, and that the disease was transmitted only by plague patients and their belongings. Even the most recent international agreements are based on this conviction. Although, as compared with formerly, we now have the great advantage that we can, with the aid of the microscope and of experiments on animals, recognise every case of plague with absolute certainty, and although the prescribed inspection of ships, quarantine, the isolation of patients, the disinfection of infected dwellings and ships, are carried out with the utmost care, the plague has, nevertheless, been transmitted everywhere, and has in not a few places assumed grave dimensions. Why this has happened we know very well, owing to the experience quite recently gained as to the manner in which the plague is transmitted. It has been discovered that only those plague patients that suffer from plague-pneumonia—a condition which is fortunately infrequent—are centres of infection, and that the real transmitters of the plague are the rats. There is no longer any doubt that, in by far the majority of cases in which the plague has been transmitted by ocean traffic, the transmission took place by means of plague among the ship rats. It has also been found that wherever the rats were intentionally or unintentionally exterminated the plague rapidly disappeared; whereas at other places, where too little attention had been paid to the rat plague, the pestilence continued. This connection between the human plague and the rat plague was totally unknown before, so that no blame attaches to those who devised the measures now in force against the plague if the said measures had proved unavailing. It is high time, however, that this enlarged knowledge of the etiology of plague be utilised in international as well as in other traffic. As human plague is so dependent on the rat plague, it is intelligible that protective inoculation and the application of antitoxic serum have had so little effect. A certain number of human beings may have been saved from the disease by that, but the general spread of the pestilence has not been hindered in the least.

#### *Cholera.*

With cholera the case is essentially different: it may under certain circumstances be transmitted directly from human beings to other human beings, but its main and most dangerous propagator is water, and therefore, in the combating of cholera, water is the first thing to be considered. In Germany, where this principle has been acted on, we have succeeded for four years in regularly exterminating the pestilence (which was introduced again and again from the infected neighbouring countries) without any obstruction of traffic.

#### *Hydrophobia.*

Hydrophobia, too, is not void of instruction for us. Against this disease the so-called protective inoculation proper has proved eminently effective as a means of preventing the outbreak of the disease in persons already infected, but, of course, such a measure can do nothing to prevent infection itself. The only real way of combating this pestilence is by compulsory muzzling. In this matter also we have had the most satisfactory experience in Germany, but have at the same time seen that the total extermination of the pestilence can be achieved only by international measures, because hydrophobia, which can be very easily and rapidly sup-

pressed, is always introduced again year after year from the neighbouring countries.

*Leprosy.*

Permit me to mention only one other disease because it is etiologically very closely akin to tuberculosis, and we can learn not a little for the furtherance of our aims from its successful combating. I mean leprosy, It is caused by a parasite which greatly resembles the tubercle bacillus. Just like tuberculosis, it does not break out till long after infection, and its course is almost slower. It is transmitted only from person to person, but only when they come into close contact, as in small dwellings and bedrooms. In this disease, accordingly, immediate transmission plays the main part; transmission by animals, water, or the like is out of the question. The combative measures, accordingly, must be directed against this close intercourse between the sick and the healthy. The only way to prevent this intercourse is to isolate the patients. This was most rigorously done in the Middle Ages by means of numerous leper houses, and the consequence was that leprosy, which had spread to an alarming extent, was completely stamped out in Central Europe. The same method has been adopted quite recently in Norway, where the segregation of lepers has been ordered by a special law. But it is extremely interesting to see how this law is carried out. It has been found that it is not at all necessary to execute it strictly, for the segregation of only the worst cases, and even of only a part of these, sufficed to produce a diminution of leprosy. Only so many infectious cases had to be sent to the leper houses that the number of fresh cases kept regularly diminishing from year to year. Consequently the stamping-out of the disease had lasted much longer than it would have lasted if every leper had been inexorably consigned to a leper house, as in the Middle Ages; but in this way, too, the same purpose is gained—slowly, indeed, but without any harshness.

### SPUTUM THE MAIN SOURCE OF INFECTION IN TUBERCULOSIS.

These examples may suffice to show what I am driving at, which is to point out that, in combating pestilences, we must strike the root of the evil, and must not squander force in subordinate ineffective measures. Now the question is whether what has hitherto been done, and what is about to be done against tuberculosis, really strikes the root of tuberculosis, so that it must sooner or later die. In order to answer this question it is necessary first and foremost to inquire how infection takes place in tuberculosis. Of course, I presuppose that we understand by tuberculosis only those morbid conditions which are caused by the tubercle bacillus.

In by far the majority of cases of tuberculosis the disease has its seat in the lungs, and has also begun there. From this fact it is justly concluded that the germs of the disease, that is, the tubercle bacilli, must have got into the lungs by inhalation. As to the question where the inhaled tubercle bacilli have come from, there is also no doubt. On the contrary, we know with certainty that they get into the air with the sputum of consumptive patients. This sputum, especially in advanced stages of the disease, almost always contains tubercle bacilli, sometimes in incredible quantities. By coughing, and even speaking, it is flung into the air in little drops, that is, in a moist condition, and can at once infect persons who happen to be near the coughers. But it may also be pulverised when dried, in the linen or on the floor, for instance, and get into the air in the form of dust.

In this manner a complete circle, a so-called *circulus vitiosus*, has been formed for the process of infection from the diseased lung, which produces phlegm and pus containing tubercle bacilli, to the formation of moist and dry particles (which, in virtue of their smallness, can keep floating a good while in the air), and finally to new infection, if particles penetrate with the air into a healthy lung and originate the disease anew. But the tubercle bacilli may get to other organs of the body in the same way, and thus originate other forms of tuberculosis. This, however, is a considerably rarer case. The sputum of consumptive people, then, is to be regarded as the main source of the infection of tuberculosis. On this point, I suppose, all are agreed. The question now arises whether there are not other sources too, copious enough to demand consideration in the combating of tuberculosis.

Great importance used to be attached to the hereditary transmission of tuberculosis. Now, however, it has been demonstrated by thorough investigation that, though hereditary tuberculosis is not absolutely non-existent, it is nevertheless extremely rare, and we are at liberty, in considering our practical measures, to leave this form of origination entirely out of account.

### DIFFERENCES BETWEEN HUMAN AND BOVINE TUBERCULOSIS.

But another possibility of tuberculous infection exists, as is generally assumed, in the transmission of the germs of the disease from tuberculous animals to man. This manner of infection is generally regarded nowadays as proved, and as so frequent that it is even looked upon by not a few as the most important, and the most rigorous measures are demanded against it. In this Congress also the discussion of the danger with which the tuberculosis of animals threatens man will play an important part. Now, as my investigations have led me to form an opinion deviating from that which is generally accepted, I beg your permission, in consideration of the great importance of this question, to discuss it a little more thoroughly.

Genuine tuberculosis has hitherto been observed in almost all domestic animals, and most frequently in poultry and cattle. The tuberculosis of poultry, however, differs so much from human tuberculosis that we may leave it out of account as a possible source of infection for man. So, strictly speaking, the only kind of animal tuberculosis remaining to be considered is the tuberculosis of cattle, which, if really transferable to man, would indeed have frequent opportunities of infecting human beings through the drinking of the milk and the eating of the flesh of diseased animals.

Even in my first circumstantial publication on the etiology of tuberculosis I expressed myself regarding the identity of human tuberculosis and bovine tuberculosis with reserve. Proved facts, which would have enabled me sharply to distinguish these two forms of the disease, were not then at my disposal, but sure proofs of their absolute identity were equally undiscoverable, and I therefore had to leave this question undecided. In order to decide it, I have repeatedly resumed the investigations relating to it, but so long as I experimented on small animals, such as rabbits and guinea-pigs, I failed to arrive at any satisfactory result, though indications which rendered the difference of the two forms of tuberculosis probably were not wanting. Not till the complaisance of the Ministry of Agriculture enabled me to experiment on cattle, the only animals really suitable for these investigations, did I arrive at absolutely conclusive results. Of the experiments which I have carried out during the last two years along with Professor Schütz, of the Veterinary College in Berlin, I will tell you briefly some of the most important.

A number of young cattle which had stood the tuberculin test, and might therefore be regarded as free from tuberculosis, were infected in various ways with pure cultures of tubercle bacilli taken from cases of human tuberculosis; some of them got the tuberculous sputum of consumptive patients direct. In some cases the tubercle bacilli or the sputum were injected under the skin, in others into the peritoneal cavity, in others into the jugular vein. Six animals were fed with tuberculous sputum almost daily for seven or eight months; four repeatedly inhaled great quantities of bacilli, which were distributed in water, and scattered with it in the form of spray. None of these cattle (there were nineteen of them) showed any symptoms of disease, and they gained considerably in weight. From six to eight months after the beginning of the experiments they were killed. In their internal organs not a trace of tuberculosis was found. Only at the places where the injections had been made small suppurative foci had formed, in which few tubercle bacilli could be found. This is exactly what one finds when one injects dead tubercle bacilli under the skin of animals liable to contagion. So the animals we experimented on were affected by the living bacilli of human tuberculosis exactly as they would have been by dead ones; they were absolutely insusceptible to them.

The result was utterly different, however, when the same experiment was made on cattle free from tuberculosis with tubercle bacilli that came from the lungs of an animal suffer-

ing from bovine tuberculosis. After an incubation period of about a week the severest tuberculous disorders of the internal organs broke out in all the infected animals. It was all one whether the infecting matter had been injected only under the skin, or into the peritoneal cavity or the vascular system. High fever set in, and the animals became weak and lean; some of them died after a month and a half to two months, others were killed in a miserably sick condition after three months. After death extensive tuberculous infiltrations were found at the place where the injections had been made, and in the neighbouring lymphatic glands, and also far advanced alterations of the internal organs, especially the lungs and the spleen. In the cases in which the injection had been made into the peritoneal cavity the tuberculous growths which are so characteristic of bovine tuberculosis were found on the omentum and peritoneum. In short, the cattle proved just as susceptible to infection by the bacillus of bovine tuberculosis as they had proved insusceptible to infection by the bacillus of human tuberculosis. I wish only to add that preparations of the organs of the cattle which were artificially infected with bovine tuberculosis in these experiments are exhibited in the Museum of Pathology and Bacteriology.

An almost equally striking distinction between human and bovine tuberculosis was brought to light by a feeding experiment with swine. Six young swine were fed daily for three months with the tuberculous sputum of consumptive patients. Six other swine received bacilli of bovine tuberculosis with their food daily for the same period. The animals that were fed with the sputum remained healthy and grew lustily, whereas those that were fed with the bacilli of bovine tuberculosis soon became sickly, were stunted in their growth, and half of them died. After three months and a-half the surviving swine were all killed and examined. Among the animals that had been fed with sputum no trace of tuberculosis was found, except here and there little nodules in the lymphatic glands of the neck, and in one case a few grey nodules in the lungs. The animals, on the other hand, which had eaten bacilli of bovine tuberculosis had, without exception (just as in the cattle experiment), severe tuberculous diseases, especially tuberculous infiltration of the greatly enlarged lymphatic glands of the neck and of the mesenteric glands, and also extensive tuberculosis of the lungs and the spleen.

The difference between human and bovine tuberculosis appeared not less strikingly in a similar experiment with asses, sheep, and goats, into whose vascular systems the two kinds of tubercle bacilli were injected.

Our experiments, I must add, are not the only ones that have led to this result. If one studies the older literature of the subject, and collates the reports of the numerous experiments that were made in former times by Chauveau, Günther and Harms, Bollinger and others, who fed calves, swine, and goats with tuberculous material, one finds that the animals that were fed with the milk and pieces of the lungs of tuberculous cattle always fell ill of tuberculosis, whereas those that received human material with their food did not. Comparative investigations regarding human and bovine tuberculosis have been made very recently in North America by Smith, Dinwiddie, and Frothingham, and their result agreed with that of ours. The unambiguous and absolutely conclusive results of our experiments is due to the fact that we chose methods of infection which exclude all sources of error, and carefully avoided everything connected with the stalling, feeding, and tending of the animals that might have a disturbing effect on the experiments.

Considering all these facts, I feel justified in maintaining that human tuberculosis differs from bovine, and cannot be transmitted to cattle. It seems to me very desirable, however, that these experiments should be repeated elsewhere, in order that all doubt as to the correctness of my assertion may be removed.

I wish only to add that, owing to the great importance of this matter, the German Government has appointed a Commission to make further inquiries on the subject.

### Is Man susceptible to Bovine Tuberculosis?

But, now, how is it with the susceptibility of man to bovine tuberculosis? This question is far more important to us than that of the susceptibility of cattle to human tuberculosis, highly important as that is, too. It is impossible to give this question a direct answer, because, of course, the experimental investigation of it with human beings is out of the question. Indirectly, however, we can try to approach it. It is well known that the milk and butter consumed in great cities very often contain large quantities of the bacilli of bovine tuberculosis in a living condition, as the numerous infection experiments with such dairy products on animals have proved. Most of the inhabitants of such cities daily consume such living and perfectly virulent bacilli of bovine tuberculosis, and unintentionally carry out the experiment which we are not at liberty to make. If the bacilli of bovine tuberculosis were able to infect human beings, many cases of tuberculosis caused by the consumption of alimenta containing tubercle bacilli could not but occur among the inhabitants of great cities, especially the children. And most medical men believe that this is actually the case.

In reality, however, it is not so. That a case of tuberculosis has been caused by alimenta can be assumed with certainty only when the intestine suffers first—that is, when a so-called primary tuberculosis of the intestines is found. But such cases are extremely rare. Among many cases of tuberculosis examined after death, I myself remember having seen primary tuberculosis of the intestine only twice. Among the great *post-mortem* material of the Charité Hospital in Berlin ten cases of primary tuberculosis of the intestine occurred in five years. Among 933 cases of tuberculosis in children at the Emperor and Empress Frederick's Hospital for Children, Baginsky never found tuberculosis of the intestine without simultaneous disease of the lungs and the bronchial glands. Among 3,104 necropsies of tuberculous children, Biedert observed only sixteen cases of primary tuberculosis of the intestine. I could cite from the literature of the subject many more statistics of the same kind, all indubitably showing that primary tuberculosis of the intestine, especially among children, is a comparatively rare disease, and of these few cases that have been enumerated, it is by no means certain that they were due to infection by bovine tuberculosis. It is just as likely that they were caused by the widely-propagated bacilli of human tuberculosis, which may have got into the digestive canal in some way or other—for instance, by swallowing saliva from the mouth. Hitherto nobody could decide with certainty in such a case whether the tuberculosis of the intestine was of human or of animal origin. Now we can diagnose them. All that is necessary is to cultivate in pure culture the tubercle bacilli found in the tuberculous material, and to ascertain whether they belong to bovine tuberculosis by inoculating cattle with them. For this purpose I recommend subcutaneous injection, which yields quite specially characteristic and convincing results. For half a year past I have occupied myself with such investigations, but, owing to the rareness of the disease in question, the number of the cases I have been able to investigate is but small. What has hitherto resulted from this investigation does not speak for the assumption that bovine tuberculosis occurs in man.

Though the important question whether man is susceptible to bovine tuberculosis at all is not yet absolutely decided, and will not admit of absolute decision to-day or to-morrow, one is nevertheless already at liberty to say that, if such a susceptibility really exists, the infection of human beings is but a very rare occurrence. I should estimate the extent of the infection by the milk and flesh of tuberculous cattle, and the butter made of their milk, as hardly greater than that of hereditary transmission, and I therefore do not deem it advisable to take any measures against it.

### Human Sputum the Main Source of Human Tuberculosis.

So the only main source of the infection of tuberculosis is the sputum of consumptive patients, and the measures for the combating of tuberculosis must aim at the prevention of the dangers arising from its diffusion. Well, what is to be done in this direction? Several ways are open. One's first thought might be to consign all persons suffering from tuberculosis of the lungs, whose sputum contains tubercle bacilli, to suitable establishments. This, however, is not only absolutely impracticable, but also unnecessary. For a consumptive who coughs out tubercle bacilli is not necessarily a

source of infection on that account, so long as he takes care that his sputum is properly removed and rendered innocuous. This is certainly true of very many patients, especially in the first stages, and also of those who belong to the well-to-do classes, and are able to procure the necessary nursing. But how is it with people of very small means? Every medical man who has often entered the dwellings of the poor, and I can speak on this point from my own experience, knows how sad is the lot of consumptives and their families there. The whole family have to live in one or two small, ill-ventilated rooms. The patient is left without the nursing he needs, because the able-bodied members of the family must go to their work. How can the necessary cleanliness be secured under such circumstances? How is such a helpless patient to remove his sputum, so that it may do no harm? But let us go a step further and picture the condition of a poor consumptive patient's dwelling at night. The whole family sleep crowded together in one small room. However cautious he may be, the sufferer scatters the morbid matter secreted by his diseased lungs every time he coughs, and his relatives close beside him must inhale this poison. Thus whole families are infected. They die out, and awaken in the minds of those who do not know the infectiousness of tuberculosis the opinion that it is hereditary, whereas its transmission in the cases in question was due solely to the simplest process of infection, which do not strike people so much, because the consequences do not appear at once, but generally only after the lapse of years.

### Foci of Tuberculous Infection.

Often, under such circumstances, the infection is not restricted to a single family, but spreads in densely inhabited tenement houses to the neighbours, and then, as the admirable investigations of Biggs have shown in the case of the densely-peopled parts of New York, regular nests of foci of disease are formed. But, if one investigates these matters more thoroughly, one finds that it is not poverty *per se* that favours tuberculosis, but the bad domestic conditions under which the poor everywhere, but especially in great cities, have to live. For, as the German statistics show, tuberculosis is less frequent, even among the poor, when the population is not densely packed together, and may attain very great dimensions among a well-to-do population when the domestic conditions, especially as regards the bedrooms, are bad, as is the case, for instance, among the inhabitants of the North Sea Coast. So it is the overcrowded dwellings of the poor that we have to regard as the real breeding places of tuberculosis; it is out of them that the disease always crops up anew, and it is to the abolition of these conditions that we must first and foremost direct our attention if we wish to attack the evil at its root, and to wage war against it with effective weapons.

This being so, it is very gratifying to see how efforts are being made in almost all countries to improve the domestic conditions of the poor. I am also convinced that these efforts, which must be promoted in every way, will lead to a considerable diminution of tuberculosis. But a long time must elapse ere essential changes can be effected in this direction, and much may be done meanwhile in order to reach the goal much more rapidly.

### The Need for Hospitals for Consumptives.

If we are not able at present to get rid of the danger which small and overcrowded dwellings involve, all we can do is to remove the patients from them, and, in their own interests and that of the people about them, to lodge them better; and this can be done only in suitable hospitals. But the thought of attaining this end by compulsion of any kind is very far from me; what I want is that the consumptives may be enabled to obtain the nursing they need better than they can obtain it now. At present a consumptive in an advanced stage of the disease is regarded as incurable and as an unsuitable inmate for a hospital. The consequence is that he is reluctantly admitted and dismissed as soon as possible. The patient, too, when the treatment seems to him to produce no improvement, and the expenses, owing to the long duration of his illness, weigh heavily upon him, is himself animated by the wish to leave the hospital soon. That would be altogether altered if we had special hospitals for consumptives, and if the patients were taken care of there for nothing, or at least at a very moderate rate. To such hospitals they would willingly go; they could be better treated and fed there than is now the case. I know very well that the execution of the project will have great difficulties to contend with, owing to the considerable outlay it entails. But very much would be gained if, at least in the existing hospitals, which have to admit a great number of consumptives at any rate, special wards were established for them in which pecuniary facilities would be offered them. If only a considerable fraction of the whole number of consumptives were suitably lodged in this way, a diminution of infection, and consequently of the sum total of tuberculosis, could not fail to be the result. Permit me to remind you in this connection of what I said about leprosy. In the combating of that disease also great progress has already been made by lodging only a fair number of the patients in hospitals. The only country that possesses a considerable number of special hospitals for tuberculous patients is England, and there can be no doubt that the diminution of tuberculosis in England, which is much greater than in any other country, is greatly due to this circumstance. I should point to the founding of special hospitals for consumptives and the better utilisation of the already existing hospitals for the lodging of consumptives as the most important measure in the combating of tuberculosis, and its execution opens a wide field of activity to the State, to municipalities, and to private benevolence. There are many people who possess great wealth, and would willingly give of their superfluity for the benefit of their poor and heavily afflicted fellow-creatures, but do not know how to do this in a judicious manner. Here is an opportunity for them to render a real and lasting service by founding consumption hospitals or purchasing the right to have a certain number of consumptive patients maintained in special wards of other hospitals free of expense.

As, however, unfortunately, the aid of the State, the municipalities, and rich benefactors will probably not be forthcoming for a long time yet, we must for the present resort to other measures that may pave the way for the main measure just referred to, and serve as a supplement and temporary substitute for it.

### Notification.

Among such measures I regard obligatory notification as specially valuable. In the combating of all infectious diseases it has proved indispensable as a means of obtaining certain knowledge as to their state, especially their dissemination, their increase and decrease. In the conflict with tuberculosis also we cannot dispense with obligatory notification; we need it not only in order to inform ourselves as to the dissemination of this disease, but mainly in order to learn where help and instruction can be given, and especially where the disinfection which is so urgently necessary when consumptives die or change their residences has to be effected. Fortunately it is not at all necessary to notify all cases of tuberculosis, nor even all cases of consumption, but only those that, owing to the domestic conditions, are sources of danger to the people about them. Such limited notification has already been introduced in various places in Norway, for instance, by a special law, in Saxony by a ministerial decree, in New York and in several American towns, which have followed its example. In New York, where notification was optional at first and was afterwards made obligatory, it has proved eminently useful. It has thus been proved that the evils which it used to be feared the introduction of notification for tuberculosis would bring about need not occur, and it is devoutly to be wished that the examples I have named may very soon excite emulation everywhere.

### Disinfection.

There is another measure, closely connected with notification namely, disinfection, which, as already mentioned, must be effected when consumptives die or change their residence, in order that those who next occupy the infected dwelling may be protected against infection. Moreover, not only the dwellings but also the infected beds and clothes of consumptives ought to be disinfected.

### EDUCATION OF THE PUBLIC.

A further measure, already recognised on all hands as effective, is the instructing of all classes of the people as to the infectiousness of tuberculosis, and as to the best way of protecting oneself. The fact that tuberculosis has considerably diminished in almost all civilised States of late is attributable solely to the circumstance that knowledge of the contagious character of tuberculosis has been more and more widely disseminated, and that caution in intercourse with consumptives has increased more and more in consequence. If better knowledge of the nature of tuberculosis has alone sufficed to prevent a large number of cases, this must serve us as a significant admonition to make the greatest possible use of this means, and to do more and more to bring it about that everybody may know the dangers that threaten him in intercourse with consumptives. It is only to be desired that the instructions may be made shorter and more precise than they generally are, and that special emphasis be laid on the avoidance of the worst danger of infection, which is the use of bedrooms and small ill-ventilated workrooms simultaneously with consumptives. Of course the instructions must include directions as to what consumptives have to do when they cough and how they are to treat their sputum.

### SANATORIA.

Another measure which has come into the foreground of late, and which at this moment plays to a certain extent a paramount part in all efforts for the combating of tuberculosis, works in quite another direction. I mean the founding of sanatoria for consumptives.

That tuberculosis is curable in its early stages must be regarded as an undisputed fact. The idea of curing as many tuberculous patients as possible in order to reduce the number of those that reach the infectious stage of consumption, and thus to reduce the number of fresh cases, was therefore a very natural one. The only question is whether the number of persons cured in this way will be great enough to exercise an appreciable influence on the retrogression of tuberculosis. I will try to answer this question in the light of the figures at my disposal.

According to the business report of the German Central Committee for the Establishment of Sanatoria for the Cure of Consumptives, about 5,500 beds will be at the disposal of these institutions by the end of 1901, and then, if we assume that the average stay of each patient will be three months, it will be possible to treat at least 20,000 patients every year. From the reports hitherto issued as to the results that have been achieved in the establishments we learn further that about 20 per cent. of the patients that have tubercle bacilli in their sputum lose them by the treatment there. This is the only sure test of success, especially as regards prophylaxis. If we make this the basis of our estimates, we find that 4,000 consumptives will leave these establishments annually as cured. But, according to the statistics ascertained by the German Imperial Office of Health, there are 226,000 persons in Germany over 15 years of age who are so far gone in consumption that hospital treatment is necessary for them. Compared with this great number of consumptives, the success of the establishments in question seems so small that a material influence on the retrogression of tuberculosis in general is not yet to be expected of them. But pray do not imagine that I wish, by this calculation of mine, to oppose the movement for the establishment of such sanatoria in any way. I only wish to warn against the over-estimating of their importance which has recently been observable in various quarters, based apparently on the opinion that the war against tuberculosis can be waged by means of sanatoria alone, and that other measures are of subordinate value. In reality the contrary is the case. What is to be achieved by the general prophylaxis resulting from recognition of the danger of infection and the consequent greater caution in intercourse with consumptives is shown by a calculation of Cornet's regarding the decrease of mortality from tuberculosis in Prussia in the years 1889 to 1897. Before 1889 the average was 31.4 per 10,000, whereas in the period named it sank to 21.8, which means that, in that short space of time, the number of deaths from tuberculosis was 184,000 less than was to be expected from the average of the preceding years. In New York, under the influence of the general sanitary measures directed in a simply exemplary manner by Biggs, the mortality from tuberculosis has diminished by more than 35 per cent. since 1886; and it must be remembered that both in Prussia and New York the progress indicated by these figures is due to the first beginnings of these measures. Considerably greater success is to be expected of their further development. Biggs hopes to have got so far in five years that in the city of New York alone the annual number of deaths from tuberculosis will be 3,000 less than formerly. I take this opportunity of most urgently recommending Dr. Biggs's organisation to the study and imitation of all municipal sanitary authorities.

Now, I do indeed believe that it will be possible to render the sanatoria considerably more efficient. If strict care be taken that only patients be admitted for whom the treatment of those establishments is well adapted, and if the duration of the treatment be prolonged, it will certainly be possible to cure 50 per cent., and perhaps still more. But even then, and even if the number of the sanatoria be greatly increased, the total effect will always remain but moderate. The sanatoria will never render the other measures I have mentioned superfluous. If their number become great however, and if they perform their functions properly, they may materially aid the strictly sanitary measures in the conflict with tuberculosis.

### CONCLUSION.

If now, in conclusion, we glance back once more to what has been done hitherto for the combating of tuberculosis, and forward to what has still to be done, we are at liberty to declare with a certain satisfaction that very promising beginnings have already been made. Among these I reckon the consumption hospitals of England, the legal regulations regarding notification in Norway and Saxony, the organisation created by Biggs in New York, the sanatoria, and the instruction of the people. All that is necessary is to go on developing these beginnings, to test, and if possible to increase, their influence on the diminution of tuberculosis, and, wherever nothing has yet been done, to do likewise.

If we are continually guided in this enterprise by the spirit of genuine preventive medical science, if we utilise the experience gained in conflict with other pestilences, and aim, with clear recognition of the purpose and resolute avoidance of wrong roads, at striking the evil at its root, then the battle against tuberculosis, which has been so energetically begun, cannot fail to have a victorious issue.

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# AN ADDRESS

ON

## THE MEASURES ADOPTED BY DIFFERENT NATIONS FOR THE PREVENTION OF CONSUMPTION.

BY PROFESSOR P. BROUARDEL,

Dean of the Faculty of Medicine of Paris; Member of the Institute.

MORTALITY from tuberculosis varies according to the country. In some cases it is accountable for a sixth, a fifth, and sometimes a fourth of the total mortality. Havoc such as this makes it compulsory that all nations and governments should strictly inquire into and adopt measures to arrest the propagation of a disease which in these days is the greatest enemy of the human race. The wonder is that the voice of alarm has been so long in making itself heard, and that for centuries our ancestors have looked impassively on the disasters going on around them. There were several reasons for this apparent indifference. The struggle was considered useless, the disease incurable; it was not known how it spread. Exaggerating the import of some observations, it was agreed that phthisis was hereditary. They were lulled to sleep by this formula, which served as a pillow for idleness, and exempted them from investigating the origin of the mischief. Popular observations were looked on as old wives' tales—for example, Morgagni's, who, in the seventeenth century, stated that in Italy it was customary to burn the bedding of persons who had died from phthisis, and who declared that he feared to make a *post-mortem* examination of cases of phthisis. But when, on December 15th, 1865,

Villemin showed experiments at the Academy of Medicine which proved the real presence of the contagion, when our illustrious colleague, Professor Robert Koch, had discovered and demonstrated to the medical world the agent of this contagion, everyone felt that a new way was opened to humanity, and every nation wished to profit by the recent scientific discoveries for the public good.

Before the scientists I have just mentioned had actually made known their discoveries, you English people had already begun the struggle. Convinced by observation that tuberculosis thrived in dark and damp dwellings, in 1836—nearly 70 years ago—you passed a law providing for the construction of healthy houses. And since that date your zeal has not abated. You have, with admirable perseverance, passed more than ten Acts of Parliament, you have rendered salubrious the dwellings of the poor, the workshop, the town, and the whole kingdom. This effort has been described by the name of the Queen who presided over its direction—the Victorian Era. No greater homage could be paid to Her Gracious Majesty, and in the name of all my countrymen I unite with my English colleagues in adopting this characteristic name for the crusade that was undertaken and for the success obtained. You have diminished mortality in England from tuberculosis by 40 per cent. Yours is the honour. It will be ours to follow in your steps.

I was asked by the Committee to make the subject of my address the measures adopted by different nations for the prevention of consumption. This I agreed to do, but I must at the same time make a confession. I depended too much on my wish to please my excellent colleagues, whose request seemed so feasible: but, unfortunately, precise information is difficult to collect, and the time at my disposal for its verification was very short, so that there will, I fear, be lacunæ, probably even errors. I shall be pleased in either case to have my attention drawn to them, and I entreat my colleagues to do so; if they comply, thanks to them and to you, the wish expressed by the Committee will be carried out, and every nation may, by hearing what its neighbours have done, gain instruction and be inspired by motives of emulation beneficial to all.

The grounds for the prevention of tuberculosis are identical in every country. On this question the entire medical profession of the world is united. Tuberculosis is avoidable and curable. The methods used to bring this about are the same in all countries, but according to the impetus given to the movement by the scientists in the different nations, and according to the customs and laws in force, some nations have taken the first rank.

### THE EDUCATION OF PUBLIC OPINION.

Allow me to dwell a moment on legislation. It is only possible to bring a law into force that interferes with our daily life, that disturbs inveterate habits, and that has to be carried out in the bosom of the domestic hearth, when it is called for by public opinion; when all are convinced of its benefits, and everyone recognises the danger of his vicious habits, and is ready personally to reform them and to require his neighbour to do the same. This is the state of things in England. M. d'Estournelles de Constant, Chargé d'Affaires for France in London, wrote in 1892 as follows:

> English people leave no stone unturned to render not only their houses healthy, but their streets, districts, town, and whole country. Owners of property unite in preventing negligence detrimental to the community, which would in the first place expose its author and his neighbours to risk of illness and then to other material risks; for the rents are in direct proportion to the good reputation of the locality. Is the sanitation of such a town, neighbourhood, or house good? is the first question asked by an intending purchaser, householder, or lodger. Private individuals therefore are the promoters of sanitary measures which they consider appropriate: they decide on their adoption, and see that they are carried out. The State never interferes except in case of absolute necessity.

This system seems to me the only efficacious one, and the first thing which is indispensable is to educate public opinion. How is this antituberculous education of public opinion to be carried out? You founded in England, in 1899, under the presidency of His Royal Highness the Prince of Wales, a National Association for the Prevention of Consumption and other Forms of Tuberculosis. Its object is to carry out prevention by educating the masses. You drew up short, practical pamphlets. As a model, I may quote *The Crusade against Consumption* (48 pages, price 6d.), *Milk and Tuberculosis*, *Fresh Air and Ventilation*, *How to Prevent Consumption*, etc., and distributed them freely. At the head of this Association I find names that I recognise with respect; those of the gentlemen who inaugurated this Congress.

Germany founded societies for the construction of sanatoria, and then societies for the propagation of the idea, to popularise sanitary ideas. These societies are small and scattered in different localities, forming provincial groups. They, too, publish popular pamphlets. In Belgium there is a National League against tuberculosis, with its seat in Brussels. Each province has an independent branch. In Norway the Storthing voted 40,000 crowns for the purpose of printing and distributing a popular work on tuberculosis, by Dr. Klaus Haussen, and 2,000 crowns to form a travelling fund for doctors wishing to gain information about the management of sanatoria. In France the Society for the Prevention of Tuberculosis by Popular Education, under the direction of Dr. Peyrot, has collected together those who can teach with authority. I refer to such men as Lavisse, Matignon, Victorien Sardou, Landouzy, etc.

Many of us have addressed meetings explaining rules of prophylaxis in the provinces, where, on every hand, antituberculous movements are springing up. I made use of my position as President of the Polytechnic Association to institute popular education in Paris. This year eighty-eight lectures on tuberculosis have been given to 12,000 pupils of this Association. Thus gradually in all countries the public are beginning to realise that personal care and cleanliness are necessary to obviate contagion, and are also realising that other idea, to my mind equally important, that a consumptive patient is only dangerous if the necessary precautions are not taken around him, and if he himself does not take them to protect his relatives, friends, and fellow-workmen from contagion.

### THE DANGER OF SPITTING.

Tuberculophobia must not be produced, the patient must not be made a pariah. Long before our time a consumptive person has lived for many months without contaminating wife and children. The danger is in the sputum, which contains thousands of contagious germs. To expectorate on the ground is a disgusting and dangerous habit. Once this habit has quite disappeared tuberculosis will decrease rapidly. In America this habit is against the law, and there has been a press campaign against it. The American is a great newspaper reader, and he quickly realised the consequences of this deplorable habit. As an example may be quoted the case of a millionaire—Mr. Bradbury—who, punished for the first offence by a fine, on repeating it was sentenced to twenty-four hours' imprisonment. At Sydney a fine of £1 is imposed on persons for spitting in the streets. In Europe, though we are not so strict, we are none the less convinced of this danger. What part, as a matter of fact, does this sputum play in the subsequent propagation of the disease? It varies in different cases. Collected and shut up in a private or common but antiseptic spittoon, destroyed by incineration or some other measure, it is dangerous to no one. Thrown into dry and well-lighted surroundings, exposed to the rays of the sun, it will soon lose its dangerous properties; but if it remains in damp and dark surroundings it will maintain its activity for a long time. Thus it is that tuberculosis claims more victims from gloomy ill-ventilated dark dwellings.

### THE IMPROVEMENT OF WORKMEN'S HOUSES.

All nations have recognised this, but England has the double merit of recognising the primary importance of this problem, and of having solved it successfully in a manner peculiarly her own. Recognising that insalubrious dwellings are one of the most potent agents in the propagation of tuberculosis, the Legislatures of the different countries have kept this cause of insalubrity well in view, and have made laws ordering the destruction of unhealthy dwellings. You, since 1836, have directed your legislation towards the construction of healthy abodes. In England, in 1836, legislation intervened in favour of associations for building workmen's dwellings. Building societies are savings banks to procure houses for their members, and have actually more than a million members belonging to them in the United Kingdom. The Labouring Classes' Lodging Houses Acts (1851, 1866, 1867) are a collection of laws urging parishes and corporations of more than 10,000

inhabitants to construct sanitary houses. The Acts for the Removal of Nuisances (1852, 1866, 1874) gave the local authorities the right to inspect working houses, and fix fines for contravention of laws and regulations. The Artisans Dwellings Acts (1868 to 1882), also called Torrens's Acts, have as their primary object the reparation and demolition of insalubrious houses; they also suppress obstructive buildings, such as take away light and air from other houses and prevent ventilation. The Artisans' and Labourers' Dwellings Improvement Acts (1875 to 1882) oblige municipalities to pull down unhealthy dwellings and to find a lodging for those persons who, in consequence of this, are rendered homeless. This action on the part of the Government has led to the intervention of benefactors whose memory should be kept green in the minds of those interested in public health. First, I will mention Peabody. From 1862 to his death in 1869, this generous man gave £500,000 for building houses to be let to poor workmen at a very low rate, but enough was to be charged to make the man feel independent of charity. As a result, 18,000 workmen are housed in these dwellings. Judging by the advance made to date, it may be prophesied that fifty years after their foundation 120,000 workmen will be benefited by these dwellings. I must also mention Miss Octavia Hill's work and the Artisans', Labourers', and General Dwellings Company, founded by workmen in 1867, and who now have more than 6,000 houses, etc. In Germany private initiative has not been so successful. Professor Brantano, of Strassburg, and M. Miquel, Minister of Finance for Prussia, think that State and parochial intervention is required to ameliorate the condition of workmen's dwellings, because they are powerful enough of themselves. Nevertheless, some building societies have been founded, notably the "Berliner Bangenossenschaft." Belgium has been one of the most enthusiastic nations in taking up the movement in favour of healthy dwellings. The law, passed in 1889, formed committees in each administrative district to build and let healthy houses to workmen. In Denmark building societies have flourished best of all. In 1600 Christian IV set the example by erecting houses with gardens for the employees of his house. Dr. Ulrich founded an Association which has as many as 20,000 members, and 900 real estates worth ten million francs. These houses compose the healthiest part of Copenhagen. It is not my business now to speak of what has been done in France — the law of 1850, dealing with unhealthy dwellings; Du Mesnil's work on lodging the poor in Paris; the law passed November 30th, 1894, which defines the powers of the State and of private initiative in the construction of working dwellings. One of the French delegates, the Prince d'Aremberg, will give precise information about this much more ably than I can.

All authors agree that mortality is lower in these healthy houses than in the town in which they are built. The healthy house therefore is antituberculous. But if tuberculous germs fall in an ill-lighted, damp house, they maintain their activity for a long time, whether the house is in town or country. In these surroundings population is often very dense. It is no uncommon thing to see one room in Paris occupied by five, six, eight, and sometimes twelve persons. They are continually coming in contact with one another, chances of contagion are increased by this fact alone, and in addition to the limited space the dirtiness of the occupants, or, as I should say, the impossibility of keeping them sufficiently clean has to be remembered. Thus small tuberculous foci are created which invade the whole house; the workmen and employees carry the germs of disease into their workshops and offices, and soon make a large tuberculous focus of the town. But I do not wish to mislead. A town is not *in toto* unhealthy, and does not form an irreducible block. I have shown elsewhere that, in the same town, quarters adjoining one another have a mortality from tuberculosis which varies to the extent of as much again, and that mortality from tuberculosis in districts in Paris varies from 10 to 100 per 10,000 inhabitants. However, in every quarter there are hotbeds of tuberculosis. These are what we have to find and demolish. Above all else, new ones equally unhealthy must not be formed, for they are a danger to a city and country. In most of the towns in all countries building plans of new houses have to be submitted for approval to the local sanitary authorities. It is a necessary precaution which cannot be too strictly enforced.

The evils of an unhealthy dwelling are not confined to the risk of contagion just referred to. The want of air and light acts on the nutrition of the inmates, children pine away, the strongest men cannot withstand it, every human being living in these places is the destined prey of infectious diseases; and, if we consider phthisis only, they become predisposing causes of consumption, transforming the strongest man, and putting him on a par with the condition of those born of tuberculous parents. In the latter heredity is not direct; one is not born tuberculous but predisposed to tuberculosis. The English, German, Italian, French, and other laws that I referred to a moment ago are therefore just, and should be enacted perseveringly, especially at a moment when there is a tendency in all countries to concentrate in the towns the greater part of our populations. By looking after the salubrity of the towns the health of the whole land is protected.

### Alcoholism and Tuberculosis.

Unhealthy dwellings cause other disasters. Dark and crowded as they are, cleanliness is difficult, if not impossible, to preserve; they are not pleasant to pass the time in, and the workman stays in his home as little as possible; he eats there and sleeps there, but the rest of his time is spent in the public-house. Sir John Simon was right in saying: "The wretched lodging is the purveyor of the public-house," and we can add to it that the public-house is the purveyor of tuberculosis. In fact, alcoholism is the most potent factor in propagating tuberculosis. The strongest man, who has once taken to drink, is powerless against it. Time is too short for me now to draw comparisons between the laws in force in different countries, those which are proposed, private efforts, associated efforts, and temperance societies. But I can say that a universal cry of despair rises from the whole universe at the sight of the disasters caused by alcoholism. I will quote but two sets of statistics but they speak for themselves. Tatham's show that the mean mortality being represented by 100, that caused by tuberculosis is in

| | | | |
|---|---|---|---|
| Barmen | 257 | Sweeps | 141 |
| Pedlars | 239 | Publicans | 140 |
| Dock labourers | 176 | Coachmen | 124 |
| Strolling musicians | 174 | Coalmen | 116 |
| Hair dressers | 149 | Butchers | 105 |
| Brewers | 146 | | |

Baudran of Beauvais has shown that mortality from tuberculosis and from alcoholism are nearly identical. In this connection he obtained the following results:

| Deaths from Tuberculosis in 10,000 Inhabitants. | Annual Consumption of Litres of Alcohol per Head. |
|---|---|
| 30 to 40 | 12.47 |
| 40 to 50 | 15.21 |
| 50 to 60 | 14.72 |
| 70 to 80 | 16.36 |
| 80 to 90 | 17.16 |
| More than 90 | 50.70 |

Any measures, State or individual, tending to limit the ravages of alcoholism will be our most precious auxiliaries in the crusade against tuberculosis, but the question is too large a one to deal with here. Still I should like to draw attention to a mistake made too easily in the different countries by Ministers who have the charge of the financial department of the State. They like to calculate the sum the State gets from the duty on alcohol, but they should deduct from it the cost to the community of the family of the ruined drunkard, his degenerate, infirm, scrofulous, and epileptic children, who must have shelter. This invasion of alcoholism ought to be regarded by everyone as a public danger, and this principle, the truth of which is incontestable, should be inculcated into the masses that the future of the world will be in the hands of the temperate.

### Tuberculosis in Workshops and Places of Public Assembly.

The dangers surrounding a man in an unhealthy home are the same when for his work, his duties, his pleasure, through illness, or under constraint, a man lives all or part of the day in a centre where other people are assembled, where unhealthy conditions and overcrowding exist. If he is well his companions are dangerous to him, if he is ill he is dangerous to them. Now the conditions of modern life compel a man to live in such centres. As a child, there is the school; as an adult, the barracks; a workman, the workshop; a student, the lecture hall, the libraries, laboratories; the employee or

official, the bureau and the offices. If he moves about he uses vehicles, railway carriages, too often contaminated. At the hotel where he stops he has frequently been preceded by a sick person, and no precautions have been taken to protect the new arrival from possible contagion. If he is poor and ill he goes into a hospital, where he is surrounded by contamination on every hand. This peril from common life, inseparable from advance in civilisation, is continually growing; it is the ransom, and accounts for the threatening increase in tuberculosis.

### Prevention of Tuberculosis in Childhood.

Brought face to face with those predisposed by their family history, by the unhealthiness of their dwellings, it has been recognised as a duty in some countries to make an attempt to restore these tottering frames, and to render them capable of battling with the dangers that threaten them. It was adjudged with reason that childhood and youth would be the easiest period of life to influence. Thanks to the help of some towns, and of private initiative in Italy and France and in other countries, sanatoria by the seaside have been established for weakly and scrofulous children. There are 14 in France, which accommodate more than 2,000 children a year, and with excellent results. May I be allowed to recall the fact that we owe this success chiefly to the unfailing activity and to the propaganda undertaken by our revered master, Dr. Bergeron? Inspired by the same idea some countries have started holiday colonies, and temporary visits to places by the sea or in the mountains. Everything done in this direction will help to rescue from contagion those who, thanks to the generosity of private individuals, can profit by these health-restoring visits. In 1893, with the same object in view, Mme. Hervieu started at Sedan working gardens for children, young people, and their parents. These gardens occupy more than 2,000 square metres around the town, and accommodate 321 families, composed of 1,251 persons. The Society supplies tools, seeds, and manure to each family. In 1894 the Jesuit Father Volpette started the working gardens at St. Etienne. They cover about 42 acres, and accommodate 410 families, composed of 2,460 persons. On the ground let working houses are built. About ten have already been built by the lodgers, There are working gardens at Bercy, and some are now being made at Fontainebleau and at Villeurbane, near Lyons.

### Tuberculosis and Meat.

Before touching on the question of the cure of tuberculosis I should like to say a few words about measures adopted to prevent tuberculous contagion by food. Since Chauveau showed that it was possible for tuberculous germs in food to produce tubercles in the intestinal tract, attention has been turned to precautions for preventing the consumption of meats and milk from tuberculous animals. As far as meat is concerned, surveillance of the slaughterhouses in large towns achieves this. In Belgium this measure is also made to apply to the country; but I do not know of any other kingdom where private slaughterhouses are inspected, and in them it is that phthisical cows, measly pigs, and diseased animals of any kind are slaughtered, and are able to escape inspection. This injurious food is consumed either as fresh meat, or in the form of *pâtés* or sausages, from which the tuberculous viscera have not been removed. Another danger is the hawking of meat in pieces. It is rife especially in the large towns. Butchers receive daily quarters of meat despatched by provincial butchers. This meat escapes inspection. With no wish to exaggerate the danger of the propagation of tuberculosis by meat, it cannot be overlooked. It is easy, by means of legislation, to protect the population from this method of contamination. Belgium has set us the example.

### Tuberculosis and Milk.

That the milk of cows with tuberculous inflammation of the udder is used is very clear. Your great hygienist, Sir R. Thorne-Thorne, while pointing out that in England mortality in general of adults from phthisis has diminished since 1850 from 45 per cent., regrets to see that from the same date infantile mortality from tuberculosis increased by 27 per cent. According to him, this increase is entirely due to tuberculosis in the abdomen, caused by ingestion of contaminated milk in infants under a year old; for in England cowhouses are not inspected. In France, to all appearance, the law allows this surveillance. It is entrusted to mayors, but to put the law into execution the mayors must know the cows suffering from tuberculous mammitis, and they can only know this if the owner reports it. Now the dairies only report their cows when their milk is dry, when, in fact, they are no longer dangerous to the consumers. It is well to add that in large concerns the milk from different sources is mixed, and one cow only need be the victim of tuberculous mammitis in order to contaminate all the milk with which its milk is mixed. To prevent this method of propagation, strict inspection measures should be adopted, such as have been in use for several years in Denmark, Sweden, and Norway, to the great advantage of public health. Until such necessary measures are actually adopted, there only remains the simple mode of avoiding risk from milk by boiling it, and this should be widely made known, in spite of a too widespread prejudice, which wrongly holds that boiled milk is less nutritious and indigestible.

### The Curability of Tuberculosis.

If a man is the victim of tuberculosis everything possible should be done to cure him, for he can be cured. There is no doubt of this. The idea that tuberculosis can be cured dates back to Hippocrates: "Phthisis, if treated early enough, gets well," said the Father of Medicine.

After 25 centuries we are supporting the same theory, which to some may appear parodoxical. Still, all anatomo-pathologists have confirmed its truth. In 1838 Carswell, one of your distinguished physicians, wrote: "Pathological anatomy has never, perhaps, given a more decided proof of the cure of a disease than it gives in cases of pulmonary phthisis." Laennec, Nat. Guillot, Letulle proved that in more than half the necropsies made old healed tuberculous lesions were to be found. As Dr. Ribard has said:

> These figures from the very similarity of their results are striking. They show very clearly that half the men said to be well and non-tuberculous, dying of old age, or fortuitous cause, have at a certain time in their life been attacked by tuberculosis, but have recovered. Many are therefore affected, and many recover. Half the human race has tubercles and goes on living without discovering them. This fact established by necropsies is really very comforting.

As for my personal experience at the Morgue in Paris, where I frequently make necropsies on accidental deaths, I can state that in half the cases if the person on whom the necropsy is made has lived in Paris for about ten years, I find healed tuberculous lesions, either in the form of cretaceous transformation or fibrous cicatrisation. I may add that it is quite certain that such cases of old people, and those on whom necropsies are held in almshouses, hospitals, and the Morgue, have certainly taken none of the precautions we consider necessary. In spite of often deplorably dirty habits the system has been strong enough to resist the ravages of the disease.

These anatomical results have also another meaning. These lesions, in the majority of cases, are not phthisis in an early stage manifested by small disseminated foci; they are cicatrices of large foci, sometimes of wide cavities completely cicatrised. Phthisis, therefore, is curable, even in its most advanced stages. This is not only maintained by anatomo-pathologists but by all medical men who have made a special study of the disease. Grancher sums the matter up thus: "Tuberculosis is the most easily cured of chronic diseases." As a tuberculous patient can be cured, everything possible must be done to bring this about by careful organisation. The doctor, being himself firmly convinced that his patient can be cured, will make the necessary modifications in his way of looking at the disease. Formerly, when a doctor thought that he could do nothing for a patient suffering from tuberculosis, he had not the courage to tell the patient or his friends the nature of the disease. He considered it his duty to keep up appearances until the time came when the case was hopeless.

Now, we require a doctor who is convinced, we trust, that tuberculosis can be cured, to behave in just the opposite way. If it is true that in every stage tuberculosis can be cured, it is certain to be true if the patient has been caused to take the necessary precautions in the pre-tuberculous stage, when lesions are very small, and when there is sufficient power of resistance in the patient's system. The doctor should tell the patient and his family that he has a serious disease, but

that it is curable. If he does not tell him at once, he renders himself liable to be reproached by the patient or his friend for having deceived them. This change of demeanour in the medical man will only be possible when a society is formed—which I hope will not be long—enabling the doctor, at the same time that he tells him the nature of his complaint, to tell his patient the best scientific methods of treatment for him to use.

### Methods of Treatment.

What are the best methods? How are they carried out in the different countries? In this address I am only dealing with the disease as it affects working men and employees. I am leaving out of the question well-to-do patients, though these may gain some idea from it of the rules to be observed. The remedies to be recommended vary according to the stage to which the disease has got, and also according as to whether the patient is single, married, or father of a family.

### In the Earliest Stage.

Three distinct periods may be defined. In the earliest the patient coughs and has a cold. What does he generally do? Either he takes no notice of it or asks the chemist for a mixture for his cough. Days, weeks, and months go by, and if the weather is inclement he gets worse: if it is mild, he has periods of being better, followed by more serious attacks. Then fever and wasting set in, and he has to give up his work. He thinks illness has just begun. We know that he is entering the second stage, when even skilled treatment is probably useless.

The first stage of the disease, therefore, interests us most, when intervention is of use. In what way can we be of use to a patient in the first stage?

### Dispensaries.

In Germany there are polyclinics for tuberculosis in the large towns, where a doctor, provided with the things necessary, attends to the patients who come to consult him, either throughout their illness or till the patient can be admitted into a sanatorium. A Committee, composed of large numbers of benevolent men and women looks after the patient at home, tells his wife what to do, sees that his home is kept clean, and looks after necessary prophylactic measures. As far as possible the poverty due to the bread-winner being out of work is relieved from a bank, kept up like the sanatoria banks, to assist such cases.

M. Calmette conceived the same idea, but he went farther, and advised that instead of waiting for the workman to come for advice, we should go and meet him by inviting him to come to a dispensary, run on the same lines as the German polyclinics. This is his own description of his project given in 1899:

> Instead of waiting till the patient with tuberculosis comes to consult a doctor, and is driven to give up his work, I think that it would be better to establish the principle of going to him and offering him help before he finds out even that he is dangerously ill. I should like to be able to hunt out tuberculosis as soon as ever it has begun, and to be able then and there to give the sufferer advice and the care necessary, while generally keeping him in his own family circle.

Mr. Calmette has carried out his proposal; he opened an anti-tuberculous dispensary at Lille, called Emile Roux, and it has been eminently successful. Dr. Bonnet has founded a similar institution in Paris, in the Montmartre quarter; and others are about to be established, one at Vaugirard, with municipal aid. Experience shows that workmen do not shun these dispensaries: some come because they have a cough, others because they know themselves attacked. As far as I can see, the best way to ferret out disease would be to have one or more agent-workmen, foremen, if it were possible. They are the ones to notice when their comrades cough; they could advise them to go to the dispensary. Alive to the dangers of a badly-kept workshop or yard, they will superintend its being kept clean and in order; they will actually carry out antituberculous education. Those who visit the dispensary receive the necessary attention from the doctors, and are told the danger of dissemination by sputum, alcoholism, etc. They are looked after, they get meat soup—one or two meals, as far as funds will allow. Their families are helped and an eye is kept on their home from the hygienic point of view; as far as possible the poverty by which the poor man is threatened is kept away from him.

### Sanatoria.

Among these patients some are found who must be sent to sanatorium. If the patient is an unmarried man, and if he can be sent to a sanatorium, his chances of recovery are very great; but for a married man to go means that his wife and family must be provided for during his absence, and his mind relieved of all anxiety on their account. Relief banks for assisting the families of the inmates are most necessary to sanatoria. And in many cases sanatoria are essential to complete the work begun at the dispensary. It is not my business to deal with the question of building and management of a sanatorium. We need only remember that they should be closed, aseptic, disciplined, and worked on Dettweiler's principle; physical and moral rest, stuffing, and open-air treatment. In Germany this system has been carried out most enthusiastically through the assistance of private benevolence, municipal, industrial, and parochial aid; the State has generously supported the effort, recognising its value. In Germany there are 83 public sanatoria open or ready to open. They accommodate 12,000 patients a year. They have been built by local insurance, by sickness banks, by the manufacturers, who have combined to found sanatoria for their workpeople, by parishes which have united for the purpose. There are most of the latter. In some parts, a tax of from a penny a head has been exacted. The State has founded several sanatoria for its servants: the Forests Department, Railway Department, and the State of Hamburg. The Commission of the Budget of the Reichstag decided to build State sanatoria under the control of the Ministry of the Interior. The treatment lasts at least ninety days, and experience has shown that it was good for the patients to spend another month, in the year following recovery, at the sanatorium.

Under these circumstances, how long do the patients keep better? Of those who leave the sanatorium in what is considered a satisfactory condition, it has been shown that 46 per cent. in 1896, 47 per cent. in 1897, 58 per cent. in 1898, 60 per cent. in 1899 were able to work. The cost per head per patient for the three months' stay amounts to eight francs per diem, including the cost of assistance given to the patient's family, which is a third of the amount. In a very interesting report, Dr. Pannwitz points out *desiderata* thought out by various medical men. Regret is expressed that nothing has been done for women and the middle class. Drs. Schroeder and Naumann Reiners justly point out that in patients of the middle class initial symptoms are more readily recognised, that they are more provident, and not so inclined to get overworked when they leave the sanatorium as the working class do, and thereby compromise their recovery. Experience has shown, as Persiron says, the doctor is worth so much, the sanatorium is worth so much; and to provide doctors for sanatoria, a special course of instruction will be established. Dr. Pannwitz is very emphatic that if a sanatorium is to be well and economically managed it should be neither far from a town nor placed on a height; he expresses the wish that their erection were less costly, for it amounts to 10,000 marks per bed, and he thinks it should not exceed 4,000 marks.

Experience has, however, shown that a sanatorium is not a source of danger to a neighbourhood. What is dangerous is phthisis at large, which disseminates sputum everywhere in the house where patients are received without being controlled. Surveillance is quite indispensable. Dr. Pannwitz mentions two villages in the Hartz mountains which were decimated by these dangerous places. Lopo de Carvalho says the same about Guarda, in Portugal. For the safety of all concerned, every house where tuberculous patients are taken ought to be open to State inspection. Germany's example has been followed. England, Scotland, Australia, Canada have erected some few sanatoria. In Austria, Schrölter had the Sanatorium d'Alland built, with 300 beds. Chevalier Don Kersy turned into small sanatoria some huts of the Ducke type. In the United States they set apart portions of hospitals to make consumptive wards of them. They made about thirty such small sanatoria. The Association of Alabama built one for prisoners, the Naval Department one for sailors. New York has at present six sanatoria.

By the munificence of the Czar, the Etablissement Halila, in Russia, was built in 1897; and, since 1898, that of Tactzi, with two pavilions accommodating 20 beds for men and 20

beds for women. At Salta Princess Barjatinska has founded an establishment for schoolboys. The King of Sweden gave the sum collected at his jubilee (2,300,000 crowns) to build three sanatoria; Parliament voted 800,000 crowns for the same object; and the State gave the ground required for these three sanatoria. Denmark has already two sanatoria, and there is a scheme before Parliament for the erection of public sanatoria. Italy and the Netherlands and Norway have followed suit. In France several sanatoria have been opened: Hauteville, near Lyons; Agincourt, for Paris. Since 1876 we built the Home of Villefuite, and then that of Ormesson, for young tuberculous patients; and we may mention, in addition, the agricultural colonies of Caunet, the Jean Dollfus Home at Cannes, the Sanatorium of Gironde, that of Cimiez, near Nice, Argeley, and finally those which have recently been opened or will be: Lille, Nancy, Orléans, Versailles, Amiens, Havre, Marseilles, and in Paris, the Bligny and Rouen sanatoria, etc.

All nations have obeyed the same generous impulse, and the time will come when, instead of the poor tuberculous patient being given up to his sad lot, he will find that he is only in the first stages of the disease, that by means of dispensaries and sanatoria there is always hope and often realisation of his recovery. If the patient is beyond the first two stages when he asks for admission to the hospital, it must not be overlooked that he may still be cured, provided he can be made to see things as they are. He must be isolated, in order that he may not be discouraged by the spectacle of his comrades' sufferings. Rules of isolation have been drawn up by Grancher and Thoinot for the patient, for his nurses: you have them in use in your own consumption hospitals. At Brompton, in twenty years, 15 000 consumptives have been cared for. No doctor or officer or nurse has been infected. This statement is supported by Dr. Williams, physician of the hospital, by Moeller, and by Masbrenier.

### CONCLUSION.

When I was asked by the Committee to tell you in my address (which I am sorry I could not make shorter) what steps had been taken by the different nations to carry out the crusade against consumption, I was also asked to consider the question from the international point of view. I do not think that it is possible to deal with consumption in this respect as plague, cholera, and yellow fever have been dealt with in order to prevent their being brought into a country. I do not know how any doctor can state positively that a traveller at the frontier or the port is not consumptive. But it would be possible to take international steps in another way. Railway carriages might be disinfected, as well as steamboats and hotels, and the traveller no longer exposed to germs of contagion. That would be of truly international import. The Minister of Public Works in France has recently sent a circular to railway companies calling their attention to the precautions necessary to obviate or diminish risk from tuberculous contagion.

In several countries, particularly in the United States, hotel keepers who receive a consumptive client have to notify it to the municipal authorities, and compulsory disinfection of the room has to be gone through. The Minister of the Interior in Germany has brought in even more stringent measures. Every doctor who attends a case of pulmonary or larvngeal tuberculosis is bound to report it in writing to the police as soon as he has made his diagnosis. After death from tuberculosis the room in which the patient has died has to be disinfected and also his belongings. Hotel proprietors, "furnished house" keepers, asylums and other public institutions are compelled to notify at once every case of tuberculous disease which arises in their establishments. Notification, disinfection, salubrity of hotels, carriages and steamboats are questions of an international character which might be advantageously dealt with by representatives of the different nations.

The lesson to be drawn from the efforts that have been made by all nations to carry out a crusade against tuberculosis is that in conversation, in the public prints, and in specially-prepared pamphlets, we should make it universally known that tuberculous contamination can be avoided, and that, in addition, the disease can be cured. Once convince our fellow citizens on these two points and private initiative will be left behind; antituberculous efforts, numerous now, will multiply and co-ordinate; parishes, provinces, and the State will not be able to stand aloof from a common effort, and we may reasonably prophesy that, united in one brave attempt, the whole civilised world will succeed in exterminating the cruellest scourge that has ever fallen on us, our children, and our friends, and which threatens the future of our countries.

Ten years ago, at the Congress of Hygiene in London, I spoke as follows:

> When, at the beginning of a century, one can inscribe the name of Jenner, and at its end that of Pasteur, the human race may rejoice: more has been done for it against misery, disease, and death than in any one of the centuries which have preceded it.

All honour to the nineteenth century, but the century just begun, in its first year, sees the greatest effort that has ever been made in favour of public medicine: may no obstacle stand in our way, and may those who succeed us at the end of the twentieth century be able to bear witness that our conviction has not been fruitless, and that the results have answered the expectations of the nations that you, gentlemen of the Organising Committee, have brought together with the highest and noblest motive that has ever animated the human race.

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# A DISCUSSION

ON THE

# TREATMENT OF CONSUMPTION BY CLIMATE.

## I.—INTRODUCTORY ADDRESS ON THE CLASSIFICATION OF CLIMATES AND COMPARISON OF RESULTS.

By C. THEODORE WILLIAMS, M.A., M.D., F.R.C.P.,

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GENTLEMEN,—The questions we are invited to discuss to-day are:

1. What influence has climate on the treatment of consumption?
2. How far can cases be grouped for treatment in certain climates?

Both these questions have been the objects of my study for the last thirty-five years, and I will place before the Section some of the conclusions which a large experience has enabled me to formulate, omitting, except where it is absolutely necessary, the facts and figures on which they are based.

In all ages has existed a belief that consumption could be successfully treated by change of air—either from town to country, or from inland to seashore, or from valley and plain to mountain—and such belief has been the result of favourable experience of these changes.

In some lands, like Peru, the natives can point to instances of arrest of consumption from a transference of tuberculous folk from the sea-level to the mountains, and as no special attention has in these cases been paid to dietary, habits, nursing, or sanitation, the arrest of the disease must be attributed to change of climate, and to change of climate alone.

Sea voyages have possessed a great reputation for the treatment of phthisis, and especially in this country, and it must be admitted that they offer a most effective way of applying the open-air system; for what patient undergoing sanatorium treatment can obtain the amount of fresh air which comes into contact with the body and lungs of an invalid seated on the deck of an Australian bound clipper or steamer as she speeds through the waters? Doubtless this is the cause of the improved powers of digestion and assimilation which are so marked a feature in sea voyages, and of the large gain of weight which follows even where the larders are indifferently stocked. A few years ago sea voyages were the commonest recommendation for consumptives, and we all probably can remember cases of striking advantage derived from them, but at present, though the vessels are better equipped, the food

supply abundant and more varied, and the cabins better ventilated, sea voyages are rarely advised, for reasons which will be dealt with later.

Now, if we search the records of experience we shall find numerous and well-authenticated instances of arrest of tuberculous disease as the results not only of sea voyages, but of warm and of cool marine climates, of dry, warm climates, and of mountain climates respectively, and in fact it has been proved that the arrest of tuberculosis has occurred in a variety of climates and under very different conditions.

Our object, however, is to determine under what climatic conditions arrest of the disease is most frequent, what are the real causes of such improvement, and how can they be successfully brought into play in other cases.

In all climatic treatment of course care must be taken to bring the patient fully under the influence of the atmosphere, and to ensure a strictly open-air life by day and by night, with complete hygienic and sanitary surroundings, whether in a sanatorium or elsewhere.

But all climates favouring an open-air life are not necessarily suitable for the treatment of consumption: tropical lands must be excluded because there the appetite is diminished, the nervous and muscular energy depressed, excessive action from the skin induced, and requisite exercise prevented. Bacillary increase is probably also favoured. Very moist climates and those in which the sun is often obscured by mist and fog, even though mild, are undesirable, as sunshine is of the greatest importance to the consumptive. The climate which best fulfils the conditions for open-air treatment need not be a very warm or a very cold one, but should be dry and stimulating, with abundant sunshine, admitting of much exercise, and producing nervous and muscular vigour.

## THE CLASSIFICATION OF CLIMATES.

We must first classify climates before describing them, and though it would be possible to arrange them scientifically on the basis of meteorology, as I attempted in my Lumleian Lectures before the College of Physicians, for the purposes of this discussion a few practical groups will be preferable.

CLASSIFICATION.

1. Marine climates.
2. Dry, warm climates, partly inland and partly marine.
3. Mountain climates.

GROUP 1. *Marine Climates.*—Include (*a*) the British and Irish sea coast resorts; (*b*) the warm marine climates of Madeira, Teneriffe, and the West Indies: (*c*) Sea voyages.

GROUP 2. *Dry, Warm Climates.*—The desert climates, and those of the Mediterranean basins, differing in many particulars, but both characterised by warmth and dryness.

GROUP 3. *Mountain Climates.*—Characterised by the influence of diminished barometric pressure.

## (1) MARINE CLIMATES.

First come the South Coast stations on the British and Irish Channels, all more or less under the tempering influence of the Gulf Stream, and remarkable for a mild and equable climate, without extremes either in winter or summer, for a considerable rainfall, a large number of rainy days, and a prevalence of south-west wind.

The climate is bracing, and sometimes a good deal of sunshine is recorded, but on the whole it falls short in this particular of the Riviera and other southern localities, and the number of rainy days is a drawback. Some authorities object strongly to wind in a health station for consumptives, but I am in favour of its ventilating and purifying influence in the case of all diseases of germ origin, and protection by shelters can be successfully secured when wind is excessive. The great advantages of places like St. Leonards, Brighton, Worthing, Ventnor, Bournemouth, Torquay, Falmouth, Penzance, and Queenstown are their easy accessibility, their well-known medical staff, their excellent supplies of food and invalid comforts, and their being specially suited for the more weakly and advanced cases, where passive exercise is alone possible; and this last consideration will always have an unfavourable effect on their statistics of patients.

Patients can, as a rule, remain all the year round at the British and Irish South Coast places, where they often become residents and form their homes, and this for open-air treatment is to be desired. At most of these stations are to be found a number of chronic tuberculous invalids who are firmly of opinion that they can live nowhere else. There are many, too, who have tried and benefited by other climates, but cannot leave England, or cannot afford to pass more winters abroad, and having achieved a certain degree of improvement find it more convenient to continue their treatment at home. The British climates are suitable for most cases of chronic pulmonary tuberculosis, and specially for the strumous forms.

The warm marine climates of Madeira, the Canaries, and the West Indies have not in my experience proved beneficial in consumption, and the statistics of Madeira patients which I published some years ago in my Lettsomian Lectures, were very unfavourable, but the warm marine climate is specially suited to cases of catarrhal phthisis, that is, where the tuberculous disease is accompanied by a large amount of bronchial catarrh, for it enables such patients, who shrink from cold, to tolerate and profit by an open-air life, which otherwise would be impossible for them. Such climates, and notably that of the Canaries, have been of some use in cases of laryngeal phthisis.

### *Sea Voyages.*

Sea voyages have, perhaps, had the highest reputation of all, and certainly have yielded striking results, particularly when the voyages were to Australia and New Zealand round the Cape of Good Hope in clipper ships. The voyage occupied three months, and with one month's stay on land, and the return journey by the same route and not round Cape Horn, a good seven months' rest from worry and fatigue often put new life and energy into broken-down constitutions. Now the voyages are always in steamers which curtail the time, and few go round the Cape, as the Suez Canal and Red Sea route is selected, a route fraught with danger to the consumptive from extreme and rapid vicissitudes of temperature during the voyage. Another objection is the lack of opportunity of exercise and of occupation, which in the case of young men often results in their spending too much of their time in the smoking room, drinking and betting on the run of the vessel. It is probably for these reasons, and also because other and better modes of treatment have been introduced, that sea voyages are not so often recommended as formerly. They are most beneficial (1) in cases of hæmorrhagic phthisis, where large hæmorrhage accompanies small areas of tuberculisation: (2) in scrofulous or strumous phthisis, where lung disease is accompanied by strumous gland or joint affections: (3) in cases of chronic cavity, where the tuberculous disease is unilateral and quiescent.

In strumous phthisis I have repeatedly witnessed cavities contract and a gain of weight of from 1 to 2 st. occur during a sea voyage, and in patients with hæmorrhagic phthisis, where the hæmoptysis has been frequent and copious, I have known the patient completely exempt during a six months voyage.

Of all the sea voyages, probably the best still is that to Australia and New Zealand, as the tropics are passed through under the most favourable circumstances, and the temperature never rises above 80° F. or falls below 47°, except sometimes on the return voyage. Another good trip is the Brazilian voyage by Lisbon, Teneriffe, Rio de Janeiro, Buenos Ayres, and back, occupying two to three months: and another is the Royal Mail route to the West Indies, lasting six to eight weeks.

The evidence of Rattray and others goes strongly to show that the voyages should be partly in temperate climes and not only in tropical, for in the latter loss of weight often occurs.

Another great difficulty of sea voyages is ventilation of the cabin in rough weather. If the patient is fortunate enough to procure a deck cabin, well and good: but if it be deep in the hold and the portholes must be closed, the atmosphere becomes very impure, except in vessels fitted with a good system of extraction. The open-air life on deck during the day is excellent, and could the patient—as is sometimes done in hot weather—secure the same amount of air at night by sleeping on deck, the results would doubtless prove very good. Therefore, to ensure the success of a sea voyage, the patient must be certain of (1) good and abundant food, (2) proper cabin ventilation, also (3) that the cruise be principally in temperate climes and not in tropical.

(2) DRY WARM CLIMATES.

Dry warm climates include the desert and the borders of the Mediterranean basin.

*The Desert Climate.*

The desert climate has as its best example that of the Egyptian desert, which is characterised by dryness and warmth, sunshine and great radiation, and consequent great contrasts between day and night temperatures, also by its purity and asepticity of atmosphere. It is a climate which renders an open-air life by day and by night especially attractive, and life in a tent is not only possible but pleasant. The diminution of cough and expectoration is sometimes very marked, and catarrh as a rule disappears. The atmospheric purity has an excellent effect on secretion from the walls of cavities, and hence the change in the character of the expectoration and the reduction in its amount. In my statistics of land climates, published some years ago, Egypt came out first in point of improvements, but my experience is that, although the tuberculous disease becomes quiescent, there is seldom proof of its absolute arrest, and I never witnessed the kind of results from the Nile climate that I do from high altitudes. The patients are relieved of distressing symptoms, but are not rendered more vigorous or more fit to resist the vicissitudes of the British weather. The Nile climate is suitable to elderly patients and to those who are prevented from taking exercise. Chronic pulmonary tuberculosis, especially with cavities, does well, and many advanced cases of consumption have in the desert lived for years, camping out in winter and in summer. The two objections to this climate are the Khamsin wind, which from the sand particles it brings is very trying, and the increase in the irrigation works and the great barrage systems, which are making the climate less dry and therefore less fit for the treatment of consumption. Nevertheless, the climate of the Egyptian and Libyan deserts, from its dryness and asepticity, is probably the finest of all low-lying climates for consumption.

*Climates of the Mediterranean Basin.*

This group includes the Rivieras, French, Italian, and Spanish, the Mediterranean Islands, and Algiers and Tangier. These places are, as a rule, cooler, moister, and more stimulating than the desert, but they are liable to greater changes of weather if not of temperature. Compared with the British they are clearer and sunnier, with a good deal of wind, free from fog and mist, with a winter mean temperature 8° to 10° F. higher, and with half the number of rainy days, and four or five times the number of cloudless ones. The French and Italian Riviera climate is as much abused as our own, because of undue expectations being entertained, but as an old observer of its elements I should say that its benefits arise from the combination of dryness and sunshine with cool winds and moderate warmth, which enable an invalid to sit as well as lie out in the open air most of the winter. When people abuse the mistral they forget that the dryness and fine weather come from that quarter, and that much of the bracing effect on the patients would be lost without this wind.

Another advantage of the Riviera is the coolness of the nights, though this is in many cases counterbalanced by the stimulating effect of the Mediterranean on the nervous system, which in some patients gives rise to insomnia, and in many exalts nervous sensibility. It is a great pity that the treatment of consumption is not more systematically carried out in this fine climate, and that sanatoria, or at any rate sanatorial treatment is not established in every health station, as the results would undoubtedly prove successful, especially in cavity cases.

A large proportion of consumptive patients on the Riviera and elsewhere, as Sir Hermann Weber has well pointed out, consult the local medical man once, and no more, and then go their way, which is generally a very bad one, commit innumerable acts of imprudence, and thus lose all the advantages which they might be expected to reap from the fine climate, and return home worse than they came. And thus time, money, and lives are wasted for want of timely submission to medical guidance and medical supervision. My own statistics of 210 patients, including a large proportion of excavation and bilateral affection cases, give a good percentage of general improvement (61 per cent.), but the percentage of local improvement is comparatively small, while that of deterioration is larger than is satisfactory, and not altogether to the credit of the Riviera.

However, in individual cases, and notably in the numerous medical men who have practised in the Riviera, we have plenty of examples of the arresting power of this climate in consumption. Where it does not arrest disease it certainly tends to prolong life, for I have known and published instances where comparatively advanced cases of consumption, which could not have survived our northern winters, have prolonged their lives for ten or even twenty years by passing their winters on the Riviera.

The class of cases which, according to my experience, benefit most by the Riviera are:

1. Phthisis in which inflammatory processes have played a large part in predisposing to the disease.
2. Strumous phthisis.
3. Laryngeal phthisis.
4. Unilateral pulmonary tuberculisation rather than bilateral.
5. The large class of consumptives who either from extent of disease or feebleness of circulation, or advancing years, are unable to endure the rarefied atmosphere and cold of the high altitudes. Most of these patients love warmth, and cannot take enough exercise when the thermometer is below zero to maintain it.

(3) MOUNTAIN CLIMATES.

Mountain or high altitude climates vary according to altitude and latitude, but are all characterised by:

(*a*) Diathermancy (Denison), by which the sun's rays are transmitted through the attenuated air, producing a difference between sun and shade temperatures of 1° F. for every rise of 235 feet.

(*b*) By their asepticity, as shown by the preservation of meat for long periods.

(*c*) By their physiological effects on the human body, as demonstrated by the tanning of the skin by the solar rays and chiefly by the ultra-violet rays (Bowles). The effect on the circulation is that it is at first quickened, and after six or eight weeks it is found to have slowed and to have gradually fallen to a rate below the normal. The breathing becomes deeper, the inspiration longer, and the expiration more complete.

The quickening of the circulation and respiration before acclimatisation is often accompanied by great thirst and by a reduction in the blood pressure, and in the amount of urea excreted by the kidneys, but more carbonic acid (Marcet) and water are eliminated by the lungs. When acclimatisation is complete the urea appears in the urine in full quantity, and the blood pressure increases. Accompanying the slowing of the pulse and respiration there is a dilatation of the thorax in various directions, causing increase in circumference from 1 to 3 inches at different chest levels, and there is increased mobility of the thoracic walls. All this arises from the greater physiological activity of the lungs due to the rarefaction of the atmosphere, and, consequently, their more complete development.

This thoracic enlargement is always more marked in those who take much exercise at high altitudes, and large thoraces are the feature of all mountain races, whether inhabiting the Alps, the Andes, or the Himalayas.

*Statistics of Consumptive Cases at High Altitudes.*

I will now give a brief account of 385 consumptives who have been submitted to high altitude climate for varying periods of residence between the years 1878 and 1900, and state the results arrived at.

Statistics of 247 patients were published in my Lumleian Lectures, and I have now added 138 more cases, as I have not complete notes of any more. I have classified these last on the same lines as the rest.

*Sex.*—Two hundred and seventy-five were males and 110 were females, the former preponderating over the latter as 5 to 2.

*Age.*—Table I shows the ages of the two sexes when they started for the mountains, the average for the males being 29, and for the females 26. The majority of both sexes were between 20 and 40.

TABLE I.—*Ages of 385 Consumptives before Residence at High Altitudes.*

| Age. | Males. | | Females. | | Total. | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| 10-20 | 27 | 9.81 | 18 | 16.36 | 45 | 11.68 |
| 20-30 | 136 | 49.45 | 60 | 54.54 | 196 | 50.9 |
| 30-40 | 82 | 29.81 | 28 | 25.45 | 110 | 28.57 |
| 40-50 | 28 | 10.18 | 4 | 3.63 | 32 | 8.31 |
| Over 50 | 2 | | | | 2 | |
| Total | 275 | | 110 | | 385 | |

The average length of illness before climatic treatment was for the whole 385 patients two years and one month; for the 275 males 1 year 11 months, and for the 110 females 2 years 6 months, which shows us that the cases were by no means incipient ones, but decidedly chronic before they tried the mountain treatment. Some had been ill for only a few months, some for 1, 2, 3, 4, 6, 7, 8, 10 years, and a few for even as much as 20 years.

*Family predisposition* was present in 143 cases, or in 37 per cent.

*Hæmoptysis* had occurred in 166 instances, or in 43 per cent.

*Tubercle bacilli* were found in the sputum of all these patients at some period of their history, excepting some treated before the era of tubercle bacillus discovery.

*History and Nature of Cases.*—In 3 of these patients there were malformations of the thorax, in 1 spinal curvature, in 6 tuberculous abscesses in various parts of the body, 3 had fistulæ in ano, 1 tuberculous disease of the testicle, 2 laryngeal tuberculosis, 1 laryngeal catarrh—not tuberculous, 5 had syphilis, in 4 there were cardiac lesions (1 aortic and 3 mitral), 1 had dry basic pleurisy and 15 were cases of hæmorrhagic phthisis and 4 of catarrhal phthisis, the rest being examples of chronic tuberculosis of the lungs with a large preponderance of consolidation cases.

*State of the Lungs.*—I have placed on Table II an extremely condensed account of the condition of lungs of these patients, which will convey to the members of the Section some idea, though necessarily an incomplete one, of their state at the time of taking up their residence at high altitudes.

TABLE II.—*Influence of High Altitude Climate on 385 Consumptives.*

| Lung Condition. | No. of Cases. | Local Result. Arrest. | Diminished Physical Signs. | Improved including Arrest. | Stationary. | Worse. | Unknown. | General Result. Improved. | Stationary. | Worse. |
|---|---|---|---|---|---|---|---|---|---|---|
| Tuberculisation ... | 254 | 147 | 75 | 222 | 7 | 22 | 3 | | | |
| Per cent. ... | 66 | 58 | | 87 | 3 | 9 | | | | |
| Excavation ... | 131 | 27 | 54 | 81 | 13 | 37 | | | | |
| Per cent. ... | 34 | 21 | | 61 | 10 | 29 | | | | |
| Totals ... ... ... | 385 | 174 | 129 | 303 | 20 | 59 | 3 | 87% | 1% | 12% |
| Per cent. ... | | 45.0 | 33.5 | 79.0 | 5.2 | 15.0 | | | | |
| Both lungs affected.. | 139 | | | | | | | | | |
| Per cent. ... | 36 | | | | | | | | | |
| One lung affected ... | 246 | | | | | | | | | |
| Per cent. ... | 64 | | | | | | | | | |

The cases are divided into tuberculisation and excavation and single and double affection. The amount of tuberculous consolidation varied considerably from that of an apex to a whole lobe, or even to a whole lung, and in many cases, as will be seen, there were consolidations in both lungs. Under excavation are included not only unilateral cavity cases, bu also those where the opposite lung was also tuberculised. It will be seen that the tuberculisation cases numbered 254, or 66 per cent., and the excavation cases 131 or 34 per cent. Also that disease was unilateral in 246 or in 64 per cent., and bilateral in 139 or in 36 per cent.

*Place and Length of Residence.*—These 385 patients resided at high altitudes for periods varying from months to years, the shortest time being three months and the longest being nine years, the average being eleven and a-half months, or roughly speaking two winter seasons. In some instances, as in the Colorado patients and in many of the Davosers, the residence was continuous. The great majority of these patients resided at Davos (5,000 ft.), St. Moritz (6,100 ft.), and Arosa (6,200 ft.). Some were in Colorado (5,000 ft. to 8,000 ft), and the rest, with one exception, in the South African Highlands (4,000 ft. to 5,000 ft.), up the Cape Colony, in the Orange River Colony, or in the Transvaal. One gentleman spent two years at Santa Fé de Bogotà in Colombia at an altitude of 8,648 ft. The patients lived on an average for eleven and a-half months at an elevation of from 4,000 ft. to 6,000 ft. above sea level.

*General Results.*—173, or 45 per cent. of the patients completely recovered and retained their ordinary health; 77, or 20 per cent. greatly improved, and 54, or 14 per cent., improved. Placing all these together under the head of "improved," we arrive at a total of 334, or 87 per cent. of improvements.

The stationary cases numbered 5, or a little over 1 per cent., the worse 46, or 12 per cent., of whom 19 died under climatic treatment. The mortality at home will be considered later. About seven-eighths improved, and one-eighth deteriorated.

*Gain of Weight* was registered in 241 patients, loss in 29, and no change in 34. Gain of weight is not so marked a feature in the high altitude cases as in those treated in sanatoria, on account of the large amount of exercise usually taken, but a gain of from 1 st. to 2 st., and even more, is not infrequent.

LOCAL RESULTS.

Most important are the results on the lungs. These are classified as:

(1) *Arrest*, signifying in the case of tuberculisation cases, disappearance of all physical signs of disease, and in cases of excavation arrest signifies disappearance of cavernous sounds, and, even in some instances, of signs of consolidation, leaving nothing to be detected beyond deficiency of expansion over the whole side and prolonged expiration above the scapula. In some cases not even these signs are present. These changes were always accompanied by the cessation of cough and expectoration and the disappearance of tubercle bacilli from the sputum.

(2) *Diminution of physical signs* signifies that while there is local improvement, there still remains some, though lessened, physical signs.

*Worse* indicates deterioration, either in the form of extension of disease, or softening and excavation, or both.

*Stationary* signifies no perceptible change in the local condition.

The 385 cases yield 174 absolute arrests, that is, 45 per cent., and 129, or 33.50 per cent., of diminished physical signs. This gives a total improved of 303, or 79 per cent. The stationary cases number 20, that is, 5.2 per cent., and the worse 59, or 15 per cent.

In the tuberculisation cases we have 147 cases, or 58 per cent. of arrests, and 75 or 29.52 per cent. of "diminished signs," giving an improved total of 87.4 per cent.; the worse were 22, or 9 per cent., and the stationary 7, or 3 per cent.

The excavation cases yielded 27 arrests, or 20.6 per cent., and 54 with diminished physical signs, or 41.22 per cent., giving a total improved of 81, or 61.15 per cent.: 39 cases were worse, or 29.7 per cent., and 13 stationary, or 10 per cent.

These figures are very striking, and teach us clearly that tuberculisation cases do infinitely better at high altitudes than excavation ones, but that the latter make a very respectable appearance and give a percentage of 61 per cent. of improved.

The numbers in the stationary and worse classes rather indicate that the climate has a decided influence, and promotes either improvement or deterioration.

*Chest Measurements.*

These were made in 133 patients, and showed an increase in circumference in 128, or 96 per cent. In 5 patients, who had pleurisy or extensive pulmonary fibrosis, no increase took place. The amount often reached 3 inches.

The foregoing account of these 385 patients only reports their condition up to their return from the high altitudes, and the question now arises as to what became of them subsequently, and as to what proportion relapsed, how many died, and in how many the disease remained in a state of arrest.

My first patients were sent to high altitudes in 1878, and I have continued sending consumptives ever since, so that these cases are spread over a period of twenty-three years, and during this time a certain number of deaths must be expected, especially among the elder persons.

I have information about 329 out of the 385, but of 56 could glean no news. Of these 329, eighty-seven have died, or 22.6 per cent. Doubtless also some of the remaining 56 have died, but as a large proportion were leading an active life when lost sight of, it would not be fair to take it for granted that all have perished.

In addition to the deaths, 20 patients were ascertained to have suffered a relapse, but to have again recovered. Of the remainder the great majority are known to be in good health, and to be active during this present month.

### SUMMARY OF CONCLUSIONS AS TO INFLUENCE OF HIGH ALTITUDES.

My conclusions as regards the effects of the climate of high altitudes on consumption are :

1. That the respiration of the rarefied atmosphere produces hypertrophy of the healthy lung and local pulmonary emphysema around the tuberculous lesions, giving rise in due time to thoracic enlargement.

2. That it is possible the arrest of tuberculous disease is at least partly due to the pressure exercised on the tuberculous masses by the increasing bulk of the surrounding lung tissue, which by emptying the blood vessels promotes caseation and cretification of the tubercle.

3. That these changes are accompanied by general improvement in digestion and assimilation, the cessation of all symptoms of disease, the return of natural functions, by gain of weight, of colour, of nervous and muscular activity, and of respiratory and circulatory power.

4. That arrest of disease takes place in 58 per cent. of the tuberculisation cases, and great improvement in 87 per cent. That in excavation cases arrest occurs in 21 per cent., and great improvement in 61 per cent.

5. That the climate is specially beneficial in hæmorrhagic phthisis, and phthisis in which hereditary predisposition is strongly marked, and is well suited to chronic tuberculosis of the lungs in general, provided the extent of lung involved is not too large or the disease accompanied by much fever.

6. That males and females seem to do equally well and to profit most between the ages of 20 to 30. Males over 40 and females under 20 benefit least.

7. That the climate is contraindicated in acute phthisis, catarrhal phthisis, in laryngeal phthisis, in cases of phthisis accompanied by great nervous irritability in patients with double cavities, with fibroid phthisis, and in all patients whose pulmonary surface has been so much reduced from any cause that it does not suffice for complete respiratory purposes.

### RESULTS OF DIFFERENT CLIMATES COMPARED.

The comparison of the results of the various groups of climates in my Lumleian Lectures, from which I extract the annexed table (Table III), brought out the high altitudes at the top of the list, a position which they have fully maintained, and especially, as in most of the stations sanatorium treatment is also carried out, and if we want another example of the invigorating influence of the high altitudes we may find it in the determined resistance which our present enemies the Boers are offering to our brave army, for the Boers are a pastoral race, who have been reared and passed their lives at an altitude about 4,000 feet above sea level. Their chests are broad and deep, their frames are wiry and active, and they possess great powers of endurance, and though race may have something to say to the causation of their stout resistance, climate has still more.

TABLE III.—*Results of Different Climates Compared.*

| | No. of Patients. | Average Length of Residence. | First Stage. | Second and Third Stages. | Bilateral Affection. | Results. General. Improved. | Stationary. | Worse (including deaths). | Results. Local. Arrest. | Improved (including arrest). | Stationary. | Worse. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M'nths | Per Ct. | Per Ct. | Per Ct. | Per Ct. | Per Ct. | Per Ct. | Per Ct | Per Ct. | Per Ct. | Per Ct. |
| High Altitudes ... | 247 | 12.2 | 65. | 35. | 37. | 83.4 | 2.02 | 14.57 | 42.5 | 75.5 | 5.3 | 19.1 |
| Sea Voyages ... | 65 | 1.6 (average of voyages) | 63. | 37. | 37. | 77. | | 21.56 | 7.7 | 53.3 | 10.7 | 33.8 |
| Riviera ... | 210 | 9. | 59. | 41. | 36. | 65. | 10. | 24.80 | 5.9 | 36.6 | 17.8 | 45.6 |
| Home Climates ... | 292 | 9.7 | 58. | 42. | 42. | 63.7 | 8.21 | 28. | 2. | 38.9 | 20. | 41.1 |

In conclusion, I would say that in my opinion, while not undervaluing the advantages of the hygienic treatment of consumption, a most potent weapon is to be found in climate, not only as proved by results, but because of the invaluable assistance it renders to hygiene and medicine.

## II.—INTRODUCTORY ADDRESS MAINLY ON THE CLASSIFICATION OF CASES.

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MR. PRESIDENT AND GENTLEMEN,—I shall endeavour to avoid, in the few remarks I have to make, going over the same ground as that so fully and ably traversed by Dr. Williams. I shall not, therefore, say anything further as to the classification of climates or the enumeration of their main characteristics. What Dr. Williams has said on these heads will be generally admitted.

The objects of treatment by climate in cases of pulmonary tuberculosis seem to me to be the following :

(*a*) To arrest catarrhal conditions of the air passages.

(*b*) To improve nervous and circulatory tone.

(*c*) To increase the activity of the digestive functions, and thus stimulate nutrition by promoting the desire and increasing the power to take exercise.

(*d*) To raise the moral tone—by no means an unimportant matter—by affording a clear, bright, and cheerful environment.

(*e*) To diminish by its asepticity bacterial activity.

### OPEN-AIR TREATMENT—NEW AND OLD.

It must be a question for consideration whether so-called "open-air treatment," without regard to suitable climatic conditions, will do all this. It should be our object when practicable to place the consumptive patient under conditions and in circumstances where, without risk or injury, he may obtain the most complete and perfect aëration of the lungs possible.

If you place a feeble catarrhal patient in the open air in a damp and cold climate, you will risk an increase of the catarrh, and this will diminish pulmonary aëration by blocking up the air passages. The modern "open-air" treatment is only "new" in its manner of carrying out this idea of hyper-aëration of the diseased lungs, and we must be especially careful in applying it to avoid the risk of aggravating catarrhal conditions. This, I think, has now been fully admitted by some of the most strenuous advocates of open-air treatment *per se*.

The recommendation of a long sea voyage as a cure for phthisis doubtless had its origin in the idea of pulmonary hyper-aëration. It was an early form of "open-air" treatment, but with grave drawbacks and risks to which I shall immediately refer.

It may be interesting to mention that between two and three centuries ago Sydenham seems to have had in his mind also this same idea of hyper-aëration of the lungs in the treatment of consumption. He says in "A Short Treatise of Consumption":

The best remedy hitherto discovered.....is riding sufficiently long journeys on horse-back, provided this exercise be long enough continued.....For, in reality, the Peruvian bark is not more certainly curative of an intermittent fever than riding is of consumption.[1]

And again:

But the principal assistant in the cure of this disease is riding on horse-back every day, insomuch that whoever has recourse to this exercise in order to his cure, need not be tied down to observe any rules in point of diet, nor be debarred of any kind of solid or liquid aliment, as the cure depends wholly upon exercise.[2]

Sydenham, in recognising in the treatment of phthisis the value of increasing pulmonary aëration by long-continued horse exercise, clearly anticipated the modern idea of open-air treatment of this disease.

Now climatic treatment is essentially "open-air" treatment; and the appropriate selection of a climate must depend on the suitability of that climate to open-air life in the particular cases we may have to deal with.

*Difficulty in Classifying Cases.*

It is difficult to establish any precise and rigid classification of the cases best suited to particular places, because in many cases, and especially in very early cases, and in quiescent chronic cases, with a limited area of local disease, the patients will do well and obtain arrest of the disease in a variety of places with somewhat different climatic conditions.

One of the most remarkable arrests of phthisis I have ever seen in an advanced stage—that is, with a considerable area of consolidation and excavation in the upper lobe of the left lung—occurred in London. I first saw this patient between twenty and twenty-five years ago; she was then about 20 years of age. She had at that time a considerable cavity in the upper part of the left lung, with much surrounding consolidation. She had dorsal curvature of the spine, and she had mitral disease with a tendency to cyanosis. She was then living in the country, and I lost sight of her for a few years. She then reappeared as a married woman, settled in London; the physical signs were much the same. I continued to see her, at long intervals, generally on account of some circulatory disturbance. She had three or four children, and kept her husband's house till she died about two years ago, from the consequences of the mitral disease, and not from the phthisis.

Another of the best results that I have seen, in a case in a fairly advanced stage, first came under my observation about fifteen years ago, and she never went further from home than Hastings. The disease in the lungs has been arrested for some years, and she now occasionally consults me for dyspeptic troubles.

Another case that I have watched for nine years is a case of so-called fibroid phthisis, a case of what has been termed the pleurogenic type, for she has had many attacks of dry pleurisy, in the causation of which I consider rheumatism has played some part. She has a cavity in the left lung, and the whole lung from time to time becomes catarrhal. She has had several attacks of hæmoptysis. She has done well in a variety of places; she has wintered on the Riviera, in Algiers, in South Africa, at Orotava, at Montreux, in Cairo; but she will not go where she cannot get social entertainment, and for that reason she prefers Egypt. As to living in a sanatorium, you might as well ask her to live in a prison.

I mention these instances to show how difficult it sometimes is to draw minute and precise conclusions as to the suitability of different places from the results observed in individual cases. Many chronic stationary cases with fair general health travel about to different winter resorts in successive seasons and appear to benefit more or less in all.

*"Incipient Phthisis."*

Another difficulty in drawing reliable conclusions from published statistics is the tendency on the part of certain observers to use somewhat vaguely the terms "incipent phthisis" and "pretuberculous phthisis."

I find many practitioners are in the habit using the term "incipient phthisis" in the sense of "suspected" phthisis; in that case it expresses an opinion rather than a fact. If this practice is largely acted upon it must greatly detract from the value of the statistics obtained.

It would be better, I venture to suggest, to discard the use of the term "incipient phthisis" and use the more precise term "early phthisis" instead; and then in the preparation of statistics it should be stated on what observed symptoms and physical signs this diagnosis is founded.

The term "pretuberculous" phthisis is, I think, still more objectionable. In estimating the results of any form of treatment these terms, I would suggest, should not be used.

We are, I suppose, all agreed that early cases with a very limited area of local disease, with little or no fever, with integrity of the digestive functions, and in young and otherwise healthy adults do well, and are frequently cured in a variety of climates provided they live a perfectly hygienic, open-air life. They recover probably more speedily in altitude climates than elsewhere.

*Objections to Sea Voyages.*

Now it is to the more vigorous of this group that I consider a sea voyage may be of use, and then only to those who have a liking for the sea. The value of the ocean voyage has been, in my opinion, greatly overestimated and its serious drawbacks insufficiently realised. I have had occasion to know that many practitioners have advised a sea voyage as if it were a universal remedy for consumption—just as the "open-air treatment" is now prescribed—and dire have been the consequences.

The public love unqualified advocacy and universal remedies; we should be careful not to yield to the same tendency, and remember that our part is to discriminate. I should like to read a few lines about a sea voyage from the pen of one who was very eminent in his own branch of science:

The principal objection to persons in delicate health undertaking a long sea voyage is the uncertainty about the influences to which he or she may be exposed; while on land the traveller is to a great extent his own master, and has power to control the surrounding conditions. He may regulate the day's journey according to strength or inclination; he may linger in such places as have agreeable associations and environments; he may hasten over those of an opposite character; but when once embarked upon a voyage, whether he find himself crowded in a dark, close cabin with two or three uncongenial companions, lying on a narrow, hard shelf, portholes rigidly closed, and the atmosphere he breathes poisoned by noisome odours, of which the sickening smell of the oil of the engines is one of the least objectionable; the rain pouring on deck, making escape from his prison, even for a few minutes, impossible; when he feels he would give all his worldly possessions for a breath of pure air, or a few hours' cessation from the perpetual din of the engines within and the waves throughout. He is perfectly helpless; he must go through it day after day and night after night, until the weather changes or the voyage is ended.

This was the estimate of a sea voyage written by the late Sir William Flower. Another brief estimate of the sea voyage by a consumptive physician who tried it, and who was one of my own clinical clerks, is as follows:

Any slight advantage there may be as to the pureness of the air of the ocean is, I maintain, far outweighed by the manifest disadvantages to an invalid at sea, such as the close, ill-ventilated cabins, the draughty saloons, the weakness and straining caused by sea-sickness, the damp sea fogs, the enforced confinement below during bad weather, and the great trial to an invalid of passing through the tropics.

Sir Andrew Clark, who had himself been in the navy, remarked in 1890:

For my own part, when I now review the experience of the effects of sea voyages upon young invalids, I am more strongly impressed than ever I was before with the necessity of extreme caution in prescribing them.

*Advanced Chronic Cases.*

Another point on which I conclude we shall be agreed is that decidedly advanced dyspnœic cases should not, as a rule, be sent far from home, more especially if there is any pyrexia. It will, however, occasionally happen that such patients amongst the upper classes insist on change and get very restless at home, and they often rally a little on removal to some bright resort.

Of climates in which I have known distinct benefit follow in such advanced chronic cases, I would especially cite Madeira and Malaga. These advanced cases are generally associated with bronchial catarrh, and the warm, equable, and moist climate of the places I have mentioned soothe the

cough, favour expectoration, and allow of the patient being much in the open air. One, a hæmorrhagic case, did well at Malaga, and another, complicated with albuminuria, passed the last two years of his life in comparative comfort in Madeira.

The idea that formerly prevailed that a warm, moist, and equable climate was the best for consumptives had a certain foundation in the suitability of such climates to the advanced catarrhal cases. There was little idea of cure associated with these climates, because consumption was then regarded as incurable, but it was thought that they prolonged life, and made the slow process of dying less painful.

The quality of equability in a climate was at one time greatly over-rated. Indeed, we nowadays avoid an equable climate when seeking a cure for early cases of pulmonary tuberculosis. We rather seek a climate with a very wide diurnal range of temperature, if it is a dry climate, as the Engadine or Egypt.

Wide diurnal variations of temperature exert a bracing, invigorating, tonic effect, especially when they follow a certain regularity. What renders our own climate so very trying at times is that, although very variable, the variations of temperature follow no regularity. We get a week or ten days of very cold, fine, dry weather, and then, just as the organism is adapting itself to the dry external cold, it changes, and we get a spell of moist, wet, south-westerly winds, to be followed, after a few days, by a return of severely cold, dry weather; and so on. It is on this account that our climate can never be well suited to the out-of-door treatment of cases of catarrhal phthisis.

*Early and Moderately Advanced Phthisis.*

There is no great difficulty, then, in deciding what to do with cases at the very onset; we must be greatly influenced by questions of age, sex, temperament, occupation, social conditions, and constitutional tendency. They will get well in a variety of places with careful management.

Nor is there much room for hesitation as to what course is best to follow in decidedly advanced cases. The progressive febrile cases are best in bed with an abundant supply of fresh air. It is the moderately advanced case that calls for careful discrimination and is the most difficult to decide about.

It is now that the question of constitutional tendency comes into the foreground. Tuberculosis being an infective disease attended with greater or less dissemination of toxic substances throughout the organism, we find, as we do with the attacks of other infective microbes, varying degrees of reaction, of susceptibility, or infectibility, in different types of constitution.

*Cases Unsuitable for Mountain Climates.*

It has been thought that the gouty constitution is antagonistic to tuberculous infection. My impression is that the rheumatic constitution is so also, and that the latter is especially prone to develop the slow, fibroid, pleurogenic form of phthisis.

Now this form is not, in my opinion, well suited to altitude climates. These cases do best in a warm and dry climate, such as the more protected resorts of the Riviera and the desert climate, as in Upper Egypt or Biskra. Setting aside this group, the high mountain resorts have doubtless the widest range of applicability to moderately advanced cases. There are, however, certain other cases that do not improve in these resorts. Early or moderately advanced cases, with manifest cachexia, gastric disturbance, and more or less fever, do not do well in these or, as far as I am aware, in other resorts. A mild marine climate perhaps suits these cachectic cases best.

Cases with laryngeal or intestinal complications should not be sent to the mountains.

Cases of much emphysema complicating tuberculous infiltration, or tubercle invading emphysematous lungs will perhaps express better what I mean, are unsuited to altitude resorts. Cases of this latter group are prone to attacks of almost continuous and peculiarly uncontrollable hæmorrhage, and are most unpromising. As might be expected, cases with renal complication do not do well in the mountains, and if albuminuria makes its appearance in such resorts the patient should be removed to a warmer climate.

A peculiar sensitiveness to cold is a very decided drawback to wintering in the mountains; for, although the patient may be mending so far as the local disease is concerned, he or she is always depressed and unhappy.

*Sanatorium Treatment in Great Britain.*

In our own country, in which sanatorium treatment is becoming justly popular, we must seek for suitable local climates in which the worst characteristics of our changeable, insular climate are least felt, and where we can profit by what is best in it.

Nordrach is constantly referred to as a place in which consumptive patients get well in spite of the climate; but that place has great local advantages. It has a horseshoe-shaped screen of mountains, 1,400 feet high, protecting it from the north and east winds; it has adjacent pine woods, where patients can take graduated exercise, free from dust and protected from winds; it has an absorbent soil, and, although it has a considerable rainfall, the rain runs off quickly and serves to keep the atmosphere pure and clean. Then it has also an elevation of 1,400 feet above the sea.

In England we have to consider the prevalence of fog and mist in many low-lying localities, the exposure to north-east and easterly winds in some, and to wet south-westerly gales in others.

What the consumptive patient most needs for his cure is a combination of climate and sanatorium treatment. The patient, if left to his own devices, may make bad use of a good climate, while with skilful guidance in a sanatorium he may make good use of a bad one. Care without climate is better than climate without care.

The question put to us in this discussion is: What influence has climate on the treatment of consumption, and how far can cases be grouped for treatment in certain climates?

THE INFLUENCE OF CLIMATE ON CONSUMPTION.

The answer to the first part of the question will, I suggest, be that a suitable climate

(*a*) Relieves or removes catarrhal conditions accompanying the disease in a number of cases.

(*b*) It raises nervous and vascular tone.

(*c*) It increases muscular energy and the ability as well as the desire for exercise.

(*d*) By rendering an open-air life possible, it increases the aëration of the lungs and diminishes the activity of bacterial agencies, one of the most essential conditions of arrest and cure of the disease.

(*e*) It improves the tone and promotes the activity of the digestive functions, and so enables the patient to take the large amount of food which is needed to heighten his state of nutrition.

(*f*) And, finally, it improves the moral and mental state by surrounding the patient with a bright, cheerful, and hopeful environment.

THE GROUPING OF CASES.

Then, as to the answer to the second part of the question, we may, I think, say:

1. That cases seen at the very commencement of the disease, and who are otherwise in good health, may be permitted a certain amount of choice in the selection of a climate, provided it allows of many hours being spent daily in the open air, and that they are placed under admittedly hygienic conditions. A choice may be made from climates of altitude, the desert climate, the inland plateaux of South Africa, the sea voyage for those with a decided liking for the sea, and suitably placed sanatoria.

2. For progressive febrile cases, repose in bed or on a couch at home, in the best conditions practicable for the free access of air and sunshine to their apartments.

3. For advanced cases home is best if the conditions of home life are favourable, or the warm marine climates with cheerful surroundings if home life is unfavourable or change is urgently desired.

4. For catarrhal cases warm, soothing climates like Madeira or Teneriffe are best.

5. For rheumatic or gouty cases of the fibroid or pleurogenic type—dry, marine climates or the desert climate are most suitable.

6. For the so-called "scrofulous cases," if free from catarrh, fairly bracing marine climates; if with catarrh, mild marine climates should be prescribed.

7. For most other moderately advanced cases, with the limitations already mentioned, the climate of the high mountains, above the cloud belt, is the most curative.

I have not made a "hæmorrhagic" group because I do not think it would be a natural one; every hæmorrhagic case must be, in my opinion, considered apart, and, if I may be permitted the phrase, dealt with "on its own merits."

References.

[1] Swan's translation of Sydenham's works, pp. 665 and 672. [2] *Ibid.*

*(The remainder of the discussion will be found at page 211.)*

## FIRST GENERAL MEETING: *Monday July 22nd.*

### Opening Ceremony.

The opening ceremony of the British Congress on Tuberculosis was performed by the Duke of Cambridge, on behalf of His Majesty the King, at St. James's Hall on the afternoon of July 22nd.

The Ambassadors of the United States and of France, and the Ministers of the Netherlands, Greece, Denmark, Sweden, Portugal, Roumania, Servia, Peru, Liberia, and Hayti, the High Commissioner for Canada (Lord Strathcona and Mount Royal), Agents-General for New South Wales (Sir Henry Copeland), Victoria (Sir Andrew Clarke), South Australia (Sir John A. Cockburn), Queensland (Sir Horace Tozer), Western Australia (Sir E. H. Wittenboom), Tasmania (Hon. A. Dobson), New Zealand (Hon. W. P. Reeves), Cape Colony (Sir David Tennant), Natal (Sir Walter Peace), the Director-General Medical Department, R.N., the Director-General General I.M.S., the Deputy Director-General A.M.S., the Bishop of London, Earl Spencer, the Marquis of Bath, and other distinguished men whose names are mentioned below.




BADGE OF THE CONGRESS.
Designed by T. W. Cutler, F.R.I.B.A.

The Duke of Cambridge was received and conducted to the platform by the Earl of Derby, K.G. (President), and Sir William Broadbent, Bart. (Chairman of the Organising Council), Professor Clifford Allbutt (Chairman of the General Purposes Committee), Sir J. Crichton-Browne (Chairman of the Reception Committee), Sir James Blyth, Bart. (Chairman of the Finance Committee), Mr. Malcolm Morris (Honorary Secretary-General), and other members of the executive of the Congress.

The Honorary Secretary-General (Mr. Malcolm Morris), in presenting the report, said that the present Congress was the outcome of that held in Berlin in 1899. Originally it was to have met on April 22nd of this year, the date fixed by the then Prince of Wales, but had been postponed till the present time on account of the death of Queen Victoria. At the request of the King (Patron of the Congress) the Duke of Cambridge had consented to act as President. The report acknowledged the great assistance that had been rendered in the organisation of the Congress by the Foreign, Colonial, and India Offices. The work of the Congress was divided among four sections; and a museum arranged in two sections had been constituted. In Germany, under the presidency of the Duke of Ratibor, and in France under Professor Brouardel, committees had been formed for the purpose of diffusing information concerning the purposes of the Congress. The report sketched the arrangements for the work of the Congress, and stated that at its final general meeting the practical resolutions arising out of the sectional discussions would be proposed. The report acknowledged the indebtedness of the Organising Council to Dr. StClair Thomson, Honorary Foreign Secretary; to Dr. Hillier, Honorary Secretary of the Reception Committee; and to Dr. Irwin Moore, Assistant Honorary Secretary of the Committee; and to the Countess of Derby and Miss Lankester, the President and Honorary Secretary respectively of the Ladies' Committee.

The Duke of Cambridge, in declaring the Congress open, said he did so at the request of His Majesty the King, who sympathised in the endeavour to mitigate suffering and illness. He welcomed the delegates of foreign countries and concluded by reading the following telegram to the King:—

I have the honour to inform your Majesty I have opened the Congress on Tuberculosis, which is largely attended by home and foreign delegates, in obedience to your Majesty's command.

Lord Lansdowne expressed on behalf of the Government their realisation of the immense significance of the fight attempted by the Congress against tuberculosis, an enemy more ubiquitous and more insidious than any enemy they had to encounter in the open field.

Lord Cadogan (Lord Lieutenant of Ireland) said that he had the honour to represent a country which was, he would not say devastated, but which suffered perhaps as largely as any other country in Europe from the scourge which they were all met to consider, and, if possible, to arrest. The Irish people and the Irish men of science had had their attention turned very seriously to this subject during the last two years; and last year, and again this year, he had the honour of presiding over a meeting in Dublin in which the men of science there expressed their determination to do all they could to mitigate this scourge. Therefore, he was glad to be allowed to be there, and on behalf of the people of Ireland to add a few words of welcome to the Congress, and especially to the foreign members.

The Lord Mayor of London welcomed the members to the city.

Lord Strathcona and Mount Royal, speaking in the name of the representatives of the Colonies, said they were all united against the dire disease which had decimated the world. An association had been formed in Canada to combat the disease, and had already done much good.

Lord Lister, speaking on behalf of the medical profession in the British Isles, welcomed the illustrious men who had come from all parts of the world. Thanks to Professor Koch the enemy which had to be dealt with, which before had been shrouded in impenetrable obscurity, was now known. It was known also, thanks to Pasteur, that the tuberculous microbe was incapable of being originated *de novo* in the human body; hence had arisen the splendid prospect of the prevention of tuberculosis. Its cure also was aimed at, and in this respect physicians might learn much from surgeons who had proved that in many cases tuberculosis might be completely cured. Attempts also were now being made to deal with tuberculosis by means of various specifics. Some of these presented promising aspects, and would be carefully considered by the Congress; but if this programme of prevention and of cure was to be carried out, the general public must come to the aid of the physician and surgeon. He anticipated that that gathering of scientific men from all parts of the world, which met under royal patronage, would indicate to the public the importance of the work upon which the Congress was engaged, and would thereby secure the help of the public to minimise, and possibly eventually to stamp out entirely, the greatest scourge of the human race.

The representative delegates of foreign nations were then presented to the Duke of Cambridge by the Earl of Derby.

The first was Professor Osler, who said that though the delegates of the United States unlike some bands of delegates from that country, did not come to organise a trust, they represented a magnificent trust. But unlike the ordinary "trusts," with their motto of "Damn the Public," their trust bore on its banner the words, *Pro bono publico*. He recalled Bunyan's description of consumption as "captain of the men of death;" the captain, he said, had been reduced to a lieutenant and would soon be brought down to an ensign and from thence to the ranks. But finally to drum him out of the regiment was too much to expect.

Austria was represented by Professor von Schrötter, who expressed the opinion that the holding of congresses one after another kept the question before the eyes of the world.

M. le Sénateur Montefiore Levi, M.D. (Belgium), said that the Belgian Government had taken active measures against tuberculosis, and there had been a diminution in the deaths from consumption.

Professor Charles Gram, speaking for Denmark, said that he came to learn, to see, and to hear, and delighted the

meeting by saying Denmark expected every man to do his duty.

Professor BROUARDEL, in the name of the French deputation, prayed the Duke of Cambridge to present to His Majesty the expression of their gratitude and thanks for bestowing his high patronage on the Congress. The King had proved that public health was one of his highest preoccupations, and the work was now easier because public opinion was with the medical profession in the fight against tuberculosis.

The proceedings were then interrupted for the reading of the King's reply to the telegram sent by the Duke of Cambridge, as follows:

To the Duke of Cambridge.—I have just received your telegram. I thank you for having kindly consented to open the Congress in my name, and I am glad to hear that the ceremony has passed off so well. Pray heartily welcome from me the eminent men belonging to almost every nation who have assembled to-day under your presidency, and express to them my earnest hope that the valuable information which they will give to the world as the result of the deliberations of the British Congress on Tuberculosis will assist in mitigating the dire disease which has baffled the mass of distinguished physicians for so long.—EDWARD REX.

Professor VON LEYDEN, speaking in the name of a number of institutions and associations in Germany, expressed their hopes for the success of the Congress, and described in some detail the progress recently made in Germany, especially in the provision of sanatoria for the people. He referred to the pioneer work done in England by the establishment of consumptive hospitals.

Professor RUATA, speaking in the name of the Italian delegates, said that England had by its early action in public health matters taught a great lesson to all nations; moreover in 1837 George Bodington had originated sanatoria for consumptives; in 1860 England had diminished consumption by sanitary measures, and had taught other nations the necessity of cleanliness.

On the audience resuming their seats the ceremony of introducing the foreign delegates was resumed: Professor Thomassen for Holland, Professor Koranyi for Hungary, Professor Ruata for Italy, Professor Holmboë for Norway, Professor Cortezo for Spain, Professor Hofmarshall Printzjold for Sweden, and Dr. Neumann for Switzerland.

The EARL OF DERBY, as President of the Organising Council of the Congress, moved a vote of thanks to the Duke of Cambridge for taking the chair, and this, after being seconded by Sir WILLIAM BROADBENT, was carried by acclamation.

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SECOND GENERAL MEETING: *Tuesday, July 23rd.*

LORD LISTER briefly introduced Professor Koch, who delivered the address printed on p. 189.

At the conclusion of Professor Koch's address, Lord LISTER said the discourse they had listened to was full of profound interest from the beginning to the end. But what had chiefly riveted their attention had been the startling thesis that bovine tubercle could not develop in the human body. This was a matter of enormous practical importance, because, if this conclusion were sound, it would greatly simplify their preventive measures; but it would be a very serious and grievous thing if the rules now in force for securing purity of milk supply should be relaxed and it should turn out after all that the conclusion was erroneous. For his own part he thought the evidence adduced by Dr. Koch to show that human tubercle could not be communicated to bovine animals very conclusive. At the same time he agreed with him that in a matter of such great importance further inquiry was desirable. But even if that were established it would by no means necessarily follow that bovine tubercle could not be communicated to man. He took in illustration the case of variola. Attempts to inoculate human small-pox into the calf had been so very rarely successful that eminent pathologists had concluded that small-pox and cow-pox were two entirely different diseases. We now knew that this was an entire mistake; that cow-pox was small-pox modified by passing through the cow. He referred to some very instructive experiments by Dr. Monckton Copeman, who entirely failed to inoculate human small-pox into the calf but invariably succeeded in inoculating it into the monkey, and was as invariably successful when he introduced matter from the pustules in the monkey into the calf, the result being ordinary cow-pox which could be used for vaccinating children. It might be that some species of animal might serve as an intermediary host for tubercle between man and the bovine species. Or it might turn out that, if a sufficient number of experiments were made, human tubercle might prove occasionally transmissible to the bovine animal, as small-pox was in rare instances to the calf, and that the bovine tubercle so produced might be transmissible to man, as was the virus of vaccine. The evidence, necessarily indirect, on which Koch relied as showing that bovine tubercle could not be transmitted to man did not seem at all conclusive. It consisted in the alleged rarity of primary tuberculous intestinal lesions in children, in spite of the multitudes of tubercle bacilli swallowed by them in milk. Even if it were admitted that primary tuberculous intestinal lesions were as rare in children as Koch's statistics indicated, it was certainly true that tabes mesenterica existed in a considerable percentage of children who died of tuberculous disease without tubercle being found in any other part of the body. When the mesenteric glands were thus affected without any discoverable intestinal lesion, the natural, and, indeed, inevitable, interpretation seemed to him to be that the tubercle bacilli had passed from the aliment through the intestinal mucous membrane without causing obvious lesion in it, and had been arrested in the glands of the mesentery. It was known that even typhoid bacilli, whose essential place of development was the intestinal mucous membrane, occasionally passed through it without producing the characteristic lesion. And if this might occur with the typhoid bacilli, how much more likely was such an occurrence with tubercle bacilli? If this were so, Koch's argument fell to the ground. As regards the experiments Koch had referred to of inoculating bovine animals with material from the glands of children affected with tabes mesenterica, the result being negative, these experiments had been but few; and even were they more numerous, they would not, to his mind, be quite conclusive. It might be that tubercle from milk in the intestines might be so modified by passing through the human subject that the bacilli in the mesenteric glands, though derived from a bovine animal, might be no longer those of true bovine tubercle but bacilli having the characters of human tubercle little disposed to develop in cattle. The Congress would probably require a more searching inquiry into the subject before accepting this doctrine of the immunity of man to bovine tubercle.

Professor NOCARD agreed with Lord Lister that if Professor Koch was right much good meat had been unnecessarily condemned. But the analogy afforded by the behaviour of the microbe of *rouget de porc* led him to think that the present failure to prove the inter-changeability of human and bovine tuberculosis was due to the difficult nature of the experiments. Until these were overcome the matter must remain in doubt, and the arguments of Professor Koch had failed to carry conviction to his mind. He considered that the reduction of mortality from tuberculosis in England proved the legitimacy of restrictive measures regarding the food supply.

Professor BANG moved a vote of thanks to Professor Koch. He felt that the latter might have shown that there was little danger of infection of man by tuberculosis from animals, but had not proved that such infection could not occur. He referred to cases of tuberculous infection in man resulting from wound inoculation in operations upon animals, and held that, pending further knowledge, it was necessary from the hygienic standpoint to preserve the fear of tuberculous milk.

Professor SIMS WOODHEAD, in seconding the vote of thanks, characterised Professor Koch's address as masterly and his practical suggestions as wise and humane. Personally, however, he held the view that bovine tuberculosis played some part in the genesis of the disease in man. He suggested that the Minister of Agriculture be appealed to to institute a commission of inquiry into the subject, and that until the question had been settled the present precautions should be continued.

THIRD GENERAL MEETING: *Wednesday, July 24th.*

THE attendance at this meeting was almost as large as that of the previous day

The Right Hon. HENRY CHAPLIN, M.P., who occupied the chair, made a brief reference to Professor Brouardel's distinguished services to hygiene.

Professor BROUARDEL then delivered the address, of which a translation is given on p. 193.

Mr. CHAPLIN, in moving a vote of thanks to Professor Brouardel, was glad to learn that the greatest authorities on the subject were in agreement as to the principal evils leading to the spread of tuberculosis and the remedies to be used for them. He referred particularly to the amelioration of the unhealthy dwellings of the poor, a subject which he had much at heart himself, and which was being furthered both by public and private enterprise. When President of the Board of Agriculture and of the Local Government Board he had occasion to pay much attention to the question of tuberculosis, both in animals and man, and he could not fail to perceive that Professor Koch's statements tended to call in question one-half of the conclusions of the first Royal Commission upon Tuberculosis. The moral to be drawn was that we must not let our zeal in the campaign against tuberculosis interfere with other interests.

Professor GERHARDT (Berlin) seconded the vote of thanks. He referred to the work done by Great Britain, France, and Germany respectively in the campaign against tuberculosis, which he described as an international brotherly fight.

The vote of thanks was carried enthusiastically by acclammation.

## PROCEEDINGS OF SECTIONS.

### SECTION I.—STATE AND MUNICIPAL.

*President*,—THE RIGHT HON. SIR HERBERT MAXWELL, BART., M.P., F.R.S.

*Tuesday, July 23rd.*

PRESIDENT'S ADDRESS.

THE RIGHT HON. SIR HERBERT MAXWELL, Bart., in opening the proceedings of the Section, hoped that the delegates would regard him as a link between the machinery of the Government of the country and its scientific workers. It had often been said that the Legislature was backward in promoting sanitary legislation of a compulsory character, but it might be pleaded as an excuse that the Legislature could not retrace its steps if wrong, so that great care had to be taken. He warmly welcomed the foreign delegates, and alluded to the enthusiastic reception given to the delegates at the Berlin Congress a short time ago. In science there were no frontiers separating nations—all men of science were brothers and fellow-workers. Vast discoveries had been made already relating to tuberculosis; scarcely 20 years had elapsed since Dr. Koch isolated the tubercle bacillus, and much progress had been made, but yet greater provinces remained to be discovered. In regard to the question of notification, which was to be discussed, there was great difficulty in enforcing sanitary regulations on intelligent nations unless the citizens thoroughly understood the reasons for such. The difficulty experienced by the Legislature with regard to the vaccination laws would prevent it from enacting compulsory restrictions to control tuberculosis, unless the general consensus of the nation was unmistakably with it. Tubercle still remained answerable for a greater share of mortality than all the other deadly diseases together, and this in spite of considerable improvement during recent years. The housing question was often overlooked. The Scripture said, "Dust we are and to dust shall we return," but in our praiseworthy efforts to prevent this return, we had to pay great attention to this dust. The necessity of sunlight for this purpose should not be disregarded, but owing to the costliness of ground in great cities, the tendency was to raise the height of houses. It ought to be an object with municipalities to regulate the height of houses according to the breadth of the streets.

A DISCUSSION ON THE NOTIFICATION OF TUBERCULOSIS.

PROFESSOR JANEWAY, in opening the discussion, read a paper contributed by Dr. BIGGS (New York) dealing with this subject as existing in New York and various cities in the United States. Sanitary regulations having this object had existed in New York and some other States since 1893. The State of New York was, indeed, the first to enforce a scheme of compulsory notificatien. Later, the States of Michigan, Buffalo, and Philadelphia had followed the example, but in other places the notification was only voluntary. It might be taken that tuberculosis was preventable, contagious, and not hereditary, and with regard to preventive measures, the following were most important—namely, careful attention to meat and milk, educating the public with regard to the harm arising from bad habits, such as indiscriminate spitting, and the necessity of careful attention to the sputa of consumptives, and the careful disinfection of houses wherein patients had died of consumption. The compulsory notification of tubercle had not been complete. Physicians had been only invited to give information as to patients suffering from tubercle, such information to be treated as confidential; but it was compulsory to notify cases in public institutions, and inspectors were then sent to make inquiries as to their sanitary conditions. In all cases where death occurred from tubercle, and it came to the notice of the authorities, steps were taken to disinfect the premises where the death occurred. The authorities also, free of charge, examined by their medical officers the sputa of patients if submitted to them by the doctor in attendance. After this regulation was introduced, during the first year 4,000 samples of sputum were examined. The second year over 5,000, and the increase went up in a few years to 8,000. Dr. Biggs had made a report to the authorities as to the want of suitable institutions to treat poor tuberculous patients and as to the necessity for such; and that tuberculosis ought to be put more on the basis of the exanthemata. In 1897 it was resolved by the Board of Health of New York that tuberculosis was a dangerous and contagious disease, and that every physician should report to the Sanitary Bureau in writing as to patients suffering from that disease within a week of being called in. A sum of $60,000 was also appropriated to the care of poor tuberculous patients, to afford them better treatment. The notification chiefly applied to pulmonary tuberculosis as the most contagious. The law was not strictly enforced with regard to the notification of private patients by physicians, and it could not therefore be said that the regulations were strictly compulsory: but public opinion was gradually diminishing the number of cases not notified. In consequence of these various measures and the better treatment of patients there had been a reduction of 30 per cent. in the mortality arising from tuberculous diseases.

Professor OSLER, moving a vote of thanks to Dr. Biggs for his paper, said that the Board of Health of New York had the greatest difficulty in resisting Tammany in their endeavour to carry out sanitary reforms. Their success, in spite of this, had been wonderful, and formed an object-lesson as showing what could be done in spite of opposition.

Alderman MCDOUGALL then contributed a paper on the Working of the Voluntary Notification of Phthisis in the City of Manchester. This in Manchester was at first restricted to public institutions, but in 1900 the practitioners of the city were invited to notify in order

1. That the assistant medical officers might visit the homes of cases and instruct the household in the precautionary measures to be adopted, leaving with them printed instructions.
2. That the nature of the measures of disinfection required might be determined.
3. That they should make inquiries into the exposure to infection of individual cases from relatives, workmates, friends, etc., into their occupations and places of work, the various houses which they had inhabited, their physique, personal habits, and so forth.
4. That supervision might be maintained over infected households, change of address ascertained, personal precautions and household cleanliness maintained, and necessary measures of disinfection carried out from time to time.
5. That it might be ascertained if the required measures of disinfection were being executed.
6. That assistance might be given in getting bacteriological examinations of sputum in suitable cases.
7. That information regarding households might be obtained to serve as a basis for hospital provision.

Articles of clothing were disinfected by steam, rooms by washing with soap or solution of chloride of lime, and lime whitening of ceilings. The number of cases notified from September, 1899, to the end of March, 1901, had been 2,338;

of these 1,701 were from public institutions and 628 by private practitioners. During this time the number of deaths registered from phthisis has been 1,729. The total number of houses disinfected between March 31st, 1900, and March 31st, 1901, had been 2,306. In addition to the work of cleansing and disinfection, a great store of facts had been collected illustrating the sources of infection, and the places which had served as centres of diffusion. A large number of facts had also been collected, which illustrated the need for a municipal hospital in addition to the Poor-law union hospitals and those maintained by private enterprise.

(At this point, Sir J. Crichton-Browne took the chair.)

Dr. M. Holmboe. Director of the Medical Service in Norway, said that in that country notification of tuberculous diseases was restricted to tuberculous disease of the lungs, skin, and urinary system, when it could be diagnosed with certainty. After death from tubercle, under the Health Code, the fact had to be reported to the authorities, and disinfection of the premises was carried out. Many rural districts had followed the example of the urban authorities. Special attention was given to the cleansing of houses and the destruction of excreta, and the Board of Health would enforce obedience to sanitary orders. In his opinion, compulsory notification was absolutely necessary to give the State the means of taking steps to enforce sanitary regulations, although the municipal authority ought to exercise their powers with discretion. The law had been too short a time in force in Norway to allow any definite statement to be made with regard to its effects; but no complaint against inconveniences resulting from compulsory notification, had yet come to the notice of the directorate of the medical service.

Dr. Knopf of New York then spoke as a pupil of Dr. Biggs and Professor Janeway in criticism of some of the foregoing papers. He approved of everything said by Dr. Biggs on compulsory notification, provided the sanitary inspector had the power of isolating poor patients in a public sanatorium. Sufficient means must be supplied from public sources for the family when the bread-winner was thus removed. Voluntary notification was good, but if the burden on friends was increased by it he would protest against it. At a conference connected with tenement houses at New York it was shown how terrible an incidence of tubercle there was at such places, and he considered the greatest blot on the sanitary administration of New York was the failure to carry out sanitary regulations in these buildings.

Councillor Herbert Alderson, M.B. (Kensington), said that in his experience voluntary notification was not successful, and the circulation of sanitary pamphlets dealing with the subject could not be relied upon. He thought all disinfection should be free, but the payment of a fee to medical practitioners for notification was necessary. A reason why notification should be compulsory was that it forced all medical men to act in the same manner with regard to notification, and prevented a practitioner from currying favour with those of the public who desired to avoid this step, to the detriment of more public-spirited practitioners. All cases of patients leaving the infirmaries as cured should be reported to the M.O.H., who might investigate their subsequent condition, as they were extremely liable to relapse.

Dr. Robertson (Sheffield) spoke on the influence of housing and aggregation on the prevalence of tuberculosis and the possibility of improving our present conditions in this respect, having special reference to the methods employed at Sheffield for the voluntary notification of tuberculosis. The usual fees of 2s. 6d. and 1s. were paid to medical practitioners, and the sanitary inspector called and left a pamphlet of instructions at the houses of those notified. These instructions were very generally carried out, and the inspector's visit had a good effect on the public from an educational point of view. Busy practitioners had not the time to go into the work of advising patients upon sanitary points, and therefore plenty of sanitary inspectors were urgently required, but it was an advantage for some of these to be medical practitioners. It had been said that visits of inspection were resented by the public. He thought this was untrue, as in his experience he had only heard of one case of objection. Difficulties, however, arose in dealing with workshops and with the cleansing of them. The owners objected, and would often ask why they had been selected out of all the other owners of such places. This resulted in their being left alone in most cases in spite of sanitary deficiencies. The condition of houses was better in every respect now than fifty years ago, and there had been an enormous improvement in the conditions under which a large proportion of the labouring classes worked. There had also been an enormous improvement in the food supply of the working classes. The improvement in the removal of refuse in towns had been steady and was continuing. The prevention of tuberculosis might be roughly divided into two divisions—(*a*) the prevention of the spread of infecting material; (*b*) the strengthening of the resistance of every individual, especially of those having inherited tuberculous tendencies. The latter class of persons was very large, and while the limitation of the spread of infected material was important, the importance of more healthy conditions of life and of the open-air treatment upon susceptible persons could not be over-estimated.

Dr. Cooper-Pattin (Norwich) said that voluntary notification was good, but he preferred to supplement it by other means. After deaths from tubercle he always carried out disinfection, and had been able to get 95 per cent. of houses where such deaths had occurred disinfected. He also asked his inspectors to inquire what sickness was present in houses when visits were made for other purposes. A lady inspector was about to be appointed, and he hoped to get further information through her, as she could gain much information from the women of the household. All forms of tubercle ought to be notified; in many cases pulmonary tubercle was altogether secondary. It was useless to advocate compulsory notification unless prepared to find sanatoria for patients, and in dealing with tuberculosis they were dealing with a disease not of a virulent type of contagion, but of a long-continued one. More assistance was wanted from the Local Government Board. His committee were willing to schedule tubercle, but he believed the above-mentioned Board would not sanction it. He was pleased to learn from Dr. Biggs that advanced Anglo-Saxon democracies did not scruple to interfere with the liberty of the subject on sanitary grounds.

Dr. Stone (Boston Board of Health) gave the result of similar work in Boston. Last year the Board of Health included notification of tubercle and disinfection of premises after death among their sanitary regulations. There were public institutions for the pauper class in existence, but non-paupers did not like to go there; but none the less forcible removals were occasionally made.

Dr. Hoffman said that in the notification scheme nothing had been laid down as to dealing with early forms of tubercle as seen in consumptive types, such as were often found when health examinations were made for the public services and for insurance companies. A large proportion were invariably rejected on account of a suspicion of tubercle. Something should be done to reach this class, as the best results of treatment were obtained at an early stage.

Professor Ruata (Perugia) said that there was a great natural difference between diseases such as small-pox and tubercle. While the law might compel the notification of the former, it did not follow that it should do so in the case of the latter. The forms of tubercle varied so greatly. In Italy a law had been passed that the notification of pulmonary consumption should be compulsory in a few cases—for example, where it had occurred in schools, prisons, convents, etc.—and he approved of this. Also it was compulsory to notify where there had been a death.

Dr. Reynolds (Chicago) said that in Chicago they had not come to the conclusion that it was right to insist on the notification of tubercle, believing that it was the duty of the Government to educate the public in this respect. They had a hospital for the tuberculous poor, and he thought the education of the public was best brought about by the daily visits of doctors, by the public press, and by medical men giving lectures at public institutes. Sometimes on Sunday in liberal churches in Chicago medical men occupied the pulpits with advantage.

Dr. Newsholme (Brighton) said that the question of notification had advanced very considerably, and that principle in some form or other was now very generally

recognised. The dispute was now only as between compulsory and voluntary notification. He believed the former gave much more satisfactory results, as it helped to have cases followed who were often changing their addresses. An ethical difficulty in the medical profession was also got over by making the notification compulsory, as many doctors considered that it was wrong to divulge a professional confidence unless under compulsion. At Brighton voluntary notification had worked fairly well. Since 1893 an arrangement had been made for examining the sputum for practitioners in doubtful cases. In framing a resolution to put before the Section it was necessary to take care that it should be in terms that could be accepted unanimously. He begged leave to submit the following resolution:

That the voluntary notification of cases of phthisis attended with tuberculous expectoration, and the increased preventive action which it has rendered practicable, have been attended by a promising measure of success; and that the extension of voluntary notification should be encouraged in all districts in which efficient sanitary administration renders it practicable to adopt the consequential measures.

Sir H. LITTLEJOHN (Edinburgh) seconded this resolution. Personally he approved of compulsory notification, but the public required further education. At Edinburgh there were a large number of poor, and many tenement houses, and it was vain to think they would ever be able to get rid of them, but much might be done to render them more sanitary. Means should be found of isolating cases of tubercle occurring there in public hospitals, so that members of the family and other inhabitants might safely follow their avocations.

Sir JOHN COCKBURN, M.D. (South Australia), deprecated the wording of the resolution as tending to imply that the Section was specially in favour of voluntary notification. He thought that no resolution should be passed to discourage compulsory notification, as he hoped that eventually compulsory notification would be general.

The CHAIRMAN, after consulting with Dr. NEWSHOLME, suggested that the word "voluntary" should be struck out in the clause "extension of voluntary notification should be," etc.

With this alteration the resolution was put to the meeting and unanimously adopted.

### PREVENTION OF TUBERCULOSIS DURING CHILDHOOD.

Dr. LÉON PETIT (Paris) read a paper on the establishment of dispensaries for children throughout Paris. Till then there had been a great lack of hospital accommodation for young patients suffering from tuberculous diseases. These institutions were often situated at so great a distance from their homes as to render attendance there very difficult. Much good work had been done by these dispensaries; during 1900-1 at three of them there had been 30,000 consultations and 17,000 children treated. The mothers were always strongly recommended to suckle their own children; and in some districts great success had been attained in putting a stop to deplorable habits in the bringing up of infants.

Dr. S. A. KNOPF (New York) read a paper on the State and individual prophylaxis of tuberculosis during childhood and the need of children's sanatoria. He said that the prevalence of tubercle in childhood was very great, and was often contracted by contagion, so that consumptives ought to be kept away from children. Even at birth the careless midwife might infect the child by applying her mouth to that of the infant to inflate the lungs. Tuberculous mothers would often put spoons containing food for their children in their own mouths before feeding them. Infection from kissing was also not unknown, or from the application of the mouth to the prepuce after the operation of circumcision. Children should be prevented from crawling on the floor in the dust, which often harboured bacilli, and the infant was only too prone to suck his dust-polluted fingers. Lady school teachers ought not to be allowed to wear trailing dresses. No teachers or children with early symptoms of tubercle should be allowed to remain at a school, and all the inmates should be examined several times a year for symptoms. Overcrowded tenements, syphilis, and alcoholism tended to the production of tubercle, as also the employment of children under 14 years of age in factories for ten hours a day. The giving to poor children at public schools of a periodic sandwich or glass of milk would often ward off the onset of phthisis.

*Wednesday, July 24th.*

### DISCUSSION ON THE INFLUENCE OF HOUSING AND AGGREGATION.

Dr. HAROLD COATES, Senior Assistant to the Medical Officer of Health, Manchester, gave particulars of an investigation into the presence of infective material in dwellings occupied by consumptive persons. The establishment of a scheme of voluntary notification of phthisis in 1899 presented a favourable opportunity for taking up the investigation, and although his plan of the investigation differed somewhat from that of Cornet, whose results were published eleven years ago, the methods of experimentation were in the main similar. Dust was collected from situations in which it had settled naturally from the atmosphere, and in which there was no likelihood of contamination by expectoration or otherwise, from the floors, skirting boards, walls, shelves, mantelpieces, etc., of each house. On arrival at the laboratory, it was well rubbed up with sterilised water, and the mixture filtered through sterilised muslin, so as to remove coarse particles. A portion of this mixture was then injected into guinea-pigs, and the number of cases in which the animal developed symptoms of tuberculosis was noted. Dust was taken from the following houses: (1) Twenty-three infected houses in a dirty condition. In 66 per cent. the presence of virulent tubercle bacilli was proved. It was possible to deduce from these experiments that even in the dirtiest houses there was evidence of beneficial effects from light and air. (2) Ten clean but infected houses, two samples of dust being taken from each, and each sample was used to inoculate one guinea-pig. It was found that in 50 per cent. of even the cleanest houses infectious dust could be found when the phthisical occupant used his handkerchief or the floor as a receptacle for sputum. Five specimens of dust were collected from the walls, at various elevations, of the waiting-room of the out-patient department of the hospital for consumption at Manchester. This waiting-room is a lofty, well-lighted, and well-ventilated hall, and used by 180 patients every morning; the result of the experiments was negative. Five samples of dust were examined from the waiting-room of one of the large general hospitals; the results were negative. Two samples, however, taken from the general waiting room at a railway station both produced tuberculosis. The subject of the disinfection of tubercle-infected houses was next considered. In the reader's opinion, the process recommended by Professor Delépine was the best—the use of a solution of chlorinated lime of the strength of 1½ oz. to the gallon. The walls, ceiling, and floor were washed over with this solution several times, and any articles of furniture admitting of such treatment. Articles of clothing and bedding, etc., were disinfected by the steam disinfector. In houses which were in a clean condition, and where there had been no direct soiling of the walls or floor with sputum, the chlorinated lime method was not considered necessary, and the method recommended by Esmarch was practised. The wall paper was rubbed with bread or dough; floors, painted walls, and woodwork washed with soap and water, and ceilings lime-washed. This method, however, was useless in cases where the paper was directly soiled with sputum; for, owing to the mucin which it contained, it stuck tenaciously to the paper, in spite of repeated rubbings with dough. He had, indeed, obtained abundance of tubercle bacilli from wallpaper which had been soiled with sputum and cleaned with dough.

Professor von SCHRÖTTER (Vienna) said it was most necessary to get rid of all the sputum of tuberculous patients. It ought to be burnt. At Vienna his patients used a special spittoon. Such receptacles should be cheap. The cost of the one he showed was about a shilling. His patients while in bed used spittoons of *papier-mâché*.

Dr. ROBERTSON (Sheffield) as his communication to the discussion read a paper on "By what means can a higher standard of Lighting and Cleanliness be attained in Households, Factories, etc., and what legislation, if any, is required to render these advantages available?" There was reason to suppose that no portion of the human race was immune to tubercle. In about 35 per cent. of the cases a history of phthisis could be found in the family. The number, therefore, of persons requiring to be safeguarded was very

large. In his opinion, to strengthen the power of resistance of the patient was the best means of crusade against tubercle, and would give better results than the endeavour alone to destroy all sputum. The following questions were suggested: (1) What part does environment play? (2) Can proper environment ward off or arrest the disease? There was no doubt more might be done than had hitherto been thought possible. In this country there had been a reduction of mortality from tubercle of 50 per cent. in the last fifty years. He deprecated the use of coloured glass in the windows of houses where light was already deficient. No attention was given to the cleaning of windows in factories. A standard of light in workshops and factories out to be insisted on by the Legislature. The knowledge that delicate consumptives could be successfully treated in the open air had educated the public to have less fear of opening their windows, so that there was better ventilation generally. The legal standard of air space was the same under all circumstances. This was not reasonable. For if 250 cubic feet per head were sufficient in the case of some occupations, it was not enough in others. The local authorities had power to see that the walls and ceilings in factories were limewashed, but the floors were too frequently left uncleaned for months at a time. The thorough cleaning of floors ought to be enforced.

Sir HERBERT MAXWELL said that listening to some of the papers just read, he had been struck by the evils arising from deficient sunlight and ventilation; it reminded him of the Italian proverb that "where the sun does not come the doctor does."

Dr. RUFENACHT WALTERS said that he knew of a cheaper spittoon than that suggested by Professor Schrötter. He was in the habit of recommending a galvanised iron mug; a piece of butter-paper was placed in this, and later a little sawdust was added to assist the burning of the contents. Many shops were being built in London with plate-glass windows that could not be opened; this was surely wrong. It was probable that the smoke of the metropolis had an important bearing on this.

Dr. ANTONIO ESPINA Y CAPO (Madrid) read a paper in which he maintained that the best spittoons to employ were those composed of "hygienic paper," the paper to be burnt immediately after expectoration. By training all people to use a spittoon it was possible in some degree to limit the infection from sputa; but the difficulties connected with obtaining spittoons and their subsequent sterilisation were great. He referred to two kinds of spittoons—(1) pocket spittoons, (2) those to be placed wherever persons congregated. For the first he advocated the use of hygienic paper instead of the traditional handkerchief which was carried in the pocket. The destruction of the paper was so easy that a match alone was required to incinerate it. Spittoons for two or more persons should be constructed of a substance easily destroyed by fire, and of a material sufficiently cheap to admit of their being replaced daily.

Mr. GARLAND (General Post Office, London) alluded to the question of sanitary measures where there was a large aggregation of employees, as in a public department such as the Post Office. These mostly consisted of selected lives and their number exceeded 160,000. He regretted to say that some of the most obvious sanitary precautions were not adopted, no spittoons were to be seen at the post offices; the dust was not properly removed, and they certainly required more frequent disinfection. In the French Post Office good regulations had been issued recently for cleansing the floors, walls, etc., and providing spittoons. A notice had been attached to all the post offices pointing out the risks of tuberculosis, and giving instructions as to the proper sanitary conduct of their officers.

Dr. VOLCKMAN (Norway) said that a combustible spitting-pot fitting into a metal receptacle was adopted in the hospitals in Norway.

Professor RUATA (Perugia) referred to the housing of the people and the means taken for the destruction of the bacilli. Would all these measures be necessary if ventilation was perfect? The mucous membrane of the bronchial tract was furnished with epithelium which protected from chance bacilli, and healthy people even in hospitals rarely took the bacilli into their system. It must be very difficult to destroy all bacilli, but much more attention might be given to ventilation, as bad air tended to make the natural protective agency inefficent. He described the wretched housing of his countrymen in rural districts, but said that the incidence of tubercle in them was far less than in the better houses situated in towns, owing to the much freer ventilation and their life in the open air.

Dr. ARTHUR RANSOME, F.R.S., insisted on the necessity of passing a resolution. He proposed the following:

That the Council of the National Association for the Prevention of Tuberculosis be requested to urge upon the employers of labour and upon the owners of factories, the necessity of free ventilation in their workshops and factories.

The resolution was seconded.

A DELEGATE objected to this resolution because it made no reference to ventilation of houses, which had also been under discussion during the morning.

Sir HENRY LITTLEJOHN thought the resolution useless, as the employers of labour and factory owners would pay no attention to it, and he suggested the municipalities should be included with them.

Another DELEGATE thought the meeting should make some suggestion as to the way in which this ventilation might be brought about.

After some discussion, the resolution was carried.

Dr. SYKES (St. Pancras) said that, as an executive officer, he wished to carry out the opinion of experts, but he had not the power. The meeting was a meeting of experts, and ought to speak out definitely. Often Acts of Parliament ordered regulations "as far as adequate," or "sufficient;" the "adequacy" or "sufficiency" was according to the opinion of the magistrate, who often knew little or nothing of the matter. Open-air treatment was necessary for the prevention as well as for the cure of tubercle, but no definition of overcrowding existed in the English law, except in by-laws registered under municipal regulations. Here a minimum of space was laid down, but this had to be applied, whatever the condition of the occupiers of the room. There ought to be a clear definition as to what space was necessary to prevent the number occupying the room being a "nuisance." There was no definition of window space except in cellar dwellings. He begged to propose the following resolutions:

That in the opinion of this Section the following conditions of dwelling rooms should be dealt with as nuisances:

1. Any dwelling room used for sleeping so overcrowded as to be injurious or dangerous to the health of the inmates, whether or not members of the same family. That is to say, in which each inmate over 10 years of age is provided with less than 400 cubic feet of air space, and each inmate under 10 years of age with less than half this amount.

2. Any dwelling room not having one or more windows opening directly into the external air, with a total area clear of the sash panes, equal to at least one-tenth of the floor area of the room, and so constructed that one-half at least of each window of the room can be opened, and the opening in each case extend to the top of the window.

Mr. HALL, F.R.I.B.A., said he thought the resolutions would tend to cause too great disturbance in existing relations, as a large number of rooms now in use would not answer to them; and with regard to new buildings, he thought that the limit fixed was too low, and would tend to have a retrograde effect.

Sir HENRY LITTLEJOHN (Edinburgh) proposed the following resolution:

That this Section is of opinion that the light and ventilation of workshops and factories is insufficient, and that the Home Office be requested to appoint a Committee to inquire into the existing conditions with a view to fixing standards. That legislation is also required with the object of securing the periodic cleansing by disinfection of factories and workshops, and also that the Local Government Board take similar action in regard to dwelling houses.

Dr. ROBERTSON seconded.

Dr. CHALMERS (Glasgow) said that Dr. Sykes fixed two standards; he had given a cubic space standard, and that was sufficient, as it would fix the height of the ceiling.

Dr. HIME (Bradford) objected that Dr. Sykes's motion was really before the meeting, and that Sir Henry Littlejohn was out of order. He disagreed with both. In his experience the magistrates did not ask for the measurements of the room, but as to whether it was fit for human habitation. The

carrying out of Dr. Sykes's resolutions would be impracticable; there would be nowhere to put those displaced.

Dr. NIVEN (Manchester) said there were two distinct resolutions before the meeting, and they could not be considered together. In factories the conditions were different to those in houses. Dr. Sykes's resolutions would increase the present complications. Cleansing was more important than overcrowding with regard to tubercle.

Dr. SYDNEY MARSDEN (Birkenhead) said that Dr. Sykes had put before them some of the great difficulties of the medical officer of health. He had pointed out the necessity of fixing some standard; what that standard should be was for the Legislature to decide. The difficulty of dealing with existing houses was the reason why a standard ought to be fixed. He had always found appeals to magistrates very inefficacious. Tenement houses of the most insanitary character, which it was impossible to deal with, were being built. He thought that Dr. Sykes's resolutions were very clear and ought to be supported.

Dr. CALDWELL SMITH described certain procedures employed in Glasgow to prevent overcrowding.

The resolutions of Dr. Sykes were then put, and were declared by the CHAIRMAN to be lost.

Sir Henry Littlejohn's resolution was then proposed.

Dr. HIME said that in Yorkshire the lighting of factories was very good, and left nothing to be desired, so that there was no necessity for the resolution. Factories were often open to all the winds of heaven . there was surely no need for ventilation there.

A DELEGATE from Leeds, a factory proprietor, also protested against the resolution; and said that his factory, where he employed 1,700 workmen, was thoroughly cleansed, and possessed all sanitary requirements. He very much deprecated some of the remarks that had been made by Sir Henry Littlejohn with regard to factory owners generally.

The resolution was then put by the CHAIRMAN, and declared to be lost.

### CONTROL OF MEAT SUPPLIES.

Mr. SHIRLEY F. MURPHY (London) communicated a paper entitled What Administrative Measures are necessary for the Prevention of the Sale to the Public of Tuberculous Meat? He said that he had been asked to open a discussion on this subject, and it was obvious that no new material could be submitted to the meeting. He gave a review of the procedures adopted in this country for restraining the sale of diseased meat, of the prevalence of tubercle in cattle, and of the difficulty of inspecting all meat brought into the market, as at the present time there was no need for the owner of an animal presenting signs of disease to have it slaughtered under conditions that would ensure its inspection.

Councillor O'NEILL, M.D. (Belfast), referred to meat inspection at Belfast. For eight years he had had to fight the butchers, but by studying the means employed on the Continent, and from the teaching of Mr. Shirley Murphy, he had gained good hints as to what ought to be done to carry out proper meat inspection. In this he had been backed up by his profession. He did not agree with Dr. Koch as to bovine tuberculosis. He was strongly of opinion that tuberculous meat was not fit for human consumption. There was an abattoir in Belfast where every animal was examined before being slaughtered, and at the market the meat was always examined when killed outside the borough. All meat killed outside the city must be brought for inspection before being exposed for sale, and was stamped by the inspector on the request of the owner.

Dr. COGGAN asked whether Dr. O'Neill had ever seen tuberlous meat give rise to human tuberculosis.

Dr. O'NEILL could not give any particular case where this result could be proved, but he was firmly convinced that tubercle might be acquired in that way.

Sir CHARLES CAMERON (Dublin) said he had great pleasure in supporting the resolution to be proposed by Mr. Shirley Murphy:

> That in the opinion of this Section the meat of all animals intended for human food should be inspected before being sold for that purpose; and that in all urban districts and in all rural districts, as far as possible, such animals should be slaughtered in public slaughterhouses, so as to ensure efficient inspection.

He thought at present there was not sufficient inspection in many towns, especially where there were no abattoirs. In Dublin there was a public abattoir, but there were also forty private slaughterhouses, so that uniform and sufficient inspection was difficult. He had known of a case where in the carcass of an animal which had suffered from pleuro-pneumonia the lungs of a healthy animal were substituted for the diseased organs, and the fraud was only detected by the temperature of the lungs being below that of the carcass. In public abattoirs this could not take place; the carcasses of animals had been known to be brought into Dublin in a hearse to disguise the fact from the authorities. He thought a skilled veterinary surgeon was of great service to a sanitary department in attending to this work. There ought to be a systematic examination of all animals, and private slaughterhouses ought to be got rid of by giving equitable compensation to the owners.

Dr. HIME said he had a very great respect for Dr. Koch, who laid the foundation of our knowledge of tubercle, and thought, therefore, that Dr. Koch's opinion deserved respect. On the Continent every government had passed decrees that animals suffering from local tuberculosis alone might be slaughtered for food. In this country the same provisions, after the matter had been considered by a Royal Commission, had been generally adopted. Tubercle was originally only a local affection, and only in cases of general tuberculosis would harm be likely to arise from the use of unaffected parts of the animal.

Dr. MARSDEN (Birkenhead) said that medical officers of health were meeting under a cloud with regard to tuberculous meat. It seemed that Dr. Koch had thrown a bomb in their midst which, whether right or wrong, was likely to impair their influence with sanitary authorities. He did not think that procedure ought to be changed. He knew no medical officer of health who ordered the destruction of an animal on account of a trace of tubercle. Public abattoirs were urgently required, and there was no question as to their being necessary, both in urban and rural districts, but then came the question of compensation. A difficulty often arose in inspecting carcasses when the offal and and other contents had been removed. He did not believe that the difference between general and localised tubercle was of much use for distinguishing between good and bad meat. He had known the case to be called localised tubercle when every gland in the carcass had been found diseased.

Dr. PORTER (Shropshire) pointed out the necessity of following out rules in examining meat, or else magistrates would refuse to convict. He protested against the difficulties medical officers of health had put upon them by the uncertainty of some of the clauses of the Public Health Act. No claim for compensation should be allowed against officers unless they should have been proved to have acted with culpable ignorance and neglect.

The CHAIRMAN then said that it was necessary to adjourn the meeting, but it might interest those present to know that he had just received a communication stating that Dr. Koch admitted that his new tuberculin had the same reaction with human as with bovine tubercle.

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## SECTION II.

## MEDICAL (INCLUDING CLIMATOLOGY AND SANATORIA).

*President*,—Sir RICHARD DOUGLAS POWELL, Bart, M.D.

*Tuesday, July 23rd.*

### DISCUSSION ON CLIMATOLOGY.—WHAT INFLUENCE HAS CLIMATE ON THE TREATMENT OF CONSUMPTION, AND HOW FAR CAN CASES BE GROUPED FOR TREATMENT IN CERTAIN CLIMATES?

A discussion on this subject was opened by Dr. THEODORE WILLIAMS and Dr. BURNEY YEO, whose papers are printed in full elsewhere in this issue of the BRITISH MEDICAL JOURNAL.

Professor LANNELONGUE (Paris) then contributed a paper to the discussion prepared in conjunction with Dr. ACHARD and Dr. GAILLARD on the Comparative Influence of Climate

and Individual Resistance in Experimental Tuberculosis. Experiments as to the influence of climate on the evolution of tuberculosis inoculated in the pleura of guinea-pigs showed that this influence was inconsiderable, and had not the importance clinically attributed to it. It was found in animals, as in man, that different individuals of the same species showed marked differences in the progress of the disease and in the nature of the lesions. Although the guinea-pig was a susceptible animal some of these animals offered a remarkable resistance. Some increased in weight, or even became fat, although suffering from generalised tuberculosis. In one guinea-pig—and in one only—a true Pott's disease was produced; there was tuberculous destruction of the third and fourth cervical vertebræ. The conclusions arrived at from these experiments might be thus summed up. In man, as in animals, it was the constitutional peculiarity of the individual—call it what you would—it was the "soil" which determined the progress of the lesion, and whether the disease should remain localised or become general, not the climate in which the patient found himself. Further, it was shown that animals kept under careful conditions of temperature, of freedom from dust in the air, and of rest—such conditions as were observed in sanatoria—had their chances of life prolonged.

Sir HERMANN WEBER (London) said that the previous speakers seemed to hold that though climate was valuable, open air was more important, and this view was to some extent borne out by his experience many years ago. When bakers or clockmakers, for example, came to hospital suffering from the results of their occupation or indoor life he used to advise them to give up making bread or clocks, and to go about selling these things instead. This haphazard open-air treatment gave excellent results, although it did not include the rest which was so important a factor in sanatorium treatment. His experience did not lead him to take quite as favourable a view of marine climates as Dr. Williams. The high winds which occured on the sea coast were unfavourable, as could be seen on studying a map of the distribution of consumption. It was not the south-west wind in particular which is disadvantageous, as was said in a recent paper before the Royal Medical and Chirurgical Society, but any strong wind. The climate of the Riviera and of Egypt had not always proved satisfactory, but this was probably due to the fact that patients did not put themselves under medical supervision, and did foolish things—such as over-exerting themselves—which undid the good effects of climate. Whatever climate was chosen the need of supervision was of the utmost importance, and in estimating the value of any climate it would be well to compare the results attained in that climate before and after sanatorium treatment was available. Although he had a very high opinion of climate he had a still higher opinion of hygienic and dietetic management, and great as were the disadvantages of our English climate we could cure our patients here if they would submit to the hygienic management which formed so important a part of sanatorium treatment.

Dr. DENISON (Colorado) said that all the advantages of climate were increased by high altitude, but, on the other hand, the necessity for a greater quantity of the rarified air to supply the required amount of oxygen made it important to give greater air-space and more free ventilation within doors. There was nothing in the altitude climate to guarantee freedom from tuberculous infection, and yet in Colorado there was a mortality from consumption of only 2 per cent. as against 15 or 20 per cent. in the Eastern States. Deficient ventilation was the keynote of the cause of tuberculosis, as outdoor life was the keynote of its cure.

Sir JOHN WM. MOORE (Dublin) said that in his experience climate played a very secondary part in the treatment and prevention of consumption. In proof of this, he instanced a family who, under the unfavourable conditions of poverty, had gradually overcome the effects of tuberculous infection, and had recovered from tuberculosis without leaving Dublin. This had been accomplished not by change of air, but by teaching them how to live and manage themselves hygienically. In striving to prevent tuberculosis we must take into consideration the ignorance of the people, as instanced by the shut bedroom windows. The disadvantages of marine climates and of strong winds might be attributed to a common cause, namely, humidity of the air. Many persons suffered marked depression whenever the air became nearly saturated with moisture, and this was the case at and by the sea and with south-west winds.

Dr. HUGGARD (Davos) thought that it was necessary to consider the physiological and therapeutical effects of climate in relation to the response of the patient. The main physiological factor in any climate was the demand made on an individual for great or for small heat production. He recommended medical men at health resorts to demand that every room which had been occupied by a consumptive should be disinfected.

Dr. BLITZ was of opinion that any climate would do so long as the patient's physiological life was regulated to his powers. This Dr. Blitz would gauge by observation on the fermentative processes going on within the body.

Professor GRAM (Denmark) said that in Denmark the mortality from pulmonary tuberculosis was greater inland than on the coast. They, therefore, built all their sanatoria at the seaside.

Dr. SANDWITH (Cairo) said that though Egypt was low-lying, a visitor to the desert would be struck with the similarity of the air to that one got on a mountain. Europeans living in Egypt did not develop tuberculosis, though the natives did. This showed the influence of hygiene rather than of climate, for the European lived much in the open air, whilst the native lived in foul air whilst indoors, and with unhygienic surroundings.

Dr. AMREIN (Arosa) gave statistics and observations on the improvement in the composition of the blood of patients undergoing treatment at Arosa, which showed the advantages of that climatic health resort.

A paper by the late Dr. RUEDI (Arosa), specially prepared for this Congress, was read by the HON. SECRETARY of the Section. The diagrams of the chests of patients showed the unsound side was always best developed in the early stages of pulmonary tuberculosis. The diminished atmospheric pressure of high altitudes tended to bring about the symmetrical improvement in the shape and capacity of the chest.

Mr. QUARRIER (Glasgow), founder of the Scottish Orphan Homes, gave the experience of sending the children of consumptive parents from Glasgow to a farmhouse in Renfrewshire, and expressed the opinion that locality and climate had not so much to do with the cure of consumption as the practical management of the patient when he was taken in hand. The climate of Scotland was not usually considered good, yet even in this unsatisfactory climate as good results could be obtained as elsewhere, as was shown by the records of the sanatorium connected with the Scottish Orphan Homes.

Dr. HOBHOUSE gave his experience after visiting many climates; he considered that the suitability of a climate was to be decided less upon the condition of the disease than by the constitution and peculiarities of the patient himself.

Dr. CROSBY WALSH spoke on the climatic advantages of Tasmania, the sanatorium of Australia.

Dr. EXCHAQUET (Leysin) spoke of the contraindications for altitude climates.

Dr. THEODORE WILLIAMS, in reply, regretted that the discussion did not keep sufficiently close to the question of climate, but wandered rather into the subject of sanatoria. The discussion had, however, been very instructive, and had brought out many points of value.

*Wednesday, July 24th.*

## COMBINED MEETING OF SECTIONS II AND III.

Sir RICHARD DOUGLAS POWELL, Bart., M.D., in the Chair.

### A DISCUSSION ON THE THERAPEUTIC AND DIAGNOSTIC VALUE OF TUBERCULIN IN HUMAN TUBERCULOSIS.

DR. HERON, in opening the discussion on this subject, said that when in the autumn of 1890 thousands of medical practitioners and men of science flocked to Berlin, it was not so much because a new method of treating tuberculosis had been announced as because this new treatment resulted from the work of a man in the first rank of the profession, who shared with Lister and Pasteur the honour of having done most for the advancement of scientific medicine. In a few months the new remedy was to some extent discredited by Virchow's expression of opinion that tuberculin caused de-

struction of the tissues around the tuberculous centres, and set free bacilli to do their work on healthy tissues; and so tuberculin was both made and unmade in Germany. Dr. Heron, in his experience of some 2,000 injections, had found no evidence in support of Virchow's statement. Koch had distinctly laid down the limitations of the curative possibilities of tuberculin in lung tuberculosis, confining it to the comparatively early stages of the disease. The remedy had fallen into discredit owing to (1) its frequent use in unsuitable cases; (2) its administration in too large doses; (3) neglect of the rule that a dose should never be given until the patient's temperature has been normal for the previous twenty-four hours at least; (4) neglect of the rule that the dose of tuberculin should never be increased, but on the contrary should be diminished, when its administration has been followed by a rise of temperature; (5) the prejudice raised against the remedy among both medical men and patients, because of the severity of the symptoms which not seldom followed upon its use. Dr. Heron then gave particulars of 57 cases treated by him since 1890. Of 51 lung cases 17 had been lost sight of at the end of 1900, and 16 of the remaining 34 were known to be well and earning their living. The cases of lupus did well up to a certain point, and then relapsed even whilst the injections were being continued. The explanation was not apparent. The only case of lupus treated with the new tuberculin had, however, got well without relapse. This case was shown at the Clinical Society on February 25th, 1898. It was now recognised that tuberculin was worse than useless in cases of tuberculosis with mixed infection. For diagnostic purposes tuberculin was most valuable, for it produced its characteristic reaction whenever tuberculosis was present, and by no other means could tuberculosis be diagnosed in man so early. This could be done without danger to the patient. The only chance of cure of the consumptive was to to treat him in the earliest days of the disease, and tuberculin made this possible by showing the presence of tuberculosis at its commencement. Dr. Heron described at some length a case in which a girl of 17 died twenty-seven hours after the injection of tuberculin for diagnostic purposes, and gave reasons against supposing that tuberculin was the cause of death. He concluded by expressing the belief that the day was not far distant when the discovery of tuberculin would be ranked among the most valued of the many gifts mankind already owed to Robert Koch.

Professor KOCH (Berlin) said that he had shown in 1890 that tuberculin had both a diagnostic and a therapeutic value. In his experience a single injection was sufficient to give a correct diagnosis in 97 to 98 per cent. of cattle. If the diagnostic injections were properly made, in the human subject it was a very valuable method and without danger. The injections should be small enough; in weak patients one-tenth of a milligram was enough to begin with, and no second injection should be given until the temperature was again normal. When the first injection gave a faint reaction a second injection of the same quantity frequently or indeed generally gave a very marked reaction. This was the usual occurrence in tuberculosis. Over 3,000 cases had come under his own observation, and from the study of these he had come to the conclusion that as a diagnostic test tuberculin was almost absolute. It was especially valuable in cases of apical pneumonia, particularly when influenza was suspected, and also in cases of pleurisy. He had never seen disadvantageous effects from the use of tuberculin when used as he had directed. In using tuberculin as a therapeutic agent, he felt no doubt that in early uncomplicated cases it was of great value, and when used in such cases a complete cure frequently followed. If the tuberculin was used in cases of tuberculosis which were somewhat advanced, it was necessary, in order to obtain the full value of the tuberculin, that the temperature should be normal before the injections were begun. The treatment, if necessary, should be extended over a considerable period, with intervals of from three to four months, until the injections gave no reaction.

Sir RICHARD DOUGLAS POWELL said that the great difficulty which physicians experienced was that most of the cases of tuberculosis which they saw had raised temperatures, and in the cases of mixed infection even Professor Koch did not think the use of tuberculin was advantageous.

Professor OSLER said that in the Johns Hopkins Hospital, Baltimore, tuberculin had been used for a considerable time as a routine method of diagnosis. The tuberculin was, in his experience, harmless. As a therapeutic agent, although his experience was not large, he thought it must have a very limited value.

Professor FRAENKEL (Berlin) pointed out that the great danger attending the use of tuberculin was that the doses were increased too much and at too short intervals, but when these errors were avoided the results in his experience had been most beneficial.

Dr. DENYS (Louvain) gave an account of the experiments which he had made with dogs and tuberculin. He found that the injection of tuberculin subsequent to that of tubercle bacilli exercised a considerable delaying influence upon the action of the bacilli, whereas without tuberculin the animals died with disseminated tuberculosis; after tuberculin was used well-marked tubercles were formed and the dogs remained alive for very considerable periods or recovered.

Dr. DENISON (Denver) gave his experiences with tuberculin in Denver.

Dr. C. THEODORE WILLIAMS disagreed entirely with those who said that tuberculin was harmless. At the Brompton Hospital he had used tuberculin in cases of early phthisis, and was satisfied, first, that the use of tuberculin caused a certain amount of destruction of lung tissue, and secondly that even if at the best tuberculin only caused a remission of the symptoms and did not cure the patient.

Professor MCCALL ANDERSON (Glasgow) thought that tuberculin was safe. As a diagnostic test it was invaluable, and as a therapeutic agent in external tuberculosis it had been almost invariably beneficial; while in internal tuberculosis relapses which undoubtedly did occur were probably due to other causes than the tuberculin.

After Dr. SNOW (Bournemouth) had given his experiences with tuberculin in Bournemouth,

Dr. BOUSFIELD (London) asked Professor Koch if he would tell the meeting whether the tuberculin which was used for the diagnosis of tuberculosis both in man and animals was of human or bovine origin.

Dr. STONE (Boston) recorded the effect of injection of tuberculin upon himself, which had not been too satisfactory.

Dr. FRANCE (Claybury) gave an account of his experiences with the patients in an insane asylum. He inoculated 75 cases, of which 20 were clinically free from tuberculosis. These 20 gave no reaction. Of the 55 suspected cases, 45 reacted; of these 45, 34 had since died, and upon 29 *post-mortem* examinations had been made; each of the 29 cases showed active tuberculosis. Of the 11 who were still alive, 6 had very obvious tuberculosis. From these figures he concluded that the value of tuberculin in diagnosis was enormous.

Dr. VIVANT (Monte Carlo) asked Professor Koch if the tuberculin which was probably made from either human or bovine tubercle bacilli was efficacious for both man and animals, and Dr. SQUIRE asked a similar question.

Dr. MOELLER (Brussels) said he had seen no ill effects from the injection of appropriate doses of tuberculin, but had found that some patients never seemed able to stand a quantity of tuberculin more than about 1 mg. even after repeated injections.

Dr. OTIS (Boston) asked Professor Koch why syphilitic patients sometimes reacted to tuberculin, and whether any figures as to the percentage of the reaction were available.

Dr. HUGGARD (Davos) had seen cases of tuberculosis which, after the injection of tuberculin, had gone downhill with great rapidity.

Professor NOLEN (Leyden) pointed out that tuberculous patients nearly always experienced a rise of temperature if they were out of bed or at work, and did not believe that a rise of temperature was a necessary sign of mixed infection.

Dr. HERON, in reply, said that one outcome of the present discussion was the fact that in the earlier treatment with tuberculin too large doses had been given, and that the best effects were undoubtedly obtained by the use of small doses. He himself had never seen a reaction to tuberculin in a syphilitic patient not suffering from tuberculosis.

Professor KOCH, replying, said that the tuberculin was made

from tubercle bacilli of human origin, but that the reaction was produced both in man and in cattle, and, although the two bacilli were different, they possessed a common "group" reaction. It was essential that patients who were to be treated with tuberculin should be in bed. Finally, he did not wish anybody to get the idea that he himself thought there could be any antagonism between treatment by tuberculin and the outdoor treatment in or out of sanatoria. He had always insisted that the two should go on together.

Nature and Diagnosis of Predisposition to Tuberculosis.

Dr. Robin (Paris) then read a paper on this subject. As the respiratory exchanges were increased in 92 per cent. of the subjects of tuberculosis and in 63 per cent. of those with a tuberculous heredity it was possible to diagnose the tuberculous tendency, and by appropriate means to use the knowledge in a prophylactic manner.

Serum Diagnosis of Surgical Tuberculosis.

Drs. Arloing and Courmont (Lyons) communicated this paper. By the use of homogeneous liquid cultures they had succeeded in diagnosing by serum reaction in 74 per cent of cases of tuberculosis.

Dr. Horton Smith (London) said that in his experience only 10 per cent. of the cases were diagnosable by the serum reaction.

Dr. Lydia Rabinowitsch (Berlin) had examined two series of cases, the first consisting of human and the second of bovine patients. The results of her experiments showed that in only about 12 per cent. did the serum reaction agree with the *post-mortem* diagnosis, and that therefore at the present moment the serum reaction was of little value in the diagnosis of tuberculosis.

## SECTION III.—PATHOLOGY (INCLUDING BACTERIOLOGY).

*President*,—Professor G. SIMS WOODHEAD, M.D., F.R.S.E.

*Tuesday, July 23rd.*

The Morphological and Physiological Variations of the Bacillus Tuberculosis, and its Relations to other Bacteria resistent to Acids and to the Streptothrices.

Dr. Alfred Moeller (Belzig, near Berlin), in opening this discussion, said that quite recently it had been shown that all bacilli which were acid-fast were not necessarily tubercle bacilli. The smegma bacillus had the acid-fastness, and might be mistaken for the tubercle bacillus in such excretions as urine. The bacillus of avian tuberculosis differed, according to Fischel, from the tubercle bacillus practically only as regards its pathogenicity. Tuberculosis in cold-blooded animals was probably a modification of mammalian tuberculosis. Bataillon, Terre, and Lubarsch modified mammalian tuberculosis by passage through frogs. The author succeeded in modifying the tubercle bacilli by passage through the slow-worm. After this the bacilli only grew up to 30° C., and even after passage through warm-blooded animals. Recently a series of micro-organisms closely resembling the tubercle bacillus had been found in the outer surroundings of man. As well as "Petri Rabinowitsch butter bacillus" there was the Timothy bacillus (B. phlei) which had been isolated by him from Timothy grass. This bacillus had all the acid-fastness of the tubercle bacillus, it grew better at 37° C. than at 20° C., but in all cases grew better than the tubercle bacillus. The injection of cultures of the Timothy bacillus into the guinea-pig was followed by results similar to those produced by the butter bacillus; but in rabbits when injected intravenously set up lesions very similar to those set up by the true tubercle bacillus. The tubercle bacillus, like all the acid-fast bacteria, appeared to belong to the streptothriciæ.

Dr. Bulloch (London) had repeated the experiment of Aronson, and showed that the constituents of tubercle bacillus and of the B. phlei were fat, fatty acids, wax, lipochrome, proteids, salts, and a residue of a body which contained both a nitrogen nucleus and a polysaccharide, and partook of the nature of chitin. After the removal of the fat the bacilli retained their peculiar staining power, but after the extraction of the wax with boiling benzine or chloroform they were no longer acid-fast. Moreover, the wax itself was acid-fast, so that the acid-fastness was due to the wax. There was no doubt that there were many acid-fast bacilli in nature, some obligatory parasites, some facultative parasites, and others saprophytes, and the relation of these acid-fast bacteria to one another required careful investigation. There was no evidence that there were genuine endospores formed by the members of this group of bacteria.

Professor Adami (Montreal) was impressed with the great differences which were shown by the cultures which came from the different laboratories, and thought that no great progress could be made in determining the relationships of the different acid-fast bacteria until bacteriologists had determined to use standard media. The effects of the use of this standard medium were well exemplified in the cultures of Mr. Swithinbank exhibited in the museum, and he thought that the time had arrived for an international standardisation of media.

Professor McWeeney (Dublin) considered the work of Coppen Jones very valuable, and agreed with him in thinking that there was a very distinct relationship between the tubercle bacillus and the higher bacteria of the nature of streptothriciæ.

Dr. Marmorek (Pasteur Institute, Paris) was of the opinion that the close connection which had been shown to exist in the external aspect of the acid-fast bacteria made it very necessary to be careful in making distinctions between the the tubercle and paratubercle bacilli. One could say that of all these microbes only those were tuberculous which gave to laboratory animals the lesions known as tuberculous.

After Dr. Bousfield (London) had spoken,

Dr. Kossel (Berlin) pointed out that Weber had not succeeded in producing the "progressive lesions terminated by death," which were so characteristic of the true tubercle bacillus by the injection of other acid-fast bacilli.

The Infectiousness of the Milk of Tuberculous Cows, Bacteriological Diagnosis, and the Practical Value of Tuberculin for the Extermination of Tuberculosis among Cattle.

Dr. Lydia Rabinowitsch (Berlin), who opened the discussion, gave an account of her experiments with the milk of cows, both tuberculous and normal. She had failed to find tubercle bacilli in cows which had stood repeated tests with tuberculin, on the other hand she had frequently found tubercle bacilli in the milk of cattle which had sound udders. She had failed to find them, on occasion, in the milk of cattle suffering from tuberculous udders, although their presence was easily demonstrated in the tissues of the udders after death. The microscopic examination of the centrifugalised deposit of milk was unsatisfactory. The only reliable test was that of animal experiment, which was wearisome. The tuberculin test was therefore the only rapid and reliable method of diagnosis.

Dr. E. J. McWeeney said that in his experience tuberculous mastitis was rare. His experiments with sixteen cows which reacted to tuberculin showed that unless the udder was tuberculous no tubercle bacilli could be demonstrated in the milk and considered that in such cases the tubercle bacillus gained access from the sputum, dirty cans, etc.

Professor Nocard (Alfort) pointed out the danger of spreading tuberculosis in the butter and cheese-making countries on account of the custom of giving the residues and cheese to calves and pigs. He considered that it had been conclusively shown that there was also a great danger for young children. In England the mortality from general tuberculosis had declined 49 per cent. in ninety years, whilst it had increased in the case of abdominal tuberculosis by 27 per cent. It was very important, therefore, to take every precaution with the milk.

Professor Adami (Montreal) fully confirmed Dr. Rabinowitsch in her conclusions. It must be allowed that under certain circumstances tuberculosis could be conveyed to man through the milk of cattle, and even if this means of

infection produced tuberculosis in only a small proportion of children, this small proportion must be protected in every possible way.

Professor HAMILTON (Aberdeen) raised the question whether a calf would become tuberculous if suckled by a tuberculous cow with sound udders. According to Wilson of Aberdeen the calves were unaffected.

Dr. RAVENAL (Philadelphia) said that he inoculated guinea-pigs with the mixed milk from 5 cows which were tuberculous, but which had sound udders; 12.5 per cent. of these died of tuberculosis. In Pennsylvania the tuberculin test was implicitly relied upon, but periodical bacteriological examinations of milk were made, and also inspection by veterinary surgeons.

Professor WOODHEAD (Cambridge) agreed that feeding experiments were useless for diagnostic purposes, intraperitoneal injections being the only reliable method of diagnosis in the case of milk. He was of opinion that the milk of a cow with mastitis which gave the tuberculin test should be condemned or sterilised. He felt certain, also, that the tonsillar glands might be infected through ingestion of tuberculous milk, even though the mucous membrane of the alimentary canal resisted the bacilli.

Professor BANG (Copenhagen) said that in his experience it was rare to find tubercle bacilli in the milk when no tuberculous lesions of the udder were present. Out of 63 cows with advanced tuberculosis but with healthy udders, only 9 gave milk which produced tuberculous lesions in the guinea-pig, and only 1 which caused the death of the guinea-pig. He did not agree that the milk of a cow should be condemned because it had mastitis and gave the tuberculin reaction unless it was proved that the udder was tuberculous.

## SECTION IV.

## VETERINARY (TUBERCULOSIS IN ANIMALS.)

*President*,—Sir GEORGE BROWN, C.B.

*Tuesday, July 23rd.*

THE proceedings opened with a short address of welcome by the PRESIDENT.

DISCUSSION ON THE DIAGNOSIS OF TUBERCULOSIS IN ANIMALS.

Professor DEWAR, Principal of the Royal Veterinary College, Edinburgh, in opening the discussion, confined his remarks to the bovine species. The first appearance of the disease was not infrequently manifested by a rough harsh sound in the throat during respiration. The diagnosis might be confirmed by the presence of tuberculosis in the herd and clinched by the appearance of a lump in the neck, which became adherent to the skin over a single central area. In about 75 per cent. of cases the thoracic organs were early affected, and the question became that of diagnosing the disease within the chest. The points of distinction from chronic bronchitis, verminous bronchopneumonia, pulmonary hydatids, contagious pleuropneumonia, and the passage of foreign bodies forwards from the stomach were discussed. The prolongation of the vesicular murmur during expiration was pathognomonic of the disease, but this sign could only be depended on when the surroundings were absolutely quiet. With regard to other organs the udders were affected in about 3 per cent. of tuberculous cows: the swelling was as a rule diffuse, and the physical characters of the milk were little if at all changed. Bacteriological diagnosis was of most value when applied to the examination of milk, but might also be employed in the investigation of mucus from the nose or pharynx, and of fragments removed from the mamma or elsewhere by means of the pathological harpoon. Tuberculin was the most efficient, reliable, and practical means of diagnosing tuberculosis. For its full and successful use it was necessary (1) to have a thoroughly reliable tuberculin prepared by a competent pathological chemist and carefully tested before being sent out for general use; (2) to keep the herd to be tested quiet and undisturbed for ten or fifteen days prior to the application of the test; (3) to allow the veterinary surgeon perfect freedom and every facility in the application of the test. In the use of the test the temperature should be estimated in relation not to arbitrary standards, but to the average normal temperature of the animal itself: most animals showing, after the injection, a rise of more than 2° F., over this should be considered tuberculous. The temperature should be taken every two hours after the injection. If all these precautions were followed at least 98 per cent. of the results would be correct and definite.

Professor NOCARD regarded the tuberculin test as almost infallible. He gave details as to the diagnosis of tuberculous disease of the udder and uterus, and strongly advocated the use of the pathological harpoon.

Dr. MALM (Norway) had had the tuberculin test in constant use since 1891, and strongly advocated taking the temperature hourly, or at longest two-hourly, after the injection. He had seen many cases in which it reached its maximum from the second to the fourth hour after injection, and had become normal again by the twelfth hour. The test was absolutely decisive if used under stringent conditions. He employed Koch's 1890 tuberculin, of uniform strength, gave large doses, 0.5 to 1 gram, and took the temperature hourly for twenty hours. The fever which might be induced in non-tuberculous animals was not typical. If the beasts had become accustomed to tuberculin by repeated injections, stronger doses must be employed. All his results had been confirmed by necropsies.

Dr. SCHUTZ (Berlin) held that the microscopical diagnosis of tuberculosis was not nearly so easy in the lower animals as in man; caseation was specially ill-marked in the pig and sheep. In the mammæ of cows the appearances were much more those of chronic mastitis than of ordinary tubercle. Moreover, in the milk itself other bacilli might be found which were microscopically indistinguishable from those of tuberculosis which could only be certainly detected by inoculation into guinea-pigs. By experiments on artificially infected animals it was found that the susceptibility to tuberculin (that is, the ease with which the reaction was given) had a latent period, then rose suddenly and fell gradually.

Dr. BANG (Copenhagen) agreed with Professor Nocard as to the importance of clinical examination of the mammæ and uterus. He objected to Dr. Schutz's criticisms of the microscopical diagnosis, and stated that 99 per cent. of cows whose milk he had pronounced tuberculous after microscopical examination were found to have tuberculosis of the udder.

Professor MCFADYEAN held that bacteriology was more essential in diagnosis than Professor Dewar had made out, as the diagnosis had to be made earlier than in man. In 80 per cent. of these early cases the tuberculin test was alone conclusive; harpooning was not readily permitted in this country. He thought Dr. Malm's views as to the infallibility of the tuberculin test were a little in excess of the truth. Experiments both in England and France had shown that artificially tuberculous cows might show no reaction for as long as fifty days after infection. He considered the test at an early stage better than all the others together, but not infallible.

Dr. HUYTRA (Hungary) had found only 2 per cent. of failures with the tuberculin test. He regarded a rise to 40°C. as a positive indication of infection.

Professor OWEN WILLIAMS commented on the absence of reference in the paper to such sources of infection as the horse, cat, dog, and bird. He held that the failure of inflamed mamma to subsequently atrophy was strong presumptive evidence of the tuberculous nature of the disease. He had found the tuberculin test almost infallible.

Mr. PARKER (Paisley) stated that his practical experience favoured the whole symptomatic rather than the tuberculin test. His facts were contradicted by Mr. JONES (Liverpool).

Professor EDGAR held that our clinical powers of diagnosis had if anything deteriorated during the past twenty years. He strongly supported the tuberculin test when sources of error, for example, its application by unscientific people, were eliminated.

Professor ARLOING (Lyons), whose communication was read by the CHAIRMAN, had found that whereas a dilution of $\frac{1}{10}$ to $\frac{1}{15}$ would give the reaction of agglutination with the serum of tuberculous animals, it was only obtained in the non-tuberculous with a dilution of $\frac{1}{2}$ to $\frac{1}{4}$. The test was hence of great value, particularly where fraud had been used to vitiate the results given by tuberculin.

Professor McEACHRAN (Montreal) stated that the errors in the use of tuberculin in Canada and the United States amounted to less than 2 per cent. Udder infection was rarer, but uterine more common, than generally believed.

Mr. VILLAR confirmed the value of tuberculin in early cases, but adduced instances in which animals that had mastitis and reacted to injection were yet subsequently shown to be non-tuberculous.

Mr. LAITHWOOD (Cheshire) had found that 96 per cent. of the cases in which tuberculin gave a positive result were confirmed by slaughter, and that 80 per cent. of the infected animals showed a maximum temperature from the twelfth to the fourteenth hour after injection. He found that many cases recovered after six months' isolation and open-air treatment. He had come to the conclusion that manual examination of udders was insufficient to exclude tuberculosis from the milk supply.

Mr. LLOYD (Manchester) stated that about one-third of indurated or hypertrophied udders were tuberculous.

Professor DEWAR, in reply to Mr. FIELD, M.P., Mr. REED, Mr. PEARSON, and others, stated that it was impossible to make a certain diagnosis of tuberculosis in the case of all carcasses bought in the open market.

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*Wednesday, July 24th.*

TUBERCULOSIS AND THE MILK SUPPLY.

THE business of the Section was devoted to the discussion of Mr. Dollar's paper on Tuberculosis and the Milk Supply, but several speakers took occasion to refer more or less at length to Professor Koch's address of the previous day.

Mr. JOHN A. W. DOLLAR first discussed the relations between bovine and human tuberculosis. He considered that Professor Koch had brought his evidence forward at an inopportune time. Mr. Dollar, while admitting Professor Koch's logic, quoted what he regarded as almost experimental facts illustrating the transmission of tuberculosis from lower animals to man. He considered that for the transmission of bovine tuberculosis to man a certain concentration of the bacilli by the digestive tract was necessary, and gave this as one of the reasons for the rarity of primary tuberculosis of the bowel in children and in men. He proceeded to review the statistics of bovine tuberculosis in Europe, comparing the proportion of tuberculous cows as shown respectively by the slaughterhouse and tuberculin tests; his facts as regards tuberculosis of the udder were in general agreement with those of previous observers. He warned his hearers against the fallacy of believing that goats were insusceptible to tuberculosis, upon which view goat's milk was commonly given to children. Nocard had shown that tuberculous mastitis could be induced in goats by injecting tuberculous milk beneath the stripped udder. Tuberculosis was also found to attack asses and sheep. Mr. Dollar next discussed the methods of preventing the spread of tuberculosis by milk, comparing the advantages and drawbacks of pasteurisation and sterilisation, and giving examples of commercial establishments supplying pasteurised milk. He cited examples showing the possibility of eradicating tuberculosis from herds of milch cows, and the success which had attended commercial establishments supplying milk from guaranteed tubercle-free herds. He commended Professor Bang's system of stamping out tuberculosis, and quoted the experiments made on this system in Belgium, Canada, and the United States of America. He concluded by detailing the legislation in regard to milk traffic proposed by the German Milk Trade Union.

Sir GEORGE BROWN quoted as against Professor Koch's statements the experiments by which Dr. Crookshank had produced tuberculosis in a calf by injection of tuberculous sputum from man.

Mr. BOWEN JONES (Smithfield Club) referred to the numerous cases in which cows reacted to the tuberculin test shown subsequently to be non-tuberculous. He moved the following resolutions, which were seconded by Mr. LAITHWOOD, but which the Chairman declared that he was unable to put then to the meeting, but would pass them on to the final general meeting of the Congress.

That this Conference is of opinion—1. That general legislation on the subject of the inspection of dairies is urgently required whereby uniform regulations and uniform restrictions with regard to the sale of milk shall be enforced by the local authorities subject to the control of the Local Government Board or Board of Agriculture.

2. That the senior local authorities should comprise county councils as well as existing bodies which at present exhibit no uniformity of action.

3. That there should be periodical inspection of all dairies and cowsheds by local authorities within their respective districts.

4. That notification by the owner of all cases of tuberculosis of the udder shall be compulsory.

5. That upon a medical officer of health or other inspector of a local authority issuing a certificate of the existence of disease and such certificate being supported by the certificate of a veterinary inspector of the Board of Agriculture, or of a veterinary surgeon, milk from the affected animal or animals shall not be used as food.

6. That as soon as practicable after the issue of such certificates the medical officer of health or inspector of a local authority shall bring the case before a justice, who, on being satisfied of the existence of the disease, shall order the slaughter of the affected animal or animals and shall direct full compensation to be given to the owner, provided that the disease be of recent origin.

Professor McLAUCHLAN YOUNG thought that the expressions of opinion hitherto given had erred somewhat on the side of overcaution, and that the Congress should give an authoritative opinion on the points at issue. He stated that the authorities were much laxer in milk than in meat inspection. He pointed out that the tuberculin test was a good one, but abused by unscrupulous persons who fortified diseased animals against it by previous injections. He held that powers of examination of all cows by the test should be granted.

Mr. LAITHWOOD advised the following regulations for the prevention of tuberculosis dissemination by the milk supply: (1) The establishment of a State veterinary service, such as exists in Italy, whose officers should exercise functions comparable to those of medical officers of health, and should carry out the provisions of the Contagious Diseases (Animals) Act. (2) To include tuberculosis under that Act. (3) The employment of the tuberculin test, but only by qualified veterinary surgeons, and at the expense of the Government. (4) To render it unlawful to sell milk with any representation of purity unless the seller could produce a certificate from a qualified veterinary surgeon that the animals have passed, within six (or twelve) months, the tuberculin test. (5) The sterilisation of all imported milk at the port of landing, at the cost of the importer. (6) Compulsory notification of all diseased udders. (6) Uniform official veterinary inspection of all cowhouses and cattle producing milk for human consumption.

Mr. Laithwood referred to experiments by himself and Professor Delépine showing that tubercle bacilli might be found in the milk of a cow the udder of which was clinically healthy.

Dr. STOCKMAN stated that he did not believe that milk could be infected in the absence of tuberculosis of the udder. He held that there should be compulsory notification of udder tuberculosis and slaughter of the beasts. He considered that harpooning was not superior to bacteriological examination of the milk, and that inoculation experiments were impracticable. The presence of inflammatory cells in the milk should render a cow suspect.

Professor OWEN WILLIAMS strongly supported Mr. Bowen Jones's resolutions. He suggested that tuberculin should be sold as a poison in order to avoid its fraudulent use, and that funds for compensation of owners might be raised by means of a small duty on all sales.

Mr. MONTEFIORE LEVI stated that there had been great difficulty in Belgium owing to the use of imperfect tuberculin. He recommended the milk from good strains of hornless goats for use in sanatoria.

Mr. MARTIN recommended the bi-monthly inspection of cows, the isolation of all having udder disease, and the prevention of the sale of tuberculin to unqualified persons.

Professor AXE, representing the British Dairy Farmers' Association, stated that the conviction of the Association that bovine tuberculosis was transmissible to man was much weakened by Professor Koch's statement. He himself had found that the proportion of animals in a herd giving the tuberculin reaction varied directly as the amount of confinement within doors.

Professor BANG said that since 1898 all cows in Denmark with udder tuberculosis had been killed. Milk from all suspected cows was sent to his laboratory, and the diagnosis of tuberculosis there made was confirmed by necropsy in 99 per cent. He had found that in only 14 per cent. of tuberculous cows with clinically healthy udders did the milk cause tuberculosis when injected into guinea-pigs. Ostertag had

shown that the milk of cows which were tuberculous only to the tuberculin test was non-infective. Professor Bang agreed with Professor Axe as to the value of the outdoor treatment, but held that infection was all-important; a sound herd might always be kept within doors without becoming tuberculous.

Mr. East, on behalf of the dairy trade, welcomed Professor Koch's pronouncement, and stated that in his experience the healthiest people were those who kept cows and sold milk.

Professor McFadyean and Professor E. M. Crookshank spoke against Professor Koch's view, which the latter characterised as a hasty generalisation.

Mr. Crowhurst urged the importance of ensuring a pure water supply to milch cows.

Professor Dewar appealed for more stringent legislation as to the sale of cows with tuberculous udders.

Mr. Carter recorded the measures taken by the Keighley Corporation, including a quarterly inspection of and report upon all milch cows and the systematic use of the tuberculin test.

Dr. McWeeney was so satisfied with the tuberculin test that he regarded a necropsy as faulty which failed to reveal tuberculous lesions in an animal which had responded to it. He had, however, seen two cases which proved to be tuberculous after having failed to respond. He had found the milk of five cows which were clinically healthy but had given the tuberculin reaction non-infective when inoculated into guinea-pigs.

Mr. Dollar, in reply, said that in France peasants who had herded with their cattle had been found very liable to tuberculosis, and that in Queensland cattle tuberculosis was very rife, in spite of the herds being constantly in the open air. He thought the Section was in general agreement upon four points, namely:

1. The necessity for periodical inspection of herds.
2. The advisability of slaughtering cows with tuberculosis of the udder.
3. The advisability of compulsory legislation for the whole country.
4. The unwisdom of allowing Professor Koch's dictum to cause a relaxation in present efforts to keep the milk supply pure.

## THE MUSEUM.

The Museum is located in the small Queen's Hall, and consists of three sections. The largest of these deals with the bacteriology and morbid anatomy of tuberculosis. The second section deals with the statistics and public health aspects of the question as regards diagnosis, treatment, and prophylaxis; and the third section consists of an exhibit of drawings and plans for sanatoria and hospitals for the treatment of consumption.

The objects which have been aimed at in collecting and arranging the Museum and compiling the catalogue may be thus stated:

1. To bring before the Congress the concrete proofs of the scientific basis of the whole subject, and in this way to co-operate with the sections in their endeavours to arrive at useful conclusions and resolutions for the prevention of consumption.
2. To enable those so disposed to study by means of cultures, preparations, and statistical charts, the causation of the disease, the lesions which it produces, and the factors governing the rate of mortality.

To facilitate these objects a fully descriptive catalogue has been compiled by Dr. W. Jobson Horne, Honorary Secretary of the Museum. A copy has been presented to each member of the Congress. It contains nearly 200 octavo pages, besides plates illustrating some of the more remarkable preparations in the Museum, and numerous charts and diagrams dealing with the prevalence and mortality of the disease in London, England, and Wales.

The arrangement of the catalogue is systematic. It starts with the unit, the "tubercle bacillus" cultures of which have been prepared especially for the Museum by Professor Koch, and are subcultures from the original cultures of the memorable discovery of August 15th, 1881.

The Section of Bacteriology contained a complete collection of the acid-fast group, and of the streptothrices. Some of these have been supplied by Rabinowitch and Moeller, by whom they were isolated. The most complete collection was that exhibited by Mr. Harold Swithinbank. It contained cultures which had been submitted to liquid air, and were still active, demonstrating that although warmth assists the growth, extreme cold will not kill the organism. This formed part of a communication to the Royal Society. In the same collection were cultures of actinomycosis made from a culture which had undergone desiccation for a period of eight years. There was also an interesting exhibit dealing with the chemistry of the tubercle bacillus by Dr. Bulloch. The next exhibits related to experimental tuberculosis, and some fourteen preparations of organs of animals were shown by Professor Koch and Professor Schutz, giving the result of their research into the comparative effects of inoculating cattle and animals with bovine and human tubercle bacilli. (These specimens formed the basis of that portion of Professor Koch's address, published at page 189, in which he expressed the opinion that human tuberculosis differs from bovine, and cannot be transmitted to cattle.) Professor Sidney Martin lent his preparations illustrating the results of his experiments for the Royal Commission on Tuberculosis in 1895, forming a very interesting exhibit to be studied by the side of those of Professor Koch.

Of historical interest are some water-colour drawings beautifully executed, illustrating the communication of the late Dr. Wm. Marcet to the Royal Medical and Chirurgical Society, made on May 14th, 1867, upon the inoculation of animals as a means of diagnosis in tuberculous phthisis.

In addition to the bacteriology of the subject there was a most extensive collection of preparations lent by several of the museums of the hospitals in London illustrating the morbid anatomy of human tuberculosis. These have been systematically arranged into larger anatomical groups, and again subdivided in order to show the varieties of lesions, and the processes of destruction and repair which may take place in the several organs attacked by tuberculosis. There were also side by side specimens of normal organs and of the organs attacked with diseases simulating or allied to tuberculosis for the purposes of comparison. The morbid anatomy series may be considered as complete, and will doubtless be viewed with a feeling of national pride for the British instincts for morbid anatomy. Amongst them were many specimens of considerable historical interest and importance. Amongst those illustrating tuberculosis of the organs of locomotion was a specimen of spinal caries removed from a patient under the care of Percival Potts. Tuberculosis of the thoracic duct was represented by one of the 3 cases dissected out and described by Sir Astley Cooper in 1798. The suprarenal bodies of the first case in which bronzing of the skin was shown to be associated with disease of the organs were exhibited. Amongst other special exhibits were a series of large microscopic sections by Professor Sims Woodhead illustrating the pathological changes occurring in the human lung in tuberculosis.

Dr. Jobson Horne exhibited preparations to illustrate the commencement of tuberculosis of the larynx, and the way in which the disease may become arrested or quiescent. He also exhibited preparations to illustrate the formation of giant cells from endothelial cells.

Professor McFadyean lent an interesting collection from the Royal Veterinary College of specimens to illustrate tuberculosis in various animals, and side by side with these might be studied a series obtained for the most part from the gardens of the Zoological Society, lent by the Royal College of Surgeons, illustrating the comparative pathology of the subject.

In the section dealing with statistics Mr. Shirley Murphy showed the effects of overcrowding upon the increase and mortality of tuberculosis; and Sir Hugh Beevor dealt with the associations of phthisis in England. These charts and diagrams were reproduced in the catalogue. Notwithstanding the pressing work of the Census, Dr. Tatham, Superintendent of Statistics in the General Registry Office, sent a very graphic chart dealing with the mortality of phthisis for the last 40 years. Exhibits were also received from the medical officers of health from various parts of the United Kingdom.

The architectural section of the Museum, collected and arranged by Mr. Thomas W. Cutler, F.R.I.B.A., contained photographs and plans of a number of sanatoria and hospitals in various places, in Sweden, Bavaria, Austria, Switzerland, Holland, Portugal, France, Germany, Denmark, Belgium, England, and Scotland.

## ENTERTAINMENTS.

### RECEPTION AT THE QUEEN'S HALL.

On Monday evening the President of the Council and the executive officers of the Congress held a reception at the Queen's Hall, which was attended by some 2,000 members and ladies. Scientific interludes were provided at St. George's Hall in the shape of bacteriological demonstrations with lantern slides, by Professor Sims Woodhead, and a similarly illustrated lecture on tuberculosis in cattle by Professor McFadyean. Those who took their pleasure less sadly were admirably catered for by the string band of the Royal Engineers, while the attractions of the Congress museum and exhibition of architectural drawings were also displayed on the upper floors. The *soirée* afforded a pleasant relaxation after the somewhat formal labours of the afternoon.

### RECEPTION AT THE MANSION HOUSE.

On Tuesday evening the members and delegates were the guests of the Lord Mayor and Lady Mayoress at the Mansion House. The spacious rooms were crowded to their fullest capacity, and the foreign visitors were present in especially large numbers. Many persons of distinction in the City had been invited to meet the members of the Congress, Professor Koch's somewhat revolutionary paper being of course the chief topic of conversation. Herr Wurm's White Viennese Band contributed largely to the enjoyment of the guests.

### GARDEN PARTY.

The members of the British Congress on Tuberculosis were entertained to a garden party in the grounds of the Royal Botanic Gardens, Regent's Park, on Wednesday afternoon last by the ladies of the Reception Committee. The occasion was taken advantage of to secure a general photograph of the members of the Congress. The weather was not all that could be desired, but it fortunately did not rain. There was no lack of music; the Blue Hungarian Band were on the terrace overlooking the lawn; the band of the 2nd Life Guards also delivered a selection during the afternoon, and the Clifford Essex Pierrots played and sang to crowded audiences in the main building. Altogether the ladies of the Reception Committee can be congratulated on a very charming and well-arranged *fête*.

# REPORTS OF SOCIETIES.

## EDINBURGH OBSTETRICAL SOCIETY.

R. MILNE MURRAY, M.D., F.R.C.P.E., President, in the Chair.

*Wednesday, July 10th, 1901.*

### HONORARY FELLOWS.

THE following gentlemen were, on the recommendation of the Council, admitted Honorary Fellows of the Society: W. Sneguireff, M.D., Professor of Obstetrics and Gynæcology, University of Moscow; D. von Ott, M.D., Professor of Obstetrics, University of St. Petersburg; R. Chrobak, M.D., Professor of Obstetrics and Gynæcology, University of Vienna; H. Fritsch, M.D., Professor of Obstetrics and Gynæcology, University of Bonn; Paul Bar, M.D., Professor of Obstetrics, Paris.

### DISCUSSION ON THE MANAGEMENT OF THE THIRD STAGE OF LABOUR.

Professor A. R. SIMPSON, in opening the discussion, referred to the management of this stage among uncultured races, and as gathered from the Hippocratic writings. Division of the cord was not carried out till the placenta was expelled, and the weight of the child was caused to drag on the placenta. Cases were noted where the placenta was left *in utero* to be expelled seven or eight days later in a decomposed condition. Celsus gave instructions to pull gently with the left hand while the fingers of the right hand were passed up to the placenta to facilitate its removal. Later writers recommended gentle traction on the cord, and, where that failed, introduction of the hand to extract it. Where the orifice was closed, injections and fumigations, and an endless variety of medicines were advised. The treatment suggested in the first textbook on midwifery, *The Compleat Midwife*, by Rosslin, was referred to. On the whole, the trend was in the direction of an expectant treatment of the condition of retained placenta until the masters of obstetrics in the seventeenth century, noting the dangers of delay, began to practise and to advocate more active interference. The systematic intervention for immediate delivery of the placenta was specially insisted on by Daventer. At first his lead was followed, but soon it began to be seen that in other hands than his, disastrous results might follow. During the eighteenth century, accordingly, there were prolonged controversies as to the proper period for active interference during the third stage. The dangers of prolapse and inversion of the uterus were insisted on by Ruysch. William Husta, Dr. John Harvie, a London teacher of midwifery, and others urged the expectant treatment. In our own times Credé revived the immediate expulsion of the placenta by pressure on and kneading of the uterus. Though this practice has been departed from as regards its immediate application, yet the profession owed a debt to Credé for emphasising the advantage and importance of pressure on the fundus uteri. The present-day plan lay in the application of a modified Credé method, or of the Dublin method where the birth of the placenta was assisted by traction from below. Some years ago Professor Simpson said he had tested the strain at which the umbilical cord would tear in a series of cases. Sometimes a strain of over 18 lbs. was required; in other cases 2 lbs. were sufficient. In one-fourth of the cases it yielded with a pull of 4 lbs. and under. In applying the method introduced by Credé one must form a judgment in each case as to the time when assistance to the expulsion of the placenta should be given.

Professor KYNOCH (Dundee) said one naturally thought of two processes: (1) the separation and (2) the expulsion of the placenta. The cause of the separation hardly came into consideration there. He believed that uterine retraction and contraction were essential for separating the placenta, and this was best left to uterine action alone. The Credé method as originally carried out was one of very great risk—risk of retention of membranes and of hæmorrhage. He found as a rule that separation was done by the uterus itself in half an hour. Having ascertained, by tying the cord at the vulva after the birth of the child, and by the size of the uterus, that the placenta was no longer in the uterus, there was no harm in expelling it. His practice was to follow down the uterus during the birth of the child, to control the uterus, but not to exert any pressure on it, to ascertain the condition of relaxation and contraction, and, when separation had taken place, to expel.

Dr. MCVIE (Chirnside) agreed with all Professor Simpson had said. He thought it a pity the discussion was narrowed down to the simple management of the third stage. The most important fact was that the third stage of labour was as capable of being managed by natural processes as the first stage or the second stage, and that when there was interference, it should be on cause shown. There was no time limit for separation and expulsion of the placenta. The uterus had to be watched and not the clock.

Dr. JAMES RITCHIE preferred never to interfere, and never to make traction on the cord. There was no objection to the Credé method save when it was applied immediately after labour. If the placenta did not come away in a reasonable time he saw no objection to pressure on the fundus uteri. If that were not successful he inserted his hand and endeavoured to get hold of the lower edge of the placenta. In a case where he felt the uterus gradually being filled up with blood he considered it his duty to hurry matters. If the uterus was exhausted by prolonged labour, or there had been a very rapid labour, it was one's duty to wait for contraction and retraction.

Dr. JAMES FOULIS regretted the absence of Dr. Berry Hart to take up a position more or less antagonistic to the principle Professor Simpson had laid down in regard to the management of the third stage of labour, for Dr. Berry Hart had brought before the Obstetrical Society some heterodox and serious principles in regard to the anatomy and physiology of the uterus on which the management of the third stage of

labour depended. They could not be on firm ground so long as there was any doubt as to the physiology of the uterus during the third stage. The objections to the Credé method were founded on the fact that it was apt to displace the clots of blood which was Nature's mode of preventing hæmorrhage. The swelling of the uterus after the expulsion of the placenta was not muscular contraction, but the pumping action of the heart filling up the cavities in the uterine wall after they were partially closed by the clotting. If they had sufficient patience and kept their hand on the uterus the clotting would go on till the whole of the sinuses were occupied by a large clot. After that it was a physiological impossibility for the uterus to swell up again.

Dr. HAULTAIN thought that Dr. Hart's views had been almost entirely disregarded, and the management of the third stage was debateable on the Dublin and Credé methods of expulsion, that was to say, expulsion by artificial means of the placenta from the uterus by hand pressure (the Credé method), or by "expressing" the placenta from the vagina after it had left the uterus (the Dublin method). The method seemed to him to be to wait till the placenta had left the uterus and then to proceed to remove it from the vagina. He did not agree with either Dr. McVie or Dr. Ritchie in saying that there was time to be considered. They need not have a time limit, but they must have a time guide. It seemed to be a general average that half-an-hour was the time needed for the placenta to be expelled naturally from the uterus. After that they might use a certain amount of rational artificial means to remove it. It was essential that all this should be done with strict attention to antiseptics. The effusion of blood between the placenta and the uterine wall he thought was a good means of separating the placenta.

Dr. J. W. BALLANTYNE deprecated immediate expulsion or attempts at that. They had to do their utmost to prevent *post-partum* hæmorrhage, by ergot and strychnine if necessary. A hand on the uterus was a great safety. One had to be careful that the membranes as well as the placenta came away.

## BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.

MAYO COLLIER, F.R.C.S., President, in the Chair.

*Friday, July 12th, 1901.*

THE PRESIDENT showed a case of double optic neuritis with paralysis of both external recti following right tympanic disease. He also related a case of deafness due to chronic sclerosis of the middle ear, which had been greatly improved after relief of nasal obstruction, and a case of epithelioma of the maxillary antrum nine months after operation, in which there had been so far no return.

Dr. BARCLAY BARON showed a case of complete aphonia with close approximation of the cords.

Mr. LENNOX BROWNE showed a specimen of a fibro-myxomatous polypus, removed from behind the palate, and found to have proceeded from the maxillary antrum through the opening in the inferior meatus, made during the course of an operation performed some months previously for relief of maxillary empyema. He also exhibited a case of pretuberculous condition of the larynx, a patient with sarcoma of the pharynx, and another with an enomous tonsil and glandular infiltration due to sarcoma.

Dr. MCCOLL showed a patient suffering from laryngeal tuberculosis in an advanced stage, which had been treated by insufflations of resorcin and orthoform.

Dr. LODGE showed a patient with lupus of the nose cured by excision according to the method of Anderson.

Dr. DUNDAS GRANT showed (1) a case of post-diphtherial paralysis; (2) ulceration of the tongue, probably malignant; (3) thrombosis of the jugular vein.

### DISCUSSION ON TUMOURS OF THE PHARYNX FROM THEIR CLINICAL ASPECT.

Dr. WOODS (Dublin) opened the discussion, which was continued by Mr. LENNOX BROWNE, Dr. DUNDAS GRANT, Dr. LODGE, and Dr. VINRACE.

# REVIEWS.

## TUBERCULOSIS.

CREOSOTE, although it is not now regarded with the confidence that marked its first introduction, is still in sufficiently general use as to render the appearance of such a work as Dr. BERNHEIM'S[1] welcome to those who would use it scientifically. He has dealt with the subject very fully, and his book contains a good account of all that is known about creosote in relation to tubercle. Like other writers, he has to be content with a somewhat vague account of the chemical behaviour of the drug when introduced into the body. He quotes the experiments of authorities to prove that "agglutination" of tubercle bacilli may be observed in presence of blood serum derived from a subject already injected with creosote. This very important observation is not much dwelt upon, and perhaps the evidence upon which it rests is a little uncertain. As a means of introducing creosote, the author prefers subcutaneous injection as being the best means of administering large quantities, and he finds that creosote carbonate is preferable to the phosphate, although both are to be preferred to pure creosote. He believes that a local disturbance is produced in the neighbourhood of the tubercle somewhat similar to that which follows the injection of tuberculin, and on this account there is danger that dormant disease may be called into activity. His experience of large doses administered gradually by the mouth does not appear to have been satisfactory. The relative value of guaiacol is discussed at some length, but the general conclusion would appear to be unfavourable to it. The latter part of the book deals with the polyethers of creosote. These are regarded with favour, but it must be confessed that much of their virtue is attributed to their power of acidifying the tissues, and thus rendering them unsuitable soil for bacillary development. This view rests upon another assumption that there is direct antagonism between the rheumatic and the tuberculous habit, an antagonism which has not been proved by the evidence of clinical history. The action of creosote cannot be said to be fully explained, and the awkward facts of clinical observation are not as yet reconciled with the teachings of laboratory experiments, but Dr. Bernheim's book marks distinctly the present state of knowledge on the subject.

Mr. LAKE has embodied his experience of over 300 cases of laryngeal phthisis in a small book, entitled, *Laryngeal Phthisis*.[2] In many respects his conclusions coincide with those of previous observers, but they are all of interest. He finds that 40 per cent. of all cases occur in the third and fourth decades of life, and that two-thirds of the patients are men. The bacillus of tubercle is very rarely found in the nose although other organisms are common. Temporary aphonia as an early sign is not uncommon, and its liability to be mistaken for ordinary functional aphonia is emphasised. Marked laryngeal anæmia only occurred in 25 per cent. of the cases: it is often absent in primary laryngeal tuberculosis. Regarding the liability to infection of different parts of the larynx, Mr. Lake found that the arytenoid region was diseased twice as often as the cords, and three times as often as the ventricular bands. This is no doubt due to the fact that the sputum comes most closely in contact with the arytenoid region. As regards local treatment: Superficial lesions such as occur on the cords are best treated with intra-tracheal injections, and paints, such as 5 per cent. formalin, followed by protargol (3 to 10 per cent.) well rubbed in. Deeper ulcerations call for curetting followed by the rubbing in of lactic acid (5 to 40 per cent.) or formalin (5 per cent.). Infiltrations of the arytenoids and the inter-arytenoid fold may be cut out with powerful forceps with good prospect of success in suitable cases, and the same holds good of the ventricular bands. A hopelessly-diseased epiglottis may be removed with the galvano-caustic loop with the greatest relief

[1] *La Tuberculose et la Médication Creosotée* [Tuberculosis and the Creosote Treatment]. Par Dr. Samuel Bernheim. Paris: A. Maloine. 1901. (Royal 8vo, pp. 318, Frs. 10.)

[2] *Laryngeal Phthisis*. By Richard Lake, F.R.C.S. London: Rebman, Limited. 1901. (Demy 8vo, pp. 102. Twenty-one coloured illustrations. 7s. 6d.)

to the patient from distressing dysphagia, and a fair prospect in some cases of ultimate cure. Such are some of Mr. Lake's conclusions and results; but the book is full of practical points, and must be read to be appreciated. It forms a valuable and timely contribution to the literature of an important subject, and cannot fail to enhance the author's reputation. As a literary performance it is more open to criticism and shows marks of haste, but that is a comparatively small matter when its sterling value is considered.

Professor RIBBERT, in a pamphlet on the spread of tuberculosis within the body,[3] argues that the localisation of the tubercle bacillus in the apex of the lung does not represent its first place of settlement in the body. There are often caseous lymphatic glands in the hilus of the lung or in the neighbourhood of the bifurcation of the trachea which are older than the lung mischief, not only in the case of children, though most obvious in them. Other parts may be the seat of the primary disease process, as the joints or the uro-genital tract. Direct infection of the lung through the inspired air is, he thinks, probably not so common as is sometimes supposed. The facts and arguments for and against distribution by means of the lymph and by the blood respectively are discussed, and the author concludes that it is most probably by the blood stream that the bacilli are carried. The paper, which is illustrated by several plates, is an interesting contribution to the pathology of tuberculosis, and will recall to those acquainted with the history of the subject the speculations of Buhl.

To Dr. RUHEMANN, of Berlin, the author of a recent pamphlet on the etiology and prophylaxis of pulmonary tuberculosis,[4] and probably to most of his readers, even the most recent views on the etiology of tuberculosis are not altogether satisfactory. Dr. Ruhemann has made it his business to investigate the relation of influenza, amongst other factors, to the incidence of tuberculous disease. Many considerations lead to the conclusion that the tubercle bacillus in itself is not a very harmful parasite, and that it requires association with other micro-organisms or their chemical products to enable it to do its worst, at any rate within the human body. That influenza has shown a marked power of reviving quiescent tubercle has become only too obvious of late years, and by a series of carefully-observed cases Dr. Ruhemann endeavours to prove that it may play a great part also in initiating the specific disease by the assistance that the influenza bacill or their products are capable of affording to the tuberculous poison. That a similar connection has been observed in previous epidemics he shows by an interesting historical survey, extending back as far as the year 1580. The importance of guarding a tuberculous person from the possible complication of influenza or other microbic disease is thus made obvious. The relation of sunlight to the activity of tuberculous disease is also discussed, and a very interesting series of tables is given, gathered from various sources, which go to prove that diminution of sunshine is followed by an increased mortality from the disease. It is argued that this good influence is not exercised only on the tubercle bacillus, but upon those other organisms upon which it is presumed to be largely dependent for its power of increase. In discussing prophylaxis, many important points are emphasised which are worthy of note. The practice of wearing respirators to filter the air to be inhaled is advocated and supported by the analogy of the healing of external wounds, which require to be kept free from micro-organisms. To heal the lungs a similar freedom from outside organisms is necessary, especially if it be the case that the vigour of the tuberculous process is, as the author affirms, largely assisted by such organisms. The arguments brought forward by Dr. Ruhemann are worthy of careful consideration, both from the scientific and the practical points of view.

Dr. CHOWRY-MUTHU gave some general account of the results obtained at the Inglewood Sanatoria at the annual meeting of the British Medical Association last year (BRITISH MEDICAL JOURNAL, October 15th, 1900, p. 1096). The first chapter of the pamphlet which he has now issued[5] deals mainly with the generalities of open-air treatment. He has had twenty-two patients under his care at Inglewood during his first eleven months, and expresses satisfaction with their progress. The second chapter is of more value, for it deals with the personal observation on the effects of formalin (igazol) inhalations in pulmonary tuberculosis. Dr. Muthu believes that those of his patients, seven in number, who had the igazol inhalations as well as open-air treatment, did not have to stay so long in the sanatorium as those who had no inhalations.

Dr. PUJADE, of Amélie les Bains, has written a short treatise on the treatment of tuberculosis,[6] founded on personal experience, extending over twenty years. He expresses the conviction, shared by most observers of equal experience, that tuberculosis is always acquired, that it may almost always be avoided, and that it may often be cured. As to heredity he says "L'hérédité seule est abolie." One no more inherits tuberculosis than scarlet or enteric fever. M. E. Boirac, Rector of the Academy of Grenoble, to whom the book is dedicated, writes an introduction in which, though disclaiming any pretence to criticise from a medical point of view, he expresses his opinion that this is more than a good book, it is a good work. The language is incisive, and the style well calculated to fix the attention of the reader. For instance the conditions which predispose to tuberculosis are summed up under the heading "Formula for getting Tuberculosis," concerning which the author remarks: This formula is intended for the rich. The poor do not need to have laid down for them a programme which the necessities of existence impose on them naturally. Dr. Pujade denies the existence of the inverse type of fever in tuberculosis. Take the trouble, as I have done, he says, to observe every hour of the night and day the temperature of a patient who shows a temperature of 38° or 39° C. in the morning, and you will always find that if the patient has no rise of temperature during the day it commences to rise in the evening or during the night, and that it merely has not had time to fall by the morning. The "inverse" type is a fever delayed in the day and prolonged into the morning. We have said enough to indicate that this book, though perhaps it contains nothing which is new, is well worth perusing, if only for the interesting manner in which the subject matter is presented.

The main purpose of the book on *Pulmonary Consumption, Pneumonia, and Allied Diseases of the Lungs*,[7] by Dr. THOMAS T. MAYS, of New York, is, as the author states, to endeavour to show that phthisis is a neurosis, and that the disintegration of the lungs is a secondary process. It is remarkable that very many of the cases cited in proof of the influence of a lesion of the pulmonary branch of the vagus nerve as the primary etiological factor, were recorded before the discovery of the tubercle bacillus. Dr. Mays makes no pretence of impartiality, but is at least consistent in his conclusions, for he condemns the isolation of consumptives as an unnecessary cruelty. He gives a very dubious approbation to climatic treatment, and believes that the only rational therapeutic measure consists in counter-irritation by means of hypodermic injections of silver nitrate (2½ to 5 per cent.) over the course of the vagus in the neck. He has been highly satisfied with his results. The consideration of the diseases other than phthisis is crowded into little more than 100 pages, several of which are occupied by a theory of the nervous origin of pneumonia. The pneumococcus is ignored. The writer is an enthusiast, but his conclusions, founded on insufficient data, are not to be trusted.

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[3] *Über die Ausbreitung der Tuberkulose im Körper.* Von Professor Dr. Hugo Ribbert. Marburg: N. G. Elwert. 1900. (Royal 8vo, pp. 20. M. 1.20.)

[4] *Aetiologie und Prophylaxe der Lungentuberkulose.* Von Dr. J. Ruhemann. Jena: Gustav Fischer. 1900. (Demy 8vo, pp. 88. M. 2.50.)

[5] *Some Results of Sanatorium Treatment of Phthisis.* By D. J. Chowry Muthu, M.D., etc. London: John Bale, Sons, and Danielsson. 1901. (Crown 8vo, pp. 43. 1s.)

[6] *La Cure de la Tuberculose.* Par Dr. P. Pujade. Paris: Georges Carre and C. Naud. 1900. (Crown 8vo, pp. 369. Fr. 3.50.)

[7] *Pulmonary Consumption, Pneumonia, and Allied Diseases of the Lungs.* By Thomas T. Mays, A.M., M.D. New York: E. B. Treat and Co. 1901 (Demy 8vo, pp. 539. 46 illustrations. 3 dollars.)

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JULY 27TH, 1901.

## THE BRITISH CONGRESS ON TUBERCULOSIS.

The British Congress on Tuberculosis, which has been the most striking professional event of the past week, has more varied importance than usually attaches to such meetings. The scientific worth of a Congress cannot be immediately estimated, depending, as it largely does, upon the value of the views enunciated in the papers contributed to it. Each polemical address is as a new substance cast into the crucible, and time alone can show whether it will withstand the tests which it courts. In this sense, as a stimulant to thought and to new scientific effort, Professor Koch's lecture, which we discuss elsewhere, cannot but be of the highest value, while some of the other papers are hardly of less significance. But the present Congress rightly appeals to a wider audience than that concerned in the discussion of scientific principles by experts. Tuberculosis is a great national, or rather international, scourge, and the struggle against it must interest everyone who has at heart the welfare of his fellow-men. This fact has been clearly recognised by the King himself, whose gracious message to the Congress of which he is Patron plainly showed his deep concern in the problems which it has attacked, and his solicitude for the practical success of its deliberations. The presence of the Duke of Cambridge and two of His Majesty's Ministers at the inaugural meeting is further evidence of the feeling which has been aroused throughout the country, and the participation of a large number of representatives of foreign Governments testifies to the universal sense of the important questions at issue.

Isolated efforts made by various means and in different countries have shown the possibility of diminishing both the morbidity and the mortality from tuberculosis: now is the time for governments and individuals to unite under scientific direction for its extermination. If this consummation is possible, no more valuable agent in its achievement can well be conceived than such a Congress as has just been held. For it has been planned and carried out on a most ample scale, embracing not only the exchange of scientific theories and evidence, but the education of men as statesmen, as municipal officers, and as individual units in the practical application of the knowledge acquired by laboratory experts. We earnestly trust that its hygienic outcome may be wide-reaching and beneficent.

Much of the success of any Congress depends on the smooth working of the machinery of organisation. In the present instance the arrangements for the business of the Congress and for the comfort and convenience of members have been proved admirable. This result has only been obtained by long and laborious preparation by the various Committees over which Sir William Broadbent, Professor Clifford Allbutt, and Sir J. Crichton-Browne presided, while special credit is due to Mr. Malcolm Morris for the foresight and energy he displayed as Honorary Secretary-General. The social side of such occasions has not been neglected, and the private hospitality of many leading residents in London has been seconded, with the customary munificence of the City, by the Lord Mayor. We trust that our foreign visitors may carry away an agreeable recollection of their visit to the murky metropolis which appropriately enough acted up to its reputation for darkness and rain on at least one day.

## THE FIGHT AGAINST TUBERCULOSIS.

The address delivered this week by Professor Koch before a general meeting of the British Congress on Tuberculosis is printed in another part of the present issue, and will doubtless be read with immense interest in all countries of the world by medical men who have been unable to be present. Amongst the many important points raised the foremost is certainly still open to controversy, and will doubtless give rise to much discussion. This is, no doubt, what Professor Koch desires, and he indeed suggests that his experiments should be repeated and his results tested. In the clearest manner possible he tells us what he has found, and sums up his reasons for believing that the bacilli of human tuberculosis are in some of their vital characteristics and in their pathogenic qualities, distinct from the bacilli of the bovine disease, even if in appearance and staining reactions they seem to be identical. The results of inoculation of small and very susceptible animals, such as guinea-pigs, do not, he contends, give trustworthy results. Professor Koch by his experiments during the past two years on young cattle, swine, asses, sheep, and goats, has arrived at results which he considers absolutely conclusive. He found these animals to be practically immune to the bacilli of human tuberculosis. Young cattle were affected by the living bacilli as they would have been by dead ones, whereas the severest tuberculous disorders resulted when the experiments were made with bacilli from cases of bovine tuberculosis. In regard, however, to the insusceptibility of man to the bovine disease the evidence brought forward is much less conclusive. Granted that cattle are almost immune to infection from man, may not human infants, if not adults, react like cattle towards the bacilli of bovine tuberculosis? Professor Koch's conclusions were in fact challenged at the conclusion of the address. Lord Lister, who was in the chair, after pointing out that if Professor Koch was right, prevention would be greatly simplified, said that though his evidence that human tuberculosis was not communicable to man seemed very conclusive, yet the evidence for the converse proposition was not conclusive. Professor Nocard, of the French Veterinary School at Alfort, deprecated any attempt to deny the existence of danger of communication of bovine

tuberculosis to man, and said that veterinary surgeons were not infrequently inoculated accidentally.

The question is admittedly most important from the practical point of view. The importance of securing milk and food absolutely free from the living bacilli of bovine tuberculosis may have been overestimated, but this zeal can have done nothing but good, and we believe that Professor Bang of Copenhagen was right in advising that the precautions at present employed should not be relaxed until quite certain proofs of the correctness of Professor Koch's views in this respect are forthcoming. In cases of human intestinal tuberculosis, if pure cultures of the tubercle bacilli found in the tuberculous material are made, it can then be ascertained, he states, by inoculating cattle subcutaneously with them, whether the microbes are derived originally from bovine or human tuberculosis. Professor Koch, however, does not tell us how it has been proved that bacilli derived originally from bovine tuberculosis may not be so altered by their growth in the human intestinal wall that when afterwards injected subcutaneously into cattle they may behave rather as bacilli from human than bovine tuberculosis. Moreover, it is very far from proved that a primary tuberculosis of the intestine is necessary before the mesenteric lymph glands can be infected from the intestinal contents. The suggestion made by Professor Sims Woodhead that the British Government should take steps without delay to put this question to the test of actual experiment will meet with general approval.

Whatever the results of future experiments in this direction may be, most pathologists, we believe, will agree in regarding human sputum as the chief vehicle of tuberculous infection amongst the human race. In regard, therefore, to means likely to diminish the spread of the disease we are brought to the much-discussed subject of spitting. The modern education of consumptive inpatients at hospitals and sanatoria, and the printed directions distributed in out-patient departments show patients how they may avoid infecting their relations and friends. In some countries concise and clearly-written notices as to the nature of consumption and how to prevent the disease from spreading are posted in public places, such as the waiting rooms and platforms of the Baden railway stations. In short, general hygienic knowledge in regard to the nature and prevention of tuberculosis is being gradually published amongst all classes in civilised countries. Yet it is not likely that infection by sputum can be suppressed so long as it remains the popular custom for persons, healthy or unhealthy, to spit in omnibuses, in railway carriages, and on the floor of waiting rooms, etc. In the London streets spitting has scarcely diminished of late years. Anyone can convince himself of this. Passengers spit from the tops of omnibuses with little regard to where the spray goes. With a slight wind a shower of spray is often carried on to the faces of fellow-passengers.

The disgusting lumps of muco-pus to be seen on the London pavements and roads tell us how likely any woman is to return from her shopping with her skirts laden with tubercle bacilli. It is true that in the carriages of the Central London Railway there are large and conspicuous notices against spitting, but these should be equally conspicuous on the platforms and the stairs, where the currents of air are often strong enough to carry microbe-laden dust about. Quite recently at a meeting of the German Society for Popular Hygiene in Berlin an energetic protest was made by influential medical men against the spitting nuisance; and parts of America have had the courage to boldly attack the popular custom. Perhaps it is because England has never rivalled these countries in the spitting habit that she now seems to lag behind in getting rid of such a dangerous and disagreeable public nuisance.

Professor Brouardel, likewise, in his address printed in the British Medical Journal, raises his voice against the deplorable custom of spitting. Once this habit has quite disappeared, tuberculosis will, he thinks, decrease rapidly. He insists on the great importance of the improvement of workmen's dwellings by Government and municipal control, and by the formation of building societies; in every town there are groups of dwellings constituting hotbeds of tuberculosis, which must be sought out and demolished. In regard to the alcohol question, on which Professor Brouardel lays great stress, it is probable that while alcoholism is certainly a predisposing cause of pulmonary tuberculosis, yet the mortality from other pulmonary diseases is relatively more increased through intemperance even than that from tuberculosis.

Professor Koch spoke strongly as to the great need of hospitals for the consumptive poor, hospitals to which the bad cases, those cases unsuitable for sanatorium treatment, might be sent. Such patients constitute the most infectious class, since they generally eject copious expectoration, often swarming with tubercle bacilli. It is true certainly that many of these cases are received into infirmaries, and into the wards of general hospitals, in this country, but many remain in their own poor homes, where they are of necessity wretchedly cared for, and constitute a terrible source of danger to those who live about them.

In regard to the modern sanatorium movement, Koch allows that by careful selection of cases it will be possible, if the duration of treatment be prolonged, to cure 50 per cent. of patients, or perhaps still more. The total effect, however, he is convinced, will always remain moderate. Be this as it may, it must in fairness be remembered that it is largely owing to the sanatorium movement that the present great international interest in the tuberculosis question has arisen. To the managers of private sanatoria, though they have by some been slightingly compared to hotel keepers or hotel managers, is due much of the credit for the great advances which have been made during recent years in our knowledge of the whole subject of the treatment of consumption. In the struggle against tuberculosis the importance of improving the general health of weakly children of the poorer classes by the establishment of charitable seaside sanatoria and holiday colonies, as referred to by Professor Brouardel and Sir Hermann Weber, cannot be overlooked. This is indeed a timely method for rendering the human soil unsuitable to the bacillary growth.

Koch draws special attention to compulsory notification as one of the methods for checking the spread of tuberculosis. All must be agreed on the urgent necessity of

disinfecting the rooms in which patients dying of consumption have spent the last days of their life. Amongst the poorer classes disinfection can never be systematically carried out until there is notification of all consumptives who are a source of infection to others by their expectoration. The hotels and villas at health resorts frequented by consumptives, as well as the trains by which such patients mostly travel, should be regularly visited by Government inspectors, whose duty it should be to enforce adequate disinfection. Surely likewise it would not be too much to demand that candidates for employment on railways and all passenger steamship lines should be medically examined and certified as free from signs of tuberculosis before they are accepted. We have reason to believe that tuberculous patients are sometimes accepted as stewards or stewardesses on passenger ships, though adequate arrangements do not exist to prevent the spread of the disease by the sputum in such cases. As Professor Brouardel points out, for the safety of all concerned, every house where tuberculous patients are received ought to be open to State inspection; the disinfection of railway carriages, steamboats, and hotels, would be of truly international import.

Dr. Koch does not specially allude to universal insurance of the working classes as one of the means for opposing tuberculosis. In our opinion, as we have explained in a recent issue, such a scheme of universal insurance would greatly facilitate the provision of adequate hospital and sanatorium accommodation, and it would also help in instructing the people. That it would make notification easier is certain. Whence would the money be derived which would be required for such a colossal Government scheme in England? Very little of it would really come from the working classes; almost all in reality would have to be provided by the employers of labour and the tax-paying public generally. This does not sound pleasant, but it may be asked would the public have really to pay more than it does at present? To this in a sense we can certainly answer "No." Even under the present system nobody fails to obtain medical or surgical aid when he requires it, nobody starves, and beds are provided for the infirm who can no longer work. The money for most of this is actually provided by the tax-paying public, partly indeed in the form of charitable contributions. The methods by which the poor are at present relieved—that is, by the existing Government and charitable institutions—involve enormous waste, which could be partly obviated by centralisation of present hospital and charitable relief, and would be still further diminished by universal insurance of the working classes. The latter plan would, probably, effect a saving of money to those who pay for the poor, and would relieve and morally elevate the poorer industrial classes themselves.

## JOHN HUGHES BENNETT.

The opening of the John Hughes Bennett Laboratory in connection with the Physiological Department of the University of Edinburgh on Saturday last will recall to many a man who in his day was a great force in the medical world. More than a quarter of a century has elapsed since his death, and a generation has arisen that knows little of his writings. Yet it may be safely affirmed that the methods of clinical instruction in medicine now in vogue in this country were first developed by him in the dispensary and in the old Royal Infirmary of Edinburgh more than sixty years ago. As Sir John Burdon-Sanderson remarked in his appreciative address, when Bennett returned to Edinburgh as a young graduate fresh from the hospitals of Paris he had before him as an ideal a completely new method of instructing the student in medicine at the bedside. It is true that others about the same period, or a little later, and notably Sir William T. Gairdner, who is still with us, proceeded on similar lines in clinical teaching; but it was mainly owing to Bennett that the Socratic method of teaching at the bedside, as it was designated by one of the speakers—that is, the method of eliciting the truth regarding a case by careful examination and by free and full discussion between the teacher and the pupil, was generally adopted by all clinical physicians.

Bennett made his mark in medicine in many directions. He it was who mainly overthrew the method of bloodletting so freely indulged in up to his day. Some may be disposed to think that he went too far in this direction, and that there are still cases in which the abstraction of blood may be beneficial; but Bennett did great service to humanity by condemning the methods of almost indiscriminate bloodletting then freely practised. He also revolutionised the method of treating pneumonia by powerful antiphlogistic remedies, and showed that a careful study of the natural history of the disease led to a mild and expectant treatment. To him is also due the credit of advocating the use of cod-liver oil in tuberculosis and other affections. It is true that the oil had been used by others, but Bennett pressed its use on the profession generally, and he did so on physiological grounds. As was also pointed out by Sir John Burdon-Sanderson, he condemned the treatment of phthisical patients then followed, and argued that instead of cooping them up in close, over-heated rooms, dosing them with cough mixtures, and giving discomfort by irritating blisters, they should lead an open-air life and take nourishing food. It is notable that he actually proposed the use of the great glass building of the First Exhibition (1851) as a sanatorium for the treatment of phthisical patients in the early stages of the disease. He had faith in the curability of phthisis by such means, and thus he forestalled the open-air method of treatment which has been developed during the last ten years in Germany and elsewhere.

Bennett was a physiologist and pathologist, and he brought to bear on the facts of disease all the information from these two sciences that was available in his day. He was the first to teach medical students the use of the microscope, and to add it to the armamentarium of the clinical wards; but, as was pointed out by Professor McKendrick, he was amongst the first to make use of other scientific apparatus and methods, such as the thermometer, the sphygmograph, the saccharimeter, and other instruments. His great aim was to teach medicine in a scientific manner, and to train the student in accurate observation and sound reasoning. It cannot be said that his work in physiology was of a strikingly original character, and some of his peculiar views, such as his

molecular theory, have passed into oblivion. But here also he was great as a teacher, and, as shown by Professor McKendrick, he was not only the first to teach the use of the microscope, but he was the first to initiate, with the aid of Dr. Argyll Robertson and the late Professor Rutherford, the teaching that is now included under the phrase "practical physiology." No doubt the teaching of the three departments of such a course—namely, histology, physiological chemistry, and experimental work—followed in the present day in every well-equipped medical school, is now far ahead of the course given thirty-five years ago in the University of Edinburgh, but still it is of interest in the medical history of the last century that Bennett early recognised the importance of teaching physiology in a practical manner, and with the aid of the new instruments and methods that were the outcome of the labours of such men as Du Bois-Reymond, Helmholtz, Ludwig, and Bernard.

Like all strong men Bennett had strong convictions, and he was a good fighter. Gifted with a faculty of eloquence which was a blending of the histrionic power of a great actor with the intellectual agility of a great pleader at the bar, Bennett was at his best when he was defending his position or attacking an opponent. Many will still remember his appearances as a public speaker at the annual meetings of the Association, and how a rustle of expectancy ran through a meeting when it was known that Bennett was to rise. He had an instinctive dislike to a weak man, and a chivalrous feeling of respect for anyone who opposed him by sound argument or by an array of new facts. Sometimes abrupt and austere in his manner, afflicted with a restlessness that arose from his desire for progress, apt to be too severe in his denunciations and too scathing in his sarcasms, still Bennett was a personality that commanded affection and respect from those who knew the real man.

It is, therefore, a fitting tribute to the memory of her father that Mrs. Cox has presented this laboratory for physiological research to the University of Edinburgh; and there can be no doubt that under the able direction of Professor Schäfer the laboratory will prove a splendid addition to the University, and a new centre for progress in physiology. Nothing could be more in keeping with the character and life work of such a man as Bennett; nothing, as was several times remarked by speakers, would have pleased him better. Bennett was one of that galaxy of talent and genius that illuminated Edinburgh in the middle decades of last century, and the University may be proud that he will be kept in memory by so worthy an addition to her appliances as a Bennett Laboratory for physiological research.

## THE ROYAL COMMISSION ON SEWAGE DISPOSAL.

The Royal Commission on Sewage Disposal, appointed in May, 1898, issued on Wednesday an interim report. The report is on the whole very favourable to the bacterial method of sewage purification, and it is considered that the Local Government Board would be justified in modifying the present regulations as to the application of sewage to land. It is, however, recommended that the nature of these modifications should be determined after a consideration of the circumstances of each case. The report also recommends, in view of the want of success of existing legislation and administration to secure the purity of rivers, that a special and separate commission or a new department of the Local Government Board should be formed to act as a supreme river authority. We propose to deal with the report more fully in a subsequent issue.

## A LIVERPOOL MALARIA EXPEDITION TO THE GAMBIA.

At a meeting of the Liverpool School of Tropical Medicine, held on July 22nd, a letter was read from Major Ronald Ross, written on July 3rd from Freetown, Sierra Leone, describing observations made in the township of Bathurst in regard to the advisability of starting antimosquito measures there. Bathurst is on a small island some five miles long, consisting of a flat sandy soil, and just above high tide level. The town is remarkably clean, even as regards the homes of the natives. There is no segregation of Europeans, the water supply is derived from rain water gathered in cisterns or from shallow wells, of which there are some thousands. There are many hundreds of cesspools or cesspits. Bowel complaints are not frequent. Malaria is absent (except as recurrent attacks of fever) until the rains set in (June to October). Mosquitos make their appearance at the same time. During the rains the malaria may be very severe and prevalent; as much so as in other places on the coast. Yellow fever, another mosquito-borne disease, appeared last year, but was promptly checked by energetic measures. Dr. Chichester, the acting senior medical officer, had found filariæ (which also are carried by mosquitos, and cause elephantiasis) in from 40 to 50 per cent. of the native population. It was, therefore, Major Ross wrote, of great importance to endeavour to limit the propagation of mosquitos in the town. Before practical measures could be taken, however, it was necessary to know exactly where the insects principally bred, and this was unfortunately not known, whether in the wells, the cesspits, the drains, or the back gardens; and it was even unknown whether *Anopheles* had ever been found in the place. Major Ross accordingly strongly advised that the School should despatch Dr. H. E. Annett or Dr. J. E. Dutton as soon as possible for the purpose of making these necessary investigations, which he estimated would not take longer than two months. It was resolved to adopt the suggestions of Major Ross, and arrangements were at once proceeded with for sending out another expedition to West Africa, being the seventh that the Liverpool School of Tropical Medicine has organised.

## THE ART WORK OF SIR SEYMOUR HADEN.

It may be welcome news to some members of our profession that there is at present an opportunity, one very rarely afforded, of studying the etchings, mezzotints, engravings, and drawings of Sir Seymour Haden. Until August 10th there will be on view a fine collection at Messrs. Colnaghi's Gallery, 13, Pall Mall East. It is not complete, and unfortunately it would not now be possible to form such a collection. But besides examples of most of Sir Seymour Haden's etchings, it contains a series of beautiful crayon drawings, and the original mezzotints to which he has devoted himself during the last few years. In an exhibition revealing such splendid and varied artistic powers, it is difficult to select the drawings which demand special praise. From the grand etching of Turner's "Calais Pier" to the smallest and most delicate dry-point sketch there is not one which is wanting in interest and beauty. Amongst the most attractive are the various states of "The Breaking-up of the Agamemnon," and the magnificent coloured etching (intended for mezzotint) of "Erith Marshes." The latter may be compared with the plates of Turner's "Liber Studiorum." Of river scenery there are many charming examples, and certainly few, if any, etchers have ever surpassed Sir Seymour Haden in the facility and grace of his tree-drawing. It is well known that

some of his etchings are quite unprocurable, of some the copies are exceedingly scarce, whilst the majority are becoming rarer and more costly every year. American collectors are keenly alive to their value, and it is a standing reproach to our national collections that an etcher who already ranks so high in the select band of masters should be practically unrepresented therein. The British Museum possesses fine and almost unrivalled collections of the work of Rembrandt the Dutch master of this art, of the French master Meryon, and of the Anglo-American master Whistler, but of Sir Seymour Haden's over two hundred etchings it can show only a poor half-dozen. It is much to be hoped rather than expected that such a collection as Sir William Drake has made will ultimately become national property. We may be proud of the fact that Sir Seymour Haden is a medical man, and that although he has not been in active practice for many years past he still retains a warm interest in the profession. A representative collection of his work is so rarely to be seen that we would advise all who are interested in art to avail themselves of the present occasion.

## VITAL STATISTICS FOR A LONG SERIES OF YEARS.

On former occasions we have drawn attention to annual reports in which the vital statistics of districts were compiled for a long series of years. We have now pleasure in drawing attention to a valuable return made by Dr. W. L. Hunter for the borough of Pudsey. Dr. Hunter has undertaken the enormous labour of extracting all the essential facts relating to Pudsey from the death registers from the first year of registration, 1837, up to the present time. Such a long series has a more than local interest. The statement of deaths from epidemic diseases in averages for groups of years conceals the true natural history of these diseases, while a statement of the number of deaths for each year in succession enables this to be correctly gauged and studied. Each additional report on the lines of the present one by Dr. Hunter is a contribution to epidemiology and historical pathology of considerable national importance. The population of Pudsey in 1841 was 10,002, in 1891 it was 13,444. The birth-rate in 1839 was 46.0, and in 1845 was 46.6 per 1,000 of population. It oscillated between 32.7 and 40.3 in the twenty years 1861-80, and had fallen to 25.3 in 1900. The highest death-rate was 31.2 in 1858, the lowest 14.7 in 1894. The infantile mortality was 226 per 1,000 births in 1840, 128 in 1842, 214 in 1889, and 125 in 1900. Infantile diarrhœa and measles have evidently not shown any improvement. The individual causes of death deserve careful study, but we can only adduce one or two examples. Croup was epidemic before diphtheria was recognised as such in 1858. In 1858 to 1861 Pudsey suffered from the pandemic diphtheria then prevailing. The deaths from phthisis declined from about 41 in each year between 1841-50 to about 19 in each year between 1891-1900. Small-pox caused 33 deaths in the first half-year of registration. The number of deaths from this cause rapidly declined, and Pudsey almost entirely escaped the small-pox epidemic of 1870. In an earlier part of the report are given photographic reproductions of pages of the burial register for 1787 and 1792 respectively, which bring out clearly the enormous proportion of the total deaths caused by small-pox.

## THE NATURE AND ORIGIN OF PIGMENTS.

THE chemical nature and origin of the pigments of living organisms is a vast and almost unexplored field of study. The colours of insects and birds have, it is true, received a large amount of theoretical consideration at the hands of the evolutionist. The Darwinian looks for examples of utility in the struggle for existence—warning colours, mimicry, etc.—and then dismisses the origin of colouring with the magic words "natural or sexual selection." The whole subject, however, demands a far deeper inquiry at the hands of the physiologist, for it is becoming more and more evident that the origin of pigment is bound up with the chemistry of growth, and the physiological functions of living organisms. Three years ago Dr. Marion Newbigin gathered together the fragmentary knowledge we possess on the nature and distribution of pigments, and published a most useful monograph entitled *Colour in Nature*. Dr. Bohn has published recently a similar short and suggestive summary of the researches on pigments,[1] but renders little service to science by improvising a theory of their evolution. He supposes that cells (plastides) were preceded by more elementary bodies (plastidules). That the chromatin of the nucleus consists of collections of plastidules, and that pigment granules and the chloroleucites containing the chlorophyll of plants are also plastidules which now live under conditions of symbiosis in cells. For the further details of this theory Dr. Bohn's book must be consulted, but no evidence in favour of the theory will be found. The native pigments may be classed under five heads: (1) pigments of direct physiological importance, such as hæmoglobin and chlorophyll; (2) derivatives of such pigments, such as the derivatives of hæmoglobin, urobilin, hæmatoporphyrin, and possibly melanin; (3) waste products, such as uric acid and lepidotic acid, found by Hopkins in the wings of butterflies (*Pieridæ*). The white of the garden white butterfly is due to uric acid. The silver lines of the mackerel and other fishes are due to crystals of guanin, one of the xanthin bases; (4) reserve products, such as lipochromes found associated with fat. Carotin, the colouring matter of carrots, beet, etc., is said to be a cholesterin fat. Carminic acid of the coccus is a glucoside; (5) introduced pigments such as pigment taken up by a parasite from its host, chlorophyll by larvæ, etc. The little that is known about these pigments, apart from their beauty, is of such interest that its should stimulate further inquiry. The micrococcus prodigiosus growing on moist bread produces the miracle of the bleeding host. The purple pigment of bacterium beggiatoa rosco-persicina according to Englemann, breaks up $CO_2$ and sets free O under the influence of light. The green pigment of the coral polypus of the Australian barrier reef is accredited with the same function by Dr. Hickson. The pigment of vibrio cyanogens reacts like the aniline dye tryphenyl-rosaniline. The beautiful pigments of birds' eggs appear to be entirely derived from the blood shed in the bursting of the Graafian follicle. Biliverdin and hæmatoporphyrin respectively produce the green-blues and and red-browns of the combs and wattles of birds. The pigments which produce the colours of fruits and flowers and autumn tints seem to be associated with diminished power of assimilation and growth. Likewise the senescence of the nerve cell is accompanied by increased pigmentation, and the melanin, according to Dr. Bohn, owes its origin to the chromatin of the cell nuclei. The effects of light and food on pigmentation offer a wide field of inquiry. Poulton has changed the colour of larvæ by feeding them in turn on the green parts and the white midribs of cabbage leaves. Cunningham has caused the under surface of soles to become pigmented by illuminating the base of the aquarium with mirrors. Poulton and Schröder have changed certain larvæ from one colour to another by placing them on coloured papers. Crustaceæ have been bleached by keeping them in caverns, while the colourless inhabitants of caverns have been pigmented by transferring them to the light. The absorption and utilisation of light energy, or the protection of protoplasm against light must be amongst the first functions of pigment.

## A BARBER'S LICENCE TO SHAVE.

IN Michigan and in some other of the United States there are in use laws regulating the conduct of the barber's art,

[1] *L'Evolution du Pigment.* Par Dr. G. Bohn. Scientia Série Biologique No. 11. Paris: Carré and Naud. 1901. Cr. 8vo, pp. 96. Frs. 2.)

having, it is asserted, good effect. The would-be qualified barber before being granted a licence to practise is required to pass an examination conducted by a special Board. For instance, according to Mr. Charles Rieger, of the Michigan Barbers' Commission, he may be asked "What kind of a lather-brush do you use?" The inwardness of this question is that certain kinds of handles are alleged to collect verdigris and other even more harmful accumulations and are consequently rigorously eschewed by the scientific barber. Or, again, "What do you use for washing lather from a customer's face?" If he should say a sponge he is liable to be plucked, for a clean towel for each customer is very rightly considered necessary. If on being asked, "What do you use for applying powder to a customer's face?" he should reply "powder puffs," he is again in a parlous case, for the Commission hold that there is no surer method of communicating skin disease than by he application of the same powder-puff to each customer's face. According to the same authority a recent examination form consisted of sixteen questions, on which the candidate was required to obtain a percentage of seventy. He had to state, among other things, how long he had been engaged in his profession; whe her he had undergone a term of recognised apprenticeship; on what kind of hone he sharpened his razors; what kind of antiseptic lotion he used for disinfecting his razors, clippers, and scissors; what he used for cleaning hair brushes, combs, and shaving brushes; how he would stop hæmorrhage in case a customer was cut; and to describe appropriate treatment for face eruptions caused by close shaving, for dandruff, and for loss of hair. The law, we are told, while not expecting the barber to be a physician, did expect him to be familiar with the best methods of preventing skin diseases by the use of proper antiseptics. Ringworm of the beard, although one of the minor perils which daily encompass the man who does not shave himself, is quite good enough reason for welcoming the application of antiseptics to barber surgery; and although there is no examination or registration of barbers in this country, yet, in London at any rate, several may be found who systematically employ antiseptic solutions for the sterilisation of their armamentaria.

## ATTESTING A WILL.

MEDICAL practitioners are so often called upon to attest or assist at the execution of their patients' wills that the recent case of Carter *v.* Seaton (*17 Times Law Reports*, 671) is worthy of attention. The plaintiffs sought to propound a certain will under which they were beneficiaries. The defendants, who set up a previous will, impugned that which was propounded by the plaintiffs on the ground that it had not been duly executed. It appeared that after being signed by the testator in his bedroom, the document was taken into the adjoining dressing-room, the door between the two rooms being open, and it was there signed by two nurses out of the testator's sight. In these circumstances it was decided by Mr. Justice Barnes that the will had not been duly executed, and was, therefore, of no effect. Section IX of the Wills Act, 1837, provides that "no will shall be valid unless it shall be in writing and executed in manner hereinafter mentioned—that is to say, it shall be signed at the foot or end thereof by the testator, or by some other person in his presence and by his direction; and such signature shall be made or acknowledged by the testator in presence of two or more witnesses present at the same time, and such witnesses shall attest and shall subscribe the will, in the presence of the testator, but no form of attestation shall be necessary." The case under notice illustrates the importance of strict adherence to the rules laid down in this statute, which as a matter of fact are embodied in the ordinary attestation clause. In the many cases of this nature which have come before the Probate Court, the judges have enforced the provisions of the Act with great rigour. In Right *v.* Price, for instance, a will was declared invalid because the testator was unconscious at the time when the witnesses attached their signatures. In the absence of their lawyer, anxious relations of a dying man too often neglect to go through the formalities which should be observed in the making of a will. By the exercise of a little authority a medical man may often ensure that the property shall be divided according to the wishes of his patient, as expressed in his last will and testament.

## THE MEDICAL PROFESSION AS AN EXAMPLE.

NOVELISTS and preachers have unrivalled opportunities for the expression of unfettered opinion, and play no small part in fixing the average point of view of the general public. Novelists as a class have, perhaps, been about equally fair and unfair to their doctors. Thackeray's Dr. Goodenough was compensation for Dr. Firmin. The hero of *Bleak House*, though very shadowy, is obviously a picture flattering enough. Kipling has a sympathetic sketch of an Indian surgeon in one of his short stories. The doctors of George Eliot's *Middlemarch* and Thomas Hardy's *Woodlanders* are not characters which do much credit to their profession. But no writers of fiction have dealt more kindly with the physician than the modern Scotch school, notably Mr. J. M. Barrie and the Rev. John Watson, D.D. Dr. Watson—perhaps better known as "Ian MacLaren"—in an address delivered to the students of the Manchester Baptist College, and reported in the *British Weekly* of June 27th, drew a contrast between the devotion to their profession displayed by young medical men and young ministers respectively, much to the advantage of the doctors. He spoke of a medical acquaintance of his own, qualified to practise by a distinguished degree, still studying at the London hospitals, and proposing to study at certain Continental hospitals before entering upon private practice. "If," said Dr. Watson, "he were offered to-morrow the choice of a practice of his own in some country town, or the chance of being an assistant to some distinguished surgeon in London or Vienna, it would not matter to him that in the country town he would have a few pounds more salary, and would be—save the mark!—his own master. His desire—and it is that of all the best men who study medicine—is not to be as soon as possible a doctor, but to be as perfectly qualified as possible to do the work of a doctor." The opinion here expressed is not startlingly new, but it is interesting as coming from a member of a profession whose point of view is necessarily different from the scientific standpoint, and whose praise of the ordinary practitioner has been too often given, as Tennyson gave it, at the expense of the scientist.

## THE KLONDIKE CLIMATE.

IN regard to the climate of the interior of the north-western region of North America a good deal has been written, especially on the extreme cold of the winters and the relatively great heat during summer. In some parts the summer heat may prevent the traveller from sleeping, though only a moderate layer of mossy soil separate him from solid ice. Such banks of ice may be covered by summer foliage and forest growth. The temperature in the shade during summer may reach 98° F. At Fort Yukon, in Alaska, the mean summer heat is said to be 56.7° F., and the mean winter temperature (December to February) 23.8° below zero Fahrenheit. From Dr. J. H. MacArthur, of Dawson, Yukon Territory, we have received an elaborate chart of the temperature records at Dawson during the past winter months (November, 1900, to February, 1901), as accurately taken with a tested standard thermometer. The day and night extremes for each twenty-four

hours are given. Some of the sudden variations are very great. The temperature, which on January 15th and 16th remained between 60° and 70° below zero Fahrenheit, on January 19th reached 10° below zero, and on January 22nd rose from 29° below zero in the night to 23° above zero in the day. This is the greatest daily range (52° F.) recorded on the chart. The absolute winter maximum was 23° F. on January 22nd, and the minimum was 67½° below zero Fahrenheit on the night of January 17th. Thus the temperature range during six days was 90½° F. The mean winter temperature for the four months seems to fall somewhere about 20° below zero Fahrenheit. The chart is of general interest owing to the fact that the Klondike goldfields have caused such an inflow of settlers that, though only about three years and a-half old, Dawson, beautifully situated at the junction of the Klondike and Yukon rivers, has already developed into a town of some importance.

## DEATH CERTIFICATION AND REGISTRATION.

As the first massacre of the innocents has already taken place, it must be realised that the session is now too far advanced and the state of business too congested to make it possible, even if it were desirable, to introduce such a Bill for death certification and registration this year as we hoped a fortnight ago, might have seen the light. Although we learn that we were too hasty in assuming that Sir Henry Thompson would take the leading part in promoting this much-needed legislation, he has always shown an active interest in the question, and it is hoped that he will lend the weight of his great influence and proved business capacity to help those who are prepared to call in the assistance of the draughtsman to place a practical measure before the House of Commons. It is quite true that the proposals of the Select Committee will make an appreciable demand on the public purse, and that such a Bill in the hands of a private member has little chance of passing. But its introduction early next session will educate public opinion and point out the urgency of the case; and then the Government, which, we understand, is sincerely desirous of protecting the sanctity of the dead as well as the safety of the living, may be induced to take the matter up.

## POOR-LAW MEDICAL OFFICERS IN THE HIGHLANDS AND ISLANDS OF SCOTLAND.

THE endeavours of the Highland Poor-law medical officers to get their many grievances considered by the Secretary for Scotland have not met with any success—indeed, they are becoming more acutely felt. The appointment of non-resident parish medical officers is becoming more common. Recently the parish council of the extensive parish of Duthel, Inverness-shire, appointed a non-resident medical officer in succession to a resident one. The five parishes of Abernethy, Duthel, Moy, Daviot, Dores, extending from Aberdeenshire to the shores of Loch Ness, are now without a resident parish medical officer; if this system is extended the Secretary for Scotland may approve of the appointment of medical men resident in Edinburgh to attend to the people of Orkney. The medical officer of health for Inverness-shire, in his last report, drew attention to the fact that in ten years in that county 3,967 persons had died and been buried without the cause of death being certified by a medical man. This is a state of things which ought to rouse the Government to take action without delay.

## DUSTY STREETS.

DURING the recent dry weather the streets of London have been very dusty, despite a heavy cost to the ratepayers in the way of watering. The Marylebone Borough Council, at the suggestion of Dr. Edmunds, has determined to experiment upon that part of Oxford Street which lies between Oxford Circus and Marylebone Lane by watering it with a 5 per cent. solution of calcium chloride, while Oxford Street to the east and west of that section will be watered in the same way and at the same rate, but without the calcium chloride. Dust in the London streets is not merely a nuisance to pedestrians, and a source of serious injury to goods exposed in such shops as those in Oxford Street, but being loaded with fine particles of dried horse ordure and expectoration—often tuberculous—and in dry weather passing into the nostrils, into the mouth, and into the lungs, is probably an active disseminator of infectious disease. Calcium chloride is a waste substance produced in large masses in chemical manufactories, and in large quantities may be obtained very cheaply. A tender for five tons in convenient sized iron drums, at the rate of £2 10s. per ton delivered in Marylebone, has been accepted by the Works Committee for the purpose of making the experiment. Calcium chloride is a very deliquescent substance, and there is therefore reason to expect that if used in sufficient quantity it will keep street dust so damp as to prevent its being blown about. If this expectation be fulfilled, a much smaller quantity of water will suffice to keep the streets free from dust, and a considerable economy may thus be effected. Other local authorities will no doubt watch with interest the result of the effort made by the Marylebone Borough Council, and we wish it every success. Calcium chloride is non-corrosive, is without smell, and would probable act to some extent as an antiseptic (like common salt) when it passes into the drains.

MR. MALCOLM MORRIS will deliver the Lane Lectures at San Francisco during the first week in September next. The subject of the course will be Diseases of the Skin.

ON July 24th Professor Koch was entertained at dinner at the Hotel Métropole by the Royal Institute of Public Health and was presented with the Harben medal for 1901. The presentation was made by Dr. W. R. Smith, President of the Institute, who was in the chair.

AN adjourned meeting of members of the medical profession practising obstetrics and gynæcology was held in London on July 24th, under the presidency of Sir John Williams, at which it was unanimously resolved to establish a new journal to be called the *British and Colonial Journal of Obstetrics and Gynæcology*, and to raise the funds required for its publication by the formation of a limited liability company.

# MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

**The Army Medical Service Committee.**—Mr. Timothy Healy called the attention of the First Lord of the Treasury to the inadequate representation of Ireland on the Committee sitting on the reorganisation of the R.A.M.C., and asked for a return of the number of doctors in the Army, Naval, and Indian Services, distinguishing those holding English, Irish, and Scotch qualifications for the years 1890, 1895, and 1900. Mr. Balfour said the members of the Committee were chosen, not with the view of representing the various nationalities, but to give the Secretary of State for War practical assistance in reorganising the Army Medical Service. As there was no desire to let it appear that any school was slighted, Sir William Thomson had been invited to join the Committee. Mr. Young elicited from the Secretary of State on Friday that there are at present 334 army medical officers who possess Irish qualifications, or 37 per cent., while 35 per cent. possess English diplomas, and 28 per cent. Scotch qualifica-

tions. In answer to Mr. Timothy Healy he added that Sir William Thomson would attend a meeting of the Committee on that day.

**The Commission on Dysentery and Enteric Fever in South Africa.**—On Tuesday Sir Walter Foster asked the Secretary of State for War whether the report of the Commission or Committee appointed last August to inquire into the nature, causation, pathology, and modes of prevention (more particularly as affecting armies in the field) of dysentery, and its connection, if any, with enteric fever, had been received, and whether it would be laid upon the table of the House before the discussion of the Army Medical Vote. Mr. Brodrick in reply stated that no report had been received from the Commitee.

**The Factory and Workshops Acts Amendment Bill.**—At its eighth meeting the Grand Committee began on Clause 33, which was passed with some slight amendment, as was also Clause 34. The next clause, dealing with notice of accidents, was struck out, on the motion of the Home Secretary, on the ground that the present system of returns of accidents was not sufficiently uniform, and that it would be better to introduce legislation which would secure uniformity. Clause 36, which deals with reports by medical officers of health, was agreed to, and on the next clause there was a sharp debate, and several divisions were taken on the exemption of young persons and women engaged in the fish-curing and fruit-preserving trades from the provisions of the Acts as regards hours, meals, etc. The amendments on the fish-curing subsection were rejected, and after a long discussion a proviso was added as regards the jam trade giving the Secretary of State power to prescribe conditions by order. As regards creameries, the provision for Sunday labour in the Bill as regards Irish creameries was extended to England by 15 votes to 4, and the clause was then passed. On Clause 38 an attempt was made by Mr. John Burns to include post-offices, but no division was taken, and the clause was adopted, with the addition of two new subsections, moved by Mr. Ritchie, providing that a factory or workshop belonging to the Crown shall not be exempted by reason only that it is not carried on by way of trade or for the purpose of gain, and that the powers conferred on a local authority shall in such cases be exercised by a factory inspector. Clauses 39 to 44 were rapidly passed, and on Clause 45 Mr. Seton-Karr's amendment to except electrical stations was rejected by 28 to 6, just before the Committee adjourned. When the Committee resumed on Monday last, Mr. Strachey moved to leave out the words which except stations for the transmission of signals or messages. Mr. Ritchie opposed, and the attempt to include telegraph offices was rejected by only one vote—namely, 18 to 17. Mr. Strachey next moved an amendment to bring post-offices within the Acts, with the object of having independent sanitary inspection. The amendment was debated at length, and finally rejected by 28 to 13. Clause 45 was soon afterwards agreed to, and the remaining clauses were disposed of. The two postponed clauses (3 and 26) were then considered. The former, which deals with inquiries, Mr. Wolff sought to amend in the direction of insisting that the inquiries should be held by independent persons, and not by an inspector or anyone sent down by the Home Office. Several speakers supported the amendment, but it was finally rejected, and after another division Clause 3 was added to the Bill. The Laundry Clause (26) was next discussed at considerable length. Mr. Tennant succeeded in amending the clause so as to bring workers in laundries within the so-called factory day, and then the case of charitable or religious institutions which carry on laundries was debated. Mr. Ritchie struck out the subsection objected to by the Irish members, and accepted an amendment of Mr. Dillon's. A strong protest was raised against this course, but the Home Secretary carried his point by 30 to 24. The Grand Committee met again on Tuesday to continue the consideration of the Laundry Clause. Mr. Tennant tried to give to workers in small laundries the same protection as those in large laundries, but failed. It was afterwards proposed to omit the clause altogether in consequence of the concessions made with respect to religious and charitable institutions, but this was rejected by 26 to 8. The new clauses were then considered. The first to be added was one giving the Home Secretary increased powers as regards sanitation. Several divisions took place, and a proposition by Sir Charles Dilke to abolish women's overtime in certain cases was rejected by the narrow majority of 1. A new clause to reduce the limit of overtime of women and young persons during the year was carried, as was one fixing the Saturday half-holiday to begin at noon. By another new clause the provisions of the Factory Acts were extended to docks and work about ships. The new clauses were nearly all finished on Tuesday, and a short sitting to finish the Committee's work and report the Bill was arranged for Thursday.

**The Sale of Cocaine.**—Mr. Macdona called attention on Monday to two recent deaths from poisonous doses of cocaine, and asked the Home Secretary whether he would take steps to restrict the sale of the drug. Mr. Akers Douglas, in replying, said that a Committee of the Privy Council had been appointed to consider the 1st Schedule of the Poisons Act, 1868, and that the matter would be referred to them.

**The Tenure of Medical Professorships in the Queens Colleges.**—Mr. Macartney asked why certain medical professorships in Queen's College, Belfast, had been limited to a term of seven years, whereas in Queen's College, Cork, similar appointments had recently been made for life. The Chief Secretary, in reply, said that the term of seven years applied equally to all the Colleges, and that it was by an oversight that the rule was not applied in all the cases.

**Venereal Diseases in the British Army in India.**—Mr. Caine asked the Secretary of State for India last week if his attention had been called to the ratio per 1,000 of mean strength of the admissions to hospital for venereal diseases of soldiers in the military districts of Allahabad, Rohilkand, Bangalore, Rangoon, Mandalay, and Bombay, and if he was aware that the aggregate admissions in these six districts averaged 351 per 1,000, as compared with 250 per 1,000 over the whole of India, inclusive of these six districts, and only 174 per 1,000 in the six districts of Sirkind, Poona, Mhow, Aden, Quetta, and Nagpur, and if he would inquire into the matter. Lord George Hamilton said the figures were substantially correct. The admission rate for venereal diseases among the British army in India as a whole had, however, been reduced from 522 per 1,000 in 1895 to 313 per 1,000 in 1899, a reduction of over 40 per cent. in four years. The districts instanced as specially bad ones had shared in this reduction, the mean admission rate in them having fallen in the same period from 519 to 352. The Government were doing all they could, and an inquiry as suggested would serve no useful purpose.

**Dental Surgeons and the Duke of York's School.**—Mr. Cathcart Wason asked the Secretary of State of War a question relating to the care of the teeth of the boys and the girls at the Duke of York's School for the orphans of British soldiers at Chelsea, and whether having regard to the importance of sound teeth to children, and especially to those boys desirous of joining the army, a dental surgeon would be appointed. Lord Stanley, in reply, did not promise any such appointment, but said the several cases were dealt with by the medical officer, and when necessary sent to a dental surgeon or to a dental hospital.

**The Massacre of the Innocents** came off on Monday last, but this year there were not many Bills of medical interest on the list. We have to regret the withdrawal of the Drunkards Bill, and as there was no mention of any intention to pass it, the Lunacy (Ireland) Bill may probably be lost. The Factory Acts Amendment Bill is to be proceeded with. Among private members' Bills the two Vaccination Bills have been dropped and the Poor-law Superannuation (Ireland) Bill. The Public Health Bill is still kept on the paper and the Cremation Bill, but they have no chance of passing this session.

## THE HUGHES-BENNETT LABORATORY, EDINBURGH UNIVERSITY.

THE Hughes-Bennett Laboratory of Experimental Physiology, given to the University of Edinburgh by Mrs. Cox in memory of her father, who was Professor of Physiology and of Clinical Medicine from 1848 till 1874, was opened and formally handed over to the University authorities on July 20th. The ceremony of inauguration took place in the large room of the new laboratory, and was presided over by the Vice-Chancellor (Sir William Muir). There was present a goodly and distinguished company of professors, teachers, and physiologists from various parts of the kingdom. Apologies came from the Lord Provost of Edinburgh, Lord Lister, Sir Michael Foster, Sir Lauder Brunton, Sir Dyce Duckworth, Dr. W. W. Johnston (Washington), and others.

Mrs. Cox, in handing over the laboratory, addressed the Vice-Chancellor in the following words: "I ask you on behalf of the University to accept this laboratory, which I have built to the memory of my dear father, and to help physiological research in the University."

Sir WILLIAM MUIR, in accepting the gift on behalf of the University, said he was sure all were touched by the way in which Mrs. Cox had carried out her wish to perpetuate the memory of her father. Dr. Hughes Bennett was a great name in the annals of the University, and they looked back with admiration on it. His daughter, in rearing and dedicating that place to his memory, had done a great work for the University, and he begged to thank her for it.

Mrs. Cox next unveiled, amid applause, the bronze bas-relief representation of her father, which is placed on the south wall of the large room, and is the work of Mr. Pittendrigh Macgillivray. The figure, half length, is in low relief, with the face three-quarters to the left, and has below it this legend:

John Hughes Bennett, M.D., F.R.S.E., Professor of the Institutes of Medicine and of Clinical Medicine in the University of Edinburgh. The first in this country to teach the use of the microscope in the clinical investigation of disease. This laboratory was erected as a memorial by his daughter in 1901.

Sir JOHN BURDON-SANDERSON, Bart., F.R.S., Regius Professor of Medicine in the University of Oxford, expressed on behalf of the students of Dr. Hughes Bennett who were present their high appreciation of the exactitude of the likeness which Mr. Macgillivray had given them. As they looked on the medallion his features came back again as freshly almost as if they had seen him there that day.

Mrs. Cox was then thanked for unveiling the memorial, after which the company retired to the McEwan Hall, where Sir JOHN BURDON-SANDERSON gave an address on the life and work of Dr. Hughes Bennett: and among those present were Sir William T. Gairdner, Sir John Batty Tuke, M.P., Sir William Turner, Sir Henry Littlejohn, Sir James Crichton-Browne, Sir Ludovic Grant, Sir James Russell, Mrs. Smith (another daughter of Dr. Hughes Bennett), Dr. Hughes Bennett, London (a son), Bishop Dowden, Dr. W. C. Bayliss (Secretary of the Physiological Society of London), Dr. Moore (Charing Cross Hospital), Dr. Waller (St. Mary's Hospital, London), Professor MacWilliam (Aberdeen), Professor Waymouth Reid (University College, Dundee), Dr. Pavy (London), Dr. Myles Ward (Sheffield), Dr. Rivers (Cambridge), Professor Boyce (Liverpool), Professor Sherrington (Liverpool), Professor Hamilton (Aberdeen), Professor Cash (Aberdeen), Professor Muir (Glasgow), Professor Stockman (Glasgow), Dr. Lorrain Smith (Belfast), Professor J. G. McKendrick (Glasgow), Professor Schäfer, Dr. John Smith, Dr. Argyll Robertson, Dr. Clouston, Professors Chiene, Simpson, Annandale, and Hunter Stewart; Professor Geikie, Mr. Kingdon, Mr. Pittendrigh Macgillivray, R.S.A.; Mr. J. Hope Finlay, W.S.; Mr. W. C. Smith, Advocate; Drs. Renton, Smart, Byrom Bramwell, C. E. Underhill, Caton, P. A. Young, Alexander Bruce, Milroy, Milne Murray, Munroe, A. James, Noel Paton, Philip, McIntosh, Mr. Douglas Cox, Lady Burdon-Sanderson, Lady Turner, and other ladies.

The VICE-CHANCELLOR, in calling on Sir John Burdon-Sanderson to give his address, spoke of him as a former President of the British Association, and as one of the most distinguished graduates of the University of Edinburgh.

Sir JOHN BURDON-SANDERSON said that the lady who, with so true an appreciation of the requirements of the science which her father professed in the University, had provided its students with a working place to be specially devoted to those higher investigations by which alone it could now be successfully advanced, had given him the privilege of addressing to them a few words about the distinguished man to whose memory the building they had just left was the most fitting monument that could have been erected. John Hughes Bennett was born in 1813; his father, an actor of repute, died soon after his birth, leaving him to the care of his widow, Mrs. Julia Bennett, and to the guardianship of a devoted friend of her family, the late Mr. Kingdon, of Bank Buildings, London. His early years were spent at Exeter, where his maternal grandfather had long resided. His mother was his best master. The excellence of his style as a writer, teacher, and debater must be attributed to the pains which she took to make him familiar with the English classics and to inspire him with her own genuine love of literature. He began his medical career, at the age of 17, by serving three years as apprentice to a country doctor. The term of his apprenticeship was much longer, but at the end of his third year his master, finding him much more addicted to study than to business, was glad to release him from his engagement. He went to Edinburgh, where, after spending the four years which then sufficed, he obtained the degree of Doctor of Medicine, with the highest distinction which the University had at that time to offer. He was while a student brought into relation with men of his own age, who were destined at a later time to become famous either as men of science or as practitioners of medicine or surgery, among whose names were those of Edward Forbes, John Goodsir, James Y. Simpson, R. M. Glover, John Reid, and J. Hutton Balfour. Bennett used to say that, as a student, he had learned much more from the weekly debates of the Royal Medical Society than from any form of academic instruction. Bennett took his degree sixty-four years ago; the subject of his dissertation was the pathology of the brain. It was afterwards published in more extended form as the first of a very remarkable series of essays on the diseases of the nervous system, giving a true conspectus of the knowledge which existed sixty years ago as regards the most difficult class of diseases. The knowledge embodied in these essays was the result of his own observations in the hospitals of Paris. In 1842 he came back to Edinburgh. As physician to the Old Town Dispensary he gave his students the advantages of the system of teaching which in Germany was designated by the term *Poliklinik*, conducting them to the dwellings of his patients. Soon after he became pathologist to the Royal Infirmary, and made a collection of anatomical preparations to illustrate his lectures. He became editor of the *Edinburgh Journal of Medical Science*. When, in 1843, the Chair of Pathology in the University became vacant by the resignation of its founder and first occupant, Dr. John Thomson, the opportunity of placing him in the position for which his attainments so obviously fitted him was lost, to the great and lasting detriment of the University. It was not till 1848 that he was elected to the Chair of the Institute of Medicine, which he held till his death. His guiding principles were not to advance any pathological doctrine which was not founded on physiological data, and to constantly keep in mind that the men he had to teach were being trained to be doctors. This he could not have accomplished had he not become, at the same time, Professor of Clinical Medicine. He introduced an exact method of studying the characteristic phenomena of disease, in other words, of observing them so as to be able to describe in clear language whatever could be seen, heard, or felt in the examination of a patient, whether by the unaided senses or with the assistance of such instruments as were then available. Of these the microscope was the most important, and Bennett, in his first course of pathological histology in 1841, was the first to place the microscope in the student's hands and to teach him how to use it. His teaching at the bedside and in the *post-mortem* room on the one hand and his practical lessons in microscopical and other special modes of observation on the other, both conduced to the establishment of an exact and scientific method of studying the phenomena of disease. This constituted Bennett's highest claim to the

gratitude of Edinburgh students of that time. His services to medical science were great. He waged war against the then prevailing notion that every inflammation must be treated by anti-inflammatory remedies. Bennett in his later writing expressed the belief that if what was now called sanatorium treatment of consumption could be made accessible, persons in the initial stage of the disease could, in a great many cases, be restored to health, and advocated the use for this purpose of the first Crystal Palace, the building erected for the Exhibition of 1851. This was an entirely new view in Bennett's time. The sanatorium treatment as carried out in Germany during the last ten years had proved that the curability of consumption exceeded the most sanguine expectations that could have been entertained fifty years ago. Sir John Burdon-Sanderson then spoke of the nature of the work to be done in the new laboratories and concluded by saying that he was sure that all present would cordially join with him in wishing Professor Schäfer success in carrying out the noble purpose to which Mrs. Cox had devoted her munificent gift.

Professor J. G. MCKENDRICK (Glasgow) proposed a vote of thanks to Sir John Burdon-Sanderson, and Sir JOHN BATTY TUKE seconded.

After the proceedings in the McEwan Hall Mrs. Cox entertained a party of fifty or sixty ladies and gentlemen to luncheon in Aitchison's Rooms, Queen Street.

## COMPLIMENTARY DINNER TO SURGEON-GENERAL JAMESON.

THE complimentary dinner to Surgeon-General James Jameson, C.B., was held at the Hotel Cecil on July 24th, with Sir WILLIAM CHURCH, Bart., in the chair.

After the loyal toasts had been honoured, the CHAIRMAN proposed the toast of "The Guest" of the evening, and said that when a very general feeling was expressed that the long and valuable services of Surgeon-General Jameson had given to the country should be publicly recognised, it very naturally took the form of a dinner. They had met to do honour to one who had deserved well both of his profession and of the country. After describing the career of Surgeon-General Jameson, the Chairman, continuing, said that in 1896 he was appointed the Director-General of the Army Medical Department. The labours and difficulties that he had had to surmount in that department were known to all. The extreme difficulty of his position and the arduous character of his labours put him somewhat in the position of the Israelite of old, because he was asked to make bricks without straw. The present war was unique in its character and difficulties, and never before had so many men left our shores for so great a distance. When the country realised what had to be done and rose like one man to assist the Government, it was a much easier task for the Government to increase the forces of the country than it was for those whose duty it was to organise the departments which were absolutely necessary for the forces the country was ready to give. The general public had no idea of the difficulties of organising the hospital service of South Africa. Surgeon-General Jameson had said that all requirements that had been made upon him he had been able to meet, and he thought it reflected the highest possible credit both upon the Surgeon-General and upon his department. They recognised by the dinner that night the value of a long life spent in the service of the country, and they recognised still more the constancy with which, amidst labours of the most difficult kind, Surgeon-General Jameson stuck to his post and did good work. As civilians they also wished to acknowledge the able manner in which he had kept up the good relationship between his own corps and his civilian brethren.

Surgeon-General JAMESON, C.B., in responding to the toast, said that he felt some difficulty in replying and in expressing in adequate terms his feelings of profound gratitude to the medical profession for the compliment they had paid him that evening, and through him the Royal Army Medical Corps. He had been Director-General during a very eventful period, when a strain was put upon the public service such as had never been put before. The medical establishment was designedly fixed for two army corps and two cavalry brigades, but that establishment was expended in the early months of the war and very little was left for the home hospitals. Matters developed rapidly; the army was doubled and then trebled, and with every unit that embarked a proportion of medical *personnel* and material had to be provided. Militia regiments were embodied, necessitating further demands upon an establishment already much impoverished, and soon there began to arrive from South Africa invalids in tens, in hundreds, and in thousands. Up to the present time they had received 50,000 invalids from South Africa in the Colony since the beginning of the war. They were all received by the department and handled by it in conjunction with and ably assisted by the Quartermaster-General's Department. Not one of the invalids was transferred to civil hospitals, and only those who happened to be sick on furlough were admitted to civil hospitals. From first to last these arrangements were carried out without a single hitch. His critics would say, How could the department possibly look after 50,000 invalids in the condition he had described? But that was the miracle he was about to explain. The reserve of their own corps was first called out, then they enlisted and trained men as fast as they possibly could. They recalled from the Colonial stations every man that could be spared, and they had been able to send out to South Africa nearly 7,000 trained men. But a much greater effort was required, so they tapped the Militia Medical Staff Corps, and got from them 500 men. They then paid their addresses to the Volunteer Medical Staff Corps and to the Volunteer infantry brigade companies. From them they got 600 very good men. They then invited all old pensioners to return to the colours, and met with a good response; and every civilian with hospital experience that they could hear of, him they employed. The institution which was by far the most serviceable to them was the St. John Ambulance Brigade, which gave them 1,900 men. The difficulty they had was in regard to securing trained men at the beginning of the war, and the report in the Royal Commission said that this deficiency was not the fault of the Director-General nor the officers associated with him, because they had for a considerable time before the war broke out urged upon the Government the necessity of increasing the corps, but for the most part without avail. The department had sent to Africa 4,000 tons of medicines and material, and had mobilised 151 staff and regimental units, 19 bearer companies, 28 field hospitals, 5 stationary hospitals, and 16 general hospitals. They had also prepared three advanced and two base depôts for medicine. They had also fitted out in this country two hospital ships and three hospital trains, and they had sent out men and material to enable the Principal Medical Officer to organise many more units in South Africa, where at the present time they had about 21,000 beds ready equipped, not counting the provision made in the field hospitals. When it was recollected that in the whole of London there were only 30,000 beds, including small and general hospitals and the infirmaries, he thought the magnitude of the undertaking would be appreciated. He would like to remind his critics that in regard to supply the Medical Department was only responsible for medicines and medical and surgical appliances. Food, so-called hospital comforts, wine, etc., were procured by requisition on the Army Service Corps, while all hospital equipments, such as bedding, etc., were supplied by the Ordnance Department. At Bloemfontein the Medical Department had to commandeer very freely, because for ten days after the occupation of Bloemfontein there was not a single Ordnance Store officer present there. The critics also found fault with his department for not having made sufficient sanitary arrangements in the field, and this in face of the fact that the post of Sanitary Officer had been abolished against the advice of the Medical Department. When the officers of the Royal Army Medical Corps, after superhuman efforts on their part, were exposed to criticism and to an inquiry such as had not been applied to any other branch of the Army, and exposed to blame which others should have borne, it was not surprising that in the ranks of that corps the feeling prevailed that justice had not been done; the sympathy which was denied to them by others and which found expression in the presence there that evening of those at the dinner would be all the more esteemed and valued.

Sir WILLIAM MACCORMAC, in proposing the toast of "The

Public Medical Services," observed that it seemed to be a matter of course that after every war an inquiry into the medical arrangements should be held. The Royal Commission sent to South Africa had found some minor defects, but on the whole its report was most favourable. But incompetent critics were not satisfied, and the effect of the injustice with which the service had been treated was shown by the fact that there was at the present moment not a single candidate applying for admission to His Majesty's Medical Service. He thought it was impossible too say too much in the way of admiration of how Surgeon-General Jameson had met every requirement that had been made on him, and it seemed to him passing strange that the Government had allowed that man to leave the ranks of the army, not only without the customary recognition given to every one of his predecessors, but also without one word of thanks or one line of acknowledgement.

This toast was responded to by Sir JOSEPH FAYRER, who was followed by Sir THOMAS GALLWEY, who gave the toast of "The Chairman."

The names of those present were: Dr. Allchin, Lieutenant-Colonel Anderson, Professor McCall Anderson, J. Anderson, Lieutenant-Colonel Babtie, V.C., Sir Thomas Barlow, Bart., A. E. Barker, W. H. Battle, Surgeon-Lieutenant-Colonel Beatson, Brigade Surgeon-Lieutenant-Colonel Beattie, F. D. Bennett, Sir W. H. Bennett, L. A. Bidwell, Dr. Barry Blacker, Major Bond, Captain Booth-Clarkson, Lieutenant-Colonel Bourke, Woodhouse Braine, Sir Lauder Brunton, Thomas Bryant, Dr. Dudley Buxton, Colonel Cayley, Dr. Paul Chapman, Professor J. Chiene, A. H. Cheatle, G. L. Cheatle, Professor W. W. Cheyne, Sir William Church, Bart. (Chairman), Colonel Gordon Cleather, H. H. Clutton, R. W. Collum, Lieutenant-Colonel Colman, Alfred Cooper, J. Couper, R. M. Cowie, Surgeon-General McD. Cuffe, Professor Cunningham, Clinton Dent, Surgeon-General De Renzy, Lieutenant-Colonel J. R. Dodd, Major A. Dodd, Work Dodd, Dr. Conan Doyle, Lieutenant-Colonel Drake-Brockman, Sir Dyce Duckworth, Bart., Dr. A. Duncan, General Dunne, Dr. Dunsmure, A. Elliot, Dr. Philip Frank, Dr. Robert Farquharson, Sir Joseph Fayrer, G. Field, Dr. Finlayson, Sir John Furley, Sir Thomas Gallwey, Dr. Clement Godson, H. Norman Goode, Dr. John Hall, Harford Hartland, Dr. J. Harper, Lieutenant-Colonel Harris, R. Harrison, Surgeon-Colonel Harrison, Dr. Hawksworth, H. Herring, Dr. Hepenstal Ormsby, Dr. Heron, Dr. A. Hillier, Surgeon-General Hooper, Lieutenant Colonel Howard, R. C. Jameson, Surgeon-General Jameson, Major Jerome, Colonel Johnston, Lieutenant-Colonel Keir, C. B. Keetley, Lieutenant-Colonel Kirwan, Sir Ralph Knox, Colonel Latchford, J. Langton, Lieutenant-Colonel Leake, Captain Lewis, Dr. Ligertwood, Dr. James Little, J. MacAlister, Sir William Mac Cormac, Bart., Dr. Shaw-Mackenzie, Major Macpherson, G. H. Makins, Howard Marsh, Surgeon-General Marston, Surgeon-Colonel Martin, Dr. Valentine Matthews, W. E. Miles, Lieutenant-Colonel Moberley, Captain Moore, John Morgan, C. Morris, Surgeon-General Muir, H. W. Nevinson, Sir Christopher Nixon, T. W. Nunn, Dr. George Ogilvie, T. Openshaw, Edmund Owen, W. Owen, W. H. Page, Dr. Pardoe, Dr. Pavy, Dr. E. V. Poore, Deputy Inspector-General Porter, Surgeon-General Preston, Major Ratton, Surgeon-General Reade, Lieutenant-Colonel J. Reynolds, Arthur Ricketts, Dr. Frederick Roberts, Mayo Robson, W. Rose, T. L. Rogers, Major-General Russell, Captain Samman, Major B. H. Scott, J. Scharlieb, Dr. Shore, Sir Thomas Smith, Bart., Colonel Stevenson, C. Stonham, Dr. Stott, Charters Symonds, Sir Frederick Treves, Lynn Thomas, H. H. Tooth, H. A. Tom-Fairbank, Major Trewman, E. R. Turner, W. Turner, Edgcombe Venning, W. L. Wainwright, T. Wakley, jun., H. R. Walker, Cuthbert Wallace, F. C. Wallis, Dr. Washbourn, Dr. Heron Watson, Dr. Whitfield, A. Willett, Major Wilson, Sir John Williams, A. E. Wynter.

THE will of the late Dr. Thomas Bond has recently been proved. He left personality of the net value of £21,359 15s. 5d.

THE ETHICS OF OPERATION.—An American judge has recently ruled that in the case of a surgeon, while performing an operation under an anæsthetic, finds that another operation not previously contemplated is necessary, he has the right to perform the second operation without waiting to

## ROYAL COMMISSION ON ARSENICAL POISONING.

[FIRST REPORT.]

THIS Commission—which is composed of Lord Kelvin, Sir William Hart Dyke, Bart., Professor T. E. Thorpe, Mr. Henry Cosmo Orme Bonsor, Sir Wm. Selby Church, Bart., M.D., and Dr. Whitelegge, Chief Inspector of Factories—was invited to ascertain, with respect to England and Wales, the amount of sickness and death caused by arsenic, and how much of the sickness and death might have been due to arsenic in beer or other articles of food and drink; also how far it was possible to safeguard these in the future. The Commission sat eighteen times in London and in Manchester, and examined fifty-one witnesses. Of these witnesses, sixteen were hospital physicians and medical officers of health, the remainder included chemists, public analysts, brewers' managers, and members of the Chamber of Agriculture. Its conclusions are summarised under eight headings, which deal with the extent of the illness caused by arsenic, both in its medical and toxicological aspects; the means by which arsenic gains entrance into beer and other articles of food and drink.

The extent to which arsenic caused serious ill-health and death may be gauged by the fact that in Manchester and Salford alone 3,000 persons suffered. In some districts the poisoning assumed an epidemic form. That the illness was due to drinking beer contaminated by arsenic there is now no longer room for doubt. To Dr. E. S. Reynolds, of Manchester, belongs the credit of having demonstrated the presence of arsenic in beer that had issued from particular breweries. Immediately steps were taken by the brewers and sanitary authorities to withdraw the beer from sale, and when this was done the epidemic of poisoning came to an end. Only a few breweries fortunately were inculpated, and to them brewing sugars had been supplied by a single firm named in the report. In using the term "brewing sugar," the Commissioners mean glucose and invert sugar, either of which takes the place, partly or entirely, of malt, or it is in the "priming" solution added after the wort has fermented. The amount of arsenic detected as arsenious oxide in different glucoses varied from 0.015 per cent. to 0.095 per cent. (1.05 gr. to 6.6 grs. per lb.); in other instances from 0.008 to 0.131 per cent. (0.56 to 9.17 grs. per lb.). Invert sugar contained arsenious oxide, 0.02 per cent., or 1.4 grs. per lb. to 0.062 per cent., or 4.34 grs. per lb. The brewing sugar had all become contaminated by arsenic in the process of manufacture through using sulphuric acid supplied by one firm. This acid contained from 1.5 to 2.6 per cent. of arsenious oxide. The firm that supplied the adulterated acid admitted in evidence that the acid contained arsenic, but stated they had no knowledge as to the use to which it was put. The amount of sugar used varied in different brews, but it is believed that in the process of brewing, if the contaminated sugar is added before fermentation takes place, a portion of the arsenic is removed by the action of the yeast, whereas if sugars are introduced as priming agents, that is after fermentation, the whole of the arsenic remains in the beer. The amount of arsenic in beer therefore varied from 1½ to 3 gr. per gallon, but oftener it contained only ½ gr.

Dr. Tunnicliffe, who gave evidence, drew the attention of the Commission to the fact that in addition to arsenic, beer sometimes contained selenium, and to which he was disposed to attribute some of the poisoning. This subject requires apparently further consideration.

All the evidence went to show that it was the heavy beer drinkers who suffered most. The symptoms produced resembled those that are observed in alcoholic peripheral neuritis. Although arsenicated beer had been drunk, it was not always clear to the Commissioners that the poisonous effects were due to arsenic, for peripheral neuritis is known to have occurred long prior to the recent epidemic of poisoning in consumers of beer in whose drink at that time there was no reason to suspect arsenic. The report deals with the various ways by which arsenic may gain entrance into beer. It may be by the brewing sugars and malt, or possibly by the fuel used in drying the malt. It is reassuring to learn that in no instance were hops found to contain arsenic, but in the drying

nated by the fume from fuel. There is no reason why arsenic should be in beer at all if ordinary precautions are taken. An arsenicated beer will be in the future inadmissible. Beers will have to conform to a standard test. Although many foods and other kinds of drinks were analysed they were found to be free from arsenic.

In this country we learn by experience slowly, and our legislation is apt to be piecemeal. Parliamentary powers exist at present whereby county and borough councils, town and district councils can through their medical officers of health deal with suspected articles of food. Officers under the Food and Drugs Act and Public Health Acts possess the power to obtain samples, but so far as beer is concerned only when it is an article of sale. These gentlemen are no better off in this respect than other people. It would appear that public authorities have no effective power as against sugar manufacturers or brewers, hence they are obliged to proceed against retailers. It is now felt that there should be some standard test for arsenic that could be adopted by all public analysts. The Public Health Acts, while empowering authorities to condemn and destroy unsound articles of food, do not enable them to act thus in regard to poisoned beer. Statutory power will have to be obtained. The Revenue Acts neither cover the ground sufficiently, nor do they offer adequate protection. Some improvement in administrative measures is therefore called for. The Commissioners think that the Board of Inland Revenue should be empowered to specify the individual ingredients of beer liable to be contaminated by arsenic, "to prescribe for every such ingredient, and for the different materials used in their preparation, an adequate test which should ensure their freedom from arsenic; and to prohibit, under penalty, the use in a brewery of any material which infringes the prescribed test." To these words Dr. Whitelegge takes exception, on account of the wide terms of the recommendation. His opinion is that at the present stage of the inquiry the reference of administration and standards to the Board of Inland Revenue should be limited to the materials found upon the premises visited for revenue purposes. Unless, for example, excise officers supervise malting premises, they cannot see or sample the fuel used there; and fume, as we have seen, is a possible source of arsenical poisoning.

## THE COUNTY OF DURHAM MEDICAL UNION.

The third annual meeting of this Union was held in the Mayor's Chamber, Town Hall, Durham, on June 28th. There was a large attendance of members from Durham, South Shields, Whickham, Jarrow, Low Fell, Gateshead, Bishop Auckland, Sunderland, West Hartlepool, Stockton-on-Tees, Wingate, Stanley, Houghton-le-Wear, Sedgefield, Wellington, Ryton-on-Tyne, Washington, Sherburn, Easington, and Spennymoor.

*President's Address.*—The chair was taken by the President, Alderman Jepson, M.D., J.P., who congratulated the members on this being the third annual meeting. He said that some had predicted an early decline in the Union; but, rather than declining or showing signs of decay, there were indications and evidences of more stability. It was true they were not engaged in a sharp conflict at that time, but the Union had gradually asserted itself in many places, and a higher rate of pay had become recognised in many parts of the county. The position of those directly opposed to the Union was becoming worse every day. He and Dr. Alfred Cox (Gateshead) had been invited to a meeting of the Hartlepool Medical Society to explain to them the objects and aims of the Union with a view to affiliation, and he had now received a letter from Dr. Schmitz, the Secretary of the Hartlepool Society, stating that it had unanimously resolved to become affiliated to the Union. This he considered was very gratifying. He had repeatedly tried to induce the Darlington Society to become affiliated, but hitherto without success. That day, however, he had received a letter from Dr. Hern to say that the matter would be further considered in October. There was one more Society to be wooed and won, and that was the Society in Gateshead. When these two Societies joined, then the County Union will be nearly complete. In conclusion, he thanked them for their kindness and courtesy during the past year, and in electing his successor he begged them most earnestly to use a free and open mind.

*Election of Officers.*—Dr. J. F. Armstrong (South Shields) said he had very great pleasure in moving the re-election of Dr. Jepson, who had been a great power and help to the Society. He had spared neither time or trouble in furthering its interests.—Dr. W. Galloway (Low Fell) seconded the motion, which was carried unanimously.—The President, in returning thanks, said that he did not believe in repeated re-elections, but he could not resist their kindness, and would do all in his power to help on the Union.—On the motion of Dr. Wardle (Bishop Auckland) and Dr. Attwater (Whickham), Dr. James Murphy (Sunderland) was unanimously re-elected Vice-President. The following were elected Members of the Council:—Dr. Armstrong (South Shields), Dr. Cox (Gateshead), Dr. W. Galloway (Low Fell), Dr. J. H. Hunter (South Shields), Dr. R. S. Hubbersty (Sunderland), Dr. R. E. Ingram Johnson (South Moor), Dr. Mann (Washington), Dr. Miller (Stockton), Dr. A. MacRay (Crook), Dr. Taylor (Chester-le-Street), Dr. R. Stuart (Durham), Dr. Wardle (Bishop Auckland), Dr. Davis (Hartlepool), Dr. Arthur (Wingate), Dr. Stephen (West Auckland), Dr. Hill (Jarrow), Dr. Charles (Stanley), Dr. Attwater (Whickham), Dr. Anderson (Spennymoor), Dr. McIntyre (Blackhill), Dr. Wilson (Birtley), Dr. Parker (Easington), Dr. Taylor taking the place of Dr. H. Lyon Smith, who was leaving the district; Dr. Davis the place of Dr. Nisbet (Thornley), who had retired from practice; and Dr. Arthur the place of Dr. Gordon Russell, who, it was stated, was at the war. Messrs. Graham and Shepherd (Sunderland), were re-elected joint secretaries, treasurers, and solicitors. Drs. C. D. Hill Drury and Hern (Darlington), David V. McIntyre (Brandon), and Davis (Hartlepool) were elected members.

*Reports.*—The Treasurer's statement showing a balance of £66 3s. 1d. in favour of the Union was submitted and adopted. A sum of £50 was ordered to be paid to the secretaries on account of the balance due to them. Reports were made by representatives from the Sunderland, Chester-le-Street, Stanley, Jarrow and Hebburn, Consett, Trimdon, and Stockton which were generally very satisfactory.

*Midwifery Fees: Assistants.*—Some discussion took place as to the fixing of a minimum midwifery fee for the county, and Dr. Attwater (Whickham) gave notice that at the next meeting he would move a resolution fixing the minimum midwifery fee at 15s. Dr. Attwater also moved:

That in consequence of the great difficulty frequently experienced in obtaining a reliable assistant or *locum tenens*, we ask Messrs. Graham and Shepherd to act as agents for the purpose, and also for negotiating the sale and purchase of medical practices.

Several members expressed themselves in favour of the desirability of such an agency being attached to the Union, and the resolution was carried unanimously.

*Canvassing.*—The Secretaries having reported that the resolution unanimously passed at the general meeting on February 5th, 1901, requesting the General Medical Council to remove from the *Register* any medical practitioner who countenances or encourages canvassing by any union or association of working men and others on his behalf, had been brought before the Executive Committee of the General Medical Council on June 3rd, but that no action was taken thereon, great disappointment was expressed at the lack of interest in matters affecting the general practitioner thus displayed by the General Medical Council, and it was unanimously resolved, on the motion of Dr. Attwater, seconded by the Vice-President, and supported by Dr. Armstrong, Dr. Charles, and Dr. Arthur:

That the resolution be again sent up to the General Medical Council, and Drs. Brown, Horsley, and Glover be specially asked to give it their support.

*Reports to Members.*—A reprint of the rules, with the amendments made since first issue, was ordered. On the motion of the President, seconded by Dr. Armstrong, it was agreed that a half-yearly letter or report should be sent out in the months of March and October to all the members, giving a short statement of the work being done and the meetings held and any resolutions, etc., passed, so as to keep the members in touch with what was going on.

*Insurance Fees.*—Considerable interest was evinced in the question of the fees paid by insurance companies for medical examinations, and it was decided that the matter should be further considered at the next meeting, and the President

said he would give notice of a resolution he would move on the subject.

*Vote of Thanks.*—A hearty vote of thanks to the President brought a most successful meeting to a close.

## THE RELATIONSHIPS OF PUBLIC VACCINATION.

WE have received from a medical practitioner a letter which raises various interesting questions as to the relative duties and position of medical officers of health, public vaccinators, and private practitioners. The letter is as follows:

A case of small-pox occurs at a large laundry. The sanitary officer (by order of the medical officer of health) very properly notifies personally to all people employing that laundry. Then the public vaccinator calls on all these people (not paupers, but well-to-do people, and mostly patients of other medical men), and urges revaccination and offers to vaccinate them himself (this also by order of the medical officer of health). Now I want to know if this is right. Should not the people have been advised to consult their own private attendant as to the necessity of revaccination? It seems to me touting for work, and in a few cases it succeeded, the public vaccinator calling after to see how they were getting on. I should not have heard of it had not some of my patients resented the interference and come to me.

In a case of this kind, should not the medical officer of health have given the private practitioners some notification of the extent of the trouble instead of creating a wholesale scare?

The questions here put bring into relief some of the difficulties which attach to the present vaccination law of this country. As has often been pointed out, vaccination is a public health measure, and ought to be administered by the sanitary authority. In the case put by our correspondent the matter first of all, as was proper, came before the health officer. He, however, instead of acting directly, as in other questions, called in an officer of the Board of Guardians—the public vaccinator—to perform what ought to be done under the direct supervision of the Sanitary Board. The public vaccinator next proceeded to advise the persons who were believed to have been exposed to the risk of small-pox infection to accept from him the protection which vaccination, promptly performed, would afford, and by so doing he gave some offence to the family medical man, who asks, "Should not the people have been advised to consult their own private attendant as to the necessity of revaccination?"

It is the obvious duty of every public vaccinator to avoid using his office as a means of adding to his private practice, and dereliction of this duty should be dealt with like other unprofessional conduct. But with regard to the particular query before us, the essentially important fact is that in the presence of infection of small-pox vaccination should be done at once, and that every hour of delay is an hour of added risk. To use an extreme illustration, where a man is bleeding to death and a doctor is at hand, there is no time to send for the family surgeon to tie the injured artery. Indeed, if in an emergency sending for the public vaccinator involves any delay, some may ask, Why should not the medical officer of health himself, immediately on the facts coming to his knowledge, have gone straight away and offered to vaccinate all who could be regarded as under the risk of infection from small-pox? It is not mentioned whether in this case the health officer or public vaccinator, or both, are in private practice. Almost certainly the latter is. If the former is not, then there would have been the less risk of offence to practitioners had he himself performed the vaccinations in the emergency.

As regards our correspondent's other query, "In a case of this kind should not the medical officer of health have given the private practitioners some notification of the extent of the trouble instead of creating a wholesale scare?" we regret to be unable to reply in the affirmative. In presence of small-pox it would have been unwise for the medical officer of health to spend time writing a memorandum on the facts of the case and getting up a list of the medical practitioners who might be regarded as regular attendants of the families interested, and forwarding to these practitioners a copy of his memorandum, so that they might then proceed to consider whether in the circumstances revaccination had to be performed. By the time all that procedure had been gone through it might have been too late for revaccination to do any good; and if the wholesale scare had the effect of causing a number of people to get revaccinated who after all had not been exposed to small-pox, then it did on a small scale what a general revaccination law ought to do on a large scale.

In all this, it may be asked, is there to be no sympathy for the general practitioner, whose interests seem here to be subordinated alike to those of the public and of his own medical brethren who chance to be officials? The answer is that we have the utmost sympathy, and that if effect had been given to the views of the British Medical Association as expressed by its Council and Parliamentary Bills Committee when the Vaccination Act of 1897 was going through Parliament, these hardships would have been almost or altogether removed. It was then urged that the vaccination work done by every medical man in the land should be regarded as done on behalf of the public authority, and should be paid for out of the public funds, provided always that the work so done should reach the standard aimed at by the Local Government Board in the case of public vaccinators, and that no work falling short of this standard should be accepted for the purpose of public remuneration. Had this course been followed no doubt the supervision of vaccination by the central authority would have been less detailed than at present, and would probably have had to consist of surprise visits rather than systematic inspection; but what might have been lost in this way would, we are convinced, have been more than atoned for by the great improvement in the average efficiency of vaccination throughout the country. Such a system also would have helped to prevent what there is now some reason to fear is by no means a diminishing tendency to downward competition in this important matter.

It was also pointed out when the Bill was before Parliament that the administration of the vaccination laws should be placed in the hands of the sanitary authority, but that to safely accomplish this desired change, the conduct of prosecutions for disobedience of the law should be undertaken by the central authority itself through its own officers. In that way there would have been avoidance in the case of local sanitary authorities of elections *ad hoc* which sometimes do so much harm to the constitution of Boards of Guardians by making membership of a public body depend not on general fitness for the work, but on special promises on one special question. The Government, however, did not give effect to these views, and a system now prevails by which an officer who is paid by a local Board out of local funds is regarded in the matter of prosecutions as a servant of the central Board who neither pay nor appoint him. The not unnatural result is that local Boards which may be perfectly sound on the question of vaccination are apt to take a stand on the general principles of local government which they hold to be infringed on this matter, and, taking this stand, they are further apt to come under the mischievous influence of such Boards of Guardians as are controlled by antivaccination cranks, who are not slow to seize the advantage which the present defective condition of the law so readily affords them. Though Government has already burked its promise regarding a Revaccination Bill, an opportunity for raising the whole question again is bound to occur when the five years elapse which measure the life of the Act of 1897; and when vaccination legislation is once more in the melting pot, surely something better and more shapely will emerge than the incomplete and illogical statutes under which the public and the profession at present suffer.

## THE PLAGUE.

### PREVALENCE OF THE DISEASE.

#### CAPE COLONY.

THE Governor's report for the week ending July 13th states that 3 cases of plague occurred in the Cape Peninsula, and 3 deaths from the disease. A telegram dated July 21st states that 3 cases of bubonic plague were notified in Capetown during the preceding forty-eight hours. At Port Elizabeth 2 cases of plague and 2 corpses of persons dead of plague were reported during July 19th and 20th. The total number of cases and deaths from plague in Cape Colony from the commencement of the outbreak until July 21st have been 772 and 368 respectively.

#### INDIA.

For the two weeks ending June 22nd and 29th the plague returns for all India show the deaths from the disease to have been 683 and 821 respectively, an increase of 138 in the latter period. The increase has been brought about by a higher rate of mortality from plague in the Bombay Presidency.

In the city of Bombay the deaths from plague during the weeks mentioned were respectively 49 and 66, and in the Bombay Districts 422 and 581. In other parts of India the plague deaths during the two weeks have shown a lesser degree of mortality, being in Calcutta 22 and 14, Punjab 79 and 28, and the North-West Provinces and Oudh and Kashmir all show a slight decrease in the number of plague deaths. In Belgaum the disease continues to increase, 276 being the number of deaths from plague which occurred during the week ending June 29th.

CONSTANTINOPLE.

Between June 23rd and July 17th, 5 cases of plague occurred in Constantinople. The Sanitary Council in Constantinople has decided that all vessels before leaving the port shall be medically inspected. Two suspected cases of plague, one of which terminated fatally, occurred at Chio.

MARSEILLES.

The passengers from the plague-infected ss. *Laos* detained on the island of Frioul, the quarantine station for Marseilles, have been allowed to land in France. From July 7th until July 18th, 382 passengers were kept in quarantine. The organisation of the station, the methods of disinfection, and the food supplied is being loudly condemned by the French passengers who were quarantined.

PLYMOUTH.

The ss. *Ormuz*, of the Orient line, arrived at Plymouth on July 22nd, having on board two persons with suspected plague. The *Ormuz* left Australia on June 8th, but it was not until July 7th that a coal trimmer who had joined the ship at Sydney developed symptoms suggestive of plague. A second case of similar illness occurred on July 17th, the patient being a baker who joined the ship at Fremantle. None of the passengers were allowed to land at Marseilles or at Gibraltar. Dr. F. M. Williams, the medical officer of health, and Dr. R. T. Reece, one of the medical inspectors of the Local Government Board, boarded the ship on arrival at Plymouth. The patients were transferred to the hospital ship. The passengers after being medically inspected were allowed to land, and the ship after disinfection proceeded on her voyage to London.

# ASSOCIATION INTELLIGENCE.

## COUNCIL.

### NOTICE OF MEETINGS.

MEETINGS of the Council will be held in No. 8 Room, Ladies College, Cheltenham, on Tuesday, July 30th, Wednesday, July 31st, and Thursday, August 1st next, at 9.30 o'clock in the forenoon of each day.

July, 1901. GUY ELLISTON, *Acting General Secretary.*

## NORTH WALES BRANCH.

THE fifty-second annual meeting of this Branch was held on July 9th at the Williams-Bulkeley Arms Hotel, Beaumaris, Dr. G. R. GRIFFITH (Carnarvon) in the chair at the outset.

*Letters* were read from the Home Secretary, acknowledging the receipt of a vote of condolence passed with the Royal Family; from Mrs. Williams, Holyhead, thanking the Council for the vote of condolence passed with her on the death of her husband, Mr. O. T. Williams, the President-elect; and from several members regretting their inability to attend the meeting.

*New Members.*—Mr. A. Thompson Hill, L.R.C.P.& S.Edin. (Llanrwst), and Mr. Ernest Shelton-Jones, M.R.C.S., L.R.C.P. Lond. (Penygroes), were elected members of the Association and Branch.

*Introduction of President-elect.*—Dr. G. R. GRIFFITH, the retiring President, introduced the President-elect, Dr. Robert Parry, J.P. (Carnarvon).—The PRESIDENT thanked the members for the honour conferred upon him, which, owing to the recent death of the late Mr. O. T. Williams, had come upon him somewhat suddenly; he therefore proposed to postpone delivering the customary address until the next meeting in September.

*Vote of Thanks.*—On the motion of the PRESIDENT, seconded by Dr. JOHN ROBERTS (Menai Bridge), a hearty vote of thanks was accorded to Dr. G. R. Griffith for his services as President during the past year.

*University College of South Wales.*—Mr. W JONES MORRIS called attention to the fact that Dr. Isambard Owen had been invited by the Council of the South Wales University College to become Principal in succession to the late Professor Viriamu Jones, F.R.S. He felt proud that a member of the profession had been called upon to take that office, and he did not think it would ill-become them to send a resolution to him, hoping he would accept the office, for they felt proud to think of having his services to guide them in educational Wales. Dr. JOHN ROBERTS (Menai Bridge) seconded the resolution, which was carried unanimously.

*Report of Council.*—Mr. H. JONES ROBERTS (Honorary Secretary) submitted the fifty-second annual report of Council, in which the Branch was congratulated upon its continued prosperity. When it last met at Beaumaris in 1880, the membership numbered 88, whilst now the Branch has 190 members. During the past year five members had died—namely, their President-elect, Mr. O. T. Williams (Holyhead), Mr. Charles Williams (Dyffryn), Dr. Roger Edwards (Colwyn Bay), Mr. R. P. Roberts (Bethesda), and Professor A. W. Hughes (King's College, London), whose death—a martyr to duty—not only Wales, but the empire mourned. The report was adopted.

*Election of Officers for 1902-03.*—Mr. Price Morris (Colwyn Bay) was elected President. Mr. Samuel Griffith (Portmadoc) was re-elected Treasurer. Mr. W. Jones Morris (Portmadoc) and Mr. H. Jones Roberts (Penygroes) were re-elected Honorary Secretaries. The following were elected on the Branch Council: Messrs. W. Lloyd Williams, M.B. (Llanberis), R. H. Mills-Roberts (Llanberis), D. R. Jones (Corwen), J. W. Rowlands (Llanaelhaiarn), J. O. Williams (Barmouth), Roger Hughes (Bala), J. Lloyd-Roberts, M.B. (Colwyn Bay), James Craig, M.B. (Llandudno), and R. A. Prichard (Conway).

*Meetings for 1901-02.*—It was resolved to hold the autumn meeting at Llanberis, the spring meeting at Corwen, and the annual meeting at Llandudno.

*Clubs.*—The resolution *re* clubs from the Shropshire and Mid-Wales Branch was deferred until the next meeting, the Honorary Secretaries being requested to open the discussion.

*Papers.*—The following were read:—Mr. EDMUND OWEN, F.R.C.S. (London): What is Intussusception, and How it should be dealt with.—Mr. R. JAMES HUGHES, M.B. (Denbigh): Treatment of Enlarged Prostate by Vasectomy.—Dr. H. GREY-EDWARDS (Bangor): Septicæmia, with a very High Temperature; Recovery.—Dr. J. E. THOMAS (Bangor): Case of Triplets with Hydramnios.—Mr. HUGH JONES, M.B. (Dolgelly): Inversion of the Uterus.—Professor P. J. WHITE, M.B. (Bangor); First Year's Medical Course at the University College of North Wales.

*Dinner.*—After the meeting the members dined together and entertained Mr. J. Lynn Thomas, F.R.C.S. (Cardiff) and Mr. R. H. Mills Roberts, F.R.C.S. (Llanberis) (members of the Staff of the Welsh Hospital in South Africa); and Mr. Edmund Owen, F.R.C.S., Member of the Hospital Committee. Sir John Williams, Bart., Professor F. T. Roberts, Dr. Isambard Owen, and Colonel Keogh, C.B., R.A.M.C. had also been invited, but wrote to express their regret that they were unavoidably prevented from attending.

## SCOTTISH BRANCHES.

*Conjoint Meeting.*—A very successful joint meeting of the Scottish Branches of the Association was held in Glasgow on July 5th. There was a large attendance, many members being present from Edinburgh, and from several of the county Branches. The members first met in the Students' Union at the University, where through the kindness of the Students' Society they were entertained to afternoon tea. Then a visit was made to the Hunterian Museum, many of the treasures of which were demonstrated by Professor Young and Dr. John H. Teacher. Particular attention was paid to the anatomical and pathological preparations, which have been recently rearranged and catalogued.

*Dinner.*—A visit to the Exhibition followed, and there dinner was served to a large company, Dr. WILLIAM FINDLAY, of Dennistoun, the Vice-President, being in the chair, in the unavoidable absence of the President, Dr. Graham, of Paisley. The toast list was short, the toasts of "The King" and of "The British Medical Association" being suitably proposed by the CHAIRMAN. Dr. WHITELAW, of Kirkintilloch, proposed the health of "The Visitors," this being replied to by Dr. WILLIAM RUSSELL, of Edinburgh; while the health of "The Chairman" was proposed by Dr. FREW, of Kilmarnock. The weather was perfect, and a very enjoyable evening was afterwards spent in the Exhibition grounds.

# BRITISH MEDICAL ASSOCIATION.

## SIXTY-NINTH ANNUAL MEETING.

THE sixty-ninth annual meeting of the British Medical Association will be held at Cheltenham on Tuesday, Wednesday, Thursday, and Friday, July 30th, 31st, August 1st, and 2nd, 1901.

*President:* WILLIAM ALFRED ELLISTON, M.D., Consulting Surgeon to the East Suffolk and Ipswich Hospital.

*President-Elect:* GEORGE BAGOT FERGUSON, M.D., Senior Surgeon to the Cheltenham Hospital.

*President of the Council:* JOHN ROBERTS THOMSON, M.D., F.R.C.P.Lond., Consulting Physician to the Royal Victoria Hospital and to the National Sanatorium for Diseases of the Chest, Bournemouth.

*Treasurer:* ANDREW CLARK, F.R.C.S., Surgeon to the Middlesex Hospital and Lecturer on the Principles and Practice of Surgery, Middlesex Hospital School.

An Address in Medicine will be delivered by JAMES FREDERICK GOODHART, M.D., LL.D., Consulting Physician, Guy's Hospital.

An Address in Surgery will be delivered by Sir WILLIAM THOMSON, C.B., M.D., F.R.C.S.I., Surgeon to the Richmond Surgical Hospital, and Honorary Surgeon to His Majesty the King in Ireland.

The Scientific Business of the Meeting will be conducted in thirteen Sections, as follows, namely:

### A.—MEDICINE.

*Ladies' College: Education Room.*

*President:* EDWARD THOMAS WILSON, M.B., F.R.C.P. *Vice-Presidents:* RAYNER W. BATTEN, M.D., F.R.C.P.; SAMUEL WEST, M.D., F.R.C.P.; OSCAR CLARK, M.B. *Honorary Secretaries:* ROBERT KIRKLAND, M.B., 5, Crescent Terrace, Cheltenham; FREDERICK JOHN SMITH, M.D., F.R.C.P., 138, Harley Street, W.

The following discussions have been arranged:

Wednesday, July 31st.—Chronic Diseases of Joints commonly included in the terms Chronic Rheumatism, Osteo-arthritis, and Rheumatic Gout. To be opened by Dr. A. E. Garrod. The following will take part in the discussion: Professor Osler, Dr. A. P. Luff, Dr. Herringham, Dr. Hawthorne, Dr. Calwell, Miss J. Cock, M.D., Dr. E. J. Cave, Dr. L. Knowsley Sibley, Dr. Sarat K. Mullick, and Dr. Armstrong.

Thursday, August 1st.—Peripheral Neuritis in Beer Drinkers, its Precise Causation and Diagnosis. To be opened by Dr. E. S. Reynolds; to be illustrated with lantern slides of cases. The following gentlemen will take part in the discussion: Professor Dixon Mann, Dr. A. P. Luff, Dr. Kelynack, Dr. Michell Clarke, Dr. Nathan Raw, and Dr. Henry Waldo.

The following papers have been announced:

BAMPTON, A. H., M.D. Arsenic as a Blood Tonic; its Failure as demonstrated during the late Epidemic amongst Beer Drinkers.
BARDSWELL, Noel, M.D. Clinical and Experimental Observations on the Effects of Forced Feeding in Normal and Tuberculous People.
CAMPBELL, Harry, M.D. Treatment of Bronchitis.
CAMPBELL, H. J., M.D. The Treatment of Cardio-arterial Disease.
CATON, Richard, M.D. The Means of Arresting Acute Endocarditis.
CHOWRY-MUTHU, D. J. A., M.D. 1. The Presence of Tubercle Bacilli in Cases of Phthisis. 2. The Inhalation of Formaldehyde as an Aid in the Open-air Treatment of Phthisis.
DEMPSEY, Alex., M.D. Case of Acute Lymphatic Leukæmia, with Pathological Report.
EWART, William, M.D. 1. A Preliminary Note on Intravenous Injection of Protargol in Acute Pneumonia, with General Remarks on the "Silver" Treatment of Pneumonia. 2. A Note on a Method for the Surgical Treatment of Tuberculous Meningitis.
HADDON, John, M.D. Symptoms of the So-called Change of Life in Women occurring in Men and both due to Dietetic Errors.
HAWTHORNE, C. O., M.D. Occurrence of Optic Neuritis in Anæmia.
JONES, E. Lloyd, M.D. On the Physical Examination of the Pulmonary Apices.
LOW, W. Stuart, L.R.C.P. Mucin in Gastro-intestinal Irritation and Ulceration.
LUFF, A. P., M.D. On the Composition and Therapeutic Uses of the Cheltenham Waters.
MULLICK, Sarat K., M.B. Factors in the Diagnosis of Disease.
OLDFIELD, Josiah, L.R.C.P. Dietary and the Use of Oil in Chronic Constipation.
RAW, Nathan, M.D. Pneumococcic Arthritis, with Reference to Seven Cases.
RIST Dr. (Paris). On the Bacteriology of Fœtid and Gangrenous Suppuration, which will be illustrated with microscopic slides and agar culture tubes.
RIVIÈRE, Dr. (Paris). Calomel in the Treatment of Alimentary Diseases.
THOMSON, StClair, M.D. Meningitis from Sphenoidal Suppuration, Two Cases with One Necropsy.
WILKIN, Griffith, C., L.R.C.P. Rheumatic Endocarditis.
WILLIAMS, Chisholm, L.R.C.P. High Frequency Electrical Currents in the Treatment of Pulmonary Tuberculosis.

Three tubes sent by Professor Dixon Mann will be exhibited, showing under the microscope arsenical crystals from (1) horny scales due to hyperkeratosis of the epidermis, (2) from hair, (3) from nail clippings. All from cases suffering from arsenical beer poisoning.

### B.—SURGERY.

*Ladies' College: Division III.*

*President:* REGINALD HARRISON, F.R.C.S. *Vice-Presidents:* HENRY EDWARD WADDY, M.R.C.S.; GILBERT BARLING, F.R.C.S.; WILLIAM ROBERT BUCKELL, F.R.C.S. *Honorary Secretaries:* FREDERICK WILLIAM STORRY, M.R.C.S., Dirleton House, Stroud, Gloucester; HERBERT BRAMWELL, M.D., F.R.C.S.Edin., 32, Promenade, Cheltenham; JOHN MURRAY, F.R.C.S., 110, Harley Street, W.

The following discussions have been arranged:

1. Renal Tension; its Treatment by Surgical Means. To be opened by Mr. Reginald Harrison, F.R.C.S. The following gentlemen will take part in the discussion: Mr. W. D. Spanton, F.R.C.S., Dr. David Newman, and Dr. J. Ward Cousins, F.R.C.S.

2. Gastro-jejunostomy in Ulcer of the Stomach and Duodenum and Pyloric Stenosis. To be opened by Mr. Gilbert Barling, F.R.C.S. The following gentlemen will take part in the discussion: Mr. A. W. Mayo Robson, F.R.C.S., Mr. George Heaton, F.R.C.S., Mr. Thomas Sinclair, F.R.C.S., Mr. B. G. A. Moynihan, F.R.C.S., Mr. L. A. Bidwell, F.R.C.S., Mr. Sinclair White, F.R.C.S., Mr. A. B. Mitchell, F.R.C.S.I., Mr. F. C. Wallis, F.R.C.S., Mr. C. A. Morton, F.R.C.S., Mr. J. Rutherford Morison, F.R.C.S., Dr. J. Ward Cousins, F.R.C.S., and Mr. J. Lynn Thomas, F.R.C.S.

3. Injuries of Joints, with special Reference to their immediate and Remote Treatment by Massage and Movement. To be opened by Mr. Howard Marsh, F.R.C.S. The following gentlemen will take part in the discussion: Mr. R. H. Anglin Whitelocke, F.R.C.S., Mr. T. V. Jackson, F.R.C.S.E., Mr. F. F. Burghard, F.R.C.S., Mr. W. H. Brown, F.R.C.S.I., Mr. J. Jackson Clarke, F.R.C.S., and Dr. J. Ward Cousins, F.R.C.S.

The following papers have been announced:

BEATSON, Geo. T., M.D. The Treatment of Cancer of the Breast by Oöphorectomy and Thyroid Extract.
BRAMWELL, Herbert, F.R.C.S.Edin. Short notes on a case of Movable Kidney producing Pyloric Stenosis and Constriction of the Duodenum by Peritoneal Bands, with specimen.
BURGHARD, F. F., F.R.C.S. The Treatment, Operative and Non-operative, of Congenital Dislocation of the Hip.
DUNBAR, Eliza Walker, M.D. The Reduction of Old Dislocations, illustrated by two cases of five and six years' standing.
FERGUSON, G. B., M.D. Four Operations for Perforated Gastric Ulcer.
HEATON, G., F.R.C.S. A case of Partial Excision of the Pancreas for Multilocular Cystic Tumour.
HUTCHINSON, J., jun., F.R.C.S. Recent Improvements in the Operative Treatment of Renal Calculus.
MORISON, J. Rutherford, F.R.C.S. The After-history of a series of cases of Gastric Ulcer and Pyloric Stenosis treated by Pyloroplasty.
NEWMAN, David, M.D., F.R.C.S. The Symptomatology and Surgical Treatment of Movable Kidney.
PARRY, R. H., F.R.C.S. On Operation for Femoral Hernia.
WHITELOCKE, A. H. Anglin, F.R.C.S. A Case of Hydatid of the Right Pleura successfully treated by Operation.

### C.—OBSTETRICS AND GYNÆCOLOGY.

*Ladies' College: Nos. 1 and 2.*

*President:* Professor JOHN WILLIAM BYERS, M.D. *Vice-Presidents:* ALFRED SQUARE COOKE, M.R.C.S.; WILLIAM DUNCAN, M.D. *Honorary Secretaries:* Miss EVELINE A. CARGILL, M.D., Lansdown Lodge, Lansdown Road, Cheltenham; COMYNS BERKELEY, M.D., 53, Wimpole Street, W.

The Section will be opened with a short introductory address by the President.

The following discussions have been arranged:

1. The Causation, Prevention, and Treatment of Miscarriage. To be opened by Dr. Peter Horrocks. The following gentlemen will take part in the discussion: Dr. Munro Kerr, Dr. A. E. Aust Lawrence, Dr. A. V. Macan, Dr. Alfred J. Smith, Dr. W. J. Smyly, Dr. John Williams,

Dr. Thomas Wilson, Dr. Halliday Croom, Dr. Alexander Dempsey, Dr. Fred Edge, Mr. G. A. Hawkins-Ambler, Dr. Lycett, Dr. Robert P. R. Lyle, Dr. McCall, Dr. Wm. Duncan, Dr. J. Dysart McCaw, and Dr. Amand Routh.

2. The Diagnosis and Treatment of Metritis and its Relationship to Malignant Disease. To be opened by Dr. John Campbell, F.R.C.S. The following will take part in the discussion: Dr. Mary Scharlieb, Dr. Herbert Snow, Dr. Munro Kerr, Dr. A. E. Aust Lawrence, Dr. A. V. Macan, Dr. Alfred J. Smith, Dr. W. J. Smyly, Dr. Thomas Wilson, Dr. Inglis Parsons, Dr. James Murphy, Dr. Jessett, Dr. Wm. Duncan, Dr. Amand Routh, and Dr. C. E. Purslow.

The following papers have been announced:

Boyd, Mrs. F., M.D. A Case of Twin Pregnancy, Extrauterine and Intrauterine.
Croom, Halliday, M.D. Deciduoma Malignum.
Duncan, W., M.D. When and How to Operate on Uterine Fibroids.
Hastings, Gilford, F.R.C.S.Ed Ovarian Pregnancy.
Haultain, F. W. N., M.D. The Reduction of Chronic Uterine Inversion by Abdominal Hysterotomy, with a Successful Case.
Hawkins-Ambler, G. A., F.R.C.S. On Shock in Abdominal Operations.
Horrocks, P., M.D., will show a Specimen with Microscopic Sections of Deciduoma Malignum.
Kerr, Munro, M.B. Notes on Three Successful Cases of Cæsarean Section.
Lockyer, C. H. J., M.D. A Case of Cystic Fibromyoma in a Single Woman of 23 years: Myomectomy, Recovery.
Martin, Christopher, F.R.C.S. On Extirpation of the Vagina and Uterus in Cases of Intractable Prolapse.
Murphy, James, M.D. Notes on Six Cases of Inversion of the Uterus.
Parsons, J. Inglis, M.D. Further Report on a New Operation for Prolapse of the Uterus with Notes of 40 Cases.
Scharlieb, Mrs. Mary, M.D. On Metritis.
Smith, Alfred J., M.B. A Successful Laparotomy for Abdominal Pregnancy with Removal of the Fœtus (full term), Placenta and Gestation sac *en masse*. The specimen will be shown.
Snow, Herbert, M.D. Prevention in Gynæcology.

## D.—State Medicine.

*Ladies' College: Oxford Room.*

*President:* Shirley Murphy, M.R.C.S. *Vice-Presidents:* George Haynes Fosbroke, D.P.H.; Archibald Kerr Chalmers, M.D. *Honorary Secretaries:* John Henry Garrett, M.D., 24, Promenade, Cheltenham; John Charles Jackson, D.P.H., Town Hall, Fulham, S.W.

The following discussions have been arranged:

Wednesday, July 31st.—The Relation between County and District Sanitary Administrations. To be opened by Dr. F. T. Bond. The following gentlemen will take part in the discussion: Dr. Handford, Dr. Lloyd Roberts, Dr. Tubb Thomas, and Dr. Fosbroke.

Thursday, August 1st.—Enteric Fever in its Public Health Aspects. To be opened by Dr. Houston. The following gentlemen will take part in the discussion: Dr. C. H. W. Parkinson, Dr. E. M. Smith, and others.

Papers have been promised by Dr. Savage, Dr. W. Brown, Dr. Bryett, Dr. Kenwood, Dr. Priestley, Dr. Handford, Dr. Cooper-Pattin, and Dr. Dixey.

Friday, August 2nd.—The Diseases of Occupations. To be opened by Dr. T. M. Legge.

Papers have been promised by Dr. T. Oliver, Dr. Reid, Dr. Murray, Dr. Dearden, Dr. D'Arcy Ellis, Dr. Haworth, Dr. Greaves, Dr. Prosser White, Dr. H. H. Scott, and Dr. Clayton.

The following papers have also been announced:

Adams, P. Targett, M.R.C.S. Port Sanitary Administration and Control of Plague.
Beardmore, Russell, M.D. (Title not received.)
Davies, D. S., M.D. Plague and its Prevention as a Disease communicable from Animals to Man.
Dhingra, M.L., M.D. The Fallacy of the Permanganate Disinfection of Wells.
Drysdale, C. R., M.D. 1. Lower Birth-rates considered as the Real Cause of Lower Death-rates. 2. The Prevention of Syphilis. Professor Fournier's League.
Macleod, H. G., M.D. The Neglect of Sanitation in Everyday Life.
Savage, W. G., M.D. Neutral Red in the Routine Bacteriological Examination of Water.
Seaton, E., M.D. Municipal and County Laboratory Work.

## E.—Psychological Medicine.

*Wednesday, July 31st, Ladies' College, No. 5; Thursday and Friday, August 1st and 2nd, Ladies' College, Cambridge Room.*

*President:* James Beveridge Spence, M.D. *Vice-Presidents:* James Greig Soutar, M.B.; James Chambers, M.D. *Honorary Secretaries:* Maurice Craig, M.D., Bethlem Royal Hospital, Lambeth Road, S.E.; Arthur Allen Deykin Townsend, M.R.C.S., Barnwood House, Gloucester.

The following discussions have been arranged:

Wednesday, July 31st.—The *Rôle* of Toxic Action in the Pathogenesis of Insanity. To be opened by Dr. Ford Robertson.

Thursday, August 1st.—Puerperal Insanity. To be opened by Dr. Robert Jones.

Friday, August 2nd.—Feeble-Minded Children: Diagnosis and Treatment. To be opened by Dr. Francis Warner.

The following will take part in the discussions: Dr. David Bower, Dr. Shuttleworth, Dr. Outterson Wood, Dr. Fletcher Beach, Dr. Handfield Haslett, Dr. Nathan Raw, Dr. Soutar, Dr. Robert Jones, Dr. Edwin Goodall, Dr. Edridge-Green, Dr. Weatherly, Dr. Seymour Tuke, Dr. A. Helen Boyle, and Dr. Pasmore.

The following papers have been announced:

Andriezen, Lloyd, M.D. The Psychology of the Degenerate with Remarks on Treatment.
Edridge-Green, F. W., M.D. The Evolution of a Perception Centre.
Goodall, Edwin, M.D. (for Drs. Goodall and Peebs Maclulich). Remarks upon the Anthropological Examination of Asylum Patients with a Scheme for same, and the Average Results of Examination of Twenty-seven Control Cases.
Schofield, A., M.D. Some Conditions of Success in the Treatment of Neurosthenia.
Shaw, Claye, M.D. Colitis or Asylum Dysentery.
Steen, R. H., M.D. Debated Points in Asylum Plans.
Tuke, Seymour, M.B. Modern Treatment of the Insane.
Turner, John, M.B. The Physical Basis of Melancholia.
Weatherly, L., M.D. The Evolution of Delusions in Melancholia.

## F.—Anatomy and Physiology.

*Ladies' College: No. 10.*

*President:* Professor Alex. Macalister, M.D., F.R.S. *Vice-Presidents:* Thomas Smith Ellis, M.R.C.S.; William Henry Thompson, M.D., F.R.C.S. *Honorary Secretaries:* Ernest Christison Carter, M.D., Napier House, Pittville Gates, Cheltenham; Richard James Arthur Berry, M.D., F.R.S.E., 4, Howard Place, Edinburgh.

The following discussions have been arranged:

1. The Topographical Anatomy of the Thoracic and Abdominal Viscera from a Systematic and Clinical Standpoint. To be opened by Professor Christopher Addison.

2. Experimental Glycosuria. To be opened by Dr. F. W. Pavy, F.R.S. The following gentlemen will take part in the discussion: Professor Vaughan Harley, M.D., Professor W. H. Thompson, M.D., F.R.C.S., Dr. A. P. Luff, Dr. R. Hutchison, etc.

The following papers have been announced:

Anderson, Professor R. J On Rotation of the Forearm.
Edington, G. H., M.D. A Short Account of a Specimen in which Bilateral Deviation of the Internal Carotid Artery was present.
Edridge-Green, F. W., M.D. On the Function of the Rods and Cones of the Retina.
Ellis, T. S., M.R.C.S. The Physiology of the Lower Limb and the Military March.
Haig, Alexander, M.D. The Human Body as an Analytical Laboratory.
Harman, N. Bishop, M.B. 1. Socia Thymi Cervicalis and Accessory Thymus. 2. Facial Lachrymal Bones in a Native African Skull.
MacWilliam, Professor J. A. Observations on the State of the Vascular System in Death by Asphyxia.
Sherrington, Professor C. S. (Title not yet received).

## G.—Pathology and Bacteriology.

*Wednesday, July 31st, Ladies' College, Cambridge Room: Thursday and Friday, August 1st and 2nd, Ladies' College, No. 5.*

*President:* John Wichenford Washbourn, M.D., F.R.C.P. C.M.G. *Vice-Presidents:* Harold J. Stiles, M.B.; Professor Rubert William Boyce, M.B. *Honorary Secretaries:* Walter Sydney Lazarus-Barlow, M.D., Westminster Hospital, S.W.; Edgar George Trevithick, M.D., 24, Promenade, Cheltenham.

The following discussions have been arranged:

Wednesday, July 31st.—The Pathology of Lymphadenoma. To be opened by Professor J. Michell Clarke, M.D. The following gentlemen will take part in the discussion: Dr. Lovell Gulland, Dr. Theodore Fisher, Mr. Harold Stiles, and Mr. W. G. Spencer.

Thursday, August 1st.—Pathological Conditions Caused by the Pneumococcus. To be opened by Mr. A. G. R. Foulerton, F.R.C.S. The following gentlemen will take part in the discussion: the President, Dr. Eyre, Professor Michell Clarke, Dr. Theodore Fisher, and Dr. W. S. Lazarus-Barlow.

The following papers have been announced:

Douglas, J. J., M.D. Note on the arrangement of "Nissl Bodies."
Eyre, J. W., M.D. 1. Further notes on Media of Standard Reaction. 2. New Centrifugal Machine specially designed for Examination of Milk. (Demonstration.)

FLEXNER, Professor Simon. A Comparative Study of Dysenteric Bacilli.
FOULERTON, A. G. R., F.R.C.S., and HILLIER, W. F., L.R.C.P. Note on the Conditions of the Urine in Tuberculous Infections.
GLEY, Professor (Paris). Variations of Iodine in the Thyroid in Graves's Disease and Principally in the Blood after Removal of the Thyroid.
GOLDSMITH, G. Harvey, M.B. The Hæmoglobin Value of the Red Blood Corpuscles.
HUNTER, William, M.B. The Diagnosis of the Presence of B. Coli Communis by means of Neutral Red.
LAZARUS-BARLOW, W. S., M.D. Typhoid Fever without Intestinal Lesion.
LONGRIDGE, C. J. N., M.D. Focal Necroses of Liver.
NUTTALL, A. W., F.R.C.S., and HUNTER, W., M.B. The Bacteriology of Cerebro-spinal Meningitis.
POYNTON, F. J., M.D., and PAINE, A., M.D. The Bacteriology of Rheumatic Fever.
SOLLY, E., F.R.C.S. The Causation of Rheumatoid Arthritis.
STEEN, R. H., M.D. An Electrothermal Paraffin Bath. (Demonstration.)
SYMES, J. Odery, M.D. The Bacteriological Examination of the Blood.

## H.—OPHTHALMOLOGY.

*Ladies' College: No. 3.*

*President:* WALTER HAMILTON HYLTON JESSOP, M.B., F.R.C.S. *Vice-Presidents:* ERNEST DYKES BOWER, F.R.C.S.Ed.; JOHN TATHAM THOMPSON, M.B. *Honorary Secretaries:* RAYNER DERRY BATTEN, M.D., 124, Harley Street, W.; JOHN ALEX. BOWER, M.B., Portland House, Cheltenham.

The following discussions have been arranged:

1. The Diagnosis, Prognosis, and Treatment (Non-operative) of Progressive Myopia. To be opened by Mr. Priestley Smith, M.R.C.S.

2. The Relation of Gonorrhœa to Diseases of the Eye (exclusive of Purulent Ophthalmia). To be opened by Mr. J. B. Lawford, F.R.C.S.

3. The Varieties and Treatment of After-Cataract. To be opened by Mr. Richardson Cross, F.R.C.S.

The following will take part in the discussions: Dr. Landolt (Paris), Professor Nordensen, Mr. Henry Power, Mr. Quarry Silcock, Mr. D. Little, Mr. T. H. Bickerton, Mr. Simeon Snell, Mr. C. E. Shaw, Mr. Hugh Thompson, Mr. Kenneth Campbell, Mr. Reginald Yeld, Miss Ellaby, Mr. Karl Grossmann, Mr. Jno. Hern, Mr. R. S. Hamilton, Mr. A. S. Percival, Mr. Doyne, Mr. G. Hartridge, Mr. Edgar Stevenson, Mr. G. W. Roll, and Mr. W. W. Sinclair.

The following papers have been announced:

BEAUMONT, W. M., M.R.C.S. Plea for Uniformity in the Notation of the Angles of Cylindrical Lenses, and in the Tinting of Spectacles.
BLAIR, Charles, F.R.C.S. (1) An Unusual Form of Keratitis associated with a General Skin Eruption, with drawing. (2) A New Portable Refractometer.
BOWER, John A., M.B. Remarks on Suprarenal Gland in Ophthalmology.
CARGILL, L. Vernon, F.R.C.S. Notes on Ophthalmic Experiences in the Imperial Yeomanry Hospital, South Africa.
COULTER, R. J., M.B. Some interesting Visual Fields.
DARIER, A., M.D. Paris. The latest Therapeutical Discoveries in Ophthalmology—Acoine, Dionine, Epinepheine, etc.
EDRIDGE-GREEN, F. W., F.R.C.S. The Essentials of a Test for Colour Blindness.
FERGUS, Freeland, M.D. Further Observations on Sympathetic Nerve Degenerations.
GROSSMAN, Karl, M.D. Ivory Exostosis of Orbit, observed for over sixteen years, and operated on in 1886, 1892, 1895, 1898.
HAMILTON, Robert J., F.R.C.S. Edin. Hypopyon Ulcers of the Cornea.
HARTRIDGE, G., F.R.C.S. Various Preparations of Silver in Ophthalmic Work.
HERBERT, H., F.R.C.S., Major I.M.S. (1) Treatment of Hypopyon Ulcers of the Cornea. (2) Preliminary Note on a Form of Superficial Keratitis with a Special Micro-organism. With microscopic slides.
HERN, Jno., M.D., F.R.C.S.Ed. The Results of Peritomy in Cases of Keratitis and Episcleritis.
JONES, Hugh E., M.R.C.S. A Case of Gunshot Wound of the Orbit, with Concussion Injury of the Choroid, etc., Skiagraph and Sketch of Fundus.
PERCIVAL, A. S., M.B. Periscopic Glasses.
POWER, Henry, F.R.C.S. A Plea for the Occasional Performance of Depression for the Cure of Cataract.
ROLL, G. W., F.R.C.S. Notes on the Operation of Hess for Ptosis.
STEPHENSON, Sydney, F.R.C.S.Edin., and CARPENTER, George, M.D. A Note upon Tuberculosis of the Choroid, illustrated with Ophthalmic Pictures and Microscopic Specimens.
THOMPSON, John Tatham, M.B. A Case of Symmetrical Bullous Keratitis of Both Eyes.
WILLIAMS, Richard, M.R.C.S. Treatment of Ulcers with Hypopyon.
WRAY, Chas., F.R.C.S. "Graphs" showing Frequency of the Commonest Errors of Refraction.

Pathological specimens and drawings have been promised by Dr. Rayner, Dr. Batten, Mr. Chas. Blair, Dr. Charlotte Ellaby, Dr. Karl Grossmann, Mr. Marcus Gunn, Mr. Walter Jessop, Mr. J. B. Lawford, Mr. A. S. Percival, Mr. T. Holmes Spicer, and Messrs. Stephenson and Carpenter.

## I.—DISEASES OF CHILDREN.

*Ladies' College: No. 4.*

*President:* FREDERIC EVE, F.R.C.S. *Vice-Presidents:* CHARLES FIRMIN CUTHBERT, M.R.C.S.; EDWARD MANSEL SYMPSON, M.D. *Honorary Secretaries:* A. GRAHAM FOLJAMBE FORSTER, M.D., 4, Imperial Square, Cheltenham; FREDERICK E. BATTEN, M.D., 124, Harley Street, W.

The following discussions have been arranged:

Wednesday, July 31st.—The Treatment of Intussusception. To be opened by Mr. Bernard Pitts, F.R.C.S. The following gentlemen will take part in the discussion: Dr. D. B. Lees, Mr. D'Arcy Power, Mr. McAdam Eccles, Mr. F. C. Abbott, Mr. Jordan Lloyd, Mr. H. S. Collier, Mr. James Murphy, Mr. James Paul Bush, and Mr. Harold J. Stiles.

Thursday, August 1st.—Early Diagnosis of Acute Specific Fevers. To be opened by Dr. F. Foord Caiger. The following gentlemen will take part in the discussion: Dr. E. W. Goodall, Dr. F. J. Poynton, Dr. J. H. Thursfield, Dr. Henry Ashby, and Dr. W. J. Tyson.

The following papers have been announced:

ABBOTT, F. C., M.B., F.R.C.S. Intrauterine Rickets.
BAMPTON, A. H., M.D. Mumps associated with Endocarditis.
BATTEN, F. E., M.D. Suppurative Pericarditis in Children.
EWART, William, M.D., and DICKINSON, W. Lee, M.D. Two Cases of Chronic Hydrocephalus in Infants treated by Tapping and by the Introduction of Aseptic Air in the place of the Fluid.
HERRINGHAM, W. P., M.D. General Œdema without Albuminuria.
PRITCHARD, Eric, M.D. Overfeeding of Infants.
STILES, Harold J., M.B. Radical Cure of Inguinal Hernia in Infants and Young Children.
STILL, G. F., M.D. Suppurative Pericarditis in Children.
THURSFIELD, J. H., M.D. Widal's Serum Reaction in the Diagnosis of Typhoid Fever in Children.
TUBBY, A. H., M.B., F.R.C.S. Results of Tendon Grafting.
WHITE, Sinclair, F.R.C.S. Ultimate results of Tendon Grafting in Infantile Paralysis.

## J.—LARYNGOLOGY AND OTOLOGY.

*Ladies' College: No. 9.*

*President:* T. MARK HOVELL, F.R.C.S.Edin. *Vice-Presidents:* ARTHUR WIGELSWORTH ORWIN, M.D.; ROBERT HENRY WOODS, M.B. *Honorary Secretaries:* WILLIAM LAMB, M.D., 22, Temple Row, Birmingham; JAMES CHRISTOPHER REGINALD BRAINE-HARTNELL, M.R.C.S., Cotswold Sanatorium, near Stroud.

The following discussions have been arranged:

1. The Treatment of Nasal Obstruction from Intranasal Causes other than Mucous Polypus. To be opened by Mr. F. Marsh, Dr. Brown Kelly, and Mr. C. A. Parker.

2. The Local Treatment of Tuberculosis of the Larynx. To be opened by Dr. Middlemass Hunt, Dr. Barclay Baron, and Mr. Richard Lake.

The following gentlemen will take part in the discussions: Professor Ferd. Massei (Naples), Dr. Watson Williams, Dr. Frederick Spicer, Dr. Charles Warden, Dr. L. H. Pegler, Dr Logan Turner, Dr. Adolph Bronner, Dr. Dundas Grant, Mr. G. P. Field, Dr. StClair Thomson, Dr. Milligan, Dr. Scanes Spicer, Dr. R. H. Woods, Dr. Kinsey Morgan, jun., Dr. Jobson Horne, Dr. Griffith Wilkin, and Dr. W. Permewan.

The following papers have been announced:

BRONNER, Adolph, M.D. Notes of a Case of Multiple Papillomata of the Larynx treated Locally by Formalin.
COLLIER, Mayo, M.S.Lond., F.R.C.S. Chronic Non-Suppurative Disease of the Middle Ear: its Causation and Treatment.
FIELD, George P., M.R.C.S. Aural Cases from South Africa.
GRANT, Dundas, M.D. (1) Some Details in Eustachian Catheterisation (2) Explanation of Appearances in some Cases of Acute Lacunar Tonsillitis which Simulate Excavating Ulcers. (3) Hypertrophy of the Anterior Lip of the Hiatus Semilunaris.
HARING, N. C., M.B. Multiple Papillomata of the Larynx.
HORNE, Jobson, M.B. Title not received.
LACK, Lambert, M.D. The Removal of Tonsils in Adults.
LAMB, W., M.D. Notes of Two Cases, in which Hypertrophic Catarrh of the Larynx preceded the Development of Papillomata.
MCKEOWN, David, M.D. Defects and Insufficiency of the Commonly Accepted Theory of Adenoid Deafness.
MACKENZIE, Hunter, M.D. The Treatment of Laryngeal Growths in Children.
MACKIE, Dr. (1) Practical Points in the Treatment of Nasal Suppuration especially of the Accessory Sinuses. (2) Note on the Use of Ethyl Chloride as a General Anæsthetic in Nasal Surgery.
MILLIGAN, W., M.D. Some Practical Points in connection with the Technique of Skin Grafting in Mastoid Operations.
ONODI, Professor. (1) Demonstration of Photographs of Preparations, showing the Relation of the Lower Laryngeal Nerves to the Cardiac and Sympathetic Nerves. (2) Case of Bone below the Glottis.
PEGLER, L. H., M.D. *Morcellement* of the Tonsils.
PERMEWAN, W., M.D. Case of Laryngeal Paralysis Due to Recent Syphilis.

SPICER, Scanes, M.D. A Case of Sunken Nasal Bridge Treated by the Subcutaneous Injection of Sterilised Paraffin, with Casts of the Nose before and after Treatment.
TILLEY, Herbert, M.D. (1) Case of Aural Exostosis Complicated by Mastoid Suppuration. (2) Notes of a Case of Chronic Frontal Sinus Empyemata Presenting Unusual Features. (3) Notes of a Case of Bilateral Frontal Sphenoidal and Maxillary Empyemata with Chronic Mastoid Suppuration.
WINGRAVE, Wyatt, M.D. Conditions simulating Adenoids.
WOODS, R. H., M.B. A case of Thyrotomy for Laryngeal Tuberculosis.

A lantern demonstration with stereoscopic slides will be given by Dr. Watson Williams.

## K.—TROPICAL DISEASES.

*Ladies' College: Calisthenic Room.*

*President:* Major RONALD ROSS, F.R.C.S., F.R.S., I.M.S. (retired). *Vice-Presidents:* WILLIAM JOHNSON SMITH, F.R.C.S.; JAMES CANTLIE, F.R.C.S. *Honorary Secretaries:* MAX F. SIMON, M.D., C.M.G., 429, Strand, W.C.; JOHN FRANCIS JOHNS, M.D., 3, Lansdown Place, Cheltenham.

The following discussions have been arranged:

Wednesday, July 31st.—Stone in the Tropics. To be opened by Mr. P. J. Freyer.

Thursday, August 1st.—The Prevention of Malaria.

Friday, August 2nd.—The Maladies of European Children in Hot Climates. To be opened by Dr. A. Crombie.

On Wednesday the business will be introduced by a short address from the President, Major Ronald Ross, F.R.S.

The following gentlemen will take part in the discussions: Dr. Patrick Manson, Mr. James Cantlie, Dr. A. Crombie, Mr. P. J. Freyer, Dr. M. F. Simon, Dr. Edward Henderson, and others.

The following papers have been announced:

ANNETT, H. E., M.D. The Life-History of Ankylostoma Duodenale.
BUCHANAN, W. J., Major, I.M.S. A Further Note on the Etiology of Epidemic Cerebro-Spinal Meningitis.
CANTLIE, James, F.R.C.S. Four Cases of Liver Abscess.
DOCKRELL, Morgan, M.D. Parangi.
DUNCAN, Andrew, M.D. Tropical Typhoid.
DUTTON, J. Everett, M.B. Some Points Connected with Human Filariasis.
ELLIS, W. Gilmore, M.D. Some Notes on Lunacy in the Straits Settlements.
GALLOWAY, D. J., M.D. (Singapore). The Oral Condition in Sprue.
GIMLETTE, J. D., L.R.C.P. (Pahang, Federated Malay States). On an Epidemic of Zinc Poisoning in the Tropics.
MACGREGOR, Sir William, K.C.M.G. Notes on Antimalarial Measures now being taken in Lagos.
MAXWELL, Preston, M.B. Filarial Abscess.
MAYNARD, F. P., F.R.C.S., Major I.M.S. Ophthalmic Complications in Plague.
NUTTALL, G. H. F., M.D. (Title not received.)
ROSS, Major Ronald, F.R.S. Remarks on the Selection of the Proper Measures to be adopted against Malaria under Varying Local Conditions.
SANDWITH, F. M., M.D. Note on the Entrance of Ankylostoma Embryos into the Human Body by Means of the Skin.
SMITH, W. Johnson, F.R.C.S. (Title not received.)
STEWART, C. Balfour, M.B. Notes on Plague.
WILLIAMSON, G., M.D. (Larnaca, Cyprus). Notes on Cyprus Fever.
YOUNG, J. M., M.D. The Prevention of Malaria in Hong Kong.

## L.—NAVY, ARMY, AND AMBULANCE.

*Ladies' College: Kindergarten.*

*President:* Deputy-Surgeon-General W. G. DON, M.D. (ret.), A.M.S., *Vice-Presidents:* ANDREW CLARK, F.R.C.S.; Surgeon-General THOMAS O'FARRELL, A.M.S. *Honorary Secretaries:* Surgeon-Captain WILLIAM BALFOUR FERGUSSON, M.D., Hazelbury House, Painswick; Surgeon-Captain THOMAS HUGH DICKSON, M.B., H.M.'s Customs House, Lower Thames Street, E.C.

The Section will be opened with a short address by the President.

The following discussion has been arranged:

On the Organisation of the Military Medical Services. The following gentlemen will take part in the discussion: Surgeon-General J. B. Hamilton, M.D., Surgeon-General R. Harvey, C.B., D.S.O., Surgeon-Major Hutton, Surgeon-Lieutenant-Colonel J. E. Squire, M.D., Surgeon-Major Caverhill, M.B., Surgeon-Captain J. Cantlie, M.B., Surgeon-Captain A. Macgregor, M.D., Surgeon-Captain Atwood Thorne, M.B., Dr. A. R. Friel, and Surgeon-Major S. L. Haynes, M.D.

Papers will be read on The Disposal of Wounded in Naval Actions, and on the Healthfulness of Modern Warships by Fleet-Surgeon G. Kirker, R.N., Staff-Surgeon W. E. Home, R.N., and Surgeon F. H. A. Clayton, M.D., R.N., followed by a discussion in which Admiral Borlaise Warren, Inspector-General Belgrave Ninnis, M.D., R.N., Inspector-General A. Turnbull, M.D., R.N., and Surgeon-Lieutenant-Colonel J. E. Squire, M.D., will take part.

The following papers have also been announced:

CANNEY, Leigh, M.D. Airborne Typhoid in Armies.
CANTLIE, Surgeon-Captain J., M.B. Medical Cadet Corps.
CAVERHILL, Surgeon-Major, M.B. Some Notes on Typhoid Inoculation. (Followed by a discussion).
COLLIE, R. J., M.D. The Ambulance and Home Nursing Classes of the London School Board.
HALL-EDWARDS, J., L.R.C.P. Roentgen-Ray Work in South Africa.
MACCORMAC, Sir William, Bart., K.C.B., F.R.C.S. Some Remarks by way of Contrast on War Surgery, Old and Recent.
WARD, Captain W. A., R.A.M.C. Field Transport for Sick and Wounded.

## M.—DERMATOLOGY.

*Ladies' College: Library.*

*President:* JOHN JAMES PRINGLE, M.B. *Vice-Presidents:* EDWARD DILLON MAPOTHER, M.D., WALLACE BEATTY, M.D. *Honorary Secretaries:* ALFRED EDDOWES, M.D., 28, Wimpole Street, W.; D. G. MCLEOD MUNRO, M.B., 1, Oriel Villas, Cheltenham.

The arrangements are as follows:

Wednesday, July 31st.—9 A.M. Clinical Demonstrations. 10.15 A.M. Discussion on the *Rôle* of Staphylococci and Streptococci in the Etiology of Skin Diseases. To be opened by Dr. Sabouraud, of Paris, whose paper will be illustrated by many lantern slides, etc., followed by Dr. James Galloway. The following gentlemen will take part in the discussion: Dr. H. G. Brooke, Dr. Arthur Whitfield, Dr. Norman Walker, Dr. T. D. Savill, and Mr. G. Pernet.

Thursday, August 1st.—9 A.M. Clinical Demonstrations. 10 A.M. Discussion on the Treatment of Skin Diseases by Finsen's Light Method and *X* Rays. To be opened by Mr. Malcolm Morris, followed by Dr. A. B. Blacker, and Dr. Sequeira. The following gentlemen will take part in the discussion: Dr. Allan Jamieson, Dr. H. G. Brooke, Dr. Norman Walker, Dr. G. Stopford Taylor, Mr. J. Hall-Edwards, Dr. Willmott Evans, Mr. G. Pernet, and Mr. James Startin.

Friday, August 2nd.—9 A.M. Clinical Demonstrations. 10 A.M. Discussion on Seborrhœa. To be opened by Dr. Colcott Fox, followed by Dr. Sabouraud. The following gentlemen will take part in the discussion: Dr. Allan Jamieson, Dr. Thin, Dr. H. G. Brooke, Dr. James Limont, Dr. Norman Walker, Dr. J. M. H. Macleod, Dr. Morgan Dockrell, Dr. Henry Waldo, Dr. Wallace Beatty, Mr. G. Pernet, and Dr. T. D. Savill.

The following papers have been announced:

BEATTY, Wallace, M.D. On Pityriasis Rubra Pilaris.
BROOKE, H. G., M.B. On Arsenical Eruptions.
CROCKER, H. Radcliffe, M.D., and PERNET, G., M.R.C.S. Epithelioma Supervening upon Arsenical Keratosis.
DOCKRELL, Morgan, M.D. The Relation of Psoriasis to Seborrhœic Dermatitis.
DUBREUILH, Professor (Bordeaux). A case of Paget's Disease of the Vulva. (With Lantern Slides.)
EDDOWES, Alfred, M.D. Leucodermic Alopecia.
EVANS, Willmott, M.B. 1. The Microbiology of Chronic Eczema. 2. A New Medium for Growing the Fungi of Tinea Tonsurans.
FOX, T. Colcott, M.B. On Hydroa Æstivale.
FOX, T. Colcott, M.B., and MACLEOD, J. M. H., M.D. On Parakeratosis Variegata.
HALL, Arthur, M.B. A Case of Multiple Disseminate Lupus following Measles, ending by Tuberculous Meningitis.
HALL-EDWARDS, J., L.R.C.P. The Treatment of Lupus by the *X* Rays.
HARMAN, N. B., M.B. Observations on Veld and Natal Sores, with Drawings and Cultures.
LIDDELL, John, M.D. The Treatment of Psoriasis.
LITTLE, Graham E., M.D. Cases of Fatal Purpura Associated with Hæmorrhage into the Suprarenal Capsules.
MACLEOD, J. M. H., M.D. A Contribution to the Histopathology of Yaws.
PRATT, Eldon, M.D. A Case of Purpura Hæmorrhagica associated with General Tuberculosis.
ROBERTS, Leslie, M.D. The Action of Arsenic on the Skin.
SEQUEIRA, J. H., M.D. The Influence of High Frequency Currents in *X*-Ray treatment.
SNOW, Herbert, M.D. The Treatment of Lupus.
WALDO, Henry, M.D. Some Points in the Management of Eczema.
WHITFIELD, Arthur, M.D. On Erythema Induratum.

A Demonstration will be given by Dr. J. A. Fordyce (New York) of lantern slides illustrating Clinical and Pathological Conditions in Dermatology.

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The *Honorary Local Secretaries* are: Mr. G. ARTHUR CARDEW, 5, Faueonberg Villas, Cheltenham; S. TRISTRAM PRUEN, M.D., Sherborne Lodge, Cheltenham; W. W. GROSVENOR, M.D., Clarence Street, Gloucester.

## PROGRAMME OF PROCEEDINGS.

MONDAY, JULY 29TH, 1901.

8.30 P.M. to 11 P.M.—"At Home" at the Annual Museum and Exhibition. Opening Ceremony by the Mayor and Mayoress of Cheltenham.

TUESDAY, JULY 30TH, 1901.

9.30 A.M.—Meeting of 1900-1901 Council, No. 8 Room, Ladies' College.

11.30 A.M.—Church Service at St. Matthew's Church. Sermon by the Very Rev. the Dean of Gloucester.

2.30 P.M.—First General Meeting, Princess Hall, Ladies, College. Report of Council. Reports of Committees; and other business. After 4 P.M., Garden Party by Colonel Rogers, J.P. and Mrs. Rogers of Battledown Court.

8.30 P.M.—Adjourned General Meeting from 2.30 P.M. President's Address at the Princess Hall, Ladies College.

WEDNESDAY, JULY 31ST, 1901.

9.30 A.M.—Meeting of 1901-1902 Council. No. 8 Room, Ladies' College.

10 A.M. to 1 P.M.—Sectional Meetings.

2.30 P.M.—Second General Meeting, Princess Hall, Ladies' College. After 4 P.M., Garden Party by the Mayor and Mayoress of Cheltenham at Pittville Park.

8 P.M.—Address in Medicine, Princess Hall, Ladies' College, by J. F. Goodhart, M.D., F.R.C.P., Consulting Physician to Guy's Hospital. After 9 P.M., Illuminated Fête in Montpellier Gardens, given by the Mayor and Mayoress.

THURSDAY, AUGUST 1ST, 1901.

9.30 A.M.—Meeting of Council, No. 8 Room, Ladies' College.

10 A.M. to 1 P.M.—Sectional Meetings.

2.30 P.M.—Third General Meeting, Princess Hall, Ladies' College. Address in Surgery by Sir William Thomson, C.B., F.R.C.S.I., Honorary Surgeon to the King in Ireland. Presentation of Stewart Prize. After 4 P.M., Garden Parties by Lieutenant-Colonel and Mrs. J. C. Griffith (Deanwood), Mr. and Mrs. MacKnight-Crawfurd (Fullwood Park), and Alderman and Mrs. Jas B. Winterbotham (Cranley Lodge).

4.30 P.M. Exhibition of Instruments, illustrated by Cinematograph, by Dr. Doyen of Paris, at the Theatre.

7 P.M.—Public Dinner of the Association at the Boys' College. At 9 P.M., Ladies' Reception at the same place.

FRIDAY, AUGUST 2ND, 1901.

10 A.M. to 1 P.M.—Sectional Meetings.

2.30 P.M.—Concluding General Meeting, Princess Hall, Ladies' College, and afterwards Excursion to Gloucester. After 8 P.M., *Soirée* at the Ladies' College, followed by Dancing.

SATURDAY, AUGUST 3RD, 1901.

Excursion to Wye Valley.

### RECEPTION ROOMS.

The Imperial Rooms, Promenade, Cheltenham, will be opened on Monday, July 29th, from 4 P.M. to 9.45 P.M., on Tuesday, July 30th, from 9 A.M. to 9.45 P.M., and the following days from 9 o'clock to 6 P.M., for the issue of tickets to members and for supplying all necessary information. It is particularly requested that all members on their arrival will at once proceed to the reception room, enter their names and addresses, and obtain their tickets and Daily Journals containing programme, inquire for letters and telegrams, consult list of lodgings, hotels, etc.

### SPECIAL RAILWAY ARRANGEMENTS.

To members and their friends attending the annual meeting the railway companies of the United Kingdom will grant return tickets on payment at the time of booking of a single fare and a quarter. To secure this concession each passenger must produce a special voucher, and these can be obtained on application to the General Secretary, 429, Strand, London, W.C. The reduced fares will be available from July 27th to August 6th, both dates inclusive.

Those members desiring to travel to the places where they reside during the meeting of the Association can obtain return tickets at a single fare and a quarter for the double journey (minimum charge 1s.) (on production of cards of membership) from Cheltenham to any station not more than fifty miles distant to which through bookings are in operation, available to return on the same or following day.

Periodical tickets available during the meeting will also be issued to members from Cheltenham to any station not more than fifty miles distant at a charge of not less than the accumulated fares per diem under the preceding clause, and will be available for more than one journey, to enable the members sleeping out to return to their hosts for dinner.

The reduced fares indicated herein will not apply between Gloucester and Cheltenham.

### ANNUAL DINNER.

The annual dinner of the Association will be held in the College, Cheltenham, on Thursday, August 1st, 1901, at 7 o'clock. Early application should be made for tickets.

### FOREIGN GUESTS.

Guests of the Association and visitors from abroad should apply for all information at the Reception Room, Imperial Rooms, Cheltenham, where all letters and telegrams should be addressed. Visitors will notice that the membership ticket will admit them to meetings of the Association and to the various addresses, but tickets for entertainments and excursions should be applied for in the Reception Room. An interpreter will be in attendance.

### PATHOLOGICAL MUSEUM.

Specimens of interest for exhibition in the Museum should be forwarded, addressed to the Secretary of the Pathological Museum, British Medical Association, Winter Gardens, Cheltenham, during the last week in July; and a brief description of each exhibit will be inserted in the Museum catalogue. Secretary of the Pathological Museum, Mrs. Stewart Billings, M.B., B.S., 3, Pittville Parade, Cheltenham. All specimens must be mounted ready for exhibition.

### CLUBS.

The New Club will make honorary members for the week of 120 of the members of the Association, and these will have a special card issued to them on application at the Reception Room.

### GOLF.

Members of the Association desirous of playing golf will be made honorary members of the Cheltenham Golf Club. A match will be arranged, and members of the Association wishing to play are requested to communicate with Dr. Bansall Todd, Keynsham Lodge, Cheltenham, stating their handicaps.

## EXCURSIONS.

*Railway Arrangements.*—Cheap excursion tickets will be issued to Malvern, Raglan, Kerne Bridge, Symond's Yat, Monmouth, Stroud, Lydbrook, Tintern, Wye Valley, Newnham and Sharpness, Lydney, Chedworth, Tewkesbury, Severn Bridge, Speech House Road, Chepstow, Stratford-on-Avon, Ross, Hereford, Ledbury, Newent, Dursley, and Evesham, by special permission of the Great Western, Midland and South-Western Junction, and Midland Railways.

## NOTICE OF MOTION.

Dr. W. GORDON gives notice that he will move at the Annual Meeting at Cheltenham:

1. That it is undesirable that anyone should be registered as a medical student until he or she have attained the age of seventeen.

2. That the standard of the examination in preliminary general education required by the General Medical Council should be suitable to candidates of 17 years of age of average intelligence and reasonable industry.

3. That the examination should include: Latin, mathematics, English grammar, literature, history and composition, geography, and either French or German.

4. That the present system of multiple examining Boards, whose examinations differ widely in standard, scope, method and purpose, is most undesirable, and that it is necessary, in order to secure uniformity of standard, that a single examining Board should be appointed by the General Medical Council. That this Board should hold its examinations as often as necessary at multiple centres simultaneously throughout the United Kingdom.

5. That the Council of the British Medical Association be requested to approach the General Medical Council at the earliest possible date with a view to bringing about the changes embodied in the foregoing resolutions.

Dr. W. GORDON also gives notice that he will move the following amendment to the Constitution Committee's Report:

That in recommendation 18 the words "Members in the Division or group of" be struck out, and that the word "Constituency" be changed to "Division."

July 25th, 1901. GUY ELLISTON, *Acting General Secretary.*

# SPECIAL CORRESPONDENCE.

## INDIA.

*The Proposed Amalgamation of the British and Indian Medical Services.*

THE proposal of the Committee of the British Medical Association for the consideration of the steps which are necessary to restore the lost popularity of the Royal Army Medical Corps by, among other things, amalgamating the British and Indian Medical Services in order to allow of the officers of the former being able to have the advantage of civil work in India, is a very difficult question, which must be considered from several points of view. Here in India the question as to how the proposal, if carried out, will affect the Indian Medical Service is naturally uppermost, while it is one that those at home will have most difficulty in gauging. Before writing on it I have waited for some weeks in order to ascertain the opinions of many officers of both the civil and military portions of the Indian Service, but they have been so unanimously against the new scheme that the hostility of the service affected by the plan should be made known to all who are interested in the question. Quite recently a leading article on the subject has appeared in the *Pioneer*, which very well expresses the general consensus of opinion.

In the first place, it is felt that the Indian Service was not adequately represented on the Committee which so lightly adopted a proposal which amounts to doing away with the Indian Medical Service in order to add a fillip to the recruiting for the unpopular British Service. For it is the general opinion here that this plan would wreck the Indian Service, with all its glorious traditions and great work, which has no equal in any part of the world. Further, the numbers of the combined services in proportion to the civil posts in India would be so great that the very small proportion of men who could expect to get civil work would not serve to attract good men in sufficient numbers. Again, one of the main grievances of the British Service is the small proportion of time spent on home service on account of undermanning. Yet the new proposal would very greatly accentuate this evil by trebling the number of foreign appointments, about half of the added ones being military posts, so that the proportion of foreign service in military employ would be greatly increased, in addition to that in civil work, and one of the greatest complaints would be aggravated instead of removed. From the point of view, then, of the British Service, it is extremely doubtful if the attractions of the new scheme outweigh its disadvantages.

Admitting, then, that this scheme has undoubted disadvantages as well as advantages from the point of view of the British Service, and that it is far from being a certainly successful remedy for the undermanning of that department, let me glance for a minute at the probable effects of the plan on the Indian Service. It is well-known that this service is not nearly so popular as it used to be, and at the last examination the full number of candidates advertised for were not obtained for the first time for many years. Is it likely that the prospect of amalgamation with a much less popular service will be likely to stimulate recruiting for the Indian Service? What will be the effect of an amalgamation which will allow only one in four instead of more than half the members of the service to obtain civil employ when it is considered that at least nine-tenths of the men who enter the Indian Service do so with the idea of going into the civil branch, although later some of them may decide not to do so for private reasons? It is too much to say that such a scheme would reduce the recruiting for the Indian Service to the present level of that for the British branch? At any rate such is the universal opinion of all to whom I have spoken on the subject, and they ought to know if any one does what such a leap in the dark as the present proposal will lead to. If this opinion is correct the only result of the plan would be to ruin the Indian Service without benefiting the British.

But let us suppose for a minute that the necessary number of men could be obtained and the scheme were carried out. What would be the effect on the efficiency of medical work in India, putting aside all questions of service interests? Under the revived scheme of Lord Ripon's Government of 1881 vacancies as they occur in the Military and Civil Departments in India would be filled by R.A.M.C. men who would go to India on a fixed tour of seven years, but might volunteer for a second seven years. On first arriving in India two or three years would have to be served with a native or a British regiment before civil employment could be obtained, during which the necessary language studies would be undertaken. Then after four years of civil employ the seven-years tour would be up, and if as many as possible are to get the benefit of civil work extensions would have to be only exceptionally granted. The effect would be that just as an officer has got a good grip of the multifarious duties which fall to the lot of a civil surgeon, and a working knowledge of his district (which would often contain over a million inhabitants) and of his subordinates he would return to England. Is it likely that the Indian Government would consent to put up with such a makeshift and unworkable system just to save the Home Government from paying the proper market price for the men it wants for the British Service? For that is what it amounts to in practice. Further, there are many special appointments, as professorships at the medical colleges, the political and other special branches, which must have permanent men, and would have to be deducted from those open to the Army medical officers. In short, the further the scheme is examined the more impossible does it appear.

The real cause of the present difficulty is the unforeseen stringency of the market owing to the five-year rule, and the South African war, and the doing away with unqualified assistants. Let the pay of both the British and Indian Services be increased until the right stamp and number of men are obtained, and the present difficulties will vanish.

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## SYDNEY.

*The Manchester Unity of Oddfellows.—Prince Alfred Hospital.—The University Commemoration.—Small-pox Epidemic.—Death of Dr. Dagnall Clark.—Sir James Graham.*

THE Medical Institute of the Manchester Unity of Oddfellows, Sydney, has secured the services of four medical men to replace those who had resigned their positions at the request of the Council of the New South Wales Branch of the British Medical Association. Owing to circumstances which it is needless to particularise, it is felt that these appointments cannot long be held by the present occupants. The institute has always prided itself upon obtaining the services of the best of the younger practitioners in Sydney.

During the recent visit of the Duke and Duchess of Cornwall and York the foundation stone of the new additions to Prince Alfred Hospital was laid by the Duke. The hospital from its inception has been closely connected with the Royal Family. It was founded to commemorate the escape of the late Duke of Edinburgh on the occasion of his being shot by a Fenian when visiting Sydney in 1867. The late Queen Victoria graciously consented to become patron, and the two new pavilions about to be erected are to be called the Queen Victoria Pavilions. The buildings are to be constructed by the Government at an estimated cost of £40,000. An appeal has been made to the public for funds to furnish and equip the new pavilions. It is estimated that a sum of at least £15,000 will be required for this purpose, and already over £10,000 has been subscribed. The additional buildings will provide accommodation for about 120 patients.

At the University Commemoration, held on the same day as the laying of the foundation stone of the hospital additions, the degree of L.L.D. *ad eundem gradum* was conferred upon the Duke of Cornwall and York.

A further outbreak of small-pox has occurred in Sydney. The steamer *Chingtu*, returning to Sydney with the Naval Contingent on board, brought a case of small-pox from China. The passengers and crew were quarantined. Shortly afterwards the incoming mail steamer *Ormuz* also had a case of small-pox on board. As the first cases on each steamer were not landed at the first quarantine station, the disease spread among the crew and passengers, and some of the patients have died. One or two isolated cases have also cropped up in the city, the infection in each case having probably been carried in some clothing from the *Chingtu*.

Dr. Dagnall Clark, a highly esteemed practitioner of North Sydney, and for some years a member of the Council of the New South Wales Branch of the British Medical Association, died suddenly last week, at the early age of forty-five years. He had long suffered from some cardiac irregularity, and the end came suddenly as he was preparing to visit a charity patient in the early morning. Dr. Clark was educated at St. Bartholomew's Hospital, London, and graduated M.B. at the University of London in 1881. He was a skilful practitioner, and his opinion was highly valued. As a member of the Council of the New South Wales Branch he was a man of strong opinions, and was not afraid to hold fast to them, yet always with deference and courtesy towards those in opposition to him. At the last meeting of the Council a resolution was passed expressive of sympathy with his widow and family.

On the occasion of the recent visit of the Duke and Duchess of Cornwall and York to Sydney, Dr. James Graham, the Mayor of Sydney, was created a Knight Bachelor.

# CORRESPONDENCE.

## INDIAN MEDICAL REFORM AND THE BRITISH MEDICAL ASSOCIATION.

SIR,—Considering the great trouble which the Secretary of the British Medical Association had on behalf of the Indian Medical Service Subcommittee and the Parliamentary Bills Committee in eliciting any reply from Dr. Mullick to his communications, it is really marvellous how quickly our censure found that gentleman out. Dr. Mullick says that "nothing could be more inaccurate than Dr. Barr's statement," but I think instead of such a blatant assertion it would have been much better if he had shown the inaccuracy. We censured Dr. Mullick not for having made charges but for failing to even attempt to substantiate them. A short recapitulation of the history of this subject will clear the matter up.

For some time Dr. Mullick seems to have thought that the mantle of the late Dr. Bahadurji had fallen on his shoulders, and consequently he has carried on the agitation started by the latter gentleman at the Carlisle meeting of the British Medical Association against the Indian Medical Service, with special reference to the methods of filling up the civil medical appointments in India. At the meeting in Ipswich it was thought that the charges preferred by Dr. Mullick should be investigated, and consequently the matter was referred to the Council of the Association. At the next meeting of the Council, held in October, 1900, the resolution was referred to the Parliamentary Bills Committee, which in the afternoon of the same day appointed a subcommittee to consider the question.

On October 15th, 1900, Dr. Mullick wrote to the General Secretary asking "the Committee to postpone its deliberations, as he was collecting evidence from India, which was necessarily a long and tedious procedure"; therefore the Subcommittee was not called together until the following April.

On January 15th, 1901, Dr. Mullick again wrote to the General Secretary stating that he had received the information he required from India, and was prepared to place the same before the Committee, but as the manuscript was a very long one would he let him know the points on which the Committee would require informaion, so that he might boil down the evidence for specific points. In reply to this the Secretary wrote to say that as Dr. Mullick moved the resolution at the annual meeting, he must put the points as shortly as possible, and that if he would let him have them in a condensed form he would place them before the Subcommittee. To this communication no reply was received.

At a meeting of the Subcommittee held in April a resolution was passed and forwarded to Dr. Mullick on April 30th requesting him to furnish the Committee with the evidence from India in time for the next meeting in July. This communication Dr. Mullick also ignored, and not until July 15th, 1901, after the Committee had met, did Dr. Mullick send in the information for which he had been asked, though from Dr. Mullick's statement he appeared to have the material by him as far back as January 17th, 1901.

About Dr. Mullick's supposed communication to "the Parliamentary Bills Committee in order to wake them up," and his offer "to serve on any Subcommittee they appointed," nothing is known at the office of the Association, but we can now have no doubt as to his willingness to sit in judgment on his own case. This might be a very nice and convenient way of settling the matter to the satisfaction of Dr. Mullick, but it would scarcely comport with the ordinary English sense of justice. The Parliamentary Bills Committee neither appointed Dr. Mullick nor any member of the Indian Medical Service on the Subcommittee.

As to the fitness or unfitness of the Committee "to deal with such an important question," the profession may be able to form an opinion when we have got some evidence to investigate. We innocently thought that Dr. Mullick, who had been carrying on his attack against the Indian Medical Service for at least two years, would be prepared with some evidence in support of his general accusations; but apparently he thought that any uncorroborated statements were good enough for the British Medical Association.

The charges which he made at Ipswich have been categorically denied by Surgeon-General Harvey, who has adduced much evidence in support of his statements.

Dr. Mullick has had ample opportunities of proving, or of attempting to prove, his case before a Committee which was quite prepared to investigate every charge which he could formulate against the Indian Medical Service, but he utterly failed to put in an appearance, even to favour us with any documentary evidence. On July 15th, two days after the issue of our report, he sent in four documents to support his case. The first is a type written article without any date with the name of J. Hope Potter, M.R.C.S., L.R.C.P. (late Acting Police Surgeon to the Government of Bombay) appended. This paper contains an "opinion that the chairs and professorships and appointments at the hospitals, schools, and universities of India should be thrown open to all legally-qualified medical men, and not confined to members of the Indian Medical Service," for reasons which are set forth, but there is no evidence that the present system has not worked well, or how it could be judiciously improved.

The other three documents bear distinct evidence of age: The second is dated March 25th, 1897, and is signed "F. Clarence Smith, M.B.(Durham), F.R.C.S.Eng." This paper is an expression of opinion in favour of Dr. Bahadurji's proposition to throw the Indian medical appointments open to all. The third is a similar document, also dated March 25th, 1897, and is a letter addressed by Dr. T. McNair to the Secretary of the South Indian Branch of the British Medical Association. The fourth document is a peculiar production from nowhere and unsigned. It reflects little credit on the man who could adduce it in its present form as evidence of anything. Dr. Mullick says it "is a detailed list of the many changes which have taken place in the professorial chairs. The document shows how the teachers are changed about from chair to chair much to the detriment of the proper teaching of the subject." It seems to consist largely of excerpts from Indian Medical Service papers as to the movements of the staff in the Madras Presidency during the years 1881 to 1899, mixed with some pious opinions of the compiler. There is no proof that those professors did not discharge their duties with efficiency, but often evidence that they did. Take the following paragraph:—"Brigade-Surgeon A. Porter, M.D., Professor of Medical Jurisprudence, was appointed in G.O. No. 69, dated December 21st, 1886, Principal of the Medical College. He assumed charge on January 3rd, 1887, on which date Brigade-Surgeon J. Kees, M.D., retired from the service after twenty years' connection with the institution, first as Professor of Anatomy and afterwards as Principal, both of which offices he filled with much ability and zeal. His departure was universally regretted by the students."

I hope to be able to make an analysis of this document before the meeting at Cheltenham.

These documents, which Dr. Mullick says he "received from India and other sources to support my case," are several years old, yet he found it convenient not to present them till after the Committee had held its last meeting and presented its report. It will be for the meeting at Cheltenham to decide how far the British Medical Association can support such tactics. Abstract resolutions based on *ex parte*

statements are valueless, and would receive no attention from the Indian or any other responsible Government. There may be, and I have no hesitation in saying that in my opinion there are, many defects in the medical service in India, but they will never be righted by Dr. Mullick or his methods.—I am, etc.,

Liverpool, July 20th. JAMES BARR.

## REPORT OF THE CONSTITUTION COMMITTEE.

SIR,—The Committee for the revision or reorganisation of the constitution of our Association are to be highly commended and congratulated for their valuable report, published in the last number of the BRITISH MEDICAL JOURNAL, and which is to be presented at the annual general meeting at Cheltenham on July 30th. May I suggest that

1. In Clause 7 the term "honorary" members be substituted for "complimentary," and that in Clauses 14 and 16 the quorum of the annual and other general meetings, and also that of the Council of the Association be more precisely defined?

2. The proposal regarding delegates or representatives of Divisions—Clauses 16 and 19—will, no doubt, meet with considerable disapproval. To my mind it savours strongly of trades-unionism, is foreign to other scientific and professional societies, and is unusual, even in similar societies under the Companies Act: it implies distrust of the Council of the Association, and would tend to weaken alike their sense of dignity and responsibility; it would be very expensive, cumbrous, and, in my opinion, quite unnecessary, since its object, that of "securing to the general body of members of the Association the most complete control possible over its policy and Government," could be easily and effectively gained by extending to them in general meetings, and under proper conditions, the power of Referendum so properly proposed to be conferred upon the Council in Clause 19.

3. The proposed payment of travelling expenses to all members of the Central Council, Committees, etc. (Clauses 16 and 21) is also likely to provoke opposition. I regard it as a mercenary proposal, offensive and derogatory to those high-minded members whose sole or principal object in accepting any office would be the honour and interests of the profession, and calculated to give fresh occasion to those unfriendly critics—some in very high places—who are prone to scoff at "a breach of some rule of the medical trade-union."—I am, etc.,

Swanley, July 22nd. JOHN INCE, M.D., I.M.S.(Retired).

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SIR,—There will be a meeting of some members of the Association at St. Mary's Hall, Cheltenham, on Monday evening, July 29th, at 9 o'clock, to determine what attitude should be adopted towards certain of the proposals of the Committee when the report is presented to the annual meeting. A circular is being sent to all the members who are known to take an active part in reforming the conduct of the Association, but I trust all members will consider that this notice is an invitation.

The points we shall discuss are:

1. The proposed reduction of the representative members of Council by 50 per cent.
2. The powers to this reduced Council to co-opt 10 per cent. of its own members.
3. The powers to this weakened Council to elect the Journal and Finance Committee; this handful of men to have absolute control over the funds of the Association, the income now being over £43,000 a year.
4. Powers to exercise the Referendum, and generally powers to obstruct all reforms at will.

Please refer to Provisional Report, February 16th, 1901, p. 5, Recommendation 16 (1), and p. 6, 18 C. (11), and Counsel's Opinion, p. 47, 6. Also Final Report, published July 20th, 1901, p. 8, line 8 and seq.

It is clear, Sir, that if this Report be adopted as it now stands, the British Medical Association as a representative institution of the medical profession will be at an end. The delegate proposals are entirely fallacious. The delegates' power (?) is a delusion—not a single act they are supposed to exercise is proposed which the attenuated Council has not ample power to check.—I am, etc.,

Old Trafford, July 23rd. JAS. BRASSEY BRIERLEY.

## VACCINATION AND PROFESSIONAL UNDER-SELLING.

SIR,—At the present time, when there is a very general opinion that there should be greater union in the profession, it might be well to notice one or two causes of the disunion unfortunately so prevalent.

Underselling, whatever form it takes, must always be fatal to friendly combination, and, although it has been condemned by the ethics of the profession, in some forms it continues to thrive, apparently with the approval of many respectable practitioners. I allude to the almost universal custom of private doctors consenting to vaccinate their patients at a lower rate than that paid to the public vaccinator of the district. Surely this ought not to be. It is argued that poor people cannot possibly pay a fee equal to that paid by the local authority. But there is no need for them to pay anything, as it is the intention of the law that as many as possible should be vaccinated at the public cost. The real objection is that the private practitioner grudges the loss to his pocket likely to arise from refusing private vaccinations, although by so doing he diminishes considerably the amount of money that would be paid to the profession for vaccination. His action, too, is hurtful for another reason. The fact that he is willing to vaccinate for a lower fee is made use of by antivaccinators and economists to cut down the fees paid to public vaccinators, and so to diminish the emoluments of many of his professional brethren.

It may be readily admitted that no advantage could arise from individual practitioners refusing to vaccinate below the rate of the public vaccinator unless all the men in the district agreed to do the same. His action would only result in losing patients to his less scrupulous neighbours. But if all the practitioners, especially in poor districts, were to refuse to take cases away from the public vaccinator by underselling him, the annual loss to any one would be insignificant, the vaccination laws would be carried out far more efficiently, and a much better standard of vaccination be the result to the public generally. It does not redound to the credit of the profession to find medical practitioners offering to vaccinate for a shilling when the public vaccinator is paid six shillings for the same operation, and his lymph is supplied gratuitously.—I am, etc.,

M. GREENWOOD.
Honorary Secretary of the Poor-Law
Hackney Road, N.E., July 12th. Medical Officers' Association.

## THE MIDWIVES BILL.

### IS A ROUND TABLE CONFERENCE POSSIBLE?

SIR,—Dr. Moxon's idea is a capital one, and produced at a timely moment. I trust some such conference may be arranged at an early date.

As an ardent opponent of the apotheosis of the midwife, I have felt for some time that although the bulk of the profession shares my opinion on this subject, we have been given away by the heads and so-called leaders of the profession. The agitation for registration has been worked, and well worked, by people who are adepts at the business, while the profession (or the bulk of it), for the want of organisation, has stood by impotently. If something in the way of united action be not taken soon, we shall be hopelessly discredited on this question in the eyes of Parliament and public. This united action can only take place as the result of compromise, and those of us who feel strongly on both sides of this question ought, for the sake of the public and of our profession, to meet, sink our differences if possible, and unite on a common policy. Anything I can do to further Dr. Moxon's plan will be done willingly. What have our direct representatives to say?—I am, etc.,

Gateshead, July 23rd. ALFRED COX.

## THE FINANCIAL ASPECT OF THE "L.O.S."

SIR,—I should like to be permitted to express my appreciation of the article entitled "The Obstetrical Society of London and the Examination of Midwives," pp. 27 to 30, of the BRITISH MEDICAL JOURNAL of July 6th. I had no idea that the Obstetrical Society of London had received so large a sum in examination fees as £6,657 7s. 6d.

I think also that many of the members of the British

Medical Association will be astonished to find that something like another 1,000 guineas must have been received by a training institution. From all this it is quite evident that large sums are received from midwives desirous of possessing the much coveted title of "L.O.S."

This last sum is easily arrived at from the following advertisement which appeared in *Nursing Notes* for July, 1901:

MIDWIFERY.

THE BELGRAVE MIDWIFERY CLASSES.

Ladies thoroughly and quickly trained for L.O.S. and monthly nursing. A large maternity attached. Lecturer ———— New classes are formed every month; also morning and evening classes for nurses when off duty. *Nearly two hundred pupils have attended the classes since 1895. Special coaching classes* begin a fortnight before each examination, open to all candidates. Advanced course of lectures to midwives by correspondence. Address ————

A printed circular states:

"1*d.* The fee for former course including *coaching* (payable in advance) is Five Guineas."

So 5 multiplied by 200 gives another 1,000 guineas. The italics are as in advertisement and circular recently issued; so that it would appear as if any action of the Obstetrical Society to stop the use of "L.O.S.," which Dr. Percy Boulton intimated, is so far of none effect!

In the same issue of *Nursing Notes*, page 91, under the heading of "L.O.S.," is an attack on Mrs. Colby for her letters in the BRITISH MEDICAL JOURNAL. There are many other training colleges in London for midwives, and all to enable women to obtain the much-coveted "L.O.S.," as stated in their circulars; so that one feels all the more disposed for crediting the assertions Mrs. Colby made in the JOURNAL some weeks ago of what large sums some midwives make by training pupils. All this is certainly a very new and no less serious aspect of the question that many of us were not prepared for.

On pages 93, 94 of *Nursing Notes* there is an article signed M. Loane, under the general notice "Nursing Notes by Practical Nurses—on White Leg:" apparently the nurses conducted this case entirely upon their own responsibility, no mention being made that the doctor was in actual attendance. This is quoted to show how unqualified practice is encouraged by the official journal of the Incorporated Midwives Institute, and also of the Association for Promoting the Compulsory Registration of Midwives.

On page 91, the editor or editress, under the heading of "L.O.S." prefers "Midwife L.O.S.," to "C.L.O.S." or "C.O.S.," as the way in which midwives should indicate their title.—I am, etc.,

Manchester, July 20th. G. H. BROADBENT.

SIR,—I must cordially endorse Dr. McCook Weir's suggestion that your article on the Obstetrical Society of London and the Examination of Midwives should be reprinted and distributed to members of Parliament and the profession and public generally. The Obstetrical Society might then break its silence, and explain, for instance, how it comes that since 1895 there has been such an enormous increase in the number of certificates granted. It might even try to raise its requirements in the estimate of its examiners.

One word in answer to Mr. Humphreys. He quotes (June 29th) the statistics of the City of London Lying-in Hospital that last year of 1,753 women delivered by midwives attached to this institution at their (the patients') homes but 2 died: but he omits to add that there were eleven district surgeons to assist in difficulties.—I am, etc.,

July 23rd. F.R.C.S.

SIR,—The sensible letters of Mr. MacLean and Dr. McCook Weir I entirely agree with. The self-interest of the Obstetrical Society is plainly shown by the fact of that Society having added £7,000 to its income, and we see no effort made to prohibit the flaunting of the so-called diploma with the magic letters L.O.S. while the fees are forthcoming. The up-to-date midwife must have something for her money; the Society get the profit, the midwives the L.O.S.!

Cheltenham, July 23rd. ALEXANDER DUKE.

## THE OBSTETRICAL SOCIETY OF LONDON AND THE EXAMINATION OF MIDWIVES.

SIR,—I find from the *Transactions* of the Obstetrical Society of London (which any one can study at the reading room of the British Museum) that in the original schedule drawn up in 1872 the Society insisted upon receiving as a preliminary to examination:

"Proof of the candidate having attended the practice of a lying-in hospital or charity for a period of not less than six months, or of having personally attended not less than twenty-five labours under supervision satisfactory to the Board of Examiners." The schedule still in force in the earlier part of 1895 insisted upon attendance on twenty-five cases of labour and states that:

"No labour can be counted among the twenty-five certified unless the candidate has repeatedly examined and watched its progress and diligently attended the lying-in for at least ten days."

In May, 1895, the Obstetrical Society gave up using the term "diploma" and called the document issued to successful candidates a "certificate" instead. Apparently the Society considers a certificate less valuable than a diploma, for with the alteration of title came the alteration of the schedule, and the requirements were reduced. Instead of 25 cases seen under supervision satisfactory to the Board of Examiners only 20 cases are required and no supervision at all is specified; moreover, these 20 cases need only be followed by attendance on a patient (not necessarily the same patient) for a week instead of for ten days. Well may the Midwives' Institute consider that the present requirements of ths L.O.S. are small.

Is it not a remarkable fact that the present standard for midwives who may act quite independently of doctors is so distinctly lower than what was held in 1872 to be the minimum of study considered absolutely necessary for women acting as midwives under medical supervision? Since 1872 women's education in every branch has made great strides.

Why has the standard been lowered only for women to whom lives of other women and children are entrusted? Will the Board of Examiners for 1895, who are presumably responsible for this alteration—Dr. C. J. Cullingworth was the President of it—explain their reasons for this action?—I am, etc.,

BEATRICE G. COLBY.

Warwick Road, S.W., July 15th.

## TOTAL EXTIRPATION OF THE PROSTATE FOR RADICAL CURE OF ENLARGEMENT OF THAT ORGAN.

SIR,—I have read with much interest Mr. P. J. Freyer's lecture on the above subject in the BRITISH MEDICAL JOURNAL of July 20th, and with the greater number of the opinions there expressed I heartily agree; but surely Mr. Freyer has overlooked the work of others when he speaks of enucleation of the prostate as a new operation.

If Mr. Freyer will refer to the JOURNAL for July 14th, 1894, he will find there a paper of mine based on 12 cases of suprapubic prostatectomy, in several of which an identical operation to that described by him as a "new method" was employed. In 7 out of the 12 cases there reported the operation advocated by my late friend and colleague, A. F. McGill, was performed of taking a wedge from the prostate; but as I knew that he advocated and practised enucleation of the lateral lobes when necessary, I did not then think it desirable to call the operation of enucleation performed on the other five new, or to refer to it otherwise than as McGill's operation, though it will be seen by the report of my cases, abstracted from the paper referred to, that the gland was enucleated most thoroughly, both median and lateral lobes being removed, and in all the 5 cases there reported with success, both immediate and remote.

I would venture to suggest that enucleation of the prostate is a better name than extirpation, for the method cannot be a genuine extirpation of the organ when the true prostatic capsule and the prostatic urethra are necessarily left after the adenomatous masses, all of them with separate capsules, have been shelled out.

At the time I wrote the paper, I employed the rectal bag to distend the rectum, and bring the prostate more easily within the reach of the finger, but since 1894 I have discarded the bag and have had the prostate pressed forward by an assistant's finger passed into the rectum.

The following are the abstracted reports of five cases:

| No. | Date. | Age. | History. | Operation. | Result. | After-History. |
|---|---|---|---|---|---|---|
| 1 | June, 1888 | 63 | Nocturnal frequency eight years. Frequency of micturition in day 20 to 40 minutes. Hæmaturia. Retention—6½ ounces drawn off by catheter, after which catheter thrice daily up to operation. Cystitis and atony | Lateral lobes much enlarged. Removed by scissors and forceps and enucleation. Bladder pouched and reticulated. Fifty calculi removed: largest, 1½ inch; smallest, size of pea | Recovery. Urine by urethra in three weeks. Discharged in 7 weeks. Could hold urine 6 hours in day, and only once disturbed in night | Two years after quite well and at work. |
| 2 | September, 1888 | 62 | Symptoms eight years. Of late up in night 20 times. Retention on admission. Catheter night and morning. Cystitis | Middle lobe size of walnut and enlarged lateral lobes. Removed by scissors and forceps; weight ⅔ ounce. Calculi in pouch removed | Recovery. Wound healed slowly and some cystitis persisted | Patient perfectly well and at work in 1892. No need for catheter since operation. |
| 3 | J.M., November, 1890 | 73 | Four years' symptoms. Atony of bladder due to overdistension. Dribbling of urine due to overflow. Sixteen ounces residual urine. Urine acid and free from albumen | Prostate very large. Middle lobe removed, and over ½ ounce from lateral lobes enucleated. Free bleeding stopped by washing out with hot water, with ½ ounce tr. hamamelis to the pint | Recovery | Recovered from operation and was able to sit up during second week. Urine passed by the urethra. Patient was feeble and decrepit at the time of operation, and in a few weeks succumbed to asthenia. *Post-mortem Report:* Bladder normal. No disease to account for death, which was due to old age. |
| 4 | August, 1891 | 61 | Eleven years since first catheterism. Nocturnal incontinence for several years. Feeble power. Cystitis. No calculus. 10 ounces residual urine. Six months' catheter life | Pedunculated middle lobe size of walnut and small growth from left side of prostate removed by scissors, forceps, and enucleation | Recovery. A month after was passing urine without pain | Phosphatic calculus removed three months after. Recovery. At work 1893 |
| 5 | June, 1892 | 72 | Operation March, 1889, by another surgeon; small portion of middle lobe removed, giving relief for nearly two years. Immense prostate felt *per rectum*, June, 1892. Complete retention; cystitis. Great suffering | Six ounces of adenomatous prostate enucleated and phosphatic stone removed. Wound healed in three weeks | Recovery. Great relief and regaining of health | Good health for some time. In October, 1893, a phosphatic stone was crushed without any difficulty. Patient now quite well (1894). |

I think the foregoing cases, the first of which was operated on by me thirteen years ago, and the whole five of which were reported eight years ago, call for a modification of Dr. Freyer's paper, in which he says: "I think I shall not be accused of exaggeration when I state that all previous so-called methods of radical cure of enlarged prostate are unsatisfactory," for not only do my cases prove the satisfactory nature of the operation performed, but the following paragraphs taken from the same paper

(1) If, as in Cases 5, 6, and 9, the lateral lobes are much enlarged, the finger can be insinuated within the capsule and the adenoid masses can be enucleated with very little difficulty.

(2) In conclusion, I consider that the operation of suprapubic prostatectomy in properly selected cases is one attended with less danger than is usually thought, and that if thoroughly and completely performed, it is capable of affording such relief as may be in many instances genuinely termed a cure, and that in a class of cases which until a few years ago were looked on as incurable

show that I anticipated Dr. Freyer by thirteen years in the advantages claimed by the operation which he describes as new.

Moreover, I think the profession at large will be interested in the following letter which was so kindly sent me by Sir Joseph (now Lord) Lister, immediately after the publication of my paper in 1894:

July 25th, 1894.

Dear Mr. Mayo Robson,—I have just been reading your article in the British Medical Journal of July 14th on suprapubic prostatectomy, and I venture to send you a few words of congratulation on the brilliant success you have obtained.

There is also one point regarding which I may make a remark. In operating suprapubically for villous growth from the bladder, I have found a very large broad-bladed pair of lithotomy forceps, introduced into the rectum and used as a lever to raise the floor of the bladder, very effectual for the purpose, and it seems to me that you might find such an instrument or one of simpler form with the same object, answer your purpose and avoid the use of the rectal bag, which I confess I have never liked.

Believe me,
Yours sincerely,
Joseph Lister.

This shows that the importance of the communication was grasped by a master mind, though some surgeons have apparently so far failed to perceive its significance that years later the identical operation is brought forward by Mr. Freyer as new.—I am, etc.,

Leeds, July 23rd. A. W. Mayo Robson.

## PRELIMINARY GENERAL EDUCATION.

Sir,—Dr. Gordon, of Exeter, considers the scope of the Preliminary Examination inadequate, and complains that an intelligent lad of 15 can pass it. For my part I consider that medicine is so much of an art that the only hope of attaining any real perfection in it is for a lad to begin his medical studies as early as possible, so as to familiarise himself as soon as possible with his future calling.

The Examining bodies are rejecting hundreds of young men at the Preliminary Examination, many of whom go up to Oxford or Cambridge, and pass well through the University courses; only a short time ago I heard of 52 going up for a Preliminary Examination, of whom 40 were rejected.

Were a youngster of 15 able to pass such a examination he would in my eyes be neither too young nor too educated to begin professional studies.—I am, etc.,

July 19th. M.D.

## LONDON DIPLOMATES AND THE TITLE OF "DR."

Sir,—I think with many of your correspondents that there is little to be gained in petitioning the Royal College of Physicians of London to revoke the by-law which enjoins a licentiate not to call himself "doctor," as, so far, the Royal College of Physicians of London have not taken any action in the matter, although numbers of their licentiates do style themselves "Dr." on their brass plates, bill-heads, and visiting cards. If the by-law was deleted, the members and licentiates as such of the College would still have no real right to the title of "Dr."

The London Licentiates and Members Society might do some good if it could get an extensively-signed petition of London diplomates and petition all the universities to grant the degree of M.D. after a thorough and searching examination in medicine, surgery, and midwifery, with applied anatomy, physiology, pathology, and materia medica (much on the lines of the M.D.Brux.) after, say, five years of registration, without any entrance examinatian or disability as to age, for no person would be registered under 21 years of age. I know the University of Durham grants a degree to practitioners of fifteen years' standing, but they must also be 40 years of age and pass an entrance examination. But this is too restrictive to be generally useful to the great body of the diplomates, as few would trouble about a degree after the age of 40. I do not think that the University of Durham is ashamed of these graduates; the inference is that such graduates would be a credit to any university. If the Society made this one of their objects, I, and I expect many others, would be pleased to join.

Meopham, Kent, July 2nd. S. A. E. Griffiths.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## ARMY MEDICAL SERVICE.

SURGEON-MAJOR-GENERAL W. A. THOMSON, M.B., Honorary Physician to the King (retired list), has been granted a distinguished service reward of £100 a year.

## ROYAL ARMY MEDICAL CORPS.

MAJOR JOHN OSBURNE is promoted to be Lieutenant-Colonel, July 20th. He was appointed Surgeon, February 5th, 1881, and Surgeon-Major twelve years later. He was in the Egyptian war in 1882, and was at the battle of Tel-el-Kebir (medal, with clasp, and Khedive's bronze star), and in the Soudan campaign in 1885, when he was present at the attack on the Topek zareba (two clasps).

The undermentioned officers have been discharged to duty from hospital in South Africa: Civil Surgeons J. B. BOYD, H. A. STEWART.

The following are on passage home: Major J. B. W. BUCHANAN, Lieutenants H. E. M. DOUGLAS and M. G. STERLING, Civil Surgeons D. KERNAHAN, W. H. CROLY, G. ARNOTT, J. A. BLACK, T. L. DAVIS, J. F. DIXON, A. P. GIBBONS, T. F. BOND, J. M. COATES, T. D. HOMAN, G. H. COLLART, and J. M. THOMAS, and Surgeon-Captain W. GIBSON (4th West Australian Contingent). Returning invalided: Majors W. M. GRAY and D. M. SAUNDERS, Civil Surgeons J. SOWDEN and J. W. MILLER.

## ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANT L. L. HANHAM, 2nd Devonshire Volunteer Artillery, is appointed Surgeon-Lieutenant, July 20th.

## INDIAN MEDICAL SERVICE.

THE privilege leave for five weeks granted to Colonel B. FRANKLIN, M.D., C.I.E., Bengal Establishment, has been cancelled.

Lieutenant H. J. R. TWIGG, M.B., Indian Medical Service, has been granted a temporary injury pension of £35 a year, for one year, renewable yearly, on account of injuries received on duty.

The retirement from the service of Colonel S. O. B. BANKS, Bombay Establishment, which has been already announced in the BRITISH MEDICAL JOURNAL, is to have effect from November 13th, 1900.

## IMPERIAL YEOMANRY.

SURGEON-CAPTAIN D. HARRISSON, Lancashire Hussars, is promoted to be Surgeon-Major, July 13th.

Temporary Captain E. T. SHORLAND, Medical Officer, 1st Battalion, resigns his commission, April 9th.

## THE VOLUNTEERS.

SURGEON-CAPTAIN D. LENNOX, M.D., 1st (City of Dundee) Volunteer Battalion the Royal Highlanders (the Black Watch), is promoted to be Surgeon-Major, July 13th.

Surgeon-Lieutenant W. T. HANNAH, M.D., 2nd Volunteer Battalion the Derbyshire Regiment, resigns his commission, July 13th.

Surgeon-Lieutenant Colonel M. H. TAYLOR, M.D., 2nd (Renfrewshire) Volunteer Battalion Argyll and Sutherland Highlanders (Princess Louise's), resigns his commission, retaining his rank and uniform, July 13th.

Surgeon-Major R. A. S. DALY, 7th Lancashire Artillery (the Manchester Artillery), is promoted to be Surgeon-Lieutenant-Colonel, July 20th.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified:—JAMES HAMILTON, 2nd Volunteer Battalion the Royal West Kent Regiment (Queen's Own), July 13th; ARTHUR R. OWST, 1st Cadet Battalion the Royal Fusiliers (City of London Regiment), July 3rd; DAVID A. HUGHES, 1st (Pembrokeshire) Volunteer Battalion the Welsh Regiment, July 20th.

Surgeon-Captain G. M. LOWE, M.D., 1st Volunteer Battalion the Lincolnshire Regiment, is promoted to be Surgeon-Major, July 20th.

Second-Lieutenant J. R. WILLIAMS, M.B., 3rd Volunteer Battalion the Royal Welsh Fusiliers, resigns his commission, and is appointed Surgeon-Lieutenant, July 20th.

Surgeon-Lieutenant T. A. SELLAR, M.B., 6th Volunteer Battalion the Gordon Highlanders, is promoted to be Surgeon-Captain, July 20th.

## VOLUNTEER MEDICAL STAFF CORPS.

MESSRS. SAMUEL M. SLOAN, M.B., HUGH W. THOMSON, M.B., and ARCHIBALD YOUNG, M.B., are appointed Surgeon-Lieutenants in the Glasgow Companies, July 6th.

Messrs. FRANCIS J. CHARTERIS, M.B., and JOHN T. K. THOMSON are appointed Surgeon-Lieutenants in the Glasgow Companies, July 13th.

Surgeon-Captain C. H. HARTT, the Woolwich Companies, is promoted to be Surgeon-Major, July 13th.

Messrs. JAMES LAWRENCE and JAMES P. EKINS are appointed Quartermasters in the Manchester and Woolwich Companies respectively, July 20th.

## MEN REQUIRED FOR R.A.M.C.

WE are asked to state that trained men are required for the Royal Army Medical Corps for one year's service or the duration of the war. Full particulars can be obtained from the Chief Recruiting Staff Officer, St. George's Barracks, London, W.C.

## HEALTH OF THE UNITED STATES NAVY.

THE health report of the United States Navy and Marine Corps for the year 1899, an abstract of which was published in the *Medical Record* of New York some time ago, shows a marked decrease in the ratio of admissions to the sick list per 1,000 of strength when compared with the previous report, notwithstanding the continued presence and prolonged cruising of ships in tropical waters and the occupation of shore stations in tropical possessions. The ratio during the past year was 783.08 as against 871 69 in 1868, 838.53 in 1895, 775.75 in 1896, and 748.24 in 1897. The average strength of the active list for the year 1899 was 20,819. The average strength of the force afloat was 13,519, distributed as follows: North Atlantic Station, 6,588; South Atlantic Station, 423; Pacific Station, 4,652; and receiving ships, 1,856. The total number of admissions for disease was 12,794, and for injuries 2,955, giving a ratio per 1,000 of strength of 636.11 and 146 92 respectively. The ratios for 1898 were 695.42 and 176.27. The daily average of patients was 645.82, and the ratio per 1,000 of strength 32.11, as against a ratio of 29.46 in 1898. The total number of sick days was 235,725, giving an average of 11.22 days for each man of the Navy and Marine Corps, and 14.97 days as the average duration of treatment per case. In 1898 the corresponding averages were 10.75 and 12.33 respectively.

There were 153 deaths during the year, of which 95 were from disease and 58 from injuries (including poison). The death-rate was 7.35 per 1,000 of strength. The death-rate per 1,000 of strength in 1898 (exclusive of the *Maine* casualties) was 7.21. Malarial diseases head the list as regards the number of sick, there being 943 cases; however, there were only 2 deaths from maladies of this nature. Diarrhœal affections amounted to 900, with 3 deaths. Gunshot wounds were responsible for 884 cases of disablement, the deaths resulting from these injuries being 21. Rheumatic affections numbered 716; the deaths from acute articular rheumatism were but 2. Bronchial affections accounted for 685 cases of sickness, 3 of which proved fatal. Epidemic catarrh and dengue caused 675 and 297 cases of sickness respectively, with no deaths. Alcohol placed on the sick list 193 navy men, 4 of whom died. Heatstroke overcame 154, a fatal result occurring in only 1 instance. Typhoid fever attacked 134 of the sailors and marine corps, and caused the death of 11. Pneumonia proved the most deadly disease, for while the number of those who suffered from it was less than from any of the above-mentioned complaints (117) the deaths reached 15. Eighty-seven men contracted pulmonic tuberculosis, and 8 died. Dysentery cases numbered 68, with no deaths. There were 42 cases of organic heart disease, the mortality from all descriptions of heart affections being 9. Measles and nephritis attacked 37 and 31 men respectively, but caused no mortality. Scarlet fever was responsible for 29 cases of sickness, and caused 2 deaths. Yellow fever was contracted by 8 sailors, half of whom died. There were 6 cases of small-pox, 4 of which ended fatally. The cases of venereal origin were as follows: Gonorrhœa, 517; primary syphilis, 84; secondary syphilis, 297, the last of which caused 2 deaths. Of other diseases, appendicitis caused 3 deaths; apoplexy, 8; carcinoma, 4; meningitis, 3; miliary tuberculosis, 3; aneurysm, 2; asphyxia, 2; kidney disease, 2; hepatitis, 2; septic æmia, 1; poisons, 1; œdema of glottis, 1; gastric ulcer, 1; and poisoned wounds, 1. Twenty men met their death by drowning. The total number of cases under treatment in the various naval hospitals was 3,377, a decrease of 294 as compared with the year 1898. The average number of patients daily under treatment was 328.15, a ratio of 16.32 per 1,000 of force. The deaths numbered 57, and the invalided from service 474, the ratio per 1,000 of cases treated being 16.88 for the former and 140.36 for the latter. The corresponding ratios for the previous year were 19.61 and 200.21 respectively.

## THE "ORDERLIES" OF THE R.A.M.C.

THREE FLANNEL SHIRTS writes: It is a mistake to say that the R.A.M.C. do not advance and try and keep pace with the times. Why, in the last week orders have been issued that every "orderly" is to have three flannel shirts in future instead of the two sweating odoriferous articles, one of which for a week at a time by day and night he wore as underclothing. Is not this real progress? Perhaps in another decade a clean and suitable working dress may be given to the overworked, underpaid, and undertrained and underfed "orderly."

# MEDICO-LEGAL AND MEDICO-ETHICAL.

## MEDICAL REFEREES AND THEIR REPORTS.

AT the Southwark County Court on Tuesday his Hon. Judge Addison, K.C., said he desired to make public a matter which affected the practice of all county courts in regard to the Workmen's Compensation Act. A short time since Messrs. Barrow Brothers, applied to terminate an award to an old man named Bowden under the Workmen's Compensation Act, alleging that he had quite recovered from the effects of the injury, and was then suffering only from old age. The old man's doctor, however, gave it as his opinion that he was still suffering from the effects of the injury, and as there was thus contradiction between the two medical men, he (his Honour) referred the man and both reports to the medical referee appointed under the Act by the Home Office. Upon the medical referee's report he decided that the award should continue. After he had referred the case an application was made to him that the examination should be conducted in the presence of the solicitor to each party, but he refused it on the ground that the examination should be conducted privately, and that if lawyers were allowed to attend, the costs of the case would be piled up and the object of the Act would be defeated. Subsequently application was made by one of the parties for a copy of the medical referee's report, but he refused to grant it, merely stating that the substance of the report was in favour of the workman. It was then stated that a contrary practice prevailed at a county court, for the proceedings and judge of which he had the greatest respect, but he refused to be guided by this, because he thought that perhaps in the case quoted the judge in question had not considered the matter or had acted with the consent of each party. He, however, communicated with the Home Office in regard to the matter, and he had now received a reply from that quarter stating that the authorities altogether approved of his decision that a medical referee was not to be attended by lawyers at all, but was to make his examination privately with the contradictory reports of the medical gentlemen in the case before him. As regarded

the supplying of a copy of the report to the parties, the Home Office held that the report was primarily for the judge, and he ought not to show it to anybody, but that he could use his discretion as to whether it would be right to show it to the parties should they ask to see it. He would use his discretion in this matter, and would never reveal a report except under very exceptional circumstances, because he felt that a doctor who had to decide impartially between two other doctors should not be exposed to the sort of controversy or contradiction that would result if those against whom he had decided were allowed to criticise his report and pull it to pieces. Further, he was of opinion that a medical referee would not report with the same fulness and confidence if his report was to be made a public document. Therefore he would follow the course he had adopted and would refuse to allow any lawyers to attend the examinations or to grant them copies of the referee's reports.

### INSURANCE COMPANIES AND THE PAYMENT OF MEDICAL REFEREES.

A MEMBER sends us a correspondence which appears to show either that a particular office is not above seeking to obtain a medical opinion without payment, or that the work of that office is done in a somewhat slipshod way. Our correspondent received a printed form requesting information as to a proposer's health, and stating that the company had been referred to our correspondent as one of the proposer's private friends. Our correspondent, in reply, wrote stating that the company had failed to enclose the fee of £1 1s. for his opinion; the secretary wrote in reply stating that he could not find that any communication had been sent to our correspondent. Our correspondent then wrote, stating the nature of the form which he had received, and the secretary then wrote back stating that the company had arranged for the medical examination of the proposer by its own medical officer, and that the reference was made to our correspondent not in his medical capacity, but as a private friend. The proposer, when interviewed by our correspondent, stated that he did not give our correspondent's name as that of a private friend, but as that of his doctor. Our correspondent suspects that the company may have been trying to get from him a second medical report corroborating or not that of their usual medical referee. Whether this is so, or whether it was merely a blunder—and as to this we should be willing to give the secretary of the company the benefit of the doubt—we think that our correspondent as a medical man was perfectly justified in refusing to give the information as to a patient, without the patient's instruction to do so in that capacity, quite irrespective of the question of fee. If the patient authorised the giving of such a report then the customary fee should be required.

### ILLEGAL OPERATION.

Two women, named Elizabeth Topham, of Broadhurst Row, Carlton, and Annie Benson, of Gordon Road, Nottingham, were charged at the Guildhall, Nottingham, on July 8th with the wilful murder of a Mrs. Allcock, death having resulted, it was asserted, as the consequence of an illegal operation performed by them. The magistrate, after hearing the evidence, dismissed the charge against Annie Benson, but committed Elizabeth Topham for trial. At the Nottingham Assizes held on July 18th Elizabeth Topham was duly indicted. The medical evidence proved death to have been due to septicæmia, the result of an injury to the uterus, and the defence raised was that the injuries might have been caused by the deceased herself. The jury returned a verdict of wilful murder, recommending the prisoner to mercy. The judge, in passing sentence of death, stated that the prisoner had already previously been sentenced to, and had served, seven years' imprisonment for a similar offence. The sentence has since been commuted.

### ILLEGAL OPERATION BY A "CONSULTING HOMŒOPATHIST."

JOHN WILLIAM CARTER, describing himself as a consulting homœopathist and photograph dealer, carrying on business at West Hartlepool, was tried at the last Durham Assizes on the coroner's inquisition for the wilful murder of Agnes Wilson on June 28th. It appeared from the evidence that the woman finding herself pregnant went to see Carter, who in her dying statement she asserted performed an operation upon her. Medical evidence was to the effect that death was due to septic peritonitis, secondary to perforation of the uterus and small intestine. The defence raised was that the injury had been self-inflicted, and that only an examination by a speculum had been made by Carter. The jury returned a verdict of guilty of wilful murder with a strong recommendation to mercy. Sentence of death was passed, but it has since been commuted.

### ALLEGED MANSLAUGHTER AT THORNLEY.

ACCORDING to the report in the *Newcastle Leader* of July 17th, Henry William Ryott, a chemist's assistant, was charged at the Durham Summer Assizes with the manslaughter of Esther Cain. It appeared from the report that the prisoner attended the woman in her confinement, and being a person of no medical qualifications did not, it was alleged, bring the requisite skill and knowledge to bear. The husband gave evidence that his wife having expressed a desire that she should be attended by Ryott, he interviewed him and asked him whether he was qualified to "carry out the confinement." To this the answer was given, "Oh yes, I am qualified to sign any paper." The prisoner did attend, and his attempts to deliver were ineffectual. Certain "appliances" were used by him, and assistance in the shape of another unqualified person was obtained. No progress was made, and before medical attendance could be obtained the woman died. The defendant had previously attended the deceased in another confinement. The medical evidence was to the effect that the case was a difficult one, and was not correctly diagnosed by the defendant. The jury returned a verdict of "Not guilty," and the judge, in discharging the accused, remarked that the result of the trial was in accordance with the evidence, but he warned Ryott to mind how he carried on his business in reference to these cases in future.

### TENURE OF CLUB APPOINTMENTS.

K. F. asks the following question. He recently held the post of surgeon to a Court of Foresters. A short time ago, without his consent, the court was divided, so that a considerable number of his members were placed under another surgeon. He thereupon resigned the appointment, declining to give any notice. The rule of court is that the "surgeon shall hold office during the pleasure of the court." Is he entitled to resign without notice? The court owes him a year's fees, and declines to pay without deducting a quarter's payments because of his resignation without notice. Can he recover in the county court?

*** As the court can dismiss the surgeon without notice, it would seem that the latter may also resign in the same way. Unless he had agreed specially at the time of his appointment to give a definite notice K. F. would probably be able to recover his fees in the county court.

### PROFESSIONAL USE OF LEASEHOLD HOUSE.

BUSINESS.—We are advised that it may be stated as a general principle that the carrying on of the practice of a physician and surgeon in premises which are demised for use as a private dwelling house, with an express stipulation in the lease against carrying on any trade or business thereupon, would constitute a breach of the terms of such lease for which the lessee would be liable to the lessor in damages. In this connection the terms "trade or business" would extend to and include a "profession," especially where the lessee was required to use the premises as a private dwelling house only. In the particular case submitted by our correspondent on the facts as stated we would advise a compromise.

# UNIVERSITIES AND COLLEGES.

### UNIVERSITY OF EDINBURGH.

UNIVERSITY COURT.—The Court met on Friday, July 19th, when a report by the Committee on the Medical Education of Women was submitted and approved, and an application by the Scottish Association for the Medical Education of Women for renewal of recognition for the next academical year of the Edinburgh Medical College for Women, Minto House, was granted. Dr. R. J. A. Berry (Edinburgh) was recognised as a teacher of human anatomy, whose courses of instruction qualify for purposes of graduation in science. The recommendations of the respective professors as to the appointment of University assistants for the next academical year which had been received up to the date of meeting were approved, and such of them as are University lecturers were continued in their office as lecturers for the same period. Dr. A. P. Aitken was reappointed University Lecturer on Agricultural Chemistry for the same period.

### UNIVERSITY OF LONDON.

INTERMEDIATE EXAMINATION IN MEDICINE (HONOURS).—The following candidates have satisfied the Examiners:

*Anatomy.*—First Class: *S. G. Barling (deserving of medal), Birmingham University; E. E. Maples (gold medal), St. Bartholomew's Hospital; W. G. Taylor (exhibition and medal), Middlesex Hospital; E. R. Wheeler, King's College. Second Class: W. F. Annand, University College: Elizabeth Bolton, London School of Medicine for Women; A. G. Gibson, B.Sc., Oxford University; F. W. W. Smith, St. Thomas's Hospital. Third Class: F. Alcock, Owens College; F. W. Jones, London Hospital; A. M. Webber, Guy's Hospital.

*Physiology and Histology.*—First Class: G. Hall (exhibition and medal), University College; T. de Smith (gold medal), Cambridge University and London Hospital; A. M. Webber, Guy's Hospital. Second Class: J. A. Ferrière, University College; A. G. Gibson, Oxford University; F. W. Jones, London Hospital; G. W. Russell, Guy's Hospital; K. S. Wise, St. Bartholomew's Hospital. Third Class: S. G. Barling, Birmingham University; N. S. Finzi, University College; M. G. Lonisson, Guy's Hospital; H. F. B. Walker, Guy's Hospital.

*Organic Chemistry.*—Second Class: E. E. Maples, St. Bartholomew's Hospital. Third Class: K. S. Wise, St. Bartholomew's Hospital.

*Materia Medica and Pharmaceutical Chemistry.*—First Class: E. E. Maples, St. Bartholomew's Hospital; A. C. Stark (exhibition and medal), Westminster Hospital. Second Class: Sophie Grace Hacking, B.Sc., London School of Medicine and Bedford College. Third Class: J. A. Ferrière, University College; N. S. Finzi, University College; G. Hall, University College; P. Rees, B.Sc., Charing Cross Hospital; G. W. Russell, Guy's Hospital.

* Obtained number of marks qualifying for the medal.

INTERMEDIATE EXAMINATION IN MEDICINE (PASS).—The following candidates have satisfied the Examiners:

*Entire Examination.*—First Division: H. R. Allingham, King's College; W. Appleyard, University College; J. G. Atkinson, St. Bartholomew's Hospital; A. E. Barnes, University College, Sheffield; H. H. Carter, Guy's Hospital; J. H. Clatworthy, Guy's Hospital; R. Félix, Middlesex Hospital; R. A. Greevos, University College; C. D. Holdsworth, University College; H. Irving, Owens College; Eleanor Gladys Kensington, London School of Medicine and Royal Free Hospital; J. N. Kilner, St. Mary's Hospital; S. M. Lawrence, St. Bartholomew's Hospital; W. C. Macaulay, B.A., Middlesex Hospital; H. C. C. Mann, Guy's Hospital; Bona Sarian Matthews, London School of Medicine and Royal Free Hospital; E. C. Myott, Owens College; Helen Nora Payne, London School of Medicine for Women; W. C. Pickering, St. Bartholomew's Hospital; A. H. Pinder, Owens College and St. Bartholomew's Hospital; Ida Russell Shields, University College, Cardiff; G. W. Smith, Guy's Hospital; G. E. O. Williams, University College; H. W. Wilson, St. Bartholomew's Hospital; R. S. Woods, University College; E. J. Wyler, London Hospital. Second Division: W. Bain, Middlesex Hospital; T. Bates, St. Bartholomew's Hospital; A. Beeley, Leeds Medical School; J. D. C. Calcott, University College, Bristol; C. Colmer, London Hospital; Rose Lilian Humphrey Davy, London School of Medicine and Royal Free Hospital; M. Feldman, London Hospital; H. Finzel, St. Bar-

tholomew's Hospital: Margaret Helen Fraser, London School of Medicine and Royal Free Hospital; F. W. Gatenby, Owens College; S. M. Hebblethwaite, St. Bartholomew's Hospital; C. E. Iredell, J. James, King's College; Katherine Rosebery Jay, B.Sc.; London School of Medicine for Women; C. R. Keed, St. Bartholomew's Hospital; A. E. F. Kynaston, Guy's Hospital; C. J. Loosely, University College; L. P. Maitland, Charing Cross Hospital; E. G. D. Milsom, St. Bartholomew's Hospital; B. Moiser, Guy's Hospital; G. E. Peachell, St. Mary's Hospital; S. H. Pitcairn, St. Thomas's Hospital; G. Price, St. Thomas's Hospital; J. M. B. Rahilly, St. Mary's Hospital; J. V. Rees, University College, Cardiff; A. W. C. Richardson, University College, Bristol; R. L. Ridge, London Hospital; G. H. Rodolph, London Hospital; G. W. Rogers, University College, Cardiff; F. Rogerson, Guy's Hospital; H. T. Samuel, University College, Cardiff; Alice Maude Sorabji, London School of Medicine and Royal Free Hospital; Mary Marguerite L. Taylor, Royal Free Hospital; G. W. Thomas, Leeds Medical School; H. G. Thompson, University College, Liverpool; Ethel Maude Townend, London School of Medicine for Women; E. F. Travers, St. Bartholomew's Hospital; S. B. Turner, University College, Sheffield; J. B. V. Watts, University College, Bristol; A. D. White, St. Bartholomew's Hospital; G. P. Young, King's College.

*Excluding Physiology.*—First Division: L. Bathurst, St. Thomas's Hospital; J. H. Bletsoe, St. Thomas's Hospital; D. Elder, University College, Liverpool; Florence Erin Gubb, London School of Medicine for Women; A. D. Hunt, Yorkshire College and University College, Liverpool; E. E. Mossop, St. Thomas's Hospital; D. J. Mulholland, University College, Liverpool; E. W. Parry, St. Thomas's Hospital; J. M. Plews, St. Bartholomew's Hospital; G. H. Rees, Guy's Hospital; Barbara Tchaykovsky, B.Sc., London School of Medicine and Bedford College; T. J. Williams, University College, Liverpool. Second Division: L. H. H. Boys, Middlesex Hospital; C. N. Davis, St. Bartholomew's Hospital; W. J. Edgar, St. Thomas's Hospital; H. Farncombe, University College; K. M. Gibbins, St. Mary's Hospital; E. C. Hood, Leeds Medical School; J. T. Lloyd, University College, Liverpool; W. A. McEnery, Middlesex Hospital and University College; J. E. Martin, University College; T. P. Puddicombe, St. Thomas's Hospital; P. H. Seal, University College; S. H. Sweet, University College, Cardiff; L. L. A. W. Thomson, St. Mary's Hospital; F. H. Whitehead, St. Thomas's Hospital.

*Physiology only.*—First Division: A. Manuel, St. George's Hospital; W. O. Meek, Owens College and Manchester Royal Infirmary; J. J. Rainforth, London Hospital; Isabel Gertrude Sexton, London School of Medicine for Women. Second Division: Alice Marian Benham, London School of Medicine; Christian Constance Bernard, Royal Free Hospital; Margaret Lucy Augusta Boileau, London School of Medicine and King's College; P. C. Bushnell, St. Thomas's Hospital; C. H. Dawe, Guy's Hospital; Mabel Emily Gates, London School of Medicine and Royal Free Hospital; W. C. F. Harland, St. Bartholomew's Hospital; B. Hart, University College; V. Hetherington, St. George's Hospital; H. B. Hill, St. Bartholomew's Hospital; W. S. Hughes, University College, Cardiff; Kate Knowles, London School of Medicine for Women; H. K. Lacey, Guy's Hospital; H. R. Minkley, St. Mary's Hospital; A. R. Neligan, St. Bartholomew's Hospital; C. C. Rushton, University and Owens Colleges; P. M. Smith, St. Mary's Hospital; J. K. Syms, University College; Agnes Williamson, Royal Free Hospital.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen have passed the necessary Examinations, and have been admitted Fellows of the College:

J. B. Byles, M.B., B.C.Cantab., L.R.C.P.Lond., Westminster Hospital; H. W. Kendall, L.R.C.P.Lond., Middlesex Hospital; J. K. Murphy, M.A., M.D., B.C.Cantab., L.R.C.P.Lond., Cambridge University and St. Bartholomew's Hospital; R. E. Newton, M.B., C.M.Glas., L.R.C.P.Lond., Glasgow University and St. Bartholomew's Hospital; C. Banting, M.D., B.S.Lond., L.R.C.P.Lond., University College and Guy's Hospital; P. N. Vellacott, M.B., B.S.Lond., L.R.C.P.Lond., Guy's Hospital; W. R. Gibson, L.R.C.P.Lond., St. Bartholomew's Hospital; R. P. Rowlands, L.R.C.P.Lond., Guy's Hospital; F. S. Batchelor, L.R.C.P.Lond., Guy's Hospital; H. H. C. Dent, M.B.Durh., L.R.C.P.Lond., Durham University, Mason University College, Birmingham, and St. Bartholomew's Hospital; J. F. Dobson, M.B., B.S.Lond., L.R.C.P.Lond., Yorkshire College and General Infirmary, Leeds; F. A. C. Tyrrell, B.A., M.B., B.C.Cantab., L.R.C.P.Lond., Cambridge University, St. Thomas's and King's College Hospitals; A. H. Greg, L.R.C.P.Lond., Cambridge University and St. Thomas's Hospital; G. E. Gask, L.R.C.P.Lond., St. Bartholomew's Hospital; W. H. McMullen, M.B.Lond., L.R.C.P.Lond., King's College Hospital; W. H. Unwin, M.B.Lond., L.R.C.P.Lond., University College and Charing Cross Hospital; H. S. Barwell, L.R.C.P.Lond., St. George's Hospital; H. V. Pryce, B.A.Cantab., L.R.C.P.Lond., Cambridge University and St. Bartholomew's Hospital; H. Burrows, M.B.Lond., L.R.C.P.Lond., St. Bartholomew's Hospital; G. S. Simpson, L.R.C.P.Lond., L.D.S.Eng., Guy's Hospital; H. G. Tymms, M.B., M.S.Melb., L.R.C.P.Lond., Melbourne University and St. Bartholomew's Hospital; W. H. Lowman, M.B., B.S.Lond., L.R.C.P.Lond., University College, Bristol, and King's College Hospital; R. Y. Aitken, M.D.Glas., L.R.C.P.Lond., Glasgow University; and J. Cunning, M.B.Melb., Melbourne University and St. Bartholomew's Hospital.

Fifty-six candidates presented themselves for this examination, twenty-five of whom passed. One of whom not having attained the legal age of 25 years will receive his diploma at a future meeting of the Council. Thirty-one candidates were referred, twenty-four for six months and seven for twelve months.

## SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, July, 1901.—The following candidates passed in:

*Surgery.*—C. H. Allan (Sections I and II), London Hospital; A. G. H. Anthonisz (Section I), University College Hospital; F. A. Beattie (Sections I and II), Guy's Hospital; P. C. Burgess (Section I), Middlesex Hospital; C. E. C. Child (Section I), Charing Cross Hospital: T. J. M. Clapperton (Sections I and II), King's College Hospital; E. A. Dunn (Section II), Royal Free Hospital; J. P. E. Henery, St. George's Hospital; H. C. Hocken (Section II), Cambridge and Westminster Hospital; C. E. A. Huddart (Sections I and II), London Hospital: R. L. Jones (Sections I and II), Middlesex Hospital; F. P. Joscelyne ((Section II), Leeds; C. C. Morgan (Section I), St. Bartholomew's Hospital; B. E. Sansom (Section II), St. Thomas's Hospital; C. V. Smith, University College Hospital; P. P. Tobit (Section I), King's College Hospital; F. I. Trimmer (Sections I and II), London Hospital; A. G. Wilson (Sections I and II), Manchester; E. Yoxall (Section I), Birmingham.

*Medicine.*—F. A. Beattie (Sections I and II), Guy's Hospital; J. E. Bolton (Section I), Leeds; G. M. Crockett (Section I), Royal Free Hospital; K. A. Dawson (Section I), Royal Free Hospital; E. A. Dunn (Section II), Royal Free Hospital; H. C. Hocken (Sections I and II), Cambridge and Westminster Hospital; F. P. Joscelyne Section II), Leeds; A. E. Malaher, St. Thomas's Hospital; M. E. Martin (Section I), Royal Free Hospital; E. S. Perkins, Leeds and Guy's Hospital); H. Richardson (Sections I and II), Leeds; P. G. Sheppard (Sections I and II), Cambridge and Liverpool; J. E. Skey (Section I), Westminster Hospital; A. G. Wilson (Sections I and II), Manchester.

*Forensic Medicine.*—F. A. Beattie, Guy's Hospital; J. E. Bolton, Leeds; G. M. Crockett, Royal Free Hospital; K. A. Dawson, Royal Free Hospital; E. H. Forjett, Edinburgh; C. J. Francis, Guy's Hospital; H. C. Hocken, Cambridge and Westminster Hospital; M. E. Martin, Royal Free Hospital; E. S. Perkins, Leeds and Guy's Hospital; F. P. Rose, London Hospital; J. E. Skey, Westminster Hospital; A. G. Wilson, Manchester.

*Midwifery.*—F. A. Beattie, Guy's Hospital; F. G. Bennett, University College Hospital; F. J. Birks, Sheffield; P. J. R. Bucknill, Manchester and Dublin; W. V. Braddon, Cambridge and Manchester; A. N. Collier, Manchester; W. H. Crossley, St. Bartholomew's Hospital; W. R. Davies, Guy's Hospital; C. W. Gibson, Guy's Hospital; J. M. King, University College Hospital; E. A. Le Maistre, London Hospital; D. E. Lockwood, Royal Free Hospital; M. B. Oliver, University College Hospital; J. A. W. Webster, St. Mary's Hospital; A. G. Wilson, Manchester.

The diploma of the Society was granted to F. A. Beattie, F. J. Birks, P. J. R. Bucknill, E. A. Dunn, H. C. Hocken, F. P. Joscelyne, A. E. Malaher, C. V. Smith, and A. G. Wilson.

# PUBLIC HEALTH
AND
# POOR-LAW MEDICAL SERVICES.

## HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,377 births and 3,927 deaths were registered during the week ending Saturday last, July 20th. The annual rate of mortality in these towns, which had been 15.1 and 15.6 per 1,000 in the two preceding weeks, further rose last week to 17.9. The rates in the several towns ranged from 7.7 in Croydon, 8.4 in Brighton, 11.9 in Hull, 12.0 in Cardiff, and 12.3 in Leicester, to 22.5 in Blackburn, 29.1 in Sheffield and in Birkenhead, and 30.5 in Liverpool. In the thirty-two large provincial towns the mean death-rate was 19.0 per 1,000, and exceeded by 2.8 the rate recorded in London, which was 16.2 per 1,000. The zymotic death-rate in the thirty-three towns averaged 4.1 per 1,000; in London this death-rate was equal to 2.9 per 1,000, while it averaged 4.8 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 10.8 in Birkenhead, 11.3 in Liverpool, and 11.7 in Sheffield. Measles caused a death-rate of 1.2 in Leeds and 1.9 in Birkenhead; scarlet fever of 1.6 in Blackburn; whooping-cough of 1.2 in Newcastle and 2.8 in Swansea; and diarrhœa of 8.9 in Birkenhead, 9.8 in Sheffield, and 10.2 in Liverpool. In none of the thirty-three towns did the death-rate from "fever" reach 1.0 per 1,000. The 62 deaths from diphtheria in the thirty-three towns included 30 in London, 5 in Leicester, 5 in Manchester, and 5 in Salford. No death from small-pox was registered last week in any of the thirty-three towns: 5 small-pox patients were admitted into the Metropolitan Asylums Hospitals during the week, and 14 remained under treatment on Saturday last, July 20th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had increased from 1,522 to 2,918 at the end of the twelve preceding weeks, declined again to 2,907 on Saturday last; 371 new cases were admitted during the week, against 408, 363, and 324 in the three preceding weeks.

## HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, July 20th, 956 births and 585 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 10.0 and 17.2 in the two preceding weeks, rose again to 18.4 last week, and was 0.5 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14.2 in Perth and 14.8 in Aberdeen, to 10.1 in Edinburgh and 22.6 in Dundee. The zymotic death-rate in these towns averaged 3.2 per 1,000, the highest rates being recorded in Glasgow and Dundee. The 274 deaths registered in Glasgow included 17 from measles, 4 from scarlet fever, 11 from whooping-cough, 3 from "fever," and 26 from diarrhœa. Ten fatal cases of whooping-cough and 6 of diarrhœa were registered in Edinburgh. Six fatal cases of measles, 5 of diarrhœa, and 3 of whooping-cough were recorded in Dundee. Diarrhœa caused 4 deaths in Aberdeen and 3 in Paisley.

*Analysis of the Vital Statistics of Thirty-three of the Largest English Towns during the Second Quarter of 1901.*

| Towns. | Estimated Population middle of 1901. (Provisional). | Births. | Deaths. | Annual Rate per 1,000 Living. Births. | Deaths. | Principal Zymotic Diseases. | Deaths from Principal Zymotic Diseases. | Small-pox. | Measles. | Scarlet Fever. | Diphtheria. | Whooping-Cough. | Fever. | Diarrhœal Diseases. | Deaths of Children under one year of age to 1,000 Births. | Rate per cent. of Uncertified Deaths. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 Towns | 11,463,026 | 84,247 | 48,334 | 29.5 | 16.9 | 1.68 | 4,815 | 6 | 1,349 | 461 | 683 | 1,377 | 287 | 652 | 124 | 1.1 |
| 32 Provincial Towns | 6,919,269 | 51,591 | 30,248 | 29.9 | 17.5 | 1.72 | 2,972 | 4 | 804 | 298 | 449 | 768 | 213 | 436 | 130 | 1.6 |
| London | 4,543,757 | 32,656 | 18,086 | 28.8 | 16.0 | 1.63 | 1,843 | 2 | 545 | 163 | 234 | 609 | 74 | 216 | 114 | 0.3 |
| West Ham | 268,868 | 2,238 | 964 | 33.4 | 14.4 | 2.13 | 143 | — | 44 | 5 | 27 | 25 | 24 | 18 | 103 | 0.7 |
| Croydon | 134,665 | 911 | 357 | 27.1 | 10.6 | 0.51 | 17 | — | 2 | — | 4 | 9 | 1 | 1 | 80 | — |
| Brighton | 123,668 | 755 | 427 | 24.5 | 13.8 | 0.74 | 23 | — | 1 | — | 9 | 9 | 1 | 3 | 91 | 0.7 |
| Portsmouth | 189,907 | 1,282 | 745 | 27.1 | 15.7 | 1.94 | 92 | — | 54 | 6 | 13 | 7 | 4 | 8 | 115 | 1.2 |
| Plymouth | 107,974 | 714 | 417 | 26.5 | 15.5 | 0.56 | 15 | — | 1 | — | 2 | 6 | 1 | 5 | 108 | 0.2 |
| Bristol | 329,831 | 2,260 | 1,258 | 27.5 | 15.3 | 1.54 | 126 | — | 3 | 8 | 27 | 65 | 4 | 19 | 111 | 0.6 |
| Cardiff | 165,308 | 1,316 | 584 | 31.9 | 14.2 | 1.21 | 50 | — | — | 5 | 18 | 22 | 1 | 4 | 108 | 0.5 |
| Swansea | 94,618 | 732 | 463 | 31.0 | 19.6 | 2.58 | 61 | — | — | 2 | 3 | 47 | 5 | 4 | 154 | 2.2 |
| Wolverhampton | 94,467 | 758 | 405 | 32.2 | 17.2 | 2.03 | 48 | — | 14 | 2 | 2 | 16 | 7 | 7 | 158 | 0.7 |
| Birmingham | 523,284 | 4,206 | 2,486 | 32.2 | 19.0 | 1.97 | 256 | — | 95 | 19 | 22 | 64 | 19 | 37 | 138 | 1.6 |
| Norwich | 111,997 | 767 | 421 | 27.5 | 15.1 | 0.54 | 15 | — | — | 1 | 4 | — | 3 | 7 | 128 | 1.9 |
| Leicester | 212,498 | 1,638 | 769 | 30.9 | 14.5 | 1.14 | 60 | — | 1 | 3 | 25 | 13 | 4 | 14 | 126 | 1.4 |
| Nottingham | 240,400 | 1,696 | 1,080 | 28.3 | 18.0 | 1.70 | 102 | — | 42 | 2 | 3 | 22 | 14 | 19 | 150 | 0.6 |
| Derby | 106,076 | 775 | 396 | 29.3 | 15.0 | 0.94 | 25 | — | — | 4 | 6 | 9 | 3 | 3 | 117 | — |
| Birkenhead | 111,203 | 828 | 428 | 29.9 | 15.4 | 1.29 | 36 | — | 12 | 2 | 3 | 9 | 5 | 5 | 103 | 0.2 |
| Liverpool | 686,332 | 5,491 | 3,529 | 32.1 | 20.6 | 2.06 | 352 | 4 | 146 | 32 | 37 | 26 | 25 | 82 | 144 | 3.9 |
| Bolton | 168,748 | 1,185 | 783 | 28.2 | 18.6 | 2.69 | 113 | — | 65 | 8 | 5 | 17 | 4 | 14 | 147 | 0.3 |
| Manchester | 544,934 | 3,960 | 2,736 | 29.1 | 20.1 | 1.84 | 251 | — | 59 | 35 | 34 | 74 | 16 | 33 | 133 | 0.8 |
| Salford | 221,526 | 1,545 | 1,039 | 28.0 | 18.8 | 2.43 | 134 | — | 27 | 27 | 34 | 25 | 4 | 17 | 146 | 0.7 |
| Oldham | 137,382 | 818 | 624 | 23.9 | 18.2 | 1.08 | 37 | — | — | 16 | 4 | 7 | 3 | 7 | 130 | 0.3 |
| Burnley | 97,295 | 665 | 417 | 27.4 | 17.2 | 1.27 | 31 | — | 1 | 4 | 9 | 8 | 2 | 7 | 158 | 1.0 |
| Blackburn | 127,714 | 906 | 576 | 28.5 | 18.1 | 2.24 | 71 | — | 4 | 15 | 18 | 6 | 9 | 10 | 143 | 5.0 |
| Preston | 113,117 | 908 | 556 | 32.2 | 19.7 | 1.78 | 50 | — | — | 25 | 5 | 14 | 2 | 4 | 154 | 3.2 |
| Huddersfield | 94,998 | 551 | 378 | 23.3 | 16.0 | 0.12 | 3 | — | — | — | 1 | — | — | 2 | 94 | 1.1 |
| Halifax | 105,113 | 509 | 454 | 22.9 | 17.3 | 1.15 | 30 | — | — | 2 | 6 | 10 | 6 | 6 | 114 | 4.8 |
| Bradford | 280,161 | 1,675 | 1,208 | 24.0 | 17.3 | 1.50 | 105 | — | 1 | 10 | 11 | 72 | 4 | 7 | 152 | 0.7 |
| Leeds | 430,489 | 3,317 | 1,807 | 30.9 | 16.8 | 1.64 | 176 | — | 63 | 23 | 31 | 18 | 9 | 32 | 127 | 0.7 |
| Sheffield | 382,129 | 3,054 | 1,671 | 32.1 | 17.5 | 1.79 | 170 | — | 12 | 13 | 59 | 42 | 18 | 26 | 188 | 2.0 |
| Hull | 241,622 | 1,902 | 989 | 33.1 | 16.4 | 1.99 | 120 | — | 54 | 6 | 5 | 41 | 5 | 9 | 115 | 1.8 |
| Sunderland | 146,937 | 1,295 | 717 | 35.3 | 19.6 | 2.87 | 103 | — | 29 | 12 | 12 | 36 | 7 | 9 | 151 | 2.5 |
| Gateshead | 110,492 | 1,015 | 539 | 36.8 | 19.6 | 3.12 | 86 | — | 55 | 2 | 2 | 19 | 3 | 5 | 133 | 7.1 |
| Newcastle-on-Tyne | 215,516 | 1,739 | 1,026 | 32.4 | 19.1 | 1.29 | 69 | — | 19 | 9 | 8 | 30 | — | 3 | 125 | 0.7 |

## ENGLISH URBAN MORTALITY IN THE SECOND QUARTER OF 1901.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

THE vital statistics of the thirty-three large English towns dealt with by the Registrar-General in his weekly returns are summarised in the accompanying table. During the three months ending June last, 84,247 births were registered in the thirty-three towns, equal to an annual rate of 29.5 per 1,000 of their aggregate population, provisionally estimated at 11,463,026 persons in the middle of the year. In the corresponding quarters of the three preceding years the rates had been 30.0, 30.8, and 29.6 per 1,000 respectively. In London the birth-rate last quarter was 28.8 per 1,000, while it averaged 29.9 in the thirty-two large provincial towns, among which the birth-rates ranged from 22.9 in Halifax, 23.3 Huddersfield, 23.9 in Oldham, and 24.0 in Bradford to 33.1 in Hull, 33.4 in West Ham, 35.3 in Sunderland, and 36.8 in Gateshead.

During the quarter under notice 48,334 deaths were registered in the thirty-three towns, corresponding to an annual rate of 16.9 per 1,000, against 17.1, 17.5, and 18.7 in the second quarters of the three preceding years. In London the rate of mortality was 16.0 per 1,000, while it averaged 17.5 in the thirty-two large provincial towns, and ranged from 10.6 in Croydon, 13.8 in Brighton, 14.2 in Cardiff, and 14.4 in West Ham, to 19.6 in Swansea, in Sunderland, and in Gateshead, 19.7 in Preston, 20.1 in Manchester, and 20.6 in Liverpool.

The 4,815 deaths referred to the principal zymotic diseases in the thirty-three towns during the quarter under notice included 1,377 which were referred to whooping-cough, 1,349 to measles, 683 to diphtheria, 652 to diarrhœal diseases, 461 to scarlet fever, 287 to "fever" (principally enteric), and 6 to small-pox. Two deaths from small-pox occurred in London, and 4 in Liverpool. The fatal cases of measles, which had been 829, 631, and 1,089 in the three preceding quarters, further rose to 1,349 during the three months ending June last, and were equal to an annual rate of 0.47 per 1,000: in London the death-rate from this disease was 0.48 per 1,000, while it averaged 0.47 in the thirty-two provincial towns, among which measles was proportionately most fatal in Portsmouth, Liverpool, Bolton, Hull, Sunderland, and Gateshead. The deaths from scarlet fever, which had been 435 and 381 in the two preceding quarters, rose again to 461 last quarter, and were equal to an annual rate of 0.16 per 1,000; in London the scarlet fever death-rate was 0.14 per 1,000, while it averaged 0.17 in the thirty-two provincial towns, among which this disease showed the highest proportional fatality in Manchester, Salford, Oldham, Blackburn, Preston, and Sunderland. The fatal cases of diphtheria, which had been 1,131 and 961 in the two preceding quarters, further declined to 683 during the three months ending June last, and were equal to an annual rate of 0.24 per 1,000; in London the death-rate from this disease was 0.21 per 1,000, while it averaged 0.26 in the thirty-two provincial towns, among which diphtheria was proportionately most fatal in West Ham, Cardiff, Leicester, Salford, Blackburn, and Sheffield. The deaths from whooping-cough, which had been 807 and 1,435 in the two preceding quarters, declined again to 1,377 during the three months under notice, and were equal to an annual rate of 0.48 per 1,000; in London the death-rate from whooping-cough was 0.54 per 1,000, while it averaged 0.45 in the thirty-two provincial towns, among which this disease showed the highest proportional fatality in Bristol, Swansea, Wolverhampton, Bradford, Hull, Sunderland, and Gateshead. The deaths referred to different forms of "fever" (including typhus, enteric, and simple and ill-defined forms of continued fever), which had been 830 and 436 in the two preceding quarters, further declined to 287 last quarter, and were equal to an annual rate of 0.10 per 1,000; in London the "fever" death-rate was 0.07 per 1,000, while it averaged 0.12 in the thirty-two provincial towns, among which the highest mortality from these diseases occurred in West Ham, Swansea, Wolverhampton, Nottingham, Blackburn, and Halifax. The 652 deaths from diarrhœal diseases were equal to an annual rate of 0.23 per 1,000; in London this death-rate was equal to 0.19 per 1,000, while it averaged 0.25 in the thirty-two provincial towns, and was highest in Wolverhampton, Nottingham, Liverpool, Bolton, Salford, Blackburn, and Leeds.

Infant mortality in the thirty-three towns, measured by the proportion of deaths of children under 1 year of age to registered births, was equal to 124 per 1,000 during the three months ending June last, against 133, 124, and 141 in the corresponding quarters of the three preceding years. In London the rate of infant mortality was equal to 114 per 1,000, while it averaged 130 in the thirty-two provincial towns, among which it ranged from 80 in Croydon, 91 in Brighton, 94 in Huddersfield, and 103 in Birkenhead to 152 in Bradford, 154 in Swansea and in Preston, and 158 in Wolverhampton and in Burnley.

The causes of 545, or 1.1 per cent., of the deaths in the thirty-three towns during the three months ending June last were not certified, either by a registered medical practitioner or by a coroner. The causes of all the deaths during the quarter were duly certified in Croydon and in Derby, and only 1 death was uncertified in Plymouth, and 1 in Birkenhead; the largest proportions of uncertified deaths were registered in Liverpool, Blackburn, Halifax, and Gateshead.

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OF 310 cases of small-pox admitted during the last two years into the Chicago Isolation Hospital, 271 had never been vaccinated.

CONGRESS OF FRENCH ALIENISTS AND NEUROLOGISTS.—The eleventh Congress of French Alienists and Neurologists will be held at Limoges from August 1st to 7th, under the presidency of Professor Gilbert Ballet of Paris. Among the subjects for discussion are acute delirium and the tendon reflexes and contractures in nervous diseases.

# OBITUARY.

## THOMAS LIVINGSTONE, M.D., J.P.,
Stanhope.

Alderman Thomas Livingstone, M.D., J.P., of Stanhope, co. Durham, who was well known in the North of England as a much-respected country practitioner particularly interested in local and county matters, died rather unexpectedly at Montague Mansions, Great Russell Street, London, on July 15th, at the comparatively early age of 53 years. After graduating at Glasgow University in 1870 Dr. Livingstone commenced practice at Stanhope. In all movements that tended to improve the township and the condition of the people he took the greatest interest. Stanhope is the centre of the lead mining industry and of quarries. In educational matters he took the lead. For 23 years he found time, notwithstanding his many professional calls and the long distances he covered, to act as Chairman of the parish school. He was Medical Officer to the Stanhope district. When County Councils were formed Dr. Livingstone was elected the first County Councillor, and subsequently was chosen as Alderman.

For several years he was the Chairman of the Sanitary Committee of the County Council, and in the discharge of the duties of this office ungrudgingly and often at considerable inconvenience travelled to Durham to attend the meetings. A little more than a year ago, and when apparently in perfect health, although known to be the victim of overwork, Dr. Livingstone was seized with symptoms of angina pectoris. On several occasions Professor Oliver, of Newcastle-on-Tyne, was summoned to see the patient in consultation with his son, Dr. T. Hillhouse Livingstone. Under treatment and prolonged rest from professional and public duties symptoms improved and the attacks became less frequent, but it was months before Dr. Livingstone was able to be out-of-doors again. Recovery was incomplete, for he never felt equal to resuming work again. A few months ago he went to the South of England, and later travelled in Germany, and it was on his return journey that he died, on July 15th.

Dr. Livingstone was by nature kind and attentive to the wants of the sick poor, by whom he was as much beloved as he was respected by the well-to-do classes. Death has robbed Weardale of a useful life, and one that could ill be spared. Dr. Livingstone is survived by his widow and two sons, the younger of whom succeeds his father in practice.

## JOHN HEADLEY NEALE, M.B., C.M.Edin., M.R.C.P.Lond.,
Physician to the Leicester Infirmary.

We regret to record the death of Dr. Neale at the comparatively early age of 51, after a few days' illness. He was the son of Mr. G. C. Neale, of Skeffington, Leicestershire. He commenced the study of medicine rather late in life, entering at the Birmingham School of Medicine about 1878, after a short pupilage with Dr. Jackson, of Somerby, Leicestershire. He soon migrated to the University of Edinburgh, and after a very successful career as a student, graduated M.B., C.M. in 1883. He held appointments under Professor Frazer and Dr. Murdoch Brown, and for a time devoted much attention to gynæcological subjects.

He commenced practice at Leicester about 1884, and was one of the first Assistant Physicians appointed to the Leicester Infirmary in 1886. This post he held for three years, when he was elected a Physician in the place of the late Dr. Blunt. He took the diploma of M.R.C.P.Lond. in 1886. As Physician he attended the infirmary with the greatest assiduity, and took the keenest interest in all clinical details. He published papers on the Germ Theory of Phthisis and on Enteric Fever and its Treatment, especially advocating the freer administration of fruit to typhoid patients, and the treatment in his hands met with undoubted success. Various other clinical notes from his hand appeared from time to time.

He was a member of the Council of the Midland Branch of the Association for some time. During the last two or three years he had not been in very good health, suffering from occasional attacks of bronchitis. On July 3rd symptoms of pneumonia developed, and despite the constant attention of his colleagues he gradually sank and died on July 8th.

Dr. Neale had been twice married, and leaves a widow and six children, with whom much sympathy is felt by his professional colleagues and by the inhabitants of Leicester generally.

Brigade-Surgeon Frederick Robinson, M.D., F.R.C.P., late Scots Guards, died at Eastbourne on July 21st, at the age of 75. He entered the service as Assistant Surgeon, November 19th, 1847, became Surgeon March 20th, 1857, Surgeon-Major November 19th, 1867, and Honorary Brigade-Surgeon on his acceptance of retired pay, March 16th, 1881. He was with the Scots Fusilier Guards throughout the Eastern campaign in 1854-5, and was at the battles of Alma, Balaklava, and Inkerman, at the siege and fall of Sebastopol, and at the sortie of October 26th, 1854 (medal with four clasps, 5th class of the Order of the Medjidie, and Turkish medal). He was recommended for the Victoria Cross for distinguished conduct in the field at the battle of Alma, and was personally complimented for his conduct during the campaign, at Inkerman by Lord Raglan, and at Alma by the Duke of Cambridge.

We regret to have to announce the death of Dr. Richard Edmond Semper, which occurred recently in the Island of St. Kitts, West Indies, from yellow fever, a disease which had threatened his life some fifty years before. He was born at Garniers, St. Kitts, in the year 1817, and came of old Norman stock. His medical education commenced with a term of apprenticeship with a general practitioner living near London, and he later entered as a student at St. Bartholomew's Hospital. He numbered among his teachers Burrows, Lawrance, Rigby, and Skey, and among his fellow-students Paget, Savory, and Holden. After a successful career as a student he took the diploma of M.R.C.S. in 1844, and returned to St. Kitts to take up practice there. He very soon acquired a high professional reputation, particularly on account of his success in operative work and the skill he manifested in fighting an epidemic of yellow fever, from which he himself was a sufferer. He was in great request socially in the island; he was an acknowledged authority on naval and military history, and was instrumental in establishing a volunteer cavalry regiment there. For many years he belonged to the Executive and Legislative Councils, and it was acknowledged that he rendered inestimable assistance as a member of these Councils to the Government in relation to questions having medical bearings. Endowed with ability above the average he yet made no permanent contribution to medical science, but he attained the highest place he coveted for kindness, generosity, and skill in the hearts of his people.

# MEDICAL NEWS.

The new Dental Hospital of London, Leicester Square, has received a legacy of £1,000 under the will of the late Miss Hannah Harvie of Cheltenham.

Presentation.—Dr. A. Davidson, for over five years Senior Assistant Medical Officer at the Dorset County Asylum, has, on the occasion of his leaving to take up work in the Colonial Service, received from the officers and staff a handsome present of silver consisting of four pieces. The inscription on the teapot was:—"Presented to A. Davidson, M.D., by the officers and staff of the Dorset County Asylum in appreciation of his zealous work and kind attention."

Recently published statistics of the number of medical students attending the German, Austrian, and Swiss Universities during the winter semester of 1900 gives the following results. Berlin, 1,313; Munich, 1,274; Vienna, 1,188; Leipzig, 626; Würzburg, 543; Berne, 434; Freiburg, 387; Geneva, 357; Gratz, 352; Kiel, 350; Erlangen, 333; Königsberg, 224; Greifswald, 224; Bonn, 223; Breslau, 217; Marburg, 217; Zürich, 302; Strassburg, 296; Heidelberg, 239; Göttingen, 193; Jena, 166; Rostock, 123; Czernowitz, 6.

THE NATIONAL ASSOCIATION FOR PROMOTING THE WELFARE OF THE FEEBLE-MINDED.—The annual meeting of this Association was held on July 10th, by kind permission of Mr. and Mrs. Alexander, at Aubrey House, Kensington. Lady Frederick Bruce was elected President of the Association and took the chair. Mr. Dickinson, L.C.C., Chairman of the Executive Committee, moved the adoption of the fifth annual report, and in the course of his remarks referred to the three homes of the Association, Alexandra House, Upshirebury, and Brent Lodge, Hendon. At Alexandra House, which contained sixteen girls, eight left during the year, of whom three were placed in service and one was apprenticed to a dressmaker. At Upshirebury seven boys had taken service in various positions. At Hendon, the old home having been found in many respects unsuited for the work, Brent Lodge had been purchased. It is at present impossible to comply with the requirement of the Act of 1899 that no more than fifteen children should remain under one roof, and accordingly the cottage system has been temporarily laid aside, and the children live together in the comfortable homelike premises of which Miss Anderson is lady superintendent. The school is at present carried on in a couple of rooms hired in the village, and in the report there is an interesting account of the educational work done by Miss Bennett, the schoolmistress, and her assistants. It is hoped that in time schools will be erected and cottages for the housing of the children, when the present house will be used as a training college for teachers. During the year the Association had addressed a memorial to the President of the Local Government Board praying for a careful inquiry into the number and condition of feeble-minded inmates of workhouses in order that steps might be taken for dealing with this neglected class; a favourable reply had been received. A conference has also been held with Poor-law Guardians and others and an interesting discussion took place, in which it was shown that guardians need the help of outside agencies in order to deal with their feeble-minded paupers. A successful meeting had also been held at Oxford, a local Working Committee had been formed, and a home for permanent cases would shortly be opened. The adoption of the report was seconded by Canon Scott Holland, and supported by Miss Honnor Morten, member of the London School Board, who informed the meeting that there were now 2,700 children in the special schools of the Board, and that the children were much happier and cleaner than they were before. The report was adopted unanimously. Mr. Loch, in speaking on another resolution, maintained that the work should make the children as much as possible competent for the battle of life, and that if 50 per cent. could be made thus capable the result would be satisfactory. Mrs. Francis Warner spoke of the work from the Poor-law side. Dr. Needham proposed the election of the Committee, and stated that from his experience as Commissioner in Lunacy there was an absolute necessity for a society of this kind. The proposal was seconded by Dr. R. Langdon-Down and carried unanimously.

## MEDICAL VACANCIES.

The following vacancies are announced:

AYR COUNTY HOSPITAL.—House-Surgeon. Salary, £70 per annum, with residence, board, and washing. Applications to the Secretary by August 7th.

BANBURY: HORTON INFIRMARY.—House-Surgeon and Dispenser. Salary, £80 per annum, with board and lodgings. Applications to the Honorary Secretary.

BETHNAL GREEN INFIRMARY, Cambridge Road, N.E.—First Assistant Medical Officer; unmarried. Salary at the rate of £150 per annum, with board, lodging, and washing. Applications, on forms provided, to be sent to the Medical Superintendent by August 5th.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon; unmarried. Salary, £150 per annum, and allowance of £20 per annum for cab hire, with furnished rooms, etc. Applications to the Secretary by September 9th.

BIRMINGHAM AND MIDLAND SKIN AND URINARY HOSPITAL.—Surgical Assistant. Honorarium at the rate of 50 guineas per annum. Applications to the Secretary.

BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Medical Officer. Salary, £100 per annum, with furnished apartments, rations, etc. Applications, on forms provided, to be sent to the Clerk to the Guardians, Parish Office, Edmund Street, Birmingham, by August 10th.

BISHOP AUCKLAND: RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary, £350 per annum. Applications to the Clerk to the Council, Union Offices, Bishop Auckland, by July 31st.

BLACKPOOL BOROUGH.—Medical Officer of Health. Age not to exceed 50 years. Salary, £400 per annum, rising to £500. Applications on forms provided and endorsed "Appointment of Medical Officer of Health," to be sent to the Town Clerk by July 29th.

BRADFORD POOR-LAW UNION.—Second Assistant Medical Officer for the Hospital and Workhouse; unmarried. Salary, £100 per annum, with prescribed rations, apartments, and washing. Applications to the Clerk to the Guardians, 22, Manor Row, Bradford, by August 13th.

BRIDGNORTH AND SOUTH SHROPSHIRE INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications to the Honorary Secretary.

BRIDGWATER INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board and residence. Applications to the Honorary Secretary.

BRISTOL ROYAL INFIRMARY.—(1) Anæsthetist and Junior House-Surgeon. (2) Casualty Officer. Appointments for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Secretary by August 1st.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with furnished apartments, board, and washing. Applications, endorsed "Assistant House-Surgeon," to be sent to the Secretary.

CARDIFF INFIRMARY.—Honorary Anæsthetist. Applications, endorsed "Anæsthetist," to be sent to the Secretary by August 5th.

CARLISLE: CUMBERLAND AND WESTMORLAND ASYLUM, Garlands.—Senior Assistant Medical Officer; unmarried, and not over 30 years of age. Salary, £150 per annum, rising to £180, with board, lodging, etc. Applications to the Medical Superintendent.

CHELTENHAM GENERAL HOSPITAL.—Junior House-Surgeon; unmarried. Salary, £70 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by July 31st.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Second House-Physician. Appointments for six months. Salary at the rate of £30 per annum, with board, residence, and washing. Applications to the Secretary by August 6th.

DENBIGH: DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary, £100 per annum to commence, with board, residence, and washing. Applications to the Secretary.

DENBIGH: NORTH WALES COUNTIES LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary commencing at £120 per annum, rising to £180, with board, residence, and washing. Applications to the Clerk to the Visiting Committee by August 12th.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee.

DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £40 per annum, with residence, board, and washing. Applications to the Secretary by August 8th.

EDINBURGH: CRAIGLEITH POORHOUSE AND HOSPITAL.—Resident Medical Officer. Salary at the rate of £100 per annum, with board and apartments. Applications to the Clerk, Parish Council Chambers, Castle Terrace, Edinburgh, by September 2nd.

HALIFAX UNION.—Resident Medical Officer for the new Poor law Hospital.—Salary, £141 per annum, with apartments, rations, and washing. Applications to the Clerk to the Guardians by July 29th.

HULL ROYAL INFIRMARY.—(1) Casualty Officer. (2) Junior Assistant House-Surgeon. Salary, £60 per annum, with board and lodging in each case. Applications to the Chairman of the House Committee.

ISLINGTON PARISH.—Dentist for the Schools at Hornsey Road. Salary, £20 per annum. Applications to the Clerk, Guardians' Offices, St. John's Road, Upper Holloway, N., by August 15th.

LEEDS GENERAL INFIRMARY.—(1) Three House-Physicians. (2) One House-Surgeon. Appointments (1) for six months, and (2) for twelve months. Board, lodging, and washing provided. Applications to the Secretary of the Faculty.

LINCOLN COUNTY HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Honorarium £25 for six months, with board, residence, and washing. Applications to the Secretary by August 14th.

LINCOLN: LAWN HOSPITAL FOR INSANE.—Assistant Medical Officer. Salary, £100 per annum. Applications to the Medical Superintendent.

LIVERPOOL EYE AND EAR INFIRMARY.—Out-patient Assistant and Pathologist. Applications to the Secretary by August 20th.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN.—Honorary Physician for Diseases of Children. Applications to the Secretary, 38, Barton Arcade, Manchester, by July 31st.

MANCHESTER CORPORATION.—Third Assistant Medical Officer at the Monsall Fever Hospital. Salary, £100 per annum, with board and lodging. Applications, endorsed "Appointment of Medical Assistant," to be sent to the Chairman of the Sanitary Committee by July 27th.

MARGATE: ROYAL SEA BATHING HOSPITAL.—Senior and Junior Resident Surgeons. Salaries £120 and £80 per annum respectively, with board and residence. Applications to the Secretary at the offices, 80, Charing Cross, London, S.W.

NEWCASTLE-ON-TYNE: HOSPITAL FOR SICK CHILDREN.—Male Resident Medical Officer. Salary, £100 per annum, with board, lodgings, and laundry. Applications to the Secretary.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill, Stoke-upon-Trent.—Assistant House-Surgeon. Board, apartments, and washing provided, and at least £10 honorarium at the end of six months. Applications to the Secretary by July 29th.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon; unmarried. Salary, £165 per annum, increasing by £10 yearly, with furnished apartments, etc. Applications to the Secretary, Mr. M. I. Preston, Journal Chambers, Nottingham.

OXFORD COUNTY.—Medical Officer of Health for the combined districts. Salary, £750 per annum. Applications to Mr. A. G. Higgs, Solicitor, Woodstock, by August 10th.

PRESTON ROYAL INFIRMARY.—Assistant House Surgeon. Salary, £60 per annum, with board, lodging, and washing. Applications to the Secretary by August 8th.

ROYAL EYE HOSPITAL, Southwark, S.E.—(1) House-Surgeon. Salary, 50 guineas per annum, with board and residence. (2) Clinical Assistants. Applications to the Secretary for (1) by August 31st.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Appointment for six months. Salary at the rate of £60 per annum, with furnished apartments, board, and washing. Applications to the Secretary by July 29th.

RUBERY HILL ASYLUM, Burnt Green, Worcestershire.—Junior Assistant Medical Officer. Commencing salary, £130 per annum, with board, furnished apartments, etc. Applications to the Medical Superintendent.

SALISBURY: FISHERTON ASYLUM.—Assistant Medical Officer. Salary, £150 per annum, with board, lodging, and washing. Applications to Dr Finch, Salisbury.

SHREWSBURY: SALOP INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board, washing, and residence. Applications to the Board of Directors.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—(1) Junior House-Surgeon. Salary at the rate of £50 per annum, with rooms, board, and washing. (2) Locum Tenens by August 1st for post of Junior House-Surgeon. Applications to the Secretary for (1) by August 1st.

STAFFORDSHIRE COUNTY ASYLUM.—Junior Assistant Medical Officer; unmarried, and under 30 years of age. Salary, £150 per annum, with board, lodging, etc. Applications to the Medical Superintendent.

SYDNEY UNIVERSITY.—Professorship of Pathology, not more than 40 years of age. Salary, £600 per annum, and £100 allowed for passage expenses. Applications to the Agent-General for New South Wales, 9, Victoria Street, London, S.W., by September 14th.

TOTTENHAM HOSPITAL, N.—Senior Resident Medical Officer. Salary, £90 per annum, with board, residence, and laundry. Applications to the Chairman of the Joint Committee by August 12th.

TOXTETH PARK UNION.—Assistant Medical Officer for the Workhouse and Infirmary. Salary, £100 per annum, with board, washing, and apartments. Applications to the Clerk to the Guardians, 15, High Park Street, Liverpool, by July 31st.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon; unmarried. Salary, £100 per annum, increasing by £10 a year, with board and apartments. Applications to the Secretary.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY. Junior House-Surgeon; unmarried. Salary, £80 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by August 7th.

WELLS: SOMERSET AND BATH LUNATIC ASYLUM.—Medical Superintendent. Salary commencing £600 per annum, with furnished house and allowances. Applications to the Clerk to the Visiting Committee by August 6th.

WEST BROMWICH UNION.—Assistant Medical Officer for the Workhouse and Infirmary; unmarried. Salary, £125 per annum and £100 per annum in lieu of apartments, board, etc. Applications, endorsed "Assistant Medical Officer," to be sent to the Clerk by August 10th.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—House-Surgeon. Salary, £120 per year, and £30 for dispensing, with furnished apartments and attendance. Applications to the Secretary by August 10th.

WORCESTER GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £70 per annum, with board, residence, and washing. Applications to the Secretary by August 5th.

WORKSOP DISPENSARY AND VICTORIA HOSPITAL.—House-Surgeon. Salary, £150 per annum, with rooms, furniture, etc. Applications to Mr. C. A. Whall, 44, Bridge Street, Worksop.

## MEDICAL APPOINTMENTS.

BRABYN, G. W., L.R.C.S., L.R.C.P.Edin., L.F.P.S.Glasg., appointed one of the Public Vaccinators for the South Wimbledon District of the Kingston Union.

BURDWOOD, J. W., L.F.P.S.G., L.M., L.S.A., F.R.I.P.H., Mem. San. Inst., reappointed Medical Officer of Health for the Bourne Urban and Rural Districts.

COLLINSON, Harold, M.B.Lond., M.R.C.S., L.R.C.P., appointed Resident Casualty Officer to the General Infirmary, Leeds.

CRAWSHAW, E. E., M.R.C.S., L.R.C.P., appointed Resident Obstetric Officer to the General Infirmary, Leeds.

DAVIDSON, A., M.D., appointed Port Medical Officer at Singapore.

DUNLEA, M. P., M.D., M.Ch.R.U.I., appointed Certifying Factory Surgeon for the Riverstown District, co. Cork.

ERSKINE, Marian, L.R.C.P. and S., appointed Junior Assistant Medical Officer to the Edinburgh Hospital and Dispensary for Women and Children.

FAULKNER, Hugh, M.B., (Ch.B.Edin., appointed House-Physician to the General Hospital, Birmingham.

FINLAY, Hunter, M.D., L.F.P.S.G., L.M., J.P., appointed Medical Officer to the Hospital at Angledool, New South Wales.

GLYNN, Ernest E., M.R.C.S., L.R.C.P.Lond., appointed Honorary Assistant Physician to the Liverpool Hospital for Consumption, *vice* R. J. M. Buchanan, M.D.Viet.

GRIFFIN, W. Watson, F.R.C.S., appointed Ophthalmic Surgeon to the Sussex County Hospital, Brighton.

GRUNBAUM, A. S. F., M.A.Cantab., M.D., M.R.C.P., appointed Honorary Assistant Physician to the Liverpool Hospital for Consumption, *vice* W. B. Warrington, M.D.Lond.

HAYES, W. B., M.D.R.U.I., M.Ch., appointed Certifying Factory Surgeon for the Union of Tralee, co. Kerry.

LAKING, Sir Francis, K.C.V.O., M.R.C.P.Lond., appointed Consulting Physician to the Victoria Hospital for Sick Children, Chelsea.

MACLEAN, E. J., M.D.Edin., M.R.C.P.Lond., appointed Gynæcologist to the Cardiff Infirmary, *vice* John Williams, M.D.Edin.

MADDEVER, J. C., M.D.Glasg., C.M., appointed Certifying Factory Surgeon for the Brownhills and Aldridge District of Staffordshire.

MEACHEN, G. Norman, M.B., B.S.Lond., M.R.C.P.Edin. M.R.C.S., appointed Clinical Assistant to the Hospital for Diseases of the Skin, Blackfriars.

MORRISSEY, Martin R., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Blessington No. 2 Dispensary District.

NASH, J. T. C., M.D.Edin., D.P.H.Cantab., appointed Medical Officer of Health for the Borough of Southend-on-Sea.

O'BRIEN, D. J., L.R.C.P., L.R.C.S.Irel., appointed Certifying Factory Surgeon for the Durrow Dispensary District, Queen's County.

PICK, T. Pickering, F.R.C.S.Eng., appointed Consulting Surgeon to the Victoria Hospital for Sick children, Chelsea.

PRITCHARD, W. G., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Medical Officer and Public Vaccinator to the Carnarvonshire No. 2 District of the Bangor and Beaumaris Union; also Factory Surgeon for the Bethesda Urban District and the civil parishes of Llanllechid and Llandegai, *vice* R. Pritchard Roberts, M.R.C.S., L.S.A., deceased.

ROBIE, Geo., M.B., M.Ch.Edin., appointed Senior Assistant Medical Officer to the Dorset County Asylum, *vice* A. Davidson, M.D., resigned.

STEVENSON, Edgar, M.D., appointed Demonstrator in Ophthalmology at University College, Liverpool.

THOMSON, H. Hyslop, M.D., M.C., appointed Resident Medical Officer to the Consumption Sanatoria, Bridge-of-Weir, Renfrewshire.

TREDINNICK, A. S., L.R.C.P.Lond., M.R.C.S.Eng., appointed Certifying Factory Surgeon for the Melbourne District of Derbyshire.

WATKINS, J. W., M.B., B.Ch.Dub., appointed Certifying Factory Surgeon for the Bolsover District of the county of Derby.

WATSON, Mrs. D. Chalmers, M.D., appointed Senior Assistant Medical Officer to the Edinburgh Hospital and Dispensary for Women and Children.

WILKINSON, J. Howard, L.R.C.P.Lond., M.R.C.S.Eng., D.P.H.Oxon., appointed an Honorary Surgeon to the Guest Hospital, Dudley.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

ATKINS.—On July 23rd, at 13, Booth Street, Handsworth, Birmingham, the wife of J. F. Atkins, M.R.C.S., L.R.C.P., of a daughter.

BODGER.—At Studley, R.S.O., Warwickshire, on July 15th, the wife of S. Bodger, M.D., of a daughter.

LANGFORD.—On July 15th, 1901, at West Lodge, 142, Peckham Rye, S.E., the wife of Frederick C. Langford, L.R.C.P.Lond., M.R.C.S., of a son.

NIALL.—On July 18th, at Burneston, Epsom Road, Guildford, the wife of W. G. Niall, M.D., M.Ch., of a daughter.

### MARRIAGES.

EVANS—BEENHAM.—On July 23rd, at St. John the Divine, Richmond, by the Rev. A. W. Goodwin, M.A., Curate, David Robert Powell Evans, L.R.C.P.Lond., M.R.C.S.Eng., L.S.A.Lond., of Berth Ddu, Cottenham Park, Wimbledon, to Jessie, daughter of the late Charles Beenham, of Kennington, and niece of Mrs. W. J. Penfold, of Thornfield, Wimbledon. At home after August 23rd.

FINCH—LOWE.—On the 17th, at the Ecclesfield Parish Church, by the Rev. G. P. Proctor, M.A., W. Stanley Finch, M.R.C.S., L.R.C.P., of Purston, Pontefract, to Sarah (Sallie), second daughter of Robert Lowe, Esq., of Shire Green, near Sheffield.

### DEATHS.

GORNALL.—On Thursday, July 18th, 1901, after a long and painful illness, John Hankinson Gornall, M.R.C.S., L.S.A., J.P., during twenty-one years Medical Officer of Health for the Borough of Warrington.

MCCRAITH.—At Smyrna, on July 15th, in his 92nd year, James McCraith, M.D., F.R.C.S.

PEARSE.—On the 19th instant, at The Rookery, Blofield, Arthur Pearse, M.D., formerly of Gotesdale, aged 64 years.

SHETTLE.—On July 21st, at Nailsworth, Gloucestershire, Richard Charles Shettle, M.D., aged 76, for twenty-eight years Physician to the Royal Berks Hospital.

## LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

### QUERIES.

DUPLEX desires to learn whether the course of exercises followed out at Sandow's different schools or in the privacy of home would be of benefit in neurasthenia.

GREEN STOOLS IN PNEUMONIA.

J. W. M. writes: Will any member explain the significance of green semi-liquid stools in a case of pneumonia ending fatally? Might it point to an infection of the liver as well as the lungs?

### ANSWERS.

WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided.

HAY FEVER.

DR. S. H. SNELL (late of Scarborough) writes in answer to "J. W.'s" inquiry *re* hay fever that from personal experience he can say that he remained free while living at the seaside, but return inland has again brought on attacks. He has seen the same frequently with patients.

"CANCROIN."

F.R.C.P. AND MEDICUS.—Cancroin is, according to Adamkiewicz, a toxin obtained from the parasite coccidium sarkolytes Adamkiewiczii. The material which he uses, however, appears to be called neurin or Cancroin II, which he states to be a substance whose chief physiological properties correspond with those of the original cancroin. The original toxin, he states, cannot be obtained in sufficiently large quantities for therapeutic purposes. The doses of Cancroin II vary, but he advises that it should be gradually increased until 11/2 grs. (=0.75 gram) is reached. It is injected into some "indifferent" part, that is, the abdominal wall, and this is carried out daily until there appears to be "complete cure." In one case he reports that a rather long interval followed, but he found it necessary to complete the treatment by a second course. Adamkiewicz does not mention in the available literature where he has obtained Cancroin II, but there is little doubt that the name and address of the manufacturing chemist in Vienna can easily be procured from the professor himself. For further details see (1) *Untersuchungen über der Krebs.* Wien (Braunmüller) 1893; (2) *Wiener med. Wochen.*, 1895, 1896, and 1892; (3) *Wiener med. Presse*, 1892-94 (*in alia*).

SENILE PRURITUS.

X. recommends after general hygienic treatment, and the exclusion of diabetes mellitus, the trial of acid. sulph. dil. mxv in some bitter tincture thrice daily after food. If the effect is not satisfactory mvj or mvij of the hydrochloric solution of arsenic may be added to the dose.

DR. HERBERT SMITH (Dover) writes in answer to "S. J.": This seems to be due to a dystrophy of the nervous system, an irritation of nerve endings, a sensory neurosis affecting groups of skin nerves; it may be the expression of a subjective or invisible eczema, possibly it is the prelude of a nerve storm or zona; I have known it to be the sign of a neuritis having no connection with the lesion of the posterior columns or sensory ganglia, but simply the first expression of a general break up. To relieve it, after eliminating such factors of causation as glycosuria, jaundice, gout, piles, parasites, toxins, and local sources of irritation, I should give the patient ℞ calc. chloridi. gr. x, am. chloridi. gr. xv, am. brom. gr. x, tr. aur. 3ss, aq. chlor. 3j. t.d.s. Discontinue in four days and repeat later. (I am indebted to Dr. T. D. Savill for this hint.) Calcium chloride seems to increase the coagulability of blood and impart something lacking to the blood plasma. I should limit meat ingesta, alcohol, tea, coffee, and sugar, and put the patient on a simple, nourishing, but bland diet; let him take daily an alkaline bath, and twice a week give him a vapour bath (by Allen's apparatus). He should wear cotton or silk next the skin. "S. J." should see that his patient takes plenty of vegetable food, salt with his meals, and drinks at least four pints of bland fluid daily. I have found great benefit from a hot goulard and eucalyptus bath with an occasional use of ℞ calam. ppt. 3j, zinci. oxidi 3ss, acid. hydrocy. dil. 3j, aq. rosæ ad.

5viij. As a lotion Ihle recommends ichthyol 5ss. lanolin, vaselin., zinc. ox. amyli. āā 5ij. Mix, as a salve. Ichthyol pills (gr. 2) (Parke, Davies), often relieve and the use of ext. opii gr. ¼ t.d.s. (M. Morris) for allaying the tortures of itching and irritation must not be forgotten.

DAVIDSON'S OPTOMETER IN GENERAL PRACTICE.

DR. WILLIAM C. D. HILLS (Upwell) writes: In reply to "R. W.", I have used Davidson's optometer for the last three years and have tested a number of eyes. I am inclined to think that a trial set of glasses with frames are the best, as almost invariably with the optometer the patient tries to use the wrong eye or look between the two discs. Another advantage of glasses are that they can be more easily cleaned. The chief advantage of the optometer is the quickness with which one can determine the sight.

C. writes: The optometer will answer very well. Of course, to test sight means much time; it requires a good deal of experience and judgment to prescribe after testing. Probably homatropine, or even atropine, will be required to ascertain latent hypermetropia, to reduce myopia, and to eliminate ciliary spasm. A knowledge of the diseases of the eye is also necessary, for the patient who comes for glasses may really have chronic glaucoma, cataract, detachment of retina, intense ciliary neuralgia without glaucoma, intraocular tumour, retinitis pigmentosa, choroiditis, diabetes, albuminuria, etc.

## LETTERS, NOTES, Etc.

WARNING!

DR. HERBERT C. CROUCH (31, Welbeck Street, W.) writes: A large number of members of our profession have been receiving begging letters from a man signing himself "W. Dyer Frazer," pleading want of means consequent on illness and loss of income owing to the situation in South Africa. The only W. Dyer Frazer in the profession is at the present moment in South Africa, and is not in need of pecuniary assistance. The police have been communicated with and a warrant has been issued. The writer has at present disappeared, but the police consider that he is probably writing more letters from a different address and over a different signature. Would, therefore, anyone who receives a begging letter, however signed, the *bona fides* of which are in question, kindly forward it to me, or to Detective-Sergeant Harris, Marylebone Police Station, W.

BITES OF VENOMOUS REPTILES IN GREAT BRITAIN.

DR. GERALD LEIGHTON, M.B. (Grosmont, near Hereford), writes: The case of adder-bite reported in the BRITISH MEDICAL JOURNAL of July 20th by Dr. Ronaldson Russell leads me to ask you to allow me to appeal to all medical men practising in districts where our venomous reptile occurs to report all such cases to the JOURNAL. From reports sent to me privately I am of the opinion that these cases are by no means so rare in this country as is generally supposed, though fatalities from this cause are fortunately few and far between. Still they do occur, and Dr. Eden Cass has sent me notes of a case in Cumberland only last month which ended in death, and which I believe he will report in the JOURNAL. Another case of snakebite—the species of serpent being doubtful yet—happened in Staffordshire this last week, which I trust will also be fully reported. I mention these now simply to show that these cases are not so very rare, but their literature in this country is very meagre. If practitioners in country districts will keep careful notes of all cases and report the same we should soon know a great deal more about the symptomatology of adder-bite than is at present to be found.

ANAL PAIN.

DR. B. STRACHAN (Sunderland) writes:—*Apropos* of the case recorded in the BRITISH MEDICAL JOURNAL of July 13th, p. 78, of a rabbit bone having been inhaled into the right bronchus, I came across an interesting case some years ago. A commercial traveller, who owned to not infrequently bolting his food, sent for me in a great distress one morning having experienced a sharp pricking pain in the anus on going to stool. On exploring with my finger I found, lying transversely across the lumen of the bowel, above the inner sphincter, what proved to be the rib bone of a rabbit some two or three inches long. By cautiously drawing down one end it was easily removed, to his immediate relief.

PATIENTS AND DOCTORS.

MR. SYDNEY JONES, M.B., F.R.C.S., Consulting Surgeon, St. Thomas's Hospital, writes: As Dean of St. Thomas's Hospital Medical School on Thursday, October 1st, 1853, I gave the introductory address. I quoted the following lines:

> "God and the doctor we alike adore,
> But only when in danger, not before:
> The danger o'er both are alike requited,
> God is forgotten, and the doctor slighted."

I had several letters asking for the authorship. The lines were taken, I believe, from Jeaffreson on doctors.

DIFFICULTIES OF COUNTRY PRACTITIONERS.

P. writes: There are two points now being discussed in the BRITISH MEDICAL JOURNAL which are of infinite importance to the country practitioner, especially if he holds the post of public vaccinator. In the South-Western counties we are severely handicapped by the apathy of the guardians in not prosecuting where there is no exemption taken out under the Vaccination Law, and especially where the offender is a farmer (a great number of the guardians being farmers also). I have in my district a few families where there are even six children unvaccinated, and certainly two of these households would be done if the least sign was given of intended action. Again, it is a fact, and a sad one, that practitioners of standing do lend themselves to the practice of underbidding by cheap vaccination, and only doing one or two insertions. In opposition to "Tolerans," whose letter astonished myself and no doubt many others, I believe it to be conclusively proved that four pocks protect more than one, and I have proved more than once that if only one place takes and the other places are redone within six or seven days, usually all will take and the course of the later pocks is accelerated.

My other point is that pressure should be brought to bear so that medical evidence should be taken at coroner's inquiries; here it is done in barely one-fourth of the inquests, sometimes with ludicrous results from want of medical testimony.

LETTERS, COMMUNICATIONS, ETC., have been received from

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## BOOKS, ETC., RECEIVED.

Die anorganischen Salze im menschlichen Organismus. Von Dr. R. Brasch. Zweite und dritte Abteilung. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1901. 8s.

Die therapeutischen Leistungen des Jahres 1900. Herausgegeben von Dr. A. Poliatschek. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1901. 8s.

Der Hypnotismus. Von Dr. Loewenfeld. Wiesbaden: J. F. Bergmann; and Glasgow. F. Bauermeister. 1901. 9s.

Das Asthma. Von Dr. W. Brugelmann. Vierte Auflage. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1901. 4s.

Bericht ueber die achtundzwanzigste Versammlung der ophthalmologischen Gesellschaft. Heidelberg, 1900. Redigirt durch W. Hess und T. Leber. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1901. 8s.

Grundzüge der allgemeinen Anatomie. Von Dr. F. Reinke. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1901. 7s. 9d.

Der Farbensinn der Tiere. Von Dr. W. A. Nagel. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1901. 1s. 3d.

Verhandlungen der siebzehnten Versammlung der Gesellschaft für Kinderheilkunde in Aachen 1900. Herausgegeben von Dr. E. Pfeiffer. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1901. 8s.

Vorlesungen ueber die pathologische Anatomie des Rückenmarks. Herausgegeben von Dr. H. Schmaus. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1901. 16s.

Das Selbstbewusstsein: Empfindung und Gefühl. Von T. Lipps. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1901. 1s. 3d.

Pathologie und Therapie der Herzneurosen und der functionellen Kreislaufstörungen. Von Dr. A. Hoffmann. Wiesbaden: J. F. Bergmann; and Glasgow: F. Baurmeister. 1901. 7s. 9d.

Atlas der Nasenkrankheiten. Von Dr. R. Kreig. Die englische Uebersetzung von A. Roman, M.D., M.R.C.S., L.R.C.P. Lief. 5, 6, and 7. Stuttgart: F. Enke. 1901. M.6 each.

Le Diagnostic Précoce de la Tuberculose Pulmonaire. Par Dr. C. Jourdin et Dr. G. Fischer. Paris: A. Maloine. 1901. Fr. 2.50.

Encyclopædia Medica. Edited by Chalmers Watson, M.B., M.R.C.P.E. Vol. viii. Edinburgh: W. Green and Sons. 1901.

Tumours, Innocent and Malignant. By J. Bland-Sutton. New Edition. London: Cassell and Co. 1901. 21s.

The Association of Inguinal Hernia with the Descent of the Testis. By J. Langton. London: John Bale, Sons, and Danielsson. 1900. 5s.

The Ship Captain's Medical Guide. Compiled by H. Leach, M.R.C.P. Revised by W. Spooner, L.R.C.P., M.R.C.S. Thirteenth Edition. London: Simpkin, Marshall, Hamilton, Kent, and Co. 1901. 2s.

History of Intellectual Development: on the lines of Modern Evolution. By J. B. Crozier. Vol. iii. London: Longmans, Green, and Co. 1901. 10s. 6d.

Die künstlichen Nahrpräparate und Anregungsmittel. Von Dr. M. Heim. Berlin: A. Hirschwald. 1901. M.5.

Traité de Chirurgie clinique et opératoire. Publié sous la Direction de A. Le Dentu et P. Delbet. Tome Dixième. Parties I et II. Paris: J. B. Baillière et Fils. 1901. Frs. 17.

A System of Physiologic Therapeutics. Edited by S. S. Cohen, A.M., M.D. Vol. ii. London: Rebman Limited. 1901. 10s. 6d.

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# PRESIDENT'S ADDRESS

DELIVERED AT THE

SIXTY-NINTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

BY

GEORGE BAGOT FERGUSON, M.A., M.D.,

B.Ch.Oxon.,

Senior Surgeon to the Cheltenham General Hospital and to Cheltenham College.

## SCIENTIFIC RESEARCH: THE INDISPENSABLE BASIS OF ALL MEDICAL AND MATERIAL PROGRESS.

"Vergebens, dass, ihr ringsum wissenschaftlich schweift,
Ein jeder lernt nur was er lernen kann.
Doch der den Augenblick ergreift,
Das ist der rechte Mann."

—*Goethe.*

"Man is bound to expend every particle of strength which God Almighty has given him in doing the work he finds he is fit for, to stand up to it to the last breath of life, and to do his best."

—*Carlyle.*

"Quemcunque miserum videris, hominem scias."

—*Seneca.*

### Introductory.

Ladies and Gentlemen,—My first duty is to bid you a hearty welcome to Cheltenham, which has not been visited by the Association since 1837, the auspicious year of our late lamented Queen's accession to the throne. But 1901 is no less an auspicious year, marking as it does the accession of King Edward VII, formerly an honorary member of our Association, but now its Patron. Of His Majesty we may confidently affirm that throughout the long line of British monarchs there has reigned none more closely connected with the medical profession, and none a more constant and munificent supporter of its great charities and institutions.

The first visit of the Association to Cheltenham was the fifth of its annual meetings, and was held under the presidency of Dr. Boisragon. In 1837 the Association comprised 940 members only. Now it is a great and powerful body, numbering nearly 19,000, when we include its 30 Branches in the British Colonies and in India. To us who have lived long in Cheltenham—and I have lived here fifty years—there is no more favoured spot. The words of Horace—

Ille terrarum mihi praeter omnes
Angulus ridet,

express my feeling and that of most of our old residents; and right glad I am that the leaders of British medicine should come here once again, to spend four days of work and inquiry, of comparison and sifting of facts in our garden town; for we have nothing to fear, but much to gain from their presence and close scrutiny. The town of Cheltenham, originally a royal manor of great antiquity, is, so far as its present aspect is concerned, comparatively modern, and owes its present position and popularity to two chief causes, its waters and its educational establishments.

You will notice how we lie on a gentle slope of the Cotswolds, with a natural drainage towards the Severn. You will see how sheltered we are on the east, and how open to the north and west: whilst from most directions the air blows on us, fresh and pure, either from the open wolds of the neighbouring hills, or from the valleys of Evesham and Gloucester. Our water supply, mainly from the hills, is pure and good. It contains lime, but not enough to produce calculous disorders, though sufficient to supply a needful constituent for growth and nutrition, so as to constitute one great factor of the high salubrity of Cheltenham, and of its reputation as a home for youth. Ascend the hills, and you will see that our town is a garden of broad roads, with innumerable trees, oxygenating and renovating the atmosphere under the influence of light. The use of its waters dates from about 1716, soon after their discovery by the pigeons who were wont to pick up the saline particles left by their evaporation, as they flowed to waste unnoticed—a circumstance commemorated by the pigeons on our municipal arms. The original Cheltenham spring is within a short distance of this great Hall, which marks the spot where the waters of another well were formerly imbibed by King George III and many thousands of invalids. Tennyson, who composed much of his *In Memoriam* here, was thinking of Cheltenham when he wrote the lines:

There rolls the wave, where grew the tree,
Oh Earth, what changes hast thou seen,
Where the long street now roars, hath been
The stillness of the central sea.

Beneath the town are vast saline deposits, the relics of this "central sea." The springs becoming charged with brine, percolate afterwards through deposits of iron pyrites, oxidation of which yields the sulphates that so largely characterise the Cheltenham waters. The constitution of most of the springs is nearly the same as those of Carlsbad, with the exception that the last are hot, and contain in addition more carbonate of soda and free carbonic acid, a deficiency easily supplied by the addition to our local waters of a little hot Vichy or Vals, and thus we obtain a curative means of still greater efficacy in some cases.

After the pigeons had discovered the waters they gradually increased in popularity, until at last kings, princes, lords, and commonalty flocked to the healing springs. Of the celebrities of eighty-five years ago it will be simplest to state that they all came here, and found their advantage in so doing. The use of our waters, like those of Carlsbad, is mainly for affections of the stomach and liver, and their efficacy in the diseases of Anglo-Indians made Cheltenham, soon after its general reputation was established, one of their specially favoured resorts, as it remains to this day. The waters are with us still, and their virtue is unimpaired, but the celebrities come no longer. The poor use them with the greatest benefit, but the rich for the most part go elsewhere—to Carlsbad or Homburg, for instance, where their amusements, at any rate, are much better provided for. The principal wells have now passed into the keeping of the Corporation, and the greatest care is taken to ensure the purity and uniformity of their yield. I can assure all gastric and hepatic sufferers that if they will only drink the Montpellier saline or the No. 2 Pittville, warm, as they do the similar waters of the Continent, early in the morning, in repeated small draughts, taking exercise between them, they will find them not one whit less efficacious than the very best of the springs of Germany; and I sincerely hope that most of those here present will make a practical trial of them and recommend them. I will ask further that they should look at the results of Professor Thorpe's recent analyses of our waters, and compare them with those of the best-known German springs; when they will at once perceive how immeasurably superior are the former to most of the latter, to Homburg and Wiesbaden, to Kreuznach and Kissingen, for instance. In the Nos. 1 and 3 Pittville, we have an extremely salt water, almost identical with that of Wiesbaden, and some years ago the Spa Medical Committee and a sympathising body in the Corporation projected a sumptuous set of medical baths, in which this salt water, heated, would have been utilised. A vast deal of trouble and expense were gone to, though the scheme, which would have been most advantageous to many invalids and to Cheltenham, was finally wrecked, owing mainly to the opposition of our temporary residents. And thus it is that, to the keen disappointment of many, we cannot show you our new Bains de Luxe, with which we had hoped to restore some of the old therapeutical fame of Cheltenham. These we cannot show you, but we will ask you in their place to inspect our new public baths, which for art, science, and luxury are not, I believe, inferior to the best anywhere.

This would seem to be the right place for mentioning some of our medical worthies of the past: Dr. Baron, the biographer of Jenner (of whom more presently); Dr. Henry Wyldbore Rumsey, F.R.S., the pioneer of sanitary science, who filled the Chair of Public Medicine at the Newcastle Meeting of 1870; Charles Fowler, one of the founders of the Cheltenham Hospital, who ranked among the first of the provincial practioners of fifty years ago; Clement Hawkins, the fellow-student and lifelong friend of the late Sir James Paget, a most successful practitioner, blunt and direct, but the soul of kindness and honour, whose name is still gratefully enshrined in

the recollection of an extensive circle; Dr. Evans, of Gloucester, the first president of our Branch, our chief consultant of thirty years ago, a physician equal in kindness and accomplishment, in insight and generosity; Dr. Wright, F.R.S., our first medical officer of health, a student of nature from his youth, a most accomplished geologist, anatomist, and surgeon, the most original and interesting man I ever met, whom to know was to admire, and with whom to be intimate was an education. Drs. Baron and Rumsey and Mr. Fowler were present at the last Cheltenham meeting; at which I find also mentioned the well-remembered local names of Allardyce, Bernard, Coley, Cooke, Eves, and Gibney. I hope that you will report kindly and favourably of our town, of its advantages generally, and of its educational establishments in particular; of its successful College, the first of the great modern public schools, and of its unparalleled Ladies' College, where we meet to-night, and where all of our Sections will be accommodated. Nor must I omit to name our ancient and yet completely modern Grammar School, our great training colleges for teachers, and that splendidly-managed young giant, Dean Close School. What we have lost as a spa we have more than regained as a centre for education. It may be that some of our arrangements are not yet quite perfect, but the Corporation is wide awake, and determined always to remember the motto of the town, "Salubritas et Eruditio."

## THE FOUNDATIONS OF MEDICINE.

"*Homo sum, humani nihil a me alienum puto*," and this sentence of Terence may well be taken as descriptive of the modern practitioner of medicine. Is there nothing revolting in medical and surgical training and practice, in the year of dissection so wisely exacted from every medical student, in the indispensable work of the deadhouse, in the examination of patients, and in many operations of surgery and obstetrics? There is much, no doubt, repulsive to us at first in our professional education, but the cheering thought of doing service to our common humanity removes the feeling of abhorrence that would otherwise overcome us. As we for others, so others willingly for us; for sooner or later the medical man himself must seek the help of his fellows. Age, infirmity, mortal illness must come to him too in his turn, and so during his days of activity he must shrink from nothing which is repulsive, and hesitate at nothing which is disagreeable, if only he may know more fully and act more precisely. To me "*Homo sum, humani nihil a me alienum puto*," is the most inspiriting and the most comforting of mottoes.

Man's body is our chief care and study, its anatomy, its physiology, its diseases and injuries. Of anatomy we may say that it is the indispensable basis of medicine and surgery, and I can honestly state that I have never known a conspicuously successful practitioner who was not a good anatomist. To the younger members of the profession I would say, Never lose your grasp of anatomy, dissect whenever you have the opportunity, and as regards your anatomical manuals "*Nocturnâ versate manu, versate diurnâ*." Physiology teaches us that which is in accordance with Nature, and if we would recognise that which is abnormal or diseased, that which is pathological or contrary to Nature, it follows that we must ever keep before our eyes the physiological standard, the normal processes, reactions, and chemistry of the human body. Then of diseases themselves or variations from the normal we may recognise that many are essentially derangements of function, such as catarrh, anæmia, diabetes, gout; whilst others are due to true anatomical changes, such as chronic Bright's disease, atheroma, hemiplegia, valvular disease of the heart, and cirrhosis of the liver. Others, again, like anthrax, phthisis, glanders, typhoid, tetanus, and diphtheria are due to parasitic invasion. Indeed a division of diseases may be made into anatomical, physiological, and parasitic; the last including tumours, of which the malignant or infective are especially parasitic. Composed as such tumours are of the natural cells and tissues of the body, and apparently of nothing else, but passing out of their proper location and vocation (and this is the doctrine of Ribbert published in 1895), and arrogating to themselves the licence of unlimited multiplication and growth; and remembering that there is no sharp line of demarcation between the animal and vegetable kingdoms, it has always seemed to me that the occurrence of a malignant tumour implied a reversion to a condition of life that is neither animal nor vegetable, but intermediate and parasitic. Degenerating from their high position in the scale of being, some of our connective tissue or endothelial or epithelial cells, as the result of malnutrition (as Sangalli asserts), or of irritation, or under the influence at first of some specific organism (some blastomycete) as Thoma, Scheurlen, Korotneff, Russell, Sanfelice, and Roncali have asserted, comport themselves somewhat as the yeast fungus, itself a blastomycete, in a suitable medium would do, growing ever and working never (as Adami suggests), and soon, unless the surgeon interposes quickly and boldly and removes root and branch the malefic colony, the whole body becomes contaminated by the animal fungoid, which soon destroys its life. However numerous the departments of medical science may be—and we have thirteen represented at this meeting—anatomy, physiology, and pathology, being the true foundations of medicine, should always occupy a very large share of our attention.

## ONE HUNDRED YEARS AGO.

The medical orator of to-day, standing, as it were, between two centuries, must naturally, whilst regarding the present, glance also backwards and forwards. Now what was the condition of medicine a hundred years ago? Well, thanks to the work mainly of Haller of Göttingen, and of Morgagni of Padua, the old mysticism had to a large extent been dissipated, and a physiological foundation was laid by the first, and a pathological one by the second, for that vast superstructure of facts on which are based the medicine and surgery not only of 100 years ago, but of to-day. Haller and Morgagni were true disciples, though at a considerable interval, of Vesalius, who, following Mondino de Luzzi, first broke completely through the deadening influence of the Galenical tradition, and founded human anatomy on direct observation alone. Then it was that the paralysing effect of the Roman edict of the first century was effectively removed, that for 1,200 years had arrested the progress of anatomy, and with it all medical and surgical progress, by forbidding *post-mortem* examinations—just as many good people now would tie our hands in other directions, and keep us stagnant till the world grew wiser.

It was that great mediæval ruler, the Emperor Frederick II, of the illustrious house of Hohenstaufen, who once more, after its long neglect, revived the study of practical anatomy in the thirteenth century, by forbidding the practice of surgery to any but well-instructed anatomists, an injunction which led to the establishment of a school of practical anatomy at Salerno, in Lower Italy, and soon afterwards of another at Bologna.

The schools of Salerno and Bologna, with those of Milan, Montpellier, and Padua were, however, still too reverent of antiquity, and it was not before the advent of that greatest of anatomists, Andrew Wittings, commonly known as Vesalius (from Wesel on the Rhine, the original home of his family), who taught at Padua, Pavia, Bologna, and Pisa between 1539 and 1564, the reappointed, though never the actual successor of his own pupil Fallopius at Padua, that modern anatomy really began. I say reappointed, for he had been professor before at Padua, when he was only 23 years old, and after long wanderings, occasioned by accusations of impiety, had been honourably recalled, when, owing to a shipwreck, he lost his life—of such priceless value to science—at the too early age of 49. I must not attempt to describe the discoveries of Vesalius, though I may mention that, apart from his well-known corrections of the osteology of Galen, it is to him that we owe our first exacter knowledge of the inferior vena cava, the vena azygos, the ductus venosus, the cerebral ventricles, the peritoneum and the internal ear. One hundred and fifty years later arose one of Boerhaave's scholars, Albrecht von Haller, of Göttingen—himself a great anatomist—who, animated by the teachings of Vesalius, by his love of truth and Nature, and by an aptitude for physiological research, which was all his own, stands forth as the father of modern physiology.

In 1791 Morgagni of Padua (a pupil of Valsalva, whom he constantly quotes) published what Matthew Baillie styled his "stupendous work" on the *Seats and Causes of Disease, investigated by Anatomy*, thereby at once earning the title of the Father of Pathology.

Vesalius, Haller, and Morgagni were the true founders of modern medicine, and we cannot even now peruse their

writings without instruction and surprise. It was Glisson—Harvey's successor in the Anatomical and Surgical Chair of the College of Physicians (not Royal in those days)—who first declared that the great characteristic of living matter is that it moves, the ground of motion being irritability; but it was Haller who first distinguished between muscular irritability and nervous sensibility (the vital properties of Bichat), and explaining the great facts of physiology as largely dependent on both, removed at once the *deus ex machinâ*, the extraneous spirit, so fondly imagined by the old physicians. The Pneuma of Hoffmann, the Nervous Liquor of Mead, the Anima of Stahl, the Archæus of Van Helmont, being no longer hypothetically needed, were gradually discarded. So it was that Haller and Morgagni, the great physiologist and the great morbid anatomist of the eighteenth century, led up to the improved practice of 1801 and later. This was to some extent due to John Brown, of Edinburgh, the representative in modern times of the so-called "Methodists" of the first century. Brown it was who first divided diseases into sthenic and asthenic, who first gave beef-tea in debility and who first fed fevers. The Brownian or Brunonian system, or the plan of stimulating or lowering as required, obtained a large vogue at the beginning of the nineteenth century, and still largely influences the practice of to-day. It must be freely conceded, however, that the highly philosophical doctrines of Brown were by no means judiciously or consistently carried out by himself and his immediate successors.

One hundred years ago Laennec was prosecuting those studies the result of which were to constitute him soon afterwards the medical guiding star of France, and later of the whole world; and after him ranked Bichat, the anatomist, and Broussais, the physician. It is doubtful if anyone ever accomplished so much for medicine during a short life of 31 years as Bichat did. Our own Hewson, who died at the age of 34, comes nearest to him. In one winter alone Bichat dissected 700 bodies. I cannot stop to enumerate the discoveries of this "Napoleon of medicine," as he was then called, though I may mention that it is to him that we owe the discrimination of pneumonia, pleurisy, and bronchitis.

According to Broussais, irritation or inflammation accounted for most diseases, and bleeding was the most general and most trustworthy treatment. For leeches (first used in European medicine at Rome in the first century) he was the greatest enthusiast the world has ever known, having used 100,000 in his own practice in a single year. The importation of leeches into France in his time amounted to over 41,000,000 a year! There can be no doubt that treatment by bleeding was formerly sadly overdone, but the pendulum has now swung too far in the opposite direction, and I cannot doubt that lives are now lost for the want of it. I have myself seen desperate cases of pulmonary obstruction in which I have advised it, but friends objected, and not one of these cases was saved by its omission. On the other hand, at a meeting not long ago of our local Branch at Gloucester some remarkable cases were brought forward of the recovery from epilepsy, puerperal convulsions, and from apparently hopeless pneumonia after free bleeding.

Among the other great names of France a hundred years ago I should mention Bayle, Bretonneau of Tours, and Alibert, and the surgeons Boyer, Larrey, Roux, and Dupuytren, a galaxy unmatchable then in any other part of the world. Small wonder that the earnest students of all nations flocked in those days to Paris, and still more so a few years later, when we should need to add to our enumeration the names of Corvisart, Cloquet, Louis, Cruveilhier, Andral, and Bouillaud; just as they are now flocking to Germany, and will soon, I believe, betake themselves to America, and hereafter to London, if only its newly reconstituted teaching university turns out as successful as we all hope it may be. I sincerely trust that this new departure may make full amends for the university that we were promised ten years ago, which was to have been named after that most enlightened member of our Royal Family, the late Prince Consort, to whom more than to anyone else we owe the establishment of scientific teaching in England. A hundred years ago we had in London Heberden, Willan, and Baillie. The first has left us his *Commentaries*, which are a mine of acute and accurate observation. I would refer especially to his chapters on jaundice, dropsy, and paralysis. He it was who first described varicella and angina pectoris. The second was the father of modern dermatology, and the third is universally acknowledged to have been one of the greatest pathological teachers at the close of the eighteenth century. Other English names of the same period are those of Sir Charles Scudamore, Sir George Baker, Sir Henry Halford, Dr. Thomas Young (so imperishably connected with the theories of light and colour), Dr. Lettsom, and Mr. Cline.

In Edinburgh the chief medical authorities a hundred years ago were Benjamin and John Bell (the younger), John Cheyne (afterwards of Dublin), and John Thomson, and in Dublin Sir Philip Crampton and the Surgeon Abraham Colles. In 1801 William Blizard, Abernethy, Charles Bell, and Astley Cooper had climbed, or were climbing, the ladder of their fame, the latter with no rival in surgery save the great name of Dupuytren. In Germany the most noted names in surgery were those of C. J. M. Langenbeck, Wutzer, Hesselbach, Richter, and Von Textor; and in Italy Antonio Scarpa, of Pavia. In America I would mention the physicians Rush (the Sydenham of America), Waterhouse, Dexter, and Romayne; and the surgeons Physick, Warren, Nathan Smith, and McDowell. A hundred years ago Edward Jenner was practising in Cheltenham, and here the *genius loci* reminds me that I must not dismiss our greatest medical celebrity with a single line. To me the most interesting point about Jenner is that he was educated by John Hunter, which is to say that he became and remained a naturalist. He was not, however, neglectful of medicine—indeed he manufactured an improved tartar emetic—but he was at first more interested in fossils, hedgehogs, and cuckoos. His celebrated paper on the cuckoo, describing for the first time the inconsiderate conduct of the young cuckoo to his fellow-nestlings, need not be referred to here further than to state that for a long while he reckoned a personal visit to all the young cuckoos in his neighbourhood as the first of his or his nephew's duties in May and June. It was this kind of training in natural observation which led at last to such productive fruit as his celebrated *Inquiry into the Causes and Effects of the Variolæ Vaccinæ*, published in 1798. Wishing to test a tradition of Berkeley, where he was born and practised at first, as to the small-pox immunity conferred by cow and swine pox, and fulfilling Hunter's injunction, "Don't think, but try," he made his first experimental inoculation from swine pox on his eldest son, aged 1½ year, in November, 1789. It was nearly eight years afterwards before the next step was made, for it was on May 14th, 1796 (two years before the publication of his book), that lymph was taken from the hand of Sarah Nelmes, of Berkeley, who had been infected by her master's cows, and was inoculated into the arms of James Phipps, a healthy boy, 8 years of age. A typical vesicle and areola were produced, and two subsequent attempts to inoculate James Phipps with small-pox proved perfectly futile. Jenner next sent lymph to London to Mr. Cline, whose patient also resisted all attempts to inoculate him with small-pox. Jenner was thereupon invited to London, and wrote from Cheltenham in reply on September 29th, 1798, his often-quoted letter in which he expresses his preference for the "lowly and sequestered paths of life, the valley and not the mountain," declaring his contentment and contempt of fame and fortune, "fame being only a gilded butt, for ever pierced by the arrows of malignancy." He took up his regular abode in Cheltenham in July, 1800, living at first in the High Street, and afterwards at 8, St. George's Place. Though often absent he spent much of his time here for many years, as letters of his dating from 1802 to 1813 testify, vaccinating gratuitously at Alpha House Bayshill, the residence of the present Mayor of Cheltenham, all the poor who made application to him.

Well, ladies and gentlemen, you know the rest, the rapid extension of the practice the world over, the parliamentary grants to him of £30,000, his medals and diplomas and honours from every nation, and the tardy and unwilling acceptance of his teaching by his own. Later came detraction, obloquy, and neglect, followed at last by 443 small-pox deaths in 1896 in his own county, in the neighbouring city of Gloucester: and finally the perilous experiment of leaving the decision as to whether vaccination should be done or not to the discretion or indiscretion of each head of a family. I am

bound, however, to state that the perilous experiment is turning out much better than could have been expected. Truly you will mourn with me over those 443 preventable deaths in Gloucester, 1 of them of a vaccinated and 297 of them of unvaccinated children under ten years of age, when you reflect that during the same year and the next one there were, in well-vaccinated and revacoinated Germany, only 15 deaths from small-pox throughout a population of 53 millions. Does anyone want more proofs? If so they have them in the records of our own profession, which suffers from a general zymotic mortality far beyond, but from a small-pox mortality far below, the average; and this though we of necessity are much more than the general public exposed to the infection of small-pox. We, ladies and gentlemen, know the truth and how to act up to it, and most earnestly do I wish success to Dr. Bond and to the Jenner Society in their truly philanthropic enterprise of combating error and disseminating truth. I will say no more of Jenner and his work, though in this town, the former centre of his activity, I could not well say less. I must, however, add that the sad experience of Gloucester has not been fruitless, and that Jenner's county is now perhaps the best protected against small-pox of any in England.

In 1801 Auenbrugger, the inventor of modern percussion, was still living in retirement at Graz at the age of 81, and Wichmann, the discoverer of the part played by the itch insect in scabies, was practising at Hanover. But the great medical awakening of Germany had not begun, though its two chief agents were then living, but young, namely, Romberg, the founder of modern neurology, and Schönlein of Berlin (originally of Würzburg), who gave the first impulse to scientific medicine in Germany, and who is well known to most of us as the discoverer of the fungus of favus. If I have omitted a few noted names of the epoch, it is because their bearers had expired (like John Hunter) a few years before 1801, or because, like Abercrombie, Addison and Bright, Brodie, Earle, Guthrie and Lawrence, Dieffenbach and von Chelius, they were youths only when the nineteenth century began. If I have mentioned discoverers rather than discoveries it is because the time at my disposal would not suffice to narrate even a tenth of the latter. Modern surgery had not begun in 1801—the advent of a Lister was necessary for that—though Hunter had taught us in 1785 how to cure popliteal aneurysm, and Petit and Brasdor, Chopart and Desault, Cheselden, Gimbernat, and Pott had not lived and worked in vain during the eighteenth century, nor failed to hand on great facts and principles to their successors. Many admirable, mostly ancient, drugs were in vogue in 1801. To mention a few of them: Aconite and colchicum, mercury, arsenic, iron, antimony, bismuth, bark, belladonna, digitalis, ipecacuanha, the vegetable aperients and bitters, the common acids, alkalies, and salines, and of course, opium. In fact, a very fair selection of "the blessed infusions that dwell in vegetives, in metals, stones,' to quote Lord Cerimon in *Pericles*. And these drugs were well and ably wielded and with boldness and success. "We want no more drugs," said an old doctor to me some years ago, "but to use better those we have." There is much truth in this, for it is impossible to note without alarm the yearly increasing invasion of new, chiefly synthetical, remedies, many of them by no means harmless. Fortunately the law of the survival of the fittest soon comes into operation and the useless ones are quickly relegated to that obscurity from which they had never emerged without the well-intentioned but too hasty laudations of overzealous men of business. The old doctor did not give a quotation, though a line in Homer's fourth Odyssey expresses something of his feeling—

*Φάρμακα, πολλὰ μὲν ἐσθλὰ μεμιγμενα, πολλὰ δὲ λυγρά.*

which I may thus paraphrase—"some drugs are most excellent and others quite the reverse." I wonder what that admirable writer, the author of *Ecclesiasticus*, would have said had he lived in these days? He who, referring to his own times, wrote that, "of the works of the apothecary there is no end and from him there is peace over all the earth?" I think *Ecclesiasticus* might be oftener read than it is, and so it would be, said Addison, if "such shining tracts of morality had appeared under the name of Confucius or of any celebrated Grecian philosopher." How admirable is the following and how excellent its precept!—"The Lord hath made medicines out of the earth: he that is wise will not abhor them." Also this: "He that sinneth let him fall into the hands of the physician." I strongly recommend a medical reading of *Ecclesiasticus*. It may not be quite so instructive as *Don Quixote*, recommended by Sydenham to Sir Richard Blackmore as the best medical treatise of his time, but it will certainly prove interesting and very soothing to the *amour propre* of our profession.

We must not, however, discourage pharmacological research and effort altogether, for the practitioner of 1801 had neither iodides nor bromides; no chloroform, pepsine, carbolic acid, cocaine, nor quinine; no salicylates; no chloral; no morphine nor strychnine, nor atropine; and how could we practise without these and many others now?

Seeing how large is our modern armamentarium, and how undoubtedly effective many portions of it are, one would be inclined to pity the practitioner of 1801, were it not equally certain that the practitioner of 2001 will pity us.

As regards the practice of to-day, that middle point of the centuries to which I referred, it is not too much to say that the whole realm of Nature—animal, vegetable, and mineral—has been ransacked to find remedies against disease. Not only so, but every available physical force—heat, light, and electricity—have been pressed into the same service.

It is in the use of antitoxins and animal extracts, however, that the most remarkable advances have been made, and I would ask once more, how could we get on to-day without diphtheria antitoxin and without thyroid extract?

"If they do these things in a green tree what shall be done in the dry?" I must leave it to others to predict the therapeutical standpoint of 100 years hence. This much, however, may be safely affirmed, that as the general public of to-day expects to be cured with all expedition, the public of the future will expect even more in proportion from the practioner of 2001.

### THE MEDICAL STANDPOINT OF TO-DAY THE RESULT OF SCIENTIFIC RESEARCH.

Pondering over medicine as it stands to-day, the main fact that strikes me about it is, how much more it owes to the biologists and to the men of pure science than to the so-called practical men. The practical man is indispensable, but he is not like the great biologists, a High Priest of the Arcana of Nature. The cell theory, for example, lies at the very foundation of modern medicine, and this theory certainly originated entirely with the biologists. The term "cell" was first used in reference to plants in the seventeenth century (1665) by Hooke, who, with his contemporaries, Grew and Malpighi, distinctly foreshadowed the cell theory of modern times. The cell nucleus was actually seen and drawn by F. Bauer so long ago as 1802, though it was not before 1831 that it received that name from Robert Brown, the botanist. Little notice, however, was taken of the subject before the publication of Schleiden's paper on Phytogenesis in *Müller's Archives* for 1838, in which he asserted that "every plant is an aggregate of individualised, independent, separate beings—namely, cells." Theodor Schwann, also in the next year, made a similar assertion regarding animals in his *Microscopical Researches*, of which, and of Schleiden's paper also, the Sydenham Society published a translation in 1847.

Schwann was first impelled to his conclusion by noticing the extraordinary resemblance between the microscopic structure of the chorda dorsalis of the tadpole and that of the onion and of certain pollen matrices. Schwann, however, fell into error in asserting that cells arose spontaneously, and here he was set right by Barry in 1838 and later by Goodsir, who established the direct descent of every cell from a pre-existing one. This is Virchow's "continuity of life," his *omnis cellula e cellulâ*, the aphorism which he offers us in the place of Harvey's *Omne vivum ex ovo*." That *punctum saliens*, the nucleolus, was first noticed by Schleiden, though it was Schwann who gave it that name. Next came Hugo von Mohl in 1846, who recognised what we now call protoplasm in the cells of plants: the identity of which with a similar substance in the cells of animals was soon afterwards proved by Cohn and Remak. To Schwann a cell without a wall and a nucleus was no true cell, but Leydig in 1856 adduced pus and mucus corpuscles as instances of wall-less cells, and so step by step

the ground was cleared for the now historical Cellular Pathology of Virchow, which influenced so profoundly the medical thought and practice of forty-three years ago. To Virchow as to Schwann a cell wall was a necessity, though this idea was soon afterwards dispelled by Lionel Beale and independently by Max Schultze in 1861. To Max Schultze we owe not only the extension of the term protoplasm (the bioplasm or living matter of Beale) to the contents of animal cells also, but the best description of an animal cell, namely, that it is a protoplasmic mass containing a nucleus; though even this last, we may add, is non-essential. All this work on the cell theory gave the original inspiration to Pasteur, and Pasteur leads up to Lister, of whom I will forbear to speak, for he needs no speech, though he might well say of himself, *Quæ regio in terris nostri non plena laboris?* I may mention this significant fact, however, that visiting the Polyklinik in Vienna two years ago, I noticed that the only name of a contemporary Briton inscribed on its façade was that of Lister. The cell theory, further leads up to bacteriology, the most imposing and the most impressive department of medical biology.

Now bacteriology, which orginated with the labours of Cohn and De Bary, rests on cultivation and staining; and if year by year more and more of the germs of disease are recognised, it is because improved methods are constantly being perfected for colouring and making visible these formerly invisible entities. The modern practice of staining, so essential to the physician and surgeon of the day, began with the botanists Göppert and Cohn, who used carmine in 1849, and here again the pure scientists showed the way to the practical investigators of medicine, such as Gerlach of Erlangen, who first applied the method to anatomy. In 1871 and later Weigert succeeded in demonstrating nuclei by ammoniated carmine, and cocci by methyl violet. In 1872 Eberth and Wagner began the use of that admirable stain, hæmatoxylin. Looking through some old preparations of mine not long ago, I found that most of those stained with aniline dyes were faded, but those stained with hæmatoxylin were still bright and good. In 1879 Ehrlich enunciated his remarkable generalisation that the basic coal tar colours (like fuchsin, methylene blue, and methyl green and violet) stain nuclei; whilst the acid ones (like orange-green) stain plasm, and the neutral ones (like rosaniline-picrate) stain special cell contents. Weigert, later, found that acid fuchsin was specially useful in the study of the nervous system, and Strasburger, the botanist, used the basic methyl-green to demonstrate those mitotic figures which are of such importance in embryological work, and have afforded a basis for the wide generalisations of the biologist Weismann. Nor need I pursue the matter much further than to state that in 1882 Koch, who had previously devised the method of cultivation of bacteria, first stained with methylene blue and thus discovered the bacillus tuberculosis, the consequences and far-reaching results of which discovery are well known to all of you. That I have said so much on this point is to strengthen my contention that the true basis of modern medicine is essentially scientific. As an admirable instance of the kind of debt that modern medicine owes to bacteriology, of its power and promise, as also of the extreme difficulty and complexity of the subject in its recent developments, I cannot do better than to advise the re-perusal of Dr. Horton-Smith's Goulstonian Lectures on Typhoid Fever.

In surgery the discovery of the Roentgen rays has been of priceless benefit, and the Cheltenham Hospital was, I believe, among the first of provincial hospitals to make use of them, but most certainly Roentgen was thinking of nothing less than of surgery when in the modest Physical Institute of Würzburg he undertook his epoch-making research on the cathodic rays of Sir William Crookes. I have been to that modest but celebrated laboratory at Würzburg, and heard there the true story of the discovery, which I must not here stop to relate, though I may remark that I have never seen it correctly reported in English.

I spoke of the antitoxins as among the most valued resources of remedial art, and it is to strictly scientific investigators, to such men as Loeffler and Roux, Behring and Kitasato, Haffkine and Yersin, that we owe these great discoveries.

Soon, I believe, we shall possess antitoxins for most of the febrile and infective diseases, as undoubtedly effective as is that one now so successfully employed against diphtheria. Personally, I place much faith in the antityphoid inoculations of Professor Wright, of Netley, and in the antitetanus serum: and I feel sure that many more equally effective and similar means will soon be in our hands against other diseases. But it is not the practical physician and surgeon who will discover them, but the intellectual devotees of pure science, steadily pursuing, through good and evil report, their self-appointed task of universal beneficence.

The animal extracts stand on a different basis; the basis of secretions destined not for excretion but for internal and bodily use, as first divined by Claude Bernard; and so indispensable that without them disease or discomfort at once arises. I forbear to do more than allude to the recognition of myxœdema by Sir William Gull in 1873, to its naming and the discovery of its connection with an atrophic condition of the thyroid gland by Dr. Miller Ord in 1877; and to the discovery by Mr. Victor Horsley in 1890 of its antidote in thyroid transplantation, for which Dr. G. R. Murray, of Newcastle, soon afterwards substituted subcutaneous injection of thyroid extract, and Dr. Hector Mackenzie the much pleasanter method of thyroid feeding. I likewise merely mention ovarian extract, which often mitigates markedly the miseries of the menopause, and suprarenal extract, which, with its extraordinary power of contracting blood vessels and of consequently raising the blood pressure, must necessarily have a great future in therapeutics. The animal extracts (not wholly unknown to the Ancients, though first studied in modern times by Brown Sequard) have, doubtless, a great future in practical medicine; and ere long many more will be in use, though doubtless some, already proposed, will fall short of their promise and pretension.

In thinking of the standpoint of to-day, I next recall the splendid work—purely scientific again—of the French and Italian investigators of malaria, of Laveran in 1880, and more recently of Marchiafava and Celli, Bignami and Grassi, but more especially of Golgi, who first proved that the feverish attacks coincided with the sporulation of the malarial amœbæ. To which I am pleased to add, that it is, as you know, the President of our Tropical Diseases Section, Major Ronald Ross, who, following the promptings and surmises of Dr. Patrick Manson, has discovered nearly the whole life-cycle of the protozoon, and not only that, but has identified the true delinquent and disseminator of malaria with the mosquito *Anopheles*, a fact subsequently demonstrated by experiment on a human subject by the celebrated Italian biologist, Grassi; and still more recently by the experiment at Ostia in the Roman Campagna, where Drs. Low and Sambon and three others living by night for four months in their mosquito-proof hut, retained their health; whilst Messrs. T. P. Manson and George Warren (courageous sufferers for science), bitten in London by infected mosquitos from the Sancto Spirito Hospital in Rome, developed soon afterwards every symptom of malarial fever. It seems that the hæmamœbidæ of malaria pass the whole of their life-cycle between animals and mosquitos, and Dr. McCallum of Baltimore has further supplied the missing link of their sexual reproduction in the mosquito only. But the original hæmamœba can hardly have evolved itself in either. Whence, then, can it have originated? That is a question which I cannot answer, though I may refer to the statement made by Captain L. Rogers, I.M.S., officiating Professor of Pathology in the Medical College of Calcutta, that where pure and filtered water is drunk there but little intermittent fever will be met with. At all events, it is quite clear that vertebrate animals are the intermediate hosts of the malarial germ, and that it has hitherto never yet been found in water or anywhere else, save in mosquitos and in some vertebrated animals only. Elephantiasis, whose hæmatozoon, the filaria nocturna, was discovered in the blood by Surgeon-Major Timothy Lewis in 1872, is distributed by another mosquito, the *Culex pipiens* or *ciliaris*, as first proved by Dr. Manson. And even this does not exhaust the delinquencies of these dangerous insects, as there can be little doubt that they also disseminate yellow fever; witness the experience of the American army surgeons in Cuba, where that scientific martyr, Dr. Jesse W. Lazear, though isolated from yellow fever cases, yet died of it seven days after submitting to the puncture of an infected mos-

quito, and Dr. James Carroll, under similar conditions, narrowly escaped with his life. This particular mosquito has recently been recognised by the United States surgeons as the *Culex fasciatus*, and it is probable that the transmission of yellow fever is due to it alone. The study of tropical diseases has, in fact, now become a refined department of biological investigation. Smith and Kilborne have shown the part played by ticks in disseminating the cattle fever of Texas, and ticks also are said to be responsible for the miana disease of North Persia, and for a dysenteric fever of the Zambesi. Some forms of dysentery, as first suggested by Lösch in Russia in 1875, are probably originated by an amœba. In this town of Cheltenham old cases of malarial fever are often met with in returned officers and civilians, and I have yet to see the case that will resist six subcutaneous injections of 3 grs. each of the acid hydrobromate of quinine.

What would have been the state of ophthalmology to-day without the invention in 1851 of the ophthalmoscope by the physicist Helmholtz? Then consider the benefits conferred by electricity. It may be that great results will follow some day from cataphoresis, or the electrolytic introduction of drugs, recently written about by Dr. Morton. At all events, there is no doubt in my mind as to the benefit in gynæcological work conferred by the treatment of Apostoli. Dr. Thomas Keith is not likely to have been mistaken in this matter, and what I have myself seen of permanent cures of really serious cases makes me feel sure that the Apostolian treatment for fibroids is not the delusion that some persons, who perhaps have not quite mastered it, proclaim it to be. It is, indeed, tedious, uncomfortable, and troublesome, and I for one shall be only too pleased if Sneguireff's simple treatment by superheated steam should prove itself an efficient substitute. Then there is the marvellously successful treatment of lupus by the chemical rays of the electric arc, devised by Finsen, of Copenhagen, though it is a question again if these results are any better than those of Hannover, speedily obtained by a simple jet of heated air (atmokausis).

Where should we be without the scientific chemists: to cite a few names only—Courtois, who gave us iodine in 1811; Balard, who gave us bromine in 1826; Serullas, who discovered iodoform in 1822; Soubeiran, who discovered chloroform in 1831; Liebig, who discovered chloral in 1832: and Niemann, who gave us cocaine in 1860? Not one of these was a practitioner of medicine, nor, unfortunately, a Briton.

### More Universities and Research Institutions Needed.

I think I have said enough to prove that the progress of pure science means medical progress also, and that it is to the men of pure science that we must still look to hold aloft for us the torch of progress. I can only hope that in the great advances still to be made Great Britain and Ireland may play their worthy part; but I confess I have my misgivings unless some improvements are made in our educational arrangements. As the result of several recent Augusts spent in many of the Continental capitals, I have been struck with the thoroughness and scientific spirit everywhere there manifested; being very different, I regret to add, from the antiscientific spirit which characterises most of the wealthier and more cultivated classes in this country. This antiscientific spirit is only eradicable by the better education of the young. To what other cause can we ascribe the fact that although the aniline dyes were discovered in 1858 by an Englishman, Dr. W. H. Perkin, yet almost the whole of their manufacture is now carried on in Germany. One company, the Badische Anilin und Soda Fabrik, employs 146 scientific chemists, 75 civil engineers, and 6,300 workmen in one alone of its three factories. I know not if any words of mine will reach the eyes of those who govern in this country, but if they do, I will implore them to give to our youth more facilities, similar to those enjoyed on the Continent and in America. I know that much has been done, and no fault is to be found with our primary education. The National Physical Laboratory and the Jenner Institute of Preventive Medicine, have been established, the former in principle, the latter in reality, thanks to the splendid munificence of Lord Iveagh. New colleges, universities, and technical schools have been started, and some 15 to 17 research scholars are appointed every year, one half of whom, I may remark, proceed at once to Germany to make their researches! What has been done, however, is as nothing to what ought to be done.

The defences of the empire must not be overlooked, but of what avail will be those defences if our trade is gradually lost for want of exacter knowledge? For trade and medical progress, and those very defences themselves, rest entirely upon progressive science.

Depend upon it, there is as much scientific ability and aptitude for research in the country of Cavendish and Priestley, of Faraday and Kelvin, of Darwin and Huxley, of Jenner and Lister, of Rayleigh and Ramsay, as in any foreign nation: but here the chances and opportunities are much fewer, and many a great discoverer that might have been, one of whom it might have been written that—

> He broke his birth's invidious bar,
> And grasped the skirts of happy chance—

spends his untrained energies in futile efforts and vain regrets, and wholly wastes his commanding intellect for the want of instruction and opportunities easily accessible.

But the cost? It would be as nothing in proportion to the gain, and a Faraday, a Koch, or a Pasteur would be a cheap purchase at a million. Whereas France, Germany, and the United States educate at their universities approximately one student in every 1,500 of the population, we in the United Kingdom are content with less than 1 in 2,000. Whereas Germany spends £753,000 a year on its twenty-two universities and France £740,000 a year on its sixteen, we in Great Britain and Ireland are content with less than one-fifth of that amount, namely, £135,339 among seven of our thirteen. Although the Leland Stanford University of California has received no less than nine millions sterling from private munificence, and many others of the 480 American universities and colleges have likewise received huge sums—I may specify the Chicago University £2,000,000, the Johns Hopkins University £1,400,000, and the Cornell University over £1,000,000—no such general largesse is, I fear, to be expected from our British millionaires. The help must come from Government, supplemented by local contributions, or it may not come at all. Yet the matter is one of life or death for the country, for more and more every year the victory in every department, and the predominance in arts and trades, will pass to the possessors of the latest knowledge, the deepest science, and the most perfect and most economical processes. I cannot but believe that this great need will soon be remedied, and that at the cost of a few battleships real universities of teaching and research, like the new University of Birmingham, will be established in every large town, and technical and research institutions—there are twenty-five of these in Germany and forty-three in America—in most of the smaller ones. At present we are feeling keenly the competition of America, a competition that is not likely to diminish, for it possesses over 100 schools of chemistry, and has 10,000 students of engineering. This competition we can only hope to resist by imitating the foresight, generosity, and enthusiasm for science of the American Governments and of the American men of wealth. And here I would wish to quote the words of Dr. T. K. Pearsons, of Chicago, himself the donor of £800,000 to its University. "Monuments and monumental arches," he says, "once finished become dead memorials; their active function ceases. The school and college live, just as does the memorial in cold statuesque granite, but *their* functions never cease; education goes on from day to day, thinkers are moulded, the nation is served, humanity is benefited in the college."

Oh! that these words may find a practical echo in this country! Examinations are of secondary consequence. China is the most examined country in the world, and look at it. Original work done under the professor's eye and at his suggestion is far better than any examinations, and the true ideal of a real university must always be in the words of Paulsen, "*Die Erkentniss der Dinge durch freie Forschung.*" ("True knowledge from free research.") Let us hope that we shall not have long to wait for many such universities, where the best and most practical scientific education will be open to all at low cost, as in the University of Michigan, where the fees do not exceed £7 a year, or at no cost at all, as in the State of Massachussetts, and in many of the Western States of America. There is no time to lose. The Consultative Committee on Education is, however, a good beginning,

which I sincerely hope will soon be followed by the appointment of a Minister for Education, a functionary to be found in nearly every civilised State except our own. It is not trades unions and skilled workmen that can ensure the continued prosperity of a nation, but the trained intelligences that direct its energy; and we may rest assured that whichever nation shall elevate highest the general standard of education will be the nation which will lead the world. Since the preceding section was written I have to record the magnificent—I hope it will prove infectious—generosity of Mr. Andrew Carnegie, with his gift of £2,000,000 to the Scottish Universities, one portion of it to be applied mainly to the teaching and endowment of research, and the rest to replace the fees hitherto paid by their students. Happy Scotland! that not only receives about one-third of the whole parliamentary grant for university education, but has found besides such a princely and far-seeing benefactor as Mr. Andrew Carnegie.

### The Public Health Act of 1875.

Any reference to the medical standpoint of to-day were quite imperfect without some mention of the important position now happily assumed by the sanitary medical service; and it is a matter for legitimate pride that in this particular Great Britain was beforehand, and set, by the Public Health Act of 1875, an example that foreign countries, with the exception of the United States and of Belgium, seem in no great hurry to imitate. In every town and district there is now a skilled expert who is the guide, philosopher, and friend of every household where epidemic disease makes its appearance. It is to the labours of such as he and to the existence of isolation hospitals that the great diminution in the zymotic death-rate is due. To his labours and to the increased cleanliness and better food of the population generally is due the gratifying diminution of the phthisical death-rate within sixty years from 38 to 13 per 10,000—the presage, I cannot doubt, of the total abolition at no distant date of consumptive and tuberculous disease altogether. And this, although Naegeli has recently proved that, at any rate as far as Zurich is concerned, 96 per cent. of the deaths under 18 in that town are due to tubercle. To Dr. Nathan Raw and to the guardians of Liverpool must be given the great credit of taking the first deliberate steps for the stamping out of tuberculosis by establishing a rate-supported sanatorium near Heswall for the isolation and treatment of the consumptive poor—a good example, likely to be largely imitated soon throughout the country. Here I would wish to solicit a generous and helpful interest in the sanatorium of 60 beds to be built at Limpley Stoke, near Bath, in which the consumptive poor of the counties of Gloucester, Somerset, and Wilts will be treated with every advantage of hill air, full dietary, and modern science. Pure air implies at least no fresh infection; and high feeding, as so convincingly shown by Sir Hugh Beevor at the last annual meeting, occasions an enhanced resistance against the tubercle bacilli.

The originator of the method of high feeding and fresh air was undoubtedly Mr. George Bodington of Sutton Coldfield, by whom it was devised and carried out with great success so long ago as 1836. Most of the credit, however, of advocating persistently and quite independently the necessity and importance of fresh air must be given to the father of the distinguished recent President of the Royal College of Surgeons of England, namely, to Dr. Henry MacCormac of Belfast, whom it was my privilege to know in my youth, and well do I remember his striking book, *Consumption and the Breath Re-breathed*. Like Semmelweis, the earliest of antiseptic obstetricians, and like Harvey, whose subversive discovery only brought about the loss of most of his practice, Dr. MacCormac excited at first opposition and ridicule only. The more reason therefore that full credit should now be given to the impassioned and eloquent advocate of fresh air, who anticipated by more than half a century some of the best knowledge and practice of to-day. Here then is a method half English and half Irish in its conception, however much it may have been pushed and popularised during recent years in Germany. And there can be no doubt as to the cures. Soon after Koch's discovery of the bacillus tuberculosis, I looked for it and found it at once in phthisical sputa, and each finding was sentence of death: but now it is found as a simple matter of diagnosis to disappear completely, and often finally at the completion of the cure by fresh air and high diet. Of the contagiousness of phthisis I can entertain no doubt whatever, and the greatest care should be taken to destroy sputa. Remembering the liability of birds to phthisis, Dr. Tucker Wise's cautions as to cage birds should not be forgotten. Indeed the connection of the lower animals with our diseases must never be overlooked. The "harmless necessary cat" is quite often the conveyor of diphtheria, the dog always of hydatids, and the rat often of plague. "No rats, no plague," it has been said, and he who would exterminate his city's rats would do much to ensure his city's immunity against the plague. In the case of Glasgow, however, it is right to add that the rats were guiltless.

### Aspirations, Ethics, and Conclusion.

And now for a few concluding words about the aims, the aspirations, and the ethics of the profession. After a long and expensive education, after knowledge acquired laboriously and at great personal risk (the clergyman's death-rate is 16 per 1,000, the lawyer's 20, and the doctor's 25) the medical man must not hold himself too cheaply. He is the heir of a long tradition, originating from the sages of India and from the temples of Greece. Our health and happiness are in his hands and the issues of life and death tremble often upon his judgment. So he must bear himself with confidence and proper pride, remembering his great traditions and the antiquity of his calling, which ranks next to that of priest. He is worthy of his hire, and that hire should be such that in the day of his popularity he may make due provision for his age and retirement and for those whom he will leave behind him. He must work hard and read and think all the days of his practising, for the best practice of to-day will not be that of even five years hence. His aspirations must be for the very best in each department of practice, for the progressive advancement of his art, and for the increased dignity and consideration of his calling.

Above all, let him be chary of any commerce with the enemies of science. *Magna est scientia et prævalebit*. None the less serious is his responsibility who, knowing its benefits, yet retards its progress, or who ignorantly would deny to others what he is insufficiently instructed to understand for himself. Beware of panaceas. There are none in truth, though the worship of Panacea was not confined to Ancient Greece, and is as reprehensible in the cold clear light of twentieth-century science as is the equivalent assumption by too many of specialist omniscience.

The wise practitioner will strengthen his position, as he will certainly increase his knowledge by somewhat frequent consultations, and he will do well if, like Hunter and Jenner, he cultivates some extraneous intellectual interest to relax occasionally the stress of his anxious labours. I venture to think that nothing will do him more good than the pursuit of one or other of the arts, or of some branches of biological or physical distraction, be it zoology or botany, electricity or telescopy, for

> Neque semper arcum
> Tendit Apollo.

And the quotation is apposite, for was not Apollo the first physician and the father of Æsculapius, and does he not say of himself in *Ovid*,

> Inventum medicina meum est, opiferque per orbem
> Dicor, et herbarum subjecta potentia nobis?

The wise practitioner, moreover, will confine his studies within certain limits if he wishes to attain to a thorough knowledge of even some portions of his great subject. He cannot be a universal specialist, and I would commend to your consideration the admirable advice contained in one of Goethe's sonnets:

> Wer grosses will, muss sich zusammenraffen;
> In der Beschränkung zeigt sich erst der Meister.

For which I would propose the following English equivalent:

> Who would be great, must pull himself together;
> The Master shows himself in limitation ever.

The good and worthy practitioner will never be wanting in sympathy. Too often there is physical pain to be relieved, and, thank God, it can be relieved; though at other times the sufferings will be nervous rather than physical; and these are the occasions when sympathy and patience are most

needed, though it is not always easy to show the first and to retain the last in the interest of some nervous sufferer on a cold wet night at 3 A.M.!

In respect of medical ethics the case is very simple. Treat and think and speak of your brother practitioners as you would wish them to treat and think and speak of you.

Medical ethics are, indeed, so completely summed up in this single sentence as to make it quite unnecessary for me to read to you the section that I had written on this subject. With high aims and aspirations, with true ethical, that is to say, brotherly feeling, and with constant consideration for the public weal, we shall each and all be worthy of the well-known description in Chaucer, and be "veray parfit practisours," though I hope it will not be said of us, as it was of that particular one, that

> His studie was but litel on the Bible.

No! we will read *Ecclesiasticus*, though not *Ecclesiasticus* only, in the hope that it may be said of each of us in the words of an old poet, who was writing of a good and brave physician of his day:

> He holds no parley with unmanly fears,
> Where duty calls he confidently steers,
> Faces a thousand dangers at her call,
> And trusting in his God surmounts them all.

After Providence, ladies and gentlemen, reason is and must necessarily be our daily guide, for which cause it is consoling to recall the words of one of the greatest of French writers:

> La Raison triomphe de la mort, et travailler pour elle,
> C'est travailler pour l'éternité.

And if I have mentioned the word *la mort* it will but afford me the opportunity of concluding with my solemn conviction, as best expressed in the words of Longfellow:

> There is no death! what seems so is transition;
> This life of mortal breath
> Is but a suburb of the life elysian,
> Whose portal we call death.

# ADDRESS IN MEDICINE,

*At the Annual Meeting of the British Medical Association at Cheltenham, July-August*, 1901,

BY

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## FRIENDS IN COUNCIL.

To be honoured by the request to give this address before the British Medical Association is an opportunity that comes only once in a man's lifetime. How shall I utilise it? It might be thought perhaps that an almost unlimited scope is here given to the lecturer, but in the selection of a subject there are indeed several sharp limitations to his choice.

In the first place, it being an Address in Medicine the only thing that I must not lecture upon is medicine in detail. In the next place, as I understand it, this is an occasion on which in some measure we sit in open session; when men other than medical have in years past sought and found topics of common interest in the subject matter of the address; and then the lecturer himself is in, to him, a unique position; for once in his life he becomes for the moment, at the invitation of our great brotherhood, the mouthpiece—ay, even the priest sometimes, if he be happily inspired—of the temple of our most sacred longings; of our strongest feelings, our highest aspirations. Is not he then indeed under the most strict of limitations to whom it comes, to have to put as a duty, with all the authority that such an opportunity offers, his view of the position of medicine at the present day of its weakness or its strength, as it enters into the life of the English speaking peoples. There is, however, this much of freedom in my choice: "For what can a man do that cometh after the king even that which hath been already done." Many of you must have often thought and said before what I shall say to night, but I conceive that to express the consensus of your thought, to "watch what main currents draw the year," is the duty upon which you would wish me to embark.

The position of medicine then to-day as I see it is this: The living body, the clay between the potter (the doctor) on the one hand; and the wheel (the blind guidance of animal life) on the other.

The living body! Think of it, if you can, with that freshness and plasticity of mind, that awful wonderment, that first came to you when out of the darkness you first began to peer into your dawn, and think about the phenomena of life. Think of it—brain, spinal cord, heart, lungs, and so on. All separate, yet all one. All separate, so that each has its individual wants, each its own special food which it needs to draw selectively from a common stockpot (I beg pardon of our juices), each with its own methods of work, and times of rest: each so individual that if you take the imprint of one's finger creases, the intonation of man's speech, the general character of his handwriting, and no doubt, too, if one could take it by some unconscious graphic method, the action of our muscles, the flow and method of one's thought, and so on, there are probably in the whole universe no two living beings exact in counterpart. I take this to mean that if we could see into the minute details of the working of the machine not only that no two men think alike, but no two men have hearts alike, as expressed by function; no two men have a liver that pours out its bile exactly alike: that is at the same rate and in response to exactly similar impulses or in which the ultimate elements are not individualised.

There are, of course, certain rough results which have to be obtained as a necessity of the organic combination. Without some universal gauge the machine could not work and the body with its respective organs would perish, but I take it that though these results are common to us all, the function that produces them is as much different and peculiar to the individual as the various impulses and motives differ in men and women whose output of action is a common one, and directed to the good of the body politic.

### THE VITALITY OF LIFE.

And yet all our parts are one. So absolutely one that it is impossible to suffer bad pain in two separate parts of the body at the same time—one comes and the other goes. So absolutely one that when you think hard your feet grow cold, so one that when one member of the body suffers all the members suffer with it; so one that the temporary failure to lock or unlock the points at the many junctions and sidings will disarrange the whole. So much so that to any thinker sufficiently detached from himself it may well seem that the harmonics of the song of life are so extremely intricate as to be impossible of performance. And yet the song of life is sung, and on the whole to most of us the result is beautiful.

And then behind all, or rather before it, is this curious unfathomable mystery "the boon of life." "I needs must live," the body seems to say. Some cynic asks where is the necessity. But that is life, or all we know about it. The "needs must" live, an unconscious blind unquenchable energy that carries on the being irrespective of his will, and which, blending with his conscious will, renders the clay at once so plastic, and yet too at one and the same time so unimpressionable. Ah, that living energy, let me dwell upon it awhile, for it supplies the motive of much that is to follow. As yet we know it not, whence it cometh or whither it goeth, but at least this may be said of it, that it rolls on from the cradle to the grave dominating the man with an absolute domination, and of it he is in some measure the unconscious slave. Take the case of a man who is so extremely ill that you think there is no hope. You turn your back and he recovers completely. Instead of saying there is no hope it would have been nearer the mark to say that man cannot die, so dominant is that force in him that called him into being. Many and many a mistake does the doctor make by underestimating the vitality of life. Take again the case of the being, not a very common one, I grant you, in proportion to the number who would have you believe that such is their desire—who want to die and cannot do so—their masterful vitality will not let them go. Think, too, of the number of times you must have seen and talked to a man or woman drinking himself or herself to death, and who, in spite of your outspoken declaration that there could be but one ending to such a course, continues on the downward road

after the same and perhaps accelerated fashion. He wills to reform, but there is that within him that is stronger than his will; his very energy of living eggs him on to his destruction,

Forced to obey even in his own despite his being's law.

The spirit of life has no knowledge of death. It is always eager, and death comes to it as a catastrophe by the fault or decay of its subordinate ministers—the brain, the heart, lungs, liver, skin, and so on. And this irrepressible living energy will carry on to old age a very weakly flesh. In saying this I think of the disappointed ones in the race, the tired, the painful; for I have come to the conclusion that there are those who are tired, who are full of pain, from early years even to old age. There are many of these who have missed their mark, who must be very weary of life, but the motive force of their being will not let them go. I suppose, too, that this ever restless, yearning life within us tends to show up the weaknesses of our bodily construction. It is, no doubt, only to be expected that with a restless driving power within us joints that are losing the polish of their early smoothness, bores that no longer allow of sureness of aim, tired bodies that need sleep or rest—organs, in short, that now work with labour that before ran riot in their unconscious ease—should, if stimulated, express their work in weariness that is perhaps worse than pain. Let me give an example: There are a large number of people who at the present day come and tell you that they cannot think or that they cannot concentrate their thoughts. I seldom find that the associates of these have observed any difference in them. They can, in fact, think well enough, only thought is conducted with a sense of labour now, whereas in times gone by it had glided on untold. Who does not know, too, of the common complaint of muscular fatigue, the man or woman who is always tired? The muscular apparatus works with conscious labour, and thus all the pleasure of living is taken away: and you cannot cure these people, because they are mostly people full of vital activity; the spirit within them is a willing one but the flesh is weak.

Strangely tenacious is this initial energy. Decadent this part or that of the body may be, but the main spring holds still; the suicide may be, rebellious of its mastery, snaps it; or disease quells it by rendering its servants unable to subserve its purposes. But even this often only after a long and weary struggle in which the prolongation of life seems almost a cruelty. And still more wonderful, anon we see this fundamental life struggling on for some time after its ministers have ceased to work, and the man as man no longer lives. What wonder, then, that with this force within us we feel, we even seem to know, that the purposes of Nature are not consummated by death, or that the strenuous spirit of a Huxley should be found to exclaim that he would prefer Hell to annihilation.

Now take these two points—the intricacy of the mechanism of the animal body and the indomitable animal spirit of life that innervates it. How do these react upon the practice of medicine, and do we acknowledge the reaction as it exists?

## The Difficulties of Medicine.

It is clear, without my labouring the point, that a body so composite as ours is so very delicate a machine that there must be many and many a case presented to us where we do not, many even where we cannot, know what is the matter, and taking even the most favourable view of the progress of scientific discovery it is probable that this will be so till time shall be no longer. We cannot know because the intricacy of the machine hinders one in getting at the real facts. We cannot know because even when we have got at the facts we cannot be sure that the remedies used will get at the disease.

When we come out of the aloofness of the contemplation of growth, nutrition, degeneration, and death to take part in the active grappling with these by stimulating this function and dulling that, in the attempt, in short, to arrest or stop disease, our difficulties become appalling, but this is quite unrecognised by most of those with whom we have to deal. There has been much interesting, and perhaps interested, talk of late about water-tube boilers, their intricacy of working, and their excessive wear and tear, and the difficulty of their repair without stopping the ship. Now supposing that such a machine as our modern warship could be worked automatically with hatches down, and that the only positive knowledge to be obtained of the condition of its entrails was by the observation and analysis of the smoke, and the bilge water, by *post-mortem* examination at the breaking-up of old vessels and the recording where each had gone to pieces, would the progress of knowledge, think you, be very rapid in the evolution of the science and art of ship building? Would the feeling of power to deal with the defects of the machinery as they arose be very robust in any engineer who had had much experience? Would not "I can" have to wait upon "I am not sure," and the result be some tangent from direct purpose? And, excepting the self-righting power of the living organism, which, from my present point of view, does but make confusion worse by rendering still more uncertain the real relation between means and ends, our naval engineer is in the same position as are we, when we attempt to control or modify function, for it is impossible to get at the organ that is implicated, and function and excretion are, so to speak, waste products, or as I like to call them ash. Take the liver or the bones as concrete examples. Of the bones and the exchanges that go on between them and the other component parts of the body I think we may say we know nothing, and yet no doubt they extract material from the general store that the general store is better without, and they return to the common stock material which is better adapted by the abstraction for the purposes of other parts. Then the liver, the largest organ in the body; its imports and exports must be enormous, and from the familiar way in which it is spoken of there cannot be a man in the whole world who does not think he knows all about it. But what are the facts? We know something about the physiology of the liver, but this knowledge has been mostly obtained by experimentation on the lower animals, by observations that occasional cases of disease afford us, and by certain inferences that we draw—very much at second hand—from the changes produced by disease in the organ. But all these things, valuable as they are, and without which where we should be I don't know, yet are very far from giving us that real and intimate knowledge of the living organ that we require to enable us to treat its diseases.

For example, there is not a soul in this room to-night who, if I asked him how and why gall stones are formed, could give me any useful information on the subject. Yet the kernelled public flock to us for treatment, and expect to be cured. And when, alas, as often happens, drugs fail, they apply to surgery, which in that case is but a refuge for the destitute, for that is not the treatment of disease.

Then there is the question of hepatic stimulation of the liver by cholagogues—we still give our blue pill and podophyllin, and so on, and speak with early innocence of "touching" the liver, and so still perpetuate the idea that certain remedies go for the liver and increase its various secretions. I don't say this is all wrong, or that the remedies are not valuable in the conditions for which they are given, but all the positive experimental evidence that we possess I think goes to show that these remedies are chiefly intestinal in their action. And I instance them particularly because they not only show up the difficulties that an intricate machine causes us in obtaining information, but also another point too often forgotten—which nevertheless is constantly interfering with our inferences on the treatment of disease—that we send a remedy forth on one mission which we suppose it to have performed, whereas in reality its virtue has been expended in quite a different direction. Take the matter of pain—a pain with a definite cause if only we can find it, but it is deep down in the recesses of our impenetrabilia, and it has absolutely no distinguishing feature—so that no human being can do more than say that it may be this or it may be that. A position this that would seem to claim for the doctor all the patient's sympathy—it usually, however, meets with derision.

Take next the vital element and its bearing upon the handling of disease. Here again we are often foiled when we would be positive because of the personal equation, as it is called, the individuality of the patient. When Mrs. Smith asked her doctor why it was that a particular pain possessed her, he is said to have replied with ready wit and no less truth, "Madam, it is because you are Mrs. Smith." And the lady no doubt thought her doctor a very amusing man, but she

had not a glimmer of the great truth that had been administered in such an excellent coating. But, indeed, that "because you are Mrs. Smith" constitutes one of, if not the most, insuperable of the difficulties to framing any system of precise medicine, and over and over again fattens crass ignorance at the expense of real knowledge. In the practice of medicine you cannot jump the fact that the inflections of your voice are not exactly like those of anyone else; and as long as the world lasts, this variability of the living force, this individuality, will prevent the attainment of the popular desire—a cut and dried remedy—not only for every disease—that is no use to Dick when the remedy touches only Tom's variety; no, we want a remedy for every disease, and for every variety of it, as met with in the young and in the old, in the otherwise healthy and the unhealthy, under the specious garb of mildness, or the pronounced type of malignity, that is another of the cruxes of medicine that the world wots little of. And then as part of the animal energy of man, of the spirit of life, perhaps the chief human expression of it, comes that wonderful indescribable something that we call hope. One hears talk of forlorn hopes, but hope is never forlorn: its spring is always light and buoyant, and it is as indomitable as life itself. Of all the unnatural conditions of which medicine takes count, perhaps none is so much so as life without hope. When hope flies out of the window death is lurking at the door, but in the good providence of God man cannot quench it, and I beseech you that you never try. And it is these attributes of hope, so indissolubly linked as it is to life, that constitute it indeed a thing to be reckoned with in our dealings with disease, for if not forlorn it has one characteristic—I will not call it a failing for, after all, it brings more help than trouble in its train—it is generally blind in the matter of life to anything but the certainty of returning health. It is ever ready to ask three questions and no more. What is the matter with me? What will cure me? And how long will it take? And to these it expects immediate and positive answers.

With human life, then, and hope before us we may pass on to the patient who embodies them, and to the doctor who, while also similarly endowed, has yet to influence and control them as best he may.

### PATIENTS.

We must for a moment consider each of the two parties, their influence upon each other and thus upon the progress or otherwise of scientific medicine. Are we gradually surging on by a natural process of evolution to a perfect system of the treatment of disease? Is the management of the sick man and the ailing man in the present day as perfect as it might be? On the larger side of the subject—that of preventive medicine and the scientific knowledge of disease—it is obvious that great discoveries have been made in the recent past, and the dawn is surely breaking of a still more brilliant day. So far as this side is concerned I think it may be said that we are steadily working upwards to that time when much of the present gross disease—tuberculosis, microbic fevers, etc.—shall be no longer, though even here, if there were time, I might pause to show how a weak sentimentalism sometimes steps in to delay the promise of the future; but in the aspect with which we as physicians are concerned, the daily treatment of disease, with all the manifold details of the aches and pains that flesh is said to be heir to, one cannot but feel that there is room for improvement, both on the side of the patient as on that of the doctor. Now, on looking over the field of disease, although it is said that the average duration of life is longer than it was, I neither find that medicine is less often in request, nor that an ailing public is less in evidence. I am here to contend on the contrary, that we are growing more and more sensitive about our health, more impatient when the flies of ill health worry us, that we are crying more loudly for a cure for every disease, whether it be one that is commencing and curable or so advanced that—as, say, in a bad case of phthisis—the greater part of an organ is practically destroyed, and a restoration of its health impossible.

This is shown in several ways: in the first place the sick man wants to know too much. He wants to know what is the matter with him when it is not possible to tell him; moreover, he will have an answer, and if not he thinks the doctor an ignoramus, and calls in someone else. How blind he is not to see, it seems so obvious, that in this complex body of ours there must be hundreds of little accommodations between the various organs and parts that it is impossible to explain or be sure about, that there must be numberless reactions that we cannot give a cause to; numberless conditions that will bear several interpretations; numberless others that cannot be labelled at all; numberless states that look grave, and yet if we could only peer a little into the future, get just one glimpse behind the veil, we should see were just on the turn towards health, and no matter what drug was given would do well—the cradle these of many an ignorant man's reputation; and numberless cases that seem to be doing well that are just on the verge of a catastrophe, and these the grave of many a competent man's success. Oh if men would only think a little more, it seems so obvious that they must then see that even the best of us are but gropers in the dark, and that ignorance acknowledged is no proof of want of skill, rather is it a proof of thought and of the highest devotion to the advancement of our calling. Any fool can give a name to a disease, if, as is too often the case, the letter satisfieth. But what if the name is wrong, and the name determines an important line of treatment; what if the letter killeth?

It is because the public will have a disease ticketed when there is no means of identification that these difficulties arise, and because it still sets such store by the man who plunges. How much better would it be if the obvious were better recognised, that the doctor is but mortal, and if others than ourselves could take part intelligently in our doubts and difficulties. And having got a name for his complaint, from either wisdom or ignorance, the patient thinks his physic tumbles out of the same slot, and that between the two he will be cured offhand. Someone comes into your room and says "I have got to do this or that on a particular date, and you must get me well by that time." It is the doctor or his medicine that has got to do it; there is no thought behind, as there should be, of "Will my tissues or the disease allow of this being done?" There is no idea of doubt, none of the necessity of waiting to see which way the cat jumps, none that the powers of medicine are limited in all sorts of ways, and that there are numbers and numbers of instances where there is no indication whatever that medicine will do any good whatever; that waiting for developments or subsidencies is the only skilful course. Waiting is described as "nothing is being done for me," and some one else is called in with a "Can't you do something?" "Doctor, I'm just stuck," said a poor fellow to me the other day when all hope had left us, though keeping him radiant still.

And it is because life understands so little the common sense of this waiting, this doing nothing, this length of illness, and so on, that it understands so little the true value of consultations. The sick man or his friend has a rooted idea that when a second opinion is sought it is to set the first opinion right. Now the wise man is he who makes fewest, there is no man who never makes any mistakes, and least of all in medicine. Our uncertainties are so thickly strewed on all sides, that it is seldom that one is in a position to give a very positive opinion; but I think I may say, with an approach to certainty that I am in accord with those who are in a similar position to myself, that the education of every member of the medical profession at the present day is so high, that it is seldom indeed that a consultation does not produce a well thought out and probable diagnosis from the practitioner in charge. It is not a case of right or wrong; it is not altogether a question of less or more experience; it is a meeting to discuss doubtful and difficult points to which each party contributes an equal share. But so little is this the light in which consultations are regarded, that it has become a saying that doctors in consultation always agree; doctors apart will always differ. I am constantly being annoyed, in all innocence, by being told that "I want a perfectly independent opinion," as if that were the last thing the applicant considered himself likely to get. An independent opinion too often means an opinion more in accord with the wishes of the patient than is the one which has been originally given. Doctors would be only too glad to discuss the doubtful points of a case with the patient or his friends, if those could be found who could appreciate them intelligently; but it is hardly to be expected that differences of opinion should be

made much of when the sick man is unable to appraise them at their true value; puts trivial and important matters equally into the same scales of right and wrong; and when wrong always implies with them discredit. And discredit may come from the most worthless sources. For instance, one man may have ordered hot water for drinking, and No. 2 says drink cold water. It does not matter a mote in the sunbeam which of the two is drunk, but the symptoms change within a measurable distance of the alteration, and the undiscerning man puts it all down to "the new treatment." A change in the medicine is made, say more to ease the patient's mind than with any real expectation of influencing the course of the disease; and while one man reaps the credit the other has the blame, and each alike may be entirely innocent of the result. Then this morbid sensitiveness of people in the present day is well shown by the rapidity with which they fly to medicine. This fact is, I think, patent enough—it is to the doctor, at any rate—for the number of new drugs for all sorts of maladies, imaginary and real, that are being daily launched upon us is bewildering in the extreme.

A woman with migraine has gone the round of all the coal-tar products that were ever invented, as well as caffeine and other things, before she thinks of applying to our calling. Most people know all about lithia and piperazine and the respective merits of the various preparations of Carlsbad salts; they all have their own form of blue pill, which generally from the look of the prescription seems to date from before the Flood. They have their own special dinner pill and an aperient pill as well; they know all about podophyllin, and euonymin, and cascara. They take their bismuth and soda for indigestion, mindererus spirit and Dover's powder for colds, camphor for cholera, chlorodyne for the stomach-ache; and one old gentleman that I have known, though he had been bred amongst doctors and was old enough to know better, was so enamoured of drugs that he took a daily dose of gentian and ammonia as his lunch.

Then, too, with what impatience do men and women in the present day rush into the not always sufficiently repellant arms of surgery. A little pain unnerves them, and all they know of surgery is its successful side. It is a day of great things, and why should they not have the benefit of these advances? And so with an ache here or a pain there they undergo an operation. The energy of life that I have so often spoken of knows nothing of risks; knows nothing of shock; will hear nothing of waiting and rest in bed, and the disappointment in consequence is often considerable, although the operation was a great success.

### Doctors.

And now for the potter who has more or less to fashion this clay as it somewhat impulsively rolls along under the momentum of the wheel of life. The simile is not a good one, for the doctor is never a fashioner, although sometimes in the plenitude of his pride he conceives himself to be, and then o'erleaps himself, not he, but his patient, unfortunately, falling on the other side.

What are we doing in this impatient, restless age to stem the tide, to stay the panic, to bid the people keep its head? I do not mean in the immediate present, for we always do our best for the patient according to our lights, but with our eye on the future and that continuous progress as individuals for which the Goddess of Medicine is marking time, and surely points us to. I do not doubt, I say, that everyone of us does his best for the man that consults him, but I am not sure that in attending to the exigencies of the immediate present we do sufficiently take heed of the future. And our failings in this respect are closely bound up with those of our patients, for we in our place are so anxious to overlook nothing and to cure disease, so enthusiastic in our belief in our power to accomplish what we wish. First may be put a morbid readiness on our part to detect disease. Engaged as we are in this pursuit there comes a risk that we too little appreciate the wide range of health; that is, how good a state of health is compatible with numberless slight and even sometimes considerable departures from normal. We tend to make our standard too severe for practical purposes. I will take an illustration from the heart. Here is an organ in which there are numberless slight departures from a rigid normal, both as regards its muscular action and functions, which mean nothing as regards the longevity of the patient, but to which a morbidly tender medical conscience refuses the title of health. Over and over again in the present day a heart is said to be strained, or weak, or dilated, or even diseased as to its valves from a want of sound appreciation of what is to be considered health, not for the general, but for the particular. One would almost think from all the talk one hears about dilatation of the heart, strains in healthy young people from trivial causes, the grave conclusions that are based upon, perhaps, some slight displacement of the impulse, etc., that the heart is so fragile an organ that it needs to be coddled from the cradle to the grave. It is the fountain of life certainly, and therefore a very indispensable organ, but Nature gives to our comely as to our uncomely parts a strength sufficient for their day, and there is a large margin for emergencies in every part. It is for this reason that I hate the term weak heart. It coffins, or, worse, throws useless upon society, many an otherwise useful life. Hearts are either diseased or healthy, and, with its margin, it is a robust organ that is all the better for plenty of work. I tell you what it does not like, and that is luxurious ease, and one may well have a shrewd suspicion that many a one who coddles a weak heart dies of real disease which an indolent habit has produced.

Let me take another organ popular at the present day both with the doctor and his patient, and upon which both parties have, I fear, gone a trifle adrift. It shall be the stomach. Catarrh of the stomach is a term that is in most people's mouths, and it is a word that appears to have a strange satisfaction in the utterance. Catarrh is quite a sufficient disease, wherever it may be, to silence the anxious inquirer, and no more questions are asked. But, as I have said before, the stomach does not catarrh, at any rate readily. It is a good strong healthy servant, with possibly a prejudice or two, and, if you treat it fairly, is really, quite unlike most servants of the present day, most obliging and thorough. And even if, upon occasion, you do not treat it with quite that sensitive regard that it is entitled to expect, you may hurt its feelings, as any want of consideration is likely to do to a faithful handmaid who has done her best; yet it is only a momentary estrangement, a little domestic concern that wants no third party, such as rhubarb, or creosote, or salol may be, to rub the injustice in. A little carbonic acid to soothe its ruffled feelings, and a kindly sorrow and repentance on the part of the master, with a penitential fast, and things will soon come right.

And while on stomachs I hear a good deal of a so-called dilatation of the stomach. Now a true dilatation of this organ is a comparatively rare thing, and when it occurs it often needs, and is benefited by, rather heroic measures. But the great part of these so-called dilatations are due to a passive relaxation of our inward parts, and this to the bankrupt condition of our abdominal brains. These and quite a number of other abdominal displacements are so common without any symptoms of any kind, that it is certain the condition is only a disease under special circumstances, and those special circumstances have more to do with the individual than with his displacement, and their best treatment is to let them severely alone. But the public won't have it. Who does not know the difficulty there is in preventing people from undergoing a serious operation for the purpose of stitching these harmless mobilities—for it is only quite exceptional that it is otherwise—into their places. It is the same in many another region, throats and noses suffer terribly from this lust of operation that has beset the public. Ears are now being swept into the panic, and I incline to think that the only region of our art that preserves its proper decorum is that of ophthalmic surgery, and it, I believe, reaps the reward of well-doing that is usual in this topsy-turvy world in being regarded by the *élite* as somewhat old-fashioned, and so it is supposed to be the thing to go abroad to skim the cream of skill. But let me quit the domain of medical surgery to take up the question of our administration of drugs. It is told, as many of you know, of the late Sir William Gull that upon a doctor excusing himself for not having discovered the existence of a particular disease he remarked that it was as well he had not done so, for if he had he might have treated it.

### Drugs.

Now, why do we give drugs? To cure disease, you answer at once, and think the question unnecessary. But wait a minute; we give drugs for several other reasons, some of which are far less free from criticism. For example, drugs are often given, not because the disease demands one, but because the patient is not happy till he gets it: too often he is not happy even then. They are given sometimes to hide our ignorance, I fear, or to mark time while we watch and wait; they are given sometimes as a gambler on the Stock Exchange speculates in "futures," an enhanced reputation being the windfall that it is hoped to secure; and then we often give drugs as an experiment in the hope that they may do good. I will deal with this last more especially, for it is a reason for giving drugs about which the public are peculiarly sensitive and ill-informed. It is often said as a matter of prejudice against the hospitals of our country—than which none could possibly be conducted more humanely and considerately—that the patients are made the subjects of experiment. So they are. But this happens not only in the hospital. If it be true—and it is true—that you and I are unique in our way, and that it is this individualism of man that constitutes the great barrier of the evolution of any system of medication, it follows that each new patient who demands treatment is more or less a case for experiment, and it is by experiment of this qualified kind—upon the king as he sits upon his throne, as for the poorest being within his realm—not only that the value of drugs is established and new powers gained over disease, but by which an increase of knowledge of disease itself is gained. The cure of disease is always the fundamental object; but not far behind it should come the alert eye to watch the deviations from the hypothetic normal which the individual resistance or the drug in its action may show in the course of the case.

All treatment by drugs is more or less of an experiment, and it is, indeed, in this fact that the enormous number of new drugs daily poured upon us finds its justification. Many and many an ailment that afflicts mankind badly needs a remedy, but for which, as yet, no remedy is opportune; and who knows but what in each new drug some human ill may find alleviation? A chemist's shop is indeed a source of wonder and dismay to me, and I could indeed wish we were less the prey of the manufacturing chemist, but I would not for a moment even seem to discountenance new remedies. What I would discountenance is the giving drugs by rule of thumb. Diseases run in fashions; I have mentioned one or two that seem to me in fashion now, and there are fashionable drugs which, while the sun shines upon them, become the darlings of Society. Their popularity is enormous—far in excess of their merits; and by and by they sink into the cold shade of neglect. Who does not even now remember the boom of the antipyretics? A few of them have remained to us for other purposes; but as antipyretics, who gives them now? They are not by any means valueless when given appropriately, but they were rushed for more than they were worth, and they are now buried by later booms, such as animal extracts and antitoxins, and many of these will be buried too. And then as to routine in the treatment of disease. I suppose there is not a single case of gout in the whole world that has not had sodium salicylate and other easily enumerated drugs, and had them freely; and why?—because they are supposed to eliminate the cause of the disease. I find that the British public knows far more about uric acid and how to deal with it than I do with all my pains, and what men think they know in this respect, I fear that we, in the first place, and vulgar advertisement in the second place, have taught them. Yet I cannot understand how any reflective mind, making a careful study of gout in its clinical aspect, can settle down and bury itself in the doctrine that gout is a mere question of intake and output, and, if not, think of the harm that is done by false doctrine of this kind upon the thousands who are engaged in the hopeless struggle of dispossessing themselves of their fetish.

The open-air treatment of consumption, of which we are hearing much at the present day, is also bidding fair to come under the baneful influence of routine. "The new treatment," though it is hardly a compliment to our environment to call it so. What, think you, does the consumptive and his friend see in this? He sees a residence for a few months in a home, and a cure at the end of it. Is that what he has any chance of obtaining? Certainly not, and in proportion to the exaggerated hope will come the bitterness of the disappointment to the sick, and the discredit to us. The benefit to be obtained in these sanatoria is that there will be learned a habit of life—what we mean by plenty of good food and plenty of fresh air; and having learned his lesson the tuberculous man will need to practise it all the rest of his life. There is no cure in this treatment as the sick man understands cure; for although it is true that there is no disease that is more often arrested than phthisis, it is equally true that there is no disease that has a more inveterate tendency to relapse, and I very much fear that when you come to strike the balance between arrest and relapse, the latter has the best of it. Therefore if the open-air treatment is to take its real place and be of any abiding value, the principles of the sanatorium must be introduced into the home.

And that reminds me of another fashionable idea that is now in vogue, and I will call it medical antisepsis. Antiseptics in lung disease have had a long day, tempered only by a momentary fall into heresy when it was proposed by those who ought to have known better that we should be converted into gasometers for the storage of sulphuretted hydrogen, and this was to cure consumption! I only mention this to show how much we need to keep our imaginations in check in thinking over the cure of disease. However, antiseptics in the lung from all the many inhalations up to iodoform, and finally creosote internally, have had a good innings and have not been without their minor successes, but it was very meet and right that the comparative inefficacy of such nauseous medicaments should drive us back into the arms of the great original antiseptic, fresh air. And perhaps for that reason we have now turned a somewhat cold shoulder to the lung, and are directing our efforts to rendering the intestinal canal antiseptic, and I hear daily of creosote and salol and all sorts of other well-meaning drugs being sent on this errand of reform. Far be it from me to decry the value of useful remedies, but I cannot help asking myself the question whether the staunch believers in intestinal antisepsis possess sufficiently cultured and liberal-minded noses to be good advisers to our intestinal apparatus. It is quite evident that stercorin, however much so to us, is not a *persona ingrata* to our colic mucous membrane: it is indeed bone of its bone; and it is possible that we might be none the healthier men and women even if our doctors got their wishes in this respect.

One other drug only will I wish to mention to illustrate my point, and that shall be the use of the bromides in epilepsy. Now that these are useful drugs in this complaint no one will question to-day. But long ago it has gone forth from those who are in authority in such matters that after a person has suffered from epileptic fits the drug must be given regularly in considerable doses, and for long periods of time—a year or two, or more—to prevent their recurrence. And this advice is very generally acted upon. There is no doubt that it has become the routine treatment of epilepsy; and as such I think it often does a great deal of harm, and I am by no means certain that it does any equivalent good.

### The Dangers of Routine and Fashion.

Now all this routine and fashion, and remember I have only taken one or two instances out of numbers that lie at my hand, I object to, and I do so because it all tends to establish false relationships between the doctor and his patient, and let me attempt to show you how. The patient first of all asks us for a name to his disease, and whether we know or not we give him one. In so doing we, as I say, speculate in "futures;" and that is a form of business that very often ends in bankruptcy. No remark is more frequent at a consultation than that we must give a name to the disease. I object to giving a name to anything I am not sure about, and when a man says to me, "That is all very well for you, but it would never do for me," I object still more, because the general practitioner is the great instructor of the public in matters medical. I have not a tithe of the influence that he has, and by giving names to symptoms that are doubtful in their significance, he is first of all losing an opportunity of insisting upon the dignity of ignorance; then he is conveying to the public the erroneous notion that we have the power of insight into problems that are at the time inscrutable; and

we ultimately end in deceiving ourselves into thinking that we know much more than we do, an idea that is fatal to the progress of knowledge. There are hundreds of examples that might be given, but the various febrile disorders are the most fertile in discords of this sort. It is often absolutely impossible in the early days of typhoid fever to say what is the matter; equally is it absolutely impossible in many of the eruptive fevers to say what of several things will eventually declare itself. It is not ignorance but knowledge that halts. When I first entered Guy's Hospital some thirty-six years ago it was a common saying about one of our staff at that time, and certainly one of the best physicians of that day, that he knew so much that he could but seldom be prevailed upon to give a positive diagnosis. And it is true, as Sir Arthur Helps says, in the book from which I have borrowed the title of this address, that knowledge brings doubts and exceptions and limitations that are all hindrances to vigorous statement.

Then a word about the evil of letting the public force our hand in the matter of drug taking. I have already alluded to routine as destructive of all scientific observation, enabling as it does the giver to see only cures and nothing of failures, though they be in very truth staring him in the face. But I am now alluding especially to the numberless occasions when drugs are given, there being at the time no distinct indication for giving anything. There is no doubt that this is a very common and bad fault with us. I do not say it must never be practised. There are times when the sick are not reasonable beings, and unless they have a bottle of medicine to anchor their faith to (oh, shifting sands!) they are in a state of unrest that is positively harmful to their progress. But there are multitudes who are not in this parlous state, who are capable of listening to reason, but who as now, having been taught to look for their prescription or their bottle of medicine, have no idea of the value of advice only, or of the need of the watchful eye. Why, we are all familiar with the "Are not you going to give me a prescription?" when you have been pouring in advice with much prodigality of tongue, and had flattered yourself that you had gained a disciple; and there is no need to go far to be absolutely sure that the great body of the public, rich and poor, pay for our prescription, and that they do not value by a button any advice that lies outside it.

But I think there is another reason for this indifference to the value of advice which, although it is perhaps one that savours of the sordid, I must nevertheless touch upon. I have often inwardly contrasted the two professions of law and medicine, how in the one advice pure and simple is sought and found, and the givers thereof acquire positions of milk and honey, and find themselves mounting to the high places of the land. In the other medicine passes for the consideration, and, well! the sellers thereof do not seem to possess themselves of many coveted places of honour. And if you ask me why this is, I believe it to be because we make ourselves too cheap. Advice—just think of it! A product of so unique a value, that when a man of great experience in the world of medicine dies his knowledge dies with him; no other man can supply his place, and there is a dead loss to the community of a mine of unrealised information. You all know that very clever signboard in which a bullock is seen gazing yearningly upon a small jar of meat extract and exclaiming, "Alas! my brother." But I often wish that I could pot my brothers as they flit from off the stage; my trouble is that my masters die unbottled. And yet we "give" advice, and there are those in number who not only accept but ask the gift. Oh, dreadful degradation that advice, a priceless article, should fall in value below cheese and butter.

It is told of the late Sir Andrew Clark, with what truth I do not know, that when he was asked to give gratuitous advice he said, "No; but I will give you the money with which you can purchase it." Whoever said this was a wise man; for on the one hand there was in the answer the generosity that knows no bounds of medicine to poverty; there was on the other the dignity and self-respect that fully understood the preciousness of the knowledge that he had the power to impart; and we shall never make the public understand the true position of medicine until we set a higher value upon *ourselves* and upon the *advice* we give.

What better illustration could there be of the inutility of thus giving ourselves away, than that so shrewd and penetrating and fair-minded man as Mr. Joseph Chamberlain, in so grave a matter of right and wrong as the question of cheap consultation, should have declared that the question was settled by medicine upon the strictest trades union principles; and that another man, equally hardheaded if erratic, should agree upon that point, and then proceed to define trades unionism as "doing the worst possible work at the highest possible price." Cheap consultations! Philanthropy has indeed there got hold of the wrong end of the stick. Why, it is notorious that such is the generosity of medicine that there is not a needy person in the whole kingdom who cannot, if he need it, obtain the best opinion in the country gratuitously. The clergy, the army, the navy, artists, actors, actresses, clerks, artisans, and others pour into a doctor's room or the hospital asking alms in the shape of advice and never get a refusal. And after it all we are insulted by being called trades unionists—"men who do the worst possible work at the highest possible price!" And I honestly believe we have ourselves to thank for this in great measure, for we belittle the value of our advice in allowing the public to exalt so greatly the supremacy of physic.

That the labourer is worthy of his hire is but one side of the question, and not the best side, for it might be held to cover many a sordid act; the other and much the more important is surely this, "See to it that the hire is worthy of the labourer." And although, expressed in these terms, the face value may seem to be one of low ideals, I am far from thinking, as I speak, of any money consideration, but of the higher and nobler recompense of dignity and self-respect. And it is, in part, because I think that to careful observation it must seem that the very nobleness and generosity of medicine does tend somewhat to make us forget the importance to its well-being of these just rewards that I have chosen this subject for my address to-night.

On, then, my comrades, in your noble work, till other voices, other years, shall bid you pause in other ways, according to their seeming. Mark well the hindrances to our onward progress that together we have traced to-night, be more than ever heretofore the steersmen at the helm, to guide the sometimes teasy ship between the troubling eddies of the passing thought, and then your Greater selves, firm anchored in "the spirit of the years to come," need reck not

> Lest the cause ye love
> Should languish when your tender toil-worn hands
> Are crossed in peace beneath the daisied sod!
> The Means wax old and perishable prove,
> The End endures eternally, and stands
> Above the ages, face to face with God.

# ADDRESS IN SURGERY,

*At the Annual Meeting of the British Medical Association at Cheltenham, July-August*, 1901,

BY

SIR WILLIAM THOMSON, C.B., M.D., F.R.C.S.I.,

Honorary Surgeon to His Majesty the King in Ireland; Surgeon to His Excellency the Lord Lieutenant, K.G., and to the Richmond Hospital, Dublin.

## SOME SURGICAL LESSONS FROM THE CAMPAIGN IN SOUTH AFRICA.

MR. PRESIDENT, LADIES AND GENTLEMEN,—The request of the Council of the Association that I should undertake the duty of delivering the Address in Surgery at this meeting confers upon me a great honour which I fully appreciate, and for which I hasten to express my cordial acknowledgments. But it also brings with it a responsibility so heavy that I am filled with anxiety. It is a difficult thing to follow, even at a long interval, the distinguished men who have preceded me in this high office. I remember, too, that but a few years ago my old teacher and colleague, Sir William Stokes, occupied this position, and captivated his audience by a vivid eloquence which was all his own. To-day we have to speak of him as one of the many who, going out in the

service of their country, have paid the immortal tribute of their patriotism in South Africa, and, like tired children, have lain down "to take their fill of deep and liquid rest."

In the discharge of the duty which I have assumed, I hope it will not be out of place if I, a civilian, venture to occupy your attention with some points in connection with the surgical aspects of the war. For the first time in our history the country has been largely represented by civilian surgeons in a great campaign. In the Crimean war a few were so employed, but in the present case civil aid has not been only casual or occasional. Many hundreds of surgeons have left their peaceful practice at home and volunteered for service in the field to help their brethren of the Royal Army Medical Corps. They have had the opportunity of seeing what active service is, and the results of it: have tasted to the full its discomforts and horrors. They have had entirely novel experiences. They have been taken from the placidities of home life and thrown into the bloody turmoil of war, looking with unaccustomed eyes upon scenes which often thrilled and never ceased to interest.

### The General Effect of Modern Small-bore Fire.

For nearly fifty years Great Britain had not met a white-faced foe, and the weapons of war had been entirely revolutionised. The smooth-bore musket, with its round bullet, had been succeeded by rifles of large calibre; these in turn had given place to the Snider and Martini, to be followed by rifles of small bore and great range, and of these our own experience was one-sided, for even in our late Indian campaigns they had hardly ever been used against us.

The knowledge of the effects of these weapons from their use by both sets of combatants was limited to the war between the United States and Spain. But in the Cuban campaign there were no great masses of troops engaged; and the casualties were comparatively few. Thus we entered upon the war in South Africa without any comprehensive idea of what the surgical results would be in a conflict between two forces each armed with the small-bore rifle. It was said that with the rapid discharge of which these arms are capable—supplemented by the magazine—no troops could escape destruction. Indeed, the world is still without experience of what would happen with great bodies of men handled according to European methods, as in the Franco-German war. But these methods did not exist in South Africa. The Boer rarely appeared in the open, and then only in small numbers. His plan was to seize some kopjes, with a secure line of retreat, to entrench himself and await the attack. From these positions the ground usually stretched away in a flat plain, without a tree or a boulder, and with sometimes only a small ant hill here and there to give protection to the assailants. The conditions, then, were: an unseen enemy well entrenched in a commanding position; a large body of troops advancing and exposed to view, an object upon which thousands of sharpshooters were pouring fire. The rifle began its work at a couple of thousand yards: aim became more sure as the intervening distance decreased, until sometimes fire was delivered into our soldiers at one hundred yards or less as they made the final rush.

One would naturally expect as a result of all this a terrific mortality. It is true that we have lost heavily, but certainly not more heavily than the enemy. Yet if we look to proportional effects, and compare these with those of campaigns in which the weapons were of cruder form and of less range and penetrating power, we see that there is not the difference which was anticipated in the amount of damage inflicted. In the American civil war of forty years ago the killed were 17.97 per cent. of those hit, or one man killed for every 4.56 wounded. In the recent war in Cuba, where the Mauser rifle was used against the United States troops, the killed were only 11.9 to 88.1 wounded, in each hundred—a very considerable decrease as compared with the results of the old rifle.

When the total casualties of Belmont, Graspan, Modder River, and Magersfontein are grouped, we have 17.24 killed in every hundred struck, almost identical with the return from the American civil war. The latest figures bring our losses up to June 30th, and show that, of 22,646 hit, 4,355 were killed. In other words, 14.8 were killed to 85.2 wounded, a return higher than that of the Cuban war, but lower than that of the civil war. The figures do not include those men who died subsequently from wounds, but simply give the immediate results of battle. The subsequent mortality returns, when they are available, will probably not vary much from these ratios.

I have not been able to separate the effect of shell fire from that of the rifle, but it may be said that it did comparatively little physical damage. The war was essentially a war of small arms; and so far it would seem as if all the improvements in them have not added to their immediate destructiveness. But this conclusion would not be entirely justifiable. The weapons are more accurate and of greater range than have been employed before, and given the same conditions of closer quarters and the formation of troops as formerly, opposed men, armed with breech-loaders and using magazines, must inflict terrible damage. We have had some instances of the result in this campaign. What has happened is that we have learnt to diminish the effect of the fire by making considerable intervals between the men; so that there is much less damage from loose unaimed firing than if the enemy had huge blocks of human beings for targets. If we add to this the fact that firing begins at a range of 2,000 or 1,500 yards; that the very light bullet is subject to the deflection caused by varying densities of atmosphere and force of wind, all conducing to inaccuracy of shooting, we have some reasons why the efficiency of modern rifle fire under certain conditions has so happily disappointed our anticipations.

### The Effect of the Small-bore Bullet.

When, however, we come to consider the nature of the wounds inflicted by the two classes of weapons the difference is very great: and this depends mainly upon the character of the bullet employed. The old flint lock had a ball nearly seven-tenths of an inch in diameter, the Minie rifle of the Crimean war one of six-tenths, the Enfield of five-tenths, the Martini-Henry of four-tenths, the modern small bore represented by the Lee-Metford is about three-tenths, and the Mauser is a decimal smaller. The bullets in the first group were all of lead, and elongated, with the exception of that of the old musket; the bullets of the second group, however, which may be likened to an inch and a-quarter of ordinary lead pencil, are encased in a hard cupro-nickel case, somewhat pointed, polished, and absolutely smooth.

The vast majority of wounds received in South Africa were caused by these bullets. It is certain that the enemy used other varieties; sometimes the soft-nosed sporting bullet, which, having an end of exposed lead, spread out on impact and inflicted a lacerated wound. Explosive bullets for big game have been found on prisoners; and the old Martini rifles were used with considerable freedom. In other instances the mantles were split at the top so that they expanded on impact. But it was not always possible to identify the effects as due to a missile contrary to the usages of civilised war.

There is a popular belief that an elongated bullet must hit its object practically at right angles if that object is upright when presented to the line of fire. But between the discharge of the bullet and its arrival at the mark, a great many things may happen. It is often deflected in its flight, or it may be turned by clothing or other substances, and make its impact at all sorts of angles, causing large wounds. Sometimes the Mauser bullet has turned completely round and entered base forwards. But a great number strike the ground, or a stone, and become much more formidable in their effects. This ricochet produced many kinds of deformities in the bullet; the case was often torn off wholly or in part, and, when the primary contact occurred close to the body, spattered the skin about the entrance wound with small fragments of the cupro-nickel mantle. Now and again the exposed lead mushroomed and produced ghastly lacerations. But the result of a bullet striking soft parts sideways after a ricochet often made it difficult to believe that it had not contained a bursting charge. I was able to observe the effect of a Lee-Metford bullet on one of our own men. A soldier accidentally discharged his rifle at a distance of ten paces. The bullet ricocheted and struck the victim on the inside of the thigh posterior to the femoral vessels. The entrance was more than an inch in diameter, the exit at the outer side was a wound 2½ inches in diameter, with great loss of substance.

Here there was no doubt as to the weapon or the ammunition employed. The soft structures alone were injured, but they presented the appearance that one would expect as the result of some powerful local explosive.

### Wounds of Soft Parts.

The campaign in South Africa has presented many surprises. Perhaps none is greater than the large proportion of wounded who have recovered. Even severe wounds have responded to treatment in a manner which has surprised everyone having experience of surgical injuries. These happy results were due in the first place to the character of the bullet. The wound was in ordinary cases exceedingly small at both apertures, and the tendency was to close immediately. There was usually little hæmorrhage, and the openings were quickly sealed by exudation. This was an important first step. The pointed end of the bullet made the area of primary collision with the surface struck quite minute, and being covered in a hard mantle it acted like a steel wedge driven with great velocity through the soft parts, rather cleaving than tearing its passage onwards. It appeared to contuse the walls of the channel sufficiently to prevent considerable oozing, and not to lacerate or destroy. One of my patients, a man of the 11th Hussars, was shot transversely through the cartilages of the nose. The mere margins of the alæ alone remained to keep the outline of the perforations unbroken. If the bullet exercised a destructive force appreciably beyond the channel which it made, the edges of the alæ must have died, so thin were they; but they never showed any tendency to necrose, and the wounds were healed in three days.

But even in long flesh wounds in the extremities the same rapidity of repair was noticed. Here again the character of the injury influenced the result, for the walls of the track did not remain rigid, leaving a permeable tunnel. As soon as the passage had been accomplished the walls fell together, and thus further helped in the exclusion of air and the risks of sepsis.

Various suggestions have been made but have not been sustained that asepsis has been secured by the heat generated in the bullet itself, heat which it has been claimed is sufficient to destroy any pathogenic organisms. Cartridges carried in bandoliers were always exposed to contamination, but I have no doubt that the bullet received a thorough cleansing in the rifle. It was, of course, slightly larger than the bore, and was forced to take the turn of the rifling by the explosion. The result was a certain polishing of the outer surface under immense pressure, and the after-sources of contamination could only be found in passage through the air, the man's clothes, and his skin. Practically penetration was effected by a piece of clean very hard metal. Of course, there is no doubt that germs did gain access even under such circumstances, but in how many cases, even in operations under elaborate precautions, are they entirely absent? Unless the conditions which make them potent exist they give no trouble.

The second cause was the early application of the first dressing. This was not always done by the surgeon. Very frequently the wounded man was able to attend to his own wants in this particular. Sometimes dressings had been lost and a piece of old linen or window blind did duty. In spite of these, however, and of skin ingrained with dirt, the early closing of the apertures helped to avert mischief. But in the case of the extremities the bandages were of special importance in fixing the track of the wounds, in securing apposition of the walls, and in keeping the parts in that immobile condition which was of so much importance.

The third cause was the climate. The temperature was high, the atmosphere very dry and particularly free from germs hostile to the surgeon's work. The general elevation of the plains in the northern part of Cape Colony through Orange River Colony and on to the Transvaal varied from 4,000 to 6,000 feet, higher by nearly 2,000 feet than any mountain in the United Kingdom. The conditions, therefore, were exceedingly favourable. The intensely dry atmosphere quickly transformed oozing blood into crusts, and so helped on the healing in a wonderful way. In a moister climate the results probably would not have been as good, and we should have had to deal with a greatly increased number of cases of suppuration.

### Wounds of Bones.

So far we have been considering the effect of the small-bore bullet upon soft parts. Let me pass on to discuss the damage done to bones, and the rate of mortality which followed. The subject is important, because in this as in all wars injuries of the upper and lower extremities outnumber, many times over, those of any other part of the body. I will take a convenient illustration—the American civil war. The total number of wounded treated in the Northern hospitals was 245,800; 71,594 were wounds of parts excluding the extremities, wounds of the upper extremities were 87,793; of the lower 86,413. These produced fractures of bones in 32,992 and 27,274 respectively, or a total of 60,266. Injuries of bones, then, hold the first place in number, and hitherto they have been followed by an appalling mortality.

It is in the damage inflicted upon these structures that we find the strongest evidence of the power of the small bore. As the improvement in the rifle developed, there was also an alteration in the shape of the bullet, which became elongated, and during these changes the character of the injuries to bones became correspondingly severe.

The velocity at which the modern bullet travels as it leaves the muzzle may be taken as about 2,000 feet a second, but during the flight this rate is gradually reduced owing to well-recognised causes. It is obvious that if the bullet, within a few hundred yards after it has been fired, strikes a bone, it does so with crushing force; and that the severity of the injury decreases just in proportion to the distance which intervenes between the rifle and the object struck. In other words, the greater the velocity the greater the destruction when the bullet is suddenly obstructed by striking the shaft of a bone. Without entering into a discussion of the so-called explosive force produced on impact, what we find is that the bone is much comminuted, and that fragments are carried some distance onwards in the soft parts as the bullet travels. But as the velocity lessens the effects are not so destructive; the bone is broken, sometimes into a few pieces, at the point at which it is struck, and sometimes the fracture has no subsidiary fragments. Occasionally a case is met with in which the velocity has been just enough to break the bone, but not to carry the bullet through the limb after the collision.

The behaviour of the bullet in the cancellous structure of the ends of bones differed from what I have just described. In the older forms of conical bullets with low velocity there was much tendency to lodge in these structures, but in this campaign the injury was chiefly a complete perforation. The different structure of the ends of bones as compared with the shafts accounted for this. The cancellous tissue presented a more or less elastic obstacle and yielded to the impact; but in the case of the shaft the hardness of the parts struck offered considerable resistance, and much of the force of impact was expended in breaking the denser obstruction into minute pieces.

### Amputations through the Thigh.

In the campaigns of forty or fifty years ago few injuries were more fatal than gunshot fractures of the femur, and the doctrine which had been laid down by earlier writers that amputation should be immediately performed still largely influenced practice. The flesh wounds were much more severe. Principles of cleanliness had not yet been formulated; the wounds always suppurated, and the result was a compound and comminuted fracture, which often developed the worst forms of sepsis. It was to avoid these almost inevitable results that amputation was advised, for it got rid of a lacerated wound and fragments of bone and gave for a time a hope of safety. Nevertheless, the mortality was appalling. Here are a few figures:

*Results of Amputation of Thigh in Gunshot Fractures.*

| | Cases. | Recovered. | Died. | Percentage of Mortality. |
|---|---|---|---|---|
| Crimean war ... ... ... ... | 2,748 | 227 | 2,033 | 73·5 |
| American war (North) ... ... | 6,229 | 2,839 | 3,310 | 53·8 |
| Franco-German war (German) ... | 798 | 243 | 514 | 65·6 |
| ,, ,, ,, (French) ... | 3,794 | 342 | 3,452 | 90·6 |

Out of a further group of 9,017 cases 83 per cent. died.

But the results of conservative treatment did not show to much more advantage in the Crimea and the United States. I give the figures in the same campaigns by way of strict comparison.

*Results of Conservative Treatment in Gunshot Fractures of the Thigh.*

| | Cases. | Recovered. | Died. | Percentage of Mortality. |
|---|---|---|---|---|
| Crimean war ... ... ... ... | 555 | 153 | 402 | 72.4 |
| American war (North) ... ... | 3,467 | 1,689 | 1,684[1] | 49.9 |
| Franco-German war (German) ... | 811 | 530 | 233 | 28.7 |
| ,, ,, ,, (French) ... | 896 | 811 | 85 | 9.4 |

[1] Result unknown in 94 cases.

Nevertheless there was an improvement. The historians of the American civil war hailed as victory the return which showed a mortality of 49.9 in conservative practice as compared with 53.8 for amputation. It was a gain of nearly 4 per cent. for the treatment which aimed at saving the limb. Then came the Franco-German war nearly ten years later, and the lessons from America bore fruit. There was still a large number of surgeons, whose opinion was valued, who believed in immediate amputation, but even these yielded to the force of experience, and conservation as against amputation won by a difference of 26.9 per cent. The experience of France was remarkable, as only 85 or 9.4 per cent. are reported to have died without amputation; but the number given is so small that I am not prepared to accept it as representing the surgery of the period. Still, the lesson remains that in those campaigns when the revolt against amputation began the result was with the progressives.

But if we turn to the recent Cuban war we have a further gratifying experience. Surgeon-General Sternberg reports that during the two years 1898-9

> Eighty-two cases of gunshot fracture of the femur were reported, 6 of which were treated by primary amputation and 2 by resection, the remaining 74 cases being treated by conservative methods, not because the conditions were not favourable for the performance of primary operations, but because of a conviction that under present methods of treatment the limb could be preserved without materially adding to the danger of life. The limb was lost through surgical intervention in only 7.3 per cent. of the cases. Of fracture of the upper third there were 32 cases, of which 5 were fatal under conservative methods; of the middle third, 27 cases and 3 deaths; of the lower third, 23 cases and 1 death. A general mortality of 10.8 per cent.

This is a splendid record of the treatment of compound fractures of the femur in the field.

I am not able to lay before you like figures from the campaign in South Africa. They have not yet been completely analysed, and partial results are apt to leave false impressions, Nevertheless, I think I may say that in no war have the number of amputations been so few, the number of limbs saved so many, or the mortality from such operations so small. Amputation of limbs was quite the exception, and was only done when the case was otherwise beyond hope. For, the lessons of modern surgery, the vast possibilities of recovery which the teaching of Lister had put within the grasp of every practitioner of the art in the world, had already proved that the nearer we could approach to natural conditions the greater the safety for the patients. Therefore when a bone was broken by a bullet, and there was no other lesion but the track made through unimportant soft parts, the indication was to apply an antiseptic dressing at once, to secure as much immobility as possible, and to have the patient sent to a place where rest and more deliberate attention could be had.

### Examination of Wounds.

The treatment of these cases in the first stage has led to some difference of views among surgeons; but I am satisfied that reason and experience point in one direction only. It has been recommended that fragments of bone which have been detached from the shaft ought to be removed, and the limb then secured in splints. I am strongly of opinion that local examination ought not to be carried out unless the surgeon should be driven to it by developments. The fact that bone is broken can be elicited quite easily by the methods which we employ in a simple fracture. Of what value in treatment on the field is it to learn whether there are four or forty fragments? What should we learn by passing in probes or fingers except that there was fracture and that there were many pieces? To do this we should enlarge the wound considerably, introduce things that, probably, were not aseptic, disturb adhesions that were already in progress, break down clots, and generally do the things which were the very worst for the patient. It is surprising what little trouble many fragments apparently separated from sources of vitality may give. If they do necrose later on they can be dealt with under safe conditions. But I am quite sure that, with rare exceptions, the wrong thing to do on the battlefield in a recent wound by a bullet involving fracture of a bone is to explore it with probes, or to enlarge it for the passage of a finger and the removal of fragments.

### Wounds of Joints.

One of the interesting features of the surgery of the campaign was the injury done to joints. In a majority of cases the bone was more or less injured, but in three out of five cases of perforation of the knee-joint under my own care there was no apparent involvement of bone. Such cases did very well, most of them pursued an aseptic course, and recovered with good movement. Even suppuration did not demand more severe measures than incision and drainage. I have seen a bullet traverse the two malleoli and the astragalus with perfect movement remaining. In the case of a naval officer, the head of a pompom entered the astragalus and practically destroyed it, all that remained being the dense walls. There was a fracture of the tibia as well, and the limb would certainly have been amputated under the old rules; but I succeeded in saving the foot, although with a stiff joint, and he is still in the service. Excisions, again, were rare; and amputations were only performed on the field when vital parts were involved, or there was terrible destruction by a shell, which was an event of infrequent occurrence.

I have specially referred to injuries of the knee-joint, because I wish to indicate how satisfactory our experience of them has been in this campaign as compared with that of forty years ago. Then the doctrine was that whenever the knee-joint was penetrated by a bullet, whether the bone was fractured or not, the limb should be amputated, and the sooner the better. This view existed not only before the American war, but was emphasised by the experience then acquired. In the Crimea, out of 138 cases, 45 recovered and 93 died, or 67.3 per cent. In all but 3 of these there was fracture, of which the recoveries were 43 and the deaths 92. In the American war there were 793 cases, of which 402 recovered and 376 died, or 48 per cent. In 659 instances there was fracture, of which 309 recovered and 350 died.

The proportion of cases in which bone was involved in wounds of the knee in the present campaign will perhaps be found to be somewhat less. But there can be no doubt that in spite of such a serious complication the cases did extremely well. The excisions must have been very few, for I did not see or hear of any. The simple perforations were attended by some blood effusion and, in my own experience, trivial synovitis, and in these cases treatment by carefully occluding the openings and keeping the limb at rest was generally sufficient to secure safety and early restoration of normal movement.

### Penetrating Wounds of the Abdomen.

But the problem which most exercised the minds of surgeons in South Africa was the treatment of penetrating wounds of the abdomen. These had always been marked by the highest mortality in war. In the Crimea 92.5 per cent. of the British so injured died; 91.3 per cent. of the French. Here was a field in which there was plenty of scope for improvement. In the interval between that great campaign and the present far-reaching changes had taken place in the practice of surgery. It had been shown in civil practice that it was possible to deal with almost all kinds of pathological conditions within the abdomen. In our own country the surgery of this region had reached such a high level of security that many believed that the successes of the civil hospitals could be extended to the field of war, and that at all events the mortality would be

diminished very effectively. The late Marion Sims had strenuously pleaded that these cases ought to be submitted to operation, because therein lay greater hope for the patient; and there were few surgeons who went to South Africa who did not hold the same view. In a few months, however, they abandoned that position, after experience of the actualities of war and the almost uniformly fatal results which followed—if they did not depend upon—interference.

I think the causes of this were not far to seek. In civil life a patient so wounded is quickly brought into the best position for operation with all the appliances at hand which are almost essential to success. In warfare a wounded man may occasionally reach the field hospital within a short time, but when the casualties count into hundreds and thousands delay may extend into twelve, and, in some cases, twenty-four hours before he is even rescued. Now if there is an injury which should be treated promptly it is a lesion of the intestine; but the conditions in which operation should be done, if there is to be hope of success, are not to be found in a field hospital. The equipment is not sufficient or efficient, water is usually bad—in South Africa it was loaded with earth from which no filters could free it; it could not be boiled in sufficient quantity, and what we understand as the toilet of the abdomen was out of the question.

There were, as I have hinted, two periods in which the surgical attitude towards these cases was quite different. In the early days many abdomens were opened, but probably all the recoveries after operation were less than a score. This depressing result has corroborated the experiences of surgeons elsewhere. In the Tirah campaign 5 cases of laparotomy were reported, but they all died. In the late Cuban war Senn says that the 4 operation cases of which he personally knew all died. Surgeon-General Sternberg, of the United States Army, reports officially that in the two years 1898–9 they had 116 perforating wounds of the abdomen, of which 81, or 70 per cent., were fatal, and that of 10 cases in which laparotomy was performed 9 died. In South Africa I have known of a series of 9 cases with 1 recovery. Dr. J. E. Neale, civil surgeon, has, however, reported[1] a case of a man wounded at Frere: fifteen inches of the intestine were resected, and the patient never had a bad symptom.

But as I have said, while the whole experience of operations was almost uniformly disappointing even in the most skilled hands, it was observed that many men with wounds of the abdomen did not present any alarming symptoms at all, and that many of them quickly recovered. Mr. Watson Cheyne gives his impression, derived at Capetown, that only 20 per cent. of the abdominal cases had died; but this, of course, did not account for that large number killed outright, or for those who lingered for a few days and died before they could be transferred to the base. We are not yet in a position to deal with exact figures because they are not procurable; but I think it will be found that the proportion of deaths was far in excess of this. Indeed, Mr. Cheyne's subsequent experience at the front induced him to regard the death-rate as much higher. He reports 27 cases, of which 18 died (2 after operation); Mr. Cheatle 10 cases, of which 9 died. From the Philippine war Dr. Robinson has published figures which show 45 cases, with a mortality of 48.9 per cent. But of these 8 were killed, or died within 24 hours. The interesting fact brought out, however, is that of 30 cases which were not operated upon only 10 died, showing in this group a mortality of but 33.3 per cent.

These cases include all kinds of internal injuries, many of them necessarily mortal from hæmorrhage, as in wounds of large vessels. But if we limit our inquiry to wounds of the intestines we are still met by serious difficulties in settling the question of operation. Apart from the initial one of the unsuitable surroundings of the field hospital and the insecurity which must attend opening of the abdomen there, we must first try to determine whether the bowel has been wounded at all. If we accept the evidence of the apertures of entrance or of exit, there generally appears to be no doubt that the bullet has passed direct between the two points, and it seems impossible that the bowel has escaped perforation. But there is abundant evidence, both recent and remote, that bullets and even sharp weapons have traversed the abdomen, not only without fatal results, but without symptoms of perforation of the intestine. I shall not trouble you with any other instance than that given by Mr. Cheatle, and reported by Mr. Makins in his admirable book on *Surgical Experiences of the War*. There the bullet passed through the cæcum and the sigmoid flexure, but the intervening small intestine presented no indication of the slightest injury. Even upon this one case it may be affirmed that a bullet can traverse the abdomen without wounding the intestine. I have seen or treated many cases in which the track of the bullet made it almost a certainty that it had passed through the bowel, and in which the patient presented absolutely no symptoms up to his discharge from hospital. Now here we have another problem. Are we justified in opening the abdomen in such a case as soon as we see it, with no other evidence than two external openings and a belief that the bowel cannot have escaped? There can be no doubt, I think, that after a prolonged search for wounds in the intestine which did not exist the patient's chances of recovery would be much on the wrong side.

But I go further and take the cases in which there is actually a wound of the intestine. Is it possible for recovery to take place? I am quite satisfied that in very many instances of this injury from the Mauser or Lee-Metford bullet the patients survived. Some of them had bloody stools and other symptoms which made plain the nature of the lesion. Many reasons have been given for these remarkable escapes. Probably they have depended in the first place on the angle of the impact of the bullet.

A more or less direct hit would make a very small opening, which was immediately closed into a slit by contraction, and in some degree blocked by mucous membrane. The openings may have been further secured by pressure against an adjacent intestine, as suggested by Sir Frederick Treves, and kept secure until finally healed. But if we go back to Mr. Cheatle's case, we find there was no extravasation from the cæcum and no inflammation about the aperture, which had shaped itself into a minute slit. If, however, the bullet struck at a smaller angle, it would probably make multiple oval openings, with such loss of substance as to lead to extravasation and rapid infection of the peritoneum.

I have tried to show that there are cases in which there is no perforation, although we may suspect it, and cases in which wounds occur which may run a safe course and in which operation would only lead to greater risks.

There remains the group in which the wound does allow of extravasation, and in which from various signs and symptoms we are able to recognise the condition. These cases as they stand are almost but not quite certain to die. Can we do anything to diminish this tendency?

I revert to the difficulty of operating upon them in a field hospital, and yet to send them back to a stationary hospital is almost hopeless. They ought to be operated upon at once, but they are sent away with an infected peritoneum, which becomes worse each hour. What chance is there for successful interference at the journey's end, when the patient is exhausted by pain and exposure, and has been jolted in an ox-waggon for a couple of days. Yet if operation is to be done quickly there must be some better equipment of field hospitals and more suitable preparations for this special work, for it is tedious and exacting, and it demands expert hands and sound knowledge. But every foresight will be nullified by the pressure of a severe engagement where there are many men to be attended to. When everyone is working at high pressure night and day there is no time for the prolonged operations on the abdomen, unless it is possible to set apart one surgeon to deal with such cases only.

On the whole, then, considering the difficulty of diagnosis in many instances at the outset, the fact that intestines may be found unwounded, and if wounded may be occluded by natural processes if not interfered with, it seems to me that in war as we stand at present the man whose abdomen is perforated by a small-bore bullet has a better chance of life without operation than with it, bearing in mind the circumstances on the field under which laparotomy must be performed. That is an opinion which I think most surgeons came to when experience had ripened after the early months of the campaign. Although the judgment may be a little humiliating it is one which must for the present be accepted.

### LODGED BULLETS.

The war has developed once again the discussion upon the removal of bullets. Formerly with the low velocity the proportion of lodged bullets was much larger than it is now. Some surgeons are of opinion that the missile ought to be searched for and removed at as early a moment as possible. I think the practice in ordinary circumstances unjustifiable. If the nature of the wound enables us to reach the bullet without trouble, or if it has lodged under the skin and can be reached by a simple incision, it may be removed. But remembering the character of the wounds made by the Mauser in most cases, enlarging the apertures, or a search with probes or other instruments, may mean a suppurating instead of a non-suppurating track. It has been said in justification that the bullet may become displaced and give rise to troublesome after-effects. If these should occur the cause can then be dealt with, but a bullet may lie buried with impunity throughout a long life. Therefore, except under special circumstances, which are sufficiently obvious, nothing should be done beyond trying to occlude the wound and to secure it from contamination.

### PROGRESS MADE BY MILITARY SURGERY.

I should have liked to speak of several other forms of injury, all of them full of interest, and of the great advantage given by the use of the *x*-ray apparatus, but the limits of time demand that I should confine my remarks to some salient facts only. The war is still in progress, and it will take a considerable time after its conclusion before we can make an effective summing up. But even thus far we have materials for conclusions which are not likely to be much modified. We have seen a marvellous proportion of recoveries from severe wounds, and we have been able to rejoice at the great reduction of suppurating cases, and the practical absence of such infective diseases as tetanus, erysipelas, pyæmia and hospital gangrene. This great difference in the records of to-day as compared with those of older and more bloody wars does not depend mainly upon the alteration in the bullet used. That, as we have seen, can do fearful things to a dense obstacle, and add to its power for mischief by the laceration caused by bony fragments which it scatters on impact. To some extent, the smallness of the canal made by it helps towards recovery. But, above all, the results are due to the treatment of the wounds by the surgeon, and the operation of those great principles which have developed under the splendid genius of Lord Lister. He has made possible the unquestionable triumph of conservative treatment. Honoured as he is throughout the whole world, proud as we all are to claim him as a compatriot, his most enduring memorial will be in the multitudes whom he has been the means of saving from pain and death, and in the direction which he has given to scientific surgery for all time.

When the recoveries from wounds in this war are made up and analysed, it will be seen what a tremendous progress has been made in protecting the injured from disaster, even in the face of all the difficulties of the battlefield. For, while in the general and stationary hospitals the precautions necessary in modern surgery can be observed, it is, after all, at the initial stage that safety from sepsis is to be secured. "The fate of the wounded rests in the hands of the one who applies the first dressing," wrote Von Nussbaum, and the truth of this assertion has been proved every day.

War is at all times full of horrors, but as it is waged to-day it is less terrible than before. In the recent Spanish-American conflict the mortality among the wounded dropped from the 12.96 per cent. of the civil war to 6.64—a reduction of nearly one-half—a result in part no doubt due to the smaller bullet employed, but more certainly to the improved methods which have been established in the practice of surgery.

Our profession has taken its full share in the work in South Africa, and whether as officers of the Royal Army Medical Corps or as civil surgeons, all have worked ceaselessly in ministering to the sick and wounded. They have not flinched in danger on the field, and they have vied with their combatant fellows in deeds of valour. Six medical officers have been killed; 9 have died of disease; 12 have been wounded; 3 civil surgeons have been killed; 11 have died of disease; and 5 have been wounded. Of all branches, including orderlies and nurses, nearly 400 medical helpers have fallen victims to their labours. It is a noble record of devotion. We must always glory in it, but so also must we delight to know that the true spirit of patriotism is still with us, and that so many of our profession have been ready to show, by rendering up their lives, that "A country's a thing men should die for, at need."

REFERENCE.
1 BRITISH MEDICAL JOURNAL, vol. i, 1900, p. 604.

# THE ANNUAL MUSEUM
## OF
## FOODS, DRUGS, INSTRUMENTS, BOOKS, AND SANITARY APPLIANCES.

THE annual museum which is being held in connection with the sixty-ninth annual meeting of the British Medical Association is, in respect of interest and variety, fully up to the level of former years. We give below notices of some of the principal exhibits:

### MEDICAL AND SURGICAL APPLIANCES.

Messrs. ALLEN AND HANBURYS, Limited (Plough Court, Lombard Street, E.C.), exhibited for the ELECTRIC OZONE SYNDICATE, Limited (London) a series of medical ozonisers. Ozone has of late been pressed into the service of medicine and surgery as an oxidising agent which yields no undesirable by-products. It is capable under suitable conditions of destroying pathogenic and saprophytic organisms, as when the gas is bubbled through a liquid medium in which they are suspended. It may therefore, it would seem, be used as a means of sterilising water, and the process is said to be economical. Ozone may be used for the purification of the air of sick rooms and waiting rooms, the air after treatment having a remarkable feeling of freshness.

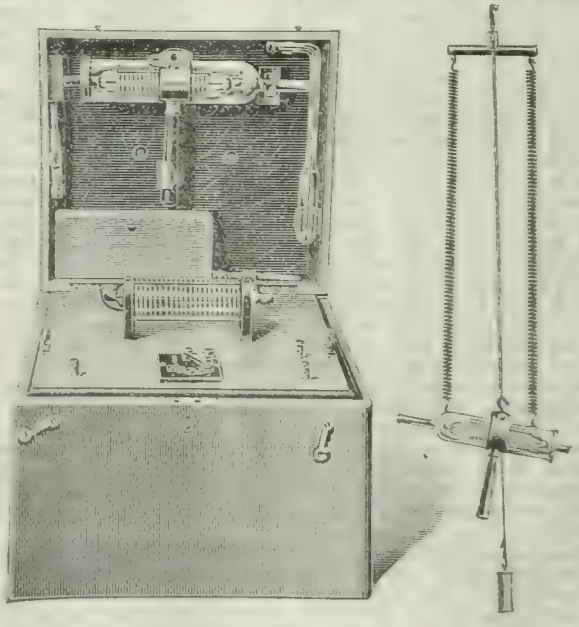


FIG. 1

The "Alpha" ozoniser and applicator (Fig. 1) comprises an ozone generator, ozone applicator, Rhumkorff coil, and battery of cells. The ozone generator is constructed on the principle of the Siemens tube; an aluminium wire is enclosed in a sealed glass tube, and the latter is surrounded by a "cage" of the same metal. The wire enclosed in the tube is connected with one terminal from the Rhumkorff coil, and the outer "cage" with the other. When the battery is working the air passing between the glass tube and the "cage" becomes ozonised under the influence of the silent discharge.

The current is supplied by a battery of four cells, and is regulated by a switch which is seen just above the lock in the illustration; immediately behind the switch stands the ozone generator. The appliance on the right of the box is the ozone applicator; it is also seen packed away in the lid in the left-hand figure. This applicator is similar in principle to the ozone generator, but it differs in that the outer cage is enclosed in a glass tube which is open and drawn out at both ends; hence the ozonised air produced can be caused to impinge on any surface or be made to pass through water. Fresh air is caused to enter the applicator by means of an indiarubber ball, and the pressure thus exerted has a distinct influence on the current of ozonised air expelled. As will be seen from the illustration, the applicator can be suspended, and the wires thus kept out of the way of operator and patient. The "Beta" ozoniser and inhaler (Fig. 2) comprises an ozone

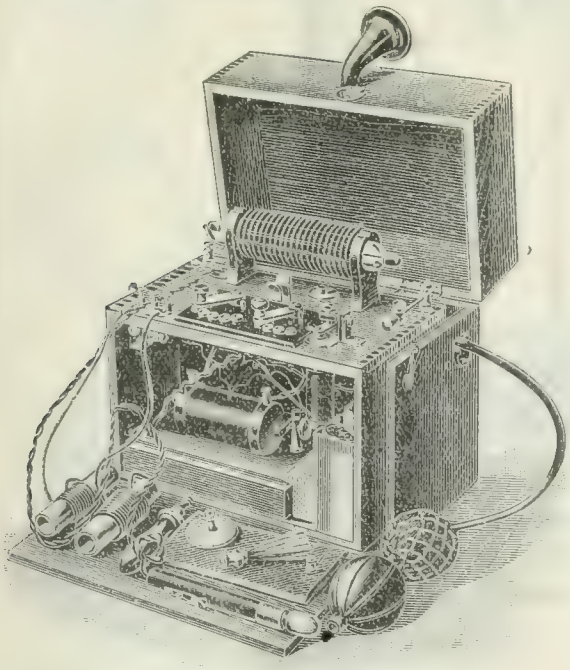


Fig. 2.

generator, a medical coil with the usual accessories, and an electric light. The ozone generator is the same as that already described; the case, when closed, is arranged so as to form an inhaler from which ozonised air can be inhaled through the trumpet-shaped tube seen inserted in the lid: the supply of fresh air is forced into the case by means of a rubber ball, and enters just under the outer "cage" of the ozoniser. The apparatus weighs 11½ lbs., and the enclosing cases measures 10 by 6½ by 9¾ inches. We are not sure, however, that it is altogether wise to condense so much into this space, as simplicity of construction, which is a most valuable feature in medical batteries, must be to some extent sacrificed. Both "Alpha" and "Beta" ozonisers may be connected by means of separate terminals to the alternating current from the main when large quantities of ozonised air are required. We find that all these ozonisers give good yields of ozone; in this connection it may be noticed that in subjecting air containing moisture to the silent electric discharge we are working under the most favourable conditions for the production of ozone, oxygen itself being much less readily ozonised than moist air.

Messrs. Allen and Hanburys also exhibited an improved Clover's ether inhaler, the special advantage claimed for which is that it has a glass chamber for containing the ether, thus enabling the operator to see the supply of ether in the apparatus. Another advantage is that the ether chamber revolves on the shaft which carries the gas bag and the facepiece, thus doing away with the necessity of altering the position of the patient's face. The firm also showed a portable electric head lamp, for laryngeal and other work, lighted by three small dry cells connected together, which can be readily and cheaply replaced. They exhibited also a Ralston still designed for the domestic production of pure distilled water. To use the apparatus both the lower and upper chambers are filled up to points indicated and the whole placed on the fire; as the water becomes heated vapour rises into an upper cone-shaped chamber, condenses, and collects in a channel from which it can be drawn off by a tap. It is stated that from one to three quarts an hour can thus be obtained. The apparatus, which is 14 inches high and has a diameter of 9 inches, is well made and portable. The firm also exhibited an aseptic syringe for use with sterilised solution of sodium cacodylate supplied in tubes containing one dose, midwifery and surgical bags with aseptic linings, aseptic metal cases of pocket instruments as well as various surgical and obstetrical instruments.

Messrs. John Weiss and Son, Limited (287, Oxford Street, London, and Manchester), showed a large collection of surgeon's aseptic instruments of English make, including sets of instruments in cases with aseptic metal linings, both regulation patterns for the public services and for private practitioners. Some of the cases as well as their contents were entirely of metal and could, therefore, be thoroughly sterilised. Amongst other lithotrity instruments was a "giant" lithotrite made for Captain Henry Smith, of Jallundur. This instrument is used by a modification of Keith's operation of perineal lithotrity through a perineal opening for breaking stones that are too large for the ordinary lithotrite. Forceps for a similar purpose were also exhibited as well as bladder aspirators. Among the ophthalmic instruments shown was an air-tight brass cabinet, with racks for knives and needles fitted to sliding glass shelves, the necessary forceps and scissors being hung beneath these, the whole affording an excellent way of keeping delicate instruments. Amongst new instruments were an improved tonsil guillotine designed by Dr. William Hill. It has a fork so arranged that the tonsil is drawn vertically well into the centre of the ring, the subsequent cut being horizontal instead of, as is frequently the case, oblique. A new axis-traction forceps by Dr. Stawell, the set of instruments used by Mr. Arbuthnot Lane for drilling and wiring bones in cases of ununited fracture, together with various bone-holding and cutting forceps, were shown. Doyen's hysterectomy instruments, including abdominal retractors, multiple pressure clamp, cutting forceps, and tubes for uterine fibroids, needles, etc., also "rongeurs" for clearing out the acetabulum were exhibited, together with Laplace's forceps for intestinal anastomosis and various other intestinal clamps, improved mouth-gags, needle-holders, and needles for operations for cleft palate; Carter-Braine's safety chloroform and other anæsthetic inhalers; syringes, both wholly of glass and of metal, easily sterilisable; sterilisers for instruments and dressings, some small enough for a coat pocket; storage batteries for galvano-cauteries and lights; together with various patterns of surgical handlamps, cystoscopes, urethroscopes, etc. Messrs. Weiss also exhibited a working model of a nickelled-steel table for operations, the height of which can be adjusted to suit the operator; it is geared so that the patient can easily be placed in various positions.

Messrs. Mayer and Meltzer (71, Great Portland Street), exhibited a collection of hospital furniture, including new patterns of general operating tables and a portable operating table, by which the patient could be placed in various positions for operating (including the Trendelenburg position). They also showed several new patterns of instrument steriliser, and dressing tables, ward waggons, etc. (Fig. 3). The glass shelves are supported by brackets which allow the utmost cleanliness with small expenditure of time and trouble. The shelves do not touch the metal, but rest in indiarubber buffers, which prevent rattling. Some tables were fitted with ball-bearing castors, including a ward waggon with gun-metal rail, to prevent articles falling off as it is wheeled about the wards. These tables in various forms, we are informed, are in use in University College Hospital. New patterns of instrument cabinets are made without "wells" in the lower part, so that dust is easily removed. A collection of articles for use in the operating theatre was shown, including lotion, sponge, suture, and drainage tube jars, bowls, etc.,

in enamelled iron and glass. Fig. 4 represents a new form of leg bath designed by Mr. G. L. Cheatle for use in out-patients' departments: it allows of thorough cleansing of the limb from the knee downwards, the waste running into a tray beneath. A collection of anæsthetic apparatus was shown, including Rose's modification of Clover's inhaler, the advantages claimed for which are that its weight is only 8 ozs., and that the ether chamber is formed of a cylinder of glass which allows the operator to see the quantity of ether at any time during administration. Various forms of gags and syringes for infiltration analgesia

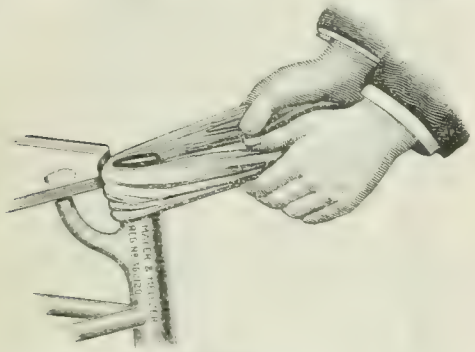


Fig. 3.

were shown, as well as the telephone probe, and Lynn Thomas's tourniquet forceps, a description of which appeared in the BRITISH MEDICAL JOURNAL of October 27th, 1900, by a correspondent in South Africa who adds "the addition of these two instruments to an army regulation operating case would be most advantageous." A urine segregator for obtaining specimens of the urine from either kidney without catheterising the ureters, so as to obviate the risk of carrying septic matter into or injuring the ureter, was shown. The double catheter is passed into the bladder, and the lever into the rectum in the male or the vagina in the female. This lever raises the bladder wall, thus forming a kind of

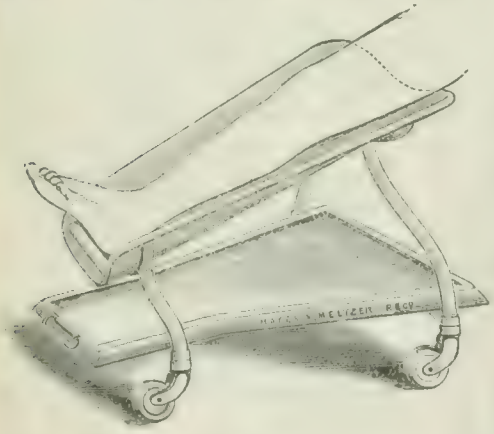


Fig. 4.

watershed, and in the pouch on either side urine from the right and left kidney respectively is collected and drawn off by the double catheter. The firm also showed their new bulbar vaporisers (Fig. 6, p. 273), suitable for menthol, eucalyptus, iodine, suprarenal extract, etc., in either watery or oily solution. They consist of a glass globe, with spray apparatus inside, and a single rubber bottle below. They are easily kept clean, and are moderate in price, and are made in two grades, one giving a very fine vapour the other a coarser cloud. Messrs. Mayer and Meltzer also exhibited a portable surgical motor, (Fig. 5), designed by Mr. Ballance and Dr. Milligan (Manchester) to meet the want felt by many surgeons for a motor which can be carried about to private operations. The 16-volt accumulator is of the sealed type, having a capacity of 18 ampère hours, and weighing about 34 lbs. The motor is of the type known as the "D" pattern, so called on account of the shape of the field magnet. The armature is a gramme ring, and is attached directly to the shaft which carries the cable, thus acting the part of a fly-wheel. It weighs about 15 lbs., and is mounted on a gun-metal turn table, which enables it to rotate and follow the movements of the operator. The turn table is mounted on a platform, at each corner of

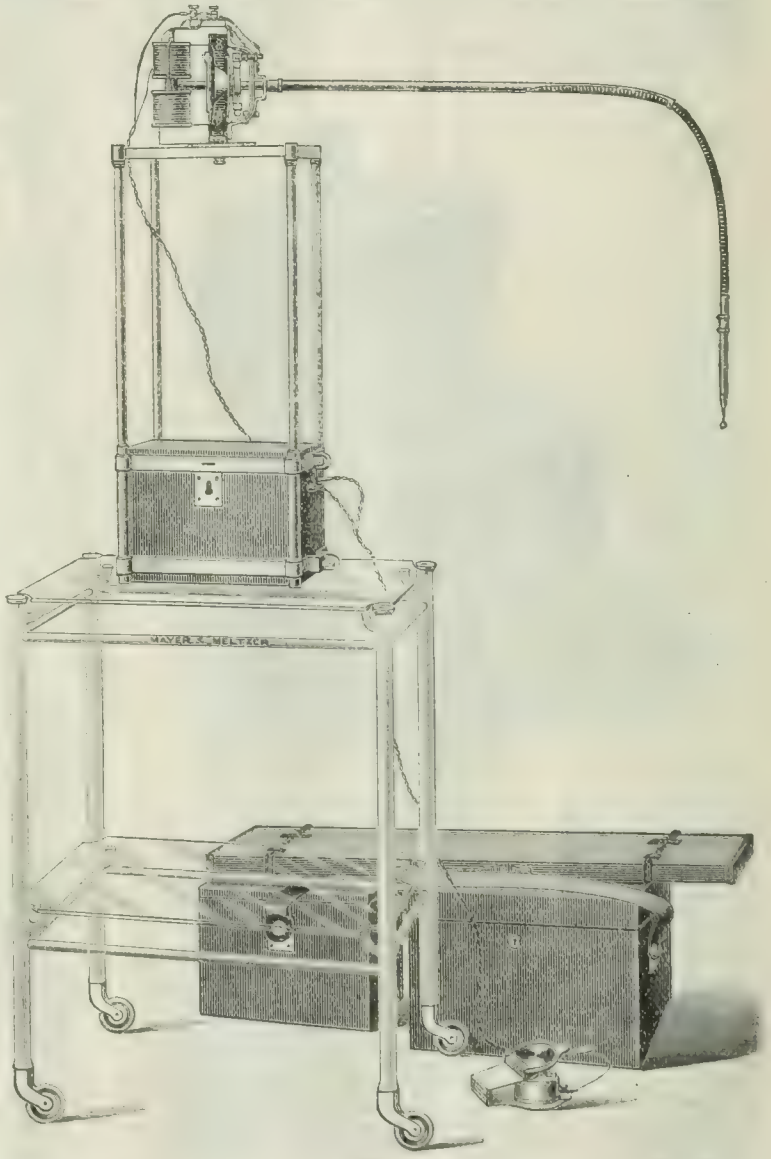



Fig. 5.

which are sockets, and similar sockets are attached to the steel frame which surrounds the accumulator. Into these sockets steel tubes are fitted which form a rigid stand at a convenient height. The accumulator acts as a secure base for the motor when in action. The metal cable is directly attached to the central shaft of motor, and is covered with a flexible metal tube which can be boiled. The handpiece is attached to the cable by means of a left-handed screw. It is perfectly plain in design, so as to allow no corners for the accumulation of dirt. The drills, saws, and other tools are held in position by a

spring clutch acting in a groove in their shanks and are easily fixed or removed. The handpiece is in two parts. The outer portions form the handle, and act as a bearing for the inner portion which is the spring clutch already referred to. The cable and handpiece are supported by a rigid steel tube terminating in a spring which relieves the operator almost entirely of their weight, and allows of much greater delicacy of touch than would otherwise be possible. The motor is started and its speed regulated by means of a foot switch. The apparatus ready for use is shown in the figure, and when dismounted fits into three packages shown at the foot of the same figure. The case on the left is the accumulator. That

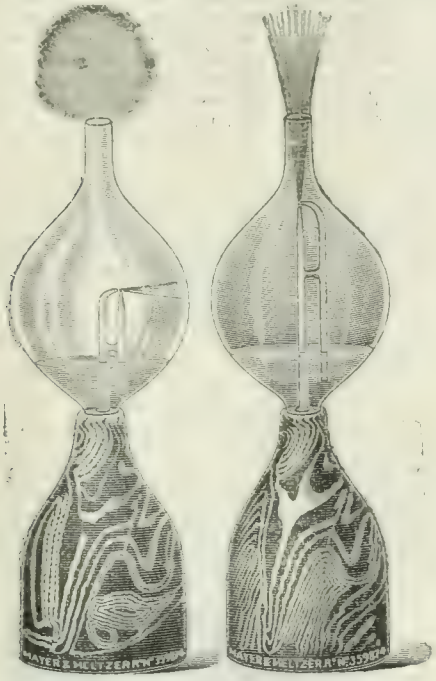


Fig. 6.

on the right contains the motor, stand, turntable, switch, and other fittings, the package on the top, which is a kind of gun case, carries the legs of the stand and the flexible arm. The entire apparatus, with cases included, weighs about 70 pounds. For hospital work the motor is wound to suit the voltage of the main current. It is mounted on enamelled steel pedestal fitted with ball-bearing castors. Burrs, drills, a small trephine, and Cryer's drill can be used with the motor.

Mr. Frank A. Rogers (327, Oxford Street, London, W.) exhibited a form of spray illustrated in the accompanying drawing (Fig. 7). It appeared to be simple in construction, easily cleaned and moderate in price. By means of a slight modification it can be used as a Politzer air-douche and Eustachian inflater; other modifications adapted to it are in laryngeal and post-nasal disorders. He also exhibited an apparatus for heating spray, solutions, etc., to which he has given the name thermogen. Nasal plasma tablets are made according to Dr. Murray Macfarlane's formula to give with this spray a solution of specific gravity about equal to that of blood serum. These tablets are used with the object of preventing undue osmosis or endosmosis in the nasal cavity. Aquol, a bland oil produced by the fractional distillation of petroleum, is colourless, odourless, and is stated to be free from irritating properties. It may be medicated as in benzoin-aquol. Mr. Rogers also showed miniature pocket sprays in vulcanite or metal in which small quantities of solution can be carried about by the patient, as also an aquol atomiser designed for spraying either water or oily solution: it has movable tips, so that the spray could be sent in any direction. The special feature which the inventor claimed for the spray was that the joint by which the movable tips are attached is absolutely airtight. An adaptation of the spray can be arranged on a turntable for work in the consulting room. An aquol pocket atomiser was also exhibited, and a pocket insufflator for medicated snuffs, and a nasal syringe in pure rubber with solid rubber nasal tip for use by patients. He showed also a set of hypodermules, small cylindrical glass flasks with short thin necks hermetically sealed, each containing an accurately-measured dose of sterilised solution ready for hypodermic injection. These were described in the British Medical Journal of January 15th, 1898, p. 156. Nasal hypodermules, sterilised sealed closed capsules, are intended for use with a miniature spraying apparatus; they were designed, it was stated, for the application of suprarenal gland solution in hay fever, nasal catarrh, etc., but can be adapted to solutions of other drugs.



Fig. 7.

Mr. W. F. Woodland (surgical mechanician, 24, Dorset Street, Southampton) showed artificial limbs of the forms supplied by him to wounded men at Netley, in some instances by order of Her late Majesty, Queen Victoria. In connection with these he exhibited a new adjustable ball bearing, which, it is claimed, does away with the necessity for using the large amount of oil usually required, while reducing the friction to a minimum. He also exhibited a new appliance for extroversion of the bladder, its object being to carry away the urine as it comes from the ureters. The main shield is made of celluloid moulded to shape, attached to which is the usual rubber receptacle. The feature of the apparatus regarded as most important by the maker was an internal arrangement which, by capillary attraction, conveys the urine to the proper channel and prevents leakage.

Mr. James Gillingham (Chard) exhibited photographs of patients for whom he had fitted artificial limbs. He preferred to do this rather than to exhibit the artificial limbs themselves, on the ground that he regards every case as a study in itself, believing that success depends upon the adaptation of the instrument to the individual patient. One photograph of a recent case showed two artificial legs made by Mr. Gillingham, jun., fitted to a man who had undergone double amputation. Mr. Gillingham publishes an interesting catalogue, giving illustrations of a large number of cases to which he has supplied artificial limbs, and he is able to claim that he has the recommendation of many leading surgeons, who describe him as a skilful and experienced mechanician. He also exhibited a spinal chair, a "hand-feed," and a "barbed-wire" cutter.

Mr. N. Bletchley (89, Northgate Street, Gloucester) exhibited a number of boots for various deformities, including various forms for club foot and displacement of the great toe. The same maker exhibited sandals for children and also for adults, which appear to be becoming rather the fashion; they undoubtedly present certain advantages, and even in this climate comparatively few drawbacks. He also showed a variety of boots and shoes for ordinary wear, including lace shoes recommended by Mr. T. S. Ellis, M.R.C.S., of Gloucester, who has given special attention to foot gear and the art of walking.

Messrs. Ferris and Co. (Bristol) exhibited a large collection of instruments and dressings, among which we noticed various forms of portable sterilisers for instruments and a gauze-plug introducer, an instrument resembling a large catheter with an introducer working in the interior for plugging the uterus or any cavity with gauze. A selvedge gauze of various widths wound on reels in caddies for use with this instrument was exhibited, as also caddies containing plasters, bandages, and other necessaries ready for use. The firm also exhibited various pharmaceutical preparations, including saxol, a colourless, odourless oil, suggested as a vehicle for menthol, cocaine, and other drugs used for applications to the throat and nose. This firm also exhibited an aseptic operating table and a portable table of the same kind.

Messrs. DOWN BROTHERS (St. Thomas's Street, London, S.E.) exhibited a collection of recent models of aseptic hospital furniture. Among these was an operating table made entirely of metal, the waste pipe, which in some previous patterns has been of indiarubber, being done away with, the waste being carried by a polished metal gutter into a pail which stands on a tray attached to the under part of the table, so as to move with it. The table proper upon which the patient rests can be warmed by a current of hot water taken from the hot-water mains. Various positions can be given to the patient to suit the convenience of the operator, for whom a polished metal stool, which can be raised so that he can rest upon it while in an approximately upright position, is provided; the screw for raising the stool is covered, so that oil and dirt are excluded. A kidney-shaped stand for instruments is shown in conjunction with the table, and also a convenient stand for solutions so arranged that the stock bottles can be easily got at. A theatre douche was also shown which can be raised to the height of 9 feet or lowered to a convenient level for refilling. A hospital trolley for moving patients, made entirely of metal, was also exhibited, and all these appliances were mounted on easy-running castors with ball bearings. In the case of the operating table the castors can be locked by lifting a lever so that the table becomes immovable. An aseptic glass instrument cupboard with metal mountings and instrument was also exhibited.

Messrs. SALT AND SON (5, Cherry Street, Birmingham) exhibited a large collection of surgical instruments and appliances.

The O'CONNOR EXTENSION COMPANY (2, Bloomsbury Street, London, W.C.) exhibited their extension apparatus, which was described and illustrated in connection with the annual museum of the Ipswich meeting, and also certain other appliances for talipes and other deformities.

The DOWSING RADIANT HEAT COMPANY (24, Budge Row, Cannon Street, London, E.C.) exhibited their apparatus for radiant heat baths, and also a new portable lupus lamp, in which the lens is cooled by water. It is claimed that with this apparatus the necessary time for exposure is materially diminished.

### X-RAY APPARATUS.

Messrs. HARRY W. COX, Limited (10, Cursitor Street, Chancery Lane, W.C.) exhibited various apparatus for the production of *x* rays, including *x*-ray coils, embodying the latest improvements, and new portable coils designed to be used when it is necessary to take the apparatus to the residence of the patient. They also exhibited Mr. Mackenzie Davidson's motor mercury interrupter and the stereoscopic fluoroscope designed by him. They also showed an electrolytic interrupter designed by Mr. Cox (Fig. 8) which can be worked off the direct current supply mains without any separate resistance. Last November Dr. J. Macintyre, the President of the Roentgen Society, offered a gold medal to the maker of the best practical *x*-ray tube for both photographic and screen work. We learn from the report to the Society for the year 1900-01 that the jury appointed to adjudicate upon the tubes sent in consisted of Sir William Crookes, F.C.S., F.I.C., F.R.S.; Mr. J. Mackenzie Davidson, M.B., C.M.; Mr. J. H. Gardiner, F.C.S.; Mr. Herbert Jackson, F.C.S.; Mr. C. W. Mansell Moullin, M.A., M.D., F.R.C.S.; Mr. Wilson Noble, M.A.; Mr. Chas. E. S. Phillips; Professor Silvanus P. Thompson, B.A., D.Sc., F.R.S.; Professor Dawson Turner, M.D.; Mr. H. Snowden Ward, F.R.P.S.; and Mr. J. J. Vezey, F.R.M.S.; with Mr. F. Harrison Low, M.B., as Honorary Secretary. The conditions laid down were of a stringent kind, and it was notified that each tube would be tested and marked for (*a*) penetration, (*b*) photographic effect, (*c*) screen work. The jury reported that 28 tubes were sent in for competition; of these 5 were of British manufacture, 8 from America, and 15 from Germany. All were of excellent make, several had special arrangements for taking heavy discharges, and others had devices for regulating the vacuum. About 75 per cent. of the tubes failed to satisfy the required test for definition, and the jury point out that unless a tube defines well all other advantages it may possess are to a great extent valueless for most of the purposes to which *x*-ray tubes are put. The tubes which stood the test for definition were subjected to a very severe trial for penetration and photographic effect, and the jury reported that a much higher standard of excellence was obtained in this respect than in that of definition. The prices of the tubes varied from £4 5s. to 16s.; many of the high-priced tubes were eliminated by the first test, and it is added that "the jury think it will be satisfactory to *x*-ray workers to know that, though the price was not the determining feature, yet the tube selected as the best is also one of the most moderate in price." In conclusion they report that the tube which had best satisfied all the tests applied by the jury was one sent in as Cox's record tube (Fig. 9), made by a Mr. C. H. F. Müller of Hamburg,

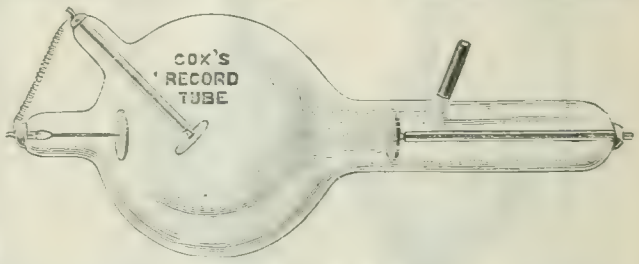



Fig. 9.—Cox's Record Tube.

price 18s. 6d., and to this the jury awarded the medal. A number of these tubes were exhibited.

Messrs. A ROSENBERG and Co. (21, Southampton Row, Holborn, W.C.), makers of electro medical and *x*-ray apparatus, exhibited a collection of *x*-ray appliances, and a historical collection of focus tubes from the earliest form of Crookes to the tube now made for the treatment of lupus. The firm also exhibited a "patent portable outfit." Fig. 10

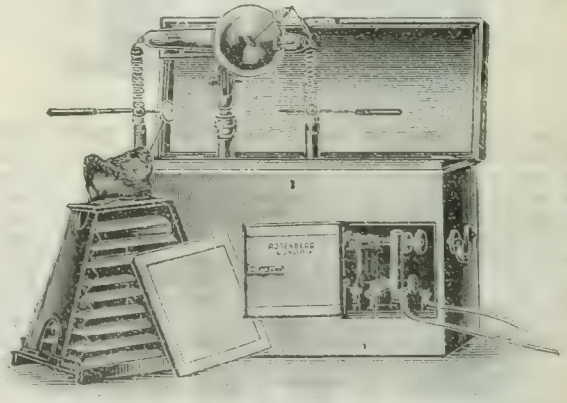


Fig. 10.

shows the apparatus open ready for use, consisting of a 10-in. coil tube, tube holder, collapsible fluoroscope, fluorescent screen, set of battery connections, and set of useful tools, with room for photographic plates, variable resistance ameter, voltmeter, etc. The size of the box into which the apparatus packs is 25 in. by 11 in. by 14 in., and the total weight 65 lbs.

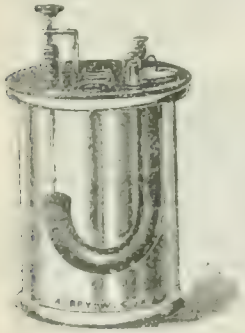


Fig. 8.—Cox's Electrolytic Interrupter.

### DRUGS AND PREPARATIONS.

Mr. PETER MÖLLER (18, High Holborn, London, W.C.) exhibited hydroxyl-free cod-liver oil. It was pointed out that the chief objections to the use of cod-liver oil are its smell, its taste, and the frequency with which it causes disagreeable eructations. The disagreeable smell and taste have been greatly reduced by methods of production of which Mr. Peter Möller claims to have been the introducer in 1853, but the liability to produce eructation remained. A prolonged chemical examination of the circumstances under which

eructations occur after taking cod-liver oil was therefore undertaken, and it was concluded that the oil was composed of unsaturated fatty acids with as many as four double bonds, and that these were exceedingly susceptible to oxidation in atmospheric air. It was also ascertained that in their original states these fats had neither smell, taste, nor any tendency to produce eructations. In the extraction of the oil as hitherto conducted, opportunities for oxidation were inevitably afforded. In order to avoid this, the whole process of extraction as now conducted in a current of carbon dioxide, and a model of the apparatus employed, was exhibited. The oil thus obtained, being believed to be entirely free from oxidation products, has been named hydroxyl-free cod-liver oil.

Messrs. Scott and Bowne (95-98, Great Saffron Hill, London, E.C.) exhibited the emulsion of cod-liver oil which they manufacture.

Messrs. Southall Bros. and Barclay, Limited (Birmingham) exhibited drugs and the standardised medicinal preparations. In the standardised tinctures simple and concentrated the proportion of active principle is indicated so as to ensure uniformity of therapeutic activity. The tincture of strophanthus, for instance, was guaranteed to contain a definite percentage of strophanthin, estimated by a process worked out by one of the members of the firm. Southall Bros. and Barclay are manufacturers of distilled table waters, and as a novelty amongst these was to be noted a siphon of aërated distilled water containing urotropine. The same drug was exhibited also in the form of a granular effervescing preparation. Specimens of the new season's extracts of henbane and belladonna were shown, with a label on each showing the amount of alkaloid present. A "conjoint" materia medica collection, herbaria, microscopic slides, etc., and urine testing apparatus, for the use of students, was shown, as well as specimen pieces of the special apparatus recommended by Dr. Barwise for water analysis by medical officers of health, and a milk steriliser of simple form and working. A series of specimens enclosed in sealed tubes, and mounted on a stand, showing the percentage of foods and drinks, as suggested by Dr. Ridge, Secretary of the British Medical Temperance Association, was exhibited. At the firm's new mills recently erected at Saltley, near Birmingham, are produced absorbent cotton, lint, gamgee tissue, and aseptic and antiseptic dressings of all kinds. Specimens illustrating the various stages in the production of cotton and flax lints, starting in the one case from the flax plant and the other from the cotton pod, were exhibited; as also were microscopic slides of lint and cotton fibres. The latter were shown with a view of illustrating the superior value of flax lint as a dressing owing to the non-irritating structure of the ultimate cells. There were also exhibited surgeon's dressing cases, containing assorted dressings enclosed in cartons sterilised by a patent process. The new "Celtex" dressing, designed as an improved gamgee tissue, was also shown. Specimens of "sanitary towels" and accouchement outfits were shown, as also a sample of the specially patented wood cellulose, which is used in the manufacture of the "towels" and "Celtex" dressing. It is claimed for this material that it is particularly useful for the rapid and complete absorption of albuminous fluids, possessing in this respect advantages over ordinary cotton wool.

The Maltine Manufacturing Company (24 and 25, Hart Street, Bloomsbury, London) exhibited maltine prepared by them from malted barley, wheat, and oats. It is a well-made and palatable preparation, and is of value in cases in which an adjuvant for the digestion of starch is indicated. Various preparations are made from it, including maltine with cod-liver oil, in which the taste of the oil is to a large extent masked, maltine with iron, maltine with cascara sagrada, which it is stated contains 60 grs. of extract in each fluid ounce; the maltine covers the bitter taste of the drug. Maltine is also put up with phosphate of iron, quinine, and strychnine, each fluid ounce being stated to contain 4 grs. of iron pyrophosphate, 1 gr. of quinine, and $\frac{2}{3}$ gr. of strychnine. In the preparation of malto-yerbine maltine is used as a menstruum for yerba-santa, as it is found that there is less liability for the precipitation of the resinoids; each fluid ounce is stated to contain active principles of 30 grs. of the drug. Maltine is also medicated with hypophosphites of lime, soda, and iron, and with phosphates of the same metals. There was also a preparation containing pepsine and pancreatine. The same company exhibited preparations made by Carnrick and Co., including liquid peptonoids made from beef, wheat, and milk, and stated to have been rendered aseptic by heat during manufacture. A beef peptonoid powder is also prepared, and can be obtained mixed with coca. Carnrick soluble food for infants, which was also exhibited, is stated to be made from modified cow's milk, with the addition of dextrine.

Wyleys, Limited, exhibited a series of pharmaceutical preparations manufactured by the firm at Coventry, and embracing compound medicinal syrups, standardised tinctures, emulsions of cod-liver oil, fluid extracts, soft gelatine capsules, cachets, ointments in flexible tubes, glycerine pessaries and suppositories, ophthalmic ointment tubes, and compressed pellets of various sizes, plain and sugar-coated, effervescent pellets, antiseptic pellets for forming solutions, hypodermic pellets soluble in cold water, and other forms of compressed simple and compound drugs. The gelatine coated pills, produced by machinery, and coated without pinhole in the finished products, included the pillulæ of the *British Pharmacopœia*, as well as combinations of recognised drugs, the formula in each case being published. An antiseptic powder, put up in two forms, pink and white, was stated to consist of starch medicated with boric acid and zinc oleate. As a convenient form for using various antiseptic jellies, combinations of thymol, mercuric chloride, mercuric biniodide, carbolic acid, and cocaine, were shown in collapsible tubes. Various non-alcoholic tinctures were exhibited, including those of cinchona, belladonna, nux vomica, opium, and squill. The firm state that the active principles are taken out with the glycerine basis used in the preparation. Neuracetin is put forward by this firm as an antipyretic, analgesic, anti-neuralgic, and anodyne, in doses of 5 to 10 grains. Plain extract of malt, stated to be produced from English barley, malted in Coventry under the supervision of the firm, was exhibited along with combinations of the same extract with cod-liver oil, hypophosphites, iron and quinine, pepsine and phosphates. A compound syrup of the hypophosphites was shown, together with a new non-acid syrup of glycerophosphates, which was stated to contain 3 grains in each fluid drachm of the combined salts of lime, soda, potash, magnesium, and iron. Unguentum ranunculi ficari, prepared according to the recently published formula of Sir James Sawyer, appeared as a pale green ointment due to the green colouring matter of the fresh plant from which it was prepared. It is recommended for use in hæmorrhoids. The firm also showed medicated pastils and compressed lozenges of a definite weight ("tropels"). In view of the discussion which has taken place with regard to chloroform and its possible impurities, Messrs. Wyleys showed a chemically pure chloroform, prepared by themselves exclusively from recrystallised chloral hydrate.

The exhibit of Messrs. Corbyn, Stacey, and Co. (300, High Holborn) consisted of a selection of drugs, both official and unofficial, together with a number of pharmaceutical preparations, among which must be mentioned a liquor Eastonii concentratus, one part of which added to three parts of syrup by measure produces Easton's syrup. The special merit claimed for this preparation is that it can be kept for months without change or decomposition, thus overcoming the objection to a concentrated liquor of this form. An effervescing preparation of cascara sagrada, stated to contain 8 grs. of the dried extract in a teaspoonful, would seem to be a convenient and agreeable way of administering this valuable drug. The liquor opii dialysatus is an ingenious preparation from which the extracted resinous and waxy matters have been excluded: the alkaloidal strength is stated to be the same as the tincture of opium *B.P.*, and it is claimed that it is less liable to produce derangements of the stomach, constipation, or headache. The liquor cinchonæ rubræ is stated to contain 5 per cent. total alkaloids, and to have the merit of being miscible in water in all proportions. The makers state that as it contains only the natural acid of the bark and is free from mineral acids it can be prescribed with iodides and bromides without the fear of liberation of iodine and bromine to any serious extent. The syrup of sodium cacodylate, stated to contain $\frac{3}{4}$ gr. of the salt in each fluid drachm, is flavoured with orange, and is a pleasant form in which to administer the drug. Fine specimens of calamine were also exhibited,

great care being taken in the grinding and levigation of the ores, which are carefully selected.

Messrs. C. J. HEWLETT AND SON (Charlotte Street, London, E.C.) exhibited a number of concentrated liquors and mixtures, including certain new preparations specially devised for medical men who dispense. Among these is a mixture containing sodium sulphate, gentian, orange, capsicum, and elixir of saccharin intended to be diluted with water. A mixture containing sodium sulpho-carbolate, a hæmatoxyl mixture, and a bismuth carbonate emulsion were also shown as suitable for use in diarrhœa under various circumstances. Among the new drugs exhibited were isphagul, which has recently been recognised by the *Indian and Colonial Addendum to the British Pharmacopœia:* sidonal, the quinate of piperazine, recommended for gout and rheumatic arthritis: sodium cacodylate and preparations of it such as liquors, injection, and pill. They also exhibited a series of antiseptic preparations, including jellies in collapsible tubes: cabinets for urine analysis were also exhibited, together with reagents and also some surgical instruments, including a universal needle-holder, an aseptic rinsing curette, and platinum-lined porcelain specula.

Messrs. BURGOYNE, BURBIDGES AND CO. (12 and 16, Coleman Street, London, E.C.), exhibited for Messrs. HEYDEN a series of preparations, among which we may mention acoin, a synthetic body possessing anæsthetic properties which is recommended for use in weak solution in place of cocaine, the anæsthesia produced is stated to be prolonged, lasting even for some hours. Xeroform, a tribromphenol bismuth, is designed to be a substitute for iodoform. As recently reported it was found when tested for us in ordinary infective wounds and tuberculous sinuses to possess distinct deodorising properties, and seemed to stimulate the growth of granulations. It is stated by the manufacturers to have analgesic properties and to be of value as an intestinal antiseptic. Creosotal (creosote carbonate) and duotal (guaiacol carbonate) are designed to be used as substitutes for creosote in acute and chronic diseases of the pulmonary passages and in tuberculosis. A series of silver preparations were also exhibited including antiseptic credé (silver citrate), actol credé (silver lactate), and collargolum, which is stated to be an allotropic modification of metallic silver soluble in water in the proportion of 1 in 20. It is said to be of value as an antiseptic both for internal and external applications. An unguentum credé stated to contain 15 per cent. of silver was also exhibited.

Messrs. ARTHUR AND COMPANY, manufacturing chemists (69, Berners Street, London, W.) exhibited "bromaurum" ($AuAsOBr_2$) and "hydraurum" ($AuAsOBr_4$, $Hg_4Br_2O_3$), which have been employed in the treatment of subacute and chronic rheumatism, sciatica, hysteria, neurasthenia, epilepsy, and migraine. They also exhibited iannopumilio, $C_{16}H_{12}2(C_{14}H_{10}O_2)$, said to be useful in bromidrosis and in various forms of dermatitis, including herpes zoster. Ext. radicis pernionis is recommended for the relief of chilblains.

Messrs. FAIRCHILD BROS. AND FOSTER (Snow Hill Buildings, London, E.C.) showed a collection of the digestive and predigested products manufactured by them. Of the former, diazyme and enzymol have been recently introduced. Diazyme is stated to be a natural amylolytic enzyme, and enzymol to be a solution of the proteolytic enzyme of the stomach glands, preserved in a sterilised menstruum. This enzyme is offered as a solvent of pus, broken-down tissue, etc. Among other digestives exhibited, zymine peptonising tubes, peptogenic milk powder, pepsencia, and compressed preparations under the brand "Pepule" may be mentioned. A predigested product, panopepton, is made from beef and wheat flour, and is a soluble preparation in a convenient form.

Messrs. PARKE, DAVIS AND CO. (111, Queen Victoria Street, E.C.) exhibited a variety of pharmaceutical preparations, among which may be mentioned a series of standardised products, such as ergot, digitalis, scilla, aconite, strophanthus, cannabis indica, elaterium, and convallaria, all of which are, it is stated, physiologically tested. The antidiphtherial serum also exhibited had been examined and certified in the laboratories of the Royal Colleges of Physicians and Surgeons, London. The firm also exhibited streptococcus antitoxin, also the antitoxin of tetanus, and erysipelas and prodigiosus toxins recommended by Dr. Coley in the treatment of inoperable malignant tumours. They also showed chloretone, a synthetical compound, for which it is claimed that it possesses hypnotic and analgesic properties, and that it can be used as a local anæsthetic like cocaine; it is a white crystalline compound having a camphoraceous odour and taste; as a local anæsthetic an aqueous solution is employed, the solution being prepared by saturating luke-warm water with the crystals. Suprarenal liquid c. clorotone, an aqueous solution of the gland sterilised and rendered aseptic by chloretone, was noticed in our columns as recently as July 20th, 1901, p. 151, as was also adrenalin, a white microcrystalline substance stated to be the active principle of the suprarenal gland. Among organo-metallic preparations recently introduced into medicine, this firm exhibited a collection of nuclein compounds, examples of which are mercurol, nargol, cuprol, and ferrinol. For mercurol, which was noticed in the BRITISH MEDICAL JOURNAL of January 5th, 1901, p. 26, it is claimed that its solution does not precipitate albumen, and is not acted upon by alkalies. Nargol, which was noticed in the JOURNAL of July 20th, 1901, p. 151, is a silver compound for which it is claimed that while readily soluble it is almost entirely free from irritating effects. Both preparations have antiseptic properties, and owing to the circumstance that they do not coagulate albumen are stated to be particularly useful in urethritis and allied affections. Cuprol and ferrinol were also exhibited, but we have not had an opportunity of examining them; the latter is stated to be of use in anæmia. Preparations of pepsine and taka-diastase were exhibited, the latter an amylolitic ferment, capable of converting into sugar 100 times its own weight of starch in a short time. The firm also displayed a variety of pills and tablets, the former gelatine or sugar coated, and the latter plain, sugar coated, or chocolate coated.

The BAYER COMPANY, Limited (20, Booth Street, Manchester), exhibited the products of the FARBENFABRIKEN VORM. FRIEDR. BAYER AND COMPANY, Elberfeld (Germany). Among these were analgen, a derivative of quinoline: aristol, an antiseptic powder which can be used as a dusting powder, or in ointment (5 to 10 per cent.): aspirin recommended as a substitute for salicylates; epicarin recommended to be used as an ointment or alcoholic solution as an antiparasite in scabies; europhen, a substitute for iodoform and free from its odour; hedonal, an hypnotic of the urethan group; iodothyrin said to contain the active principle of the thyroid gland in a concentrated form; lycetol, a combination of tartaric acid and piperazine recommended for use in gout and allied affections; protargol, a silver proteid preparation stated to contain 8.3 per cent. of silver and to be of use, especially as an injection of dilute solutions in gonorrhœa, and also to be valuable in ophthalmology: salophen, a combination of salicylic acid and salol. This firm also exhibited somatose preparations.

The firm of E. MERCK (Darmstadt and 16, Jewry Street, London, E.C.) exhibited a large number of pharmaceutical preparations, including tannoform, a condensed product of tannic acid and formic aldehyde. It is a light, reddish-white, odourless, and almost tasteless powder, insoluble in water but soluble in alcohol, and to the extent of 10 per cent. or more in a mixture of equal parts of alcohol and ether. It is astringent and deodorant. Hæmogallol (powder and tablets). Iodipin is a compound of iodine and sesame oil, containing 10 per cent. or 25 per cent. of iodine. It has been recommended as a convenient form of administrating iodine. Bromipin, a similar compound of bromine and sesame oil, containing 10 or 33⅓ per cent. of bromine, is recommended as as a substitute for the alkaline bromides, and to be free from the unpleasant by-effects sometimes produced by the latter. Largin, an albuminous silver compound stated to contain a constant proportion of 11 per cent. of silver, and to be of value in the treatment of gonorrhœa and in ophthalmic diseases. The firm also exhibited diphtheria antitoxin (500 and 1,000 units). Pyoktanin, blue and yellow and antiseptic disinfectant and analgesic, and jequiritol and jequiritol serum, prepared from jequirity seeds and employed in ophthalmic practice.

Messrs. THOMAS BROS. (Dispensing Chemists, Bath) exhibited a variety of pharmaceutical preparations, and also a set of Kodak photographic apparatus.

Messrs. KUTNOW (41, Farringdon Road, London, E.C.) exhibited their effervescent Carlsbad powder, which is a convenient method of administering Carlsbad salts.

Messrs. Widenmann, Broicher, and Co. (33, Lime Street, London, E.C.) exhibited for Messrs. Zimmer and Co., of Frankfort, among other drugs, that to which the name "urosine" is applied; it is a lithium quinate, and is recommended in the treatment of gout, in consequence of the solvent action of quinic acid on uric acid. Quinic acid is stated to be converted into benzoic acid in the body, and eventually to be excreted as a hippuric acid. Euquinine is an ethyl carbonate of quinine, and was originally recommended by Professor von Noorden as a substitute for quinine, on the ground that, while retaining the antiperiodic qualities of the alkaloid, it has no bitter taste, and is not so apt to cause tinnitus.

## Foods.

The Shredded Wheat Company (Worcester, Massachusetts) exhibited their biscuits or "little loaves." It is claimed that the article is prepared from the whole wheat berry only, and that the method of preparation produces a particularly pure, wholesome, and digestible article of food. The process of manufacture and the machinery employed are highly ingenious, and such as to avoid almost entirely any manipulation by hand. The results of an analytical examination made for the British Medical Journal show that the claims made as to the composition of the article are correct. It is free from all adulterants and impurities, and the cooking and baking processes employed result in the dextrinisation of a considerable amount of the starchy matter, and thus in the production of a very digestible biscuit food. It is free from irritating particles, and so long as it is kept dry remains quite unaltered. We regard the article as a valuable and agreeable food product, and we have therefore no hesitation in recommending it. The biscuits, which measure about 4 inches by 2½ inches by 1½ inch, are light and short, and may be used as a bread, as a substitute for porridge, and as a basis for sweets and savouries.

M. Henri Nestlé (Vevey, Switzerland, and 48, Cannon Street, London) exhibited Swiss milk, infants food, and Viking milk. An analysis of the Swiss milk made for us some years ago showed that it was a genuine sweetened condensed milk containing 10.23 per cent. by weight of milk-fat. The Viking milk, which is stated to be prepared from Norwegian milk, is an unsweetened condensed milk of very good quality, the sample examined contained 10.27 per cent. of milk fat. This unsweetened milk has since been extensively used, and we are aware that it has been found to be well taken by infants who have not been able to digest sweetened milks.

Mellin's Food, Limited (Stafford Street, Peckham. London, S.E.), exhibited the food made by them, a brownish granular powder made from cereals by conversion of the starch. It is often used with advantage for modification of cow's milk for infants. Wheaten biscuits containing the food powder were also exhibited, as was also lacto-glycose, in which the food is incorporated with cow's milk, the preparation being intended for use where fresh cow's milk cannot easily be obtained. The cod-liver oil emulsion of the company is well made with gum arabic and sugar without the addition of any alkali. The emulsion can also be obtained in combination with hypophosphites.

The Protene Company (35, Welbeck Street, London, W.) exhibited their products, including protene itself, and biscuits, bread, chocolates, etc., made from it. Protene is a powder almost insoluble in water, and having the composition of a dry milk curd containing 7.68 per cent. of fat. The biscuits made from it contain from 60 to 70 per cent., and are palatable. Protene biscuits were shown by our analysis to contain 53.43 per cent. of proteid matter and to be free from starch and sugar, the sweetening being due to saccharin. Protene medical biscuits were also found to be free from sugar, and contained wheat flour and a lower percentage of proteids. The powder can also be added to liquids if desired.

Plasmon was exhibited by International Plasmon, Limited (56, Duke Street, Grosvenor Square, London, W.). It is stated to consist of the albumen of milk, and is a dry granulated powder. Preparations were also shown in combination with cocoa, chocolate, and beef extract, and in the form of biscuits.

Brand and Co., Limited (74-84, South Lambeth Road, London, S.E.), in addition to their meat essences, showed a number of preparations designed for the use of invalids. Brand's meat juice is rich in uncoagulated proteids, and is stated to be prepared from the best English meat alone. It possesses a delicate flavour, and is comparatively cheap. Beef-broth is designed for hospital use, and as a substitute for home-made beef-tea, the stimulating properties of which are often valuable. Beef-tea tabules are a portable, concentrated preparation, requiring the addition of boiling water only to make beef-tea; the tabules consist of a well-prepared meat extract containing meat fibre and some wheat flour, dried in the form of cakes. They contain only 5.3 per cent. of moisture, and were found on analysis to be free from chemical preservatives, as claimed by the manufacturers. The retail price of each tabule is 2½d., and one is stated to be sufficient to make a breakfast cup of "beef-tea," and should prove convenient to travellers. "Fever food" is an example of a mixed proteid diet stated to be prepared from cream, meat essence, and eggs. In cases where nutrient enemata are indicated, the peptones and nutrient powder of this firm will be found useful. The nutrient powder can also be taken mixed with other foods, being prepared from fresh meat, containing the albumen in an uncoagulated state; it has very little taste. Various potted meats, sauces, etc., completed Messrs. Brand's exhibit.

Bovril, Limited (152 to 166, Old Street, London, E.C.), exhibited bovril and various preparations made from it. Bovril itself is a meat extract with which beef powder, separately prepared, has been incorporated. Among the preparations shown were lozenges and stamnoids, which on analysis a few years ago were found to contain 82 per cent. of meat and meat extractives; they disintegrate readily in the mouth, and are recommended as more suitable than lozenges for use in tropical climates. Bovril beef jelly is an elegant preparation which may be used with ice. A preparation was also shown in which bovril was incorporated with chocolate. The company also exhibited certain concentrated rations: the basis of the blue ration cartridge is potatoes and beef, of the red ration cartridge, pea, beef, and bacon. An emergency ration was shown designed to yield 4 pints of soup and 4 pints of cocoa, but adapted to be eaten without preparation if absolutely necessary. The bacon ration is made from fresh Irish bacon, finely cut and dried. We are informed that the rations are being extensively used by the troops in South Africa, and that similar preparations were used in the Chitral, Ashanti, and other campaigns; they would obviously also be useful on an emergency to travellers in remote countries. The company also exhibited virol, stated to be a combination of red bone marrow, with malt extract, eggs, and lemon juice; it is a good emulsion, is palatable, and may be used as a substitute for cod-liver oil in the treatment of rickets, anæmia, and marasmus.

Liebig's Extract of Meat Co., Limited (9, Fenchurch Avenue, E.C.), exhibited the Company's extract of beef, to which the name of "Lemco" is now applied; it is one of the oldest extracts of the class, and has long maintained a wide reputation. A newer preparation made by this company is oxo, which is an extract to which fibrine has been added; it has a beef-broth flavour, and its price is said to bring it within the means of hospitals and infirmaries. Peptarnis, also exhibited, is peptonised beef of good flavour, suitable for use in cases in which a predigested meat food is indicated.

The British Somatose Co. (165, Queen Victoria Street, London, E.C.) exhibited their original preparation, somatose, which is a grey powder consisting mainly of beef albumoses; it is readily soluble in water, and has little taste or colour. It contains about 60 per cent. of albumoses, alkali albumen, and coaguable albumen; a teaspoonful is stated to be about equal in this respect to half an ounce of lean meat. Milk somatose is a similar preparation made from the proteids of milk; it is stated to contain 5 per cent. of tannic acid in combination, and to be of use in summer diarrhœa in infants and children. Liquid somatose is a newer preparation, one teaspoonful of which is stated to be equivalent to one teaspoonful of the somatose in powder; owing to its form it is in some respects more convenient. Iron somatose contains some iron, but we have not seen any statement as to the proportion of iron thus added.

Marvis, a concentrated fish food manufactured by the Marvis Company (7, Eastcheap, E.C.), affords a change from

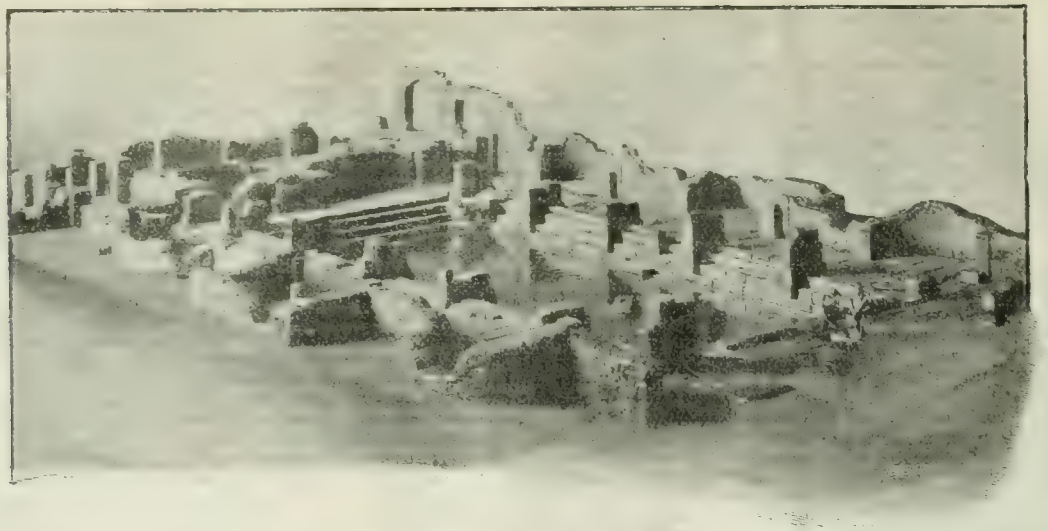


Fig. 11.—Model of Roman bath at Bath.

the use of meat extracts; it is a dried preparation made from white sea fish and is guaranteed to be made from freshly-caught fish. It can be made into a soup, and has, we are informed, been used in this form in South Africa.

Messrs. Callard (Regent Street, London, W.) showed a a large collection of foods suitable for diabetics, and we were informed that since the last annual meeting of the Association about a dozen new articles for diabetic dietary had been devised. The most interesting was a new diabetic bread stated to be free from carbohydrates, and made entirely from pure casein. An analysis shown to us was to the effect that it contained 83 per cent. of proteid; it is palatable, and we shall hope to publish a detailed examination of it on some future occasion. The casein biscuits also exhibited were short and markedly palatable; an analysis shown to us was to the effect that they contained no carbohydrates and 73 per cent. of albuminoids. An interesting preparation was a biscuit stated to be made from fresh spinach, and to contain the mineral salts of its own weight of the fresh vegetable, which, according to Dr. Luff's researches, has a remarkable effect in eliminating uric acid. A biscuit flavoured with celery was also exhibited. The firm also showed chocolate preparations for diabetic patients, and samples of English and foreign-made caseins.

The Myosin Albumin Meat Company exhibited preparations made by them. Mamesin is stated to be prepared from beef by a simple method of extraction in the cold, and to be put up without any preservatives. The preparation is intended to be used for making beef-tea or for sandwiches, or to enrich soups. Mameco is a modification from which extractives are stated to have been removed.

Messrs. Cadbury (Bournville, near Birmingham) exhibited specimens of their cocoa, which they guarantee to be absolutely pure, as is, we believe, the case.

### Mineral Waters.

The Apollinaris Company (4, Stratford Place, Oxford Street, London) exhibited various mineral waters sold by them. The Apollinaris water itself, which is well known as an agreeable natural mineral water containing carbonic acid, and the Johannis water from the Johannis spring at Zollhaus near Niederselters, both plain or prepared by the addition of 1 gr. of lithium carbonate, or of 7½ gr. of potassium carbonate to each small bottle. The company also exhibited the Apenta water, a natural bitter aperient water containing magnesium and sodium sulphates, the former predominating. This water, it is stated, also contains some lithium. The company also showed the Friedrichshall aperient natural mineral water, which contains alkaline chlorides in addition to magnesium sulphate, and is recommended as an aperient for habitual use. The company reports that an analysis recently made by Dr. Fischer of Breslau shows that the salts which the water contains are practically identical with those found in an analysis made by Professor Liebig in 1846.

Messrs. Ingram, Royle and Co. (26, Upper Thames Street, London, E.C.), exhibited the waters of Vichy and Carlsbad, and also the Hunyadi Janos water. The main constituents of Carlsbad water, as is well known, are magnesium and sodium carbonate, sodium sulphate, and sodium chloride; the principal therapeutic effects are attributed to the sodium sulphate, chloride, and carbonate, together with the high temperature of the water. The same firm also exhibited the Carlsbad Sprudel salt in powder and crystals, which they guarantee to be a natural and genuine Carlsbad salt. They also exhibited the Hunyadi Janos water of Andreas Saxlehner of Budapesth. The most important constituents of this water are sodium and magnesium sulphates in about equal proportions; sodium chloride and carbonate, and lithium carbonate are also present, and the water is useful as an aperient. The various waters of Vichy, the Celestins, the Grande-Grille, and the Hôpital, all containing considerable proportions of sodium carbonate, with free carbonic acid, were also exhibited by this firm.

The Bath Corporation exhibited a very finely worked model of the Roman Thermæ at Bath (Fig. 11), which was shown at the Paris Exhibition last year. It is $\frac{1}{8}$ of full size, and represents the great rectangular Roman bath and circular bath in the precise condition in which they were discovered. These remains of the Roman occupation of Britain are too well known to call for description here, though it is interesting to note that the dimensions of the largest bath are 110 feet by 68 feet, with a water surface of 82 feet by 40 feet. When discovered the bottom of this bath was covered with lead, 30 lbs. to the square foot, and the lead work in the model was a precise copy of what it was originally. Both the large baths represented in the model may be seen to-day at Bath filled with mineral water as of old, the large rectangular bath receiving the overflow from the historic King's bath spring, which has the largest volume of the three chief springs at Bath, which together give a daily yield of over half a million gallons of mineral water at a temperature of 116° F. The remarkable preservation of the Roman Thermæ at Bath can only be explained by the assumption that on the sacking of the place by the Saxons in 577 the conduits which carried off the superfluous hot water from the springs were choked up and the area of the baths flooded, the mineral deposit of the spring of many centuries covering the floors in some places to the astonishing depth of 15 feet, and thus acting as a preservative. It is believed that the Roman Thermæ at Bath, from the first to the fourth century, covered an area exceeding 7 acres, and were capable of the accommodation of upwards of 1,000 bathers.

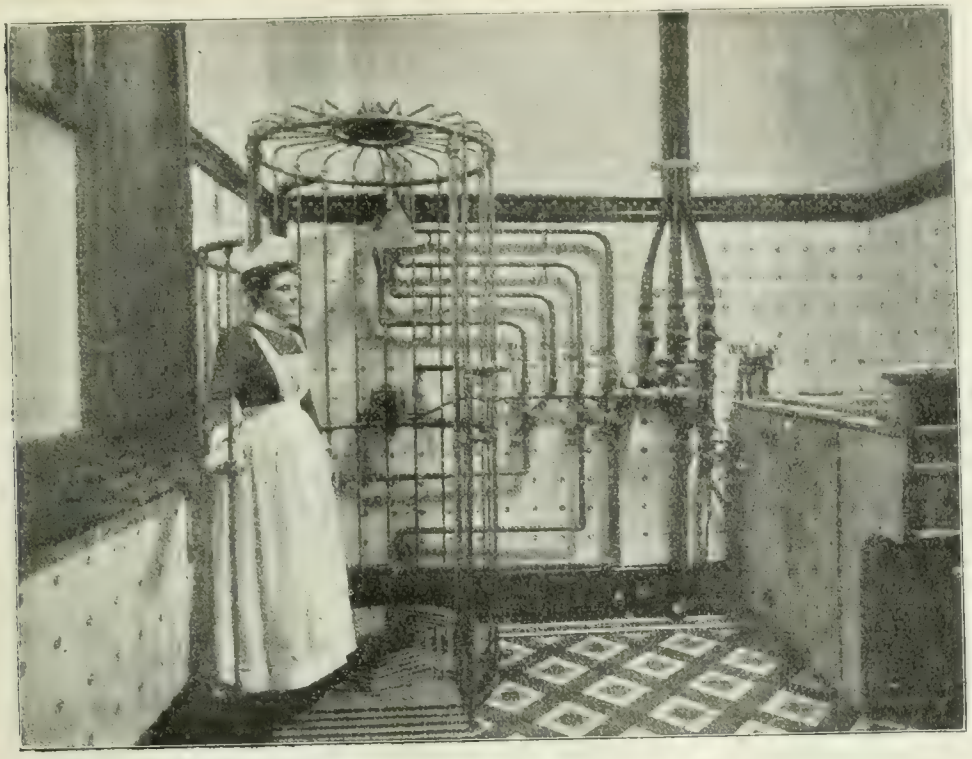


Fig. 12.

The Wells and Baths Committee of the Harrogate Corporation exhibited samples of mineral waters (strong and mild sulphur, Kissingen magnesia, chalybeate), and other waters for drinking. The Committee exhibited also a model of the Harrogate combination bath giving varied douches, ascending, descending, wave, and spinal, in conjunction with needle and shower bath (Fig. 12). Photographs of Harrogate showing interior and exterior views of the baths (Fig. 13) and some of the appliances, as also photographs of places in the neighbourhood, were exhibited. Information was also afforded with regard to various other baths given at Harrogate—sulphur immersion and the sulphur electrolytic baths, running and still sitz baths, the Vichy douche, peat or mud baths, Turkish baths, and also appliances for the administration of electricity, alternating, constant, and D'Arsonval high frequency currents. The hot-air and light baths, and the apparatus for Dr. Finsen's light treatment of lupus were also illustrated. Harrogate, as is well known, contains a large number of mineral waters springs, the most important being those belonging to the sulphur group and to the saline chalybeate, and iron groups respectively. Both groups contain a large proportion of sodium chloride; the sulphur group contains varied proportions of sodium sulphide, and the water of some of the springs is charged with sulphuretted hydrogen. The chalybeate group contains ferrous carbonate or chloride, or both, and considerable proportions of magnesium, calcium, and potassium chlorides. The accommodation for bathers now provided at Harrogate is very good, and the value of the waters in many skin diseases, in functional disorders of the digestive system, in gout and its allies, and in anæmia is well recognised. In the Stray it possesses an agreeable recreation ground where exercise can be taken, and there are many interesting excursions to places in the neighbourhood. A pamphlet distributed by the Committee gave particulars compiled by the Harrogate Medical Society as to the advantages of Harrogate as a watering place.



Fig 13.

The BOROUGH OF ROYAL LEAMINGTON SPA exhibited the mineral waters, saline and chalybeate, aërated, concentrated, and plain, and also views of Leamington and the surrounding country.

### CARRIAGES, MOTOR CARS AND CYCLES.

The MOTOR MANUFACTURING COMPANY (47, Holborn Viaduct, London, E.C.) exhibited their miniature Panhard, a small car fitted with the company's water-cooled De Dion motor, $5\frac{1}{2}$ horse-power. It is claimed for this engine that the means employed for the regulation of the drop of the inlet valve secures economy in running. The car is chain driven, and possesses three forward speeds and reverse obtained by means of cog gearing. It is claimed that the wheels are always in mesh, and that the wear and tear is thus reduced to a minimum. The rear part of the body, which is of the Tonneau type, can be removed, giving sitting accomodation for two persons only and luggage if required.

The SINGER CYCLE CO. (Coventry and 17, Holborn Viaduct, London, E.C.) exhibited bicycles and tricycles with the Singer motor wheel, and facilities were given for trying the apparatus in the grounds. The motor, which is compact and simple, is in the case of the bicycle (Fig. 14) placed in the

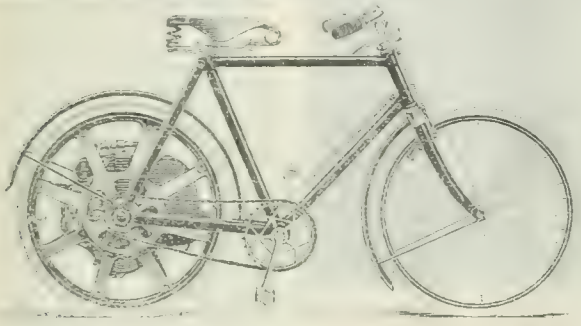


Fig. 14.

rear wheel; in the tricycle it is in the front wheel (Fig. 15).




Fig. 15.

It is claimed that anyone who can ride a bicycle can ride a Singer motor bicycle without tuition. The machine is mounted in the ordinary way, and the rider begins to pedal, at the same time turning the controlling lever with the hand; after three revolutions the engine is at work. The sparking for the petrol engine is obtained from a permanent magnet, and the manufacturers stated that this had been applied in an emergency by one medical man to the extraction of a broken needle from a finger. The complete machines, including the engines, are, we are informed, made at Coventry, and the workmanship appears to be of high order. The same company exhibited the velociman hand tricycle, which has been seen on previous occasions. It is the invention of the Rev. Mr. Charsley, of Oxford, and has been made by the company for the past eighteen years. The action is the same as in rowing, and a great driving power can be developed. The machine is of great service as a means of independent progression to persons who, having lost the use of the lower limbs, retain the power of the upper.

Mr. D. H. MORGAN, auto-car engineer (22, Clarence Street, Cheltenham), exhited a $3\frac{1}{2}$ horse power Star motor car with two speeds. It is fitted with a hood, and the exhibitor recommended it as specially suited for members of the medical profession.

Mr. W. B. MOORE (Oldswinford Carriage Works, Stourbridge) showed a light two-wheeled ambulance to carry two patients lying down, and two in a sitting position; there is a seat for an attendant. The lying-down patients are carried on two stretcher mattresses which slide in and out and can be used as stretchers. Attention has been given to ventilation, the carriage is swung on steel springs and rubber bearings so as to make it run easily; it has also rubber tyres on the wheels, and it is well finished. The price, fitted with lamps, is 50 guineas. The same maker exhibited a doctor's gig with hood which could easily be raised; the shafts were hung on steel springs, back and front, to obviate oscillation and knee motion. The gig is made in graduated sizes to suit a horse or pony, and the price with hood is 40 guineas, an extra charge being made for rubber tyres. In the Victoria gig without hood the shafts were similarly adjusted, there was good room under the seat, the weight was $3\frac{1}{4}$ cwt., the price 25 guineas. A hood can be adjusted to this carriage also.

Messrs. MAYTHORN AND SON, Coachbuilders (Biggleswade) exhibited four carriages which they considered to be specially adapted to meet the wants of medical men: (1) A single brougham, which is built with steel in place of iron, and weighs only $6\frac{3}{4}$ cwt. It gives comfortable room for two persons inside, and is well within the power of any cob not less than 14 2. It is well finished, and the price is 100 guineas. (2) The "Mayfair" victoria is compactly built and closely coupled, so that the draft is light. It is hung on steel long elliptic springs, with india-rubber cushioned ends, and the price complete with lamps and shafts is 100 guineas. (3) The "Ripon" buggy (horse size) has been designed to obviate disadvantages encountered in carriages of this type. It is mounted (Fig. 16) low on a cranked axle, but on wheels of a

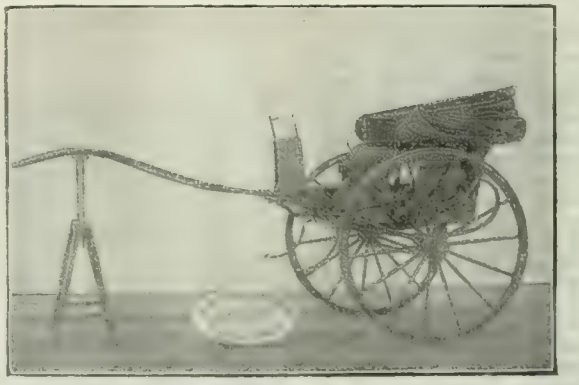


Fig. 16.

good height. The springs are a combination of the elliptic and the cee spring, and it is claimed that a saving in weight

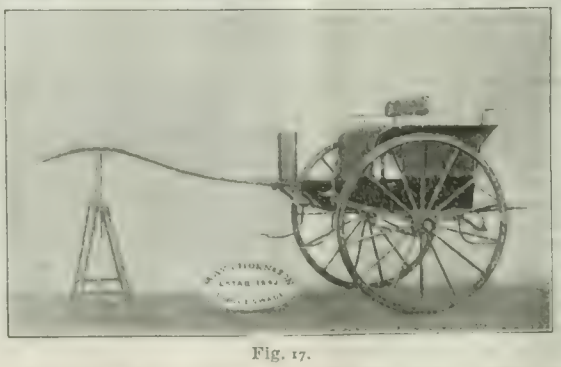


Fig. 17.

and a decrease of draught is thus effected. The shafts are of lancewood, hung in indiarubber-lined fulcrums, and their hind

ends are attached to springs to obviate the transference of the horse's knee motion. The disturbance of balance usually caused by the raising or lowering of the head is counteracted by making the seat slide so as to affect a balance. The leather head (or hood) is low, and comes well forward, covering a greater space than the width of the seat, so as to afford protection from the weather, but to offer little resistance to the wind. The price complete is 52 guineas. (4) the "Ripon" cart (Fig. 17) is hung on three springs and a cranked Collinge patent axle in such a manner that whilst the wheels are a good height the body is kept low, and ingress and egress made easy. The shafts are lancewood, hung in indiarubber-lined fulcrums, their hind ends attached to springs, so as to banish the effect of the knee motion of the horse. The door is fitted with a removable top panel, so that when the front seat only is in use the cart has the appearance of being built to carry two persons only. The price complete is 34 guineas.

### Miscellaneous.

The Sanitary and Economic Association Limited (Gloucester), exhibited a number of appliances, among them being Dr. Bond's euthermic ventilating gas stove, film filters, sanitary coverlets, and regenerating fire bricks. The "Gelidum" ice storer and refrigerator also shown is a barrel-shaped, jacketted receptacle for the storage of ice. It is designed to be used with a large stock of ice which it preserves for a considerable time, but it can be used also as an ordinary refrigerator. They also exhibited the Pittsburgh visible writing machine.

The Gem Supplies Company (6, Bishop's Court, Chancery Lane, London, W.C.) among other exhibits showed an automatic domestic still for obtaining distilled water. The still can be heated in an ordinary stove and can be adapted to work automatically.

The Sanitas Company (Bethnal Green, London, E.) exhibited a number of the preparations manufactured by them, many of which have long been employed. Among more recent inventions were formic fumigators of various sorts, and a disinfectant to which the name "creocide" has been applied. The makers issued a favourable report on the latest form of creocide from Dr. Rideal, from which it would appear that the fluid is an effective germicide when used in proper strength. Creocide powder and creocide soap were also exhibited. The fluid may be diluted with water, with which it yields a milky fluid.

Messrs. Newton, Chambers and Co., Limited (Thorncliffe, Sheffield), exhibited izal disinfecting fluid, as well as the crude coke-oven oil from which izal oil is extracted. A refined preparation for medical and surgical use was also exhibited, as were also also various preparations of izal.

Messrs. Boyd and Co. (Belfast, and 296, Regent Street, London) showed specimens of the "doctor's ulster coat," the eidudon rug, and "unguatum," a porous material stated to consist of wool only, but to be waterproof. The winter fabrics shown appeared to combine lightness and warmth. They also exhibited specimens of all wool fittings used in suits taking the place of the usual cotton fabrics.

Petanelle, a preparation of fibrous peat, was shown in various forms by Messrs. Paté, Burke and Co. (6, Wool Exchange, London, E.C.). Petanelle surgical wool is an absorbent substance which has some deodorant qualities; it is useful as a dressing in foul wounds, in anal fistula, and makes an excellent pad for splints. Wadded sheets for use in the case of children inflicted with incontinence of urine seemed likely to prove useful. Petanelle fabrics are also made for body belts and underwear generally, and boot socks of the same material seem to possess certain advantages. The stuff is also made into a foot powder, which is said to be pleasant and effectual in use. The firm also exhibited a "petanelle disinfecting fluid," which forms an oily film upon water, but we have not had an opportunity of testing its value.

The Sanitary Wood Wool Company (26, Thavies Inn, London, E.C.) exhibited a number of wood-wool preparations for surgical dressings. The material is made up into various convenient shapes and forms, and possesses the advantages of being light and absorbent. The wool can also be obtained medicated in various ways, including sublimate wool. It is also made up into sponges and sheets, and napkins for ladies' use. The firm also supplies outfits for accouchments containing sheets, towellettes, etc., which can be burnt after use.

The Liverpool Lint Company (Netherfield Road, North Liverpool) exhibited a collection of dressings, bandages, splint padding and bandage fasteners.

The Cellular Clothing Company, Limited, exhibited the material sold under the name of "aertex." The original fabric is made of cotton of a peculiar texture, which, it is claimed, is cool in summer and warm in winter.

Jeyes' Sanitary Compounds Company showed the disinfectants bearing that name, and various preparations of it, including surgical dressings and soap.

Messrs. Macmillan (St. Martin's Street, London, W.C.), Messrs. W. B. Saunders (161, Strand, London, and Philadelphia), Mr. H. Kimpton (13, Furnival Street, Holborn, London), and Messrs. Rebman, Limited (129, Shaftesbury Avenue, London, W.C.), exhibited specimens of the medical books published by them.

## THE PATHOLOGICAL MUSEUM.

The arrangements for the Pathological Museum at the annual meeting this year must have placed a severe strain upon the resourcefulness of the Honorary Secretary, Mrs. Stewart-Billings, M.B. It has been located in the Winter Garden along with the annual museum for trade preparations. In this arrangement there are two disadvantages, the first being that the Pathological Museum is, so to speak, pushed away into a couple of corners, while the second and more important is that it is extremely difficult to prevent the entrance of non-medical visitors. Apart from these disadvantages, the exhibition is well up to the average so far as the drawings, photographs, and sketches are concerned, but is hardly up to the average in the matter of preserved specimens. The reason of this is not difficult to find, for curators of museums are naturally chary of sending a long distance specimens which are practically priceless. We think, however that the dangers in this respect are somewhat exaggerated. With careful packing and personal supervision by an experienced museum attendant, the risk to specimens is really very small. The entire series of specimens which came from London arrived without the slightest damage. But although it is necessary from a sense of fairness to raise the objections which have been made above, it is only just to say that many of the exhibits are extremely beautiful from an artistic point of view, and invaluable from a scientific standpoint.

The range covered by the exhibits is a very wide one, for the length of time that separates the oldest specimens from the most recent is about 7,000 years. Unintentionally, no doubt, this fact, and the underlying evidence it gives of the vast territory of pathology, are placed in the strongest light, for photographs and drawings showing the effects of arsenical poisoning in beer drinkers and radiographs from South Africa lie in absolute contiguity with fractured bones of ancient Egyptians. These exhibits are very good indeed, but we could have wished that Dr. Joseph Griffiths had seen his way to exhibit some more of those beautiful preparations of modern bones that excited so much admiration at the Ipswich meeting last year.

Perhaps the especial feature of this year's exhibition is the collection of watercolour drawings of the fundus of the eye. Of these about a hundred are exhibited, Dr. Rayner Batten being responsible for specimens obtained from Dr. Charlotte Ellaby, Mr. Marcus Gunn, Mr. Walter Jessop, Mr. Bowring Lawford, Mr. A. S. Percival, and others. They form a fairly complete series for the more distinctive pathological conditions of the organ.

We have already mentioned the photographs and drawings obtained from cases of arsenical poisoning, but they deserve more than a mere passing word. The particular pigmentation that is produced by this form of poisoning is extremely well shown, and in addition the paralyses and the wasting which are characteristic. The exhibit is made by Dr. Kelynack, than whom it would be difficult to find anyone more competent to deal with the question. Another photographic exhibit in close juxtaposition is that of Dr. E. A. Dent, who shows a number of excellent photographs, illustrating joint

affections, including arthritis deformans and gout. Dr. Macleod shows a series of watercolour drawings of microscopical sections from cases of yaws, parakeratosis variegata, etc., and these, reinforced by a number of good photographs of various skin affections shown by Dr. Arthur Hall of Sheffield, constituted a fair dermatological collection.

We now come to consider the moist specimens in the exhibition, and cannot refrain from once more expressing our delight at the improvements that are still being made in the formalin process. Wonderful as was the difference between the old spirit specimens and the formalin specimens when first the latter method was introduced, the difference becomes more and more marked every day. In this connection, without making any invidious comparisons, we may mention one specimen of primary sarcoma of the liver in which the brilliant colour of the hæmorrhagic foci of growth contrasts in the most marked manner with the brilliant green of those portions of the organ which were free from growth and yet were intensely bile-stained. The only pity is that even yet the question as to whether a given specimen which is beautiful when removed from the body, will remain so in the preparation, is quite a matter of uncertainty. No doubt much has been done by leaving the fresh specimen for a longer time in formalin than was done when first the method was introduced, but we have not yet fully learned how to control the event.

So far as the moist specimens are concerned, it will be most convenient to refer to the most interesting specimens in the order in which they occur in the catalogue. Amongst diseases of the circulatory system three specimens call for notice—namely, those of syphilitic myocarditis, thrombosis of the thoracic aorta, and a most beautiful aneurysm of the middle cerebral artery. Among diseases of the gastro-intestinal tract the most important is that of lymphangiectasis of the duodenum. If we are right, this specimen is derived from a unique case that was shown some years ago at the Pathological Society of London by Dr. Hebb. Diseases of the liver are represented by four very interesting specimens, while diseases of the tongue and throat are chiefly remarkable for a specimen of lipoma of the œsophagus, which is of historic as well as of pathological interest in that it was first shown at the Pathological Society in 1853. Diseases of bones and joints are represented by six specimens, each of which is highly interesting. Diseases of the lungs are but poorly represented, but there is a fine specimen of secondary nodules of hæmorrhagic sarcoma from a case of sarcoma of the testicle, the natural colours of which are well preserved. The spleen and the kidney are not well represented, but the difficulty of obtaining good permanent specimens in these two classes is well known. Amongst the miscellaneous class is one of a cavernous angeioma of the gracilis muscle, which is probably unique. A number of specimens of tuberculosis in different animals is shown in Section B, and some of these are interesting, especially at the present moment when the relation of the tuberculosis of men and of animals is under discussion.

In mentioning the principal exhibits we have felt that, though there is very much that is of interest to persons who are on the outlook for specimens of rarity, the usefulness of the museum is not so great as it ought to be. It is, perhaps, not our duty to make recommendations, but perhaps we may be allowed to suggest that there would be a great advantage if it were possible to get together a thoroughly representative series of the diseases of one organ. If it were arranged, say, at one meeting that special attention should be given in the museum of the following meeting to diseases of a special organ or part, it should be possible to bring together from all parts of the country a series of specimens which should prove of great advantage not only to those who wish to see the most remarkable examples of pathological conditions affecting any given part, but also to that larger number of persons who are not professed pathologists, but are anxious to refresh or to extend their knowledge on the broadest possible lines with the object of rendering their diagnosis more exact and their prognosis more satisfactory. As a matter of fact, we can always leave the unique specimens to take care of themselves. They will always be shown, and rightly so, for the members of the British Medical Association are not simply medical students except in the large sense of the term, and they will always attract attention. But it would be well if it were possible to have a full series of the disease of one part. To take one concrete example. In this year's museum there is a specimen of a malignant growth at the junction of the right and the left hepatic ducts, and there is one of a malignant growth of the biliary papilla. But we have no doubt that it would have been possible, and it would have certainly enhanced the value of the two specimens mentioned, if we had had specimens showing the presence of malignant growths in those other portions of the bile ducts which are liable to be affected. Without wishing to dogmatise, we would commend this suggestion to the secretary—whoever he may be—who will have charge of the arrangements for the Pathological Museum at the next general meeting.

## THE ANDERSON FUND.

The main facts of Mr. Anderson's case are set forth in our issue for July 13th in a letter from Lord Stamford and Mr. T. Holmes. Few cases have more revolted the English sense of justice, and none could be more threatening to the rights of every member of the medical profession. The conduct of the Trinidad judges was investigated by a commission of two eminent lawyers sent out to Trinidad for the purpose, and was by them unreservedly condemned. One of those judges had died, the other was removed from the bench. A jury in London awarded damages to Mr. Anderson against the surviving judge. But the doctrine of the irresponsibility of a judge for his judicial acts prevailed against such action as Mr. Anderson had funds to prosecute and the verdict was set aside. After that Mr. Anderson strove, with an energy that nothing could abate, to stir up the public to reform a condition of things in which such abuses were possible. He had no private means except a small pension given him by the Colonial Government for some previous service to the Colony, and this with a noble sense of duty he set aside for the support of his wife and children. And, of course, this died with him. He was nearly starving, and though he did not die of inanition, yet the hardships he endured must have hastened his end.

It is confidently hoped that so sad a history will appeal to the sympathy of his fellow practitioners, and that some provision may be forthcoming for the support of his widow and the education of his two sons.

The following additional subscriptions have been received:

Already announced ... ... ... ... £22 7 0

| | £ | s. | d. | | £ | s. | d. |
|---|---|---|---|---|---|---|---|
| Lord Lister ... . | 10 | 0 | 0 | J. Granville Hockridge, Esq. | 1 | 1 | 0 |
| Dr. Herbert Owen ... | 1 | 1 | 0 | Dr. C. Crawford ... ... | 1 | 1 | 0 |
| Dr. Duka ... ... ... | 1 | 1 | 0 | J. H. Waddington, Esq. ... | 0 | 10 | 6 |
| Dr. W. Domett Stone ... | 1 | 1 | 0 | W. Smith, Esq. ... ... | 0 | 10 | 6 |
| Dr. John Brown ... ... | 0 | 10 | 0 | Dr. C. Coates ... ... | 2 | 2 | 0 |
| A Friend ... ... ... | 1 | 0 | 0 | Dr. G. F. Blandford ... | 3 | 3 | 0 |
| Thomas Smith, Esq. ... | 5 | 0 | 0 | | | | |
| Sir R. M. Craven ... ... | 1 | 1 | 0 | Total ... | £52 | 0 | 0 |
| E. E. Llewellyn, Esq. ... | 1 | 1 | 0 | | | | |

Stamford, Chairman.
Timothy Holmes, F.R.C.S., Hon. Treasurer.
Walter Monnington, 7, Fig Tree Court, Temple, E.C., Hon. Secretary.

Donations for "The late R. B. Anderson Fund" should be sent, and made payable, to the Manager, Union Bank of London, Chancery Lane, London.

National Veterinary Association.—The Conference of the National Veterinary Association was opened in Edinburgh on July 30th. It was agreed to meet next year in London, and Professor MacFadyean, of London, was elected President for next year. In welcoming the Association to the city Bailie Forbes MacKay, on behalf of the Corporation, said it was a serious matter in the public health to find that all the precautions and enormous labour and expense incurred with a view to safeguarding the lives of citizens from the effects of tuberculosis in the udder or carcass of cows were, according to the dictum of Dr. Koch, thrown away. The President delivered his inaugural address, in which he advocated extensive reorganisation of the Army Veterinary Departments. The remounts and veterinary departments should be united and controlled by a veterinary surgeon.

# CORRESPONDENCE.

## PROFESSOR R. KOCH'S ADDRESS.

Sir,—My remarks after Dr. Koch's address at the Tuberculosis Congress last Tuesday were made at very short notice, and the summary of them which you kindly published on Saturday was written very hurriedly, and there is one point of considerable importance in the latter which I should be glad, with your permission, to correct.

I stated that when the mesenteric glands are found affected with tubercle, without any discoverable intestinal lesion, in children that have died of tubercular disease, and no tubercle is met with in other parts of the body, the natural, and, indeed, inevitable conclusion seemed to me to be that "the tubercle bacilli had passed from the aliment through the intestinal mucous membrane without causing obvious lesion in it and had been arrested by the mesenteric glands." If for "the aliment" I substitute *the alimentary canal*, I express what I believe to be the true state of the case.

The intestinal contents consist, of course, not only of the food more or less altered, but also of the secretions of the various glands which pour their products into the alimentary canal. One such product is the bronchial mucus which, together with the dust of the inhaled air, is brought up by the cilia to the orifice of the larynx and perpetually swallowed unconsciously. The inhaled dust thus enters as truly into the composition of the intestinal contents as does the food; and in the case of a child fed on unboiled milk from a cow with a tuberculous udder in a room infected with tubercle, it might be fairly open to question whether the bacilli of bovine tubercle imbibed at its meals or those of human tubercle derived indirectly from the inhaled air were the more numerous in its intestine. Hence the fact of the mesenteric glands being the only seat of tubercle in a milk-fed child is no proof that the bacilli which they contain were derived from the milk. This consideration may seem in favour of Koch's hypothesis; but it, in truth, deprives his argument based on the rarity of primary tubercular intestinal lesions in the child, in spite of the multitudes of bovine tubercle bacilli swallowed in milk, of any relevancy whatever; because, considering the extremely numerous bacilli of human tubercle often present in the intestinal contents, the argument might be used with equal force against the possibility of communicating human tubercle to man.

The truth appears to be that the intestinal mucous membrane is by no means a favourable site for the development of tubercle bacilli. This is manifest if we consider that, according to the experience of pathologists, only about two-thirds of the bodies of those who have died of pulmonary tuberculosis have tubercular lesions of the intestines. Or, to put it otherwise, the intestines of one-third of such patients have resisted the invasion of tubercle bacilli passed through them for months, or it may be for years, in enormous numbers in the swallowed expectoration. In the child the intestinal mucous membrane seems to allow the bacilli to pass through it more readily than in the adult; but even in the young child pathologists seem agreed that pulmonary tubercle is much more common than tabes mesenterica, although, as we have seen, the infecting dust passes through the intestine after its inhalation into the lungs.

Dr. Koch has shown that human tubercle is very rarely, if ever, transmissible to the bovine species. But of the converse proposition, incomparably the more important, that bovine tubercle is not communicable to man, there is, I venture to think, no reliable evidence.—I am, etc.,

Park Crescent, W., July 30th. Lister.

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Sir,—I desire to call attention to an apparent omission in that portion of Dr. Koch's address, in which he deals with the results of his experimental feeding of swine with bovine tuberculosis. The animals, he says, which "had eaten bacilli of bovine tuberculosis, had without exception.....tuberculous infiltration of the greatly enlarged lymphatic glands of the neck, and of the mesenteric glands, and also extensive tuberculosis of the lungs and spleen." But although the swine had been infected by the method of feeding no mention is made as to whether tuberculous lesions of the intestine were found in any of the experimental animals.

This omission appears the more remarkable seeing that in discussing the reasons for his assumption that bovine tuberculosis cannot be conveyed to man by the ingestion of milk or butter containg "living and perfectly virulent bacilli," Dr. Koch makes the definite assertion that it is "only when the intestine suffers first" that a case of tuberculosis can be assumed with certainty to have been "caused by alimenta." It may be that although in Dr. Koch's address as reproduced in the British Medical Journal no mention of the fact is made, nevertheless tuberculous lesions of the intestine were really present in addition to those which he enumerates, but in view of the importance which Dr. Koch evidently attaches to this condition in the case of man the publication of full details of the *post-mortem* examination of these pigs would be of considerable interest.—I am, etc.,

Earl's Court, July 30th. S. Monckton Copeman.

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## THE NOTIFICATION OF TUBERCULOSIS.

Sir,—I am unfortunate in your reporter not hearing my remarks on Tuesday, July 23rd, at the meeting of Section I of the Tuberculosis Congress. What I stated was not in accordance with your report. It should have read: "Voluntary notification was not successful *in the absence of any fee for notification*, and a *single* circulation of educational pamphlets dealing with the measures to be taken to prevent the spread of tuberculosis *had not produced the results hoped and expected*." I gave no reason for compulsory notification; quite the contrary: I stated I was not in favour of compulsory notification, and continued my speech by pointing out how voluntary notification could best be effected, and the necessity for voluntary notification carrying the usual fee. I concluded by drawing attention to the great advantage gained for those interested in the subject by the article in the July number of *Tuberculosis* on "Disinfection after Phthisis," as affording, with all the weight of the National Association for the Prevention of Tuberculosis at its back, the necessary final dogmatic statement in a now complete series when urging local authorities to take measures to prevent the spread of tuberculosis.—I am, etc.,

Kensington, July 29th. Herbert Alderson.

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## THE TRANSMISSION OF TUBERCLE FROM ANIMALS TO MAN.

Sir,—With regard to Professor Koch's statement as to the transmission of tubercle from cattle to man, it is very interesting to note that the Jews have always taken it for granted that such transmission does occur. A cow, however slightly diseased, is at once condemned.—I am, etc.,

Swansea, July 29th. G. Arbour Stephens.

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## THE C.O.S. OF LONDON.

Sir,—This "big question" occupied twelve columns of printed matter in the British Medical Journal on July 6th, to-day two columns, which is below the average weekly output.

For thirty years I have taken part in the action of the Obstetrical Society, and I am indeed loath to add a word to a discussion which is already too long, and is only kept alive by constantly raising fresh issues. Those who do not yet know what they want never will. Opposition there is to all things, and differences of opinion about most.

The letters L.O.S. were adopted by the holders of certificates and freely used, but never sanctioned by the Obstetrical Society. When it was discovered that L stood for licentiate as well as London, objections were raised, showing how not only every word but every letter is scrutinised. The Obstetrical Society will express itself about this in its own way, and I am not authorised to make any statement.

If every woman is to have a doctor as well as a nurse instead of a midwife, which is the alternative suggested by the opposition, may I ask who is to pay? If the public will have to be taxed, the idea is not worth consideration, and we might as well unite forces and agree to pass a Midwives Bill as perfect and as soon as possible.

To Mrs. Colby I may say that 25 cases was reduced to 20, which is the requirement of the College of Physicians and

College of Surgeons for medical students, because it was felt that more should not be required of midwives.

The obstetrical examinations have proved an immense success; otherwise no one would trouble about them. For twenty years no one raised any objection to them. The Jubilee gave an immense impulse to nursing and to nurses, and of course midwives were no exception. In my humble opinion the nurse who is responsible for the poor mother and her babe at such a time should not take a "back place." In the interests of the poor I have always done all in my power to improve the midwife. I have not considered her as an opponent, nor in any way on the same plane with the humblest practitioner, but as a thing apart and necessary (good or bad) in thousands. It is untrue to suggest that self-interest has influenced anybody. When a Midwives Bill becomes law the whole affair will be taken over by the State, and yet the Obstetrical Society does not stand in the way, but is in favour of legislation.

To "F.R.C.S." I would point out that the percentage of failure is higher now than in 1895, but the increase of candidates has steadily gone up: 1895, 432; 1896, 467; 1897, 511: 1898, 590; 1899, 688; 1900, 842 candidates, 119 failures, 18 absent; that is, 408 increase in five years.

I have no intention to enter into any discussions, and am leaving England in a few days for some weeks, so this must be my last letter.—I am, etc.,

Seymour Street, W., July 27th. PERCY BOULTON, M.D.

## THE INCIDENCE OF GASTRIC ULCER IN THE TWO SEXES.

SIR,—My attention has been drawn to a very important mistake in a letter of mine published by you in the BRITISH MEDICAL JOURNAL for December 1st, 1900, vol. ii, p. 1613. In that I am made to say that during the last five years there had been 15 cases of gastric ulcer verified by necropsy at the General Hospital, and of these 11 occurred in men and 4 in women. This statement is the exact reverse of the truth, as the detailed list I now enclose shows, the truth being that of the 15, 11 occurred in women and only 4 in men. The whole point of my communication was to show that *post-mortem* data confirm the usual clinical experience in this respect. As these figures have been quoted recently, my attention has been drawn to them, and I am therefore bound to ask you to permit me to correct the mistake.—I am, etc.,

Birmingham, July 29th. ROBERT SAUNDBY.

*Deaths from Gastric Ulcer from Medical and Surgical Post-mortem Registers. 1895-1900 inclusive.*

| | | | |
|---|---|---|---|
| Medical, 1897-1900 | ... None. | | |
| ,, 1896 | ... Rowland Morris | ... | Ulcer of stomach; nephritis. |
| ,, ,, | ... Henry Manning | ... | Perforated ulcer of stomach. |
| ,, 1895 | ... Elizabeth Duff | ... | Perforated gastric ulcer. |
| ,, ,, | ... — Schofield (female) | | ,, ,, ,, |
| Surgical, 1900 | ... Emily Bretherton | | ,, ,, ,, |
| ,, ,, | ... Joseph Cook ... | ... | Ulcer near pylorus; no rupture; gastro-jejunostomy. |
| ,, 1899 | ... Kitty Southey | ... | Gastric ulcer. |
| ,, ,, | ... Emma Cutter | ... | Perforated gastric ulcer. |
| ,, 1898 | ... Helen Crowthan | ... | ,, ,, ,, |
| ,, ,, | ... Mary Dowton | ... | Gastric ulcer; hæmorrhage. |
| ,, ,, | ... Elizabeth Roberts | ... | Perforated gastric ulcer. |
| ,, 1896 | ... Louisa Bird | ... | Gastric ulcer; peritonitis. |
| ,, 1895 | ... William Chance | ... | Perforated gastric ulcer. |
| ,, ,, | ... Annie Hudson | ... | ,, ,, ,, |
| ,, ,, | ... Mary Dedsbury | ... | ,, ,, ,, |

15 cases—11 females, 4 males.

## VACCINATION AND PROFESSIONAL UNDERSELLING.

SIR,—With Dr. Major Greenwood's views on the above subject, as expressed in the BRITISH MEDICAL JOURNAL of July 27th, I feel sure everyone will agree to a large extent. But I think few will agree when he deprecates the action of the private practitioner, who merely sticks to his own patient, and vaccinates the latter at the fee he was accustomed to charge prior to the passing of the last Vaccination Act, rather than let his patient fall into the hands of perhaps a rival practitioner who happens to be a public vaccinator. If anyone has a right to complain it is the private practitioner against the public vaccinator, and not *vice versâ*.

So strongly were the seductive methods of some public vaccinators felt in this district after the passing of the Act of 1898, and so keen was the resentment against the unwarranted action of some of them, that the "Bradford and West Riding Medical Union" felt compelled to take action and issue a "Memorandum to Public Vaccinators" containing "suggestions" for their guidance, if they wished to act ethically as well as legally.

The text of these suggestions may be seen in the BRITISH MEDICAL JOURNAL of July 15th, 1899, p. 155.

To me, too, Dr. Major Greenwood's terms seem unjust. For how can one be said to be "underselling" a public vaccinator when one simply continues to charge the same fee for vaccinating as one was accustomed to charge before public vaccinators were paid on the present scale? Here the usual charge used to be 2s. 6d. for working people, but since calf lymph has become general it has been mostly raised to 3s. 6d.

Of course, it would be more altruistic to hand over to the public vaccinator all that cannot afford to pay 6s., and not only give the public vaccinator an introduction to some fresh prospective patients, but be oneself spared the indignity of taking a 3s. 6d. fee.

This altruistic ideal does not, however, appeal to everyone, and some may even think it more profitable to do the vaccination gratis, and keep the public vaccinator out of their patients' houses altogether.

To secure the harmonious working of the present Vaccination Act, it appears to me that one of two things should be done: either that every medical practitioner be made a public vaccinator and be paid by the authorities on the present scale for what vaccinations he performs, or else that special public vaccinators be appointed in all densely populated areas who shall be debarred from taking part in private practice at all.

The present method does and will continue to produce friction so long as men are what they are.—I am, etc.,

Bradford, July 29th. WILLIAM MITCHELL, M.B.

SIR,—As a private practitioner I certainly cannot agree with the remarks made by Dr. M. Greenwood in the BRITISH MEDICAL JOURNAL of July 27th. He says, "I allude to the almost universal custom of private doctors consenting to vaccinate their patients at a lower rate than that paid to the public vaccinator of the district. Surely this ought not to be." The expense to the ratepayers of the town in which I live for vaccinations performed by the public vaccinators last year was £1,600, and the cost of each vaccination performed by them worked out at 11s. 6d. per case. Surely Dr. Greenwood would not suggest that a private practitioner should charge a fee of this magnitude.

I charge 2s. 6d. for vaccination done at my house, and this I consider to be a reasonable fee. I make two marks, but as I believe that four are more effectual than a lesser number, I always make them of such a length that their actual surface is at least equal to four circular ones. Thus the patient is satisfied and my conscience is clear.

To my mind the most effectual method of dealing with this subject would be to appoint every medical man a public vaccinator at a fee of 5s. per case. This would prevent friction arising between the public vaccinator and his fellow practitioners. Were private practitioners to agree not to vaccinate at a lesser fee than that received by the public vaccinator, as suggested by Dr. Greenwood, I fail to see who but the public vaccinator would be a gainer by such an arrangement.—I am, etc.,

July 29th. L.R.C.P.

SIR,—Most practitioners will agree with Dr. Greenwood's general statement in reference to professional underselling, but in the particular instance of vaccination his remarks call for criticism.

The average amount of work per case performed by a public vaccinator is considerably greater than that performed by a private practitioner. The public vaccinator has to visit each case of actual vaccination at least twice, he pays many visits which are fruitless from one cause or another, and he has no inconsiderable amount of "office" work to get through in sending out preliminary notices and in filling up the various registers he is required to keep. The private practitioner, on the other hand, can vaccinate at his own residence, and, generally speaking, his expenditure of time and trouble is less altogether. Why were the fees of public

vaccinators raised after the passing of the Vaccination Act of 1898? Surely it was only because of the increased amount of work in each individual case. In the class of cases, therefore, to which Dr. Greenwood more particularly refers, it would be fairer to compare the fees charged by private practitioners with those which public vaccinators received before the passing of the Act of 1898. I do not think he would find that many medical men vaccinate for fees so small as those with which public vaccinators had to be content at that time. In making this last statement I am quite aware of the existence of the "shilling" vaccinators, to whom Dr. Greenwood calls attention, but I think we may leave these gentlemen out of account in the present instance, that is to say, in an appeal to ethical considerations in the conduct of medical practice.—I am, etc.,

Weybridge, July 29th. HOWARD S. WILLSON, M.B., D.P.H.

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SIR,—As a "private medical man" I should like to say a few words in reply to Dr. M. Greenwood's letter in the BRITISH MEDICAL JOURNAL of July 27th. Until there is a universally recognised scale of fees for medical men, and until all our patients are equally blessed with the good things of this world, it will be impossible to avoid what your correspondent terms "underselling"—which, according to him, appears to mean charging a lower fee than someone else for doing a certain piece of work, so that a man who vaccinates a child for half a guinea would certainly be considered guilty of "underselling" by one whose fee for the same operation was a guinea, and so on *ad infinitum*. Granted this to be the case, surely Dr. Greenwood is fitting the cap on the wrong head, and it is the public vaccinator who undersells the private practitioner: for, in effect, he goes to the patient of another medical man, and says "I will vaccinate your child for nothing: at any rate as far as you are concerned." This he is able to do, being subsidised by Government, even "his lymph being supplied gratuitously." In acting thus he is not only guilty of "underselling," but also of what is generally considered an equally reprehensible practice — namely, touting.

This latter offence against "the ethics of the profession," however, he is, I believe, compelled to commit according to law, and hence deserves our sympathy rather than our censure.

Public vaccinators, at present, seem to be very well paid, and I think they should be content, without issuing to the profession appeals based on false premisses, with the object of increasing their incomes from this source.

It seems to me that Dr. Greenwood has made out a very good case in favour of the private practitioner as against the public vaccinator on the question of underselling, and I, for one, tender him my sincere thanks.—I am, etc.,

July 29th. A PRIVATE DOCTOR.

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## TOTAL EXTIRPATION OF THE PROSTATE FOR ENLARGEMENT OF THAT ORGAN.

SIR,—I am surprised, I confess, at the pretension put forward by Mr. Mayo Robson in the BRITISH MEDICAL JOURNAL of July 27th of having anticipated me in the operation of total extirpation of the prostate described in the JOURNAL of July 20th, and still more surprised at the flimsy grounds on which he bases this pretension. Mr. Mayo Robson has failed to grasp, or affects to ignore, the nature and extent of the operation described by me when he writes:

> The method cannot be a genuine extirpation of the organ when the true prostatic capsule and the prostatic urethra are necessarily left after the adenomatous masses, all of them with separate capsules, have been shelled out.

What Mr. Mayo Robson regards as impossible is exactly what I have accomplished in the four cases described—namely, the extirpation of the whole organ with the true capsule attached, and this is the essential feature of my new operation.

As pointed out in my lecture, and illustrated in the woodcuts accompanying it, and apparent from the removed specimens, the lateral lobes of the enlarged prostate contain within their true capsules numerous encysted adenomatous tumours: and hitherto when Mr. Mayo Robson and other surgeons, including myself, have performed partial prostatectomy, according to the method of Belfield and McGill, we have cut off by scissors or torn off by forceps—piecemeal—the middle lobe and portions of the lateral lobes; or, after cutting through the true prostatic capsule, enucleated one or more of these encysted tumours, the true capsule and main portion of the lateral lobes being left behind. This is what was done in the five cases described in Mr. Mayo Robson's letter. There was nothing original in the procedure on his part. It was a partial prostatectomy, entirely falling short of the much bolder and more radical operation of total enucleation of the prostate in its capsule, which I claim to be new. Will Mr. Mayo Robson produce from the whole of surgical literature a single instance in which this had previously been done, or claimed to be done? How the prostatic urethra is left behind I have fully described in my lecture.

Let us now examine the selected cases on which Mr. Mayo Robson bases his claim to have forestalled me, and in which he states that

> The gland was enucleated most thoroughly, both median and lateral lobes being removed, and in all five cases there reported with success both immediate and remote.

In one case the lateral lobes were removed by scissors, forceps, and enucleation, but the weight of tissue removed is not given. In a second:

> Middle lobe size of walnut and enlarged lateral lobes removed by scissors and forceps; weight ½ oz.

In a third: Prostate very large. Middle lobe removed, and over ½ oz. from lateral lobes enucleated.

In a fourth: Pedunculated middle lobe size of a walnut, and small growth from left side of prostate removed by scissors, forceps, and enucleation.

From these extracts it will be observed that only a limited portion of the enlarged prostate was removed in each case, not even a mass the weight of the normal prostate. We are, therefore, enabled to realise fully Mr. Mayo Robson's idea as to what constitutes "most thorough enucleation" of the enlarged prostate! And this partial prostatectomy, which we have all been doing for years, is, he tells us, "an identical operation" with my 4 cases of total extirpation of the organ in its capsule, the weight of tissue removed varying from 2½ to 4½ ozs.

Three out of the 5 were in reality cases of stone in the bladder, in which a portion of the prostate was removed during a suprapubic lithotomy: and I observe that 6 out of the 12 cases in his paper from which these 5 were extracted are of the same type. Such cases are of no practical value as a test of the efficiency of prostatectomy. I have had numerous cases of this kind in my own practice in which all the prostatic symptoms passed off, and the catheter was no longer necessary after the removal of the stone by cutting or crushing, the congestive enlargement of the prostate caused by the irritation of the stone, on which the symptoms frequently depend, completely subsiding on the removal of the stone. A typical example of this is given at page 75 in my work on stone.[1]

I must protest against this practice, which Mr. Mayo Robson has originated, of performing suprapubic lithotomy, nipping off a small portion of the prostate, ignoring the effects of the removal of the stone, recording the case as a prostatectomy, and attributing the results to this latter proceeding alone, as unscientific, misleading, and giving to his so-called prostatectomies credit to which they are not entitled.

But the most extraordinary statement contained in his letter under reply is that in which Mr. Mayo Robson claims a "success, both immediate and remote," in Case 3, in the face of the following record:

> Recovered from operation, and was able to sit up during second week. Urine passed by urethra. Patient was feeble and decrepit at the time of operation, and in a few weeks succumbed to asthenia.

I think most surgeons would regard and return this case as a death from the operation. Mr. Mayo Robson regards it as not only a success, but a "success, both immediate and remote"! After this, the reader can judge of the value of Mr. Mayo Robson's statistics.

In conclusion, Mr. Mayo Robson has recourse to an artifice not uncommon in controversy with men in his weak position, namely, that of appealing to the glamour of great names. I cannot, however, see in Lord Lister's letter a particle of evidence in support of the contention in connection with which it is brought forward. Lord Lister has, with his usual courtesy, also written me a kindly letter of appreciation of my work: and I have had innumerable letters, many from the heads of the profession, recognising the distinct and important

[1] *The Modern Treatment of Stone*, 2nd edition, 1896.

advance in surgery of my operation. I will refrain from inflicting them on the reader. I prefer that my work should be judged on its own merits.—I am, etc.,

Harley Street, W., July 27th. P. J. FREYER.

SIR,—The clinical lecture on total extirpation of the prostate for radical cure of enlargement of that organ, delivered by Mr. P. J. Freyer at the Medical Graduates' College, London, on June 26th, and reported in the BRITISH MEDICAL JOURNAL of July 20th, heralds a new and most promising epoch in operative surgery, and is in my opinion one of the most valuable and important clinical lectures published for many years. It will doubtless receive in the editorial columns of this JOURNAL the prominence it so richly merits, and I venture to state that I voice the opinion of the Indian Medical Service when I say that we one and all feel proud that it should have fallen to the lot of a member of our service to have made this great and important advance in the surgical treatment of enlargement of the prostate. The four cases which form the basis of this most remarkable lecture merit the most careful study of surgeons, and they foreshadow the enormous relief from suffering which Freyer's operation is destined to confer on that large class of middle-aged male patients who, as they approach the evening of their days, see them darkened by the shadows of catheter life. As yet it is too soon to speculate on the probable mortality which may follow total extirpation of the prostate, and we shall require the faithful record of a long series of cases before we can safely determine this very important point. But it is even now evident that a judicious selection of cases must be made in carrying out Freyer's operation, if it is not to be strangled in its birth by a heavy death-rate. If the rate of mortality following it should prove to be trifling, as I think it will be, then there can be no doubt that its sphere will be gradually enlarged, and that men who have already entered on catheter life, and who, although leading fairly comfortable lives, resent the irksomeness and inconveniences inseparable from a continued use of the catheter, will willingly run a moderate risk to regain the control over the bladder which they have lost. And so I would advise caution at the beginning, and I think it would be well at this juncture to refrain from carrying out this operation when it is evident that marked kidney disease coexists with enlargement of the prostate. When the operation is established on a firm basis, and when experience has proved that in selected cases its mortality is but trifling, it will be time enough to adopt it in the more unfavourable class of cases. The far-reaching results of this new departure in operative surgery are numerous, and that it will prove eminently successful in dealing with a hitherto most unsatisfactory class of calculi in the bladder I have no doubt, namely, in recurrent phosphatic calculi or concretions, associated with and caused by enlargement of the prostate.—I am, etc.,

Igls, Tirol, July 24th. D. F. KEEGAN.

## CREOSOTE AND HÆMOPTYSIS.

SIR,—In your review of Dr. Bernheim's work on tuberculosis, I notice with some interest the following passage concerning creosote:

> He believes that a local disturbance is produced in the neighbourhood of the tubercle similar to that which follows the injection of tuberculin, and on this account there is danger that dormant disease may be called into activity.

My object in writing this is to inquire whether any causal connection has been noticed in certain cases between creosote and hæmoptysis. When a Resident in a provincial hospital it fell to my lot to observe two severe cases of hæmoptysis in patients taking large doses of creosote, one of which ended fatally. I do not pretend to know whether this was mere coincidence or not. What struck me in both cases was the unexpectedness of the hæmorrhage, and the fact that both were improving before the creosote was begun.

Of course, "unexpected" hæmoptysis is common enough in phthisis, whether treated by creosote or anything else, and, though momentarily impressed by the occurrence, it was speedily dismissed from my mind.

The sentence in your review of Dr. Bernheim's book quoted above has, however, recalled the event, and suggested that possibly others may have had suspicious experiences with the drug. I write merely to raise the point, and to ask for further experience. I have myself no contribution to make except this damaged recollection.—I am, etc.,

Sheffield, July 28th. E. W. ADAMS.

## THE SUPPLY OF REMEDIES BY MEDICAL GRADUATES.

SIR,—I am instructed to send you the annexed copy of a resolution recently adopted by the Senatus Academicus of the University of Aberdeen, and to request that you will kindly give it a place in the BRITISH MEDICAL JOURNAL. I may mention that a similar resolution has been adopted by the University of Edinburgh.—I am, etc.,

DONALDSON ROSE THOM,
University of Aberdeen, July 29th. Secretary of Senatus.

Resolved: Whilst it is admitted that the exigencies of practice in certain localities may sometimes render it unavoidable for a medical practitioner to supply to his patients the remedies which he prescribes, the Senatus Academicus of this University is of opinion that it is undesirable and detrimental to the position of medical graduates of the University that this custom should be followed under other circumstances; and, further it regards the sale of objects other than remedies by its medical graduates as, under all circumstances, to be strongly deprecated.

## THE ARMY MEDICAL SERVICE.

SIR,—As requested by the Secretary of State for War, I have forwarded to him a careful synopsis of about eighty letters I have received from army medical officers all over the world suggesting various important and necessary reforms in the Royal Army Medical Corps. I have also sent forward two most exhaustive and complete reports enclosed to me by two distinguished army surgeons of high rank. The information afforded to the Secretary of State and the Commission should be useful, and I trust will be carefully studied by those who are at present engaged in a task which will either make or mar probably the most important department of His Majesty's army.—I am, etc.,

Omagh, July 27th. EDWARD THOMPSON, F.R.C.S.I.

## THE COMPLIMENTARY DINNER TO SURGEON-GENERAL JAMESON.

SIR,—In the list of those who attended the above-mentioned dinner, published in the BRITISH MEDICAL JOURNAL of July 27th, my name was omitted; that I would not much mind: but, instead, there appears the fictitious name of "W. Owen," and it seems I sat under this alias by mistake.

I may take this opportunity of remarking that, as one who had served in South Africa, visited a good number of the hospitals, and been present in the field, I can fully understand and appreciate the magnitude of the work which must have devolved upon the Director-General and those in authority. Never has there been a war conducted by this country so great as the present one, and, correspondingly, never have the medical arrangements been on so large a scale; and, though the campaign has been great, the medical arrangements, on the whole, I feel sure have never been surpassed in any previous war. I should think that no Director-General has had so much stress of work as Surgeon-General Jameson; and though at one time the sudden influx of patients suffering from disease, chiefly enteric, dislocated the medical arrangements—and they were inadequate—they were not very long before they were remedied, and at the present time they redound to the credit of Surgeon-General Jameson and those in charge.

Having read the report of the Royal Commission upon the care and treatment of the sick and wounded in South Africa, I cannot, from a general point of view, but concur with their conclusions, which I consider to be just and sensible, and that almost everything was done that could reasonably be expected.

One is inclined to think that, had other matters been conducted as well as the medical, the war now would probably be at an end.—I am, etc.,

Glandovey, July 30th. OWEN WILLIAMS, M.B.

THE Society for Colonial Expansion in France, which has its headquarters at Bordeaux, has instituted a special branch devoted to the assistance of French doctors and chemists who desire to emigrate.

# SPECIAL CORRESPONDENCE.

## SOUTH WALES.

*Appointment of a Gynæcologist to the Cardiff Infirmary.—Gift of £10,000 to Swansea Hospital.—Diseased Meat at Swansea.—Chemist acting as Doctor.*

On July 18th the Board of Management of the Cardiff Infirmary elected Ewan J. Maclean, M.D.Edin., M.R.C.P., F.R.S.Edin., Assistant Physician to the Chelsea Hospital for Women, as gynæcologist to the institution, in succession to the late Dr. John Williams. Of the six applicants three were local medical men. After the appointment a motion to appoint a second gynæcologist was brought forward. The medical staff were not in favour of the appointment being made at the present juncture. After an animated discussion the following motion was carried: That a second gynæcologist be appointed, but the question be referred to the next monthly meeting for further consideration. The view of the medical staff is that it is better to allow the gynæcologist to settle down first, and to hear his views on the prospective appointment before further steps are taken. Owing to want of funds the greater number of the beds for this special department had to be given up; but now, owing largely to the generous action of the ladies of Glamorgan, funds are available to extend the work again, and it is hoped that 12, possibly 16, beds will be available.

At the annual meeting on July 18th of the Board of Management of the Swansea Hospital it was announced that an anonymous donor, who had previously given £5,000 towards the erection of convalescent homes in connection with the hospital, had promised to double the gift. It was estimated that the homes in question would cost about £12,000, and it was anticipated that the other £2,000 would be readily obtained locally. The giver of this magnificent donation remains anonymous, the announcement being made through Miss Dillwyn, the newly elected Chairman (or Chairwoman) of the Board of Management. At the same time another anonymous gift of £800 was announced to be invested for the maintenance of a ward in the hospital to be called the Devon and Dorset Ward.

An important case of seizure of meat was decided on July 18th at Swansea. The case caused a considerable amount of local interest, and was in a measure a test case between the Corporation and the local butchers. A right forequarter of an ox was seized on account of tuberculosis both in the lung and in the glands of the seized forequarter. The expert evidence called by the prosecution confirmed the tuberculous nature of the lesions. Ultimately the defendant, a local butcher, was fined £2 and £20 6s. costs. The chief interest of the case lies, however, in the points of law raised by the defendant's legal adviser, of which the most important was whether the inspector who seized the meat had the legal power to do so. The special meat and veterinary inspector was not a sanitary inspector, and had not been appointed under the Public Health Act. The prosecution could not, therefore, be taken under the Public Health Act of 1875, but was taken out under the Towns Improvement Clauses, the inspector being specially appointed to carry out certain sections of these clauses. The objection was overruled after the magistrates had adjourned the case, but it is understood that an appeal will be lodged, and the magistrate intimated that if required he would state a case for a superior court.

At Carmarthen, at the County Court on July 18th, the Society of Apothecaries sought to recover a penalty of £20 from W. M. Jenkins, a chemist of St. Clears, for practising as an apothecary without a certificate. Evidence was given to the effect that the defendant was in the habit of seeing people at his chemist's shop, and that there he not only supplied medicine to them, but prescribed and examined and in general treated them medically. The offences complained of appeared to have been going on for some time, and were brought to light, as happens in so many of these cases, as the result of an inquest on a patient said to have been treated by the defendant. It was explained by Mr. T. Walters, coroner for West Carmarthenshire, that the defendant had appeared before him at three previous inquests, and that he had been several times warned by him, but without effect. The jury found defendant guilty of having acted as an apothecary without a certificate, and the penalty of £20 was imposed with costs.

## BELFAST.

*Prevalence of Enteric Fever in Belfast.—The Belfast Health Journal.*

It is sad once more to have to record the prevalence of enteric fever in Belfast. The two public responsible Boards, the City Council and the Water Commissioners, instead of amicably joining their forces to eradicate the evil, are again squabbling, each endeavouring to shift the blame to the shoulders of the other; 247 cases of enteric, and 119 of simple continued fever were notified in one month. This presumably means 366 cases of enteric fever. The epidemic began in the Woodvale portion of No. 10 district. The medical officer of health for this district, with the superintending medical officer of health for the city, and the visiting physician to the Union Fever Hospital, were instructed to make a careful inquiry into the history and probable cause of the onset in the houses of a list supplied to them. Their report to the Health Committee, as far as it goes, is most valuable; but its importance is seriously discounted by the fact that although 366 cases were notified from the 19th May to the 15th June, yet these gentlemen were supplied with a list of twenty-four houses containing 27 cases of typhoid, some of them dating as far back as the end of March. In their investigations they found, with few exceptions, fairly good sanitary arrangements, and nothing suspicious in the food or milk supply. It has been said, but never clearly explained how, that this district is supplied with Stoneyford water. The authors of the report are evidently not certain on the point, because they qualify their statement by saying "we believe" it is so. Surely this is a point that could be settled. They saw evidence, however, sufficient to convince them that the Stoneyford catchment area was contaminated by alvine discharges, both brute and human; and as two cases of enteric fever had occurred in this area in February, they are led to believe that the water supply is mainly responsible for the excess in No. 10 District. Here plainly the Water Commissioners have been at fault for not having bought up these lands, as some years ago they were empowered to do, and so put beyond suspicion the source of their supply. On the other hand, although the twenty-four houses in the list supplied to these three medical officers were found fairly sanitary, it is perfectly well known and has been demonstrated again and again beyond cavil, that there are hundreds of houses utterly insanitary in the city.

Dr. O'Neill has just published the last number of the second volume of his *Belfast Health Journal*, which will conclude—it is to be hoped only for a time—the present issue. The chief sanitary lessons that are enforced in this number—as, indeed, all through the second volume—are the importance of an improved meat and milk supply and an improved system of housing the working classes; great stress is laid on preventable disease, and on the fact that literally thousands of deaths occur which might be prevented. A map of what has been done in one place by the London County Council in clearing away overcrowded insanitary property is given, and serves to illustrate a second map which shows what should be done on an analogous plan in one of the overcrowded regions of Belfast. Articles on proper street construction, on the flax industry in Belfast in relation to health, on bacteria filter beds, and many other subjects, combine to make this a most interesting number.

## HONG KONG.

*Epidemic of Bubonic Plague.—Decrease in the Weekly Returns.—Small-pox Returns.*

The total cases reported to date (21st June) are 1,406, of which number 1,334 proved fatal. A special characteristic of the epidemic this year has been the large number of Europeans attacked. Twenty-three Europeans have suffered from bubonic plague, of whom 10 have died. Most of these cases occurred in Queen's Road Central. Large numbers of Chinese with their families have left the Colony, the total being esti-

mated at 70,000 to 100,000. Great difficulty has been found by large employers of labour in keeping their Chinese workmen from going to their villages. To conciliate these workmen as far as possible, certain concessions have been made whereby one or two large companies can treat their own men (under proper medical supervision) in isolated quarters near their own premises, instead of having all cases removed to Kennedy Town Hospital, as formerly. The hot season is now at its height, and the returns of cases during the last three weeks show a definite fall:

| Week ended— | Cases. | Deaths. |
|---|---|---|
| 1st June ... ... | 215 ... ... | 207 |
| 8th ,, ... ... | 161 ... ... | 155 |
| 15th ,, ... ... | 151 ... ... | 151 |

In 1894 the number of cases to 21st June was 2,007. During the last few days the cases per day average 20.

The number of cases of small-pox reported from the beginning of the year to the week ending May 25th has been 83, while the deaths have numbered 52.

## INDIA.

*Ethnographic Survey of India.—The Malaria Commission in India.—The F.R.S. for two Indian Medical Service Officers.—The Kausali Institute.—Hot Weather: Decrease of Plague.*

MUCH satisfaction is felt at the decision of the Government of India to carry out a complete ethnographic survey of India under the direction of Mr. Risley, the Census Commissioner, whose great interest in the subject is witnessed by his well-known book on *The Tribes and Castes of Bengal*, and by various papers in the *Proceedings* of the Asiatic Society, which is also rich in fragmentary work by various writers on this subject: the hill tribes of Assam, for instance, having been recently dealt with by Lieutenant-Colonel Waddell of the Indian Medical Service. However, a great many very interesting tribes, especially of Central India, have never been adequately dealt with, and those of Chotta Nagpur have by no means been exhausted by Colonel Dalton's work on them. Owing largely to the strictness with which marriages between different tribes and castes is prohibited in India, racial characteristics have been preserved unchanged for many centuries to an extraordinary degree, so that the results of a full inquiry, with measurements, cannot fail to be of the greatest interest. The inquiry is expected to last about five years, during which information will be collected from all who have studied it locally. The weakest point of the scheme is that the head of it is expected to do the whole of the vast labour which it will involve in addition to his ordinary duties, while only one native assistant surgeon is placed on duty for the purpose of making all the required measurements. This is an example of the false economy which so often in this country robs such investigations of half their value. Possibly, as the work proceeds, the necessity of adding to the staff will force itself on the attention of the Government, while in the meantime Lord Curzon may be congratulated on the initiation of so important a piece of work.

Drs. Stephens and Christophers, of the Malaria Commission of the Royal Society, have arrived in Calcutta to continue their investigations in India, where they may rely on every possible help being given them. Although the present season is that of the minimal prevalence of malaria, yet there is no lack of cases, which will soon be increasing again shortly after the onset of the rains. Much work has been done during the last year or two on the distribution of mosquitos and malaria in India, while two Indian Medical Service officers have succeeded in producing malaria by means of the bites of previously infected *Anopheles*. An illustrated paper by one of them has appeared in the recently-issued number of the Scientific Memoirs by medical officers of the army of India, which, by the way, is an unusually interesting one, reflecting the great revival of research work in India as a result of increased attention given to tropical diseases.

The fact that out of the fifteen scientists nominated for the Fellowship of the Royal Society this year no fewer than two are members of the Indian Medical Service ought to act as a further stimulus to those who are working under undoubted difficulties of climate and multifarious duties. Major Ross's work needs no bush, but owing to the very technical nature of that of Major Alcock, it is necessarily less well known. He was for several years naturalist to the Marine Survey of India, and since 1894 has held the post of Professor of Zoology and Superintendent of the Museum at Calcutta, where he has done a vast amount of work in organising the zoological portion of the museum, and in working out and classifying many of the deep-sea fauna, especially the crustaceæ, his work on which is well known to European scientists.

The Kausali Institute is doing very good work, an average of about one case a day for the prevention of hydrophobia being treated. Many of the patients are natives. The results up to date compare favourably with those obtained in Europe. Many thousands of rupees have already been saved to the Government, owing to its being no longer necessary to send soldiers to Paris to be inoculated, while many who could not afford such a journey are being saved from a frightful death. Antivenene will also be made at the institute, a supply of which near at hand will be of the utmost value.

The usual decline in the prevalence of plague during the hot weather months has been as marked as ever this year, the number of deaths returned for the whole of India having declined from 11,606 during the first week in April to only 1,066 in the last week of May, the fall being a general one affecting all parts of the country. Still the present numbers are just twice as large as at the same period of last year, so that there is no evidence whatever as yet of any tendency for the disease to die out, while, on the contrary, it has during the present season taken a much firmer hold of the North-west Provinces than before. It has become much more widespread in the Punjab, the strenuous efforts to confine it to the first infected districts having failed owing to the fatalistic obstruction of the ignorant villagers, who by means of rioting have forced the Government to abandon the more effective measures of evacuation of the villages. Fortunately the maximum seasonal prevalence of plague in India only lasts some three months of the year, while during the remaining months the mortality is small and the disease sporadic, so that before long it will probably be regarded as an endemic disease with epidemic periods like cholera and malaria, only causing but a tithe of the victims claimed yearly by the latter affections.

# OBITUARY.

## JOHN EDWIN SCOWCROFT, M.D., J.P., Bolton.

THE MAYOR OF BOLTON, Alderman JOHN EDWIN SCOWCROFT, M.D., J.P., died suddenly on July 10th of apoplexy. He was only 56 years of age at the time of his death, and had fulfilled his professional and municipal engagements on the previous day, when he appeared to be quite well, although his general health had been unsatisfactory for the greater part of the year.

Dr. Scowcroft, who was the son of the late Mr. John Seddon Scowcroft, received his early education at the Bolton Grammar School. His medical education he obtained in Manchester and Liverpool, and in the Manchester school he was for a time Prosector in Anatomy. He qualified in 1868, and immediately thereafter commenced practice in Bolton. Among other qualifications, he held the St. Andrews M.D. degree, the F.R.C.S. of Edinburgh, and the F.F.P.S. of Glasgow. For thirty-three years he continuously practised his profession in Bolton, and a few years ago he was joined in partnership by his son, who had gone out to South Africa as civil surgeon a few weeks only before his father's death. In addition to many other appointments, Dr. Scowcroft was Honorary Surgeon to the Bolton Infirmary, and Honorary Medical Officer to the Bolton Rescue Home. He had also been for some years one of the medical inspectors under the Factory Acts.

He was placed on the Commission of the Peace for the Borough in 1881, and he was Surgeon-Captain in the Local Infantry Corps. He took a great interest in Sunday School and other religious work.

But it is probably in connection with the municipal affairs of Bolton that his greatest reputation was won. He worked in connection with its Town Council for 21 years, 13 years as councillor and 8 as alderman, and he had been Mayor of the town for about two years at the time of his death. He took particular interest, as was to have been expected, in all

matters relating to the sanitary condition of the borough and the health of its inhabitants. It was recognised that he had rendered special service in helping to carry out improvements in regard to unhealthy areas, for the abatement of smoke and other nuisances, for the provision of public baths, and most especially for the provision of infectious diseases hospitals. It has been said that the town of Bolton will suffer greatly and be much the poorer for his loss. And by his patients and acquaintances it is felt that a skilful, kindly, and good man has gone from them. Deep sympathy is felt with his widow and family in their bereavement. Dr. Scowcroft was a member of the Lancashire and Cheshire Branch of the British Medical Association.

### ROBERT BLACK, M.D.,

Assistant Surgeon to the Sussex County Hospital, Brighton.

The recent accident on the Matterhorn, in which Dr. Black lost his life, closes a useful and distinguished career.

His father was a solicitor at Brighton, and here Robert Black was born, and passed his school days; here he began his professional education as a pupil at the Sussex County Hospital, and then he passed on to the London Hospital. He took his M.B. (with honours) at the London University in 1881, and returned to Brighton, being appointed Assistant House-Surgeon and then House-Surgeon at the County Hospital. He became M.D. in 1882, and eventually commenced private practice as partner with Mr. N. P. Blaker, with whom he was associated at the time of his death. He was soon appointed Assistant Surgeon at the County Hospital, and succeeded to a post on the Senior Staff a few years ago.

One of his colleagues writes as follows: "He was widely known socially and in his profession; his early death, and especially the tragedy of it, will be deeply regretted. It is not possible for anyone to be more truly mourned. Intellectual, cultivated, and artistic, a good musician, a lover of Nature, and full of philosophic speculation, he was an excellent companion. A keen sense of humour, combined with a pessimism largely assumed, hid very thinly the real kindness of his heart. Generally goodhumoured and equable, he was roused by anything not quite just and honest. First rate in knowledge, purposeful, and painstaking, he gained much success. It will easily be seen how good a colleague is lost, and how charming a friend."

## THE LONDON COUNTY COUNCIL AND THE PUBLIC HEALTH.

At the last meeting of the London County Council a report was received from the Public Health Committee dealing with a variety of interesting questions.

*Regent's Canal.*—Dr. Cooper, the chairman, stated that attention was being directed to the condition of the Regent's Canal with a view to prevent nuisance arising therefrom, as was the case last year during the summer drought.

*Small-pox.*—The medical officer had, the Committee reported, called attention to the fact that 32 cases of illness certified to be small-pox had been notified in London during the present year. Nine of these cases had, however, been returned from the hospitals of the Metropolitan Asylums Board as not suffering from small-pox. Of the remaining 23 actual cases 17 have been notified since the first week in June. The 23 cases are distributed among ten metropolitan boroughs, namely: Paddington, Kensington, Hammersmith, Fulham, Marylebone, Islington, Hackney, Bethnal Green, Stepney and Walworth.

*Tuberculous Cows.*—The Committee further reported with reference to tuberculous cows in London, that unless and until Professor Koch's latest views are generally accepted, it would be unwise to disregard this source of infection. The Committee's attention had been directed to two cows certified by the Council's veterinary inspector to be suffering from tuberculous disease of the udder. In the first case the cow was slaughtered, and its carcass, being found to be badly affected with tuberculosis and unfit for food, was destroyed. In the other case notice of the condition of the cow was given to the occupier of the cowshed premises, and he was cautioned against selling or using the milk from this animal. It was subsequently ascertained that the cow had been sold by auction at Romford market with several others, and the purchaser had not been traced. This case, in the Committee's opinion, illustrated the need for power to seize and slaughter cows affected with tuberculous disease of the udder. The Council on June 18th instructed the Parliamentary Committee to seek legislation in this direction. A further report of the Committee recommending that Dr. Klein should undertake the bacteriological examination of milk at a cost of £215 5s. per 100 samples was after debate referred back to the Committee for further consideration.

*Plague.*—In view of the possible importation of plague, the Committee was authorised to act for the Council during the approaching recess.

# MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

**Lead Poisoning.**—Mr. Coghill last week called the attention of the Home Secretary to the fact that out of 64 cases of lead poisoning reported during June, only 8 were in the china and earthenware trades, and asked why under those circumstances new special rules were necessary for a trade in which relatively few cases occurred. Mr. Ritchie said the figures were correct, but the 8 cases in the china and earthenware trade included 2 of the 4 fatal cases reported in the month. The remaining 56 cases were spread in small numbers over many trades. There was only one trade, the manufacture of white lead, in which the number of cases was larger than in the china and earthenware trades, and for that trade new rules had recently been made. The reasons for proposing new rules for the china and earthenware trade had been fully given in the published reports.

**Hospital Beds for Wounded Officers.**—General Laurie made an inquiry on this subject last week, and Mr. Brodrick replied that at Netley 16 beds were available, and that in all 75 officers had been treated there. At Herbert Hospital 2 beds were available, but none had applied to be treated there. More officers might have availed themselves of the accommodation provided in these hospitals. As regards private accommodation it was provided in some cases free of expense, owing to the generosity of private organisations. The question of providing for private medical attendance at the public expense was under consideration.

**The Army Estimates.**—Thursday in last week was devoted to the Army Estimates, and the medical vote was put down after the salary of the Secretary of State, in order to get a discussion on the R.A.M.C. Unfortunately the expectation was not realised, and so this year there will now be no chance of discussing medical matters. This was much regretted, but the debate on the Dawkins report on the organisation of the War Office and other questions occupied the whole evening, and the debate on Mr. Brodrick's salary was not concluded when the House rose. In the course of the evening Dr. Farquharson managed very cleverly to get in some remarks on the Committee now sitting on the R.A.M.C., and he criticised the composition of it as not quite broadly representative of the principal medical schools. He complained of the undermanning of the Army Medical Department, and claimed for the position of Director-General greater power and consideration. He especially referred to the premature retirement of, and the insufficient reward given to, the late Director-General after a brilliant career. He pointed out that any reforms which relied on civil doctors for home duties, while the army doctors were used for foreign service, would not popularise the service, and would lead to a breakdown in war time. He regarded the appointment of Sir F. Treves on the Committee as very valuable, but there ought to have been also appointed some army medical officer of long standing and experience. He specially urged that the recommendations formulated by the British Medical Association should be carefully and specially considered by the Committee of Experts before they arrived at any decision.

**Typhoid among the Troops in South Africa.**—In answer to Sir Walter Foster, the Secretary of State for War said that the figures were forwarded in weekly returns, and could not, therefore, be calculated for any one exact month. From returns received since June 25th, the deaths for the four weeks ended April 26th were now given as 194. For the five weeks ended May 31st the admissions were 2,300, and the deaths 326.

**Dr. Tebb's Appointment.**—Mr. Corrie Grant asked the President of the Local Government Board last Monday whether he was aware that Dr. Tebb was elected Medical Officer for Penge after open competition in response to public advertisement; why the Local Government Board refused to sanction his appointment; whether a profession of belief in vaccination was required from medical officers of health;

and what duties in securing vaccination are imposed on medical officers of health. Mr. Long, in reply, said that the matter had recently been discussed, and the reasons for not sanctioning the appointment fully explained to the House, that no profession of belief in vaccination was asked for, and that in case of an outbreak of small-pox the medical officer of health is much concerned, as it would devolve upon him to do his utmost to promote vaccination and revaccination.

**The Transport "Mongolian."**—In answer to Sir Walter Foster, the Secretary to the Admiralty informed the House on Monday last that the promised inquiry had now been made into the circumstances attending the voyage of the *Mongolian*. The machinery of the vessel broke down twice during the voyage from the Cape, and the voyage was consequently unduly lengthened. Before leaving on her outward voyage she had been thoroughly surveyed, and the Board of Trade certificate renewed. Up to her last voyage the *Mongolian* had made the passage at an average speed of 12 knots. The delay in her last voyage caused an extra demand on stores, which in some cases proved inadequate. The commanding officer on her last voyage outwards reported that the accommodation was entirely satisfactory in all points, and that the hospital could hardly be improved upon. Unfortunately, great demands were made upon the accommodation on the last homeward voyage owing to the fact that several patients who had acquired the germs of enteric fever at Kroonstadt developed the disease on board. The hire of the vessel had been stopped for the period by which she exceeded the normal length of voyage, and a fine of £700 had been thus inflicted. An abatement would also be made in the daily rates payable in respect of victualling.

**The Investigation of Cancer.**—Mr. Weir asked the First Lord of the Treasury whether, in view of the increase of this disease, he would consider the advisability of the appointment of a Commission or Committee to inquire into what steps could be taken for aiding research into the cause, cure, and prevention of cancer. Mr. Balfour replied that he could not believe that a Commission would be the proper machinery for carrying on delicate and difficult questions of medical research. The prevalence and increase of this disease was occupying every medical mind over the whole of the civilised world, and he could not think that the appointment of a Commission would either aid or stimulate inquiry. Before any grant of public money could be made by the Government in aid of research, they would have to be assured that such an unusual course would have satisfactory results.

**The Factory and Workshops Acts Consolidation Bill.**—The new clauses added to the Factory and Workshops Amendment Bill last week embraced two clauses dealing with ventilation. The old provisions of the Cotton Cloth Factories Act, 1897, were agreed to be suspended and repealed on an order being issued by the Secretary of State. A new clause dealing with formal investigations into accidents directed by the Secretary of State was also added to the Bill. On Monday last the Amendment Bill, as finally reported, was brought before the Standing Committee, and added to the Consolidation Bill, so as to consolidate the whole of the Factory Acts in one measure. The Consolidated Bill was ordered to be reported to the House, and the proceedings ended with a vote of thanks to the Chairman for his long and arduous services. It is expected that two days will be given to the Bill for the report stage, and as it will comprise more than 100 pages of closely printed clauses the time will not be excessive. It is not expected to come on till late next week at the earliest.

**Brass Poisoning.**—Dr. Farquharson called the attention of the Home Secretary to a death at Birmingham, which was certified as brass poisoning, and to the statement made at the inquest that of the 2,000 men, women, and girls employed in the 400 brass foundries of Birmingham a large proportion were suffering or had suffered from the symptoms of brass poisoning. The Home Secretary said that his attention had been called to the matter by the coroner. The question of the danger to health from dust in polishing brass and other metals had for some time been engaging the attention of the Factory Staff and especially of the Medical Inspector of Factories. Mr. Ritchie promised to make further inquiry, and to consider what steps ought to be taken.

**Promotion in the Army Medical Department.**—Captain Norton asked on Tuesday why the promotions due in the Army Medical Department on the retirement of the late Director-General on June 1st had not been gazetted. Mr. Brodrick said that the organisation of the Department was not yet complete, and that the appointment might be affected by the organisation.

**Tuberculosis Commission.**—In answer to a question calling his attention to the resolution of the Tuberculosis Congress asking for a Royal Commission to inquire into and report on the communicability of bovine tuberculosis to the human species, Mr. Walter Long said the resolution had his attention, and the matter was under consideration.

## IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

THE summer general meeting of the above Association was held in the Ladies' College, Cheltenham, on Wednesday, July 31st. The attendance of members was unusually large, and included Professor Alexander Macalister, F.R.S., and Dr. Mapother (Vice-Presidents): Sir John William Moore (Dublin), Sir William R. Kynsey, K.C.M.G., Surgeon-General Cuffe, C.B., Surgeon-General Sibthorpe, C.B., Professor Anderson (Galway), Professor Thompson (Belfast), Colonel Boileau, A.M.S., Fleet Surgeon Gilbert Kirker, R.N., and the Honorary Secretaries, Drs. James Stewart and J. H. Swanton. In the absence of the President, Dr. W. Alexander (Liverpool), the chair was occupied by Dr. MAPOTHER, Vice-President.

The Council reported that since the annual general meeting the restrictive rule had been repealed in the case of two provincial hospitals.

Sir JOHN WILLIAM MOORE (Dublin) said that the subject of the exclusion of those holding the higher diplomas of the Royal College of Physicians of Ireland from candidature for honorary appointments in English hospitals had for several years engaged the anxious attention of the College.

After some remarks on the same subject from Professor THOMPSON (Belfast), the meeting adjourned.

DR. R. TANNER HEWLETT, of the Jenner Institute of Preventive Medicine, has been appointed to the professorship of General Pathology and Bacteriology in King's College, London: and Dr. StClair Thomson has been appointed Assistant Physician for Diseases of the Throat to King's College Hospital.

WEST LONDON HOSPITAL.—The late Mrs. Mary Lidbrooke Hull Martin, of Holland Road, Kensington, by her will has bequeathed to the West London Hospital, Hammersmith, fifteen hundred pounds, and subject to the life interest of her adopted son, Mr. Thomas Wholey, left her residuary estate to the same institution, "for the purpose of founding, building, and maintaining a home for patients suffering from incurable cancer, where they may end their days of suffering here on earth."

THE NEW CORONER FOR THE CITY OF LONDON.—Dr. F. J. Waldo, the new Coroner for the City of London, was entertained by his friends at a congratulatory banquet at the Crystal Palace on July 25th. An illuminated address was presented to Dr. Waldo expressive of his friends' appreciation of his sterling work as a sanitarian and a public officer. The address alluded in terms of praise to his efforts to decrease the infantile mortality of the parish, to improve the character of the bakehouses, to bring the nightly shelter of the poor under the observation of the sanitary authorities, and to clear insanitary areas.

DR. FEODOR KRAUSE, Professor of Surgery at Halle, has been elected Extraordinary Professor of Surgery at Berlin; and Dr. Alexander Westphal of Berlin has been appointed Extraordinary Professor of Psychiatry at Greifswald.

## BRITISH MEDICAL ASSOCIATION.

### SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, AUGUST 3RD, 1901.

## THE ANNUAL MEETING.

The sixty-ninth annual meeting of the British Medical Association, which is in progress at Cheltenham as we go to press, will be memorable in many respects. It has served to make a large number of members of the profession acquainted with one of the most agreeable residential towns in England, situated in the heart of a beautiful country, a town which may yet regain the place it once held as a mineral water spa and health resort, especially in winter and spring. It has brought together from all parts of the United Kingdom and of the British Colonies members of the Association, and not a few foreign guests, anxious to take part in the discussions which have been arranged with so much care and discrimination by the officers of Sections. Finally, it has had before it in general meeting the matters of the first importance to the future welfare of the Association as an organised body raised by the report of the Constitution Committee.

The address delivered by the President of the Association was worthy of the occasion. As the first called to undertake that office in a new century, he was almost under an obligation to look back upon the work done for medicine in the century just past. Those who heard and those who read Dr. Ferguson's address will agree with us in congratulating him on the discrimination with which he marshalled his facts and showed how inevitable is the conclusion expressed in the title of his address that scientific research is the indispensable basis of all medical and material progress. It is a doctrine which needs to be insisted upon very strongly in our day and country, and it is good that the President of the British Medical Association should have taken advantage of the occasion to range himself with the leaders of thought in other departments of activity who have defended the same thesis from other standpoints. The country has a fit of introspection, and is examining its assets and its prospects with a critical eye. The result is not altogether satisfactory. We have not the lead we once had in commerce, and we have undoubtedly dropped behind in the race with other nations as regards both the acquisition and the dissemination of knowledge.

Dr. Ferguson tells us that recent experience has impressed him with the contrast between the antiscientific spirit which characterises most of the wealthier and more cultured classes in this country and the thoroughness and scientific spirit manifested elsewhere. We would fain hope that he has taken too gloomy a view, and that if the aristocratic and the would-be aristocratic classes retain almost unmitigated the "barbarian" attitude of mind which Matthew Arnold condemned, the ranks of the professions, of trades and of commerce, contain a majority which appreciates the truth of his text.

Certain it is that our deficiencies are more clearly and generally recognised than was the case a few years ago, and that there is even a danger that newly-born zeal may not be directed into the best channels. Dr. Ferguson tells us that the antiscientific spirit which impedes the progress of medicine even more than any other branches of knowledge is to be eradicated only by the better education of the young. It will probably be admitted by all that more colleges and technical schools are wanted, and that better equipment and more liberal financial support are needed by those already in existence, but the policy which calls for more universities is more open to criticism. There are those who fear that the multiplication of universities, by creating competition for students, may tend to cause a lowering of the standard of degrees.

The circumstances of the medical profession are peculiar in this respect, inasmuch as we have to make our account not only with universities but also with corporations, all naturally jealous of their privileges. The true remedy for the medical difficulty would seem to be a one-portal system, a precedent for which in combination with many universities is to be found in the German empire. It is, at any rate, pretty certain that in any specific instance the decision of the question whether a new university shall be founded will not be determined by medical considerations alone, but that local aspirations and the desire of teachers in other faculties to take a share in the examination of their own students for degrees will tend to favour the multiplication of universities. The only alternative appears to be the principle of federation of colleges, and this has not hitherto proved a success. A scheme of this kind had a long trial in France, but has now been definitively abandoned, and the one British federal university seems about to break up. Various authorities have within the last few months given to the world their ideas of what a university should be; probably the true spirit has never found better expression than in the principle quoted by Dr. Ferguson—"True knowledge by free research"—for freedom in research will mean freedom in teaching to insist on realities, and eventual liberation from the tyranny of examinations as the sole sufficient test of teaching.

The consideration of the report of the Constitution Committee to the annual meeting was begun at the general meeting on Wednesday, and its main principles were affirmed after a brief discussion, which showed unmistakably that the general feeling of those present was in favour of those principles. The Chairman of the Constitution Committee, Mr. Edmund Owen, moved the reception of the report in a witty and genial speech, which put the meeting in a thoroughly good humour with itself and with him. The motion was seconded by Mr. Victor Horsley, who dwelt on the importance of the proposed changes to the profession at large, and it was then carried without further discussion.

Mr. Whitaker, who has taken so active a part in the work of the Constitution Committee, then moved a comprehensive resolution affirming the general principles of the report "without prejudice to the further consideration of details," a motion which Professor Byers afterwards happily compared to a motion for the second reading of a Bill in the House of Commons. The discussion on this was opened by an amendment, moved by Dr. Pope and seconded by Dr. Handford, who desired that for the present the changes should be limited to the inclusion of unattached members in order that the effect of this on the number of members, and therefore on the income of the Association, should be ascertained before any other changes were made or fresh financial obligations incurred. Mr. Butlin supported the proposed amendment on similar grounds, but it was evident that the meeting would not be satisfied with so limited a result of the labours of the past year, and when Mr. Whitaker's resolution, which was seconded by Mr. Verrall, was put, it was carried with very few dissentients; in fact, almost unanimously. The meeting then passed to the consideration, paragraph by paragraph, of the Recommendations of the Committee's report, and rapid progress was at first made, exception being taken to a few points only. An amendment to extend the period within which a Colonial member suspended by the Branch to which he belonged should have the right of appeal to the Central Council from fourteen to twenty-eight days was carried; but a proposal to omit the provision that the Central Council should have power to co-opt members not exceeding one-tenth of the number of elected members, and another to increase the number of representatives of the larger Branches on the Council, were rejected by the meeting. The subject of the annual general and representative meetings (Recommendation 16) was under consideration when the hour arrived at which the President had previously announced that the meeting would be adjourned.

### ADOPTION OF THE REPORT OF THE CONSTITUTION COMMITTEE.

As we go to press we learn by telegram that the Constitution Report has been adopted. The only important amendments are (1) That the chairman of the representative meeting is to be *ex officio* a member of the Council; (2) that to Clause 20 [*Annual Subscription: Grant to Branches*] the following words are added: "Nothing shall prevent any Branch from levying a voluntary subscription for special purposes, or for complimentary members;" (3) that the Council shall present an estimate of revenue and expenditure to the annual general business meeting.

## THE ADDRESS IN MEDICINE.

DR. GOODHART'S Address in Medicine at the annual meeting of the British Medical Association, which is published at page 260, cannot fail to interest medical men engaged in the active practice of their profession. It preaches once again, and in a specially entertaining form, the lesson of individualism in treatment.

The treatment of individuals may in many respects be contrasted with State medicine, with which the general addresses at last week's Tuberculosis Congress were chiefly concerned. The success of State measures for the suppression of disease depends mainly on the recognition of influences acting on large classes, whilst the practitioner's work requires the most careful investigation of individual tendencies, without the due recognition of which he cannot be really successful. Not only is such a recognition of individual tendencies frequently helpful in treating distressing "functional" symptoms and various forms of temporary ill health, but it is serviceable even during acute febrile disease, and most of all useful in warding off premature degenerative troubles and prolonging the useful period of the patient's life. It is indeed true that many patients pay less heed to medical advice when it concerns the prolongation of health of mind and body than when it deals merely with the relief of some temporary ache or pain, but there are also some, though probably the minority, who realise fully the value of advice which, if carried out, will diminish the chances of ill-health in the future. Naturally, in this respect there is a great difference between the educated and the relatively uneducated classes. Many educated persons, who might be expected to know better, think very little of advice on the preservation of health, especially if it is not written down, though they treasure up every prescription, and sometimes lend them to their friends; others, relying on a little knowledge picked up from reading, often from scraps of conversation with medical men, profess a horror of all drugs, and will be satisfied with nothing but baths and massage, and other forms of physical therapeutics. Yet there are certainly others who realise some of the inevitable difficulties of practical medicine, and endeavour to facilitate their adviser's decision by an intelligent description of former illnesses and therapeutic results without manifesting the morbid introspection of hypochondriacs. Such patients thoroughly recognise the necessarily experimental element in treatment to which Dr. Goodhart alludes, though they do not insist on trying every latest therapeutic novelty or recklessly urge a resort to very "experimental" operations.

If so many difficulties arise, as Dr. Goodhart tells us, from the ignorance of patients, should not endeavours be made to increase the patients' knowledge, that is the knowledge of the general public on medical matters? No one will deny that the dissemination of knowledge in regard to general hygiene has yielded admirable results, and with respect to tuberculosis much is to be hoped from the present broadcast publication of general information. No one, we think, is likely to deny that the dissemination of medical knowledge can be made useful, provided that sufficient care be taken as to the kind of information and the means of distributing it. If possible, every child should be taught the elements of biology, human anatomy and human physiology, and school teachers should be specially tested with reference to their capabilities of imparting this kind of instruction. This is the first requisite, and one which is very imperfectly carried out at present. The knowledge thus early acquired should be supplemented later on by careful instruction on the rudiments of hygiene and public health, the amount and kinds of food required, the dangers of excess in eating and drinking, and so on. If such information be made interesting, as it certainly can be, it will stimulate to inquiry and lead to a

permanent habit of observation, which will add to the enjoyment and usefulness of life. By these means the work of doctors and hygienists will ultimately be facilitated, their real function will be appreciated, and their profession dignified in the eyes of the public.

In regard to hospital work, there is generally not time to give all out-patients detailed advice as to diet, clothing, habits, and so on—indeed, they would seldom be able to remember the various rules given, even if there were ample time for the verbal instruction of each individual. In some hospitals this difficulty is met by the distribution of printed information to patients suffering from pulmonary tuberculosis, syphilis, certain skin diseases, and to mothers in regard to the feeding of infants. General advice given in this way, although, doubtless, often neglected, is of great use on the whole, and is preferable to verbal directions hurriedly given and liable to be misunderstood. Time is thus gained for giving special advice to the individual case.

## THE ADDRESS IN SURGERY.

The Address in Surgery, delivered by Sir William Thomson, contains an able outline and summary of the alterations in, and the additions to, our surgical knowledge which have resulted from the war in South Africa.

At the meeting of the British Medical Association held in Portsmouth two years ago the subject of gunshot wounds of the abdomen was given the first place among the prearranged discussions. The papers read by Colonel Stevenson, Major Beevor, and others gave a lucid and first-hand description of the surgical experiences in the more recent of our "little wars," including the Tirah campaign. The conditions of warfare existing in South Africa have proved to be different from anything experienced before in a big war; and it is no exaggeration to say that, with the exception of the principle of cleanliness, there is hardly a doctrine contained in the papers referred to which has not needed reconsideration.

In the present war, perhaps the most striking fact is the very large number of the wounded who have recovered. Sir William Thomson attributes this to three causes, the character of the wound, the rapid application of the first dressing, and the climate. The weapons generally used have discharged small bullets, with an extremely high velocity. The resulting wound, when implicating the soft parts alone, has often been almost trivial. The points of entrance and of exit have been small, and rapidly sealed by exudation. The passage of the hard bullet has been permitted, as Sir William Thomson aptly says, rather by the cleaving than by the tearing of the soft parts, the walls of the temporary channel falling together again instantly. In many cases the injured man was himself able, as soon as the wound had been inflicted, to apply the temporary field dressing, which is a part of the equipment of every soldier. Of the climate we have all heard; the air is often very dry and clear, and, except in dust storms, very pure.

The injury sustained by the bones struck by a small-bore bullet depends chiefly upon the distance the bullet has travelled. The initial velocity of the bullet from a Mauser rifle is 2,000 feet per second. If a bone is struck soon after the discharge a comminution is the result, and fragments of bone may be carried on and spread wide in the soft parts. If the bullet is travelling slowly, nearing the end of its flight, a simple fracture of the shaft, or a clean-cut perforation of the cancellous bone at the articular ends is likely to occur.

In comparing the results of amputation and conservation in bone or joint injuries of the extremities in the Crimean war, the American war, the Franco-German war, and the recent Cuban war it is seen that the results of conservative practice have gradually improved. In the present war, though no actual statistics are available, Sir William Thomson says, "I think I may say that in no war have the amputations been so few, the number of limbs saved so many, or the mortality from such operations so small." This is indeed a triumph of those principles of Listerism which have made conservation legitimate.

Perhaps the most interesting portion of the address was that dealing with penetrating wounds of the abdomen. It seems clear from accumulated experience that a bullet may traverse the abdomen from side to side, or from front to back without wounding intestine, and that intestine if wounded, may be speedily sealed at its one or many points of perforation so that no extravasation results. In both cases no operation is needed or justified. There are, again, cases in which the gut is wounded and extravasation is clearly taking place; in these the need for operation is urgent. Owing, however, to the inevitable conditions of warfare, such as the impossibility of ideal asepsis, the large numbers of wounded hurried in to hospital in quick succeeding drafts, the time limit before peritoneal infection is overwhelming, and in this war the lack of water, the possibility of successful operation is remote. Sir William Thomson sums up: "It seems to me that in war, as we stand at present, the man whose abdomen is perforated by a small-bore bullet has a better chance of life without operation than with it, bearing in mind the circumstances on the field under which laparatory must be performed." The whole address is a clear and telling proof of the great and permanent advance which military surgery has recently made, an advance which ensures a restoration to complete health of many who, in earlier times would have been sacrified, and thus tends to lessen in no small degree the inevitable horror and tragedy of war.

## THE FACTORY AND WORKSHOPS BILL.

The new clause which Sir Fortescue Flannery proposed to add to the Factory and Workshops Bill would have compelled the medical attendant of a case of "suspected" anthrax to take a specimen of blood from the patient, whether the patient or his friends or the medical attendant approved or not. The proposal was one which could not well be defended, and it is satisfactory, therefore, to know that it has been withdrawn. That the bedside of a dying man should be liable to become the scene of a contest for a specimen of the patient's blood is a proposal not to be contemplated without indignation, and it is also most undesirable that such duties should be compulsorily imposed on the medical practitioner, who in such matters should be left to be guided by the ordinary principles of professional conduct. The proposal was the more objectionable because only in rare instances could it have given positive information as to diagnosis; a negative result would be calculated to do mischief by producing a false sense of security, and in no case could the patient

himself be benefited. The arguments against the proposal are indeed so overwhelming that it is difficult to believe that it was ever seriously intended. However this may be, it is satisfactory to know that it has been dropped, as has also another amendment to compel medical practitioners to notify all injuries received in a factory or workshop, an example of excess of zeal which could only tend to bring the whole system of notification of injuries into contempt. The Bradford and West Riding Medical Union, as has already been mentioned, took the lead in resisting these ill-advised proposals in the interests of the public as well as of the profession, and the result shows the influence which the profession possesses when its members choose to unite to exert it.

## THE LIGHT TREATMENT IN MANCHESTER.

ON July 26th a department for carrying out the light treatment of lupus and other diseases was opened at the Manchester and Salford Hospital for Skin Diseases by the Lord Mayor of Manchester, Mr. T. Briggs. At the request of the medical staff the committee decided to build a room, and the chairman of the committee, Mr. W. C. Jones, generously undertook to defray the cost of the building and the purchase of the necessary instruments, to the amount of £500. Dr. H. G. Brooke and Dr. R. B. Wild, the honorary physicians of the institution, have taken a leading part in the adoption of the new form of treatment. Although the treatment has only been in operation about a month, there are already 34 patients waiting for a vacancy. It is evident, therefore, that the committee will have to incur further expenditure in the provision of another lamp. In addition to the gift of the Chairman of the Committee, a sum of £500 has been received from the residuary legatees of the late Mr. John Harling, and other subscriptions also have been given. A special interest attaches to one of these. A paying patient, in gratitude for the benefit which has resulted to him from a course of treatment at the hospital, has asked the committee to accept a gift of £20.

## HEREDITARY MIDWIVES IN INDIA.

MIDWIFERY in India is, and always has been, in the hands of a class of utterly ignorant hereditary midwives, *dais*, who are said to number 83,000; their methods probably differ in no essential respect from those in vogue two thousand years ago. Lady Curzon recently appointed a subcommittee to consider a scheme in connection with the fund started as a memorial to the late Queen, and this scheme has been provisionally accepted. The alternatives were two—either to extend the present work of training superior midwives or to endeavour to impart a certain amount of practical knowledge to the hereditary *dais*. The latter alternative is, of course, a new departure; and if, as seems likely, it is adopted, the results cannot but be most beneficial. The difficulty would be to get these women to attend at local centres for instruction, for they certainly, as a class, are profoundly ignorant of their own shortcomings. But, as the report of the scheme points out, "the course of action suggested is somewhat analogous to that which has been successfully adopted in the case of vaccinators; . . . vaccination has made the greatest progress where the hereditary inoculators have been induced to substitute vaccination for inoculation without abandoning the characteristic worship of Sitala, the goddess of small-pox." At present no one knows the mortality in childbirth, as statistics on such a subject are practically impossible in India; that it is terrible is commonly admitted, and that it is, to a very large degree, avoidable is certain. Without the most rudimentary ideas of cleanliness or of the mechanism of labour the *dais* are responsible for thousands of deaths, and this is certainly recognised by the natives themselves. But custom there is too strong a force for an individual to attempt to break with it; and it is only by a gradual improvement of the *dai* herself, as distinct from the trained midwife, that the crying need of Indian women can be really met.

## THE ANNUAL MEETING

THE inaugural ceremony of the Cheltenham meeting was performed by the Mayor and Mayoress of Cheltenham in the Winter Gardens. At an "At Home" subsequently held, a large number of members with their friends were present. The Winter Gardens were tastefully decorated with fairy lamps, and a military band played during the evening.

A SERVICE was held at St. Matthew's Church on Tuesday morning. The President, President-elect, members of the Council, Presidents of the Sections, and local members of the Association met at the Fine Art Gallery and formed a procession (the President and local doctors wearing their academic costume), which entered the church and went to assigned seats. Another procession to the church was that of the Mayor and Corporation, and the National Anthem was played as they entered the building. The rector (the Rev. E. L. Roxby), the Rev. A. Armitage, and the Rev. G. L. H. Gardner officiated, the lesson being taken from St. Matthew's Gospel, xxv, verses 31 to 40. The sermon was preached by the Dean of Gloucester (Dean Spence) from Colossians, iv, verse 14, "Luke, the beloved physician." The preacher said he thought he should best carry out the wishes of the company of earnest, devoted toilers for the welfare of their brothers and sisters if, leaving aside scientific problems of which his knowledge was limited, he chose as his subject some of the great changes effected in the works and days of men by the religion of Christ, dwelling more particularly on those changes with which his medical brethren were especially brought into contact. First, and most momentous was the novel aspect in which death presented itself to the believers in the religion of Christ. Perhaps the best and noblest presentment of the thoughts of men before the Christian revelation on this profound subject was that by Plato, to be found in his long and beautiful story of the death of Socrates. As the result of life on earth, the death, the resurrection, the teaching, and the miracles of Jesus Christ, there flashed upon the disciples of the Master and on the communities of the early Christians an entirely new conception of death. Dissolution was no longer a subject of speculation, no longer a terror, but the gateway into life, into "the garden of the blessed." So intensely were men persuaded of this by the Life, the Passion, and the works and the words of Jesus Christ, that during the so-called age of persecution—a period of some 280 years—they seemed to be in love with death, believing with St. Ignatius, a pupil of the Apostles, that they were "the wheat of God." The senator and the slave, the old man and the tender girl, all through those 280 years, not only endured, but were positively eager for martyrdom. It was true that this glowing conviction that death was the gate of a new and more blessed life became less marked when the Roman world became *en masse* Christian. But still their experience, as well as his told them that the new view of death was held at this very hour by a great mass of Christian men and women. But the religion of Jesus had done more than remove the dark veil hanging over death and the hereafter; it had taught altruism as it was never taught before. "Surely," said a well-known writer, "if anything is a foregleam of the Kingdom of Heaven, in which we hope to share, it is the brotherhood of spirit shown in the charity of the modern world." These blessed results were distinctly the fruit of Christ's teachings. They did not exist in the pre-Christian period. The bare catalogue of the great changes introduced by Christianity was a long one. It included the end of slavery. It taught a new sense of the sanctity of the human life. It introduced a tender consideration for the victims of war. It inculcated a

higher standard of purity. But in the long catalogue, the heading of one of the chapters of changes stood out in letters of gold. Its splendid development had been mainly due to the self-denying, restless labours of the great profession represented by this present gathering. The hospital and its surroundings in some form or other was utterly unknown in the Pagan world. They appeared, did these strange new institutions, in the first century of the Church's triumph. Before that century of Christian victory—the fourth had run its course—Fabiola, a Roman lady, had founded in the Imperial City the first public hospital. The charity planted by that woman's hand soon spread over the world: it will alleviate to the end of time the darkest anguish of humanity. In the many-coloured and pathetic story of the trials and sufferings of the age of persecution, no chapter contains a more lovely and touching memory than that which tells how the noble Cyprian of Carthage and his devoted band of followers behaved in the days of the great plague which desolated that fairest city of the Empire in the year 252. Were he addressing any congregation save the present notable gathering, he should dwell with earnest emphasis upon the services rendered by the great guild of physicians and surgeons to this mighty outcome of Christian influence—the hospital, and to all the bright and blessed organisation of nursing, of convalescent homes which surround the hospital: services performed in a thousand cases without hope or thought of recompense or reward. Round his own poor life the shadows of eventide were gathering fast; but had he to live his life again he would throw in his lot with them, who were, after all, the truest servants of Christianity, who in the great majority of cases, in good truth, live the life we Christians say we love, who follow closest of all in the footsteps of Him known as God, Redeemer, Friend—the Great Physician, who loved us well, even unto death.

After the sermon an offertory was taken on behalf of the Royal Medical Benevolent College and the British Medical Benevolent Fund, and the National Anthem was sung. The concluding voluntary, played by Mr. H. A. Matthews, was the "Hallelujah Chorus."

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On Monday evening Dr. G. B. Ferguson, President-elect, entertained at dinner the officers of Sections and members of the Council, and a few other guests to the number altogether of 55 at the Queen's Hotel, Cheltenham. After dinner Dr. Ferguson gave the toast of "The King," and in a short genial speech welcomed his guests to Cheltenham. He referred also to the serious business which was to come before the general meetings, and expressed his determination to act with absolute impartiality in the chair. Sir William Gairdner proposed the health of Dr. Ferguson, and in doing so expressed the opinion that the influence of the British Medical Association in public affairs suffered by reason of a want of continuity in its work. Dr. Ferguson concluded his response by proposing the health of Dr. A. Darier, of Paris, who replied in French, expressing the pleasure with which he found himself taking part in an annual meeting of the British Medical Association, in the prosperity of which he expressed the liveliest interest.

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On Monday evening a reception was held at the Annual Museum and Exhibition, when the Mayor of Cheltenham, who was accompanied by the Mayoress, declared the exhibition open. The Winter Gardens, which have recently been renovated, afford ample space for the display of the articles and apparatus of the numerous firms which have stalls. The building is in the immediate neighbourhood of the Ladies' College, where rooms have been provided, and where the general meetings also are held. The reception rooms are midway between the two, and altogether the arrangements made for the work of the annual meeting in all its activities, and for the comfort and convenience of members, leave nothing to be desired. The thanks of all the members, numbering we believe some 1,600, are due, and will, we have no doubt, be most heartily given, to Dr. Ferguson, and to the Honorary Local Secretaries, Drs. Cardew, Pruen, and Grosvenor, as well as to the members of the various local committees, who have worked hard to bring about this successful and gratifying result.

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The Local Committee has presented to every member attending the annual meeting a *Guide to Cheltenham*, edited by Dr. Edward T. Wilson and Mr. John Sawyer. It is, as they say in a short preface, concise but comprehensive, giving in broad outline the characteristic features of the town as a health and pleasure resort and educational centre. There are chapters on the history of Cheltenham and on the town as it is to-day, on the medical, educational and ecclesiastical institutions, and on the surrounding country. The account given of the sanitary condition of Cheltenham is very satisfactory. The death-rate from consumption is low, and persons suffering from bronchial affections, it is stated, do well. Deaths from acute rheumatism are rare, and the place is considered to be well suited to both extremes of life—childhood and old age. The Cotswold Hills protect the town from northerly and easterly winds, the annual rainfall is 27.27 inches, and fogs are rare. Members have been presented also with a large illustrated pamphlet in album form entitled *The Garden Town of England*, and containing a large number of views of the town and neighbourhood, with descriptions of various places of interest. There is also a pamphlet called *The Way About Cheltenham*, containing an illustrated description of the town and its commercial resources, and there is a fourth pamphlet, *Cheltenham in the Nineteenth Century*, a short history of the place, reprinted from the *Cheltenham Examiner*. Altogether, therefore, the wants of members in respect to guide-books have been very amply provided for; and when to this list are added the daily journal of the meeting, and a small book containing particulars of the excursions, it will be understood that members of the Association carrying this bundle of literature might be easily distinguished from the inhabitants of Cheltenham, quite apart from the chimney-pot hat or frock-coat—garments which appear to have been very generally left at home.

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On Tuesday afternoon a garden party was given by Colonel Rogers, J.P., and Mrs. Rogers, at Battledown Court. Owing to the early hour at which the general meeting concluded on that afternoon, and also to the fineness of the weather, this entertainment was very largely attended by members, who thoroughly appreciated the hospitality extended to them.

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A garden party, given on Wednesday afternoon by the Mayor and Mayoress of Cheltenham at Pittville Park, was attended by large numbers of members and their friends, many of whom were carried to the park on motor cars, and others on brakes. The weather being all that could be desired a very enjoyable afternoon was spent, and it was felt that the Mayor and Mayoress had added considerably to the debt of gratitude already owed to them by the members present at the meeting.

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On the evening of Wednesday an illuminated *fête* was given in the Montpellier Gardens by the Mayor and Mayoress. A reception tent was placed near the entrance gate and the extensive grounds, covered with velvety turf and scattered over with trees, was used as a promenade by a large number of visitors. The evening, which was perfect in regard to weather, was made all the more pleasing by the music rendered by the White Viennese band.

SIXTY-NINTH ANNUAL MEETING

OF THE

# British Medical Association.

*Held at Cheltenham, July 30th, 31st, August 1st and 2nd.*

FIRST GENERAL MEETING, TUESDAY, JULY 30TH.

THE first general meeting of the sixty-ninth annual meeting of the British Medical Association was held at Cheltenham on Tuesday, July 30th, Dr. ELLISTON, the President of the Association, in the chair.

The minutes of the last meeting were by permission taken as correct.

The retiring PRESIDENT said the time had come for him to resign into their hands the trusts which they imposed upon him two years ago at Portsmouth. It was usual, he believed, for the retiring President to give very briefly a sketch of the important events that had occurred during his year of office. This had been an eventful year in the ordinary course of events. To begin with, the nineteenth century, that gave birth to this great British Medical Association, had passed away, and the new century had dawned upon them since they met. Then, again, this nation had suffered a great and irreparable loss by the death of their beloved Queen, the great and good Queen Victoria. A new reign had commenced, and with regard to that new reign his successor would have a special resolution to propose to them in the course of the meeting. One of the great events of his year was that the Association had made His Royal Highness the Prince of Wales an honorary member of the Association, having first ascertained that he had become a member of our profession both as physician and surgeon. He graciously consented to become an honorary member, and at Ipswich he was made an honorary member. There were one or two other matters which he had to relate in connection with the Ipswich meeting. One was that then ladies for the first time in the history of the Association were appointed to hold important office in the scientific sections of the meeting, and, again, a new Section was established, namely, the Navy, Army, and Ambulance Section of the Association which had already done good work, and which he thought was a Section that had come to stay, because so many matters in connection with the various services and with the profession had to be submitted to someone, and it had become important that they should be submitted to a Section thoroughly cognisant with all the work of the various Branches. He took it, therefore, that the Navy, Army, and Ambulance Section of the British Medical Association was a most important one. Then he had, lastly, to congratulate the members upon the continued success of the Association during his year of office. The Association continued to increase in numbers and he also congratulated them upon the most successful and satisfactory financial position of the Association. It was very much in consequence of the continued success of their Association that the Constitution Committee, appointed last year at Ipswich to inquire into the constitution of the Association, had become necessary. It was not that matters in the past had failed; it was rather that this Committee had been called for from the very great success and the extension and development of their Association in every part of the Empire. This Committee had met on many occasions, and had given an enormous amount of time and consideration to the report which would be submitted to them, and he ventured to hope that at this meeting they would give that report the consideration which the amount of work thrown into it deserved at their hands. Before resuming his seat he had to thank the permanent officials of the Association for the help they had given him during his year of office; to Mr. Fowke, the General Secretary, whose absence they so much regretted, and to Dr. Dawson Williams, the Editor, and the staff of the JOURNAL: and he was also exceedingly indebted to the members of the permanent staff of the Association itself. Nothing remained for him but to introduce to them, if introduction were necessary, the gentleman who had been appointed to succeed him in that office. Dr. Ferguson was well known in that district, and to those with whom he had come in contact in the past year he had endeared himself in the central work of this great Association. In this republic of medicine the constitution provided that as the President expired so a new President should be elected. The President was dead, and he now called upon the members to give long life to his successor as President, Dr. George Bagot Ferguson. [Applause.]

The PRESIDENT (Dr. Ferguson) said he must return his most hearty thanks to Dr. Elliston for the exceedingly kind words he had spoken, and he also returned to all of the members his most hearty thanks for the position in which they had put him. He was exceedingly grateful. He felt himself that the position in which they had put him was far in excess of any services which he had done for the Association. He would also very much rather that this responsibility had fallen on the shoulders of one of his senior colleagues in Gloucestershire, a remark that he had made before, but inasmuch as it had not been possible for various reasons that that should be so, he could only say that to the extent of his abilities and opportunities he would endeavour to fulfil the duties of his position. He considered that the first of the duties of that position was to remind them that when their Association, not great then but only growing, met in Cheltenham 64 years ago it was the year of the Queen's accession to the throne. By a singular coincidence it met there again in the year of the King's accession to the throne. On the previous occasion Dr. Barlow, of Bath, proposed, and Dr. Connolly seconded, a proposition that a loyal address to the Throne be presented personally by the gentlemen mentioned, the President of the Association, Dr. Boisragon, and Sir Astley Cooper and others. Under those circumstances he thought it would be highly reprehensible to allow so favourable an omen of that kind to lapse, and he thought that inasmuch as their good wishes, which were then expressed, were fraught with good results to Her Majesty the Queen it might turn out that their good wishes, if renewed that day, might be fraught with good and propitious results to their King. He begged to propose to them, for their approbation, that the following address which had been drawn up be presented to His Majesty.

ADDRESS TO THE KING.

MAY IT PLEASE YOUR MAJESTY,—We, the members of the British Medical Association, who, when assembled in annual meeting sixty-four years ago at Cheltenham, voted an address to your august predecessor on her accession, assuring her of our loyalty and devotion, being again assembled in the same place, and including as we now do in our ranks representatives of all the Colonies and dependencies of your Empire, desire to renew in the fullest measure all our expressions of loyalty and devotion to the Throne. We expect the greatest benefit to this realm from the knowledge, experience, and benevolence of Your Majesty, who has ever been the first in philanthropic enterprise; and we are the more emboldened to give utterance to our feelings, inasmuch as Your Majesty, the Patron of our Association, is closely connected with the medical profession and with some of its greatest institutions and chief charities.

We pray that the longevity of your predecessor may be yours, and we earnestly hope that scientific teaching—so greatly stimulated in this realm by His late Royal Highness the illustrious Prince Consort—may receive even greater encouragement and support during Your Majesty's reign, with the sure result of enhancing the health, wealth, and happiness of all your subjects. Every good wish in our address of sixty-four years ago in reference to Her late lamented Majesty was verified to the letter. These wishes and the conclusion of that address we venture confidently to repeat—namely, that "in the exercise of your functions Your Majesty may ever find the rich reward of an approving conscience, and that the success of your benevolent and enlightened endeavours may be such as to embalm the memory of your reign in the hearts of a united, prosperous, happy, and grateful people."

The PRESIDENT OF COUNCIL, in seconding the motion, reminded the meeting that the Council of the Association had already adopted a resolution conveying the condolence of the Association to His Majesty and the Royal Family at the irreparable sorrow which had fallen upon the nation; and also a letter congratulating him upon his accession. As loyal subjects they desired in general meeting assembled to take action in the matter, and he was sure they would unanimously, loyally, and heartily pass the address.

The resolution was then put and carried unanimously, the members standing.

### Vote of Thanks to Dr. W. A. Elliston.

Dr. Beverley moved:

That the warmest thanks of the Association be given to Dr. William Alfred Elliston for so ably presiding over the Association during the past twelve months; and that he be and is hereby elected a Vice-President of the Association for life.

On this occasion a somewhat new departure had been made in requesting him to propose the resolution, which had been generally reserved for some distinguished member of the Association, or someone, at any rate, who was not so intimately acquainted with the retiring President as he (Dr. Beverley) happened to be, a fact which absolved him from saying as much as he otherwise would have done in praise of the late President. All those who were present at Ipswich last year, he was sure, would give a unanimous vote of thanks to their late President—with whom he begged to be allowed to associate the name of Mrs. Elliston—for the unstinted and unbounded hospitality which they showed on that occasion, and which contributed so much to make the meeting the success which they all knew it was. Their warmest thanks were also due to Dr. Elliston for the able manner in which he had presided over the somewhat contentious annual meeting which they held last year. On that occasion he exhibited the true type of a good chairman, for he united in his person the *suaviter in modo* and the *fortiter in re*. They had also to thank him for the able manner in which he had conducted the affairs of the Association during the past year; and for that reason, and many others, he asked the meeting to accord Dr. Elliston their warmest thanks, and to give him the only reward in their power, namely, to appoint him a Vice-President for life.

Mr. Victor Horsley, as one of the younger members of the Association, desired the honour of seconding the resolution, and as one also who was present at Ipswich and had witnessed Dr. Elliston's conduct of the business which, under the present arrangement, to say the least, was somewhat confused. In doing so, he was sure that he was expressing the gratitude of the Association to him for his tenure of office on that occasion. He would like to add that not only in his memory, but in the memory of others who were there, Ipswich was one of the pleasantest, if not the most delightful, meetings they had ever had.

The resolution was then put and carried by acclamation.

Dr. Elliston who, on rising to reply, was most enthusiastically received, thanked the meeting for the great honour conferred upon him in his election to the position of Vice-President of the British Medical Association: the kind expressions of his old friend, Dr. Beverley, and also of Mr. Victor Horsley, would make this very distinguished honour more acceptable. He would have liked to have said a great deal more, but he thanked the members on behalf of himself and Mrs. Elliston for their kind expressions of feeling towards him.

### Vote of Thanks to Mr. Walter Long, M.P.

The President moved:

That the thanks of the Association be given to the Right Hon. Walter Hume Long, P.C., M.P., for his strenuous efforts to stamp out hydrophobia whilst President of the Board of Agriculture.

They all remembered how Mr. Long had carried out the muzzling of dogs, and the consequent outcry against him, and how many people were inclined to give up their political opinions in order to have their dogs unmuzzled; but Mr. Long stuck to his guns, or rather he would say adhered to his muzzles, with the result that his action had practically stamped out hydrophobia.

Mr. Parkinson had great pleasure in seconding the motion, which he felt appealed to them very strongly. No words of his were required to enhance their approbation of it.

The resolution was then carried unanimously.

### Report of Council.

Dr. Roberts Thomson, the President of Council, in bringing forward this report, remarked that so far as he knew it did not contain very contentious matter. The reports of the Council and of the ordinary Committees of the Council and of the Association were this year overshadowed in interest and in importance by the report and recommendations of the Committee which was elected last year, and to the consideration of which it would be necessary that they should give up much of their time. Perhaps some might be inclined to say, What is it that the Council does? That was rather a pertinent question. The report did not seem to contain within it very much to interest them; but of course a very large amount of administrative and other very important work came before the Council which did not find a direct place in its report. When he told them that the minutes of the Council's last meeting held at the beginning of this month amounted to something like forty-seven pages of closely-printed matter, he thought he had said enough to assure any member who might not have closely watched the doings of the Council that at all events a good deal of business came before it and occupied its attention. He wished to refer to a matter that had already been mentioned—namely, the absence of their General Secretary, Mr. Fowke. Had he been there that day in the body as he (the President of Council) knew he was in the spirit, it would have been the thirtieth consecutive annual meeting which he had attended; and he believed that during that long period of faithful service to the Association Mr. Fowke had never been absent from one Council meeting. Unfortunately he had not only been the subject of illness, but had suffered a heavy domestic bereavement; and those who had the advising of him in this matter pressed upon him very strongly, although very much against his wish, that he should not attempt to undergo the fatigue and strain of attending the annual meeting. The President of Council was sure that the Association would wish him to convey to Mr. Fowke their sympathy and their hope—which he ventured to say was a strong hope—that before the autumn work commenced Mr. Fowke would be sufficiently restored to come back to his work. Was it their pleasure that that should be so conveyed to him? [Hear, hear.] The proceedings of the Council were published regularly immediately after the meetings throughout the year. The reports had appeared in the Journal one or two weeks ago, and, therefore, those who desired to make themselves acquainted with them had had ample opportunity of doing so; and he would be glad to answer any question which any member chose to put. With regard to the Stewart Prize the adjudicators had advised that it should be awarded to Dr. Patrick Manson, and the Council had adopted that recommendation. He hoped Dr. Manson would attend during the week to receive the prize in person. In the report of the Council would be found the name of a gentleman who sometimes had taken a prominent part in the annual meetings. He did so last year; he had now gone to his rest. He referred to Mr. R. B. Anderson. From a letter which had appeared in the press signed by Lord Stamford and Mr. Timothy Holmes it was understood that the family of Mr. Anderson were in financial trouble. A list of subscriptions had already appeared in the Journal, and such as were from time to time obtained by friends interested in this matter would be published in the Journal. He mentioned it now in order that if any members of the Association felt sympathy with the relatives of Mr. Anderson they should have an opportunity of contributing to the fund which was being raised. He would make no reference to the financial part of the work of the Council—that rested in the hands of the Treasurer. One of the reasons why they got on so well in the Council was that they believed in the division of labour.

The Treasurer said that he had very much pleasure in seconding the motion. Instead of going into the details of the account, he would content himself with saying that if there were any questions asked, he would be very pleased to answer them to the best of his ability. He would merely call attention to the fact that the report contained a full statement of accounts, and also a short statement of the revenue and expenditure, which he thought would be of interest to all present, particularly when they saw that the mortgage loan was now reduced to £10,000. Originally it was £38,000. He had every hope that before the next annual meeting it would be reduced by another £4,000 or £5,000.

Dr. John Haddon said that while he was able to come to the meetings he should continue to protest against the way in which the money of the Association was squandered by the

Scientific Grants Committee. The Scientific Grants Committee should select a subject upon which doctors were slightly ignorant, and in which their knowledge would be the better for being increased.

Dr. BRASSEY BRIERLEY said that the report of the Council was far too short. He thought that the Association should be taken into the confidence of the Council, and should know where the money was going. He then proceeded to criticise various items in the accounts, and remarked that it was an extraordinary thing, for instance, that £5,828 should be spent without definite details being given.

The TREASURER said that he should like to reply to the strictures of Dr. Haddon, who had forgotten—or perhaps he did not know—that the money which was given in connection with the Stewart prize was the income of a trust fund. The Council did not fix the £50; that was the amount of the income. With regard to Dr. Haddon's other stricture, an instruction had been issued this year to all scholars and to all recipients of scientific grants that the JOURNAL had a prior lien upon their work, and therefore that the work would appear in the JOURNAL first before it appeared elsewhere.

Dr. HADDON moved that the Scientific Grants Committee should be instructed in the future to name a subject upon which they would like competition. If he might suggest a subject it would be the subject of metabolism.

Dr. BARR said that he agreed with a great deal of what Dr. Haddon had said. He thought that the Association did not get any result commensurate with the amount of money which they spent, and for his own part he should do everything he possibly could to try to get better results than had been obtained in the past. He did not think that at present he would propose to press any definite claim on the Council, because he thought that the Council were becoming alive to the necessity of doing something in the direction which Dr. Haddon had indicated. He thought that it would be to the interest of the Association to be able to show that it got something for its money.

Mr. NELSON HARDY said that he should like to second the proposal of Dr. Haddon, and especially because it gave him an opportunity of calling attention to what he thought needed, on the part of the Treasurer, a little more explanation. In the revenue or profit and loss account he found that the sum total of what were called "Association expenses" was £3,769 2s. 10d. He thought that it was evident that a little more light was needed to be thrown on that.

Mr. ANDREW CLARK did not quite understand the questions which had been put forward by Dr. Brassey Brierley, but he understood that one referred to the expenses of printing of the JOURNAL which came to £21,280, and his suggestion was that that was not sufficiently explained. He would point out that it was explained in brackets, "Printing, postage, and paper" that was all the machining, postage, and the cost of the paper and the setting up of the JOURNAL. That was all included in the amount mentioned. Members might scarcely appreciate it, but there was not much change out of £4,000 when the postage was paid for. When he first became Treasurer he was surprised at the expenditure which the paper involved. It no doubt amounted to a large sum. The Secretary told him it was £9,500. He did not know that there was anything else that he could explain. It was to be remembered that they were dealing with a very large Association and a very large number of copies of the JOURNAL were printed and sent out; he thought that those who knew what things of that description cost would agree that the amount charged was a proper amount. There was also some question about the editorial expenses and salaries, contributions, engraving and reporting. Dr. Brassey Brierley had asked who got the money for the contributions, and he had spoken about someone he knew getting paid in shillings for his contribution. It was hardly in his (Mr. Andrew Clark's) province to deal with that, and as a matter of fact he did not know. Of course he knew what each contributor got because he had to draw the cheques, but he did not think that the items for contribution should be set out in any more than that the names of the writers of the contributions should be made public. He certainly thought that the amount of the contributions should not be given at a public meeting. With regard to the salaries it was open to every member of the Association to see the salaries of every officer, and among others the Editor. With regard to the Association expenses, Dr. Brassey Brierley thought that £3,769 was too much. There was a good deal besides the expenses of Committees included in that sum. The Council from time to time voted sums of money to various objects. For instance £100 was given to the Congress on Tuberculosis: £200 was given to the Jenner Society, and the members of the Association who attended the Council meetings had their fares paid, which amounted to £600. Had he been aware that these questions were going to be asked, he would have got out all the different items. The Secretary reminded him that the Constitution Committee, which was appointed at the last meeting, had held several meetings, and the expenses of these meetings had been included; they were about £200. Then the Anæsthetics Committee, which had just issued its report, had spent £550; all that was not all included in this year, but part of it was. He hoped he had said sufficient to satisfy the meeting on the points which had been raised.

Mr. COLIN CAMPBELL was sorry to appear as a grumbler on that occasion, but the question of the finances of the JOURNAL and the editorial expenses had been one which had interested him for some time. As a member of the Council he had found himself unable to get the information which had been asked for by a member at this meeting. It was rather a curious condition of things, and he thought it would be better if a little light were thrown on it. In the first place he should like to say that they had a very excellent editorial staff, and they had an Editor whom he thought could not be beaten. With regard to the remuneration that he got, he should be the last in the world to say that the Editor did not earn it. Then they had an assistant editor and a sub-editor. He did not know those gentlemen personally, but he assumed that their work was very well done, because certainly the JOURNAL was a very creditable production. In addition to these gentlemen they had a number of contributors whose contributions in some quarters had amounted to as much as £900, or about £75 a week. The question he had asked a good many times was, Who were the contributors who got that money? They were told at this meeting that it was undesirable that that information should be granted. The Council was in the same condition, and the information therefore was never granted. He did not say the money was not thoroughly earned, but he thought the members were justified in knowing who it was that drew these large sums of money. Members round him said "No, no," but why not? If they saw an article in any magazine with the name of Rudyard Kipling under it, was it any the worse for being there? Why should these great men hide their names? The custom of signing articles was becoming more common everywhere.

The PRESIDENT inquired if the Editor of the JOURNAL had anything to say on the subject.

Dr. DAWSON WILLIAMS understood what was asked of him was to give an explanation, so far as he was at liberty to do so, of how the money which was paid and voted by the Association for contributions to the JOURNAL was distributed. He would like, first of all, to be allowed to thank Mr. Colin Campbell for the kind way in which he had referred to himself and colleagues. The expenses during the last year had been in excess of the ordinary expenses of the JOURNAL owing to certain special rates of payment which the Council had sanctioned in regard to reports which they thought it desirable to obtain from South Africa with regard to the war. He believed they got, on the whole, their money's worth, and that the BRITISH MEDICAL JOURNAL had published reports from the medical, surgical, and sanitary aspect of the war which were inferior to none published elsewhere. Then, with regard to the people who were paid, they had three salaried officers. He was paid a salary, his colleague the assistant editor a salary, and they had recently during the last year paid a sub-editor a very moderate salary. They were the only salaried officers they had in connection with the JOURNAL. With regard to the principle which he found in existence in the JOURNAL, which had been followed with the sanction of the Journal and Finance Committee and the Council, it was an ordinary principle of journalism in the country. A man was not paid for a contribution to a medical journal, such as an original article on a clinical subject, or scientific subject to which he puts his name. [A Voice: "Why?"]

Well, Why? He was not called upon to analyse the reasons; but, in the first place, a member of the profession made an observation or discovery which he thought valuable. He desired to publish it. No doubt, also, the publication of such papers might be of advantage to the individual by bringing his name before the profession. That was the principle upon which their JOURNAL had been worked from the beginning, a principle on which he believed most other medical journals, both here and in America, were conducted. The money which was paid for contributions was paid on a certain scale for unsigned articles, and that scale, he took the liberty of saying, was by no means a liberal one. Somebody said "Hear, hear." Probably he had contributed, and was surprised at the size of his cheque. All ordinary contributions were paid for at a rate per column of so many words. Some years ago a number of complaints were made from gentlemen who had reviewed books for the JOURNAL. They said: "Here you ask us to return the book to go into the Association library, and you have given me a tome of 600 pages, and paid me this small sum at the rate per column; it is not worth while." The Journal and Finance Committee made it a rule that there should be a minimum fee for reviews of books. Again, he did not know whether readers of the JOURNAL realised how many questions were answered every week. Very many were answered by post, and a great many in the JOURNAL, and it was felt that an answer published in the JOURNAL of the Association should have authority. Such answers had to be paid for, and could not properly be paid for at a rate per line, but by a small fee. He did not think there was anything else that he need say.

The PRESIDENT pointed out that the resolution proposed by Dr. Haddon and seconded by Mr. Nelson Hardy was perfectly in order, but it would come in under the Scientific Grants report, and therefore if they would allow him he would postpone it until that subject came up for discussion. In the meantime he would ask the meeting if they would agree that the report of the Council, together with the financial statement for the year ending December 31st, 1900, after the various explanations which they had heard, should be received and adopted.

The motion was carried unanimously.

### APPOINTMENT OF AUDITORS.

Dr. ROBERTS THOMSON stated that in order to satisfy the requirements of the Companies Act, 1890, he had to move a resolution with regard to the auditors, which was as follows:

That Messrs. Price, Waterhouse and Co. be and they are hereby appointed auditors of the British Medical Association until the next annual general meeting at a remuneration of £105.

The TREASURER (Mr. Andrew Clark) seconded, and it was carried unanimously.

### REPORT OF PARLIAMENTARY BILLS COMMITTEE.

It was then agreed unanimously that the report of the Parliamentary Bills Committee should be received.

### SCIENTIFIC GRANTS COMMITTEE.

The PRESIDENT then put the resolution which had been proposed by Dr. Haddon, and seconded by Mr. Nelson Hardy, that it be an instruction to the Scientific Grants Committee to offer the money they spend as a prize on some subject on which original research was required, such as metabolism.

Dr. HADDON said that was only a suggestion.

Mr. BUTLIN hoped that the resolution would not be put without some discussion, as it involved the principle of spending money on scientific grants. He could look back on his acquaintance with the Scientific Grants Committee for a good many years: for almost as soon as he became a member of the Council of the British Medical Association, before the time he became a member of the Scientific Grants Committee, and afterwards as a member of the Finance Committee of the Association, and as Treasurer, the manner in which the money was spent was very often a serious anxiety to him. At these meetings the two questions as to the money expended on the JOURNAL and the money expended on the scientific grants had been constantly discussed, and very similar replies had been given at the annual meetings that he had attended. But when it came to a complete change in the manner of spending the money of the Scientific Grants Committee he hoped that the members would not tie the hands of that Committee without a very much longer consideration of the question than they had had that day. As a matter of fact, when this question was first discussed it was at an annual general meeting; and when he heard what the members said, and how the complaint was made that the money was not properly spent, but was actually wasted, he was then very much inclined to agree with one speaker who raised the question whether they could not persuade those gentlemen who took the scientific grants and occupied the post of scholars to undertake somewhat more practical subjects, some subjects which should possibly give them some better results than they appeared to obtain at present. The more he had considered the matter, however, the more convinced he was that the more the Association helped in scientific work, and the more it spread its money out under certain conditions, so much the more likely was it to get some good work. He did not pretend to be able to estimate the result that could be obtained from the various researches, but when he saw what had been done by purely scientific men, and the practical uses to which their researches and discoveries had tended, he was bound to confess that he would be sorry indeed to see the money now given by the Association put into one particular channel and perhaps absolutely wasted in the course of a year or two. If anybody wanted to have an idea of what scientific research and discovery could do, let him read through the very small book in which Tyndall had given a history of Faraday's discoveries; let him read of his work on the relation between electricity and magnetism. He was quite sure when Faraday was at this work neither he nor anyone else had any notion of what value it would be. Supposing at the time Professor (now Lord) Lister had begun his work, people had said "What a nonsensical thing this is; this man desires to receive a sum of money from the Association or some scientific body in order to help him to work out what really is of very little consequence, the relation of these micro-organisms to these various diseases." He thought, supposing it was proved by-and-by that some of the great discoveries of the future had been brought about by the work already done by the scholars of the Association, or those who had received grants, the Association would have done more good than by all its other Committees and meetings. The question had often arisen whether the money was well expended on scientific grants, or whether it should not be given in scholarships. As a matter of fact he was looking forward to the time—and he hoped to see it within his connection with the Association—when they might have their own laboratories of research with their own directors, and with all the apparatus belonging to them, and when they might be able thus, in some sort of way, to superintend and have the work done a little more under their own auspices, and he hoped with some better effect. He was not sure that that was the best way of spending it, but he was quite sure that the Association would be doing a foolish thing to fix the Committee down to spending a large sum of money in the manner suggested by Dr. Haddon. He would rather that Dr. Haddon would withdraw for the time being his resolution, and bring the matter before the Association in some other form. He might write a letter to the Scientific Grants Committee and see what could be done, and whether that Committee could not do something to improve the manner in which the money was spent.

Dr. EDRIDGE-GREEN was of opinion that the way the Scientific Grants Committee acted was on absolutely the right line. There was no doubt that any man who was occupied with research would not deviate from that research for £1,000 or £1,500. If a man was determined to get to the bottom of a matter he would do it at any cost to himself. As Mr. Butlin had pointed out so ably, if they helped a man to conduct a research the importance of which only appeared afterwards, they would be doing far more than helping a man who was working simply on older lines, the value of which would be more than doubtful in a few years' time.

The PRESIDENT inquired whether Dr. Haddon would like to withdraw the resolution or should he put it to the vote.

Dr. HADDON said as it had been moved and seconded he would take the vote upon it.

Surgeon-Major INCE thought that after the able and interesting speech of Mr. Butlin, it would be better to leave the question open, and if the proposer and the seconder did not feel in-

clined to withdraw it he he begged leave to move the previous question.

This was not accepted by the meeting.

The PRESIDENT then put the resolution, with a slight alteration, to the meeting:

That it be a suggestion to the Scientific Grants Committee to offer the money they spend for a prize or prizes on subjects on which we require original research, such as metabolism.

The resolution was put to the meeting, and was declared by the PRESIDENT to be lost by a large majority.

The report of the Scientific Grants Committee was then agreed to be received, as well as the report of the General Practitioners and Ethical Committee, the report of the Medical Charities Committee, and the preliminary report of the West African Medical Service Committee.

MR. VERRALL asked when the members adopted them.

The PRESIDENT replied that they simply received them, and if any question arose they could be brought up again.

### REPORT OF THE INDIAN MILITARY MEDICAL SERVICES SUBCOMMITTEE.

Dr. MULLICK said he did not wish to push this matter further than he could help, but he was very much involved in the report of the Subcommittee. The report of the Subcommittee to consider the Indian Medical Services was to the effect that he had failed to supply the information to establish the charges which he had brought forward at the Ipswich meeting. The resolution had been seconded by Mr. Victor Horsley, and asked for investigation into certain matters in connection with those services. All the Committee was asked to do was to listen to the story on both sides and give their opinion as to whether the charges were true or not. The report of the Committee was that he had not been able to bring evidence before them. Nothing could have been further from the truth than that. On October 15th he wrote to the Parliamentary Bills Committee asking what had been done, and he was told the matter would be placed before the next meeting. Then on January 15th he wrote asking to to be given an idea of the evidence that would be required to prove the point. He got an answer to say that as he had brought the resolution before the Association it was left to him to prove his point. He did not know on what points the Subcommittee wanted evidence. Nevertheless, he wrote out to India for evidence, and such evidence as he could get he offered to put before the Committee. Then he was asked to furnish any evidence that he had from India within three months, but before the three months had expired the Subcommittee met and discussed the matter, and passed, as he considered, a vote of censure on him. He thought that a most unjust procedure. The Committee had made a point about Surgeon-General Harvey having given a categorical denial to the charges which had been made. But there was a great difference between the official head trying to collect evidence and a private individual. All a gentleman in his position had to do was to write and say, "I want evidence in proof of this," and he would get it in a week; whereas in the case of a private individual it was very different. Therefore on the ground that the time had not expired, and that he had had considerable difficulty in getting evidence, he proposed that the matter should be referred to the Subcommittee again for consideration. He did not say that his view of the question was right, but he did say that he had not received fair play. He was going out to India shortly, and he would use his best endeavours to collect such evidence as he possibly could.

Mr. GEORGE BROWN had great pleasure in seconding the resolution, because he did not think Dr. Mullick had been given a fair chance to state his case before the Committee; and it was for that reason, although he did not understand the merits of the question, that he seconded the resolution.

Surgeon-General HARVEY asked the meeting to remember that this subject did not originate at the Ipswich meeting, and that at the meeting at Portsmouth in 1899, when the matter was brought up, he thought not for the first time, he made a few remarks which resulted in the matter being thrown out. So from 1899 to the present time Dr. Mullick had had at least two years, and not one, in which to bring forward evidence in support of the charges which he made against the Government of India on account of its administration or maladministration of its medical services. In two years Dr. Mullick had never put forward a single instance in support of any one of his categorical statements. The Ipswich meeting was held at about the end of July or the beginning of August last year, and a very flaming account of the magnificent triumph of Dr. Mullick in carrying the reference to the Council appeared in the *Indian Medical Record*. As Director-General of the Indian Medical Service, he had thereupon to write a memorandum in his official capacity which he sent to the Parliamentary Bills Committee in view of their discussing the question with reference to whatever evidence Dr. Mullick might have to produce. He took up each one of his contentions, not only those of his resolution but those of his speech, and showed that there was absolutely no ground for any one of them. One of the grievances which Dr. Mullick had in his speech—it did not come into his resolution—was that under the present system the native of India was absolutely debarred from getting into the service. He (Surgeon General Harvey) mentioned at Portsmouth that the service was open to everybody by competition, and that if the native gentlemen for whom Dr. Mullick held a brief were the medical archangels which he desired them to be believed to be, they ought to have no difficulty in securing all the appointments at the competitive examination. As a matter of fact at the present moment there were forty-six pure natives in the Indian Medical Service, and there were probably a larger number of Eurasians who were also, in a sense, natives of India. There were, in addition, three larger services which were officered, to a very large extent at all events, if not exclusively, by Indians. There was the civil assistant surgeon class, which numbered, he thought, 650 officers. There was the military assistant surgeon class, many of whom were Eurasians. Some of them were Anglo-Indians, that was, Europeans born in India of European parents. They numbered 550. There were, in addition, natives in the hospital assistant class. The meeting must remember that in every officer's covenant with the Government there was a clause making him entitled to medical attendance, and this had always been looked upon as attendance by a doctor of the Indian Medical Service, and it was expected as a rule to be European medical attendance. And for the higher officers in the State the ruling power had to be mainly at the top. In India the Government was very glad to welcome natives by the open door of competitive examination. Those who came in by that door he had always tried to treat as being on an absolute equality with those of his own country. He had had several fierce fights on behalf of the native members of the Indian Medical Service, and he had always won his cases. The main point was that Dr. Mullick, having had ample time to bring forward evidence, had not yet brought forward any evidence whatever, and therefore it was of no use remitting the matter back to the Committee.

Dr. HADDON said that the question was, Had the Committee which was appointed done its duty? He did not think that it had. It was appointed to report to the present meeting as to whether there was any foundation for the complaints which had been made. It ought to have weighed the evidence and then given a report. It had not done so, and he thought it was but right that it should be asked to do that in the course of the coming year, and submit the report to the Association at the next annual meeting.

Dr. OLDFIELD asked the meeting to support the motion to send back the report to the Committee upon a proper and technical ground. Dr. Mullick claimed that the time granted to him to give his report was not entirely allowed him, and that within the time limit granted to him he did send such a report as he was able to send. Further, he (the speaker) took exception, as a member of the Association, to the letter which appeared in the current BRITISH MEDICAL JOURNAL; for therein Dr. Barr, the Chairman of the Subcommittee, tried to bring a certain amount of ridicule upon Dr. Mullick. Further, Dr. Barr had, in his letter to the JOURNAL, brought forward Dr. Mullick's evidence. That evidence was given by Dr. Mullick in confidence and privacy to a Committee, and no member of the Committee had any right whatever to publish to the world in his own individual capacity evidence which he had received as Chairman of a confidential Committee.

Dr. Barr said that his letter was a reply to a previous letter by Dr. Mullick. Dr. Mullick had attacked the Committee. He thought that he had disposed of Dr. Mullick's arguments pretty satisfactorily in that letter. Not one of the Committee had got an Indian axe to grind. As a matter of fact the only evidence which had been produced against the Indian Medical Service before the Committee was produced by himself. Dr. Mullick produced no evidence whatsoever, though he had been working on the subject for a couple of years, and he did not even think of sending in his material till after the Committee had met for the last time and had issued its report. He (Dr. Barr) maintained that there was no privacy whatever about these documents. They had been before the Association previously. Any man could make use of them. The Committee had done its duty. The Indian Medical Service was not perfect, but the present way of proceeding was not the way to improve it.

Dr. Mullick said that he did not want this question to go any further. It was a very simple question, but there had been a great deal of bad blood over the matter. Let the matter go back to the Committee, and then both sides would get fair play, and a decision would be come to.

The motion was put to the meeting and lost, there being 38 in favour of it and 44 against.

Mr. George Brown said that he must ask for an amendment, and that was to omit the last paragraph of the report. The omission would not affect the substance of the report. He thought that the last paragraph had been adopted by the Committee under a misapprehension, because it cast a reflection on Dr. Mullick which he was quite sure the Committee in its sound moments would not attempt to cast, and which the meeting ought not to adopt. He would ask Dr. Barr to withdraw the last three lines of the report.

Dr. Oldfield seconded the motion.

Dr. Barr said that he could not withdraw the words. Dr. Mullick and his predecessor ought to have been prepared before the charges. Dr. Mullick was not prepared with evidence according to his own statement. Serious allegations against an important medical service should not be made at all unless a man had actually got his evidence at hand.

Surgeon-General Hamilton said that he thought that the whole of this matter lay in a nutshell. Dr. Mullick had stated that he was deprived of a fortnight out of the three months which he was getting. It took rather over a fortnight for the mail to come from Calcutta to England. Had Dr. Mullick in the interval received the evidence? Was he prepared to lay it before the Committee? If so, he certainly thought that the Committee ought to use it.

Dr. Barr said that there was another point. Dr. Mullick actually wrote on January 15th that he had the evidence in his possession.

The motion was put to the meeting and lost by 37 to 23.

The meeting was then adjourned.

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## Second General Meeting, Wednesday, July 31st.

Dr. George Bagot Ferguson, President, took the chair at 2.30 P.M.

### Annual Meeting of 1902.

The President of Council (Dr. Roberts Thomson) stated that at its meeting that morning the Council had received a deputation of members of the Association from Manchester and the district, conveying a very cordial invitation to the Association to hold its meeting in 1902 in Manchester. The Council had no hesitation in arriving at a unanimous recommendation to the General Meeting to accept that invitation, which they were informed had been arrived at unanimously by members of the Association in Manchester; therefore it was his pleasant duty to bring up a recommendation from the Council to the General Meeting that the annual meeting for 1902 be held in Manchester, and that Mr. Walter Whitehead be chosen President-elect.

Dr. Elliston seconded the resolution, which was carried unanimously amid cheers.

Mr. Whitehead (the President-elect) said he was sure Manchester would be very proud when it was known that the invitation which the deputation that morning brought before the Council had been accepted. Manchester in return would make a very great effort to make the meeting next year one worthy of the Association. He must also thank them for electing him as President-elect. He was sure they would all sympathise with him when they felt that he had to follow in the footsteps of such an admirable President as they had that day, and were he not conscious that he should be assisted in Manchester by hundreds of able medical men to make the meeting a success, he should feel very little confidence in himself. The President in his address had alluded to England falling back in comparison with Germany, France, and America in opportunities for original research. He thought that when members of the Association came to Manchester they would find there strong evidence that Manchester, at least, had made a very good beginning to carry out the principles which were so ably alluded to the previous evening. The College in Manchester was an enormous place and technical schools were springing up in all directions. He could assure them, speaking for himself and all his colleagues in Manchester and surrounding districts, that they would make the members of the Association not only welcome but would do everything in their power to make their visit pleasant.

### Duration of Meeting.

The President remarked that he was armed with a little brief authority which would not continue many days, but he proposed at once to exercise a small portion of that authority in saying that he was fully determined not to sit after five o'clock that day. He then called upon Mr. Guy Elliston, the Assistant Secretary, to read the reports of the Branches.

The Assistant Secretary was proceeding with the reading of these reports when some member suggested that they should be taken as read.

The President inquired whether it was the pleasure of the meeting that they should be taken as read, and this was carried with acclamation.

### Constitution Committee.

The President said all would agree with him in saying that a meeting of the Association had never had before it anything more important than the report of the Constitution Committee. There could be no doubt that for a long time past there had been a good deal of discontent; that in theory the General Meeting was absolute, but that the findings of the General Meeting had not been loyally accepted by the Council, and upon many occasions recommendations had been made by the General Meeting, but nothing had come of them. That ought not to be. It appeared to him that the Association at the present time resembled a pyramid on its apex, namely, the Council. The power rested with the members in General Meeting. They were the plenary power of the Association. What they wanted to do was to turn this pyramid by an angle of 180 degrees and to set it on its base, which was the absolute will of the members assembled in General Meeting. He sincerely hoped they would not separate that afternoon without a good deal of work being accomplished. His own honest opinion was that the report was by no means perfect, but that it was the work of a most devoted and most able Committee, and his own impression was that it would be a very difficult thing to improve upon it. It might not be perfect, and it was quite possible that they might amend it in different directions, but he hoped, and in fact he entreated them, if they could bring themselves to do so, to pass it as regards its general essentials. He would not occupy any more of their time, but he called upon Mr. Edmund Owen, Chairman of the Constitution Committee.

Mr. Edmund Owen, who was most cordially received, said he understood that for some years past there had been a feeling of dissatisfaction throughout the British Medical Association for some reason or other. He thought, first of all, because members had not a sufficient voice in the management of the affairs of the Association. Other members thought that the British Medical Association was not to them what it ought to be, and therefore they were dissatisfied. Another great cause of dissatisfaction which he was afraid had existed in the Association was that certain members had not been to the British Medical Association what they ought to have been to it. Those feelings of dissatisfaction were brought to a focus last year at Ipswich, when Mr. Victor Horsley moved the appointment of a Committee to consider the best means of reorganising the constitution of the British Medical Association; it was to produce a scheme of reform. He did

not mind confessing that hitherto the word "reform" had had no charm for him; it was a thing that he least desired for himself, although he could not shut his eyes to the fact that for some of his friends it was really desirable. [Laughter.] This Committee was told to report to the Association on February 1st, but for various reasons, but through no fault of the Committee, there was delay; but a fortnight later they sent out their valentine. This Committee consisted of twenty-four members, and he might tell them that it was not a packed Committee; if it had been he should not have been on it, because a packed Committee was a Committee of men whose opinions were known. His opinion was not known when he was put upon the Committee; he did not know it himself, and what was more—and he said it with a certain amount of shame—he did not know that there was a question in connection with the British Medical Association on which he ought to hold an opinion. The members of the Committee were drawn from England, Ireland, Scotland, and Britain beyond the seas. Mr. Cantlie represented the large borough of China, Surgeon-General Hamilton represented South Africa from the Cape to, perhaps, the Zambesi, and also the Navy and Army, Dr. Morier represented Australasia, and he himself was put on to represent Canada on the motion of Dr. Cameron of Toronto. In addition to the twenty-four members it was suggested that the President-elect and Dr. Elliston should be appointed on the Committee, making in all twenty-six members. At the first meeting of the Committee, very much against his wish, he was appointed its Chairman. Two members did not appear at that meeting. One was their President. They regretted his absence, but felt that the uncrowned king of the British Medical Association should not be identified with any political views. Dr. Saundby was not present at the meetings, and they all very much regretted his absence. He was ill during the first two or three meetings, and he thought that he would not be able to pick up the threads of the argument. More than that Dr. Saundby had got at Birmingham what the French called *une affaire:* he had taken his coat off to fight a very strong family combination which had in view the establishment in Birmingham of a consultants' institute which should be advertised in every hairdresser's shop and restaurant in Birmingham; the general body of the profession were greatly indebted to Dr. Saundby for the splendid fight he had made in regard to this matter. [Hear, hear.] If this scheme had been carried out at Birmingham, there would have been similar schemes throughout all the towns of England, which must have proved extremely disastrous to the medical profession. Mr. Edmund Owen then referred to the attendance of the Committee, and pointed out that the average was a little over seven out of nine meetings of the Committee, which he thought was a good average. When he was appointed Chairman of the Committee, his friends expressed their apprehension; they said: "You will run risk; Mr. Victor Horsley is on the Committee." [Laughter.] Mr. Victor Horsley was on the Committee, and had been on many committees of the British Medical Association, the members of which were beginning to know what they owed to Mr. Victor Horsley; the profession did not know what they owed to him. [Hear, hear.] Mr. Victor Horsley was a simple-minded man—[laughter]; he had no axe of his own to grind. He was not seeking personal advancement, but he was always ready to fight the battle of any member of the British Medical Association who was in distress. As for his conduct on the Committee, it was really quite admirable. Mr. Horsley knew what he had to say, said it, and sat down; if he was not understood he would say it again. He did not know whether Mr. Horsley was a friend of Mr. Whitaker's before the Constitution Committee was appointed; but when they came to the Committee they found in Mr. Whitaker an extraordinary man. [Applause.] Mr. Victor Horsley was perfectly content to let Mr. Whitaker do a great deal of the work which he expected to have to do himself. Mr. Whitaker was splendid in debate; he knew the Articles of Association; he knew the by-laws and company laws—both very important matters in this connection; but he did not thrust his knowledge upon the Committee. He was a most delightful member of the Committee, who was always ready to meet his opponent—in fact, he was accused of being a too conciliatory man. Mr. Whitaker had penned every line of this report, and he felt very sorry for him; he was also for Mrs. Whitaker. Mr. Whitaker had an extraordinarily gentle, terribly serious temperament. He was the sort of man of whom martyrs were willingly made; he would have willingly gone to the stake. Mr. Horsley would not have gone to the stake. [Great laughter.] With his extraordinary ability and dialectical skill, he would have turned the tables on his accusers, and he would have had the mournful satisfaction of fixing them to the stake which they had prepared for him. He would have gone through the market place explaining to the men how they should pile the stakes in a proper and scientific way, so that the proper amount of heat might be obtained with the smallest amount of expenditure of fuel, and so that the sufferings of those who were tied to the stake might be as little prolonged as possible. [Laughter.] He would like to say something about his place at the Committee table; that was on the left of the Secretary, Mr. Fowke; he (Mr. Edmund Owen) did not know much about him before. As Secretary, he thought he was one of the ordinary appendages of the British Medical Association; but Mr. Fowke impressed him immensely with his honesty and anxiety to do what was best for the British Medical Association, and it was impossible to estimate the amount of work he did for it. All were very sorry that he was not able to be present. After he left, Mr. Guy Elliston took his place, and he would simply say of Mr. Guy Elliston that he was full of promise. He would like to thank Mr. Guy Elliston and also the shorthand writers who attended that Committee for what they had done. He wished to say that during the whole of that Committee neither Mr. Fowke nor Mr. Elliston, nor Dr. Roberts Thomson, nor Mr. Andrew Clark, by word or look tried to influence him one iota towards departing from the proper Parliamentary chairmanship of the meeting. He appreciated that very much, for they might have tried to help him. [Laughter]. It might be said: "Why was not this British Medical Association put into the melting-pot and started afresh?" But the fact that the Association was a Limited Liability Company under the Companies Act must not be lost sight of. It might be said, Why not dissolve and go into the melting-pot, and come out—what? With a Royal Charter? It would take years to wind up as a Limited Liability Company, and they would not be certain of getting a Royal Charter. He hoped that in discussing the report it would be remembered that there was only one British Medical Association, and that their profession in the British Empire could scarcely get on without the British Medical Association. They must not by any cranky motion run any risk of making a split in the Association. He would call attention to one paragraph in the analysis of the replies. It appeared under the head of Perth. It was a printer's slip, no doubt, but what appeared was "D. the whole thing." [Loud laughter.] He trusted they were not going to use this very improper language with regard to the report. If they did, it would be for one of two reasons—either because they thought it did not give enough, or because it gave, as some thought, too much. If they thought it advised too much, let them put their courage in both hands, and not be afraid of it. He was no reformer, but he believed that if they voted for the report they would be voting for the good of the profession. He thought the crux would be about the representatives; not delegates, that term had been dropped. The representative members were going to be a little parliament. The question was, Could the British Medical Association afford to pay these members for the work which they would do for the good of the profession? He thought it ought to be tried as an experiment. Another reason for following the advice of the Perthshire Branch might be that they thought the report did not advise enough. If Mr. Horsley and Mr. Whitaker and others were content to recommend them to follow this course they should do so and not attempt to grasp something more. He personally thought it was only a part of what this great Association was coming to; they should accept it and be thankful.

Mr. VICTOR HORSLEY said that he should like to commend to the favourable notice of the meeting the report of the Constitution Committee. At Ipswich the meeting passed a resolution, which he had the honour of moving, that a committee should be appointed for the reorganisation of the Association. He knew that while that Committee was at work

there were many members of the Association, who like many members of the Committee, felt that a very heavy and responsible work was being done within the Association, and further who felt, as Mr. Owen had said with his customary felicity and eloquence, that it was the work of the profession and not merely of the Association. Thank goodness their numbers now had reached such a figure that they could, practically speaking, refer to themselves as the body of the profession. The Constitution Committee wished to make the Association so representative in character that on the rare occasions when it met in general meeting its dicta should go forth to the general public as being what the profession wanted. For his sins, which had not been expiated in the manner shadowed by Mr. Owen, he was glad to say, he had served on behalf of the Association in a committee on a burning question which he would not mention by name. Under those circumstances the most difficult position of the members of that Committee to which he belonged was that they had no means of ascertaining what were the wishes of the members of the Association, let alone the ideas which prevailed in the profession as a whole. Unless the meeting accepted some sort of scheme, such as was now presented to it, and made the Association thoroughly representative, there was no possible means of getting at the opinion of the profession on any public question. It went without saying that if they were in that position they were mighty in numbers but most weak in influence. Surely the recent proceedings in the House of Commons should be quite enough to remind them of their powerlessness in the way of co-operative influence. Under those circumstances the Committee had worked, and he had simply to commend to the favourable consideration of the meeting the report of that Committee. He should have much pleasure in seconding the resolution.

The motion was put to the meeting.

The President of Council: That is carried almost unanimously.

Mr. J. S. Whitaker said that he rose with very great pleasure to propose the following resolution:

> That this meeting, without prejudice to the further consideration of details, approves generally of the scheme of reorganisation proposed in the report and recommendations, including the principle of reorganising the constitution of the Association under the Companies Acts, of instituting Divisions, of enrolling all members in the Divisions and Branches, and of instituting a representative meeting, and transferring thereto as much as possible of the business hitherto brought before the general meeting.

These were the broad outlines of the scheme proposed in the Report of the Committee, and, though the question of advisability had been so fully dealt with by Mr. Owen and Mr. Horsley, he thought that it was due to the meeting that, at any rate briefly, the main principles should be set out a little more in detail than was possible in the resolution itself. He should like first to say something on the point of excluding details. That meant just this: That all that the meeting was asked to affirm at the present time was the general principle, Should there be units smaller than Branches or should there not? The meeting would not say by passing the resolution what was to be the size of those units, how they were to be bounded, or anything of that kind. It simply adopted the principle that there should be other units of local organisation than the Branches. The second point was that the membership of the Association and the membership of its local component parts should be identical, and that if a man was not good enough to belong to any small section of the Association he was not good enough to belong to the Association, and if he was good enough to belong to the Association he was good enough to belong to any Branch and division of the Association, and ought to be a member and take his part in the local work of the Association. The third point was the constitution of the representative meeting. Various objections had been made, but if they were examined candidly they would be found to be objections to details. He asked them not to reject the general resolution which he was moving on the ground of objection to any details. The principle which the meeting was asked to accept was that, instead of the general meeting, which was now the absolutely supreme power in the Association, there should be a representative body. He would like, before taking that point up, to deal a little more fully with the question of the Divisions and what it was hoped that the Divisions would do. The first thing that called his attention to the insufficiency of the British Medical Association as at present constituted for the work which it had to do for its members and the profession was that he found his own Branch was unwieldy, and owing to its size members were not able to take their proper part in the work of the Branch. He believed that there was a great deal to be done for the profession by local organisation. A properly constituted local organisation, to his mind, was, as it was defined in the first resolution, one such that every member should have a reasonable opportunity of attending every important meeting. It was said, What do you mean by "reasonable opportunity"? He meant such opportunity as the conditions of the district afforded. The areas of the Association differed widely in character. There were towns and there were remote country districts, and they could not expect that people in the remote country districts should have the same opportunity of attending meetings as people in the towns. What the Committee asked the meeting to consider about the country districts was, first, Would they be any worse off under the scheme than they were at present? If the area of a Division was such that it had only perhaps fifteen members, would those members be worse off as regarded opportunities of meeting than they were with the existing Branches? Secondly, even if the Association could not bring the country members together as it would like, why should members in towns be deprived of any opportunity of combined work that could be afforded? He thought that it was a great thing that members of the profession living in the same neighbourhood should meet freely with one another on neutral ground, not at the invitation of any individual member, but under the auspices of a great association like the British Medical Association. In his opinion there was nothing which did more good to them as medical men than frequenting meetings with their fellow practitioners, and the more facilities could be provided for medical men to come together to rub off their angles against one another, and to get the prejudices knocked out of them, and also to get their personal prejudices knocked out of them, the better. Another important point was that very often the public in a district looked to the profession for guidance on various matters, and it very often happened when they wished for a professional opinion that some prominent or influential man in the district was asked what he thought about the matter. But however prominent or however influential, or however able he might be, his *ipse dixit* should not go as the voice of the profession in that district on a public question. There ought to be a proper means by which any public body which wished to ascertain the opinion of the profession in any district or town might be able to ascertain that opinion in a perfectly regular way. He knew one town where a School Board decided that it would have medical certificates for children who were said to be unable to attend school, and the question was, under what conditions should those certificates be given and what should be the form of the certificate, and what should be paid to the medical man certifying? One medical man was asked what he thought about it. He said, "I do not think that this is a question which I ought to answer. I must ask you to get the Clerk of the School Board to write to the Secretary of our local Medical Association and ask him to call a meeting of the Medical Association, and then you will have an official reply." That was business. There was another purpose which he thought that the Divisions would serve. It was to form opinion. He had been very much struck by a remark that fell from a member of the Council during the discussions in the Committee. It was on the point whether the Council should be obliged to carry out the decisions of the general meetings. He said: "I have never known a case where the Council refused to carry out what it believed to be the wish of the Association. It has often refused to carry out what the general meeting had said, but it is because it did not believe that the general meeting represented the Association." The difficulty had always been to know what the Association really did want. Was not that the difficulty in the profession too? Who knew what the medical profession wanted? Who could tell what the medical profession

wanted on the midwifery question? What certain sections wanted was known, but did anybody know what the profession wanted? One reason why they did not know was because the profession had no proper means of forming its opinion in the first instance. It was no use sending voting papers to fill up "Yes" or "No." A man sat down in his study to fill up a paper of that kind, and to evolve an answer out of his inner consciousness, and he often ended by not filling it up, or if he did answer it, his answer was not worth much because he had no proper means of forming his opinion. One object of the local organisations would be to provide men with a suitable opportunity of forming their opinions by free discussion with their fellows—the proper way of forming opinions. Having got the opinion formed in the local organisations, the next point was how to convert it into the opinion of the Association. How was this done now? There were the Branches, but the general meeting declared the opinion of the Association. He did not want to say anything disrespectful of the general meeting, but really was it the British Medical Association? Were those present to-day the British Medical Association? That was the question, but by the present constitution it had the power to declare what would be taken as the will of the Association on the present question. The meeting was taking place in Gloucestershire, and he had no doubt that there were a much greater number of Gloucestershire men present to-day than there were present at Ipswich last year, and than there would be at Manchester next year. Next year the meeting would be more largely composed of Manchester men. The consequence was that a thing which to-day, perhaps, owing to the opinion of Gloucestershire might not receive approval, at Manchester a year hence would go through as easily as possible. Yet each of the meetings was the authorised representative of the opinion of the Association. They could not play battledore and shuttlecock with the opinion of the Association in that way—having it changing from annual meeting to annual meeting in that fashion. There must be a properly authorised way of declaring the opinion by representative persons. How different the position would be if every man who was present at the meeting he was addressing had been sent there by his fellow-practitioners in his own district to say what their opinion was on the questions that should come before the meeting. How much more weight the meeting would carry, and how much less chance there would be of the opinion of the meeting this year being reversed by the opinion of Manchester next year. Of course, people might say, "Why have not these difficulties arisen before?" For this reason—that the Council, he believed perfectly honestly, had been of opinion that under the constitution of the Association it had the power to disregard the votes of general meetings. Eminent legal opinion had been taken, and the Council had been advised that it had not that power, and that any resolution passed by the general meeting was binding on the Council. That brought the Association face to face with the fact that it was, as he said, the general meeting, the unrepresentative general meeting, which came to be now the governing body in the Association, and that was why the Committee was asking the meeting to substitute for the present unrepresentative, accidental assembly, a representative body elected by the local organisations which had been already provided as a means of forming the opinion of the profession. Those were the broad outlines of the scheme. It had been said by one Branch in criticism of the provisional report of the Committee that they were not promised even a perfect paper scheme. It was not in human capacity to present a perfect scheme; and if the Committee were so foolish as to imagine that they were presenting a perfect scheme, the meeting would have very good reason for mistrusting that scheme. They presented what they believed was the best thing to be done now, but they tried to provide means whereby the Association in the future, as it found out more accurately what it meant, might modify detail after detail as occasion arose.

Mr. VERRALL said it was only on account of the legal necessity of having a seconder to this proposal that he took a few moments after the speech of Mr. Whitaker, which he was sure all would admit was a very able exposition of the general principles before them. He would take this opportunity of saying that he wanted to endorse every word that had been said as to the great debt which the Association owed to Mr. Whitaker for the trouble he had taken in the matter. That report had been touched up and furbished, and also added to and corrected by every member of the Committee who had an opinion and tried to express it on the matter, but in the main it was the work of Mr. Whitaker. He hoped that after the meeting that day Mr. Whitaker would have the proud satisfaction of having been mainly instrumental in something like a settlement of a difficulty of many years' standing. The resolution brought forward general principles with a hope that if they were accepted it would tend to settle the question. They were not to be stopped at this point, and thrown back upon the position which had existed so long. Let them try, as a profession and an Association, to get some common ground which would get rid once for all of all feeling of antagonism between their executive and general body. The main points had been fully dealt with, but he would like to make one or two observations on the questions of division. He thought there was nothing like experiment in everything, and they found, for instance, in his own branch—the South Eastern—which was divided into smaller areas than existed in some others, that although those divisions were only for scientific purposes, the result of the existence of such divisions had been that men had taken a greater interest on questions before them. If that had been found to be the case when questions of a scientific character were brought before them he hoped that would be found to be the case when other questions came before them.

Dr. POPE felt after the eloquent speeches, especially the lucid exposition of Mr. Whitaker, that the members might think it an ungrateful task for him to say anything except to pass the thing right off as it stood. He conceived a great admiration for Mr. Whitaker's work, which had been enhanced by his excellent speech. He wished, however, to move the following amendment:

That the Council be requested to carry into effect the recommendations with regard to the inclusion of unattached members, and that the consideration of the rest of the report be deferred until it is ascertained what the effect of these changes will be on the numbers and income of the Association.

Mr. WHITAKER inquired whether the amendment was in order, inasmuch as in the resolution there was no reference to the composition of the Council.

Dr. POPE replied that he would strike out those words. He thought no one would maintain that the inclusion of all unattached members in the Branches would leave the Association where it was. The effect might be extensive and far-reaching. If there was to be a redistribution of seats he thought it would commend itself to the members that they should have some idea of their register first. If they were going to have representatives they should let them know what they were going to represent. Nobody knew at present in the case of a large Branch with 1,100 members, some 580 of whom were not Branch members, whether at the end of that time there would be 1,100 members or only six. The object of his amendment was to ascertain that before the matter of delegates was gone into. On that question he did not express any opinion; but he would like to remind the meeting of the serious financial burden the Association would take upon itself if it paid the expenses of the delegates. They had only had the amended report before them for ten days, and members had not had time properly to discuss it. The real question, however, was how many members would be left in the Association when the proposed change had been made. They had been told by Mr. Owen that they were a very fine Association, which had grown to its present condition under the fostering care of the Council; and he did not think it would do much harm if it was left in charge of the Council for a little period longer, until the future annual income was known.

Dr. HANDFORD in seconding the amendment said that he had not much to say upon the amended report, because it had only been published a very short time, and it was the preliminary report which came before the Branch which he represented. The opinion of the Midland Branch, more especially the Nottingham portion, was very much adverse to the preliminary report so far as the financial question was concerned. He thought the remarks that were made by Mr. Owen that the difficulty would arise chiefly on the

delegate question and the payment of delegates was the crux of the whole matter. On the point of including unattached members in the Branch and in the formation of Divisions the Midland Branch was fairly, if not absolutely, unanimous. For quite twenty years past it had practised the principle of subdivisions. The Branch was geographically somewhat large. It had divided it into counties, and each county had separate meetings and worked independently. He agreed with Dr. Pope that the attempt to include the unattached members might lead to a great financial reorganisation of the Association, and some of the members, including his Branch, felt that it would be wiser to leave the question of the representative meeting, and especially the payment of the representative meeting, until the earlier part of the report had been put into a definite shape and had been a longer time before the members.

Sir John William Moore pointed out that if the amendment was carried it would be the beginning of great difficulties. The Council would have to undertake the most invidious task of forcibly annexing to the various Branches the unattached members whether they liked it or not. No provision was made in the amendment for the fixing of the new subscription, which was an important thing. Was it to remain as it was at present, one guinea, which would mean bankruptcy to many of the Branches; or was it to be raised by the Council, irrespective of the Constitution Committee's report? He asked the meeting to consider that a body of very busy professional men had given a vast amount of time, thought, and consideration to the report. The Committee was chosen with the most extreme attention to the wishes of the general meeting at Ipswich. It was supposed to be a Committee that represented the views of the Association at large, and also the views of the Council. He was proud to think that the Committee had worked so harmoniously, and he was glad that it had made a unanimous report. That was a very important matter, and he ventured to say that it would probably be many a day before they got a unanimous report again from any other Constitution Committee.

Mr. Butlin said that the report of the Constitutional Committee really dealt with three great principles. First, it dealt with an increase of subscription, and the putting of all unattached members into the Branches; secondly, it dealt with the reform of the Council, and, thirdly, it expressed the wish to establish an assembly of what was first called delegates, but afterwards representative members. It seemed to him quite easy, without rejecting any part of the report, for the members there assembled to make up their minds to adopt the first principle, that was the inclusion of all members of the Association in the Branches, and an increase in the subscription, and then, he thought, the second part relating to the formation of the Council should be deferred for one or two years until there had been time to turn round and see how the Association stood. The Association at the present time was still in debt £10,000 in respect of their premises in the Strand, and, in addition, in the course of the next few years it would be necessary to spend £20,000 or £30,000 in order to make the premises fit for the Association, so that it would have to face a capital expenditure in the course of the next few years of £30,000 or £40,000. He felt that although the scheme of raising the subscription, and including all members in the Branch might turn out a success, it might, on the other hand, result for the time being in a very serious falling off in the revenue of the Association. It was proposed, however, that they should increase their expenses by different things; it was proposed that they should pay the representatives, who might number some 200 or 300; that they should have paid secretaries of several Committees, and pay the members of certain Committees their travelling expenses. He had heard this last question discussed in many quarters. If they were going to have a meeting of representatives or delegates he would like to see the work done under the best possible conditions. He should like these men when they did meet to have every opportunity of carrying on the work of the Association under the best possible circumstances, but he would leave it in the hands of the meeting to say whether they should take upon themselves the great responsibility which was now proposed.

Dr. Milligan, as an unattached member, objected to being compelled to join any Branch; a considerable number of unattached members felt the same. If they were asked to join a reorganised Association they would be delighted to join the Branches; but he objected to be compelled to join a Branch which perhaps he did not wish to join under the present circumstances and under the present organisation of the Association.

Professor Byers wished to say a word or two in support of the view that they should accept the report of the Constitution Committee as a whole. He thought it would be a great pity to defer it. That argument had been used very frequently when an effort had been made to bring forward some scheme of reorganisation, but he was afraid if they deferred it for a year or two it meant that the whole scheme would be abandoned. With regard to their financial position Mr. Butlin had told them a great deal about their premises in London, and, of course, the question of spending money was an important one for the whole Association. Coming from the uttermost part of the earth he thought that was a question that must not weigh too much. This was the British Medical Association and not the London Medical Association. He felt sure if they accepted the report that members representing both sides of the question would be quite prepared to accept amendments of the various clauses. [Cries of "Vote, vote."]

The President inquired whether it was the wish of the meeting that they should hear no more speeches. [Yes, yes.] He could not resist the will of the meeting, and therefore he would put the amendment.

The amendment was then put by the President to the meeting, and declared by him to be lost by an "immense majority."

Dr. Haddon then brought forward the following amendment:

That the recommendations of the Committee as to the division of Branches, reducing the number of members of the Council, be carried out, and that the Branches be asked to suggest a scheme of reorganisation which shall be considered at our next meeting.

The President ruled the amendment out of order.

Dr. Brassey Brierley suggested that the question proposed by Mr. Whitaker be now put. It was absurd to waste the time of the meeting in discussing a proposal which committed them to nothing, when they had such serious proposals to consider afterwards.

The President put to the meeting the resolution that the question be now put, which he declared carried. He then put the resolution which had been proposed to the meeting, and declared it carried.

The President then proposed to deal with the different sections, and Section I [Primary Unit], Section II [Divisions], Section III [Divisions in the Indian and Colonial], Section IV [Branches] were put to the meeting and declared carried.

Membership of Local Organisation.

Mr. Parkinson wished to propose an amendment in these words:

That the enrolling of unattached members in a Division and Branches should not be retrospective.

The amendment would meet the case of others who were at present unattached members, and did not want to be attached. There were cases of members who somehow got into the Association, but had been rejected by Branches. Were the Branches to be bound to take such members in? He thought the regulation should be prospective and not retrospective.

The President inquired if there was any seconder, but as there was none, he declared that the amendment fell to the ground.

Mr. Jones Morris said that in the North Wales Branch there were a large number of members who practised in towns in England, but had residences in North Wales, and they were pleased to have them as members of the Branch. It seemed to him that under this clause they would have to tell all those gentlemen, although they resided within the area, that they could not be members of the Branch. He knew that under another clause they could be made complimentary members, but this did not meet the wishes of such members.

Mr. Whitaker thought that Mr. Jones Morris was under a misapprehension as to the effect of the clause. The difficulty, he seemed to think, was that in his Branch there would be a

danger of losing a good many members who were now members of the Branch who resided within the Branch area. But if they resided there, why should not they remain members of that Branch unless they wished to become members of some other Branch? Let the Branch arrange what people they would have to take part in the Branch work; all the Association cared about was the question of voting. A man could not vote in two or three Branches; he thought if the member would examine Recommendation 7, it amounted to this, that a man should only vote in one Branch, but for all other purposes he might be a member of as many Branches as chose to elect him.

Dr. O'SULLIVAN inquired if a member could select the Branch in which he would vote?

Mr. WHITAKER replied Yes, it would be left to him to say in which Branch he resided.

Surgeon-General HAMILTON seconded the amendment. He thought it was a very simple matter to allow those who represented foreign Branches, for instance, to belong to a Branch at home.

Mr. VERRALL said that one paragraph must be taken with another. It was recommended that a Committee should be appointed to consider the further organisation of Colonial Branches, and no doubt this question would be taken into consideration.

The amendment was then put and declared lost.

The PRESIDENT then put Clause 5 as a substantive motion, and it was agreed to.

With regard to Clause 6, Dr. SAUNDBY wished to know whether there were not many small Branches in scattered districts throughout the country which would find it exceedingly difficult to hold meetings except once or twice a year. Was it possible, therefore, to carry out this clause?

Mr. WHITAKER admitted that the difficulty was a real one, but what they had to consider was the choice of two evils.

Dr. O'SULLIVAN wished to know if the point had been considered in Committee.

Mr. WHITAKER could not recollect, but it was one on which the meeting would like to be satisfied that no injustice was done to the scattered Branches. He thought that gentlemen who wished to join those Branches should wait to be elected rather than that the principle of local election should be departed from

Mr. JONES MORRIS proposed as an amendment the addition of the words "by the Branch or its Council." He was of opinion that every member of the Division or Branch should know the individual to be proposed for election into the Branch.

Mr. COLIN CAMPBELL seconded the amendment, which on being put was lost.

Dr. MAURY DEAS, by leave of the meeting, withdrew an amendment to this clause, of which he had given notice.

The PRESIDENT then put Clause 6 as a substantive motion without alteration, and it was adopted.

On Clause 7 being taken, Mr. EASTES asked if complimentary members should not pay the Branch subscription. He was a member of two Branches.

Dr. SAUNDBY pointed out that Birmingham was on the borders of three counties — Derbyshire, Worcestershire, and Staffordshire; and a great many members under this scheme would become part of the Staffordshire Branch or Worcestershire Branch, and they had many active members in Staffordshire who had expressed a desire to remain members of his Branch because they came for scientific purposes; and this scheme meant the sacrifice of a very large proportion of members as the Branch could not keep them unless they contributed a small sum to cover expenses.

The PRESIDENT put the clause, and it was agreed to.

On Clause 8 (Expulsion) being put from the Chair, Dr. WARD COUSINS suggested that fourteen days was insufficient notice in the case of the Colonies.

On the motion of Mr. EASTES, seconded by Mr. VERRALL, it was resolved to extend the time to twenty-eight days.

The clause as amended was then put and agreed to.

Clauses 9, 10, 11, 12, and 13 were then agreed to *nem. con.*

### CO-OPTION.

Dr. BRASSEY BRIERLEY proposed, as an amendment to Clause 14, to delete the words from "and to members" down to "more than five years successfully." The whole trend of the proposals of the Committee was in the direction of reform, and he sincerely trusted that this meeting, having lent its hearty support to the suggestion so far would not stop at this. The principle of co-option was bad; it was out of date altogether. It was not necessary.

Dr. GROVES seconded it for the sake of the explanation which they would have from Mr. Whitaker.

Mr. WHITAKER wished briefly to give the reasons for the faith which he had, although he knew most of his friends were against him on this point. He believed that a topographical system of election, under which men were elected for wide areas, was subject to accident in the method of election. It must also be remembered that the members of the Council were not re-eligible at the end of eight years. It might happen under either of these conditions that a man whom everyone might wish to see on the Council would be excluded from it. He would therefore like to give the power to the Council to add a small number of persons whom they considered suitable to assist them in their work. That he considered a good principle.

The PRESIDENT thought this a most important matter which ought to be considered carefully, and not adopted without some little thought. He reminded the members that their power in this matter was perfectly absolute, and that for a long time to come it would fix the rule of the Association.

Dr. WOLSTENHOLME wished to support the amendment. Mr. Whitaker had given them an illustration of the good side of co-option; but, on the other hand, they might have a bad side. They might have a man elected by his Branch at a time when he was an ardent reformer: but after a time he might get out of touch with his Branch and the Branch might not wish to elect him. Then the time would come when he would no longer be eligible for election; but possibly in the meantime he would have become a favourite with the Central Council, and then the power of co-option would come in and the Council might co-opt him.

The resolution was then put, when 41 voted for and 46 against, and it was declared lost.

### MILITARY MEDICAL SERVICES.

Dr. COOMBS wished to propose the insertion after the words "Indian Medical Service" of the words "Militia, Yeomanry, and Volunteers." He thought some recognition should be given to the auxiliary forces with regard to this matter.

Dr. KINSEY seconded the amendment.

Dr. RADCLIFFE CROCKER pointed out that those branches of the service were represented in another way and in another capacity.

On the amendment being put, it was declared lost.

### REPRESENTATIVES OF BRANCHES ON COUNCIL.

Dr. BRASSEY BRIERLEY was of opinion that the change in the representation of Branches on the Central Council was a retrograde step and was most unreasonable.

Mr. WHITAKER thought the word "representative" was rather unfortunate, because a member of Council as an executive could not be under an obligation to vote entirely according to the wishes of his constituency. With regard to the large, as compared with the small, Branches, the object of the clause was to cut down the representation as much as possible, and all were agreed that for the Council to be efficient it must be much smaller than at present. They would ask the small Branches to put up with the sacrifice of being amalgamated with other Branches for the purpose of representation and ask the larger Branches to make a sacrifice on their part.

Dr. WALSH said that he represented a small Branch in the South of Ireland, which would have a great grievance if they were deprived of their representation. Although small in numbers the Branch covered a very large area—six counties. They could not get a number of members sufficient to qualify them under the recommendation of the Committee. They could not possibly be tacked on to any other Branch. They were remote from Dublin, which was the nearest Branch; and they could not possibly attend the meetings. Of course they would be satisfied with a very limited representation indeed; but they considered they

ought to be represented in some way. In fact, they would cease to exist altogether as members of the Association if they were to be deprived of direct representation on the Council.

The President: I think that this will be provided for by that part of the Recommendation giving power to the Council to deal with such special cases.

Dr. Brassey Brierley proposed that the Section should be referred back to the Committee.

Dr. Barr seconded. He thought that it would be far better if the matter was reconsidered. He was in favour of proportional representation, not merely that one man should have one vote, but that the votes should be of equal value. He considered the scheme was badly thought out. The tendency under it would be for large Branches to divide themselves up.

Mr. Whitaker said that he doubted very much whether they ought to have any amendments referring matters back to the Committee. The Committee no longer existed; it was *functus officio*. If the meeting wanted to refer anything they must appoint a committee to refer it to.

Dr. J. Ward Cousins said that this matter received the earnest attention of the Committee. It was perfectly clear that the larger Branches of the Association would have power, if they thought proper, to divide and so modify the representation, and the smaller Branches would have power to unite. He was quite sure that it would work well.

The motion that Section xiv (ii) should be referred back to the Committee was put, and was lost by a large majority.

Dr. Barr proposed that the number, 600, in the section should be changed to 400.

Dr. Brassey Brierley seconded the motion.

Dr. Helme said that he had had the intention of seconding the proposal. He was Secretary of a very large Branch, the Lancashire and Cheshire. It had 1,250 members. He was quite sure that the feeling in that Branch—it was not well represented at the meeting—was against the diminishing of its representation. He would ask those gentlemen who were present, the majority of whom were probably resident in the neighbourhood, to consider the wishes of those who were not able to be present.

The motion was negatived.

Mr. Crawshaw moved that wherever the word "representatives" or the word "representative" occurred in the clause it should be changed for the word "member." He thought that it was necessary to get rid of the idea that the Council was really representative of the Association.

The motion was seconded by Dr. Cox. It was then put to the meeting and negatived.

Clause 14 was then agreed to.

### Annual Meetings.

Mr. Langley Browne moved the omission of the words "General Scientific" in Clause 16. He said that he thought that the advancement of science was one part of the work of the British Medical Association which was certainly very important, and he thought that this part was rather likely to suffer if all the meetings were held at the same time. By the omission which he proposed the arrangement of the meetings would be left in the hands of the Council. He did not think it could do any possible harm if the annual meeting of delegates and the annual general meeting was held every year in London. There would be no question of getting accommodation for every member. He thought that it would conduce very much to the good working of the new scheme if the meeting would consent to the alteration, at any rate for a year or two.

Dr. Groves said that he was very much in sympathy with Mr. Langley Browne. Much of the disagreement of the past had simply been due to the fact that the Council had not had time to do the work, and the annual meeting had not time to do the work. By separating the business from the annual meeting there would be very much more time, and their efforts would be much more effective in the country and in the scientific and medical world.

Mr. Whitaker said that the question whether the scientific meetings should be held at the same time as the business meeting, had been considered in the Committee, and he thought that the matter had been very fully threshed out. Several members of the Committee thought it would be better to separate the meetings: but in the end the other consideration gained the day, namely, that if they divorced the scientific meetings from the business meetings they would not get such a good attendance at either. Medical practitioners could not afford to be leaving their practices and going away to attend meetings so frequently, and those who wished to attend the business meetings should not be deprived of the opportunity of also taking part in the work of the scientific meeting.

The motion moved by Mr. Langley Browne was then put to the meeting and negatived.

It was then agreed, on the motion of the Chairman, that the meeting should be adjourned till Thursday at half-past two.

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# THE SECTIONS.

## BRIEF SUMMARY OF PROCEEDINGS.

*Wednesday, July 31st.*

The scope of the proceedings in the various Sections may be gathered from the following account of the work accomplished. A complete report of the discussions and of the papers read in the different Sections will appear in due course.

### Section of Medicine.

The proceedings of this Section, which was very largely attended, were commenced with a short address by the President, Dr. E. T. Wilson, on The Value of Research in Medicine. Dr. A. E. Garrod then opened a discussion on Chronic Diseases of Joints, usually comprised in the terms chronic rheumatism, osteoarthritis, and rheumatic gout. The cases commonly classed as rheumatoid arthritis were of several different types, differing in their anatomical appearances, the pathological processes, and clinical features, and it was a question whether these types represented different diseases. Two characteristic varieties of rheumatoid arthritis were a fusiform type, occurring in earlier life or even in children, with considerable disturbance of general health; and a nodular type, occurring in more advanced life, with good general health. The first had a possible relation to acute rheumatism, and the second to gout: but it was probable that both were distinct from either. The evidence so far was in favour of rheumatoid arthritis being a separate disease; but an expectant attitude should still be maintained in view of advances in bacteriology and pathology. The best therapeutic measures consisted in removing any constant source of debility, in tonic medicines and ample diet. Professor Osler appealed for an unbiassed consideration of the question apart from inherited views. He accepted in the main the division of the cases that had been given. In the fusiform cases the acute febrile onset, like that of acute rheumatism, tended to mislead. Those described on the one hand by Bechterew, and on the other by Marie and Strümpell, were merely varieties having a special localisation, and were not distinct diseases. After Dr. Armstrong had alluded to two of the principal theories in regard to the etiology of the disease, Dr. A. P. Luff stated that although he believed rheumatoid arthritis to be a distinct disease, yet in his experience it was not an uncommon sequel of acute rheumatism. It was probably a microbic disease, and this should be kept in mind in treatment. The nervous theory of its causation was probably not tenable. Six cases were referred to in which the disease followed ovariotomy. In its treatment he especially recommended radiant heat, with potassium iodide and the carbonate or guaiacol internally. Dr. Herringham considered that on account of the misleading onset it was impossible for a time to distinguish the acute cases from true rheumatism. He, however, argued for the identity of the different types of rheumatoid arthritis, the differences being due to the pathological bias derived from age tendencies, and counselled that more evidence should be obtained before any sharp division were attempted. Dr. Hawthorne had seen cases with deformities indistinguishable from those of rheumatoid arthritis following attacks of subacute rheumatism, and sometimes associated with endo-

cardial changes and fibrous nodules. He appealed for the abolition of terms involving theoretical considerations. Dr. Calwell alluded to the frequency of these diseases among the lower animals. Defective hygiene in clothing and in water were, he thought, important causal agents. Dr. Eliza Dunbar referred to the effect of overstrain in causing the disease among girls predisposed to nerve disorders. Dr. E. J. Cave, in discussing the etiology of the disease, believed that various infective agents might produce identical anatomical changes, and that the same infection might cause different forms of chronic joint affection. He described a case in which septic infection was definitely the cause of rheumatoid arthritis. Certain persons had a special proclivity to joint affections from any cause. Dr. Samuel West considered that the etiological was the only satisfactory basis of classification. The removal of a source of general infection would in many cases, if in the early stages, result in the cure of the condition. The joint changes probably resulted from the absorption of toxins of possibly several bacteria. Dr. Saundby also emphasised the importance of an etiological basis, and the recognition of the fact that certain forms of arthritis followed certain infections. Dr. Mullick supported the neural theory of origin and Dr. Preston King thought the joint changes were only a part of a general disease. Dr. Watson Williams then, in conjunction with Dr. Stoker, showed a case of persistent escape of cerebro-spinal fluid from the nose, which was discussed by Dr. StClair Thomson, Dr. Ewart, and Professor Osler. Dr. Luff next read a paper on The Composition and Therapeutical Uses of the Cheltenham Waters, and Dr. Nathan Raw one based on Seven Cases of Pneumococcus Arthritis Occurring in Lobar Pneumonia, which was discussed by Professor Osler, Dr. Cave, and Professor Clifford Allbutt.

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### SECTION OF SURGERY.

THE President—Mr. Reginald Harrison—opened the proceedings of this Section with a paper on Renal Tension and its Treatment by Surgical Means. His attention was first directed to the subject by the good results following operations undertaken for the relief of symptoms pointing to calculus or other removable cause where no such condition was discovered. The descriptions given by medical writers of the *post-mortem* appearances of kidneys which had been the subjects of nephritis were highly suggestive of the probable value of mechanical assistance towards recovery. High tension in an inflamed kidney led, in addition to hæmorrhage and exudation, to a slow extravasation of urine into the tissue, which was highly destructive. Six cases were narrated, one operated on for supposed pyonephrosis, two for supposed stone, two for hæmaturia and other symptoms following injury, and one for cystic disease. In all nephrotomy was followed by recovery. Nephrotomy was not advocated for the ordinary case of acute nephritis, but for those which were passing on to the subacute and chronic stages, and for what he termed the malignant type. The operation consisted of a limited incision through the renal capsule, along the convex border. Drainage was carried out for a variable period afterwards. Mr. W. D. Spanton narrated 2 cases, one of hæmaturia and albuminuria after chill, the other of injury to the kidney during gymnastics, in which simple nephrotomy was followed by recovery. Mr. Barling believed that the good results in these cases arose from two causes, fixation and relief of tension. In cases of suppression of urine, such as followed catheterisation, he recommended wet cupping; they were not in a fit condition to stand operation. Good results were most commonly to be looked for in unilateral injury. Mr. R. C. Chicken disapproved of nephrotomy deliberately undertaken for the relief of tension. The kidney could be satisfactorily drained by drawing blood from the loin. Mr. Jonathan Hutchinson, jun., then read a paper on Recent Improvements in the Operative Treatment of Renal Calculus, recommending that which led to least disturbance of the kidney and its surroundings. He dwelt on the value of the Roentgen rays in the diagnosis of small stones. The President inquired whether stones could be made to give a more satisfactory shadow by coloration with methylene blue or indigo. Mr. Rutherford Morrison did not think that radiographic examination was yet sufficiently certain to enable a definite opinion to be expressed on the absence of stone if none was shown on the radiograph. He advocated removal of stones through the renal pelvis. Mr. Herbert Bramwell read notes of a case of Enormous Distension of the Stomach in a woman, aged 49, the result of peritoneal bands constricting the duodenum and arising in connection with a movable kidney. Mr. R. H. Parry read a paper on the Operation for Femoral Hernia having for its object the closure of the femoral canal from above after doubling up the sac, and recommending the removal of the sac, and Mr. McAdam Eccles believed that a method aiming at bringing some barrier across the ring above was more likely to give good results than any attempt to close below. Mr. W. H. Brown read a paper on the Prevention of Shock during Prolonged Operations, involving the loss of large quantities of blood by continuous transfusion as preferable to transfusion after operation. Mr. Jessop expressed his approval of the method; he was in the habit of using large quantities of fluid, up to five pints. In shock he relied also on the effect of doses of strychnine up to as much as ½ gr.

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### SECTION OF GYNÆCOLOGY AND OBSTETRICS.

THE President, Professor J. W. Byers, in an introductory address, described the advances made recently in Obstetrics and Gynæcology. A discussion on the Causation, Prevention, and Treatment of Miscarriage was opened by Dr. Peter Horrocks. Miscarriage was premature expulsion of the contents of a gravid uterus at any time, from conception to the end of the sixth month, before the fœtus was viable; abortion, more commonly associated with criminal cases, should be restricted to such. He considered the causation under the heads of damage to the normal attachments of the ovum, accidental, criminal, due to disease of the neighbouring parts, or artificial; maternal causes, systemic or local disease; and fœtal causes, intrinsic or paternal. The treatment was prophylactic, corrective, or general, while the miscarriage was avoidable; when otherwise, the womb should be assisted to get rid of its contents. The discussion was continued by Dr. Aust Lawrence, Professor Alfred Smith, Mr. Hawkins-Ambler, Dr. Lycett, Dr. Wm. Duncan, and Dr. Inglis Parsons, who mentioned the sedative action of viburnum prunifolium; under its use the womb had retained its contents three weeks beyond the estimated term, in a case in which it was desirable to prolong pregnancy. The President said that once the miscarriage was unavoidable the sooner and more completely the womb was emptied the better; the finger should be aided by the flushing curette. Mr. Stanley Boyd and Dr. Haultain also spoke. Dr. Horrocks showed an interesting specimen and two microscopic slides from a case of deciduoma malignum. Dr. Munro Kerr reported three successful cases of Cæsarean section. Alluding to the number of successful cases recently published by Murdoch Cameron, Japp Sinclair, and others, he concluded that only exceptional circumstances could justify craniotomy of the living child. Dr. William Duncan did not think it safe to do Cæsarean section without sterilising the woman, and preferred hysterectomy to resection of the tubes. Mrs. Scharlieb reported three successful cases at the New Hospital for Women. Dr. Peter Horrocks recommended resection of the tubes; but he made as small an incision as possible. An excellent paper on Shock by Mr. Hawkins-Ambler concluded the business of the meeting, which was more than usually well attended.

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### SECTION OF STATE MEDICINE.

THE President of this Section, Mr. Shirley F. Murphy, opened its proceedings with a short introductory address on the Value of Statistics in the Study of Disease. After showing the enormous waste of valuable material which was even at the present time lost to the statistician, he traced the history of the distribution of the returns of infectious disease. A further advance had recently been made by Dr. Tatham in recording the infectious disease returns of some of the large towns. A weekly return of all the cases of infectious diseases was to be strongly advocated, as by the universal knowledge of such facts the beginnings of epidemics could be very easily seen

and watched, and the study of them would probably give clues to the solution of some of the problems of State Medicine. Dr. F. T. Bond, M.O.H. of the Gloucester Combined District, then opened a discussion on the Relation between County and District Sanitary Administrations. There was no doubt that eventually there would have to be medical officers for every county, and it was an important point whether such a medical officer of health should also be medical officer of health for any of the districts. In any case the county medical officer of health ought to be a man of wide experience. Vaccination would probably before long be under the supervision of the county medical officer of health. Dr. Fosbrooke and Dr. Lloyd Roberts gave their experience in Worcester and North Wales, and both pointed out how the county medical officer of health was the link which bound together the sanitary districts and made the otherwise scattered material valuable. Dr. Seaton communicated a paper on Municipal and County Laboratory Work. Drs. May, Garstang, and Slade King having spoken, Dr. Groves proposed that the Section should express its thanks to the Council for promoting the Bill for security of tenure of medical officers of heath. After Dr. Jones and Dr. Smith had spoken, Mr. Pakes put in a plea for the underpaid municipal bacteriologist; and Dr. Chalmers, Dr. Fosbrooke, Dr. Martin, and Dr. Davies discussed the questions raised by Dr. Seaton's paper. The President, in concluding the discussion, thought that the solution of the problems would eventually be found in the appointment by the county council of both the district and county medical officers. Dr. Bond, in reply, thought that the different circumstances in the different counties should be taken into consideration, and that what would do for one county might not do for another, and any regulations framed must be elastic. Dr. Groves's resolution having been carried, Dr. Davies read his communication, Plague and its Prevention as a Disease Communicable from Animal to Man. The time had now arrived, he said, when regulations should be enforced for clearing ships of all rats, and for preventing the inter-communication of the ship and land rats.

### Section of Psychological Medicine.

Dr. James Beveridge Spence in his Presidential Address referred to the progress made in the past century in the treatment of lunacy. It was a special honour to preside over the meeting at the present year, which marked the beginning of a newer epoch in mental disease. In the earlier part of the nineteenth century lunatics were sequestrated in prisons and "dens," the reform of which and the inauguration of humane treatment reflected honour on the names of William Tuke and Conolly. Classification of the insane into suitable groups was important both from a medical and from an administrative standpoint. Treatment included both reformation and medical measures, both scientific and administrative procedure. Huge asylums, which were so characteristic of modern times, entailed an excess of administrative work and occupied too much of the time of medical officers, while the medium-sized asylum was relatively more costly to build. A practical classification of patients suitable for the various kinds of institutions made it necessary to recognise the following groups: (*a*) Acute cases and low-grade patients, not necessarily chronic cases, suitable for hospitals for the insane; (*b*) chronic cases which required plain housing and dieting, and who could be housed in large institutions at low cost; and (*c*) workhouse patients suitable for the lunatic wards of workhouses. The various counties should have cheap institutions for chronic dements, such as the Metropolitan Asylums Board had, so that the cost of maintenance would be low and the burden on the ratepayers diminished. The establishment of laboratories for research in the pathology of insanity marked a new departure of the past decade. The hope of the coming century lay in the aim that much might be effected in the direction of prevention even when the hope of cure was small. The training of nurses and attendants was a matter of supreme importance, and if this was neglected there could be little hope of progress. Systematic training, after the plan of the Medico-Psychological Association or otherwise, was the general rule in asylums, but much yet remained to be done. The conditions necessary to make the service more attractive and efficient—provision for pension, shorter hours of work and longer leisure necessitated by the harassing nature of the work—should be borne in mind and practised. No means should be left untried to make the position and lot of asylum attendants and nurses more comfortable and hopeful. They were fellow labourers in the same field of medicine, and inspired by the same objects. Dr. Ford Robertson opened a discussion on the Rôle of Toxins in the Pathogenesis of Insanity, with special reference to general paralysis of the insane. After referring to the conditions necessary for normal mental processes, he dwelt on the agencies which might injure the same, such as deficiency of normal secretions, toxins from the alimentary canal and elsewhere, and special disturbances arising from sensorial excitation. In general paralysis gastro-intestinal changes were common, especially a trophic catarrh of the small intestine, consequent on which toxins were freely absorbed by the lymphatics and entering into the general circulation. They contributed largely to the damage of the cerebral tissues, nervous and vascular. Insanity was a disease of the whole organism, which could only be properly understood and properly dealt with when so regarded. The paper was discussed by Drs. Jones, Goodall, and Pasmore. Dr. A. Schofield read a paper on Some Conditions of Success in the Treatment of Neurasthenia, with special reference to the qualities necessary for the physician, namely, sympathy, tact, firmness, and attention to detail, The physician should be dogmatic, and his attitude should be such as to inspire the conviction of hope in the patient. The nurse should be docile and be of a type not yet evolved—one intermediate between the hospital and the asylum nurse. The President laid emphasis upon the need for tactful qualities by the physician, and Dr. Fletcher Beach dwelt at some length on the same, as well as on the question of diet, occupation for the patient, sleep, hypnotism, and other therapeutic procedures. Dr. Edridge-Green pointed out analogies between hysteria and neurasthenia, and said that some of these cases merged into delusional insanity with fixed ideas. Dr. Robert Jones spoke briefly of post-influenzal psychoses. Dr. Edwin Goodall read a paper, with anthropometric tables, on the Examination of Asylum Patients, especially in regard to cranial and bodily measurements, and remarks were made by the President and Dr. Jones.

### Section of Anatomy and Physiology.

The President, Professor A. Macalister, opened the proceedings, with an address. A discussion was then introduced by Professor Addison on the Topography of the Thoracic and Abdominal Viscera, in which the author advocated a proportionate method of surface markings instead of the usual one now employed for this purpose. Dr. A. L. Gillespie (Edinburgh) made an interesting contribution to this discussion from the clinical aspect by relating the results of his observations on the capacity of 104 stomachs, which he found to vary enormously, ranging between the limits of 2 ounces in the smallest to 160 ounces in the largest. The capacity was determined *post mortem* by filling the organs without pressure with water brought in at the cardiac orifice, the pyloric opening being closed. Diagrammatic representations drawn to scale were also shown. Mr. T. S. Ellis alluded to the natural tendency which the erect attitude in man involved in the displacement of organs, and thought that the correction of this tendency was to be found in muscular action. The President pointed out that displacement of one organ involved correlative displacements of others, and that the position and *post-mortem* shape of organs was greatly influenced by the attitude in which the body was allowed to lie after death. Mr. Ellis then read a paper on the Physiology of the Lower Limb and the Military March. The tendency to deformity at the knee was counteracted by the contraction of the gluteus medius, that of the ankle to inward displacement by the flexor longus pollicis muscle. Models of the arch of the foot were also shown, by means of which Mr. Ellis demonstrated the bow-string action, exerted in a longitudinal direction, by the tendon of the long flexor of the great toe, and in the transverse direction by that of the peroneus longus. Too great convexity of the arch with claw-like toes was corrected by the action of the short muscles of the sole of the foot, chiefly the abductor and adductor pollicis. In walking the natural foot-fall should be almost in a straight line forwards, and not

with an outward inclination, as in the military march. A paper was then read by Dr. van Someren, entitled Was Luigi Cornaro Right? in which the author endeavoured to convince his audience of the fact that the average man ate far too much food, and that it was possible to establish a deglutition reflex, which gave information when the requisite amount was partaken of. To institute this reflex all food should be masticated till it was so completely mixed with and altered by saliva that its original taste had been lost. The paper provoked a lively discussion, in which Drs. Gillespie, Carter, Ellis, Addison, Anderson, Thompson, and the President joined. The Secretary (Dr. Carter) also read an abstract of a paper for Dr. Haig, entitled The Human Body as an Analytical Laboratory.

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### SECTION OF PATHOLOGY AND BACTERIOLOGY.

THE business of the Section commenced with an address by the President, Dr. J. W. Washbourn, C.M.G.. Professor Clifford Allbutt, in returning the thanks of the meeting to the President, referred to the question of a preliminary febrile attack in typhoid fever, which he had frequently noticed although he had never ventured to publish his own observations on the point, and to the remarkably low death-rate that was observed, both in typhoid fever and dysentery. He instanced from his own experience a case of an epidemic of "asylum dysentery" which was undoubtedly dependent upon the filthy habits of the inmates of a certain institution. He concluded by expressing his satisfaction that the President had laid stress upon the importance of "chill" in connection with etiology, and remarked that it had been of late years almost driven from the field by the respect which the clinical physician felt for the discoveries of bacteriology. A paper was then read by Dr. Eyre upon a new form of centrifugal machine to be used for the bacteriological examination of milk. The principal feature of the instrument was the fact that the metal disc which carried the tubes revolved upon a cone-shaped mass of indiarubber, and was not fixed to the upright spindle, as in the ordinary machines. One great advantage of the instrument was that when the speed was once got up (the number of revolutions being ordinarily about 2,500 to 3,000 per minute), the disc continued to revolve for twenty minutes, and ultimately gave a very satisfactory deposit. The President inquired as to the danger of a dislocation of the disc and the probable effects of a mass of metal weighing about 40 lbs. when thrown off while revolving at such a high speed of velocity. Dr. Odery Symes, Mr. Foulerton, and Dr. Lazarus-Barlow asked certain questions; and Dr. Eyre replied. A discussion upon The Pathology of Lymphadenoma was opened by Dr. Michell Clarke (Bristol), who indicated the general characters of the condition. The chief points that called for discussion were: (1) Is the condition a specific disease? (2) what is its relationship to tuberculosis? (3) what is its relationship to acute lymphatic leukæmia? and (4) what its relationship to lymphosarcoma? Dr. Bryant followed with an account of a case in which the characters of lymphadenoma were combined with an enormous degree of fibrosis, most marked in the lymphatic glands, the spleen, and the liver. In the lung appearances were present which strongly suggested the existence of gumma in the liver, the fibrosis was partly interlobular and partly interstitial, but on the pericardium were a few nodules which, from their appearance, were apparently typical lymphadenoma. The case was probably one of lymphadenoma complicated by chronic fibrosis of the liver which was either syphilitic or alcoholic. Dr. Gulland followed with a paper, in which he strongly maintained that lymphadenoma only disseminated tuberculosis of lymphatic glands, and urged that a much more careful examination of the lymphatic glands should be made than was usually the case. If this were done, in a large proportion of cases it was possible to find the ordinary histological features of tuberculosis, including the presence of giant cells and the specific bacillus. Mr. Harold Stiles said that for a long time he had held the view that lymphadenoma was nothing but disseminated tuberculosis of glands, but the last four cases which he had operated upon had raised considerable doubts in his mind. He gave details and showed specimens from two of the cases in question. Professor Clifford Allbutt and the President felt the greatest difficulty in speaking upon the subject, but each of them indicated that he felt that whether lymphadenoma was a specific disease or not, it was going somewhat too far to say that all cases of the disease clinically known as "Hodgkin's disease" were tuberculous. Dr. Longridge urged that it would be well if tuberculin were used as a diagnostic means. Dr. Odery Symes then read a paper on the bacteriological examination of the blood, which was discussed by Dr. Eyre, Dr. Grünbaum, Dr. Rabagliati, Dr. Daland (Philadelphia), and Dr. Trevithick. One important subject which arose in connection with this paper was that of antistreptococcus serum, and several speakers mentioned cases in which, on the one hand, streptococci had been found in the blood during life, and the patients, though they had not been treated with antistreptococcus serum, had recovered completely, and, on the other, cases in which, although streptococci had been found in the blood, the serum was entirely without effect. One speaker mentioned a case in which the injection of quite small doses of serum had been followed by alarming symptoms, but it was generally agreed that this must be an exceptional circumstance. The last paper was by Dr. Douglas on the Arrangement of Nissl Bodies in the Cells of the Anterior Cornua and the Cells of Clarke's Column. He showed lantern slides from photomicrographs, which clearly indicated that whereas it was normal for the Nissl bodies to be evenly distributed throughout the cell in the case of the anterior cornual cell, a peripheral arrangement was characteristic of the cells of Clarke's column. Mr. Fouler ton referred to the changes which he and Dr. Campbell Thomson had found in the crse of the cortical cells of animals dying of experimental tetanus, and Dr. Michell Clarke asked some questions with reference to the staining reactions of thionin upon the Nissl bodies. He had found that in some cases this dye seemed to show a selective action. Dr. Douglas, in his reply, laid stress upon his belief that the appearances he had described were normal for the cells in question.

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### SECTION OF OPHTHALMOLOGY.

THE President, Mr. W. H. H. Jessop, gave a Presidential address on Points in the Pathology and Prognosis of Glioma. Mr. Priestley Smith opened the discussion on Myopia, and drew conclusions from 100 cases of all degrees of the affection. He discussed the condition under the heads of the age of the patient, the degree of myopia present, the state of the choroid and retina, the constitutional condition of the patient, evidence of heredity, occupation of the patient. Dr. A. S. Percival showed a diagram of the orbit, and thought the oblique muscles were very powerful in the production of myopia. Mr. Henry Power laid stress on the hygienic surroundings of the patient and the pernicious habit of allowing children to work before breakfast and on insufficient food. Dr. Darier (Paris) referred to massage as a treatment for myopia. Mr. A. H. Thompson thought the chart shown by Mr. Priestley Smith most useful, and considered it safe for myopes of a low degree to use their accommodation. Mr. Eales thought the power of accommodation of the patient was a great index as to the condition present, and also that with exophoria accompanying it prisms did much good. Dr. Barr did not consider reading in a carriage very likely to do harm, but he especially warned myopes against reading in bad light. Dr. Maddox held that fatigue of the eyes should be avoided whenever there was a tendency to myopia. After some remarks from Dr. Bronner, Dr. Batten discussed various general conditions as bearing on myopia, and also the appearance of the fundus in various stages of the disease. Dr. Tatham Thompson fully corrected his low cases of myopia. Surgeon-Major Herbert read a paper on Superficial Punctate Keratitis, in which the dots on the cornea were stained with fluorescine. In these dots he found an encapsuled bacillus, which showed many signs of causing the disease, though most cultures had failed. Mr. Devereux Marshall thought the name "keratitis punctata" very confusing, and did not consider the proofs brought forward by Major Herbert very conclusive. Mr. Blair thought it resembled Fuchs's keratitis. Dr. Tatham Thompson described a case of symmetrical bullous keratitis in a man, aged 22. The bullæ arranged themselves all around the cornea, and were cured after four months of treatment, of which formol (1 to 5,000) appeared to do the most good.

Dr. C. Blair reported a case of unusual form of keratitis associated with a skin eruption in a patient aged 18, who showed swellings around the cornea, which were somewhat like what was seen in spring catarrh. At times exacerbations occurred, and these were associated with a papular eruption of the skin of the face. He considered it part of a general condition. Mr. Devereux Marshall thought it very like a tuberculous cyclitis. Dr. Blair thought this possible, but stated that it had not altered much for four years. Dr. Percival read a paper on Periscopic Lenses, the errors of which had been worked out mathematically. The President, Dr. Maddox, and Dr. Tatham Thompson joined in the discussion.

### Diseases of Children.

The meeting of this Section took place under the presidency of Mr. Frederic Eve. A discussion was opened by Mr. Bernard Pitts on The Treatment of Intussusception, in which he first referred to treatment by inflation, and maintained that it should be resorted to only when the case had been seen within a few hours of onset, and was not of a very acute character. In the great majority of hospital cases it was best to open the abdomen at once. Inflation might be tried in certain other cases in order to reduce the main part of the intussusception, and to enable the incision to be made directly over the cæcum. When reduction was found impossible in chronic cases a resection might generally be done. In acute cases, especially if gangrene was present, or the condition of the bowel required its removal, a wide resection should be undertaken as rapidly as possible. The ends should be brought outside the abdomen and continuity restored at a subsequent operation. In exceptional cases of enteric intussusception resection and immediate restoration of continuity gave the only chance. Mr. D'Arcy Power confirmed what Mr. Pitts had said as corresponding with his own experience, and gave additional results. He also spoke of the small proportion of such cases out of the total number ordinarily seen, of the very large mortality, of possible mistakes in diagnosis, and on the question of multiple intussusception. Mr. McAdam Eccles discussed the various temperatures seen in such cases with reference to prognosis, and emphasised the necessity of giving chloroform during irrigation, and also the necessity of rapid operation. He also discussed the questions of improper feeding as a cause of the condition, after-treatment, shock, and recurrence. Mr. Tubby commented on the futility of irrigation and the necessity of immediate operation, and quoted one or two unique cases that had come under his observation. Mr. F. C. Abbott spoke of his experiences when such cases were admitted first to the medical side in hospitals and after inflation transferred to the surgeon's care. This involved delay and a double anæsthetic, and the mortality had been very high. He alluded to the question of high temperature and the procedure that should be followed in cases accompanied by local peritonitis. Mr. Paul Bush advocated operation at the first available moment, and strongly deprecated the loss of time occasioned by the routine employment of preliminary irrigation and inflation. Mr. Sinclair White discussed the causes of hyperpyrexia in such cases, treatment by morphine, and sundry operative procedures. Mr. Lewis Marshall alluded to the use of sutures, the administration of strychnine, and the importance of early operation. Mr. Firmin Cuthbert, Professor McPhedran (Toronto), Dr. A. Foljambe Forster, Mr. Mansell Sympson, and Dr. Blackader took part in the discussion. Papers were read by Mr. A. H. Tubby on Results of Tendon Grafting, and by Dr. Herringham on General Œdema without Albuminuria.

### Section of Laryngology and Otology.

The proceedings of this Section opened with a discussion on the Treatment of Nasal Obstruction from Intranasal Causes other than Mucous Polypus, which was introduced by papers from Mr. F. Marsh, Dr. Brown Kelly, and Mr. C. A. Parker. Mr. Mayo Collier remarked on the frequency and importance of turbinal congestion as a cause of intermittent, or, as he preferred to call it, "latent nasal obstruction," coming on at night as soon as the patient lay down in bed, the lower nostril being blocked. Dr. Pegler contended that the term "insufficiency" was more accurate than "obstruction," which implied a more or less complete block, and was generally due to some body in the nasopharynx. He directed attention to displacement of the central crus of the lateral cartilage as impeding nasal respiration, described his method of treatment, and showed his instruments. He approved of the use of the spokeshave in carefully selected cases. Dr. Watson Williams emphasised the importance of general treatment in persons suffering from defective health, as from gout and rheumatism, and pointed out that the subjective conditions varied immensely in cases which were apparently identical. Nervous depression was often the most distressing feature. Very slight operations sometimes gave great results. Complete turbinectomy was very rarely necessary, but the results were good. A useless turbinal might as well be removed. Dr. StClair Thomson referred to reflex nasal congestion as from uterine irritation. He agreed with Mr. Parker as to defective nasal drainage producing symptoms resembling ethmoiditis. He differed from Dr. Williams as to the removal of a lower turbinal which was doing no work. Dr. Milligan had very rarely had occasion to remove the whole of the lower turbinal, but yet in certain cases it was advisable. Minor measures should be tried first. He recommended submucous incision, and sometimes passed a bead of chromic acid along the incision fused on a probe. Dr. Permewan wished to associate himself with Mr. Parker's views, and thought his method of causing the patient to inspire lycopodium powder so as to mark the inspiratory path was a most useful one and likely to lead to more scientific methods. Complete turbinectomy was certainly sometimes necessary. Dr. Scanes Spicer had never seen any of the bad results described as following complete turbinectomy. There was muco-purulent discharge for a time but it ceased. In cases of imperfectly developed nostrils he recommended the operation and in certain very difficult septal cases. Dr. R. H. Woods thought complete turbinectomy was very rarely indicated. Nothing should be removed that it was possible to preserve, consistently with giving the patient complete relief. Dr. H. Tilley endorsed Dr. Milligan's remarks as to the great usefulness of subcutaneous section of the lower turbinal. Dr. Symons gave his experience of nasal troubles in miners. The President had long ago protested against the reckless removal of turbinals. He preferred the cold snare for posterior hypertrophies on account of the proximity of the Eustachian tube. He had had no serious hæmorrhage. Posterior hypertrophies should be sought for in all adenoid operations and removed if found. Many cases of partial failure of the operation were due to posterior hypertrophies. Dr. Mackie then read a paper on the Treatment of Nasal Suppuration, which was discussed by Drs. Milligan, Tilley, Permewan, Kelly, Spicer, and Woods.

### Section of Tropical Diseases.

The Chairman, Mr. James Cantlie, F.R.C.S., explained the absence of the President of the Section, Major Ronald Ross, F.R.S., and read the Presidential Address. A discussion on Stone in the Tropics was then opened by Mr. P. J. Freyer. Urinary calculi of the oxalate of lime and uric acid varieties was practically confined to the district of the Indus and the upper reaches of the Ganges. The Punjab, the North-West Provinces, Scinde, and Gujerat were the countries where urinary calculi most prevailed. The mountains from whence these rivers rose were of cretaceous formation. Probably it was the lime in the water that brought about oxalate of lime calculi and the dyspepsia antecedent to uric acid deposits. In these regions it was intensely hot in summer and very cold in winter, and it was probable that the disease was partly attributable to this fact. Food had not probably much to do with the development of calculi. As the preferable operation, litholapaxy was strongly advocated: and although he at first opposed Colonel Keegan's operation for stone in children by crushing, he was now a cordial supporter of the treatment. Surgeon-General Harvey, C.B., endorsed the statement as to the advantages of litholapaxy in India. The objection to the old lithotrity was that frequently the patient left after one or two crushings, and would not wait until the cure was completed. Dr. Patrick Manson, C.M.G., F.R.S., objected to the etiology of calculous disorders announced by Mr. Freyer. The irregular distribution of stone in the urinary tract could not be explained

by the imbibitions of hard water. Two causes of stone were definitely known—incrustation around a foreign body and around the ova of the bilharzia. The causation of stone should be looked for on a parasitic basis. Lieutenant-Colonel Giles, I.M.S., agreed with Dr. Manson as to the probability of a parasitic etiology. After remarks from Dr. Max. F. Simon (Singapore), Captain Milne, I.M.S., Dr. Leopold G. Hill (Pakhoi, China), and Mr. James Cantlie, Dr. Sandwith (Egypt) said that the ova of bilharzia frequently formed the nucleus of stone in Egypt. The prevalence of stone in Lower Egypt was probably due to the Nile water being impregnated with volcanic detritus. Major W. J. Buchanan, I.M.S., read a paper on Dust as the Vehicle for the Germ of Cerebro-spinal Fever, relating 13 cases in addition to 47 previously recorded. He supported the consideration of cerebro-spinal fever as one of the continued fevers of the tropics. Lieutenant-Colonel G. M. Giles, I.M.S., said habitation seemed to play an important part in the development of the disease. Mr. James Cantlie described Four Cases of Liver Abscess treated by the Trocar and Cannula (Manson's method), making 28 cases which he had treated by this method, with 4 deaths. Mr. P. J. Freyer upheld the free exposure of liver abscesses by cutting. Dr. G. P. Jordan (Hong Kong) preferred the open method to tapping by the trocar and cannula, and inserted a silver drainage tube in place of a rubber drainage tube. Captain W. R. Battye, I.M.S., referred to the dangers, described by Colonel Hatch in Bombay, of hæmorrhage by introducing a long aspirating needle whilst searching for pus. Hæmorrhage of that kind could be more easily controlled through an open wound. Dr. Manson had seen the open method and that by the trocar and cannula practised in London, and preferred for many reasons the latter treatment for deep-seated abscess. Mr. Cantlie, in reply, believed that hæmorrhage was due to the needle or trocar reaching the inferior vena cava, but this could be guarded against.

### Section of Navy, Army, and Ambulance.

The work of this Section was inaugurated by the President (Deputy-Surgeon-General W. G. Don). Fleet-Surgeon Gilbert Kirker, Royal Hospital, Haslar, and Instructor of Surgeons on Entry, read a paper on the Treatment of the Wounded in Naval Actions. He hoped to see a definite and suitable place provided below the water line for the surgeon's station; he feared that in modern naval actions little could be done for treatment during the action, or the transport of the wounded. Their transport in modern ships required a very special description of ambulance, and he found an ambulance sleigh which he had designed for the purpose some fifteen years before, and then pronounced too heavy, had virtually been adopted after modification in the French and Chilian navies, it was now made lighter, and was under trial in the Channel Squadron. Surgeon F. H. A. Clayton, M.D., R.N., contributed a paper on the same subject. The Japanese found forward and aft dressing stations were the most available and suitable. He doubted the possibility of securing a suitable operating room under the waterline. He advocated the safeguarding of the surgical equipment by protected store rooms, and suggested the supply of sterilised dressings in air-tight tins. He was in favour of hospital ships, but on detached service they would not be available. Inspector-General Belgrave Ninnis, M.D. (retired), contributed a paper, in which hospital ships were strongly advocated, as treatment on board ships after naval action was to be deprecated. He maintained that hospital ships should be used for no other purpose, and should be suitable for the treatment of the sick and injured, including infectious cases. A discussion followed on these subjects. Fleet Surgeon Vasey (retired) dwelt on the difficulties of designing an ambulance stretcher for the transport of the wounded on board modern ships of war, and favoured Fleet Surgeon Kerker's sleigh ambulance. Inspector General Turnbull, M.D. (retired), remarked on the peace surgical equipment supplied to men of war in his day as inadequate for war service which might suddenly occur, and latterly quite out of date. He understood, however, that under the recent and present naval medical administration reforms had been and were being made as to the character of the equipment, but it might still be requisite to consider war service supply. The provision of good ventilation and the facility for segregating infectious or other special cases were essential, as were cleanliness and purity for modern antiseptic surgery, all readily obtainable in a well-ordered hospital ship at sea. Surgeon-General O'Dwyer, (P.M.O., Aldershot) and Dr. Leigh Canney also made remarks. A paper by Staff Surgeon W. E. Home, R.N., on the Healthfulness of Modern Warships was read in his unavoidable absence. He favoured iron ships, and the early central battleships he thought were much healthier than wooden ships, and turret ships even more healthy. The requirements for health afloat were ventilation and dryness. Inspector-General Turnbull referred to the ancient history of septic disease in wooden ships, and hoped the decision to transfer the training of naval cadets from the wooden ship *Britannia* to the Naval College on shore at Dartmouth would be followed by the similar abolition of the wooden-ship training establishments for boys, doubtless costly in money, but a saving in the health of our future seamen which could hardly be over-estimated. Fleet Surgeon Kirker, while remarking on the difficulty of securing the desirable amount of air space and air supply on board men-of-war, advocated the strictest attention to sanitary matters. The most liberal supply of fresh air was the most important sanitary measure.

### Section of Dermatology.

The Section of Dermatology was opened by the President, Dr. J. J. Pringle, with some general introductory remarks. Dr. Sabouraud (Paris) then gave a demonstration on the *rôle* of cocci in the pathology of the skin. He dealt with the action of the streptococcus of Fehleisen, the staphylococcus pyogenes aureus, and of a third micro-organism, a grey-cultured staphylococcus, the most common of all. The various histological lesions were shown by means of drawings and lantern slides, and various cultures were handed round. In the course of his lecture Dr. Sabouraud opposed the views of Unna as to the microbial origin of eczema. The primary lesion of eczema contained no micro-organism, and was situated in the deeper layers of the epidermis. The so-called flask bacillus was probably a degenerative form of the staphylococcus with grey cultures. Microscopically the true coccal forms were always found associated with the flask bacillus, together with numerous intermediate forms. Further, staphylococcus aureus and staphylococcus griseus were possibly two forms of one and the same coccus; but M. Sabouraud considered that the streptococcus he had studied was quite distinct from the staphylococcus. Such conditions as impetigo contagiosa, eczema, and seborrhœa corporis were gone into very fully from the histological and bacteriological points of view. A discussion on the communication was then opened by Dr. James Galloway, who rendered well-deserved tribute to M. Sabouraud's painstaking investigations. It was continued by Dr. Whitfield of London, Dr. Norman Walker of Edinburgh, Dr. Savill of London, Professor Dubreuilh of Bordeaux, Professor Allan Jamieson of Edinburgh, Dr. H. Radcliffe Crocker of London, Dr. Colcott Fox of London, and Mr. Pernet of London. Dr. Sabouraud then replied to the several questions which had been put to him. Professor Dubreuilh followed with a paper on Paget's Disease of the Vulva, and was succeeded by Dr. J. M. H. Macleod on the Histology of Yaws. With regard to the latter, the author expressed the opinion that several points taken collectively differentiated a well-marked lesion of yaws from syphilis. Sir William Kynsey contributed a number of plates illustrating the clinical aspects of yaws, and emphasised the clinical points which separated it from syphilis. The clinical and histological facts showed that yaws was a disease *sui generis* quite distinct from syphilis. The following cases were brought before the Section: (1) Alopecia areata and (2) congenital tylosis (Dr. Prance of Cheltenham); (1) molluscum fibrosum of the Recklinghausen type, and (2) a case for diagnosis, either pemphigus or erythema bullosum (Dr. Douglas Heath of Birmingham); multiple tuberculous lesions—lupus vulgaris—(Dr. Fisher of Bristol); an extensive hairy mole of the body (Dr. Johns of Cheltenham); and a circinate psoriasis (Dr. Davies of Cheltenham).

# British Congress on Tuberculosis.

*LONDON, JULY 22nd to 26th, 1901.*

## PROCEEDINGS OF SECTIONS.

### SECTION I.—STATE AND MUNICIPAL.

*President*,—The Right Hon. Sir Herbert Maxwell, Bart., M.P., F.R.S.

*Thursday, July 25th.*

The International Aspect of Tuberculosis.

Dr. Alfred Hillier said that two practical questions had to be considered: (1) What throughout the civilised States of Europe and America was being done? (2) What, in general terms, were we called upon most urgently to do? As Germany had produced the discoverer of the tubercle bacillus, so that country had taken the leading place in the movement for the provision of special sanatoria. But if Germany had led in the matter of sanatoria, thanks to Dr. Hermann Biggs (of New York), the United States had led the way in practical measures of prevention. In New York, spitting was no longer merely a disagreeable habit, it was proclaimed a public nuisance, and made by statute a penal offence. To France belonged the honour of having done more for the education of public opinion than any other country. Norway had recently passed a law making notification of tuberculosis throughout the kingdom compulsory. Denmark had entered energetically into the contest, and had created numerous sanatoria. In England there was a strong Association, and numerous sanatoria in course of erection. In many other countries much good work had been done. Might not the international movement begun at Naples last year be extended? Could not a European committee or league be formed in which all European countries might be represented? Such a body might formulate the principles on which all were agreed, and might define the broad lines of action on which it was desirable that States, municipalities, and individuals should proceed. Legislation alone could never terminate many of the abuses associated with the spread of tuberculosis, but legislation fortified by public opinion could and would do so.

Dr. Montizambert (Delegate of the Canadian Government) said that he was commissioned by his Government to give a hearty greeting to the Congress. Tuberculosis was a great bane in Canada and gave rise to a large mortality. A Canadian Association for the Prevention of Tuberculosis had been formed last year and had extended all over the land. The Dominion offered every kind of climate, so that it might be seen there how far climatic differences affected the disease. In the extremely cold districts there was an open-air treatment, and very good results were obtained. But in many parts of the country the climate was not different from that of England, so that in one way or another open-air treatment was largely carried out.

Professor Robinson (Maine, U.S.A.) said that in the State of Maine a campaign had been undertaken against the spread of tuberculosis. It was the most north-easterly of all the States of the Union. The cities were few in number and the country sparsely populated. The people were very tenacious of their rights, so that it was not easy to pass restrictive legislation, and it was therefore necessary for the campaign against tuberculosis to be largely one of education. By means of educational literature many reforms had been brought about, and the mortality from tuberculosis during the last eight years had been reduced from 20.14 to 14.69. Now there was a strong movement in favour of sanatoria.

Dr. Hobbs (Bordeaux) said that an Anti-Tuberculous Society had recently been formed in Bordeaux, which aimed at collecting and distributing literature connected with tuberculosis, and encouraging the use of tuberculin in the dairies from which milk was supplied. It undertook the examination of sputum in doubtful cases, and immediately forwarded the result to the doctor in question.

Señor de Silva-Amado spoke of the work done in Portugal, and said that they had founded an association, presided over by the King, for the prevention of the ravages of tubercle.

Free Bacteriological Examination.

Dr. Bezly Thorne read a paper on The National Importance of Gratuitous Bacteriological Examination. He said that early recognition was the essence of the curative treatment of pulmonary tuberculosis; that a positive diagnosis in early cases was difficult apart from the detection of the bacillus; that the appearance of the bacillus in the sputum marked the turning point of danger to the patient and those with whom he associated; and that the bacteriological examination was a national concern, and should be provided for by the State.

The following resolution, proposed by Dr. Hillier, and seconded by Dr. Newsholme, was carried unanimously:

That this Section is of opinion that a permanent International Committee should be appointed (*a*) to collect evidence and report upon the measures that had been adopted for the prevention of tuberculosis in different countries; (*b*) to publish a popular statement of these measures; (*c*) to keep and publish periodically a record of scientific researches in relation to tuberculosis; (*d*) to consider and recommend measures of prevention for the guidance and information of the governments of States and local authorities. This Congress is further of opinion that such a Committee should consist of representatives to be elected by the great national societies for the prevention of tuberculosis, and also of representatives nominated by various Governments.

Control of Milk Supplies.

Professor Delépine (Manchester) commenced the discussion on this subject by reading a paper entitled What Exact Statistics are there to Show the Certainty or Otherwise of the Tuberculin Test, and by what Means may the Application of the Tuberculin Test towards the Eradication of Tuberculosis be Best Secured? He said that it was hard to disagree with the discoverer of the bacillus, but he thought it was incumbent on Dr. Koch to give good evidence of his contention. There were a number of facts against his views. There were authentic cases of veterinary surgeons who had been infected by bovine tubercle; many of the lower animals when fed on human tubercle developed ordinary tuberculous lesions; typical lesions were also produced by inoculating animals with infective human sputum. Finally, there was the reaction obtained from Koch's tuberculin. This last was the same in cases of animal tuberculosis as in the human disease, so that he could not help thinking that Dr. Koch was not justified in making his statement. He desired to propose the following resolution:

That in the opinion of the State Section of the Congress the statement made by Professor Koch as to the danger of consuming tuberculous meat and milk gives rise to serious administrative difficulties in this country. Such difficulties can only be removed by the confirmation or disproval of Professor Koch's conclusions; and this Section is therefore of opinion that the Congress as a whole should appoint a deputation to wait upon the President of the Local Government Board and the President of the Board of Agriculture for the purpose of bringing these views to their notice.

Dr. Robertson seconded. He thought it very necessary that something should be done to undo the mischief caused by Professor Koch's statements.

The resolution was put and carried unanimously.

Professor Delépine then said that a prominent position must be given to tuberculin because it was the best means of diagnosing tubercle. Cure largely depended upon early diagnosis. Tuberculin was an all-important agent in detecting tuberculosis in cattle, but its administration could not be enforced upon owners on account of possible mischief to the cattle from its use. On that account the State could not be asked to give compulsory powers. Tuberculin, when properly injected however, did not cause mischief. It should not be applied when the temperature of the animal was raised or during the calving period. He admitted that the test did not act in cases of advanced disease, but that was of no moment as then the disease could be detected in other ways. In his opinion no animal could be guaranteed free from tubercle unless the tuberculin test had been applied. As to the reported tolerance of cows, he had found that only after five injections did the reaction cease to appear, so that it was

not often that the test would refuse to answer. When he had received samples of tuberculous milk he invariably found that the cows yielding it answered to the test.

Dr. BOOBBYER (Nottingham) said it must be recognised that the bombshell of Professor Koch had destroyed a good deal of interest in what was to have been discussed that morning. Medical officers of health could not afford to wait for the results of slow experiments. He had heard that many in the meat and milk trade were jubilant over Professor Koch's opinion. He thought that Professor Koch had not sufficient evidence for what he stated. The circular letter of the Local Government Board, dated March 10th, 1899, founded on the report of the Royal Commission, at the present time ruled the conduct of medical officers of health and sanitary inspectors in dealing with diseased milk and meat. What was to be done? This circular must still be their guide, although when cases were brought before the magistrates no doubt Koch's opinion would be flung in their faces. He thought that the Local Government Board ought to be approached, and he begged to move the following resolution:

That the Local Government Boards of England, Scotland, and Ireland be asked to issue another circular similar to that of March 10th, 1899, setting forth the line of action that should be followed by the municipalities and their officers with regard to diseased meat and milk.

Dr. BAILLIE (Glasgow) seconded. He strongly insisted that no alteration ought to be made by medical officers of health in their custom of restricting the sale of tuberculous milk and meat until the matter was much more certain.

Professor BLITZ made some comments on Professor Koch's opinion; but many of his remarks were ruled by the Chairman not to apply to the present discussion.

The resolution was then put and carried unanimously.

Mr. J. S. LLOYD, M.R.C.V.S., next read a paper by Dr. JAMES NIVEN (Manchester), entitled, The Administration of the Manchester Milk Clauses, 1899, to which he had appended a statement as to the work done by him as veterinary surgeon to the Sanitary Committee at Manchester. He admitted that evidence showing that tuberculous milk had been the cause of tuberculous disease to children was rather scanty: but he said that it was open to infer for various reasons that the food of young children and young cattle was more liable to produce tuberculosis than the food of adults and of full-grown cattle. This conclusion had been rendered stronger by the evidence of feeding experiments made by Chauveau and Jöhne, and by Drs. Woodhead and Sidney Martin. The Sanitary Committee of the city of Manchester had determined in 1898 to apply for similar powers to those enjoyed by Glasgow, with the result that the following regulations were enforced:

(1) That cows known to be suffering from tuberculosis of the udder must be isolated, and that the milk from such cows must not be used for human food. (2) Powers were given to inspect the cow, and to take samples of the milk from particular teats. (3) If the medical officer of health was of opinion that tuberculosis was likely to be caused by the consumption of a particular milk, the dairyman might be summoned to appear before the Corporation to show cause why an order should not be made prohibiting him from supplying milk within the city. (4) A dairyman supplying milk within the city who had in his dairy any cow affected with tuberculosis of the udder should forthwith give written notice of the fact to the medical officer of health.

Unfortunately the penalty attaching to an offence of this description must not exceed 40 shillings. He then gave an interesting account of the way in which the milk was examined in Manchester, and of the frequency with which tuberculosis of the udder was found among the cows supplying the milk. He thought there was doubt whether the operation of the milk clauses was adequate to the result expected. He would urge these points: (1) Cows shown to suffer from tuberculosis of the udder should be forthwith slaughtered in the presence of the veterinary surgeon; (2) all restrictions on the inspection of herds supplying the district with milk should be removed; (3) a heavy penalty should be attached to failure to notify suspicious conditions of the udder. Mr. Lloyd then gave an interesting account of the veterinary work done under the milk clauses in Manchester, and the difficulties met with.

Dr. NIVEN said that the milk clauses did not enable the authorities to compel the slaughter of cows with diseased udders, but only to effect their removal from the district. He moved:

That power be given by the Legislature to have such cows slaughtered under veterinary inspection.

This resolution was seconded.

Dr. EASTON (Fulham) moved as an amendment:

That compensation should be paid on such slaughter.

This amendment was also seconded.

Dr. HODGSON objected to the question of compensation being introduced, as it was outside the range of the discussion, which ought to go on the broad humanitarian question whether the food was fit for consumption.

The CHAIRMAN said the position of the agriculturists in the country, who were not very well represented there, must be considered. The meeting must try if possible to carry that class with them, and the question of compensation very much affected them.

Dr. NIVEN said that his resolution had been formulated by his sanitary authority, and that he was not authorised to pledge it to any scheme of compensation. Rather than do so he would withdraw his resolution, although personally he was in favour of compensation.

The amendment was lost, and the original resolution carried.

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*Friday, July 26th.*

PROVISION OF SANATORIA.

SIR JAMES CRICHTON-BROWNE gave a brief address upon What are the best Means of Promoting the Erection of Sanatoria for Phthisical Patients, in which (1) the curable may have the best chances of recovery afforded to them; (2) the incurable, while ceasing to be a source of danger to the community, may have their lives prolonged, and receive the comfort necessary to their condition? He said there was a great necessity for sanatoria. Some even now were in doubt as to the curability of phthisis. This arose from the old opinion of Laennec, but even Dr. Theodore Williams tended to support the old view, as he objected to the term "cure" being used, but rather preferred "arrest of the disease." He (Sir James) thought this was wrong, as nearly every disease left scars behind, but they did not count unless they disabled or caused suffering to the patient. In every cadaver there were found the remains of old disease, but yet one had been accustomed to call these cases "cures," and not merely "arrests of the disease." Tubercle bacilli were always waiting to intervene wherever the strength of the body went down; but wherever tuberculous disease broke out afresh, it was not necessarily a relapse, but might be a fresh infection. Obsolete tubercle was often found in the lungs of people who had never known of its existence, and had died of other diseases. Nothing was more clearly shown by statistics than this. He found a large prevalence of tubercle among the inmates of asylums, and even under the depressing conditions always prevalent there, cures still went on. It was to help the tendency to spontaneous cures, of the existence of which there could be no doubt, that sanatoria were so necessary. The sanatorium treatment had largely increased the curability of consumption, and ought to be brought within the reach of all persons, for the public were largely protected by the isolation of such cases, and this was being recognised in all civilised countries. There ought to be three classes of sanatoria: (1) for the affluent classes; (2) for those possessing competent means; (3) for the poor. In (1) were included those to whom the incidence of sickness made no difference as to their financial position; in (2) were reckoned those who had sufficient means for paying their way under ordinary conditions of health, but in times of sickness were sure to be more or less embarrassed, and for which some eleemosynary assistance was necessary. The members of this class might contribute a portion of the cost, and, if they recovered, would not object to repay what had been expended for them. But it was in (3) that were included the great mass of the sick, although the line between (2) and (3) could not be sharply defined. Members of the latter class were always helpless in the event of long sickness. Private charity was not sufficient; public funds must be found.

Mr. BRABROOK, C.B. (Chief Registrar of Friendly Societies), said that what he proposed to deal with was the question whether it was to the interest of Friendly Societies to provide funds for sanatoria. Such societies suffered from disease among their members (1) by claims made on the the sick-funds; (2) by sums paid at the death of members. They had a legal

power to provide funds under their special Acts, for hospitals and such like institutions, but before anything would be likely to be done, it would be necessary for the Orders clearly to understand at what cost its members might receive benefits. Friendly Societies might combine together to form sanatoria. Although these Orders possessed large funds, it must not be taken for granted that they could afford excessive contributions. Their members were usually picked men, owing to their having had a medical examination before admission to the Order, so that their risks would not be so great as those of the general public. That the risk of phthisis was less clearly shown by statistics, and for this reason their contributions ought to be less. As a matter of fact, among the Friendly Societies, a short and rapid case of phthisis was financially better for them than one of a long duration, as the funeral allowance was much less costly than prolonged sick pay. The conclusions he had come to were that the financial interests of the Friendly Societies in sanatoria were small; and for that reason they were not likely to be eager to become contributories.

Herr Bielefeldt (Privy Councillor, and President of the Senate of the Imperial Insurance Department) read a paper entitled, The Battle against Consumption as a Sickness of the People on the Grounds of the German Workmen's Insurance, which it is proposed to publish subsequently.

### Tuberculosis and Life Assurance.

Mr. Hoffman (Statistician to the Prudential Insurance Company of America) read a paper on life insurance in its relation to tuberculosis. The chief question was what interest had life insurance companies in the question of sanatoria for phthisis? He exhibited charts showing the mortality of this disease in America, and that there had been a great decline. Dr. Koch had said that the reason of the diminution in tuberculous mortality was the dissemination of the knowledge that tubercle was infectious. This statement was incorrect, in his opinion, and altogether ignored the progress of sanitary science, as the decline had been going on for the last fifty years. The difference in the rate of decline in the case of males and females in America was worthy of a very close investigation as to possible cause. It was always this disease that gave them most trouble and put them financially to the greatest cost, but the insurance companies could not contribute towards sanatoria. The insured had paid as a rule 24 dollars, and had cost them at least 65 dollars before sanatorial treatment was possible. They might, however, help by distributing literature to educate the public. He proposed the following resolution, which was carried unanimously:

That whereas it is in evidence that the further reduction of mortality of tuberculosis is of the greatest financial importance to insurance companies; in the opinion of this section, such companies should endeavour to give the greatest publicity to the most essential and easily comprehended facts as to the treatment and prevention of consumption.

Dr. Hayward (Medical Officer of Health of Haydock, Lancs.) gave an abstract of his paper on the Mortality from Phthisis and other Tuberculous Diseases, considered in some aspects which may be demonstrated by life tables. The usual way of measuring the mortality of phthisis was to see how many died out of so many living; but he had constructed a table to show how many more would be living were the disease abolished. His conclusions were that if this disease could be got rid of every infant born would have an increased expectation of life of two and a-half years; where the age was 15 the expectation would be three and a quarter years; the average life of the population of the country would be increased by two years; the increase, in fact, would be more than equal to what would occur if all the zymotic diseases were abolished.

Lieutenant-Colonel Montefiore (Charity Organisation Society) said that although the development of sanatoria in this country had not been so rapid as abroad, we had led the way in promulgating the scientific principles on which they were founded. Foreigners had beaten us in this direction because the opinion of scientific men had more influence abroad than here; but he hoped the present Congress would stimulate his countrymen. Convalescent homes here for the poor were very few, and many of these refused to take in consumptives. It was not generally understood that consumption was infectious, and the idea that it was not was encouraged by the fact that in some hospitals phthisical cases were admitted and treated side by side with other cases. He thought the treatment in proper institutions would make a great difference in the length of disablement of working men.

Dr. Jane Walker (London) said that it could hardly be gainsaid that it was more necessary to help the poor than the rich. Overcrowding bore a direct relation to the causation of phthisis; consumptives among the poor had little chance while exposed to insanitary surroundings, and they directly threatened the health of the sound. There was a great tendency for both sexes to be more and more employed in indoor occupations, and unless proper inspection of the workrooms was kept up overcrowding was more or less certain to occur. Every division of London ought to have a sanatorium in the country; she had herself practical experience of open-air treatment, as she had taken a farm in Norfolk and turned it into a sanatorium for ten women patients. She had met with fair success, and thought such homes could be made to pay 2½ per cent.

Sir James Crichton-Browne said it was now necessary for him to propose some resolution so as to give a practical turn to the discussion. He begged to propose:

That in the opinion of this Section the provision of sanatoria is an indispensible condition for the treatment and diminution of tuberculosis, and that the duty of providing such sanatoria should devolve upon the county councils.

Dr. Kaye seconded.

Dr. Ritchie (Edinburgh) proposed as an amendment the following:

That it is desirable for strengthening the hands of parish councils and of others interested in the care and treatment of those on the parochial roll suffering from pulmonary phthisis, that an expression of opinion be given by the Congress to this effect.

That it is not only right but necessary that proper provision be made for the housing or accommodation of such afflicted persons, either by separate wards being provided in the poor or workhouse hospitals, in which they may be treated apart from the other inmates; or, what is more advisable, that a distinct building or sanatorium be erected, at a moderate cost, with accommodation for the care and treatment of cases of both sexes, not only of the early or curable, but also of the advanced stages of the disease.

Dr. W. F. Robinson seconded.

Sir James Crichton-Browne thought that the resolution should be as general as possible, and would withdraw the second part of his resolution. Another amendment was proposed, but ruled by the Chairman to be out of order. The Chairman further said that Dr. Ritchie's resolution could not be treated as an amendment, but must be put as a separate resolution. Sir James Crichton-Browne's resolution was then put to the meeting and carried.

Dr. Ritchie's resolution was next considered, although the Chairman thought it hardly applied to the present business.

Dr. Patten proposed as an amendment that "all public bodies" be substituted for the bodies named in the resolution. Another Member proposed that "local authority" be put in the place of "parish council." The Chairman thought the Section ought to be very careful as to what resolution they passed. Dr. Ritchie's resolution was then put to the meeting, but was lost by a considerable majority.

### Hospitals and Dispensaries for Consumption and the Prevention of Phthisis.

Dr. J. Edward Squire said that the chief cause of th diminution of consumption was the hygienic measures th had been employed in its treatment, as no specific had been employed. It must not be forgotten that all consr tives were a danger on account of their proneness to others. The sanatorium often isolated the patient, hospital should be all that a sanatorium was, and pro more than the sanatorium could do. For a proper c tion hospital several departments were essential. T be an out-patient department for patients able t and through it expert assistance might be given in doubtful cases, so as to bring about an earlie Then there would be the indoor department quiring active treatment, and who were not to be in sanatoria. Thirdly, there should b

dying connected with such a hospital to which incurables might be sent when necessary. Whether such institutions should be supported by the charitable or by the municipalities was another question, but they should always be arranged according to the foregoing scheme.

Dr. CALMETTE gave an interesting description of a class of dispensaries established in Paris for the purpose of treating tuberculous diseases among the working classes.

Dr. SAMUEL BERNHEIM (Paris) described dispensaries established as branches of the large hospitals for the reception and care of poor people; the patients were carefully examined in order to discover the earliest symptoms of tuberculosis. They were not only provided gratuitously with medicines, food and clothing, but were warned to be on their guard against contagion. A certain number of sanitary officials attached to these institutions looked after the patients at their own homes, and made sure that existing rules were observed. Consumptives, especially those in early stages of the disease, treated by these dispensaries, had derived the greatest benefit from them. From a prophylactic point of view he thought they would be found even more efficacious than sanatoria.

## SECTION II.

## MEDICAL (INCLUDING CLIMATOLOGY AND SANATORIA).

*President*,—Sir RICHARD DOUGLAS POWELL, Bart, M.D.

*Thursday, July 25th.*

### SANATORIA FOR CONSUMPTIVES.

DR. CLIFFORD ALLBUTT, in opening the discussion on sanatoria for consumptives, said that though the open-air treatment of consumption was advocated in England half a century ago, it was Brehmer who, by his methods, brought the cure of phthisis within the reach of the poor, whereas before it had been costly. The modern treatment was called the sanatorium method; it had been worked out and perfected in sanatoria, and though open-air treatment might perhaps be carried out at home, the method should be supervised by a medical man who had practical experience of sanatorium treatment. It was in the congregations of the sanatorium that individual treatment had been learnt; for phthisis there was no specific, not even climate. The coldest air that the patient could stand, if dry and clear, was the best for any individual patient. This generally increased the appetite, and made forced feeding unnecessary: but cold, which stimulated a young man, would shrivel up an older patient. There should be central committees for the encouragement of scientific work in sanatoria. Much important scientific work was at present performed in sanatoria, but it required to be collated. The examination of the blood, observations on the agglutination by serum, and the virulence of the bacilli rather than their number, were amongst the points which required attention. The importance of early diagnosis was insisted upon. Wherever a person complained of being overwrought, of being "off colour," phthisis should be suspected first, cough or no cough. Let no haemoptysis, however slight, be set down to a blood vessel in the throat. As to the duration of stay required in the sanatorium, the degrees of cure were three—arrest, obsolescence, and *restitutio ad integrum*. The last might be set aside. If obsolescence were to be sought, it would be practically impossible to carry out sanatorium treatment with the poor. To bring about obsolescence even of the first stage, two winters and one summer at least were necessary. To the poor this was impossible. What must be aimed at was what the Germans had described as *wirtschaftliche Heilung* (economic cure), rather than the *wissenschaftliche Heilung*, or absolute cure. Six months would probably be required in the majority of cases, but the probable stay required must be calculated by the progress of the patient in the first month. The patient, and not the abstract "tubercle," must be treated. Alcohol was rarely required, and Bennett said, "a two-edged sword." Some form of exercises, properly adapted to the condition of the patient, might be of value. A protest must be entered against the fussiness of mind which certain reformers would enforce upon their patients. He felt sure that the lack even of tranquil occupations and amusements conduced to introspection. The vacuous looks and aimless wanderings of the patients hanging about some sanatoria had impressed him painfully. The main questions propounded were: 1. Can mixed infections be inferred from fever curves? 2. Can economical (*wirtschaftliche*) healing be distinguished from complete (*wissenschaftliche*) healing; if so, what was the mean term of residence for the economical healing of early cases? 3. How long in certain active cases—say, 6 to 8 per cent.—was a febrile patient to be kept to bed in the reasonable hope of recovery? For instance, was it justifiable to retain in a public sanatorium patients who had been confined to bed for four, five, or even six months? 4. What estimates of improvement, and what rules of prognosis could be based upon physical signs alone? 5. Was multiple tuberculosis—say, in the lungs and in the testicle—too hopeless a condition for a public sanatorium? How far was it comparable with an equal extent of mischief in one organ? 6. Of what use, if any, was massage? 7. Of what use, if any, hydrotherapeutics? 8. Were pulmonary gymnastics appropriate at any stage of progress; and, if so, under what conditions? 9. Must the body be repaired at the expense of the life of the mind? 10. Could not some more educational value be given to the sanatorium higher than the medical drill of it?

Dr. KINGSTON FOWLER (London) said that subsequent experience had confirmed the opinions he expressed at the discussion on sanatoria in November, 1899. The treatment could not be properly carried out at home: sanatorium training was essential. When people talked of the splendid situation of their homes, the southerly aspect, the large rooms, the extensive garden, and other advantages for treatment at home, this frequently spelt disaster, for in these advantages they forgot the necessity for proper regulation of their lives. The aim of treatment was obsolescence, but this was not always obtainable. Further researches on metabolism, such as Dr. Bardswell was carrying out, were required to help to a decision of the vexed questions concerning the feeding of patients. The necessity for early treatment was shown by the very large proportion of cases in which cured tuberculosis found at necropsies occurred in the early stages, and the small number in which cure occurred when the disease was advanced. In deciding the stage of the disease it was well to take into consideration the number of lobes affected. Although consumption was best treated in the country, much good could be done by hospitals in towns: even the London poor got accustomed to an open air life in two or three days.

Dr. PHILIP (Edinburgh) in giving the result of the experience of ten years of sanatorium treatment in Scotland, said that each case required consideration *per se*, all could not be treated on one plan. The temperature of the ward need not be kept high. It was found that patients did better in the winter than in the summer. Rest and exercise must be considered together, and should be gauged by the temperature and pulse. Simple respiratory exercises were often useful. As to alimentation a full dietary was necessary, but not forced feeding. The hygiene of the skin required attention not only for purposes of cleanliness. Overclothing was to be condemned. Cold bathing often did good if shock was avoided. As to the site of the sanatorium almost any place would do so long as the immediate surroundings were satisfactory and sufficient ground. It was well to treat patients in their native air. Uniformly good results were obtained in early cases, and even advanced cases were made more comfortable. The temperature charts showed the steadying of an oscillating temperature and coincident decrease in the rapidity of pulse. Night sweats disappeared entirely in a few days or weeks. Sanatorium treatment at home, though theoretically possible, was most difficult to carry out practically.

Professor VON SCHRÖTTER (Vienna) said that though the principles of sanatorium treatment were in the main settled, the details still required attention. Was it necessary to send patients to the south or up to the mountains? In Austria there was a central sanatorium, with 130 beds, where patients were observed for two or three months: some were then sent to the south, others to the mountains, and kept under observation. In sanatoria not only climatic, hygienic, and dietetic treatment should be employed, but every known treatment should be studied and utilised as far as it was

found of value. Tuberculin had gone out of fashion, but having again come forward must be observed afresh. It would be an advantage if Professor Koch would give definite instructions for the uniform preparation of tuberculin.

Dr. Dvorak (Prague) recommended the institution of wards or pavilions for the isolation of tuberculous patients in general hospitals.

Dr. Jane Walker said that the good results of sanatorium treatment were so immediate and so apparent that it was only after some experience that the difficulties began to show themselves. The chief difficulties arose in the long duration of the disease, patients had to pass prolonged periods of mental and physical inaction, and the longer this was endured the longer it took to get them back to their normal mental and physical condition. Hospital patients should be employed by doing the cooking and housework. With paying patients it was more difficult to find employment.

Professor Janeway (New York) said that in America at least there were far too few sanatoria. They were required for the poor, but were not so essential for the rich. The great defect was the failure of medical men to recognise early consumption. Greater care and knowledge was required.

Sir Hermann Weber (London) said he had known a patient with a temperature ranging between 98.5° and 103° for three years, fully recover at last. Gout was a most favourable complication. Out of 25 cured patients within his knowledge, 18 had developed distinct gout in some form. He emphasised the necessity of "transition sanatoria" where patients after leaving a sanatorium might be kept for a further time under observation. Too often in sanatoria the individual was forgotten in the system or method of treatment peculiar to a particular institution.

Dr. Knopf (New York) said the best climate for a sanatorium for the working man was that in which he would have to work and earn his living. The State had duties to perform in providing sanatoria, but the work required a large staff of medical men who must be paid.

Dr. Snow (Bournemouth) endorsed Dr. Clifford Allbutt's remarks as to forced feeding. As to the danger of infection, he considered the safest place to live in for those who wished to avoid consumption was a well-regulated sanatorium. Patients in a sanatorium learned discipline, and all who wished to carry out the treatment at home should first spend a month at a sanatorium to learn how to manage themselves.

Dr. Rosenthal (Copenhagen) said that if all consumptives were to be treated in sanatoria the number to be built would be enormous. Whilst awaiting the erection of sanatoria, he advised the utilisation of existing hospitals, especially those in the country.

Dr. Burton Fanning presented a report on the results of sanatorium treatment in the United Kingdom dealing with 716 patients from sanatoria where the inmates defrayed the cost of their own maintenance and treatment. The payments varied from 2 to 6 guineas a week. As the results of treatment, 92 per cent. of all the patients gained weight, but in no particular did the results of different sanatoria show greater variation than in the matter of the amount of weight gained. In 71 per cent. of the patients there was an habitual rise of temperature to 96.6 or higher; 8.6 per cent. had rapid cardiac action without fever; quiescence or definite recovery occurred in 25.1 per cent., and reduction of fever in 50.7 per cent. Of those patients without either fever or quickened pulse, 63.6 per cent. secured quiescence of their disease or definite recovery. Since earlier cases were now being sent for treatment the subsequent records of sanatoria would contrast favourably with this report.

Dr. Wolff Becher (Berlin) said it was impossible to provide sanatoria for all the poor consumptives in Berlin. A new kind of sanatorium had been provided, where the patients spent the day, but returned to their homes at night. Barracks obtained from the Red Cross Society had been erected in the woods two miles out of the town, where the patients spent the day in the open air. This kind of partial sanatorium treatment was inexpensive, and, though not entirely satisfactory, did a great amount of good.

Dr. Braine Hartnell thought that it was not necessary to take the temperature directly after exercise; the most important point was the length of time that the temperature remained high after exercise. If it fell in half an hour no harm has been done. In the lower ranges of temperature there were often great differences between the rectal, oral, and axillary temperatures. In the higher temperatures there was little advantage in taking the temperature in the rectum, as there was little difference.

Dr. Parsons (Dublin) expressed doubts as to the utility of erecting sanatoria for poor consumptives. They were unable to remain sufficiently long to obtain full benefit, and on return to their unhygienic surroundings the disease lighted up afresh, and perhaps progressed more quickly from the contrast to the open-air life in the sanatorium. He found great variations in the amount of weight gained during different months of the year. In March and June about 4 ozs. a week was the average, whereas in September, October, and November the gain was as much as 14 ozs. to 16 ozs. a week.

### A Plea for Seaside Sanatoria for Children, especially for the Prevention and Treatment of Scrofulous Complaints.

Sir Hermann Weber read a paper on this subject, in the course of which he said: Scrofulous affections should engage our sympathy and attention, first, because they are of tuberculous nature, and often lead to pulmonary or to acute meningeal tuberculosis: and secondly, because they cause infinite suffering and misery. By treating scrofulous affections we therefore not only endeavour to cure the existing diseases, but also to prevent pulmonary tuberculosis. Such treatment cannot be carried out at the homes of the children of the poor, and frequently even not at the hospitals of large towns; but in the pure air of the seaside (and also of inland places, especially at high elevations), the treatment, if commenced early, almost always results in complete cure. The poor children who are most benefited, and who specially require the sanatorium treatment, are those affected with:

1. General weakness and deficient nutrition.
2. Tardy and imperfect recovery from various acute diseases such as measles, whooping-cough, scarlet fever, diphtheria, influenza, etc.
3. Anæmia.
4. Rachitis.
5. Scrofulous and tuberculous swelling of the lymphatic glands.
6. Scrofulous and tuberculous inflammation of the joints, including hip-joint disease and Pott's disease.
7. Adenoid affections of the throat and nose.
8. Scrofulous ophthalmia.
9. Scrofulous skin diseases.

For the treatment of the majority of the cases it was not sufficient to use any ordinary house, but a properly arranged sanatorium was required. There ought to be on the seashore sheds open on two sides, with rotatory arrangement for shelter against wind and rain, and to some degree also against too fierce a sun. There must be good arrangements for bathing in the open sea and for tepid sea-water baths, to be used in winter as well as in summer. The duration of the stay of patients at the sanatorium ought not to be fixed by fast rules, but must depend on the nature of the case, and be left entirely to the judgment of the medical attendant. It might vary from a few weeks to a few years. To limit it to two or three months by the rules of the institution was absolutely wrong. The number of children who required sanatorium treatment at the seaside was very large, and the number of beds available for them in England was very small. There were perhaps 300 beds in the seaside sanatoria of England, while 5,000 would certainly not be too many. Every hospital for sick children ought to have a seaside branch. It was almost incredible that there should be this strange defect in the hospital accommodation of England, especially when one reflected that the whole of the United Kingdom had such splendid seacoasts, and when it was further considered that England was the first country to awake to the great importance of this matter by establishing, on the suggestion of Dr. Lettsom and Dr. Latham, the General Sea-Bathing Infirmary at Margate in 1791, but England had remained almost stationary in this matter. The town of Paris alone maintained, in its sanatoria at Berck-sur-Mer, about 1,034 beds for scrofulous and rachitic children all the year round, and had also many beds in several other seaside sanatoria on the French coasts.

How was it that England, with its wonderful sea coasts, and with its many excellent institutions for the sick, erected and maintained by private gifts, neglected this important matter? The subject was so important and so large that the speaker ventured to suggest that an association for the erection of seaside sanatoria should be formed as a subdivision of the National Association for the Prevention of Consumption and other Forms of Tuberculosis.

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*Friday, July 27th.*

### USE OF THE ROENTGEN RAYS IN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS.

Dr. HUGH WALSHAM (London) in his paper, which was illustrated by lantern slides of photographs, asked the following questions: Can the Roentgen rays show tubercle in the lung, if so, at what stage of their development? Can the rays detect tubercle in the lung before the other means of physical diagnosis at our disposal? In a picture of a normal chest, it was seen at once that the pulmonary image in health was quite transparent from apex to base, with the exception of a few ill-defined shadowy lines to the right of the heart shadow. These cardiac lines were seen more or less pronounced by all skiagraphs of the healthy chest, and must, therefore, be considered normal. On what did they depend? Were they caused by the lower division of the longer bronchi? The author thought not. These cardiac lines were caused, no doubt, by the junction of the pericardium with the pleurae. The shadow of the pericardium which contained heart in the anterior position was well seen. The shadow of the diaphragm was also well seen. If the diaphragm were watched with the screen it is seen that it did not, as physiologists said, become flatter with inspiration. Its curve was always maintained unaltered; it plunged up and down piston-wise, and now came a point of great importance in the diagnosis of pulmonary tubercle. The movement of the diaphragm on the affected side was much less affected than on the non-affected or less affected side, and this when the disease was limited to one apex. Why this should be so was hard to explain, but the fact remained. The dead lung outside the body cast a very distinct shadow, although transparent in the living condition. At present he could not offer any explanation of that curious fact. There was one other shadow, and that was one occasionally seen as an ill-defined curved shadow in women with large mammary glands. In a well-developed case of pulmonary tuberculosis the clear pulmonary image was obscured by flocculent shadow, punctate in parts. Now on what did those shadows depend? Were they due to tuberculous consolidation, or to patches of congestion of caseation or pleural adhesions, or what? The shadow caused by grey and yellow tubercle was nothing like so dense as that thrown by caseation. It had been asserted that the blood next to the bones was the most opaque tissue of the body. With that assertion he could not agree. The questions proposed for solution might be answered by saying that, though the Roentgen rays would not disclose the earliest stages of tuberculosis in the lungs, they would definitely show tubercle in the lungs, and that at a comparatively early stage. It might be hoped that that means of detecting an early tuberculous shadow brought a little nearer the day when internal tubercle might perhaps be treated with chemical rays, as external tubercle—namely, lupus—was being treated to-day with such conspicuous success. In the future one might perhaps be able to say of pulmonary tubercle: "It comes as a shadow, so departs."

Dr. BÉCLÈRE (Paris), in discussing the technique of the application of the Roentgen rays in the diagnosis of tuberculosis, said that in order to avoid fatigue and to preserve freedom of the respiratory movements, particularly freedom of the movements of the diaphragm, the subject under examination should recline on his back, or, preferably, be seated on an elevated chair. The observer, to be in possession of a high degree of sensibility to the light, should stay some minutes in the dark before commencing radioscopic examination. Although it was necessary that the generator of electricity for supplying the Crookes's tube should have a certain power, it was not necessary that this power should be very great. On the other hand, it was indispensable that the power of penetration of the Roentgen rays should be exactly adapted to the luminous sensibility of the observer. For this reason the tubes furnished with a vacuum regulator were preferable to others. It was equally indispensable that the tube should be easily moved, and capable of being placed over any part of the thorax which the observer wished. This condition was fulfilled by the frame for carrying the tube which he had had constructed for the purpose. It was also necessary to be able to restrict at will the divergent bundle of rays which traversed the thorax, so as to confine the surface illuminated by the screen. To this end the author had had constructed a disc of lead with a variable aperture, which was a simplification of the iris-diaphragm of microscopes. Thus in the radioscopic examination of a patient attacked by, or suspected of, tuberculosis, one began by taking a general view of the thoracic organ, by enlarging to the maximum the opening in the diaphragm; then the tube was pulled out in such a way that the normal ray of incidence traversed the apex of the chest, then the opening in the diaphragm was narrowed until no more could be seen on the screen than the supraclavicular regions of the two lungs. Lastly, one varied the electric resistance of the tube, and, consequently, the penetrating power of the rays, so as to obtain the greatest contrast possible between the clear and obscure parts in the radioscopic image.

Dr. LÉON BONNET (Paris) read a paper on the same subject based on more than 600 observations. By the employment of the fluorescent screen he was able to make a precise diagnosis in 98 per cent. of the cases, even at the commencement of the disease. In the very earliest stage a diagnosis could be arrived at by observing the diaphragm and the inspiratory muscles. From anomalies in the synchronism or the amount of displacement of the two halves of the diaphragm one might almost always diagnose a predisposition to tuberculosis or a commencing tuberculosis. In this way a number of persons apparently in good health had become suspected, in whom some months or years afterwards unmistakable evidence of disease had manifested itself.

Dr. ESPINA Y CAPO (Madrid) read a paper comprising three parts: First, radioscopy; secondly, radiography; and, thirdly, the technique of both in relation to tuberculosis. He referred to the transcendent importance of the assistance afforded by the $x$ rays in investigating glandular tuberculosis, the commencement in many cases of pulmonary tuberculosis, and in all the inseparable companions of the disease. Radioscopy constituted a powerful means of studying the dynamic forces. It was not possible to see by radiography all the functions and all the movements that characterised each function. Ever since Wells drew attention to the diagnostic value of tachycardia, all specialists, and those who devoted themselves specially to the study of tuberculosis, had set great store upon this datum, raising it to an important position in the early diagnosis of tuberculosis. One of the most efficient means of verifying this datum was by fluoroscopy. A sign which, he thought, had not been touched upon by other authors, was that this tachycardia was not rhythmical. The visibility of the diaphragmatic excursion, both in inspiration and expiration, was a phenomenon that, as was easily understood, could be appreciated neither by common means of exploration nor by radiography. This phenomenon, which under normal conditions was rhythmical and symmetrical on both sides, in tuberculosis was neither rhythmical nor symmetrical. In radiography the transient nature of the radioscopic image, and the necessity of taking it permanently, emphasised the need of closely following with it the datum described in radioscopy. The heart gave a sign easier of record by radiography than radioscopy. Since the adoption of this valuable means of diagnosis, the small size of the tuberculous heart had attracted his attention, being a true cardiac hypertrophy. Another datum that might be observed was the peculiar shape of the intercostal spaces. In regard to the development of radiographic plates, Dr. Espina y Capo said he used the diamidophenol to 1.2 per 100, with sulphite of soda crystallised to 6 per 100 as a developer, and Enckel's (Swiss) hyposulphite to 25 per 100. With these products he made his baths for two or three radiographs only.

### OTHER PAPERS.

Dr. SYMES THOMPSON (London) read a paper on the Open-air Treatment in Institutions and in Nursing Homes. He

said English patients often did not like the restrictions of sanatoria, and preferred the greater freedom which a nursing home, accommodating a few patients only, could afford. He pointed out the often insurmountable difficulty of carrying out the open-air treatment in the homes of patients, giving reasons for this want of success. The paper contained suggestions and details of treatment as regulated. (1) By incessant observations of temperature (charts, by which the rectal and mouth temperatures were compared, demonstrated the insufficiency of mouth temperatures as guides for treatment); (2) by watchful consideration of the respiratory movements; (3) by discriminating attendance to the digestive system. It was in cases of tuberculous pharyngitis, prior to the development of lung disease, that careful local and constitutional treatment in a nursing home often proved of the greatest value. In rapid cases (galloping consumption) nursing home treatment was the best that could be found. In many slight cases the evil was arrested in these homes more successfully than in other ways, and in advanced cases of long standing lasting benefit was often thus secured. The idea that wind was harmful was not entirely correct. Wind was salutary as a cleanser. Improvement was greater with wind or air in movement than in still air.

Dr. Squire (London) and Dr. F. Morin (Leysin) made some remarks, and Dr. Lasalle (Bordeaux) urged that marine sanatoria were required as well as sanatoria for consumptives. The latter were curative, the former preventive.

Dr. Noel D. Bardswell, Physician to the Banchory Sanatorium, N.B., in a paper on The Responsibility of the Medical Profession with regard to Pulmonary Tuberculosis, reviewed some aspects of the sanatorium question in its relation to the physician and to the laity with a view to show to how great an extent the success of this treatment depended upon them, especially upon the former, namely, the medical profession. On the strength mainly of statistics, published by various Continental sanatoria, it was very widely held that such institutions should cure 80 per cent. of their patients, if they were early cases." When this "if" was not forthcoming the figures were very different. Doubtless every year now would see a greater proportion of genuinely early cases sent to sanatoria, but in the meantime it was of interest to ascertain why it was that more of such cases—early in the pathological sense—were not seen in such institutions. To throw light upon this subject he had closely enquired into the previous histories of 56 cases in the Banchory Sanatorium and found that the majority of them could be placed in one of the following divisions, the delay in seeking efficient treatment being due either to themselves or to their medical attendants.

The following table was an attempt to classify the cases in this respect:—

Group I. *Patients themselves chiefly responsible.*

Due to
- (1) Long delay in taking medical advice, in the hope of throwing off the cold, etc.
- (2) Refusal to follow good advice, though quite able to do so, till frightened by onset of serious symptoms.
- (3) Delay in following good advice, on the grounds of expense; the sacrifice eventually being made when the chances of cure are considerably poorer.

Group II. *Medical Men Chiefly Responsible.*

Due to
- (1) True nature of disease not being diagnosed till it is far far advanced. Such cases have usually been treated—often for a considerable time—for muscular rheumatism, anæmia, debility, chills, or influenza, etc.
- (2) Disease being diagnosed, but its nature concealed from the patient, who is informed that he has not got consumption, but a little catarrh of the lung, weak lung, tendency to consumption, a lung touched, or some such indefinite condition.
- (3) Disease being diagnosed, but apparently on the assumption that it is inevitably fatal, nothing but merely symptomatic treatment being adopted, until on the suggestion of friends or relatives the sanatorium treatment has been decided on as a last hope.
- (4) Disease being diagnosed, and, in many cases, at the request of patients or their families, sanatorium treatment at home having been tried without success.

As to the remedies:

(*a*) On the patient's side: Better knowledge on the subject of tuberculosis generally, and especially upon the value of early treatment of this disease. In this question of education the medical profession can do much.

(*b*) On the part of medical profession.

In a paper of this length the author said he could only deal with the first two items on his second list of causes. First: as to that of failure to diagnose the disease in the early stage, and sometimes, indeed, in a fairly or well-advanced stage. Granting that physical signs of early phthisis were often very slight, or very indefinite, and that early symptoms were so insidious that it was often difficult to say when a condition of poor general health ended, and tuberculosis began, there remained little or no excuse for a case being allowed to drift into a condition of well-marked disease, with such a certain and easy method at hand for establishing a diagnosis as the examination of the sputum. Hurried and too superficial chest examination, the outcome of overwork, was no doubt sometimes responsible. Upon the question of wilfully hiding the truth from patients and substituting such terms as weak lungs for the true name, there was doubtless much diversion of opinion. The word "consumption" certainly had as yet lost but little of its ill omen, and it was very striking how studiously sanatorium patients avoided using it. Still, however unpleasant the duty might be of telling a person that he had consumption, in the great majority of cases it was a duty.

Dr. StClair Thomson (London) read a paper on The Principles of Treatment of Tuberculous Laryngitis, in which he pointed to the comparative failure of surgical treatment, and concluded that the most successful treatment for tuberculosis of the larynx was that found so beneficial in pulmonary tuberculosis, namely, sanatorium treatment.

Dr. Maguire (London) detailed the results of over 100 cases treated by him by means of intravenous injections of formalin as well as of numerous cases treated by other observers. Cases treated in the early stage all showed disappearance of physical signs and of bacilli. In cavitation cases the signs of active disease disappeared and bacilli also disappeared.

Other papers read were:

Dr. Allen T. Haight (Chicago). Tuberculosis of the Eye and its Addenda.

Dr. C. Denison (Denver, Colorado). Devitalised Air Toxæmia a Prime Cause of Tuberculosis.

Dr. A. Josias (Paris). Sur le Traitement de la Tuberculose chez les Enfants par le Serum Musculaire.

Dr. Chowry Muthu (London). The Inhalation of Formic Aldehyde as an Aid in the Open-air Treatment of Phthisis.

Professor Cervello (Palermo). Experimental Researches on the Method of Action of Igazol in the Process of Cure of Pulmonary Tuberculosis.

Mr. Colin Campbell (Saddleworth, Yorks). The Treatment and Prevention of Tuberculosis of the Air Passages.

### Vote of Thanks to the President.

Dr. Theodore Williams, in closing the work of the Section, referred to the wide range covered by the papers, many of which were of the greatest interest and value. The success of the Section had been due in great measure to the President, Sir R. Douglas Powell, who, though overwhelmed with grief by the death of his second son in South Africa, had not allowed his private grief to interfere with his public duties, and had presided over the meetings of the Section with marked courtesy yet with firmness. The thanks of the Section were due, and would be gratefully and cordially rendered, to Sir R. Douglas Powell, for the able manner in which he had presided over the Section.

Sir J. W. Moore (Dublin) then in a few well-chosen words proposed the following resolution:

Resolved: That the Section desires to express its high and grateful appreciation of the able, dignified, and courteous manner in which Sir Richard Douglas Powell has discharged his presidential duties under most trying and regrettable circumstances; and the Section would convey to Sir Richard and Lady Douglas Powell an expression of its deep sympathy with them on the occasion of the death of their soldierly and heroic son in the South African campaign.

The resolution was seconded by Dr. Denison (Colorado), and carried unanimously.

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### Tuberculin.

Before leaving London, Professor Koch corrected the official shorthand writer's notes of his concluding speech in the discussion on the therapeutic and diagnostic value of tuberculin in human tuberculosis at the combined meetings of Sections II and III. As the speech was of considerable importance, the following translation of the official version will be read with interest:

Gentlemen,—Dr. Heron has just summarised most excel-

lently what we have heard here to-day, and I agree with him in every respect. You would like, however, to have some further information from me as to the tuberculin in present use. The tuberculin which is now everywhere employed originates from human tuberculosis. A certain contradiction seems to be involved in that a tuberculin derived from human tuberculosis gives reactions with cattle as well, although cattle tuberculosis is quite indubitably different from the disease in man. This contradiction is, however, only apparent, for this is not an isolated example of such behaviour. We know of analogous reactions which relate likewise to many closely allied micro-organisms. I may remind you of the agglutinative action of the serum of typhoid patients upon pure cultures of typhoid bacilli, the so-called Widal's reaction. This reaction is also not absolutely specific. It has transpired that the serum of typhoid patients exerts an agglutinising action, not only upon typhoid bacilli, but also upon certain colon bacilli which have upon this account been described as paratyphoid bacilli. We have hence here to do not with absolutely limited reactions, but rather with group reactions.

I have investigated various kinds of tuberculin—in the first place that from human tubercle bacilli, then that from the bacilli of bovine tuberculosis, and finally that from fowl tuberculosis. Even the last named gives reactions with cattle as with human beings, but they are much feebler.

When we see that tuberculin has properties of this kind, we have undoubtedly to do with chemical qualities. As to these, however, we know at present too little to be able to give a general explanation of them.

I have been much interested to hear of the researches of Dr. Eric France. I hold them to be of exceptional importance. It is, as far as I know, the first time that such investigations have been made upon men, and at the same time clinched by *post-mortem* results. You have heard that not a single exception to the rule was found either in those who had reacted or those who had not. Such an experience is worth much more than any number of purely theoretical deductions. That is all I have to say on this point.

There is yet another question which I have been asked, in relation to the height of the body temperatures. Naturally in all the cases to which my data refer the temperature was fluctuating, but they related only to patients who had been kept in bed for at least one day. We find very often that patients come into hospital with high temperatures, and that when they have been kept a few days in bed the fever vanishes. In such cases tuberculin can be given without hesitation. But I always regard such a patient as one requiring most careful treatment, and in whom I would never commence the administration of tuberculin with larger doses than one-tenth milligram.

I now come to speak of another point which appears to me to be of great importance. Facts have often been stated in such a manner as to make it appear that the tuberculin and open-air treatment were opposed to one another. Owing to limitations of time I did not go into this question in my address, but I consider it obvious that we should make use of all the advantages which any treatment offers to the tuberculous and, as far as possible, combine them. I am entirely of opinion that in future the treatment of tuberculosis should not be one-sided, that neither tuberculin, nor open-air, nor any other line of treatment should be used alone, but that all methods which can benefit the tuberculous should be brought together; hence I recommend the closest possible combination of treatments.

## SECTION III.—PATHOLOGY (Including Bacteriology).

*President*,—Professor G. Sims Woodhead, M.D., F.R.S.E.

*Thursday, July 25th.*

### The Variety of Tuberculosis.

Professor Benda (Berlin) pointed out that the variety of forms of tuberculosis depended upon (1) the character of the organism, and (2) the mode of dissemination. He called attention to the development of the bacillus in the large blood vessels of the thoracic duct. When tubercle began outside contiguous blood vessels and invaded the interior tuberculous periangitis resulted. Endangitis showed itself when the infection came from within, and spread in a longitudinal direction. This form of tuberculosis was much more frequent than was generally supposed. Weigert's tuberculosis, consisting of mixed caseous and freshly disseminated tubercles also occurred with some frequency. Fresh tubercles arising in the course of the chronic disease were, he thought, the result of chance tubercle bacilli, spread by means of the blood stream. He showed a number of diagrams illustrating periangitis and endangitis.

Professor Hamilton (Aberdeen) called attention to the small number of cases of tuberculosis of the stomach. He raised the question whether the mucous membrane was able to absorb the bacilli and hand them on to the glands without itself becoming tuberculous? and why tuberculous pericarditis was so rare a disease, especially when the neighbouring pleuræ were often one mass of tubercles?

Dr. Habershon (London), from the results of numerous *post-mortem* examinations at the Brompton Hospital, had come to the conclusion that two of the chief paths of entrance were the tonsils and the lower part of the small intestines. Secondary infection through the blood channels occurred through rupture of, or ulceration into, blood vessels. He thought that some of the differences in appearance of the tuberculous lesions were due to a difference in virulence of the bacilli, and called attention to the effect of the superposition of syphilis upon pulmonary tuberculosis.

Professor Osler (Baltimore) could not in the least agree with Professor Hamilton that tuberculous pericarditis was rare. He felt certain that its frequency was directly in proportion to the care with which it was sought. From clinical evidence he felt certain that the differences in the tuberculous lesions depended upon the difference in the strength of the toxin produced by the bacilli.

Sir Christopher Nixon (Dublin) agreed with Professor Osler in thinking that the virulence of the bacilli played a considerable part in the causation of the different pathological conditions grouped under the term "tuberculosis." He felt certain that occasionally at least tuberculosis arose in man from cattle.

Professor Adami (Montreal) thought that it must now be fully accepted that there was a constant physiological passage of bacteria through the mucous membrane of the tonsil and intestine. Thus, tubercle bacilli could be absorbed through intact membranes, and be carried into the lymph and blood vessels, and pass into or through various organs without setting up any disturbance until a region was reached in which the endothelium was so weak that it could not destroy the bacilli.

Professor Muir (Glasgow) agreed with Professor Benda that single metastases from occasional entrance of bacilli into the blood was a fact often overlooked. The presence of pulmonary lesions did not necessarily indicate that the disease was produced by inhalation, and the absence of lesions in the mucous membrane of the alimentary canal did not prove that infection had not occurred through that channel.

Professor Hamilton said that in the question of tuberculous pericarditis what he meant was that the cases which contained tubercle bacilli were probably secondarily infected with tubercles, and therefore could not be called primary tuberculous pericarditis, but he thought it was the experience of every pathologist to find numerous cases in which the lungs were in the last stages of tuberculous phthisis, and in which nearly every organ in the body was the seat of a secondary tuberculous eruption, whilst the pericardial sac was free from every vestige of tubercle.

### The Diazo-Reaction in Tuberculosis.

Professor Heymans (Ghent) gave his experiences with the diazo-reaction in the diagnosis of tuberculosis, which were not altogether satisfactory.

### Human and Bovine Tuberculosis.

Dr. Ravenal (Philadelphia) read his paper upon comparative experiments with human and bovine tuberculosis. In opposition to the conclusions of Koch his experiments

showed "that it is a fair assumption from the evidence at hand, and in the absence of evidence to the contrary, that the bovine tubercle bacillus has a high degree of pathogenic power for man also, which is especially manifest in the early years of life."

*Friday, July 26th.*

DEMONSTRATION.

DR. WILLIAM BROWN (Carlisle) gave a lantern demonstration illustrating cattle tuberculosis.

TUBERCLE AND MILK.

Professor BANG (Copenhagen) communicated the results of his experiments upon the temperature necessary to destroy tubercle bacilli in milk. The minimum temperature necessary he found to be 85° C. One great danger in sterilisation was that the froth did not reach the same temperature as the actual milk.

Professor RUATA (Perugia) showed that in England the deaths from meningitis during the first year of life were nearly equal to those from tabes mesenterica, and therefore he could not see how milk could be the cause.

Dr. KOSSEL (Berlin) had found that 90° C. was necessary to sterilise milk on a large scale, but that heating the milk to this temperature did not prevent its being used for butter and cheese making.

Professor DELÉPINE (Manchester) insisted that nothing short of boiling would really kill the tubercle bacilli.

Dr. MARMOREK (Paris) pointed out to Professor Ruata that tuberculous meningitis was always a secondary infection, and therefore his explanation was not satisfactory. The immunity of those living in the high Alps from tuberculosis was due to three factors—the splendid condition of the cattle, the absence of large communities, and the comparative lack of communication between the villages.

MIXED INFECTIONS IN TUBERCULOSIS.

Mr. A. G. R. FOULERTON (London) and Dr. OPHÜLS (San Francisco) opened the discussion on this subject. The latter gave a detailed account of his examination of 39 consecutive cases of phthisis, and of the bacteria other than the tubercle bacilli which were present, and showed how frequently the actual cause of death was a secondary septicæmia.

Dr. BULLOCH (London) said that investigation should be undertaken by clinicians, pathologists, and bacteriologists to determine the exact *rôle* played by these secondary infections.

FŒTAL TUBERCULOSIS.

Dr. F. F. FRIEDMANN, in his communication, told how he had proved that a fœtus could be infected with tuberculosis without infecting the mother.

## SECTION IV.

## VETERINARY (TUBERCULOSIS IN ANIMALS).

*President*,—Sir GEORGE BROWN, C.B.

*Thursday, July 25th.*

TUBERCULOSIS AND THE MEAT SUPPLY.

MR. KING (Veterinary Inspector to the City of London), said that tuberculosis in cattle was a cause of great loss to both farmer and butcher, the more so as neither trader nor expert was able to detect the disease in open market. The butcher hence tended more and more to obtain his supplies from the dead meat markets. Here the British farmer had to compete with the foreigner, and statistics showed that the latter was getting the better of the struggle. The fresh meat imports, which in 1866-70 formed only ¾ lb. a head of the population, expanded to little short of 20 lbs. a head of the population in 1896-1900, and in 1900 had touched 22.5 lbs. per person. At the same time the total number of cattle in this country was in in 1900 less by 47,281 than in 1891. It was common knowledge that a very large percentage of cattle in our best herds were subjects of tuberculosis, and that it was impossible by ordinary examination to find clinical evidence of the malady. The isolated efforts of wealthy stockholders had done nothing to effectually check the ravages of the disease, which required to be dealt with by Act of Parliament. He gave statistics of 1,738 *post-mortem* examinations made by himself. He was only in the habit of condemning carcasses affected with general tuberculosis, or such parts as were tuberculous, but on the basis of this he calculated that the annual loss to the country from tuberculosis in cattle amounted to nearly £500,000.

Sir GEORGE BROWN referred to the extraordinary irregularities which existed in the practice of meat inspection. Some inspectors condemned only such carcasses as were the subjects of general tuberculosis, while for others the presence of a single tuberculous nodule was enough. He was sure that the majority of meat inspectors had not even read the recommendations of the Royal Commission on Tuberculosis.

Mr. BOWEN JONES held that no legislation was possible unless based upon incontrovertible evidence. He opposed the inclusion of tuberculosis under the Contagious Diseases Acts, and held that the use of the tuberculin test was impracticable, as its universal application would decimate the herds and cost an impossible sum in compensation. He brought forward the following recommendations (which were seconded by Mr. COOPER, but not put to the meeting):

That inspection and seizure of tuberculous cattle and meat should be made compulsory upon the local authorities. That upon the order of the confiscating magistrate the owner should be fully compensated out of imperial funds if the condemned animal appeared well nourished and was not purchased for less than a minimum price, to be fixed from time to time. That the law should be made equal and uniform, and that the Local Government Board should lay down the evidence upon which confiscation should be obligatory.

Mr. WILLIAM COOPER suggested that medical officers of health should meet in conference and draw up rules for uniform inspection. The present system set a premium upon the concealment of tuberculous meat; the remedy was to compensate the butcher for all destruction. With regard to foreign meat, he stated that Danish carcasses were frequently condemned as tuberculous on arrival here, though passed by the sanitary authority in Denmark. He pleaded that none but properly qualified inspectors who were practical butchers should be appointed.

Mr. PEARSON stated that in present circumstances it did not pay to feed cattle to sell; in common with several other speakers he strongly supported the minority report of the Royal Commission.

Mr. W. FIELD, M.P., pointed out that tuberculosis in this country had decreased by 50 per cent., while the meat consumption had increased threefold. A report which he had called for in the House of Commons had shown that among acting meat inspectors were men whose proper avocation was that of gardeners, plumbers, and haymakers. He knew of cities in different quarters of which meat inspection was carried out on radically opposite principles. He complained that the last Royal Commission had included no representative of the meat trade.

Mr. F. ANDERSON, delegate of the Corporation of Glasgow, speaking amid considerable interruption, stated that the compensation principle might be a very dangerous precedent, and might lead to fraud on the part of the purveyors. What was wanted was a system which should protect the public without injuring the butchers; in Glasgow none but fully qualified inspectors were employed. He complained that at the meeting the delegates of public bodies were swamped by those of trade associations.

Professor OWEN WILLIAMS recommended that inspectors should be appointed by the Government and not by local authorities, and that public abattoirs should be provided. He suggested that compensation should only be employed for a limited number of years, breeding being meanwhile encouraged to help in the stamping out of tuberculosis.

The Hon. W. P. REEVES (Agent-General for New Zealand) stated that tuberculosis was common among the cattle of Queensland and New Zealand, in spite of the open-air conditions under which they lived. In the latter colony every town of over 2,000 inhabitants had its own public abattoir, where the animals were slaughtered under Government inspection. Owners of tuberculous beasts were paid half their value; the flesh was reduced to manure, and the hides and hoofs sold.

The system was so successful that farmers were beginning to invite Government inspectors to examine their herds, and the colony was hence beginning to get the better of tuberculosis.

Mr. W. HUNTING (Editor of the *Veterinary Record*) said that less than half the meat slaughtered was at present inspected at all. He believed that compensation would relieve the butcher of any interest in stamping out the disease, just as the present idea of the breeder was merely to sell it to the butcher without detection.

Mr. KING briefly replied.

*Friday, July 26th.*

LEGISLATION SUGGESTED FOR CONTROLLING AND ERADICATING TUBERCULOSIS IN ANIMALS.

PROFESSOR DUNCAN MCEACHRAN (Montreal) read a long and important paper on this subject. He strongly recommended the publication and distribution among the masses—the agricultural population in particular—of information on the subject of tuberculosis. He read extracts from the bulletins which were distributed throughout Canada, and which he believed to be largely responsible for the diminution in the amount of tuberculosis in the herds of that colony. He considered the contagiousness of the disease to depend very largely on the insanitary nature of the buildings in which cattle were housed; the chief defects were insufficient air space, the absence of a rational system of ventilation, and imperfectly trapped drains. Pure air and sunshine were valuable remedial agents, but would not prevent diseased animals from infecting those with which they were brought into contact. With regard to the tuberculin test, he believed it to be virtually infallible; it was gaining in popularity among the dairy farmers of Canada, and was only opposed by speculative breeders and importers of suspicious herds. Professor McEachran gave examples of the fraudulent practices followed by these classes of dealers. He regarded tuberculin as a safe, trustworthy, and harmless test; as the result of careful and extended investigation he was able to say that it did not produce abortion in pregnant cows, impotence in bulls, or any other injurious effects upon the animals tested. He gave a detailed summary of the measures adopted by different countries and States with regard to the tuberculin test and the campaign against bovine tuberculosis. In the majority of the United States the latter disease was now diminishing, it was believed owing to the precautions adopted. Some form of indemnity—as, for instance, an insurance fund aided by a Government grant—was necessary if progress in this respect was to be rapid. Professor McEachran concluded by laying down the following principles of suggested legislation:

1. Tuberculosis should be included in the list of contagious diseases.
   (*a*) Tuberculous animals should consequently come under the provisions of the Contagious Diseases (Animals) Act; but the local authorities should have power to allow the sale and movement of such parts of the carcasses as were known not to carry contagion, such as hides, hoofs, horns, and hair, thus preventing unnecessary loss.
2. All foreign animals admitted for breeding or dairy purposes should be tested by the tuberculin test. Tuberculous animals should be prohibited from entering.
3. Tuberculin should be controlled, and none but qualified veterinarians be allowed to use it; and all reacting animals should be reported, marked, and quarantined.
4. All animals showing clinical symptoms of tuberculosis, especially disease of the udder, lungs, uterus, or bowels, should be killed at once, and all scrub and grade animals reacting should be killed within six months. Pure-bred cattle may be bred from under Bang's system, in quarantine for life.
5. All testing, other than imported animals, should be by voluntary application for a test of the entire herd, and the expense should be borne by the State. A reaction of 2 per cent. to be understood to indicate tuberculosis, 1½ per cent. as suspicious. Suspicious animals to be quarantined and retested in three months, unless clinical symptoms developed, when they would be at once condemned; the Government to have the right to order retest when considered necessary.
6. Disinfection of premises should be ordered by special regulations, the carrying out of which would be superintended by Government officials.

PROFESSOR NOCARD (Alfort) stated that where precautions were not taken animal tuberculosis was on the increase; the principal causes contributory to this were bad food, over-exertion, insanitary surroundings, and prolonged lactation. He pointed out that tuberculosis was the sole infectious disease for which there was no legislation. He advocated the general use of the tuberculin test and the compulsory slaughter of infected animals; also that pasteurisation or sterilisation of milk should be enforced in all dairies, creameries, and cheese manufactories.

PROFESSOR THOMASSEN (Utrecht) read detailed notes of four cases in which he claimed to have successfully inoculated calves with human tuberculous material. The regulations which he had proposed in Holland were the following: Clinically affected animals to be destroyed; those reacting to tuberculin to be segregated; the calves of the latter to be reared by hand; importation of all reacting animals to be stopped: dairies, creameries, etc., to be kept sanitary, and the products sterilised.

LIEUTENANT-COLONEL NUNN held that bovine tuberculosis, whether communicable to man or not, ought to be eradicated. To do this, both legislative and executive enactments were necessary.

PROFESSOR EDGAR stated that the great obstacle to legislation hitherto had been the absence of a reliable criterion by which the disease could be diagnosed. The introduction of the tuberculin test had changed all this, and the time was now ripe to press for legal measures instead of trusting to the tedious process of educating public opinion. Restrictive measures should be universal and uniform, and for the sake of promptitude their execution should be delegated to the local authorities. He doubted the wisdom of Professor McEachran's suggestion that no measures were necessary with regard to the hair of infected animals. Might not this contain bacilli?

PROFESSOR DEWAR gave details to show that the eradication of tuberculosis from a herd was not so expensive as was generally believed. The segregated cows proved good breeders, and their calves did not react to the tuberculin test. The fees for veterinary attendance were lessened as well.

MR. W. HUNTING (Editor, the *Veterinary Record*) stated that at present legislation was an absolute farce. With regard to inspection, if a farmer had his cattle condemned in a public market he always knew of a private shed owned by a friendly butcher where tuberculous beasts could be slaughtered and so disposed of to the public. Legislation was required not only for cows with tuberculous udders, but also for the "wasters" who were the most fertile means of disseminating tuberculosis. He considered that the great obstacle to progress was the futile talk of experts about educating the public, which was a direct encouragement to the Board of Agriculture to sit still and do nothing.

DR. PORTER (M.O.H. Shropshire) pointed out that, in the existing state of the law, a sanitary authority had no power to make regulations for the inspection of tuberculous cattle in dairies, and no power to prevent the feeding of animals on tuberculous milk; further, that, owing to the non-inclusion of tuberculosis under the Contagious Diseases (Animals) Act, the officers of a sanitary authority had no legal right of entry into a cowshed in reference to tuberculosis in the cattle therein. He instanced a recent slander case to show that protection was necessary for veterinary officers.

MR. ARMITAGE (Nottingham) said that the difficulty in applying for legislation was the lack of unanimity in the veterinary profession.

MR. F. J. LLOYD (Chemist to the Dairy Farmers' Association) stated, in opposition to Professor Nocard, that it was impossible to make cheese from sterilised milk. He said that it had been shown experimentally that the process of cheese-making killed tubercle bacilli when present in milk. He considered that the sterilisation of milk for drinking purposes would be a more efficient measure than the most drastic legislation.

MR. J. S. LLOYD (Sheffield) referred to the non-ventilation of the byres of milch cows. He recommended the compulsory slaughter of cows with tuberculous udders, and severely criticised the agitation of meat traders for compensation for such cows.

PROFESSOR MCEACHRAN very briefly replied.

VOTE OF THANKS TO THE PRESIDENT.

The business of the Section being concluded, a vote of thanks was passed to the Chairman, Sir George Brown, C.B., who, in reply, complimented the Section on the excellent attendance at its meetings.

## GENERAL MEETINGS.

### Fourth General Meeting: *Thursday, July 25th.*

The chair was taken at first by Earl Spencer, K.G., and later on by Sir James Crichton-Browne.

Earl Spencer, speaking as one who had had much to do with disease in animals, said that it was the duty of statesmen and agriculturists alike to carry into effect the dicta of scientific experts and to support measures to check such a scourge as tuberculosis. Should Professor Koch's views prevail they would relieve the agricultural world of an enormous responsibility, but the speaker hoped that they would not impede the efforts of those bred in the opposite doctrine to keep milk pure. Further investigation should be pressed for, and in the meantime existing precautions should not be neglected. He felt that whether bovine tuberculosis was transmissible to man or not the consumption of milk from diseased cows must be injurious to health.

### Tubercle Bacilli in Cows' Milk as a Possible Source of Tuberculous Disease in Man.

Dr. John McFadyean (Professor of Comparative Pathology and Bacteriology, Royal Veterinary College) gave an address on this subject, in the course of which he stated that he was overwhelmed at finding himself in a position which compelled him to offer criticism in the pronouncement of one so distinguished as Professor Koch. The identity of human and bovine tuberculosis had been generally supposed to have been established by Professor Koch himself on the ground that the lesions in the two cases contained bacilli identical in morphological, tinctorial, and cultural characters, and that the artificial cultures from both sources produced indistinguishable effects when employed to infect a variety of animals. Subsequent observations had brought forward additional evidence of this identity, such as the discovery that tuberculin produced a specific reaction in tuberculous cattle whether human or bovine bacilli had been employed in its preparation. It was therefore concluded that human tuberculosis might have an animal origin and *vice versâ*. Professor Koch now asked them to discard this conviction, and his train of reasoning appeared to Professor McFadyean to be the following:

1. That the bacilli found in cases of bovine tuberculosis were much more virulent for cattle and other domestic quadrupeds than the bacilli found in cases of human tuberculosis.

2. That this difference was so marked and so constant that it might be relied on as a means of distinguishing the bacilli of bovine tuberculosis from those of the human disease, even assuming that the former might occasionally be found as a cause of disease in man.

3. That if bovine bacilli were capable of causing disease in man there were abundant opportunities for the transference of the bacilli from the one species to the other, and cases of primary intestinal tuberculosis from the consumption of tuberculous milk ought to be of common occurrence. But *post-mortem* examination of human beings proved that cases of primary intestinal tuberculosis were extremely rare in man, and therefore it must be concluded that the human subject was immune against infection with the bovine bacilli, or was so slightly susceptible that it was not necessary to take any steps to counteract the risk of infection in this way.

Professor McFadyean submitted that at least one of the foregoing premisses was ill-founded, that the others had little or no bearing on the question, and that reasonable grounds remained for regarding tuberculous cows' milk as distinctly dangerous to human beings. He did not deny that bovine tubercle bacilli were, as a rule, more virulent for cattle and other domesticated animals than human bacilli, or that experimental results indicated that in natural circumstances there was little danger of cattle becoming infected from human beings; but this could not be held to prove or even to render it probable that bovine bacilli had only a feeble pathogenic power for man. The probability was entirely the other way, for it was well known that while the majority of disease-exciting bacteria were harmful to one or two species only, all those that were common to all the domesticated animals were also pathogenic to man. Professor McFadyean regarded the view that the difference between bovine and human bacilli as regarded virulence to cattle was sufficient to distinguish one from the other as very far from proved. It was possible that the normal virulence of bovine bacilli for cattle might be reduced by passage through the human subject. The third proposition in Dr. Koch's argument was, according to the speaker, the only one really germane to the point at issue. He traversed Dr. Koch's statement that primary tuberculosis in the human subject was extremely rare by citing analyses of the *post-mortem* records during the last few years of the Hospital for Sick Children, Great Ormond Street, and of the Royal Hospital for Sick Children in Edinburgh. Out of 547 cases of tuberculosis the proportion of primary infection through the intestine was found at the former institution to be 29.1 and at the latter 28.1 per cent. Professor McFadyean hence submitted that there was strong *primâ facie* evidence that animals were a possible source of human tuberculosis. Professor McFadyean then turned to the question of infection by milk containing tubercle bacilli. Criticising Sir R. Thorne-Thorne's Harben Lectures, he pointed out that if the consumption of such milk were the cause of the increased number of deaths from tabes mesenterica, that disease should have become more instead of less fatal to children between the ages of 1 and 5 years. He had come to the conclusion that the Registrar-General's returns did not afford much trustworthy information with regard to the number of cases of primary alimentary tuberculosis, and were absolutely worthless as an indication of the extent to which human beings were infected by means of milk. Of more use were investigations relating to the frequency with which milk contained tubercle bacilli. About 30 per cent. of milch cows in this country were, he stated, tuberculous, but he did not believe that the milk was as a rule dangerous unless the udder was affected. He thought that about 2 per cent. of the milking cows of this country were so affected; in every such case the milk contained tubercle bacilli, often in enormous numbers, and the danger was rendered greater by the fact that the early stages of tuberculosis of the udder were unattended with pain or tenderness in milking or obvious change in the character of the milk. Milk might also be contaminated with tubercle bacilli owing to the dust and dirt which it frequently contained. With regard to remedies, Professor McFadyean considered that to agitate for legislation such as had been effectual with cattle plague and pleuro-pneumonia would, owing to the wide extent of the disease, prevent any Government from touching the subject. The greatest obstacle to successful action against tuberculosis was the ignorance of the laity regarding the cause of the disease; there was a want of conviction among cattle owners that tuberculous animals were dangerous to their companions. He believed the systematic use of the tuberculin test throughout the country impracticable on the ground of expense, and also because it would disorganise the breeding and milking trades. He preferred to recommend periodic inspection at brief intervals by competent inspectors; the special powers for inspection of cows in outside districts acquired by certain cities through Act of Parliament should be made general. He supported also the compulsory notification of udder disease, and of symptoms of tuberculosis in milch cows, and the interdiction of the sale of milk from any cow suffering from tuberculous disease of the udder or exhibiting clinical signs of tuberculosis. He regarded the boiling of milk merely as an antidote, and held that it did not absolve public health authorities from all concern with the subject. He concluded by appealing to the Congress to press for measures to prevent the transmission of tuberculosis from the lower animals to human beings.

Sir James Crichton-Browne urged that the subject should be investigated under Government auspices. He instanced the prompt action of the State of Wisconsin as an example to be followed, and added that Sir James Blyth and Mr. Swithinbank had offered their farms and laboratories for experimental purposes. While the matter was *sub judice* no risks should be run by relaxing precautions.

Professor Nocard agreed in general with Professor McFadyean. He regarded bovine tuberculosis as a source of danger to man, especially through milk. The law on the subject in France was excellent but its execution practically a dead letter, as it depended upon a declaration by the dairyman that the cow was infected. The systematic inspection of cowsheds, dairies, &c., was now being demanded.

Professor D. J. Hamilton moved a vote of thanks to his old

pupil, Professor McFadyean, who had, he said, contributed to the great improvements seen in veterinary science of late years. He pleaded that the study of pathology should henceforth be on more general lines than at present.

Dr. RAVENAL (Philadelphia), in seconding the vote of thanks, mentioned that he had seen three cases in which men were directly infected by bovine tuberculosis. The tuberculin test was now compulsory in the case of all cattle imported into Pennsylvania.

Professor E. M. CROOKSHANK, in a long address, recounted his own experiments on the communicability of human tuberculosis to a calf, and said that Professor Koch had made a fallacious statement, based on hasty generalisation. Professor Crookshank advocated a departmental commission instituted by the Board of Agriculture.

Professor SIMS WOODHEAD referred to the great prevalence of human tuberculosis, fully 50 per cent. of the population being at one time or another affected. He considered that bovine tuberculosis was dangerous to man.

The vote of thanks was carried with applause.

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FIFTH AND FINAL MEETING: *Friday, July 26th.*

The EARL OF DERBY presided, and explained in his opening statement that the object of the meeting was to receive and consider the resolutions arising out of the work of the Congress. He mentioned that over 2,500 persons had joined the Congress, and hoped that some definite result would accrue towards the promotion of the welfare of mankind.

The following resolutions were then carried unanimously:

Mr. MALCOLM MORRIS proposed:

That tuberculous sputum is the main agent for the conveyance of the virus of tuberculosis from man to man. Indiscriminate spitting should therefore be suppressed.

He said if nothing else resulted from the work of the Congress than the passing of that resolution it would be of great importance in teaching the public that by spitting indiscriminately in public places and elsewhere a great injustice was done to themselves, to their wives, and to their families.

Mr. SWITHINBANK, in seconding, said that in New York a millionaire had been put into prison for the offence of spitting, in Toronto it was a penal offence, in Ottawa it was about to be made so, and in Halifax and Sydney necessary regulations were enforced.

Professor SIMS WOODHEAD moved the next resolution:

That it is the opinion of this Congress that all public hospitals and dispensaries should present every out-patient suffering from phthisis with a leaflet containing instructions with regard to the prevention of consumption, and should supply and insist on the proper use of a pocket spittoon.

He said that the principle concerned was the question of the hour.

Sir WILLIAM BROADBENT, who seconded, said that out-patient departments could be made actual centres for the spread of the disease.

Dr. JAMES NIVEN (Manchester) moved:

That the voluntary notification of cases of phthisis attended with tuberculous expectoration and the increased preventive action which it has rendered practicable has been attended by a promising measure of success, and that the extension of notification should be encouraged in all districts in which efficient sanitary administration renders it possible to adopt the consequential measures.

He gave in considerable detail the experience of notification at Manchester, and advocated the carrying out of the system with a conciliatory spirit.

Professor CLIFFORD ALLBUTT, who seconded, showed that much could be done without exercising any improper pressure on the public.

Sir JOHN BURDON-SANDERSON proposed the next resolution:

That the provision of sanatoria is an indispensable part of the means necessary for the diminution of tuberculosis.

He urged that it was their duty to promote the establishment of sanatoria for the poor at which the cost should not exceed 15s. to 20s. a week.

Sir RICHARD DOUGLAS POWELL, who seconded, endorsed the remarks of the proposer.

Sir HERBERT MAXWELL, Bart., M.P., proposed:

In the opinion of this Congress, in the light of the work that has been presented at its sittings, medical officers of health should continue to use all the powers at their disposal and relax no effort to prevent the spread of tuberculosis by milk and meat.

The resolution, he said, decided nothing, but affirmed the unwisdom of abandoning precautionary measures.

Lord SPENCER, who seconded, considered that it was important no change should be made in the precautions which had been taken to prevent the sale of milk from diseased animals.

Dr. G. A. HERON proposed, and Mr. F. J. LLOYD seconded:

That in view of the doubts thrown on the identity of human and bovine tuberculosis, it is expedient that the Government be approached and requested to institute an immediate inquiry into this question, which is of vital importance to the public health and of great consequence to the agricultural industry.

Dr. FARQUHARSON, M.P., thought some inquiry of the kind should be made in spite of the emphatic refusal of the Government to undertake it.

Sir JAMES CRICHTON-BROWNE proposed:

That the educational work of the great national societies for the prevention of tuberculosis is deserving of every encouragement and support. It is through their agency that a rational public opinion may be formed, the duties of public health officers made easier of performance, and such local and State legislation as may be requisite called into existence.

He suggested that the words prophylaxis and sanatoria should be inscribed on their banner, and said tuberculosis in the future would come to be only a painful and terrible memory.

The resolution was seconded by Dr. ALFRED HILLIER.

Sir WILLIAM BROADBENT proposed:

That this Congress is of opinion that a permanent international committee should be appointed to collect evidence and report on the measures that have been adopted for the prevention of tuberculosis in different countries, to publish a popular statement of these measures, to keep and publish periodically a record of scientific research in relation to tuberculosis, and to consider and recommend measures of prevention. This Congress is further of opinion that such a committee should consist of representatives to be elected by the great national societies formed for the suppression of tuberculosis and also representatives nominated by various Governments. It is further of opinion that all international committees and great national societies whose object is the prevention of tuberculosis should be invited to co-operate.

Nothing was more striking than the immense interest the Congress had excited in the press.

Professor BROUARDEL, who seconded, expressed his conviction that the International Committee would be of great use.

The following was proposed by Professor CROOKSHANK, and seconded by Dr. THEODORE WILLIAMS:

That in the opinion of this Congress overcrowding, defective ventilation, damp, general insanitary conditions in the houses of the working classes diminish the chance of curing consumption, and aid in predisposing to and spreading the disease.

Professor BROUARDEL proposed, and Professor CALMETTE seconded the following:

That while recognising the great importance of sanatoria in combating tuberculosis in countries, the attention of Governments should be directed towards informing charitable and philanthropic individuals and societies of the necessity for antituberculous dispensaries as the best means of checking tuberculous disease amongst the industrial and indigent classes.

The following was proposed by Professor ROBIN, and seconded by Sir WILLIAM BROADBENT:

That the following question be submitted to the consideration of the next Congress: "The constitutional conditions of the individual which predispose to tuberculosis, and the means whereby they can be modified."

The meeting came to a close after votes of thanks had been passed to the various gentlemen who had acted as Chairmen of the different Councils and Committes and Honorary Secretaries to the same.

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VISIT TO THE PARKES MUSEUM.

The President and Council of the Sanitary Institute entertained the delegates and members of the British Congress on Tuberculosis at the Parkes Museum of Hygiene in Margaret Street on July 25th. The guests were received by Mr. A. Wynter Blyth, Chairman of the Council, and Mrs. Blyth, supported by the Secretary, Mr. E. White Wallis. The Museum was carefully classified, and the visitors inspected the various collections, including the meteorological and other scientific apparatus in the Science Room, and the models and diagrams in the Water Supply section.

## ENTERTAINMENTS.

### Reception by the King.

On July 25th the King received at St. James's Palace the following delegates to the Congress who were presented by the Earl of Derby:

*United States.*—Professors Osler and Janeway.
*Austria.*—Hofrath Professor von Schroetter and Professor Davorak.
*Belgium.*—M. le Sénateur Montefiore Lévi and Doctor Van Ryn.
*Bulgaria.*—Doctor Mikailovsky.
*Denmark.*—Professor Bang and Dr. Charles Gram.
*France.*—Dr. Brouardel (Doyen de la Faculté de Médecine de Paris) and Professors Bouchard and Nocard.
*Germany.*—Geheimrath Professor Gerhardt, Professor Flügge, Geheimrath Professor Von Leyden, Professor Frankel, Doctor Werner, and Dr. Dettweiler. Director Dr. Freund was unavoidably prevented from being present.
*Holland.*—Professor Thomassen.
*Hungary.*—Professor Korányi.
*Norway.*—Dr. Malm.
*Portugal.*—Professor da Silva Amado.
*Roumania.*—Dr. Cantacuzino was unavoidably absent.
*Spain.*—Señor Don Antonio Espino y Capo.
*Sweden.*—Hof Marshal Printzjold.
*Switzerland.*—Dr. Neuman.

Sir William Broadbent, Professor Clifford Allbutt, Mr. Malcolm Morris, and Dr. StClair Thomson were also present.

### Dinner to Foreign Vice-Presidents.

A dinner was given on Friday, July 26th, at the Hotel Cecil, Strand, in honour of the foreign vice-presidents and delegates, and also to the delegates representing the Indian Empire and British Empire. The chair was taken by Lord Derby.

In giving the toast of "His Majesty the King," Lord Derby said that there was a special interest which on that occasion attached itself to the toast of the health of their Sovereign, the King, because but for the lamented event of some months ago, they might have hoped to have had the King standing there as their President, giving to the Congress that personal attention, that warm support, that ever-ready assistance, which he was certain His Majesty would have given on that occasion. The King, as Prince of Wales, was early in the field in seeing the importance of the great subject which had brought them all there together, and until he helped them, though there were sanatoria in the country, there was no general movement, no united campaign attacking tuberculosis at every point. He claimed for the King that he had been foremost in the movement in this country. The Chairman concluded by referring to the interest taken by the King in the efforts directed against the spread of cancer.

The Chairman again rose to propose the toast of "The Queen and the rest of the Royal Family," and pointed out that the two public occasions on which the Queen has made her appearance lately have been in respect of ceremonies connected with the giving of medals and certificates to nurses.

The toast of the evening, "Our Foreign Guests," was then proposed by the Chairman, who said it was one all would honour. They were glad to welcome those who possibly at inconvenience to themselves had brought to that Congress the tribute of their knowledge and the results of their experiments. That Congress was not that of one nation, but of many countries; it was a great international movement in which all could join with freedom. They recognised that Great Britain was somewhat behind in the race at first against tuberculosis, but they had learnt many lessons from that Congress, and they trusted that the combination of talent which had been brought together, and the friction of the various intellects brought round their Council Board would produce the result to which they looked forward, and that the Conference would leave behind it an abiding good. They cordially invited their foreign guests to visit these shores again. It was with a feeling of pride that he found himself addressing men whose names were household words in Europe and throughout the world, and he would be able to look back to the time when he had spoken to them face to face.

Professor E. G. Janeway, for America, said the organisation of the Congress had been so perfect that it must serve as an example for similar undertakings.

Professor L. R. von Schroetter, for Austria, humorously compared the Congress to marriage. In the case of the Congress the difficulty was more complicated by reason of the many nations concerned. However, just as in the best of marriages there must be little troubles, still they disappeared, and the result in the case of the Congress was the advancement of science for the good of the whole of humanity.

Dr. Martin responded for Belgium, Dr. Mikailovsky for Bulgaria, Professor Bang for Denmark, and M. Felix Voisin (Juge de la Cour de Cassation) for France. M. Voisin, in the course of his remarks, announced the invitation from the President of the French Republic to the members of the Congress to be present and help in the next Congress to be held in Paris in two or three years' time. Professor Gerhardt replied for Germany, Professor Pel for Holland, Councillor Raisz for Hungary, Professor Cervello for Italy, Dr. Malm for Norway, Dr. de Lancastre for Portugal, Dr. I. Cantacuzino for Roumania, Senor Don Jose Verdes Montenegro for Spain, Dr. Secretan for Switzerland, and Dr. Klas Linroth for Sweden.

Sir Herbert Maxwell, M.P., in proposing the toast of "Greater Britain," said the Colonies were worthily represented, and the Empire of India had sent many delegates, as also had Canada and Australasia to join in the crusade against tuberculosis. Surgeon-General Harvey replied as representative of India, and the toast was also replied to by Sir David Tennant and Sir John Cockburn.

"The Health of the Chairman" was proposed by Sir William Church, who detailed the many claims the Earl of Derby had on their gratitude and respect. His services had been invaluable, for he had used his influence and his knowledge of men and matters in the interests of the Congress. Sir William Church emphasised the fact that for further progress in fighting tuberculosis they must look to the Government and to the general public.

The Chairman, in replying, said he thanked them as the humble lieutenant of the King, whose orders he obeyed. After describing the efforts that had been successfully carried out in Liverpool for the establishment of sanatoria, the Chairman concluded by a graceful acknowledgment of the labours of Mr. Malcolm Morris in organising the Congress.

Besides the names of those already mentioned there were present Sir Hugh Beevor, Professor Boyce, Sir William Broadbent, Dr. Bulstrode, Professor Calmette, Sir Henry Copeland, the Hon. A. Dobson (Tasmania), Sir William Kynsey (Ceylon), Lord Lister, Mr. Walter Long, the Lord Mayor, Sir J. W. Moore, Professor E. Nocard (France), Sir H. Norbury, Professor Osler (Baltimore), Dr. Pavy, Sir W. Peace, Sir James Reid, Lord Reay, Sir Felix Semon, Sir Arthur Trendell, Sir Hermann Weber, Sir E. H. Wittenoom, Sir Christopher Nixon, Dr. J. Dunsmuir, Professor Brouardel, Dr. J. Andrew, Dr. T. Finlayson, and Sir J. Blyth.

### Receptions.

On Thursday evening, July 25th, the Earl and Countess of Derby held a reception at the Victoria and Albert Museum, South Kensington, which was perhaps more numerously attended than any of the previous social functions. Excellent music was provided by Karl Kaps's Viennese band and the splendid orchestra of the Grenadier Guards.

The Belgian delegates were entertained by the Council of the Brussels Medical Graduates' Association at a dinner given at the Club House of the Royal Botanical Gardens on Wednesday evening, July 24th, after the Ladies' Reception on that afternoon.

On Friday, July 26th, the members and delegates were entertained by Sir J. Whittaker and Lady Ellis at a garden party at Buccleuch House, Richmond. The weather, though unsettled, was not continuously wet, and, even if it had been, the host and hostess had made every arrangement for sheltering their guests. As it was, an enjoyable afternoon was spent, enlivened by excellent music. The visitors, especially those new to London, had an opportunity of admiring the beautiful view along the river which Sir J. Whittaker Ellis is striving so hard to preserve to the public.

On Saturday the Duke and Duchess of Northumberland gave a garden party at Isleworth, which was attended by some 1,500 delegates and members of the Congress. As a garden party the entertainment was spoilt by the weather, but the guests were most hospitably received by their noble hosts, and had an opportunity of examining the histori treasures of Syon House.

# PUBLIC HEALTH
AND
# POOR-LAW MEDICAL SERVICES.

## HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,096 births and 4,658 deaths were registered during the week ending Saturday last, July 27th. The annual rate of mortality in these towns, which had risen from 14.8 to 17.9 per 1,000 in the four preceding weeks, further rose last week to 21.2 per 1,000. The rates in the several towns ranged from 9.7 in Croydon, 10.8 in Derby, 12.3 in Cardiff, and 12.4 in Halifax, to 30.0 in Birkenhead, 30.2 in Portsmouth, 31.7 in Sheffield, and 34.3 in Liverpool. In the thirty-two large provincial towns the mean death-rate was 23.2 per 1,000, and exceeded by 5.0 the rate recorded in London, which was 18.2 per 1,000. The zymotic death-rate in the thirty-three towns averaged 6.9 per 1,000; in London this death-rate was equal to 5.0 per 1,000, while it averaged 8.1 in the thirty-two provincial towns, among which the highest zymotic death-rates were 10.7 in West Ham and in Burnley, 11.7 in Leeds, 12.2 in Birkenhead, 13.7 in Portsmouth, 14.1 in Sheffield, and 17.1 in Liverpool. Measles caused a death-rate of 1.1 in Birmingham, 1.4 in Gateshead, 1.6 in West Ham, and 2.3 in Birkenhead; whooping-cough of 1.1 in Sunderland, 1.3 in Brighton, and 1.7 in Swansea; and diarrhœal diseases of 7.6 in Nottingham and in Gateshead, 7.7 in Manchester, 7.8 in Preston, 8.5 in West Ham, 9.4 in Birkenhead, 9.6 in Burnley, 10.8 in Leeds, 12.4 in Sheffield, 13.2 in Portsmouth, and 16.1 in Liverpool. In none of the thirty-three towns did the death-rate from scarlet fever or from "fever" reach 1.0 per 1,000. The 68 deaths from diphtheria in the large towns included 28 in London, 5 in Sheffield, and 4 in Salford. No fatal case of small-pox was registered either in London, or in any of the thirty-two large provincial towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, July 27th, was 11, against numbers increasing from 1 to 14 on the five preceding Saturdays; 2 new cases were admitted during the week, against 2, 6, and 5 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,018 and 2,007 at the end of the two preceding weeks, had risen again to 2,974 on Saturday last; 374 new cases were admitted during the week, against 363, 324, and 371 in the three preceding weeks.

## HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, July 27th, 988 births and 567 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.0, 18.4, and 17.2 per 1,000 in the three preceding weeks, rose again last week to 17.8 per 1,000, but was 3.4 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14.2 in Aberdeen and 15.1 in Dundee to 22.8 in Leith and 22.9 in Greenock. The zymotic death-rates in these towns averaged 4.2 per 1,000, the highest rates being recorded in Leith and Greenock. The 271 deaths registered in Glasgow included 11 from measles, 4 from scarlet fever, 5 from whooping-cough, and 56 from diarrhœa. Three fatal cases of whooping-cough and 11 of diarrhœa were recorded in Edinburgh. Five deaths from measles and 11 from diarrhœa occurred in Dundee; and 8 from diarrhœa in Leith, 5 in Paisley, and 5 in Greenock.

# MEDICAL NEWS.

PROFESSOR M'CORMICK, of Dundee University College, has been appointed Secretary of the Carnegie Trust, at a salary of £800 per annum.

LEGACY TO ST. ANDREWS UNIVERSITY.—By the will of the late Miss Malcolm, sister of Sir James Malcolm of Balbedie, a sum of £4,000 has been bequeathed to St. Andrews University for the purpose of establishing medical bursaries or scholarships.

EDINBURGH ROYAL INFIRMRRY.—At their meeting on Monday, July 8th, the Managers of the Edinburgh Royal Infirmary appointed Dr. Dawson Turner Medical Electrician to that institution, *vice* Dr. Milne Murray, resigned. Dr. Hope Fowler was at the same time appointed Assistant Medical Electrician.

THE SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—At the annual general meeting of this Society, held in London on July 26th, Dr. A. E. Sansom in the chair, it was stated that during the past session the membership had increased from 102 to 237 members. A volume of reports will be issued shortly. The following office-bearers were elected at the meeting: Drs. Henry Armstrong, Henry Ashby, Fletcher Beach, James Carmichael, Edmund Cautley, Wayland Chaffey, Leonard Guthrie, Robert Hutchison, Charles Macalister, John McCaw, Lewis Marshall, Ernest Sansom, George Shuttleworth, George Sutherland, Frederick Taylor, James Taylor, Charles Willey, and Dawson Williams, and Messrs. Watson Cheyne, Walter Edmunds, Francis Jaffrey, Robert Jones, Betham Robinson, and Alfred H. Tubby were appointed members of the Council. Mr. R. Clement Lucas was appointed Honorary Treasurer, and Mr. Sydney Stephenson, Dr. George Carpenter, and Dr. Theodore Fisher Honorary Secretaries.

## MEDICAL VACANCIES.

The following vacancies are announced:

AYR COUNTY HOSPITAL.—House-Surgeon. Salary, £70 per annum, with residence, board, and washing. Applications to the Secretary by August 7th.

BETHNAL GREEN INFIRMARY, Cambridge Road, N.E.—First Assistant Medical Officer: unmarried. Salary at the rate of £150 per annum, with board, lodging, and washing. Applications, on forms provided, to be sent to the Medical Superintendent by August 5th.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon; unmarried. Salary, £150 per annum, and allowance of £30 per annum for cab hire, with furnished rooms, etc. Applications to the Secretary by September 9th.

BIRMINGHAM AND MIDLAND SKIN AND URINARY HOSPITAL.—Surgical Assistant. Honorarium at the rate of 50 guineas per annum. Applications to the Secretary.

BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Medical Officer. Salary, £100 per annum, with furnished apartments, rations, etc. Applications, on forms provided, to be sent to the Clerk to the Guardians, Parish Office, Edmund Street, Birmingham, by August 10th.

BRADFORD POOR-LAW UNION.—Second Assistant Medical Officer for the Hospital and Workhouse; unmarried. Salary, £100 per annum, with prescribed rations, apartments, and washing. Applications to the Clerk to the Guardians, 22, Manor Row, Bradford, by August 13th.

BRECON INFIRMARY.—Resident House-Surgeon. Salary, £100 per annum, with residence, board, etc. Applications to Secretary by August 14th.

BRIDGWATER INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board and residence. Applications to the Honorary Secretary.

BRIGHTON, HOVE, AND SUSSEX THROAT AND EAR HOSPITAL.—Non-resident House-Surgeon. Appointment for six months. Salary at the rate of £75 per annum. Applications to Secretary.

BRISTOL GENERAL HOSPITAL.—Casualty Assistant House-Surgeon. Salary, £50 per annum, with board and residence. Applications to Secretary by August 7th.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with furnished apartments, board, and washing. Applications, endorsed "Assistant House-Surgeon," to be sent to the Secretary.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum, with board and lodging. Applications to Secretary by August 26th.

CARDIFF INFIRMARY.—Honorary Anæsthetist. Applications, endorsed "Anæsthetist," to be sent to the Secretary by August 5th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Second House-Physician. Appointments for six months. Salary at the rate of £80 per annum, with board, residence, and washing. Applications to the Secretary by August 6th.

COLCHESTER: EXETER AND COLCHESTER HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by August 30th.

DENBIGH: DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary, £100 per annum to commence, with board, residence, and washing. Applications to the Secretary.

DENBIGH: NORTH WALES COUNTIES LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary commencing at £120 per annum, rising to £180, with board, residence, and washing. Applications to the Clerk to the Visiting Committee by August 12th.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee.

DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £40 per annum, with residence, board, and washing. Applications to the Secretary by August 8th.

EDINBURGH: CRAIGLEITH POORHOUSE AND HOSPITAL.—Resident Medical Officer. Salary at the rate of £100 per annum, with board and apartments. Applications to the Clerk, Parish Council Chambers Castle Terrace, Edinburgh, by September 2nd.

EXMINSTER: DEVON COUNTY ASYLUM.—Third Assistant Medical Officer. Salary, £125 per annum, with board, residence, etc. Applications to Medical Superintendent.

HULL ROYAL INFIRMARY.—(1) Casualty Officer. (2) Junior Assistant House-Surgeon. Salary, £60 per annum, with board and lodging in each case. Applications to the Chairman of the House Committee.

IPSWICH: EAST SUFFOLK AND IPSWICH HOSPITAL.—Second House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to Secretary.

ISLINGTON PARISH.—Dentist for the Schools at Hornsey Road. Salary, £20 per annum. Applications to the Clerk, Guardians' Offices, St. John's Road, Upper Holloway, N., by August 15th.

LINCOLN COUNTY HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Honorarium £25 for six months, with board, residence, and washing. Applications to the Secretary by August 14th.

LIVERPOOL EYE AND EAR INFIRMARY.—Out-patient Assistant and Pathologist. Applications to the Secretary by August 20th.

NEWCASTLE-ON-TYNE: HOSPITAL FOR SICK CHILDREN.—Male Resident Medical Officer. Salary, £100 per annum, with board, lodgings, and laundry. Applications to the Secretary.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon; unmarried. Salary, £160 per annum, increasing by £10 yearly, with furnished apartments, etc. Applications to the Secretary, Mr. M. I. Preston, Journal Chambers, Nottingham.

OXFORD COUNTY.—Medical Officer of Health for the combined districts. Salary, £750 per annum. Applications to Mr. A. G. Higgs, Solicitor, Woodstock, by August 9th.

PRESTON ROYAL INFIRMARY.—Assistant House Surgeon. Salary, £60 per annum, with board, lodging, and washing. Applications to the Secretary by August 8th.

ROYAL EYE HOSPITAL, Southwark, S.E.—(1) House-Surgeon. Salary, 50 guineas per annum, with board and residence. (2) Clinical Assistants. Applications to the Secretary for (1) by August 31st.

RUBERY HILL ASYLUM, Burnt Green, Worcestershire.—Junior Assistant Medical Officer. Commencing salary, £130 per annum, with board, furnished apartments, etc. Applications to the Medical Superintendent.

SHEFFIELD ROYAL INFIRMARY.—(1) Senior Assistant House-Surgeon. (2) Junior Assistant House-Surgeon. (1) Salary, £80 per annum, with board, lodging, and washing. (2) Salary, £70 per annum, with board, lodging, and washing. Applications to Secretary by August 17th.

SHREWSBURY: SALOP INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board, washing, and residence. Applications to the Board of Directors

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary, £50 per annum, with rooms, board, and washing. Applications to Secretary.

STAFFORDSHIRE COUNTY ASYLUM.—Junior Assistant Medical Officer; unmarried, and under 30 years of age. Salary, £150 per annum, with board, lodging, etc. Applications to the Medical Superintendent.

SYDNEY UNIVERSITY.—Professorship of Pathology, not more than 40 years of age Salary, £900 per annum, and £100 allowed for passage expenses. Applications to the Agent-General for New South Wales, 9, Victoria Street, London, S.W., by September 14th

TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £60 per annum, with board, lodging, and washing. Applications to Secretary.

TOTTENHAM HOSPITAL, N.—Senior Resident Medical Officer. Salary, £90 per annum, with board, residence, and laundry. Applications to the Chairman of the Joint Committee by August 12th.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon; unmarried. Salary, £100 per annum, increasing by £10 a year, with board and apartments. Applications to the Secretary.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY. Junior House-Surgeon; unmarried. Salary, £80 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by August 7th.

WELLS: SOMERSET AND BATH LUNATIC ASYLUM.—Medical Superintendent. Salary commencing £600 per annum, with furnished house and allowances. Applications to the Clerk to the Visiting Committee by August 6th.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House-Surgeon. Salary, £50 per annum, with board, lodging, washing, and attendance. Applications to the Secretary.

WEST BROMWICH UNION.—Assistant Medical Officer for the Workhouse and Infirmary; unmarried. Salary, £125 per annum and £100 per annum in lieu of apartments, board, etc. Applications, endorsed "Assistant Medical Officer," to be sent to the Clerk by August 10th.

WEST HAM HOSPITAL, Stratford, E.—Junior House-Surgeon. Salary, £75 per annum, with board, residence, etc. Applications to Secretary.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—House-Surgeon. Salary, £120 per year, and £30 for dispensing, with furnished apartments and attendance. Applications to the Secretary by August 10th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Assistant House-Surgeon. (2) Assistant House-Physician. Appointment for six months. Honorarium at the rate of £75 per annum will be given with board, lodging, and washing in each case. Applications to Secretary by August 12th.

WOLVERHAMPTON EYE INFIRMARY.—House-Surgeon. Appointment for twelve months. Salary, £70 per annum, with rooms, board, and washing. Applications to Secretary by August 13th.

WORCESTER GENERAL INFIRMARY.—Assistant House Surgeon. Salary, £70 per annum, with board, residence, and washing. Applications to the Secretary by August 5th.

## MEDICAL APPOINTMENTS.

ALLEN, W. T. D., M.B., B.Ch., R.U.I., appointed Medical Officer for the 4th District of the Parish of Liverpool, *vice* S. Caldwell, M.R.C.S., resigned.

BARNES, E. W., L.R.C.P.I., L.F.P.S.Glasg., appointed District Medical Officer to the Liverpool Union, *vice* Dr. Caldwell, resigned.

BUCK, A. H., F.R.C.S., M.R.C.S., L.R.C.P., appointed Honorary Surgeon to the Brighton, Hove, and Sussex Throat and Ear Hospital.

BURGESS Arthur H., F.R.C.S.Eng., M.B., Ch.B., M.Sc.Vict., appointed Surgical Officer and Medical Superintendent of the Manchester Cancer Pavilion and Home.

HOLLIS, H., M.D., appointed Medical Officer for the Wellingborough District and the Workhouse of the Wellinborough Union; also Vaccination Officer, *vice* W. W. Clark, M.D., resigned.

HUTCHISON, A. J., M.A., M.B., C.M., appointed Honorary Assistant-Surgeon to the Brighton, Hove, and Sussex Throat and Ear Hospital.

JOHNSON, Alice Vowe, L.R.C.P.&S.Edin., L.S.A.Lond., M.D.Brux., appointed Junior Medical Officer to the Joint Counties Asylum, Carmarthen.

MACMURCHY, Helen, M.D.Toronto, appointed a Resident Medical Assistant to the General Hospital, Toronto, Canada.

MARTINEAU, A. J., F.R.C.S., M.R.C.S., L.R.C.P., appointed Honorary Assistant-Surgeon to the Brighton, Hove, and Sussex Throat and Ear Hospital.

MEADE, J. W., L.R.C.P., L.R.C.S.E., appointed Assistant Resident Surgeon to Nottingham General Dispensary.

ROBIE, George A., M.B., Ch.B., M.P.C., late Senior Assistant Cumberland and Westmorland Asylum, Carlisle, appointed Senior Assistant, Dorset County Asylum, Dorchester, in place of Dr. Davidson, resigned.

SINCLAIR, Miss A. B., M.B., Ch.B., appointed Resident House-Surgeon to the Carlisle Dispensary, *vice* Dr. Bower, resigned.

SMITH, T. Rudolph, M.B., F.R.C.S., appointed Honorary Surgeon to the Stockton and Thornaby Hospital.

TAUNTON, J. Godfrey C., M.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Surgeon to St. Bartholomew's Hospital, Rochester.

THOMSON, StClair, M.D., M.R.C.P.Lond., F.R.C.S.Eng., appointed Assistant Physician for Diseases of the Throat to King's College, Hospital.

TREVES, Edward, M.R.C.S., L.R.C.P., appointed Honorary Consulting Surgeon to the Brighton, Hove, and Sussex Throat and Ear Hospital.

WARDE, Wilfrid B., M.D., M.R.C.P., appointed Assistant-Physician to the Hospital for Diseases of the Skin, Blackfriars, London.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

CALEY.—On July 29th, at Colville House, Ealing, the wife of Guthrie Neville Caley, M.D., M.S., of a son.

EDWARDS.—On July 29th, at 34, Peckham Road, the wife of Francis H. Edwards, M.D., M.R.C.P., of a son.

LYDALL.—On July 25th, at Clyston, 68, City Road, Birmingham, the wife of W. Tracy Lydall, M.D., M.R.C.S., L.R.C.P., of a son.

MOORE.—On July 24th, at 23, Upper Pembroke Street, Dublin, the wife of George A. Moore, M.D., Captain R.A.M.C., of a son.

### MARRIAGES.

LANGWILL—HOLMES.—At the Parish Church, Alcastor Malbis, York, on July 27th, by the Rev. J. E. Kehle, Hamilton Grahame Langwill, M.D., F.R.C.P.E., 4, Hermitage Place, Leith, to Amy, third daughter of the late George Julius Holmes, York.

STABB—FROUDE.—On July 30th, at Marylebone Parish Church, by the Rev. Cecil Wood, Ewen Carthew Stabb, F.R.C.S., of 57, Queen Anne Street, W., eldest son of William Henry Stabb, of Ilfracombe, to Emma Langworthy, daughter of the late James Henry Froude, of Newent, Gloucester.

### DEATHS.

KENRICK-JONES.—July 26th, at Bronheulog, Llanrhaiadr, Oswestry, suddenly of syncope, Mary, the beloved wife of J. Kenrick-Jones, L.R.C.P.& S.E., L.F.P.S.G. Deeply regretted. Interred at Llanrhaiadr July 30th.

MUNCASTER.—July 19th, at The Mount, Halifax, James Hannay Muncaster, B.A.Cantab., M.B.Lond.

SCOWCROFT.—On July 10th, 1901, at his residence, Oakleigh Great Lever, Bolton, John Edwin Scowcroft, M.D., Mayor of Bolton, Surgeon-Captain 2nd V. B. L. N. L. Regiment. Aged 56 years.

WOOD.—On July 25th, aged 34 years, Joseph Wood, M.D., B.S.Durh., of Riffa House, Liversedge, second son of Mr. Albert Wood, of Blackpool (late of Oldham), and the dearly beloved husband of Margaret H. Wood, only daughter of the late Mr. William Edward Taylor, of Newcastle.

## LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

### QUERIES.

N. S. wishes to know of a country cottager competent to take in a bed-ridden man. S.W.R. or G.W.R. if possible.

SERUM writes: Can any reader give me any information regarding "Hæmosepsin," and how it is used?

SALIX NIGRA asks if anyone can tell him of a substitute for salicylate of soda—a drug reasonable in price, capable of producing all the anti-rheumatic and antiseptic effects of the soda salt, and yet free from its disagreeable sweet taste, nauseating effects, and dangerous impurities.

SPES would be very glad to hear, through the medium of the BRITISH MEDICAL JOURNAL, of any suitable institutions, preferable in the neighbourhood of Lincolnshire, for a poor patient suffering from phthisis. A fee such as £2 2s. a week, which appears to be the minimum of those sanatoria advertised in the BRITISH MEDICAL JOURNAL, would be prohibitive in this case.

XENOPHON would be glad if any member will kindly inform him where a simple soft wire or other nostril dilator may be obtained. It is required for a patient whose alæ nasi fall inwards like valves during respiration, thus necessitating mouth breathing. But for this there is plenty of room in the nostrils. Also, could suitable chin-straps be obtained at the same place to keep the mouth shut?

#### TREATMENT OF POLYMYOSITIS.

AJAX would like advice in treatment from any brother practitioner who has had experience of polymyositis. His patient, a lady, had an attack of arthritis commencing last summer. The attack proved very resistent to treatment, and lasted six months or more. The baths of Droitwich, hot-air treatment, rubbings, massage, and other remedies seemed of very doubtful value. The arthritis during the last three months has been in abeyance, but occasionally during the attack various muscles became much enlarged, very tender and painful, and at present this condition is the chief symptom. The arms are bandaged, and various drugs have been used with no marked benefit. The symptom is well described in recent literature, but treated is carefully excluded.

### ANSWERS.

#### MOSQUITOS, MALARIA, AND THE CASTOR-OIL PLANT.

DR. STANFORD HARRIS (Güimar, Teneriffe) writes: In answer to the query *re* mosquitos and castor-oil plant, in the BRITISH MEDICAL JOURNAL for June 15th, p. 1527, I beg to state that although the plant grows in this island mosquitos are not uncommon, although by no means the pest they are in tropical countries.

#### DAVIDSON'S OPTOMETER IN GENERAL PRACTICE.

M.D. writes: In reply to "R. W.," I have used Davidson's optometer during the past four or five years, and I find it to be all that the inventor claims for it. I knew nothing of the subject before I had the instrument, but after two lessons from Mr. Davidson, careful reading of his book of instructions, and a little practice I soon became able to correct the more ordinary errors of refraction.

#### CARBON MONOXIDE POISONING.

SETON.—The literature relating to carbon monoxide poisoning is of a very considerable extent, but the most recent information is contained in the following papers and books: *Report of the Water-gas Committee*, 1899; *Report by Professor Le Neve Foster on the Snaefell Mine Disaster: Report by Dr. Haldane on the Causes of Death in Colliery Explosions*, 1896 (these Parliamentary papers can be obtained from Eyre and Spottiswoode, East Harding Street, E.C.); series of papers by Haldane, *Journal of Physiology*, 1895-1900; Lorrain Smith, BRITISH MEDICAL JOURNAL, 1899, i. p. 780; Sachs, *Die Kohlenoxyd-Vergiftung*, 1900; Mosso, *La Respirazione nelle Gallerie e l'Azione dell Ossido di Carbone*, 1900.

#### FORMALIN AS A PRESERVATIVE.

W. T. G. asks if formalin is dangerous when used as a food preservative, and, if not, in what proportion it might be added, say, to milk.

*** Professor Halliburton concluded, from experiments (published in the BRITISH MEDICAL JOURNAL, July 7th 1900 p. 2) conducted *in vitro*,

that even small quantities have an inhibitory action on digestion, particularly on the rennet curdling of milk. According to the recent observations of Tunnicliffe and Rosenheim (*Journal of Hygiene*, July, 1901, p. 321), the administration of formic aldehyde up to 1 to 5,000 in milk or 1 to 9,000 in total food and drink (formalin is a 40 per cent. solution of formic aldehyde, and about 2 drops of this are stated to be added to each fluid ounce of milk) produces no appreciable influence on the general health or well-being of healthy children. Their results, however, suggest that the substance has a tendency to diminish phosphorus and fat assimilation owing to an influence on pancreatic digestion and a slight intestinal irritant action. In a delicate child it had a chemically measurable deleterious action.

## LETTERS, NOTES, Etc.

ERRATUM.—In the letter of "F.R.C.S." on the Financial Aspect of the L.O.S., in the BRITISH MEDICAL JOURNAL of July 27th, p. 243, col. 1, the last word of the first paragraph should be *examinees*, and not as printed.

### A WARNING FROM AUSTRALIA.

A BUSH PRACTITIONER writes: The telegram published in the BRITISH MEDICAL JOURNAL of April 27th under the above heading is as much a mystery to most Australian practitioners as it is to you in England; but it comes none too soon, for whereas the Australian Natives' Association used to be the champion sweaters of the profession in Australia, they have for some time past had to yield the palm to the Manchester Unity, which periodically increases the burdens of its medical officers and reduces their pay. Your paragraph goes on to state that "Difficulties as to contract practice have reached a very acute stage in Australia." Unfortunately this is not strictly accurate, because the acute stage is gradually passing over, and there is grave danger of the evil becoming chronic. Medical men will not stir themselves to any effective resistance to the lodges; they growl and grumble spasmodically, [illegible] ing whining letters to the lay press; then they a[illegible] go on as before, or a little worse. When the situa[illegible]le, they find it easier to sell their practice and [illegible] than improve the position where they are.

There are, as far as I can make out, three principal reasons for this. First, although the supply of medical attendan[illegible] far in excess of the demand. The Universities of Sydney, Melbourne, and Adelaide continue to turn out young graduates by the hundred, and many of these, being under the immediate necessity of making a living somehow, come up into the country and tout for lodge appointments. It is nothing to them that the lodge-doctorship is occupied; they cannot afford to let ethical or other considerations stand in their way. It is useless to tell these young men that by making themselves tools of the lodges they are preparing rods for their own backs. Like the gamblers at Monte Carlo, other men's systems have failed, but theirs never can. At any rate, if a country doctor resigns his lodge, or is dismissed for any reason, the lodge has not the least difficulty in filling his place, so the doctor, knowing that any show of resista[illegible] results in the imm[illegible]n of fresh opposition into his district, which affords no more than a living for himself, contents himself with growling in private, and keeps as q[illegible].

Secondly, a circumstance which plays powerfully into the hands of the lodges is the fact that in townships where two or more doctors are practising it is very rarely that these are on friendly, or [illegible] terms with each other. This, viewed in the light of the preceding paragra[illegible] loca[illegible] tage [illegible] the lodges love, but is fatal to the interests and sta[illegible].

The [illegible]nd in our system of buying and selling practices [illegible] revision. pra[illegible]s course in it lasts five years or even longer. Psal[illegible] in [illegible] ove[illegible] doi[illegible] the [illegible] his [illegible] time, and [illegible] tice in the market, and it is advertised "Lucrative practice, worth so much, with [illegible] opposition nominal, etc." The "appointments" are, of course, lodges, and are a veritable trap for the unwary, but they increase the selling price of a practice, which inde[illegible]. The [illegible] soo[illegible] rath[illegible] with an imported opponent. The lodges k[illegible] ow their own value and act accordingly. A favourite trick of theirs is to appoint the newcomer for the remainder of the vendor's term of office, and when the time comes for renewing the contract to tell him that he must lower his terms or they will call for tenders. Of course Emptor gives way, knowing what will be the inevitable result if he resists. I have known many cases in which this has been done during the last five years. Emptor's only consolation is that he will "sell" somebody else in two or three years.

These three causes merit the earnest consideration of the British Medical Association in all lands. The Association in Australia and the various medical defence associations in the Colonies are moving in the rig[illegible] hill[illegible] of failure, to extort better terms from the lodges. But I would ask, Why not [illegible] contract practice, as is done in Canada and the United States, instead of wasting time and energy in haggling with the lodges over such a very unsatisfactory instalment of justice as a wage or income limit? If (which I cannot believe) the British Medical and kindred associations are unequal to this task, then I really think it would be better for us to frankly accept the [illegible], and with it the status of the tradesmen allotted to us by our masters.

### ABDOMINAL SUTURE IN A PIG.

DR. H. HOLLIS (Wellingb[illegible]ugh) writes: A pig about 12 weeks old was six weeks ago gored [illegible] 2 inches long, and a small round hole in the muscular wall of the abdomen, through which 3 or 4 feet of bowel protruded. Some of the labourers on the farm (the sewage farm) tried to put the intestine back but failed, so called the wife of the manager, who successfully reduced the bowel, closed the muscular wall with an or[illegible] and then put a piece of lard on the wound and sewed the skin up in the same way. The pig was "pined" on milk and water for a fortnight, and afterwards allowed in the yard with the others. Some of the superficial stitches suppurated slightly; now the pig appears to be as well as the others of the same litter. The thread is hanging from the skin, but the wound has healed entirely.

### MEDICAL ATTIRE.

CENTURION writes: My letter was not written to allude to the occasions when wearing a frock coat and top-hat would be correct, but to suggest that we should not wear these articles simply through professional custom, when they are decidedly incorrect. That this is done is beyond doubt, "Suburban" and the "Tatler" notwithstanding.

LETTERS, COMMUNICATIONS, ETC., have been received from

**A** Ajax; Dr. E. Anderson, Paris; A. E. P.; E. W. Adams, M.B., Sheffield; H. Alderson, M.B., London. **B** Dr. J. W. Byers, Belfast; Dr. C. Berkeley, London; Dr. P. Boulton, London; Dr. A. Brownlie, Redcar; Mr. P. J. Byrne, Chesterton; Dr. J. A. Blair, Newcastle-on-Tyne; Mr. P. B. Bentliff, Jersey. **C** J. G. Connal, M.B., Glasgow; Mr. G. A. Cardew, Cheltenham; E. E. Cass, M.B., Ravenglass; R. M. Crookshank, M.B., Sutherland; Dr. S. M. Copeman, London; Mr. F. W. Collingwood, London. **D** Mr. F. L. Dickson, Beelfontein; J. S. Dick, M.B., Manchester; Mr. A. G. Davis, Harrogate; Mr. S. R. Dudley, London. **E** Mr. E. W. Everett, Norwich; Dr. J. W. Eden, London; Ex-public Vaccinator; Enquirer. **F** Dr. E. A. Fox, Warrington; F.R.C.P.; Dr. P. J. Freyer, London; Mr. A. B. Francis, Carnickergus; Former Stammerer. **G** Dr. J. Gay, London; Mr. J. Good, Stockport; Dr. E. Gwynn, London; Mr. F. B. Greenwood, Portsea. **H** Dr. S. Harris, Teneriffe; Mr. F. R. Humphreys, London; Dr. W. A. Hatton, Westhoughton; Dr. P. Horrocks, London; Dr. T. W. Hime, Bradford; Hospital; E. Holthouse, M.B., London; Hopeful; W. Hardman, M.B., Blackpool; Hypnotist; Dr. J. S. Haldane, Oxford. **I** I.M.S. **J** W. H. H. Jessop, M.S., London; J. T.; Dr. R. Jones, Woodford Bridge. **K** R. Kirkland, M.B., Cheltenham; Kappa. **L** L.R.C.P.; Mr. E. L. Luckman, Altrincham. **M** M.D.; J. Murray, M.B., London; Dr. J. M. H. Martin, Blackburn; Dr. J. Matthews, Blundellsands; Mr. W. Manning; [illegible] Mr. A. Maclean, London; Mr. D. A. McCurdy, Londonderry; W. M[illegible] Y. B. Bradford; Mr. J. M. Marshall, Wallingford; Medical Officer; Dr. R. M[illegible] blin. **N** Mr. R. Nitch-Smith, London. **P** Mr. E. P. Pilcher, London; Private Doctor; Dr. R. J. Probyn-Williams, London; Dr. H. H. Phillips-Conn, Reading; Pat; Dr. W. R. Parker, Kendal; Mr. P. Pfleiderer, Wellington, Salop. **R** Dr. W. P. Robertson, Edinburgh; Mr. R. J. Reid, London; Mr. H. G. Read, London; D. J. S. Revely, Beeston; Mr. C. H. D. K[illegible]ns, Grantham; Mr. T. Readman, Skipton. **S** Mr. H. B. T. Symons, Pretoria; Dr. M. P. Simon, London; Dr. W. W. St[illegible]ger, Kimberley; Scion; Dr. H. Sen, Calcutta; Dr. L. E. Shaw, London; Dr. G. Savage, [illegible] London; Dr. G. A. Stephens, Swansea; Senex. **T** Mr. S. [illegible] Mersey; Mr. F. G. Turner, London; Mrs. Thompson, [illegible] Aberdeen; Dr. E. Thompson, M.P., Omagh. **U** Underjay in India. **V** Visitor; Mr. T. J. Verrall, Brighton. **W** E. T. Wilson, M.B., Cheltenham; W. D. S.; Dr. H. S. Wilson, Weybridge; W. A. L.; Mr. O. Williams, Glandovey. **X** Xenophon. **Y** Mr. N. E. Yorke-Davies, London; etc.

## BOOKS, ETC., RECEIVED.

| | | | |
|---|---|---|---|
| Home Exercises for Spinal Curvatures. By [illegible] M.D. | | Die Behandlung der Empyeme. Von Dr. F. [illegible] | |
| A [illegible] | | Die [illegible] | W. |
| [illegible] | | [illegible] | |
| [illegible] | | [illegible] | |
| [illegible] | | [illegible] |

# INTRODUCTORY REMARKS

MADE AT THE OPENING OF THE

# SECTION OF STATE MEDICINE.

*At the Annual Meeting of the British Medical Association held in Cheltenham July-August, 1901.*

By SHIRLEY F. MURPHY, M.R.C.S.,
Medical Officer of Health for the Administrative County of London; President of the Section.

[After a few preliminary observations Mr. Shirley Murphy proceeded: —]

If I may make a forecast of the conclusion, at which we shall arrive at the close of our conference, I would predict that we shall be satisfied that in recent years great progess has been made in our knowledge of the manner in which diseases are caused, and that as we recognise this progress we shall have ever before us more certainty of its incompleteness and of the great probability that we are only making a beginning of that which must eventually come to us by patient study. Some new discovery, some new observation, shows us how ignorant we have been before it was made, and impresses us with the vast possibilities which lie before us. I could not cite any better instance in support of this view than the recent remarkable observation of Dr. Horton-Smith concerning enteric fever. With the hope which each addition to knowledge inspires us comes the claim for better opportunities of observation, a claim for fuller investigation in the laboratory and a claim for wider study of disease in the field.

In the latter our system of notification of infectious diseases helps us; it necessarily provides but imperfect material for study, for it can take no cognisance of those unrecognised cases of disease which are probably responsible in the main for the continuance of communicable maladies among us. It cannot profess to do more than indicate a sample of the cases which are occurring, but it can be, and is, turned to useful account by the officer, who is thus told where to direct his attention. Until recently, however, its lessons have been regarded as only of local concern, for the use of local administrations rather than intended to provide material for the study of disease in a wider sense. It is, however, capable of being thus used, and I have thought that I might properly emphasise this in the remarks which I am permitted to make to you.

It is now some years since Mr. Charles Paget, in discussing wasted records of disease, pointed out the value of material which existed in the country, but which remained unused. Mr. Paget referred to the mass of material accumulated in the records of the several Boards of Guardians, registers of sickness of the poor who seek relief. He further dwelt upon the information which was provided by our system of notification of infectious disease, and he claimed that what was needed was not only the registration of deaths with a central department such as that of the Registrar-General, but a tabulation of disease.

In a way, so far as infectious disease is concerned, we have already a beginnning. Some years have passed since Dr. John Tatham, Superintendent of Statistics for England, and then Medical Officer of Health of Manchester, undertook to receive from medical officers of health returns as to notified cases of infectious diseases in their districts. He prepared a tabular statement of the information thus derived and he communicated a copy of it to each officer who contributed the facts as to his own district. Thus, thanks to Dr. Tatham, medical officers of health were able to get better knowledge of the manner in which infectious disease was behaving in some parts of this country than was possible from the study of the returns and reports relating to deaths.

Dr. Tatham's efforts were, of course, experimental: the question necessarily arose whether the contributors to his tables would continue to supply him with the information needed with sufficient regularity. Experience showed, however, that there need not be hesitation on this point. Dr. Tatham's next step was to approach the Local Government Board, and this Board proved, as might be expected, sympathetic and useful, undertaking to do what Dr. Tatham had done and supplying medical officers of health who contributed to the return with weekly statements of infectious diseases in the districts included in it. I can bear witness to the great value of the information which this return supplies, for I have been able to study the behaviour of infectious disease in London in the light of that of other districts, and have been able to interpret this behaviour with much greater approach to correctness than would otherwise have been possible.

This year we may record another advance. Dr. Tatham, who has intimate knowledge of the needs of the student of infectious disease, has been able to use his opportunities as Superintendent of Statistics to secure publication in the returns of the Registrar General of the number of cases of infectious disease notified in the large towns of England. The list is not yet quite complete, for in a few instances the councils of these towns have not given permission for the publication, and in a few have definitely refused. I do not doubt that time will very soon remedy this defect, and especially as the public is likely to put its own construction on the exceptional attitude of any authority manifesting unwillingness to state the number of cases of infectious disease occurring in their district.

There is, therefore, already a useful beginning of records for study, but there is need of a more complete system if the valuable material of the Notification Act is to be fully used. It is in this respect, I believe, that all county authorities would be able to render service of immense value if they would follow the example of those who already, through their medical officers of health, publish the returns of cases notified to the medical officers of health of the several districts.

A weekly statement in each county of the number of cases in each district of the disease which is especially interesting us on Thursday (enteric fever), would provide material which would often throw light upon the relationship between that malady and water supplies. Variations in prevalence of disease in particular districts, often small variations, are often only explicable when its behaviour can be studied over a much wider area. But beyond this must be considered the opportunity which would be afforded for the study of the natural history of disease. We are still in ignorance of the actual conditions which make first one malady, then another, to assume epidemic prevalence, or which cause them to recur after periods of quiescence. These are problems which deserve the closest study, and which invite county authorities to provide the opportunity for the collection of and for the study of material necessary for the purpose. This material already exists: all that is needed is to make it available for use and to provide for its study. I would therefore claim that the study of the behaviour of infectious disease in each county by the county authority is definitely needed; that the material for this purpose, now that the requirement as to notification of cases of infectious diseases is obligatory throughout the country, already exists, and that the "waste" of which Mr. Paget wrote years ago should, as far as infectious disease is concerned, now end.

We may, however, go one step further than this. There is much that could be learnt from this material if the cases were classified on some uniform principle, and this, I would submit, could well be defined by the Local Government Board, and the work done by the county authorities. It would then be possible for the Registrar-General to obtain from these authorities returns which would give the results for the whole of England. The value of figures based upon such a large number of cases as would thus be dealt with would be very great, for we should have standards with which to compare our local figures, which would have no fallacy in them as the result of their insufficiency, and we should have at our own disposal for study figures which could not fail eventually to teach important lessons which could be used for the prevention of disease.

I may submit that this method of dealing with the records of notified cases of infectious disease is not in the experimental stage. In London the county authority receives indirectly returns showing particulars as to each case of infectious disease which is notified to the medical officers of health throughout the county. I can speak from personal knowledge of the value of the information thus

received; it can often be used for the purposes of immediate administration; it can always be used for endeavouring to learn new lessons we hope to turn to good account hereafter. In some other counties a somewhat similar course is adopted. What is wanted now is the extension of this system throughout the country, and finally the use of a department like that of the Registrar-General for the publication of the results in as much detail as possible, and for a final tabulation of the total figures.

While we are admittedly making great progress in the direction I have indicated, it is necessary to point out that as yet, outside London, it rests on no statutory requirement.

We have begun, as we so often do begin in this country, by depending on voluntary effort, but we must at length rely upon Parliament, and I do not think there is now any reason which should make us hesitate to ask for legislation; I believe the public would cordially approve any reasonable proposals which should put an end to this waste of useful material.

I may point out effort was made to attain this result when the last Notification Bill was before Parliament, but the amendments with this object which were proposed were ruled out of order by the Speaker. We must now await a later opportunity, when we may hope the provisions which I have indicated will be included in the original Bill.

In conclusion, I may add a few words of apology for intervening between the meeting and the interesting papers which will now be read; but I have thought it well, in considering the relation of county to district administration, to which our attention will be directed by Dr. Bond, and the subject of enteric fever, which will be introduced to us by Dr. Houston, that the question I have dealt with touches upon both, and might be conveniently referred to in my preliminary remarks. I hope, moreover, the time is not far distant when it will be possible to take stock of industrial diseases of which we shall learn from Dr. Legge, and know in better proportion than we now can of their magnitude and importance.

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SIXTY-NINTH ANNUAL MEETING

OF THE

# British Medical Association.

*Held at Cheltenham, July 30th, 31st, August 1st, and 2nd, 1901.*

## PROCEEDINGS OF SECTIONS.

## SECTION OF STATE MEDICINE.

SHIRLEY MURPHY, M.R.C.S., President.

### A DISCUSSION ON THE RELATION BETWEEN COUNTY AND DISTRICT SANITARY ADMINISTRATIONS.

I.—FRANCIS T. BOND, M.D., B.A., Lond., F.R.S.E.,
Medical Officer of Health, Gloucester Combined Districts.

WHEN the Committee of this Section honoured me by inviting me to open a discussion on the subject of the relations between county and district administrations, although they were good enough to do this in a way that made it very difficult for me to decline, I at first decided not to do so, feeling that if the subject was to be dealt with from the standpoint of actual experience, it would be more appropriately treated by someone who held office as a county medical officer. But it occurred to me that the subject was also capable of being considered from the point of view, not merely of what the relations between these two grades of administration in certain counties actually are, but what they might ideally be desired to be. In regard to this aspect of the question, I thought that twenty-eight years of experience as medical officer of health to a large combined district might be considered some justification for formulating some views on the matter.

#### THE M.O.H. THE PIVOT AND MOTOR POWER OF ALL SANITARY ADMINISTRATION.

Let us, then, take this latter section of the subject first, and after visualising it in the abstract we may, perhaps, then be better able to appreciate the other aspect of it as illustrated by the action already taken by certain county councils to embody it in a concrete form.

There is one preliminary remark that it may be well to make, and it is one about which I apprehend there will be no difference of opinion—here, at any rate. It is that whether in regard to sanitary administration in the restricted sphere of the smallest district or in the larger area of the county, the result must necessarily be from first to last the outcome of the energy, intelligence, and discretion of the medical officer of health. From the epoch-making labours of that great pioneer of sanitary administration, Sir John Simon—who, we are rejoiced to know, is still with us in a green old age—to the present time sanitary progress has, with very few exceptions, been the result of the activity of medical officers of health. In saying this I do not desire to ignore in the slightest degree the valuable help rendered in this cause by the official who, though still, outside of the metropolis, legally styled only the "inspector of nuisances," has come to be generally invested with the more appropriate title of "sanitary inspector." Nor do I forget that in a large number of cases this office is filled by men who in intelligence, activity, and devotion to their duties are in no whit inferior in these respects to the medical officer of health, and as such are worthy of the highest praise. But the experience of practical sanitary administration, no less than the obvious intentions of the Legislature, constitute the medical officer of health—from his special technical training, the result of a long, varied, and expensive education—not only the necessary pivot on which the machinery of this administration revolves, but also the motor power by which it is made to work.

It is, therefore, impossible to consider sanitary administration, either in the district or in the county, apart from the office and duties of the medical officer of health. Any form of sanitary administration without a medical officer of health is, to use a well-worn simile, like the play of *Hamlet* with the *rôle* of the Prince of Denmark omitted. It may serve to "mark time" and to maintain a make-believe resembance to the genuine article, but all who know what real sanitary administration is are fully aware that it is but a resemblance.

#### COMBINED DISTRICTS.

In dealing with the subject from this point of view it will be useful to refer to the experience of what are known as "combined districts," as being the predecessors both in time and development of county areas. I shall have occasion later on to refer to some interesting relations between combined districts and counties, but I may, perhaps, be allowed here to point out that these districts, which were formed by the Local Government Board immediately after the passing of the first Public Health Act in 1872, were obviously intended to foreshadow the more definite and better-constructed area of the county which was adopted in the Local Government Act of 1888. Unfortunately they suffered more or less *ab initio* from two radical defects, the first is the absence in many, but I am not certain whether in all cases, of any central authority in the shape of a committee, to whom the medical officer could look for guidance and support in his work, and through whom pressure could be brought to bear, without undue offence, on unprogressive members of the Guild. The second defect is the want of permanency in the combinations themselves, which have been always liable to disintegrating influences of various kinds. It may be accepted as an illustration of this defect that in a combination, not a hundred miles from this room, the committee which was formed at the outset to work with the medical officer broke down after a brief existence of a few years because the authorities of the district refused to guarantee the modest remuneration of £5 per annum to the gentleman who acted as clerk to it, and that if the medical officer of the combination, whose annual re-election, by the way, involves a procedure in the way of notice-giving and correspondence that occupies about six months out of every twelve, wants to adopt any new form or to issue any notice which he may consider appropriate for the whole district, he has to go through the

operation of submitting it to and hearing it discussed and criticised by the various members of 13 separate authorities. It can hardly be wondered at if such an ordeal is calculated to deaden enthusiasm for sanitary progress, and to stereotype in the mind a conservative view of things which finds increasing balm in the belief that everything is for the best in this best of all worlds.

### No Substitute for County Appointments.

The combined district was a praiseworthy effort of the Local Government Board of the day to effect a co-ordination of sanitary authorities for their common advantage, and especially to obtain a medical officer of health for whom a proper remuneration could be provided which would render him independent of medical practice, and, therefore, better fitted to discharge his duties with efficiency. But whilst the plan had strong recommendations in 1873; whilst it has, I believe, on the whole worked satisfactorily, and whilst it may still be adopted as a general principle, adapted to meet the conditions of small urban or larger rural districts, it cannot be considered a substitute for the appointment of a county medical officer of health, though these combinations, where they exist, offer considerable advantages for making the county appointments somewhat more experimental in their character than would be otherwise practicable. And, in regard to this point, I may observe that there will, I think, be little difference of opinion amongst those who have had any practical experience of these appointments that, whether large or small, they should in all cases be under the direct control of their respective county councils. This would give those bodies the opportunity of seeing that proper appointments were made, of assuring to those who might be appointed reasonable security of tenure, and of promoting combinations which would facilitate the establishment of a satisfactorily co-ordinated system of county sanitary administration. It would seem that the Local Government Board is authorised to make a devolution to county councils of the powers which it possesses in regard to these appointments under the provisions of Section x of the Local Government Act, subject only to the usual conditions applying to provisional orders generally.

Under such circumstances every county council would be in a position to determine how many medical officers of health were necessary to carry on efficiently the sanitary work of their district. They would also be free to promote two or more combinations in their area, and to make the holder of one of them the chief medical officer of the county, and the others assistants to him; or to appoint a single medical officer for the whole county, without any personal relations with any of the district councils in it. The determination of which of these two courses would be most expedient would depend largely on the size of the county and the facilities existing in it for easy communication between its administrative centre and the rest of the area. To some extent, also, it would depend upon the character of that part of the local administration which had to be discharged by the sanitary inspector. I have no hesitation in expressing my own opinion that where this latter appointment is filled by thoroughly competent men a single medical officer of health can superintend efficiently a far larger district than is possible where, from his being unable to depend on his inspectors, he is obliged to do a good deal of work which they themselves ought to do, or where, from their want of knowledge or independence, they are constantly calling on him to assist them in matters which they ought to be able to manage for themselves. In fact the possibilities, both of efficiency and economy, in county sanitary administration rest primarily on the care with which the appointment of sanitary inspectors is made. Once obtain a corps of well-trained sanitary inspectors in a county and the question of the arrangement of the work of the medical officer of health is greatly simplified.

It is for this reason that it seems most expedient that the direct control of these appointments, as well as of those of medical officers of health, should be without delay transferred by the Local Government Board to county councils. It is of no use to have competent officers to lead an army if the privates cannot or will not carry out their orders.

Here I may be allowed to put in a plea for allowing county councils the same freedom of combination with one another that district councils possess. The Public Health Act allows district councils, whether within or without the same county, to combine for various purposes, including the appointment of a medical officer of health, and it is difficult to see why the same power should not be given to counties. I am myself an illustration of a medical officer of health holding appointments in three separate counties. The county is a good and, indeed, an indispensable unit for general administrative purposes, so far as it can be maintained without sacrificing more important considerations; but it is mere pedantry to adhere to it indiscriminately for every purpose. The county boundary is in all cases an artificial, and in some cases a very inconvenient, one. Combinations, therefore, between counties should be facilitated wherever it may seem useful to do so.

### County M.O.H. and District Appointments.

This seems a convenient place for saying a few words on a question which cannot fail to suggest itself in any discussion on this matter. It is, whether it is expedient as a general principle that the medical officer of a county council should hold at the same time any appointment under a district council in that county? It may be, and, indeed, it has been, contended that it is the duty of the county medical officer to act as a sort of check upon the district councils of the county, and that, therefore he should be free from any entangling alliances with them which may interfere with his giving independent advice to the county council. But this contention is, I think, founded on a misconception of what the duties of a medical officer of health are and what is the real source of any possible conflict such as that suggested. It is the duty of a medical officer of health, whether of a county or of a district, in the first place, to make himself acquainted with the facts bearing on the sanitary administration of his district. In the second place, it is his duty to present those facts to his authority and to found on them any suggestions which he may think pertinent to them. Here his duty ceases. If a district council persist in ignoring the advice of their medical officer, it is for the county council, or, failing that body, for the Local Government Board, to apply the proper remedy; and that remedy, in the case of the county council, does not require them to use their medical officer personally, for any purpose of coercing the defaulting district council, but simply to consult him, as an expert on technical points, on any matters beyond their own knowledge. Whether these matters arise out of a report by himself as their own officer or as officer to a district council is a matter of no importance.

The only point of any importance is whether he is competent and independent enough to be able to advise them properly; and that question involves, as I have before indicated, the consideration that the district medical officer should have the same security of tenure that the county medical officer has. It would not be difficult to show some reasons why it would be a distinct advantage for the county medical officer to have personal relations, at any rate with the more important district councils in his county as their medical officer of health, since he would then be in a better position to fill the office of *amicus curiæ* in any case of friction arising between these two bodies.

The only other objection, so far as I am aware, that has been raised to a district medical officer acting as a county officer is that he cannot be expected, as a county official, to present an annual report dealing with his own annual report as a district official; but here again the objection is founded on an erroneous view of the work involved. The work of summarising any number of annual reports, when once the basis on which they are to be compared is settled, is very largely capable of being performed by any intelligent clerk. It is the inferences which are to be drawn from the summary so made which require the intelligence and experience of a trained expert, and whether that expert hold the position of a county medical officer, or of an officer to a combination or to a single district, is not of the least importance. What is of importance is that he is competent for the work.

For these and for other reasons which might be given if time allowed, it seems desirable that wherever combined districts exist in any counties, they should be utilised by the councils of those counties, if they have not already appointed a medical officer of health, as the basis on which they can

most conveniently and economically erect a well-adjusted county sanitary administration. It might be thought that such a course would have commended itself more than it seems to have done to the councils of counties in which such combinations exist, if only for the sake of securing for their counties the advantage of the experience of the holders of these appointment in the general condition of their districts.

There is another reason why county councils who are in a position to consider this matter would do well to do so without delay. So long as any one of these combinations exists, under the tenure of a medical officer who may have held it for several years, the Local Government Board do not appear to make any objection to the holder of such a combination being appointed medical officer of health for the county, of which arrangement we have illustrations in the neighbouring counties of Worcester and Berks. But a short time ago, when in another neighbouring county, Hereford, a combined district fell vacant, and the district councils forming the combination and the County Council of Hereford wished to join in appointing one person to hold both offices, the Local Government Board refused their sanction to this arrangement, so far as the district councils were concerned. This would seem to show that if county councils who have not yet appointed medical officers of health desire to avail themselves of the existence of combined districts which may happen to exist in their areas as a foundation for an effective system of sanitary organisation in their counties, they will do well to lose no time in doing so, lest they find that on the appointments to these combinations becoming vacant the combinations themselves may break up, as many of them are not unlikely to do, or, if they do not, lest the Local Government Board may veto the medical officer of the combination being appointed to act also as medical officer for the county.

### COUNTY MEDICAL OFFICERS AND VACCINATION.

Amongst the duties which will probably ere long be imposed on sanitary authorities will be the superintendence of vaccination. There can be no question that so far at any rate as the medical portion of the administration of the Vaccination Acts is concerned, it should be combined with that of sanitary work generally, and its supervision would thus devolve on the medical officer of health. For the same reasons I have suggested that the direct control of the elections of medical officers of health and of sanitary inspectors should be transferred by the Local Government Board to local councils, it is also expedient that the inspection of vaccination should be transferred to these bodies. This would provide a much more satisfactory control of the operation of vaccination itself than at present exists. Whether the control of the vaccination officer should pass with that of the public vaccinator to sanitary authorities is a question which is more open to discussion. But there is a good deal to be said in favour of such a course. At any rate, it is clear that if the supervision of public vaccinators is transferred to local councils, which it probably will be when the subject of vaccination comes again before Parliament, before the lapse of the Vaccination Act of 1898, in 1903, this duty will add largely to the sanitary responsibilities of county councils, and will at once make it imperative that every county council shall appoint a medical officer of health.

From the foregoing considerations it will be seen that quite irrespective of any duties which may be imposed on county councils in connection with the supervision of vaccination, there is already ample work for a county medical officer of health. And the best proof of this will be found in the annual reports of the medical officers of some of the counties where such appointments have been already made. These reports as well as the list of duties prescribed by several county councils for their medical officers of health show clearly that even with the limited powers for sanitary purposes which county councils already possess, a great deal of very valuable work can be done in the way of co-ordinating, encouraging, and stimulating sanitary progress, especially in rural districts. There is therefore no legitimate excuse on the part of any county council which has not yet appointed a medical officer of health for any longer refraining from doing so. The plea that it is of no use for these councils to make such an appointment until they are invested with fuller sanitary powers is met by the reply that county councils can hardly expect their sanitary powers to be enlarged until they show that they have made an effort to use those with which they are already invested. The real reasons which have probably operated in arresting action in this direction are want of genuine enthusiasm in sanitary work, fear of large expenditure being imposed upon sanitary authorities as the result of enforced county council action, and an unwillingness to undertake the supervising, consultative, and semi-judicial functions which a cordial acceptance of their sanitary responsibilities would impose on county councils. But it is to be hoped that now that attention will be focussed on this subject by its discussion in this Section, public opinion will begin to make itself felt in regard to it, and that even those county authorities who have been least disposed to move in the matter will recognise that they incur a great responsibility in any longer delaying to appoint a medical officer of health. If the Legislature has indicated, as it certainly did eleven years ago, by the provisions in the Local Government Act of 1888, that it is the *primâ-facie* duty of county councils to make such an appointment, those county authorities who have not yet done so may not unreasonably be asked to justify their default by showing that there are some serious and insuperable impediments in the way of their so doing. Lack of time prevents me discussing various matters in regard to which a well-advised and well-disposed county authority can materially assist in promoting sanitary progress amongst district councils, such as the establishment of isolation hospitals, biological laboratories, and of nursing organisations. But this omission is the less important because there are county medical officers of health present who can speak from experience on this point, and also because, with the appointment of a competent county medical officer of health, these things would follow as a matter of course.

These remarks, on what may be considered the theoretical aspect of the subject, would be scarcely complete without a statement of what has been actually done in the direction which has been advocated. The only official information that has been published on the subject does not bring it down later than June, 1896, when a return was made to Parliament showing the salaries and terms of appointment of medical officers of health appointed by county councils in England and Wales. I have endeavoured, so far as I have been able, by private inquiries, to bring the information contained in this return down to the present time, and may thus summarise the facts which I have collected.

A. TOTAL NUMBER OF AUTHORITIES EMPOWERED TO APPOINT A COUNTY MEDICAL OFFICER OF HEALTH: 62.

B. AUTHORITIES THAT HAVE APPOINTED A WHOLE TIME MEDICAL OFFICER OF HEALTH, WITH THE SALARY, ETC. (14).

*Chester.*—£600 per annum, with travelling and hotel expenses. M.O.H. holds no district appointment.

*Derby.*—£800 per annum, inclusive of travelling and office expenses. M.O.H. holds no district appointment.

*Durham.*—£500 per annum and travelling expenses. M.O.H. holds no district appointment.

*Essex.*—£800, with certain fees and allowances. M.O.H. acts also separately for Chelmsford and Malden Rural Districts.

*Lancaster.*—£800 per annum, with travelling and office allowances. M.O.H. holds no district appointment.

*London.*—£1,000 per annum. M.O.H. holds no district appointment.

*Northampton.*—£700 per annum, with travelling and office expenses, and allowance for clerk. M.O.H. holds no district appointment.

*Northumberland.*—£500 per annum, with travelling expenses, and allowance for clerical assistance.

*Salop.*—£750, inclusive of travelling but not laboratory or office expenses. M.O.H. holds no district appointment.

*Stafford.*—£1,000 per annum, inclusive of all expenses except official books, telegrams, postage, and stationery. M.O.H. holds no district appointment.

*Surrey.*—£800 per annum, exclusive of travelling expenses, postage, and printing. M.O.H. holds no district appointment.

*Worcester.*—£600 per annum, with allowance for travelling expenses. Services of M.O.H. to be regularly available in the districts of such local authorities as may desire it. M.O.H. holds five district appointments.

*York (West Riding).*—£1,000 per annum, exclusive of travelling, office and laboratory expenses, and with a complete staff of assistants. M.O.H. holds no district appointments.

*Glamorgan.*—£600 per annum, with £150 for travelling and office expenses. M.O.H. holds no district appointment.

C. AUTHORITIES WHO HAVE APPOINTED A MEDICAL OFFICER OF HEALTH FOR SPECIAL PURPOSES, WITH SALARY, ETC. (7)

*Bedford.*—£52 10s., exclusive of travelling expenses, with extra fees for work done. M.O.H. holds no district appointment.

*Berks.*—£10 10s., with £2 2s. per diem when called on to advise or act.

M.O.H. holds also the Berks Combined District of seventeen District Councils.

*Cambridge.*—£52 10s., with allowances.

*Scilly Isles.*—£10.

*Warwick.*—£200 per annum, with £40 for allowances. M.O.H. holds three district as well as other appointments.

*Yorks (North Riding).*—£100 per annum, with fees for special work. M.O.H. holds two district appointments.

*Merioneth.*—£25. M.O.H. holds one district appointment.

D. Authorities who have appointed no Medical Officer of Health (41).

## II.—George Haynes Fosbroke, M.R.C.S., D.P.H.Camb.,

County Medical Officer for Worcestershire.

Mr. Fosbroke wished to confine his remarks to his Worcestershire experience, as he had now had eleven years of county work, and it was for that reason he inferred he had been invited to state what had been done by the Worcestershire County Council. It was often alleged that county councils had most limited sanitary powers. This he admitted to be so; but when he had reminded the Section that county councils possessed powers under the Rivers Pollution Prevention Acts, which when put in force frequently resulted in considerable internal sanitary improvement of towns and villages, had very large powers as to the provision of isolation hospitals, powers under the Housing of Working Classes Acts, and power to bring pressure on local authorities to carry out the recommendations of their own district medical officers, he contended that the sanitary powers were larger than some persons were wont to believe. But be that as it might, he held that it was the directing of public attention to local sanitary defects, and by communication with and advising authorities thereon, that led to the adoption of many sanitary schemes which had proved of public benefit. With reference to the President's remarks on county notification of disease, he would say that in Worcestershire this had been established weekly since 1890, with most beneficial results, as such returns enabled medical officers of health to be on their guard against infectious diseases prevalent in adjoining districts. He then explained that under pressure brought to bear by the Isolation Hospitals Act, he believed by the close of the present year every authority in Worcestershire would possess hospital accommodation of their own or would have arranged with neighbouring authorities to treat their patients. He then proceeded to explain how his Council had established "whole time" lady health missioners, out of grants made by the Technical Education Committee, and said he could not speak too highly of the satisfactory results obtained. He alluded to the complete chemical and bacteriological laboratories which his Council had equipped at large cost, and which they were maintaining at much larger cost, inasmuch as the county bacteriologist—who was also county analyst—had had large experience of such work before he came to Worcestershire, and had to be paid accordingly, and who was now carrying out his work with the assistance of three paid assistants and two pupils. The fees charged for analyses of water and bacteriological tests were purely nominal, and were paid into the county funds. No such work was done for any but ratepayers in the county, and the reason the fees were low was to encourage such researches on the part of those who "paid the piper." Reference was next made to the experiments which his Council were making with regard to the bacterial purification of sewage, and he described the three sets of filters which had been put down respectively at Malvern and Oldley, at a cost of some £300 in each instance. Nearly forty analyses, he said, of sewage effluents from these tanks were being made weekly, and he believed that much good would result therefrom. He concluded by alluding to his consultations with district councils and medical officers of health, and expressed much pleasure in being able to state that there had not been the slightest friction in carrying out his duties.

## III.—John Lloyd Roberts, M.B., D.P.H.,

M.O.H. St. Asaph Rural District Council, etc., Colwyn Bay.

Dr. Lloyd Roberts said that in recounting the relations between county and district sanitary administrations in North Wales the task was a simple and an easy one, for to all intents and purposes there were none. The County of Carnarvon had a combination of districts for the purposes of a medical officer of health, which combination overlapped into adjoining counties, but this was in no way related to the county council. The County of Merioneth had a medical officer and compiler of statistics appointed at a nominal fee; a gentleman who was engaged in general and quarry practice. Anglesea, Denbighshire, and Flintshire, the remaining three counties, had no such officer, nor, so far as he was aware, even in name, public health committees. Thus in North Wales there was but one county, and in South Wales there was but one county (Glamorgan) which had an officer of health; and many English counties were in the same position.

It was unnecessary to enlarge on the great losses to the public health entailed by the failure of these many counties to establish committees and officers who would be the connecting links between the county and the local administrations. The loss of statistics was one thing; the information they would yield another. Being submitted to a "higher authority" than a district council the stimulus of the "higher authority" was lost to many a district standing sorely in need of it. Localities upon localities could be called to mind as insanitary now as they were when the Public Health Act came into operation in 1875, and localities in which sewerage schemes and water supplies had been propounded for more than twenty years, which were as far from accomplishment now as ever they were: even where Local Government Board inquiries had been held and reports issued, which had resulted in nothing—the exciting cause, an epidemic, having passed off. District councils were no doubt responsible for these omissions and shortcomings, and one had not to look far for the cause—the fear of expense to a parish, the personal dread of loss of popularity and of a seat on the council. The stimulus of a "higher authority" on a local one would counteract these. Experience was that so far such stimulus had been that the Local Government Board spasmodically and at long intervals wrote to a district council to inquire what action was being taken or had been taken on a certain matter or a certain scheme, and they mostly appeared contented with a courteous and an evasive reply.

Again, on the other hand, district councils deferred to the parish councils, and so evaded responsible actions. The Local Government (Parish Councils) Act, 1894, certainly required that "when a rural district council have determined to adopt plans for the sewerage or water supply of any contributory place within the district, they shall give notice thereof to the parish council of any parish for which the works are to be provided before any contract is entered into by them for the execution of the works." But this did not remove the responsibility from the district to the parish council. Parish councils and parish meetings took very different views of public health requirements from those of responsible authorities. Their ideas were chiefly based on finance rather than on necessity, and the inhabitants of one end of a parish would refuse to contribute to the cost of necessities of those at the other end.

In public health administration there was a want of uniformity in the various methods. A scheme for sewerage or for water supply had to go before a parish council, not for approval but for information, and then to the Local Government Board for approval and permission to raise a loan. A scheme for hospital building required the sanction of the Local Government Board alone. A scheme for buildings under the Housing of the Working Classes Act first required the sanction of the county councils before finally going before the Local Government Board. The County Council might be regarded in this as the supreme authority. The Housing of the Working Classes Act of 1900 had so far created a further want of uniformity by allowing parish councils to apply directly to county councils without representing the deficiencies in their housing accommodation to the district councils. The creation of an urban district or the extension of the area of an urban district lay in the discretion and power of a county council.

In the matter of finance there was no want of uniformity in the ministrations of district or of county councils. Government auditors had been long in existence, and they saw that the accounts were properly kept and payments properly made. Over each and every authority and the various members there was always the fear of this official overhanging, lest

by any mistake or mischance a surcharge should be made upon the authority or upon the individual who wrongly signed a cheque. In the matter of education, again, the same system prevailed, with a Government inspector of schools. The avowed object of the Government was to make the county or borough councils the universal education authority, dealing ultimately with elementary as well as with technical or secondary education. The work would be done through a statutory committee, on which educational experts would probably be well represented.

Public health matters at least required an equal administrative treatment for reasons too obvious. An amount of latitude perhaps was necessary and essential in the application of all legislative measures. But the why and the wherefore of adoptive Acts were difficult to comprehend: for *primâ facie* what was good and right for one place was equally so for another. If Acts were passed by Parliament with the adoptive powers or privileges, the suspension of the Act should only be for a limited period, say three years, during which time the local authorities should be properly informed as to these Acts and to their responsibilities.

From the foregoing by inference it was clear that, as in the case of the Infectious Diseases (Notification) Act, which had been made compulsory everywhere, all county councils which had not appointed medical officers of health should now be called upon to make such appointments. Such officers would be in a position to bring the public health administrations of district councils into uniformity, and to ally the administrations of adjoining counties more or less into uniformity.

And county councils might well be endowed with the authority that the Local Government Board had now in the matter of sanctioning schemes and loans for public works, and also for the compulsion which the Board above had the power to exercise, the Local Government Board holding the county councils responsible and under punitive conditions.

From time to time an appeal was heard for a new Public Health Act which should bring into line and bring together the Acts under which authorities were supposed to administer their responsibilities. Desirable as such was, it was not an essential to good work being carried on and carried into something like uniformity. Powers by Acts of Parliament there were in abundance, if the permissive word "may" were but made to read "shall."

The Legislature should insist on the appointment of county medical officers of health in the first instance. In the second instance county councils might be endowed with the powers of the Local Government Board as indicated above, and by these means would "county and district sanitary administrations be brought into relation" the one to the other.

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### IV.—EDWARD C. SEATON, M.D., F.R.C.P., F.C.S.,

Lecturer on Sanitary Science and Public Health Administration, St. Thomas's Hospital Medical College, and Medical Officer of Health, County of Surrey.

DR. SEATON said that in connection with the discussion on the relation between county and district sanitary administration the question of efficient and economical arrangements for laboratory work could not fail to be of interest. The reports of the large cities and county boroughs issued of late years, especially those which had already appeared for 1900, indicated that laboratory work was entering more than ever into the daily routine of the public health and sanitary departments of most municipalities. In nearly all the counties which could be said to have seriously taken up their sanitary functions, the subject had also been forced on the attention of the Council and their advisers in various ways.

In 1871 when public official appointments for sanitary districts were the topic of discussion, two great pioneers, Dr. Hassall and Dr. Parkes, had each in different spheres created new fields of scientific work, and introduced new kinds of laboratory industry, in connection with foods. At that time Dr. (afterwards Sir Edward) Frankland had already perfected his process of water analysis, and Mr. Wanklyn was introducing another system more adapted to the purposes of medical officers of health. Research work into the intimate pathology of infection and other auxiliary scientific studies were proceeding under Mr. (afterwards Sir John) Simon, but as yet there was nothing in the way of practical routine work to be done in this direction. But there was a fair amount of laboratory work which wanted doing occasionally or within stated periods. On the other hand, the work of practical epidemiology and the general guidance of sanitary authorities in the application of those powers which had already been, or were about to be given to them, were often not appreciated at the proper value. It might have been partly for this latter reason, but also because laboratory work was regarded as more closely akin to that of the medical officer of health than the general practice of the medical profession, that some authorities were desirous of combining the two offices of medical officer of health and public analyst. There was precedent in the case of some London appointments, notably that of Dr. Odling, formerly a medical officer of health, now for many years of Oxford; the late Dr. Letheby who followed Simon at the City of London: and Dr. Stephenson who followed Dr. Hillier at St. Pancras, names that had been, and in the case of Professor Odling and Dr. Stephenson still were, renowned in the chemical world and among the general public. Some appointments under the 1872 Act were made on these lines and they might recall with pride that their colleague, Dr. Alfred Hill, rendered a national service in connection with the Whitehead dynamite discoveries at Birmingham nearly twenty years ago, and that Dr. Wynter Blyth, several years ago too, made observations on the presence of arsenic in beer, the true importance of which was only now becoming evident. Other names occurred to him—Dr. Alfred Ashby of Grantham and Reading, Dr. Adams of Maidstone, the county analyst for Kent, and Dr. Bond who had opened that discussion. But notwithstanding that a few distinguished men had filled the dual office, as a general rule successful analytical work did not harmonise with that of medical administration.

Much of the analytical work under the Food and Drugs Adulteration Acts had from the very first fallen into the hands of highly-trained experts conducting their operations in large centres of industry.

Twenty years ago, in 1881, the samples from the counties and from many large towns also were usually collected, sent away, and dealt with entirely apart from any medical direction. They generally arrived by post at the laboratories of well-known experts conducting business on a large scale in London and the great provincial centres, and were there analysed and reported upon. The analytical authorities thus appointed for counties and many towns, large and small, concluded that gross and dangerous adulteration of foods had ceased, and they believed that such extraneous admixture as took place was in the nature of diluents added for the purpose of increasing the profits of the vendors, and was not such as to affect health injuriously, except perhaps indirectly, by diminishing to a fractional extent the food value of the goods. Adulteration was becoming a fine art carried on by merchants on a large scale, and bearing a likeness to those forms of trade competition, one of which the Right Hon. John Bright had from the first declared it to be. The detection of adulteration of common articles of food, such as milk and butter, demanded more and more highly specialised work, thus conducing to separation of analytical work from that of medical officers. In some respects this was no doubt unfortunate. It was probable the arsenical beer epidemic would not have occurred if the work of food analysis had been kept more under medical supervision. There were certainly reasons for regretting that the original intention of the Adulteration Act to deal with articles injurious to health had been to a large extent ignored, especially during the last ten or twenty years. Worked as it had been, the Act necessitated the employment of specialists of greater skill and with infinitely larger practice than that acquired by the vast majority of medical officers, even including those specially trained. But the development of scientific knowledge was beginning to produce effects making for change. Already at the close of the Eighties the medical colleges were beginning to recognise a new kind of laboratory work, which, having emerged from the hands of the men who created it, was seen to have practical bearings on daily sanitary administration.

In 1891 bacteriological laboratories, where routine work was done, already existed, and since then how greatly the new science had advanced in its practical applications. The steady progress of the science in relation to diagnosis and food poisoning had given fresh impulse to the work; already daily recourse to the laboratory was required for dis-

tinguishing typhoid, food poisoning, diphtheria, and phthisis. The recognised relations of animal and human diseases called for the daily exercise of expert knowledge in daily affairs. Bacteriology was of at least equal significance to chemistry in water analysis, and since the Massachusetts contributions to the artificial methods of sewage treatment commenced the need for applied knowledge of a special kind and of suitably-equipped laboratories every year became more evident. Even the last-named subdivision, which related to the composition of sewage and sewage effluents, included the search for pathogenic organisms, and, generally speaking, it might be said that medical training was necessary for their proper performance, and that there was at least a strong case for their being carried out under immediate medical supervision or control.

In considering the question of sanitary analyses and public health laboratories in 1901, they came back again to the time when the medical officers were regarded as the most suitable persons to undertake it. But there was this great difference, that whereas expert knowledge thirty years ago was comparatively limited, it was now so highly and extensively developed that it could rarely be accomplished by one man. At the same time there was great and obvious advantage in its being carried on in conjunction with the man who was responsible for the efficient sanitary administration of a sufficiently large district.

This was much the same in kind both for municipal and county purposes. In every large town there was a demand for bacteriological examinations for diagnostic purposes in aid of the general practitioners, and for hospital purposes, which might be provided for at a central bureau connected with the municipal offices. Here examinations of meat, milk, and foods suspected of being dangerous would be made, and it might be a convenient spot from which all the operations of the food inspectors would be directed.

The whole of the operations of the Adulteration Act should in the future be included under this head, although it must be frankly recognised that in many instances existing arrangements could with advantage be altered. In this connection it was well to remark again that the primary intentions of the Act deserved more consideration, and that it should be the first object of the sanitary authority to repress injury to health and not to allow this to become subordinated as it had been for some time past to the detection of a certain kind of commercial fraud.

This enumeration of the uses to which such a laboratory would be put did not pretend to be exhaustive, but obviously analyses of the public water supply would be carried on there, and it would occur to some that it would immediately be found useful for purposes indicated by H.M. Chief Inspector of Factories.

In the case of a county laboratory an especial feature would be the provision for numerous samples of water supplies from their sources and of effluents which mingled with those sources. There was a crying want for provision of this kind throughout the country for the purposes of the district councils. It had to be remembered that the sources of water supply for rural districts, villages, and small towns were very numerous, and often subject to doubt and suspicion. Inquiries necessary for both county and district council purposes involved many analyses, partial or complete. Here there was much need for organisation. Then, again, the purification of rivers work was already leading to the construction of numerous sewerage systems with installations of artificial processes of sewage disposal. With regard to these, the just issued report of the Royal Commission on Sewage Disposal might be quoted as follows: "That the problems involved in a comparison with different kinds of sewage are so many and so varied that only investigation, and, we may add, experience of a prolonged and varied character will suffice to solve them." Obviously, co-ordination of work on the part of many different authorities would be required for this purpose, and in any case it must mean a large increased demand for laboratory work under county councils, for plainly the district councils could not be expected to go to the expense of separate laboratories.

The public generally recognised the need of analyses for the purposes of prosecution under the Adulteration of Food and Drugs or the Rivers Pollution Prevention Acts, but they had yet to learn and appreciate how important analyses for information had become. He could illustrate this point very aptly by recent experiences connected with public water supplies in which long series of analyses became necessary for the information of the medical officer of health who had to report thereon independently. There could be no doubt that every county medical officer of health should be able, under certain circumstances, to collect samples independently under his own conditions, and to hand them to an expert colleague, who would act loyally with him. In this way alone could certain questions affecting not only the water companies, but the interests and safety of the public, be satisfactorily dealt with.

Again, in the case of foods dealt with at present only through the machinery of the Adulteration Act, there was much preliminary information and "sorting" required. During the last year, for example, information had been required in several counties respecting the presence of arsenic in beer in quantity sufficient to affect health. The condition of milk coming from insanitary cowsheds was a matter of the greatest importance. These inquiries necessitated laboratory tests or partial analyses on a large scale, which needed to be provided for or arranged somehow.

The desire to provide for all these purposes efficiently and at the same time with due regard to economy had led to the suggestion of a county laboratory for all public purposes. Such a laboratory had been established for the county of Worcestershire. He quoted that instance because, by the courtesy of the Chairman of the County Council, Mr. Willis Bund, Dr. Fosbroke, the distinguished medical officer of health, and his accomplished colleague, Mr. Duncan, F.I.C., he had the opportunity of inquiring about his work, the comprehensive character of which might be gathered from the fact that the establishment included a well-equipped laboratory under the management of Mr. Duncan, who had two assistants, and that attached to the laboratory was an animal house. The following is the list of analyses performed in the last two years 1899 and 1900:

I.—*Chemical.*

| | 1900. | 1899. | Increase or Decrease in 1900. |
|---|---|---|---|
| (*a*) Miscellaneous ... ... ... | 41 | 17 | + 24 |
| *(*b*) Food and drugs ... ... ... | 633 | *416 | + 217 |
| †(*c*) Fertilisers and feeding stuffs | 67 | †65 | + 2 |
| (*d*) Poisoning cases ... ... ... | 14 | 8 | + 6 |
| (*e*) Sewage ... ... ... ... | 8 | 11 | — 3 |
| (*f*) Water ... ... ... ... ... | 359 | 362 | — 3 |
| Total chemical ... ... | 1,122 | 879 | + 249 |
| | | | — 6 |
| | | | + 243 |

This shows an increase of 243 samples.

| 1900. | | 1899. |
|---|---|---|
| * 531 taken under the Act. | | 408 |
| † 24 | ,, ,, | 34 |

II.—*Bacteriological.*

| | 1900. | 1899. | Increase or Decrease in 1900. |
|---|---|---|---|
| (*a*) Anthrax ... ... ... ... | 85 | 17 | + 68 |
| (*b*) Diphtheria ... ... ... ... | 248 | 439 | — 191 |
| (*c*) Empyema fluid ... ... ... | 1 | — | + 1 |
| (*d*) Honeycomb ... ... ... | 1 | — | + 1 |
| (*e*) Milk (tubercle) ... ... ... | 25 | 1 | + 24 |
| (*f*) Rabies... ... ... ... | 1 | — | + 1 |
| (*g*) Sewage effluent ... ... ... | 1 | — | + 1 |
| (*h*) Stout) ... ... ... ... | 2 | — | + 2 |
| (*i*) Tubercle (sputa) ... ... ... | 60 | 20 | + 40 |
| (*j*) Typhoid ... ... ... ... | 23 | 18 | + 5 |
| (*k*) Water ... ... ... ... | 138 | 174 | — 36 |
| Total bacteriological ... | 615 | 678 | — 63 |
| Grand Total ... ... ... | 1,737 | 1,557 | + 180 |

While a certain number of the total of 1,737 analyses (122) were quite outside the province of the medical officer of health and that of sanitary authorities generally, the great majority had immediate relation to public health work. In fact, if the whole of the 633 samples taken under the Food and Drugs Acts were included, the work might be said to belong almost entirely to that department. With regard to all this work it would be at once recognised that although the post of public analyst was a separate one under the Local Government Board, and the certificates under the Act were wholly his own, yet a great deal of this and other work indicated above necessitated consultation with the medical officer of health.

He attributed the success of the Worcestershire Laboratory in great measure to the fact that an officer of great knowledge and experience, their colleague, Dr. Fosbroke, had a large share in its initiation, and that its conduct had been greatly helped by his tact and discretion. In what he had said he in no way wished to detract from the legitimate position of the chemist, bacteriological, or other pathological expert in laboratories of the kind they were considering, but he was greatly impressed with the desirability of securing the services of the medical officer of health in the direction of their management and control, seeing that a great part of the work conducted therein was that in which the responsibility directly belonged to him of seeing that the public health was properly safeguarded.

He had ventured to make these remarks from the standpoint of a teacher in sanitary administration, and not as representing any particular official view. At the same time he would not like to conclude without referring to the fact that his own relations with analytical experts (including high authorities on these subjects) had extended over a good long time, and had always been most harmonious.

### V.—HENRY MAY, L.R.C.P.,
Late M.O.H. Aston Manor, U.D.C. Birmingham.

MR. MAY said so far the discussion had been of an academical rather than of a practical character, but was none the less interesting on that account. The M.O.H. for Worcestershire (Dr. Fosbroke) was entitled to take the optimistic tone he adopted as to the satisfactory work of the County M.O.H. in relation with the local sanitary authorities and generally; but then he had had exceptionally strong men on his county council, and he was himself a remarkably able administrator. With regard to the point on which he appealed (as to expediency of county M.O.H.'s being also District M.O.H.'s), so far as Mr. May's personal knowledge went no injustice had been done by the former continuing to hold previous local appointments; but he was strongly against the extension of centralisation in sanitary administration, such as was recommended by a County Councillor at a recent county M.O.H. appointment, namely, that all the district medical officers should be superseded by the county officers, and the local sanitary inspectors by county inspectors. Very little reference had been made to the relations between the county medical officer and the local officers, but although his duties were legally undefined and indefinite, he could be the official complement of the medical officers of small districts whose work had been the subject of some reproach, and could support them when weak, advise them where deficient, supply the expert help which they could not be expected to furnish, while the latter would supply the great advantages of sanitary administration on the spot, and of having the confidence of their own sanitary authorities. In this and other directions there was a useful future, and a great field of work before the county medical officer of health if he was a man of tact and discretion as well as ability; and he thought that they agreed that it was eminently desirable that each of the fifty-two counties should have a confidential medical adviser of its own.

### VI.—T. W. H. GARSTANG, M.B., M.R.C.S., D.P.H.,
M.O.H., Bucklow, R.D.C., etc.

DR. GARSTANG wished it to be understood that his comments referred to facts as they existed in the county of Chester, fully recognising that circumstances varied in different localities. It would be impossible for any one man to serve the whole of the numerous districts in that county simply on account of its size. It was therefore impossible for the plan to be carried out of a county medical officer of health holding district appointments as in Worcestershire. The object of all the papers was to advance sanitary administration. He strongly supported Dr. Bond's suggestion of devolution of power over appointment and dismissal of district medical officers of health from the Local Government Board to the county council. "Security of tenure" would do more at one stroke to advance sanitary administration than all other propositions put together. Weekly internotification of infectious disease was still a matter of local conditions. It would be an advantage to himself personally in one district where he did not get it, whilst in another district where he did get it he did not find it of much practical value. As to sewage treatment the ten systems alluded to by Dr. Seaton, as noticed by the Royal Commission, might be reduced to two—namely, the open or closed septic tank, followed by some system of "continuous filtration" under conditions which secured the admission of oxygen to the filter in all its parts and at all times.

### VII.—EDWYN JOHN SLADE-KING, M.D., D.P.H., etc.,
Medical Officer of Health, Ilfracombe, etc.

DR. SLADE-KING said that refusal of certain towns to give returns of received notification destroyed the value of internotification. Parliament should make weekly returns compulsory. County medical officers of health ought to be first-class men; and, whilst ratepayers considered them too expensive, their legal status and power was too shadowy to allow them to be really well paid. In Devon they had two acting medical officers of health, who tabulated reports and wrote introductory prefaces year by year. This report was dealt with by the Committee of County Councils, who sent out communications to district councils as to infant mortality rate, hospital accommodation, river pollution; and with good practical results. As to the suggestion that the county councils should more directly appoint and control district medical officers of health, the personal experience of the speaker was in favour of the authority of the Local Government Board. In his case in a difficulty they backed him up, and obtained for him a life-appointment for three combined districts. If parish medical officers were life men, how much more important that a medical officer of health should have a life tenure of his office, in which he had so often to tread on the toes of builders, of slum owners, and other ill-paying investments.

### VIII.—JOSEPH GROVES, B.A., M.B.,
M.O.H., Isle of Wight, R.D.

DR. GROVES said that so varied were the conditions which obtained in different parts of the country that it would be simply impossible to devise arrangements as regards county and district sanitary administration which would be universally applicable. He knew a county, for example, the appointment of a county officer of health in which he should regard a positive calamity. It would probably emphasise the antagonism of the towns to the country, and would end in the prejudice of the latter. In his opinion thought should be constantly concentrated upon the one object of all sanitary administration, the sanitary well-being of the people and the best means of securing the interests of the public health to the utmost in the particular area. Personally, he considered that if it was necessary to divide up the country into Poor-law districts, over each of which was placed a Poor-law inspector of the Local Government Board, it was far more necessary to divide the country into sanitary districts with a Local Government Board sanitary inspector placed over each. But there was at present one question which was of the greatest possible importance to the interests of the public health and the sanitary well-being of the people which cried for settlement, and that was the question of security of tenure of office of sanitary officers. It mattered not if a medical officer of health had charge of over a thousand or a hundred thousand people, he should have security for doing his best for the health and the lives of those people. He had risen chiefly to move a resolution of approval and thanks to the Council for their action in promoting a Bill in Parliament, the object of which was to obtain this end.

Resolution.

Having regard to the paramount importance to the interests of the public health of security of tenure of office of sanitary officers, the State Medicine Section beg to express their approval of the action of the Council in promoting a Bill in Parliament to that end, and their thanks for the same.

The resolution was seconded by Dr. Slade-King, and carried unanimously.

IX.—Mr. Herbert Jones, D.P.H.,
M.O.H., Hereford Combined Districts.

Mr. Jones supported the resolution proposed by Dr. Groves. He considered that it would be a distinct advantage if there were a Central Committee with whom those medical officers of health who had combined districts could confer upon matters of administration. He thought that in large counties it would be impossible for the county medical officers of health to hold district appointments, but in the case of the smaller counties, where a combined district was in operation, the combination of district and county medical officers of health might well be made. Referring to the notification of non-infectious disease he thought that sufficient use was not made of the returns of Poor-law medical officers to which medical officers of health were entitled. He spoke of the system of notification of disease by the secretaries of Friendly Societies as in force for some years in Crewe.

X.—Walter Smith, M.D.Brux., M.R.C.P.Edin.,
London.

Dr. Smith was strongly in favour of fixity of tenure of a medical officer of health, who would give his whole time, as unless such was the case it was absolutely impossible to carry on his work in a satisfactory manner. He was not in favour of the dual appointment of district medical officer and medical officer of health being held by one man, but would advocate a connection between the medical officers of health and district medical officers in the form of a scheme brought about by himself when chairman of his Health Committee, namely, asking D.M.O.'s to notify any nuisance or insanitary dwelling that they might come across in the course of their duties, and for which they were paid a fee of 2s. for each certificate. Bacteriological examination should be undertaken by sanitary authorities for medical men gratuitously.

XI.—Walter C. C. Pakes, M.R.C.S., D.P.H.,
Bacteriologist and Demonstrator of Sanitary Science and Bacteriology to Guy's Hospital.

Mr. Pakes referred to the paper of Dr. Seaton, and wished to point out that a bacteriologist who was competent to undertake the work of a municipal laboratory was in every sense of the term a skilled labourer and ought therefore to receive adequate remuneration. In his experience he had come across sanitary authorities who thought that 3s. 6d. for the examination of culture for diphtheria was a large sum, and he could not help but think that this was because counties like Worcester would undertake the examination for 1s. 6d. If the M.O.H.'s, the advisers of the authorities, would remember that two or three months in a bacteriological laboratory did not qualify a man to undertake such responsible work as was entailed in the routine work of a county it was more probable that the bacteriologists would receive more adequate remuneration. He quite agreed that it was essential that a municipal or county bacteriologist should work with or, if necessary, under the M.O.H., but he could not agree that his work was worth only slightly more than that of an inspector of nuisances.

XII.—Archibald Kerr Chalmers, M.D., D.P.H.,
Medical Officer of Health, City of Glasgow.

Dr. Chalmers had hoped that Dr. Seaton's paper would have encouraged a discussion of the relative value of the various means by which local authorities should obtain bacteriological assistance. In his own district the Health Committee had founded a laboratory and the work was done gratuitously and with satisfaction.

XIII.—John Middleton Martin, B.A., M.B., D.P.H.,
Medical Officer of Health, Stroud, R.D.C.

Dr. Martin asked Dr. Fosbroke why any charge should be made by the county council to the medical men or others for examination?

XIV.—David Samuel Davies, M.D., D.P.H.,
Medical Officer of Health, Bristol, and Lecturer on Hygiene, Bristol Medical School.

Dr. Davies said that if a charge was made for the diagnosis of, say, diphtheria, the very cases which it was essential to diagnose, namely the doubtful cases—would be left. He considered that the county council should make no charge for such examinations.

XV.—Shirley F. Murphy, M.R.C.S.,
M.O.H., Administrative County of London: President of the Section.

The President, in concluding the discussion, referred to what had taken place at the time the Local Government Bill was before Parliament. Two amendments were proposed, the one by Sir Lyon Playfair, which empowered the county council to appoint the medical officers of health of districts within the county. The other amendment by Mr. James Stansfield provided for the county council to make available in a district of the county the medical officer of health the county council appointed, agreement between the county and district authority as to salary, etc., being necessary for this purpose. The former, which was an amendment to one of the district council claims, did not come before the House, as the district clauses were withdrawn. The latter was accepted by the Government and became law. He believed this power had been very exceptionally exercised, but he believed the ultimate solution of the problem of the relation between the county and district medical officers of health would be found in the appointment of both by the county council.

Reply.

Dr. Bond, in reply, suggested that under the very varying conditions in regard to area and population, and also to the existence of combined districts of varying size, it seemed expedient to give county councils the largest amount of freedom in the appointment of county medical officers of health. It was obvious, for instance, that what would be desirable and practicable in such a county as Kent would not be so in such a county as Hunts. It was desirable to have as much elasticity as possible in this matter, both for the foregoing reason and also to encourage those county councils who had not yet appointed medical officers of health to do so, in such a way as, whilst satisfying the requirements of efficiency, not to impose undue pressure on county finance.

## PLAGUE AND ITS PREVENTION AS A DISEASE COMMUNICABLE FROM ANIMAL TO MAN.

By David Samuel Davies, M.D., D.P.H.,
Medical Officer of Health, Bristol Urban District and Lecturer on Hygiene, Bristol Medical School.

It is a grimly pathetic picture, that of the seventeenth century householder shut up with his stricken family, under rigid sequestration orders, "conceived and published by the Lord Mayor and aldermen of the City of London," with visitings, watching and marking of infected houses, and stringent prohibition of infected stuff, while all this time the living pestilence went unrestricted by rat runs from house to house.

So far as I can find the published writings on plague are barren of interest to the epidemiologist until the Asiatic pandemic started in 1894. In 1895 Cantlie, in an address before the Epidemiological Society, ventured the pregnant supposition that the endemicity of plague in certain parts of Central Asia, as it coincided with the distribution of a particular subfamily of rats, was possibly in causal relationship with the defined rat habitat. Evidence rapidly accumulated pointing to the same end, ultimately culminating in our present knowledge that plague is primarily an epizoötic disease communicable to man rather than epidemic disease communicable to animals.

Patrick Manson, in his introductory address at the London School of Tropical Medicine in October, 1899, eloquently and

forcibly insisted upon the necessity for dealing with plague as essentially a ratborne disease, and of adapting our repressive measures to the newly-ascertained conditions instead of moving blindly along haphazard routine lines sanctioned by tradition and custom, but inapplicable to the end in view.

The records of the Sydney outbreak of plague, 1900, as given in the official report issued by the Chief Medical Officer and President of the Board of Health (Dr. Ashburton Thompson) confirm in every particular the conviction that has surely been accumulating from the more or less complete records of other outbreaks, that plague in man is a secondary event dependent on previous plague in animals, and that therefore success in the suppression of human plague depends upon the adoption of adequate measures for the suppression of rat plague.

This outbreak may be taken as a typical manifestation of what may be expected from the introduction of the plague epizoötic amongst a wholly civilised white population, and the following facts stand forth:

1. The disease did not spread by person-to-person infection.

2. The observed facts as to its spread can only be satisfactorily explained by assuming an animated host not human to diffuse the infection in place, and a second host to communicate the infection to man: the two hosts are the rat and the flea.

3. "Contact" in regard to plague infection does not necessarily mean one who has lately been associated with a plague patient; it means rather one who has been exposed in more or less close association with plague rats within five days.

4. Nearly all the cases were bubonic in type, a type very little infectious.

5. The outbreak originated in connection with a wharf, almost certainly through the landing of plague rats from infected ports, and the history of further infection in the town pointed definitely to the same means of distribution.

I need hardly labour the proof of the importance of rats in the spread of plague, especially as Professor Koch, in his now historical address before the British Congress of Tuberculosis, has affirmed it with a lucidity and directness which renders further comment unnecessary, nor do I think there will be disagreement on this essential point.

Accepting the rat origin of plague, I wish, however, to ask, Are our present regulations sufficient to prevent the introduction of plague, or, in the words of Koch, are the measures we are empowered to take against it "most accurately adapted to its special nature, to its etiology? It is a great blunder to treat pestilence uniformly."

The present Local Government Board regulations against cholera, yellow fever and plague (all grouped together) are issued under date November, 1896, and are practically a transcript of former regulations against cholera, to the circumstances of which purely human disease they are excellently adapted, issued, I believe, in accordance with the Venice Convention.

Up to the spring of 1901, no further official instructions relating to plague were issued.

In January, 1901, therefore, the Port of Bristol found itself in this position:

A grain boat, fifteen days out from Smyrna, arrived in the central harbour of the city, within a stone's throw of the Public Health Offices, with a history of no illness on the voyage, and therefore not "infected" under the regulations, and not legally liable to any detention or supervision.

For some months, however, special precautions as to off-mooring of vessels from the quayside, disc-guarding of ropes, up-lifting of gangways, and day and night watchmen had been enforced as stringently as the absence of special powers would permit, and as infected rats had been carried to the Port of Hamburg in the previous week, a careful watch was kept.

Thirteen rats were found dead in the forehold, and Professor Klein confirmed the death of certain of these from plague, but not until the cargo of grain had been partly discharged and distributed. Thereupon the ship was dealt with as an "infected" ship, and, as no plague resulted, the measures of precaution and disinfection may be taken to have been in this instance successful; 226 rats were destroyed altogether.

In March, 1901, I brought the question before the Liverpool meeting of port sanitary authorities, and a unanimous appeal was forwarded to the Local Government Board for revision of the regulations relating to plague.

In April the Board issued a memorandum practically approving of the measures which had been for some months in force.

But I cannot consider that the position is satisfactory which allows droves of infected animals to be carried from port to port, and leaves the protection of the towns to the chance of success of what must necessarily, during the process of unloading and storing such cargoes as grain, be imperfect measures.

The danger is not obvious to the public, because the ships arrive with the crews in good health; but the crews have little to do with the loading or unloading of the cargoes, and the real danger is to the quay labourers who work in infected holds.

To bring infected rats to a port in unlimited numbers and then rely on attempts to prevent them coming ashore is obviously attacking the evil at the wrong end. It is impossible to destroy all rats on a loaded vessel; it is not a very difficult matter to practically secure this on an empty vessel. The pclicy to follow is to secure rat-free merchant ships. Is this practicable?

Dr. Ashburton Thompson, in the report quoted, states that if vessels which engage in coasting voyages lasting three weeks to a month are fumigated at the point of departure before loading, and at the ultimate port touched on the voyage, few and often no rats are discovered to remain, and this statement applied to steam vessels of various tonnages up to 4,000. This method, he states further, has been practically carried out under inter-colonial agreement, which requires vessels to produce a certificate of fumigation, without which they are subject to detention. The method is, then, practicable.

May I again quote Koch? "This connection between the human plague and the rat plague was totally unknown before, so that no blame attaches to those who devised the measures now in force against the plague if the said measures had proved unavailing. It is high time, however, that this enlarged knowledge of the etiology of plague be utilised in international as well as in other traffic."

Is it not indeed so? brilliant success may attend special efforts for "stamping out" plague, but it is far more satisfactory to prevent its introduction. May I submit this resolution to the meeting?

That this meeting considers the time has come when the question of dealing with this ship-brought plague deserves the attention of the Government, with the view of securing an international agreement whereby merchant vessels shall take the necessary steps for the destruction of rats on board before loading and upon discharge, and in addition for the adoption of uniform steps to prevent intercommunication, during loading and discharge, between ship and shore rats.

In June the Bristol Chamber of Commerce having obtained extensive information from other important shipping centres in England hereon, were unanimously of opinion that united action should be taken, and passed the following resolution, to be included in the programme of resolutions for the autumnal meeting of the Associated Chambers of Commerce:

That as it appears desirable in the interest of the public health to minimise opportunities for the introduction of diseases by shipborne rats, it is of importance that regulations made for this purpose should be so framed as not injuriously to affect the trade and commerce of the country. This Association therefore recommends that the captains of vessels loading at plague-infected ports should be ordered to destroy rats on board ship before loading cargo, and to take precautions for preventing rats getting on board during the time cargo is being loaded, and that British Consular certificates should be issued to captains obeying such orders. The Association further resolves that a copy of this resolution be sent to the Board of Trade and the Ship Owners Association.

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PRESENTATION.—On July 26th, at 41, Belsize Park, Dr. Ford Anderson presented Dr. Edmund Gwynn, of Hampstead, on behalf of the medical practitioners of the neighbourhood, with a pair of massive silver candelabra and silver bowl, together with an album containing a dedicatory address signed by 60 practitioners, on the occasion of his retirement from the post of medical officer of health. On July 24th, at the Hampstead Town Hall, Professor Stokes presented Dr. Gwynn with a set of four handsome silver bowls on behalf of his colleagues of the borough council.

MEDICAL MAGISTRATE. Dr. W. Moxon has been appointed to the Commission of the Peace for the county of Derby.

# THE SECTIONS.

## BRIEF SUMMARY OF PROCEEDINGS.

### Section of Medicine.

The attention of this Section was mainly given to a discussion on Peripheral Neuritis in Beer-drinkers, its Causation and Diagnosis, which was opened by Dr. Ernest S. Reynolds, who showed lantern slides of cases. His remarks included much of what has already been published in the British Medical Journal. Special stress was laid on the occurrence of neuritis in drinkers of beer, and not spirits. The neuritis in the Manchester cases was attributed to the combined action of arsenic and alcohol in the beer consumed. There had been a great falling off in peripheral neuritis cases since the presence of arsenic in beer had been recognised. It was suggested that spirits and wines were often accidentally adulterated with arsenic, but the degree of contamination was not indicated. Peripheral neuritis from pure alcoholic drinks was, he believed, one of the rarest diseases known. Whenever a case of alcoholic neuritis occurred an exhaustive inquiry for the presence of arsenic should be made. The differential diagnosis of the condition from beri-beri was alluded to, but all cases of beri-beri could not be connected with arsenic. Professor Dixon Mann held that the distinctive characters of the neuritis were its severity, its slow recovery, and the extreme tenderness of the muscles associated with it as compared with alcoholic neuritis. The innervation of the heart was also unusually profoundly affected. In regard to the magnitude of the symptoms as contrasted with the amount of arsenic alleged to exist, there was evidence that the amount was much larger than had been published, as the Commission had shown. Allusion was made to the extraordinary affinity of keratin tissues for arsenic, and it was sugested that the neurokeratin of nervous tissue was the medium of toxic effect, and experiments bearing on this were described, but the nerve centres themselves were probably affected at the time that obvious changes were going on in the peripheral nerves. It was probable that arsenic inhibited nerve cells from taking up oxygen, leading to peripheral neuritic changes, as Dr. Mott had suggested for phosphorus. Dr. Luff referred gratefully to this novel view of the affinity of arsenic for the keratin tissues. In his opinion there was certainly a neuritis due to alcohol apart from the effect of arsenic. In the arsenical cases there was more excessive tenderness of the calf muscles, and marked pigmentation; while in fatal alcoholic cases toxicological investigations had not revealed arsenic in the tissues. In the Manchester Commission investigations nearly half of the samples of beer examined were free from arsenic, and in nearly all the rest it was traceable to brewing sugar from one firm. Dr. Kelynack also showed lantern slides from Lancashire cases. The alcohol of the beverages had greatly accentuated the effect of the arsenic. Professor Osler discussed the problem whether there was such a thing as alcoholic neuritis. In America whisky and lager beer was the drink of the labouring classes, and alcoholic neuritis was there a very rare disease. The clinical features were those described in the Manchester cases less the peculiar skin lesions. The neuritis in drinkers was due to alcohol, not to arsenic. Extreme hyperæsthesia was a part of typhoid neuritis. Dr. Nathan Raw, who had had 212 cases under his care in seven months, divided them into two groups—16 acute and the remaining cases chronic. This division depended on the dose of arsenic contained in the beer; he had found as much as from 1½ to 2 grs. in the gallon, and 40 pints of beer had been drunk by one patient in three days; this was one of the acute cases. The acute cases were all in men, although the vast bulk of the total cases were in women. Spirits in his experience rarely produced peripheral neuritis. Arsenic given with alcohol greatly increased the likelihood of neuritis. Recovery from the arsenical cases was more complete than from the alcoholic cases. In 2 cases relapses of pigmentation and skin lesions occurred even more than once. Dr. Waldo discussed the differential characters of arsenical from alcoholic neuritis. Dr. Pope had seen about 20 cases at Leicester, all traceable to one brewery using sugar from Manchester. Alcohol as a sole cause of neuritis was for him difficult to accept because of the enormous amount of alcohol consumed by some persons without any neuritis. After remarks by Mr. F. L. Ormrod, who described cases he had seen in Cumberland, Dr. Caton alluded to the presence of other mineral poisons in beer; in one of his cases lead had been found, but there was no lead line on the gums which suggested that the combination with alcohol made the lead more toxic. Sir William Gairdner, although like Professor Osler having the duty of studying types of disease, had not seen alcoholic neuritis before 1884, when the late Dr. Ross demonstrated cases to him in Manchester. Yet enormous quantities of whisky were drunk in Scotland. Since then he had not seen more than ten cases of alcoholic neuritis, although on the look out for it. Dr. Reynolds, in reply, stated his belief that ethylic alcohol probably occasionally produced neuritis in Manchester, but the bulk of the large number of cases there were due to arsenic and alcohol together. Dr. Caton then read a paper on the Arrest of Acute Endocarditis by means of Rest, Blisters, and Sodium Iodide. Professor Osler had for three or four years employed the method with not so favourable results as described. It was to be remembered that valvular changes were slow in their development. Dr. Haddon and Dr. Hawthorne having made some remarks, Professor Clifford Allbutt said that, in his experience, in a substantial minority of cases cardiac murmurs occurring after acute rheumatism disappeared in the course of ten, fifteen, or twenty years, with the disappearance of all cardiac symptoms. In treatment it was desirable that blood mass should also be reduced. Sir William Gairdner emphasised the need for prolonged rest in rheumatic cardiac affections after the joint troubles had disappeared. Dr. Ewart asserted how much more important were the means of prevention than cure. The treatment described might have good effect, also, by influencing the microbic factor in the rheumatic disease. Sir William Broadbent thought it a pity to stereotype any form of treatment. In his experience, too, it was not very uncommon for all evidence of valvular disease to cease in the course of years. The routine administration of sodium salicylate was not so good as the method of giving large quantities in the first forty-eight hours. Dr. Samuel West deprecated the appeal to statistics in relation to the treatment of rheumatic fever. The disappearance of a murmur did not necessarily mean the disappearance of disease. The third day of the meeting of this Section was devoted to the reading and discussion of papers. Dr. Rist, of Paris, first read one on the Bacteriology of Fœtid and Gangrenous Suppuration. He described a new method, devised by Dr. Veillon, of cultivating anaërobic microbes by aspirating colonies from plunge cultures in agar, deprived of oxygen, with a sterilised pipette. Pulmonary gangrene and putrid pleurisy were always due to obligatory anaërobic germs, as were abscesses in the abdominal and urinary organs and fœtid suppurations of the ear and throat. Dr. H. J. Campbell referred to a case of joint suppuration in which there was found a pure culture of the pneumococcus, presumably derived from the throat, and in this case the suppuration was not fœtid. The second paper was by Professor McPhedran, of Toronto, on Indigouria Occurring in a patient who Suffered from Dyspepsia Associated with Imperfect Mastication. The blue colour was not due to methylene blue, and there was only a trace of indican present. Dr Rivière of Paris, next read a paper on the Treatment of Alimentary Diseases, particularly Enteric Fever and Appendicitis, by Calomel. When the secretion of the liver was altered or checked the loss of the antiseptic action of the bile which resulted allowed of the occurrence of toxic putrefactive processes in the intestine. Calomel medication was accompanied by the administration of carbonate of soda and quinine, and followed by warm applications and hot drinks. Auto-intoxication depended directly on defective function of the liver. He protested against the use of morphine, ice, and dry diet in appendicitis. Dr. Chisholm Williams then described the treatment of pulmonary tuberculosis by high frequency electrical currents. He had been accustomed to decide that arrest of the disease had occurred when no rise of temperature followed a sitting. The sputum occasionally became rusty during the treatment; the tubercle bacilli at first increased in number and then decreased. A

common increase in weight was 14 lbs. in three months. The daily sitting lasted about ten minutes. Dr. Rivière had used this treatment for years in Paris, both for pulmonary and local tuberculosis, and had had equally good results. Dr. H. J. Campbell next read a paper on the Treatment of Cardio-Arterial Disease, directed to restore a normal balance between the work of the heart and arterial resistance. He had used in his observations the sphygmometer of Messrs. Hill and Barnard. Each case must be treated on its special indications with the view of restoring this balance. Dr. Chowry-Muthu contributed a paper on the Diagnostic Value of Tubercle Bacilli in Relation to Phthisis, in which he alluded to cases resembling phthisis, in which thrush-like fungi and micrococci were alone found. The virulence of the bacilli and not their number gauged the severity of any case. The paper was discussed by Dr. William Odell (Torquay), who thought that cases of merely suspected phthisis, in which tubercle bacilli could not be found, should not be kept in consumptive hospitals. Dr. Forbes Ross referred to the conditions under which tubercle bacilli became non-toxic, showing that the number of tubercle bacilli in the sputum was no index of the severity of the case. The next paper taken was one by Mr. Griffith Wilkin on a case of Rheumatic Endocarditis, in which a remarkable susceptibility to morphine, strychnine, and quinine was manifested. This was followed by one from Dr. Forbes Ross on the Use of Meat Albumin in Phthisis, with the object of producing stable nutrition for which it was preferable to milk albumin. Dr. Haddon then made a communication on Climacteric Changes in the Male Subject, and Dr. Stuart Low one on the Use of Mucin as a Therapeutic Agent in conditions of irritation and ulceration of the intestinal tract.

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### SECTION OF SURGERY.

MR. GILBERT BARLING, on the second day of meeting of this Section, opened a discussion on Gastro-jejunostomy in Ulcer of the Stomach and Duodenum and Pyloric Stenosis. He remarked on the difference in the estimates of mortality from gastric ulcer, and considered 10 per cent. to be approximately accurate. This mortality was due to perforation, hæmorrhage, inanition, intercurrent disease, and cancer. A cancerous change he believed to be rare. The diagnosis was often very difficult, and neither the occurrence nor absence of hæmorrhage permitted of certainty in forming a positive or negative opinion. The conditions calling for operation appeared to be in the first place hæmorrhage; in acute "fulminating" hæmorrhage surgical intervention was of little use; in recurrent hæmorrhage either gastro-jejunostomy or direct treatment of the ulcer were the methods of choice. The second class in which operation was called for was formed by the cases of long-continued pain, vomiting, loss of weight, and repeated disability for work. Thirdly, there were the cases where gastric dilatation and stasis pointed to pyloric stenosis; and, fourthly, there were those where adhesions were the cause of stenosis or pain. The method of Loreta—pylorodiosis—he did not favour, owing to the danger of rupturing the coats if efficient dilatation was carried out. Pyloroplasty was the method of choice in pyloric stenosis, except in cases where the pyloric thickening was very dense and there were many adhesions. It was inapplicable in cases of duodenal ulcer and where an operation was undertaken for the relief of pain and hæmorrhage. The simple separation of adhesions was an incomplete procedure. In regard to gastro-jejunostomy he had only performed the anterior operation, and with fair success. He did not favour any method of special approximation. Delay was the chief cause of mortality after operations; the mean mortality of gastro-jejunostomy was about 20 per cent. Mr. G. Heaton thought the mortality of gastric ulcer was lower than 10 per cent. The best results were to be expected in cases operated on for long continued pain and vomiting. He had used the button and had not found retention of the apparatus to be followed by any disadvantage. Raising the patient during after-treatment aided in preventing regurgitation. Mr. Bidwell had not discarded Loreta's operation, it was useful where the pyloric hypertrophy affected chiefly the muscular coat. Of four cases of pyloroplasty which he had reported last year three had remained well, the fourth had been operated on again for dense adhesions between the pylorus and the abdominal wall. In gastro-jejunostomy he preferred suture and the anterior operation. Mr. Sinclair White thought pyloroplasty only applicable to a few cases, gastro-jejunostomy was suitable to a large variety of conditions. Mr. C. A. Morton related a successful case of gastro-jejunostomy for gastric ulcer of seven years duration. Mr. Rutherford Morrison thought that syncope was a frequent cause of death in gastric ulcer and allied conditions. In cases of hæmorrhage there was great difficulty in deciding whether the case was one suitable for operation. He never now performed simple dilatation of the pylorus. He had found the mortality of gastro-jejunostomy very large, the chief difficulty being the regurgitation which occurred. Mr. Paul Bush had found the posterior operation much more difficult than the anterior. Mr. Parry related two cases in which he had performed a modified pyloroplasty. Dr. G. B. Ferguson gave details of a successful case of operation for perforated gastric ulcer, performed by himself, and of three others, done in Gloucestershire. Mr. Murphy also advocated early operation. Mr. D'Arcy Power thought the number of cases of perforating gastric ulcer was on the increase. Mr. Barling considered Dr. Ferguson's method of dealing with the case the best one. Mr. Rutherford Morison read a paper on the after-history of cases of gastric ulcer and pyloric stenosis treated by pyloroplasty. Where the pylorus was not much bound down, this procedure was very satisfactory. Of 20 cases, 14 were in good health, 1 had been lost sight of but was healthy when last seen, 2 were dead, one from cancer the other from phthisis, and 3 still had occasional gastric troubles. The first operation was done six years and eight months and the last two years ago. Mr. Barling and Dr. Herbert Bramwell spoke. Dr. Beatson read a further communication on the treatment of cancer of the breast by oöphorectomy and thyroid extract. He related a successful case. He gave thyroid extract in only small doses up to 15 grs. per diem. If visceral deposits were present the operation was not advisable. Mr. Barling thought the influence of the ovaries was probably not in any way special in relation to cancer. Mr. Chicken had such confidence in the procedure that in cases of this disease he intended to obtain permission always to remove the ovaries if in the course of operation it should appear advisable. Mr. McAdam Eccles had performed the operation during the last year with some success. He did not think there was any certainty as to the results, although some cases were remarkably successful. Mr. Stiles thought that as much as possible of the local disease should be removed. He questioned whether the time had come to consider the oöphorectomy as part of the routine operation, but thought that Dr. Beatson's results would justify its use by him in earlier cases. Mr. Morison related 2 cases where the ovaries had been removed some years previous to the development of cancer in the breast. At the third meeting of this Section Mr. Howard Marsh opened a discussion on Injuries to Joints with special reference to their immediate and remote treatment by massage and movement. This treatment should never be undertaken except under skilled advice. Movement might be employed in three forms: (1) Forcible movement under an anæsthetic, (2) passive movement subsequently, (3) movements made by the patient against resistance. Exact diagnosis was of great importance, as subluxations and fractures were frequently overlooked. In recent dislocations daily passive movements should be carried out after reduction instead of fixation. It was important in injuries to joints to determine whether the lesion was really within the joint or whether it concerned the surroundings. If movement within a limited range was free and normal then the injury was probably mainly one of surrounding structures. After the breaking of adhesions by movement massage should be employed daily for some three weeks. In certain cases after slight injury to a joint much subsequent trouble was caused by slight adhesion inappreciable during ordinary manipulation. Mr. Whitelocke was in the habit of treating injuries of joints in young adults by careful examination under an anæsthetic, passive movement within twelve hours after the injury, and elastic pressure. Recovery ensued within three weeks. He deprecated the use of all fixation apparatus. Mr. Burghard referred to the good results in dislocation of the shoulder obtained by massage and the discarding of all fixing apparatus. He was in the habit of repeating passive

movement under an anæsthetic about once a week in cases where adhesions tended to re-form. Dr. Ward Cousins recommended the use of an antiseptic bath in the treatment of contusions around joints. He had found the hot air bath of value in cases complicated by rheumatism. Mr. Barling believed that fixation was still too much employed in joint injuries; the muscular system was usually out of condition in these injuries, and did not allow early active exercise. In Colles's fracture he discarded splints unless the deformity was great, and began passive movement two days after the injury. Mr. Bush thought that in moving stiff joints under an anæsthetic the joint should be always carried through its greatest range of movement. Mr. Rutherford Morison thought that a strict differentiation should be made between injuries to the joints themselves and injuries to their surroundings. He did not approve of the universal application of massage in joint injuries. Where there was injury to a joint a certain amount of rest was necessary. He always insisted on rest after operation for displaced semilunar cartilage or fractured patella. Mr. F. Burghard then read a paper on the Treatment, Operative and Non-operative, of Congenital Dislocation of the Hip. He gave a brief account of the anatomy of the deformity, and mentioned the various forms of apparatus which had been used from time to time without, he believed, any satisfactory results. After a review of the "bloodless methods" and a description of the Hoffa-Lorenz operation, he enumerated the cases which had come under his own observation. These had been 20 in number. In 2 he had carried out Paci's method with good immediate but disappointing ultimate result. By the bloodless method of Lorenz he had treated 9 cases. In 1 the result was perfect, in 5 fair, and in 2 failure. The cases most suitable were children between two and three years of age. By the operative method of Lorenz he had treated 5 and with good results. In children under two he recommended no active treatment; between two and five Lorenz's bloodless method; about five or six Lorenz method of open operation. After the age of seven he did not recommend operation. Mr. Howard Marsh considered that cases requiring active treatment were those in which there was a good deal of displacement upwards and backwards, sliding of the head of the bone, and no proper false joint. Mrs. E. W. Dunbar read a paper on Two Cases of Reduction of Long-standing Dislocation. There were illustrative skiagraphs. The one was a subluxation of the hip of five years' standing, the other one of partial dislocation of the right sacro-iliac joint. Treatment was in both cases followed by complete recovery. Mr. Buckell thought that the ease in reduction was due to the fact that both luxations were partial. Mr. Whitelocke read notes of a case of Hydatid of the Right Pleura successfully treated by operation. In July, 1900, thoracic section was performed; the sinus continued to discharge until December, when the mother cyst was removed. The results of the treatment of these cases by incision and drainage had proved very satisfactory. Mr. Michie related a similar case of hydatid of the pleura which had occurred in his practice in Adelaide. Dr. James Rankin read notes of a case of Amputation of the Right Leg at the Knee-joint for Senile Gangrene. The patient now possessed a useful stump. Mr. R. C. Chicken showed a specimen of 67 loose bodies removed by operation from a knee-joint.

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### Section of Obstetrics and Gynæcology.

At the beginning of the second day's work a discussion on When and How to Operate on Fibroids was opened by Dr. William Duncan. The direct mortality from fibroids was a matter of controversy, but could not be non-existent, as one author had collected 18 cases in which death was directly due to such tumours. The danger to health, however, was far more important as regarded the general question of operation. Many fibroids should be left alone; others caused hæmorrhage—not to be disregarded—pressure on the bladder, rectum, or sacral nerves, or exhibited a rapid growth, or complicated pregnancy, and in such the question of operation immediately arose. The uterus should in the first instance always be dilated and explored: polypi might be removed, or a small submucous tumour without a broad attachment twisted out. He was not in favour, if the submucous tumour were large, of the plan of slitting the capsule, giving ergot, and trusting to the uterus to expel the tumour; nor of *morcellement*, which he considered as dangerous as hysterectomy. Myomectomy was no doubt a good way of dealing with subperitoneal growths, if single and not widely attached. He had found that the Apostoli method neither reduced the size of the tumour nor arrested the hæmorrhage. Generally he preferred hysterectomy by the abdomen, and, though pan-hysterectomy was occasionally necessary, he had up to the present time performed intraperitoneal hysterectomy in 127 cases with 4 deaths, none of which occurred in the last 81 cases. Rapid growth of fibroids implied cystic or mucoid degeneration, and always demanded operation. In case of pregnancy, if the tumour were in the upper uterine segment, or subperitoneal and not impacted in the pelvis, it should be seldom interfered with; in other cases the question to decide was whether we should empty the uterus, perform hysterectomy immediately, or wait till term and remove the uterus after Cæsarean section. The administration of strychnine for a week before and after operation was a valuable method of avoiding shock; hot water with bicarbonate of soda was of benefit in tympanites; nutrient enemata should be given every four hours. The ovarian and uterine arteries should be tied on both sides before amputation: the cervix should be completely covered by the peritoneal flaps, but the cervix should not be stitched, or the knots should be outside the peritoneum. Mr. Alban Doran pointed out that "retroperitoneal" was a more correct term for the hysterectomy described by Dr. Duncan than "intraperitoneal." Even interstitial fibroids if near the fundus were of little detriment to pregnancy. Not only should any sutures passed through the cervix be kept outside the peritoneum, but all stumps (of the ovarian arteries and tubes if amputated) and ligatures upon them should also be excluded. If there was any doubt as to the position of the uterine arteries it was better not to attempt to tie them till they spouted. Mr. Christopher Martin thought that submucous tumours might often be well removed by *morcellement*, especially in parous women. He had done 47 abominal hysterectomies for fibroids with only one death, 33 vaginal with 2; latterly he had done the retroperitoneal operation, but formerly panhysterectomy. Mr. Hawkins-Ambler insisted on the advantages of the Trendelenburg position in preventing shock, and of raising the foot of the bed and free use of saline solutions after operation. A dose of atropine and morphine given before the patient left the table relieved restlessness and pain, and so diminished the effect of shock. Professor Alfred Smith had performed 9 pan-hysterectomies and 92 retroperitoneal hysterectomies without a death; each case must be judged on its own merits, and special indications might be given by the deformity arousing unfounded suspicion, especially in the case of women who had to earn their bread. Dr. John Campbell of Belfast objected to the use of the dilator and curette. In a uterine cavity deformed by the presence of fibroids it was impossible to remove the whole of the mucosa, to drain perfectly, or to escape sloughing from interference with the blood supply of the tumour. The discussion was continued by Mrs. Garrett Anderson, Mrs. Scharlieb, and Mrs. Stanley Boyd, the latter insisting much upon the right of a woman to be relieved of a deformity caused by a fibroid, as being just as valid as in other cases when surgical interference was generally allowed. After some remarks from Mr. Bowreman Jessett, Mr. Aust Lawrence, and Dr. Ward Cousins, and a short reply from Dr. Duncan, the President summed up the results of the discussion, saying that all seemed generally agreed that fibroid tumours were not such simple tumours as was formerly thought; that the treatment of each case must be judged on its own merits; that the tendency was in favour of abdominal rather than vaginal, and of retroperitoneal rather than total, hysterectomy, and that such operations should be done on purely surgical principles. Dr. Jayle, Chef de Clinique à l'Hôpital Broca, then read a paper on a New Gynæcological Position, and three communications were made by Dr. C. H. G. Lockyer, Professor Alfred Smith, and Mrs. Stanley Boyd on cases of Ectopic Gestation, and Dr. A. S. Cooke, Vice-President, commented on the cases. At the final meeting of the Section a discussion on the Diagnosis and Treatment of Metritis and its Relationship to Malignant Disease was introduced by Dr. John Campbell (Belfast). In consequence of the close relationship between the uterus,

tubes, and ovaries, it was rare in metritis for the lesions to be confined to the uterus. The differential diagnosis had to be made from pregnancy, cancer, incomplete abortion, fibroids, salpingitis, cystitis, proctitis, and reflex disturbances, with symptoms simulating those of metritis. In relation to malignant disease, too much importance had been given to pain, which was not an early symptom, and to make an early diagnosis before a case became inoperable the use of the curette was necessary. Mrs. Scharlieb said that of the various affections affecting the endometrium, probably glandular or adenomatous and interstitial endometritis were the only ones at all related to malignant disease. Dr. Herbert Snow, Dr. Aust Lawrence, Dr. Inglis Parsons, Mr. Bowreman Jessett, Dr. Purslow, Mrs. Garrett Anderson, Mr. Cooke (Vice-President), Mrs. Stanley Boyd, Mr. Hawkins Ambler, Dr. Handfield-Jones, Dr. R. J. Ferguson, Dr. Haultain, and the President took part in the discussion. Dr. Campbell, in reply, insisted that the sharp curette used with a firm hand was the best means of diagnosis: if plugs of friable tissue were brought away there could be little doubt that the microscopical examination would confirm a diagnosis of malignant disease. In a small proportion of non-malignant cases hysterectomy would be required, in spite of the efforts, which should always be made, to avoid such operation by active treatment in other ways. Electrolysis had failed in his hands; atmokausis he considered dangerous. The great difficulty in gonorrhœal cases was their liability to reinfection. Dr. J. Inglis Parsons read a Further Report on a New Operation for Prolapsus Uteri, with Notes of Forty Cases. After restoring the pelvic floor he deavoured to strengthen the supports of the uterus by injecting, with all antiseptic precautions, a solution of sulphate of quinine (12 grs. to ʒj) within the folds of the broad ligament, which caused an effusion of lymph which subsequently became organised. The uterus was supported for five days by a cup and stem pessary. Of the 40 cases 34 were quite successful; 4 others improved: relapse took place in 2. Mr. Christopher Martin reported a case of Extirpation of the Uterus and Vagina for Obstinate Prolapse. A mode of treatment he recommended for cases otherwise intractable and causing the patient much discomfort, but not in married or marriageable women. Dr. Haultain read a paper on the Treatment of Chronic Uterine Inversion by Abdominal Hysterotomy, with a Successful Case, which was illustrated by drawings and models. The incision required was much smaller than that by Küstner's method, its extent being limited by the prompt reduction of the inversion directly there was room for it to take place.

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### SECTION OF STATE MEDICINE.

At the second meeting of the Section Dr. Houston opened a discussion on Enteric Fever in its Public Health Aspects. He described the natural history of the disease and the various modes of its dissemination, the appearances and reaction of the bacillus, the manner in which it grew, and the dissemination of enteric fever by water, milk, and shellfish. The relation of soil, sewer gas, ground air and ground water to enteric fever was next discussed, and then the relation of sewage to the dissemination of the disease. The important part which urine played in spreading the disease was only now beginning to be understood. The researches of Dr. Hamer into the fried fish epidemics was next described, and, finally, the prophylactic measures which ought to be adopted. Dr. Dixey, from a study of the statistics of enteric fever, showed that the death-rate from enteric fever in London was a fluctuating one, but it had materially diminished, and of recent years there had been a tendency for the autumnal wave to be flattened. The comparison between the London and New York curves showed that meteorological conditions played a distinct part in the activity of the enteric infection. The case mortality appeared to have reached a constant level. Dr. Savage thought that in the matter of isolating the typhoid bacillus too much was expected of bacteriologists. Dr. Handford pointed out what a large part was played in the dissemination of the disease by personal contact, but he thought that, although the bacilli might be present in the urine, they were probably avirulent, since he had never known a case in the convalescent hospitals which had been traced to such a source. Dr. E. M. Smith thought that privy middens were responsible for much ground contamination. Dr. Reynolds gave an account of the measures adopted in Chicago, and told how in previous years the stirring up of the mud of the lake by storms was followed by outbursts of enteric fever. Dr. Chalmers said that the seasonal incidence in Glasgow was different from that in London. Dr. Groves thought that there was often expected of the bacteriologist more than he was able to give. Dr. Bond had never met with a single case of enteric fever during twenty-eight years' experience which could be traced to milk. Mr. Wanklyn thought that the most dangerous water was one highly charged with organic matter, but containing few bacteria. After Mr. Pakes had spoken, Mr. Herbert Jones said he thought that in colliery districts enteric fever was kept up by the conservancy system which was generally in vogue in these districts. Dr. Martin asked Dr. Houston whether enteric fever could be communicated to man from the lower animals? Dr. Drysdale thought that dust was a potent factor in the spread of the disease. Dr. Fosbroke instanced cases where enteric fever had been carried long distances by water. The President having summed up, Dr. Houston replied. Dr. Savage then read a paper on Neutral Red in the Routine Bacteriological Examination of Water, which was discussed by Mr. Pakes. At the final meeting of the Section, Mr. J. A. Wanklyn read notes on Arsenical Beer Recently Examined, and showed a specimen of cacodyl prepared from commercial cacodylate of soda. Dr. T. M. Legge opened a discussion on the Diseases of Occupations. One process, that of the preparation of potassium cyanide, which one would have anticipated to be dangerous, appeared to be innocuous. The hides from China were a very constant source of anthrax, and lately he had traced a definite connection between tetanus and jute. The exact part played by dust in lung diseases was still unknown, for although the production of fibrosis from silica and steel dust was incontestable, it was still a doubt whether this condition led directly to death. He insisted strongly on notification as the best means of finding occupational diseases hitherto unsuspected. The periodical medical examination which was now in vogue in certain diseases had been attended with very beneficial results. Dr. W. Murray read a communication on Chronic Brass-poisoning. This was not the brass founder's ague, which was an acute form of the disease, but a chronic disease which from the similarity of the symptoms was often mistaken for phthisis. The cause was probably copper, and possibly zinc. Lead-poisoning was quite different from brass-poisoning. He hoped that brass-poisoning would be added to the list of notifiable diseases. Dr. D'Arcy Ellis then read a paper on Glass Polishing, and described the dangerous part of the process—that of handling the putty powder—which was a mixture of lead, tin, antimony, and bismuth. Since the "feeders" had been protected from splashing with the putty powder, the cases of lead-poisoning had decreased; the unfortunate part was that hitherto a satisfactory substitute for putty had not been found. Dr. Clayton then gave an account of some cases of poisoning with arsenuretted hydrogen. Dr. Alexander Scott pleaded for railway servants, who suffered from a very definite neurosis. He gave a number of examples where accidents, some of them severe, had occurred as the result of extreme nervous tension. He hoped that the profession would remember this very definite disease when treating railway servants. Dr. Dearden next read a paper on the Causation of Phosphorus Necrosis. The use of yellow phosphorus should be entirely prohibited, and a prohibitive duty should be placed upon the "strike anywhere" variety of matches. Drs. Prosser White and John Hay gave an account of some Recent Inquiries and Researches into the Poisonous Properties of Naphthalene and of the Aromatic Compounds, and Dr. Reid read one on the Infant Mortality and the Employment of Married Women in Factories. He showed how the employment of women led to the increase in the infant mortality out of all proportion, and showed how important this was in the face of the general decline in the birth-rate. After Dr. Legge had briefly replied, Dr. Chalmers moved, and Dr. Reid seconded, a resolution concerning an amendment of the Workshop and Factory Bill now before Parliament. This was carried. Dr. P. Targett Adams then read his paper on Sanitary Administration and the Control of Plague in the Port of Bombay.

## Section of Psychological Medicine.

Dr. Robert Jones opened a discussion on Puerperal Insanity, a condition met with in one out of every 1,700 confinements. Puerperal insanity followed four times as frequently in illegitimate as compared with legitimate births. Of 3,592 female patients admitted to Claybury Asylum 269 were puerperal cases, or 7.4 per cent. Of these 49 women were confined in the asylum; 83 cases were instances of the insanity of lactation, of the mentally depressed type, and with special tendencies to suicide. The commonest type of puerperal insanity was marked by delirium with hallucinations, and mingled with excitement of a religious and erotic nature—a group which constituted a nosological entity, though this view was not supported by high authority. Among the symptoms were insomnia and headache, feverish restlessness, apprehensiveness, auditory and visual hallucinations, and dangerous impulses towards infanticide or suicide. Treatment consisted of electric baths (useful especially in stuporous cases), generous feeding—if necessary by the tube—with abundance of light liquid diet, and hypnotics, of which sulphonal, bromides and chloral, or paraldehyde were the best. Anæmia should be combated by iron. Relapses occurred during convalescence, and were of bad import. Antistreptococcus serum was tried, but it did not give satisfactory results in one or two cases. Dr. J. Oldfield stated that infanticide by a woman shortly after confinement was *ipso facto* evidence of temporary mental derangement, and the onus of proving the absence of insanity lay on the prosecution. Lawyers and jury should be educated as regards the fact that such acts of infanticide were *primâ-facie* evidence of insanity, or at any rate of a degree of mental irresponsibility allied to insanity. Dr. Samuel Griffith believed that home treatment was the best, and if all failed then the asylum should be used. Most cases of puerperal insanity he had seen had a neuropathic heredity or were asthenic. Dr. Soutar referred to private cases seen by him—10 during eighteen years. Dr. Hadden opposed the view that so-called septicæmic or other microbes caused puerperal insanity. The soil must be suitable for microbes. Dr. Lloyd Andriezen referred to the importance of the moral factor, puerperal insanity being twice or three times as common after illegitimate births, and to the *modus operandi* of neuropathic heredity. He pointed out, also, racial differences in the proclivity to puerperal psychoses. In classifying the puerperal psychoses the first place should be given to acute mental confusion with hallucinatory delirium. He described the pathological findings in an acute and fatal case of puerperal insanity, and quoted statistics to show that the puerperal psychoses of septic or toxic origin were largely preventable. Dr. Harry Campbell pointed out in some detail the operation of fear and other moral causes in acting on the body and co-operating with other factors (septic agents and exhaustion) in the production of puerperal insanity. Dr. Fletcher Beach opposed the marriage of epileptic or insane persons. Diet should be always ample, never on the margin of starvation. Dr. Cole thought the upper classes were more prone to puerperal insanity than the lower classes. Dr. Pasmore insisted on the febrile temperature and reaction of puerperal insanity. Opium proved valuable in his hands. Dr. Edridge-Green read a paper on the Evolution of a Visual Perception Centre, which was discussed by Dr. Andriezen and by Dr. Robert Jones. Dr. John Turner read a paper on the Physical Basis of Melancholia, stating that the spinal cord and bulbo-spinal nuclei were unaffected, and that the lesions were located in the cerebral cortex, affecting chiefly the large pyramidal and "giant" cells. Dr. Seymour Tuke read a paper on the Modern Treatment of the Insane, and referred to the view that Lunacy Acts were, during the past century, drawn up with a bias of suspicion towards medical men connected with lunacy practice. The Lunacy Act of 1890 was too repressive, hence it was evaded by many, and unregistered homes for lunatics and other scandals still continued to exist. He deprecated the pleas adduced by some medical men that cases of neurasthenia, hystero-mania, and "borderland" cases were free from insanity, and should be accordingly treated, as this led to a very elastic use of these terms and to the illegal treatment of insane patients in homes without certification or notification to the lunacy authorities. Dr. Stewart said there were unfortunately too many people who undertook the treatment of the insane in private houses, and who had no sufficient knowledge of insanity as a disease. The public were then occasionally scandalised by a suicidal or other case, and the blame was indiscriminately applied to mental physicians, whereas it should be laid at the doors of quite another set of people who were not of the speciality of psychological medicine, and who yet did all they could to persuade medical practitioners to send mental cases to their homes. On the third meeting of the Section Dr. Francis Warner opened a discussion on the Diagnosis and Treatment of Feeble-minded Children. After referring to the recent Education (Defective and Epileptic Children) Act of 1899, which allowed of provision for the education of feeble-minded children in special classes and schools under the Education Board, it was pointed out that a scientific knowledge of the diagnosis of feeble-mindedness in children was becoming increasingly necessary for medical men. The various symptoms were detailed: physiognomy and developmental features, "nerve signs," morbid conditions of the organs of special sense, and general bodily nutrition. Conversation with the child soon gave an idea of its status in mental ability. The constant grimaces and rhythmic movements of some children were an indication of defective brain power and want of spontaneity. Treatment consisted in regulated exercises, imitation of the teacher in simple movements and gestures, including articulation and voice production. The muscular and tactile sense should be very carefully trained, so as to give correct perceptions of weight, size, and form. Training of the fingers helped to count, and training of eye movements served to develop attention. Obstructions in the nose and throat might make a child deaf or dull, and should be surgically treated. Caries of the teeth also required attention. In the discussion following the paper, Dr. G. E. Shuttleworth emphasised the significance of developmental and physiognomical peculiarities, and of nerve signs. Children with marked mental or physical defect bordering on imbecility should be certified as "imbecile," so that they could gain admission to asylums for imbeciles where, in addition to the requisite medical care and nursing, suitable instruction and training were also provided. Idiocy, imbecility, and feeble-mindedness were three grades which were not however sharply defined from one another. Defective children of the Mongolian type of physiognomy were a very unsatisfactory class to deal with as regarded education: they were mischievous and had vicious tendencies which made them more fit for asylums than schools. When inherited syphilis was the cause the children were usually found to be unsuitable for schools. Morally defective children formed about 2 per cent. of the defectives in special schools. They should be sequestrated in asylums. Continued training, especially after the age of 16 years, was necessary for defective children, and for this purpose nothing was more suitable than life in a farming and industrial colony—the most efficient and economical way of dealing with them in the long run. Dr. Pope said that too much stress should not be laid on physical signs and stigmata. Dr. Fletcher Beach thought that the arrangements for teaching defective children in London and Leicester should be extended to other towns throughout the country. As regarded "moral imbeciles," they were hard to train, and their strong anti-social and immoral instincts were almost incorrigible. He advocated special institutions for them, as Morel had advocated in Belgium—at present they were sent to asylums or allowed to be at large and to propagate their kind, a state of things fraught with danger to the community. The defective child after the age of 16 still required teaching and training at least till the age of 20 years. Dr. Ashby would test defective children by conversation and inspection, then examine the senses of sight and hearing, and finally look for nerve signs and developmental defects and stigmata. Children bordering on imbecility should not be sent to the schools. Dr. Lloyd Andriezen referred to the importance of steady and persevering training of the muscular sense (manual and industrial training), and referred to the excellent results obtained at Elmira for young adult criminals and defectives between the ages of 16 and 30. He cited a case where imitation of the mother produced "tics" and faulty facial movements in the child, which were cured by removal from the source of imitation, and emphasised the necessity of special provision as regarded institutions for the degenerate, that was, moral im-

beciles, and degenerates of perverted and anti-social instincts, as recommended by Morel, of Belgium. Dr. E. B. Angell (Rochester, New York) agreed as to the importance and significance of the stigmata of degeneracy, and said that patience in teaching imbeciles accomplished wonderful results which he had witnessed himself at the Bicêtre, Paris. Dr. Claye Shaw (Banstead Asylum) read a paper on Colitis or Asylum Dysentery. He contended that in many cases this disease started as a trophic change or degeneration in the nerves of the intestine, and that ulceration (with bloody and mucoid stools and sloughing) were secondary results. He was, therefore, opposed to the view that the disease was primarily bacterial in origin, and stated that no specific microbe had as yet been isolated. He did not believe it was a disease due to overcrowding in asylums, but was a secondary manifestation of the low nervous vitality of the insane, such as bedsores might be. The President thought that the occurrence of colitis in epidemics, and sometimes in newly-opened asylums, suggested the conclusion that it sometimes was spread by contagion or infection. Dr. Andriezen believed that while some cases were trophic in origin others were toxic. The latter was the case with true colitis or dysentery marked by blood, slimy mucus, and sloughings of the mucous membranes of the large bowel with intense tenesmus. He thought that the fingers of patients were easily contaminated with the fæcal matter by faulty habits and contagion might thus spread to others. He instanced the case of a family where a child contracted the disease, and shortly afterwards there was an outbreak of the colitis in the family, four of whom (three boys and the mother) suffered from it. The trophic degenerations of the bowel he regarded as giving rise to diarrhœal rather than dysenteric symptoms. Dr. Edwin Goodall, while believing that bacterial agencies would account for a limited number of cases, was of opinion that this could not be proved to be the cause in other cases. Dr. Harry Campbell suggested the possibility of right-sided colotomy in suitable cases which threatened a fatal issue, and asked whether ulceration might not, in some cases, be caused by the elimination of toxins by the bowel as mercurial ulceration was occasionally thus produced, and duodenal ulcers after severe burns were similarly occasioned. Dr. Havelock had not observed colitis at the Montrose Asylum, and thought that prolonged constipation was followed by diarrhœa in the insane, which might eventually end in colitis. Dr. Sheen contributed a paper on Modern Plans of Asylums, and Dr. Andriezen one on the Psychology of the Degenerate, with remarks on treatment.

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### Section of Anatomy and Physiology.

Professor R. J. Anderson (Galway) described a method by which the movements of the bones of the forearm could be studied during rotation of the limb. That of the radius was a more complex matter than was usually supposed, and the ulna, contrary to generally-accepted opinion, also executed a certain amount of rotatory movement. Mr. Ellis agreed with Professor Anderson that the movements of joints was under all circumstances difficult of interpretation, and very seldom to be accounted for on simple mathematical principles. The President referred to the great difficulty that lay in exact measurement of small movements, and could not understand how the older anatomists fell into the error of supposing that no movement of the ulna occurred in rotation. A discussion on Experimental Glycosuria was then opened by Dr. Pavy, in which he attributed the appearance of an excessive amount of sugar in the blood to one of four conditions—want of due assimilation of absorbed carbohydrates, abnormal metabolism of carbohydrate stored up as glycogen in the liver, abnormal breaking down of proteids with a consequent liberation of the carbohydrate constituent of their molecule, and, lastly, from destructive metabolism of stored-up fat. The author relied on the analogy of a similar conversion of fat into carbohydrates in the vegetable kingdom in the case of oily seeds as the basis of his fourth contention. In further elucidation of the forms of glycosuria referable to the first class, Dr. Pavy dwelt on the view which he held—that the office of the liver in the storing up of carbohydrate was a secondary one, and that if sufficiently assimilated by the tissues generally, no sugar ought to be left for this organ to convert into glycogen. With regard to those forms arising from perverted glycogen metabolism, Dr. Pavy agreed with Pflüger that under normal conditions this substance became linked with nitrogen into a more stable compound, probably of a proteid nature, and that such glycogen as could be readily washed out of an excised liver was to be regarded as existing only in a state of "loose combination." The puncture diabetes of Claude Bernard was to be assigned to an improper transformation of this substance into sugar. Phloridzin diabetes, and that arising from extirpation of the pancreas, were given as instances of disruption of proteids with liberation of their sugar element. These forms occurred in animals where all carbohydrate food was withheld and a constant relation was shown between the amounts of nitrogen and sugar excreted in the urine. The former variety differed from the latter in that no excess of sugar in the blood occurred antecedent to the glycosuria, and hence the kidney seemed in some way to be associated with the production of the sugar. Professor W. H. Thompson referred experimental glycosurias to the following groups: the first due to primary excess of sugar in the blood arising chiefly from over-absorption in the alimentary canal, such as occurred when the large quantities of sugar were ingested; those in which a diminished oxidation of sugar by the tissues was to be found, for example, after the administration of chloroform ether, or morphine in asphyxia and Co. poisoning; and the third group, including phloridzin glycosuria, which might be termed renal diabetes, since this organ seemed to play the chief part in its causation. Damage to the glycogenic function of the liver would explain all the other chief forms of glycosuria, including that arising from extirpation of the pancreas. In this latter form it might be assumed that an internal secretion was produced by this organ which was necessary either for the due performance of the glycogenic function of the liver, or possibly to prevent poisonous substances formed in the alimentary canal from interfering with this function. Professor Vaughan Harley sent a contribution to the discussion which was read by the Secretary. His views very largely coincided with those already expressed by the previous speaker. Sir William Broadbent and Professor R. J. Anderson expressed the gratitude which was due to Dr. Pavy for his masterly contribution. Professor MacWilliam (Aberdeen) then read a paper on the Cause of the Ordinary Vascular Conditions found after Death from Asphyxia. The empty condition of the left heart was due to *post-mortem* rigidity with contraction of its muscle walls. Immediately after death both cavities were equally distended. The right ventricle failed to empty itself not because of contraction of the pulmonary arterioles, but because its death was slow and the onset of rigor uncertain and irregular. A further important fact observed was that the walls of the arteries remained contractile, and therefore living, for long periods after systemic death, five days being not uncommon; and in the case of the carotid of the horse immersed in olive oil for as long as fourteen days. Dr. Harman showed the skull of a Hottentot with facial lachrymal bones, and also gave an account of two important abnormal conditions of the thymus gland in the fœtus. One of these showed a process of the gland which he termed "socia rhynisi cervicalis," and which extended up to the level of the third bronchial cleft, where the gland mainly aroses in embryonic life. The other illustrated the fact that the fourth cleft also contributed to the formation of the organ. At the third meeting of this Section, Dr. Edridge-Green contributed a paper in which he wished to show that the rods and cones of the retina had wholly different functions. Visual purple was liberated by the rods and acted upon by light, the function of the cones and of the optic nerve fibres being to receive and convey to the sensorium the impress of the chemical change thus set up. The cones were of themselves insensitive to the direct action of light, in support of which he alleged that light might fall on the fovea centralis without giving rise to any sensation.

### Section of Pathology and Bacteriology.

The business of the Section was commenced with a paper by Dr. Eyre on the Standardisation of Nutrient Media, in continuation of observations which were made by the author and communicated to the Pathology Section at last year's meet-

ing. The practical measures the author found useful in an attempt to attain, and especially to retain, the standard reaction were described. He dealt with, first, the preparation of that watery solution of meat extract, extractives, etc., which formed the basis of all nutrient media (*Fleischwasser*), and secondly, with the most important nutrient media separately. Dr. Steen showed an electro-thermal paraffin bath for embedding purposes. The most important part was the construction of the thermostat, which was of the ordinary mercury type, with the addition that into it were introduced two platinum electrodes, junction between which was made by the column of mercury. These terminals went to two electric lamps, which were the source of heat, and thus, according as the temperature of the bath in which the bulb of the thermostat was placed was above or below the point for which the instrument was set the lamps were extinguished or lit. A paper was then read by the Secretary, in the absence of the author, Dr. W. Hunter, of the London Hospital Bacteriological Laboratory, on the Diagnosis of the Presence of B. Coli Communis by Means of Neutral-red. His main contentions were: (1) That B. coli communis and a few other microorganisms possessed the power of reducing neutral-red in an agar culture medium to a canary-yellow fluorescent colour; (2) that B. typhosus never possessed this power of reduction; (3) that this difference enabled one within twelve to twenty-four hours to diagnose with accuracy between microorganisms of the coli group and the typhoid group. Mr. Foulerton recognised the importance of the test, but failed to see the advantage it possessed over a variety of other colour tests, as, for example, those dependent on the addition of methylene blue or fuchsin to the culture medium. With each of the latter dyes there was a somewhat similar differentiation between B. coli and B. typhosus. Dr. Lazarus-Barlow read a short communication on a case of typhoid fever in which intestinal lesions were completely absent from the intestine. The clinical evidence of the typhoidal nature of the disease was overwhelming, partly on account of the fact that five other members of the family were at the same time suffering from clinically-typical typhoid fever, and partly from the well-marked Widal reaction that was given in this as in the other cases. From the spleen a microorganism was isolated, which was rigidly subjected to all the tests that were available for the distinction of B. coli communis from B. typhosus, and although it was found that agglutination with an artificial antityphoid horse serum was not so great as might have been wished, the probability amounted almost to certainty that the micro-organism isolated from the spleen of the patient who died was true B. typhosus. The President and Dr. Bryant referred to a case which was strikingly similar. Dr. Michell Clarke referred to two cases in which he had found a complete absence of typhoid lesions in the small intestines, but in which definite small ulcers were present in the follicles of the large intestine, and particularly in the cæcum and upper part of the ascending colon. The President thought it possible that some of the cases similar to that brought forward by Dr. Michell Clarke were really cases of dysentery and not of typhoid fever. In reply Dr. Lazarus-Barlow believed that some of the cases of autumnal diarrhœa in children would ultimately turn out to be associated with and, perhaps caused by, the typhoid bacillus. It was possible the existence of undiagnosed cases of typhoid fever without intestinal lesion in children thought to be suffering from autumnal diarrhœa might account for the endemic character of typhoid fever. A discussion on the pathological conditions caused by the pneumococcus was then opened by Mr. Foulerton. He referred to the fact that two distinct conditions caused by the pneumococcus were met with—one which was characterised by the formation of pus, and the other in which pus, in the surgical sense, was not present, but in which the exudation was intensely fibrinous. The President believed that the pneumococcus existed in Nature in two distinct forms, the one intensely virulent and almost a strict parasite, and the other a virulent, which was almost a pure saprophyte and grew at the room temperature on the ordinary culture media. He had, in conjunction with Dr. Eyre, succeeded in converting one of the virulent types into a definite avirulent type. He was not satisfied as to the production of toxic substances by the organism and had never himself been able to demonstrate their existence. He referred to a paper written by Drs. Brodie and Rogers on an epidemic of pneumococcic meningitis in Johannesburg, in which nasal catarrh was followed in some cases by lobar pneumonia, in others by meningitis, and in others by both. Dr. Cave followed with a short reference to cases of pneumococcic arthritis. The joint which was affected was particularly likely to be one having a diminished resistance from some cause, such as a previous injury. Dr. Lazarus-Barlow communicated two cases of posterior basic meningitis of—clinically—the strictest type, from which after death the pneumococcus was isolated. Although there was no doubt that M. intracellularis was frequently the cause of posterior basic meningitis, he felt no doubt that in a certain number of cases the cause was the pneumococcus. Dr. Bryant referred to cases of pneumococcic peritonitis that he had seen. He was strongly of opinion that if cases of so-called idiopathic peritonitis were examined bacteriologically, it would be found that they were caused by the pneumococcus. He drew attention to the frequency with which the condition affects children, and particularly girls, and suggested that the latter fact pointed to the possibility that the infection entered by way of the generative organs. He also considered the possibility of infection by way of the alimentary canal. He adverted to the difference in appearance and behaviour of pneumococcal pus and pus of streptococcal or of staphylococcal origin. Dr. Eyre said that there were two different groups of inflammation produced by the pneumococcus, one in which the formation of fibrin was the most important characteristic, and the other in which there was an excessive formation of œdema. It was not possible, however, to draw a hard-and-fast line between the two classes. In addition to these there was now a third group, the pyogenetic. By suitable dilution of cultures obtained from different cases he had been able to obtain a kind of measure of the virulence of any particular strain. Dr. Rist (Paris) mentioned that in investigating several cases of putrid empyema he had found that a pneumococcal infection might be secondary. Thus in a woman who had suffered from a liver abscess which perforated the diaphragm and led to the formation of an empyema, he found in the liver abscess and in the empyema certain obligatory anaërobic bacilli, and in the empyema a small number of virulent pneumococci. Pneumococci were, however, completely absent from the pus of the hepatic abscess. A paper was next read by Professor Gley (Paris), on some considerations in connection with the pathogeny of exophthalmic goître. He referred to the old view that the condition was due to hyperthyroidism, and showed that it was unsatisfactory, and alluded to his own researches, which pointed to the importance of the parathyroids in connection with the disease. He suggested that they formed a secretion which acted on the thyroid substance proper, that this gland as a result of its altered condition secreted an abnormal substance, which was specially characterised by the small quantity of colloid and of iodine which it contained, and that this altered thyroid secretion acting by way of the sympathetic nervous system, generally led to the production of Graves's disease. Dr. Edmunds followed with a communication on the changes which occurred in the cells of the central nervous system after complete excision of the thyroid and parathyroid bodies of dogs. He found chromatolysis frequently, and sometimes alterations of the nuclei or of the bodies or the processes of the cells. The third day's proceedings commenced with a short communication by Dr. Batten (Dulwich) on a case in which Lobar Pneumonia was followed six months later by the formation of an Abscess in the Brain, and Death. In the pus of the abscess a diplococcus was found which was quite indistinguishable from the pneumococcus. Messrs. Foulerton and Hillier read a paper on the Presence of Tubercle Bacilli in the Urine of Patients suffering from Pulmonary Phthisis. The urine from 18 case of phthisis was inoculated after prolonged centrifugalisation into guinea-pigs, and the result showed that in 9 the urine had contained tubercle bacilli, although it was impossible in a single case to directly determine the presence of the bacilli in the urine by microscopical examination of the sediment. Eight of the patients died, and at the necropsies no macroscopic trace of tuberculous affection of the kidney or the bladder was discoverable. The President

referred to the importance of inoculation in determining the presence or the absence of tubercle bacilli, and mentioned a case in which he had found acid-fast bacilli in the urine which failed to produce tuberculosis when inoculated into guinea-pigs. Dr. Longridge read a paper upon Focal Necroses in the Liver in cases of Typhoid Fever and Eclampsia. He believed that the explanation of the necroses was to be found in the existence of an excessive functional activity of the liver cells in an attempt to exert their normal antitoxic action, and a consequent supervention of fatty degeneration. The President suggested that perhaps some of the cases of hepatic cirrhosis, and particularly the condition that occurred in young children, was due to the formation of a fibrous tissue in the repair of focal necroses that had resulted in the course of some earlier infective intestinal affection. Dr. Lazarus-Barlow had seen focal necroses in cases of ulcerative colitis. Mr. Foulerton was convinced that focal necroses were sometimes the result of the actual presence of bacteria, and were not always produced by the action of toxins, as the author supposed. The question of duodenal ulceration after extensive burns having incidentally arisen in connection with the paper, Dr. Grünbaum suggested that the rarity with which they were now seen might perhaps depend upon the antiseptic methods of treatment of such cases adopted at the present time. Dr Longridge replied, and said that certainly it was most common to find clumps of bacilli in the liver at points at which there were no focal necroses, while in the centres of the focal necroses themselves bacilli were generally conspicuously absent. Drs. Poynton and Paine read a paper (illustrated by lantern slides and microscopic and macroscopic specimens) on the Present Position of the Bacteriology of Acute Rheumatic Fever. They brought forward strong evidence that the organism which they had isolated from a large number of cases in children (a diplococcus) was the specific cause of the disease. They based their opinion upon a variety of circumstances, some of the most important of which were the great resemblances that existed between the disease in man and the result of experimental inoculation of rabbits with the diplococcus. Thus the rabbits showed joint pains and inflammation, pericarditis, endocarditis, and myocarditis. After the President had made a few remarks on the question, Mr. Foulerton pointed out that it was normal to find vegetations on the valves of a certain proportion of apparently healthy rabbits; he presumed the authors had eliminated this source of fallacy. He also asked whether they had been able to produce an artificial immunity in their animals; it was well known that in man an attack of acute rheumatism predisposed to a subsequent attack and did not confer an immunity. Dr. Rist, Paris, agreed that the bacillus described formerly by Achalme as the specific organism of rheumatism was an accidental contamination, and asked why it was that the diplococcus described by the authors had not been discovered before since it seemed so easy of demonstration. Mr. Bokenham referred to the fact that he had found valvular lesions in some rabbits that he had inoculated with streptococci. Dr. Harry Campbell asked whether there was any especial tendency for the vegetations in the rabbits' hearts to be confined to the left side as in man. Drs. Poynton and Paine replied. They had not found that any immunity could be produced in rabbits. The reason why the diplococcus had not been discovered before, they thought, was due to the fact that it was generally very scanty in the exudations, and that it was not to be found in the places in which it was generally sought, namely, the necrotic patches in the valvular vegetations, but at some little distance from those spots. Dr. Harvey Goldsmith (Bedford) gave a communication upon the hæmoglobin value of the individual red blood corpuscles based upon a number of experiments he had made with a new instrument the object of which was to determine, if possible, the hæmoglobin value of the corpuscles themselves precipitated by centrifugalisation. He dealt with healthy adult males and females only. The two chief points which he brought forward were that the variability compatible with perfect health were enormously larger than was generally thought, and that the red blood corpuscles in women were smaller than in men. Dr. Lazarus-Barlow made a few remarks and asked whether it was not possible that the difference in the size of the corpuscles in females might be in some way related to the common occurrence of chlorosis in that sex. A paper by Mr. Nuthall and Dr. Hunter upon the bacteriology of the cerebro-spinal meningitis was then read by the Secretary in the absence of the authors. They maintained that the condition, both when endemic and when sporadic, was caused by a single variety of micro-organism which was the M. intracellularis, although the micrococcus was found under two forms that differed slightly from one another. The President felt that there was a great confusion as to cerebro-spinal meningitis, more that one type of disease being included under the name. Mr. Foulerton had had recently three cases of meningitis that were clinically and macroscopically indistinguishable, but which differed essentially in that in one case the cause was streptococus pyogenes, in another pneumococcus, and in the third M.intracellularis. Dr. Lazarus-Barlow thought that the authors had made good observations, but had completely mistaken the significance of those observations. He thought it was impossible to give better proof than the authors had done that at least M.intracellularis and pneumococci were concerned in the production of cerebro-spinal meningitis. He alluded to the difference between the two micro-organisms when stained by Gram's method. Mr. Pakes, Mr. Foulerton, Dr. Rist (Paris), and Dr. Paine joined in the discussion, which turned upon the question of the differential value of Gram's method of staining. Opinions were very divided, and it was felt that bacteriologists should come to a general agreement as to the exact conditions under which the staining could be said to be present or absent. If such an agreement were arrived at it was felt that the process would prove much more satisfactory than it was at present.

## SECTION OF OPHTHALMOLOGY.

THE work of this Section was begun by Mr. Blair, who showed a new portable refractometer. Mr. Roll then read a paper on the Hess Operation for Ptosis, which he had somewhat modified. He showed photographs of patients before and after the operation had been performed. Mr. J. R. Coulter showed some interesting fields and strongly advocated the testing of fields with black spots. Mr. Hartridge wished that all observers would state the size of the square used when taking fields. Mr. Henry Power read a paper on the Performance of Depression for the Cure of Cataract. He stated that he had many times seen it done in his early life, and had also performed the operation himself. He advocated it in some cases of old, feeble patients, in those who were deaf, and also in lunatics, idiots, etc. Mr. Jessop mentioned one successful case he had seen done abroad in a second eye after the first had been lost from hæmorrhage, but stated that he had never done the operation, and asked if Mr. Power operated through the sclera or cornea. Mr. Richardson Cross had done it in one case of tremulous iris. Mr. Roll once did the operation accidentally when extracting the lens. He subsequently extracted it with good result. Mr. Tatham Thompson had done it once eighteen months ago with excellent results. Mr. Power, in reply, stated that he operated through the sclera. Mr. Vernon Cargill next read some notes on his ophthalmic experience in the Imperial Yeomanry Hospital in South Africa. He showed museum specimens and fragments of bullets which had destroyed or injured eyes. He described the most frequent injuries met with as the result of gunshot wounds, and also more rarely of shell wounds. A discussion on the Relation of Gonorrhœa to Diseases of the Eye, exclusive of Purulent Ophthalmia, was then opened by Mr. Lawford. He described some cases in which iritis and other lesions occurred after the disease. The frequency of these was more marked in males than females, but the statistics were very limited. The most common form was iridocyclitis, together with scleritis and episcleritis; the least common forms were retinitis and neuro-retinitis, and even bilateral infection of the lachrymal gland. Mr. Hamilton described a case of gonorrhœal iritis in which there was no arthritic infection. Dr. Yeld had recently analysed many cases of iritis, and had found that gonorrhœa was responsible for many. Dr. Darier had seen many cases associated with endometritis, which were rapidly cured when the uterine affection was treated. Mr. Henry Power thought that cases of gonorrhœal iritis must be excessively rare. Mr. Richardson Cross was always on the look-out for cases, and frequently found such. Colonel Drake-Brockman had in India seen cases of

iritis associated with gonorrhœal ophthalmia. Mr. Sydney Stephenson had seen cases of arthritis in children associated with gonorrhœal ophthalmia. Mr. Devereux Marshall described the characteristic transparent exudation in the anterior chamber. Mr. Vernon Cargill drew attention to the numerous cases of rheumatic iritis in which there was a history of gonorrhœa. Mr. Hamilton read a paper on Hypopyon Ulcers of the Cornea, in which he advocated the cutting of the vessels and local bleeding. The actual cautery he thought indispensable. Mr. Richard Williams frequently found the cautery inefficient, but made a vertical linear incision and let out the lymph. Mr. Tatham Thompson looked upon formalin as his sheet anchor, and subsequently used iodoform ointment. Mr. H. E. Jones had almost given up the cautery. Dr. Darier strongly advocated the careful use of fluorescine and the actual cautery. Dr. Barr agreed as to the great value of the cautery and fluorescine, but disapproved of dressings over the eye, and preferred the instillation of castor oil and iodoform. Dr. Ward Cousins showed an irrigator he had introduced for the cleansing of the conjunctival sac in cases of purulent ophthalmia. At the final meeting of this Section Mr. Edridge-Green read a paper on the Essentials of a Test for Colour Blindness, adversely criticising the Holmgren test. He strongly advocated the use of names when testing colours. Mr. Devereux Marshall agreed that Holmgren's tests were fallacious. Mr. Gustavus Hartridge read a paper on the various preparations of silver in ophthalmic work, and gave the preference to protargol. Dr. Darier thought nitrate of silver very harmful in feeble children, and preferred constant applications of a drop of 5 per cent. protargol, and later on the nitrate of silver was useful. Mr. John A. Brown read a paper on the suprarenal gland in ophthalmology. Chloretone acted best as a preservative, but it was preferable fresh. He recommended it in hay fever and various other conditions, but he thought it very harmful in corneal ulceration. Dr. Darier read a paper on some of the latest discoveries in ophthalmic therapeutics. In glaucoma suprarenal extract diminished the tension and made the eye much less vascular. Acoine when injected subconjunctivally was a powerful anæsthetic, though it had no use when instilled only into the conjunctival sac. Dionine was useful with atropine in helping to dilate the pupil in iritis, it was also an antiseptic and analgesic and relieved the pain of acute glaucoma and iritis. Dr. Grainger though that Jacques solution of suprarenal extract was far the best. Dionine was very useful for diagnostic purposes. Dr. Maddox agreed as to the value of suprarenal extract, especially in operations on the eye, making it avascular. Dr. Darier replied. Mr. Sydney Stephenson and Dr. George Carpenter read a note on Tuberculosis of the Choroid. In miliary tubercle they usually found two or three spots, while in chronic tuberculosis the lesions might be multiple or single. Sometimes it might assume the form of an intraocular growth, and occasionally it might become quiescent. The President mentioned a case in which a large mass of tubercle of the choroid subsided under rest and treatment. Mr. A. S. Percival described a case he had seen. Mr. Dykes Bower suggested that some of the lesions depicted might have been of a congenital origin. Mr. Richardson Cross opened a discussion on the Varieties and Treatment of After-cataract. No method of operation would entirely prevent the formation of after-cataract. In ordinary cases a modified Bowman's needle sufficed, but the capsule should be cut and not torn. In other cases scissors should be used to cut the capsule, and as a last resort the capsule might be extracted. The President thought that a ground-down Graefe's knife was far better than a needle; Dr. Darier that great care should be taken in needling not to go deeply into the vitreous. Mr. Power described various methods he had used, but thought the less done to secondary cataract the better. Mr. Devereux Marshall thought needling a dangerous operation, but if the operation had to be done, the sooner the better. Remarks were also made by Mr. Dykes Bower, Mr. A. H. Thompson, Mr. Roll, and Mr. Cargill. Mr. Hartridge showed his capsulotomy needle. Mr. Richardson Cross replied, and stated that he always inserted his needle at the periphery when operating. Mr. H. E. Jones moved a resolution concerning the compensation of workmen after eye injuries, which was seconded by Mr. Henry Power.

### Section of Diseases of Children.

At the second meeting of this Section a discussion was opened by Dr. Foord Caiger on the Early Diagnosis of the Acute Specific Fevers. He advanced a provisional classification of specific fevers based on a recognised similarity in their clinical aspect during the early period of illness. In this way a group was obtained characterised at an early stage by catarrh of the naso-respiratory tract, and by pyrexia, the group including measles, rubella, the ordinary febrile cold, and whooping-cough. The frequency of occurrence and diagnostic significance of Koplik's spots was alluded to, and the spots themselves minutely described. Dr. Caiger considered them of absolutely certain import when found, but he had not found them present quite as often as some other observers. The diagnosis of certain affections attended with laryngeal stridor was next discussed, and a further group was suggested of those cases which were attended with febrile sore throat, namely, tonsillitis, diphtheria, and scarlet fever. Points of difference between diphtherial sore throat and follicular tonsillitis were alluded to. Several axioms were laid down with reference to the diagnosis of diphtheria bacteriologically and clinically, and the value of Neissner's stain in making a positive bacteriological diagnosis of diphtheria was dwelt on. A diagnosis should never be based on a bacteriological examination alone. The differentiation of those diseases which resembled each other by the possession of a diffused erythematous eruption, namely, scarlet fever, measles, and rubella was also considered. Dr. Goodall referred to the time at which the rash in measles appeared, the prodromal rashes of measles and varicella, the remission of symptoms occasionally observed, the diagnostic value of Koplik's spots, the difficulties in diagnosing scarlet fever, and the question of the incubation period in that fever. Dr. Ashby alluded to the occurrence of Koplik's spots and the incubation period in measles, and raised a question as to the spasmodic cough occurring after influenza, the importance of recognising large glands at the angle of the jaw as a means of diagnosis in diphtheria and scarlet fever, and the characteristic rashes of empyema and pneumonia. Dr. Poynton described some difficult cases that had come under his notice in a public school, and referred to the rash that might be due to iodoform poisoning. Dr. W. J. Tyson referred to the difficulties of diagnosis in obscure cases of so-called "gastric" and typhoid fevers. Dr. Watson Williams showed drawings of Koplik's spots, and gave his experiences in two epidemics of typhoid and measles respectively. Dr. Lovell Drage urged the importance of looking on every sore throat as a possible source of diphtheria, and deprecated the looking at every sore throat as a separate entity. Dr. Mansel Sympson referred to the enlargement of the posterior cervical glands in German measles, and to questions of the heat of the skin and convulsions in early stages of infectious disease. Dr. J. H. Thursfield then read a paper on Widal's Serum Reaction in the Diagnosis of Typhoid Fever in Children, and Dr. Caiger continued the discussion. Dr. Sinclair White read a paper on the Ultimate Results of Tendon Grafting in Infantile Paralysis, and Mr. Abbott related a case in point. Mr. Tubby continued the discussfon, and Dr. White replied. Mr. F. C. Abbott read a paper on intrauterine rickets, and showed a remarkable specimen of the case; and Dr. Ashby spoke on the subject. At the third meeting of this Section the proceedings were opened with a paper by Mr. H. J. Stiles on the Radical Cure of Hernia in Infants and Young Children. Details of operations on 100 cases done by himself were given with particulars of the varieties of the condition and ages of the patients at the time of the operation. He referred to his method of operation and to the subsequent treatment. He had lost three cases but from causes unconnected with the operation. Mr. McAdam Eccles referred to questions of essential causes of hernia, treatment, strangulation, operation, sutures and after-treatment. Dr. F. Cuthbert and Dr. Mansel Sympson also spoke. Dr. Ferguson (Chicago) described the operation done by him, in which a portion of the external oblique muscle was transplanted into Poupart's ligament in order to give support to the internal ring. Dr. William Ewart and Dr. Lee Dickinson read a paper on Two Cases of Chronic Hydrocephalus in Infants treated by Tapping and the Introduction of Aseptic Air in the Place of the Fluid, which Dr. Pritchard, Mr. McAdam Eccles, and Mr. Stiles discussed. Dr. E. F. Batten

and Dr. Still contributed papers on Suppurative Pericarditis in Children. Dr. Mansel Sympson read a paper on a case of Suprapubic Lithotomy in a Child, and showed a large stone removed. Dr. Pritchard read a paper on Overfeeding in Children. Dr. A. H. Bampton contributed a paper on Mumps associated with Endocarditis, and Dr. A. G. Foljambe Forster showed three clinical cases, one of Pseudo-hypertrophic Paralysis, a case of Paralysis following Acute Pneumonia and Meningitis, and a case of Absolute Displacement of the Heart over to the right of the sternum due to abscess and contraction of the right lung.

## SECTION OF LARYNGOLOGY AND OTOLOGY.

A DISCUSSION on the Local Treatment of Laryngeal Tuberculosis was opened with papers by Dr. Middlemass Hunt, Dr. Barclay Baron, and Mr. Richard Lake. Dr. McCall spoke favourably of a combination of resorcin and orthoform in varying proportion for local application, especially in cases where there were exuberant granulations. Local and general treatment must go hand in hand. Dr. Jobson Horne considered that before the larynx was in a condition to require surgical treatment there was practically always cavitation in the lungs. Dr. Watson Williams recounted his experience of submucous injections of guaiacol in almond oil and of weak solutions of mercury in cases of tuberculous new formation without breach of surface. The treatment provoked some reaction, but the subsequent result had been very good in a considerable number of his cases. He emphasised the importance of sanatorium treatment and of prolonged rest of the larynx; even whispering should be avoided. Dr. StClair Thomson thought the subject was in a very unsatisfactory condition, practically no progress having been made during the last six or seven years. He desired to see definite statements of results, not vague and general expressions of opinion. Frequently, as Dr. Fowler had shown, the arytenoid joint was affected, and in such cases rest was as imperative as in the case of a tuberculous hip or knee. Little could be expected from surgical treatment in the third stage. Earlier diagnosis was the first condition of progress. It was of little use curing the larynx if the patient died just the same. Dr. R. H. Woods had seen several cases of apparently complete cure continuing well after a year or more. Dr. de Havilland Hall had seen great good from the lactic acid treatment, even in some most unpromising cases. He would never attack an unbroken surface in the larynx in a case of tubercle. In ulcerative cases orthoform was most useful. Dr. Permewan thought that probably myrotomy should be performed early if at all. He had had good results from lactic acid applied after curetting. Localised changes were hopeful, but general infiltration was hopeless. Rest was important, especially from useless coughing. He did not forbid whispering. Dr. Donelan thought rest and cleanliness were the essential things in treatment. Dilute antiseptic sprays were useful if persistently used. Dr. Milligan thought surgical measures must always be risky, because there was a constant source of infection below the larynx in the lungs. He had seen temporary cure from moderate curetting and lactic acid. Dr. Bronner had had good results from formalin. Dr. Haring thought the intermittent progress of tuberculous diseases might explain some apparent results. Mr. C. A. Parker applied strong lactic or chromic acid at once under cocaine. He recalled three cases of cure. Cases with much œdema should be left alone. Dr. Griffith Wilkin strongly recommended powdered menthol. The President said no cure of the larynx could be expected with active disease in the lung. General treatment should go with local. Insufflations, as of heroin or morphine, were often most useful, and had more of a local than a general effect. Dysphagia might be effectually relieved by compressing the head very firmly with the palms of the hands upon the ears. The firmer the pressure the greater the relief. Dr. Hunter Mackenzie read a paper on the Treatment of Papillomata in Children, which was discussed by Drs. Permewan, Spicer, and Tilley. Dr. Bronner read a note on the Treatment of Papillomata by Formalin, and Dr. Haring one on Multiple Papillomata. The President remarked that tracheotomy was not curative, though tending to prevent recurrence. He disapproved of thyrotomy, as it injured the voice. In operating endo-laryngeally under anæsthesia there must be no sponging. Only during the first half minute could a view be obtained. At the third meeting of this Section Dr. L. H. Pegler read a paper on *Morcellement* of the Tonsils, and showed the instruments he used. Dr. Brown Kelly said he had given up using the tonsil punch he introduced some years ago. It was difficult to get an instrument in which the punching part fitted perfectly into the bolster, and unless it did tags of tissue had to be torn away. He now preferred Heryng's double curette fitted in a straight tube. Cocaine dissolved in aniline oil gave satisfactory anæthesia. Dr. Woods used the vulsellum and bistoury, followed by the use of Grünwald's forceps. Dr. Tilley remarked that *morcellement* was only to be thought of in cases where the guillotine could not be used. Enucleation was an excellent method under general anæsthesia. Dr. Herbert Tilley read notes of three cases, namely:—(1) Aural Exostosis with Mastoid Suppuration; (2) Chronic Frontal Sinus Empyema; (3) Bilateral Empyemata of all the Nasal Sinuses and of the Mastoid Antrum. Dr. S. Spicer thought a complete diagnosis could be best made under a general anæsthetic. Sometimes a single central trephine opening enabled one to treat both sinuses. Dr. Woods deprecated the use of the mallet and chisel in the external meatus. He used a small trephine rather less in diameter than the exostosis, and so made as to drill a hollow cylinder of bone out of it. The little central column of bone could be felt to shake as the deep side of the growth was approached, and thus danger to the drumhead was easily avoided, even when the growth extended close to it. Dr. Watson Williams then gave a Lantern Demonstration of Stereoscopic Views of the Nose and its Accessory Sinuses; Mr. Geo. P. Field read notes of Aural Cases from South Africa. Dr. Chas. Nurden inquired as to the explanation of the influence of sea bathing in causing aural exostosis. He had seen many cases, and generally found exacerbations of deafness to be due to accumulation of wax. Dr. S. Spicer had not had much success with pilocarpin, and desired to know reliable indications for its use. Dr. McKeown read a paper on the Defects and Insufficiency of the Commonly-accepted Theory of Adenoid Deafness, which was discussed by Drs. Spicer, Permewan, Jobson Horne, and the President.

## SECTION OF TROPICAL DISEASES.

SIR WILLIAM MACGREGOR, Governor of Lagos, contributed a paper on Antimalarial Measures now being taken in Lagos. As a preliminary, the Europeans and natives in the colony were being educated in the prevention of malaria by lectures, teaching in schools, and the distribution of pamphlets. The active operations were the administration of quinine, the use of gauze netting, and attacking the mosquitos in their breeding ground. The taking of quinine should be made compulsory amongst Government servants, and they should be tested as to toleration before being engaged. Prevention by mosquito-netting was being carried out, but, as a rule, such good results could not be obtained in Lagos as in Italy. Swamps were being filled in, kerosene being used, undergrowth around dwellings thinned, and general sanitary measures adopted in town and along the railway. There was practically no propagation of mosquitos in the interior, and were the coast swamps, etc., cleared of mosquitos, it would be feasible to exterminate mosquitos in the hinterland entirely. The system of Europeans living quite apart from natives was condemned. Dr. J. M. Young contributed a paper on the Prevention of Malaria in Hong Kong. In the malarious districts the parasites had been found in the blood of children, the living adult *Anopheles* had been caught, and breeding pools had been localised in the immediate vicinity. He had put twenty *Culex* and twenty *Anopheles* larvæ together in water. The *Culices* destroyed the *Anopheles* in a very short time, proving that the former were an important factor in the extermination of *Anopheles*, and therefore of malaria. The distance from the breeding pools to the houses was in no case greater than 150 yards. The practical steps which proved effectual were found to be clearing the district of shrubs, grass, bamboos, etc., and draining the breeding pools. To treat the pools with larvicides alone caused the mosquitos merely to spread and breed elsewhere. Captain C. F. Fearnside, I.M.S., then stated the result of investigations on how far the *Anopheles* mosquito was the bearer of the malarial organism. Dr. G. A. Williamson

(Larnaca, Cyprus) next contributed a paper on Fever in Cyprus, which he declared to be mostly malarial. Dr. G. C. Low contributed a paper in which he stated that neither *Anopheles* nor malaria existed in Barbadoes. In the discussion on the papers dealing with malaria Professor Rubert Boyce felt convinced that more good would be accomplished by extirpation of mosquitos than by segregation. Dr. Edward Henderson (Shanghai) viewed preventive measures against malaria amongst the natives of China as well nigh chimerical, but the example set by Europeans would have in time an effect. Dr. Patrick Manson, said that measures which proved beneficial and possible in one town or district might be inapplicable in others. Taking quinine when a large population had to be dealt with was a form of treatment quite inapplicable, but for a small community it was useful. Dr. Young remarked on the onslaught of *Culex* larvæ on the *Anopheles* and the destruction of the latter as quite possible, but when a sufficiency of food was present *Culex* and *Anopheles* larvæ lived in the same pools amicably. Dr. Manson deprecated the tendency to throw over any method of prevention merely because it was not perfect; if amelioration even could be attained a great gain would have accrued. Colonel Poynder, I.M.S., believed it was impossible to introduce preventive measures against malaria amongst the natives of India. Mr. Cantlie remarked that as a means of destroying mosquitos within a mosquito net nothing equalled the "Swatow lamp" used in China. He had induced a surgical-instrument maker to make the lamp, and the "Swatow lamp" could now be obtained in London. Resolutions were passed on subjects arising out of Dr. Low's paper. Professor F. M. Sandwith (Cairo) then read a paper on the Entrance of Ankylostoma Embryos into the Human Body by Means of the Skin. Lieutenant-Colonel F. M. Giles, I.M.S., had always maintained that infection of the human being with ankylostoma by drinking water was most exceptional. He had been driven to the conclusion that infected earth was the source of infection, the parasite being conveyed by dirty hands to the mouth, and hence to the alimentary canal. Dr. Manson, believed that the embryos of ankylostoma might occasionally enter by the skin; but considered that further experiments should be carried out in this country, where the absence of previous contamination of the individual could be ensured. Dr. Andrew Duncan read a paper on the Causation of Enteric Fever in India. The young European soldiers were exposed to infection through the liquids they imbibed in the native bazaars; through the dust and the flies which abounded in India. The soil of the country was also year by year becoming more impregnated with the enteric bacillus. He upheld the protection afforded against typhoid by Professor Wright's serum. Colonel Crombie, I.M.S., did not regard Professor Wright's inoculation as an efficient protection; but he believed, however, that inoculation against typhoid had a future. Captain Battye, I.M.S., described an experiment made in India, in which servants were made to wash their hands in a common basin, but the typhoid bacillus was not found in the water. Colonel Poynder, I.M.S., believed that children in India, by contracting typhoid in early years, became immune. Professor Sandwith said that Wright's plan of treatment was by no means perfected, and at present it did not afford marked protection. Major F. P. Maynard then read a paper on Ophthalmic Complications of Plague. At the final meeting of this Section Lieutenant-Colonel A. Crombie opened a discussion on Maladies of European Children in Hot Climates. Speaking generally, it might be said that the sick rate of European children was lower in India than in the United Kingdom, the reverse to the death-rate. It was therefore obvious that the illnesses of European children were more frequently fatal in India. Were, however, malaria excluded from the diseases in India, the British child in India would have less chances of illness by 10 per cent. than the child at home. From army statistics it was shown that diseases of the alimentary canal, although generally believed to be more prevalent in India than at home, were not really so; it was the gravity of the affections in India that caused alarm. The admission rate for all tuberculous diseases appeared to be higher among European children in India; but the death-rate and case-mortality were both lower. Dr. Edward Henderson said that in Shanghai, with a subtropical climate, children appeared to suffer more during the hot months than adults. Heat not only caused bodily languor and anæmia, but in addition made food was less wholesome. Bottle-fed infants were much more apt to suffer than breast-fed infants. Dr. Manson, F.R.S., inquired whether trismus neonatorum, diphtheria, and hypertrophic cirrhosis of the liver were common in India. Major W. H. Burke, I.M.S., stated that enteric fever was as a rule rare amongst natives of India, but he had treated many cases amongst Parsees and amongst quite the higher ruling classes in India. The Parsees had no caste, and the rajah was above caste prejudices, in this way, perhaps, accounting for the diseases. Mr. Cantlie remarked that trismus nascentium accounted for 50 per cent. of the total deaths in Hong Kong. Tuberculosis was very prevalent amongst half-castes in China. Dr. Crombie, in reply, said that diphtheria was frequent in India, but that hypertrophic cirrhosis was unknown amongst European children in India. Mr. T. D. Gimlette, (Pahang) described an outbreak of gastro-intestinal troubles amongst soldiers (Sikhs and Pathans) at Kudla Lipis, Pahang, Malay States, which ceased when the use of the water collected from zinc roofs was discontinued. Concerning the alleged occurrence of metallic (arsenic) poisoning as a cause of beri-beri, Dr. Max Simon, Dr. Manson, and Dr. Henderson strenuously opposed any such possibility. Dr. J. Preston Maxwell (China) contributed notes on the frequency of abscess occurring in persons with filaria nocturna in the blood. In one case only he had found a portion of a dead parent worm. He classified filarial abscesses as those of the scrotum, the limbs, and those occurring in the thorax and abdomen. Abscess in the scrotum might be suppurating hydrocele, abscess of the cord, and abscess below the testicle. Dr. Manson said filarial abscesses occurred directly from dead parent filariæ or from obstructed lymphatics. Grave conditions were apt to be produced by death of a parent worm in the thorax or abdomen. Lieutenant-Colonel Crombie, I.M.S., stated that Colonel Maitland, I.M.S., Madras, had removed groin glands and found parent worms. He considered removal of lymphatic glands from the groin an unscientific treatment for filariasis, and suggested short-circuiting the passage of lymph into the venous circulation in the thigh by a plastic operation. Professor MacWilliam (Aberdeen) believed that there was no physiological reason why a lymphatic should not be made to open directly into a vein in the thigh or elsewhere. Mr. Cantlie believed he found empty sheaths of filarial embryos in two cases of suprahepatic abscesses in Hong Kong. Dr. J. Everett Dutton stated that the transmission of the filarial embryos to man by the mosquito bite had been repeatedly confirmed. *Anopheles costulis* were caught in numbers in Nigeria, and found to be infected with filaria. In the labium of these insects filariæ were found fifteen days after feeding on cases of filaria nocturna, and the question arose, How did the filariæ escape from the chitinous case of the labium? Dr. Dutton claimed to have demonstrated that towards the tip of the labium existed a very delicate loose membrane covered by fine hairs, and it seemed probable that it was by a rupture of this membrane that the filariæ escaped. Dr. Manson considered Dr. Dutton's observation a very important one. His explanation seemed more probable than the explanation given by Grassi. Dr. W. G. Ellis (Singapore) contributed a paper on Asylum Practice in Singapore. There was a marked absence of acute insanity amongst natives; primary dementia was not uncommon; belief in witchcraft was universal; melancholia was rare and never very acute; general paralysis of the insane was rarely seen amongst Asiatics. Beri-beri was a frequent cause of mortality amongst inmates of insane asylums. He also alluded to the psychology of running amok. Dr. Moffat (Uganda) said that such diseases as locomotor ataxy and general paralysis were extremely rare in East African natives, although syphilis was common enough. Amok was frequent amongst Soudanese; they described it as "seeing the devil," and professed absolute ignorance of their actions when the fit was over.

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### Section of Navy, Army, and Ambulance.

Sir William Mac Cormac, Bart., K.C.B., K.C.V.O., at the opening of this Section on the second day read a paper

entitled Some Remarks, by way of contrast, on War Surgery, Old and New. The first employment of choloroform on a large scale in the field in the Crimean war and its life-saving effects were alluded to, and the mortality from septicæmia, gangrene, and hæmorrhage in gunshot wounds prior to the employment of antiseptic surgery. In the Egyptian war of 1882 septicæmia in military surgery was unknown. The limited amount of local damage due to modern rifle bullets and the rapid healing of the injuries were emphasised. Primary fatal hæmorrhage was rare, while in the Crimean and Franco-German wars 20 per cent. of wounded were estimated to die from hæmorrhage on the field. The character of bullet wounds was changed, their severity diminished, as also their frequency. The soldier's antiseptic pad might comfort the wounded, but its antiseptic adequacy was doubtful. The Roentgen rays were of great service, and should abolish the probe, a source of mischief, pain, and suffering. Dr. Robert Farquharson, M.P., considered that Sir William Mac Cormac's address formed a complete vindication of the Army Medical Department and their work in South Africa. Fleet Surgeon Gilbert Kirker referred to his experiences of military surgery in the Russo-Turkish war, when he anticipated the humanity of the modern bullet wound. Among the Turks, in those days even, he witnessed femur and knee-joint wounds healing without suppuration. Surgeon-General O'Dwyer dwelt on the difficulties of attending the wounded in the very extended firing line in modern actions, and the great increase of medical *personnel* and transport requisite. Surgeon-General Hamilton, deprecated the use of expanding bullets. Surgeon-Major Poole stated that the effects of expanding bullets were the worst, while men had come to him apparently happy individuals who had had Mauser bullets through their heads. Surgeon-General Harvey, C.B., considered that the surgical results of the first field dressings in the Indian frontier wars had been excellent, but the fanatical Ghazi was not checked by the modern bullet, which went through him like a knitting needle through a pat of butter. He thought a stopping bullet was legitimate and necessary in conflicts with savage races to save the lives of our own men. Mr. J. W. Smith, from his experiences in South Africa, regarded the antiseptic pad as inefficient, either as an aseptic or antiseptic agent. Dr. Leigh Canney then read a paper on the Theory of Airborne Typhoid in Armies. He maintained that water was the chief means of spreading typhoid, and that dust and flies were an extremely weak medium of conveyance in armies. Surgeon-General Cuffe, C.B., remarked on the great difficulty frequently experienced in tracing the avenue of communication of enteric. Dr. J. W. Washbourn also believed that enteric fever was waterborne—not airborne. Lieutenant-Colonel Giles, maintained that water distribution entirely failed to account for many outbreaks: flies and dust must be considered as possible distributors of enteric; flies were prevalent in the wet season. Dr. E. E. G. Simons furnished evidence of flyborne enteric fever from open street drains in which he had found the enteric bacillus. At the final meeting of this Section Mr. Cantlie read a paper on the formation of a Medical Cadet Corps. Medical students were not quite the right *personnel* for the Volunteer Medical Staff Corps, to carry stretchers and such laymen's work, they might be doing much better service and would be better organised as Medical Cadet Corps in connection with their medical schools, and such service be credited if they ultimately joined the volunteers and a pass certificate were granted, and also for the militia. They should have special consideration in nomination for entry into the Naval Medical Service, R.A.M.C., and the I.M.S., and further they might have an allowance of time towards pension or retirement according to their years of training, not that it should affect their seniority. The Volunteer Medical Staff Corps should then be transferred to laymen, with whom it was always popular. A Government medical school for training medical officers for the services had much more against it than for it, but the tendency of medical cadet corps would be to lead young medical men to desire to serve the State, to which the profession owed much in many ways. The President favoured the consideration of this proposal being referred to the War Office, as if approved and supported it would be accepted by the medical schools. Surgeon-General O'Dwyer favoured competition for entry into the public medical services. He had not found that the medical officers of volunteers were prepared for foreign service. Government had lately discouraged school cadet corps. Surgeon-General Cuffe, C.B., was opposed to nomination for the medical services. Surgeon-Lieutenant-Colonel Coates, V.M.S.C., deprecated the breaking up, as in South Africa, of detachments of the Volunteer Medical Staff Corps. He favoured nomination by the heads of medical schools for the services, with modified competition for places. Mr. Cantlie proposed, Surgeon-Lieutenant-Colonel Coates seconded, and it was agreed:

That it be a recommendation to the Council of the Association to consider whether the establishment of medical cadet corps in connection with the medical schools is feasible or desirable, and if so whether the matter should not be brought to the attention of the War Office.

Mr. J. Hall-Edwards described his experiences in South Africa of Roentgen rays in military surgery in the Imperial Yeomanry Hospital. He spoke highly of the electrolytic interrupter, and recommended for military work on active service the supply of an oil engine and dynamo specially designed for *x*-ray work. Surgeon-General O'Dwyer dwelt on the great advantages of the Roentgen ray skiagraphs in indicating the exact injuries of discharged soldiers. In reply to questions by members of the Section, Mr. Hall Edwards treated of bullet wounds, specially detailing illustrative cases of bullets lodged in the spinal column and neck of the femur. He subsequently exhibited lantern slides illustrating these field equipments and methods. Mr. Cuthbert Wallace, gave a lantern demonstration of the external injuries caused by bullets at long and short range he had seen in South Africa, the Mauser at short range causing wounds of exit which might be mistaken for the results of expanding bullets.

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### Section of Dermatology.

The second day's proceedings commenced with a discussion on the Treatment of Skin Diseases by Finsen's Light Method and *X*-Rays, opened by Mr. Malcolm Morris. He reviewed the history and *modus operandi* of the Copenhagen method, and then gave an account of the results obtained in his own cases, in which work he had been assisted by Dr. Dore. Various conditions were treated, such as lupus vulgaris, lupus erythematosus, alopecia areata, and rodent ulcer, with more or less success. In epithelioma cutis and keloid, the results had been negative. He compared the Finsen light and Roentgen rays, insisting on the usefulness of the latter where mucous membranes were involved. The drawbacks, inconveniences, and difficulties arising in connection with the treatment were also touched on. On the whole, he confirmed the claims put forward by Dr. Bie, Professor Finsen's assistant, but they required some qualification. Two patients, with severe lupus vulgaris, who had undergone treatment by Finsen's light and the *x*-rays, were then brought before the meeting, in illustration of the opening paper. The subject was discussed by Dr. A. B. Blacker, who alluded to a more convenient and much less expensive light apparatus devised by MM. Lortet and Genoud, of Lyons; and by Dr. Sequeira, who gave the results of the Finsen treatment at the London Hospital, and demonstrated a modification of the Lortet apparatus. After Dr. Allan Jamieson, of Edinburgh, and Dr. H. G. Brooke, of Manchester, had spoken, Dr. Norman Walker, of Edinburgh, pointed out there was a danger of the treatment falling into the hands of quacks, and that it was important the employment of such powerful forms of energy as the *x* rays, for instance, should be only applied under proper medical supervision. The subject was further discussed by Dr. Stopford Taylor, of Liverpool; Mr. Hall-Edwards, of Birmingham; Mr. Willmott Evans, of London, who described a small light apparatus devised by himself; Dr. Noiré, of Paris, who gave details of the results obtained at the Hôpital Saint-Louis; Dr. G. B. Batten; Dr. Bolton, of Nottingham; and Dr. H. Radcliffe Crocker. The last speaker insisted on the fact that notwithstanding the usefulness of the light treatment, it must not be concluded that the older methods, such as scarification, were to be abandoned. This was far from being the case. Dr. A. Whitfield then contributed a note on Erythema Induratum. Drs. Colcott Fox and J. M. H.

Macleod, of London, gave a summary of some work on parakeratosis variegata; and Dr. Wallace Beatty, of Dublin, read a short paper on Pityriasis Rubra Pilaris. The proceedings concluded with remarks on the Microbiology of Chronic Eczema by Mr. Willmott Evans, and on The Treatment of Eczema, by Dr. Waldo. At the third meeting of this Section Dr. Colcott Fox opened a discussion on Seborrhœa, reviewed the functions and distribution of the sebaceous and sweat glands, and examined the various views held as to the nature of the disorder. This was followed by an exposition of the results of his own investigations by M. Sabouraud of Paris, who insisted that seborrhœa capitis, with progressive early calvities, was due to a specific microbacillus, which also was the cause of acne vulgaris, but in this latter condition invasion by other microbes occurred secondarily. M. Sabouraud explained his position. He looked upon the sexual development of the sebaceous glandular system as a point of primary importance in causation, but it did not invalidate the microbacillary factor. The subject was discussed by Drs. Allan Jamieson and Norman Walker of Edinburgh, D. H. G. Brooke of Manchester. Dr. J. M. H. Macleod of London, Dr. Waldo of Clifton, Mr. George Pernet of London, Dr. T. D. Savill of London, Professor Dubreuilh of Bordeaux, and Dr. Leslie Roberts of Liverpool. Three papers on the effects of arsenic on the skin were then read and discussed: On Arsenical Eruptions (Dr. H. G. Brooke), on the Action of Arsenic on the Skin (Dr. Leslie Roberts), and on Epithelioma Supervening on Arsenical Keratosis (Dr. H. Radcliffe Crocker and Mr. George Pernet), and in connection with these drawings and sections were shown. Dr. Eldon Pratt then read notes on Purpura Hæmorrhagica associated with General Tuberculosis. A case of alopecia universalis melano-leucoderma associated with morphœa was shown by Dr. A. Eddowes, and symmetrical case of ichthyosis hystrix by Dr. Dent, of Cheltenham. A number of coloured drawings and photographs and models were also exhibited. In connection with the business of this Section Dr. Norman Walker proposed that the Dermatological Section should meet not less frequently than twice in four years. This was seconded by Dr. Colcott Fox and carried *nem con.* It was then decided, on the proposition of Dr. Walker, seconded by Dr. H. G. Brooke, that the resolution should be sent to the Council.

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## Third General Meeting.

The President of the Association in the Chair.

*Thursday, August 1st.*

### Presentation of Stewart Prize.

The President said that the first point was the presentation of the Stewart prize to Dr. Patrick Manson. The prize was established by the late Dr. Alexander Patrick Stewart for the encouragement of the study of epidemic diseases, and the prize consisted of an illuminated scroll and a cheque for £50. That prize had been unanimously awarded by the adjudicators to Dr. Patrick Manson. In honouring Dr. Manson, the Association was honouring itself, just as he had honoured his native country by the work that he had done and the discoveries that he had made. He (the President) was sure that they would all hope that Dr. Manson's life might be prolonged in order that he might add to that long roll of original researches and discoveries which he had made, which had not only been important owing to what he had himself discovered, but for the principles which he evolved and the suggestions which he had given to others which had been almost as fruitful as his own discoveries. He would not say a word more on the subject except to assure him that he considered it the greatest pleasure and privilege that he should be the means of presenting that gift to a recipient so worthy to receive it.

Dr. Patrick Manson then received the prize, and, after thanking the President, retired.

### Address in Surgery.

The President then called on Sir William Thomson, Honorary Surgeon to the King in Ireland, to read his Address in Surgery. He said it was quite unnecessary for him to say any words of introduction, because the name of Sir William Thomson was universally known. The members who were present would remember the time when his chief celebrity was his knowledge of the successful study of the surgery of the great arteries, but he had recently added to his experience that of the surgery of war and gunshot wounds.

[Sir William Thomson, who had a very hearty reception, then delivered the address, which was published in the British Medical Journal of August 3rd, page 265. At the conclusion there was great applause.]

The President was sure that they were all very grateful to Sir William Thomson for his very interesting address, of which perhaps the concluding portion was the most touching, showing the way in which the military and civil surgeons had served their country in the war, and submitted to discomfort and death in the service of their country. He had much pleasure in calling upon Sir William MacCormac.

Sir William Mac Cormac, who was received with great cheering, said he had to propose a resolution which he was sure would be at once accepted, and that was that the cordial thanks of the Association be given to Sir William Thomson for his able and interesting address. They had all listened with much pleasure and gratification to the exposition he had given of the admirable work he had done in South Africa. They all knew what that work had been, and they were aware of the distinguished position which he occupied at home. There could be no doubt that it was for the good of the country, and for the good of the soldiers who fought for the country, that men of Sir William Thomson's position should go out to help in the good work that was being done. Sir William Thomson had said many things in his address which covered a large amount of ground, and he (Sir William Mac Cormac) thought that in all he had said he most cordially agreed. The small calibre of the modern bullet had revolutionised the aspect of the surgery of warfare. Something had been said about the climate of South Africa; but in Cuba, where the weapons used were precisely the same as those used in South Africa, the injuries inflicted during the war proceeded on exactly the same lines and with precisely the same results as they did in South Africa. He need not tell those who knew Cuba that it was not precisely a health resort. The atmosphere there was not conducive to good results. The climate of South Africa was very different, but, notwithstanding that, he thought the fact that the injuries which occurred in Cuba had been exactly of the same description, with practically the same results as those inflicted in South Africa, showed that the climate had not much to do with it. He also agreed with Sir William Thomson in his remarks with regard to abdominal wounds. Before the war began there was little hope that any such results as had been obtained would be secured. He would quote one case that came within his knowledge. A man had a bullet wound through the cæcum; it was sewn up, but there was no extravasation in the abdominal cavity. There was no doubt in his mind that that man would have got quite well without the operation, and what was more extraordinary perhaps was that he got well with it. He also agreed with Sir William Thomson's remarks about leaving bullets alone. Unless they were making themselves disagreeable in some way he was quite certain they ought to be left alone. He had known of many cases in which efforts were made to look for bullets which resulted even in disaster, and he thought it could not be too strongly insisted upon that bullet-hunting was a very dangerous sort of occupation. He had much pleasure in proposing the resolution.

The President-elect (Mr. W. Whitehead) said he felt it was a very great honour to be asked to second the resolution. He could not, unfortunately, like Sir William Mac Cormac, criticise the military aspect of the paper read by Sir William Thomson, but he was very grateful indeed to hear him speak in such high terms of the Army Medical Corps, as he happened to be connected with one of the largest medical corps in the kingdom—a corps which had sent more men to South Africa than any other. He only hoped that what had been said might reach their ears, because he was sure they would be very grateful to have their merits recognised in such an important meeting as this. He had great pleasure in seconding the resolution.

The resolution was then put to the meeting and carried with acclamation.

Sir William Thomson in replying expressed himself exceedingly grateful for the kindly reception they had given to the proposal of Sir William MacCormac. He also was very much gratified to have from his old friend of so many years, Sir William Mac Cormac, approval of certain statements he had made. Of course it was impossible in an address which was limited by time to deal with more than two or three points, and even those could only be dealt with in a very cursory way. It was possible only to try to draw the larger lessons, and to present them in such a way as to make them intelligible. He himself was very conscious, and he was sure the members of the audience were too, of the many defects which there were in his address; but such as it was he had given it to them, and his reward had been the kindness with which it had been received by them, and the very attentive hearing which they had given him.

### Adjourned Discussion of Report of Constitution Committee.

Surgeon-Major Ince said that he had a notice on the paper. He was of opinion that the system of delegation proposed to be adopted was entirely unusual in other scientific and professional societies.

A Member: May I ask whether this is in order?

The President: I do not think that it is in order.

Surgeon-Major Ince: I do not think that it is myself. [Laughter.]

*Recommendation 16: Payment of Travelling Expenses.*

Clause 16, down to the words "determined by the constituency," was then agreed to.

On the last paragraph of the clause,

Mr. Pye Smith moved that the word "railway" should be inserted after the word "first class."

Dr. Woodcock: Is it suggested that members from Ireland should cross the Channel by railway? [Laughter.]

The Treasurer (Mr. Andrew Clark) said that he hoped that the meeting would allow the clause to stand as it was proposed by the Committee. It was a matter that had been discussed at some length at the Committee, and it was felt that it would be better to leave out the word "railway," mainly because members would come from Ireland perhaps, and would have steamboat expenses. There was another point. The clause suggested that the travelling expenses should be defrayed by the Association. It did not say whether they were to be defrayed out of the main funds of the Association or out of the funds of the Branches. It should be left to the Committee to decide whether it should be the Branches or the Association.

Dr. Redwood proposed that "second class" should be substituted for "first class."

This was not seconded.

Dr. Pope asked the Treasurer to tell the meeting what was to become of the funds that the existing Branches had in hand at the present moment.

The Treasurer: I should think that the funds have to be disposed of as the Branches like.

Mr. Jones Morris said that, as the representative of a small Branch and a distant Branch, he could say at once that the 4s. grant would not suffice for the travelling expenses of the members of the Council and the representatives.

Mr. Whitaker thought that it was the intention of the Committee that the word "Association" should mean the central funds of the Association, and that the meeting should be guided by the intention of the Committee in the matter. If the matter were not clear enough there should be an amendment to make it perfectly clear. He proposed that instead of the words "defrayed by the Association" there should be inserted the words "defrayed from the central funds of the Association."

This was agreed to.

Mr. George Eastes moved that the word "first class" should be changed into "third class."

The amendment was seconded by Dr. Pope.

Mr. Langley Browne said that a great many representatives would have to make very long journeys, and there was a marked difference in the fatigue between travelling first class and travelling third class in going a long way. He thought that they had better stick to first class fares.

The amendment was put to the meeting, and was lost.

Surgeon-Major Ince proposed that the travelling expenses should be entirely expunged both for the delegates and also for members of the Central Council.

The motion was seconded by Dr. Spicer.

Dr. Groves said that some American gentlemen who were visiting the meeting on the previous day expressed their astonishment that members of the Council should accept travelling expenses. They said that in America it would be considered *infra dig.* They were only too glad to do anything that they could to give expression to their sense of the honour done them by their professional brethren in choosing them.

Dr. Mullick asked for an estimate of what the expenditure would be.

Mr. Whitaker said that he had made a calculation of what the probable cost of paying the travelling expenses of the representatives would be. Through the kindness of the officials at the central office he had had a statement of the amount paid to members of Council for their travelling expenses for the last five years. The total was £2,915. The aggregate number of attendances for which this payment was made was 995. It worked out at an average of a little less than £3 per attendance. As the delegate meeting was drawn from the same areas as the Council it might be taken that the average expenditure would be on the same basis. Therefore, it might be assumed that the travelling expenses would be £3 per representative. The maximum number of delegates was to be 300, so that the total expense of paying the travelling expenses of the representatives when the reduction allowed by the railway companies to members attending the annual meeting was taken into account would not be more than between £600 to £700. With regard to the members of Council it was proposed that they should in future be paid their travelling expenses to the annual meeting as well as for the ordinary meetings of Council. Hitherto members of Council had had their fares paid for the Council meetings but not for attending the annual meeting. But the size of the Council was being reduced nearly one half so there would be a saving on each one of the four ordinary quarterly meetings. The last clause of the section as amended was then carried.

*Financial Statements.*

On paragraph 17, Section (A) Subsection (ii), Dr. E. Slade-King said that part of the duty of the annual meeting was to consider the annual financial statement. He submitted they were all members of a large limited liability company, and that they had each a pecuniary interest in the matter. They were all shareholders. It did not do to consider financial matters too much in a hurry. The habit that had hitherto existed had been to spend the money and then to ask the meeting to confirm the expenditure when it was too late to pick it to pieces. He desired to move:

That it be an instruction to the Committee A that would be appointed to draw up an article somewhat after this form:

That the Council present annually to the representative meeting an estimate of revenue and of expenditure for the coming financial year a copy of such estimate to be furnished to the Secretary of every Division not less than one month before the annual meeting.

Dr. Groves seconded the motion.

Dr. Brown Ritchie asked how they could have a budget submitted to them when they did not know what the policy of the Association would be until after the representative meeting had been held. They did not know what the representative meeting would want them to do, and they did not know to what expenditure they might put the Association.

Dr. E. Slade-King said that he simply suggested that that there should be a budget presented, and that that budget should show the estimated receipts and the estimated expenditure, so that the members would be able to study the whole matter instead of being asked to discuss it at five minutes' notice.

The Treasurer said that he was rather taken aback by the proposition. The income of the Association was very uncertain, and its expenditure was also to some extent uncertain. If they did not know what their income was, he did not well see how they could produce a budget with any degree of satisfaction to those who had to receive it. It seemed to him that

it would be rather rash to demand such a thing which, perhaps, it would be impossible to produce.

Mr. Langley Browne said that it would not be such a difficult thing to do. It was done every year by every town council in the kingdom. It might very well be incorporated in the scheme.

Dr. Roberts Thomson said that it did not seem to him that a document of the kind proposed would be of any practical use. How was it possible that a budget could be prepared before the meeting assembled which was to decide the policy of the Association for the year? He thought that gentlemen had been misled by the action of bodies that levied a rate. The Association did not levy a rate. He thought that it would be quite an unworkable scheme.

Dr. Ward Cousins said that he had grown to the conviction that the annual meeting had a great deal of power. They had all come to the conviction that the annual meeting had all the powers of the Association. That was no part of his creed ten years ago, but that was no fault of his. He was legally misinformed. Now, seeing what power the annual meeting had, would not the proposal enable them to cut their coat according to their cloth? The Association met annually and if it had a sort of budget it would enable them so to arrange their expenditure that they would never get into any difficulties.

Dr. O'Sullivan supported the proposition made by Dr. Slade-King as a step in the right direction. They were tired in the Association of doing things *in camerâ*. He cordially sympathised with Dr. Ward Cousins when he said that he was legally misinformed. The tendency of the Council in the past had been to keep as much power in their hands as they possibly could. He would press upon the meeting the necessity of having everything open in the Association.

The amendment was carried.

Replying to Mr. Eastes, Dr. Slade-King said his amendment referred to the secretaries of units.

Clause B. was agreed to, and Clause C., Subclauses 1, 2, 3, and 4.

*Initiative.*

Mr. Pye-Smith moved to amend Subclause 5 by inserting, after the word "Journal," the words "and by the authority of the Council," as it appeared to him as it stood it might be considered that any Division could submit to the Journal any matter by merely writing a letter.

Mr. Parsons seconded.

Mr. Whitaker pointed out that the essence of the report was that Divisions should have the power to consider medico-political questions which should come up for consideration.

On being put the amendment was declared lost, and the clause as originally drawn agreed to.

*Voting at Representative Meeting.*

Mr. Pye-Smith moved to amend Clause 18 by inserting after the word "representative" in line 7 the word "voting," so that it should read "every representative voting shall record as many votes as there are members." The representative meeting was one at which there would be a certain amount of give and take, and occasionally a representative might feel it wise not to vote.

Mr. Pakes seconded.

Mr. Whitaker observed that this raised the point whether a representative of a Division who was sent up for the purpose of expressing the opinion of his Division was to be at liberty not to vote at all. [No, no.]

Dr. Groves understood that a delegate was a man who was a voting machine, and a representative a man who used in some sort of way his judgment having regard to the interest he represented. He did not want to contest the report, but thought this was a point that should be settled by those who drew it up.

Dr. Buist thought that if the words were carefully read what should take place was absolutely clear. It was possible for a Division to be so divided in opinion that it would not instruct its representative to vote, and it would not be right to change the wording so as to compel him to vote in a direction he was not desired to do.

The amendment was then put and declared lost.

Sir John Wm. Moore moved to strike out the words "but that if a majority" down to and including the words "Division which he represents." He thought there was a very important principle involved in this paragraph, which was adopted by the Constitution Committee by a very narrow majority, namely, the principle of cumulative voting. This proposition was a very dangerous one, and the sense of the meeting should be taken before it was included in the new constitution. It was perfectly absurd that a representative of a Branch, say, of 200 members, on a question on which the Branch might be nearly equally divided, as for instance, 101 for the proposition and 99 against, should claim the whole weight of the voting powers of the Branch by recording 200 votes. He did not know any institution in which it was done, but Mr. Victor Horsley, he believed, contended that it was equivalent to the system of Parliamentary voting.

Surgeon-Major Ince seconded the amendment. Multiple voting was almost entirely confined to trade unions, and he did not desire the British Medical Association to be on a level with them.

Mr. Victor Horsley desired, as he had been mentioned, to add a few words. Sir John Wm. Moore had said that he could not understand that the one-man-one-vote principle contained just as much injustice as this proposition; but surely it was self evident. If a Unionist was elected by a majority of 1 to the House of Commons, he would, in voting, vote all the Radical votes which had been cast against him, as he would those of the slender majority which carried him into the House. This proposition was exactly the same principle. If they were to have the control in the representative meeting, the representation of the profession must be proportionate somehow, and it could only be obtained by this system of voting. He first saw the system at work at the Manchester Conference, and it entirely opened his eyes to the real way to obtain the collection of ideas of a large profession.

Surgeon-General Hamilton contended that in the representative meeting, if those who already had a majority were to ask for a count they would be stultifying themselves. It could be clearly shown that a minority carefully manipulated might beat a majority. Therefore the clause should either be recast or cut out.

Mr. Whitaker pointed out that the preamble of the report had been so drafted as to call the attention of the members to the fact that the Committee was almost equally divided on this point. If the Association consisted of 18,000 members with 300 representatives, a simple calculation showed that every one of those representatives counted for 60 members of the Association, and when he gave his one vote in effect he gave 60 votes; and he was just as much justified and no more in casting one vote according to the decision of the majority of the Division as in casting the number of votes proportionately to the membership of his Division. The effect of accepting Sir John Wm. Moore's proposition would be to give a small constituency of 50 members the same voting power as a large one of the size, say, of Glasgow. Would Glasgow be content with that? It had been suggested that a large constituency like Glasgow could be split up, and given six delegates instead of one, but by so doing the expenses would be increased. Was it desirable to do this rather than adopt the system of proportionate voting?

Mr. Verrall explained to Surgeon-General Hamilton that the difficulty which troubled him was purely imaginary. Of course, if there was a meeting of, say, 50, and 30 voted one way and 20 another, the 30 would not be such fools as to alter the vote afterwards. There was nothing to say how the votes taken were to be given. If some urgent point was before the meeting long before any vote had been taken at all, it would be decided if necessary that the vote should be in the way which would give the greatest weight. The system proposed was analogous to the *scrutin d'arrondissement* adopted in France, where it had been found to work very well.

Dr. Ward Cousins was of opinion that the spirit of the Association could only be obtained by ascertaining how many were for and how many against a particular proposition.

The amendment was then put and declared lost by a large majority.

Dr. Brown Ritchie proposed the insertion of the word "fifty" instead of the word "majority."

Mr. Pakes seconded.

Dr. Pope thought the report as it stood was better than if amended as suggested. If there was any strong feeling on a

point they might get a majority, but if it was only to be 50 it would be possible for a small party to obstruct the business.

The amendment was then put and declared lost.

Mr. PARKINSON moved, and Surgeon-Major INCE seconded, to substitute for the word "representative" the word "delegate," but on being put this also was lost.

The PRESIDENT then put the entire clause, which he declared carried.

Mr. LANGLEY BROWNE thought that as the Council would be the Executive to carry out the resolutions adopted by the representative meeting, the chairman of that meeting should be *ex-officio* a member of the Council for the ensuing year, as it would facilitate business.

Surgeon-Major INCE seconded the motion, which was carried.

Clause 19 was agreed to *nem. con.*

*Special Branch Subscriptions.*

Mr. LANGLEY BROWNE proposed that nothing in Clause 20 should prevent Branches charging a voluntary subscription for any special purpose.

The PRESIDENT thought that would be agreed to, and the clause was adopted, as were also the remaining clauses.

The PRESIDENT here vacated the chair, which was taken by the PRESIDENT OF COUNCIL.

*Organisation Committee.*

At the suggestion of the PRESIDENT OF COUNCIL, supported by Mr. VICTOR HORSLEY, the formation of the Committee to draft the necessary new by-laws and articles was referred to the Council.

*By-laws.*

On the motion of the PRESIDENT OF COUNCIL, By-law 37 was altered as follows:

37. No by-law shall be made, altered, or repealed, except at an annual or other General Meeting *duly convened*, nor unless a written notice, specifying the nature and object of the proposed *addition, alteration, or repeal (as the case may be)* shall have been given to the Council at least one month previously. Such notice shall be forthwith published in the JOURNAL.

*Annual Report of Council.*

Mr. VICTOR HORSLEY moved for Dr. Douglas, Surgeon-Major INCE seconded, and it was resolved:

That it be an instruction to the Committee appointed to draft the new articles and by-laws, to consider the desirability of publishing the annual report before the election of the members of Council, and, if approved, to include the above suggestion in the new articles or by-laws.

*Chairmanship of General Business Meetings.*

On the motion of Dr. WOODCOCK, also for Dr. Douglas, it was resolved:

Also, to consider the desirability of the President of Council taking the chair at all general business meetings, and, if approved, to include the above suggestion in the new articles or by-laws.

*Journal Committee.*

Mr. NELSON HARDY moved:

That a Committee be appointed by the Council, not necessarily from the members of the Council, which shall meet once a month at the offices of the Association, whose sole business shall be with matters concerning the JOURNAL.

He contended that the Journal and Finance Committee had not enough time to devote to one of the most important matters connected with the Association, namely, the conduct of the JOURNAL, and that there ought to be a Journal Committee separate from all other committees, simply to look after matters connected with the JOURNAL, and that it should meet once a month. He thought the JOURNAL ought not to be under the control of an autocratic Editor, but in case of any dispute between him and a member of the Association there ought to be some appeal. If this Committee were constituted it would be possible to refer such disputes to it, and it would tend to improve the JOURNAL.

Mr. WOLSTENHOLME seconded the motion, as he considered the work of the Journal and Finance Committee too much for one body to have to do.

The CHAIRMAN pointed out that under the by-laws the Council only should appoint such a Committee, and he suggested that the motion should be modified accordingly.

Mr. NELSON HARDY accepted the suggestion, and substituted for his motion:

That it be a suggestion to the Journal and Finance Committee to consider the desirability of the formation of a Committee by the Council, which shall meet once a month at the offices of the Association, whose sole business shall be with matters concerning the JOURNAL.

which on being put was carried, 22 voting for and 20 against.

OTHER MOTIONS.

Mr. GEORGE JACKSON had a motion on the agenda, but the President of Council said he could not accept it as it interfered with the autonomy of the Branches.

Mr. GEORGE BROWN moved:

That in view of recent public statements to the effect that the medical profession is in favour of the measure for the registration of midwives adopted by the Association for promoting the compulsory registration of midwives, this meeting of members of the British Medical Association enters an emphatic protest against any legislation which has for its object the formation of a class of midwifery practitioners other than those recognised under the Medical Act of 1886.

He hoped if this was passed the meeting would recommend the Council to take the opinion of the profession as to whether there should be a new Bill which should create a new class of practitioners or whether they should have a new class of trained nurses. He believed that a specially trained nurse was sufficient for all purposes.

Dr. SPICER seconded the motion.

On the motion of Dr. BUIST, seconded by Surgeon-Major INCE, the previous question was carried by 16 to 11.

Mr. VICTOR HORSLEY appealed to Mr. George Brown to withdraw his other motion on the ground that the meeting was too small to discuss it.

Mr. GEORGE BROWN assented for that reason only.

Dr. WARD COUSINS stated that he had been requested by Dr. Gordon to put the motions standing in his name, but for the same reason as Mr. Brown he did not think he was justified in doing so.

Dr. MULLICK moved:

That having regard to the fact that persons possessing no knowledge of medicine are by law allowed the same rights to practise in India as fully-qualified practitioners, this Association considers it advisable that there should be a system of registration to protect the public from charlatans.

This he did simply to ascertain what the Council was doing in the matter.

Dr. GROVES assured Dr. Mullick that the Council was doing everything possible in the matter with the idea of bringing about registration throughout the Empire.

Surgeon-General HAMILTON endorsed the observation of Dr. Groves.

Dr. MULLICK was satisfied with this assurance and withdrew his motion.

The meeting then terminated.

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CONCLUDING GENERAL MEETING.

*Friday, August 2nd.*

THE concluding general meeting was held in the Princess Hall of the Ladies' College, Cheltenham, on Friday, August 2nd, Dr. FERGUSON, President of the Association, in the chair.

The PRESIDENT reported the following resolutions passed by the respective Sections, which were adopted:

*Section of State Medicine.*

1. Having regard to the paramount importance to the interests of the public health of security of tenure of office of sanitary officers, the State Medicine Section beg to express their approval of the action of the Council in promoting a Bill in Parliament to that end and their thanks for the same.

2. That, as it appears desirable in the interest of the public health to minimise opportunities for the introduction of diseases by shipborne rats, it is of importance that regulations made for this purpose should be so framed as not injuriously to affect the trade and commerce of the country.

3. This Section therefore recommends that the captains of vessels loading at plague-infected ports should be ordered to destroy rats on board ship before loading cargo, and to take precautions for preventing rats getting on board during the time cargo is being loaded, and that British consular certificates should be issued to captains obeying such orders.

*Section of Ophthalmology.*

That it is of opinion that the just and friendly settlement of claims for injury to the eyes under the Workmen's Compensation Act, 1897, would be greatly facilitated by a knowledge of the condition of the eyesight of the injured person before the accident, and recommends that employers should adopt some simple plan whereby a record of the sight of each eye should be appended to the name of each workman in the wage-books.

*Section of Tropical Diseases.*

1. That in the opinion of this Association there is a large amount of grave disease produced by filaria nocturna in Barbadoes.
2. That these diseases can be got rid of by a simple and inexpensive means.
3. That success in exterminating a mosquito-produced disease in any place would be a valuable object lesson and an encouragement for other places to adopt similar measures.
4. That His Majesty's Secretary of State for the Colonies be requested to favour and encourage the institution and carrying out of the measures indicated in Dr. George Thin's paper.
5. That His Majesty's Secretary of State for the Colonies be requested to impress on the Government of Barbadoes that the suppression of filarial diseases would be a measure of great economic value to the colony.

## Votes of Thanks.

The President proposed that the thanks of the Association be given:

To his Worship the Mayor and the Corporation of Cheltenham for the warm welcome accorded to the Association at the opening meeting, and for the use of the Winter Gardens, Montpellier Gardens, Pittville Gardens, and other facilities, especially the illustrated Guide to the Garden Town of England, so liberally granted by the Corporation to the Association.

To his Worship the Mayor and Mayoress of Cheltenham for their hospitable reception given in Pittville Park.

To the Very Rev. the Dean of Gloucester (Dean Spence) for his sermon to the Association.

To the Rector of Cheltenham and Rural Dean (Rev. Canon Roxby) for the services at St. Matthew's Church.

To Mrs. Ferguson and the Ladies' Committee for their hospitable reception at Cheltenham College.

To Alderman Colonel Rogers, J.P., and Mrs. Rogers for their hospitality at Battledown Court.

To Lieutenant-Colonel and Mrs. J. C. Griffith for their garden party at Deanwood House.

To Mr. and Mrs. Macknight-Crawfurd for their garden party at Fullwood Park.

To Alderman and Mrs. James B. Winterbotham for the offer of hospitality at Cranley Lodge. The Association regrets that the indisposition of Alderman Winterbotham prevented this garden party being held.

To the Committees of the New Club, the Constitutional Club, the Cheltenham Golf Club, the Cheltenham Cricket Club, and the East Gloucestershire Club for granting the honorary membership of their respective clubs to the members of the Association during the meeting.

To the members of the Association resident in Cheltenham, Gloucester, and neighbouring towns for their generous entertainments and the welcome they extended to members.

To the Council of the Ladies' College and Miss Beale for placing their magnificent building at the disposal of the Association for the general and sectional meetings.

To the Council and the Reverend the Principal of Cheltenham College for the use of their hall for the annual dinner of the Association.

To the Board of Governors of the General Hospital, the Trustees of the Delancy Fever Hospital, the Committee of the Eye, Ear, and Throat Hospital, and the Committee of the Victoria Home for granting the liberty to inspect these institutions.

To the following firms for their kindness in throwing open their premises and works for the inspection of visitors: Messrs. Boulton, the proprietors of the *Echo*, and the Directors of the Cheltenham Original Brewery Company.

To the Rev. J. E. A. Fenwick and Mrs. Fenwick for allowing the members of the Association the privilege of viewing their magnificent collection of art treasures.

To the Chairman and Honorary Secretaries of the various Committees, namely: Dr. H. Cripps Lawrence, Dr. H. Bramwell, G. Arthur Cardew, Esq., his Worship the Mayor, C. Braine-Hartnell, Esq., O. H. Fowler, Esq., Mrs. G. B. Ferguson, and Dr. S. T. Pruen, for their able and energetic help.

To G. Arthew Cardew, Esq., Dr. S. T. Pruen, and Dr. W. W. Grosvenor for their great labours in organising and carrying out this most successful and important meeting.

To the Committee of the Cheltenham Training College for the use of St. Mary's Hall for the Ladies' Reception Room.

To the Directors of the Cheltenham Theatre and Opera House Company, Limited, for the use of their theatre.

To the Committee of the Cheltenham Library for free use of their reading-rooms.

To the President and Members of the Gloucestershire Branch for their generous support and hospitality during the meeting.

To Dr. Batten and Miss Batten for their "At Home."

To the Governors of Barnwood House, Gloucester, and to Dr. and Mrs. Souter for their hospitality during the delightful excursion to Gloucester.

To John Bellows, Esq., for his intellectual discourse on the antiquities of the city of Gloucester.

To the Dean of Gloucester for so kindly showing the members of the Association over Gloucester Cathedral.

To the Mayor and Concert Committee of the Corporation of Cheltenham for the illuminated *fête* in Montpellier Gardens.

To J. T. Agg-Gardner, Esq., M.P., and other residents in Cheltenham and neighbourhood, for so generously entertaining many foreign and distinguished guests during the meeting.

To G. A. Peake, Esq., and the Subcommittee for their splendid efforts, which have so made for the success of the annual museum and exhibition.

To the Vicar of Tewkesbury for his kindly attention to members on the occasion of their visit to the Abbey.

To Mr. and Mrs. J. L. Robertson for their hospitality to members on the occasion of their visit to Withington Manor.

To Dr. and Mrs. Balfour Fergusson for their hospitality to members on the occasion of their visit to Painswick.

To the members of the Urban District Council and the medical profession at Malvern for their invitation to the Association to visit Malvern.

To O. H. Fowler, Esq., and Mrs. Fowler, for their hospitality at Cirencester.

To Mr. Wilfred Cripps, C.B., and Mrs. Cripps (Countess Bismarck) for their hospitality at Cripps Mead.

To James Horlick, Esq., J.P., for his hospitality at Cowley Manor.

To the Soirée Committee and those ladies and gentlemen who have so much contributed to the pleasure of the evening.

To the Soirée Subcommittee and to the several ladies and gentlemen by whose exertions the Soirée has been made such a splendid success.

Dr. Ward Cousins, in seconding, said he was quite sure that the best thanks of the Association were due to the gentlemen who had given their help at the annual meeting, which had been a great success. They had enjoyed most delightful entertainments and hospitality. He thought that no meeting of the Association had ever been organised and no better hospitality received in any district which they had visited.

The resolution was put and carried unanimously.

The President having vacated the chair, the President of Council called on Sir Walter Foster, who proposed:

That the cordial thanks of the Association be given to Dr. George Bagot Ferguson for his able and courteous conduct in the Chair during this the sixty-ninth annual meeting of the British Medical Association.

He thought the words of the resolution were almost barren compared with what was the general feeling of every member of the Association towards their President for his admirable conduct. They came there first of all for those great purposes connected with the spread of medical science; they also came for the organisation; and they also came for the amenities and pleasures which a meeting in a place like Cheltenham could give; and, lastly, they came for purposes of a spiritual kind, which were generally rendered by some high dignitary of the Church, which on this occasion had been performed by the Very Rev. the Dean of Gloucester. He had seen many meetings and many Presidents, but he had never attended a meeting from which he derived more pleasure, and the President had conducted the business of the Association with great ability. Therefore he thought that the members present would join with him in the hearty vote of thanks which he proposed.

The Treasurer seconded the resolution, and endorsed the observations of Sir Walter Foster.

The President of Council wished to give his personal testimony as to the intense anxiety of their President and the work and trouble which he had been put to. No effort had been spared which could tend to the success of the meeting. He felt quite sure that, though the printed resolution did not contain it, Sir Walter Foster and his seconder would readily agree that there should be included in it a cordial vote of thanks to Mrs. Ferguson for the happy way in which she had performed the very heavy and responsible duties which fell upon the wife of the President at an annual meeting.

The resolution was then put and carried with acclamation.

The President, in reply, said he found it very difficult to express his gratitude to them for the kindness which they had shown him. There was no doubt some anxiety in connection with his position, more particularly in reference to the general meeting, and his anxiety had been lest he should unconsciously do an injustice to somebody or other. The conduct of the general meetings had been to him a source of very great anxiety indeed, but their vote of thanks was more than a sufficient reward for all the thought and effort which had

been undoubtedly devoted by himself and his colleagues to the arrangements for the annual meeting. He spoke in high terms of the assistance he had derived from the various members of the Committee, and concluded by saying that he felt exceedingly obliged to the members present for the kind way in which they had referred to Mrs. Ferguson who, he was sure, would be very gratified indeed at the kindliness that had been shown her in every direction. (Loud applause).

The proceedings then terminated.

ERRATUM.—In the discussion on the report of the Constitution Committee, under the head of "Co-option," in the BRITISH MEDICAL JOURNAL of August 3rd, page 306, the last paragraph should read "The *amendment* was then put," etc., and not as printed.

# OBITUARY.

## CARSTEN HOLTHOUSE, F.R.C.S.,

Consulting Surgeon to the Westminster Hospital, and to the Royal Eye Hospital, Southwark.

MR. CARSTEN HOLTHOUSE, in former years well known in the surgical world, passed away on July 18th, at the advanced age of 90. He was one of the last three original Fellows of the College of Surgeons, and since the death of Sir Rutherford Alcock had been the senior on the roll. His later life had been spent in complete retirement, and during the last two years in grievous bodily affliction.

He was born on October 14th, 1810, the eldest son of Mr. Carsten Holthouse of Edmonton. After being educated at various private schools, he began his professional training at about the age of 14 by apprenticeship to his uncle, Mr. Le Gay Brewerton, of Bawtry, in Yorkshire. This method of instruction, though severe, he always considered the best possible for a medical man, because of the practical knowledge it gave of the details of everyday medical work, and he never ceased to regret its abolition.

Released from his articles before their expiration, he became a student at St. Bartholomew's Hospital, where he served as dresser under Sir William Lawrence, and clinical clerk under Dr. Latham. He obtained the diploma of L.S.A. in 1832, and that of M.R.C.S. in the following year.

After some months of further study in Paris, Mr. Holthouse returned to London and started practice under the roof of his father, then living in Keppel Street. His spare time during this period was largely spent in the out-patient department of his old hospital, where he first became interested in diseases of the ear, a subject he pursued for many years, and never entirely abandoned, although others claimed from him greater attention. He published a series of papers on Some of the More Remediable Forms of Deafness in 1855. But it was his three papers on the Acarus Scabiei, published in the *Medical Gazette* in 1838-9, which first brought him into notice.

His career, which seemed to be shaping into one of surgical practice, with considerable possibilities for the future, was violently diverted in 1843 by his appointment as Lecturer on Anatomy and Physiology at the Aldersgate School of Medicine. Mr. Skey left the school to become Lecturer on Anatomy at St. Bartholomew's, and urged Mr. Holthouse to take his place in spite of the plea that whatever anatomy he ever knew had long since been forgotten. The post was accepted and the deficient equipment made good by strenuous labour, many a lecture during the first session being preceded by a night spent in the dissecting room. The work was not unrewarded, for it established Mr. Holthouse's reputation as an anatomist, and his position as a teacher was recognised by his inclusion in the list of original Fellows of the Royal College of Surgeons in December, 1843. But for some years surgical was subordinate to anatomical work.

It was in 1849 that Mr. Holthouse's long connection with Westminster Hospital and its medical school began. For some three years the hospital had had no teaching staff attached to it, for the school started in 1841 had come to an end in 1846. A new staff of lecturers was got together in June, 1849, the Chair of Anatomy being assigned to Mr. Holthouse, among whose colleagues were Dr. Basham, Dr. Radcliffe, and Mr. Charles Brooke. Owing, however, to the deficiencies in the Museum the College of Surgeons in the following November refused recognition of the new school, and it was by Mr. Holthouse's energetic efforts that before the end of the year these deficiencies were made good, and the school obtained the necessary recognition. But it was only by granting the hospital students gratuitous admission to the lectures that the school managed to keep going. In spite of this failure seemed imminent, and after lecturing for five years without any pecuniary reward whatever Mr. Holthouse sent in his resignation. As a result of this step he was appointed sole manager of the school, with a free hand to do what he might consider necessary to place it on a sure foundation. Without going into details it may be said that in this he was completely successful, and he must, without doubt, be regarded as the real founder of the Westminster Hospital Medical School as it now exists.

On March 12th, 1853, Mr. Holthouse was appointed Assistant-Surgeon, and on January 17th, 1857, Surgeon, to the Westminster Hospital. Between these two dates he spent several months abroad, having been appointed to the staff of the British Hospital at Smyrna during the Crimean war. Among his colleagues were the late Sir Spencer Wells and Mr. Hulke. The episode, though interesting and pleasant, proved a serious interruption to Mr. Holthouse's career in London.

On his return he settled at Storey's Gate, Westminster, where he remained for many years. Before his visit to the East he had studied ophthalmology and been closely associated with Sir William Bowman. Six lectures on The Pathology of Strabismus and its Treatment by Operation were published in 1854. In 1857 he became one of the founders of the Surrey Ophthalmic or Eye Dispensary, which, after many changes of name and established in a new building, is so well known as the Royal Eye Hospital, Southwark. His book *On Squinting, Paralytic Affections of the Eye, and certain Forms of Impaired Vision* appeared in 1858. In the treatment of squint Mr. Holthouse always deprecated excessive operation, having become impressed by the disastrous results too often following on vigorous tenotomy. He paid much attention to the visual defect of the deviating eye, and, believing it to be due to disuse, took great pains in attempting to remedy it. At that time, of course, systematic treatment of convergent squint by spectacles was not practised.

In regard to surgical work in general, Mr. Holthouse, though a careful, was not a brilliant operator, but his diagnosis was rarely at fault, and his treatment after operation was careful and conscientious. Besides occasional papers he wrote the article on The Lower Extremity in the first two editions of Holmes's *System of Surgery*, and, in 1870, a work *On Hernial and Other Tumours of the Groin*.

On reaching the age of 65 he retired from his post as Surgeon, being appointed on October 29th, 1875, Consulting Surgeon to the Westminster Hospital. This brought to an end his direct relations with the institution, in the service of which he had spent the best years of his life.

After his retirement Mr. Holthouse turned his mind to the treatment of habitual inebriates, and even started an institution for their reception. Such an attempt at that time would scarcely be successful, and in this instance it only brought anxiety and loss to its author. But Mr. Holthouse's efforts probably helped to prepare that change in the law which alone could make success possible.

In spite of real ability and devotion to his profession, Mr. Holthouse never reaped the reward that he might have looked for. Whilst his work in each branch of surgery that he took up was thorough so far as it went, he allowed his energies to range over too many subjects, and, when success in one seemed close at hand, he had already turned his attention to another. Confident also, and justly so, in his own powers of diagnosis and his judgment as to treatment, he was scarcely ready enough to make allowance for the views which others might take of a case. These characteristics were naturally a serious bar to success in practice.

Till about two years ago Mr. Holthouse enjoyed vigorous health. At that date, during the after-treatment for cataract extraction, he was seized by hemiplegia of the right side with aphasia, but, after a marvellously short interval, almost entirely recovered. Some less severe attacks since gradually destroyed his powers, so that for many weeks before his

decease he was quite helpless. The end came peacefully on July 18th, when he was within three months of completing his 91st year.

Mr. Holthouse married first, in 1853, Agnes, daughter of Mr. Samuel Vent, of Upton-on-Severn; and secondly, in 1869, Martha, daughter of Dr. John Inglis Nicol, of Inverness. His second wife, by whom he had no issue, predeceased him. By his first wife he had three sons who survive him.

## E. S. MORLEY, M.D., J.P.,

Blackburn.

After a lingering and painful illness Dr. E. S. Morley, J.P., passed away peacefully on July 21st at his residence in Blackburn. For more than two years he had battled with a disease which caused him much suffering and necessitated almost entire confinement to the house. His death is deeply regretted by a host of friends not only in Blackburn, but throughout England and Scotland, where his name is a household word amongst the millions who take an interest in sport and football in particular, of which pastime he was one of the most enthusiastic patrons.

Edward Sword Morley was the elder son of the late Dr. Jonathan Morley, the younger brother being the Right Hon. John Morley. He was born at Newcastle in 1828, and received his early education in the Queen Elizabeth Grammar School, Blackburn. He studied medicine at Guy's Hospital, and became a Member of the Royal College of Surgeons and a Licentiate of the Society of Apothecaries of London in 1853. In 1862 he obtained the degree of M.D at St. Andrews. He was for a long period the leading physician not only of Blackburn but the neighbourhood. He was appointed Honorary Physician to the Blackburn Infirmary in 1864, and held the post till 1875, when he retired and was thanked by the Board "for his valuable services during his long connection with the institution."

But it is as a patron of athletics that Dr. Morley will be longest remembered. Always a lover of healthy English games, he participated in them in his youth, and patronised them in his old age. In his youth he was a very successful swimmer and sprinter. It was largely on his initiative that in 1874 the East Lancashire Cricket Club made its first attempt to arrange a large athletic meeting.

From 1874 to about 1880 he was one of the most conspicuous figures at the great athletic meetings held at Huddersfield, Stoke, Crowe, Notts, Southport, Widnes, and other places, where he was always welcomed in the judge's enclosure. There was no better judge of a sprint race over a short distance than Dr. Morley. Cricket he was not so enthusiastic about, though he liked to see a good game. He was a member of the Lancashire County Cricket Club, and, till he became too feeble, visited Old Trafford two or three times a year to see the best matches of the season. No one took a keener interest in Association football than Dr. Morley, and few have done more for it than he. The first match he saw was between the Rovers and Notts Forest on the Alexandra Meadows, about 1880. From that day up to the time of his death he was a strong supporter of it. That year he was made a vice-president of the Rovers' Club, a position he held up to the floating of the club a few years ago, when he was made chairman of the directors, a post he retained so long as he could attend meetings, and up to his death held a seat on the directorate. He was elected a Vice-President of the Lancashire Association in 1883, retiring only a few years ago. His introduction to the English Association had also an agreeable sequel, for at the annual meeting in August, 1882, he was elected a representative for his part of the country, and in 1886 was elected a Vice-President, and at the time of his death was senior in that position. He was a regular attendant at the Rovers' matches up to the commencement of his illness, and his occasional cry, "For Heaven's sake, Rovers, play football!" will be missed for many seasons to come. Dr. Morley was always a welcome visitor on the football grounds of England and Scotland. With the late Sir Francis Marindin, Lord Kinnaird, Mr. J. C. Clegg, and Mr. Charles Alcock, he worked zealously in the interest of Association football, and strove to stop the tendency of professionalism to dominate a great sport. He was the leading spirit in the attempt made on the Oval years ago to make the charity festival an annual affair, and was amongst those thanked by the King (then Prince of Wales) on the occasion of his visit to the Rugby and Association matches on the Oval, the profits of which were handed over to the Imperial Institute.

Dr. Morley was an old Freemason, and at one time held a commission in the volunteers. In November, 1892, he was placed on the Commission of the Peace for the borough, and sat very regularly till June 1st, 1899, which was the last time he was able to perform his magisterial duties. He was a fair-minded magistrate, but remorseless in dealing with wife-beaters and deserters, and men proved guilty of cruelty to animals. The severest penalties were frequently imposed, and prisoners were made to cringe beneath his penetrating look and passionate and fearless utterances as he condemned them as "incorrigible and unmitigated blackguards." He had a kind and generous heart, and where his common-sense would have let a person off, but the law said a fine must be imposed, he would inflict the penalty but himself pay the fine.

Dr. Morley leaves three sons, one of whom is a medical officer in the Royal Navy.

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The death of Dr. Richard Charles Shettle, which took place on July 21st at Nailsworth, Gloucestershire, after a long and trying illness, has removed one who, during his professional career, has been a frequent contributor to medical and scientific literature, and who, wherever he has lived, has always been highly esteemed, not only for his medical skill but also on account of his genial disposition and upright Christian life. Dr. Shettle was in his 76th year at the time of his death. After studying at St. George's Hospital he qualified as M.R.C.S. in 1846; he became house-surgeon at Dorchester Hospital and afterwards began private practice at Donhead, whence he removed to Cann, near Shaftesbury. Taking his M.D. at St. Andrews in 1858 he in 1869 removed to Reading, where he was appointed Physician to the Royal Berkshire Hospital, a position which he held for 28 years until his retirement from practice in 1897, when he was appointed Consulting Physician. He then removed to Nailsworth where he hoped to indulge his fondness for gardening and find leisure for continuing those scientific pursuits which, in their important bearings on treatment and modes of life, had long had great attraction for him. Whilst conscientiously meeting the claims of medical practice, both hospital and private, he experimented much and continuously in the field of electricity, one of his earliest papers in 1863 being An Essay on the Electricity of the Blood, and his latest in 1900, The Cause and Nature of Electric Force. Other publications and contributions were on Electricity as the Principle causing the Vitality and Coagulating Property of the Blood, on The Nature of Vital Force, on The Physiology of Death by Electric Shock, on Experiments showing the Paramagnetic Condition of Arterial Blood as compared with the Diamagnetic Condition of Venous Blood, on Spirality of the Energy in Bar Magnets, and on The Rotation of a Copper Sphere and of Copper Wire Helices when Freely Suspended in a Magnetic Field, etc. Dr. Shettle was for some time Chairman of the Reading School of Science and Art, and a governor of Reading College (giving liberally to its Physical Laboratory), and was an ex-President of the Reading Pathological Society. He was always ready to help and encourage the spread of knowledge and the advance of truth. The funeral took place at Nailsworth on July 25th, and was attended by many friends of the deceased, both from Reading and Nailsworth.

# PUBLIC HEALTH
## AND
# POOR-LAW MEDICAL SERVICES.

### HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 7,180 births and 4,926 deaths were registered during the week ending Saturday last, August 3rd. The annual rate of mortality in these towns, which had risen from 14.8 to 21.2 per 1,000 in the five preceding weeks, further rose last week to 22.4. The rates in the several towns ranged from 9.7 in Croydon, 11.4 in Halifax, 11.6 in Wolverhampton, and 13.1 in Bristol,

to 30.2 in Liverpool, 30.1 in West Ham, 31.7 in Newcastle, and 33.0 in Gateshead. In the thirty-two large provincial towns the mean death-rate was 24.0 per 1,000, and exceeded the rate recorded in London, which was 20.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 8.0 per 1,000; in London this death-rate was equal to 6.0 per 1,000, while it averaged 9.3 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 13.0 in Manchester, 13.7 in Salford, 13.9 in Liverpool, 16.1 in Preston, and 16.9 in West Ham. Measles caused a death-rate of 1.1 in Birmingham, 1.4 in Sheffield, and 2.1 in West Ham and in Salford; scarlet fever of 1.2 in Blackburn, and 1.8 in Preston; and diarrhœal diseases of 11.6 in Manchester, 11.8 in Portsmouth, 12.4 in Sheffield, 12.8 in Liverpool, 13.2 in Preston, and 14.0 in West Ham. In none of the large towns did the death-rate from "fever" or from whooping-cough amount to 1.0 per 1,000. The 69 deaths from diphtheria in the thirty-three towns included 28 in London, 6 in Leeds, 5 in Leicester, and 5 in Sheffield. One fatal case of small-pox was registered last week in London, but not one in any of the thirty-two large provincial towns; 12 small-pox patients were under treatment in the Metropolitan Asylums Hospitals on Saturday last, August 3rd, against 12, 14, and 11 on the three preceding Saturdays; 4 new cases were admitted during the week, against 6, 5, and 2 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,907 and 2,974 at the end of the two preceding weeks, had further increased to 3,091 on Saturday last; 391 new cases were admitted during the week, against 324, 371, and 374 in the three preceding weeks.

### HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, August 3rd, 914 births and 630 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.4 and 17.8 per 1,000 in the two preceding weeks, further rose last week to 19.8, but was 2.6 per 1,000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14.4 in Paisley and 15.8 in Aberdeen to 22.1 in Dundee. The zymotic death-rates in these towns averaged 5.5 per 1,000, the highest rates being recorded in Dundee and Greenock. The 314 deaths registered in Glasgow included 7 from measles, 19 from whooping-cough, and 73 from diarrhœa. Two fatal cases of measles, 5 of whooping-cough, and 12 of diarrhœa were recorded in Edinburgh. Three deaths from measles, 3 from whooping-cough, and 15 from diarrhœa occurred in Dundee; 9 from diarrhœa in Leith, 8 in Greenock, 4 in Aberdeen, 4 in Perth, and 3 in Paisley.

# THE PLAGUE.

## Prevalence of the Disease.

### Cape Colony.

The Governor's report for the week ending July 20th states that no fresh case of plague occurred in the Cape Peninsula. During the week 1 death only from plague occurred. During the week ending July 27th 3 cases of plague were reported, and 2 deaths from the disease. The total cases to July 27th, since the outbreak number 734, of which number 355 persons died.

At Port Elizabeth, for the week ending July 20th, the cases of plague numbered 3, and the deaths from the disease 3, and during the week ending July 27th, 2 cases occurred, but there was no death from the disease. At Port Elizabeth the total number of cases since the outbreak until July 27th have been 33, and the total number of deaths from the disease 13. No naval or military cases of plague occurred during the weeks ending July 20th and 27th. In Cape Colony, besides Cape Town and Port Elizabeth, cases of plague have been met with at Hermon, Imvani, Mafeking, Somerset West, Somerset West Strand, and Stellenbosch. In these several places 10 cases in all have occurred, and 2 deaths from the disease.

### India.

For the week ending July 6th the plague returns show that 1,125 deaths from the disease occurred throughout all India. This is a marked increase upon the previous week when the returns gave 821 deaths only, and as this number showed an increase on the week ending June 22nd plague would seem to be again increasing in virulence at a period when experience had taught us to expect an abatement. The chief cause of the increased total is a recrudescence of the disease in the Bombay districts, where 872 deaths from plague occurred during the week ending July 6th, against 581 during the previous week. In Bombay City the number of deaths from plague were 63, against 66 during the week ending June 29th. In Calcutta the deaths from plague during the week ending July 6th amounted to 15, and in the Bengal districts one death from the disease only is returned. The Punjab returns 14 against 28, and Kashmir none. In the Mysore State a rather serious recrudescence occurred, 157 deaths having occurred during the week ending July 6th, as compared with 93 during the week ending June 29th.

### Constantinople.

Considerable excitement still prevails in Constantinople concerning plague, and the action of the Sultan and the decrees of the International Board of Health serve to keep it going. The cases of plague reported, however, seem sporadic in character, and as yet but some half-dozen cases of plague have occurred in the city. On July 27th a fresh case of plague was reported in the Pancaldi quarter of the city. The patient, a Greek coachman, is stated to have been ill for fourteen days. The foreign embassies in Constantinople are about to take action in consequence of the Sultan having compelled the Sanitary Council to place ten days' quarantine upon arrivals from Egypt.

### Egypt.

The Director-General of the Sanitary Department in Egypt reports that "during the week ending July 28th, 1901, 7 cases of plague and 3 deaths from the disease have been reported from all Egypt; of these, 4 cases and 3 deaths occurred among natives and 3 cases among Europeans of Greek nationality; 4 cases and 1 death were reported from Alexandria; 2 cases and 1 death from Zagazig: 1 case and 1 death from Port Said."

According to a Reuter's telegram dated Cairo, July 29th, "the number of plague cases in Egypt at present is 13, of which 10 are at Zagazig and 3 at Alexandria. The total number of cases since April 7th is 98, of which 42 have ended fatally."

### Mauritius.

During the week ending July 26th no cases of plague were reported in Mauritius; during the week ending August 1st 1 death occurred from plague.

### Plymouth.

The bacteriological report on the cases of suspected plague at Plymouth which arrived at that port on board the ss. *Ormuz*, states that the patients were not suffering from plague.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## ROYAL ARMY MEDICAL CORPS EXCHANGE.

*The charge for inserting notices respecting Exchanges in the Army Medical Department is 8s. 6d., which should be forwarded in stamps or post-office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.*

Major, R.A.M.C., at home on leave from best part of the Punjab till November 8th, when he completes nearly three years of Indian tour, will exchange for full or part tour in Egypt, nearer Colonies, or home. What offers? Apply early, with full particulars to "Exchange," care of Holt and Co.

### ROYAL NAVY MEDICAL SERVICE.

Surgeon Edward D. J. O'Malley has been appointed to the *Excellent*, July 30th, and Thomas D. Halahan, B.A., M.B. to the *Pioneer*, August 3rd.

### ROYAL ARMY MEDICAL CORPS.

The undermentioned officers have been discharged to duty from hospital in South Africa: Captain H. W. Vaughan Williams, Civil Surgeon Tucker, J. B. Ruddock, and J. M. Davies.

The following are returning to England: Major M. Dundon, Lieutenant J. K. Tomory, Civil Surgeons J. D. Holmes, H. E. Birmingham, S. Kirkpatrick, A. V. Peathing, W. J. Sweeney, G. FitzGibbons, C. R. Hodgson, H. L. Apthorp, R. A. Draper, W. J. Moir, A. A. Kingston, F. L. Vaux, F. J. Hathaway, and F. A. Clark.

Lieutenants G. S. Nickerson, M.B., G. B. Crisp, R. S. H. Fuhr, W. Jagger, M.B., G. J. S. Archer, M.B., R. Selby, M.B., S. O. Hall, A. E. Weld, J. S. Gallie, F. J. C. Heffernan, A. E. Thorp, C. W. Mainprise, H. Herrick, E. J. Dobbin, J. Cowan, M.B., A. R. O'Flaherty, H. B. G. Walton, and G. P. Hewitt, having completeed three years' full-pay service, are promoted to be Captains from July 27th.

Civil Surgeon C. G. Thomson is appointed Lieutenant, August 3rd.

Colonel W. D. C. Williams, C.B., Army Medical Corps, New South Wales Military Forces, is granted the local rank of Surgeon-General for the period during which he was P.M.O. to Sir I. Hamilton's and Sir A. Hunter's commands from April 3rd to December 4th, 1900.

### ARMY MEDICAL RESERVE.

Surgeon-Captain J. V. W. Rutherford is promoted to be Surgeon-Major, August 3rd.

Surgeon-Captain J. Cameron, 6th Volunteer Battalion the Royal Scots (Lothian Regiment), is appointed Surgeon-Captain, August 3rd.

### INDIAN MEDICAL SERVICE.

Lieutenant-Colonel C. Adams, M.B., Madras Establishment, retires from July 1st. He was appointed Assistant Surgeon, April 2nd, 1881, and became Lieutenant-Colonel, April 2nd, 1901. He was with the Burmese expedition in 1885-7, and has the Frontier medal with clasp.

Colonel A. M. Branfoot, M.B., C.I.E., Madras Establishment, is appointed Principal Medical Officer, Bangalore and Southern Districts, *vice* Colonel T. J. McGann, Madras Establishment, retired.

Colonel A. F. Dobson, M.B., Madras Establishment, is appointed Principal Medical Officer, Rangoon and Southern Shan States Commands, *vice* Colonel A. M. Branfoot, transferred, May 28th.

Lieutenant-Colonel A. N. Rogers-Harrison, Madras Establishment, has been granted the Madras pension for 1901-2 of £100 a year, on his retirement from the service in December next.

Colonel P. F. O'Connor is appointed Principal Medical Officer to the troops to be left in China.

The retirement from the service of Colonel T. J. McCann, Madras Establishment, has effect from May 5th.

The Principal Medical Officer of His Majesty's Forces in India; the Principal Medical Officers of Commands and Districts; and the Senior Medical Officers in Charge of Station Hospitals, are, as a tentative measure, permitted to sign all rail, river, and road warrants required for the use of officers, subordinates, and families of their own departments.

### IMPERIAL YEOMANRY.

Mr. Richard M. Wilson, M.D., is appointed Surgeon-Lieutenant in the Derbyshire Imperial Yeomanry, May 24th.

### MILITIA MEDICAL STAFF CORPS.

Surgeon-Captain P. B. Bentlif, of the Royal Jersey Militia, has been promoted Surgeon-Major.

Captain F. J. W. Porter, R.A.M.C., has been seconded for service with the South African Constabulary. He has been appointed to the charge of the reserve depôt hospital at the dynamite factory at Modderfontein, and granted the local rank of Major.

## BRITISH MEDICAL ASSOCIATION.

### SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.


# British Medical Journal.

SATURDAY, AUGUST 10TH, 1901.


## PUBLIC AUTHORITIES AND THE TUBERCULOSIS CONGRESS.

The Public Health Committees of local sanitary authorities have of recent years exhibited such commendable zeal in putting into execution measures directed against the spread of disease by food supply that we cannot think without considerable anxiety of the effects which recent pronouncements at the Tuberculosis Congress may have upon those who, alive to their responsibilities in matters of public health, have faithfully endeavoured to translate the most recent teachings of pathology into administrative practice. To such the most recent deliverances of Professor Koch must not only have occasioned bewilderment as to procedures which have been embarked upon with vigour in the matter of tuberculosis in particular, but cannot fail also to give rise to scepticism in other directions in which local authorities desire to act up to the last word of authoritative science. Professor Koch declares that "human tuberculosis differs from bovine and cannot be transmitted to cattle" and again in the reverse direction he alleges that "the infection of human beings is but a very rare occurrence," and he "therefore does not deem it advisable to take any measures against it." On the other hand, the current view and practice of local sanitary authorities in this country have been in accord with the unanimous findings of two Royal Commissions (the first containing such experts as Sir G. Buchanan and Sir J. Burdon-Sanderson, and the last the late Sir Thorne Thorne and Mr. Shirley Murphy). In paragraph 11 of the last Commission's report they say: "We have had before us the unanimous finding of the Royal Commission on Tuberculosis, which reported in 1895 to the effect that tuberculous disease in bovine and other animals is identical with that in the human subject, and that it is communicable from one to the other, though the manifestation of the disease differs in some respects in the human subject from that in the lower animals. We have also considered their finding that 'any person who takes tuberculous matter into the body as food incurs risk of acquiring tuberculous disease.' Nothing that has come before us in the course of our inquiry has raised any doubt in our minds as to the accuracy of this opinion." The views of the two Commissions and those of Professor Koch are absolutely contradictory; both cannot be true, and one at least must be false. Whither are local authorities charged with the public health to look for authoritative guidance? We are well aware of difficulties which have beset workers in this field of pathology in the past. The earlier work of Wilson Fox and Burdon-Sanderson has shown how the etiology of tubercle has baffled the ablest investigators. Even Professor Koch has probably seen fit to revise some of his pronouncements of 1890. He would probably not now assert that "phthisis in the early stages can be cured with certainty by tuberculin." Only in 1899 was the Local Government Board tardily induced to issue the Dairies Order providing that milk from cows certified by a veterinary surgeon to be suffering from tuberculous disease of the udder should not be used for human food or mixed with other milk. The Board of Agriculture is still reluctant to take energetic action, and will doubtless invoke the authority of Professor Koch in persisting in that attitude. Meanwhile is it unreasonable to take up the position that presumption should be against the consumption of milk from other than healthy cows, and that milk *plus* disease products, tubercle bacilli, or what not, is not of the quality and nature reasonably expected by the purchaser from the vendor, and that while doubt exists no relaxation of measures directed towards such end should be permitted?

In another aspect of his memorable address Professor Koch's utterances are happily not fraught with dismay for local authorities, but are, indeed, calculated to inspire and encourage sanitary activity. He said in his closing remarks: "It is the overcrowded dwellings of the poor that we have to regard as the real breeding places of tuberculosis." It is needless to go further than East and Central London to find ample corroboration of this assertion.

A special report on Tuberculosis, by Dr. Newman, Medical Officer of Health for Clerkenwell, lies before us, in which the figures show that, in the main, the phthisis death-rate for the various sanitary districts of London follows closely the general death-rate, which is, again, a function of the density of population in the respective areas. While in the North and West the death-rate from phthisis is 1.6 per 1,000, in Clerkenwell it is 2.32 and in the East of London 2.19.

Whatever may be the last word of science in the matter of tuberculous infection from food and milk, sanitary authorities will be unworthy of the name and forgetful of their duties if they do not with vigour pursue the policy of pulling down our rookeries, increasing open spaces, reducing overcrowding, and providing, where need be, healthy homes for the working classes.

## ECCE ITERUM BURDETT-COUTTS!

The inventive reporter has sometimes supplied a Prime Minister with wit and a Parliamentary orator with wisdom. But his imagination is not always so happily inspired when he puts into the mouths of speakers words which they never uttered. An instance of such misdirected inventiveness has occurred in connection with the annual meeting of the British Medical Association held last week at Cheltenham. In the Section of Army, Navy, and Ambulance, Sir William MacCormac read a short paper, largely historical, on War Surgery, Old and Recent, which was

followed by a brief discussion. Reports of this discussion, all obviously supplied from the same source, found their way into several of the daily papers, in which it was stated that Sir William MacCormac made an attack on Mr. Burdett-Coutts. We are assured by several gentlemen, including the President of the Section, who were present, that Mr. Burdett-Coutts's name was not mentioned either by Sir William MacCormac or by any of the speakers who took part in the discussion. The error of the reporter has given Mr. Burdett-Coutts an opportunity of appearing once more before the public in the character in which he has achieved a certain *succès de scandale*. Whether Sir William MacCormac may object to Mr. Burdett-Coutts's application to himself of the remarks made about "amateur critics" who had "no idea of perspective and exaggerated everything" we know not; but for our own part we may say that, whether or not they were intended for Mr. Burdett-Coutts, they exactly fit that sensational rhetorician.

We are willing to believe that in the campaign which he has undertaken against the Army Medical Service he is animated by a spirit as lofty and as disinterested as that of Don Quixote; but he is carried even further by his enthusiasm. The Knight of the Sorrowful Countenance tilted at windmills when they came in his way; Mr. Burdett-Coutts puts them up that he may tilt at them. He actually denounces Sir William MacCormac for not having seen in South Africa what he himself saw at a later period and in a different part of the seat of war. He appears to be much aggrieved by the charge of "exaggeration." This charge, as has already been stated, was not made against him personally by anyone at Cheltenham; but we may remind him that it was made in no halting language and with unmistakable meaning by the Royal Commission against the author of statements that "in particular hospitals there were thousands of men in deadly disease," and that "thousands of men were left unnursed," and against an accuser who brought wholesale charges of inhumanity, gross and wilful neglect and disregard for the sufferings of the sick and wounded on the part of the military authorities. And what is to be said of a writer who describes the Medical Service of the army as an "obsolete and obstinate department which has secured to the soldiers who fight and die for us the worst medical treatment known to any community in the civilised world"? This is saved from being an exaggeration of the most reckless kind only by the fact that it is a monstrous untruth. We do not accuse Mr. Burdett-Coutts of a deliberate misstatement; his offence is that, evidently knowing nothing either of medical treatment or of the exigencies of war, he presumes to speak as one entitled to be heard on the subject. We need only place against his wild words the statement of the Royal Commission that "all witnesses of experience in other wars are practically unanimous in the view that, taking it all in all, in no campaign have the sick and wounded been so well looked after as they have in this."

Another windmill of his own making which Mr. Burdett-Coutts tilts at with great fierceness is the opposition to reform which he gratuitously imputes to Sir William MacCormac. He says that "if the impression which Sir William MacCormac has endeavoured with studied method to convey to the public mind is accepted, the cause of reform is as surely lost as the lives of our soldiers were in the months of May and June." It might almost be thought that Mr. Burdett-Coutts is endeavouring "with studied method" to convey to the public mind that he alone has really at heart the reform of the Army Medical Service. Yet he knows, or could easily learn, that there are many just as anxious as he is for a thorough reform of the Service, and that none are more eager to see this accomplished than the officers of the Royal Army Medical Corps themselves. Sir William MacCormac has been active in promoting the improvement of the Service; and neither he nor any other member of the medical profession can have any other desire in regard to this question than that the truth should be made manifest and the blame for all shortcomings laid on the right shoulders.

Mr. Burdett-Coutts counts among the causes hindering reform "the flattering unction of the professional apologist." The phrase is singularly inept, for it is from the profession itself that the demand for reform has been strongest and most insistent. Mr. Burdett-Coutts either knows nothing of the history of the Army Medical Service, or he conceals his knowledge "with studied method." It has for years past been predicted by ourselves and by others that, unless the Service were placed on a footing of efficiency, a collapse would inevitably take place under the strain of a great war. The War Office turned a deaf ear to all warnings, and it alone must bear the responsibility of any failure in the arrangements for the care of the sick and wounded which has occurred in South Africa.

We suggest to Mr. Burdett-Coutts that he would do more for the cause of reform if, instead of fighting "professional apologists," begotten of his own teeming fancy, he were to turn his attention to the muzzling of the extra-professional calumniator. He boasts that he "struck hard at a manufactured and deadly sham and it tumbled to the ground." We thank him for teaching us the words "manufactured sham," for there could be no more apt description of his endeavour to make the British public's flesh creep. This much, it may freely be admitted, he has achieved. But we are at a loss to conjecture what it is that has "tumbled to the ground"—unless it be the indictment which, with such sound and fury, he brought against a Service that has earned the praise of every competent and impartial judge.

## THE PHYSIOLOGY OF MARCHING.

UNDER the able administration of His Excellency Dr. Alwin v. Coler, the medical officers of the German army complete their education in special institutes, such as the Kaiser Wilhelm Akademie in Berlin. The laboratories of these institutes are fitted with every appliance for chemical, bacteriological, and physical research, and are supplied with complete libraries of medical literature. The officers, moreover, are appointed to act for several years as clinical assistants in the clinics of the Universities. They thus not only become efficient, but largely contribute to the furtherance of medical knowledge. The result of such an administration can be seen both in the number of army doctors who now hold important university chairs, and in the fact that the mortality of the German army has been lowered from 5 per mille in 1877-79 to 1.5 per mille in

1897-98, and the cases of sickness from 1,165 per mille to 682 per mille. The result can also be seen in the publication which has just commenced of a series of important works dealing with the medicine and sanitation of the army. The first volume of this series is a most valuable monograph on the physiology of marching* by Dr. Zuntz, who has already achieved the highest reputation by his researches on metabolism, and Dr. Schumberg.

The capacity of the soldier to march is of supreme importance in modern warfare. The sickness produced by overmarching soldiers when too heavily loaded, wrongly fed, and injudiciously clothed may, in times of peace, cause enormous economic loss to a country, while in the conduct of war such errors may lead to national ruin. The whole matter can be put to experimental test. Soldiers can be marched varying distances under varying atmospheric conditions, and with varying loads; their respiratory, circulatory, muscular, and nervous systems can be tested, their secretions investigated, and their diet and metabolism exactly recorded. The proper diet, the most suitable load, the proper distribution of the load on the body, and the most suitable kind of clothing can thus be established on a firm scientific footing. Exact metabolic research can demonstrate the means by which the soldier can be made to do the greatest amount of work with the greatest economy. In Germany the medical sciences are valued at their proper worth, and it is recognised by the Government that the unstinting support of researches will effect enormous economy both in men and money in the future. How far the British War Office is behind the German in its attitude towards medical science we shall not attempt to estimate.

Drs. Zuntz and Schumberg carried out their research on six students, who were set to march in uniform, carrying the usual military accoutrements. It will be interesting to summarise the main observations and conclusions. With regard to the circulatory system, it was found that severe marching shortened diastole, lengthened systole, lessened the systolic expansion of the arteries, and increased dicrotism. Marching with a load of 18 kilos. lengthened the systolic time by 30 per cent., while a load of 31 kilos. lengthened it by 55 per cent. The prolongation of the systole was regarded by the authors as a sign of cardiac fatigue. The frequency of the heart beat was increased, and might reach 150. Tachycardia and prolongation of systole was accompanied by dilatation of the heart and congestion of the liver. An increase of the load from 22 to 31 kilos. markedly increased the enlargement of the heart and liver. In 50 per cent. of cases the left side of the heart was dilated as well as the right. The venous congestion and consequent enlargement were brought about partly by the pumping action of the skeletal muscles, partly by cardiac fatigue, but chiefly by fatigue of the respiratory pump. It was found that when the respiration was impeded by too heavy a load it became shallow and frequent. The vital capacity was strikingly diminished, in one case by 21 per cent., and the average vital capacity without load was found to be 3,436 c.cm., with load 3,220 c.cm. The vital capacity was far more reduced in the raw recruit than in the trained soldier, and varied inversely as the frequency of respiration. Zuntz and Schumberg conclude that after a rest of a quarter of an hour the frequency of respiration should not exceed the normal by more than 30 per cent., during the march by more than 75 per cent. This is a practical test which can be applied by any officer. Shallow, quick respiration leads to venous congestion, and this in its turn leads to a rise of body temperature.

The temperature was measured in the urine. With a load of 22 kilos., and marches of 15 to 20 kilometres, the temperature even in tropical heat did not rise about 37° C. It was raised to 38° C. by a load of 31 kilos. and a march of 25 kilometres. After the debauch of a birthday celebration the temperature in one case reached 40.5° C.

The specific gravity of the blood was found to be raised, and the number of red corpuscles increased by 9 per cent., but these changes were, however, only temporary. The concentration of the blood is not due to sweating alone, for in the active muscles the osmotic pressure is raised by 50 per cent. The muscle fibres thus become turgid with water. The loss of water from the blood is counteracted by the withdrawal of tissue lymph into the circulation. This is brought about by vaso-dilatation and the pumping action of the contracting muscles. The number of polynuclear white corpuscles was found to be temporarily increased, but this was not due to new formations, and the conclusion drawn is that marching produces no permanent effect on the blood of a normal man.

The specific gravity of the urine was found to be lowered, and owing to diuresis and to sweating the fluids of the tissues became more concentrated. Albumen and casts were observed after short, excessive muscular efforts, but never after severe marching. An increase noted in the output of calcium and phosphoric acid suggests the wear and tear of bone, for it was out of proportion to the output of nitrogen. There was no increase in the output of ammonia. The increased output of nitrogen due to marching accounts for 6 to 7 per cent. of the total energy expended, and it was observed that very hot weather made the nitrogenous waste greater. If the muscular work be excessive the blood supply fails to keep up with the needs of the muscles, and destruction of muscular tissue then occurs and long-lasting lessening of functional power. Such is the result of overtraining.

The soldiers were clothed in specially washed garments, and after the march the amount of nitrogen in these clothes was estimated. The authors calculated that as much as 12 per cent of the nitrogen given off in the urine and fæces may be given off in the sweat during hard work (284 mg. N. per litre). Increases in the nitrogen output in the sweat seemed to be due rather to hot weather than to an increased load. By measuring the respiratory output of carbon and water, and deducting the weight of the excreta from the total loss in bodily weight, the authors ingeniously reckon the output of sweat. For every 1,000 calories of energy expended in marching they reckon that about 800 grams of water are evaporated. The effect of atmospheric conditions, dryness, wind, sun, and the effect of load were investigated and calculated. A man weighing 70 kilos. produces, when resting, 1.2 to 1.35 calories a minute; while marching with a load of 31 kilos. he produces 7.73 calories a minute. The extra production of

* *Studien zur einer Physiologie des Marsches* (On the Physiology of Marching). Von Dr. Zuntz und Dr. Schumberg. Berlin: A. Hirschwald. 1901. (Demy 8vo, pp. 370. M. 8.)

heat is calculated to raise the body 1° C. in 8.7 minutes, and yet the heat-regulating mechanism is found to be sufficient in spite of the uniform and accoutrements. A heavy load was found to increase sweating by impeding the pulmonary ventilation. Zuntz and Schumberg argue that the heat regulation depends on the sweat glands, for they studied a man who possessed no sweat glands, and found that in a hot sun his temperature quickly rose to 39° C. in spite of a doubled pulmonary ventilation. They believe that soldiers with hot, dry, dark red skin and inactive sweat glands are especially in danger of heat-stroke.

The authors insist on the importance of substituting light, porous clothing for the absurd uniform of the past. This by allowing rapid evaporation of sweat prevents overheating of the body by day, and over-cooling by night. They conclude that there is no danger in long marches in very hot weather if the soldiers are lightly loaded. The load should not exceed 22 kilos.

The full war ration in Germany contains 181 grams proteid, 64 grams fat, and 558 grams carbohydrate, yielding 3,442 calories. A diet of the same calorie-worth was given by the authors, but they found that their subjects lost weight; they lost fat, but put on muscle. The subjects of their investigation were found to expend 3,600 calories on resting days and 4,300 calories on marching days. The German peace ration yields only 2,611 calories. They consider that the fat ought to be increased in the diet because it spares the work of digestion. They recommend also the use of more sugar, but are of opinion that 110 grams of proteid in the diet is amply sufficient for nitrogenous metabolism. They point out that while 1 kilo. of adipose tissue yields 8,600 calories, the same weight of muscle yields 900 calories. Thus 7,700 calories (the energy of two days' work) are set free when a man replaces 1 kilo. of his adipose tissue by muscle. Such a substitution cannot, however, take place quickly, for 33 grams nitrogen, or 214 grams proteid, must be retained out of the diet to make 1 kilo. of muscle. With the growth of muscle the authors find a proportionate increase in oxygen intake. They ingeniously calculated the proportionate metabolism of fat and carbohydrate from their measurements of the oxygen intake, and the respiratory quotient. The proteid metabolism they reckoned in the usual way from the output of nitrogen. The intake and output of the subjects day by day are set forth in tables, which show an extraordinary amount of laborious and accurate work.

They found that fatigue increased the rate of expenditure of energy, and that lameness due to pain in the tendons of the foot increased waste most strikingly. It would, they say, be uneconomical to work a lame horse on account of the amount it would eat! As a result of training there is more perfect co-ordination, fewer muscles are used, and work is done more economically; thus a riding horse carries a man with markedly less expenditure of energy than a carriage horse. Excessive heat with a light load increases the expenditure of energy much more than a heavy load on a cold day. Loads increase expenditure in proportion to their weight, but if properly distributed over the body have remarkably little effect. The load should be placed so as to disturb the centre of gravity as little as possible, and should be so arranged on each side of the body as to balance the disturbance at one step by that at the next.

Elaborate as it is, the authors regard their report as only a step towards further and more complete inquiry. Such co-operative work carried out by teachers and students is of the utmost value, and we can only hope that the conditions will be so altered that similar researches may be stimulated in our own country.

## THE GERMAN GOVERNMENT AND PROFESSOR KOCH'S ADDRESS.

According to the Berlin correspondent of the *Times*, the official *Berliner Correspondenz*, in dealing with the paper read by Professor Koch before the Tuberculosis Congress, states that the results of his experiments in inoculating cattle with human tuberculosis were already known to the Imperial Government. Professor Koch had expressed the desire that his investigations should be examined, and a Commission was appointed for this purpose in the beginning of July. This Commission includes a number of experts, among whom are Professor Virchow and Professor Bollinger, of Munich. The work of investigation has been planned on a great scale, and will include experiments on large animals, such as horned cattle, sheep, and pigs, and on other animals which can only be obtained with some difficulty, such as monkeys. Experiments which have already been made on smaller animals have not led to the establishment of any difference between human and bovine tuberculosis. The question seemed at one time to have been settled by the discovery of the tubercle bacillus and by Professor Koch's proof that the two diseases were caused by bacilli which were apparently the same. But a thorough investigation seems necessary now that Professor Koch himself has expressed doubts on the subject. The German official organ adds that there is at present no ground for modifying the precautions which are taken to prevent the spread of tuberculosis by milk and butter. It may be several years before the question of the difference of human and bovine tuberculosis is finally settled. Even on veterinary grounds dairy owners must still be required to sterilise their milk by means of heat, as otherwise there would be no means of preventing the spread of tuberculosis among their cattle. Consumers are strongly urged to continue not to use milk before it has been thoroughly boiled.

## VIRCHOW ON KOCH.

The last number of the *Berliner klinische Wochenschrift* contains some comments by Professor Virchow on the address with which Professor Koch the other day startled the Congress on Tuberculosis. Professor Virchow agrees with Dr. Koch in the view that human and cattle tuberculosis are different, and declares that he has always held this opinion, whereas the bacteriologists thought they had proved their identity by the discovery of the tubercle bacillus. He further states that he has taken part in the deliberations of the members of the Imperial Board of Health on the preparations made by Dr. Koch and Dr. Schutz in the Veterinary School, Berlin. He thinks that by these experiments it has been proved that infective material from human consumptive patients has not produced any symptoms in animals similar to cattle tuberculosis. As to the objection that no experiments with cattle tuberculosis have been made on man, Professor Virchow remarks that this is a matter of course, and that they must wait for a future opportunity. He thinks, however, that Koch has, perhaps, gone a little too far in excluding all those cases in which cattle tuberculosis might have been transmitted to man by food. Occasionally such a case has been observed in the Charité, and preparations have been collected showing

unusual foci of peritoneal tuberculosis, with such enormous ramifications as are seldom found in man. Virchow considers every such case to be suspicious. He is therefore of opinion that Koch's negation may, in the future, be disproved; but, on the other hand, he admits Koch's contention that human tuberculosis differs from that of cattle, and that it cannot be transmitted to cattle. In this proposition, however, two theses are combined: the difference of the two tuberculoses, and the question whether they can be transmitted. As regards the latter the specimens exhibited tend to an affirmative answer. Professor Virchow said that his old thesis of their difference has been for a long time treated with a certain contempt by Dr. Koch's school, and he as a patient man did not object to their judgment, but he is not at all surprised that Dr. Koch has now been convinced that they are two different things. Professor Virchow (according to the Berlin correspondent of the *Standard*) went on to say: "We must not consider everything formed in connection with the tubercle bacillus as tubercle. There are both bacillary and non-bacillary tubercle, and to settle this the anatomical examination of the tubercle must be decisive. . . . Having the honour of being a member of the Examining Committee for the control of further experiments, I shall endeavour to insist upon the most careful investigation possible in order that no similar difficulties may arise in the future. This will be very good for the public in general, and I shall be very glad if it proves true that the tubercle bacilli of cattle are not transmissible to the human body through milk, meat, etc., as has been usually said. This belief never kept me from drinking milk or eating meat, though I must admit that there might have been one bacillus in them. I was always of the opinion that one, or a few, bacilli, even of consumption, do not matter anything, and that only a large number of them is dangerous. But this question of quantity has, as yet, not been at all considered by the bacteriologists. Whenever one typhus or cholera bacillus is found by them they always talk as if it were quite enough to prove the origination of infinite millions of similar bacilli. We must be a little more careful, and in so far as I am concerned I promise you to insist that the anatomical tubercle shall be fully considered in future, in order not to confound anatomical and bacteriological matters. I may add that the preparations obtained by the experiments in the Veterinary School here will, in a comparatively short time, be made accessible to the public."

## THE LIVERPOOL MALARIA EXPEDITION.

In a letter dated Freetown, Sierra Leone, July 19th, and addressed to Mr. Milne, Honorary Secretary of the Liverpool School of Tropical Medicine, Major Ronald Ross, F.R.S., gives an account of the sixth expedition sent out by the school. He says that on July 18th he gave a lecture on mosquitos before a very large audience. The Governor strongly supported and commended the object of the expedition, and said it was eminently a practical object. Unlike most scientific expeditions, which usually asked for large sums of money, the present one came already supported with large funds. He said that he would give every assistance in his power, and advised the people of Freetown to do the same, and added that the whole scientific world was watching with great interest the present important experiment of ridding Freetown of the pests which scientific men considered were the cause of so many diseases. At the end of the meeting, Sir Samuel Lewis proposed a resolution, which was carried unanimously, offering on behalf of the people of Freetown every support to the expedition. Mr. Blyden made a speech in favour of the motion. "The work (says Major Ross) is proceeding very rapidly. We have twenty-four men, twelve of them supplied by the Governor, constantly engaged in draining away the *Anopheles* pools, and some of the most waterlogged and pestiferous streets have already, after only ten days' work, been drained. Another gang of seven men, with carts, is constantly engaged in destroying mosquito larvæ in private houses, and in carrying away tin cans, broken bottles, old buckets, etc., in which they breed. They clear about forty houses daily, and carry away about ten cartloads of old pots every day, of which about one-third formerly bred mosquitos. I am reserving my full resources for clearing the drying streams at the end of the rains. Labour is sufficient for the present. To-morrow I start by ss. *Jebba* for the Gold Coast, to arrange for similar campaign there. Dr. Logan Taylor remains here. Health of both perfect."

## EPIDEMIC DROPSY IN CALCUTTA.

In the years 1877-80 a disease characterised by fever, anasarca, rash, and intestinal disturbance, and resulting in anæmia, weak heart, and emaciation, prevailed epidemically in Calcutta and some parts of Lower Bengal and Assam. The same disease was imported into the Island of Mauritius by coolies and spread among that class, and to some extent among the indigenous inhabitants during 1878-79. A full description of this unique outbreak was compiled by Dr. Kenneth McLeod, and published in the *Transactions* of the Epidemiological Society of London for the session 1892-93 (New Series, vol. xii, p. 55); an article by the same author will be found in the second volume of Allbutt's *System of Medicine* (p. 475). Although the facts recorded in these papers justified the conclusion that the disease was a novel and distinct form, there were those who held that it was a manifestation of beri-beri, or of a variety or modification of that malady. There is a prospect of that question being now set at rest, for letters recently received from India convey the very interesting intelligence that epidemic dropsy has again made its appearance in Calcutta. Cases were first brought to notice by Dr. R. L. Dutt, a retired officer of the Indian Medical Service. Dr. Neild Cook, the able Health Officer of Calcutta, promptly visited the cases, and has no doubt made careful observations; and Captain Leonard Rogers, of the Indian Medical Service, also commenced a series of bacteriological observations which were in active progress and will no doubt be fully reported when complete. The disease is described as presenting symptoms of "a few days' slight fever, followed by cardiac depression, dropsical effusions, purpuric spots, and intestinal catarrh." It is anticipated that if the disease is the same as that of 1877-80 it will increase during the cold weather.

## THE POTTERIES AND NEWCASTLE CRIPPLES' GUILD.

Some fifteen months ago a Potteries and Newcastle Cripples' Guild was founded mainly through the exertions of a benevolent lady, the Duchess of Sutherland. Its objects were to help crippled children to obtain proper surgical treatment and appliances, and to see that they get some education. Secretaries were appointed in Stoke, Burslem, Hanley, and other centres, and the members of the medical profession in these towns agreed, as we understand, to give their services gratuitously to help a good work. We have no doubt that there is plenty of scope for such an enterprise, for the lives of the crippled children of the poor are often most dreary. But, as sometimes happens, the zeal of the chief promoter of the Guild has outrun her discretion, and the Duchess of Sutherland has taken a course which amounts to a public insult to the medical profession. At an entertainment given to a number of the cripples helped by the Guild she was, we are told by the *Staffordshire Sentinel* of July 27th, "accompanied by Professor Atkinson, who went to look at some of the children." "The Professor," the public are further informed, "is an eminent bonesetter," and "is giving his services quite gratuitously." The course adopted by the Duchess seems to have struck our contemporary as something rather out of the common, for it adds, "it

should be understood that his visit" (the "Professor's" to wit) "cannot in any way interfere with the splendid work that is at present being carried on in the interests of the Cripples' Guild by the medical men of the Potteries." *Qui s'excuse s'accuse.* We take leave to say that the medical men who have hitherto been connected with the Cripples' Guild cannot possibly continue that connection unless this matter is thoroughly cleared up. The Duchess of Sutherland, no doubt, acted heedlessly, but it is important in the public interest that ladies occupying positions which bring them prominently before the public eye should act with ordinary discretion, and we may add, with ordinary courtesy. We know very little of Professor Atkinson, nor do we know on what grounds that title is applied to him, but we believe that he was at one time a veterinary surgeon, and that he set up some years ago as what is called a "bonesetter."

## MODERN GYNÆCOLOGY.

PROFESSOR POZZI recently delivered an introductory address on the opening of the course of lectures on clinical gynæcology in the Faculty of Medicine, Paris. He gracefully acknowledged how much France was indebted to foreign nations for advances in that science, and dwelt on the memory of Marion Sims, Clay, Spencer Wells, Tait, and others. The lesson had been learnt, and Koeberlé, Péan, and their successors had been distinguished agents in advancing gynæcology. M. Pozzi spoke of the advantages of foreign travel for professional education; we suspect that at present the Briton is behind the Gaul in readiness to visit as well as to read about foreign authorities. He supported several well-known British gynæcologists in urging the retention of one ovary or at least part of one ovary in every pelvic operation where such conservative practice is possible. He concluded by denouncing tinkering and excessive operating with equal vigour. It it is bad gynæcology, said the lecturer, to advise a woman debilitated by a bleeding fibroid to be content with hot injections, ergotine, and electricity. It is bad gynæcology, on the other hand, to press for immediate hysterectomy in the case of a woman near the menopause who has a fibroid which causes neither bleeding nor pressure symptoms. M. Pozzi denies the title of gynæcologist to the practitioner who prescribes a binder with theoretical powers of support, and a pessary which can somehow manage to lie in the vagina without falling out, for a patient with an obviously relaxed pelvic floor, when perineorrhaphy would at once confer upon her the long-desired comfort. Who, he adds, can enumerate all the crimes wrought by the curette? Scraping is a "minor" operation reported innocuous, whilst in truth, so rashly has it been employed, it has caused more complications than it has effected cures. Lastly, the true gynæcologist refrains from boldly extirpating the uterus, ovaries, and tubes for any inflammatory mischief, even of mild degree, affecting the appendages. He will spare those that clearly or even probably may undergo spontaneous cure after suitable medication.

## THE NATIONAL ANTARCTIC EXPEDITION SHIP *DISCOVERY*.

THE *Discovery* left English shores on August 6th for the antarctic regions. This is the first ship built in our country expressly for scientific purposes, and her officers, scientific staff, and crew have been specially selected for this important expedition, which has been promoted by the Royal Society and the Royal Geographical Society. Commander R. F. Scott, R.N., is in supreme command, and Lieutenant O. B. Armitage, R.N.R., who is second in command, has had experience of three polar winters. The medical officers in charge are Surgeon R. Koettletz, late of the Jackson-Harmsworth Expedition, and Surgeon E. H. Wilson. Their services, it is understood, will be at the disposal of the director of the scientific staff for scientific work when not engaged on the work of their own department—Dr. Koettletz as botanist, and Dr. Wilson as zoologist. The civilian scientific staff includes Dr. M. G. Murray, F.R.S., director; Mr. T. Hodgson, biologist; Mr. W. Shackleton, physicist; and Mr. H. S. Ferrar, geologist. The *Discovery* is barque-rigged, of 743 tons, measuring 190 feet over all, 174 feet between the perpendiculars, and her greatest beam 34 feet. Her framing is solid for about 60 feet from the bow, which is of immense strength; the ship's sides aft of this are of oak and pitch pine, about 36 inches thick, with air spaces between the ribs to turn of bilge. On the upper deck is the magnetic laboratory, within 30 feet of which all the fittings are of brass, hempen rope, or wood; no steel or iron in this area. To either side, against the ship's side, are biological laboratories suitably fitted. Over these laboratories is the ship's bridge, fitted for the hauling and landing of the dredge. On the port side is situated the enclosed sick berth or hospital, which is furnished with two folding-up wood cots that can be turned up when not required; a hammock can also be slung in this sick berth. The medicines, mainly in the form of tabloids and palatinoids, are in locked cupboards. A Tallerman's apparatus is also provided. On the starboard side of the galley compartment, from before backwards, are cabins for the physicist's laboratory, and a dark room for Roentgen-ray work and photography. The main deck is divided into five compartments which can be closed with watertight doors; the ship under main deck consists of eleven watertight compartments, divided where practicable longitudinally into three sections, mainly store rooms. The engine room, with large ice-melting tanks over it, and the stokehold are situated between the main and foremasts, the engines of 450 horse-power. The rudder and screw propeller can be raised when requisite. Electric lighting is provided throughout the ship; a windmill is supplied to drive the dynamo when desirable.

## A COUNTRY BRANCH OF THE HAMPSTEAD CONSUMPTION HOSPITAL.

ONE of the acknowledged drawbacks of the treatment of consumptives in London chest hospitals is that they are for the most part in more or less densely populated neighbourhoods, and that the highly oxygenated air believed to be of so much importance, as bearing on the encouragement of the bodily nutrition of consumptives, is not sufficiently available. If there were one metropolitan hospital more than the rest which was free from this drawback it would be held to be the North London Hospital for Consumption at Mount Vernon, Hampstead. Yet with the irony of fate, giving, however, a result which is cause of general congratulation, this hospital has recently been provided with the means of obtaining the openest of open air for its patients. In common with other hospitals, the applications for admission which it has received, more particularly of late, have been far in excess of any accommodation that could possibly be provided, producing difficulty which has been accentuated by the lengthened stay necessary for those who are submitted to the open-air treatment. An anonymous benefactor has recently made a gift of over £100,000 to the Hampstead Hospital for the erection and partial endowment of a country branch and convalescent home to contain 100 beds to which patients can be transferred from the hospital, so that more greatly prolonged care under favourable conditions may be afforded. The Hospital Committee has accordingly purchased 60 acres of land on the borders of Hertfordshire, which is about 350 feet above sea level, with a subsoil of sand and gravel and well sheltered by woods. The Committee intends to proceed immediately with the erection of the building.

## UGANDA AND ST. HELENA.

In Sir Harry Johnston's striking report on the Uganda Protectorate, he speaks in the highest terms of the skill and services of the Principal Medical Officer, Dr. R. U. Moffatt, C.M.G. The principal evil which has to be contended with is blackwater fever, which even under the most expert treatment causes a mortality of 20.9 per cent. Both Sir Harry Johnston and Dr. Moffatt ridicule Dr. Koch's view that this affection is produced by overdosage with quinine, the former characterising the doctrine as "foolish and dangerous." The almost constant cause appears to be chill during the course of malaria. Malaria is endemic in the Western Province of the Protectorate and in the Nile Valley; it is mainly of the quotidian and tropical tertian types, and only assumes a chronic form when inadequate doses of quinine have been given at the outset. In all refractory cases Dr. Moffatt adopts the routine principle of injecting quinine hypodermically on the third day. It is hoped that vigorous measures may soon be undertaken for the stamping out of the disease. Small-pox is endemic throughout Equatorial Africa, but is practically negligible as regards vaccinated subjects. Considerable difficulty has hitherto existed in vaccinating the natives, chiefly owing to ill-success in obtaining an active lymph. The climate of Uganda is described as being generally healthy, one part being almost ideal, but certain districts are insalubrious mainly on account of the presence of *Anopheles*. The report of the colony of St. Helena for 1900 is of interest as officially refuting the calumnies which have been spread regarding the treatment of the Boer prisoners on the island. The healthiness of Deadwood Camp, where most of them are confined, had been previously proved by the residence of the West Indian troops there in 1899. It was further shown by the rapidity with which the typhoid imported by the prisoners disappeared, and the fact that they escaped untouched from an epidemic of influenza which prostrated nearly the whole of the islanders. The following passages from Governor Sterndale's report speak for themselves:—"The gross lies which have been circulated in the Continental papers about our treatment of the prisoners have aroused considerable indignation here, even among the prisoners themselves. The Boer hospital in Jamestown is fitted up in a perfect manner, and the patients when convalescent are loth to leave. The fair and honest among the prisoners, whilst upholding their opinion that they were right to fight and would fight again in the same cause, acknowledge that they are well treated, and there are a few who have expressed a wish to settle in the island after the war."

## HOSPITAL EQUIPMENT IN INDIA.

If the recommendations of the Hospital Stores Committee, India, are carried out, there can be doubt that along with perhaps much-needed economy on the one hand, there must be a very marked increase in efficiency of station and regimental hospitals on the other. The Committee was originally appointed apparently on account of a considerable increase in expenditure on medical supplies during the past few years, and the object of the inquiry was "to ascertain whether, with due regard to the comfort of the sick, it might not be possible to revise the arrangements, and perhaps the scales of stores and equipments, as well as to consider the present system under which the stores are supplied, issued, and accounted for." Incidentally it may be remarked that the increase in expenditure was to a great extent apparent, and due to the manner in which the numerous subheads and military accounts generally have been rearranged in the course of time. But apart from this the recommendations of the Committee amount to a marked advance in the modernising of somewhat time-honoured but obsolete customs, and the bringing of hospital equipment generally in touch with ordinary requirements. As regards drugs, it may be stated that, for economic reasons, the tendency has increasingly of late years been towards manufacture of as many as possible in India, instead of purchasing in England. This policy is entirely justifiable, as long as the products obtained are as good as those purchased at home, and are reasonably reliable in their strength and standardisation. But the Committee points out that this is far from being the case. The Medical Store depôts are inadequate and ill adapted to modern manufacturing processes, and "it is impossible to expect reliable results from laboratory employees who have had no special training." Comparisons between the products of the depôts showed there was considerable variations in quality, and that, as there is no attempt at standardisation at all, there can be no uniformity of strengths. "In short, there is an absence of systematic examination as to strength and purity of preparations." This being the case—and the evil has been reported on over and over again—the Committee recommends the substitution for the existing four depôts of one central one under the administrative control of a commissioned officer, but practically conducted by a man acquainted with this branch of manufacture. The change seems likely to lead to greater experience and economy. The Committee strongly insists on the value of drugs in a compressed form, especially for use on service. With reference to the surgical equipment now in use the Committee expressed the opinion that "much of it is defective, behind the times, and not in keeping with modern surgery." There are no operation rooms in military hospitals, operations having to be performed in the wards or in open verandahs, where the best results cannot be obtained; in many civil hospitals, on the other hand, admirably fitted-up rooms with really modern appliances are to be found. "Surely if it is necessary to provide aseptic equipment for the performance of operations in the interests of the natives of India it is at least equally necessary for the performance of operations on officers and soldiers." Even in small hospitals much can be done. The present wooden-handled instruments, which cannot be rendered aseptic, should be done away with; proper sterilisers and a suitable supply of trays, dishes, etc., should be supplied; dressings should be issued in small air-tight packets instead of in bulk as at present, and there should be a reasonable variety in the matter of these dressings. All these are among the recommendations urgently put forward by the Committee. The instruments themselves want revising. Stricture dilators, metallic bougies, Reid's stomach pump ("which is often a combined enema and stomach pump"), the old fashioned ophthalmoscope now issued, all these should be replaced by modern patterns; and such things as eye instruments, retractors, needle holders, and many others which are not supplied at all are necessary. The Committee draws attention to the institution known as the casebook, in which every case that is getting any form of extra outside the recognised "diet" has to be entered by the medical officer. This recommendation has been acted on already, and the casebook in future is to be reserved for its legitimate use—the record of cases of professional interest. It is only to be regretted that the whole subject of hospital returns did not also come into the field of inquiry. It remains to be seen how far the Government of India will act on these recommendations. It is fairly certain that the great majority of them will be carried into effect shortly, as, when once a reasonable case is made out for improvements not involving great expenditure, the Indian Government has generally shown itself ready to respond.

## NIGHTINGALE NURSES.

From the opening of the Nightingale School for Probationer-Nurses at St. Thomas's Hospital in 1860 to the end of 1890, no fewer than 1,645 candidates have been admitted, and of these 982, after completing a year's probationary training,

have received appointments on the nursing staff of St. Thomas's Hospital, or at some other approved public hospital or infirmary, or district nursing institution for the benefit of the sick poor. Among the appointments made during the year 1900 were those of seven Nightingale nurses to be matrons in provincial hospitals, two to be assistant matrons, and thirteen to be sisters either in London or in the provinces. As the rules at present stand, in addition to one year of probationary training contemplated in the original regulations of the school, one or two years' subsequent experience and training in the wards has become a necessary qualification for an appointment as a nurse on the regular hospital staff, and at least two years as a ward sister; the result is that no nurse is recommended for appointment at another hospital until after the expiration of three years from admission to the Nightingale Home. The Matron, Miss Gordon, in referring to the changes that have been made, writes in her report: "We trust that we have kept to the principles inculcated by Miss Nightingale, and that we are entitled to feel that our nurses when they leave us have received such a training as she would approve." The Committee states that it has reason to believe that such is the case, and it may be said, as representing without exaggeration outside opinion, that the Nightingale nurses represent the high-water mark of the present-day nursing art. The uses of adversity, the poet states, are sweet. The Crimean war discovered Miss Nightingale, and from her influence has sprung, it is not too much to say, the scientific nursing of to-day—a growth of the three later decades of the nineteenth century. What that new order displaced, although it had doubtless some good qualities, is not a pleasant thing for description or even for remembrance. Regulations as to the admission of candidates desirous of being trained for service as hospital nurses may be made to the Matron, St. Thomas's Hospital, London, S.E.

### THE FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE, MADRID, 1903.

THE National Committee of the Fourteenth International Congress of Medicine to be held at Madrid from April 23rd to April 30th, 1903, for Great Britain and Ireland, remains the same as at the Paris Congress; Sir William Mac Cormac, Bart., K.C.B., K.C.V.O., being the President. The Honorary Secretaries are Dr. Percival Horton-Smith of 15, Upper Brook Street, Grosvenor Square, and Mr. D'Arcy Power, F.R.C.S.Eng., of 10A, Chandos Street, Cavendish Square, London, W.

## MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

**Industrial Diseases.**—When the Home Office vote came on last Monday a very interesting debate was raised by Sir Charles Dilke on the prevalence of lead poisoning in the china and earthenware trade. The improvement which had taken place, he thought, was due to the general use of the fan. The manufacturers in Germany had reduced plumbism by being forced to take more effective steps than were taken in this country. He criticised the Home Office for slowness in action. Mr. Coghill urged the Home Secretary not to go too far, as there was a risk of destroying the trade, and Mr. Tennant defended the enforcement of rules which would reduce the percentage of lead to 2 per cent. in the glaze, and so, according to Dr. Thorpe's recommendations, bring the British manufacturers in line with those abroad. Attention was called to the increase of lead poisoning among coach painters, those who worked at electrical accumulators, and shipbuilders. The prevalence of plumbism among printers was referred to, and a strong opinion expressed that separate rooms should be provided for meals for all such workers. Mr. Ritchie, in his reply, congratulated the House on the fact that lead poisoning had diminished in 1900 and that cases of phosphorus poisoning had disappeared. He defended Dr. Thorpe, and said that the Home Office was bound, when the manufacturers objected to the 2 per cent. proportion, to submit the matter to arbitration. He could not undertake to appoint a resident lady inspector for the Potteries as suggested. Lady inspectors could be sent wherever they were required. Mr. Asquith pointed out the good results of a stationary lady inspector in the West of London, and he thought one in the Potteries would be most valuable. In 1893 there were only two lady inspectors and now there were seven, but more were required. References were also made in the course of the debate to the numerous cases of pulmonary disease in Bessemer steel works caused by floating particles of ganister. The increase in the number of fatal accidents in factories and workshops from 455 in 1893 to 1,045 in 1900, and of all industrial accidents from 4,262 in 1897 to 4,823 in 1900, was also mentioned in the course of the discussion by Mr. John Burns.

**The Commission on Tuberculosis.**—In answer to Mr. Field, the President of the Local Government Board said that the Government had not arrived at any decision as to the appointment of a Royal Commission to inquire into and report on the tuberculosis question. He admitted, however, that the advisability of placing on such a commission, if appointed, practical representatives of the animal industry and representatives of the agriculturists was being considered. Mr. Wyndham also said, in answer to the same hon. member, that the question of the transmissibility of tuberculosis from animals to man was under the consideration in Ireland of the Local Government Board and the Board of Agriculture. He could not say, as they were still conferring, whether they would consider it necessary to cause experiments to be carried out with the object of settling the question of the transmissibility of bovine tuberculosis to the human race.

**Tuberculosis among Post Office Officials.**—Sir Walter Foster asked on Tuesday whether the Postmaster-General's attention had been called to the conclusions of the British Tuberculosis Congress with regard to the dangers arising from dust and tuberculous sputum, and whether he was aware that uncontradicted statements were made in the State and Municipal Section to the effect that no efficient organisation existed in the Post Office for the disposal of dust and sputa from persons suffering from tuberculous disease. The Postmaster-General's attention was also directed to the measures adopted by the French Postal Department for the prevention of the spread of tuberculosis with a view to the adoption of similar measures in this country. The Secretary of the Treasury said that no authorised record of the proceedings of the Congress was before the Postmaster-General, but that he was considering what steps could be taken.

**The Factory and Workshops Acts Amendment and Consolidation Bill** is to be taken on its report stage next Monday and Tuesday. It is likely to occupy both those days, as it covers over 100 pages, is divided into 10 parts and 163 clauses, and has 7 schedules. There are some seven pages of amendments on the paper to be considered. In spite of its bulk, the Bill is not likely to excite much discussion, except on a few points, as there is a general desire to pass it into law.

**Army Medical Reports.**—Mr. Weir called attention on Tuesday to the delay in the report of the Army Medical Department for 1900, and asked when it would be issued. Lord Stanley, in reply, said that the Indian returns were only received late in the following year, and have to be edited, and so the delay was caused. The report for 1900 would be issued early in 1902, which meant a delay of over a year after the returns were received.

**Bills to be Dropped.**—Among the twenty or more Bills still on the Government list, the Lunacy (Ireland) Bill has but a doubtful chance. Among the forty-three private members' Bills, there are none likely to pass into law. The Public Health Bill and the Rivers Pollution Bill have not yet been read a second time, and the Cremation Bill, which might pass, is blocked by amendments standing in the name of Mr. Tomlinson (Wigan).

SIXTY-NINTH ANNUAL MEETING

OF THE

# British Medical Association.

*Held at Cheltenham, July 30th, 31st, August 1st and 2nd.*

## THE ANNUAL DINNER.

The annual dinner of the Association was held in the Boys' College, Cheltenham, on Thursday, August 1st, 1901, when the following toasts were drunk:

*The King.*

The President proposed the health of "The King," which was loyally received.

*The Queen, The Duke of Cornwall and York.*

He then proposed the health of "The Queen, The Duke of Cornwall and York and the rest of the Royal Family."

*The Navy, Army, and Imperial Forces.*

The High Sheriff of the County (Mr. G. S. Bayley) esteemed it a great privilege to be asked to propose this toast. There were records enough fresh in their memories to stir the most sluggish pulses, and they need not go very far for their inspiration, because from the very hall in which they were then seated went forth to the present war the old Cheltenham contingent, of whom no fewer than 37 fell fighting for their country. Again, only last week, the Gloucester Militia, who had been eighteen months on active service, the greater part of which time had been spent in guarding prisoners of war at St. Helena, returned to this country. Then, again, there were the volunteers who had gone out to fight for their country in the present war. He thought it might be said that if this war had taught us anything it was the value of the volunteers. Referring to the dangers which were experienced at the front he would like to say a word as to these people who were called non-combatant. It seemed to him, speaking as a mere man in the street, that they were called non-combatant, not because they escaped the risk to life and health and all the innumerable hardships of a campaign, but because, instead of taking life, they did their very best to preserve it. As to the navy, they were very proud of the way their navy had done their work in South Africa, and the courage, resource, and devotion which it had shown. He then went on to speak in high terms of the Imperial Forces and concluded by asking the audience to drink the health of the "Navy, Army and Imperial Forces," coupling with this toast the names of Inspector-General Turnbull, Surgeon-General Hamilton, and Colonel Rogers. The toast was well received.

Inspector-General Turnbull regretted that it had fallen to him to take the place of his friend, Fleet Surgeon Kirker, to return thanks for the cordial manner in which they had toasted the Royal Navy. The "handy man" had been well in evidence since they last met at Ipswich, on no occasion more so than at Windsor when their late, ever-to-be-remembered Queen and Empress of India was being conveyed to her resting-place. He felt assured that the Association, by their research into and report on the requirements of the R.A.M.C., had advanced the interests of the medical service to which he had so long belonged, and in so doing promoted the best interests of the Navy, as the health of the *personnel* was not second, but necessary to the efficiency of its material.

Surgeon-General Hamilton said that it would be in the recollection of those who were present at the last meeting, when he had the honour of returning thanks to this toast, that the whole civilised world was shocked by the accusation which was brought against their body, and which turned out to be a terrible mistake. Mr. Burdett-Coutts seemed to have got his knife into the medical services of the army, and the result of what he said was that the Secretary of State for War appointed a Commission to inquire into the facts. He thought all those who were present would acknowledge that the report of that Commission completely exonerated the medical services from all blame. No doubt somebody was to blame, but the question was, Who? He thought they could at any rate say it was not the medical services. The only person he could conceive to be to blame was Mr. Kruger, because he started the war, and upon his shoulders must rest the misery and the loss of life which had been sustained by this country.

Colonel Rogers then replied on behalf of the Imperial Forces.

*The Bishop, Clergy, and Ministers of all Denominations.*

Mr. W. F. Hicks Beach proposed this toast, which was responded to by the Rev. George Croxby.

*The Borough of Cheltenham.*

Sir William MacCormac esteemed it an honour to be entrusted with the task of proposing the toast of the City of Cheltenham. In doing so he coupled with it the name of the Mayor. They had met in the town of Cheltehham under the happiest auspices. Everything possible had been done for them by everyone concerned. No more successful meeting had taken place for many a long time than the present one in the beautiful town of Cheltenham. He asked all to join with him in thanking the representatives of the town and the town itself for all they had done, and done with the utmost cordiality in promoting in every way the success of their meeting. It was about the year 1740 that the town first came into notice by virtue of its waters. Many of them would remember that their admirable President had referred to these waters as being of very great account and that they could be improved upon by additions made to them by certain other waters. He believed the way they came into recognition was by the country folk coming in on market days and Sundays and holidays and drinking the waters in immense quantities. They drank quarts at a time, and when they were asked why they drank the waters they said they did so because they thought it was a potion, but they really had nothing the matter with them. The President had said that these waters were very valuable when certain additions were made to them. He would give them the interpretation of those words. A friend of his had told him that he was driving from the station on an omnibus and he asked the 'bus driver what they had in the town. The 'bus driver replied, "We have mineral waters." His friend said, "What are they good for?" "Oh, very good for the doctors." "How do you mean; what good can they do for the doctors?" "Oh, the doctors prescribe these waters, and they give the patient who takes them rheumatism and gout, and, what is worse than all, they dilute the waters." That is what he wanted them particularly to know after what had been said by the President. The waters were not universally held in esteem. He had been told, on what he thought was good authority, that certain persons had suffered from the waters, and that a record was to be found in a churchyard not very far off to the following effect:

> Here lie I and my four daughters
> All through drinking Cheltenham waters.
> Had we but stuck to Epsom salts
> We should not lie in these 'ere vaults.

That was perhaps a digression from the toast which he had the honour of proposing, but he asked them with all earnestness to drink the toast of the town of Cheltenham, and at the same time to express their sincere and hearty thanks to the Mayor of the beautiful city for his kindness to the Association, and he would like to couple with the Mayor's name the name of the Lady Mayoress. [Loud applause.]

The Mayor, in responding to the toast, asked for their indulgence for a few moments. He was not much given to public speaking, and sometimes when he was speaking he remembered that quotation from the well-known Scotch poet, "That there was a chiel among them taking notes, and faith he'll print it." That sometimes embarrassed him, but that night he hoped that there was a chiel among them taking notes, in order that they might have recorded in the interests of Cheltenham the very kind words which the distinguished man who had last spoken had said of them. Another quotation which he would give them was:

> Oh wad some pow'r the giftie gie us,
> To see ourselves as ithers see us.

If he had been thankful for nothing else that week, he was

at any rate thankful that the members of that great Association had come among them in order that some of those who resided there might know what strangers thought of their beautiful town and of the way in which it was kept. He had had the honour for the last three years of presiding over the County Council of the Borough. It was true that it had not many faults, but the main fault of the Cheltenham Town Council had been that it had been a little in advance of its constituency, and perhaps it had tried to do more than the constituency would authorise it to do. It was only three or four years ago that they tried to emulate Harrogate, but unfortunately they were checked by the Local Government Board in deference to the opposition of some indignant ratepayers. He would like to exemplify what he had said, and to show them that the body which he represented was really an energetic and go-ahead body. They all had heard reference made in the eloquent address of their President to the outbreak of small-pox in the neighbouring city of Gloucester. Gloucester was only eight miles from Cheltenham, and was connected by road and rail. In Gloucester they had 434 deaths from small-pox, and they in Cheltenham, which was a health resort, were at their wits' end to know how to keep that fell disease out of their town. They found themselves bound by red tape. The Board of Guardians could not move. Without reference to the Local Government Board, the Town Council took upon itself to make every medical man in the town an officer for free vaccination, and under the guidance of Dr. Garrett, who, he ventured to think, was one of the ablest officers of health in the country, they made every medical man free for vaccination. They had 10,000 people vaccinated and revaccinated within a week or two. They had twenty-three imported cases from Gloucester brought into Cheltenham; every case was picked up and isolated as it came into the town; and while there were, as he said, 434 deaths in Gloucester, there was not a single death from small-pox in Cheltenham. He mentioned that because he thought it was to the credit of the Town Council, and as an earnest of the assurance that they meant to do their best to restore Cheltenham not only as a focus for those attractions to which he had alluded on Tuesday evening, but also in the hope that they would make it a health resort in the future as it had been in the past. He hoped that the Association would adhere to its migratory principles. They were doing a great deal of good to Cheltenham by their visit there, and he was quite sure that they would help them to resuscitate their waters and their health attractions; and what the Association had done for them he was quite sure it could do for other towns in the country. He hoped that before very long the Association would again visit Cheltenham. He thanked them for listening to him for so long, and of giving him the opportunity of expressing his thanks to them, and to Sir William MacCormac in particular, for the compliments he had paid, and especially for the graceful allusion he had made to his wife.

*The Houses of Parliament.*

Sir WILLIAM BROADBENT then proposed the toast of "The Houses of Parliament," which was responded to by Mr. AGG GARDNER.

*The British Medical Association.*

Mr. F. BRANDT, J.P.: Mr. President, Mr. Mayor, and Gentlemen,—If anything could add to our regret for the indisposition which unfortunately prevents Mr. Jas. B. Winterbotham, our Deputy Mayor, from being present, it is that he is not able to propose the toast which has been entrusted to me in his place—"Prosperity to the British Medical Association"—in the case of all those who know him there must be a keen sense of what we all lose by the absence of one of the most able and popular of our local representatives. We shall miss his easy eloquence, his ready fund of humour, the store of his wide local and general knowledge, the charm of his genial personality; and nothing but reluctance to do anything which should add to the labours of your esteemed President made me consent to his request—indeed I accepted it as a command—that I should endeavour, at the shortest notice, to speak to the important toast which I regret Mr. Winterbotham is not here to do justice to; and I crave your indulgence. I shall say but little on the more distinctive features and associations of the place of your meeting this year—on the *genius loci*—some of these have been touched upon by others more competent as experts than myself; your worthy President spoke of the waters of this place and its claims as a health resort, in the address to which all listened with such interest on Tuesday evening last; but with reference to the claims of Cheltenham as an important educational centre, there seems to me—myself educated within these walls—something especially appropriate in the place of our meeting to-night, seeing that I can refer with pride and pleasure to the fact that your President himself, Dr. Ferguson, received his early education in this college, and after proceeding to Oxford, where he graduated, taking a First Class in Natural Science, commenced that distinguished career, some of the stepping-stones in which are recorded in our register, to which I must refer you, for time does not permit me to recount them all, nor would he forgive me if I said more than that many here present have special pleasure in seeing an old Cheltonian occupying the position he holds here to-night. And, standing here, I may be allowed also to ask you to glance at the tablets and memorials on these walls in proof of the healthiness of this place, and of the sound and efficient moral and intellectual training here supplied. Assuredly without sound minds in healthy bodies those whose names are here recorded as distinguished, more or less, beyond their compeers—and many others among the swiftly-passing generations of schoolboys—could not have done what they have done in all parts of the world, serving their Sovereign and their country in every capacity—civil, naval, and military—as they have done; faithful, ever faithful to their duty; only too many of them faithful even unto death, in the prime of life. But to return to the toast. The founders of this great Association must have had an almost prophetic appreciation of the needs and possibilities of the then coming future, but the most sanguine among them could hardly have anticipated the growth and success of their enterprise. Starting with some 700 members and three Branches, what would they have thought could they have foreseen what we see—an Association numbering between 18,000 and 19,000 members, with innumerable Branches throughout not only the United Kingdom, but all the dominions beyond and over the seas, and the Empire of India. Would those founders not have felt a thrill of pride and pleasure—as we all did—could they have heard read the list of distinguished delegates and guests on Tuesday night last, when to these, coming to do honour to and to be honoured by this meeting, coming from France, from Germany, from the United States of America, from Australia, New Zealand, India, Ceylon, Bermuda, and I know not where, the right hand of fellowship and a hearty greeting were extended by your distinguished President on behalf of the Association. These are subjects on which a speaker has to beware lest he seem unduly to magnify the institutions of his own country; subjects in reference to which he may express sympathies or arouse antipathies which, like sleeping dogs, it were better to let lie. But here we are all on common ground: there is no monopoly of such excellent Associations as that which we now welcome here; there are international as well as national and provincial congresses, associations, and societies, all working towards our common ends and with no conflicting interests—and I ask you all to wish God-speed to the British Medical Association in its crusade against human sickness, suffering, and degradation, and in its efforts to raise the standard of human efficiency and happiness, under the guidance this year of your distinguished President, and in all the years to come.

The toast was drunk with much enthusiasm.

The PRESIDENT OF COUNCIL (Dr. Roberts Thomson), in replying to the toast, said that at their last dinner he ventured to suggest that when the Constitution Committee got to work, one of the subjects it should take into consideration was an amendment of that unwritten law which made the President of Council respond to this toast; for among other disadvantages it had this, that the same individual had to do it three times in succession. It was, therefore, not easy for him to say anything fresh, but there was this consolation for them and this comfort for himself, that so far as he was concerned that was the last time of asking, and when the next annual dinner came round, somebody else would have to respond. On behalf of the Association, he thanked the mover of the toast for the very kind words he had said, and

also the guests for the very cordial way in which they had received it. It was true that they were a great Association; they were great in numbers. When last they met in Cheltenham the number of members had not got into four figures, and the number of Branches had not got into two figures; but now they had Branches scattered over the whole British-speaking world, and they had a membership amounting to 19,000. They were also great in that they contained within them all that was best in the profession. They were great also in the influence that they exercised. He did not say that they were satisfied with that. They were not great in their organisation, but there were some of them who were great in their desire that that organisation should be improved, and they had that day made a step in that direction. He for one had felt—and there were many who also felt—that it was a great deficiency in their education that they did not know Cheltenham; but they had that week had the deficiency removed in the most delightful manner, and he was sure the happiest memories would cling to them in connection with that week, for, whatever way they might look at it, it had undoubtedly been a most successful meeting. Their desire in these meetings was to attain the maximum of scientific work along with the maximum of social enjoyment, and he felt sure that everyone of the Association present at that meeting would agree with him that those points had been attained and that both had been happily blended. He had been told by those who were in a position to form an opinion that the Sectional work had been of a very high standard and that the Sections had been well attended. He thought the work which had gone on in the Sections would bear comparison with what had been done at other meetings. In regard to the addresses that had been delivered, he was sure they would agree with him when he said that they were worthy to take a place with any addresses that had ever been delivered at any of their annual meetings. Under those circumstances, he was sure they would congratulate those who had had such heavy anxiety. He had himself had to bear part of the burden of an annual meeting, and therefore he knew what he was speaking about when he referred to the anxiety and responsibility which rested on the shoulders of those who locally had to make the arrangements for an annual meeting. In Cheltenham they had had everything in their favour. They had visited a beautiful city, they had had most delightful weather, and they had never been better housed so far as the work of the Association was concerned. They had had the genial and hospitable Mayor and Municipality; they had had a most active and representative Local Committee; and last, but not least, they had *such* a President. In such a combination of circumstances it was not to be wondered at that they had had such a successful meeting. They would carry away with them the happiest memories of the meeting, and on behalf of the Association he begged to thank them warmly for the way they had drunk the toast.

*The President.*

Sir William Church appreciated most highly the high honour that had been paid to him in asking him to propose the toast of the President. It was not only a great honour, but a very great pleasure, for when their President communicated to him his (the President's) wish that he should propose this toast, he also somewhat unkindly reminded him of the flight of time and of the time when he as student at St. Bartholomew's Hospital was working for a portion of his time under his supervision. He, Sir William Church could only say that if he, the President, considered himself proud to be a pupil of his, he that night was proud of his pupil. No man attained the position their President held that night who had not gained the confidence of his professional brethren, and that confidence Dr. Ferguson had attained by a long life of meritorious and steady work. He might commend Dr. Ferguson to them that night for many reasons. He might speak of him as a trustworthy practitioner and as a skilful surgeon. He might also allude to the part that he played in the social life of the town, but he preferred rather to direct their attention to his work as President of the Association. They, as visitors to that charming city, could appreciate all that he, and those who had been working under him, had done for their instruction, amusement and comfort. They thanked him most heartily for the interesting and comprehensive address that he had given them, and they thanked him also for the part he had taken in the more serious business of the Association. He thought they might take their President as an example to guide them, for he had attained his present position, not by self-seeking but, he believed, at the universal request of all his brethren in that portion of the country, and he felt sure he might congratulate him on having received at that banquet the greatest reward which could happen to any of them, and that was to feel that they had got the approbation of their professional brethren.

The toast was drunk with great enthusiasm.

The President considered that the fact that he should have presided over them during the past few days and at the dinner that night, and also that his old master, Sir William Church, should have proposed his health was the greatest honour of his life. He felt a very great debt of gratitude to Sir William Church, not only for the honour he had done him in coming there that night but also for the too gracious words he had uttered. He felt sure he was only echoing their sentiments in saying that they congratulated Sir William Church upon the primary position in the medical profession to which he had attained, and for those honours which were not long ago bestowed upon him by his Sovereign to mark his approbation of a life well spent. He was sure they would all agree with him in hoping that his life might long be spared to continue the work upon which he had been engaged, and to occupy the position of honour that he had attained as the result of a long and most unobtrusive devotion to duty. If they had had a successful meeting, he would ascribe the chief merit of it to the experienced counsels of Mr. Fowke, who he was sorry was not able to be with them that night; but, although he was not with them, his place had been supplied by his assistant, Mr. Guy Elliston, and, so far as one man could fill the place of another, that place had been most ably and most admirably filled by Mr Elliston, of whom he would only say that he seemed to have a natural genius for the duties which he had to undertake. After Mr. Elliston he should like to mention the name of Dr. Cardew, their chief local Secretary, who was educated in Cheltenham, who derived his first experience of the medical profession in the Cheltenham Hospital. There were two of his (Dr. Cardew's) old teachers present that night, and they congratulated him on the proud position which he had attained in the town, and on the success which had attended his efforts. Then they had a most admirable Assistant Secretary, Dr. Pruen, whose labours they would see something of the following night. Besides that they had to pay a debt of gratitude to the gentlemen who had organised what was the record exhibition of the Association. He could not find words to express the obligation they felt to Captain Peake, but he could assure him it was most deep, most real, and most true. Then again he should certainly fail in his duty if he did not say a word of that splendid host and most genial member who was universally popular, Mr. Fowler of Cirencester. He must also mention his able and most admirable and genial lieutenant, Mr. Ewbank Lansdown. But after all they could have done nothing if it had not been for the Mayor. He could only say that the Mayor had been so assiduous in his attendance at the Committees that at one time he, the President, began to think that he was a medical man. He had given him every assistance that he possibly could. He would not detain them longer, but with all the intensity he possessed he thanked them all, and he could assure them that the memories of that week, and that night, would never be effaced from his memory.

*The Guests.*

Dr. Batten then proposed the health of the guests, coupling with it the names of Dr. Sabouraud of Paris and Professor George Dock of Michigan.

The President, addressing M. Sabouraud, said:—"M. Sabouraud, voudriez-vous bien répondre pour les médecins Français, faisant usage, je vous prie, de votre belle langue maternelle que nous comprenons, pour la plupart, parfaitement?

Dr. Sabouraud then responded in French.

Professor George Dock, who also spoke to the toast, re-

ferring to the interruptions which had taken place in the course of some of the speeches, said that it reminded him of an incident which occurred at a meeting at which the speaker had a difficulty in making himself heard. At last fixing upon one of the audience who had been constant in his interruptions, he asked him, "Do you believe in the efficacy of prayer?" to which the individual replied "Yes, of course I do." "Do you believe in regeneration?" "Well, yes." "Then the next time you pray, pray that you may be born again, and stillborn." [Loud laughter.] From the bottom of his heart he begged to thank them all for the kind reception he had received. He was glad to hear from their President that he was going to visit America, and he could assure him that he would receive a very hearty welcome there. They as a profession were only young in his country, but he was pleased to say they were growing, and they would be pleased to show the medical profession what they were doing, if they would only come and see them, and he would promise them that when they came they should be received as hospitably as he had been received in the town of Cheltenham by the British Medical Association.

The dinner was brought to a close by the singing of the National Anthem.

## VOTES OF THANKS ON THE ADDRESSES.

A DELAY in the receipt of the shorthand writer's notes prevented us from publishing in last week's issue of the BRITISH MEDICAL JOURNAL the speeches in which votes of thanks were proposed to the President of the British Medical Association, Dr. G. B. Ferguson, for his Presidential address, and Dr. J. F. Goodhart for his Address in Medicine. The report is given below:—

### THE PRESIDENT'S ADDRESS.

On the President resuming his seat amid great applause after delivering his address,

The MAYOR called upon Sir William Church, President of the Royal College of Physicians to propose a vote of thanks to the President and upon Sir John William Moore to second it.

Sir WILLIAM CHURCH said: Mr. President, Ladies and Gentlemen,—I have been afforded the great privilege of proposing the resolution to this magnificent assembly, a resolution which I am sure all who have just heard the eloquent and interesting address of our President will accept with the same pleasure with which I propose it. The resolution is:

That the cordial thanks of the Association be given to Dr. George Bagot Ferguson for his able and interesting address.

Sir JOHN WILLIAM MOORE: Mr. Mayor, Ladies and Gentlemen,—I feel like Sir William Church that it is a great honour indeed to be asked to take part in this resolution. I think our worthy President is both to be congratulated and to be envied; he is to be congratulated on having had the attractive power of drawing together the vast assembly which we see assembled in this beautiful hall, and he is to be envied, because so many of the audience are ladies. I am sure we have all listened with great interest to the very eloquent and learned address which our President has delivered. He has included in his contribution languages ancient and modern, poets ancient and modern, and prose writers ancient and modern; but if I were to single out any part of that address for comment, I should certainly select those passages in it which told us something of the beautiful valley of the Severn in which we are at present met together, and especially of this fair town with its illustrious history. It was the privilege of many of your visitors to-day to visit one of the finest abbeys, I venture to say, in the world—namely, Tewkesbury—and we all know the interest attaching to that neighbourhood. But beyond that, for that is not quite appropriate to the present occasion, I should recall the fact alluded to by your President, that Henry William Rumsey was undoubtedly the pioneer of modern State medicine; and I recall with great satisfaction that he had two collaborators—namely, Henry Acland of Oxford, and William Stokes of Dublin. I also think we should all feel a special interest and pride on the present occasion in having recalled to our recollection the fact of the intimate connection of Edward Jenner with this neighbourhood. This hard-working, great, learned, and devoted physician, toiling at Berkeley, not far from here, made a discovery which, I may say, revolutionised all nations, and there can be no question that it brought about the gradual abolition of small-pox and the safety of nations. It was that disease which in past ages wrought ravages which were unequalled by any pestilence, the plague alone excepted. The motto of this town is an admirable one, "Health and learning," and I think we have all had, since we came to live in Cheltenham, evidence of the strict attention paid to both one and the other. The municipality of the town is to be congratulated for the cleanliness which we see on all sides. The educational advantages of this place are known by reputation, and many of my friends have been taught in this College. I have great pleasure in seconding the resolution.

The resolution was put and carried by acclamation.

The PRESIDENT returned thanks in a few graceful words.

### THE ADDRESS IN MEDICINE.

After the delivery of the Address in Medicine, the PRESIDENT said he thought the audience would agree with him that they had just listened to a very philosophic address, an address which they would read over and over again, and think of for many a long day. He then called on Professor Clifford Albutt.

Professor CLIFFORD ALBUTT said it had been stated that they would that night hear a very philosophic address. Those of them who had had, as many had had, the opportunity of hearing Dr. Goodhart in public, or of reading what he wrote in private, were aware that they would hear from him that night an address which carried with it particularly the note which he had spoken of, namely, the note of individuality. He had told them how in this and other vocations even that as regards the sound of their voices no two of them were alike or identical. He thought many of them felt—he (Professor Allbutt) at any rate did—that there was a very wide difference between them as individuals, and he wished that out of his experience he could have drawn such a harvest of shrewd wisdom as that which had been presented to them by Dr. Goodhart, and which stamped him as being a genius. He (Professor Allbutt) used those words, because it was one's common experience—and he was very conscious of it—that they were not always able to put their thoughts epigrammatically in words. They had often given expression to their feelings by saying "that is the thing I should like to have said myself," and when they heard it they felt that is what they should like to have said. They had had an address which had been very interesting, but no part was more interesting that that which had dealt with the question of individuality. The lesson which had been taught them that night was one they would not easily forget. The address had not only been brimful of wisdom, but had been delivered with a strong sense of humour. There were many happy expressions in it which he was sure they all wished to remember, and he was glad to think that they would have the opportunity of seeing it in print and carrying it away with them. He therefore proposed:

That the cordial thanks of the Association be given to Dr. J. F. Goodhart for his able and most interesting address on Medicine.

Dr. FARQUHARSON was very glad that they had a real doctor to propose this resolution of thanks, because he did not suppose any man was better qualified than Dr. Clifford Albutt to speak about anything connected with medicine. He was like Dr. Johnson: he had written a dictionary, or, at all events, he had encouraged other people to write a dictionary. Therefore he was well qualified to speak in the way he had done about the admirable address they had listened to. Dr. Goodhart had told them about muscular fatigue occasionally interfering with the concentration of their thoughts. He, Dr. Farquharson, had experienced a good deal of muscular fatigue in going around to see the beautiful city of Cheltenham, but that condition did not prevent him from concentrating his thoughts on the valuable address they had listened to. One of the great functions of the Association was that it brought the members together and gave them the opportunity annually of hearing a concentrated summary of the progress of medicine which had been going on during the previous year. He had occasion to ask a friend of his the day before if he was going to hear the Address in Medicine. His friend said he did not think so. He said to his friend: "You had better listen to Goodhart, because I know something of him. I have

read his writings, I have heard him speak, and if you hear him you will hear something interesting, suggestive, honest, and, above all, humorous." Dr. Goodhart had told them that night to treat their internal organisation with easy familiarity, and they were not to be worried about their hearts and not to let their stomachs stand over them. He had been to twenty meetings of the British Medical Association, and they all knew what that meant in connection with their stomachs, but he was pleased to say he was standing before them sound in wind and limb, with a good digestion, and still able to treat his stomach with an easy familiarity which he hoped did not amount to contempt. He asked them whether they thought that he told his friend what was right. Was he a good prophet when he told his friend what he did? Believing that he was a true prophet, he had great pleasure in seconding the resolution.

The resolution was put to the meeting and carried with acclamation.

Dr. Goodhart then thanked the audience for their vote of thanks, and also for the very attentive manner in which they had listened to him and for the kind reception he had received.

## EXCURSIONS.

The later days of the Association meeting at Cheltenham were made extremely pleasant by a series of admirably organised excursions, arranged by an Excursions Subcommittee under the chairmanship of Mr. C. Braine-Hartnell. The arrangements made by the Subcommittee, and carried out by the hard-working and genial Secretary, Mr. F. E. Rickerby, himself a member of the legal profession, were in their excellence worthy of the delightful country which served as a field for their operations. The excursions of Saturday, in particular, formed a fitting termination to a week of princely hospitality.

*Birdlip.*—On Friday afternoon about thirty members of the Association and their friends drove in brakes to Birdlip and then to Painswick, where they partook of afternoon tea on the kind invitation of Dr. and Mrs. Balfour Fergusson. After a very pleasant afternoon they returned to Cheltenham about 7 o'clock.

*Wye Valley.*—This, which was perhaps the most successful of the many excursions organised by the Excursions Subcommittee, was enjoyed by some 120 persons, members and ladies, on Saturday. They went by a morning train to Lydbrook Junction, and then walked over the Coldwell rocks and through about two miles of forest to Symond's Yat, where the extensive landscape was greatly admired. They then scrambled down to the banks of the Wye, and after luncheon were carried in a number of rowing boats down the Wye to Monmouth. Their admiration of the beautiful valley and river was punctuated by the pleasant excitement of the occasional grounding of the boats as the stream was low. Taking train at Monmouth, they went to Tintern, and after tea spent a very enjoyable time among the ruins of Tintern Abbey, Mr. John Sawyer describing the features of the ruins and the general characters of Cistercian churches. Then in the cool evening through the Forest of Dean they returned to Cheltenham.

*Great Malvern.*—A pleasant day was spent on Saturday by those who accepted the invitation of the members of the profession and the District Council to visit Malvern. After a drive over the Malvern Hills they were entertained to luncheon by a Committee of the Urban Council and the medical men of the district.

*Cirencester.*—About fifty members of the Association, accompanied by ladies, left Cheltenham on Saturday morning for Cirencester. They were met by brakes, and, under the guidance of Mr. E. C. Cripps and Dr. Charles Mackinnon, were driven to Ashcroft House, by the kind invitation of Mr. O. H. Fowler, where light refreshments were provided. They drove round Earl Bathurst's Park to Sapperton, where they enjoyed the view of the Golden Valley and inspected the church. They were then entertained at luncheon in the Wood House in the park, after which they drove back to Cirencester. Here they were met by the Rev. J. S. Sinclair, who described in an interesting way the features of the parish church. By the kind invitation of Mr. Wilfred Cripps, C.B., and Mrs. Cripps (Countess Bismarck) they were then entertained at tea and shown a large collection of Roman antiquities. They returned to Cheltenham in the evening, having spent a delightful day.

*Cowley Manor.*—On Saturday morning another party of about fifty, of whom a large proportion were ladies, left the Imperial Rooms for Cowley Manor, where they enjoyed the hospitable arrangements provided by Mr. and Mrs. James Horlick. They were shown as much of the manor house as was not in the hands of the builders, and were conducted over the beautiful grounds of the estate. Luncheon was partaken of in a tent on one of the upper lawns. The return journey was in the early afternoon, and the Seven Springs, the source of the Thames, was passed on the way.

## THE GENERAL MEDICAL COUNCIL ELECTION, 1901.

### Meeting of Candidates at Cheltenham.

A meeting was held, by the kind permission of the Council of the British Medical Association, on August 2nd, at 9.30 P.M., in the Ladies' College, Cheltenham, to discuss the question of the election of the direct representatives and to hear addresses on medical politics from the present representatives for England and Wales. The chair was taken by Mr. T. Garrett Horder, who had organised the holding of the meeting.

After some preliminary discussion the Chairman called upon Mr. George Brown to speak.

Mr. George Brown said: I do not see that we can regard this meeting as one that can come to any definite conclusion by way of deciding who should or should not be recommended to the constituency as those who should be selected for representation. I should have preferred that some programme had been drawn up or some hint as to what would have been expected of me. Am I to give an account of my stewardship? If so, I am not prepared for that, except to say that during the time I have represented you I have endeavoured to carry out the programme on which I came before you as a candidate, and on which I was successful in 1896. I hope that I have succeeded in satisfying those who placed me in that position. I have received no complaint from anyone about any vote I have given on the Council. On the contrary, I have received numerous letters from all parts of the country expressing approval, as well as letters from different Associations. I have reason to believe, therefore, that my stewardship has not been altogether unsatisfactory to those who sent me to the General Medical Council, and under these circumstances I hope I am not egotistical in believing that my candidature in the coming election is justifiable, and it may possibly be agreeable to the medical men of England and Wales to give me their votes again. I have no hesitation in saying that, having put my hand to the plough, I have no intention of turning back. I must say, as a general practitioner, it is undoubtedly a great tax upon one's time. There may be people who say—and very often the remark has been made of me—that "Brown has a nice fat thing, his fees for the General Medical Council are 5 guineas a day." All I can say is that, if it were only for anything of that kind, I should wash my hands of the whole matter and should proceed no further. But there is nothing to be got out of it, not even by a poor general practitioner, for you must remember the loss of practice which it entails and the loss of time necessarily incurred in going about to meetings all over the country, which is not done without putting your hand in your pocket. I may mention that my midwifery practice has absolutely gone. In my practice the fifty cases in the year I used to attend has dwindled down to one this year, and in that one I could not accept a fee because it was a domestic matter. That I think will dispose as far as I am concerned of one of the arguments put before you in the press that those who oppose the Midwives Bill are doing it from interested motives. I have opposed it for ten years on the principle that I do not believe that a partially educated woman, after three months' education, should be given a diploma or licence to to practise midwifery, and be allowed to use dangerous drugs as they are advised to do by those who lecture to them. I have seen a lecture by a midwife to midwives in which it was stated that treatment had been carried out in a bad case of

phlegmasia alba dolens without any mention being made in that lecture of a medical man being called in to the case. I think that that is likely to occur very largely indeed if the Midwifery Bill is passed. You do not want me to discuss that to-day. No resolution will be put before you, because it would be objected to on the ground that the meeting is not representative enough. I will now refer to an incident which occurred during my last candidature. I was invited to a meeting at Manchester, and some notice was taken of a remark of mine then that if I remained on the Council for three years without something being done that I would resign my seat. I did not resign my seat at the end of three years because I found that your sending as direct representatives to the Council men from your own body had a considerable effect and influence on some important matters on which you thought deeply. One of the items in my programme was to see that the General Medical Council made more stringent regulations with regard to the suppression of unqualified practice. You will admit that since the last election much has been done by the Council. They passed that memorable resolution which caused some dissatisfaction for some time in certain districts prohibiting unqualified assistants. The effect of that has been of a most satisfactory kind, and it is shown by the salaries which are now obtainable by medical men. Five years ago medical men almost went down on their knees to the medical agent to get them employment as *locums* or assistants, and those who were in some cases delighted then to get 2 guineas a week are now standing out for 5 guineas a week and getting it. That is due in a great measure to the action of the General Medical Council, which I consistently supported, in declaring that the employment of unqualified assistants would be regarded as disgraceful conduct in a professional respect. On another point I had a mandate in regard to preliminary education, and a great deal has been accomplished in that respect, although the effect is not very apparent yet, but the regulations are agreed to which will have a great influence indeed in the future admission of candidates to the medical profession. There will be a higher standard of preliminary education exacted, and that will have an important effect on the future of the profession generally. The raising of the curriculum has had a good effect in keeping out a large number of men who were not perhaps so well educated as they might have been. There is, however, still much to be done. I believe we are on the right road, and in the course of time we shall do a great deal which many of you desired to have been done for years past and almost despaired of seeing accomplished. I rather expected that we should have had others speaking previous to the candidates, and I would perhaps then have had to answer some questions. I will, however, anticipate by saying what I have to say with regard to that unfortunate incident which has occurred during the time which I was a member of the Council. I refer to the case of Kingsley Hunter. Though I cannot acquit myself from all blame in that matter, yet when you understand the true facts of the case you will, I am sure, acquit me and my colleague, Mr. Horsley, of any blame. All cases in which prosecution is asked for are submitted to the Penal Cases Committee and they report to the General Medical Council, When the prosecution of Hunter was decided upon his name was dovetailed in in a list of men who were practising without any qualification, that is to say quacks. All these names were put together, and I have the written evidence of some members of the General Medical Council that when Dr. Hunter's name was dovetailed in with this list of quacks not one of us knew that this man Hunter was a qualified man. Had that been known I, of course, should not have consented to his prosecution, and it was with the greatest amazement that I saw many months afterwards that by order of the General Medical Council this unfortunate Dr. Hunter had been prosecuted for taking a medical title. I am sorry this has occurred, but personally I do not have it on my conscience that I was guilty of any dereliction of duty in regard to that matter except that I might have called for all the evidence in respect to those five or six names among which Hunter's name occurred. I certainly think we ought to have had a summary of the evidence, but then if I had applied for such I should have been told I was wasting the time of the Council as I have been told before. I regard my position as one of extreme difficulty though not so bad as it was, I think my election at first was rather resented by some of the old members of the Council because it occurred more than once that when I had a motion down on the paper and wanted to say something, someone popped up and moved the previous question which unfortunately was invariably carried. That, however, does not occur now. There has been much change in the *personnel* of the Council. Something like half the Council has changed in the five years. In regard to everything I bring forward now I must say that I am always treated with respect, and that facilitates one's work at the Council. One feels more and more at home. As I get to understand the old members better I think at the same time they also get to know George Brown better, and there is more kindly feeling between us in consequence. I shall not say anything in regard to any other candidate who may come forward, except that I feel in justice bound to say that my colleague, Mr. Horsley, and myself have worked very harmoniously and happily together during the time we have been on the Council. I am glad to say this, because I opposed Mr. Horsley's candidature and supported that of Sir Walter Foster. I thought Sir Walter might have been more useful than Mr. Horsley to general practitioners, because of his influence in the House of Commons. We want more representation in the House of Commons, and I thought Sir Walter would serve us better, but whoever had been sent no one could have better served the cause of the general practitioner than Mr. Horsley, and if I have the happiness and honour to again represent you on the Council I know this that I hope I shall have the opportunity of working with Mr. Horsley on the General Medical Council. I trust that we shall have three representatives sent who will work harmoniously hand in hand, because it weakens direct representation when we find one voting on one side and one on the other. It is essential we should all be united in carrying out the work the profession wishes to be accomplished.

Dr. A. B. Ritchie (Manchester) asked: Does Mr. George Brown believe it probable that the practice of midwives will be restricted by legislation so as to make the attendance of a medical man compulsory in cases of confinement, and what policy does he support in connection with such legislation as is threatened?

Mr. George Brown: I shall oppose the present Bill as I have done with a considerable amount of success. I oppose that Bill *in toto*. I am in favour of a Bill for the better training of nurses by public bodies for poor people, and I believe that will meet the case.

Dr. A. B. Ritchie said that Mr. Brown had not answered his question.

Mr. R. H. Wolstenholme (Manchester) asked if Mr. Brown had seen the scheme of the Medical Guild referring to a registration of midwives, and would he support it?

Mr. G. Brown said he had had the opportunity of reading the scheme, which was on the lines of the Bill he would support. It, however, required amplification.

Mr. J. S. Whitaker (Great Yarmouth) said Mr. Brown's answer was not intelligible, because it referred to a scheme they had not seen. It would be more satisfactory if Mr. Brown answered the question whether he believed that it was reasonable or possible to expect the Legislature to pass any measure requiring every obstetric case to be attended by a medical practitioner. It was no use medical men crying for the moon; if the House of Commons would not do what the profession wanted, something should be asked for which was likely to be granted.

Mr. George Brown said he did not quite understand the question in that direct way.

The Chairman having repeated Dr. Ritchie's question to Mr. Brown,

Mr. Brown answered as follows: I am sure the Legislature will do nothing of that kind. From conversation with members of Parliament, I am sure they will never make that restriction. You cannot force a man into a woman's lying-in room, and it would be unreasonable to ask for such a thing.

The Chairman then called upon Dr. J. G. Glover to address the meeting.

Dr. J. G. Glover said: I recognise the necessity for brevity, and shall try to keep myself within the time allowed. I should

like in the forefront of my remarks to express the hope that we may have at the next election a larger vote of the profession than on any previous occasion. It will be impossible to get any real addition to direct representation if three-fourths of the profession stand aloof and leave the election to groups and small numbers. Certainly the larger the vote and the better the class of men sent as direct representatives, the more will be the influence of your representatives. A very serious blow was inflicted on direct representation after the last election, when one of the gentlemen elected, after clamouring for a seat, left the Council without ever waiting to discuss the main question he was supposed to understand and for the solution of which he was chosen. I have enjoyed your confidence for fifteen years—that is, for three separate quinquennial periods, and I am asking you once more to re-elect me. Nobody knows better than I do my many defects and shortcomings, but I have come to the conclusion in spite of these that I shall consult the interest of the cause of direct representation by sticking to my guns and by seeking re-election. Few members of the Council have seen more of its working; few have a larger experience of its principal committees; few know better what the Council can do and what it cannot do than myself. I do not boast of this. It is simply the length of my experience in the Council as your representative, and my knowledge of its members, their attitude of confidence and kindness towards me over this period that make it so. The Council is not perfect. It is too large. It wants reconstruction, and it wants larger powers. But in my opinion it has great powers for good even in its present form, and I see no immediate chance of it being materally altered. It has done very much already, as Mr. Brown has admitted, and may do much more both for the public and the profession—for medical education; and for the purity and dignity of the medical profession—which are of enormous consequence to the public. And I believe sincerely that for those ends the presence on the Council of general practitioners—men acquainted with general practice, with its problems, its difficulties, its grievances—are essential and will be acceptable to the Council.

### The Midwives Question.

I will dispose first of the midwives question. Even those who differ from me on this matter will allow that I have never shirked the question, and that I have consistently held that some regulation of the practice of midwives is urgently required and can scarcely be had without legislation. My support will only be given to a Midwives Bill on two or three very strict and well-defined conditions. First, that the practice of unlicensed midwives be stopped and penalised, and, secondly, that the midwife shall be required on the occurrence of any irregularity or abnormality of mother or child to apply to a registered medical practitioner, thus placing her in a distinct, non-medical, subordinate position. I have a third condition to which I attach much importance, though I have not been able here as in the other points to get the General Medical Council to agree with me, namely, that the local sanitary authority of each district shall be required to pay medical men a reasonable fee (not less than a guinea) when so appealed to by the midwife. I have two objects (I am sure my opponents do not believe that I have any personal object in the views I hold on this question)—I have two objects in supporting a Midwives Bill which I will shortly state—I need not labour them. The first is I wish to abolish the existing untrained ignorant midwife—the Sarah Gamp—believing her to be dangerous and deadly to poor lying-in women, who are entitled to the greatest consideration. The second object I have is to abolish the unauthorised function of the Obstetrical Society of London in giving certificates to midwives. Here I must be quite explicit. I could be no party to blaming the Society for its efforts to raise the character of midwives and to give them some training. I am quite sure that the General Medical Council would find itself without public support if it sought to abolish this function of the Society without seeing how the function was to be assigned to some other body. Some gentlemen think that we should punish the leaders of the Obstetrical Society—and we have only one punishment, and it is a capital one—that we should remove their name from the *Medical Register*. Does any gentleman think that the most advanced medical reformer—Mr. Brown himself, say—would venture to rise seriously and make a definite proposition to that effect in the General Medical Council? To do Mr. Brown justice, I must say he has had the chance of doing this any time in the last five years, and he has not done it. Gentlemen, what has the Government, the Privy Council, done with one of the chief ornaments of the Obstetrical Society of London? It has made him a Crown Member of the General Medical Council. The only way and the proper way to get rid of the irregular and unauthorised action of the Obstetrical Society of London is to create a Board, acting under law, to do what it is doing, and for which it has in time past had the approval of the public and the tacit approval of the General Medical Council. These are my principal objects in supporting with strict conditions a Midwives Bill. And I would say, in dismissing this subject, that I have another reason. I feel convinced that such legislation will come to pass. And that it will be done independently of the medical profession if it loses the chance of shaping it and controlling and regulating the practice of midwives. Gentlemen, in this matter, as in some others, Mr. Brown poses as the saviour of the medical profession. He has a medical paper all to himself—which in the interval of elections undergoes a sort of hibernation, and just before the great event comes to life again and demonstrates to its readers that I am the great sinner—the Jonah—and he is the man to elect to represent the profession. Now I do not believe that the majority of the profession differ from me in thinking that something must be done to get rid of the untrained, dirty, ignorant, often intemperate midwife. What has happened? In the last five years Mr. Brown has never once that I remember in all the midwifery discussions moved the Council to declare that it disapproves of all such attempts at legislation. But he leads his followers to think that he is going to do so, and that some great change is going to occur. Gentlemen, let me tell you such a change cannot occur without the Council stultifying itself. I shall tell you what would happen. Mr. Brown would not get a seconder, as happened on a recent occasion to which I shall have to allude further on. I prefer more practical courses, and to help the profession to regulate legislation which it cannot and, in my opinion, ought not altogether to prevent.

### Medical Education.

But, gentlemen, the midwives question is only one of a score or a hundred questions that have to be considered by the General Medical Council. I regard the Midwives Bill question as practically disposed of by the General Medical Council. It devoted a special session to it. It has spent thousands of pounds and whole weeks over its principles, and it cannot well reopen the question. But there are many other questions to be dealt with by the General Medical Council. Let me remind you of a few of these. The Council is *par excellence* a Council of Medical Education, which must have for its basis a sound preliminary education. I tried to do my duty as your representative on this question. I may be excused for saying that in the very first session after my election to the Council I drew attention to the want of practical teaching in clinical and therapeutical subjects and of examinations in such subjects. The defect was admitted. I was put on the Education Committee. The resolution I proposed on this subject has been fruitful of good.

### A Conciliation Board.

The General Medical Council has to consider the means of securing the maintenance of a high professional standard of conduct and of work in practice among the working classes of the community, and for this end has suggested the formation of a Conciliation Board representing Friendly Societies on the one hand and medical men and their interests on the other. The principle of a Conciliation Board has been approved by a Committee of the Council of the British Medical Association, and there is reason to hope much from the application of it in the improvement of the position and power of the medical profession in relation to the great Friendly Societies. Personally I think the General Medical Council entitled to great credit for its trouble in this matter.

### Advertising and Touting.

It has to discourage degrading and unprofessional modes of

promoting practice—especially advertising and touting. I had the pleasure of carrying a resolution meant to discourage these practices. It has been very effective where the evidence of such practices and of the doctor's knowledge of them has been sufficient. One or two large insurance companies with medical aid business have given up the business, and several medical officers have resigned their position as a result of this clause. Mr. Brown tried to induce the Council to do something more drastic and did not get a seconder. This conduct is no service to the profession. It wastes the Council's time and money and rather places it in an undignified position.

### Certification of Deaths.

The Council has been much concerned with the proofs of the large numbers in the community who have no medical attendance and whose deaths are uncertified. I had the honour of waiting on the President of the Local Government Board with Sir William Turner and Sir Dyce Duckworth as a deputation on this subject. We had a most sympathetic hearing, and have reason to hope that legislation will result that will brace our registration system up and will regard uncertified deaths in a Christian community as a scandal to be inquired into and prevented.

### The Royal Colleges and the General Medical Council.

The Council is a complex organism and has much to do in co-ordinating and harmonising the action of the various medical authorities. There has lately been exhibited an unseemly and injurious friction between the Royal Colleges of England and the General Medical Council. The best friends of medical education must wish to see the end of this discord which threatens to throw back education. I have tried, and shall continue to try, to urge a *modus vivendi*. The Colleges and the Council can both help each other, while not encroaching on each other's province. At present the question is raised at each Council meeting and threatens to waste much of the Council's money.

### The Finances of the Council.

My last remark leads me to say a word about the finances of the Council. The money of the Council is the money of the profession, and our sittings have lately been so prolonged that our expenditure has exceeded our income. Some gentlemen have advised an annual fee to be paid instead of a single fee for registration. I am much in favour of a single and final payment as at present, instead of what would be an annual tax, and I believe that with some reforms in the conduct of our discussions the ordinary income of the Council will suffice to meet its expenditure.

These, gentlemen, are a few of the subjects that engage, and must engage, our attention, to say nothing of those most painful cases of misconduct which call for the exercise of the disciplinary powers of the Council or of the need for more disciplinary power, both for it and the individual medical authorities which we all recognise. To hear some fluent critics, you would think that the General Medical Council does nothing, and goes on very slowly. Gentlemen, I do not think so. I think that the changes which are taking place in the profession—in its curriculum, in its education, in the public estimate of it, and in the State estimate of it—are enormous, and in some aspects serious. I believe if the General Medical Council proceeds in its steady improvement of education and in its steady demand for the maintenance of professional conduct even in the poorest sections of practice, it will command more and more the respect of the public, of the medical authorities, and of the registered practitioners of the country, who at an election time are called to send men to represent them. Remember that as, regards the election, it is not the General Medical Council that is on its trial so much as direct representation itself. I can imagine nothing more worthy of representation at the Council than the views generated and impressed upon us by the ordinary and varied life of daily and nightly practice, and if such experience is put at the service of direct representation, I have good hopes for its extension.

The Chairman then called upon Mr. Victor Horsley.

Mr. Victor Horsley said: I have much pleasure in attending this meeting because I am hopeful that it will be the precursor of many similar meetings, and that it will be an annual fixture at the meetings of the British Medical Association.

### The Midwives Question.

With regard to my views on the midwifery question, they are exactly what I circularised in my address to the profession when I was a candidate for the General Medical Council four years ago. I still think that registration of existing and prospective midwives is necessary, and whether they are called midwives or midwifery nurses, some form of registration is necessary and will be insisted on by the Legislature. It is also in accord with my principles that what both Dr. Glover has suggested and what has been more fully suggested in the *Medical Guild Quarterly* should be carried out. I think it is a perfectly feasible way of dealing with the subject. That is my personal opinion. Our duty as members of the General Medical Council is to see as far as we can that the Government will not lend their support to any measure which does not embrace the ten points that are given in detail in the Minutes of the General Medical Council, the ten points which the Council considers are essential in this subject. This brings me to the action of the Government, not only towards us in regard to the midwifery question, but also in regard to other questions.

### The Privy Council and the General Medical Council.

You must know that the General Medical Council is practically a subdepartment of the Central Government; its head is the Privy Council; the head of the Privy Council is the Duke of Devonshire. If you will study the Minutes of the Council in respect to previous questions you will find that the President of the General Medical Council is in communication with the Privy Council in various ways. You will find the letters that passed between the two bodies, and yet in spite of this repeated communication between these bodies extending over all these years, it is a fact that the Privy Council has during the last ten months treated the General Medical Council with superlative contempt. You will find all the facts in our Minutes. The Privy Council is at the present moment utterly disregarding the General Medical Council and its ten points, which include the safeguards necessary in midwifery legislation. And why? Because of what is called the respect of authority and because of what is known as negotiations. We cannot parley with the enemy at the gate: it is ridiculous for us to consider that as a subdepartment of the Government we can through our President, or through anyone else, influence the Privy Council privately. We cannot do it. The only way to do it is through the voice of the profession. Now, thanks to the work which has been effected at this meeting of the British Medical Association, I believe that we shall get this power, but until then let me warn this meeting that at the present time the General Medical Council is unable to do what it wishes to do in this matter. I personally am responsible for endeavouring to send up a protest to the Privy Council against its behaviour towards us as its subdepartment. Dr. MacAlister, however, opposed me, and succeeded very easily in persuading the Council so that no protest was sent. All that I can do is to try and endeavour to support the authority of the General Medical Council, and I should like to point out that this action of the Privy Council during the last ten months is no isolated instance. For example, the Executive Committee of the General Medical Council took upon itself to conduct negotiations with the Privy Council on the subject of reciprocity of practice in Italy. Now whatever views we hold, and I hold there is no true reciprocity as arranged, at least we are entitled to consideration: but no, the Privy Council passed an order entirely disregarding our views as a Council. So the Privy Council for a second time in ten months has treated the General Medical Council with contempt.

### The Council and the Colleges.

As regards the work of the Council in education this matter of the Colleges is really a very grave question. It is a step taken by the Royal Colleges which is subversive of the present five years curriculum and of the best interests of the medical profession, and it will ruin students' registration. The representative of the Royal College of Physicians, which body is now tottering to financial ruin, did not hesitate to state in the Council—and his speech unfortunately

made a favourable impression on the Council as a whole—this representative actually said that he was willing to ruin students' registration simply to carry out the wishes of his college. I warn you not to enter into any compromise on this matter. If you support this view you will do what, in the opinion of all teachers of medicine in this country, will lead to an irreparable injury to the medical profession. As regards preliminary professional education, headway is being made in this matter by the Council itself, quite irrespective of this step taken by the Royal Colleges. This question of education is coincident with the question of the one-portal system. Until this plan is endorsed, as I hope it will be by the real voice of the profession at Manchester, we shall not get any further with the General Medical Council, because the compromise with the two Royal Colleges is nothing more than the general feeling of the Corporations represented in the Council. The Royal Colleges are going to get a greater number of students to enter for their examinations, and the Colleges will receive the fees; the other licensing bodies naturally think—Why should not we do the same? By the constitution of the General Medical Council it is unable to receive a scheme for the one-portal system, for the Council is composed of commercially-competing bodies, but then it is really unfit to control medical education.

### Medical Act Amendment Bill.

I pass now to the necessity of having a Medical Act Amendment Bill. You may ask me how do we stand in the General Medical Council with regard to this matter, and what chance is there of success? I am rather surprised at the result of three and a-half to four years' work on the Council. When I first entered it my time was so taken up with obtaining ordinary constitutional methods of procedure, that for about a year I was unable to gauge progress. We have, however, swept away the men who were bitterly hostile to the profession. It has caused hard words and some misunderstanding, but the men have gone, and in their place we have a younger set of men, amongst them deans of medical schools, who are keenly interested in general medical education. These men are men to whom you can appeal with reason, and the outlook for the Medical Act Amendment Bill is better. But the body of the General Medical Council considers that such a Bill should come from the British Medical Association, and I am willing to accept that position. Let us meet them half way; let the British Medical Association go on with the work of the Parliamentary Bills Subcommittee, and let us bring to the General Medical Council the Bill that they ask for. In such a Bill I think I ought to say that the mention of unqualified practice should take first place, but as the price of the puchase of that course the House of Commons will require what we also require, that the constitution of the Council shall be changed, and that it should be deprived of its corporate, that is to say its commercial, character, so that it shall be made a representative council, and if the House of Commons demanded it there should be an addition of one or two more Crown members. There must be a bargain and we must give something in return if we are to get anything out of the House of Commons.

### The Finances of the Council.

I have left my next point to the last because I believe it is a lever by means of which we shall reform the General Medical Council. I come now to the question of money, which, as usual, is at the bottom of most things. We have now got to the bottom of the pocket of the Council, and the Council is in a bad way and may find it necessary to go to the House of Commons and ask for some change in legislation which it can put into operation in order that it may live. So that I am hopeful in this matter of finance. You well remember that three years ago I raised the question of finance after a very short examination of the statement of accounts that sufficed to show me, and I am no expert in finance, that the finances of the Council were wholly unsound. I brought the matter forward in the Council three years ago and was duly pooh-poohed by Mr. Bryant and Sir Dyce Duckworth, the Treasurers of the Council, mainly I must say by Mr. Bryant. However, after a long series of wrangles and after a long series of utter and deliberate misstatements by Dr. Donald MacAlister of Cambridge, we at last succeeded in getting a report from an expert in finance, Mr. Frere. Mr. Frere's report confirmed in every minute detail not only the facts I had brought forward two or three years before, but Mr. Frere proposed as reforms everything that we had been asking for. Now, that is a most remarkable thing, for I had no communication with Mr. Frere and I never had told him of the discussions that had taken place in the reform party, nevertheless he introduced all the possible reforms we had thought of. Among these reforms there is one which I must deal with; Dr. Glover has raised the question and given us his opinion upon it. I refer to the annual registration fee, and am a firm believer that an annual registration is a necessity in legislation. It will be necessary to tell the House of Commons, and it will be necessary also to convince the House of Commons, that if you have an annual registration fee of £1, it will give the General Medical Council an income of £30,000, and that is amply sufficient for the Council to be really operative in the interests of the public and the profession. To return, however, to the question of the annual registration fee which I personally consider is a necessity, that has never been properly discussed, and as we look to Manchester as usual for reform, so we look to the meeting at Manchester to have that point thoroughly threshed out, so that we shall know what is the voice of the profession in the matter.

It is, of course, impossible to give an account of one's stewardship in the time allotted, but I have endeavoured to do that in the reports to the profession I have from time to time issued, and I shall continue that action if you re-elect me. I only wish to conclude by expressing my intense gratification that we are at last likely to be in a position through the British Medical Association to be able to instruct our representatives as to what they ought to do.

The Chairman then called on Mr. George Jackson.

Mr. George Jackson (Plymouth) said: When I was a candidate for the General Medical Council on a former occasion I polled over 4,000 votes. I was not so well known then as now, and, having been asked by the Incorporated Practitioners' Association, I come forward as a candidate again. In regard to the question of the midwives, the trend of opinion in the House of Commons seems to be—and I have talked to members of Parliament about it—in favour of some form of registration. We ought to try and guide legislation so that it shall not be registration of midwives as midwives, but rather as nurses, and I would say that all nurses should be registered. It should be impossible for any woman after just three months training to be turned out as a midwife. I maintain that the Government has insisted on the provision of medical assistance for the poor, but it is a farce to a very great extent. I maintain there should be a system by which nurses should also be provided by corporate bodies and guardians. I read in the *Medical Guild Quarterly* a statement from Dr. Colin Campbell that that was carried out at Saddleworth, the payment for the services rendered being regarded as a loan. In Jamaica it was also done, and there advances were made to pay for the doctor and the nurse. A poor person in an infirmary has a nurse of a sort, but in his own home it is a different matter. District nurses should be appointed who might give lessons in elementary sanitation and attend to ordinary dressings. The population was not increasing, and one woman in fifteen was said to die in her first confinement. I do not know if it is true, but at any rate the mortality is very considerable, and it behoves us, therefore, to take more care of our population-producing people, to take more care of the mothers of the country, and not allow them to die in this way, and to take more care of the children. I would suggest that the British Medical Association should introduce a Bill into Parliament on the lines indicated in the *Medical Guild Quarterly*, and that there should be a regular system of nurses: that they should have two to three years' training before they were allowed to have anything to do with nursing, as a sufficient training was necessary so as to thoroughly drill the nurses in their work, because, if taught only for a limited time the nurses relapsed into careless ways. It was more important for the public at large to be well nursed than to be well doctored. The whole body of the profession, as represented by the British Medical Association, must push forward

egislation. The representation of the College of Surgeons should not be through the Fellows alone, but by the members also, and so also with the other bodies. Even if you could not get direct representation you would have a better representation on the Council and have more weight with the profession. I should be in favour of more direct representatives, and of cutting up the country into smaller electoral districts. The General Medical Council would thus be able to promote legislation favourable to the profession and to the country at large. In the House of Commons you must insist that it is for the benefit of the country at large. We must improve matters in that way. For instance, as regards quacks, who are allowed to practise under the name of aurists and oculists, they should be prosecuted. The lawyers do not allow anything of the sort in their profession. It would be a good plan if every medical man had to pay a small sum each year, which would then enable the Council to act. In such benighted countries as the Transvaal medical men pay for a licence and quacks are legally prosecuted. The examination for the entrance to the medical profession should be raised. Another important point is that a Bill should be introduced into Parliament for the better registration of deaths, because of the enormous number of uncertified deaths. We have examples of this in cases in which chemists attend people and simply write a note to the Registrar informing him of the death. Stillbirths also should be registered. I do not suppose I have touched on all the points, but I think I have touched on the main points. I cannot claim personal experience like the present representatives, but if elected I shall carry out the duties as far as I can.

The CHAIRMAN then called on Dr. S. Woodcock.

Dr. S. WOODCOCK, J.P. (Manchester), said: I do not know that I am a candidate. My attitude in regard to this question is this: In the first place we are entitled to a representative from the North of England, and I do not think that all our representatives should be in London. Other places should have some share in representation. When approached I said: If it is apparent that the bulk of the profession in the North of England desire me as a candidate I am at their service. I have no personal ambition in the matter.

### THE MIDWIVES QUESTION.

I believe that I am misunderstood with regard to the midwives question. I have never been in favour of initiating legislation in this question. When I spoke in Manchester some six or seven years ago, I spoke in condemnation of those self-elected men who were arrogating to themselves the right of giving certificates to women. I thought that these men should be prevented from so doing, but when I approached members of the House of Commons and the House of Lords I was met with a simply reply, "What do you propose instead, because there must be some legislation, and things can't go on as they are and something must be done." I was then a member of the Parliamentary Bills Committee and of the Council of the British Medical Association. The then chairman of the Parliamentary Bills Committee requested that a subcommittee should be appointed and that the question should be considered. Mr. Horsley and Mr. Brown were on that Committee with myself, and we suggested a plan for the registration of midwifery nurses and so we called our Bill. We aimed at two or three principal things, limiting the function of the registered midwifery nurse in a definite way. We made it a necessity under conditions clearly laid down that she should call in medical aid, and we disposed of the men who were giving the certificates. But all this was only done with the idea of it being submitted to Parliament if the other proposed Bill came before the House. Our Bill was to be put in only in order that it should not be said that we had nothing to suggest. I consider that to insist on a medical man being called in in every case of confinement is impracticable, and it is not possible for the Government to consent to that. This present Government appears to be in for a long tenure of office and there is a weak Opposition. You may judge what the attitude of the Government is on this question when I tell you that with all our efforts we could never get at the President of the Privy Council. We tried again and again to get him to receive a deputation, but we were never allowed to see him. On the other hand the promoters of the Midwives Bill have had no difficulty, and they were encouraged by him to go on. No difficulty was placed in their way, and when a vacancy occurred on the General Medical Council of a Crown nominee the appointment was given to the man through whose efforts more than anybody else the first and the worst Registration Bill was brought forward and a letter from Sir John Williams was read by Lord Balfour blessing the Bill, and the Government has put Sir John Williams on the General Medical Council. Is the Government going to agree to a Bill like the Medical Guild Bill? I do not disapprove of it, but I want something to be done in my lifetime and I want something done now. Is it desirable that these men should be allowed to go on giving these midwifery certificates? Is it desirable that you should have people unregistered, and consequently uncontrolled; or is it not better that something should be done which should be a safeguard to the public? If there was any unanimity of the profession, and if there was any encouragement from the public you might hope to insist on a medical man being called in to each confinement. But it is absurd to believe in any such thing which is so far from being practical. In our Bill we laid down distinctions, and there were certain stated circumstances under which a woman should be compelled to call in a medical man, but for every confinement it was not practicable. If I go to the General Medical Council I must go and be able to feel that I am speaking what I really believe. I would not propose resolutions which could not be passed, and would be ineffectual if they were. I am generally in approval of the attitude and policy of Mr. Horsley, and I agree with him on this midwives question. I am not supporting the measure in favour of the registration of midwives. Our Bill was altered in its title by the Council of the Association; the name was not altered by the Committee.

### MEDICAL ACTS AMENDMENT BILL.

I have also taken some part in attempting to draft a Medical Acts Amendment Bill, and there I have sufficiently indicated my opinion in regard to the representatives of the corporate body. These should be elected by the licentiates and members of those bodies. I think we should aim at having the one-portal system. It is not creditable that we should have so many methods for men to enter into the profession. If the Council is paralysed for funds we should go to Parliament and get permission to have an annual registration fee. Lawyers do it, and so do other men who manage their affairs better than we do. I know something of the work of general practice, and have had some experience in public life, and if the medical profession should think I have the ability and the tact to represent them sufficiently well I am prepared to place myself at their service.

Dr. RITCHIE said that, after what they had heard from all the candidates, they ought to sweep away the question of the midwives, because to introduce the matter into this election of representatives would be only throwing dust in the eyes of the electors.

Dr. G. H. BROADBENT (Manchester) said he thought just the opposite. It was a most essential matter to prevent the establishment of an inferior order of practitioners.

The CHAIRMAN then repeated the following question to the candidates: Did they believe it probable that the practice of midwives would be restricted by legislation so as to make the attendance of a medical man compulsory in cases of confinement?

Mr. JACKSON said: I do not think it is at all probable.

Mr. BROWN said: I do not think that has been asked for by any medical journal or medical body. It has never been suggested by the profession.

Dr. A. COX (Gateshead) asked if Dr. GLOVER was in favour of the present form of certificate of the Obstetrical Society of London, and did he vote in favour of it?

Dr. GLOVER said that he voted for the present form of certificate and it would be remembered that it used to be called a diploma. Until some legal body was provided to look after that business he was not prepared to act otherwise.

Dr. MAJOR GREENWOOD said he understood that the General Medical Council had come down on the Obstetrical Society to alter their diploma into a certificate. What was it that led those who held certificates to go on using the term L.O.S., that could imply the Licentiate? That was the most important point and that was omitted by the Council. He con-

sidered it was a deception, and at an early period the General Medical Council should take notice of it, because Licentiate was a medical title and it made the public believe these midwives held a qualification.

Mr. Wolstenholme asked if Dr. Glover had assisted Mr. Horsley when Sir William Turner had refused him access to the documents of the General Medical Council.

Dr. Glover explained that he had no other object than to secure, first, the care of the documents, and, secondly, the right and convenience of members in the use of them. The present resolution of the Council was drawn up by himself (Dr. Glover) in the place of the first one, which, though supported by him, was not quite satisfactory.

Mr. Wolstenholme continuing, said that with regard to the Royal Colleges, their scheme appeared to reduce the medical curriculum to four years. Dr. Glover had spoken of a *modus vivendi*. Was that to prevent the five years course being turned into four years?

Dr. Glover replied that he had no intention of disturbing the five years course, and there was not one instance in which the Colleges had accepted less than a five years curriculum. They included in that the year spent at an educational institution approved by them.

Mr. Wolstenholme asked if Dr. Glover agreed to that.

Dr. Glover replied that he agreed with that till the Council had power to interfere with the legal rights of the colleges, otherwise they would be landed in an appeal to the Privy Council, and they would lose.

Mr. Wolstenholme then asked Mr. Horsley whether he had applied to inspect the documents of the Council and had been thwarted in that application, and had Dr. Glover given him proper support on that occasion? He also asked whether Mr. Horsley was in favour of the *modus vivendi* with the Colleges that permitted the five years course to become a four years course.

Mr. Horsley said: Dr. Glover has told us that his memory does not serve him in regard to the first session when the question of the documents came up. I have to say that mine does for the facts are burnt into my memory. The Chairman of the Council locked up the documents, which were public property, and which I had a right to inspect. When I made my protest I was opposed by Dr. Glover so strongly that actually I could not obtain a fair hearing. I am speaking of the first session which Dr. Glover does not remember. I was so strongly opposed that I could not obtain a fair hearing, and during the whole of that week's work I was looked upon as a kind of outcast for having endeavoured to disorderly interrupt the Chairman. That was the state of affairs, but I carried my point at the next session and what Dr. Glover says is true. It was on his motion that the documents are now inspected. It is a ridiculous thing that there should have been any reason for such a proposal at all, but it is what we work under at the present time. With regard to the *modus vivendi* with the Colleges, I want to say that the Colleges have legal rights under their charters and the Council has legal rights under the Medical Acts, but, owing to the carelessness of the Legislature when the Act of 1886 was drawn up, purporting to be an Act to carry uniformity through all the corporate bodies, a clause was left out which should declare that the Council was the head of all these bodies. That clause having been omitted, if you were to bring the matter before the Courts the Courts would have to say both parties were in the right. That is the legal position, and I intend to resist any attempt to spend the money of the profession in going to law in this matter. There is no possible *modus vivendi*. If the Council chooses to succumb to to the Colleges, that is possible; but unless the direct representatives can say, with the voice of the profession behind them, that the Council shall adhere to its former position, a very grave injury will be done to the medical profession.

Mr. Broadbent then asked all the candidates if they opposed legislation for midwives making them independent practitioners.

The answer he received in each case was in the affirmative.

Mr. Broadbent then asked the candidates if they considered that it was for the good of poor women that every case of midwifery should be more or less under the direct and personal supervision of a medical man even if details were carried out by a trained and registered nurse.

Mr. Brown said that he thought it was desirable that every poor woman should have the opportunity of being seen by a medical practitioner. Every local authority should be compelled to provide that; he could not hope for—nor would it be right to impose—the presence of a medical man in the lying-in chamber, nor a medical woman, and it was not possible to insist upon the attendance of a qualified practitioner.

Mr. Broadbent explained that by legislation a medical man should be provided to visit a lying-in woman at least once; she should have the opportunity of medical attendance, but it should be optional to her.

Dr. Glover said that he was in favour of that, and it was his proposition that medical attendance should be provided and should be paid for.

Mr. Jackson said he quite agreed with the proposition.

Mr. Horsley said he answered in the affirmative.

Dr. Woodcock said he quite agreed.

Dr. C. H. Milburn asked if the candidates were re-elected would they furnish reports to the profession after the fashion followed by Mr. Horsley.

This was agreed to by the candidates.

Dr. Crawshaw asked the candidates if they understood that any legislation in midwifery was to be confined to one particular class.

Mr. Horsley said he had no regard in that matter to any class except the poor. If legislation, however, was carried out, any member of the public could exercise his own discretion in the matter.

Dr. Glover said he had in view only the very poor. He would object distinctly to making these nurses highly-trained women, and looked to the progress of society for the time when every lying-in woman would be attended by a medical man.

Mr. Brown, in agreeing, said that he would oppose any measure which placed in a nurse's hand a document that she could flaunt before the public as a diploma or certificate.

Mr. Jackson said he quite agreed with Mr. Horsley; and

Dr. Woodcock said that any such measure must be confined to the poor, but it was not possible to interfere with the freedom of the public.

Dr. Major Greenwood asked in the event of legislation for midwives that a point should be made that the registration should be local and by the sanitary authorities.

### Vote of Thanks to the Candidates.

The meeting was then addressed by Mr. Whitaker, who moved a vote of thanks to the candidates. They were very glad to have candidates coming up from the provinces. They had three representatives now in London, and it was open to the profession to say that they would like two of the candidates from the country. Of those who had not been elected before it was satisfactory that Mr. Jackson and Dr. Woodcock had shown how competent they were to undertake the duties of a direct representative on the General Medical Council. If the election turned out to be one representative for London with Mr. Jackson and Dr. Woodcock for the provinces it would be most satisfactory. It was important that the representatives of the profession should not be at variance with one another, and it was gratifying to know that Mr. Jackson and Dr. Woodcock, if elected, would co-operate with their London colleagues. In regard to midwifery, as the candidates were all agreed, the election would not turn on that question. Mr. Brown had himself told them the plain fact that they must look facts in the face and they had to conform to the public feeling of the country. Not one of the candidates was inclined to say that there should be no legislation in regard to midwives. If they could not get what they wanted from Parliament the reform of the British Medical Association might enable them to deal with the question raised by the Royal Colleges in regard to education by internal discipline.

Dr. Milburn, in seconding the vote of thanks, pointed out the advantages of electing two of the provincial candidates.

Mr. Wolstenholme supported the vote of thanks, but regretted Mr. Whitaker had suggested to the profession whom they should elect.

Mr. WHITAKER said he did not suggest anything to that meeting. He simply said it would be gratifying if one London candidate was elected together with Mr. Jackson and Dr. Woodcock from the provinces.

Mr. WOLSTENHOLME said the profession would not stand Mr. Whitaker's suggestion for one moment. The profession was quite able to judge for themselves.

VOTE OF THANKS TO THE CHAIRMAN.

Dr. H. W. LATIMER, in moving a vote of thanks to the Chairman, which was carried, said that Mr. Horder had done very good work in initiating that meeting, and he thoroughly deserved their most cordial vote of thanks.

## THE NEW NURSING ORDER OF THE IRISH LOCAL GOVERNMENT BOARD.

THE Irish Local Government Board issued to Irish Boards of Guardians on July 26th a new Sealed Order in substitution of that disallowed by the Judicial Committee of the Privy Council last May, and upon which we commented at the time.

The new Order deals chiefly with the staffs of workhouse hospitals, and makes radical changes in the workhouse system as applied to those institutions which places the hospital staff in a position far better than they occupy in England under the Nursing Order of 1897.

Article 4 is to the following effect:

(*a*) The Board of Guardians shall, as soon as may be requisite, and from time to time hereafter upon the occurrence of any vacancy, appoint, subject to our approval, fit persons to perform respectively the duties specified by our rules and regulations in force at the time to be the duties of the following officers:

1. Clerk to the guardians.
2. Medical officer of the workhouse.
3. Master of the workhouse.
4. Nurse of the workhouse.
5. Matron of the workhouse.
6. Schoolmaster of the workhouse.
7. Schoolmistress of the workhouse.
8. Porter of the workhouse.

(*c*) The following shall be the duties of the nurse of the workhouse:

1. To bring under the special notice of the medical officer every patient as soon as possible after admission into the sick wards.
2. To be responsible for the good nursing of the sick and for the satisfactory discharge of the duties of the nursing staff, and for the carrying out of the directions of the medical officer with respect to all medicines and medical appliances.
3. To inform the medical officer without any avoidable delay of any defects that may be observed in connection with the arrangements for the care and the nursing of the sick, including their clothing and diet.
4. To send a notification in writing to the master of the workhouse whenever the condition of any patient demands that the medical officer, the chaplain, or the relatives of such patient should be sent for or communicated with.
5. To see that everything connected with the patients and the wards is kept clean and in proper condition; and also to take care that all wards are duly ventilated, warmed, and lighted.
6. To see that the food is properly distributed to the patients, and to arrange that each patient receives the special treatment ordered by the medical officer, and generally to carry out all reasonable directions of the medical officer, to whom and to the Board of Guardians only (notwithstanding anything contained in any other General Order) she shall be subordinate, save as regards the general disciplinary control of the master of the workhouse.
7. In the absence of the medical officer, to exercise general supervision and control over the nurses, wardsmaids, and attendants, and to maintain proper order and discipline in the sick wards in her charge.

(*d*) The Board of Guardians shall, subject to our approval in each case, appoint such and so many "qualified nurses" to assist the "nurse of the workhouse" in the performance of her duties as above mentioned, and generally in the nursing and care of the sick in the workhouse, and also such and so many "wardsmaids" and "attendants" for the discharge of menial duties in the infirmary or hospital, as we shall from time to time think necessary.

From this it will be observed that the medical officer and his staff have entire control of the hospitals of the union; that the nurse of the workhouse has in the list of officials been placed next to the master and in the position of infirmary matron; and that her duties have been accurately defined for the first time. We think it a pity, however, that she was not designated infirmary matron or superintendent nurse.

The order gives the medical officer the power to obtain by requisition from the master not alone temporary nurses but also wardmaids or attendants, and requires the guardians to appoint such a staff of nurses and wardmaids as the Local Government Board may deem necessary.

Article 5 gives fixity of tenure to the entire hospital staff instead of to the superior officers only, as was hitherto the case. In their explanatory letter accompanying this Order, the Local Government Board say: "The management of the sick wards under the guardians will accordingly be in the hands of the medical officer, to whom the guardians should look for the satisfactory condition of their infirmary and fever hospital."

The medical officer should not regard himself merely as an adviser in the case of the sick in his charge, but as an officer of the guardians, exercising for them, as regards the sick wards, such control as the medical staff of a general public hospital exercise under the governing body.

We have nothing but approval to express for this general order. It has been long looked for by the progressive members of the Irish Union Hospital Staff, and we think it leaves them little to complain of so far as the Local Government Board is concerned.

## THE PREVENTION OF TUBERCULOSIS.

WESTMORLAND.

*Proposed Prosecutions for Tuberculous Milk.*

ON July 30th the Kendal Town Council unanimously passed a resolution similar to that described in the BRITISH MEDICAL JOURNAL for June 29th, p. 1633, as having been passed by the Borough Council of Camberwell, namely:

That all milk dealers selling milk within the Borough of Kendal be warned that from January 1st, 1902, samples of milk will from time to time be taken for examination, and that the Council will be prepared to prosecute, under Section VI of the Food and Drugs Act, any milk dealer having on sale milk in which tubercle bacilli have been found.

Although the motion was opposed, on the strength of Dr. Koch's recent address, it was eventually carried unanimously. Every sanitary authority in the County of Westmorland has been requested to take a similar action. This policy might be advantageously adopted throughout the kingdom as a very simple method of putting a check upon the sale of milk from obviously tuberculous udders, whether or not it can be demonstrated that such milk is accountable for much tuberculosis in children.

# SPECIAL CORRESPONDENCE.

## LIVERPOOL.

*Medical Officer of Health's Annual Report: Increase of Population and Lowering of the Death-Rate: Zymotic Mortality: High Mortality among Children in Certain Districts: The Milk Supply: Preparations for the Plague.*

THE annual report of the medical officer of health has just been published, having been deferred in order that the results of the new census might be incorporated in the statistics. The actual population of the City is now 680,628, being an increase of almost exactly 12,000 on the population as estimated by the medical officer of health for the previous year. These figures show that the calculations of population made by the medical officers of health were remarkably correct, and that although last year's calculations gave the population as 6,000 too little it was much nearer the truth than the lower estimate of the Registrar-General.

The death-rate, as might be expected, varied greatly in different districts, being as low as 10.7 per 1,000 in the well-to-do Sefton Park district, and as high as 36.5 per 1,000 in the old and crowded Exchange districts. The rate for the whole city was 23.1, being a diminution of 1 per 1,000 on the corrected death-rate for the previous year. In some districts there is a lamentably high mortality among young children. A considerable number of cases of small-pox were imported, but the measures which were taken sufficed to prevent any considerable spread of the disease from taking place. The number of cases of typhus is the lowest on record, and there is a large decrease in the cases of typhoid fever. There is a progressive decline in the cases of scarlet fever, and the medical officer of health expresses the expectation that a similar steady diminution in measles and whooping-cough may be expected when adequate hospital provision is found for them. Unfortunately the position in regard to diphtheria is not so

satisfactory, and larger hospital provision is needed for it. Deaths from phthisis show a continued diminution, and so do deaths from other forms of tuberculosis.

The part of the report which deals with alcoholism is not altogether pleasant reading. Although, on the whole, drunkenness seems to be diminishing, the statistics of certain districts show an increase. The mortality among children of drunken parents is high; they suffer from direct violence and brutality to some extent, but more frequently from want of food and clothing and from general neglect. The bulk of the volume is occupied with an account of the work of the sanitary administration of the city. Insanitary property has engaged a considerable amount of attention during the year. The report contains photographs of excellent and convenient workmen's dwellings which have replaced some of the insanitary property which has lately been destroyed. Not less than 6,000 back-to-back houses have been taken down during the last ten years. There are still about 10,500 persons living in cellars. The food inspectors have been exceptionally busy, and chemical and bacteriological examinations have been carried out in a large number of cases. The subject of the milk supply is dealt with at some length. The advantages of boiling or sterilisation are insisted on, and it is pointed out that the possibilities of milk becoming contaminated in various ways before it reaches the consumer are many and various. There are, it appears, about 26,000 gallons of milk consumed every day in Liverpool, about half of it being obtained from cows kept within the city, while the other half is sent in from the country by rail. Owing to the stringent regulations which have for some time been in force the city milk is more free from the germs of tuberculosis than is the milk from the country. Since Parliament gave Liverpool power to exclude milk coming from infected dairies outside the city, much fewer samples of milk arriving by rail also have been found infected with tubercle, but this does not prove that the condition of the animals is any better than it was, as it is possible that the infected milk is sent to other places where there are no powers to prevent its being exposed for sale.

The safeguarding of the city from plague, it appears, occupied a good deal of attention during part of the year. A stock of plague vaccine has always been kept in readiness, and satisfaction is expressed that the Liverpool University College Laboratories have been able to supply it at a few hours' notice, not only to several ports in the country in which plague has occurred, but also in very large quantities to the Colonial and War Offices.

The condition of the streets is stated to be much improved owing to the substitution of electric for horse power in the tramway system, and to improvements in the methods employed in collecting and removing refuse. The pavilions which were set apart in the hospitals for plague or suspected plague were happily needed only for the isolation of cases which ultimately proved not to be cases of that disease.

# CORRESPONDENCE.

## THE ANNUAL MEETING AND THE REPORT OF THE CONSTITUTION COMMITTEE.

Sir,—At the general meeting of the Association on July 31st the report of the Constitution Committee came up for reception and approval. The Bath and Bristol Branch, which I have the honour (with Dr. Markham Skerritt) to represent in the Central Council of the Association, holds certain views on that report, which, by the ruling of the Chair, we were prevented from expressing on that occasion. I must therefore crave a portion of your space to explain the position taken up by my constituents, an explanation which I venture to think would have come more appropriately on the occasion of the meeting at which the vote was taken. I suppose every member will agree with Mr. Owen in the charming opening speech with which he moved the reception of the report, that the crux of the whole question is the matter of delegates, or as he preferred to call them representatives, from the Divisions, and this is the only point on which my Branch is at variance with the report of the Constitution Committee. Yet it is hardly credible that on this, the most vital point in the whole scheme, no amendment could be moved or division taken.

This is no time for action in the matter; but, while the facts are fresh in our memory, let me recall the course of events. The reception of the report was moved in a long and delightful speech by Mr. Owen, the Chairman of the Committee, seconded by Mr. Horsley, and without further comment carried. The approval of its general principles was then moved by Mr. J. S. Whitaker in a long and well-argued speech, which not unnaturally emphasised all the possible advantages that may accrue from the institution of a third representative meeting as distinct from the Council and the general meeting, while it was silent as to its possibilities for danger to the Association: indeed, as regards dangers, I am quite prepared to believe that Mr. Whitaker is of opinion that it has none. Mr. Verrall seconded. Now for the sequel. An amendment of a somewhat reactionary character was moved by Dr. Pope, to the effect that the only present fruit of the prolonged labours of the Constitution Committee should be the enrolment in their respective domiciliary Branches of all the unattached members of the Association. This was discussed. It was an amendment which did not touch the question of delegates or a (divisional) representative meeting, an amendment with which we had no sympathy, and against which I voted. Now apparently we were coming to what Mr. Owen had called the crux of the question; and I asked leave to move an amendment which would meet the views of my constituents in regard to this, the most vital question of principle in the whole of the report and in Mr. Whitaker's resolution. I endeavoured to hand my amendment in writing to the Chairman, but he refused to receive it, or, indeed, any further amendment whatever. This, Sir, in itself is sufficiently startling as a method of revolutionary procedure. What follows is still more incredible. A gentleman on the platform had moved the closure. No seconder being required, this was immediately put from the chair and declared carried. So that while four of the most enthusiastic supporters of the report were permitted to dilate as fully as they pleased on the one side—indeed, including the President's opening remarks, I might say it had five supporters—not a single member of the Association was allowed to utter one word in opposition either to the report as a whole or to its most debatable principle. So much for the circumstances under which the vote was taken; and although I confess to some surprise, I make little complaint. I can well believe that a revolutionary measure requires revolutionary methods, and I can well understand that those in favour of the report as a whole were anxious to secure it from attack in its most vulnerable point. Still, perhaps this fluttering straw gives us some inkling of the fate of minorities under a system of representation or delegation such as is foreshadowed in the report itself. Having a majority of votes, there is no occasion to permit your opponents to express themselves.

I am loth to make further demand on your space, but I must ask to be allowed a very brief statement on the views which the majority of my Branch entertain on the report itself. Most of us have classed ourselves among the party of reform in the Association and since I have sat upon the Council, although I think it undesirable that the more recently elected members should be much in evidence in debate, I have voted consistently with the representatives of that party in the Council. And with their measures of reform as laid down in the report of the Constitution Committee we are in agreement. That is to say, we are in favour of the institution of smaller areas than those of the established Branches, especially for the consideration of medico-political and ethical questions—areas to be founded not by a mathematical and geographical subdivision of the whole country, but by granting a certain measure of local autonomy to any group of practitioners who voluntarily make application therefor. We are in favour of the enrolment of the unattached members in their respective domiciliary Branches. Above all, we are in favour of the reformation of the present Council, both as to its constitution and election, on the lines indicated in the report. We would protect the Council and the Association by raising considerably the quorum of the annual meeting, and we would introduce as a further safeguard the principle of the referendum.

All these are measures of reform, and the tendency of their

working is obvious to all. But when beyond these reforms it is proposed to create a new body of representatives or delegates from smaller constituencies we introduce a totally new principle into the management of the Association, and run a grave risk of conflicting functions as between the two representative bodies. We incur confessedly a considerable expense, although I lay no stress on this, for the profession is assuredly rich enough to pay for the management of its affairs; none the less, we are all anxious to expend our resources wisely and to the best advantage. Finally, we obtain a body not one whit more representative than will be the reformed Council; it is the difference between 50 representatives and 300. By all means fix the limit at one or the other, or at any other number; but why have both? With this double system of representation and the introduction of this new body in authority, reform ceases and revolution begins. Here my Branch joins issue with the Committee. We agree that the case of the Association is a bad one; and I will further agree that a condition of the Association may arise, just as it may in the body politic, in which revolution is the only means of safety, and becomes a duty with every right-thinking member of that State or association. We do not believe that that crisis has yet arisen in our own case. We contend that there is reasonable ground for expecting that the reforms already specified, reforms acceptable to practically the whole body of the Association, would meet fully the requirements of the profession, while incurring a minimum of risk and expenditure.

It has been contended that the whole scheme of the Committee is one and indivisible, and that to pull out a single stone is to risk the stability of the whole structure. Here again is a palpable attempt to run through this unnecessary double representation on the shoulders of necessary reforms. The scheme is not indivisible, and the deletion of all those parts having reference to a separate representation of divisions would still leave it a harmonious whole—indeed far more harmonious than as it at present stands, with its unnecessary multiplication of representative bodies with conflicting powers. If the Council is to be no longer representative, but an executive body to carry out the will of the divisional representatives, then let it be appointed by the body to whom it should be responsible, and to whose voice it gives practical expression; let it in short be an executive committee of the representative body. As the proposal at present stands, the Council is directly responsible to its constituents—the Branches—and only in the most remote sense to the representatives of Divisions. Could the possibilities of discord be more cunningly devised?

While recognising what we believe to be the grave dangers of this part of the scheme, we were not, nor are we, irreconcilable in the matter. Quite simply we wished to give a chance to reform before resorting to revolution. If at the expiration of a reasonable time—say five years—the very radical measures of reform on which we are agreed were found insufficient to bring our now representative executive into harmonious relation with the general body of the Association, then, indeed, we might reasonably take our courage in both hands and dare the leap; but it were folly to dare desperately without desperate occasion. Moreover, had we been allowed to express our views before the matter was, in its preliminary stage, decided by the vote, we were prepared to abide loyally by the decision of the Association, and, the acceptance of the risk being, after full consideration, decided on, to do our part in carrying out the scheme according to the intention of its authors. We were prepared to be out-voted, and there our opposition would have ceased; we were not prepared for sudden execution without fair trial and full defence.

We willingly and gratefully recognise the single-minded intent and honourable and prolonged labours of those from whom on this point, and on this alone, we differ. In return we ask that they, too, shall give us credit for some measure of affection for our profession and its great Association, and it is our fears for its future that make us speak now. It may be that living down in the sleepy hollow of the West, our minds jump less quickly than those of our brothers in the more pushing and stirring centres of industry, and that their prophetic forecast of the results of this complex and untried scheme is less certainly evident to us.

Yet is our caution none the less a part of ourselves, and must be accepted with us. One present fact I know: that the feeling of my Branch (not one of the youngest nor least honourable in its past record) is so strong in this matter that if the vote recently taken were to be regarded as the final word of the Association, and came up for discussion while the heat engendered by these recent events is still aglow, a grave crisis would arise in the relations of the Branch. But, Sir, this is not the final word, and if, when the revised by-laws and articles of association come up for adoption—an adoption which must be carried by a three-fourths majority—the whole cause of the reform of the Association is thrown back for another year, it is not those who, thinking and acting with us, and with us deprived of the constitutional method of expressing their dissent—I say it is not with these will rest the most direct responsibility for the catastrophe.—I am, etc.,

EDWARD J. CAVE,
Joint Representative of the Bath and Bristol Branch on the Council of the Association.

Towyn, North Wales, August 5th.

## INACCURATE REPORTING.

SIR,—I have noticed in some of the daily papers a somewhat inaccurate report of the proceedings on the reading of Sir William Mac Cormac's paper on War Surgery, Past and Present, in the Section over which I presided at Cheltenham.

I did not hear Mr. W. Burdett-Coutts, M.P., mentioned by name at all during the discussion, and certainly not by Sir William MacCormac, who was throughout beside me; although, of course, the individuality of the former gentleman would naturally be inferred by any listener in the discussion of charges brought against the Army Medical Service during the war by "amateur critics."

I may further mention that my own remarks, which were mild enough, apparently got mixed with those of other speakers in the discussion; for, in some reports I am made to give utterance to sentiments and criticisms I never uttered, and, indeed, repudiate.

In mitigation of such mistakes, however, I can appreciate the difficulties a Press reporter must experience in following a discursive technical discussion by many speakers, such as that in question.—I am, etc.,

W. G. DON, M.D.,
Deputy Surgeon-General (ret.), President of Section. Navy, Army and Ambulance.

August 7th.

## THE ARMY MEDICAL SERVICE.

SIR,—Yesterday I received a very important note from the Secretary of State for War—whose recent bereavement everyone so deeply deplores—informing me that the Departmental Committee on the Reform of the Army Medical Department had practically completed its labours, and had agreed on a scheme which he hoped would solve, to the satisfaction of all concerned, the present unfortunate condition of the R.A.M.C. He was good enough also to say that all the important suggestions recommended in the draft scheme submitted by me to the Committee had been adopted. This being so, and the substance of these recommendations having already appeared in the BRITISH MEDICAL JOURNAL, with many others recently added, it seems only reasonable to infer that the scheme now finally determined upon will be in every way satisfactory. It speaks volumes for Mr. Brodrick's determination and sacrifice of self in the public interests that notwithstanding the strain and mental suffering he has recently had to endure, he is back again at his work trying to solve those pressing army questions which so seriously affect imperial interests.—I am, etc.,

House of Commons, Aug. 7th. EDWD. THOMPSON, F.R.C.S.I.

## PROFESSOR KOCH'S ADDRESS.

SIR,—Professor Koch in his historic address made the following statement:

I should estimate the extent of infection by the milk and flesh of tuberculous cattle, and the butter made of their milk, as hardly greater than that of hereditary transmission, and I therefore do not deem it advisable to take any measures against it.

In view of this astounding statement—which I have thought it best to put in Professor Koch's own words—it is of interest

to consider for a moment the work of the Royal Commission appointed in 1890 by Her late Majesty's Government to "inquire into the effect of food derived from tuberculous animals on human health." An exhaustive series of experiments were conducted by Professor Sims Woodhead and Dr. Sidney Martin for the information of this Commission, and one result—the only one to which I propose to refer—was made absolutely clear. The milk from cows with "tuberculous disease of the udder" was of the most virulent character, and when used as food for the test animals employed, which included guinea-pigs, rabbits, and pigs, it set up tuberculosis in nearly all of them. This milk from "the tuberculous udder" of a cow, so deadly to other animals, was held by both Royal Commissions, and has been held by the bulk of the scientific opinion of Europe, to be dangerous to man, especially so to infants, for whom cow's milk is frequently the only food. Against the accuracy of this view Professor Koch has so far adduced no direct evidence whatever. The case is one in which direct experiment is of course impossible; but against the vague generalities, open, I submit, to the severest criticism, advanced by Professor Koch, it is of interest to adduce at least one direct case cited by Nocard in his work on *The Animal Tuberculoses*. The case referred to, which, as Nocard fairly says, is almost as convincing as an experiment, is as follows:

Dr. Gosse, a well-known medical man in Geneva, lost a daughter of 17. In perfect health till 1892, she began to waste away in 1893, and in ten months died. A *post-mortem* examination revealed extensive tuberculous disease of the intestine and mesentery. How had the disease been contracted? There was no family history. But it appeared that every Sunday Dr. Gosse and his family spent the day at a small estate on the hills, and one of the greatest delights of this young girl was to drink milk fresh from the cow. On being tested by tuberculin, four out of the five cows on the estate were found to be tuberculous; these were slaughtered, and two were found to have tuberculous disease of the udder.

It would be interesting to learn if any of your readers have been able to trace any case of this sort in a similar manner. Apart from this and one or two other cases of apparent direct infection cited by Nocard, the incidence of tabes mesenterica in relation to milk consumption is remarkable.

I have discussed various statistics bearing on this point at some length in a chapter entitled "Transmission from Animals to Man" in a book, *Tuberculosis*, published last year. It is sufficient here to cite two noteworthy facts.

The first is that to which Sir R. Thorne-Thorne called special attention in the Harben Lectures of 1898. He pointed out that while there had been a steady fall in mortality from phthisis in this country for many years, the decrease in tabes mesenterica in the quinquennial period 1891-5, as compared with the decade 1851-60, was only 3 per cent. for children under 5 years old; while for children under 1 year of age there has been an actual increase of deaths from this cause of 27.7 per cent. This increase Sir R. Thorne-Thorne believed to be due to the increased consumption by infants of cow's milk, the greater portion of it unboiled.

A second noteworthy fact is that published in the British Medical Journal for February 25th, 1899, in the shape of a report from the Jersey Medical Society. This Society appointed a Subcommittee to report on bovine and human tuberculosis in the island. They reported that they had been advised by the veterinary surgeons that there was very little tuberculous disease among cattle in the island, and that practically all the cattle examined for exportation had passed the tuberculin test. Dealing with the mortality statistics of St. Heliers, the capital of the island, with 29,000 inhabitants, the Subcommittee found that from 1892 to 1896 only 4 deaths were registered under the heading of tuberculous peritonitis or tabes mesenterica.

These statistics, taken in conjunction with the established virulence of tuberculous milk for other animals, while they do not demonstrate, undoubtedly strongly suggest a danger to infants from its consumption. *Prima facie*, the case against tuberculous milk is a strong one. The *onus probandi* is on Professor Koch, who practically declares tuberculous milk harmless to infants. In support of this declaration he adduces two arguments, neither of which is at all conclusive. The one is that if "the bacilli of bovine tuberculosis were able to infect human beings, many cases of tuberculosis caused by the consumption of alimenta containing tubercle bacilli could not but occur among the inhabitants of great cities, especially the children." The reply is that they do so occur in the shape of tabes mesenterica. The other argument is a suggestion that because human tuberculosis cannot be transmitted to cattle, bovine tuberculosis cannot be transmitted to man. Meanwhile there is a conflict of evidence about the soundness of the premisses in this argument, Professor Crookshank and others maintaining that they have communicated human tuberculosis to cattle. Whereas even if the premisses were absolutely sound the conclusion suggested is not logically warranted.

In spite, then, of Koch's dictum, the cow with the tuberculous udder—notoriously so deadly to her own and many other creatures of animal kind—cannot be regarded as providing a nourishing and innocuous food for the human infant.—I am, etc.,

Wimpole Street, W., August 3rd. ALFRED HILLIER.

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SIR,—Dr. Koch's address is one of wide interest and importance. Whether he is correct in his views as to human and bovine tuberculosis being two separate and distinct diseases is a question for those with special bacteriological knowledge and opportunities to determine. With his estimate of the infrequency with which tuberculosis is primarily incurred by the intestines through the agency of infected food many clinical observers in this country will cordially agree. Two years ago, in a short article on Tuberculosis in Allchin's *Manual of Medicine*, vol. i, I expressed my opinion that primary tuberculosis of the intestinal mucous membrane was a rare event. I also expressed a regret that too much stress had been laid upon the frequency of infection through the agency of food by some authorities actuated by a laudable desire to check and control the disease.

Certain wild schemes involving the wholesale destruction of cattle presenting any evidence of tuberculosis or reacting to the tuberculin test which have been proposed from time to time have never had my sympathy or support. There would, in my opinion, be only one result of such schemes being adopted and put into execution. The general public, having the stupendous butchers' bill to pay, would be wholly dissatisfied with the meagre benefit gained—if, indeed, there could be any at all—and they would naturally resent the unnecessary expense they had been called upon to sustain, and would regard with suspicion any further schemes for controlling the disease that might emanate from the profession.

Estimates as to the frequency of primary tuberculosis of the intestines differ very widely. During a twenty years' experience at a children's hospital, with exceptional opportunities of seeing *post-mortem* examinations in cases of tuberculosis, I have never met with a single instance of it. In the article before referred to I wrote that probably such cases did not form more than 1 per cent. of all cases of tuberculosis, and I know that more than one eminent authority agreed in this low estimate. As, however, it seemed to me such a statement was a mere pious expression of a personal faith, I finally deleted the sentence containing it in the proof sheets of the article. To test the matter more definitely, Dr. J. Shardlow kindly analysed 63 consecutive cases of tuberculosis from the *post-mortem* records at the Shadwell Children's Hospital. In only one case was it thought probable that infection had primarily occurred in the intestine; and this, too, with observers who were quite prepared to admit that tuberculosis of the mesenteric glands might take place directly from the intestines without any obvious lesion of the intestinal wall. Now, 63 is only a small number of cases to generalise from, but I have a strong conviction that a larger number would only have decreased, instead of increased, the percentage of cases of primary intestinal tuberculosis. Several authors, including Dr. Still, for whose opinion I have every respect, have published statistics in which the percentage of cases of primary intestinal tuberculosis is exceedingly large. Such statistics have been mainly gathered, I believe, from cases of general tuberculosis in children, and there is very often a difficulty in discriminating between the ages of the various lesions in such cases—a fact, I am well aware, that might easily be turned against my view of the question. But with adults no such difficulty arises, and more reliable statistics on the question can be formed from a consideration of the complaint in them than is the case with

children. Cases of primary intestinal infection are admittedly rare, and cases of secondary intestinal infection through the agency of tuberculous sputa is admittedly common. The frequency of this secondary intestinal tuberculosis proves that there is no real inherent difference between adults and infantile intestines as regards the capability of infection by the tubercle bacillus. Adults, again, are as constantly exposed as children to infection by the same kinds of food, the only difference being that with them milk is for the most part taken in much smaller quantities.

With equal conditions of capability of infection and identical sources of contamination, the rarity of primary intestinal tuberculosis in adults is a weighty argument against the expectation of any great frequency of the complaint in children. The view, too, that tuberculous food collecting about the tonsils and back of the pharynx is often directly responsible for tuberculosis of the glands of the neck is as difficult to prove as to disprove. There are, however, valid reasons against the supposition that tuberculosis often arises from such a source.

On the whole, then, I would contend that the weight of the evidence we possess is in favour of Dr. Koch's view of the infrequency of tuberculosis arising from the ingestion of tuberculous food being the correct one.—I am, etc.,

pper Berkeley Street, July 31st. J. A. COUTTS.

## VACCINATION AND PROFESSIONAL UNDERSELLING.

SIR,—With all due respect to Dr. Major Greenwood, I venture to think that he has entirely overlooked the real reason why private practitioners are willing to vaccinate for a much smaller fee than that paid to public vaccinators. I believe the real reason is that most medical men object to having a rival calling on their patients. If there is any little thing amiss with the child, the mother is very likely to ask the vaccinator's advice on the subject, which he can hardly refuse to give; he may possibly promise to send a bottle of medicine, and to call again, and thus he gains a footing in the household. Of course, the risk is much greater when the public vaccinator is at all unscrupulous; but however honourable he may be, the usual medical attendant does not like the risk of losing his patient in this way, and in many instances, I believe, would prefer to do the vaccination for nothing rather than have the public vaccinator stepping in. This difficulty could of course be obviated by appointing public vaccinators for large districts, and allowing them to do no other work.

Another reason for the private doctor's lower charge is, that in a working-class district no one would think of paying 6s. for vaccination; it is out of all proportion to the other fees charged, and by insisting on it we should simply drive all our cases to the public vaccinator; and the average practitioner still thinks that "half a loaf is better than no bread."

I must take exception to Dr. Greenwood's statement that by sending all the cases to the public vaccinator "a much better standard of vaccination would be the result." This is not proved, and seems to me an uncalled-for slur on the ability or conscientiousness of the general practitioner.—I am, etc.,

Mossley, near Manchester, July 31st. A. W. HARRISON, M.D.

SIR,—It appears to me that the four letters under this heading published in the BRITISH MEDICAL JOURNAL of August 3rd, like several previous ones, miss a vital factor altogether.

Permit me to point out that the public vaccinator canvasses nobody, and does not "tout" or interfere in any way with the private practitioner. He merely receives a list from the vaccination officer of such children as have reached the age of 4 months without being accounted for in the vaccination register. The private practitioner has four months in which to vaccinate his own cases, during which time the public vaccinator is not even aware of their existence; and it is only upon the neglect of the practitioner to look after his own cases that the public vaccinator is ordered by the existing law to "offer" to vaccinate, and to make such offer personally, after sending notice in writing of the date on which he will call. It is even then still open to the parents to refuse his offer, and to go to the family attendant.

Let it also be remembered that a very large number of children are born without the presence of a medical man at all. It is precisely such cases which, for the same motive of economy, are readily given to the public vaccinator, and it is a very cool assumption (on the part of those who are attacking the public vaccinator) that all these cases are the private property of some individual medical man or other.

Moreover the question of "underselling" can never arise, because competition can never arise if the medical attendant deals with his own cases in proper time. Such cases as he has not attended at birth he can hardly claim to have a preferential right to vaccinate.

The chief difficulty in the way of recognising vaccinations done by all medical men would, I apprehend, lie in the great difficulty of efficient Government supervision; and, in the absence of this, competition and underselling would flourish to exactly the same degree as they do to-day, only the point would be changed from the fee to the number and size of the vesicles to be made.

There is no shadow of either the one or the other in my district, and I am sorry to hear that other places are not so fortunate.—I am, etc.,

Altrincham, Aug. 3rd. THOS. W. H. GARSTANG, D.P.H.

SIR,—The only equitable and just remedy for this evil is for the Government to pay all practitioners alike for successful vaccinations, whether they be appointed public vaccinators or not.

It is to be hoped that this matter will not be allowed to drop until the evil is remedied, and I would suggest that our representatives on the General Medical Council should be written to on the subject, and also that the full influence of the British Medical Association should be brought to bear on the Local Government Board to alter the present inequitable and unjust state of affairs.—I am, etc.,

August 3rd. VERAX.

## THE SUPPLY OF MEDICINES BY MEDICAL GRADUATES.

SIR,—I am instructed to send you the annexed copy of a resolution recently adopted by the Senatus Academicus of this University, and to request that you will kindly give it a place in the next issue of the BRITISH MEDICAL JOURNAL. I may mention that a similar resolution has been adopted by the University of Aberdeen.—I am, etc.,

L. J. GRANT,
University of Edinburgh, Aug. 6th. Secretary of Senatus.

Resolved: Whilst it is admitted that the exigencies of practice in certain localities may sometimes render it unavoidable for a medical practitioner to supply to his patients the remedies which he prescribes, the Medical Faculty of this University is of opinion that it is undesirable and detrimental to the position of medical graduates of the University that this custom should be followed under other circumstances; and, further it regards the sale of objects other than remedies by its medical graduates as, under all circumstances, to be strongly deprecated.

## TOTAL EXTIRPATION OF THE PROSTATE FOR RADICAL CURE OF ENLARGEMENT OF THAT ORGAN.

SIR,—It should be possible to discuss a scientific subject without acerbity.

Even if Mr. Freyer does not acknowledge that McGill enucleated the hypertrophied prostate, the operation said by Mr. Freyer to be original was described by Dr. Fuller in the *Journal of Cutaneous and Genito-urinary Diseases*, vol. xiii, 1895, p. 232, and on p. 233 are shown drawings of prostates removed by enucleation, which are very much like the drawings shown in Mr. Freyer's paper. A series of cases is also given at the end of the paper. This book can be seen in the library of the Royal Medical and Chirurgical Society. The operation is further described on p. 415 of Dr. Eugene Fuller's work on *Diseases of the Genito-urinary System* (The Macmillan Co., New York, 1900), where occurs the following passage:

Enucleation can be easily and speedily accomplished in this manner, and should not be desisted from until the lateral and median hypertrophies, as well as the hypertrophies along the line of the prostatic urethra, have been removed. The vesical walls at the base, as elsewhere, are very elastic and dilatable, so that it will be found that

the little cut made through the bottom of the bladder will be large enough to admit of the passage through it of the enucleated prostate.

After enucleating the prostate, Dr. Fuller almost closes the suprapubic opening and drains by the perineum, but this is a matter of detail and does not invalidate the principle of the operation. Neither in McGill's cases nor in my own was perineal drainage adopted.

If Mr. Freyer will take the trouble to examine the specimens in the Leeds Pathological Museum he will see that all the members of the staff have been performing enucleation of the prostate for years. Mr. Freyer therefore places himself in the position either of being ignorant of what has been done previously or of ignoring the work of others; it is for him to say which.

If Mr. Freyer will refer to my original paper in 1894 and to my letter of a fortnight ago in the British Medical Journal he will see that I claim no originality for the operation of enucleation of the prostate which I describe as McGill's operation, and to which I still think McGill's name should be attached, and this was my real reason for writing to the Journal.

The reports of the cases I repeated in my letter, as well as the record of some of the cases of partial prostatectomy reported in my original paper, at once dispose of the statement contained in Mr. Freyer's lecture "that all previous so-called methods of radical cure of enlarged prostate are unsatisfactory," for a considerable number of the cases were a complete success.

Moreover, Dr. Fuller's cases referred to above were completely cured, and those members who attended the meeting of the British Medical Association at Leeds in 1889, will remember seeing a number of McGill's patients in good health holding their prostates in jars to show how much had been removed.

The groundless accusation that some of the cases reported are misleading is at once disposed of by the fact that a complete report of each case is given, so that anyone interested in the subject can form his own opinion on every case, by reading the details.

In ignoring any reference to my fifth case, in which the weight of the removed prostate was 6 ozs., thus exceeding by 1¾ oz. the heaviest removed by himself, surely Mr. Freyer is resorting "to an artifice not uncommon in controversy with men in his weak position" of ignoring points that would tell against them. In one of McGill's cases the enucleated prostate weighed 7 ozs.

I cannot agree with Mr. Freyer's remarks that cases of prostatectomy, where a stone or stones happen to be in the pouch behind an enlarged prostate, but where the symptoms are, and have been for some time, distinctly prostatic, should not be included in any list of prostatectomies, so long as an accurate statement is furnished with each report, otherwise one would be ignoring the most important part of the operation in some of these cases, and the statistics would be distinctly "unscientific and misleading." Moreover, the congestion of the prostate due to stone is essentially different from such enlargements of the prostate as call for prostatectomy.

I have no hesitation in describing Mr. Freyer's idea that he extirpates the prostate, including its capsule, as impracticable from an anatomical point of view, as if the capsule proper of the prostate were removed the urine would become extravasated into the pelvis, and if the whole of the prostate were taken away the seminal ducts and urethra would suffer. Even if it were possible to take away the entire prostate it would be unnecessary and undesirable seeing that a removal of all the hypertrophies effects a cure of the disease. To prove the impracticability of extirpation I will refer to three recent works:—

1. Fuller, p. 348.
The prostate itself is enveloped in a firm sheath of fibrous tissue which in front is intimately blended with the true pelvic fascia. Above in a backward direction the sheath becomes continuous with that enveloping the bladder, laterally with that which serves as a common covering for the bladder as well as the rectum, and underneath that surrounding the seminal vesicles.

2. Deaver, *Surgical Anatomy*, vol. ii, p. 622:
When the entire breadth of the prostate and its capsule are divided the urine will have ready access to the pelvis.

3. Keen and White, *Textbook of Surgery*, vol. ii, p. 622:
It is composed chiefly of unstriped muscular fibres, the inner or circular layer of which are continuous in front with those surrounding the membranous urethra and behind with the muscular coat of the bladder. An outer layer beneath the fibrous capsule forms a sheath for the gland, while between them the glandular structures are embedded.

Now in cases of hypertrophy, the obstructing tumour is made up of rounded bundles of involuntary muscle fibres in the softer varieties, and of muscle and fibrous tissue in the harder forms. These may form distinct and separate masses each with its capsule, or a number may be bound together and may be shelled out in a mass of the size and shape of the prostate; but I hold that this is not extirpation of the prostate, but enucleation of a growth or growths in the prostate, the true muscular and fibrous capsule, the urethra, the sinus poculoris and the seminal ducts not being interfered with, fortunately for the patient.

As I have a great admiration for Mr. Freyer's valuable work in lithotrity, and am really interested in his lecture on prostatectomy, I am very sorry that my letter, written in support of the claims of a colleague, who, though not with us now, still holds a warm place in the hearts of all who knew him, should provoke a reply like that in your last issue.—I am, etc.,

Leeds, August 6th. A. W. Mayo Robson.

## THE "C.O.S." OF LONDON.

Sir,—One would have thought that the appearance of Dr. Percy Boulton's welcome letter indicated rather his return to England than his departure from it.

When computing the output on this subject, if he had begun with the first issue of the British Medical Journal for June instead of July he would have found that it was two and a-half columns including his own of twelve lines dated May 23rd, so that he has been silent for upwards of two months!

As to "fresh issues" cropping up, this is not surprising in so "big a question," and shows great diligence somewhere and in some cases considerable skill and ability. Surely these fresh issues keep the subject green and invigorating. Anyone possessing a musical instrument does not always want the same humdrum tunes, nor for each player to play the same tune with the same variations. Quite independently of the main issue which is always present, the more time the Legislature keeps its hands off the more fresh issues will appear, and it is only fair that so important a matter should be freely discussed and looked at from all standpoints before the Bill is entered in the Statute Book.

In reply to his assertion that the opponents to the Midwives Registration Bill do not know what they want, I should like to say that it is the same as they ever wanted, namely, first, for the Medical Acts to be carried out that no one should be allowed to practise midwifery upon their own responsibility except those who are qualified and registered in that subject as well as in medicine and surgery.

Secondly, they are more anxious for the protection of parturient women and their offspring than for the protection and promotion of midwives, and for the former they suggest that a doctor to examine the case once at least should be placed at the disposal of the parturient poor and a woman to nurse them in an efficient manner.

Thirdly, they think it the duty of the Obstetrical Society of London to put a stop to those they have examined signing themselves as "L.O.S.", as they consider that the practice is calculated to deceive the public, which is apt to think it is intended to convey the idea that they hold the licence to practise midwifery.

These are the chief features of the requirements of the opponents to registration, not only for the protection and benefit of the public, but for the honour of the profession.—I am, etc.,

Ardwick, Manchester, August 5th. G. H. Broadbent.

## THE MIDWIVES QUESTION.

Sir,—I did not wish to trouble you with another letter on this subject, but I am afraid I have no alternative, as Mr. Humphreys has so palpably misquoted me in his letter of July 13th.

To the remarks in my letter of July 6th, all Mr. Humphreys can reply is, "Mr. Allan MacLean's suggestion that it is not lay persons who see the necessity for legislation but only interested medical men, is not borne out by facts."

I said nothing of the kind; what I did say was: "If this

demand for midwives was only brought forward by laymen one could understand it, but when one sees that it is most strenuously urged by those members of the medical profession who are not in any way injured by it, but on the contrary by those who have something to gain either in advertisement or fees, one cannot help doubting their *bona fides*, and may be forgiven if one puts down the whole matter to interested motives."

I presume Mr. Humphreys is the recognised mouthpiece of the midwives registration party, and as such I should have thought that it would have been wiser to have replied (or at any rate attempted to reply) categorically to the arguments of his opponents in controversy, than systematically to evade awkward questions.

Mr. Humphreys ignores the rest of my letter in which I say that the real object of the Midwives Registration Bill is to find occupation for women. I should like to put a few straightforward questions to this gentleman, but refrain from doing so as being merely a waste of time, for when he finds the question difficult to answer he says he is not good at riddles, and gives it up.

I maintain, as I have done previously, that this agitation for the manufacture and registration of midwives is not got up solely for the benefit of the poor, but chiefly to find employment for women, and incidentally fees and advertisement for certain of our profession.

I for one strongly object to more competition with unqualified persons; we have quite enough; and, to my mind, it is this very competition among ourselves which induces men to do things which under more prosperous circumstances they would not do.

Can any sane person suppose for one instant that the women who present themselves for the L.O.S. do so for the benefit of anyone but themselves; or that, if they knew that they would only have the poor for their patients, they would trouble about the L.O.S. at all (of course, by the poor, I mean those who cannot pay a doctor)?

This "benefit of the poor," which is made so much of, is merely the proverbial red herring to divert the attention of the influential and those in power from the real object of the promoters of this Bill.—I am, etc.,

Friern Road, S.E., July 29th. ALLAN MACLEAN.

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SIR,—Dr. Boulton's letter obviously calls for a reply, because he suggests that the opponents of the Obstetrical Society do not know what they want. Speaking for myself, I certainly do.

Now, I have, since my admission to the profession, seen three diseases "boomed"—leprosy, puerperal fever, and tuberculosis. We all know the result of the leprosy "boom"—fiasco.

I venture to predict the same result to the other two. All three "booms" are stains on the scientific honour of the medical profession; and equally so. At present I am only concerned with the puerperal fever "boom."

The issue is a simple one: the disease is a notifiable one, and comes under the jurisdiction of the sanitary service of this country. If special legislation is required, that legislation ought to be in the direction of further powers to sanitary authorities.

Three such short clauses, added to the Public Health Act, would meet the requirements of the situation, as:

1. Every person who shall attend a woman in her confinement in the capacity of a midwife without the control of a registered medical practitioner shall within three days of the delivery notify the fact to the medical officer of health for the district. On the receipt of such notification the medical officer of health shall enter the name of the person acting as midwife on a list to be kept by him, and shall visit the house, obtain particulars of the qualification of such person and her address, and ascertain the condition of the lying-in woman and all circumstances connected with the hygiene of the case.

2. In the case of his ascertaining that the condition of the lying-in woman is one of sepsis, he shall at once send for the assistance of the parochial district medical officer, who shall forthwith take charge of the case, and if he thinks it necessary he shall suspend the practice of such midwife for such a period as is reasonable.

3. In the event of a midwife disobeying the directions of either officer or neglecting to notify the sanitary authority, on being satisfied by written report from such officer, shall bring the midwife before a Bench of magistrates, and the Bench upon the case being proved shall fine the midwife a sum not exceeding 40s.

I do not suggest that the clauses are perfectly drawn, but I sketch them as a suggestion of the lines upon which they should be drafted. It is only too obvious that if the Obstetrical Society had not had one eye on the disease and one eye on midwives' interests it would not have taken the course which it has taken, namely, that of a drawing-room campaign. The disease is now lost sight of and the midwives' interests are the only point worthy of consideration in its eyes.

I suggest that the Council of the British Medical Association should at once form a committee of one person nominated by the Midwives' Institute, one nominated by the Obstetrical Society, one by the Medical Defence Union, one by the London and Counties Protection Society, one by the Council of the Association, and that the three direct representatives of the profession on the General Medical Council should be asked to give their services; that the committee should take evidence orally, if offered, and such other evidence as is available; and that the committee should report to the Council of the Association the conclusions at which it arrives.—I am, etc.,

Hatfield, August 3rd. LOVELL DRAGE.

# UNIVERSITIES AND COLLEGES.

## UNIVERSITY OF EDINBURGH.

### GRADUATION CEREMONIAL.

THE medical graduation ceremonial took place in the McEwan Hall on July 27th, the Vice-Chancellor (Principal Sir William Muir) presiding, and having on his right Sir John Batty Tuke, M.P., and on his left Sir William Turner.

The following medical and surgical degrees were conferred:—

*Doctors of Medicine.*—*R. O. Adamson (M.A.), M.B., C.M., ‡A. C. Ainslie (M.A.), M.B., C.M., ‡J. C. Atkinson, M.B., C.M., ‡J. M. Beattie (M.A.), M.B., C.M., *J. M. Bowie, M.B., C.M., *H. R. Brown (M.A.), M.B., C.M., *H. G. Brown, M.B., C.M., *R. N. Brebner, M.B., Ch.B., R. C. Bruce, M.B., C.M., ‡T. H. Bryce (M.A.), M.B., C.M., R. D. Buchanan, M.B., C.M., M. Burnet, M.B., C.M., *F. H. Carylon, M.B., C.M., B. R. C. Christie, M.B., C.M., *E. F. Cyriax, M.B., Ch.B., D. R. Davies, M.B., C.M., W. Dickson, M.B., C.M., D. C. Edington, M.B., C.M., †R. C. Elsworth, M.B., C.M., D. S. Evans, M.B., C.M., G. W. Fitzgerald, M.B., C.M., †D. Forbes, M.B., Ch.B., T. D. Forbes, M.B., C.M., ‡E. J. H. Fraser, M.B., C.M., *H. E. Gibbs, M.B., Ch.B. (*in absentiâ*), †A. Goodall, M.B., Ch.B., †T. D. Greenlees, M.B., C.M., †G. K. Grimmer, (B.A.), M.B., C.M. (*in absentiâ*), R. L. Guthrie, M.A., M.B., C.M., †A. C. Heath, M.B., Ch.B., A. Hendry, M.B., C.M., †J. T. Hewetson, M.B., C.M., *J. Hume, M.B., C.M., †L. G. Irvine, M.A., B.Sc., M.B., C.M. (*in absentiâ*), C. H. Johnson, M.B., C.M. (*in absentiâ*), W. Kinnear, M.A., M.B., C.M., W. B. Kirkaldy, M.B., C.M., *T. Knowles, M.B., C.M., *L. F. B. Knuthsen, M.B., C.M., *R. Laidlaw, M.B. (*in absentiâ*), †G. R. Leighton, M.B., C.M., †S. Mallannah, M.B., C.M. (*in absentiâ*), *T. M. Martin, M.B., C.M., G. H. Monro-Home, M.B., C.M., A. Nobbs, M.B., C.M., D. W. H. Paterson, M.B., C.M., *C. E. Potter, M.B., C.M., †J. V. R. Roberts, B.Sc., M.B., C.M., †T. A. Ross, M.B., C.M., ‡A. C. Sandstein, M.B., Ch.B., ‡S. Simpson, B.Sc., M.B., Ch.B., *E. Somerville, M.B., Ch.B., *H. B. Sproat, M.B., Ch.B., *W. A. Stephen, M.A., M.B., C.M., G. H. Steyn, M.B., C.M., *G. C. Thomas, M.B., C.M., *W. F. Thompson, M.B., C.M., A. H. H. Vizard, M.B., C.M., ‡D. B. Waters, M.A., M.B., Ch.B., †A. R. Wilson, M.A., M.B., C.M., A. H. Wood, M.B., Ch.B.

* Commended for thesis. † Highly commended.

‡ Gold medals.

*Degree of Bachelor of Science in the Department of Public Health.*—M. Baket, M.B., C.M.; D. Forbes, M.D.; F. Gardiner, M.B., C.M.

*Degrees of Bachelor of Medicine and Master in Surgery (Old Regulations).*—M. N. Bose, S. Dawood, A. T. Gavin, P. E. H. Giuseppi, J. H. Meikle, M.A., B.Sc., W. H. Meyer, J. D. Saner, W. H. Swaffield, *H. M. Traquair, J. Wallace, J. O. Williams.

* With First class Honours.

*Degrees of Bachelor of Medicine and Bachelor of Surgery.*—M. M. Aitken, M.A., J. F. Allan, C. M. Anderson, R. V. C. Ash, *R. T. Baillie, J. W. Barrack, *A. C. Begg, R. A. Bellilios, J. H. M. Bell, V. C. de Boinville, †R. J. Bradley, E. S. Brett, J. Brocket, E. E. Brown, Golfina Maude Brown, W. Brown, J. Brownlee, R. W. Buchanan, M.A., B.Sc., H. Buist, †G. C. Burgess, E. P. Calder, K. Chapel, C. C. Choyce, B.Sc., A. W. S. Christie, R. V. Clark, M.A., B.Sc., H. L. Clift, W. J. Crow, Barbara Martin Cunningham, J. Dalgliesh, †G. A. Davidson, M.A., †W. H. Dickinson, *W. E. C. Dickson, B.Sc., T. G. B. Dodds, H. Dodgson, C. Douglas, J. L. Duncan, W. A. Duncan, W. I. Dunn, J. R. Edward, W. Eggeling, M.A., O. J. Evans, J. W. Falconer, M.A., †A. H. Firth, M.A., G. A. Forrest, S. Garvin, J. C. Gilchrist, E. M. Glanville, R. A. Glegg, T. Graham, R. M'K. Grant, A. L. Gurney, A. R. Hallam, Agnes Moore Hamilton, R. Hamilton, W. Hamilton, N. C. R. Hansen, B.A., R. A. J. Harper, P. J. Hay, Eleanor Russell Henderson, D. C. Henry, C. W. Howe, *A. Hunter, M.A., B.Sc., A. E. Hunter, A. R. Johnston, M.A., G. A. Jolly, E. V. Jones, †A. C. Keay, J. P. Kennedy, P. V. Langmore, A. K. Lauddie, W. Lee, C. H. Lindsay, S. Lyle, J. G. M'Bride, L. T. M'Clintock, H. K. Macdonald, W. MacDougall, M.A., P. F. M'Farlan, †G. M'Farland, A. F. Mackay, F. D. S. Mackenzie, J. M'Kenzie, W. M'Lachlan, W. Mair, M.A., B.Sc., G. W. P. Maitland, A. M. Malcolmson, E. C. C. Maunsell, †G. R. Mill, T. Mill, W. Miller, J. Miskelly, A. Mouat, D. Munro, M.A., G. S. Murray, *P. Murray, M.A., W. Murray, E. G. O. Nixon, D. A. Ogilvie, J. F. Orr, J. L. Palmer, W. Paterson, W. S. Patton, J. G. Peebles, S. G. Peill, G. Pereira, H. G. Pesel, L. W. Pole, E. T. Potts, †W. H. Prentice, M.A., L. T. Price, H. St. J.

Randell, F. L. Rigby, H. M. Roberts, †G. C. I. Robertson, M.A., J. K. A. Robertson, M. W. Robertson, W. A. Robinson, B.A., B.Sc., A. L. Roxburgh, L. Rundall, *C. W. Saleeby, †T. B. Shaw, Margaret Merry Smith, T. A. Smyth, Kate Southon, H. L. Spark, W. C. Speirs, B. A. Spence, A. J. de Spiganovicz, C. S. Steavenson, Maud Muriel Stevenson, D. A. Stewart, M.A., I. S. Stewart, J. Sullivan, M. A. Swan, P. Telles, G. L. Thompson, T. L. Thomson, J. B. Thorburn, W. L. Trafford, (*in absentiâ*) E. J. Tyrrell, A. R. Wallis, E. Wells, *T. S. B. Williams, F. E. Wilson, J. Woods, D. Young.

* First-class Honours; † Second-class Honours.

The Special University Certificate in Diseases of Tropical Climates was awarded to S. Dawood, M.B., C.M., C. W. Howe, M.B., Ch.B., and W. Miller, M.B., Ch.B.

The following Scholarships, Prizes, etc., were awarded; The Syme Surgical Fellowship to A. C. Sandstein, M.D., Ch.B.; the Goodsir Memorial Fellowship to S. Simpson, B.Sc., M.D., Ch.B.; Gunning Victoria Jubilee Prize in Anatomy to D. Forbes, M.D., Ch.B.; the Gunning Victoria Jubilee Prize in Forensic Medicine and Public Health to C. J. Lewis, D.Sc., M.D., C.M.; the Ellis Prize in Physiology to S. Simpson, B.Sc., M.D., Ch.B.; the Milner Fothergill Medal in Therapeutics to E. F. Bashford, M.B., Ch.B.; the Ettles Scholarship to C. W. Saleeby, M.B., Ch.B.; the Beaney Prize in Anatomy and Surgery to H. M. Traquair, M.B., C.M.; the Buchanan Scholarship in Gynæcology to W. H. Prentice, M.A., M.B., Ch.B.; the James Scott Scholarship in Midwifery to C. W. Saleeby, M.B., Ch.B.; the Allan Fellowship in Clinical Medicine and Clinical Surgery to T. B. Shaw, M.B., Ch.B.; the Mouat Scholarship in Practice of Physic to J. Brownlee, M.B., Ch.B.; the Stark Scholarship in Clinical Medicine to W. E. C. Dickson, B.Sc., M.B., Ch.B.; the Murchison Memorial Scholarship in Clinical Medicine to R. V. Clark, M.A., M.B., Ch.B.; the Pattison Prize in Clinical Surgery to J. Saffley; the Gilfillan Memorial Prize to Agnes Moore Hamilton, M.B., Ch.B.; the Cameron Prize in Therapeutics to P. Manson, C.M.G., M.D.; for his researches on the transmission of diseases through the mosquito.

*Heriot's Hospital Fellowship.*—Professor Simpson intimated that the Governors of Heriot's Hospital, at their meeting held on July 26th, had awarded Fellowships of £100 to each of the following graduates of Edinburgh University: E. H. Fraser, M.B., C.M., A. W. C. Menzies, M.A., B.Sc., and J. M'Farlane, M.A.

Professor John Wyllie then gave the Promoter's address to the graduates. After congratulating them on their new promotion, he said the two leading characteristics of the medical profession were its beneficence and its love of accurate scientific knowledge The very remarkable advances in medicine, and especially in surgery, gave the practitioner of to-day much more power to help the sick and the injured than had his predecessor of even the last generation. Reference was made to the position of the Medical Faculty of the University, what had been done of late years, and what was now being done to keep the medical school in a state of high equipment and efficiency. The work of Sir Alexander Grant and his Committee in securing funds for the new medical buildings, the noble gift of Mr. McEwan, and most recently the Hughes Bennett Physiological Laboratory given by Mrs. Cox, were in turn referred to. Another splendid gift was being prepared in the John Usher Institute of Public Health. But Mr. Carnegie's was the crowning gift. It gave promise of an excellence of equipment in the scientific departments of the Universities of Scotland which would leave nothing to be desired. It would provide for the establishment of scholarships for the encouragement of research. It promised to bring about in the Universities the foundation of new chairs and lectureships dealing with scientific subjects. It must be a matter of satisfaction that Sir William Turner represented the University of Edinburgh on the Executive Committee of the Trust. Professor Wyllie then gave the graduates some advice as to their professional future. He urged them to be business-like in all their ways, and not to be reckless of their own health in regard to infection, and to exposure to fatigue and weather. A reasonable amount of attention to recreation should always be given, be it golf, angling, shooting, fox hunting, or any other form; mental recreation in the society of friends and in reading were inculcated. In conclusion the graduates were urged to scorn all quackery and pretence, and to keep ever in the path of rectitude. Winning honour as good doctors and good citizens would also reflect honour on the University that had reared them.

First Professional Examination.—The following candidates have passed this examination in the subjects undernoted:

*Chemistry.*—T. Addis, M. Ahmed, D. C. Alexander, R. G. A. Bagnall, C. R. M. Baker, G. Banks, R. A. Blake, Elizabeth H. Brook, Mary Brown, J. W. Cairns, J. S. Caldwell, H. P. Cook, A. B. Darling, T. Davidson, N. C. Dutt, D. Eakin, F. H. S. Gardner, J. T. Gunn, C. M. Hall, Mary D. Hancock, W. Henderson, J. Ings, Annie Jackson, S. Kark, J. S. Kinross, Ethel Landon, J. Lindsay, A. S. Macbeth, W. O. S. M'Gowan, D. F. Mackenzie, K. W. Mackenzie, I. R. Macleod, E. S. Massiah, Ada E. Miller, O. M. Mirylees, D. L. Morrison, R. E. U. Newman, R. H. Nolan, Ethel A. Orchard, D. H. Paul, G. Raffan, Mabel L. Ramsay, W. E. Reynolds, C. S. U. Rippon, T. E. Roberts, M. J. Da Rocha, A. Sandison, H. Sauzier, W. J. B. Selkirk, M.A., J. G. B. Shand, J. O. Shircore, E. S. Simpson, D. M. Smith, A. G. V. van Someren, R. A. Spence, H. V. Taylor, S. H. S. Taylor, E. W. Vaughan, A. P. Wall, D. R. P. Walther, H. M. Whittell, A. Wight, Marian E. Wilson, H. Wolf.

*Physics.*—A. C. Alport, A. Arthur, G. Banks, D. Bell, E. J. Black, N. Black, R. A. Blake, Elizabeth H. Brook, Mary Brown, J. S. Caldwell, H. Cargin, S. T. Champtaloup, Marjorie Duake-Cohen, J. A. Cruickshank, J. S. Daniell, A. J. Davin, L. F. Dawson, J. M. Dickson, S. C. Fernando, C. M. Finn, F. H. S. Gardner, L. Gibson, J. R. Hall, Mary C. Hamilton, D. G. Harries, T. E. Harris, A. S. Hendrie, G. A. Hodges, G. H. Howe, S. Kark, J. S. Kinross, P. J. M'Ardle, A. M. Macarthur, A. M'Donald, M. Maclean, E. S. Massiah, D. M. Mathieson, M.A., G. M. Melville, A. I. Miller, H. Mowat, Janet M. Murray, M.A., R. R. Murray, A. A. Ollivierre, J. S. Orwin, W. Patton, O. E. Powell, C. A. Purnell, G. Raffan, W. E. Reynolds, J. Ritchie, H. D. Robb, R. M. Robb, J. Z. H. Rousseau, H. Sauzier, T. H. Scott, S. C. Sen, J. G. B. Shand, T. R. Smith, A. G. V. van Someren, R. S. Steuart, G. H. de Wet Stofberg, H. V. Taylor, W. A. A. Taylor, R. B. Thomson, E. Valenzia, E. W. Vaughan, P. Vickerman, A. S. Walker, D. R. P. Walther, R. H. Walton, C. R. Wills, H. C. Wilson, H. Wolf.

*Zoology.*—C. R. M. Baker, G. S. Banks, D. M. Barker, C. S. Baxter, W. J. E. Bell, J. W. Bingham, E. H. Black, N. Black, C. E. Blair, D. P. Blair, H. Brown, D. S. Buist, N. S. Carmichael, W. I. M. Clark, W. Collins, B.A., Agnes M. Cowan, F. W. Cragg, W. Y. Craig, Irene B. Cunningham, R. G. Cunningham, Davidina R. J. Davidson, R. Davidson, T. Davidson, A. M. Dick, M. G. Dill, A. M. Drennan, R. Duncan, E. W. Dyer, S. S. Dykes, H. F. Fenton, Mary S. Finlayson, J. G. Fleming, M. S. Fraser, T. Fraser, R. S. Frew, F. H. S. Gardner, L. P. M. Gardner, W. J. Geale, Jessie H. Gellatly, W. Gemmill, G. A. Gordon, D. G. Gray, G. R. Gray, J. C. Grieve, G. F. Grogan, G. Hadden, Mary C. Hamilton, A. J. Harpur, D. G. Harries, A. S. Hendrie, W. M. Hewetson, H. S. A. Hogg, J. R. Holgate, J. C. Holm, J. Ings, Blanche M. Z. Johnston, H. C. Johnston, S. Kark, J. R. Kerr, Ethel Landon, J. Lindsay, J. A. Loughridge, J. P. Lowson, P. J. M'Ardle, A. S. Macbeth, J. F. Mackay, K. W. Mackenzie, Helen M. Macmillan, R. J. A. Macmillan, G. M'Mullan, A. C. B. M'Murtrie, W. J. Macnab, S. Macnaughton, A. S. Mactavish, J. N. M'Turk, W. J. Maloney, D. Mann, L. R. H. P. Marshall, N. Martin, S. E. Martin, E. S. Massiah, A. Mathieson, G. M. Melville, H. Millar, A. I. Millar, Aimee E. Mills, B.Sc., D. L. Morrison, H. L. Morrow, H. Mowat, R. E. Moyes, E. B. Munro, Janet M. Murray, M.A., R. R. Murray, R. E. U. Newman, A. J. R. O'Brien, Ethel A. Orchard, J. S. Orwin, A. S. Paterson, J. L. Pearce, H. B. Porteous, C. A. Purnell, Mabel L. Ramsay, G. Raubenheimer, H. E. Rawlence, W. E. Reynolds, W. H. Riddell, W. R. Ridley, W. G. Rivers, H. D. Robb, A. Ross, F. Ross, W. K. Sanderson, A. Sandison, J. Scott, W. M. Scott, W. J. B. Selkirk, M.A., H. L. Sells, Alice C. Sharp, A. Simpson, E. S. Simpson, D. M. Smith, R. A. Staig, A. D. Stewart, R. B. Thomson, H. H. Thorburn, J. H. du Toit, A. E. Turnbull, Nettie B. Turnbull, Annie D. Urquhart, P. Vickerman, R. Wilkins, W. E. R. Williams, Marian E. Wilson, C. J. Wolfe, and J. Young.

*Botany.*—D. C. Alexander, A. C. Alport, K. G. Archer, W. H. Armistead, A. Arthur, E. Banks, G. S. Banks, D. M. Barker, G. G. Bartholomew, C. S. Baxter, J. W. Bingham, H. W. Binks, E. H. Black, E. J. Black, N. Black, C. E. Blair, D. P. Blair, R. A. Blake, H. Brown, H. Cargin, N. S. Carmichael, S. T. Champtaloup, A. E. Chisholm, W. Collins, B.A., S. G. Corner, F. W. Cragg, F. S. Cumming, Irene B. Cunningham, R. G. Cunningham, J. A. Currell, J. S. Daniell, A. B. Darling, Davidina R. J. Davidson, R. Davidson, R. B. Davidson, T. Davidson, L. F. Dawson, Annie H. Dean, A. M. Dick, J. M. Dickson, T. H. Dickson, M. G. Dill, A. M. Drennan, R. Duncan, N. C. Dutt, E. W. Dyer, S. S. Dykes, H. A. Edwards, C. E. Elliston, H. F. Fenton, Mary S. Finlayson, C. N. Finn, J. G. Fleming, M. S. Fraser, T. Fraser, R. S. Frew, W. G. Frohlich, J. F. Gallagher, F. H. S. Gardner, L. P. M. Gardner, W. J. Geale, Jessie H. Gellatly, W. Gemmill, J. Gilmour, G. A. Gordon, W. H. Gowans, D. G. Gray, G. R. Gray, J. C. Grieve, G. F. Grogan, E. J. C. Groves, G. Gunn, Mary D. Hancock, D. G. Harries, D. K. Henderson, W. Henderson, W. M. Hewetson, H. S. A. Hogg, S.W. Hogg, J. R. Holgate, J. C. Holm, G. H. Howe, F. O. Inglis, H. C. Johnston, S. Kark, J. R. Kerr, N. W. Kidston, Ethel Landon, H. A. Leicester, J. Lindsay, J. A. Loughbridge, A. M. Macarthur, P. M'Dermid, A. M'Donald, T. A. MacGibbon, B.Sc., W. A. Mackay, K. W. Mackenzie, W. R. Mackenzie, M. Maclean, I. R. MacLeod, Helen M. M'Millan, J. P. M'Morland, R. P. M'Morland, G. M'Mullan, A. C. B. M'Murtrie, W. J. Macnab, S. M'Naughton, J. N. M'Turk, W. J. Maloney, G. O. Marke, L. R. H. P. Marshall, S. E. Martin, R. E. Marwick, E. S. Massiah, A. Mathieson, D. M. Mathieson, M.A., A. H. M. Maxwell, H. Millar, A. I. Miller, H. L. Morrow, H. Mowat, R. E. Moyes, Anna M. Mulholland, E. B. Munro, R. R. Murray, R. H. Nolan, A. J. R. O'Brien, A. A. Ollivierre, A. S. Paterson, J. L. Pearce, H. B. Porteous, O. E. Powell, C. A. Purnell, K. A. O. Quainoo, G. Raffan, Mabel L. Ramsay, G. Raubenheimer, H. E. Rawlence, G. Y. Richardson, W. H. Riddell, W. R. Ridley, J. Ritchie, W. G. Rivers, R. M. Robb, F. Rose, M.A., F. Ross, J. Z. H. Rousseau, T. H. Scott, W. M. Scott, W. J. B. Selkirk, M.A., H. L. Sells, S. C. Sen, Alice C. Sharp, E. S. Simpson, I. Y. Small, A. G. H. Smart, T. R. Smith, M. G. V. van Someren, R. A. Staig, A. Stephen, M.A., L. D Stephen, R. S. Steuart, A. D. Stewart, G. H. De Wet Stofberg, H. Stokes, W. J. Taggart, J. A. Taylor, L. R. Thomson, R. B. Thomson, H. H. Thorburn, J. H. du Toit, Annie D. Urquhart, E. Valenzia, P. Vickerman, V. A. Vijayakar, A. S. Walker, R. H. Walton, H. C. Weber, J. D. Wells, F. E. Wernicke, R. Wilkins, W. E. R. Williams, H. C. Wilson, Marian E. Wilson, J. Young.

## UNIVERSITY OF GLASGOW.

### Summer Graduation Ceremony.

The summer graduation in medicine in Glasgow University took place on July 23rd in the Bute Hall. Principal Story, the Vice-Chancellor, presided, and there was a large gathering of the public The first degrees conferred were two honorary degrees which had been omitted at the recent jubilee celebrations, and were now conferred *in absentiâ*—the degree of Doctor of Laws (LL.D) on Dr. James Dunsmure, President of the Royal College of Surgeons, Edinburgh, and the same degree on Professor William M. Ramsay, of Aberdeen, an eminent archæologist and scholar. The following medical and surgical degrees were then conferred:

*Doctors of Medicine (M.D.).*—T. Bell, M.B., C.M. (Thesis—Arsenical Poisoning in Beer Drinkers); T. Colvin, M.B., C.M. (Thesis—Notes on an Outbreak of Bubonic Plague in Glasgow in August, 1900, with a Study of Enteric Fever in its initial stage, and other cases that simulated Plague); R. H. Henderson, M.B., C.M. (Thesis—The Choice of an Anæsthetic); J. C. Howie, M.A., M.B., C.M. (Thesis—Puerperal Eclampsia: its Symptomatology, Pathology, and Treatment, with Illustrative Cases); J. Jack, M.B., C.M. (Thesis—Albuminuria in Pregnancy, with special reference to Puerperal Eclampsia, with cases); G. Jubb, M.B., C.M. (Thesis—Antiseptic Methods in the Treatment of Enteric Fever); J. Lindsay, M.A., M.B., C.M. (Thesis—A Study of Atrophic Development); D. M'Nicol, M.B., C.M. (Thesis—One Hundred Years of Vaccination); W. M'G. Young, M.A., M.B., C.M. (Thesis—Ether Anæsthesia).

*Bachelors of Medicine and Masters in Surgery (M.B., C.M.).*—D. Davie, W. H. Ferran, S. K. Roy, J. P. Small, D. W. Smith.

*Bachelors of Medicine and Bachelors of Surgery (M.B., Ch.B.).*—Honours: *A. D. Thompson, W. M. Brown. Commendation: J. M'Pherson, M.A., S. J. Cameron, A. E. Wainwright, E. Magoveny, J. G. Tomkinson, R. Ramsey, D. Steel, J. Walker, W. A. Milne. Ordinary Degrees: Martha Adams, J. Anderson, T. Anderson, W. Archibald, J. O. Barclay, J. S. Barr, W. H. Brown, G. F. Buchan, E. C. Burnett, P. T. Cairns, R. D. Campbell, J. B. W. Cook, E. H. Cramb, A. Currie, D. B. Davidson, J. Davidson, M.A., G. H. G. Davie, A. Doig, R. N. Dunlop, G. B. Eadie, W. Elder, W. W. Farrar, J. Forrest, J. A. Garden, A. P. Granger, J. Gregor, Mabel Hardie, G. P. Harlan, F. J. Henry, D. W. Hunter, M. Hunter, W. J. Isbister, T. H. Jack, D. R. Kilpatrick, D. Kyle, M.A., J. Lambie, F. J. Lochrane, J. W. M'Dougall, T. M'Laren, H. A. McLean, G. W. M'Millan, J. Mains, J. G. Millar, R. J. Mills, W. A. Mills, S. J. Moore, Alice Moorhouse, A. H. Muir, R. Paterson, J. Paton, J. K. Patrick, Mary Janet Pirret, P. M. Reid, W. Robertson, T. R. Rodger, C. J. Ross, B.A., D. Shannon, Agnes Bankier Sloan, Elizabeth Macfarlane Sloan, J. Strathearn, J. N. Todd, J. W. Turner, R. W. Valentine, G. S. Wallace, P. M. Waugh, W. W. W. Wilson.

* Gains the Brunton Memorial Prize of £10, awarded to the most distinguished Graduate in Medicine of the year.

At the conclusion of the ceremony the customary valedictory address was delivered by Professor Sir Hector Cameron. Having referred to the extent to which the law recognises and protects the registered medical practitioner, he proceeded to direct attention to some of the distinctively characteristic features of the medical profession. However noble the aims of the physician, he must be constantly disappointed and baffled by the inexorable forces of Nature. Moreover, while his work was arduous, exciting, and exhausting, it was not lucrative, and competition was keen, so that the number of blanks must probably equal the number of prizes. On the other hand, the practice of medicine at the present time, perhaps more than ever before, was characterised by frequent changes, the result of the constant and incessant progress in scientific knowledge, and, indeed, this constant progress in the collateral sciences, added much to the interest of their lives. And this scientific progress was at once published to the world, no matter in what country it originated, so that it might be said of medicine that it was one of the greatest promoters of international amity. Sir Hector then proceeded to address a few words of advice to the graduates in regard to the practice of their profession, and, in conclusion, expressed the hope that they would do credit not only to the profession to which they belonged, but to the University in which they had graduated.

## UNIVERSITY OF ABERDEEN.

### GRADUATION CEREMONY.

THE summer graduation ceremony took place on July 24th in the Mitchell Hall of Marischal College.

The honorary degree of Doctor of Laws was conferred on Professor Rudolph Virchow, of Berlin, and Major Alfred W. Alcock, M.B., I.M.S., Superintendent of the Indian Museum, Calcutta.

The following degrees and diplomas were also conferred:

*Degree of Doctor of Medicine (M.D.).*—J. Baker, M.B., C.M. Thesis—Criminality in Youth (a Medico-legal Study" (with commendation); W. J. Byres, M.A., M.B., C.M. Thesis—Pathology and Treatment of Angina Pectoris; C. I. Ellis, M.B., C.M. Thesis—A Plea for Greater Care of the Teeth; D. V. Haig, M.B., C.M. Thesis—The Hygienic or Open-air Treatment of Pulmonary Tuberculosis (with commendation); J. S. Laing, M.B., C.M. Thesis—Prevalence and Mortality of Whooping-cough in Aberdeen from 1882 to 1900 (with honours); *H. O. Nicholson, M.B., C.M. Thesis—An Introduction to the Study of the Pulse in Children. (New Regulations.) (With highest honours); J. Porter, M.A., M.B., C.M., Deputy Inspector-General of Hospitals, R.N.; J. Wallace, M.A., M.B., C.M. Thesis—On the Effects upon Disease of certain Gases when present in the Atmosphere.

* Lord Rector's Prize for the best thesis.

*Degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) (New Ordinances.)*—G. W. Allan, W. Brander, E. J. Bruce, J. Campbell, A. W. Falconer, J. Findlay, T. P. Fraser, G. O. Gauld, A. C. Gavin, J. S. Geddie, W. C. Gray, H. L. Hamilton, H. L. Johnston, G. A. Johnstone, E. D. Keane, A. J. Milne, T. N. Mitchell, *H. L. Murray, R. W. Reid, A. M. Ross, M. Smith, P. M. Turnbull, W. Turner, M. F. White, J. Wishart, B.Sc., T. C. McC. Young.

* With Second-Class Honours and passed 3rd Professional Examination with "Distinction."

*Diploma in Public Health.*—J. M'Rea, M.A., M.D. (Aberd.), J. A. Rose, M.A., M.B. (Aberd.).

The John Murray Medal and Scholarship for the most distinguished graduate (M.B.) of 1901 has been awarded to R. Aird, M.A., M.B., Ch.B.

In his address, at the close of the ceremony, Principal Marshall Lang, after expressing the loss felt by the University in the resignation by Professor Dove Wilson of the Chair of Law, went on to deal with some points in the Carnegie Trust. In discussing the University Extension scheme, the Principal pointed out the urgent necessity there was for obtaining further funds. Lord Strathcona's promise of £25,000 towards the completion of the scheme was (and is) entirely conditional on the University being able to raise a sum which, when added to Lord Strathcona's gift, will suffice to complete the building scheme. Some £22,000 are still required in order to do this, and it is expressly stated that the funds required are not to be found in the Carnegie benefaction. An urgent appeal to the public is, therefore, to be made to obtain the money, and it is a matter of real anxiety to the University that the appeal should be generously responded to.

## UNIVERSITY OF LONDON.

### FACULTY OF MEDICINE.

AT a meeting of the Faculty of Medicine, held at the University Buildings, South Kensington, on July 26th, the following matters were dealt with:

*Concentration of Medical Studies.*

An interim report from the Concentration Committee was submitted. Mr. Butlin, the Dean of the Faculty and Chairman of the Committee, referred to the great importance and complexity of the work of the Committee. He expressed a hope that a final report would be ready for presentation to the Faculty early in the ensuing winter session. The interim report contained a tabular statement of the replies of the medical schools to a series of questions submitted to them by the Committee. Some particulars were given of the vacant space in the vicinity of the University Buildings, some of which might be available for the establishment of a centre for preliminary medical studies if such a course were deemed advisable. Information was also afforded as to the space at present devoted to the teaching of these subjects in the twelve constituent medical schools of the University. The Committee further reported that they had appointed Dr. Lewis Smith to visit certain British universities in order to obtain information as to the conditions under which the teaching of the earlier subjects of medical education was carried on in these cities.

*Composition of the Faculty.*

Certain anomalies in the composition of the Faculty as originally formed by the Statutory Commissioners having been noted, a committee was appointed to inquire into the matter, and to advise the Faculty as to any recommendations that should be made to the Senate in order to ensure the inclusion in the Faculty of all recognised teachers whose presence would promote the work of the University.

*Curricula and Examinations.*

Reports from the Boards of Preliminary and Intermediate Medical Studies upon proposed changes in the curricula and examinations were submitted to the Faculty. It was decided to defer full consideration of these reports until the October meeting, the Dean stating that it would be convenient if members desiring to criticise any points in the report would give notice of motion to the Honorary Secretary before that date.

*A University Gazette.*

A resolution calling attention to the importance of publishing a gazette as a record of matters connected with the University was withdrawn, it being reported to the Faculty that the Senate had already decided to take immediate steps to publish such a paper under the editorship of Professor Rücker, the Principal of the University.

D.SC. EXAMINATION.—The following candidates have satisfied the examiners in the subjects undernoted:

*Mathematics and Physics.*—J. Buchanan, private study.

*Experimental Physics.*—C. V. Drysdale, private study; W. H. Eccles, Royal College of Science; P. E. Shaw, University College, Nottingham.

*Chemistry.*—T. J. Baker (Granville Scholarship), private study; T. A. Henry, Schools and Research Laboratory of the Pharmaceutical Society, and Research Laboratory of the Imperial Institute; W. H. Hurtley, St. Bartholomew's Chemical Laboratory; G. D Lander, University of St. Andrews and University College, Nottingham; H. R. Le Sueur, St. Thomas's Hospital; S. Smiles, University College.

## UNIVERSITY COLLEGE, CARDIFF.

AT the recent examinations of the University of Wales, Thomas Lewis and R. K. Shepherd completed their B.Sc. examinations in anatomy, physiology, and organic chemistry.

# MEDICAL NEWS.

MR. W. WATSON GRIFFIN, M.B., F.R.C.S.Eng., has been appointed Ophthalmic Surgeon to the Sussex County Hospital.

DENTAL HOSPITAL OF LONDON.—The annual prize distribution was held on August 1st in the Theatre of the new hospital in Leicester Square. The company was received by the hospital staff in the Council Room. The prizes were distributed by Mr. T. Arnold Rogers, senior consulting surgeon. Mr. Morton Smale announced that the King had consented to become patron of the institution. The principal prize-winners were Messrs. E. C. Sprawson, G. Sheppard and J. R. Preston. Mr. Sprawson was awarded the Walker Scholarship and Mr. Sheppard the Saunders Scholarship and Ash Prize. It was stated that 53 new students had entered at the hospital during the present session, being the largest number on record. A concert was given by the members of the Hospital Musical Society and friends, and the gaiety of the evening, a little impaired by the failure of the electric light, was enhanced by the playing of the Alexandrienne Orchestra.

DR. THOMAS YOUNG.—A portrait of Dr. Thomas Young, from the painting by Sir Thomas Lawrence, has been placed in the Victoria Hall, Milverton, Somerset, with the following inscription: "Thomas Young, M.D., F.R.S., etc. Born at Milverton, 1773. Died 1829. Physician, Natural Philosopher, and Master of many languages; he first established the undulatory theory of light, and translated the Rosetta Stone, which is the key to our understanding the Egyptian hieroglyphics."

## MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM CITY ASYLUM.—(1) Senior Assistant Medical Officer. (2) Junior Assistant Medical Officer. Salaries, £180 and £130 per annum respectively, with board, apartments, and washing. Applications to the Medical Superintendent.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon; unmarried. Salary, £150 per annum, and allowance of £30 per annum for cab hire, with furnished rooms, etc. Applications to the Secretary by September 9th.

BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Medical Officer. Salary, £100 per annum, with furnished apartments, rations, etc. Applications, on forms provided, to be sent to the Clerk to the Guardians, Parish Office, Edmund Street Birmingham, by August 10th.

BOURNEMOUTH: ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary by August 22nd.

BRADFORD POOR-LAW UNION.—Second Assistant Medical Officer for the Hospital and Workhouse; unmarried. Salary, £100 per annum, with prescribed rations, apartments, and washing. Applications to the Clerk to the Guardians, 22, Manor Row, Bradford, by August 13th.

BRADFORD ROYAL INFIRMARY.—(1) Dispensary Surgeon. Salary, £100 per annum, with board and residence. (2) Junior House-Surgeon. Salary, £50 per annum, with board and residence. Candidates must be unmarried. Applications, endorsed "Dispensary Surgeon" and "Junior House-Surgeon" to be sent to the Secretary by August 20th.

BRECON INFIRMARY.—Resident House-Surgeon. Salary, £100 per annum, with residence, board, etc. Applications to Secretary by August 14th.

BRIDGWATER INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board and residence. Applications to the Honorary Secretary.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—(1) Surgeon. (2) Assistant Surgeon. Applications to the Secretary by September 4th.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with furnished apartments, board, and washing. Applications, endorsed "Assistant House-Surgeon," to be sent to the Secretary.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum, with board and lodging. Applications to Secretary by August 26th.

COLCHESTER: EASTERN COUNTIES ASYLUM FOR IDIOTS, IMBECILES, AND FEEBLE-MINDED.—Resident Medical Attendant; unmarried. Salary, £100 per annum, with furnished apartments, board, and washing. Applications to the Secretary before August 24th.

COLCHESTER: EXETER AND COLCHESTER HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by August 30th.

DENBIGH: DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary, £100 per annum to commence, with board, residence, and washing. Applications to the Secretary.

DENBIGH: NORTH WALES COUNTIES LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary commencing at £120 per annum, rising to £160, with board, residence, and washing. Applications to the Clerk to the Visiting Committee by August 12th.

EDINBURGH: CRAIGLEITH POORHOUSE AND HOSPITAL.—Resident Medical Officer. Salary at the rate of £100 per annum, with board and apartments. Applications to the Clerk, Parish Council Chambers Castle Terrace, Edinburgh, by September 2nd.

EXMINSTER: DEVON COUNTY ASYLUM.—Third Assistant Medical Officer. Salary, £125 per annum, with board, residence, etc. Applications to Medical Superintendent.

FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, residence, and laundry. Applications to Secretary by September 1st.

GLASGOW UNIVERSITY.—Additional Examiner for Degrees in Medicine and Science, with special reference to Physics. Salary, £30 per annum. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by September 26th.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £75 per annum, with board, residence, and laundry. Applications to the Honorary Secretary.

HEMEL HEMPSTEAD: WEST HERTS INFIRMARY.—House-Surgeon; unmarried. Salary, £100 per annum, with furnished rooms, board, etc. Applications to Dr. Turner, Camden House, Hemel Hempstead.

HULL ROYAL INFIRMARY.—Casualty Officer. Salary, £60 per annum, with board and lodging. Applications to the Chairman of the House Committee.

IPSWICH: EAST SUFFOLK AND IPSWICH HOSPITAL.—Second House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to Secretary.

ISLINGTON PARISH.—Dentist for the Schools at Hornsey Road. Salary, £20 per annum. Applications to the Clerk, Guardians' Offices, St. John's Road, Upper Holloway, N., by August 15th.

LANCASTER ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £80 per annum, with residence, board, attendance, and washing. Applications to the Secretary by August 23rd.

LEEDS GENERAL INFIRMARY.—Assistant Resident Medical Officer. Appointment, in first instance, for six months. Salary at the rate of £100 per annum. Applications to the Secretary to the Faculty.

LEWES DISPENSARY AND INFIRMARY AND VICTORIA HOSPITAL.—Resident Medical Officer. Salary, £100 per annum, with furnished apartments, board, etc. Applications to the Honorary Secretary, Mr. William E. Nicholson, 213, High Street, Lewes, by August 17th.

LINCOLN COUNTY HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Honorarium £25 for six months, with board, residence, and washing. Applications to the Secretary by August 10th.

LIVERPOOL DISPENSARIES.—Assistant Surgeon; unmarried. Salary, £100 per annum, with board and apartments. Applications to the Secretary by August 10th.

LIVERPOOL EYE AND EAR INFIRMARY.—Out-patient Assistant and Pathologist. Applications to the Secretary by August 20th.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle Street. Assistant House-Surgeon. Appointment for six months. Salary £25, with board and lodging. Applications to the Honorary Secretary by August 19th.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon; unmarried. Salary, £160 per annum, increasing by £10 yearly, with furnished apartments, etc. Applications to the Secretary, Mr. M. I. Preston, Journal Chambers, Nottingham.

OXFORD COUNTY.—Medical Officer of Health for the combined districts. Salary, £750 per annum. Applications to Mr. A. G. Higgs, Solicitor, Woodstock, by August 10th.

PLYMOUTH BOROUGH ASYLUM.—Assistant Medical Officer; unmarried. Salary, £150 per annum, rising to £200, with furnished apartments, board, and washing. Applications, endorsed "Assistant Medical Officer," to be sent to Dr. W. H. Bowes, Medical Superintendent, by August 15th.

PRESTON ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £60 per annum, with board, lodging, and washing. Applications to the Secretary by August 15th.

ROYAL EYE HOSPITAL, Southwark, S.E.—(1) House-Surgeon. Salary, 50 guineas per annum, with board and residence. (2) Clinical Assistants. Applications to the Secretary for (1) by August 31st.

SHEFFIELD ROYAL INFIRMARY.—(1) Senior Assistant House-Surgeon. (2) Junior Assistant House-Surgeon. (1) Salary, £80 per annum, with board, lodging, and washing. (2) Salary, £70 per annum, with board, lodging, and washing. Applications to Secretary by August 17th.

SHREWSBURY: SALOP INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board, washing, and residence. Applications to the Board of Directors by August 24th.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—(1) Junior House-Surgeon. Salary, £50 per annum. (2) Dispenser. Salary £60 per annum. Rooms, board, and washing provided in each case. Applications to Secretary by August 15th.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.—House-Surgeon; unmarried. Salary, £160 per annum, with board, lodging, and washing. Applications to the Secretary by August 24th.

SYDNEY UNIVERSITY.—Professorship of Pathology, not more than 40 years of age. Salary, £900 per annum, and £100 allowed for passage expenses. Applications to the Agent-General for New South Wales, 9, Victoria Street, London, S.W., by September 14th.

TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £60 per annum, with board, lodging, and washing. Applications to Secretary.

TOTTENHAM HOSPITAL, N.—Senior Resident Medical Officer. Salary, £90 per annum, with board, residence, and laundry. Applications to the Chairman of the Joint Committee by August 12th.

TOXTETH PARK TOWNSHIP.—Assistant Medical Officer of the Workhouse and Infirmary. Salary, £100 per annum, with board, washing, and apartments. Applications to the Clerk to the Guardians, 15, High Park Street, Liverpool, by August 21st.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House-Surgeon. Salary, £50 per annum, with board, lodging, washing, and attendance. Applications to the Secretary.

WEST BROMWICH UNION.—Assistant Medical Officer for the Workhouse and Infirmary; unmarried. Salary, £125 per annum and £10 per annum in lieu of apartments, board, etc. Applications, endorsed "Assistant Medical Officer," to be sent to the Clerk by August 19th.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—House-Surgeon. Salary, £120 per year, and £30 for dispensing, with furnished apartments and attendance. Applications to the Secretary by August 10th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Assistant House-Surgeon. (2) Assistant House-Physician. Appointment for six months. Honorarium at the rate of £75 per annum will be given with board, lodging, and washing in each case. Applications to Secretary by August 12th.

WOLVERHAMPTON EYE INFIRMARY.—House-Surgeon. Appointment for twelve months. Salary, £70 per annum, with rooms, board, and washing. Applications to Secretary by August 13th.

## MEDICAL APPOINTMENTS.

BERRY, Richard J. A., M.D., F.R.S.E. Lecturer on Anatomy at the New School, School of Medicine of the Royal Colleges, Edinburgh, appointed Examiner in Anatomy to the University of Aberdeen.

BUTLER, William, M.B. Glasg., C.M., D.P.H.R.C.P.S.Lond., appointed Medical Superintendent, Isolation Hospital, Willesden, *vice* D. S. Skinner, M.D., resigned; and Assistant Medical Officer of Health to the Willesden Urban District Council.

DIX, R. H., M.B., B.S., appointed Junior House Physician to the Royal Infirmary, Newcastle-on-Tyne.

FORBES, Duncan, M.D., B.Sc., appointed Assistant Medical Officer of Health for Leith.

GOUGH, J. Harley, F.R.C.S., appointed Certifying Factory Surgeon for the Torquay District.

HESLOP, J. W., M.B., B.S., appointed House-Surgeon to the Royal Infirmary, Newcastle-on-Tyne.

HIND, Clara, L.R.C.P. and S. Edin. and Glasg., appointed Resident Medical Officer to the Rudgwick Sanatorium, Sussex.

KEOGH, William M. F., M.B., B.Ch., B.A.O.R.U.I., appointed Assistant Medical Officer, County Asylum, Newport, Isle of Wight.

MEIKLE, R. H., M.B., M.S.Glasg., appointed Medical Officer of Health for the Darlington Rural District, *vice* G. M. Hardy, M.B., B.S. Durh., resigned.

PEARSON, H. Carden, M.B., F.R.C.S.Edin., appointed Surgeon to the Darlington Hospital.

PORTER, A. E., M.D., D.P.H.Camb., appointed Assistant Medical Officer of Health to the City of Leeds.

UNWIN, Marion Ethel, L.R.C.P. and S. Edin. and Glasg., appointed Junior Resident Medical Officer to the Clapham Maternity Hospital.

## DIARY FOR NEXT WEEK.

### MONDAY.

**West London Vacation Post-Graduate Course.** West London Hospital, Hammersmith Road, W., 5 P.M.—Lecture on the Treatment of Enlarged Glands.

### THURSDAY.

**West London Vacation Post-Graduate Course.** West London Hospital, Hammersmith Road, W., 5 P.M.—Lecture on Some Surgical Emergencies and their Treatment.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

BERRY.—At 4, Howard Place, Edinburgh, on Saturday, August 3rd, 1901, the wife of Richard J. A. Berry, M.D., F.R.S.E., of a daughter.

EDDOWES.—On August 3rd, the wife of Alfred Eddowes, M.D., M.R.C.P., of 28, Wimpole Street, W., of a son.

FULLER.—On August 3rd, at 95, Tollington Park, London, the wife of John Reginald Fuller, M.B., B.S., M.R.C.S., etc., of a son.

STABB.—July 30th, at Harleston, Torquay, the wife of W. Wilking Stabb, M.D., of a son.

### MARRIAGES.

CALVERLEY—DOUET.—On July 27th, at St. John's, S.E., Ernest Joseph Goodfellow Calverley, M.B., B.S.Lond., M.R.C.S., L.R.C.P., of Claremont House, Folkestone, to Evelyn, daughter of E. Douet, Esq., of St. John's.

GOULD—ASPINWALL.—August 3rd, 1901, at St. John's, Manchester, by the Rev. C. P. Roberts, M.A., rector, John E. Gould, M.D.Lond., D.P.H. Cantab., to Beatrice, youngest daughter of the late John Aspinwall, Esq., of Manchester.

KILLICK—MOULTON.—August 1st, at Wesley Church, Middlesbrough, by the father and brother of the bride, Arthur Killick, B.A., M.B., B.C.Cantab., son of R. Killick, J.P., of Dover, to Henrietta Fanny, eldest daughter of Rev. E. Moulton, Brentwood House, Middlesbrough.

LYLE—SELFE.—On July 31st, at Holy Trinity Church, Blackheath Hill, by the Rev. S. F. Hooper, rector of Lydlinch, Dorset, assisted by the Rev. R. Sayne, M.A., vicar, Herbert Willoughby Lyle, M.D.Lond., M.R.C.S., F.Z.S., elder son of Thomas Lyle, M.P., of the Board of Education, to Elizabeth Ada, the eldest daughter of James D. Selfe, of Blackheath Rise.

### DEATHS.

MILLER.—At Greenfield, 156, Perth Road, Dundee, on August 7th, James William Miller, M.D., in his 66th year.

SCORER.—On August 1st, at Maplestead, Old Christchurch Road, Bournemouth, Frank Elmo, infant son of Frank and Violet Scorer, aged 3 weeks.

# LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

## QUERIES.

G. P. writes: Can any member give a formula for cheap and efficient "weed killer" for garden paths?

PAT would be glad to know of any institution offering the open-air treatment for phthisis gratuitously.

SOUTHERN PRACTITIONER would be glad to know the address of a debt collecting agency working in this part of England—Hants.

## ANSWERS.

EGYPT has omitted to send his address.

C.O.H.—Hughes's induction balance and its application to surgery is dealt with in Hospitali's *The Modern Applications of Electricity*, vol. ii, and almost in the same words it will be found in the *Telephone* by Preece and Maier. The descriptions in both books are illustrated.

NOSTRIL DILATORS.

DR. GEO. STEELE PERKINS (Wimpole Street, W.) writes: "Xenophon" can obtain suitable "nostril dilators" at Messrs. Mayer and Meltzer, 71, Great Portland Street, W. I do not think he will require a chin-strap for his patient, as the habit of keeping the mouth open can easily be overcome when there is room to breathe through the nostrils.

THE RIBERI PRIZE.

T.M.S.—The Riberi prize is offered by the Royal Medical Academy of Turin from time to time to the author of what is judged to be the most important printed or manuscript work, or discovery during the previous five years. The work or discovery must deal with a subject relating to anatomy, physiology, pathology, or pharmacology. Works bearing on the history of medicine since the Renaissance are admitted to competition. The works intended for competition, which must be in Italian, French, or Latin, must be sent to the Secretary of the Academy. The last award of the prize, which is of the value of £800, was made in 1897. We are not aware that the date of the next award of the prize has yet been advertised, but we presume that works intended for competition must be in the hands of the Secretary on or before December 31st, 1901.

TREATMENT OF LATERAL CURVATURE.

J. B. D. T.—In the treatment of a case of lateral curvature of the spine so much depends on the pathological cause and on the duration of the deformity, on the age and condition of the patient, that it is unwise to follow any fixed routine as to whether one particular or any instrument is to be used. If an instrument is required it should be accurately designed by the surgeon for the particular patient and used under medical supervision. The best course would be for the medical man in charge of the case to communicate with some surgeon of experience in this class of case.

A CHEAP SANATORIUM.

DR. E. NEWLYN SMITH (Willesden) writes: In answer to the question of "Spes" respecting a sanatorium for a poor phthisical patient, allow me to state that the cheapest sanatorium I am acquainted with in this country is that under the direction of Miss Jane Walker, M.D., at Clare, in Suffolk. Male and female patients are taken; the fee is 15s. per week, and the patients are asked to do such light household work as they may be physically fit for. I sent a youth of 16 there some time ago; he returned greatly improved.

A SUBSTITUTE FOR SODIUM SALICYLATE.

H. W. ARMIT, M.R.C.S., etc. (Wembley) writes: In reply to "Salix Nigra," I wish to call his attention to a preparation, introduced by Beyer of Elberfeld, as a substitute for the usual salicylates—aspirin. It is an acetate of salicylic acid, and is given in gram doses (= 15 grs.) three, four, or more times a day. It has, according to several reliable observers, never produced any of the disadvantageous actions of sodium salicylate, does not possess the disagreeable taste of the latter, and yet has all its antirheumatic and antipyretic actions. The drug is in the English market, and is not expensive. I have no knowledge of its use as an antiseptic lotion, for example, for washing out the bladder, etc., but presume that salicylic acid having no detrimental side-effects in this capacity, would be preferable to newer remedies.

DR. HENRY WALDO (Bristol) advises "Salix Nigra" to see the Bristol *Medico-Chirurgical Journal* for June, 1901, p. 149.

## LETTERS, NOTES, Etc.

MALARIA: A SUGGESTION.

DR. ARTHUR TODD-WHITE (Leytonstone) writes: I do not know whether it is generally known that adding ammonia to one's morning bath is an almost infallible protection against gnat and mosquito bites. I have myself found it so. If I omit the ammonia I get bitten probably in a dozen places in a day; if I put it in I go safely day after day without a bite. Now we learn that malaria is conveyed by mosquitos it would be interesting to know whether this precaution would keep off these insects, and thus indirectly prove a very simple and convenient protection against malaria. Perhaps someone conveniently situated would try the experiment.

IMPERFORATE HYMEN.

DR. JAMES COPLAND (Gore, New Zealand), writes: The case reported by Dr. W. McDonald, Antigua, West Indies, in the BRITISH MEDICAL JOURNAL of April 13th, 1901, recalled to my remembrance a similar case I met with some years ago when connected with the Dunedin Hospital as one of the visiting staff. As such cases are comparatively rare I send you the following notes made at the time (February 2nd, 1887): "The patient was 17½ years of age, well grown and fully developed, but had never menstruated. The vagina was completely occluded by a thick, tough membrane, bulging, but yielding to the finger. Over the pubes there was a distinct swelling, which could be defined as the fundus of the uterus. When she was put under chloroform I made an incision about three-eighths of an inch in the centre of the hymen, and immediately there flowed out about a pint and a half of viscid, black, tar-like fluid, pressure being made all the time over the uterus. I enlarged the opening with my finger, washed out the vagina with weak carbolic water, and inserted a piece of cotton wool well soaked in glycerine and eucalyptus oil. A solid pad of tow was applied over the uterus with a bandage. Six hours afterwards I removed the cotton wool from the vagina, and washed out the latter with tincture of iodine and water. The patient made a favourable recovery."

LETTERS, COMMUNICATIONS, ETC., have been received from

**A** Dr. J. F. Anderson London; Mr. H. W. Armit, Wembley; Mr. A. R. Anderson, Nottingham; Aggrieved Member; Army M.D. retired; Antihumbug. **B** Mr. J. Bayley, Hendon; Dr. H. Bramwell, Cheltenham; Mr. J. C. Braine-Hartnell, Stroud; Mr. L. A. Bidwell, London; Mr. G. H. Broadbent, Manchester; Dr. J. O. Brookhouse, Nottingham; Dr. R. J. A. Berry, Edinburgh. **C** Mrs. Clamp, Bishop Stortford; J. A. Coutts, M.B., London; Mr. T. J. Carson, Oldham; Dr. R. Cook, Leiston; Capsuloid Co., Manager of, London; Dr. J. Copland, Gore, N.Z.; J. J. Clarke, M.B., London; Dr. W. Calwell, Belfast; Dr. E. J. Cave, Towyn. **D** Dr. W. B. Drummond, Edinburgh; S. Delépine, M.B., Eastbourne; Dr. L. Drage, Hatfield; Dr. T. M. Dolan, Halifax. **E** Mr. J. W. Evans, Carmarthen; Dr. A. W. Esler, Heathcote, Australia; Edinburgh; E. M. S.; Dr. G. H. Edington, Glasgow; "Examiner," Editor of the, Cheltenham. **F** Dr. J. L. Firth, Clifton. **G** Mr. C. H. Garland, London; Dr. J. Griffiths, Cambridge; Dr. J. G. Glover, London; P. G. Griffith, M.B., Hayward's Heath; Mr. T. W. H. Garstang, Altrincham; Sir L. Grant, Edinburgh; G. P. **H** Dr. W. H. Hewlett, Wivenhoe; Dr. W. W. Hall, London; Messrs. Hearn and Hearn, Buckingham; Miss M. Heathcote, London; Mr. T. L. Hall, Dilwyn; Dr. A. W. Harrison, Mossley; Mr. F. Hall, Bacup; Dr. A. Hillier, London; Dr. J. Hamilton, London. **I** I.M.S. **J** Mr. D. H. Jones, Clevedon; Dr. R. Jones, Woodford Bridge. **K** Mrs. Kerr, London; Dr. T. N. Kelynack, Manchester. **L** Mr. W. A. Loxton, Birmingham; Dr. H. A. Latimer, Swansea; Mr. H. K. Lewis, London; Dr. C. Lockyer, London. **M** Mr. R. Mears, Atherstone; Member of Imperial Medical Service; M.; Mr. A. H. Martin, Evesham; Mr. J. A. Martin, Bournemouth; Mr. R. Montgomery, Dublin; Dr. C. J. Macalister, Liverpool; Dr. D. McKenzie, Leytonstone; Motor. **N** N. P. D. **O** Omega; Dr. L. H. Ormsby, Dublin; One of Them. **P** Dr. W. H. Peake, Marden; Dr. G. S. Perkins, London; Mr. V. S. Partridge, London; Mr. R. H. Parry Glasgow; Mr. J. R. Polson, Worcester; Mr. T. S. Pigg, Cambridge; Mr. J. K. Pickford, Cleethorpes. **R** Mr. J. Robertson, Edinburgh; R. R.; Dr. J. Reid, Redhill; Mr. A. W. M. Robson, Leeds. **S** Dr. J. H. Sharpe, Bridgwater; Dr. A. P. Sherwood, Eastbourne; Dr. E. M. Sympson, Lincoln; Mr. J. Snowman, London; Dr. H. Snow, London; Mr. C. Siewers, London; Dr. E. N. Smith, London; Somerset; Southern Practitioner. **T** Mr. J. B. D. Thomas, Newcastle-on-Tyne; P. Turner, M.B., Nagercoil; Mr. W. J. Tivy, Clifton; Mr. A. T. Todd-White, Leytonstone; Mr. G. Thomson, Codnor. **U** Unattached Member. **V** Verax. **W** Messrs Wallach Brothers, London; Messrs. F. Williams and Co., London; Dr. H. Waldo, Clifton; Mr. T. Wilson, Wallsend-on-Tyne; C. S. Wallace, M.B., London. **Y** W. McG. Young, M.B., Leeds.

## BOOKS, Etc., RECEIVED.

By-laws as to House Drainage and Sanitary Fittings made by the London County Council. Annotated by G. J. G. Jensen, C.E. and Another. London: Sanitary Publishing Co. 1901. 3s. 6d.

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Topographie des weiblichen Ureters. Von Dr. J. Tandler und Dr. J. Halban. Wien und Leipzig: W. Braumüller. 1901. M.30.

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SIXTY-NINTH ANNUAL MEETING

OF THE

# British Medical Association.

*Held at Cheltenham, July 30th, 31st, August 1st, and 2nd, 1901.*

PROCEEDINGS OF SECTIONS.

## SECTION OF STATE MEDICINE.

Shirley Murphy, M.R.C.S., President.

### A DISCUSSION ON ENTERIC FEVER IN ITS PUBLIC HEALTH ASPECTS.

I.—A. C. Houston, M.B., D.Sc.

#### ENTERIC FEVER: ITS NATURAL HISTORY, MODES OF DISSEMINATION, AND PROPHYLAXIS.

In opening this important discussion, I am forcibly struck by three things:

1. That notwithstanding the progress of science and the great efficiency of the public health service, we find ourselves at the beginning of a new century unable to stamp out a disease which is nevertheless still classed as a preventable one. All we can say is that at the present time the mortality from it is less than it was some years ago.

2. That the knowledge, skill, and resourcefulness of the members of the Army Medical Service and their high devotion to duty have failed to prevent our troops in South Africa from suffering from enteric fever to a most deplorable extent.

3. That during the last few years some notable discoveries have been made in connection with the bacteriology of enteric fever, and fresh light has been thrown on the modes of dissemination of the disease.

A.—Natural History and Modes of Dissemination.

Over fifty years have passed since Sir William Jenner showed that typhoid fever and typhus fever were separate diseases, and twenty since Eberth discovered the micro-organism causing the disease. Since then many notable additions to our knowledge have been made, some of which I now propose to discuss.

*The "Agglutination Phenomenon."*

One of the most remarkable bacteriological discoveries of recent times is the "agglutination phenomenon" or "clumping reaction," associated chiefly with the names of Widal, Gruber, Durham, Bordet, and Grünbaum. As you are well aware, the blood of an enteric fever patient when mixed with an emulsion of living typhoid bacilli causes a specific reaction to take place, even when diluted 20, 100, or more times. This shows itself in an embarrassment of motility followed by a clumping together of the bacilli, at first into masses of small size, later into larger and still larger aggregations of motionless microbes. The importance of this discovery, not only in the diagnosis of enteric fever, but in other directions, is really very great. I may remind you that Dr. Davies made practical use of this test in tracing the source of specific contamination of a milk supply which gave rise to a severe epidemic of enteric fever at Bristol. While we may test the blood of a suspected enteric patient with B. typhosus as a valuable aid to diagnosis, we may also use the blood of a known case of typhoid fever or the blood of a typhoid immunised animal to discover the identity of a microbe suspected of being the typhoid bacillus. Speaking in general terms, no microbe other than B. typhosus yields a positive result under the above conditions of experiment. Nevertheless, there are marked exceptions to this rule. It has been shown by Durham that the serum of typhoid fever patients may react strongly to Gaertner's bacillus (B. enteritidis), owing to the presence in the blood of the agglutinins of B. enteritidis as well as of those of B. typhosus.[1] And Lorrain Smith isolated coli-like microbes from the implicated Belfast water supply which "clumped" strongly with the blood of enteric fever patients believed to have contracted the disease through drinking the water.[2]

My own experience has been that nearly all strains of B. coli do not respond to the "agglutination phenomenon," either when tested with human typhoid blood serum or the serum of a typhoid-immunised animal. But I have isolated a few coli-like microbes from water which were certainly not B. typhosus, and could not be classed as B. enteritidis, yet which "clumped" in marked fashion with one or other or both sera.

*Differentiation of B. Coli and B. Typhosus.*

Within recent years our means of differentiating B. typhosus from B. coli have been greatly extended and improved. We now know that separating Eberth's B. typhosus and Escherich's B. coli communis there are numerous intermediate forms which seem indeed to link the two microbes together in an unbroken chain. Nevertheless it appears to me most unwise to consider micro-organisms on one side of the middle line as allies of B. coli and on the other as varieties of B. typhosus. All coli-like microbes which can in any way be distinguished from B. typhosus should be considered varieties of B. coli, notwithstanding the fact of their seeming much greater resemblance to B. typhosus. We know, with an approach to certainty nearly if not quite absolute, that the typhoid bacillus is the cause of enteric fever; as regards these other microbes we have no such knowledge at our disposal.

The chief tests now used in the separation of B. coli and B. typhosus are as follows:

| | B. coli. | B. typhosus. |
|---|---|---|
| Morphology ... | Usually the rods are so short as to appear hardly longer than broad, but every variation seems to exist up to microbes almost, if not quite, indistinguishable from B. typhosus | Long thin rods, but different races of typhoid seem to vary somewhat in this particular. |
| Motility ... ... | Usually considered only feebly motile, but many varieties show very active spontaneous movement | Actively motile. |
| Flagella ... ... | Usually very few but some coli-like microbes possess 5, 6, 8, or more flagella. Stain as a rule with difficulty, apt to be short | Numerous, about 10, stain easily, long and wavy. |
| Potato ... ... | The growth is usually fawn or brown-coloured and luxuriant, but some coli-like microbes give a transparent growth | Transparent, colourless growth. |
| Gelatine "shake" cultures | Usually abundant "gas" in 24 hours. Some coli-like microbes, however, give no gas | No "gas" formation. |
| Proskauer and Capaldi media (I and II)* | Medium I. Positive both as regards growth and acidity. Medium II. Positive as regards growth, but no acidity. Yet it is probable that varieties of B. coli exist which may yield anomalous results | Medium I. Little or no growth. Medium II. Positive both as regards growth and acidity. |
| Indol in broth cultures | Positive, but many strains of B. coli freshly isolated from sewage yield a negative result | Negative result. |
| Litmus milk cultures | Strong acid and solid clot, but many coli-like microbes do not clot milk and produce only feeble acidity. Others again produce alkali | Slight acid, no clot. |
| Neutral-red tinted media | Greenish-yellow fluorescence, but some varieties of B. coli fail in this respect | Red colour remains unaltered. |
| Serum test ... | Negative result, nevertheless some varieties of B. coli yield a well-marked positive result | Positive result. |
| Pfeiffer's test ... | The serum of a typhoid immunised animal does not protect against a lethal dose | The serum of a typhoid immunised animal does protect against a lethal dose. |
| Gelatine, agar and other media | The growth tends to be more rapid and luxuriant than B. typhosus | The growth tends to be less rapid and luxuriant, but between a colony of B. coli growing somewhat "feebly" and a colony of B. typhosus growing somewhat "strongly" there is not much to choose. |

* Horton-Smith has laid much stress on the value of this test.

[1] Durham, *Lancet*, January 15th, 1898, p. 154.

[2] Lorrain Smith, British Medical Journal, January 28th, 1899.

Much credit belongs to Dr. Gordon for his study of B. coli and its varieties.[3] He, as well as Petruchsky, Gaertner, and others, showed that coli-like microbes exist which resemble B. typhosus most closely. In the past, some of these micro-organisms would doubtless have been classed as the enteric fever bacillus. Indeed, all cases of isolation of the supposed typhoid microbe at a date antecedent to the elaboration of modern methods of research, and the discovery of the serum test must be looked upon with some measure of doubt.

By using the tests (Table, p. 349) we can readily differentiate microbes from B. typhosus, some of which in the past would almost certainly have been confused with the bacillus of enteric fever.

Some years ago I isolated from Thames mud four micro-organisms (A., B., C., D.), which resembled B. typhosus in a number of respects. They were somewhat longer than B. coli, and possessed more flagella, gave no gas in gelatine "shake" cultures, no acidity, and no clot in milk; two of them (A. and C.) yielded traces of indol, but the other two (B. and D.) did not do so. One (D.) gave a faint yellow growth on potato, the others (A., B., C.) showed no coloration. Nevertheless, when tested in Proskauer and Capaldi's media they behaved like B. coli, and they did not respond to the agglutination test. Since then I have isolated microbes from water which bore a close resemblance to B. coli, and yet they "clumped" in marked fashion when tested with the blood of a typhoid immunised animal. If these micro-organisms had been tested by the serum test alone they would have been classed as B. typhosus, and a great error committed. Horton-Smith, in his admirable lectures on typhoid fever,[4] lays much stress on this point, namely, the fallacy of considering an unknown bacillus as B. typhosus, simply because it responds to the agglutination phenomenon, without seeing whether it answers to the other tests for the typhoid bacillus.

It will thus be seen that we may have microbes resembling B. typhosus, but failing as regards the serum test and others resembling B. coli but responding to the agglutination phenomenon.

*Isolation of B. Typhosus.*

While our means of distinguishing B. typhosus from B. coli and its allies have made remarkable progress, it cannot be said that much progress has been made in the method of isolating B. typhosus from sewage and water supply. But McConkey[5] and others have done much useful work in this direction, and it is to be hoped that success may eventually crown their efforts. Since the introduction of the serum test I am not aware that B. typhosus has been isolated from water in this country. But abroad they have been more fortunate. Were this not the case we might almost be tempted to conjecture that as our knowledge of B. typhosus is gained by a study of the microbe during or after its parasitic stage of existence, we may be rejecting microbes in our examination of polluted water which do not greatly resemble the typhoid bacillus, but which can nevertheless give rise to enteric fever. In brief, that B. typhosus existing saprophytically may differ in its morphological and biological character from B. typhosus after it has gained a foothold in the human organism. But the races of undoubted B. typhosus which have been recently isolated from polluted water causing typhoid fever do not seem to have differed morphologically or biologically from B. typhosus as derived from the spleen of a typhoid patient.

Some bacteriologists still believe that B. coli is concerned in the propagation of enteric fever, and if we dared to accept such a view the endemic and epidemic prevalence of the disease would be easily explained. It must be admitted that in those cases where the contaminating material has been sewage gaining access in minimal amount to a water supply, only an infinitesimal fraction of which could possibly have contained the virus of enteric fever, it is difficult to understand the severity and widespread nature of the epidemics which have arisen more than once in this manner. Of course we may assume that some individuals are exceptionally prone to contract the disease or that the virus of enteric fever is habitually or occasionally possessed of morbific quality in conspicuous degree. Nevertheless, it is beyond controversy that some water epidemics have arisen from a dose of poison so excessively minute in itself and so enormously diluted as to appear out of all proportion to the number of persons attacked. This seeming lack of proportion between the amount of morbific pollution and the severity of the resulting epidemic has not, I think, been sufficiently explained. But the study of typhoid bacilluria by Horton Smith, to which allusion will presently be made, throws much light on the subject.

If under some unknown conditions B. coli could acquire specialised properties, the ability of a small amount of contaminating material to cause a widespread lethal effect would be easily explained because this microbe is constantly present in sewage in enormous numbers (100,000 per c.cm.). But all our available knowledge points in the other direction—namely, that microbes (at all events, when cultivated in artificial media) may lose some of their original properties, but can hardly, if at all, acquire new ones, and we know that water derived from varied sources, and unquestionably polluted with excremental matters, has been drunk with impunity for long periods in the absence of contaminating substances of specific sort.

[3] *Journal of Pathology and Bacteriology*, June, 1897.
[4] *Lectures on Typhoid Fever* (Goulstonian Lectures). Published by J. and A. Churchill, London. 1900.
[5] *Thompson-Yates Laboratory Reports.*

Rejecting B. coli (in general) as a causal agent in the propagation of enteric fever it is still open to us to inquire whether particular races of coli-like microbes, particularly those derived from the intestine of a typhoid patient, may not possess specialised properties and infectious qualities. This is clearly the view of Lorrain Smith, who isolated strains of B. coli from the spleen of typhoid patients and from the implicated Belfast water supply, which responded in marked fashion to the agglutination phenomenon when tested with the blood of the patients supposed to have contracted the disease through drinking the water. We may regard microbes of this nature when isolated from a suspected water supply as possessed of special significance possibly even as going far to prove the concomitant presence of the morbific virus of enteric fever, but to consider them agents in the propagation of the disease seems to me to be an attractive hypothesis unsupported by evidence of a convincing kind.

At the last Congress of Hygiene and Demography in Paris[6] an important discussion was held on the bacteriological examination of water for the typhoid bacillus.

M. Fodor, while advocating the importance of not abandoning the search for the typhoid bacillus in drinking water, admitted that the difficulties were of an almost insuperable character. In one case he transplanted 1,600 colonies, 5 of which proved to be B. typhosus (320 to 1). M. Dunbar described how he looked in vain for the typhoid bacillus in the water of a certain well round which cases of fever had broken out. But he isolated B. typhosus from another well surrounded by a seemingly healthy population. A week after his discovery 20 cases of enteric fever occurred among the people using this well water. Widal, Gruber, Vaillard, and Loeffler all testified to the utility of examining water for B. typhosus, although acknowledging that with the means of investigation at present at our disposal its isolation was a matter of extreme difficulty. Loeffler was of opinion that in very pure water at a low temperature B. typhosus only lived for twenty-four to forty-eight hours, and never for more than fifteen days in a natural water, but that in sewage-contaminated water the bacillus might even multiply and persist for a considerable period. M. Vaillard protested against accepting laboratory experiments as an absolute indication of what occurred in Nature, and cited the instance of Dijon, where, three months after the end of the epidemic, he was able to isolate the typhoid bacillus from the water, which was of excellent quality from a chemical point of view. In his view bacilli closely resembling B. typhosus, although failing to give a positive result with the serum test, might possibly be in reality typhoid bacilli altered by changes in their environment.

The two chief reasons why B. typhosus is so difficult of demonstration in an implicated water supply are that the water as a rule is not examined until two to three weeks after specific pollution has ceased, and that in nearly every case accompanying the typhoid bacillus, and in vastly greater abundance, are microbes of the coli tribe, which on preliminary study are practically indistinguishable from B. typhosus.

*Water, Milk, and Shellfish in relation to the Dissemination of Enteric Fever.*

That water plays a most important *rôle* in the dissemination of typhoid fever is familiar to every one. For example, that the Caterham, Middlesbrough and Tees Valley, and Worthing outbreaks owed their origin to specifically polluted water supply seems beyond controversy. Milk, again, beyond question has given rise to numerous epidemics of enteric fever. It has been suggested that enteric fever, as well as scarlet fever and diphtheria, may be conveyed in milk through a diseased condition of the cow. A belief in this view would doubtless help to explain many puzzling features connected with the study of some epidemics of enteric fever. But it seems unwise to place too much faith in suppositions unsupported by evidence of a convincing kind. While water and milk have for long been recognised as the two agents specially concerned in the dissemination of enteric fever, there are other factors to be considered, some at least of which may give rise to widespread epidemics as well as to isolated cases of the disease. Of late years it has come to our knowledge that shellfish may be the means of spreading enteric fever. Professor Conn[7] first drew prominent attention to the matter in 1894, and Sir William Broadbent a few months later, and since then much useful work has been carried out by a number of investigators (Klein, Cartwright Wood, Boyce, Herdmann, and others.) It needs to be explained, however, that sanitarians at a much earlier date had conceived the possibility or probability of shellfish being concerned in the propagation of disease, and in 1893 the Local Government Board were convinced that the part played by shellfish in the dissemination

[6] Tenth International Congress of Hygiene and Demography (BRITISH MEDICAL JOURNAL, October 26th, 1900, report by the JOURNAL'S special correspondent in Paris).
[7] *New York Medical Record*, 1894.

of cholera was probably a real and important one. Moreover, Dr. Bruce Low had drawn the attention of the Board to the following facts—namely, that a watchman set to guard certain oyster beds at Southend from the thieving proclivities of East-End trippers was rewarded both in 1894 and 1895 with a batch of oysters. These he distributed among his friends with serious results as regards enteric fever on each occasion. It needs to be added that the oyster beds bore no distant relation to sewage pollution. Dr. Timbrell Bulstrode made a special and elaborate study of the whole subject on behalf of the Local Government Board, and Dr. Klein carried out a large number of laboratory investigations bearing on the vitality of the typhoid bacillus in sea water. Dr. Klein concluded that B. typhosus may persist in sea water for two or three weeks, and in the interior of living oysters placed in sea water artificially polluted with B. typhosus for eighteen days. In one instance he succeeded in isolating the typhoid bacillus from the body and liquor of an oyster derived from an especially suspicious source. Dr. Wood showed that the typhoid bacillus could persist in sea water for a considerable period, and inside artificially infected oysters for eighteen days.[8] There can be no question then that infected oysters may propagate typhoid fever, and the chief source of their contamination is to be sought for in the sewage-polluted beds where they are grown and fattened, although, of course, subsequent to their collection, they may also be brought into relation with polluting matters. That the danger is not a constant one is due to the fact that although oysters are apt at one time or another to be brought into sustained relation with objectionable matters, the contamination is happily but seldom of specific sort.

*Soil in Relation to Typhoid Fever.*

Soil in its relation to typhoid fever has for long attracted the attention of numerous observers. Dr. Martin has contributed much useful information on the subject in his reports to the Local Government Board. He found that B. typhosus remained alive for long periods in the case of sterilised cultivated soils, but that sterilised virgin soils were inimical to the growth of the typhoid bacillus. In his earlier experiments with unsterilised soils he obtained widely different results, the B. typhosus disappearing within twenty-four hours after its introduction. By varying his experiments as regards temperature and moisture he succeeded in isolating B. typhosus from the artificially contaminated soils up to a maximum of 12 days.

So far as it is expedient to compare the cholera vibrio with B. typhosus I obtained somewhat comparable results. Thus I found that Koch's vibrio very rapidly decreased in numbers when sown broadcast on soil in the open. There are two reasons, in my opinion, why B. typhosus cannot be expected to thrive in the surface layers of soil. The first is that in my examination of soil collected from varied sources B. coli (a more hardy germ than B. typhosus) was not found to be by any means habitually present. Indeed other than in cases of recent animal pollution it was apt to be absent or present in sparse proportion only. Considering the wide diffusion of excremental matters, and that many of the soils must almost necessarily at one time or another have been exposed to pollution of animal sort, these results point, in my judgment, to surface soil being unfavourable to the growth and vitality of non-sporing microbes of intestinal origin. Secondly, it was found that the number of spores of aërobic bacteria in soils is enormous (both actually and relatively to the total bacterial flora). This again seems to me to indicate that the surface layers of soil must be frequently exposed to physical conditions inimical to microbial life. But it may well be the case that in the deeper layers of soil the conditions may be much more favourable to the continued existence of the enteric fever bacillus. It is only right to add that in Dr. Robertson's experiments at Sheffield very different results were obtained. Dr. Robertson came to the conclusion not only that B. typhosus could persist for long periods in certain soils, but that it could grow to the surface when planted at a depth of 18 inches.

It is advisable to speak with great caution on this matter in view of the puzzling features connected with the endemic and epidemic prevalence in undue amount of enteric fever in certain localities both in this country and abroad. No better example could be cited than Chichester, and when so experienced and careful an observer as Dr. Theodore Thomson comes to the provisional conclusion that the soil of that place may possibly play a part "in fostering the vitality and morbific power of the infective material of enteric fever," it is well to preserve an open mind on the question.

*Flood Water in Relation to Enteric Fever.*

Many sanitarians view flood water with great suspicion in relation to the spread of enteric fever. This view I believe to be held somewhat strongly by Mr. Shirley Murphy. In the case of filtered water it is to be feared that not uncommonly filtration is apt to be inefficient during storms. It is specially during this period that the virus of enteric fever may pass the barrier of the filter beds.

For a number of years I have investigated the bacteriology of soils and the "washings" of soil. The results obtained have convinced me that "flood water" gaining access to a water supply even in minimal quantity may be readily appreciated by bacteriological (but not by the ordinary chemical) methods. How far the presence of flood water is to be regarded as potentially or actually dangerous may also be determined by observation of the kind of bacteria present. I have observed more than once that certain "soil microbes" absent from a filtered water under ordinary conditions may nevertheless pass through the filter beds during floods. These are matters which can only be demonstrated by the trained bacteriologist, and it is greatly to be regretted that the routine examination of our public water supplies so seldom rests in their hands.[9]

*Sewer Gas, Ground Air and Ground Water.*

At one time the foul emanations from sewer and cesspools were universally considered a fertile source of typhoid fever. But the important researches of Andrewes and Lawes showed conclusively that the microbes in sewer air differ essentially from those found in sewage and indeed resemble the bacteria present in the atmosphere. At the present time sanitarians rather take the view that the gases from sewers and cesspools, sewage works and sewage fields, polluted rivers and collections of filth of various kinds are not usually bacterially objectionable but that they tend to depress the vitality of weakly persons and render them prone to "catch" disease.

Indeed, if Alessi's experiments be accepted in their entirety and the results of artificially contrived experiments upon the lower animals be considered applicable to the conditions surrounding human beings the effect of sewer gas in predisposing individuals to contract disease is noteworthy. Alessi found that rats, guinea-pigs and rabbits exposed to sewer emanations grew thin, and nearly all succumbed to a small dose of a culture of B. typhosus of feeble virulence. Other animals of similar sort but kept under normal conditions nearly all recovered from the same dose of B. typhosus. Nor must it be forgotten that articles of food and drink readily absorb these gases, and may in consequence acquire injurious properties apart altogether from the question of specific infection.

As regards subsoil water and subsoil air the case is somewhat different. Polluted subsoil water, by its alternate rise and fall must leave objectionable bacteria in the interstices of the soil. These may become detached in the dried condition and contaminate the subsoil air. The subsoil air may be drawn into houses by air currents and carry with it the germs of disease. This hypothesis was freely accepted in the past and still has many advocates, but fuller bacteriological and epidemiological knowledge has rendered it much less attractive than formerly. It may be suspected that many of the cases of enteric fever, traced to inhalation of impure ground air, may have been due to ingesting specifically contaminated articles, such as water, milk, etc.

*Sewage in relation to Enteric Fever.*

That water plays a most important *rôle* in the dissemination of typhoid fever will be denied by none, and that sewage is the most common and most dangerous source of its pollution is beyond controversy. Since the actual demonstration of the typhoid bacillus in specifically polluted sewage and water is extremely difficult, it is most important that we should ascertain the kind (and relative abundance) of microbes which are to be thought of as characteristic of sewage, and absent (or relatively so) from pure waters.

In pure waters I have failed to find spores of B. enteritidis sporogenes (Klein) in as much as 100 to 500 c.cm. B. coli is either altogether absent or present only in insignificant proportion in waters free from suspicion of animal pollution: and I have failed to find streptococci in waters except in cases of recent and objectionable contamination. Yet raw sewage harbours these objectionable microbes in great abundance. The number of spores of B. enteritidis sporogenes is usually at least 100 to 1,000, the number of B. coli (or closely allied forms) more than 100,000, and the number of streptococci rarely less than 1,000 per c.cm.

It is evident from these figures that the smallest trace of sewage gaining access to a water supply could be readily appreciated by the presence of these objectionable microbes. If we desire to eliminate as far as possible the danger arising from drinking impure water, we must see that our water supplies are free from micro-organisms of the above sort.

*Vitality of B. Typhosus in Sewage and Water, Dust, Flies, etc., in Relation to Contagion.*

Brief allusion has been made to subsoil water and subsoil

[8] British Medical Journal, 1896.

[9] Reports of Medical Officer, Local Government Board, 1897-98-99, 1900.

air, and also to water supply. But it needs to be added that authorities differ very much as to the length of time B. typhosus can remain alive in waters of different sorts, in sewage, and in sewage-polluted waters. The experiments of Andrewes and Lawes indicate that sewage is not a favourable medium for the growth and vitality of B. typhosus.[10] Klein found that the typhoid bacillus showed much greater vitality in "nitrate sewage" than in "pure sewage."[11] Most Continental observers are of opinion that the typhoid bacillus loses its vitality somewhat rapidly in unsterilised waters of potable sort; but Klein's results indicate that the distinction has been overlooked between a great decrease in number (relative death) and total disappearance (absolute death). By paying attention to this circumstance he was able to show that some typhoid bacilli persisted in unsterilised water long after the majority had perished.

But it is to be feared that at best laboratory experiments form an unreliable index of what may occur in Nature. The endemic prevalence of enteric fever in some localities with occasional explosive outbreaks of the disease without any apparent reason, which cannot be traced to any imported cause, are extremely difficult of comprehension, unless we assume that B. typhosus may exist saprophytically in soil—superficial or deep—or in ground water. Nevertheless, there are several circumstances which help to explain the persistence of typhoid fever in our midst, and to connect one case with another, and to link together successive epidemics although separated by a wide interval of time. One of them is that some individuals undoubtedly contract the disease in a form so mild as to escape recognition, and another is that the typhoid bacillus can remain alive in various situations in the human body for months and even years. This latter point has been discussed in the ablest fashion by Dr. Horton-Smith in his lectures on typhoid fever, and I cannot do better than quote his concluding words: "Truly, no longer can we say with Dr. Budd, that 'by destroying the infectious power of the intestinal discharges the disease may be finally extinguished.' So far, indeed, from the stools being the only agents by means of which the disease is spread, they are but one of a series of agents. So far, too, from the patient ceasing to be a source of danger after his restoration to seeming health, he may carry about in himself the seeds of infection for months and even years."

Some authorities consider that B. typhosus can remain alive for months in the dried condition. It seems difficult to believe that a non-sporing bacillus of comparatively speaking delicate sort can remain dormant for long periods, neither multiplying nor dying, in the form of dust. But that excreta and particles of soil, and the "fluff" of soiled linen may, when the specific contamination is of comparatively recent sort, be brought into relation with articles of food or drink in the form of dust, and so spread contagion, will be denied by none.

How far flies and insects and vermin may convey contagion from one place to another is not known, but we may suspect that under certain circumstances the danger is a real one.

*Sewage Effluents a Source of Danger.*

At last year's meeting of the British Medical Association one of the subjects of discussion was: "Can Modern Systems of Sewage Treatment be depended upon to remove the B. typhosus and Allied Organisms?"

In opening the discussion, I dealt very fully with the question of bacteria-bed effluents in relation to the spread of disease.[12] My adverse conclusions were based on the result of the Barking and Crossness experiments, which showed among other things that:

B. coli and B. enteritidis sporogenes passed through the bacterial beds in practically undiminished numbers. Thus the effluents usually contained at least 100,000 B. coli (or closely allied forms) and 100 spores of B. enteritidis sporogenes per c.cm.

The effluents contained streptococci (presumably of intestinal origin) in abundance—usually at least 1,000 in 1 c.cm.

Proteus-like germs were seemingly as numerous in the effluents as in the crude sewage.

The subcutaneous injection of the effluents from the bacterial beds into guinea-pigs always produced a local reaction and usually death in from twenty-four to seventy-two hours, and the effluents seemed to be nearly if not quite as pathogenic as the raw sewage.

These results led me, while freely admitting the great advantages of the bacterial-bed systems from the chemical and practical points of view, to say that until positive evidence to the contrary was forthcoming, it would be wise to regard the effluents from bacterial beds as no more safe in their possible relation to disease than crude sewage.

Of my later experience I am unfortunately not privileged to speak.

[10] London County Council Reports.
[11] Report of the Medical Officer, Loc. Gov. Board, 1894-95.
[12] BRITISH MEDICAL JOURNAL, August 18th, 1900.

*Typhoid Bacilluria.*

In 1897 Dr. Horton-Smith drew attention to the presence of B. typhosus in the urine of enteric patients.[13] Since then he has carried out a laborious and highly useful investigation on the subject (Figs. 1, 2, 3, 4, 6). He concludes that

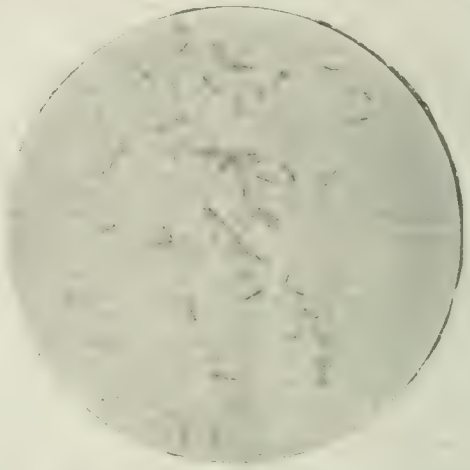


Fig. 1.—B. typhosus (verified by study on cultures) in the urine of a patient suffering from typhoid bacilluria. × 1000.

"in London it will probably be correct to say that at least 25 per cent. of all cases present this serious and dangerous condition.[14] When typhoid bacilli occur in the urine "they are nearly always in pure culture, and not uncommonly they are present in such extraordinary numbers that one cubic centimetre may contain as many as 500,000,000 micro-organisms." As a rule it is towards the end of the disease or during convalescence that this condition occurs. The duration of typhoid bacilluria varies, but it nearly always lasts for some considerable time. Dr. Horton-Smith cites a most extraordinary case recorded by

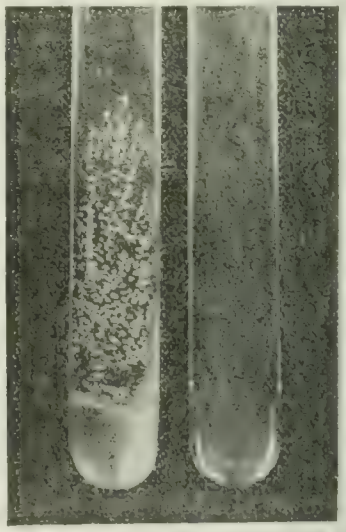


Fig. 2.—Oblique gelatine cultures inoculated with the urine of a patient suffering from typhoid bacilluria. The left tube shows the presence of many colonies of B. typhosus (before the administration of urotropine). The right tube is sterile (after the administration of urotropine).

Gwynn. A patient five years after an attack of typhoid fever was found to be suffering from cystitis, and the typhoid bacillus was obtained in pure culture from the urine. It is evident that Dr. Horton-Smith's results are of the highest

[13] *Medico-Chirurgical Transactions*, 1897.
[14] *Lectures on Typhoid Fever* (Goulstonian Lectures), published by J. and A. Churchill, London, 1900.

importance. They throw, indeed, a flood of light on the dissemination of the disease, and its persistence in our midst, and go far to explain the direct infection from one case to another so often observed in the houses of the poor. The successful treatment of enteric fever in the general wards of hospitals where cleanliness and order prevail must not in the

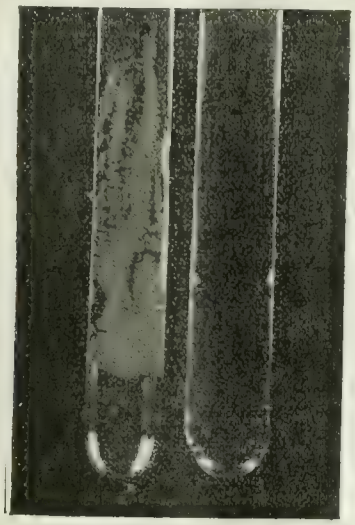


Fig. 3.—Same remarks as Fig. 2 but a different case.

future blind us to the fact that a case of typhoid fever may for months or even years be a manufactory for the production and distribution of the morbific virus of the disease.

This typhoid bacilluria, coupled with the now acknowledged fact that the typhoid bacillus may persist for long periods in various situations in the body, helps us to understand many puzzling features in the spread of the disease. It enables us also to comprehend why, when enteric fever has once got a footing in a locality, it tends to recur year after year with occasional spasmodic outbreaks of greater intensity. Further, it allows us to understand how in the past localised outbreaks of the disease have often seemed to arrive spontaneously. In investigating these cases, inquiries would have been made as regards illness and diarrhœa, but the possibility of a seemingly normal individual discharging typhoid bacilli

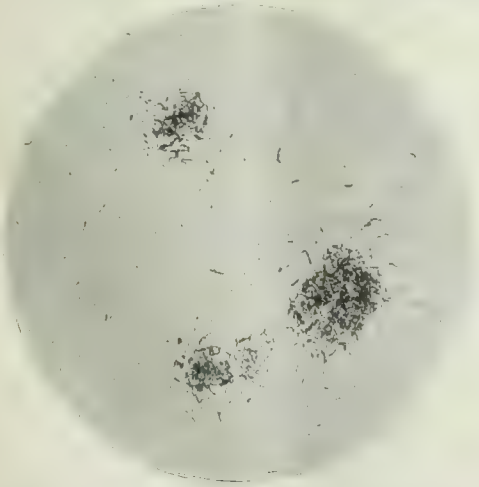


Fig. 4.—Typhoid bacilluria. A drop of the urine stained and dried, showing innumerable typhoid bacilli (verified by study in cultures) × 500.

n the urine in countless numbers would never be dreamt of. But, on the ther hand, it is difficult to understand why some other places, after eing visited by a severe epidemic of typhoid fever, may remain for long eriods afterwards almost free from the disease, notwithstanding that probably many of the inhabitants are carrying about within their bodies the living germs of the disease, and that ome of them are possibly discharging typhoid bacilli broadcast n their urine. That the epidemic has stricken all the susceptible people, and the morbific virus only awaits fresh soil to be again operative, is possibly a partial explanation, but by no means a wholly satisfactory one. Again, in these cases the cause of the original epidemic may have resulted from a chain of unfortunate circumstances not likely to be repeated, and the sanitary conditions of the place may have been of so favourable a character as to afford adequate protection to the inhabitants.

*Fried Fish and Infected Mangles.*

In January of this year Mr. Shirley Murphy presented to the Public Health Committee of the London County Council

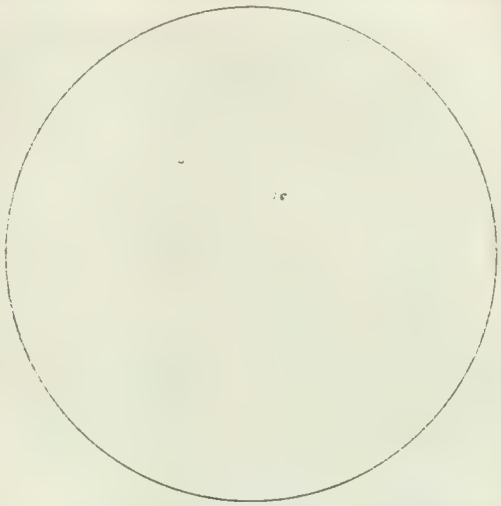


Fig. 5.—A drop of the urine (stained and dried) from the same patient (Fig. 4) after the administration of urotropine. No bacilli are seen, and cultures proved their absence. × 500.

a report by Dr. Hamer on certain localised prevalences of enteric fever in London in September, 1900. Dr. Hamer's report is a notable one in many respects: in the first place because an article of food (fried fish) not previously suspected of having causal concern with enteric fever is implicated; secondly, because his investigations were pursued in so thorough and exhaustive a manner as to carry great conviction; and, lastly, because Mr. Shirley Murphy, in a

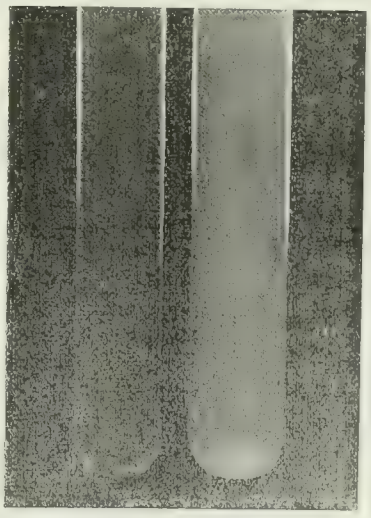


Fig. 6.—Typhoid bacilluria. The tube on the right is filled with the turbid urine before the administration of the drug. The tube on the left represents the clear urine passed after the administration of urotropine.

masterly introductory summary of the available evidence, throws the weight of his wide experience in favour of Dr. Hamer's conclusions.

There were three outbreaks of enteric fever known as the Southwark, Lambeth, and Kensal Town. The facts ascertained by Dr. Hamer pointed strongly to the conclusion that the Southwark outbreak was directly attributable to the con-

sumption of fried fish obtained from a particular vendor. As regards the Lambeth and Kensal Town outbreaks Dr. Hamer considered a similar explanation respectively probable and possible in the absence of any other adequate explanation, and in view of the fact that the Lambeth sufferers had largely purchased fish from a particular fried fish shop and the Kensal Town cases from a general fish shop.

Speaking now particularly of the Southwark outbreak, Dr. Hamer found that none of the agencies commonly associated with the cause of the disease seemed to be in any way implicated. In his inquiries as to food he elicited the fact that fried fish purchased from a particular shop seemed to have had a nearly universal attraction for the persons attacked by the disease. Further, that the distribution of affected houses showed a grouping about this shop as a centre, that the intensity of incidence of house attacks rapidly diminished at increasing distances from the shop, and that in several instances it was found, in particular families, that it was the fried-fish eaters who were attacked, to the exclusion of other persons not eating fried fish. These facts were sufficiently startling to allow of the provisional hypothesis being made that fried fish was the infective agent. But Dr. Hamer very wisely set himself the task not so much of proving as of attempting to disprove the truth of his tentative supposition. In this mood he asked himself the following pertinent questions:

1. Was the heat to which the fish was subjected in the process of frying sufficient to destroy the typhoid bacillus?

2. How was it possible for the fish to have been originally infected?

3. Was there any relation between the age incidence of the disease and the age incidence of the fish-eater?

4. Was the consumption of the fried fish so general among the inhabitants of the district as practically to necessitate that a number of persons selected for any other reason should also be fried fish-eaters?

Those who have read Dr. Hamer's report will not, I think, be likely to deny that he answers questions 3 and 4 in a completely satisfactory manner. As regards 2, the Southwark fried-fish vendor obtained his fish from Billingsgate and also direct from Grimsby, but for various reasons it was found to be impossible to trace for each day the source from which the consignments purchased came. Inquiries as to the existence of cases of illness, just before the time of the outbreak, among those living at the fish shop premises or employed in the business yielded negative results.

As regards 1, on mere *a priori* grounds the fried-fish hypothesis might have been dismissed from consideration as untenable in view of the heat to which the fish was subjected in the process of frying. But Dr. Hamer was mindful of the history of certain of the cholera cases which occurred in England in 1893, which seemed to have a close relation to the consumption of fried fish. In the absence of actual experiments, it could only be said that the contamination, if superficial, would almost certainly be destroyed, but if due to infection within the fish no safe conjecture could be made as regards sterilisation.

The thermal death point of B. typhosus is less than 60° C., so it must be admitted that before considering fried fish as a possible agent in the dissemination of enteric fever the evidence implicating it must needs be of the strongest kind. But the evidence adduced by Dr. Hamer in support of his fried-fish hypothesis cannot reasonably be regarded as other than of a most convincing and reliable kind. Were it open to us to believe that fish under certain unknown conditions was capable of so disturbing the alimentary system as to allow a bacillus normally present in the intestines to set up the disease known as enteric fever, the relation of fried fish to the Southwark outbreak would be clear and unmistakeable. We know, indeed, that virulent diplococcus pneumoniæ is commonly present in the saliva of healthy individuals and needs only some exciting cause to set up croupous pneumonia. But we have no reason to suspect that the typhoid bacillus may be commonly present in our bodies or that a microbe habitually present in our intestines may under certain conditions lose its harmless character and become endowed with specialised properties. Indeed, all our available evidence tends to show that a microbe may lose some of its original characters but can hardly, if at all, acquire new properties.

As regards the Lambeth outbreak it is only right to state that Dr. Priestley presented to his vestry on October 26th, 1900, a report showing that, in his judgment, the disease was spread by means of infected mangles. His report is of considerable interest because such a medium of infection has hitherto escaped recognition. The number of so-called secondary cases is sufficiently startling; in one instance 13 secondary cases are supposed to have arisen from one primary case. Dr. Priestley seems to assume too easily that because a mangle kept in an infected house is used to mangle the washing of neighbouring houses it must almost necessarily be the means of conveying contagion from one house to another. Thus he says that "four definitely-infected mangles have been traced ..... and from these houses have arisen, directly or indirectly, 26 cases." But what Dr. Priestley means by "definitely-infected mangles" is not stated. Looking into his report a little more closely, the following points are deserving of consideration:

Dr. Priestley shows that a high percentage of the persons attacked sent their clothes to four separate mangle houses, but he does not seem to show what proportion of any given population sent their clothes to be mangled and what proportion did not. Hence there is nothing in his report to show that there was greater incidence of disease upon those sending their clothes to be mangled than on persons who did not so send their clothes.

As regards Dr. Priestley's four groups (infected mangles) there is nothing to show how Group I or Group II became infected. In Group II F. G. lived in the house in which the mangle was situated, but she was not attacked sufficiently early to account for infection of the other cases Dr. Priestley associates with this mangle. Even accepting Groups III and IV the "infected-mangles hypothesis" does not seem to explain half the cases occurring in the outbreak.

## B.—Prophylaxis.

### *Preventive Inoculation with Wright's Vaccine.*

Antityphoid inoculations with vaccine material were first started in 1896. In India the results have been of an encouraging nature. Dr. Lane Notter thus sums them up. "Amongst 2,835 inoculated men there were 27 attacks of enteric fever with 5 deaths, and amongst 8,460 uninoculated men there were 213 cases of enteric fever and 23 deaths."[15] As regards South Africa it is advisable to wait until all the figures are available, but while some competent authorities have spoken very favourably of the results others equally competent have arrived at an opposite conclusion. But, however the results be interpreted, it cannot be expected that preventive inoculation has a great future before it in this country. Nevertheless, if the final verdict be favourable, individuals of susceptible age going to reside in localities where enteric fever is very prevalent may perhaps reasonably be advised to submit to inoculation. Again, during severe epidemics antityphoid inoculations should then possibly be encouraged. But it is chiefly in the case of persons going to reside abroad, and as regards our troops serving in India, South Africa, and other places where typhoid fever is very prevalent, that preventive inoculations would be most serviceable.

### *Urotropine and Typhoid Bacilluria.*

It has been clearly demonstrated by Richardson and Horton-Smith that urotropine is an almost specific remedy in cases of typhoid bacilluria (Figs. 2, 3, 4, 5, 6). Dr. Horton-Smith has strongly advocated its use throughout the whole course of the disease and for some weeks afterwards. When it is remembered that every fourth case may present this serious complication, that every drop of such urine may contain not only thousands, but even millions, of typhoid bacilli, and that soiling of the linen with urine is impossible to avoid, the extreme importance of the subject will be readily admitted. In nearly all cases urotropine may be given in 30-grain doses daily for months without any ill-effects, and without prejudice to other medicines and the usual treatment of the disease. It is true that in a few cases hæmaturia[16] and albuminuria[17] have been caused by its use, but on ceasing the administration of the drug these symptoms rapidly disappeared. Moreover, all such cases would be under medical observation and any ill-effect noted at once. Indeed, it appears that the hæmaturia and albuminuria are preceded by symptoms (discomfort and pai

[15] *Theory and Practice of Hygiene.*

[16] BRITISH MEDICAL JOURNAL, June 15th and 29th, Drs. Langdon Brown, Milligan, and Forbes.

[17] *Ibid*, June 29th, Dr. Griffith.

during micturition) which the patient will be the first to appreciate.

It needs to be remembered that direct spread of infection from the sick to the healthy is no idle myth, but a dangerous fact. Moreover, the potentialities for evil of a typhoid fever convalescent suffering from typhoid bacilluria are so great as to be almost inconceivable. On public health grounds I would urge in the strongest manner possible that this valuable remedy should be administered in all cases of enteric fever. A fresh impetus has been given to the matter by a recent article coming from so distinguished a physician as Dr. T. Clifford Allbutt.[18]

*Widal's Reaction in Relation to Early Diagnosis.*

As the value of this test in diagnosis is beyond dispute, it seems a great misfortune that medical men do not utilise it more often. The earlier the diagnosis the sooner is the patient removed to hospital, or, if treated at home, suitable precautions taken as regards cleanliness and disinfection, and the sooner is the cause of the disease sought for and, if discovered, remedied. It is clearly the duty of medical men to notify cases of enteric fever at as early a date as possible: it is equally certain that Widal's test may greatly help them in forming a diagnosis. If they persist in neglecting to avail themselves of the advantages of Widal's test in at all events doubtful cases, they are not doing their full duty either to their patients or the general public.

*Sterilisation of Drinking Water, Filtration, etc.*

Abroad, the sterilisation of water with chemical substances has been tried with some success even on the large scale. Sterilisation to the extent of destroying B. typhosus does not seem to be by any means an impracticable measure, but it may be doubted if complete sterilisation—destruction of spores as well as bacilli—can be carried out at a reasonable cost. Chlorine and chlorine compounds are strong disinfectants, and, after the sterilisation of the water has been effected, can be easily got rid of. Drs. Parkes and Rideal have suggested a chemical emergency method of sterilising water on a small scale which may prove useful in the future.

No one doubts that efficient sand filtration is a great safeguard, but there is no reliable evidence to show that it does more than greatly lessen the danger. In brief, the protection it affords is relative, not absolute. Filters on the small scale are usually quite untrustworthy, as has been conclusively demonstrated by a laborious series of investigations carried out by Sims Woodhead and Cartwright Wood. But Pasteur-Chamberland and, to a much less extent, Berkefeld filters may be relied on to afford protection from water-borne disease. This has recently been made the subject of a careful piece of work by Mr. W. H. Horrocks.[19]

*General Measures.*

In considering general measures for the prevention of enteric fever, I am forcibly struck by the fact that the discoveries of recent times have only confirmed the wisdom of the teaching of epidemiologists at a time when the science of bacteriology was unknown, or only in its infancy. This teaching was based on the careful consideration of gradually accumulated facts bearing on the conditions associated with the prevalence of epidemic disease. The observed facts pointed strongly to the danger of contamination of water and articles of food with excremental matters. In this connection let me quote from Sir Richard Thorne Thorne's introduction to the Local Government Board report on oyster culture in relation to disease. "Long before Koch's cholera vibrio, or Eberth's typhoid bacillus had been even heard of, the remarkable progress made in the prevention of cholera and of enteric fever in this country was the result of the recognition of the fact that water and food, amongst other things which had been subject to contamination by human excreta, served as channels for the communication of the specific contagia of those diseases to man."[20]

The general measures which have governed sanitarians in the past remain the same to-day. These are (1) to protect our water supplies from excremental pollution: (2) to secure that all articles of food are free from objectionable contamination; (3) to secure that our drains and sewers are kept in good order: and (4) to disinfect the stools and urine and soiled linen of enteric fever patients.

As regards (1), it is advisable to wait until the report of the Royal Commission on sewage disposal is published before pronouncing a decided opinion. But, as regards detection of dangerous pollution, progress must needs be unsatisfactory so long as judgment as to the purity of our water supplies is allowed to rest almost exclusively in the hands of the chemist and not of the skilled bacteriologist.

As regards (2) much progress has been made, but much still remains to be done, especially, perhaps, in connection with the sale of impure milk and of shellfish obtained from sewage-contaminated areas.

The sewerage system (3) of most of our towns, if not wholly satisfactory, is the outcome of an enlightened policy which has probably served to contribute in important degree to the reduction of enteric fever in this country.

As regards (4) it is frequently urged that sterilisation of the stools and urine is an impracticable measure. It may be so as regards complete sterilisation (destruction of spores as well as bacilli): it is certainly not the case as regards partial sterilisation (destruction of bacilli but not spores). Sterilisation to the extent of killing B. typhosus is a possible and practicable measure, and should always be carried out.

Recent discoveries have shown us how manifold are the channels of infection, and how prolonged and serious the capacity of enteric fever patients to disseminate the disease may be. If, as seems true, a considerable percentage of enteric fever cases can for weeks and months discharge in their urine typhoid bacilli in abundance, the outlook seems at first sight a discouraging one. But recognition of the dangerous affection known as typhoid bacilluria, and of the value of urotropine as a remedy, may have a most important influence in the future in controlling the spread of the disease: and, in general, the greater our knowledge of the channels of infection and modes of dissemination of the disease, the greater becomes the probability of successful preventive treatment.

[The photomicrographs accompanying this paper are taken from Dr. Horton-Smith's lectures on typhoid fever (Goulstonian Lectures), published by J. and A. Churchill, London, 1900. They are reproduced here by his kind permission.]

[18] *Ibid.*, July 13th, 1901, Urine in Convalescence from Typhoid Fever.

[19] British Medical Journal, June 15th, 1901.

[20] Report of the Medical Officer, Local Government Board, 1894-95. Supplement on Oyster Culture in relation to Disease.

II.—F. A. Dixey, M.A., M.D.,

Fellow of Wadham College, Oxford.

## VITAL STATISTICS OF ENTERIC FEVER.

When, on the suggestion of the President, I was invited to read a paper before the Section of State Medicine on the Statistics of Enteric Fever, I gladly undertook to do my best. I was, however, not free from doubt as to whether I could throw any new light on a subject which, in most of its relations, is already so well known, and which, as I need hardly say, has received ample treatment in the series of reports issued annually by Mr. Shirley Murphy as medical officer of health to the London County Council. Still, though the bulk of the harvest has already been carried, there may remain an ear or two to reward the search of a patient gleaner: and I am not without hope that some of the more striking facts relating to the prevalence of enteric fever may at least be presented in a simple and readily-appreciable form by the tables and diagrams here submitted.

In dealing with enteric fever, we are without many of the special points that lend interest to the study of other zymotic diseases. In the case of influenza, we have all the excitement that belongs to a malady occurring in great epidemic waves: we have also the important question of its relation to other diseases, whether as cause or consequence. Diphtheria, too, gives us something of the epidemic interest, as in the outbreak of eight or nine years ago in London, which was sufficiently serious to attract the attention of the general public. Besides this, there is the problem of diagnosis, the relation of diphtheria to "croup," and the burning question of school infection, involving the chance of friction with educational authorities.

Turning to enteric fever, we find no counterpart to any of these things. The number of fatal cases, though fluctuating,

is seldom very large in proportion to the population or to other causes: exceptional outbreaks, when they occur, are usually localised; the relation with other certified causes of death is remote: there is no "holiday drop" in the curve, and no temptation to abuse the legislation of 1870. Moreover, there has as yet been no general revolution in the treatment of the disease, such as that which imparts so much interest to the case-mortality of diphtheria during the last six years or so. Nevertheless, it will not be denied that enteric fever possesses great claims of its own to attention. It is a disease the spread of which is, or should be, largely under human control. It is by their power to check the dissemination of enteric, as much as by anything else, that modern ideas of sanitation will be tested: and if there is anything in those ideas, it is here that they will show their value. I think everyone will agree that we ought to aim at nothing less than the total suppression of typhoid in this country: and though we are at present far enough from that consummation, we know that much progress has been made in the past, and there are grounds for believing that, on the whole, that progress still continues.

An illustration of this is afforded by the figures given in Table I, which contains the number of deaths from enteric fever in London for the years 1869 to 1900 inclusive:

TABLE I.—*London, 1869—1900. Yearly Deaths from Enteric Fever.**

| Year. | Number of Deaths. | Year. | Number of Deaths. | Year. | Number of Deaths. |
|---|---|---|---|---|---|
| 1869 | 1,069 | 1880 | 702 | 1891 | 557 |
| 1870 | 976 | 1881 | 971 | 1892 | 434 |
| 1871 | 871 | 1882 | 975 | 1893 | 690 |
| 1872 | 807 | 1883 | 963 | 1894 | 630 |
| 1873 | 908 | 1884 | 925 | 1895 | 629 |
| 1874 | 879 | 1885 | 597 | 1896 | 574 |
| 1875 | 817 | 1886 | 618 | 1897 | 579 |
| 1876 | 769 | 1887 | 612 | 1898 | 587 |
| 1877 | 901 | 1888 | 694 | 1899 | 800 |
| 1878 | 1,033 | 1889 | 538 | 1900 | 756 |
| 1879 | 849 | 1890 | 604 | | |

* From the Registrar-General's Annual Report and Weekly Returns.

There are many reasons why the data relating to London should be chosen for purposes of this kind. In London we have a very large population living under practically identical climatic conditions. For London, moreover, we have the advantage of being able to consult the Registrar-General's Weekly Returns, which enable us to bring our results, within certain limitations, very nearly up to date; and which also put it in our power to investigate the seasonal incidence of disease at various periods of life, or on the population as a whole. Moreover, the size of the community is quite sufficient, in the case of a disease like enteric fever, to obviate all danger from the "fallacy of small numbers."

*The General Course of Enteric Fever in London, 1869-1901.*

The number of deaths certified as due to enteric fever in 1869, the first year in which it was returned as a separate cause of death, was 1,069, a total never since reached. The next three years showed a steady fall, but from 1872 to 1884 the actual figures had, on the whole, an upward tendency. The highest point reached (1,033) was in the year 1878, and was followed two years later by the minimum (702) in 1880. But for the last four years of this period the numbers remained pretty steadily near an average of 960. In 1885 there came a drop in fatal enteric of no less than 35 per cent., which marked the beginning of a period of low comparative fatality, lasting until 1898. During this series of fourteen years the greatest fluctuations were in 1888 and 1893 (high years), and 1892, which latter year showed the absolute minimum of 434. In 1899 came a sudden leap, the mortality for that year being the highest since 1884. Last year brought a slight diminution in the number of fatal cases, but it is evident that the outbreak of 1899 had not entirely spent its force. In the current year, 1901, the numbers at present show a considerable improvement, which it is to be hoped may continue; but we are only now reaching the critical period of the season, and it is as yet too early to speak with confidence.

I need hardly point out that I have so far only been dealing with the actual number of deaths, without reference to the increase of population, which amounts, of course, to a rise of something like 40 per cent. between the beginning and end of our period. When the above figures are expressed as a rate, the general fall in fatal enteric naturally becomes more marked, and the high figures of the last decade become less comparable with those of the Seventies and early Eighties. In illustration of this I would draw attention to the diagram (exhibited), in which the annual number of deaths since 1869, and also the annual death-rate for the same period, are represented by two curves drawn to the same zero. By way of putting the facts in another shape, I have also plotted out both curves on the same scale in parallel columns, making the starting point of the two coincide, so that the gradually increasing "discount," as we may call it, of the total fatality, is marked by the lengthening interval between the uppermost limits of the light and dark shading. These diagrams, which are really no more than another setting of those to be found in Mr. Shirley Murphy's reports, will, at any rate, serve to recall the recorded facts with reference to the general course of the disease since its separate recognition.

*The Seasonal Relations of Enteric Fever.*

It is, of course, well known that enteric fever presents a very distinct seasonal curve, being at its lowest in London about June, rising above the mean in August, reaching its

TABLE II.—*London, 1896-1901. Weekly Deaths from Enteric Fever, with corrected averages for two periods of ten years.**

| | Week. | 1896, Deaths | Corrected Average, 1886-1895. | 1897, Deaths | 1898, Deaths | 1899, Deaths | 1900, Deaths | Corrected Average, 1890-1899. | 1901, Deaths |
|---|---|---|---|---|---|---|---|---|---|
| Jan. | 1 | 14 | 14.0 | 9 | 10 | 17 | 19 | 11.8 | 18 |
| | 2 | 13 | 13.3 | 14 | 9 | 10 | 23 | 12.6 | 17 |
| | 3 | 12 | 12.9 | 7 | 8 | 16 | 17 | 11.6 | 13 |
| | 4 | 17 | 10.0 | 7 | 9 | 15 | 13 | 10.9 | 16 |
| | 5 | 12 | 11.9 | 15 | 8 | 10 | 17 | 10.3 | 12 |
| Feb. | 6 | 7 | 7.6 | 9 | 6 | 20 | 22 | 8.1 | 12 |
| | 7 | 10 | 9.8 | 6 | 8 | 16 | 18 | 8.9 | 11 |
| | 8 | 16 | 8.2 | 10 | 9 | 13 | 17 | 8.9 | 6 |
| | 9 | 8 | 8.4 | 10 | 11 | 9 | 18 | 8.8 | 9 |
| March. | 10 | 7 | 9.4 | 8 | 7 | 9 | 13 | 8.2 | 7 |
| | 11 | 10 | 8.3 | 8 | 10 | 7 | 13 | 8.6 | 8 |
| | 12 | 5 | 7.7 | 12 | 1 | 4 | 7 | 6.3 | 5 |
| | 13 | 6 | 0.2 | 9 | 7 | 9 | 7 | 7.6 | 8 |
| April. | 14 | 6 | 7.9 | 10 | 9 | 6 | 20 | 7.3 | 5 |
| | 15 | 4 | 7.4 | 2 | 7 | 14 | 12 | 6.5 | 4 |
| | 16 | 6 | 8.3 | 7 | 5 | 3 | 9 | 7.0 | 7 |
| | 17 | 9 | 6.8 | 5 | 7 | 4 | 8 | 6.6 | 10 |
| | 18 | 10 | 8.8 | 1 | 5 | 7 | 6 | 8.0 | 2 |
| May. | 19 | 4 | 7.1 | 6 | 7 | 8 | 3 | 7.5 | 7 |
| | 20 | 8 | 8.3 | 17 | 8 | 6 | 15 | 7.5 | 4 |
| | 21 | 4 | 8.0 | 12 | 6 | 4 | 8 | 7.8 | 5 |
| | 22 | 8 | 8.1 | 8 | 5 | 6 | 10 | 7.0 | 13 |
| June. | 23 | 7 | 7.3 | 6 | 4 | 7 | 7 | 7.2 | 6 |
| | 24 | 3 | 9.5 | 5 | 4 | 6 | 8 | 8.2 | 7 |
| | 25 | 10 | 8.5 | 8 | 4 | 6 | 4 | 7.8 | 2 |
| | 26 | 5 | 9.2 | 5 | 10 | 11 | 12 | 8.9 | 4 |
| July. | 27 | 11 | 8.1 | 10 | 7 | 7 | 7 | 7.7 | 6 |
| | 28 | 9 | 9.4 | 9 | 4 | 6 | 13 | 8.5 | 5 |
| | 29 | 2 | 7.0 | 6 | 5 | 8 | 9 | 6.7 | 9 |
| | 30 | 10 | 10.3 | 2 | 7 | 13 | 13 | 8.5 | 10 |
| Aug. | 31 | 12 | 11.0 | 7 | 10 | 13 | 7 | 11.2 | |
| | 32 | 10 | 11.5 | 7 | 5 | 12 | 7 | 9.5 | |
| | 33 | 13 | 12.1 | 11 | 11 | 11 | 6 | 14.2 | |
| | 34 | 9 | 11.7 | 12 | 9 | 16 | 16 | 12.3 | |
| Sept. | 35 | 12 | 11.6 | 7 | 13 | 18 | 8 | 12.0 | |
| | 36 | 14 | 15.3 | 16 | 19 | 11 | 15 | 15.1 | |
| | 37 | 14 | 15.7 | 21 | 7 | 18 | 23 | 15.5 | |
| | 38 | 24 | 16.4 | 15 | 9 | 24 | 14 | 18.3 | |
| Oct. | 39 | 21 | 10.5 | 17 | 9 | 19 | 18 | 16.2 | |
| | 40 | 13 | 16.5 | 24 | 6 | 19 | 15 | 16.8 | |
| | 41 | 18 | 19.7 | 14 | 18 | 21 | 22 | 20.1 | |
| | 42 | 17 | 18.4 | 22 | 28 | 13 | 20 | 20.0 | |
| Nov. | 43 | 9 | 19.4 | 23 | 20 | 40 | 22 | 20.1 | |
| | 44 | 27 | 10.6 | 24 | 29 | 29 | 20 | 22.1 | |
| | 45 | 15 | 18.8 | 30 | 27 | 51 | 25 | 24.2 | |
| | 46 | 17 | 20.4 | 12 | 28 | 55 | 17 | 24.4 | |
| Dec. | 47 | 18 | 19.1 | 1 | 33 | 20 | 26 | 22.5 | |
| | 48 | 17 | 16.7 | 16 | 21 | 26 | 23 | 19.1 | |
| | 49 | 9 | 18.6 | 14 | 26 | 29 | 21 | 19.8 | |
| | 50 | 13 | 18.6 | 23 | 19 | 13 | 19 | 10.0 | |
| | 51 | 15 | 15.2 | | 21 | 36 | 12 | 18.1 | |
| | 52 | 9 | 17.1 | 14 | 13 | 18 | 22 | 16.9 | |
| | 53 | 10 | 17.4 | | | | | | |

* From the Registrar-General's Weekly Returns.

maximum about the middle of November, and sinking again below the mean in the succeeding January or February. It is interesting, however, to note that although the general character of the curve is well maintained, it is found on examination to vary considerably in detail from year to year. For this reason I have thought that it would be of interest to dissect the totals of the last five years into their weekly constituents. This has been done in Table II (p. 396), to which have also been added, in the case of the years 1896 and 1900, the averages for each corresponding week of the last ten years, for comparison.

I am aware of the objections that may be brought against the use of these ten-year averages, and I cannot but agree with what Dr. Newsholme has said in their disparagement. Nevertheless, it must, I think, be agreed that, when handled with due discrimination, they are capable of affording valuable information. The facts relating to the seasonal prevalence of enteric fever from 1896 up to the present year are also show in the diagram (exhibited), where the curves have been drawn according to Bloxam's method, and referred to a mean of five years 1896-1900. A feature of interest in these curves is the manner in which the ordinary seasonal characters become gradually intensified up to 1899, the year of greatest recent prevalence. The autumnal rise in that year is unusually steep, though a kind of foretaste of it may be noted in the year 1898. In 1900 the curve, though it begins on an elevation due to the unexpended force of the autumnal prevalence of 1899, has in great measure resumed its ordinary flatness, which may perhaps indicate that some of the causes of the recent increase in typhoid fatality have ceased to operate.

In another table (Table III) I have compared the weekly averages of two periods of ten years each—the first from 1872 to 1881, the second from 1889 to 1898. These have been selected as representative periods of high and low general prevalence.

Table III.—*London: Corrected Weekly Averages of Deaths from Enteric Fever for Two Periods of Ten Years (1872-81 and 1889-98).**

| | Week. | Corrected Average, 1872-81. | Corrected Average, 1889-98. | | Week. | Corrected Average, 1872-81. | Corrected Average, 1889-98. |
|---|---|---|---|---|---|---|---|
| Jan. | 1 | 20.9 | 11.5 | July. | 27 | 11.2 | 7.8 |
| | 2 | 18.3 | 12.6 | | 28 | 12.6 | 8.7 |
| | 3 | 17.4 | 10.6 | | 29 | 13.7 | 6.5 |
| | 4 | 18.1 | 10.4 | | 30 | 15.6 | 8.0 |
| Feb. | 5 | 15.4 | 10.3 | Aug. | 31 | 13.4 | 10.6 |
| | 6 | 16.4 | 6.5 | | 32 | 16.1 | 8.8 |
| | 7 | 17.7 | 8.6 | | 33 | 17.3 | 13.9 |
| | 8 | 15.4 | 8.4 | | 34 | 16.9 | 11.8 |
| | 9 | 13.1 | 8.5 | | 35 | 18.2 | 11.4 |
| March. | 10 | 15.7 | 7.7 | | 36 | 16.0 | 16.1 |
| | 11 | 16.2 | 8.5 | Sept. | 37 | 20.3 | 15.6 |
| | 12 | 17.0 | 6.3 | | 38 | 23.9 | 16.9 |
| | 13 | 16.7 | 7.5 | | 39 | 24.3 | 16.2 |
| April. | 14 | 15.5 | 7.0 | | 40 | 26.7 | 16.8 |
| | 15 | 15.8 | 6.1 | Oct. | 41 | 25.9 | 19.6 |
| | 16 | 13.5 | 7.4 | | 42 | 27.5 | 19.6 |
| | 17 | 13.8 | 6.5 | | 43 | 30.3 | 18.2 |
| | 18 | 14.0 | 7.8 | | 44 | 28.3 | 21.0 |
| May. | 19 | 13.3 | 7.2 | Nov. | 45 | 27.4 | 20.0 |
| | 20 | 12.6 | 7.6 | | 46 | 26.2 | 20.5 |
| | 21 | 13.5 | 7.9 | | 47 | 25.6 | 21.8 |
| | 22 | 11.9 | 7.4 | | 48 | 26.6 | 18.0 |
| June. | 23 | 13.5 | 6.7 | Dec. | 49 | 22.9 | 17.6 |
| | 24 | 13.2 | 8.4 | | 50 | 22.6 | 19.3 |
| | 25 | 11.1 | 7.9 | | 51 | 21.3 | 15.0 |
| | 26 | 11.9 | 8.6 | | 52 | 18.6 | 16.4 |

* From the Registrar-General's Weekly Returns.

Curves based on these figures are shown in the diagram (exhibited). They are drawn on the same scale and to the same zero, and are of interest as showing the general fact of diminished mortality during the second period, and also the further fact that the decrease seems chiefly to have affected the autumnal and winter prevalence, the difference during the minimum period being less marked. To put it in another way we may say that enteric fever, as well as being most active, is also most vulnerable during the latter months of the year; and that the diminished mortality has been reached rather by depressing the maximum than by still further lowering the minimum. In view of the very definite seasonal relations of the typhoid curve, one is naturally tempted to search for the influence of some meteorological condition in the varying prevalence of the disease. Efforts in this direction have so far been unsuccessful, at least when the investigation has been confined to a single locality. But when looked at in another way the facts assume a somewhat different appearance.

*The Seasonal Prevalence of Enteric Fever in London compared with that in New York.*

It is now many years since Sir A. Mitchell and Dr. Buchan showed in the *Journal of the Scottish Meteorological Society*,[1] that the seasonal incidence of many diseases in New York differed from that of the same diseases in London, in correspondence with differences in climatic conditions between the two cities. Among the diseases so influenced, enteric fever is conspicuous, both the intensity and the period of its maximum being largely affected. The mean annual temperature of New York does not greatly differ from that of London; the fluctuations, however, are much greater, the summers being hotter and the winters colder. The rainfall is nearly twice that of London, but the rainy days are about 25 per cent. fewer. Hence New York, as compared with London, possesses the character of a "continental" as opposed to an "insular" climate—hot summers, cold winters, rapid changes from one to the other, comparative absence of "raw" weather at all seasons, general dryness of the air, with occasional torrential rains. The effect of these conditions upon the incidence of enteric fever is remarkable. The curve representing the monthly mortality of that disease for a period of seven years is a very strongly-marked one—far more strongly marked than the corresponding curve for London. It remains very steady from year to year, and from January to July shows little fluctuation. In August it rises with great swiftness, and in September—that is to say, two months earlier than in London—it reaches its maximum, which is, in the years taken by Sir A. Mitchell and Dr. Buchan, as much as 83 per cent. above the mean, as against 34 per cent. in London.

Table IV.—*London and New York: Average Monthly Temperature and Monthly percentage Deviation from the Mean of Deaths from Enteric Fever.**

| | Monthly Mean Temperature. | | Deaths from Enteric Fever. Percentage Deviation from Mean. | |
|---|---|---|---|---|
| | New York. | London. | New York, 1871-1877. | London, 1869-1874. |
| | °F. | °F. | | |
| January ... ... | 29.6 | 38.3 | −19 | 0 |
| February ... ... | 30.7 | 40.8 | −28 | + 2 |
| March ... ... | 36.0 | 42.4 | −29 | − 7 |
| April ... ... ... | 46.7 | 49.1 | −32 | −10 |
| May ... ... ... | 50.0 | 54.0 | −24 | −27 |
| June ... ... ... | 70.4 | 61.0 | −37 | −22 |
| July ... ... ... | 75.4 | 63.8 | −22 | −20 |
| August ... ... | 73.6 | 63.0 | +48 | + 2 |
| September ... ... | 64.9 | 59.2 | +83 | +12 |
| October ... ... | 54.2 | 51.0 | +27 | +24 |
| November ... ... | 41.3 | 42.6 | +34 | +34 |
| December ... ... | 31.8 | 40.6 | − 3 | +23 |

* Based on figures given by Sir A. Mitchell and Dr. Buchan in the *Journal of the Scottish Meteorological Society*, vol. v, pp. 171-188.

These features are represented in the table and diagram (exhibited), and their consideration leaves little doubt that meteorological conditions, especially perhaps temperature, must count as a factor in the activity of typhoid infection.

It is remarkable that while in New York the mortality from bowel complaints, like that from enteric, begins to rise two months earlier than in London, the rise in diphtheria is deferred for about a month later. The curve of the latter disease in New York shows a similar intensification of its characteristic seasonal features.

*The Relation of Enteric Fever to other Diseases.*

It is probable that at the present time, few fatal cases of

[1] Vol v, p. 171.

enteric fever escape diagnosis. One is inclined to look with some suspicion on the deaths returned as due to "simple continued fever," especially in view of their rapid diminution from year to year. In the early days of the separation of the fevers, there need be little doubt that some cases of enteric did find their way into the other category. But the seasonal features of the "simple continued fever" curve have always been very distinct from those of enteric; and, as the figures in the subjoined table will show, since about 1880 the general correspondence which had previously obtained between the variations of annual mortality in the two diseases has ceased to exist, being replaced, in the case of simple continued fever, by an almost uniform subsidence.

*Table V.—London, 1869-1900. Yearly Deaths from Typhus and Simple Continued Fever.**

| Year. | Deaths from Typhus. | Deaths from Simple Continued Fever. | Year. | Deaths from Typhus. | Deaths from Simple Continued Fever. |
|---|---|---|---|---|---|
| 1869 | 716 | 615 | 1885 | 28 | 78 |
| 1870 | 472 | 570 | 1886 | 13 | 73 |
| 1871 | 384 | 436 | 1887 | 19 | 41 |
| 1872 | 174 | 322 | 1888 | 9 | 35 |
| 1873 | 277 | 325 | 1889 | 16 | 42 |
| 1874 | 312 | 337 | 1890 | 10 | 35 |
| 1875 | 128 | 272 | 1891 | 11 | 44 |
| 1876 | 159 | 202 | 1892 | 11 | 22 |
| 1877 | 157 | 194 | 1893 | 5 | 21 |
| 1878 | 151 | 197 | 1894 | 8 | 13 |
| 1879 | 71 | 160 | 1895 | 4 | 9 |
| 1880 | 74 | 134 | 1896 | 5 | 17 |
| 1881 | 92 | 134 | 1897 | 1 | 8 |
| 1882 | 53 | 95 | 1898 | 4 | 10 |
| 1883 | 55 | 102 | 1899 | | |
| 1884 | 32 | 78 | 1900 | | |

* From the Registrar-General's Annual Reports.

Much the same statements would be true of typhus, the annual mortality from which disease since 1869 is also shown in the annexed table, and compared with that from simple continued fever and enteric in the diagram (exhibited). Though the evidence, as a whole, is not favourable to Murchison's view that "simple continued fever," when fatal, was almost always typhoid in disguise, yet the consideration that a certain proportion of both the "typhus" and the "simple continued fever" of the early Seventies was very probably enteric, helps to emphasise the fact that during the last thirty years the enteric fever of the metropolis has, to a great extent, been "got under."[2]

*Case-Mortality in Enteric Fever.*

With regard to case-mortality in enteric fever the data at present available do not afford evidence of any striking improvement, at least in recent years. This is, perhaps, to be expected. The leading principles of treatment in enteric fever have long been well understood, and there are probably few classes of acute cases that are more carefully tended, both publicly and privately, than typhoid patients. Until, therefore, some revolution, like that which the serum treatment has affected in diphtheria, takes place on a large scale, it seems unlikely that the case-mortality of enteric fever will be much further reduced.

*Summary.*

The main points of the present paper may be summed up as follows:

1. The death-rate from enteric fever in London is a fluctuating one, but has on the whole materially diminished, the most marked descent having occurred about sixteen years ago.

2. The seasonal relations of enteric fever remain fairly constant from year to year, but there seems to be a tendency, at least in years of low general prevalence, towards a progressive flattening of the autumnal maximum.

3. A comparison between London and New York, in respect of their climate and enteric death-rate, indicates that some meteorological conditions, especially perhaps temperature, are factors in the activity of the enteric infection. The relation, however, is not of such a kind as to make itself apparent from year to year in one given locality.

4. It is probable that the diminution in the death-rate of enteric fever is really somewhat greater than it appears to be, from the inclusion in former times of enteric cases under other heads, notably typhus and simple continued fever. This source of error, however, was never very important, and is now practically non-existent.

5. The case-mortality of enteric fever is almost stationary, and seems likely for the present to remain so.

[2] For an interesting discussion of the relation between these three causes of death, see Dr. Longstaff's *Studies in Statistics*. London, 1891, p. 394

### III.—William G. Savage, M.D., B.Sc., D.P.H.,

Lecturer on Bacteriology and Public Health, University College, Cardiff, Bacteriologist to the Cardiff and County Public Health Laboratory.

Dr. Savage, said that the valuable papers of Dr. Houston and Dr. Dixey must give them comfort. The most striking part of Dr. Houston's paper was the able way in which he traced the disease to so many different causes, and this should encourage them to seek for fresh causes and to adequately study the methods of dissemination already known. Dr. Houston had also touched on the difficulty of isolating and diagnosing the bacillus, and this was a difficulty that must be realised. There was a tendency to throw too much on the bacteriologist and to take his opinion as final, while, as bacteriologists only too well knew, at present they were not able to do very much. Thus in suspected cases of infection by milk and water it was practically impossible to find the organism. They must give the bacteriologist more time to put his knowledge and methods of identification of the bacillus on a sure basis before they expected so much from him. At the present day the certain differentiation of the typhoid bacillus was a matter of extreme difficulty, and it was only in the application of Widal's test that bacteriological knowledge could be said to be of much avail in routine public health work.

### IV.—Henry Handford, M.D., F.R.C.P., D.P.H.,

Nottingham.

Dr. Handford wished to contribute to the discussion what had been his experience as a practising physician attached for many years to a hospital with a special fever block. Without undervaluing the importance of water and milk as possible agencies in causing the spread of enteric fever, he had become year by year more convinced of the importance of direct infection in this disease, not merely as an interesting clinical fact, but also as a widespread power for evil, especially in the small and crowded homes of the poor. It would not be sufficient in combating this difficulty to remove all cases to hospital unless means were taken to provide an even larger floor space and cubic space per patient than the present standard, and to guarantee that in times of pressure no extra cases should be admitted so as to (relatively) overcrowd the wards. The infection of hospital nurses under the best conditions, according to present standards, was a well-established fact. They must accept the principle that all the excretions of an enteric fever patient might be infectious. How long this infection lasted was a difficult and very important problem. They were told that typhoid bacilli might continue present in the urine for weeks or months after convalescence had been firmly established. He thought clinical experience showed that enteric cases varied greatly in their degree of infectiousness. He had no personal experience of infection arising from cases two or more months after established convalescence, although for many years past the convalescent cases in Nottingham had been sent to the Convalescent Hospital and elsewhere. Might it be that the bacilli, though still present, had lost their power of infection, or retained it only in a very low degree? He had found urotropine to be of great value in a limited class of cases; but he protested against the routine use of urotropine in large doses for the purpose of disinfecting the urine. Any drug which might give rise to hæmaturia should only be given when of benefit to the patient. The urine must be disinfected in other ways as well as the other excreta.

V. Edmund Moody Smith, M.D., D.P.H.,
Medical Officer of Health, City of York.

Dr. Smith said that in York last year there was an outbreak of typhoid fever, 244 cases being notified during the year with a case mortality of 15.5 per cent. Careful inquiry failed to show a connection with water or milk supply, but a glaring sanitary deficiency existed in York in the shape of privy middens, from some at least of which there was soakage into the soil, and he attributed both the endemic and epidemic occurrence of typhoid in York to the existence of these privy middens. He referred to the ease with which infection could be carried from open middens by flies, and considered this to be a common means of the distribution of the infection of typhoid in York. He also mentioned the existence in York of defective sewers laid without sufficient fall and containing many inches of deposit, as a contributory cause, and said in regard to sewer gas, that, although it might not contain the typhoid bacilli, the continued breathing of it would lower the vitality of the body and tend to break down its natural defences.

VI.—Arthur R. Reynolds, M.D.,
Commissioner of Health, Chicago.

Dr. Reynolds said that Chicago was supplied with water from Lake Michigan by four tunnels under the lake, ranging in length from two to four miles; each working day a sample of water was collected from the shore end of each tunnel, and a careful analysis, both chemical and bacterial, made in the laboratory of the Department of Health. It had been observed that the mortality from typhoid fever and from acute intestinal diseases followed each pollution, the first in about five weeks, and the second in about one week. Until recently the majority of the sewers of the city emptied into the Chicago river, and a few directly into the lake. The river was a sluggish stream, and only emptied into the lake in times of freshet. In January, 1900, the sanitary water way which was cut through the divide between the St. Lawrence Valley, into which the great lakes emptied, and the Mississippi Valley was opened. Through this sanitary canal the waters of the Chicago River and of Lake Michigan now flowed to the Mississippi Valley, and carried with it all the city sewage excepting that emptying directly into the lake, with the result that the mortality in the city from typhoid fever had been greatly reduced. The Department Laboratory offered, entirely free to the physicians of the city, their services in making diagnosis by the Widal test; and this fact contributed largely to the health of the city, on account of the earlier diagnoses made.

VII.—Archibald Kerr Chalmers, M.D., D.P.H.,
Medical Officer of Health, City of Glasgow.

Dr. Chalmers made reference to the seasonal curve of the disease in Glasgow. This was a double curve in the sense that there were two periods of increasing prevalence, the major occurring during autumn, and comparing with the experience elsewhere, whilst there was also a smaller curve of increase in spring, which was only, however, a little in excess of the mean prevalence for the year. The spring increase was most likely dependent on the mild winters which they had in the West of Scotland, because in the winter of severe frost some years ago no such spring increase followed.

VIII.—Joseph Groves, B.A., M.B.,
Medical Officer of Health, Isle of Wight Rural District.

Dr. Groves added his testimony of appreciation of Dr. Houston's and Dr. Dixey's papers. He had a feeling of satisfaction in knowing at a time when the superiority of American methods were being, perhaps, grudgingly admitted, that the sanitary arrangements of the great City of Chicago were, to say the least, not superior to those which prevailed in this country. There could be no doubt, he thought, the majority of the cases of enteric fever received the poison of the diseases through the medium of drinking water, or of the water used in the dilution of milk; and he intended to confine his remarks to enteric fever in this relation. He agreed with Dr. Savage that they should not be grudging in their sympathy with the bacteriologist, from whom was expected that which was altogether beyond his power. He referred to a terrible outbreak of enteric fever due to an independent supply of chalk water. The attention of the local authorities was entirely diverted from suspicion of the water supply because the bacteriologists and the chemists declared it to be a most excellent potable supply, containing no organic impurity, and less than 150 innocent micro-organisms to the cubic centimetre. So valuable time was lost, and it was not until spot maps were laboriously made that the true source of the poison was arrived at. He thought that authorities should be ever alive to the sanitary test of drinking water. There should be no possible source of pollution of public water supplies. He referred to Dr. Frankland's experiments, which went to prove that the typhoid bacillus ceased to be infective in five days in river water, which contained millions of micro-organisms in the c.cm.; and that it was infective after thirty-five days in deep well chalk water containing less than 150 micro-organisms to the c.cm. The toxins present from the large crowd of micro-organisms in river water destroyed the typhoid bacillus.

IX.—Francis Thomas Bond, M.D., F.R.S.E.,
Medical Officer of Health, Gloucester Combined Districts.

Dr. Bond had had, he supposed he must say fortunately, a very limited experience in his district of enteric fever, especially of epidemic outbreaks due to contaminated water. So far as his own experience was concerned, he had not found in the two colliery districts under his charge that there was any special liability to enteric fever, as had been suggested by a previous speaker. A portion of his district was largely occupied in the production of milk, but during the course of twenty-eight years he had not met with a single case of enteric fever, much less any serious outbreak of the disease, which could be attributed to contaminated milk.

X.—J. Alfred Wanklyn, M.R.C.S.,
London.

Professor Wanklyn said that the most dangerous kind of water was water highly charged with organic matter, and almost free from organisms; such a water would act as a culture medium, and any accidental malignant germ that might come into such water would have a chance of life. He desired to support the statement that typhoid fever was often conveyed by other agencies than water.

XI.—W. C. C. Pakes, D.P.H.Camb.
Bacteriologist to Guy's Hospital.

Mr. Pakes felt that there was so much to discuss in the two papers to which they had listened that there was only time to say a little about one minute portion—the bacteriology. He pointed out to Dr. Groves that it was hardly fair for medical officers to blame the bacteriologist for not giving them more help. On many occasions it had happened to him to be asked to make an enumeration of the bacteria present in drinking water and to give an opinion from the result of that examination. He maintained that it was practically impossible to do so, but that when he suggested that a complete bacteriological examination should be made, he was told that the sanitary authority would not give the few guineas that he asked. Dr. Groves had given an example of the inadequacy of mere enumeration, and he (the speaker) had on several occasions found not more than 120 to 150 bacteria per c.cm., but had isolated the B. coli from 2, 5 or 10 c.cm. of the water, and he said that however few the bacteria might be, any sample of drinking water which contained one B. coli in as small a quantity as 30 c.cm. should be condemned. In the differentiation between the B. typhosus and other bacteria belonging to the colon group he strongly recommended to the notice of Dr. Houston a method which he had previously published, namely, the power which certain bacteria had to decompose salts of formic acid into hydrogen and carbon dioxide. He had found that no single strain of the B. typhosus was able to effect this decomposition, whereas, all the colon, lactis aërogenes and Friedlaender bacilli were able to do so with ease. He also mentioned that Horrocks had, in a recent paper, showed that in performing Gruber's test for the B. typhosus it was necessary to use the serum of an animal which had been highly immunised and possessed high agglutinating powers; only when such a serum was used was it possible to eliminate the fallacies incidental to the use of even normal

serum, by diluting to 1 in 1,000. With the observations and conclusions of Horrocks he was in complete accord.

XII.—Herbert Jones, L.R.C.S.I.,
Medical Officer of Health, Hereford Combined District.

Mr. Herbert Jones considered that the incidence of typhoid fever in colliery districts was due largely to the conservancy system usually found, and instanced the experience of the Rhondda valleys, where, among a population of 120,000 persons, upon the introduction of water carriage, typhoid fever had very materially decreased.

XIII.—John Middleton Martin, B.A., M.B., D.P.H.,
Medical Officer of Health, Stroud Rural District Council.

Dr. Martin said, as Dr. Houston had given a hint that the lower animals could not suffer from human diseases, he would like to know his opinion of the cases and groups of cases reported on by officials of the Local Government Board. As regarded the communication of typhoid fever by sewage effluents, was it the duty of local authorities to sterilise their effluents chemically pure, that was, produce drinking water from their sewage, or for those authorities who used the river for drinking purposes to purify the river water themselves?

XIV.—Charles Robert Drysdale, M.D., M.R.C.P., F.R.C.S.,
Consulting Physician to the Metropolitan Hospital.

Dr. Drysdale thought that sufficient importance had not been attached during the discussion to dust as a disseminator of enteric fever.

XV.—George Haynes Fosbroke, F.R.C.S., D.P.H.,
Medical Officer of Health, Worcester County.

Mr. Fosbroke wished to emphasise the fact that typhoid fever was sometimes carried very long distances by water. He knew of a case, of which the President was also aware, where an epidemic occurred in a town, and during the outbreak sewage escaped accidentally into the local river, the water of which after flowing twelve miles was used by the inhabitants of a town on its banks. In a week or two after this sewage accident typhoid fever began to arise in the last-mentioned town, without any other apparent cause than the water. He did not agree with Dr. Houston in thinking that specifically polluted soil was not a cause of typhoid fever, or at least that such a theory was not so generally accepted as formerly, for during the last three years he had investigated two extended outbreaks, where the possibility of water or milk having acted as a channel of distribution was entirely precluded, and the conclusion he arrived at, after careful consideration, was that these attacks were due to polluted soil around houses contaminated by adjacent middens.

XVI.—Shirley F. Murphy, M.R.C.S.,
Medical Officer of Health, County of London; Lecturer on Public Health, St. Mary's Hospital; President of the Section.

The President, in reply to Dr. Handford, thought that one of the ways in which the spread of enteric fever among hospital nurses might be arrested was by employing older nurses for the enteric patients. It had been shown that the lower incidence of enteric among the nurses at the London Fever Hospital, as compared with the Metropolitan Asylums Board Hospitals, was due to the fact that at the former place the nurses were considerably older than those employed at the Metropolitan Board Hospitals.

Reply.

Dr. Houston, in reply, said he was very much in sympathy with what Dr. Savage had said, and thought that sanitary authorities did not fully realise the great difficulties which the bacteriologist had to encounter in his work. Dr. Handford's fearless and frank statement as regards the infection of nurses and porters at Nottingham was most acceptable, the more so since these matters were usually concealed to a most regrettable extent. His interesting remarks as regards the varying intensity of the infective process were most important and seemed to be in accord with existing bacteriological and epidemiological knowledge. Sputum was not usually credited with special infective qualities, but he quite agreed with Dr. Handford that all the secretions of the body should be viewed with grave suspicion. He was not quite in agreement with Dr. Handford that because the enteric fever convalescents sent to the convalescent homes and hospitals did not spread the disease that this necessarily implied that their urine was free from infective qualities. Still less was he in agreement with his view that they had no right to give urotropine unless it could be proved that it was to the benefit of the patient himself. Dr. Hill had stated that one-seventh of the cases in Birmingham were due to case infection. If this were true, to withhold urotropine was simply to encourage the spread of the disease. Dr. Smith's suggestion that flies could carry contagion from middens to articles of food was quite possible. Dr. Reynolds's remarks were of great value, particularly his description of the chemical and bacteriological examination of the Lake Michigan water supply. That the detection of pollution by chemical and bacteriological means was followed after one week and five weeks respectively by acute intestinal diseases and enteric fever in the inhabitants of Chicago was peculiarly interesting. He quite agreed with Dr. Chalmers's view that Widal's test was sometimes open to error, but thought that the exceptions were so few in number as not to seriously detract from the great value of the test. He was out of sympathy with Mr. Wanklyn's estimate of the value of the bacterioscopic analysis of water. It was beyond controversy that the bacteriologist could appreciate an amount of excremental pollution so minute as to be altogether outside the reach of chemical analysis. He greatly sympathised with what Mr. Pakes had said as regards the inadequate fees paid to bacteriologists. His sodium formate medium sounded an attractive one, and he hoped to put it to practical trial in the future. He did not much care for fixed bacteriological standards, but Mr. Pakes's one as regards B. coli was certainly a useful one. He was glad that Dr. Martin had asked the question about cattle. He did think that the milk of diseased cattle might be suspected of giving rise to both scarlet fever and diphtheria, but he hardly thought the evidence as regards enteric was as convincing. The illustration given by Dr. Fosbroke of the great distance down a river which the morbific virus of enteric fever might be carried was of quite exceptional importance. The question of dust storms raised was one which certainly demanded further study.

## NEUTRAL RED IN THE ROUTINE BACTERIOLOGICAL EXAMINATION OF WATER.

By William G. Savage, B.Sc., M.D.Lond., D.P.H.,
Lecturer on Bacteriology, University College, Cardiff; Bacteriologist to the Cardiff and County Public Health Laboratory.

[Abstract.]

A mere enumeration of the number of organisms in water is unsatisfactory, and attention is naturally directed to the qualitative examination. Of the special organisms which may get into water, the bacillus coli communis is one of the most important. Its presence in small quantities of water—for example, 10 to 50 c.cm.—is probably of great significance, and is against the freedom from contamination of the water in question.

As a useful aid to its detection neutral red may be employed, an agent which was introduced by Rothberger in 1898 for the differentiation of bacillus coli. The method employed in the investigation is as follows: The water is collected in small glass-stoppered bottles of about 2 ozs. capacity. After the different amounts required for the various steps of the routine examination are withdrawn, 10 c.cm. or a smaller quantity of the water is added by sterile pipette to a tube of glucose (½ per cent.) neutral red broth. To the remainder in the bottle—usually about 40 c.cm.—the contents of a second tube of glucose neutral red broth is added. Both are incubated at 37° C., and examined daily. The presence of bacillus coli is shown by the production of marked fluorescence, and the red colour is reduced to a yellow or orange colour. This takes from one to three days.

Before the value of this reaction can be determined two questions must be considered: (1) If the B. coli is present, will it always give this characteristic reaction? and (2) is the

bacillus coli the only organism which may give this reaction under the conditions of the test?

To answer these questions, and to determine the value of neutral red in routine water examination, 50 waters were investigated. These were obtained from very varying sources—some from sources obviously polluted, others from suspected wells, springs, etc., and others from public water supplies.

In answer to the first question, the results obtained showed that a negative reaction, while not certainly excluding bacillus coli being in the water, yet made its presence very improbable.

In regard to the second question, the reaction being one of reduction, it is hardly to be expected that it should be specific; and some authors have described reacting organisms which were not B. coli. I isolated three organisms—one of these, however, reacted but slightly—from the waters which gave the reaction, which were not bacillus coli. Out of 34 waters which gave a positive reaction, and which were specially examined for bacillus coli, that organism was isolated in 31.

Out of 50 waters investigated, a positive result was obtained in 39, and a negative in 11. Of these 50 waters, 44, that is, all but 6, were specially examined for the bacillus coli communis. Of these 44 waters, a positive neutral red reaction was obtained in 34, and a negative in 10. Out of these 34 waters the bacillus coli was isolated in 31, and in 3 only it was not isolated. Of the 10 waters which gave a negative reaction, and were examined for bacillus coli, in none of them could this organism be found. Except for 3 waters, therefore, the reaction gave quite satisfactory results. In other words, out of 44 waters 41 gave straightforward results, that is, over 93 per cent., and if 1 of the 3 waters be excluded, as is probably reasonable to do for reasons given, the satisfactory results are brought up to 95 per cent.

For the series of waters examined, therefore, the error of assuming that the yellow colour and fluorescence were due to the presence of the bacillus coli was only about 5 per cent. In other words, this very-readily-carried-out test gave approximately accurate results even if the further isolation of the bacillus coli had not been proceeded with.

The significance of the presence of this organism in these samples, and the large number of positive results obtained were then considered. The conclusions from the results obtained were:

1. That a positive reaction obtained as described, while not certainly diagnostic of bacillus coli, yet in the vast majority of cases pointed to the presence of that organism.
2. That a negative reaction renders the presence of bacillus coli highly improbable.
3. That the test is very readily applied, and with reasonable care fallacies in its employment can be avoided.
4. That it is a test which is of great value in the routine examination of water.

Mr. Pakes thought that Dr. Savage had claimed too much for neutral red in the bacteriological examination of water. He had previously pointed out that a considerable number of bacteria gave the fluorescent colour by the reduction of neutral red, such as the proteus vulgaris, all the members of the enteritidis of Gaertner, lactis aërogenes, and Friedländer groups, the B. prodigiosus and the B. kiliense. Some of these were by no means uncommon in water, and therefore a wrong conclusion might be obtained when the reduction was found to have taken place. He felt too that a comparatively rough test, as the neutral red undoubtedly was, was really a retrograde one. Little enough was known about the bacteria in water and their significance, but in the present state of our knowledge it behoved all who were undertaking these investigations to work out most thoroughly the bacteria present, and not to be content with having found a member of the great heterogenous colon group. The paper would have been much more valuable if Dr. Savage had determined the number of B. coli in a sample of water, and at the same time the smallest quantity of that sample which produced the fluorescence from neutral red. If a reduction was obtained with a small quantity of water, the water would on that account alone be highly suspicious, but if no reduction were obtained with say 30 or 40 c.cm. of the water, no conclusions ought to be drawn until it was determined how delicate the reaction was.

Dr. Savage, in reply, said that he was aware that other bacteria gave the test; in fact, he had isolated three such organisms, as already described, from his series of 50 waters, but that out of 34 waters which gave a positive reaction with neutral red he had actually isolated the bacillus coli in 31, showing that the reaction was in the great majority of cases due to the presence of that organism. He did not in the least claim for the test that it was an absolute one, merely an exceedingly helpful one. Bacillus prodigiosus he had not found give the reaction in neutral red broth. In regard to the B. coli isolated they were almost all typical B. coli, and, as far as he had used the test, the positive reactions were given by B. coli as definite in their characters as those isolated by any other method. Unfortunately at the present day it was not possible to say from what source B. coli isolated from water were certainly derived. For practical purposes he regarded the two quantities of water used, that was, the 10 and 40 c.cm. as sufficient, especially when it was remembered that organisms were not quite uniformly distributed in water. In regard to the question of a negative reaction with 40 c.cm. he was quite in accord with Mr. Pakes that further investigation was needed to determine whether it was a reliable deduction from the negative reaction, that that quantity of water was free from B. coli. He could only say that with his 10 negative waters in all he failed to find that organism, but, of course, a much larger series and more fully worked out was required.

## NOTES ON ARSENICAL BEERS RECENTLY EXAMINED.

By J. A. Wanklyn, M.R.C.S.,
London.

In the recent arsenical epidemic there can be no doubt that much arsenic was present in the beer, and that it was to a great extent unrecognised, and that the question arises, Why was the arsenic overlooked? My reply is that the failure was due partly to the abandonment of the real Marsh's process in England, and partly to the circumstance that arsenic is protean in its combination, like nitrogen, and peculiarly addicted to the wearing of a mask; and that in the operation of brewing in a brewery abundant scope was provided for the exercise of the wonderful powers of combination possessed by arsenic.

Everyone in this room is doubtless familiar with arsenic in its elementary form, with the arsenic mirror and its curious brown films and crusts. Everyone has seen the common oxide of arsenic, arsenious acid, which exists in many forms, sometimes as glittering crystals, sometimes as a dull opaque white mass or powder. The very soluble and powerfully acid higher oxide of arsenic is also well known. The yellow sulphuret of arsenic is likewise familiar to everyone. All these forms of arsenic are easily transformed, any one into any other.

Within the last few years many of those present in this room have doubtless made the acquaintance of that very extraordinary substance cacodylic acid, or its soda salt. We know that two grains of arsenic in the shape of arsenious acid has proved a fatal dose. Fifteen grains of arsenic in the shape of cacodylic acid or cacodylate of soda is not fatal; and, indeed, has been taken without manifest ill-effect. Common cacodylic acid is only one member of a very large family, the different members of which are as like as two peas.

The substances which are before you, namely cacodyl and the cacodyl red pigment (both discovered by Bunsen so long ago as the year 1837), are rare. I very much doubt whether these specimens could be matched in England at the present time.

## A DISCUSSION ON THE DISEASES OF OCCUPATIONS.

I.—T. M. Legge, M.A., M.D.Oxon., D.P.H.Camb.,
H.M. Medical Inspector of Factories.

There is so much to be said from each one of the points from which the subject may be viewed—the purely medical, the preventive, and the social, that it is desirable at the outset to

define the ground to be covered in the discussion. It will be proper to limit discussion to the symptoms presented by the various diseases, their frequency in one and another occupation, and to the best means by which the medical profession can assist in preventing or mitigating their consequence.

*Potassium Cyanide.*

The anomalies presented by trade diseases, that is, the difference of the symptoms produced among workers making or using poisonous materials from those produced by their medicinal exhibition, are very striking. The manufacture of potassium cyanide, for example, and the use of strong, hot solutions of the same salt—processes in which one would anticipate grave risk—appear to be almost if not quite innocuous.

*Potassium Chromate.*

In the manufacture of potassium bichromate although definite lesions are undoubtedly caused by the dust and fumes, they are limited to local action on the skin through abraded surfaces and to the septum. There is no evidence to show that the chromic acid dust (often in time past present in considerable quantity in the air) penetrates to the lungs. It is generally held that the inhalation of dust in excessive quantity, whatever its quality, must be injurious, but the instance quoted shows that probably 99 per cent. of the dust inhaled never reaches the lungs at all, so as to damage them.

*Arsenic.*

Workers who come into contact with arsenic, either in the manufacture of arsenious acid or emerald green, suffer markedly from the cutaneous lesions, but the symptoms of neuritis which have been made so familiar to us of late are absent. That some of the dust is absorbed is certain, as hoarseness is common, and gastro-intestinal symptoms occur.

*Mercury.*

The typical symptoms of mercurial poisoning are found in barometer and thermometer makers and in factories where pharmaceutical preparations of mercury are made, but in hatters-furriers' processes, where rabbit skins are brushed with a dilute solution of nitrate of mercury, salivation is rare, although tremor is a prominent symptom, and there is in addition marked erosion of the teeth due to the acid fumes. In this industry, as might be expected, the symptom of erosion is principally to be found among those actually brushing the skins, and thus especially exposed to fumes, and that of tremor among those who work at subsequent dusty processes and swallow dry particles of fur impregnated with the solution.

*Phosphorus.*

There has been no adequate explanation given of the reason why the continued inhalation of the fumes of yellow phosphorus should limit itself to a local lesion of the maxillary bones, for satisfactory evidence is lacking that anything in the nature of phosphorism is produced. So far as I am aware no observations have been made to see whether there are indications of fatty changes in the liver cells which might be expected in those engaged in the process of dipping in lucifer match works for many years.

*Anthrax.*

Workers in industries such as wool, horsehair, or the manipulation of hides and skins, seem to bear an almost charmed life. It has been stated on excellent authority that it would be unsafe to assume that a single bale of horsehair from China was free from anthrax and the spores have been found in a little dust shaken from a few strands of horsehair taken at random from a suspected hydraulically pressed bale, and they were again found in dust from the same bale after it had been passed through a Lyon's Steam Disinfector.

*Tetanus.*

My attention was called about two years ago to fatal cases of tetanus following on severe lacerated wounds to workers in jute mills. It occurred to me that the alluvial land in which the jute was grown in Bengal might be rich in tetanus bacilli, and the incidence of tetanus on jute workers in Dundee attributable, therefore, to spores brought over in the mud adhering to the jute fibres in much the same way that anthrax is brought over in hair and wool from abroad. A sample of dust collected from under a machine where an accident followed by fatal tetanus had occurred, and other samples collected in jute mills, were proved by Dr. Andrewes, of St. Bartholomew's Hospital to be very rich in tetanus spores. In the ten years, 1890-99, 11 fatal cases of traumatic tetanus have been recorded in Dundee. Five of these were workers in jute mills, and in three others the connection with jute dust could not be excluded. But if the contention is right that the incidence of tetanus on jute workers is due to the spores imported in incredible numbers from India it is surprising that cases following on lacerated wounds in jute mills are not more frequent. This must be attributed to the natural immunity of the human subject to tetanus, and the fact that infection will only rarely occur except as the result of a mixed infection.

*Lead.*

So much is lacking in our knowledge as to the etiology of almost every industrial disease, that a medical practitioner has little difficulty, once his attention is directed to the subject in discovering fresh symptoms or fresh sources of danger. Sometimes in a trade the effects of one particular poisonous material used are so pronounced as to mask or, at any rate, to lead to lessened attention to other sources of danger. Thus in the manufacture of indiarubber goods the effects of carbon disulphide have been so prominent that consideration of the effects of lead and naphtha has fallen into the background. In the potteries the effects of lead because they are often so swift have to some extent masked the insidious influence of dust. The marked ague-like symptoms among brass founders have obscured the less pronounced symptoms of emaciation and debility which Dr. Wilfrid Murray, of Birmingham, has recently established. In factories where lead is used it is right constantly to be on one's guard against attributing every case of anæmia in youthful workers to their employment. The types of anæmia produced by lead, by arsenic, and by mercury are all spoken of as secondary, and thus dismissed, but were it possible to ascertain by some demonstrable test what is the peculiar change affected by lead on the blood whereby one could distinguish the anæmia thus produced from simple anæmia the advance in knowledge would be very great.

*Dust.*

One of the most difficult points in industrial disease is to estimate aright the effect of the inhalation of dust on the lungs and the relation of fibroid phthisis to true phthisis. With the exception of the inhalation of mineral dust containing a high percentage of silica, of steel dust, of flax dust, and a few others, evidence as to injury to the lungs from many kinds of dust has not been made very clear. In the first place, statistics on the subject are difficult to obtain. As Dr. Tatham says, "Crude death-rates, the use of which as between separate localities requires caution, are entirely untrustworthy as a means of comparing one industry with another," by reason of the wide differences both in the age constitution of the respective bodies of workers, and in the tendency to death (apart from any exceptional environment) at successive age periods. For instance, in a district where the phthisis death-rate and that from respiratory diseases was only slightly higher than that for England and Wales as a whole for all ages, it was found that in one particular mine and factory where a hard silicious stone—ganister—was worked, the average death-rate among the miners from phthisis and respiratory diseases in three out of the ten years for which they were estimated was ten times as great as in the general male population at corresponding ages. And although the evidence as to fibrosis of the lungs induced by the long-continued inhalation of silica and steel dust is incontestable, it is by no means clear that the lesions thus produced lead directly to death. In two cases of fibroid phthisis that have come immediately under my notice,* tubercle was found on microscopical examination to be present in both, the bacillus no doubt finding a soil suitable to its growth in the previously damaged lung. In both these cases, however, the fibroid process was absolutely distinct from the tuberculous. In another marked case of fibroid phthisis in a Sheffield grinder, death was due to apoplexy, and the condition of the lungs only discovered accidentally *post mortem*.

* The specimens were shown.

The whole change of fibrosis is an effort to resist the dust, and therefore a healing one. The fibrosis would probably not progress were cessation from work on the onset of symptoms the rule. Further observations are necessary to determine whether breaking down of the lung tissue and the formation of abscesses is possible as the result of dust inhalation alone apart from added tuberculous infection. At any rate, the close relationship of fibrosis and tuberculosis teaches the lesson that attempts to control the former by improved ventilation must be associated with collateral effort to check the latter (1) by education of the workers as to the infectious nature of the disease, and (2) by suitable action on the part of local authorities through the medical officer of health. No medical officer of health has paid more attention to this subject than Dr. Niven, of Manchester. In his annual report for 1899 he cites 33 cases of phthisis in which the history points to infection having been caught from employment in various factories and workshops by work carried on in close proximity to persons known to be consumptive, and in many workshops useful work has been done by having a notice as to the danger of spitting posted up.

*Basic Slag Dust.*

While on this subject of industrial diseases of the lungs, attention might be called to another industrial respiratory disease—not infrequently fatal—as to the etiology of which we are still in the dark, namely, the pneumonia induced by the inhalation of basic slag dust. There is nothing in the composition of the dust (apart from its very fine state of division) to render it particularly injurious. Silica is present in only small amount. Its harmful nature has been attributed to the caustic action of the lime, which constitutes over 50 per cent., but cement workers are not affected in any similar way, and the disease always appears to be a pneumococcus infection.

*Analysis of Notification Returns.*

Our knowledge has certainly been advanced materially of late owing to the obligation put upon medical practitioners by Section XXIX of the Factory and Workshop Act, 1895, to notify the Chief Inspector of Factories of every case of lead, arsenic, phosphorus, or mercurial poisoning, and of anthrax contracted in a factory or workshop. Medical practitioners who notify cases of lead poisoning from drinking water or in in a house painter engaged entirely in outside work may think it pedantic to draw a distinction between notifiable and non-notifiable lead poisoning, but the whole point of the distinction, as will be readily seen, is to obtain a clue only to those cases occurring in premises under the Factory Acts over which inspectors of factories can exercise control.

*Notification of Poisoning by Lead, Phosphorus, Arsenic, Mercury, and of Anthrax. (Cases Reported under Section xxix).*

| Disease and Industry. | Number of Reported Cases. | | |
|---|---|---|---|
| | 1900. | 1899. | 1898. |
| Lead poisoning | 1,058 | 1,258 | 1,278 |
| China and earthenware | 200 | 249 | 457 |
| Litho-transfer works | 10 | 11 | Included in china and earthenware |
| Glass polishing | 7 | 8 | 19 |
| Smelting | 34 | 61 | 82 |
| Tinning and enamelling | 16 | 24 | 24 |
| File cutting | 40 | 41 | 46 |
| White lead | 358 | 399 | 332 |
| Paints and colours | 50 | 75 | 59 |
| Coach making | [illegible] | 05 | 45 |
| Ship building | [illegible] | 30 | Included in other industries |
| Electrical accumulator works | 33 | 32 | 11 |
| Other industries | 202 | 263 | [illegible] |
| Phosphorus poisoning | 3 | 8 | 21 |
| | | | Including 10 before 1898 |
| Arsenic poisoning | 22 | — | — |
| Mercurial poisoning | [illegible] | 10 | — |
| | | From May 1st, 1899 | |
| Anthrax | 37 | 55 | 28 |
| Wool sorting and wool combing | 9 | 18 | 16 |
| Horsehair | [illegible] | 17 | [illegible] |
| Handling of hides and skins | 6 | 15 | 8 |
| Other industries | [illegible] | 4 | 1 |

The preceding table gives a comparison of the number of cases of poisoning by lead, phosphorus, arsenic, and mercury, and of anthrax, in the three years 1898 to 1900:

With a malady, such as lead poisoning, showing wide variation in the degree of severity, and attended in many cases with considerable difficulty in diagnosis, a tabulation only of the number reported as so suffering conveys hardly any useful information. Only careful analysis according to severity, to the length of time of exposure to the injurious action of lead, to the number of previous attacks, to the nature of the symptoms, and to the precise occupation in which the poisoning was contracted, can make them permanently useful. Much greater value, therefore, should be attached to the table (p. 404), which gives an analysis of nearly 1,000 cases of lead poisoning distributed according to the several industries and according to the severity of the symptoms, to the number of attacks, and to the main symptoms attributable to lead.

At the outset one is met with the difficulty that a fair number of the severe cases are the victims of chronic lead poisoning with very likely old-standing paralysis. Further, the definition of "severe," "moderate," and "slight" is an arbitrary one, as the reports by the certifying surgeons on which the table is based are made before the illness has terminated, and therefore the number of sick days entailed cannot be computed. But in general it may be said that "severe" includes cases of encephalopathy, paralysis, cachexia, and colic, accompanied by much pain and involving confinement to bed for several days. Sometimes because the attack of colic for which the person was reported was slight, even although old-standing paralysis was present it is regarded as slight. Certifying surgeons would do well to regard the general condition of the patient so far as lead is concerned, and not the particular attack as the basis of the description "severity." It may fairly be assumed that each case on an average entailed an absence from work for one week, and the absence from work therefore from the effects of lead alone on this assumption last year, if compressed into the life of a single man, would mean absence from work for nineteen years.

Attention should be called to a point on which sufficient stress has never been laid, that in the long run the slower and more insidious form of lead poisoning brought about by the absorption of metallic lead and of the salts of lead in the form of paint is quite as severe as that due to the salts of lead in the form of dust or from fumes. At any rate, the proportion of severe cases among file cutters and those engaged in coach painting, in ship building, and in other industries where paint is used exceeds that of those engaged in industries where the danger is primarily from the dust of salts of lead.

But before it is possible to pronounce definitely on a point of this kind it is necessary to remember matters which may involve fallacies, such, for example, as that persons handling metallic lead and lead salts in the form of paint continue to work at their employment much longer as a rule than do persons in industries where the danger is mainly from salts of lead in the form of dust.

The reports bring out the fact that saturnine palsy is essentially an affection of the male sex, while headache, anæmia, and encephalopathy are more common in the female sex.

It will be observed that the percentages in the table are percentages based on the number attacked and not on the number employed, which would be more satisfactory, as it would then be possible to draw up a table of lead industries showing the relative danger to the workers; and it would go far also to determine the relative susceptibility to lead of males and females. This has been done with some approach to accuracy in the case of all the processes in one industry—china and earthenware. In that industry some 6,361 persons came into contact with lead, of whom 4,213 are males and 2,148 females. The percentage rate of attack last year among males was 2.3 and among females 4.9, which suggests that women are about twice as susceptible to lead poisoning as men.

*The Value of Notification.*

Notification has been especially useful in obtaining knowledge of sources—hitherto unsuspected—in which mercurial

*Analysis of Reports on Lead Poisoning by Certifying Surgeons.*

| Occupation. | | Severity of Symptoms. | | | | | | | | | | Number of Attack. | | | | | | | | | | Main Symptoms. | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Severe. | | Moderate. | | Slight. | | Not Stated. | | Total. | | 1st. | | 2nd. | | 3rd, or Chronic. | | Not stated. | | Total. | | Colic. | | Anæmia. | | Headache. | | Paretic. | | Encephalopathic. | | Rheumatic. | | Uterine. | | Not stated. | |
| | | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. |
| Smelting of metals ... ... | No. of cases | 12 | | 9 | 1 | 12 | | 1 | 1 | 34 | 1 | 28 | | 2 | | 2 | | | | 32 | | 3 | | 3 | | 1 | | 6 | | | | 8 | | 1 | | 4 | |
| | Per cent. | 35.3 | | 26.4 | 100 | 35.3 | | 2.9 | | | | 82.3 | | 5.9 | | 5.9 | | | | | | 9.4 | | 9.4 | | 3.1 | | 17.6 | | | | 23.5 | | 2.9 | | 11.8 | |
| Brassworks ... ... ... | No. of cases | 1 | | 2 | | | | | | 3 | | 3 | | 1 | | | | | | 3 | | | | | | | | | | | | | | | | | |
| | Per cent. | 33.3 | | 66.7 | | | | | | | | 75.0 | | 25.0 | | | | | | | | | | | | | | | | | | | | | | | |
| Sheet lead and lead piping | No. of cases | 4 | | 5 | 1 | 7 | | 1 | | 17 | 1 | 12 | | 1 | | 3 | | 1 | | 17 | | 12 | | 4 | | 1 | | 3 | | | | 1 | | | | 1 | |
| | Per cent. | 23.5 | | 29.4 | 100 | 41.2 | | 5.9 | | | | 70.6 | | 5.9 | | 11.8 | | 5.9 | | | | 70.6 | | 23.5 | | 5.9 | | 17.6 | | | | 5.9 | | | | 5.9 | |
| Plumbing and soldering ... | No. of cases | 2 | | | 1 | 6 | 1 | | | 8 | 1 | 3 | 1 | 1 | | 1 | | | | 3 | 1 | 3 | | 1 | | | | | 1 | | | | | | | 1 | |
| | Per cent. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Printing ... ... ... ... | No. of cases | 6 | | 6 | 1 | 5 | | | | 17 | 1 | 11 | | 3 | | 3 | | | | 17 | | 11 | | 2 | | 1 | | 1 | | | | 1 | | | | 1 | |
| | Per cent. | 35.3 | | 35.3 | 100 | 29.4 | | | | | | 64.7 | | 17.6 | | 17.6 | | | | | | 64.7 | | 11.8 | | 5.9 | | 5.9 | | | | 5.9 | | | | 5.9 | |
| File cutting ... ... ... | No. of cases | 6 | | 6 | | 11 | 2 | | | 35 | 3 | 11 | | 6 | 1 | 1 | | | | 19 | 2 | 2 | 2 | 1 | 1 | 16 | | 1 | | 1 | | | | | | 2 | |
| | Per cent. | 17.1 | | 17.1 | | 31.4 | | 5.7 | | | | 31.4 | | 17.1 | | 2.8 | | 2.7 | | 54.3 | | 5.7 | | 5.7 | | 45.7 | | 2.9 | | 2.9 | | | | | | 5.7 | |
| Tinning and enamelling of iron hollow-ware ... ... | No. of cases | 1 | | 1 | 1 | | 1 | | | 2 | 3 | 1 | 1 | | | 2 | | | | 2 | | | | 2 | 1 | | | | | | | | | | | | |
| | Per cent. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White lead ... ... ... | No. of cases | 77 | 10 | 28 | 1 | 116 | 15 | 7 | 1 | 288 | 28 | 34 | 17 | 23 | 3 | 7 | 2 | 11 | 6 | 83 | 28 | 1 | 1 | 1 | 2 | 11 | 2 | 1 | | 11 | 1 | 1 | 5 | 1 | |
| | Per cent. | 26.7 | 35.7 | 9.7 | 3.6 | 40.1 | 53.6 | 2.4 | 3.6 | | | 8.0 | 60.7 | 8.0 | 10.7 | 2.4 | 7.1 | 3.8 | 21.4 | | | 1.1 | 3.6 | 1.1 | 7.1 | 0.7 | 3.6 | 3.8 | 7.1 | 3.6 | 3.6 | 1.7 | 10.7 | | | | |
| Red lead ... ... ... ... | No. of cases | 7 | | 2 | | 10 | | | | 19 | | 1 | | | | 1 | | | | 17 | | 1 | | | | 1 | | | | 3 | | | | | | | |
| | Per cent. | 36.8 | | 10.5 | | 52.6 | | | | | | 5.3 | | | | 5.3 | | | | | | 5.3 | | | | 5.3 | | | | 15.8 | | | | | | | |
| China and earthenware ... | No. of cases | 17 | 3 | 15 | 2 | 53 | 4 | 7 | 1 | 92 | 10 | 53 | 7 | 13 | 1 | 19 | 1 | 1 | 1 | 87 | 10 | 2 | 1 | 2 | 1 | 8 | | 9 | 3 | 1 | 1 | 8 | 1 | 4 | 1 | 12 | 1 |
| | Per cent. | 18.5 | 30.8 | 16.3 | 20.0 | 57.6 | 40.0 | 7.6 | 10.0 | | | 57.6 | 70.0 | 14.1 | 10.0 | 20.6 | 10.0 | 1.1 | 10.0 | | | 2.2 | 10.0 | 2.2 | 10.0 | 8.7 | | 9.8 | 30.0 | 1.1 | 10.0 | 8.7 | 14.3 | 3.8 | 10.0 | 13.0 | 14.3 |
| Litho-transfers ... ... | No. of cases | 2 | 1 | | | 5 | | | | 7 | 1 | 6 | 1 | 1 | | | | | | 7 | 1 | 0 | | 2 | | 3 | | | | | | | | 1 | |
| | Per cent. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Glass cutting ... ... ... | No. of cases | 2 | | 2 | | 3 | | | | 7 | | 3 | | 1 | | 3 | | | | 7 | | 1 | | | | | | 1 | | | | | | | | | |
| | Per cent. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Enamelling of iron plates... | No. of cases | 3 | 2 | 4 | | 1 | 1 | | | 9 | 3 | 6 | 3 | | | | | | | 8 | 3 | | | 1 | | 3 | | 1 | | | | | | 1 | |
| | Per cent. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Electric accumulators ... | No. of cases | 16 | | 7 | | 14 | | | | 30 | | 21 | | 3 | | 3 | | 1 | | 28 | | 1 | | 1 | | 1 | | 1 | | | | | | | | | |
| | Per cent. | 53.3 | | 23.3 | | 46.7 | | | | | | 70.0 | | 10.0 | | 10.0 | | 3.3 | | | | 3.3 | | 3.3 | | 3.3 | | 3.3 | | | | | | | | | |
| Paints and colours ... ... | No. of cases | 20 | 1 | 8 | | 23 | 4 | | | 51 | 1 | 33 | 1 | 10 | | 6 | 1 | | | 51 | 1 | 30 | 1 | 7 | | 1 | | 9 | | | | 7 | | | | 4 | 1 |
| | Per cent. | 39.2 | | 15.7 | | 45.1 | | | | | | 64.7 | | 19.6 | | 11.8 | | | | | | 58.8 | | 13.7 | | 1.9 | | 17.6 | | | | 13.7 | | | | 7.8 | |
| Coachmaking ... ... ... | No. of cases | 23 | | 1 | | 10 | | 2 | | 61 | | 33 | | 1 | | 1 | | 2 | | 61 | | 30 | | 11 | | 9 | | 10 | | 1 | | 2 | | | | 3 | |
| | Per cent. | 37.7 | | 1.6 | | 16.4 | | 3.3 | | | | 54.1 | | 1.6 | | 1.6 | | 3.3 | | | | 49.2 | | 18.0 | | 14.8 | | 16.4 | | 1.6 | | 3.3 | | | | 4.9 | |
| Ship building ... ... ... | No. of cases | 14 | | 2 | | 1 | | | | 17 | | 12 | | 2 | | 3 | | 1 | | 17 | | 12 | | 2 | | 1 | | 1 | | | | 1 | | | | 1 | |
| | Per cent. | 82.4 | | 11.8 | | 5.9 | | | | | | 70.6 | | 11.8 | | 17.6 | | 5.9 | | | | 70.6 | | 11.8 | | 5.9 | | 5.9 | | | | 5.9 | | | | 5.9 | |
| Paint used in other industries ... ... ... ... | No. of cases | 21 | | 6 | | 19 | | | | 46 | | 27 | | 11 | | 6 | | 1 | | 46 | | 40 | | 3 | | 1 | | 3 | | 3 | | | | | | | |
| | Per cent. | 45.7 | | 13.0 | | 41.3 | | | | | | 58.7 | | 23.9 | | 13.0 | | 2.2 | | | | 87.0 | | 6.5 | | 2.2 | | 6.5 | | 6.5 | | | | | | | |
| Other industries ... ... | No. of cases | 26 | 11 | 11 | 1 | 18 | 6 | 3 | | 58 | 18 | 36 | 17 | 10 | | 8 | 1 | 4 | | 58 | 18 | 47 | 17 | 9 | 1 | 3 | 3 | 6 | 2 | 1 | 1 | 4 | | | | 1 | |
| | Per cent. | 44.8 | 61.1 | 19.0 | 5.6 | 31.0 | 33.3 | 5.2 | | | | 62.1 | 94.4 | 17.2 | | 13.8 | 5.6 | 6.9 | | | | 81.1 | 94.4 | 15.5 | 5.6 | 5.2 | 16.7 | 10.3 | 11.1 | 5.6 | 5.6 | 6.9 | | | | 1.7 | |
| Total ... ... ... ... | | 263 | 51 | 120 | 26 | 407 | 77 | 24 | 4 | 814 | 109 | 362 | 119 | 114 | 21 | 91 | 8 | 33 | 17 | 811 | 109 | 677 | 114 | 100 | 22 | 36 | 35 | 98 | 7 | 25 | 20 | 43 | 16 | 5 | 17 | 18 | |
| Per cent. ... ... ... ... | | 32.3 | 46.8 | 14.7 | 23.4 | 50.0 | 70.6 | 2.9 | 3.7 | | | 44.5 | 109.2 | 14.0 | 19.3 | 11.2 | 7.3 | 4.1 | 15.6 | | | 83.2 | 104.6 | 12.3 | 20.2 | 4.4 | 32.1 | 12.0 | 6.4 | 3.1 | 18.3 | 5.3 | 14.7 | 0.6 | 15.6 | 2.2 | 16.5 |

and arsenical poisoning are likely to arise. As the result of one such notification where mercurial pharmaceutical preparations were made, and another in the manufacture of electrical meters, and yet another in the manipulation of mercury fulminate in an explosive factory, examination of the workers showed such symptoms of mercurialism as to lead to the adoption of periodical medical examination. Similarly, in a paint and colour factory where arsenic was used, information obtained in this way revealed injury to health from the salt, which was materially lessened when a periodical medical examination was instituted. Anthrax is, however, the most protean in its manifestations of all trade diseases and the most difficult to control. Disinfection by steam of horsehair would not at first sight seem impossible, but experiments have hitherto shown that penetration into hydraulically pressed bales is impossible, and that when they are not hydraulically pressed the environment of the spores, imbedded as they are in the grease and dirt of so non-conducting a material as hair, offers great obstacles to successful penetration.

In the cases of anthrax which have been notified I have been struck by one point. The accepted treatment is excision of the pustule as soon as it is diagnosed. In country districts there is reluctance on the part of practitioners to operate, treatment being limited to the application of caustic or hypodermic injections of pure carbolic acid. It must be admitted that in these country districts this treatment has been successful. In one country village 5 successive cases recovered without operation. On the other hand, in Bradford and Sheffield the fatal cases, as a rule, have been those in which there has been delay in having the pustule excised.

I am inclined to take the view that the normal state of health of workers in the country is so much better than in the towns that a degree of resistance to anthrax is established in the one case which is absent in the other. This question of the environment and habits of the workers in enabling them to resist the disease of their calling frequently forces itself on one's notice. Alcoholism and the consequences of bad housing conditions are factors which contribute to the severity of trade diseases in many cases.

*The Medical Profession and the Control of Occupation Diseases.*

What is the share that the medical profession has and can have in controlling the diseases of occupation? All accurate knowledge of the symptoms and the effects must come from them, and by their writings they have assisted greatly in pointing out the dangers attaching to various occupations. In this connection and in this country alone I need only mention the names, out of many that would occur to all, of the late Dr. Arlidge, Dr. Oliver, Dr. Ogle, and his successor as Superintendent of Statistics at Somerset House, Dr. Tatham.

Under special rules issued by the Home Office, periodical medical examination of workers in dangerous processes, either by the certifying factory surgeon or other medical practitioner, is required in the following industries: White lead works, china and earthenware works, the manufacture of litho transfers, enamelling of iron plates, electrical accumulator works, the manufacture of explosives in which dinitro-benzol is used, and bichromate factories; in lucifer match factories where yellow phosphorus is used periodical examination of the teeth of persons in certain specified processes is enjoined. Further, in paint and colour factories, in chemical works where pharmaceutical mercurial preparations are made, in hatters-furriers' processes where mercury nitrate is used, etc., similar voluntary periodical examination is in some cases provided.

I do not specially refer to the work of the certifying factory surgeons, over 2,000 in number, charged with the statutory duties of examining children and young persons under 16 for certificates of fitness for employment in factories, with the investigation and report upon certain accidents and cases of poisoning occurring or contracted in factories and workshops, and with the making of special inquiries and examinations when so required. In 1899 the number of children and young persons examined by them was 412,141, of whom 4,241 were rejected. The cause for rejection was in 266 imperfect or impaired use of limbs: in 384 defective sight or disease of the eyes; in 264 anæmia or debility: in 137 disease of the heart or lungs; in 223 disease of the skin; in 78 infectious disease; in 42 deafness and in 19 mental defect.

I have never yet come across a certifying surgeon who was not interested in his work, but it has appeared to me that as a body they are lacking in *esprit de corps*. A certifying surgeon in one district knows little or nothing of the procedure of certifying surgeons in other districts. The knowledge he has accumulated in his years of office is lost to others when he retires. Every difficulty he meets with—and they are numerous—he has to meet unaided by the experience of the many who have met them before. There is abundance of material, abundance of energy and ability among the certifying surgeons to have some medium of their own for recording interesting facts of their work, and for the interchange of opinions as to points of procedure. If as the result of this the first discussion at a meeting of the British Medical Association some definite attempt is made to bridge over this lacuna the meeting will not have been in vain.

This year to stimulate interest in their work by showing them the importance attached to their work, and the use to some extent to which their reports were put, certifying surgeons will receive such portions of the annual report of the Chief Inspector of Factories as has medical interest.

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II.—William Murray, M.A., M.D.,
Birmingham.

## CHRONIC BRASS POISONING.

French medical literature contains some accounts of the evil effects of copper on those who work in that metal. Whether such poisoning occurs amongst copper workers in this country is uncertain, but there exists a disease analogous to, if not identical with, it which is much more prevalent than is generally supposed, and to which too little attention has been paid by public health authorities and medical practitioners. I refer to the insidious form of poisoning that affects many persons engaged in the manufacture of raw brass. An acute condition of a transient character, known as brassfounders' ague, has long been recognised, although very few physicians have seen a case; while the far commoner cases of disease produced by prolonged absorption of brass dust have attracted very little notice. As illustrating this, it may be mentioned that the report of a Departmental Committee on the Conditions of Labour in the Manufacture of Brass, published five years ago, is almost entirely taken up with a discussion of the circumstances conducing to brassfounders' ague, while the more chronic ailment is scarcely referred to. Brassworking has long been considered an unhealthy occupation, but it has not, I think, been sufficiently realised that this state of unhealthiness presents a uniformity in its train of symptoms such as to suggest the action of a specific poison producing a specific disease or form of poisoning.

*Symptoms.*—The illness is ushered in as a rule by an anæmia of the ordinary oligæmia type, with *malaise*, headache, and extreme weakness and nervousness. As the disease progresses the complexion assumes a sallow appearance, the subcutaneous fat gradually diminishes, and the muscles waste, until emaciation becomes one of the most prominent features of the complaint. There is corresponding loss of strength, with frequently muscular tremors, especially of the hands and tongue. Muscular or neuralgic pains in various parts of the body are often complained of. The digestion is impaired, usually with anorexia and gastralgia, and sometimes sickness. The tongue is generally furred, moist, and tremulous, and the bowels irregular; there is a metallic taste in the mouth, and the breath emits a disagreeable metallic odour. Symptoms indicative of catarrh of the air passages are common, particularly of laryngeal or pharyngeal origin—aphonia, dryness, or constriction of the throat, tickling cough, with expectoration and occasionally even hæmoptysis. Nervousness, faintness, profuse sweatings, and cold sensations are very troublesome features. The familiar indication of copper absorption, namely, a green line at the bases of the teeth, is present in all these cases; the sweat, too, may have a greenish tint, and this colour is sometimes very marked in the hoary hair of old workmen. These and the peculiar chlorotic-looking com-

plexion are all probably associated with the presence of salts of copper. Skin eruptions are sometimes produced either by the direct irritation of the brass dust on the skin, or by the irritative action of the sweat impregnated with copper salts. A remarkable thing about this disease is its resemblance, when first seen, to consumption. The appearance of the patient and his description of his symptoms are often sufficient almost to make one risk giving a diagnosis of phthisis, but on examination of the chest no lesion is discoverable, except occasionally a bronchial catarrh. Whenever one has reason to suspect phthisis without physical signs, occurring in an artisan, minute inquiry into the nature of his occupation should be made.

*Causation.*—Much difference of opinion has been expressed as to the ultimate cause of this disease. Some authorities blame the copper, others the zinc, while one (Lloyd, of Philadelphia) attributes the symptoms mainly to the impurities lead and arsenic, with possibly contributory assistance from the copper and zinc. This last view, I think, may be set aside as visionary. Even if the presence of lead and arsenic were coexistent with the cases of brass poisoning, the fact remains that the symptoms of brass poisoning are not the symptoms of lead or arsenic poisoning. To me it seems most probable that the copper is the offending ingredient, although possibly the zinc may have some additional influence.

Cases of ataxic neuritis or "pseudo-tabes" have been recorded as resulting from brass absorption, and it is possible that this rare condition may have been caused by the presence of arsenic, just as true cases of lead poisoning are sometimes found among workers in brass; but the symptoms of these are quite distinct, and are easily differentiated from the typical symptoms of brass poisoning.

Although the records of chronic poisoning among workers in unalloyed copper are very meagre, yet we see sufficient similarity in the symptoms to justify the hypothesis that the copper is the principal metal at fault in brass working. Whatever be the actual poison, it undoubtedly gains ingress into the body by the digestive and respiratory tracts, in the form of the fine dust which flies about in the workrooms and covers the floor and machinery. This dust is partly inhaled, setting up laryngeal, pharyngeal, and bronchial catarrh, ending possibly in fibrosis of the lungs, or passes into the stomach, causing gastric troubles. In the stomach the dust is acted upon by the gastric juice, which probably dissolves out part of the copper, yielding soluble salts which become absorbed and so lead to the general condition. It is evident that much of this noxious dust could be, and probably is, swallowed by taking food either in the workrooms or with unwashed hands.

*Treatment.*—There is one drug which, in my experience, exercises a remarkable influence on the condition which I have been endeavouring to describe. I refer to phosphorus. Whether pure phosphorus or phosphoric acid be given, the effect is uniformly efficacious. The former may be administered as the pharmacopœial pill of $\frac{1}{30}$ gr., while the acid may be given without any adjuvant beyond what may be necessary to colour and flavour it.

*Prophylaxis.*—For the prevention of brassfounders' ague "special rules" are enforced by the Chief Inspector of Factories. These rules apply only to the casting and mixing shops, and require that adequate means be provided for the escape of noxious fumes and dust, that the shops be cleaned down and limewashed every year, that the workpeople have every facility for personal cleanliness, and are prohibited from eating during the process of casting. It is to be regretted that similar rules are not applied to the other departments of brass working, where so much harm is derived from the inhalation of poisonous metallic dust.

More than a year ago I advocated the addition of brass poisoning to the list of diseases notifiable under Section XXIX of the Factory Act (1895), which includes anthrax, and lead, phosphorus, arsenic, and mercurial poisoning. I still think this would be advisable, especially if the application of the "special rules" were extended as suggested; but possibly there may be circumstances which render this impracticable. I think at least that measures should be taken to reduce the quantity of free dust in the workrooms to a minimum, to provide efficient ventilation, to enforce cleanliness on the part of the workers, and to prohibit eating in the workshops.

III.—H. D'ARCY ELLIS, L.R.C.P.,
Medical Officer of Health, Brierley Hill and Amblecote; Factory Surgeon, Stourbridge.

## GLASS POLISHING.

FLINT-GLASS polishing may be described as the final stage of glass-cutting. It is the glass-cutter who polishes the glass on which he has already cut various designs, and in this process of polishing he uses a mixture containing lead, which is known in the trade as "putty powder," and from the use of this powder cases of lead poisoning arise.

*History.*—The art of cutting glass is a much more modern invention than that of painting, staining, or colouring. I believe the credit of having invented the process belongs to one Caspar Lehmann, a cutter of iron and steel in the service of the Emperor Rudolphus II about the year 1609, Lehmann having secured an exclusive patent, prosecuted his invention with much success in the city of Prague. At the end of the seventeenth century a large trade was done in cut glass at Nuremberg. This glass was much admired for its lustre and brilliancy. The brilliancy was due to a polishing paste, which doubtless contained lead. Although there has been great improvement in method and style, the process has continued to be carried on on the same lines as introduced by Lehmann.

*Glass-cutting* at the present day is almost entirely in the hands of the manufacturer, who employs a large number of cutters in large workshops. This is so in the Stourbridge district at least. There are a few separate workshops, but even they employ from 20 to 30 cutters. There are no outworkers who cannot be placed under the strict rules of the factories. On entering a glass-cutting factory at the present day, you will observe two long lines of men, containing perhaps 20, on each side of the workshop, sitting behind various-sized wheels, which are worked by a steam pulley from a shaft which extends the whole length of the room. You will notice that the workman is pressing a glass vessel against the wheel, which is kept moist by dripping water; underneath the wheel is a large wooden box into which the workman frequently dips a wisp of straw to apply the sand and water (or other material used) which lies in this box, against the wheel. You will also note that the wheel always revolves away from the workman. By the workman's side is a small tub into which he dips his glass from time to time to note the progress of his work. The wheels are the cutting instruments. They are run at great speed and have their edges shaped according to the design, each workman requiring a large number of wheels. The materials used in the formation of these cutting instruments are iron, Yorkshire stone, and willow wood, representing the three principal processes of glass cutting.

1. *Roughing*, by the use of the iron wheel and sand.
2. *Cutting*, by the stone wheel, assisted by a constant flow of water.
3. *Polishing*, by the wooden wheel which is turned or trimmed to the section of the groove to be polished. This wheel is assisted by a mixture consisting of pumice powder, rotten stone and water to the consistence of a paste, the proportions being 3 parts of pumice to 1 part of rotten stone.

*Polishing.*—If the process of glass cutting and polishing stopped at this point we should hear very little of lead poisoning in connection with this occupation. To the inexperienced observer the polished surface at this stage looks very well, but unfortunately it lacks that lustre and brightness for which English cut glass is famed, and which the manufacturer considers essential to the success of his business. To obtain this additional lustre and brightness a mixture of lead and tin is used, and is known in the trade as "putty powder." The following is a good putty mixture:—Lead 112 lbs., tin 25 lbs., antimony 3 lbs., bismuth 2 to 3 ounces. The two latter ingredients are not often used. This mixture is put into a shallow iron pan over a bright fire. As it melts the top scum which forms is skimmed off, dried, pounded to a powder in an iron mortar, and afterwards run through a sieve. The person who does this work always suffers more or less. He usually protects himself by wearing a respirator—there is a good draught at the flue, and the sieve is enclosed in a box but there is always a certain amount of dust. This putty powder is used on the wooden wheel, much in the same way as the pumice mix-

ture, and is dabbed on as the wheel revolves. All good bold work can be polished in this way, and there is not much risk to the workman, as the speed at which the wheel revolves causes the mixture to cling and not fly about. This process does not answer for very fine cut work—so it is contended; and to enable this kind of work to be properly polished brushes made of bristles are used. They are mounted on an iron spindle, and are usually about 6 inches to 7 inches in diameter, with a face of 1 inch to 1½ inch broad. They are driven at a speed of about 2,000 revolutions a minute. The putty powder is applied to these brushes (which are of various sizes) in the same way as to the wooden wheel, that is, by dabbing it on. For smaller work, such as tumblers and wineglasses the workman applies the putty mixture himself, holding the glass against the brush with his right hand and using his left underneath to apply the mixture. Where, however, larger work has to be done which the workman cannot manage with one hand, the service of a boy is called in, who does what is called the "feeding up." This boy stands partly in front and partly at the side of the brush, and applies the mixture with one hand with the wisp of straw. In this position the boy gets splashed with the putty mixture which flies off the brush, and it is generally believed by the workman to be the most dangerous occupation. At one time—not very long ago—all the various processes of this work were done indiscriminately in the workshop, and consequently the men were frequently found working in a perfect haze of fine dust, which had been thrown off from the brushes. There was no attempt made to separate and detach the less injurious part of the work, such as roughing and cutting, from the general workshop, the lead polishing only occupying about one-fifth of the workmen's time. After the glass has been polished by the putty it is taken away to another department, where girls are employed as "wipers out." They take the glass with the dried putty upon it, dip it into a basin of water, and then wipe it dry. Some of these girls have been known to suffer from lead poisoning.

*Illustrative Cases.*—My attention was first directed to lead poisoning in my district in the year 1875. A young girl died after a few days' illness, with what appeared to have been "acute chorea." The death was certified as being due to bronchitis and convulsions. She was 20 years of age, and single. I ascertained that she was employed at a local glass works, and was in the habit of handling putty. She had had colic, and subsequently epileptic attacks. I have no doubt this was a case of lead poisoning, and at that time I would have published the case, but the gentleman who attended the patient disagreed with my view, and I had not seen her during life. Subsequently I came across other cases affecting the "central nervous system," all of whom were employed in the glass-cutting industry. I mentioned the subject several times in my annual report as medical officer of health, but at that time annual reports of the medical officer of health were given even less consideration than they are now. I also tried to get some support from the certifying surgeon, but he rather resented my interference, and gave me some grandmotherly advice about incurring the disapproval of the manufacturers. Cases of colic were quite frequent, and were regarded by the workmen as one of the necessary conditions of the trade, and often treated as "a joke." Gout was another prominent feature, occurring in the abstainer and the drinker alike, and often without any hereditary taint. Glass-cutters are not an intemperate class. Drop-wrist was frequently to be seen—in fact, there was hardly a workshop in the district in which cases of drop-wrist could not be found. They were all anæmic, and the albuminuric and prematurely aged were frequently met with. These are not yet things of the past, but there is considerable improvement.

I will now briefly relate a few of the cases I have met with:

T. A. began work at 13 in a glass-cutting shop. First attack of colic at 17; frequent attacks after this at intervals of about six months, and at 23 another very severe attack, with asthma and albumen in the urine. At 27 he had neuro-retinitis, pulmonary œdema, albumen, and paralysis of the extensors. This case was regarded as hopeless. He gave up his occupation as a glass-cutter, and, after a long course of treatment by baths, electricity, and iodide of potassium, he gradually recovered, and in 1879 was appointed school officer—a position he has held ever since. He is now 50 years of age, and is in excellent health. The wrist-drop did not entirely leave him for seven or eight years. His sight is now very good. He has always been of very abstemious habits.

C. F., now aged 54, precisely similar history: suffered badly from colic and gout, with profound anæmia, also withdrew from the glass-cutting shop; was eventually appointed a school attendance officer, and is now in very good health. He had always been an abstemious man, and there is no history of gout in his family.

F. D. began work at 13. First attack of colic at 24; at 26 very severe attack, with cerebral symptoms. No albumen, no sugar. He rested three months. Shortly after returning to work the cerebral symptoms increased, and in a condition of acute mania he was removed to an asylum, where he was detained seven weeks. After another prolonged rest he returned to his work, and remained at it for six years. During this period he had slight attacks of colic, and frequent headaches and vomiting, but continued at his work, and refused to give it up. In May, 1897, after working at the trade nineteen years, he had double optic neuritis, and by the end of September he was totally blind, and remains so. He had also at this period muscular tremors and "drop wrist." There was never albumen or sugar, and no family history of insanity. He now keeps a small furniture shop, and is in excellent health.

I think these three cases afford a good illustration of how much good may often be done by simple withdrawal from the "lead influence." On the other hand, I could relate some half-dozen cases which have ended fatally at a comparatively early age, and which from force of circumstances or obstinate indifference refused to withdraw. One case, not intemperate, which ended in saturnine pseudo-paralysis, detention in an asylum, and death; several others with repeated attacks of colic, gout, albuminuria, ending in cerebral hæmorrhage and death; two cases in which the only symptom was epileptic seizures, followed by cerebral hæmorrhage and death. All of these cases, to my own personal knowledge, were advised to withdraw, but were unable to do so. As further evidence of the liability of glass-cutters to lead poisoning, there are some figures which I have obtained from the Glass-cutters' Society, a society which makes superannuation grants to men over 55 years of age and who are unable to continue their employment. During the past five years the applicants numbered 84, and of these 29 may be attributed to lead poisoning, as ascertained by examining the medical certificates. They come under the following: Defective sight, 10; albuminuria, 6; gout and albuminuria, 2; lead, 7; paralysis, 4.

*Preventive Measures.*—It is a serious thing to advise a man to give up the only trade by which he can earn his living. Serious for the employee and the employer. He may be, and often is, one of the most skilled and best workmen, and his chances of earning a living at any other occupation are extremely small. The isolation of every susceptible worker is an extreme remedy which would be strongly resented. The obvious remedy is to find the minimum of risk and endeavour to enforce its application. With the employer there will be no great difficulty, but it is difficult to get the workman to make proper use of the opportunities offered to him for his own protection.

*Benefit from Legislation already in Operation.*—The Notification Act, 1895, which came into operation in 1896, and includes lead poisoning, has given better opportunities for proper investigation and better management. Not the least of its advantage being that the certifying surgeon and factory inspector visit the workshops more frequently and can use their influence towards improved regulations. The new putty polishing frames with fans were, I believe, first introduced at Messrs. Oslers, Birmingham, in the year 1889. They are not compulsory. Since 1899 through the influence of the factory inspector they have been introduced into all the Stourbridge factories. These frames are shaped like a pyramid, the workman has his putty box, spindle and brush at the open base, where he sits, and at the apex which goes through the external wall is the extracting fan, which removes all dust from the workman and prevents splashing on his clothing. The feeding-up boy stands at the side and feeds up through a hole in the frame large enough to admit his arm. Another great advantage is that this work is now done in a separate part of the workshop—at one end—or as in a few places, in a separate compartment. No cloud of putty dust is now to be seen floating about the workshops and the general aspect of the workers is much improved. The cases of lead poisoning have also diminished. Dr. Legge gives me the following number of cases of lead poisoning returned in glass polishing: 1897, 23; 1898, 19; 1899, 8; 1900, 7. But these are of course, the chronic cases, and if these are left out the result is practically *nil*. According to Dr. Legge 76.5 per cent. of the cases reported are "chronic."

### Substitutes for Putty Powder.

*Rouge and Oxide of Tin.*—The former is used for polishing plate glass, neither of these substitutes have succeeded in

giving the final lustre or brilliancy which is said to be necessary, and the polish they do give, besides being inferior, does not last.

*Hydrofluoric Acid*, with a small quantity of sulphuric acid added, this process is now being used here and in the United States. Lightly cut and engraved glass polished by this process comes out bright and clean, and appears likely to rival putty polished glass.

*Brushing.*—In some of the cutting shops in the United States brush polishing has been entirely dispensed with. They insist that the workman shall polish and finish off his work entirely on the wood wheel, and when this cannot be done on plain or concave surfaces, a "bole" or wheel made of light felt is used. This plan is said to have been followed by a rapid diminution in the number of cases of lead poisoning.

### CAN ANYTHING MORE BE DONE?

On this point I think greater attention to detail is all that is needed, such as personal cleanliness, ventilation, and tidiness in the workshops.

It would be an improvement to have a separate room adjoining the workshop in which the frames and fans could be placed. The washbasins should be of glazed ware, with a constant flow of water and a discharge plug. They should be placed in a convenient position adjoining the frames. This is not always so now; a tub is placed by the side of the workman to dip the glass in as he proceeds with his work. A glazed sink, with a constant water supply and discharge plug would be better. A separate apron should be worn at the putty frames and taken off when that work is finished. Roller towels should be provided. The towel is often mislaid and the workman wipes his hands on his apron. A weekly register of cases of sickness would be useful. The workshops are necessarily somewhat overcrowded by machinery: they should be swept, cleaned, and limewashed at regular intervals, and no lumber, such as crates, should be permitted.

In many cases some better system of warming and ventilation is needed. In cold weather fresh air is rigidly excluded and down-draughts are complained of. I do not think periodical inspection by the certifying surgeon is necessary—at least, not at short periods.

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## IV.—ALEXANDER SCOTT, M.D.,

Certifying Surgeon, Glasgow, Assistant-Physician Glasgow Royal Infirmary.

### RAILWAY WORK.

DR. SCOTT congratulated Dr. Legge on his interesting paper, and at the same time urged the necessity of closer safeguards for those engaged in dangerous occupations. At the usual periodic examination, a workman suffering from, say, chronic lead poisoning might absent himself, the reason given being that he had some slight ailment, such as a sprained ankle or a common cold, especially when a knowledge of the true nature of his illness might lead to his suspension or dismissal. Now, he held that to obtain the very best results the certifying surgeon must be held responsible for the prevention of all such diseases, and that he not only visit the workers at the factory, but if necessary at their homes. He also thought that in reporting cases of poisoning in these occupations, the certifying surgeon should not be limited in his investigation to his own district, and this was brought forcibly to his mind some time ago in reporting a case of anthrax on which he wrote a paper in the BRITISH MEDICAL JOURNAL of July 20th. In it he suggested certain precautions for the prevention of that disease in horsehair factories, and Dr. Legge had just informed him that in a certain detail these were impracticable. Now, he was convinced that had he been allowed to visit the factory to which these germs were traced that error might have been avoided. To the list of dangerous occupations he would venture to add another, that of railway servants. The neuroses of railway servants was an alarming phase of the dangerous character of this occupation. Many accidents, the majority of accidents in fact, were due to the nervous tension at which they were kept while performing their duties, and only a limited number of men were so constituted as to withstand this. In proof of this he would refer to several cases, the majority of which had come under his personal observation, and allow them to draw their own conclusions.

A man who had been a stoker was promoted to the position of engine-driver. This man some time after came and consulted him with all the symptoms of apparent atonic dyspepsia. All the usual remedies failed to relieve him, and in consequence he sent him to a consulting physician, who was also unsuccessful. Then the unfortunate man went through the whole course of quacks in the town and without success. It was only after a big smash on the railway on which the man was dismissed that he finally got quite well. It was then evident that the man had simply been suffering from nervous tension. He had been well ever since.

Here was another case. A patient came to consult him at the Royal Infirmary with symptoms of headache, general *malaise*, and insomnia. The man had come from the north of Scotland, where he had acted as a ploughman. He became a railway servant, and after a time a signalman. Here the nervous tension was so great that it brought on the symptoms he had described, although there passed his cabin only 120 passenger trains in eight hours. He (Dr. Scott) wrote to the manager pointing out his incapacity for such service, and the man ultimately recovered, and was now an excellent workman, but not a signalman. In another case a signalman was found on the floor of his cabin writhing in convulsions. When consciousness returned, he explained that he never entered his signal box without feeling he was on the brink of a precipice, and that some day a disaster would occur. His next case was that of a signalman who had been previously healthy, and who suddenly developed acute mania, from which he died in the course of three months. On careful inquiry, there was no family history of neurotic diseases. Dr. Scott next referred to the comparatively recent Slough railway disaster. At the inquest on the bodies of three of the passengers who were killed, the man Woodman declared that he did not know how it was he had run past the danger signal. He had simply lost his head, and the jury found that he had had for the moment an aberration of mind. Yet the man had conveyed over the rails some 150 millions of passengers without making a single mistake.

Turning to the question of driving electric cars, Dr. Scott stated that in Glasgow a man who had been used to driving horses was put on to drive an electric vehicle. He caused a smash, and one man was killed and several were injured. At the trial it was brought out that he had been in an extremely excitable condition throughout the day, and yet it was proved to the hilt that he had not tasted intoxicating drink that day; it was merely a case of nervous tension. When we remembered that last year there were no fewer than 1,325 fatal accidents and 19,572 persons injured on railways, he thought it was time to consider whether more attention should not be given to the temperament and general health of those engaged on railways. Our lives and our comforts largely depended on this. It was lamentable that the medical apart from the surgical aspect was so little represented at inquiries into the causes of railway accidents.

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## V.—W. F. DEARDEN, M.R.C.S., L.R.C.P.Lond., D.P.H.Viet.,

Certifying Surgeon, Harpurhey District of Manchester.

### THE CAUSATION OF PHOSPHORUS NECROSIS.

MR. DEARDEN said: The lucifer match as we know it first came to light in the year 1833, and is therefore quite an attendant on modern civilisation. The departure of the flint and steel, however, has had its disadvantages, for, though the successor be one of the most useful domestic appliances ever invented, it cannot be said to have come amongst us as an altogether unmixed blessing. On the Continent, and particularly in Denmark and Sweden, exception has been taken to the lucifer on account of the many fires arising from carelessness in its handling, the occurrence of cases of poisoning from its misuse, and the dangerous practice of utilising its business end as a means of bringing on abortion.

The great danger, however, which is intimately associated with this popular agent for the production of light and heat is rife only during the process of manufacture, but it is to this that the main attention of both Continental and home experts has been directed during the past few years. I refer to that necrotic condition of the jawbone which is vulgarly known in "the trade" as "phossy jaw."

The first authentic cases of this disease were reported by Lorinser, of Vienna, who, between the years 1839 and 1845, came across no fewer than 9 instances. It is, however, to Dr.—now Sir Samuel—Wilks that we credit the discovery of the occurrence of phosphorus necrosis in this country, he having noted a case of this character just over fifty years ago.

In the light of present knowledge that older workers are mainly the ones to suffer, coupled with the fact the industry has been one to increase at a greater pace during later years, it could not be expected that many cases would arise during the earlier period of the manufacture. During the last 20 years, however, it is known that 102 definite cases of phosphorus necrosis have occurred in this country. The 1897 report of the Chief Inspector of Factories and Workshops gives the number of persons employed in the match-making industry as 4,311, and of these 1,100 were occupied at processes directly associated with phosphorus.

Though the proportion of those suffering from this disease to the number occupied at phosphorus processes does not appear very large, when one comes to consider the severe nature of the affection there is little wonder that the authorities have found it necessary to step in and deal with the subject from a legislative point of view. Both in England and on the Continent the last ten years have been marked by a greatly increased and much-to-be appreciated activity in this direction. The scanty provisions of the Factory Act of 1878 regulating this trade were greatly extended in 1892, when the manufacture of yellow phosphorus matches was certified as a dangerous trade, and special rules for regulating it were published. As the result of a special report[1] by Professor Thorpe, Dr. Oliver, and Dr. Cunningham on the use of phosphorus in the manufacture of lucifer matches, which was published in February of 1899 a more stringent set of rules was drawn up, but as every manufacturer, excepting one, objected to their adoption the matter was referred to arbitration, with the result that an amended and acceptable set of regulations was enabled to be published in March of last year. It is not my purpose in this paper to criticise these rules or to prophesy as to their working and effects, but we can be certain that the departure of the small manufacturer, the centralisation in large and more modern buildings with the attendant increase of available capital, the employment of machinery for practically every process, and the increased perfection of mechanical ventilation will all prove very important aids to the efficient carrying out of their provisions.

The advent of the Swedish safety match in 1855 as a result of von Schrötter's discovery of amorphous phosphorus only concerns this subject in so far as its replacement of the "strike anywhere" variety has had effect in a corresponding diminution in the manufacture of the yellow variety, and therefore a lessening of the danger of disease.

It might also be noted that necrosis of the jaw has been known to occur in connection with the manufacture of yellow phosphorus itself and in certain processes in which this element is utilised as in making phosphor-bronze and the old-time vermin killer.

Leaving out of special account wax vestas, parlour matches, and vesuvians, which are only modifications of the strike-anywhere match, there are two varieties with we we are particularly concerned, the English or paraffin-dipped match and the Belgian or sulphur-dipped match. The latter is in great demand on the Continent among the agricultural class and lower orders generally, is popularly termed "*stinksoteckje*," and its reputation does not belie its name, as English visitors abroad know to their cost. I specially distinguish these two classes, as the fulminating composition of the former only contains about 5 per cent. of yellow phosphorus, whilst that of the latter commonly contains as much as 30 per cent., the obvious inference being that the relative danger in the manufacturing processes must obtain in like proportion. Before receiving the phosphorus composition the wooden splints receive their preliminary dipping into melted paraffin wax or sulphur, as the case may be, in order to enable the wood to catch fire. The dangerous parts of the processes necessary to turn out the perfect article are the mixing of the paste and the dipping, drying, and boxing of the matches.

The paste is usually a mixture of glue, chlorate of potash, red lead, powdered glass, and yellow phosphorus, with a sufficiency of water, and is, or should be, made in a steam jacketed pan with a removable lid provided with a ventilating tube.

The dipping is done by placing by means of a special machine about 4,000 wooden splints in a frame and pressing the ends on to the composition spread out on a heated slab. The splints are separated from one another by a narrow space, and are mostly double dipped, that is to say, first on one end and then the other. After the first dipping a common practice is to place the frames on one side for the composition to set before the second takes place.

The drying is effected by placing the frames on racks in a heated chamber, and when this is complete the frames are taken out and unclamped and the matches placed ready for the "boxer."

The boxing is done by girls and women standing at long benches on which the boxes and matches are placed ready. A boxer seizes hold of a bundle of matches sufficient to fill two boxes, cuts the splints through the middle by means of a sharp knife, which is either free or fixed to a hinge and swivel, and crams the two halves into their respective compartments. The filled boxes are then placed in a suitable room to undergo a little more drying. If the matches are too dry when being cut, the friction taking place during this process causes them to fire, enveloping the operator and her neighbours in dense white fumes, presumably of phosphoric oxide.

The dangerous factor in the processes is the giving off from the moist heated paste in the three first-named departments, and from the somewhat moist heads of the matches when in a "proper" condition for cutting and boxing, of fumes of the lower oxide of phosphorus ($P_4O_6$). This mixes with the saliva in the mouth, and is also inhaled direct into the lungs. The soiling of the hands and clothes with the paste also constitutes somewhat of a danger.

The frequent firing during the cutting and boxing process resulting in the formation of phosphoric oxide must also exert a deleterious influence, though I share the common belief that this is only in a minor degree.

There are two opinions as to how these fumes exert their evil office, one being that the influence is purely local, the other that the disease occurs as a local manifestation of a general disturbance of the system. Nearly all observers adhere to one theory or the other solely. I can find very few ready to adopt the more commercial method of "splitting the difference" and acknowledging that there is something to be said on both sides, but among these one is pleased to find that Lorinser, the first to write on the subject at all, occupies a prominent place. Lorinser was of the opinion that the blood became surcharged with phosphorus, which in turn had an affinity for bone and as a consequence weakened the resisting power of this tissue to local injury—this local injury in the case of the jawbone being supplied through the medium of a carious tooth. I quite agree with Lorinser and will endeavour to show why. The great argument in favour of the purely local theory is that there never occurs a case of phosphorus necrosis of the jaw without the sufferer being primarily possessed of carious teeth, or having had the jawbone exposed through an extraction. The irritating action of the phosphorus fumes on the exposed tooth pulp or jawbone setting up a periostitis or periodontitis, followed by suppuration, being held to be the actual cause. There being no particular evidence of any special cachexia occurring in match-makers, and the fact that this necrotic condition is not preceded by any well marked general symptoms are advanced as proofs against the opposition theory.

The former argument simply proves the possession of carious teeth to be a necessary factor in exciting the acute local condition, and the latter does not hold good against a contention that the systematic condition is one which injuriously affects bony tissue only.

The arguments against the local theory as the sole explanation are sundry and powerful. It is well known that this particular necrosis does not occur until the worker has been some, and mostly many, years at this employment, though

[1] Report to the Secretary of State for Home Affairs on Occurrence of Phosphorus Necrosis amongst Workers in Lucifer Match Factories. 1899.

no immunity exists against caries, toothache, and abscess during the earlier years. It is also well known that cases have occurred which have had their commencement several years after the sufferers have left the match trade.

In galvanising works, the men are much exposed to the fumes of hydrochloric acid and their teeth suffer to a great extent in consequence. They get toothache, periostitis, and abscess, but although the fumes of this acid are remarkably irritating in character, these symptoms are not followed by necrosis.

The important experiments made quite recently by Professor von Stubenrauch,[2] of Munich, tend, in a marked manner to disprove the sufficiency of the local irritating action of phosphorus or its lower oxides alone to produce this destruction of bone. Filling holes drilled into the jawbones of dogs, with phosphorus and plugging with cement caused no necrotic changes. Dogs, rabbits, and guinea-pigs, some with wounds on the facial side of the jaw and on the cranium, and some without, were exposed for three or four months to the action of phosphorus fumes without effect. Only when the wound was kept open artificially was there anything approaching necrosis produced, this being quite superficial and limited to the area of the wound. No effect was produced on a dog with a drilled tooth after four months' exposure to phosphorus fumes, and when the opening was subsequently inoculated with a culture of staphylococcus pyogenes aureus, though extensive suppuration with osteophytic formation took place, no sequestration resulted. A similar experiment with a drilled tibia showed the same results. Check experiments were made with unexposed healthy animals with like effects. Not to be beaten, he kept dogs, with and without exposed jawbone, for some months in the drying room of a match works, but got no necrosis in the end. He denies entirely the justness of the conclusions arrived at by Wegner[3] as the result of similar experiments, and states most definitely his opinion that phosphorus fumes exert no specific action on exposed bone or periosteum. He insists on a primary infection of the tissues as a necessary condition, and places the local irritation as the actual exciting cause in a secondary position.

The above arguments all constitute presumptive evidence of the existence of some systematic predisposing influence as a necessary adjunct to the local excitation. Have we any positive evidence of a more general action exerted by phosphorus on the tissues? I think so.

The quantity of phosphorus absorbed through the skin must be very small, and the stomach, through the swallowing of saliva or accidental contamination of food, cannot take in a great quantity but it is perfectly evident that, in the course of years, a comparatively large amount of the fumes must be inhaled into the lungs, and that phosphorus or some combination of this drug must by this means get into the circulation to a considerable extent. I have repeatedly noticed the characteristic odour in the breath of girls several days after I have found it necessary to suspend them from work under the operation of the special rules. The condition brought about by this mild saturation of the system with some compound of phosphorus and which predisposes to necrosis of the jaw is one which, in my opinion, influences bone tissue generally and is chemical in its nature.

In the BRITISH MEDICAL JOURNAL,[4] of July 29th, 1899, I drew attention to the comparative frequency of the occurrence of spontaneous fractures of the long bones in match-makers of many years standing, and described two typical cases occurring in my own practice. I pointed out how this brittle state of the bone could account, in some degree, for the low resisting power of the jaw to local inflammatory injury, and published my analyses of match-makers' bone and healthy bone to show the distinct difference in the relative proportions of phosphoric acid to lime in the two classes of samples. Since publishing this I have been able to obtain the excised portion of a "phossy" jaw, and find, on estimation of the ash, that it shows the same distinct chemical differences. Last year Professor von Stubenrauch[5] published an excellent paper on the influence of phosphorus on growing bone. He confirms Wegner's previous results on fowls fed with phosphorus, showing how, in place of the ordinary cancellous bone, a denser variety is formed, and how the medullary cavity of the long bones gets almost blocked by excessive formative action.

With human beings he seeks aid from the Roentgen rays, and cites cases of workers from early years who show distinctly a strong shadow formation at the epiphyseal lines of certain bones. His conclusion is that bone formed in young people working at phosphorus processes during the growing period is much denser in character than it would otherwise be.

I believe it to be quite a rational conclusion to arrive at that the excess of phosphorus in younger people would be utilised in the formation of a denser variety of bone, and that in older people it would seek combination with the pre-existing neutral phosphate of lime to form a slightly acid phosphate.

It must, therefore, be concluded that certain changes do take place in bone tissue as the result of the constant inhalation of phosphorus fumes, and that it is much more reasonable to account for the occurrence of phossy jaw by local irritation through a carious tooth acting on bone already damaged as the result of a general infection.

The methods of prevention can be divided into radical and hygienic, the latter being subdivided into general and personal.

The radical methods are:

1. Total prohibition of the use of yellow phosphorus in the manufacture of matches, this being quite effectual for countries which have no export trade in this commodity, Denmark being the example.

2. The fixing of a prohibitive duty on the production of the strike-anywhere variety in order to stimulate the use of the safety match, as obtains in Russia.

3. The French system of converting the whole industry into a State monopoly, and therefore getting perfect control.

The adoption of effectual hygienic methods depends upon a proper appreciation of the two factors in causation of the malady. The principle upon which all general precautions must be based aims at a minimum exposure of the worker to the fumes, thus preventing the general infection of the system, personal hygiene mainly aiming at the prevention of local irritation by producing as perfect a condition of the teeth as possible.

The first is arrived at by drawing away all fumes from the worker at the various dangerous processes by means of efficient extraction fans; by the introduction of machinery preventing close contact with the work; the periodical changing to a non-dangerous department; by effectual separation of the different processes, and thorough cleanliness of the whole place. The saturation of the air with turpentine vapour is also supposed to have an excellent neutralising effect on the fumes themselves.

The second is obtained by providing for inspection of the teeth by a dentist and the removal of any defects presenting themselves, medical examination for the detection of commencing disease or a predisposition to contract such, adequate provision for personal cleanliness, and the arranging of accommodation for the taking of meals away from the rooms where dangerous processes are in operation.

These principles of prevention can be elaborated upon to a great extent. I, however, have perforce to satisfy myself by giving the headlines. I would nevertheless express the opinion that, however good these hygienic precautions may be in themselves without an efficient supervision of the trade and the enforcing of rules and regulations, they would be only too likely to fall short of their desired result.

In conclusion, I must acknowledge the valuable assistance which I have derived, when compiling this paper, from the Home Office report before referred to, and at the same time express my indebtedness to Professor von Stubenrauch for his kindness in supplying me with copies of his three valuable publications on the subject.

[2] *Archiv für klinische Chirurgie*, vol. lix., p. 2, 1899.
[3] *Virchow's Archiv.*, 1870, vol. 55.
[4] Fragilitas Ossium amongst Workers in Lucifer Match Factories.
[5] Gesellschaft für Morphologie und Physiologie in München.

VI.—GEORGE REID, M.D., D.P.H.,
Medical Officer of Health, Staffordshire County Council.

## INFANT MORTALITY AND THE EMPLOYMENT OF MARRIED WOMEN IN FACTORIES.

DR. REID said: Among the factors which are responsible for the continued high rate of infant mortality throughout the

country, notwithstanding the steady decline in the general death-rate coincident with, and, no doubt, mainly attributable to, sanitary progress, a prominent place must be given to ignorance on the part of mothers regarding the essentials of infants' diet. If by some means the simple fact could be brought home to mothers that milk, and preferably human milk, is the only permissible diet for infants, no doubt the natural instincts of motherhood would prevail in the majority of cases, and thousands of otherwise healthy infants who do not now survive the first few months of life would reach an age when greater licence in diet is permissible and the chances of living are very much increased.

Some years ago, Dr. Hope of Liverpool conducted an inquiry in order to determine the relative mortality from diarrhœa among infants of artisan parents classified as follows: First, the entirely breast-fed; secondly, those fed partly on breast milk and partly on artificial food; and, thirdly, the entirely artificially fed. He found that for every death from diarrhœa which occurred among breast-fed infants under 3 months old, 15 occurred among those of the mixed class, and that for every death from the same cause among the breast-fed and mixed class combined, 22 occurred among the entirely artificially fed.

I might quote other observers who have paid special attention to this subject, and whose conclusions bear out those of Dr. Hope, but it is needless to occupy the time of such a meeting as this in multiplying proofs of a fact which is generally recognised. Of course it does not follow that artificial feeding, *per se*, is necessarily responsible for the enormously increased fatality. It is the prevailing ignorance among parents regarding the fact that there is only one admissible substitute for mothers' milk, and that certain simple though all-important conditions have to be observed in its administration which lead to such disastrous consequences. To attempt to educate the present race of mothers is a hopeless task. The Mother Gamp influence is still far too potent to succumb even to an army of lady visitors, or sheaves of official memoranda as to how infants should be fed. One has only to observe the incredulous smile with which mothers receive the advice in order to realise how hopeless such efforts are. The only means by which we can hope to make any headway in breaking down the existing ignorance is to begin with the rising generation. We must go on striving to secure the introduction of the teaching of health principles in our elementary schools. Surely such teaching, to say the least of it, would serve as well as an exercise of memory (for that is the only function it can serve) as the sing-song daily repetition of the names, populations, localities, and industries of endless insignificant villages and hamlets along our coasts. Such health teaching, if judiciously imparted, might, at least in a few instances, survive school life, and thus a nucleus of valuable knowledge possessed by mothers here and there would bear fruit even among some untaught mothers, and in time, with a continuation of the instruction in schools, the race of artisan mothers, as a whole, would be forced to acknowledge the wisdom of the teaching.

Bearing in mind how enormous the mortality is among entirely artificially-fed infants, and having regard to the fact that in some artisan towns the relative proportion of that class of infants is considerably increased owing to the staple trade affording occupation for women in large numbers, does it not follow as a natural consequence—high though the infant death-rate is in all artisan towns, from other causes—that it will be still further increased by disturbing what may be termed the present normal ratio between the wholly or partially breast-fed class and the wholly artificially-fed class?

Some years ago, when I first had occasion to inquire into the mortality returns of the County of Stafford, I was greatly impressed at finding a very marked difference in the infant mortality-rate of the northern and southern towns. In that county the mass of the artisan population is grouped together in adjoining populous towns at the extreme north and south, the intervening area being mainly rural. The northern and southern towns, however, differ in one important respect—while in the former the trade is chiefly potting, in which large numbers of married women are engaged, in the latter the population is mainly employed in coal mines and iron works, industries which do not admit of the employment of women. From a sanitary point of view, both groups of towns may be said to be identical, and in this respect there are, apparently, no influences in operation in the one group or the other which could in any way account for the striking difference in the rate of infant mortality.

This being the case, it occurred to me that the probable cause of the diversity in the rates of mortality among infants in the northern and southern groups of towns was to be found in the relative proportion of married women engaged in factory labour in each group.

In order to test the accuracy of this conclusion, I determined to classify the artisan towns, not according to their geographical position, but, as far as possible, according to the relative proportion of women workers. Although, roughly speaking, the subdivisions of north and south answered my purpose fairly well in this respect, in some of the northern towns women were not largely engaged in factories, and *vice versâ*, in the south, there were a few exceptions to the general rule as to the absence of facilities for factory labour among women.

With the help, then, of the district medical officers of health, and from information supplied by manufacturers regarding the number of married women workers, I was able to classify the purely artisan towns in the county into three groups, as follows:

1. Many married women workers.
2. A good number of married women workers.
3. Practically no married women workers.

Having arrived at this classification, I was able to work out the infant mortality-rate in the three groups of towns for a period of ten years, when I found that the diversity in the rate based merely upon the geographical division was intensified, and that there was a very marked gradation in the rate which accorded with the relative proportion of married women workers.

Since my first inquiry I have continued to classify the figures on the same lines annually, and I now have records covering a period of 20 years, and relating to a population of upwards of 529,000.

Granting, then, that care has been exercised in the classification of the towns according to the number of married women workers, and that in other respects they do not differ, one may fairly claim that records from such a large population and for so long a period may legitimately be used, from a statistical point of view, in support of my argument.

Let me now call your attention to the statistics in question, which I have arranged in the form of a table.

*Deaths in Children under 1 Year per 1,000 Births in Three Classes of Artisan Towns in Staffordshire.*

| | Class I. Many Women engaged in Work. | Class II. Fewer Women engaged in Work. | Class III. Practically no Women engaged in Work. |
|---|---|---|---|
| Population, 1901 census ... | 147,281 | 198,955 | 182,864 |
| 10 years, 1881-90 ... ... | 195 | 166 | 152 |
| 10 years, 1891-1900 ... ... | 211 | 177 | 167 |

These figures speak for themselves, and it will be noticed that while there has been a general increase in the infant death-rate in recent years, practically the same relative proportion has been maintained in the three groups of towns.

As the outcome of a paper I read before this Section at the annual meeting at Nottingham in 1892, the question was taken up by the Parliamentary Bills Committee, and, in order to test the accuracy of my conclusions, that Committee conducted a special inquiry throughout England on similar lines to the Staffordshire inquiry. Returns were thus obtained from a large number of artisan towns, and, without going into particulars regarding the results, I may state that they bore out in a striking manner the conclusions I had arrived at. Upon this, efforts were made to induce the Home Office to take the matter up with a view to some legislative remedy being devised, and an influential deputation was received by Mr. Asquith, the then Home Secretary. Here, how-

ever, the matter ended, and we are in the same position now as then.

The question is, What remedy can be suggested pending the time, which must come sooner or later, when far more extended benefits will follow the general introduction of the teaching of elementary hygiene in schools? If I have interpreted my figures correctly, we have to devise means for wiping out an increase in the infant mortality from this special cause of nearly 27 cent. in those artisan towns in which married women are largely engaged in factory labour. If this could be accomplished, the saving in infant life would be enormous, even allowing that, meanwhile, every other adverse influence continues to operate; in Staffordshire alone, for example, it would amount to a saving of at least 300 infant lives annually.

Now it is perfectly true that we cannot legislate as to how mothers shall feed their children, but surely we may reasonably expect the State to exercise some control in the case of those mothers who, sometimes from necessity, but more frequently from inclination, neglect their home duties and go to work in factories. Would it be unreasonable to make it a condition in such cases that the child shall, during the absence of the mother, be placed under such care as shall afford a reasonable prospect of its wants being provided for?

Even the present law imposes certain restrictions, but these, in effect, benefit the mother rather than the child. It is illegal for the mother to return to work within one month of her confinement, but it is hardly likely that she will commence suckling her child if she intends to engage in work again after so short a period. One remedy I would suggest, then, is the extension of this time limit to three months. The probability is that the mother in most cases would then suckle her child until she returned to work, and thus the most precarious period in the life of the child would be tided over, and the chances of subsequent survival would be considerably increased.

More than this, however, is desirable, although it is not so easily accomplished. Mothers who at the end of the three months' period select to return to work, should be required to show that satisfactory provision has been made for the care of their infants. Under existing circumstances, this, I think, can only be effected by the establishment of *crèches* by local authorities, and to allow of this an enabling (adoptive if need be) Act should be passed. Such institutions might be made almost self-supporting, for a sufficient charge to cover all expenses would be made in the case of those parents whose joint earnings allowed of its payment. Under present conditions payment is made, in most cases probably, to persons who profess to take charge of the infants, and if an increased payment was made to an institution under public control, the infants would be properly looked after and fed.

In a certain number of cases, no doubt, the whole or a portion of the charge would have to be defrayed out of the rates, but in the vast majority of cases no such help would be called for. As a rule the wife, usually from choice, but sometimes because of the improvident habits of the husband, goes to work while, at the same time, the latter is earning good wages. In Lancashire it is common for a man to receive 25s. a week, while his wife earns from 15s. to 20s., and in Staffordshire, when the potting trade is ordinarily prosperous, the weekly wages of a man and his wife amount to 30s. and 12s. respectively. These figures represent a fair average, but many of the men workers earn higher wages.

I would point out that this is not wholly a humanitarian question, but that in the face of the steady decline in the birth-rate of this country during recent years it may assume, if it has not already assumed, a serious economic aspect.

VII.—C. A. GREAVES, M.B., LL.B.,

Consulting Physician, Derbyshire Royal Infirmary; Medical Officer under Factory Acts for Derby, etc.

### PLUMBISM CASES IN CARRIAGE WORKS.

DR GREAVES said: During the two complete years (1899-1900) which have elapsed since the notifying of lead poisoning has been compulsory under the Factory Acts, I have had to report on a total of 60 such cases, of which 37 occurred in 1899 and 23 in 1900. Of this total 42, or exactly 70 per cent., happened in carriage-building works, and in practically every instance in the carriage and van department of the Midland Railway Company. The very large number of hands employed by the Midland Company in building and repairing their rolling stock accounts for the large preponderance of these cases. It is satisfactory, and probably due to the increased attention now directed to preventive measures, that the number of cases in 1900 was less by one-third than the record for 1899, and it is probable that the present year will show an even greater improvement. It is, *primâ facie*, rather remarkable that, of the 42 cases, 14 were workmen not employed in the paint-shops, but working as coach-body makers. This is, however, explicable by the fact that these men use a good deal of paint for coating the parts of their wood-work which will be in apposition, as well as a certain amount of white lead for filling in crevices and other purposes. Probably, also, in some ways these workers have been less careful as to precautions than the regular painters. Facilities for washing the hands before meals are now provided by the company. I find that most of the men pay attention to cleaning the hands, but the majority of the middle-aged workers who have had plumbic troubles seem to have been negligent as to the use of the toothbrush; their teeth are usually very bad, and the gums ragged and unhealthy, with marked blue lines. A point which I consider of importance is the advisability of clearing the nasal passages by blowing the nose well before meals, as I have found reason to believe that those who have to burn off old paint are liable to take in a good deal of volatilised lead in the fumes and dust which they inhale. It may be worth while to mention a fallacy which may be harmful, in an impression that prevails that lemonade is a good preventive of plumbism; this arises from the fact that a drink containing dilute sulphuric acid (which is really useful from forming a sulphate of lead that is insoluble) has been foolishly called "lemonade," whereas real lemonade, in which citric acid is the chief ingredient, would be useless, because citrate of lead is fairly soluble. I have seen a few cases (one in the carriage works) for which I was unprepared, namely, in brass-finishers. I believe these are traceable to the filing of soft-brass castings, in the composition of which as much as 5 per cent. of lead has been found to be introduced. Finally, I may say that the morbid effects I have noted comprise colic and constipation (almost always), bad teeth and gums, neuritis and paresis, anæmia, hæmaturia, and rheumatoid troubles.

#### REPLY.

Dr. LEGGE in reply merely stated that he thought much good had been done by the Section in securing such a number of valuable papers upon occupational diseases.

#### RESOLUTIONS.

Dr. CHALMERS (Glasgow) then moved, and Dr. REID (Staffordshire) seconded, the following resolutions to be forwarded to the Council of the Association, which were carried unanimously:

1. That this Section expresses its satisfaction with the provisions in the Factory and Workshop Bill now before Parliament, which requires the medical officer of health of every district council in his annual report to them, to report specifically on the administration of the Factory and Workshops Act, and to send a copy of his report to the Secretary of State for the Home Department.

2. That inasmuch as notice has been given of amendment of the provision referred to, the effect of the amendment being to put the duty on other officers than the medical officers of health, and inasmuch as such reports will deal with questions affecting the health of the workers, the Section recommends the Association to adopt the above resolution, and to communicate it to the Secretary of State for the Home Department.

## PORT SANITARY ADMINISTRATION AND THE CONTROL OF PLAGUE, IN THE PORT OF BOMBAY.

By P. TARGETT ADAMS, M.R.C.S., D.P.H.,

Late Assistant Port Health Officer of Bombay.

PLAGUE has been present in an epidemic form in Bombay and its environs since 1896, and it speaks well for the care which has been bestowed upon the organisation, supervision, and control of the Port Sanitary Department that plague has been so effectually prevented from spreading from this large port

which is in such constant intercommunication with Europe and elsewhere.

This result is largely due to the application of systematic methods of medical inspection, disinfection, and sanitary control of all passengers, crews, and ships prior to their departure from Bombay, combined with the detention of all doubtful or suspicious cases of illness for further observation in the hospitals and segregation camps of the city.

To these measures should be added a carefully devised system there adopted, of noting in the official ship log-books and office records all the actual observations (gathered during the medical inspections) with reference to any slight elevations from the normal body temperature, glandular enlargements, or other symptoms indicative of, or likely to be confounded with, those of plague, which cases are ordered to be kept under personal supervision after the ship has left port.

For it has not infrequently occurred that patients have been thought to have been suffering from plague after leaving Bombay, and who were subsequently removed from the ships, who, after remaining under observation in a quarantine station elsewhere have proved not to have been suffering from this disease at all; which, had reference been made at the port of detention to our notes in the ship's log-book, made prior to the ship's departure, would have undoubtedly proved.

As I intend only to refer to the routine adopted for vessels about to leave Bombay for "ports out of India." I shall not touch upon the several and special regulations which govern "the coast-wise traffic" in India alone.

A ship some few days prior to her departure from Bombay (through the owners or their agents) notifies the date of sailing to the port health officer, who fixes a date for the medical inspection of the crew and the disinfection of all their kit and bedding, together with the hour at which it is to take place at the disinfection station within the docks.

This notice also contains instructions relating to the regulations enforced by the Government of India and the Venice Sanitary Convention (1897) affecting all outward-bound ships from plague-infected ports, together with the several requirements of the port sanitary authority for the due enforcement of those enactments.

These instructions are forwarded by the shipowners or their agents to the captains and commanders, who thus have no excuse or grounds for reasonable complaint for any delay or inconvenience arising from their detention by the port health officer for any omission they may have made in carrying out the rules of the port.

Prior to the departure from Bombay of any vessel for any port out of India the crew are subjected to at least three medical inspections held at intervals of a few days between each inspection. The value of this precaution is obvious, as it secures the recognition of such cases of plague which upon the first inspection may have escaped detection as being then in the incubation or latent stage of the disease, and thus when subsequently detected are prevented from embarking.

The first examination is held by the medical officer appointed to "the shipping office" at the time each member of the crew is physically examined as to his fitness or otherwise to be permitted "to sign on the articles of the ship."

The second examination is held by the port health officer or his European assistant port health officer at the disinfection station, whilst the personal luggage, kit, and bedding are passing through the steam disinfecting apparatus, and it is conducted in the following manner: Everyone is ranged in lines or ranks in the sheds, and a written nominal roll-call is furnished to the medical officer by the ship's agent, and is a nominal list of all the passengers and crew who are about to sail in the outward-bound ship then under inspection. This is called and checked concurrently by the port health officer. The quantity of luggage, bedding, and belongings of the passengers and crew produced by them for disinfection is likewise noted, together with any absentees or other special remarks.

This done, a careful medical examination is made of every person within the sheds, and the results of such examinations are recorded upon a special form which will be again checked by the port health officer, who shall make the third medical and sanitary inspection immediately before the vessel leaves the harbour.

It is necessary to add that whilst this second examination is being conducted, the ship is cleared of everyone (save those few persons who must stand by the engines and the ship, and who are subsequently dealt with), and a most thorough search is made by the European sanitary police for any luggage, clothing, or bedding which may have been secreted by the passengers or crew.

The axillæ and groins, etc., are examined by palpation in order that any glandular enlargement, tenderness, or elevation of the surface temperature may be ascertained, and further physical and thermometrical investigations made if necessary.

The tongue, gait, and general appearance, etc., of each individual is noted, and any suspicious case is prevented from sailing, being set aside for further observation, and, if necessary, sent to a special observation camp, or, if suffering from plague, to a plague hospital.

Those persons who have satisfied the port health officer as to their fitness to embark may be permitted to have a simple (aniline) ink mark impressed with a rubber stamp upon their forearm, bearing the date and place at which the medical examination took place (on shore). (*Vide* Venice Sanitary Convention.)

All their belongings after disinfection are checked and stamped with a rubber stamp, and then conveyed directly from the disinfecting apparatus to the ship, into which nothing which is unstamped or unprovided with a special pass is permitted to be received by the police stationed at the ship's gangway.

Stamped, dated, and signed passes (signed alone by the port health officer) must be produced by everyone before they may go on board or bring a single parcel or anything else on board.

All boots, shoes, sandals, and boxes, on entering the disinfection station, are plunged into large wooden vats containing a solution of mercuric chloride (1 in 1,000), and all crews and passengers must present themselves for examination in clean, freshly-washed clothing, or they are rejected as unfitted to sail.

They are required also to bring clean clothing with them, in order that those they are then wearing may be passed through the disinfecting apparatus.

An exactly similar procedure and examination is applied to the female passengers, in separate apartments set apart for them, by lady nurses, who are under the entire supervision and control of the port health officer, to whom all suspicious cases of illness are submitted by the nurses for the final decision as to their fitness to embark.

Some special concessions are granted to "suspects" who can produce evidence of and recent certificates of inoculation (by the appointed Government medical officers) with Professor Haffkine's prophylactic.

The third, and usually the final medical inspection, is made by the port health officer immediately before the actual departure of the ship from "the stream" or from the "dock wall." In both cases all loading or unloading of cargo and coaling must have finally ceased, and no stranger or visitor is permitted on board the ship. Every person on board is medically examined in a similar manner to that already described.

The port health officer has placed before him all the results of any former examination, together with the notes of any suspicious illness, elevation of temperature or glandular enlargement amongst the crew or passengers, together with any remarks bearing on the sanitary condition of the ship itself, and on any infraction or omission of the sanitary regulations which may have occurred. This examination is very carefully made by the most experienced European medical officers.

The luggage, kit, and bedding of the crew and passengers is again checked, counted and examined for the mark placed upon it at the disinfection shed, and tallied with the figures marked on the disinfection form and record already mentioned. The crew's quarters, which just prior to each voyage must be thoroughly cleaned and freshly-lime washed, together with the sanitary appointments throughout the ship, are inspected by the health officer.

If all these matters are satisfactory and each of the several regulations have been fully complied with, a "bill of

health" is granted to the commander and the ship must leave the port forthwith. If, on the contrary, there is any omission in the carrying out of the regulations of the Indian Government the bill of health is refused and is brought on shore for disposal.

No description of the measures for the prevention of the spreading of plague would be complete without some mention was made of the very important fact of its propagation by means of rats and their parasites.

From the Port of Bombay I believe I am correct when I say that plague has rarely been shown to have been imported at all, and in no case by means of rats. In those few cases in which importation in a sporadic form, or a small outbreak among two or three individuals, it has been due to the conveyance of the infective material from Bombay by means of infected clothing or persons.

Special and repeated measures have been taken by the Port Trust of Bombay (the authority which controls the docks) to destroy rats within the docks and on board the ships (the latter a very difficult matter).

The evidence adduced before the Plague Commissioners, and their final conclusions, were (at least so far as the Port of Bombay was concerned) against the propagation and conveyance of plague by ship rats from this port; and I think justly so.

Most important as this means of the transmission of plague by means of rats and their parasites is, it is of equal importance to remember that filthy clothing charged with moisture and organic matter and stuffed into a filthy box, in the moist warm atmosphere of a forecastle or steerage, is probably as dangerous and certain a means for the successful importation of plague, as the rat and its fleas.

Plague is generally—I maintain always—conveyed by the direct introduction of the virus through some local breach of the continuity of the surface of the body, conveyed to it in several ways—through wounds in the feet, hands, gums, and the entire surface of the skin and mucous membrane.

In pneumonic plague aërial convection undoubtedly takes place; probably through a cracked or abraded mucous membrane following catarrh, etc., as this somewhat rare form of plague is most prevalent when these conditions of the mucous membranes are also most common. Infected fleas from plague-infected rats are but one of the sources of infection. Rats are probably always present in ships plying from and to Bombay, yet plague is very rare on those ships. Sailors are brought into as close a connection with rats as any people, and are probably bitten by fleas, bugs, and mosquitos; they go barefooted, and suffer from frequent injuries to the feet and hands; yet plague is not common amongst them. They do occasionally manage to smuggle infected clothing and stow it away in their boxes, and these things are the probable sources of infection of those cases of imported plague which have arisen from Bombay.

By all means place rat shields on mooring cables and shore lines, heave up gangways at night, employ rat-catchers, and attempt efficient gaseous disinfection and destruction of rats with sulphur dioxide gas, or even station terrier dogs at the ships' gangways as a port health officer lately is reported to have advised his sanitary authority to do. But it is also as well not to forget that because we cannot always find direct evidence of the importation of plague by means of infected persons or their belongings, it by no means follows that rats have of necessity conveyed the disease; for all of us know how difficult it often is to obtain direct negative evidence against the former risks.

Again, we do not yet understand that anomalous condition known as pestis minor; and has not the study of diphtheria led us to the recognition of the dangerous transmission of that infection from the apparently healthy person to the subsequently infected victim of that disorder, whose fauces or larynx happens to be in a suitable state for its reception?

I am convinced that there is probably much truth in the rat theory, but I will make bold to assert that there is some truth also in probably many other sources of infection, some of which I have already mentioned, and others which we know less of, and yet, judging from analogy, we may surmise do actually exist. Altered environment will produce variability in species otherwise constant—typhus and overcrowding, dirt, squalor, and famine undoubtedly increase the virulence of the disease and receptivity of the infected.

I wish to conclude by saying that I feel that no small measure of praise is due to Colonel Macartie, C.I.E., I.M.S., the late Port Health Officer of Bombay, together with his able successor, Major Crimmin, V.C., C.I.E., I.M.S., for so far preventing the extension of plague from a city saturated with the infection of plague, and yet in such constant intercommunication with ports all over the world, and Europe in particular.

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## THE FALLACY OF THE PERMANGANATE DISINFECTION OF WELLS (HANKIN'S METHOD.)

By M. L. DHINGRA, M.D., D.P.H.,
Amritsar, India.

*Rationale of Hankin's Method.*

ACCORDING to Hankin,[1] this process depends on the fact that potassium permanganate, by destroying a portion of the organic pabulum, indirectly brings about a diminution in the number of cholera vibrios. This reduction is said to last for "several days." About 2 or 3 ozs. of the permanganate are said to suffice for a single well.

*Conditions of Permanganate Disinfection.*

It is well known that no disinfectant can act simultaneously and in sufficient proportion upon all the organisms to which it is applied; and hence the agent, if it is to be of any use, should be somewhat permanent in action. Now, the permanganate, acting as a mere oxidiser, is soon used up—unless, of course, it is employed in abnormally large quantities; and it can only act thus if the water is acid and heated to a certain temperature—two essential conditions which are entirely ignored by Hankin. The water of Indian wells, on the other hand, is notoriously alkaline, although the necessary warmth may be supplied in hot weather.

*And its Limitations.*

But, even granting that the permanganate does act in spite of these conditions, it is only a very small proportion of the organic matter which is thus actually destroyed. This will be obvious when we consider that the amount of the agent used is so small, that there are other substances besides the organic matter — for example, nitrites and sulphites—which will reduce the permanganate, and, lastly, that the oxidisable organic matter bears an inconstant ratio to the total organic matter.

*Permanganate Harmless to Cholera Vibrios.*

The large amount of organic matter present in Indian wells is more than sufficient pabulum for cholera vibrios, and a certain proportion of it can easily be spared. Besides, the permanganate (if at all) rather kills or "paralyses," the lower saprophytes, and the removal of their inhibitory influence enables the vibrios to flourish still more luxuriantly. The reduction in the number of cholera organisms observed by Hankin, as we shall presently see, is due to a totally different set of causes, and cannot be ascribed to the influence of the permanganate.

*Difficulties in Cholera Experiments.*

But if the chemistry of Hankin's method is unsatisfactory, its bacteriology is still more so. It would be interesting to inquire as to which are the cholera vibrios, and what differential tests he employed to distinguish between the true and false varieties. Pfeiffer's[2] test is by no means absolute, and it has been shown that pigeons[3] can often be inoculated with true cholera vibrios as readily as with Metchnikoff's vibrio. Again, Rumpell[4] has shown that cholera vibrios after being passed through pigeons and cultivated in artificial media develop phosphorescence. There is, indeed, no standard test on which we can rely for the diagnosis of the true cholera organism.

*The Guinea-pig Fallacy Again.*

But Hankin relies for his experiments on guinea-pigs—the least satisfactory and most fallacious of all tests. For, as has been maintained by Klein and others, death in these cases is induced not so much by

the cholera vibrios as by the other means adopted, and that other bacilli may be substituted to bring about the same result. Indeed, according to Virchow, any organism is capable, under certain circumstances, of causing death with symptoms and pathological changes more or less like cholera.

*Diminution of Vibrios not due to Permanganate.*

The diminution in the number of vibrios observed by Hankin after the application of the permanganate is due to other causes, and has no relationship to this agent. The organisms die chiefly owing to their delicate nature. According to Krause,[5] cholera vibrios, when introduced in the well water of Munich, disappeared on the second day. Then the agitation of water (induced by the working of the well) brings them more and more under the lethal influence of fresh air and sunshine.[6] The well is continuously worked, and the water pumped out is as regularly thrown back into the well. Thus a continuous agitation is kept up in the well water, which, however, is hardly sufficient to dislodge the organisms from the walls and bottom of the well.

*Defective Technique.*

Indeed, it is in the deeper layers of the water and in the slime at the bottom where bacteria mostly abound. Russell[7] made a series of researches on the micro-organisms of the Gulf of Naples and of the mud at the bottom of this gulf, collected at various depths up to 1,100 metres. At a depth of 50 metres the water contained 121 bacteria per c.cm., and the mud from the bottom 245,000; at 100 metres the water contained 10 and the mud 200,000 per c.cm.: at 500 metres the water contained 22 and the mud 125,000 per c.cm.; at 1,100 metres the mud contained 24,000. A method of well-disinfection which leaves out of count its walls and the slime at the bottom cannot be too severely condemned.

*Diminished Duration of Cholera Outbreaks due to Causes other than Permanganate.*

It has been urged that the permanganate treatment has shortened the average duration of cholera outbreaks. But the vagaries of these epidemics are notorious; they vary with season, soil, the species of vibrio, and the condition (intestinal and bodily) of the human host. And therefore it is only reasonable to assume that the two facts (treatment of wells and the diminished duration of outbreaks) are by no means necessarily related to each other as cause and effect.

The apparently good results are, no doubt, due to the stoppage of the particular water supply. Previous epidemics have taught the people a lesson, and they now take increased personal care and attend to sanitation. A good many doubtless boil their water before use. And the source of infection being thus more or less controlled, the epidemic might cease owing to "passage," that is, to gradual attenuation of the virus brought about by continuous transmission from man to man (to "passage," indeed, is due the relatively low mortality of endemic areas, and the diminishing death-rate at the "tail-end" of an epidemic in non-endemic parts).

*Conclusion.*

To summarise the foregoing observations, it will be noticed that potassium permanganate can only act under certain conditions, and even then is not continuous in action. The permanganate must first expend itself in oxidising nitrites and organic matter before attacking organisms, which are so resistant to it that Koch[8] states that it is applicable only in concentrated solutions (5 per cent.). For practical purposes, then, it can only be employed as a deodorant.

The disinfection of wells is based on the assumption that there is a distinct relationship between the chemical composition of water and the number of microbes contained in it. But it is highly probable that no such relationship exists in Nature. Using the oxygen derived from the permanganate as a text, Fischer[9] found in one case 7.4 parts per 100,000 of oxygen absorbed with 800 bacteria present; and in another case only 0.5 part per 100,000 of oxygen absorbed with 360,000 bacteria present.

But while Hankin's method is fallacious in theory and defective in technique, it is impossible in its practical application. In a community where there are numerous sources of water supply (each house often has its own well), such a treatment of wells, entailing a very close supervision, is bound to fail. And, practically speaking, the incidental vanishing of the vibrios by Hankin's method cannot be so reliable as their actual destruction by boiling.

Again, there is not a single reliable experiment in support of this method—indeed, all the tests point in the contrary direction. And the apparently good results following treatment by the permanganate can be explained by other and better means. In so far as the actual destruction of microbes is concerned, we can only regard this agent as having little or no influence at all. But, if any further proof is required on this matter, it is furnished by the fact that it has absolutely failed in practice, after a prolonged trial. As the Sanitary Commissioner[10] to the Government of India remarks, permanganate disinfection "does not much or materially diminish the risk of cholera infection in epidemic times."

It is, therefore, submitted that the pumping of a well, with a couple of ounces of potassium permanganate thrown in (and such, in brief, is Hankin's method) does not bring about any profound changes in the chemical or biological constituents of well water. Permanganate neither diminishes the number of vibrios nor shortens cholera outbreaks, and cannot therefore be credited with the beneficent *rôle* ascribed to it by Hankin.


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1. British Medical Journal, January 22nd, 1898, p. 205. 2 Allbutt's *System of Medicine*, vol i, p. 886. 3 *Ibid.*, p. 891. 4 Sternberg's *Bacteriology*, p. 569. 5 Frankland's *Micro-organisms in Water*, p. 301. 6 *Ibid.*, p. 333; also Sternberg's *Bacteriology*, pp. 155-8. 7 Sternberg's *Bacteriology*, pp. 647-8. 8 *Mitth. a.d. Kais. Ges.*, December, 1881. 9 Notter and Horrocks's *Hygiene*, p. 104. 10 Annual Report for 1897, p. 148.


## MEMBERS PRESENT AT THE ANNUAL MEETING.

The following names of members and visitors attending the annual meeting were entered in the books provided for that purpose:

Abbott, C. E., M.R.C.S., Cheltenham
Abbott, F. C., F.R.C.S., London
Allbutt, Professor Clifford, M.D., Cambridge
Allen, F. J., M.D., Malvern
Allison, Lieutenant-Colonel, M.D., Madras
Anderson, Mrs. Elizabeth Garrett, M.D., London
Anderson, Professor Richard John, M.D., Galway
Andriezen, Lloyd, M.D., London
Angior, F. L., L.S.A., Wigan
Antrobus, Edward, M.D., Malvern
Armitage, R., M.R.C.S., Cheltenham
Armstrong, W., M.R.C.S., Buxton
Ashby, Henry, M.D., Manchester
Ashford, E. C., M.R.C.P., Bath

Bagley, Samuel, L.R.C.P., Manchester
Bailey, T. Ridley, M.D., Bilston
Baldwin, T. B. J., M.R.C.S., Rotherham
Bale, Mrs. Rosa E., L.R.C.P.S.Edin., Plymouth
Ballance, Hamilton A., M.S., Norwich
Ballantyne, A., M.D., Eskbank, N.B.
Barclay, W.B., L.R.C.P.Edin., Bacup
Barker, Alfred J., M.D., London
Barling, H. Gilbert, M.B., Birmingham
Barnard, J. H., M.D., Aix-les-Bains
Barnes, Edgar G., M.D., Eye, Suffolk
Baron, Barclay Josiah, M.B., Clifton
Barr, James, M.D., Liverpool
Barrett, Wm. B., M.R.C.S., Folkestone
Basset, Walter, M.R.C.S., Newport, Mon.
Bates, Tom, M.R.C.S., Worcester
Batten, F. E., M.D., London
Batten, George B., M.D., London
Batten, R. D., M.D., London
Batten, R. W., M.D., Gloucester
Battye, Captain W. R., M.B., I.M.S., London
Baxter, Andrew, M.D., Darwen
Bayliss, H. W., L.R.C.P.Edin., Edinburgh
Bayliss, Richard A., M.R.C.S., Bath
Beach, Fletcher M.B. Kingston Hill
Beatson, George T., M.D., Glasgow
Beattie, Thomas M.D., Newcastle-on-Tyne
Beatty, Wallace, M.D., Dublin
Beaumont, W. M., M.R.C.S., Bath
Begg, Charles, M.B., Bath
Benson, J. R., F.R.C.S., Bath
Berkeley, C., M.B., London
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Birmingham, C. L., M.D., Westport, co. Mayo
Birt, George, M.B., Stourbridge
Birtwhistle, F., M.B., Barton-on-Humber
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Blacker, Arthur B., M.D., London
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Blair, William, M.D., Jedburgh, N.B.
Bluett, G. M., M.R.C.S., London
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Bokenham, T. J., M.R.C.S., London
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Bond, Francis T., M.D., Gloucester
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Bower, John A., M.B., Cheltenham
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Bramwell, John Wm., M.D., Cheltenham
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Buckell, W. R., F.R.C.S., Cheltenham
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Burton-Brown, F. H., M.B., Rome
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Campbell, Harry, M.D., London
Campbell, H. J., M.D., Bradford
Campbell, John, M.D., Belfast
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Cargill, L. Vernon, F.R.C.S., London
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Clark, Oscar W., M.B., Gloucester
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Cooke, M. A., M.R.C.S., Stroud
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Cox, William, M.R.C.S., Winchcombe
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Cuthbert, C. Firmin, M.R.C.S., Gloucester

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Davies, E. C., M.D., Lampeter
Davies, H. R. L., M.D., Cheltenham
Davies, R., M.D., Cheltenham
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Duncan, William, M.D., London
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Eyre, John, M.D., London

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Ferguson, George Bagot, M.D., Cheltenham
Ferguson, H. L., M.D., Dunedin, N.Z.
Ferguson, Robert J., M.D., London
Ferguson, Surgeon-Captain Wm. Baliour, M.D., Painswick
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Fowler, O. H., M.R.C.S., Cirencester
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Grünbaum, O. F. F., M.A., B.C., London

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Harrison, Reginald, F.R.C.S., London
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Haslam, W. F., F.R.C.S., Birmingham
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Hawkins-Ambler, G. A., F.R.C.S., Liverpool
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Hayward, Thos. E., M.B., Haydock
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Heaton, George, M.B., Birmingham
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Hill, Rowland, M.B., Blaenavon
Hill, William, M.D., London
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Holloway, S. F., M.R.C.S., London
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Hore, Captain E. Wickham, M.B., I.M.S., London
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Horsley, Victor, F.R.S., London
Horton, W. Winnall, M.D., Great Malvern
Hovell, T. Mark, F.R.C.S.Edin., London
Howe, John P., L.R.C.P.I., Liverpool
Howell, John, M.B., Cheltenham
Hubbard, D. L., M.B., Bordighera
Hubbard, W. L., M.R.C.S., Rugeley
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Hunt, D. De Vere, L.R.C.P.Edin., Cardiff
Hunt, John M., M.B., Liverpool
Hunter, J. H., M.D., South Shields
Hunter, R. R., M.B., Birmingham
Hunter, W. M., M.D., Eckington
Hutchinson, Jonathan, jun., F.R.C.S., London

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Ivens, M. H. Francis, M.B., London

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Jackson, J. C., M.R.C.S., London
Jackson, Thomas, M.D., Hull
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Jamieson, W. Allen, M.D., Edinburgh
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Jessop, T. R., F.R.C.S., Leeds
Jessop, W. H. H., M.B., London
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Johnson, S. C., L.R.C.S.Edin., Birmingham
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Jones, D. J., F.R.C.S., Blaenavon
Jones, Evan, M.R.C.S., Aberdare
Jones, Herbert, D.P.H., Hereford
Jones, H. E., M.R.C.S., Liverpool
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Jones, John W., L.R.C.P.I., Coleshill
Jones, Robert, M.D., Woodford Bridge
Jones, R. W., M.D., Penrhiwceiber
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Ker, Claude B., M.D., Edinburgh
Keyworth, G. H., M.B., Wem
King, Preston, M.D., Bath
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Kirker, Fleet Surgeon Gilbert, R.N., Gosport
Kirkland, R., M.B., Cheltenham
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Kynsey, Sir William R., C.M.G., London

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Lake, Richard, F.R.C.S., London
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Lang, Jackson, L.R.C.P., London
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McCall, Anthony, M.D., Bournemouth
McCall, W., M.D., Painswick
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Marsh, Howard, F.R.C.S., London
Marshall, C. D., F.R.C.S., London
Marshall, L. W., M.D., Nottingham
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Martin, H. A., M.D., Surbiton
Martin, H. C., M.D., Wroughton
Martin, John M., M.B., Stroud
Martin, J. Williamson, M.D., Dumfries, N.B.
Mason, Francis J. G., M.R.C.S., Cheltenham
Mathews, Edward, L.R.C.S.I., Redditch
May, Henry, L.R.C.P., Birmingham
May, W. Page, M.D., London
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Miller, Staff-Surgeon, R.N., Liverpool
Milligan, Surgeon-Lieutenant-Col. William, M.R.C.S., Yardley
Milligan, Wm., M.D., Manchester
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Milward, F. Victor, M.B., Birmingham
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Moore, Sir John William, M.D., Dublin
Moore, Walter, M.R.C.S., Stourport
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Morgan, L. Wayne, M.D., Pontypridd
Morgan, R. D., L.R.C.P., Yns-y-Bwl
Moriarty, Brigade-Surgeon T. B., M.D., Cork
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Morris, Malcolm, F.R.C.S., London
Morris, W. Jones, M.R.C.S., Portmadoc
Morton, C. A., F.R.C.S., Clifton
Mossop, Isaac, F.R.C.S.Edin., Bradford
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Murphy, Shirley F., M.R.C.S., London
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Murray, W., M.D., Edgbaston, Birmingham
Murrell, C.M., M.B., London

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Newton, Lancelot, M.R.C.S., Alconbury Hill, Hunts
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Norman, Geo., M.B., Buckhurst Hill

Odell, William, M.D., Torquay
O'Dwyer, Surgeon-General T. F., M.D., A.M.S., P.M.O. Aldershot
Ogg, Surgeon-General C., Bath
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O'Neill, Henry, M.D., Belfast
Ormrod, F., L.R.C.P.Edin., Workington
Orwin, A. Wigelsworth, M.D., London
Osler, William, M.D., F.R.S., Baltimore, U.S.A.
O'Sullivan, D. A., L.R.C.P.Edin., London
Owen, Edmund, F.R.C.S., London

Packer, W. H., M.D., Cressage, near Shrewsbury
Pain, E. Maynard, M.B., Sydney
Pakes, W. C. C., L.R.C.P., London
Parker, A. P., M.B., Oxford
Parker, Chas. A., F.R.C.S.Edin., London
Parkinson, C. H. Watts, M.R.C.S., Wimborne
Parr-Dudley, Arthur D., M.R.C.S., Chippenham
Parry, R. H., F.R.C.S.Edin., Glasgow
Parsons, Charles, M.D., Dover
Parsons, Francis, M.D., Worthing
Parsons, J. Inglis, M.D., London
Pasmore, E. S., M.D., Sutton
Pavy, F. W., F.R.S., M.D., London
Peake, G. A., M.R.C.S., Cheltenham
Pegler, L. H., M.D., London
Pemberton, C. L. H., M.D., Banbury
Penhall, John T., M.D., Broadwas-on-Teme
Percival, A. Stanley, M.B., Newcastle-on Tyne
Permewan, William, M.D., Liverpool
Pernet, George, M.R.C.S., London
Philipps, S., Rees, M.D., Cheltenham
Phillips, Edward, M.B., Coventry
Philpots, E. P., M.D., Bournemouth
Philpots, Harris, M.B., Birkenhead
Philpots, J. R., L.R.C.P.Edin., Parkstone
Piggott, F. Cecil H., M.D., Teignmouth
Pilkington, F. W., L.R.C.P., Lechlade
Pitts, B., F.R.C.S., London
Plummer, W. E., M.R.C.S., Cranford
Pollard, Charles, F.R.C.S., Worcester
Poole, Surgeon-Major G. K., M.D., Norwood
Pope, Frank M., M.D., Leicester
Pope, H. Campbell, M.D., London
Porter, Surgeon-Colonel A., M.D., Cheltenham
Potts, W. Alexander, M.D., Birmingham
Powell, Mr. A. E., Cheltenham
Powell, William, M.R.C.S., Cheltenham
Power, D'Arcy, M.B., London
Power, Henry, F.R.C.S., London
Poynder, Lieutenant-Colonel J. L., I.M.S., London
Poynton, Frederick John, M.D., London
Prance, Geoffrey H., M.D., Cheltenham
Pratt, Eldon, M.D., Cardiff
Pringle, J. J., M.B., London
Prout, Edward de C., M.B., Stonehouse
Pruen, S. T., M.D., Cheltenham
Prytherch, John R., M.B., Anglesey
Puckle, S. H., M.B., Bishop's Castle
Purslow, C. E., M.D., Birmingham
Purves, Robert B., M.B., Edinburgh
Pye-Smith, R. J., F.R.C.S., Sheffield

Quirke, J. C., L.R.C.P.I., Piltown

Rabagliati, A., M.D., Bradford
Rankin, Guthrie, M.D., London
Rankin, James, L.F.P.S.G., Kilmarnock
Ratcliffe, Joseph Riley, M.B., Birmingham
Rattray, John M., M.D., Frome
Raw, Nathan, M.D., Liverpool
Rayner, D. C., F.R.C.S., Bristol
Rayner, Edwin, M.D., Stockport
Redwood, T. H., M.D., Rhymney
Rees, Howell, L.R.C.P., Glan-Garnant
Renner, Charles, M.D., London
Reynolds, Ernest S., M.D., Manchester
Richards, John E., M.D., Boscombe
Rickards, Edwin, F.R.C.P., Birmingham
Ridge, J. J., M.D., Enfield
Ritchie, A. Brown, M.B., Manchester
Roberts, John Lloyd, M.B., Colwyn Bay
Roberts, Leslie, M.D., Liverpool
Robertson, W. F., M.D., Edinburgh
Robinson, E. S., M.R.C.S., Stourport
Robinson, Leonard, M.D., Paris
Robinson, Lieut.-Colonel Thomas, M.B., I.M.S., Clonakilty
Roden, P. A., M.B., Droitwich
Roll, G. Winfield, F.R.C.S., London
Ross, F. W. Forbes, M.D., London
Routh, Amand, M.D., London
Rowlett, James L., L.R.C.S., Portadown
Royds, W. A. S., L.R.C.P., St. Mary Bourne
Rubidge, John L., M.B., Graaf Reinet, Cape Colony
Russell, Thomas, M.B., Glasgow
Ryan, S., L.R.C.P., Sheffield

Samways, D. W., M.D., Mentone
Sandwith, F. M., M.D., Cairo
Saundby, Robert, M.D., Birmingham
Savage, E. Smallwood, F.R.C.S., Birmingham
Savage, Wm. G., M.D., Cardiff
Savill, T. D., M.D., London
Sayres, A. W. F., M.D.Brux., Woodford
Scharlieb, Mrs., M.D., London
Schofield, A. T., M.D., London
Scott, Alexander, M.D., Glasgow
Scott, Surgeon-Major R. R., M.R.C.P.I., Bath
Seccombe, T., M.D., London
Sequeira, Jas. Harry, M.D., London
Shaw, T. Claye, M.D., Banstead
Sheen, Alfred, M.D., Cardiff
Shuttleworth, G. E., M.D., Richmond, Surrey
Sibthorpe, Surgeon-General C., C.B., Dublin
Silva, W. H. de, M.B., Colombo
Sim, Roderick, M.R.C.S., Monte Carlo
Simmons, Harold, M.B. Bournemouth
Simon, M.F., C.M.G., M.D., London
Simons, C. E. G., M.B., Merthyr Tydvil
Simpson, J. B., M.D., Golspie, N.B.
Skipton, Alex., L.R.C.P.Edin, Barrow-on-Soar
Slade-King, E. J., M.D., Ilfracombe
Smith, Alfred J., F.R.C.S.I., Dublin
Smith, E. Gilbert, F.R.C.S., Birmingham

Smith, E. Noble, F.R.C.S.Edin., London
Smith, Fred J., M.D., London
Smith, H. Lyon, M.R.C.S., Chester-le-Street
Smith, James W., M.D., Ryton-on-Tyne
Smith, John W., F.R.C.S., Manchester
Smith, W., M.D., London
Smith, William Muir, M.B., Eastbourne
Smyth, T. E., M.D., Tavistock
Snow, Herbert, M.D., London
Soutar, James G., M.B., Gloucester
Spanton, W. D., F.R.C.S., Hanley
Spence, J. B., M.D., Lichfield
Spence, W. J., L.R.C.P., Syston, Leicester
Spicer, Frederick, M.D., London
Spicer, Scanes, M.D., London
Sprague, W. Carr, M.D., Saffron Walden
Sprent, W. Swanson, L.R.C.S., Slingsby
Stallard, H., M.R.C.S., Stow-on-the-Wold
Stear, Henry, M.R.C.S., Saffron Walden
Steel, W. D., M.D., Abergavenny
Steen, R. H., M.D., Chichester
Stephen, W. H., M.B., Smethwick
Stephenson, S., M.B., London
Sterling, R., L.R.C.P.Edin., Stoneyford
Stevenson, John, M.B., Edinburgh
Stewart, James, F.R.C.P.Edin., Clifton, Bristol
Stewart, R. C., M.R.C.S., Leicester
Stiles, H. Jalland, F.R.C.S.Edin., Edinburgh
Stilwell, R. J., M.R.C.S., Hillingdon
Stirling, Professor Edward Charles, C.M.G., F.R.S., M.D., Adelaide
Stocker, E. G., M.R.C.S., Clevedon
Stoney, Mrs. Florence A., M.D., London
Storry, Fred W., M.R.C.S., Stroud
Stretton, J. L., M.R.C.S., Kidderminster
Sturrock, W. Malcolm, M.B., Birmingham
Style, Mark, M.R.C.S.Edin., Moreton-in-Marsh
Summerskill, W., L.R.C.P., London
Swanton, J. Hutchinson, M.D., London
Symes, J. O., M.D., Clifton, Bristol
Symonds, Horatio P., F.R.C.S.Edin., Oxford
Symons, Wm. Henry, M.D., Bath
Sympson, E. Mansel, M.D., Lincoln

Tatham, E. J., M.D., Cheltenham
Taylor, G. G. S., M.D., Liverpool
Taylor, James, M.R.C.S., Clifton, Bristol
Teale, Michael A., M.R.C.S., Leeds
Thomas, J., F.R.C.S., Swansea
Thomas, J. Lynn, F.R.C.S., Cardiff
Thomas, Wm., M.B., Birmingham
Thomason, Richard, M.R.C.S., Hereford
Thompson, A. Hugh, M.D., London
Thompson, John T., M.B., Cardiff
Thompson, Professor W. H., M.D., Belfast
Thomson, A., M.B., Stratford-on-Avon
Thomson, J. Roberts, M.D., Bournemouth
Thomson, P. J., M.R.C.S., Brussels
Thomson, StClair, M.D., London
Thomson, W. Arnold, F.R.C.S., Maidenhead
Thomson, Sir W., C.B., F.R.C.S., Dublin
Thursfield, Hugh, M.D., London
Thursfield, Thos. W., M.D., Leamington
Tibbetts, T. M., M.B., Old Hill, Staffs.
Tilley, Herbert, M.D., London
Tomlinson, J. H., M.R.C.S., Egham
Townsend, A. Allen Deykin, M.B., Gloucester
Travell, J. W., M.B., Nottingham
Travers, William, M.B., London
Trevithick, Edgar, M.D., Cheltenham
Tubby, Alfred H., F.R.C.S., London
Tuke, Seymour, M.B., London
Turnbull, Inspector-General Alexander, M.D., R.N., Emsworth
Turner, A. C. King, M.B., Fairford
Turner, A. Jefferis, M.D., Brisbane, Australia
Turner, John, M.B., Brentwood
Tweed, Reginald, M.D., Honiton
Tyson, W. J., F.R.C.P., Folkestone

Vallance, T. J., M.D., London
Van Someran, E. H., M.R.C.S., Venice
Vasey, Fleet-Surgeon C. L., London
Verrall, T. Jenner, M.R.C.S., Brighton
Vinrace, John, M.D., Birmingham

Waldo, Henry, M.D., Clifton, Bristol
Walker, C. Hutchinson, M.B., Clifton, Bristol
Walker, D. F., M.D., Portlaw, Waterford
Walker, Mrs. Jane H., M.D., London
Walker, Norman, M.D., Edinburgh
Wallace, Cuthbert, F.R.C.S., London
Waller, A. Whalley, M.R.C.S., Stroud
Walshe, Denis, L.R.C.P., Graigue, co. Kilkenny
Warburton, E. S., M.R.C.S., Treherbert, Glam.
Ward, Joseph, M.D., Birmingham
Warden, A. A., M.D., Paris
Warden, Charles, M.D., Weston-super-Mare
Warner, Francis, F.R.C.P., London
Washbourn, J. W., C.M.G., M.D., London
Washbourn, W., M.R.C.S., Gloucester
Waterhouse, Rupert, M.B., Bath
Watson, Deputy-Surgeon-General G. A., Cheltenham
Watters, G. B., M.D., Stonehouse
Weatherly, L. B., M.D., Bath
West, Samuel, M.D., London
Westlake, Mrs. Winifred, L.R.C.P., Sheffield
Westmacott, F. H., F.R.C.S., Manchester
Whitaker, J. Smith, M.R.C.S., Great Yarmouth
Whitcombe, E. B., M.R.C.S., Birmingham
White, C. H., M.R.C.S., Nottingham
White, Sinclair, F.R.C.S., Sheffield
White, W. H., M.D., London
Whitehead, W., F.R.C.S., Manchester
Whitelocke, R. H. A., M.B., Oxford
Whitfield, Arthur, M.D., London
Whiting, A. J., M.D., London
Whittingdale, J. F. L., M.B., Sherborne
Wilkin, G. C., M.R.C.S., West Coker
Wilkinson, J., M.D., Droitwich
Williams, Chisholm, F.R.C.S.Edin., London
Williams, Dawson, M.D., London
Williams, Morgan, M.R.C.S., Cardiff
Williams, P. Watson, M.B., Clifton
Williams, Richard, M.R.C.S., Liverpool
Wilson, E. T., M.B., Cheltenham
Wilson, Frederick, L.R.C.P., Hull
Wilson, George, M.B., Safed, Syria
Winterbotham, W. L., M.B., Bridgwater
Wolseley, H. J., M.B., Barbadoes
Wolstenholme, R. H., M.R.C.S., Manchester
Woodcock, S., M.D., Manchester
Woods, R. H., M.B., Dublin
Wright, Professor C. J., M.R.C.S., Leeds
Wyer, O. F., M.D., Leamington
Wynter, W. E., M.D., London

Young, William, M.D., Wellington, N.Z.

### GUESTS AND FOREIGN DELEGATES.

Angell, Edw. B., M.D., Rochester, U.S.A.
Bacon, Gorham, M.D., New York, U.S.A.
Capps, E. D., M.D., Fort Worth, Texas, U.S.A.
Chapman, Miss Katherine, Cheltenham
Cook, Francis, M.D., Cheltenham
Darier, Dr., Paris
Dock, Professor George, Ann Arbor, Michigan, U.S.A.
Daland, Professor Judson, Philadelphia, U.S.A.
Dubreuilh, Professor, Bordeaux
Fischer Allan, M.D., Detroit, Michigan, U.S.A.
Glandière, Dr., Paris
Herring, George, L.F.P.S.Glas., Kilburn
Jayle, Dr., Paris
King, Herbert Maxom, M.D., Grand Rapids, Michigan, U.S.A.
Landale, Surgeon-General, Cheltenham
Longridge, C. J. V., M.B. London
McRae, Floyd Willcox, M.D., Atlanta, Ga., U.S.A.
Miller, R. F., M.D., Sherman, Texas, U.S.A.
Noiré, Dr., Paris
Nixon, Henry, B.A., Churchdown, Gloucester
Nance, Willis O., M.D., Chicago, U.S.A.
Otto, Dr. Ernest, Teneriffe
Parker, A. S., Edinburgh
Punton, John, M.D., Kansas City, Mo., U.S.A.
Reynolds, Arthur R., M.D., Chicago, U.S.A.
Rist, Dr. E., Paris
Rivière, Dr. J., Paris
Ruhräh, John, M.D., Baltimore, Md., U.S.A.
Sabouraud, Dr., Paris
Shrader, J. C., M.D., Iowa City, U.S.A.
Seekings, Miss S., Gloucester
Schooler, Lewis, M.D., Des Moines, Iowa, U.S.A.
Sutton, Emerson M., M.D., Pioria, Ill., U.S.A.
Whitmore, B. T., M.D., LL.D., New York, U.S.A.
Wilson, Miss Lilian E., Lakenham, Norwich
Wiltshire, Sam, M.R.C.V.S., Natal

# THE PLAGUE.

## PREVALENCE OF THE DISEASE.

### CAPE COLONY.

FOR the week ending August 3rd 1 fresh case of plague only was reported in the Cape Peninsula, and 2 deaths from the disease. The total cases to August 3rd numbered 735, and the total deaths from the disease 357. At Port Elizabeth during the same period 1 case of plague occurred in a native, and there were no deaths from the disease. The total cases and deaths from plague amounted in Port Elizabeth to 34 and 13 respectively. In all other parts of Cape Colony the total cases amount to 10, and the deaths from the disease 2 only, 1 case during the week ending August 3rd. Under naval and military control 1 native was reported to be suffering from plague. On August 11th (Reuter) 2 cases of plague were reported in Port Elizabeth.

### INDIA.

The plague returns for all India for the week ending July 20th show 1,445 deaths, against 1,125 and 1,258 for the weeks ending July 6th and 13th respectively. The number of plague cases have been gradually increasing for four weeks past, showing a recrudescence of rather serious import, especially when the time of year is taken into consideration. The chief increase is in the Bombay districts where, for the weeks ending July 6th, 13th, and 20th, the plague deaths have numbered 872, 1,048, and 1,174 respectively.

In Bombay City the general mortality has increased during the same periods, and plague is accredited during the three weeks mentioned with 63, 85, and 103 deaths respectively. In the Mandvie portion of the city, where plague first appeared, and where it has maintained its most serious hold, the victims of plague are increasing in numbers after a considerable period of abatement. Dysentery and remittent fever are also causing a serious mortality in the city. In other parts of India the plague returns show nothing remarkable. For the weeks ending July 6th, 13th, and 20th the deaths in Calcutta have been 15, 16, and 11: in Bengal 1, 2, and 7; in Mysore State 157, 97, and 120. In Mysore it is stated that there has been no difficulty about segregation and evacuation, the people being impressed by the good results attendant thereupon. In the Punjab plague is reported to be flickering out.

### MAURITIUS.

For the week ending August 8th no cases of plague occurred in Mauritius.

### EGYPT.

The Director-General of the Sanitary Department, Egypt, announces that "during the week ending August 4th, 6 cases of plague and 1 death from the disease have been reported from all Egypt; of these, 5 cases occurred among natives. A European, an Italian fisherman without domicile, died of the disease. The cases were distributed as follows: Three cases from Zagazig, 2 cases from Port Said, and 1 case and 1 death from plague in Alexandria." According to a Reuter's telegram to the *Times*, dated Cairo, August 12th, "there are at present 10 cases of plague in Egypt, 3 of which are at Zagazig and 7 at Port Said. The total number of cases since April 7th is 111, of which 46 have proved fatal and 55 have been cured."

### CONSTANTINOPLE.

Between June 23rd and August 3rd there were 18 cases of plague in Constantinople, 4 of which proved fatal. The plague is reported to have disappeared from the city. One death took place at the Kavak Lazaretto on August 7th. The trouble between the Sultan and the Board of Health concerning plague measures seems to be subsiding, owing, no doubt, to the gradual disappearance of the disease. We are, however, from what we know of Turkish administration, quite prepared to hear that the subsidence is only apparent.

### HONG KONG.

During the week ending August 3rd 13 cases of plague were reported in Hong Kong, and 11 deaths from the disease. In the week ending August 10th there were 10 cases and 12 deaths.

## UNITED KINGDOM POLICE-SURGEONS' ASSOCIATION.

The annual meeting of the members of this Association was held at Cheltenham on July 31st. There were present: Mr. W. Powell (Cheltenham) in the chair, Mr. Nelson Hardy (London), Mr. J. Paul Bush (Bristol), Mr. T. Wolverson (Wolverhampton), Dr. J. F. Craig (Birmingham), Mr. W. Washbourn (Gloucester), and Mr. F. W. Lowndes (Liverpool) and Mr. J. T. J. Morrison (Birmingham), Honorary Secretaries. Apologies for non-attendance were received from Sir Henry Littlejohn (Edinburgh), Dr. Maybury (Portsmouth), Mr. W. J. Stephens (Brighton), and Dr. Burd (Shrewsbury).

*Election of President.*—It was proposed by Mr. Nelson Hardy, seconded by Dr. Craig, and unanimously resolved:

That Mr. J. Paul Bush, C.M.G., be elected President for the ensuing year.

Mr. Bush thereupon took the chair in succession to Mr. Powell.

*Annual Reports.*—The report of the Council summarised the steps which had been taken by the Association to direct public attention in Parliament and in the London and provincial press to the inadequate fees of medical witnesses in criminal cases. A Joint Committee of the British Medical Association and the United Kingdom Police Surgeons' Association had the matter in hand, and it was expected that the subject would be raised in the House of Commons on the Home Office estimates. The President (Mr. J. Paul Bush) was congratulated on his safe return from South Africa, and on receiving the honour of C.M.G. in recognition of his services in connection with the Princess Christian Hospital Train. Congratulations were also offered to the Treasurer (Mr. Nelson Hardy) on obtaining the Carmichael Prize of the Royal College of Surgeons of Ireland for his essay on the medical profession. Reference was made to the great loss sustained by the Association in the death of Mr. Thomas Bond, of London, the first President; and of Mr. Culliford Hopkins, of Bath, a former honorary secretary.—The Treasurer reported that the accounts had been duly audited, and showed a favourable balance of £32.—It was resolved that the reports be received, adopted, and entered on the minutes.

*Election of Officers.—Vice-Presidents:* Sir Henry D. Littlejohn (Edinburgh) and Dr. H. W. Oulton (Dublin). *Treasurer:* Mr. H. Nelson Hardy (London). *Hon. Secretaries:* Mr. F. W. Lowndes (Liverpool) and Mr. J. T. J. Morrison (Birmingham). *Council:* Dr. H. Barnes (Carlisle), Dr. J. F. Craig (Birmingham), Mr. B. G. Heald (Leeds), Mr. W. J. Heslop (Manchester), Mr. E. K. Houchin (London), Dr. L. Maybury (Portsmouth), Dr. D. McDonnell (Belfast), Mr. W. Powell (Cheltenham), Mr. H. W. Roberts (London), Mr. W. M. Roocroft (Wigan), Dr. C. Templeman (Dundee), Mr. W. Washbourn (Gloucester).—Mr. Nelson Hardy, Mr. E. K. Houchin, and Mr. H. W. Roberts were re-appointed to the Joint Committee on Medical Witnesses' Fees.—The Honorary Secretaries were appointed a Committee to revise the rules and to report thereon to the Council.

*Reform of Death Certification.*—It was unanimously resolved:

That this meeting of the United Kingdom Police Surgeons' Association is strongly of opinion that the recent discovery of thirty-one dead bodies of children at an undertaker's in Birmingham shows very clearly the necessity of Parliament carrying out the recommendations of the Committee of the House of Commons for the registration of stillborn children.

## NURSING IN COUNTRY WORKHOUSES.

A small deputation from the Workhouse Infirmary Nursing Association, consisting of the Hon. Mrs. J. G. Talbot (Vice-President of the Association, and Chairman of the Executive Committee), the Viscountess Knutsford (a member of the Executive Committee), Miss Wilson (Treasurer), and Miss Gill (Secretary), was received on August 2nd at the House of Commons by the Right Hon. Walter Long., M.P., President of the Local Government Board. Mr. J. G. Talbot, M.P., introduced the deputation. Mr. S. B. Provis, C.B., Permanent Secretary to the Local Government Board; Mr. W. E. Knollys, C.B., Assistant Secretary; and Dr. A. H. Downes, Poor-law Medical Inspector, were present. The object of the deputation was to discuss details of a statement which had been submitted by the Association to Mr. Long early in the year, touching upon the present condition of the nursing in country workhouse infirmaries, and the dearth of nurses obtainable for these infirmaries.

The President of the Local Government Board listened to the members of the Association most attentively, and clearly showed that he took considerable interest in the questions at issue. Ample time was placed at the disposal of the delegates, and some important points were discussed.

The serious dearth of nurses available for the Poor-law Service was brought forward as the main cause for action, and the Local Government Board was urged to adopt measures for the special training of nurses for workhouse infirmaries.

It was suggested that it might be practicable to train nurses in the metropolitan and other Poor-law infirmaries of adequate size and organisation, and bind them to the service, as Government officials, to work for a definite period, in provincial and country workhouse infirmaries as well as in metropolitan.

The desirability of a subdepartment of the Local Government Board being formed to deal with the whole question of nursing in workhouse infirmaries was urged by the deputation.

Mr. Long intimated that he had under consideration the possibility of making alterations in the existing regulations affecting the position of nurses in workhouses and infirmaries. He promised careful consideration of the suggestions made by the deputation, but was unable to hold out much hope that the Local Government Board could itself undertake the training and placing of nurses.

## THE PREVENTION OF TUBERCULOSIS.

### Cheshire.

At a recent meeting of the Cheshire County Council a discussion took place on the address delivered by Professor Koch at the Tuberculosis Congress. Dr. Hodgson said that in Cheshire they would hardly accept the position taken up by Dr. Koch without further demonstration. Referring to an experiment carried out in Cheshire, he said they took a cow which was free from disease and infected her through the medium of the stomach with 2 ounces of a tuberculous gland in a quart of water. Twenty-seven days afterwards the animal had contracted tuberculosis, and when she was killed they found no disease in the stomach or intestines, but extensive disease in both lungs; a few mesenteric glands were also affected. This, he said, was an example of infection through the stomach causing consumption of the lungs and pleura without any primary lesion of the intestines. He believed in urging on the Government to have this matter sifted immediately by a proper Commission. In this connection he mentioned that an American delegate at the Congress cabled his State officials the gist of Dr. Koch's speech, and next morning received the following reply: "Your cable received. Our experiments begin to-morrow."

### Leamington.

On August 12th the Leamington Town Council directed the medical officer of health for the borough to prepare a scheme for procuring reports of all cases of consumption in the district which were not properly attended to and kept in such a condition as not to constitute a danger to others. It is hoped by this means to prevent the spread of infection until a sanatorium for consumptives has been established in Warwickshire.

### Aberdeen.

A meeting of the Aberdeen Committee on Tuberculosis was held on August 9th, Mr. James Murray, Glenburnie Park, in the chair. The subcommittee who attended the meetings of the British Congress on Tuberculosis, held in London the other week, submitted reports on the various questions arising out of those meetings. It was decided that in the meantime the committee should cease so far as active operations were concerned, but a small subcommittee, consisting of three local gentlemen, was appointed to keep an eye on the interests of the landowners, farmers, and butchers, and they were empowered if the occasion arose—in such cases, for instance, where it might be found necessary to consult the members on

any vital question affecting their interests—or, indeed, when it might be deemed advisable to convene a meeting of the whole committee.

PERTHSHIRE.

A bazaar, subsidiary to other bazaars which are being held throughout the county of Perth, in aid of the Consumptive Hospital in connection with the Hillside Home, Perth, was opened on August 9th in the Hall of Morrison's Academy, Crieff, by Mr. J. Stroyan, M.P. He said the new consumptive hospital, recently erected, was built at a cost of £8,000, and was a gift to the county from Sir Robert and Lady Pullar, who had not only presented the hospital but had also provided a further sum of £60 per annum in perpetuity to cover the feu duty. The new hospital contained accommodation for some 20 patients, and their object that day was to provide funds towards the endowment of at least eight of these beds, so that the very poorest should be accommodated in the hospital. The people of Scotland were justly proud of the way they treated their poor. They always provided for their poor, and they did not look upon it as a burden, but considered it a sacred duty. Good sanitation, good housing, good food, and fresh air would do very much to fortify the system against the terrible scourge of consumption. They were very proud in Scotland of their medical men and the distinctions achieved by them in every part of the world, and he thought if they all joined together under their guidance, and made up their minds to work together to reduce the dire disease of consumption, at no distant date they would be able to make it very much rarer, if not entirely to eradicate it.

## LITERARY NOTES.

MR. EDWARD ARNOLD will publish in the autumn an English translation of Professor Finsen's work on phototherapy by Dr. J. H. Sequeira, of the London Hospital. The book, which is illustrated, consists of three parts entitled, respectively, The Chemical Rays of Light and Small-pox, Light as an Irritant, and The Treatment of Lupus Vulgaris by Concentrated Chemical Rays.

Messrs. Putnam will publish an English translation of Dr. Pierre Janet's work on the mental state of hysterical subjects. Charcot contributed an introduction to the original French edition. The book consists of two parts, one in which mental stigmata and another in which mental accidents are dealt with. The translator is Miss Caroline Corson.

Among Messrs. Macmillan's announcements for the forthcoming season are the following: The fourth and concluding volume of Huxley's *Scientific Memoirs*, edited by Sir Michael Foster and Professor Ray Lankester; the fourth and fifth volumes of Allchin's *Manual of Medicine*, the former being devoted to diseases of the respiratory and circulatory systems, the latter to diseases of the digestive system and of the kidneys; *Assimilation and Digestion*, by Sir T. Lauder Brunton; and the second volume ("The Midland Counties and Ireland") of *The Climates and Baths of Great Britain*, being the report of a Committee of the Royal Medical and Chirurgical Society of London.

Messrs. Blackwood and Son are about to publish a work by Dr. Gerald R. Leighton, entitled *The Life-History of British Serpents and their Local Distribution in the British Isles*. Dr. Leighton has given much attention to the subject. His thesis for the M.D. degree of the University of Edinburgh in 1901 was on "The Reptilia of the Monnow Valley," and he is the author of numerous contributions on British snakes in the *Zoologist*, *Science Gossip*, *Country Life*, etc. His new work is said to be the first attempt that has been made to trace out the relative frequency and varying sizes of the several species in different part of the United Kingdom. The book is illustrated by more than fifty photographs and drawings, many from life, all but three of which are from the camera or pencil of the author. The work contains a full discussion of the adder-swallowing theory and special chapters on colour-variation, the small red viper, snakes in Ireland, preserving specimens, stories about snakes, etc.

Messrs. P. S. King and Son (Orchard House, Westminster) have in the press for publication during September, a work by Dr. J. F. J. Sykes, entitled *Public Health and Housing: The Influence of the Dwelling upon Health in Relation to the Changing Style of Habitation*, being the Milroy lectures delivered before the Royal College of Physicians in February and March, 1901. The lectures have been carefully revised by the author, and many additions made which it has been considered would add to the completeness of the subject. The work is divided into three parts:—(1) The Ascertained Effects upon Health of Certain Conditions of Habitation; (2) Construction and Misconstruction; and (3) Usage and Misusage. A number of illustrations and statistical tables are included, and the whole work should prove valuable to those interested in such an important subject as the Public Health in Relation to Housing.

We learn from the *New York Medical Journal* that, in a paper entitled Some Doctors of the Olden Time, which was read not long ago before the Lebanon County (Pennsylvania) Historical Society by J. H. Redsecker, Ph.M., mention was made of a Dr. Henry William Stoy, who in the latter part of the eighteenth century had a reputation for curing hydrophobia. The author cited the following extract from Washington's memoranda:

> October 18th, 1797. Gave my servant Christopher to bear the expenses to a person at Lebanon, in Pennsylvania, celebrated for curing persons bit by wild animals, 25 dols.

The person referred to was Dr. Stoy, and his remedy consisted of an ounce of the herb of red chickweed, four ounces of theriac, and a quart of beer, all well digested, the dose of which was a wineglassful. The red (or purple) chickweed, arenaria rubra, was reputed to be antivenomous, nervine, and stimulating. The theriac employed was that of andromachus, the *électuaire thériacal* of the French *Codex*.

The Cambridge University Press is about to publish a journal for the statistical study of biological problems. It is to be entitled *Biometrika*, and will be edited, in consultation with Mr. Francis Galton, by Professors Weldon, Karl Pearson, and Davenport of Chicago. Papers will be accepted in German, French, or Italian. It is intended that *Biometrika*, which will appear about four times a year, shall serve as a medium not only for collecting under one title biological data of a kind not systematically collected or published in any other periodical, but also for spreading a knowledge of such statistical theory as may be requisite for their scientific treatment.

A recent addition to the long list of medical journals published in France is the *Caducée* which will appear fortnightly under the editorship of Dr. Granjux. In its prospectus the new journal declares that it is not a rival of existing official "organs" but a complement to them. It has no "platform," and will carefully refrain from criticising the military authorities; all personal questions are to be tabooed. The aim of the *Caducée* is said to be "to popularise and spread abroad the wealth heaped up far out of the sight of the medical public." If these words are to be taken literally our new contemporary would seem to purpose to enter on a campaign against millionaires for the benefit of the medical profession. Is there any good reason to believe that those whom Mr. Dooley calls the "Titans of finance" are specially careful to hide their wealth from the eyes of the medical public? If such be indeed the case, we can only conjecture that it is done in order that the millionaire, when ill, may receive medical charity *in formâ pauperis*. We have heard of more than one American millionaire who haggled over his doctor's bill, but we have not yet heard of one who sought advice at a hospital. Have French millionaires come to this complexion?

A correspondent forwards an interesting extract from the journal of the late Alexander Fisher, M.D., R.N., indicating that the connection of mosquitos and malaria was ancient history in the Gulf of California, Mexico, though the proof of the Ajiabambo belief remained to be scientifically established by Manson and Ross. The following is the extract:

> July 6th, 1864.—Ajiabambo. An anchorage 150 miles down the Gulf of California from Guaymas. Several of the boats communicated with the shore there, their crews landing, and some proceeding inland 15 miles from the ship to a ranch .... Although the appearance of the low sandy bushwood covered land inland from the beach showed a likely habitat of malaria, one circumstance was pointed out to me as indicative of the absence of malarious poison, which was, that there were no mosquitos, with an assurance that where they do not exist there is no chance of fever.

MEDICAL MAGISTRATE.—Dr. William Martin, of Whitehead, has been placed on the Commission of the Peace for the County of Antrim.

## BRITISH MEDICAL ASSOCIATION.

### SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, AUGUST 17TH, 1901.

## WATER SUPPLY AND SEWAGE DISPOSAL.

The interim report of the Royal Commission on the Disposal of Sewage, to which attention was drawn in a recent number in the British Medical Journal, opens up a somewhat wider question than the mere methods of treatment of various effluents. Our readers are aware that the Commissioners set themselves in the meantime to answer three questions, and claim to have arrived at three conclusions. Some of the latter are such as the great majority of those interested in sewage problems have already reached. No expert could, for instance, fail to endorse the opinion that while no land can be said to be absolutely useless for the purpose of sewage purification, stiff clays and peat lands, covered by only a thin layer of soil, possess this property in a very minor degree. Nor could such a one doubt that the amount of land of this kind necessary to effect the purification would be so large as to render the method, as the only one, in many manufacturing districts practically unavailable.

The second question the Commissioners attempt to answer is one also as to which the conclusion which they have already arrived at will be generally acknowledged to be correct. They pronounce it as their opinion that it is quite possible, by artificial processes alone, to produce either from sewage or from certain mixtures of sewage and trade refuse (such as are met with at Leeds and Manchester) effluents which will not putrefy, and would be classed as good according to ordinary chemical standards. The corollary, which is embraced in the "conclusion" as set forth in paragraph 19 of the report, is that the Local Government Board would, under proper safeguards, be justified in relaxing their present rule as to the application of sewage to land. The Commissioners are, however, very careful to save themselves from being supposed to have pronounced on the perfect harmlessness of the bacteria which may escape from these artificial beds or, for that matter, even from well-conducted sewage farms.

The answer to the third question is somewhat hesitating and may not perhaps meet with such general acceptance as its two predecessors. The question is the rather large one: What means should be adopted for securing the better protection of our rivers? In discussing this point the Commissioners state it as their conviction that the Prevention Act of 1876 has been more or less a failure. The reluctance of sanitary authorities to take action proceeds, they think, in part from the difficulty of determining the true offender, and in part from the difficulty of getting the several authorities on the same stream to co-operate to the desired end. The last disability may to some extent be overcome by the powers given to county councils by the Act of 1888, or still better by the formation of joint committees under provisional order of the Local Government Board as provided for in the same statute. Such are the Mersey and Irwell, and the Ribble Joint Committees in Lancashire, and the West Riding Rivers Board in Yorkshire. Even these bodies, however, feel a certain hesitation in enforcing stringent measures against manufacturers in one county, when perhaps in a neighbouring one little or nothing of the kind is being done. Extracts from the reports of previously-appointed Commissions are set forth, showing that several of these have considered the desirability of setting up other authorities, the boundaries of whose districts would lie along the watersheds separating the areas contributory to the several rivers of the country. All that is perhaps required to accomplish this is the providing of the Local Government with some coercive power enabling them to insist on the formation of such bodies as the Irwell and Mersey Joint Committee, and giving them certain powers to compel the so-created bodies to act, or in default to act themselves instead of them. One of the reports quoted suggests a central commission of three to deal with all questions of pollution and water supply.

The conclusion of the Commissioners themselves, however, is, as already hinted, a sufficiently cautious one. It begins by stating it as their opinion that it is of the utmost importance that the simplest possible means should be provided for adequately protecting all our rivers, adding that it will probably be desirable for some time to come that scientific experiments should be carried out in order to ascertain all the real dangers of pollution against which our streams should be protected. Then comes a statement of their opinion that the general protection of our rivers is a matter of such grave concern as to demand the creation of a separate commission, or a new department of the Local Government Board, which should be a Supreme Rivers Authority, dealing with matters relating to the rivers and their purification, and one which when appeal is made to it should have power to take action in cases where the local authorities have failed to do so. The utterance at present is, as already said, a trifle hesitating, but this is after all but a sort of preliminary report, and it is not impossible that, when a further report is forthcoming, it may give forth a less uncertain sound.

In particular we should have been glad to have had a pronouncement as clear as that of the 1868 Commission, who in their third report recommended a central authority, or Board, to be composed of not more than three persons, who should be duly qualified to deal with all questions connected with the pollution of water and of water supply. Such a commission, consisting, for instance, of a geologist, an engineer, and a medical expert, with the sort of authority vested in the Endowed Schools, Charity, or even the Lunacy Commissioners, would do much to co-ordinate the action of local authorities. They would regulate, if they did not prevent, the unseemly struggle in the committee-rooms of the Houses of Parliament over such important

sources of water supply as the Derbyshire Peak. They would protect the weaker districts, which unless supported by their county councils, are apt to be hustled aside in the rush of great towns for important supplies. A scheme, which had received their approval, would come before Parliament, if parliamentary sanction were still deemed necessary, with the knowledge that it was not merely the resultant of sundry opposing forces, but one matured by the advice not only of eminent partisan experts, but of an impartial authority possessing all the available knowledge of the needs of the district and of neighbouring districts, of the physical features of the country, and of the character of the proposed supply. Such an authority would take a broader view than the mere satisfying of a demand for some ten or twenty years, and its action would tend to husband the resources of the country. Such an authority, assisted it may be by local authorities representative of the counties and towns whose areas make up the various river basins of the United Kingdom, would not only protect and economise the sources, but would exercise a wise and equalising control over those who now so wantonly pollute the streams and rivers of our land.

Such an authority should not only have power to advise, when consulted by large towns or great combined districts, but they should also have some right to indicate to various Sleepy Hollows that they must come up into line and provide their inhabitants with that first requisite of sanitation, a pure water supply. Such an authority, vested with the powers we should give them, would not only say to Mr. Bumble, "You must get pure water somewhere," but they would be able to point out exactly where he could best and most economically seek that of which he had not yet discovered his need. Fortunately, this coercive part of their work with the progress of time and the growth of local patriotism would seldom have to be exercised. But the importance of the advisory influence in economising our large, but after all limited, supplies of hill water and the protection from serious contamination of not only of our rivers and streams, but also of our underground sources of supply, cannot easily be over-estimated.

With the Commission, in their desire for further scientific inquiry, we are quite at one. We hope, however, that this laudable longing for further light will not weaken the will to use, for the benefit of the nation and the protection of our streams, the knowledge we already possess. While we continue our search for the philosopher's stone and *elixir vitæ*, let us not fail to use the remedies we have for the ills we know they will relieve, nor to smelt our iron, and forge our engines, perhaps to find that it is the commonest of metals that after all is most easily transmuted into gold.

## INDISCRIMINATE EXPECTORATION.

A very generally accepted lesson of the recent British Congress on Tuberculosis is, in the words of Professor Koch, that the sputum of consumptive people must be regarded as the main source of the infection of tuberculosis. There is, however, no necessary contradiction between this doctrine and the lesson which every individual sufferer from tuberculous disease should early be taught that under no conceivable circumstances must he do anything but eject the germ-laden mucus which comes from his respiratory passages; for, as is well known, a few timely precautions, simple in their principle, are quite sufficient to meet the risk of spreading pulmonary tuberculosis and the other alternative leads to infection of his own alimentary tract.

But in regard to the act of expectoration itself there seems to be some likelihood that a mental confusion may arise between the disgust produced in the spectator by the act of spitting and the fear depending on a knowledge of the infectious nature of some expectorated matters. Such a confusion would almost inevitably give rise to a wrong estimate both of the importance of spitting *per se*, and of the probability of infection through the sputum. While recognising the danger involved in indiscriminate expectoration, it is therefore advisable to examine what its degree is and what its precise sphere.

It is obvious that however offensive indiscriminate spitting by healthy men may be, yet in itself it constitutes no appreciable danger to the life or even to the health of the community. It is only the expectoration of a very small percentage of persons above infancy which implies a serious menace to the public, yet, in view of the fact that a consumptive may in the course of a day eject billions of tubercle bacilli, it must never be forgotten that the risk is a substantial one. What is ordinarily described as phthisical sputum, however, is probably less to be dreaded than, as Klebs and Flügge have shown, the minute particles which are scattered as spray in the act of expectoration, coughing, or even it may be speaking. Apart from this production of spray, tuberculous sputum is harmless so long as it is moist; it is only when dried, pulverised, and suspended in the air that it becomes active for harm. Moreover, in regard to the question of danger, a well-defined line of division separates expectoration in the open (for example, in the open road) and expectoration in closed places (for example, in dark and crowded houses) where the air charged with tubercle bacilli is breathed again and again by sick and healthy. Two influences at least tend to make sputum in the open comparatively innocuous: one is the antiseptic action of the violet and ultraviolet rays of light, and the other the dilution of the suspended tuberculous dust by the air.

The presence of virulent tubercle bacilli within the nostrils of healthy persons obliged to live in association with consumptives has been demonstrated by Strauss, and it is hardly conceivable that a few ordinarily virulent bacilli will ever hurt a healthy man; it is the excess either in their numbers or virulence or both over the resisting power of the individual that implies danger. And so it comes about that although phthisical sputum is probably the most important factor, it is not the sole etiological factor in tuberculous infection of the lungs.

In America, where expectoration seems, if report be true, to be a kind of mental solace, laws have been passed to restrain it, but it is doubtful whether there is any sufficient ground for adding a law to the British Statute Book that all who in this country are convicted of that objectionable practice should be visited with fine and imprisonment. There is surely a more excellent way in regard, for example, to the healthy schoolboy who believes that he has been rightly and conveniently provided by

Nature with a perennial means of removing the evidence of lore from the youthful slate; or in regard to the British workman, who requires before any feat of manual prowess the application of some genial moisture to his palms. Such a law, in its logical rigour, might even be made to include certain teachers and legislators who in the whirlwind of their eloquence have been known to scatter something over and above their winged words among those sitting at their feet. In regard to persons suffering from phthisis, fine and imprisonment are ill adapted as means of punishment. Moreover, while the risk at home from this necessary action is far greater tha in the open air, the anverage Brito is apt to consider his home his castle.

But promiscuous spitting in closed places of public resort, such as omnibuses, railway carriages and waiting-rooms, is in a different category, for it is not only dangerous but an unqualified nuisance, and, in the event of printed notices being insufficient, recourse might well be had to pains and penalties. It would, however, not be a matter of great surprise if that education of public opinion, which is actively in progress in this country (mainly, it is only fair to add, through the agency of the National Association for the Prevention of Tuberculosis), should lead, at no far distant date, to the cessation of anything worthy of the name of promiscuous spitting.

What practicable measures can be suggested to meet the acknowledged danger, first, in closed rooms, and, secondly, in the street? Among the principles on which they must be based are that infected sputum should be ejected from the mouth directly into a receptacle in which it can be kept moist until it is destroyed and that the receptacle itself is capable of being made bacteriologically clean or of complete destruction by fire. In closed rooms this receptacle, which should be inexpensive so that several might be simultaneously in use by the same person, may be any form of metal or porcelain vessel, preferably without angles and crevices, containing a watery fluid. Floor spittoons should be absolutely discarded, for their use favours the distribution of dangerous spray; the best resting place for spittoons is a rather high shelf. Glass bottles or opalescent vases may be used or *papier mâché* cups as von Schrötter suggests. In place of a fluid recipient the metal or other vessel may be lined with a removable paper or cardboard lining, which with its contents can be burned *en masse*; otherwise the fluid may be water, or some antiseptic lotion, or such an emulsion as one of lysol and soft soap, which obviates objectionable appearances. Clearly no plan of destroying the sputum is so good as burning, although that still adhering to the spittoon after it has been roughly cleansed by mechanical means may be rendered harmless by boiling, but this, as Schill and Fischer have shown, must be for not less than five minutes. It is, however, in the case of the consumptive who is not confined to the house that the chief difficulty arises. For him some kind of small, portable, flask, bottle, or box, containing either a watery fluid or a removable and burnable lining is preferable. Some pocket spittoons are too elaborate and expensive, and a short wide-mouthed glass bottle with an indiarubber cork, containing a solution of carbonate of soda, answers every necessary purpose. In an emergency, or even habitually, a piece of paper or a used envelope, which may at once be burned after use, is by no means the least valuable of all recognised methods. As an alternative a handkerchief or piece of cloth may be used, but the tendency is for these to be allowed to get dry before they are burned, and the mere washing of soiled handkerchiefs is unsatisfactory. For a poor person a method like the following might be recommended: he should be supplied with two rather flat metal boxes like those used for tobacco, one of which could be undergoing cleansing processes while the other was in use, and a number of small envelopes or bags, preferably made of parchment paper, of a size which would easily fit the box. As soon as possible after use the paper receptacle should be burned and another substituted, and at the end of the day the metal box should be kept immersed in boiling water for ten minutes and then be placed in some antiseptic lotion until again required. If cloth or paper handkerchiefs be used they should be kept in a separate detachable pocket made of indiarubber or linen which could be thoroughly cleansed, and this observation applies equally to patients in bed who, of course, like others, need something with which to wipe their lips.

But after all the real danger lies not so much in promiscuous expectoration as in the presence of the spitting, coughing, and talking consumptives in small, ill-ventilated, and overcrowded rooms. As both English and German statistics have shown, phthisis is not especially prevalent in the neighbourhood of consumption hospitals with large out-patient departments where spitting is frequent, but overcrowded city areas are for it very hot-beds. While a direct attack on the infectivity of phthisical sputum is of the utmost importance, the importance of free ventilation cannot be over-estimated, and of no less importance is a systematic effort to increase the bodily resistance of the community by, in addition to good ventilation, the discouragement of alcoholism and the encouragement of good feeding.

## THE DUFFERIN ASSOCIATION IN INDIA.

The report for the year 1900 of the National Association for supplying female medical aid to the women of India,[1] contains only 191 pages instead of the 500 pages of former years. This condensation has been effected by the somewhat strange omission of the reports of the medical women who form the staff of the Association. It does not seem clear why the reports of those serving in Native States should alone be published in the central report, while those from the rest of India are reported only in provincial reports (p. 11). There are 247 hospital wards or dispensaries officered by women and for the most part affiliated to the Association; more than a million and a-half of women and children have received medical relief. The staff numbers over 500 women, though the 290 hospital assistants should not be reckoned "medical women" (p. 13), and 379 are being trained in medicine and nursing. The report notes an improvement in the financial condition of the Association, due in great measure to the exertions of Lady Northcote in Bombay and Lady Ampthill in Madras. The paradoxical statement occurs (p. 12) that the

[1] Sixteenth Annual Report of the National Association for Supplying Female Medical Aid to the Women of India. Calcutta: pp. 191. Price, Rupee 1, or 1s. 4d.

object of the report is "to give a complete idea of all that is being done for Indian women in the way of affording them female medical aid without reference to the manner in which it is provided," but that it "does not include any details of the large number of hospitals and dispensaries administered by lady doctors belonging to the various missionary societies." As mission hospitals are among the best of those officered by medical women, some attempt might be made to obtain at least statistics of the number of patients and staff of these hospitals, and the results of their schools for women students and nurses. There is an impression in some quarters that mission hospitals have been more successful than Dufferin Hospitals; this report (page 21) seems to acknowledge that something is lacking to the success of the Dufferin Association. It is possible that the report itself points where the fault lies, when it states that the success of the Association mainly depends upon the measure of support it receives from the united efforts of a large number of local organisations and individuals. The Association seems to be not a well-organised system, but a loose aggregate of some 140 local bodies, and there appears to be a defective appreciation of the fact that the success of any medical charity depends chiefly on its medical staff. In the report for 1899 one medical woman after another recorded her opinion that the experiment of refusing to admit low caste women was a failure, yet no attention seems to have been paid to the opinion of those surely best qualified to judge of the practical effect of such a regulation. We commented last year on the fact that medical women were totally unrepresented on the governing bodies of the Association in India, and almost totally unrepresented in England. The need for such representation is emphasised by the fact that criticism of the medical staff appears in the reports, which unlike most of those in a Government service are sold to the public and sent to newspapers for review. For this reason alone it would only be common justice that the medical staff should have representatives on the various committees to guard their interests. There are several medical women in India unconnected with the Dufferin Fund, whose opinion ought to be of value to the Central Committee, and there can really be no doubt that well-qualified members of the staffs of the Dufferin Hospital should be members of the committees of their respective hospitals. The Central Committee reports that the suggestion made in a letter to the BRITISH MEDICAL JOURNAL last year[2] by Dr. Mildred Staley as to the grouping of smaller hospitals round a central hospital has been considered, and that the proposal to appoint an inspectress of hospitals was renewed, but that both propositions were vetoed on the ground of expense.

There should be little expense involved in grouping hospitals; assistants of lower grade could be maintained at minor institutions when arrangements had been made to send serious cases to the central hospital, or to telegraph to its better-equipped staff for aid. In Bombay and in Bengal (where the experiment of admitting to the new Victoria Hospital only high-caste women limited the number of in-patients down to 164 in 1899 and to 155 in 1900), it ought to be possible to group the Dufferin institutions of the Presidency round that of the capital. Lahore might be suggested as the centre for the Punjab, and Agra for the North-West Provinces. The report states that, useful as an inspectress would be, money is more advantageously spent in augmenting the salaries of certain ladies engaged by local committees, and in aiding capable women of the second grade (that is, who have qualified in India) to travel home and procure higher degrees in Europe. This latter statement is rather at variance with the paragraph immediately preceding, which states that a number of applications for employment continue to reach the Committee from medical women, both in and out of India, but that there is not much likelihood of many first-grade appointments falling vacant this year. If the number of first-grade medical women (that is, women holding a European qualification) exceeds the demand, why should the Association spend money needed elsewhere in increasing the supply?

Now that Lady Curzon is inaugurating a scheme which Queen Victoria had much at heart—namely, the provision of trained midwives for district work, it would be well if stock were taken of the defects of the already existing voluntary efforts for medical relief and these defects avoided in the new scheme. The presence on the Committee of experienced medical women, and their employment whenever possible to train midwives at hospitals where no males are admitted, seems essential in view of the very statement in this report (p. 19) that the Inspector-General of Civil Hospitals, Bengal, "has grave doubts as to the wisdom of teaching native girls of the hospital assistant class in the same schools or hospitals as the men," and considers that "they should be generally under the management of their own sex, but might well be taught much of their profession by male professors." Considering the danger of criminal abortion and the frequency of motives for infanticide in a land where polygamy is practised it is well that these midwives should be drawn from a respectable class and trained under conditions which will encourage them to remain respectable, and under such moral influence as well-qualified European women exert.

[2] September 8th, 1900, p. 695.

## THE UNIVERSITY OF LONDON.

WE understand that there will shortly be issued an official list of institutions and courses of study recognised by the University of London, together with details as to days and conditions of attendance. The list is provisional, and will be revised during the next academic year. We are also glad to learn that the list of institutions from which the University receives certificates for degrees in Medicine, which appears annually in the Calendar, is under consideration with a view to revision. The medical members of the Senate have been constituted a Committee, we understand, for the purpose of dealing with this and similar matters of a purely medical and surgical character. It is a matter of some regret that the meetings of the Medical Faculty are not more largely attended than has recently been the case. It is true the place of meeting is not very convenient, and there is not much real executive power vested in the Medical Faculty, so that some may feel the discussions are more academic than practical; it is nevertheless of importance that, while grave matters of the first importance to medical students and graduates are under discussion by the Senate, the Medical Faculty, which stands for the democratic part of the medical side

of the University, should exhibit no appearance of indifference. Doubtless an air of mystery surrounds the doings of the Senate; this, we trust, may be to some extent dispelled by the promised publication of an official organ to be entitled the *London University Gazette*. This gazette, edited by the new Principal, Mr. Rucker, will make its first appearance in October, and its price will be twopence a copy. In addition to class lists, regulations, and university notices, the *Gazette* will include an official account of the proceedings of the Senate and its Boards and Faculties, together with the business of Convocation and such advertisements as may be approved by the Editorial Committee under whose general direction the Principal will act.

## DIPHTHERIA EPIDEMIC AT COLCHESTER.

The members of the Sanitary Committee of the Colchester Town Council are deserving of no small amount of sympathy on account of the difficult and anxious position in which they have found themselves during the greater part of the last twelve months. During that time there has been an almost continuous epidemic of diphtheria in Colchester, and during the previous year the number of cases was decidedly large. During the month of July last 65 cases of the disease were notified, and there were 6 deaths; but there is reason to believe that by no means all the cases of slight diphtheria have been notified. From the report of the meeting of the Colchester Town Council on August 7th in the *Essex County Standard* it appears that the accommodation available at present in the Colchester Infectious Diseases Hospital consists of 18 beds, but 35 patients had to be provided for in it, and in 3 of its small rooms, each, according to the requirements of the Local Government Board, large enough for only 2 patients 18 diphtheria patients were placed. The remaining 18 or 20 patients were housed in seven tents in the open. The municipal authorities of Colchester appear to have been unfortunate in regard to the counsel they have received from their own medical advisers. Three of the four sanitary officers connected with the Corporation and Board of Guardians, according to the report quoted, have disapproved of the employment of antitoxin, while one of them had a private method of treating the disease that he considered preferable, as was pointed out in the British Medical Journal of February 23rd, 1901, p. 477. It is not to be wondered at that under these circumstances one of the Town Councillors recently said: "They themselves did not know anything about antitoxin and its use; some said it was beneficial, and others said it brought on other disease." According to the last report of the medical officer of health, however, the epidemic disease had run a natural course; or, in the words of one of the Town Councillors, "in the good old-fashioned way." The medical officer wrote:

> This outbreak of diphtheria has followed the usual law which governs these infectious disorders—a sudden outburst with a few previous mild cases indicating that the disease was amongst us, and giving a large amount of fatality in proportion to the population; then a uniform progress amongst those susceptible to its attack; finally, the infection becomes more weak and gradually dies out—as it shows with measles notified above, or with small-pox in the early part of the year in Glasgow.

Considering the disuse of diphtheria antitoxin, it seems hardly fair to compare the course of the small-pox epidemic in well-vaccinated Glasgow with the diphtheria epidemic in Colchester. More active steps, however, have of late been taken by the municipal authorities of Colchester; a resolution was passed by the Sanitary Committee on July 17th that antitoxin should be administered in all cases of diphtheria admitted to the hospital if it had not already been injected, and the Medical Officer of Health, who had hitherto resisted the method, was understood to express his acquiescence. On July 29th it was decided that the advice of a consulting bacteriologist should be obtained, and Professor Sims Woodhead's assistance was sought. Through his influence Dr. Louis Cobbett, Demonstrator of Pathology in the University of Cambridge, went down to Colchester, made an examination into the conditions of the epidemic, and delivered a report based on the results. He found the evidence indicated that the disease was being spread by personal contact, and proposed that the diagnosis in all cases of the disease should be based on bacteriological examination, that all "contacts" should be submitted to a similar examination, and that in their case the injection of antitoxin should be employed as a prophylactic measure. He accordingly recommended that a practical bacteriologist should be appointed and provided with a laboratory; that an isolation home for "contacts" should be organised, and that all persons admitted should have antitoxin injected as a preventative; that the co-operation of the medical practitioners of the district should be invited, and that, if they preferred to have it so in any particular instance, the Medical Officer of Health should be instructed to undertake the examination of "contacts" and the administration of antitoxin. As yet Dr. Cobbett's suggestions have not been adopted, but permission was, on August 7th, granted for the erection of a temporary iron building, at a cost of £125, to cope with the present outbreak, and the question of the establishment of a permanent and enlarged infectious diseases hospital was referred back to a committee with the understanding that it would not be indefinitely postponed. We cannot but feel that those medical officers, to whom the municipal authorities of the district have looked for guidance in regard to the public health, by advocating a reactionary policy, are incurring a grave responsibility.

## THE HALIFAX GUARDIANS AND THEIR NEW WORKHOUSE HOSPITAL.

We see by the local press that the new workhouse infirmary which has been erected for the Halifax Union, and is described as having cost the ratepayers of that district £100,000, will shortly be available for the reception of patients. For the medical supervision of this institution the guardians now advertise for a medical officer who is to be the head of the medical staff (which is to consist of three), and to be paid a salary of £105 per annum; the duties of this officer, however, are to be hereafter defined. It is evident that these terms are sufficiently elastic to allow the guardians to impose on their new officer after his election duties which he may not be prepared to undertake. It is not easy to understand what has induced the Halifax guardians to issue such an advertisement, and indeed it seems to be doubtful whether it is strictly in accordance with regulations. As the new hospital is really a department of the workhouse of the Halifax Union, we are surprised to find that Dr. Dolan, who has held the medical appointment of that institution for thirty years past, should not now be appointed one of its medical staff, though it would appear that until so recently as August 7th this was the course designed by the guardians themselves. This has, however, been altered, and the alteration appears to have been brought about by the attempt of the guardians to throw the medical work of the new hospital, with all its responsibilities, on Dr. Dolan from the time of its being opened, without fixing any salary, leaving themselves free at the end of twelve months, to decide what salary (if any) should then be paid to him for his services during that period of time. We believe that if Dr. Dolan had accepted this offer the guardians would have found themselves unable to remunerate him and he would have been unable to recover payment for any work done during the first half of the twelve months in question. Dr. Dolan appears to have considered this, and has consequently declined to undertake a serious amount of additional work (which the guardians themselves estimate will require three medical

officers) for twelve months, on terms so vague and uncertain that it is possible he might receive no remuneration whatever, according to the view the majority of the Board might take as to his claim for such at the expiration of that time. It is difficult to understand how any Board composed of business men could have expected to secure professional services on the terms offered by these guardians to a medical officer who has for so long a time served them with marked efficiency. We cannot, therefore, at the present time regard the vacancy at Halifax as a desirable medical appointment.

## OPENING OF A NEW HOSPITAL AT NEWPORT.

ON August 5th the new Newport and Monmouthshire Hospital was publicly opened by Lord Tredegar in the presence of a large gathering, exactly four years after the foundation stone was laid. The new hospital has been erected on an excellent site which was presented by Lord Tredegar. It has the drawback, however, that it is situated at one end of the town. A new hospital was badly needed at Newport. Its predecessor dated back to 1860, and was originally opened as a dispensary to which wards were gradually added. Its gradual enclosure by houses, and the more exacting requirements of scientific medicine and surgery, rendered the old hospital unsuitable. The new hospital owed its initiation to the generous action of Dr. Garrod Thomas, who offered £5,000 if another £15,000 could be obtained. Lord Tredegar gave the site, and by means of a bazaar and contributions from wealthy firms and individuals, as well as by smaller monetary contributions, the money required was raised. The cost of the hospital was about £40,000. It was inspected on August 1st, by invitation, by a large number of the medical profession of Monmouthshire and the neighbourhood. The hospital has been erected on the pavilion principle, with central administrative block and pavilions stretching out on both sides at right angles. The ward blocks are connected with the administrative block by corridors. Accommodation is provided for 84 patients in 6 wards, each of 12 beds, and 6 wards of 2 beds each. These 6 wards consist of 3 male wards, 2 for surgical and 1 for medical cases; 2 female wards, 1 for surgical and 1 for medical cases; and a children's ward. The out-patient block is quite separate from the main building. The operating theatre, which is on the ground floor, is well lit, and has a side room for the administration of anæsthetics. The walls are of white cement, and the theatre is fitted up with the latest appliances. The whole hospital is supplied with electric light, and in the wards plug connections are placed between the beds for connection with a portable electric light. The mortuary and *post-mortem* rooms are behind the administrative block in a separate one-storey building.

## THE TRANSMISSION OF BOVINE TUBERCULOSIS TO MAN.

ACCORDING to a telegraphic message from Denver, Dr. Monson, the Dairy Commissioner for the State of Colorado, has volunteered to subject himself to the infection of animal tuberculosis with a view to settling the question whether bovine tuberculosis is transmissible to man. Dr. Monson makes as a condition of his experiment that a satisfactory annuity be provided for his family in the event of the infection being fatal. We are not informed how Dr. Monson proposes to subject himself to infection. If it is merely by swallowing tuberculous milk or meat, we take leave to point out that while fully appreciating his self-sacrificing devotion to the cause of scientific truth and to the welfare of mankind, a negative result of such an experiment would not necessarily be a proof of Professor Koch's doctrine. Fortunately for the human race the tubercle bacillus is very often swallowed with impunity because the conditions necessary for its development are not present *semper, ubique et in omnibus*. Nor will Dr. Monson settle the controversy if he submits to the inoculation of infective material. If he contracts tuberculosis he will only add one case to the many instances of transmission of the disease in this manner recorded by Nocard and others. On the other hand, if the result of the experiment is negative it cannot be held to be conclusive, for no general inference could legitimately be drawn from a single case.

## EGYPTIAN MEDICAL CONGRESS.

AN Egyptian Medical Congress is to be held under the patronage of the Khedive at Cairo from December 10th to 14th, 1902, under the presidency of Dr. Abbate Pacha. The Honorary Presidents are Dr. Ibrahim Pacha Hassan, Dr. Pinching, and Dr. Ruffer. The General Secretary is Dr. Voronoff. The work of the Congress will be divided among three sections, as follows: (1) Medical Sciences, presided over by Dr. Comanos Pacha; (2) Surgical Sciences, presided over by Dr. H. Milton; and (3) Ophthalmology, presided over by Dr. Mohammed Bey Eloui. The programme of the Congress will include discussions on affections especially rife in Egypt, such as bilharzia, ankylostomiasis, bilious fever, abscess of the liver, etc. Special attention will be given to questions relative to the epidemics which for some years past have regularly visited Egypt, and the prophylactic measures to be taken against them. The following papers among others have been promised: Alcoholism and its Increase in Egypt, by Dr. de Becker; The Frequency of Hydrocele in Egypt and its Treatment, by Dr. Colloridi; Myxœdema in Egypt, by Dr. Brossard; Plague, by Dr. Gotschlich; and Tuberculosis in Egypt, by Drs. Ibrahim Pacha Hassan, Eïd, and Sandwith.

## MOSQUITOS AND MALARIA.

THE *Times* of August 10th published the following cablegram which has been received by the Honorary Secretary of the Liverpool School of Tropical Medicine from Major Ronald Ross, F.R.S.: "I have left Lagos and am now at Accra. Have had very satisfactory interview with the Governor of the Gold Coast. His Excellency, Major Nathan, the Governor promises every assistances to the expedition of the Liverpool School if we can arrange for the despatch of another delegate to carry out operations in the Gold Coast.—Ross." The Liverpool School of Tropical Medicine hopes to be able to act on this suggestion and to send out at an early date an expert to undertake the task of conducting a campaign against the malarial mosquito and malaria on the Gold Coast. In the meantime Dr. Charles Wilberforce Daniels, Medical Superintendent of the London School of Tropical Medicine, has sailed from Liverpool for West Africa in order to join the sixth Liverpool Expedition in Sierra Leone. It will be remembered that Dr. Daniels has recently spent a considerable time in Central and East Africa as a member of the Royal Commission on Malaria, and that he has also had experience of the tropical diseases of South America. The sixth expedition now consists of Major Ronald Ross, Dr. Logan Taylor, Dr. McKendrick, who is officially attached to the expedition on behalf of the Indian Government, and Dr. C. W. Daniels. The seventh Liverpool Expedition, which is to be despatched to the Gambia country, will probably leave for Bathurst in about a fortnight.

## GLANDERS IN LONDON.

ON July 30th a deputation waited upon the President of the Board of Agriculture (Mr. Hanbury) from the London County Council in reference to the increase of glanders in London. Mr. Johnson, Chairman of the Public Control

Committee, and Dr. Collins addressed the President on behalf of the deputation, and pointed out that 1,387 cases of the disease had been reported in London in 1900, whereas since 1895 the annual number had been fewer than 1,000. During the first four months of the present year 538 cases had been reported. The chief interest, however, centred in the pathological questions of the value of mallein as a diagnostic agent and the curability of glanders by its aid. Mr. Hanbury, in his reply, refused to entertain the idea of rendering notification of glanders compulsory by veterinary surgeons. He also objected to giving further powers to the Council to deal with contact cases, and so indirectly coerce owners into employing mallein. He further expressed doubt as to whether the last word had yet been said as to the value of mallein as determining the need for slaughter, and he reminded the deputation that, following the recommendations of the last Departmental Committee on the subject, the Board had instituted a series of investigations with a view to determine authoritatively various pathological questions as to mallein in its diagnostic and therapeutic uses, and until these researches were concluded—and they would probably last another year—he was not disposed to make any fresh departures in administrative dealings with this disease. There can be little doubt that the present Glanders Orders are based upon pathological assumptions which are either obsolete or erroneous, and, while the officers of the Board, in a recently-issued report, commend the Glasgow authorities for their successful dealing with the disease, it is an open secret that horses which reacted to mallein are now in daily employ in Glasgow, having been reported to be cured of that which the Board of Agriculture regards as an incurable disease. Truly, as the President avers, the last word has not yet been said upon this question.

## LIVERPOOL COUNTRY HOSPITAL FOR CHRONIC DISEASES OF CHILDREN.

It is but fair to acknowledge that Liverpool not infrequently takes the lead in wise and far-seeing efforts to advance the public good. In November, 1899, the Liverpool Country Hospital for Chronic Diseases of Children was opened by Sir Edward Russell, and it has since been more than filled by little patients whose friends have contributed some 3s. 6d. per week for each. Its object is to supply prolonged medical and surgical treatment to children who require such in the good air of the open country. It is not meant for hopeless cripples or incurables from any cause, neither is it a convalescent home; it is for those who would not recover in the comparatively short time they could be kept in a general hospital, and who, if left at home in their unfavourable surroundings, would almost certainly suffer a lingering death, but who, with proper care, are capable of cure. At present the hospital, which is at West Kirby, has 20 beds and 2 cots, but judging by the number of applications on behalf of suitable patients, a hospital of 200 beds would not be too large. A feature of the hospital not commonly met with is that each patient is from the beginning under conjoint medical and surgical care. It is to be hoped that other towns and districts will follow the good example set by Liverpool. Any disinclination to do so based on views relating to the survival of the fittest would be based on a half-truth, not to say a positive fallacy, for many who are among the fittest to survive are fit in spite of physical disabilities.

## A MEDICO-HISTORICAL MUSEUM IN PARIS.

On the initiative of the Dean of the Paris Medical Faculty a medico-historical museum is to be established in the library of the Sorbonne. It will contain a large collection of medical relics of one kind or another, documents relating to the history of medical science, letters and autographs of distinguished physicians and surgeons, medicine glasses and other apparatus, surgical instruments, and other objects of interest to medical antiquarians. Among the documents will be the journals kept by the physicians of Louis the Fourteenth and Louis the Fifteenth, in which are faithfully recorded the disorders of the royal digestion and the irregularities of the royal bowels which followed the excesses of these monarchs at table. All the enemata and bleedings to which the august patients were subjected on the principle of *clysterium donare, ensuita purgare* are also duly chronicled. The collection will also include various edicts of the kings of France relative to the practice of medicine and the putting down of quackery. Among the relics are a set of obstetrical instruments found at Pompeii, and the instruments which served for the *post-mortem* examination of Napoleon the First. There will also be a collection of portraits. The new museum, which is to be under the direction of Dr. Cabanès, editor of the *Chronique Médicale*, is to be opened at the beginning of 1902.

## PROPOSED SANATORIUM FOR CONSUMPTIVES AT WINSLEY.

It is proposed to erect at Winsley a sanatorium for the consumptives of Gloucestershire, Somerset, and Wiltshire who are above the rate-supported poor in social position and below the class who are able to pay for admission into private sanatoria. The estimated cost of its erection and equipment to provide for 60 patients is £20,000, and for its maintenance a yearly revenue of £4,000 will be required. Only early cases will be considered suitable, and no patient will be admitted without a medical certificate. At first each of the three counties and Bristol will be allotted 15 beds. It is expected that clubs and groups of persons will subscribe to support beds. Thus a group of 300 paying one penny each per week would have a bed for their own nomination, and they would probably be able to send three or four patients to be treated each year. Other cases nominated in the ordinary way by subscribers would be expected to pay a sum not exceeding 10s. a week. The difference between the amount thus charged and the 25s. per week, the estimated cost of maintenance for each patient, would have to be collected by subscription, but the Committee do not anticipate that such amount will be more than £300 a year for each of the counties and the city of Bristol.

## A MEMORIAL TO DR. BREHMER.

At the last meeting of the German Balneological Congress it was decided to erect a memorial to Dr. Hermann Brehmer, whose name is associated with the introduction of the open-air treatment of consumption. A Committee for the purpose has been appointed, under the patronage of the Duke of Ratibor. The Chairman of the Committee is Professor Liebreich, and among its members are Professor von Leyden, Professor Nothnagel, Professor Winternitz, Professor Chrobak, and many other prominent members of the medical profession, official personages, and others. Dr. Brehmer died on December 22nd, 1889.

## AN ANTICIGARETTE LEAGUE.

An Anticigarette League was in session recently at Buffalo. There were present about 600 delegates representing many local organisations in the United States and Canada. Addresses were delivered by President Elwood Brown and Mr. Charles Fisk, of Chicago, and many papers were read on the baneful effects of cigarette smoking.

The Home Secretary has appointed Dr. Robert Welsh Branthwaite to be Inspector of State Inebriate Reformatories.

General Leonard Wood, the Governor of Cuba, who is a member of the medical profession, has been suffering from enteric fever. We are pleased to learn that he is now convalescent.

The next Congress and Exhibition of the Sanitary Institute will be held in the City of Manchester in the second week of September, 1902, under the Presidency of the Right Hon. the Earl Egerton of Tatton.

The King has been graciously pleased to appoint Sir Francis Richard Cruise, M.D., F.R.C.P.I., D.L., formerly President of the Royal College of Physicians in Ireland, to be one of the Physicians in Ordinary to His Majesty in Ireland in place of the late Dr. William Moore.

The King has been pleased to give directions for the appointment of Mr. William Henry Williams Strachan (Chief Medical Officer) to be an Official Member, and of Obadiah Johnson, M.D., to be an Unofficial Member of the Legislative Council of the Colony of Lagos.

The German Government has sent an expedition to German East Africa for the purpose of organising a systematic effort for the prevention of malaria. The expedition is under the command of Dr. Ollwig, Staff-Surgeon *à la suite* serving with the Imperial forces in East Africa.

Surgeon-General J. Jameson, C.B., King's Honorary Physician, who has lately retired from the post of Director-General Army Medical Department, to which he was appointed in May, 1896, has, we understand, been pensioned on a higher scale than originally intended of £1,000 per annum, having been awarded an extra sum of £10 per month.

# MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

**The Factory and Workshops Bill.**—The report stage of the Bill was taken on Monday, and there was a large attendance of members for August 12th. Sir Charles Dilke tried first unsuccessfully to amend the ventilation clause, but the Home Secretary accepted an amendment of Mr. Tennant's respecting sanitary conveniences in factories. Then, after some discussion on the clause dealing with notices of accidents, the burning question of the Saturday half-holiday came on, and the Government suffered a remarkable defeat, the proposals of the Grand Committee for the Saturday half-holiday to begin at 12 being carried by 163 to 141. After a scene of considerable excitement the House settled down again to its work. Mr. Renshaw then carried two amendments with the support of the Government, the most important of which extended the period of overtime for women. Other proposals to extend overtime were withdrawn. Sir Charles Dilke failed in his attempt to secure further protection for young persons engaged in the fish-curing trade, and the House disposed of the amendments up to Clause 101, when the consideration was adjourned. On Tuesday the consideration of the Bill was resumed, and the chief struggle was in connection with the exemption of laundries connected with conventual or charitable institutions. Mr. Ritchie moved the omission of Clause 103 for this purpose, and then, by an amendment of the schedule, proposed to restore the law to the *status quo ante*. The Home Secretary's plan was carried by 188 to 60. The Bill then passed through Committee without further amendment of its clauses. Mr. Renshaw moved an amendment to introduce the sanitary inspector on an equality with the medical officer of health in Clause 159. Sir Michael Foster strongly opposed the proposal, and it was finally withdrawn. After the schedules had been considered and slightly amended, the Bill was read a third time and passed.

**Research Laboratories for Irish Asylums.**—Mr. William Johnson asked the Chief Secretary last week whether he would introduce a clause into the Local Government (Ireland) Amendment Bill to empower County Councils to contribute to the support of a central laboratory for the study of mental pathology. Mr. Wyndham gave a sympathetic reply, in which he said that such a clause could not be inserted in the Bill named but could be inserted in the Lunacy (Ireland) Bill now before the House if there was an assurance that there would be no opposition.

**Tuberculosis in Man and Cattle.**—Mr. Field drew the attention of the President of the Local Government Board to an alleged statement of Professor Virchow agreeing with Professor Koch that human and cattle tuberculosis were different, and asked if the Government would grant a sufficient sum of money to enable exhaustive scientific experiments to be made to settle the question, and also appoint a Commission. Mr. Long, in reply, said that the making of experiments was a matter which would have to be considered in connection with the appointment of a Royal Commission, but that no decision as to the appointment had yet been arrived at.

**Ptomaine Poisoning.**—Mr. Channing directed the attention of the President of the Local Government Board to two recent cases of poisoning by decomposed cream, and asked that prompt steps should be taken to check the improper use of preservatives whereby articles were sold for consumption in a condition dangerous to health. Mr. Long said in reply that he expected very soon to receive the report of the Committee on Food Preservatives, and he hoped he should then be in a better position to say how the decompositions referred to could be prevented.

**The Irish Local Government Board.**—The last two days in Supply were occupied with a prolonged and exhaustive discussion by the Irish members on the difficulties which have arisen between the local authorities and the Local Government Board. Many questions connected with the action of Poor-law inspectors, the position of dispensary doctors (even details of mistaken diagnosis), the question of nurses as affected by the recent order of the Board, the action of Dr. Flynn as vice-guardian of the Poor-law Union of Killarney, and a host of other questions were debated at length on the first day. On the second day, on Report, the subject was resumed, and lasted till the closure rule came into force at 10 o'clock. In the course of the debate Dr. Thompson made a useful speech, in which he complained of the rule that prevented the training of nurses in the county infirmaries for higher positions, and pointed out that hospitals with fewer than 140 beds, as required by the rules, were often the best training schools for nursing. He also strongly condemned the arrangements for the care of the poor in some Poor-law hospitals. Sir Walter Foster contrasted the friction existing in Ireland with the smoother working in England, and argued that it must continue till a more representative Central Board was created in Dublin. Mr. Wyndham, in the course of several speeches, defended the Irish Local Government Board, but on the whole made sympathetic and conciliatory replies. The vote was carried on the closure by a large majority.

**The R.A.M.C. Committee.**—Major Rasch, on Friday last week, asked the Financial Secretary, in the absence of the Secretary of State for War, when the report of the Committee of Experts on the Army Medical Department would be ready, and if it would be published. Lord Stanley, in reply, was not able to give any information. It is generally understood that the Committee has agreed upon a scheme, but it is feared that no opportunity will be forthcoming for its consideration before the end of the session. It is very doubtful if the report will be published before Parliament rises.

## THE MEDICAL GUILD, MANCHESTER, AND THE PROTECTION OF PARTURIENT WOMEN.

We have received from Mr. David Owen, the Hon. Secretary of the Medical Guild, Manchester, a scheme for the protection of parturient women and their offspring, which was adopted at a special meeting of the Guild held on June 15th, 1901. In view of the fact that a large share of the mortality and morbidity amongst the parturient women and the newly-born of the poorer classes is undoubtedly due to their being attended by ignorant and untrained women, and their not having the services of fully qualified medical practitioners, the Guild is of opinion that legislation is urgently required with the sole object of putting within the reach of the poorer classes the assistance both of a trained nurse and of a qualified medical practitioner, and recommends the adoption of the following scheme as a basis for future legislation:

1. That all obstetric nurses be adequately trained in hospital, examined, and registered.

2. That the guardians or the local sanitary authority be the authority for the local administration of the scheme.

3. That the local authority shall engage one or more registered obstetric nurses, at such salary as may be practicable, whose services shall be placed, free of all charge to the patient, at the disposal of any woman living in the district, and whose circumstances shall justify it, to nurse her in her confinement and during the puerperal period.

4. That each local authority shall issue to each suitable applicant for the nurse's services a note requisitioning the services of a registered medical practitioner. This note must be taken or sent by the woman to such practitioner as she may select who is willing to undertake this work. The acceptance by him of a note shall constitute an engagement on his part to render to her such assistance in her confinement as the nature of the case may demand.

5. That the notes which the practitioner receives from the patients shall be redeemed by the local authority at such a rate as may be hereafter fixed.

6. That the question of the suitability of applicants be left to the local authority.

# ASSOCIATION INTELLIGENCE.

## PROCEEDINGS OF COUNCIL.

At a meeting of the Council held in Room No. 8, Ladies' College, Cheltenham, on Tuesday, July 30th, 1901.

*Present:*

Dr. John Roberts Thomson, President of the Council, in the Chair.

Dr. William Alfred Elliston, President.

Dr. George Bagot Ferguson, President-elect.

Mr. Andrew Clark, Treasurer.

Dr. James Barr, Liverpool.
Dr. Rayner W. Batten, Gloucester.
Dr. Thomas Beattie, Newcastle-on-Tyne.
Dr. Michael Beverley, Norwich.
Mr. Langley Browne, West Bromwich.
Professor John William Byers, Belfast.
Dr. W. Calwell, Belfast.
Mr. Colin Campbell, Saddleworth.
Dr. Edward J. Cave, Bath.
Mr. Thomas H. Cheatle, Burford.
Mr. John Ward Cousins, Portsmouth.
Dr. H. Radcliffe Crocker, London.
Dr. P. Maury Deas, Exeter.
Brigade-Surgeon-Lieut.-Col. E. F. Drake-Brockman, F.R.C.S., London (South Indian and Madras Branch).
Mr. George Eastes, M.B., London.
Dr. John H. Galton, Upper Norwood.
Dr. Alfred Godson, Cheadle.
Dr. Bruce Goff, Bothwell.
Dr. Joseph Groves, Carisbrooke.
Surg.-Gen. J. B. Hamilton, M.D., London (Cape of Good Hope Branch).
Dr. W. Morton Harman, Winchester.
Dr. T. Arthur Helme, Manchester.
Mr. Victor Horsley, F.R.S. London.
Mr. T. R. Jessop, Leeds.
Mr. Evan Jones, Aberdare.
Mr. R. H. Kinsey, Bedford.
Dr. C. H. Milburn, Hull.
Sir John William Moore, M.D., Dublin.
Brigade-Surgeon T. B. Moriarty, M.D., Cork.
Mr. W. Jones Morris, Portmadoc.
Dr. James Murphy, Sunderland.
Surgeon-General T. F. O'Dwyer, Aldershot (Halifax and Nova Scotia Branch).
Mr. D. A. O'Sullivan, London.
Mr. C. H. Watts Parkinson, Wimborne.
Dr. Charles Parsons, Dover.
Dr. Frank M. Pope, Leicester.
Dr. A. Brown Ritchie, Hulme.
Dr. Robert Saundby, Birmingham.
Dr. Alfred Sheen, Cardiff.
Dr. G. E. Shuttleworth, Richmond Hill.
Mr. Henry Stear, Saffron Walden.
Dr. A. Jefferis Turner, London (Brisbane and Queensland Branch).
Mr. T. Jenner Verrall, Brighton.
Mr. Denis Walshe, Graigue.
Dr. S. Woodcock, Old Trafford.
Dr. William Young, Bridge of Turk, N.B. (New Zealand Branch).

The minutes of the last meeting having been printed and circulated, and no objection received, were taken as read and signed as correct.

Read letters of apology for non-attendance from Sir George Hare Philipson, Dr. Edgar Barnes, Dr. Henry Barnes, Dr. Buist, Dr. Freeland Fergus, Dr. James Murray, Dr. R. W. Philip, and Dr. John Rolston.

Dr. A. Jefferis Turner and Dr. Wm. Young were introduced to the Council as the representatives of the Brisbane and Queensland Branch and New Zealand Branch respectively.

The President of Council reported that he had received a letter from Mr. Francis Fowke, the General Secretary, thanking him for conveying the decision of the last meeting of the Council, and asking for leave of absence until the first week in October.

Resolved: That the General Secretary be granted leave of absence until the first week in October.

The President of Council reported that he had received a communication asking that collecting boxes be placed in the rooms during the meeting on behalf of the family of the late Mr. R. B. Anderson.

Resolved: That the death of Mr. R. B. Anderson be announced to the general meeting, and the members' attention be drawn to the subscription list which has been opened on behalf of his family.

The election of candidates was then considered.

Resolved: That the 82 candidates (together with the 14 on the Supplemental List) whose names appear on the circular convening the meeting be and they are hereby elected members of the British Medical Association.

Read reply from the Matrons' Council of Great Britain and Ireland in reference to minute of Council 5129:—

Resolved: That the General Secretary be instructed to write and ask the Matrons' Council to communicate their views in writing, together with a list of their membership and information as to the institutions of which they are matrons.

46, York Street, Portman Square, W.
July 8th, 1901.

Sir,—At the last meeting of the Executive Committee of the Matrons' Council of Great Britain and Ireland your letter of April 29th on behalf of the Council of the British Medical Association was read and discussed. The members regretted that your Association has not consented to receive a deputation from the Matrons' Council, to lay before it the views of trained nurses on the registration of midwives, and, after due consideration decided not to communicate their views in writing, as they are of opinion that no useful purpose would be attained by this method.

I enclose for the information of your Council the copy of a resolution which was forwarded by the Matrons' Council to the London Obstetrical Society early in the year, which will indicate to you the line which the Council has taken on this question.

I am, Sir, yours faithfully,
Margaret Breay,
Hon. Sec. Matrons' Council.

To the General Secretary,
British Medical Association.

Copy of resolution sent by the Matrons' Council to the London Obstetrical Society:

The Matrons' Council of Great Britain and Ireland, an Association of superintendents of trained nurses, while recognising the work done in the past by the Council of the London Obstetrical Society in raising the standard of midwifery education, desires to express its strong conviction that a three months' training is inadequate to prepare midwifery pupils for the responsible practical work which devolves upon them after obtaining the certificate of the London Obstetrical Society. It moreover considers that in the education of nurses a general education should always precede a special one, and asks the Council of the Obstetrical Society to henceforth require of candidates for its examination either the certificate of a general nurse training school, or evidence that they are *bonâ-fide* pupils of such a school. The Matrons' Council further considers that the recognition and certification of specialists is calculated to professionally injure thoroughly trained nurses.

With regard to the notices of motion of Dr. Sarat K. Mullick:

1. That the present system of filling professorial chairs in the medical colleges of India by virtue of grade rank is apparently prejudicial to the interests of medical education, and is a bar to the advancement of original research in India. This meeting is of opinion that some change is necessary, and hereby appoints a Committee to consider the matter and report to the Council.

2. That having regard to the fact that persons possessing no knowledge of medicine are by law allowed the same rights to practise in India as fully-qualified practitioners, this Association considers it advisable that there should be a system of registration to protect the public from charlatans.

it was moved and seconded and

Resolved: That Dr. Mullick be told that his first notice of motion is in effect to refer the matter back to the Indian Medical Services Subcommittee, with instructions to reopen the inquiry, and therefore he must deal with the question upon the report of that Subcommittee, and cannot be allowed to move a separate resolution at a later stage of the meeting.

AT a meeting of the Council held in Room No. 8, Ladies' College, Cheltenham, on Wednesday, July 31st, 1901.

*Present:*

Dr. J. ROBERTS THOMSON, President of the Council, in the Chair.
Dr. GEORGE BAGOT FERGUSON, President.
Mr. ANDREW CLARK, Treasurer.

Dr. JAMES BARR, Liverpool.
Dr. THOMAS BEATTIE, Newcastle
Dr. MICHAEL BEVERLEY, Norwich.
Dr. J. BRASSEY BRIERLEY, Old Trafford.
Mr. LANGLEY BROWNE, West Bromwich.
Dr. R. C. BUIST, Dundee.
Mr. HENRY T. BUTLIN, London.
Professor JOHN W. BYERS, Belfast.
Dr. W. CALWELL, Belfast.
Mr. COLIN CAMPBELL, Saddleworth.
Dr. E. J. CAVE, Bath.
Mr. J. WARD COUSINS, Southsea.
Dr. H. RADCLIFFE CROCKER, London.
Dr. P. MAURY DEAS, Exeter.
Brigade-Surgeon-Lieut.-Colonel E. F. DRAKE-BROCKMAN, London (South Indian and Madras Branch).
Dr. W. A. ELLISTON, Ipswich.
Dr. JOHN H. GALTON, Upper Norwood.
Dr. ALFRED GODSON, Cheadle.
Dr. BRUCE GOFF, Bothwell.
Dr. MAJOR GREENWOOD, London.
Dr. J. GROVES, Carisbrooke.
Surgeon-General J. B. HAMILTON, M.D., London (Cape of Good Hope Branch).
Dr. HENRY HANDFORD, Nottingham.
Dr. W. M. HARMAN, Winchester.
Dr. W. F. HASLAM, Birmingham.
Dr. T. ARTHUR HELME, Manchester.
Mr. VICTOR HORSLEY, F.R.S., London.
Mr. T. R. JESSOP, Leeds.
Mr. EVAN JONES, Aberdare.
Mr. R. H. KINSEY, Bedford.
Dr. C. H. H. MILBURN, Hull.
Sir JOHN WM. MOORE, M.D., Dublin.
Brig.-Surg. T. B. MORIARTY, M.D., Cork.
Mr. W. JONES MORRIS, Portmadoc.
Dr. JAMES MURPHY, Sunderland.
Surg.-Genl. T. F. O'DWYER, Aldershot (Halifax and Nova Scotia Branch).
Mr. C. H. W. PARKINSON, Wimborne.
Dr. FRANK M. POPE, Leicester.
Dr. A. BROWN RITCHIE, Hulme
Dr. ROBERT SAUNDBY, Birmingham.
Dr. ALFRED SHEEN, Cardiff.
Dr. G. E. SHUTTLEWORTH, Richmond Hill.
Mr. HENRY STEAR, Saffron Walden.
Dr. A. JEFFERIS TURNER, London (Brisbane and Queensland Branch)
Dr. W. J. TYSON, Folkestone.
Mr. T. JENNER VERRALL, Brighton
Dr. NORMAN WALKER, Edinburgh.
Mr. DENIS WALSHE, Graigue.
Dr. S. WOODCOCK, Old Trafford.
DR. WILLIAM YOUNG, Bridge of Turk, N.B. (New Zealand Branch.)

The minutes of the last meeting having been printed and published in the *Daily Journal* were taken as read and ordered to be signed as correct.

Read letters of apology for non-attendance from Dr. E. L. Fox and Mr. C. S. Tomes, F.R.S.

Dr. Major Greenwood and Mr. W. F. Haslam were introduced to the Council as Representatives of the Metropolitan Counties Branch and Birmingham and Midland Counties Branch respectively.

The Council received a deputation from Manchester, inviting the Association to hold its annual meeting there in 1902, consisting of Mr. Walter Whitehead, Dr. Brooke, Dr. Dreschfeld, Dr. Glascott, Dr. Dodson, Dr. Little, Dr. Lloyd Roberts, Dr. Macfie, Dr. Milligan, Dr. Mould, Dr. Rayner, Mr. Thorburn, Dr. Woodcock, Professor Young, the Secretaries of the meeting, Mr. W. Coates, Dr. Helme, Mr. J. W. Smith, Dr. Brown Ritchie.

Resolved: That it be recommended to the general meeting of members of to-day that the annual meeting for 1902 be held in Manchester, and that Mr. Walter Whitehead be nominated President-elect.

Resolved: That the candidates whose names are printed on page 74 of the *Daily Journal*, July 31st, 1901, be provisionally elected members of the British Medical Association, subject to confirmation at the October meeting of Council.

The President of Council reported the returns of the election of representatives of Branches.

*Aberdeen, Banff, and Kincardine Branch.*—Professor David W. Finlay, Aberdeen. *Adelaide and South Australia Branch.*—C. G. D. Morier, London. *Barbados Branch.*—C. G. D. Gooding, Deptford. *Bath and Bristol Branch.*—Edward John Cave, Bath; E. Markham Skerritt, Bristol. *Bermuda Branch.*—Eldon Harvey, London. *Birmingham and Midland Counties Branch.*—Langley Browne, West Bromwich; F. W. Haslam, Edgbaston; E. B. Whitcombe, Birmingham. *Bombay Branch.*—(No return.) *Border Counties Branch.*—Roderick Maclaren, Carlisle; R. Somerville, Galashiels. *Brisbane and Queensland Branch.*—(No return.) *British Guiana Branch.*—C. W. Daniels, London. *Burmah Branch.*—(No return.) *Cambridge and Huntingdon Branch.*—Henry Stear, Saffron Walden. *Cape of Good Hope Branch.*—Surgeon-General J. B. Hamilton (ret. A.M.S.), London. *Colombo Ceylon Branch.*—(No return.) *Cork and South of Ireland Branch.*—Brigade-Surgeon T. B. Moriarty, Cork. *Deccan Branch.*—(No return.) *Dorset and West Hants Branch.*—C. H. Watts Parkinson, Wimborne Minster. *Dublin Branch.*—Sir John William Moore, Dublin. *Dundee and District Branch.*—R. C. Buist, Dundee. *East Anglian Branch.*—Edgar George Barnes, Eye; M. Beverley, Norwich. *East York and North Lincoln Branch.*—C. H. Milburn, Hull. *Edinburgh Branch.*—R. W. Philip, Edinburgh; Norman Walker, Edinburgh. *Gibraltar Branch.*—(No return.) *Glasgow and West of Scotland Branch.*—Andrew Freeland Fergus, Glasgow; Bruce Goff, Bothwell. *Gloucestershire Branch.*—R. W. Batten, Gloucester. *Grahamstown and Eastern Province Branch.*—(No return.) *Griqualand West Branch.*—(No return.) *Halifax, Nova Scotia, Branch.*—Surgeon-General T. F. O'Dwyer, Aldershot. *Hong Kong and China Branch.*—James Cantlie, London. *Jamaica Branch.*—(No return.) *Lancashire and Cheshire Branch.*—James Barr, Liverpool; J. Brassey Brierley, Manchester; Colin Campbell, Saddleworth; A. Godson, Cheadle; T. Arthur Helme, Manchester; A. Browne Ritchie, Hulme; S. Woodcock, Manchester. *Leeward Islands Branch.*—(No return.) *Londonderry and North-West of Ireland Branch.*—E. Donaldson, Londonderry. *Malaya Branch.*—(No return.) *Malta and Mediterranean Branch.*—(No return.) *Melbourne and Victoria Branch.*—(No return.) *Metropolitan Counties Branch.*—H. Radcliffe Crocker, George Eastes, Major Greenwood, Victor Horsley, Henry Betham Robinson, Charles Sissmore Tomes, London. *Midland Branch.*—H. Handford, Nottingham; F. M. Pope, Leicester. *Montreal Branch.*—Sir William Hingston, Montreal. *Natal Branch.*—(No return.) *New Zealand Branch.*—W. Young, Bridge of Turk, N.B. *Northern Counties of Scotland Branch.*—James Murray, Inverness. *North of England Branch.*—T. Beattie, Newcastle-on-Tyne; James Murphy, Sunderland. *North of Ireland Branch.*—J. W. Byers, Belfast; Wm. Calwell, Belfast. *North Wales Branch.*—W. Jones Morris, Portmadoc. *Ottawa Branch.*—(No return.) *Oxford and District Branch.*—Thomas Henry Cheatle, Burford. *Perthshire Branch.*—Robert Stirling, Perth. *Quebec Branch.*—(No return.) *Reading and Upper Thames Branch.*—H. H. Phillips-Conn, Reading. *Shropshire and Mid-Wales Branch.*—John Davies Harries, Shrewsbury. *South-Eastern Branch.*—J. H. Galton, Upper Norwood; W. J. Tyson, Folkestone; T. J. Verrall, Brighton. *South-Eastern of Ireland Branch.*—Denis Walshe, Graigue. *Southern Branch.*—J. Groves, Carisbrooke, I.W.; Wm. Morton Harman, Winchester. *South Indian and Madras Branch.*—Brigade-Surgeon-Lieutenant-Colonel E. F. Drake-Brockman, London. *South Midland Branch.*—R. H. Kinsey, Bedford. *South Wales and Monmouthshire Branch.*—Evan Jones, Aberdare; A. Sheen, Cardiff. *South Western Branch.*—P. Maury Deas, Exeter; Edward Lawrence Fox, Plymouth. *Staffordshire Branch.*—T. Vincent Jackson, Wolverhampton. *Stirling, Kinross, and Clackmannan Branch.*—W. A. Mackintosh, Stirling. *Sydney and New South Wales Branch.*—Wm. Chisholm; W. H. Coutie. *Thames Valley Branch.*—G. E. Shuttleworth, Richmond Hill. *Toronto Branch.*—(No return.) *Trinidad and Tobago Branch.*—(No return). *Western Australian Branch.*—(No return.) *West Somerset Branch.*—L. Winterbotham, Bridgwater. *Worcestershire and Herefordshire Branch.*—W. G. Crowe, Worcester. *Yorkshire Branch.*—T. M. Dolan, Halifax; W. Dyson, Sheffield; T. R. Jessop, Leeds.

Read list of attendances of members of Council for the past twelve months, as follows (seven meetings):

| | Total Attendances. |
|---|---|
| Elliston, Dr. W. A., Ipswich, President ... ... | 7 |
| Ferguson, Dr. G. B., Cheltenham, President-elect ... | |
| Thomson, Dr. J. Roberts, Bournemouth, President of Council ... ... ... ... ... ... | 7 |
| Clark, Mr. Andrew, F.R.C.S., London, Treasurer ... | 7 |
| Banks, Sir J. T., M.D., Dublin, Vice-President ... | 0 |
| Barnes, Dr. E. G., Eye, R. ... ... ... ... | 6 |
| Barnes, Dr. Henry, Carlisle, Vice-President... ... | 0 |
| Barr, Dr. James, Liverpool, R. ... ... ... | 7 |
| Batten, Dr. R. W., Gloucester, R. ... ... ... | 4 |
| Beattie, Dr. T., Newcastle-on-Tyne, R. ... ... | 6 |
| Beverley, Dr. M., Norwich, R. ... ... ... | 7 |
| Bridgwater, Dr. T., LL.D., Harrow-on-the-Hill, Vice-President ... ... ... ... ... | 2 |
| Browne, Mr. Langley, F.R.C.S., West Bromwich, R... | 7 |
| Buist, Dr. R. C., Dundee, R. ... ... ... ... | 2 |
| Butlin, Mr. Henry T., D.C.L., F.R.C.S., London, Vice-President ... ... ... ... ... ... | 2 |
| Byers, Professor J. W., Belfast, R. ... ... ... | 5 |
| Calwell, Dr. W., Belfast, R. ... ... ... ... | 3 |
| Campbell, Mr. Colin, Saddleworth, R. ... ... | 5 |
| Cantlie, Mr. James, London, R. (Hong Kong Branch) | 4 |
| Carter, Dr. Alfred H., Birmingham, R. ... ... | 3 |
| Cave, Dr. Edward J., Bath, R. ... ... ... | 6 |
| Cheatle, Mr. T. H., Burford, R. ... ... ... | 4 |
| Cousins, Dr. J. Ward, Portsmouth, Vice-President ... | 6 |
| Crocker, Dr. H. Radcliffe, London, R. ... ... | 7 |
| Crowe, Dr. G. W., Worcester, R. ... ... ... | 3 |
| Deas, Dr. P. Maury, Exeter, R. ... ... ... | 4 |
| Dolan, Dr. T. M., Halifax, R. ... ... ... | 3 |
| Donaldson, Mr. E., Londonderry, R. ... ... | 3 |
| Drake-Brockman, Brigade-Surgeon-Lieutenant-Colonel E. F., F.R.C.S., London, R. (South Indian and Madras Branch) ... ... ... ... | 4 |
| Dyson, Dr. W., Sheffield, R. ... ... ... ... | 3 |
| Eastes, Mr. George, M.B., London, R. ... ... | 7 |
| Edwards, Dr. W. T., Cardiff, Vice-President ... | 0 |
| Fergus, Dr. Freeland, Glasgow, R. ... ... ... | 4 |
| Finlay, Professor David W., Aberdeen, R. ... ... | 2 |
| Foster, Sir Walter, M.D., D.C.L., LL.D., M.P., London, Vice-President ... ... ... ... | 0 |
| Fox, Dr. E. Long, Bristol, Vice-President ... ... | 0 |
| Gairdner, Sir W. T., K.C.B., M.D., F.R.S., Edinburgh, Vice-President ... ... ... ... ... | 0 |
| Galton, Dr. J. H., Upper Norwood, R. ... ... | 6 |
| Godson, Dr. A., Cheadle, R. ... ... ... ... | 4 |
| Goff, Dr. Bruce, Bothwell, R. ... ... ... | 7 |
| Gooding, Dr. C. G., Deptford, R. ... ... ... | 1 |
| Groves, Dr. J., Carisbrooke, R. ... ... ... | 7 |
| Hamilton, Surgeon-General J. B., M.D., London, R. (Cape of Good Hope Branch) ... ... ... | 7 |
| Handford, Dr. H., Nottingham, R. ... ... ... | 4 |
| Harman, Dr. W. M., Winchester, R. ... ... ... | 7 |
| Harries, Mr. John D., Shrewsbury, R. ... ... | 4 |
| Harvey, Dr. Eldon, London, R. (Bermuda Branch) ... | 1 |
| Helme, Dr. T. A., Manchester, R. ... ... ... | 7 |
| Holman, Dr., London, Vice-President ... ... | 5 |
| Horsley, Mr. Victor, F.R.S., London, R. ... ... | 6 |
| Jackson, Mr. T. Vincent, Wolverhampton, R. ... | 4 |
| Jessop, Mr. T. R., F.R.C.S., Leeds, R. ... ... | 7 |
| Jones, Mr. Evan, Aberdare, R. ... ... ... | 6 |
| Kinsey, Mr. R. H., Bedford, R. ... ... ... | 7 |
| Lloyd, Mr. Jordan, F.R.C.S., Birmingham, R. ... | 3 |

| | Total Attendances. |
|---|---|
| Mackintosh, Dr. W. A., Stirling, R. ... ... ... | 3 |
| Maclaren, Dr. R., Carlisle, R. ... ... ... | 1 |
| Macnamara, Mr. N. C., F.R.C.S., London, Vice-President ... ... ... ... ... | 3 |
| Milburn, Dr. C. H., Hull, R. ... ... ... ... | 5 |
| Moore, Sir John William, M.D., Dublin, R. ... ... | 7 |
| Moriarty, Brigade-Surgeon T. B., M.D., Cork, R. ... | 3 |
| Morier, Dr. C. G. D., London, R. (Adelaide and South Australia Branch) ... ... ... ... | 3 |
| Morris, Mr. W. Jones, Portmadoc, R. ... ... | 2 |
| Murphy, Dr. James, Sunderland, R.... ... ... | 7 |
| Murray, Dr. James, Inverness, R. ... ... ... | 4 |
| Niven, Dr. Thomas, Newburgh, R. ... ... ... | 3 |
| O'Dwyer, Surgeon-General T. F., Aldershot, R. (Halifax, Nova Scotia, Branch) ... ... ... | 6 |
| O'Sullivan, Mr. D. A., Southport, R.... ... ... | 7 |
| Parkinson, Mr. C. H. W., Wimborne Minster, R. ... | 7 |
| Parsons, Dr. Charles, Dover, Vice-President ... | 2 |
| Philip, Dr. R. W., Edinburgh, R. ... ... ... | 3 |
| Philipson, Sir G. H., D.C.L., Newcastle-on-Tyne, Vice-President ... ... ... ... ... | 0 |
| Phillips-Conn, Dr. H. H., Reading, R. ... ... | 3 |
| Pope, Dr. F. M., Leicester, R. ... ... ... | 7 |
| Ritchie, Dr. A. Brown, Hulme, R. ... ... ... | 6 |
| Robinson, Mr. H. B., M.S.Lond., London, R. ... | 4 |
| Roddick, Dr. T. G., Montreal, Vice-President ... | 0 |
| Rolston, Dr. John, Devonport, R. ... ... ... | 1 |
| Saundby, Dr. R., LL.D., Birmingham, Vice-President | 5 |
| Sedgwick, Dr. L. W., London, R. ... ... ... | 3 |
| Sheen, Dr. A., Cardiff, R. ... ... ... ... | 5 |
| Shuttleworth, Dr. G. E., Richmond Hill, R ... ... | 4 |
| Skerritt, Dr. E. Markham, Bristol, R. ... ... | 2 |
| Somerville, Dr. R., Galashiels, R. ... ... ... | 2 |
| Stear, Mr. Henry, Saffron Walden, R. ... ... | 4 |
| Tomes, Mr. C. S., F.R.S., London, R. ... ... | 3 |
| Turner, Dr. A. Jefferis, R. (Brisbane Branch) ... | 1 |
| Tyson, Dr. W. J., Folkestone, R. ... ... ... | 3 |
| Verrall, Mr. T. J., Brighton, R. ... ... ... | 7 |
| Wade, Sir Willoughby, M.D., Florence, Vice-President... ... ... ... ... ... ... | 0 |
| Walker, Dr. Norman, Edinburgh, R. ... ... | 5 |
| Walshe, Mr. Denis, Graigue, R. ... ... ... | 5 |
| Waters, Dr. A. T. H., Liverpool, Vice-President ... | 0 |
| Wheelhouse, Mr. C. G., Filey, Vice-President ... | 0 |
| Winterbotham, Dr. W. L., Bridgwater, R. ... ... | 3 |
| Woodcock, Dr. S., Manchester, R. ... ... ... | 7 |
| Young, Dr. W., R. (New Zealand Branch), ... ... | 1 |

R. = Branch Representative.

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At a meeting of the Council, held in Room No. 8, Ladies' College, Cheltenham, on Thursday, August 1st, 1901.

*Present:*

Dr. J. Roberts Thomson, President of Council, in the Chair.
Dr. George Bagot Ferguson, President
Mr. Walter Whitehead, President-elect
Mr. Andrew Clark, Treasurer

Dr. Edgar G. Barnes, Eye.
Dr. James Barr, Liverpool.
Dr. T. Beattie, Newcastle-on-Tyne.
Dr. Michael Beverley, Norwich.
Mr. Langley Browne, West Bromwich.
Dr. R. C. Buist, Dundee.
Professor John W. Byers, Belfast.
Dr. W. Calwell, Belfast.
Dr. Edward J. Cave, Bath.
Mr. J. Ward Cousins, Portsmouth
Dr. H. Radcliffe Crocker, London.
Dr. P. Maury Deas, Exeter.
Brigade-Surgeon-Lieut.-Colonel E. F. Drake-Brockman, London.
Mr. George Eastes, M.B., London.
Dr. William Alfred Elliston, Ipswich.
Dr. J. H. Galton, Upper Norwood.
Dr. Bruce Goff, Bothwell.
Dr. Major Greenwood, London.
Dr. Joseph Groves, Carisbrooke.
Surgeon-General J. B. Hamilton, M.D., London.
Dr. Henry Handford, Nottingham.
Dr. W. Morton Harman, Winchester.
Mr. W. F. Haslam, Birmingham.
Dr. T. Arthur Helme, Manchester.
Mr. Victor Horsley, F.R.S., London.
Mr. T. R. Jessop, Leeds.
Mr. Evan Jones, Aberdare.
Mr. R. H. Kinsey, Bedford.
Dr. C. H. Milburn, Hull.
Sir John William Moore, M.D., Dublin.
Brigade-Surgeon T. B. Moriarty, M.D., Cork.
Mr. W. Jones Morris, Portmadoc.
Dr. James Murphy, Sunderland.
Surgeon-General T. F. O'Dwyer, Aldershot.
Mr. C. H. W. Parkinson, Wimborne Minster.
Dr. Charles Parsons, Dover.
Dr. Frank M. Pope, Leicester.
Dr. A. Brown Ritchie, Hulme.
Dr. R. Saundby, Birmingham.
Dr. Alfred Sheen, Cardiff.
Dr. G. E. Shuttleworth, Richmond.
Mr. Henry Stear, Saffron Walden.
Dr. A. Jefferis Turner, London.
Dr. W. J. Tyson, Folkestone.
Mr. T. Jenner Verrall, Brighton.
Dr. Norman Walker, Edinburgh.
Mr. Dennis Walshe, Graigue.
Mr. E. B. Whitcombe, Birmingham.
Dr. W. L. Winterbotham, Bridgwater.
Dr. S. Woodcock, Old Trafford
Dr. William Young, Bridge of Turk, N.B.

The minutes of the last meeting having been printed and published in the *Daily Journal*, were taken as read and ordered to be signed as correct.

Dr. Saundby introduced Mr. E. B. Whitcombe, the representative of the Birmingham and Midland Counties Branch.

The appointment of the Journal and Finance Committee was then considered, and in accordance with the By-laws the three members longest on the committee, viz., Mr. George Eastes, Mr. T. Jenner Verrall, and Dr. S. Woodcock, retired. Two vacancies were created by the retirement of Dr. C. Parsons and Dr. R. Saundby for insufficient attendance. There were 11 nominations. A ballot was taken; Dr. Edgar Barnes and Dr. T. Beattie were nominated scrutineers, and the following were reported to have the greatest number of votes:—Dr. W. A. Elliston, Prof. J. W. Byers, Dr. T. A. Helme, Dr. J. H. Galton, and Mr. Jones Morris.

Resolved: That the following be appointed the Journal and Finance Committee for the ensuing year:

The President and President-elect, *ex officio;* Dr. J. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer; Dr. James Barr, Mr. Langley Browne, Professor J. W. Byers, Mr. J. Ward Cousins, Dr. H. Radcliffe Crocker, Dr. W. A. Elliston, Dr. J. H. Galton, Dr. T Arthur Helme, Mr. Victor Horsley, F.R.S.; Mr. T. R. Jessop, Mr. Evan Jones, Mr. W. Jones Morris, Mr. C. H. W. Parkinson, Dr. F. M. Pope, and Dr. E. Markham Skerritt.

Resolved: That the following be appointed the Parliamentary Bills Committee for the ensuing year:

The President and President-elect, *ex officio;* Dr. J. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer; Mr. S. H. Agar; Mr. D. B. Balding; Mr. Gilbert Barling; Dr. James Barr; Dr. A. G. Bateman; Dr. R. W. Batten; Dr. R. L. Bowles; Dr. T. R. Bradshaw; Dr. R. W. Brogden; Mr. George Brown; Dr. R. C. Buist; Dr. J. S. Cameron; Mr. J. Cantlie; Dr. W. A. Carline; Mr. T. H. Cheatle; Mr. J. Ward Cousins; Dr. Alired Cox; Dr. P. Maury Deas; Dr. A. Dempsey; Dr. H. E. Dixey; Dr. T. M. Dolan; Dr. E. Donaldson; Dr. W. Douglas; Brigade-Surgeon-Lieutenant-Colonel E. F. Drake-Brockman; Mr. George Eastes; Dr. Robert Farquharson, M.P.; Sir Walter Foster, M.D., M.P.; Dr. Edward Lawrence Fox; Dr. Bruce Goff; Dr. C. G. Gooding; Dr. Major Greenwood; Dr. J. Groves; Surgeon-General J. B. Hamilton; Mr. J. D. Harries; Dr. A. J. Harrison; Dr. Eldon Harvey; Dr. C. Holman; Mr. Victor Horsley, F.R.S.; Mr. Evan Jones; Dr. W. Mackintosh; Dr. C. W. Marriott; Dr. C. H. Milburn; Sir John William Moore; Brigade-Surgeon T. B. Moriarty, M.D.; Mr. W. Jones Morris; Dr. J. Murphy; Dr. James Murray; Dr. W. Newman; Surgeon-General T. F. O'Dwyer; Professor Alexander Ogston, M.D.; Dr. W. H. O'Meara; Mr. D. A. O'Sullivan; Mr. C. H. W. Parkinson; Dr. F. M. Pope; Dr. A. Brown Ritchie; Dr. T. G. Roddick; Dr. R. Saundby; Dr. G. E. Shuttleworth; Dr. R. Somerville; Mr. W. D. Spanton; Dr. Robert Stirling; Mr. C. R. Straton; Dr. J. C. Thresh; Inspector-General Alex. Turnbull, R.N.; Dr. Norman Walker; Dr. Martindale Ward; Dr. Dawson Williams; Dr. W. L. Winterbotham; and Dr. S. Woodcock.

Resolved: That the following be appointed the Scientific Grants Committee:

The President; the President-elect; Dr. J. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer, *ex officio;* Professor T. Clifford Allbutt, F.R.S.; Dr. J. Barr; Sir T. Lauder Brunton, F.R.S.; Mr. J. Ward Cousins, Dr. H. R. Crocker, Professor W. D. Halliburton, F.R.S.; Dr. H. Handford, Dr. Holman, Mr. Victor Horsley, F.R.S.; Professor John McFadyean, Mr. N. C. Macnamara, Dr. R. Saundby, Professor J. Lorrain Smith, Professor E. H. Starling, F.R.S.; Professor Ralph Stockman, Dr. Norman Walker, Professor B. C. A. Windle, F.R.S.; and Professor G. Sims Woodhead.

Resolved: That the following be appointed the Inebriates Legislation Committee:

The President and President-elect, *ex officio;* Dr. J. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer; Mr. D. B. Balding, Dr. Fletcher Beach, Dr. T. Bridgwater, Sir C. Cameron, Bart.; Mr. George Eastes, Dr. R. Farquharson, M.P.; Sir Walter Foster, M.P.; Dr. E. Long Fox, Sir W. T. Gairdner, K.C.B., F.R.S.; Dr. Alexander Grant, Mr. F. J. Gray, Dr. F. S. D. Hogg, Dr. A. A. Jamison, Mr. H. R. Kerr, Dr. A. E. T. Longhurst, Dr. T. Morton, Dr. A. E. Neale, Surgeon-Major G. K. Poole, M.D.; Fleet-Surgeon G. Robertson, M.D., R.N.; Dr. G. D. P. Thomas, Dr. W. J. Tyson, Dr. Wynn Westcott, Dr. H. W. Williams, and Dr. D. Yellowlees.

Resolved: That the following be appointed the Premises and Library Committee:

The President and President-elect, *ex officio;* Dr. J. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer; Dr. T. Bridgwater; Mr. J. Ward Cousins; Dr. Handford; Dr. Holman; Mr. N. C. Macnamara; Mr. C. H. W. Parkinson; Dr. C. Parsons; Dr. F. M. Pope; and Dr. R. Saundby.

Resolved: That the following be appointed the Medical Charities Committee:

The President and President-elect, *ex officio;* Dr. J. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer; Dr. T. Bridgwater; Mr. George Brown; Mr. Langley Browne; Dr. D. Goyder; Mr. H. Nelson Hardy; Dr. A. J. Harrison; Mr. George Jackson; Mr. J. Brindley James; Mr. Evan Jones; Mr. H. W. Kiallmark; Dr. J. W. J. Oswald; Dr. Isambard Owen; Dr. A. Brown Ritchie; Dr. A. Sheen; and Dr. Hugh Woods.

Resolved: That the Therapeutic Committee be reappointed as follows, and that a grant of £20 be made for its expenses:—

The President and President-elect, *ex officio;* Dr. J. Roberts Thomson, President of Council; Dr. J. B. Bradbury; Sir W. H. Broadbent, Bart., M.D., F.R.S.; Dr. Mitchell Bruce; Sir T. Lauder Brunton, F.R.S.; Dr. J. L. Bunch; Dr. A. H. Carter; Professor T. Cash, F.R.S.; Dr. R. Crawfurd; Professor T. R. Fraser, F.R.S.; Sir W. T. Gairdner, K.C.B., F.R.S.; Dr. W. Hunter; Dr. James Little; Professor D. MacAlister, M.D.; Dr. E. Mackey; Dr. C. R. Marshall; Dr. Sidney H. C. Martin, F.R.S.; Dr. M. McHugh; Dr. W. Murrell; Professor W. Osler, F.R.S.; Dr. C. Y. Pearson; Dr. C. D. F. Phillips; Dr. Sidney

Phillips; Dr. Sydney Ringer, F.R.S.; Professor Walter Smith; Professor R. Stockman; Dr. Nestor Tirard; Dr. W. Hale White; Dr. W. Whitla; and Dr. F. Willcocks.

Resolved: That the following be appointed the General Practitioners and Ethical Committee:

The President and President-elect, *ex officio*; Dr. J. Roberts Thomson, President of Council; Mr. Andrew Clark, Treasurer; Dr. James Barr, Dr. T. Bridgwater, Mr. Langley Browne, Mr. Colin Campbell, Mr. J. Ward Cousins, Dr. J. H. Galton, Dr. Bruce Goff, Dr. J. Groves, Mr. R. H. Kinsey, Mr. W. Jones Morris, Mr. C. H. W. Parkinson, Dr. C. Parsons, Dr. F. M. Pope, and Dr. R. Saundby.

Resolved: That the following be appointed the Trust Funds Committee:

The President and President-elect, *ex officio*, Dr. J. R. Thomson, President of Council; Mr. Andrew Clark, Treasurer; Dr. T. Bridgwater, Dr. Bruce Goff, Mr. N. C. Macnamara, Dr. C. Parsons, Dr. R. Saundby, and Mr. T. J. Verrall.

Resolved: That the Special Chloroform Committee be reappointed, consisting of the President and President-elect *ex officio*, Dr. James Barr, Dr. Dudley Buxton, Mr. Victor Horsley, F.R.S., Professor C. S. Sherrington, F.R.S., and Dr. A. Waller, F.R.S.

Resolved: That the following be appointed the Arrangement Committee for considering the arrangements and programme for the annual meeting at Manchester for 1902:—

The President, *ex officio*: the President of the Council, the Treasurer, Dr. James Barr, Dr. Norman Walker, and Mr. Eastes, together with the following local officers: The President-elect, Professor Dreschfeld, Professor Wright, Professor Young, Dr. Mould, and Dr. T. Arthur Helme.

The Council then adjourned until Friday at 9.30 a.m. for the purpose of appointing a Committee to draft the proposed new articles and by-laws in accordance with the recommendations of the Constitution Report should such Report be adopted at the extraordinary general meeting.

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AT the adjourned meeting of the Council, held in Room No. 8, Ladies' College, Cheltenham, on Friday, August 2nd, 1901, Dr. J. ROBERTS THOMSON (President of Council, in the chair), having reported that this meeting was held for the purpose of electing a Committee to arrange for carrying into effect the reconstitution of the Association which had been adopted by the General Meeting, it was resolved: That the following be appointed the Committee for carrying out the foregoing, namely, the President, the President-elect *ex officio*, the President of Council, the Treasurer, Professor J. W. Byers, Dr. A. Cox, Mr. Victor Horsley, F.R.S., Dr. C. H. Milburn, Mr. Edmund Owen, Dr. A. Brown Ritchie, Mr. T. Jenner Verrall, Mr. J. S. Whitaker, and Dr. S. Woodcock.

Resolved: That it be left in the hands of the President of Council to summon the statutory meeting on behalf of the Association.

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## NOTICE OF QUARTERLY MEETING OF COUNCIL FOR 1901.

A MEETING of the Council will be held on October 23rd. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before that meeting—namely, October 2nd.

### ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary*.

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## BRANCH MEETINGS TO BE HELD.

SOUTHERN BRANCH: SOUTH WILTS DISTRICT.—The next meeting of this District will be held at the Salisbury Infirmary on Wednesday, September 4th, at 2 P.M. The meeting will be preceded by luncheon at the County Hotel at 1 P.M. Programme: Election of officers.—President's address.—Dr. C. R. Straton will open a discussion on Milkborne Tuberculosis by a paper on the subject, subsequent speeches on the subject not to exceed seven minutes.—Cases. Members desirous of showing any cases or reading any papers at the meeting are requested to communicate with the Hon. Secretary as soon as possible.—J. E. GORDON, 52, Endless Street, Salisbury, Hon. Secretary.

## NORTH OF IRELAND BRANCH.

THE twenty-third annual meeting of this Branch was held in the Museum, Belfast, on July 18th, Professor J. W. BYERS, President, in the chair. Sixty-five members were present. Dr. CECIL SHAW acted as Secretary in the absence of Dr. Calwell.

*Confirmation of Minutes.*—The minutes of the last meeting were read and confirmed.

*Report of Council.*—The Council's annual report and the Treasurer's statement of accounts, showing a balance to the credit of the Branch of £20 13s. 9d., were taken as read and adopted by the meeting.

*New Members.*—It was announced that the following new members had been elected by the Council: O. M. Praeger, M.B., R.U.I.; Wm. Martin, M.B.Edin.; John A. D. Radcliff, M.B., R.U.I.; Malcom Bryce Smyth, M.B.Dub.; Miss Marion Andrews, M.B., R.U.I.; Samuel Hamilton, M.D., R.U.I.; and David Johnston, M.D., R.U.I.

*Election of Officers.*—The following were elected officers of the Branch for 1901-1902:—*President:* Dr. Singleton Darling, Lurgan. *Vice-Presidents* (Country): Dr. D. P. Gaussen, Dunmurry; (Town): Dr. John Campbell. *Council* (Country): Dr. Martin, Portrush; Dr. St. George, Lisburn; Dr. Stuart, Ballymena; Dr. Agnew, Lurgan; Dr. R. Gray, Armagh; Dr. Thompson, Omagh; Dr. Hall, Monaghan; Dr. Donnan, Holywood; (Town): Professor Sinclair, Professor Whitla, Dr. Dempsey, Dr. Cecil Shaw, Dr. McKisack, Dr. Mitchell, Dr. M'Caw, Professor Lindsay. *Treasurer:* George Gray, M.D., Adelaide Place, Newcastle, co. Down. *Secretary:* William Calwell, M.D., 1, College Square North, Belfast. *Representatives of the Branch on the Council of the British Medical Association:* Professor J. W. Byers, M.D., William Calwell, M.D. *Representative on the Parliamentary Bills Committee:* Alex. Dempsey, M.D., Clifton Street, Belfast.

*Communications.*—Dr. DEMPSEY showed a fibroid tumour of the uterus removed by retroperitoneal hysterectomy; Dr. MITCHELL (Belfast) gave a lantern demonstration illustrative of the conditions found and operations carried out in a series of 18 operations on the stomach; Dr. KIRK (Belfast) read (*a*) notes of a case of suppurative nephritis treated by nephrotomy, and showed (*b*) some cases of excision of the hip; Dr. CECIL SHAW gave brief notes of removal of ivory exostosis from the auditory meatus; Dr. WHITLA showed a specimen of a dissecting aneurysm; Dr. JOHNSTON showed specimens of Charcot's joint, endothelioma of ovary, sarcoma of ovary invading myoma of uterus, healed typhoid and dysenteric ulcers, etc., which were spoken to by Dr. DARLING, WHITLA, M'KEOWN, JOHNSTON, KEVIN, HENRY, and the PRESIDENT.

*Luncheon.*—After the meeting members were entertained to luncheon by the President in Prince's Restaurant.

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## SYDNEY AND NEW SOUTH WALES BRANCH.

THE regular general meeting of this Branch was held at the Royal Society's Room, Sydney, on May 24th, Dr. G. E. RENNIE, Vice-President, in the chair. There were 44 members and 4 visitors present.

*Confirmation of Minutes.*—The minutes of the last meeting were read and confirmed.

*New Members.*—The CHAIRMAN announced the election of Drs. Romeo, Stevens, Busby, Agnes Bennett, C. V. Bowker, Savage, McCredie, Lucy Gullett, and A. L. Kerr, and the nomination of Drs. Forster, J. J. Kelly, John Harris, H. Throsby, and Julia Carlisle-Thomas.

*Communications.*—Dr. CLUBBE showed a woman on whom he had performed five years previously at Prince Alfred Hospital an osteoplastic resection of the foot, by the method of Mikulicz. Drs. HANKINS and MCDONAGH discussed the case.—Dr. MILLS read a paper on appendicitis from a physician's point of view. A discussion ensued, in which Drs. CLUBBE, THOMAS, BINNEY, SYDNEY JONES, CLARK, SINCLAIR GILLIES, CHENHALL, MAITLAND, CRAGO, HANKINS, HINDER, W. E. WARREN, MCDONAGH, and RENNIE took part. Dr. MILLS replied.

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A YOUNG married couple, M. and Madame Gebrak, recently received the degree of Doctor of Medicine on the same day from the University of Paris.

# CORRESPONDENCE.

## THE ANNUAL MEETING AND THE REPORT OF THE CONSTITUTION COMMITTEE.

Sir,—Like, I have no doubt, many others, I was glad to read Dr. Cave's letter in this week's British Medical Journal; knowing how strong was the feeling of the Bath and Bristol Branch on the question of the representative meeting I had expressly gone to Cheltenham to second his amendment. The three great principles of the scheme had been laid before the Branches for their opinion, and I quite supposed that we should have had an opportunity of discussing them each separately at the general meeting. At annual meetings one has often sighed for a strong president, but on this occasion King Log was replaced by King Stork with a vengeance. The two and a-half hours allowed was little enough—was too little—time to discuss only the principles involved, much less the details of the scheme; on such an important occasion, although the opinion of the meeting was so decided that the eloquence of a Bright or the persuasive power of a Gladstone would not have altered its decisions, it was hardly fitting to enforce the closure. Had there been in view no further opportunity for discussing the question I should have protested at the time, as it was it would hardly have been fair to let the business of our Association interfere with the pleasures of the lawn.

For a long time the avowed cause of discontent with the Association was that the annual general meeting could do so little; now the objection is that it may do too much. To remedy this it is proposed to emasculate the general meeting, but having made this body impotent it is now proposed to beget in its place a hermaphrodite being, a body of doubtful function, probably impotent, possibly dangerous, generally inconvenient.

We are told that the Council cannot be made really representative: how, then, with the same constituents and the same methods, is the representative meeting to be made what it professes? The same apathy which marks the Council elections may surely creep over the newly-proposed elections. The life of the representatives is not even limited, as is the life of the councillors under this scheme. It may be argued that with smaller Divisions the interest in the elections will greater, but if we are guided by the analogy of municipal and district council elections, we shall find that the greatest apathy exists in the rural districts and the metropolis, and the greatest interest in provincial towns small and large; but let it be assumed that the meeting can be made representative, then why with like men and methods cannot the Council be the same, and, if so, what need for this other body? It may be objected that the general meeting would still be all-powerful and possibly dangerous, but this danger would be minimised to the vanishing point by the proposed power to adopt the referendum, and the increased quorum necessary for an annual general meeting. If fewer than 700 members are sufficient, and more than sufficient, for the representative conduct of the affairs of the forty odd millions of inhabitants of Great Britain, surely the Council should be sufficient for the purposes of the Association.

There is much talk of the necessity for an exact, arithmetical system of representation for the profession and for the need of a united authoritative voice; it would, of course, be out of place to discuss these points in this letter, but I would suggest them as useful subjects for discussion in the Journal before the special general meeting for the adoption of the proposed new constitution.—I am, etc.,

Bradford-on-Avon, Aug. 13th. Chas. E. S. Flemming.

Sir,—The report of the Constitution Committee was submitted to, and, with little modification, adopted at, the annual meeting at Cheltenham after a brief, rapid, repressive, generally excited, and at times angry, debate, conducted perhaps with less of the *suaviter in modo* than of the *fortiter in re*. Our Association is therefore committed to a radical reform of its principles, but little if anything short of revolutionary; and although some discussion may possibly be allowed when the consequential new rules and by-laws are submitted for confirmation at a future general meeting, the decisions of the Cheltenham meeting must, I fear, be considered as final.

The principal changes resolved upon are:

1. The unattached members, numbering about 6,000 out of the total of about 18,000, are to be compelled *nolens volens* to join the Divisions in the area of which they reside (Clause 5 of the report).

2. The annual subscription to the Association is to be raised from 21s. to 25s., or such greater sum not exceeding 30s. as may be fixed by the Council; and, in addition, every member will be liable for a share of the expenses of his Branch or Division should they exceed the total amount of the capitation grant of 4s., to be made from the general funds of the Association (Clause 20).

3. The system of delegation, almost peculiar to the ordinary trades unions, is definitely adopted; a body of delegates or representatives of the Divisions, not exceeding 300 in number, is to be elected, their first-class travelling expenses are to be paid, they are to meet at the same place and time of the year as the general business and general scientific meetings, and they are invested for the most part with the powers of the ordinary members in their general meetings (Clause 16).

As regards the unattached members (1) it is not unlikely that many may resent so compulsory a proposal; and the enhanced cost of membership (2) may likewise lead not a few to reconsider their position in this respect.

The adoption of the principle of delegation (3) is, however, a very momentous change, and may have a still more serious effect upon the numerical strength of our Association. It is not unlikely that some members—especially those connected with the public services, as the Navy and Army, etc.—may have scruples as to the propriety of belonging to a society, the objects and methods of which are so closely allied to those of the ordinary trades unions. Again, the principle of delegation is foreign to other scientific and professional bodies; it may be expedient, if not necessary, for ordinary trades unions, because the members of such have generally neither the time, nor the means, nor perhaps the capacity, for taking part in their general meetings: but the medical profession is a wealthy one for the most part, and its members are intellectually well able individually to conduct the affairs of such an Association as the British Medical. Again, the setting up of a body of delegates or representatives will to a great extent supersede the usual annual meeting of ordinary members; it will also undoubtedly degrade the status of the members of the central Council. To me, such a body seems a superfluous and expensive machine, a cumbrous and complex duplicate, not only quite unnecessary for the needs of our Association, but highly derogatory to its position as a learned and professional society, and calculated to lower our position in the eyes of an already suspicious and not too friendly public.

I thought it very desirable that the principle of delegation should be formally discussed at the Cheltenham meeting; an amendment by me to that effect was accepted by the Council, and appeared for days on the agenda in the journals; and I was informed by the Secretary that it would come up in the discussion of Resolution No. 2, that "approving generally the principles of the Committee's report." Before my motion was reached, however, the discussion upon that resolution was closured, and it was put to the meeting and carried.—I am, etc.,

Swanley, Aug. 11th. John Ince, M.D., I.M.S.

## TOTAL EXTIRPATION OF THE PROSTATE FOR RADICAL CURE OF ENLARGEMENT OF THAT ORGAN.

Sir,—My letter, published in the British Medical Journal of August 3rd, contains a full and complete refutation of the statements and pretensions advanced by Mr. Mayo Robson in his first communication. As his recent letter consists mainly of a dreary iteration of the same statements and claims, it is unnecessary for me to occupy your space in going over the same ground again.

I have searched in vain in that letter for any explanation of how he regards as a "success, both immediate and remote," Case III in his list, which obviously died from the operation.

Mr. Mayo Robson now retreats from his former position,

and assumes the *rôle* of chivalrous champion of his late colleague; but he cannot get away from his own words. No claims of having forestalled me were put forward by him in his first letter on behalf of McGill. In it Mr. Mayo Robson boldly endeavours to father on himself my new operation.

It is not the fact, as alleged by Mr. Mayo Robson, that I refrained from according to McGill due credit for his share in prostatectomy. A reference to my lecture will show that in reviewing the various operative procedures for enlarged prostate I did him full justice in the following words:

I ventured to hold that partial prostatectomy by the suprapubic route, first performed by Belfield, of America, but best known in this country in connection with the name of McGill, who first brought it prominently before the profession in 1888, was the most valuable, as the most commonly applicable and, on the whole, most satisfactory in its results.

The communication of Fuller referred to I regard as a valuable contribution to the surgery of the prostate. It exemplifies a higher step in the evolution of the operation of McGill and Belfield. But his operation is purely a *partial* prostatectomy, the obstructing nodules being removed from within the capsule, sometimes by the finger, at others by cutting forceps and scissors, of which a variety is figured. The prostatic urethra is cut into, a perineal section performed for drainage, and counter-pressure made by a hand on the perineum; whereas in my operation cutting forceps and scissors are dispensed with, and by the finger-point alone, aided by a finger in the rectum for counter-pressure, the whole enlarged prostate is enucleated in its capsule and stripped off the urethra, which is left untouched, in the manner explained in my lecture, thus obviating severe bleeding, and securing permanent immunity from recurrence of the disease. No perineal section is done in my operation.

All surgical operations are necessarily a matter of evolution towards perfection. Civiale, Thompson, Guyon, and other surgeons had practised lithotrity, with its numerous sittings, for three-quarters of a century without discovering the advantages of removing the stone at one sitting, till Bigelow appeared on the scene and revolutionised the whole procedure by his operation of litholapaxy—and we all wonder now how such a simple discovery could have been so long delayed. Some of us also remember the unworthy attempt to deprive him of the credit of its being a new operation. And so it is with my new operation. It is a distinct and definite step in the evolution towards perfection, I hope, of the procedure initiated by Belfield and McGill; and having practised the latter operation for twelve or thirteen years, the wonder to me is that the enucleation of the prostate in its capsule was not hit on before. This is probably due to the defective anatomical descriptions of the normal prostate, which regard it as a single body with a tunnel, in the form of the urethra, passing through it; whereas, as fully described in my lecture, it consists in reality of two encapsuled glands which fold the urethra in their embrace—an embrace which is more or less loosened when the glands assume the adenamatous growth peculiar to advancing age, thus facilitating the enlarged prostate being stripped off the urethra, which is left behind uninjured.

When Mr. Mayo Robson writes:

I have no hesitation in describing Mr. Freyer's idea that he extirpates the prostate, including its capsule, as impracticable from an anatomical point of view; as if the capsule proper were removed, the urine would become extravasated into the pelvis,

and quotes authorities to prove that if the prostatic sheath is cut through, infiltration of urine into the pelvis will occur, he has recourse to a quibble which can only deceive the unwary reader. Mr. Mayo Robson knows well—I have refreshed his memory in my lecture—that the prostate is enclosed in two distinct capsules, between which lies the prostatic plexus of veins, one of which, the true capsule (that which is removed in my operation), is adherent to the lobes; the other, the sheath (erroneously called by him the "capsule proper") is left behind, and prevents infiltration of urine into the pelvis.

Mr. Mayo Robson is somewhat antiquated in his pathology of the prostate when he writes:

The obstructing tumour is made up of rounded bundles of involuntary muscle fibres in the softer varieties, and of muscle and fibrous tissue in the harder forms.

Captain Hayward Pinch, whose report is given in full in my lecture, writes:

All four specimens of prostatic tumour removed by Mr. Freyer, when examined microscopically, prove to be true adenomata.

They were purely glandular tumours, the muscular tissue being almost entirely replaced by fibrous tissue. And this description is in accordance with the latest views enunciated in the two great works on tumours by Bland-Sutton and Senn. The pathology of the enlarged prostate, as given by Mr. Mayo Robson, is exactly that of typical uterine "fibroids,"[1] so that one is irresistibly driven to the conclusion that his gynæcological and genito-urinary pathologies have got mixed up.—I am, etc.,

Harley Street, W., Aug. 12th. P. J. FREYER.

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SIR,—Mr. Freyer, in his paper on what he terms "Extirpation" of the Prostate, in the BRITISH MEDICAL JOURNAL of July 20th, referring to suprapubic prostatectomy, says:

I am not aware of a single instance in which, after the bladder had completely lost its expulsive power, namely, when all the urine had to be drawn off by the catheter, that power has been restored by this operation.

In making this statement he ignores the fact that on March 6th, 1893, the Medical Society of London, with Mr. Jonathan Hutchinson in the chair, devoted the evening to my paper on this subject, and that a gentleman, aged 71, was good enough to attend, who a year before had been submitted to suprapubic prostatectomy by me. He was seen to be in perfect health and comfort, and his own statement was that "he had not even inconvenience." He emptied his bladder completely by his natural efforts, and held his water easily for from three to six hours. He had used a catheter for twenty years before the operation, and for the last ten years had not passed any urine except by catheter. Up to the time of the exhibition of this case the best authorities had not accepted the fact that such a cure was possible, and I quoted my old and valued teacher, Sir Henry Thompson, to that effect, and answered him with this case—just as now, eight years afterwards, Mr. Freyer quotes him again.

I was once a teacher of anatomy, and I am satisfied that it is impossible to entirely remove the prostate and at the same time leave intact the prostatic veins and capsule, urethra, and seminal ducts. Mr. Spanton, of Hanley, is the only surgeon to my knowledge who ever deliberately set out to remove the entire anatomical prostate, and he will correct me if I am incorrect in saying that he had to remove the prostatic urethra.

The literature on this subject is extensive, and writers must master the excellent work of Belfield, McGill, Mayo Robson, Jessop, Atkinson, Keyes, Southam, Moullin, and Fuller.—I am, etc.,

Wimpole Street, Aug. 13th. G. BUCKSTON BROWNE.

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SIR,—I was not surprised to see Mr. Mayo Robson's letter in your issue of July 27th questioning the novelty of the operation described by Dr. Freyer.

For years past, when operating for prostatic enlargement, I have extirpated the gland completely, so that the patient is left with nothing that can be distinguished as prostate, removing both lateral and middle lobes in their entirety by enucleation.

I may allude to one of my earlier cases as evidence of this, that of C. E. W., sent me by Dr. Bolton of this city. On March 29th, 1896, I completely removed this man's prostate in the General Hospital, taking away both lateral and middle lobes by enucleation. It was one of the largest I have seen, and weighed after removal just over 9 ozs. The patient and the specimen were shown at a subsequent meeting of the Nottingham Medico-Chirurgical Society. I saw this man two months since in good health.

It is very doubtful whether this could be described as a new operation. Indeed, it is only fair to Mr. Mayo Robson to say that the adoption of this method on my part was largely due to the publication of his paper in the BRITISH MEDICAL JOURNAL of July 14th, 1894, supplementing Mr. McGill's work.

I believe Mr. McGill in his later operations removed the prostate very freely, and Mr. Mayo Robson in the paper referred to distinctly advocates enucleation of the lateral lobes, as distinguished from the removal of portions by scissors or forceps, an operation which, I take it, most surgeons have abandoned as useless.

As regards the technique of the operation, I have never used

[1] *Tumours*, by Bland-Sutton, pp. 202-3.

the rectal bag, and have found it an advantage to use one's own fingers, instead of an assistant's to press up the prostate from the rectum. With two fingers in the rectum and two in the bladder, the surgeon has complete control over the area of operation, and his hands can work rapidly and in unison in a way that I have found impossible when employing the fingers of an assistant. It is well to wear a rubber glove on the rectal hand, as on its removal this hand can be used without hesitation in connection with the suprapubic wound.—I am, etc.,

Nottingham, August 5th. A. R. Anderson, F.R.C.S.

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Sir,—Mr. Mayo Robson ought perhaps to have understood from the latter part of Mr. Freyer's clinical lecture that he was describing an operation different from mere enucleation of the prostate, or at least one which was meant to be different, though perhaps the actual description of each case might not lead the reader to that conclusion.

But I should like to indicate one point which might suggest that, in the first of the four cases recorded, Mr. Freyer was not himself aware that he was performing a new operation. The case is the same as that recorded in a little book by him recently published, *Stricture of the Urethra and Hypertrophy of the Prostate*. The two records are in almost identical words, as is natural. But in that occurring in the book, when Mr. Freyer had apparently not yet performed the three subsequent operations, certain words appear which are omitted in the clinical lecture: "After removal of these tumours no trace of the prostate could be felt between a finger in the bladder and one in the rectum, *the portion of the gland not involved in the tumours having been atrophied by pressure*. The words in italics are omitted in the clinical lecture, the sentence running, "After removal of the tumour (not 'tumours' as in the former record).....I could feel that there was no prostatic substance left behind." Is this an entirely accidental difference? Was the operator not aware in the first case that he was performing a new operation? Certainly he nowhere in his first record of the case uses the expression "total extirpation of the prostate," nor indicates in any way that he was aware he had "undertaken a new, and, at first sight, very formidable operation."

I should like, at the same time, to join others in heartily congratulating Mr. Freyer on the brilliant results in these four cases.—I am, etc.,

Edinburgh, Aug 7th. John Shaw McLaren.

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Sir,—On November 9th, 1898, Parker Syms read a paper, entitled Prostatectomy, before the New York Surgical Society. This paper and the discussion that followed were published in the *Annals of Surgery* for March, 1899. The method described was a combination of the suprapubic and perineal operations, and is spoken of as "Alexander's" operation. It was claimed that the entire prostate could be enucleated by this method, and the following are the words used:

> The fibrous sheath of the prostate, covering its posterior and anterior surfaces, is broken into with the finger, the capsule entered, and the entire prostate shelled out from within its sheath by digital dissection.

In the discussion that followed, Dr. Hotchkiss said that sometimes it was easy to enucleate the gland by the suprapubic route, while at other times the perineal method offered the greater facilities; he also added that he had done a submucous enucleation, thus leaving the urethra "in good shape."

Soon after reading this paper, I operated on two cases of enlarged prostate by the method described. In one case a tumour, measuring about 2 in. by 1½ in., was enucleated, and the finger at the time could not detect any remaining gland. As the man made a good recovery, it is impossible to say how much was actually removed. Microscopically the growth consisted of fibromuscular tissue, with but little gland tissue. The urethra was torn, but the bladder, except for the suprapubic opening, was intact.

The second case ended fatally from pyæmic nephritis, and at the *post-mortem* examination it was stated that the right lobe of the prostate had been removed. The left lobe was *in situ* and somewhat enlarged. Microscopically the part removed had the structure of a fibro-adenoma. The urethra was extensively torn but the bladder intact. There was intense cystitis. The contention of the American surgeons that the entire prostate could be removed and yet the urethra left "in good shape" seemed hard to believe, so I determined to try to shell out a normal prostate, which should be possible if the American statement were correct. Early in this year Mr. Marriage and I attempted to do this on several bodies, about the age of 60, in which the gland was not markedly enlarged, and although the posterior superior part of the gland could be separated from the bladder, in no instance could the gland be shelled out; in fact we only succeeded in removing it piecemeal, and that with extensive damage to the urethra.—I am, etc.,

Upper Wimpole Street, W., Aug. 6th. Cuthbert S. Wallace.

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## DR. GLOVER AND THE MIDWIVES QUESTION.

Sir,—It is refreshing to read on p. 373 of the British Medical Journal of August 10th Dr. Glover's attitude on the midwife question. Dr. Glover says:

> I wish to abolish the existing untrained ignorant midwife—the Sarah Gamp, believing her to be dangerous and deadly to poor lying-in women, who are entitled to the greatest consideration.

That is the preamble of my "Sick and Obstetric Nurses Bill" published in February, 1898. It runs thus:

> Whereas it is expedient to abolish the practice of midwifery by ignorant and incompetent persons calling themselves midwives, and to protect poor parturient women and their infants from such persons, and to make better provision for the nursing of the sick and parturient poor and their children in England and Wales:—Be it enacted, etc.,

This was not Dr. Glover's attitude five years ago, and I was the first to point out the gross inconsistency of those who proposed to register the Gamp and give her a standing equal to that of the trained midwife. It would be a more glaring anomaly than the registration of the unqualified medical assistant. It is surprising, however, that Dr. Glover favours the creation of a Midwives Board which would be a rival body to the General Medical Council, of which he is so useful a member. A Midwives Board with its midwife or obstetric president and its wily secretary would make short work of the General Medical Council's recommendations, and be a Board almost entirely in the hands of the London obstetric physicians, if not the Obstetric Society itself. Dr. Glover should think of the weighty self-interest of that society in this question, who, while posing as the saviours of "the poor," add so enormously to their income by the examination of midwives, which income will be enhanced once the Registration Bill is passed. In dealing with an astute body like this society it is necessary to inquire into their motives, and see if there is not a fly in their alabaster box of ointment. It was for such reasons that I left the administration of my Bill to local authorities (*vide* Clause 2), with an appeal to the General Medical Council as the ultimate court (Schedule, Clause 9). It is satisfactory that the Manchester Medical Guild, in copying this part of my Bill, have adopted local administration with subsidies where necessary, which I have detailed in Schedule D. It would be injudicious to cast the entire onus of administration on a central authority whose establishment alone would absorb most of their income. And it would be equally so to do as Dr. Lovell Drage suggests on page 384 of the British Medical Journal of August 10th. It should not be taken for granted that the trained midwife, or even the Gamp, only waits on poor women of the pauper class, to whom Dr. Lovell Drage would send the parish doctor. This is not so, as my personal experience proves, and to send the parish doctor to non-pauper patients at the instance of the medical officer of health, would be a grave breach of decorum as well as of the law. Nor would this suggestion meet the nursing aspect of the case. Would the parish doctor nurse the septic case, and if so, who is to nurse the non-septic? My Bill is essentially a Nursing Bill, and any other kind of Bill cannot possibly meet the case of the poor woman who, under present circumstances, cannot obtain a suitable nurse at a moderate cost, or indeed at any cost in the manufacturing districts where the women who would devote themselves to obstetric nursing have not the requisite training, and can earn as much or more in the mills or at laundry work or otherwise. It is not necessary to pauperise the people in order to provide trained obstetric nurses. All we want is a Nursing Bill, and private benevolence will supply the rest. It would be necessary to amalgamate poor parishes, and the clergyman and their ladies are ready and willing to assist.

Anyone acquainted with the country must know that a registered midwife could not subsist in certain parishes, but by amalgamation and a subsidy both sick and obstetric nurse could be employed on a scale such as I have inserted in Schedule D, and the doctor paid a decent fee for his attendance. Only in case of absolute necessity should the guardians be called upon to administer the Act.

I will only say in conclusion that if what Dr. Glover says of Mr. Geo. Brown on page 373 of the British Medical Journal of August 10th be correct, that gentleman is in my opinion not a fitting person to represent the profession on the General Medical Council.—I am, etc.,

Liverpool, Aug. 11th. Alex. McCook Weir.

## THE GENERAL MEDICAL COUNCIL ELECTION.

Sir,—Allow me to appeal to the English medical masses to recognise the solidarity of Irish and English medical interests. The other day Dr. Kidd, of Enniskillen, wrote a letter to the papers recalling the truism that so long as there are three men to look for one appointment, so long shall we be powerless to improve our position. It is therefore imperative on everyone who desires to improve that position to strive to make the aperture of entrance as tight as possible. What, then, should our attitude be to the private and uninspected examinations which the diploma-vending bodies keep open to bring grist to their mills? I brought an apparently gross case of the kind before the General Medical Council, and subsequently before the Privy Council, but it was stifled. I urge the body of the profession to vote for no man who will not pledge himself to the following:

1. To put an end to all uninspected examinations.
2. To make pupilage a reality instead of a sham.
3. To put an end to the clinical monopoly now enjoyed by a few hospitals.
4. To endeavour to secure the same treatment for physicians and surgeons who allow hospital authorities to sweat them for the benefit of rich hospital patients and the funds of the hospitals themselves as is now accorded to the physicians and surgeons, who as servants of medical aid associations are doing nothing more and nothing less than the aforesaid hospital doctors are doing.
5. That the authorised curriculum shall be adhered to.

On these and many other points I would have addressed a respectful appeal for a hearing to the audience which met in the Oxford Class Room at Cheltenham had I had an opportunity of doing so.—I am, etc.,

Cashel, Aug. 4th. Thomas Laffan.

Sir,—So much has been said of the inadequacy of direct representation of the profession on the General Medical Council that it must be a surprise that so few candidates can be found to contest the seats shortly becoming vacant. There is no general movement to secure well-known and powerful representatives.

I have read the addresses of the present members and the possible candidates to the handful of electors at Cheltenham. The views of these gentlemen are pretty well known to those of us who follow medical politics closely, but I should like to express my appreciation of the plain, straightforward, and practical remarks of Mr. George Jackson. He has a very good grasp of what reforms are necessary, and will do his best, I am satisfied, to secure them.

Dr. Woodcock's address was as tactful as the most accomplished politician courting a constituency could make it. Dr. Woodcock does not disapprove of the Medical Guild Bill, but he wants something done now. All of us know perfectly well that something can only be the Bill of the "Midwives' Institute," or some other measure which gives a legal right to non-medical women to practise one branch of medicine; and, given this power, a midwife is precisely on the same level as far as the practice of midwifery goes as a duly-qualified medical practitioner; and when she calls one in, that practitioner meets her in consultation, and where is the man who dare decline to meet a qualified midwife?

Dr. Woodcock refers to the share Sir John Williams has had in furthering the interests of the midwife. It is rather late to complain of this gentleman's action, and of the discourteous treatment of the Council of the British Medical Association by the President of Council. Again and again others with myself have asked the Lancashire and Cheshire Branch to deal with these self-elected lecturers, and the Council of the Association has been urged to take the action of the Obstetrical Society of London and that of smaller bodies into consideration, and to tell the members of them that if they continue their irregular practices they would be expelled the Association. But Dr. Woodcock gave us no help—indeed, he has more than once justified their conduct. It is quite true, as he told his hearers, that he, in a speech in Manchester, expressed his disapproval of these irregular practices, but that was before he went on to the Council. Again, when the Bill of the Midwives Institute was last introduced, the Subcommittee of the Parliamentary Bills Committee, of which Committee Dr. Woodcock was Chairman, promptly dropped their Midwifery Nurses Bill, and actually took up this Bill of the Midwives' Institute, remoulded it, and, as Dr. Woodcock wrote at the time in the Journal, "without interfering with its principle" (?)

Dr. Woodcock, it is pleasing to see, is "generally in approval of the attitude and policy of Mr. Horsley on the Midwives" question, and he follows this statement by the assertion that he is not supporting the measure in favour of the registration of midwives. What was the Bill for that his Committee drew up then? Mr. Brown has consistently supported Mr. Horsley in the Council, and we must carefully consider if it would be wise to separate two representatives we know work together: so that Dr. Glover is the only one left for Dr. Woodcock to displace, and we have substantial evidence that he is now pretty well in Mr. Horsley's hands, or, more correctly, has profited by the lessons he has had. Of course, we have Mr. Jackson's claims before us.

Now Dr. Woodcock told his audience at Cheltenham that the condition upon which he would become a candidate was that "the bulk of the profession in the North of England desired him to stand." At Cheltenham we were told that he was a candidate, and it is clear to me and others that he was being pushed by some London men: indeed, it was further announced that arrangements were being made for him to address various meetings.

To-day I am told that the arrangements are so far complete that the "ticket" is settled, and that Mr. Horsley is the only sitting councillor who is honoured with a place on the card of three.

Developments in the approaching election will be interesting—probably sensational.—I am, etc.,

Old Trafford, Aug. 13th. Jas. Brassey Brierley.

## THE TRANSMISSION OF TUBERCLE FROM ANIMALS TO MAN.

Sir,—The brief communication from Dr. Arbour Stephens in the British Medical Journal of August 3rd, containing the information that Jews have always taken for granted that the transmission of tubercle from cattle to man does occur, is extremely misleading. I have had the opportunity of devoting some attention to this matter, and have embodied my views in an article which I contributed to the *Medical Magazine* some three years ago on the Sanitary Relations of the Jewish Dietary Laws. It is perfectly true that the ritual system which controls the meat supply to Jewish butchers is based on a legislation influenced to some extent by health considerations. The *rationale* of the *post-mortem* examination of animals before they are pronounced fit for food mainly turns upon whether the lesion found would ultimately be the cause of death, and not upon the liability of its infecting the human consumer.

Although it is the fashion to discover in the Mosaic code and later Jewish legislation anticipations of twentieth-century hygiene, and although this fashion is not wholly a fancy, it is historically inaccurate to state that the Jews ever entertained any definite views on the transmission of tuberculous disease from animals to man. The morbid anatomy of cattle tuberculosis is described in detail in the *Talmud*, but it is confused with other pathological conditions, and often enough is considered less harmful than a traumatic lesion.

When, during recent years, the identity of human and bovine tuberculosis became established and the infective nature of the disease was realised, the danger of consuming tuberculous meat was published far and wide. Thereupon it was obvious that the ancient Jewish system of *post-mortem*

examination of animals destined for human consumption, excluding as it does lungs which are excavated, or possess adhesions or ulcerated bronchi, etc., would necessarily reject all advanced cases of cattle tuberculosis. This indeed is the effect of the Jewish laws on the subject, but it was not their design.

Science apparently has not said the last word on the question of the communicability of tubercle from animals to man. Those who look for any reply in the ritual of Judaism will share the fate of those who found the theories of geology and the doctrine of evolution in the first chapters of Genesis.—I am, etc.,

Spitalfields, E., Aug. 5th. J. Snowman, M.D.

## THE HEREDITY OF TUBERCULOSIS.

Sir,—Personal experience has long convinced me of the marked heredity of tuberculosis, and on looking through notes of my last 50 consecutive cases of pulmonary phthisis I find that tuberculosis had occurred amongst the near relatives of 40 of these patients. A great deal has been said respecting the boiling or sterilising of cow's milk, though, as Dr. Koch states, the infection of human beings from cows is far from proven. A much more important point seems to be overlooked that mothers in whose family tuberculosis has occurred should under no circumstances nurse their infants.

Dr. Goodhart, in his magnificent and dignified Address in Medicine, has warned all physicians of the dangers of routine and fashion in medicine, and of failure to individualise the case of each patient.

Medicine is just now passing through a curious and dangerous phase, when it is suggested by many that diphtheria can only be recognised and notified after a bacteriological examination of throat swabs in cases which present no symptoms of true diphtheria, and that by Widal's reaction alone can we diagnose enteric fever in cases which present none of the usual symptoms.—I am, etc.,

Clifton, Aug. 5th. W. J. Tivy, F.R.C.P.E., F.R.C.S.E.

## PROFESSOR KOCH'S ADDRESS.

Sir,—The numerous letters in the British Medical Journal to prove or disprove Professor Koch's statement regarding the innocence of tuberculous food look at this question from, I think, one point only.

Is it necessary that tuberculosis of the alimentary tract must exist in frequency or exist at all to prove that the human being can be infected by the tubercle bacillus through the ingestion of tuberculous food?

Is it necessary to prove some lesion in the alimentary tract simply because the bacillus entered through that tract? I think it only reasonable to believe that a chill causing pleurisy in one person and acute nephritis in another caused the pleurisy in the one because the pleura was the weak point and in the other the kidney.

Is it not likely that the tubercle bacillus, with some innate predisposition to attack the lungs and respiratory tract of the human being, might either be inhaled from the air or injected through tuberculous food, and finds its nidus in the weakest point of the individual?

On the other hand, I do not think it necessary to say that a child with tuberculous mesenteric disease was infected by the ingestion of tuberculous food more so than by the inhalation of the organism.

I think it quite possible and probable that the organism may have entered by either channel and affected the mesentery, simply because of the weakness from some prior causes.—I am, etc.,

Comrie, N.B., Aug. 12th. Frederick Porter, M.B., C.M.

Sir,—I like everyone else was impressed by the statement of Koch that bovine tubercle is different to human tubercle, and also as to the comparative rarity of the intestinal form of the disease which led him to the inference that the two diseases are distinct (but perhaps modified by the life-history, as Lord Lister afterwards suggested). Still, we have the fact that both in bovines and in man the lungs are the principal parts affected, and that in both the alimentary canal is rarely the seat of the disease, whether primarily or secondarily.

In small houses where the inmates are crowded it seems to me that both the food they eat and the air they breathe are equally liable to be infected, the former by the deposition of infected dust on the food, the latter by dust in suspension in the air. There must be some other reason besides any difference in the two bacilli for the lesser liability of the intestinal tract to infection, and that is probably to be found in the fact that the microbe is exposed to the action of the gastric juice in the one case and not in the other. However that may be I think it is clear that the alimentary canal is liable to infection whether from infected food or the swallowing of sputum in a greater proportion than 0.75 per cent. as given by Koch, and that there must be other factors to be taken into account.—I am, etc.,

Leiston, Suffolk, August 1st. Robert Cook.

## DEFECTIVE CHILDREN OF MONGOLIAN TYPE.

Sir,—May I point out that in the discussion on feeble-minded children in the Psychological Section at Cheltenham I did not attribute to children of the above type "mischievous and vicious tendencies"? I stated that they were in the long run not good cases for special instruction in Board School classes, as their capacity for improvement was very limited, and that there were *other* cases with mischievous and vicious tendencies more fit for asylums than for schools. The imbecile of Mongolian type is for the most part innocent enough, but his school progress is limited by his lack of originality, and his leading characteristic is simple imitativeness.—I am, etc.,

Richmond Hill, Aug. 14th. G. E. Shuttleworth.

## VACCINATION AND PROFESSIONAL UNDERSELLING.

Sir,—With regard to the vaccination dispute, surely private practitioners have the remedy in their own hands. Let them vaccinate their patients before they are 4 months old, and before the names appear on the vaccination officers' list. If they neglect doing this at the very best period they ought not to complain of the public vaccinator appearing on the scene.—I am, etc.,

Tottenham, Aug. 7th. W. H. Plaister.

Sir,—It appears to me that the vaccination question in relation to fees is on quite a different footing from ordinary medical attendance. It is a preventive matter. As a rule a parent prefers the ordinary medical attendant to vaccinate the child, "if it has to be done." Here is the difficulty—compulsion. If we vaccinate the child for no fee at all, we vaccinate for the same amount that the parent would pay to the public vaccinator, and we keep him from interfering with or introduction to our patients. Is this underselling? If a patient is ill with diphtheria, do we not investigate the drainage to see if we can find a fault? and do we charge for such if we do it for our own satisfaction? Is this underselling? If we make two marks, or one, when the legal number is four, then if we charge nothing we are underselling; and if we take a fee we are taking a bribe for inefficient vaccination—and, I am sorry to say, such a commission is frequent, vaccination fails, and the public *point*. Vaccination is brought into disrepute by this worse than underselling.—I am, etc.,

August 5th. E.M.S.

Sir,—As a private practitioner may I bring forward the following facts *re* the public vaccinator? In this district he is also registrar of births, etc.; he goes to any house from which a birth is registered, and intimates his obligation to vaccinate the child, and at the same time impresses upon the parents that he, and he only, has the right to do so.

The result of all this is that personally I vaccinate gratuitously the children of any of my patients rather than allow the wiles of a public vaccinator to interfere with my peace of mind. The sooner the appointment of public vaccinator is done away with the better, unless he is debarred from private practice.—I am, etc.,

August 7th. M.R.C.S.

Sir,—The gravity of the question under discussion is plainly stated in Dr. Garstang's letter when he says, "Competition and underselling would flourish to exactly the same degree as they do to-day, only the point would be changed

from the fee to the number and size of the vesicles to be made." Is it necessary to have Government supervision to prevent medical men doing wrong? Dr. Harrison thinks that public vaccinators give medicine to the mothers of children they visit for the purpose of vaccinating. As a public vaccinator I protest against this insinuation as unfair and un-English. His suggestion of appointing public vaccinators for large districts and allowing them to do no other work would undoubtedly be the best way out of a position which, after his previous remark, has undoubtedly become extremely unenviable.—I am, etc.,

August 13th. A PUBLIC VACCINATOR.

## A SECOND CASE OF INDIGENOUS MALARIA.

SIR,—In an article on The Geographical Distribution of *Anopheles* in Relation to the Former Distribution of Ague in England in the *Journal of Hygiene* for January, 1901,[1] reference is made to a case of indigenous ague in which the parasites were found in the blood of a patient who lived at Acle in Norfolk.

I have recently been able to demonstrate the presence of the malarial parasite in another case of indigenous ague. The subject is an old lady over 80 years of age living in Ramsey, Huntingdonshire, who has suffered from ague almost continuously since the age of three. She gave a clear and interesting description of the prevalence of ague during the first half of the last century, and stated that her father, mother, and all their children—seven in number—suffered from the disease. She had her first attack when an infant of three years, and has been subject to the disease ever since. At first the attacks were only every third day, then every other day, and finally every day. During the whole of her life she had never been free from ague, except for a period of two months when taking some "ague pills" given to her by a friend—this was sixty years ago. At the present time she suffers from "the chills" at least once a week, and had an attack only three days before I saw her. Her travels are limited—she has only been out of the county of Huntingdonshire twice in her life, and never out of England.

I obtained some films of her blood, and on microscopical examination found malarial parasites present. They were few in number, but absolutely characteristic, and appeared to be of the variety associated with tertian fever.

On examining the ditches around the town I was able to find without difficulty the larvæ of the *Anopheles maculipennis*. In a ditch within 200 yards of Ramsey Abbey they were especially plentiful, and were also present in the Drains on the fens about one mile away.

It would be extremely interesting to map out the geographical distribution of any cases of indigenous ague which may come under the notice of physicians in this country, and I should be pleased to examine blood films from suspected cases if asked to do so, and to indicate the source of the case when published.—I am, etc.,

T. STRANGEWAYS PIGG, M.A.,

August 6th. Demonstrator of Pathology, Cambridge University.

## ARTIFICIAL CONNECTION OF LYMPHATIC VESSELS WITH VEINS.

SIR,—At the recent Cheltenham meeting, in the Tropical Diseases Section, a very interesting suggestion was made as to the possibility of dealing with certain results of filariasis by making an artificial connection between a lymphatic vessel and a vein in the thigh.[2]

As I stated at that meeting, while unaware of any exact physiological experiments to test the ultimate result of such a procedure, there seems to be no ground for anticipating any harmful result from the direct entrance of lymph into a vein in the thigh. But a difficulty presents itself in regard to the relative pressures in the femoral vein and the lymph vessel. The blood pressure in the vein is much higher than the lymph pressure in the lymphatic vessel; hence the physical conditions are evidently unfavourable for the passage of lymph into the blood stream. It is quite true, as Braune showed many years ago, that somewhat special conditions exist in the case of the femoral vein, inasmuch as certain passive movements of the thigh—external rotation *plus* extension followed by the opposite movement—cause the pressure in the vein to become alternately negative and positive, thus alternately drawing blood into the vein from the periphery, and driving it on towards the heart. The occurrence of such a phase of negative pressure would obviously be favourable to the entrance of lymph. But such conditions are only present when movements are performed; for example, during muscular exercise (walking, etc.), when active contraction of the muscles also helps on the flow of both lymph and venous blood. At other times the higher pressure in the vein would oppose the flow of lymph from the artificially-connected lymphatic into the blood stream.

The normal connection of the lymphatic and venous systems at the junction of the subclavian and internal jugular veins is such as to offer very favourable conditions for the passage of lymph into the blood stream, since in that situation there is a negative (suction) pressure in the veins, in consequence of the elastic traction of the lungs in the closed thorax, greatly increased during inspiration (aspiration of the thorax). Indeed, this is probably one of the most important—if not the main—reason why the lymphatic vessels in the limbs do not open into local veins, but run a protracted course alongside the veins to discharge their contents under the very special conditions which are present within the thorax.—I am, etc.,

J. A. MACWILLIAM,

August 12th. Physiological Laboratory, University of Aberdeen.

## THE DIETARY OF TYPHOID PATIENTS.

SIR,—The dietary of typhoid patients is at present in a state of revolution, and undoubtedly the new movement is in the right direction. Up to quite recently the usual custom was to keep the sufferer on a milk diet with beef tea occasionally when the condition of the bowels permitted until the temperature became normal. Patients thus treated may convalesce favourably, particularly where the disease runs a rapid course, but when prolonged the result is far from satisfactory. It is a well-known fact that many persons in good health cannot digest milk, though solid food, such as fish, fowl, and farinaceous stuffs may be digested with comfort, and it is only rational to suppose that this peculiarity is exaggerated during the febrile state.

I have frequently noticed—and particularly amongst the working classes, where the craving for food on the part of the patients has been surreptitiously satisfied by anxious friends—that in many instances beneficial instead of injurious results followed, increase of weight and tendency to rest being distinctly marked, and the convalescent period being considerably shortened, the patients often being able to return to their work in an amazingly short time.

It is generally admitted when the tongue is dry and the temperature high, that milk and beef tea, better still peptonised, are indicated; but when the tongue is moist, and the patient complains of feeling hungry, malted preparations, followed as the digestion improves by light farinaceous food, such as arrowroot, corn flour, rice puddings, with a little sugar added easily digested, fish (such as sole), fowl, and occasionally part or whole of a lightly boiled egg, may be given with advantage, the digestive powers of each individual being of course carefully noted. In cases where the patient is much wasted, and diarrhœa not troublesome, half to a tablespoonful of fresh cream, diluted with water, frequently repeated, is highly beneficial. The absence of vegetables from the diet in protracted cases has, to my mind, accounted directly for fatal results in at least four instances which came under my observation.

These cases were kept on a rigid diet, and in each instance the temperature had almost fallen to normal, and the special symptoms of the disease abated, when spongy gums, petechiæ, great prostration, with frequent passing of small quantities of alkaline urine, preceded death. I have no doubt that many other cases of long duration would have ended similarly had not a more liberal diet been allowed. As vegetables are necessary to maintain health under ordinary circumstances, it is obvious that in some form they must be supplied during protracted disease, otherwise, if scurvy does not actually appear, I think it may at least be inferred that the recuperative power of the blood will be deficient, owing to the lack of vegetable

[1] Nuttall, Cobbett, and Strangeways Pigg, On the Geographical Distribution of *Anopheles*, etc., *Journal of Hygiene*, No. 1, vol. i, 1901.

[2] BRITISH MEDICAL JOURNAL, August 10th, 1901.

salts. To combat this condition, especially in prolonged cases, half to a teaspoonful of orange juice in a small quantity of sweetened water should be given occasionally, and will always be gratefully received by the patient. Vegetables, such as onions, carrots, etc., may be stewed with the meat in the preparation of soups; by this means, some of the anti-scorbutic constituents are extracted, besides giving the patient the benefit of change and variety in taste.

I have adopted this present system of dietary during the past four years, and have every reason to be satisfied with the results.—I am, etc.,

P. J. Byrne,
Medical Officer, Bradwell Isolation Hospital.

Chesterton, Staffs, July 25th.

## SOLDIERS' TEETH.

Sir,—In the British Medical Journal of July 20th, under the heading "Soldiers' Teeth," you refer to Colonel Brookfield's inquiry of the Secretary of State for War whether he had given attention to the suffering caused among the troops in South Africa by the diseased and neglected condition of the soldiers' teeth, and what arrangements had been made for providing dental assistance to the field force. Mr. Brodrick in reply said that the subject was engaging the careful attention of the military authorities. Four dental surgeons had been sent out in June and a number of refugee dentists had been engaged for the benefit of the troops. Further you add, the Secretary of State did not say that the matter would come under the notice of the committee now considering reforms in the Army Medical Department. I ask you and your readers to pause and consider how inadequate this provision is for the relief of upwards of two hundred thousand men, whose teeth are being submitted to a most severe strain by field rations and a life of exposure. Yet the appointment of these few dentists is all the British Dental Association has been able to obtain as the result of a direct appeal to Mr. Brodrick, backed by years of agitation by individual dentists, notably Gaddes, Cunningham, Norman Bennet, Newland Pedley, W. B. Paterson, and others. The committee now sitting has a great opportunity to insist for the ultimate benefit of our soldiers' health that no reform of the Army Medical Department can be complete without the addition of a properly organised and sufficient dental staff. Will the medical profession bring its mighty support to aid us younger brothers of the dental profession in urging on the nation that loss of teeth is followed by loss of good health, and by demanding that in place of ruthless extraction of teeth ample dental aid be supplied our army.—I am, etc.,

Portland Place, July 27th. Henry G. Read.

## MEDICAL GRADUATES AND THE SUPPLY OF MEDICINES.

Sir,—The venerable professors who constitute the Senatus Academicus of Edinburgh University have evidently, like many of us in these summer months, been feeling the want of work. The diminution of 30 to 40 per cent. of medical students during the past few years is a serious matter, and if the process go on, Edinburgh professors a few years hence will be lecturing to almost empty benches. When I studied under them I regarded them as demigods; for some time past I have regarded them as men, and am now convinced of it, as, like ourselves, they find scope for their superfluous energy in instructing their Secretary to send letters and resolutions to the medical journals. As the resolution that appeared in the British Medical Journal of August 10th is not likely to be enforced, they might possibly have been as well employed in passing motions to stop the current of the Firth of Forth.

Those of us who are graduates of that ancient University ought to be thankful to them for the sudden interest they have developed in our welfare. If that University is to be restored to its former status, there are certain reforms which are quite within the power of the Senatus Academicus, and which some of its members might find it possible to carry out. There might be some limit to the number of practical classes which bring extra fees into the professors' pockets, while the work is done by their not too highly paid nominees. A medical professor's salary is large enough, and there seems to be no particular reason why he should swell the ranks of competition by visiting patients, and he might see to it that the patients he attends in hospitals are not those who have been withdrawn from his old pupils, and who could quite afford to pay their modest fee. If the pockets of an Edinburgh professor or a Birmingham consultant are affected, there is outcry enough in the lay press as well as the medical journals. But what of the toiling practitioner, who, when others are enjoying their two or three months' holidays, is plodding with weary steps through the back streets, and spending his days and nights in badly-ventilated dwellings? To uphold the dignity of the profession, he must forego the small extra sums he derives from supplying the medicine he prescribes, and it is of little concern to a Senatus Academicus though ruin and bankruptcy follow in consequence.

I have known not a few who for long years have followed the time-honoured custom of dispensing their own medicine, and who were not inferior in ability to many who have occupied more prominent positions. They might not have had the happy art of pleasing, nor ever cared to seek the political and other influence by which professoriates and other appointments are often obtained. They were men so true and noble that nothing they ever did could have thrown discredit on their profession, and though living in a quiet sphere served their day and generation as well as any member of a Senatus Academicus.—I am, etc.,

Greenwich, Aug. 12th. J. H. Keay.

## SEASIDE SANATORIA FOR CHILDREN.

Sir,—At the recent Tuberculosis Congress I listened with great pleasure to the paper by Sir Hermann Weber in which he pointed out the need which exists for seaside sanatoria for children—especially those suffering from scrofulous complaints. In 1899 there was established the Liverpool Country Hospital for Chronic Diseases of Children, the object of which is "to afford medical and surgical aid to children requiring prolonged treatment in the fresh air of the country." At this hospital there is no time limit, and children suffering from scrofulous and other chronic ailments are admitted and treated for months or years provided a reasonable hope of cure or of permanent benefit exists. Sir Edward Russell, when declaring the institution open, remarked that "he believed the hospital would be looked upon as a great experiment to be followed in other parts of the country, and he was convinced that if they kept their principle in view the hospital might be the beginning of a national undertaking, and that the country at large would realise the importance of so treating the rising race that nothing of which science could make a certainty should be left to chance." The institution has now passed the experimental stage, and the practical results have already proved so successful that the Committee, having acquired a site comprising nearly ten acres of land on the slopes of the Dee at Heswall, are now considering plans for an institution which will eventually accommodate 200 children.

It is to the honour of Liverpool that she has been a pioneer in this country in providing a seaside hospital in which children suffering from chronic ailments can be treated from first to last, and Sir Hermann Weber is to be congratulated on having brought to the notice of the public the necessity which exists for institutions of the kind.—I am, etc.,

Liverpool, Aug. 6th. Charles J. Macalister.

## A DEGREE FOR LONDON DIPLOMATES.

Sir,—I fail to see why "Conjoint" men of the ancient Colleges of Physicians and Surgeons of London should petition all the recently-formed universities. It is, I submit, the duty of the Royal Colleges to protect the interests of their Licentiates and Members, and it would be useless to act as Dr. Griffiths suggests: as it is, a very large number of men, owing to the facility for study, etc., in London, come and reside in the metropolis, and still fewer would go to the various provincial schools were the suggestions of the above-named writer carried out by the provincial universities. The universities have rights, and they are not on moral grounds going to concede them to the London diplomate. In fact it is to their interest to exclude him.—I am, etc.,

Wimpole Street, W., July 30th. Frederick W. Collingwood.

## A SECTION OF MEDICAL POLITICS.

SIR,—I hope that at the next annual meeting of our Association a Section will be formed, or, at any rate, meetings will be held, on the subjects comprised in the term "medical politics." Owing, I believe, to the energy of Mr. Garrett Horder, of Cardiff, one meeting of members interested in the election of direct representatives of the profession in the General Medical Council took place during the exceedingly pleasant and valuable annual meeting which has just been held at Cheltenham, and I cannot but feel, as one who was present at that special meeting, that good work was done at it, and that had its claims for a large attendance been pushed and a prominently-placed room had been allotted for it, the gathering would have been larger than it was. But even with the limitation of subjects assigned to this assembly a fairly large and a very earnest body of members of the Association were in attendance, and I believe I am but representing the feelings of others who were there, when I say that it fully justified its existence. We were enabled to hear speeches from present members of the General Medical Council and from prospective candidates for the same, and were thereby empowered to form opinions of our own as to their probable fitness to represent us in that important body, which, after all, rules our profession. I will say nothing as to my own opinions on that occasion, but will draw the attention of my fellow members to the fact that we have heretofore elected our representatives on the appeals made to us by circular and through the medical press. Such a mode of exercising the franchise is surely not the one best adapted for securing the best men. The personal element must enter into consideration of this sort, and it is, in my opinion, not sufficient that a candidate should have merely sound views on the subjects in which we are all interested, but that it is desirable that he should also have a good presence, and a power of expressing these views in a manner which is generally acceptable during debate anywhere. That our selections of direct representatives should be good I feel that we ought to have opportunities afforded us of doing what, through the foresight of Mr. Horder, was done the other day, namely, of listening to the personal statements of candidates for seats at the General Medical Council.

But I go further than this matter of the General Medical Council election when I call for the formation of a Section of Medical Politics at our annual meeting. I regard our Association as having potentialities for the general welfare of our profession in a way that has hitherto been quite neglected. Surely the British Medical Association should be regarded from the double point of view of a body for the advancement of medical sciences, and for pushing the just claims of medical practitioners to a proper recognition of their work by the State, of their protection during their tenure of public office, and of the prohibition of unqualified and illegal practice.

If we had a Section for Medical Politics, with two subjects for discussion allotted to it as at the other Sections at these annual meetings, we might formulate thought on these subjects, and might arrive at some means for pushing what just claims we have on the consideration of the public; and we might secure some reforms which are called for in the constitution of the Council itself. But if any such Section is formed it should be controlled by strict rules of debate, and should be presided over by a president of known capacity for filling such an office; it would be only by the adoption of such methods that due order would be maintained and continuity of debate would be secured: for in all matters of politics, whether of general or of a special character, feelings run high, and discussions are apt to be interrupted by impromptu speaking and by impassioned outbreaks from those who are not holding the floor of the House. Granted such enforcement of the rules of debate, and a pre-arranged scheme of subjects for discussion, I believe that much good would be done in the matter of the formation of opinions relative to medical politics, and that the interest in, and the utility of, our annual meetings would be greatly enhanced.—I am, etc.,

Swansea, Aug. 5th. H. A. LATIMER, M.D.

MEDICAL MAGISTRATE. The name of Mr. Thomas John Carson, L.F.P.S.Glasg., and L.M., has been placed on the Commission of the Peace for the Borough of Oldham.

# OBITUARY.

## JAMES WILLIAM MILLER, M.D.,

Dundee.

WE regret to announce the death of Dr. Miller, of Dundee, which took place at his residence on August 7th, after a trying illness of many months.

Dr. Miller was one of Dundee's leading physicians. Born in London in 1836, he went to Leslie, Fife, with his parents two years later. At the parish school there he received the rudiments of his education. Afterwards he attended Edinburgh University. Having passed through a University training, he graduated M.D. in 1857, and was about the same time admitted a Licentiate of the Royal College of Surgeons. Dr. Miller was gold medallist in Sir James Simpson's midwifery class the year he left the college. Immediately after graduating he went to Dundee, commencing practice in 1858 with Dr. Munro, his uncle, who was then in failing health. The connection then formed with the city was never broken.

With Dundee Royal Infirmary Dr. Miller had a long and honourable connection, going back to the old days when the Infirmary stood at the head of King's Road. He was then a student taking advantage of his visits to his uncle, Dr. Munro, in holiday time, and one of his most cherished possessions was the old admission ticket for the buildings in King's Road. As a senior student he attended the present infirmary, and before qualifying was actually interim superintendent for a short time during a vacancy. Shortly after settling in Dundee he was called upon to fill the position of dispensary surgeon, and after five years' excellent service in this capacity Dr. Miller, in 1865, was appointed visiting physician to the Infirmary. In those days typhus fever raged extensively in the town, and he actually contracted typhus twice in the performance of his hospital duties. He always attributed his second attack to the careful attention he paid to the physical examination of the cases, presuming an immunity acquired by his first attack. On the completion of his term as attending physician, in 1874, he became consulting physician, a position which he had held ever since. He was thus by far the senior member of the staff, having been engaged at the institution for over forty years. When the new charter, two years ago, permitted the governors to elect a member of the staff as a director, Dr. Miller was at once designated for the place, and nothing in his declining years gave him more pleasure than the work he was permitted to do for a place he had known so long. In 1870 he became Prison Surgeon, retiring on a pension in 1898, and for nine years he acted as Medical Officer to the East Poorhouse.

Dr. Miller's merits were recognised all over the countryside, being held in high esteem for his professional skill. For three years from 1880 he was Examiner in Medicine in the University of Aberdeen, and in 1883 he was appointed Certifying Surgeon of Factories in the eastern district of Dundee. With the Forfarshire Medical Association he had an intimate connection, having been one of the four or five still surviving original members who about 1860 brought it into existence.

For many years previous to 1894 Dr. Miller had been a member of the British Medical Association, but it was only in that year, on the formation of the Dundee and District Branch, that he became intimately acquainted with its working. He was the first President of the Branch, and in the following year was elected as its first representative on the Council. In that capacity he rendered most regular, faithful, and cheerful service for six years. He liked the Council's work, comprehended its details thoroughly, and to the last was interested in the position of the Association and eager to extend the influence.

In the study of the social condition of the people Dr. Miller took a keen interest, and more than once he spoke effectively when matters concerning the public health were being discussed. With many philanthropic institutions in the city he was long connected, whilst he was a member of the Directorate of the Dundee Home for Consumptives, and a Consulting Physician in connection with the Royal Victoria Hospital. He was also a J.P. for the city, and a member of the Free Library Committee.

A strong devotee of athletics, Dr. Miller, in his younger

days, was a keen sculler and swimmer. He was one of the original members of the Dalhousie Golf Club, while he all along took an active interest in athletics in the neighbourhood, more particularly in connection with the High School. He was also an ardent musician.

Above all, he was a singularly upright and honourable man, whom it did one good to know, and whose memory will long remain as one of the most precious traditions of his profession in the city and district in which he practised.

Dr. Miller is survived by a widow and a family of eight, one of whom, Dr. George Miller, is a member of the medical profession.

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We regret to announce the death of Surgeon-General Charles Richard Francis, formerly of the Indian Medical Service. Surgeon-General Francis, who was in his 81st year, received his professional education at the Middlesex Hospital, and became a Member of the Royal College of Surgeons of England and a Licentiate of the London Society of Apothecaries in 1843. In the same year he graduated M.B. at the University of London. In 1844 he entered the Indian Medical Service and remained on the active list till 1875. During that period he held a number of civil and military appointments. He officiated at one time as Principal and Professor of Medicine at the Medical College, Calcutta, and Physician to the College Hospital. He was also Examiner in Medicine and Obstetrics to the University of Calcutta, of which he was a Fellow. Towards the close of his Indian career he held successively the posts of Secretary to the Surgeon-General, Deputy-Surgeon-General, and officiating Surgeon-General with the Government of India. In 1853 he was appointed by the Government to investigate, in conjunction with Dr. Frank Pearson, the nature of the mahamurree, which was raging as an epidemic in the hill districts of Kumaon and Gurhwal. Drs. Francis and Pearson found this disease to be identical with "bubonic plague," and wrote a valuable report thereon. Dr. Francis experimented much with snakes and snake poison, with a view of discovering an antidote. He was at one time editor of the *Indian Medical Gazette*, and was the author of "Sketches of Native Life in India," "To India and Back by the Cape," "Army Hospital Equipments," "The Indian Medical Officer's *Vade-Mecum*," "List of Vernacular Professional Publications," "On Constitutional Syphilis," "Endemic Plague in India," "Enteric Fever in India," "Course of Introductory Lectures at the Medical College, Calcutta," "Alcohol, Chemically, Physiologically, and Microscopically Considered," "Alcohol: A Compendium of Information on the Temperance Question," "On Snake Poison," "Medical Women for India," "How to Preserve Health in India," etc.

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Dr. John Hankinson Gornall, Medical Officer of Health for the County Borough of Warrington, who died recently after an illness of several months, was born at Preston in 1841. The death of his father when he was only six years of age left the family in straitened circumstance, and the trials which, in company with his mother and sister, he then underwent, left a marked impress in after-years both on his character and his physical constitution. He received his preliminary education at the Liverpool College, then under the headmastership of Dr. Howson, subsequently Dean of Chester. Here he gained numerous certificates and prizes. At 15 he was apprenticed to a branch of the shipping trade, but, disliking this trade, he became medical apprentice to his uncle, Dr. Kenyon, of Wavertree. About the year 1858 he gained a resident scholarship at the Liverpool Medical School, and lived in the Liverpool Infirmary, as assistant to the house-surgeon. Thence he went to Warrington as House-Surgeon to the old Dispensary in 1865. He left Warrington in 1868 to take up a partnership with Dr. William Arminson, of Preston. In 1870, however, he returned to Warrington and began practice on his own account. Among the appointments which Dr. Gornall held at the time of his death, the one which he had held longest was that of public vaccinator, to which post he was appointed in 1872. He was also Poor-law Medical Officer. At one time, also, he was Medical Officer for the Warrington Rural District; he was made Medical Officer of the Infectious Diseases Hospital in 1878, and in 1880 Medical Officer of Health and Public Analyst when he relinquished all private practice to devote himself to the health of the town. In June, 1885, his name was placed on the Commission of the Peace for the Borough of Warrington, and within more recent years he was appointed Consulting-Surgeon to the Warrington Infirmary. Dr. Gornall was married in 1866 to Miss Mary Guest. His eldest son (Dr. J. Guest Gornall) was recently appointed Deputy Medical Officer of the Borough. The loss of Dr. Gornall will be keenly felt, and the sorrowing widow and family have the deep sympathy of a large circle of friends in the irreparable loss they have sustained.

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We regret to announce the death of Dr. Leroy de Mericourt, of Paris, at an advanced age. After serving as Surgeon-Major throughout the Crimean war, he was appointed Professor at the Brest School of Medicine. He was a recognised authority on naval hospital organisation. Dr. de Méricourt was a member of the Académie de Médecine. He was founder and director of the *Archives de Médecine Navale*, and was the author of numerous contributions to medical literature.

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Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Armand Delpeuch, Physician to the Hôpital Cochin, Paris, aged 45; Dr. Miguel Colmeiro, Professor of Natural History in the Medical Faculty of the University of Madrid; Dr. Maurice Perkins, Professor of Chemistry and Toxicology in the Albany Medical College, aged 65; Dr. Joseph Le Conte, Professor of Geology and Natural History in the University of California, author of *Sight: An Exposition of the Principles of Monocular and Binocular Vision: Evolution and its Relation to Religious Thought*, etc., aged 80; Dr. Lacaze-Duthiers, Professor in the Faculty of Science of the University of Paris; Dr. Hameau, Vice-President of the French General Medical Association; Dr. Ed. Tordens, *Agrégé* Professor in the University of Brussels, and formerly Clinical Professor of Diseases of Children at the Hôpital St. Pierre in that city, aged 54; and Dr. E. J. M. Aubrée, Professor in the Rennes School of Medicine.

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# MEDICO-LEGAL AND MEDICO-ETHICAL.

## AN ACTION FOR LIBEL.

In the case of Martin *v.* Allen, which was heard by the Lord Chief Justice and a special jury at Leeds last week, the plaintiff, who was at one time matron of the isolation hospital at Belper, in Derbyshire, sued Dr. Richard Grammer Allen, the medical superintendent of the hospital, for damages for libel.

Mr. Tindal Atkinson, K.C., and Mr. Waddy appeared for the plaintiff; Mr. J. Scott Fox, K.C., and Mr. Compston (instructed by the Solicitor to the Medical Defence Union) appeared for the defendant.

According to a report which appeared in the *Times* of August 12th, the defendant had been superintendent of the Belper Isolation Hospital for some time prior to January, 1900. The plaintiff was appointed matron on January 20th in that year, and from the very first there seems to have been friction between the parties.

On July 14th the defendant wrote a letter to the committee of the hospital, which contained (*inter alia*) the following statement: "I was soon convinced that your present matron is a person absolutely unfitted for the responsible position in which she is placed . . . . Miss Martin appears to think that this building was erected for her sole use and benefit—in fact, as a convenient centre for friendly visitation and the dissemination of idle gossip. You will probably recollect the day but one after I took office the nursing staff deserted *en masse*, the reason given being, 'We cannot and will not work with this matron.' The three nurses whom we have at present have all intimated to me their intention of resigning their duties if the present mismanagement continues; petty annoyances long continued and by one in authority may make life unbearable. This is what has happened and is happening at your isolation hospital. Her manner to me has at times been most impertinent. I have received more insolence from her in six months than I have done in all my experience with nurses. Only a few days ago a stuff dress worn by the housemaid—a mere child—was sent by the matron to be altered and repaired by a convalescent patient. It came back without being disinfected. The girl contracted the malady, and is now under treatment. Whoever has gone to the hospital on visiting days must have wondered if he had read aright the meaning of the word 'isolation.' Such a rabble I never came across, without any apparent discipline, wandering here, there, and everywhere, all over the grounds. The matron's sole idea appears to be to make the place into a show ground and impress the parents and friends. With all this amount of irregular visiting can you wonder that the epidemic does not cease and that we read attacks in the press on this and isolation hospitals generally? We are also handicapped that in an emergency we are unable to obtain the services of nurses from the Derby Nurses' Home as long as the present matron remains. I could, if necessary, write a good deal more to prove to you that Miss Martin is not the proper person to be in authority in a place of this description, but I consider that I have said quite enough, and

all that I can now say is that if you decide to retain her services you will take upon yourselves a responsibility which I do not envy you of and in which I for one must decline to participate."

This letter was read out at a meeting of the committee, and was the alleged libel. The matters in question were considered by the committee, and eventually the plaintiff was asked to resign.

The plaintiff was called in support of her own case. She suggested that the letter had not been written by the defendant merely in the discharge of his duty, but in order to ventilate a private grievance. Two members of the committee gave evidence in her behalf.

At the close of the plaintiff's case the defendant's counsel submitted that the alleged libel was a privileged communication, and that there was no evidence of malice. His Lordship, however, said that the case must go to the jury.

The defendant, who had pleaded privilege and in the alternative that the words of the alleged libel were true in substance and in fact, was then called to prove the truth of his allegations. He said that he had no ill-feeling whatever against the plaintiff. From what he had heard and seen he believed Miss Martin to be unsuitable for the position which she occupied, and he had conceived it to be his duty to inform the committee.

A number of nurses were also called in support of the defendant's case.

The Lord Chief Justice, in summing up, said that it was the duty of the defendant to make a full statement to the committee about the management of the hospital, and that if the jury believed that the letter complained of was written *bonâ fide* and without malice they ought to find a verdict for the defendant.

The jury retired to consider their verdict. Upon their return into court after an absence of about two hours, the foreman said that the majority thought that as a whole the letter showed no malice, but that a few of them were of opinion that one paragraph of it displayed malice. They again retired, and did not return into court until nearly two hours or more had elapsed. The foreman then announced that there was no prospect of their agreeing. They were accordingly discharged.

### MEDICAL ADVERTISING.

ELECTRICUS writes that he intends to open an electro-therapeutic institute for high frequency, static douches, and radiotherapy, and wishes to know to what extent it would be permissible for him to make it known to the public.

*** We know of no precedent for the carrying on of such an "institute" by a registered medical practitioner. We believe great exception will be taken to the scheme, and that its advertisement in the public papers would be a breach of professional ethics. A medical practitioner who desires to practise electricity must be content to make himself known through the members of his own profession and by means of their introduction. There is no more excuse for the public advertisement of the proposed establishment than for similar notices or advertisements of a home for the treatment of diseases of the eye. We think our correspondent should reconsider his position or remove his name from the *Medical Register* before proceeding with his enterprise.

### PRICE FOR PRACTICE.

VIATOR asks what would be a reasonable price to be paid for a practice in a country town in the Midlands bringing in £650 a year, with appointment of £250. It has been in the hands of a *locum tenens* for over a year. The working expenses are £200, and the rental of the house £50.

*** "Viator" does not state if the practice is an unopposed one. If it is, the want of introduction does not much detract from the selling value, which we are advised would be from £800 to £900. If another medical man is practising in the town £650 would be a reasonable purchase price without introduction and subject to the transfer of the appointments. An agreement should be entered into with the *locum tenens* binding him down not to practise, and this should be a condition *sine quâ non* of purchase.

### CERTIFICATION OF LUNATICS IN SCOTLAND.

RUSTICANUS states: "A man, not a pauper, suffering from delirium tremens, but showing no signs of violence, was seen by the medical officer of a parish in Scotland who certified him insane, and the inspector of poor had him removed to an asylum. Has the patient a grievance? If so, against whom?"

*** The inspector of poor is not in any way responsible; he relies on the accuracy of the medical certificate, or rather the two medical certificates as two are necessary. It is not uncommon for patients to be admitted into asylums suffering from delirium tremens and discharged in a few days. We do not consider that there is any grievance.

### PAYMENTS ON ACCOUNT DURING PARTNERSHIP INTRODUCTIONS.

A CORRESPONDENT writes that he has recently sold his practice, and during a partnership introduction an account was incurred by one of his old patients, who owed money for a previous attendance by himself before the sale. Later on a bill was sent in to this patient, with two items, (1) £5 due for old attendance before partnership, (2) £3 for attendance during the partnership introduction. The patient paid £4 on account. It is asked how this money ought to be divided, if at all.

*** Our correspondent is entitled to the whole of this money. Where money is paid on account, unless debts are statute barred, they take precedence in the order in which they were incurred, unless it is specially agreed to the contrary.

### PUBLIC APPOINTMENTS AND SALES OF PRACTICE.

A CORRESPONDENT asks advice under the following circumstances:—The local medical officer of health has just sold his practice and wishes to transfer the public health appointment to his successor. This has been done several times before at short intervals, and the Local Board disapproves of the arrangement. He is the only D.P.H. practising in the district, and would like to become a candidate for the post. He asks:—(1) Does he offend against medical etiquette by competing for the appointment? (2) Being a D.P.H. has he not a special claim to such an office? (3) Has the retiring medical officer of health any right to be offended if he becomes a competitor? (4) Ought he to consider the appointment as a part of his practice that he is entitled to sell? (5) If he informs the retiring medical officer of health and the purchaser of his practice of his intention to apply for the appointment, will he be acting fairly in becoming a candidate?

*** If the appointment in question is advertised, our correspondent may properly become a candidate. Such an appointment cannot be considered part of a private practice, and neither the former holder of the appointment nor the purchaser of his practice has any right to resent our correspondent's candidature, provided he competes for the appointment in an open and honourable manner.

### THE BOND RESTRICTING PRACTICE.

VENDOR writes that he sold his practice some time ago, giving the usual bond not to practise within six miles of his old neighbourhood. He has since acquired another practice twelve miles away, and finds it difficult to avoid following his patients to the only hospital in the vicinity, which is situated within the prohibited radius. He has applied to the purchaser of his old practice for permission to attend patients requiring to be taken to this hospital, but has been refused. (1) He wishes to know if he can claim to be allowed to visit patients in this hospital? (2) Can he also also claim to administer chloroform to a patient in a private hospital within the radius?

*** We do not think that "Vendor" is entitled to visit professionally any patient, whether in a hospital or otherwise, without the consent of the purchaser of his old practice within the prescribed radius.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## THE UNDERMANNING OF THE ARMY MEDICAL SERVICE.

THE following is the distribution of medical officers according to the *Army List* for August, 1901:

*Distribution in August Army List.*

| Ranks. | Home. | South Africa. | Other Foreign Stations. | Not Posted. | Total. | Remarks. Seconded. | Remarks. Reserve of Officers. |
|---|---|---|---|---|---|---|---|
| Surgeon-Generals ... | 5 | 1 | 4 | — | 10 | — | — |
| Colonels ... ... ... | 9 | 7 | 12 | — | 28 | 4 | — |
| Lieutenant-Colonels... | 58 | 53 | 76 | 1 | 188 | 6 | 85 |
| Majors ... ... ... | 37 | 155 | 123 | 3 | 318 | 3 | 4 |
| Captains ... ... ... | 29 | 71 | 111 | 2 | 213 | 7 | 4 |
| Lieutenants ... ... | 36 | 135 | 59 | 2 | 232 | 3 | — |
| Total... ... ... | 174 | 422 | 385 | 8 | 989 | 23 | 33 |

Comparing the table with the list for June, the following changes are to be noted:

There is an apparent increase of 11 in the total number of medical officers, but of that number 5 belong to the reserve, while 5 have been removed to the seconded list, leaving a nominal increase of 1. All the reserve officers are employed at home, except 2 in South Africa.

But to arrive at the true available strength of the active list it is necessary to deduct the 56 seconded and reserve (retired) officers from the total, which leaves 933, or 1 more than in June.

There is an increase of 10 at home, 1 less in South Africa, and 6 more at other foreign stations, while the unposted are 4 less.

The number of retired officers of the Army Medical Service shown as employed is 97, including the 33 given in the active list, leaving 64, to which must be added 4 officers of the Militia Medical Staff, and 3 of the Indian Medical Service. There are also 2 officers of the Militia Medical Staff Corps shown as serving in South Africa.

The total number employed for August is thus as follows:

| | |
|---|---|
| Active list ... ... ... | 989 |
| Retired list ... ... ... | 04 |
| Militia list ... ... ... | 7 |
| Indian list ... ... ... | 3 |
| Total ... ... | 1,063 |

This, of course, is wholly exclusive of the civil surgeons employed at home and abroad, especially in South Africa.

## ROYAL ARMY MEDICAL CORPS EXCHANGE.

*The charge for inserting notices respecting Exchanges in the Army Medical Department is 8s. 6d., which should be forwarded in stamps or post-office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.*

Major, R.A.M.C., at home on leave from best part of the Punjab till November 8th, when he completes nearly three years of Indian tour, will exchange for full or part tour in Egypt, nearer Colonies, or home. What offers? Apply early, with full particulars to "Exchange," care of Holt and Co.

### ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel J. O. G. Sandiford, M.D., retires on retired pay, August 14th. He was appointed Surgeon, July 31st, 1880, Surgeon-Major, July 31st, 1892, and Lieutenant-Colonel, July 31st, 1900.

The undermentioned Majors are promoted to be Lieutenant-Colonels, dated July 30th:—A. M. Davies, H. W. Hubbard, T. E. Noding, J. R. Yourdi, M.B., J. C. Culling, R. I. D. Hackett, M.D., G. T. Trewman, M.B., H. H. Johnston, M.D., E. M. Wilson, C.M.G., D.S.O., E. J. E. Risk, W. G. Birrell, M.B., M. Dundon, M.D., C. W. S. Magrath, M.D., A. V. Lane, G. E. Weston, G. H. Younge, F.R.C.S.I., R. F. O'Brien, C. W. Thiele, M.B., F. P. Nichols, M.B., J. McLaughlin, M.D., F. J. Lambkin, W. L. Reade, H. J. Peard, S. J. Rennie. J. Carmichael, F.R.C.S.I., G. W. Brazier-Creagh, C.M.G., F. T. Wilkinson. Their previous commissions, which are simultaneous, are dated: Surgeon, July 30th, 1881; Surgeon-Major, July 30th, 1893. Their war records are as follow:—A. M. Davies—Egyptian war of 1882 (medal and Khedive's star); expedition to the Soudan in 1884, engagement at El Teb and Temai (two clasps); also Nile expedition in 1884-85 (clasp). H. W. Hubbard—Egyptian war of 1882, and battle of Tel-el-Kebir (medal with clasp and Khedive's star). T. E. Noding—Egyptian war of 1882 (medal and Khedive's star); Waziristan expedition in 1894-5. J. R. Yourdi—Egyptian war of 1882, first with Army Hospital Corps at Alexandria, and subsequently in medical charge of a battery of Royal Artillery at Ramleh (medal and Khedive's star). J. C. Culling—South African war 1899-1900, including relief of Ladysmith (mentioned in despatches). R. I. D. Hackett—Soudan campaign in 1885 (medal with clasp and Khedive's star); operations in Zululand in 1888. G. T. Trewman—Soudan campaign in 1885 (medal with clasp and Khedive's star). H. H. Johnston—Soudan campaign in 1885 (medal with clasp and Khedive's star); campaign on North West Frontier of India in 1897-98 in charge of No. 1 British Field Hospital, Malakand, and engagement at Landakai, operations in Bajaur and Mahmund country, and capture of Tanga Pass (mentioned in despatches, medal with clasp); South African war, 1899-1900 (mentioned in despatches). E. M. Wilson—Zulu war of 1879 as Civil Surgeon (medal with clasp); Nile expedition in 1884-85 (medal with clasp and Khedive's star); Egyptian Frontier Field Force in 1885-86; expedition up the river Gambia in 1891-92 (medal with clasp); expedition to Ashanti under Sir Francis Scott in 1895 in charge of base hospital (C.M.G. and star); Soudan campaign in 1898, including battle of Khartoum (mentioned in despatches, D.S.O., British medal, and Khedive's medal with clasp). E. J. E. Risk—Egyptian war of 1882, and engagements at Tel-el-Mahuta and Mahsama, and the two actions at Kassasin (medal and Khedive's star). W. G. Birrell—Soudan campaign in 1885 (medal with clasp and Khedive's star); Burmese expedition in 1885-88 (mentioned in despatches, medal with clasp); campaign in the Soudan in 1898 (British medal and Khedive's medal). C. W. S. Magrath—Egyptian war of 1882, and battle of Tel-el-Kebir (medal with clasp and Khedive's star); Nile expedition in 1884-85 (clasp); Burmese expedition in 1886-87 (medal with two clasps). A. V. Lane—Egyptian war of 1882 (medal and Khedive's star); Soudan expedition in 1884, and engagements at El Teb and Temai (two clasps). G. E. Weston—Egyptian war of 1882 (medal and Khedive's star); Bechuanaland expedition under Sir Charles Warren in 1884-85. G. H. Younge—South African war of 1899-1900, including relief of Ladysmith (mentioned in despatches). R. F. O'Brien—Burmese Expedition in 1885-86 (medal with clasp). C. W. Thiele—South African war, 1899-1900. J. M'Laughlin—Expedition to Tambaka country, West Coast of Africa, in 1892, as senior medical officer, and capture of Tambi (mentioned in despatches, medal with clasp); expedition up the Gambia in 1892 as senior medical officer, and capture of Toniataba (mentioned in despatches); South African war 1899-1900 (mentioned in despatches). F. J. Lambkin—South African war in 1899-1900, and battles of Colenso, Spion Kop, Vaal Krantz, and Pieter's Hill, and relief of Ladysmith. W. L. Reade—South African war, 1899-1900. H. J. Peard—Campaign on North-West Frontier of India in 1897-98, with Malakand Field Force (medal with clasp); South African war, 1899-1900 (mentioned in despatches). F. T. Wilkinson—Isazai expedition in 1892; Soudan campaign in 1898, including battle of Khartoum (British medal, and Khedive's medal with clasp); South African war, 1899-1900 (medal with three clasps).

Civil Surgeons T. Caldwell and D. M. French have been discharged to duty from hospital in South Africa.

The following are on passage home: Lieutenant A. H. McDougall (attached), Major M. T. Yarr, Major C. E. Nichol, Surgeon-Lieutenant J. K. Tomory (attached), Lieutenant and Quatermaster M. H. Bradley, Civil Surgeons F. A. H. Clarke, A. Thomson, R. Carswell, C. M. Ekins, H. H. Swanzy, and R. Boyd. Returning invalided: Major G. H. Younge, Lieutenant T. B. Unwin, Surgeon-Captain H. Ilderton, Civil Surgeons F. A. F. Barnardo, F. G. Grosvenor.

### INDIAN MEDICAL SERVICE.

Lieutenant-Colonel W. R. Browne, M.D., Madras Establishment, is appointed Principal Medical Officer at the General Hospital, and Principal Madras Medical College.

Surgeon-General Charles Richard Francis, M.D., Bengal Establishment, died at Spencer Park, S.W., on August 10th, in his 81st year. He was appointed Assistant Surgeon, January 16th, 1844; became Deputy Surgeon-General, March 16th, 1870; and retired from the service, with the honorary rank of Surgeon-General, September 1st, 1875.

### IMPERIAL YEOMANRY.

Temporary Captain J. E. Martin, M.B., Medical Officer, 17th Battalion, in South Africa, is granted the temporary rank of Major, March 24th.

### THE VOLUNTEERS.

Mr. George Johnston is appointed Surgeon-Lieutenant in the 1st City of London Artillery (Eastern Division, Royal Garrison Artillery), July 27th.

Mr. George A. Patrick is appointed Surgeon-Lieutenant in the 2nd Volunteer Battalion the Loyal North Lancashire Regiment, July 27th.

Surgeon-Lieutenant R. Soutar, M.B., 1st Forfarshire Artillery, has resigned his commission, August 3rd.

Surgeon-Captain W. Nettle, 2nd Volunteer Battalion the Duke of Cornwall's Light Infantry, is promoted to be Surgeon-Major, August 3rd.

The undermentioned Surgeon-Lieutenants are promoted to be Surgeon-Captains: A. R. Rendle, 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment, July 27th; W. G. Heasman, 1st Volunteer Battalion Princess Charlotte of Wales's (Royal Berkshire) Regiment, July 27th; A. L. Whitehead, M.B., 1st West Riding of Yorkshire Artillery (Western Division Royal Garrison Artillery) August 3rd; D. Christie, M.B., 1st Dumbarton Rifles, July 7th, 1900; C. F. Spinks, 1st Dumbartonshire Rifles, April 3rd.

Surgeon-Captain A. W. Wigmore, 19th Middlesex (Bloomsbury) Rifles, resigns his commission, August 3rd.

Surgeon-Lieutenant S. Clark, M.D., 1st Banff Artillery, retires under para. 111 Volunteer Regulations, August 10th.

The undermentioned Surgeon-Captains are promoted to be Surgeon-Majors, dated August 10th: F. Shann, 1st Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment); A. W. Prichard, 1st (City of Bristol) Volunteer Battalion the Gloucestershire Regiment; J. Turton, 1st Volunteer Battalion the Royal Sussex Regiment.

Surgeon-Captain S. H. Snell, M.D., 2nd Volunteer Battalion the Princess of Wales's Own (Yorkshire Regiment) resigns his commission, August 10th.

Mr. John P. Shine, M.B., is appointed Surgeon-Lieutenant in the 2nd Volunteer Battalion the York and Lancaster Regiment, August 10th.

Surgeon-Lieutenant J. B. Stevens, M.B., 2nd (Renfrewshire) Volunteer Battalion Princess Louise's (Argyle and Sutherland Highlanders), is promoted to be Surgeon-Captain, August 10th.

Surgeon-Lieutenant J. P. Brown, M.B., 5th Volunteer Battalion Argyle and Sutherland Highlanders, is also promoted to be Surgeon-Captain, August 10th.

### VOLUNTEER MEDICAL STAFF CORPS.

Surgeon-Lieutenant E. B. Waggett, M.B., the London Companies, is promoted to be Surgeon-Captain, August 3rd.

Mr. William H. Payne is appointed Surgeon-Lieutenant in the Woolwich Companies, August 3rd.

### CHANGES OF STATION.

The following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

| | From. | To. |
|---|---|---|
| Lieutenant-Colonel D. F. Franklin ... | South Africa... | Aldershot. |
| Major J. I. P. Doyle ... ... ... ... | Dublin ... ... | Brighton. |
| ,, J. F. Burke ... ... ... ... | — | Lancaster. |
| ,, J. S. Edye ... ... ... ... ... | South Africa... | Bermuda. |
| ,, R. N. Buist, M.B. ... ... ... | — | Netley. |
| Captain C. E. G. Stalkartt, M.D. ... ... | South Africa... | Dublin. |
| ,, E. W. Slater, M.B. ... ... ... | Portsmouth ... | Golden Hill Ft. |
| ,, A. F. Heaton ... ... ... ... | Coldstream Gs. | South Africa. |
| ,, J. H. Power ... ... ... | Malta ... ... | Roy. Hrse. Gds. |
| Lieutenant H. M. Nicholls, M.B. ... ... | South Africa... | Bermuda. |
| ,, A. J. Hull ... ... ... ... | Woolwich ... | West Africa. |
| ,, J. B. Clarke ... ... ... | — | Aldershot. |
| ,, D. L. Harding ... ... ... | — | South Africa. |
| ,, R. C. Wilson ... ... ... | — | ,, |
| Quartermaster F. Kyle ... ... ... | Aldershot ... | — |

The undermentioned retired medical officers have relinquished the medical charge of troops at the stations specified: Lieutenant-Colonel A. Kirwan, Leicester: Surgeon-Lieutenant-Colonel H. W. Edwards (Militia Medical Staff), Shrewsbury; Lieutenant-Colonel J. J. Crean, Brighton.

Lieutenant-Colonel A. L. Browne, retired pay, has been brought on the establishment and placed in medical charge of troops at Warley.

### COLONEL BOOKEY, I.M.S.

Colonel John Thomas Brownrigg Bookey, I.M.S., who has been appointed an ordinary member of the Military Division of the Third Class of the Order of the Bath, in recognition of his services in the recent operations in China, was principal medical officer of the China Field Force. He entered the Indian Medical Service as Assistant Surgeon in March, 1872, and was promoted to the rank of Colonel in May, 1900. Colonel Bookey served with the 6th Punjab Infantry in the Jowaki Afridi expedition in 1877-78, for which he received the medal with clasp; and in the Mahzood Wuziri expedition in 1881. He also served with the Burmese expedition in 1886-88 (mentioned in despatches, two clasps); with the Hazara expedition in 1888 (mentioned in despatches, clasp); with the Miranzai expedition in 1891 (mentioned in despatches, clasp), and with the Waziristan Field Force under Sir William Lockhart in 1894-95. With the 1st Battalion 5th Goorkhas (mentioned in despatches,

clasp). He served in the campaign on the North-West Frontier of India under Sir William Lockhart in 1897-98 with the Malakand Field Force, and was mentioned in despatches and received the medal with clasp.

## IMPERIAL YEOMANRY HOSPITALS.

COLONEL KILKELLY, C.M.G., Grenadier Guards, Principal Medical Officer of the Pretoria Imperial Yeomanry, in his last report to the Countess Howe states that on July 17th there remained in that hospital 23 officers and 424 non-commissioned officers and men, the total number of cases treated in that hospital at that date being 4,932 in-patients and 994 out-patients. Colonel Kilkelly also encloses the first weekly return of patients under treatment in the Elandsfontein branch of the Imperial Yeomanry Hospitals, which shows 16 patients were then under treatment. Colonel Kilkelly then adds sickness was decreasing, and the total strength of the troops in the Transvaal reduced, in consequence of the number of columns operating in the south. Since the last list of subscriptions was published the Countess Howe has received £10 from Mrs. E. Baird, being the balance of the second Cambridge donations. Since the above reports were issued Colonel Kilkelly has cabled to the Countess Howe stating that Lord Kitchener has inspected the hospital and authorised him to cable informing her ladyship and the committee of his complete approval of the arrangements made for the comfort of the sick and wounded, and his entire satisfaction with all he had seen during his visit.

## ENNO SANDER PRIZE.

A GOLD medal of the value of £20 and £20 in cash are offered as the Enno Sander Prize for 1901-02. The subject is, The Most Practicable Organisation for the Medical Department of the United States Army on Active Service. Competition is open to all persons eligible to active or associate membership in the Association of Military Surgeons of the United States. Essays must consist of not less than ten, or more than twenty thousand words, exclusive of tables. Three type-written copies must be sent in a sealed envelope so as to reach the Secretary of the Association, Major James Evelyn Pilcher, Office of the Secretary, Carlisle, Pennsylvania, on or before February 28th, 1902. Essays must be authenticated by a *nom de plume*, the competitor's name being at the same time sent in a separate envelope.

## REORGANISATION OF THE ARMY MEDICAL SERVICE.

INDIGNANT writes: To secure good men in any public service, pay in kind or honours, must be fully given; the R.A.M.C. receive neither in sufficient degree. Even the Director-General after all his services remains unknighted. The following from the *London Gazette* of February 8th, Natal Field Force, is very instructive:

| | R.A.M.C. Officers Mentioned. | R.A.M.C. Officers Rewarded. |
|---|---|---|
| *Siege of Ladysmith* ... ... ... .. | 9 | 1 |
| *Relief of Ladysmith:* | | |
| R.A.M.C. officers with regiments ... | 9 | 1 |
| ,, bearer companies ... ... | 3 | 0 |
| ,, field hospital... ... ... | 16 | 1 |
| *Laing's Nek, Natal, June 2nd* ... .. | 6 | 1 |
| *Summary of Natal Field Force, Despatch, November 9th:* | | |
| R.A.M.C. officers of brigades | | |
| 2nd Cavalry Brigade ... ... ... | 0 | 0 |
| 3rd Mounted Brigade ... ... ... | 2 | 0 |
| 2nd Infantry Division ... ... ... | 3 | 2 |
| 2nd Infantry Brigade ... ... ... | 1 | 0 |
| 4th Infantry Brigade ... ... ... | 2 | 1 |
| 4th Infantry Division ... ... ... | 1 | 0 |
| 7th Infantry Brigade ... ... ... | 0 | 0 |
| 8th Infantry Brigade ... ... ... | 2 | 0 |
| 5th Infantry Division (Warren's) ... | 1 | 0 |
| 10th Infantry Brigade ... ... ... | 2 | 0 |
| 11th Infantry Brigade ... ... ... | 4 | 0 |

Here there is absolutely no recognition of the hard work done by the 4th and 5th divisions in spite of recommendations of their generals.

FESTINA LENTE writes: It is perhaps less the improvement than the very existence of the R.A.M.C. which is involved in prospective changes. What is wanted is a homogeneous corps in direct touch with the Commander-in-Chief, and with freedom of action in its legitimate sphere; that is one ideal, and one accorded to other branches. But the military ideal is a medical service entirely subordinate to the combatant element, not only in military but in professional matters. It is the claim of independence that offends the military element; hence, among other things, a return to the discredited regimental system is desired; and the present race of medical officers are ridiculously declared to be the professional inferiors of those of the regimental days. A vicious system in the past stereotyped the inferiority of the medical officer in the military mind, and it is hard to get over. On account of these long ingrained divergencies between the military and medical ideal, it will be no easy matter in reorganising the R.A.M.C. to adjust differences which will satisfy both parties.

## DENTAL TREATMENT IN THE ARMY.

THE Secretary of State for War has to provide dental services for the troops in South Africa, and that in the Home District and at Aldershot dental surgeons have been appointed as an experimental measure. We now hear from India that a similar experiment is to be tried in that country, in the form of a dental institution for the benefit of the British troops stationed in Quetta. It is impossible to say how many recruits are rejected on the ground of faulty dentition alone; but inasmuch as recruits for the Navy are allowed to have as many as seven deficient or defective teeth, and this number has recently been increased to ten, it stands to reason that a very considerable proportion of the men in the two services must require attention sooner or later. Lack of this attention will certainly lead, in many cases, not only to misery to the individual, but to loss of efficiency in the service. It is not to be expected that the medical officers of either service should be expert dental surgeons, in addition to their other qualifications, any more than the ordinary general practitioner. It would seem, therefore, that there is much scope for the wider employment of professional dentists: above all is this the case in India, where the teeth suffer to a greater extent than in temperate climates. With 70,000 British soldiers permanently stationed in the country, and dentists few and far between, many a man must get to the point of submitting to what is really an unnecessary extraction from the mere lack of opportunity to get proper treatment.

## TOTAL STRENGTH OF THE OFFICERS, ARMY MEDICAL SERVICE.

A CORRESPONDENT gives the strength of the service during the past fifteen years as under:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| March 31st, | 1887 | ... ... ... | 974 | March 31st, | 1895 | ... ... ... | 857 |
| ,, | 1888 | ... ... ... | 958 | ,, | 1896 | ... ... ... | 847 |
| ,, | 1889 | ... ... ... | 897 | ,, | 1897 | ... ... ... | 825 |
| ,, | 1890 | ... ... ... | 861 | ,, | 1898 | ... ... ... | *820 |
| ,, | 1891 | ... ... ... | 848 | ,, | 1899 | ... ... ... | 835 |
| ,, | 1892 | ... ... ... | 857 | ,, | 1900 | ... ... ... | 867 |
| ,, | 1893 | ... ... ... | 859 | ,, | 1901 | ... ... ... | 961 |
| ,, | 1894 | ... ... ... | 824 | | | | |

* Minimum.

## HONOURS FOR THE OPERATIONS IN CHINA.

A SUPPLEMENT to the *London Gazette* was issued on July 24th containing honours granted for the recent operations in China. The following are included:

Lieutenant-Colonel W. J. R. RAINSFORD, Royal Army Medical Corps; Major John J. C. WATSON, Royal Army Medical Corps; and Lieutenant-Colonel LAWRENCE A. WADDELL, Indian Medical Service, to be Companions of the Order of the Indian Empire (C.I.E.).

## CIVIL SURGEONS IN SOUTH AFRICA.

WE have received several communications on matters concerning these gentlemen:

ONE CORRESPONDENT writes that, from inquiries he had made, it is certain if a civil surgeon accepting a commission in the R.A.M.C. at the end of his year of service was allowed to reckon the time as service towards pension, many valuable men could be secured for the Corps. But they hold back until this question is decided upon.

A CIVIL SURGEON writes: The pay and allowances of civil medical officers are insufficient, and they are treated invidiously compared with other officers: thus civil veterinary surgeons, acting chaplains, and nursing sisters receive 3s. per diem Colonial allowance; civil surgeons no such allowance; acting chaplains after twelve months' service receive a gratuity of £100; civil surgeons £61 only. The pay of £365 a year seems sufficient, but "pans out" very indifferently when the unavoidable expenses are placed against it. Also, instead of engaging fresh and inexperienced men, had the pay been increased to 30s. per diem after twelve months' service, many tried men would have remained on another three or six months. In a country where artisans get 20s. a day, surely the surgeon is worth 30s.

ANOTHER CORRESPONDENT states: Civil surgeons receive nothing for uniform or camp outfit, and any advance of pay made before embarkation is swallowed up in obtaining these. The Colonial allowance of 3s. a day is insufficient.

*** We give these statements as to pay and allowances as we find them, without attempting to reconcile apparent contradictions. We cannot but think it would be well for civil surgeons entering the R.A.M.C. after twelve months' service at the Cape to be allowed to count such service towards pension. Unless we are mistaken there is a precedent for this, in that acting assistant-surgeons, as they were called, in Crimean and Mutiny days, who finally received permanent commissions, were allowed to count acting time both in regard to seniority and pensions.

## COLONIAL CIVIL SURGEONS WITH THE FORCES IN SOUTH AFRICA.

MR. H. B. TREHANE SYMONS, L.R.C.P.I., attached A.M.S., writes from Pretoria under date July 1st, 1901: I wish briefly to point out that Professor Watson, whose statement concerning pay and allowances of civil surgeons serving in South Africa appears in the BRITISH MEDICAL JOURNAL of March 30th, has been misinformed on this matter.

I have it on the authority of those best in position to decide. No civil surgeon is allowed more than one servant, and when that one is a soldier, be he employed in whatsoever capacity, servant allowance is not to be drawn, and to this there is no exception.

Touching the £60 gratuity (parsons and militia officers get £100): men proceeding from England require to obtain possession of a kit adapted to the country whither they are bound, and so do not benefit much by the envied £60. In any case, as things go in South Africa, the pay cannot be considered as an equivalent for services rendered.

LIEUTENANT-COLONEL R. W. FORD, R.A.M.C., D.S.O., lately stationed at Portland, has been appointed Deputy Surgeon of Chelsea Hospital.

# UNIVERSITIES AND COLLEGES.

## ROYAL COLLEGE OF PHYSICIANS.

THE ordinary quarterly Comitia was held on July 25th, the President, Sir W. S. Church, M.D., Bart., in the chair.

*Congratulatory Address to Professor Virchow.*

Upon the suggestion of the President it was unanimously resolved that a congratulatory address should be presented to Professor Virchow on the occasion of his 80th birthday on October 13th next; and Sir Felix Semon, M.D., was appointed as a delegate to present the same on behalf of the College.

*Bradshawe Lecture.*

It was announced that the Bradshawe Lecture would be delivered on November 5th by Dr. Judson Bury upon the subject of Prognosis in relation to Diseases of the Nervous System.

*Admission of Members.*

The following gentlemen, having passed the required examination, were admitted Members of the College: T. Bushby, M.B.Edin., A. H. W. Clemow, M.D.Edin., J. C. M. Given, M.D.Lond., T. W. Griffith, M.D.Aberd., A. D. Heath, M.D.Lond., L.R.C.P., T. McCrae, M.B.Toronto, L.R.C.P., F. C. Moore, M.D.Vict., H. D. Singer, M.D.Lond., L.R.C.P.

*Licences.*

Licences to practise physic were granted to 113 gentlemen. Of these 13 were under regulations dated October 1st, 1884, and 2 under old regulations before October 1st, 1884.

*Diploma in Public Health.*

Diplomas in Public Health were, with the College of Surgeons, granted to the following gentlemen: D. A. Bellhis, L.R.C.P., M.R.C.S.; W. Daley, L.R.C.P., L.R.C.S.Edin., L.F.P. and S.Glas.; S. E. Denyer, M.B., B.C. Cantab., M.R.C.S., L.R.C.P.; M. Farrant, M.R.C.S., L.R.C.P.; W. Ferris, M.B., B.S.Lond., L.R.C.P., M.R.C.S.; J. P. Frengley, M.D., B.Ch., R.U.I., F.R.C.S.I.; W. T. Hillier, L.R.C.P., M.R.C.S.; E. J. Hynes, L.R.C.P., M.R.C.S.; C. E. McDade, M.B., B.Ch., R.U.I.; M. T. Male, M.B.Lond.; C. H. Melville (Major R.A.M.C.), M.B., C.M.Edin.; D. N. Nabarro, M.D.Lond., L.R.C.P., M.R.C.S.; J. R. Plant, L.R.C.P., M.R.C.S.; G. B. Price, M.D., B.S.Lond., L.R.C.P., M.R.C.S.; R. G. Riddell, M.B., Ch.B.Edin.; W. Salisbury-Sharpe, L.R.C.P., M.R.C.S.; E. Taunton, L.R.C.P., M.R.C.S.; C. J. Thomas, L.R.C.P., M.R.C.S.; A. Warner, M.D.Durh., L.R.C.P., M.R.C.S.; W. D. Wiggins, L.R.C.P., M.R.C.S.; P. J. Wilkinson, F.R.C.S.Edin., L.R.C.P.Edin., L.F.P.and S.Glas.; H. S. Willson, M.B., B.C.Cantab.; F. L. Wood, M.B., Ch.B.Vict., L.S.A.; L. U. Young, M.B., C.M.Edin.

*Admission of Fellow.*

William Joseph Tyson, M.D.Durh., of Folkestone, elected on April 25th, was admitted to the Fellowship.

*Examination in Physics.*

A letter from Dr. Womack, Lecturer on Physics at St. Bartholomew's Hospital, suggesting some amendments in the Syllabus of Physics for the First Examination was referred to the Committee of Management for consideration and report.

*Award of Baly Medal.*

Upon the recommendation of the Council it was unanimously resolved that the Baly Medal be awarded to Frederick William Pavy, M.D., F.R.S., F.R.C.P., for his researches on *The Physiology of the Carbohydrates: their Application as Food, and Relation to Diabetes*, 1894; but more especially for his original investigations on Sugar Formation in the Liver, which he has carried on during the last forty years, and with unabated enthusiasm during the last two years. Dr. Pavy briefly acknowledged the compliment.

*Election of Officers.*

Upon the nomination of the President and Council, the following gentlemen were elected Censors and other College officers and Examiners:—*Censors:* Thomas Tillyer Whipham, M.D., Sir Dyce Duckworth, M.D., Thomas Henry Green, M.D., George Vivian Poore, M.D. *Treasurer:* Sir Dyce Duckworth, M.D. *Emeritus Registrar:* Sir Henry Alfred Pitman, M.D. *Registrar:* Edward Liveing, M.D. *Harveian Librarian:* Joseph Frank Payne, M.D. *Elected Members of the Library Committee:* Samuel Gee, M.D., John Wickham Legg, M.D., Norman Moore, M.D., William Henry Allchin, M.D. *Curators of the Museum:* William Howship Dickinson, M.D., Henry Charlton Bastian, M.D., William Cayley, M.D., John Abercrombie, M.D. *Finance Committee:* Thomas Tillyer Whipham, M.D., Alfred Lewis Galabin, M.D., Stephen Mackenzie, M.D. *Examiners: Chemistry and Chemical Physics:* John Millar Thomson, F.R.S., Henry Forster Morley, D.Sc., F.C.S., Henry Wilson Hake, Ph.D., Harold B. Dixon, F.R.S., Alexander Mitchell Kellas, F.C.S. *Materia Medica and Pharmacy:* Hector Wm. Gavin Mackenzie, M.D., Edwin Cooper Perry, M.D., Walter Essex Wynter, M.D., John Rose Bradford, M.D., Henry Albert Caley, M.D. *Physiology:* Marcus Seymour Pembrey, M.D., John Sydney Edkins, M.B., Robert Arthur Young, M.D. *Anatomy:* William Arbuthnot Lane, M.B., F.R.C.S., Andrew Melville Paterson, M.D. *Medical Anatomy and Principles and Practice of Medicine:* Joseph Frank Payne, M.D., Francis de Havilland Hall, M.D., Herbert Isambard Owen, M.D., Percy Kidd, M.D., John Abercrombie, M.D., Nestor I. C. Tirard, M.D., Donald MacAlister, M.D., William Hale White, M.D., Sidney Philip Phillips, M.D., William Pasteur, M.D. *Midwifery and Diseases peculiar to Women:* Alfred Lewis Galabin, M.D., George Ernest Herman, M.B., Arthur and J. McConnel Routh, M.D., C. Montagu Handfield-Jones, M.D., William Rivers Pollock, M.D. *Public Health:* Part I: James Lane Notter, M.D.; Part II: William Henry Corfield, M.D. *Murchison Scholarship:* Sydney Harris Cox Martin, M.D., Hubert Montague Murray, M.D.

*Reports.*

A report from the representative of the College in the General Medical Council on the proceedings of that Council during its session in May last was received and ordered to be entered upon the minutes.

A report, dated July 15th, from the Committee of Management, was received and adopted.

The Committee recommended that the Municipal Technical School, Dover, and the Municipal Technical School, Maidstone, be omitted from the list of institutions recognised by the Examining Board in England for instruction in chemistry, physics, practical chemistry, and biology; and that King Edward's School, Stourbridge, be added to the list of institutions recognised for instruction in chemistry, physics, and practical chemistry. It was further recommended that the University of Birmingham be added to the list of recognised universities whose examinations are accepted under the conditions of Paragraph 2, Section III, of the regulations in lieu of the first and second examinations of this Board. The Committee also recommended that an additional examination in Public Health be held in December next.

The annual reports of the Library Committee and of the Curators of the Museum and the quarterly report of the College Finance Committee were also received and adopted.

A list of books and other publications presented to the Library during the past quarter was received from the Librarian and the thanks of the College accorded to the donors.

*Amendment of By-laws.*

The Registrar moved the amendment and re-enactment for the second time of certain by-laws relating to the licence, to make them conformable to the amended regulations of the Conjoint Board adopted May 9th, 1900.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on August 1st, Henry G. Howse, President, in the Chair.

*University of Birmingham.*

This University was added to the list of recognised Universities, the examinations of which are accepted under the conditions of Paragraph 11, Section III of the Regulations, in lieu of the first and second examinations of this Board.

*Diploma of Public Health.*

It was decided that an additional examination in Public Health be held in December next.

*Report of the Finance Committee.*

This report was approved and adopted by the Council. The gross income of the College for the past year is £26,104, being £893 greater than the gross income of the previous year. This increase is chiefly due to a continued advance in the amount of the fees paid by candidates for the Diploma in Dental Surgery. The expenditure of the College for the past year amounts to £23,989, being £424 more than in the previous year. The balance of income over expenditure amounts to £2,115.

## SCOTTISH UNIVERSITIES AND THE CARNEGIE TRUST.

FORMS of application and other information regarding the terms on which the benefaction of the Carnegie Trust are available have now been made public. Applicants must send in their forms not later than September 14th, 1901. Those who have not yet passed the examination qualifying for admission to the classes for which payment of fees is claimed, but who hope to qualify in October, should also apply in like manner not later than September 14th next, stating what part, if any, of the examination has already been passed. The Executive Committee have determined that, until they have had an opportunity of considering all the applications sent in they cannot undertake to advise or pronounce upon individual cases. Applicants are requested to fill in the particulars of the form to the best of their ability, and if they think it necessary to add such other information as they consider relevant to the application.

All applications will receive full consideration; and, so far as possible, they will be answered before the beginning of the winter session.

*Form of Application.*

The following are the particulars required of applicants: Applicant who propose to attend University Classes:

1. Full name (Christian and surname) of applicant.
2. Place and date of birth.
3. Name and address of parent or guardian.
4. School or other institution attended after the age of 14, and period during which attendance was given.

   Note.—No applicant can be admitted under the age of 16. Applicants who have given two years' attendance after the age of 14 at any school or institution under inspection of the Scottish Education Department will not be required to submit proof of Scottish birth or extraction.
5. Bursaries or other distinction gained after the age of 14.
6. Name of the University which applicant proposes to attend.
7. Faculty or faculties in which applicant proposes to study.
8. Year of attendance.
9. Classes in the University for which payment of fees is claimed, stating the amount of the fee in each case.
10. Preliminary examination or other examination passed qualifying for admission to classes in the University with a view of graduation, giving place and date of passing. (Copies of certificates to be enclosed.)
11. Evidence of Scottish birth or extraction. Certificates (if any) enclosed.

    Note.—To be filled up by applicants who have not given two years' attendance after the age of 14 at any school or institution under inspection of the Scottish Education Department.

A second schedule applicable to those who propose to attend Extra-Mural Classes has also been issued. Appended to the circular is an extract from Mr. Carnegie's letter to Lord Elgin, Chairman of the Trust. Mr. Carnegie says he believes that the conditions of application ensure a sufficient standard of merit, and he hopes that the honest pride for which his countrymen are distinguished will prevent claims from those who do not require assistance, and that the invidious task of inquiring into the circumstances of each candidate need not be imposed upon the Trustees.

## UNIVERSITY OF EDINBURGH.

THE following are the complete official lists of passes in the recent examinations:

*First Professional Examination.*—T. Addis, D. C. Alexander, A. C. Alport, K. G. Archer, C. R. M. Baker, G. Banks, G. S. Banks, D. M. Barker (with distinction), G. G. Bartholomew, D. Bell, W. J. E. Bell, J. W. Bingham, N. Black, D. P. Blair, R. A. Blake, Elizabeth H. Brook, H. Brown, J. W. Cairns, J. S. Caldwell, H. Cargin, N. S. Carmichael, Marjorie Duake-Cohen, W. Collins, B.A., H. P. Cook, F. W. Cragg, J. A. Cruickshank, Irene B. Cunningham, Davidina R. J. Davidson, T. Davidson, L. F. Dawson, J. M. Dickson, N. C. Dutt, H. A. Edwards, C. E. Elliston, S. C. Fernando, R. S. Frew, F. H. S. Gardner, Jessie H. Gellatly, D. G. Gray, E. J. C. Groves, J. T. Gunn, G. Hadden, J. R. Hall, D. G. Harries, W. M. Hewetson, J. R. Holgate, J. C. Holm, G. H. Howe, J. Ings, Annie Jackson, S. Kark, J. R. Kerr, J. S. Kinross, Ethel Landon, J. Lindsay, J. A. Loughbridge, A. S. Macbeth, T. A. MacGibbon, B.Sc., K. W. Mackenzie, Helen M. M'Millan, S. M'Naughton, W. J. Maloney (with distinction), S. E. Martin, E. S. Massiah, E. M. Mathieson, M.A., Ada E. Miller, A. L. Miller, Amee E. Mills, B.Sc., O. M. Mirylees, D. L. Morrison, H. L. Morrow, H. Mowat, R. E. Moyes, Anna M. Mulholland, E. B. Munro, R. R. Murray, R. E. U. Newman, A. J. R. O'Brien, A. A. Ollivierre, W. Patton, D. H. Paul, J. L. Pearce, K. A. O. Quainoo, G. Raffan, Mabel L. Ramsay, H. E. Rawlence, W. E. Reynolds, C. S. U. Rippon, H. D. Robb, T. E. Roberts, J. Z. H. Rousseau, W. M. Scott, W. J. B. Selkirk, M.A., J. G. B. Shand, Alice C. Sharp, E. S. Simpson, I. Y. Smail, T. R. Smith, R. A. Spence, A. Stephen, M.A., A. D. Stewart, W. J. Taggart, S. H. S. Taylor, B.A., R. B. Thomson, Nettie B. Turnbull, A. P. Wall, D. R. P. Walther, J. D. Wells, H. M. R. Wilkins, R. C. Wilson, Marian E. Wilson, J. Young.

*Second Professional Examination.*—R. T. G. Aickin, J. Allan, G. W. Armstrong, Agnes Balfour, W. Basson, J. Brennan, R. Buchanan, S. Burns, H. Caird, T. P. Caverhill, D. H. Croom, F. D. Crosthwaite, Alice M. Ebden, H. N. Fletcher, F. H. Gibson, T. M. Guthrie, G. Harrison, G. W. Harty, Isabel Hill, Janette T. Hill, T. J. H. Hofmeyr, F. E. Larkins, F. T. C. Linton, M.A., C. D. Lochrane, J. M. Lovett, A. Lundie, H. MacCormac, J. W. M'Ewan, N. D. M'Kay, W. Mackenzie, H. C. Martin, A. G. M. Middleton, C. R. P. Mitchell, G. I. Moriarty, Helen Morison, T. Nicol, C. F. A. Oberlander, L. Ram, C. Reece, W. J. D. Robertson, W. S. Robertson, L. C. Robinson, J. A. Ross, F. G. Saleeby, W. Sanderson, D. J. Scott, J. E. Scott, M.A., W. M. Selby, W. H. Simpson, J. H. Smith, Effie Stuart, J. Tait (with distinction), E. J. Taylor, T. T. Thomson, J. P. du Toit, E. A. Turpin, Caroline Twigge, R. M. Walker, J. H. D. Webster, L. West, R. M. M. White, W. C. P. White, W. Y. Woodburn, A. C. T. Woodward. Old Regulations: F. R. Bremner, L. A. Drake, S. C. Roy.

*Third Professional Examination.*—Nina H. Bearth, Constance A. Bennet, G. S. Blandy, J. G. Briggs, G. G. Buchanan, H. H. Bullmore, W. C. Burton, E. E. Cassady, R. E. Collins, A. F. R. Condor, H. L. Cumming, H. Curven, A. R. Douglas, F. C. Drew, J. Fairburn (with distinction), Agnes J. Gardner, E. C. Gimson, R. G. Gordon, J. A. Gray, L. A. Holcroft, C. H. Houghton, J. Hunter, A. Hutley, Bertha Jex-Blake, J. M. Johnstone, W. E. Knight, W. S. Laidlaw, A. Leach, A. B. Leakey, J. C. London, A. W. B. Loudon, J. G. M'Caughey, A. M'Ewan, D. Mackinnon, E. Macmillan, J. B. Mason, E. L. Meynell, R. C. Monnington, E. J. Morton, R. Murray, C. Nelson, J. H. C. Orr, H. Overy, A. C. Owen, D. E. S. Park, J. Politachi, E. C. Pritchard, A. F. H. Rabagliati, J. A. Raubenheimer, D. Sandler, G. D. Sloan, M. W. Smart, B. M. S. Sodhi, D. Sutherland, A. B. M. Thomson, J. F. van de S. de Villiers. Passed in Pathology: G. M. Brunton.

## VICTORIA UNIVERSITY.

FINAL EXAMINATION IN MEDICINE.—The following candidates have satisfied the examiners:

*Part I.*—R. Appleton, Yorks; H. M. Birkett, Yorks; W. Briggs, Owens; G. H. Brown, Owens; A. E. Burkhard, Yorks; A. G. Christian, Owens; J. A. Davenport, Owens; R. T. Dobson, Univ.; J. E. Floyd, Owens; W. P. Grant, Owens; P. T. Harding, Owens; J. L. Hawkes, Univ.; H. E. Heapy, Univ.; J. Hindshaw, Owens; G. R. Hitchin, Owens; A. Hodgkinson, Owens; C. H. H. Hopwood, Owens; A. Howard, Owens; J. R. Hutchinson, Owens; H. L. Jenkins, Owens; S. J. C. Johnson, Owens; J. A. Jones, Owens; G. W. N. Joseph, Univ.; R. G. Ladell, Yorks; A. W. Latham, Owens; G. H. Leigh, Owens; J. A. Longley, Yorks; J. Longworth, Owens; P. Pollard, Yorks; A. Richmond, Owens; C. A. Ricketts, Owens; W. E. Rothwell, Owens; J. A. C. Roy, Owens; S. H. Ryan, Owens; F. W. Schofield, Owens; W. F. Shaw, Owens; A. F. Thompson, Owens; E. Tinker, Yorks; A. E. Townley, Owens; F. E. Tylecote, Owens; G. F. C. Walker, Univ.; T. B. Wolstenholme, Owens; M. S. Wood, Owens; W. S. Wrigley, Owens.

*Part II.*—D. M. Alexander, Univ.; E. L. Anderson, Univ.; M. B. Arnold, Owens; H. Bates, Univ.; A. D. Beckett, Owens; J. L. Beddoes, Univ.; S. B. Brentnall, Owens; H. N. Bridge, Owens; H. Brown, Yorks.; †E. R. Cooper, Owens; J. F. Corson, Owens; J. M. Cort, Owens; *E. N. Cunliffe, Owens; S. W. Davies, Univ.; D. J. Ferris, Owens; A. H. B. Fletcher, Yorks; F. S. Fletcher, Owens; J. A. C. Forsyth, Yorks; †M. Gamble, Owens; W. Garstang, Owens; †G. W. Gelderd, Univ.; V. J. Glover, Univ.; †P. H. Green, Owens; J. W. Greenwood, Owens; F. Griffith, Univ.; F. W. Harrowell, Yorks; W. Hickey, Owens; W. C. Johnson, Owens; R. J. Jones, Univ.; †R. E. Kelly, Univ.; J. Kemp, Owens; †C. Mackey, Owens; J. C. Mann, Univ.; S. B. Mehta, Owens; A. H. Priestley, Owens; T. F. Pugh, Univ.; P. A. H. Radcliffe, Yorks; H. H. Rayner, Owens; E. C. Roberts, Univ.; F. M. Rodgers, Owens; F. R. Sawdon, Owens; †E. Saville, Yorks; G. H. Shaw, Owens; W. R. N. Smithard, Owens; J. H. Stephens, Owens; W. A. Stott, Yorks; J. H. Sutcliffe, Yorks; †H. G. Tansley, Owens; A. R. Thompson, Yorks; H. Thorp, Owens; R. N. West, Owens; H. W. Whiteley, Owens; T. B. Williams, Owens; B. M. Wilson, Owens; F. P. Wilson, Univ.; W. J. Woodyatt, Owens; J. G. Woolham, Owens.

* First-class Honours. † Second-class Honours.

SECOND EXAMINATION IN MEDICINE.—The following candidates have satisfied the examiners in the subjects undernoted:

*Anatomy and Physiology.*—R. A. H. Atkinson, Owens; J. A. M. Bligh, Univ.; F. L. Boag, Owens; N. Bradley, Univ.; A. Campbell, Owens; J. B. Dalton, Owens; J. A. Davies, Owens; J. P. Garlick, Owens; M. Hooper, Owens; W. H. Judson, Owens; F. H. Lacey, Owens; A. S. McNeil, Owens; W. Y. Martin, Owens; S. Murray, Owens; C. S. O'Neill, Owens; W. V. Pegler, Yorks; E. W. Reed, Yorks; G. H. H. Russell, Owens; H. Woods, Univ.; A. R. Wright, Owens; W. Wright, Owens.

*Materia Medica and Pharmacy.*—F. Bailey, Yorks; F. P. H. Birtwhistle, Yorks; J. A. Bligh, Univ.; F. L. Boag, Owens; J. L. Browne, Univ.; W. Calverley, Owens; Catherine Chisholm, Owens; Catherine L. Corbett, Owens; F. da Cunha, Owens; J. B. Dalton, Owens; G. D. Dawson, Owens; H. S. Dixon, Owens; R. L. Ferguson, Owens; W. G. Fuller, Owens; F. W. M. Greaves, Yorks; A. E. Grisewood, Univ.; W. L. Hawksley, Univ.; W. H. Hey, Owens; P. Hick, Univ.; E. E. Hughes, Owens; E. Hulme, Owens; G. H. Joseph, Univ.; G. J. Keane, Univ.; L. Kilroe, Owens; E. C. Lea, Owens; H. Mackenzie, Owens; J. McClellan, Univ.; H. J. Macvean, Yorks; W. Y. Martin, Owens; R. H. Mole, Univ.; L. D. Napier, Univ.; R. N. Porter, Owens; R. B. Radcliffe, Yorks; F. G. Ralphs, Owens; J. S. Rowlands, Univ.; G. H. H. Russell, Owens; G. C. Scott, Univ.; J. F. Smith, Owens; J. N. M. Sykes, Univ.; P. Talbot, Owens; F. P. S. Thomas, Owens; L. Thorp, Owens; H. Tomlin, Yorks; T. E. Walker, Univ.; T. W. Walker, Owens; H. W. L. Waller, Univ.; F. J. Walton, Owens; J. Whitehead, Owens; W. D. Wilkins, Owens.

*Diploma in Public Health.*—W. S. Sinclair; W. H. Waddington, M.B.; J. W. Wells; R. H. Wilshaw, M.B.

## ROYAL UNIVERSITY OF IRELAND

FIRST EXAMINATION IN MEDICINE.—The following candidates satisfied the examiners:

J. W. Beirne, University College, Dublin; C. D. Bell, Queen's College, Belfast; S. Bradbury, Queen's College, Belfast; H. W. Brennan, University College, Dublin; H. W. Carson, Queen's College, Belfast; R. Chambers, LL.B., Queen's College, Belfast; R. G. Clements, Queen's College, Belfast; R. G. G. Croly, Queen's College, Cork; A. G. Cummins, Queen's College, Cork; *J. S. Dickey, Queen's College, Belfast; J. Donnelly, Queen's College, Belfast; J. Finnegan, Queen's College, Belfast; I. Flack, Queen's College, Galway; J. Flack, Queen's College, Galway; J. R. Hackett, Queen's College, Cork; A. Hill, Queen's College, Belfast; W. J. Hill, Queen's College, Belfast; †R. Jamison (Sch.), Queen's College, Belfast; E. J. Kavanagh, University College, Dublin; J. Kelleher, Queen's College, Cork; R. J. Ledlie, Queen's College, Belfast; A. Leitch, Queen's College, Belfast; J. Lilley, Queen's College, Belfast; R. J. Lytle, Queen's College, Belfast; D. T. MacCarthy, University College, Dublin; W. M'Kee, Queen's College, Belfast; A. V. M'Master, Queen's College, Belfast; S. M'Murray, Queen's College, Belfast; J. Magill, Queen's College, Belfast; T. J. Macgill, Queen's College, Belfast; T. Meagher, University College, Dublin; Charlotte E. Mitchell, Queen's College, Belfast; T. O'Driscoll, University College, Dublin; M. J. O'Grady, University College, Dublin; E. M. O'Neill, University College, Dublin; J. J. O'Reilly, University College, Dublin; W. B. Purdon, Queen's College, Belfast; C. G. Robb, Queen's College, Belfast; G. V. Ryan, University College, Dublin; M. P. Scanlon, University College, Dublin; J. Shaw, Queen's College, Belfast; M. Shipsey, Queen's College, Cork; P. Steen, University College, Dublin; W. M. Thomson, Queen's College, Belfast; S. M. Walsh, University College, Dublin; J. Warnock, Queen's College, Galway; H. C. Watson, Queen's College, Belfast; Jemima B. White, Queen's College, Belfast; W. Whitfield, Queen's College, Belfast.

* Honours in botany, zoology, chemistry, and experimental physics, and exhibition of £20.

† Honours in botany, zoology, chemistry, and experimental physics, and exhibition of £10.

## ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

A QUARTERLY meeting of the Royal College of Physicians of Edinburgh was held on Tuesday, August 6th; Dr. Fraser, President, in the chair.

*Death of Her Imperial Majesty the Empress Fredrerick.*

The President referred in respectful and feeling terms to the death of Her Imperial Majesty the Empress Frederick of Germany. On the motion of the President it was resolved unanimously to send a telegram of condolence to His Majesty the King in the following terms:

"The Private Secretary of His Majesty the King, Cowes, Isle of Wight.

"Please convey to His Majesty the King the respectful and sincere sympathy of the President and Fellows of the Royal College of Physicians of Edinburgh on the occasion of the sad death of Her Imperial and Royal Highness the Empress Frederick and Princess Royal of Great Britain."

It was further resolved to send a telegram of condolence in similar terms to His Majesty's Ambassador in Berlin, for presentation to His Imperial Majesty the German Emperor.

*Introduction of New Fellow.*

Dr. Lewis Campbell Bruce was introduced, and took his seat as a Fellow of the College.

*Admission to the Fellowship.*

Douglas Chalmers Watson, M.B., C.M.Edin., M.R.C.P.E., was admitted by ballot to the Fellowship of the College.

*Admission to the Membership.*

On a ballot the following candidates were admitted to the Membership of the College after examination: William Edward Home, M.B., C.M.Edin., London; James Burnet, M.B., Ch.B.Edin., Edinburgh; Alexander Goodall, M.D.Edin., Edinburgh; and George Norman Meachen, M.B., B.S.Lond., London.

*Admission to the Licence.*

The Registrar reported that since the last quarterly meeting 67 persons had obtained the licence of the College by examination.

*School of Medicine of the Royal Colleges.*

The Secretary laid on the table the annual statement by the Governing Board of the School of Medicine of the Royal Colleges in terms of the Constitution. The report indicated that the number of classes during the session 1900-1901 was 37, and during the summer session of 1901 21, and that the number of students during the winter session was 1,160, and during the summer session 1,110. The College re-elected the Vice-President (Dr. Andrew) and Sir John Sibbald, who retired by rotation as representatives on the Governing Board of the School of Medicine of the Royal Colleges.

*Morison Lecturer.*

Intimation was made that Dr. G. A. Gibson had, on the nomination of Dr. Alexander Morison, been appointed Morison Lecturer for two years, 1901-1902.

*Recognition of Lecturer.*

Mr. Stuart Macdonald, M.B., C.M.Edin., M.R.C.P.E., was, after examination, recognised as a Lecturer in Pathology, the President conferring on him the certificate of qualification.

*Cullen Prize.*

A committee of award was appointed in connection with the Victoria Jubilee Cullen Prize. The prize, which was instituted by His Excellency the late Dr. R. H. Gunning, is of the value of £100, and is awarded every four years "for the greatest benefit done to practical medicine." The prize is open to Fellows, Members, and Licentiates of the College. The award will be made in June, 1902.

*Portrait of the late Sir William Jenner.*

On behalf of Lady Jenner, the President presented to the College a photogravure of Mr. Frank Holl's portrait of the late Sir William Jenner, Bart.

*Professor Virchow's 80th Birthday.*

It was agreed unanimously to send a congratulatory address to Professor Virchow on the occasion of his 80th birthday.

## CONJOINT BOARD IN ENGLAND.

THE following gentlemen passed the First Examination of the Board, at the July quarterly meeting of the Examiners in the subjects indicated:

*Chemistry.*—J. H. D. Ackland, St. Thomas's Hospital; E. A. W. Alleyne, St. Mary's Hospital; H. L. Askham, Middlesex Hospital; J. S. Austin, Birmingham University; E. J. Balchin, Birkbeck Institute and St. Bartholomew's Hospital; H. E. Battle, Yorkshire College, Leeds; C. Bennett, St. Thomas's Hospital; John Boldero, St. George's Hospital; A. H. A. Bright, Genoa University and Charing Cross Hospital; R. A. Bryden, St. Mary's Hospital; D. A. Chamberlain, Cambridge University and London Hospital; H. C. Colyer, Birkbeck Institute; E. A. Collins and R. B. Dawson, Guy's Hospital; W. E. Davies, Owens College, Manchester; A. H. Davis, St. George's Hospital; A. C. Dickson, Cambridge University, Guy's Hospital, and Birkbeck Institute; E. M. Dolan, Yorkshire College, Leeds; W. C. Doughty, University College, London; H. J. Duske, St. Mary's Hospital; T. H. Edey, Guy's Hospital and Birkbeck Institute; A. Finlay and J. E. Foreman, London Hospital; S. R. Gibbs, St. Thomas's Hospital; J. G. Gibb, C. G. Grey, and W. H. Harvey, St. Bartholomew's Hospital; W. Harrison, University College, Sheffield; R. N. Hartley, Owens College, Manchester; T. R. Harvey, Guy's Hospital; F. D. G. Howell, St. Thomas's Hospital; R. Jackson, University College, Liverpool; Robert Lecky, University College, Bristol; A. V. Ledger, Guy's Hospital; J. J. Louwrens, St. Mary's Hospital; J. R. Lloyd, C. B. Mora, and W. S. Nealor, St. Bartholomew's Hospital; B. B. Metcalfe and H. H. Movle, Guy's Hospital; C. C. Morrell, University College, Liverpool; R. D. Neagle, University College, Cardiff, and St. Mary's Hospital; H. T. Ollerhead, St. Mary's Hospital; J. W. Parker, University College of South Wales, Cardiff; R. E. Pitts, Middlesex Hospital; H. J. D'A. G. Price, Birmingham University; S. Reader, Stonyhurst College, Staffs; E. E. Rendle, Guy's Hospital; F. S. Rood, University College, London; S. J. Rowntree, Birkbeck Institute; J. W. L. Scott and F. M. W. South, Westminster Hospital; E. H. Shaw, St. Bartholomew's Hospital; H. G. Sherren, London Hospital; A. Sheppard and R. Willan, Guy's Hospital; C. Ward, Middlesex Hospital; A. C. Watkin, University College, Aberystwith; E. S. Whitcombe, Birmingham University; F. H. P. Willis, St. Mary's Hospital, and J. M. Wyatt, St. Thomas's Hospital.

*Pharmacy.*—L. E. Acomb, University College of South Wales, Cardiff; H. W. Acton, Middlesex Hospital; J. Adler and G. Bevir, London Hospital; A. K. Armstrong, R. C. P. Berryman, and R. A. Bowling, St. Bartholomew's Hospital; T. St. J. Barry and L. T. Booth, University College, Liverpool; H. G. W. Beckett, St. Mary's Hospital; S. L. Benton and J. H. D. Bolton, University College, London; F. G. Bergin, University College, Bristol; F. J. C. Blackmore, University College, Sheffield; F. F. Bray and P. H. Bryant, private study; A. J. K. Brayton, Owens College, Manchester, and University College, Liverpool; W. B. Burr and E. C. Clements, Middlesex Hospital; S. Carter and D. K. Coutts, St. Thomas's Hospital; E. P. G. Causton, Cambridge University and St. Mary's Hospital; C. P. Charles and W. R. Collingridge, St. Bartholomew's Hospital; C. T. Cheatle, King's College, London; J. Clarke, University College, Sheffield; V. Colmer and H. R. Crau, London Hospital; J. Copland, University College, London; C. Corfield, University College, Bristol; E. J. Crew, Guy's Hospital; H. S. C. Darbyshire, University College, Sheffield; W. C. C. C. Davies and E. M. de Willon, St. Mary's Hospital; P. A. Dingle, St. Bartholomew's Hospital; A. Dinnis, Charing Cross Hospital; E. M. Dolan, Yorkshire College, Leeds; B. M. Dunstan, St. Thomas's Hospital; F. R. Edmonds, University College, London; G. T. D. Elder, Cambridge University and St. Mary's Hospital; T. J. C. Evans and T. L. Evans, University College of South Wales, Cardiff; G. J. Eady, C. Elliott, R. V. Favell, C. H. Fernie and W. E. L. Fowler, St. Bartholomew's Hospital; G. E. Fritche, Middlesex Hospital; C. F. Fraser and A. W. Gater, Guy's Hospital; L. G. Gibson, London Hospital; C. I. Graham, St. Mary's Hospital; H. E. Griffiths, University College of South Wales, Cardiff; H. E. Gotellee and L. F. Hanbury, St. Thomas's Hospital; J. G. Gibb, L. Gray, J. P. Griffin, and E. W. D. Hardy, St. Bartholomew's Hospital; A. O. M. Heslop, private study; J. G. Higgins, Glasgow University; S. E. Holden and H. V. Humphry, University College, London; W. G. Hopkins, St. Mary's Hospital; A. R. F. Hubbard, Charing Cross Hospital; H. R. Ibbotson, Yorkshire College, Leeds; B. Jacques, London Hospital; W. W. James, Middlesex Hospital; A. E. Jenkins and T. J. Jenkins, University College of South Wales, Cardiff; T. A. Killby and H. J. S. Kimbell, of St. Bartholomew's Hospital; G. J. Langley, St. Thomas's Hospital; A. A. H. Lawrence, Cambridge University and University College, London; A. E. Leapingwell, St. Mary's Hospital; W. S. Livock and A. H. Macdonald, London Hospital; C. Loddiges, W. G. Loughborough, J. E. R. McDonagh and R. C. P. McDonagh, St. Bartholomew's Hospital; W. St. C. McClure, University College, Sheffield; F. D. Martyn, Westminster Hospital; G. B. Messenger, University College, Liverpool; J. H. Napper, King's College, London; R. C. Neil, University College, London; L. E. C. Norbury, St. Thomas's Hospital; D. C. L. Orton, Owens College, Manchester; J. W. Parker and C. R. M. Peaty, University College of South Wales, Cardiff; R. M. Pearson, private study; H. M. Brins, University College, London; P. A. Reckless, University College, Sheffield; E. A. Roberts, King's College, London; F. E. Roberts, St. George's Hospital; R. Raby and C. G. Seymour, St. Thomas's Hospital; A. G. L. Reade, A. A. Smith, and T. Stordy, Charing Cross Hospital; S. Mack, Saunders, private study; E. H. Shaw, St. Bartholomew's Hospital; A. Smith, Middlesex Hospital; J. H. Sutcliffe, Yorkshire College, Leeds; N. Tarr, St. George's Hospital; G. S. Thompson, St. Mary's Hospital; G. S. Tolesan, University College, London; J. F. Trewby and J. R. E. Trist, St. Bartholomew's Hospital; H. S. Turner, A. F. P. Warleigh, and W. W. Williams, King's College, London; H. C. Waldo, University College, Bristol, and St. Bartholomew's Hospital; C. G. Welch and A. G. Wells, University College, London; J. A. West, C. O. O. Williams, E. L. Wright, H. N. Wright, and A. C. Wroughton, St. Bartholomew's Hospital; C. Wheen and D. Wilson, St. Thomas's Hospital; A. G. Whitaker, Charing Cross Hospital; M. T. Whitehouse, Birmingham University; F. C. Whitmore, Guy's Hospital, Bristol, and Dublin; and A. P. Wright, Glasgow and Charing Cross Hospital.

*Elementary Biology.*—J. Aspinall, London Hospital; E. J. Balchin and G. H. Curtis, Birkbeck Institute; G. Chaikin, University College, Sheffield; L. D. Ching and M. R. Coalbank, St. Bartholomew's Hospital; B. M. Collard, London Hospital; A. E. Collins, Guy's Hospital; W. C. Doughty, University College, London; F. G. Edholm, Birkbeck Institute; T. L. Evans, University College of South Wales, Cardiff; A. Finlay, London Hospital; J. V. Foster, Birmingham University; C. G. Grey, St. Bartholomew's Hospital; W. Harrison, University College, Sheffield; R. G. Gillies and L. Joseph, Birkbeck Institute; M. A. Kenny, Yorkshire College, Leeds; E. W. King, St. Thomas's Hospital; J. A. Laughton, Charing Cross Hospital; S. J. Lee, Middlesex Hospital and City of London College; J. C. R. Lund, University College, London; R. G. Maghone and J. Mellor, Owens College, Manchester; W. J. May, W. Morgan, and C. C. Morrell, London Hospital; L. A. S. Mutch and A. S. Piper, Birkbeck Institute; T. Norman, F. W. Parfitt, Guy's Hospital; S. Reader, Stonyhurst College, Staffs; L. L. C. Reynolds, Epsom College; H. T. Rossiter and G. A. Simmons, St. Thomas's Hospital; J. W. L. Scott, Westminster Hospital; R. B. Sparrow, London Hospital; Mr. R. Smith, G. G. Timpson, and W. W. Vaughan, Guy's Hospital; F. H. Stephens, A. G. Wells, St. Mary's Hospital; R. T. Taylor, Birkbeck Institute; T. R. Williams, University College, Cardiff; and A. B. Wolfenden, Yorkshire College, Leeds.

## CONJOINT BOARD IN SCOTLAND.

CANDIDATES have passed the undermentioned examinations:

*First Examination.*—W. N. Walker, J. Taylor (with distinction), J. A. Ashurst, J. Macnamara, and A. E. M'Dougall, all of Anderson's College Medical School, Glasgow; R. J. Crawford, of St. Mungo's College, Glasgow; C. C. Fitzgerald, Glasgow University; W. J. Cogan, W. N. Alexander, and D. T. H. Crowley, all of Queen's College, Cork.

*Second Examination (Four Years' Course).*—T. M. Metcalfe, Anderson's College Medical School.

*Second Examination (Five Years' Course).*—W. M. Ramsay, D. Haig, J. B. Patterson, T. M'Master Glen, and A. Glen, all of St. Mungo's College, Glasgow; W. A. Magill and J. Macarthur, both of Queen's College, Cork; P. F. Doorly, of Queen's College, Galway; C. J. Todd, Durham University Medical School, Newcastle.

*Third Examination.*—A. M'Innes, T. L. Ashforth, Anderson's College Medical School, Glasgow; A. R. Young, R. C. Blyth, D. R. Williams, T. W. M'Cubbin, all of St. Mungo's College, Glasgow; D. Christie and R. V. Khedkar, Grant Medical College, Bombay, and St. Mungo's College, Glasgow; A. E. Griffith, Catholic University, Dublin; M. D. Ahern, Queen's College, Cork; Grace Eleanor Soltan and Constance Muriel Scott, London School of Medicine for Women; S. J. Mathewson, Queen's College, Belfast; F. H. Maberly, Mason College, Birmingham; A. G. Jackson, University College, Liverpool.

*Final Examination.*—J. M'Intyre, D. Duff, J. Noble, O. Scanlan, R. Wardlaw, R. G. Whitelaw, J. B. Walker, J. Kean, all of St. Mungo's College, Glasgow; Marion Ethel Unwin, [illegible], both of the London School of Medicine for Women; S. H. Allen, M. Lyons, [illegible] W. A. Reid, all of Melbourne University; R. Cowan, Dalhousie University School; J. Sykes, University College, Liverpool; A. M'Millan, Anderson's College Medical School; [illegible] Andrews, Yorkshire College of Medicine; H. C. [illegible], Queen's College, Cork.

# PUBLIC HEALTH
AND
# POOR-LAW MEDICAL SERVICES.

## ZYMOTIC MORTALITY IN LONDON.

[Specially Reported for the British Medical Journal.]

The accompanying diagram shows the prevalence of the principal zymotic diseases in London during the second, or spring, quarter of this year. The fluctuations of each disease, and its relative fatality, as compared with that recorded in the corresponding periods of recent years, can thus be readily seen.

*Small-pox.*—Two fatal cases of small-pox were registered in London last quarter, the corrected average number in the corresponding quarters of the ten preceding years having been 17: of these two deaths one belonged to St. Marylebone, and one to Bethnal Green. Six small-pox patients were admitted into the Metropolitan Asylums Hospitals during the quarter, and 5 remained under treatment at the end of June.

*Measles.*—The deaths referred to measles, which had been 329, 243, and 433 in the three preceding quarters, further increased to 545 during the three months ending June last, but were 325 below the corrected average. Among the various metropolitan boroughs measles showed the highest proportional fatality in Stepney, Poplar, Southwark, Bermondsey, Camberwell, and Greenwich.

*Scarlet Fever.*—The fatal cases of this disease, which had been 110 and 91 in the two preceding quarters, rose again last quarter to 163, but were 30 below the average number in the corresponding periods of the ten preceding years. Among the various metropolitan boroughs scarlet fever was proportionately most fatal in Fulham, Finsbury, Shoreditch, Bethnal Green, Bermondsey, and Deptford. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had been 1,800, 2,400, and 1,533 at the end of the three preceding quarters, had risen again to 2,752 on June 29th. The number of new cases admitted into these hospitals, which had been 2,616, 3,467, and 2,012 in the three preceding quarters, increased to 3,781 during the three months ending June last.

*Diphtheria.*—The deaths referred to diphtheria in London, which had been 406 and 308 in the two preceding quarters, further declined last quarter to 234, and were less than one-half of the corrected average number. This disease showed the highest proportional fatality in Islington, Hackney, Finsbury, City of London, Bethnal Green, and Camberwell. The number of diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of June last was 1,169, against 1,231, 1,343, and 1,084 at the end of the three preceding quarters; 1,969 new cases were admitted during the three months under notice, against 2,180, 2,401, and 1,726 in the three preceding quarters.

*Whooping-cough.*—The fatal cases of this disease, which had numbered 545, 290, and 594 in the three preceding quarters, further rose to 609 during the three months ending June last, but were 60 below the average number in the corresponding periods of the ten preceding years. Among the various metropolitan boroughs, whooping-cough was proportionally most fatal in Hammersmith, Fulham, Poplar, Bermondsey, Battersea, and Greenwich.

"*Fever.*"—Under this heading are included deaths from typhus, enteric, and simple and ill-defined forms of continued fever. The deaths referred to these different forms of "fever," which had been 162, 274, and 146 in the three preceding quarters, further declined to 74 last quarter, and were 33 below the average number in the corresponding periods of the ten preceding years. One death was referred to typhus during the quarter, but not one to simple continued fever. Among the various metropolitan boroughs the "fever" death-rate was highest in Paddington, City of Westminster, Stoke Newington, Shoreditch, Southwark, Bermondsey, and Greenwich. The Metropolitan Asylums Hospitals contained 125 enteric fever patients at the end of June last, against 320, 403, and 162 at the end of the three preceding quarters: 233 new cases were admitted during the three months under notice, against 515, 750, and 329 in the three preceding quarters.

*Diarrhœal Diseases.*—The 216 deaths from diarrhœal diseases registered in London during the three months ending June last were slightly below the corrected average number in the corresponding periods of the ten preceding years. Among the various metropolitan boroughs these diseases were proportionately most fatal in Fulham, Finsbury, Shoreditch, Stepney, Poplar, and Battersea.

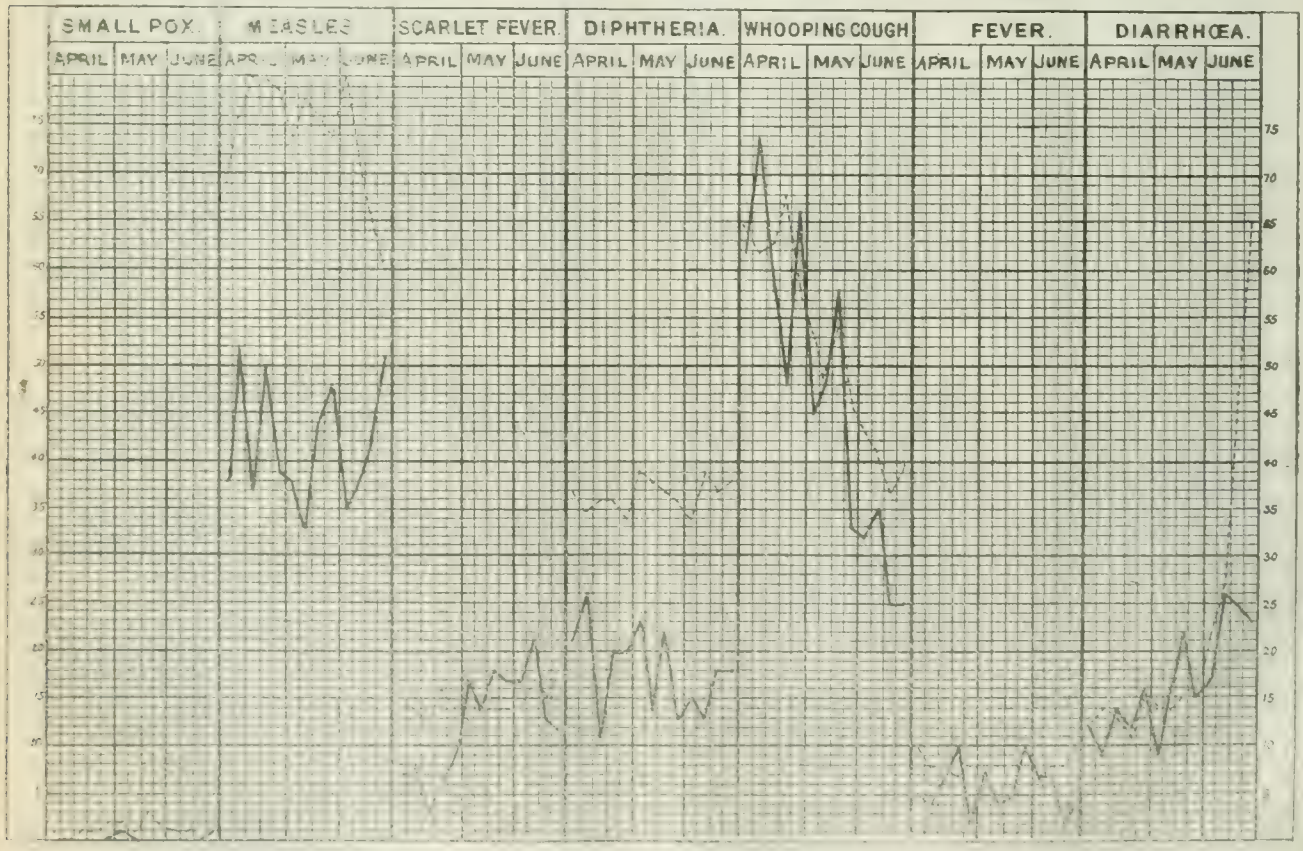
In conclusion it may be stated that the 1,843 deaths referred to the principal zymotic diseases in London during the second quarter of the year were 885, or more than 32 per cent. below the average number in the corresponding periods of the ten preceding years, 1891-1900. The lowest zymotic death-rates in the several metropolitan boroughs were recorded in Kensington, Hampstead, Stoke Newington, City of London, Lewisham, and Woolwich; and the highest rates in Shoreditch, Bethnal Green, Poplar, Southwark, Bermondsey, and Greenwich.

## THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

[Specially Reported for the British Medical Journal.]

The Registrar-General has just issued his return relating to the birth and deaths registered in England and Wales during the second, or

Deaths from Zymotic Diseases in London during the Second Quarter of 1901.




Note.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding weeks of the ten preceding years, 1891-1900.

spring, quarter of this year, and to the marriages during the three months ending March last. The marriage-rate was equal to 10·9 per 1,000, and was 0·8 per 1,000 below the average rate in the corresponding quarters of the ten preceding years.

The births registered in England and Wales during the quarter ending June last numbered 233,518, and were equal to an annual rate of 28·7 per 1,000 of the population, estimated by the Registrar-General at more than thirty-two and a-half millions in the middle of this year. This rate was 1·8 per 1,000 below the mean rate in the corresponding quarters of the ten preceding years. The birth-rates in the several counties ranged from 22·7 in Sussex, 22·9 in Oxfordshire, 23·2 in Westmorland, and 23·5 in Bedfordshire to 32·9 in South Wales, 33·7 in Staffordshire, 35·6 in Monmouthshire, and 36·8 in Durham. In thirty-three of the largest English towns, including London, the birth-rate last quarter averaged 29·5 per 1,000, and exceeded by 0·8 the general English birth-rate. In London the rate was 28·8 per 1,000, while it averaged 29·9 in the thirty-two provincial towns, among which it ranged from 22·0 in Halifax, 23·3 in Huddersfield, 23·9 in Oldham, and 24·0 in Bradford to 33·1 in Hull, 33·4 in West Ham, 35·3 in Sunderland, and 36·8 in Gateshead.

The births registered in England and Wales during the three months under notice exceeded the deaths by 104,928; this represents the natural increase of the population during that period. From returns issued by the Board of Trade it appears that 88,042 emigrants embarked during last quarter for places outside Europe, from the various ports of the United Kingdom at which emigration officers are stationed. Of these 88,042 emigrants, 27,071 were English, 4,778 Scotch, and 17,514 Irish, while 38,679 others were of foreign nationality. Compared with the averages in the corresponding quarters of the three preceding years the proportions of English and of Scotch emigrants showed increases of 17·6 and 10·7 per cent. respectively, while that of Irish emigrants showed a decline of 3·6 per cent.

During the second quarter of this year the deaths of 128,590 persons were registered in England and Wales, equal to an annual rate of 15·8 per 1,000 of the population, the average rate in the second quarters of the ten preceding years being 17·5 per 1,000. The lowest county death-rates last quarter were 11·8 in Middlesex, 12·1 in Surrey, 12·7 in Sussex and in Northamptonshire, and 12·8 in Hertfordshire; the highest rates were 17·5 in Durham, 17·6 in Staffordshire, 18·1 in Lancashire, 18·3 in South Wales, and 19·2 in North Wales. In the urban population of England and Wales, estimated at nearly 22⅝ millions, the rate of mortality during the quarter under notice was 16·2 per 1,000; while in the remaining and chiefly rural population of about 10 millions the rate was 14·9 per 1,000. These urban and rural rates were 1·6 and 2·0 per 1,000 below the respective averages in the corresponding quarters of the ten preceding years. Among thirty-three of the largest English towns the mean death-rate was 16·9 per 1,000, or 1·1 per 1,000 in excess of the general English death-rate during the same period. In London the rate was 16·0 per 1,000, while it averaged 17·5 in the thirty-two large provincial towns, among which it ranged from 10·6 in Croydon, 13·8 in Brighton, 14·2 in Cardiff, and 14·4 in West Ham to 19·6 in Swansea, in Sunderland, and in Gateshead, 19·7 in Preston, 20·1 in Manchester, and 20·6 in Liverpool. In sixty-seven other large towns, with an estimated aggregate population of more than four millions, the mean death-rate was 15·8 per 1,000, or 1·1 below the rate in the thirty-three great towns.

The 128,590 deaths registered in England and Wales during the three months ending June last included 3,666 which were referred to whooping-cough, 2,268 to measles, 1,720 to diphtheria, 1,498 to diarrhœal diseases, 989 to scarlet fever, 789 to "fever" (principally enteric), and 12 to small-pox. The mortality from diphtheria was equal to the average in the ten preceding second quarters, while that from each of the other principal zymotic diseases showed a decline. Of the 12 deaths from small-pox 4 belonged to Liverpool, 3 to Hebburn Urban District, and 2 to London.

The rate of infant mortality in England and Wales last quarter, or the proportion of deaths under 1 year of age to registered births, was 118 per 1,000, or 10 per 1,000 below the average in the corresponding periods of the ten preceding years. In thirty-three of the largest English towns, including London, the rate of infant mortality was 124 per 1,000; in London the rate was 114 per 1,000, while it averaged 130 in the thirty-two large provincial towns, among which it ranged from 80 in Croydon, 91 in Brighton, 94 in Huddersfield, and 103 in West Ham and in Birkenhead to 132 in Bradford, 134 in Swansea and in Preston, and 158 in Wolverhampton and in Burnley. The mortality in England and Wales last quarter among persons aged between 1 and 60 years was equal to 8·3 per 1,000 of the estimated population at this group of ages, and was 1·2 per 1,000 below the average in the ten preceding second quarters. In the thirty-three great towns the mortality at this age-group averaged 9·7 per 1,000, and ranged from 4·9 in Croydon, 6·8 in Norwich, 6·9 in Leicester, and 7·4 in Brighton to 11·7 in Salford and in Sunderland, 11·8 in Newcastle, 11·9 in Gateshead, 12·5 in Liverpool, and 12·7 in Manchester.

Among persons aged 60 years and upwards the death-rate in England and Wales last quarter was equal to 67·0 per 1,000 of the population estimated to be living at this group of ages, against an average rate of 69·1 per 1,000 in the corresponding periods of the ten preceding years. In the thirty-three great towns this death-rate averaged 72·4 per 1,000, the lowest rates being 56·1 in Plymouth, 56·3 in Croydon, 57·7 in Brighton, and 60·7 in Wolverhampton; and the highest rates, 93·9 in Halifax, 95·3 in Preston, 99·4 in Burnley, and 101·8 in Huddersfield.

The mean temperature of the air at the Royal Observatory, Greenwich, was 53·4°, which was 1·0° above the average in the second quarters of 130 years; the excess being 2·0° in April, 0·6° in May, and 0·4° in June. The rainfall during the quarter measured 5·09 inches, which was 0·52 inch below the average.

### HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 5,893 births and 4,862 deaths were registered during the week ending Saturday last, August 10th. The annual rate of mortality in these towns, which had increased from 14·8 to 22·4 per 1,000 in the six preceding weeks, declined again last week to 22·1. The rates in the several towns ranged from 11·9 in Bristol, 12·0 in Croydon, 12·1 in Wolverhampton, and 14·5 in Plymouth, to 32·6 in Sheffield, 33·7 in Sunderland, 34·1 in Salford, and 40·6 in Gateshead. In the thirty-two large provincial towns the mean death-rate was 24·3 per 1,000, and exceeded by 6·0 the rate recorded in London, which was 18·3 per 1,000. The zymotic death-rate in the thirty-three towns last week averaged 7·8 per 1,000; in London this death-rate was equal to 5·5 per 1,000, while it averaged 9·4 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 12·7 in Leeds, 13·8 in Sheffield, 14·4 in Salford, 16·3 in Gateshead, 16·7 in West Ham, and 16·7 in Sunderland. Measles caused a death-rate of 1·0 in Birmingham and in Sheffield, 1·1 in Leeds, 1·4 in Salford, and 2·5 in West Ham; whooping-cough of 1·4 in Sunderland; and diarrhœal diseases of 10·3 in Leeds, 10·6 in Hull, 10·7 in West Ham, 11·1 in Manchester, 11·8 in Portsmouth, 12·0 in Salford, 12·1 in Sheffield, 13·8 in Sunderland, and 16·0 in Gateshead. In none of the thirty-three towns did the death-rate from "fever" or from scarlet fever exceed 1·0 per 1,000. The 71 deaths from diphtheria in these towns included 24 in London, 7 in West Ham, 7 in Leeds, 6 in Brighton, and 4 in Leicester. One fatal case of small-pox was registered last week in London, but not one in any of the thirty-two large provincial towns; there were 11 small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, August 10th, against 14, 11, and 13 on the three preceding Saturdays; 3 new cases were admitted during the week, against 5, 2, and 4 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,907, 2,974, and 3,091 at the end of the three preceding weeks, had further risen to 3,148 on Saturday last; 306 new cases were admitted during the week, against 371, 374, and 391 in the three preceding weeks.

### HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, August 10th, 910 births and 613 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17·8 and 19·8 per 1,000 in the two preceding weeks, declined again last week to 19·2 per 1,000, and was 2·9 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13·5 in Aberdeen and 15·0 in Paisley to 20·8 in Glasgow and 30·1 in Perth. The zymotic death-rates in these towns averaged 5·3 per 1,000, the highest rates being recorded in Glasgow and Perth. The 306 deaths registered in Glasgow included 9 from measles, 2 from scarlet fever, 9 from whooping-cough, 2 from "fever," and 77 from diarrhœa. Two fatal cases of measles, 3 of diphtheria, 2 of whooping-cough, and 19 of diarrhœa were recorded in Edinburgh. Three deaths from "fever" and 10 from diarrhœa occurred in Dundee; 9 from diarrhœa in Leith, 5 in Greenock, 4 in Paisley, and 3 in Perth.

### CLAIM ON GUARDIANS BY MEDICAL OFFICER AFTER VOLUNTARY RESIGNATION OF APPOINTMENT.

A. R. writes to ask whether a district medical officer who has contributed towards superannuation can, on resignation of his appointment at any time prior to becoming eligible for pension, claim a return of his contributions thereto. He understands that these are refunded if the appointment is terminated from any other cause than misconduct.

*** A return of contributions paid towards superannuation cannot be claimed after a voluntary resignation, but by Clause 7 of the Superannuation Act, "the guardians may, if they see fit, return out of the common fund of the union a sum equal to all or part of the contributions under the Act."

### SUITABLE SALARY FOR DISTRICT MEDICAL OFFICER.

A. R. also asks: "What is a suitable salary for a medical officer of a district of 20,000 people?"

*** This question cannot be answered properly without a knowledge of the acreage of the district, as well as an approximate percentage of paupers in the population.

### MEDICAL CERTIFICATION OF PAUPER LUNATICS.

Practitioner writes to ask whether it is the right course for cases of pauper lunacy to be referred to the parish doctor of the district, or whether an ordinary practitioner is acting fairly by examining the case himself and receiving the fee?

*** It is the more common course for cases of pauper lunacy to be certified by the district medical officer, but this is subject to the discretion of the magistrate who acts in the case, who is quite at liberty to call on any medical practitioner to give the requisite certificate.

# MEDICAL NEWS.

The *London Gazette* of August 9th announces the promotion of John Brown, Esq., L.R.C.P. (from Honorary Associate) to be a Knight of Grace of the Order of St. John of Jerusalem.

Canadian Medical Association.—The thirty-fourth annual meeting of the Canadian Medical Association will be held at Winnipeg, August 28th to 31st.

French Surgical Congress.—The French Surgical Congress will hold its fourteenth annual meeting in Paris on October 21st and following days. The questions proposed for discussion are (1) Surgery of the Spleen; (2) the Treatment of Tuberculous Gland Inflammations.

Dr. Stefani, Professor of Bacteriology in the University of Pavia, died a few days ago, at the age of 80. He fought under Garibaldi in 1859 and 1866. Dr. Stefani has bequeathed £10,000 to the General Hospital, Pavia.

The Spitting Nuisance in Germany.—At the recent meeting of the German Public Health Society the practice of spitting in public places was strongly condemned. The trailing skirts worn by many women also came in for vigorous denunciation. Resolutions were adopted calling on the Government to prohibit expectoration in public conveyances, and urging women not to wear long trains out of doors.

A Challenge to the Christian Scientists.—The *New York Medical Journal* states that Dr. Oscar Carrabine, of Chicago, in a lecture given at Tremont Temple on July 24th, for the purpose of exposing the methods of Christian Scientists, announced that he had been authorised by a Chicago physician, whose name he did not mention, to offer a reward of £200 for any case of deformity healed by Christian Science treatment.

The Light Treatment of Lupus.—It is stated by the *Daily Telegraph* that, having regard to the great progress recently made with the light treatment of lupus vulgaris, "and to the urgent necessity of dealing with cases of this grave affliction," the Poplar guardians propose to request the Local Government Board to entrust to the Metropolitan Asylums Board the care of lupus patients chargeable to the metropolitan Boards of Guardians.

Quacks in Council.—A congress of "lay practitioners of medicine of Germany" is to be held in Berlin in September. It is expected that a number of "Nature healers," magnetopaths, disciples of Kneipp, and other varieties of the motley family of quacks, will attend and take counsel together as to the measures to be taken for their protection against laws, existing and prospective, for the regulation of medical practice.

A memorial to Johannes Müller, the famous physiologist, has been erected at Coblenz, where he was born July 14th, 1801. Müller was ordinary Professor of Anatomy at Berlin University from 1833 till his death in 1858, and is honoured throughout his fatherland as the virtual creator of experimental physiology in Germany. He was the teacher of Virchow, Du Bois-Reymond, and Helmholtz. The memorial is the work of the eminent sculptor, Herr Uphues.

Admission of Women at Rush Medical College.—Women are to be admitted at the Rush Medical College, Chicago, after October 1st, for the first two years' work. This action, says the *New York Medical Journal*, is said to be due to the fact that the first two years of the medical work will be done hereafter at the University of Chicago, and the University insists that equal freedom be given to women and men. That women will be permitted to enter the last two years of the college work and receive a degree is said to be the next step which will be taken in the near future, or as soon as the women who now enter are ready for the two last years.

London (Royal Free Hospital) School of Medicine for Women.—The Mabel Webb Research Scholarship for the encouragement of original work in pathology, physiology, or chemistry, will be given in October to a past or present student of the school. Candidates must state the nature of the work they propose to undertake in one of the above branches of study, and the holder of the scholarship is required to keep the lecturer or lecturers in the department selected informed of the progress of the work. The value of the scholarship is £30 a year for two years. Applications will be received up to September 1st, and should be sent to the Secretary, 8, Hunter Street.

The late Dr. Norman Kerr. A handsome memorial to the late Dr. Norman Kerr has just been erected on the south wall of St. Mark's Church, Hamilton Terrace, N.W. It consists of a mosaic picture of the Parable of the Good Samaritan, and beneath it, on a slab of Derbyshire alabaster, is the following inscription: "To the memory of Norman Shanks Kerr, M.D., F.L.S., an ardent social reformer, and student of the causes and effects of inebriety, who died May 30th, 1899, aged 65 years. This tablet is erected by his family and friends as a tribute to his high character and his unwearied scientific and philanthropic labours."

Free Hospital for Poor Philadelphia Consumptives.—A tract of 215 acres has been purchased in the Blue Mountains, near White Haven, Pennsylvania, as a site for the proposed sanatorium for poor tuberculous patients. It varies from 1,500 to 1,800 feet above the sea level, and is said to be an ideal situation. A Bill appropriating £22,000 for the erection of the necessary buildings is now before Governor Stone. The buildings will be arranged on the cottage plan. Each year the State gives about £250,000 for the maintenance of free hospitals, but until this year nothing has been done on behalf of the tuberculous poor. It is estimated that 6,000 deaths occur annually in Pennsylvania from this disease, and that one-third of the sick poor are tuberculous.

## MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon; unmarried. Salary, £150 per annum, and allowance of £30 per annum for cab hire, with furnished rooms, etc. Applications to the Secretary by September 9th.

BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Medical Officer. Salary, £100 per annum, with furnished apartments, board, coals, gas, washing, and attendance. Applications to the Clerk to the Guardians by August 31st.

BOURNEMOUTH: ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary by August 22nd.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum, with residence, board, and washing. Applications to the Secretary by September 6th.

BRADFORD ROYAL INFIRMARY.—(1) Dispensary Surgeon. Salary, £100 per annum, with board and residence. (2) Junior House-Surgeon. Salary, £50 per annum, with board and residence. Candidates must be unmarried. Applications, endorsed "Dispensary Surgeon" and "Junior House-Surgeon" to be sent to the Secretary by August 26th.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—(1) Surgeon. (2) Assistant Surgeon. Applications to the Secretary by September 4th.

BURY ST. EDMUNDS: SUFFOLK GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by August 26th.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with furnished apartments, board, and washing. Applications, endorsed "Assistant House-Surgeon," to be sent to the Secretary.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum, with board and lodging. Applications to Secretary by August 26th.

COLCHESTER: EASTERN COUNTIES ASYLUM FOR IDIOTS, IMBECILES, AND FEEBLE-MINDED.—Resident Medical Attendant; unmarried. Salary, £100 per annum, with furnished apartments, board, and washing. Applications to the Secretary before August 24th.

COLCHESTER: ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by August 30th.

DENBIGH: DENBIGHSHIRE INFIRMARY.—House Surgeon. Salary, £100 per annum to commence, with board, residence, and washing. Applications to the Secretary.

EDINBURGH: CRAIGLEITH POORHOUSE AND HOSPITAL.—Resident Medical Officer. Salary at the rate of £100 per annum, with board and apartments. Applications to the Clerk, Parish Council Chambers Castle Terrace, Edinburgh, by September 2nd.

FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £100 per annum with board, residence, and laundry. Applications to Secretary by September 1st.

FULHAM PARISH.—Locum Tenens at the Infirmary. Appointment for four weeks. Remuneration £3 3s. per week, with board, furnished apartments, attendance, and washing. Applications to the Medical Superintendent of the Infirmary, St. Dunstan's Road, W.

GLASGOW UNIVERSITY.—Additional Examiner for Degrees in Medicine and Science, with special reference to Physics. Salary, £30 per annum. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by September 20th.

HALIFAX UNION.—Medical Officer for the new Workhouse. Salary, £105 per annum. Applications to the Clerk to the Guardians, 4, Carlton Street, Halifax, by August 26th.

HULL ROYAL INFIRMARY.—Casualty Officer. Salary, £60 per annum, with board and lodging. Applications to the Chairman of the House Committee.

LANCASTER COUNTY ASYLUM.—Assistant Medical Officer. Salary, £150 per annum, with furnished apartments, board, washing, and attendance. Applications to the Medical Superintendent.

LANCASTER ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £60 per annum, with residence, board, attendance, and washing. Applications to the Secretary by August 23rd.

LEICESTER INFIRMARY.—(1) Honorary Assistant Physician. (2) Honorary Assistant Surgeon. Applications to Secretary by September 2nd.

LEICESTER ISOLATION HOSPITAL.—Resident Medical Officer. Salary, £120 per annum, with board and washing. Applications to Dr. Killick, Town Hall, Leicester.

LIVERPOOL EYE AND EAR INFIRMARY.—Out-patient Assistant and Pathologist. Applications to the Secretary by August 20th.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle Street. Assistant House-Surgeon. Appointment for six months. Salary £25, with board and lodging. Applications to the Honorary Secretary by August 19th.

MANCHESTER: OWENS COLLEGE.—Junior Demonstrator in Physiology. Stipend £100, rising to £130 per annum. Applications to the Registrar by August 31st.

MANCHESTER ROYAL EYE HOSPITAL.—House-Surgeon. Applications to the Secretary.

MANCHESTER WORKHOUSE.—Assistant Medical Officer. Salary £110 per annum, with furnished apartments, fire, light, washing, and attendance. Applications to the Clerk to the Guardians by August 21st.

NORTHAMPTON GENERAL INFIRMARY.—House Physician. Salary, £100 per annum, with furnished apartments, board, etc. Applications to the Secretary by August 29th.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead, N.W.—Junior Resident Medical Officer. Appointment for six months. Honorarium, £60 per annum. Applications to the Secretary at the Offices, 11, Fitzroy Square, W.

ROYAL EYE HOSPITAL, Southwark, S.E.—(1) House-Surgeon. Salary, 50 guineas per annum, with board and residence. (2) Clinical Assistants. Applications to the Secretary for (1) by August 31st.

SCARBOROUGH: BOROUGH OF.—Medical Officer of Health. Salary, £325 per annum. Applications to Town Clerk by September 2nd.

SHEFFIELD UNION WORKHOUSE INFIRMARY.—Junior Assistant Medical Officer. Salary, £75 per annum, with furnished apartments, board, and washing. Applications to the Clerk to the Guardians, by August 26th.

SHREWSBURY: SALOP INFIRMARY.—House-Surgeon. Salary £160 per annum, with board washing, and residence. Applications to the Board of Directors by August 24th.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary, £50 per annum, with rooms, board, and washing. Applications to Secretary by September 5th.

STAFFORD: STAFFORDSHIRE COUNTY ASYLUM.—Junior Assistant Medical Officer, unmarried and under 30 years of age. Salary, £150 per annum, with board, lodging, attendance, and washing. Applications to the Medical Superintendent.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.—House-Surgeon; unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by August 24th.

SYDNEY UNIVERSITY.—Professorship of Pathology, not more than 40 years of age Salary, £900 per annum, and £100 allowed for passage expenses. Applications to the Agent-General for New South Wales, 9, Victoria Street, London, S.W., by September 14th

TOXTETH PARK TOWNSHIP.—Assistant Medical Officer of the Workhouse and Infirmary. Salary, £100 per annum, with board, washing, and apartments. Applications to the Clerk to the Guardians, 15, High Park Street, Liverpool, by August 21st.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House-Surgeon. Salary, £50 per annum, with board, lodging, washing, and attendance. Applications to the Secretary.

WEST HAM HOSPITAL, Stratford, E.—Junior House-Surgeon. Salary, £75 per annum, with board and residence. Appointment for one year, but eligible for post of Senior House-Surgeon at £100 per annum. Applications, marked "Junior House-Surgeon," to be sent to the Secretary.

WOLVERHAMPTON EYE INFIRMARY.—House-Surgeon. Salary, £70 per annum, with rooms, board, and washing. Appointment for twelve months. Applications to the Secretary by August 20th.

## MEDICAL APPOINTMENTS.

BENDLE, J. H., M.B., L.R.C.P.Lond., M.R.C.S.Eng., appointed District Medical Officer of the Uttoxeter Union, *vice* N. J. Newbould, L.R.C.P., M.R.C.S.Eng., resigned.

BERRYMAN, E. N., M.A.Oxon., M.R.C.S., L.R.C.P.Lond., appointed District and Workhouse Medical Officer of the Llandovery Union, *vice* R. J. Owen, L.R.C.P.Lond., M.R.C.S.Eng.

BROOKS, S. J., M.R.C.S.Eng., appointed District Medical Officer to the Tiverton and St. Thomas's Unions, *vice* J. K. Lewis, M.R.C.S.Eng., resigned.

COULTRE, R. J., M.B., F.R.C.S.I., appointed Ophthalmic Surgeon to the Newport and Monmouthshire Hospital, *vice* B. W. Gowring, M.D., resigned.

CURTIS, H. J., B.S.Lond., F.R.C.S.Eng., appointed Assistant Surgeon to the Royal Hospital for Children and Women, Waterloo Road.

HOLLIS, H., M.D.Camb., B.C., appointed District Medical Officer and Medical Officer of the Workhouse of the Wellingborough Union, *vice* W. W. Clark, M.D. Edin., resigned.

HOWARD, Vincent, M.R.C.S., L.R.C.P., appointed Medical Officer of the Union Workhouse, Buckingham, and Medical Officer and Public Vaccinator for the Leckhampstead District of the Buckingham Union.

JACOBS, H. R., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer for the Sulgrave District of the Brackley Union, *vice* A. G. Hays, L.R.C.P. L.R.C.S.Edin., resigned.

KENNEDY, A. J., L.S.A., appointed Medical Officer for the Fulstone District of the Huddersfield Union, *vice* A. MacGregor, M.B., C.M.Edin., resigned.

LIVINGSTONE, Thomas Hillhouse, M.B., Ch.B.Edin. appointed District Medical Officer and Medical Officer to the Workhouse, and also Public Vaccinator in the Stanhope District of the Weardale Union.

MAHOOD, A. E., M.B., M.Ch.R.U.I., appointed Medical Officer of Health for the Northam Urban District, *vice* F. Pratt, M.R.C.S.Eng.

MITCHELL, T. C., jun., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Thirsk Union, *vice* T. C. Mitchell, sen., M.R.C.S.Eng., L.S.A., resigned.

OXFORD, T. C., M.R.C.S., L.R.C.P.Lond., appointed Assistant Medical Officer to the Salford Union Infirmary, *vice* C. C. Lall, M.B., C.M.Edin.

PARRETT, E. E., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Medical Officer of the Brentford Union Infirmary, Workhouse, and Schools, *vice* A. R. McLachlan, M.R.C.S., L.R.C.P.Lond., resigned.

PERKINS, A. L., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Swansea Union.

RANSOME, G. H., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Depwade, Loddon, and Clavering and Wangford Unions, *vice* W. B. Betenson, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

ROBINSON, W. E., B.A.Oxon., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Wokingham Union, *vice* B. Brooks, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

STEVENSON, W. F., L.R.C.P., L.R.S.Edin. appointed District Medical Officer of the Henley Union, *vice* E. I. Day, resigned.

STEWART, M., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Wigton District of the Wigton Union, *vice* T. Miles, M.B.Dub.

WATSON, J., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Alnwick and Glendale Unions, *vice* W. Robertson, M.D.Edin.

WILKINS, A. G., M.B., B.Ch.Vict., appointed Assistant Medical Officer to the Salford Union Infirmary, *vice* Miss E. McCall, M.B., B.S.Glasg.

## DIARY FOR NEXT WEEK.

### MONDAY.

**West London Vacation Post-Graduate Course.** West London Hospital, Hammersmith Road, W., 5 P.M.—Lecture on Some Surgical Emergencies and their Treatment.

### THURSDAY.

**West London Vacation Post-Graduate Course.** West London Hospital, Hammersmith Road, W., 5 P.M.—Lecture on the Examination of the Gastric Contents.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

NEWBOLT.—On August 13th, at 42, Catharine Street, Liverpool, the wife of George Palmerston Newbolt, M.B., F.R.C.S., of a son.

STADDON.—At The Priory, Ipswich, on Friday, August 9th, the wife of Walter J. Staddon, M.R.C.S., L.R.C.P., of a daughter.

### MARRIAGE.

MURRAY—SMITH.—On August 7th, at St. Philip and St. James' Parish Church, Clifton, near York, by the Rev. A. Symonds, M.A., Vicar of Over Tabley, Knutsford, assisted by the Rev. R. Gresley Douglas, Vicar of St. Peter's Stockport, and the Rev. Percy Lord, of Sharrow, Robert Alexander Murray, M.D., of Stockport, to Evelyn, Mary, elder daughter of the late George John Smith, bank agent, Stockport.

### DEATH.

ALDRIDGE.—On August 7th, 1901, at Belle Vue House, Plympton, Mary Ann, beloved wife of the late Jossph Aldridge, of Plympton House, Plympton, aged 85 years.

## LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

### QUERIES.

CRIPPLE asks if anyone can recommend a home for a gentleman, aged 36, totally blind, and subject to epileptic fits. He could pay about 10s. a week.

DR. W. F. HAYNES (Stanstead, Essex) would be glad to hear of any schools on the South Coast where a deaf and dumb lad could be taught. He has a weak chest, and requires careful medical supervision.

X. Y. Z. writes: Can any member inform me of an island round the English or Scotch coasts without a public-house, and where there is also a doctor that would be willing to take a mild case of dipsomania?

FILIA writes: I should be glad to learn if there is, at Epsom or elsewhere, a college for girls—daughters of medical men—or if any member knows of a good girls' school in Germany where the care and feeding are good and the musical education excellent at a moderate cost.

X. Y. Z. would be glad to hear of any food suitable for a delicate baby of 13 months. It has at present 30 to 40 ounces of milk with added cream, but is gradually losing weight. Is this sufficient? What should a child of this age weigh?

COUNTY PRACTITIONER would like to have the opinion of members on the treatment of obesity with thyroglandin: (1) As to its capabilities; (2) its immediate evil effects (if any) and what; (3) remote effects after prolonged use; and (4) what symptoms should guide him in stopping or reducing the dose.

INTUSSUSCEPTION.

J. T. F. (Strathpeffer) would be glad to be referred to any description of pathological appearances of ileo-colic or large intestine invagination, especially with regard to the actual position of the ileo-cæcal valve and the appendix, the seat of strangulation (if present), and the course of the passage of the fæces when obstruction was absent or was overcome naturally, also to learn whether appendicitis has been observed as a cause.

### ANSWERS.

DUM SPIRO SPERO.—Mr. H. J. Waring's *Manual of Operative Surgery* (Edinburgh and London: Young J. Pentland. 1898) would probably meet our correspondent's requirements.

CLOUGHJORDAN.—We should decidedly recommend our correspondent to consult a surgeon. The deformity to which he mentions is generally remediable by operation.

B. B.—Our correspondent might try the method which used to be in favour with the *petits crevés* of Paris who wished to make themselves look as if they had been serving in Algeria, namely, to anoint the face with oil and then sit in the sun for some hours daily.

RUPTURE.—We do not give medical or surgical advice. We may say, however, that we gather from our correspondent's statement that he is worrying himself quite unnecessarily as to his condition. We should strongly advise him to pay no attention to what he sees in the papers about medical matters. We know nothing of the pamphlet as to which he asks our opinion; we do not find the name of the author in the *Medical Register* for 1901. But in any case our correspondent would do well to give up reading about the subject as to which he writes, and to leave himself entirely in the hands of his doctor.

THE KILLING OF WEEDS.

DR. W. LATTEY (Southam) writes: In reply to "G. P.", I have found boiling water efficacious for killing weeds. Plenty should be used and in dry weather, and perhaps the addition of common salt would be better. About twenty-five years ago I laid down paths made of 1 part of Portland cement to 3 of stone; they are clean, dry, and not very expensive, and show little sign of deterioration.

DEMONSTRATION OF HIP-JOINT BY X RAYS.

DR. J. K. PICKFORD.—A good 8-inch spark coil, with suitable condenser, and worked with a rotary mercury break and 24 volts, or with the Welmelt interrupter with a 100-volt circuit, will give excellent results either on the screen or upon a photographic plate. 1. The hip-joint in an adult is never seen very satisfactorily on the screen, even with the

largest coils, and photography has to be resorted to in these deep structures. 2. An 8-inch coil worked as above will show the thorax on the screen satisfactorily.

THE TREATMENT OF POLYMYOSITIS.

DR. CHARLES D. MUSGROVE (Penarth) writes: In reply to "Ajax" with regard to the treatment of polymyositis, I beg to state that in the case of a lady under my care who suffered from enlargement of various muscles, chiefly in the arms, with acute tenderness and pain, after exhausting other forms of treatment, I was able to give speedy relief and cure by making incisions into the sheaths of the affected muscles and passing a probe freely in all directions through their substance, merely suturing the skin afterwards.

SUBSTITUTE FOR SODIUM SALICYLATE.

DR. C. E. WINCKWORTH (Shefford, Beds) writes: In reply to the question of "Salix Nigra," with regard to sodium salicylate, I should be inclined to assert that at present we have no substitute for that drug. Some have preferred to neutralise salicylic acid with sodium bicarbonate in an open-mouthed vessel, and then transfer it to the medicine bottle as soon as effervescence have ceased. The sickly taste may be greatly overcome by the addition of a bitter infusion (for example, calumba). If the "natural salt" be used, it will be quite free from "dangerous impurities," but the price of it will be about 36s. per lb., instead of 3s. 2d. for the ordinary salt.

## LETTERS, NOTES, Etc.

ERRATUM.—In the report of the combined meeting of Sections II and III of the Tuberculosis Congress, published in the BRITISH MEDICAL JOURNAL of July 27th, p. 213, it was stated that Dr. Moeller (Brussels) took part in the discussion on tuberculin. We are requested to state that the speaker was Dr. Alfred Moeller, of Belzig, near Berlin.

TWISTING OF CORD.

MR. VICTOR S. PARTRIDGE (Camberwell) writes: On August 4th I was called to a primipara advanced in labour. In the course of an hour and a-half I delivered her of a living male child, the cord being wound seven times round the neck. The labour had lasted about ten hours, and delivery was not delayed by this condition, as there was not relative shortness of the cord.

A DANGEROUS PESSARY.

DR. J. G. STUART, M.B., C.M.Aberd. (Haltwhistle, Carlisle), writes: I was called to see a woman who had about a week previously purchased a wing pessary from a chemist, and had introduced it herself, as she had habitually worn a vulcanite winged pessary for years. So far everything went well till one day she endeavoured to remove it, as was her custom with the previous one, when she found that she was unable to do so. She made many attempts during the week, and at last became thoroughly alarmed at her non-success and position, and sent for aid. I found on examination that on account of the somewhat accentuated bend on the pillars—they were of brass, not vulcanite—as the wings were—causing a more than usual convexity backwards of this part of the pessary, part of the posterior wall of the vagina had become pushed between one of the pillars and the central screw rod, and had in fact become strangulated in this position, being swollen, inflamed, and very tender to the touch, and quite impossible of reduction from its position. After several painful attempts at reduction of the imprisoned part I decided to cut the pillar which, with the central rod, formed the stricture. This I accomplished by introducing a duck-bill speculum, getting hold of the handle at the end of the stem of the pessary, and sawing through the imprisoning pillar with a fine file, when the herniated part became at once released, and the pessary came easily away. The fault here undoubtedly lay in the structure of the pessary; the woman had worn her previous pessary with comfort for years, and the bend on the stem of it was much less acute than that on the new one. The metal pillars were a fault; vulcanite pillars are preferable in every respect, and serve the purpose equally well.

IDIOSYNCRASY TO IODINE AND ITS COMPOUNDS.

DR. C. L. D'AVOINE (Bombay) writes: Mr. G., about 50 years, came to consult me as to what he should do to allay the pains and burning of blisters caused by the application by means of a piece of cotton of some tincture of iodine to a patch of ringworm on the thigh. Some hours later the parts were inflamed and covered with blisters. The fingers which came in contact with the tincture were much swollen, and also covered with blisters, although he had washed them well after the application. Some time ago Mr. G. took 5 grains of potassium iodide. His face became swollen in a short time; he had severe coryza, and all the worst symptoms of iodism. One day he dressed a small wound with iodoform; the wound and surroundings very soon afterwards became inflamed; and wherever the scales of the iodoform had fallen little blisters were to be found. Mr. G.'s son, aged 12 years, shows the same peculiarities with iodoform; he also had a wound dressed with it, and the same effects were produced.

A CASE OF ADDER BITE.

MR. HY. JAS. WATTS (Burslem) writes: On July 13th I was called to see a man, aged 59 years, who had been bitten on the tongue by an adder. His tongue was very much swollen as well as the glands in the neck, and he could only speak with difficulty. The pain in the tongue and throat was very great. He was in a state of collapse; the pulse was hardly discernible at the wrist and the extremities were cold. Vomiting and diarrhœa were present. I cauterised the bite with nitrate of silver, and gave the patient some lotio boro-thymol to rinse out his mouth. I gave him also a quantity of mist. alba. The same evening I called in Dr. Ross (Burslem) for consultation, and he made two or three incisions in the tongue. The patient was kept in bed and hot bottles placed at his feet; brandy was given in small quantities at frequent intervals. He was put on a milk diet, with beef-tea and gruel. We changed the medicine, and gave him a mixture of quinine, strychnine, and hydrochloric acid. On the 14th the patient was slightly improved. His neck was more swollen, but the tongue was not so sore and had decreased in size. His pulse was stronger, and he was able to take more nourishment. During the night the patient was very restless and could not rest in bed. He complained greatly of dyspnœa, which was always more pronounced at night. On the 15th the swelling extended into the chest, which was discoloured owing to the extravasation of blood into the tissues. The patient's pulse was much improved. On the 16th the abdomen was swollen and discoloured, the penis and scrotum being about three times the usual size. The patient felt better himself, and could swallow better. He could also talk more, and with less inconvenience than before. As the swelling increased in the abdomen it disappeared in the chest, but not so much in the neck. The patient now progressed favourably, and on the 22nd the discoloration on the body was disappearing. The extremities did not swell much except on two or three days the patient complained of his feet. On the 24th the patient went out of doors, and felt better when he was in the open air than when he was in the house. The adder was 18 to 24 inches in length; its back was scaly and dark, with black, diamond-shaped patches all along its body. Its belly was of a lighter colour and smooth. It was found amongst some wood used for making crates, and was supposed to have come from the South of England.

IMPERFORATE HYMEN.

DR. J. H. R. GARSON (Durham) writes: In a well-developed girl, aged 16, height 5 ft. 2 in., I discovered imperforate hymen whilst passing a catheter for retention of urine. Inquiries elicited the occurrence of periodic pains in the back, with fulness and pressure, and gradually-increasing difficulty in micturition. After placing her in lithotomy position and administering chloroform, I made a cruciform incision through tough membrane, when 15½ ozs. of thick black viscous fluid escaped. She menstruated regularly thereafter, was married at the age of 18, and I have twice attended her in her confinements, which were perfectly normal. Her age is now 23, and she has never experienced any menstrual trouble since the operation in September, 1894.

LETTERS, COMMUNICATIONS, Etc., have been received from

**B** Mr. W. L. Batson, Dorking; Dr. H. Bramwell, Cheltenham; J. A. Bower, M.B., Cheltenham; Lady Burdon-Sanderson, Oxford; Mr. G. B. Browne, London; Boreas; Mr. L. A. Bidwell, London; Dr. J. B. Brierley, Manchester. **C** Dr. A. C. Coles, Bournemouth; Country Practitioner; Cripple; Dr. D. Couper, Glasgow; Mr. B. R. Connolly, Funchal; Carolus; Centurion; Mr. S. Colyer, London; Dr. J. F. Craig, Birmingham; Dr. C. Coombs, Castle Cary. **D** Mr. E. R. Dale, Salisbury; Dr. T. M. Dolan, Halifax; Dum Spiro Spero; Dubitans. **E** Mr. S. O. Edes, Ipswich; Mr. F. Elvy, Windsorton, S.A. **F** Dr. P. J. Freyer, London; Filia; Mr. C. E. S. Flemming, Freshford. **G** J. H. R. Garson, M.B., Sacriston; Miss Gill, London. **H** W. J. Horne, M.B. London; Dr. J. Hamilton, London; Mr. M. F. Hession, Ballindine; Mr. F. R. Humphreys, London; N. C. Haring, M.B., Manchester; J. T. Hodgson, M.B., Halifax Mr. H. N. Hardy, London; Mr. E. A. Hunt, Colchester; Dr. H. Hart, London; Mr. J. Hutchinson, jun., London; Mr. W. F. Haynes, Stansted. **I** Mr. A. G. C. Irvine, Birmingham; Icthiol. **J** J. T. F.; Mr. R. Jones, Dolgelly. **K** Dr. J. Kerr, Bradford; Mr. E. C. Kingsford, London; Dr. J. H. Keay, London. **L** Mr. R. R. Leeper, Dublin; Dr. W. Lattey, Southam. **M** Dr. C. J. Macalister, Liverpool; S. K. Mullick, M.B., London; J. S. M'Laren, M.B., Edinburgh; Dr. A. Moeller, Belzig; Dr. C. D. Musgrove, Penarth; Medical Officer; M.S.P.; A. J. McClosky, M.B., Selangor; Dr. W. A. McLachlan, Dumbarton; M.R.C.S. **N** Mr. D. Owen, Manchester; Dr. J. Oldfield, London. **P** Mr. W. H. Plaister, Tottenham; Practitioner; Postum Cereal Co., Manager of, London; Public Vaccinator; Mr. D. Pickwick, Leeds; Pot. Brom.; F. Porter, M.B., Comrie; Messrs. Parke, Davis, and Co., London. **Q** Queensland. **R** Mr. W. B. Roberts, Olney. **S** J. Stevenson, M.B., Redditch; E. W. Sharp, M.B., Bury; Dr. J. S. Scriven, Stourport; Mr. J. F. Steedman, London; St. Oswald; Dr. M. F. Simon, London; Dr. H. Snow, London; Strenbo Co., Manager of, London. **T** Tropico. **W** Mr. C. E. Winckworth, Shefford; Dr. A. McC. Weir, Liverpool; Mr. H. J. Watts, Burslem; Dr. W. Wingrave, London. **X** X Y Z.; etc.

## BOOKS, ETC., RECEIVED.

Experimentelle Untersuchungen ueber das Conservieren von Fisch und Fleisch mit Salzen. Von A. Pettersson. Munich: R. Oldenbourg. 1900.

The Origin of Thought. By the Rev. D. Nickerson, M.A. London: Kegan Paul, Trench, Trübner, and Co. 1901. 6s.

La Léprose. Par Dr. D. Sauton. Paris: C. Naud. 1901. Fr.22.

A Treatise on Orthopædic Surgery. By R. Whitman, M.D. London: Henry Kimpton. 1901. 25s.

A Manual of Practical Hygiene. By C. Harrington, M.D. London: Henry Kimpton. 1901. 21s.

Atlas und Grundriss der Unterleibsbrüche. Von Dr. G. Sultan. Munich: J. F. Lehmann. 1901. M.10.

*** In forwarding books the publishers are requested to state the selling price.


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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restantes* addressed either in initials or numbers.

SIXTY-NINTH ANNUAL MEETING

OF THE

# British Medical Association.

*Held at Cheltenham, July 30th, 31st, August 1st, and 2nd, 1901.*

## PROCEEDINGS OF SECTIONS.

## SECTION OF NAVY, ARMY, AND AMBULANCE.

Deputy Surgeon-General W. G. Don, M.D., President.

### INTRODUCTORY REMARKS BY THE PRESIDENT ON THE WORK OF THE SECTION.

The Section over which I have the honour to preside was inaugurated last year under auspicious circumstances, and this, its second meeting, promises to be equally successful. The President of last year, Inspector-General Ninnis, R.N., in his opening address, said that he deemed it a happy omen that the new Section of the Association was inaugurated while the great war, which he hoped was near an end, had concentrated public attention on the medical services. His anticipation of the early end of the war has unfortunately not been realised: it has gone on, and afforded still further object lessons in all our military departments, including the medical; while the reforms suggested in various directions have yet to be worked out and practically applied.

The objects and scope of this Section are wide, and comprehensively expressed in its title; it may be taken to embrace matters relating to the *personnel*, organisation, and equipment, and to the hygiene and surgery of our naval and military services, both in peace and war; while on the civil side it includes such problems as the provision of ambulances and emergent aid to sick and injured persons, especially in our populous urban centres.

To facilitate procedure during the three days at our disposal, we propose to discuss: first, naval; secondly, military; and thirdly, civil matters, so far as can be arranged.

On naval questions we are promised papers by naval medical officers on most important subjects: namely, the disposal of wounded in naval actions, and the relative healthfulness of modern warships, to which attention has lately been called. I will not venture to anticipate what may be said on these matters further than to remark, that while we probably have data sufficient for arriving at some definite conclusions as to the healthfulness of ironclads, our experience is as yet very limited regarding the disposal of the wounded in modern sea fights. The subject is complicated on account of the many different structural types of our warships, each requiring special contrivances of their own. I may be allowed to express much personal interest in such naval problems, because of lasting early experiences; for it was my fortune to learn something of the interior economy of our wooden walls of fifty years ago, having served for six months as a medical volunteer in H.M.S. *Duke of Wellington*, flagship of the Baltic Fleet of 1855, and taken part in the three days' bombardment at Sweaborg. Such a reminiscence brings the obvious reflection how marvellously and completely have naval life and warfare changed within my own limited recollection!

With the military medical problems which may engage our attention I am, after forty-four years' consecutive and continuous service in the army, naturally very fairly conversant. I confess I regard these problems, after the experience of many mutations both in the home and Indian services, as still presenting grave difficulties, and even dangers, unless warily and judiciously handled. Major Dick, R.A.M.C., Assistant Professor of Military Surgery, Netley, was to have recounted some aspects of small-bore wounds, as inflicted during the war, which have come under his direct observation, but we regret his inability to do so. But Sir William MacCormac has promised some observations on War Surgery—Old and New, to which his great experience and authority will lend the highest interest. We already know sufficient of such wounds to warrant the anticipation that, when the full surgery of the war is made known, we shall have some startling revelations, especially in regard to penetration of viscera by small-bore bullets. I lately saw a wounded soldier, on sick furlough, who while lying down was hit by a Mauser bullet; the missile entered the right chest below the armpit, and, passing in a slanting direction, emerged in the region of the left kidney. From its course, and the resulting symptoms, several of the important viscera could not have escaped penetration; yet, months afterwards, when I saw him, the only inconvenience experienced was occasional spasm of the diaphragm on sudden exertion. When we meet with such cases, and can recall the terrible visceral wounds inflicted by the expanding Minié bullet of forty years ago, or even by the still more recent Snider or Martini, the pencil-like missiles of the latter-day magazine rifles seem comparatively almost harmless.

Field transport for sick and wounded, on which Captain Ward, R.A.M.C., promises to give his recent war experiences, is a subject of great importance and some difficulty; for it is part of the bigger question of army field transport at large, which cannot, or ought not, to be fixed and fettered by inelastic rules; because it must vary widely according with three factors which may operate in any given campaign. These are: the physical nature of the country in which military operations are conducted; the length of the lines of communication; and the required mobility of the fighting force. It is an open question whether the medical service should not have complete autonomy in its field transport, of whatever kind; but I am not inclined to lay much stress on the point, further than that it should be autonomous, subject alone to the express disposition of the general officer in command. For necessity—and especially military necessity—can have no law beyond or overriding that of preservation of the fighting force; and, consequently, however autonomous in theory the medical or other branches of transport may be, there is always the risk, even the probability, that under the pressure of military exigency (as after Paardeberg), it may be appropriated for the supreme transport of food and ammunition.

Intimately bound up with the kind and amount of field medical transport is the question of its use, under new conditions, in affording first aid to the wounded in an action. The enormous widening of the zone of fire from modern weapons, makes all active duties connected with stretchers and ambulances increasingly difficult and dangerous. It is now next to impossible with any safety for bearers to keep in touch with an advancing fighting line, while the distances between the combatants may be so great as to render the distinguishing of red crosses and Geneva badges impossible; hence probably the complaints that the ambulances have been deliberately fired on.

Not only does the range of fire exceed that of unaided vision, but the use of smokeless power makes location of a firing line more a matter of the ear than the eye; there is plenty of noise but little to be seen. A wounded cavalry soldier told me he had been six times under fire, but never once saw a living fighting Boer while engaged.

In means for affording civil first aid to sick and injured persons in our great urban centres, we seem lamentably behind many Continental and American cities. We all trust this reproach may before long be removed. It is a question whether motor might not be substituted for horse ambulances for all emergent purposes. Important questions connected with enteric fever will be brought to your notice.

I have now the pleasure to invite you to proceed with the various matters that may come before us.

### THE TREATMENT OF WOUNDED IN NAVAL ACTIONS.

By Fleet-Surgeon Gilbert Kirker, R.N., M.D., M.Ch., M.R.C.S.

This subject may be conveniently dealt with under the three following heads:

1. The surgeon's station or the place where the wounded are treated.
2. The time of treatment.
3. The conveyance of the wounded.

1. *The Surgeon's Station.*—It has always been the custom to select some well-protected and easily-accessible part of the ship for the reception and treatment of the wounded, and to convert it, before action, into a surgical station. In the old wooden battleships the "cockpit," or afterpart of the orlop deck—a place below the waterline, and approached by a wide hatchway—was universally selected as the surgeon's station, and many of the scenes which have occurred there have found their way into history and art.

When the iron battleship displaced the wooden one the orlop deck and cockpit disappeared, and naval surgeons lost their prescriptive station in action. Then, on board each ship, the captain and medical officer selected the place they considered most suitable, and adapted to the chosen station the details of the necessary arrangements. It is in this way that the location of the surgeon's station is still settled; and, owing to the variations in ship construction, it must be so settled until the time comes when ships will be fitted with an operation room below the waterline—a modern cockpit—which can be used both in peace and war.

This suggested operation room, it appears to me, should be included in the internal arrangements of every modern battleship and cruiser. It need not be large, but it should be fitted up to meet the requirements of aseptic surgery. Neither need it be particularly easy of access, for with my "ambulance sleigh" injured men can be easily and safely taken down and along all ordinary hatchways and passages. During peace important surgical operations would be done in it instead of in the overcrowded sick bay, and in it also the valuable surgical instruments and necessaries would be kept in readiness for use. In time of war the surgeons, surgical instruments, and dressings would be protected in this place during action, and after action surgical operations could be done in it with more chance of success than in constantly-used bathrooms or greasy mess places. The preservation of the lives of the surgeons and the surgical appliances during action must receive adequate attention, if such disasters as that which occurred in the Japanese ship *Hujei* at the battle of Yalu are to be avoided. In this ship the surgeons' station was in the unprotected wardroom. Here a shell entered and exploded, killing or severely wounding the surgeons, nurses, and most of the wounded who had been brought there for treatment, and destroying all the surgical instruments and dressings. This shell also set fire to the ship, and in separating from her consorts to extinguish the fire she lost them, and was without medical assistance of any kind until the following forenoon. When the surgeons who came to her assistance got on board, they found twenty corpses and thirty-five wounded men.

2. *The Time of Treatment.*—In all modern navies it has always been the custom in time of war, and, until recently, the intention in time of peace, to remove the wounded at once from where they fell to the surgical station for immediate treatment. It has, however, for some time been inferred that in future naval warfare it will not be practicable to remove the wounded during an action, but that they will have to shift for themselves until it is over or a lull occurs in the fighting: and the experience of the Japanese in their naval battles in the late war with China must be taken as demonstrating that this inference is correct, and that the practice of the past must be abandoned.

Of course, the conditions which have brought about this proposed revolution in the treatment of naval wounded are connected with the construction of modern ships and the nature of modern fighting, but there are also other conditions which though by themselves would not justify a departure from the old custom, yet show that the new intention is not so inhuman as it would at first sight appear. Thus the duration of a modern naval action is short, the wounds are rarely attended with dangerous bleeding—not so often as in the days of solid projectiles there are few suitable places on board a ship where the wounded would be safer than where the bulk of the men are fighting; and during an action, as the Japanese found, the surgeons are not able to do work of any value. M. Fontan, Médecin en chef de la Marine de France, in a paper which he read at the International Medical Congress in Paris in 1900, stated that it had been practically decided in the French Navy not to attempt to give treatment, altogether illusory, to wounded during an action. The men should receive an elementary instruction in how to assist themselves, and a goodly supply of stimulating and restorative drinks should be provided before the action began.

3. *Conveyance of Wounded.*—Though the wounded may be allowed to remain where injured during an action, when it is over they will have to be moved either for treatment on board their own ships, or, what will be better if obtainable, discharge into hospital ships.

For the conveyance of sick and wounded men on board ship, both in peace and war, many contrivances have been proposed and used, but except the service cot, stretcher, and ambulance hammock, none has received official recognition. As far as I am aware, this is also the state of matters in all foreign navies except those of France and Chili, in which M. Auffret's *gouttière metallique* has been adopted. The Japanese during their war with China were only provided with the ordinary appliances I have mentioned, and, as might have been expected, they found these useless under the conditions of war. They threw them aside, and carried the wounded by hand alone. This method, however, has two great disadvantages—the large number of men required to carry the wounded (four for each) and the great danger of aggravating the injuries, especially when there is fracture of bone.

An ambulance to be suitable for use on board ship must satisfy several conditions. It should be able to retain its occupant safely in all positions, from horizontal to perpendicular; it should be able to go down a hatchway by sliding down the ladder, if there is one, or by being lowered at any angle, if there is none; it should be as short as possible in order to get easily round corners; and in confined spaces, where there is not room for two men to carry it, it should be transportable by one.

As far back as 1886 I brought under the notice of the Naval Medical Department an apparatus which I had invented to meet these conditions, and which I now call an "ambulance sleigh." Not meeting with approval when brought forward, on account of its size and weight, I allowed it to lie aside for fourteen years. Last year, when attending the International Congress at Paris, I became aware of the existence of M. Auffret's *gouttière metallique*, which has lately been introduced into the French and Chilian navies, and on which its inventor began to work in 1892. This apparatus I was surprised and pleased to find was constructed much on the same plan as my ambulance sleigh, except that it lacked the distinctive and most valuable sleigh characteristic of my apparatus. On returning to England I resurrected my old invention, lightened and improved it, and it is now undergoing official trial.

To make more complete my reference to the conveyance of wounded on board ship, I must mention some of the other contrivances which have been from time to time proposed. Among them are modifications of the service hammock (Macdonald), cot (Gorgas and Loyd), and stretcher (Dick), and Mowll's patent chair.

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## THE DISPOSAL OF WOUNDED IN NAVAL ACTIONS.

By Surgeon F. H. A. CLAYTON, M.D., R.N.

IN naval warfare all arrangements for the succour of the wounded must be subject to the condition that they do not in any way impair the efficiency of the ship as a fighting machine.

The difficulties met with are due principally to the occupation of nearly all the space below the armoured deck by magazines and engine rooms, and the high temperature produced there by the proximity of the latter, to the necessity for closing watertight doors and hatches, to the absorption of space behind shielded guns by ammunition hoists, fire mains, etc., and to the awkward entrances to casemates and barbettes.

It can readily be understood that these interpose obstacles both to the transport of wounded along the decks and to their reception below, and they must be taken into account in devising any scheme, but, from the differences in size, construction, and armament of ships, it is impossible to lay down rules universally applicable.

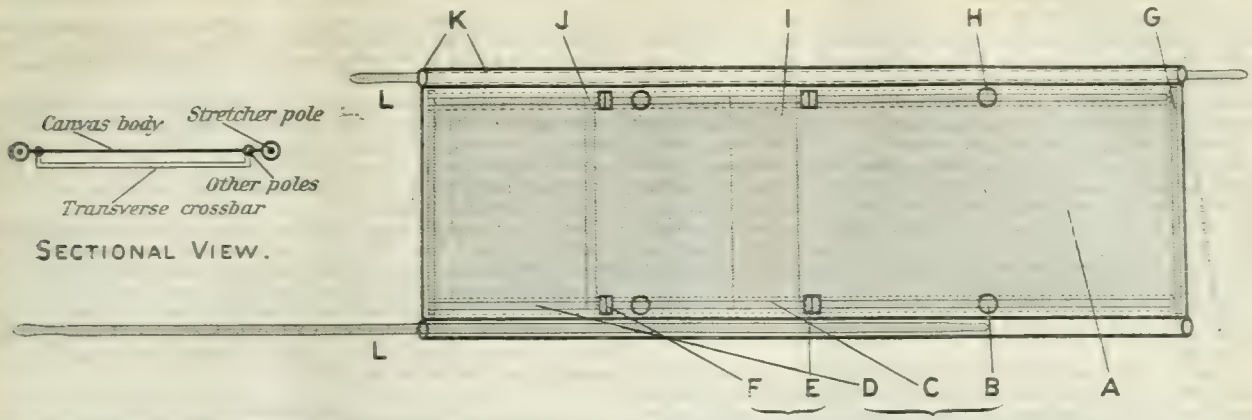
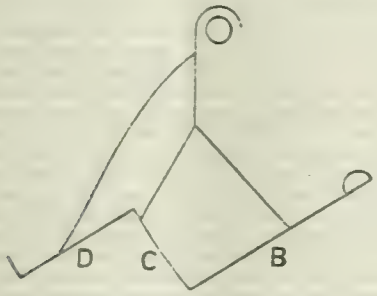



Diagram of Combined Stretcher and Lift. When the stretcher poles are removed and the lift is raised by slings attached by hooks to the grummets provided the apparatus assumes the shape of a chair, the shape being altered by adjustment of the slings. If lowered upon a mattress it again straightens out, the stretcher poles are again introduced, and it becomes once more a stretcher. A, canvas frame of stretcher: B, C, and D, three pairs of light poles sewn into canvas and connected by (E and F) two light pairs of hinges: G, upper crossbar covered by a pillow: H, grummets for hooks of slings: I, second crossbar to act as seat when stretcher becomes a lift; J, other crossbars; K, canvas fold to receive stretcher poles: L stretcher poles.




It must be recognised that during an engagement the position of the naval surgeon corresponds to that of his army brother when attached to the firing line: he can merely take all possible measures to avert impending death from hæmorrhage, shock, or other causes, disinfect and dress wounds, remove foreign bodies, apply support to fractured limbs, give restoratives or morphine, or otherwise add to his patient's comfort. The dust and concussion produced by the guns of his own ship, and the possibility of the many paralysing accidents to which she is liable, to say nothing of the nervous tension inevitably consequent upon action with the unseen enemy, would all argue against his undertaking, until after the engagement, any operation not absolutely and at once necessary. Actions of any duration are, too, rather improbable under modern conditions, with quick-firing guns, and therefore restricted ammunition supply.

This being so, it is evident that different positions will be required, on the one hand for "dressing stations" for giving first aid during action, where the main objects to be attained are accessibility, protection, and non-interference with the fighting of the ship: and, on the other hand, for the operating room and sick quarters for reception of wounded after action, where cleanliness and asepsis, roominess and ventilation, light and water supply are the chief desiderata.

*Dressing Stations.*—The position of these must necessarily be a compromise, the place chosen being in each case decided by the peculiarities of the ship in question, and the following conditions being as far as possible complied with:

1. The removal of patients to them should not interfere with the working of guns or supply of ammunition.
2. They should be protected from the enemy's fire.
3. They should be readily accessible from those parts of the ship where men are likely to be hurt.
4. They should be cool, clean, well-lighted, roomy, and lofty.

The most convenient part of the ship—the middle—is either entirely absorbed or rendered insufferably hot by the engines, and the Japanese,[1] therefore, found dressing stations both forward and aft necessary in most cases, thus dividing their already scanty *personnel*, but at the same time lessening the risk of such disaster as that in the *Hujei*, where one shell accounted for all the medical staff.

Professor Ogston[2] some time ago suggested the possibility of cutting, in the armoured deck, a hatch large enough to transmit stretchers, and leading to a large, well lighted, and properly fitted room below. It is at least doubtful whether such a hatch could be left open, and also, whether sufficient space could be spared even in the largest of ships. Such a room, too, must be insufferably hot in action, and entirely dependent upon artificial ventilation and lighting, while its position must militate against surgical cleanliness. Even if sufficient space could be spared, it would have to be situated at one end or the other, and to have systems of ventilation by fans, and of lighting by accumulators, independent of the general ship's supply, which might fail at any time. Wherever these "dressing stations" are placed, therefore, it is suggested that in them should be kept only the instruments, appliances, and dressings for carrying out "first aid" or emergency operations, with beds and mattresses upon which the wounded could lie.

*Surgical Appliances.*—The wholesale destruction of medical stores which resulted from shell explosion in no fewer than two of the Japanese ships would be absolutely fatal in an isolated ship action. Such a risk might, however, be greatly lessened by ensuring that all the fittings of operating room and sick quarters should be portable, light, and capable of easy stowage in an appropriate store room, well protected, and beneath the armoured deck. The difference between providing a comparatively small store room and providing a large room fitted for receiving patients during action will be readily appreciated. Here could be stowed bedding and hospital gear, reserve dressings, aseptic portable operation table, washstands, irrigators, and so on, with the majority of instruments all ready for immediate use, while in the comparatively unprotected dressing stations would be kept only the stores for the purposes already enumerated, the loss of which would be considerably less important. Plenty of boiled water would also have to be stored unless a Berkefeld filter or other water-sterilisation apparatus were provided. With continuous drill and training, the fitting up of some space after an action as an improvised operating room should not be a lengthy evolution.

*Operating Room and Sick Quarters.*—In a space 400 feet by 75 by 30, crammed with engines and stores of all sorts, and inhabited by 800 men, a perfect operation theatre cannot be expected. The provision of portable fittings and the postponement of operative work till after the action considerably lessens the necessity for protection of the operating room, and the advantages of a position near the upper deck giving accessibility, natural ventilation and lighting, and greater prospect of cleanliness, would seem to outweigh the un-

doubted possibility of its being wrecked by shell explosion. This risk, however, might also be diminished by choosing before the action three or more alternative spaces. These, which should be large, well ventilated and lighted, and not much in use during an engagement, such for instance as captain's cabin, ward room, and sick bay, could be stripped of their fittings and thoroughly cleansed. One of them would probably be available, and into this the previously-prepared fittings, instruments, and dressings could be at once moved after the action, ready for immediate use. Such a plan would best meet existing conditions in small ships, while most of the larger, in which a protected operating room is a possibility, are precisely those to which hospital ships, if in existence, would be attached.

Temporary hospital accommodation can be improvised almost anywhere, if an adequate supply of cots and bedding is available.

*Dressings.*—By supplying already sterilised dressings in easily-opened air-tight tins, convenient quantities, reliable, capable of easy stowage, and uninjured by the heat below, would at once be ready to hand. The almost constant occurrence of suppuration in the shell wounds, which constituted by far the largest proportion of injuries among the Japanese,[3] emphasises the necessity for early and efficient cleansing and dressing. They ascribe it chiefly to the local lowering of vitality, the dust disturbed by explosions, the irregularity of wounds, and the entrance of septic portions of clothing. A decided limitation of the latter, as in the old days of muzzle-loaders, might not only minimise this risk, but considerably lessen the severity of burns from powder or shell explosion, judging once more from the experience of the Japanese, who found that these were usually superficial except in the parts covered with clothing. There seems, too, no reason why men should not shift before action into sterilised, or, at all events, clean clothing.

An easily applied and satisfactory dressing for burns appears to be also very much a desideratum in naval warfare. The picric acid treatment suggests itself from its simplicity and the infrequency with which dressings have to be changed.

*Transport of Wounded.*—Until after the action, stretchers would be of little value except in the largest battleships and cruisers, on account of the obstructions in the shape of ammunition hoists and carriers, fire mains, hoses, and so on, and from the scarcity of bearers, who might also be required as fire parties or for other duties at any time. The Japanese, in their small ships at Yalu, found stretchers cumbrous, troublesome, and of little value, and relied entirely upon hand transport. An ambulance lift, of a type determined by the size and shape of the hatchway available, would, however, be useful in many ships, and would add greatly to the comfort of the wounded. A very efficient pattern in most cases is the combination stretcher and lift figured (see p. 455), which is cheap, light, and simple. With a number of these (and they can readily be made in the ship), the delay and discomfort of shifting from stretcher to lift and *vice versâ* is avoided. It is difficult to see how men wounded by a stray shot or shell fragment in the casemates, which are necessarily closed in action, are to be got out unless the plan is adopted of fitting, as in the *Magnificent*, a special whip and slings and lowering them down the ammunition hoists, whenever these are not required for ammunition. This is rapid and ensures protection, but the difficulties with a badly wounded man would be great. Were a shell to explode, however, in such a confined space, there would probably be no one to lower.

*Hospital Ships.*—The value of hospital ships to accompany fleets in time of war is so universally conceded that it seems unnecessary to do more than refer to it. It must, however, be remembered that on foreign stations most ships would even then have to rely upon their own resources.

*Training.*

Careful training in ambulance drill is as much a necessity as gunnery, in the opinion of the writer, for every officer and man in the navy. It is essential that they, who are liable to as great a degree as any section of the population to injury where no medical aid is near, should be able to afford temporary assistance to one another. Special attention should be paid to the application of first field dressings, the improvising of supports for fractured limbs out of materials likely to be at hand, and the methods of hand transport. In practising the latter the routes available in action should alone be used.

If this training were properly carried out, part of each gun's crew as their gun came out of action, provided they were not required elsewhere, could apply temporary dressings or splints and in other ways promote the comfort and safety of their wounded comrades, for whom very likely no other aid would at the time be available.

Drill with stretchers and ambulance lifts should not be forgotten; and the nursing staff, when their ship is "prepared for battle," should have an opportunity of preparing, as completely as possible, the alternative operating rooms. They should also be constantly exercised in removing and storing the operating room fittings, and afterwards in fitting up some part of the ship with them, special regard being paid to the rapidity of the latter evolution.

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## FLOATING HOSPITALS.

By Inspector-General BELGRAVE NINNIS, M.D., R.N. (Retired).

I THINK I may safely assert without fear of contradiction that the retention of the sick and wounded on board a modern fighting ship in war time is not only most undesirable for the sound and the wounded, the sick and the healthy, but is likewise insanitary and depressing. The means at the disposal of the naval medical officer for the up-to-date treatment of his patients cannot possibly be provided in a fighting ship, natural light and fresh air in sufficient quantity being obtained above the water line only, and such position during action would almost certainly be swept by the enemy's fire. To meet this difficulty it has been suggested that each fleet or squadron should be accompanied by one or more vessels devoted entirely to the care and treatment of the sick, and it is of the construction and internal arrangements of such vessels that I wish to say a few words. In order that the greatest advantages should accrue to the sick and wounded, I consider it essential that

1. These vessels should be floating hospitals, the treatment and care of the sick and wounded being their sole and only use.

2. That the arrangements should be such as to embody all the essentials of a small but perfectly equipped land hospital, suitable for both medical and surgical cases, infectious fevers excepted.

3. That the propelling power, whilst sufficient to enable the vessel to keep within signalling distance of the fleet to which it should be attached, should be so arranged as to leave ample space for the wards.

This last suggestion may contain an impossibility. I am not sufficiently acquainted with the subject of locomotion to decide. If so, let us get as near the impossible as we can.

*Size.*—The tonnage of such a ship should be sufficient to allow of:

(*a*) A lower deck, partially below the water (if unavoidable), but with ports each having a circular scuttle in its centre easily opened and closed.

(*b*) A middle deck, ports and scuttles as above, but larger.

(*c*) Main deck, ditto.

(*d*) Upper deck.

*Construction.*—The vessel should be of steel or iron, wood-cased on the outside to protect from heating by the sun. There should be one or more large doors in the ship's side, on each side, similar to baggage ports in passenger steamers. Each of these ports should open on to a platform outside the ship, which platform should be arranged in such a way as to be capable of being hauled up against the ship's side when the weather required it, but when possible should be utilised to give the patients on each deck an airing outside and away from the ship. They would likewise be useful in embarking invalids, especially cases in cots. Each deck, or at least such part of it as was set apart for the sick below, should be separate and distinct from the one above and below it that is, the middle deck should not communicate in any way with the main or with the lower decks.

To ensure complete and thorough ventilation of the middle and lower decks, a series of shafts should be arranged, extending some from the lower deck and some from the middle deck, on to and about 2 to 4 feet above the level of the upper deck. These shafts should extend along the length of the wards fore and aft; should be each about 18 in. to 2 ft. from side to side, and about 6 ft. fore and aft, but not touching one another—for instance, No. 1 (aft) should terminate overhead on the lower deck, No. 2 (working forward) should terminate overhead in the middle deck, and so on, each alternate shaft ventilating the lower, and the next the middle deck.

The main deck would be thoroughly ventilated by similar shafts, one on either side of these, and close alongside them, but narrower, say about 9 inches from side to side, extending the whole length overhead of the ward below and projecting about a foot above the upper deck.

Each deck or ward should be approached from the upper deck by a separate "companion." Main and middle deck wards should have their own w.c. and lavatories. The space devoted to these purposes should extend across the deck immediately outside the ward and have the "companion" in it.

These w.c.'s should be against the ship side, and built with air-tight bulkheads and doors. Ventilation should be by free currents of air entering from the ship's side, and passing out through a pipe in the roof of each and thence into the nearest mast, which masts should be of metal and hollow.

Wards should extend across the ship, so as to have a through draught and through light.

Beds or cots, swinging by short slings, but capable of being fixed by means of iron stays, metal stanchions head and foot supporting the whole.

Operation wards should be on the upper deck and immediately adjoining a lift well, which should pass direct into the surgical ward. This lift should be of sufficient area to contain a mattress of the same size as those in use in the ward and also an attendant. In other words, the lift should be about 7 ft. by 4 ft.

Special research room should be in the immediate neighbourhood of the operation ward, but separated from it by a space; for instance, operation ward on one side of the upper deck, and special research ward on the other, and, opposite, with the lift well between them.

In the short time allowed for the reading of papers only a very superficial description of this subject is possible. I should therefore wish to emphasise the points which I consider of supreme importance.

1. That the ship should be of metal, cased on the outside with wood, thus combining the cleanliness of metal with the coolness and non-conductability of wood, and that there should be no possibility of communication between the bilge and the wards.

2. That the wards should be absolutely without communication one with the other, and that each should have direct and independent air communication with the upper deck.

3. That the portion of the main and middle decks appropriated to the waterclosets should extend across the deck, so that a through current of air could be secured.

4. That the watercloset when in use should be absolutely cut off from this space.

5. That the platforms fitted outside the main and middle decks be of such a size as to accommodate a stretcher or lounge, and the parts leading on to them be in such a position as to give easy passage to a stretcher or carrying chair.

It is most essential that in these ships lighting should be by electricity, as the power required for producing this would be utilised for various other purposes, as is done in our larger passenger steamers.

Fleet Surgeon Vasey said that most of the arrangements invented for the removal of wounded on board ships appeared to him to have the defect that they were only useful for certain injuries. Those in the form of a chair could not be used for cases, say, of fractured pelvis; Fleet Surgeon Kirker's sleigh did not appear to have this defect.

Inspector-General Turnbull referred to the difficulty of providing an efficient equipment of surgical dressings, appliances and splints in peace time for the requirements of a naval action which might occur with brief or no warning; in his experience this was on a too limited scale, and the equipment was far from being up to date, though much had been done to remedy this under recent naval administration and progress he understood is being made. He deprecated too great elaboration of detail in the arrangements of hospital ships; he advocated the provision of good ventilation and the facility for segregating infectious or other special cases; he urged that cleanliness and purity were the essence of antiseptic surgery, and that could be arrived at by comparatively simple measures as Lord Lister lately represented.

Surgeon-General O'Dwyer remarked that he would have liked to have heard whether in a modern man-of-war, and considering demands of antiseptic surgery it was possible or fair to the wounded to attempt to treat them aboard. He asked if hospital ships were protected by the Geneva Convention.

Dr. Leigh Canney remarked that in such a question as the actual bringing the wounded man to the surgeon's hands—the one important question to a naval surgeon—it seemed extraordinary that Fleet Surgeon Kirker's invention should have been put aside for fifteen years, only to be tried long after its practical adoption by the French and Chilian navies. Was there no permanent naval surgeons' committee where such inventions could be tested at once, and official reasons for rejection sent to the inventor, or a request for improvement on certain points?

Fleet Surgeon Kirker, in reply, said it would be the endeavour to evacuate the wounded after an action, but in all probability the numbers would be so great that hospital ships would not be able to receive them all. Therefore some would have to be treated on board their own ships, and some place to carry out this treatment with a reasonable chance of success was necessary.

## HEALTHFULNESS OF MODERN WARSHIPS.

By Staff Surgeon W. E. Home, R.N., M.D., B.Sc.Edin.

So far as I have been able to discover, no writer since Fonssagrives has discussed this subject, and as even the *Archives de Médecine Navale* fail us, all the information I shall be able to give is extracted from the annual Admiralty Report on the Health of the Navy.

In this official Blue Book tables are published, showing for each ship her complement, the number of men sick, daily, the number of men who for disease or injury have been reported sick, the number sent to hospital, those who have been invalided or who have died. If we had, in addition, the number of days her men had spent in hospital, we could draw up for each ship a statement of the total amount of sickness to be debited to her. The want of these figures is a blemish, but even with them it would be vain to compare very minutely the figures of sickness in one ship with those shown by another, as we are not informed of the diseases which occur in the several ships. Venereal disease causes about one-fourth of the illness in the service, and its amount varies much in different ships, with their employments and the ports in which they have been lying, and further one-seventh of the illness is due to injuries, so that a great deal might have to be counted off before we got down to the corrected statistic indicating the healthiness of each ship. If, however, we compare not single ships but groups whose employments have been similar, these uncertainties are probably neutralised for us, and we may usefully draw conclusions as to the healthiness of the classes of ships considered.

Luckily for our investigation we have still in the navy opportunity to observe the improvement in health which has resulted from the substitution of iron for wood in the building of vessels. In the training service we have now two old ironclads doing duty along with old wooden ships. In Table I. I have given detailed tables from the Blue Books for 1898 and 1899 (the two latest); here we may say briefly that:

| In 1898: | Wooden Ships. | Iron Ships. |
|---|---|---|
| Total daily average on board ... ... | 5,030 | 1,180 |
| Per 1,000: Daily sick list ... ... ... | 18.2 | 12.4 |
| Per 1,000: Cases of illness, etc., in the year ... ... ... ... | 1,099 | 902 |
| Per 1,000: Sent to hospital ... | 435 | 331 |
| Per 1,000: Invalided ... ... ... ... | 31½ | 29 |
| Per 1,000: Dead ... ... ... ... | [illegible] | [illegible] |

| In 1899: | | Wooden Ships. | | Iron Ships. |
|---|---|---|---|---|
| Total daily average on board ... ... | | 5,070 | ..... | 985 |
| Per 1,000 | Daily sick list ... ... ... | 20.8 | ..... | 13.5 |
| | Cases of illness, etc., in the year ... ... ... ... | 1,181 | ..... | 833 |
| | Sent to hospital... ... ... | 481 | ..... | 338 |
| | Invalided ... ... ... ... | 47½ | ..... | 39½ |
| | Dead ... ... ... ... | 8 | ..... | 3 |

(In 1899 the returns from the *Minotaur*, one of the two iron ships, are reported defective, but as the total daily average is thus reduced, I think the proportions per 1,000 are not much affected.)

From these figures it is evident that in exchanging iron ships for wooden, we have gained health and saved great waste of men from the service by invaliding and death, the improvement being I suppose due, as pointed out by Fonssagrives, to the greater cubic space per man in the iron ship with high "'tween decks," and to the greater dryness and better lighting and ventilation of the newer ships, with more portholes or scuttles, and fewer decks superimposed on one another.

I have shown that the earliest iron ships are healthier than the wooden ships that preceded them. I have at hand the Blue Book for 1887, in which the next succeeding class, central battery ironclads appear, in the Channel Squadron, healthier than their immediate predecessors.

| Channel Fleet, 1887: | | *Minotaur*, etc. | *Iron Duke*, etc. |
|---|---|---|---|
| Total daily average on board ... ... ... ... | | 1,565 | 1,825 |
| Per 1,000 | Daily sick list ... ... ... ... ... | 31 | 23 |
| | Cases of illness, etc., for the year ... | 907 | 851 |
| | Sent to hospital ... ... ... ... | 158 | 158 |
| | Invalided ... ... ... ... ... ... | 23 | 14 |
| | Dead ... ... ... ... ... ... ... | 4 | 3 |

These central battery ironclads had high sides, several decks, many guns, and large complements; they were followed by the turret ships (or "flat irons") as the *Dreadnought*, with low freeboard, few guns, and large displacement, affording consequently plenty of room to their smaller complement. The *Alexandra* central battery ship carried 750 men; the *Dreadnought*, slightly larger, had 450. It is to this greater cubic space and to their better ventilation from having fewer decks that I ascribe their greater freedom from Malta fever shown in Table III. The ships with most cases of this fever are noted from year to year in the Blue Book, and it will be observed that the percentage of cases occurring is much higher in the central battery ships—10 per cent. is common, and even 30 per cent. occurred; 20 per cent. is once returned by the *Dreadnought*, but generally the worst turret ship has far fewer cases than that.

After 1890, turret ships were being replaced in the Mediterranean by the first-class battleships with secondary batteries, ships of the same or larger displacement, with far more guns and men, and the men berthed deeper down in the ships, though they were improved by more complete artificial ventilation. Of these, the *Hood* suffered most from Malta fever, but in her worst year she had only 11 per cent. attacked.

The ships in the Channel now are of type very similar to the *Hood*, and it will be of interest to put side by side the health statistics of the squadron in 1877 when composed of old ironclads, and those of 1899 when there were only the new first-class battleships. A minute comparison will only mislead, for though the daily sick list from injuries remains sensibly constant on the Home Station in both years the daily sick list from veneral disease has been reduced by 5 men per thousand, and that from alcoholism has also decreased. Still, taken as a whole, the statistics clearly show improvement. (See Table II).

| Channel Fleet: | | 1887. | 1899. |
|---|---|---|---|
| Total daily average on board ... ... ... | | 3,390 | 6,100 |
| Per 1,000 | Daily sick list ... ... ... ... ... | 26½ | 20 |
| | Cases of illness, &c., in the year ... ... | 877 | 834 |
| | Sent to hospital ... ... ... ... ... | 158 | 89 |
| | Invalided ... ... ... ... ... ... | 18 | 19⅓ |
| | Dead ... ... ... ... ... ... ... | 3½ | 3 |

It is easier to keep ships of our navy healthy than those of other Powers, for our authorities have been less anxious to crowd guns into ships, guns which require additional complement as they become more numerous; hence our ships are less crowded with men, and are more healthy than those of foreign nations.

TABLE I.—*Training Service.*

| | Average Complement Corrected for Time. | Gross Totals. Yearly. Daily Number Sick. | Fresh Cases. | Sent to Hospital. | Invalided. | Dead. | Per 1,000. Daily Sick. | Yearly. Cases. | Sent to Hospital. | Invalided. | Dead. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1898. | | | | | | | | | | | |
| *Wooden ships:* | | | | | | | | | | | |
| Boscawen ... | 700 | 7.27 | 605 | 186 | 22 | 3 | 10.38 | 856 | 266 | 31 | 4 |
| Caledonia ... | 700 | 35.92 | 1,094 | 4 | 28 | 4 | 51.31 | 1,563 | 6 | 40 | 6 |
| Ganges ... ... | 545 | 25.95 | 767 | 52 | 2 | 6 | 47.61 | 1,407 | 95 | 3½ | 11 |
| Impregnable ... | 1,435 | 4.27 | 1,055 | 930 | 74 | 9 | 2.97 | 735 | 648 | 51 | 6 |
| Lion ... ... | 930 | 16.50 | 1,390 | 440 | 3 | 5 | 17.74 | 1,495 | 473 | 3 | 5 |
| St. Vincent ... | 720 | 1.64 | 619 | 570 | 30 | 1 | 2.27 | 860 | 792 | 41 | 1 |
| Total wooden ships ... ... | 5,030 | 91.55 | 5,530 | 2,182 | 159 | 28 | 18.20 | 1,099 | 435 | 31½ | 5.56 |
| *Iron ships:* | | | | | | | | | | | |
| Black Prince ... | 590 | 3.79 | 361 | 193 | 21 | 1 | 6.42 | 612 | 327 | 36 | 2 |
| Minotaur ... | 590 | 10.83 | 704 | 198 | 13 | 2 | 18.35 | 1,192 | 336 | 22 | 3 |
| Total iron ships ... | 1,180 | 14.62 | 1,065 | 391 | 34 | 3 | 12.40 | 902 | 331 | 29 | 2.5 |
| 1899. | | | | | | | | | | | |
| *Wooden ships:* | | | | | | | | | | | |
| Boscawen ... | 545 | 7.38 | 518 | 131 | 8 | — | 13.54 | 950 | 240 | 15 | — |
| Caledonia ... | 785 | 39.14 | 550 | 5 | 41 | 9 | 49.85 | 700 | 6 | 51 | 11 |
| Ganges ... ... | 500 | 19.60 | 615 | 65 | 14 | 6 | 39.20 | 1,300 | 130 | 28 | 12 |
| Impregnable ... | 1,540 | 13.23 | 1,670 | 915 | 74 | 9 | 8.59 | 1,084 | 594 | 48 | 6 |
| Lion ... ... | 930 | 18.21 | 1,679 | 417 | 72 | 7 | 19.58 | 1,800 | 448 | 77 | 7 |
| St. Vincent ... | 770 | 7.82 | 1,072 | 906 | 32 | 10 | 10.15 | 1,322 | 1178 | 41 | 13 |
| Total wooden ships ... | 5,070 | 105.38 | 6,104 | 2,439 | 241 | 41 | 20.80 | 1,204 | 481 | 47½ | 8.1 |
| *Iron ships:* | | | | | | | | | | | |
| Black Prince ... | 650 | 5.60 | 413 | 231 | 25 | 1 | 8.61 | 635 | 355 | 38 | 1½ |
| Minotaur ... | 335 | 7.83 | 407 | 102 | 14 | 2 | 23.37 | 1,215 | 305 | 42 | 6 |
| Total iron ships ... | 985 | 13.43 | 820 | 333 | 39 | 3 | 13.50 | 833 | 338 | 39½ | 3 |

TABLE II.—*Channel Squadron 1887 and 1899.*

| | Average Complement Corrected for Time. | Gross Totals. Yearly. Daily Number Sick. | Fresh Cases. | Sent to Hospital. | Invalided. | Dead. | Per 1,000. Daily Sick. | Yearly. Cases. | Sent to Hospital. | Invalided. | Dead. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1887. | | | | | | | | | | | |
| Agincourt ... | 730 | 21.45 | 770 | 136 | 23 | 2 | 29.38 | 1,055 | 186 | 31 | 2⅘ |
| Minotaur ... | 750 | 16.96 | 557 | 90 | 14 | 4 | 20.31 | 743 | 120 | 19 | 5 |
| Northumberland ... ... | 85 | 10.05 | 92 | 22 | — | — | 19.45 | 1,083 | | | |
| Sum older ships ... | 1,565 | 48.46 | 1,419 | 248 | 37 | 6 | 31.00 | 907 | 158 | 23 | 4 |
| Iron Duke ... | 525 | 14.47 | 538 | 67 | 7 | 1 | 27.56 | 1,025 | 102 | 14 | 2 |
| Monarch ... ... | 550 | 12.79 | 490 | 97 | 12 | 2 | 23.25 | 898 | 176 | 22 | 3⅗ |
| Sultan ... ... | 750 | 14.46 | 526 | 124 | 6 | 2 | 19.28 | 700 | 164 | 8 | 2⅔ |
| Sum newer ships... | 1,825 | 41.72 | 1,554 | 288 | 25 | 5 | 22.85 | 851 | 158 | 14 | 3 |
| Total of Fleet ... | 3,390 | 90.18 | 2,973 | 536 | 62 | 11 | 26.60 | 877 | 158 | 18 | 3⅓ |
| 1899. | | | | | | | | | | | |
| Hannibal... ... | 785 | 15.84 | 682 | 120 | 16 | 4 | 20.17 | 600 | 153 | 20 | 5 |
| Jupiter ... ... | 810 | 13.96 | 545 | 33 | 12 | 1 | 17.23 | 673 | 40 | 14 | 1⅓ |
| Magnificent ... | 775 | 14.41 | 588 | 64 | 22 | 2 | 18.59 | 764 | 83 | 28 | 2⅗ |
| Majestic ... ... | 785 | 13.37 | 498 | 54 | 12 | 2 | 17.03 | 634 | 63 | 15 | 2⅔ |
| Mars ... ... | 705 | 18.63 | 751 | 77 | 14 | 2 | 26.42 | 1,072 | 110 | 20 | 3 |
| Prince George ... | 740 | 16.22 | 602 | 55 | 13 | 4 | 21.91 | 814 | 74 | 17 | 5 |
| Repulse ... ... | 760 | 14.96 | 593 | 80 | 18 | 3 | 19.68 | 780 | 105 | 23 | 4 |
| Resolution ... | 740 | 15.87 | 848 | 65 | 13 | 1 | 21.44 | 1,146 | 88 | 17 | 1⅓ |
| Total of Fleet ... | 6,100 | 123.26 | 5,107 | 548 | 120 | 19 | 20.15 | 834 | 89 | 19½ | 3 |

Table III.—*Yearly Maxima of Malta Fever (Percentages).*

| | Central Battery Ships. | | Turret Ships. | | Secondary Battery Ships. | |
|---|---|---|---|---|---|---|
| 1882 | Monarch ... ... | 30 | | | | |
| | Superb ... ... | 20 | | | | |
| 1883 | | | Inflexible ... | 6 | | |
| 1884 | Superb ... ... | 20 | | | | |
| | Alexandra ... | 12 | | | | |
| 1885 | Alexandra ... | 12 | | | | |
| | Téméraire ... | 10 | | | | |
| 1886 | Alexandra ... | 10 | | | | |
| 1887 | Alexandra ... | 10 | Dreadnought ... | 2½ | | |
| 1888 | [Alexandra ... | 4½] | | | | |
| 1889 | | | Dreadnought ... | 3 | | |
| 1890 | | | Agamemnon ... | 10 | | |
| 1891 | | | Dreadnought ... | 20 | Tratalgar ... ... | 15 |
| 1892 | | | Dreadnought ... | 7 | | |
| 1893 | | | | | Nile ... ... ... | 6 |
| 1894 | | | | | Anson ... ... ... | 15 |
| | | | | | Hood ... ... ... | 8 |
| 1895 | | | | | Collingwood ... | 9½ |
| | | | | | Hood ... ... ... | 8 |
| 1806 | | | | | Howe ... ... ... | 7½ |
| | | | | | Hood ... ... ... | 6 |
| 1897 | | | | | Hood ... ... ... | 11 |
| | | | | | Camperdown ... | 9 |
| 1898 | | | | | Hood ... ... ... | 5 |
| 1899 | *No longer reported in Blue Book.* | | | | | |

In order to secure that your ship shall be healthy she must:—

1. Have certainly not less than 120 cubic feet of space for each man and more in the tropics.

2. Have uptake ventilators from every compartment, opening as near the top as possible. These should be so constructed as to be capable of being cleaned by a brush pulled through.

3. Cowls and air-shafts are needed to be supplemented in all favourable weather by a windsail for each hatchway and wind scoops for each port or scuttle in the side. Artificial ventilation is required for every space in which men live (only to be used on the main deck in bad weather).

4. She should be warmed and kept dry by steam radiators. In 1888, the *Alexandra* having been fitted with electric light and being now kept drier by the heat radiated from the boiler always alight, had less than half as many cases of Malta fever as she had had in each of the four preceding years.

5. Whenever decks are washed, the last washing over should be done with a 1 in 1,000 solution of perchloride of mercury or other antiseptic. The mess tables and stools are similarly washed. This reduces the liability of casual wounds to inflame. I would like also to spray the beams overhead with formalin solution once a week in order to diminish the occurrence of sore throats and other septic diseases. But I quite believe the best general antiseptic on board a ship to be fresh dry air in plenty.

6. There should be a drying room for the wet clothes and bedding of the ship's company.

Fleet Surgeon Kirker said that owing to the conditions which existed on board men-of-war it was impossible to give men the desirable amount of air space or air supply. It was therefore necessary that most careful attention should be paid to sanitary matters on board, for a small amount of preventive work was worth to the service more than much curative. It was found in the days of wooden ships that those with small complements were more healthy than those with large, and it would probably always be so. There were several sanitary improvements which one would like to see in the navy, and the most liberal supply of fresh air possible was the most important of them.

Donation to the Royal Free Hospital.—The Committee of Management of this hospital has received a donation of £100 from Mr. Peregrine Purvis.

Wallingford Cottage Hospital.—A sum of £1,010 has been subscribed for the purpose of endowing a bed as a memorial in the Wallingford Cottage Hospital to the late Mrs. Helen Mary Wells who took an untiring interest in the above from its foundation in 1878 to the time of her death in September last.

## SOME REMARKS, BY WAY OF CONTRAST, ON WAR SURGERY, OLD AND NEW.

By Sir William MacCormac, Bart., K.C.B., K.C.V.O., M.A., M.Ch., LL.D., D.Sc.

On October 1st, 1856, Mr. M'Whinnie, assistant surgeon to St. Bartholomew's Hospital, delivered the introductory address at that Institution. In the course of it he referred to the Crimean War, and many of his remarks are applicable now. He said that, "although the military surgeon enjoys certain advantages which the events of the late war promise to render greater, we must not conceal the fact that military surgeons have not yet attained the position to which their varied acquirements, skill and devotion, fairly entitles them." Speaking of the return of the victorious regiments and the enthusiasm which accompanied their triumphal entry he called to mind the glorious part our own professional brethren had taken in the struggle, and that the surgeons had, as in preceding wars, distinguished themselves by their skill, devotion, bravery, and humanity. He quoted Colonel Ambert, a French colonel of dragoons, who had used in October, 1854, generous and eloquent words in describing the qualities of the medical officer. "In the hour after the battle he will be chief among the multitude, during the fight calm, when all around is agitated and disturbed. In an atmosphere of grape shot and smoke he must deny himself all emotion. The shrieks of the wounded, the booming of cannon, and the crash of shells, do not disturb him—all ranks appeal to him for help, and he gives it alike to the poor soldier or to the mighty general, to the fallen amongst the enemy, and the wounded of his own army."

"After the battle the General and his soldiers hear the shouts of triumph, but the surgeon has to listen to the groans of the sufferer; night comes on and all are asleep save him, awake amongst the wounded, and next day, exhausted with fatigue, he sets out again with his ambulance, giving hope to all, improvising a thousand methods, and supplying material means of aid by the power of his intelligence and skill. Honour then to him: his mission is a thousand times sacred."

"Fellow citizens, you who were so moved at the heart-rending sufferings of your soldiers in the East, the military surgeon has saved your sons, though he may himself have died at his post, and the heroism of science has equalled, if it has not surpassed, the bravery of the field of battle."

Mr. M'Whinnie pointed out that "from evidence given before Parliamentary committees, and other undeniable testimony, it was clearly shown that the blame attached to the medical department at the beginning of the Crimean campaign was undeserved, and had the hygienic measures suggested by its members been carried out the losses and sufferings of the army would not have been greater than those which attend the ordinary casualties of war, and that when the injunctions of our military brethren were attended to the health of our troops soon became most satisfactory."

Dr. Balfour—then of the Royal Military Asylum, Chelsea, whose authority is entitled to the greatest attention and respect—writes that "so far as I can learn from competent judges there has been an amount of good surgery, which surpassed the anticipations of even the best friends of the department, and I believe we are far ahead of the French army in that respect."

The wars which compare with that in South Africa in regard to length of the struggle, numbers of wounded, and strain upon the Army Medical Department are the Peninsular and Crimean wars, the American war of the Rebellion, and the Franco-German war.

Many lesser campaigns have intervened, such as the Egyptian and the Indian wars, and the struggle between China and Japan, but these are not epoch-making like the other great wars, and do not constitute milestones along the march of military medical progress. In considering this question, we must also remember there is much concerned beside the mere treatment of wounds. There is the organisation of the Medical Corps, the improvement in the means of transport of sick and wounded, the formation of hospitals, and the commissariat supply.

We scarcely remember it now, but chloroform was first

tested on a large scale in the field during the Crimean campaign, and its success was complete. Macleod says there was but one death which can fairly be said to have arisen from it. Baudens tells us that chloroform was administered some 25,000 times in the French army, and that no fatal case had occurred.

It was found even more precious in the field than in civil practice by relieving shock and permitting many primary amputations which could not otherwise be performed. Fewer assistants are required when it is employed, which materially adds to its value. Mr. Blenkins, of the Guards, remarks that without the aid of chloroform many severe operations could not have been undertaken or performed at all.

The next great war was that of the American Rebellion, and the records of its results are to be found in the monumental volumes issued from the Surgeon-General's office.

In the Austro-German war of 1866 antiseptic surgery had not been introduced, nor was it employed during the Franco-German war of 1870-71, except to a quite limited extent upon the German side.

The mortality after operation was then very great indeed on both sides, and especially in the French army. All kinds of infective diseases prevailed—septicæmia, pyæmia, and tetanus were common, most indeed of the operation cases died pyæmic, suppuration was universal, gangrene and secondary hæmorrhage were frequent. Wounds of large joints entailed fatal results, abdominal wounds were scarcely ever recovered from, and one-half or more of the cases of chest injuries died. Fractures of long bones were always very serious, especially those of femur: amputations were frequent, and attended by a large mortality; while excisions of joints, in the lower limb at all events, were most unsatisfactory, if performed as primary operations. A very large proportion of those who died on the field of battle, if not killed immediately, perished from hæmorrhage. Operations, however, were almost invariably performed with the assistance of chloroform, and an infinite amount of suffering was thus saved.

The large bullets of former campaigns, weighing often twice as much as those now in use, inflicted most extensive damage both on the soft parts and the bones, the comparative magnitude of the injury and the imperfect means of guarding against sepsis offer a sufficient explanation of the high rate of mortality.

In the war between Russia and Turkey a systematic attempt was first made by Professors Bergmann and Reyher to treat gunshot wounds of the knee antiseptically with very great and, at the time, astonishing success. In the campaign in Egypt in 1882 antiseptic methods were so effectively carried out that there was not throughout a single case of erysipelas, pyæmia, or septicæmia, or of any infective preventable disease.

I do not mean in this brief communication to enter into minute details or to give you many statistics—indeed, from South Africa there are as yet no complete ones available. I would only seek to indicate in a general way some of the improved conditions of modern warfare as exemplified in South Africa.

The use of chloroform was universal, and that not less blessed agent in relieving pain, morphine; in this way the detrimental influence of shock was much lessened. But shock is less severe in the case of the modern bullet than previously was the case, due no doubt to the different character of the wound.

The limited amount of local damage produced in most instances by the comparatively small and very swift Lee-Metford or Mauser bullet has impressed all observers. The normal external wound is circular, and quite small, like the end of an ordinary pencil, and it soon became sealed with a black scab of dried blood. The exit wound is often quite similar, or like a small slit, and closes in the same way. The soft parts and bone are damaged as a rule in a limited degree, and recovery generally took place rapidly and without complication.

The bullet seems to be itself aseptic; clothing is very seldom carried in with it; the bullet track behaves more like an incised wound than a contused one: the rapid manner in which the small external wounds seal up reduces the injury to the subcutaneous form, and the frequency of recovery is proportionately great.

The manner in which the bullet may traverse the abdomen, thorax, cranium, the great joints, and important viscera, not only without entailing a fatal result, but often producing only a minimum of constitutional or other disturbance, must be witnessed to be realised.

I was much impressed with the small number of cases of primary fatal hæmorrhage and the large number of traumatic aneurysms. The large vessels, even including the innominate artery, may be wounded by a bullet without causing fatal bleeding, and often with a surprisingly small amount of hæmorrhage either external or internal—a totally new experience.

In the Crimea and in the Franco-German war the estimated proportion of deaths from primary hæmorrhage on the field of battle was about 20 per cent., and it was thought beforehand that the small hardened bullet would probably greatly increase the number, but this is not true, and in South Africa and in the Cuban war death from this cause was found to be comparative rare. The same comparative infrequency may be stated in respect of secondary hæmorrhage.

Wounds of the blood vessels are generally followed by aneurysmal swellings sometimes arterial, more frequently arterio-venous. The treatment of these cases is difficult, and many I am convinced should if possible be left alone. Unless immediate interference is indicated by some urgency such as fresh hæmorrhage, pressure symptoms, or impending gangrene the longer the interval permitted before operation the better the prospect of ultimate success, besides, some cases get well spontaneously. In those operated upon the ligation of the vessels at the seat of injury remains for most cases the classic and safest treatment, but it is often attended by the greatest difficulties and often followed by gangrene.

The treatment of the larger proportion of Mauser wounds is generally of the expectant kind, and of none may this be more correctly stated than of wounds involving the abdominal cavity.

Many surgeons went to South Africa anticipating a large field of surgical enterprise in this direction, but I feel sure the surgical records of the campaign, when published, will prove the advantages of non-interference in the greater number of instances, and this has also been the experience of the American surgeons in the war with Spain where the weapons used were precisely similar. There all the abdominal cases but one operated on died, while many treated expectantly recovered, but the general mortality was as high as 70 per cent. of the total, while in the Civil War the mortality reached 87 per cent. The liver, kidneys, and spleen may be perforated and yet recovery ensue. The large intestine, and, I believe, the small intestine also, must have been frequently perforated without fatal consequences. The small perforation caused by the Mauser bullet and the frequently empty condition of the bowel are the principal factors to account for a non-fatal issue.

In every region of the body the percentage of cases terminating fatally is diminished. Formerly a gunshot fracture of the femur formed a serious menace to life, and determined not infrequently an immediate amputation. In the Civil War, of 6,576 fractures of the femur nearly 3,000 (2,923) were treated by primary amputation, and the mortality following the injury amounted to 50 per cent.

In the Spanish-American war, of 82 cases of gunshot of femur 6 only were amputated, while 74 were treated conservatively. We do not yet know the mortality results in South Africa, nor do I know of any uncomplicated case of gunshot fracture of the femur treated by primary amputation. I fancy there must have been very few. Recovery was looked upon as the ordinary result, although union was often considerably delayed, and the risk to life and limb was increased the higher up the fracture; while possibly 15 to 20 per cent. were amputated for various causes later on. I think the record of this war will show amazingly few primary amputations for injury, but a certain number had to be performed at a later period on account of septic conditions.

The way in which many perforating wounds of one side or both sides of the chest recovered was nothing short of marvellous. Very often the most trivial inconvenience was the result—trifling dyspnœa, perhaps, or hæmoptysis, which was

often absent and frequently insignificant, and complete recovery followed in a few days. In other cases there was more or less hæmothorax, and in a few pyothorax; what the ultimate mortality table may show we do not yet know, but it will not be very large. In the Franco-German war half the cases terminated fatally, and in the Civil War the mortality was as high as 62.6 per cent.

It may be taken as proved that a Mauser or Metford bullet may traverse the knee and other articulations and fracture the bones, entering into the joint without causing any risk to life or limb, or even any permanent disablement. The old difficulty as to amputation or resection did not arise, the treatment was expectant, suppuration was rare, and when passive movement was commenced sufficiently early excellent functional results followed.

In the sketch to which I have limited myself, I think enough has been said to show how completely the character of gunshot injuries is changed. Their severity is not only diminished, but also their relative frequency, so that the progressive improvement in lethal weapons does not appear to render the prosecution of war more difficult, or to render it impossible, as some have recently contended.

In the American Civil War 1 man was killed for every $4\frac{1}{2}$ wounded, while with the Mauser bullet the proportion of killed to wounded is 1 to $7\frac{1}{2}$. Only 6 to 8 per cent. of those wounded now die, whereas in the Civil War the percentage was $14\frac{1}{2}$; this is due, no doubt, to the altered character of the injury, and also, in no small measure, to improvements in the method of treatment.

It has often been forgotten what a complete change there is in the battles of this present war from any that have gone before. Stress is placed upon our losses, but they are almost insignificant in comparison with those of former times. In the Crimea they reached nearly half our strength. There was no trained transport corps, nor hospital service, nor adequate system for the care of the wounded on the battle field at the beginning of the war, and numbers died on board the ships transporting the sick and wounded to Scutari in consequence of the inadequate preparation, although it is a journey of only 36 hours.

Now the enemy is for the most part unseen, and the smokeless powder fails to give any sign of his whereabouts. At some of the earlier battles—that of Colenso, for instance—the Boers were invisible during the entire day; not a single Boer was seen by our men, and the result was that the enemy only lost 5 killed and 25 wounded; while on our side there were 1,100 casualties.

What a contrast is this to the early battles of the Franco-German war, with their brilliant cavalry charges, and their masses of men hurled at the objective, without heed of the loss incurred; they were literally decimated. At Gravelotte, on August 16th, 1870, each side had 16,000 men placed *hors de combat*. On the 18th, two days later, occurred the terrible struggle of St. Privat, where 120,000 French were pitted against 180,000 Germans. The artillery, the mitrailleuses, chassepots, and needleguns, plied against one another in the open. Five times Steinmetz's sharpshooters were driven back, and many corps lost half their officers. The Prussians were repeatedly repulsed with fearful loss, and at 7 in the evening Bazaine and his officers considered the field was won. But at 9 the Prussians again attacked, and in the early morning the Royal Guards advanced up the exposed slopes of St. Privat against Canrobert.

They assaulted one position after another in superb fashion, but the slaughter was dreadful; almost all the principal officers were struck down, the colours exchanged hands several times, and 160 German officers and 4,000 soldiers were laid low in the attempt. Nevertheless the Germans poured in regiment after regiment, 14 Saxon batteries of artillery were added to the ten Prussian ones, and, as the sun was setting, the Saxon regiments of the Guard, drums beating and trumpets calling, rushed at the double on Canrobert's forces; there was fighting in the streets, in the houses, in the cemetery, man to man with bayonet and butt end of musket, and the place was taken.

The French lost that day 12,000 men and the Germans more than 20,000, amongst them the flower of the army, for the Prussian Guard had 300 officers and 8,000 soldiers either wounded or killed. One of them was Langenbeck's son, who told me he had spent many long hours in search of him only to find him mortally wounded.

The Germans nearly lost the battle, and would certainly have lost had Bazaine come to the assistance of his colleague. He heard the guns, and was informed of the situation by Marshal Leboeuf, yet he never left his office at Plappeville. Soon afterwards Moltke's supreme knowledge shut him up helpless with 170,000 men in Metz, and a little later, on October 29th, Metz la Pucelle and all this great French army was forced to surrender.

In some of the great Napoleon's battles as many as 38 per cent. were disabled; at Waterloo the number was 24 per cent. At Koeniggratz, the bloodiest battle of the war of 1866, it was $7\frac{1}{2}$ per cent. At Mars le Tour it was 16 per cent., and at Sedan 12 per cent. I was there that day, September 1st, 1870, when the French lost 3,000 killed and 14,000 wounded—not very far short of our total loss for the entire period of the war in South Africa.

During twenty-one months of this war, from the beginning up to the end of June, 4,355 officers and men have been killed in action, 18,291 were wounded, and 1,493, or 8.1 per cent., of the wounded died.

Modern troops in the field are now supplied with a packet of antiseptic material called a "first field dressing." It is hermetically sealed, and carried in a special pocket in each soldier's jacket. If a surgeon be near, he applies the gauze contained in the packet to the wound, and fastens it on with the bandage supplied; or the wounded man himself does it, or his comrade for him, as every man is taught its use and application. It certainly helps somewhat, and comforts the wounded; but I do not myself much believe in its antiseptic adequacy, and it often slips out of place.

Later on the Roentgen rays are of great service; they localise the foreign body when lodged, and determine the extent and direction of a fracture. They should serve to abolish the use of the probe, which is a fertile cause of mischief and of needless pain and suffering.

Before the regimental system ceased to be each regiment had a surgeon-major and two assistant surgeons. In time of peace there was very little for them to do except to look after a few sick in the regimental hospital. In time of war they accompanied their regiments into action as at Waterloo and in the Crimea, and tended the wounded, often under fire. When the regiment moved on the wounded had perforce to be left behind to the chance care of such persons as could be found to look after them, and there was practically no organised system of transport, field hospitals, and bearer companies.

The organisation of the transport of wounded from the field to the field hospital, and thence to the stationary and base hospitals, is now very complete, and worked well in South Africa. Formerly the wounded might have to lie for days untended, now they are looked after with the least possible delay, and passed along the continuous relief chain from the front to the base with a minimum of hardship and delay. I myself saw many who had been exposed after Sedan for three or four days, and some were even longer, without any succour.

The hospital ships and hospital trains are comparatively new departures, and of immense value in modern warfare. The ships were, I consider, something as near perfection as anything human can be, and the hospital trains did splendid work. One officer I knew—Major Brazier-Creagh—lived for twelve months in one of these trains, almost constantly on the move. During the period of twelve months and six weeks that Major Brazier-Creagh commanded this train he conveyed 16,485 officers and men from the battlefields and along the lines of communication, covering a distance of 34,473 miles. The train was several times under fire, and was shelled on two occasions. It was also in collision, and more than once in imminent risk of being wrecked by the Boers: and the Princess Christian Train made 102 journeys, carried 7,000 patients, and traversed over 30,000 miles up to June last, and is still at work with the same staff of surgeons and nurses on board as at the beginning.

At the battle of Colenso, before the firing had ceased, a hospital train was loaded with 120 wounded men, every one of whom had been previously dressed and otherwise attended to by the bearer companies. This train, with its occupants

lying comfortably in their cots, was soon speeding on its way to the general hospital at Maritzburg. A few days later these and other wounded men were sent on to one of the hospital ships, provided with every medical and surgical requirement and luxury, awaiting their arrival at Durban. Many thus found themselves aboard ship, in a swinging cot, in the fresh sea air, a couple of days after they had been wounded some 150 miles inland. What a contrast to the incidents which took place in the Crimea and on some battlefields in India, where the wounded had often to be left for days upon the field, being frequently plundered and sometimes killed by murderous thieves amongst the camp followers!

Dr. FARQUHARSON, M.P., congratulated the Section on having had the opportunity of hearing from a surgeon of Sir William MacCormac's unique and varied experience the results of military surgery in South Africa, in comparison with those in previous campaigns. His address formed a complete and forcible vindication of the Army Medical Department and their admirable work in South Africa under conditions of exceptional difficulty and danger, and at times when the society globe trotters, who afterwards posed as critics, were comfortably in bed after a good dinner. This work had been insufficiently appreciated, and the Department had felt rather strongly that their proceedings had been specially subjected to hostile criticism, and that it was thought necessary to appoint a commission to make inquiries, whilst the purely military side of the campaign had hitherto escaped hostile comment and investigation. The Commission was composed of able and trustworthy men, who took a calm, judicial, and dispassionate review of the situation, and it was unjust, cruel, and even libellous to characterise their report as a whitewashing one. Reading between as well as on the lines, they found some emphatic condemnation of the insufficient appreciation by the Government of the difficulties of the situation, but at the same time they praised highly the skill, devotion, and humanity shown by the army doctors under conditions of absolutely unprecedented difficulty. Undermanned as they were, compelled to attend vast numbers of sick and hurt, encountering overwhelming difficulties of transport and hospital accommodation they still attained results unknown in previous warfare. The climate had something to do with this, as well as the Mauser bullet, but much was due to the early antiseptic dressing on the field, as well as to the skill and care with which the wounded were afterwards treated.

Fleet Surgeon G. KIRKER, R.N., said he had listened with great pleasure to the very interesting and instructive address of his distinguished countryman and townsman, Sir William MacCormac. He did not propose to refer to Sir William MacCormac's paper further than to observe that it showed the great difficulties which the R.A.M.C. had to contend with and the splendid results which in spite of these difficulties they achieved. With the permission of the Section he wished to refer to a somewhat personal matter in connection with the nature of modern small-bore bullet wounds, a subject which Sir William MacCormac shortly treated. Through Sir William MacCormac's instrumentality he had the opportunity of observing bullet wounds in the Russo-Turkish war of 1877-78, and he presumed to regard himself as the prophet of the humane character of modern bullet sounds of which they heard so much now. In Turkey he saw compound fractures of the thigh which healed without suppuration, perforations of the knee-joint which healed without trouble, and cases of penetration of the chest from side to side which recovered without a bad symptom. When he returned home he made experiments on the subject of rifle bullet wounds, and based on these observations he brought forward the then new doctrine that rifle bullet wounds were less severe than round bullet wounds, and would be the more so the more their peculiar characters—especially smallness of diameter and hardness—were accentuated. He also pointed out that the splendid results, especially in the treatment of penetrating wounds of the knee-joint in the hands of Dr. Reyher, which were attributed to antiseptic treatment, were to a great extent probably due to their being produced by rifle bullets. A similar remark had recently been made by surgeons who had been out in South Africa, and several characteristics of small-bore rifle wounds had been brought forward in connection with the South African war which he brought forward twenty years ago. His papers on the subject were one in the Transactions of the International Medical Congress of London, 1881, and another read at the meeting of the British Medical Association in Belfast in 1884 and printed in the BRITISH MEDICAL JOURNAL in the following September.

Surgeon-General O'DWYER pointed out that with a force extended over a frontage of three miles, as was the case at Waterloo, it was much more easy to remove the wounded promptly than when they are scattered over an advance extending over twenty miles—and Lord Roberts informed the troops at Bisley the other day that future wars against troops armed with modern rifles must be in the very extended formation. It would require a great increase of medical *personnel* as well as of the transport for medical purposes. Surgeon-General O'Dwyer fully corroborated Sir Wm. MacCormac's experience as to the benign character of the modern small-bore bullet. He also pointed out the difficulties the medical service had to contend with in improvising *personnel* and equipment only intended to be sufficient for a force of 70,000 men to suffice for a force of 200,000, for it appeared from the evidence given by the Chief Ordnance Officer at Woolwich Arsenal as given before Mr. Justice Romer's Committee that after the hospital equipment for the first two army corps 70,000 men had been despatched, only one general hospital and three stationary hospitals remained in store to meet the requirements of the remaining 130,000 men added to the South African field army. He concluded by thanking Sir Wm. MacCormac for his interesting paper and from the deductions from the war which would be treasured up by those who had to do with wounded men.

Surgeon-General HAMILTON commented on the various forms of bullet that had been in use in the British army. Commencing with the original spherical, and passing on to the Minié, the Enfield, the Snider, with its expanding, indeed almost explosive bullet; the Martini, and finally the Lee-Enfield of 0.303 bore. He alluded to the great penetration of the present bullet, deprecating in the strongest terms the use of expanding bullets, and proposed a motion on the subject.

Surgeon-Major POOLE said his experience of the South African war had been gathered from his connection with the Soldiers' Help Society, and pointed out that the worst cases of injury had been from the use of explosive bullets: the present bullet was comparatively harmless—men coming to his study for help to work who had had a bullet entering one side of the head behind the ear and passing out at the right eye, whose appearance and behaviour had been that of happy individuals.

Surgeon-General HARVEY (Director-General I.M.S.) thought that in justice to the Government of India he should mention that the first field dressing had been used in all recent Indian campaigns. The surgical results of these campaigns had been excellent: in the second Mirangui expedition of 1891 less than 3 per cent. of the wounded had died, and the proportion of deaths among the wounded in the Tirah campaign was very small. He entirely agreed that in fighting with a civilised enemy the use of expanding bullets should be absolutely prohibited, but in the case of savage foes who were determined to kill their enemy though they died for it, the case was different. A fanatical Ghazi was not checked by the modern bullet, which went through him like a knitting-needle through a pat of butter, and it seemed to him quite legitimate to stop him by any means necessary, including the Dum-dum bullet. It was false humanity to allow our own men to be killed rather than take means to effectually prevent this by disabling the enemy.

Mr. J. W. SMITH (Manchester) said that from his experience in the South African campaign he wished to support the conclusion enunciated in the paper. He regarded the first field-dressing as somewhat ineffectual either as an aseptic or antiseptic agent, and attributed the aseptic course of wounds rather to the nature of the wound and atmospheric conditions than to the dressing. Some better means of fixing the dressing should be devised.

[Surgeon-General Harvey's observations on the advantages of the Dum-dum bullet in war with savage and fanatical foes were approved by the Section, and Surgeon-General Hamilton's motion deprecating such bullets was not entertained.]

## THE THEORY OF AIRBORNE TYPHOID IN ARMIES.

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Outside a few laboratory experiments, the great natural experiments upon which military medical authorities rely for demonstration of this theory are to be found amongst the outbreaks of enteric at stations in India, South Africa, and Egypt.

I propose, therefore, in this paper to consider:

1. The conditions under which typhoid originates and spreads in armies in India, South Africa, and Egypt.

### India.

The strength of the British Army in India averages about 66,000.

Enteric during the period 1896-98 caused every second death amongst soldiers in India instead of 1 in every 120 as at home.

*The Typhoid Avenues in India.*

1. *Water.*—The general water supplies of India in nearly every case are open to suspicion of contamination or pollution. Many actually contain the typhoid bacillus. The natives are subjects of typhoid fever to a larger extent than formerly supposed. Most of the rivers are polluted by man.

The typhoid bacillus, besides being found at Agra, was also found in 1897 at Lucknow, at Meerut, at Cherat, at Dagshai, and at Quetta. In 1898 it was found at Meerut, Bangalore, and at Cawnpore.

*Contamination.*—Human excrement contaminates the municipal water at Agra, Mhow, Dagshai, and Nasirabad. At Lucknow, Peshawar, Umballa, Poona, Secunderabad, Cherat, Ahmednagar, Jhansi, and Ranikhet, the water supply was contaminated. At all the above stations epidemics varying from 30 to 230 cases occur year after year.

*Mussacks and Pakhals.*—Although they have been condemned, these filthy leathern vessels were the supposed cause at least of the Cherat epidemic in 1898.

2. *Milk*, adulterated by natives in the regimental dairies with foul water, caused the Cherat epidemic in 1897, as we have seen. To a like cause, also, the Peshawar epidemic is attributed in 1898. From Mhow in 1898 it is reported that "the milk and butter almost entirely from the bazaars should be condemned as unfit." The Kasauli, Subathu, Jntogh, and Rawal Pindi epidemics of 1899, and Lucknow (1898) are also attributed to native-supplied milk.

3. *Bazaars.*—The bazaars are stated to be the cause of the epidemics at Rawal Pindi, Dagshai, Quetta, and Ahmednagar in 1897, and fifteen stations attribute their epidemics in 1898 to the same cause in whole or in part. These bazaars are in a very insanitary condition; they supply filthy aërated waters, known largely to contain typhoid. Their milk and butter and fresh vegetables are all infected and sold largely to regiments or individual soldiers. These bazaars are frequented largely day and night by the men.

4. *Native cooks*, often working with impure water and introducing filthy methods, is an admitted avenue of enteric.

5. The following stations attributed their epidemics in whole or in part to airborne typhoid: Kailana, Quetta, Khyber, Chakrata, Bangalore, Mhow, and Poona.

*Kailana, 1897.*

The water supply is obtained from fenced-in springs, abundant and good, but its distribution by pakhals is considered objectionable. Funds for the extension of the water supply to Kailana, which is considered an urgent need, are not available.

At Kailana we must conclude that the avenues for waterborne typhoid were easier for the typhoid bacillus than that by dust and flies from faulty latrines. That bazaar infection and direct contact will explain equally well the facts

*Quetta.*

We must consider the three epidemics of 1896, 1897, and 1898. That of 1898 forms the principal instance in India of the dustborne theory of typhoid. The epidemics of 1896 and 1897 have bearings on this point.

The onset of the 1896 epidemic was gradual: 1 case in April, 3 in May, 29 in June, 24 in July, 33 in August, 18 in September, 25 in October, 6 in November, and 1 in December—140 cases. Not confined to any corps or barracks. The medical officer after a searching inquiry reported:

> Barrack surroundings in good sanitary state; the water supply as perfect as possible to conceive, being brought in pipes a distance of thirteen miles from uninhabited mountains 1,400 ft. above the station, and any idea that the drinking water could be the cause may be put out of court..... The most likely cause of all, and the cause to which the disease has been attributed is the native city of Quetta. It is full of brothels, drinking shops, etc., many of which are in a most insanitary condition. The soldiers frequent these places in great numbers.

He also states that other possible causes of the spread of the disease are:—

1. The smuggling of milk and butter from native villages.
2. Native attendants who are not clean handling or preparing food.
3. Drinking water from surface irrigation channels of doubtful purity on field days when the drinking water has run out.
4. Ambulant cases sleeping in barracks and fouling the latrines.
5. Flies fouling food, &c.

He concludes, "The disease originated in the city of Quetta and most of the cases were contracted there." The epidemic began in April, on June 6th all water vessels ordered to be washed weekly with 6 per cent. solution of permanganate of potash, the drinking water to be faintly tinged with the same. June 24th mussacks and pakhals, the leather homes of the typhoid bacilli, were ordered to be cleaned with a strong solution of this agent. July 23rd (a month later) all drinking water was ordered to be boiled, August 5th the milk also. The preventive measures were incomplete in theory and dilatory and ineffective in practice.

In the appendix of the report for 1897 is found the report of the fuller inquiry of the same epidemic; it states—

1. The year 1896 was a hard one for manœuvring; "the men fell out of the ranks in large numbers and drank any water they could get, principally from irrigation channels."

*Water.*—"Though the water supply is almost as perfect as it is possible to conceive, yet its contamination was the direct cause of the outbreak. That it was contaminated by natives is of course possible." In samples from different sources Mr. Hankin found the enteric bacillus. "The artillery suffered most in proportion to strength; this is easily accounted for, as Mr. Hankin found large numbers of enteric bacilli in the soda water drawn from the Royal Artillery mineral water factory."

In 1897 the epidemic was less severe (52 cases).

In 1898 the epidemic was very severe, 232 cases (or 108.2 per 1,000 of strength).

The epidemic began on May 13th. There were: In May, 2 cases; June, 4; July, 41; August, 52; September, 49; October, 62; November, 10; December, 1. The epidemic of 1896 practically was the same period (April 3rd to December 1st).

The women and children suffered in proportion, which is not the rule in India, and indicating some cause in the barracks, or milk, butter, vegetable, etc., from the outside.

Major Davies, R.A.M.C., conducted the special commission of inquiry, and the epidemic was ascribed to dust and flies as the principal channel of its conveyance, for the following reasons:

1. Immunity till May, when the dust storms begin.
2. Dust storms were very prevalent from May 2nd to 13th.
3. Outbreak preceded by epidemic of sore throat, possibly from contaminated dust.
4. The filth pits were to windward of the barracks, and the epidemic was especially severe in the lines nearest the filth pits (left infantry and Royal Artillery barracks).

Let us inquire what waterborne avenues were open to the bacillus at the same time.

The following avenues open in 1896 were still available:

1. The water supply, in which the bacillus had been found in 1896, may have contained the bacillus again from its previous undiscovered source, although it may not have been present late in the epidemic when first looked for, or it may have been actually present but not isolated.
2. The same insanitary condition of the bazaars, and therefore of the milk and butter, soda water and vegetables. The

Royal Artillery soda water factory supplied the bacillus in 1896; may it not have supplied it in this case?

The dairy supplies. Major Davies reports, were only fairly satisfactory, hence an avenue to the women and children as well as the men.

Vegetables and salads, washed possibly in foul irrigation water, are not referred to at all.

3. The condemned pakhals and mussacks were still in use as in 1896.

4. On field days the foul irrigation channels were still open to the men freely.

5. Lucerne or green food for horses is not referred to, being a cause of typhoid thought of for the first time only two years later, and this may have come in soaked from the fields, polluted with human excrement and foul irrigation water. This would go largely to the Royal Artillery lines, and the men handling this would be subject to a higher incidence than the infantry lines. These men might with their wet hands easily have polluted the water supplies near and so have distributed it to the infantry in the same lines. Or if engaged as in 1896 in the manufacture of typhoid soda water, the pollution may have arisen in this way on both occasions. Major Davies was not satisfied with the state of the regimental soda-water factories.

6. The increased incidence amongst 1st Battalion Wiltshire Regiment which occupied with the Royal Artillery the left British infantry lines in the track of dust from the filth trenches, as compared with the incidence in the 2nd Battalion Border Regiment may also receive another explanation apparently overlooked. The Wiltshire regiment arrived in India in 1895, the Borderers in 1890. According to the tables of incidence per 1,000 in the various years of service in India, the Wiltshires should have an incidence twice as great as that in the Borderers. We find they had 136 cases to 47 in the Borderers. The balance in the Wiltshires might be accounted for by possible direct infection from the Royal Artillery cases, or from the proximity of polluted water or food of these horses or the pollution of the local drinking water by the Artillery men's hands, etc. Thus the incidence, which was the main argument of the dustborne or airborne theory in this case, is capable of quite a different explanation, and one which is in conformity with previous experience.

The remaining reasons the Commission found for concluding in favour of dust must be considered:—

1. Storms of wind and clouds of dust from May 2nd to 13th; the first case was on May 13th, and was probably contracted about April 22nd, that is eleven days before the winds began. If these storms of wind carried the bacilli to food and drink and to the air breathed by 2,138 men and their quota of women and children, we should expect a large number of cases between May 23rd and June 3rd, but there were only 2 cases in the whole of May and 4 in June. After June 3rd the windborne cases would largely cease, whereas in the months July to October we have sixteen times as many cases. Moreover, if we take the whole Bombay command, in which the Quetta outbreak is included, we find that for the months of July, August, and September there was the same general increased prevalence as at Quetta. The main cause in the rest of the command is admitted to be waterborne typhoid.

2. The outbreak was preceded by an epidemic of sore throat. The outbreak was on May 13th, so the epidemic sore throat preceded that date. Up to forty-seven days after the sore throats only 6 cases of typhoid had developed in 2,138 men, but in the five months following these forty-seven days 214 cases developed. This, perhaps, is the strongest argument against the theory.

I am not assuming that the carrying of typhoid bacilli by flies and dust did not exist, nor that the sanitary condition or site of the trenches was what should be demanded, but what I think I have shown is that the data on which the preference is given to the theory of airborne rather than to waterborne typhoid in this case are altogether insufficient, and that the balance of evidence is stronger in favour of the waterborne theory.

*Khyber Epidemic, 1898.*

Strength 1,483, 238 cases, the largest outbreak in 1898. Report states:

considered likely that infection was carried by dust-laden winds. Towards the end of July arrangements were completed for removal of the night soil to a mile and a-half from the camp. Pakhals were discarded, and galvanised iron tanks provided for the drinking water.

The subsidence of the epidemic followed the ordinary subsidence observed in other epidemics in the same command, and was not necessarily the result of the improvements. The discarding of the pakhals and the improved water tanks may have been equally or wholly as efficient in reducing the epidemic. The state of the bazaars or camps supplying butter, milk, vegetables, green cattle food, soda water, etc., are all omitted in the report. We should not feel justified in drawing any conclusions from this epidemic.

*Chakrata.*

At Chakrata half the cases were imported; the remainder were put down to dust and flies; there was no inquiry. Most of the ordinary avenues of typhoid are not referred to.

*Bangalore.*

At Bangalore liquid sewage was used to irrigate the lucerne gardens cultivated for the mounted corps. A chatty in the horse lines used for drinking water became infected with the bacillus. The effect of the Quetta theory is seen in the Principal Medical Officer's report, he states:

The bacilli are almost of universal prevalence and food and drink are liable to be affected by them, and, given the liability by means of youth, depression of health or vitality from any cause, the occurrence of the disease is probable.

Here, again, the other avenues are not excluded, and the actual presence of the bacillus in the drinking water must exclude this epidemic from being considered airborne, in spite of the reference to dust and flies.

*Mhow.*

At Mhow the milk, butter, aërated waters, and bazaars in 1898 were all condemned. In 1899 the water, milk, and butter are said to be protected, and fæcal dust is referred to as a cause. Aërated waters, lucerne, salads, and vegetables washed in infected water and the unboiled water previously shown to contain typhoid bacilli, and used probably for washing salads, watering cattle, horses, etc., are all neither excluded nor referred to.

*Poonah, 1899.*

Lastly, at Poonah, in 1899, Major Davies reported on investigation, "water supply open to pollution throughout its course." The Principal Medical Officer, however, thinks "the proximity of the city filth pits right to windward of these barracks and military prison has been overlooked," and, the Principal Medical Officer states, "the disease may have been airborne, as seems to have been the case at Quetta." It seems curious that this Quetta theory should be considered the more likely in face of the obvious fact of "the water supply being polluted throughout its course."

In each of these seven epidemics, the obvious avenues of waterborne typhoid are so numerous, and often neither mentioned nor excluded, in the reports of the epidemics, that we must conclude that the proof of the airborne theory from these epidemics does not exist in any one of them. The balance of evidence and certainly of theory is strongly in favour of a waterborne origin.

As to boiling of drinking water the medical officer at Barrackpore reports:—

It is a question whether we have not ourselves been the unconscious agents of the spread of enteric by the use of the very measures designed to prevent it, anyone who has watched the mode in which these measures are carried out cannot fail to be struck with the fact that it is a most dangerous proceeding. In collecting, boiling, cooling, transferring to, and methods of storage one can imagine numerous modes in which the organism of enteric may be introduced.

This happened at Lucknow in 1897, causing an epidemic. The bacillus was found in drinking water supposed to have been boiled.

SOUTH AFRICA.

The incidence of enteric fever in the British Army in South Africa in 1898 was 36.5 times that of the British Army in the United Kingdom in the same year.

The 1898 Army Medical Report contains the report of Major R. J. S. Simpson, M.A., M.B., R.A.M.C., on the conditions under which enteric fever at Pietermaritzburg in Natal was causing more than half the enteric fever in the British Army in South Africa between 1884-1896. This searching inquiry is one of the most complete and creditable studies that any officer in this corps has produced, and must be taken as a standard in South Africa generally. I shall, therefore, chiefly confine my remarks on South Africa largely to this report, as the report states the sanitary condition of this town is not worse than that of most South African towns.

In 1897 the Principal Medical Officer in South Africa reports 115 of the total 160 South African cases of enteric fever

occurred at Pietermaritzburg. The sanitary contractor's men have been seen emptying pails in gardens of the town. With such arrangements and a large enteric epidemic in process in the garrison, in the civil population and amongst the natives, from whom the excreta are being distributed all over the surroundings of the town, and even in the gardens in the town we have the ideal natural conditions for the experiment of the possible airborne transmission of enteric fever.

In 1898 Major Simpson's special report confirmed the above. The following facts may be added from his complete account.

*General Sanitation.*

The pail system used without earth—the natives have no pails. The surface drainage for rain used also for excreta; the storm water from April to October flushes them. There are oxen and horses innumerable. Of the houses 19 per cent. have grave sanitary defects (official town report). General dirtiness prevails. After exhaustive details on almost every point, Major Simpson summaries as follows:

1. Enteric fever at Pietermaritzburg conforms closely to the conditions found in India.
2. There is a connection between the early rains and the annual outbreak.
3. The water supply is subject to pollution in the collecting area, and till it enters the reservoirs, and till lately also in the distribution.
4. It is endemic in Pietermaritzburg, and affects all classes and natives.

He continues:

The cause is common to the city and the camp—the two common causes are water and dust. But if the dust were the chief means of propagation, one would expect the prevalence greatest during the dry weather, whereas enteric fever does not begin to prevail until after the onset of the rains, when dust is both less in quantity and frequency.

On the other hand (he states) we have enteric fever occurring amongst the native population throughout the country. The first washings of the polluted surface pass into the water supply, which is not efficiently filtered, and soon after the first onset of the rains we have enteric fever both in camp and city.

Moreover, at the prison the boiling and storing of water are carefully attended to, and though exposed to the dust from the city where so much enteric was scattered about, yet "not a single case occurred amongst 348 prisoners."

The almost impossibility of imagining the water under the circumstances free from the enteric bacillus, taken with the comparative immunity of women and children, who were largely protected by rules of barracks, which could not have protected them against dustborne enteric, and the absence of enteric fever before the rains, makes the conclusion almost a certainty in favour of waterborne typhoid in this crucial test.

Egypt.

Intimate acquaintance with this country, especially Upper Egypt, during the past ten years in civil practice, has afforded me considerable experience in the facts I shall here discuss. In 1884 the Principal Medical Officer Frontier Field Force states: "Enteric fever appears to be endemic along the whole Nile Valley." This latter statement recurs repeatedly in other reports, but is not correct.

I propose to consider (1) the military station of Assouan situated at the First Cataract; (2) civil experiences in Egypt, especially at Assouan.

*Assouan.*

This town of 15,000 natives is situated at the foot of the First Cataract of the Nile on the right bank. 1886.—Frontier Field Force strength 3,503, admissions for enteric fever 467. 170 deaths. Of these Assouan had 276 cases and 97 deaths. The medical officer at Assouan Station Hospital reports: "Its prevalence must, in my opinion, be chiefly owing to climatic causes, and not to the insanitary condition of the camps or water supply." The Principal Medical Officer Frontier Field Force reported of Assouan in the same year:

The water supply, too, was often taken for convenience from the river's bank, and the recommendations as to boiling and filtering were not effectually carried out, but on the whole I do not think that defects of drainage, latrines, or water supply were the most important factors in the spread of the disease.

The principal comments I have to make on these three years at Assouan are:

That the plan of selection and arrangement of the sites for camps was very bad.

In 1886 the sites "North End" "Tagoog Heights" with the subsidiary site "under the palms" and "Shellal" were occupied simultaneously. In a distance of four miles on one bank there were three camps all with enteric cases previous to removal to hospital, all containing simple continued fever cases (of which 50 per cent. are probably enteric) before or after being in hospital. These men bathed in or washed in the river at each camp. By no possible means could the river and banks escape continuous enteric pollution, and as the "water was often taken for convenience from the river's banks, and the recommendations as to boiling and filtering were not effectually carried out," by no possible means could the drinking water be free from the enteric bacillus. Moreover, the Tagoog camp had the advantage of the Shellal bacilli as well as their own and North End had those of both Shellal, Tagoog, the Bashi-Bazouks, and the town foreshore and therefore rightly gained the reputation of being "not nearly so healthy." The camp at North End has been occupied by British troops for years, and even in the last Soudan expedition repeatedly. There is no excuse for such utter disregard of sanitation as to accept a site on a river immediately below a large town.

Notwithstanding the above conditions of the water supply the medical opinions refer the epidemics to air and dust, and state that "defects of drainage latrines or water supply were not the most important factors." However the price of these methods and opinions was paid.

We now pass to Assouan, considered civilly in the past three or four years.

This same town and district has become a health resort for European visitors in spite of supposed "climatic," "air," and "dust" defects. Moreover, during the past three years "Shellal" site has become the site of the great Barrage works.

*The Assouan Barrage Works.*

These works and camps occupy the district called "Shellal," at the south end of the Cataract, practically the camp site of British troops in 1886, and the scene of part of the great epidemic of that year. The works commenced in 1898, and are nearing completion. The site was practically a desert; it is now covered thickly with long rows of huts or barracks for workmen, blocks of houses for numerous young English engineers, hospital buildings, etc. The concentration of workmen in the bed of the river by day and in the barracks and restaurants by night is very great, exposed alike to river water and the dust of a camping ground that has been occupied for over three years.

The first report of the medical officer in charge covers nine months—October 1st, 1898, to June 30th, 1899.

The average strength on the works was 704 Europeans—chiefly Italian, English, and Greek—and 5,515 natives. (There were 181 admissions to hospital, which included 53 accident and 33 sunstroke cases. Deaths: accidents 10, sunstroke 10, pneumonia 3, dysentery 2, heart disease 2, toxine 1.) No enteric fever; 15 cases of dysentery.

The second report—July 1st, 1899, to June 30th, 1900—Average strength: Europeans 1,142, natives 4,892: total 6,034. Enteric fever: 9 Europeans, 1 native; no deaths.

Dr. White, medical officer to the Barrage works, reports as regards the enteric cases:

Typhoid all traced back to infection down country, except the native, which was not typical typhoid, and so far no Englishman has had true dysentery. This I take to be due to the care taken over the ice and water supply.

Thus, during two years, with a mean of 923 Europeans and 5,463 natives in one large camp on one site, not a single case of enteric originated locally, although nine times was it brought by fresh arrivals from Alexandria to the camp. There was no death from enteric. At the starting of these works I was consulted by Sir John Aird and asked to prepare a report on the sanitary arrangements, plans, site, etc., suitable for large camps of workmen in Egypt.

Without going into details I may here state that the diseases that report was planned chiefly to confront were enteric fever and dysentery, and the plans recommended were based upon the waterborne theory of these diseases. The results speak for themselves. Encamped on the same spot twelve years previously the army had 276 enteric amongst a force of Europeans only about twice as great, compared with no cases of local origin in the workmen's camp, although the latter was embarrassed by 5,463 natives always in the camp. The 1886 epidemic was attributed to airborne dust "and the local insanitary conditions inseparable from all camps," and

defects of drainage latrines or water supply were "not the most important factors" in the spread of the disease. The 1898-1900 total absence of enteric is attributed to the scheme of protection being constructed on the waterborne theory.

*Tourists in Egypt 1900-1901.*

There were 8,000 English and American visitors spending a great part of the winter in the Nile Valley, throughout which enteric fever is held by the Army Medical Department to be endemic. Even as late as 1898 Surgeon-General Taylor (medically in charge of the last Nile expedition) has placed it on record that

The specific germs are no doubt swarming in both earth and water. Frequency of dust-storms, when it is impossible to avoid large quantities of soil, the prevalence of the disease is not surprising.

Now few soldiers swallow more of the soil and dust than these tourists, who are driven at a great pace on donkeys in large parties even of 50 to 100 people through every town, bazaar, and temple in Egypt, yet most soldiers and armies would envy their health and spirits. In the whole of Egypt last winter (the time of the year in which enteric has been and still is rife in the British Army) out of those 8,000 visitors only 4 contracted enteric fever, and such results have happened in previous winters. There was not a single case either occurring at or developing in Assouan in an average of 300 visitors constantly at the three hotels during the winter, though two of the hotels are within a stone's throw of the remaining two army camp sites (1 and 2) previously mentioned.

It is extremely probable that the specific germs are neither in the soil, water, or dust of Egypt, except at a few points of special pollution and of rare occurrence. The explanation of the different results obtained is in the fact that wherever the British or other army has gone it has taken enteric with it.

I have selected only those natural experiments where the evidence in favour of airborne typhoid seemed and was considered strongest, and I conclude:

1. That the evidence of airborne typhoid recorded in Indian military experience is not established.

2. That in South Africa and Egypt the evidence is opposed to this theory.

3. That in India, South Africa, and Egypt the immense weight of evidence and probability is in favour of a waterborne origin and spread.

4. That the evidence from Egypt proves that if the avenues to man by means of water be protected, all other avenues are powerless to originate and spread typhoid in large bodies of men. There is strong evidence to suppose that the same methods would bring about like results in India, South Africa, and other countries.

5. That the origin and spread of typhoid by means of flies and dust being theory only, can only be discussed as such in relation to certain laboratory experiments, and that in practice it is unjustifiable to hold this theory, if it should deter, delay, or hinder the adoption in armies of the most vigorous, and comprehensive measures against waterborne typhoid.

*Laboratory Work.*

*Soil.*—In 1899-1900 Dr. Sidney Martin summarises his further work as follows:

1. When the typhoid bacillus is added to unsterilised soils, kept very moist and at a high temperature (about 19° to 37° C. = 67° to 99° F.) it has not been possible to recover it from the soil, even after a short period (twenty-four hours). If, however, the soil be kept in a drier condition and at a low temperature (2° to 12° C. = 36° to 54° F.), the bacillus can be regained after a certain interval, which in these experiments did not exceed twelve days; after this it appeared to die out.

2. The reason of the disappearance from the unsterilised soils appears to be the antagonism of some of the soil micro-organisms.

3. The typhoid bacillus, as far as is known, has no resting stage. It has no spores, so that if it once dies it cannot be expected to reappear.

Dr. Houston (1899-1900), in his experiments on the soil of Chichester "fever areas," failed, as Dr. Sidney Martin had also done, to find either B. coli com. or B. typhosus. He states that:

B. coli is always associated with the typhoid bacillus, but the latter is less hardy, and as B. coli is absent this ought to be also.

Again:

If the conditions were so unfavourable as to render all the soils in general unsuitable for the existence of B. coli it is unlikely that B typhosus could have maintained its vitality in any of them.

Again, he adds:

In my judgment the reason why spores are present in such abundance in surface soil is because the conditions are frequently unfavourable, that only those bacteria which can form spores can maintain their existence for any length of time.

From the above facts there is reason to suppose that if rain fell on a soil such as that of South Africa coming within the temperature 67° to 99° F., and over which typhoid had been scattered, this soil would be free from bacilli within twenty-four hours. Only those bacilli being temporarily saved that could escape in the surface water to wells and rivers.

2. *Air.*—Flügge and Fischer dried the bacillus in thin films and recovered it after five to fifteen days.

The typhoid bacillus has not been recovered in transit through the air in dust, etc., although several observers have experimented specially on this point, the destructive effect of light and total drying being the probable cause of its absence. Dr. Brownlee, after experimenting in this manner and failing to recover the bacillus, concludes the extent to which the aërial infection takes place can only be decided by an appeal to natural processes and not in the laboratory.

Flies theoretically can transport the bacilli.

3. *Water.*—The difficulties in the search for typhoid bacillus in water are very great.

Widal[1] has shown the causes of this difficulty. In the first series it still exists, but it is impossible to isolate it from the numbers of other germs with which it is struggling for existence.

In the second series the bacteriologist has arrived too late, the bacillus which was present at the beginning of the epidemic having disappeared for some weeks.

As regards the second series, Loeffler was of opinion that the bacillus did not live more than fifteen days in natural water, and in a very pure water much less time. If the bacillus appeared for a long time, it indicated continued pollution.

We thus see that in cases such as Quetta, 1898, when the bacillus was not found in the water, that it may belong to the first series, where the typhoid bacilli are few and perhaps not in the specimen examined, or masked by other bacilli. Or it may belong to the second series, where the examination was made too late. In the 1896 epidemic it was found long after in the water supply, being probably, therefore, in the class where the pollution is repeated or constant.

Thus all research goes to prove:

1. That in soils in which it might be expected to be present, it is never found.

2. That it is extremely difficult for the typhoid bacillus to live in soil, and that, if much moisture exists and a temperature above 66°, it will only live some hours.

3. That the action of light and total drying on the superficial layers of infected dust are so specially deadly to the typhoid bacillus as to account for the fact that, though it may be partly dried in the laboratory, it has not been driven through the air and recovered.

4. That its recovery from water is difficult, and failure to recover it does not show either that it was not there at the time of examination, or at any time previous.

It is interesting to find that the conclusion arrived at in the study of the natural experiments or epidemics coincides closely with the facts which laboratory research has established.

Whilst not taking any extreme view we are justified in stating (1) that air, by means of flies or dust, is an extremely weak medium of conveyance of enteric in armies, both on active service and at stations. (2) That if the army is free from enteric it will in all probability remain so until it receives the bacillus by a water avenue. (3) That if enteric is prevalent existing arrangements on service leave the water avenues infinitely more accessible to the bacillus than the extremely difficult air avenues. (4) That if enteric be allowed to become very prevalent, as at Bloemfontein, then it is still probable that the water avenues are the most important, though the airborne avenues increase in importance.

This latter state of affairs is of no practical importance to the army sanitarian because it is evident that such a condition can only arrive in an army unprepared to meet waterborne enteric and with no proper sanitation; and in such an army the sanitarian can have no further influence.

Finally, what is the bearing of these considerations on

[1] At the Tenth International Congress of Hygiene.

practical military hygiene? Dr. Tooth, at the Clinical Society, said that, in his opinion, air avenues were more important than water avenues in the present war, and that the conditions of life in an army on active service might well fill the soul of the sanitarian with despair. Taking an altogether different view of the facts, and seeing the practical application and results of this view in the modern non-military camps at Assouan, where once the despondency was deep enough, I am of opinion that the problem may be faced with certainty of success when the army, as a whole, shall consider it important.

Enteric will have to be met and overcome in no matter what part of the world, on the waterborne theory mainly, though every other avenue must also be guarded. As I have shown elsewhere, this will only be successfully done by means of a Royal Water Corps, this being a special section of the R.A.M.C., but linked to each regiment and receiving the loyal support of the whole army. This corps would have independent transport in war. The functions of this corps would be to prevent enteric fever, dysentery, cholera, and diarrhœa, by whatever means may be best suited to the time. The responsibility for the occurrence of these diseases would rest with this corps. This corps would have to provide boiled or approved water on all active service, field service, route marches, and manœuvres in both the Army and Volunteer forces and all foreign stations in peace, and no other water must be allowed. Its other duties I have detailed elsewhere.[2] At the present time there is a process of decentralisation going on, a process of subdivision, of responsibility, and power of initiative. One of the first cases in which this is necessary is in the R.A.M.C., and especially in the Royal Water Corps. All officers must be examined in military hygiene, especially as regards the power, origin, and spread of these four waterborne diseases, and be responsible for the ordinary sanitation of their own regiments, subject to repeated and critical inspection by the Royal Water Corps.

The sites for camps must be decided in consultation with the Principal Medical Officer of the R.A.M.C. and Royal Water Corps. It is almost criminal the way in which the choice of camps hitherto has been left to officers quite ignorant of the dangers they are placing their men in. I will only refer to a single instance, that of Assouan in five different years.

Sanitation must mobilise first in war, field service, route marches, or arrival at stations.

The men must be taught the awful destruction that has happened from the *laissez-boire* theory, and that in drinking only approved water they are not only avoiding disease themselves, but chiefly they are saving their comrades from destruction. It must be regarded a crime to drink unapproved water, and cowardly to get enteric or other waterborne disease. If an officer boils every drop of water he drinks (and hundreds have done so of late), why should we deny this right to the man in the ranks?

Pure water, the one important thing in war, is practically no man's business in the army; water polluted with enteric, dysentery, and diarrhœa organisms is still drunk every day in South Africa. With a Royal Water Corps it would be impossible to find the bacillus in the regular drinking water or soda water, as it would mean disgrace to the corps. Now the bacillus is found in the milk, in the drinking water, in the aërated water, in the butter, in the salads, etc., at stations in India, South Africa, and elsewhere, but no one is blamed because no one is responsible. If a Royal Water Corps existed, is it likely that the bazaars, so far as they represent drinking places, would continue to pour these four diseases into our men at foreign stations in the empire? Would a Royal Water Corps allow men with diarrhœa from any cause, or with a temperature from no assigned cause, either on active service or at stations, to remain a moment marching and mixing with the healthy men? If there was a Royal Water Corps would several months pass in an epidemic at stations abroad before the bacteriological examination of the water supplies or inquiry into the causes of the epidemic took place? I am not attributing blame in any way to the R.A.M.C., for the best men of this corps have too often found themselves hampered by a thousand foolish restrictions, limited to recommending reforms, and with no power to carry these out on the spot. Nevertheless, out of this chaos of persistent bacilli and reckless men, the light will finally dawn, and the line be fixed by the men against their true enemies in war.

[2] *Typhoid, the Destroyer of Armies, and its Abolition.* Baillière, Tindall, and Cox, London, 1901.

Surgeon-General Cuffe, C.B., R.A.M.C., P.M.O. South-Western District, said that very great difficulties existed in tracing the sources of enteric. To his mind it was almost impossible to fix upon the source, as there were many direct means of communication—water, flies, food, dust, etc. He had no doubt of the infectivity of typhoid, and he had had a recent experience of this in the case of an outbreak of enteric in details of the Northamptonshire Regiment at Portland, in which it appeared that men who had been invalided from South Africa on account of enteric fever had as convalescents communicated the disease to young recruits in the same barrack room. It must be recollected, however, that it was almost impossible to trace what the soldier did and where he went when he left barracks. He had had frequently to complain of the way in which kitchen utensils, mess crockery, etc., were washed and cleansed, and the very primitive kitchen cloths which were in use.

Dr. J. W. Washbourn, C.B., regretted that he was not present when Dr. Canney's paper was read, but wished to speak upon the subject, as he had had a large experience recently in South Africa. He agreed with Dr. Canney that epidemics of enteric were waterborne and not airborne. He emphasised the term "epidemics" because he believed that individual cases of enteric fever were conveyed by different modes than by water. He instanced the case of Maidstone, where the main epidemic was due to the contamination of a particular water supply, but where, as Dr. Adams had predicted, secondary cases arose after the water supply had been cut off. In South Africa it was clear that dust was not responsible for the main epidemic, as the latter occurred when dust storms were not very prevalent. If the matter came to a resolution, he hoped that the meeting would decide that water was the main method of conveyance of enteric, but that other factors were concerned which, however, were of secondary importance.

Lieutenant-Colonel Giles, I.M.S., had gathered from much internal evidence that Dr. Canney had no personal experience of India. He seemed to be under the idea that in advocating the occasional and frequent occurrence of airborne infection they denied the occurrence of water carriage. But, of course, nothing was further from the case, all they stated was that air, namely, flies and dust, was a possible, and they believed frequent, vehicle of infection, and that water infection entirely failed to account for many outbreaks. How, indeed, could it be otherwise? Did Dr. Canney mean to assert that flies could not carry bacteria about on their feet or that they never visited latrines or trenching grounds, and that after such visits they could never find their way to food or other supplies? He asked why typhoid was rarest in the dusty time of the year. He replied because then the fierce sun destroyed any bacteria that might be adherent to dust, whereas in the rains flies were common and the wretched trenching system of night soil disposal necessarily broke down because dry earth could not be got. He regarded the adherence to this system as the main source of typhoid in India. In the case of Quetta mentioned by Dr. Canney Major Melville, as secretary to a Committee of Inquiry, had told him that they then found no reason to suspect either water or food supplies, but found the latrines quite close to windward of the barracks, and that the disease always commenced in the corner nearest the latrines and trenches. The committee recommended that the latrines should be moved to leeward and the filth pitted, not trenched. This system, they were careful to state, could only be expected to answer temporarily, certainly no longer than six months. Well, it answered for two years, and then broke down, as its advocates predicted it would, but expense had prevented the Government carrying out the permanent measures recommended. In Agra the water supply was always better than that of London. It was examined weekly bacteriologically, and on one occasion only were typhoid bacilli found. Water supplies had been enormously improved. Typhoid remained, and would, he believed, remain, as long as the trenching system was maintained.

Dr. E. E. G. SIMONS said in his experience as a medical officer of health of a large district he had had to deal with an epidemic which lasted over two years, and gave a case-incidence of 4 per 1,000. This epidemic was not waterborne, and also was not carried by a common food infection. He was faced with the following problem: the disease was confined to certain streets, and was endemic in these neighbourhoods. These areas were infected year after year, and his researches back as far as 1866 showed that from that date enteric had been more or less continuous in those localities. He found that in the summer and early autumn adults and children were affected, but that in the winter time children alone were infected, unless a case of cross-infection occurred in a house. With the return of summer typhoid always reappeared amongst the adults. His district was well sewered, the drainage generally efficient, carried out by gravitation. His observations showed that typhoid was most prevalent where manure heaps and the flies hidden in them were most common. He found that the soil in one of the surface drainage channels in an infected neighbourhood gave a pure cultivation of the B. typhosus. Here they had the key to the solution of the problem. The epidemic was controlled by clearing the manure from infected areas, by improving the slop drainage, and by endeavouring to cover the areas and infected yards with impervious materials. His explanation of this epidemic was that it was entirely airborne in one sense of the word—that is to say, it was carried or transported to food, and so to the individual by flies. During late autumn and winter the children who were infected were all of the school-going age, and they all played in the district in the infected gutters. The profession would fully understand the reason why they alone should be infected under the circumstances that he had detailed. Typhoid in his district had been milkborne, and had in few isolated instances been due to local water supplies which ought not to have been used being drunk by perverse individuals. The main water supply coming from a magnificent gathering ground from the Breconshire mountains, far from the abodes of men, had never been infected. The general summer incidence of the disease was, he believed, entirely due to transportation through the air. He could adduce further strong circumstantial evidence to prove the point that they must look in some epidemics to other sources than waterborne infection. He had information from one of the brigade-surgeon-majors in the American-Spanish war, that two regiments and a civil population were side by side on the same ground. They had a common water, milk, and food supply. One regiment got enteric badly, and the civil population and the other regiment escaped. Those who escaped had fly-proof cages for their provisions. Those who were affected took no protection for their food. In his district urine and slop water in the side streets was always thrown over the street or into the channel along the sidewalk; it was easy to understand the continual soil infection that this filthy custom produced. His conclusions were that if they looked entirely to waterborne infection as the cause of typhoid they would miss the active factor in many epidemics. Their attention would in future be directed to every possible source of infection, whether theoretical or not. This, he claimed to have proved, was a very active factor.

## MEDICAL CADET CORPS.

By Surgeon-Captain J. CANTLIE, M.B., F.R.C.S.,

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As an aid towards solving the problem of rendering the military medical service more attractive to young medical men, and of furnishing the State with a reserve of skilled medical assistance, to be called upon when required, I would begin with the medical student at the commencement of his career and organise a medical cadet corps.

Whilst engaged in forming the Volunteer Medical Staff Corps in 1885, some such idea was present to my mind, but the evolution of that corps fitted it for other purposes, and although in some sense it may be termed a cadet corps, it has never been seriously regarded by Government in that light.

A special cadet corps school for the medical officers of the Army cannot, under present conditions, be organised on quite the same footing as the cadet corps schools for the young men entering the corps of Royal Engineers or the Royal Artillery.

The medical education of the country is in the hands of our universities and medical schools, and it is necessary that young medical men intending to join the military and naval services should be educated by them. It would be a simple matter to centralise and develop a large central military school, say in London, but as it would take men away from their local university or school such a proceeding would meet with strenuous opposition. It would be inadvisable also to separate the training of the military and civil branches of the profession. There is apt to be a sharp enough line drawn now between the two sections, but were the separation to take place before even student days were commenced, the two would drift still further apart.

Another point of practical difficulty is this, namely, how many of the lads when they join a medical school have made up their minds or know anything about how their future career is to be cast? Fresh from school, what do they know of military service except as sentimental notions gathered from books, or of heaped abuse of the service gathered from the newspapers, or from some, too often, prejudiced misstatements?

For all these reasons, therefore, it is perhaps well for the State and for the medical officer in the army that we have no separate medical school wholly under State control, and devoted to the one purpose of educating men for the public services. On the other hand, although much can be said against such a school, a great deal can be said in favour of it; and although the most weighty arguments seem to tell against a scheme of the kind, it does not follow that some attempt at organisation, even upon our existing lines of study, should not be attempted.

It is on these grounds that I would offer a few suggestions whereby the medical student may become more valuable to the State, and whereby he may even during his career as a student be fitting himself for military duties whether he elects to enter the army, to join the auxiliary forces, or to be ready to volunteer for active service abroad in the event of war.

I think that it is well to point out that most medical men of every grade owe a debt to the State more or less direct. The university in which he studies is supported to some considerable degree by the State; the country grants to its graduates in medicine an exclusive right to practise within the realm, a privilege carefully guarded so as to exclude from competition with them medical men holding foreign diplomas only. In several additional ways are medical men protected by the State, and it behoves them to repay the privileges extended to them in some measure by studying that part of their profession which may be useful and serviceable to the State in time of need. I consider, therefore, that a knowledge of military ambulance work is a subject which every medical man ought to be acquainted with—in the first place as a part of general medical education, and, secondly, as a debt he owes to his fellow-citizens and to the State.

To promote and to secure this education, the formation of cadet corps at all medical centres should be instituted, and should form part of the education of every medical school. There is no great difficulty in bringing this about. The Volunteer Medical Staff Corps has shown that work in this direction can be done, and it requires but a slight additional encouragement from the State to develop the system to the full.

1. In connection with every medical school, a means of acquiring training in military ambulance work should be obtainable. The training can be arranged for (*a*) in connection with a company of the Volunteer Medical Staff Corps, should there be a company of the corps in the immediate neighbourhood. In the majority of the medical centres in England and Scotland a company of the Volunteer Medical Staff Corps exists, and might be available for this purpose. (*b*) Where no company of the Volunteer Medical Staff Corps exists, the medical students can be trained by instructors attached specially for this purpose.

2. Medical students should be enrolled in medical cadet

corps, to be styled the Cambridge Medical Cadet Corps, the Edinburgh Medical Cadet Corps, etc.

3. A special uniform should be designed for the corps.

4. Cadets should be allowed Government grants for efficiency in ambulance work. They should be required to pass a satisfactory standard of efficiency.

5. Nominations to the naval or army medical services should be made by the authorities in medical schools only from amongst cadets who have been through the corps and have been passed as efficient. All questions of seniority should be decided by the place candidates take in the competitive examination held at their entrance to the service. Promotions in the corps to be determined by stated examinations, and all nominations to the service should be made according to seniority in rank, sergeants being offered nominations before corporals, and corporals before privates.

6. Were three years' efficiency made to count as six months' service towards obtaining a pension: four years' to count as nine months' service towards pension; and five years' efficiency as twelve months towards pension, a great stimulus to joining the corps and the service would be created.

As corollaries to this scheme: I. The medical students at present enrolled as members of the Volunteer Medical Staff Corps should belong to cadet corps companies and be quite supernumerary to the present existing strength, and the regular members of the Volunteer Medical Staff Corps should consist of laymen.

II. When selecting medical men for vacancies in the auxiliary forces, commanding officers of regiments should be advised to give preference to candidates who have passed through the cadet corps, and that a medical man holding a three years' certificate be not required to obtain the proficiency certificate at present required, but that he be allowed to have "passed" attached to his name from the time of entrance.

It is advisable that the present system of enrolling medical students in the Volunteer Medical Staff Corps be terminated. It is not conformable to the present-day system in the army to have medical students serving as privates along with laymen. The training of the medical student entitles him to be placed on a similar footing with cadets joining the Royal Engineers and the Royal Artillery, and until that is done the medical officer when he enters the army cannot acquire that service prestige which the young engineer and artillery officers acquire as cadets.

I believe in this way the status of the medical officer on joining the services will be improved; that the auxiliary forces will be supplied with more efficient medical officers; that a reserve of medical men in private practice would be at hand in case of national emergency; and that the discipline inculcated at an early age will be less irksome than when it is imposed for the first time at the age of 24 and 25, the average age medical men join the army now.

I would move the following resolutions:

That this Section recommends to the Council:

1. That the Council issue a circular to the deans of medical schools throughout Great Britain and Ireland urging the advisability of establishing medical cadet corps at the medical schools.

2. That Government be requested to promote the formation and maintenance of cadet corps by providing instruction and allowing grants for efficiency to the members of the corps.

3. That nominations to the naval and military services be made to cadets who have obtained efficiency certificates in the medical cadet corps according to seniority.

4. That preference be given in selecting medical men for the auxiliary forces to those who have obtained proficiency certificates in the cadet corps; and that no further examination be required after joining the service, every trained officer on joining being gazetted as "passed."

5. That a committee be appointed to deal practically and solely with this scheme.

The President favoured the consideration of this scheme being referred to the War Office, as it would require much organisation and entail expense, and, if favoured by the Minister of War, the medical schools would be much more likely to take up the subject.

Surgeon-General O'Dwyer, R.A.M.C., P.M.O. Aldershot, said that medical students were not the most useful members of a volunteer medical unit, for they were frequently changed, and were not adapted to perform menial work in hospitals. He thought that more detailed information as to the expense of medical cadet corps was wanted before the question could be put forward. Incidentally he preferred that commissions in the R.A.M.C. should be open to competition and not by nomination, whenever the number of applicants allowed it. The difficulty about a volunteer medical cadet corps is that there were no volunteers in Ireland. He asked Mr. Cantlie how he would get over that Irish difficulty. By orders from the Medical Director-General, he had sounded all volunteer medical officers in his command to ascertain if they would go to South Africa, and the response was not very satisfactory. He was afraid that, seeing that the Government could not support the expense of cadet corps in schools they would not support the expense of a medical cadet corps.

Surgeon-General Cuffe, C.B., did not approve of volunteer cadet bearer companies as units, except in so far as they might be encouraged so as to familiarise medical students with the work of bearers, first-aid, etc., and in course of time, when examined, assist in training the Royal Army Medical Corps. As to the volunteer bearer companies, a certain number, such as that called the Portsmouth Infantry Volunteer Brigade Bearer Company, was made up of men volunteering from various battalions all dressed in different uniforms, and not with an officially recognised organisation as the London companies and others. Every volunteer infantry brigade should have its own bearer company as a distinct unit. As regards volunteer medical officers for service in South Africa, a very large number, he was pleased to say, offered their services with great public spirit, leaving their practices and going at short notice. He thought the principle of nomination to appointments in any part of the public service was a wrong one. In these days competition was the universal means of admission.

Surgeon-Lieutenant-Colonel Coates, V.M.S.C., thought it most desirable that in any future campaign where the services of officers and men of the Volunteer Medical Staff Corps are required, they should as much as possible be kept together in the same units, and especially that the officers should not be separated from their own men. He was in favour of nomination by heads of colleges for commissions in the Royal Army Medical Corps, and, if necessary, some very modified form of competitive examination afterwards.

Resolution.

A resolution was proposed by Surgeon-Captain Cantlie, F.R.C.S., and seconded by Surgeon-Lieutenant-Colonel Coates, M.R.C.S., and agreed:

That it be a recommendation to the Council of the British Medical Association to consider whether the establishment of a medical cadet corps in connection with the medical schools is feasible or desirable, and, if so, whether the matter should not be brought to the attention of the War Office.

## THE FIRST AID AND HOME NURSING CLASSES OF THE LONDON SCHOOL BOARD.

By Robert J. Collie, M.D.,
Medical Superintendent of the Classes.

The School Board for London is entrusted with the education of a population as large as that of Switzerland. The fact that a body charged with such a responsibility should have undertaken the teaching of first aid and home nursing in its evening continuation classes cannot fail to be of interest to the profession.

Until a year ago the first aid and home nursing classes were held in the Board's schools and taught by its teachers, the syllabus was prescribed, and the examinations were conducted by the St. John Ambulance Association, successful students being awarded the certificate of the Association. In May, 1900, the Board decided that in future it would arrange the details of the classes, prepare its own syllabuses, conduct its own examinations, and grant its own certificate, and I was appointed to reorganise and superintend the classes.

These classes have provided instruction for over 16,000 pupils, and a short account of the work done during the year the classes have been under my care will be of interest to the members of the profession.

*Teachers' Classes.*—My first duty was to see that those who were to assist the medical staff in the conduct of the classes had themselves the necessary information. Accordingly, a fortnight after my appointment teachers' classes both in first aid and home nursing were opened at convenient centres in the metropolis.

Over 900 teachers availed themselves of the instruction offered at these classes, 787 of whom passed the examination at the end of the course.

There can be no question that the influence of these teachers' classes has made itself felt during the session now closing in better teaching and in more thorough work.

During the present session it was found that many of the Board's teachers who had not attended those classes wished to undergo a course of instruction in first aid and home nursing, and a syllabus of instruction for teachers has been prepared, special classes have been opened, and a teacher's certificate has been granted.

These teachers' classes meet twelve times, and are taught at each meeting by a fully qualified medical man or woman. Each meeting lasts an hour and a-half, the first forty-five minutes of which consists of a lecture, the next quarter of an hour is devoted either (*a*) to oral examination, (*b*) to explanation of difficult points asked by members of the class, or (*c*) a subject is selected by the lecturer, and a pupil is invited to explain it; the last half hour is spent in practical work.

*Syllabus of Teachers' Classes.*—When preparing the syllabus of instruction for the teachers' classes I availed myself of the opportunity to introduce certain important subjects, such as the following:

The Prevention of Disease in School Life.
The Prevention of Communicable Diseases in School Life.
The Eradication of Parasitic Diseases.
The Dangers of Ophthalmia.
The Evils of Overcrowding and Improper Dietary.
The Dangers of the Indiscriminate Use of Alcohol, etc.

The knowledge thus gained will, it is hoped, filter through to the pupils, and in this way incalculable benefit be secured to thousands of children attending the day schools.

The session has not yet closed and the examinations are not yet completed, but the returns to hand show that 1,030 teachers have entered for examination, of whom 894 passed and 136 failed.

*The Scheme of Instruction.*—The Board's scheme provides that the first aid course shall consist of twelve meetings, six conducted by a duly qualified medical practitioner, and six by one of the Board's teachers, who is to assist the doctor, and on each alternate evening, in the doctor's absence, to conduct the class. The nursing classes, on the other hand, may be taught by a certificated hospital nurse, or by one of the Board's teachers who hold the Board's special teachers' certificate in home nursing, or by a doctor. A few classes held in the poorer districts have been entrusted to hospital-trained nurses. These classes have been well attended, well instructed, and are bound to be productive of much good.

*Syllabus of Instruction.*—In drawing up the syllabus of instruction for the pupils, I felt so much the importance of the question of the subjects to be chosen both in first aid to the injured and in home nursing, that the members of the medical staff were invited to attend a meeting to discuss a draft syllabus. At this meeting several suggestions were made and adopted, and a free interchange of ideas took place as to the conduct of the classes.

I have on many occasions had interviews with members of the medical staff and with the Board's teachers, and although one could hardly hope to compile a syllabus which in every detail would commend itself to each individual mind, I have had the satisfaction of feeling that the schemes of instruction now in use have met with a general approval. Judging from my inspection of the classes, and from what I can learn from the visits of inspectors (His Majesty's and the Board's) I am satisfied that these classes are without exception well taught, and that the instruction given is likely to do incalculable good.

The following quotations from unofficial communications made to me by His Majesty's Inspectors may be of interest:

"The whole work appears to me to be admirably planned, and to be thoroughly practical. The infectious diseases and poison cards cannot fail to be most useful."

"I have looked through the papers and feel they are bound to be of great use."

When the schemes of instruction were issued occasion was taken to point out to both lecturers and teachers that in instructing the classes their object must be to show how the common and inexpensive things of every-day life may be utilised in emergencies: that though hospital treatment and hospital-trained nurses are admittedly the best for most cases of serious illness amongst the poor, there always is a considerable number of the sick who are either inadmissible to hospitals or who, for various reasons, prefer to be nursed in their own homes by their relations or friends; and that the instruction given at the home nursing classes is intended to assist the pupils to be of service at such times.

The ordinary course includes among other things—how to make poultices, how to take and how to record the temperature, the importance of isolation in infectious diseases, the value of fresh air in sickness and in health, the importance of prompt treatment in accidents, the value of rational treatment of burns and scalds, what to do when the dress catches fire, how to treat fainting, first aid to the apparently drowned, what to do in severe hæmorrhage, etc.

It is invariably found that pupils who come week after week to learn what to do in these and other emergencies of daily life take an intelligent interest in, and readily master the details of the teaching. In order to make clear the somewhat difficult subject of what to do in cases of poisoning, and the still more perplexing subject of the communicability of the different infectious diseases, I prepared charts on these subjects.

These were ordered by the Committee to be printed on small cards and circulated amongst the scholars attending the classes.

As no satisfactory diagrams could be found, I have had prepared for the classes a series embracing the small amount of elementary anatomy and physiology required, and several charts showing how the main arteries are digitally compressed, how first-aid treatment is rendered when bones are broken, etc.

*Number of Classes.*—Before the classes were reorganised there were 191 ambulance and nursing classes. This year they have increased to no less a number than 460. Prior to this session the course consisted of 24 meetings of two hours each, and as the classes were held but once a week the course extended over several months, lasting, as a rule, the whole winter term.

It was found that this resulted in irregular attendance, and in a comparatively small number presenting themselves for examination.

Students are now prepared to present themselves for examination both at Christmas and Easter.

This at once doubled the number of classes held, although, apart from this new arrangement, 78 additional classes have been opened under the new scheme.

Of the 460 classes, 300 have been on first aid to the injured, and 160 on home nursing.

In order that I might understand how each individual class was being attended, the Committee has ordered a weekly abstract of the attendances at all classes under my care to be supplied to me.

These data regularly supplied will enable me to have a more thorough grasp of all that is being done in the classes. Without them it is impossible for me to understand as I wish to the causes which make for success or otherwise.

*Staff.*—The staff consists of 120 doctors, many of whom are women, and 13 trained nurses, assisted by 245 of the Board's teachers.

In order as far as possible to arrange that the lecturers should be deputed to teach at schools within a reasonable distance of their own residences, I have located as nearly as possible the areas in which they should be employed.

*Correspondence.*—Some idea of the enormous amount of labour involved may be gathered from the volume of correspondence. This I find from my postage book amounts to over 1,400 letters.

As the scheme is crystallised, and the rules which I have gradually formulated become more widely known and appreciated, I am hopeful that the volume of this correspondence will be diminished.

*Examinations.*—I have given the subject of examinations special attention. All candidates are examined both in the theory and practice of their respective subjects. The examinations consist of two parts—a written (or oral where, owing to special circumstances, it is considered advisable) and a practical. Inability to satisfy the examiner in either part of the examination entails rejection of the whole.

It was pointed out to the examiners that many pupils being unaccustomed to express themselves in writing, do so with considerable difficulty, and consequently do themselves an injustice at the examination. The examiners have been instructed to discover such, and give them the option of submitting to the oral instead of the written examination. As many of our lecturing staff are also examiners, special care has been taken that no lecturer is asked to examine his own class.

When the written examination is held the questions are written on the blackboard; the practical part is conducted in the adjoining class-room, and the assistant teacher is instructed to remain with the scholars while they are writing.

The examination report form supplies me, in addition to the lists of successful and unsuccessful candidates, with a copy of the questions set.

By providing a space for examiners' remarks, I have utilised this examination report form as a means of obtaining the views generally of the examiners upon the pupils.

With a view to diminishing as far as possible the personal equation of the examiners, a printed sheet has been supplied setting on specimen questions and percentages of marks. The whole of the marks obtained by all pupils examined are returned in the examiner's report.

With my knowledge of the neighbourhood and class of student, with the examination questions before me, with the percentage of marks obtained by each pupil, and my personal knowledge of the examiner, I have constituted myself a court of appeal, with the object of obtaining the ideal—that of a uniform standard.

As these examinations are now in progress, it is impossible to give the details, which, however, will be found in the report of the Evening Continuation Schools Committee about to be issued.

Since my appointment, now nearly twelve months ago, I have done my best to launch this new scheme successfully. I have devoted many of the working hours of each day and practically all the leisure at my command to the organisation and superintendence of the classes, and submit the foregoing account of the results with some measure of confidence that the results will be considered satisfactory, and that they have justified the painstaking and anxious effort by which they have been produced.

In conclusion, I have to acknowledge the generous encouragement I have received from the Chairman of the Committee, the Rev. Stewart D. Headlam, without whose kindly sympathy and hearty co-operation it would have been impossible for me to do the work. I am grateful also for much valuable assistance and unfailing courtesy from Mr. Robertson, Clerk of the Evening Continuation Schools Committee.

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## THE ROENTGEN RAYS IN MILITARY SURGERY:

### EXPERIENCES IN SOUTH AFRICA.

By John Hall-Edwards, L.R.C.P.Edin., F.R.P.S.,

Surgeon-Radiographer to the General and Orthopædic Hospitals, Birmingham; and (late) to the Imperial Yeomanry Hospital, South Africa.

Professor Roentgen's discovery has placed in the hands of military surgeons an accurate method of diagnosis of inestimable value. To no branch of our professional work have the *x* rays proved of greater service than in the localisation of bullets in times of war, and in the power they place in our hands of estimating the amount of damage done to bones in the passage of bullets through them. Up to the commencement of the present war our knowledge of the injuries produced by small-bore projectiles was based almost entirely upon experiments performed upon dead animals, and experience has taught us that such experiments are of little value in helping us to arrive at a conclusion as to what takes place in actual warfare. In dead animals the conditions are so altered that it is impossible to draw a conclusion as to what would happen had the experiments which have been quoted been performed upon the living. In the first place there is a marked loss of elasticity in the muscles, bones, and skin. The fluids are more or less solidified; and last, but not least, there is absence of movement. There are, undoubtedly, many other alterations which would modify to a great extent the effects produced; but the mere mention of these is sufficient in itself to prove that the conditions are not parallel.

With the friendly aid of the *x* rays, we are enabled to record the effects of small-bore projectiles under the various conditions which occur in actual warfare. We are enabled to localise the position of a bullet or other foreign body with absolutely scientific accuracy; and, if our present knowledge be used to its fullest extent, we can see the condition of the parts as plainly as we could do, were the soft tissues composed only of transparent gelatine.

These facts being recognised, it is easy to see that the application of the *x* rays to military surgery must produce results of the greatest possible value for future guidance, and that their complete application in a great war—such as we are at present engaged in—must prove of inestimable service in increasing our knowledge upon this most important subject.

Many of the time-worn, useless, and dangerous methods of finding the whereabouts of hidden bullets may now be forgotten; for with the *x* rays we have at our disposal an aseptic, scientific, and absolutely accurate method of localisation, which may be improved, but which even now is as near perfection as our present knowledge can make it.

There can be little doubt that, in the face of the new facts brought to light by means of the *x* rays, military surgery will have to be rewritten, and the advance made will mark an epoch in its progress.

I freely admit that the altered conditions of warfare have themselves necessitated a considerable alteration in the methods of surgical treatment; and it is curious to note that, in the evolution of scientific progress, the discovery of the *x* rays should occur at a time when a perfect method of localisation was urgently needed. With the high-velocity firearms recently introduced, a far less number of bullets are retained in the tissues than was the case in the old days; but these few are usually situated so far from the entrance wound that no probe, however carefully designed, is capable of reaching them, and apart from the *x* rays we have no method of finding them. A bullet may enter into the right flank, and find its final resting place in the neck of the left femur; or, in a case which has been recorded, it may enter near the clavicle and be located in the thigh. In such cases as these no probe is of any value: and unless the whereabouts of the missile can be discovered by palpation, its exact location must ever remain a mystery, unless the *x* rays be used.

It is now possible to examine the whole body—with the fluorescent screen—in a few minutes, and to find the position of a bullet, no matter where its situation; moreover, this can be done without placing the patient at any serious inconvenience, and without subjecting him to the slightest risk of any sort.

Before starting for South Africa, I had, as the results of experiments tried at home (without any knowledge of the requirements of actual warfare) arrived at the conclusion that the transport difficulties, laid so much stress upon by the officials at the War Office, could be easily overcome, and that there was no reason why the *x* rays should not be applied, even upon the field. Actual experience has taught me, that although upon the field the *x* rays have distinct advantages over the old methods of diagnosis, and that they may prove of great service—there is, under ordinary circumstances, little or no necessity to have an apparatus in such an advanced position. Should a foreign body be located on the field, there is a rule, no immediate hurry for its removal; but the knowledge of its whereabouts would be of service, in helping to decide the best method of disposing of the patient.

The whole of my work in South Africa was done in large general hospitals, where, after some trouble, every convenience for efficiently carrying out the necessary procedures, was placed at my disposal.

Prior to my appointment on the staff of the Imperial Yeomanry Hospital two sets of apparatus had been ordered

through the generosity of the ladies of Yorkshire, and a gentleman of Leamington. These sets I found on inspection to be most incomplete, and to be minus the important part of the necessary equipment—namely, the instruments required for localisation. Without these no work of any moment could have been done. At my suggestion these were immediately ordered, together with an amount of photographic material which I thought I should require, and a specially-designed foot motor (of the bicycle type), and small dynamo for charging the accumulators. I have so many times been asked about the motor that I will proceed to describe it. The arrangement was constructed upon a firm metal frame, which was capable of being bolted to the floor; it was supplied with a heavy fly-wheel, which was driven by two riders by means of a chain: a belt from the fly-wheel drove the dynamo. The arrangement was as perfect—in theory—as could be wished for, but in practice it was a complete failure, as no one could be persuaded to work it. For the first few minutes the drivers of the dynamo beamed with delight, but they soon commenced to reek with perspiration, and gave in, from sheer exhaustion. The Kaffirs took a great interest in the proceedings, so I allowed them to have a turn, but they soon gave in, and lost all further interest in the object which had so bewildered them. I have no hesitation in saying that the bicycle arrangement is a failure, and that the machine I had so carefully designed is a monument of misplaced confidence. The charging of the accumulators gave me more trouble than all the other work. In the first instance they were charged at Capetown, and were sent up country by rail. They arrived with half the acid split, and had suffered considerably from the amount of bumping which they had sustained in the journey. On the second occasion (on the advice of friends) I sent them to the De Beers workshop at Kimberley—and I must take this opportunity of again thanking the electrical engineers there for the trouble they took in covering in the cells, and in despatching them in good working order. On their arrival at Deelfontein, I found them both leaking through their cases, and to all intents and purposes in a worse condition than when I sent them away. This was of course, no fault of the engineers who had so kindly come to my assistance (and who charged us nothing for their trouble), but was due to the manner in which they had been handled by the railway officials. They were next sent to Capetown to be repaired, but returned in a worse condition than when they were sent away. At this juncture I decided that it was impossible to continue my work under these conditions; and having been presented with a dynamo before starting from England, I persuaded my Commandant (Colonel Sloggett) to allow me to hire an oil engine to drive it. A visit to Capetown ended in my securing an engine (second-hand), which, after some preliminary experiments, worked very well. With it we lighted the dispensary, operating theatre, *x*-ray room, surgical stores, commandant's office, and officers' mess tent, in addition to the work I required. I so arranged matters that under ordinary circumstances my patients visited me in the evening, between 5 and 7.30, at which time only a small amount of the current was being used for lighting purposes. In the event of my urgently requiring the current, the engine could be started at any time in a few minutes, and could be shut off when the work was done. With this amount of current at my disposal, I used by preference the electrolytic interrupter, which never failed me, and produced the most satisfactory results.

The electrolytic interrupter is, in my opinion, far superior to any other. It is more manageable, is quickly repaired when it gets out of order, and the exposures made by it are shorter than those produced by any other form of contact breaker. As most base hospitals are now lighted with electric light, there are but slight obstacles in the way of using it. At Pretoria, which I visited for the purpose of establishing an *x*-ray department at the branch Imperial Yeomanry Hospital, I found that the whole of the institution was supplied with electric light from a steam engine and dynamo, which had been used by the Boers for lighting the prisoners' camp. The Volunteer engineers put in the necessary cable and switches for me, and in a few days I was ready for work. Here, owing to the time occupied in starting the engine, it was necessary to work in the evening; but as it rarely happens that a case is of such urgency as to require immediate attention, the patients suffered little or no inconvenience; whilst the absence of worry, caused by the uncertainty of accumulators, was a great satisfaction.

For future campaigns, I would strongly recommend that each general hospital (which has not an electric light installation) be supplied with with an oil engine and dynamo specially designed for *x*-ray work. Such an apparatus need not necessarily be heavy, and at the present time I am engaged in designing one (with the aid of a friend) which I trust will meet all requirements.

In addition to the apparatus already mentioned, my equipment consisted of two coils, one giving a 12-inch spark; and a portable one of my own design, which, under normal conditions, gave a spark of 10 inches. This second coil was of the army pattern, and was specially constructed for transport. A selection of tubes of the pattern which a few weeks back won the medal offered by the Roentgen Society, and known as the "Cox Record Tube"; a Mackenzie-Davidson's localising couch, and cross thread localiser; a localiser of my own design; two fluorescent screens, ampère-meters, volt-meters, tube holders, etc.; and an amount of photographic material, plates, which I imagined would last me at least twelve months. I may here mention that the plates I prefer are "The Castle," and I found them work as well in South Africa as they do in this country. Amongst the stores sent out were a number of plates specially prepared for *x*-ray work; upon these I failed to obtain as good results as I did upon my old friends, and I only used them when compelled to do so.

During the first few weeks, whilst the hospital was in course of erection, I was compelled to work under difficulties; but when all was complete, I was furnished with a room which was all that could be desired, together with a convenient dark room and general photographic room. From this you will gather that my work was carried on under exceptional conditions; nevertheless, at No. 2 General Hospital at Pretoria the rooms were quite as pretentious and even more convenient. If the work is to be well done there can be no doubt that it must be carried out under favourable conditions. Localisation requires exactitude, and it cannot be properly performed under "rough and tumble" circumstances.

There can be little doubt that some of the best surgery performed in the Imperial Yeomanry Hospital was the result of the *x*-ray work done there; and although it is not my intention here to enter into a discussion on the advisability or otherwise of removing bullets I am strongly of opinion that such a discussion would serve a useful purpose. It would be more than interesting to hear the different opinions on this subject, and some general line of action might arise from it.

The localisation of bullets was carried out in the usual manner, with the exception that I prefer to make my two exposures on separate plates instead of upon one as is frequently advocated. There is a distinct advantage in adopting this method, inasmuch as the first image is not obscured by the subsequent exposure, and as the Wheatstone's stereoscope can be appealed to, if its evidence should be required. My method of securing measurements from the two negatives is as follows: Upon a sheet of tracing paper are carefully drawn two lines, crossing one another at right angles, to correspond with the lines ruled upon the glass base of the "cross-thread" localiser. This is laid upon the negative so that the ruled lines overlay, and correspond with, the image produced by the wires of the localiser. The negative is now either held up against a window, or it is placed upon the glass base I have already referred to, and the outline of the bullet or other foreign body is carefully traced with a sharp lead pencil. The procedure is now repeated with the other negative. The diagram produced is now laid upon the "cross-thread" localiser in the usual manner, being kept in its position by weights on the corners. From this diagram a localisation can be made with as great accuracy as can be obtained by the one negative method, and even greater than that secured with one negative placed over another. As in most cases the operation for the removal of the bullet does not take place for some time after the localisation has been made, it is a necessity that the lines made upon the skin by the crossed wires should be marked in such a way that they cannot be rubbed out by the patient; an ink

pencil answers the purpose very well, if the part marked can be well covered and be kept still. The final marking (before cleaning up for the operation) must be made by scratching the skin, or better still, the whole thing can be marked in from the first with nitrate of silver.

If, during the localisation, the patient lies upon the surface of the skin from which the operation is to be made, an allowance in the depth must be made for the compression of the soft parts. This is frequently difficult to calculate with exactitude; but with a pair of callipers and a foot rule a very good idea can be obtained.

In the Imperial Yeomanry Hospital I made it a rule to attend all operations in which a foreign body was to be removed, and saw for myself that the markings were not obliterated in the process of cleansing. To this fact I attribute, to some extent, our success. In no single case was a bullet missed after a localisation had been made, although, in one instance, I think it would have occurred had I not been present at the time of the operation.

In this case a man was brought in with a suppurating wound over the patella of the right knee, and a history of having been operated upon for the purpose of finding a bullet, the presence of which had been demonstrated by the *x* rays. Several weeks were allowed to elapse before anything could be done. When the wound was quite healed, a localisation was made, and, as it was thought advisable to remove the bullet, an operation was arranged for. The surgeon cut down under the localising marks until the surface of the femur was reached, and, no sign of the bullet being visible, he arrived at the conclusion that some mistake had been made in the localisation. A careful inspection of the bone led to the discovery of a minute crack immediately under my marks, and upon my advice the surgeon removed a small piece of bone with a chisel, when the nose of the bullet at once became visible, and the missile was removed.

Had I not been present at this operation, the search might have been once more abandoned, and the case might have been handed down to posterity as a glaring example of the uselessness of the *x* rays. The failure to find the bullet on the first occasion was undoubtedly due to a want of knowledge of, and sufficient confidence in, the possibilities of the *x* rays. I must admit that, in the first instance, a localisation may not have been made; and, granted that such was the case, a bullet in such a position would be exceedingly difficult to find.

Another exceedingly interesting case, and one which points to a moral, was one which came under the care of my friend, Mr. H. A. Ballance, of Norwich; and it is with his kind permission that I mention it here:

It occurred in the case of a man who had an entrance wound three-quarters of an inch in length, situated half an inch to the right of the middle line of the back, on a level with the sixth dorsal spine. There was a tender spot in front, about the middle of the second right costal cartilage. An examination with the fluorescent screen showed the presence of a shrapnel bullet. This was localised with some difficulty, owing to the movements of the chest wall, at a depth of an inch and a quarter. As the man was exceedingly well nourished, and was very muscular into the bargain, a discussion took place as to the whereabouts of the missile. A re-examination with the fluorescent screen showed that the bullet moved very slightly during the acts of inspiration and respiration, and that the movements coincided with those of the chest wall, and not with those of the lung. It was thought that in all probability the bullet had just penetrated the lung, and that an inflammatory area had been set up, causing adhesions. At the operation, Mr. Ballance resected portions of two ribs, when, after a slight dissection, the presence of the bullet could be detected with the finger. During the examination, however, the lung suddenly collapsed, carrying the bullet with it. On inserting the finger into the chest, the bullet could be distinctly felt on the surface of the lung; but could not for obvious reasons be removed. The wound was stitched up, and dressed, and the patient was sent back to his bed. In ten days' time it was found that the lung had again assumed its normal condition, and it was decided to operate once more. The wound was re-opened, and the bullet removed without the slightest difficulty—new adhesions holding the lung in position.

In this interesting case, I very much doubt if the use of Wheatstone's stereoscope would have helped us very much, as the bullet, though embedded in the lung, was situated at such a short distance from the ribs, that even under these conditions its exact *locale* would have been to a great extent a matter of speculation. As a rule, the reflecting stereoscope is of the greatest possible help, even after an exact localisation has been made, as it shows the relative position of foreign bodies and neighbouring bones; and this instance may be mentioned as the exception which goes to prove the rule. Unfortunately, I was not provided with a reflecting stereoscope, so that all my localisations depended entirely upon measurements. I would, however, suggest that in future campaigns the instrument should form part of a base hospital equipment.

During an experience of fourteen months at the Imperial Yeomanry Hospitals at Deelfontein and Pretoria, some 280 cases of one sort and another came under my observation.

It is my intention here to deal only with those in which the presence of a foreign body was suspected. The following list of 193 cases shows the parts injured, and the number of cases in which foreign bodies were localised:

*List of Cases of Injury with Bullets, Portions of Bullets, and Fragments of Shell, Radiographed at the Imperial Yeomanry Hospitals at Deelfontein and Pretoria, between March 19th, 1900, and March 31st, 1901.*

| Parts Injured. | Number of Cases Radiographed. | Number of Cases in which Foreign Bodies were Localised. |
|---|---|---|
| Eye ... ... ... | 3 | 1 |
| Head ... ... | 11 | 1 |
| Neck ... ... | 2 | 1 |
| Chest ... ... | 18 | 7 |
| Shoulder ... ... | 10 | 1 |
| Arm... ... ... | 13 | 4 |
| Elbow ... ... | 14 | 2 |
| Forearm ... ... | 10 | 1 |
| Wrist ... ... | 3 | 0 |
| Hand ... ... | 19 | 8 |
| Abdomen ... ... | 2 | 0 |
| Spine ... ... | 1 | 1 |
| Back ... ... | 5 | 3 |
| Pelvis ... ... | 6 | 4 |
| Thigh and Hip ... | 30 | 18 |
| Knee ... ... | 8 | 3 |
| Leg ... ... ... | 16 | 8 |
| Ankle ... ... | — | — |
| Foot... ... ... | 18 | 2 |
| Total ... ... | 193 | 65 |

The list here given is not a long one; but it must be remembered that until within the last two months of my stay at Deelfontein we were situated far from the front, and only such cases as had filtered through other hospitals came into my hands. It was only during the last two months that we received any wounded straight from the field, and curiously none of these had retained bullets.

Some of the most interesting cases—from my point of view—were those we received in the first train of wounded brought down from Mafeking after the relief. Amongst these were several cases in which the *x* rays in the hands of others had failed to show the presence of bullets. I may specially mention the cases of Major Mullins and Mr. Charles Hands (the Special Correspondent of the London *Daily Mail*), in which attempts to find bullets by means of the *x* rays had proved a failure. In both of these cases the bullets were localised and removed. They were both under the care of our Senior Surgeon, Mr. A. D. Fripp, C.B., F.R.C.S. In the first-mentioned case a Mauser bullet was located in the spinal column; a "laminectomy" was performed, and the bullet removed with the greatest possible success. On admission, the patient was paralysed in both legs, and had lost all control over his bladder and rectum. The removal of the bullet alleviated the symptoms, and I am pleased to say that at the present time the patient can move about with the aid of sticks, and has a fair chance of a complete recovery. Mr. Hands, in addition to the presence of a bullet, had sustained a serious fracture of his left femur. He has now completely recovered.

That the *x* rays have not been used to their fullest possible extent during the present war I deeply regret, as I feel certain that a complete radiographic survey of the many injuries received in South Africa would have been of the greatest service to future military surgeons. It is generally admitted by those who have had any experience in *x*-ray work that if a surgeon is to take up the subject with any chance of success he must devote the whole of his time to it. Prior to the commencement of the war few members of the Royal Army Medical Corps had received any training in this most important branch of military medical work, and most of those who had undergone a course freely admitted that it was inadequate to give them a complete knowledge of the subject.

Owing to the incompleteness of the Army X-ray Department, it was found necessary to send to the front a number of medical students, and manufacturers of apparatus, who had

...ge of the subject. As the result of this pro-...y failures have occurred, and some discredit has ...upon the *x* rays which they do not deserve, and ...under proper administration, they would not have ...debited with.

The *x*-ray departments were left entirely to the mercy of the assistants, under whose control they had, by force of circumstances, fallen. There was no proper supervision, and, as a consequence, the gentlemen in charge were left to do pretty well as they liked.

If the Royal Army Medical Corps is to be reconstructed on perfect lines, we must have a properly-constituted *x*-ray department under capable supervision, in which members can receive a complete training, and in which such experimental work as may be necessary to evolve perfect apparatus can be carried out with the intention of having everything in order, when necessity may call us once more to the front.

Surgeon-General O'Dwyer assured Dr. Hall-Edwards that he had never heard the *x* rays disparaged and that military surgeons were fully alive to their great utility. He said the *x* rays had not been long before the public and there was hardly time to give elaborate instruction to all the officers of the R.A.M.C. as to their use. No doubt that would be attended to in future. A further use of the *x* rays in the army was that when a soldier was discharged from the army with an obscure injury it was possible to send the diagnosis of his injury with him, obtained as a photo by the *x* rays for the information of some medical gentleman in, perhaps, a remote country district far away from the *x*-ray apparatus.

## TYPES OF ENTRANCE AND EXIT WOUNDS AS SEEN IN THE SOUTH AFRICAN CAMPAIGN.

By Cuthbert S. Wallace, F.R.C.S.Eng.,

Assistant Surgeon to St. Thomas's Hospital, and to the East London Hospital for Children.

A bullet wound is essentially a "penetrating" or "perforating" wound, but it differs most materially from penetrating wounds inflicted by sharp-pointed instruments, such as knives or trocars. This difference is due chiefly to the velocity of the projectile, and to a lesser degree to its bluntness, the consequence of these conditions being that all bullet wounds partake of the nature of contusions, and that, as a corollary, the tissues are liable to be injured beyond the immediate track of the bullet to varying distances.

### Entrance and Exit Wounds: Different Kinds of Bullets.

*Typical Wounds caused by Normal Small-bore Bullets.*—A perfect, undeformed, small-bore bullet entering at right angles to the surface makes as a rule a round hole slightly smaller than the bullet itself. Around this aperture is a narrow ring about one-sixth of an inch in breath, from which the cuticle has been removed, and which appears some hours after the receipt of the injury as a red border to the wound. A little later this ring, as well as the actual hole, is covered with a dark scab, which consequently is larger than the hole which it covers. The bullet in its passage inwards pushes in front of it the skin, which is thus brought into contact with the sides of the bullet and bruised by it. The projectile then passing on, stretches and perforates the skin, and gains admission through a hole which is smaller than the actual diameter of the bullet.

*Atypical Wounds caused by Normal Small-Bore Bullets.*—When the axis of flight of the bullet is inclined at less than a right angle to the surface, the wound in the skin becomes oval, and the breach of surface therefore is slightly bigger. When the angle is very oblique the bullet traverses a certain track of skin, depressing it more and more until actual perforation takes place. The skin, therefore, is bruised and the cuticle destroyed for some distance from the aperture of entrance. This damaged area of skin shows as a red, raw place when the wound is recent.

The shape of the contused area is roughly that of an isosceles triangle with a rounded apex, and the sides are slightly bent outwards. The base is formed by the perforation in the skin. The breadth is often more than that of the actual bullet.

Bullets passing out through the skin obliquely make an oval aperture of exit, and this, if the line of flight is greatly inclined to the skin, is often of large size, but still remains oval. The skin is evidently pushed out and then burst. The width of such a wound is rather striking, and is due to the skin being unsupported and to the natural elasticity of the cutis causing retraction and gaping. It has been thought by some that such wounds are due to the setting up of expanding bullets, but the evidence does not confirm this, for in multiple wounds caused by the same bullet the second aperture of entrance is often quite round and small, although the first exit wound is large and slit obliquely. Some of these oblique wounds have measured 1 inch by $\frac{1}{2}$ inch and even more.

When a bullet traverses the surface of the skin so as to make a long graze it causes a surprisingly wide area of damage.

The following is a good example of this damage:

A soldier was shot while lying down. The bullet came from the front, and perforated the skin over the spine of the right scapula, then emerged, leaving a bridge of skin a third of an inch wide, and travelled down the surface of the body for 4 inches. The resulting slough was the same length, and at least $\frac{3}{4}$ inch broad at its widest place; from here it gradually tapered off. When the slough separated the surface refused to granulate, and was not healed at the end of a month from the receipt of the injury.

*Ricochet Bullet Wounds.*—In these cases the wounds lose more or less of their typical character according to the amount and kind of distortion the bullet has undergone. The round, oval, or slit-like wound becomes irregular, torn or jagged, for, even if not greatly distorted after striking the ground, the bullet no longer continues to have its long axis in the axis of flight, and so may strike the body with its side, or partly with its side and base. In such cases the length of the wound will vary according to the actual position of the projectile at the moment of its impinging on the skin. Fragments of stones struck by bullets will also cause jagged irregular wounds. This is especially the case when the bullet strikes the body where it is in contact with the ground.

F. H. was wounded at Paardeberg on February 18th. He was lying down under a cross fire. The bullet entered just by the left anterior superior spine, and caused a lacerated wound $1\frac{1}{2}$ inch long. The clothes over the entrance aperture were also torn to a like extent. When the patient was dressed there was a wound just over the femoral artery, but of small extent and slit like. On March 10th the wound near the anterior superior spine was granulating healthily, and the slit over the femoral artery was healed. A hard core could be felt to join the two. The *x*-ray picture showed a bullet lying with its point towards the symphysis pubis under the groin wound. The bullet was found lying under the skin in the midst of gritty pultaceous material within a fibrous capsule. It was slightly flattened and grazed. The nickel plating was chipped off on one side at the base.

The explanation of this case seems to have been that the bullet hit the ground and the body almost at the same time, thus causing a large aperture of entrance, and then passing in it bruised the tissue against the ground, and finally lodged. Retained bullets were found under three conditions as regards the surrounding structures.

1. When extracted shortly after the receipt of the wound the bullet was lodged in a ragged blood-containing cavity.
2. Somewhat later a fibrous capsule was found, and within this was the projectile surrounded with serous fluid.
3. At a since later period the fibrous capsule was found to have shrunken on to the bullet which it closely surrounded.

A certain number of lodged bullets were found, when extracted, to be lying inverted, with their apex towards the aperture of entrance, which was usually of the typical form, though contact with bone could in many instances be excluded. The explanation must be sought outside the body, and is due to one of two causes. In some cases it is the result of a ricochet.

In another class of case the turning over of the bullets is due to the wearing away of the grooves of the rifling by frequent firing; this was probably the cause of a bullet, which was extracted at the Portland Hospital, having entered the arm base first, for the projectile was quite smooth, and showed only the barest trace of the rifling upon its surface. It is the rapid twist of a long bullet that alone prevents it from turning head over heels soon after it leaves the rifle, and, if the spin imparted to the bullet be not sufficient it will soon

commence to turn over on a transverse axis, and thus may actually enter the body base first.

"Explosive" Wounds.

These wounds are practically always met with in connection with fractures of bone.

There is no hard and fast line to be drawn between an ordinary typical Mauser wound and those that have been termed explosive, and all gradations are met with between the small round puncture of the former and the yawning opening of the latter. The wounds shown in slides [exhibited] are cases in point. It will be seen that these apertures are large and irregular. The entrance wounds were perfectly typical. There was no evidence to show that the bullets were anything else but perfect, small calibre bullets, and there was no sign of any fracture of bone. The bullets here emerged at an acute angle, and to this must be attributed the character of the wounds.

The extent of the exit wound, it must be borne in mind, has no invariable definite relation to the underlying damage, although it may afford valuable indications thereof. The introduction of a finger will often show that although the exit aperture may be large, the skin is so undermined and the muscles so torn that a still larger irregular cavity is formed into which the ends of the fractured bone protrude, and this was especially well shown in cases of fractured femur.

Another form of wound is that in which the skin is blown away to a great extent. This is likely to happen if the bullet emerges from a subcutaneous bone, as the shin, and then there is a definite loss of substance so that a crater-like wound results.

A third form is that in which the muscles and tendons are torn, and at the same time extruded through the skin wound and form a protruding mass above the level of the skin resembling in some degree a fungating sarcoma, especially if seen for the first time some days after the infliction of the wound.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

### TREATMENT OF DYSENTERY.

My experience of this disease during the last two summers in Natal, when dysentery has been very prevalent amongst the troops, prompts me to mention the method of treatment I have usually adopted and found most useful in very severe cases where there has been frequent stools accompanied by tenesmus and vomiting.

In such cases the patients were fed on white of egg only, the whites of three eggs being beaten up and mixed with one large bottle of soda-water; no milk or brandy was given. The latter, I find, has a great tendency to increase the diarrhœa; the former will usually cause sickness, owing to the irritable state of the gastric mucous membrane. This white of egg diet, I find, does not upset the stomach, and at the same time tends to prevent sickness, if any. It appeases the appetite and nourishes the patient. As many as 12 to 18 whites of egg may be given during the twenty-four hours. When the stools become less frequent, that is, 5 to 7 during the twenty-four hours, the patient is allowed to take the raw juice of a steak three times a day and an ounce of port wine mixed with the same quantity of the meat juice in addition to the white of egg.

Local treatment consists of a warm saturated solution of boracic acid given night and morning. For severe tenesmus the internal sphincter is swabbed with a 2 per cent. solution of cocaine. Hot fomentations are applied to the abdomen to relieve tormina—a few drops of turpentine being sprinkled upon the foment. The constant hiccough and vomiting, which generally supervenes in these severe cases, can be usually prevented by giving the patient small pieces of ice to suck, with the addition of: ℞ Vin. ipecac. ℥j, tr. nux vom. ℥ij, sp. chloroform ℥x, aq. ad. ℥j, every half-hour.

Lime-juice sweetened, mixed with soda-water, is a very refreshing drink, especially in cases in which the breath has a fœtid odour, the tongue is dry, the mouth parched, and the stools green and watery. In such cases this beverage has added not a little to the improvement, if not to the actual recovery, of some of these patients. This latter statement especially applies to those stricken of the disease who had been through the siege of Ladysmith.

W. Rous Kemp, B.A.Camb., L.S.A.Lond.,
Civil Surgeon, No. 4 General Hospital, Mooi River, Natal.

### LACERATION OF THE INFERIOR VENA CAVA: DEATH AFTER FOUR HOURS.

On May 12th, a boy, aged 6 years was admitted to the Worthing Infirmary, having been run over by a rubber-tyred cab: both wheels, according to a witness of the accident, passed over his body. On admission, about 10 minutes after the accident, he was in a state of collapse, and appeared dying. The obvious injuries were a slight graze of the skin on the right of the thorax, and a fracture of the left humerus. He was put to bed, treated with warmth and stimulants, and so far improved as to be able to say he had pain in the abdomen. His pulse was small and irregular both in force and rhythm, and his breathing was also irregular, being very shallow and rapid at times, and then almost stertorous for a short period; the pupils varied in size, and acted sometimes together, sometimes separately. He became irritable upon any attempt being made to rouse him.

The appearance of diminished resonance on percussion in the flanks and over an increasing area was taken to indicate intraperitoneal hæmorrhage; 20 ozs. of saline solution (½ per cent.) were injected into the right median basilic vein; the pulse improved. Laparotomy was performed by a median incision between the ensiform cartilage and the umbilicus; a large quantity of dark blood and some clots were found in the abdominal cavity; examination of the upper and lower surfaces of the liver and spleen revealed no injury; the rest of the abdomen was examined and sponged out; the bleeding had ceased, and the source of it had not been found. The hand was then passed beneath the diaphragm to the posterior surface of the liver; the finger entered a laceration, the limits of which could not be made out; there was a profuse flow of dark blood, and the patient immediately died. This was four hours after the accident.

*Post-mortem* examination showed that the brain was uninjured; the sixth right rib was fractured. There was a small quantity of bloody serum in the right pleura and in the pericardium, and there were two lacerations on the posterior surface of the right lobe of the liver, about an inch and a-half long, one of which was quite shallow, and the other about half an inch deep at one end; the falciform ligament was torn from the upper surface of the liver for its whole length. The inferior vena cava was torn through for half its circumference, just below the diaphragm, on its left side front, the opening of the right hepatic vein being visible through the tear; on the inner surface of the right auricle, but not extending through the wall, was a laceration from the inferior vena cava to within half an inch of the opening of the superior vena cava. There was a slight extravasion of blood beneath the right pleura and the pericardium, close to the spine.

This case seems worth recording, as showing the length of time the victim of such an injury may live: it was four hours in this case, and would have been longer but for the operation. It also shows that the apposition of the liver to the under surface of the diaphragm is such as to allow the circulation to be carried on through the vena cava, even when half the circumference of the vessel has been torn through.

Frank Hinds, M.D.,
Hon. Surgeon, Worthing Infirmary.

### CASE OF TETANUS: RECOVERY UNDER CHLORAL.

The case arose from an acute spreading gangrene following a severe compound fracture of the leg, complicated by simple fracture of the thigh on the same side. The injury was sustained on February 12th. The treatment consisted in keeping the patient fully under the influence of chloral, its effect being watched carefully; thus 30 grs. were given, usually every two hours; now and again, though rarely, every three hours, and occasionally a double dose, according to the severity of the tetanic seizures. The following is a brief history: On February 15th amputation was performed just be-

low knee. On the 16th a gangrenous patch the size of half-a-crown was removed from the posterior flap. On the 25th the patient complained of stiffness of the jaws, and of a cracking sensation when eating, but was otherwise well. Part of the stump had healed by first intention, part was granulating and healthy. The granulating surface was swabbed with pure carbolic. On February 28th risus sardonicus was noticed, and spasms in the muscles of the face and neck. He spat blood from a bite of the tongue, which had given pain at its root, and could only protrude the tip. The temperature was normal.

On March 3rd the jaws were firmly locked; there was vomiting all the day; rectal medication and nutrient enemata were employed. On the 4th there were spasms in the muscles of the back with opisthotonos; he had a feeling of "red-hot coal" behind the neck. On the fifth the abdomen was affected, and owing to the severe pain opium and belladonna were added to the medicine. He slept for about ten minutes at a time, when the mouth would be open, awaking with a cry of pain, a snap of the jaws, and a convulsive seizure.

On the 14th the lower extremities were affected: he was very weak; glycerine enemata caused agonising seizures; he was perspiring profusely, his pulse was 120. He was given digitalis and strophanthus. On the 16th he was delirious for the first time; the temperature was 103°, as he seemed to be collapsing he was given brandy. On the 17th the spasms were not so severe; there was evidence of hypostatic pneumonia, and a sacral bedsore. On the 19th expectoration was copious, but difficult, owing to rigidity of the chest and abdomen. On the 27th he was conscious for the first time since the 16th; perspiration was very profuse; there was a much longer interval between the spasms; the muscles were relaxing. From this time on he did well, occasionally becoming delirious, usually at night time; the chloral was accordingly eased off. The temperature varied from 100° to 103° for another fortnight, but disappeared under liberal diet. The feeding throughout was done by a tube. After recovery it was found that the crowns of 2 sound molars were broken off, and there was a deep scar on each side of the tongue. The amputation wound and the fracture were soundly healed. Cases of tetanus are divided into acute and chronic. It may be asked, is not every case of tetanus acute, for tetanus that gets better is necessarily chronic in recovery?

Wigan. J. THOMSON SHIRLAW, M.B.

# REPORTS

ON

## MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

### LIVERPOOL ROYAL INFIRMARY.

#### AN UNUSUAL CASE OF EXTRAVASATION OF URINE.

(Under the care of Mr. RUSHTON PARKER.)

*History and State on Examination.*—On April 10th, 1901, Mr. Parker was called by Dr. Holmes, of Liverpool, to see a ship's steward, aged 51, who was suffering from a brawny cellulitis of the lower abdomen of four days' duration, attended by fever and illness, due to extravasation of urine. As the inflammatory swelling extended more to the right than the left, it looked at first like an abscess associated with appendicitis, but no symptom had existed pointing to that. The man was known to have had urethral stricture, for which he had been submitted ten years previously to internal urethrotomy by Mr. Parker, in conjunction with Dr. Holmes, with complete relief for five years, during which he occasionally passed bougies on himself. But there was not now, nor had he previously noticed, any retention of urine, though he passed urine with a certain amount of trouble from time to time during the previous five years, which he attributed to his neglect of bougies. Nor was the scrotum œdematous or in any way altered, as in the usual forms of extravasation. On examining the perineum, however, there was found thickening at the root of the penis, which was thrust forward as if by a deep perineal abscess.

His present illness began with a rigor on March 24th, the day after sailing for Liverpool from New Brunswick, and kept him in bed most of the voyage of ten days. As he could pass water, although with some discomfort, he had not connected his state with any urinary trouble, and was supposed to be ill with influenza. On April 6th, after arriving home, he first noticed the abdominal swelling, which he afterwards said had begun during the night after passing water.

*Diagnosis.*—It was concluded that the case was probably one of extravasation, and in view of a necessary operation he was removed to the Royal Infirmary the same day and operated on the next (April 11th).

*Operation.*—Three long incisions were made over the abdominal swelling, and thin puriform liquid, horribly fœtid, was let out, exposing adherent sloughs of subcutaneous tissue and muscular aponeuroses. A single median cut was made in the perineum opening a deep abscess with cellulitis continuous with that on the abdomen. But, as he could pass water, the urethra was not opened. A search was made for a perforation but none was found, although, of course, it must have been there, as urine escaped afterwards.

Lister's bougies up to No. 13 were passed without difficulty. He made a steady recovery, the wounds gradually clearing and healing, and water passing the natural way at his convenience. No bougies were passed again for some weeks, but as on the attempt a hitch was several times found, he was put under chloroform on May 28th, and internal urethrotomy was again performed, followed at once by the passage of large bougies. The urethrotome used in both instances was that of Maisonneuve.

REMARKS BY MR. PARKER.—The case was peculiar and unusual in the following particulars: There was never any notable retention, as micturition went on regularly; but whether the bladder was regularly emptied or not was not known. The initial trouble was probably a deep urinary abscess, due to a small perforation near the bulb; and a greater extravasation occurred secondarily, but did not increase as such. The scrotum for some reason was never implicated in the extravasation from first to last. This was to me a novel feature in the presence of abdominal infiltration. The reason of it would appear to be that the original urinary abscess blocked the way to the scrotum, and that when the larger extravasation occurred it had only the abdominal course to follow. I have seen other cases of extravasation in which the urethral opening was not noticeable on inspection of the exposed urethra, and in some of them the urethral passage was wide enough in front of the rupture or perforation not to absolutely require laying open according to conventional usage. But hitherto I had always practised that conventional incision, which here was obviously unnecessary. The absence of a tube to drain the bladder proved convenient by limiting the after-treatment to the dressing of the abscesses.

### NO. 8 GENERAL HOSPITAL, BLOEMFONTEIN.

#### THE TREATMENT OF SOME AFFECTIONS COMMON IN MILITARY PRACTICE.

(By F. J. W. PORTER, Captain R.A.M.C.)

*Ingrowing Toe-nail.*—This is very commonly met with among soldiers. The treatment usually adopted is either to remove the whole nail or a strip on the side which is ingrowing, care being taken, by packing with wool or lint, during the growth of the new nail, to keep the edge of the skin from overlapping again. Sometimes part of the overhanging skin is dissected away. Whatever method is adopted, it necessitates the detention of the soldier in hospital for at least fourteen days, and in my experience relapse usually results after a time. The following will be found a most satisfactory method of treatment. Render the toe anæsthetic by injecting some 5 per cent. solution of cocaine. Then with sharp scissors remove a thin strip of the ingrowing nail right down to the root, and apply pure carbolic acid to the exposed matrix for three successive days. At the end of this time the strip of matrix can be peeled off, and it is never renewed, consequently there is no fresh growth of nail. The man is fit for duty in less than a week, and relapses never occur.

*Phimosis.*—Phimosis, due to a long prepuce becoming œdema-

tous, owing to the presence of a chancre near or on the corona glandis, is a fairly common sight in military hospitals. There is a very offensive discharge from beneath the prepuce, and retraction is impossible. It is usual to slit up the prepuce, with the result that the edges of the incision become infected, and two enormous hard sores occur, or else two ulcerated surfaces, which take a long time to heal and require a secondary circumcision. If strips of oiled lint be packed as tightly as possible between the prepuce and glans, it will usually be found that the œdema will become so lessened in twelve hours that retraction will be possible. Occasionally a second packing will be found necessary.

*Bedsores.*—At this hospital an enormous number of cases of enteric fever are treated, and bedsores are very exceptional occurrences. This is due to the fact that, besides careful nursing, the parts exposed to pressure are painted from the first day, with a hardening solution, which consists of a saturated solution of tannic acid in spirits of camphor.

These methods of treatment I have learnt from Major C. J. Holmes, R.A.M.C., and I think them so valuable that I communicate them to the JOURNAL, in the hope that others may find them as useful as I have.

# REVIEWS.

THE STATE OF THE MEDICAL PROFESSION IN GREAT BRITAIN AND IRELAND IN 1900. Carmichael Prize Essay. By H. NELSON HARDY, F.R.C.S.E., M.R.C.S., L.R.C.P., Divisional Surgeon Metropolitan Police. Dublin: Fannin and Co.; and London: Baillière, Tindall, and Cox. 1901. (Demy 8vo, pp. 105.)

THIS essay obtained the Carmichael Prize last year, and as it had to be sent in by June 30th, 1900, the topics handled in it reach only to that date. This warning the author is careful to give the reader in his preface, and it should be borne in mind in reading those parts of the essay which touch on matters such as the surgery of the war in South Africa, the Midwives Bill, the constitution of our Association, and other topics of the hour.

Turning to the work itself we feel able to congratulate both the judges and the successful candidate. The essay is evidently the production of an honest and courageous enquirer into the present condition of our profession, one who has no private ends to serve, and has the experience and intelligence necessary for dealing with the complicated mass of facts that such an inquiry involves, and its perusal will well repay the time spent on it by anyone who will also think over what he reads. We must content ourselves, in this brief notice, with selecting one or two of the more prominent topics with which Mr. NELSON HARDY deals. These are regarded naturally and most properly from the point of view of the ordinary general practitioner, rather than that of the philanthropist or the social reformer.

And first for "hospital abuse." As Mr. Nelson Hardy says: "It would be waste of time to go over again the facts which prove its existence and extent" (page 20). He shows how prejudicial is the present out-patient system to the practice of the medical men in the vicinity; how inadequate is the inquiry which is, in some cases, made into the circumstances of the applicants, and how trivial are many of the cases treated. Probably it did not fall within the scope of the essay to suggest remedies, nor shall we try to do so. Mr. Nelson Hardy deplores the fact that general practitioners find it hard to make a living, though they are reduced to "accept such low fees as 1s. 6d. for visit and medicine, and 1s. for consultation and medicine." But let us really face the facts as they are. Is it not the fact that this deplorable state of things is kept up—in a great measure, at any rate—by the reckless competition which goes on in the ranks of the profession itself? We do not plead for anything approaching to the rules or the discipline of a trades-union, but only for such a reasonable fellow-feeling as would prevent practitioners from underselling their neighbours in the gross way indicated by these shilling and eighteenpenny fees. On the subject of trades-unions, our author has some very sensible remarks:

"The bugbear of trades-unionism," he says (p. 29), "is one which only needs to be examined in the full light of knowledge to disappear, like many another ghostly apparition. There is, it is true, a trades-unionism which should be avoided by all honourable men, which consists in the tyrannical oppression of workmen belonging to the same trade by their so-called leaders, compelling them to come out on strike, and often to starve with their families, because the officials of their union, who are often the chief benefiters by the strike, have decreed that they shall do so; but in its simpler and far more beneficial form trades-unionism means the combination of those belonging to a particular occupation (and why not also a particular profession?) for their mutual advantage. Without such a combination it would have been impossible for the Cork medical men to have led the way in what has come to be known as 'the battle of the clubs,' which has since been waged with varying success at Lincoln, Stockport, Wigan, Nottingham, Eastbourne, and Inverness. The result in the last-named place is instructive as to the power of such combination. The medical men of the town formed a union, and all agreed not to accept clubs except on certain terms.....The clubs refused to agree to these terms, amalgamated, and in the end gave the very terms they had refused to their old medical officers to the new."

Mr. Hardy also gives examples of the adoption of union methods in France and Belgium. One of the first lessons we should derive from this essay is the need for a better corporate feeling in the profession, and for such mutual confidence as would make common action possible and effective.

Another matter of the greatest importance, and bearing on the same topic, is the necessity for some "court of medical ethics," which could decide what conduct is to be held "infamous" in the eye of the law, and which would be armed with the legal power necessary to enforce its decision. This matter is discussed very sensibly on p. 72, where also reference is made to an abortive attempt to set up the General Medical Council as such a court. The author says:

Surely the proper authorities are the Colleges of Physicians and Surgeons, who license the majority of practitioners, and who unfortunately, after having granted them diplomas, seem to take very little interest in them or their doings until some complaint is made to the Colleges or the General Medical Council. If the Colleges could be brought to see what an important service they might render to the profession by taking up this subject of medical ethics in real earnest, constituting themselves, as they easily could, courts of appeal for their own licentiates, at all events giving opportunities for discussing such subjects within the college buildings, and even sending friendly admonitions to those of their licentiates whose manner of conducting their practices seemed to require such warnings, they might do much to bind the whole profession to them and to open up to themselves and their official successors an entirely new sphere of influence and usefulness.

A counsel of perfection! some may feel inclined to say, but one which we need not despair of seeing realised, as we believe, in the not distant future. There are several other topics in this interesting and valuable book—not the less valuable a book because a short one—which we had marked for extract and comment, but our space is exhausted. We commend the essay heartily to our readers for perusal and meditation. All of them can do something in their own practice, as well as by their influence with their friends and the public to realise the end which Mr. Carmichael had in view in founding the prize, and Mr. Nelson Hardy has so worthily striven to promote, namely, that the profession should become "more useful to the public, and a more respectable body than it is at present."

## BOOKS ON BACTERIOLOGY.

SINCE the days of de Bary little systematic work upon bacteriology has been collected together from the botanical point of view. In consequence there is a great diversity of opinion among bacteriologists as to the classification of bacteria and particularly of bacilli. If we except the better-known pathogenic bacteria it may be said with truth that there is scarcely a bacterium which is sufficiently described in the textbooks to allow of its being classified. For instance, even in some of the latest works upon systematic bacteriology, such as those of Migula and Flügge, the amount of information given is often not enough to identify, much less classify, the organism. It is not enough to say that a bacillus is motile or that it forms spores; the number and distribution of the flagella, the shape of the spore-bearing bacillus should be observed. Professor FISCHER[1] in his work to which in its English dress Mr. Coppen Jones has given the title *The Structure and Functions and Bacteria*, goes so far as to classify bacilli with regard to these points, and suggests the names "plectridium" for bacilli like the tetanus bacillus, "bactrinium" for a mono-

[1] *The Structure and Functions of Bacteria.* By Alfred Fischer, Professor of Botany at the University of Leipzig. Translated by A. Coppen Jones. Oxford: Clarendon Press. 1900. (Demy 8vo, pp. 198. 8s. 6d.)

trichous bacillus like the B. pyocyaneus, and the B. typhi abdominalis should be called the bactridium typhi abdominalis. The functions of bacteria and their effects upon different substances are very fully described, and the chapters upon the circulation of nitrogen and carbon dioxide are most excellent. In short, the book is one of the greatest possible value to the bacteriologist, and should be the means of reducing to some order the present chaos in the nomenclature and classification of bacteria. It is difficult to follow such a man as de Bary, but in Professor Fischer we have a most excellent successor. The translation is well done, and shows that Mr. Coppen Jones has a perfect knowledge of the technical terms of both languages.

Dr. J. GASSER's book upon the biological examination of drinking water[2] is a short account of the bacteriological examination, for nothing but bacteria are included. The first part deals with the collection of the water and the estimation of the bacteria therein contained. After this comes an account of the typhoid and colon bacilli and the cholera vibrio, and a few remarks concerning the paratyphoid and paracolon bacilli. The last seventy pages contain some facts concerning each of a number of bacteria commonly found in water. We must confess that we are extremely disappointed in the book, because it does not fulfil the promise of the preface. The object which the author had in view was to enable those who are not experts in water examination to perform the various examinations. It is admitted that one of the most difficult problems which the examiner has to face is the identity of those organisms belonging to the colon group. There are so many omissions and errors concerning the colon and paracolon bacilli, however, that we are convinced that a beginner relying upon the book would in many cases draw very wrong conclusions. It will be sufficient to quote one statement in proof of our contention: "The bacillus lactis aërogenes differs from the bacillus coli only by the faculty which it has of remaining stained by the method of Gram." The account of the water bacteria is drawn from Flügge, Lustig, and Frankland's works, and no attempt has been made to add to the accounts the results of the researches of more recent workers.

Dr. V. A. MOORE'S *Laboratory Directions for Beginners in Bacteriology*[3] are contained in sixty-four exercises, and include descriptions of the various methods and processes used in bacteriology. The usefulness of the book has been diminished by the attempts to include more than the laboratory directions; bacteriological history may surely be relegated to a manual. On the other hand, much might have been included which is dismissed by such a phrase as "for this and other methods see textbooks on bacteriology." We would point to an excellent point about the book—that the beginner is taught to obtain the greatest number of reactions produced by the bacteria, and not to rely for a description upon the appearances on three or four media.

Dr. GEORGE NEWMAN'S book on *Bacteria*[4] discusses their place in the economy of Nature, and should prove eminently helpful in its own sphere, which is quite defined. Elaborate technical treatises on bacteriology already exist, but this book deals with what may be called the philosophy of the subject in a homely way, well adapted for the ordinary intelligent man, whether medical or lay. The familiar proverb enjoins on us to "give even the Devil his due," and this work keeps before its readers, in a somewhat unusual way, the fact that all bacteria do not belong to the Destroyer: that, indeed, many of them are friendly. The book deserves praise not merely for its treatment of the bacteriology of disease—although that is excellent but for the clear, concise, and illuminating way in which it discusses such questions as nitrification, the part played by bacteria in butter and cheese-making, and the bacterial purification of sewage. It contains enough for the general practitioner who has not made a systematic study of bacteriology, but desires a wide view of the subject. It contains enough to serve as an introduction for one who aspires to a special knowledge of bacteriology. And it does not contain too much, in our opinion, for such representative men as the members of municipal sanitary committees and of the Boards of provincial hospitals. The book is at once interesting, sound, and practical.

[2] *Analyse Biologique des Eaux Potable* [Biological Examination of Drinking Water]. Von Dr. J. Gasser (Encyclopédie Scientifique des Aide-mémoire). Paris: Masson et Cie. (Crown 8vo, pp. 100. Fr. 2.50.)

[3] *Laboratory Directions for Beginners in Bacteriology.* By Veranus A. Moore, B.S., M.D. Second Edition. London: Edward Arnold. 1900. (Crown 8vo, pp. 144.)

[4] *Bacteria Especially as they are Related to the Economy of Nature, to Industrial Processes, and to the Public Health.* By George Newman, M.D., F.R.S. Edin., D.P.H. Second edition. London: John Murray. 1900. (Demy 8vo, pp. 397, 15 photomicrographs, and 70 other illustrations. 6s.)

# REPORTS AND ANALYSES

AND

# DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

## MEDICINAL AND DIETETIC PREPARATIONS.

*Urosin.*—Specimens of preparations made from this drug have been brought to our notice by Messrs. Zimmer and Co., Frankfort. Chemically urosin is lithium quinate, and its pharmaceutical properties are similar to those of sidonal (piperazine quinate), which was reported on in the BRITISH MEDICAL JOURNAL of June 8th, 1901, p. 1408. A note on its therapeutic uses will be found on referring to the EPITOME of the BRITISH MEDICAL JOURNAL, May 18th, 1901 (par. 335 on quinic acid). Effervescent urosin is a white granular substance which forms an agreeable draught with water. Urosin solution 50 per cent. is a convenient form for dispensing. Urosin tablets contain 0.5 gram (7½ grs.) of urosin, and are supplied in glass tubes. They effervesce, rapidly disintegrate, and dissolve in water.

*Sulphaqua.*—Sulphaqua is the name given to an aqueous mixture obtained by mixing the solutions of two powders which are put up in separate packages by the Seltzogene Patent Charging Company of St. Helens, Lancashire. The two powders consist of well-known salts, the nature of which we have ascertained by analysis, and the effect of mixing their aqueous solutions is to produce a very finely-divided precipitate of sulphur, while a certain amount of sulphurous acid gas is evolved. The mixture is thrown into from 10 to 20 gallons of warm water, and thus gives a sulphur bath. When prepared according to the directions given, the bath is not appreciably acid, and the fact that the finely-divided sulphur is in the "nascent" condition is undoubtedly a point of considerable importance. In essential respects the natural sulphur springs would thus appear to be successfully simulated, and the idea appears well worthy of the attention of the profession.

## MEDICAL AND SURGICAL APPLIANCES.

*The Duplex Hot Air Spray* for inhalations and the local application of volatile remedies, sold by the Hot Air Spray Company, 37, York Place, Edinburgh, resembles the instrument shown by Dr. P. Lacroix, of Paris, at the Portsmouth meeting of the British Medical Association in 1899, which will be found described and figured in the BRITISH MEDICAL JOURNAL for October 14th, 1899, page 996. Dr. Lacroix reported favourably of its use with formalin in laryngeal phthisis. Such appliances are convenient for the application of medicated vapour to the upper air tract. The inhalant may be mixed with the hot water in the bottle (for moist inhalation) or put in a test tube, which is plunged in the hot water (for dry inhalation). Dr. Lacroix seems to have used his instrument for dry inhalation only.

MID-CHESHIRE QUEEN VICTORIA MEMORIAL.—At a recent meeting of the Board of the Victoria Infirmary, Northwich, it was announced that a firm of chemical manufacturers, Messrs. Brunner, Mond, and Co., had decided to give £1,000 towards the fund for the extension of the hospital. It was resolved to provide 24 additional beds, an operating theatre, and isolation wards at a cost of about £4,000: the whole was to be known as the Mid-Cheshire Queen Victoria Memorial.

# NOVA ET VETERA.

## SOME UNPUBLISHED MANUSCRIPT LETTERS OF JENNER.

Dr. S. Weir Mitchell contributes to the *Transactions of the College of Physicians of Philadelphia*, vol. xxii, 1900, a paper mainly consisting of a number of letters by Edward Jenner, the discoverer of vaccination. He looked with care through the various lives of Jenner and the histories of vaccination, and failed to find any of the letters, which are now in the possession of the Philadelphia College of Physicians. The letters, seventeen in number, are addressed to Mr. Charles Murray, of 17, Bedford Row, London, who was Secretary of one of the numerous societies which had for their object the propagation of Jenner's views and practice. They begin in 1806, and the last bears the date of June, 1817. The letters show that Jenner was a quick-tempered man, in whom what he termed the barbarous murders committed by the unchecked small-pox roused the fiercest indignation. Angry reference is made to Dr. Walker and Mr. Adams, who is denounced as an "apostate." The former, as to whom little is said in Baron's *Life of Jenner*, had been appointed Resident Inoculator and Medical Secretary of the Royal Jennerian Institution, of which Jenner was President. The charges brought against him by Jenner finally led to his resignation in March, 1806. Of Adams we are told that he made certain experiments on small-pox, and in his own opinion had produced a very mild and innocuous form presumably to be used for inoculation. But what he had done to provoke the wrath of Jenner in the following extract from a letter dated April 29th, 1808, does not appear:

If you had not acted as you did on receiving so gross an insult from the apostate Adams I should say the laws of attraction were not immutable. Your fingers were compelled like the needle to the magnet to fly to the centre of his countenance after the excitement they had received. This is not the only chastisement this gentleman will receive. You have very properly inflicted corporal punishment on the delinquent, and if I mistake not the world will give him enough of the mental. I do not consider Dr. Adams any longer a fit man to conduct the business of vaccination at the small-pox hospital, as his late writings exhibit a spirit of disaffection. How can such a man be trusted?

That Jenner knew the uses of publicity in furthering a scheme is shown in the following passage from the same letter:

I am much obliged to you for sending me Dr. McKenzie's report, which shall be returned to you on my coming to town. We can make some striking extracts from it for the papers and the medical journals.

Here is an interesting deliverance as to an alleged case of failure which is not mentioned by Baron. It occurs in a letter dated June 23rd, 1808:

If Mr. Bliss, who has always been represented to me as a sensible man, considers the case in Mr. Gambier's family as a failure, how miserably have I been wasting my time and labour in making experiments to ascertain the laws and agencies of the variolous and vaccine virus on the human constitution, and in endeavouring to impress those laws on the minds of the faculty. This child, it seems, was found insusceptible to the effluvia of the variolous poison, but not of the venom when inserted into the skin. Where, then, is the failure of vaccination? Was it not proved by the natural test that the child in question had actually received security from the contagion of the small-pox? And even when inoculated the consequences were exactly such as have happened to those who have previously had the small-pox in a vast number of well-attested instances. After this I may exclaim with Cobbett, "It is done." At least I think it high time that I should have done with it.

How eager he was that the benefits of vaccination should be made known appears from the following reference to the National Vaccine Institution, which occurs in a letter dated November 21st, 1809:

The new institution cannot possibly succeed according to its present plan. There is no energy in any one department of it. You must recollect how often I harangued the Board and Council of the B. I. Society on the necessity of making vaccination and all its benefits known to the people through the medium of the newspapers. And this was adopted by them as far as their means would allow. In my conference with Mr. Rose I enforced, with all the powers I was master of, his making an adequate provision for this purpose, and that it should be the duty of a secretary to attend to this point, under the control of a superintendent meaning to take that office upon himself. But this you will find has not been in the least attended to. Such a mass of evidence, both foreign and domestic, might thus have been placed before the people that the destructive engine, small-pox inoculation, now kept so constantly at work, would have no longer known its effects, and the stations of the N. V. Institution would have been crowded with applicants. But now all the documents laid before them consist in little more than the placards of Moseley and Birch, pamphlets, reviews, etc., which abound with praises of the vaccine, fall into the hands of a few only; but newspapers are read or their contents made known to the multitude.

Then as now noble lords were in the habit of talking about matters which they did not understand. On July 25th, 1813, we find Jenner in great wrath because of some foolish deliverance of Lord Ellenborough:

I wish you would have the kindness to tell me what sensation has been occasioned in town by the very extraordinary and unwarrantable remarks of my Lord Ellenborough in the House of Lords on vaccination? In the country they have occasioned no inconsiderable effect, and I will venture to predict without the interposition of some bold and manly counteraction the consequences will be extremely mischievous. The people who conclude without reasoning will imagine that a Lord Chief Justice knows everything, and judge that a general tremor must arise among those whose children have been vaccinated to find that they have received temporary security only and to hear the general slur his lordship passed upon the practice that it did not merit the praises passed upon it. That it was very well for those who like himself had large families to bring up in a great city, etc. I have examined three different London papers and find the same expression in all of them; therefore I conceive his words to be correctly reported; but I imagine it will be necessary that a report sanctioned by the House should be examined before what I am going to mention is published. My friend Dr. Baron, the founder of the Gloucestershire Vaccine Association, has written a most excellent letter full of the most spirited remarks and severe animadversions on Lord Ellenborough's conduct.

On June 23rd, 1817, Jenner writes in reference to a French claim to the discovery which has made his name immortal:

The report you made me from a French journal, which I have since seen, was too contemptible to require any reply from me. These jealous people still continue their ridiculous claims, and now say the disease was known in France twenty-five years ago. What nonsense! But the most extraordinary part of the business is that a name so illustrious as that of Chaptal should appear among these fellows. This I cannot understand, unless what I have heard remarked is an absolute fact that all Frenchmen are alike.

In addition to the letters addressed to Mr. Murray, there is one addressed by Jenner to Mr. Monroe, then United States Minister to the Court of St. James. It has not been printed before, and Dr. Weir Mitchell says he has added it to the others "because of its sagacious statement as to the epidemic influenza from which Mrs. Monroe had suffered":

I have been favoured with your letter from Bath, and was sorry to find Mrs. Monroe had experienced a return of her indisposition. I know not why it should be so, but yet I see clearly that these febrile catarrhs, which have obtained the name of influenzas, hang about the Constitution for a long space of time, and that their influence, though apparently subsided, is ready to be again and again called into action from slight causes.

I mention this on Mrs. Monroe's account that she may guard herself with more than ordinary care till the exciting cause, whatever it may be, has quitted our atmosphere.

The Packet of Books for the worthy President I have desired a Friend in Town to consign to your care at Blake's Hotel with all possible despatch. My Letter will be put up with the Book which is set apart for his own use.

And now, my good Sir, allow me to thank you for all your kind attentions, and to assure you how extremely happy I am in having form'd your acquaintance and obtained your friendship. You will at all times find me ready to convince you of it in any way in my power, either on this, or on the other side of the Atlantic.

It should be stated that the letters from which extracts are given above were bought in England and presented to the Philadelphia College of Physicians by Professor Da Costa and Dr. S. Weir Mitchell. They are declared by the latter gentleman to be "certainly genuine."

## ANNUAL REPORT OF THE CHIEF INSPECTOR OF FACTORIES AND WORKSHOPS FOR THE YEAR 1900.[1]

This report, which reaches the dimensions of a Blue Book of 664 pages, contains a large amount of valuable and interesting information, and is one of the best that has ever been published by the Factory Department. There is a greater general excellence, too, in the reports of the various Inspectors of Factories than we have observed on previous occasions. Comparing the statistics of 1899 with those of 1900, there is a further increase in the number of accidents. During 1900 there were reported to the certifying surgeons 27,704 accidents, or an advance of 4,933, that is, an increase of 21.7 per cent. upon the corresponding total of the previous year, an increase which is unequally distributed over men, women, and children, the greatest increase being observed in adults and males. Machinery, hoists, circular saws, escape of gas, and steam and electric shock have all tended to swell the increase. In the month of November, as in the previous two years, there occurred the largest number of accidents. Lead poisoning decreased from 1,258 cases in 1899, to 1,058 in 1900, the decrease being especially noticeable in the two industries pottery (249 to 200), and white lead (399 to 358). There were 22 reported cases of arsenical poisoning, 20 of which occurred in

[1] Messrs. Eyre and Spottiswoode, price 6s. 4d.

three factories; 13, of which 3 were fatal, were due to the inhalation of arseniuretted hydrogen gas. Mercury is responsible for 9 cases of poisoning, phosphorus for 3, and anthrax for 37. A greater attempt has been made to enlist the sympathy and co-operation of employer and the workpeople in carrying out precautionary measures.

The report gives at considerable length the correspondence that passed between the Secretary of State and the pottery manufacturers in regard to the recommendations made by Professors Thorpe and Oliver nearly three years ago. Objection is taken to the recommendation of leadless glazes and also to the standard solubility of lead fritts. Dr. Thorpe demonstrated that a glaze which yielded to a dilute solution of hydrochloric acid only 2 per cent. of soluble lead calculated as lead monoxide, would give as satisfactory results as one that contained three or four times that amount. In accordance with that fact the Home Secretary announced several months ago to the pottery manufacturers that after July 1st, 1902, this as a recommendation would be enforced. The dispute between the manufacturers and the Home Office on this particular point is not yet ended.

Dr. Whitelegge directs attention to a subject of interest to the medical profession, namely, the compulsory notification of cases of industrial lead poisoning. The object of notification is to obtain information of dangerous conditions over which the inspectors can exercise control. At present the Home Office has no power to deal with cases of plumbism occurring beyond either a factory or workshop. It cannot, for example, deal with lead poisoning due to drinking water, or that caused by any industry not included under the operation of the Factory Acts. The notifiable cases, therefore, are those occurring in factories and workshops. House-painting is, correctly speaking, outside the province of the Factory Acts, so that in most instances no duty is incumbent upon the medical practitioner to report cases of plumbism occurring in this industry, nor can the Home Office remedy the conditions that may have caused the lead poisoning, and yet now and again a house painter may spend some portion of his time in a factory or workshop grinding lead pigments or mixing lead paints, so that under these circumstances such a case would be reportable. The Home Office will accept certificates and pay the usual fee of half-a-crown on the assumption that the practitioner is of opinion the patient was employed in connection with a given factory or workshop, where, from the nature of the work, lead poisoning might reasonably be anticipated. Successive attacks of plumbism in an individual who continues to work in lead processes are to be notified, but not those of chronic lead poisoning already reported, and where the workman has ceased for years to be connected with dangerous processes.

The portion of the report which has the greatest interest for us is that issued by the medical inspector, Dr. Legge, who informs us at the outset that much has been done during the year to educate the workpeople as to the precautions necessary when working with lead by the distribution of leaflets containing information as to how industrial plumbism is caused and best prevented. Statistics of lead poisoning in the various industries have been carefully tabulated by the medical inspector, and these at once fix the attention of the reader. In electrical accumulator works there were 33 cases of lead poisoning in excess of the year 1899. Remedial measures are indicated by Dr. Legge. To the rare form of poisoning by arseniuretted hydrogen gas a few pages are very properly devoted. Of the 13 people who suffered 3 died. The two factories that supplied the cases were an alkali and a chemical works where zinc chloride was manufactured. In the case of a man who had been cleaning out a Weldon chlorine still, the symptoms are said to have suggested phosphorous poisoning to the medical attendant. These were "constant vomiting, coppery jaundice, lividity of the body, the mucous membrane of the lips almost black, suppression of urine (what little was drawn off consisted almost of pure blood)." The man died on the sixth day, having had free hæmatemesis. To the naked eye the viscera seemed healthy at the necropsy, and beyond marked disintegration of the blood corpuscles microscopical examination revealed nothing abnormal. Arsenic was subsequently found in the liver, spleen, and kidneys, etc. In another case arsenic was found in the urine during life. The symptoms of arseniuretted hydrogen gas poisoning in the men who worked in the zinc chloride factory were nausea and great depression, hot burning pain extending from throat to stomach, intense thirst, vomiting, diarrhœa, the stools being choleraic in character first, rice-watery and then bloody, hæmoglobinuria, and jaundice. The whole effect was that of an irritant poison. The intensity of the jaundice was very striking. In 9 out of the 10 cases there was hæmaturia.

Only 3 cases of phosphorus necrosis occurred during 1900. The compulsory dental examination is believed to have been of good service, while to the abolition of the use of white phosphorus in at least one large match works may also be attributed the comparative healthiness of the trade during the year. Dr. Legge has, since the introduction of substitutes for white phosphorus, observed severe conjunctivitis, œdema of the eyelids, and eczematous eruptions in some of the workers. Attention is directed to the frequency with which men who work in ganister—a substance used for making firebrick clays—die from phthisis. Dr. Robertshaw, of Stocksbridge, was one of the first to indicate the connection between phthisis and ganister mining. In Dr. Legge's report there are several beautiful illustrations of sections of the lung, demonstrating the fibroid character of the phthisis and the late tuberculous infection that may occur. For the pathological report of ganister lung disease the Government is indebted to Dr. Andrewes, of St. Bartholomew's Hospital. We congratulate Dr. Whitelegge and his able staff on the valuable report they have published.

## THE LONDON COUNTY COUNCIL'S INEBRIATE REFORMATORY.

THE first report of the London County Council's Inebriate Reformatory at Horley has just been issued, giving full particulars of the first 30 women who have been treated there. The report is preceded by a prefatory account of the work at Farmfield, by Dr. W. J. Collins, the first Chairman of the Inebriates Acts Committee, in which he recalls the fact that in 1834, 1867, and 1872 Select Committees sat and reported on the mode of dealing with habitual drunkards, inquiries with which the names of J. S. Buckingham and Dalrymple were honourably associated. In 1879 the Habitual Drunkards Act provided for the treatment in licensed "retreats" of persons who, not being amenable to any jurisdiction in lunacy, were, notwithstanding, by reason of habitual intemperate drinking of intoxicating liquor dangerous to themselves or others or incapable of managing their own affairs. Entrance to such retreats was a voluntary act on the part of such persons, the Legislature declining, in the interest of the liberty of the subject, to enact compulsory committal. Jealous regard for individual liberty and fear of the abuse of compulsory incarceration sufficed to limit the scope of the Act of 1879. This Act, though amended in 1889, failed to achieve conspicuous success, and after a further inquiry by Departmental Committee in 1893, the Inebriates Act of 1898 was passed, which created an entirely new law for the compulsory treatment in reformatories of habitual drunkards guilty of crime and offences against public order.

The intention of the Legislature was to facilitate the reformation of the habitual drunkard under three distinct categories. The State was to concern itself with the more truly criminal and also presumably the more intractable class; the county and town councils were to cater for the less criminal in certified reformatories conducted with greater lenity; and, thirdly, by encouraging support of "retreats" out of rates it was intended to offer greater facilities to inebriates, who have not come under the law, to reform themselves.

### THE WORKING OF THE INEBRIATES ACT.

The new Act came into force on January 1st, 1899, and on February 28th the London County Council decided to exercise the new optional powers thus placed in its hands, and appointed a Committee to consider the matter. The scheme of contribution by the Treasury, whereby half-a-guinea per head per week was paid under certain conditions for inmates of reformatories committed under Section 2, did not come into operation until April 1st, 1899.

The Inebriates Acts Committee at once set about inquiring

as to the amount of accommodation that would be required for proving the efficacy of the new system. No adequate information was forthcoming from either the Home Office or the magistrates. A visit to Holloway Gaol suggested that the need of making provision for female inebriates was more pressing than for males. It was pointed out that many a male inebriate when not in drink was an artisan earning good wages, and that his incarceration for two or three years would spell ruin to his family. A return shows that of 88 cases committed to reformatories in 1899 only 7 were males, though it is fair to state that the limited provision for males has possibly affected this result.

Before deciding to establish a reformatory of its own, the the Council, on the advice of its Committee, decided in July, 1899, to enter into contracts with two of the three institutions which had already received certificates. One of these was the Farm Colony established some years ago under the guidance and sagacious direction of Lady Henry Somerset, at Duxhurst, in Surrey. The other was the Roman Catholic Reformatory at Ashford, in Middlesex, controlled by the devoted Sisterhood of the Good Shepherd. To these two reformatories some 60 London women had been committed, the Council supplementing the Treasury grant by a contribution of 7s. per head per week.

### The Reformatory at Farmfield.

In October, 1899, the Council decided to establish and carry on a certified reformatory of its own and under its own immediate management. It accordingly purchased an estate consisting of 374 acres, known as Farmfield, near Horley, in Surrey, about midway between London and Brighton. The estate cost some £13,000; this included two mansions on the estate, which it was decided to fit up and utilise for thirty patients, and the requisite staff, as rapidly as possible, so that experience might be acquired before embarking upon extensive building operations. Dr. Collins describes the reformatory as follows:

"A visit to Farmfield would disabuse the minds of those who think of reformatories only as dull barrack buildings, with stone walls and iron bars in obtrusive evidence. From the high road a quarter of a mile drive across a meadow puts you down at Farmfield House, where the lady superintendent, Mrs. Mathias, resides with her thirty 'patients,' the rest of the sisters and staff being housed at the Home Farm, about 300 yards off, with which, however, telephonic communication has been established.

"The house is an attractive country mansion, situate in a picturesque flower-garden with lawn and lake; to the north is an airing court, within an unclimbable fence, with a cinder path for exercise in damp weather. At the rear of the mansion is a large vegetable garden which both supplies and occupies the inmates. There is on the ground floor a large recreation and dining-hall, brightly and prettily furnished, with harmonium and piano; also a large washhouse, with drying-rooms and well-ventilated workrooms. An ominously heavy door in the back court is labelled 'Punishment Cell'; this it is the desire of the committee and superintendent to use as little as possible, and moral suasion is exhausted before resort is had to this chamber. Discipline has been remarkably good, thanks to the untiring patience and tact of the matron and sisters; the women receive marks and can earn thereby a small sum, which accumulates against their discharge. At the Home Farm is a model dairy, where the better behaved are instructed in butter-making, etc.: a fruit farm has also been laid out under the direction of Mr. Goodchild, the agricultural adviser, and will this year be worked largely by the inmates of the home. All the buildings are lit by electric light, generated at a station near the garden. Poultry, bees, and other details of farm life are not forgotten, and everything is done to take the patients back to simple, natural life, such as that typified in the English country homestead. Of course, no alcohol is permitted on the estate; the patients thrive remarkably, all have increased in weight, some to a phenomenal degree; no serious illness has occurred, and the visiting medical officer, Dr. Williamson, despite the miserable and physically low condition in which some of the women arrive, has nothing but progress to report after their sojourn at Farmfield. Careful records are made as to the mental, moral, and physical condition of the inmates, and their life-histories provide opportunities for reflection alike to the anthropologist and the philanthropist.

So impressed with the same truth was the Inebriates Acts Committee that already, in November last, the Council, on their recommendation, resolved "That a letter be addressed to the Secretary of State urging the desirability of a State reformatory being established for the reception of persons committed under the Inebriates Act, 1898, who cannot be suitably dealt with in certified reformatories."

The paramount importance of discriminating classification is forced upon the minds of those who have endeavoured to deal remedially with these "borderland" cases. The mad and the bad pass insensibly into one another. The prison, the asylum, the hospital, and the reformatory are all required, but the sorting of their contents is at present very imperfectly done. S. Butler, in *Erewhon*, treats crime as a disease and disease as a crime, and fancifully puts a consumptive in the dock for having contracted phthisis. Doubtless the penology of the twentieth century will rub out some of the old lines of past classifications and introduce many new ones. In the new buildings at Farmfield, which the Council, at the cost of some £20,000, is about to erect, especial attention has been given to gradating the inmates for purposes of applying the appropriate motives, restrictions, and mental and moral treatment to the several phases and types of the patients committed to their charge. The work is novel, experimental no doubt, but full of hope. It is well that the late century and the Victorian era, with which the progress of the "new humanity" has been so closely interwoven, did not close without at least inaugurating, under municipal management, a movement for the restoration of our social wrecks, the rehabilitation of the victims of our national curse.

## SCIENCE NOTES.

We may admire and envy not only the zeal displayed in America in providing facilities for higher education, and the liberality with which rich Americans give money for this purpose, but also the energy with which plans are carried through. During the winter and spring of this year a movement was originated by the Washington Academy of Sciences for the foundation of an institution to facilitate the utilisation of the various scientific and other resources of the Federal Government for purposes of research. We learn, from a recent issue of *Science*, that the scheme has already been completed. By co-operation between the Academy and the George Washington Memorial Association, formed to commemorate the first President and to increase in the city of Washington the opportunities for higher education as recommended by him in his first annual message to Congress, a Washington Memorial Institution has been founded. An Act has been passed by Congress providing "that facilities for study and research in the Government departments, the library of Congress, the national museum, the zoological park, the bureau of ethnology, the Fish Commission, the botanic gardens and similar institutions hereafter established, shall be afforded to scientific investigators and to duly qualified individuals, students and graduates of institutions of learning." The Memorial Association undertakes to secure a suitable site and erect thereon a substantial dignified building to the memory of George Washington and the academy in conjunction with the National Education Association, the Association of American Universities, and the Association of Agricultural and Experiment Stations undertakes to provide for the maintenance and conduct of the institution in the interest of science and literature. The Act of Congress was passed on March 3rd, the scheme of co-operation was agreed to on March 13th, the articles of incorporation were filed on May 20th, the incorporators met and elected a Board of Trustees representative of the chief universities and Government departments on May 27th, and the trustees met and elected executive officers and an Advisory Board on June 3rd. Three months seems a short time to get such a scheme in working order even in America, and it is pretty certain that we should spend three years at least in England. The general idea seems to be to give promising students and young graduates in the many universities of the United States opportunities for advanced study and research in the national

collections. We have the idea in this country, and we believe that as a matter of practice worthy students of special subjects are welcomed by the directors of our national collections and museums, but as usual we have no organised system. Everything is left to individual initiative, to chance vacancies, and to the luck of finding a young man sufficiently endowed with scientific zeal and this world's goods to give his energies to research, and sufficiently fortunate to have friends to put him in the right road.

Dr. Granville Harrison in the *Bulletin* of the Johns Hopkins Hospital, April-June, 1901, gives an interesting account of tailed men, and adds one more to the list of *homines caudati*. Some years ago, says Dr. Harrison, Bartels gave an excellent summary of existing knowledge and beliefs concerning the occurrence of caudal appendages in man, pointing out that references to the peculiarity are to be found as far back as Pliny and Pausanias. Appended to Bartels's paper is a map, which shows the various lands supposed at one time or other to have been the haunts of human races with tails. These regions include not only widely distant portions of South America, Asia, and Africa, but also the greater part of Western Europe. Whilst many of the statements cited by Bartels are to be classed as legendary, it is interesting to note how persistent and wide in range the belief in the existence of such races has been. The most remarkable stories have been told and have found credence; in these the significance of the caudal appendage has been variously interpreted. On the one hand, a tail has been considered a distinction of the highest degree, even a mark of divine descent, as in the case of the Ranas of Poorbunder, who traced their descent from the monkey-god Hanuman. On the other hand, it has usually been looked upon as a curse or stigma of degradation. Many congenital malformations in the region of the coccyx have passed for tails, but when the individual instances are sifted a certain proportion show that the condition has resulted from the persistence of at least part of the vestigial tail found in the human embryo. In some of these cases it seems that the coccyx extends down into the tail, though there is no good evidence that there is ever an increase over the normal number of coccygeal vertebræ. The majority of tails, too, contain no prolongation of the vertebral column, so that they were classed by Virchow as "soft tails." The boy described by Dr. Harrison had a tail attached to the mid-line of the body about 1 centimetre, or rather less than half an inch, below the tip of the coccyx. It consisted of three segments, and on the whole was not unlike that of a pig. The hairs upon the tail were plainly visible to the naked eye and pointed towards the tip. Two weeks after the birth of the child it was 4.4 cm. long; at the age of 2 months it had grown to 5 cm., and at 6 months, when it was removed, it had attained the length of 7 cm., or 3 inches. The most remarkable characteristic of the tail was its mobility. When at rest it would lie extended in the midline, or bent over to one side upon the buttocks. When the child was irritated, or cried, or coughed, the tail would contract markedly. Between the basal and middle segments but little movement was possible, but between the distal and middle segments the movement was considerable. The distal part could be drawn in sharply, telescoping the middle segment, and at the same time flexion to the left side took place. During this action the middle segment became much shorter and thicker. A microscopical section of the tail showed it to consist of areolar tissue containing much fat. Blood vessels, nerves, and striated muscle fibres were embedded in the connective tissue, but there was no trace of anything like the vertebral column or of notochordal tissue.

The new mammal, the existence of which in the Semliki Forest of the Congo Free State, has been established by the exertions of Sir Harry Johnston, is the third living representative of a group of the Ungulates intermediary between the Cervidæ (deer) and the Bovidæ (oxen, sheep, antelopes, etc.). The other two living members of the group are the giraffe of Africa and the prongbuck of North America. There are, however, numerous extinct forms belonging to the group, and the okapi (as the animal is called by the natives of the forest) seems to be nearly-related to a creature, helladotherium, found in the fossil state in Greece and Asia Minor. Professor Ray Lankester, who has received a skin and two skulls of the okapi, has, after examining the skulls, come to the conclusion that the new mammal cannot be referred to the genus helladotherium, but must be placed in a new genus. The flesh of the okapi is said to be excellent eating, and there seems no reason why we should not some day see the animal domesticated, if steps are taken in the meanwhile to prevent its extermination. It seems that it is much scarcer than it used to be, its skin, or portions of it, being greatly sought after by the natives for purposes of personal adornment.

The photogenic bacteria, upon which Dr. Allan Macfadyen and Mr. J. E. Barnard have recently made a series of researches at the Jenner Institute, are an extremely interesting group of organisms living chiefly in sea water. They only produce light in the presence of free oxygen and a certain percentage of soluble chloride in the nutritive medium, although it is not clear that they cannot exist except under these conditions. At one time "phosphorescence" (so-called) was considered a property of dead matter, but it has now been clearly demonstrated that the luminosity often seen in dead and decaying fish and other animal substances is due to the presence of these bacteria. Among living organisms "phosphorescence" is quite a common phenomenon, some examples occurring in each of the larger groups of animals up to and including fishes, and it is especially common among deep-sea forms. Among plants, in some of the fungi, chiefly those of the hymenomycetes or mushroom group, the mycelium gives out light during growth. A few instances are recorded among the higher plants, a poppy (papaver orientale), a nasturtium (tropæolum majus), a lily (lilium bulbiferum), and a few others having been observed at some time to be photogenic. Now, although the cause of light production is not understood, it might be too much to suggest that "phosphorescence" generally is due to the presence of bacteria, but it would seem highly probable that, in the case of the higher animals and plants, when luminosity occurs, it is due to the presence of these organisms.

Mr. R. Lydekker, in an article on Arctic Animals in *Knowledge* for August, discusses, among other things, the experiment of Sir John Ross on an Arctic lemming. He says: "In this instance the little animal was kept in a comparatively warm room till winter was well advanced, when it was suddenly exposed to a temperature of 30° below zero; a continued exposure to this and a still more intense degree of cold, eventually resulting in its death, which took place within three weeks of the commencement of the experiment. In consequence of the conditions under which it had been kept, this lemming was still brown in mid-winter, when it ought to have been white. As a result of its first night's exposure, the fur on the cheeks and a patch on each shoulder became completely white, and by the end of the first week the whole coat had turned white. On examination it was found that only the tips of some of the hairs had become blanched, and that these white-tipped hairs were longer than the rest of the coat, apparently owing to a sudden growth on their part in the course of the experiment. By clipping these long white-tipped hairs the animal was restored to its original brown condition.....In spite of the very obvious fact that these changes occurred under extremely abnormal circumstances, it has been argued that Arctic mammals which turn white in winter do so normally by a similar blanching of the hair of the summer coat, and that the greater length of the winter, as compared with the summer dress of such white animals, is due to a lengthening of the individual hairs of the former. Moreover, it has been inferred that the colour change is directly under the control of the animals themselves. Quite apart from many other considerations, one weak point in this argument is that the hairs in the subject of the experiment were white only at their tips. It was doubtless assumed that had the experiment been continued over a longer period, the white would have gradually extended downwards till the whole hair became blanched. But had this been the normal way in which the change from a dark to a white coat is brought about, it is obvious that animals ought frequently to be captured in which the coat is in the same condition as that of the lemming. So far, however, as I am aware, no such condition has ever been described."

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THE Boston Board of Health is evidently determined to enforce its rules relative to expectoration in public places. The penalty for violating the ordinance is $100 (£20).

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, AUGUST 24TH, 1901.

## TYPHOID INFECTION IN ARMIES.

In a paper contributed to the Navy, Army, and Ambulance Section on Airborne Typhoid in Armies, which appears at p. 463, Dr. Leigh Canney has endeavoured to show that in those epidemics of typhoid fever occurring at certain military stations in India, namely, Kailana, Quetta, Khyber, Chakrata, Bangalore, Mhow, and Poona, where dust and flies have been believed to have been prominent factors in the spread of the disease, the evidence of such a causation was by no means clear, and that the avenues of infection by means of water were not all excluded in a single instance. Of these, the outbreak in Quetta in 1898, the causes of which were made the subject of inquiry by a Commission, is more fully discussed by Dr. Canney than the others. The Commission on the spot concluded that dust was the more important means of propagating the disease, but Dr. Canney, from a study of Blue Books, has come to the conclusion that the balance of evidence is in favour of the waterborne theory. It is unnecessary to analyse in detail the arguments advanced by Dr. Canney in support of his case as against that of the Commission, or to make a minute examination of the similar reasoning which he applies to epidemics in our army in Egypt and South Africa. It will suffice to say that his conclusion is, "if the water avenues to armies are protected, all other agencies are powerless to spread typhoid in armies," and, including the lesser in the greater, we must add in civil communities also. Dr. Washbourn, who discussed the paper, while agreeing that epidemics of typhoid fever were waterborne and not airborne, thought that in individual cases infection was by other channels. Lieutenant-Colonel Giles, of the Indian Medical Service, however, while admitting the importance of water carriage, maintained that flies and dust were a quite frequent cause of infection, and that in certain outbreaks water infection must be placed out of court.

It is probable that no one will at the present time be found to deny that most of the outbreaks of typhoid fever among civilised communities—of which that at Maidstone, alluded to by Dr. Washbourn, may be taken as a type—are waterborne, although it is a matter for thought that the typhoid bacillus was never isolated from the Maidstone water; but it is also probable that many will be found to uphold the view that outbreaks of typhoid in armies on active service, of which those occurring in the Spanish-American war and in the South African war may be taken as types, are in large part due to the spread of infection through the air, that is, by the agency of dust and flies.

The following chain of events is within our own knowledge: Of several surgical officers attached to one of the civil hospitals in South Africa, one, of high training and considerable professional standing, determined that whatever happened to him he at any rate would not contract typhoid fever from drinking unboiled water. He accordingly had boiled every drop of water he drank or took into his mouth, including that he used for washing his teeth. But again and again dust from the track of the army was blown in quantity into his mouth and nose, and, whether or not on that account, he developed typhoid fever. This is a small piece of positive evidence, and if authenticated cases such as this were numerous enough there would result the proof of an outbreak of typhoid fever not due to waterborne infection.

It is worthy of remark that at the present time, when the carriage of tubercle bacilli in powdered sputum by the air is believed to be the main source of infection of that common disease, pulmonary tuberculosis, a similar mechanism in regard to typhoid fever should by some be almost scouted, although, as Neisser has shown, that typhoid bacilli can be carried by strong currents of air.

The only laboratory experiment that need be referred to in regard to the agency of flies is one which proved that if flies, after having walked over substances containing typhoid bacilli, were allowed to walk over agar plates, colonies of typhoid bacilli developed along their track. The open latrines of an infected camp, filled with typhoid excrement, are a favourite resort of flies, thirty-six species of which were found during the Spanish-American war to breed in human excreta. The statement given by Dr. Simons in the discussion on Dr. Canney's paper, derived from experience in that war, is much to the point. Of two regiments and a civil population on the same ground, having the same water, milk, and food supply, one regiment alone contracted typhoid badly, and it alone had neglected to use fly-proof cages for its provisions; and at a certain stage of the same war, when quicklime was placed in the latrines as an antiseptic, the food substances in the neighbouring kitchens became quite white from flies settling on them.

In regard to dust as a vehicle, the evidence adduced, even in regard to one of the Quetta outbreaks, seems fairly strong in its favour, for while at a previous outbreak the water supply had been found infected, in this, neither in regard to the water nor the food, could any suspicion be justified, yet the infected latrines, as Lieutenant-Colonel Giles mentioned, being close to windward of the barracks, the disease always commenced in the corner nearest the latrines and trenches, and ceased and remained absent for two years when these were removed to leeward of the barracks.

In South Africa, in camps of 40,000 men, typhoid was prevalent. In these there certainly was not what the Americans are said to have decided is an essential for standing camps—a water carriage system of drainage. Sandstorms, giving the appearance of a dense London fog, were frequent. The cooking of food was in the main done in the open, and as a result sand was freely mixed with

the food; under such circumstances, no wonder is it that a man who refrained from drinking unboiled water was infected nevertheless with typhoid bacilli. It may be admitted that there is no need for further evidence of the spread of typhoid fever by water supply, and that a good case has been made out for its spread by the air. Both probably occur; which is the more important in the varying conditions resulting from the exigencies of modern warfare is a subject for future investigation.

It is the urgent duty of the medical profession, however, to point out every possible source of infection irrespective of any immediate effect it may have in official circles. The suggestion has been made that if infection by the air—a source difficult to control—be admitted it will be considered by military authorities a waste of energy to institute precautionary measures in regard to the water supply; but this is an unworthy suggestion, and in any case the onus of responsibility must not be allowed to rest on the profession, as it would do if such an argument were allowed to influence their conduct.

Various suggestions have already been made for meeting the difficulties of preventing typhoid infection among masses of soldiers, one of the most recent being that of Dr. Leigh Canney himself, namely, the organisation of a Royal Water Corps. When a question in regard to this proposal was asked by Sir Michael Foster in the House of Commons on the evening of August 16th, a reply was given by Lord Stanley that the suggested measure had received careful consideration, but was found to be entirely impracticable for active service. Whether some modification of this method directed against the risk of water-borne infection be adopted or not, the best practicable precautions, possible at the time of need, should be directed to every possible source of infection, and it certainly behoves this and every country to organise in times of peace a preventive system against those diseases which are responsible for more deaths in armies than all warlike instruments put together.

## COMPULSORY INSURANCE AND CONSUMPTION.

THE article by Privy Councillor Bielefeldt, the President of the Imperial Insurance Department in Germany, published at p. 493, explains some of the advantages to be expected from a compulsory system of State insurance of the working classes. In recent numbers we have several times called attention to the help which such a system would probably afford in the fight against tuberculosis. While charitable endeavours will hardly suffice by themselves they might be strengthened by centralisation, and by some organised State system of insurance. The provision of adequate hospital accommodation for all cases of consumption, and of convalescent homes for all cases of temporary debility amongst the poorer classes, is urgently needed; and by the help of a State insurance system might be secured, but it will never be obtained unless State aid be forthcoming. In the establishment of special sanatoria for selected cases of consumption, and of seaside sanatoria for scrofulous and weakly children, charity has immense and promising scope for action; the institution of children's holiday colonies in healthy and bracing country sites, important though these are for the prevention of tuberculosis amongst the inhabitants of densely-populated town districts, has not yet been commenced in England on anything like an adequate scale, and the subject may with great advantage engage the attention of charitably-disposed persons. The field for private charity in this and many other directions will always remain large enough, but it cannot accomplish everything, and we believe that no amount of private charity will ever do for England what the Workman's Insurance organisation is now doing for Germany.

In regard to the part which a State insurance system would probably play in the establishment and maintenance of special sanatoria for selected (favourable) cases of consumption, the statistics as to the duration of the good results obtained by the treatment abroad are, of course, most important. Herr Bielefeldt says that the insurance societies intend in future to ascertain the results as to cure for five successive years, and that only those in which incapacity for self-support has not recurred will be regarded as successful.

He says that, according to the tables of the German Imperial Insurance Department, of patients treated in 1898, 38 per cent. of men and 44 per cent. of women were ascertained to be still able in 1900 to support themselves by their work. According to the recent medical statistics of the Hanse Towns Insurance Institution, for the compilation and publication of which Drs. Predöhl and F. Reiche of Hamburg deserve much credit, out of 558 patients whose sanatorium treatment took place more than three and less than five years ago the present condition, as ascertained November, 1900, to March, 1901, is as follows: Seventy-four patients are known to have died; in 162 the earning power is complete, and under favourable conditions promises to last: in 267 the earning power is at present complete, but there is doubt whether it is likely to remain so; in 48 the earning power has improved; in 7 there is no earning power, at least, in the German legal insurance sense, that is to say, the earning power is reduced to less than one-third. These results are sufficient to justify the system of State Insurance and warrant the hope that better still may be achieved in the future.

## NEURO-CHEMISTRY.

AMONG recent changes in pathological theories none is more notable than the tendency to substitute chemical for physiological explanations of morbid phenomena. This tendency no doubt owes its initiation in a large part to the advance of bacteriology, whereby it has been learnt that micro-organisms exert their influence almost entirely by means of the chemical processes which they evoke. It was next shown that the inter-relation of the organs of the animal body is also to a considerable extent effected by chemical means, and it is now taught that the influence of many organs, particularly glands, upon the general metabolism, is exerted through the blood and not through the nervous system. It may be that there is just now a risk of being carried too far by the fascinating simplicity of this idea. The difficulties in the way of accurate investigation are very great. Only the end substances, the ingesta and excreta, are, as a rule, available; for analysis to search for the intermediate products in the chemical complexity of the blood-plasma is a difficult task. Moreover, these

products act by virtue of a quality which further hinders research into their chemical nature, namely, instability. Finally, it must be admitted that few investigators have brought to the study of this problem the combination of pathological and chemical experience and skill requisite for its solution. There is all the more reason, therefore, to congratulate Dr. Mott and Professor Halliburton upon the excellent work which they have combined to carry out, the chemical side of which was presented by the last-named in the Croonian lectures for this year. The nervous system, which they selected for the subject of their investigations, presents obvious advantages in that its composition is approximately constant and fairly accurately known, and that some at least of the products of its metabolism remain for a considerable time *in situ*. To these may be added the abundant material which is always at Dr. Mott's disposal, and the special knowledge which each observer has brought to bear upon the two chief aspects of their joint work.

The amount of knowledge as to the chemical constitution of the central nervous system is already considerable. Great importance attaches to the decomposition products of its chief fatty constituent protagon. Among them is the lower, but still complex, phosphorised fat, known as lecithin, hydrolysis of which yields not only the ordinary fatty acid and glycerine, but also phosphoric acid and choline. Now choline is an alkaloid, and a somewhat toxic one; moreover, it can be readily recognised in the plasma, and its presence may thus be taken as the criterion of lecithin decomposition, and hence of nerve degeneration.

Professor Halliburton has recently shown that choline is one of the first recognisable products of Wallerian degeneration, while phosphoric acid comes next. Both these appear for a brief while in the blood, by the agency of which they are eliminated. The fatty acid and glycerine remain *in situ*, forming a neutral fat, which is eventually removed by phagocytic action, but which while present can be recognised by the black colour which it strikes with Marchi's fluid. Chemical investigation of the blood can thus be used in combination with the microchemistry involved in staining reactions to account for the fate of each of the products of nerve degeneration. But this is not all; it is now known, thanks mainly to Dr. Mott's reseaches, that nerve degeneration, and not neuroglial overgrowth, is the primary feature of general paralysis of the insane, and he and Professor Halliburton have been able to show that many of the symptoms of this disease are due to autointoxication by the chemical results of such degeneration. They have found great excess of choline in the cerebrospinal fluid and blood of general paralytics, and have demonstrated its toxic properties by animal experiments. Much yet remains to be done; the influence of the nucleoproteid and other products of nervous disintegration is still unknown, nor has research as yet extended to the question as to whether nerve degeneration occasioned by various causes invariably produces the same chemical substances. But the subject is in good hands, and there is every reason to hope for an extension of results which already reflect so much credit upon the progress of neuropathology in this country.

## AMBULANCES FOR STREET ACCIDENTS.

Attention has, we are glad to notice, recently been directed to the question of improving the ambulance system in this country. In some directions, notably the provision for the transport of those certified to be suffering from dangerous infectious disease as now managed in the metropolis by the Asylums Board, there is little room for improvement. In the case of ordinary street accidents, however, our ambulance arrangements in London and many large towns are sadly deficient and out of date. We do not underrate the means undertaken to instruct the police in methods of first aid, nor the excellent service, so far as they go, of the St. John Ambulance Association or the Hospitals Association. A few of the hospitals and some Boards of Guardians have established horse ambulances, but these naturally have only limited application to the public needs. We are afraid it must be admitted that in London the provision for rapid conveyance of persons injured or seized by sudden illness in the streets to the hospitals is far behind that obtaining in several Continental cities and in New York. We understand that in the latter there is a complete system whereby, as the result of a telephonic call, a horsed ambulance accompanied by a surgeon and first-aid appliances is despatched forthwith to the site of the accident with the same celerity as is a fire engine in case of fire. These horsed ambulances are stationed at the various hospitals, and there is but little control by either police or municipal bodies. On the other hand in Paris a system of horsed ambulances originally provided by private philanthropy, and in connection with St. Louis Hospital, was in 1894 transferred to municipal management, and under the Assistance Publique is, we understand, in course of extension over a larger area of the French metropolis. In Birkenhead, Liverpool, Manchester, Burnley, and Newcastle there are horsed ambulances, in some cases worked in connection with the fire brigades, and in others with the police, and summons is by telephone. In London, on the other hand, there are practically no horsed ambulances for public use in connection with street accidents or illness, and London's telephonic system is notoriously expensive and inconvenient. The ordinary procedure in London is by the dilatory agency of "asking a policeman," and conveyance to hospital is effected by a litter when such is get-at-able, and when not by the still less suitable intervention of the four-wheeled cab. The police are believed to possess the magnificent number of three horsed ambulances; but for every occasion of their use a horse has to be obtained from a contractor. We have little doubt that the casualty departments of our metropolitan hospitals could tell of many cases in which simple fractures have been made compound by lifting in and out of four-wheeled cabs, and serious injuries and illnesses rendered fatal by the delay in procuring a litter, or getting it to a hospital when obtained. More than 9,000 street accidents involving personal injury occur annually, and some uniform, expeditious, and humane means of bringing relief to the sufferer, or the sufferer to relief, is urgently demanded. We are glad to learn that the London County Council has appointed a Committee to consider the question, and we shall watch with interest the action that may proceed from such inquiry.

## THE DUCHESS AND THE BONESETTER.

In the British Medical Journal of August 10th we made some comments on the fact that the Duchess of Sutherland had invited a bonesetter to "look at" some of the children of the Potteries and Newcastle Cripples' Guild. We characterised this procedure as an insult to the medical profession, the members of which in Burslem, Hanley, Stoke, and other centres had agreed to give their services gratuitously to help the work started by the Duchess. For this

we have been taken to task by the *Staffordshire Sentinel*, which lectures us on an implied discourtesy on our part towards the Duchess of Sutherland. We cannot admit that we have been guilty of any discourtesy towards a lady whose benevolence we freely acknowledged, while hinting that in the particular instance referred to she had been somewhat wanting in discretion. The *Staffordshire Sentinel* itself seems to allow that Her Grace's zeal outran her discretion. Our contemporary further makes the following admission: "We are not defending the bringing of Mr. Atkinson to the Potteries, for we have no personal knowledge of his qualifications or capabilities." This admission is all the more remarkable, as the *Sentinel* had already informed all whom it might concern that "Professor, or as the doctors would say 'Mr.' Atkinson has attained considerable celebrity in the setting of bones; and though he may be in the eyes of the medical professsion 'unqualified,' he has apparently attained not only celebrity but success." Does the editor of the *Staffordshire Sentinel* call that backing of his friends? Both the Duchess and the "Professor" have reason to say to this clumsy champion, *Non tali auxilio nec defensoribus istis!* We said that we knew little about "Professor" Atkinson, and the *Staffordshire Sentinel*, on its own showing, is unable to enlighten our ignorance. Fortunately, however, help has come to us from an unexpected but authoritative quarter. Mr. Atkinson's secretary has been obliging enough to send us two pamphlets in order that we may "no longer remain in ignorance of the opinions of the English (and American) Press on the Professor's work and its merits." The opinions of the Press there quoted do not concern us, but we have sought in the pamphlets for a few facts as to the "Professor." We have failed, however, to discover what he is "professor" of and where; and his career is pourtrayed with an artistic haziness that makes it difficult to distinguish details. We are told that "he has been examined on, and has passed in, anatomy, physiology, and those branches of science which bear upon his immediate profession under some of the most eminent specialists of the century, and his diplomas are framed and hung in his consulting room." But we are not told where Mr. Atkinson was examined, nor is the source of his "diplomas" revealed. We do, however, hear something about "the eminent specialists," for the "Professor" says he studied physiology under Burden (*sic*) Sanderson, and under "John Burkitt and Dr. Taylor of University College Hospital [elsewhere infelicitously described as 'Taylor, M.D., Toxicologist of the University Hospital'], Professor Bentley of King's College, Professor Cobbould of Middlesex Hospital, and Professor Robertson." We learn further that he "carried off, not only the Fellowship, the highest degree, but also the chief prizes for the best comparative anatomy and physiology of the year in a distinguished college." In order probably to obviate any damaging effect which a confession of having studied physiology might have on the sort of people who form the bulk of his *clientèle*, he is careful to let it be known that he is a strong antivivisector. The "professor," it may be noted, has, in referring to his educational career, a certain delicacy in regard to dates and places. But education can matter little to men like Mr. Atkinson who, in the words of the *Longton Times*, have "an intuitive and inbred aptitude for dealing with cripples"? The practice of the "professor" is not confined to bone setting; according to himself it includes "arthritis, neuritis, lumbago, sciatica, and, indeed, every form of rheumatism," besides "spinal weakness, displacement, and paralysis, also atrophy." And apparently he finds no difficulty in getting journals like *Sketch*, the *Westminster Budget*, *Black and White*, and *Cassell's Magazine* to beat the big drum on his behalf. It is possible that the Duchess of Sutherland, like the *Staffordshire Sentinel*, had no personal knowledge of Mr. Atkinson's qualifications and capabilities when she asked him to look at the children of the Cripples' Union. We have done our best to supply the deficiency of Her Grace's knowledge on the subject, and it only remains for us now to say that she must choose between the bonesetter and the skilled surgeons who placed their services at her disposal.

## THE TRANSMISSIBILITY OF BOVINE TUBERCULOSIS TO HUMAN BEINGS.

MENTION was made in the last issue of the BRITISH MEDICAL JOURNAL of an offer made by Dr. Monson, Dairy Commissioner for the State of Colorado, to submit himself as the subject of experiment to test Professor Koch's doctrine that bovine tuberculosis is not transmissible to man. Now comes the news of a similar offer on the part of a French physician, Dr. Paul Garnault, who is said to have written to Professor Koch as follows:

> Most honoured Master,—With the full consciousness of what I am about to do, I hereby offer to serve as a subject for experimental inoculations of bovine tuberculosis. I am disposed to believe that you are mistaken, and that the inoculations will take effect. I am 41 years of age, I weigh over 100 kilograms, my height is 1.81 mètres, my health is perfect (for that matter you may subject me previously to inoculations of tuberculin). I have no children. In battles men of inferior mental powers face death in thousands. Although I am not of your opinion, and although I consider it probable that I shall be inoculated with the disease, I hold that on the battlefield of social existence a man, fully conscious of his acts, can well do as much as so many do on a real battlefield. I remain entirely at your disposal, either in Paris or in Berlin, under whatever conditions you may think fit to lay down.

He further stipulates that some cattle shall be inoculated at the same time with material similar to that used on him. The heroism of the offer is not diminished by the somewhat theatrical manner in which it is made, for to the average Frenchman all the world's a stage in a sense undreamt of by the melancholy Jaques. Dr. Garnault, as was inevitable, has been interviewed by an enterprising journalist, to whom he explained that the experiment is, after all, not so dangerous as it sounds. Even if, contrary to Professor Koch's teaching, the inoculations should take effect they will, Dr. Garnault believes, "only act upon the lymphatic system and the glands which, when diseased, can easily be removed." On the other hand, the infection may become rapidly generalised and the development of tuberculosis may place his life in jeopardy. But it is an abuse of language to say, as a daily contemporary does, that Dr. Garnault "is offering up his life for science." Doubtless, if his offer is accepted, he will run a certain amount of danger; but the risk is not so great that he need proclaim to the world *Morituri te salutat*. The crusade against tuberculosis finds its justification and its hope of ultimate success in the scientific truth that the disease is curable, if it is properly treated in the early stage. Dr. Garnault being, as he says, a perfectly healthy man, and being kept under the closest observation, will be in the most favourable circumstances for treatment should he become infected. The result of the experiment, if it is carried out, will therefore be awaited with an interest that is not made too painful by fear as to the fate of the voluntary victim. We venture to express a doubt, however, whether Professor Koch will see his way to accept Dr. Garnault's offer. There is the law as well as the cause of science to be thought of; international relations have also to be considered, and, although the French profess to be a logical people, they would be pretty sure to call for vengeance if the experiment by some mischance should have an unlucky ending. In connection with this subject it may be mentioned, on the authority of a press agency, that the Chicago Board of Health has obtained the consent of two men "who will undergo the inoculation of lupus in order to demonstrate conclusively Dr. Koch's theory that human beings cannot contract tuberculosis from animals." One would like to know what such an experiment could be intended to prove. It is already

known that lupus is inoculable, but what this has to do with the question of the transmissibility of bovine tuberculosis to human beings we cannot conjecture.

## DANGERS FROM ICE CREAM AND ARTIFICIAL LEMONADE.

The dangers that have been recognised in association with ice creams are many, and in their purest state it is probable that they are not altogether harmless. A new possibility of their harmfulness was revealed recently at a meeting of the Rowley Regis District Council, but whether direct or indirect is left by the report in the *Morning Post* for conjecture. The medical officer of health stated at this meeting that in a house in which ice cream was manufactured and sold he had found a boy suffering from smallpox. At the time of his visit the boy's parents were out selling ice cream, which he had had called in and destroyed. In an adjoining parish eight or ten people had contracted the disease, presumably by infection from this patient, but whether from eating the ice cream or from contact with the sellers of it was not made clear. A measure directed to meet such a risk has lately been introduced by the Brighton Corporation. By its terms it is proposed to inflict a penalty of forty shillings on any manufacturer of ice cream who stores or exposes it to infection or contamination. It also provides that a register of makers of ice cream shall be kept, and that any unregistered person who sells ice cream within the borough will be liable to a penalty of £5, and a daily penalty of 40s. Recent analyses of lemonade powders, according to a letter in the *Standard*, have revealed the presence of lead in dangerous amounts. The samples of powders intended for the home manufacture of artificial lemonade were composed principally of tartaric acid and sugar, and the lead with which they were contaminated was alleged to have been derived from the vessels used for the crystallisation of the acid liquids.

## SOME IMPORTANT LEGAL CASES.

We publish elsewhere short reports of several cases in which members of the medical profession have taken a prominent part at the assizes in various parts of the country. In two instances the interests of the doctor were successfully protected by the Medical Defence Union, while in the action for libel which was brought against a Medical Officer of Health we are pleased to note that the verdict was for the defendant. There are certain features in some of these cases which render them worthy of more than passing notice. In the action of Williams *v.* Ward, which was a claim for damages for negligence against a "works" doctor in Wales, the plaintiffs called no medical witnesses in support of their case but simply relied on a skiagraph of the defendant's handiwork. The reason given for not calling medical witnesses was that all the medical men in Wales are members of the Medical Defence Union and, therefore, no medical witness could be found who was ready to impeach the conduct of a brother practitioner. The fact that such an absurd reason for not calling satisfactory evidence had to be given by the plaintiff's counsel, shows the extremity to which he was put to establish the truth of the allegations which his client had made. That the jury refused to accept any such arguments is clearly proved by the fact that they stopped the case before the conclusion of the defendant's evidence. This action, as we have already stated, was brought against the "works" doctor. It is, therefore, fair to assume that the claim for negligence was sanctioned by the Union of which the plaintiff was a member. Trades-unions will find in the course of time that the right of combining to protect their common interests is not confined to the working classes, and that the medical profession are fully alive to the advantages of united action. With regard to the case of Clarke *v.* Mears, which was an action for slander brought against a medical officer of health in the performance of his duty, the defendant became a member of the Defence Union too late to be able to avail himself of its protection. Fortunately for him, however, the District Council, whose servant he is, saw their way to providing him with the means of conducting his defence to the action, and the jury, we are glad to notice, found that in reporting that the plaintiff's cattle were tuberculous the defendant had merely done his duty. If the functions of a medical officer of health do not include the duty of making a report to his Council whenever any suspicious case is brought to his notice, we are at a loss to define the duties of a public officer. The sole aim and object of his existence is to safeguard the health of the community, and to take every possible precaution against the spread of infection. From the concluding words of the learned judge it is quite clear that his lordship took this view. The case of Thomas *v.* the City of Birmingham Tramways affects the medical profession less directly, but is no less important than the cases to which reference has been made. There a medical practitioner of good standing was called as a witness to support a claim against a tramway company by a person who was seriously injured in a street accident. The plaintiff resided in Coventry. The accident happened in Birmingham, and as soon as the plaintiff could be removed he was taken home, the Birmingham practitioner continuing to attend him at his special request. In all, thirty trips were made to Coventry, in respect of which the medical man charged fees amounting to £139. This sum was carried in and claimed by the plaintiff as part of his special damage against the company. The learned counsel who appeared for the company did not hesitate to accuse the doctor of having made these visits to Coventry in the knowledge that whatever he charged would be paid by those who were responsible for the accident. An accusation of this kind may be expected from a cross-examining counsel, but we must confess to being surprised that Mr. Justice Bigham should have thought proper to follow up the cue thus given and charge the doctor with having made hay while the sun shone. The case was admittedly a serious one, in which the opinion of two medical men might well have been required. The journey from Birmingham to Coventry cannot be undertaken by any practitioner every day for pleasure; and, in view of the fact that the practitioner in this case only came at the express wish of his patient, we cannot but regret the "judicial ignorance" of medical etiquette displayed by the learned judge. It is inconceivable that any practitioner who valued his reputation would deliberately allow his patient to incur the heavy expense of thirty trips from Birmingham to Coventry without a special request in that behalf. It is still more unlikely that a medical man would run up costs (to use a legal phrase) merely on the off chance that they would one day be paid by an opulent company.

## NURSING IN COUNTRY WORKHOUSES.

In the British Medical Journal of August 17th there appeared a brief report of a deputation from the Workhouse Infirmary Nursing Association, which was received by the President of the Local Government Board. The object of the deputation was to lay before the President the urgent need of further reform in the direction of improving both the method of obtaining nurses, and of defining their position when in the infirmary. In March last the Association laid before Mr. Long a statement showing the effect of the New Nursing Order, and of the present position of nursing in the rural infirmaries. Briefly, it amounts to this, that the New Nursing Order of 1899 has failed of its purpose because it created a new order of things without taking steps to provide the material out of which the new system of nursing was to be evolved—in other words, the historic task of making

bricks without straw was laid upon the Guardians. After reviewing the difficulties which surround the question, the statement sums up the situation in these words: "That unqualified women are employed as nurses; that inexperienced probationers are employed as nurses; that paupers are employed as nurses." We are glad to note from the report furnished to us, that the attitude of the President was sympathetic, but assuming that the facts are as stated—and an Association with the reputation of the Workhouse Infirmary Nursing Association may be trusted to be sure of its facts—much more than sympathy is required to meet the case. The question is a complex one. It admits of no tinkering or patching. It must be faced by a statesman, who must call to his aid expert and professional advice; but if handled firmly the problem can be solved, and until it is a great blot rests on our administration, a grievous wrong is done to the hapless pauper, on whom the pauper help, or the untried practitioner, or the unqualified woman, are allowed to try their experiments. Mr. Long intimated that he had under consideration the possibility of making alterations in the existing regulations affecting the position of nurses in workhouses and infirmaries. That is good as far as it goes, but we would urge on the President that the question must be dealt with as a whole, and as a contribution to that result, we would emphasise the suggestion of the deputation that a sub-department of the Local Government Board be formed to deal with it. In whatever manner the question is attacked, it cannot be left where it is.

## MR. DOOLEY ON MEDICINE AND CHRISTIAN SCIENCE.

MR. DOOLEY, whose criticism of life is as comprehensive as it is acute, has naturally something to say about Christian Science. He neatly describes it as "wan way iv gettin' th' money," and he points to the significant fact that "not manny men is Christyan Scientists, but nearly all women is, in wan way or another." To Mr. Hennessy, who, after hearing how pain and injury are charmed away by making believe that they do not exist, declares, "'Tis all foolishness." Mr. Dooley replies with the philosophical reflection, "Well, sir, who can tell? If it wasn't f'r medical progress I'd be sure th' Christian Scientists was wrong." Incidentally he describes the old-fashioned medical practitioner: "Th' doctor who attinded me whin I was young'd be thought as loonatical if he was alive to-day, as th' mos' christyan scientist that iver rayjooced a swellin' over a long distance tillyphone. He inthrajooced near th' whole parish into this life iv sin an' sorrow, he give us calomel with a shovel, bled us like a polis captain, an' niver thought anny medicine was good if it didn't choke ye goin' down. I can see him now as he come up dhriven' ol' gray an' yellow horse in a buggy. He had whiskers that he cud tie in a knot round his waist, an' him an' th' priest was th' on'y two men in th' neighborhood that carried a goold watch . . . . He was catch-as-catch-can n' he'd tackle annything fr'm pneumony iv th' lungs to premachure baldness. He'd niver heerd iv mickrobes." Mr. Dooley goes on to contrast the new with the old. He sends for a doctor, who at once proceeds to take his temperature. "While I have th' chube in me mouth he jabs me thumb with a needle an' laves th' room. He comes back about th' time I'm r-ready to sthrangle an' removes th' chube. 'How high does she spout?' says I. 'Ninety-nine,' says he. 'Good hivens,' says I, 'don't come near me dock, or ye'll be sunsthruck,' I says. 'I've just examined ye'er blood,' he says. 'Ye're full of weeds,' he says. Be that time I'm scared to death, an' I say a few prayers, whin he fixes a hose to me chest and begins listenin.' 'Annything goin' on inside?' says I. 'Tis ye'er heart,' says he. 'Glory be,' says I, 'what's th' matther with that ol' ingine?' says I. 'I cud tell you,' he says, 'but I'll have to call in Dock Vinthricle, th' specialist,' he says. 'I oughtn't to be lookin' at ye'er heart at all,' he says. 'I niver larned below th' chin, an' I'd be fired be th' union if they knew I was wurrukin' on th' heart,' he says." So Dr. Ventricle is sent for, and, finding something wrong in the lungs, suggests that Dr. Bellows should be called in. Dr. Bellows, in "pounding" the patient's chest, accidentally hits him below the belt, and at once sends for Dr. "Laporattemy," whose proceedings are described as follows: "Th' Dock sticks his finger into me as far as th' knuckle. 'What's that f'r?' says I. 'That's O'Hannigan's point,' he says. 'I don't see it,' says I. 'O'Hannigan must have had a fine sinse iv humor.' 'Did it hurt?' says he. 'Not,' says I, 'as much as though ye'd used an awl,' says I. 'or a chisel,' I says; 'but,' I says, 'it didn't tickle,' I says." The doctors go out of the room and "talk it over at tin dollars a minyit while I'm layin' there at two dollars a day—docked." The result of the consultation is announced by Dr. Laparotomy, who, after distributing the various organs among his learned brothers, says: "'As f'r me,' he says, 'I will add wan more vermiform appendix to me belt,' he says. 'Tis sthrange how our foolish predecessors,' says he, 'niver got onto the dangers iv th' vermiform appendix,' he says. 'I have no doubt that that's what kilt Methausalem,' he says." Mr. Dooley tells a fearsome story of a man who, after being operated on, had to be "hemstitched" so hurriedly that the surgeons "locked up in him two sponges, a saw, an ice-pick, a goold watch an' a pair iv curlin' irons belongin' to wan iv th' nurses." Summing up, he says that between the Christian scientist and the scientific practitioner "'tis a question iv whether ye want to be threated like a loonytic or like a can iv preserved vigitables." He quotes Father Kelly as saying that if doctors "knew less about pizen an' more about gruel an' opened fewer patients an' more windows, they'd not be so manny christyan scientists." To the same clerical authority is attributed the opinion that "th' difference between christyan scientists an' doctors is that christyan scientists thinks they'se no such thing as disease, and doctors thinks there ain't annything else." Mr. Dooley himself thinks that "if th christyan scientists had some science an' th' doctors more christyanity, it wouldn't make anny diff'rence which ye called in—if ye had a good nurse." *Dulce est desipere in loco.* Mr. Dooley's satire, though keen, is good-natured; and, like a sermon, it can be applied by everyone to his neighbour.

## THE WEST AFRICAN HEALTH COMMISSION.

Two meetings of the Committee of the African Trade Section of the Liverpool Chamber of Commerce have recently been held, Mr. Alfred L. Jones being in the chair. Previous to the conference held between representatives of the Liverpool, London, and Manchester Chambers on July 10th a letter had been sent to Mr. Chamberlain pointing out that Major Ronald Ross, F.R.S., had been despatched to Sierra Leone on a mission of the Liverpool School of Tropical Medicine, and it was suggested that advantage might be taken to utilise Major Ross's presence in West Africa by the Colonial Office, instructing him to report to them on his observations there, with the view of treating that report as part of the report of the Commission. Mr. Chamberlain, in reply, recalled the fact that the proposal submitted to the deputation which waited upon him on March 15th was that the three Chambers of Commerce should each appoint one of their number to be a member of the Commission, and that they should also have a scientific expert, whom they would nominate; and it was proposed that the scientific expert should take a full part in the discussions and in the decisions come to by the other Commissioners, who would go with him and weigh his advice on the spot. Mr.

Chamberlain went on to say that he did not know whether the London and Manchester Chambers had concurred in the proposal that Dr. Ross should be the scientific expert, but he pointed out that, as Dr. Ross had just started for West Africa on another mission, it would hardly be possible for him to undertake the duties which it was proposed that the scientific expert on this commission should discharge. He added that, while he fully appreciated the great value of the work which Dr. Ross had done and was doing in his own line, it appeared to him that the expert of the commission ought to be a sanitary engineer, especially as one very important part of the work of the commission would be to report upon the cost of any reforms suggested and the means of meeting this cost by taxation. Before the receipt of this letter from the Colonial Office, the conference of the three chambers referred to above had been held, when it was decided to request the Colonial Office to attach Major Ross to the commission as an expert in tropical medicine, in addition to a sanitary engineer, as suggested by Mr. Chamberlain to the deputation on March 15th. It was resolved to communicate with the Chambers of Commerce of Manchester and London as to the further necessary arrangements in connection with the commission.

## LIVERPOOL MALARIA EXPEDITION.

A Reuter telegram from Liverpool, dated August 19th and published in the *Times* of August 20th, says:—"A cablegram was to-day received by the Liverpool School of Tropical Medicine from Sierra Leone announcing that Major Ronald Ross, F.R.S., is returning to England by the s.s. *Phillippeville*, which was due to leave Sierra Leone, yesterday, August 18th. Major Ross is returning temporarily for the purpose of arranging for the despatch of an expedition similar to that now under his charge to the Gambia and the Gold Coast. He will also, no doubt, consult with the Committee of the Africa trade section of the Liverpool Chamber of Commerce on the subject of the suggestion that he should be attached to Mr. Chamberlain's West African Commission on health and sanitation. In Major Ross's absence the work of the expedition in Sierra Leone is proceeding under the charge of the other medical men who compose the expedition. During his present visit to the West Coast Major Ross has been to the Gambia, Sierra Leone, the Gold Coast, and Lagos.

## A LEAGUE AGAINST SEASICKNESS.

It was stated some time ago in the British Medical Journal that a League Against Seasickness was in process of formation on the initiative of Dr. F. Madeuf of Paris. The object is said to be to collect information as to seasickness, to make experiments as to its pathology and treatment, and to publish the results for the benefit of sufferers. Another object of the League appears to be to train specialists who shall either practise in seaports or on board steamers and ships. The League has now been duly formed, and issues a *Journal du Mal de Mer*, in which that most humiliating and not least painful of human afflictions is discussed in all its aspects. The League, like all well-regulated leagues, will hold Congresses. This year it meets at Ostend, and in connection with it an exhibition of inventions for the prevention and treatment of seasickness has just been opened under the patronage of the King of the Belgians. The collection is divided into sections as follows: (1) Suspension and other apparatus intended to lessen the effects of the movements of the vessel; plans of ships specially constructed to prevent seasickness; (2) apparatus for the immobilisation of the abdominal viscera; (3) ventilation of cabins; oxygenation of the patient; deodorisation of places; (4) miscellaneous articles relating to the preventive hygiene of seasickness (special seats, apparatus for training people to bear the movement of ships; food, drink); (5) remedies against seasickness; (6) pamphlets, journals, etc., in which seasickness in human beings and in animals is dealt with. Public experiments will be made on the boats plying about near Ostend. The subject is distinctly seasonable, and the organisers of the league seem to be very much in earnest. We hope, therefore, that they will succeed in discovering some means of preventing or mitigating a malady which, though it excites little sympathy among those who enjoy immunity, congenital or acquired, against its attacks, makes the shortest journey by sea a serious tribulation to its victims.

## A MALARIA CONFERENCE IN NEW YORK.

A Conference on Malaria and its prevention was held at a meeting of the New York Board of Health on July 31st. As a result of the Conference the Board approved of a circular prepared by Dr. H. M. Biggs, and ordered it to be distributed to the medical practitioners of New York. The circular states that malaria is prevalent in certain boroughs of New York, and that, in view of the extensive excavations and consequent formation of rainpools in various parts of these boroughs, the fever is not unlikely to extend to Manhattan and Brooklyn if steps are not taken to prevent it. The following precautions are recommended: (1) Proper screening of the house and of the bed. The chief danger of infection is at night, inasmuch as the *Anopheles* bite mostly at this time. (2) The confinement and continuous screening of persons suffering from malarial fever, so that mosquitos may not bite them and thus become infected. (3) The administration of quinine in full doses to malarial patients, and persistence in the use of the remedy for a few weeks after apparent recovery. (4) The removal of the breeding places of the mosquitos through drainage, filling up of holes and surface pools, and emptying of tubs, pails, etc., which contain stagnant water. (5) In pools which cannot be drained or filled the destruction of the mosquito larvæ by the use of petroleum thrown upon the surface; by the introduction of minnows and other small fish which eat the larvæ, or by other methods. In conclusion the circular states that the Board of Health desires the co-operation of all practitioners in its efforts to disseminate information in regard to the causation and prevention of malarial fever, and in its efforts to restrict the prevalence of this disease in New York City.

## THE CALEDONIAN MEDICAL SOCIETY.

The annual dinner of the Caledonian Medical Society was held on August 19th in the Windsor Hotel, Glasgow. Dr. Cameron Gillies, Vice-President, who was in the chair, was supported by, among others, Sir Hector Cameron, Dr. M'Vail, Dr. Rutherford, and Dr. J. F. Maclachlan. Dr. Macleod and Dr. Logan acted as croupiers. After the usual loyal toasts Sir Hector Cameron proposed "The Caledonian Medical Society." He said he thought their society had more objects in view than most medical societies. He belonged to many such societies—they had one or two in Glasgow—which had no other object than that of fellowship and comradeship. One of these was the Edinburgh and Glasgow Medical Society, which met alternately in Edinburgh and Glasgow, and the object was to keep an *entente cordiale* between the two principal cities in Scotland. It seemed to him that the Caledonian Society went one better, as it had three objects, the first being the patriotic, namely, that of keeping up Celtic traditions, Celtic literature, Celtic lore, and Highland medical lore. The second object was that all members must have Highland blood in their veins; and the last one was that which they were carrying out that night—the object of good fellowship and comradeship. The Chairman in responding to the toast said they did their best to keep alive the medical lore of the Highlands by means of the journal published by their society, the membership of which was now 200. After alluding to the good fellowship among

them, he said they were offering two prizes, one of 20 guineas and one of 10 guineas, for the best work in the direction of illuminating to the duller world the wit and wisdom of Celtic literature. Dr. Tulloch (Trinidad) proposed "The Scottish Universities," to which Dr. M'Vail and Dr. Russell replied. Other toasts followed, and during the evening a number of solos were sung, several being in Gaelic.

## MEDICAL APPOINTMENTS IN THE HIGHLANDS AND ISLANDS OF SCOTLAND.

To those unaware of the conditions holding in the Highlands and Islands of Scotland, and of the endeavours of the local profession to remedy the many grievances that exist, the advertisements that from time to time appear in the press announcing vacancies may hold out inducements which require to be carefully investigated by intending applicants, so as to prevent disappointment. Thus, besides a stated salary, there is the inducement of private practice among a large population. As this population usually consists of poor crofters or cottars who, while unable or unwilling to pay for a doctor, are not at all slow in demanding his services, the inducement is not a great one. Intending applicants should get information from previous holders of the vacant posts, and should communicate with the Secretary of the Scottish Poor Law Medical Association. As examples of appointments which we should advise medical men—and women—not to apply for under present conditions may be mentioned that of medical officer to the parish of Lochbroom, in Rossshire, which is inhabited chiefly by crofters of the poorer class. The salary offered is quite inadequate, and the medical officer is compelled to live in a house provided for him, for which he pays rent to the Parish Council. Another is the post of medical officer for the Island of Papa-Westray, in Orkney, which is now advertised, the salary offered being £55 and "fees." The island, which is about three miles long and about one broad, is three miles off the larger island of Westray, where there is a parish doctor. There is only a mere handful of people resident on Papa-Westray, and we are informed that the "fees" cannot amount to more than £3 or £4 a year. It is difficult to understand why the Local Government Board of Scotland should sanction the appointment of a medical officer for this island which, we believe, is little more than a rock.

## NATIVE MEDICAL PRACTICE IN THE PHILIPPINES.

DR. PHILIP P. HARVEY, Lieutenant-Colonel and Deputy-Surgeon-General in the United States Army, contributes a paper on native medical practice in the Philippine Islands to a recent number of the *New York Medical Journal*. The climate of the Philippines, he says, is among the most healthful in the tropics. Some parts of the islands are extremely malarious, but there are many places which are almost entirely free from that noxious influence. The list of indigenous medicinal plants embraces cathartics, astringents, antiseptics, tonics, antiperiodics, emmenagogues, escharotics, emollients; in short, represents the entire range of therapeutic action. The betel nut, which is in universal use, is reported to possess tonic, stimulant, astringent, and aphrodisiac qualities, and to increase the powers of endurance. The papaw (*Carica Papaya, L.*) furnishes a melon-like fruit of rather agreeable flavour and the digestive ferment known as *papain*, *papayotin*, or *papoid*, which by many authorities is considered a more reliable digestive than pepsin, as it acts equally well in acid and in alkaline media. The Indians use the fresh leaves of the papaya plant as a dressing for foul wounds. The *Piper betel* (buyo) leaf is reputed to be an antidote for snake bites. The leaves are bruised and applied locally as a poultice. They are also used as a remedy in cholera, and a decoction prepared from them is applied locally for the relief of infantile colic. Among the alcoholic liquors manufactured by the natives is one called "tuba," which is prepared from the juice obtained from the cocoanut tree. The flower stalk is punctured, and into the incision is inserted a small bamboo tube; below a larger bamboo vessel is placed, or the stalk is cut off and a bamboo tube fastened below to catch the drippings. The cut end is freshened daily. This is a pleasant beverage, and at first non-intoxicating; but when fermentation takes place it acquires a considerable percentage of alcohol. A wine is also obtained from the Nipa palm (*Nipa fruticans*), which is distilled through bamboo tubes, the condensing pipe being conducted through a hollow log having a stream of cool water running through it. A brandy is also made from sugarcane. There is little or no drunkenness among the natives. The practice of obstetrics among the natives is simple. As a general rule delivery takes place without complications, and, notwithstanding the neglect of antiseptic precautions, puerperal fever is extremely rare. The prevention of conception is practised, but probably much less than among more civilised nations. Abortions are occasionally produced by rough massage of the abdomen and by the administration of a mixture composed of the leaves of a plant called "pandakakay" and the juice of a partly-roasted green pineapple; these are boiled together and given twice daily. Instruments are never used for this purpose. Expert professional aid is seldom required by the women in labour, during which the recumbent posture is usual. Soon after labour the mother walks to the river and bathes, taking her infant. The placenta is delivered spontaneously or by traction on the cord, and retention is uncommon. The cord is tied with a few fibres of abaca (hemp), and severed 3 to 6 ins. from the body of the child by means of a bolo, a razor, or a thread. Circumcision both of boys and girls is practised. A knowledge of medicine and surgery among the natives becomes more and more exact as the racial scale is ascended, *pari passu* with the increase of intelligence, until it culminates in the educated practitioners of Manila and the larger cities, who have obtained their education at reputable schools and colleges, and whose practice conforms to that of educated physicians elsewhere. But there are thousands of *praticantes*, *curanderos*, and old women, throughout the islands, whose practice is purely empirical. Typhoid and malarial fevers, and the so-called "calentura" are all treated very similarly. They recognise typhoid as somewhat infectious, but adopt no prophylaxis. It is treated by decoctions of a plant called *amurgosa* or *amplaya (Momordica balsamina)*, balsam apple, and *makabuhay, Tinospora crispa*, administered in small doses twice daily. In the treatment of malarial fever they prefer barks and herbs of the bitter class, and, if the disease is intractable, they apply for medicine to the town *praticante*, who probably gives quinine. Dysentery and diarrhœa are among the most prevalent diseases; they are treated by the natives by the administration of astringent roots and herbs. Constitutional syphilis is met with not infrequently, but among 200 Filipinos examined by the surgeon in Zamboanga for enlistment in the force of native troops, only about half a dozen cases were discovered, and of these only one was at all severe. In its treatment the natives use what they call the "China root decoction," which has the reputation of being efficacious. Insanity and cancer are very uncommon among these people. Puerperal insanity occasionally occurs among them, but they have no treatment for it except prayers and incantations. The Filipinos depend entirely upon the vegetable kingdom for their medicines for internal use, and the decoction or infusion is the form in which they invariably use the drug. It is prepared in the following manner: The leaves, roots, or barks are placed in a rice pounder and bruised; they are then transformed to an earthen pot, and, when mixed

with one cupful of cold water, the depth is measured with a stick; water is then added to make a total of eight cupfuls. The mixture is then boiled until the remaining amount measures the same as it did after the first cup of water had been added. When cool it is strained and given to the sick twice daily.

## ENZYMES IN THE ORGANS AND TISSUES.

Two important papers[1] have been published by S. G. Hedin and S. Rowland from the Jenner Institute upon the enzymes of the body. In the first communication they show that the spleen contains a proteolytic enzyme which is capable under certain conditions of digesting not only the spleen pulp itself but fibrin of extraneous origin. The spleens of the horse, cow, sheep, pig, and dog were all found to contain this enzyme. The similarity of this enzyme to trypsin led them to make comparative digestion experiments which showed that the two are not identical. The spleen enzyme digests fibrin best when acetic acid is present in small quantity; but when the spleen juice, which is naturally acid, is neutralised or alkalised, the digestion ceases; trypsin, on the other hand, digests equally well in alkaline, neutral or acid solutions. Further experiments (detailed in the second paper) with other organs showed that a similar enzyme is present in the mesenteric glands (of the calf), in the kidneys (of the calf, horse, and dog), and in the liver (of the cow and dog). In the skeletal muscles they also found an enzyme. This differs from the "organ enzyme" in two particulars; in the first place, the digestive power is slight when compared with that of the "organ enzyme"; and, secondly, digestion goes on indifferently in acid, neutral, or alkaline solutions. In the heart muscle there is also an enzyme which more nearly resembles the "organ enzyme," especially in its preference for an acid reaction. The influence of the neutrality or alkalinity of the solution, although decided, is not so great as on the "organ enzyme." Lastly, although the blood plasma does not appear to contain a proteolytic enzyme, the corpuscles do contain one which has a somewhat feeble power. It has not yet been ascertained whether this enzyme is situated in the white cells or red discs. The further experiments which are promised will be awaited with considerable interest.

## GOVERNMENT LABORATORIES IN ITALY.

The Italian Government has established laboratories of micrography and bacteriology and chemistry as dependencies of the Sanitary Bureau of the Minister of the Interior. A department of the bacteriological laboratory is to be devoted to the preparation and control of serums and similar products. The professional staff of the bacteriological laboratory consists of a director, with a salary of £240; a coadjutor, with £160; and two assistants, with £100 each. For the serum department there are medical and veterinary coadjutors, each with a salary of £160, and three assistants at £100 each. The staff of the chemical laboratory is paid on the same scale.

## THE PASTEUR INSTITUTE IN INDIA.

The Pasteur Institute at Kasauli has been open for a year. During that period, according to the *Times* correspondent at Simla, 321 patients have been treated, including 96 from the British Army and 50 European civilians. Not a single failure has occurred among the Europeans, but two natives died. Both of the latter had been badly bitten and came too late to be saved. There are 30 patients at present under treatment. The complete success of the Institute, which is under the charge of Major Semple, of the Royal Army Medical Corps, means a great saving to the Government, as soldiers need no longer be sent to Paris for treatment. It is hoped that funds will be provided to make possible the preparation of anti-toxins for enteric, snakebite, and tetanus.

[1] *Hoppe-Seyler's Zeitsch f. physiol. Chemie*, Band xxii, pp. 341 and 532.

## BIRTHDAY CELEBRATIONS OF PROFESSOR VIRCHOW.

For the celebration of the eightieth birthday of Professor Virchow on October 13th, a Committee has been chosen for Switzerland, consisting of Professor Kocher, of Berne, representing the Swiss Medical Commission, Professor von Carenville, of Lausanne, who represents the Medical Society of French Switzerland, Dr. Haffter, of Frauenfeld, representing the Central Medical Society, and Dr. Reali, of Lugano, representing the Medical Society of Italian Switzerland. Professor Skliffasowski having been incapacitated by illness, Professor Tarantzki, head of the Medical Academy of St. Petersburg, has been chosen President of the Russian Committee in his place.

## A COUNTRY BRANCH OF THE BROMPTON CONSUMPTION HOSPITAL.

The Brompton Hospital for Consumption and Diseases of the Chest is about to establish a country branch and convalescent home with 100 beds at Heatherside, near Bagshot. The internal arrangements will include all the latest improvements. The open-air cure will be largely adopted, since the result of this treatment in a portion of the south wing of the parent hospital for nearly two years has been most encouraging.

Surgeon-General William Taylor, M.D., C.B., principal medical officer in India, has been appointed an Honorary Physician to the King.

At the St. Bartholomew's Hospital Old Students' Dinner, to be held in the Great Hall on Tuesday, October 1st, Mr. Walsham in the chair, Sir Thomas Smith, Bart., will be presented with a portrait of himself which has recently been subscribed for by many past and present Bartholomew's men.

Dr. Santos Fernandez, President of the third Pan-American Congress held recently at Havana, has been presented by the members of the medical profession in that city with a magnificent gold medal in recognition of his efforts to advance medical science and to promote the interests of the profession in Cuba.

Hospital Saturday will be observed on October 12th, when special collections will be made in the workshops and business houses in aid of the medical charities of London. The regular weekly collections in industrial establishments, which constitute the main source of the fund, will be continued till the end of the year. It is hoped that the ultimate total will not fall short of £25,000.

We learn from a letter received from a private source that Dr. Manby, who is in attendance of their Royal Highnesses the Duke and Duchess of Cornwall and York on their Imperial tour, has expressed great satisfaction at the kindly reception given him by members of the branches of the Association in the various colonies visited. We understand that Dr. Manby, who is a member of the Association, would like to have introductions to members in Montreal, Quebec, Toronto, and other places in Canada. We have done our best to ensure him a hearty welcome in the Dominion, but some members or readers may be willing to use any social influence they may possess in Canada to make Dr. Manby's visit as agreeable as possible. Although the responsible position which Dr. Manby holds as guardian of the health of the Heir to the British Throne and his Royal Consort renders formal introduction unnecessary, we think it right to give publicity to what we understand to be his wish. Letters addressed to Dr. Manby on H.M.S. *Ophir* will doubtless reach their destination.

PROFESSOR GUIDO BACCELLI, who recently resigned the portfolio of Minister of Education, has accepted that of Minister of Agriculture in the Italian Government. Professor Baccelli will give special attention to the prevention of the diseases prevalent among agricultural labourers in Italy. The principal of these are malaria, pellagra, ankylostomiasis, and tuberculosis.

# MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

**The Factory and Workshops Acts Amendment Bill.**—In the Lords this Bill excited an animated debate on Thursday of last week in respect to the laundry question. After the second reading Lord Belper moved to put in the Consolidated Bill as Clause 103 the laundries section of the Act of 1895, thus leaving the law as it stood before this session. The Bishop of Winchester, the Archbishop of Canterbury, Lord Windsor, and Lord Rosebery all joined in the debate, and finally Lord James promised on behalf of the Government that the subject of the women employed in laundries outside the Bill should be taken up hereafter. On this promise Lord Windsor withdrew his opposition and Lord Belper's clause was added. The Bill was then read a third time and passed, and on the following day the Lords' amendments were accepted by the Commons.

**The Adulteration of Milk.**—Mr. Strachey called the attention of the President of the Board of Agriculture to this subject last week, and asked him whether he intended to adopt any of the recommendations of the Departmental Committee besides those referring to a milk standard, and especially whether he intended to take any steps for ensuring that the addition of separated milk to whole milk could be detected. Mr. Hanbury, in reply, said: We are preparing circular letters to the local authorities calling their attention to the recommendations of the Committee with regard to the adulteration of cream with gelatine or other substances, and to the administration of the Food and Drugs Acts generally, with the object of protecting the vendor whose milk is proved to be genuine though below the regulation limit, and of preventing milk being reduced to that limit if naturally above it. The suggestion of the honourable member for earmarking separated milk by the addition of some innocuous substance is one which could not be carried into effect without further legislation. We also propose to direct the attention of local authorities to the desirability of a uniform procedure as to sampling and analysing the milk taken for examination, and to indicate what such procedure should be. The labelling of condensed milk would require further legislation. We have already made arrangements by which the vessels used in the testing can be officially standardised at the National Physical Laboratory.

**Executions in Great Britain and Ireland.**—Dr. Thompson asked the Home Secretary if he was aware that in executions as carried out in this country death was seldom instantaneous, that in the majority of cases the vertebra was neither dislocated nor fractured, and that in many cases the pulse continued to beat at the wrist after the fall of the drop for five or six minutes, and whether he would order a careful inquiry into the present method of conducting executions with the view of steps being taken to prevent the possibility of the convict being conscious of suffering. The Home Secretary, in reply, said that the exact cause of death was carefully investigated in each case, and the evidence was entirely opposed to what was suggested in the question. He had no reason to suppose that any further inquiry was necessary.

**The Tuberculosis Commission and Cancer.**—Mr. Jasper More suggested to the President of the Local Government Board, in a question last Friday, that the communicability of cancer from animals to man might be considered by the proposed commission. Mr. Long said that he did not think it would be practicable that the Commission on Tuberculosis, the appointment of which was under consideration, should have included in its reference an enquiry whether cancer was communicable from animals to man.

**Enteric Fever during the War.**—Sir Michael Foster asked the Secretary of State for War last week whether his attention had been called to certain proposals contained in a scientific publication for the prevention by means of a Royal Water Corps of enteric and other waterborne diseases in war, and whether, in view of the recent heavy losses by these diseases in South Africa, he could give these proposals his serious consideration in order to ascertain whether they offered any practical suggestions for preventing such disasters in future. Lord Stanley said the attention of the Secretary of State for War had been called to the publication in question. The proposals had been carefully considered, and had been found absolutely impracticable for active service.

**The Lunacy (Ireland) Bill,** which at one time seemed to have doubtful prospects, has now been added to the Statute Book with a notable addition. As originally introduced, the Bill dealt with criminal lunatics, and gave powers for their conditional discharge, and also dealt with the ill-treatment of lunatics by extending to Ireland sections of the English Act of 1890. When the Bill came up for consideration last week, Mr. Wyndham, according to a promise given previously, introduced the following new and valuable clause: "The committees of any two or more district asylums may agree to unite in providing and maintaining a laboratory for pathological research in connection with insanity and nervous diseases, and may defray the expenses incurred in pursuance of an agreement under this section by contributions from the funds at their disposal for the maintenance of their respective asylums." Mr. Murnaghan opposed the new clause on account of the expense to the local rates, but Mr. J. Redmond said everyone else agreed to it, and so the Bill was passed with this useful addition. The next day the Lords accepted the amendment, and the measure will pass on to the Statute Book.

**The Session of 1901.**—On Saturday Parliament was prorogued to November 5th, and the session closed after one of the most arduous weeks on record. The usual Parliamentary week consists of five days, and sittings lasting about forty-four hours. During the first five days of last week the House of Commons sat nearly sixty hours, and finished with two short sittings on the sixth. It was an appropriate ending to a session which has been very laborious but very unproductive. No Act of great importance either to the public or the profession has been placed upon the Statute Book except the New Factory Act, which amends as well as consolidates the law. It will be found on working to have improved the conditions of labour, especially in the direction of sanitary supervision and the diminution of industrial diseases. The war, which overshadowed all other topics of debate during the session, naturally led to considerable interest in the death-rate from disease among the forces in South Africa and in the constitution of the R.A.M.C. Some valuable debates on the sanitary aspects of the campaign have taken place, but it is regretted on all sides that no thorough discussion of the Army Medical Department was possible. Mr. Brodrick's scheme for the reconstitution of the Corps, which was submitted to his Committee of Experts, did not come before the House as was hoped earlier in the session. It will have to be considered fully next year in the light of a careful study of the whole scheme of army reform proposed by the Secretary of State for War. Many valuable Bills affecting the profession failed to pass even a second reading, such as the Public Health Bill for giving security of tenure to health officers, and the Bills to amend the Inebriates Acts and to give superannuation to Scotch and Irish Poor-law officers. The Cremation Bill passed through the Lords, and successfully went through the lower House to its last stage, when it was blocked by amendments not hostile to the principles of the Bill, but making slight amendments in its clauses. The loss of this Bill was regretted on both sides of the House.

# AN ACCOUNT OF THE METHODS OF COMBATING CONSUMPTION WITH THE AID OF THE COMPULSORY WORKMEN'S INSURANCE IN GERMANY.[1]

By Privy Councillor Bielefeldt,
President of the Imperial Insurance Department.

Since the year 1891 all German working men whose income does not amount to more than two-thirds of a "living wage" have been insured against sickness and old age, by contributions in equal parts from the employers and the men themselves. This entitles them to an allowance in sickness or when they are over 70 years of age. The insurance is under the supervision of the Imperial Insurance Department, and is effected by means of local institutions or of clubs. It is obviously desirable for financial reasons to defer the allowances in sickness as long as possible, and so to lessen the total amount to be paid, and it is of great importance to ascertain the chief causes of sickness, so as to combat them effectually. The investigation of the causes of sickness in 158,462 persons in receipt of relief showed that of every 1,000 cases of sickness 350 were suffering from phthisis. This result was in accordance with those published by the Board of Health for the year 1893, which showed that in 33 per cent. of the total deaths between the ages of 15 and 60, in the German Empire, the cause of death was consumption.

By a law relating to insurance against sickness and old age, insurance societies were empowered to undertake methods of cure or of prevention. At first little use was made of this right, but year by year the necessity for such action seemed more desirable, and in the year 1900 more than 6,000,000 marks were devoted to this purpose, more than the half of this sum being spent on consumptive persons.

Three large associations connected with the Imperial Insurance Department, and to which several smaller institutions belonged, headed the movement against tuberculosis in 1896—namely, the German Central Committee for the Establishment of Sanatoria for Consumptives, the Berlin Brandenburg Association, and the People's Union of the Red Cross for the same purpose. A few insurance societies—for example, the State Insurance Departments of Brunswick and of the Hanse Towns—began at once to erect sanatoria, while the smaller societies availed themselves of those already in existence. With the view of promoting the erection of such sanatoria in all parts of the German Empire, some of the insurance societies granted mortgages at a very low rate of interest where the funds provided by local bodies or rich philanthropists were insufficient for the purpose.

By a law as to insurance against sickness, which came into operation on January 1st, 1900, all the limitations imposed by the earlier law were abolished. Insurance societies are now at liberty to send the sick to hospitals, sanatoria, health resorts, or to the care of private persons, as may seem best, the travelling expenses of the invalids being paid, so that the poorest have the chance of regaining health in this manner. No compulsion is permitted, or any influence, except indirectly, to induce the sick to avail themselves of these means of relief. But if, having placed themselves under treatment, they withdraw without good reason and thus increase their ailment, the allowance may be withheld "for a time" or "in part or altogether." This circumstance, however, is of rare occurrence.

Now that the insurance societies have taken upon themselves the obligations of sick clubs towards their members so long as these are under treatment, they are authorised to demand from such clubs the payments due from them.

Insurance societies are also bound by the new law to assist pecuniarily such relatives of the sick in sanatoria as have been dependent on the earnings of the patient, so that the latter may not be tempted to return to his work too soon, and thus lose the benefit of the treatment, and come upon the sick list again. These ocieties are authorised to add half as much more to the sum received from the sick club. The total sum so paid in 1900 amounted to 506,772 marks (about £25,000), three times more than the amount expended for a similar purpose in 1899. Where the allowance permitted by law is insufficient for the needs of the family, the case is recommended by the committees of the sanatoria to charitable associations or to private beneficence. Consumptive persons were always a heavy burden on the funds of the sick clubs, which therefore gladly accepted the help offered by the insurance societies, and these clubs find it to their advantage to have any of their members who is suspected of being phthisical medically examined as soon as possible.

At the suggestion of the sick clubs, conferences are frequently held in the large towns for the discussion of matters relating to pulmonary consumption, the sputum is examined gratuitously at various "information offices," and "question sheets," indicating the points of chief importance in the diagnosis of phthisis are distributed. Patients recommended to sanatoria by sick clubs are examined by the medical officer of the insurance societies, and as inappropriate cases are sometimes sent, the clubs are recommended only to send cases in the initial stage of the disease.

Sick clubs, insurance societies, and many other agencies take every opportunity, by means of lectures and the dissemination of suitable literature, to warn the working classes of the dangers of consumption which threaten them, and of the means provided for alleviation or cure.

"Recreation places" for convalescents have been provided in various places (notably three in the neighbourhood of Berlin) by sick clubs, insurance societies, the Red Cross Union, etc., and these are much frequented. Insurance societies frequently undertake the task of finding suitable employment for patients leaving their sanatoria. For instance, one of the rules of the Albrechtshaus belonging to the State Insurance Society of Brunswick, directs that a patient three weeks before his dismissal from the Home should apply to the "Inspector of the House" to find a situation for him. "The object of the Home being to restore the capability of work, it is essential that this capability should be exercised immediately on the return of the patient to his own home, lest absence of the means of maintenance, and consequent want, should undo all the good which has been gained by residence in the Institution." Such a proceeding is clearly in the interest of the workman's insurance societies. The State insurance societies have indirectly aided in the combat against consumption by investing their surplus capital in loans at small percentages for the purpose of building healthy dwellings for the working classes.

Even in cases where the efforts of the various agencies are unsuccessful either as regards prevention or cure, the sick allowance granted by the Workmen's Insurance Society preserves the family from bitter want. But the insurance societies have begun to provide homes for such pensioners as are willing to renounce their cash payments, and, instead, to be maintained free of charge to the end of their lives. In this way not only is the invalid sure of being carefully tended, but the danger of infection to other members of the family is removed. The experience of a few years will show whether it is desirable, as a means of effective protection against consumption, that the number of such homes should be increased.

There are at present 43 sanatoria for the people in full working order, 19 more will be opened within a year, and 16 others are planned, so that, assuming that every bed in these institutions is occupied four times a year, there will shortly be 20,000 places for consumptive persons in Germany. The treatment consists chiefly of abundant nourishment, fresh air, general bracing of the system, and "hygienic education."

The cost per annum for each case during the year 1900 amounted to 345.13 marks for each male patient and 321.12 for each woman. There has been a steady increase in the cost of men and a decrease in the cost of women in the four years from 1897 to 1900. Comparing these sums with the average expense of patients suffering from other diseases, it is a striking fact that the treatment of consumptives costs nearly twice as much as that of other classes of patients. This is accounted for by the amount of strengthening diet which is necessary, as well as the longer duration of the treatment. Nevertheless the insurance societies have not been losers, as the cost of treatment for each case is less than sick pay for two and a-half years would have been.

Statistics as to the results of treatment for the years

[1] Abridged from a communication made to the Tuberculosis Congress in London on July 26th, 1901.

1897-1900 have been prepared by the Imperial Insurance Department, and are placed at the disposal of Congress. They relate to 21,176 consumptive persons. The insurance societies intend to ascertain in future the results as to cure for five successive years, and only cases in which incapacity for self-support has not recurred will be regarded as "successful."

The two published tables express the results of treatment in the years 1897, 1898, 1899, and 1900. According to these, the immediate results of the treatment in the four years varied from 68 to 74 per cent. in all the men and from 68 to 73 per cent. in all the women under treatment. The three last of the years first referred to show better results than those of 1897, a success which is partly due to the more careful selection of cases, and partly to the experience gained in that year. The beneficial effects of the treatment of 1897 lasted only two years in 27 per cent. of the men and 36 per cent. of the women; whereas of those treated in 1898, 38 per cent. of men and 44 per cent. of women were able to support themselves after the same lapse of time. It is worthy of note, however, that of the men treated in 1897, 26 per cent. were still able to work in 1900. Positive conclusions as to the duration of cure cannot yet be drawn, but the greater success of the more recent years is striking. The effect of the treatment is more lasting in women than in men.

Such are the general results of the efforts to combat consumption of the German compulsory workmen's insurance, aided as it has been by local bodies and institutions for the public welfare, as well as by private charity. The experience of several years shows that this warfare could not have been successfully waged in Germany without the workmen's insurance, but by means of it we feel confident of victory in the end.

## THE DISCOVERER OF THE LEPROSY BACILLUS.

On August 10th a bust of Dr. G. Armauer Hansen, the discoverer of the leprosy bacillus, was unveiled by Professor Visdal in the garden of the Museum at Bergen, in the presence of many Norwegian and foreign medical men. An address was delivered by Professor O. Lassar of Berlin, and Drs. Sandberg and Lie of Bergen also spoke. Congratulatory messages were sent from all parts of the world, and a letter from Professor Virchow was read, in which the veteran pathologist, after expressing his regret at his inability to be present, went on to say that Dr. Hansen's work had definitively cleared up a large and difficult field of pathology, and that his name was known and celebrated throughout the whole world as a benefactor of mankind. The King of Norway conferred on Dr. Armauer Hansen the distinction of Commander of the Order of Ola.

Dr. H. P. Lie, the present Director of the Leprosy Hospitals of Bergen, contributes an interesting biographical sketch of Dr. Gerhard Henrik Armauer Hansen to the current fasciculus of *Lepra* (vol. ii, Fasc. 3, 1901, p. 121, with portrait). Dr. Hansen was born in Bergen in 1841, and received his early education in the Cathedral College of that town. After passing his medical examinations, he became a resident in the Rigshospital of Christiania, and later spent some time as medical officer to the great Lofoten fisheries. In 1868 he became Assistant Medical Officer to the Bergen Leper Hospital (Lungegaards-Hospital), of which Dr. Daniel C. Danielssen was director. It was under the influence of this enthusiastic teacher and acute observer that Armauer Hansen began his life-long study of leprosy. His first investigation was to work out the significance of the so-called globi, or leprous cells of Virchow. These bodies had been already referred to in 1840 by Danielssen, who thought they were characteristic of the disease. This idea he afterwards gave up, and came to the conclusion they were the results of an involution process, that is, fatty degeneration. Hansen was not satisfied with the latter explanation; he thought that Danielssen's first idea was more likely the right one. This led him to investigate the matter, and in 1869 he published his results in the Norwegian Archives of Medicine (*Nordisk Medicinisk Arkiv*, vol. i, 1869, No. 13).

At this time Hansen spent a year at various universities, but on his return to Norway he again applied himself to the difficulties which surrounded the etiology of leprosy. Various views were held at that time on this point. As a result of his observations and investigations, he published an important paper in the *Norsk Magasin for Lægevidenskaben* (1872), which gave rise to much discussion in Norwegian medical circles. His researches pointed to the contagious and specific nature of the malady. The Medical Society of Christiania voted a sum of money for him to continue his research. In the course of his journeyings through the country he came across instances of the disease, which were more readily explained by contagion than by any other theory. An account of his additional investigation was published in the *Norsk Magasin for Lægevidenskaben* (Third Series, vol. iv, 1874), and an abstract of his paper appeared in *The British and Foreign Medico-Chirurgical Review* (vol. lv. 1875). Unfortunately this important contribution to the subject was but little known outside of Norway. His views confirmed those of Drognat-Landré, who had worked at leprosy in Surinam, and published a book entitled *La Contagion, seule cause de la Lèpre* (Paris, 1869).

This led Hansen to reinvestigate the peculiar bodies (globi-brown corpuscles) previously referred to, for he held that if the disease is contagious there must be some specific virus at work. His labours were rewarded by the discovery, in unstained preparations, of bacilli. These were ultimately stained, and are what we know them to be, the bacilli of leprosy. His discovery, be it noted, was made in 1873, that is about ten years before the bacillus tuberculosis was made known to the world by Koch.

For years Hansen has repeatedly tried to cultivate and inoculate the bacillus lepræ, which is also deservedly known as Hansen's bacillus, but up to the present fruitlessly. One great point, however, has been gained, namely, that it is now practically admitted by all those engaged in the study and observation of leprosy, that the disease is contagious. In Norway, practical legislation on this basis has given the best results, and leprosy there is gradually and surely diminishing.

Dr. Armauer Hansen has recently (July 29th) celebrated his 60th birthday, and the tribute to his lifelong work and devotion above recorded will be gratifying to all lovers of science. Norway is a small nation, but while she has such sons she may well hold her head high among the proudest.

## THE PREVENTION OF TUBERCULOSIS.

### Westmorland.

The accompanying circular may be of use to any sanitary authorities throughout the Kingdom who propose to follow the example of the Camberwell Borough Council, the Kendal Town Council, and the Bowness-on-Windermere and Ambleside Urban District Councils, in examining milk for tubercle bacilli, and prosecuting the purveyors who have it for sale.

BOROUGH OF KENDAL.

To Cowkeepers, Dairymen, and Purveyors of Milk.

Notice is hereby given, that from January 1st, 1902, the Kendal Urban District Council will from time to time take samples of milk for examination and will be prepared to prosecute any person having on sale within the Borough of Kendal milk in which the bacilli of tuberculosis shall be found.

*By Section 6 of the Sale of Food and Drugs Act, 1875:—*

No person shall sell, to the prejudice of the purchaser, any article of food which is not of the nature, substance, and quality of the article demanded by such purchaser, under a penalty not exceeding £20.

*By Article 15 of the Dairies, Cowsheds, and Milkshops Order, 1885, as amended by the Order of 1889:—*

If at any time disease, including in the case of a cow such disease of the udder as shall be certified by a veterinary surgeon to be tuberculous, exists among the cattle in a dairy or cowshed, or other building or place, the milk of a diseased cow therein (*a*) shall not be mixed with other milk; and (*b*) shall not be sold or used for human food.

Any person guilty of an offence against the above order is liable for every such offence to a penalty of £5, and in the case of a continuing offence, to a further penalty of £2 for each day after written notice of the offence from the local authority.

By order of the Kendal Urban District Council.

August, 1901. John Bolton, Town Clerk.

### Austria.

Dr. von Kusy, an Under-Secretary in the Austrian Home Office and Chief of the Sanitary Department of that Ministry, is now engaged in drawing up a series of Bills and administrative regulations to protect the population of Austria against tuberculosis. According to the *Fremdenblatt* the duty of notification is impressed upon the doctors, while special

attention will be directed to all establishments and buildings where many persons live or work together. Proceeding on the principle that the fight against tuberculosis must be carried into the largest classes of the population, the schools will be entrusted with the duty of enlightenment in this matter, and the Minister of Public Instruction will take measures with that object.

## THE MEDICAL GUILD, MANCHESTER, AND VACCINATION.

Mr. David Owen, Hon. Secretary of the Medical Guild, Manchester, has forwarded for publication the following resolutions which were unanimously passed at the last meeting of the Medical Guild, Manchester, on July 26th as follows:—

1. That in the opinion of the Medical Guild, seeing that vaccination is made compulsory in the interest of public health, the parent or guardian of a child should have the right to select any registered medical practitioner, who is willing to do so, to perform the vaccination, and that the cost of the same should be defrayed by the State at a fixed rate.

2. That, in the event of the foregoing resolution being passed, the Council be requested to consider what steps can be taken to influence future legislation on the subject.

# THE PLAGUE.

### Prevalence of the Disease.

#### Cape of Good Hope.

For the week ending August 10th the health report shows that in the Cape Peninsula only one case (a Malay) of plague occurred and no death from the disease. In Port Elizabeth a European contracted the disease and died; this being the only case reported during the week. The total number of cases in the Cape of Good Hope (including the Peninsula, Port Elizabeth, and other places), since the commencement of the outbreak until August 10th, amount to 783, and of this number 373 died. The distribution, according to nationality, has been:—Cases: Europeans, 199; coloured, 338; Malays, 62; Indians, 17; Chinese, 2; natives, 161. Deaths: Europeans, 67; coloured, 170; Malays, 45; Indians, 13; Chinese, 1; natives, 68. No cases occurred amongst the naval and military during the week ending August 10th.

#### India.

The plague returns for all India for the week ending July 27th show 1,912 deaths against 1,455 in the week preceding. The numbers during the two weeks ending July 20 and 27th were 105 and 106 respectively in the city of Bombay, but in the Bombay districts the numbers increased from 1,174 during the former to 1,623 during the latter week. Mysore is the only other State showing a noteworthy increase in mortality, the figures during the weeks ending July 20th and 27th being 129 and 154 respectively. On July 22nd, 32 deaths from plague occurred in Mysore city. In Calcutta during the week ending July 27th the deaths from plague amounted to 16, in the Bengal district to 4, and in the Punjab 1 death only was attributed to plague. The report from the Punjab includes the notoriously endemic centres of Jullundur, Hoshiarpur and Sialkot, so that even in these plague seems to be in abeyance for the present.

#### Egypt.

The Director-General, Sanitary Department, Egypt, states that during the week ending August 11th, 8 cases of plague and 3 deaths from the disease were reported throughout all Egypt. Natives of Egypt have alone been attacked. The distribution was as follows: Six cases and 1 death at Port Said; 1 case and 1 death at Zagazig; and 1 death out of hospital at Alexandria."'According to a Reuter's telegram there were on August 10th 10 cases of plague in Egypt, and the total number of cases since April 7th has been 117, of which 50 ended fatally.

#### Hong Kong.

Four fresh cases of plague and 5 deaths from the disease occurred in Hong Kong during the week ending August 17th.

#### Constantinople.

After 14 days' interval, during which no case of plague occurred in Constantinople, a Greek resident developed the disease on August 21st.

Presentation.—Dr. E. L. Jacob, who has been Medical Officer of Health for the Epsom Urban and Rural Districts for twenty-seven years, was recently presented with an illuminated address and a silver tray by members of the Epsom Board of Guardians as a mark of their appreciation of his valuable services and his unremitting devotion to his duties.

Bequests.—Under the will of Mr. James Toleman, of Goswell Road, wallpaper manufacturer, the Brompton Cancer Hospital, the Royal Free Hospital, the British Home for Incurables, the Islington Fever Hospital, the City Road Hospital for Diseases of the Chest, and the Fitzroy Square Hospital for Consumption each receive a legacy of £1,000.

# ASSOCIATION INTELLIGENCE.

## NOTICE OF QUARTERLY MEETING OF COUNCIL FOR 1901.

A meeting of the Council will be held on October 23rd. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before that meeting—namely, October 2nd.

### Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

## LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

## BRANCH MEETINGS TO BE HELD.

Southern Branch: South Wilts District.—The next meeting of this District will be held at the Salisbury Infirmary on Wednesday, September 4th, at 2 P.M. The meeting will be preceded by luncheon at the County Hotel at 1 P.M. Programme: Election of officers.—President's address.—Dr. C. R. Straton will open a discussion on Milkborne Tuberculosis by a paper on the subject, subsequent speeches on the subject not to exceed seven minutes.—Cases. Members desirous of showing any cases or reading any papers at the meeting are requested to communicate with the Hon. Secretary as soon as possible.—J. E. Gordon, 52, Endless Street, Salisbury, Hon. Secretary.

## CEYLON BRANCH.

A meeting of this Branch was held on June 29th, Dr. W. G. Van Dort, President, in the chair. Twelve other members were present.

*Confirmation of Minutes.*—The minutes of the previous meeting were read and confirmed.

*New Members.*—The following gentlemen were elected members of this Branch: Dr. Albert J. Chalmers, M.D.Vict., F.R.C.S.Eng., L.R.C.P.Lond.; Dr. H. M. Pieris, L.C.M.C.Ceylon.

*Complaint by a Member.*—The Secretary next read a letter, dated March 26th, from the General Secretary of the Association, regarding complaint from Dr. V. C. J. Vanderstraaten, late member of the Ceylon Branch of the British Medical Association. It was proposed by Dr. H. G. Thomasz, and seconded by Dr. V. Saravanamuttu,

That Drs. H. Marcus Fernando, M. Sinne Tamby, A. B. Santiago, and Dr. H. G. Thomasz (Honorary Secretary) be appointed a Committee to consider letter regarding complaint from Dr. V. C. J. Vanderstraaten.

Carried unanimously.

*Letters from Members.*—The Secretary next read communications from members who had paid their subscriptions which had not been credited, and also from those who had not been informed that they had been elected members. Proposed by Dr. Saravanamuttu, and seconded by Dr. Joseph S. de Silva:

That the above matter should lie over till Dr. W. H. de Silva, the late Secretary, returns from England.

Carried unanimously.

*Chaulmoogra Oil in Leprosy, etc.*—Dr. W. G. Van Dort (President) read a paper on Chaulmoogra Oil in the Treatment of Leprosy, Tuberculosis, etc., being an abstract of a monograph in French, by Georges Desprez, M.D., of Paris. Dr. M. Sinne Tamby, Dr. Geo. P. Van Twest, and Dr. H. G. Thomasz joined in the discussion.

*Vote of Thanks to the President.*—The meeting terminated with a vote of thanks to Dr. W. G. Van Dort (President), proposed by Dr. M. SINNE TAMBY and seconded by Dr. A. B. SANTIAGO, for his very instructive paper. This was carried.

### JAMAICA BRANCH.

AN ordinary meeting was held at the Jamaica Institute on March 28th, Dr. HENDERSON in the chair.

*Confirmation of Minutes.*—The minutes of the last meeting were read and confirmed.

*Antitoxin in Diphtheria.*—Dr. RAGG gave a history of several cases of diphtheria occurring in one family, in which the early injection of antitoxic serum appeared to greatly modify the virulence of the disease.

*Ectopic Gestation.*—Dr. G. V. LOCKETT read notes of a case of ectopic gestation, the sac being extraperitoneal and abdominal. An operation was performed, and in six weeks the patient, a negress aged 39, was convalescing and up and about, when unfortunately she was taken ill suddenly and an abscess bursting into the left lung, she died.

*Tuberculous Disease of Knee.*—Dr. LOCKETT also read notes of a case of chronic tuberculous disease of the knee-joint, with large synovial cyst. At operation this sac, lined with synovial membrane, contained altered synovial fluid and thick flakes of lymph. It could be traced under the semimembranosus and in all probability communicated with the knee-joint. These cysts occurred in hydrops articuli—now considered tuberculous—and Charcot's disease. The latter was out of court from the signs, symptoms, and history of the cases.

*The Treatment of Hydrocele.*—Dr. HENDERSON, in opening a discussion on the curative treatment of hydrocele, strongly advocated the use of carbolic acid as an injection after tapping, and cited a number of cases in which he had used it with uniformly good results. He effected a complete cure in about 80 per cent. of the cases treated, with a minimum of discomfort to the patients.—Dr. RAGG had used iodine for the same purpose, preferably the liniment or the Edinburgh tincture, which was stronger than the *B.P.*, and had not noticed any excessive pain or inflammatory reaction. This was contrary to the experience of most of the other members present.—Dr. ALLWOOD had not been so successful with either iodine or carbolic acid as the previous speakers, and got the best results from excision of the sac as completely as possible. All agreed that whatever method was used there was always more or less some orchitis.

### SOUTH AUSTRALIAN BRANCH.

THE twenty-second annual meeting of this Branch was held at Adelaide University on June 27th.

*Confirmation of Minutes.*—The minutes of the previous meeting were read and signed.

*Report of Council.*—The report of the Council stated that during the past year the membership of the Branch had been maintained satisfactorily, and the financial position was sound. Death had removed two—Dr. Robert Stewart and Dr. S. J. Magarey—both prominent and able members of the Branch. One or two members had left South Australia; several had gone to South Africa, and there gained distinction for themselves and for the Commonwealth. Seven new members had been elected. Members had considered the proposed new constitution of the Association, and the resolutions of the Branch forwarded to London were now under consideration by a special Subcommittee, which included our representative on the General Council. An address to H.R.H. the Duke of Cornwall and York was in preparation. The report and financial statement were adopted.

*Election of Officers.*—The following members were elected officers for the ensuing year: *Vice-President:* Dr. Archibald A. Hamilton. *Honorary Treasurer:* Dr. W. T. Hayward. *Honorary Secretary:* Dr. J. B. Cunson. *Ordinary Members of Council* (3): Drs. M. Jay, Otto W. Smith, and W. R. Cavenagh-Mainwaring. The President (Dr. C. E. Todd) and retiring President (Dr. Brummitt) are members *ex-officio*. The members of the Parliamentary Bills Committee were re-elected. The local editor of the *Australasian Medical Gazette* was re-elected.

*Presidential Address.*—Dr. R. BRUMMITT delivered the annual address and vacated the chair, which was taken by the newly-elected President, Dr. C. E. Todd.

*Votes of Thanks.*—Votes of thanks to retiring officers and to the Council of the University were carried.

# SPECIAL CORRESPONDENCE.

## BELFAST.

*Health of Belfast: Annual Report of the Superintendent Medical Officer of Health: Tuberculosis: Typhoid Fever.*

THE superintendent medical officer of health has lately issued his annual report on the health of Belfast. Since 1896, when a Special Committee was appointed to report on the high death-rate, and even more so since the serious epidemic of typhoid fever in 1898, public feeling has been very strong, and prolonged and even angry discussions in the city council on the subject have been not infrequent. Although the mortality is not excessive, being 21.7, and has shown a steady but slow decline in the last decennium, it is still felt to be unduly high. The report fills 48 double octavo pages, but as 12 of these are simply ominous lists of streets in which typhoid fever has occurred, there are really only 36 pages; it contains three charts and 17 short tables of statistics; there is no index, and we miss such helps to the general reader as "main divisions" and "headings," and general graphic arrangement and orderly sequence. There are no maps. It is not perhaps altogether a fair comparison to put this report side by side with that of Dr. Hope on Liverpool; still even making allowance for the fact that the population of the latter town is nearly double that of Belfast, we cannot congratulate ourselves on the result. In the Liverpool report there are 203 pages, not inclusive of an index of 6 pages, of a preface of 4 pages, and of an appendix of 18 pages, 2 maps, and 2 large charts. There are also photographs and tables of statistics innumerable; it is easier to find information on a certain subject in these 230 pages than in the 36. A comparison with the reports of Manchester, Glasgow, and Birmingham does not remove our uneasiness. A comparison with the reports of some towns with a smaller population than Belfast even intensifies it. The population of Kingston-upon-Hull for 1899 was estimated at 234,270, nearly 100,000 less than that of Belfast; yet its report contains 140 pages, an index of 2 pages, a large map with coloured dots showing the distribution of the fatal cases of the severe zymotic diseases, and numerous tables and coloured charts. The population of Cardiff for 1899 was estimated at 185,826, little more than half that of Belfast; its report is four inches longer and a little broader than the one under comparison, and contains 76 pages, four large charts, and an index of one page. One is forced to the conclusion that as regards mere amount of matter and general fulness and what we may term the dignity of the report, it is markedly deficient. This unfavourable conclusion is not altered on a closer inspection of the materials dealt with; there is no mention of prosecutions under the Health Act; no hospital reports, or the very scantiest reference to fever hospital accommodation; no returns of vaccination; no reports on the housing of the poor except on the vaguest terms in the description of the Registrars' districts; no returns as to the density of the population, although an excellent table giving the deaths is given; no mention of the foreshore or of the smoke nuisance; no mention of the increase or decrease of alcoholism, of the working of the main drainage scheme, of the sanitary destructors; no list of officers in the department, or of the cost of the department; no lady inspectors. It is impossible to verify all the figures, but two instances may be cited which still further increase the uneasy feeling aroused by the report. On page 20 the total death-rate of Liverpool is given as 25.7, and that from zymotic disease as 3.1; whereas Dr. Hope's figures in his report are 23.1 (on page 7) and 3.6 (on page 19), nor are the figures quoted correct for the previous year. Again, in Table I, 3 cases of measles and whooping-cough are returned as notified during the last three years, and no cases of diarrhœa or chicken-pox. Of course this arises from these diseases not being notifiable; yet, from Table IV. we learn that during this period there were 242 deaths from measles and 439 from whooping-cough, and 882 from diarrhœa. Thus any estimate of the total zymotic disease in the

city from Table I. is hopeless, and the figures given are misleading. The estimate for the population was 359,000, the census showed it to be 348,965 at the end of a decennium; this was very close calculation, and the responsible authority must be congratulated; the corrected death-rate is thus 21.7. It is very satisfactory to record the decline from 25.5 in 1891, but the satisfaction would have been more complete if evidence were adduced enabling one to differentiate Old Belfast from New Belfast. A few years ago a large circumjacent suburban area was added; the point really at issue is to know whether the death-rate in Old Belfast is being reduced. Thus, in Table II we find 372 cases of typhoid and 120 of simple continued fever notified from district No. 3, which is part of Old Belfast, whereas in district No. 7, a new suburban area, 8 and 3 cases respectively were notified; and as a satire upon our modern hygiene, the latter, which consists chiefly of the village of Greencastle, is described as "situate below high water level, 4 ft. to 6 ft. below level of adjoining roadway ..... whose sanitary arrangements have been woefully neglected in the past," necessitating "a complete system of drainage," whereas No. 3 has "good wide streets ..... the greater number of the houses comparatively recently built, with fair attention to sanitary arrangements." Both are inhabited chiefly by operatives. Surely there must be some *tertium quid?* But the evidence, such as it is, does not support the idea that some districts in Old Belfast are improving *pari passu* with the town as a whole.

The medical officer again complains of his inability to place on record the causes of 4,006 deaths out of 7,642.

I know nothing of where any deaths take place, except from the Registrar-General's returns, which merely state that so many deaths occur in a certain district.

"Even this meagre information is only given as regards chest affections and zymotic disease." This and many other defects arise from the anomalous position of the superintendent medical officer of health. He has no real power or control. The medical officers of health for the fourteen districts, who are also the dispensary medical officers and all gentlemen in large private practice, supply him with what information they can, and he acknowledges their kindness: but the want of proper organisation and due centralisation neutralise to a great extent the efforts not only of the officers of health, but also of the Health Committee; and to ask the superintendent medical officer of health to draw up an annual report from the materials at his disposal is to ask him to make bricks without straw.

The two heavy items in the mortality list are consumption and typhoid. To phthisis we have two pages devoted, one of which is nearly occupied by Table XI. It caused 1,115 deaths out of 7,642. It is the highest actual number ever recorded, although the death-rate is stated to have steadily declined since 1891. The mortality from all forms of tuberculous disease is not given. In Liverpool with nearly twice the population the mortality was 1,287, and from all forms of tuberculous disease 1,717. In the Liverpool report there is mention of experiments by Dr. Elliott as to the infectivity of houses where tuberculous patients have recently died, the number of animals seized for tuberculosis, and eight pages on tuberculosis and milk—about twelve pages altogether. During 1900 Edinburgh issued a report on the prevention of consumption of 120 large pages. Cardiff, with only 208 deaths, devotes four pages, each larger than the page of the Belfast report. The special report on tuberculosis by Dr. Newman, the Medical Officer of Health for Clerkenwell, gives the death-rate from phthisis for the East of London as 2.19, and for Clerkenwell as 2.32. In Belfast it is 3.1, nearly exactly double what it is in the North and West of London (1.6). It is the merest mockery to talk of consumption being a preventable disease, and yet for the responsible Board of the city not to take, or at least to record, one single practical step to endeavour to lessen this terrible mortality.

There were 1,777 cases of typhoid fever and 813 cases of simple continued fever notified during the year, with a total of 269 deaths; in Liverpool 731 cases—1,046 fewer than in Belfast—with 120 deaths are reported. In 1899 Cardiff reported 94 cases with 19 deaths; and in the same year Kingston-upon-Hull acknowledged 43 deaths. If the incidence of the disease for the year had been the same as that of Liverpool, roughly 200 more people would have been living at the end of the year than actually were; and the expense, anxiety, and pain of 2,000 cases of a tedious, dangerous, and in every way detestable disease would have been saved to the inhabitants.

There are some points on which the authorities are to be congratulated. Small-pox and plague were prevalent in Glasgow, yet, although the traffic between the two cities is enormous, we were saved from both. The commendable activity and promptitude shown enables one to judge what might be done in other directions. It is extremely satisfactory also to note the examinations that are being made of the house drains, although the number discovered defective is astounding; and also the use that is being made of the pathological laboratory for the examination of diphtherial membrane and for Widal's test. The mortality from measles, whooping-cough, scarlatina, diphtheria, and infant mortality compare favourably—sometimes very favourably—with that of other large towns, so that if once the two endemic scourges of the city were successfully dealt with, there is little reason to doubt that the mortality would fall to that of London.

## SYDNEY.

*Sydney Hospital Branch Dispensary.—The London Sanitary Institute.—Prince Alfred Hospital.—Australian Natives' Association.—Australasian Trained Nurses' Association.*

With a view to providing medical attendance and medicine to the deserving poor of the eastern suburbs the Board of Directors of the Sydney Hospital has erected a dispensary upon a piece of land in a prominent thoroughfare bequeathed to the directors by the late Mr. William Perry. The building has been erected at a cost of £3,000: separate rooms are provided for the dispensing of medicine, and for an honorary physician and surgeon who will attend daily. Adjoining the dispensary are two shops which form part of the building, and which have been let with a view of aiding materially in the expense of carrying on the dispensary.

At a meeting held recently in the Town Hall, under the presidency of the Mayor, Sir James Graham, M.D., the certificates of the London Sanitary Institute were presented to those persons who had qualified to receive them. Sir James Graham stated that those who were to receive the certificates had specially studied to qualify for them. Until lately, although a series of lectures on Sanitation had been given at the Technical College, the municipal authorities had never seriously turned their attention to the enormous importance of insisting that every sanitary inspector or officer should be thoroughly well trained and equipped in every way for his work. Eight hundred students attended sanitary lectures in Sydney and country during the past year, the subjects studied being practical sanitation and plumbing, sanitary inspection, and sanitary and municipal engineering. Much of the activity in this direction was due to the outbreak of plague last year, which has aroused the citizens to the importance of perfect sanitation.

The total amount collected up to date towards the furnishing of the new Queen Victoria Memorial wings at Prince Alfred Hospital is £11,683. Miss McGahey, the matron of the hospital, left for England and America a fortnight ago. She is to collect information in Great Britain and America, with a view to the equipment of the new wings of the hospital being as perfect and up to date as possible.

The Australian Natives' Association, which, as I have before explained, is a purely political association, but which has lately been registered as a Friendly Society to enable it to maintain its existence and progress at the expense of the medical profession, held an annual session in June last. Some resolutions then passed may be of interest as showing the aggressive nature of this new illegitimate medical benefit society. It was resolved that the following communication be sent to the Friendly Societies' Association:

That they forward a paper to all candidates for the State Parliament asking if they are prepared to support a measure to enforce medical practitioners to consult with any duly qualified medical man when so desired, and to establish by legislation a system of fees for consultation, attendance, etc. "That in the event of the Friendly Societies Association not acting on the foregoing resolution the Board is hereby empowered to forward such questions to all Parliamentary candidates.

The Council of the New South Wales Branch of the British Medical Association declared the Australian Natives' Associa-

tion to be one prejudicial to the interests of the profession, and no member of this Branch of the British Medical Association will take the position of medical officer, nor consult with any of the medical officers of this Society. The object of the Board of the Australian Natives' Association is of course to endeavour by Act of Parliament to get over the difficulty they have experienced in securing good medical attendance. It is beginning to be realised here that the only way to deal with the increasing abuse of the club system is to abolish all medical contract practice.

The annual meeting of the Australasian Trained Nurses' Association was held in July under the presidency of Dr. Norton Manning. The Association is in a flourishing condition due largely to the efforts of Sir J. Graham in the initiation, and more recently to the large amount of time and interest devoted to it by the President, Dr. Norton Manning. The annual report states that there are now on the roll of members the names of 414 trained nurses, of whom 368 are resident in New South Wales, and there are 63 medical members. The matrons of 55 public hospitals in this State are members of the Association. A benevolent fund has been started and has received help from various quarters. Miss McGahey, the Matron of the Prince Alfred Hospital, is to represent the Association at the Congress of Nurses at Buffalo, U.S.A., in September of this year. It is hoped that before long branches of the Association will be formed in Victoria, Queensland, and Tasmania. Auxiliary branches for midwifery and mental nurses have been formed. The financial statement showed a credit balance of £352, and the benevolent fund £70. The adoption of the report and balance sheet was moved by Dr. Sydney Jones and seconded by Dr. Clubbe, and carried. Sir James Graham advocated the claims of the benevolent fund, and in his capacity as Mayor promised the use of the town hall for a public meeting to be called in the interests of the fund.

## HONG KONG.

*Death of Dr. A. P. Carvalho.—Decrease in Bubonic Plague Returns.—The Sanitary Condition of the Colony.—Small-pox.*

ALBERTO PEDRO DE CARVALHO, M.R.C.S., L.R.C.P., L.S.A., died here on April 5th, at the age of 41. He was born in Hong Kong in 1859, proceeding when a boy to Portugal for general education. In 1882 he was registered as a medical student at University College, London, obtained the L.S.A. in 1886, and a year later became M.R.C.S. and L.R.C.P. Returning to the Colony he entered general practice, but owing to a nervous breakdown had almost ceased to practice during the three years before his death. Dr. Carvalho was a faithful, kind, and able practitioner, and rendered good service to the Alice Memorial Hospitals for many years.

The epidemic of bubonic plage is now practically over for this year. It has been somewhat severer than former years, especially in so many Europeans being attacked. For the week ending July 13th the cases were 26, and 21 deaths. The following table shows cases and deaths to noon of July 18th:

| Cases. | | Deaths. | |
|---|---|---|---|
| Chinese ... ... ... | 1,487 | Chinese ... ... ... | 1,450 |
| Other Asiatics ... ... | 51 | Other Asiatics... ... | 34 |
| Europeans ... ... | 28 | Europeans ... ... | 9 |
| Total Cases ... | 1,566 | Total Deaths ... | 1,493 |

These returns give a mortality of 95.33 per cent. of all the cases, while among Chinese alone 97.51 per cent., among Asiatics (other than Chinese) 66.66 per cent., and among Europeans 32.14 per cent. were fatal.

Many schemes and suggestions have been brought forward at the Sanitary Board and in the daily papers for the improvement of the health of the Colony. The real difficulty lies in the housing of the Chinese and the maintenance of thorough cleanliness. The merchants of the Colony regard the yearly recurrence of plague as a great hindrance to the trade of the Colony, and a petition, largely signed, has been presented to His Excellency the Governor, praying that a Sanitary Commission be sent to the Colony at once with power to enforce the carrying out of its suggestions.

Small-pox has now practically disappeared, coincidently, as in former years, with the onset of the hot season.

# CORRESPONDENCE.

## THE CONSTITUTION REPORT.

SIR,—I should have been very loth to believe that any attempt had been made to boycott those members who were prepared to offer arguments in opposition to the recommendations of the Constitution Committee, but the letters from Drs. Cave and Ince convince me that such an attempt was not only made but was successfully carried into execution.

I may here say, Sir, that I was prepared to discuss the report of the said committee on Tuesday but the President thought that the superior attraction of certain garden parties would be more congenial than the discussion of that report, and accordingly adjourned the first general meeting at an early hour.

And this instance reminds me of what I have from time to time ineffectually proposed, and that is that the business of the Association should be commenced early on Tuesday morning and continued until it was finished, and also that no entertainments of any sort should be allowed to be fixed until such time as the general business of the Association had been concluded.

It will naturally be asked whether the Association mean the annual meeting to be considered as a picnic or as a business and scientific meeting. You will excuse me if I say that I am of opinion that it is quite possible to combine a certain amount of pleasure with a large amount of business, but it is essential that *all* the business should be finished before the pleasure commences.

Now with regard to the important question of delegation: Is it not apparent that considering every member of the Association must belong to one of the Branches, that every question of importance should be first discussed by the Branches, and afterwards, if necessary, relegated to the annual meeting of members for final decision?

Why on earth should we have a body intervening between the Branches and the Council, and not responsible to either of these bodies?

That the Branches cover too wide an area goes without saying, and that the idea of division is a good one everyone admits; but surely the division of a Branch should first of all report to the Branch what they consider desirable, and the Branch should then, as a matter of course, report after discussion what decision they (the Branch) have come to to the Council. There is nothing in the present or in the proposed constitutions to prevent any Branch from communicating their decision or their opinions to the other Brancnes. Speaking as an old and, I may add, as a reforming member of the Association, I would say that what is wanted is:

1. A subdivision of the Branches, so that every member could without inconvenience attend meetings.
2. A keener interest in the medico-political and medico-ethical questions of the day.
3. An election of an executive body from the Council which should meet so frequently that it would be possible to discuss adequately all the questions that arise.
4. A strong determination on the part of members that the Council should make such arrangements at the annual meeting that no disturbing element in the shape of entertainments should interfere with the proper control of the business.—I am, etc.,

Cardiff, Aug. 19th. T. GARRETT HORDER.

SIR,—It is impossible not to feel sympathy with Drs. Cave, Flemming, and Ince in their attempts to defend a lost cause. But singularly enough they do not seem to realise the curious position in which their arguments place them. In the first place they complain of the closure. This certainly was not invented by the revolutionary party in the Association. Moreover, it was not applied by the caprice of the chair, but by the express will of the meeting, and yet these gentlemen who opposed the setting up of a representative meeting are not willing to accept the verdict of an assembly to which they were anxious to appeal. But the position is even more curious. The subject under discussion had actually been through the process of the "referendum" and had come back with the approval of 25 Branches against 8; of 99 meetings against 16, and approximately of 950 members against 250.

Dr. Ince, who is utterly opposed to the principle of delegation, says that "it is foreign to other scientific and professional bodies." I should like to draw his attention to the proceedings of the recent British Congress on Tuberculosis. He will find that the Duke of Cambridge sent a telegram to His Majesty stating that he had opened the Congress which was largely attended by "home and foreign delegates," and he will also find that "the following delegates" were presented to the King.—I am, etc.,

R. Hanson Wolstenholme, L.R.C.P.Edin, M.R.C.S.

Salford, August 19th.

## THE MEDICAL PROFESSION AND TRADES-UNIONISM.

Sir,—In the British Medical Journal of July 27th a letter appears from Dr. Ince, I.M.S.(ret.), the object of which is to criticise some of the work of the Constitution Committee appointed to revise the rules of the British Medical Association. His criticism is mainly directed against the idea of trades-unionism, which he thinks is favoured in some of the proposed rules.

Now, Sir, I would inquire why the idea of trades-unionism should not be kept prominently before the Committee of the British Medical Association engaged in reorganising its constitution? Why should medical men not combine for mutual benefit and protection in the same way that others do? Lawyers have codes of discipline for mutual benefit and guidance; so have parsons and engineers, as well as the principal trades of the kingdom. The medical profession seems the only one without adequate organisation for the common good of its members; and what is the result? Underbidding and advertising in every shape and form, even to the extent in many cases of causing the public to laugh at the simplicity of medical men. Advertising and underbidding, for instance, are exemplified by the gratuitous hospital services so much in vogue all over the kingdom; by free lectures to lay audiences on popular medical and surgical subjects; by the midwifery training associations, and by many of the medical clubs.

These and many similar abuses might be ended, and adequate remuneration received for the performance of all honest professional work, were medical men bound together by suitable organisation, no matter by what name called. It is all very well for a retired Indian medical officer, who doubtless has never had occasion to worry about the constancy of his stipend, to object to a savour of trades-unionism about the proposed new rules of the Association. Probably he has no experience whatever of the conditions of civil practice in which the great bulk of medical men are engaged, otherwise he would not write in so sentimental a strain about trades-unionism, the dignity of the profession, and so forth. The truth is that far too much twaddle is periodically uttered, especially in scholastic quarters, on the "nobility and dignity" of the profession, and the sooner this fashion changes the better. Few will dispute the assertion that ninety-nine out of every hundred men enter the profession for the purpose of making a respectable livelihood in return for work done. In doing this work no doubt they are desirous of advancing the interests of medical science in whatever way possible; but bread-and-butter have to be provided and rent and taxes paid; and, naturally, ways and means, whatever may be said about the dignity and nobility of the profession, are the first consideration.

We each know how much hard work has to be accomplished before medical practice can be commenced, and we also know the great expense incurred during the years spent in study; why then should medical men be foolish enough to continue the suicidal policy which so many of them are to-day pursuing? The public does not thank them for gratuitous work, nor does it even respect them for it, nevertheless it gladly accepts services which save its purse. Not long ago the writer heard a prominent citizen declare, while acting as chairman of a meeting convened for the purpose of arranging a free course of medical lectures on popular subjects, that it seemed to him the doctors in so lecturing were metaphorically "cutting their own throats." Lawyers, engineers, and clerics do not so act, and the public respect them for it, whilst doctors, who practise the most difficult and expensive of all the professions, still remain at the bottom of the list in public estimation.

I hope, therefore, that neither the Constitution Committee nor the British Medical Association at large will give up the idea of trades-unionism while engaged in reforming the rules of the Association; and I also trust that such reform will be continued until the glaring anomalies and injustices universally admitted to exist in medical practice have been removed.—I am, etc.,

Londonderry, July 29th. D. A. McCurdy, F.R.C.S.

## A "JOURNAL COMMITTEE."

Sir,—In the report of the resolution carried on this subject at the annual meeting there are two errors which I must ask you to allow me to correct. In the first column on p. 354, the resolution of which I had given written notice at the commencement of the meeting is correctly given; but in the second column two changes are made in the wording, the first referring the matter to the Journal and Finance Committee, which was never proposed, and the second omitting the important words, "not necessarily from the members of Council," which also was never proposed to the meeting, and to neither of which would either I or my seconder, Mr. Wolstenholme, have agreed.

We consider the change which we have proposed an important reform, well worthy the consideration of the new Organisation Committee, and it was to that Committee, and not to the Journal and Finance Committee, that we agreed to refer our suggestion.—I am, etc.,

Dulwich, S.E., Aug. 12th. H. Nelson Hardy.

*** We have referred Mr. Nelson Hardy's letter to the President of Council, who was in the chair when the resolution was proposed, and have received from him the following statement:—

"The shorthand notes bear out the correctness of the report of the meeting as it appears in the British Medical Journal, but Mr. Nelson Hardy's contention as to the form in which he believes his resolution was passed will not be overlooked when the matter comes to be considered in Committee.

J. Roberts Thomson,

President of Council and Chairman of the Meeting."

## THE MIDWIVES QUESTION.

Sir,—There is so much in Dr. Alex. McCook Weir's letter in the British Medical Journal of August 17th with which I agree that I scarcely like to take up your space with a few words of comment. I assure him that I am conscious of no change of attitude in saying that I wish to abolish the "existing untrained midwife." That has been my chief object throughout this whole discussion, and to subordinate the new midwife to the medical profession. Dr. Weir thinks it strange that I should favour the creation of a Midwives Board. He prefers to leave the administration of any Bill to the local authority, with an appeal to the General Medical Council. We both agree that the General Medical Council is to be the ultimate authority for fixing the regulations under which a midwife is to act. I should fear that the local authority would delegate its function to two or three cranky members—male or female—who would be less thorough in their views than a Board composed, at least predominantly, of registered medical practitioners. This is a detail, and so long as the General Medical Council is left as the final authority, I am not wedded to any particular machinery.

"The inconsistency of registering the Gamp" at the outset is inherent in the case. Parliament would never sanction the suppression at one stroke of respectable women who have acted as midwives for years. The General Medical Council and the Committee of the British Medical Association have both stipulated that evidence of good character shall be forthcoming as a condition of registration. On one main point I feel strongly with Dr. Weir. The new midwife must be a nurse to her patient, as the old one has been. Probably much of the mischief of Gamps comes in with the nursing function. I should be amongst the foremost, as I have been, to urge that legislation must recognise this duty of the midwife or midwifery work. One thing is satisfactory—that on all sides there is a more clear perception of the urgency of this question, and a tendency to agree on essential points. It would

be well for the profession and for the cause of direct representation if this tendency could be carried to complete agreement, and we could appear as a united and harmonious profession.—I am, etc.,

Pitlochry, N.B., Aug. 20th. J. G. GLOVER.

SIR,—Dr. Lovell Drage, a prominent champion of the opposition to the registration of midwives, proposes to settle the question by adding clauses to the Public Health Act which, if given the effect of law, would constitute a gross and intolerable violation of the liberty of the subject. His proposals in your issue of August 10th amount to this:—

1. That any woman who shall venture to render to another woman certain services which have the sanction of immemorial antiquity, except in the presence of a registered surgeon, shall forthwith report herself to a certain official.

2. That if any woman give birth to a child, aided only by the services of a sister woman and without the presence of a surgeon, her lying-in room shall be invaded and her person submitted to inspection by an official, who is probably a stranger and possibly personally offensive.

3. That it shall rest with the discretion of this official to summon a second official, perhaps also a stranger or personally offensive, to invade the lying-in room and inspect the person of the delivered woman who may be a sensitive and shrinking primipara.

4. That it shall be at the discretion of this official to suspend the woman who had rendered such services from the exercise of the calling by which she gains her livelihood, or to have her fined if she refuse to submit.

Even in the twentieth century an Englishman's house is still his castle, and British women are not such slaves but that they have still the right to choose whether a man or a woman or both shall be summoned to help them in giving birth to children. How if the delivered woman refuse to admit the health officer to her chamber, or if the husband, on her behalf, show this functionary, politely or otherwise, the door?

As I have ventured to say before,[1] parturition is a natural process, and in normal cases, which form the great majority, the presence of a surgeon should be superfluous. In scores of cases which I have attended I have been able to be of material service to my patients by performing offices, changing sheets, etc., which Sairey Gamp in attendance was too ignorant, dirty, or indifferent to perform; but such offices belong rightly to the sphere of nursing, and trained women, not surgeons, should be taught to render them to sister women.

We surgeons are registered, not that we may acquire the right to impose our services on the public, but that the public, when requiring expert assistance, may know who is and who is not a properly qualified person to render such. Similarly the registration of midwives is demanded that the public may know whether any person calling herself a midwife is properly competent to that office. Among other things the training of a midwife should enable her to ascertain the moment when a case becomes abnormal, and to summon a surgeon as soon as surgical assistance is required.

It may be that well-to-do women will generally prefer to have a surgeon present at their lying-in in case of emergencies, or to administer chloroform, etc.; but to demand that the natural process of giving birth to a child, which is at least as old as the days of Eve, shall never take place without the intervention of a surgeon, is utterly preposterous.

Finally, may I hint to writers on both sides of this question that to attribute motives of sordid self-interest to those who differ from us on political subjects does not accord with the best traditions of controversy?—I am, etc.,

Chiswick, Nov. 17th. REGINALD FARRAR, M.D.Oxon.

SIR,—I happened to-day to see the sixteenth Annual Report of the Guy's Hospital Institution for Trained Nurses, being for the year 1900. Glancing casually over it I read the following passages:

A midwife resident in the Institution trains six pupils quarterly for the examination of the London Obstetrical Society. The pupils also live at the institution and get their practical training in the district served by Guy's Hospital Maternity Charity. A portion of this district is allotted to the nurses exclusively, etc.

[1] BRITISH MEDICAL JOURNAL, November 28th, 1896.

In further illustration are appended a few typical extracts from the nurses' case books:

CASE I.—Patient suffers with chronic bronchitis and had pneumonia after birth of child, etc. Finally developed puerperal mania.

CASE II.—Patient phthisical, and very ill at birth, etc.

There are several other cases, but these will suffice. It would be interesting to know who diagnosed these cases—the midwife or the nurses? Here then is an institution with a medical school attached actually training pupils for the L.O.S. diploma, certificate or whatever else that august body granting it call it; the curriculum being apparently three months! Are the students of Guy's aware of this? I fancy not. Let me remind them that these pupil nurses after one quarter's training by a midwife, and having passed the L.O.S. examination conducted by so-called consultants in this branch, will be sooner or later opposing them by practising midwifery on their own account. Red lamp, brass plate, etc., and to the ignorant public as much qualified as Dr. Syrupus Simplex in the next street. To medical students happily ignorant of the competition in practice, and to parents selecting a hospital for the education of their sons, it is indeed reading that requires careful consideration. I would urge all of them to procure a copy and read pages 6, 7, and 8, and then ask themselves the question—Do all hospitals train midwives?—I am, etc.,

East Dulwich Road, S.E., Aug. 17th. MORGAN RICHARDS.

## THE MEDICAL GUILD, MANCHESTER, AND THE PROTECTION OF PARTURIENT WOMEN.

SIR,—Dr. Alexander McCook Weir, in his letter to-day on the midwives question, flatters himself with the unwarrantable assumption that in formulating a scheme for the protection of parturient women and their offspring, the Medical Guild has copied his Bill. As a matter of fact, we were unaware of the existence of such a Bill at the time of considering the subject. The scheme was largely based upon a system of providing parturient women with medical attendance, which has been in operation in the Saddleworth district for a number of years.—I am, etc.,

DAVID OWEN,
Manchester, Aug. 17th. Honorary Secretary, Medical Guild.

## THE GENERAL MEDICAL COUNCIL ELECTION.

SIR,—If Dr. McCook Weir is so anxious to obtain information as to my fitness to represent the profession on the General Medical Council as the concluding paragraph of his letter in the BRITISH MEDICAL JOURNAL of August 17th, p. 436, would lead one to believe, I recommend him to refer to the Minutes of the General Medical Council, vols. xxxiv to xxxvii, wherein he will find recorded my work on the Council during the years 1896-1900. I certainly should not advise anyone seeking information on the point to apply to Dr. Glover, and I should have thought that Dr. McCook Weir's personal experience of General Medical Council election methods would have taught him to receive with caution the platform utterances of a candidate when discussing the claims of a rival to the suffrages of the electors. I have no fear that any considerable number of my fellow-practitioners will swallow, open-mouthed, Dr. Glover's views as to our respective claims to their support. I hope, at an early date, to have an opportunity on a public platform of replying to Dr. Glover's uncalled-for attack upon me. Meanwhile I trust that, should any of your readers be disposed to attach any importance to Dr. Glover's personalities, they will suspend their judgment.—I am, etc.,

Gibson Square, N., Aug. 20th. GEORGE BROWN.

## TOTAL EXTIRPATION OF THE PROSTATE FOR RADICAL CURE OF ENLARGEMENT OF THAT ORGAN.

SIR,—Mr. Freyer, by raising side issues, attempts to divert attention from the chief points in the controversy. I hold that Mr. Freyer has not substantiated his claim to having performed an original operation, and that had he been acquainted with the literature of the subject and with the work of others he would never have made such a claim. Moreover, had Mr. Freyer studied the anatomy of the prostate, he would have seen the utter impracticability of extirpation.

The letters of Mr. Buckston Browne, Mr. A. R. Anderson

and Mr. Cuthbert S. Wallace in the British Medical Journal of August 17th, as well as the following letter taken from among a number that I have received, clearly demonstrate that my views are shared by others:

August 6th, 1901, Canada.

Dear Sir,—I noticed with great interest and pleasure your letter to the British Medical Journal (July 27th) in reference to the lecture by Mr. Freyer which appeared in the previous issue. I am sending you by this same mail under separate cover a reprint of a paper I read on this subject three years ago. Four years before that (seven years ago) I had given an address on the same subject. The method of operation I adopted was enucleation, though I did not give it that name. It seems strange that any surgeon who reads the English language should think in 1901 that an operation was new and original with himself that had been done by scores of surgeons in all parts of the world for ten or twelve years. With great respect,—I am, very truly yours, ——.

It will be interesting to have Mr. Freyer's answer to Dr. MacLaren's letter, and to see Mr. Freyer's explanation of his varying descriptions of the same case at different times.

I again repeat the fact that my cases are reported in detail both in my original paper and in my first letter, therefore anyone desirous of forming his own opinion of Case III can read it for himself.

The fact of my having headed my original paper as "Suprapubic Prostatectomy or McGill's Operation" shows that one must not take seriously Mr. Freyer's statement "Mr. Mayo Robson endeavours to father on himself my new operation."—I am, etc.,

Leeds, Aug. 20th. A. W. Mayo Robson.

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Sir,—I was much interested in Mr. Freyer's article on total extirpation of the prostate, which appeared in the British Medical Journal of July 20th. On first glancing it over, I thought that Mr. Freyer was announcing himself as one of my disciples, so closely did he follow in my footsteps; but on closer reading I failed to find any acknowledgement of my tutelage.

In my book published by the Macmillan Co. in 1900, entitled "Diseases of the Genito-Urinary System," my operative work in this connection is carefully detailed, and, as my publishers have given this work rather free distribution in England, your genito-urinary surgeons have had an opportunity to familiarise themselves with it.

I enclose you a reprint of my article, "Six Successful and Successive Cases of Prostatectomy," which appeared in the *Journal of Cutaneous and Genito-Urinary Diseases*, New York, June, 1895. In that article I think you will find in my method of prostatic enucleation practically everything to which Mr. Freyer now lays claim.—I am, etc.,

Eugene Fuller, M.D.,

August 12th. 252, Lexington Avenue, New York City.

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Sir,—My attention has been directed to a correspondence in your columns on the above subject. In his letter of August 6th Mr. Mayo Robson says: "Mr. Freyer, therefore, places himself in the position either of being ignorant of what has been done previously, or of ignoring the work of others; it is for him to say which." To me it appears that Mr. Freyer's position in the matter must depend entirely on the personal interpretation he puts upon the nature and extent of the work done by himself and that done by others.

Ever since Mr. Freyer in March, 1900, paid me the compliment of publishing what he evidently believes[1] to be an improvement on my method of prostatectomy, I have felt that Mr. Freyer's view and mine of the value and nature of earlier work by others must be widely different. My conviction that this must be so has been strengthened by Mr. Freyer's recent publication.[2] Which view is to prove correct may be safely left to the judgment of others. Here my object is to indicate the points on which I find our views differ. They are as follows:

1. *Total Extirpation of the Prostate.*—Mr. Freyer[3] appears to regard this as something new. I am under the impression that it has been a recognised operation in surgery for a considerable time. I have seen it performed by several different methods by several different surgeons. When I published the first account[4] of the method of prostatectomy, which has come to bear my name, I was well aware of the work of the Leeds School, and, when reading a paper on the subject of prostatectomy before the British Medical Association in Edinburgh,[5] I quoted from Mr. Robson's publications, and was then cognisant of the cases of enucleation performed by him.

Further, I have in my possession several complete prostates which I have removed by operation. I append a photograph of one of these, removed in Glasgow in 1899.



Body, lateral lobes, and middle lobe of prostate removed by submucous enucleation.

2. *The Operation which Mr. Freyer described to the Medical Society of London in March, 1900.*—This operation Mr. Freyer clearly regards and publishes as an improvement on mine, and therefore as something new. I, on the other hand, am under the impression that the operation described by Mr. Freyer is one of the well-known methods of performing perineal prostatectomy, consisting, as Mr. Freyer's operation did, in the hooking down of the prostate by a finger passed into the neck of the bladder while prostatic tissue was enucleated by instruments, etc., manipulated by the other hand. I formerly used to practise it as such before I adopted the method now known by my name, and was accustomed to make use of a small curved spatula or retractor to pull down the prostate, as occupying less room than the finger. The last case in which I practised it was that of a patient of Dr. D. Couper's of Denistoun, on whom I operated in Glasgow, in January, 1894. The method of operating ranks, correctly or not, in my mind as having been, when I found it, a well-recognised procedure, with the establishing of which in practice I had nothing to do. It served me as a step in the evolution of the method I subsequently published, and was discarded by me in favour of that method for reasons which do not appear to me to require detailing in the present connection. The operation which bears my name is, briefly, an enucleation, partial or total, of the prostate through an aperture made in the perineal aspect of its capsule, the entire operation being controlled by two fingers introduced into the bladder through a suprapubic section, and performed outside of the mucous floor of the bladder, which remains intact. I should, however, wish to avoid here entering into the merits of different operations and confine attention to the "historic" aspects of Mr. Freyer's views.—I am, etc.,

Glasgow, Aug. 14th. James H. Nicoll.

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Sir,—Mr. Freyer writes in his last published letter to the British Medical Journal on the subject of the Total Extirpation of the Prostate for the Radical Cure of Enlargement of that Organ, in connection with the pathology of the enlargement, as follows:

They were purely glandular tumours, the muscular tissue being almost

[1] *Stricture of the Urethra and Hypertrophy of the Prostate*, Freyer, p. 105, par. 6: "Nicoll's objects are attained by a much less serious proceeding," etc.

[2] British Medical Journal, July 20th, 1901.

[3] British Medical Journal, July 20th, 1901.

[4] *Lancet*, April 14th, 1894.

[5] British Medical Journal, October 20th, 1898.

entirely replaced by fibrous tissue. And this description is in accordance with the latest views enunciated in the two great works on tumours by Bland-Sutton and Senn. The pathology of the enlarged prostate, as given by Mr. Mayo Robson, is exactly that of typical uterine "fibroids," so that one is irresistibly driven to the conclusion that his gynæcological and genito-urinary pathologies have got mixed up.

If reference to Senn's great work on the Pathology and Surgical Treatment of Tumours, second edition (published in 1900), page 172, be made, the following passage will be found:

It took a long time for pathologists to make a distinction between hyperplasia of the thyroid gland and adenomata. And the same confusion has prevailed in regard to the two entirely different kinds of enlargement of the prostate gland. The extirpation of the hyperplasic prostate *in toto* has not yielded encouraging results, and will never become a feasible surgical procedure; on the contrary, enucleation of adenomata of this organ from the perineum through Zuckerkandl's incision, or through the bladder above the pubes has a promising future.

Professor Senn's work has been appealed to by Mr. Freyer; nevertheless, in my humble opinion, Senn's views much more nearly coincides with Mr. Mayo Robson's than with Mr. Freyer's. Mr. Freyer believes Mr. Mayo Robson's "gynæcological and genito-urinary pathologies have got mixed up." It will puzzle many to discover how they could be separated.—I am, etc.,

Dublin. R. H. KENNAN.

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SIR,—It seems to me that in the correspondence which has taken place on Mr. Freyer's paper the discussion has somewhat strayed from its original standpoint. The real question which should and no doubt does interest most surgeons is whether the operation described by Mr. Freyer in the BRITISH MEDICAL JOURNAL of July 20th is in reality a new procedure, or one which differs in no material point from those which have been performed by various surgeons during the last few years. It is perfectly clear that some at least of those who have joined in this discussion are fully under the impression after having carefully read and probably re-read Mr. Freyer's paper that his operation is not a new one, and with this view I am absolutely in accord. I have on several occasions removed the whole prostate by shelling it out with the finger, but I do not believe it is possible to perform this enucleation in all cases. The fact is that in many cases of enlarged prostate we are face to face not merely with the enlargement, but have to deal with an amount of inflammation and congestion which has so matted together the surrounding structures as to render the process of complete shelling out an impossibility. It is this fact which has led to the statement that the perineal route in certain instances offers greater facilities, and it was certainly this factor which led me to advocate for certain cases the removal of the prostate in two operations.[1]

The fact is that the four cases which form the basis of Mr. Freyer's paper were ones to which his operation was eminently applicable, principally because they were composed mainly of adenomatous growth and were therefore easy to enucleate. Anyone who examines microscopically many cases of enlarged prostate will realise that the term "enlarged prostate" is not a true pathological entity, and whilst unstriped muscular fibre and fibrous tissue predominate in one case adenoma forms the bulk of others. Mr. Freyer appears to be ignorant of this fact or he would not accuse Mr. Mayo Robson of being antiquated in his pathology.

It is certainly not a little remarkable to find that Mr. Freyer is unaware of a single case in which patients have been able to micturate naturally after prostatectomy. When McGill showed his first series of successful cases at the Leeds meeting of the British Medical Association one of the striking features which they presented was that they could micturate without a catheter, and there must be many besides myself who saw them and can testify to this fact. In my paper above alluded to four cases of natural micturition are described as occurring after prostatectomy; but he would be a bold man who would be prepared to state that prostatic enucleation, however complete, would confer this benefit on all cases.

We can, however, all join in congratulating Mr. Freyer on his four successful cases, if we venture to dispute the fact that the method of procedure which he describes is novel.—I am, etc.,

Harley Street, W., Aug. 20th. W. BRUCE CLARKE.

[1] BRITISH MEDICAL JOURNAL, October 20th, 1900.

## PROFESSOR KOCH'S ADDRESS.

SIR,—Professor Robert Koch, in his recent address before the Congress on Tuberculosis in London, stated rather positively that the bovine tubercle bacilli were not dangerous to human beings. It seems to me a very important test of this point has been omitted, namely, the treatment of persons afflicted with tuberculosis by injections of a tuberculin prepared from the bovine tubercle bacilli and the effects, if any, contrasted with similar treatment of the same persons by injections of tuberculin prepared from the human tubercle bacilli.

As bovine tubercle bacilli are known to be several times more pathogenic for the smaller animals—guinea pigs, rabbits, etc.—a tuberculin from such a source might be several times more curative or no effect produced at all.

Steps have been taken by me to obtain tuberculin prepared from bovine tubercle bacilli, and I desire you to publish this as a preliminary announcement to some subsequent work on this subject.—I am, etc.,

CLEMENT A. PENROSE,
Baltimore, Aug. 6th. A.B., M.D., Johns Hopkins University.

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## A PLEA FOR UNBOILED MILK.

SIR,—"Ought we to have the milk boiled?" is one of the most common questions fired off at the general practitioner, and to this query my invariable answer is "No." Herein doubtless I may be considered unorthodox, though I am fully persuaded that my answer is the right one, for there is little doubt, putting aside the question of bacteria altogether, that unboiled milk is a better article of diet than the same fluid boiled. I do not suppose for a minute, however, that such a thing as germ-free milk exists, but I am convinced that in our desire to be logically scientific in affairs alimentary and otherwise we are liable to become quite onesided in our views. Thus while fully recognising the presence of germs and their latent possibilities for mischief, we seem altogether to forget the vital potentialities of the phagocytes in our own systems who are constantly waging successful warfare in our behalf against the invading hordes of the enemy. And if the milk be boiled, to what extent does this act assist Nature, who is quite capable of doing her own work, in warding off disease? Surely one boiling, unless it be greatly prolonged (and this is impossible in an ordinary saucepan), will not destroy the various spores that are probably present. So, to be logical in the matter, the milk ought to be boiled at least twice, and a considerable interval of time allowed between the two operations. And if the milk be boiled, why not also all other ingesta which are equally capable of conveying germs to our inner selves? And since these inner selves are not constructed to deal with pabulum at a high temperature, what are we to do with our food and drink between the boiling and the swallowing in order to be sure that it be not reinfected? Now that Professor Koch has given us good reason to believe that there is no fear of infection from the ingestion of bovine tubercle bacilli, I trust that the silly fad for boiling milk, especially for the use of infants, will go out of fashion and be relegated to the oblivion it deserves.

With regard to the onesided view of a question that even the best of us is liable to take, I would quote some remarks of Lord Lister, if I may presume to criticise so eminent a scientist. At the recent Tuberculosis Congress, in contesting Koch's views *re* bovine tubercle, he said: "Even if it were admitted that primary tuberculous intestinal lesions were as rare in children as Koch's statistics indicated, it was certainly true that tabes mesenterica existed in a considerable percentage of children who died of tuberculous disease without tubercle being found in any other part of the body. When the mesenteric glands were thus affected without any discoverable intestinal lesion, the natural, and indeed inevitable interpretation seemed to him to be that the tubercle bacilli had passed from the aliment through the intestinal mucous membrane without causing obvious lesion in it, and had been arrested in the glands of the mesentery.....If this were so, Koch's argument fell to the ground." In arriving at this deduction, Lord Lister evidently gave his attention too completely to the staple food of children, that is, milk more or less infested with bovine tubercle bacilli, and he seems for the moment to have been quite oblivious to the fact that infants and young children spend a large proportion of their

time sucking their thumbs, "soothers," or other objects, each of which, when moistened by the child's saliva, must form a most fruitful focus from which human tubercle bacilli, gathered from the surrounding germ-laden atmosphere, may be absorbed. Taking this into consideration, the fact, *per se*, that a large number of children, given suitable environment, become tuberculous, and that of these a goodly proportion develop tabes mesenterica either with or without primary intestinal lesions, does not in any way affect Koch's argument for or against, although at the time of the discussion Lord Lister suggested that it actually destroyed it.—I am, etc.,

Brondesbury, Aug. 12th. E. C. Kingsford.

## THE DIETARY OF TYPHOID FEVER.

Sir,—I was much interested in reading Dr. Byrne's letter on The Dietary of Typhoid Fever in the British Medical Journal of August 17th, but do not quite follow him nor quite understand his meaning. If milk agrees with a patient, why not let him or her live on it until the temperature drops? It is naturally a perfect mixed food, and will keep the strength up better than anything else.

If milk disagrees, Benger's food, or something like it, can be substituted if the patient has a tendency to loose stools. The milk will often be taken also in this peptonised food when not otherwise tolerated. If constipation be marked, plenty of beef-tea, chicken soup, and enemata seems the best treatment. In typhoid fever I always diet the person according to foods which we know can do no harm, than run the risk of allowing them to swallow anything indigestible or insufficiently cooked. At best there is much carelessness, and they all tend to take plenty of liberty with what is bad for them.

I write this letter as the opinion of a practical general practitioner and as the result of a large experience amongst typhoid fever cases. Where a medical man has a large number of cases down at the same time, it is far safer to let the general public be impressed with the importance of a strict dietary such as milk, milk puddings, arrowroot, beef-tea, etc., (just as each individual case requires), than to let them put onions or carrots in their soups.

It is also far safer to tie them down strictly in this way to the state of the bowels and allow custard puddings, etc., with caution to each individual case. In private practice one has to lay down the law very strictly as to diet in each case, and I have seen more deaths from injudicious friends giving bread and other improper food to typhoid cases, than I have ever done from cases of typhoid fever with nearly normal temperatures dying in the way Dr. Byrne suggests.

Twice in my lifetime I have had the management of epidemics of typhoid fever, the first one of 40 cases, the last one in an unhealthy village in the Lake District of 80 cases, and not one death did I ever see occur from scurvy, but one or two of the few deaths were perforation of intestine from injudicious feeding. Before closing I should like to put a word of praise in for drugs. It is common nowadays to decry them, but in most cases a most excellent prescription will be found in Dr. Burney Yeo's quinine and chlorine water mixture.—I am, etc.,

August 18th. T. P. T.

## THE CERTIFICATION OF THE INSANE.

Sir,—The certification of persons of unsound mind is one of the most important duties of the medical practitioner, and should not be lightly undertaken. It involves grave responsibilities, and ought to be adequately paid for. Recently, Boards of Guardians have made a new and dangerous departure in connection with certification. In the duties assigned to their resident medical officers in their Poor-law infirmaries they have added a clause to this effect:

> All lunatics in this district shall be certified without fee by the resident medical officer.

There are grave objections to this clause.

1. Lunatics ought not to be certified by contract in this way.

2. The resident may be an able man, but he may not have had experience with the insane. It may be said he will acquire it in time, but usually the resident medical officer does not remain sufficiently long in these ill-paid appointments, and there is a constant change of certifiers.

3. The guardians are interfering with the duties of the magistrate.

It is the duty of the magistrate to call "to his assistance a surgeon," and he is thus deprived of his right to select his examiner. I am astonished that any bench of magistrates will accept the medical officer nominated by the guardians.

It is said there is one union, where all persons of unsound mind are first placed in the workhouse, so that they may come under the resident and be certified by him. This is strictly illegal, and I feel sure the Commissioners in Lunacy would condemn this practice. I know of another case where the resident medical officer offered to do all the certification free of charge; the visiting medical officer previously had done the certification. The guardians, economically inclined, accepted the offer. I enclose an extract from the printed rules of another workhouse, wherein the resident medical officer was deputed to do (without fees) all the certifying. The visiting medical officer previously did the work, and protested (with success) against this innovation. The rule ran as follows:

> To sign all certificates for the removal of lunatics to the asylum or for their detention in the workhouse, and to attend before the magistrates for the purpose of giving the necessary information as to the lunatic's state of mind.

The subject is one well worth the attention of the profession. I think something should be done to stop this encroachment of the guardians. I hope in your columns for its ventilation and for some united action.—I am, etc.,

August 3rd. M.D.

## MENTAL NURSING.

Sir,—Amongst the many anxieties pertaining to the practise of medicine not the least is that of the treatment of mental disease in the house of the patient, and the importance of obtaining competent trained nursing is apparent. In medical or surgical practice efficient nurses are easily obtainable, and little fear need be entertained but that the necessary clinical records and skilful care of the patient will be maintained during the practitioner's absence. It would appear, however, to be at times otherwise in mental nursing owing to the extreme laxity of certain institutes providing so-called "trained attendants," and I am here referring more especially to male nurses. Within the past few months some of my junior attendants, being attracted by enticing advertisements for private male nurses, have applied and been accepted without any inquiry, by the institutes, of me as to their ability for such an onerous post, the only qualifications required apparently being good physical health and a few months residence in an asylum. These young men, thus inadequately equipped, are now entrusted with the care, and possibly the safety of the patient and those about him.

Doubtless most nursing institutes examine with due care the credentials of applicants; but my experience, which probably other medical superintendents could endorse, is that it is quite easy for a person with experience of a rudimentary character to undertake duties requiring not only long and special training in a special subject, but also a sound knowledge of general sick nursing.

To place mental nursing on a more definite and proper footing, the Medico-Psychological Association of Great Britain and Ireland decided several years ago to grant a certificate of proficiency to successful candidates, both male and female, who, after a specified probation and course of instruction, presented themselves for examination; and—in order that the lack of this certificate might not handicap those engaged in private nursing prior to its inception—the Association provided that they should be admitted to the examination on complying with reasonable conditions.

Without here criticising the curriculum and standard of this examination, it may be stated to be the present hallmark of efficiency, and should be regarded by medical men as a *sine quâ non* for the private mental nurse.—I am, etc.,

Camberwell House, S.E., Aug. 19th. Francis H. Edwards.

## THE REPORT OF THE WEST AFRICAN COMMITTEE.

Sir,—On reading in the British Medical Journal of July 13th "The Preliminary Report of the West African Medical Service Committee," I am somewhat struck with one or two of the suggestions to which I should like to call

attention. To begin with: Why has East Africa been left out in the cold? I feel sure all medical officers on this side of Africa would like some definite grading and uniform nomenclature and better pay—the pay, I believe, is very much less than what it ought to be, and the private practice *nil*. In West Africa—the Niger—things are very different, or were, as medical officers were well paid (including all emoluments, and practice). In the East African Protectorates medical officers actually draw less pay than junior subalterns.

The suggestion that medical officers serving on the West Coast should be permitted to retire after 20 years' service on a pension of £1 a day sounds very reasonable; but who can, or cares to stop 20 years in West Africa? Ten years at the outside is what the length of service required should be in such a notoriously bad climate, at that rate of pension.

As regards leave rules, a medical officer should occasionally be allowed "extended leave for purposes of study, on full pay." How can a man on three or four months' leave recruit his health and attend hospital, etc.? Medical officers should also have definite relative rank, and not, as some senior medical officers have to do, give way to junior members of Consular or Protectorate services, simply because the chief has no sympathy with medical officers. I think all doubtful points should be taken into consideration and brought before the committee.

As regards quarters, provision should be made for married medical officers. Medical officers should be supplied with ordinary and hospital tents when required. The climate of Uganda, and East Africa and British Central Africa generally is unhealthy, and what is applicable to West Africa as regards rules and regulations should apply on this side also—with higher rates of pay, since there is no private practice (practically), and possibly less leave.—I am, etc.,

July 31st. MEDICAL OFFICER.

## THE COLONIAL MEDICAL SERVICE.

SIR,—There has been lately a considerable amount of correspondence about the position of the Army Medical and the Indian Medical Services. Nothing, however, has appeared about the Colonial Medical Services. The pay of most colonial surgeons is small; private practice, when allowed, may amount to nothing, and the greater part of their life is spent in the moist heat of the tropics. Promotion being slow and uncertain, I strongly advise anyone who thinks of applying for a post as surgeon in any colony to go to the Colonial Office list, where he can find the pay of the junior as well as of the senior men, and to write to some colonial surgeon before he starts in order to find out what may be expected in the way of work, private practice, necessary and usual expenses, and probable balance at end of a year.—I am, etc.,

August 12th. TROPICO.

## JOHN HUGHES BENNETT.

SIR,—The account in the BRITISH MEDICAL JOURNAL of the opening of the John Hughes Bennett Laboratory in the University of Edinburgh has recalled to my memory some little incidents in his method of teaching.

I was one of his clinical clerks during many months in the years 1850-1. Bennett was recently from Paris, and fresh and full of the physical methods of diagnosis in lung and heart diseases. He inspired great enthusiasm amongst the students. Above all else, he insisted on exactitude and precision in diagnosis; he insisted that all our faculties should be brought to bear on a case; he permitted no vague or general terms. In the ward the students were ordered to stand in a great semicircle around the bed of a new case, then Bennett would call on one or another to come forward to the bedside and diagnose the case; the student thus called was drilled into precision and right method of action. A favourite method of Bennett was, first, this question, "Where have you pain?" laying emphasis on the "where"; then at once followed the order, "put your hand" where the pain is. Then followed the exact use of the other senses—sight, hearing, touch—all used in the fullest degree. Though not covering every type of case, the method was an admirable one for the greater proportion of cases; but it was mainly admirable for this method and habit of exactness which was stamped into the student. Bennett threw a brightness and vigour into the clinical and all his other work which deeply interested and elevated the students.

I remember one handsome dashing type of student being singled out from the circle to diagnose a case. He went to work, heard a little wheezing in the chest, stood up, and gave his diagnosis as bronchitis. Bennett cast the bedcovers down and revealed a case of elephantiasis! Then he gave the class a little lecture on the importance of precision and using all our faculties. I had once with great pains drawn up a statement of the physical signs of a lung apex in a child, aged 10 years. I had diagnosed phthisis; at the *post-mortem* examination it was found to be chronic bronchitis only. Bennett passed the lung apex round the class, pointed out my error, and instructed the class on the difficulties of diagnosis, on the caution needed, and on the prevalence of such cases amongst weakly children.

Bennett seemed with his students to be ever striving to rivet on their minds the particular instances and cases which they saw, and from which he expanded their views to wide pathological principles.

I am sure that those who fell under Professor Bennett's teaching will accord with my remembrance of it—that it was earnest, enthusiastic, laborious, faithful, wise, and solid. In every part of the world medical men talk of Hughes Bennett with a rare esteem and gratitude.—I am, etc.,

Plymouth, Aug. 15th. WILLIAM H. PEARSE.

## PARAFFIN IN DIPHTHERIA.

SIR,—In the BRITISH MEDICAL JOURNAL for June 29th, which I have only just seen, your Cardiff correspondent seems surprised at the treatment in Wales of diphtheria by paraffin. I saw the suggestion in the JOURNAL, I think about twelve years ago, and, acting upon it, I have applied it locally in all my cases except those of young children, who cannot be induced to submit to it. No case so treated has died, though several children treated with antidiphtherial serum have. I have not given it internally. I should be glad to know if paraffinum liquidum *B.P.* is the same thing.—I am, etc.,

Dilwyn, Herefordshire, July 31st. T. LAMBERT HALL.

## SEASIDE SANATORIA FOR CHILDREN.

SIR,—In reference to a letter in the BRITISH MEDICAL JOURNAL of August 17th concerning Seaside Homes for Children, I beg to state that such an institution was started in 1896 on a modest scale by a few ladies at Exmouth. Children have been received chiefly from one of the poorest districts of Exeter, a few have come from the Midland Counties, and some from London. One child from London with spinal caries has been in the home for over twelve months, and has improved wonderfully; but this is only one of many cases that have been restored to health. There is no limit to the length of sojourn in the home, and the children are received from all parts of England, for which the modest sum of 5s. 6d. per child per week is charged. The home is in charge of a nurse who was trained at a children's hospital. It is to be hoped that in time the home will be permanently established in premises of its own. At present the rent (which is nominal) and the nurse's salary are provided by voluntary contributions.—I am, etc.,

Exmouth, Aug. 19th. R. STANLEY THOMAS.

## THE BACTERIOSCOPIC ANALYSIS OF WATER.

SIR,—In Dr. Houston's reply, which terminated the discussion on enteric fever held in the Section of State Medicine in Cheltenham, after making the remark that he was out of sympathy with Mr. Wanklyn's estimate of the bacterioscopic analysis of water, he said:

> It was beyond controversy that the bacteriologist could appreciate an amount of excremental pollution so minute as to be altogether outside the reach of chemical analysis.

There is no experimental warrant for such a statement, and it is not for the public good that an error of that description should pass without protest.—I am, etc.,

J. ALFRED WANKLYN.

The Laboratory, New Malden, Surrey, Aug. 17th.

APPEAL FOR THE WESTMINSTER HOSPITAL. The appeal for funds made by the House Committee of the Westminster Hospital has already resulted in promises of donations for £10,700 of the £20,000 asked for as well as promises of new annual subscriptions amounting to over £200.

# OBITUARY.

Mr. John S. Slater, M.R.C.S., L.S.A., J.P., Mayor of Evesham, who died recently, was educated at St. Thomas's Hospital, where he had a very successful career as a student. Among other posts he held that of Resident Obstetric Physician to Dr. Robert Barnes. In 1872 he entered into partnership at Evesham with Mr. A. H. Martin. Throughout the whole of his medical career he was greatly esteemed and beloved in the town and neighbourhood. A few years ago he was appointed a magistrate for the borough. He had for a considerable time been a member of the Town Council, and in November, 1900, he was unanimously elected Mayor, and he filled that office most gracefully and efficiently in a year which to one engaged in active professional work was specially arduous, owing to the special duties which he was called upon to discharge. He had official duties in connection with the death of Queen Victoria, and with the proclamation of King Edward VII. In June the reception of the Worcestershire and Herefordshire Agricultural Society made further demands on his time. Mr. Slater was very skilful in the practice of his profession. He was an honourable, upright, and religious man, was most kind and attentive to the poor, and had endeared himself to all classes of the community. He was ill only three days. The cause of death was acute gastro-enteritis, leading to a failure of the heart's action. The funeral was of a public character, the corporation and magistrates attended, and the manifestations of sympathy were universal. Mr. Slater was twice married, and his second wife and five children survive him.

Dr. Horace Lawton Swete, J.P., of Fishguard, who died after a short illness on August 10th in the 40th year of his age, was the eldest son of Dr. Horace Swete, D.P.H., of Worcester, and nephew of the Rev. H. B. Swete, D.D., Professor of Divinity at Cambridge. He was born at Wrington, Somerset, and settled at Fishguard in 1889. He always took a keen interest in local affairs. He was returned to represent Fishguard on the Pembrokeshire County Council in 1895, and sat for three years. His practice was extensive, and his was a well-known figure in North Pembrokeshire. Dr. Swete was placed on the Commission of the Peace for the county in 1896. He was instrumental in starting the Fishguard Cottage Hospital in 1895, acting as Surgeon and, until a few months ago, as Honorary Secretary. Amongst other appointments which he held were Admiralty Surgeon and Agent, Goodwick; Surgeon and Trustee to the local Foresters' lodge, and Medical Referee to the Prudential and other insurance companies. Dr. Swete was twice married, and leaves a widow and two children. He was very popular in North Pembrokeshire, and his death is sincerely mourned by many patients and friends.

# MEDICO-LEGAL AND MEDICO-ETHICAL.

## ACTION FOR LIBEL AGAINST A MEDICAL OFFICER OF HEALTH.

On Thursday, July 25th, the case of Clarke *v.* Mears was heard by Mr. Justice Phillimore and a special jury at the Warwick Assizes.

The plaintiff, a farmer and dairyman, was represented by Mr. Parfitt; while Mr. Hugo Young, K.C., and Mr. McCardie appeared for the defendant, who is Medical Officer of Health for the Atherstone Rural District Council.

According to a report which appeared in the *Atherstone News* for July 26th, the defendant's attention had for some time been drawn to the fact that the infant mortality in his district was very great, and that he attributed it partly to tuberculosis. His suspicions being thus aroused, he questioned Mr. Ison, a veterinary surgeon, who told him that there was tuberculosis among the beasts at the plaintiff's farm. In these circumstances the defendant wrote the following letter: "1st of April. It has come to my knowledge that tuberculosis to a serious extent is prevalent amongst your cows. As Medical Officer of Health, and pending the meeting of the District Council on Tuesday next, I must warn you to discontinue the sale of milk until a veterinary certificate of freedom from tuberculosis has been produced." Upon receipt of this letter, the plaintiff stopped selling milk, which was worth £6 a week, and he also alleged that, when the report got about, he lost profits which he would have made by the sale of his cattle. In these circumstances he consulted his solicitor, and brought an action for libel against the defendant.

In the course of his evidence the plaintiff said that when he received the letter above referred to he wrote to the District Council asking where they had got their information, and denying that his cows were tuberculous. Some of them were weak and wasted.

The Judge: If you were satisfied that your cows were not tuberculous why did you pay any attention to the warning?—I thought it was a direct order from the Council.

A number of witnesses were called to prove that the plaintiff's cows were not in fact suffering from tuberculosis.

At the conclusion of the plaintiff's case there was a legal argument upon the question whether there was any case to go to the jury. The learned Judge said that he could not withdraw it.

In the course of his evidence, the defendant said that he had never mentioned Mr. Clarke's name to the Council. He considered that the evidence of a veterinary surgeon was sufficient for him to act on, and that he was not at liberty to go to any farm without the orders of the District Council. His only reason for doing what he had done was a desire to prevent the spread of the disease.

Ernest Ison, the veterinary surgeon upon whose report the defendant had acted, and a number of other witnesses were called on behalf of the defendant.

Ultimately the judge put the following questions to the special jury:—(1) Was tuberculosis to a serious extent prevalent amongst plaintiff's cattle? (2) Did the defendant reasonably believe it was prevalent? (3) Did the defendant write recklessly? (4) Was the letter worded as to induce the plaintiff to believe that the defendant had authority to make an order, and was making an order?

The Jury answered the second question in the affirmative, and the judge said this was sufficient for the purpose of the case. He quite agreed with the jury that the defendant thought he had reasonable material on which to form the opinion he did form. When a person in the position of Mr. W. E. Ison told the defendant as medical officer what he did the defendant was entitled to do what he did do.

Judgment was entered for the defendant with costs.

## AN ACTION FOR NEGLIGENCE.

In the case of Williams *v.* Ward, which was heard by Mr. Justice Grantham and a special jury at Swansea on August 5th, the plaintiff, an Aberdare collier, sought to obtain damages from the defendant, Dr. Ward, of Merthyr, for professional negligence.

Mr. S. T. Evans, K.C., and Mr. Arthur Lewis, instructed by the solicitor to the Miners Federation, appeared for the plaintiff; Mr. Abel Thomas, K.C., and Mr. Griffith Jones, instructed by Messrs. Hempsons, solicitors to the Medical Defence Union, represented the defendants.

According to a report which appeared in the *South Wales Daily News* for August 6th, the plaintiff, while working in the Blaenant Pit, Aberdare, had his left arm fractured between the wrist and the elbow by the fall of a heavy stone. On the same day (August 25th, 1900) the plaintiff was seen by the defendant, the doctor of the works who put the injured limb in splints and bandages. The doctor again saw his patient on the following day, but during the next three weeks the plaintiff visited the dispensary, where he was seen by the dispenser or his assistant. On September 17th the plaintiff went to the surgery with his father, who was getting anxious owing to the appearance of certain swellings on the plaintiff's arm. They saw the defendant, who said that it would be all right and promised to put the limb in plaster, which he did on September 24th. When the limb was freed upon a subsequent occasion, the swellings were still apparent. Dr. Ward having suggested that plaster of Paris should be used again, the plaintiff's father expressed himself dissatisfied, and took his son to Liverpool, where he placed him under the care of Dr. Robert Jones, who at that time considered that an operation was necessary. Having undergone the operation, the plaintiff remained at Dr. Jones's private home until February 20th, 1901. The negligence complained of was that the bones of the arm had not been placed in apposition, and could not, therefore, be properly set. A radiograph was put in to prove this. In the meantime, the Works Committee approached the defendant and suggested that he should pay some compensation to the plaintiff. The defendant made a promise of some kind at the time, but later on he wrote to the committee to say that anything he should give would be quite voluntary, as he considered that Dr. Jones's report completely exonerated him from blame. It was also stated that no medical witness could be called for the plaintiff, because defendant was a member of the Medical Defence Union, and it was impossible to get any other medical man to give evidence against him.

The plaintiff gave evidence in support of his own case. He admitted while disabled he was receiving 10s. a week under the Workmen's Compensation Act, and 12s. a week from his club.

John Williams, the plaintiff's father, said that Dr. Jones had stated that sufficient care had not been taken with the plaintiff's arm. In cross-examination, however, Mr. Abel Thomas read a letter in which Dr. Jones had stated that the treatment had been "in every sense without fault, and that the result showed perfect apposition."

Other witnesses having been called for the plaintiff,

Mr. Abel Thomas, in addressing the jury, said that the cause of the bones not setting was that the callus had turned into a fibrous substance, which necessitated the operation which Dr. Jones had performed.

Dr. Ward was then called. He explained how he had set the arm, and that he had put it in a plaster bandage because the ends of the bone had a tendency to be "whippy." The swelling was an indication that union was taking place. An attempt was made to cross-examine the defendant as to his offer of compensation, but the learned judge said that even if he had made the conditional offer it was highly creditable to him.

Dr. Jones gave evidence as to the absence of any negligence, and denied that he had ever mentioned the existence of negligence to the plaintiff or his father.

At this point the jury stopped the case and gave a verdict for the defendant.

## THE BENCH AND THE MEDICAL PROFESSION.

In the case of Thomas *v.* the City of Birmingham Tramways, which was heard before Mr. Justice Bigham and a special jury at the Birmingham Assizes on August 9th, the learned judge thought proper to make certain comments on the conduct of a medical man who was a witness in the

case. According to a report which appeared in the *Birmingham Daily Post* for August 10th, an action was brought by the plaintiff to recover damages for injuries sustained by him in a tramway accident. He was driving along Oxygen Street in a cab, and when he reached the corner where the trams cross, a steam tram came suddenly upon him without warning, colliding with the cab, which was utterly wrecked. Six of the plaintiff's ribs were broken, his shoulder blade was injured, and he also suffered a concussion of the spine. He was taken to a private hospital, where he remained from February 5th (the day of the accident) until February 26th. It was not until March 10th that he was able to return to his home at Coventry.

Dr. J. F. Craig, who was called as a witness, had attended the plaintiff from the first. He had visited the plaintiff at his own request at Coventry, making in all 30 visits, for which he had charged £139.

The following conversation took place between the judge and the doctor:

Mr. Justice Bigham: Do you think your attendance was necessary?—I do.

Mr. Justice Bigham: Why could his own medical attendant not have done it?—Because he asked for me.

The Judge: I don't care; he might have asked for the moon.

Drs. Rice, Hutchinson, and Morrison were all called on behalf of the plaintiff, and testified that he would never be able to undertake business matters again.

The jury having found for the plaintiff on the question of negligence, the learned judge addressed them further on the question of damages. He said (*inter alia*): The plaintiff has fixed his out-of-pocket expenses at £400, a sum which I think ought to be submitted to considerable abatement. For my own part I cannot understand what Dr. Craig was doing going down thirty times to Coventry. There was nothing to be done for the poor gentleman except what his medical attendant could do, and you must not ask the defendants to pay for unnecessary expenses. You must also take into account the difference of opinion between the doctors.....For my part, I believe the very best remedy for the plaintiff was to be left alone by the doctors, not with them. If they go on pestering and troubling him it will take a very long time.

In the event the jury awarded the plaintiff £750 damages.

### PRACTITIONERS AND PATIENTS.

QUEENSLAND.—The employers of X. engage a practitioner, A., to attend X. during an illness. A. attends, but during the attendance he asks B., a fellow practitioner to attend for him while away for a holiday. B. does so till A.'s return, who then completes the case. Some months later Mrs. X. asks B. to attend her mother, who lives with her, and he does so. It is asked whether B. was acting ethically in attending this patient.

*** We do not consider that there was anything unethical in B.'s conduct under the circumstances as set forth.

### PRINCIPAL AND *LOCUM TENENS*.

JUSTICE writes: A. resides at an important branch and receives good remuneration. He leaves for his holiday, his principal paying his salary and providing a *locum tenens*. As it is necessary for the *locum tenens* to reside at A.'s house, who is responsible for the ordinary necessaries and for the comfort of the latter?

*** Assuming the facts to be as stated, the principal would be responsible only for the salary of the *locum tenens*. A. would be expected to provide the usual necessaries for the *locum tenens* while resident in his house.

### FEE FOR EVIDENCE.

KAPPA asks what fee he is entitled to for giving evidence on behalf of an insurance company in a trial before the sheriff in a workman's compensation case.

*** From the statement of facts it would appear that our correspondent was subpœnaed on behalf of the insurance company. Under these circumstances he is entitled to recover from that company reasonable charges. In the absence of a special agreement he can only recover on the scale laid down by the court in question.

### THE G.M.C. AND MEDICAL AID SOCIETIES.

ICHTHYOL asks if registered practitioners are permitted by the General Medical Council to act as surgeons to medical aid societies in connection with insurance companies; and also, if they may act for provident dispensaries where canvassers and collectors are constantly employed.

*** The General Medical Council has warned all medical practitioners that it will be disposed to regard with grave disapprobation the connection of any registered practitioner with associations that advertise or systematically "tout" for patients.

### PARTNERSHIPS AND INTRODUCTIONS.

A CORRESPONDENT asks whether it is usual in London, when a medical man purchases a share in a practice, for a circular to be sent round to the patients notifying the fact that a partner has come into the practice. If so, what length of time is it justifiable to go back in the books for patients who may be circularised?

*** We believe it is not customary in the case of partnerships in London for circulars to be sent to the patients notifying the fact: it is more usual for the senior partner personally to introduce the incoming one. In some cases it may be justifiable to send round letters or circulars to *bonâ fide* patients of the firm notifying the fact of the partnership, but this must be done with discretion, and it certainly would not be justifiable to circularise every patient whose name might appear on the books of the firm.

### A QUESTION OF FEES.

FIBULA asks what he ought to charge for each visit to a patient residing half a mile from his house. It is necessary to visit the patient twice a day to pass a catheter, and he resides in his own house, the rental of which would be about £35 or £40 per annum.

*** It would be impossible to lay down a rule as to charges in such a case as this. The practitioner himself is in a much better position for judging what his patient can fairly pay.

### WIDOWS AND THE SALE OF PRACTICES.

IN DOUBT writes to ask what introduction the widow of a practitioner can legimately give to the purchaser of the goodwill of her late husband's practice.

*** All arrangements relative to the disposal of the practice must be made by the executors of the deceased. If the widow be the executrix, she may introduce the vendor of the goodwill to all patients she is acquainted with personally; she may also notify in sending out the accounts of her late husband the name of the purchaser. She may even send a circular to all *bonâ fide* patients of the practice, notifying the sale, but she is not justified in including among such all who may have had any kind of professional relation with the deceased.

### THE COLLECTION OF DEBTS.

A CORRESPONDENT inquires as to the best means of collecting outstanding professional debts, and asks if the employment of a solicitor for this purpose is not too expensive.

*** If the debts are for small amounts the employment of a solicitor would be expensive, but were they are more considerable, for example, £2 and upwards, a solicitor might be able to recover costs from the debtor, and the expense to the practitioner would be small.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## SOUTH AFRICAN DESPATCHES.

THE *London Gazette* of August 20th contains a despatch from Lord Kitchener, dated Pretoria, July 8th, detailing the operations of the troops under his command in South Africa since May 8th. Lord Kitchener enters into the particulars of the work undertaken by the various columns detached to effect the subjugation of the enemy. He concludes by bringing to notice individual officers and men for their conduct, and includes the following:

"Surgeon-Captain F. B. Reid showed absolute disregard of danger in performing his duties at Brackpan, in East Transvaal, on May 16th.....Surgeon-Captain E. J. O'Neill, New Zealand Mounted Rifles, on June 16th, under heavy fire, went three times to the wounded, and succeeded in getting in Lieutenant Ryan and two men.....Private Dawes, R.A.M.C., for good work under heavy fire at the attack on the convoy south of Bethel, May 25th."

Details are added of the troops engaged on the occasions cited.

### ROYAL NAVY MEDICAL SERVICE.

MESSRS. T. B. SHAW, M.B., P. T. NICHOLLS, A. T. GAILLTON, M.B., and G. S. DAVIDGE are appointed Surgeons in His Majesty's Fleet, dated August 10th, and to the *Duke of Wellington*, additional for Haslar Hospital, from the same date.

The following appointments have been made at the Admiralty: JOSEPH A. MOON, Staff Surgeon, and J. A. READ, M.A., M.B., Surgeon, to the *Implacable*, September 10th; HENRY E. RAPER, Surgeon, to the *Vulcan*, August 13th; ROBERT W. G. STEWART, Surgeon, to the *Hazard*, on recommissioning; PERCY F. ALDERSON, Surgeon, to the *Defiance*, August 20th; GEORGE S. SMITH, Fleet Surgeon, and ROBERT R. FASSON, Surgeon, to the *Cæsar*, undated; ALEXANDER M. FRENCH, Fleet Surgeon, and JOHN E. H. PHILLIPS, Surgeon, to the *Empress of India*, undated; FREDERICK W. STERICKER, Staff Surgeon, to the *Fox*, September 10th.

### ROYAL ARMY MEDICAL CORPS.

SURGEON-GENERAL W. TAYLOR, M.D., C.B., Principal Medical Officer in India, is appointed Honorary Physician to the King, *vice* Surgeon-Major (Honorary Deputy Inspector-General), R. DOMENICHETTI, M.D., half-pay, deceased, August 21st. Surgeon-General Taylor entered the service as Assistant Surgeon September 30th, 1864, became Surgeon March 1, 1873, Surgeon-Major, September 30th, 1876; Brigade Surgeon February 5th, 1890, Surgeon-Colonel, March 10th, 1895, and Surgeon-Major-General, March 25th, 1896. The record of his war services comprise the following:—Jowaki Expedition, 1877 (medal); Burmese Expedition, 1885-6, served on the Staff of the Commander-in-Chief in India (Despatches, *London Gazette*, September 2nd, 1887, clasp); Hazara Expedition, 1888; Burmese Expedition, 1888-9; Japan and China War, 1894-5; Attendant to Headquarters, Japanese Army (Japanese War medal); Ashanti Expedition, 1895-6, as Principal Medical Officer (Honourably mentioned, promoted Surgeon-Major-General, star; Nile Expedition, 1898, as Principal Medical Officer Battle of Khartoum (Despatches, *London Gazette*, September 30, 1898, C.B.; Second Class of the Medjidie; Egyptian medal with clasp; medal).

The undermentioned officers have been discharged to duty from hospital in South Africa: Captain H. W. VAUGHAN-WILLIAMS, Lieutenant P. G.

Stock, Civil Surgeons C. R. Hodgson, B. Runciman, J. McMurray, Surgeon-Captain W. Thomas (Prince of Wales's Light Horse).

Civil Surgeon H. L. Apthorp is on passage home from South Africa.

## THE VOLUNTEERS.

Mr. J. H. Livingstone, M.B., has been appointed Surgeon-Lieutenant in the 2nd Volunteer Battalion Durham Light Infantry.

## INDIAN MEDICAL SERVICE.

The following is a list of the candidates for His Majesty's Indian Medical Service who were successful at the Competitive Examination held in London on February 9th and following days:

| | Marks. | | Marks. |
|---|---|---|---|
| A. E. J. Lister ... ... ... | 3,246 | R. J. Bradley ... ... ... | 2,633 |
| T. F. B. Williams ... ... | 3,135 | E. A. Loch... ... ... ... | 2,593 |
| S. H. L. Abbott ... ... ... | 3,077 | R. M. Carter ... ... ... | 2,550 |
| A. W. Greig ... ... ... | 3,015 | R. L. Hagger ... ... ... | 2,545 |
| R. E. Lloyd ... ... ... | 3,013 | D. G. R. S. Baker... ... ... | 2,500 |
| J. Woods ... ... ... ... | 2,965 | T. W. Harley ... ... ... | 2,472 |
| H. B. Steen ... ... ... | 2,940 | J. W. McCoy ... ... ... | 2,306 |
| D. Munro ... ... ... ... | 2,929 | R. A. Willcocks ... ... ... | 2,264 |
| E. Bisset ... ... ... ... | 2,910 | T. G. F. Paterson... ... ... | 2,220 |
| J. E. Clements ... ... ... | 2,800 | D. G. Rai ... ... ... ... | 2,207 |
| A. W. Overbeck Wright ... | 2,665 | | |

## THE INDIAN MEDICAL SERVICE.

The *Pioneer* of July 19th, 1901, presents an able and temperate review of the Indian Medical Service, based partly on the proposal, which was tentatively made to the War Office, whether amalgamation between the military branches of that service and the Royal Army Medical Corps was practicable or desirable. While we are not aware that it was anywhere desired that such a proposal should be otherwise than merely discussed, we know it is generally condemned, and would meet with strenuous resistance, at all events, from the Indian Service. As some of our correspondents have somewhat bluntly put it, no one surely desires that an unpopular Royal Army Medical Corps should be rehabilitated at the expense of a contented and popular Indian Medical Service. We do not think anyone desires that; but the question arises, Is the Indian Service really in the happy state here implied? Many have doubts, and the article on which we are commenting rather confirms them. It conclusively proves that there are two sides to the Indian Medical question, the "unduly optimistic" view of its head and the seniors in general, and the "dissatisfaction," to put it mildly, of some seniors or most juniors. The argument, we think, broadly proves that the service, full of many and glorious traditions, is not, and never again can be, what it once was. Its attractions once embraced with splendid possibilities the certainty of a modest competency: now, even both are problematical.

Glorious possibilities for the few do and will always exist: probability of lucrative employment and a competency for the many recedes most and more into the hopeless distance. The unwise economy of the Government of India with the rise of an increasingly well-equipped native Indian body of medical men, who naturally cut deep into the once lucrative private practice of the civil branch of the medical service, seriously decreases the possible emoluments of that service. It is roundly declared that, unless Government salaries are increased by at least 25 per cent., the Indian Medical Service must deteriorate.

The article commented on states: "The number of candidates" (for the Indian Service) "has fallen off very seriously, and, although the amount of discontent has been exaggerated and its character misrepresented, dissatisfaction undoubtedly exists." The discontent has not merely been passing, through the exigencies caused by war, plague, and famine, but, as in the Army Medical Service, lies deeper—in general undermanning, causing constant work under high pressure, with chronic curtailment of leave. The medical service can and will and does always rise to genuine emergencies, but naturally objects to work in an atmosphere of constant emergency.

Such, we take it, are among the causes of legitimate complaint in the Indian Service, without subscribing either to undue optimism or pessimism, and we earnestly desire they should be removed or provided against. Left unheeded, they will bring about the same results as we deplore in the Army Medical Service.

## THE INDIAN GOVERNMENT AND THE R.A.M.C.

Under-Pay in India writes: As the treatment in pay matters dealt out by the Indian Government to officers of the R.A.M.C. is one of the main questions in the grievances of these officers, may I have space to state the matter for the information of the civil profession, from whom the officers R.A.M.C. are drawn and specialised for military work?

The matter will be better understood by bearing in mind the analogy to civil medical custom. If I am practising in England and need an assistant I pay him the market rate for such service, and no question need arise as to small or large amount of pay. But if I am a doctor practising in a tropical city—say, in Ceylon, Singapore, China, South America, etc.—I have, when engaging an assistant, to pay him a higher rate of pay as compensation for climatic risks—that is to say, I pay him English pay *plus* Colonial or tropical compensation for risks run and expenses incurred.

The complaint of the R.A.M.C. officers is that although several hundreds of them serve in India with the British soldier, the Indian Government decline to pay them the lawful and equitable pay rate to which they are entitled, thereby practically robbing them of a justly-earned income and sweating them. This is the only possible word to use.

You are aware that up to 1858 India was governed by the Honourable East India Company. They were hard masters, keen on dividends, and dealt with their employees in a purely business way. No pay without work, and very rarely, if ever, high pay. Up to the time of the Mutiny the Indian officers were wretchedly paid and were largely in debt. When the Crown took over the government the control over local expenditure in India passed largely into the hands of the Indian officials themselves, and the pay rates of the "classes" in India have been greatly improved. The "classes" are the covenanted civilians, and the "combatant" soldiers. I do not include the medical service in the "classes," as they really have no voice whatever in the civil and military clique that govern India—that is to say the "classes" of India.

When an officer R.A.M.C. goes now to India his pay is made up of English pay and local allowances. The English pay-rate is based still on the warrant of 1858, and it ignores the warrants of the years 1866-1873, 1879, with the result that the R.A.M.C. officers are made to serve in India at an inferior income to what they bargain for with their primary employer—namely, the War Minister of the English army, under whom they agree to serve.

The English War Minister, instead of standing out boldly against this injustice of the Indian clique, is afraid to tackle the Secretary of State for India, or thinks that the doctors as a class having no political power, may be treated with neglect—a neglect that dare not be allowed to be extended to the more powerful "classes" in the narrow sense in India.

No settlement of R.A.M.C. grievances can be in any degree adequate that does not ensure just pay in India. That just pay is English pay rates as laid down by the more recent English warrants—*plus* local allowances as per military rank in the army.

The matter is clear and simple, but the political powerlessness of the doctor class accounts for this and many other unfortunate conditions of our profession. The mental worry and wear and tear caused by tropical service in India, with a defective, unjust, and "sweating" pay-rate greatly reacts on the mental and physical efficiency of the whole medical service. They return from India mentally and bodily enfeebled from climatic and financial "wear and tear," and no one seems powerful enough to wring justice from the Indian Government.

## THE INDIAN FIELD HOSPITALS IN SOUTH AFRICA.

A correspondent writes that these hospitals sent from India, composed of R.A.M.C. officers, non-commissioned officers, and men of British regiments in India, and of assistant surgeons and hospital corps men of the Indian establishments, have received very scant recognition for work well done. It was they on whom the work of the actions fell during the earlier battles of the war in Natal, as at Talana, Elandslaagtie, etc., and in Ladysmith itself. They have continued in the field ever since, and everyone praises their work; but with what reward? Not a single decoration, and no mention in despatches for any officer, not even thanks. No presents were sent out to them; even the Queen's chocolate was refused to natives of India, because they were such. It is yet time to remedy these omissions, which are keenly felt, especially by the Indians.

## THE ARMY MEDICAL SERVICE.

Centurian writes: In a letter to the British Medical Journal of August 10th Dr. Thompson states that most of the important suggestions for improving the R.A.M.C have been conceded. Now, unless amongst these there are the two following: (1) That the R.A.M.C. have the red facings of a Royal corps; (2) that the Director-General A.M.S. is made a lieutenant-general, or major-general at least, all the other concessions will amount to nothing. The R.A.M.C. will still be in the inferior position it has always held, and no self-respecting man who realises what the above two points mean, will think of entering it under the circumstances.

## "STATION HOSPITALS."

Antiseptic writes: It may be as well to suggest the abolition of the words "station hospitals," and follow the recommendations so frequently made, that all military hospitals be known as such. The term "station hospital" is used by the L.C.C. in some garrison towns, and this causes no little confusion to the postal authorities.

## UNIFICATION OF TITLES.

Grouse writes: The unification of medical military titles is clearly indicated by the abolition of the obsolete compound titles as now applied to the A.M.S. All should be included under Royal Army Medical Corps—Surgeon-Major Generals and Director-Generals not excepted—in the new warrant as such compound titles are now obsolete. Promotion by length of service abroad is an old-time method, and no test of efficiency or merit. To popularise the R.A.M.C. increase of pay and reduction in the tours of foreign service required for promotion should be considered, as it is the cause of great hardship and quite uncalled-for suffering, when transport by sea and land is so inexpensive and accessible.

## ABERDEEN MEDICAL STAFF CORPS.

A successful camp of six days' duration was held by the Aberdeen Medical Staff Corps at North Lasts, Skene, the inspection being held on July 26th. Colonel Rooney, P.M.O. of the Scottish district, who inspected, gave the corps high praise for the quality of their work, comparing it favourably with that of previous years. The total number on parade was 119.

## THE AUXILIARY SERVICES.

A correspondent writes: These services are defined as consisting of the "Militia, Yeomanry, and Volunteers," in the Army Act; but they are not treated on all-fours. The militia officer employed at home during the present emergency is granted temporary army rank, while the volunteer, similarly employed, is not allowed even seniority from the date of his volunteer or reserve commission. In this way many volunteers have found themselves superseded and junior to those originally junior to them. The volunteer receives about £20 on being gazetted towards uniform, which actually costs from £60 to £70. This uniform might last him for the whole of his volunteer career, but speedily wears out on continuous service with troops; a gratuity of say, £10 to £15 should be given to replace at least the undress uniform,

### COMPOUND TITLES.

A RETIRED medical officer writes: A certain number of us are still handicapped by these absurd and unwieldy titles. Would it not be a gracious act of the War Office, in instituting reforms, to sweep them all away?

*** The theory is that officers must retain the titles under which they served and retired; hence the variety still shown in the retired lists. For our own part we should be glad to see uniformity introduced in all lists, at all events so far as compound titles, such as brigade-surgeon-lieutenant-colonel, are concerned.

### AMALGAMATION OF THE HOME AND INDIAN MEDICAL SERVICES.

THE suggestion that such an amalgamation should be carried out has, we are aware, evoked wide and strong protests in India; and so far as we can judge the question at present is one more for academic discussion than coming within the scope of practical politics. At the same time, the members of the Indian Medical Service are not all against it, as is shown by a communication we have received from one of them, who in time hopes to be a member of an "Imperial Medical Service." Perhaps his wish may ultimately be realised, when some large future scheme of Imperial federation and consolidation of Imperial forces is carried out. In any such scheme India, of course, would be treated as an integral portion of the Empire. Our correspondent sketches out a scheme of amalgamation which, however feasible, need hardly be set forth at present.

### GRIEVANCES OF CIVIL SURGEONS EMPLOYED IN THE ARMY.

A CORRESPONDENT urges that civil surgeons are entitled, with other branches of the service, to the gratuity under Army Order 136 of June, 1901. A simple perusal of the Order, he says, will show this, yet it has not been extended to civil surgeons acting with Imperial troops. We trust this matter will be ventilated and brought to the notice of the War Office.

### ATTACHING MEDICAL OFFICERS TO CORPS.

A CORRESPONDENT objects to the proposal to attach junior medical officers to corps or units for three or five years on the following grounds: (1) It would ruin R.A.M.C. messes. (2) It would place the officer in the impossible position of serving two masters. (3) It would harm medical *esprit de corps*. If carried out it should be under the following conditions: (1) The attached officer should be under the orders of his own corps), and not those of the officer commanding the regiment; (2) he should belong to the R.A.M.C. mess at stations where there is one. What leave is the attached solitary medical officer likely to get?

*** We fear the conditions indicated by our correspondent are not likely to be carried out; the attached officer would undoubtedly be regimental, as of old, and no colonel would be likely to suffer "my" doctor to be interfered with by outsiders of the medical service. As to leave indicated—well?

# UNIVERSITIES AND COLLEGES.

### CONJOINT BOARD IN ENGLAND.

THE following gentlemen passed the Second Examination of the Board, at the July quarterly meeting of the Examiners in the subjects noted:

*Anatomy and Physiology.*—E. F. R. Alford and J. Armstrong, University College, London; B. N. Ash, St. Bartholomew's Hospital; C. K. Attlee, B.A.Camb., St. Thomas's Hospital; J. L. Blakie and F. J. Borrie, Otago University and Middlesex Hospital; J. H. Burridge, King's College, London; A. H. Bond and H. Clapham, St. Mary's Hospital; W. Byam and H. G. S. Courtney, St. George's Hospital; T. C. A. Cleverton, London Hospital; R. H. Cotton, St. Thomas's Hospital; W. Crampton, University College, Liverpool; A. M. De Silva, Ceylon Medical College and London Hospital; W. L. Dickson, Middlesex Hospital; K. A. C. Doig, Westminster Hospital; W. S. Edmond, St. Bartholomew's Hospital; E. R. Evans, University College, Liverpool; H. L. Evans and C. R. B. Eyre, St. Thomas's Hospital; H. A. Fenton, St. Mary's Hospital; G. E. O. Fenwick, Otago University and University College, London; H. N. Fink, B.A.Camb., and D. H. Fraser, B.A.Camb., Cambridge University; W. T. Finlayson, St. Mary's Hospital; W. H. France, Westminster Hospital; E. H. Good, London Hospital; G. C. Grundy, Yorkshire College, Leeds; P. Gully, Charing Cross Hospital; A. L. Heiser and D. M. Humby, L.D.S.Eng., Middlesex Hospital; G. W. Heron, Westminster Hospital; T. M. Hughes, Owens College, Manchester; C. D. M. Holbrook, H. M. Huggins, and A. M. A. James, St. Bartholomew's Hospital; A. H. Jacob, London Hospital; H. H. Jenkins, Guy's Hospital; W. H. Kaye, Owens College, Manchester; T. B. Kobbekaduwa, Ceylon Medical College and University College, London; H. A. Kisch and G. M. L. Lester, M.A.Oxon., St. Thomas's Hospital; J. E. Lascelles, St. Mary's Hospital; E. B. Lathbury, St. Bartholomew's Hospital; F. B. Lowe, W. N. May, P. F. Minett, C. S. Morris, L.D.S.Eng., and M. J. Mottram, Guy's Hospital; W. C. Macaulay, B.A.Lond., Middlesex Hospital; J. C. S. McDouall, Otago University, New Zealand; A. V. Maybury, Durham University and Guy's Hospital; P. J. Marett, Westminster Hospital; R. C. Merryweather, University College, London; E. S. Molyneux and I. N. Morgan, London Hospital; H. R. Moxon, St. Thomas's Hospital; A. H. Muirhead, F. M. Newton, and H. Nicol, Westminster Hospital; G. Nunn, Guy's Hospital; C. W. O'Brien and A. F. C. Pollard, St. Bartholomew's Hospital; G. R. Painton, London Hospital; G. A. Paulin, Royal College of Surgeons, Edinburgh; C. T. Pellow, St. Thomas's Hospital and Cooke's School of Anatomy and Physiology; E. C. Peers, G. H. Rees, G. C. F. Robinson, F. Rogerson, and R. P. Rowlands, Guy's Hospital; G. H. Rains, Westminster Hospital; C. E. Reynolds, University College, London; C. S. S. Rigby, Birmingham University; H. H. Rolfe and H. B. Scott, St. Bartholomew's Hospital; A. Ruete and E. A. Smith, University College, Liverpool; E. J. R. Surrage, B.A., LL.B., King's College, London; R. StG. Seagrove, Guy's Hospital; K. Takaki, St. Thomas's Hospital; F. Thompson, A. G. Tresidder, and J. Turtle, London Hospital; J. E. L. A. Turnly, B.A.Camb., St. Bartholomew's Hospital; C. Vosper, King's College, London; A. J. Walton, S. J. Williams, J. H. Wolfe, and P. C. Woollatt, London Hospital; A. E. Weaver, Birmingham University; S. J. Weinberg, Owens College, Manchester; A. D. White and F. E. Whitehead, St. Bartholomew's Hospital; E. K. Williams, B.A.Camb., St. Andrew's University, and J. A. Williams, University College, London.

*Physiology Only.*—A. V. Benson, London Hospital.

Fifty-two gentlemen were referred in both subjects and one in anatomy only.

### CONJOINT BOARD IN SCOTLAND.

THE quarterly examinations of the above Board, held in Edinburgh, were concluded on July 27th, with the following results:

*First Examination (Five Years' Course).*—L. H. Gill, G. A. S. Hamilton, J. Murphy, Jessie Jean Martin Morton, H. G. Smith, J. Watson, A. Oyejola, Edith Boomgardt, E. P. Titterton, G. H. Waugh, R. M. Fraser, N. D. Sweetnam, W. P. Walker, and C. S. P. McDermott.

Five passed in Physics, 4 passed in Elementary Biology, and 1 in Chemistry.

*Second Examination (Five Years' Course).*—J. van S. Taylor (with distinction), W. H. Boalth, B. E. M. Newland (with distinction), R. H. Rigby, D. Banerji, Sybil Louie Lewis, J. J. Lawton, S. McCarthy, Bessie Chapple, Eileen FitzGerald, C. E. Watts, P. Shaw, R. D. Hirsch, and W. E. O'Hara.

Two passed in Anatomy and 1 in Physiology.

*Second Examination (Four Years' Course.)*—A. P. Walker, W. F. Waugh, U. Burston, F. D. Yourelle, J. C. Grant, and J. Martin.

*Third Examination (Five Years' Course)*—A. W. Hall, T. A. Mendes, L. Levi, C. S. Macaskie, J. A. Douglas, W. P. Cowper, T. J. Walsh, W. J. Gray, J. M. Gerety, G. J. Harman, A. Kellgren-Cyriax, Alice Esther Gilford, P. O. Jollie, S. P. Mistri, H. Carlaw, and J. O'Connor, and 1 passed in Anatomy and 1 in Materia Medica.

*Final Examination.*—D. Mitchell, J. C. Nicholson, A. A. Beeks, C. St. Aubyn-Farrer, J. A. Baird, F. J. Pattee, R. F. de Boissiere, N. M. Gavin, Alice Marietta Marval, J. B. Mason, Alice Deborah Sibree, A. W. Frew, B. Flood, A. H. Corley, H. Holden, N. L. Stevenson, J. Crawford, F. W. McCay, D. G. Metheny, D. L. Williams (with honours), C. W. Sharp, G. C. Ghose, M. B. Conroy, Alice Evangeline Brown, Jeanie Newton, W. G. Edwards, H. E. J. Batty, C. R. Martin, A. D'Souza, J. P. Modi, T. F. Okell, H. E. Blackwood, P. W. McHugh, G. S. Coghlan, R. Fox, B. B. Paymaster, J. S. da P. Rodrigues, K. D. Cooper, E. Millicans, D. McN. Ford, W. Sykes, J. H. Stewart, H. N. Anklesaria, H. D. Pitt, D. F. Sanjana, W. P. Grellett, Helen Mary Serjeant, and J. Dunlop; and 6 passed in Medicine and Therapeutics, 5 in Midwifery, and 6 in Medical Jurisprudence.

### CONJOINT BOARD IN IRELAND.

FINAL EXAMINATION.—Candidates have passed this examination as undernoted:—

*In all Subjects.*—Honours in order of merit: P. J. Hanafin, E. Glenny, Miss M. J. Shire, A. H. B. Hartford. Pass alphabetically: H. L. A. Barry, J. P. Byrne, F. J. Cahill, M. J. Johnston, J. F. L. Keegan, J. M. S. Levis, M. J. Loughrey, D. J. O'Reilly, J. White.

*Completed the Examination.*—A. J. Connolly, P. L. Crosbie, C. H. Felvey, J. S. Lane, M. E. Lynch, R. F. MacMahon.

SECOND PROFESSIONAL EXAMINATION (PART I).—Candidates have passed this examination as undernoted:

*In all Subjects.*—I. Grace.

*Completed the Examination.*—P. Donnellon, A. H. R. Duncan, H. B. Evans, D. Gillies, B. D. Gibson, M. Hurley, L. F. Kelly, T. Keogh, A. C. Lewis, F. J. Moore, J. O'Doherty, J. P. O'Donnell, D. J. O'C. Kelly, P. P. Ryan.

SECOND PROFESSIONAL EXAMINATION (PART II).—Candidates have passed this examination as undernoted:

*In all Subjects.*—Honours: M. J. Ryan.

*Pass.*—C. P. O'B. Butler, R. G. Griffin, S. B. Hanbury, J. Hayes, R. A. Murphy, L. P. Stokes.

*Completed the Examination.*—H. E. F. Hastings, J. R. H. Macmanus, V. H. MacSwiney.

THIRD PROFESSIONAL EXAMINATION.—Candidates have passed this examination as undernoted:

*In all Subjects.*—Miss L. N. Alexander, J. E. Brereton, A. Charles, T. A. Dillon, J. Dwyer, C. Foley, Miss H. A. Hall, W. B. A. Moore, C. E. O'Keeffe, P. W. Power, C. Waters.

*Completed the Examination.*—Miss M. E. Bridgford, S. Brown, J. Cuffe, Miss H. A. Driver, G. Lacey, J. J. McInerney, S. R. M'Causland, O. F. M. Ormsby, W. Scott, G. J. Sexton, S. A. Tucker, G. B. Wilkinson.

### ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen passed the Preliminary Science Examination for the Licence in Dental Surgery at the July quarterly meeting of the Examiners:

W. Breese, Birkbeck Institute; J. P. Brown, Holt School of Science, Birkenhead; H. E. Collett and W. E. Derriman, Guy's Hospital; J. T. Daly, Middlesex Hospital; N. S. Deravin, Melbourne University and Charing Cross Hospital; H. J. Fooke and F. Gordon, Middlesex Hospital; E. Gibbon, Rutherford College, Newcastle-upon-Tyne; T. E. Gibbs, Birkbeck Institute and Charing Cross Hospital; L. A. Glaisby, Yorkshire College, Leeds; R. Glendining, Polytechnic Institute, Regent's Street; W. J. Goodman, T. J. Green, and R. G. Harrington, Guy's Hospital; C. T. V. Greenslade, Brighton School of Science; S. Hallam, Yorkshire College, Leeds; J. C. Harris, Birmingham University; S. Isaacs, Owens College, Manchester; M. Jackson, Middlesex Hospital; H. H. James, Charing Cross Hospital; J. J. Law, Technical School, Blackburn;

G. E. McMahon, Holt School of Science, Birkenhead; A. Miller, Harris Institute, Preston; A. L. Moon, Guy's Hospital; F. R. Moser, Charing Cross Hospital; N. McL. Nibbs and J. A. Oates, Birkbeck Institute; A. B. Oddie, W. C. Retallack, and J. S. Sawer, Birmingham University; T. W. Robinson and R. A. Scott, Guy's Hospital; W. D. Southern, Municiple Technical College, Derby; B. M. Stephens, Middlesex Hospital; F. E. Sprawson and F. R. Wilson, Birkbeck Institute; and H. H. Tomlinson, Holt School of Science, Birkenhead.

### ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

The following gentlemen having passed the requisite Examination were, at a meeting of the College, held on 30th July, elected ordinary Fellows:—

G. Alexander, M.B., Ch.B., W. H. G. Aspland, M.R.C.S.Eng., L.R.C.P., Lond., A. Girvan, M.B., C.M., P. Kinmot, M.B., Ch.B., W. T. McArthur, L.R.C.S.E., A. Macdonald, M.B., C.M., S. A. Ord-Mackenzie, M.R.C.S.Eng., L.R.C.P.Lond., A. D. Peill, M.B., C.M., G. H. Pooly, L.S.A.Lond., M. A. Reid, M.B., C.M., E. Robertson, L.R.C.S.E., F. H. Sturdee, M.R.C.S.Eng., L.R.C.P.Lond., and G. F. Vincent, L.R.C.S.E.

### APOTHECARIES' HALL, IRELAND.

At the annual meeting of the General Council of the Apothecaries' Hall of Ireland, convened by the Act of Incorporation, 1791, on August 1st, 1901, the following were duly balloted for and elected to hold office for the ensuing year, ending July 31st, 1902:—Governor: George A. Stritch, L.F.P.S.G., L.M. Deputy-Governor; Arthur Atock, M.D., M.S., R.U.I. Directors: Hugh A. Auchinleck, F.R.C.S.I., L.R.C.S.Edin., John Evans, L.R.C.S.I., William V. Furlong, L.R.C.S.I., L.R.C.P.E., J. Adam Johns, M.D., T.C.D., Thomas D. Finucane, M.D., Edward Hanrahan, M.B., R.U.I., Robert Montgomery, M.R.C.S., Robert J. Montgomery, M.B., T.C.D., F.R.C.S.I., Richard G. O'Flaherty, L.R.C.S., M.B., T.C.D., James Raverty, L.R.C.S.E., Joseph A. Ryan, L.R.C.S.E., James Shaw, L.R.C.S.I., Charles R. C. Tichborne, L.and D.P.H., R.C.S.I. Representative on the General Medical Council: Charles R. C. Tichborne, L.and D.P.H., R.C.S.I. Secretary: Robert Montgomery, M.R.C.S.

# PUBLIC HEALTH
## AND
# POOR-LAW MEDICAL SERVICES.

### HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,727 births and 4,673 deaths were registered during the week ending Saturday last, August 17th. The annual rate of mortality in these towns, which had been 22.4 and 22.1 per 1,000 in the two preceding weeks, further declined last week to 21.3 per 1,000. The rates in the several towns ranged from 10.4 in Halifax, 13.2 in Croydon, 13.9 in Cardiff, and 14.2 in Bristol to 27.2 in Sheffield and Hull, 28.7 in Salford, 30.2 in Sunderland and in Gateshead, and 30.5 in Birkenhead. The mean rate in the thirty-two provincial towns was 22.4 per 1,000, and exceeded by 2.8 the rate recorded in London, which was 19.6 per 1,000. In the thirty-three large towns the zymotic death-rate last week averaged 7.4 per 1,000; in London this death-rate was equal to 6.0 per 1,000, while it averaged 8.2 in the thirty-two provincial towns, among which the highest zymotic death-rates were 12.4 in Sunderland, 12.6 in West Ham, 12.7 in Salford, 12.9 in Hull, and 15.6 in Gateshead. Measles caused a death-rate of 1.1 in Sheffield, 1.4 in Salford, and 2.5 in West Ham; scarlet fever of 1.8 in Preston; whooping-cough of 1.0 in West Ham and 1.7 in Swansea; and diarrhœal diseases of 10.1 in Salford, 10.2 in Manchester, 10.6 in Sunderland, 11.3 in Burnley, 12.1 in Hull, and 14.2 in Gateshead. In none of the thirty-three towns was the death-rate from "fever" equal to 1.0 per 1,000. The 64 deaths from diphtheria in these towns included 30 in London, 6 in Leeds, 5 in Leicester, 3 in West Ham, and 3 in Sheffield. Two fatal cases of small-pox were registered in London, but not one in any of the thirty-two large provincial towns; 8 small-pox patients were admitted into the Metropolitan Asylums Hospitals during the week, against 2, 4, and 3 in the three preceding weeks, and 13 remained under treatment on Saturday, August 17th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,974, 3,091, and 3,148 at the end of the three preceding weeks, had declined again to 3,111 on Saturday last; 300 new cases were admitted during the week, against 374, 391, and 306 in the three preceding weeks.

### HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, August 17th, 892 births and 606 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.8 and 19.2 per 1,000 in the two preceding weeks, further declined to 19.0 per 1,000 last week, and was 2.3 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 12.7 in Leith and 14.2 in Perth to 19.6 in Paisley and 20.8 in Glasgow. The zymotic death-rates in these towns averaged 4.7 per 1,000, the highest rates being recorded in Glasgow and Leith. The 306 deaths registered in Glasgow included 11 from measles, 2 from scarlet fever, 10 from whooping-cough, 2 from "fever," and 58 from diarrhœa. Four fatal cases of whooping-cough and 12 of diarrhœa were recorded in Edinburgh. Two deaths from whooping-cough and 18 of diarrhœa occurred in Dundee; 2 from whooping-cough, 2 from "fever" and 3 from diarrhœa in Paisley, and 10 from diarrhœa in Leith, 4 in Greenock, 3 in Aberdeen, and 3 in Perth.

### LADY INSPECTORS OF HEALTH.

The Norwich City Council has appointed Miss Brenda Orme as lady inspector and health visitor to go to the homes of the poor and instruct mothers in the proper upbringing of their children and report on the sanitary surroundings. It may be remembered that at Cheltenham, in the section of State Medicine, Dr. Fosbroke, the Worcester County Medical Officer, instanced the excellent work which was being done by three lady inspectors, retained at an annual expense of £180, to go from house to house in certain districts and teach the mothers there not to feed their babies on potatoes, brandy, and other such foods. The work of these ladies has been very successful.

### ISOLATION WARDS FOR THE LIVERPOOL WORKHOUSE HOSPITAL.

At a meeting of the Liverpool Workhouse Committee held on August 15th a plan was moved and adopted for the conversion of the matron's cottage in the acute hospital buildings into small isolation wards at an estimated cost of £170. The new wards will provide accommodation for three or four patients of either sex. In view of the difficulty or impossibility of diagnosing the precise nature of acute infectious diseases in their early stages, such a provision as that made by the Liverpool Workhouse Committee is an almost indispensable part of hospital administration.

### SWANSEA GUARDIANS AND MEDICAL OFFICERS.

According to the *Western Mail* the Swansea Board of Guardians have so far been unable to obtain a medical officer. They have twice advertised the post of assistant medical officer, but have failed to attract candidates. It has been decided again to advertise the post at a remuneration of £200 a year as before, but providing for weekly lectures to be delivered by the assistant medical officer at a fee of half a guinea each.

### THE LOCAL GOVERNMENT BOARD AND VACCINATION PRACTICE.

We learn from the *Yorkshire Daily Post* that the Local Government Board have written to the Gainsborough Board of Guardians in reply to their complaint of the cost of administering the Vaccination Acts, and their request for permission to revert to the methods practised between the passing of the Act of 1898. The Local Government Board points out that the cost is increased by the fact that the visits and special precautions now employed in the actual performance of the operation demand a larger portion of the time of the officers. They further suggest that there are compensating advantages, for apart from the safeguards which the present procedure affords against injury from vaccination, much time and trouble are saved to the parents, who formerly were compelled to take their children to the public stations. With regard to the suggested reversion to the former procedure, the Board states that they have no authority to over-ride the requirements of the Vaccination Act of 1898.

### INCREASE OF SALARY OF WORKHOUSE MEDICAL OFFICERS.

We see by the *Craven Herald* that Dr. Readman, the medical officer of the Skipton (Yorks) Workhouse, has had an increase of salary awarded to him by the guardians of that union, this increase being from £45 per annum to £52, and recommended on the ground that the work had greatly increased since Dr. Readman's appointment four years back. We cannot think that the increase of salary bears any fair proportion to the increase of the work; but we note with no little surprise that even this trivial increase, which was recommended by the Committee, was strenuously opposed by some of the members of the Board, who advocated a £5 increase instead of £7 as recommended, one of the guardians stating that the extra fees which Dr. Readman received for attendance on midwifery cases *might* amount to £100 per annum. It can scarcely be expected that, so long as guardians attempt to settle important questions by such fallacious arguments as this, either medical officers or patients will be able to acquire their legal rights. The question may very properly be asked, Has not the time arrived when a different class of men should be selected to act as guardians of the poor?

### EXTRAS ORDERED BY MEDICAL OFFICER.

Pot. Brom., who is a workhouse medical officer where the guardians find the drugs, says that some time since when a glass measure was required in the workhouse surgery, he gave an order for one, and has now been informed by the clerk that he had no authority to do this. He wishes to know whether the clerk is right on this point. Our correspondent says he has been in the habit of ordering all such requisites, also trusses for patients who require them. He asks whether he can continue to order the latter, as they are sometimes required immediately.

*** Glass measures must be regarded as fittings or furniture for the surgery, and we think our correspondent would do well to throw the responsibility of ordering all such things on someone else; he might properly put in writing that they are required. In some unions the medical officers are authorised by the guardians to order trusses for any paupers who require them, but the more usual plan is for the medical officer to report the requirements, and then leave the guardians or relieving officer to give the necessary order.

# MEDICAL NEWS.

The King has consented to become Patron of the Royal Hants County Hospital at Winchester, in succession to the late Queen Victoria. His Majesty has also intimated his intention of contributing 100 guineas to the building fund.

The Open-air Treatment in London.—In the new Camberwell Infirmary in course of erection by the Board of Guardians there will be three large wards, with 24 beds each, where tuberculous patients will be treated.

BEQUEST TO THE PRINCE OF WALES'S HOSPITAL FUND.—The legacy of £3,000, bequeathed by the late Sir Henry Page-Turner Barron has been received, free of duty, at the Bank of England by the honorary secretaries of the Prince of Wales's Hospital Fund.

THE ENDOWMENT OF RESEARCH IN AMERICA.—A donation of £10,000 has been made to the Medical Department of the University of Buffalo, for the purpose of erecting a laboratory to be devoted entirely to research work. It will be known as the Gratwick Research Laboratory.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.—The American Association of Obstetricians and Gynecologists will hold its fourteenth annual meeting at Cleveland, Ohio, on September 17th and two following days, under the presidency of Dr. William E. B. Davis.

THE ALVARENGA PRIZE.—The College of Physicians of Philadelphia has awarded the Alvarenga Prize this year to Dr. George W. Crile, of Cleveland, Ohio, for his essay entitled An Experimental and Clinical Research into certain problems Relating to Surgical Operations.

THE LATE PROFESSOR BIRCH-HIRSCHFELD'S LIBRARY.—The library of the late Professor Birch-Hirschfeld, Director of the Leipzig Pathological Institute, has, it is said, been acquired by Cornell University. The library consists of some 5,000 volumes, and is one of the largest collection of writings relating to pathology in existence.

NOTIFICATION OF TUBERCULOSIS IN AMERICA.—The medical practitioners of Jersey City, New Jersey, have been notified that henceforth cases of tuberculosis must be included in their reports of contagious disease. This is taken to be the beginning of a movement in the direction of isolation of such cases.

FRENCH HOSPITAL IN ST. PETERSBURG.—A French hospital has recently been opened in St. Petersburg. The cost of the buildings and installation was £16,000. The hospital contains twenty beds, and although preference will be given to patients of French nationality, it is not intended that the benefits of the institution shall be restricted to them.

THE OPEN-AIR TREATMENT OF PHTHISIS AT CARDIFF.—In accordance with resolutions passed recently, a tent for consumptive patients was opened in the Cardiff Union grounds on August 19th. Five patients were lodged in the tent on Tuesday under the care of Dr. Jenkins, medical officer of the workhouse, and everything was provided to make them comfortable.

THE LATE DR. RAMSDEN OF SADDLEWORTH.—A massive and handsome marble fountain was unveiled on August 17th at Saddleworth to the memory of the late Dr. Ramsden. There was a large assembly, the Rev. H. P. Edwards presiding, the ceremony being performed by Miss Susan Brierley of Denshaw House. Dr. Ramsden resided at Saddleworth for thirty-six years, and was highly respected.

A GERMAN ORTHOPÆDIC SOCIETY.—It is proposed to found a German Orthopædic Society, and a meeting for that purpose will be held at Hamburg at the time of the meeting of the Association of Scientists and Medical Practitioners in September. Dr. Hoeftman of Königsberg has in the name of leading German specialists in orthopædic surgery sent out invitations to all presumed to be interested in the subject.

CONGRESS OF ITALIAN ALIENISTS.—The Società Freniatrica Italiana will hold its eleventh Congress at Ancona from September 29th to October 3rd under the presidency of Professor Tamburini, of Reggio-Emilia. Among the subjects to be discussed are the Classification of Psychoses (to be introduced by Dr. S. de Sanctis); the Genesis and Nosography of Progressive Paralysis (to be introduced by Professor L. Bianchi); and the Practical Direction which Psychiatry may give to Pedagogy (to be introduced by Dr. C. Agostini). In connection with the Congress there will be an exhibition of objects relating to asylums, psychiatric and neuropathological clinics, etc.

THE LANE LECTURES FOR 1901.—The sixth course of the Lane Medical Lectures in Cooper Medical College, San Francisco, inaugurated by Dr. L. C. Lane in 1896, will be given this year by Mr. Malcolm Morris, who has chosen as his subject The Social Aspects of Dermatology. The lectures will be given on September 2nd, 3rd, 4th, 5th, and 6th. The following is the syllabus:—(1) Social Aspects of Skin Diseases: General outline of the subject. (2) Inoculable Diseases of the Skin: Animal parasites—scabies, pediculosis, and vegetable parasites—ringworm, favus, recent researches in fungi producing them, need of special schools for ringworm children, the hygiene of the barber's shop. (3) Local Inoculable Diseases: Contagious impetigo, sycosis, boils, carbuncles, acne, elephantiasis, their prevention and treatment. (4) General Inoculable Diseases of the Skin: Tuberculosis, the part played by the skin in its dissemination, the crusade for its extirpation. (5) Lupus: The light treatment, and other modern treatments. (6) Syphilis: The International League; Leprosy in the past and in the present. (7) Affections of the Skin dependent on Nerve Disorder: Prurigo and other itching affections, mental effects of cutaneous irritability, skin diseases in the insane, erythema, lupus erythematosus, rosacea, herpes zoster, pemphigus. (8) Hysterical Œdema: Feigned eruptions, stigmata, bloody sweat, dermographism, diabolic marks. (9) Diseases of Unknown Causation: Eczema, psoriasis, pityriasis rubra. (10) Malignant Diseases of the Skin: Epithelioma cutis, rodent ulcer, Roentgen-rays treatment, mycosis fungoides.

## MEDICAL VACANCIES.

The following vacancies are announced:

BELGRAVE HOSPITAL FOR CHILDREN, Gloucester Street, S.W.—House-Surgeon. Appointment for six months. Board, lodging, and gratuity of £5. Applications to the Secretary by September 14th.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon; unmarried. Salary, £150 per annum, and allowance of £30 per annum for cab hire, with furnished rooms, etc. Applications to the Secretary by September 9th.

BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Medical Officer. Salary, £100 per annum, with furnished apartments, board, coals, gas, washing, and attendance. Applications to the Clerk to the Guardians by August 31st.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum, with residence, board, and washing. Applications to the Secretary by September 6th.

BRADFORD ROYAL INFIRMARY.—(1) Dispensary Surgeon. Salary, £100 per annum, with board and residence. (2) Junior House-Surgeon. Salary, £50 per annum, with board and residence. Candidates must be unmarried. Applications, endorsed "Dispensary Surgeon" and "Junior House-Surgeon" to be sent to the Secretary by August 26th.

BRENTWOOD: ESSEX COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £140 per annum. Applications to Medical Superintendent.

BRIDGEND: GLAMORGAN COUNTY ASYLUM.—Assistant Medical Officer. Salary, £175, with board, lodging, etc. Applications to Medical Superintendent, by September 12th.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—(1) Surgeon. (2) Assistant Surgeon. Applications to the Secretary by September 4th.

BRISTOL GENERAL HOSPITAL.—Casualty House-Surgeon. Salary, £75 per annum, with board, residence, etc. Applications to the Secretary by August 27th.

BURY ST EDMUNDS: SUFFOLK GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by August 26th.

CAIRO: KASR-EL-AINY HOSPITAL AND SCHOOL OF MEDICINE.—Physician to Hospital and Professor of Clinical Medicine in School. Appointment for two years. Salary, £E280 per annum. Applications to Director, General Sanitary Department, Cairo, by September 25th.

CARLISLE: CUMBERLAND INFIRMARY.—Resident Medical Officer. Salary, £80 per annum. Applications to Secretary by September 25th.

COLCHESTER: ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by August 30th.

DENBIGH: DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary, £100 per annum to commence, with board, residence, and washing. Applications to the Secretary.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—(1) Medical Officer for the Casualty Department. Appointment for six months but renewable. Salary at the rate of £100 per annum with luncheon. (2) House-Surgeon. Board, residence, etc., provided, and honorarium of £25 on completion of six months approved service. Application to the Secretary by September 14th.

EDINBURGH: CRAIGLEITH POORHOUSE AND HOSPITAL.—Resident Medical Officer. Salary at the rate of £100 per annum, with board and apartments. Applications to the Clerk, Parish Council Chambers Castle Terrace, Edinburgh, by September 2nd.

FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £100 per annum with board, residence and laundry. Applications to Secretary by September 1st.

GLASGOW UNIVERSITY.—Additional Examiner for Degrees in Medicine and Science, with special reference to Physics. Salary, £30 per annum. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by September 26th.

HALIFAX UNION.—Medical Officer for the new Workhouse. Salary, £105 per annum. Applications to the Clerk to the Guardians, 4, Carlton Street, Halifax, by August 26th.

JOHANNESBURG MUNICIPALITY.—Medical Officer of Health, must hold Public Health Diploma. Salary, £1,500 per annum. Applications to the Assistant Private Secretary, Colonial Office, Whitehall, S.W., by August 24th.

LANCASTER COUNTY ASYLUM.—Assistant Medical Officer. Salary, £150 per annum, with furnished apartments, board, washing, and attendance. Applications to the Medical Superintendent.

LEICESTER INFIRMARY.—(1) Honorary Assistant Physician. (2) Honorary Assistant Surgeon. Applications to Secretary by September 2nd.

LEICESTER ISOLATION HOSPITAL.—Resident Medical Officer. Salary, £120 per annum, with board and washing. Applications to Dr. Killick Millard, Town Hall, Leicester.

LINCOLN COUNTY HOSPITAL.—Assistant House-Surgeon. Appointment for six months but eligible for re-election. Honorarium, £25 for each six months, with board, residence and washing. Applications to the Secretary by August 26th.

LIVERPOOL STANLEY HOSPITAL.—Third House-Surgeon. Salary, £70, with board, residence, etc. Applications to Secretary by September 5th.

MANCHESTER ANCOATS HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum, with board, residence, etc. Applications to the Secretary by September 3rd.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN.—Honorary Pathologist. Applications to the Secretary by August 31st.

MANCHESTER: OWENS COLLEGE.—Junior Demonstrator in Physiology. Stipend £100, rising to £150 per annum. Applications to the Registrar by August 31st.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officers. Salaries, £160 to £200, with board, lodging, etc. Applications to the Clerk.

NORTHAMPTON GENERAL INFIRMARY.—House Physician. Salary, £100 per annum, with furnished apartments, board, etc. Applications to the Secretary by August 29th.

PLYMOUTH PUBLIC DISPENSARY.—Second Medical Officer. Applications to Secretary by September 17th.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Assistant Resident Medical Officer. Appointment for four months. Salary at the rate of £50 per annum, with board, residence and washing. Applications to Secretary by September 6th.

ROYAL EYE HOSPITAL, Southwark, S.E.—(1) House-Surgeon. Salary, 50 guineas per annum, with board and residence. (2) Clinical Assistants. Applications to the Secretary for (1) by August 31st.

SCARBOROUGH: BOROUGH OF.—Medical Officer of Health. Salary, £325 per annum. Applications to Town Clerk by September 2nd.

SHEFFIELD UNION WORKHOUSE INFIRMARY.—Junior Assistant Medical Officer. Salary, £75 per annum, with furnished apartments, board, and washing. Applications to the Clerk to the Guardians, by August 26th.

SHOREDITCH INFIRMARY.—Resident Senior Assistant Medical Officer. Salary, £150 per annum, with rations, furnished apartments and washing. Applications, on forms provided, to be sent to the Clerk to the Guardians, 213, Kingsland Road, N.E., by August 26th.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary, £50 per annum, with rooms, board, and washing. Applications to Secretary by September 5th.

SYDNEY UNIVERSITY.—Professorship of Pathology, not more than 40 years of age Salary, £900 per annum, and £100 allowed for passage expenses. Applications to the Agent-General for New South Wales, 9, Victoria Street, London, S.W., by September 14th

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House-Surgeon. Salary, £50 per annum, with board, lodging, washing, and attendance. Applications to the Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Two House Physicians. Appointment for six months. Board and lodging provided. Applications to Secretary-Superintendent by September 25th.

WOLVERHAMPTON EYE INFIRMARY.—House-Surgeon. Salary, £70 per annum, with rooms, board, and washing. Appointment for twelve months. Applications to the Secretary by August 27th.

## MEDICAL APPOINTMENTS.

BATTERSBY, J. H., M.D., C.M.Edin., appointed Medical Officer of the Doncaster Workhouse, *vice* H. A. Lownds, resigned.

BEALE, H. E., M.R.C.S., L.R.C.P., appointed Assistant Resident Medical Officer to the Leeds General Infirmary.

CARTER, G. J., M.R.C.S., L.R.C.P.Lond., appointed Casualty Officer to the Hull Royal Infirmary.

COATES, Harold, M.D., D.P.H. (Vict.), appointed Medical Officer of Health of the Borough of Burton-upon-Trent.

COLLINS, E., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of Health of the Sawbridgeworth Urban District.

COLLUM, Rowland W., M.R.C.S., L.R.C.P., appointed Second Anæsthetist to the Hospital for Sick Children, Great Ormond Street, W.C.

FENNELL, Charles H., M.A., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P., appointed Medical Registrar to the Hospital for Sick Children, Great Ormond Street, W.C.

GRAHAM, V., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of the East District of the Doncaster Union, *vice* H. A. Lownds, resigned.

GRUNER, O., M.R.C.S., L.R.C.P., appointed House Physician to the Leeds General Infirmary.

HANNA, W., M.B., B.Ch., B.A.O., R.U.I., D.P.H.Camb., appointed Assistant Medical Officer of the Port of Liverpool.

HARRIS, F. D., M.B., M.R.C.S., L.R.C.P., D.P.H.Lond., reappointed Medical Officer of Health for St. Helens Borough.

HUNT, E., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Newton Abbot Union, *vice* A. L. MacLeroy, deceased.

HUNTER, William, M.B., C.M.Aberd., appointed Assistant Director of the Pathological Institute, London Hospital, E.

MCDONALD, P., M.B., C.M Aberd., appointed District Medical Officer of the Great Ouseburn Union, *vice* A. Dunbar.

POTTS, E. Thurlow, appointed Resident Medical Officer to the Hospital for Sick Children, Newcastle-on-Tyne.

POWERS, R. H., M.R.C.S., L.R.C.P.Lond., reappointed Medical Officer for the West District of the Brigg Union.

RAW, Nathan, M.D., M.R.C.P.Lond., F.R.S.E., D.P.H., appointed Visiting Medical Superintendent to the West Derby Union Infirmary, Mill Road, Liverpool.

SMITH, C. Lawson, M.B., Ch.B.Aberd., appointed Senior Resident Medical Officer to the Tottenham Hospital, N.

STROVER W. M.R.C.S.Eng., L.S.A., appointed Medical Officer of Health of the Chingford Urban District.

WATTS, A. M., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of Health for East Elloe Rural District.

YOUNG, A. J., L.R.C.P. and S.Edin., L.F.P.S.Glasg., appointed Medical Officer of Health of the Whitefield Urban District, *vice* A. T. Dorchard, resigned.

## DIARY FOR NEXT WEEK.

### MONDAY.

**West London Vacation Post-Graduate Course.** West London Hospital, Hammersmith Road, W., 5 P.M.—Lecture on Surface Anatomy of the Thorax.

### THURSDAY.

**West London Vacation Post-Graduate Course.** West London Hospital, Hammersmith Road, W., 5 P.M.—Lecture on Neurasthenia and its Treatment.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### MARRIAGE.

ROCYN JONES—JONES.—13th August, at Trinity, Abertillery, by the Rev. J. E. Rhys (uncle of the bride) assisted by the Revs. H. H. Hughes, B.A., B.D., of Anglesea (cousin of the bride), D. L. Jenkins, and D. Benyon Jones, Abertillery, D. T. Rocyn Jones, M.B., C.M.Edin., eldest son of Mr. D. Rocyn Jones, Rhymney, to Alla, elder daughter of Councillor G. N. Jones, J.P., Abertillery.

## LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate. London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

### QUERIES.

KENSINGTON would feel indebted to any readers of the BRITISH MEDICAL JOURNAL for some suggestions as to treatment in the following case: A patient of his, male, aged 62, subject to gout, suffered from an acute attack of herpes zoster in August, 1900, which ran its usual course, leaving, however, a persistent neuralgia along the course of two intercostal nerves, and being most marked over the point of exit from the spine and over the point in front where the branch comes through to supply the skin. Heart normal and urine contains a mere trace of albumen. Most remedies have been tried, amongst which are included (*a*) (externally) cocaine, iodine, blisters, morphine (injected into the tender spots), electricity; (*b*) (internally) alkalies, colchicum, arsenic, pot. iodid., bromides, piperidine, quinine, phenacetin, and antipyrin, but the pain still continues. He has had the advice of specialists in London, Berlin, and Wiesbaden.

### ANSWERS.

JUNIPER.—Oil of Harlem is described as an "anti-gouty" preparation, composed of equal parts of oil of cade and essential oil of juniper berries. It could probably be obtained from any large pharmaceutical establishment.

BETA.—We understand that systematic instruction in massage is given at the National Hospital for the Paralysed and Epileptic, Queen's Square. There are also, we believe, many private institutions. The usual fee for a course of instruction is 5 guineas.

H. G. H.—Our correspondent will find full information as to the course of study and the practical work required in order to obtain the diploma of D.P.H. in the Educational Number of the BRITISH MEDICAL JOURNAL to be published on August 31st.

HYPNOTIST.—We have no knowledge of the institute referred to, and, as our correspondent has not forwarded a copy of the pamphlet as to which he asks our opinion, we have no means of forming a judgment. As to the medical men whose names are said to be quoted, there is no evidence that this is done with their knowledge, much less with their sanction. We may add that, while "the late Weir Mitchell" is still very much alive, we do not find the name of "Dr. C. Loyd Tucker of London" in the *Medical Directory.*

MEDICAL MASONIC LODGE.

Z.—We presume the Lodge referred to by our correspondent is the Cherè Reine, No. 2,853, in connection with Charing Cross Hospital.

"ASTHMA SPECIFICS."

M. AND E. J. C.—We regret that we are unable to supply the information asked for by our correspondents. We understand, however, that in some at least of these "specifics" a number of medicaments are used, the proportion and some of the ingredients being altered to suit individual cases.

A PLACE WITHOUT A PUBLIC-HOUSE.

A. N. M. writes: In reply to "X. Y. Z." in the BRITISH MEDICAL JOURNAL of August 17th, I have to state that there is no public-house on the Island of Tiree, in the West of Scotland. Mr. Donald Lamont, farmer there, has accommodation, and the patient could be seen by the doctor on the island.

GIRLS' SCHOOL IN GERMANY.

MR. F. DORRELL GRAYSON (Rayleigh, Essex) writes: In answer to "Filia" inquiring for a good girls' school in Germany, I can confidently recommend Frau von Hollebeu of Honnef-y-Rhein as a most excellent person to entrust a young girl to. My daughter has been with her for two years, and would be pleased to answer any questions "Filia" may like to put about her school.

THE OPEN-AIR TREATMENT OF PHTHISIS.

R. R.—Dr. F. R. Walter's *Sanatoria for Consumptives*, a second edition of which is, we understand, on the eve of publication, would probably meet our correspondent's requirements. In regard to open-air treatment in private houses and at home there have been various papers dealing more or less with the subject by Dr. C. T. Williams and others in England and North America.

## LETTERS, NOTES, Etc.

### NEW OPENINGS FOR THE MEDICAL PROFESSION.

DR. JOHN HADDON (Hawick) writes: In these days, when, in spite of all the General Medical Council can do for the interests of the profession, and in spite of all our Association will be able to do when it is made into a Medical Defence Association—as those who support the Constitution Committee's Report hope to make it—the profession will continue overcrowded and competition downwards will be persisted in, unless some other outlets can be found for medical students. Looking around for possible openings, there are two which I think it is worth while to point out. Specialities are being followed more and more, till even they are said to be overcrowded in the cities, which alone seem large enough to attract—specialists on the eye, ear, nose, throat, skin, etc.; but there is one speciality to which the medical profession has given little heed so far, and which it seems to me offers a better prospect of certain success—that is, making a living, if not a fortune—than many of those which are more fashionable. I mean dentistry.

Teeth are such important articles in the digestive apparatus, and their loss gives rise to so much ill-health that it seems time to consider whether dentistry should become a speciality of the surgeon instead of being left in the hands of those who have not had a full medical and surgical curriculum, who cannot be expected to be able to appreciate the significance of symptoms caused by disorders of dentition, or even the value of teeth capable of masticating our food. It is true that a few medical graduates have entered the ranks of dentistry but they have, in too many cases, if not in all, been obliged to engage in work which may be regarded by some as beneath the dignity of the medical profession, namely, with the making and fitting of sets of teeth. If it were possible to divide the speciality into two branches, one scientific, dealing with living, the other practical, dealing with dead matter, there could be no objection on the part of any graduate to become a scientific dentist. He would see his patients at his rooms, extract, stop, give advice, instruct the mechanical branch of the speciality when teeth were required, and see that his directions were properly carried out. It might be possible to combine the two branches, without loss of dignity, if any difficulty were found in separating them. If separated the dentist would then hold the same position, to what we may call the mechanical dentist, as the oculist does to the optician, the surgeon to the surgical instrument maker, or the physician to the druggist.

The other opening that I think offers itself to the medical profession is that of veterinary science and practice. It has always seemed to me strange that the treatment of dumb animals, from whom we can get no information as to their ailments, should be left in the hands of those who have not received such a good education as is required of us, who have to treat, except in the case of young children, those who can help us to a correct diagnosis by detailing their medical history, and various symptoms. The medical schools would require very few additional courses to be able to fit students for the treatment of all animals; and just as some now qualify in State Medicine, taking the Public Health degree, so others, if facilities were offered, might take a veterinary qualification which would open to them a very large field for the pursuit either of the science or the practice of the veterinary profession. I commend these suggestions to the members of the Association who have time to think of, and the will to assist in, the further extension of the medical profession.

### GONAL.

MESSRS. F. WILLIAMS AND CO. (Upper Thames Street) write: With reference to the remarks on "gonal," contained in the BRITISH MEDICAL JOURNAL of June 8th, we ask your permission to point out that researches carried out in the laboratory of Messrs. Heine and Co., of Leipzig, prove the presence in ordinary sandal wood oil of a substance to which they gave the name of "santalen," a result which corroborates the independent investigations of von Soden, Mueller, and Guerbet. Santalen is a sesquiterpen, having the formula $C_{15}H_{24}$, the boiling point of which is between 261° C. and 262° C., and the sp.gr. 0898, at 15° C. The investigations of Dr. Paul Meissner, of Berlin, have shown this substance to be possessed of very irritating properties in respect of the kidneys, and there is little doubt that the irritating effects formerly ascribed to the presence of empyreumatic impurities in the oil are in reality due to the existence of santalen. In the preparation of gonal the santalen constituent is eliminated, hence the freedom of this product from the by-effects of the official oil. Extensive clinical observations moreover show that the antiblennorrhagic properties of the oil are in no way attenuated by the process of purification and concentration. The purified product (gonal) indeed possesses the specific therapeutic properties of the oil in a higher degree, owing to the absence of inert and injurious constituents. Gonal therefore may be regarded as a purified and concentrated sandalwood oil.

### THE SALE OF MEDICINES BY MEDICAL GRADUATES.

DR. WILLIAM V. M'CALLAN (Dumbarton) writes: In the BRITISH MEDICAL JOURNAL of August 10th, p. 382, is a letter emanating from the Secretary of the Senatus of the Edinburgh University, in which he says the "in the opinion" that it is "undesirable [illegible] except under unavoidable circumstances, [illegible] the said graduates prescribe. I, sir, trust [illegible] the medical graduate [illegible] will note this, and remember it is only a "medical opinion," and value it accordingly. Some medical opinions are worth having, others not worth the time required to listen to them, far less than to read them. The above "opinion" can be [illegible] to the necessity of the case. It [illegible] I express an opinion but formulate a [illegible] which, if carried out, would [illegible] graduates could gain a living [illegible] necessity of [illegible] and providing medicines for about 4d. per week to Shepherds, Oddfellows, Foresters, Rechabites, etc., they would confer a lasting benefit on these graduates who are emanating from their schools, as well as on those who have long since passed beyond their portals, and their own time would be more usefully employed for the temporary and permanent benefit of their graduates, than in venturing to express an "opinion" on a subject, that from the very nature of their position, the general practitioner considers them ill-fitted to judge. A practitioner who lives by his profession must conform to the use and want of the locality he settles in, or he must be made of such *matériel* that his iron will can boss the whole show. Such is the "opinion" of the writer, and he dares say, of a very large body of highly intelligent and classically-educated general practitioners, many of whom could quite well, fortune favouring, fill worthily a place in the "Senatus." The august bodies whose opinion is quoted can, if they deem fit, assimilate the writer's opinion, or relegate it to the same category as most graduates, in general practice, will theirs.

### A RAPID REMEDY.

DR. A. W. ESLER (Heathcote, Victoria) writes: Within the past month an acquaintance of mine was talking to an old selector in a paddock in this district when a valuable sheep dog belonging to the old selector came up to them showing symptoms of poisoning. The selector asked his companion to catch the dog and keep his mouth open and at once urinated down the dog's throat, with the result that the dog almost immediately was sick and vomited up a strychnine fox-bait. The selector then with his knife cut off the tips of the dog's ears and allowed them to bleed. The patient made an uninterrupted recovery. In these days of modern inventions the number of articles a well-equipped general practitioner should have about him is legion. Must an always full bladder be added to the list?

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LETTERS, COMMUNICATIONS, ETC., have been received from

**A** Antiseptic; Dr. J. A. Arkwright, Halesowen; A. N. M. **B** Mr. H. N. Barnett, London; Sir H.C. Burdett, K.C.B., London; Mr. R. S. Bowker, Sydney; Mr. H. J. Bennett, Northwich; Mr. D. M. Belfrage San Francisco; Mr. G. Brown, London. **C** Dr. J. M. Clarke, Clifton; Messrs. Chivers and Sons, Histon; O. J. Currie, M.B., Maritzburg; C. R. H.; Mr. E. J. Cross, St. Neots; Dr. W. J. Collins, London; Mr. L. Cooke, Wigan; Camp; W. B. Clarke, M.B., London. **D** Dr. G. W. Davis, Sidcup. **E** Dr. F. H. Edwards, London; Ethics. **F** Fibula; Dr. R. Farrar, Chiswick; Dr. E. Fuller, New York. **G** Grouse; Mr. J. E. Gordon, Salisbury; Messrs. H. Gilbertson and Sons, London; Dr. W. T. Greene, London; Mr. J. Good, Stockport; Mr. F. D. Grayson, Rayleigh; G. P.; Dr. J. G. Glover, Pitlochry, N.B. **H** J. F. Hodgson, M.B., Halifax; Dr. J. Haddon, Denholm; Dr. C. Hailes, Clifton; Mr. H. L. Heath, Ipswich; Mr. N. W. Holmes, London; Mr. T. G. Herder Cardiff; Mr. H. G. Hine, Godalming. **I** In Doubt; I.M.S. Man. **J** Justice; Mr. J. C. Jackson, London; Dr. J. M. Johnson, Leek; Dr. W. M. M. Jackson, Epsom. **K** Dr. R. H. Kennan Dublin; Kensington. **M** Dr. S. K. Mullick, London; Mr. D. A. McCurdy, Londonderry; Dr. W. A. McLachlan, Dumbarton. **N** Mr. B. A. Nicol, London; J. H. Nicoll, M.B., Glasgow; Miss K. Newell, London. **O** Mr. B. A. Nicol, London; J. H. Nicoll, M.B., Glasgow; Miss K. Newell, London. Mr. F. Nolans, Gorey; Dr. W. Nolan, London. **O** Mr. D. Owen Manchester; Dr. W. Overend, Clacton-on-Sea; Mr. E. J. O'Meara, Sandown, I. of W.; O. G. **P** Pro Bono Publico; Dr. W. H. Pearse, Plymouth; Dr. W. R. Parker, Kendal; Prideaux's Pure Casein and Life Food Co., Manager of, London; Dr. J. C. Potter, London; Dr. J. Pringle, Manchester. **R** Dr. C. J. Renshaw, Ashton-on-Mersey; M. Richards, M.B., Walthamstow; Dr. F. M. Rowland, Lichfield; Mr. A. W. Mayo Robson, Leeds. **S** Dr. W. M. Stevens, Cardiff; Dr. H. A. Sen, Calcutta; Strefford; Mr. W. D. Spanton, Hanley. **T** T. P. Thomson, M.B., Aberkenfig; J. C. Taylor, M.B., Glasgow; Dr. L. B. Trotter, Coleford; Dr. R. S. Thomas, Exmouth. **W** Dr. R. P. White, Wigan; Mr. J. A. Wanklyn, New Malden; Mr. J. T. Williams, Barrow-in-Furness; Messrs. Wallach Bros., London; Mr. R. H. Wolstenholme, Salford Dr. N. Walker, Edinburgh. **X** X. Y. **Z** Z.; etc.

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## BOOKS, Etc., RECEIVED.

Diseases of the Stomach and their Surgical Treatment. By A. W. Mayo Robson, F.R.C.S., and B. G. A. Moynihan, M.S., F.R.C.S. London: Baillière, Tindall, and Cox. 1901. 18s.

A Practical Treatise on Diseases of the Skin. By J. N. Hyde, A.M., M.D., and F. H. Montgomery, M.D. Sixth Edition. London: Henry Kimpton. 1901. 25s.

A Treatise on Surgery. Edited by R. Park, A.M., M.D. Condensed Edition. London: Henry Kimpton. 1901. 25s.

Traité de Médecine et de Thérapeutique. Publié sous la Direction de P. Brouardel et A. Gilbert. Tome Huitième. Paris: J. B. Baillière et Fils. 1901. Fr.12.

Some Notes on the Housing Question in Finsbury. By George Newman, M.D., F.R.S.E., D.P.H. London: T. Bean and Son. 1901.

Guy's Hospital Reports. Vol. lv. London: J. and A. Churchill. 1901.

Die Sterblichkeit der Haupt und Residenzstadt Budapest in der Jahren 1891-1895 und deren Ursachen. Von Dr. J. von Korösy. Berlin: Puttkammer und Mühlbrecht. 1901. M.4.

Matière Medicale Zoologique; Histoire des Drogues d'Origine Animale. Par H. Beaugarde. Paris: C. Naud. 1901. Fr.12.

With the Scottish Yeomanry. By T. F. Dewar, M.D., B.Sc. Arbroath: T. Buncle and Co. 1901.

Dissection Outline and Index. Adapted for Use with Morris's Anatomy. By W. A. Campbell, B.S., M.D. Second Edition. London: J. and A. Churchill. 1901. 3s.

Report of the Work of the Edinburgh and East of Scotland South African Hospital. Edited by D. Wallace, C.M.G., F.R.C.S.E., and F. D. Boyd, M.D., F.R.C.P.E. Edinburgh: Oliver and Boyd. 1901. 3s. 6d.

La Chirurgia Conservatrice. Par P. Calli. Rome: Società Editrice Dante Alighieri. 1901. L.5.

*** In forwarding books the publishers are requested to state the selling price.

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# EDUCATIONAL NUMBER.

## *SESSIONS 1901-1902.*

### THE ADVANTAGES AND DISADVANTAGES OF THE PROFESSION OF MEDICINE.

To a large number of the youth of these islands the time has come for the choice of a sphere of life-work, and the thoughts of many among them are doubtless turning towards the profession of medicine. It is a critical moment, for a mistake in the choice of a calling may lead to lifelong regret, to failure, and even to social and moral shipwreck. Such a step should therefore not be taken without the fullest consideration not only of all that the profession has to offer, but of the demands it makes on those who practise it. The medical profession, like every other, has certain advantages and certain disadvantages; and those who think of entering it should carefully weigh the one against the other so that they may know as far as is possible what they have to expect. The clearer idea they have of the life they will have to lead, the more accurately they will be able to judge of their own fitness for it; and they will be better able to avoid the stones of stumbling that they may meet with in their path, if they are made aware of them beforehand. With the object of helping young runners about to enter on the race of life to avoid making a mistake in a matter of such vital importance as the choice of a profession, we here lay before them a dispassionate statement of what lies before one who adopts medicine as a career—the work he will be called upon to do, the rewards he may fairly look for, the sacrifices he may have to make, and the disappointments that may fall to his lot. It must be understood that we speak here of the man of average abilities, with no particular advantages in the way of money or influence, who takes up medicine for a livelihood, and looks for a fair return for the time and money spent on his education.

#### The Opportunities of the Profession.

Although few can hope to make a fortune by the practice of medicine, the profession has this great advantage—that none of its members who are able and willing to work need starve. A man's career will be determined to a large extent by his tastes and by the opportunities that may come in his way. Besides the open field of consulting and general practice, there is scope for the special knowledge of the doctor in many directions. Besides the Army, Navy, and Indian Medical Services, there is the Colonial Service, which cannot fail to grow in importance as it becomes more clearly realised by the powers that be that the expansion of the Empire depends more on the extermination of microbes than on the elimination of aborigines. The Public Health Service at home offers attractions to those who prefer an assured moderate income to larger but more precarious gains; the Prison Service presents a career of useful work with the certainty of a pension; and Poor-law appointments are useful "adjuvants" to general practice. Particulars as to all these spheres of practice will be found in the following pages.

#### The Profession from the Physical Standpoint.

The advantages and drawbacks of the medical profession as far as the bodily well-being of its members is concerned are different in the case of the medical student and in that of the practitioner. The health of the student tends to suffer, if he be keen and diligent, from the magnitude, variety, and difficulty of his work, and, in some cases, from the number and severity of the examinations which he has to pass; but, given a fair constitution, and considering the opportunities for open-air recreation now within general reach and the fact that he may have at least three months' holiday in the year, these risks may probably be disregarded. The risks to the health of the practitioner arise mainly from the incessant nature of his work; except for two or three weeks' holiday in the year he is actually never off duty, day or night, weekdays or Sundays. He must have what Napoleon called the "two o'clock in the morning courage"—that is to say, he must be in possession of all his faculties and ready to cope with any difficulty, even when called up in the middle of the night. And he may have unpleasantly frequent opportunities of displaying this readiness. It is within our personal knowledge that a practitioner not long ago was called up at least once every night for three weeks, and he is a type of many. The life of a general practitioner is one of the constant meeting of emergencies in which, although a kind of tolerance is developed, the continuous strain gradually wears out the strongest. He is much more exposed to infection than most people, and his bodily resistance is often at a low ebb from irregularity in meals, exposure to inclement weather, and fatigue. On the other hand, the active life of a practitioner who likes his work is itself a safeguard against dulness; the open-air life of a country doctor is almost as healthy as that of an agricultural labourer, and he knows how to preserve his own health by taking precautions against infection or by the treatment of various ailments.

#### The Profession from the Financial Standpoint.

The adoption of medicine as a profession has generally a more immediate influence on the purse of the student's relatives than on his own. The principal bearing on his own is probably in advanced life. The capital expenditure on his behalf is in his student days, and the yearly income of subsequent life may be looked upon as interest. The one advantage of the average healthy man in this relation is that his profession will bring a prac-

tically assured livelihood; he will live among people who are either being born, or struggling more or less successfully to live, or about to die, and at every stage he will find that there is a demand for services such as he alone can render which should result in an income of, say, £400 or £500 a year. There are a few who become what a business man would consider moderately rich by the exercise of their profession, but probably not 1 per cent. of all practitioners in this country achieve this measure of success. The pecuniary disadvantages of medicine as a profession are the prolongation and costliness of the term of training, and the more or less lengthy time of waiting with expenditure going on after qualification before any considerable income is received. Perhaps a more serious drawback is the large amount of what may be called the working expenses, including house, carriage, and dress, in proportion to the gross income of the man in active practice, so that the chance of being able to save, even to the extent of the return of the original capital, are in not a few cases slight: and reasonable provision for old age, after family expenses are met, is too often a practical impossibility. Apart from the result of that keen competition which is the result of overcrowding of the profession, he will probably receive from nearly all his patients the injustice of tardy payment, especially, it may be said, from the rich, who, in many cases, are serious offenders in the matter of inadequate remuneration. But what is at once the glory of the profession and one of its most serious drawbacks from a financial point of view, is that the true doctor is working year in year out to reduce the incidence of disease in general, and so directly helping to dry up his own sources of income. One bearing an honoured name in the profession said some years ago that enteric fever was worth perhaps a steady hundred a year to many a town and country practitioner, not counting the "luck of epidemics," and yet many of them had striven hard to do away with this source of income, thereby often offending not the poor but the rich, from whom their main living was expected to come.

### The Profession from the Intellectual Standpoint.

The profession of medicine has to do with facts rather than words; it is based on an advancing science, and, therefore, on the one hand brings unfading freshness and interest to its followers, and on the other, seeing how litttle time they can find for study and thought, has an awkward knack of leaving its followers far behind. But with an effort in the opposite direction they will find that its intellectual results, the fruit of experience, increase in value to the end. During the student life proper there is not only a vast, though to a great extent unconscious, acquisition of knowledge, and that of a most widely useful kind, but there is an even more valuable training in scientific method, in observation and reasoning on facts observed. There is, moreover, in fairly well-endowed persons a marvellous development of certain of the senses, particularly those of touch, sight, and hearing. All through the active life of practice the mind is kept healthy and vigorous by the exercise of the powers of judgment with a minimum of emotional bias. Yet so much time is spent with unhealthy people that there is a tendency to consider all persons more or less morbid. The man who sees the wide bearings of natural phenomena as well as those of disease—in other words, who is a naturalist as well as a pathologist—will probably be saved from the danger which certainly exists of falling into grooves of thought and action. It is, moreover, not the least subjective advantage of medicine that in every case the absolute truth may be the aim, giving liberty to its members to look at all sides of a question with freedom from trammels of creed or party.

### The Profession from the Ethical Standpoint.

It is probably a penalty of the individualistic and private nature of medical practice that doctors are proverbially sensitive and jealous in their professional relations with each other. This is merely to say that medical practitioners are made of the same clay as other men. Apart from this relish of humanity it may truly be said that in no walk of life are there greater possibilities of the highest development of character, the readiness to render assistance whenever and by whomsoever it is needed, irrespective of any other consideration; the assuagement of human sorrow as well as the mitigation of physical suffering; the courage which never shrinks from meeting infection or from incurring necessary responsibility: the perseverance which refuses to yield to the enemy until the end is obviously nigh: the generosity, discretion, cheerfulness, sympathy which are possible in the followers of the healing art, when they are realised, are beautiful in themselves and in their effects. The sympathy of such a man is not so much an emotion as a motive; it is not indeed a sentiment expressing itself in tears but a sympathy manifesting itself in active effort for the relief of the sufferer who is in need of help. The doctor, in the words of Matthew Arnold, "sees life steadily and sees it whole." It has been well said that while the lawyer sees the worst and the clergyman the best of human nature, the doctor sees it as it really is, a compound of good and bad, in which the former quality on the whole preponderates.

### The Profession from the Social Standpoint.

The medical man has little time for the culture of social amenities, and his work is so individualistic that as compared, say, with the clerical profession, a part of whose daily duty it is to cultivate them, his average conventional social status is not high. On the other hand his general influence is of the widest character, probably the widest of all, and although he has not yet developed any marked political influence, his special knowledge and trained faculty of dealing with facts have already given him a certain indirect power in the State, and must give him increasing importance as civilisation advances. A proof of the social value of a medical training, and of the way in which it fits men for leadership among their fellows may be found in the number of medical practitioners who have done good service to their country and achieved fame for themselves in the work of practical administration in new territories added to the Empire. Sir William McGregor, Sir George Robertson, Sir John Kirk, General Wood, the American Governor of Cuba, and many others could scarcely have done the work for which they will always be held in honour unless they had been doctors. The foundation of our Indian Empire was in great part laid by a surgeon, and it has since been extended almost as

largely by the lancet of the medical officer as by the sword of the conqueror.

Conclusion.

To sum up the whole matter the medical profession affords a fairly certain means of livelihood with unrivalled opportunities for that development of the faculties which, as Goethe said, is a duty of the highest importance for every man; moreover it opens a field for the exercise of his faculties in which he will have the sense of doing good with more certainty, perhaps, than in any other. Carlyle, who had no particular respect for medical science, bore witness to the nobility of the profession in the following words, which all who are thinking of joining our ranks will do well to ponder.

"He that can abolish pain, relieve his fellow mortal from sickness, he is indisputably usefullest of all men. Him savage and civilised will honour. As a Lord Chancellor under one's horsehair wig there might be misgivings, still more so, perhaps, as a Lord Primate under one's cauliflower, but if I could heal disease I should say to all men and angels without fear 'En! Ecce!'"

## MEDICINE AS A CAREER.

When a youth has chosen, or has had chosen for him, the profession of medicine for his career in life, his parents or guardians naturally wish to inform themselves as to the successive steps necessary to be taken in order that he may become a qualified practitioner, and the probable cost of those steps, as well as to gain some idea of the prospect of his being able, at the end of his pupilage, to support himself either by starting in practice on his own account, or by entering the medical service of the army or navy. They probably turn to their medical adviser for information on these points, and he, if he has arrived at middle age, knowing full well that the whole system of medical education has been changed since he was himself a student, refers to the Educational Number of one of the medical journals to see how matters stand at the present time.

Regulations of the General Medical Council.

The first thing which confronts the inquirer is that all the course along which the student has to tread has been marked out for him by the regulations of the General Council of Medical Education and Registration. Before he can even register himself as a medical student he must pass a Preliminary Examination approved by the Council, and until he has so registered himself no time spent in study or attending lectures will be allowed to count as part of the five years required by the regulations of the Council to be spent in the medical study. The curricula of the hospitals and schools where he is taught must conform to the Council's regulations, and when at length he has obtained a registrable qualification or qualifications, these must be duly recorded by the Council in its *Medical Register* before he is legally qualified to practise his profession. The Council's regulations are given in another part of this number, and may be taken as representing the minimum required from all students.

Universities and Corporations.

Even before the student passes his Preliminary Examination a decision should be come to as to whether he intends to take a degree (M.B. or M.D.) at a university, or to be content with the double diploma of the Conjoint Board of London, Scotland, or Dublin, entitling him to write after his name the letters L.R.C.P. and M.R.C.S. in England, L.R.C.P. and S. in Ireland, and L.R.C.P. and S. and L.F.P.S.G. in Scotland. If this decision should be delayed, and he should desire after commencing study to go into the degree of the London University, for instance, he will find himself seriously handicapped by having to take up again his preliminary work, when he ought to be working hard at his strictly medical studies.

Where expense is no object, the advantages of a university education are apparent to all. Friendships are formed in all these places, often among those who intend to enter other professions—friendships which are of service to the student in his after-career. Then, also, the degree of M.D., which is conferred by the Universities of Oxford, Cambridge, Durham, London, Victoria, and Birmingham in England, by those of Edinburgh, Glasgow, Aberdeen, and St. Andrews in Scotland, and the University of Dublin and the Royal University in Ireland, is a distinct advantage in practice, and is indispensable for those who seek to obtain honorary appointments to hospitals on the medical side, or to practise as consulting physicians. The licences of the Society of Apothecaries of London and of the Apothecaries' Hall of Ireland also give admission to the *Medical Register*.

For the average English student the great objection to seeking a university degree is the extra year which in practice is so often required, and the fact that, unless he happens to reside in a university town, or one in which a college connected with a university exists, his calculations as to cost must be on a higher scale than if he merely design to qualify at the Conjoint Board. At Cambridge, for instance, residence for the university year of about twenty-four weeks can hardly be accomplished under £200, while at the residential colleges connected with several of the London medical schools, as also at Owens College, Manchester, and the Yorkshire College, Leeds, the charges, varying somewhat in each place and according to the rooms selected, are all very much less than those at Cambridge. Thus, at King's College, London, the cost of the academic year for rooms and dinner varies from £50 to £60.

In Ireland the same difficulty of expense in obtaining the degree of M.D. need not arise, since, in addition to old Trinity in Dublin, there are the three Colleges of Belfast, Cork, and Galway in connection with the Royal University of Ireland, which enable the Irish student to qualify as M.D. with as little expense as he would incur in obtaining the diplomas of the Conjoint Board.

In Scotland the cheapness with which a university degree can be obtained has long been a marvel to Englishmen, and seems to be largely due to the capability of the Scotch student for restricting his personal expenses, both for living and clothing, within such narrow bounds as are rendered necessary by the *res angusti domi*, a practical lesson in self-control and self-denial which stands him in good stead in after-life. The munificence of Mr. Carnegie has now placed a university education within reach of the poorest.

### Selection of a Medical School.

The decision whether a university degree is to be sought or not having been made, the next step is to select a medical school. In the following pages particulars are given of the attractions offered by the various schools, and it would be invidious to name any one of them as affording better opportunities than another for gaining a practical knowledge of medicine, surgery, and midwifery. London, Edinburgh, and Dublin will always attract large numbers of students, but the parent or guardian may be assured that in many of the great provincial centres his son or charge will receive as good practical teaching, and be as well prepared either for the ordinary diplomas or for the higher degrees, as in the metropolitan cities.

As a general rule, the best time for entering at a medical school is May. The student then learns during his first summer session chemistry and chemical physics, also practical chemistry, and passing an examination in them at the end of the session, gets them, so to speak, out of his way before he commences anatomy and physiology in his first winter session. He may also, if he has done practical pharmacy either in the hospital dispensary or with a general practitioner, go in for examination in it, or he may defer this to a later period. By taking practical pharmacy with an outside practitioner the student will gain a useful insight into the usages of private practice, and will be better prepared to undertake the duties of an assistant should this at any time become necessary. With the winter session commence the lectures on anatomy and physiology, the dissections and tutorial classes, with always the prospect of an examination at the end of the session looming in the distance.

The student who loves his work will find the five years spent at a medical school by no means too long to make him thoroughly prepared for practising on his own account. After he has passed his first examination in anatomy and physiology at one of the Examining Boards he becomes eligible for the offices of clerk or dresser at his hospital, by holding which he is brought at once into close personal contact with the medical and surgical cases of which he is required to take note; in order that he may be able to do this in a systematic manner he receives instruction from the medical tutor at the hospital on the examination of patients and on note-taking. As clinical clerk to one of the physicians, or dresser to one of the surgeons, he has opportunities, of which he should avail himself to the utmost, of cultivating the faculty of accurate observation, of training his eyes, ears, and hands, and of learning the use of various instruments of precision. He will also at this time find occasion for applying the knowledge he has already gained of microscopic and chemical work in the ward and laboratory to the study of disease in the living, and by holding the appointment of clerk in the *post-mortem* room to the morbid appearances after death.

Whether holding these appointments or not, every student should attend as regularly as possible the medical and surgical wards and the *post-mortem* room. Among the special departments of the hospital which he will do well to attend regularly are those dealing with diseases of the eye and throat. Fascinating in themselves as studies, especially the former, they will both be found useful in after-life even by those who do not follow them as specialities. Diseases of the ear should also receive attention, and the dental department should on no account be neglected, as many a country practitioner finds it quite necessary to be able to extract teeth skilfully.

### The Cost of a Medical Education.

Most of the London hospital schools arrange that by paying a composition fee of from a little over £100 to £150, either in one sum or by instalments, the student becomes a perpetual student, and is entitled to attend all necessary lectures and hospitals for the double diploma. As cheapness here cannot be considered a special recommendation, we take the larger sum for the purpose of our estimate, and adding to it the necessary expenses for maintenance, clothing, books, anatomical parts, etc., at £100 a year for five years—a rather low estimate for London—we find that the total cost of an ordinary student at a London hospital who qualifies at the Conjoint Board would be from £650 to £700; that of a university graduate would necessarily be greater, and might amount to £1,000. Of course there is always the possibility in either case that rejections at intermediate examinations may prolong the period of studentship by an additional six months or a year, or may even render coaching necessary, and so add to the cost.

### The Prospects of a Qualified Practitioner.

Suppose our student to have become fully qualified and registered, he is next confronted with the question, What is he to do to obtain a livelihood? There are, of course, the medical services of the army and navy open by competitive examinations; or if he has filled the offices of house-physician and house-surgeon at his hospital with credit and distinction, and has also some facility for acquiring languages, he may be advised to compete for the Indian Medical Service. With regard to all these services, details will be found on pp. 562-4. Other openings which frequently occur and are advertised in the medical journals are those of assistant medical officers at lunatic asylums, or in the smaller general and special hospitals in London or the provinces, and assistant medical superintendents at the metropolitan infirmaries or fever hospitals; but these, though well enough for a year or two, ought not to be held too long, or the holder is liable to become unfitted for ordinary practice. One form of temptation which the newly qualified man cannot be too strongly cautioned against is that of the co-operative friendly societies, who seek to engage his whole services at a certain fixed salary, they providing him with drugs and a dispenser, and also with a residence or allowance in lieu of one. The offer sounds tempting enough, but those who have tried it have in many cases found themselves the mere slaves of unreasonable members, and after a short time have thrown up their appointments in disgust.

The General Medical Council has expressed disapproval of medical men taking office under these societies, and the profession as a rule fights shy of them, so that the holders find themselves looked upon as black sheep, and cut off from professional society; some of the Branches of the British Medical Association have decided not to admit the holders of such appointments to the membership of the Branch. The lot of a qualified assistant is not without its

trials, but it may be considered a happy one as compared with those who allow their medical services to be exploited by a commercial company.

The newly-qualified man who secures an assistantship with a successful practitioner in the suburbs of London or in the country may expect to receive from £100 to £150 a year indoors, with a prospect of rising, if he is found to contribute to the success of the practice, to perhaps £200 or £250. He will also usually have a percentage on the midwifery cases which he attends. At the present time, in consequence of the condemnation by the General Medical Council of the employment of unqualified assistants for any duties except such as dispensing, there is said by medical agents to be an abnormally large demand for qualified assistants and an abnormally small supply of them, showing itself, particularly at this season of the year, in a dearth of *locum tenentes* to supply the place of principals going away on holidays; but the laws of supply and demand will doubtless set this all right within a few years.

The qualified assistant will find it a distinct advantage to be able to dispense not only accurately but neatly, and with due regard to the requirements of private patients. Should the practice be a country one in England or Wales, he will find that it is principally made up of three elements, in varying proportion: (1) Private practice, which is of course as a rule the part which pays best; (2) Poor-law appointments, generally including that of public vaccinator, which, since the antiseptic method of performing this little operation, has been made obligatory, and vaccinating stations have been done away with, is better paid for than it used to be; and (3) clubs and friendly societies, which are taken more as an introduction to other practice than for the sake of the remuneration given, which, ranging from 2s. 6d. to 4s. a head per annum, is far too small—certainly the lower figure is—to pay for the actual work done. If the Conciliation Board, proposed by the General Medical Council, is able to bring about, as we have been led to hope, a rise in these contract prices to at least 4s. a year, it will have done a very considerable service both to our profession and to the friendly societies.

It will be seen that from the moment when the student becomes a registered medical practitioner, his services have a definite money value, which ought in the course of years to give him a fair interest on the capital expended on his education, and, if he be at all successful, by degrees the return of the capital itself. Should he be so fortunately situated as not to have expended the greater part of his capital already, the choice lies before him of either setting up in practice for himself, or purchasing a practice or partnership, for which, however, much judgment is required. His safest plan is to consult some well-known medical agent, and under his advice to purchase a partnership, after a year's preliminary assistantship.

## THE MEDICAL CURRICULUM.

The course of professional training through which a student who desires to enter the medical profession must pass is, under the regulations now in force, essentially the same in all cases. The Universities and medical corporations differ from each other rather in the severity of the various examinational tests which they impose than in the subjects of study, which are laid down by the General Medical Council, and are broadly the same for all. The minimum period of study after registration as a medical student is five years, whether the curriculum be passed in England, Scotland, or Ireland, and whether the student is seeking a University degree or a College diploma. Although in the case of the Universities the minimum period of study is the same as that for a diploma, some students find it necessary to spread their work over a longer period, and before deciding upon a University course the intending student should carefully consider the regulations and requirements; for his guidance in this respect particulars are given in the following pages of the regulations of the various Examining Boards. When the student has decided upon the degrees or diplomas to which he aspires, and has selected the medical school at which he desires to attend, he should communicate with the Warden or Dean, who will give him all necessary advice in regard to the mode of entrance, registration, and the details of the best way to prepare for his several professional examinations.

Before he can begin his course of medical study, the student must pass one of the recognised Preliminary Examinations in Arts, a complete list of which can be obtained from the Registrar of the General Medical Council (299, Oxford Street, W.) or from the Registrar of the Branch Council in Scotland or Ireland (48, George Square, Edinburgh, or 35, Dawson Street, Dublin). Care should be taken in the selection of the Preliminary Examination, for in the case of the student seeking a University degree he must pass the particular Preliminary Examination laid down by that University. Thus, for example, to pass the first-class College of Preceptors or the Junior Oxford or Cambridge Local Examination in the required subjects will suffice for registration, and thus allow the student to obtain college diplomas, but will not admit him to the examinations for the degrees of the University of London, for which the only recognised preliminary is the Matriculation Examination at that University. A list of recognised preliminary examinations will be found at p. 519. Immediately after passing the required Preliminary Examination the student should enter at the medical school he has selected, and register his name at the office of the General Medical Council, after which he begins to count the five years of compulsory study.

By a recent regulation the Royal Colleges of Physicians and Surgeons do not now require that a student shall have been registered by the General Medical Council before admitting him to their examinations, but he must pass a preliminary examination recognised by the Council and go through five years' course of medical study. Notwithstanding this new regulation, the student is advised not to neglect registration, since he may later on seek other diplomas, the regulations for which require it.

Under former regulations it was the almost universal custom for students to begin their professional studies in October; but under the alterations recently made in the curriculum there is now no special advantage in beginning in October. At some of the medical schools, indeed, arrangements have been made whereby the student may with advantage begin his medical course in the summer

session and commence the study of chemistry, physics, and pharmacy, if he has passed a Preliminary Examination early in the year.

It will not be necessary or desirable that we should enter into a comparison of the details of the adaptation of the curriculum to the requirements of the various Examining Boards. The following account of the curriculum and examinations for the diplomas of L.R.C.P.Lond. and M.R.C.S.Eng., given by the Conjoint Examining Board of the Royal Colleges of Physicians and Surgeons will, we hope, prove useful to the student as an example of the general course required for entrance into the profession. With slight modifications in detail the account will be applicable to the course for the degrees of the University of London, since the curriculum and examinations of the Conjoint Board have now been brought much more into line with those of the Universities than was formerly the case. Broadly speaking there are three stages with three examinations in the student's career; the first is devoted to elementary science, the second to anatomy and physiology, and the third to the purely professional subjects of medicine, surgery, and midwifery, and their special branches.

The First Examination includes chemistry and physics, elementary biology, and practical pharmacy. Pharmacy, however, may be passed separately and, indeed, may be taken at any stage of the curriculum. Generally speaking, the whole of the student's first year is devoted to the study of the subjects of the First Examination, which is usually passed in three parts: (1) Biology, at the end of the winter session in March; (2) Chemistry and physics, at the end of the summer session in July; (3) Pharmacy, which may be passed during the first year or be postponed. The First Examination of the Conjoint Board may be passed before entry at a medical school, but only if the study of biology, chemistry, and physics has been done at a science school specially recognised for the purpose, in which case one year of the five may be counted. Except under very special circumstances, therefore, the student should pass a Preliminary Examination in Arts before he begins his science work, and should take care to attend lectures and laboratory instruction in science at a properly equipped and recognised institution, such as a medical school. In the metropolitan medical schools the students of the first year, except those proceeding to the University of London degrees, generally attend lectures on anatomy and dissect whilst engaged in their science study, a plan which has the advantage of permitting them to see the applications of Science to the study of more professional subjects and of allowing them to enter for the Second Examination six months earlier than they can if they devote their first year to science at a purely science school. The student should always endeavour to complete the First Examination in his first year of study, since he must attend at a medical school for four years subsequent to passing it. Before admission to any part of the First Examination a certificate of attendance at a recognised institution on a course of instruction in the subject or subjects for which the student desires to present himself must be produced.

After passing the First Examination the student proceeds to the study of the intermediate medical subjects—anatomy and physiology. The regulations require him to attend, at a recognised medical school, a course of lectures in anatomy (six months), a course of lectures in physiology (six months), a course of practical physiology (six months), and to have dissected during two winter sessions or twelve months. The earliest time at which he can be admitted to the Second Examination is twelve months after completing the First Examination, or if he has passed the First Examination before entering at a medical school, after two winter and one summer sessions of attendance at a recognised medical school. The student who has followed the usual course and has entered at a medical school in October and completed the First Examination at the end of his first year will therefore devote the whole of his second year to anatomy and physiology, and pass the Second Examination at the end of his second summer session. He will find it greatly to his advantage to have begun anatomy and dissecting during his first year, as is the practice in the metropolitan medical schools, for one year is a short time for two such important subjects as anatomy and physiology and many students require six months longer, and additional time taken at this stage either prolongs the course or curtails the time which should be devoted to purely professional studies. In the case of those seeking the University of London degrees, two years are required after passing the Preliminary Scientific Examination instead of one year.

Having passed the Second Examination, the student begins the systematic practical study of disease by attending the out-patient rooms, at the bedside, in the operating theatre, and in the *post-mortem* room, although, if he is wise, he will have taken the opportunity from time to time during the earlier part of his course of paying occasional visits to the wards and out-patient and *post-mortem* rooms. If he has been industrious, and has passed all examinations without mishap, he has now two and a-half or three years to devote to the uninterrupted study of disease. The Third or Final Examination is passed at the end of five years from the date of registration, and at the expiration of four years from the date of passing the First Examination and of two years from the date of passing the Second Examination. One subject of the Final Examination however, namely, Midwifery, may be taken before the rest of the Examination at the end of four years of study and not earlier than one year from the date of passing the Second Examination. It is important that the student should pass each examination at the prescribed time, otherwise he will be delayed in obtaining his diploma until the lapse of the required time from the date of passing his earlier examinations, or will find it necessary to encroach upon the time which should be devoted to the more important practical subjects of his profession.

Space will not permit us to enter into full particulars of the lectures and other work required to be attended during the last two or three years, and for this information we must refer the student to the official regulations, outlines of which are given below. Speaking generally, however, he must attend lectures in medicine (six months), surgery (six months), midwifery (three months), pathology, including pathological histology and bacteriology (three months), pharmacology and therapeutics (three months), forensic medicine (three months), public health (three months)

together with practical instruction in medicine, midwifery, and surgery, operations on the dead body, hospital practice (two winter and two summer sessions), *post-mortem* demonstrations (twelve months), and clinical lectures on medicine and surgery (nine months). The student is also required to attend clinical instruction in ophthalmic surgery, insanity, and diseases of women, and to act as clinical clerk and surgical dresser for not less than six months each, and to attend twenty labours. Instruction in vaccination and attendance at a fever hospital are also necessary.

# REGULATIONS OF THE GENERAL MEDICAL COUNCIL

## IN REGARD TO THE REGISTRATION AND EDUCATION OF MEDICAL STUDENTS.

The regulations of the General Medical Council as to registration, preliminary examination, and professional education must be followed by all medical students seeking to obtain degrees or licences to practise from the universities or medical corporations of the United Kingdom. The separate regulations of the universities and corporations are so drawn up as to meet the requirements of the General Medical Council.

### PRELIMINARY EXAMINATION.

Every medical student must be registered by the General Medical Council at the commencement of his studentship. To obtain registration the student must pass a preliminary examination in general education, and must produce evidence that he has commenced medical study at a university, school of medicine, or a scientific institution recognised by a Licensing Body and approved by the Council. A degree in Arts of any British or Colonial University, or of such other Universities as may be specially recognised from time to time by the General Medical Council, is considered a sufficient testimony of proficiency. The student must make application for registration on a special form, to be had on application to the several qualifying bodies and medical schools.

The *Students' Register* is kept by the Branch Registrars, namely: in England, Mr. H. E. Allen, B.A., LL.B., 299, Oxford Street, London, W.; in Scotland, Mr. James Robertson, 54, George Square, Edinburgh; in Dublin, Mr. S. Wesley Wilson, 35, Dawson Street, Dublin.

The following is a list of examining bodies whose examination in general education will be recognised by the General Medical Council, as from January 1st, 1900, as qualifying for registration as medical or dental student:

I.—University Examinations held in the United Kingdom.

*University of Oxford:*
- Junior Local Examinations; Certificate to include all the required subjects at one time.
- Senior Local Examinations; Certificates to include the required subjects.
- Responsions; Certificate to be supplemented by others showing that the required mathematical subjects have been passed.
- Moderations; Certificates to include the required subjects.
- Final Examination for a Degree in Arts.

*University of Cambridge:*
- Junior Local Examinations; Certificate to include all the required subjects at one time.
- Senior Local Examinations; Certificates to include the required subjects.
- Higher Local Examination; Certificates to include the required subjects.
- Previous Examination; Certificates to include the required subjects.
- General Examination; Certificates to include the required subjects.
- Final Examination for a Degree in Arts.

*University of Durham:*
- Examination for Certificate of Proficiency; Certificate to include all the required subjects at one time.
- Preliminary Examination in Arts for Graduation in Medicine and Science; Certificate to include the required subjects.
- Final Examination for a Degree in Arts.

*University of London:*
- Matriculation Examination; Certificate to include the required subjects.
- Final Examination for a Degree in Arts or Science.

*Victoria University:*
- Preliminary Examination; Certificate to include all the required subjects at one time.
- Final Examination for a Degree in Arts or Science.

*University of Birmingham:*
- Matriculation Examination: Certificate to include all the required subjects at one time.

*University of Wales:*
- Matriculation Examination; Certificate to include all the required subjects at one time.
- Final Examination for a Degree in Arts.

*University of Edinburgh:*
- Junior Local Examination; Certificate to include all the required subjects at one time.
- Senior Local Examination; Certificates to include the required subjects.
- Preliminary Examination for Graduation in Medicine and Surgery; Certificate to include the required subjects.
- Preliminary Examination for Graduation in Arts or Science; Certificate to include the required subjects.
- Final Examination for a Degree in Arts or Science.

*University of Aberdeen:*
- Junior Local Examination; Certificate to include all the required subjects at one time.
- Senior Local Examination; Certificates to include all the required subjects.
- Preliminary Examination for Graduation in Medicine and Surgery; Certificate to include the required subjects.
- Preliminary Examination for Graduation in Arts or Science; Certificate to include the required subjects.
- Final Examination for a Degree of Arts or Science.

*University of Glasgow:*
- Preliminary Examination for Graduation in Medicine and Surgery; Certificate to include the required subjects.
- Preliminary Examination for Graduation in Arts or Science; Certificate to include the required subjects.
- Final Examination for a Degree in Arts or Science.

*University of St. Andrews:*
- Preliminary Examination for Graduation in Medicine and Surgery; Certificate to include the required subjects.
- Preliminary Examination for Graduation in Arts or Science; Certificate to include the required subjects.
- Final Examination for a degree in Arts or Science.
- Final Examination for the Diploma of L.L.A.

*University of Dublin:*
- Public Entrance Examination; Certificate to include the required subjects.
- Examination for the First, Second, Third, or Fourth Year in Arts; Certificate to be signed in the approved form by the Medical Registrar of the University.
- Final Examination for a Degree in Arts.

*Royal University of Ireland:*
- Matriculation Examination; Certificate to include the required subjects.
- Final Examination for a Degree in Arts or Science.

*Oxford and Cambridge Schools Examination Board:*
- Lower Certificate, to include all the required subjects at one time.
- Higher Certificate, Certificates to include the required subjects.

II.—Government Examinations Held in the United Kingdom.

*Scotch Education Department:*
- Examination for Lower Grade Leaving Certificate, to include all the required subjects at one time.
- Examinations for Higher Grade or Honours Leaving Certificate, to include the required subjects.

*Intermediate Education Board of Ireland:*
- Junior or Middle Grade Examination; Certificate to include all the required subjects at one time.
- Senior Grade Examination; Certificates to include the required subjects.

*Central Welsh Board:*
- Senior Certificate Examination.

III.—Examinations by Chartered Bodies held in the United Kingdom.

*College of Preceptors:*
- Examination for a First-class Certificate; to include all the required subjects at one time.

*Educational Institute of Scotland:*
- Preliminary Medical Examination; Certificate to include all the required subjects at one time.

*Royal Colleges of Physicians and Surgeons of Ireland:**
- Preliminary Examination; Certificate to include all the required subjects at one time.

* The Council has recommended that this Examination be discontinued.

IV.—Examinations held out of the United Kingdom.

*University of Malta:*
- Matriculation Examination.

*University of Calcutta:*
- First Examination in Arts.

*University of Madras:*
- First Examination in Arts.

*University of Bombay:*
- Matriculation Examination.

*Punjab University:*
- Intermediate Examination in Arts.

*University of Allahabad:*
- Intermediate Examination in Arts.

*Ceylon Medical College:*
- Preliminary Examination.

*University of McGill College, Montreal:*
- Matriculation Examination.

*University of Bishop's College, Montreal:*
Matriculation Examination.
*College of Physicians and Surgeons of the Province of Quebec:*
Matriculation Examination.
*Universities and Colleges of the Province of Ontario:*
Departmental Arts Matriculation Examination (conducted under the direction of the Provincial Education Department).
*University of Manitoba:*
Preliminary and Previous Examinations.
*University of New Brunswick, Fredericton:*
Matriculation Examination.
*University of Mount Allison College, New Brunswick:*
Matriculation Examination.
*College of Physicians and Surgeons of New Brunswick:*
Matriculation Examination.
*Dalhousie College and University, Halifax, Nova Scotia:*
Matriculation Examination.
*Provincial Medical Board of Nova Scotia:*
Preliminary Examination.
*Newfoundland Medical Board:*
Preliminary or Matriculation Examination.
*University of Melbourne:*
Matriculation Examination.
*University of Sydney:*
Matriculation Examination.
First Year Examination in Arts.
Senior Public Examination.
Entrance Examination for Medicine and Science.
*University of Adelaide:*
Senior Public Examination.
First Year Examination in Arts.
*University of Tasmania:*
Senior Public Examination.
*University of the Cape of Good Hope:*
Matriculation Examination.
*University of Otago:*
Preliminary Medical Examination.
*University of New Zealand:*
Preliminary Examination for Medical Students.
*Codrington College, Barbadoes:*
Examinations qualifying for a Degree in Arts as the University of Durham.
*Foreign Universities in Europe:*
The German Arbiturienten-Examen of the Gymnasia and Real-gymnasia; Examinations entitling to the French Diplomas of Bachelier ès Lettres and Bachelier ès Sciences: and other corresponding Entrance Examinations to Foreign Universities in Europe.
*Egyptian Government:*
Examination for the Secondary Education Certificate.

## PROFESSIONAL EDUCATION.

The period of professional study between the date of registration as a medical student and the date of the Final Examination for any diploma which entitles its holder to be registered under the Medical Acts must be a period of *bonâfide* study during not less than five years. The course of professional study and examinations must include the following subjects:

(i) Physics, including the Elementary Mechanics of Solids and Fluids, and the rudiments of Heat, Light, and Electricity. (ii) Chemistry, including the principles of the science, and the details which bear on the Study of Medicine. (iii) Elementary Biology. (iv) Anatomy. (v) Physiology. (vi) Materia Medica and Pharmacy. (vii) Pathology. (viii) Therapeutics. (ix) Medicine, including Medical Anatomy and Clinical Medicine. (x) Surgery, including Surgical Anatomy and Clinical Surgery. (xi) Midwifery, including Diseases peculiar to Women and to Newborn Children. (xii) Theory and Practice of Vaccination. (xiii) Forensic Medicine. (xiv) Hygiene. (xv) Mental Disease.

The first four of the five years must be passed at a School or Schools of Medicine recognised by any of the Licensing Bodies; but (*a*) the first year may be passed at a University or Teaching Institution recognised by a Licensing Body and approved by the Council where the subjects of Physics, Chemistry, and Biology are taught; and (*b*) a graduate in arts or science of any university recognised by the General Medical Council, who has spent a year in the study of Physics, Chemistry, and Biology, and has passed an examination in these subjects for the degrees in question, is held to have completed the first of the five years of medical study provided that he has registered as a medical student with the General Medical Council. It is also to be noted that a student who has previous to registration attended a course or courses of study in one or all of the subjects, Physics, Chemistry, or Biology, in any university, school of medicine, or teaching institution recognised by any of the licensing bodies, may without further attendance be admitted to examination in these subjects, provided always that such course or courses shall not be held to constitute any part of the five years' course of professional study.

The General Medical Council recommends the Licensing Bodies to require that the fifth year should be devoted to clinical work at one or more public hospitals or dispensaries, British or foreign, recognised by any of the medical authorities mentioned in Schedule (A) of the Medical Act (1858), provided that of this year six months may be passed as a pupil to a registered practitioner possessing such opportunities of imparting medical knowledge as shall be satisfactory to the medical authorities.

# THE ENGLISH UNIVERSITIES.

## THE UNIVERSITY OF OXFORD.

THERE are two degrees in Medicine (B.M. and D.M.), and two degrees in Surgery (B.Ch. and M.Ch.), which under the most favourable circumstances may be obtained in six or seven years from Matriculation.

### B.A. DEGREE.

The degrees of B.M. and B.Ch. are conferred only on candidates who have taken the B.A. degree, for which residence for three years within the University is necessary; the examinations, however, for the degrees in Arts and Medicine may be passed in any order, provided the subjoined regulations are complied with.

The degree of B.A. may be obtained in either of the following ways:

(*a*) By passing Responsions (or one of the examinations which are accepted as equivalent), Moderations, a Scripture Examination, or, in the event of a candidate objecting, an examination in some substituted book; and the Final Pass School in three subjects, two of which may be the same as two in the Preliminary Examination in Natural Science.

(*b*) By passing Responsions; an additional subject in Responsions; the Scripture Examination; some of the Preliminary Examinations in the Natural Science School, or the Preliminary Examination and the School of Jurisprudence, or the Honour School of Mathematics in the First Public Examination; and one of the Final Honour Examinations.

Responsions and the additional subject may be passed before a candidate is a member of the University;[1] Moderations and Scripture can be passed in the fourth term: the Final Pass School may be taken any time after Moderations; a Final Honour School may be taken at the end of the third or within the fourth Academical year, that is twelve or sixteen terms respectively; the Preliminary Examinations of the Natural Science School may be taken as soon as Responsions have beeen passed.

### DEGREES IN MEDICINE AND SURGERY.

To obtain the degrees of M.B., B.Ch. the following examinations must be passed:—

*Preliminary.*—The preliminary examination in (1) Mechanics and Physics, (2) Chemistry, (3) Zoology, (4) Botany, of the Natural Science School.

*Professional.*—There are two professional examinations held twice a year at the end of Michaelmas and Trinity terms. The subjects of the first B.M. examination are Organic Chemistry, Human Anatomy and Physiology, Materia Medica, and Pharmacy. Candidates who have previously obtained a First or Second Class in the Final Examination in Physiology or Chemistry are exempt from further examination in those subjects. The first examination may be passed at any time after the preliminary. The second examination may be taken at any time after the first, but usually two or three years elapse. It comprises the remaining subjects of the medical curriculum, namely, Medicine, Surgery, Midwifery, Pathology, Forensic Medicine, and Hygiene. Pathology may be offered either with or without the other subjects.

*D.M. Degree.*—A B.M. who has entered his thirty-ninth term is admitted D.M. on presentation of a dissertation approved by the appointed professors and examiners.[2]

*M.Ch. Degree.*—An examination for this degree is held in June. The candidate must have entered his twenty-seventh term.

*Fees.*—University: B.A., £16 or £17. B.M. and B.Ch., £14. D.M., £25. M.Ch., £17. Also an annual fee to the University

[1] Membership is constituted by Matriculation, and by becoming a member of a College or Hall, or a non-collegiate student.

[2] The regulations for Graduates who took the degree of B.M. previous to 1886 differ slightly.

of £2 for the first four years, reduced to £1 when the B.A. is taken. College fees (varying in amount) on taking degrees and for the first four years of membership. Tuition fees, £21 to £30. The cost of living for the four University terms cannot be stated at less than £120.

*Scholarships, etc.*—The several Colleges grant scholarships of £80 a year tenable for four years in Natural Science, Chemistry, Physics, and Biology, and also exhibitions. Particulars can be obtained on application to the College tutors. A Radcliffe Travelling Fellowship of £200 a year, tenable for three years, is conferred annually. Candidates who have been placed in the First Class in any Final Examination in the Natural Science School, whether they have taken the degree of B.M. or not, are eligible.

### Teaching.

*Preliminary Examination.*—Courses of lectures and demonstrations on Elementary Mechanics and Physics, on Inorganic Chemistry, on Animal Morphology, and on Botany are given at convenient periods, and are open to members of the University intending to proceed to a medical degree.

*Degree of B.A.*—The Course of Instruction for the Final Honour Examination in Physiology consists of lectures and practical work, and extends over two years. It is intended for students who have passed the Preliminary Examination in other subjects.

*First B.M.*—The instruction in Human Anatomy is by lectures and demonstrations; the dissecting room is open daily, and dissection may be continued during the vacation. The course of instruction in Physiology consists of a course of lectures extending over three full terms, a course of practical instruction in Histology during three terms, and a course of Elementary Physiological Chemistry, with practical laboratory work during two terms. Instruction in Organic Chemistry is given in the Chemistry Department.

*Second B.M.*—Lectures on Materia Medica and practical instruction in Pharmacology are given during the summer term, and clinical lectures and tutorial instruction and demonstrations in Physical Diagnosis in Regional Anatomy are given in each term at the Radcliffe Infirmary. Lectures on Pathology and practical instruction in Bacteriology and Pathological Histology are given in Michaelmas and Hiliary Terms in the new Pathological Laboratory.

## THE UNIVERSITY OF CAMBRIDGE.

### Bachelor of Medicine (M.B.) and Bachelor of Surgery (B.C.)

A student proceeding to this degree must (1) reside in the University during the required portion of each of nine terms, (2) pass (or obtain exemption from) the Previous Examination, (3) pursue medical study for five years.

There are three examinations for the degree of Bachelor of Medicine. They are partly in writing, partly oral, and partly practical. The examinations take place twice in the year, in the Michaelmas and Easter terms.

*The First Examination* is divided into two parts: 1. Chemistry and other branches of Physics; 2. Elementary Biology. These two parts may be taken together or separately. Before admission to this examination the candidate must have passed (or obtained exemption from) the Previous Examination. He must also produce certificates of diligent attendance on a course of lectures in Chemistry, and of practical instruction in Chemical Manipulations.

*The Second Examination* includes Human Anatomy and Physiology. Before admission to this examination the student must have passed both parts of the First Examination, must have practised dissection during six months, and must produce certificates of diligent attendance on a course of lectures on each of the following subjects: 1. Human Anatomy; 2. Physiology.

*The Third Examination* is divided into two parts, called the First part and the Second part respectively. Before presenting himself for either part, the student must have passed the Second Examination. The First part includes: (1) Pharmacology, (2) General Pathology. The Second part includes: (1) Principles and Practice of Surgery, (2) Midwifery and Diseases Peculiar to Women, (3) Principles and Practice of Physic. The student, before admission to the First part, must produce certificates of attendance on one course of lectures in each of the following subjects: Pharmacology and General Pathology; he must have attended the practice of a recognised hospital for six months. In the Second part the student may present himself for examination in any two or in all of the Sections 1, 2 and 3. A student who satisfies the examiners in two of the sections shall be exempted from further examination therein; but his name shall not be included in the list of successful candidates until he has satisfied the examiners in the remaining section. The candidates are informed of the result but their names are not published. Before admission to the Second part a candidate must produce evidence that he has completed the five years' course of medical study and obtained certificates of diligent attendance on one course of lectures in each of the following subjects: 1. Principles and Practice of Surgery. 2. Midwifery. 3. Principles and Practice of Physic. 4. Medical Jurisprudence; he must also have attended the Medical and Surgical Practice of a recognised hospital (with clinical lectures), including certain special hospitals and asylums, during three years at least; All candidates must also produce certificates of attendance during three months on (1) practical instruction in Pharmacy and Dispensing, (2) clinical instruction in Fevers at a general or special hospital, (3) proficiency in Vaccination from an authorised vaccinator appointed by the Local Government Board, (4) of having attended twenty cases of Midwifery, (5) of having at a recognised hospital acted as Dresser or House-Surgeon for six months, as Clinical Clerk or House Physician for six months, and as *Post-mortem* Room Clerk.

*Act for M.B.*—After these examinations have been passed, an Act must be kept in the schools in the following manner. The Regius Professor of Physic assigns a day and hour for keeping the Act, of which public notice has to be given eight days before. The candidate reads a thesis, composed by himself, on some subject approved by the Professor; the Professor brings forward arguments or objections for the candidate to answer, and examines him orally on questions connected with his thesis, as well as on other subjects connected with medicine of a more general nature.

*B.C.*—As the Third Examination includes operative and clinical surgery, the degree of Bachelor of Surgery is conferred upon candidates who pass it without further examination and without the Act. The degree of B.C. is thus a registrable qualification in Medicine, Surgery, and Midwifery.

### Doctor of Medicine (M.D.).

This degree may be taken by an M.B. of three years' standing, or by an M.A. of four years' standing, who has been engaged in medical study for five years at least. In the latter case certificates of attendance on lectures and hospital practice for the M.B. must be produced, and the examination for the M.B. must be passed. In either case the candidate keeps an Act by reading an original thesis upon which he is examined, and writes a short extempore essay upon one of four topics (at his choice) relating severally to Physiology, Pathology, Medicine, or State Medicine.

### Master in Surgery (M.C.).

This degree is granted to a candidate who has completed all that is required for the degree of B.C. at least two years previously; the candidate is either (1) examined in Pathology, Surgery, Surgical Anatomy, and Surgery Operations, the examinations being both written and practical; or (2) submits books or writings constituting original contributions of merit to the science or art of surgery.

### Dates, Fees, etc.

The dates of examinations are announced early in the Michaelmas and Lent terms. Each candidate pays £2 2s. to the Registrary of the University on giving notice of his intention to offer himself for either part of the First or Second, and £3 3s. for either part of the Third Examination for M.B., but any student who has been exempted from further examination in two of the sections in the Second Part shall be required to pay a fee of £2 2s. on admission or readmission to examination in the remaining section. He pays £3 3s. before that for M.C. Schedules defining the range of subjects in the First M.B. Examination, and of the Pharmaceutical Chemistry in the Second Examination; also schedules for the

necessary certificates, and a list of the schools of medicines and hospitals recognised by the University, may be obtained on application to the Registrary of the University, the Registry, Cambridge.

## THE UNIVERSITY OF LONDON.[1]

### DEGREE OF M.B.

Every candidate for the degree of M.B. is required to pass four examinations:

1. *Matriculation*, held twice a year, in January and June. This examination consists of the following subjects: (1) Latin, (*a*) translation of selected authors, (*b*) unseen translation, (*c*) translation of English into Latin, (*d*) Latin grammar; (2) one of the following languages: Greek, French, German, Sanskrit, Arabic: translation and grammar; (3) English, grammar and composition, and the history of the language and literature; History of England to the end of the seventeenth century, with the geography relating thereto; (4) Mathematics, including Arithmetic, Algebra to Quadratic Equations inclusive, Geometry, including the subjects of the first four books of Euclid, and simple deductions: (5) General Elementary Science (including a general acquaintance with the apparatus by which the elementary principles of physics can be illustrated and applied): (6) one of the following branches of science; (*a*) Elementary Chemistry, (*b*) Sound, Heat, and Light, (*c*) Magnetism and Electricity, (*d*) Botany, (*e*) Mechanics. The full text of the regulations, with the syllabus in each subject, can be obtained on application to the Registrar of the University of London, Burlington Gardens, London, W. The candidate must be 16 years of age.[2]

2. *Preliminary Scientific (M.B.) Examination.*—This examination is held for Pass and Honours in July, and for Pass only in January. It consists of two sections: (*a*) Chemistry and Physics, (*b*) General Biology. The examinations are conducted by written papers, *vivâ voce*, and by practical tests. The two sections may be taken together or separately, and the candidate who passes in one section only, though presenting himself in both, will be credited with the one in which he is successful. Honours may be taken in (*a*) Chemistry, (*b*) Experimental Physics, (*c*) Botany, (*d*) Zoology. Particulars as to the conditions of competition for honours and syllabuses of the subjects, both in the Pass and in the Honours examination, may be obtained on application to the Registrar, as above.

3. *Intermediate Examination in Medicine.*—This examination is held for Pass and Honours in July, and for Pass only in January. The candidate must have completed his nineteenth year, and must, subsequently to having passed the Preliminary Scientific Examination, have been a student in a recognised medical school for at least two years, have dissected for two sessions, have attended courses of Practical Chemistry and Practical Pharmacy, and have attended three courses of lectures in the medical school. The subjects of the examination are: Anatomy, Physiology and Histology, Organic Chemistry, Materia Medica and Pharmaceutical Chemistry. Physiology may be postponed by pass candidates till a later examination, but candidates will not be allowed to present themselves for the M.B. Examination till at least twelve months after they have passed in Physiology. The examination is conducted by written papers *vivâ voce*, and by practical examinations. Honours may be taken in any one of the subjects of the examination under conditions stated in the *Calendar*, an extract from which containing these particulars, as well as syllabuses of the subjects, can be obtained from the Registrar.

4. *M.B. Examination.*—This examination is held for Pass and Honours in October, and for Pass only in May. The candidate must have passed the Intermediate Examination at least twenty-one months earlier, must have attended lectures and hospital practice in a recognised medical school for two years, including at least two months' attendance each on lunacy and infectious diseases, one of which must be subsequent to the Intermediate Examination, must have conducted at least twenty labours, and have acquired proficiency in vaccination. After having attended Medical and Surgical Hospital practice for at least twelve months subsequent to passing the Intermediate Examination in Medicine, the student is required to attend to Practical Medicine, Surgery, or Obstetric Medicine, with special charge of patients in a Hospital, Infirmary, Dispensary, or Parochial Union during six months, such attendance not to count as part of the Surgical or Medical Hospital Practice already referred to. The examination, which is conducted by written papers, *vivâ voce*, and by practical examinations, comprises the following subjects: Pathology, Therapeutics, Hygiene, Surgery, Medicine, Obstetric Medicine, and Forensic Medicine. The candidate must pass in all the subjects. Honours may be taken in Medicine, Obstetric Medicine, and Forensic Medicine.

### DEGREES IN SURGERY.

*Bachelor of Surgery* (*B.S.*).—This degree is granted to Bachelors of Medicine after an examination held annually in December. The candidate must have attended a course of operative surgery. The examination comprises Surgical Pathology and Surgery, and the candidate is examined by written papers and clinically, and is required to operate on the dead body. Candidates who pass this examination in the first division may be examined for Honours.

*Master in Surgery* (*M.S.*).—This degree is granted, after examination, to Bachelors of Surgery of at least two years' standing; one year is, however, remitted in the case of candidates who passed the B.S. examination in the first division. The examination comprises Mental Physiology, Surgery, and Surgical Anatomy.

### DEGREE OF M.D.

*Doctor of Medicine.*—The degree of Doctor of Medicine is granted to Bachelors of Medicine of at least two years' standing; one year is remitted if the candidate passed the M.B. examination in the first division. The examination comprises Mental Physiology and Medicine, and is conducted by written papers, clinical examination, and *vivâ voce*. A candidate who presents a printed dissertation, thesis, or commentary, which shall have been approved by the examiners, will be excused the written examination.

*Doctor of Medicine in State Medicine.*—This degree is granted to Bachelors of Medicine after examination on producing evidence of having attended (*a*) to State Medicine during two years, or (*b*) to State Medicine for one year, and of having held the position of Medical Officer of Health for two years, or (*c*) of having held the position of Medical Officer of Health for three years. The examination is similar to that for the ordinary M.D., State Medicine taking the place of Medicine.

### FEES AND SCHOLARSHIPS.

The fees are as follows: Matriculation, £2; for the other examinations, in each case, £5. A rejected candidate on again presenting himself pays half the fee.

Exhibitions or Scholarships are granted to the first six candidates in honours at the Matriculation Examination, and, if sufficient merit be evinced, to the first candidates in honours at all the other examinations.

*The Sherbrooke Prize.*—This prize, founded by the late Lord Sherbrooke, will in future be awarded triennially for the best essay embodying original research in some branch of natural science. It is open to all graduates of not more than five years' standing.

## THE UNIVERSITY OF DURHAM.

The University of Durham grants six degrees in the medical faculty—M.B., M.D., B.S., M.S., B.Hy., D.Hy. The degrees of M.D., B.S., and M.S. are granted only to M.B. graduates of the University. The degrees B.Hy. and D.Hy. are granted under certain conditions to registered medical practitioners (see page 560). The University also grants a diploma in Public Health. These degrees are open both to men and women. It is hardly necessary to say that every student intending to attend the University of Durham College of Medicine, Newcastle-on-Tyne, would do well to pass the necessary examination in general knowledge, and qualify himself to obtain the degrees of the University.

### DEGREE OF BACHELOR OF MEDICINE (M.B.).

*Preliminary Examination in Arts.*—In addition to the Certificate of Registration, a candidate must (*a*) pass the Pre-

[1] The following regulations will hold good at least for the coming year.

[2] Under the new regulations shortly to be issued the matriculation examination will, under certain conditions, be dispensed with in the case of persons holding degrees from other universities of the United Kingdom.

liminary Examination in Arts for the degree in Medicine of the University of Durham, or hold a certificate of having passed one of the following examinations: (1) The first Public Examination for the Degree of B. Litt. of the University of Durham; (2) the First Public Examination in Arts of the University of Durham; (3) the University of Oxford Moderations; (4) the University of Cambridge Previous Examination with the extra subjects; (5) the University of Cambridge General Examination; (6) the Matriculation Examination of the University of London; or (*b*) be a graduate in Arts of the University of Durham, Oxford, Cambridge, London, Victoria (Manchester), Dublin, Queen's University (Ireland), Edinburgh, Glasgow, St. Andrews, Aberdeen, Calcutta, Madras, Bombay, McGill (Montreal), Sydney, Melbourne, Queen's College (Kingston), the Victoria or the Royal University of Ireland. Particulars as to the Preliminary Examination of the University of Durham (*a*) can be obtained from the Rev. Henry Ellershaw, M.A., Secretary of the Examinations, the University, Durham, to whom the fee (£1) is payable.[1] The fee for the Examination in and after January, 1902, will be £1 10s.

The Preliminary Examination in Arts is held thrice yearly, in January, March, and September, at the same time as the Registration Examination. The next examination will be commenced on September 17th, 1901.

*Curriculum.*—The curriculum extends over five years, of which at least one must be spent in attendance at the University of Durham College of Medicine, Newcastle-on-Tyne, and in the clinical practice of the Royal Infirmary there. Students are recommended to carry out the curriculum on some such plan as the following:

First Winter: Anatomy, Dissections, Chemistry, Physics, Elementary Biology. First Summer: Practical Chemistry, Practical Physics, Elementary Biology (if not attended during the Winter).

Second Winter: Anatomy, Physiology, Practical Physiology, Dissections. Second Summer: Practical Histology, Practical Pharmacy, Materia Medica, Therapeutics, and Pharmacology.

Third Winter: Medicine, Surgery, Hospital Practice, with Clinical Lectures, Midwifery and Diseases of Women and Children, Practical Midwifery, Public Health. Third Summer: Pathology, Practical Pathology, Medical Jurisprudence, Hospital Practice, with Clinical Lectures, Practical Midwifery.

Fourth Winter: Medicine, Surgery, Regional Anatomy, Hospital Practice, with Clinical Lectures. Fourth Summer: Operative Surgery, Hospital Practice, with Clinical Lectures.

Fifth Winter: Infectious Diseases and Clinical Lectures. Fifth Summer: Clinical Lectures, Mental Diseases.

*Professional Examinations.*—There are four professional examinations conducted in writing, practically, and *viva voce*, each held twice a year (April and September). *First Examination:* Elementary Anatomy and Biology, Chemistry, Physics. *Second Examination:* Anatomy, Physiology, Materia Medica, Therapeutics, and Pharmacology. *Third Examination:* Pathology, Medical Jurisprudence, Public Health, and Elementary Bacteriology. *Final Examination:* Medicine, Clinical Medicine and Psychological Medicine, Surgery and Clinical Surgery, Midwifery and Diseases of Women and Children. The *Calendar* of the University of Durham College of Medicine, Newcastle-on-Tyne, contains synopses of the subjects of the examinations and examination papers. Applications for further information should be addressed to Professor Howden at the College. A candidate who has passed the First and Second Examinations of the University will be exempt from the First and Second Examinations of the Conjoint Board in England, and will be entitled to present himself for the Final Examination of the Board on the completion of the necessary curriculum. Candidates who have completed part of their curriculum elsewhere may pass their First, Second, and Third Examinations *previously* to entering at Newcastle-upon-Tyne.

### Degree of Doctor of Medicine (M.D.).

A candidate for this degree must have been engaged in practice for at least two years subsequent to obtaining the degree of M.B. in the University of Durham. The candidate is required to prepare an essay, which must be type-written, based on original research or observation, and is subject to examination on the topic of his essay. For particulars as to the degree of M.D. for medical practitioners of fifteen years' standing, without curriculum, see page 556.

### Degrees in Surgery.

*Bachelor of Surgery.*—A candidate must have passed the examination for the degree of M.B.(Dunelm), and have attended courses of lectures on Operative Surgery and on Regional Anatomy. He is required to perform operations on the dead body, and to show practical acquaintance with the use of surgical instruments and appliances.

*Master in Surgery.*—A candidate must have obtained the degree of B.S.(Dunelm) at least two years previously, and have been engaged in practice for that period. The subjects for the examination are Principles and Practice of Surgery, Surgical Pathology, Surgical Anatomy, Surgical Operations, Clinical Surgery.

### Degrees in Hygiene (B.Hy., D.Hy.).

For the regulations as to these degrees, see pages 558-9.

### Fees.

Preliminary Arts Examination for Degrees, £1.[2] First, Second, and Third Professional Examinations (M.B.), each £5. Final (M.B.), £10. Examination for the degrees of M.D., B.S., and M.S., each £5, in addition to the University of Durham for each degree, £6 6s.

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## VICTORIA UNIVERSITY.

*Colleges.*—The Colleges of the Victoria University are Owens College, Manchester; University College, Liverpool; and the Yorkshire College, Leeds.

*Preliminary.*—A candidate for the Preliminary Examination is examined in: (1) Latin; (2) Elementary Mathematics; (3) Elementary Mechanics; (4) English Language, including Grammar and Composition; (5) *One* of the following: i, Greek; ii, French; iii, German; iv, Italian; v, Spanish. Candidates may, by special permission of the Board of Studies, substitute any other modern language for either of the subjects named under (5). Candidates who propose to present themselves in Italian or Spanish, or in a modern language not included in the list, must give notice to the Registrar on or before March 1st in the year in question. Candidates who fail in Mechanics only may pass in it separately afterwards.

*Matriculation.*—Before matriculating, which consists in signing the University Register, candidates must produce proof that they are registered students of a College of the University, or of a medical school recognised by it.

### Degrees of Bachelor of Medicine and of Surgery (M.B., Ch.B).

*Curriculum and Residence.*—Five years must be spent in study at a recognised medical school subsequent to registration as a medical student; of these five years, two must be passed in a college of the University, and one of these two years must be subsequent to passing the first M.B. Examination.

*First M.B. Examination.*—Candidates must have attended during at least one year courses of lectures and laboratory work in each of the subjects of the examination—namely: Part I. (*a*) Physics: (*b*) Chemistry. Part II. Biology (Animal and Vegetable Morphology, Physiology, and Laboratory work). The two parts may be taken together or separately.

*Second M.B. Examination.*—Candidates must have attended winter courses in Anatomy and Physiology, and a summer course in Materia Medica and Pharmacy, must have dissected for two winter sessions and one summer, and must have had practical instruction in Physiology and in Materia Medica and Pharmacy. The subjects of the examination are: (1) Anatomy; (2) Physiology; (3) Materia Medica and Pharmacy; (3) may be passed separately.

*Final M.B. Examination.*—Candidates must produce certificates of having attended, in a recognised medical school, courses of instruction in all the subjects of the examination,

[1] Candidates from Indian Universities must have passed a Matriculation Examination at one of the Indian Universities, and will have to reside for one academic year at the University of Durham College of Medicine at Newcastle-on-Tyne before presenting themselves for the M.B. Degree Examination, in accordance with the regulation on page 56 of the *Calendar*. If the Matriculation Examination at the Indian University did not embrace Latin and Persian or Sanskrit, then it will be necessary for the candidate, in addition, to produce evidence that he has passed in Latin and one of those subjects, or in Greek, within twelve months of his presenting himself for the examination for the Degree in Medicine.

[2] In and after January, 1902, the fee will be £1 10s.

which are: Part I. (*a*) Pharmacology and Therapeutics, (*b*) General Pathology and Morbid Anatomy, (*c*) Forensic Medicine and Toxicology and Public Health. Part II. (*d*) Obstetrics and Diseases of Women, (*e*) Surgery, (*f*) Medicine (including Mental Diseases and Diseases of Children). The two parts may be taken separately, and any one of the subjects of Part I may be deferred and taken with Part II.

DEGREES OF DOCTOR OF MEDICINE (M.D.).

A candidate must have obtained the degree of M.B. at least one year previously. He must present a printed dissertation, and may be examined on any subject connected therewith.

DEGREE OF MASTER OF SURGERY (CH.M.).

A candidate must have obtained the degree of M.B. at least one year previously, must have been engaged in the study of Practical Surgery in the interval, and have held a surgical appointment for not less than six months in a hospital or other public institution. He must also produce certificates of having attended special courses in Operative Surgery, Bacteriology, and Ophthalmology.

FEES AND DATES OF EXAMINATION.

Preliminary examination, £2; re-examination after failure, £1. First, Second, and Third M.B. Examinations, each £5; re-examination after rejection, £2. M.D., £10. Ch.M., £5 on examination, and £5 on the conferring of the degree.

The Preliminary Examination is held in June and September. The First M.B. Examination is held in June and also in September. The Second and Final M.B. Examinations are held in March and July, and that for the Ch.M. in July.

## UNIVERSITY OF BIRMINGHAM.

THE University of Birmingham grants the degrees of M.B. Ch.B., M.D., Ch.M., and also a B.Sc., in the subject of Public Health. In order to obtain any of these degrees it is necessary that a student shall have passed at least the first four years of his curriculum in attendance upon the classes of the University.

DEGREES OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY.

The student must have passed either the Matriculation Examination of the University or one of the following examinations, which will be accepted in lieu thereof, *for the present*. (*a*) The Previous Examination of the University of Cambridge. (*b*) Responsions of the University of Oxford. (*c*) The Matriculation Examination of any other University in the United Kingdom. (*d*) The leaving Certificate (Higher) of the Oxford and Cambridge Boards. (*e*) The Oxford or Cambridge Junior Local Examinations (First or Second Class Honours). (*f*) The Oxford or Cambridge Senior Local Examination (Honours). (*g*) The College of Preceptors Examination for First Class Certificate. Matriculation Examinations are held in June and September in each year, the Regulations for which may be obtained from the Registrar.

*First Examination.*—Chemistry and Physics. One year's lectures with practical work.

*Second Examination.*—Anatomy, Comparative Anatomy, and Physiology. Two winters' and one summer's dissections with lectures in anatomy; one winter course of lectures and practical Comparative Anatomy; one winter course and two summer courses of lectures and practical work in Physiology.

*Third Examination.*—Materia Medica and Pharmacy. One course of lectures and practical work.

*Fourth Examination* (at the end of the fourth year). Pharmacology, Pathology, Forensic Medicine, Toxicology, and Public Health. Two years' hospital work must have been accomplished, and the following course attended: Medicine and Surgery (two each), Hygiene and Public Health, Pathology, Therapeutics and Pharmacology, Midwifery, Gynæcology, Forensic Medicine.

*Final Examination.*—Medicine, Surgery, Midwifery, Gynæcology, Mental Diseases, and Ophthalmology. Attendance on General Hospital for a year after the passing of the Fourth Examination, also attendances at Fever Hospital, Lunatic Asylum, Vaccination, courses of Ophthalmology, Medical and Surgical Anatomy, and Operative Surgery.

DEGREES OF DOCTOR OF MEDICINE AND MASTER OF SURGERY.

Candidates for either of these Degrees will be required either: (A) To present a Thesis, embodying original observations in some subject embraced in the medical curriculum and approved by a Board of medical examiners to whom the Thesis will subsequently be submitted—on the report of which Board the Degree will be awarded or withheld. The candidate will be examined on the subject which he has chosen for his Thesis, and the examiners may require to see the notes of original observations on which the Thesis is based. (B) To pass a general examinations (written and practical) in Medicine or Surgery, according to the Degree desired, and, in addition, to show special proficiency in any one of the following subjects to be chosen by the candidate:

*For the Degree of M.D.*—(*a*) Infectious Diseases, (*b*) Diseases of the Chest, (*c*) Diseases of the Abdomen, (*d*) Nervous Diseases, (*e*) Diseases of Children (*f*) Midwifery, (*g*) Pathology, (*h*) Bacteriology, (*i*) Medical Jurisprudence and Toxicology, (*j*) Public Health, (*k*) Mental Diseases, (*l*) Diseases of the Skin.

*For the Degree of M.Ch.*—(*a*) Regional Surgery, (*b*) Gynæcology, (*c*) Ophthalmology, (*d*) Diseases of the Ear, Nose, and Throat.

DEGREE IN PUBLIC HEALTH.

For the Regulations for Degree and for the Diploma in the same subject see p. 558.

FEES.

Matriculation, £2; First Examination, £5; Second, £5; Third, £1; Fourth, £3; Final, £5. The composition fee for the University courses is 80 guineas.

*Entrance Scholarships.*—Sands Cox, 40 guineas awarded to the candidate who obtains the highest marks at the June Matriculation Examination. Sydenham Scholarships, one or more annually, restricted to orphan sons of medical men, elected by the Council, on the recommendation of the Medical Board of Studies 40 guineas.

The Winter Session begins on October 1st, 1901, and terminates on March 22nd, 1902.

The Summer Session commences on the 15th of April, 1902, and terminates on the 28th of June, 1902.

*Further particulars* may be obtained by application to Professor Windle, Dean of the Medical Faculty, at the University.

# THE ENGLISH COLLEGES.

THE Medical Corporations in England are the Royal College of Physicians of London, the Royal College of Surgeons of England, and the Society of Apothecaries of London. The two Royal Colleges now co-operate to hold a series of examinations, on passing which the candidate receives the diplomas of Licentiate of the Royal College of Physicians (L.R.C.P.), and Member of the Royal College of Surgeons (M.R.C.S.). The Society of Apothecaries grants its diploma separately.

## CONJOINT EXAMINING BOARD IN ENGLAND.

A candidate who desires to obtain the Licence of the Royal College of Physicians of London and the diploma of Member of the Royal College of Surgeons of England is required to pass three professional examinations, and to produce evidence of having passed through a stated course of instruction at a recognised medical school. The full period of five years must be spent in professional study, after passing the required Preliminary Examination, of which six months may be spent at an Institution recognised by the Board for instruction in Chemistry or one year may be spent at an Institution recognised by the Board for instruction in Chemistry and Biology. The candidate must pass an examination in subjects of Preliminary Education before entering the medical school (see page 519). Except in the case of Chemistry and Physics, Practical Chemistry, Practical Pharmacy, and Elementary Biology, professional studies commenced before registration will not be recognised. For institutions from which certificates are accepted by the Conjoint Board see p. 552.

### First Professional Examination.

The examination consists of three parts: (1) Chemistry and Physics, (2) Practical Pharmacy, (3) Elementary Biology.

A candidate may take this examination in three parts at different times, or he may present himself for the whole at one time, *or he may take Practical Pharmacy at any time during the curriculum.*

A candidate is required to produce evidence of having received instruction in each of the above-mentioned subjects. A candidate referred in any part or parts will not be admitted to re-examination for three months. If referred in Chemistry or Biology he must produce evidence of further instruction. A candidate who produces evidence of having passed an examination for a degree in Medicine on any of the subjects in this examination at a university in the United Kingdom, India, or a British colony will be exempt from examination on the subjects in which he has passed.

### Second Professional Examination.

The subjects of this examination are Anatomy and Physiology, and both must be passed at the same time. A candidate must have passed Parts I and III of the First Examination at least nine months (one winter and one summer session) earlier, and have attended during two winter sessions and one summer session (or fifteen months during the ordinary sessions) at a recognised medical school lectures on Anatomy, Physiology, and a course of Practical Physiology and Histology, and have dissected for twelve months during the ordinary sessions. If rejected, a candidate, before being admitted to re-examination, must continue his studies for not less than three months.

### Third or Final Professional Examination.

This examination consists of three parts: Part I, Medicine, including Medical Anatomy, Pathology, Practical Pharmacy,[1] Therapeutics, Forensic Medicine, and Public Health; Part II, Surgery, including Pathology, Surgical Anatomy, and the use of Surgical Appliances; Part III, Midwifery and Gynæcology.[2] The examination may be passed at one time or in each part separately. Evidence of attendance at courses of instruction in the subjects of the three parts must be produced, and also of attendance on twenty labours. The candidate must have passed the Second Examination two years previously, and have spent five years in professional study subsequent to passing the required Preliminary Examination. A rejected candidate must produce evidence of further instruction during three months.

All applications with reference to the examinations for the Licence of the Royal College of Physicians of London and to the diploma of Member of the Royal College of Surgeons of England should be addressed to the Secretary, Examination Hall, Victoria Embankment, London, W.C. (telegraphic address, "Conjoint," London), from which also synopses of some of the subjects can be obtained.

### Regulations for Colonial, Indian, or Foreign Candidates and University Candidates.

A person holding a colonial, Indian, or foreign qualification which entitles him to practise in the country where such qualification has been obtained, is, after a course of study and examination equivalent to those required by the Regulations of the two Royal Colleges, admissible to the Second and Third or Final Examinations without any interval. Members of an English, Scotch, or Irish university are under certain conditions eligible for admission to the Third or Final Examination two years after passing at their University the subjects included in the First and Second Examination of the Board.

A Doctor or Bachelor of Medicine or Surgery of an Indian, Colonial, or foreign University recognised for the purpose, who shall have passed at his University in the subjects of the First and Second Examinations will be eligible for admission to the Third or Final Examination two years after passing in the said subjects.

[1] Candidates who have previously passed in Practical Pharmacy will not be re-examined in that subject at the Third Examination.

[2] Candidates may present themselves for examination in Midwifery and Diseases of Women at any time after the completion of the fourth year of professional study at a medical school, and not less than one year after the passing of the Second Examination, on production of the required certificates.

### Fees, Dates, Etc.

*First Examination*, £10 10s. Re-examination, Part I, £3 3s., Parts II, III, each £2 2s. *Second Examination*, £10 10s. Re-examination, £6 6s. *Third Examination*, £21. Re-examination, Part I, Medicine, £5 5s. Practical Pharmacy, £2 2s. Part II, Surgery, £5 5s. Part III, £3 3s. Members of an English, Scottish, or Irish University, £5 5s.; for the diplomas, £36 15s.

The examinations are held in January, April, July, and October. A book of questions set at the several examinations is published annually and can be obtained from Messrs. Taylor and Francis, Red Lion Court, Fleet Street, London, E.C.

## ROYAL COLLEGE OF PHYSICIANS OF LONDON.

*Licentiates.*—Candidates for the Licence are now subject to the regulations of the Conjoint Examining Board in England.

*Members.*—The Membership of the College is granted after examination to graduates in Medicine of recognised Universities, or to Licentiates of the College, being above the age of 25 years, who do not engage in trade, do not dispense medicine, and who do not practise in partnership. Under the provisions of the Medical Act of 1886 the Diploma of Membership is not registrable at the present time as a primary qualification, and is therefore granted only to persons already registered, or who have passed the Final Examination for the Licence.

The examination, which is held in January, April, July, and October, is partly written and partly oral. It is directed to Pathology and the practice of Physic, and is conducted by the President and Censors. Candidates under 40 are examined in Latin, and either Greek, French, or German. Candidates over 40 are not so examined, and the examination in Medicine may in their case be modified under conditions to be ascertained by application to the Registrar. The fee for the Membership is £42, but if the candidate is a Licentiate the fee is the difference between what he has already paid and £42. In either case £6 6s. is paid before examination.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

*Membership.*—Candidates who registered on or after October 1st, 1884, are now subject to the regulations of the Conjoint Board.

*Fellowship.*—The Fellowship of the College of Surgeons is granted after examination to persons at least 25 years of age who have been engaged in professional studies for six years. There are two examinations—the first in Anatomy and Physiology, which may be passed after the third winter session; the second, chiefly directed to Surgery, which may be passed after six years of professional study, or after five years' professional study in the case of a Bachelor or Master of Arts, or Bachelor or Doctor of Science of a university recognised by the Council for the purpose. Candidates must pass the Final Examination of the Examining Board in England and be admitted Members of the College before admission to the Second Examination for the Fellowship, except in the case of Graduates in Medicine and Surgery of universities recognised by the College for the purpose of not less than four years' standing.

*Fees.*—At First Examination: £5 5s. At Second Examination: Members: £12 12s. Further information can be obtained on application to the Secretary, Examination Hall, Victoria Embankment, London, W.C.

## SOCIETY OF APOTHECARIES OF LONDON.

The examinations are Primary and Final. The Primary Examination is held quarterly on the first Wednesday, and on the Monday and Thursday in the same week, in the months of January, April, July, and October. The Final Examination is held monthly.

*Primary Examination.*—This examination consists of two parts: Part I includes (*a*) Elementary Biology (oral only), (*b*) Chemistry, Chemical Physics, Practical Chemistry; (*c*) Pharmacy. A synopsis indicating the range of the subjects in the examination will be sent with the regulations on application. This examination may be passed any time before or after registration as a medical student. No professional

studies commenced before registration will be recognised as part of the medical course. Should the candidate not succeed in passing in all the subjects of the examination, he will be referred only in the subject or subjects in which he fails. Part II includes Anatomy, Physiology, and Histology. This examination cannot be passed before the completion of twelve months' Practical Anatomy, with demonstrations. These subjects cannot be taken separately except in the event of the candidate having previously passed in one. A schedule of the Primary Examination, to be obtained of the Secretary, must be signed by the Dean of the Medical School or other authority. Candidates will be excused any or all the subjects of the Primary Examination on producing evidence that they have passed equivalent examinations before any examining body recognised by the Society. Candidates referred in Anatomy will be required to produce evidence of further work in the dissecting room before being admitted to re-examination.

*Final Examination* (Sec. I).—This examination consists of three parts. Part I includes: The Principles and Practice of Surgery, Surgical Pathology, Operative Manipulation, Surgical Anatomy, Instruments and Appliances. Part II includes: (*a*) The Principles and Practice of Medicine (including Therapeutics, Pharmacology, and Prescriptions), Pathology, and Morbid Histology; (*b*) Forensic Medicine, Hygiene, Theory and Practice of Vaccination, and Mental Diseases. Candidates passing either (*a*) or (*b*) will not be re-examined therein. Part III: Midwifery, Gynæcology, and Diseases of Newborn Children, Obstetric Instruments and Appliances. Sec. I of the Final Examination cannot be passed before the expiration of 45 months after registration as a medical student, during which time not less than 3 winter sessions and 2 summer sessions must have been passed at one or more of the medical schools connected with a general hospital recognised by the Society.

*Final Examination* (Sec. II).—This examination consists of two parts: Part I, Clinical Surgery: Part II, Clinical Medicine and Medical Anatomy. This examination cannot be passed before the end of the fifth year.

Information as to the details of the course of study required may be obtained on application to the Secretary, Court of Examiners, Apothecaries' Hall, Blackfriars, E.C. The Examination offices are open from 10 to 4, Saturdays 10 to 1.

*Fee*, £15 15s.—Primary Examination, £5 5s.; Final Examination, £10 10s.

# THE SCOTTISH UNIVERSITIES.

It will be convenient to give the regulations for Edinburgh more in detail, and then briefly indicate points of difference as regards the other three Universities.

## UNIVERSITY OF EDINBURGH.

The following regulations apply to all who began their studies after October 1st, 1892.

Four degrees in Medicine and Surgery are conferred—namely, Bachelor of Medicine, Bachelor of Surgery, Doctor of Medicine, and Master of Surgery. The degree of M.B. is not conferred separately from Ch.B., and *vice versâ*, but M.D. and Ch.M. are separable.

### Preliminary Examination.

This must be passed before beginning medical study: the subjects are: (1) English[1]; (2) Latin, Translation, and Parsing, Prose, Composition, Grammar, and Sentences; (3) Elementary Mathematics, Arithmetic,[2] Algebra, and Geometry, Euclid, Books i, ii, and iii (or their equivalents with easy deductions); (4) Greek (Translation, Sentences, and Grammar), or French, or German. [One paper will be set in French and one in German. The papers will be of a lower standard than those set in these subjects in the Arts and Science Preliminaries. The time allowed for such paper will be three hours. The papers will comprise questions in grammar, translations, a piece of English for translation, and some short sentences.]

Excellence in one or more subjects will in some measure compensate for deficiency in others. The examination is conducted by a Joint Board of the four Universities, and will be held from September 27th to October 4th, 1901, and from March 25th to April 4th, 1902, and these dates apply to all the Scottish Universities. The standard of examination corresponds pretty nearly to the certificate of the Scotch Education Department, or the lower certificate of the Oxford and Cambridge Schools. Candidates are required to pass in all the necessary subjects at one or not more than two examinations. The examinations of a large number of bodies are taken as equivalents of the Preliminary; these will be found on pages 450-452 of the *University Calendar* (Regulations of the Joint Board of Examiners). The fee is 10s. 6d. each time, and is to be sent with the schedule to Mr. T. Gilbert, the University Clerk, not later than September 18th, 1901, and March 1st, 1902.[3] The schedules can be had on and after September 9th, 1901, and February 15th, 1902.

### Registration.

The student must register within fifteen days after the commencement of medical study. There is no fee. Forms and information may be had from Mr. James Robertson, 54, George Square, Edinburgh, or at the office of the Faculty of Medicine.

### Professional Education.

The course extends over five years. During the first four the student must attend Elementary Botany, Elementary Zoology, Physics, Practical Chemistry, Practical Physiology, Practical Pathology, and Medical Jurisprudence and Public Health during courses of not less than 2½ months each; Practical Anatomy during two courses of not less than 5 months each; Chemistry, Anatomy, Physiology, Pathology, Surgery, Materia Medica and Therapeutics, Medicine, and Midwifery, and the Diseases of Women and Infants, during courses of not less than 5 months each. During the fifth, or final year, he must be engaged in clinical study for at least 9 months, and must attend a 9 months' course in Clinical Medicine and in Clinical Surgery. In all, before graduation he must have attended, for at least three years, a hospital which accommodates not fewer than 80 patients, and possesses a distinct staff of physicians and surgeons, and he must have acted as clerk in the medical, and dresser in the surgical wards of such a hospital. He must have had approved opportunities of studying at a hospital *Post-mortem* Examinations, Fevers, and Ophthalmology. He must have had a course of Operative Surgery. Every candidate must attend one of the three following courses: (1) A six weeks' course of clinical instruction in the Diseases of Children. (2) A course of instruction, of at least 18 meetings, in diseases of the Larynx, Ear, and Nose. (3) A course of clinical instruction in diseases of the skin, of not less than 20 meetings. He must have attended a course of 25 meetings on Practical Pharmacy, a course on Mental Diseases, been properly instructed in Vaccination by a certificated public vaccinator, have attended 12 cases of labour, or had 3 months' attendance at a lying-in hospital, and have personally conducted 6 cases. Certificates for these various courses must attest regular attendance and due performance of the work of the class. The fees vary from 1 to 4 guineas for each class, and the total minimum cost in class, examination, and other fees for M.B. and Ch.B. may be set down as £150. Two of the five years' course must be taken in the University of Edinburgh. For students beginning their course in winter there may be given the following minimum curriculum for

[1] In English no set books are prescribed, nor is a general knowledge of the life and works of the greater authors expected of candidates, but one or two questions may be set, giving an opportunity to candidates to show a knowledge of famous literary works. The historical questions will not be confined to any one period, but will cover the whole of British History, and will be set in such a way as to give an opportunity to candidates who have confined their studies to a single period to show their knowledge. A single three hours' paper will be set, containing an Essay, a Paraphrase, two questions on History, two on Geography, four on Grammar (including correction of sentences, parsing, analysis of sentences, and derivations), two of a literary and general kind. Eight answers will be required. The Essay, the Paraphrase, one answer on History, and one on Geography will be compulsory.

[2] *Arithmetic* (including Vulgar and Decimal Fractions, Proportion, Percentage, Square Root, Simple Interest); *Algebra* (including Fractions, Factors, Square Root, Equations of the First Degree, Simultaneous Equations of the First Degree, Easy Quadratics, and problems leading to the above Equations).

[3] A student whose native language is not English may substitute his own language for either French or German, and may substitute any other classical language for Latin or Greek.

the degrees of M.B. and Ch.B., with suggested order of study and examination:

First Winter Session: Chemistry, including Practical Chemistry, Physics,[4] or Elementary Zoology, Anatomy (Lectures), Examination in Chemistry, including Practical Chemistry, and either Physics or Elementary Zoology. First Summer Session: Elementary Zoology or Physics,[4] Elementary Botany. Examination in Elementary Botany and Elementary Zoology, or Physics.

Second Winter Session: Practical Anatomy, Physiology, Surgery. Second Summer Session: Practical Physiology, Practical Materia Medica, Clinical Surgery (with Dressership), Hospital.

Third Winter Session: Materia Medica, Practical Anatomy, Clinical Surgery (with Dressership), Hospital, Examination in Anatomy, Physiology, and Materia Medica and Therapeutics (the last may be postponed to the end of the following summer). Third Summer Session: Practical Pathology, Medical Jurisprudence and Public Health, Clinical Medicine, Hospital, Examination in Materia Medica and Therapeutics (if not previously taken).

Fourth Winter Session: Pathology, Medicine, Midwifery, and Diseases of Women and Children, Clinical Medicine (with Clerkships), Hospital, Examination in Pathology, and Medical Jurisprudence and Public Health (the latter may be postponed to the end of the following summer). Fourth Summer Session: Examination in Medical Jurisprudence and Public Health (if not previously taken).

Fourth Summer and Fifth Winter Session: Clinical Medicine, Clinical Surgery, Mental Diseases, Ophthalmology, *Post-mortem* Examinations, Fevers, Diseases of Children, or Diseases of the Larynx, Ear, and Nose, Diseases of the Skin, Out-practice of a Hospital, Dispensary, etc. Midwifery Cases and Practice, Vaccination, Hospital.

Fifth Summer Session: Examination in Surgery and Clinical Surgery, Medicine and Clinical Medicine, and Midwifery.

### Professional Examinations.

These are four in number, and the first three may be taken in sections as indicated above.

*First.*—Botany, Zoology, Physics, Chemistry, taken any time after the full specified course in these subjects.

*Second.*—Anatomy, Physiology, Materia Medica, and Therapeutics, at the end of the fourth winter.

*Third.*—Pathology, Medical Jurisprudence, and Public Health, at the end of the third winter.

*Final.*—Surgery, Clinical Surgery, Medicine, Clinical Medicine, and Midwifery, at the end of the fifth year.

Failure in one subject does not involve failure in the other subjects of that division. Candidates must be 21 years of age before admission to the degrees of M.B. and Ch.B.

*Examination Fees for M.B. and Ch.B.*

| | First Time. | Re-entry. |
|---|---|---|
| | £ s. d. | £ s. d. |
| Preliminary ... ... ... ... | 0 10 6 | 0 10 6 |
| First Professional ... ... ... | 6 6 0 | |
| Any two Subjects of Ditto ... | 3 3 0 | |
| Second Professional ... ... | 6 6 0 | |
| Anatomy and Physiology ... | 4 4 0 | £1 1s. each time for each subject. |
| Materia Medica, etc. ... ... | 2 2 0 | |
| Third Professional ... ... | 4 4 0 | |
| Final ... ... ... ... ... | 6 6 0 | |

### Degree of M.D.

The candidate must be M.B. and Ch.B. of Edinburgh, must have been engaged for one year in the medical wards of a hospital, or at scientific work at a recognised research laboratory, or in the military or naval medical services, or for at least two years in general practice, and must be 24 years of age. He must write a thesis on a subject not exclusively surgical, and he will be examined in Medicine, and in some of its special departments. The fee is £10 10s., and the re-entry fee £5 5s.

### Degree of Ch.M.

The candidate must be M.B. and Ch.B. of Edinburgh, have worked one year in the surgical wards of a hospital, or been engaged in scientific work, or in the military and naval medical services, or for at least two years in practice not confined to medicine. He must be 24, must submit a thesis on a subject not exclusively medical, will be examined on Surgical Anatomy, Operations on the Dead Body, Clinical Surgery, and some of its special departments. The fee is £10 10s.

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For further details the student is referred to the *University Calendar* (published by Mr. Thin, South Bridge, Edinburgh, price 3s., post free 3s. 6d.), or the medical *Programme*, price 2d., also published by Mr. Thin, or to the Dean of the Faculty of Medicine, University of Edinburgh.

[4] Three months' course.

### Regulations for Graduation of Women.

When granting recognition to medical schools or teachers for the medical instruction of women, the University Court *requires that the classes shall not be mixed classes, except on special cause shown.*

The University Court have recognised the Medical College for Women, 30, Chambers Street, Edinburgh, as a medical school whose course of instruction qualify for graduation in Medicine (but see p. 543). Every candidate must produce evidence of having satisfied the conditions with respect to the preliminary examination and registration as medical students, and will be examined in all the subjects necessary for graduation by the Examiners of the University in which she takes her degree. All students not matriculated students of the University attending this school for purposes of graduation must, at the commencement of each year of such attendance, enter their names in a book to be kept in the University for that purpose, paying a fee of the same amount as the matriculation fee paid by students of the University, and having, in respect of such payment, a right to the use of the library of the University.

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## THE UNIVERSITY OF GLASGOW.

The regulations are essentially the same as those given above for Edinburgh.

### Preliminary Examination.

The dates of the next two Examinations are the same as those given under Edinburgh. Fee, 10s. 6d. each time. Names to be given in and fee paid by September 9th, 1901, and March 7th, 1902, to the Assistant Clerk, Matriculation Office. The extent of the examination will be found under Edinburgh.

### Registration.

Printed form of application may be had from the Assistant Clerk at the Matriculation Office, and this must be transmitted to Mr. James Robertson, Scottish Branch Registrar, 54, George Square, Edinburgh.

### Professional Education.

The minimum cost is about £126, and the course is the same as at Edinburgh.

### Fees, etc.

The total examination fees for M.B., Ch.B., are the same as for Edinburgh, but are differently distributed. The fee for the First and Second is £6 6s., and for the Third and Fourth £5 5s. each. In the event of a candidate being rejected in any of these he may be admitted once to re-examination without payment of further fee, but for a second and for each subsequent re-examination a fee of £2 2s. is charged.

For further details the student is referred to the *Glasgow University Calendar* for 1901-2, published by James Maclehose and Sons, 61, St. Vincent Street, Glasgow, price 3s., post free 3s. 6d. (see also p. 544).

Queen Margaret College, which provides a course of instruction for women, is now an integral part of the University. For course of study, etc. see p. 544.

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## THE UNIVERSITY OF ABERDEEN.

The regulations are essentially the same as for Edinburgh.

### Preliminary Examination.

The next Preliminary Examination will be held on precisely the same dates as are given under Ediuburgh, and the subjects are the same. Names must be intimated, and the fee (10s. 6d.) paid ten days previously, to the Secretary of the Medical Faculty, Marischal College.

### Professional Education.

The candidate before admission to his Final Examination must produce certificates to the effect that he he has attended for at least three years the medical and surgical practice of a general hospital; attended courses in clinical medicine and clinical surgery of not less than nine months each; attended courses in mental diseases: and in practical pharmacy; and the out-practice of a hospital, or the practice of a dispensary; that he has acted for a period equal to a winter session both

as a Clinical Clerk and Surgical Dresser, that he has attended not fewer than twenty-five necropsies, and taken part in some; that he has attended for not less than three months a fever hospital of at least forty patients, and has had a three months' course on Disease in Children, and the same in Ophthalmology. The total minimum cost for M.B. and Ch.B. is about £115.

The fees for Professional examinations are: First, Second, and Third, £5 5s.; Final, £7 7s.

Further information will be given by the Secretary of the Medical Faculty, or will be got in the *University Calendar* for 1901-2, published by the University Press, Limited, Aberdeen: price 3s. 6d., or post free 3s. 10d.

## THE UNIVERSITY OF ST. ANDREWS.

*United College, St. Andrews; University College, Dundee.*

### PRELIMINARY EXAMINATION.

The dates of the next two examinations are September 27th, 1901, and March 28th, 1902. Fees, 10s. 6d. each time. Examination schedules to be returned, filled up, and fees paid by September 14th, 1901, and March 9th, 1902, to the Secretary of the University.

### REGISTRATION.

Printed forms may be obtained from the Dean, and must be sent to the Scottish Branch Registrar.

### PROFESSIONAL EDUCATION.

The United College, St. Andrews, offers classes in the subjects of the first two years of the medical curriculum; University College, Dundee, for the full period of five years.

### BURSARIES AND SCHOLARSHIPS.

*United College, St. Andrews.*

The following Bursaries and Scholarships are open to competition during session 1901-1902:

I. Bursaries for men. Two Berry Bursaries of the annual value of £40 each, tenable for three years, open to men who intend to study Arts, Science, or Medicine.

II. Bursaries for women. The Valentine Bursary of the annual value of about £25, tenable for three years, for students of Arts, Science, or Medicine, *but restricted to applicants from certain districts of Scotland.* Fourteen Taylour-Thomson Bursaries of the annual value of £20 to £30 each, tenable partly for one year, partly for two.

The Bursaries are allocated in the order of merit, the most valuable ones being given to those students who obtain the highest marks in the Preliminary Medical Examination, and who are prepared to take two *anni medici* at the United College, St. Andrews.

*University College, Dundee.*

Entrance Bursaries, open to either sex, for students of Arts, Science, or Medicine. Eleven bursaries of £15 tenable for one year.

Second Year Bursaries (Arts, Science, or Medicine, either sex). Four bursaries of £20 and three of £15, tenable for one year.

Third Year Bursaries (Arts, Science, or Medicine, either sex). Four bursaries of £20 and two of £15, tenable for one year.

Patrick Lowson Scholarship, £60 for two years, *restricted to candidates from schools in Dundee or Broughty Ferry.*

Educational Endowment Trust Bursaries. Two bursaries of £25, tenable for three years.

Bute Bursary. Annual income from £1,000.

### FEES, ETC.

The total fees for M.B. & Ch.B. are the same as for Edinburgh (22 guineas). The fee for the First Division is £6 6s., and is payable in two instalments of £3 3s. (Each payment of £3 3s. admits the candidate to two periods of examination in the same subject, but for every subsequent appearance in any subject a further payment of £1 11s. 6d. is necessary.) The fee for the Second Division of the Professional Examination is also £6 6s., and is payable in instalments at the rate of £2 2s. for each of the three subjects. Each payment of £4 4s. or £6 6s. admits the candidate to two periods of examination in the same subject, but for every subsequent appearance in any subject a further payment of £2 2s. is necessary.

### DEGREES OF M.D. AND CH.M.

The regulations and fees for these will be found under Edinburgh.

# THE SCOTTISH COLLEGES.

THE three medical corporate Colleges in Scotland—the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons in Glasgow—now co-operate to hold a series of examinations, after passing which the student is presented with the diplomas of all three Colleges. Each College grants its single qualification only to persons who already possess another and opposite qualification (see below).

## CONJOINT EXAMINATION.

A candidate who passes this series of examinations is granted the diploma of each of the co-operating bodies, and is entitled to register the three diplomas under the Medical Acts, and to write after his name—L.R.C.P.Edin., L.R.C.S.Edin., and L.F.P.S.Glasg.—qualifications which are recognised by the army, navy, and other public services.

### PRELIMINARY EXAMINATION.

The Educational Institute of Scotland conducts special preliminary examinations in Edinburgh and Glasgow for the Colleges. The next examination will be held on September 17th, 18th, and 19th, 1901, and names must be in, and fees paid, by September 14th. Full particulars may be obtained from David Ross, Esq., LL.D., Secretary to the Examining Board of the Institute, Established Church Training College, Glasgow, or to Alex Mackay, Esq., LL.D., 40, Princes Street, Edinburgh, Treasurer of the Institute. Certain other preliminary examinations, of which a list may be obtained on application, are also accepted. The entire examination must be passed at one period. A cheque on a private account will not be received in payment of fees.

### PROFESSIONAL CURRICULUM.

The course of study after registration as a medical student must occupy not less than forty-five months, which period shall include not less than four winter sessions' attendance.[1] Professional studies commenced before registration will not be recognised, except in the case of Physics, Elementary Biology, Chemistry, Practical Chemistry, and Practical Pharmacy: but graduates in arts or science of any recognised University, who have spent a year in the study of Physics, Elementary Biology, and Chemistry, and have passed examinations in these subjects for their degrees, are held to have completed the first year of medical study. The fifth year must be devoted to practical clinical work, and six months of this year may be spent as a pupil of a registered practitioner.

The following order of study is recommended as conforming generally to the sequence of examinations, but is not imperative:

First Summer: Physics, Elementary Biology. First Winter: Chemistry, Practical Chemistry, Junior Anatomy, Dissections. Second Summer: Histology, Dissections. Second Winter: Anatomy, Dissections, Physiology. Third Summer: Pathology, Materia Medica, and Hospital Practice. Third Winter: Surgery, Hospital Practice, with Clinical Surgery. Fourth Summer: Midwifery and Gynæcology, Hospital Practice, with Clinical Surgery. Fourth Winter: Medicine, Hospital Practice, with Clinical Medicine. Fifth Summer: Clinical Medicine, Medical Jurisprudence and Hygiene, Insanity, Practical Midwifery, Eye Diseases. Fifth Winter: Hospital Practice, Dispensary, Fevers, Vaccination.

Students are also recommended to study in the fifth year the following subjects: Operative Surgery, Diseases of Children, Ear and Throat, Skin.

### PROFESSIONAL EXAMINATION.

During the five years of the professional curriculum the student has to pass four examinations. Each examination is held six times in each year, four times in Edinburgh, and twice at Glasgow, and a candidate may present himself at either place. An interval of not less than three months must elapse between the passing of any two successive examinations, and an interval of two academic years must intervene between the passing of the Second and of the Final Examination. Candidates may enter for all the subjects of an examination at one period, or may enter for any division of subjects. If the latter a higher percentage is exacted. Schedules showing the course of study followed must be submitted before the examinations to one or other of the Inspectors of Certificates: in Edinburgh, Mr. James Robertson, solicitor, 54, George Square; in Glasgow, Mr. Alexander Duncan, B.A., LL.D., Faculty Hall, 242, St. Vincent Street, to whom all inquiries as to professional examinations should be addressed.

*First Examination.*—This examination may be passed at any time after registration as a medical student by any candidate who has attended the obligatory courses. The examination

[1] This regulation does not apply to students who commenced medical study before January 1st, 1892.

consists of three parts: (1) Physics, (2) Chemistry, (3) Elementary Biology, and each division may be taken separately.

*Second Examination.*—This examination may be passed at any time after the end of the second year by a student who has attended courses of Anatomy, Physiology, and Dissection for six months each. The subjects of the examination are: (1) Anatomy and (2) Physiology, including Histology. A candidate may pass in one subject while failing in the other.

*Third Examination.*—The student must have attended a course of Pathology and of Materia Medica before presenting himself for this examination, the subjects of which are (1) Pathology, (2) Materia Medica and Pharmacy. It may be taken in three divisions, or at one time, or at any time after the end of the third year; but the subjects must be entered for together.

*Final Examination.*—The student must be 21, and may not pass this examination till the end of the fifth year. The subjects are: (1) Medicine, including Therapeutics, Medical Anatomy, and Clinical Medicine; (2) Surgery, including Surgical Anatomy, Clinical Surgery, and Diseases and Injuries of the Eye; (3) Midwifery and Diseases of Women and of Newborn Children; (4) Medical Jurisprudence and Hygiene. Candidates may also be examined on Diseases of Children, Diseases of the Ear and Throat, Insanity, Vaccination, etc. The examination may be taken in divisions at different times or all at once.

TABLE SHOWING THE FEES FOR THE CONJOINT EXAMINATIONS IN SCOTLAND.

*The Figures signify Pounds Sterling.*

| | Whole Examination. | Re-entry for all Divisions. | Re-entry in one or two Divisions. | Entry for one Division. | Re-entry for one Division. |
|---|---|---|---|---|---|
| Preliminary ... ... .. | 1 | ½ | — | — | — |
| Professional First ... ... | 5 | 3 | 2½ | 2½ | 2 |
| ,, Second ... | 5 | 3 | 2 | — | — |
| ,, Third ... | 5 | 3 | 2 | — | — |
| ,, Final ... | 15 | 5 | — | 6 | 2 |

The total minimum cost for Lectures and Examination Fees for the Conjoint Examinations is about £102.

## ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

*Licence.*—The Licence is only granted as a separate qualification (in Medicine) to persons (of either sex) who already possess a recognised British, Irish, Colonial, or Indian qualification in Surgery. A candidate, who must not have been rejected within three months by any Licensing Board, is subjected to written and oral examination in Medicine, Clinical Medicine, Materia Medica, Midwifery, and Medical Jurisprudence. The fee for the examination is £15 15s.; it is held on the first Wednesday and succeeding days of each month except September and October. A special examination can be obtained on showing cause, and paying £5 5s. extra. Eight days' notice must be given by all candidates to the Secretary of the College, from whom further particulars can be obtained.

*Membership.*—The candidate, who must be a Licentiate of a College of Physicians, or graduate of a British or Irish University, and 24 years of age, is examined in (1) Medicine and Therapeutics, and in (2) one of the following subjects chosen by him: (*a*) One or more departments of Medicine specially professed; (*b*) Psychological Medicine: (*c*) General Pathology and Morbid Anatomy; (*d*) Medical Jurisprudence; (*e*) Public Health; (*f*) Midwifery; (*g*) Diseases of Women. Further particulars as to other formalities can be obtained from the Secretary. A candidate 40 years of age and ten years in practice *may be excused* any part of or all the examination by the Council. The fee paid by a Licentiate of the College is £21 if licensed prior to August 1st, 1876; if subsequently, £15 15s. Fee for others, £31 10s. The examination is held quarterly (October, January, April, and July), and application must be made a month previous to the date of examination.

*Fellow.*—A Member, aged 25, and of at least two years' standing, may be elected a Fellow: he pays £56 10s. (including stamp duty). Women are not yet admitted to the Membership or Fellowship. Under certain exceptional circumstances a practitioner of standing has been and may be elected to the Fellowship of the College without examination.

## ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

*Licence.*—The Licence is only granted as a separate qualification (in Surgery) to persons (of either sex) who already possess a recognised British, Irish, Colonial, or Indian qualification in Medicine. A candidate, who must not have been rejected by any other Licensing Board in Surgery within three months, is examined on one day by written papers, and on a subsequent day orally, on specimens in the wards of a surgical hospital, and may be required to operate on the dead body. The fee is £15 15s., of which £10 10s. will be returned to unsuccessful candidates, and is payable to Mr. James Robertson, Clerk to the College, 54, George Square, Edinburgh, from whom further particulars may be obtained, and to whom eight days' notice must be given. A special examination can be obtained on showing cause. The fee is £20, of which £10 will be returned to candidates remitted on examination.

*Fellowship.*—A candidate must have the diploma of the Royal College of Surgeons of Edinburgh, England, or Ireland, or of the Faculty of Physicians and Surgeons in Glasgow, or the surgical degree of one of the Universities of Great Britain and Ireland, must be 25 years of age, and must have been engaged in practice for two subsequent years at least. Candidates who are Licentiates of the Edinburgh Colleges are examined in Surgery, Surgical Anatomy, including Clinical and Operative Surgery, and one optional subject, and in other subjects not adequately included in the examination passed elsewhere. The optional subjects embrace: (*a*) Surgery in any of its Ophthalmic, Aural, Laryngeal, Cerebro-spinal, Dental, Abdominal, Gynæcological, Orthopædic, Venereal, or Genito-Urinary branches; (*b*) Advanced Anatomy; (*c*) Advanced Physiology; (*d*) Surgical Pathology and Morbid Anatomy; (*e*) Midwifery; (*f*) Medical Jurisprudence. The examinations are written, oral, and practical. Three weeks' notice must be given to Mr. James Robertson as above, from whom full particulars as to certificates required (among others two from Fellows of the College, of whom one must reside in Edinburgh) may be obtained. The fee is £30 to those who hold the diploma of Licentiate of the College, and £45 to others (no stamp duty is payable on the diploma). Registered practitioners, aged not less than 40, and who have been in practice for not less than twenty years, and who have distinguished themselves in their profession, may under special circumstances be elected without examination. Women are not admitted to the Fellowship.

## FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

*Licence.*—The licence is only granted as a separate qualification to candidates who already possess a recognised British, Irish, Colonial, or Indian qualification in Medicine. Candidates are examined in Surgery (including Clinical Surgery) and Surgical Anatomy. The fee is £15 15s. The examination is held quarterly. Further particulars can be obtained on application to Alexander Duncan, B.A., LL.D., Faculty Hall, St. Vincent Street, Glasgow.

*Fellowship.*—Every candidate must be qualified for two years, and aged 24. The ordinary mode of admission to the Fellowship shall be by examination and subsequent election. The subjects of examination shall be either (*a*) Medicine (including Clinical Medicine, Medical Pathology, and Therapeutics); or (*b*) Surgery (including Clinical Surgery, Operative Surgery, Surgical Anatomy, and Surgical Pathology); and one of the following at the option of the candidate: (1) Anatomy, (2) Physiology, (3) Pathology, (4) Midwifery, (5) Diseases of Women, (6) Medical Jurisprudence, Surgery, in one of its following branches, (7) Ophthalmic Surgery, (8) Aural, Laryngeal, and Nasal Surgery, (9) Dental Surgery;

Medicine in one of its following branches, (10) State Medicine, (11) Psychological Medicine, (12) Dermatology. Four examinations are held annually (January, April, July, October). Fourteen days' notice must be given. The fee is £30 unless the candidate desires to qualify to hold office, when it is £50. In the case of a Licentiate of the Faculty, £25 and £15 respectively.

Four Fellows may be elected in each year "in virtue of distinction," and without examination. They must be not less than 40 years of age, and ten years qualified.

# THE IRISH UNIVERSITIES.

## THE UNIVERSITY OF DUBLIN.

THE University of Dublin grants two degrees in Medicine (M.B. and M.D.), two in Surgery (B.Ch. and M.Ch.), and two in Midwifery (B.A.O. and M.A.O.). A candidate for any one of these degrees must be a graduate in Arts and have passed the Previous Medical Examination.

The following schools, in addition to the School of Physic, are recognised by the Board of Trinity College—the Schools of the Royal College of Surgeons in Ireland, the Schools of the Catholic University.

### PREVIOUS MEDICAL EXAMINATIONS.

This examination is divided into three parts; (1) Physics and Chemistry, (2) Botany and Zoology, (3) Anatomy, Practical Histology, and Physiology. The three parts may be taken together or passed at separate examinations. The examinations are held in November, January, May, and June.

### DEGREES IN MEDICINE.

The following conditions must be fulfilled in order to qualify for the degrees in Midwifery (B.A.O.), Surgery (B.Ch.), and Medicine (M.B.): The student must be of B.A. standing, and his name must be for at least five (academic) years on the books of the Medical School, reckoned from the date of his matriculation. He may carry on his Arts course concurrently with his Medical course, and he need not have taken his B.A. before presenting himself for his Final Medical Examinations, but he cannot have the Medical degrees conferred without the Arts degree. The following courses must be attended:—Lectures: Winter Courses: Systematic Anatomy, Descriptive Anatomy, first year; Descriptive Anatomy (with Dissections), second year; Applied Anatomy (with Dissections), Chemistry, Surgery, Physiology (two courses). Practice of Medicine, Midwifery, Pathology. Summer Courses: Practical Chemistry, Practical Histology, Botany, Zoology, Materia Medica and Therapeutics, Medical Jurisprudence and Hygiene, Operative Surgery, Practical Pathology. Term Courses: Physics (Michaelmas, Hilary, and Trinity Terms). The student must attend three courses of nine months' attendance each on the Clinical Lectures of Sir Patrick Dun's or other metropolitan hospital recognised by the Board of Trinity College. One year at a recognised London or Edinburgh hospital or two years at a recognised county infirmary or recognised Colonial hospital previous to the commencement of their metropolitan medical studies may be allowed, on special application to the Board of Trinity College, to count as equivalent to one year spent in a recognised metropolitan hospital. The following examinations must be passed: The Previous Medical or Half M.B. Examination and the Final Examination. The Final Examination is arranged as follows:—First Part:—Section A: Applied Anatomy (Medical and Surgical), paper; Applied Physiology, *vivâ voce*; Materia Medica and Therapeutics, paper and *vivâ voce*. Section B: Medical Jurisprudence and Hygiene, paper and *vivâ voce*; Medicine, paper and *vivâ voce*; Surgery, paper and *vivâ voce*; Pathology, paper and *vivâ voce*. Section A may be passed in any part of the fourth year, provided the corresponding curriculum shall have been completed, and must be passed before B can be entered for; Section B not before Trinity Term of the fourth year. Examinations for both Sections are held in November, January, or February, and May or June. Liceat fee £5 to be paid on entering for A. Second part Midwifery: Midwifery, paper and *vivâ voce*; Gynæcology, paper and *vivâ voce*; Obstetrical Anatomy, paper. Medicine—Clinical Medicine; Mental Disease, paper. Surgery: Clinical Surgery, Operations, Clinical Ophthalmology. Both Sections of the First Part must be passed at least one term before any section of the Second Part can be entered for. One section of the Second Part must be passed in Trinity Term of the fifth year or subsequently; the other two in any part of the fifth year if the corresponding curriculum be completed. Subject to this provision the sections of the Second Part may be taken in any order. Liceat fee £5 to be paid when entering for whichever section the candidate takes first.

*Degree of M.D.*—The candidate must have taken, or have been qualified to take, the degree of M.B. three years previously, and must read a thesis before the Regius Professor of Physic.

*Degree of M.Ch.*—The candidate must be a B.Ch. of not less than three years' standing, and have been engaged in practice for two years. Graduates of ten years' standing may be given a special examination.

*Degree of M.A.O.*—The candidate must have passed the M.B. and B.Ch. examinations. The examination is specially directed to Obstetrics and Practical Gynæcology.

### UNIVERSITY DIPLOMAS.

The University grants diplomas in Medicine, in Surgery, and in Obstetric Medicine. A candidate must have completed two years in Arts and five years in medical studies.

*Diploma in Medicine.*—The medical course and examination are the same as for the degree of M.B., excepting that attendance is not required on lectures on Botany and Zoology, and that the candidate is not examined in these subjects.[1]

*Diplomas in Surgery and in Obstetric Science.*—The examination and courses necessary for these diplomas are the same as for the degrees of B.Ch. and B.A.O. respectively.

### FEES.

Matriculation, 5s.: M.B., B.Ch., B.A.O., £17; M.D., £13; M.C., £11; M.A.O., £5; L.M., L.Ch., L.A.O., £11.

A schedule containing recommendations respecting the five years' medical curriculum can be obtained on application to the Registrar of the School of Physic in the University of Dublin.

## THE ROYAL UNIVERSITY OF IRELAND.

The University grants two Degrees in Medicine, M.B. and M.D.; two in Surgery, B.Ch. and M.Ch.; and two in Obstetrics, B.A.O. and M.A.O. The course for the lesser of these degrees is at least five years. Graduates in Arts or Science who have spent a year in the study of Physics, Chemistry, and Biology, and passed an examination in those subjects, are held to have completed the first of the five years.

### MEDICAL CURRICULUM.

The order in which the subjects of the medical curriculum are required to be studied is minutely stated in the *Calendar*: the general character of the curriculum is sufficiently indicated by the examination held at the termination of each year.

### MATRICULATION AND FIRST UNIVERSITY EXAMINATION.

Candidates for any degree must pass the Matriculation Examination and First University Examination.

*Matriculation.*—This examination is held for pass and honours in June, and for pass only in September. Notice of intention to compete must be sent with the fee to the Secretaries, Royal University of Ireland, Dublin, on a printed form, at least one month before each Examination. The examination consists of the following parts: I, Latin; II, any one of the following languages: Greek, French, German, Italian, Spanish, Celtic, Sanskrit, Hebrew, or Arabic; III, English Language; IV, Elementary Mathematics; V, Natural Philosophy. A schedule of the subject is contained in the *University Calendar*.[2]

*First University Examination.*—A candidate who has passed the Matriculation Examination in the autumn of one year

[1] A Diplomate in Medicine, on completing his course in Arts, and proceeding to the degree of B.A., may become a Bachelor of Medicine by attending the lectures on Botany and Zoology, passing the Previous Medical Examination in those subjects, and paying the degree fees.

[2] Dublin: Alex. Thom and Co.; London: Longmans, Green and Co. Price, 2s. 6d.; by post, 3s. Extracts can be obtained, Arts, etc., price 4d.; Medicine, price 8d.

may be admitted to the First University Examination in the summer of the next year, otherwise an academical year must elapse: The subjects are: I, Latin; II, any one of the following languages: Greek, French, German, Italian, Spanish, Celtic, Sanskrit, Hebrew, or Arabic; III, English Language and Literature; IV, Mathematics; V, Natural Philosophy. Schedules are published in the *Calendar*.

Degrees in Medicine, Surgery, and Obstetrics.

A candidate must pass four examinations subsequently to the First University Examination.

*First Examination in Medicine.*—Candidates must have matriculated at least one year previously, and must have passed the First University Examination, and completed the first year of the medical curriculum. The subjects are: Natural Philosophy, Systematic Chemistry, Botany, and Zoology. Schedules are contained in the *Calendar*. The examination is written, oral, and practical.

*Second Examination in Medicine.*—Candidates must have passed the First Examination one year previously, and are examined in Anatomy, Physiology, and Practical Chemistry. Schedules will be found in the *Calendar*.

*Third Examination in Medicine.*—Candidates must have passed the Second Examination one year previously. They are examined in Anatomy, Physiology, Materia Medica, Pharmacology, and Therapeutics.

*Examination for the Degrees of M.B., B.Ch., B.A.O.*—Candidates must have passed the Third Examination. The examination consists of three parts: (*a*) Medicine, theoretical and clinical, including Therapeutics, Mental Diseases, Medical Jurisprudence, Sanitary Science, and Medical Pathology; (*b*) Surgery, theoretical, clinical, and operative, including the use of instruments and appliances; Surgical Anatomy, Ophthalmology and Otology, Surgical Pathology, (*c*) Midwifery and Diseases of Women and Children. All candidates must enter for and go through the entire examination, but a candidate may be adjudged to have passed in any of the foregoing parts in which he satisfies the examiners. Successful candidates receive the triple degree.

*Honours.*—There are special examinations for honours held in connection with each of the last four examinations.

M.D. Degree.

A candidate must have obtained the degrees of M.B., B.Ch., B.A.O. at least three years previously, and must have spent at least two of these in practice. The candidate is examined in writing and orally in Medicine and Pathology and at the bedside.

M.Ch. Degree.

The candidate must have obtained the degrees of M.B., B.Ch., B.A.O. at least three years previously, two of which must have been spent in practice. The candidate is examined in Surgery, including Ophthalmology and Otology, and in Pathology at the bedside, and is required to write detailed reports on cases.

M.A.O. Degree.

The candidate must have obtained the degrees of M.B., B.Ch., B.A.O. at least three years previously, have been engaged in practice for two years, have had personal charge of at least 20 cases of labour, and have attended Clinical Gynæcology for three months. The candidate is examined in writing, orally, and clinically, in Midwifery, Diseases of Women and Children, and Pathology.

Exhibitions and Scholarships.

Two first class and two second class exhibitions are given after each of the four examinations in Medicine. They are of the value at the first of £20 and £10; at the second of £25 and £15; at the third of £30 and £20; and at the degree examination of £40 and £25 respectively. A travelling medical scholarship, value £100, is awarded in October, after a special examination, to a candidate who has passed the Medical Degrees Examination in that year or the preceding one. Two Dr. Henry Hutchinson Stewart Medical Scholarships are awarded annually, the one of the value of £10, tenable for three years, in the subjects of the Second Examination in Medicine; the other of the annual value of £50, tenable for three years, for Proficiency in the Knowledge of Mental Diseases. One Medical Studentship, tenable for two consecutive years, of the annual value of £200, is offered for competition in October.

Fees.

Matriculation, £1; First University Examination, £1; First, Second, and Third Examinations in Medicine, for each £1. The Examination for Degrees, £2; for admission to the Degrees, £10; for the Degrees of M.D., M.Ch., M.A.O., each £5.

# THE IRISH COLLEGES.

## CONJOINT EXAMINING BOARD OF THE ROYAL COLLEGE OF PHYSICIANS AND THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

The diplomas of these two bodies are now granted upon terms and after examinations settled between the Colleges.

*Preliminary Examination.*—Examinations in general education, which fulfil the requirements of the General Medical Council, are accepted by the Colleges (see pages 519-520). The Preliminary Examination of the College is held in spring and autumn, and seven clear days' notice must be given to Mr. Greenwood Pim, Secretary of the Committee of Management, Royal College of Physicians, 6, Kildare Street, Dublin. Preliminary Examinations for the commencement of medical study of the Royal Colleges of Physicians and Surgeons for Sessions 1901-1902 will be held on Wednesday and Thursday, September 25th and 26th, and October 30th and 31st, 1901. Prospectus can be had on application.

Professional Examinations.

There are four Professional Examinations:

The *First Professional Examination* may be passed not earlier than the end of the first winter session. It consists of four Parts: I, Chemistry and Physics; II, Practical Pharmacy; III, Biology; IV, Anatomy (Bones and Joints). The four Parts may be taken together or separately.

The *Second Professional Examination* consists of two Parts:

Part I.—A. Anatomy: B. Histology: C. Physiology, as found in Foster and Shore's *Physiology for Beginners*, omitting Chapters 5, 6, 7, and 8, and 18, 19, 20, and 21. Candidates are not admissible to this portion of the examination sooner than the end of their second winter session. No subject can be deferred, but candidates who obtain passing marks in any subject may, at the discretion of the examiners, obtain credit therefor.

Part II.—A. Advanced Physiology (textbook, Starling's *Elements of Human Physiology*); B. Materia Medica. Candidates are not admissible to this portion of the examination sooner than the end of their third winter session and they must have completed Part I before presenting themselves for Part II. Neither subject can be deferred, but candidates who pass in one and fail in the other may, at the discretion of the examiners, obtain credit for the subject passed.

The *Third Professional Examination* may be passed not sooner than the end of the fourth winter session. It consists of five parts: I, Medicine; II, Surgery; III, Pathology; IV, Therapeutics; V, Public Health and Forensic Medicine. A candidate must present himself in the first instance in I. II, III, and IV at least, but if he pass any of them he may, at the discretion of the examiners, obtain credit therefor.

The *Final Professional Examination* may be passed not sooner than the end of the fifth year of medical study. A candidate may present himself in all the subjects at one time, or in one or more in the following groups: (*a*) Medicine, including Mental Diseases, Medical Anatomy, and Clinical Medicine: (*b*) Surgery, including Ophthalmic and Aural Surgery, Clinical Surgery, Operations, and Surgical Anatomy; (*c*) Midwifery, including Diseases of Women and Newborn Children, and the Theory and Practice of Vaccination.

Curriculum.

The curriculum, as above stated, extends over five years, and its general arrangement can be gathered from the subjects of the examination which are arranged to test the student's progress. Full details may be obtained on application to the Secretary as above.

Fees.

Preliminary Examination, £2 2s., except in the case of matriculated pupils of the Royal College of Surgeons, who pay £1 1s.; re-examination, £1 1s. First Professional Examination, £15 15s.; Second, £10 10s.; Third £9 9s.; Final, £6 6s.: Re examination fee, £1 1s. for each subject, with a maximum fee of £3 3s., except in Medicine and Surgery at the Final Examination, for each of which the re-examination fee is £2 2s.

## ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

THIS College continues to issue its Licence in Medicine and the Licence in Midwifery to registered medical practitioners whose names appear on the *Medical Register* of the United Kingdom.

*Licence in Medicine.*—The subjects of examination are: Practice of Medicine, Clinical Medicine, Pathology, Medical Jurisprudence, Midwifery, Hygiene, and Therapeutics.

*Licence in Midwifery.*—The candidate must produce certificates of having attended a course of lectures on Midwifery, and of having attended Practical Midwifery and Diseases of Women, for six months, at a lying-in hospital or maternity recognised by the College; or, where such hospital attendance cannot have been obtained during any period of the candidate's course of study, of having been engaged in Practical Midwifery under the supervision of a registered practitioner holding a public medical appointment, the certificate in either case to state that no fewer than twenty labour cases have been actually attended. A registered medical practitioner of five years' standing is exempted from the examination by printed questions.

*Fees.*—Fee for the Licence to practise Medicine, £15 15s. Fee for examination for the Licences in Medicine and Midwifery, if obtained within the interval of a month, £16 16s.—to be lodged in one sum.[1] Fee for special examination for the Licence to practise Medicine, £21. Fee for examination for the Licence to practise Midwifery, £3 3s. Fee for special examination for the Licence to practise Midwifery, £5 5s. The admission fee, less the sum paid to the examiners, will be returned to rejected candidates. The examinations for these licences are held in the week following the first Friday in February, May, and November. Notice must be given, and the schedule transmitted at least four days before the first Friday in each of the above months to the Registrar of the Royal College of Physicians of Ireland, Kildare Street, Dublin, from whom further information can be obtained. A special examination can be obtained under conditions which can be ascertained from the Registrar.

*Membership.*—A candidate for the Membership of the College must be 25 years of age and a Licentiate of the College of three years' standing, or if a graduate of Arts of a university in the United Kingdom, a Licentiate of one year's standing, or if a practitioner of seven years' standing, then he is admitted to the Membership after one year. He must not be engaged in trade, dispense medicine, or practise in partnership. He must also have held during at least six months the office of resident physician or resident medical pupil, or have acted during the same period as medical clinical clerk in a recognised hospital, or have been in medical charge for at least twelve months of a public institution for the treatment of the sick. Every candidate must pass an examination in: (1) Principles of Medicine, including Pathology, Morbid Anatomy, and Medical Chemistry: (2) Practice of Medicine, including Principles of Public Health; (3) Clinical Medicine. The fee for the examination is £21, which must be lodged in the Royal Bank, Dublin, before the applications and certificates are sent in. The admission fee, less the sum paid to the examiners, will be returned to the rejected candidates. The examinations are held in January, April, July, and October.

## ROYAL COLLEGE OF SURGEONS IN IRELAND.

*The Licence.*—Candidates who hold registrable surgical diplomas including the licence of the Apothecaries' Company, London, granted since October, 1886, are admitted to examination without further evidence of study, but candidates who hold medical qualifications only, including the L.S.A. granted before October, 1886, will be required to produce certificates of two courses of lectures in Anatomy and Dissections, one course of Practical Histology, one course of lectures in Surgery, and one course of Operative Surgery.

*Subjects.*—Candidates are examined in Surgery, Clinical Surgery, Operative Surgery, Surgical Appliances, and Ophthalmic Surgery. The examination is partly written, partly *viva voce*, and partly practical. The fee is £26 5s., of which £5 5s. is retained by the College in case the candidate be unsuccessful. The fee for a special examination is £31 10s.

*Diploma in Midwifery.*—A diploma in Midwifery is granted after examination to persons possessing a registrable qualification. Candidates must produce evidence of (*a*) attendance on a course of lectures on Midwifery and Diseases of Women and Children in a recognised school; (*b*) attendance on six months' practice of a recognised lying-in hospital or recognised dispensary for lying-in women and children, and (*c*) of having conducted at least thirty labour cases. The fee for the examination is £15 15s., of which £5 5s. is retained by the College in case the candidate is unsuccessful.

### FELLOWSHIP.

A candidate for the Fellowship shall make application to the President and Council to be admitted to examination, and, if the Council decide to entertain the application, it shall lie on the table for at least a fortnight for consideration before it is put to the Council for approval. All the required evidences of study or qualification, fees, and testimonials as to character must be submitted previously to its being so considered, and the candidate shall then, if approved by the Council, be admitted to the next Sessional Examination or to a Special Examination if granted by Council, at such date as the President may fix. In order that these regulations may be carried out, candidates are required to enter their names with the Registrar at least one month before the date of examination.

*Periods of Examination.*—Sessional Fellowship Examinations commence, as far as arrangements permit, on the third Mondays in February, May, and November. Special Examinations may be granted at other times by the Council if they see fit, on sufficient cause being shown.

*Grades of Examination.*—Candidates for the Final Fellowship Examination are divided into two grades: (1) Licentiates or graduates in surgery of less than ten years' standing, (2) Licentiates or graduates in Surgery of more than ten years' standing. Students not either Licentiates or graduates in Surgery are permitted to present themselves for the Primary Examination under Grade 1 at the end of their third winter course of dissections.

*Grade 1.*—Candidates are required to pass two Examinations—Primary and Final. But candidates may present themselves for the Final Examination immediately after passing the Primary part, provided they have complied with the necessary regulations. The subjects for the Private Examination are: (*a*) Anatomy, including Dissections; (*b*) Physiology and Histology; those for the Final are: (*a*) Surgery, including Clinical and Operative Surgery; (*b*) Surgical Pathology.

*Grade 2.*—The subjects of examination are: (*a*) Surgical Anatomy, (*b*) Surgery, including Clinical and Operative Surgery, (*c*) Surgical Pathology.

*Fees—Grade 1:* For Licentiates of the College—for Primary Examination, 15 guineas; for Final Examination, 10 guineas. For Licentiates in Surgery of other licensing bodies—for Primary Examination, 25 guineas; for Final Examination, 15 guineas; for Students of the College, Primary Examination, 5 guineas; Final Examination, 20 guineas; for Students of other licensing bodies, Primary Examination, 10 guineas; Final Examination, 30 guineas. *Grade 2:* Licentiates of the College, 25 guineas; Licentiates in Surgery of other licensing bodies, 40 guineas. Extra fee for Special Examination, 10 guineas. In case of rejection, 10 guineas in addition to the Special Fee, if such has been paid, is retained by the College, and is not allowed in the fees for re-examination. In the case of Fellowship candidates who fail to present themselves for the examination at the time fixed, without having previously given at least a week's notice of their withdrawal, five guineas of the fee is retained by the College.

Regulations and entrance forms can be obtained from the Registrar at the College, Stephen's Green West, Dublin.

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## APOTHECARIES' HALL OF IRELAND.

THE Licence of this Hall is granted to students who can present certificates of having fully completed the course of study as laid down in the curriculum. The diploma of the Apothecaries' Hall of Ireland entitles the holder to be regis-

[1] Any candidate who has been rejected at the examination for the Licence in Medicine loses this privilege, and will be required to pay the full fee of £3 3s. for the Licence in Midwifery.

tered as a practitioner in Medicine, Surgery, and Midwifery; also with the privileges of the Apothecary Licence.

There are four professional examinations, the total fees in connection with which amount to 21 guineas. Ladies are eligible for the diploma.

Candidates already on the *Register* will receive the diploma of the Hall upon passing an examination in the subjects which are not covered by their previous qualification and on paying a fee of 10 guineas; if Medicine or Surgery be required 2 guineas extra will be charged.

The fees payable for each examination are as follows: First Professional, £5 5s.; Second, £5 5s.; Third, £5 5s.; Final Examination, £6 6s.

If a candidate gives three clear days' notice of inability to attend, he may present himself at the ensuing examination without any further fee.

A candidate is allowed for each professional examination which he has completed at any other Licensing Body, except the Final. If he has passed only in some of the subjects in a given examination, he has to pay the whole of the fee for that examination.

The fees for re-examination are: For each subject, £1 1s., excepting in the subjects of Chemistry, Pharmacy, Surgery, Medicine, second Anatomy, and Ophthalmology, the fees for which are £2 2s. each.

The fee for Final alone £15 15s. when the other examinations have been taken elsewhere.

All examination fees are to be lodged in the Sackville Street Branch of the Royal Bank of Ireland to the credit of the Examination Committee.

Applications and schedules, together with bank receipt for the fee must be lodged with the Registrar, Apothecaries' Hall, 40, Mary Street, Dublin, fourteen clear days before the first day of examination.

There are four Examinations, First, Second, Third, and Final. The first three are held quarterly on the third Monday in January, April, July, and October; there are only two finals in January and July. The First Examination includes Biology, Physics, theoretical and practical Chemistry, with an examination at the bench. Pharmacy is put down in this examination, but it may be taken at any of the first three examinations. Candidates holding a pharmaceutical licence are exempt from this subject. Osteology (First Anatomy) is also a subject of the first professional examination.

The subjects for the Second Professional are: Anatomy of the whole body (the examination in this subject is practical), Materia Medica, and Therapeutics, Physiology and Practical Histology.

The Third Examination consists of Pathology, Materia Medica if not taken at Second Examination, Medical Jurisprudence, Hygeine.

The Final Examination includes Medicine, oral and clinical; Surgery, including operations clinical and oral; Clinical Ophthalmic Surgery, Midwifery, and Gynæcology. Written papers are required on all these subjects.

Candidates who desire to obtain the Letters Testimonial of the Apothecaries' Hall in Ireland must, before proceeding to the Final Examination, produce evidence of having been registered as a Medical Student for fifty-seven months; also of having attended courses of instruction as follows:

One course each (winter course of six months) of the following: Anatomy (lecture), Chemistry (theoretical), Midwifery, Practice of Medicine, Physiology or Institutes of Medicine, Surgery Dissections, two courses of six months each.

Courses of three months.—Materia Medica, Medical Jurisprudence, Chemistry (practical), Practical Physiology and Histology, Operative Surgery, Physics, Clinical Ophthalmology, Biology, Clinical Instruction in Mental Disease, Pathology, Vaccination.

Medico-Chirurgical Hospital, twenty-seven months to be distributed at the student's own discretion, over the last four years of his study. The candidate may substitute for nine months in this hospital attendance six months as a resident pupil. He will be required to present a certificate of having taken notes of at least six medical and surgical cases recorded under the supervision respectively of a physician and surgeon of his hospital.

Three months' study of Fever—which may be included in his twenty-seven months' Hospital Attendance—in a Hospital containing Fever Wards, and having taken notes of five cases of Fever, namely, either Typhus, Typhoid, Scarlet Fever, Small-pox, or Measles.

Six months' practical Midwifery and Diseases of Women during the winter or summer of the third or fourth year at a recognised lying-in hospital or maternity.

Three months' practical Pharmacy, in a recognised Clinical Hospital or a recognised School of Pharmacy, or a year in the Compounding Department of a Licentiate Apothecary or a Pharmaceutical Chemist.

Each candidate before receiving his diploma must produce evidence that he has attained the age of 21 years.

Each candidate must produce evidence of having before entering on Medical Studies passed a Preliminary Examination in General Education recognised by the General Medical Council, and of having been registered by that Council as a Student in Medicine. Certificates of Medical Study will not be recognised if the commencement of the course to which the certificate refers dates more than fifteen days prior to such registration, except in the subjects of Physics and Biology. This registration is not undertaken by the Hall, but the student must apply to the Registrar of the General Medical Council that he may be so entered.

The details of the course of education required and syllabus of the Examinations will be supplied on application to the Registrar at 40, Mary Street, Dublin.

## NOTES ON MEDICAL SCHOOLS AND COLLEGES.

### LONDON.

The reconstitution of the University of London has already taken definite shape, and the immediately forthcoming *Calendar* will contain very copious information in regard to the organisation of the Schools of the University in the Faculty of Medicine. Provisionally, and for the current year, the scheme of examinations will remain as before; therefore no alteration relating to external students of the University will come into force until next year at earliest. Certain courses of study in connection with the London hospitals have been approved, and are now recognised as part of the teaching machinery of the University for its internal students. The new *Calendar* will contain a wonderfully complete list in alphabetical order of the approved teachers at the Schools, and the ground they individually cover, with times of lectures or demonstrations, and the fees required for particular courses. The list includes not only the recognised teachers but also the non-recognised attached to the respective Schools. For the present all who desire to begin medical study with a view to medical or surgical degrees in the University of London must pass its matriculation examination. The regulations relating to the examination of external students will probably receive material alteration during the coming year. Most of the medical schools have special regulations to meet the case of those who commence their studies at the Universities of Cambridge or of Oxford. This involves a residence of three years in one or other university, during which the earlier subjects of the medical curriculum—including anatomy and physiology—can be taken. It should be clearly understood that the Conjoint Board in England, consisting of the Royal Colleges of Physicians and Surgeons, does not grant a degree, but the diplomas of L.R.C.P. and M.R.C.S. The Society of Apothecaries grants a licence to practise, which is a registrable qualification. Those intending students who desire to obtain a university degree should from the first regulate their course of preliminary study in accordance with the requirements of the university which they may choose to enter.

The following particulars as to the twelve medical schools in London which provide for the full curriculum will be

useful to students who propose to prosecute their studies in the metropolis. The arrangements of the various medical schools are everywhere the same in principle, and are in conformity with the requirements of the General Medical Council and the qualifying bodies. The laboratories for chemistry, physiology and histology, and pathology have at most of the schools been greatly improved during recent years, and the facilities for instruction at the smaller as well as at the larger schools are now in most respects very complete, and are yearly extended and improved.

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### ST. BARTHOLOMEW'S HOSPITAL MEDICAL SCHOOL.

*The Hospital* contains 744 beds.

*Appointments.*—Clinical Clerks to the Physicians and to the Physician-Accoucheur, and Dressers to the Surgeons and in the Casualty Department are chosen from the students. Clerks and Dressers are also selected from the students to attend in the out-patient rooms, in the special departments (Ophthalmic, Orthopædic, Gynæcological, Laryngological, Aural, Dermatological, Electrical, and Dental), and in the *post-mortem* room. Ten House-Physicians and ten House-Surgeons are appointed annually. During their first six months of office they act as "Junior" House-Physicians and House-Surgeons, and receive a salary of £25 a year. During their second six months they become "Senior" House-Physicians and House-Surgeons, and are provided with rooms by the hospital authorities, and receive a salary of £80 a year. A resident Midwifery Assistant and an Ophthalmic House-Surgeon are appointed every six months, and are provided with rooms and receive a salary of £80 a year. Two Assistant Anæsthetists are appointed annually, and receive salaries of £120 and £100 a year respectively. An Extern Midwifery Assistant is appointed every three months, and receives a salary of £80 a year. Two Assistant Electricians are elected every six months.

There is a residential college within the precincts of the Hospital.

The ground—10 acres in area—provided for the use of the members of the Students' Amalgamated Clubs is at Winchmore Hill, within easy reach of the Hospital.

Special classes for students preparing for the Preliminary Scientific Examination will commence October 2nd. Special laboratory instruction for the D.P.H. of Cambridge, Oxford, Durham, and London, is also given. Tutorial Classes in all subjects are held in preparation for all University and other examinations without further fee.

*Entrance Scholarships.*—Five Entrance Scholarships will be awarded after an Examination to be held on September 23rd, 1901, and following days. The subjects of examination and conditions of eligibility for these Scholarships are: 1. Two Scholarships, value £75 each, in no fewer than two nor more than three of the subjects—Chemistry, Physics, Botany, Zoology, Physiology, and Anatomy, limited to students under 25 years of age who have not entered to the medical or surgical practice of any London medical school. 2. One Scholarship, value £150, in not fewer than three of the following subjects—Chemistry, Physics, Botany, Zoology, and Physiology, limited to students under 21 years of age who have not entered to the medical or surgical practice of any London medical school. 3. The Preliminary Scientific Exhibition of £50 will be given for the second best examination in the same subjects and under the same conditions as 2. 4. The Jeaffreson Exhibition in Mathematics, Latin, and one other language—Greek, French, or German—and of the value of £20. The Treasurer's Research Studentship in Pathology, of the value of £100 a year, is given by election to the most promising of the recently qualified men. The Research Student must engage in original work in the Hospital laboratories. The value of the Scholarships and Prizes is nearly £900 annually.

*Fees.*—The composition fee is 150 guineas.

*Communications* must be addressed to Dr. James Calvert, Warden of the College, St. Bartholomew's Hospital.

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### CHARING CROSS HOSPITAL MEDICAL SCHOOL.

*The Hospital*, including the Convalescent Home at Limpsfield, contains 230 beds, and is now being considerably enlarged. Students are also admitted to the practice of the Royal Westminster Ophthalmic Hospital, which contains 30 beds.

*Appointments.*—In the Medical School Demonstratorships and Assistant Demonstratorships, when they fall vacant, are open to students of the school, and carry honoraria. The Curator and Pathologist is appointed annually, and receives £100 a year. Medical and Surgical and Obstetric Registrars to the Hospital are appointed annually, the two former of whom receive £40 a year each, with luncheon in the Hospital. Six House-Physicians, six House-Surgeons, and two Resident Obstetrical Officers are appointed each year on the recommendation of the Medical Committee, after competitive examination. They are provided with board and residence in the Hospital. An assistant to the Roentgen and Electrical Departments is appointed every six months. He receives an honorarium of 12 guineas, with luncheon at the Hospital. Clinical Clerks, Dressers, and Surgical Ward Clerks are appointed in all the general and special departments of the Hospital. Arrangements can be made for students who have not entered for the entire medical curriculum to hold the posts of Clerk and Dresser. Every student holds in turn the appointment of Pathological Assistant, and assists at the *Post-mortem* Examinations. The above appointments are open without any additional fee.

*Entrance Scholarships.*—Five Entrance Scholarships, of the respective value of 100 guineas (Livingstone Scholarship, founded in memory of the late Dr. Livingstone, a former student of this school), 60 guineas, 55 guineas (Huxley Scholarship, founded in memory of the late Professor Huxley, a former student of this school), 40 guineas, and 30 guineas, are open to students commencing their medical curriculum. Three of these (100 guineas, 60 guineas, and 40 guineas) are open to all general students,[1] one (55 guineas) is reserved for the sons[1] of medical men, and one (30 guineas) is open to Dental students only. All these Scholarships are awarded annually at the commencement of each winter session, after a competitive examination in the following groups of subjects: (1) English, including Language, History, and Geography; (2) any two of the following four languages—Latin, Greek, French, and German; (3) Mathematics, including Arithmetic, Algebra, and Geometry: and Mechanics, including Statics and Dynamics; (4) Inorganic Chemistry and Experimental Physics, including Acoustics, Heat, Magnetism, Electricity, and Optics; and (5) Animal and Vegetable Biology. No candidate may offer himself for examination in more than three of the above groups of subjects, the selection of the groups being left to the candidate. Students who join in the summer session have the same privileges as regards scholarships, medals, and prizes as those who join in October of the same year. The value attached to each group of subjects is 1,000 marks. No credit will be given for any paper in which the candidate obtains less than one-fifth of the total marks. Candidates must be under 25 years of age on the first day of the examination. In the first three groups the subjects, as regards extent and the authors selected, will be the same as those chosen for the Matriculation Examination of the University of London in the June immediately preceding; in the fourth and fifth, the same as those for the Preliminary Scientific Examination of the same University. Candidates must give notice to the Librarian of their intention to compete, and of the groups in which they offer themselves for examination, on or before Saturday (10 A.M.), September 21st, 1901. The examination will commence at the school on Monday, September 23rd, at 9 A.M., and will continue during the two following days. The successful candidates will be required to enter forthwith for their complete medical education at the Charing Cross Hospital.

*One Epsom Scholarship*, giving a free education, is, each winter session, placed at the disposal of the Royal Medical Benevolent College at Epsom, to be competed for by foundation scholars who have passed the Preliminary Scientific M.B. Examination of the University of London.

*Two University Scholarships*, of the value of 60 guineas each, are open to students from the University of Oxford who have passed the First M.B. Examination, to students of the University of Cambridge who have passed the Second M.B. Examination, and to students of the University of London who have passed the Intermediate Examination in Medicine, and who

[1] Those who enter for their entire medical education.

have not entered at any London Medical School. Subjects: Anatomy and Physiology, including Histology. The examination for these Scholarships, which will be partly practical, will be held at the school on September 25th and 26th. Candidates must give notice to the Librarian of their intention to compete on or before Monday (2 P.M.), September 23rd, 1901. The successful candidates will be required to enter forthwith at the Hospital for the completion of their curriculum.

*Fees.*—The composition fee is 110 guineas.

Further information may be had of the Dean, Mr. Herbert F. Waterhouse, Charing Cross Hospital Medical School, Chandos Street, Strand, London, W.C.

### St. George's Hospital Medical School.

*The Hospital* contains 351 beds, of which 205 are devoted to Surgical and 146 to Medical cases.

*Appointments.*—Four House-Physicians and Four House-Surgeons are appointed quarterly from among the perpetual pupils; they hold office for six months in each capacity in succession, and reside and board in the hospital free of expense. An Obstetric Assistant is appointed half-yearly; he must be a legally qualified practitioner. He resides and boards in the hospital, and receives a salary at the yearly rate of £100. A Surgery Officer is appointed half-yearly. He receives a salary of £100. A Curator of the Pathological Museum is appointed annually, with a salary of £100; and an Assistant Curator, with a salary of £50. A Medical and a Surgical Registrar are appointed annually from among the senior pupils, each with a salary of £50; and another Medical Registrar with a salary of £30. A Senior Anæsthetist is appointed annually with a salary of £50 a year; and two Junior Anæsthetists with salaries of £30. As the result of a competitive examination held every three months, those students who desire to proceed to the offices of House-Physician and House-Surgeon are appointed as assistants during twelve months in the special and general divisions of the out-patient departments. Three Demonstrators of Anatomy are appointed annually, each with a salary of £50. Each pupil of the Hospital must act as Clinical Clerk and Dresser before a certificate of attendance on hospital practice can be signed.

*Entrance Scholarships.*—The following Entrance Scholarships are offered for competition: 1. A scholarship, value £150, for the sons of medical men who have entered the school during the current year. 2. Two scholarships, each of £50, open to all students commencing their studies and one open only to sons of officers in His Majesty's service who have met their death in the South African war. The subjects for these four scholarships will be Latin, Greek, French, German, Mathematics, Physics, Chemistry, and Biology. Three of these to be taken at option. The examinations for all these scholarships will be held on September 24th to 27th. 3. Two scholarships, value £85, for students who have entered during the current year, and have passed or completed the curriculum for the Oxford First M.B. or the Cambridge Second M.B. Subjects for these three Scholarships: Organic Chemistry, Anatomy, Physiology, Zoology, Botany; any two to be taken at option. 4. A Scholarship, value £85, for students of Provincial University Colleges in England and Wales who have passed or completed the curriculum for the first M.B. of London or the corresponding examinations of the Victoria University or of Durham. The examinations for these Scholarships will commence on September 24th.

*Fees.*—The composition fee is £150.

*Further information* may be obtained from the Dean of the School; from any of the Lecturers; or from Mr. F. J. Marshall, the Resident Medical Officer at the Hospital.

### Guy's Hospital Medical School.

*The Hospital* contains more than 600 beds, of which 550 are in constant occupation. Thirty-six beds are set apart for diseases of the eye, and 40 for the most urgent and interesting medical cases, which form the subjects of the weekly clinical lectures. One of the wards containing 40 beds, which has been closed for fifteen years, has been reopened for the reception of cases of diseases of women. A few beds are reserved for cases of difficult labour.

*Appointments.*—All appointments are given without extra payment, and according to the merits of the candidates, as determined by a committee of the medical staff. Eight assistant house-physicians, 8 house-physicians, 24 assistant house-surgeons, and 8 house-surgeons are appointed annually. The house-physicians and house-surgeons hold office for six months each, and receive free board and lodging in the college, as also do the resident obstetric assistants, of whom 8 are appointed annually, each holding office for six months. Every student is provided with rooms and commons in the hospital during the period of his "take in" as dresser. In addition to the clerkships and dresserships in the medical and surgical wards, students are appointed to the posts of clinical assistant, dresser, or clerk in the special departments of ophthalmology, laryngology, gynæcology, dermatology, otology, electricity, anæsthetics, and dentistry. More than 150 additional appointments have been added to the list of those annually open to students of the hospital, the majority of them being in the special departments.

*The College*, fronting the east gate of the Hospital, provides accommodation for 60 resident students. It contains a dining hall, reading rooms, library of general literature, and gymnasium for the use of the residents and of the members of the Clubs' Union. The athletic ground is easily accessible.

*Scholarships, Prizes, etc.*—Two Entrance Scholarships in Arts: One of the value of £100 open to candidates under 20 years of age, and one of £50 open to candidates under 25. Subjects: English, Latin, Arithmetic, Algebra, Euclid, and either Greek, French, or German. Three Entrance Scholarships in Science: One of £150 and one of £60, open to candidates under 25, and one of £50 to University students who have completed their study of Anatomy and Physiology. Subjects: Anatomy, Physiology, Chemistry, Practical Chemistry, Biology, and Physics. These examinations begin on September 24th; names must be sent in on or before September 16th. Junior prizes for general proficiency, £20, £15, £10; Arthur Durham prizes for dissection, £15, £5; Hilton prize for dissection, £5; Michael Harris prize for Anatomy, £10; Sands Cox scholarship for Physiology, £15 for three years: Wooldridge Memorial prize for Physiology, £10. Senior prizes for general proficiency, £20, £15, £10; Bleaney prize for pathology, £34; Treasurer's gold medal in medicine, Treasurer's gold medal in surgery, and the Golding-Bird gold medal and scholarship (£20) for sanitary science are awarded annually after competitive examination. The Gull Studentship in pathology and the Beaney scholarship in materica medica, of the annual value of £150 and £31 10s. respectively, are awarded without examination to enable research to be carried on in these subjects.

*Practical Classes.*—An advanced course of Practical Physiology is held in the new laboratories during the winter session and, in association with the advanced course of Practical Anatomy, is designed to prepare candidates for the University and Fellowship examinations in these subjects.

Special classes are held for the Preliminary Scientific examination of the London University throughout the year. Two courses of laboratory instruction for the D.P.H. are conducted annually.

*Fees.*—The composition fee is 150 guineas.

The Clubs' Union recreation ground, situated at Honor Oak Park, is reached from the Hospital in less than 25 minutes.

### King's College Medical Faculty.

*The Hospital* contains 220 beds in daily use.

*Appointments.*—Resident Medical Officers, Clerks, and Dressers are chosen from the students, and the former have rooms and commons free. Two Sambrooke Registrarships, Medicine and Surgery, of the annual value of £50 each, are open to students in higher appointments of the Hospital. Clinical assistants are appointed in the Ophthalmic, Ear, and Throat Departments.

*Entrance Scholarships.*—1. Two Warneford Scholarships, for the encouragement of previous education, each £75 value; subjects of examination—Mathematics, Classics, Divinity. 2. Two Sambrooke Exhibitions, one £60 and one £40, open; subjects of examination, Mathematics, Elementary Physics, Inorganic Chemistry, Botany, and Biology. 3. Rabbeth Scholarship, value £20, in July, for best evidence of early scientific training. 4. Two Scientific Exhibitions, open, given annually, in October, by the Clothworkers' Company, value £60 and £40, for proficiency in any four of the following subjects: Mathematics, Mechanics, Physics, Chemistry,

Botany, Geology, Mineralogy, and Zoology will be open to all candidates who are under the age of 19. 5. Medical Entrance Scholarships.—One of 70 guineas and one of 60 guineas, instituted for Students who propose to take their degree at Oxford, Cambridge, or other British University, having already passed the examination of that University in Biology, Chemistry, and Physics.

During the curriculum Scholarships and Prizes of the value of £300 are open to matriculated students.

For conditions of scholarships and subjects of examinations apply to the Dean, Medical Faculty. Examinations commence September 27th.

The Dean of the Medical Department, Professor W. D. Halliburton, attends daily (Saturdays excepted) at King's College for the purpose of seeing students and their friends. Any letters addressed to the Dean during the vacation will receive early attention.

*Fellowship Examinations of the Royal College of Surgeons.*—Special classes for the Primary and Final Examinations are held, and a special prospectus regarding these classes will be forwarded on application to the Dean.

*University of London.*—A special class for the Matriculation Examination will commence on September 25th. Classes for the science subjects are held by the Professors of the Science Faculty of King's College, and students avail themselves of their laboratories.

*Fees.*—The composition fee is £135.

*Athletic Club.*—All students are entitled to the privileges of the Athletic Club, which manages a large recreation ground of the College at Wormwood Scrubbs.

*Resident Chambers* are available for students. The cost of the academical year varies from £50 to £60 for rent of rooms and dinner.

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### London Hospital Medical School.

*The Hospital* is the largest general hospital in the kingdom: it contains nearly 800 beds. Number of patients treated last year: In-patients, 12,746; out-patients, 161,762; total, 174,508; major operations, 2,526.

*Appointments.*—Among the salaried appointments open to students are those of Medical Registrar, Surgical Registrar, Obstetric Registrar: Medical, Surgical, and Obstetric Tutors, Receiving-room Officers, and Medical, Surgical, and Ophthalmic Clinical Assistants. There are also 5 Resident House-Physicians and 5 Resident House-Surgeons and Accoucheurs. In addition there are Assistantships, and Clerkships, and Dresserships in the various departments.

*Scholarships and Prizes.*—The following is a list of scholarships and prizes: *At Entrance:* Price Scholarships in Science, £120; in Anatomy and Physiology, £60; Entrance Scholarships in Science, £60 and £35; Epsom Scholarship, £126; Buxton Scholarships in Arts, £30 and £20. *After Entrance:* Anatomy and Biology Scholarships, £20; Anatomy and Physiology Scholarship, £25; Letheby Prize, Senior, £20; Letheby Prize, Junior, £10; Scholarships in Clinical Medicine, Surgery, and Obstetrics, £20 each; Duckworth Nelson Prize, £10; Hutchinson Prize, £35; Sutton Prize, £20; Sir Andrew Clark Prize, £26; Anderson Prizes, £9; Out-patient Dressers' Prizes, £60; Practical Anatomy Prizes, £10.

A special course for the D.P.H. will commence at the beginning of the winter session.

*Fees.*—The composition is 120 guineas. A reduction of 15 guineas is made to sons of medical men.

*New Buildings.*—The new Departments of Bacteriology, Public Health, Chemistry, and Biology, and the new Pathological Institute at the Hospital, are now completed and in full use. During the last year new Students' Rooms have been added, and a Garden and Fives Court opened for the use of the members of the London Hospital Clubs Union.

*Information* may be obtained from the Warden, Mr. Munro Scott, at the London Hospital Medical College, Mile End, E.

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### St. Mary's Hospital Medical School.

*The Hospital* at present contains 281 beds. The new wing, the ground floor of which, comprising the new out-patient department, was opened in 1898, is about to be completed. This will add to the hospital 100 new beds, and will include an additional Operating Theatre, a new Clinical Laboratory, and an X-ray Department. The situation of the hospital in the centre of the residential districts of Paddington, Bayswater, and North Kensington renders it especially convenient to students who wish to reside in the immediate vicinity, and a register of approved lodgings is kept in the office of the Medical School.

All clinical appointments in the hospital are free to students of the Medical School, and the Resident Medical Officers are chosen by competitive examination. Six House-Physicians, six House-Surgeons, four Obstetric Officers, and two Resident Anæsthetists are appointed each year, and receive board and residence in the hospital.

*Entrance Scholarships in Natural Science.*—One of £145, two of £78 15s., one of £52 10s., and two of £63 (open to students of Oxford and Cambridge), are awarded annually by competitive examination in September.

*The Laboratories.*—The Physiological Laboratories have been further extended, and a special Physiological Lecture Room, adapted for advanced practical classes, has been added. The alterations completed in 1898 provide new laboratories for pathology and bacteriology, a new lecture room, fitted with electric light and every modern improvement for practical classes in these subjects, and a new museum. An enlarged chemical laboratory has been provided, and the former chemical laboratory has been adapted for public health courses and for the study of pathological chemistry.

*Special Tuition.*—In addition to systematic courses of Lectures and Demonstrations, special tuition is provided for the Intermediate and Final Examinations of the Universities of Oxford, Cambridge, and London without additional fees.

*Preliminary Scientific Course.*—Special classes, including Lectures and Laboratory work, are held throughout the year.

The composition fee for students is £140 if paid in one sum, or £145 if paid in four instalments. University students who have completed their examinations in Anatomy and Physiology are admitted on payment of a composition fee of 60 guineas (£63) paid in one sum, or 65 guineas (£68 5s.) if paid in two annual instalments. University students, prior to completing their examination in Anatomy and Physiology, pay an annual fee of 25 guineas (£26 5s.). Separate courses of Lectures, Laboratory Work, or Hospital Practice may be taken.

The composition fees include membership of the amalgamated clubs.

The School Calendar and full information can be obtained from the Secretary, St. Mary's Hospital Medical School, Paddington, W.

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### Middlesex Hospital Medical School.

*The Hospital* contains 340 beds. A new wing containing 40 beds and special research laboratories is entirely devoted to patients suffering from cancer. It offers unrivalled opportunities for the study of this disease, both in its clinical and pathological aspects.

*Appointments, etc.*—Eighteen Resident appointments are open annually to competition among pupils of the Hospital. The officers reside and board in the Residential College free of expense. There are two Casualty Medical and two Casualty Surgical Officers appointed annually. Six House-Surgeons are appointed every year at intervals of two months, after examination; the six House-Physicians are also appointed annually at similar intervals; they must have a legal qualification, or hold a Broderip Scholarship. An Obstetric House-Physician (qualified to practise) is appointed every six months. Non-resident Physicians' Assistants are appointed in the various out-patient departments. In the out-patient department the appointments are: Dresser to the Assistant Surgeon and to the Dental Surgeon, Clerk to the Assistant Physician, Dresser to the Ophthalmic Surgeon, Clerk in the Department for Diseases of the Skin, Clerk in the Department for Diseases of Women, and Dresser to the Throat and Ear Department. There are also Extern Midwifery Clerks and *Post-mortem* Clerks. The appointments are so arranged that every student may during his course hold all the Out-patient and In-patient Clerkships and Dresserships. Each student must have held an out-patient clerkship and dresserships before being eligible to hold in-patient clerkships or dresserships. No student can be appointed to any office until

he has passed the Second Examination of the Examining Board in England, or its equivalent. Clinical Assistants are appointed in the Children's, Ophthalmic, Skin and Throat, and Ear Departments.

*Entrance Scholarships.*—Two Entrance Scholarships, value £100 and £60, are open to all gentlemen commencing their medical studies in May or October, 1901. The successful candidates must become general students of the school. Examination on September 24th, 25th, and 26th. Candidates must send in their names to the Dean, stating the three subjects they select, on or before September 16th.

*Universities Scholarship* —An annual Entrance Scholarship, of the value of £60, is open to students of the Universities of Oxford and Cambridge who have completed the curriculum for or passed the examinations in Anatomy and Physiology. Subjects: Anatomy and Physiology, including Histology. The examination takes place on September 24th and 25th. Application to be made on or before September 16th. Students joining the school in the previous May are eligible to compete for the Entrance and University Scholarships in that year.

*The Freer Lucas Scholarship* is annually awarded on the nomination of the head master to a pupil of the Royal Medical College, Epsom, who had passed the Preliminary Scientific M.B. Examination.

*Fees.*—The composition fee is 135 guineas.

*Further Information* may be obtained from Dr. Pasteur, the Dean.

*The Residential College* is situated in Cleveland Street, W., and has its frontage in the Hospital Garden: it accommodates about 30 students. Warden, Dr. R. A. Young, B.Sc.

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### St. Thomas's Hospital Medical School.

*The Hospital* contains 572 beds, of which about 512 are in use. It is built on the system of separate pavilions, which are connected by a covered and an open-air corridor. The Hospital and School are situated along the banks of the Thames between Westminster and Lambeth Bridges, an open-air terrace running the whole length of the buildings facing the Houses of Parliament. The two large Operating Theatres are now undergoing alterations by means of which the Hospital will contain two Children's Wards and four Operating Theatres. One of the wards and two of the theatres are ready for use. A Clinical Laboratory has been recently built, in which all the more difficult methods of diagnosis, bacteriological, chemical, and microscopical, are carried on under the direction of a Superintendent. The Department for Out-patients has been rearranged, and now consists of a series of rooms, among which are two large, well-ventilated Clinical Theatres provided with ample sitting accommodation, so that large numbers of students are enabled to follow closely the practice and teaching of the assistant staff. During the twelve months ending December 31st, 1900, the number of patients admitted into the hospital amounted to 5,821. In the same period 18,596 out-patients have been treated, and in the maternity department 2,585 women have been attended at their own homes. Casualties to the number of 88,128 attendances were treated during the same period.

The *School Buildings*, which are separated from the hospital by a quadrangle containing a lawn tennis court for the use of the residents, comprise numerous theatres, laboratories, and class rooms, and are well adapted for the modern teaching of large bodies of students in the subjects of the medical curriculum. A large library and reading room and a very complete museum are open to all students from 9 A.M. to 5 P.M. The new club premises, opened in 1894, contain a dining room, a smoking and reading room supplied with daily and illustrated weekly papers, and a gymnasium. A cloakroom with lockers, and a lavatory with bath rooms are in the main school building. Students are thus able to spend the whole day at the school, all meals being obtainable at a moderate tariff, and they are further provided with facilities for exercise and recreation. A ground of more than nine acres in extent is provided at Chiswick. It can be reached in forty minutes from the hospital, it is admirably adapted for football, cricket, lawn tennis, and athletic sports. It is provided with a pavilion where refreshments can be obtained.

*Scholarships.*—Three Entrance Scholarships will be offered for competition in September, namely: One of £150 and one of £60, in Chemistry and Physics, with either Physiology, Botany, or Zoology at the option of candidates, for first year's students. (The Medical School Committee is empowered to grant an exhibition of £20 to any unsuccessful competitor who obtains sufficient marks to qualify for a scholarship); one of £50 in any two of the following subjects: Anatomy, Physiology, Chemistry, for students who have completed their examinations in Anatomy, Physiology, Materia Medica and Pharmacy for a medical degree in any of the Universities of the United Kingdom, and have not entered as students in any London medical school. Copies of the examination papers of last year may be obtained on application to the Medical Secretary. Applications must be sent in not later than September 17th, with certificate of birth and of Preliminary Examination, and with a notification of the choice of optional subject. Numerous Scholarships, prizes, and medals are open for competition throughout the whole career of a student, including a Fellowship of £100 given by the Salters' Company for research in Pharmacology.

*Appointments.*—All Hospital Appointments are open to students without charge. A Resident Assistant Physician and a Resident Assistant Surgeon are appointed annually at a salary of £100 with board and lodging. Two Hospital Registrars, at an annual salary of £100 each, are appointed yearly. The tenure of these offices may be renewed for a term not exceeding two years. An Obstetric Tutor and Registrar is appointed each year at an annual salary of £50. Four House-Physicians, two Assistant House-Physicians, four House-Surgeons, four Assistant House-Surgeons, two Obstetric House-Physicians, two Ophthalmic House-Surgeons, and eight Clinical Assistants in the special departments are appointed every three months, and hold office for six months if recommended for re-election. Clinical Clerkships and Dresserships to the in-patient and out-patient departments are available to the number of 400 each year.

*Fees.*—The fees may be paid in one sum or by instalments. Entries may be made separately to lectures or to hospital practice. The composition fee is £150. Special arrangements are made for students from the Universities and elsewhere entering in their second or subsequent years, also for dental students and for qualified practitioners.

*University Examinations.*—Special Classes for the Preliminary Scientific and Intermed. M.B.Lond., for the Oxford and Cambridge Examinations, and for the Primary F.R.C.S. are held throughout the year. St. Thomas's Hospital is one of the Medical Schools of the University of London.

*Lodgings.*—A register of approved lodgings is kept by the Medical Secretary, who has a list of local medical practitioners, clergymen, and others who receive students into their houses.

Further information may be obtained by application to Mr. Rendle, the Medical Secretary, St. Thomas's Hospital, Albert Embankment, S.E.

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### University College, London: Medical Faculty.

*The Hospital* contains 185 beds, all of which are available for clinical instruction and study.

*Appointments.*—Eight House-Physicians, Six House-Surgeons, twelve Obstetric Assistants, Out-Patients Physicians' and Surgeons' Assistants, Clinical Clerks, Surgeons' Dressers, and Ophthalmic Surgeons' Assistants, are selected annually from among the students without extra fee. The House-Physicians, the House-Surgeons, and four Obstetric Assistants reside in the Hospital, receiving free board and lodging.

*Entrance Scholarships.*—The Bucknill Scholarship of £30 a year for four years, and two Exhibitions of the value of 60 guineas each, are offered for competition in September to gentlemen who are about to commence their first winter's attendance. The subjects are Chemistry, Physics, Botany, and Zoology. Two Exhibitions of the value of 80 guineas each are offered for competition in September, the subjects of the examination being Anatomy and Physiology. Only one of these Exhibitions may be awarded to a student who has received his Anatomical and Physiological instruction in University College. The Bucknill Scholar is not eligible for these Exhibitions. The examinations for the Scholarship and Exhibitions will take place at the College on September

26th and 27th, 1901. Notice of intention to compete must be given to the Secretary, on or before September 25th, at the office of the College.

Other exhibitions and prizes of the annual value of about £500 are given in the Faculty of Medicine.

*Fees.*—The composition fee is 150 guineas.

*Information* respecting the College may be obtained from the Dean, Professor J. R. Bradford, M.D., F.R.C.P., F.R.S.; the Sub-Dean, Professor Thane; or the Principal, Mr. G. Carey Foster.

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### WESTMINSTER HOSPITAL MEDICAL SCHOOL.

*The Hospital* contains upwards of 200 beds.

*Appointments.*—A Medical and a Surgical Registrar are appointed annually, each with a salary of £40. Two House-Physicians, two House-Surgeons, two Assistant House-Surgeons, and a Resident Obstetric Assistant are appointed for six months, after examination, and are provided with rooms and commons. An Assistant House-Surgeon, after six months' service, becomes House-Surgeon for a further period of six months. Clinical Assistants to the Assistant Physicians and Assistant Surgeons, and to the officers in charge of special departments, are appointed from among qualified students. Every student must perform the duties of Out-patient Dresser for four months, and afterwards hold the office of In-patient Dresser for four months, of Out-patient Clinical Clerk for four months, and of In-patient Clinical Clerk for four months. Two Pathological Clerks are appointed every four months to assist in the *Post-mortem* Room. No Student is eligible as an In-patient Dresser or Clinical Clerk until he has passed the Second Examination of the Conjoint Board, or an equivalent examination. Clerks and Dressers in the Special Departments of Hospital Practice are periodically appointed. So far as vacancies permit, students of other hospitals are admitted to In-patients' Dresserships or Clerkships.

*Scholarships.*—The following Scholarships are offered for competition during the year 1901-2: *In September, 1901:* Three Scholarships in Arts, £60, £40, and £30; Scholarships in Arts for Dental Students, £20; two Oxford and Cambridge Scholarships in Anatomy and Physiology, £40 and £30; Two Natural Science Scholarships, £60 and £40; Free Presentation, open to pupils of Epsom Medical College. *In April, 1902:* Two Scholarships in Arts, £60 and £40; two Oxford and Cambridge Scholarships in Anatomy and Physiology, £40 and £30; Two Natural Science Scholarships, £60 and £40.

*Fees.*—The composition fee is 110 guineas.

Further information can be obtained on application to the Dean at the Westminster Hospital Medical School, Caxton Street, Westminster, S.W.

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### LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

*The Hospital* contains 170 beds, all of which are available for clinical instruction. There are separate departments for Diseases of Women, Diseases of the Eye, Throat and Ear, Skin, and classes for instruction in Anæsthetics, Bacteriology, etc., in addition to the ordinary Clinical Lectures and Demonstrations and Tutorial Classes. Students also attend the practice of one of the Fever Hospitals of the Metropolitan Asylums Board, and receive special instruction in Lunacy at one of the Hospitals under the Asylums Board of the London County Council, and are also admitted to the practice of 13 special hospitals.

*Appointments* as House-Physician and Surgeon, Surgical and Medical Registrar, Anæsthetist, Curators of the School and Hospital Museums, and Clinical Assistants and Demonstratorships in various subjects are open to students after qualification.

*Scholarships.*—An Entrance Scholarship value £30, and the St. Dunstan Medical Exhibition value £60 a year for three years, extensible to five years, are offered for competition at the end of September in each year. The Bostock Scholarship value £60 a year for two or four years, is awarded on the result of the Preliminary Scientific Examination of the University of London. The Stuart Mill Scholarship value £30 a year, for four years, the John Byron Bursary and two Mackay Prizes, value £20 each, the Helen Prideaux Prize of £50, the Mabel Webb Research Scholarship of £30 for two years, together with many other scholarships and prizes, are offered on sundry conditions. Various Missionary Societies also offer scholarships on certain conditions, and assist ladies who wish to go to India as medical missionaries.

*The Course of Study* includes preparation for the Examinations of the University of London, the Royal University of Ireland, the University of Durham, the Victoria University, the Conjoint Colleges of Scotland and of Ireland, and the Society of Apothecaries, London. Special classes are held in preparation for the Preliminary Scientific Examinations of the Universities of London and Durham.

*School Buildings.*—The entire School has been rebuilt and greatly enlarged. The Laboratories are large and well-lighted, and are fully equipped for the Preliminary Scientific and Intermediate M.B. work required by the University of London. There are also a large Library and a Common Room for the use of the students, and sets of chambers to accommodate seventeen students.

*Fees.*—The composition fee is £125.

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### COOKE'S MEDICAL SCHOOL, LONDON.

The School is prepared to admit to its supplementary work all who may wish to join the same, but in regard to its curriculum work it does not receive more than half a dozen students in the course of the year; these have special advantages both as regards anatomy and physiology. The fees, we are informed, are but slightly in excess of current charges.

By decision of the various Examining Bodies, gentlemen rejected at their Anatomical and Physiological Examinations (Second Conjoint, etc.) can get "signed up" from this school for the three months' supplementary work they are required to put in before re-examination. The School is also recognised for the special dissections for the Fellowship of the Royal College of Surgeons.

The operations of Surgery are performed on the dead body. Such courses are recognised for army promotion, for the Indian Medical Service, etc.

The School possesses a good collection of anatomical models, physiological and chemical apparatus, and gentlemen preparing for the higher examinations (F.R.C.S.Eng., M.B. Cambridge, Oxford, London, etc.) receive special instruction in the more difficult subjects.

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## PROVINCES.

THE medical schools in England, outside London, which give instruction in the full medical curriculum, are those of the Universities of Oxford, Cambridge, and Durham (University of Durham College of Medicine, Newcastle-on-Tyne): the three Colleges of the Victoria University (Owens College, Manchester; University College, Liverpool; and the Yorkshire College, Leeds); the University of Birmingham (Mason University College); University College, Bristol; and University College, Sheffield (School of Medicine).

The opportunities for obtaining a good knowledge of the Preliminary Sciences, and of Anatomy and Physiology at the Universities of Cambridge and Oxford are unsurpassed: the staffs of teachers are distinguished, and the laboratories are most completely appointed. Instruction in Clinical Medicine, Surgery, and Midwifery is given by the University Lecturers, and by the visiting staffs of the Radcliffe Infirmary at Oxford and of Addenbrooke's Hospital, Cambridge: but it is the rule for Oxford and Cambridge men, after spending three years at the University, and passing the necessary examinations, to proceed for the remaining two years to London or some other large town, where the opportunities for gaining clinical experience are greater. At many of the London schools special arrangements—as to which full particulars can be obtained on application to the respective Deans—are in existence to meet the case of students from the Universities joining under these circumstances. At some of the schools they are placed on the same footing in regard to obtaining the appointments of House-Physician and House-Surgeon as

students who have attended the hospital throughout. As the circumstances of the various schools are liable to vary from time to time, special inquiries should be made on this point, which after-experience will show to be of great importance.

The arrangements and appliances for laboratory and other practical instruction at Owens College, Manchester, at University College, Liverpool, at the Yorkshire College, Leeds, University College, Sheffield, and at University College, Bristol, are most complete, having in each case been recently increased and improved. At Birmingham the medical school is a Faculty of the newly-formed University, and is provided with all the most modern facilities for instruction in science, while the great hospitals afford excellent opportunities for clinical work, and a very unusual number of resident appointments in proportion to the present size of the school.

The Medical School of the University College of South Wales and Monmouthshire at Cardiff gives instruction in all the subjects of the medical curriculum belonging to the first three years.

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The General and Queen's Hospitals, Birmingham.

The practices of these Hospitals are amalgamated for the purpose of clinical instruction under the direction of the Birmingham Clinical Board, by whom all schedules will be signed and all examinations conducted.

The Hospitals have a total of upwards of 400 beds; 6,000 in-patients and 80,000 out-patients are treated annually.

*Appointments open to Past Students.*—At the General Hospital: Two Resident Medical Officers, salary £70 a year; a degree in Medicine is necessary. One Resident Surgical Officer, salary £100 a year. One Resident Pathologist, salary £100 a year. Two non-resident Casualty Assistant Physicians, salary £50 a year. Two non-resident Surgical Casualty Officers, salary £50 a year. Two non-resident Anæsthetists, salary £50 a year. Four House-Surgeons, office tenable for six months, without salary. Two Assistant House-Physicians, tenable for six months, without salary. One Resident Medical Officer at the Jaffray Hospital, salary £150 a year. One Resident Assistant at the Jaffray Hospital (post vacant early in April, July, October, and January), tenable for three months. At the Queen's Hospital: Three House-Physicians (posts vacant in February, May, and November, tenable for twelve months, at a salary of £50). Three House-Surgeons (posts vacant in February, May, and November, tenable for twelve months, at a salary of £50). One Obstetric and Ophthalmic House-Surgeon (post vacant in May and November, tenable for six months), salary £20, with board and lodgings, etc. One Resident Dresser (post vacant on the first day of January, April, July, and October, tenable for three months); candidates must previously have attended all their lectures, etc., and need not be qualified. At the City Workhouse and Workhouse Infirmary: Five Resident Medical Officers. At the Birmingham General and Branch Dispensaries: Eight Resident Surgeons. At the Birmingham Lunatic Asylums: Five Assistant Medical Officers. At the City Fever Hospitals: Three Assistant Medical Officers. At the Children's Hospital: One Resident Surgical Officer; one Resident Medical Officer. At the Birmingham and Midland Eye Hospital: Three Resident Surgeons. At the Orthopædic and Spinal Hospital: Four Clinical Assistants (non-resident). At the Ear and Throat Hospital: One House-Surgeon; four Clinical Assistants (non-resident). There are also four non-resident Poor-law appointments in the gift of the Board of Guardians.

Besides the above-mentioned positions in Institutions in the city of Birmingham, there are numerous resident appointments in the Hospitals in the immediate vicinity which are open to the students of the Birmingham Medical School, such as the West Bromwich Hospital; the Guest Hospital, Dudley; the Warneford Hospital, Leamington; the Kidderminster Infirmary; the Worcester General Infirmary; and the Walsall and District Hospital. Most of the above positions are at the present time occupied by past students of the School.

*Clinical Prizes.*—The following prizes will be given annually: Senior Medical Prize, for students during their "final" year, to the value of £5 5s.; Senior Surgical Prize, ditto, £5 5s.; Junior Medical Prize, for students before the commencement of their "final" year, to the value of £3 3s.; Junior Surgical Prize, ditto, £3 3s.; Midwifery Prize, for students during their "final" year, to the value of £4 4s.

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University College, Bristol: Faculty of Medicine.

The lectures and instruction given in the Faculty of Arts and Science of University College, Bristol, are adapted to the various Preliminary Examinations, including the Preliminary Scientific Examination of the University of London: and students can complete in Bristol the entire course of study required for the medical and surgical degrees of the University of London, the diplomas of the Royal College of Physicians of London and the Royal College of Surgeons of England, and of the Apothecaries' Society of London, and for the Examinations for admission to the Royal Navy and the Indian Medical Services, and the Royal Army Medical Corps.

It is now arranged that students of the College shall be admitted to the Clinical Practice of the Bristol Royal Infirmary and the Bristol General Hospital conjointly, and consequently both these institutions are open to all students.

The Infirmary and the Hospital comprise between them a total of 470 beds, and both have very extensive Out-patient Departments, Special Departments for the Diseases of Women and Children, and of the Eye, Ear, and Throat, besides large Outdoor Maternity Departments and Dental Departments. Students may also attend the practice of the Bristol Royal Hospital for Sick Children and Women, containing 104 beds, and that of the Bristol Eye Hospital, with 28 beds. The total number of beds available for clinical instruction is therefore 603. Very exceptional facilities are thus afforded to students for obtaining a wide and thorough acquaintance with all branches of Medical and Surgical work. Each student has the opportunity of personally studying a large number of cases and of acquiring practical skill in diagnosis and treatment.

*Appointments—Royal Infirmary:* House-Physician, House-Surgeon, Junior House-Physician, and Junior House-Surgeon; Clinical Clerks and Dressers, also Ophthalmic, Obstetric, and Pathological Clerks are appointed. The Dressers reside in the Infirmary in weekly rotation. *General Hospital:* House-Surgeon, Assistant House-Surgeon, Assistant House-Physician and Casualty House-Surgeon; Clinical Clerks, Dressers, and Obstetric, Ophthalmic, and Pathological Clerks are appointed. The Dressers reside in the Hospital in rotation free of expense.

*Scholarships and Prizes.*—(1) University Entrance Scholarships, £50. (2) Lady Haberfield Entrance Scholarship, £30 (about), after examination in subjects of general education. (3) Martin Memorial Pathological Scholarships, two of £10 each. (4) Tibbit's Memorial Prize, value 9 guineas, for proficiency in Practical Surgery. (5) Committee Gold Medal for fifth year Students for general proficiency. (6) Committee Silver Medal for the same. (7) Augustin Prichard Prize, value about 7 guineas, for proficiency in Anatomy. (8) Henry Clark Prize, value about 11 guineas, for general proficiency. (9) Crosby Leonard Prize, value 7 guineas, for proficiency in Surgery. (10) Suple Surgical Prize, a Gold Medal and 7 guineas in money. (11) Suple Medical Prize, a Gold Medal and 7 guineas in money. (12) Henry Marshall Prize, value about £12, Dresser's Prize. (13) H. M. Clarke Scholarship, value £15, for proficiency in Surgery. (14) Sanders Scholarship, value £22 10s., for general proficiency. Prizes and certificates are also awarded in the various classes of the College.

*Fees.*—The composition fee for the College courses is 65 guineas (or 70 guineas in two instalments). Dental Composition Fee, 55 guineas.

*Clinical and Bacteriological Research Laboratory.*—This Laboratory has been established with the view of enabling medical men in the West of England to obtain reliable information and reports upon pathological material, to assist them in the clinical investigation of cases presenting obscure symptoms, and to afford them the opportunity of personally carrying out investigations.

Full information can be obtained on application to the Dean of the Medical Faculty, Professor E. Markham Skerritt, University College, Bristol.

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The Yorkshire College, Leeds (Victoria University), Department of Medicine.

Clinical instruction is given at the Leeds General Infirmary, which has over 400 beds in constant use, and includes

gynæcological and ophthalmic wards and a large new out-patient department. The Ida Semi-convalescent Hospital attached to the Infirmary has over 40 beds. The West Riding Lunatic Asylum at Wakefield is also open for the study of Mental Diseases. Students can in addition attend the practice of the Leeds Public Dispensary, the City Fever Hospitals (100 beds) and the Hospital for Women and Children.

*Appointments.*—Senior Anæsthetist, £50. Five Anæsthetists, £25 each. The Resident Medical, Surgical and Casualty Officers, each at £100 per annum. The Resident Ophthalmic Officer at £50 per annum. A Resident Obstetric Officer at £50 is attached to the Gynæcological ward and an extensive external maternity department. A Resident Medical Officer is appointed every six months for the Ida Hospital (honorarium £25). Six House-Physicians, each holding office for six months, and four House-Surgeons holding office for twelve months. Physicians' Clerks, Surgeons' Dressers are appointed for six months: Ophthalmic and Aural Dressers, Gynæcological Ward Clerks, Gynæcological Out-patient Clerks, Maternity Clerks, Assistant Physicians' Clerks, Laryngological Clerks, and Assistant Surgeons' Dressers, Assistant Ophthalmic Surgeons' Dressers, Dressers in the Casualty Room, *Post-mortem* Clerks, and Laboratory Assistants for three months. A Pathological Curator (£120 per annum) has charge of the new pathological laboratory. Appointments are also open to students at the Leeds Public Dispensary (three Resident Medical Officers, with salaries commencing at £80), at the Hospital for Women (House-Surgeon, honorarium £120, and Anæsthetist £25), and at the West Riding Asylums.

*Entrance Scholarships.*—The Yorkshire College awards annually a Scholarship in the form of a free admission to the lectures and classes covered by the composition fee. Candidates must have passed the First (Scientific) Examination of the Victoria University, or the Preliminary Scientific (M.B.) Examination of the London University. The subjects of the examination are those included in the above examination. The Infirmary also awards a scholarship of the value of 40 guineas in the form of a free admission to the clinical teaching of the Infirmary. The subjects of the examination are: (*a*) Latin, (*b*) Elementary Mathematics, (*c*) English Language (including an essay), (*d*) English History, and (*e*) one of the following languages: French, German, or Greek.

*Fees.*—The composition fee for the Colleges courses is £67 4s.

Further information can be obtained from the Dean, the Department of Medicine, Yorkshire College, Leeds, or from the Secretary of the Faculty, General Infirmary, Leeds.

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### UNIVERSITY COLLEGE, LIVERPOOL (VICTORIA UNIVERSITY): MEDICAL FACULTY.

New Medical Buildings are at present in course of erection, comprising departments of Anatomy, Surgery, Anatomical Museum, and Laboratory and Lecture-Room accommodation for the School of Dental Surgery, Materia Medica, Toxicology, etc. These adjoin the Physiological and Pathological Laboratories, which were recently built and equipped by the generosity of the Rev. S. A. Thompson-Yates at a cost of over £30,000. These Laboratories include theatres for physiology and pathology, laboratories for microscopic, physical, and chemical Physiology, for Morbid Anatomy, Bacteriology, and Chemical Pathology, special rooms for research, etc., private rooms, students' common room, and lavatories. The Chemical Laboratories have been extended, so as to provide *inter alia* more complete accommodation for medical students and those engaged in laboratory work for diplomas in Public Health. The Chair of Hygiene has secured adequate permanent accommodation in Ashton Hall, an institute adjacent to the College, which contains ample class room and laboratory accommodation for study and research. The Museums of Anatomy, Pathology, and Materia Medica are furnished with complete provision for the needs of students, and have recently been reorganised and revised. The Museum of Hygiene, accommodated in Ashton Hall, has been recently established on the lines of the Parkes Museum. It contains meteorological instruments, and numerous models and specimens. Under the supervision of the Professor of Hygiene, a course of lectures on Sanitary Science is given during the winter, suitable for candidates for sanitary inspectors' certificates.

*Royal Infirmary.*—The Royal Infirmary, which adjoins the School, contains 300 beds, with 40 special beds for the treatment of Diseases of Women. The Lying-in, Eye and Ear, Women's, Children's, Dental, and Skin Hospitals are in the immediate vicinity, and their practice is open to the students of the Medical Faculty.

*Fees.*—The composition fees are: £24 15s. for Preliminary Scientific Classes; £60 for the Medical Classes required for the Victoria, London, and other University Degrees; £70 for all the Classes required for the diplomas of the Conjoint Boards. The medical composition fees are payable in two instalments, at intervals of twelve months. The fee for hospital attendance at the Royal Infirmary is 40 guineas, also payable in two annual instalments.

*Appointments.*—Three House-Surgeons, three House-Physicians, and one External House-Surgeon to the Thornton Wards, are appointed for six months, after (if necessary) competitive examination. Clinical Clerks for each Physician, Dressers for each Surgeon, and Clerks to the Thornton Wards for Diseases of Women, are appointed every three months. *Post-mortem* clerks are appointed for six weeks. All students are required to perform this duty before the Schedule for the Final Examination is signed.

*Fellowships and Scholarships.*—Fellowships, Scholarships, and Prizes of over £600 are awarded annually. (*a*) A Holt Fellowship in Pathology and Surgery, of the value of £100 for one year, is awarded annually by the Medical Faculty to a senior student possessing a medical qualification. The successful candidate is required to devote a year to tutorial work and investigation in the Pathological Department. (*b*) A Holt Fellowship in Physiology awarded under similar conditions, of the value of £100 for one year. (*c*) A Robert Gee Fellowship in Anatomy, awarded under similar conditions, also of the value of £100 for one year. (*d*) An Alexander Fellowship for Research in Pathology of the annual value of £100, renewable. (*e*) A Johnston Colonial Fellowship in Pathology and Bacteriology (£100 a year, renewable). (*f*) A John W. Garrett International Fellowship in Physiology and Pathology (£100 a year, renewable). (*g*) Two Lyon Jones Scholarships of the value of £21 each for two years are awarded annually—a Junior Scholarship, open at the end of the first year of study to Victoria University students in the subjects of the first M.B. Examinations, and a Senior Scholarship, open to all students in the school at the end of the second or third year of study, on the subjects of Anatomy, Physiology, and Therapeutics. (*h*) The Derby Exhibition of £15 for one year is awarded in Clinical Medicine and Surgery in alternate years. Students may compete in their fourth and fifth years: in 1901 the subject will be Clinical Surgery. (*i*) The Torr Gold Medal in Anatomy, and the George Holt Medal in Physiology, the Fletcher Prize in Physiology (£3 3s. in books), the Kanthack Medal in Pathology, the Robert Gee Book Prize of the value of £5, for Children's Diseases, and numerous class prizes are awarded annually.

*Entrance Scholarships.*—Four Robert Gee Entrance Scholarships, of the value each of £25 for one year, are offered annually for competition. The holder is required to take out the Science Course for the University Degree in Medicine.

*Communications* should be addressed to the Dean, Professor Paterson, M.D., University College, Liverpool.

*Liverpool Dental Hospital and School of Dental Surgery.*—The courses of systematic instruction are given in University College, five minutes from the Dental Hospital. The two institutions are now closely associated, and the management of the curriculum is in the hands of a Joint Committee. At the Dental Hospital recent alterations have been made, and, as it now stands, this school offers advantages to students which are not excelled anywhere. The ground floor of the building contains the following: Extraction room with all needful appliances; anæsthetic room specially reserved with every convenience; and large waiting room for patients. The first floor has a large Board room and a very comfortable students' room set apart exclusively for the use of students. The whole top floor of the building has been thrown into one fine, airy, and well-ventilated operating room. This room will accommodate upwards of 30 operating chairs, which are of the "Morrison pattern," and each of which has a special electric light (canting pendant) suspended before it. In the basement a very convenient workroom has been fitted up, con

taining the necessary requirements, and there are commodious lavatories for students. A new Laboratory for practical mechanical work was constructed last year, so as to meet the requirements of the curriculum. It is adequately furnished with all the modern appliances of a dental workshop. A skilled Dental Mechanic has been engaged, and students are able to undertake at the Hospital the whole of their training in Mechanical Dentistry. The times of the lectures at University College are arranged to meet the convenience of students, thus allowing the maximum time for attendance upon Dental Hospital practice. The staff of the Hospital includes seven honorary Dental Surgeons, a Demonstrator, two House-Surgeons, and a Curator. Fees for two years' hospital practice, £21. Apprenticeship: A limited number of apprentices are admitted annually, fees for three years, £105. Further information may be had from the Warden, Mr. W. H. Gilmour. The various medical and dental lectures are given at University College. The Anatomical Department contains an excellent collection of skulls illustrative of human and comparative dental anatomy. The dissecting room and theatre are lighted by electricity. The Physiological and Pathological Departments are housed in new and spacious laboratories erected by the Rev. S. A. Thompson-Yates. Fees: The composition fee for all lectures is £50, in one payment on entrance, or in two equal instalments (one half on entrance, and the remainder within twelve months). The fee for general hospital practice is £10 10s. Further particulars can be obtained of A. M. Paterson, M.D., Dean.

[For particulars with regard to the School of Tropical Medicine see p. 554.]

Prospectuses and further information may be had on application to the Secretary, University College, Liverpool.

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### Owens College, Manchester (Victoria University): Medical Department.

*The Royal Infirmary* contains 300 beds; associated with it are the Convalescent Hospital, (136 beds) and the Royal Lunatic Asylum at Cheadle, which accommodates 260 patients.

*Appointments.*—The following appointments are made: A Surgical Registrar, at £80 per annum: a Pathological Registrar, at £100 per annum: a Medical Registrar, at £70 per annum; two Assistant Medical Officers, each at £80 per annum; an Anæsthetist, at £50 per annum; an Assistant Anæsthetist, at £50 per annum. Resident Medical Officer, one year, £150 per annum: ditto, at Cheadle, one year, £150 per annum. Resident Surgical Officer, one year, £150 per annum; two House-Surgeons and one House-Physician are appointed every three months for a term of six months: an Assistant to the Resident Medical Officer at Cheadle is appointed for six months. The House-Physicians and House-Surgeons must possess a qualification which can be registered. For the Resident Assistant at Cheadle a qualification is not absolutely necessary. Four or more Clinical Clerks are attached to each Physician or Assistant-Physician, and four or more Dressers to each Surgeon and Assistant-Surgeon, and to the Ophthalmic Surgeon, and four more Clerks to the Pathological Registrar. Accident Room Dressers will be appointed every three months, and will hold their appointment for three months; there will be three Senior Dressers and twelve or more Junior Dressers, the former selected from students who have acted as Dressers in the wards for a full period of six months. Additional Clinical Clerks are appointed to assist in the departments for the Diseases of the Ear and Throat, and to assist the Surgical Registrar.

*Entrance Scholarships.*—Rogers and Seaton Scholarships (in alternate years), £40 per annum, tenable for two years. Subjects: Greek and Latin. Credit given for knowledge of Geometry, Algebra, French, German and English. Examination June 2nd, 3rd, 4th, 5th, 1902. Dalton (entrance), two of £40, one of which will be awarded annually, and tenable for two years. Examination June 2nd, 3rd, 4th, 5th, 1902. Subjects: Geometry (Euclid I—IV and VI, or the subjects thereof); Algebra (as far as the Binomial Theorem, inclusive); Plane Trigonometry (to Solution of Triangles); Elementary Analytical Geometry, the Conic Sections. Credit given for knowledge of Classics and Modern Languages (including English). Cartwright Scholarship, £35 per annum, tenable for three years; subjects as in Dalton. Examination in May, 1903. Hulme, three of £35, one of which will be awarded annually, tenable for three years. Examination on June 2nd, 3rd, 4th, 5th, 1902. Subjects: English Language (Grammatical Structure and Outlines of its History); English Literature (an Essay on some subject of English Literature); and Modern History (Outlines of English History and Geography); with at least two of the following: Latin (Translation at sight; Grammar and Easy Composition); Greek (ditto); French (ditto); German (ditto). Credit given for knowledge of Mathematics (Geometry and Algebra). James Gaskill, two of £40, one of which will be awarded annually, and tenable for two years. Examination on June 2nd, 3rd, 4th, 5th, 6th, 7th, 1902. Subjects: Mathematics—Geometry, the subjects of Euclid, I—IV and VI: Algebra, as far as the Binomel Theorem inclusive; Plane Trigonometry (to Solution of Triangles); Elementary Mechanics, including composition and resolution of forces in a plane, centre of gravity of simple bodies, uniform acceleration, direct impact, the elements of Hydrostatics, Boyle's Law. Chemistry: Inorganic Chemistry, Elementary Organic Chemistry; Practical work, including preparations, analysis of mixtures of inorganic salts, easy quantitative analysis. Credit given for knowledge of classics and Modern Languages (including English). Sir J. P. Kay-Shuttleworth Scholarship, £30 per annum, tenable for three years, open to the competition of scholars from Sedbergh School, Giggleswick School, and Burnley Grammar School, Examination in May, 1903. Subjects: Geometry, Algebra, Trigonometry, Chemistry, Practical Chemistry, and Mechanics, as in the James Gaskill. Two Dauntesey Medical Scholarships, value £35, tenable for one year. Candidates must not have attended lectures in a medical school. Subjects of examination: Zoology, Botany, and Chemistry. The successful candidates must enter for the full course of medical studies at the College. A Gilchrist Scholarship of £50 per annum, tenable for three years in the College, awarded annually upon the results of the June Preliminary Examination of the Victoria University. Grammar School Scholarship, value £18 per annum, tenable for three years, open to scholars of the Manchester Grammar School between the ages of 16 and 21. Subjects: Mathematics, with Classics and Physical Science in alternate years. A subject for an English Essay will be set each year.

*Fees.*—The composition fee for the College courses is £70, payable in two instalments of £35 each.

*Prospectuses* may be obtained from the Registrar, Mr. S. Chaffers.

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### University College, Sheffield: Department of Medicine.

The Physiological Department, thanks to the generosity of anonymous donors, has been entirely reconstructed and equipped to fulfil the most modern requirements, in memory of the late President of the School, Mr. Wm. F. Favell. The department consists of a lecture and demonstration theatre, students' laboratory, professor's room, preparing room, and galvanometer room, all of which are equipped with the most modern apparatus. The department is lighted by electricity throughout.

A Laboratory of Bacteriology has been completely equipped by a "Sheffield citizen" in premises adjacent to the College. The laboratory is recognised by the Royal Colleges of Physicians and Surgeons, and by Cambridge University, and full courses of laboratory instruction are given for the D.P.H.

The Arthur Jackson Chair of Anatomy has been founded by Mrs. Arthur Jackson in memory of her late husband. The Anatomical Department has been improved by the addition of a new theatre and museum.

*Dental Department.*—A complete course of instruction in the subjects required for the L.D.S. has been inaugurated at the College, Dental Hospital practice being taken out at the Royal Hospital. Clinical instruction in Medicine and Surgery is given at Sheffield Royal Infirmary and the Royal Hospital, and in Midwifery and Gynæcology at the Jessop Hospital for Diseases of Women. Students are also admitted to the practice of the Borough Fever Hospitals and the South Yorkshire Asylum. The Royal Infirmary contains 240 beds, including Ophthalmic wards (30 beds) and Dermatological department.

The Royal Hospital contains 125 beds, and Dental and Ophthalmic departments.

*Scholarships, etc.*—An entrance scholarship of the value of £110 is awarded annually to the best candidate, if of sufficient merit, in Latin, Mathematics, Elementary Physics, Inorganic Chemistry, and English. The "Kaye Scholarship" (being the interest on £900) for second-year students is awarded annually under certain regulations. Prizes in Clinical Medicine and Surgery, of £10 10s. each, awarded by the Clinical Committee. Certificates and Book Prizes are awarded annually.

*Fees.*—The composition fee, if paid at the commencement of medical study, is 60 guineas; or the fees may be paid 35 guineas at the commencement of the first and 30 guineas at the commencement of the second year. These fees do not include hospital practice or instruction. The composition fee for this is £45.

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### University of Durham College of Medicine, Newcastle-on-Tyne.

*The Royal Infirmary* contains 280 beds.

*Appointments.*—Assistant Demonstrators of Anatomy, Prosectors for the Professors of Anatomy, Assistant Physiologists, Pathological Assistants, Assistants to the Dental Surgeon, and Assistants in the Eye Department, Throat and Ear Department, and Department for Skin Diseases are elected annually. The Assistant Demonstrators of Anatomy receive £5 each: the others are unpaid. Four times in the year Clinical Clerks and Dressers are appointed for three months.

*Scholarships.*—A University of Durham Scholarship, value £100, for proficiency in Arts, open annually at the beginning of the winter session to intending students. The Dickinson Memorial Scholarship, interest of £400, with a gold medal, for Medicine, Surgery, Midwifery, and Pathology, open to perpetual students who have passed the primary examination of a licensing body. The Tulloch Scholarship, interest of £400 annually, for Anatomy, Physiology, and Chemistry. The Charlton Memorial Scholarship, interest of £700 annually, open to full students entered for the class of Medicine, at end of winter session. The Gibb Scholarship, interest of £500 annually, for Pathology, at end of summer session. The Goyder Memorial Scholarship, proceeds of £325: subjects: Clinical Medicine and Clinical Surgery. Luke Armstrong Memorial Scholarship, proceeds of £680, for best essay on some subject in Comparative Pathology. The Scholarship is open to all Graduates in Medicine or Hygiene, and candidates for these degrees who have spent at least six months at the University of Durham, and whose age does not exceed 30 years. The Stephen Scott Scholarship in Surgery, interest on £1,000 annually. The Heath Scholarship. The late George Y. Heath, M.D., M.B., D.C.L., F.R.C.S., President of the University of Durham College of Medicine, bequeathed the sum of £4,000 to found a scholarship in surgery, the interest to be awarded every second year. First award in 1896. The Gibson Prize in Midwifery and Diseases of Women and Children, interest on £225.

*Fees.*—The composition fee for the College course is 70 guineas.

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### University College of South Wales and Monmouthshire School of Medicine, Cardiff.

This College, which is one of the Colleges of the University of Wales, has, since its foundation in 1883, prepared students for the Preliminary Scientific Examination of the University of London, and for the corresponding examinations of other licensing bodies. In 1893, Chairs of Anatomy and Physiology and a Lectureship in Materia Medica and Pharmacy were established, making it possible for students of medicine to spend three out of the five years of prescribed study at Cardiff. Arrangements with the Managing Committee of the Cardiff Infirmary give students of the College the privilege of attending this large and well-ordered Hospital, which is situated within five minutes' walk of University College. Many students, especially from Wales and Monmouthshire, avail themselves of the opportunities, thus afforded, to pursue the earlier part of the medical curriculum near home.

All classes, at the College and at the Infirmary, are open alike to both men and women students over 16 years of age.

The courses of instruction given at Cardiff are recognised as qualifying for the examinations of the Universities, Royal Colleges, and other licensing bodies of Great Britain and Ireland.

Having spent two or three years in study at Cardiff, and having passed the corresponding examinations, a student may proceed to London or elsewhere and complete his qualifying course for a University Degree or for a College Diploma.

Students preparing for the Preliminary Scientific and Intermediate Examination in Medicine of the University of London may compound for their three years' instruction at Cardiff by paying a single composition fee of £57 10s., or by paying £13 13s., £28, and £21 at the beginning of their first, second, and third years respectively.

Students preparing for the First and Second Examinations of the Conjoint Board for England or for the corresponding examinations of the Conjoint Board for Scotland or for those of the Society of Apothecaries may compound for their classes by paying a single composition fee of £40, or by paying £18 10s. and £24 10s. at the beginning of their first and second year respectively.

In 1899 a department of Public Health was established, and Lecturers in Bacteriology, and in Public Health and Hygiene were appointed. Medical men preparing for a Diploma in Public Health and Hygiene can attend complete courses of Lectures and Laboratory instruction in this department. These courses are recognised by the University of Cambridge, by the Royal Colleges of Physicians and Surgeons, and by Victoria University.

Students preparing for a University Degree in Medicine can, with some additional work, in the first three years of their study, take courses qualifying for the B.Sc. degree in the University of Wales.

*Scholarships and Exhibitions.*—A considerable number of scholarships and exhibitions are open to students of Medicine. The examinations for these take place in September (see Syllabus of Examination, which may be obtained on application to the College Registrar).

Further information may be obtained by application to Dr. A. F. Dixon, Dean of the Faculty of Medicine.

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## SCOTLAND.

### University of Aberdeen.

The Faculty of Medicine embraces twelve chairs, from which instruction is given in all the main branches of medical science, namely, Botany, Zoology, Physics, Chemistry, Anatomy, Physiology, Materia Medica, Pathology, Forensic Medicine, Surgery, Medicine, and Midwifery. Special opportunities for practical instruction are afforded in the laboratories and museums attached to these departments. Clinical instruction is obtained in the Royal Infirmary (accommodating 200 patients), the Royal Lunatic Asylum (700 patients), the Sick Children's Hospital (75 patients), the City Fever Hospital (100 patients), the General Dispensary, etc. (10,000 out-patients annually), and the Ophthalmic Institution (1,600 patients annually). Courses of practical instruction are given in Diseases of Children at the Sick Children's Hospital; in Fevers at the City Fever Hospital; in Insanity at the Royal Asylum; in Diseases of the Ear and Larynx at the Dispensary; in Diseases of the Eye at the Infirmary and Eye Institution; in Diseases of the Skin at the Royal Infirmary. The fee for each University Course is, as a general rule, £3 3s.; and for a second attendance £2 2s. Matriculation Fee, both sessions, £1 1s.; summer session alone, 10s. 6d.; Royal Infirmary, Perpetual Fee, £6; or, first year, £3 10s.; second year £3. The winter session begins on October 17th, 1901. Bursaries, scholarships, and fellowships, to the number of fifty, and of the annual value of £1,180, may be held by students of medicine in this University. They range from £8 to £100 per annum, and are tenable in most cases for two or three years.

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### Edinburgh University.

*Practical Instruction.*—The following means are afforded for practical instruction: Royal Botanic Garden, Herbarium, and

Museum; Zoological Laboratory and Museum of Science and Art; Physical Laboratory; Chemical Laboratories; Dissecting Rooms, Bone Room, and Anatomical Museum; Physiological Laboratory; Medical Jurisprudence and Public Health Laboratories; Materia Medica Museum and Laboratory; *Post-mortem* Department of Royal Infirmary, and University Pathological and Bacteriological Laboratory; Royal Infirmary of nearly 800 beds; Royal Hospital for Sick Children, with nearly 100 beds; Maternity Hospital; City Fever Hospital, with nearly 400 beds; Mental Diseases at Royal Morningside Asylum; Tutorial Classes of Practice of Physic, of Clinical Medicine, and Clinical Surgery.

*Fees.*—The Sessional Fee for Zoology, Botany (Garden Fee, 5s.), Chemistry, Anatomy Lectures, Physiology, Pathology, Materia Medica, Medical Jurisprudence, Surgery, Medicine, Clinical Surgery (Winter), Clinical Medicine (Winter), is £4 4s. each. Second Course, £3 3s. Third Free. A perpetual ticket taken at the beginning of the first year is £6 6s. Physics, Practical Chemistry, Practical Physiology, Practical Pathology, Clinical Surgery (Summer), Clinical Medicine (Summer), Practical Anatomy (Winter), Operative Surgery, Obstetric Operations, Practical Materia Medica, including Pharmacy, Pathological Bacteriology, Experimental Pharmacology, Vertebrate Morphology, and Comparative Embryology are £3 3s. Practical Botany (besides Garden fee of 5s.). Elementary Practical Zoology (besides charge of 10s. for Laboratory expenses), Practical Anatomy (Summer), Anthropology, Anatomy Demonstrations, Diseases of Children, Diseases of the Eye, Diseases of the Larynx, Ear, and Nose, Diseases of Tropical Climates, Clinical Instruction on Diseases of the Skin, Regional Anatomy, Physiological Chemistry, Invertebrate Zoology, Organic Chemistry, Mental Diseases, £2 2s. Vaccination, £1 1s. Matriculation Fee, £1 for each year, or 10s. for a Summer Session. Library open from 10 to 4; Saturdays, 10 to 1.

## Fellowships, Scholarships, Bursaries, and Prizes open to competition in 1901-1902.

### Fellowships.

1. *The Leckie-Mactier Fellowship* of £80, tenable for three years, open to M.B.'s of not more than three years' standing.
2. *The Allan Fellowship in Clinical Medicine and Clinical Surgery* of £40, awarded annually for highest percentage of marks in these subjects in the final.

### Funds for Research, Etc.

1. *The William Dickson Travelling Fund*, of the annual value of £85, usually divided into grants of various amounts.
2. *Earl of Moray Fund* for the promotion of original research. The annual income is £570, available for payment of the actual expenses of the prosecution of original research.

### Scholarships, Etc.

1. *The Stark Scholarship in Clinical Medicine* of £112, tenable for one year, open to students and M.B.'s of not more than eighteen months' standing. July, 1902.
2. *Six Vans Dunlop Scholarships* of £100, tenable for three years, one in Botany and Zoology, one in Chemistry, Anatomy, and Physics, one in Physiology and Surgery, one in Anatomy and Physiology, one in Materia Medica, and one in Pathology, Medical Jurisprudence, and Public Health.
3. *The Mouat Scholarship in Practice of Physic*, of £55 4s. annually, for highest place in class of medicine.
4. *The Thomson Scholarship* of £40, for four years, after examination in Botany, Zoology, and Elementary Mechanics.
5. *The Murchison Scholarship.*—Proceeds of £1,000. Examination in London in 1902.
6. *The Buchanan Scholarship.*—£40 annually for highest proficiency in gynæcology.
7. *The James Scott Scholarship.*—£32 10s. annually for proficiency in midwifery.
8. *The Ettles Scholarship in Medicine.*—£31 5s. annually to the most distinguished graduate.
9. *Two Hope Prize Scholarships.*—£30 for one year for excellence in chemistry.
10. *Two Crichton Scholarships for Research.*—£100 each, tenable for one year.
11. *The Houldsworth Scholarship.*—£46 for one year, with power to re-elect for a second or even a third year if good work is being done, for promoting research in pharmacology.

### Bursaries.

1. *Town Council Bursaries.*—A number are vacant. Apply to the City Clerk for particulars.
2. *One Sibbald Bursary* of £30, tenable for three years.
3. *Two Thomson Bursaries* of £25, tenable for four years.
4. *Five Gricrson Bursaries*, three of £20 and two of £10, each tenable for one year.
5. *Two John Aitkin Carlyle Bursaries*, each £28, tenable for one year.
6. *Four Mackenzie Bursaries* for Practical Anatomy, £8 2s. 6d., tenable for one year.
7. *Renton Bursary*, £20, tenable for one year.
8. *Two Crichton Bursaries*, £50 each, tenable for four years.
9. *The McCosh Graduate's Bursary and McCosh Medical Bursary*, the former £153, the latter £11 11s. 4d., each tenable for one year.
10. *Mackie Bursary*, £30, tenable for two years.
11. *Four Buchanan Society Bursaries*, £35 each, tenable for five years.

### Prizes.

1. *The Medical Faculty Gold Medals*, to distinguished M.D.'s.
2. *The Neill Arnot Prize in Physics*, £37 10s., annually.
3. *The Beaney Prize in Anatomy and Surgery* to M.B.'s. £32 10s. annually.
4. *The Cameron Prize*, £80 annually, for any highly important and valuable addition to practical therapeutics.
5. *Two Gunning Victoria Jubilee Prizes* in Chemistry and Practice of Physic, each of £50.
6. *The Wightman Prize* of £12 annually in Clinical Medicine.
7. *The Pattison Prize* of £10 10s. annually in Clinical Surgery.
8. *The Milner Fothergill Medal* in Therapeutics, £20 triennially, tenable for one year.
9. *The Robert Wilson Memorial Prize* in Chemistry. Bronze medal and £7 16s. annually, tenable for one year.
10. *The Lord Rector's Prize* of 25 guineas.
11. The Trustees of *Gray's Prize Essay Fund* offer three prizes of £15, £10, and £5.

### Lectureship.

*The Swiney Lectureship in Geology*, £144 per annum, tenable for five years, is in the patronage of the Trustees of the British Museum.

Full particulars of all these will be found in the University *Calendar*, price 3s., or in the Medical Slip, 2d., to be had from Mr. Thin, 55, South Bridge, Edinburgh.

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## Edinburgh Royal Infirmary.

*Fees.*—Six months, £4 4s.; one year, £6 6s.; perpetual, £12 in one sum, or separate payments, £12 12s.

Eight resident physicians and six surgeons are appointed every six months; they live in the house free of charge, save laundry. They must be registered. Many non-resident clinical clerks are also appointed for six months. The physicians and surgeons appoint their own clerks and dressers, and assistants in the Pathological Department are appointed by the pathologists. Instruction is given in all the special departments. In-patients, 8,914; out, 32,379.

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## School of Medicine of the Royal Colleges, Edinburgh.

The teaching is similar to that of the Scottish Universities, and the students receive similar certificates at the close of each session. The courses on the special subjects not included in the curriculum of the Examining Boards are also conducted by teachers specially qualified in each branch, and have for the last quarter of a century formed a special feature of the School.

This School of Medicine is composed of lecturers licensed by the Royal Colleges of Physicians and Surgeons, and also recognised by the University through their *licentia docendi*, who, for the sake of convenience, lecture in several buildings near at hand to the Royal Infirmary. The lecturers form one body, are all subject to the same rules and regulations, and enjoy the same privileges. A new constitution and set of regulations have recently been drawn up, in virtue of which the government of the School is placed in the hands of a Governing Board consisting of five members elected by the Royal College of Physicians, of five members elected by the Royal College of Surgeons, and of five members elected by the Lecturers in the School. This Board, with the assistance of the Standing Committees of the School, supervises the whole management, and specially the maintenance of the efficiency and discipline of the school. The different buildings at present utilised for the purpose of lecturing are the following: 1. Surgeons' Hall, Nicolson Street; 2. Minto House, Chambers Street; 3. Nicholson Square; 4. Marshall Street; 5. the New School, Bristo Street; and other places.

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## Medical College for Women, Edinburgh.

Clinical instruction in the Royal Infirmary qualifies for graduation in the Universities. Precisely the same facilities for medical study are given as to male students in the School of Medicine, Edinburgh. Arrangements, fees, and regulations are similar. All the teachers are qualified lecturers of the School, and their courses admit to the various qualifying bodies for women. The lecturers are also recognised by the University of Edinburgh as giving courses admitting to the degrees of M.B., Ch.B. In the case of those proceeding to such degrees, the same fees as those in the University must be paid. The classes, with the exception of those in the Royal Infirmary, are open to all ladies, whether taking a full medical curriculum or not. Prospectus and all information from Miss H. F. Mackay, 20, Chambers Street, (Minto House).

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## University of Glasgow.

The whole course of study presented by the University of Glasgow (*q. v.*) can be passed in the Medical School of the University. For practical work there are available the Physical, Chemical (winter course, £10 10s.; summer, £5 5s.), Physiological, Zoological, and Botanical Laboratories, and the Botanic Gardens.

*Partial Study elsewhere.*—Only two of the five years need be spent at the University; the remaining three may be spent in such university or schools, or under such teachers, as are recognised by the University Court.

*Bursaries, etc.*—Sixteen Bursaries and Prizes in Medicine are open to competition during session 1901-1902, the aggregate value of which is about £337, besides 15 in the Faculty of Science, and 10 in the Faculty of Arts open to medical students. Several of the bursaries are also open to women.

*Hospitals.*—The University is in the immediate neighbourhood of the Western Infirmary, with 400 beds, and near to the Lunatic Asylum, and Special Hospitals for Diseases of the Eye, Skin, etc.

*Fees.*—The class fees are, as a rule, £3 3s., excepting Practical Anatomy and Anatomical Lectures (in summer), Embryology, and Diseases of Women, which are £2 2s. A perpetual Hospital Ticket costs £21, payable £10 10s. in the first year, and the same the second, and this includes clinical instruction. The fee for the degree of M.D. is £10 10s., for Ch.M., £10 10s. The total class and hospital fees for the five years' course amount to about £97 13s., to which add the annual matriculation fee (£1 1s.) and the fees for M.B., Ch.B. (£23 2s.), making a total of £126.

*The Women's Department of the University (Queen Margaret College).*—The course of study, degrees, regulations, fees, etc., are the same as for men. Women students have their own buildings, with class rooms, reading and writing rooms, drawing room, library, etc., and are taught in classes apart from male students, but have all the rights and privileges of university students. Their clinical studies are taken in the Royal Infirmary, where wards are reserved for their exclusive use, and in its dispensaries: also in the Royal Hospital for Sick Children; the Royal Asylum, Gartnavel; the City of Glasgow Fever Hospital, Belvidere; and the Glasgow Maternity Hospital.

*Scholarships and Bursaries at Queen Margaret College.*—The Arthur Scholarship, annual value £20, tenable for three years. Open to competition by medical students of first year (who began their medical studies in October, 1900) at the First Professional Examination in October, 1901. This Scholarship is the gift of Mrs. Arthur, of Barshaw, and is restricted to women medical students. The Dr. Thomas Gibson Bursary, annual value about £30, tenable for four years. Open to medical students who are preparing for service as medical missionaries in connection with the Church of Scotland. Next vacancy in 1904. It will be awarded to the eligible candidate who has gained the highest number of marks in the First Professional Examination. One Logan Bursary, annual value £17, tenable four years; appointment by the Senate. Next vacancy, 1901. Mackintosh Mental Science Bursary in Medicine, of the value of £31, is awarded annually to the student (of either sex) attending the class of Insanity, who stands first in an examination in that subject, to be held in June—the Bursar to continue the practical study of the subject to the satisfaction of the Faculty of Medicine. The William Gardiner Bursary, annual value about £13 10s., tenable for two years, will be awarded after the autumn professional examination to the candidate who has passed in Physiology of the Second Professional Examination, and whose aggregate marks in that subject and in Chemistry and Physics of the First Professional Examination is the highest. It is open in 1901. Four Buchanan Society Bursaries in Arts, Science, or Medicine are open in 1901. In Science or in Medicine they are of the value of £35, and are tenable for three years. They are awarded by the Buchanan Society to students bearing certain preferential names. Applications to be made to The Secretary, P. G. Keyden, Esq., 186, West George Street, Glasgow, on or before September 15th, 1901. The Armagh Bursary (£45, tenable for three years) is open in 1901; two Dumfriesshire Society Bursaries (each £15 and tenable for four years) open in 1902; two Pratt Bursaries (each £20 or tenable for four years) open in 1901; and two Taylor Bursaries (each £7 tenable for four years) are both open in 1901. These last are open to students of both sexes in any Faculty of the University. The University Commissioners have issued an Ordinance to make regulations for the admission of women to certain other Bursaries, Scholarships, and Fellowships. It came into force on May 11th, 1895. Miss Galloway will supply details. See Prospectus for 1901-1902.

*Class and Examination Fees.*—The class and hospital fees for the subjects enjoined by Ordinance as constituting a five years' course of study and clinical work amount to about £96 12s. To this must be added £5 5s. for matriculation fees (£1 1s. for each of five years), £23 2s. for examination fees, and £5 1s. for registration as a medical practitioner.

*Board for Students.*—A House of Residence for women students, Queen Margaret Hall, is situated near the College. The cost for board and residence is £25 10s. to £37 10s. for the College session of 30 weeks, according to accommodation. Students bring their own towels and dinner napkins. Full information can be obtained from Miss Galloway, Queen Margaret College: or from the Lady Superintendent, Queen Margaret Hall, Bute Gardens, Glasgow.

*For further information* male students may apply to Mr. W. Innes Addison, Matriculation Office, Glasgow University; women students to Miss Galloway, Queen Margaret College, Glasgow, W., from whom copies of the prospectus may be had.

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### ST. MUNGO'S COLLEGE, GLASGOW.

The College buildings are situated within the grounds of the Royal Infirmary, the wards and clinical instruction therein being available for students. Qualifying classes are held during the winter in Physics, Embryology, Chemistry, Anatomy, Materia Medica, Physiology, Practical Physiology, Pathology, Medicine, Surgery, Ophthalmology, Gynæcology, Diseases of Throat and Nose, and in Public Health Laboratory Work. Instruction is also given daily in the Dispensary by the Assistant Physicians and Surgeons of the Royal Infirmary. During the summer the classes include Botany, Zoology, Medical Chemistry, Practical Pathology, Practical Physiology, Anatomy, Operative Surgery, Diseases of Children, Clinical Medicine, Clinical Surgery, Medical Jurisprudence, Dermatology, Otology, Bacteriology, and Psychological Medicine. All classes in this College qualify for the diplomas of the English, Scotch, and Irish Conjoint Boards.

*Class Fees.*—£2 2s. for each class, except Anatomy, £4 4s.; Pathology, £4 4s.; Zoology, £4 4s.; Botany, £3 3s.; Otology, Throat and Nose, and Dermatology, £1 1s.

*Hospital Fees.*—First year, £10 10s.; second year (and perpetual), £10 10s.

Total cost of a qualifying course, including Corporation Licence, about £100.

A *Calendar* giving full particulars of the School may be obtained on application from the Dean, Professor John Barlow.

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### GLASGOW: ANDERSON'S COLLEGE MEDICAL SCHOOL.

Lectures are delivered on all the subjects of the five years' curriculum. Hospital Practice and Clinical Lectures in Western or Royal Infirmary; Pathology in Western or Royal Infirmary; Vaccination and Dispensary Practice in Western or Royal Infirmary Dispensary. The above lectures qualify for all the Licensing Boards in the United Kingdom. They are also recognised by the Universities of London, Durham, Ireland, Glasgow, and Edinburgh (the latter two under certain conditions which are stated in the School *Calendar*).

The new buildings are situated in Dumbarton Road, immediately to the west of the entrance to the Western Infirmary, within two minutes' walk of that institution, and four minutes' walk of the University.

A *Calendar* containing full particulars of the School may be obtained from the Secretary to the Medical Faculty, Anderson's College, Dumbarton Road, Partick, Glasgow.

*Class Fees.*—For each Course of Lectures (Anatomy, Ophthalmic Medicine and Surgery, Aural Surgery, Diseases of Throat and Nose, and Mental Diseases excepted), first session, £2 2s.; second session (in Anderson's College), £1 1s.; afterwards free. For Practical Classes (except Anatomy)—namely, Chemistry, Botany, Zoology, Physiology, Pharmacy, Operative Surgery, first session, £2 2s.; second session, £2 2s. Reduced joint fees in Zoology and in Botany, for Lectures and Practical Class when taken in same summer session, £3 3s.; for either course separately, £2 2s. Anatomy Class Fees.—

Winter: First session (including Practical Anatomy), £4 4s.; second session (including Practical Anatomy), £4 4s.; third session, £2 2s. To those who have had the necessary courses of Practical Anatomy, the fee will be £1 1s. Summer: Lectures and Practical Anatomy, £2 12s. 6d.; Lectures alone, £1 11s. 6d.; Practical Anatomy alone, £1 1s.; Osteology and Practical Anatomy, £2 12s. 6d.; Osteology alone, £1 11s. 6d. Students who have attended classes at other Schools, and who desire to pursue their studies at Anderson's College Medical School, will be admitted to such classes as they may have attended elsewhere, at the reduced fees. Ophthalmic Medicine and Surgery (including Hospital Practice).—Aural Surgery, Diseases of Throat and Nose, and Mental Diseases, £1 1s. Matriculation Fee.—Winter: 10s. to those taking out two or more classes, which represents a combined fee for the winter and summer session: 5s. to those taking out only one class. Summer: 5s., except to those who have paid a fee of 10s. for the winter session. Western Infirmary.—Fees: Hospital Practice and Clinical Instruction, first year, £10 10s.; second year, £10 10s.; afterwards free. Six months, £7 7s.; three months, £4 4s. Vaccination fee, £1 1s. Royal Infirmary.—Fees: Hospital Practice and Clinical Instruction, first year, £10 10s.; second year, £10 10s.; afterwards free. Six months, £6 6s.; three months, £4 4s. Pathology, both courses, £3 3s. Vaccination fee, £1 1s. Attendance at the dispensaries of the Western and Royal Infirmaries is included in the hospital fee. Eye Infirmary.—Fee: Hospital Practice and Clinical Instruction, including Lectures at the College, six months, £1 1s.

### University College, Dundee.

Some information as to this College will be found under the head of University of St. Andrews.

*Dundee Royal Infirmary.*—The Infirmary contains 300 beds, with a special ward for the treatment of diseases of children. Three Resident Qualified Assistants are appointed annually. Clinical Clerks and Dressers are attached to the physicians and surgeons, and students are appointed to assist in the *post-mortem* room. Instruction in Practical Pharmacy is given in connection with the Dispensary. Out-patients are seen daily at 9 A.M. The instruction given at the Infirmary is recognised for purposes of graduation by all the Scotch Universities, the University of London, the University of Cambridge, the Royal University of Ireland, and by the Royal Colleges of England and Scotland. Further information may be had on application to the Medical Superintendent.

*Dundee Royal Asylum.*—The appointments include a qualified Resident Assistant and two Resident Clinical Clerks. Clinical instruction is given.

*Fees.*—The fee in the case of most of the classes is 3 guineas. The hospital ticket is 3 guineas a year or 2 guineas a session. The total fees for the five years' curriculum amount to about 80 guineas.

## IRELAND.

Students desirous of prosecuting their medical studies in Ireland may attend the School of Physic in the University of Dublin; the Schools of Surgery of the Royal College of Surgeons of Ireland; the Catholic University School of Medicine, Dublin; or the Schools of Medicine of the Queen's Colleges in Belfast, Cork, or Galway. The student will be guided in making his arrangements for clinical instruction by the advice of the teachers of the School which he may select to attend.

### School of Physic in Ireland, Dublin.

This school is formed by an amalgamation of the medical school of Trinity College and of the Royal College of Physicians; the King's Professors of Institutes of Medicine, Practice of Medicine, Materia Medica, and Midwifery, being appointed by the latter.

Clinical instruction is given by the staff of Sir Patrick Dun's Hospital. The following Hospitals are also recognised by the Board of Trinity College: Adelaide Hospital, Royal City of Dublin Hospital, Dr. Steevens's Hospital, House of Industry Hospitals, Jervis Street Infirmary, Mater Misericordiæ Hospital, Mercer's Hospital, Meath Hospital, the National Eye and Ear Infirmary, St. Mark's Ophthalmic Hospital, St. Vincent's Hospital, Richmond Asylum, St. Patrick's Hospital.

### Catholic University Medical School.

Prospectuses and further information about this school, which provides complete courses of lectures as required by the examining bodies, may be obtained from the Registrar of the School, Cecilia Street, Dublin, who has written a very useful *Guide for Medical Students*. The total fees for school and hospital courses is £160, payable as the courses are taken out.

### The Schools of Surgery of the Royal College of Surgeons in Ireland.

The Schools of Surgery are attached by Charter to the Royal College of Surgeons, Dublin, and have existed as a department of the College for over a century. They are carried on within the College buildings, and are specially subject to the supervision and control of the Council. The buildings have been reconstructed, the capacity of the Dissecting Room nearly trebled, and special Chemical, Pathological, Bacteriological, Public Health, and Pharmaceutical Laboratories fitted with the most approved appliances, in order that students may have the advantage of the most modern methods of instruction. There are special rooms set apart for lady students. The entire building is now heated by hot-water pipes, and lighted throughout by the electric light. A refreshment room is also open, where students can have luncheon. The certificates of this school are accepted by all the Universities and Colleges of Physicians and Surgeons throughout the kingdom. The winter session commences October 1st, and the summer session April 1st. All the lectures and courses of practical instruction may be attended by medical students who are otherwise unconnected with the College.

*Prizes.*—The Barker Anatomical Prize (£21). The Carmichael Scholarship (£15). The Mayne Scholarship (£15). The Gold Medal in Surgery, and the Stoney Gold Memorial Medal in Anatomy. Class Prizes of £3 and £1, accompanied by medals, will also be given in each subject.

Prospectus and *Students' Guide* will be forwarded on written application to the Registrar, Royal College of Surgeons, Dublin.

### Queen's College, Belfast.

The courses of study meet the requirements of the Royal University of Ireland and other examining bodies. The class fee is £2, except in a few cases. The total cost of the medical curriculum of the Royal University of Ireland, including examination fees and perpetual fee for the Royal Hospital, but not including fees for the special hospitals, is about £95. It amounts to about the same for the course of the Conjoint Board in Ireland.

Clinical instruction is given at the Royal Victoria Hospital. *Fees*, six months, £7 7s.; nine months, £9 9s.; Perpetual, £21 in two instalments. The Maternity Hospital, the Ulster Hospital for Women and Children, the Hospital for Sick Children, the Ophthalmic Hospital, the Ulster Eye, Ear, and Throat Hospital, and the District Lunatic Asylum are open to students.

*Prizes.*—(1) Ten medical scholarships each year, value £20 each; (2) two Dunville studentships (one each alternate year), value £145 each; (3) one Andrews studentship each alternate year, value £145; (4) numerous sessional prizes.

The College contains laboratories in connection with the departments of Chemistry, Physiology, and Pathology.

A Students' Union provides dining room, reading room, library, and various recreation rooms.

A pamphlet containing full information can be had free on application to the Registrar, Queen's College, Belfast.

### Queen's College, Cork.

The arrangements in the Faculty of Medicine are made chiefly with reference to the requirements of the Royal University of Ireland, but students proceeding for the examinations of the Conjoint Boards of London, Edinburgh, or Dublin, the Society of Apothecaries of London, or the Apothecaries Hall of Ireland can arrange the courses of lectures which they attend, and the order in which they attend them, to meet the requirements of those bodies. Certificates of attendance in the College are also accepted by the University of Cambridge. The total fees for the College Lecturer and

hospital attendances required by the Royal University of Ireland is about £85.

Clinical instruction is given at the North and South Infirmaries (each 100 beds). Students can also attend the Mercy Hospital (60 beds), the Cork Union Hospital, the County and City of Cork Lying-in Hospital, the Maternity, the Hospital for Diseases of Women and Children, the Fever Hospital, the Ophthalmic and Aural Hospital, and the Eglington Lunatic Asylum. The session at Queen's College extends from October to April inclusive (twenty-seven weeks), but arrangements have been made for the delivery of some of the three months' courses of lectures during the months of April, May, and June. The hospitals are open to students in May, June, and July also.

The College contains laboratories in the Departments of Biology, Chemistry, Physiology, Pathology, and Materia Medica and Pharmacy, and there are a Botanic Garden and Plant Houses in the grounds.

*Scholarships and Prizes.*—Eight Medical Scholarships, two in each of the first four years, of the value of £25 each, and in the fifth year the Blayney Scholarship of the value of £35, and a Senior Exhibition, value £30. Three Exhibitions, one in Practical Medicine, one in Practical Surgery, and one in Practical Midwifery, each of the value of £15. Book prizes at the sessional examinations.

Further information (free) can be obtained in the College Regulations, or on application to the Registrar, Queen's College, Cork.

### Queen's College, Galway.

The Lectures of the Professors in the Medical School of Queen's College, Galway, and the Clinical Instruction in the Galway Hospitals, are recognised as qualifying for the Diplomas of the Royal College of Physicians and Surgeons of Ireland, England, and Scotland, and for the Medical Degrees of the University of London and the Royal University of Ireland.

Clinical teaching is carried on in the Galway Hospital, established as a Public General Hospital (in the place of the County Galway Infirmary) by Act of Parliament (1892).

In addition to this, the Galway Fever Hospital[1] is open to Students of the Clinical Class. Here opportunities are afforded for studying the various forms of Fever and Zymotic Disease admitted during the College Session. The Medical Faculty has also made arrangements with the medical officers for the admission of students to the Galway Union Hospital. This Hospital affords an extensive field for the study of all classes of disease, acute and chronic. A special ward is set apart for the diseases of children, in which students will have an opportunity of studying this important class of cases. Opportunities for extra practice and vaccination are afforded at Galway Dispensary, No. 1. Students whose names are on the Clinical Roll of the Galway Hospital may attend any of the above-named institutions without further charge.

For further information as to the arrangements for clinical teaching (which are liable to alteration) application should be made to Professor Pye, Honorary Secretary of Medical Staff of Galway Hospital.

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## Clinical Hospitals of Dublin.

### Sir Patrick Dun's Hospital.

We have received no reply to our requests for information as to this Institution.

### Richmond, Whitworth, and Hardwicke Hospitals.

These Hospitals contain 312 beds: 110 for surgical cases, 82 for medical cases, 120 for fevers and other epidemic diseases.

The Richmond Lunatic Asylum, containing over 1,200 patients adjoins these hospitals, affording facility for the study of mental disease.

*Appointment.*—A Resident Surgeon and a Resident Physician are appointed every year, receive a salary, and hold office for one year. Eight Residential Clinical Clerks are appointed each half year, and provided with furnished apartments, fuel, etc. These appointments are open not only to advanced students, but also to those who are qualified in Medicine and Surgery. The Dressers are selected from among the best qualified of the pupils, without the payment of any additional fee.

Further information can be obtained from the Honorary Secretary, Dr. J. O'Carroll, 43, Merrion Square E., or the Honorary Treasurer, Sir William Thomson, 54, Stephen's Green, E.

[1] The Royal University and other Licensing Bodies require a certificate of attendance for three months at a hospital devoted to the treatment of fever.

### Adelaide Medical and Surgical Hospitals.

The hospitals contain 140 beds. A House-Surgeon is appointed yearly, and three resident pupils are selected half-yearly.

Further particulars may be obtained from Mr. F T. Heuston, 15, St. Stephen's Green, Dublin, N., or any of the members of the medical staff.

### Royal City of Dublin Hospital.

This hospital, in addition to the general Medical and Surgical Wards, contains special wards for Ophthalmic and Aural Cases, Diseases of Women, and Diseases of Children. There is also an isolated building for the reception of infectious cases. An entirely new operation theatre has been constructed in accordance with the most modern surgical requirements.

*Appointments.*—Clinical Clerks to the Physicians and Dressers to the Surgeons are appointed from the most deserving of the class, and certificates awarded for the faithful performance of their duties. Medical and Surgical Resident Pupils are appointed, and Special Certificates awarded if merited. A Resident Medical Officer is appointed annually.

For detailed prospectus or further particulars apply to Mr. G. Jameson Johnston, F.R.C.S.I., Honorary Secretary, Medical Board, 13, Lower Fitzwilliam Street, or at the hospital.

### Jervis Street Hospital, Dublin.

The hospital was founded in 1718, and was rebuilt in 1886.

*Appointments.*—Resident Pupils, Clinical Clerks, and Dressers are appointed every six months without additional fee, and are awarded special certificates if their duties have been satisfactorily performed. Six interns are appointed each half-year, and are provided with apartments, etc., free of expense.

*Fees:* Winter session, £8 8s.; summer, £5 5s.; winter and summer, £12 12s.

The hospital prospectus and any further information can be obtained from Dr. Thos. G. Stevens, Hon. Secretary, Medical Board.

### Mater Misericordiæ Hospital.

This hospital contains 338 beds. Fifty beds are reserved for the reception of patients suffering from fevers and other contagious diseases. A convalescent home containing 50 beds will be opened this winter.

*Appointments.*—Four House-Physicians, eight House-Surgeons, and twelve Resident Pupils are elected from the most attentive of the class each year.

Entries are to be made with and fees paid to the Registrar, Dr. Joseph Redmond, 41, Merrion Square, Dublin.

A prospectus containing in detail the arrangements for clinical instruction, prizes, etc., may be obtained from the Secretary of the Medical Board, Mr. Arthur Chance, F.R.C.S., 90, Merrion Square West, Dublin.

### Mercer's Hospital.

This hospital, founded in 1707, is situated in the centre of Dublin, in the immediate vicinity of the Schools of Surgery of the Royal College of Surgeons, the Catholic University School of Medicine, and within five minutes' walk of Trinity College. It contains 120 beds for medical and surgical cases, and arrangements have been made with the medical officers of Cork Street Fever Hospital whereby all students of this hospital are entitled to attend the clinical instruction of that institution and become eligible for the posts of Resident Pupils, etc. There is a large Out-Patient Department, and a special Department for diseases peculiar to women. There are also special wards for the treatment and study of children's diseases. During the past few years the hospital has undergone extensive alterations in order to bring it up to modern requirements.

*Appointments.*—A House-Surgeon is appointed annually. Five Resident Pupils, each for six months, and Clinical Clerks and Dressers are appointed monthly from amongst the most deserving of the members of the class.

*Fees.*—Winter, six months, £8 8s.; summer, three months, £5 5s.; nine months, £12 12s.

For further particulars apply to R. Charles B. Maunsell, M.B., F.R.C.S., 32, Lower Baggot Street, Dublin.

### Dr. Steevens's Hospital.

This hospital situated at Kingsbridge contains over 200 beds. Three new wards have recently been opened. It affords exceptional advantages for clinical instruction; owing to its position amongst manufactories and railway works a large number of casualties are always under treatment in the institution, while there are to be found occupying its beds at all times numerous cases of acute and chronic medical and surgical disease. There is a ward entirely devoted to venereal diseases, and a detached building for fever cases; in connection with the hospital is a newly-built extensive out-patient department, with separate clinics for diseases of the eye and ear, skin, throat, teeth, and diseases of women. In addition to these special dispensaries, a general dispensary is held daily. Every opportunity is afforded to the students to become thoroughly familiar with the modern appliances used in diagnosis and treatment of disease. Operations are performed on Tuesday, Thursday, and Saturday. Gynæcological operations on Wednesday. There is accommodation in the hospital for four medical, six surgical, and two specialists (Gynæcology and Ophthalmology) resident pupils, who are provided with separate furnished rooms, with coal and gas, and also a comfortable common sitting room for meals which can be obtained at a reasonable rate.

*Fees.*—Hospital practice: Nine months, 12 guineas; six months, 8 guineas; three months, 5 guineas. Residence: Each three months, 10 guineas, which includes fee for hospital practice and certificate.

A prospectus and particulars may be obtained from the Resident Surgeon at the hospital, or from Dr. William S. S. Haughton, Honorary Secretary, 30, Lower Fitzwilliam Street.

### St. Vincent's Hospital.

We have received no reply to our requests for information as to this Institution.

### Meath Hospital and Co. Dublin Infirmary.

This hospital contains 150 beds available for clinical teaching. There is a separate building for the isolated treatment of Fevers. There are Accident Wards and an Operating Theatre, in connection with which all the modern requirements of surgical teaching have been provided. The certificates of this hospital are recognised by all the universities and licensing bodies of the United Kingdom.

Twenty Medical and Surgical Resident Pupils and Clinical Clerks and Dressers are appointed every session, and a House-Surgeon is elected annually.

A prospectus giving the complete arrangements for the Medical and Surgical Classes for the coming session may be obtained from the Hon. Secretary of the Medical Board, Mr. Richard Lane Joynt, F.R.C.S.I., 84, Harcourt Street, Dublin.

### Rotunda Hospital.

*Master*—Dr. R. D. Purefoy.

This institution consists of two distinct hospitals—namely, the Lying-in Hospital, into which 1,800 labour cases are, on an average, admitted annually, and the Auxiliary Hospital, set apart for the reception and treatment of patients suffering from the various forms of uterine and ovarian disease; about 500 patients are received into this hospital during each year.

There is also in connection with the hospital a large extern maternity (2,000 patients were in the past year attended at their own homes), and a Dispensary for Diseases Peculiar to Women, which is open daily.

Pupils are admitted to the practice of all these departments. Clinical instruction in Midwifery and the Diseases of Women is given daily, and lectures are delivered regularly during the session on the subjects. Pupils can enter at any time.

The diploma from this hospital is granted to pupils on their passing an examination before the Master and Assistants after a period of six months' attendance on the practice of the hospital.

Accommodation is provided for a limited number of intern pupils.

*Fees.*—Intern pupils: Six months, £21; three months, £12 12s.; two months, £9 9s.; one month, £6 6s. Extern pupils: Six months, £10 10s.; three months, £6 6s.

## CLINICAL HOSPITALS.[1]

Opportunities for clinical instruction and study are afforded by many hospitals which are not directly connected with any medical school, and to which the post-graduate student, especially in the fifth year of the curriculum, will often find it to his advantage to resort, as they offer great facilities for gaining practical clinical experience. The following pages contain brief particulars as to the more important of these.[2]

### London.

Clinical instruction and appointments as Clinical Assistants can be obtained at many of the Special Hospitals in London, as well as at the General Hospitals to which medical schools are not attached. Resident appointments (Resident Medical Officer, House-Surgeon, House-Physician, etc.) are made from time to time, and vacancies are announced in our columns. The appointments are usually for stated periods of six or twelve months.

### General Hospitals.

*Great Northern Central Hospital, Holloway Road, N.*—This hospital is now recognised by the Examining Board in England of the Royal Colleges of Physicians and Surgeons as a place of study during the fifth year of the medical curriculum. The hospital contains 159 beds, all of which are at present occupied. The large rectangular and circular wards, each of which contains 20 beds, the operation theatre, out-patient department, general and special, and the pathological departments, have all been erected since 1887. Medical practitioners are invited to attend the general and special practice of the hospital. Clinical Assistants (qualified), Clinical Clerks, and Pathological Clerks are appointed in the general and special departments, and may receive certificates at the end of their terms of office. There are four Resident Medical Officers, Senior and Junior House-Surgeons, Senior and Junior House-Physicians, an Assistant House-Physician; also Pathologist and Registrar, Casualty Officer, and Anæsthetists. Full particulars of and rules for these appointments can be obtained from Mr. Peyton T. B. Beale, F.R.C.S., Honorary Secretary of the Medical Committee.

*London Temperance Hospital.*—The hospital contains 100 beds. The medical and surgical practice is open to students and practitioners. Appointments (vacancies for which are advertised in the medical journals): Surgical and Medical Registrars. Resident Medical Officer, and one Assistant Resident Medical Officer. For particulars as to hospital practice and classes apply at the hospital.

*Seamen's Hospital Society.*—Dreadnought Hospital, Greenwich, 225 beds. Branch Hospital, Royal Victoria and Albert Docks; 50 beds. Dispensary at 51, East India Dock Road, and at Gravesend. The London School of Tropical Medicine is attached to the Seamen's Hospital Society and is situated within the grounds of their branch hospital in the Royal Victoria and Albert Docks. In this hospital are constantly to be found many cases of tropical disease, and opportunities are afforded to students and others to study Practical Surgery and Diseases Incidental to Tropical Climates. One hundred and forty-five students have joined the school since October, 1899, of which number 10 were women graduates. See also p. 554.

*West London Hospital, Hammersmith Road, W.* (West London Post-graduate College).—The hospital contains 175 beds, all of which are now in occupation. Some 2,500 in-patients are treated in the hospital during the year. The teaching in the hospital is especially devoted to the requirements of post-graduates. The Physicians and Surgeons attend on Mondays, Tuesdays, Thursdays, and Fridays at 2.30 P.M., and instruction

[1] Additions or corrections intended for future editions should be forwarded to the Editor not later than the end of July in each year.

[2] For Clinical Hospitals in Dublin see page 546.

is given by the Assistant Physicians and Surgeons in the out-patient department daily, at 2.15 P.M. A course of 18 special demonstrations is given in the wards by the Physicians and Surgeons each session. Operations are performed daily at 2.30 P.M. There are special departments for Diseases of the Eye, Skin, Ear, Throat, and Nose, Women, and for Orthopædic Surgery. Post-graduate lectures are delivered daily, except Saturdays, at 5 o'clock. The date of the commencement of each course is advertised in the medical journals. No Junior Students are admitted to the practice of the hospital. The study certificate of the College is recognised by the Army Medical and Naval Medical Departments for "study leave." There is a pathological investigation laboratory attached to the hospital, at which instruction is given in practical pathology and elementary bacteriology. A large lecture room, together with reading and writing rooms, lavatories, etc., are provided for the use of post-graduates. The fee for the hospital practice, including Post-graduate Lectures, is £3 3s. for three months, and £7 7s. for one year. For Post-graduate Lectures alone, £1 1s. for a course of 10 lectures. Full particulars of the next Post-Graduate Course, and any other information about Post-Graduate teaching, can be obtained on application to the Dean, Mr. L. A. Bidwell, at the hospital.

*North-West London Hospital, Kentish Town Road.*—The hospital, which was established in 1878, provides 53 beds. It is a general hospital. There are two spacious wards for men and women respectively. The children's wards contain 18 cots. The special departments include: (1) Diseases of women; (2) diseases of the eye: (3) diseases of the skin: (4) dental. There are two resident officers; an honorarium at the rate of £50 per annum attaches to each post. Operation day, Thursday at 2.30 o'clock. Further particulars from the Secretary at the Hospital.

### CHILDREN'S HOSPITALS.

*The Hospital for Sick Children, Great Ormond Street, W.C.*, contains 200 beds, divided into 102 medical, 73 surgical, and 25 for special and infectious cases, besides 52 beds at the Convalescent Branch, Highgate. The hospital having been recognised by the Conjoint Board for England as a place where, under the new curriculum, six months of the fifth year may be spent in clinical work, the practice is arranged to meet this need, and is open to students who have completed four years of medical study, and also to qualified medical men. Appointments are made every three months to six medical clerkships and six surgical clerkships, which are open to students at the hospital. Lectures or Demonstrations, given once or twice every week during both winter and summer sessions, are open, free of charge, to medical practitioners. The session are of ten weeks' duration, and begin in October, January, and March. Fees for hospital practice, three months, 2 guineas: perpetual ticket, 3 guineas. Prospectuses and further information will be forwarded on application to the Secretary, Mr. Adrian Hope, at the hospital.

*East London Hospital for Children, Shadwell.*—The hospital contains 107 cots, one-third being devoted to infants. Two House-Surgeons and two House-Physicians (holding office for six months) are appointed annually. This hospital is recognised by the Conjoint Board for England as a place of instruction for students, at which six months of their fifth year under the new regulations may be spent in clinical work. The following opportunities for the study of the diseases of childhood are offered to gentlemen who have completed four years of medical study, and to those who are already qualified: The practice of the hospital (in the out-patients' department) is open to students every day (except Saturdays), at such hours as the physicians or surgeons for the day are attending. The in-patient practice is open to students holding clerkships or dresserships in the hospital, and to students not holding appointments during the attendance of the physicians and surgeons. A certain number of Clinical Clerks and Dressers are appointed every three months to each physician and surgeon. Gentlemen who wish to hold these appointments must have completed their fourth year of medical study. They are eligible for reappointment at the end of three months. Practitioners and students are admitted to the practice of the hospital in both the wards and out-patient department, and clerkships and dresserships can be obtained. Any additional information may be obtained on applying to Mr. H. Betham Robinson, M.S., F.R.C.S., 1, Upper Wimpole Street, W., or to Mr. Thomas Hayes, the secretary at the hospital.

*North-Eastern Hospital for Children, Hackney Road, Shoreditch, E.*—The hospital contains 57 beds. Patients in 1900: In-patients, 778 (206 under 2 years of age): out-patient, 18,264; new cases, 62,931 attendances. There are Special Dental, Eye, and Roentgen Ray Departments. Particulars of facilities for attending Medical and Surgical practice can be obtained on application to Mr. T. Glenton-Kerr, Secretary (City office), 27, Clement's Lane, E.C.

### LYING-IN HOSPITALS AND HOSPITALS FOR WOMEN.

*Queen Charlotte's Lying-in Hospital and Midwifery Training School.*—This hospital receives over 1,100 patients annually, besides having a large out-patient department. Medical pupils are received at all times of the year. Pupils have unusual opportunities of seeing Obstetric complications and Operative Midwifery, on account of the very large number of primiparous cases—upwards of three-fourths of the total admissions. Clinical instruction is given. Certificates of attendance at this hospital are recognised by all Universities, Colleges, and Licensing Bodies. Pupil Midwives and Monthly Nurses are received and specially trained. *Fees.*—Medical Pupils, £8 8s. for four weeks, exclusive of board and lodging; Pupil Midwives, £26 5s. for three months; Pupil Nurses, £15 15s. for twelve weeks, inclusive of board and lodging. The new residence for Medical Pupils opposite, and in telephonic communication with, the hospital is now open. *Terms.*—Full board and residence, £1 15s. per week.

*Hospital for Women, Soho Square.*—There is an organised School for Gynæcology open to qualified medical men and students after their fourth year. A limited number of Clinical Assistants to the Physicians and Surgeons in the Out-patient Department are appointed every three months. Clinical instruction is given also in the theatre and in the wards. *Fee* for the three months' course, £8 8s. Further information can be obtained by letter, addressed to the Dean at the hospital.

### OPHTHALMIC HOSPITALS.

*Royal London Ophthalmic Hospital (Moorfields Eye Hospital), City Road, E.C.*—The hospital was founded in 1804 in Charterhouse Square; in 1821 it was moved to a larger building in Blomfield Street, where the work was carried on until 1899; in 1899 the present building in City Road was opened. It contains 138 beds for in-patients, which were occupied during last year by 1,871 persons; in the same year the out-patients were 36,932, and the attendances 99,821. Operations are performed daily from 10 A.M. until 1 P.M., and four surgeons attend on each day. Students are admitted to the practice of the hospital. *Fees*, for six months, £3 3s.; perpetual, £5 5s. Courses of instruction in the following subjects are given at the hospital periodically: (1) The Use of the Ophthalmoscope; (2) Errors of Refraction: (3) External Diseases of the Eye; (4) Surgical Anatomy of the Eye. Systematic instruction is also given in the Laboratory of the hospital on the Pathology of the Eye. Perpetual Students are admitted to the lectures free. Students of the hospital are eligible for the offices of House-Surgeon, Out-patient Surgical Officer, or Clinical and Junior Assistants. Junior Assistants are appointed every three months. Any further information will be furnished by Mr. Robert J. Bland, Secretary.

*Royal Westminster Ophthalmic Hospital, King William Street, West Strand.*—The hospital contains 36 beds and an out-patient department. The practice is open to practitioners and students from 1 to 4 P.M. daily. Special instruction is given in the Diagnosis, Pathology, and Treatment of Eye Affections, including the Operations on the Eye, the Treatment of Errors of Refractions, and the Use of the Ophthalmoscope. *Fees:* Six months, £3 3s.; perpetual, £5 5s. For particulars, apply to Mr. Adams Frost, F.R.C.S., 30, Cavendish Square, or at the hospital.

*Royal Eye Hospital, Southwark.*—This hospital contains 40 beds and 2 cots. The new patients in the out-patient department number over 18,000 yearly. Operations are performed

and patients seen daily at 2 P.M. and 9 A.M. Qualified practitioners and students are admitted to the practice of the hospital. *Fees:* For three months, £2 2s.; for six months, £3 3s.; perpetual, £5 5s. Courses on Ophthalmoscopy, Refraction, and Diseases of the Eye, each £1 1s. (perpetual students one course free); Pathology £1 1s., to cover cost of materials. Tutorial classes arranged to suit candidates for the various examinations. Qualified students of the hospital are eligible for the offices of Registrar and House-Surgeon, may also be appointed Clinical Assistants for six months, and are eligible for re-election. Further particulars may be obtained from Mr. Edwin Easton, Acting Secretary, at the hospital, Southwark, S.E.

*Central London Ophthalmic Hospital, Gray's Inn Road, W.C.*—Attendances last year 31,440. Classes of Instruction in the use of the Ophthalmoscope with demonstrations on cases are held at the hospital at 8 o'clock in the evening during the winter months, also classes on Refraction. Clinical Assistants are appointed for a term of three or six months to assist the Surgeons in the out-patient department. For full particulars apply to the Secretary, Mr. John Griggs Bryant.

### Fever and Small-pox Hospitals of the Metropolitan Asylums Board.

Students are admitted to study at the Fever Hospitals and the Small-pox Hospital Ships of the Metropolitan Asylums Board after they have completed the third year of medical education, provided they have held the offices of clinical clerk and dresser, and have obtained the sanction of the authorities of the medical school to which they belong. The minimum duration of the course of study at the fever hospitals is two months; and the ordinary course of study at the small-pox ships is not less than two weeks and not more than four weeks, as the Board of Management may determine. At the fever hospitals the student may attend three days, and must attend two days, a week: at the small-pox ships he resides, paying in advance 12s. a week for board and lodging. He must abide by the rules laid down as to disinfection and other matters, and must satisfy the Board of Management that he is sufficiently protected against small-pox by vaccination or otherwise. A certificate signed by the medical superintendent of the hospital at which attendance is made, and countersigned by the Clerk to the Board, is granted to a student when he has satisfactorily completed the course of study. Qualified medical men are admitted under similar terms and conditions, except that the sanction of the authorities of the medical school is not required in their case.

*Fees.*—Fever hospitals, two months, £3 3s., and £1 1s. for every additional month: small-pox ships, two weeks, £2 2s., and £1 1s. for the remaining period.

Courses of instruction in the treatment of fevers are usually held three times a year, beginning in January, May, and October respectively; and information as to the classes is furnished to each of the recognised medical schools in the metropolis.

Courses in connection with small-pox are held from time to time as circumstances permit.

### Other Special Hospitals: London.

*Bethlem Royal Hospital.*—Two Resident House Physicians are appointed twice a year for six months from recently qualified medical students. Students of certain hospitals are allowed to attend for clinical instruction. Qualified medical men are allowed to attend for three months on payment of a fee. Post-graduate courses are given from time to time.

*Hospital for Consumption and Diseases of the Chest, Brompton.*—The hospital has been recognised by the Conjoint Board for England as a place where under the present curriculum six months of the fifth year may be spent in clinical work. There are 321 beds in the two buildings constituting the hospital, and a special throat department. Pupils are admitted to the in-patient and out-patient practice of the hospital. Three courses of lectures and demonstrations will be given during the year. The next course will commence in October, 1901. Clinical assistants are appointed to the Assistant Physicians in the out-patient department, and clinical clerks are appointed to the Physicians in the wards. These appointments are tenable from three to six months. The fee for the practice of the hospital is £1 1s. for each month, or £2 2s. for each period of three months, or a perpetual fee of £5 5s.

*City of London Hospital for Diseases of the Chest, Victoria Park.*—There are 164 beds. The practice of the hospital, both as regards in-patients and out-patients, is open to students and medical practitioners. Certificates of attendance in the medical practice of this hospital are recognised by the London University and London medical examining Boards. Information as to medical instruction can be obtained on application to the Secretary of the Clinical Subcommittee at the hospital.

*National Hospital for the Paralysed and Epileptic, Queen Square, Bloomsbury.*—This hospital with the Finchley branch contains 200 beds and cots. The out-patient practice and lectures are free to students and practitioners. Lectures and demonstrations are given on Tuesdays at 3.30 in three courses—spring, summer, and winter—and the physicians attend every Monday, Tuesday, Wednesday, and Friday for out-patients at 2.30. Surgical operations are performed on days and at hours of which notice will be posted at the hospital. The hospital has been recognised by the Conjoint Board for England as one of the places where part of the fifth year of study may be spent. Clinical Clerks are appointed to the Physicians for in-patients and out-patients. All communications regarding clinical clerkships, lectures, and hospital practice should be addressed to the Secretary and General Director at the hospital.

*Central London Throat and Ear Hospital, Gray's Inn Road.*—The hospital contains accommodation for 17 in-patients, and has a very extensive out-patient department (over 50,000 attendances) yearly, which is daily open to all medical practitioners and students for the purpose of Clinical Demonstration and Instruction. Fee for three months' attendance, 3 guineas: for six months, 5 guineas. A course of lectures on the special diseases treated at this hospital is delivered during both the winter and summer months by members of the staff. The date of these lectures is announced in the medical journals prior to their commencement. They are free to qualified practitioners and advanced students of medicine. Operations on in-patients are performed on Tuesdays at 2 P.M., and on out-patients on Tuesdays and Fridays at 2 P.M. Considerable attention is given to scientific work, particularly with regard to the bacteriology of the diseases of the ear and respiratory passages, for which a special department has been inaugurated.

*St. Peter's Hospital for Stone and Urinary Diseases* (Henrietta Street, Covent Garden).—Qualified medical men and students are admitted free to the practice of this hospital, which contains 27 beds and has a large out-patient attendance (40,725 for 1900) New cases, 4,387. Operations are performed and consultations held on Wednesdays and Fridays at 2. Clinical instruction is given regularly by members of the staff.

*Royal Ear Hospital, Frith Street, Soho Square, W.*—Courses, of six weeks' duration, in Diseases of the Ear and Nose are given by the members of the staff throughout the teaching year. Students can attend one or more surgeons; the fee for each course (2 clinics a week) is 1 guinea. The teaching is of a practical character, and the number of students is limited. For information, address the Honorary Secretary of the Medical Board.

*St. John's Hospital for Diseases of the Skin.*—The Out-patient Practice (at 49, Leicester Square, W.C.) is open free to the medical profession every week day from 2 to 4 P.M., on presentation of their cards to the Medical Officer in attendance. Chesterfield Lectures are given free. The In-patient Department, with 50 beds, is at 238, Uxbridge Road, W. Further particulars may be obtained from Mr. J. Dunlop Costine, Superintendent of the Hospital, 49, Leicester Square, W.C.

### Liverpool.

The following hospitals, in addition to the Royal Infirmary (see page 540), have arrangements for Clinical Instruction:

*Royal Southern Hospital: Clinical School.*—The hospital is situated within convenient distance of the School of Medicine, and contains 200 beds. There is a children's ward, and beds are appropriated to the diseases of women, and also

for cases of tropical disease in connection with the Liverpool Tropical School. Clinical teaching is given in the hospital, and arrangements have been made to render it both thorough and systematic. The members of the staff visit the wards daily, and clinical lectures are given each week. Tutorial classes are also held each day, at which the junior students are instructed in the methods of diagnosis, and the seniors are prepared for their final examinations. The pathological department has a good laboratory attached, in which the students receive practical instruction. *Appointments:* In addition to the usual clinical and *post-mortem* clerkships, two resident posts of Ambulance Officer are awarded every three months to the students whom the Board may consider most suited to hold them. *Fees:* Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.: three months, £4 4s. *Board* (exclusive of fees for Hospital Practice), £15 15s. per quarter. The practice of the hospital is recognised by all examining bodies. Further particulars may be obtained from the Dean, Mr. Newbolt, 42, Catherine Street, Liverpool.

*Eye and Ear Infirmary, Myrtle Street.*—The infirmary contains 70 beds. Evening courses of Lectures on Refraction and Medical Ophthalmoscopy and Diseases of the Ear are delivered at this infirmary during the winter months by the honorary medical staff. Students of medicine of University College, Liverpool, have free access to the practice of the infirmary. Out-patient dresserships may be obtained on application to the Secretary of the Medical Board. The infirmary is recognised by the Conjoint Board as a teaching institution.

*Liverpool Infirmary for Children.*—The infirmary contains 88 beds, and has a large out-patient department. In-patients (1900) 807; new out-patients, 13,258; out-patient attendances, 50,635. A new out-patient department is in course of construction, and it is proposed shortly to enlarge and rebuild the whole hospital. The practice of the hospital is free to students, and clinical instruction is given by the Medical Staff. For further particulars apply to the Secretary of the Medical Board.

### MANCHESTER.

In addition to the Royal Infirmary (see page 541), facilities for clinical instruction are afforded at the following hospitals:

*The Manchester Children's Hospital, Pendlebury.*—The hospital at Pendlebury contains 140 beds. The medical staff see out-patients daily at the Dispensary, Gartside Street, at 9.30 A.M., and visit the hospital at 10 A.M. and 5 P.M. The practice of the hospital and dispensary is free to students accompanying the medical staff.

*Royal Eye Hospital.*—The hospital contains 110 beds. The medical staff attend daily from 9.30 to 12. Clinical instruction is given to students. Further particulars can be obtained from the Secretary, Mr. W. S. Prophet.

*St Mary's Hospital for Diseases of Women and Children.*—Sixty beds, including 12 for the reception of lying-in cases, especially those attended with difficulty or danger. In the out-patient department students are taught the various methods of examination and diagnosis, and the use of gynæcological apparatus; while, in the wards, they have an opportunity of becoming familiar with the diagnosis and treatment of graver cases, and of witnessing more important gynæcological operations. The number of maternity cases attended annually is 3,000. A student attends his first five cases under the immediate supervision of the House-Surgeon and Resident Obstetric Assistant Surgeon. The hospital possesses a library, presented by the late Dr. Radford, consisting of nearly 5,000 volumes, chiefly on subjects connected with obstetrics and gynæcology. There is also a museum, containing a large number of pathological specimens, and a valuable collection of deformed pelves, casts, obstetric instruments, and anatomical models. The gynæcological practice of the hospital is free to third and fourth years' students. The fee for the midwifery practice, which includes attendance upon 20 cases of labour, as required by the examining bodies, is £2 2s. Application must be made to the House-Surgeon at the hospital.

*Manchester Clinical Hospital for Women and Children.*—The hospital is situated in Cheetham Hill Road, near the centre of the town, and contains 70 beds. Out-patients are seen daily at 8.30, and the wards are visited at 9 A.M. Secretary, Mr. H. Teague, Barton Arcade, Manchester.

### NEWCASTLE-ON-TYNE.

*Hospital for Sick Children.*—There are 70 beds in the hospital, besides an isolated block for infectious and doubtful cases. There is a large out-patient department. The practice of the hospital is open free to all students or qualified practitioners. There are 70 beds in the hospital, besides an isolated block for infectious and doubtful cases, with 4 beds. The number of in-patients in 1900 was 703. The out-patient department is carried on in buildings recently erected in the central part of the city, and the number of out-patients in 1900 was 11,943 with 18,429 attendances. A scheme for giving clinical instruction is at present under consideration.

### SHEFFIELD.

*Jessop Hospital for Diseases of Women.*—The number of beds is 45: in the Diseases of Women Department 36, and in the Maternity Department 9. Students can attend the practice of the hospital, and be supplied with cases of midwifery. (See also p. 541.)

### BATH.

*Royal United Hospital.*—130 beds. The hospital is recognised by the Royal Colleges of Physicians, Surgeons, etc., and licensed for dissections. It contains a library and an excellent museum, in which are a large number of intesting specimens, both in Pathology and Comparative Anatomy. Fees for attendance: Twelve months, £10 10s.; six months, £5 5s. (temporary pupils can also, by permission of the honorary staff, attend the practice of the hospital by the payment of £1 1s. for each month). Instruction in Practical Pharmacy for three months, £3 3s. For further particulars apply to the Secretary, Mr. J. M. Sheppard.

### BIRMINGHAM.

*Birmingham and Midland Hospital for Skin and Urinary Diseases.*—The practice of the hospital is open to medical students who have passed their anatomical and physiological examinations, and to registered medical practitioners. The fee for a course of three months is 5 guineas. Further particulars may be obtained from the Honorary Secretary at the hospital.

### BRADFORD.

*Bradford Royal Infirmary.*—The hospital contains 220 beds. Non-resident pupils are received, and have every opportunity of acquiring a practical knowledge of their profession under the superintendence of a House-Surgeon and House-Physician. One year's attendance is recognised by the Examining Boards. *Fee:* Perpetual, £10 10s.

### BRIGHTON.

*Sussex County Hospital.*—The hospital contains 190 beds, with separate wards for children and for cases requiring isolation; and the Out-patient Department is attended by 700 or 800 patients weekly. It is recognised by the College of Surgeons and by the Conjoint Board as a hospital where part of a course of Dispensing may be taken. Out-pupils are admitted to the clinical teaching at the fee of £21 for two years. Further information may be obtained from the House-Surgeon.

### CANTERBURY.

*Kent and Canterbury Hospital.*—The hospital contains 106 beds. Over 700 in-patients and 1,200 out-patients attend every year. Lectures are delivered weekly during term time to the students of St. Augustine's Missionary College on Practical Medicine by Dr. Gogarty, and on Surgery by Mr. T. W. Reid.

### DERBY.

*Derbyshire Royal Infirmary.*—The infirmary has been rebuilt, and will accommodate 198 patients. Pupils are admitted to the practice of the infirmary at £10 10s. a year.

### Devonport.

*Royal Albert Hospital.*—The hospital contains on the Civil side 52 beds, and 6 additional for emergency cases only, and 45 on the Government side. A course of Practical Pharmacy is given by the Dispenser on payment of a fee of £5 5s.: pupils of the medical staff can attend this course on payment of £2 2s.

### Edinburgh.

*Victoria Hospital for Consumption and Diseases of the Chest.*—Excellent opportunity is afforded for the clinical study of Diseases of the Chest. Special clinics by Drs. Philip and Lovell Gulland are arranged from time to time, both in the hospital itself which contains 15 beds, and in the extensive outdoor department, which has its headquarters in Lauriston Place, close to the University. The number in attendance at these cliniques is limited. The fees is £2 2s. for a six weeks' course. Application for places has to be made some time in advance to Dr. R. W. Philip, 45, Charlotte Square. Two medical appointments in connection with the hospital are vacant every six months: (1) Resident Physicianship; (2) Non-resident Physicianship for the out-door department. The vacancies occur usually in April and October.

*Royal Edinburgh Hospital for Sick Children.*—The hospital, which has been recently built, stands in Sciennes Road, about seven minutes' walk from the Medical School and Royal Infirmary, contains over 100 available beds, and is fitted up with modern improvements. There are some 1,500 in-patients and 17,000 out-patients yearly. No cases of infectious disease are admitted. The out-patient department (medical and surgical) is conducted in a building adjoining the hospital, and is well equipped. Systematic clinical courses of instruction, at a fee of £2 2s., which qualify for the University and other examinations, are given at various times throughout the year by the ordinary physicians and surgeons. These are Drs. T. Burn Murdoch, G. H. Melville Dunlop, and John Thomson, and Mr. Harold J. Stiles. Students may enter at any time. A limited number of clinical clerkships are available, and four resident appointments are made yearly. The Registrar of the hospital, Dr. John W. Simpson, will supply particulars.

*Edinburgh Eye, Ear, and Throat Infirmary.*—Open daily at 6, Cambridge Street, at 1 P.M., for Eye Diseases; on Monday, Thursday, and Saturday at 12 for Ear Diseases: on Tuesday and Friday at 4 for Throat Diseases. There is a small infirmary of six beds in male and female wards. 2,500 patients are treated annually. Fee for three months, £1 1s.

*Edinburgh Royal Maternity and Simpson Memorial Hospital* has 40 beds, about 330 in-patients, and 550 out-patients yearly. Clinics are given by the physicians and their assistants. Fees for three months, £2 2s. Two House-Surgeons appointed for each quarter.

*Edinburgh City Hospital for Infectious Diseases* contains nearly 400 beds, a large number of which are available for teaching purposes. Short courses of instruction are given by the Visiting Physician and the Medical Superintendent during the winter and summer session at a fee of £2 2s.

*Royal Asylum, Morningside, Edinburgh.*—There is a clinical field of 500 beds, comprising all the wards except those for private patients. Students have the opportunity of personally coming in contact with and examining the cases, so as to learn the modes of dealing with patients suffering from mental disease; they are exercised in diagnosis and the drawing up of certificates, the aim being to enable them to recognise its early stages, to distinguish its varieties, to adopt suitable treatment, and to advise the relatives as to sending the patient to an asylum. The course extends through the last month of the winter session and the most of the following summer session, and the fee is £2 2s. Dr. Clouston is the Lecturer on Insanity for the University of Edinburgh.

### Exeter.

*Royal Devon and Exeter Hospital.*—The hospital contains 214 beds, including a Special Children's Ward. There are a good Library, Museum, Dissecting, and *Post-mortem* Rooms. Attendance on the Practice at this hospital qualifies for all the Examining Boards. Arrangements may be made by which students can attend Midwifery. For further particulars as to fees, etc., apply to the House-Surgeon.

*West of England Eye Infirmary.*—This infirmary contains 50 beds. Arrangements can be made for students of the Exeter Hospital to attend the practice of the Eye Infirmary.

### Glasgow.

*Royal Hospital for Sick Children.*—This hospital, containing 80 beds for the non-infectious diseases of children, is open for clinical instruction, as is the dispensary or out-patient department. Students, by paying the fee of £1 1s., are entitled to the practice of the hospital and dispensary for twelve months from the term of entry. In-patients, 741; out, 7,128. Futher particulars may be had by applying to the Resident Medical Officer, 45, Scott Street, Garnethill. The Dispensary is at 11, West Graham Street.

*Glasgow Western Infirmary.*—This hospital adjoins the University of Glasgow. Number of beds, 416. The Clinical Courses are given by the Physicians and Surgeons, each of whom conducts a separate class, and students may attend whichever they select at the beginning of the session. Special instruction is given to junior students by tutors or assistants, and clinical clerks and dressers are selected from the members of the class. Special wards are set apart for Diseases of Women and for Diseases of the Skin. In the Out-Patients' Departments there are special clinics for Diseases of Women and for Diseases of the Throat, Ear, and Teeth. All the courses of clinical instruction are recognised at the University of Glasgow and other Boards in the kingdom. Nine resident assistants are appointed annually without fee from those who have completed their course. *Fees.*—For the hospital practice, including the various courses of clinical instruction in Medicine and Surgery, £21 in one payment, or in two equal instalments for the first and second years; for six months, £7 7s.; and for three months, £4 4s. In-patients, 4,854; out-patients, 15,580.

*Glasgow Eye Infirmary.*—This infirmary is situated at 174, Berkeley Street, and 80, Charlotte Street. During last year 1,386 in-patients and 20,749 out-patients were seen. Dispensaries open daily at 1 P.M. Operations performed on Wednesday and Saturday at 2 P.M. Fees for six months, 1 guinea.

### Gloucester.

*The General Infirmary and the Gloucestershire Eye Institution.*—The hospital contains 156 beds. Resident and non-resident pupils are admitted by the General Committee on the recommendation of a member of the Medical Board. Each pupil pays in advance £10 for the first half-year, and £5 for every subsequent quarter, or portion of a quarter, of a year. Each resident pupil has board and lodging in the house, for which he pays in advance 26 guineas for the first half-year, and 13 guineas for every subsequent quarter, or portion of a quarter, of a year. Each pupil pays in advance to the House-Surgeon a fee of £5 5s. for instruction, and a further fee of £3 3s. for every subsequent year or portion of a year. One year spent at this hospital, after passing a preliminary examination, is recognised by the Royal College of Surgeons.

### Lincoln.

*County Hospital.*—The hospital contains 125 beds, and 5 isolation beds. The House-Surgeon is allowed to take two pupils, on terms arranged by the Weekly Board, himself, and the pupils. A fee of not less than £10 10s. is paid by every pupil to the hospital. The House-Surgeon is responsible for the conduct of his pupils. The pupils remain in the hospital only when occupied in performing or observing the actual work of the hospital.

### Norwich.

*Norfolk and Norwich Hospital.*—The hospital contains 220 beds. Students (non-resident) are admitted according to the following scale: For three months, £3 3s.: for six months, £5 5s.: as Permanent Students, £8 8s. The resident officers are a House-Physician, House Surgeon, and Assistant House-Surgeon.

### Northampton.

*General Infirmary.*—There are 163 beds and a large out-patient department. Out-pupils are received, and have every opportunity of acquiring a practical knowledge of their pro-

fession. Instruction is also given by the House-Surgeon in Anatomy, Materia Medica, and Pharmacy. Non-resident pupils are taken at a fee of £10 10s. annually.

NOTTINGHAM.

*General Hospital.*—The hospital contains 233 beds. The Honorary Staff introduce pupils to witness the practice of the hospital on payment of £10 10s. annually in advance. The pupils receive instruction from the Resident Medical Officers.

PORTSMOUTH.

*Royal Portsmouth Hospital.*—150 beds. One year's attendance recognised by the Examining Board. For particulars as to fees apply to the Secretary of the Committee of Management.

SOUTHAMPTON.

*Royal South Hants and Southampton Hospital.*—This institution was established in 1838. The out-patients' building was erected in 1887. The number of beds is 130. The in-patients number about 1,050 a year, the out-patients about 4,500. Large additions to buildings, including new isolation wards, new operating room, a new ward block, and a steam laundry, have just been completed. The Hospital has been registered by the Royal Colleges of Physicians and Surgeons as a "Medical School."

STAFFORDSHIRE.

*Staffordshire General Infirmary.*—There are 75 beds. The pupils of medical practitioners resident in the county of Stafford are allowed to witness the medical and surgical practice of the infirmary, and to be present at operations. The pupils of the officers of the institution are admitted to these privileges gratuitously, those of other practitioners on the payment of £10 10s. with each pupil.

*North Staffordshire Infirmary and Eye Hospital.*—The infirmary has accommodation for 216 patients, including children's wards, eye department, and special ovarian wards. The attendance of pupils at this infirmary is recognised by all the Examining Boards. Particulars as to fees, etc., may be obtained from the Secretary and House-Surgeon, Mr. Albert E. Boyce, Hartshill, Stoke-on-Trent.

WINCHESTER.

*Royal Hants County Hospital.*—The hospital contains 108 beds. The Physicians and Surgeons are allowed to introduce a certain number of pupils; the House-Surgeon may also receive a pupil, for whose maintenance a certain sum, to be fixed by the Committee, is payable in advance. Pupils of medical men not on the staff of the hospital may, with the consent of the Committee, become out-pupils, and see the practice of the hospital, under the direction of the House-Surgeon, on the payment of £10 10s. for one year, or £21 for unlimited attendance. Out-pupils are permitted daily (Sundays excepted) to read in the Library on payment of £1 1s.

WOLVERHAMPTON.

*Wolverhampton and Staffordshire General Hospital.*—The hospital contains 230 beds, and is a preparatory School of Medicine and Surgery. The pupils see the whole of the practice of the Physicians and Surgeons, and are trained in clinical work by the medical and surgical staff. Attendance at this hospital is recognised by the Examining Boards. *Fees:* Six months, £6 6s.; twelve months, £12 12s.; perpetual, £21.

## INSTRUCTION IN PRELIMINARY SCIENCES.

THE following institutions are recognised by the Conjoint Board in England for instruction in chemistry, including chemical physics, practical chemistry, and elementary biology. Certificates for Biology will only be accepted from those institutions marked with an asterisk.

Aberystwith.—*University College of Wales.
Banbury.—Municipal Technical Schools.
Bangor.—*University College of North Wales.
Bath.—*Kingswood School.
Bedford.—The Grammar School; Modern School.
Berkhamsted.—Berkhamsted School.
Birkenhead.—Holt Schools of Science and Art.
Blackburn.—*Stonyhurst College; Municipal Technical School.
Bolton.—Central Higher Grade Board School.
Bradford.—*The Grammar School; *Bradford Technical College.
Brighton.—*Municipal School of Science and Technology.
Bristol.—*University College; *Merchant Venturers' Technical College; Bristol Grammar School.
Bury.—Bury Grammar School.
Cardiff.—*University College of South Wales.
Cheltenham.—Cheltenham College.
Clifton, Bristol.—Clifton College.
Derby.—*Municipal Technical College.
Devonport.—Municipal Science, Art, and Technical Schools.
Dulwich.—*Dulwich College.
Epsom.—*Epsom College.
Eton.—*Eton College.
Exeter.—*Royal Albert Memorial College.
Felsted.—Felsted School.
Gloucester.—Municipal Schools of Science, Art, and Technology.
Godalming.—*Charterhouse School.
Halifax.—Municipal Technical School.
Hanley.—Higher Grade Board School.
Harrow.—*Harrow School.
Huddersfield.—Technical School.
Hull.—Municipal Technical School; *Hymer's College.
Leicester.—*Wyggeston School; Municipal Technical and Art School.
Liverpool.—*School of Science, Technology, and Art.
London.—*The Department of Science and Art, South Kensington.
" City of London School.
" *St. Paul's School, West Kensington.
" The Pharmaceutical Society.
" *Birkbeck Literary and Scientific Institute.
" *South-West Polytechnic Institute, Chelsea.
" *City of London College.
" Polytechnic Institute, Regent Street.
" *Polytechnic Institute, Battersea.
" *Northern Polytechnic Institute, Holloway.
" East London Technical College, People's Palace.
" Mercer's School, Holborn.
" St. Olave's Grammar School, Tooley Street, S.E.
" Merchant Taylors' School.
Manchester.—Municipal Technical School.
Marlborough.—Marlborough College.
Middlesbrough.—Middlesbrough High School.
Newcastle-upon-Tyne.—*The Durham College of Science; *Rutherford College.
Norwich.—Higher Grade Board School.
Nottingham.—*University College.
Oldham.—Municipal Technical School.
Plymouth.—*The Science, Art, and Technical School.
Portsmouth.—Higher Grade Board School; Grammar School; *Municipal Technical Institute.
Preston.—Harris Institute.
Reading.—*Reading College; Reading School.
Rochdale.—Municipal Technical School.
Rochester.—Mathematical School.
Salford.—Royal Technical Institution.
Sherborne (Dorset).—Sherborne School.
Southampton.—*Hartley Institution.
Stoke-upon-Trent.—School of Science and Art.
Stourbridge.—King Edward's School.
Swansea.—Municipal Technical School.
Swindon.—Swindon and North Wilts Technical School.
Tonbridge.—*Tonbridge School.
Towyn, Merionethshire.—Intermediate County School.
Walthamstow.—Forest School.
Winchester.—Winchester College.
Wolverhampton.—*Science School in connection with the Free Library.
Woodford (Essex).—*Bancroft School.

# MEDICAL EDUCATION OF WOMEN.

## QUALIFICATIONS FOR FEMALE PRACTITIONERS.

DEGREES, DIPLOMAS, AND SCHOOLS.

THE qualifying bodies in the United Kingdom which admit women as candidates for their degrees or diplomas are as follows: The University of London, the University of Durham, the University of Edinburgh, the University of Glasgow, the University of Aberdeen, the University of St. Andrews, and the Royal University of Ireland, the Society of Apothecaries, London, and the Conjoint Board of the Royal Colleges of Physicians and Surgeons in Scotland and Ireland. Women candidates for qualification are subject to the regulations of the General Medical Council as to education and examinations in precisely the same manner as men.

Women medical students can obtain a complete medical education by becoming students of the London School of Medicine for Women, the Medical College for Women, Edinburgh; Queen Margaret College, Glasgow; the Schools of Surgery of the Royal College of Surgeons in Ireland, and

the Queen's Colleges of Belfast, Cork, and Galway. The two first-named schools receive women only. In the Schools of Surgery of the Royal College of Surgeons in Ireland special rooms are set apart for lady students. They can also enter at the Universities of Edinburgh (see page 543), Aberdeen, and St. Andrews, and at the University of Durham, the Medical and Science Faculties of which are located in Newcastle-upon-Tyne, the former in the College of Medicine, and the latter in the College of Science, where women students can receive instruction in the various subjects of these two Faculties.

For the University of Glasgow a complete medical education is given at Queen Margaret College, which is now an integral part of that University. The medical classes (systematic and practical) of the University of St. Andrews (United College, St. Andrews and University College, Dundee) are open to women on an equal footing with men. Two years of the medical curriculum can be taken at United College, St. Andrews, or the whole five years at University College, Dundee. Women are received as students at the Dundee Royal Infirmary and the Dundee Royal Lunatic Asylum. The medical degrees of the University are open to women.

Some further particulars as to the London School of Medicine for Women will be found on page 538, but intending students should write to the Secretary of the School, 30, Handel Street, Brunswick Square, London, W.C. The prospectus of this School contains an article of advice to students, which will be found very useful.

# POST-GRADUATION STUDY.

## London.

A result of the enormous growth of medical and surgical science and art in recent years is that a practitioner who is unable to keep himself practically acquainted with the details of that growth finds himself after a time quite "behind the times." The mere failure to advance places him and his patients at a positive disadvantage in the daily warfare against a large number of injuries and diseases. Scarcely, too, can the best men in the medical schools, however diligent, find time to attain proficiency in every branch of modern medical and surgical diagnosis and treatment. Indeed, practitioners of all classes require occasional opportunities to keep themselves abreast of science, and to gain proficiency in the use of the newer instruments of precision, and in the interpretation of their indications. Below will be found some particulars as to the institutions in this country which now provide such instruction.

A large number of medical practitioners educated in the United Kingdom every year leave its shores to settle in various parts of the British Empire that are within the tropics. They are at once brought into contact with diseases unknown in this country, and for the successful treatment of these special training is requisite. To supply such two Schools of Tropical Medicine have been founded, and some account of the arrangements in each is given below.

### Clinical Study for Qualified Medical Men.

The combination of nine of the London Schools of Medicine for the provision of clinical teaching for qualified medical men is one which deserves attention. It is doubtful if a larger variety of cases can be seen anywhere in the world, and when this great amount of material is available for study for the moderate fee of 7 guineas for three months or 10 guineas for six months, it is not surprising to learn that a large number of practitioners have taken out tickets during the past year.

The holder of one of these tickets has the right to attend the clinical instruction, operations, and necropsies at each of the nine hospitals included in the scheme.

Full particulars of the arrangements can be obtained on application to the Honorary Secretary, Metropolitan Schools of Medicine, West Wing, Examination Hall of the Conjoint Examining Board, Victoria Embankment, London, W.C., between the hours of 12.30 and 3 P.M. daily, except on Saturdays.

### The London Medical Graduates' College and Polyclinic.

The London Medical Graduates' College and Polyclinic, which was opened in May, 1899, has already attracted to itself large classes of practitioners, and its success fully justifies its foundation.

The College, which occupies premises formerly used as a High School, is situated in central London, being at the corner of Chenies and Ridgmount Streets, about 50 yards to the west of Gower Street. The building, with the additions now completed, is sufficiently commodious for all present purposes.

In the basement is a dark room, against the walls of which are placed 12 seats, each separated from the adjoining one by a partition, and each having its own electric light that can be used in varying strength, naked or shaded. In this room twelve patients can be examined simultaneously, but separately from each other, and the use of the ophthalmoscope, laryngoscope, or other instrument of precision, and their indications demonstrated. An adjoining room is fitted with appliances for instruction in ophthalmic cases, such as type tests, working models of eyes, stereoscopes, lenses, etc.

The ground floor contains class-rooms, which are furnished with black boards and various other appliances for clinical instruction. In one of them is a large and powerful Roentgen-ray apparatus which is frequently requisitioned in the diagnosis of fractures and deformities. For special occasions the partition dividing one room from the other can be removed, and the two rooms thus united will form a class-room of fine proportions.

The first floor is occupied by the library, reading room, and consultation theatre.

The third floor has an excellent laboratory for bacteriology and chemical pathology, each table having its Bunsen burner, set of reagents, test tubes, etc.

There is a lift to all the floors, and the whole College is fitted with electric light everywhere. At the side of the building is the museum, which is devoted to clinical illustrations; portraits and models of diseased conditions find their place there, and the newest medical and surgical instruments and appliances of all kinds, which can be examined at any time, form a marked feature of this department of the College. The museum has been enriched by a unique collection of valuable pictures of disease, especially skin disease, most of which are painted from life, together with many other specimens of rare clinical value, which have been placed at the service of the Polyclinic by Mr. Jonathan Hutchinson, F.R.S., and the museum has been appropriately named after him the Hutchinson Museum.

One chief method of instruction provided for the medical men attending the classes is the system of consultations taking place every afternoon. These afford opportunities of studying exceptional forms of disease by the most recent methods of diagnosis. Notes are taken of the cases, and are supplemented on occasions by photographs or other portraits of the rarer morbid conditions.

### West London Hospital.

The West London Hospital was the first General Hospital in London to organise a systematic scheme for post-graduate teaching, and is still the only one which devotes the clinical material in its wards and out-patient department solely to the instruction of qualified men. This scheme was started in 1895, and three years later its basis was enlarged by the provision of accommodation for the post-graduates in the shape of lecture, reading and writing rooms, etc. The College has had a very successful career. Upwards of 300 post-graduates have been enrolled since its establishment.

The scheme of study includes the following: (1) Instruction is given daily in the medical and surgical out-patient rooms; (2) special demonstrations are given in the medical and

surgical wards on fixed days in each week; (3) practical instruction is given in the special departments for diseases of the eye, ear, throat and nose, and of women, and clinical assistants are appointed in all; (4) instruction is given in the *post-mortem* room and in the clinical investigation laboratory; (5) every facility is afforded to the post-graduates for seeing and following the operations which are performed daily in the operating theatre, and they are encouraged to render assistance thereat; (6) courses of practical lectures are held three or four times in the year, lectures being given daily except Saturdays.

A certificate signed by the staff is awarded after three months' attendance.

UNIVERSITY COLLEGE, LONDON.

*Pathological Chemistry.*—At University College, London, Dr. Vaughan Harley, Professor of Pathological Chemistry, holds classes in Pathological Chemistry intended for the advantage of qualified practitioners and advanced students. Each course is practical, and includes demonstrations and lectures on the principal points brought out by analysis in the diagnosis and prognosis of disease. Each member of the class is given the actual material to analyse, and from results obtained is required to make the diagnosis, which is corrected if necessary. Thus each man not only does the ordinary class analysis, but he learns to apply his results to practice. Each course includes the analysis of the saliva, stomach contents, fæces, urine, calculi, and pathological fluids, and in the lectures the chemical changes which occur in disease are fully discussed, and as far as possible explained. The laboratory is open from 9 A.M. to 5 P.M., so that the practical work can be done at the hours most convenient to those attending the class. The next class will commence in October, at a date to be fixed by mutual arrangement. The fee for the class, including apparatus and material, is £5 5s. A department is also fitted up for research work, and is open to all researchers at the fee of £1 1s. a month. Most excellent original research work has been and is being done in the laboratory, and in many instances the workers have received grants from the Scientific Grants Committee of the British Medical Association.

*Department of Clinical Pathology.*—The top floor of the west wing of the new hospital is equipped for histological, chemical, and bacteriological investigation of the cases in the hospital.

CHARING CROSS HOSPITAL, LONDON.

*Post-Graduate Class and Lectures.*—Special series of clinical lectures and practical demonstrations, exclusively arranged for the convenience of practitioners and post-graduate students, are given at the hospital throughout the year. The lectures for the year are arranged in three courses, each course consisting of ten meetings, and lasting ten weeks. Two of these courses are held during the winter and one during the summer. The class meets on each Thursday in the Board Room of the Hospital, and proceeds thence to the wards or to the department in which the demonstration may be held. The fee at present charged for each course of ten lectures is one guinea. The first of the two winter courses of the ensuing academical year will commence on October 10th next, and will be conducted by the following members of the medical and surgical staff: Drs. Green, Bruce, Eden, Willcocks, Murray, Mott, and Messrs. Boyd, Waterhouse, Wallis, and Gibbs. Practitioners wishing to join the class can receive any further information as to the dates and subjects by communicating with the Honorary Secretary (Dr. Willcocks) at the hospital.

THE LONDON SCHOOL OF TROPICAL MEDICINE.

*The Seamen's Hospital Society* possesses two hospitals—the Dreadnought Hospital at Greenwich, 225 beds, and the Branch Hospital in the Royal Victoria and Albert Docks, E., 50 beds. It has also two Dispensaries—one in the East India Dock Road and the other at Gravesend, from which the patients are transferred to the hospitals.

The School Buildings, Laboratories, Museum, Library, etc., are within the grounds of the Branch Hospital, Royal Victoria, and Albert Dock Station, Connaught Road, Great Eastern Railway.

Opportunities are afforded to students and others who may be desirous of studying diseases incidental to Tropical Climates and also Practical Surgery before entering the services or going abroad. In the hospitals of the Society are to be found cases of Tropical Disease such as may be met with in actual practice in the tropics. There are three courses in the year, each lasting three months, beginning October 1st, January 15th, and May 1st respectively.

The Laboratory, Museum, Library, etc., are open daily, and clinical instruction is given daily in the wards of the hospitals.

The Lecturers in the School are: Dr. P. Manson, F.R.S., Dr. Andrew Duncan, Dr. Oswald Baker, Dr. L. Westenra Sambon, Dr. James Galloway, Dr. R. Tanner Hewlett, Mr. Jas. Cantlie, Mr. E. Treacher Collins, and Professor W. J. Simpson. The Medical Tutor is Dr. C. W. Daniels.

Certificates are granted after examination to those who complete a full course.

Resident chambers are available for students, who must be qualified or in the fifth year of their medical studies.

*Appointments.*—There is a House-Physician and a House-Surgeon at the Dreadnought Hospital, Greenwich, and a Senior House-Surgeon and House-Surgeon at the Branch Hospital. The pay of these offices varies from £50 to £100.

*Scholarships.*—The Craggs Travelling Scholarship of £300 is in the gift of the school.

The Prospectus, Syllabus, and other particulars can be obtained on application to the Secretary, Mr. P. Michelli, Seamen's Hospital, Greenwich, S.E., or from the medical tutor at the School.

THE LIVERPOOL SCHOOL OF TROPICAL MEDICINE.

This school has been established in Liverpool. It is in conjunction with University College, Liverpool, and the Royal Southern Hospital, for the purposes of research and clinical teaching respectively. A special ward at the hospital has been set apart for the reception and treatment of Tropical Diseases, and all facilities for investigation and study are given in the Pathological Department of University College (Thompson-Yates Laboratories).

Major Ronald Ross, F.R.S., F.R.C.S., is the Walter Myers Lecturer in Tropical Medicine and Consulting Physician in Tropical Diseases at the hospital, and Dr. H. E. Annett holds the post of Demonstrator in Tropical Medicine to the school. Dr. R. Fielding-Ould, Dr. A. S. Grünbaum, and Dr. Balfour Stewart have been appointed Assistant Lecturers, and Dr. J. E. Dutton holds the Walter Myers Fellowship of Tropical Medicine. The school is entirely supported by the voluntary subscriptions of Liverpool merchants and others. A. H. Milne, B.A., Honorary Secretary.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, LONDON.

Clinical demonstrations of Diseases of the Nervous System are held at this hospital at 4 P.M. on each Tuesday afternoon throughout the winter session. Medical men are admitted on presentation of their visiting cards, but the fee for a course of three months is 1 guinea. Courses are sometimes held during the spring and autumn vacations. The demonstrations during the winter course are so arranged as to cover the main subjects of Neurology, and are designed for practitioners. Further particulars can be obtained from the Honorary Secretary, 73, Welbeck Street, W.

CAMBRIDGE.

Special arrangements for advanced study and research have been made recently in the University of Cambridge. Graduates of other Universities may be admitted to the University of Cambridge as advanced students. They may for one or more terms pursue courses of advanced study or research, literary or scientific, under the direction of the University teachers, and may become members of certain colleges without fulfilling the same conditions as are imposed on junior students, their collegiate status being assimilated to that of students who have taken their first degree in the University. Advanced students may, if they wish, obtain a certificate certifying to their proficiency in research, or may proceed to the degree of B.A. or LL.B. under certain conditions. In their third or some subsequent term of residence they may become candidates for certain parts of the Tripos (Honour) Examinations, among others the Natural Science

Tripos, Part II. Having satisfied the examiners, and after residence of six terms in all, they are admissible to the degree of B.A. or LL.B. The Certificate of Research may be obtained after residing for three terms (one academical year), and when the student has completed six terms' residence he is admissible to the degree of B.A. The facilities for advanced study and research offered by the University include the University Library and the Philosophical Library, while each of the seventeen Colleges possesses it own Library, as do also the respective Natural Science Departments. The department of Zoology and Comparative Anatomy includes a museum of zoology and a laboratory for animal morphology and elementary biology. The department of Botany contains a comprehensive herbarium and a museum of specimens illustrating the morphology and life-history of plants. There are also laboratories and class-rooms fitted for experimental work, while the Botanic Garden contains a large and varied collection, with numerous plant houses and a botanic laboratory. The department of Human Anatomy contains a spacious dissecting room, a museum, osteological room, and a number of rooms for special study and research in anatomy, histology, and physical anthropology; upon the last-named subject a special course of lectures is given. The department of Physiology contains a number of rooms provided with electric light and motive power, and with abundant and complete appliances of all kinds for practical work. Special rooms are set apart for histology, chemical physiology and experimental inquiries, including psycho-physical researches. The department of Pathology is well equipped for the study of the processes and results of disease and for bacteriological teaching and investigation. There is also a museum containing a fine collection of specimens illustrative of morbid anatomy. The surgical portion is of special importance, and contains a large number of interesting specimens presented by the late Sir George Humphry. The Pharmacological Museum and Laboratory, at present lodged in Downing College, possesses a complete collection of the official materia medica and ample appliances for experimental and chemical research on the nature and uses of medicinal substances. Lectures on clinical medicine and surgery are given at Addenbrooke's Hospital by the staff. The department of Chemistry is very completely furnished, and several of the Colleges also possess chemical laboratories. Certain scholarships are open, including the John Lucas Walker Studentship for Pathology, the Balfour Studentship for Animal Morphology, and the Coutts Trotter Studentship (at Trinity College) for Physiology and Experimental Physics. Special arrangements for advanced students have been made by King's College, Trinity College, St. John's College, Christ's College, and Emmanuel College. Further particulars may be obtained from the Registrary of the University, the Registry, Cambridge.[1]

### Edinburgh.

The attendance at formal post-graduate courses was not such as to warrant the continuance of the arrangements devised in 1899. At various periods of the year graduates may avail themselves of short courses in Diseases of the Chest at the Victoria Hospital for Consumption, and at the out-department of that hospital at 26, Lauriston Place, by Drs. R. W. Philip and G. Lovell Gulland; Diseases of Children by the staff of the Royal Hospital for Sick Children; Surgery in Children by Mr. Stiles at the same hospital; Diseases of Ear, Throat, and Nose, at the Royal Infirmary, by Drs. McBride and Mackenzie Johnston; on the same group of subjects by Dr. Hunter Mackenzie and Dr. Logan Turner at the Cambridge Street Infirmary; Ophthalmoscopy, by Dr. George Mackay at the Royal Infirmary, and by Dr. W. G. Sym at 6, Cambridge Street; on Infectious Diseases, by Dr. Claude B. Ker, at the City Hospital; Practical Bacteriology, by Dr. Shennan, at Surgeons' Hall; Electricity in Medicine and Surgery (with Roentgen rays), by Dr. Dawson Turner, at the Royal Infirmary and Surgeons' Hall; and in Diseases of the Skin, by Drs. W. Allan Jamieson and Norman Walker, at the Royal Infirmary.

Various other courses are from time to time available, and are advertised at the beginning of Winter and Summer Sessions.

### Special Departments.

At many of the special hospitals in London and at some of the general hospitals also, such as the West London, courses are given by the members of the staff specially arranged for post-graduate students. Some particulars as to the hospitals having such arrangements will be found under the head of Clinical Hospitals (pp. 547 *et seq.*). Details are usually published in the advertisement columns of the British Medical Journal from time to time. The facilities which exist for the practical study of diseases of the throat and ear are considerable. Special arrangements for the study of laryngology exist in London at St. Thomas's, Guy's, St. Mary's, Charing Cross, and the West London Hospital; for otology at the London Hospital and the Royal Ear Hospital; and for both subjects at the Golden Square Hospital, the London Throat Hospital, and the Central London Throat Hospital. In connection with Owens College, Manchester, a post-graduate course is held at the Ear Institute in June. Anderson's College, Glasgow, has special courses for ear diseases in November and May, and at the Aberdeen General Dispensary there is a course which extends from April to June. At many other hospitals clinical practice can be attended, and full particulars will be furnished by the Secretaries.

At many of these special hospitals, also, a certain number of appointments as clinical clerks or clinical assistants are available. No doubt these posts are mostly filled by senior students or newly-qualified men, but as the special hospitals are not connected with the schools, there is nothing to prevent senior students taking them. The field is very large, and the opportunity for gaining technical knowledge is great, as the work is done in connection with, and under the eye of, a member of the staff. At the children's hospitals both at Great Ormond Street and at Shadwell, and also at the Evelina Hospital, appointments of this kind can be obtained.

## PSYCHOLOGICAL MEDICINE.

The facilities for the study of mental diseases are now vastly increased, and in addition to the regular lectures given in the different medical schools, post-graduate lectures are also given in the Bethlem Royal Hospital. The London County Council has thrown open its large asylums, which are recognised by the Conjoint Medical Board as teaching hospitals; this also applies to the City of London Asylum. Dr. Savage at Guy's, and Dr. Rayner at St. Thomas's, have special classes, with clinical instruction, at Bethlem Royal Hospital; Professor E. W. White lectures at King's College, and gives clinical instruction at the City of London Asylum, near Dartford; Dr. Percy Smith is the Lecturer at Charing Cross, and gives clinical instruction at Bethlem; Dr. Claye Shaw at St. Bartholomew's, with clinical instruction at Banstead Asylum; Dr. Mickle at Middlesex and University College; Dr. Hyslop at St. Mary's; Dr. C. Mercier at Westminster; Dr. J. K. Will at the London Hospital.

In the Provinces, also, each medical school has a Lecturer on Psychological Medicine, who gives clinical instruction in a neighbouring asylum; and in Scotland and Ireland similar arrangements exist.

The Royal University of Ireland grants a diploma for proficiency in the treatment of mental diseases under the following conditions:

The diploma is conferred only on graduates in medicine of the University.

Candidates must give notice, in writing, to the Secretaries of their intention to present themselves, and must pay the prescribed fee of £2 at least one month previous to the examination.

Candidates who satisfy the examiners will be required to pay a further fee of £3 before the diploma is conferred.

The subjects for this examination are those required for the Hutchinson Stewart Scholarship for proficiency in the treatment of Mental Diseases.

The Medico-Psychological Association of Great Britain and Ireland also grants a Certificate in Psychological Medicine after a course of training, according to the rules of the Association, to candidates registered under the Medical Act. The examinations are held in London, Scotland, and Ireland twice a year. The fee for the examination is £3 3s. Full particulars may be obtained from the General Secretary, Dr. R. Jones,

[1] *A Guide for Advanced Students*, compiled by Dr. Donald MacAlister, tutor of St. John's College, and University Lecturer in Medicine, has been printed by the Cambridge University Press, and can be obtained (price 6d.) from any bookseller.

Claybury Asylum, Woodford Bridge, Essex. The Medico-Psychological Association further gives a Bronze Medal and £10 10s. to Asylum Assistant Medical Officers for the best dissertation on any clinical or pathological subject relating to insanity, also the Gaskell Prize, value £30, and the Hack Tuke Memorial Prize is awarded for an essay on some subject connected with insanity.

## DEGREES FOR PRACTITIONERS.

Since it was formerly the almost universal custom for medical students educated in London not to seek a University degree, and as that custom still prevails to a considerable extent, a very large proportion of medical men in actual practice in England possess diplomas to practise but not degrees in Medicine. The want of a degree and of the title of "Doctor" is often a subject of regret in after-life, and certain universities have issued special regulations under which the degree of M.D. is granted to practitioners of a certain standing under special conditions. The regulations of these universities are stated briefly in the following paragraphs. The University of Brussels also grants the degree of M.D. to practitioners after examination, without restriction as to residence or curriculum; but this degree is not registrable on the *Medical Register* if obtained subsequently to June, 1886.

### University of London.

Registered medical practitioners of not less than three years' standing, and not less than 25 years of age, who shall pass, or have already passed, the Matriculation and Preliminary Scientific Examinations, may proceed to the Intermediate and M.B. Examinations without the intervals prescribed by the Regulations, on producing certificates that they have gone through the required course of training at any time previously (see p. 522).

### University of Durham.

The degree of M.D. is granted by the University of Durham to registered practitioner of not less than fifteen years' standing, who have been qualified and in practice for that period, upon the following conditions without residence: the candidate must be 40 years of age, and must produce a certificate of moral character from three registered medical practitioners. If he have not passed previously to the professional examination in virtue of which his name was placed on the *Register* an examination in Arts, he is examined in classics and mathematics; if otherwise, he is required to translate into English passages from any one of the following Latin authors: Cæsar, *De Bello Gallico* (first three books), Virgil, *Æneid* (first three books), or Celsus (first three books).

*Professional Examination.*—The candidate must pass an examination in the following subjects: i. Principles and Practice of Medicine, including Psychological Medicine. Hygiene and Therapeutics: ii. Principles and Practice of Surgery; iii. Midwifery and Diseases Peculiar to Women and Children; iv. Pathology, Medical and Surgical; v. Anatomy, Medical and Surgical; vi. Medical Jurisprudence and Toxicology. The examination is conducted by means of printed papers, clinically, in the Royal Infirmary, Newcastle, and *viva voce*. The classical portion of the examination may be taken separately from the professional on payment of a portion (£10 10s.) of the full fee.

*Foreign and Colonial Practitioners.*—Natives of India or the British Colonies are placed on the same footing as natives of Great Britain. Natives of India may produce evidence from an Indian University that they have passed within one year an examination in Latin and in Greek, Persian, or Sanskrit.

*Fees.*—The inclusive fee is fifty guineas; if a candidate fail to pass twenty guineas are retained, but if he present himself again forty guineas only are required.

*Dates, etc.*—The examinations are held twice a year, at the end of April and of September. Notice, accompanied by the fee and certificates, must be sent to Professor Howden, Secretary of the University of Durham College of Medicine, Newcastle-on-Tyne, at least twenty-eight days before the commencement of the examination.

### University of Brussels.

British practitioners of medicine holding medical and surgical qualifications are, in common with legally-qualified practitioners in other countries, admissible without further curriculum to the examination for the degree of M.D. of the University of Brussels.

*Examination.*—The examination is divided into three parts. The "First Doctorate" includes Medicine, Pathology (with microscopical examination), Therapeutics, Mental Diseases, and Diseases of Women and Children. The "Second Doctorate" comprises Surgery, Midwifery, Hygiene, and Medical Jurisprudence. The "Third Doctorate" consists of clinical examination in Medicine and Surgery, examination in Midwifery with the *mannequin*, Ophthalmology, Operative Surgery (amputation, ligature of arteries in the dead subject), and Regional Anatomy with Dissections. Special importance is attached to practical knowledge. The examination is conducted in French through an official interpreter, but most of the examiners, it is stated, speak English fluently. The examination is *viva voce*, but a written examination may be obtained on paying a special fee of £1 for each part.

*Dates.*—The examinations take place on the first Tuesday in November, December, February, May, and June. It is desirable that the candidate should arrive in Brussels on the previous Saturday before 2 P.M. at latest. The whole examination (First, Second, and Third Doctorate) may be got through in about a week, and seldom exceeds eight to ten days.

*Fees.*—Candidates are required to leave their diplomas with the Registrar of the University prior to the examination. The fees are: For inscription of name, £8 12s.; for examination, £13; for legalisation of diploma, 8s.; total, £22. If a candidate fail in the first part of the examination the fees for the second and third are returned to him; if in the second, the fees for the third. A rejected candidate may present himself again in three months on paying the examination fees, provided his second appearance be in the same academic year (October 1st to June 30th); otherwise the matriculation fee must be renewed, that is, the fee for inscription of name.

Further particulars may be obtained from Dr. Major Greenwood, Hon. Sec. Brussels Medical Graduates' Association, 243, Hackney Road, London, N.E. An article containing a full description of everything concerning the degree was published in the British Medical Journal on September 15th, 1888.

## PUBLIC HEALTH OR STATE MEDICINE.

A medical officer of health of any county, or of any single or combined district with a population at the last census of 50,000 or more, or of any metropolitan district, or the deputy of any such officer, must be legally qualified for the practice of Medicine, Surgery, and Midwifery, and also either be registered in the *Medical Register* as the holder of a diploma in Sanitary Science, Public Health, or State Medicine, under Section xxi of the Medical Act, 1866, or have been, during three consecutive years preceding the year 1892, a medical officer of a district or combination of districts in London or elsewhere with a population, according to the last published census, of not less than 20,000, or have, before the passing of the Local Government Act, 1888, been for not less than three years a medical officer or inspector of the Local Government Board.

The following regulations for candidates for diplomas in Public Health have been laid down by the General Medical Council. These regulations are designed to ensure "the possession of a distinctly high proficiency, scientific and practical, in all the branches of study which concern the Public Health."

#### Section I.
#### Examination.

(1) Candidates must have obtained a registrable qualification in Medicine, Surgery, and Midwifery.

(2) The examination, consisting of two parts, will be held in the months of January and July in each year.

(3) Candidates must pass Part I. before being admitted to Part II.

(4) Candidates may enter for Parts I. and II. separately, or at the same time, but no candidate's name will be published until he has passed in both parts of the examination.

(5) The examination in each part will be written, oral, and practical.[1]
(6) The fee for each part is £5 5s., and must be paid three days prior to the day on which the examination commences.
(7) A candidate who fails to satisfy the examiners in either part may present himself again at the next examination on payment of a fee of £3 3s.
(8) The diploma awarded is entitled "Diploma in Public Health of the Royal College of Physicians of London and the Royal College of Surgeons of England."
(9) A candidate intending to present himself for either part of the examination must give 14 days' notice in writing to the Secretary, at the Examination Hall, Victoria Embankment, W.C.

SECTION II.
CONDITIONS OF ADMISSION TO EXAMINATION.

I. *For candidates who obtained a registrable qualification on or before January 1st, 1890.*

A candidate entitled to be registered under the Medical Act on or before January 1st, 1890, will be admissible to Part I of the examination on producing evidence of being at least 23 years of age, and to Part II on producing evidence of being at least 24 years of age.

II. *For candidates who obtained a registrable qualification after January 1st, 1890.*

A candidate will be admissible to examination in Part I on producing evidence:
(1) Of having been in possession of a registrable qualification in Medicine, Surgery, and Midwifery for at least twelve months
(2) Of having attended, after obtaining such registrable qualification, practical instruction in a laboratory recognised by the Examining Board in England during a period of six months.
(3) Of being at least 23 years of age.

A candidate will be admitted to Part II of the examination on producing evidence:
(4) Of having, after obtaining a registrable qualification, been associated day by day in the duty, routine and special, of Public Health Administration during six months (of which at least three months shall be distinct and separate from the period of laboratory instruction required under Paragraph 2, Clause 2) under the supervision of
(*a*) In England and Wales, the medical officer of health of a county or of a single sanitary district having a population of not fewer than 50,000, or a medical officer of health devoting his whole time to public health work; or
(*b*) In Scotland, a medical officer of health of a county or counties, or of one or more sanitary districts having a population of not fewer than 30,000; or
(*c*) In Ireland, a medical superintendent officer of health of a district or districts having a population of not fewer than 30,000: or
(*d*) A medical officer of health who is also a teacher in the department of Public Health of a recognised medical school.

*** The certificate of an assistant medical officer of health of a county or of a single sanitary district having a population of not fewer than 50,000 may be accepted as evidence under Clause IV, provided the medical officer of health of the county or district in question permits the assistant officer to give the necessary instruction and to issue certificates.

(5) Of having attended during three months, after obtaining a registrable qualification, the practice of a hospital for infectious diseases at which opportunities are afforded for the study of Methods of Administration.
(6) Of being at least 24 years of age.

SYLLABUS FOR THE EXAMINATION.

PART I.

The first part of the examination will have reference to the general principles of sanitary science, and will comprise the following subjects:

The elements of chemistry, physics, and geology. Methods of examination of water and air for hygienic purposes, including a knowledge of analytical methods and the interpretation of results. The chemical composition of foods, and the usual forms of adulteration. The laws of heat and the elements of pneumatics, hydrostatics, and hydraulics, in their relation to warming, ventilation, water supply, and drainage. Principles of building construction in their application to dwellings, hospitals, and schools, etc. Meteorology in relation to health; meteorological instruments, their construction and use. The general principles of sanitary engineering, including the disposal of sewage and refuse. The reading and interpretation of geological and ordnance survey maps. The microscopical examination of foods and the detection thereby of the common forms of adulteration. The methods of bacteriological analysis, and the bacteriology of water, air, food, and soil. Disinfectants, their chemical and bacteriological efficacy and use. The general pathology of infection, and the diseases of animals that are transmissible to man. Nature of immunity and protection from infectious disease.

PART II.

The second part of the examination will have reference to the application of the Principles of Sanitary Science, and will comprise the following subjects:

Laws and statutes relating to Public Health, including the model Bylaws of the Local Government Board. General Epidemiology with reference to the origin, pathology, symptoms, propagation, geographical distribution, and prevention of epidemic, endemic, and other diseases at home and abroad. Unwholesome trades and the diseases to which they give rise, and the prevention of nuisances arising therefrom. Nature and origin of parasitic diseases. Nuisances injurious or dangerous to health. Causes and conditions which produce climate, general effects of climate, acclimatisation. Effects on health of overcrowding, vitiated air, impure water, polluted soil, and bad or insufficient food. Duties of sanitary authorities and their officers.

Vital Statistics:—Calculation of population, birth-rate, marriage-rate, and death-rate: mortality from zymotic diseases: sickness-rates: relation between occupation and mortality: life tables, their construction and interpretation of the value of statistical facts, averages, and methods.

[1] NOTE.—The practical examination in Part II may include a visit to, and report on, some selected premises.

Laboratories recognised for the above course of Laboratory Instruction:

London.—St. Bartholomew's, Guy's, London, University College, King's College, Charing Cross, St. George's, St. Mary's, St. Thomas's, Westminster, Middlesex, Jenner Institute of Preventive Medicine.
Birmingham.—Mason College.
Brighton.—Technical School.
Bristol.—Medical School.
Cardiff.—University College.
Leeds.—Yorkshire College.
Liverpool.—School of Science and Technology; University College.
Manchester.—Owens College.
Newcastle-on-Tyne.—University of Durham College of Medicine.
Sheffield.—University College.

Books of questions set at the examinations for the diploma in Public Health during the years from 1887 to 1900 may be obtained on application to Messrs. Taylor and Francis, Red Lion Court, Fleet Street, London, E.C. Price 6d., post free 6½ each.

The examinations for diplomas in Public Health, granted by the various Universities and Medical Corporations, and the courses of study required, are adapted to meet the regulations of the General Medical Council, and, as a rule, to fulfil the recommendations issued by that body from time to time.

BOOKS.

It is impossible to indicate all the books which may be consulted with advantage by candidates for the various examinations, but the following list of books includes those which are most generally read:

Whitelegge's *Hygiene and Public Health* (London: Cassell and Co., 7s.6d.); Parkes and Kenwood's *Hygiene and Public Health* (London: H. K. Lewis, 10s. 6d.); Wilson's *Handbook of Hygiene* (London: J. and A. Churchill, 12s. 6d.); *The Theory and Practice of Hygiene*, by Notter and Firth (London: J. and A. Churchill, 24s.); Stevenson and Murphy's *Treatise on Hygiene and Public Health*, 3 vols., for reference on special subjects (London: J. and A. Churchill, 80s.); Wynter Blyth's *Manual of Public Health* (London: Macmillan and Co., 1890, 17s.); Smith's *Laboratory Textbook of Public Health* (London: Henry Renshaw, 1896, 21s.); Kenwood's *Public Health Laboratory Work* (London: H. K. Lewis, 10s. 6d.); Wanklyn's *Water, Air, Milk, and Bread Analysis*, four separate manuals: (London: Kegan Paul, Trench, Trübner, and Co., 5s. each); Fox's *Sanitary Examination of Water, Air, and Food* (London: J. and A. Churchill, 1886, 12s. 6d.); Woodhead's *Bacteria and their Products* (London: W. Scott, 3s. 6d.); Kanthack and Drysdale's *Practical Bacteriology* (London: Macmillan and Co., 4s. 6d.); Muir and Ritchie's *Manual of Bacteriology* (London: Young J. Pentland, 12s. 6d.); Klein's *Micro-organisms and Disease* (London: Macmillan and Co., 1896, 10s. 6d.); Crookshank's *Manual of Bacteriology* (London: H. K. Lewis, 1896, 21s.); Daniell's *Textbook of the Principles of Physics* (London: Macmillan and Co., 1896, 4s. 6d.); Balfour Stewart's *Elementary Physics* (Oxford: Clarendon Press, 7s. 6d.); Newsholme's *Vital Statistics* (London: Swan Sonnenschein and Co., 1889, 7s. 6d.); McVail's *Vaccination Vindicated* (London: Cassell and Co., 1887, 5s.); J. W. Moore's *Meteorology: Practical and Applied* (Rebman and Co., 8s.); Scott's *Meteorology* (London: Kegan, Paul, Trench, Trübner, and Co.); Statton's *Public Health Acts* (London: Knight and Co., 7s. 6d.); Knight's *Annotated Model By-laws* (London: Knight and Co., 12s.); Corfield's *Dwelling Houses: Their Sanitary Construction and Arrangements* (London: H. K. Lewis, 1894, 4s. 6d.).

It is also desirable to consult several *Special Reports of the Local Government Board*, etc. (London; Eyre and Spottiswoode).

UNIVERSITY OF CAMBRIDGE.

A diploma in Public Health is granted by the University, and any person whose name is on the *Medical Register* may apply to be examined, provided that he can show that he has complied with the regulations laid down by the General Medical Council (see above).

The examination, which is usually held twice a year, during parts of two successive weeks, and beginning on the first Tuesday in April and October respectively, is divided into two parts. A fee of £6 6s. must be paid before admission to either part.

*The First Part* will comprise Physics and Chemistry; the principles of chemistry and methods of analysis, with especial reference to analyses of air, water, and food; applications of the microscope, including the investigation of micro-organisms; the laws of heat, and the principles of pneumatics, hydrostatics, and hydraulics, with especial reference to ventilation, water supply, drainage, construction of dwellings, disposal of sewage and refuse, and sanitary engineering in general; meteorology in relation to health; sources of water supply; statistical methods in their application to public health.

*The Second Part* will comprise Laws and Statutes relating to public health; origin, propagation, pathology, and prevention of epidemic and infectious diseases, including those diseases of animals that are transmissible to man; effects of overcrowding, vitiated air, impure water, and bad or insufficient food; unhealthy occupations and the diseases to which they give rise; water supply and drainage in reference to health; nuisances injurious to health; distribution of diseases within the United Kingdom, and effects of soil, season, and climate.

The above schedule is not to be understood as limiting the

scope of the examination, which will include every branch of Sanitary Science. No candidate will be approved by the Examiners who does not show a high proficiency in all the branches of study, scientific and practical, which concern Public Health. The examination in both parts will be oral and practical as well as in writing. One day at least will be devoted to practical laboratory work, and one day to oral and practical examination in, and reporting on, subjects connected with outdoor sanitary work.

Applications for further information should be addressed to the Registrary, University Registry, Cambridge. Dr. Anningson, Walt-ham-sal, Cambridge, will supply particulars as to the course of instruction provided in the University.

A list of Colleges and Schools of Medicine at which the courses of laboratory instruction have, for the purposes of this examination, been already approved by the syndicate, can be obtained on application.

### UNIVERSITY OF OXFORD.

A diploma in Public Health is granted after an examination held annually in Michaelmas Term, open to all registered medical practitioners, whether members of the University or not. The examination begins November 22nd, and is conducted in two divisions: (1) First Division: The application of Chemistry and Physics to General Hygiene. (2) Second Division: (*a*) General Pathology, with special relation to Infectious Diseases: (*b*) Laws relating to Public Health; (*c*) Sanitary Engineering; (*d*) Vital Statistics. It is permissible to take the two divisions at the same or at different examinations. Candidates must comply with the regulations of the General Medical Council (see pp. 556-7). Fee for each division, £5. Names to be sent to the Secretary to the Boards of Faculties not later than November 8th.

### UNIVERSITY OF LONDON.

The university does not grant a Diploma in Public Health, but Sanitary Science is made a branch of the M.D. Examination, which is open to persons holding the degree of M.B.Lond. (see page 522).

### VICTORIA UNIVERSITY.

A diploma in Public Health is granted after an examination, which begins about the middle of July in each year. The candidate must fulfil the requirements laid down by the General Medical Council. The examination is divided into two parts; the subjects so nearly coincide with those of the University of Cambridge that it is unnecessary to reproduce them. Special mention is, however, made of the use of meteorological instruments, of the diseases of animals in relation to the health of man, and of "Sanitary Reporting," every candidate being expected to visit and report upon the sanitary condition of some actual locality assigned to him by the examiners.

Each part of the examination occupies two days, and the fee for each part is £5 5s. Application for admission to the examination must be made to the Registrar of the Victoria University, Manchester, not later than July 1st, and the fee must be paid on or before July 1st.

### UNIVERSITY OF BIRMINGHAM.

The University grants the degree of B.Sc.in Public Health, and also a diploma in the same subject on the following conditions: Graduates in Medicine of this University may become candidates for the degree of Bachelor of Science in Public Health by conforming to all the requirements laid down for candidates for the Diploma in Public Health, except that after graduating in Medicine all courses of study must be taken out in the University, and they must, in addition, have attended a three months' course of Geology in the University.

The following are the regulations for the Diploma in Public Health:

*General Conditions.* (1) All candidates must be registered under the Medical Act. (2) The examinations will be held in the months of January and June, and will consist of two parts. No candidate will be allowed to pass Part II until he has passed Part I. (3) Candidates may enter for Parts I and II separately or at the same time. (4) The examination in each part will be written, oral, and practical. (5) Candidates intending to present themselves for either part of the examination must give fourteen days' notice in writing to the Registrar of the University. (6) The fee for each part of the examination is £5.

*Conditions of Admission to the Examinations.*—(1) For candidates registered under the Medical Act on or before January 1st, 1890. Candidates so registered will be allowed to sit for examination on producing certificate of registration. (2) For candidates registered under the Medical Act after January 1st, 1890. Candidates will be admitted to examination in Part I on producing evidence: (1) Of being at least 23 years of age, and of having been possessed of a registrable qualification in Medicine, Surgery, and Midwifery, for a period of twelve months. (2) Of having received, after obtaining a registrable qualification, during six months, practical instruction in a laboratory or laboratories, British or foreign, approved by the University, in which Chemistry, Bacteriology, and the Pathology of the Diseases of Animals transmissible to man are taught. (3) That after obtaining a registrable qualification, he has, during six months (of which at least three months shall be distinct and separate from the period of laboratory instruction required under Rule 2) been associated day by day in the duty, routine and special, of Public Health administration under the supervision of: (*a*) In England and Wales, the medical officer of health of a county or of a single sanitary his having a population of not less than 50,000, or a medical officer of health devoting his whole time to Public Health work; or (*b*) in Scotland, a medical officer of health of a county or counties, or of one or more sanitary districts having a population of not less than 30,000: or (*c*) in Ireland, a medical superintendent of health of a district or districts having a population of not less than 30,000; or (*d*) a medical officer of health who is also a teacher in the department of Public Health of a recognised medical school. The certificate of an assistant medical officer of health of a county or of a single sanitary district having a population of not less than 50,000, may be accepted as evidence under Rule 3, provided the medical officer of health of the county or district in question permits the assistant officer to give the necessary instruction and to issue certificates. (4) That, after obtaining a registrable qualification, he has attended during three months the practice of a hospital for infectious diseases recognised by the University, at which opportunities are afforded for the study of methods of administration.

The examination for the degree is not the same as that for the diploma, and a considerably higher standard of knowledge will be exacted at the former.

The whole of the instruction, with the exception of out-door sanitary work, required for the degree and diploma in Public Health can be taken out in the University. Fees:—Sanitary chemistry, £8 8s.; bacteriology, £4 4s.; incidental fee, £1 1s.; geology, £2 2s.

Composition fee for the whole course of instruction for Bachelor of Science and Diploma in Public Health (including incidental fee); £13 13s.

### CONJOINT BOARD IN ENGLAND.

The diploma in Public Health of the Royal College of Physicians of London and the Royal College of Surgeons of England is granted to persons whose names are on the *Medical Register*, or who are entitled to register. The examination is held in two parts, and Part I may be passed before fulfilling Clauses 1 and 2 under Part II. The subjects of the two parts and other particulars of the examination are to be found on pp. 556-7.

### UNIVERSITY OF DURHAM.

The University grants a Diploma in Public Health (D.P.H.) and the degree of Bachelor in Hygiene (B.Hy.) and Doctor in Hygiene (D.Hy.).

*Degree of Bachelor in Hygiene (B.Hy.)*—The candidate shall be a registered medical practitioner and a graduate in medicine of a recognised University. He shall not be less than 22 years of age. A period of at least twelve months shall have elapsed after the date when the candidate obtained his first registrable qualification in Medicine, Surgery, and Midwifery before he presents himself for examination. He shall have spent six months of professional study subsequent to the attainment of a first registrable qualification in Medicine, Surgery, and Midwifery, in attendance at the University of Durham Colleges in Newcastle-upon-Tyne, in the following

manner: (*a*) Three months' course of lectures on Comparative Pathology, with practical work in the Bacteriological Laboratory. (*b*) Three months' practical instruction in the Chemical and Physical Laboratories. This course must not be concurrent with the three months' course of lectures on Comparative Pathology, with practical work in the Bacteriological Laboratory. Out-door Sanitary Work: (*c*) Six months' practical study of out-door sanitary work under a medical officer of health, as required by the rules of the General Medical Council.

The rules of the General Medical Council as to out-door sanitary work are as follows: Every candidate shall have produced evidence that, after obtaining a registrable qualification, he has during six months (of which at least three months shall be distinct and separate from the period of laboratory instruction) been associated day by day in the duty, routine and special, of Public Health administration, under the supervision of—(*a*) in England and Wales, the medical officer of health of a county, or of a single sanitary district, having a population of not less than 50,000, or a Medical Officer of Health devoting his whole time to Public Health work; or (*b*) in Scotland, a Medical Officer of Health of a County or Counties, or of one or more Sanitary Districts having a population of not less than 30,000; or (*c*) in Ireland, a Medical Superintendent Officer of Health of a District, or Districts, having a population of not less than 30,000; or (*d*) a Medical Officer of Health who is also a Teacher in the Department of Public Health of a recognised Medical School. The certificate of an Assistant Medical Officer of Health of a County, or of a single Sanitary District having a population of not less than 50,000, may be accepted as evidence, provided the Medical Officer of Health of the County or district in question permits the Assistant Officer to give the necessary instruction and to issue certificates.

(*d*) Three months' attendance, after obtaining a registrable qualification, on the Clinical Practice and Instruction of a Hospital for infectious diseases recognised by one of the Licensing Bodies. (*e*) Course of Lectures on Public Health. Regulation (*e*) to be omitted in the case of a candidate who has already attended the course before obtaining a registrable qualification.

Books recommended.—*Manual of Public Health*, by Professor A. Wynter Blyth. *Hygiene and Public Health*, by Parkes and Kenwood. *Handbook of Hygiene*, by Dr. Geo. Wilson. *Comparative Pathology: Manual of Bacteriology*, by Professor Crookshank; or, *Manual of Bacteriology*, by Muir and Ritchie; *Essentials of Practical Bacteriology*, by Curtis. *Parasites of Man*, by Leuckart. *Sanitary Chemistry and Physics: Sanitary Examination of Water, Air, and Food*, by Dr. C. B Fox. *Analysis of Water and Food*, by Professor Wanklyn. *Air, Water, and Disinfectants*, by Mr. Noel Hartley. *Dwelling Houses*, by Professor Corfield. *Meat Inspection*, by Professor Walley. Aitken's *Practice of Physic: Medical Geography*. Law: The Statutes and By-laws named under the heading "Sanitary Legislation."

The Examination is divided into two parts as follows:—Part I.: Sanitary Chemistry.—The examination of Air for Sanitary purposes; detection of noxious gases and atmospheric impurities. Water for sanitary purposes: detection of metals in water; the action of water on metals. Milk and Food. Practical Examination in Chemistry as applied to Public Health. Physics.—The principles of Physics in their application to warming, ventilation, water supply, and drainage. The elements of Meteorology and the use of meteorological instruments. *Viva voce* Examination in Chemistry and Physics. Comparative Pathology, etc.—Knowledge of Comparative Pathology, Methods of Propagation and Prevention of Microbic and Parasitic Diseases intertransmissible between Man and the Lower Animals: Morphology of Microbes and Animal Parasites. Methods of Microscopical Examination and Artificial Cultivation of Micro-organisms. The Bacteriological Examination of Water, Air, and Earth; the Special Characteristics, Life-history, Properties, and Natural and Artificial Modes of Inoculation of Pathogenic Micro-organisms and Animal Parasites. Practical Examination.—The candidate will be expected to show a practical acquaintance with the usual methods of Bacteriological examination, and to be able to recognise specimens of Animal Parasites and Pathogenic Bacteria. There will also be a *viva voce* Examination in the above subjects. Part II: Sanitary Legislation.—Knowledge of the following Statutes and By-laws, namely, the Public Health Act, 1875: Rivers Pollution Prevention Act, 1876; the Public Health (Water) Act, 1878; the Infectious Diseases (Notification) Act, 1889; the Local Government Act, 1888; the Infectious Diseases (Prevention) Act, 1890; the Housing of the Working Classes Act, 1890; the Public Health Acts (Amendment) Act, 1890; the Model By-laws of the Local Government Board relating to Cleansing, the Prevention of Nuisances, New Streets and Buildings, Slaughter Houses, Common Lodging Houses, Houses Let in Lodgings, Offensive Trades. Most of the above-mentioned Statutes will be found in Knight and Co.'s "Public Health Acts" (latest edition), and the By-laws in the work under that title, by the same publishers. Vital Statistics.—Rates of Birth, Death, and Marriage; Methods of Calculation, Classification, and Tabulation of Returns of Sickness and Mortality; Data required and Conclusions deducible therefrom. Nosology.—Definition, Nomenclature, and Classification of Diseases. Climatology, Meteorology, Geographical Distribution of Health and Disease over the Globe, and in different Urban and Rural Districts of the United Kingdom. Sanitary Medicine, in relation to the Origin, Propagation, Pathology, and Prevention of Epidemic, Endemic, Epizootic, and other Communicable Diseases; Diseases attributable to Heat, Cold, or Dampness; Insufficiency or Impurity of Air, Food, or Drink; Parasitic and other Diseases affecting the Food and Drink of Man: Disease due to Habitation in Cities, Towns, Villages, and separate Houses; Occupation and Trade Operations in relation to the Health of the Workers; Overwork, Intemperance, Heredity: Preventive Measures, Vaccination, Isolation, Disinfection: the Regulation of Noxious and Offensive Manufactures and Trades; the Removal of Nuisances. Practical Hygiene in reference to Sanitary Appliances; the Site, Materials, Construction, Capacity, Lighting, Ventilation, Warming, Dryness, Water Supply, Drainage, and Refuse Disposal, of Houses, Schools, Hospitals, Artisans' Dwellings, Workshops and Workplaces, and other Buildings of Public or Private Resort; the Construction of Dairies, Abattoirs, and Disinfecting Stations; Action with respect to Nuisances and Outbreaks of Disease; the Examination of Butchers' Meat and other Food; the Preparation of Sanitary Reports, and other Duties of a Medical Officer of Health. The candidate shall also be required: (*a*) To pass an examination on medical clinical cases at the City Hospital for Infectious Diseases or elsewhere. (*b*) To draw up outlines for Annual or other Reports of a Medical Officer of Health. (*c*) To report upon the condition of some actual locality. (*d*) To describe the construction and use of Hygienic Apparatus and Sanitary Appliances. (*e*) To examine submitted specimens with the Microscope. (*f*) To describe submitted specimens of Diseased Organs and Tissues (Human and other). (*g*) To inspect and describe specimens of Meat or other articles of food. The candidate will also be examined *viva voce*. N.B.—Candidates may present themselves for either part of the examination separately or both together, at their option. Every candidate wishing to present himself for examination for the degree of Bachelor in Hygiene must give at least twenty-eight days' notice to Professor Howden, Secretary of the University of Durham College of Medicine, Newcastle-upon-Tyne, and must, at the same time, send the examination fee and the necessary certificates. The fee for the examination for the degree of B.Hy. is 10 guineas, and for the degree 6 guineas. Holders of the Licence in Sanitary Science of the University of Durham, prior to January, 1892, who are Graduates in Medicine of the University of Durham, are entitled to admission to the Examination for the degree of Bachelor in Hygiene without residence.

*Degree of Doctor in Hygiene (D.Hy.).*—The candidate shall be a Bachelor in Hygiene. The candidate shall have been engaged for two years subsequent to the date of his acquirement of the Degree of Bachelor in Hygiene, in practice, as a Medical Officer of Health. The candidate shall write an essay upon some practical hygienic subject, selected by himself and approved by the Lecturer on Public Health, and shall be examined thereon, and upon questions relative to the subject of the essay. Candidates must use for their essays thin, strong, cream-wove half-sheet foolscap, size 13 inches by 8 inches, with a margin on the left-hand side 1½ inch in breadth, and the essay must be typewritten on one side of the paper only. The essay should not exceed 20 pages in length. The essays must be forwarded to the Lecturer on Public Health one month before the date of the examination, and will be retained by the Faculty of Medicine. If the essay of any candidate is not of sufficient merit, notice of the fact will be sent to the candidate, who will not be required to attend for examination. The fee for the examination for the degree of D.Hy. is £5 and for the degree £6 6s.

*Diploma in Public Health (D.P.H.).*—The candidate shall be a registered medical practitioner. He shall not be less than 22 years of age. A period of at least twelve months

shall have elapsed after the date when the candidate obtained his first registrable qualification in Medicine, Surgery, and Midwifery before he presents himself for examination. He shall have spent six months of professional study subsequent to the attainment of a first registrable qualification in Medicine, Surgery, and Midwifery, in attendance at a recognised Medical School, in the following manner: (*a*) Three months' course of lectures on Comparative Pathology, with practical work in the bacteriological laboratory. (*b*) Three months' practical instruction in a chemical laboratory. This course must not be concurrent with the three months' course of lectures on Comparative Pathology, with practical work in the bacteriological laboratory. (*c*) Six months' practical study of outdoor sanitary work, under a medical officer of health, as required by the rules of the General Medical Council. Regulation (*c*) to be omitted in the case of a practitioner who has himself held appointment as a medical officer of health under conditions not requiring the possession of a Sanitary Diploma under the Local Government (England and Wales) Act, 1888. (*d*) Three months' attendance—after obtaining a registrable qualification—on the clinical practice and instruction of a hospital for infectious diseases recognised by one of the licensing bodies. (*e*) Course of lectures on Public Health. Regulation (*e*) to be omitted in the case of a candidate who has already attended the courses before obtaining a registrable qualification. The regulations for examination are the same as those for the Degree of Bachelor in Hygiene (see above). The fee for the examination and diploma is ten guineas.

*Diploma in Public Health for Medical Practitioners.*—The candidate shall be a Medical Practitioner, registered, or entitled to be registered, on or before January 1st, 1890. The candidate shall be required to pass the same examination as that for the ordinary Diploma in Public Health. Every candidate wishing to present himself for the examination must give at least twenty-eight days' notice to Professor Howden, Secretary of the University of Durham College of Medicine, Newcastle-upon-Tyne, and must at the same time send the examination fee and the necessary certificates. The fee for the examination and diploma is ten guineas.

### University of Aberdeen.

The University grants a diploma in Public Health. Candidates for the diploma must have graduated in Medicine in the University, or in a University in the United Kingdom, one year before they received the diploma; and they must produce evidence of (1) having complied with the regulations of the General Medical Council (see pp. 556-7); (2) of having attended a fever hospital, containing no fewer than 50 beds, for six months; (3) if not a graduate in Medicine of Aberdeen University, of having attended a course in the University in one or more of the subjects embraced in the examination for the diploma. The examination consists of two parts: Part I (*a*) Physics, Engineering, and Meteorology; (*b*) Chemistry, Microscopy, and Bacteriology. Part II (*a*) General Hygiene; (*b*) Sanitary Law and Vital Statistics. The examination (which is written and oral) is held in March and July, and notice must be given to the Secretary of the Medical Faculty two weeks before. A detailed synopsis can be obtained from the Dean of the Medical Faculty, or will be found in the University *Calendar* for 1901-1902. The fee, which must be paid at the time of giving notice, is £5 5s. The fee for re-examination, £1 1s.

### University of Edinburgh.

This University confers two degrees in science in the department of Public Health, namely, Bachelor of Science (B.Sc.) and Doctor of Science (D.Sc.).

*Bachelor of Science.*—Two examinations must be passed, and the candidate must produce evidence of having complied with the regulations of the General Medical Council (see pp. 556-7), and have taken a degree in Medicine in the University of Edinburgh or in a university recognised by it. The subjects of the First Examination are: (1) Laboratory work, practical, written, and oral; (2) Elements of Experimental Physics; (3) Geology, written and oral. The second examination cannot be taken sooner than six months after the first. The candidate must have attended a course of lectures (50 at least) in the University of Edinburgh, or in a university recognised by the Court. The subjects of the Second Examination are (1) Sanitation: (2) Sanitary Law: (3) Vital Statistics; (4) Medicine in its bearings on Public Health; and the examinations in these subjects are taken at one time. (A detailed syllabus is given in the *Calendar*, pp. 264-266. The time table will be found at pp. 275-278 of the *Calendar*). The examinations are held in March and July. The fee for each examination is £3 3s. Further particulars may be obtained on application to the Dean of the Faculty of Science at the University Matriculation Office, where the schedules for examination are issued and the certificates of candidates examined.

*Doctor of Science.*—Bachelors of Science in the Department of Public Health may, after the lapse of five years, proceed to the degree of Doctor in the same Department on presenting a Thesis on some subject in the Department of Public Health, or a published memoir of works, and are required to pass an examination in Public Health, and in such of its special departments as may from time to time be determined. (Candidates for D.Sc. in Public Health may appear for examination in any one of the departments of knowledge required for the degree of B.Sc. in Public Health. They are required to submit the subject in which they propose to be examined for approval at least two months before the date of the examination.) Every such Thesis must be certified by the candidate to have been composed by himself, and must be approved by the examiners. The Thesis must be lodged with the Dean of the Faculty of Science on or before December 1st, and the subject of examination must be submitted before January 20th. The examination will take place about the end of March. The fee is £10 10s.

### University of St. Andrews.

This University grants a diploma in Public Health. Candidates must have been in possession of a Medical Degree of this University or of a University of the United Kingdom for at least twelve months previous to admittance to examination. There are two examinations: first, in Chemistry, Physics, Bacteriology, and Meteorology; secondly, in Sanitation, Sanitary Law, Vital Statistics, Epidemiology and Endemiology and Pathology of Infectious Disease. Fee for each examination, £5 5s. For re-examination, £1 1s. A synopsis of the subjects of examination and books recommended will be found on pages 117-119 of the *University Calendar*.

Further information will be given by the Dean of the Faculty of Medicine, University College, Dundee, or will be found in the *University Calendar* for 1901-1902, published by William Blackwood and Sons, 45, George Street, Edinburgh, price 2s. 6d., or post free 2s. 11d.

### The Conjoint Board of Scotland.

The Royal College of Physicians and Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow will grant a conjoint diploma in Public Health, after examination by a Board on which these bodies are represented. Candidates qualified before 1890 will be admitted without evidence of special instruction (though even in their case such instruction is strongly recommended). Registered medical practitioners who have for a period of three years held the position of medical officer of health to any county or urban district of more than 20,000 inhabitants, or any entire rural sanitary district, are also exempt from courses of special instruction. Other candidates must produce evidence of attendance (subsequent to obtaining a registrable qualification) for six months at a Public Health Laboratory, and for six months under a Medical Officer of Health of a county or of a large urban district. There are two examinations, and candidates may present themselves for both of them at one period, or for either examination separately. The First Examination embraces the following subjects in their relation to Public Health: Chemistry, Laboratory Work, Physics, and Meteorology. The Second Examination includes: (*a*) Report on premises visited; (*b*) examination at fever hospital; (*c*) examination at public abattoir; (*d*) epidemiology and endemiology: (*e*) vital statistics and sanitary law; (*f*) practical sanitation. The various subjects of both examinations are detached and limited by synopses given. The laboratory work embraces not only Chemical Analyses, but also Microscopical Examination, Bacteriology, Parasites, etc. At the Second Examination each candidate is required to submit a

report on the sanitary condition of premises to which he may be sent for the purpose, and is examined on the Acts of Parliament included under "Sanitary Law." The fee is £10 10s., or £5 5s. in respect of each examination; and candidates referred are readmitted on the fee of £3 3s. in respect of each examination. The examination is held in Edinburgh or in Glasgow, there being two periods of examination yearly—October and May. Application for examination in Edinburgh to be sent to Mr. James Robertson, 54, George Square, Edinburgh; and in Glasgow to Alexander Duncan, Esq., B.A., LL.D., 242, St. Vincent Street, Glasgow, not later than 14 days before the examination day. The regulations and synopsis of subjects will be found at page 230 of the 1900-1901 edition of the *Medical School Calendar for Scotland*, published by E. and S. Livingstone, 15, Teviot Place, Edinburgh, price 2s., post free 2s. 3d.

### University of Dublin.

The diploma in State Medicine is conferred after examination upon M.D.'s or graduates in Medicine and Surgery of Dublin, Oxford, or Cambridge. The name of the candidate must have been on the *Medical Register* at least twelve months before the examination, and, subsequently to registration, the candidate must have completed six months' practical instruction in a laboratory approved by the University, and have studied practical outdoor sanitary work for six months under an approved officer of health. [This condition does not apply to candidates registered or entitled to be registered on or before January 1st, 1890.] Examinations are held in December and June, and candidates are required to send in their names at least a week before the first day of the examination to the Registrar of the School of Physic, from whom a full syllabus of the examination can be obtained. Candidates who have registered since January 1st, 1890, are required to make application for permission to present themselves for examination to the Board of Trinity College, submitting at the same time certificates of the required courses of study. The subjects of examination are: Hygiene and Epidemiology (paper); Chemistry (paper and laboratory); Physics and Meteorology (oral); Sanitary Engineering (paper and practical); Vital Statistics and Public Health Act (paper); Bacteriology and Pathology.

Further particulars can be obtained on application to the Registrar of the School of Physic, Dublin.

### Royal University of Ireland.

The University grants a diploma in Sanitary Science, but only to graduates in Medicine of the University. The fee is £2. Further particulars will be found in the *Calendar*.

### Conjoint Examining Board in Ireland of the Royal College of Physicians and the Royal College of Surgeons.

A diploma in State Medicine is granted by these two Colleges after an examination conducted by them jointly. Candidates are required to comply with the regulations of the General Medical Council (see pp. 556-7). The regulations as to study do not apply to practitioners registered or entitled to be registered on or before January 1st, 1890. The examination comprises the following subjects: State Medicine and Hygiene, Chemistry (including Chemical Physics), Meteorology and Climatology, Engineering, Vital Statistics, Law, and Bacteriology. In addition to written papers, the candidates will be examined orally in Hygiene, and practically in the reading of plans, sections, and scales, as well as in Analytical Chemistry, with special reference to air, water, and food, including the use of the Microscope, and in Bacteriology. They will also be required to read meteorological instruments, and to explain their construction; and will be called upon to make a practical Sanitary Report.

The candidate must return his name to the Secretary of the Committee of Management under the Conjoint Scheme, Royal College of Physicians, 6, Kildare Street, Dublin, three weeks before the examination, and lodge with him a testimonial of character from a Fellow of either of the Colleges, or of the Royal Colleges of Physicians or Surgeons of London or Edinburgh. If he has been registered subsequent to January 1st, 1890, he must lodge, in addition, a schedule, setting forth that he has attended the necessary courses of instruction as laid down in the Regulations.

The examination is divided into two parts, which may be passed either together or separately, but no candidate can present himself for Part II who fails to satisfy the examiners in Part I. The examination occupies four days.

The fee for examination is £10 10s., for re-examination £5 5s.; the examinations begin on the first Tuesday of the months of February, May, and November.

A Special Examination for the diploma can be obtained on payment of £10 10s., in addition to the ordinary fees mentioned above—except during the months of August and September—and on giving notice at least one fortnight before the date of the proposed examination.

Detailed Regulations and Schedules can be obtained from the Secretary.

### Instruction and Laboratory Classes.

Courses of lectures and laboratory instruction to suit the requirements of candidates for diplomas in Public Health have been organised at the following Schools, and could probably be arranged for at most of the other schools and colleges (see also p. 557). The chemical and bacteriological examinations for many of the health diplomas are now so practical, and the time allowed so short, that unless a candidate—even though familiar with the duties of a M.O.H.—has a certain amount of the manipulative dexterity only to be acquired by work in a laboratory, he would not be likely to satisfy the examiners.

| London. | |
|---|---|
| St. Bartholomew's Hospital. | London Hospital. |
| Charing Cross Hospital. | Middlesex Hospital. |
| St. George's Hospital. | St. Mary's Hospital. |
| Guy's Hospital. | St. Thomas's Hospital. |
| King's College. | University College. |
| **Provincial.** | |
| Cambridge University. | University of Durham College of Medicine, Newcastle-on-Tyne. |
| University of Birmingham. | University College, Bristol. |
| University College, Liverpool. | |
| Yorkshire College, Leeds. | |
| **Ireland.** | |
| School of Physic, Dublin. | Royal College of Surgeons, Schools of Surgery, Dublin. |
| The Catholic University School of Medicine. | |
| **Scotland.** | |
| University of Edinburgh. | St. Mungo's College, Glasgow. |
| University of Glasgow. | The Conjoint Board in Scotland. |
| University of Aberdeen. | |

## OPENING OF THE MEDICAL SCHOOLS.

The arrangement for the opening of the Winter Session in the Medical Schools and Colleges in the United Kingdom, as far as they are at present complete, are as follows:

### London.

#### St. Bartholomew's Hospital and College.

The Winter Session will begin on Tuesday, October 1st. The Old Students' Dinner will be held on the same evening in the Great Hall of the Hospital at 6.30 for 7 o'clock, Mr. W. J. Walsham, F.R.C.S., in the chair.

#### Charing Cross Hospital Medical School.

The Winter Session will commence on Wednesday, October 2nd, when an Introductory Address will be delivered by Mr. John W. Taylor, F.R.C.S., at 4 P.M. The Old Students' Dinner will be held at the Hotel Cecil on October 2nd.

#### St. George's Hospital Medical School.

The Winter Session will begin on Tuesday, October 1st, with an Introductory Address at 4 P.M. by Dr. P. W. Latham. The Annual Dinner will be held on the same evening at the Hotel Metropole at 6.30 for 7 o'clock, when the chair will be taken by Mr. Warrington Haward.

#### Guy's Hospital Medical School.

The Winter Session will begin on Tuesday, October 1st. A house dinner of the Students' Club will take place at 7 o'clock on the same evening in the College Dining Hall. Application for tickets for the dinner should be made to A. W. Ormond, Esq., Secretary to the Students' Club. The first meeting of the Physical Society will be held on Saturday, October 5th, in the new Physiological Theatre at 8 P.M., when

Sir Samuel Wilks, Bart., M.D., LL.D., F.R.S., will preside. After the meeting a *conversazione* will be held in the new laboratories and class rooms.

King's College, London.

The Winter Session will begin on Tuesday, October 1st. The Old Students' Dinner will be held in the evening at the Hotel Cecil, when Mr. Paul Swain, F.R.C.S., will take the chair.

The London Hospital Medical College.

The Winter Session will commence on Tuesday, October 1st. The annual dinner will be held in the College Library in the evening, when Dr. Daly will take the chair.

St. Mary's Hospital Medical School.

The Winter Session will begin on Tuesday, October 1st, when an introductory address will be given at 3 P.M. by Mr. G. William Hill, M.D., B.Sc. The annual dinner will be held on Thursday, October 3rd, at the Whitehall Rooms, Hôtel Métropole, when the chair will be taken by Colonel A. B. R. Myers.

The Middlesex Hospital.

The Winter Session will commence on Tuesday, October 1st, when Mr. T. H. Kellock, M.A., M.D., F.R.C.S., will give an introductory address, after which the prizes gained during the previous year will be distributed by Lord Howard de Walden. The annual dinner of past and present students will take place the same evening at 7 o'clock at the Trocadero Restaurant, under the presidency of Mr. J. Bland-Sutton, F.R.C.S.

St. Thomas's Hospital Medical School.

The Winter Session will open on Wednesday, October 2nd, when the prizes will be distributed at 3 P.M. by Major-General Sir Ian Hamilton, K.C.B., in the Governor's Hall. The annual dinner, to which all former and present students are invited to join, will take place on the same evening in the Whitehall Rooms, Hôtel Métropole, at 6.30, when Mr. H. H. Clutton will take the chair.

University College, London.

The Winter Session of the Medical Faculty will commence on Tuesday, October 1st, when an introductory lecture will be given at 4 P.M. by Professor J. Risien Russell. The Old Students' Dinner will take place at 6.30 the same evening at the Hotel Cecil.

Westminster Hospital Medical School.

The Winter Session will begin on Tuesday, October 1st. The annual dinner will take place on Friday, October 4th, at the Hotel Cecil, when the chair will be taken by Mr. Charles Stonham, F.R.C.S.

London School of Medicine for Women.

The Winter Session will open on Tuesday, October 1st. An introductory address will be given by Dr. F. W. Andrewes at 4 P.M.

London School of Tropical Medicine.

The winter session will commence on Tuesday, October 1st.

PROVINCES.

University of Birmingham.—The Winter Session will commence on Tuesday, October 1st.

University College, Bristol.—The Winter Session commences on Tuesday, October 1st.

University College of South Wales and Monmouthshire, Cardiff.—The Winter Session will begin on Monday, October 7th.

Yorkshire College, Leeds. The Winter Session will open on October 1st, and an introductory address will be given by Sir W. S. Church, Bart., on October 2nd.

University College, Liverpool.—The Winter Session will begin on Tuesday, October 1st. Principal Lodge, of Birmingham, will deliver the opening address and distribute the prizes on Saturday, October 12th.

Owens College, Manchester.—The Winter Session begins on Tuesday, October 1st.

University of Durham College of Medicine, Newcastle-on-Tyne.—The Winter Session will commence on Tuesday, October 1st.

University College, Sheffield.—The Winter Session will commence on Tuesday, October 1st, when the introductory address will be given by Sir Thomas Barlow, Bart., K.C.V.O.

SCOTLAND.

University of Edinburgh.—The Winter Session will commence on Tuesday, October 15th.

The Medical College for Women, Edinburgh.—The Winter Session will commence on Tuesday, October 15th.

The Edinburgh Extra-Academical School.—The School will open on Tuesday, October 15th.

University of Aberdeen.—The Winter Session will commence on Tuesday, October 15th.

University of St. Andrews.—The Winter Session will open on Tuesday, October 1st.

University of Glasgow.—The Winter Session will be opened on Thursday, October 17th. The Winter Session of Queen Margaret College Medical School for Women will begin on Thursday, October 17th.

Anderson's College Medical School.—The Winter Session will open on Thursday, October 17th.

St. Mungo's College, Glasgow.—The Winter Session will open on Thursday, October 17th.

University College, Dundee.—The Winter Session will open on Thursday, October 10th.

IRELAND.

The University of Dublin: The School of Physics.—The Winter Session will commence on Thursday, October 10th.

The Royal College of Surgeons in Ireland: Schools of Surgery.—The Winter Session will commence on Tuesday, October 1st.

Queen's College, Belfast.—The Winter Session will begin on Tuesday, October 15th.

Queen's College, Cork.—The Winter Session will begin on Tuesday, October 15th. Particulars can be obtained from the Registrar, Mr. Alexander Jack, M.A.

# THE PUBLIC SERVICES.

## THE ROYAL NAVY AND ARMY AND THE INDIAN MEDICAL SERVICES.

General Regulations.

The following are the rules governing admission to these services:—

All candidates must submit to an examination by a medical Board into their physical fitness before being admitted to the entrance examination. Special attention is given to the candidate's power of vision. A moderate degree of myopia is not considered a disqualification, provided it does not necessitate the use of glasses during operations, and no organic disease of the eye exists.

Candidates for the Army and Indian Services may, before examination, elect to declare their intention to compete for one or other or both of these services; and their position will be determined according to the results of the examination.

As the prospect of a medical officer in one of these services attaining to the highest administrative grades depends to a large extent upon the regulations with regard to compulsory retirement at the age of 55, if below a certain grade at that age, there is a distinct advantage in entering the service at as early an age as possible.

THE ROYAL NAVY MEDICAL SERVICE.

A candidate for admission to the Royal Navy Medical Service must be between 21 and 28 years of age, age to be verified by a copy of birth registration, or by a declaration before a magistrate by parent or near relative. He must also produce a certificate of moral character, up to date, and a recommendation signed by a clergyman or magistrate to whom he has been for some years personally known, or by the President or senior Professor of the College at which he was educated. He must be registered under the Medical Act in force as qualified to practise medicine and surgery in Great Britain and Ireland. He must declare that he is of pure European descent, the son either of natural-born British

subjects or of parents naturalised in the United Kingdom.[1] His freedom from organic or other disease and physical fitness for sea service will be determined by a Board of medical officers, who are to certify that his vision comes up to the required standard, which will be ascertained by the use of Snellen's types.

The entrance examination consists of two parts; in Part I. *Compulsory* (*a*) Medicine, including therapeutics and the diseases of women and children (marks 1,200); (*b*) Surgery (1,200); (*c*) Anatomy and Physiology (600); (*d*) Chemistry and Materia Medica, with a practical knowledge of drugs (600). The examination in Medicine and Surgery will be in part clinical, and include the examination of pathological specimens and Operative Surgery on the dead body to which great importance is attached. The examination in Chemistry will be limited to the elements of the science, and to its application in medicine, pharmacy, and practical hygiene, and that in materia medica will include a knowledge of the physiological actions and therapeutical uses of drugs. Part II. *Voluntary*, consists of two divisions: (*a*) French and German (200 marks each): a knowledge of modern languages being considered of great importance, all candidates are urged to qualify in them: (*b*) Natural Sciences (Zoology, Botany, Physics, Geology, and Physical Geography) (300 marks each); the two latter subjects are combined for the 300 marks. Candidates will be examined in not more than two of these sciences. Candidates who qualify in the compulsory subjects by obtaining a minimum of one-third of the maximum marks attainable will be allowed to count marks in those of the two *voluntary subjects* only in which they obtain one-third of the maximum marks for each.

*Zoology.*—The examination in Zoology will include the general principles of biology and a comparison of animals with plants: the distinctive character of the larger groups of animals—the protozoa, cœlenterata, vermes, anthropoda, mollusca, echinodermata, and vertebrata—as illustrated by common types; the elements of embryology; animal parasites.

*Botany.*—The examination in Botany will comprise the general principles of the morphology and physiology of low forms of life, for example, torula, bacteria, spirogyra, moss, fern; the general morphology of flowering plants; diagnosis of the important British natural orders; medicinal plants.

*Physics.*—The examination in Physics will be limited to the principles of mechanics, acoustics optics, heat, magnetism, and electricity, such as: the properties of solids, liquids, and gases; conservation of energy, specific gravity, propagation and reflection of sound and light, thermometers, properties of mirrors and lenses, chromatic dispersion of light, forms of batteries, galvanic and frictional electricity, general properties of magnets.

*Physical Geography.*—The examination in Geology and Physical Geography will be limited to general principles, such as the relations of the earth to the rest of the solar system, nature of the earth's crust, and the chief kinds of rocks, general configuration of land and water, mountains, plains, lakes, rivers, islands, glaciers, and icebergs, the ocean currents, tides, winds and storms, dew, rain, climate, volcanoes, earthquakes, distribution of animal and vegetable life.

The order of merit is determined by the total number of marks obtained in the compulsory and voluntary subjects. Should, however, it be considered expedient to grant additional commissions, the Board of Admiralty is empowered to admit annually one candidate proposed by the governing bodies of public schools of medicine in the United Kingdom or attached to such Colonial universities as they may think proper. Such candidates must be qualified according to the rules in force for entry of candidates, and must be approved by the Director-General of the Medical Department of the Navy. He will also be compelled to pass a physical and test examination, and must on arrival in England register under the Medical Act in force as qualified to practise Medicine and Surgery in Great Britain and Ireland.

Copies of the Regulations for entry of candidates for commissions in the Medical Department of the Royal Navy will be furnished on application to the Medical Director-General, Admiralty, London, W.C.

Successful candidates immediately after passing the examination will receive commissions as Surgeons in the Royal Navy, and will undergo a course of practical instruction in Naval Hygiene, etc., at Haslar Hospital. Three prizes of the approximate value of £10 each will be awarded at the close of each session at Haslar to the students who have shown the greatest proficiency, and their seniority in the service will depend on the marks obtained at the examination in London, and at the termination of their studies at Haslar. Surgeons entered without competition will take seniority next after the last surgeon entered by competition.

Surgeons are only required to provide themselves with a regulation case of pocket instruments, a stethoscope, and three clinical thermometers. All other instruments, except eye instruments, microscope, laryngoscope, ophthalmoscope, and endoscope, are provided at the public expense, but the provision of the latter specified by surgeons is not compulsory. *Promotion.*—(1) An inspector-general of hospitals and fleets will be selected from amongst deputy-inspectors-general who have in that rank three years' full-pay service, and have not declined foreign service unless with the sanction of the Admiralty. (2) A deputy-inspector-general of hospitals and fleets will be selected for ability and merit from among the fleet surgeons. (3) The rank of fleet-surgeon will be granted to staff surgeons on completion of 20 years' service (namely, 20 years after entry) if recommended for promotion. Special promotions to this rank will be made at the discretion of the Admiralty in cases of distinguished service or conspicuous professional merit. Such promotions will be exceptional, and not exceed the rate of one in two years, or a total number of six at any one time of fleet surgeons so promoted. (4) The rank of staff surgeon will be granted to surgeons at the expiration of 12 years from the date of entry, subject to the recommendation of the Medical Director-General and the passing of a qualifying examination after the completion of eight years from date of entry. Special promotions will be made at the discretion of the Admiralty to the rank of staff surgeon in cases of distinguished service or conspicuous professional merit; such promotions not to exceed one a year, or a total of eight at one time on the staff surgeon's list. These officers will attain the rank of fleet surgeon after eight years' full-pay service after their special promotion, if recommended for such promotion. Relative rank is accorded as laid down in the Queen's Regulations and Admiralty Instructions, and also in the official Quarterly Navy List. *Full Pay and Allowances.*—The rate of pay of surgeons is on entry £209 17s. 6d. a year; after four years' full-pay service, £246 7s. 6d. a year; after eight years' full-pay service, £282 17s. 6d. Staff surgeons receive £383 5s. a year on promotion, special, or after 12 years in the service, after 4 years' full-pay service in that rank £438. Fleet-surgeons on promotions, special, or after 20 years in the service, £492 15s. a year; after 4 years' full-pay service in that rank, £547 10s.; after 8 years' full-pay service, £602 5s.; deputy inspector-general, £766 10s. a year; inspector-general, £1,003 15s. The senior medical officer—fleet or staff surgeon—of the commander-in-chief's flag ship, on a foreign station, receives an allowance of 5s. a day; of the flag ship of the senior officer commanding the channel squadron, as also of the ship of a commodore or of a senior officer commanding a foreign station, 2s. 6d. a day. Medical officers conducting the course of instruction at Haslar Hospital will receive the following allowances:—The two senior officers employed upon this duty, £150 a year each; the junior officer assisting, £50 a year. Hospital allowances for naval medical officers at home and abroad, in lieu of provisions for themselves and servants, and for fuel and lights, granted to officers on board ship, or 1s. 6d. in lieu thereof, are as follows: Inspectors-general of hospital, at home, £85: abroad, £130: deputy inspectors-general, at home, £67; abroad, £112; fleet or staff surgeons, at home, £53; abroad, £112; surgeons, at home, £39; abroad £108.

*Retirement.*—Compulsory retirement will be as follows:

| | | |
|---|---|---|
| Inspector and deputy inspector-general of hospitals and fleets. | At the age of 60, or if unemployed for five years. The Admiralty reserve the right to extend the age of retirement of an inspector-general of hospitals and fleets in the interests of the public service, to 62 years. | To be retired at any age if physically unfit for service. |
| Fleet surgeon, staff surgeon, and surgeon. | At the age of 55, or at any age, if he has not served for five years. | |

Gratuities and retired pay will be awarded on retirement and withdrawal on the undermentioned scale:—

[1] If any doubt should arise as to this question the burden of clear proof that he is qualified will rest upon the candidate himself.

| Rank. | Gratuities. | Daily. | Yearly. |
|---|---|---|---|
| | £ s. d. | £ s. d. | £ s. d. |
| Surgeon and Staff Surgeon : | | | |
| After 8 years' full-pay service | 1,000 0 0 | — | — |
| ,, 12 ,, ,, | 1,500 0 0 | — | — |
| ,, 16 ,, ,, | 2,250 0 0 | — | — |
| Fleet Surgeon : | | | |
| After 20 years' service ... ... | — | *1 0 0 | 365 0 0 |
| After 24 ,, ,, ... ... | — | *1 2 6 | 410 12 6 |
| After 27 ,, ,, ... ... | — | *1 5 0 | 456 5 0 |
| After 30 ,, ,, ... ... | — | *†1 10 0 | 547 10 0 |
| Deputy Inspector-General ... | — | 1 15 0 | 638 15 0 |
| Inspector-General ... ... ... | — | 2 0 0 | 730 0 0 |

* To obtain this rate an officer must hold the Commission of Fleet Surgeon.

† Or on compulsory retirement at the age of 55.

Voluntary retirement and withdrawal will be allowed as follows :

(*a*) Every officer will have the option, subject to their Lordships' approval, of retiring after twenty years' full pay service on the scale of retired pay, or with a gratuity, as laid down above.

(*b*) At the expiration of 8, 12, or 16 years' full pay service, every officer will be permitted, subject to their Lordships' approval, to withdraw from the Naval Service, receiving a gratuity on the scale laid down below. The name of an officer so withdrawing will be removed from the lists of the Navy, with which all connection will then be severed.

(*c*) Voluntary retirement and withdrawal will be allowed, as a rule, only when an officer is unemployed or serving at home.

(*d*) Applications from officers, not entitled to retire or withdraw, to resign their commissions, will receive every consideration.

NOTE.—This necessary "subject to their Lordships' approval" for these voluntary or optional retirements, withdrawals, and resignations, has of late very greatly qualified them. Loss of full-pay service from sickness, or inability to obtain service from no default of the officer, peculiar to the navy as compared with the army, delays these so-called voluntary retirements and withdrawals, as does employment abroad with no option of paying the passage out of a successor.

*Half Pay.*—Surgeons under 2 years' full pay service, 6s. per diem ; after 2 years' full pay service, 7s. per diem ; after 4 years, 8s. ; after 6 years, 9s. ; after 8 years, 10s. ; after 10 years, 11s. Staff surgeons on promotion, 12s. ; after 2 years' full pay service in rank, 13s. ; after 4 years, 14s. ; after 6 years, 15s. Fleet surgeon on promotion, 17s. ; after 2 years, 18s. ; after 6 years, 20s. Deputy-inspector-general on promotion, 25s. ; after 2 years' full-pay service in rank, 27s. ; after 4 years, 29s. Inspector-general, 38s.

### REGULATIONS FOR TEMPORARY SERVICE IN THE MEDICAL DEPARTMENT OF THE ROYAL NAVY.

These Regulations, we are informed, are at present under revision.

## THE ROYAL ARMY MEDICAL CORPS.

IN view of the fact that the organisation of the Medical Service of the Army is now undergoing revision, it would be misleading to publish conditions of admission and statements as to pay, etc., which no longer hold good. We understand that the Committee of Experts to which Mr. Brodrick submitted his scheme for the reform of the Service has finished its work, but till the result is officially made public, by Royal Warrant or otherwise, intending candidates can only be recommended to possess their souls in patience. As to the probable date of promulgation, we regret that we are not at present in a position to say anything definite.

## INDIAN MEDICAL SERVICE.

ALL natural-born subjects of His Majesty between 21 and 28 years of age may be candidates. Every candidate must be registered under the Medical Act, and produce a certificate of moral character, and a certificate to the effect that he is of steady habits, and likely to prove creditable to the corps. Before admission to the examination his physical fitness will be determined by a Board of medical officers. These and some additional facts of minor importance must be embodied in a "declaration" upon a special form, which may be obtained upon application to the Director-General, Army Medical Service, War Office, London, S.W., who will also forward a memorandum on conditions of admission, pay, etc. A competitive examination is held twice a year, generally in February and August. Announcement of the date and of the number of vacancies is made in advance by advertisement in the medical and some other papers, and in the monthly *Army List*. Candidates may enter for both services if eligible under the regulations of each, choice of either depending on position in order of merit. All particulars regarding condition of admission and subjects of examination are contained in the "Regulations for the Examination of Candidates for admission to His Majesty's Indian Medical Service," issued by the India Office and obtainable by application to the Military Secretary. The following is the present scale of marks: Surgery and Medicine, each 1,200; Anatomy with Physiology, and Chemistry with Pharmacy, each 600: French, German, and Hindustani, each 200: Physics, Zoology, Geological and Physical Geography, and Botany, each 300. A certificate of three months' attendance at an Ophthalmic Hospital is required. Selected candidates are required to undergo a course of four months' instruction in the Army Medical School, Netley, and no candidate is allowed to compete more than three times.

The final order of merit is determined, as in the case of the Royal Army Medical Corps, by the combined results of the Preliminary (London) and of the Final (Netley) Examinations, and, so far as the requirements of the Service will permit, candidates will have the choice of commands in India (that is, Bengal, Punjab, Madras, or Bombay), according to their position in that list. The examinations are held, as a rule, twice a year, in February and August.

Free passage to India is provided. The rate of pay at Netley is 8s. a day, and on leaving Netley until arrival in India 10s. a day. The minimum rate of pay in India is stated to be Rs.350 a month : and the maximum Rs.2,700 a month. After seventeen years' service for pension, the rate of retired pension is £292 a year ; after twenty, £365 ; after twenty-five, £500 ; after thirty years, £700. Extra pensions of £250 and £350 are given after five years' service in the administrative grades, with rank of Colonel and Surgeon-General. Further particulars as to rates of pay, promotion, pensions, and half-pay will be found in Military Department Form 124, which can be obtained on application to the Under-Secretary of State, India Office, London, S.W.

### EXAMINATION PAPERS.

*The following are the Papers set at the Examination of Candidates for the Royal Army Medical Corps and His Majesty's Indian Medical Service held in February, 1901.*

MEDICINE AND PATHOLOGY.—PROFESSOR MCCALL ANDERSON.

1. Give a description of the various complications and "sequelæ" of enteric fever, including their *post-mortem* appearance and treatment.

2. Mention the features which progressive pernicious anæmia and general dilatation of the heart have in common ; and then give in tabular form all the points which distinguish the one from the other.

3. What are the characters of the urine in typical cases of (*a*) chronic parenchymatous nephritis, (*b*) amyloid disease of the kidney (early stage), (*c*) granular (contracted) kidney, (*d*) pyelitis ?

4. How would you treat typical uncomplicated cases—(1) Pneumonia, (2) acute gout, (3) catarrhal jaundice ?

NATURAL SCIENCES.—DR. NORMAN MOORE.

*Geology and Physical Geography.*

1. Describe the structure (1) of a peat-moss, (2) of a tertiary lignite bed, (3) of the coal measures.

2. Contrast the effects of ice and of water as exhibited on the face of a country.

3. State what you know of the following fossils :—Encrinite, pterodactyl, plesiosaurus, trilobite, ammonite, belemnite, terebratula, biplicata, eozoon canadense.

*Zoology and Comparative Anatomy.*

1. Describe the structure of the stomach in the following animals :—Sheep, horse, ox, musk deer, camel.

2. How do antelopes differ from deer ? To what order does the giraffe belong ? Write out the dentition of the following animals :—Dog, pig, cat, horse, chimpanzee.

3. Into what orders is the class insecta divided ? Give an example of each order and mention its characteristics.

*Physics.*

1. Describe the effects of a prism on a ray of light.

2. In what ways may electricity be generated ? What are the varieties of electricity ?

3. Describe experiments illustrating the effects of heat on solids.

*Botany.*

1. Give the characters of the following natural orders :—Cruciferæ, Solanaceæ, Euphorbiaceæ, Palmaceæ, Caprifoliaceæ.

2. Mention the chief differences between animals and plants.

3. Describe the structure of an acorn and the growth of an oak tree from it. How does the stem of an oak differ from that of a gum tree (eucalyptus) ?

CHEMISTRY AND MATERIA MEDICA—DR. NORMAN MOORE.

1. How would you demonstrate the presence of arsenic in a sample of beer ? What are the official preparations of arsenic ?

2. How is chloroform made ? What is its chemical composition ?

3. What is the strength of the chief ingredient of the following official preparations, and what other substances do they contain :—Liquor trini-

trini, glycerinum acidi tannici, pulvis ipecacuanhæ compositus, pilula hydrargyri, mistura ferri composita?

4. Mention the chief drugs which act upon the heart, and give the dose of each.

5. Name the chief official preparations used to reduce fever, and give the dose of each with directions for its administration.

SURGERY—Sir WILLIAM MACCORMAC, BT., K.C.V.O.
*All four questions to be answered.*

1. Describe a case of prostatic hypertrophy. Note the pathological changes in the organ, the symptoms occasioned, and give the treatment.

2. What changes take place in lymphatic glands, as the result of a deposit of tubercle in them? What are the causes of retropharyngeal abscess, and in what situation does it develop? Give the treatment.

3. Give the symptoms and treatment of a case of calculus impacted in the ureter.

4. Enumerate the different forms of conjunctivitis, and describe the gonorrhœal variety with its treatment.

ANATOMY AND PHYSIOLOGY.—PROFESSOR CUNNINGHAM.

1. Give the position of the different parts of the colon within the abdominal cavity, and state the relation which each of these presents to the peritoneum.

2. Describe the capsule of the hip-joint with special reference to dislocations at this articulation.

3. State shortly what you know regarding the function of the thyroid gland.

4. Describe the nerves of the larynx and give the functions of each.

## PRISON MEDICAL SERVICE.

THE prison department consists of two branches—the convict service and the local prison service. These are now practically amalgamated, and the officers of each branch are freely interchangeable. In the case of the smaller prisons the medical officer is usually a local practitioner, but in the case of the larger prisons the medical officers are appointed by the Convict Prison Board or the Prison Commission, and form practically a special service. The Chairman of the Boards is Mr. Evelyn Ruggles-Brise. Application for employment may be made to the Board on a special form, which, we understand, can be obtained from the Secretary, Major E. G. Clayton, Prison Commission, Home Office, London, S.W.

The number of vacancies is not large, and the prospects of promotion are bad. This is due in part to the fact that the rate of pay of the higher appointments depends upon the number of prisoners in the particular prison, and that the total number of prisoners in the country is decreasing.[1]

The following is the authorised staff with scales of pay laid down in the official estimates for 1901-1902.

*Convict Service.*—Five deputy medical officers at £250, rising to £300; four medical officers at incomes ranging from £300 to £550.

*Local Prison Service.*—Nine deputy medical officers at £250, rising to £300; eight medical officers at £200; two medical officers at £250; three medical officers at £300, rising to £390; six medical officers at £400, rising to £500. Quarters, or an allowance in lieu, are granted to those who give their whole time to the service.

## MEDICAL APPOINTMENTS IN THE COLONIES.

1. Medical appointments are from time to time filled up by the Colonial Office in the following Colonies: British Guiana, Jamaica, Trinidad, Windward Islands, Leeward Islands, British Honduras, Fiji, Sierra Leone, Gambia, Gold Coast, Lagos, Niger Territories, Ceylon, Straits Settlements and F.M.S., Seychelles, Hong Kong, Cyprus, Gibraltar, St. Helena, and the Falkland Islands. In Ceylon and Jamaica vacancies are almost always filled locally by the appointment of qualified native candidates.

It is for the West Indies and the West African Colonies that medical officers are chiefly required.

2. The majority of the West Indian appointments involve medical charge of a district, including, as a rule, the care of a hospital, poor-house, asylum, or other institution, and free attendance on the aged and children.

In West Africa the medical officers are also required to take charge of any hospital, public dispensary, lunatic asylum, or other Government institution at their respective stations, to supervise the sanitation of the district, to perform vaccination, and to give gratuitous attendance to all Government officials, and, in most cases, the families of such officials also.

N.B.—Passage money on first appointment, and leave of absence on half-pay (in case of sickness, or after six years' service, if the medical officer has given satisfaction in the discharge of his duties), are granted to medical officers in the cases specified in the Colonial Regulations; and those serving in West Africa are allowed six months' leave with full pay and free passages home and out again, after every twelve or fifteen months of continuous residential service. With regard to pension, medical officers are usually on the same footing as other Government servants: but in cases where private practice is allowed, the rule is that they are not entitled to pension, except in West Africa.

3. The following is a short account of the appointments in the separate Colonies:

*British Guiana.*—Thirty-nine appointments. Candidates must have held for at least six months a resident medical appointment in some public institution. Officers are appointed on two years' probation as supernumeraries, and are paid a salary at the rate of £300 per annum with quarters, without the right to private practice. Supernumerary officers, married or single, who obtain leave to reside out of the quarters provided for them, will not be entitled to lodging allowance. After serving for two years, if appointed to the permanent staff, the officer will receive £400 per annum, rising by increments of £25 annually up to £700 per annum. A Government medical officer on being appointed to a district, and a supernumerary on being appointed to act in charge of a district, will receive a salary of £500 per annum, but will not receive any increments thereto until entitled to such increments by length of actual service. Every medical officer appointed to a district or to act in charge of a district will receive a travelling allowance at a rate varying from £100 to £150 per annum as the extent of the district may require. He is allowed private practice. No more than £30 is allowed for passage money on first appointment. A system of compulsory assurance of Government servants is under consideration.

*Jamaica.*—The appointments, 45 in number, are mainly district appointments with private practice allowed; the salary paid by Government varies from £150 to £250 per annum, and in most cases is £200. Newcomers are in some cases attached for a while to the public hospital in Kingston, and given an allowance at the rate of £200 per annum, but not permitted to undertake private practice. There is a Civil Service Widows' and Orphans' Fund established by law, to which all medical officers are obliged to subscribe at the rate of 4 per cent. on their salaries.

*Trinidad and Tobago.*—In Trinidad there are 32 appointments. Officers are appointed in the first instance on two years' probation as supernumeraries. They will receive a salary of £250 per annum, with furnished quarters, and are usually attached to the Government Hospital; the salary assigned to the district appointments, to which they are promoted as vacancies occur, is £300, which is increased to £400 and upwards by various allowances for horse, house, or otherwise; these posts carry the right to private practice; after every five years' service an officer is given an additional personal allowance at the rate of £50 per annum; but the number of appointments is being reduced, the Government work being assigned to private practitioners, who receive £150 per annum and fees. All officers hereafter appointed are required to contribute 4 per cent. of their salaries to the Widows' and Orphans' Fund. In the Island of Tobago there are 3 district appointments, with salary of £200 per annum attached.

*Windward Islands* (Grenada, St. Lucia, St. Vincent).—The 22 appointments are, with few exceptions, district appointments with the right to private practice attached; the salaries paid by Government vary from £240 to £400, with allowances in certain cases.

*Leeward Islands* (Antigua, St. Christopher, and Nevis, Dominica, Montserrat, Virgin Islands).—The 21 appointments are of the same nature as in the Windward Islands. An officer when first sent out is not appointed to a particular colony, but to the service of the Leeward Islands, with a salary of £200, and the Governor decides as to the district which is to be allotted to him. As a rule, £30 only is allowed for passage money. The medical officers receive fees for successful vac-

[1] Intending applicants would do well to consult a memorandum prepared for the use of the Parliamentary Bills Committee of the British Medical Association, and published in the BRITISH MEDICAL JOURNAL on April 23rd, 1892.

cinations, *post-mortem* examinations, attendance and giving evidence at courts of justice, certificates of lunacy, and, in the larger islands, for burial certificates. They are also allowed private practice.

*British Honduras.*—There are 5 medical appointments, in all of which private practice is allowed, if it does not interfere with the public duties of the officer: the pay is $720 to $1,050. The Colonial Surgeon and District Surgeon are public vaccinators, and as such receive a fee for every successful case. Four of the medical officers are also district magistrates, and receive an additional $720 in the latter capacity. Unless they already possess a diploma of Public Health, medical officers before they join the Colony are liable to be required to undergo a course of instruction at a laboratory of public health or analogous institution.

*Fiji.*—There are at present 8 medical officers, of whom the Chief Medical Officer receives £600 per annum, the Senior Medical Officer £450 per annum and £50 allowance for house rent, the others receiving £300 per annum with quarters, or £50 house allowance at the option of the Government. District Medical Officers receive in addition capitation fees upon all the indentured labourers in their respective districts. These amount usually to sums ranging between £60 and £150 per annum. Government medical officers are entitled to the private practice of their profession in all districts, on the understanding that their official duties are not made subservient to it. There are also 3 Provincial Medical Officers, who are to take charge of 3 small hospitals which will shortly be established. Salary £300, rising by £10 to £450 and quarters, no private practice, no pensions, but the doctors are eligible for appointment as chief or senior medical officer. Each doctor will be in charge of the hospital, with a native dresser. Candidates should be unmarried, midwifery necessary, knowledge of eye diseases desirable. The doctors are at first attached to Suva Hospital and will afterwards accompany the provincial inspectors on tours.

*Sierra Leone.*—There are 10 Government medical officers. The pay of the Colonial Surgeon is £800 a year rising by annual increments of £50 to £1,000, with consultation practice only. The Assistant Colonial Surgeons receive salaries varying from £200 to £400, and the District Surgeons in the Protectorate £350, rising to £400. The Senior Assistant Colonial Surgeon is in charge of the lunatic asylum and the incurable and small-pox hospitals at Kissy, and is situated in Freetown. Quarters are not provided.

*Gambia.*—There are 2 medical officers paid respectively £400 and £300 per annum and allowed private practice. Quarters are provided, or an allowance in lieu thereof.

*Gold Coast.*—The pay of the Chief Medical Officer is £800, rising to £1,000 by £50 per annum, with consultation practice only. The Colonial Surgeon, the next officer, receives £600 with annual increments of £25 to £700, and there are two Assistant Colonial Surgeons receiving £500 with annual increments of £25 up to £600. The other Assistant Colonial Surgeons, 34 in number, are paid at the rate of £350 per annum for three years. After three years, if the officer has performed his duties in a satisfactory manner and is continued in his appointment, the salary will be increased to £400, rising by annual increments of £20 to £500. Several temporary appointments will be made at a salary of £400 per annum. Private practice is allowed, but the right of withdrawing this is reserved; there is very little to be had, and it cannot be counted upon, as the medical officers are liable to frequent change of station. Free quarters are provided.

*Lagos.* The pay of the Chief Medical Officer is £800 per annum, rising to £1,000 by increments of £50. The Senior Assistant Colonial Surgeon receives a salary of £400 a year, rising by annual increments of £20 to £500. Ten other Assistant Colonial Surgeons receive £350, rising by triennial increments of £25 to £400. Private practice is not allowed, except when granted by special permission of the Governor. Free quarters, or allowance in lieu thereof, are granted to the Chief Medical Officer and to the European Assistant Colonial Surgeons. (N.B. It is not considered desirable that anyone under 25 should be appointed to any medical post in West Africa. The special rules as to leave and pension in the case of Government servants on the West Coast of Africa apply also to medical officers.)

*Northern Nigeria.*—In Northern Nigeria the medical department consists of one Principal Medical Officer, with pay at the rate of £800 per annum, rising to £1,000 by annual increments of £50, and duty pay at the rate of £108 per annum; four Senior Medical Officers, with pay at the rate of £600 per annum, rising by annual increments of £25 to £700, and duty pay at the rate of £60 per annum; eight Senior Assistant Medical Officers, with pay at the rate of £450, rising to £500 by annual increments of £20; and eight Junior Assistant Medical Officers, with pay at the rate of £400 per annum, rising to £450 by annual increments of £15. The staff also includes 2 Dressers, with pay at the rate of £180 a year, rising by annual increments of £10 to £250 a year; 7 Male Nurses, with pay at the rate of £150 a year, rising by annual increments of £10 to £200 a year. Officers employed in Northern Nigeria receive at present a local allowance of 5s. a day in addition to their pay.

*Southern Nigeria.*—The medical staff consists of one Principal Medical Officer, with pay at the rate of £1,000 per annum; one Assistant Principal Medical Officer, with pay at the rate of £600 per annum, rising to £700 by biennial increments of £50; two Senior Medical Officers, with pay at the rate of £500 per annum, rising to £600 by biennial increments of £50; and 22 District Medical Officers, with pay at the rate of £350 per annum, rising to £500 per annum by biennial increments of £50.

*Ceylon.*—The (9) Deputy Assistant Colonial Surgeons receive Rs.1,500 to Rs.2,500 per annum. The pay of the (36) Sub-Assistant Colonial Surgeons and (8) other subordinate medical officers is at the rate of from Rs.900 to Rs.1,600 per annum. The (23) Assistant Colonial Surgeons are paid at a rate of from Rs.3,000 to Rs.5,000 per annum, and the (4) Colonial Surgeons and (3) other superior medical officers at a rate of from Rs.5,000 to Rs.8,000 per annum. The Principal Civil Medical Officer receives Rs.12,000 per annum, rising by biennial increments of Rs.1,000 to Rs.15,000 per annum. Private practice is allowed to the subordinate officers, but the Colonial Surgeons may take only consultation practice. The Medical Service is recruited mainly from gentlemen born in the island, but possessing British diplomas.

*Straits Settlements.*—There are 11 medical appointments, but the amount of the salaries cannot be stated at present, as the whole system of payment is under revision. Private practice is not as a general rule allowed.

*Hong Kong.*—There are 7 Government medical appointments, but the amount of the salaries cannot be stated at present, as the whole system of payment is under revision. Private practice is in general not allowed.

*Mauritius.*—There are 24 medical appointments in all. Of these, 14 are minor appointments, with salaries varying from Rs.1,000 to Rs.1,500 per annum. The other 10 appointments have salaries varying from Rs.2,000 to Rs.9,000. Free quarters are not given in most cases; and private practice is not allowed. The service is mainly recruited from gentlemen born in the island.

*N.B.*—Exchange compensation is granted to officers appointed from this country to medical posts in Hong Kong and the Straits Settlements, that is, an allowance of dollars, in respect of one-half, and one-half only, of an officer's salary, sufficient to make up the difference between the market value of the dollar and a dollar equivalent to 3s. The sterling value of the dollar from day to day is to be found in the market quotations. The value of the rupee is now approximately 1s. 4d., but an exchange compensation allowance is at present granted in Ceylon to make up half the salary to the equivalent of 1s. 6d. the rupee. There are Widows' and Orphans' Pensions Funds in Ceylon, Straits Settlements, Mauritius, and Hong Kong, to which all permanent Government servants are called upon to subscribe at the rate of 4 per cent. on their salaries.

*Seychelles.* There are three medical appointments. The Government Medical Officer receives Rs 4,000; two Assistant Government Medical Officers receive Rs 3,000. The holders of the latter appointment have free quarters. Private practice is allowed.

*Gibraltar.*—There is a surgeon of the Colonial Hospital receiving £250, and an assistant surgeon receiving £87 10s. The surgeon of the hospital as medical officer of the civil prison and lunatic asylum receives £50, and house allowance of £42. The assistant surgeon is also police surgeon, port surgeon (£100), and public vaccinator.

*Cyprus.*—There is a Chief Medical Officer paid at the rate of £500 per annum, and two District Medical Officers paid at the rate of £250 per annum; all enjoying private practice; these are the only medical appointments in the island which are open to English candidates.

*St. Helena.*—The Colonial Surgeon receives £200 per annum, and £30 horse allowance. Private practice is allowed.

*Falkland Islands.*—There are two appointments, one of which is paid at the rate of £300 per annum, and the other £200 per annum. Private practice is allowed in both cases.

4. All applicants for ordinary medical employment in these Colonies must be between the ages of 23 and 30 (in the case of the West African Colonies 25 and 32), and must be doubly qualified; preference will be given to those who have attended a course of lectures on tropical diseases, or have held hospital appointments as house-physicians and house-surgeons; certificates of moral character and of sobriety will be required, and every officer before being appointed will be medically examined by one of the consulting physicians of the Colonial Office—Dr. Patrick Manson, 21, Queen Anne Street, Cavendish Square, London, W.; Dr. Andrew Davidson, 30, Morningside Drive, Edinburgh; or Dr. Hawtrey Benson, 57, Fitzwilliam Square, Dublin.

5. In addition to the ordinary medical appointments in these Colonies vacancies also occasionally, though very rarely occur for which specialists are required, as, for example, to take charge of a lunatic asylum, and the particulars of chief medical officer in some of the larger Colonies have not been given, as the headship of the medical department in such Colonies, requiring administrative as well as professional qualifications, is not reserved to the ordinary medical staff of the same Colony, but is often filled up directly by transfer, and sometimes from outside the service.

6. Applications for medical employment in these Colonies from persons in the United Kingdom must be addressed to the Assistant Private Secretary, Colonial Office, Downing Street, S.W. Out of the total number so applying, a list of candidates will be made, who will be eligible to fill any vacancies which may occur, but no promise whatever can be held out that candidates will eventually receive an appointment. It is not possible to forecast either the number or the nature of the vacancies which will arise in the course of any given year and it is not expected that candidates should hold themselves in readiness by refraining from other employment, as usually, when selected for an appointment, they can be allowed sufficient time to make their preparations and to terminate their existing employment. There have been on the average 15 vacancies a year during the last ten years to which appointments have been made from this country. During recent years the vacancies have been more numerous, owing to the increases of medical staff in the West African Colonies.

In the course of the year April, 1887, to April, 1888, there were in all 15 vacancies to which appointments were made from this country. They occurred in the following colonies: British Guiana, British Honduras, Falklands, Gambia, Gold Coast, Hong Kong, Straits Settlements. In the course of the year 1888-1889 there were 8 vacancies (British Guiana, Fiji, Gold Coast, Straits Settlements, Trinidad). In 1889-1890 there were 12 vacancies (British Guiana, Fiji, Gibraltar, Gold Coast. Hong Kong, Lagos, St. Helena). In the year 1890-1891 there were 17 vacancies (British Guiana, British Honduras, Gambia, Gold Coast, Leeward Islands, Straits Settlements, Windward Islands). In the year 1891-1892 there were 12 vacancies (British Guiana, British Honduras, Fiji, Gold Coast, Leeward Islands, Windward Islands). In the year 1892-93 there were 18 vacancies (British Guiana, British Honduras, Fiji, Gold Coast, Jamaica, Leeward Islands, Trinidad). In the year 1893-1894 there were 18 vacancies (British Guiana, British Honduras, Falklands, Fiji, Gambia, Gold Coast, Jamaica, Lagos, Leeward Islands, Straits Settlements, Trinidad). In the year 1894-1895 there were 14 vacancies (British Guiana, Cyprus, Fiji, Gold Coast, Lagos, Leeward Islands, Trinidad, Windward Islands). In the year 1895-96 there were 15 vacancies (Gold Coast, Lagos, Gambia, Jamaica, St. Vincent, Straits Settlement, Cyprus, and Zululand). The list of candidates applying in April, 1897, comprised about 90 names.

In addition to the above, the Colonial Office and Foreign Office, through the Crown Agents for the Colonies, sent out every year an increasing number of medical men to fill temporarily appointments in connection with railway and other large public works in the Crown Colonies and Protectorates.

Applications for further information should be made at the Colonial Office, Downing Street, S.W.

# BRITISH PRACTITIONERS ABROAD.

There are very few changes to record this year in regard to British practitioners abroad. It is true that Italy has claimed, and the Privy Council has granted the request, that their medical graduates shall be permitted, under the Medical Act, 1886, to practise in England, and to be entitled to the privileges of registration. The Order in Council conferring these privileges was made under the somewhat mistaken idea that equal rights would be accorded to English graduates and diplomates desiring to practise in Italy. We use the words "somewhat mistaken idea" advisedly, as it is at present by no means sure that true reciprocity has been established between the two nations. As the matter is, however, in the hands of the General Medical Council, we may be sure that every step will be taken to ensure the desired result, and that nothing will be allowed to endanger the just rights of both Italian and British practitioners. With regard to our Colonies, no legislation has been accomplished with reference to medical practice in any but New South Wales, which, as will be noted below, has passed a short Act, making it penal to practise save under the regulations of the Medical Practitioners Act, and containing penal clauses which will make practitioners in Great Britain and Ireland anxious that somewhat similar enactments should be passed against unqualified practice in this country.

## BRITISH COLONIES AND DEPENDENCIES.

### Australasia.

*New South Wales.*—The following Act has passed both Houses of Parliament and has received the sanction of the Governor and is now the law An Act for the registration of medical practitioners, the restriction of unqualified persons from practising, and to amend such other Statutes as may be inconsistent therewith. 1. Any person who, not being a legally qualified medical practitioner within the meaning of the Medical Practitioners Act, 1898, or entitled to be registered as a legally qualified medical practitioner within the meaning of the Act, takes or uses the name or title of a physician, doctor of medicine, licentiate in medicine and surgery, bachelor of medicine or surgeon, or any name, title, addition or description implying that he is a legally qualified medical practitioner as aforesaid shall be liable to a penalty of £50, and in the case of a continuing offence against the provisions of this Section to a further penalty of £5 for each day from the time when the said offence was first committed or shall be liable to imprisonment for a term not exceeding 12 months. All penalties imposed by this Act may be recovered before, and all charges under this Act may be heard and determined by a stipendiary or police magistrate, or any two justices in Petty Session. We are further informed that another clause was inserted and passed to the effect that any person who shall have been for 15 years before the date of the passing of the Act in *bonâ fide* medical practice, and shall have received a medical education at some recognised school or college shall be admitted to registration as a medical practitioner at the discretion of the Medicine Board, and shall have all the rights of medical practitioners and be subject to all the provisions of the Act. Clauses in respect of the manner in which persons upon the Medical Register shall have their names removed by the Medical Board, and provisions for the proper keeping of the Register are also found in the Act.

*Victoria.*—Local registration compulsory. British qualifications entitle holder to registration here.

*South Australia.*—Registration not compulsory here, and persons can practise without it. British qualifications entitle to registration here. Part II of the Imperial Medical Act, 1886, now applies to South Australia.

*Queensland.*—All medical practitioners must be registered by the Queensland Medical Board. British qualifications subject to verification entitle holder to registration. Persons registered under Medical Act, 1858, can claim registration, but such registration must be legally proved.

*Western Australia.*—Persons registered under Medical Act, 1858, can claim to be registered by the Medical Board after legal proof of identity and registration.

*Tasmania.*—Registration compulsory by Local Medical Council, but any person entitled to be registered under Medical Act, 1858, can after legal proof obtain from the Court of Medical Examiners a certificate entitling him to practise in this Colony.

*New Zealand.*—Medical practitioners must be registered here, paying a fee of £1 5s. All persons entitled to be registered under Medical Act, 1858, can after legal proof be entitled to registration, but have to pay the fee.

### South Africa.

*Cape Colony.*—No person can practise here without a licence signed by the Colonial Secretary on the recommendation of the Colonial Medical Council. Women are eligible for registration. The fee payable is £5. All persons entitled to be registered under the Medical Act, 1858, can, after legal proof, claim to be registered in the Colony, but the fee has to be paid. The following foreign degrees are made by Order in Council qualifications entitled to local registration—the Staats-Examen of Austria, Germany, Holland, Russia, and Switzerland. A further fee of £1 1s. is

required for registration of any additional diplomas or degrees after the first registration. Midwives are also registered by the Colonial Medical Council.

*Natal.*—No unlicensed person can either practise in Natal or recover fees. All persons entitled to be registered under the Medical Act, 1858, can, after legal proof, claim to be registered by the Natal Medical Board upon payment of fees from 1 to 3 guineas. An annual licence has also to be taken out, fee £5.

DOMINION OF CANADA.

All British degrees and diplomas are registered by the Provincial Medical Board.

*Prince Edward Island.*—No one may practise here unless registered and licensed by the Colonial Medical Committee. All persons entitled to be registered under the Medical Act, 1858, can claim, after legal proof and the payment of fees not exceeding $20, registration.

*New Brunswick.*—All practitioners must be locally registered by the Colonial Medical Council under conditions which vary from time to time according to the direction of the Council. Each medical practitoner has to pay an annual fee of $1 to $2.

*Nova Scotia.*—Local registration compulsory by Provincial Medical Board.

*Quebec.*—Local registration compulsory by Provincial Board.

*Ontario.*—No one may practise Medicine, Surgery, or Midwifery who is not registered by the Council of the College of Physicians and Surgeons of Ontario. An examination must be passed.

*Manitoba.*—No person may practise Medicine, Surgery, or Midwifery unless registered by the Council of the College of Physicians and Surgeons of Manitoba. Persons on the *Medical Register* can claim to be registered locally upon legal proofs.

*North-West Territories.*—No one may practise here unless registered by the Medical Council which sits at present at Regina, under a penalty of not exceeding $100. All persons entitled to be on the *Medical Register* can claim registration after legal proof and payment of $50, and an annual fee of $1 to $2.

*British Columbia.*—An Act has recently been passed respecting the profession of medicine and surgery, by which His Majesty, by and with the advice and consent of the Legislative Assembly of the Province of British Columbia, enacts as follows: (1) This Act may be cited as the Medical Act, 1898. (2) The members of the medical profession of British Columbia heretofore incorporated under the name of "The Medical Council of British Columbia" shall be deemed to be and to have been from its first establishment a body corporate by the name aforesaid, and the said name is hereby changed to that of "The College of Physicians and Surgeons of British Columbia." (3) Every person registered according to the provisions of the "Medical Act" and any other Act of the Legislature of British Columbia relating to the medical profession shall be a member of the said "College of Physicians and Surgeons of British Columbia." 4. Every person hereafter registered under the provisions of this Act shall also be a member of the said College. 24. The Council shall admit upon the *Register* any person who shall produce from any college or school of medicine and surgery requiring at least four years' course of study a diploma of qualification, provided also that the applicant shall furnish to the Council satisfactory evidence of identification and pass before the members thereof a satisfactory examination touching his fitness and capacity to practise as a physician and surgeon. 63. If any person not registered pursuant to this Act, for hire, gain, or hope of reward, practise or profess to practice medicine, surgery, or midwifery, he shall, upon summary conviction thereof before any justice of the peace, for any and every such offence, pay a penalty not exceeding one hundred dollars.

WEST INDIES.

*Jamaica.*—Local registration compulsory. Persons entitled to be upon the *Medical Register* can claim registration here after legal proof.

*British Guiana.*—Registration necessary. Medical Board accepts after legal proof any person who is registered under the provisions of the Medical Act, 1858.

FIJI.

Practitioners must be registered in Fiji. The *Register* is kept by the principal medical officer, and any person entitled to be registered under the Medical Act can after legal proof claim to be registered in the Colony. The principal medical officer has power of erasing the name of any registered person for felony, misdemeanour, or unprofessional conduct.

GOLD COAST COLONY.

Registration before the Licensing Board compulsory here, but proof of being upon the *Register* under the Medical Act, 1858, establishes right to practise.

GIBRALTAR.

Registration under local law necessary, but right to practise conferred after legal proof upon persons registered under the Medical Act, 1858.

LEEWARD ISLANDS.

Registration under local law necessary, and licence to be obtained from the Governor. Persons registered under the Medical Act, 1858, can after legal proof claim registration.

VIRGIN ISLANDS.

No person not entitled to practise in the United Kingdom is allowed to practise medicine or surgery here.

EUROPE.

*Austria.*—It is necessary to pass the State examination, or to obtain a University Degree in Medicine, a necessary preliminary to which is naturalisation as an Austrian subject. Recognition of foreign diplomas may be obtained on passing certain examinations.

*Belgium.*—Permission to practise must be obtained by foreign practitioners through a duly appointed Medical Board. So stringent are the formalities that it is held by His Majesty's Minister at Brussels that the difficulties are prohibitive. No foreigner has, as a matter of fact, received permission to practise since 1893.

*Denmark.*—Foreigners are allowed no privilege in respect of exemption from examination.

*France.*—The degree of M.D. obtained by examination before a French faculty (Paris, Montpelier, Nancy, Bordeaux, Lyons, Lille, or Toulouse) is required. This regulation applies to Algiers. The degree, however, confers the right to practise only if it has been obtained on precisely the same conditions as those to which French students are subject—that is to say, before registration as medical students they must produce evidence of having passed the examination for the French diploma of Bachelor in Classical Education (Arts and Philosophy) and the certificate in Physical, Chemical, and Natural Science, and they must go through the regular curriculum of professional study, and must pass all the five professional examinations required of French students. The degree of M.D. is still obtainable by holders of British diplomas under the old conditions of exemption, at the discretion of the Minister of Public Instruction, from any preliminary examination in Arts or Sciences and from portions of the professional curriculum and examinations. The degree obtained in this way will not, however, confer the right to practise in France. The wards of hospitals and laboratories are still freely open to foreigners: and for those who may wish to obtain the purely honorary M.D. degree the facilities offered in the way of dispensation from preliminary examinations are even greater than heretofore. Application for such exemption must be addressed to the Minister of Public Instruction, to whom the documents showing the examinations passed by the candidate in his own country and the degrees or qualifications possessed by him must be submitted. Fees to the amount of £60 must be paid. The *Progrès Médical* (14, Rue des Carmes, Paris) publishes a "Students' Number" every year about November, in which full information is given as to teaching and examinations in every medical school in France.

*Germany.*—Any person may practise medicine, but if he has not passed the State examination he does so at his own peril, and is liable to fine and imprisonment if convicted of a mistake. The right to practise is obtained only by passing the German *Staats-Examen*. A lad who intends to enter the profession of medicine must attend a gymnasium (upper school), and pass an examination in general knowledge—Latin, Greek, German, French, divinity, mathematics, physics, history, and geography. After passing this examination he may be accepted as an ordinary full student of the university. At the end of the fourth semester (second year) he can pass the first State Examination (*Tentamen Physicum*), which embraces anatomy, physiology and physics, chemistry, botany and zoology. In the tenth semester he may pass the Final State Examination. In some universities the degree of M.D. can be obtained at the end of the eighth semester (fourth year)—that is, before the *Staats-Examen* can be passed. The degree of M.D. does not in itself confer a licence to practise in the German Empire. By a recent ordinance the Universities of Prussia will not in future grant the degree of M.D. except to persons who have passed the State examination. The fee for the *Tentamen Physicum* is £1 16s.; for the Final State examination, £10 6s. The fee to the University for the M.D. degree varies between £15 and £25.

*Greece.*—A State examination must be passed, but graduates of foreign schools may take their examination in French or German.

*Holland.*—Foreigners are required to pass the State examination.

*Hungary.*—An English diploma does not entitle one to practise in Hungary without certain formalities of confirmation, owing to the fact that there is no International Convention between England and that country.

*Italy.*—A foreigner must (*a*) obtain an authorisation (*abilitazione*) from one of the Royal Universities of Italy; or (*b*) if he desires to practise only among foreigners, he is at liberty to do so. New legislation is, however, threatened, by which it is proposed to restrict the right to practise in Italy to citizens of countries granting reciprocity to Italian practitioners. In Italy medical studies are conducted in Government Universities under the immediate supervision of the Ministry of Public Instruction in Rome. There are several universities, one in each of the most important centres of the kingdom, such as Rome, Turin, Naples, Genoa, Palermo, Pavia, Pisa. There is only one medical degree in Italy, and it is that of Doctor in Medicine and Surgery. The title is conferred (by the Rector of each University) in the name of the King. The examination can be passed at any of the universities, and the students can transfer themselves from one to the other. An original thesis must be presented.

*Monaco.*—The following British qualifications are, for the purposes of medical practice in the Principality of Monaco, considered equivalent to the French Diploma of Doctor of Medicine: the degree of Doctor of Medicine of the universities of "the United Kingdom of Great Britain," and the diplomas of Fellows of the Royal Colleges of Surgeons and Physicians of London, Edinburgh, Dublin, and of the Faculty of Physicians and Surgeons of Glasgow. Every application for leave to practise must be accompanied by the diplomas of the applicant or by copies of those documents certified as correct either by a consul of the Principality or by the Mayor of Monaco. The applicants must enter into an undertaking to live in the Principality and to practise their profession during the whole or part of the months of May, June, July, August, September, and October, agreeably to Article 1 of the Ordinance of May 29th, 1894.

*Portugal.*—The State examination must be passed.

*Roumania.*—The State examination must be passed (*viva voce*).

*Russia.*—Foreign medical men must pass a comprehensive examination at the Medical Academy of St. Petersburg or one of the Universities of Russia, and must know Russian. Those who have not a B.A. degree must pass an examination in general education, and in Greek and Latin.

*Norway.*—The State examination must be passed. The Government may, however, grant permission in individual cases to persons who produce satisfactory evidence that they possess the requisite knowledge.

*Spain.*—The State examination must be passed, but exemptions are sometimes granted on application through the British Ambassador. A licence costing from £1 to £24 must be taken out every year. This regulation applies to the Canary Islands and other Spanish Colonies.

*Sweden.*—The State examination must be passed. Some reduction in curriculum may be granted.

*Switzerland.*—A qualified English practitioner desiring to practise in Switzerland, even if he desire to practise only among his own countrymen, is required to pass the Federal examination in that country. The degree of Doctor of Medicine does not give the right to practise. The Federal examination may be passed at Basle, Zürich, or Berne in German, and at Geneva or Lausanne in French. The applicant is advised to obtain

from one of his teachers in this country an introduction to a professor at the university at which he proposes to pass the examination. His proper course would be to call upon the Rector of the University. We are informed that every information would be afforded, and that no difficulties are placed in the way of candidates. At the University of Zürich, the three examinations which it is necessary to pass are held as a rule at the following periods of the year: *First Examination:* End of January and mid-September. *Second Examination:* End of January and mid-September. *Third Examination:* Beginning of January, end of May, and beginning of October. At Basle the next examinations are in October. At Geneva the examinations are held in the third week of October, and in the second week of July, at the opening and conclusion respectively of the winter and summer session At Lausanne the examinations take place as follows:—*First and Second Examinations:* April and October. *Final Examinations:* February and March, and June and July.

*Turkey.*—An examination in the chief branches of medicine and surgery must be passed at Constantinople (fee, £4 10s.). Before being admitted to the examination the candidate must present a diploma from a medical school recognised by the Government of the country in which it is situated.

SOUTH AMERICA.

*Argentine Republic.*—The applicant's diplomas must be verified by the Argentine Consul in this country (fee £1 4s.). This should be done before leaving. On arriving at Buenos Aires, the endorsement of the Argentine Consul in England must be verified by the Argentine Foreign Office. Three examinations must be passed in the University of Buenos Aires or Cordova. First Examination: Anatomy and Dissections, Physiology, Pathology, Ophthalmology, and Gynæcology. Second Examination: Clinical and Operative Surgery, Histology, Materia Medica, and Mental Diseases. Third Examination: Clinical Medicine, Pathology, Midwifery, and Toxicology. The fee for examination is $300, half of which is retained in case of rejection. The examinations can be passed consecutively at a few short intervals or separately; a rejected candidate is not readmitted to examination until after the lapse of six months. The examination is conducted *vivâ voce* in Spanish. Temporary authorisations to practise for six months may be obtained from the Governor of a province, and the applicant may utilise this time to improve his knowledge of Spanish. The regulations for graduates of Spanish Universities are less onerous.

*Brazil.*—A State examination must be passed which is conducted in Portuguese or French. The Faculties of Medicine are at Rio de Janeiro and Bahia.

*Chili.*—The regulations resemble those in the Argentine Republic; examination by the University of Santiago.

*Peru.*—Five examinations must be passed. Spanish is the official language. Applications to be made to the Dean of the Medical Faculty, Lima.

*Uruguay.*—An examination conducted in Spanish, at the University of Monte Video, must be passed.

NORTH AMERICA.

The laws regulating the practice of medicine differ in the different States and Territories. The requirements, corrected up to a comparatively recent date, are as follows:—

A. In some States the possession of a diploma does not convey the right to practise, an examination being required in all cases. The following States make this demand:

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| Alabama | Maryland | North Carolina |
| Arizona | Massachusetts | North Dakota |
| California | Minnesota | Oregon |
| Connecticut | Mississipi | Pennsylvania |
| Florida | Montana | South Carolina |
| Georgia | Washington | Tennessee |
| Illinois | Idaho | Utah |
| Indiana | Indian Territory | Virginia |
| Iowa | New Hampshire | West Virginia |
| Louisiana | New Jersey | Wisconsin |
| Maine | New York | |

B. The following States require an examination by a duly qualified Board, or the approval thereby of the presented diploma:

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| Delaware | Wyoming | Nebraska |
| District of Columbia | Rhode Island | Vermont |
| Kansas | New Mexico Territory | Indian Territory |
| Nevada | Colorado | Oklahama |
| Texas | Missouri | |

C. In a few States the presentations of diploma or other certificate of qualifications is the only requirement. This is the case in:

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| Arkansas | Ohio | Kentucky |
| Michigan | Alaska Territory | S. Dakota. |

PRACTICE IN KLONDYKE.

Medical men desirous of legally practising in the Klondyke region may do so (1) if they hold a British qualification and pay a registration fee of $50.00; (2) not having such qualifications, they must pass an examination and pay the same fee. Dr. H. N. Bain, Prince Albert, N.W.T., is the Registrar of the Territories. The examinations are similar in character to those in British Columbia, the subjects of which and the British Columbia regulations are here appended:

Section 1.—Section 29 of the Consolidated Statutes of British Columbia provides: "The Council shall admit upon the register any person who shall produce from any college or school of medicine or surgery, requiring a three years' course of study, a diploma of qualification; provided, also, that the applicant shall furnish to the Council satisfactory evidence of identification, and pass before the members thereof, or such of them as may be appointed for the purpose, a satisfactory examination, touching his fitness and capacity to practise as a physician and surgeon." (1886, C. 13, S. 28).

Section 3.—Every person applying for registration under Section 2 of the Medical Act Amendment Act, 1893, shall on appearing in person before the Registrar of the Council, and paying a fee to the Registrar of $100.00, be entitled to be registered, on producing to such Registrar a certificate duly authenticated under the hand and seal of the Registrar of Medical Practitioners in England, Ireland, and Scotland, as the case may be (or other legal evidence), that such applicant is a duly registered medical practitioner, and that he was duly registered under the Medical Act (Imperial) on or before June 30th, 1887. Such applicant will also be required to produce a certificate of good standing in the profession of medicine from the Registrar or other officer of the medical body having jurisdiction where such applicant last practised his profession, and evidence by statutory declaration that he has not lost the benefit of his said registration under the Medical Act (Imperial) by misconduct or otherwise.

Section 4.—The examination shall be orally and in writing, upon the following subjects: (1) Anatomy, (2) Chemistry, (3) Physiology, (4) Pathology, (5) Materia Medica, (6) Medical Jurisprudence, (7) Theory and Practice of Medicine, (8) Surgery, (9) Clinical Medicine, (10) Clinical Surgery, (11) Obstetrics, and Diseases of Women and Children. Marks required: 50 per cent. in first six branches, 75 per cent. in others.

Section 7.—During the year there will be three regular meetings, and three examinations held, beginning on the first Tuesday of May and September, and the second Tuesday of January, in Victoria, B.C.

Section 8.—Permits are not granted by the Council.

# DENTAL SURGERY.

## REGULATIONS OF THE GENERAL MEDICAL COUNCIL.

Candidates for a diploma in Dental Surgery are required to produce certificates of having been engaged during four years in professional studies, and of having received three years' instruction in Mechanical Dentistry from a registered practitioner, or at some dental hospital where instruction is given in this subject. One year's *bonâ-fide* apprenticeship with a registered dental practitioner, or one year's instruction at a dental hospital, after being registered as a dental student, may be counted one of the four years of professional study. The three years of instruction in Mechanical Dentistry, or any part of them, may be taken by the dental student, either before or after his registration as a student; but no year of such mechanical instruction shall be counted as one of the four years of professional study unless taken after registration.

*A Register of Dental Students* is kept by the Registrar of the General Medical Council, 299, Oxford Street, London.

*Preliminary Education.*—Dental students are subject to the same regulations as regards preliminary examination as medical students, but professional study may commence by pupilage with a registered dental practitioner.

Diplomas.

The Royal College of Surgeons of England, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, each grant a licence in Dental Surgery, and the Royal College of Surgeons in Ireland grants a licence in Dentistry, in all cases after the student has produced evidence of passing through the stated curriculum and prescribed examinations. Particulars can be obtained upon application to the Secretary of the Conjoint Board in England, Examination Hall, Victoria Embankment, London, W.C.; to Mr. James Robertson, Clerk to the Royal College of Surgeons, Edinburgh, 48, George Square, Edinburgh; to the Secretary of the Royal College of Surgeons in Ireland, Dublin; and as to the Faculty of Physicians and Surgeons, to Mr. Alexander Duncan, B.A., 242, St. Vincent Street, Glasgow.

The University of Birmingham grants the degree of Bachelor of Dental Surgery to students of its own school who have obtained a licence in Dental Surgery elsewhere at least one year previously, have produced evidence of certain additional study, and have passed the prescribed examination.

Education.

A candidate for the Diploma in Dentistry can obtain the necessary instruction in special dental subjects (the general subjects being attended at some general hospital) at the Dental Hospital of London (apply to the Dean at the Hospital, Leicester Square, W.C.); or at the National Dental Hospital and College, London (apply to the Dean, the National Dental Hospital, Great Portland Street, London, W.); at the Dental School of Guy's Hospital (apply to the Dean at the Medical School, Guy's Hospital, S.E.); at the University of Birmingham (apply to the Dean of the Medical Faculty, University of Birmingham); at Owens College, Manchester (apply to the

Registrar, Owens College, Manchester): at the Liverpool Dental Hospital and School of Dental Surgery (apply to the Dean of the Medical Faculty, University College, Liverpool): and at the Devon and Exeter Dental Hospital (apply to the Honorary Secretary of the Hospital). The Scottish Schools of Dentistry are the Incorporated Edinburgh Dental Hospital and School (apply to the Dean, 31, Chambers Street, Edinburgh): the Glasgow Royal Infirmary, Dental Department (apply to the Dean of the Faculty or Medicine, Mr. R. T. Kent, St. Mungo's College, Glasgow); and Anderson's College Medical School, Glasgow (apply to the Secretary, Mr. D. M. Alexander, 97, West Regent Street, Glasgow).

### UNIVERSITY OF BIRMINGHAM.

Degrees in Dentistry—namely, Bachelor and Master of Dental Surgery (B.D.S. and M.D.S.)—are granted by the University of Birmingham. All candidates for these degrees must pass the same Matriculation Examination as that required from candidates for medical degrees. The Degree of Bachelor of Dental Surgery is not conferred upon any candidate who has not obtained a Licence in Dental Surgery from some body legally entitled to confer such qualification. The candidate is not eligible for the degree until a period of twelve months has elapsed from the passing of his examination for the Licence in Dental Surgery. Of this period at least six months must be spent in the dental department of a general hospital approved by the University. *A*. In addition to the Licence in Dental Surgery the candidate must produce evidence that he has attended the courses required by medical students of the University in the following subjects, and passed the examinations held in the same for medical and surgical degrees: (*a*) Chemistry and Practical Chemistry, (*b*) Physics and Practical Physics, (*c*) Comparative Anatomy, (*d*) Anatomy and Practical Anatomy, (*e*) Physiology and Practical Physiology. *B*. That he has attended the following courses: (*f*) One Course of Lectures on Medicine, (*g*) One Course of Lectures on Surgery, (*h*) Special Courses of Lectures on the Surgery and Medicine of the Mouth, (*i*) Pathology and Bacteriology. And has passed the examinations for candidates for Dental degrees held in each of these subjects. *C*. That he has attended courses in: (*k*) Dental Histology and Patho-Histology; (*l*) Comparative Dental Anatomy; (*m*) Dental Surgery and Prosthetic Dentistry. *D*. That he has received instruction in the Clinical Examination of living cases at the dental department of a general hospital for a period of not less than six months. The Final Examination will deal with the subjects in Classes *C* and *D*. On the expiration of twelve months from the date of passing the examination for the Degree of Bachelor of Dental Surgery, the candidate will be eligible for that of Master of Dental Surgery. For this degree candidates will be required to submit a Thesis containing original work and investigations in some subject connected with Dentistry, which thesis shall be submitted to examiners to be nominated by the Dental Advisory Board. The degree will be awarded or withheld according to the report of these examiners.

The teaching of Dentistry is undertaken by the University acting in association with the Birmingham Dental Hospital and the Birmingham Clinical Board.

An Entrance Scholarship, value £37 10s. is awarded annually at the commencement of the Winter Session.

The Winter Session begins on October 1st, 1901, and the Summer Session on April 15th, 1902.

### ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The following are the amended Regulations approved by the Council:—Section I, Clause 6: Of having attended at a recognised Dental Hospital and School—(*a*) A course of Dental Anatomy and Physiology; (*b*) a separate Course of Dental Histology, including the preparation of Microscopical Sections; (*c*) a course of Dental Surgery; (*d*) a separate course of Practical Dental Surgery; (*e*) a course of not less than five lectures on the Surgery of the Mouth[1]; (*f*) a course of Dental Bacteriology; (*g*) a course of Dental Materia Medica. Section II, Clause 3: The Second Professional Examination consists of—Part I, General Anatomy and Physiology, General Pathology and Surgery: Part II, Dental Anatomy and Physiology, Dental Pathology and Surgery and Practical Dental Surgery. The examination is partly written, partly practical, and partly oral. The written examination in Part I comprises General Anatomy and Physiology, General Pathology and Surgery; and in Part II Dental Anatomy, and Physiology, Dental Pathology, and Surgery. The oral examination in each part comprises the several subjects above mentioned, and is conducted by the use of preparations, casts, drawings, etc. At the practical Examination in Part II candidates may be examined: (*a*) On the treatment of Dental Caries, and may be required to prepare and fill cavities with gold or plastic filling or material, or to do any other operation in dental surgery. (Candidates must provide their own instruments.) (*b*) On the mechanical and surgical treatment of the various irregularities of children's teeth. Candidates who have passed the first professional examination at least six months previously may present themselves for the two parts separately, or they may take the whole examination at one time. Before presenting themselves for Part I. they must produce the certificates required under Section I Clauses 5, 8, 9, 10 and 11, and before taking Part II. the certificates required under Section I, Clauses 5, 6, 7 and 11. A candidate who enters for the whole examination may be referred in one part only. If referred in both parts he will be required to produce, before admission to re-examination, a certificate of three months' additional study at a general hospital and a special dental hospital; but a candidate referred in one part only will be required to produce before admission to re-examination in that part, a certificate of three months' additional study at a general hospital or a special dental hospital as the case may be, the precise attendances required at each hospital being left to the discretion of the respective hospital authorities. Candidates who have passed the Second Examination of the Examining Board in England, or who shall produce evidence of having passed the Examination in Anatomy and Physiology required for the Licence in Surgery of the Royal College of Surgeons of Edinburgh, the Royal College of Surgeons in Ireland, or the Faculty of Physicians and Surgeons of Glasgow, or an Examination in Anatomy and Physiology required for a Degree in Medicine or Surgery at a University in the United Kingdom, will be exempt from re-examination in those subjects in Part I. Candidates who are members of the College, or who have passed the examination in surgery of the Examining Board in England, or who shall produce evidence of having passed the examination in Surgery for the Licence in Surgery of the Royal College of Surgeons of Edinburgh, the Royal College of Surgeons in Ireland, or the Faculty of Physicians and Surgeons of Glasgow, or an examination in Surgery for a degree in Medicine or Surgery at a University in the United Kingdom, will be exempt from examination in Surgery and Pathology in Part I. Clause 4.—The fee for the diploma of the licence in Dental Surgery is £21, and is payable in the following manner, namely:

| | £ | s. | d. |
|---|---|---|---|
| Preliminary science examination. Each admission ... ... ... | 3 | 3 | 0 |
| First professional examination. ,, ,, ... ... ... | 2 | 2 | 0 |
| Second ,, ,, ,, ,, ... ... Part I | 2 | 2 | 0 |
| Second ,, ,, ,, ,, ... ... Part II | 3 | 3 | 0 |
| Amount payable before grant of diploma ... ... ... ... | 10 | 10 | 0 |
| | £21 | 0 | 0 |

Fees for re-examination will not be allowed to count as part of the fee of £21 payable for the diploma, except in the case of any candidate being on June 1st, 1900, registered by the General Medical Council as a Dental Student and becoming within six years from the date of his registration entitled to receive the diploma.

### ROYAL COLLEGE OF SURGEONS IN IRELAND.

[Candidates for the Licence in Dental Surgery are required to pass three examinations—namely, *Preliminary* (in General Education), *Primary Dental*, and *Final Dental*.

*Primary Dental Examination.*—Every candidate is required, before admission to the Primary Dental Examination, to produce evidence (1) of having passed a recognised Preliminary Examination, and of having been registered as a medical or dental student by the General Medical Council; (2) of having, subsequently to registration as a dental or medical

[1] These lectures may be given either at a recognised Dental Hospital and School, in which case the lecturer must be a qualified surgeon practising surgery, or they may be given at a recognised Medical School, and may form part of the course required by Clause 8 (*d*).

student, attended at a recognised medical school (*a*) one course (six months) lectures on Practical Anatomy, including Dental Anatomy; (*b*) two courses (six months each) Demonstrations and Dissections; the certificate must include a statement that the candidate has dissected the head and neck at least three times; (*c*) one course (six months) lectures on Chemistry; (*d*) one course (six months) lectures on Physiology, including Dental Physiology; (*e*) one course (three months) lectures on Materia Medica; (*f*) one course (six months) lectures on Surgery; (*g*) one course (six months) lectures on Medicine; (*h*) one course (three months) Practical Chemistry, including metallurgy: (*i*) one course (three months) Practical Physiology and Histology, including Dental Physiology and Histology, human and comparative; (3) of having attended Clinical Instruction at a recognised general hospital for one year. Primary Dental Examination, £10 10s.; Re-examination, if rejected, £5 5s. Fees are not returned to candidates who may fail to present themselves without having given two days' previous notice to the Registrar, or who may have been rejected. All fees are to be lodged to the credit of the Royal College of Surgeons at the Bank of Ireland. A rejected candidate will not be again admitted to examination until after a period of three months. Candidates who have passed in Chemistry and Physics at a First Professional Examination under the Conjoint Board with the Royal College of Physicians in Ireland, or with the Apothecaries' Hall, or an equivalent examination recognised by the College, are exempted from examination in these subjects at the Primary Dental Examination. Candidates shall not obtain credit for passing any part of the examination unless they pass at the same time in at least two of the following subjects, save in case they need a lesser number to complete their examination. 1. Physics: Heat, Electricity, and Light (as in Ganot's *Natural Philosophy*). 2. Chemistry, including Metallurgy: Elementary Chemistry (inorganic), including Metallurgy, as found in Roscoe's *Lessons in Elementary Chemistry*, with a practical Examination in the Laboratory. 3. Anatomy: The Bones, the names and positions of the principal Muscles, Blood Vessels, and Nerves; the elementary anatomy of the Viscera, of the Thorax and Abdomen, and of the Brain and Cranial Nerves; the anatomy of the Mouth and Jaws, and parts in relation thereto. 4. Physiology and Histology: An elementary knowledge of the functions of Digestion, Circulation, Respiration, and the Nervous system; and an elementary knowledge of Histological Structures, the Physiology and Histology of the Mouth and the organs related thereto. 5. Surgery: Inflammation, its varieties and consequences: Fractures, Dislocations, and Injuries of the Mouth, Face, Jaw, and parts in relation thereto, their immediate and remote effects; Surgical Diseases of Blood Vessels, Diseases of the Mouth, Bones and Joints thereof, Wound Infection, Pyæmia, Septicæmia, Use of Anæsthetics, Accidents therefrom, and their treatment.

*Final Dental Examination.*—Candidates must produce evidence of having passed the Primary Dental Examination of this College, or the third Professional Examination under the Conjoint Board with the Royal College of Physicians in Ireland, or with the Apothecaries' Hall, or an equivalent examination recognised by the College. Candidates are required to produce certificates of having attended subsequent to registration as a dental or medical student: 1. The following courses of lectures recognised by the College: Dental Surgery and Pathology (two courses), Dental Mechanics (two courses). 2. For two years the practice of a dental hospital recognised by the College, or of the dental department of a general hospital so recognised. 3. Of having been engaged during four years in Professional Studies. 4. Of having received three years' instruction in Mechanical Dentistry from a registered dentist.[1] Candidates holding a diploma in Surgery shall be admissible to the Final Dental Examination on producing certificates of having attended: 1. One course of lectures on Dental Surgery and Pathology. 2. One course of lectures on Dental Mechanics. 3. For one year the practice of a dental hospital recognised by the College, or of the dental department of a general hospital so recognised, where such attendance has been subsequent to the date of diploma. This remission (3) has been made on the understanding that the surgeon devotes his whole time to dental work. 4. Of having been engaged during a period of not less than two years in acquiring a practical familiarity with the details of Mechanical Dentistry, under the instruction of a registered dentist. Candidates are examined in: Dental Surgery—Theoretical (including Dental Pathology), Clinical, and Operative. Dental Mechanics—Theoretical, Clinical, and Practical (including the Metallurgy of the workshop). Candidates must pass in all the subjects at the same time. Final Dental Examination.—Candidates holding L.R.C.S.I., or Students who have passed Primary Dental or Third Professional Examination of the College, £10 10s.; re-examination, £5 5s. Fees for Final Examination of all other candidates, £26 5s. Re-examination £10 10s. Extra fee for Special Examination, £5 5s. Fees are not returned to candidates who may fail to present themselves without having given two days' previous notice to the Registrar, or who may have been rejected. All fees are to be lodged to the credit of the Royal College of Surgeons at the Bank of Ireland. A rejected candidate will not be again admitted to examination until after a period of three months. The Council has power to admit to examination, *sine curriculo*, candidates whose names are on the *Dental Register*, published under the direction of the General Medical Council, and who are unable to furnish the certificates required by the foregoing regulations, on presentation of the schedule of application as hereinafter set forth, accompanied by any certificate they may have of general or professional education, and by the required fee. The application of the candidate for examination shall be made on a form, obtainable at the College, setting forth a certificate, signed by two Fellows, Members or Licentiates of a College of Surgeons, and by two Licentiates in Dental Surgery in the Royal College of Surgeons in Ireland [or two members of the British Dental Association, or of the Odontological Society], to the effect that applicant is of good moral character, has been for five years engaged in the practice of Dentistry, is a registered dentist, and has not, during the past two years, attracted business as a dentist by advertising or other unbecoming practices. The applicant must also submit a declaration made by him before a magistrate to the effect that the applicant has not during the two years preceding the date of such declaration attracted business as a dentist by advertising or other unbecoming practices. The application must also contain a statement by the applicant subscribing to the terms of the declaration hereinafter laid down for all candidates before receiving the diploma. The examination and fees for candidates *sine curriculo* are the same as for Final Dental Examinations of other candidates.

[1] The three years' instruction in Mechanical Dentistry, or any part of them, may be taken by the dental student, either before or after his registration as a student; but no year of such instruction in Mechanical Dentistry shall be counted as one of the four years of professional study unless taken after registration. One year's *bona-fide* instruction from a registered dentist after being registered as a dental student may be counted as one of the four years of professional study.

## SOME OPEN SCHOLARSHIPS AND PRIZES.

The suggestion has been made to us that there are many men, especially among those recently qualified, who would probably be glad to try for some of the numerous scholarships and prizes offered both in this country and abroad for open competition, if they only knew of their existence, or if, knowing of them, they were made aware of their conditions. It is surprising to how many men even the Murchison Scholarship, the Astley Cooper Prize, and the Jacksonian Prize are unknown. Although some of the scholarships and prizes are of value on account of the substantial pecuniary aid they afford in protracted and costly researches, there are others whose intrinsic value is small, which however, have a high value on account of the distinction they confer.

### Scholarships for Students.

The Medical Schools with hardly an exception offer Entrance Scholarships to all students intending to begin their medical curriculum. Most of the London hospitals offer some five, ranging in value from £150 to £50. The University of Edinburgh offers every third year one of the value of £300, a Vans Dunlop Scholarship of £100 for three years. Some of the entrance scholarships, including exhibitions, are awarded for proficiency in the arts and others for knowledge of the preliminary sciences of the curriculum. Particulars in regard to them will be found elsewhere in this number of the

JOURNAL. It is understood that the successful candidates will take up the full course in the hospital in question, but there is no reason, as far as we are aware, why intending students should not compete at two or more medical schools simultaneously.

The Murchison Memorial Scholarship in Clinical Medicine is open to students of medicine or recently-qualified men who have been educated in London or Edinburgh, having been registered students in either place for not less than five and not more than seven years. It is of the annual value of 20 guineas, and is awarded alternately in London by the Royal College of Physicians and in Edinburgh by the University of Edinburgh.

At Owens College, Victoria University, there is an annual open Scholarship in Physiology and Comparative Anatomy called the Robert Platt Physiological Scholarship of the value of £50 for two years. It is given as the result of an examination, aptitude for original research being taken into account.

### INCENTIVES TO SPECIFIED RESEARCHES.

The Weber-Parkes Prize is awarded by the Royal College of Physicians every third year for an essay on some subject connected with the etiology, prevention, pathology, or treatment of tuberculosis, especially with reference to pulmonary consumption in man. The prize consists of 150 guineas and a silver medal. A similar medal is also awarded to the essayist who comes next in order of merit. There was no award made in 1900.

The Jacksonian Prize of the Royal College of Surgeons is open to Fellows or members of the College. Its annual value is about £12. For 1901 the subject for the prize is the diagnosis and treatment of bullet wounds of the chest. Dissertations must be delivered at the College not later than 4 P.M. on December 31st.

The Astley Cooper Prize is a triennial prize of the value of £300, which will be next awarded in 1904 for the best essay on the pathology of carcinoma and the distribution and frequency of occurrence of the secondary deposits, corresponding to the various primary growths. The essays must contain an account of original experiments and observations not already published and be illustrated as far as possible by preparations and drawings. They are to be in English or accompanied by an English translation, and must, on or before January 1st, 1904, be addressed to the Physicians and Surgeons of Guy's Hospital, London, S.E.

The William F. Jenks Memorial Prize is given triennially by the College of Physicians of Philadelphia for the best essay on some announced gynæcological or obstetrical subject. It is of the value of about £100. The essays are to be sent to the Chairman of the Prize Committee, from whom full particulars may be obtained. The last award was in January, 1901.

The three following prizes are given for essays on subjects connected with tropical diseases, which must be sent to the Editors of the *Journal of Tropical Medicine* not later than December 1st, 1901. An essay on the duration of the latency of malaria after primary infection as proved by tertian or quartan periodicity or demonstration of the parasite in the blood, for the Sivewright Prize; on the spread of plague from rat to rat and from rat to man by the rat-flea, for the Belilios Prize; and on the best method of administration of quinine as a preventive of malarial fever, for the Lady Macgregor Prize.

The Carmichael Prize is in the award of the President and Council of the Royal College of Surgeons in Ireland. It is of the value of £120, and is given for the best essay dealing with the state of the medical profession in Great Britain and Ireland.

### ENDOWMENT OF GENERAL RESEARCH.

The British Medical Association has instituted two Research Scholarships awarded annually but capable of being continued for three years, each of the yearly value of £150. These are for the encouragement of research in anatomy, physiology, pathology, bacteriology, State Medicine, clinical medicine, and clinical surgery. They are awarded by the Council of the Association on the recommendation of the Scientific Grants Committee.

The Association has also established an Ernest Hart Memorial Scholarship of the annual value of £200, the holder of which is required to devote himself to the study of some subject in the department of State Medicine. Forms of application for these scholarships may be obtained from the General Secretary of the Association.

The Grocers' Company have instituted three Medical Research Scholarships, open to all British subjects, of the annual value of £250. They are intended as an encouragement to the making of exact researches into the causes and prevention of important diseases. Particulars should be obtained before the end of April in each year by application by letter to the Clerk of the Company at Grocers' Hall, Princes Street, E.C.

At Cambridge there are at least two valuable Studentships in Science, each of the annual value of £200 and tenable for three years. One is the Balfour Studentship for original research in biology, and especially in animal morphology; and the other the John Lucas Walker Studentship for original research in pathology. At Trinity College the Coutts Trotter Studentship is open in physiology and experimental physics.

In connection with the Jenner Institute of Preventive Medicine a Studentship of the value of £150 has been offered. It is open to all British, including Colonial, subjects; it is tenable for one year, and is renewable for a second year. It has been instituted for the purpose of research in pathological chemistry. Applications must be sent in to the Secretary to the Governing Body not later than October 1st next.

The Salters' Company Research Fellowship, of the annual value of £100, is for the promotion of research in pharmacology. It is awarded by the Company on the nomination of the Treasurer of St. Thomas's Hospital and a Committee of Selection. It may be held for a term of three years, and the research must be prosecuted in the laboratories of St. Thomas's Hospital.

In connection with University College, Liverpool, are the Alexandra Fellowship in pathology, which was instituted in 1899 for a period of five years, and is of the annual value of £100; and the Colonial Fellowship in pathology and bacteriology, for which there is a preference for members of Colonial universities and medical schools.

In addition grants in aid of scientific research are made after due consideration both by the British Medical Association and by the Royal Society.

### PRIZES FOR ACCOMPLISHED RESEARCH.

The Walker Prize of the Royal College of Surgeons is awarded every five years for the best work in advancing the knowledge of the pathology and therapeutics of cancer. It is of the value of £100. It is open to foreigners as well as British subjects, and it is not intended that essays should be written specially for the competition.

The John Tomes Prize is awarded triennially by the Royal College of Surgeons for original work on dental surgery, pathology, anatomy, physiology, or mechanics. The next award is for the period ending December 31st, 1902.

The Cameron Prize, which is of the value of about £100, is given annually by the University of Edinburgh to the member of the medical profession who shall be adjudged to have made the most valuable addition to medical therapeutics during the year preceding.

The Marshall Hall Prize is given every five years by the Royal Medical and Chirurgical Society for physiological and pathological researches relating to the nervous system.

[A list of foreign prizes will be given in a future number.]

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

BRYANT.—On August 25th, at 126, Anlaby Road, Hull, the wife of W. A. Bryant, M.B., C.M., of a daughter.

HOWE.—On August 24th, at Deepdale House, Burrow Road, Preston, the wife of Dr. J. Duncan Howe, prematurely, of a stillborn son.

### MARRIAGE.

MARKS—BURGESS.—On August 15th, at West Cross Leonard Freeman Marks, M.B. Lond., M.R.C.S.Eng., of Rose Bank, Mumbles, R.S.O. Glamorganshire, son of T. Septimus Marks, Esq., of Highgate, London, to Ethel Osmond, second daughter of J. H. Burgess, Esq., of the Croft, Mumbles.

### DEATHS.

EDWARDS.—On the 23rd August, at 34, Peckham Road, S.E., Francis Guy Howlings, the infant child of Francis Henry Edwards and Eleanor Margaret, his wife.

KELLY.—Suddenly, on August 15th, Adam Lawson Kelly, M.D., F.F.P.S.G., aged 66 years, of 20, Blythswood Square, Glasgow.

# AN ADDRESS

ON

# WHAT IS INTUSSUSCEPTION: HOW SHOULD IT BE DEALT WITH?

*Delivered at a Meeting of the North Wales Branch of the British Medical Association, July 9th, 1901.*

By EDMUND OWEN, F.R.C.S.,

Surgeon to St. Mary's Hospital; Consulting Surgeon to the Hospital for Sick Children, Great Ormond Street, London.

The reading of a set paper at a medical meeting is not, in my opinion, quite a satisfactory affair. The paper is often so loaded with facts, figures, and fancies as to excite a sort of scientific dyspepsia, or so learned as to be actually tedious. What is wanted in these meetings is, I think, something short and incisive, and, if possible, just a little "contradictious," for unless the communication excites some feeling of antagonism, it, as a rule, somewhat misses the mark. Inverting the proposition of the learned author of *Ecce Homo*, I would say that words which excite no opposition in the mind are apt to make no impression upon it.

Papers at medical meetings are a good deal like set lectures at medical schools, and though they have no doubt played a very useful part in the scheme of professional education, they "have had their day." At the meetings of our various medical societies in London, the "Clinical Evenings" are the bright, profitable, and successful ones, the others being often badly attended and dull. In London, where things are somewhat in a transitional state as regards medical societies and their business, we have one highly venerable society which for many years has flourished in an atmosphere solely of long and learned papers, and as it finds itself unable, or unwilling, to alter its habits in accordance with a more modern environment, it is in consequence, I regret to say, now subsisting very much on the reputation which it laboriously acquired in the days of Astley Cooper, Bright, and Paget.

The communication which I have the pleasure of making before the North Wales Branch shall be a short one, and shall consist of two questions and answers: What is intussusception? and, How should it be treated? One can, however, accept no loose or undecided answers, and in order that I may be perfectly satisfied with them I had, perhaps, better supply them myself.

## What is Intussusception?

No difference of opinion could arise in answering this question verbally, though I notice in examination work that there is sometimes a little difficulty with the spelling. Except for this the word would be quite excellent, as its dissection shows: "intus," within, and "susceptum," caught up, the past participle of "suscipio," from *sub* and *capio*. That is to say, intussusception means the catching up of one piece of bowel within another piece.

Sometimes when one is pulling off an overcoat with rather a tight cuff the lower part of the sleeve becomes "caught up within" the higher, so that at that particular level there are three layers of overcoat sleeve which is, in consequence, temporarily shortened. This is a true intussusception, and the best way to deal with it is by drawing down the cuff and holding on to it whilst the arm is being gently drawn out. The difference between a caught-up coat sleeve and an intestinal intussusception is, that whilst the coat sleeve is intussuscepted from below upwards, the intestinal catching-up-within is from above downwards, for the simple reason that the peristaltic action of the circular fibres of the bowel is from above downwards; and it is by the energetic contraction of these circular fibres that the intussusception is produced.

Anything which excites this vigorous peristaltic action is apt to produce intussusception; thus, I have known it to occur after the administration of a rather large dose of fluid magnesia to an infant. Constipation, or diarrhœa, with associated straining, is a likely cause of it, and only last month I operated on an infant who was suddenly seized with acute symptoms after a series of jolts. He had just learnt to stand, and, holding on to the edge of the table with both hands and dancing up and down, he screamed out and became doubled up. The vigorous movements had evidently shaken the end of the ileum against the region of the ileo-cæcal valve until the wall of the large intestine had been thrust inwards, and the circular muscular fibres of the colon were able to get the end of the small intestine in their grasp. They had then promptly carried it and the ileo-cæcal valve upwards, together with the cæcum and appendix. When I cut down upon the bowel, just the end of the appendix was visible outside the inverted part of the colon.

The answer to the question "What is an intussusception?" cannot be deemed complete without making reference to the symptoms to which the condition gives rise. Fortunately these are, as a rule, very definite, so that the practitioner who keeps his eyes open is unlikely to miss the diagnosis. In that respect intussusception differs widely from most other intra-abdominal lesions, and this is exceedingly fortunate because "everything" turns upon the prompt recognition and early rectification of the catching-up-within. In the case of intestinal obstruction due to a volvulus, to a small malignant growth, or to some stray band, the practitioner cannot be sure as to the causation of the symptoms. He says to the friends of the patient, "something very serious has gone wrong inside the abdomen, and we advise an operation for finding out what it is and for putting it right." To the friends such a statement of the case is apt to appear far from promising, and as they usually have an ingrained objection to speculative operating they are apt to say, "Please wait a little longer before resorting to the knife." They seem to have at present a natural horror of "the knife." By the words "the knife" the British public vaguely and comprehensively express their deep-rooted antipathy to operative surgery in general and to operations performed upon themselves and their friends in particular. Nor is the use of the expression confined to the uneducated classes; the late Poet Laureate himself resorted to it in an unjust and offensive way in connection with the theatre of a children's hospital. Doubtless such prejudices spring from imperfect acquaintance with the benefits of operative surgery, but time is likely to remove them. The next generation will probably hold widely different views on this subject, and, judging from the surgical horoscope, I apprehend that there will be few individuals who will not be operated on in one part or another, and probably in several parts. Resourceful Nature will, no doubt, prove equal to the demands made upon her by surgical enterprise, and even at the end of the nineteeth century we heard of a man who three times had had his appendix removed.

But I regret to say that sometimes an unreasonable objection to beneficent operative interference is also shared by the family practitioner, especially if he happen to be about or beyond middle age. The young practitioner who has had the benefit of a more "advanced" education, however, thinks no more about a proposal to open the abdomen than he does of unlocking his hatbox! Of all classes of medical men the young physician is the most enterprising—not to say blood-thirsty.

I am strongly of opinion that all cases of intestinal obstruction are surgical from the very beginning, and that they are quite out of place in a medical ward. But when they happen to fall into the hands of the young physician of modern views there is not, as a rule, much loss of time before the operation is done. And for the treatment of intussusception I am shortly going to maintain that medical treatment can afford no trustworthy means: that prompt abdominal section is the only scientific and practical way of supplying relief.

The symptoms of intussusception are generally as follows: A healthy infant or young child is suddenly seized with a pain in the abdomen, he rolls screaming on the floor or in his cot, and is found "doubled up" and much collapsed. Probably he vomits; and in a straining act of defæcation he passes a little mucus, or some mucus and blood with scanty liquid fæces. (Were his trouble due to a twist or a band, nothing would pass *per anum*.) There may be no distension of the bowel, for the case is not one of actual intestinal obstruction—there may even be some diarrhœa. The distress comes on in paroxysms, and between whiles the little patient may lie quite placidly. So the surgeon must sit by and watch.

If the abdomen remains flat there may be no difficulty in making out the presence of a "thickening" or a "lump" in the region of the ascending colon. The textbooks, with their customary unanimity, speak of the little lump as "sausage

shaped." This is somewhat unfortunate, for that striking simile has left so deep an impression on the student that when he gets into practice he may hardly dare to make the diagnosis of intussusception in the absence of the "sausage-shaped" tumour. And if he waits for the mass to assume this shape before venturing on his diagnosis he may be doing irretrievable harm to his patient and spoiling the chance of the ultimate success of a surgical operation.

Having thus answered the question as to what an intussusception is, I propose asking what the treatment should be. And by way of introduction I will describe a case which has very recently been under my care.

*Case.*—A male infant of 9 months was brought by his mother to St. Mary's Hospital on April 18th, 1901. She said that in the previous morning he had all on a sudden been taken ill with, evidently, severe pains in the belly. He had been constipated for a week before, and that of the medicine which had been prescribed by the doctor he had relieved himself by vomiting. There had been no proper action of the bowels, but some blood and "slime" had been passed, and as evidence of this, the mother showed the soiled napkin. There was a "drawn" look about the face and the child was evidently very ill. He lay with his legs drawn up, and he cried if his somewhat distended abdomen was touched. A firm mass could be distinctly made out below and to the right of the ensiform cartilage. Nothing was discoverable by rectal exploration, but the finger came back stained with blood and mucus. The pulse was 148. The infant was admitted immediately before the hour of my visit, so I had him at once taken to the theatre, where I demonstrated the chief features of the case to the students, explaining the pathological anatomy of the condition; foreshadowing what we should find at the abdominal section which I was about to perform; describing the various steps of the operation, and giving a rather cheerless prognosis. By this time the surface of the belly and the umbilicus were cleansed, so far as was practicable, and the child was anæsthetised. On making an incision a little more than an inch long through the upper part of the right semilunar line, I at once arrived at the mass of intussusception, and, getting it between the first and second fingers of the left hand, gently coaxed it up to the wound. The thin ensheathing part of the colon was so stretched by the ileo-cæcal mass which it had swallowed that we could see the intussuscepted piece through it. And we could easily demonstrate the ileum and the appendix tucking themselves into the invaginated colon. Without much difficulty we then gently squeezed the intussuscepted mass out of the sheath, avoiding all pulling on the strangulated and sodden ileum. But when we had done this the shape and appearance of the ileum, and the presence of a deep indentation in the adjacent wall of the cæcum, seemed to suggest that the intussusception would most certainly recur unless it were prevented. So with this object in view we put in a judicious stitch, and closed the abdominal wound with a continuous suture of silk which traversed all the layers. Next day the child passed a blood-stained motion, and he looked remarkably well. Except for a slight attack of bronchitis convalescence was uninterrupted, and the child was taken home on the twenty-first day.

I am now going to ask a question, of which notice has not been given, but it arises out of what has preceded it, Was the treatment of this case right or wrong? If you say that it was right you are most likely running counter to what you were taught in the wards of your hospital, to what you read in your textbooks, and, I fear, to what you generally practise. And if you still maintain that it was right I have to caution you that the treatment is not generally considered as orthodox, and it is a terrible thing not to be orthodox. Even a surgeon may wince at hearing it said of him that he is too ready to use the knife! But, after all, knowing what we do know of the terrible effect of strangulation of a piece of intestine, it is surely better to use a knife to relieve an intussusception than a funnel with an india-rubber tube or even a Higginson's syringe.

I deem it nothing less than a calamity that physicians have every now and then managed to chase back an intussuscepted piece of bowel by using an enema! It would be an interesting speculation as to the percentage of cases in which the receptive piece of bowel has been ruptured, or in which the child has died unrelieved.

A column of water exerts its pressure equally in all directions. That is to say, in the case of injection being resorted to for the relief of an intussusception, the pressure against the wall of the bowel exactly equals that exerted against the intussuscepted piece of bowel. And is it not more likely that the distended sheath of bowel will give way than that the immigrant piece will be forced back? I have been called to operate in such circumstances, and have found the intussuscepted piece prolapsed through a rent in the intussuscipiens.

I also remember being called by a general practitioner to a case in which intussusception in an infant had followed the administration of a purgative, when the practitioner said, "I have seen such disastrous results following a cutting operation in intussusceptions that I shall decline to sanction it in this case." He admitted, however, that operation had been resorted to after "other measures" had failed.

Hitherto the results of abdominal section for this form of strangulation have been highly unsatisfactory. But this fact should not be allowed to discredit the laparotomy, for hitherto this operation has been resorted to, as a rule, only after the child has been "messed about" with inflations or injections. What should we think of a surgeon who, going back to the time of Pott, advanced any other treatment for a strangulated inguinal hernia than a cutting operation?

In conclusion, I am going to maintain that whether a strangulation of the intestine is by an ensheathing piece of bowel or by the neck of a hernial sac, the effects are very much the same, and that delay in affording relief is likely to be fatal. And, lastly, that the best way of affording prompt and certain relief is by the surgeon cutting down to the seat of strangulation and putting it right in a proper surgical way—and that is my answer to the second question propounded in the title of this communication.

SIXTY-NINTH ANNUAL MEETING

OF THE

# British Medical Association.

*Held at Cheltenham, July 30th, 31st, August 1st, and 2nd, 1901.*

## PROCEEDINGS OF SECTIONS

## SECTION OF DISEASES OF CHILDREN.

FREDERIC EVE, F.R.C.S., President.

### INTRODUCTORY REMARKS.

THE PRESIDENT, in opening the Section, said: I cordially concur in the advice tendered by the Council to officers of Sections which reads thus:—"Presidents of Sections are requested not to deliver a formal address in opening their Sections, as complaints have been made of want of time for Sectional work." The main object of these meetings is to discuss various subjects regarding which the interchange of opinions and the crystallisation and dissemination of ideas may be beneficial, and to hear and discuss papers on subjects or on cases having for the time being a special interest for a novel bearing. Our agenda paper shows that we have more than sufficient material to occupy the time at our disposal, and therefore, without further preamble, I will call upon Mr. Bernard Pitts to open the discussion on the "Treatment of Intussusception."

### DISCUSSION ON THE TREATMENT OF INTUSSUSCEPTION IN CHILDREN.

I.—BERNARD PITTS, M.A., M.C., F.R.C.S.,

Surgeon and Lecturer on Surgery, St. Thomas's Hospital; Surgeon, Hospital for Sick Children, Great Ormond Street.

WHEN asked to open a discussion on this subject I consented with some hesitation, for in June, 1897, I contributed a paper to the *Lancet* on Seven Consecutive Cases of Intussusception in Infants Treated by Abdominal Section with Six Recoveries, and I have little to add to the remarks then made on the relative value of manipulation and distension of the large bowel by water or air, and the treatment by abdominal section. I then stated that it was not possible or right from a small sequence of cases to lay down rules applicable to all conditions, but the following suggestions were made:

1. In cases of recent acute intussusception, distension of the bowel by air or water combined with gentle external manipulation may be tried under an anæsthetic. The surgeon should, however, be present, and prepared to at once open the abdomen if a satisfactory result is not quickly obtained. In many cases the effect of such inflation is to reduce the main portion of the tumour, but to leave an irreducible portion in the right iliac and lumbar regions. This

amount of success aids the subsequent operation, and allows the tumour to be easily delivered through a smaller incision and with less manipulation. Supposing that inflation has apparently been successful the child should be carefully watched, and, with evidence of continued trouble, abdominal section should be resorted to and no further inflation tried.

2. An exploratory operation should be undertaken without preliminary inflation when, from the severity of the symptoms or the chronicity of the case, there is reason to believe that such inflation would be dangerous or unlikely to succeed. It must always be remembered that the time taken up by inflation adds considerably to the shock.

3. The median incision is most suitable in the majority of cases, but when the tumour is in the cæcal region a limited incision in the right semilunar line may be found most convenient. For the reduction of the final portion of an intussusception the tumour should be brought outside the wound, so that the operator may clearly see the condition of the bowel and make sure that the reduction is complete. Thickening about the ileo-cæcal valve may be mistaken for an incomplete reduction. When in doubt, an incision may safely be made into the colon and the parts examined from within the bowel.

4. When reduction is found impossible, a resection inside the colon would seem to afford the best chance. The junction between the large and small bowel must be made secure before any part is cut away. When gangrene is present the condition in young children is almost hopeless. Complete resection and end-to-end union, whether by Murphy's button or suture, so far has met with little success. Perhaps rapid resection with lateral implantation of the small bowel into a healthy portion of the colon, and bringing the cut end of the large bowel to the surface as a temporary vent for the escape of flatus, would be the quickest and safest method to adopt. Safely, however, as children stand a short operation, a prolonged one under such circumstances seems almost beyond their power.

Such, then, were my views in 1897. In the light of further experience, and from a study of 115 cases of intussusception treated at St. Thomas's Hospital, I have considered whether any modifications of these deductions should be made; but I venture to put my present views before you in the hope that they elicit the opinions of those interested in this subject who are present, and in this way help to settle the main question —namely, whether any treatment except immediate operation should be employed.

In the table before you of 115 cases treated for intussusception at St. Thomas's Hospital, we have 105 in children under 12 years of age, with 36 recoveries; 13 recovered after treatment by inflation and manipulation, and 23 after abdominal section.

The average age of the cases cured by inflation was 22 months; 5 of these cases were 6 months or under. The average age cured by abdominal section was 19 months, no fewer than 13 being 6 months of age or under.

During 1898, 1899, and 1900 the uniform practice at St. Thomas's has been primary abdominal section, with 27 deaths and 21 recoveries. The only exception was a child aged 7 months, who was treated and cured by water pressure, the symptoms having existed for twenty-four hours.

In looking at the table one is struck by the great increase in the number of cases brought to hospital during the last few years. Between 1875 and 1894 inclusive, 40 cases; between 1895 and 1900 inclusive, 68 cases.

We can hardly suppose that intussusception is now more common, but must take it that medical men diagnose the condition more frequently, and recognise the fact that the cases have a fair chance of recovery if sent without delay to hospital.

In looking through the *post-mortem* records at Great Ormond Street Hospital from 1876 to 1900, I find, excluding cases as chronic when symptoms have lasted six weeks, 26 cases of acute intussusception in which the average duration of symptoms before admission to hospital was 62 hours. In many of these cases reduction was impossible, and the want of success is easily explained. The chances of recovery in young children when so much precious time has been lost is small indeed. It is satisfactory to note that during the last few years there has been much less of this unreasonable delay in applying for admission, and we may reasonably look forward to the time when the urgency of a case of intussusception is still more fully appreciated and operative interference rendered possible within a few hours of the first onset of symptoms.

With regard to the series of 7 consecutive cases published in 1897, I remarked that no one with any experience of the treatment of intussusception would expect such a favourable record to be maintained, since some cases are almost hopeless from the first moment they are seen in hospital. Not long afterwards I had painful experience illustrating the force of the remark—for three cases that I operated upon at Great Ormond Street in the same 24 hours all died—and in each case either declared or commencing gangrene was found *post mortem*.

Let us consider now what place simple mechanical treatment has in acute intussusception. A few years ago a little child under my care for talipes at St. Thomas's was seized with sudden abdominal pain, sickness, and collapse. I saw the case within an hour, and could then distinctly feel a sausage-shaped swelling in the cæcal region. A large enema of warm water was slowly administered, with immediate relief to all symptoms, and without any action of the bowels. I have no doubt that this was a case of intussusception, and it seems a reasonable thing to give any child at the first onset of such symptoms the chance of relief by distension of the large bowel.

The following is a good example of treatment by combined inflation and manipulation. In 1881 a child was under my care with an intussusception which could be felt $1\frac{1}{2}$ inch from the anal aperture. Under chloroform inflation with air was tried within twelve hours of first symptoms. This inflation made no impression, so the child was suspended by the heels, and gentle manipulation with one finger in the rectum and one hand grasping the tumour in the iliac region was tried. The swelling receded to the splenic region. Inflation with air was again resorted to, and the swelling could be seen and felt travelling round the cæcal region, and soon the whole abdomen was quite normal. The child had no further symptoms, and left the hospital well a fortnight later. The very completeness of the intussusception in this case rendered the taxis almost as definite as for the reduction of a hernia. Inflation at first failed, because there was no room for the proper introduction of the tube into the rectum.

Since 1897, at St. Thomas's Hospital, out of 49 cases inflation was only tried on one occasion, water was injected and relieved all symptoms, the child was 7 months old, and had been ill twenty-four hours. We have found that immediate operation gives the best result in hospital cases. As a rule they have been treated either rightly by enemata or wrongly by purgatives before admission. Formerly the physicians gave a thorough trial to air or water pressure, and sent for the surgeon when they considered their efforts had failed. At the present time the surgeon is called at once, and an inflation is never attempted unless the surgeon is prepared to open the abdomen. The most unsatisfactory feature in attempts at inflation is that you are never sure that you have succeeded in reducing the whole of the intussusception, and in the ileo-colic and enteric forms it is most improbable that success will attend your efforts. It is not so very uncommon to have an intussusception of small bowel into small near the cæcum, and then a further intussusception into the cæcum.

Again in operating on intususception one cannot but be struck by the considerable difficulty experienced in the majority of cases in affecting a complete reduction even when the part is manipulated outside the abdomen. It often requires very careful inspection to make sure whether the residual thickening left is due to œdema or to a still unreduced final portion of the intussusception or to some complication, such as polypus, inverted Meckel's diverticulum, or even inversion of the appendix.

It is, then, this uncertainty as to the exact condition of the bowel which makes the surgeon prefer to handle and see the bowel. The length of time which has elapsed since the first onset of symptoms cannot altogether be relied upon as a guide; such swelling may take place in a few hours, so as to induce gangrene, or make the reduction by abdominal section and taxis extremely difficult; whilst intussusceptions which have lasted for days, or even two or three weeks, are occasionally reduced with comparative ease, and with very little change visible in the bowel after its reduction. What

*Cases of Intussusception Treated at St. Thomas's Hospital from 1875 to 1900 Inclusive.*

| Date. | Sex. | Age. | How Long Ill. | Variety. | Treatment. | Result + *P.M.* |
|---|---|---|---|---|---|---|
| 1875 | F. | 6 months | 3 days | Not stated | Inflation followed by cœliotomy | D. within 1 hour. |
| 1876 | M. | Under 5 | Not stated | Ileo-cæcal | Injection of water | D.; *p.m.*: unreduced. |
| 1877 | No cases | | | | | |
| 1878 | F. | 3 years | Not stated | Ileo-cæcal | Palliative | D. on 4th day; *p.m.*: intussusception discovered; general peritonitis. |
| 1879 | M. | 9 months | 3 days | Not stated, but felt within 2 inches of anus | Two unsuccessful attempts at reduction by inflation | D. on 6th day, tumour still palpable; no *p.m.* |
| 1880 | M. | 3 months | 3 days | Ileo-cæcal | Cœliotomy: reduction not effected: tumour not returned; later, inflation and injection, without result | D. 3 hours after operation; *p.m.*: irreducible; no peritonitis. |
| ,, | M. | 3 months | 3 days | Iliac, connected with a Vitelline duct | Cœliotomy; reduction not effected | D. *p.m.*: peritonitis. |
| ,, | M. | 6 months | 2 days | Not stated: felt 2 inches from anus | Enema | D. on 2nd day; no *p.m.* |
| ,, | M. | 6 months | 2 days | Ileo-cæcal | Cœliotomy; resection; implantation anastomosis | D. 4 hours after operation. |
| 1881 | M. | 4½ months | 8 hours | Not stated | Inflation and manipulation under anæsthetic | Reduced; C. |
| ,, | M. | 4 months | 12 hours | Ileo-cæcal | Inflation under anæsthetic on 2 successive days, followed by enemata | D. 6 days after admission; *p.m.*: not reduced. |
| 1882 | F. | 7 months | 5 days | Ileo-colic | Inflation | D. within 12 hours; *p.m.*: not reduced. |
| 1883 | M. | 2 years | 3 hours | Enteric, 6 ft. from pylorus, 2 ins. long | *Nil.*; not diagnosed | D. on 2nd day; *p.m.*: easily reducible; no peritonitis. |
| ,, | M. | 3 years | 2 days | Not stated | Inflation, followed by enemata, on successive days | Reduced; C. |
| 1884 | M. | 4 months | 1 day | Ileo-cæcal, 3 ins. long | Cœliotomy and reduction | D. on 2nd day. |
| ,, | M. | 3 months | Not stated | Ileo-cæcal; felt *per anum* | Not stated. | D. within 24 hours: *p.m.*: unreduced. |
| ,, | F. | 7 months | 4 days | Not stated | Enemata | Reduced; C. |
| 1885 | M. | 5 months | 2 days | Ileo-cæcal, 2 ft. long | Inflation and enema, not successful; then reduced by cœliotomy | D. 2hours after operation; *p.m.*: completely reduced. |
| ,, | M. | 8 weeks | 1 day | Not stated (symptoms of intussusception, but no tumour felt, and rectal examination negative) | Enemata | C. |
| 1886 | F. | 47 years | "Chronic": time not stated | Protrusion of ileo-cæcal valve at anus | Cœliotomy; resection end sutured to abdomen wound | D. on 2nd day; *p.m.*: peritonitis. |
| ,, | F. | 5 months | 1 day | Ileo-cæcal: felt *per anum* | Reduced by manipulation; recurred same evening; inflation unsuccessful: reduction by cœliotomy next day | D. on day after operation; *p.m.*: peritonits. |
| 1887 | M. | 3 years | 1 day | Ileo-cæcal; felt *per anum* | Enema unsuccessful: inflation under anæsthetic apparently successful | D. on 3rd day: *p.m.*: unreduced. 4 ins. long; no peritonitis. |
| ,, | F. | 8 months | 2 days | Ileo-cæcal; felt *per anum* | Inflation under anæsthetic 2 hours after admission; reduction | C. |
| 1888 | M. | 4 months | 2 days | Not stated: felt *per anum* | Inflation under anæsthetic; apparent reduction; recurrence in 4 hours; cœliotomy: reduction of all but last inch; resection: artificial anus | D. 2½ hours after operation; *p.m.*: no peritonitis. |
| ,, | F. | 6 months | 2 days | Ileo cæcal: 4½ ins. long | *Nil*, owing to collapse | D. within 12 hours: *p.m.*: irreducible; peritonitis. |
| 1889 | F. | 10 months | 2 days | Not stated; protruded at anus | Inflation under anæsthetic; reduced | C. |
| ,, | M. | 7 months | Not stated | Ileo-cæcal 8 inches long | Not stated (only *p.m.* report available) | *P.M.*: easily reduced by injection of water per rectum; no peritonitis. |
| 1890 | No case | | | | | |
| 1891 | F. | 2 months | 18 hours | Not stated: tumour felt: not felt per anum | Inflation under anæsthetic; reduced | C. |
| ,, | F. | 3 months | 1 day | Not stated: tumour felt | Inflation under anæsthetic; reduced | C. |
| ,, | M. | 4 months | 1 day | "Small into large intestine" | Inflation | D. on 2nd day; *p.m.*: partially reduced. |
| 1892 | F. | 16 years | 7 days | Enteric, 3 inches long, 3 inches above ileo-cæcal valve; gangrenous intussusceptum | Cœliotomy; resection; end to end anastomosis; lavage of peritoneal cavity; drainage; Fæcal fistula 8th day; peritonitis | D. on 9th day. |
| ,, | M. | 32 years | 4 months | Cæcal, with malignant growth at starting point | Resection: lateral anastomosis | C. |
| ,, | F. | 7 months | 3 days | Not stated; tumour felt; not felt per anum | Inflation under anæsthetic: reduced | C. |
| ,, | M. | 3 months | 10 hours | Ileo-cæcal | Inflation under anæsthetic: apparent reduction | D. within 24 hours; *p.m.*: not reduced, but easily reducible by manipulation. |
| ,, | M. | 7 months | Not stated | Ileo-colic | Cœliotomy; incomplete reduction | D. within 24 hours: *p.m.*: 2 inches of ileum still intussuscepted, and fixed by adhesions: peritonitis. |
| ,, | M | 4 months | 2 days | Not stated; tumour felt | Cœliotomy; nothing abnormal detected | D. on 3rd day; no *p.m.* |
| 1893 | M | 4 months | 24 hours | Ileo-cæcal; felt per anum | Inflation; apparent reduction; recurrence next day; frequent inflation | D. from exhaustion: *p.m.*: unreduced: easily reducible by manipulation. |
| ,, | M | 6 months | 24 hours | Ileo-cæcal: felt per anum | Inflation | D. on 2nd day; *p.m.*: unredeemed. |
| ,, | M | 18 years | 5 weeks | Ileo-cæcal | Cœliotomy; partial reduction: resection of remaining part which was gangrenous | C. |
| 1894 | M. | 32 years | 1 day | Enteric; papillomatous growth | Cœliotomy: reduction and removal of growth: Incision of fæcal abscess 11 days later; resection of gangrenous bowel (Murphy's button) | D. on 22nd day; *p.m.*: no leakage at anastomosis |
| ,, | M | 8 years | 2 days | Ileo-cæcal | Cœliotomy; reduced | C. |
| ,, | M | 6 months | 2 days | Not stated | Cœliotomy; no intussusception found; appendicectomy | D. on 3rd day; *p.m.*: ulceration of mucous membrane. |
| ,, | F. | 32 years | 13 weeks | Cronic ileo-cæcal | *Nil.* | D. on 3rd day; *p.m.*: 12 ins. long: acute perforative peritonitis; fibroid growth in cæcum. |
| ,, | F. | 3 months | 7 days | Not stated | Inflation: reduced | C. |
| 1895 | F. | 7 months | 24 hours | Ileo-cæcal | Inflation; partial reduction; cœliotomy reduction | D. on 3rd day; *p.m.*: cause of death not ascertained. |
| ,, | M | 31 years | 8 days | Enteric; 18 inches from ileo-cæcal valve | Cœliotomy; resection and enterostomy | D. on same day; *p.m.*: peritonitis. |

*Cases of Intussusception Treated at St. Thomas's Hospital from 1875 to 1900 Inclusive.—(Continued.)*

| Date. | Sex. | Age. | How Long Ill. | Variety. | Treatment. | Result + *P.M.* |
|---|---|---|---|---|---|---|
| 1895 | M. | 6 months | Not stated | Ileo-cæcal | Cœliotomy; reduced | D. on same day; *p.m.:* peritonitis. |
| ,, | M. | 7 months | 1 day | Not stated | Manipulation + enema; reduced | C. |
| ,, | F. | 4 months | 14 days | Ileo-cæcal | Inflation failed; cœliotomy + reduced | D. on 4th day; *p.m.:* completely reduced; no peritonitis. |
| ,, | M. | 17 months | 3 days | Not stated; appendix protruded through anus | Inflation (too collapsed for operation) | D. on 2nd day; no *p.m.* report. |
| ,, | F. | 7 months | 24 hours | Ileo-cæcal | Inflation failed; cœliotomy; reduction | D. on 2nd day; *p.m.:* completely reduced; no peritonitis. |
| 1896 | M. | 3½ years | 1 day | Not stated; tumour present; not felt *per anum* | Inflation under anæsthetic failed; cœliotomy; reduction | C. |
| ,, | M. | 10 months | 1 day | Ileo-cæcal; 4 ins. long | Inflation | D. within 24 hours: *p.m.:* found unreduced. |
| ,, | M. | 5 months | 4 days | Not stated; felt *per anum* | *Nil.* | D. on 7th day; *p.m.:* reduced. |
| ,, | F. | 4½ years | 6 days | Enteric: gangrene of gut | Enemata unsuccessful; cœliotomy; resection; anastomosis; median incision; brandy enema: strychnine + morphine hypod. | D. within 24 hours (5 hours after operation). |
| ,, | M. | 10 weeks | 6 days | Ileo-cæcal | Enterostomy; not reduced; medium incision | D. within 24 hours. |
| ,, | F. | 6 months | 2 days | Colic: 2 inches long | Cœliotomy; reduction; brandy+strychnine | D. within 24 hours. |
| ,, | F. | 5 years | 7 days | Appendix into cæcum, and cæcum into colon | Cœliotomy; reduction; median incision above umbilicus; tr. opii | D. within 24 hours. |
| ,, | M. | 10 months | 6 hours | Ileo-cæcal; felt per anum | Cœliotomy; reduction | C. |
| ,, | M. | 4 months | 3 days | Ileo-cæcal | Cœliotomy; no intussusception found; probable spontaneous reduction | D. in a few hours; *p.m.:* congestion of ileum+colon. |
| ,, | M. | 31 years | 5 days | Ileo-cæcal | Cœliotomy; no intussusception found; probable spontaneous reduction; appendicectomy | D. on 6th day; *p.m.:* reduced. |
| ,, | M. | 18 months | 4 days | Ileo-cæcal; felt per anum | Cœliotomy; reduced | D. within a few hours (shock); *p.m.:* Incompletely reduced. |
| 1897 | M. | 4 months | 1 day | Not stated; not felt per anum | Cœliotomy; reduced; much shock | D. on 2nd day; *p.m.:* reduced; localised peritonitis. |
| ,, | M. | 5 months | Not stated (No notes; only *p.m.* abstract available) | Ileo-cæcal; 3½ inches long | Cœliotomy; not reduced; median incision below umbilicus | D. within 24 hours; *p.m.:* irreducible; slight peritonitis. |
| ,, | M. | 3 months | 3 days | Ileo-cæcal | Cœliotomy; reduced; median incision below umbilicus; brandy by mouth and in nutrient enemata | D. within 24 hours; *p.m.:* slight peritonitis. |
| ,, | M. | 4 months | 4 days | Ileo-cæcal; rupture of intussuscipiens | Cœliotomy; resection; enterostomy | D. within 24 hours (3 hours after operation); *p.m.:* no peritonitis. |
| ,, | M. | 4 months | 6 days | Ileo-cæcal | Nil, owing to collapse | D. very shortly after admission; *p.m.:* Irreducible ileo-cæcal. |
| ,, | F. | 5 months | 1 day | Ileo-cæcal | Cœliotomy; reduction; median incision above umbilicus; brandy+strychnine; much shock | C. |
| ,, | F. | 2½ years | Not stated | Not stated; protruded from anus | Manipulation; reduced | C. |
| ,, | F. | 2½ years | Not stated | Ileo-cæcal; 6 inches long | Cœliotomy; reduction; appendicectomy | C. (Intussusception of appendix itself child had been admitted with similar symtoms 3 weeks before, but these had subsided spontaneously and she was discharged.) |
| ,, | F. | 7 months | Not stated | Ileo-cæcal | Cœliotomy; reduction | D. within 24 hours; *p.m.:* ulceration of colon at site of invagination. |
| 1898 | M. | 1 year | 24 hours | Enteric + ileo-cæcal | Cœliotomy; reduction | D. within 24 hours; *p.m.:* reduced. |
| ,, | M. | 6 months | 1 day | Ileo-cæcal | Cœliotomy; reduction | D. within 24 hours; *p.m.:* reduced; no peritonitis. |
| ,, | M. | 4 months | 2 days | Ileo-cæcal | Cœliotomy; reduction; incision in mid-line below umbilicus; enema e mag. sulph. immediately after operation | D. within 24 hours. |
| ,, | . | 5 months | Few hours | Ileo-cæcal | Cœliotomy; reduction; brandy + strychnine before and after operation | C. |
| ,, | M. | 7 months | 1 day | Not stated | Manipulation under anæsthetic; reduced | C. |
| ,, | M. | 2 years | 14 days | 4 enteric intussusceptions | Cœliotomy; reduced; incision in mid-line below umbilicus | D. within 24 hours (2 hours after operation); *p.m.:* nothing abnormal found. |
| ,, | M. | 8 months | Not stated | Ileo-cæcal | Cœliotomy; resection; incision through r. rectus; Paul's tubes | D. within 24 hours. |
| ,, | M. | 3⅞ years | Not stated | Multiple enteric | Cœliotomy; reduced | D. within 24 hours. |
| ,, | F. | 4 months | 1 day | Ileo-cæcal | Cœliotomy; reduced; incision in mid line; brandy; rectal feeding; ol. ric. + tr. opii on second day | D. on 2nd day; *p.m.:* no peritonitis. |
| 1899 | M. | 5 months | 2 days | Ileo-cæcal | Cœliotomy; reduced; subcutaneous injection of ether + strychnine; brandy by mouth; tinct. opii. | D. on 6th day; *p.m.:* slight peritonitis. |
| ,, | M. | 3 months | 2 days | Ileo-cæcal | Cœliotomy; reduced; incision through r. semilunar line; brandy after operation | C. |
| ,, | M. | 4½ months | 18 hours | Ileo-cæcal | Cœliotomy; reduced; incision in mid line below umbilicus | C. |
| ,, | M. | 8 months | 24 hours | Ileo-cæcal | Cœliotomy; reduced; incision through l. rectus; brandy+saline per rectum | D. within 24 hours; *p.m.:* no peritonitis |
| ,, | M. | 5 months | 7 hours | Double; enteric, and this into cæcum | Inflation unsuccessful, then cœliotomy+reduction | C. |
| ,, | M. | 8 months | 24 hours | Ileo-cæcal | Cœliotomy; reduced | D. within 24 hours; *p.m.:* no peritonitis |
| ,, | M. | 10 months | 1 day | Ileo-cæcal | Cœliotomy; reduced; median line incision; appendicectomy | C. |
| ,, | M. | 7 months | 5 days | Enteric | Resection; lateral anastomosis | D. within 24 hours; *p.m.:* peritonitis. |
| ,, | M. | 10 months | 1 day | Ileo-cæcal | Cœliotomy; reduced; r. semilunar line incision | C. |
| ,, | M. | 6 months | 1 day | Ileo-cæcal | Cœliotomy; reduced; incision through r. rectus | C. |
| ,, | M. | 1 10/12 years | 1 day | Ileo-colic | Cœliotomy; reduced | D. within 24 hours from shock; *p.m.:* coils of ileum, last 18 inches adherent to one another. |
| ,, | F. | 7 months | 2 days | Ileo-cæcal | Cœliotomy; reduced | D. within 24 hours. |
| ,, | F. | 6 months | 3 days | Ileo-cæcal | Cœliotomy; reduced; median incision below umbilicus | C. |
| ,, | F. | 3 years | 2½ hours | "Partly ileo-cæcal, partly ileo-colic" | Cœliotomy; reduced; median incision below umbilicus | C. |

*Cases of Intussusception Treated at St. Thomas's Hospital from 1875 to 1900 Inclusive.—(Continued.)*

| Date. | Sex. | Age. | How Long Ill. | Variety. | Treatment. | Result + *P.M.* |
|---|---|---|---|---|---|---|
| 1899 | F. | 2 5/12 years | 3 weeks | Chronic ileo-cæcal: two inches of intussusceptum ulcerated through | Cœliotomy; resection; (Paul's tubes); brandy | D. on 12th day; *p.m.*: no peritonitis; sinus thrombosis, non-septic. |
| ,, | F. | 1 1/12 years | 12 hours | Enteric; 4 inches long | Cœliotomy; reduction; incision in mid line below umbilicus; brandy; rectal feeding | D. on 31st day; *p.m.*: bronchiectasis. |
| ,, | F. | 6 months | 1 day | Ileo-cæcal: then this into colon; 4 inches long | Cœliotomy; reduction; incision through l. rectus | C. |
| ,, | F. | 7 months | 24 hours | Ileo-cæcal | Cœliotomy; reduction | D. within 24 hours; *p.m.*: no peritonitis. |
| 1900 | F. | 8 1/2 years | 5 days | Enteric; gangrenous | Resection of 22 inches of gut; implantation anastomosis one month later | C. |
| ,, | M. | 4 months | 12 hours | Enteric; 6 inches | Cœliotomy; reduced | C. |
| ,, | M. | 1 1/6 years | (?) 1 hour | Ileo-cæcal | Cœliotomy; reduced | D. under anæsthetic; ($CHCl_3$). |
| ,, | M. | 10 months | Few hours | Ileo-cæcal | Cœliotomy; reduced; brandy on admission; ol. ric. 5j third day | C. |
| ,, | M. | 3 years | 1 day | Enteric, then this into cæcum | Cœliotomy; reduced; ol. ric. 5j third day | C. |
| ,, | M. | 5 months | 1 day | Ileo-cæcal | Cœliotomy; reduced: brandy per rectum | D. within 24 hours. |
| ,, | M. | 10 months | 1 day | Enteric + ileo-cæcal | Cœliotomy; reduced | C. |
| ,, | M. | 7 months | 4 days | Enteric | Cœliotomy; reduced; subcutaneous infusion of saline | D. within 24 hours. |
| ,, | M. | 3 months | 12 hours | Ileo-cæcal | Cœliotomy; reduced | C. |
| ,, | M. | 23 years | 5 days | Enteric | Too ill for operation; saline infusion; digitalis morphine | D.; *p.m.*: perforative peritonitis. |
| ,, | M. | 6 years | 1 day | Not stated | Cœliotomy; no intus. found; appendicectomy | C. |
| ,, | F. | 5 months | 12 hours | Ileo-cæcal; 4 1/2 inches long | Cœliotomy; reduction; brandy on admission; ol. ric. third day | C. |
| ,, | F. | 19 years | 1 day | Enteric + ileo-cæcal | Resection; lateral anastomosis | C. (Paul's tubes; anastomosis at a later date.) |
| ,, | F. | 6 months | 24 hours | Ileo-cæcal: 12 inches long | Cœliotomy; reduction; brandy | D. within 24 hours. |
| ,, | F. | 6 months | 1 hour | Ileo-cæcal | Cœliotomy; reduction; appendicectomy | D. on 3rd day; *p.m.*: obstruction of ileum by kinking 2 ft. from valve |
| ,, | F. | 8 months | 4 days | Ileo-cæcal | Cœliotomy; reduction; brandy + strychnine subcutaneously | C. |
| ,, | M. | 11 months | 4 days | Ileo-cæcal; valve at anus | Cœliotomy; reduction | D. within 24 hours. |
| ,, | M. | 7 months | 1 day | Ileo-cæcal | Cœliotomy; reduction | D. on 8th day; peritonitis. |

happens in intussusception is very much the same in this respect as in strangulated hernia, except that in the intussusception of children swollen mesenteric glands are constantly met with, and often form one of the difficulties in the final reduction. I would, then, reserve trial by inflation to cases seen within a few hours of the commencement of symptoms, and then only when the symptoms are not of a very acute form.

It follows that most cases seen in hospital are best dealt with at once by operation. In some of these, however, when the intussusception has travelled along transverse or descending colon, inflation may be employed as a useful preliminary to exploration, and will often limit the field of operation and enable the incision to be made directly over the swelling.

Even if complete reduction should apparently take place, it will generally be best to make sure by a small incision, otherwise there must remain a considerable doubt, and it is highly probable that reduction is not quite complete and will recur, or else give rise later to a condition of chronic stenosis.

I believe that water pressure is more easily managed than air and is more efficient, and is also unattended with danger when introduced slowly and by a glass funnel, which should not be raised more than 2 feet above the patient.

In performing laparotomy on a young child it is essential that the shock should be minimised by placing the child on a hot-water cushion and by having the extremities covered with cotton wool and bandaged. The operation must be a rapid one. When the abdomen is much distended and the position of tumour is not manifest it is best to make an incision in the middle line and to take special precautions against the prolapse of small bowel. A distended coil may with advantage be withdrawn and air and intestinal contents allowed to escape through a small incision, and this incision having been closed, the after-examination is rendered comparatively easy. This is a much safer course to adopt than to allow coils of distended and unmanageable gut to remain outside the abdomen during the exploration. The following case illustrates the advantage so gained:

A schoolboy, aged 15, after eating a pint of cherries, was seized with severe abdominal pain and sickness and some tenesmus. The bowels were open but no blood or mucus was passed. With rest in bed, enemas, and restricted diet, he improved at first, but on the fifth day his condition became very serious, the abdomen greatly distended, pulse 120, and expression of face anxious. There was some dulness and sense of resistance in the cæcal and right lumbar region, but no definite tumour could be made out. Temperature subnormal. A diagnosis between appendix trouble and intussusception was not possible but, from watching the development of the symptoms, and in the absence all through of any rise of temperature, Dr. Haig-Brown, under whose care the boy was, thought intussusception the most probable; with Dr. Haig-Brown's help I made an exploration in the middle line but examination was very difficult owing to the great distension of the small intestines. A coil was, therefore, withdrawn and opened, and a pint or more of intestinal contents evacuated, together with a very considerable quantity of gas. After suturing the intestinal incision the examination was resumed. An intussusception was found in the hepatic region, and was without much difficulty disengaged from the cæcum and found to be enteric in origin. Complete reduction of this was not found possible by manipulation, and an incision was made into the ileum and an inverted Meckel's diverticulum discovered, and, with the finger inside the bowel, was at last restored to its natural position. The incision in the ileum on the cæcal side of the enteric intussusception was secured by suture.

The primary trouble had clearly been an inversion of Meckel's diverticulum which had acted as a polypus, and caused an enteric intussusception, which again had become intususcepted into the cæcum. The diverticulum was situated about 2 feet from the end of ileum, and, together with the engaged portion of intestine, was greatly swollen and œdematous. The boy, in spite of his serious condition, made a rapid recovery, and has remained free from any abdominal trouble since. The operation was in July last year. His recovery was, I believe, due to the free evacuation of intestinal contents, which allowed of a complete examination, minimised the manipulations, prevented the otherwise inevitable prolapse of many coils of distended bowel, and assisted the after-recovery by the free evacuation of the bowels obtained.

In effecting the reduction of an intussusception the most common accident is the splitting of the peritoneal coat of the ensheathing layer. The greatest gentleness is necessary, and most of the work should be done by pressing on the apex of the intussusception rather than by dragging on the entering bowel. If great difficulty is experienced it may be advisable

to open the ensheathing layer, and assist by the insertion of the finger within the bowel as in the case just quoted. The nature of the difficulty can be thus ascertained, and some of the œdema will be relieved.

If the reduction is still impossible the irreducible part in a favourable case may be resected *in situ* as shown in the diagrams 1 and 2. Such a procedure is rarely feasible in an acute case, and is more likely to be required in a chronic intussusception.

When gangrene is manifest resection and immediate end-to-end approximation is most unlikely to be successful in a young child, and the treatment I would suggest is that of resection, putting Paul's tubes into the end of the bowel after bringing the ends outside the abdominal incision—or better, through a separate smaller incision conveniently placed so that there shall be no drag on the bowel. Two or three stitches should then secure the bowel end beyond the tubes to the parietal peritoneum, gauze being wrapped round and between the tubes, and the patient got to bed as quickly as possible. Continuity should be established at a subsequent operation. If, however, the intussusception is of the enteric form high up in the intestine, then restoration of continuity must be established at once, or the patient will die of exhaustion.

To illustrate the treatment of gangrene I will briefly relate the following case:

*History.*—A little girl aged 8 years was admitted to St. Thomas's Hospital under my care on December 29th, 1899. She was taken suddenly ill on December 24th, with severe abdominal pain and sickness after eating chestnuts. According to the mother the bowels had been open each day, but for the two days preceding admission the motions were small and fluid in character, much like coffee grounds.

*State on Admission.*—The pulse was over 120, and the child looked very exhausted and ill. An elongated mass could be felt in the right iliac region.

*Operation.*—I operated at once, making an incision directly over the lump. An intussusception was found, with its sheath in a state of commencing slough. The ensheathing bowel was opened, and the intussusception was found to be black, stinking, and gangrenous. The intussusception was of the enteric form, and the tumour was about a foot from the cæcum. It was brought outside the abdomen and excised, the lower division being 6 inches from the cæcum. When unravelled the length of intestine excised was 24 inches. After securing vessels and suturing mesentery, Paul's tubes were tied into the two ends of the bowel, and a few stitches were used to unite the parietal peritoneum to the bowel just beyond the tubes. During the operation, which only lasted about twenty minutes, 2 pints of saline solution with ℥ss. of brandy was being slowly injected into the left basilic vein by an assistant.

*Progress.*—An improvement in the condition of the patient was at once manifest, and was steadily maintained. At the end of the week the child had recovered from her condition of exhaustion, and was only troubled by eczema of the skin due to the discharges from the artificial anus.

*Second Operation.*—On February 3rd, 1900, one month after first operation. I restored continuity by freeing the end and resecting some three inches on either side, closing the cæcal end, and then implanting the active end of small bowel into the side of the ascending colon. The edges of the abdominal wound were resected, and the opening closed in the usual manner.

*After-Progress.*—The operation was well borne, but was followed by sickness of a most intractable form, which continued for the next four days in spite of rectal feeding and careful washing out of the stomach and the administration of cocaine. On February 7th, as the thirst was not relieved by saline injections into the rectum, and the child continued to be very sick and was greatly exhausted and shrunken in aspect; ℥xji ℥ of normal saline with ℥ss. brandy was injected into the right basilic vein. This was followed by marked improvement—the sickness stopped, and recovery was uninterrupted. She left the hospital on April 21st. Since then the bowels have acted naturally with great regularity, and the child has remained in good general condition. A ventral hernia formed at the site of abdominal incision, and on February 20th of this year I did a radical cure. The child is now well and has no trouble of any kind.

Before leaving the subject of acute intussusception, I would refer to a point of some importance, namely, the necessity for great care in the suturing of the exploration wound, and for the use of buried sutures and for leaving the the superficial sutures as long as possible. I have heard of several cases where an otherwise successful case has been endangered or even lost by the bursting open of the half-healed wound and the escape of intestines into the dressings. No doubt deep-buried sutures add a little to the length of an operation, but they are specially necessary in young children.

I have noticed after abdominal section in young infants, especially when there has been much manipulation of intestines, that death is often preceded by high temperature and delirium, and takes place within twenty-four hours of operation. Nothing is found *post mortem* to explain the temperature or death. I have no experience of such a condition following similar operation in adults, and cannot explain it. I mention the fact in the hope of eliciting some explanation from those who take part in the discussion.

I have little to add to the remarks I made in my former paper on the treatment of chronic intussusception. The diagnosis is often obscure, especially when the intussusception is of a limited character and the condition may be easily mistaken for tuberculous periostitis or for chronic appendix trouble. Taking the chronic form as six weeks or more in duration, in the table of intussusceptions at St. Thomas's 4 cases were in adults out of a total of 10 cases; 2 cases were in children out of a total of 105 cases. The condition may therefore be regarded as rare in children.

I have operated on 3 such cases, 2 at Great Ormond Street and 1 at St. Thomas's. The cases at Great Ormond Street were curiously brothers, and both had suffered from recurring attacks of intussusception for several years, and in both at the time of operation, in addition to an easily-reduced recent intussusception of cæcum into colon, a chronic adherent ileo-colic form existed, causing a great stenosis of bowel. In each case after opening the cæcum the intussusception was excised. One made a good recovery, the other—and as I thought more favourable case, operated upon a year after I published my paper—died from some unexplained cause within twenty-four hours of operation with a very high temperature and delirium.

In the case operated upon at St. Thomas's a chronic recurring ileo-cæcal intussusception with three and a-half months history (several attacks) was easily reduced, but a separate complete inversion of the appendix was found and removed by incision through the cæcum. This case, which was complicated by tuberculous peritonitis, made a good recovery. I have no doubt that the inverted appendix acted as a polyp within the bowel, and caused the repeated attacks of intussusception from which the child suffered. How an appendix could so invert itself is difficult to explain, but the case is somewhat analogous to the one I have described where an inversion of a Meckel's diverticulum was the cause of an acute enteric intussusception.

In conclusion, I venture to make the following modifications of the conclusions I arrived at in my paper of 1897:

1. Try inflation only when the case is seen within a few hours of onset, and is not of a very acute character. In the great majority of hospital cases it is better to open the abdomen at once.

2. Inflation may be tried in certain other cases for the purpose of reducing the main portion of the intussusception and enabling the incision to be made directly over the cæcum.

3. When reduction is found impossible in chronic cases a resection may be generally done through an incision in the ensheathing bowel.

4. In acute cases, and especially if gangrene is present or the condition of the bowel requires its removal, a wide resection should be undertaken as rapidly as possible, and the ends brought outside the abdomen; continuity should be restored at a subsequent operation.

5. In exceptional cases of enteric intussusception resection and immediate restoration of continuity gives the only chance.

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### II.—D'Arcy Power, F.R.C.S.Eng.,

Senior Surgeon to the Victoria Hospital for Children, Chelsea; Assistant Surgeon to, and Teacher of Surgery at, St. Bartholomew's Hospital.

Mr. D'Arcy Power thought the object of the discussion would be best promoted if each speaker gave an accurate survey of the cases which had come under his own observation, or of which reliable information could be obtained. During the years 1860 to 1900, 113 cases had been admitted into the wards of St. Bartholomew's Hospital and the Victoria Hospital for Children; 66 of these had died and 47 had recovered. He had concerned himself, however, more especially with those admitted into the hospitals during the ten years ending December 31st, 1900. The number of cases admitted directly into the surgical wards and submitted to operation during this decade was 65 out of a total of 46,197 surgical cases; 42 of the 65 cases had died, and 23 had recovered; 30 of the 65 cases showed points of especial interest; 2 were said to have recovered

*Table of Cases of Intussusception Operated on at St. Bartholomew's Hospital and at the Victoria Hospital for Children, Chelsea, during the Years 1891—1900.*

| | Cured. | | Died. | | Total. | | Grand total. | Total No. of Surgical Patients. |
|---|---|---|---|---|---|---|---|---|
| | M. | F. | M. | F. | M. | F. | | |
| 1891. St. B. H. ... | 0 | 0 | 1 | 2 | 1 | 2 | 3 | 3,852 |
| Victoria Hospital ... | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 349 |
| 1892. St. B. H. ... | 1 | 1 | 2 | 0 | 3 | 1 | 4 | 3,750 |
| Victoria Hospital ... | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 441 |
| 1893. St. B. H. ... | 3 | 2 | 1 | 1 | 4 | 3 | 7 | 4,539 |
| Victoria Hospital ... | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 479 |
| 1894. St. B. H. ... | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 4,453 |
| Victoria Hospital ... | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 505 |
| 1895. St. B. H. ... | 1 | 0 | 5 | 2 | 6 | 2 | 8 | 4,617 |
| Victoria Hospital ... | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 537 |
| 1896. St. B. H. ... | 1 | 0 | 2 | 0 | 3 | 0 | 3 | 4,475 |
| Victoria Hospital ... | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 475 |
| 1897. St. B. H. ... | 0 | 1 | 0 | 2 | 0 | 3 | 3 | 4,237 |
| Victoria Hospital ... | 1 | 0 | 0 | 1 | 0 | 2 | 2 | 491 |
| 1898. St. B. H. ... | 2 | 0 | 3 | 1 | 5 | 1 | 6 | 4,236 |
| Victoria Hospital ... | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 387 |
| 1899. St. B. H. ... | 4 | 1 | 2 | 2 | 6 | 3 | 9 | 4,120 |
| Victoria Hospital ... | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 151 |
| 1900. St. B. H. ... | 2 | 0 | 3 | 0 | 5 | 0 | 5 | 3,754 |
| Victoria Hospital ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 289 |
| | 17 | 6 | 28 | 14 | 44 | 21 | 65 | 46,197 |

Total recoveries, 23.
Total deaths, 42.
30 cases presented points of especial interest as follows:
2 recovered spontaneously, 1 acute and 1 chronic case.
1 recovered from a triple intussusception.
1 died of ileus after reduction.
1 had intestinal obstruction due to adhesions after the abdominal section.
2 cases were too ill to operate upon.
1 case had such extensive adhesions that nothing could be done.
3 cases recurred repeatedly after apparent reduction by irrigation.
In 3 cases the intussusception was overlooked at the operation and was found *post mortem*.
In 1 case there was no intussusception.
15 cases needed excision of the bowel; in—
7 cases an artificial anus was made; all fatal.
5 cases Murphy's button was used; 4 died and 1 recovered.
2 cases Maunsell's operation was performed; both died.
1 case a circular enterorrhaphy was done; it died.

spontaneously, the one an acute intussusception, about which there was no doubt, the other a chronic case which he thought might be explained by an error in diagnosis. Abdominal section was performed in 1 case where there was no intussusception, and in 3 cases where the intussusception was overlooked, and was only found *post mortem*. A schoolboy, aged 12, recovered after an abdominal section, which revealed 3 intussusceptions, 1 being at the ileo-cæcal valve and 2 in the small intestine. The boy had suffered from symptoms of intussusception for four days. Fifteen of the 65 cases had needed excision of the bowel, and only 1 of these 15 had recovered. An artificial anus was made in 6 of these cases: Murphy's button was employed in 5; Maunsell's operation was performed twice, and once the intestine was united by circular suture. The case which recovered was that of a girl operated upon by Mr. Pickering Pick at the Victoria Hospital. Murphy's button was used, and was passed on the ninth day. Mr. Power had seen this girl in the course of the previous week—five and a-half years after the operation. She was in excellent health, had no abdominal symptoms of any sort, and the scar was firm and without any tendency to bulge. In regard to treatment, although he was formerly an advocate for irrigation of the bowel, greater experience had taught him that this method was not to be relied upon, and he quoted cases which had led him to alter his opinion. He now performed an abdominal section at the earliest possible opportunity, reducing the intussusception if possible without bringing the tumour into the wound, though he had no hesitation in making a very large incision and bringing the intussusception outside the abdominal cavity if there was the least difficulty in reduction. In this way he had had 3 successful cases in the course of the last three months, 2 of these being colo-colic invaginations[1] and the third a large ileo-cæcal intussusception, which was under his care at the present time. Mr. Power further pointed out the rarity of the disease and the curious manner in which the cases were distributed throughout a number of years. There was only 1 case at St. Bartholomew's Hospital during the years 1860-76, there were none in the years 1878, 1879, and 1887, whilst there were 9 in 1899, 8 in 1895, 7 in 1893, and 6 in 1898.

[1] BRITISH MEDICAL JOURNAL, vol. i, 1901, p. 1401.

### III.—WILLIAM MCADAM ECCLES, M.S., F.R.C.S.,
Senior Assistant Surgeon, West London Hospital.

MR. MCADAM ECCLES said that given early diagnosis—and this, it must be allowed, was often left until too late owing to a failure to recognise the presence of cardinal signs or symptoms of the affection, namely, paroxysmal abdominal pain, vomiting, abdominal facies, the passage of blood-stained mucus, and the presence of a tumour to be felt through the abdominal walls, or *per rectum*—given, therefore, an early diagnosis, what was the best line of treatment? He thought that, provided the surroundings of the patient were satisfactory, and as intussusception occurred most commonly among the poorer classes these were those of a hospital, the results of the present day showed that immediate laparotomy with a view to the reduction of the intussuscepted bowel was clearly indicated. The laparotomy was more likely to be followed by a happy result at this early stage in the affection because the child was less exhausted, there was less distension, and therefore less difficulty in dealing with the small intestines, and there was less likelihood of sepsis after the operation from the surface of the reduced gut. He considered that some of the cases in which the temperature of the young patient had risen very high, with a fatal result, had been those in which there had been septic absorption from the intestine that had been invaginated and reduced. Chloroform anæsthesia was always needful. Rapidity of operating was of the utmost consequence in such cases. There was no reason, provided that everything was in readiness before the incision was made, that the operation, including the suturing of the abdominal wall and the application of a collodion dressing, should occupy a longer time than a quarter of an hour. It was advisable to quickly cleanse the surface of the intestine that had been liberated, so as to diminish the risk of septic absorption from it. He did not think deep sutures were needful, provided the sutures took all layers and were left in for a sufficiently long time. Injection *plus* manipulation might be helpful during laparotomy. The after-treatment of the case was a matter of great importance. There was one point that had hardly had the attention paid to it that it deserved, namely, the question as to whether a child that was being suckled by its mother should be put to the breast within a short time after the operation. He thought this unwise and that it was better to withdraw the breast milk, and to give it to the child in teaspoonfuls very frequently repeated, for the act of sucking tended to so markedly stimulate the movements of peristalsis that there would seem to be a possibility of reproducing the intussusception. For the same reason he thought that it was always well to give small doses of tincture of opium, so as to obtain and maintain rest of the gut. He had seen good results from the early injection of two ounces of hot milk into the rectum in those cases in which the collapse after the operation was severe.

### IV.—A. H. TUBBY, M.S., F.R.C.S.,
Surgeon to the Evelina Hospital for Sick Children, the Westminster, and National Orthopædic Hospitals.

MR. TUBBY spoke of the relative merits of inflation or irrigation and abdominal section. He was of opinion that the frequent recurrence of intussusception after irrigation or inflation was due to the fact that the condition was not entirely relieved, although apparently so to the hand placed on the abdomen. And this view was supported by the great difficulty experienced, even during an abdominal section, in completely reducing the last inch or so of the intussusception owing to the great swelling, the exudation of lymph, and the tension of the parts. It was even sometimes necessary to make an incision into the bowel above, and draw up the last remnant of the intussusception as Mr. Pitts had done, and so avoid the danger arising from a laceration of the bowel. Bearing this in mind, the speaker was of opinion that in all

but possibly the earliest cases, that is, those of a very few hours' duration, the patient stood a much better chance if abdominal section was performed at once. His experience of operations for this condition was not great, but he had had severe cases to deal with. In one instance the affection had lasted four days, and 8 inches of gangrenous bowel protruded from the anus. At the suggestion of his colleague, Mr. Edmunds (a suggestion which was the only feasible one), a further portion of bowel was pulled down, the gangrenous part amputated, and the resulting adjacent serous surfaces united. An abdominal section was then done, and the protruded part was returned through the anus, and the intussusception was reduced. The child—a young one of 18 months—lived five hours. He had had two instances of recovery after inflation in private cases of not more than twenty-four hours' duration in which he had tried this method on account of the unsuitability of the surroundings, but he had been compelled in another case to perform abdominal section after the failure of irrigation. Although he had not been prepared to contribute to this discussion, yet at the request of the President he could not refrain from saying that his experience was in entire accord with that of Mr. Bernard Pitts and Mr. D'Arcy Power, namely, the safest course lay in abdominal section for intussusception, and that it was imperatively called for, and that the earlier and quicker it was done the better. With reference to the rapid rise of temperature which occurred in some fatal cases before death, he had seen in the severe cases he had mentioned commencing thrombosis of the mesenteric veins corresponding to the apex of the intussusception, and he thought that this septic thrombosis was indicative of an acute septic infection originating in the damaged condition of the bowel. The rapid spread of the venous thrombosis was, it seemed to him, a feasible explanation of the continued pyrexia in cases of this type which were admittedly fatal.

V.—F. C. Abbott, M.S., F.R.C.S.,
Assistant Surgeon, St. Thomas's Hospital.

Mr. Abbott said that his experience was largely covered by Mr. Pitts's table of the cases at St. Thomas's Hospital. He had been fortunate enough to be resident surgeon there during the whole transition period in practice there from 1894 to 1897. He had only seen one case cured by inflation alone and was strongly convinced of the advisability of immediate operation if circumstances were favourable. In hospital the conditions were always favourable, but should the case occur in a cottage it might be advisable to inflate first to relieve the symptoms and distension temporarily, and then send the case for operation to hospital. When the abdomen was distended it was advisable at the beginning of the operation to inflate in order to reduce the length of the intussusception. For though the earlier portion was easily reduced with the finger, still the distended small intestines were very liable to escape and so to lengthen the operation. He would explain the rapid rise of temperature after operation as due to absorption from within rather than from the outer surface of the intestine owing to the flow of fæcal matter over the damaged mucous membrane. No washing of the outer coat of the bowel, as suggested by Mr. McAdam Eccles, could obviate this. Mr. Abbott then raised the point of fallacy in diagnosis, quoting a case of tuberculous peritonitis in which the sausage tumour was imitated by the rolled omentum, and there was passage of blood and mucus, this being due to a kink in the small intestine against a tuberculous gland that had suppurated. It was a question what should be done in cases in which there was local peritonitis, with gangrenous gut and a big abscess, and he advised merely opening the abscess, as in an acute abscess of the appendix, dealing with the intussusception later. The gangrenous gut should be resected and joined in two stages. In a case of his own he had resected a gangrenous intussusception in a girl 19 years old, with subsequent anastomosis and recovery. In shock he advised that the child should be given its bottle to suck, and an intracellular infusion of saline fluid administered. He advised the use of some deep sutures in the three layers of the abdominal wall in closing the wound, as well as sutures through the whole abdominal wall.

VI.—J. Paul Bush, C.M.G., M.R.C.S., Bristol,
Surgeon to the Bristol Royal Infirmary.

Mr. Bush was glad to hear strong remarks made concerning the importance of early abdominal section in these cases. He thought the time was not far distant when inflation and such-like methods of reducing the intestine would not be tried, and so much valuable time in that way lost. Two cases had come under his notice in which reduction had apparently been effected by irrigation, but the symptoms continuing it had become necessary to open the abdomen. He failed to see how anyone could be certain after reduction by irrigation that the last small portion of the constricted intestine was reduced. Another point to be urged against irrigation was that the intestine in children would not stand more than a few feet of pressure of the water column. As regarded the treatment of an infected peritoneal cavity, in his opinion the less they irrigated or washed the peritoneal cavity the better for the patient. In cases of severe perforation, he thought it better to drain the intestine with a Paul's tube, and finish the cure at a second operation.

VII.—Sinclair White, M.D., M.Ch., F.R.C.S.,
Honorary Surgeon, Sheffield Royal Hospital.

Dr. Sinclair White stated that while he agreed generally with the remarks of previous speakers as to the advisability of immediate operation in intussusception, he thought irrigation should not be entirely discarded. With regard to the hyperpyrexia following operation he thought it due possibly to some trophic change or disturbance of the thermogenic centres. It came on too quickly to be due to sepsis. It was to be remembered that country practitioners were not all experts, and the public ought not to be led to think that operation offered the only remedy. He thought that if morphine were given at once so as to arrest peristalsis, there would not so often be a recurrence of the tumour. As regarded operation he thought it was very often better to bring the intestines out of the wound, keeping them warm and clean, so that the whole abdomen might be inspected and no other condition be passed over. He thought the formation of an artificial anus a bad measure. The mortality was very high in these cases, and the operation for closure of the artificial anus had also a very formidable mortality.

VIII.—Lewis Marshall, M.D., M.R.C.S.,
Surgeon to the Nottingham Children's Hospital.

Dr. Marshall wished to thank Mr. Pitts and Mr. D'Arcy Power for placing the case for abdominal section in intussusception so forcibly before the profession, and to join them heartily in their conclusions that this method should always be adopted in preference to the older methods of inflation and injection. So few cases were on record of success by these methods that they should fall into disuse in cases seen more than an hour or two after the onset of the condition. He could himself only look back with regret on the years in which he had unfortunately wasted time in their adoption. In reference to some few details of operation, he would say that he preferred sutures put through the whole of the abdominal wall, although hidden sutures could not be interfered with by the person in charge of the case. He should like to call attention to the value of strychnine as a means of lessening shock. He had known a case of volvulus in which this drug gave great assistance. He thought that the fact that few men were sufficiently expert to undertake the operation ought not to influence the conclusions come to by this meeting upon the main question.

IX.—Charles Firmin Cuthbert, M.R.C.S.,
Surgeon to the Gloucester Hospital for Children.

Mr. Cuthbert was very glad to hear so strong an opinion expressed by Mr. Bernard Pitts in his excellent paper. As regarded the early laparotomy in cases of intussusception, if a diagnosis had been made before the child was brought to the hospital, inflation or injection had probably been tried; but, if no diagnosis had previously been made, then the time had passed by for further delay. The opinion expressed by Mr. Bernard Pitts, and corroborated by Mr. D'Arcy Power and other speakers, was so strong that practitioners in towns and

cities of smaller size than London or our larger towns should have no hesitation in seeking an immediate operation. The friends of patients were usually ready to clutch at any treatment which did not involve an operation, and any hesitation on the part of the medical adviser might entail great loss of time. Nowadays it was generally easy either to get skilled surgical help or to move the patient to a hospital.

### X.—A. Foljambe Forster, M.B., C.M.,
Cheltenham.

Dr. Forster agreed with the previous speakers that the operation should be done without delay, even if treatment by inflation were apparently satisfactory. He was also glad to find that Mr. Pitts approved of the method of relieving distension of the intestine by puncture before operating in cases in which the distension was severe. There was less risk of shock in this procedure than in exposing the distended intestines outside the wound.

### XI.—E. Mansel Sympson, M.D., M.R.C.S.,
Surgeon to the Lincoln County Hospital.

Dr. Mansel Sympson advocated early abdominal section. He thought with regard to the hyperpyrexia in these cases that it was probably due to septic absorption from the bowel. He thought the danger of operation for the cure of artificial anus was very great, and quoted an unsuccessful case of his own.

### XII.—A. McPhedran, M.D.,
Toronto.

Professor McPhedran regretted not having heard Mr. Pitts's paper, but he wished to add his testimony to the importance of the early diagnosis of intussusception, so that prompt and effective treatment might be instituted. Early diagnosis was, however, frequently most difficult, as the symptoms might be very indefinite. As soon as intussusception was diagnosed, the case should at once be submitted to operation. This was the only course that offered a fair hope of success. In a recent case the great mass of intussuscepted bowel was easily reduced by inflation, but a small nodule might remain, and this on operation might be found exceedingly difficult to reduce. He had seen a similar case in which the symptoms had been very slight, and the peritoneum had looked well, in which death occurred from peritoneal sepsis the day following the operation. The condition had in this case only lasted twenty-four hours.

### XIII.—A. D. Blackader, M.D.,
Montreal.

Dr. Blackader advised that purgative medicines should be avoided and enemata only used where any symptoms of obstruction were present. In his own practice he always emphasised the importance of early operation. He had not had the pleasure of hearing the early part of this discussion, but his own view was that there should be neither hesitation nor procrastination in procuring surgical assistance.

### XIV.—Frederick E. Batten, M.D.,
Assistant Physician, Hospital for Sick Children, Great Ormond Street and National Hospital for the Paralysed and Epileptic.

Dr. Batten thought that the production of intussusception was largely due to bad feeding and powerful purgatives, and that this accounted for the greater frequency of the condition in the children of the poorer classes to which previous speakers had alluded. He had heard it stated that the disease was of great rarity in France and should be glad to know if Mr. Pitts had any information on this point.

### XV.—Frederic Eve, F.R.C.S.,
Surgeon to the London Hospital; Consulting Surgeon to the Evelina Hospital; President of the Section

The President remarked that the unanimous opinion of the various speakers was against the employment of inflation or injection, with the exception of the opener of the discussion, who would employ those measures in cases seen within a few hours of the onset. For his own part he summed up the arguments against them as follows: (1) Injection or inflation was very rarely efficacious. Of 24 cases so treated at the London Hospital not one was cured by this method alone. Eighteen were subsequently operated on, and 6 died without operation. Of the 18 cases subjected to operation, in 14 reduction was affected, although inflation or injection had failed in procuring it. (2) Injection or inflation was not infrequently followed by an illusory or partial reduction. So-called recurrence of the displacement was inevitable, and the consequent delay in performing the operation usually led to a fatal result. He pointed out this danger in 1895,[1] and had since insisted on immediate operation. Of 6 cases of his own treated by injection incomplete reduction followed by recurrence occurred twice, and both patients died after operation. In the remaining 4 cases injection had no practical effect. In one of these case he injected water one hour after the onset of symptoms, and yet the reduction was only partial. Immediate operation resulted in recovery. (3) Injection or inflation were haphazard and therefore unscientific. They could not be expected to influence an intussusception commencing in the small intestine. By experiment he had found that, as regarded young children, in more than half the cases the ileo-cæcal valve was so competent that it would not permit sufficient air or water to pass it to reduce an artificial invagination of the ileum. It might be remembered that ileo-colic and iliac intussusceptions constituted 38 per cent. of the whole number. He would like to draw attention to a variety of intussusception in which the invagination commenced at the caput cæci or free end of the cæcum instead of at the ileo-cæcal orifice. The free end of the cæcum was the last part to be reduced, and in one case he found it so hard and board-like from extravasation and œdema that he had to pass sutures across it in order to maintain it in its normal position after reduction. This variety was, he believed, first observed by himself in 1897.[2] Its frequency was shown by the fact that he had met with 6 examples of it in 21 cases which he had operated on. The symptoms and course showed no peculiarities. Among these 21 cases he met with 1 in which the apex of the intussusception was formed by an introverted Meckel's diverticulum, and another by a swollen tuberculous ulcer of the ileum; 10 cases recovered and 11 died, being a mortality of 52.4 per cent. Of the 21 cases operated on, he only met with 1 which was irreducible, and in that the intussusception had existed twenty-eight days; it was the only case requiring resection. With this exception not one case died of peritonitis. A patient died with persistence of the symptoms of obstruction owing to paralysis of the lower end of the ileum which formed the intussusceptum. It may be noted that of the 21 cases 16 were 1 year of age or under, which may account for the somewhat high mortality. The average duration of symptoms in those that recovered was 18.5 hours, and in those that died 27.7 hours; the average in the former was raised by one case in which the symptoms had existed five days before operation. In this calculation the case lasting twenty-eight days was, for obvious reasons, excluded. (See table, p. 583.)

### Reply.

Mr. Bernard Pitts said, in reply to the various speakers, that Mr. D'Arcy Power's tables of cases operated on had been an advantage to the discussion, and doubled the value of the one he had himself presented. As regarded the high temperatures which occurred after operation, they came on too quickly to be explained by Mr. McAdam Eccles's theory of a toxic origin. They might more probably be attributed, he thought, to some impending death changes, and he had seen them occur after some other conditions involving operation—in one case after operation on the stomach. He wished to remind his colleagues that though a tumour might apparently be reduced after irrigation, it might only have shifted its position into the splenic or hepatic flexure, where it could not be felt. In these cases inflation might assist diagnosis sometimes. He agreed with Mr. Paul Bush that washing the parts was to be avoided if possible, and he had forborne to do it even after a ruptured gut. But where there was perforation with septic contamination of the whole abdominal cavity, he thought it must be done. Recovery in this kind of case had been known to occur after washing, whereas there was no

[1] British Medical Journal, vol. ii, 1895, p. 968.
[2] Clinical Lecture on Intussusception, *Clinical Journal*, 1899.

*Evelina Hospital.*

| Name. | Sex | Age. | Date. | Injected or Inflated. | Time after Onset. | Result of Injection. | Operation. | Variety. | Reducible or not. | Result. |
|---|---|---|---|---|---|---|---|---|---|---|
| R. H. | M. | 3 months | 1897 | Yes, by house-surgeon | 2 days | *Nil.* | Yes, third day | Cæcal | Yes, with difficulty; peritoneum ruptured | Recovery. |
| V. R. | F. | 4½ months | 1897 | No | — | — | Yes, 3 days | Ileo-cæcal, small | Yes | Recovery. |
| S. S. | M. | 7 months | 1898 | Yes, by house-surgeon. | 2 days | Very slight | Yes, 2 days | Cæcal, large | Yes, with difficulty; peritoneum ruptured | Recovery. |
| A. M. | M. | 2½ years | 1899 | No | — | — | Yes, 12 hours | Ileo-colic; tuberculous ulcer at apex of intussusceptum | (?) Recurrence or perhaps partial reduction; reduction completedat a second operation | Death. |
| C. L. | F. | 1 year 7 months | 1899 | No | — | — | Yes, 12 hours | Ileo-colic; ulcer (?) at apex | Reduced | Recovery. |
| R. S. | M. | 6 months | 1899 | No | — | — | Yes, 2 days | Ileo-colic | Reduced | Death. |
| H. C. | F. | 10 months | 1899 | No | — | — | Yes, 27 hours; abdomen reopened on third day; nothing found | Ileo-cæcal | Reduced | Death; paralysis of gut forming intussusception |
| *London Hospital.* | | | | | | | | | | |
| F. A. | M. | 2 years | 1893 | Water | 6 days | Partial reduction; recurrence next day | Yes | Ileo-cæcal | Yes | Death third day; pneumonia. |
| — | F. | 11 months | 1893 | No | 24 hours; intussusception felt in rectum | — | Yes | Ileo-cæcal | Yes | Death; vomiting of blood; collapse. |
| A. | F. | 11 months | 1895 | Water | 1 hour | Partial | Yes: immediately after injection | Ileo-cæcal | Yes | Recovery. |
| C. | M. | 4 months | 1897 | No | 4 days; protrusion at anus | — | Yes | Cæcal | Yes | Death. |
| E. C. | M. | 5 months | 1897 | Water by house-surgeon | 15 hours | Partial; recurrence next day | Yes | Cæcal | Yes | Death. |
| W. C. | M. | 5 months | 1898 | Water injected by house-surgeon | 17 hours | Slight reduction; collapse | Yes; 30 hours | Ileo-cæcal; great difficulty in reduction | Yes | Death. |
| L. R. | F. | 4 months | 1898 | No | 26 hours | — | Yes | Ileo-cæcal | Yes | Recovery. |
| R. N. | F. | 7 months | 1898 | No | 3 hours | — | Yes | Ileo-colic | Yes | Recovery. |
| E. R. | M. | 13 years | 1899 | No | 28 days | — | Yes | Ileo-colic: Meckel's diverticulum inverted formed: apex | No; resection: Murphy's button | Death. |
| E. S. | M. | 3 months | June 9, 1900 | No | — | — | Yes; 12 hours after onset | Ileo-cæcal | Yes | Recovery. |
| R. W. | M. | 5 months | July 5, 1900 | No | — | — | Yes; 4 days after onset | Cæcal | Yes | Died. |
| W. M. | M. | 7 months | July 16, 1900 | No | — | — | Yes; 1 day after onset | Cæcal | Yes | Recovery. |
| W. M. | M. | 3½ years | Feb. 27, 1901 | No | — | — | Yes; 5 days after onset | Ileo-cæcal | Yes | Recovery. |
| M. R. | F. | 10 months | July 1, 1901 | No | — | — | Yes; 3 days after onset | Ileo-cæcal | Yes | Death. |

Total, 21 cases; recovered, 10 cases; died, 11 cases; mortality, 52.4. Of the last five cases three recovered.

recorded case of recovery apart from this treatment. Dr. Sinclair White had objected to the general lines of treatment laid down, and seemed to think treatment by injection ought not to be disregarded. He agreed with him to a very limited extent. In general practice it might do good if the case were seen early, but it must never be substituted for operation. It might be easy to follow the plan Dr. Sinclair White had advocated of bringing the intestines outside and keeping them warm and clean, but the difficulty was to get the distended intestines replaced. With patience the intestines could be emptied. He had opened and sutured in three or four places with this end in view. He thought it was possible that additional handling involved in bringing the intestines outside might contribute to the high temperature, which they recognised as a bad sign. He thought that to give opium after inflation was dangerous to a degree, as it masked the symptoms they were on the look out for. He thought indiscretions in diet were certainly a factor in the causation of the condition. He should make a point of looking out in future for the cases occurring primarily in the caput cæci, as described by Mr. Eve. He had sutured one or two cases with a view to avoiding the supposed danger of recurrence, but he had now given it up. He regretted that he did not possess any information about the relative frequency of the condition in France and this country.

## ON ESSENTIAL OR TOXÆMIC DROPSY: DROPSY WITHOUT ALBUMINURIA.

By W. P. HERRINGHAM, M.D., F.R.C.P.,
Assistant Physician, St. Bartholomew's Hospital: Consulting Physician, Paddington Green Children's Hospital.

CASES of general anasarca are occasionally met with, chiefly in children, but sometimes also in adults, which exactly resemble cases of Bright's disease, but in which there is no albumen discoverable in the urine, and no abnormal condition of the heart to account for the condition. These have been called cases of essential or idiopathic dropsy. The disease has met with little recognition in general textbooks.

Fagge[1] says that in such cases one may fairly doubt whether the kidneys are healthy, although no clinical evidence to the contrary can be obtained. Bristowe[2] probably includes them in the dropsy which he ascribes to anæmia. Osler[3] states that there are occasional cases of acute Bright's disease with anasarca in which albumen is either absent or present only as a trace. Dickinson[4] says, "Albuminuria with nephritis is so nearly constant that an exception has the interest of a curiosity," and relates the case of a child who died of dropsy without albuminuria. Duckworth[5] wrote a paper on scarlatinal dropsy with little or no albuminuria, and Goodhart[6] mentions it also. Both these authors give several references to former literature.

With the exception of Bristowe, all the above writers are considering only an abnormal nephritis. But Donkin[7] speaks of dropsy occurring with healthy kidneys as a separate condition: Ashby and Wright[8] ascribe it to anæmia, and Rilliet and Barthez[9] devote several pages to its description as an independent disease. Wagner[10] has written a careful paper on it, and describes cases both in children and in adults. It is not mentioned by Baginsky, Meigs and Pepper, or Starr and Westcott in their textbooks on children's diseases.

A case of this kind was read by me before the Clinical Society this year, and will be found in the forthcoming volume of the *Transactions*.

A boy of 2 years old was admitted for a doubtful slight ascites, which was suspected to be tuberculous peritonitis. The signs disappeared, but the boy remained in hospital for four months for debility and some anæmia. He developed dropsy, passed extremely little urine in which no albumen or formed elements could ever be detected, and died with vomiting and gradual exhaustion. At the *post-mortem* examination exudation was found in the glomeruli and in the convoluted tubes, with apparently some shedding of the epithelium.

Dr. Donald Hood allows me to quote a case under his care.

A house decorator, aged 38, got wet through, caught cold, and had pain down the legs. He kept at work for some days, but had shortness of breath, and about the fifth day noticed swelling of the legs, body, and face. He had had a similar attack two years before. The urine gave no biuret reaction, and no precipitate with heat, or nitric or salicyl sulphonic acid, but contained a large amount of hæmatoporphyrin.[11] The heart and the retinæ were natural. In the first few days he passed a large amount of urine and the dropsy quickly disappeared. The urine was normal in amount when he was discharged

*Causes.*—Rilliet and Barthez have seen 78 cases, of which 35 were primary, all preceded by definite chill, and 43 were secondary to other diseases, 25 of them to scarlatina. But in these secondary cases, also, chill, or at any rate exposure, was a frequent antecedent. The children were always anæmic or delicate, and all were hospital patients.

Wagner could not trace any definite cause in some of his cases, but in others, chiefly adults, there was a distinct history of chill. Many years ago Basham[12] and Taylor[13] described cases in adults after exposure to cold. The same history was given in Dr. Donald Hood's case.

*Course.*—Some cases begin acutely with chills, fever, *malaise*, pains in the back, and a furred tongue. Some have fever before the dropsy. The fever lasts for a few days only. In others the dropsy comes on rapidly, but there is no fever. Other cases, especially those which occur in the course of scariatina or other illness, begin insidiously without fever or pain. To the general dropsy of the skin may be added hydrothorax and ascites. Bronchitis, pneumonia, diarrhœa, and vomiting are also noted as complications.

The dropsy usually begins in the legs, but sometimes attacks the face and arms at the same time. It exactly resembles renal dropsy in appearance. Most cases recover under six weeks, but some last longer. Killiet and Barthez had 14 deaths in 63 cases. Wagner lost 3 out of 6 children, and the two adult cases recovered. The French physicians have seen death preceded by cerebral symptoms, convulsions, headache, and drowsiness. Wagner has noticed that the disease recurs.

The urine is in some cases extremely scanty, in others normal, and in others excessive in amount. Its density varies also. It contains no albumen; Dr. Hood's case did not even give a biuret reaction, and under the microscope there are either no formed elements at all, or at most a hyaline cylinder or two, or a few blood cells (Wagner). A curious rarity, hæmatoporphyrinuria, existed in Dr. Hood's case.

*Morbid Anatomy.*—There are no constant lesions. The heart is sometimes dilated, and in cases with hydrothorax the lungs are of course collapsed. In a case of Wagner's the lymph follicles and Peyer's patches were red and swollen. The spleen and glands are usually normal.

The kidneys are normal to the naked eye. Wagner found some of the collecting tubes plugged with hyaline cylinders, but no other morbid change. I found exudation in the glomeruli and in the convoluted tubes as well. There is no detailed account of microscopic examinations by other authors, but their statements imply that they were made with negative results.

*Pathology.*—Three questions present themselves. Is the disease really nephritis? Is it dependent upon the anæmia merely? Is it a condition distinct from either?

1. Both in symptoms and in causation by cold and scarlatina the disease closely resembles nephritis. Moreover, there are undoubted cases of post-scarlatinal nephritis without albuminuria, in which *post mortem* the kidneys show the lesions typical of ordinary Bright's disease. Henoch relates such. Thus the strongest suspicions are aroused. Yet the total absence of albuminuria from first to last, and the testimony of many trustworthy physicians that the kidneys have been found free of disease, cannot be set aside. It must, at any rate, be allowed that there are a good many cases of general dropsy which are not cases of nephritis.

2. We frequently find slight œdema about the ankles in cases of anæmia, and occasionally a case of pernicious anæmia will terminate with great general dropsy. It is possible, therefore, to suppose that in these cases the dropsy is dependent upon the anæmia, and evidently Bristowe and Ashby and Wright take that view. But quite apart from the question of the immediate causation of dropsy in anæmia, which I will discuss directly, it is quite certain that in some cases the anæmia is not present at all, and in others it is by no means of that degree that would naturally account for severe anasarca. I see no reason to separate the adult cases, which are certainly rarer but equally striking, from those in children, and it is not to be supposed that a grown-up man in full work after getting wet through suddenly falls a prey to an anæmia such as to produce anasarca (see especially one of Wagner's cases).

3. I think we shall be better prepared to consider this condition if we first ask ourselves frankly how we should explain the anasarca, even if we believed it was due to nephritis or to anæmia. The fact is, we cannot easily explain it in either case. At the recent discussion at the Pathological Society the unsatisfactory explanation of œdema was that it is due to excessive filtration through capillaries damaged by some toxic condition of the blood. No one has ever seen the damage, and no one has ever demonstrated the toxin. But many a hypothesis does very well to go on with, and this will do for the present. I am myself very much inclined to think that it is not the mere loss of blood cells in anæmia nor the mere failure of excretion in nephritis that produces this toxic condition, but that there is some original toxic poison, such for instance as that of scarlatina, which produces not only the nephritis or the anæmia, but also the œdema as well, the latter being not consequent upon, but coincident with, the inflammation of the kidneys or the loss of the blood cells.

We know of two definite and frequent causes of acute nephritis—they are scarlatina and chill. No one doubts that in scarlatina the nephritis is produced by a microbic poison. Probably most of us believe that chill also is a microbic invasion, which cold has rendered possible by lowering resistance. Both will then be toxic conditions of the blood. It is not unreasonable to suppose that in certain cases they may produce anasarca without inflaming the kidney, and in others may produce both anasarca and nephritis. The latter are the ordinary cases of Bright's disease, the former are the cases I have been describing.

A curious parallel may be found in a paper by Lassar.[14] A man of 31 came down to the *post-mortem* room with general dropsy. He had had albuminuria, and was diagnosed by Friedländer as a case of nephritis. The disease was consequent on a universal rubbing with petroleum, which had been practised to cure him of scabies. No disease could be detected in the heart, lungs, or kidneys by the naked eye, and the "most scrupulous" microscopical examination of the kidneys gave a negative result. Here general dropsy and albuminuria were produced by an absorption of poison through the skin.

*Treatment.*—Wet packing, hot-water baths, and hot-air baths have been employed to remove the dropsy by sweating. For the anæmia iron has been given. I should myself be inclined to give, along with some syrup of the iodide of iron, drop doses of the liq. arsenicalis, and to endeavour by milk and by digitalis to increase the flow of urine, which is the natural way both to decrease dropsy and to purify the blood.

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1 *Princ. and Pract.*, 1st ed., vol. ii, p. 442. 2 *Theory and Pract.*, 4th ed., p. 98. 3 *Princ. and Pract.*, 1st ed., p. 743. 4 Allbutt's *System*, vol. iv, p. 368. 5 *St. Bart.'s Hosp. Rep.*, vol. xix, p. 321. 6 *Dis. of Children*, p. 104. 7 *Dis. of Childhood*, p. 108. 8 *Dis. of Children*, 2nd ed., p. 334. 9 *Mal. des Enfants*, 3rd ed., vol. ii, p. 106. 10 *Deut. Arch. f. klin. Med.*, vol. xli, 1887, p. 509. 11 The case is J. S. in Dr. Garrod's paper on Hæmatoporphyrinuria, *Journ. of Phys.*, vols. xiii and xv. 12 *Lancet*, 1867, vol. ii, p. 225. 13 *Med. Times an Gaz.*, 1871, vol. ii, p. 469. 14 *Virchow's Archiv*, Bd. lxxii, p. 132.

Dr. F. E. BATTEN said general œdema in children without albumen in the urine was a well-recognised condition. It was seen in marasmic infants, in congenital syphilis, in the later stage of tuberculosis, in association with excessive diarrhœa and anæmic conditions, but it was not with these cases they were at present concerned, for these were regarded as almost entirely due to an enfeebled circulation and altered condition of the vessels and blood. Excluding the above from consideration, certain cases were left which could be placed in two groups, as differing altogether from the others in course and pathology The following illustrated the class of cases he referred to :—Case I.—P. G., a boy four years old, had had an attack of dropsy similar to his present attack a year previously. He was ill for a month and then recovered. His present attack had come on about a week before with swelling of the legs, face, and abdomen. He had never had scarlet fever. He was a well-nourished boy. The eyes were puffy, the abdomen swollen with free fluid in it, and there was œdema of the legs. The temperature was normal, the heart sounds natural, the urine acid, 1030, and free from either albumen or sugar. The quantity of urine which the boy passed in the twenty-four hours varied from 4 to 16 ozs.: the average quantity was about 10 ozs. It was always of high specific gravity, 1028 to 1035. The œdema steadily diminished and the boy left the hospital well after fourteen days. The case looked just like a case of albuminuria. This he considered a fairly typical case of the disease described by Dr. Herringham as toxæmic dropsy. Case II.—Girl, aged 14 months. The child had suffered from fits for nearly nine months. Fourteen days previously the feet had become swollen, and a few days later the arms had become similarly affected. On admission there was general œdema of the feet, hands, and legs: nothing abnormal could be detected in the heart or lungs; there was no fluid in the abdomen and no albumen in the urine. The child had another fit and died. At the necropsy the kidneys were found to be very small and hard: they weighed ½ ounce each, whereas the kidneys of a child 9 months old should weigh an ounce each. The kidneys appeared normal on microscopical examination. Case III.—C. D., 11 months old. In December, 1894, the child had influenza. On February 15th, 1895, œdema commenced over the back, and the swelling then became general. On admission there was general œdema of a soft kind affecting the eyes, arms, legs, and trunk. It pitted readily on pressure. Nothing abnormal could be detected in the lungs, heart, or abdomen. The urine was pale, like water: specific gravity 1008: no albumen and no sugar were found. About 12 to 13 ounces were passed in the twenty-four hours during which it could be measured. The amount of urea was extremely small—about 0.1 per cent. During the last few days of life extreme diarrhœa occurred, and the percentage of urea rose to 3 per cent., though it was impossible to estimate the quantity of urine passed. At the necropsy nothing abnormal was found except small kidneys, which together weighed only 1½ ounce. These last two cases might be ascribed to "renal insufficiency," and the cases of œdema might then perhaps be divided into three classes (1) those due to extreme enfeeblement, (2) those due to renal insufficiency, (3) those of unknown origin described by Herringham under the title of toxæmic dropsy.

## RESULTS OF TENDON GRAFTING IN INFANTILE AND SPASTIC PARALYSIS.

By A. H. TUBBY, M.S., F.R.C.S.,

Surgeon to the Westminster, Evelina, and National Orthopædic Hospitals.

AT the meeting of this Association (1898) our President, Mr. Eve, read a paper on the subject of tendon grafting for infantile paralysis, and gave details of four cases in which he had carried out the procedure. In that paper he laid down certain rules, which further experience has shown to be of the greatest value.

He remarked that some one group of muscles might, at least, be possessed of a fair amount of power, in order that the requisite force may be obtained; and cases of flail-like joint, in which all the muscles are paralysed, are only suitable for arthrodesis. In selecting the muscle for grafting, that one should be chosen whose action is most nearly allied to that of the paralysed muscle, or group; not only because such a muscle is nearest, but also because restoration of voluntary function is more readily obtained.

Again, before the operation we are considering is carried out, any faulty position of the foot, such as talipes cavus, will require attention.

Mr. Eve expressed the opinion that the improvement effected by this operation was brought about in a variety of ways. Where the action of the graft, or functioning muscle, is nearly allied to that of the paralysed one which it reinforces, the patient is soon able to accomplish voluntarily the new movement. Other factors also come into play in furnishing the patient with a firm base of support, adjusted to the normal position; for the graft, or functioning tendon, acts as a supporting band applied, where it is most required, to the ankle and foot; and a selection of one or more of the contracted antagonists for reinforcing the paralysed muscle, while removing useless force from the antagonist, confers power on the paralysed muscles.

The further objects of the operation are to avoid, as far as possible, the use of cumbersome and expensive apparatus, and to increase the nutrition and growth of the affected part. I have noted that the circulation improves and the warmth of the foot increases after the operation, and in the winter chilblains do not often occur.

There can be no doubt that tendon grafting as an operation has a distinct future before it. The method of treating paralytic talipes which has been most usually carried out has been to disregard the existence of the paralysed muscles, and, by tenotomy, to lengthen, and therefore to weaken, the muscles retaining their action; and then having, by this means, brought the foot into position, to keep it passively in one position. Tendon grafting aims at distributing what power is left to the muscles around the joints, and then, by careful education and training of such healthy muscles in their new attachments, to bring them into a condition of exaggerated size, action, and nutrition.

During the past three to four years I have done 11 cases of tendon grafting on the feet for paralytic talipes, the results of which I am able to report. Of these 4 have been done for calcaneo-valgus, 2 for talipes calcaneus, 1 for equino-valgus, 3 for equino-varus, and 1 for calcaneo-varus. In addition, 4 cases of spastic paralysis, affecting the forearm and hand, have been operated upon by the method which I described in the BRITISH MEDICAL JOURNAL in 1898, which consists in the transplantation of the tendon of the pronator radii teres, with section of the flexor tendons of the wrist.

Taking the group of 4 cases—namely, calcaneo-valgus, a condition due to paralysis of the calf muscles and of the tibialis anticus—I find that the results have been good so far as the restoration of function is concerned in the paralysed parts; and I briefly detail the cases and show some illustrations of the cases before and after operation and their present condition.

CASES OF TALIPES CALCANEO-VALGUS TREATED BY TENDON GRAFTING.

CASE I.—I. F., aged 8, was admitted to Westminster Hospital on October 19th, 1900, suffering from paralytic talipes calcaneo-valgus of the left foot, which had come on after a paralytic attack when she was 2 years of age. She had had no treatment for the condition until she came under my care. When the limb was passively raised from the ground the front part of the foot hung helplessly pointed and everted, the sole was deeply concave, the heel was prominent, and had the typical globular appearance of these cases, and the plantar fascia was contracted. The latter was divided and the sole of the foot unfolded, a process which took about four weeks. The muscles having been carefully tested it was found that there was some power left in the tibialis posticus and normal power in the peroneus longus. It was therefore decided to graft the peroneus longus and the tibialis posticus into the tendo Achillis, which was accordingly done. The result is well seen in the illustration. The child can voluntarily raise the heel from the ground; the foot is of comely shape, and she progresses with ease.

CASE II.—A second case of calcaneo-valgus was that of A. S., aged 6, who was admitted to the National Orthopædic Hospital on June 23rd, 1898. It was noted that the peronei acted well, but the calf muscles failed to raise the heel at all. On July 1st the peronei were grafted into the tendo Achillis behind the external malleolus. On August 10th it was noted that there was good power of voluntary extension of the foot, and when it was made the peronei could be felt to harden and the lower portion of the tendo Achillis to become tense. There was no valgus, and the foot was in excellent position. He could lift the heel off the ground, and raise himself on his toes. For a time he wore a light steel apparatus, so as to control the valgus; but this has since been discarded, and the improvement is maintained.

CASE III.—W. C., aged 3, admitted to the National Orthopædic Hospital on September 19th, 1899, suffering from infantile paralysis of the left leg.

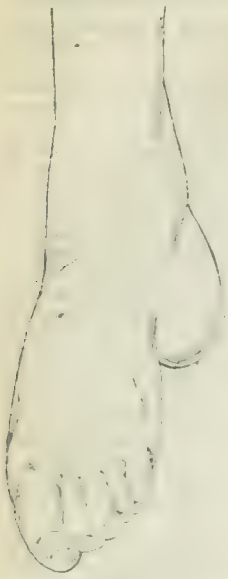


Fig. 1.—To illustrate Case I, showing a condition of paralytic talipes calcaneo-valgus, before treatment, in a girl aged 8 years. The foot and leg are hanging over the edge of a table.

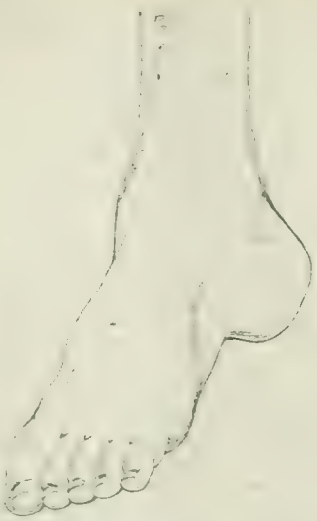


Fig. 4.—To illustrate the condition of talipes calcaneo-valgus in Case IV, before treatment.



Fig. 2.—The same foot, before treatment, as in Fig. 1, and resting on the ground. The globular heel and excessive concavity of the sole of the foot are seen.

When about a year old, and after he had walked, he had a fit. It was noted on admission that the muscles of the left leg were generally wasted, and the plantar flexors and invertors were paralysed, while the dorsiflexors and evertors retained a moderate degree of strength. The right foot was not much affected, but the sole of the foot was somewhat more hollow than natural, and the balls of the toes were dropped. On October 28th, 1899, the left peroneus longus was grafted into the tendo Achillis, and the patient was discharged from the hospital on February 22nd, 1900. He was able to raise himself on his toes, but some talipes valgus persisted, which is controlled by a valgus pad and T-strap, and this is his present condition.

CASE IV.—F. L., aged 4, was admitted to the National Orthopædic Hospital on February 20th, 1900. The history was that a year before admission, when he woke up one morning, it was found that he could not walk, although he had gone to bed quite well the night before. There was much wasting of the left leg, and the knee-jerk on the left side was not obtainable. The foot was everted, and there was good power in the peronei and the extensor communis digitorum. When the foot was brought to the middle line, he was able to invert it slightly by the action of the tibialis posticus, although the tibialis anticus appeared to be paralysed. The limb was half an inch short. On February 22nd a transverse incision was made across the front of the ankle-joint, the extensor communis tendon found and split longitudinally, and, its outer half having been divided, the proximal portion of this section was grafted on to the tibialis anticus. It was not deemed advisable to graft the peronei on to the tendo Achillis, as the amount of calcaneus was not great. The effect of the operation was that he could raise the inner border of the foot and much of the valgus was overcome. When seen on July 18th of this year the result was very good indeed, and fully justified the operation. The calcaneus had disappeared as the result of persistent massage and faradism of the calf muscles.



Fig. 3.—To illustrate the appearance of the foot in Case I, nine months after the operation of grafting the peroneus longus and flexor longus pollicis into the tendo Achillis. The shape of the foot is good, and it will be noted that the heel can be lifted well off the ground.

Of these 4 cases of tendon transplantation, the result is now seen to be good in 3, and fair in 1. It is comparatively easy to overcome the talipes calcaneus, but, unless special care be taken, there is a residuum of valgus. This is often due to excessive action, either of the peroneus brevis or of the outer part of the extensor communis digitorum, which, a few months after the operation, may be both seen and felt to be tense. I would therefore recommend that, not only should the peroneus longus be inserted into the tendo Achillis, but the peroneus brevis should be divided, or half an inch exsected from it. If it be moderately tense, at the same or a subsequent sitting, the outer half of the extensor communis digitorum should be grafted on to the tibialis anticus. By doing so, the natural equilibrium of muscles around the ankle-joint is more nearly imitated.

### CASES OF TALIPES CALCANEUS TREATED BY TENDON GRAFTING.

Pure talipes calcaneus is fortunately of rare occurrence, especially after infantile paralysis. But it is far more commonly seen as the result of dividing a contracted tendo Achillis for equinus and not maintaining proper control of the tendon after the operation. A case in point is the following:

CASE V.—R. B., aged 8, was admitted to Westminster Hospital on May 9th, 1898. When the foot was allowed to hang, it presented the appearance of a Chinese lady's foot. The dorsum was extremely convex, the toes curved over, the sole of the foot exceedingly hollow, and the heel was dropped, globular, and elongated. At the back of each ankle was an elongated scar, where attempts had evidently been made to shorten the tendo Achillis after the faulty operation for equinus. The case did not present a promising appearance, and some time was consumed in unfolding the soles of the feet. In July, 1898, a longitudinal incision of about 4 inches in length was made at the back of each ankle, the peroneus longus tendon found in each case, and divided just below the external malleolus, and inserted into the posterior aspect of the os calcis. It was very difficult to identify the remains of the tendo Achillis; they were thin and membranous, having the appearance of fasciæ rather than of tendons. The wounds healed kindly, and the child was discharged from the hospital in October, 1898, being able to raise herself on her toes, although some pes cavus still existed and the feet were not of a good shape. The calcaneus was markedly diminished, and has remained so. But considerable difficulty has occurred with regard to the persistent tendency to recurrence of the cavus.

CASE VI.—T. V., aged 6, was admitted to the Evelina Hospital on August 25th, 1898, with a marked degree of talipes calcaneus of the right foot, the result of infantile paralysis four years previously. The invertors and evertors of the foot were of equal strength, and dorsiflexion was good, so that a longitudinal incision was made over the middle of the tendo Achillis, and about five inches in length. By dissecting back the subcutaneous tissue well, the tendons posterior to both malleoli were exposed, and the peroneus longus and the flexor longus pollicis * were inserted into the tendo Achillis. The result was excellent, the foot being in good equilibrium, and it could be very readily pointed.

* The flexor longus pollicis is a good muscle to use for this purpose when it is not paralysed, for it contributes but slightly to the support of the arch of the foot, and the great toe has a short flexor in addition.



Fig. 5.—Inside and outside views of the same foot as in Fig. 4 and of Case IV, after treatment by muscle grafting.

In such a case as the last-named, and wherever the condition of the muscles permits it, it is always better not to be content merely with inserting a tendon from only the external or internal aspects of the ankle, but it is better, if possible, to reinforce the tendo Achillis by tendons taken from either side. Because, if, for example, the peroneus longus only be taken, and it be inserted low down into the tendo Achillis, it will, by the direction of its fibres, be likely to produce valgus later, although relieving the calcaneus. That is to say, the balance on either side of the middle line should be preserved as far as possible.

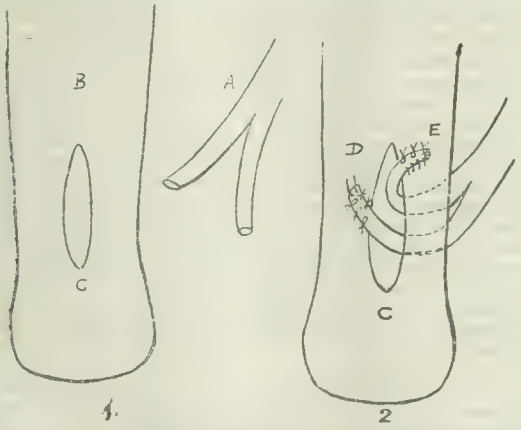



Fig. 6.—Views from behind of method of inserting a tendon into the tendo Achillis. A, Peroneus longus, to be inserted into tendo Achillis, B, through the longitudinal incision in the latter at C. The ends of the tendon A are seen split. They are then passed through C from before backwards, and firmly stitched down to the posterior surface at D and E.

### Case of Equino-Valgus Treated by Tendon Grafting.

Case VII.—C. L., aged 6½ years, was admitted to the National Orthopædic Hospital on August 29th, 1898, suffering from infantile paralysis of the left foot, which was in a position of equino-valgus. The tibialis anticus and posticus were paralysed, while the extensor proprius pollicis and inner portion of the extensor communis digitorum were affected to a less degree, but the outer portion of the latter seemed to act well, and so, too, did the peronei. The tendo Achillis was somewhat tight, and the angle of dorsi-flexion was just under 90 degrees. The sole of the foot was more concave than usual. On October 12th, some weeks after section of the plantar fascia, an incision, 5 inches long, was made along the inner and posterior aspect of the leg, and the tendo Achillis was split along its whole length: the inner half was severed below the ankle, and brought round and stitched to the tibialis posticus. The remainder of the tendo Achillis was divided, as well as the peronei. All went well, and when the boy left the hospital in January, 1899, his foot was in capital position, but since then slight relapse has taken place, and there is some valgus present. It is a matter for regret that a portion of the peronei tendons was not exsected, or it would probably have been better to carry round the peroneus longus tendon into the flexor communis digitorum, as well as inserting the inner half of the tendo Achillis into the tibialis posticus.

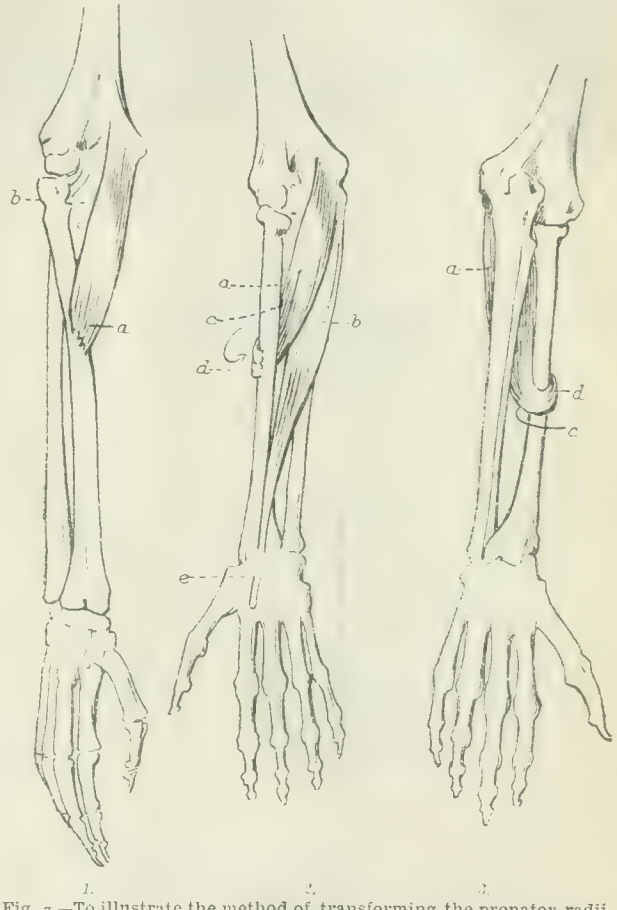



Fig. 7.—To illustrate the method of transforming the pronator radii teres into a supinator. *a*, Pronator radii teres, in *1* passing in its natural course to its insertion on the radius. In *2* the tendon has been detached and has been passed *behind* the radius to its outer side. *c* is the opening in the interosseous membrane through which the tendon is passed, and it is reinserted at *d*. At *e* the flexor carpi radialis has been divided. *3* is a posterior view of *2*, but in *3* the pronator radii teres is drawn too low down on the radius.

### Cases of Equino-Varus treated by Tendon Grafting.

Case VIII.—C. C., aged 2½ years, was admitted to the Evelina Hospital on July 6th, 1898. He appears to have had an attack of infantile paralysis at the age of nine months. He was a healthy-looking boy, but the right leg was partially paralysed: this was especially so with the extensors of the toes. The foot was pointed and inverted, resting on the externa malleolus. On July 22nd a longitudinal incision, about 3 to 4 inches in length, was made at the posterior and outer aspect of the leg, and the tendo Achillis and peroneus longus tendon exposed. The tendo Achillis was then split longitudinally for its whole length, and the gastrocnemius as far as the junction of its two heads. The outer part of the tendo Achillis was then severed transversely about an inch and a-half above the ankle, and so, too, was the peroneus longus. The proximal part of the tendo Achillis and the distal part of the peroneus longus were then firmly quilted together; the remaining inner portion of the tendo-Achillis was then severed, so as to correct the equinus. For six weeks after the healing of the wound massage and faradism were applied: it was evident that the everting movement of the foot had been regained. The present condition is that the boy is able to walk about comfortably without any instrumental assistance, the only drawback being that the leg is one inch shorter than its fellow.

Case IX.—A. R. was admitted to the Evelina Hospital on January 5th, 1899, suffering from paralytic talipes equino-varus of the left foot, with paralysis of the peronei, and partial paralysis of the dorsi-flexors of the foot. The same procedure was adopted as in the previous case, but the tendo Achillis was only split for a short distance, the gastrocnemius not being divided longitudinally. The outer portion of the tendo Achillis was inserted into both the peroneus longus and brevis, while the inner part was divided transversely. The result is not so good as in the previous case, owing doubtless to the fact that the outer strip of the tendo Achillis was not detached sufficiently from the main body of the tendon.

In these cases it is essential to fully detach the outer belly of the gastrocnemius as well, and so provide an entirely separate muscle.

CASE X.—D. O'G., aged 4½ years, was seen on December 6th, 1898, with infantile paralysis, affecting the left leg. The foot was in a position of equino-varus, and the muscles affected were the same as in the preceding case. The same procedure was carried out, but the outer portion of the gastrocnemius and the outer portion of the tendo Achillis were freely detached by a longitudinal incision. For two years the foot remained in good position, but the extensor communis digitorum recovered its power almost completely, so that the two outer tendons became tense, and the foot acquired some valgus, which will have to be corrected by section of the affected tendons. It must be remembered that long after an attack of paralysis the affected muscles continue to recover, and may therefore upset the balance which has been obtained previously by tendon grafting. Particularly so is this the case with the extensor communis digitorum.

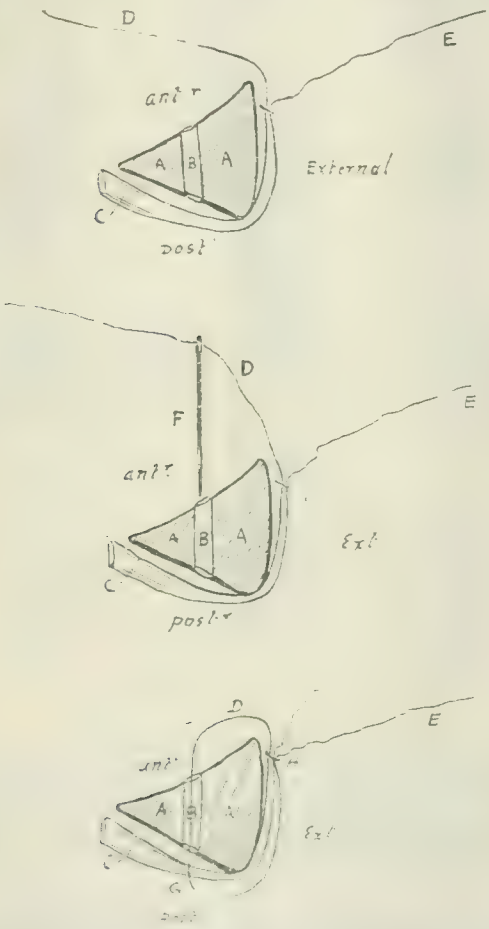



Fig. 8.—To show method of reinserting the pronator radii teres tendon into the radius, after the tendon has been passed behind the radius. A, A, section of radius. B, hole drilled through the bone from before backwards. C, tendon of pronator radii teres. D and E, ends of silk thread passed through detached tendon. I, needle threaded on D and passing through the hole B in the radius in the second figure, and through the tendon of the pronator radii teres at G in the third figure. G, position where the free end of the thread, D, is passed through the tendon as it lies behind the radius. H, spot where the thread D is finally knotted to E, and the tendon is bound down to the roughened outer surface of the radius at its new attachment.

Tendon grafting for equino-varus has not been so satisfactory in my hands as for other conditions. It is possible that the outer half of the gastrocnemius and tendo Achillis is too powerful for conversion into an evertor of the foot, and it would doubtless be wiser to use either the flexor longus pollicis or the flexor longus digitorum, and pass either or both of them beneath the tendo Achillis into the peronei.

CASE OF CALCANEO-VARUS TREATED BY TENDON GRAFTING.

CASE XI.—W. H., aged 3, was admitted to the National Orthopædic Hospital in May, 1899, with some degree of calcaneus and of varus, the latter being mainly due to contraction of the plantar fascia. This was readily removed, and the calcaneus remained to be dealt with. The peroneus longus and flexor longus pollicis were grafted into the tendo Achillis, and the result is very good.

Certain points in procedure may be alluded to. The first requisite is absolute asepsis, and the next point is the suturing material for the tendons. Catgut I have not tried, being deterred from doing so by the accounts of suppuration I have read of following its use; and it further seems to me that it is likely to become softened, and therefore useless, before the grafted tendons have become firmly fixed. I have used kangaroo tendon in thin strips, but the latter mentioned objection applies to this material also. The best substance I have found to be fine silk. This should be boiled once for half an hour, and then placed for seven days in a solution of 1 in 1,000 biniodide of mercury.

Where the tendon to be reinforced is of sufficient size it should be split longitudinally, the end of the reinforcing tendon brought through the slit, and firmly sutured into position. Another point of importance is that the foot should be held in the position it is desired to obtain while the tendons are being grafted, and when they have been sutured the reinforcing tendons should be felt to be quite tense. There are many other methods of grafting tendons, but I know of none so secure as that I have mentioned. It is well to keep the foot at rest in the corrected position at least for six weeks after the operation, to allow of firm union taking place, and every effort should be made to strengthen the reinforcing muscle by massage and faradism.

It is not advisable to allow the patient in all cases to walk about with the foot quite free from support or assistance, at any rate for a time after the operation; thus in calcaneus a toe-depressing spring is useful for a time. In paralytic valgus the foot should have a thickening along its inner border, and in varus along its outer border.

## TENDON GRAFTING FOR SPASTIC PARALYSIS.

While in paralytic affections, we can arrive at a moderate estimate of the degree of strength and of weakness of the various muscles, in spastic affections the problem is more complicated, because such muscles are subject often to both tonic and clonic spasm dependent upon varying degrees of irritability of the cerebral centres; but certain cases of infantile spastic paralysis, and, to a less degree, of cerebral diplegia, exhibit after a time fixed types of deformity arising from weakening of certain muscles, with both contraction and contracture of their opponents. Such a fairly typical deformity is seen in cases of this nature in the upper extremity, a deformity which often renders useless the affected limb. I allude to the spastic contraction of elbow, wrist, and fingers, with pronation of the forearm. If this condition has existed for some time there are two factors to be taken into consideration in applying any remedial measure. These are the (*a*) contraction of the muscles and (*b*) of the ligaments. By the method which has been practised by me, not only can the contraction of the muscles be overcome, but power which, under the circumstance of the disease, is viciously directed, can be transferred in such a way as to make it an agent for useful motion. The contraction of the ligaments can subsequently be overcome by passive movements, once the muscular contraction and contracture have been remedied.

If we look at limbs affected in the way which has been mentioned, we shall note this point. The muscles which arise from the internal condyle, and are mostly affected, are partially flexors of the elbow, almost entirely pronators of the forearm and flexors of the wrist and fingers; therefore if they can be attacked, the contractions are relieved, and some of their excessive power is transferred, especially from pronation to supination. The operation which has been practised by me is described in the BRITISH MEDICAL JOURNAL of 1898, and the procedure is there figured. The object of the operation is to transform the pronating power of the pronator radii teres into a supinating power, and the flexor carpi radialis may be treated in the same way, although, as a rule, simple division of it suffices. Briefly, the operation on the pronator radii teres is as follows:

An incision is made, with its centre a little above the middle of the forearm, as for ligature of the middle of the radial artery. The inner margin of the supinator longus is defined, the radial artery and nerve isolated and pulled to one side, and the tendon of the pronator radii teres is seen beneath. It is easily recognised amongst other tendons by the direction of its fibres, and, as a rule, is broad and flat. It is now detached from the radius, together with its periosteum, and the muscle

itself is separated for about an inch and a-half from its neighbours The next step is to make an opening through the interosseous membrane, as near to the radius as possible, so as to avoid the anterior interosseous artery and nerve. The best method is to pass an aneurysm needle around the radius, and as close to it as possible; if necessary, peeling off some of the periosteum on its posterior and outer aspects. The tendon is then drawn through the aperture and behind the radius to its outer side; but, as the muscle is often a short one, and the distance the transplanted tendon has to travel to its new insertion is greater than to its normal insertion, the opening in the interosseous membrane must be at a higher level on the forearm than that to which the usual course of the muscle corresponds. The next difficulty is to attach the tendon in its new position. The periosteum is roughened on the other surface of the radius at a point half an inch to an inch above the normal insertion of the pronator. A silk ligature with double end is then sewn on to the end of the tendon. A hole is drilled through the radius from before backwards; one end of the silk ligature is threaded with the needle, and the tendon of the pronator having been drawn around behind the radius, the needle is passed around the outer nose of the radius and then through the hole in the radius from before backwards, and again through the tendon, as it passes behind the radius, and the ends of the silk ligature knotted. By such means the tendon is firmly fixed in its new position.

The flexor carpi radialis may either be divided by a transverse incision at the wrist joint, or it may be carried down through the interrosseous membrane, and fixed to the back of the radius in the same way as the pronator. For the flexion of the wrist and fingers, it is sufficient to make an open transverse incision across the front of the wrist, isolate the median nerve, and then divide the flexor tendons until the fingers can be straightened. By putting the hand up again in the faulty position, leaving it there for ten days, and then gradually putting it into the position midway between flexion and extension, the required length of union in the flexor tendons can be accurately adjusted.

In a private case, that of D. R., a boy aged six, upon which I operated in March, 1898, I obtained by this method a most excellent result, which has since persisted. The arm was previously practically useless for most purposes, but the boy can now use it for everything, even to the extent of writing, and for such fine movement as picking up a pin.

In another case, a child aged three, the subject of severe spastic paralysis, in whom the identical operation was performed two years ago, the process of recovery has been much slower, due partly to the resistance of the ligaments, and the case has been partially successful.

In a third case, a boy in Westminster Hospital, who was operated upon four months ago, the result so far is extremely gratifying, and the same remark may be made on a fourth case in an adult aged 22.

After the operation great persistence is necessary, both in massage and in passive movements, and the patient should be encouraged to use the arm. In children I find it very necessary to tie up the sound arm, so as to ensure the use of the affected arm. There are doubtless improvements to be made in the operation, but I feel sure that the conception promises well.

So to sum up briefly, of 11 cases of tendon grafting for paralytic talipes, 6 have shown good results and 5 fair results; meaning by "good" where the results aimed at had been fully attained and the improvement permanent, and by "fair" where a partial improvement has been secured. In no case has failure resulted. The results of the 4 operations in the forearm for spastic trouble have been good in 3 and partial in 1.

Tendon grafting is an operation with a future before it, and it has great possibilities, but it must not be employed indiscriminately. It is useless in cases of flail-like joints, where all the muscles are badly affected, and it should not be employed in slight cases of paralytic valgus or varus or in slight equinus, the last being easily remedied by section of the tendo Achillis. It is not an operation for the display of anatomical knowlege nor of mechanical skill in operating, but one requiring the nicest care in the selection of cases and of the muscles to be employed, and careful watching of the results of the operation for several years afterwards.

## ULTIMATE RESULTS OF TENDON GRAFTING IN INFANTILE PARALYSIS.

By Sinclair White, M.Ch., F.R.C.S.,
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The idea of reinforcing the tendons of paralysed muscles by grafting on to them the displaced tendons of neighbouring healthy muscles after severance from their distal insertions belongs to Nicoladoni, who, in 1882, published an account of a case of paralytic talipes calcaneus so treated. In this country Nicoladoni's work excited little attention until three years ago, when Mr. Frederic Eve, in an able and singularly modest communication, brought the subject before this Association. Latterly several modifications of the original operation have been devised, the most noteworthy of which is that described by Vulpius, in which Nicoladoni's method is reversed—the distal end of the divided paralysed tendon being displaced and stitched to a normally-situated healthy muscle. The operation, while most often undertaken for the relief of deformity in old-standing cases of infantile palsy, is applicable to other paralytic conditions, such as that due to traumatic nerve lesions or to the direct destruction of muscular tissue.

My experience of tendon grafting extends to 11 cases, 1 of which concerned the extensor muscles of the thumb, while the rest were examples of foot palsy—for the most part of the anterior tibial and peroneal muscular groups. The deformity varied more in degree than in character, the prevailing feature being a talipes equinus with more or less inversion of the sole of the foot, but in 2 cases it was a pure equinus. The ages of my patients varied from 2 years up to 18 years. In all the paralytic condition appeared to have been due to an attack of infantile paralysis, and in all there was not only obvious wasting of the affected muscles, but also shortening of the tendo Achillis.

An exact history respecting the date of onset was seldom forthcoming, but several of the cases were probably congenital. All my cases have been operated on in the Sheffield Royal Infirmary during the last three years. In every instance I have followed the method of Nicoladoni, varying the details to suit the requirements of each case. Lengthening the tendo Achillis with the transference of a slip from its outer side to the tendons in front of the ankle formed an essential part of each operation, and in two cases represented the entire operation. The next most frequent procedure was to detach the tibialis posticus from its insertion into the scaphoid bone, and to bring it to the front above the internal malleolus, where it was anchored to the tendon of the extensor proprius pollicis, or to that of the long extensor of the toes. After operation the limb has been kept at rest on a splint for three weeks, and then passive movements and massage have been commenced, the foot being still supported in the intervals between massage. Two or three weeks later the patient was allowed to practise active movements of an orderly character.

*Results.*—The case of thumb palsy in which the tendon of the flexor carpi radialis was transferred to the paralysed extensor tendons shows an appreciable but not a marked improvement, and should, I think, be recorded as a failure. Of the 10 foot cases, 1 has been lost sight of, and 2 have been operated on so recently that they are not available for the purposes of this paper, although they promise well. Six of the remaining 7 are greatly benefited by the operation. In 3 cases the improvement is so great that it requires an educated eye to detect anything abnormal in their method of walking, while in the other 3 the deformity, although not entirely removed, has been greatly reduced, the patients walking on the sole of the foot with more or less pointing of the toes, whereas previous to operation the outer side of the dorsum of the foot came in contact with the ground. In each of these 3 cases the ankle-joint can be flexed through rather less than half its normal range, and in advancing the leg (in walking) the foot is carried abnormally outwards to enable the toes to clear the ground. As evidence of the improvement in walking power, I may state that one of these patients recently walked without assistance of any kind eight miles to see me at the Royal Infirmary, whereas before operation she could barely accomplish, with the aid of a stick, a distance of ½ mile. In several of my cases the disparity in the circumferences of the sound and affected legs has been slightly reduced; but of course in all there is necessarily failure to return to the normal, both as regards appearance when naked and in strength. My seventh case is much less satisfactory, and should, I think, be considered a failure, as the child, aged 4 years, requires the aid of elastic bands to prevent the foot from falling inwards, and although he can now bring the sole of the foot in contact with the ground, I attribute the improvement in this respect entirely to lengthening of the tendo-Achillis.

The exigencies of time forbid a detailed account of each

case I have operated on, but I may perhaps be permitted to relate the particulars of my first case, prefacing my remarks by stating that it illustrates the method I have most frequently practised, and is an example of the best results I have obtained.

B. D., aged 8 years. Paralysis of the right anterior tibial and peronei muscles at the age of 16 months.

*State on Examination.*—Heel drawn up: front of leg and dorsum of foot form an angle of 130 degrees: sole of foot inverted: no power to flex ankle-joint: affected leg cold and ½ inch shorter than its fellow: circumference of right calf 2 inches less than that of the left. Stands unaided with difficulty, resting the outer side of the dorsum of right foot on the ground. Cannot walk without assistance, and drags the toes of the right foot.

*Operation.*—November, 1898. (1) Vertical incision over the tendo Achillis 3 inches long: tendon exposed and divided longitudinally into three equal parts, two inner parts utilised for lengthening the tendon by dividing them at opposite ends and allowing them to slide on one another until the requisite amount of lengthening had been obtained when they were sutured together: outer third severed from its attachment to the os calcis: (2) incision of skin over the insertion of the tibialis posticus and division of tendon: (3) vertical incision over the course of the tibialis posticus tendon 1½ inch above the internal malleolus, tendon exposed and its distal end withdrawn: (4) transverse incision over anterior tibial tendons just below the annular ligament, tendons of extensor proprius pollicis, and of extensor longus digitorum exposed and identified by pulling on them: (5) Kocher's artery forceps passed under the skin from incision No. 4 to incision No. 3, and the tendon of the tibialis posticus withdrawn and united to the tendon of the extensor proprius pollicis: (6) forceps again passed subcutaneous from incision No. 4 to the upper end of incision No. 1, and the outer third of tendo Achillis withdrawn and sutured to the tendon of the extensor longus digitorum: (7) skin wound sutured, and limb placed on a back splint with foot piece, so that the foot was at right angles to the leg.

*Subsequent Condition* two years and eight months later. The ankle-joint can be flexed to almost the normal extent and the tendency to inversion of the sole of the foot has disappeared. The heel comes properly in contact with the ground, and the boy walks to school a mile and a half distant without discomfort, and without, to the untrained observer, appreciable deformity. There is still a difference of 2 inches in the calf measurements, but the circulation and general nutrition of the affected leg are much improved.

Many causes contribute to the disparity in the results obtained from tendon grafting. Foremost among these must be placed the extent and degree of the paralysis. Where only one or two muscles are partly or wholly affected a good result should be the rule. On the other hand, "we cannot make bricks without straw," and it is impossible to accomplish much good if the bulk of the muscles of a limb are affected. The least promising cases are those in which the unparalysed muscles, from disuse, are badly developed, and where there is marked evidence of defective innervation as shown by excessive arrest of growth, a habitually cold skin, and other signs of deficient blood supply. Possibly better results might be gained in these cases if a course of massage, passive movements, and galvanism preceded operative interference. Generally speaking it is better to defer operation until the age of 4 years or later. Earlier than this the small, immature tendons are difficult to manipulate, and, more important still, the child has not obtained complete volitional control over its muscular tissue, and is less able to practise movements of an orderly character and unusual nature than an older child.

The operation requires an accurate knowledge of the anatomy and functions of the muscles concerned, and is somewhat tedious to perform, but presents no special difficulty. The tendon of the reinforcing muscle should be cut squarely, and as near to its insertion as possible. It should be of sufficient length to reach the point selected for its insertion into the paralysed tendon without undue tension, and yet be sufficiently taut to assist in retaining the foot in its improved position. Some writers advocate a preliminary rectification of the deformity, but in many instances this cannot be accomplished until the unparalysed opposing tendo Achillis has been severed, and under any circumstances it can be done quite easily and with the employment of little force at the time of operation.

For tunnelling under the skin I make use of a fine pair of Kocher's artery forceps. A gossamer silkworm suture is passed twice through the end of the reinforcing tendon, and after being lightly tied is seized by the forceps and withdrawn. Gentle traction is next made on the suture, and the tendon coaxed through the tunnel to its new destination. The paralysed tendon is now slit longitudinally at the point selected for grafting, and the reinforcing tendon drawn through it and fastened by the silkworm, the ends of which are threaded on fine straight needles which transfix both tendons. The utmost care should be exercised to secure firm and neat junction of the reinforcing and paralysed tendons, and until good union has resulted it is imperative that the foot should be maintained in the corrected position by a splint or some other mechanical device. Whether a part only or the whole of the reinforcing tendon shall be transferred depends to some extent on the position and shape of the tendon; thus it would be well-nigh impracticable to deal with a portion of the tendon of the tibialis posticus, whereas the tendo Achillis lends itself admirably to transference of a portion of its bulk. Generally speaking, if only a portion of a tendon is transferred, the remaining part should be lengthened, otherwise it may be impossible to restore the foot to its normal position. The tendons of paralysed muscles are usually diminutive in size and less tough than normal tendon tissue, and occasionally are difficult to find, owing to distortion of the anatomical landmarks of the region; but, when found, their identity can always be established by pulling on them, and noticing the effect produced. If from any reason the desired paralysed tendon cannot be found, the operator may fall back on Kumik's expedient of attaching the reinforcing tendon to a properly chosen site on the periosteum.

As the operation merely distributes in a more advantageous fashion the unparalysed muscular tissue, it is quite obvious that, after even the best possible results have been obtained, the limb must necessarily remain a weak one. On the other hand, the general nutrition of the operated on leg in successful cases is greatly improved by reason of the more active movements the limb is capable of performing.

The transference of a portion of its force from the stronger to the weaker of two opposing muscular groups is a perfectly logical procedure if we bear in mind that a voluntary muscle, or even a portion of a voluntary muscle, is capable of being educated to act independently of the muscular group with which it is normally associated. But such education of a transferred muscle is necessarily a work of time, hence we find that the maximum benefit accruing from the operation is not attained all at once.

It may, I think, be fairly claimed for tendon grafting that it is a valuable addition to our means for treating a class of cases which, previous to its adoption, were alike objects of pity and a reproach to our art.

Mr. A. H. TUBBY said that he was much pleased by the interest evoked, and he thanked Dr. Sinclair White for his paper, with which he agreed in the main. He understood Dr. White to mention that some of his cases were probably congenital, but he did not himself consider that such cases were suitable for muscle grafting. As a rule the tibialis posticus was not a good muscle to graft, for it was so useful in supporting the arch of the foot, and the flexor longus pollicis was better, as there was still a short flexor left the great toe. Further he thought the operation of grafting was not suitable for cases in which only one muscle was paralysed. He agreed that any failure in the asepsis was a disaster in such operations.

## DISCUSSION ON THE EARLY DIAGNOSIS OF THE ACUTE SPECIFIC FEVERS.

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AN early and accurate diagnosis is more important in connection with the acute specific fevers than any other class of disease, not only on account of the patient's welfare, but also in the interests of the community. This is especially true in respect to measles, diphtheria, whooping-cough, and mumps, because of their infectivity at an early stage of the disease.

Considerable difficulty is often experienced at the outset, not only in the differentiation of the infective fevers, but, in many cases, in coming to a decision as to whether the attack under consideration is really an infective disease at all. It seems advisable, therefore, for the purpose of discussing their early diagnosis, to provisionally classify the specific fevers and certain affections which are liable to be mistaken for them

into various groups on the basis of a recognised similarity in their clinical aspect during the early period of illness. In this way one is in a better position to deal with the special characteristics of the individual members of a group, and to appraise them at their proper value as factors in the diagnosis.

Let us first consider a group of affections in which the bond of similarity—or, in other words, the source of confusion—consists in the possession at an early stage of the attack of catarrh of the naso-respiratory tract and more or less pyrexia, namely, measles, rubella, an ordinary feverish cold, and whooping-cough. The fact that both measles and rötheln usually present a well-marked eruption is a valuable distinction between them and the other members of the group; but, on the other hand, the resemblance which normally exists between their respective rashes represents an undoubted source of difficulty in their separate identification. The fact that there is usually a pre-eruptive stage of two or three days' duration in measles, whereas in rubella the rash is commonly present from the beginning, is a distinction of undoubted value. Its force, however, is weakened by the fact that in many cases of measles the pre-eruptive illness is so ill-defined as to escape detection. The measles rash usually begins to come out during the third night of definite illness; but an indistinct blotchiness of the face is often to be seen at an earlier stage, which, taken in conjunction with the watery eye and the miserable, depressed appearance which the child so often presents, is most suggestive of oncoming measles. In post-scarlatinal measles—that is, measles arising during convalescence from scarlet fever—a shortening of the pre-eruptive period is liable to occur: indeed, it is more likely to be so than otherwise. In a series of 78 cases of post-scarlatinal measles which came under my observation during fifteen consecutive months, in 27 the rash appeared on the first day, in a good many of them it was the first sign of illness, in 34 it came out on the second day, in 13 on the third, and in 4 only was it delayed until the fourth day or later. Many of these attacks were severe, and the mortality of the series was 14 per cent.

In rubella the rash is usually present as early as any other sign, yet a good few patients, particularly adults, will complain of general *malaise* accompanied by tender enlargement of the posterior cervical glands and stiffness of the neck for several days before the rash appears. This early glandular affection is frequently attended with slight pyrexia, and it is probable that a good many cases escape coming under medical observation by reason of the rash being but transient and ill-defined. Under these circumstances the attack is likely to have been regarded simply as a stiff neck, the result of a railway journey, or the draught from an open window, rather than as the manifestation of a specific infective disease. Slight enlargement of the glands in the posterior triangle of the neck, and particularly those lying over the mastoid and occipital bones, is common enough both in measles and scarlet fever, and is a normal accompaniment of eczema, pediculi, varicella, and other irritative conditions of the scalp; but an enlargement such as to cause a distinct fulness, due to the involvement of a bunch of glands, or tenderness sufficiently pronounced as to lead the patient himself to complain of it, is undoubtedly suggestive of rubella. The catarrhal symptoms in rubella are but slight, being commonly limited to a little injection of the conjunctival and faucial mucosa. On interrogation, the patient, if old enough, may admit that the throat feels somewhat dry and uncomfortable, and perhaps, that he has been conscious of a "stuffiness in the head" for several days, but nothing approaching the catarrh of typical measles, characterised by sneezing, coryza, cough, and lachrymation is likely to be present. Hoarseness is but rarely marked, and the catarrh never seems to definitely involve the trachea or bronchial tubes. When the rash comes out the patient usually feels distinctly better. This is in marked contrast to measles, in which a decided aggravation both of pyrexia and the catarrhal symptoms usually occurs during the development of the eruption. The pyrexia, too, in rubella is relatively slight and transient, being not often sustained for more than 24 to 36 hours, and in those cases in which the eruption constitutes the chief tangible sign of illness, pyrexia is not unlikely to be absent altogether.

It is the striking resemblance between their respective eruptions, particularly at an early stage, which is mainly responsible for the difficulty which is so often encountered in the separate identification of measles and rubella, inasmuch as the difference between the two rashes must be regarded as differences of degree rather than of kind. In rubella the individual spots are usually smaller and pinker than in measles, and in the early stage the rash is more generally diffused, being less patchy and irregular in its distribution. The spots, moreover, tend to remain more discrete, and so long as they are raised above the surface show less tendency to coalesce into groups than is usually the case in the major disease. But on the hand, in many cases of rubella the spots after the lapse of from twelve to twenty-four hours tend to lose their raised appearance and become merged in a diffuse red flush or blotching which occasionally shows distinct evidence of punctation. On this account the eruption may closely simulate the rash of scarlet fever; for which disease, indeed, the attack is frequently mistaken. The rash of rubella is commonly less persistent than that of measles and does not leave behind it the mottled staining of the skin so characteristic of that disease.

It now remains to consider a symptom of measles on which a good deal of attention has been concentrated during recent years, the presence of which, even if one is not quite prepared to accept it as entirely pathognomonic of measles, must I think be held as evidence of undoubted value in the exclusion of rubella. I refer to the so-called Koplik's spots, which can usually be detected on the buccal surface during the pre-eruptive stage of measles, but never, so far as I know, in rötheln. Although their importance was brought prominently before the notice of the profession by Koplik of New York in a paper published in the *Archives of Pediatrics* in 1896, which contained a detailed description of their appearance and situation, priority of discovery must be awarded to Filatow, who described them in the previous year and pointed out their distinctive connection with measles. They may be defined as minute white specks situated on the buccal and labial mucosa, visible on careful inspection from one to three, more rarely four, and according to Knospel occasionally even five, days before the appearance of the eruption. In number they vary from three or four to several dozens, and are frequently arranged in clusters. They affect more particularly that portion of the buccal membrane in proximity to the molar teeth and the mucous surface of the lips. They are sometimes seen on the gums, but never, as far as I know, on the palate. At an early stage of their development the specks are exceedingly minute, and for this reason and in consequence of the glistening appearance of the mucous surface, are liable to be overlooked unless the examination has been carefully made in a really good light, preferably direct daylight. According to Koplik the spots are of a bluish-white colour, but it must be confessed that the bluish tint is not very apparent. It is commonly asserted that at a somewhat later stage the mucous membrane around the spots become injected so as to form a definite red areola.

The frequent appearance of this macular injection of the mucous membrane during the pre-eruptive stage of measles is beyond dispute, but it is by no means equally certain that the maculæ bear so direct a relation to the white specks as the term "areola" would serve to imply. Some of them may usually be detected on portions of the buccal surface where no white specks are to be seen, and frequently specks may be observed round which no red injection of the mucosa whatever can be detected. Others again may be situated at the edge rather than the centre of the so-called areola. By reason of the foregoing facts it would seem more probable that this macular injection of the mucous surface is nothing more or less than a part of the endanthem, which is well known to affect the mucous lining of the mouth during the pre-eruptive stage of many cases of measles, of which disease, indeed, it represents an early diagnostic sign of the greatest value, and that the red maculæ have little, if anything, more than an accidental connection with Koplik's spots, with which, however, in situation they frequently coincide.

But whatever view we may take as to the nature of their so-called areola, there can be no question as to the paramount value of the spots themselves as a factor in the diagnosis, not only in respect to the early recognition of measles, but

also in its differentiation from other affections which are liable to be mistaken for it at an early period of illness. I refer more especially to rubella, laryngeal diphtheria, catarrhal laryngitis, and the morbilliform erythema following the injection of antitoxin, in neither of which affections has anything resembling a Koplik's spot been hitherto described.

The remarkable constancy with which these spots have been detected during the pre-eruptive stage of measles may be gathered from the following figures, for which I am mainly indebted to an excellent paper on the subject by Mr. L. Falkener, of the Western Fever Hospital, which appeared in the Medical Supplement to the Report of the Metropolitan Asylums Board for 1899. Amongst 165 consecutive cases of measles which were recorded by five different observers, including Falkener himself, who contributed 59, the spots were observed in every instance, while of 266 cases notes by three other observers, including a series of 140 attacks published by Maroney, of New York, in the *Yale Medical Journal* of October, 1900, they were detected in 244. If from the aggregate 431 cases there be deducted 11, comprising 7 in which the spots were not carefully looked for and 4 in which the patients were at the time marantic, there remain 420 cases of measles amongst which Koplik's spots were stated to have been present in 409, that is to say, in 97.6 per cent. My own experience has not been quite so favourable as this, as I have not infrequently failed to detect the spots, or, at any rate, anything which could be distinguished from the minute aphthous specks commonly associated with stomatitis, even after careful daily examination in a good light, which is, of course, essential to success. The frequent presence of these minute aphthæ in the mouths of children, especially during the period of teething, constitutes a real difficulty, and even Falkener admits that their certain differentiation from the true spots may be impossible before the latter become surrounded with the red areola before referred to. This areola (really the endanthem) in itself furnishes evidence of unquestionable value in the early diagnosis of measles, apart from any bearing it may have in determining the specific nature of a doubtful spot.

On the strength of these spots alone I have on several occasions been enabled to successfully isolate a patient in whom neither pyrexia, or the slightest indication of catarrh in the mouth or elsewhere, could be detected until twenty-four hours, and, in the case of the rash, until the lapse of four days after the spots were first seen. I have never observed the spots at an earlier date than this. To a careful observer the only other appearance which is at all likely to be mistaken for Koplik's spots are certain white specks which are sometimes to be seen rather far back on the buccal surface of the cheek. They are, however, rather yellowish in tint, but few in number, and are apparently of congenital origin.

The differentiation of an ordinary febrile cold from measles in the prodromal stage is frequently a matter of considerable difficulty. The pyrexia of an ordinary catarrh is usually less continued, but it should be remembered that in measles a temporary abatement of temperature commonly occurs during the pre-eruptive period. Lachrymation may be present in some degree, but actual conjunctival injection and photophobia are probably wanting. Of greater import is the absence of Koplik's spots and of any macular injection of the palate and buccal mucosa. The child, moreover, is likely to be less depressed and fretful, and the closest scrutiny will fail to reveal the presence of that characteristic subcuticular blotching of the face, particularly round the mouth and nose, which is so often to be detected for a day or two before the rash comes out in measles. In the absence of any of the foregoing indications it is practically impossible to distinguish measles in the pre-eruptive stage from a common cold, although presumptive evidence of undoubted value will be afforded should it be ascertained that the child has been previously exposed to its infection.

As is well known, whooping-cough at the commencement of the attack is very likely to be mistaken for an ordinary bronchial cold, and in the absence of the characteristic whoop its recognition may be considerably delayed. In some undoubted attacks the whoop is absent throughout, and other children are liable to become infected before the true nature of the affection is recognised. It is an interesting fact that during the febrile stage of an intercurrent attack of both scarlet fever and measles the whoop is often arrested altogether, only to reappear again when the temperature has returned to normal. Points which serve to indicate the specific character of the cough before the typical whoop has yet developed are the relative frequency with which the cough occurs at night, its sudden onset, its paroxysmal quality and peculiarly energetic character. Other points of diagnostic value are puffiness around the eyes, subconjunctival œdema, excessive viscidity of the sputum, which the child finds it extremely difficult to dislodge, and the fact that fine sticky *râles* may usually be heard over the lungs. The frequent culmination of the cough in vomiting is a well-recognised characteristic of the fully developed attack, but vomiting is sometimes an early symptom in pertussis quite apart from the act of coughing. Psychic disturbance, too, is frequently apparent at an early period of the disease; the child is prone to wet its bed, and may be noticed to be unduly nervous and apprehensive.

Koplik, confirming the observation of Afanassieff, Szemetzchenko, and Zuch describes a small bacillus as present in the sputum during the early stage. He successfully isolated it from the greyish mucous pellets which are separable from the sputum after standing in 13 out of 16 consecutive cases. According to Koplik, the bacillus is very minute; it stains in a granular fashion and, though difficult to cultivate on ordinary media, may be readily grown on coagulated hydrocele fluid. The presence of this organism, though hitherto, I believe, unconfirmed in this country, should prove of diagnostic value in the early stage of pertussis. With young children, unfortunately, it is not always easy to obtain a sample of the sputum, though one is more likely to succeed in pertussis than in any other variety of cough; indeed the very fact of being successful is in itself of some assistance in the diagnosis.

Let us now consider the diagnosis of certain affections, common enough in childhood, which are attended with laryngeal stridor, in other words, croup. This may be spasmodic, catarrhal, or membranous. Purely spasmodic croup is not likely to be a source of much difficulty. It is rarely met with except in infants. It almost invariably comes on very suddenly, usually at night. It passes off equally suddenly, and in the intervals between two paroxysms the stridor entirely disappears. Some reflex cause can usually be determined—either dentition, gastric disturbance, or worms—and the child is likely to be rickety. Although purely spasmodic croup is relatively rare, an element of spasm may often be detected both in the inflammatory and diphtherial variety, a fact which is responsible for considerable variation in the urgency of the dyspnœa at different times in the same case. The certain differentiation, however, between simple inflammatory croup and the true membranous variety—in other words, diphtherial laryngitis, for one must admit, I think, that membranous croup is always diphtheria is sometimes extremely difficult during the early stage of the affection. A history of exposure to cold, especially if there be other evidence of catarrh, in the one case; or of the child having been in contact with undoubted diphtheria in the other is of value as far as it goes, but such evidence is apt to be very misleading. Many are the cases of genuine diphtherial croup in which a simple laryngeal catarrh, the result of a chill, has proved the determining cause of the attack by providing the diphtheria bacillus, already there, with the very conditions most favourable to the development of its specific activity. Stridulous breathing, again, dependent upon laryngeal catarrh may be an early sign of measles. This in itself may certainly constitute a sufficient explanation of the symptom croup, but it must not be forgotten that the presence of measles renders a person very susceptible to the infection of diphtheria; indeed, so true is this that the frequency of its occurrence must be responsible for a belief which has been very general amongst practitioners that the false membranes which occasionally form in the air passages late on in the attack of measles represent a specific, though usually fatal, manifestation of that disease. In opposition to this view, I may say that as a result of many examinations I have never failed to detect the Klebs-Loeffler bacillus both in the false membranes and in the muco-pus lining the smaller bronchi, when

examined *post mortem*. Additional evidence of this complication being genuine diphtheria is afforded by the greatly-improved results which are now obtained in these cases with diphtheria antitoxin. The detection of measles, whether alone responsible for the croup, or a component factor with diphtheria, is greatly facilitated by the recognition Koplik's spots. These should always be looked for, as they constitute—and more so when attended with the buccal endanthem—an almost certain indication, and one which, as I have already stated, may be available three or even four days before the rash comes out.

The certain differentiation between simple inflammatory croup and early laryngeal diphtheria in the absence of faucial exudation may be impossible without having recourse to bacteriological examination, but should there be visible even a speck of definite exudation on the tonsils, or rhinorrhœa without other evidence of catarrh, the case will almost certainly prove to be one of diphtheria. The distinction insisted on by Niemeyer, that in membranous croup expiration is obstructed equally with inspiration, whereas, in the simple inflammatory form expiratory stridor is but little marked, is, as far as my experience goes, practically worthless. In every case of doubt a sterilised swab, mounted on a bent wire, should be passed into the upper part of the larynx and the secretion examined forthwith for bacilli. The detection of Klebs-Loeffler bacilli in the laryngeal or faucial secretion may be regarded as diagnostic of diphtherial croup, but the presence of bacilli morphologically resembling them in the nasal discharge alone is of little value.

We have now to consider those affections which are attended with a febrile sore throat, namely, diphtheria, tonsillitis, and scarlet fever. A well-developed attack of diphtheria is not likely to be mistaken for anything else, but in the early stage of the disease, and in cases in which the exudation is but slight and fragmentary, its certain differentiation from tonsillitis, especially the follicular form, in which small, though definite, patches of exudation are not infrequently present is often extremely difficult. Indeed, it is no exaggeration to say that at the present day the diagnosis in such cases practically rests on the result of a bacteriological examination. The bacteriological test, as usually applied, however, valuable though it is in many cases, must be accepted with certain reservations.

Briefly stated, the disabilities attaching to the bacteriological test are dependent upon:

1. The difficulty of differentiating with certainty the Klebs-Loeffler bacillus from allied and non-virulent forms which are not infrequently present in ordinary sore throats.

2. Our ignorance as to the limits of intranormal variation, both in the morphology and virulence of the Klebs-Loeffler bacillus.

3. The fact that genuine diphtheria bacilli are occasionally present in healthy throats, especially of persons who have been in contact with the disease.

4. The fact that a negative examination simply implies failure to find, and not necessarily that the bacillus is not present, although the evidence becomes greatly strengthened by a repetition of the experiment.

Lack of time unfortunately precludes me from attempting to discuss the question of bacteriological diagnosis, but, on the strength of the foregoing well-established facts and some clinical experience of diphtheria, I venture to submit the following propositions:

1. When bacilli, apparently conforming to the Klebs-Loeffler bacillus both morphologically and in culture, are found in a case in which the clinical aspect is negative, the bacteriological examination cannot be regarded as conclusive unless it include the result of animal inoculation.

2. When bacilli are found which conform to the Klebs-Loeffler bacillus in their microscopical, cultural, and staining characters, and the clinical appearances of the case are consistent with diphtheria, the bacteriological evidence may be held sufficient to establish the diagnosis.

3. Failure to detect the Klebs-Loeffler bacillus in a case which from the clinical standpoint is negative is sufficient to exclude the diagnosis of diphtheria, provided the negative result have been confirmed by at least one subsequent examination, preferably made on the following day.

4. On the other hand, failure to detect the Klebs-Loeffler bacillus, even though subsequent examination should also prove negative, cannot be held to exclude diphtheria should the clinical appearances be distinctly suggestive of that disease.

Incidentally, I desire to attest the value of Neisser's stain in determining the specific character of a doubtful bacillus. Excepting, of course, the inoculation test, I regard the evidence yielded by Neisser's stain as the most trustworthy criterion we at present possess. It is very rarely indeed that a bacillus other than the true Klebs-Loeffler will show the characteristic staining, though failure on the part of a genuine bacillus to show the double staining is undoubtedly more common. Another advantage which Neisser's stain possesses over others is that it is more often possible to make a positive diagnosis of diphtheria from an immediate microscopical examination of the swab, before confirmatory evidence from the culture is forthcoming, and, moreover, the staining reaction by Neisser's method is so distinctive as to be quite obvious to an observer whose experience of bacteriological technique is but limited.

It can hardly be too strongly emphasised, and to those who have had much to do with diphtheria the fact has been apparent for some years, that the diagnosis in suspected cases of diphtheria should not be based upon bacteriological evidence alone, but upon the clinical appearances, supplemented by the results of bacteriological inquiry.

From the clinical aspect alone it is often impossible to distinguish a case of follicular tonsillitis from one of diphtheria, particularly at an early age. The following points, however, are not without a certain, though limited, value. In tonsillitis the exudation, when present, for the most part consists of small spots or patches which rarely coalesce so as to form a continuous pellicle. In diphtheria, on the other hand, although the exudation frequently commences in the form of little spots corresponding in situation with the mouths of the follicular crypts, some of these, at any rate, soon coalesce and form patches of varying size. In tonsillitis the exudation is usually limited to the tonsils, and rarely, if ever, encroaches on the pillars of the fauces, palate, or uvula. The affection, moreover, as a rule, is equally pronounced on both sides: albuminuria, too, is uncommon, and the gland swelling relatively slight, but the fever and constitutional disturbance are apt to be more severe than in a case of diphtheria sufficiently mild as to be easily mistaken for it.

In scarlet fever sore throat is usually present from the outset, and its special characteristic might be defined as a vivid red injection of the whole of the faucial mucous membrane, which thus presents a tumid velvety appearance. The degree of tonsillar swelling varies greatly in different cases. In about four-fifths of attacks the sore throat is accompanied by vomiting, and before many hours have elapsed the scarlet puncto-erythematous rash comes out on the neck and chest and soon becomes diffused over the surface. In tonsillitis, as in diphtheria, an erythematous flush is occasionally seen on the trunk and arms at an early stage of illness, but the rash is never punctiform, and rarely persists for more than twenty-four hours. In these affections, too, vomiting is the exception, and the creamy-white furred tongue which rapidly becomes denuded by the third or fourth day, forming the strawberry tongue so characteristic of scarlet fever, is absent. The association of a raw clean tongue with an inflamed throat is a distinction of great value, as it is a combination found with no form of sore throat except that of scarlet fever.

I could hardly conclude this paper without brief reference to the difficulty which is occasionally experienced in the differentiation of three diseases which resemble each other in the possession of a diffused erythematous eruption—namely, scarlet fever, measles, and rubella, or German measles. The early indications of measles I have already dealt with in connection with its differentiation from rubella, and the instances in which it is likely to be confused with scarlet fever should not be very common, but at an early stage the differentiation between mild scarlatina and rubella is apt to be very difficult.

In each case the rash is present from the commencement of the attack and usually some degree of redness and swelling of the faucial structures.

The main points of distinction are as follows: The period of incubation in scarlet fever is usually two or three days: in rubella, ten days to a fortnight, and even longer. Vomiting is common in scarlet fever: in rubella, very rare. Suffusion of the eyes in scarlet fever is only seen as a part of the general flushing of the face which is present at an early stage: whereas, in rubella, slight conjunctival injection is commonly present as an independent appearance. Faucial inflammation is usually a pronounced symptom in scarlet fever, whereas in rubella it is invariably slight and unimportant. The rash in scarlet fever is erythematous and punctiform, or finely papular. In rubella, at an early stage, the rash consists of discrete morbilliform spots, and only at a later stage becomes diffused or blotchy. The face in scarlet fever is simply flushed, and the circum-oral region remains pale and uninvaded; in rubella, on the other hand, the rash is spotted on the face, and usually invades the circum-oral region. Some tender fulness of the submaxillary glands is usually to be found in scarlet fever, but there is no marked involvement of the concatenate chain such as is commonly present in German measles.

The diagnosis of rubella is rendered none the less difficult by the fact that considerable variation in the clinical aspect of the disease is to be observed in different cases. So true is this that two main varieties are very generally recognised, one conforming to the measles type, the other to that of scarlet fever.

As an explanation of this well-established fact it is believed by Dr. Clement Dukes that two separate and distinct affections are included under the term rubella.

While retaining the term "rubella" to designate those cases which most resemble measles, the attacks which conform to the scarlatinal type are regarded by Dr. Dukes as instances of an entirely distinct disorder, which he provisionally names "the fourth disease" to distinguish it alike from scarlet fever, measles, and from rubella. The evidence on which Dr. Dukes bases his belief was clearly set forth in a communication published in the *Lancet* of July 14th last year, which was received at the time with a good deal of interest and attention. The question as to the existence of a "fourth disease" must be regarded as still *sub judice*, but whichever way the consensus of opinion may eventually incline, the suggestion provides a legitimate field for discussion.

### II.—E. W. Goodall, M.D.,

Medical Superintendent, Eastern Hospital, Homerton.

Dr. Goodall said that with reference to the early diagnosis of measles, scarlet fever, or diphtheria, in the first difficulties arose in some cases because in the prodromal period there was a rash—a bright erythema, occasionally punctate and confined to the trunk—found. The same kind of rash might occur in varicella. A diagnosis even of scarlet fever might erroneously be made. Again, in measles before the appearance of the characteristic eruption, there might be a complete remission of all the symptoms leading to a diagnosis of a common cold. They should therefore in these cases wait for two or three days in any case before the diagnosis was made. Koplik's spots were certainly of great value when present, but unfortunately all cases of measles did not present these spots. Minute aphthous stars, mucous glands, and even the reflection of light from minute air bubbles might be mistaken for Koplik's spots. In looking for these spots it was absolutely necessary to have a good light. As regarded scarlet fever, there was not one of the acute specific fevers which puzzled him more. There might be no sore throat, subjectively or objectively, and the constitutional symptoms might be very slight, so that a diagnosis could not at times be made for even two or three weeks after some special complication might have arisen. Again, in some severe cases of scarlet fever the appearance of the rash might be delayed until the fourth or fifth day and the case taken for diphtheria. But a persistent high temperature, delirium, and the failure of antitoxin to relieve the faucial condition should arouse suspicion. He quite agreed with Dr. Caiger's conclusion with reference to bacteriological examinations in diphtheria. Lastly, he would ask if acute pneumonia was ever accompanied by a rash, for it was so very often mistaken for scarlet fever.

### III.—H. Ashby, M.D., F.R.C.P.,

Lecturer on Diseases of Children, Owens College.

Dr. Ashby called attention to the slight intermittent fever present during the incubation stage of measles before the actual pyrexia commenced. This fact was interesting in connection with the question as to whether measles was infective during the incubation period, a question which he thought must be answered in the affirmative. He agreed generally with Dr. Caiger with regard to the value of Koplik's spots, but thought that they were absent in attacks of measles much oftener than some recent writers believed. He called attention to the fact that in some cases of diphtheria and scarlet fever there was a tender enlarged gland at the angle of one or both jaws before there was any definite tonsillitis or membranous exudation on the tonsils, the enlarged glands preceding by twenty-four hours or more any characteristic appearances at the fauces. With regard to whooping-cough, difficulty of diagnosis at times occurred in distinguishing between the spasmodic cough which sometimes followed influenza and mild whooping-cough. In the former there was no true whoop, but the paroxysmal attacks closely resembled true whooping. He believed with Dr. Dukes that there were two diseases often included under the term "rubella," the common one with a long incubation which mimicked measles, and a rare one only diagnosable when it prevailed in epidemics and with a short incubation which mimicked scarlet fever.

### IV.—F. J. Poynton, M.D., M.R.C.P.,

Assistant Physician, Hospital for Sick Children, Great Ormond Street.

Dr. Poynton said that the only part that he would venture to take in the discussion was to say a few words on the important paper by Dr. Dukes, published in the *Lancet* of July 14th, 1900, with the title "Confusion of Two Diseases under the Name of Rubella." The conclusion that Dr. Dukes had arrived at had been the definite one—that a disease perfectly distinct from measles, rose rash, and scarlet fever existed, which he in that paper called the fourth disease. He had read the paper and correspondence which followed with much care, and thought that it clearly demonstrated one fact in the study of infectious diseases—the importance of the experience of the particular individual. A careful analysis of Dr. Dukes's reasons for considering that there was a fourth disease had not quite carried conviction to his mind that the disease was not a mild form of scarlet fever, especially as eventually it was found in association with scarlet fever. The absence of premonitory symptoms, the rarity of vomiting, the extensive rashes yet slight constitutional disturbance, the prolonged but apparently innocuous desquamation, the absence of the "strawberry tongue," the slow pulse, and escape of the kidneys, the moderate pyrexia, might all be explained, he supposed, by the supposition of a mild outbreak of scarlet fever. The universal enlargement of the lymphatic glands was certainly remarkable. Whether or not this was a mild scarlet fever, it was quite clear that they were most unusual cases, for an authority such as Dr. Dukes was not likely to make a gratuitous error, or to be unaware of the variability of scarlet fever. His paper, the speaker thought, should receive very close attention.

At the commencement of the present year he had had reason to thoroughly realise these difficulties, for he was asked by a medical friend to give an opinion upon some mysterious rashes that had made their appearance in a large school. Some half a dozen of these cases had been noticed bearing no particular relation to one another, not occurring in the same house or form. The rash resembled a severe scarlet fever rash, and was especially marked upon the abdomen and in the groins, but also occurred upon the chest. The pulse was not rapid. The boys were not really ill, and some had come to the doctor because of the rash. Only one had vomited, and then only once. There was slight or no headache. The tongue was coated, but did not resemble the "strawberry tongue" of scarlet fever. The throat was red, and slightly painful. The temperature barely reached 100°. There was no albumen in the urine. Desquamation had occurred in one case, and was fairly profuse. He had seen one of these rashes at its height, and it appeared to him like a very severe scarlet fever eruption. He had not found universal enlargement of the lymphatic glands.

There was a history of influenza and scarlet fever in the neighbourhood. The cases interested him very much until his friend asked for his opinion, then he had felt compelled to obey what seemed the one really sound rule in clinical medicine—to talk a great deal and say very little. The question was not only a scientific one then, but a very practical one. Yet, except for the rash and, in one case, the desquamation, these cases appeared to him quite unlike scarlet fever; and, needless to say, Dr. Dukes's paper came to mind at once.

Later in the term some more of these cases appeared, and a physician of wide repute and experience was asked to give an opinion. He must confess to having had a secret feeling of satisfaction when this physician refused to dogmatise upon their nature. The subsequent history of this incident was as follows: Some of the cases, all of which were at first isolated, were sent back after three weeks, in accordance with Dr. Dukes's views, among the rest of the boys, still peeling, and in no instance did the infection spread from them. One boy subsequently developed an arthritis, one had some albumen, and in the vacation was said to have had casts in the urine, but the latter was not verified. The school reassembled for the summer term, and once more cases of the same type commenced to appear, and at last one which appeared to be scarlet fever. An expert opinion decided that it was impossible to say that this case was not one of scarlet fever.

Dr. Poynton had again visited the school later in the summer and found a few cases of apparently mild scarlet fever, and a very extensive outbreak—over a hundred cases of absolutely characteristic German measles—which was spreading rapidly through the school. He was therefore as much in doubt as before as to the nature of the cases he had seen first, and was anxious to learn from this discussion some more facts that would guide him to an early diagnosis. He believed if he had the same experience again he would call them by the useful name of scarlatina, and avoid the worry and anxiety of the fourth disease.

He wished to emphasise the frequency with which enlarged glands in the posterior triangles of the neck were the first evidence of German measles. In large epidemics of this disease this symptom might be the only one, and was present for some days before the rash. He had also been indebted to Dr. Penny, the medical officer of Marlborough College, for showing him the prodromal rash of German measles. This appeared like a faint and, as it were, abortive edition of the real exanthem. Such cases were isolated as suspicious, and then the rash disappeared in a few hours. It was not for some days afterwards that the true rash made its appearance It was not to be wondered at that these early rashes were often thought to be of no importance, and it was difficult to say how they could be recognisd if it were not that an epidemic was raging at the time. He would like to endorse Dr. Ashby's statement upon the morbilliform and scarlatiniform types of rubella and also that the latter appeared to have a shorter incubation period. He could also testify to the difficulty there was in the diagnosis of scarlet fever in surgical wards, and would like to mention iodoform poisoning as liable to be mistaken for scarlet fever. In this kind of poisoning there was mild delirium, an erythematous eruption, and for a short time the child might be acutely ill.

### V.—W. J. Tyson, M.D., F.R.C.P.,

Senior Medical Officer Folkestone Hospital.

Dr. Tyson referred to the difficulties found by inexperienced practitioners in coming to a definite and satisfactory diagnosis in the early stages of an infectious disease, and to the advisability of calling in the medical officer of health in cases of doubt and suspicion. In any case of doubt, wherever it was possible, it would be wise to remove the patient to some isolation building to await the development of events. This was especially necessary when such cases occurred in seaside resorts or in schools.

### VI.—P. Watson Williams, M.D.,

Physician to Clifton College; Assistant Physician to the Bristol Royal Infirmary.

Dr. P. Watson Williams said, as regarded morbilli, the rapid development of the rash in conjunction with other general symptoms left little room for doubt after it had once shown itself. But in a large proportion of cases it was possible to diagnose the onset of measles in the pre-eruptive stage by the appearance of Filatow's or Koplik's spots. He had failed to observe these spots in many cases of true measles, but he had never found them in any other affection; therefore, while he always felt certain that a patient in whom these spots appeared was developing measles, the absence of the spots did not, in his experience, negative measles. Koplik denied that cases diagnosed as measles in which the spots were absent were true measles; they were, according to him, in the majority of cases German measles. Rötheln, or German measles, was usually sufficiently characteristic to enable a certain diagnosis to be made. But some of the milder cases were very slight and transient, and were associated with no sense of illness whatever, so that they might very readily be overlooked. A boy might be playing cricket, and on changing his clothes after the game a little rash might be noticed on the chest and back consisting of discrete very slightly-raised papules. The temperature might be normal and the patient feel in perfect health; in fact, symptoms, apart from the rash, might be non-existent. By the following morning the rash might have disappeared, yet that patient might start an epidemic of rötheln in his school. He knew no means of making a diagnosis in such exceedingly mild cases unless they occurred in the course of an epidemic. Then the one almost constant suspicious feature was the enlargement and slight tenderness of the posterior cervical glands. In no case of rötheln had he seen Koplik's spots. But in the more pronounced cases of rötheln two classical types must still be recognised—the morbilliform and the scarlatiniform. He laid stress on this because there had been a tendency of late to differentiate the scarlatiniform variety as a separate and distinct exanthem under the term "fourth disease." In a large public school of which he had charge as physician they had recently had a small epidemic which afforded examples of all the varieties of rötheln. It commenced with the exceedingly mild form to which he had alluded. The succeeding cases were mostly of the usually typical morbilliform variety. Amongst them were two cases that would be termed "fourth disease" by those who believed the scarlatiniform variety to be a distinct affection. One at least exhibited all the characteristic features associated with that disease, and others exhibited every gradation between the morbilliform variety of rötheln and "fourth disease," and other recorded instances suggested very strongly that there was a "fourth disease," which had a strong clinical resemblance to scarlatina, but which was not scarlatina nor genuine German measles. On this point he kept an open mind. What he now urged was that the scarlatiniform variety of rötheln did occur and was distinct from "fourth disease."

### VII.—Lovell Drage, M.D.,

Medical Officer of Health, Hatfield.

Dr. Lovell Drage thought it was important to consider the scientific position of infective diseases generally. A further step would be to consider, for practical purposes, the part of the body affected. For instance, the most simple type of sore throat should be regarded less as a scientific entity than as a possible source of diphtheria, and treated from this standpoint. It was generally of more importance to isolate every doubtful case than to consider whether a case had better be isolated. He would advocate the isolation and disinfection of all cases. The very successful way in which the plague at Glasgow had recently been dealt with was an argument for this policy in dealing with infectious disease wherever possible. In German measles there was always some affection of the throat. He thought it not impossible that there might be some connection between measles and scarlet fever, German measles being, as it were, a "half-way house" between these two. As regarded the cases of so-called "gastric" fever which must occasionally be diagnosed from typhoid fever, he would remind them that for a week or two they might not be able to tell what course the illness would take, and in this case, as in the case of sore throat, it was as well to assume they had, and treat the case as one of the more serious types of disease.

VIII.—E. MANSEL SYMPSON, M.D.,
Surgeon to the Lincoln County Hospital.

DR. MANSEL SYMPSON said he had found much help in diagnosing German measles from the swollen condition of the posterior cervical glands, from the distribution of the rash, that was, behind the ears and round the nose and mouth and from the colour and character of the rash. This was generally rose-red, or even brick-red or scarlatiniform in colour, but the shape of the spots was morbilliform and patchy, not, in his experience, punctate at all. The circumoral pallor in scarlet fever mentioned by Dr. Caiger was an early sign of great value. Another sign was the great apparent heat of the skin in scarlet fever; this was found only besides in acute rheumatism (an uncommon disease in children) or in acute pneumonia of children. This was liable to cause considerable confusion in cases of cerebral or gastric pneumonia with high fever and vomiting, but with little or no signs in the lungs, such as had been mentioned by Dr. Ashby. Acute pneumonia should be placed in the category of acute specific diseases with the lung symptoms as the expression of the complaint and the rash as in measles. Dr. Mansel Sympson then gave details of a case in which diphtherial infection apparently spread outwards from the lungs to the larynx and tonsils. The most general sign of diphtheria was enlargement of the glands at the angle of the jaw.

IX.—THEODORE FISHER, M.D., M.R.C.S.,
Surgeon to the Bristol General Hospital.

DR. FISHER asked Dr. Caiger concerning his experiences of the cases called gastric fever to which Dr. Tyson and Dr. Lovell Drage had drawn attention. Since he had been a student he had seen nearly every year, chiefly in the summer, cases of the kind, but he did not remember having seen any account of such cases. Dr. Goodhart had described some cases under the title of simple continued fever, but in most of these the temperature was raised for at least fourteen days, whereas Dr. Tyson had observed that in some cases the temperature came down at the end of a week.

REPLY.

Dr. FOORD CAIGER, in reply, expressed his appreciation of the very kind way in which his paper had been received. He regretted that he could not deal with many points of interest for want of time. The President had asked a question about "septicæmic rashes." There were two chief varieties of these: (1) A diffused erythema, which was sometimes indicative of so-called "surgical scarlet fever," about which there was no mystery, for it was simply genuine scarlet fever; and (2) a septicæmic eruption of a morbilliform rather than scarlatinal character, patchy in distribution, resembling measles, but unaccompanied by any catarrh or Koplik's spots, but being due entirely to septic absorption. He could fully confirm Dr. Goodall's observation with regard to prodromal rashes occurring in the early febrile stage of measles, representing the onset of the disease, and often distinctly scarlatiniform in character. He had seen various mistakes made with regard to Koplik's spots, and had even seen fragments of milk and the opening of Steno's duct mistaken for them. In some severe cases of scarlet fever the rash did not come out till late, the explanation of the sore throat in such cases being that it was probably a simple sore throat, in virtue of which the patient took scarlet fever; or diphtheria might coexist as a complication. He entirely agreed with Dr. Ashby as to the preliminary disturbance and irregular febrile conditions which were often seen during the incubation period of measles. As regarded the paroxysmal cough resembling pertussis and associated with influenza mentioned by Dr. Ashby, he had had no experience of it, but he thought that many kinds of cough in children were difficult to differentiate with certainty from pertussis. If, as had been asserted, there existed a bacillus of pertussis, the finding of this might assist in the diagnosis. He had great sympathy with Dr. Poynton over the outbreak of anomalous infectious disease he had been called upon to treat. It was often impossible to give a definite opinion on these cases. He held what might be called "the modern view" on the question of desquamation, and should not unduly prolong isolation on this account. As regarded measles andrötheln he thought the confidence a man placed in the infallibility of his diagnosis was often in inverse ratio to his experience. He thought that some cases of so-called "gastric fever" were undoubtedly cases of true typhoid. As regarded cases of so-called "fourth disease" he thought the point to elucidate was whether outbreaks of this actually occurred in patients who had already had undoubted scarlet fever. He personally believed the cases described by Dr. Dukes to be in reality scarlet fever. He thought that some enlargement of the posterior cervical glands could be observed in every one of the exanthemata.

## THE VALUE OF WIDAL'S SERUM REACTION IN THE DIAGNOSIS OF TYPHOID FEVER IN CHILDREN.

By J. H. THURSFIELD, M.A., M.D., M.R.C.P.,
Medical Registrar and Pathologist, Hospital for Sick Children, Great Ormond Street.

WIDAL'S serum reaction has been employed very extensively in all civilised countries in the diagnosis of typhoid fever, and though at first the value of the results obtained was impaired by the want of knowledge of the difficulties to be faced, it has now for some time been firmly established as an accurate and trustworthy means of recognising the disease. The degree of dilution of the blood serum to be employed, the persistence of the reaction after the disease is over, and various other similar questions still remain open for discussion. But, on the whole, I believe that it is now generally conceded that 95 per cent. to 97 per cent. of all cases of typhoid fever give the reaction at some time or other during the course of the disease. The percentage of failures, and the percentage of cases not of typhoid fever, which yet give the reaction, have been and still are steadily diminishing, as the various fallacies which are involved are pointed out.

But though the value of the test has now been recognised in the case of adults, it is otherwise with the typhoid fever of children. In the first place, statistics relating to children are very scanty; secondly, the clinical diagnosis of typhoid fever in children is often more difficult than in adults, and as a consequence the test is often misapplied; and, lastly, perhaps as a corollary of this, some authorities have maintained that a large number of cases of undoubted typhoid fever in children fail to give the reaction. For example, Dr. A. H. Wentworth, of the Harvard Medical School, states that he has failed to obtain the reaction in "quite a number of children," and goes on to say that "the cases in which the test failed were either mild or moderately severe, and in a number of cases other members of the family had typhoid at the same time."[1] My own experience during the last two years at the Hospital for Sick Children, Great Ormond Street, has been so different to that just quoted that it appeared to me to be worth while to discuss the question of the value of the reaction in children again.

I have had occasion to employ the test in rather more than 100 different cases. Of these 42 gave a positive reaction, while the remainder were negative, this latter group including examples of almost every febrile disease to which children are liable. I have employed the test among these 100 cases on about 150 occasions, so that I have in many instances repeated the test several times in one case. I may remark here that doubtful reactions have been met with only very seldom, and that in such instances I have always at once employed a different cultivation of the bacillus, and repeated the test, and have never found the doubtful result recur.

Before I consider these figures I must briefly describe the method I have employed. There are, I suppose, few tests in ordinary clinical use with so wide a divergence in the actual methods used. That which I have used is not a method of scientific accuracy, but fulfils roughly the conditions of dilution, which are recognised as necessary. I have employed a broth culture of the typhoid bacillus not more, and usually considerably less, than twenty-four hours old. This is made from a stock culture of the bacillus, which is from time to time renewed from a trustworthy source. I take a small quantity of the patient's blood in a sterile glass pipette, and dilute the blood in the pipette with an equal quantity of sterile broth. Then the pipette is placed in a centrifugal machine and the blood corpuscles separated. Then to one

platinum loopful of the diluted serum I add fifteen loopfuls of the broth culture of the typhoid organism on a cover slip, thus obtaining a dilution of 1 to 30. The cover slip is seated on the slide with paraffin to prevent evaporation, and examined at intervals till the end of an hour. If there is no clumping the reaction is said to be negative. I have, wherever possible, taken the precaution of doing a control test with the blood of a known typhoid patient who has previously given the reaction. I should add here that the time limit does not appear to me to be of great value, for my experience has been that if no clumping has occurred at the end of an hour there is none at the end of twenty-four or forty-eight hours, and in cases where the reaction has been positive the clumping has occurred within half an hour.

Of the 42 cases in which the reaction was positive, several were cases in which there would have been considerable difficulty in recognising the disease without the authority of the test. Thus, for example, the symptoms in one case were so slight that on the third day after admission, the sixteenth day of the illness, the temperature was normal, and the child quite well. The Widal reaction was, however, positive on the first day of admission, the fourteenth of the illness, and was fully justified by the occurrence a week later of a typical relapse with an eruption of rose spots. In another case the temperature reached normal on the tenth day of the illness, and convalescence was uninterrupted. Widal's test was, however, positive on the ninth day of the illness, and this result was supported by the fact that a younger sister was at the same time in the hospital with a fairly severe attack of typhoid. The patient herself also had an enlarged spleen and a few rose spots. On the whole, there was no positive result obtained in any case, which was not at least more like typhoid fever than any other disease, so that I feel justified in claiming for these cases that a positive result implied the diagnosis of typhoid.

Secondly, there was no case which clinically was an example of typhoid fever which failed to give a positive reaction. The majority of cases of typhoid at the Hospital for Sick Children are admitted about the middle of the second week of the illness, and therefore the reaction has usually been present on admission: in only two cases was the reaction absent on admission, one was on the fourth day. On the fifth day reaction was prompt and decisive. In the other case, which was undoubtedly one of typhoid, the reaction was obtained once only in the third week of the illness; negative results were obtained before and after the positive reaction.

Thus to sum up the results of these 42 cases of typhoid fever: all gave the reaction, 40 on admission, and one case alone gave negative results later than the first week of the illness. Next turning to the cases that were not typhoid fever: In the majority of instances the test was employed in order to exclude the possibility of overlooking a case of the disease, but in a few instances the diagnosis of typhoid fever was made, to be shaken by the occurrence of a negative result with the serum test, and finally disproved by the course of the disease or the opportunity of a *post-mortem* examination. Thus, to take an example: A child was admitted in the third week of an illness which had many points of resemblance to typhoid fever, and was treated as such. Widal's reaction was negative, and she rapidly improved and left the hospital in a fortnight. A month later she was admitted with precisely similar symptoms, and died on the twentieth day of tuberculous meningitis, a diagnosis confirmed by *post-mortem* examination. The list of diseases which gave a negative reaction included besides tuberculosis, pneumonia, posterior basic meningitis, rheumatism, gastritis, acute diarrhœa, tuberculous peritonitis, appendicitis, measles, and various other diseases. None of these ever showed any positive reaction. So far, then, if the smallness of the figures with which I am dealing permits of deductions, I should claim (1) that in children's disease a positive Widal reaction is trustworthy evidence of the presence of typhoid fever; (2) that a negative reaction later than the tenth day of an illness is strong, but not absolutely convincing evidence of the absence of typhoid fever; (3) that repeated negative reactions are trustworthy evidence that the case is not typhoid at all.

It will be seen that, so far from agreeing with Wentworth, my results indicate that the test is at least as reliable in children as in adults. But I believe it is even of greater value in children. In the first place one can generally exclude in children the occurrence of a previous attack of typhoid. In adults this has been in the past a frequent cause of mistakes, for the reaction sometimes lasts months or even years after an attack of the fever, and so a positive reaction is obtained where there is no typhoid fever present. This source of error is far less likely to be active in children. Secondly, judging from the few cases I have been able to test before the end of the first week, I should feel inclined to agreed with the conclusions of Wilson and Wesbrook[2] that the reaction occurs earlier in children than in adults. Of 6 cases tested within the first week all but 1 responded promptly and decisively. The one exception mentioned above gave a negative reaction on the fourth, and a positive on the fifth day. These 6 cases are the only ones which I have been able to examine within the limits of the first week. Wilson and Wesbrook, however, found the reaction in a large number of cases before the fifth day of the illness: in 1 case even on the first day. In adults, on the contrary, to quote Dr. Marsden in his paper in the *Lancet* last month,[3] "the serum reaction may remain indefinite or even negative for the first ten days or fortnight in a fair percentage of cases."

Again, there is among children a fever which, while strongly resembling typhoid fever, does not run the course nor present quite the symptoms of typhoid. This disease, whatever it is called, whether febricula, or simple continued fever, is sufficiently common to be recognised as one of the sources of error in the diagnosis of typhoid. It was formerly supposed that in many instances the disease was an abortive typhoid, and I think there can be no doubt that it is possible for typhoid fever in a child to run its entire course in which are examples of typhoid fever, and so to prevent the spread of the typhoid organisms. The use of Widal's serum reaction has, however, shown that few of these cases are true typhoid. In fact, it has introduced certainty where there was confusion, and promises to give even better results than have been already attained, when we have learnt more of the conditions which regulate it.

I have to thank the Senior Physicians at the Hospital for Sick Children—Dr. Lees, Dr. Penrose, and Dr. Garrod—for allowing me to make use of the cases in their respective wards.

References.

[1] *Trans. of Amer. Pædiat. Soc.*, vol. xi, 1899. [2] British Medical Journal, 1897, vol ii, p. 1774. [3] *Lancet*, July 13th, 1901, p. 68.

Dr. Caiger congratulated Dr. Thursfield on the favourable results he had arrived at. There seemed to be a general impression that Widal's reaction was not so reliable in children as in adults. Dr. Thursfield had put this to a scientific test under more exacting conditions than had hitherto been thought necessary.

## INTRAUTERINE RICKETS.

By F. C. Abbott, B.Sc., M.S., F.R.C.S.,

Surgeon, Evelina Hospital; Assistant Surgeon, St. Thomas's Hospital.

The case I am about to describe, and to illustrate by means of specimen, photographs, and skiagraphs was so typical of rickets that I think no one will doubt that the child suffered from that disease.

The child also folded up so accurately and exactly into its obvious intrauterine position, each of the many curves of its bones fitting over and so exactly correlating with the others, that I think you must also agree that they were caused by pressure during intrauterine life, pressure and constraint to which the child was subjected to a greater degree than the normal, owing to the fact of its being a twin, both twins being born viable at nearly full term.

Its intrauterine colleague, whom I also had the opportunity of examining, suffered from the same disease, though to a lesser degree. I regret that I have been unable to follow up the case of this other child, which was fairly healthy at the time I last saw it.

The conclusive cases of rickets *in utero*, if any, are still so few that I have felt it right to publish this case in full. There is no doubt that the bones were soft and impressionable *in utero*, and received impressions while there which have remained permanent. Equally no doubt, that the child had

rickets in a marked degree when it died at 14 months of age. The only remaining doubt is whether the disease which caused defective ossification and softening in fœtal life was the same as that from which it afterwards suffered, or whether this latter was superimposed. The mother is extremely definite that at birth the curves of the child's limbs were exactly the same both in character and degree as when I first saw her.

Many of these curves are the ones commonly associated with rickets, and usually explained as being due to muscular tractions, or to methods of progression and the support of the body weight.

It is interesting and suggestive to see that many of these curves can be produced entirely by intrauterine position, and this must at once raise the question whether these curves have not more often really commenced at this early period, and merely become more marked after birth.

The longitudinal chest groove for the arms to rest in, and the curve of the femora against the trunk, are instances in point. This latter was exactly the same curve as was noted in Mr. Makin's case (a baby of 14 days old). Some of the curves, on the other hand, are quite unusual, and can only be explained by the intrauterine folding of the child.

I rely especially, in this connection, on the curve of the lower end of the forearm with its convexity forwards and inwards, which brings the child's hand to rest back over the shoulder and on the curve of the right leg with its concavity forwards and outwards, across which concavity the left limb lay. These unusual curves at once caught the eye and were only satisfactorily explained on replacing the child in its fœtal posture, one which she very easily and naturally reassumed. The common talipes calcaneus of rickets can easily be explained in the same way.

The fusiform thickenings of the shafts which I thought I felt during life were similar to those described by Sir Thomas Barlow and Mr. Makins, and were explained by the latter as being rickety disease in the diaphyseal centre of ossification owing to the disease occurring at such an early period. As, however, the rickety changes are so much more in the line of the epiphyseal cartilage rather than in the epiphyseal centre itself, I do not think this explanation satisfactory but rather doubt the existence of these fusiform swellings, which certainly were not really present to any marked extent in my case though they appeared clinically to be so. There were no marked changes, either clinically or *post mortem*, in the liver, spleen and other internal organs.

The question of congenital syphilis must be considered as possibly responsible for the bony changes *in utero* and as a predisposing cause of the subsequent rickets.

The mother had eight times borne miscarriages or dead children, two of these, however, being twins to a second healthy child. Her other children, seven in number, were all full time and healthy. There was no direct history of syphilis, and careful examination of the present child and its male twin gave no single one of the usually accepted signs of congenital syphilis.

On the other hand, the entire absence of teeth, the large cranium, the pot-belly, the general kyphosis, and other general signs were all additional proofs of rickets.

I consider the present case as possibly the most conclusive yet published from the point of view of the curves being due to intrauterine pressure. This is, perhaps, because this child was a twin, and therefore subjected to a higher degree of pressure than the usual.

Sir Thomas Barlow[1] and Mr. Makins[2] have both described what I think must be allowed to be conclusive clinical cases, but in neither instance was a pathological examination made. Sir Thomas Barlow's case was seen at ten weeks, and there was a definite history of the bowed legs causing trouble at the birth. In his case like mine there was a history of greenstick fracture.

Mr. Makin's case was only 14 days old when seen by him. It did not, as mine did, present any unusual curves due to intrauterine pressure, and he rather dwells on the remarkable fact that intrauterine pressure can produce the curves usually ascribed to muscular action. In neither of these cases, however, was a *post-mortem* examination made, Sir Thomas Barlow's case living, while in the other an examination could not be obtained.

The other published cases that I have been able to find were either complicated by subperiosteal hæmorrhages, or were not free from the suspicion of congenital syphilis.

F. B. M., a female child, was 14 months old when first seen by me at the Evelina Hospital, and died while under my care as an in-patient a few weeks later. When admitted, she was extremely undersized and ill-developed, with enormous cranium and prominent eyes, toothless jaws, and deformed limbs, making together a painfully grotesque picture to look upon. Her length, when admitted, was only 21 inches, and she weighed 7 lbs. 6 oz., though 14 months old.

The cranium appeared large in proportion to the face, and the eyes were very prominent. The hair was scanty, dry, and brittle. The skull, as a whole, was not typical of rickets in its shape, and there were no frontal or parietal bosses. The anterior fontanelle was widely open, and measured 2½ inches long by an inch and a-half in width, with very thin and easily bendable edges. The posterior fontanelle was also slightly open, as was also the whole line of the sagittal suture, in which were several more widely open spots. The interfrontal suture was still open, and the bone at its edges could easily be bent. There was no heaping up of new bone along the suture lines. There was some cranio-tabes in the occipital bone, probably along the suture lines. The alveolar arches were badly developed, and not a single tooth had come through, nor were any imminent. There were no scars around lips nor at the angles of the mouth.

The chest showed a deep longitudinal groove on either side at the outer part of the line of rib cartilages, with prominence of the sternum and of the anterior parts of the cartilages. There was a very definite rickety rosary in front, also a well-marked posterior rosary at the line of the angles of the ribs.

The spine showed one large general posterior curve.

The abdomen was very full and prominent, and the wall bulged outward sharply from the everted lower chest wall. The lower edge of the liver was depressed but not more so than was accounted for by the shape of the chest. The spleen could not be felt at any time while the child was under observation. The alæ of the iliac bones were flattened, felt thickened, and could easily be bent like gutta-percha splinting.

The clavicle showed a marked increase of the normal curves, especially of the inner convexity, and from this prominence there was increased thickness of the whole of the inner half of the bone.

The right humerus had one general curve, the convexity of which was forwards and slightly outwards, its most prominent part being much below the deltoid insertion. The epiphyses were normal, but there appeared to be a central fusiform thickening.

The radius and ulna showed a great curvature in the lower third, the convexity of which was forward and slightly inward with a thickening at this point. The epiphyses were normal in size. The power of pronation was completely lost owing to mechanical reasons. The hand bones were normal.

The left upper extremity was approximately the same as the right, but the humeral curve was not so marked in its external bend. The radius and ulna, however, were even more sharply curved than on the opposite side, the radius having apparently been the subject of a greenstick fracture.

The upper extremities lay naturally doubled up by the side of the chest, the forearm flexed on the upper arm, the two together fitting into the groove on the chest here. The bony curves allowed the radius to fit back over the humerus with the hands resting on the shoulders.

*The Lower Extremities.*

The femora gave one long curve with its convexity forwards and outwards, and with apparently a fusiform swelling at its point of greater convexity. The left thigh was said to have been fractured, but this could not be definitely made out. These femoral curves exactly corresponded in shape and amount to the intrauterine position of the limbs against the abdominal wall.

The right leg showed a tremendous curve, with its concavity forwards and outwards; the fibula was flattened and almost disappeared at point of greatest concavity.

The curve of the left leg was in opposition to this, with convexity forwards and inwards, and exactly lay across and fitted over the opposite leg when these were placed in the intrauterine position on the abdomen. Apparent fusiform swellings were felt at the positions of the greatest curvature. The lower epiphyses of the tibiæ alone showed any palpable enlargement.

The feet were both in position of extreme varus, the inner and outer borders becoming absolutely the upper and lower respectively. They also assumed the position of calcaneus with unnatural ease. This corresponded to the intrauterine position of the feet against the abdominal wall, and the whole lower limbs packed up and fitted over each other and against the abdomen like a mechanical toy, every curve obviously corresponding to, and being caused by, the enforced position.

The child had always been weakly, often vomiting her food. She sweated profusely at night, and was prone to attacks of diarrhœa with very offensive stools. The bones were soft and malleable to an extreme degree, giving when handled an elastic feeling. All could be visibly bent, except the very strongest, as the femur and tibia, but including skull, pelvis, and all the arm bones.

*History.*—The child was one of twins, the last children of healthy parents. The mother altogether had had seven living children, as well as eight miscarriages. These included three pairs of twins, one of each of the two previous pairs had, however, been a "false conception" and born dead. All the children were living and well, except one which had died at eight months of whooping-cough. The present pair of twins, were, in the mother's opinion, three weeks premature. She was well when carrying them, and knows of nothing abnormal in her diet during the pregnancy. The boy was delivered first, and was born "doubled up," but the girl followed naturally, and her birth gave no special difficulty. The mother is very definite that the girl's legs were then "quite the same as they are now." Neither had either snuffles or rash. They have been brought up on cow's milk and Robinson's Food.

The boy child, her intrauterine colleague, is ludicrously like the girl, with similar prominent eyes.

He is backward, and makes no attempt to walk or stand at fourteen months. The head is large, somewhat square, and the anterior fontanelle is open, but not so wide as is the girl's. The posterior is closed. He has two teeth. The bones present the same softening, but not to so marked a degree as do the girl's; the forearm bones and pelvis are, however, quite malleable. The clavicles are nearly normal, the humeri show a slight outward curve at deltoid prominence. The radius and ulna show the same curve as in the girl, but it is not nearly so marked. Bending of ribs both anteriorly and posteriorly with longitudinal groove at side of sternum are also present. The femora show a slight antero-external curve, but the tibiæ and fibulæ are nearly straight, while the feet are inclined to talipes calcaneus. He sweats at night and is liable to diarrhœa.

The specimen, kindly prepared by Mr. Shattock, shows the whole of the bones of the left lower extremity, including the os innominatum, preserved in formalin. The colour has, I think, been well preserved, and the section cut through the great epiphyses at the knee-joint shows typically the characteristic appearances of rickets. The actual epiphyseal centres of ossification, the normal cartilage, and the successive layers of the epiphyseal line, with their typical colours, are shown with almost diagrammatic clearness. The bones when the soft parts had been cleaned from them could all be easily bent, and any part could be easily cut with the knife, cutting very much like gutta-percha used for splinting, except that in places it gave a gritty sensation when cut by the knife. A wedge cut from the ala of the ilium shows the enormous thickening of spongy bone in this position. Though the epiphyses are somewhat swollen there is but slight real enlargement of any of them.

Both the specimen and the skiagraphs show the apparent fusiform enlargements of the shafts at the points of greatest curvature, as felt during life, to have been to a large extent imaginary. This may equally have been the case in the instances recorded (Sir Thomas Barlow and Mr. Makins), since in neither case was a pathological examination of the bones obtained.

In my case specimens of bone were also taken from the skull, sternum, ribs, and clavicle, and all the specimens showed precisely the same characters, with typical rickety changes on microscopic examination. I do not think that anyone can doubt that at the time of its death the child was suffering from well-marked rickets, nor that the bony curves described were produced by pressure in a certain position *in utero*. It is, therefore, only open to us to allow that the child had rickets *in utero*, or to assume some antecedent condition to account for the softening of the bones at that time, and that the rickets supervened later. From a consideration of the whole case, and allowing for the history of miscarriages, and of the condition of the bones as examined after death, and taking into account the rickety changes shown in the ilium as well as in the shafts and epiphyses of the long bones, I am not inclined to accept this view.

I therefore look on the case as one of true rickets *in utero*, with marked bony curves produced by pressure while *in utero*, and exactly corresponding to its position while there. I also think that its twin showed the same changes to a lesser degree, though the proof that it suffered *in utero* is not so absolute.

REFERENCES.

[1] *Clin. Soc. Trans.*, vol. xxi, p. 290. [2] *St. Thomas's Hospital Reports*, vol. xxiii, p. 121.

Dr. Ashby referred to a case of an infant that was brought to hospital when 14 days old with five fractures of the long bones. There was marked cranio-tabes and typical deformed rickety chest. The infant was admitted under Mr. Joseph Collier's care, and the fractures readily joined up though a sixth fracture occurred while in hospital. When seen nine months after, the infant had two teeth and there was no sign of rickets. Excluding cases of achondroplasia, there were a fair number of cases recorded of so-called intrauterine rickets, but, as far as he knew, very few that had been examined pathologically shortly after birth. He had some doubts as to whether such cases were true rickets. He thought possibly they were really cases of osteoporosis, the result of malnutrition during intrauterine life. They resembled the cases of osteoporosis found in puppies fed on food in which there was a deficient amount of lime-salts. In Mr. Abbott's case there was no doubt it had severe rickets at the time of death, but it was not absolutely certain it was a case of intrauterine rickets.

## RADICAL CURE OF INGUINAL HERNIA IN CHILDREN.

By Harold J. Stiles, F.R.C.S.Edin.,

Surgeon to the Royal Edinburgh Hospital for Sick Children.

During the past three years that I have had charge of the surgical wards of the Royal Edinburgh Hospital for Sick Children, I have operated upon rather more than 100 herniæ in children. This communication is based upon the experience derived from these cases. I do not propose to enter in detail into the vexed question of trusses *versus* operation in the treatment of hernia in children. The subject was discussed at the meeting of this Association held at Portsmouth only two years ago. Our President to-day (Mr. Eve) took an important part in that discussion.[1] In the course of his remarks he expressed the opinion that, in a large proportion of hospital cases, the treatment by truss was unsatisfactory, owing to the carelessness and ignorance of the parents. That has been my experience also. The inconvenience connected with the truss treatment, its long duration, and its uncertainty in bringing about obliteration of the funicular process are weighty objections against it. If it be the case that, in experienced hands, the operative treatment of hernia in children is practically free from risk, that it is not followed by recurrence, and that it is unnecessary for the patient to wear any apparatus after the operation, then it seems to me that the surgeon is quite justified in taking the responsibility of recommending it. As illustrating the safety of the operation I have only to mention that in upwards of 500 hernia operations in children Coley, of New York, has only had one death, and that from double pneumonia following ether. Personally, I have not been so fortunate; I have had three deaths, which will be referred to again later on. In private practice, if the claims of the two methods of treatment be placed fairly before the parents, my experience is that the decision will generally be in favour of operation. Forty per cent. of the cases I have operated upon have never worn a truss.

Much difference of opinion exists in regard to the most suitable age at which to operate. Surgeons who are in favour of operation advise that it should not be performed until the child is at least 1 year old. The majority, perhaps, prefer to delay until after teething, while others advise that it should not be undertaken until the child is 4 or 5 years of age. It is true that operation is less frequently called for in young infants, because in them there is a natural tendency for the funicular process to close, and the application of a truss has, therefore, more chance of bringing about a cure. Should there be any difficulty, however, in keeping up the hernia, it has been my practice to proceed to operation even although the child be only a few months old. An infant is more easily managed than a child who has just begun to run about, and the after-treatment of the wound is not more difficult in the former than in the latter; moreover, my experience is that infants stand the operation remarkably well. Of my first 100 cases, I find that the operation was performed in 14 under 6 months, in 9 between the sixth and twelfth month, in 56 during the second and third year, and in 21 above the third year. I cannot agree with Mr. Langton's statement that "the anatomical conditions of the structures concerned in inguinal hernia are not favourable for effective suturing in early life, for there is practically no canal, the aperture of primary exit of the hernia being almost opposite the external ring. The muscles and other structures also are so soft and ill-developed as to afford very insufficient support to suturing the boundaries of the canal." I maintain, on the contrary, that the anatomy of the parts concerned in hernia in children is such that the radical operation is not only simpler, but also less likely to be followed by recurrence than in the adult.

As has been well pointed out by Russell,[2] the sac, that is to say the partially or completely patent processus vaginalis, is pre-formed, and is the essential factor in the etiology of the hernia. It follows, therefore, that the essential step in the operation in the child is the isolation and removal of the patent funicular process, its neck being ligatured at the level of the internal ring. The very fact that the canal in children is so short, and that the internal ring is almost

opposite the external ring, enables the operator by dragging down the isolated funicular process to apply a ligature to the neck without material injury to the aponeurotic and muscular structures of the abdominal wall. Russell prefers to limit the operation simply to the isolation, ligature, and excision of the funicular process. He is careful to avoid incising the anterior wall of the canal, and maintains that the application of sutures to the canal is unnecessary "no matter how large the hernia or how wide may appear to be the opening of the canal." In his hands recurrence has not so far followed this simple procedure. Personally, I prefer to introduce one or two sutures according to the patency of the canal, as this can be done without damaging the sphincter-like action of the lower fibres of the internal oblique and tranversalis muscles. I have never seen any harm produced by the introduction of sutures. It seems to me that by reducing the size of the external abdominal ring and including the conjoined tendon in the suture the liability to the development of an acquired hernia in after life is diminished.

For the sake of simplicity, the few statistics which will be given have reference to my first hundred cases. Of these 95 were males and 5 females. As regards the side affected, it is interesting to note that 72 were right sides, 20 left sides, and 8 double. The marked preponderance of right-sided herniæ in children is accounted for mainly by the later closure of the funicular process on that side. As regards the age at which the hernia was first noticed, it was found that in 19 it was present at birth, in 45 it appeared before the fourth month, and in 19 between the fourth and twelfth month. In other words, in 83 per cent. of the cases the hernia made its appearance during the first year of life.

By congenital hernia, we do not mean to imply that the child is born with a rupture. The term "congenital" refers to the fact that the sac is present at birth, and owes its origin to non-closure of the funicular process of peritoneum According to Sachs, the funicular process is completely or partially open in 59 per cent. of males under 4 months old. It is evident, therefore, that in only a small portion of these is a hernia developed. The exact type of sac in the cases operated on was, unfortunately, not noted in some of the earlier cases. Out of the 78 cases in which it was recorded, it is interesting to observe that in 72 the sac did not communicate with the tunica vaginalis. It follows, therefore, that in by far the commonest form of congenital hernia the sac resembles that of the so-called acquired oblique inguinal hernia of the adult. It is more than probable, therefore, that the majority—according to Russell, "all"—oblique inguinal herniæ which are met with in adolescents and young adults are really congenital. Coley, as a result of a careful inquiry into the histories of 15,000 cases of inguinal hernia in adults, finds that one-third were ruptured during childhood. These data afford a strong argument in favour of operation during childhood.

The operation I prefer for the radical cure of inguinal hernia in children is practically Mitchell Banks's operation. There can be no doubt as to the value of Bassini's operation in adults; in children, however, I entirely agree with those surgeons who advise as little interference as possible with the anterior wall of the canal. The steps of the operation as I am in the habit of performing it are:

1. Exposure of the cord along with its covering and the pillars of the ring.
2. Isolation, ligature, and excision of the funicular process.
3. Closure of the ring.
4. Suture of the wound.

1. The incision is made a little above and parallel to the inner half of Poupart's ligament. It should not be carried down into the scrotum or too near the penis, otherwise there will be difficulty in keeping the lower end of the wound covered and at the same time leaving the penis free. The upper and lower flaps are to be slightly reflected so as to freely expose the inner pillar and the groove between Poupart's ligament and the fascia lata of the thigh.

2. After freeing the cord along with its coverings, the latter are caught up laterally at the lower part of the wound by two pair of forceps, which are held by the assistant in such a way as to stretch out the coverings. These are then carefully divided, first, the intercolumnar and cremasteric fasciæ, the muscular fibres of the latter being easily recognisable; next, a thin white layer, the infundibuliform fascia; and beneath it the peritoneum of the funicular process. Now comes the most important stage of the operation, and the only one which presents any difficulty, namely, the isolation of the sac, that is to say, the funicular process. When a truss has not been worn, the infundibuliform fascia can, with a little care, be separated from the funicular process, to which are adherent the spermatic vessels and the vas deferens. The vessels lie in a bundle to the outer side of the sac, while the vas, which is rather more adherent, lies more posteriorly. These structures are first detached towards the fundus of the funicular process, which is then grasped by a pair of forceps and pulled downwards so that their separation may be continued upwards as far as the internal abdominal ring. The neck of the sac is now transfixed, ligatured with catgut, the sac itself being cut away. It is quite unnecessary to suture the stump to the muscles of the abdominal wall above the level of the internal ring. The necessity for slitting up the neck of the sac practically never arises except in some cases of strangulated hernia; it should be preserved intact at the seat of ligature. An opening may be made into the lower part of the sac in order that the surgeon may make sure that in ligaturing the sac he does not nip the bowel, or include a piece of omentum, or a portion of the wall of the bladder. When the coverings of the hernia have become thickened and adherent, a condition generally brought about by the pressure of a badly-fitting truss, considerable difficulty may be experienced in isolating the sac and at the same time avoiding injury to the spermatic vessels and vas deferens. In these cases it is often an advantage to open more freely into the sac, and to strip it from the other coverings. When the hernia is of comparatively recent standing, and when no truss has been worn, the sac is generally so delicate and transparent that there is no necessity to open it at all; the operation then becomes entirely extra-peritoneal.

3. The suture, or sutures, are passed through the inner pillar and conjoined tendon on the inner side and through Poupart's ligament on the outer side, care being taken to leave room for the cord. For passing the suture, I would like to draw attention to the advantage of an American instrument, known as the Cleveland needle, over the Macewen needle or its modifications. I am indebted to my friend, Dr. Walker, of St. John's, New Brunswick, for bringing this very useful instrument to my notice. For the sutures I prefer catgut which has been prepared by boiling in superheated alcohol according to Jellet's modification of Fowler's method.

4. For closing the wound I prefer an interrupted to a continuous suture, as the former enables one to dispense with drainage, which is frequently necessary if the latter be used. As a dressing I have employed both the collodion method and the application of an ordinary gauze dressing fixed by a bandage. In the hands of a good nurse I prefer the latter, on account of the accumulation of exudation which sometimes occurs beneath the sealed wound. If a spica bandage be carefully applied so as to completely cover the wound, and at the same time leave the penis and scrotum free, a good nurse should have no difficulty in preventing the dressings from being contaminated by the urine. Boracic powder should be freely dusted in the neighbourhood of the genitals. In infants all dressings may be dispensed with on the second or third day and the wound thickly dusted with boracic powder, or sealed with collodion.

In the case of an infant, after three or four days the child need not be kept constantly in its crib; it may with safety be nursed or carried about as usual. A child who has learned to walk should be kept off its feet for three weeks.

Before concluding let me summarise the more important clinical facts to be gathered from a study of this series of one hundred cases. Eighty-six were easily reducible, and in many of these the hernia remained reduced without a truss, provided the child was kept in bed. Even when the hernia is not down it is, I think, always possible to determine which is the affected side. By carefully manipulating the cord on the two sides, the empty sac may be distinctly felt when the constituents of the cord are rolled between the finger and thumb. This is a point of importance, more especially in cases in which the hernia does not happen to have been

down between the date of admission to hospital and the time of operation.

Out of the 7 cases which were admitted as irreducible and possibly strangulated 4 became spontaneously reduced within a few hours of admission, even although taxis had failed before the child was sent to hospital. In one of these cases I proceeded to operation, although the hernia had become reduced during or just before the administration of the anæsthetic. The operation was a simple one and of short duration. During the night there was frequent vomiting, and the child became collapsed and died the following morning. At the *post-mortem* examination about 4 inches of small intestine were found to be very severely bruised, and there was extensive extravasation of blood into the adjacent mesentery. There can be no doubt that the taxis was responsible for this condition. In another case, in which taxis had been employed under a anæsthetic before admission, severe bruising of the coverings was discovered at the operation. As a result of this experience I have resolved, in similar circumstances, to delay operating for the hernia until sufficient time has elapsed to enable one to ascertain if any harm has been produced by the taxis. I have referred specially to these cases of spontaneous reduction after taxis in the hope of emphasising the dangers, especially in children, associated with the undue use of taxis under an anæsthetic. If gentle manipulation fails to reduce the hernia the child may be given an opiate, and either an icebag or hot fomentations should be applied to the part; within a few hours it will generally be found that the hernia has become spontaneously reduced. Of the three remaining irreducible cases two were cæcal herniæ, and in one the omentum was adherent.

Most authorities refer to the rarity of strangulated hernia in children. This condition was met with in 7 out of the 100 cases. The ages of the children in whom it occurred were 2 weeks, 5 weeks, 12 weeks, 11 months, 12 months, and 18 months respectively, thus bearing out the general experience that strangulation in children generally occurs in infancy. In 4 out of the 7 the bowel became strangulated on the first appearance of the hernia. Fortunately, strangulation is a gradual process in children, so that there is ample time to arrive at a diagnosis and to afford relief by operation before the bowel has become gangrenous. In these 7 cases, all of which recovered, it was deemed safe to return the bowel; in 1 case, however, I considered it advisable to invert a portion of the lumen of the gut. The constriction may be situated either at the external abdominal ring, or at the neck of the sac; in the latter case it is necessary to divide the anterior wall of the inguinal canal, and it is often impossible to preserve the neck of the sac intact. It is in these circumstances that the method of radical cure introduced by Bassini should be performed.

Of cæcal herniæ there were 7. They all had these characters in common, namely, that they appeared within the first few weeks of life, that relatively to the other herniæ they were large, had a wide neck, and were difficult to keep up with a truss. In all of them the sac was complete, and the cæcum was free and completely reducible. Two were irreducible at the time of operation, and in at least 4 the appendix could be palpated through the scrotum. In 4 it was deemed advisable to remove the appendix, either on account of its unusual length or of some swelling or induration towards its apex.

In 3 cases the sac was found to be tuberculous In none of these had there been any suspicion of tuberculous peritonitis previous to the operation, but on examining the abdomen while the child was still under choloform enlarged glands could be made out in each case. In 1 of the cases about 10 ounces of fluid were evacuated; a tuberculous sinus resulted, but healed in the course of six weeks. When the sac is tuberculous the abdomen should not be freely opened in the region of the inguinal canal. Should the disease advance laparotomy may be performed at a future date.

As regards recurrence, my cases have been too recently operated on to enable me to give personal statistics of any value. At present I am only aware of 2 cases having recurred—the one a strangulated hernia in which the structures at the neck of the sac had to be freely divided before the bowel could be returned, the other a child with epispadias, in whom there was also separation of the pubes and imperfect development of the muscles of the abdominal wall.

Lastly, with regard to the three deaths. One has been already sufficiently referred to; of the remaining two, one was that of an infant, aged 18 months, who died thirty-six hours after operation. No *post-mortem* examination was allowed. It is possible that the operation may have been the direct cause of death, but it is only fair to mention that there was a severe epidemic of influenza in the wards at the time. The third case was that of a girl, aged 4½ years, who suffered from a small reducible, uncomplicated inguinal hernia. The operation was a very simple one. Death took place on the third day, the patient having developed acute jaundice and suppression of urine. The wound remained perfectly healthy. At the *post-mortem* examination there were no traces of peritonitis. There was advanced fatty degeneration of the liver; the kidneys were intensely congested; the spleen was practically normal. At first I thought that death might possibly have been due to acute septicæmia, but, from what I have since seen, I am satisfied we had to do with one of those cases of chronic chloroform poisoning such as Guthrie has shown may occur in children who suffer from advanced fatty degeneration of the liver, a condition which, unfortunately, cannot be diagnosed before operation.

REFERENCES.

[1] British Medical Journal, August 19th, 1899, p. 472. [2] *Lancet*, November 18th, 1899, and October 20th, 1900. [3] *Ibid.*, Aug. 8th, 1896. [4] *Ibid.*, January 27th, 1894, and February 3rd, 1894.

Mr. W. McAdam Eccles (London) said the paper that Mr. Stiles had read was one of extreme importance, seeing that it was the record of cases the publication of which must materially increase their knowledge of the subject. With regard to the treatment of hernia in infants and young children, definite facts as to the etiology of the protrusion were of the utmost importance. The patent *processus vaginalis* was the predisposing factor in these cases, but there were several strongly acting exciting causes. Improper diet, and its consequent enteritis, pulmonary troubles, and possibly in a certain number of cases phimosis, played a large part in the production of so-called congenital hernia. It was true that a considerable proportion, probably three-quarters, of these herniæ occurred in children under 1 year of age. If this was so, and operation was to be postponed in the majority of instances until the patient was over 12 months, should nothing be done in the meantime for the treatment of the hernia? It seemed to him that it was only rational that a properly constructed and well-fitting truss (and such could be obtained) should be applied, and the exciting causes of the protrusion removed, and that much good would result even if a subsequent operation was not avoided. Undoubtedly in children whose herniæ had not disappeared by the age of 2 to 3 years, operation was frequently indicated. With regard to this, the simpler the proceeding in the ordinary small protrusion the better. Incision of the anterior wall of the canal was usually to be avoided, and certainly the division of any muscular fibres. He would always open the sac, but not as high up as the site of the deep ring. He always tied the neck with fine aseptic silk, and had never had reason to regret this practice. He did not think in the simple cases any deep sutures were advisable. With regard to cases of strangulation he believed that reduction could generally be brought about without resort to taxis or operation by inversion and time. He agreed that the operative results on strangulated cases were not so satisfactory as those in which such a condition did not exist. If the appendix was in the sac he believed it was always right to remove it. He was interested in hearing of the large proportion of cases in which Mr. Stiles had found a tuberculous infection of the hernial sac. He had met with the same condition, and thought that it indicated that peritoneal tuberculosis was sometimes a factor in the causation of hernia. In most of such cases an eminently satisfactory result followed operation, namely, a cure of the hernia and a disappearance of the tubercle. A hyperpyrexia without apparent cause was sometimes a reason for anxiety after a radical operation. He considered that the application of a collodion dressing was best, and that the after-treatment was of the utmost importance, together with proper nursing, proper diet, and absolute cleanliness. He thought that ten days to a fortnight was sufficiently long to keep the patient on his or her back. He

ventured to hope that careful dissection and investigation of any case in which death should at any time unfortunately result after a radical operation would further enhance the knowledge of the process of cure.

Mr. C. FIRMIN CUTHBERT (Gloucester) said that he personally agreed with all that Mr. Stiles had said with regard to operation in cases of hernia. Trusses might be very valuable when properly applied, but in most out-patient departments this could not be done. He found it of great advantage in children to put on a spica bandage for some days previous to the operation in order to accustom the child to the constraint of a dressing.

Dr. E. MANSEL SYMPSON (Lincoln) said that if the child was under a year old, and phimosis existed, he always made it a point to remove the phimosis before the time came for operation.

Mr. ALEXANDER HUGH FERGUSON (Chicago) said that the indications he usually laid down for operating on hernia in infants were (1) when the hernia was colossal; (2) when the hernia was unmanageable by a truss, and was increasing; (3) when strangulated. In cases in which the herniæ was retained by a truss he left them alone. If a rupture still existed when the child began to walk then he recommended an operation. He wished to say a few words regarding other causes of hernia, and relating to deficiencies of the structures forming the abdominal wall in the inguinal region. The non-closure of the funicular process had for a long time been known as the principal local cause of congenital hernia of the oblique inguinal variety. The internal oblique muscle deserved the attention of the profession as a cause of hernia. In the normal abdomen it was the proper and only active guardian of the internal ring. Its normal orifice in the male at Poupart's ligament was from a little more than half its internal aspect from above downwards. In the female this origin at Poupart's ligament was two-thirds, hence one reason why oblique inguinal hernia was more common in the male. In over 200 cases of his own and in about 500 operated on by other surgeons the origin of the internal oblique from Poupart's ligament was noticed to be deficient. In all his own cases accurate measurements had been made during the operation, and he had been surprised to notice that the origin of the internal oblique muscle was deficient more or less in every instance, and sometimes deficient as high up as the anterior superior spine. In this connection his assistant had made dissections on 50 cadavers under his direction. Out of this number, 2 male adult and 2 male infant cadavers had hernia, and the deficient origin of the internal oblique was verified. But the most important observations and measurements were those he had made while operating for radical cure. From the facts established as to the deficient origin of the internal oblique muscle, his operation of radical cure had been devised. It consisted in (1) dealing with the sac, dissecting it from surrounding structures, and ligaturing it high up after always opening it; (2) lessening the internal ring by putting a few sutures of finest catgut in the transversalis fascia above the cord; (3) stitching the internal oblique muscle to the internal surface of Poupart's ligament to at least two-thirds of its length from above downwards with fine chromoform catgut; (4) suturing the aponeurosis of the external oblique; (5) coapting the skin in the usual manner. This operation had the advantage of leaving all the structures where they naturally belonged, and he had yet to see a relapse, although he had offered a reward of $10 for every case that returned.

Mr. FREDERIC EVE said that, in his experience, the operation for hernia was very well borne by young children. He had operated on 29 children under 10 years of age: 17 of these had been under 2 years of age, and 5 under 1 year. He never hesitated to operate if the case was urgent, otherwise he waited until the child was 1 year old. In 18 he had operated by closure of the aponeurosis of the external oblique. In 2 he he had used Bassini's method. He reserved this latter operation for cases in which the canal was large and the protrusion great. Of these cases, only 1 recurred. For a long time he had used kangaroo tendon; but he found it was too rapidly absorbed, and he now used silk. Funicular hernia was by far the most common in children. Adults would probably be found previously to have suffered from congenital hernia.

REPLY.

Mr. H. J. STILES said in reply he was glad to find his colleagues in agreement with him on almost every point. He agreed with Mr. Eccles that there were various etiological factors in the production of hernia, especially diarrhœa and whooping-cough. It was right to remove these causes whenever possible, but among the classes from which the ordinary hospital out-patients came it was not always possible. If these complications could not be corrected there was no advantage in delay. He had tried worsted trusses, but had given them up as useless. He preferred catgut sutures. As regarded opening the sac, there were cases in which it was not necessary. It was often justifiable to remove the appendix, and he had done it himself in half his cases. He had had trouble with collodion once or twice owing to an accumulation of the exudation. He would keep a child of 2 or 3 years in bed for about three weeks after operation. He agreed with Mr. Cuthbert that it was a good plan to train children for operation, and he sometimes put a child into a double long splint for a few days before the operation. He thought a cause of the high temperatures after operation that had been mentioned by other speakers was the use of antiseptics, and Kocher had pointed this out. For his own part he only used asepsis. He thought the slitting-up of the external ring advocated by Mr. Eve could not be necessary in the child. He was much interested in Mr. Ferguson's remarks upon the external oblique muscle. In the child this muscle was often very well developed; indeed, it was possible to have too much of it in operating.

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## TWO CASES OF CHRONIC HYDROCEPHALUS IN INFANTS TREATED BY TAPPING AND BY THE INTRODUCTION OF ASEPTIC AIR IN THE PLACE OF THE FLUID.

BY

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THE induction of "artificial pneumocephalus," which was resorted to in the following cases, may lead to further developments in the treatment of chronic hydrocephalus. At any rate, the method is worth putting on record in connection with the relief which it afforded to some of the symptoms, and with the considerable reduction in the size of the head which was obtained in one of the cases.

Tapping the ventricles by means of a fine trocar has been carried out by various observers, and many years ago by one of us, but only with partial and temporary benefit. The intracranial pressure is relieved by the escape of a certain amount of fluid, but as the flow must stop as soon as the membranous portions of the cranium have ceased to be overstretched, any further reduction of the cranial capacity can only be effected by some external pressure such as that of an elastic bandage, which has practical objections. As a fact, the bulk of the fluid remains within the ventricles.

We therefore determined to modify the old operation in such a way as to obtain a complete evacuation of the fluid by allowing aseptic air to take its place. For this purpose, in addition to the Southey's cannula and indiarubber tube acting as drain, a second Southey's cannula was provided with a sterilised indiarubber tube, the free end of which was connected with the nozzle of a small glass syringe from which the piston had been removed and the broad end of which was plugged with cotton wool after sterilisation. The two trochars were then ready for introduction into the fontanelle with all antiseptic precautions, and with careful avoidance of the vicinity of the sinus, the site for the outflow puncture being selected at a short distance below that for the air supply, and too great a rapidity of outflow being guarded against by a regulating small screw clip such as is used for feeding bottles.

The operation planned on these lines was successfully carried out with the results anticipated, namely, a considerable output of fluid, a considerable reduction in the size of the head, and the cessation of the pressure symptoms for the relief of which the tapping had been undertaken.

CASE I.—A male infant, C.M., aged 3⅝ months, was admitted on January 5th, 1901, into St. George's Hospital, with a large head, but no history of fits or meningitis. The head was rather large at birth, and slightly delayed delivery. It seems to have grown steadily; and during three weeks' attendance in the out-patient department its circumference increased from 21½ to 22 inches. On admission the child, otherwise healthy, but helpless owing to the weight of the head, presented the advanced features of hydrocephalus—an expanded cranium, a diminutive triangular face, a flattened and broadened root of nose, shortened and stretched upper eyelids, depressed and rolling eyeballs with some nystagmus, all the cranial bones separated, and an anterior fontanelle measuring 8 inches transversely. With the electric light the skull was found to be remarkably translucent. On January 7th lumbar puncture was performed by Dr. S. Vere Pearson, but only 2 ounces of fluid were obtained in the course of twenty-four hours. The mother being anxious for some effectual treatment the operation of "artificial pneumocephalus" was planned and carried out, and on January 25th it was skilfully performed by Dr. S. Vere Pearson, acting under the directions and with the assistance of one of us. The tubes were removed after remaining *in situ* twenty-six hours, whilst a little fluid was still escaping. The total output was 42 ounces of faintly opalescent, faintly albuminous, bacteriologically sterile fluid of specific gravity 1004. There was marked collapse due to the rapidity of the outflow at first, and a temporary rise to 101° F., together with some irritability: but the general effect of the operation was decidedly favourable, as shown by the relief of the screaming, the diminution of the rigidity, and the cessation of the vomiting, and there were no symptoms of meningitis.

Notwithstanding the admission of air, as shown by tympanitic resonance of the whole head, the size of the head was greatly reduced, the bones over-riding freely, the fontanelles becoming depressed and the integuments wrinkled.

The measurements were as follows:

| | Before Operation. | After Operation. | Decrease. |
|---|---|---|---|
| | Inches. | Inches. | Inches. |
| Maximum circumference ... | 22½ | 20 | 2½ |
| Occiput to glabella ... ... | 15½ | 13¾ | 1¾ |
| Mastoid to mastoid ... ... | 14½ | 12 | 2½ |

One of the results of the operation was that the translucency of the head was almost entirely lost except at the vertex where the longitudinal sinus was still plainly outlined. For a few days moderate pressure was applied by means of elastic webbing, but this method of treatment was of doubtful benefit, and was not persevered with.

On February 2nd, the head being still tympanitic, but having largely refilled with fluid, the operation was repeated in a similar way. Twenty-eight ounces were gradually drawn off in seven hours. This fluid was highly sanious in colour until the red corpuscles subsided, when the supernatant part was of a rich serous yellow. The specific gravity was 1010, and the albuminous coagulate on boiling amounted to a heavy flocculent precipitate. The fluid was still sterile.

This time the child became somewhat blanched and very quiet. The pulse and respiration were irregular for a few days, after which there was apparently some meningeal irritation, as shown by slightly increased rigidity of the neck and tonic flexor spasm of the limbs.

On February 7th definite left facial paralysis was noticed, which was subsequently recovered from completely. The fluid reaccumulated again with considerable rapidity, although the head remained almost universally tympanitic, and on February 22nd the operation was performed for the third time. Fifty ounces were drawn off in ten hours. The fluid was faintly sanious, specific gravity 1008, and still sterile.

This was followed by more constitutional disturbance. There was active febrile movement (the temperature rising once to 104°) on the third and fifth days after the operation. In addition to the facial paralysis, an external squint of the right eye made its appearance. The child, however, recovered to a great extent, losing both facial paralysis and squint, though not altogether losing its irritability nor the rigidity of neck and limbs.

The fourth operation, on March 18th, was well borne, and for the first time it was considered justifiable to completely empty the head. Twenty ounces of clear fluid, of specific gravity 1011, were obtained in the course of thirteen hours and a-half. The after-symptoms were far slighter than on previous occasions. After this there was a notable improvement as regards the rate at which the head refilled.

The tympanites disappeared very slowly, and was not finally gone till April 29th, an interval of forty-one days. The head, however, steadily enlarged, and on May 20th the measurements were: Maximum circumference, 20½ ins.; occiput to glabella, 12¾ ins.; mastoid to mastoid, 13 ins. The general condition of the child was now fairly good; it was gaining flesh, and weighed 13⅝ lbs.

On May 21st the operation was performed for the fifth time, Mr. A. S. Morley taking the place of Dr. Pearson. The details were precisely as before, except that the cannula connected with the air supply was inserted before the other, it being thought that by this means the entrance of air would be further facilitated. This result appeared to be obtained, for the head was markedly tympanitic three-quarters of an hour after the commencement of the operation, and there was considerably less falling in of the parietes than on previous occasions. The tubes were left in throughout the night, and the head was again completely emptied. The fluid amounted to 42 ozs., and was quite clear, of pale straw colour, and of specific gravity 1010. Some vomiting occurred as the immediate effect of the operation, but beyond this there were no bad symptoms.

A sixth tapping was made on June 8th for the relief of the constant screaming. The tubes were left in for eight hours and a half with a total output of 19 ozs. slightly sanguineous fluid. No complications followed except some vomiting the same evening, and a slight rise in temperature two days later. As on previous occasions the screaming ceased and the child was obviously made comfortable.

The seventh tapping, which was preceded by a period of several days discomfort and screaming, was carried out by Mr. Morley on June 22nd in the same manner and with the same results as the previous ones—the child being pacified and apparently comforted by the operation, and remaining comfortable until reaccumulation took place again. On this occasion much fluid was removed (48 ounces collected), and the two tubes were left *in situ* for a longer time (42 hours) than ever before. After this tapping we observed that the child moved his head rather more freely on the pillow, without, however, making any attempt to raise it. But when the body was held vertical out of the bed or supported in the sitting posture, the infant was able to hold up its head without assistance. The aspect, general health, appetite, and nutrition continued excellent, but the legs and arms remained slightly rigid and semi-flexed, and the infant remained motionless and passive, giving no evidence of any improvement in intelligence. The first tooth (left lower central incisor) was cut about this time, and the temperature was a little unsteady.

About July 10th the head had again become exceedingly heavy, and its tympanitic area much reduced. On July 14th Mr. P. L. Mummery operated skilfully under the directions of one of us, and some modifications were made in the procedure, of which it is only necessary to mention those intended to favour the complete evacuation of the fluid. When the latter had practically ceased to flow on the second day, the foot of the bed was slightly raised and the head inclined laterally so as to enable the end of the cannula to reach the remnant of the fluid. Dr. Fenton, who was present at the time of the operation, suggested utilising as a suctional pump a piece of broader tubing which had been inserted in the length of the ordinary outflow tube. This method was applied with effect, particularly when the admixture of air bubbles with the escaping fluid showed that mere siphonage would no longer serve. The same device was used finally to draw a quantity of air through the two tubes and the intraventricular space. By this means the considerable drawing in and crumpling of the fontanelle, which had resulted on former occasions, perhaps from an insufficient air supply, were lessened.

The ventricles were probably relieved of the same amount (about 48 ounces), as on the previous occasion but only 28 ounces were collected. The specific gravity was 1010, and the fluid absolutely bright, of light straw colour. The tubes were left in thirty hours. This seemed to be the most successful of all the tappings, inasmuch as besides being quieted and comforted, the infant seemed to lose a little of the rigidity of the limbs at the time of the operation and subsequently. No complication followed.

The internal treatment in this case was limited to the administration of a few grains of bromide occasionally, and of small doses of protargol (½ gr. every six hours) from March 15th to April 3rd; and it remains an open question whether this had any influence in slowing the rate of the transudation during the latter period of observation.

*Summary of the Operations.*—Eight tappings were performed between January 25th and July 15th. The table shows that the largest amount collected was 50 ounces, and this was probably the measure of the ventricular capacity in this case.

TABLE.

| Tappings | Ounces Collected. | Sp. Gr. | Colour, etc. | Albumen. | Number of Hours Tubes Left *in situ*. |
|---|---|---|---|---|---|
| Jan. 25 ... | 42 | 1004 | Straw, sterile | Little | 26 |
| Feb. 2 ... | 28 | 1010 | Blood-tinged, sterile | Abundant | 7 |
| Feb. 22 ... | 50 | 1008 | Slightly blood-tinged, sterile | ,, | 10 |
| March 18 | 20 | 1011 | Clear | ,, | 13½ |
| May 21 ... | 42 | 1010 | Straw | ,, | 19 about |
| June 8 ... | 19 | — | Slightly bloody | ,, | 8½ |
| June 22... | 48 | 1010 | Clear | ,, | 42 |
| July 14 ... | 28 (more evacuated) | 1010 | Clear straw | ,, | 30 |

Special attention is drawn to the fact that, after the first tapping, the fluid lost its cerebro-spinal character, and assumed rather the character of serum, the specific gravity rising, and with it the amount of albumen. The slight admixture of blood which sometimes occurred must have been due to the puncture of some vein.

*Complications, etc.: Effect on the Temperature.*—All the operations were free from septic complications, and after three of them there was no marked pyrexia. The ultimate effect, well shown on the first two occasions, was that the temperature, which had been unsteady, became, like the other functions, much more regular than previously. But, after the other tappings, transient pyrexia occurred, rising after the third to 104° as a maximum, whilst oscillations of 1½° continued until the middle of March. The tapping of March 18th raised the temperature to 101°, but this subsequently remained normal and subnormal, with an unexplained elevation between April 3rd and 7th, until the following operation on May 21st. This time there was no elevation, but the temperature rose a few days before the next tapping, which was performed on June 8th. Two days and four days after this a rise to 102° occurred, but the temperature then became subnormal again. There was some discomfort and an oscillating temperature before the tapping of June 22nd, which slightly de-

pressed the temperature for two days: on the fourth day (June 25th) it rose to 106° with a convulsive attack, soon dropping again to 102°, and next day to subnormal. The temperature, however, did not settle down till after the eruption of the first tooth on July 1st, after which it was quiet for three days, and became again a little unsteady. The last operation on July 14th was followed by a slighter rise (to 102°) on the evening of the 15th, and again to 100 on the 17th, dropping to 98° on the 18th, and continuing subnormal afterwards.

The rise associated with a convulsive attack may have been partly connected with some peripheral irritation, perhaps of teething, or perhaps simply gastric, as the child vomited clotted milk. The fact that no rise occurred on three occasions shows that with an improved technique and appliances, and with the advantage of increasing experience, the operation might be conducted without any complication.

*The Effect on the Cerebral Condition.*—As regards the brain, it is difficult to gauge the real value of the tapping owing to the disturbing effect of complications, such as the left facial paralysis which occurred after the second tapping and the right external squint, also temporary in duration, which occurred after the third, which indicate that slight lesions had probably been inflicted. The general rigidity and tenderness and the slight tonic contraction of the limbs which persist must be regarded as results of the original meningitis, and of the considerable compression which the brain had suffered. According to the mother's deliberate statement made on July 21st, the present condition since the last tapping is a great advance upon the extreme stiffness and tenderness which obtained before admission, and this is corroborated by the observations of the head nurse during the early period of the patient's residence in the hospital prior to operation. Nevertheless, there is still enough rigidity to seriously impede the progress and growth of the child by precluding movement and the opportunities for physical education. The mental condition remains a blank. Although the infant can hear and see, it takes no notice of its surroundings so long as left undisturbed. But so far as we can estimate the significance of fretfulness and screaming, and of their absence, the gain in well-being and comfort is very marked. As the fluid reaccumulates irritability and screaming return; but they are invariably allayed at the time of the tapping, and for some days afterwards. The general health, in spite of the recurrent attacks of pyrexia, etc., has improved. There has been a slight but progressive gain in weight, and all the functions have remained normal throughout.

*General Remarks on the Case.*—The infant's present condition after eight tappings and the removal from the ventricles of an aggregate of about 11 pints of fluid must be described as, on the whole, satisfactory. Mechanical relief from pressure has for corresponding periods been afforded to the brain substance, which, as the child lies, must be subjected to great pressure in the dependent parts from the weight of the effusion, and to considerable tension in other parts as well. The comfort derived from the operation is manifest, and such as any untrained observer can perceive. If the brain is to be allowed to grow and develop, this relief should be made continuous. Although the advantage has been only temporary and partial, nevertheless it has, in our estimation, been worth securing. We may call attention to the satisfactory state of the functions, and of the general nutrition and body weight, and to the normal though delayed cutting of the first tooth. It was observed after the first tapping that the hydrocephalic cry had given way to the normal "baby wail," and this was specially noticed after the last operation. Looking back for the adverse consequences, the collapse which was mentioned in connection with the first operation was clearly preventable, and would have been avoided if the fluid had not been inadvertently allowed to escape with too great a rush. The temporary symptoms of ocular and of facial paralysis and of increased rigidity are consistent with the view that some transient irritation of the meninges had been set up. The muscular rigidity and tenderness, although now much less, still constitute the most troublesome feature, as they preclude the advantage of movement. How far the case may continue to improve under this treatment, or some modified form of it, we cannot foretell.

Case II.—G. S., a male infant, aged 9 months, well nourished and healthy but for the rather large head, bulging fontanelle, prominent frontal bones, and slightly Mongolian aspect, was admitted into St. George's Hospital on June 6th, 1901, at the recommendation of Dr. Fenton, who had attended the child as an out-patient and had noticed an increase of a quarter of an inch in the cranial circumferenee during the last three weeks. The mother was healthy, intelligent, and of good physique, but had suffered from hydrocephalus, and presented in a slight but unmistakable degree the cranial features of the condition. The infant, born at full term without instruments, but after a difficult and "dry" labour had always been healthy and had never had convulsions or screaming at night, but had been subject to diarrhœa for the last three months. The head was first noticed to be larger than normal at the age of two months, and increased in size slowly up to one month ago, when the increase was much more rapid.

On admission the general aspect was healthy, but the head was square without much facial disfigurement, except the characteristic expansion and flattening at the root of the nose. The anterior fontanelle was about 2 inches square, the front parietal suture open about 1½ inches, the interfrontal about 1 inch, and the interparietal open about half way to the posterior fontanelle. The latter was closed. The frontal eminences were prominent, especially the right eminence. The brows were somewhat raised, but not to the extent of raising the lower eyelid.

On June 10th the head was tapped by Mr. A. S. Morley in the manner described in Case 1. The cannulæ were inserted in the right sphenoparietal region and left in situ for nine hours; 6½ ounces drained away. The fluid was slightly blood-stained, but at two distinct intervals some clear fluid ran for a while. There was some tendency to collapse a few minutes after the first 2 ounces had escaped, perhaps because the head had been lowered to favour the flow, but the patient rallied well with brandy and strychnine. He slept comfortably during the night without any screaming such as had occurred during the previous nights, and no complications ensued. Tympanitic resonance on percussion was obtained over the greater part of the vertex and forehead and for nine days slight oozing persisted. A powder containing $\frac{1}{120}$th grain of nitrate of silver was ordered to be taken every six hours.

The infant was readmitted for observation in the middle of July, but as it proved to be active, bright, apparently intelligent, carrying its large head boldly, and as there was no bulging of the fontanelle, it was deemed inadvisable to repeat the operation. Moreover the fontanelles are becoming rapidly smaller, although the head itself seems to be rather larger.

*Remarks*—In this case the removal of the fluid and the introduction of air seemed to have had only a beneficial effect and reaccumulation of fluid has not taken place. It may be noted that nitrate of silver was prescribed concurrently with the operative treatment, and was administered for nine days subsequently. Conceivably this may have had a share in the favourable result. At any rate the case suggests that sometimes the operation might be performed with the hope of giving permanent relief.

## Provisional Conclusions.

The provisional conclusions warranted by our limited experience are few:

1. With due precautions the fluid of chronic hydrocephalus may be completely evacuated from the yet unclosed skull of infants, and aseptic air may be allowed to take its place. This operation may be repeated without detriment and with scarcely more risk than belongs to the usual method of paracentesis.

2. In favourable cases of moderate effusion, such as Case II, a single operation may suffice. Continued oozing from the puncture for a few days after the removal of the tubes is not unfavourable.

3. In cases of considerable effusion an obvious indication is to relieve the brain from the weight and from the pressure of the fluid. The evacuation is facilitated by the introduction of aseptic air. In Case I this treatment has proved to be of decided advantage. By a timely repetition of the operation a hydrocephalic infant might be enabled to carry the weight of the head, and, if the treatment were begun sufficiently early, permanent damage to the brain tissue might be averted and a normal development might perhaps ensue.

4. In large heads, whilst hydropneumocephalus persists, a considerable splashing sound is readily obtained. There is obvious risk in eliciting this sound by forcible succussion, and for the same reason any abrupt movement of the head should be avoided.

Dr. Eric Pritchard asked whether it was of advantage that the air which replaced the fluid should be absorbed rapidly or slowly. If of advantage that it should be absorbed slowly, nitrogen might be substituted for air; if, on the other hand, it was of advantage that it should be absorbed quickly, oxygen might be substituted.

Mr. W. McAdam Eccles said that any treatment which might tend to stay the distressing condition of hydrocephalus must be hailed with delight. Mere withdrawal of the fluid, even if repeated, did not seem to be of any permanent benefit. What was probably the ideal method of surgical treatment, provided the cause of the hydrocephalus, whatever

this might be, was not removable, was the formation and persistence of an artificial foramen between the intraventricular and subarachnoid space. He had published in the *West London Medical Journal*, July, 1901, a brief preliminary report of a case complicated by a spina bifida in which he had operated by inserting a strand of horsehair into the ventricle, leaving the opening through the membranous covering unstitched. There were no untoward symptoms and considerable diminution in the size of the head had resulted.

Mr. H. J. Stiles said of the three cases on which he had operated after the method introduced by Mr. Watson Cheyne, one steadily improved for the first few months but after about the sixth month, the head gradually began to enlarge again and the child died three months later. In the second case, the operation did not appear to influence the course of the disease, which progressed in the usual way towards a fatal termination. In the third infant, the temperature suddenly ran up to between 104° and 105°, and the child died within 48 hours. He felt that until they knew more of the pathogenesis of chronic hydrocephalus it was difficult to say what principle in surgical treatment should be adopted. Personally, he did not look for much result from surgical treatment in this condition, which he was inclined to look upon as a congenital one, depending probably on some arrest of development.

Dr. Ewart, in reply, referred to a method which he had recently began to apply and which he hoped to improve and to render efficient, namely, that of diverting the excess of fluid from the cranial cavity into the subcutaneous areolar tissue. Mr. Prichard's suggestion was an important one. If the air could be kept renewed nitrogen would certainly be more slowly absorbed. He had found that a single charge of air had only lasted 41 days. He did not see how a permanent supply could be made available. He did not think his experiment had been of much value, though it had demonstrated on the one hand the toleration the ventricle possessed for air, and on the other hand that the introduction of air did not put a stop to the production of the secretion.

## DIAGNOSIS OF SUPPURATIVE PERICARDITIS IN CHILDREN.

By Frederick E. Batten, M.D., F.R.C.P.,

Assistant-Physician to the Hospital for Sick Children, Great Ormond Street, and to the National Hospital for the Paralysed and Epileptic.

The difficulty of arriving at a correct diagnosis in cases of purulent effusion into the pericardium of young children is well known to all those who have had the opportunity of watching cases during life and seeing them also in the *post-mortem* room. It is a disease seldom suspected, still more rarely diagnosed, and hardly ever treated, and yet it is one that is present in nearly 3 per cent. of the deaths in the records of the Children's Hospital.

Even if the disease can be successfully diagnosed, it by no means follows that it can be successfully treated, but until diagnosis is more accurate, treatment is impossible. It is therefore with this object, namely, the diagnosis of effusion into the pericardium that I have ventured to bring before you certain points in relation to the disease as I have seen it in the wards and *post-mortem* room.

My remarks are based on the observation of some 6 cases, 5 of whom were boys and 1 a girl, their ages varied from 10 months to 3 years. Their illness on admission to the hospital had lasted from four to nine weeks, and the total duration of the illness from the onset till death varied from seven to fifteen weeks.

In every case a definite onset to the illness could be fixed, although it was not necessarily acute. In 2 cases measles had been the starting point of the disease, while in the remaining cases it had been bronchitis or pneumonia. The importance of careful attention to the history is, I am convinced, great, and the history obtained closely resembles that which is obtained in cases of empyema rather than the longer history of *malaise* which is usually obtained in cases of tuberculosis. It is difficult to point to any very definite feature in the temperature which may be considered characteristic of the disease, but sudden falls are not uncommon and are attended with collapse; the general curve of the temperature is irregular, with but few subnormal points.

The pulse is almost uniformly rapid and out of proportion to any distress or discomfort which the child may exhibit; in fact, one may find a pulse of 150 to 160 with apparently very little distress.

The respiration is usually increased, but maintains about its normal ratio to the pulse.

As regards their general condition, the children are usually pale with often fat and flabby cheeks, their bodies also are often fairly nourished, but the skin is pale, and the muscles are flabby and wasted; the skin has not, however, the sallow colour nor the dry harsh feeling that it so frequently has in cases of tuberculosis. There may be some œdema of the legs and feet, but I have never observed any œdema of the chest wall in association with pus in the pericardium.

Severe attacks of syncope not infrequently occur, and a history of these is often obtained from the mother, who states that the lips become blue, respiration extremely rapid, and the child seems to be dying; in some of these attacks which I have watched the distress is very great, the heart beating so rapidly that it cannot be counted.

The impulse of the heart is generally to be felt either in the normal situation or in the epigastrium, percussion of the area of cardiac dulness, either superficial or deep, does not necessaarily show any increase of the area of cardiac dulness. In one case in which the presence of pus in the pericardium was suspected, the area of cardiac dulness was most carefully mapped out, and at the time of the necropsy needles were inserted at the margin of the dulness, and after removing the sternum it was found that the lungs were adherent to the outer surface of the pericardium, so that however much the pericardium was distended the lung could not be displaced laterally, although it might have become collapsed. In the case under discussion, however, the lungs were vesicular. So far as auscultatory signs were concerned no murmur or alteration of the sounds could be detected, though they were noted as feeble in one case, but at no time was any pericardial friction audible. With regard to the condition of the lungs, however, it is important to note that in every case marked physical signs were present, in every case there was evidence either of consolidation of the lung or of effusion into the pleura, and in four of these the right lung was affected, while in two the left lung was involved. The consolidation of the lung is sometimes apical, sometimes basal. It is attended by numerous catarrhal sounds, and owing to the chronicity of disease, the condition is generally attributed to tuberculous infection.

Other conditions, such as an enlargement of the spleen, intermittent diarrhœa, or discharge from the ear may be present, but in any case these render no aid to the diagnosis of the condition.

In the *post-mortem* examination of the above cases it was found that both pleuræ were in each case universally adherent. In two of the cases there was a localised pocket of pus, in one situated to the right of the heart, and in the other to the left of the heart, and both contained about 1 ounce of pus, in another case there was a patch of dried up purulent material at the root of the left lung, and a similar condition was present at the base of the lung in another case. Only one case showed any evidence of tubercle. In nearly every case there was more adhesion between the sternum and outer surface of the pericardium than normal, in three of the cases the area of the pericardium was noticeably increased, while in the two others in which the abscess impinged on the border of the heart the area occupied by the pericardium, together with the area occupied by the abscess, was considerably in excess of the normal pericardial area. In the remaining case there was no increase in the cardiac area, the lungs being adherent to the outer surface of the pericardium. Although there was in five cases this apparent increase in the area of the pericardium, it had not been detected on physical examination of the chest.

The amount of pus in the pericardium varied from a few drachms to six ounces, in some cases it was a thin opalescent fluid, and in others thick pus embedded between masses of lymph. In one case there was considerable injection around the base of the heart, and in another there was considerable thickening of the pericardium. There was no hypertrophy and no evidence of endocarditis in any case; the muscular substance was noted as pale in every case, but no microscopical examination of the substance was made, and therefore it is

impossible to say to what extent there was fatty change in the heart. In one case there was purulent meningitis, and in another purulent peritonitis, in one other case there were tubercles scattered over the peritoneum.

It is noteworthy that in four of the above cases there was a localised purulent effusion into the pleura, while out of nine cases of empyema which died in the hospital during the same period of time over which the above six cases of pericarditis were collected, the pericardium appeared normal in all.

From what has been said it is clear that the diagnosis of this disease is one of considerable difficulty, and the cases are most commonly mistaken for tuberculosis or empyema. The diagnosis can seldom be made from the usual physical signs of effusion into the pericardium, and therefore it must be from a general consideration of the characters of the case that the diagnosis must be arrived at. To state the points shortly, one may say that a fairly definite date can be fixed for the onset of the disease, the condition of the child generally bears a striking resemblance to that of a child suffering from empyema, the child is pale but not sallow, the limbs are wasted and the muscles flabby, and the skin is generally moist, and has not the dry and scaly condition so often seen in tuberculosis. The children are extremely liable to severe and sudden attacks of syncope. The temperature has a generally irregular character, with rather sudden rises and sharp falls. The rapidity of the heart's beat is always great, and seemingly out of all proportion to the general condition of the child, who does not seem especially distressed.

On physical examination of the chest the signs suggest either an effusion into the pleural cavity or tuberculous consolidation of the lung, but, as a rule, no increase of the area of cardiac dulness can be mapped out, although epigastric pulsation may be present.

It might be suggested that the diagnosis might be assisted by the introduction of an exploring needle, but given symptoms or signs that would suggest pericardial effusion it would be much safer to make an incision in an intercostal interspace or resect a rib if necessary rather than pass an exploring needle toward the heart.

One case, however, is reported by Dr. Ashby in which a child, aged 18 months, had dulness and bronchial breathing in the left axilla. The chest was punctured and pus evacuated, but a few days later the child died, and at the necropsy it was found that the pericardium contained some 2 ounces of pus: the pleura was adherent, and showed no sign of there having been any recent effusion. In another case, also reported by the same observer, an infant, aged 4 months, had a swelling over the sternum. This was opened and pus evacuated. The child, however, died, and it was found at the necropsy that the abscess was in connection with the pericardium.

Of prognosis and treatment little need be said, for until diagnosis becomes more accurate it is impossible for rational treatment, namely, the opening of the pericardium and draining the cavity to be carried out, and even then the percentage of recoveries will certainly be small.

It is with regret that one leaves the subject without having been able to point to some one sign on which the diagnosis could with any assurance be made; but although this has not been possible, one trusts that the points as above stated may lead one to suspect the condition, and that, at any rate, would be the first step to diagnosis.

## OBSERVATIONS ON SUPPURATIVE PERICARDITIS IN CHILDREN.

By GEORGE F. STILL, M.D., F.R.C.P.,
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PERICARDITIS in children is most often a manifestation of rheumatism, and as such is particularly frequent during the later half of childhood. There are, however, other forms of pericarditis which, although very rare in comparison with the rheumatic affection, are probably less rare in childhood than at any other time of life.

In 769 necropsies on children under 12 years of age, there were 67 which showed non-rheumatic lesions of the pericardium. In 37 of these there was tuberculosis of the pericardium seen as a deposit of grey or yellow tubercle, with or without gross pericarditis. I do not propose to consider tuberculous pericarditis in this paper, nor shall I allude further to one case which showed that chronic adhesive form of pericarditis which is associated with so-called rheumatoid arthritis in children.

The form of pericarditis to which I wish to refer particularly here is that which is found in association usually with suppurative conditions elsewhere, and which is due to infection of the pericardium with pyogenic micro-organisms.

The term "suppurative pericarditis" is not altogether satisfactory as applied to this condition, for the pericardial fluid is hardly sufficiently turbid in some cases to be called purulent, but the term is retained as emphasising that result of pyogenic infection of the pericardium which is of most importance clinically.

For an accurate conception of the clinical as well as of the pathological relations of suppuration in the pericardium, it is necessary to take into consideration not only the cases in which the fully-developed condition of suppuration with thick, opaque pus is present, but also those cases in which the lesion is still in an early stage, and the pericardial fluid is only slightly clouded, with but little exudation of lymph.

In 28 cases there was pericarditis, apparently due to pyogenic infection. In 11 of these the pericardium contained actual pus or sero-pus; in 17 the pericardial fluid was only slightly turbid. For descriptive purposes these cases may be grouped thus:

1. Cases in which the pericardial fluid was slightly turbid and contained a few flakes of lymph, either floating free or resting on the large vessels at the base or along the coronary vessels. In some of these the pericardium showed no abnormal vascularity and no loss of gloss: in others there was marked increase of vascularity, especially along the free edge of the auricular appendix, sometimes with a deposit of lymph here, and slight adhesions about the base of the heart.

2. Cases in which the pericardial fluid was actually purulent or sero-purulent, with much deposit of lymph, and in some cases extensive obliteration of the pericardial sac by adhesions.

In some of the cases, both in Group 1 and in Group 2, the presence of pyogenic micro-organisms in the pericardial fluid was demonstrated by bacteriological examination; in others the associated lesions made such infection almost certain.

The observations recorded here were made at the Hospital for Sick Children, Great Ormond Street, where children up to the age of 12 years are admitted; and it is noteworthy that, of the 17 cases in Group 1, 12 occurred within the first 3 years of life, while all the 11 cases with pus or sero-pus in the pericardium were under 3 years of age, so that no fewer than 23 out of the 28 cases occurred within the first 3 years of life.

In comparing the cases which occurred in these younger children with those in older children, some difference is noticed in the character of the associated lesions, or, rather, in the relative frequency of these lesions, as may be seen from the following table:

*Associated Lesions, with Pyogenic Infection of the Pericardium.*

| Under 3 Years of Age (23 Cases). | | Over 3 Years of Age (5 Cases). | |
|---|---|---|---|
| Empyema, or acute pleurisy complicating pneumonia | 21 | Empyema | 1 |
| Pyæmia with acute pleurisy | 1 | Pyæmia without pleurisy | 2 |
| Adherent pleura with tuberculous cavitation of lung | 1 | Adherent pleura with tuberculous cavitation of lung | 1 |
| | | Double acute pleurisy complicating lymphadenoma | 1 |

Out of the 28 cases 24 showed empyema, thick lymph on the pleura or acute pleurisy; in 17 of these the pleural lesion was present on both sides of the chest, in 4 the pleurisy was active on one side only, but was accompanied by adhesions over the opposite lung; only 3 cases showed affection of one pleura alone; in all these 3 cases there was an empyema on the right side.

In addition to the lesions mentioned in the table above, 7 of the cases with empyema or acute pleurisy complicating pneumonia showed also suppurative meningitis, and 4 of these cases (including one of those with suppurative meningitis) showed an early acute peritonitis. In 4 of the cases with affection of the pleura on both sides the inflammation seemed to have spread from the pleura to the mediastinum, producing an adhesive mediastinitis.

The pericardial fluid was examined bacteriologically in 13 cases, with the following result:

| | |
|---|---|
| Pure growth of pneumococcus ... ... ... ... ... ... | 6 cases. |
| Almost pure growth of pneumococcus (contamination probably accidental) ... ... ... ... ... ... ... ... ... | 1 case. |
| Diplococci in pericardial fluid almost certainly pneumococci (which were found in pure growth in each case in the pus in pleural cavity) ... ... ... ... ... ... ... ... ... | 3 cases. |
| Coverslip preparation only, apparently typical pneumococci ... | 1 case. |
| Staphylococcus pyogenes albus ... ... ... ... ... ... | 2 cases. |

Out of the 13 cases, therefore, 11 appeared to be due to pneumococcal infection, and of these 11, six were advanced cases in which the fluid was actually purulent; it is noteworthy, however, that 3, including 2 which showed pure growth of pneumococci, were amongst those which showed only slight turbidity of the serum with a few flakes of lymph floating in it and no increased vascularity or roughening of the pericardium. Of the 2 cases in which staphylococci were found one was the case with acute pleurisy as a terminal complication of lymphadenoma, the other was a case of empyema following pneumonia (recent lymph in the peritoneum in this case gave a pure growth of pneumococcus).

In 15 cases no bacteriological examination of the pericardial fluid was made, but a large proportion of these were almost certainly due to the pneumococcus; in 2 pus from the accompanying empyema was examined and showed pure growth of pneumococcus, in 4 others the associated empyema or acute pleurisy had followed a lobar pneumonia, and in 4 others the appearance of the associated pleural lesions (empyemata, with suppurative meningitis also in one case) made it at least probable that they were due to the pneumococcus, as one has usually found in other cases with similar appearances.

So far therefore as can be judged from 28 cases, it would seem that the pneumococcus is the micro-organism which is most often responsible for this form of pericarditis in children, and that the change in the pericardial fluid with such infection may vary from the slightest cloudiness up to actual purulency.

The frequency of pleurisy, recent or old, in association with the pericarditis is very striking, but there was some variation in the character of the pleural lesions. In some of the cases there was a recent acute pleurisy, with much shaggy lymph on the pleura and little or no fluid in the pleural cavity; in others there was slightly turbid serum or actual pus in the pleural cavity: and in others, again, the pleuræ had already become adherent, either spontaneously or as the result of drainage by operation, but in all such cases there remained either a loculus containing pus or a patch of lymph.

A study of those cases in which the pericarditis is caught in its earliest stage shows that whilst the pericardial infection may occur at a very early period of the disease, it may, on the other hand, take place at a very late stage of the pleural inflammation. In one case in which the slightly turbid pericardial fluid gave a pure growth of pneumococcus, there was very recent acute pleurisy with some lymph and only slightly turbid serum in the pleural cavity, and death occurred on the fourth day after after the onset of the illness; while in another case in which death occurred five and a-half weeks after the onset of the illness, there were dense adhesions all over both lungs, and the only trace of active inflammation in the pleura was a patch of unabsorbed lymph over portion of the left lung posteriorly. In the latter case the pericardial fluid was slightly turbid, with some flakes of yellow lymph about the vessels at the base and very slight adhesions here, but no trace of pericarditis over the ventricles; the child died of suppurative meningitis, and so far as could be judged from coverslip preparations alone, the pneumococcus was present in pure growth in the pleural lymph and also in the meningeal pus and pericardial serum.

In such a case it seems likely that the infection both of the pericardium and of the meninges was only of a few days' standing, and probably both were the simultaneous result of a blood infection by the pneumococci in the pleural lymph; moreover, this infection occurred so late that it was probably secondary rather to the pleural lesion than directly to the original pneumonia which had long since subsided.

In several of the cases it was observed that the patch of lymph or loculus of pus remaining in the pleural cavity was so situated that a direct infection of the pericardium seemed very unlikely, if not impossible; the presence of suppurative meningitis also in 7 of the cases made it almost certain that in these, at least, a blood infection had occurred, and that the pneumococcal pericarditis was in some of the cases the result of such a blood infection rather than of direct extension from the pleura.

In 2 at least of the 5 cases which were not associated with lesions suggestive of a pneumococcal origin, a blood infection seemed certain, for there was general pyæmia, but no pleural inflammation, and in the cases with tuberculous cavitation it was at least possible that a similar blood infection had occurred by pyogenic micro-organisms from the pulmonary cavity.

An interesting feature of this variety of pericarditis is the slightness or absence of dilatation of the heart; in several of the cases I have specially noted this point, and even when the heart was covered all over with shaggy lymph there seemed to be little or no dilatation: this feature is noticeable also in other forms of non-rheumatic pericarditis, and is in striking contrast with the marked dilatation which almost always accompanies rheumatic pericarditis, a point which suggests that the rheumatic infection has some special action upon the myocardium which is lacking in other varieties of pericarditis.

It is hardly within the scope of this short article to consider the clinical aspects of suppurative pericarditis, but I may perhaps be permitted to point out the practical bearing of these observations upon diagnosis and treatment.

Suppurative pericarditis is much more likely to occur in infants and young children than in the later half of childhood. It is almost always part of a pneumococcal infection which in most cases has begun with pneumonia and has affected the pleura. The presence of lymph or of turbid serum in the pleura involves a risk of suppurative pericarditis no less than does an actual empyema, and the infection of the pericardium may occur within a few days after the onset of the pneumonia, or not until several weeks have elapsed and only the empyema or pleurisy remains.

In any case, therefore, where exploration of the chest shows turbid serum or pus, especially if on bacteriological examination the fluid is found to contain the pneumococcus, free drainage, by resection of a rib in most cases, should be provided with as little delay as possible. The fact that an empyema has already been present several days or weeks, or that there seems to be only a very small and localised collection of pus, is no justification whatever for deferring operation. So long as any such infective material remains shut up in the chest the child is in hourly risk of further infection, which may involve the pericardium or the meninges, and in either case is likely to prove fatal. It is to be remembered, also, that it is not only the fluid sero-pus or pus which must be evacuated, but also the lymph which is no less infective.

Bearing in mind this infectivity of the lymph, I have sometimes thought that in cases where, with pneumonia, there are signs suggestive of fluid, but the exploring syringe gives a negative result, it might sometimes be wise to explore by incision in the hope of evacuating thick lymph, and so reducing the risk of suppurative pericarditis and suppurative meningitis. Be this as it may, it is a striking fact that in every case where death occurred with infection of the pericardium in spite of previous drainage of an empyema, there was either a loculus of pus or a patch of lymph remaining on one or other side of the chest shut off by adhesions, and there could be little doubt that this was the source of pericardial infection.

In the diagnosis of this condition it is worth remembering that there is usually no great quantity of fluid in the pericardium; in most cases where there was turbid serum or sero-pus, the quantity did not exceed ℥j to ℥jss, in one case with sero-pus it amounted only to about ℥ij, in another with almost opaque pus there was only about ℥j; the largest amount found in the cases recorded here was about ℥v. This fact, together with the absence or slightness of cardiac dilatation, accounts for the very slight increase of cardiac dulness, which is observed during life in some cases. Another point in the morbid anatomy of this condition which is of importance with reference to diagnosis, is the formation of extensive adhesions of the pericardium in some cases: in two of the cases recorded here thick pus was limited to the base of the heart by dense adhesions, and an exploratory puncture in the usual position would probably have given a negative result so that the

condition would have been overlooked. Exploratory incision after removal of a portion of one of the costal cartilages just to the left of the sternum seems to be a much more satisfactory method of exploration if circumstances make it possible.

Lastly, as to the possibility of recovery in a child with this form of pericarditis, it is clear now that with timely drainage of the pericardium life may be saved, even although the pericardial fluid has become actually purulent. It is evident also from some of the cases in which extensive adhesion has occurred and pus or sero-pus has become limited to a small loculus, that there is considerable effort at spontaneous recovery by obliteration of the cavity and absorption of the exudate. In one case, not included in the above series, it seems almost certain that a more complete recovery from pneumococcal pericarditis had occurred; this was in a boy, aged 7 years, who died o acute intestinal obstruction, by strangulation of the ileum under a fibrous band passing from a caseous mesenteric gland to the cæcum. He had undergone an operation for an empyema on the right side four years previously. *Post mortem* the right pleura was densely adherent all over, the pericardium showed over the right auricle and the base of the right ventricle some thick greyish opacity with slight adhesions, the rest of the pericardium was normal. There was no trace of tubercle past or present anywhere in the chest. It seems most probable that in this boy the pericardium had been infected at the time of the empyema, but that the pericarditis had subsided, leaving only the adhesions and thickening.

So far, however, as one can judge from experience in the *post-mortem* room, such a result must be very rare; and when once the pericardium has become infected by pyogenic microorganisms there is but little hope of saving life unless the condition is diagnosed early and treated by free drainage. In many cases the presence of other lesions, such as suppurative meningitis and peritonitis, as part of a general blood infection, makes the prognosis very bad.

There is, however, good reason to believe that we may do something in the way of prophylaxis, and an important step in this direction is the realisation of the danger of secondary infection from pneumococcal exudation, especially in the pleural cavity. It is not only pus, but also turbid serum or merely lymph in the pleural cavity which may be the focus of infection, and it is by early diagnosis and speedy evacuation of this infective material that we may hope to reduce the risk of pericardial infection.

## SECTION OF TROPICAL DISEASES.

Major Ronald Ross, F.R.C.S., F.R.S., I.M.S. (Retired), President.

### INTRODUCTORY REMARKS BY THE PRESIDENT.

I beg to express my regrets that I am unable to present my address to the Section in person.

I have great pleasure in being able to record for the last year a general and perhaps unparalleled advance in our knowledge regarding tropical diseases.

*Yellow Fever.*

The discovery of at least one mode of infection in yellow fever—a discovery of the highest importance to mankind—emanates from America. For some time past several of our American colleagues, stimulated by recent observations in connection with malaria, have sought an experimental verification of the hypothesis of Finlay and others, that yellow fever also is communicated by the bite of gnats. Insects fed on patients were subsequently induced to bite healthy persons who volunteered for the experiment. The results were negative until the gnats were kept for an interval of twelve or more days between the two operations. Success was now immediate. Drs. Reed, Carroll, and Agramonte record in their last report that out of seven non-immune persons subjected by them to the bites of infected mosquitos, six yielded undeniably positive reactions. At the same time, seven non-immunes whom they endeavoured to infect by means of the fomites of patients under peculiarly favourable circumstances, remained in every case free from the disease.

The experiments were conducted under the most stringently scientific conditions. Although the mosquito theory of yellow fever does not possess the parasitological basis of the mosquito theory of malaria, yet the differential observations of Reed, Carroll, and Agramonte are of a nature to leave no doubt concerning the soundness of their conclusions.

Some of the tests have involved great heroism on the part of those who were subjected to them. Since the death of Dr. Jesse W. Lazear we have to deplore that of Dr. Walter Myers, one of our most promising young pathologists, who lost his life from yellow fever when on a deputation from Liverpool to study that disease.

If the pathogenic organism of yellow fever, hitherto undiscovered, prove to be a vegetable organism, the fact will suggest that transference by suctorial insects and arachnids, with which we are already so familiar in the case of animal parasites, may be no less common in the case of vegetable parasites. *A priori* there is nothing improbable in the view that suctorial insects may become generally infected by blood containing schizomycetes, which may next find their way by route of the insects' salivary glands or otherwise into a fresh host. There are certainly some epidemiological facts which suggest the possibility of infection by gnats in undulant fever and perhaps leprosy, and by other vermin, in relapsing fever, typhus, and perhaps several skin diseases.

*Ankylostoma Duodenale.*

Another important advance is contained in the confirmation of Giles's life-history of the ankylostoma duodenale by Annett—details of which will shortly be published. These observations throw a vivid light on the route of infection adopted by these dangerous and widespread parasites.

*Undulant Fever.*

Owing to observations made by Wright on the serum reaction in undulant (Malta) fever, this disease has been shown to exist in India, Hong Kong, the United States, the West Indies, and Brazil—a most important fact in connection with the great subject of tropical fevers.

*Malaria.*

The recent advance in our knowledge of malaria has been well maintained by numerous observers. The practical side of the mosquito theory, which at once became predominant after the determination of the life-history of the parasites, has been energetically treated by Koch and his assistants, who have successfully dealt with malaria on a large scale by means of quinine. Similar work has been performed with success in the United States, and, according to reports, in Italy. In British possessions isolated efforts to deal with malaria according to the new principles have been made by Sir William MacGregor and Strachan at Lagos, and by Thomson and Young at Hong Kong; but the country generally has not adopted an intelligent attitude in this connection.

On the other hand, British workers have closely studied details of the malaria question in many parts of the world. We must refer especially to the good work done in Central and West Africa by the Malaria Commission of the Royal Society, and to an admirable sanitary survey of Nigeria made by the Liverpool expedition during the last year. Direct cultivations of the parasites have been reported by Daniels, Ziemann, van der Scheer and van Berkelom, and Woldert in various countries—all in *Anopheles;* while Manson has completed an interesting crucial experiment for the popular demonstration of the theory by infecting healthy persons (T. Manson and Warren) in London by mosquitos brought from Italy, and by simultaneously preserving others (Sambon and Low) in health in the Campagna in a mosquito-proof house. Nuttall and Shipley, Christophers and Dutton have closely examined the anatomy of gnats. Nuttall, Cobbett, and Strangeways-Pigg have made interesting researches on *Anopheles* in England, in which, by the way, cultivation experiments have hitherto failed. Gosio, Giles, Reinhold Ruge, Fearnside, Neveu-Lemaire, and others have done useful work on the subject in many directions. It remains, however, a matter for regret that stronger efforts have not been made to determine the reason why individual gnats of an amenable species so often resist infection. Until this difficulty is cleared away negative experiments with *Culex* cannot be entirely convincing.

Since the last annual meeting of the Association the mosquito theory of malaria has received the highest scientific acceptance in the address of the President of the Royal Society, Lord Lister.

*Filariasis.*

In regard to filariasis the discovery of Low and James has been confirmed and amplified by several observers. Manson has suggested the possibility of reducing lymphatic varix by leading a lymphatic duct below the stricture into a neighbouring vein.

*Plague.*

The prompt suppression of plague in Glasgow has further demonstrated the value of energetic sanitary measures in this disease; and the large demand for plague vaccine gives encouraging evidence in favour of Haffkine's prophylaxis.

*Beri-beri.*

The close clinical similarity of beri-beri and chronic arsenical poisoning seems to suggest that many cases attributed to the former disease may possibly be in reality due to arsenic.

*Work for the Future.*

It seems to me that further researches are at the present moment most urgently required in connection (1) with tropical fevers; (2) with the flora and fauna of the intestine in tropical bowel complaints; and (3) with the question whether European children in the tropics suffer as frequently from malaria as do the children of natives. The practical necessity of taking measures against the uncontrolled propagation of gnats in tropical cities is one which, in view of recent discoveries, can no longer be set aside by sanitary authorities without dereliction of duty.

The profession owes its sincere thanks to all those gentlemen who have done so much during the past year—often without remuneration and at considerable personal risk—for the cause of tropical medical science. It also owes it thanks to those British merchants who have generously subscribed large sums of money for the prosecution of many of the researches to which I have referred.

## FILARIAL ABSCESS.

By J. Preston Maxwell, M.B., B.S., F.R.C.S.,
China.

Abscess of the scrotum is a disease by no means common in England, even granting the inclusion of tuberculous abscess connected with the epididymis and testicle; and it was with some surprise and not a little incredulity that I found myself, soon after my arrival in China, confronted by a patient whose scrotum, swollen to the size of a large fœtal head, appeared to be little more than a bag of pus.

His history was a curious, but at the same time typical, one, although I did not know it to be such at the time I mention. Fifteen days previously, while at work, he had been seized by a violent rigor, which lasted about ten minutes, and passed into fever, which had been persistent since. He was cognisant of no previous illness, and denied any attacks of lymph fever, stating he had been a strong man all his life. His age was 42. He refused to come into hospital, and I refused to operate in his dirty hovel.

Eventually part of the scrotum sloughed, and after a long illness the man recovered. His subsequent history is reported in the appended table of cases (No. 1).

After I had seen and operated upon one or two of the cases, I determined to try and find out the cause. Gonorrhœa could be easily excluded, as not more than 30 per cent. of the patients confessed to having had it. None of them had any sign of it at the time of their illness, none had stricture of the urethra, and the orchitis present was slight and in many cases absent. And besides the fact of the abscesses being mostly outside the testicle and seminal tract, the further knowledge that Morris, in his *Diseases of the Urinary and Generative System*, did not mention such an affection, put the same, in my opinion, out of court. Injury with the suppuration of a consequent hæmatoma next occurred to me as a possible cause. But in every case in my list injury could be absolutely excluded.

Infection by the bite of some insect could also be excluded. I was fully aware that Manson, in his *Tropical Diseases*, mentioned abscess as a manifestation of filarial disease, but I was not aware that it might be the first and only manifestation. However, I began to systematically examine the blood of the patients, who suffered in this way, with the result that everyone was found to be suffering from filaria sanguinis hominis nocturna, and in considering the subject of filarial abscess every doubtful case, that is to say, every case in which I could not find the parasite or obtain a definite history of lymph fever, has been excluded. Only about one in ten of abscesses I have judged to be filarial in origin have been excluded owing to this test, and not one of these were abscesses of the scrotum. To turn to the general question of filarial abscess, its incidence is naturally only limited by the incidence of infection with the filarial parasite, and it may occur either as an incident in the course of filarial disease or as the first symptom and sign of the same. In my experience it may occur in any situation where there is loose connective tissue, rich in lymphatics, and for this reason the majority of abscesses outside the scrotum are in the vicinity of the great vessels, and the abscess does not always form in the situation where the inflammatory focus starts. In two of the cases in which I have opened a filarial abscess over the lower end of Hunter's canal, I have good evidence that the inflammatory focus was first situated in Scarpa's triangle. Both the patients themselves and my own students who saw the cases before I did are perfectly clear on this point; and this evidence is important as bearing on the question of pathology.

Previous observers have opened these abscesses and found the dead body of a parent filarial worm, and have justly surmised that some at least of these abscesses were the result of the death of the parent worm.

In one of my cases I found portions of the body of a parent worm, but in none of the others could I find anything of the kind, although a most thorough search was carried out. In some of these, however, the abscess was of some standing, rendering the absence of a dead parent worm insufficient proof. I regret to say that lack of apparatus has up to the present prevented me from a thorough bacteriological examination of these abscesses. On two occasions I inoculated broth cultures without any result, and in some there are undoubtedly ordinary pyogenic organisms, but these are cases which have been neglected, and in which the skin is about to slough.

I am inclined to think that some are due to a cause other than the death of a parent worm. I was fortunate enough to be able to observe the whole process in a patient, who was in hospital for a trivial affection. Within a day or two he had an attack of filarial lymphangitis of the cord on both sides of the scrotum; the one side came to suppuration, the other did not. Both, at the outset, presented exactly the same appearances, the inflammatory process on the one side being apparently much the same as on the other; and on two other occasions by promptly putting the part at rest and applying cold, I have been able to abort the inflammatory process.

But as a rule a sharp local attack leads to the formation of pus. And there is another fact which has to be taken into account in considering the pathology. As I shall hereafter show, some of these abscesses in the scrotum are suppurating hydroceles. In this case it is difficult to see where the death of a parent worm can come in, as I believe they have never been found inside hydroceles. I am inclined to think that the majority of these are due to a local cause, and probably connected with the blocking of lymphatic vessels. I have no evidence to offer in support of this view save the fact that in some of these cases the abscess is the first manifestation of an affection which ends in elephantiasis of the scrotum or affected limb. In others it certainly does not, but possible this is due to the fact that a lesser area of the lymphatic system has been interfered with.

Passing from the pathology of the disease to its clinical form and diagnostic points, I would provisionally classify these abscesses as follows:

Filarial abscess (*a*) of the scrotum { 1. Suppurating hydrocele. 2. Abscess of the cord. 3. Abscess below the testicle.
(*b*) of the limbs.
(*c*) Intra-abdominal or intrathoracic.

Concerning the cases contained in division (*a*), the division may seem at first sight to be arbitrary and unnecessary. A

*Filarial Abscess: Statistics of Cases, 1899-1901.*

| No. | Initial | Sex and Age. | Occupation. | Situation. | Previous Filarial History. | Microscopic Results. | Subsequent History. |
|---|---|---|---|---|---|---|---|
| 1 | K. T. | M., 42 | Shop | Scrotal abscess | None | Filaria sanguinis hominis nocturna. Many | Recovery, but subsequent attacks of elephantoid fever. |
| 2 | J. S. | M., 31 | Shop | Abscess of cord | None | Do. Many | Recovery. See No. 3. |
| 3 | J. S. | M., 31 | Shop | Perineum | Previous filarial abscess | Do. Many | Recovery. The perineal abscess was separated by some interval from the other, and was due to another definite attack. |
| 4 | K. T. | M., 57 | None | Abscess of cord | None | Do. Many | Recovery. Subsequent history unknown. |
| 5 | T. T. | M., 26 | Fields | Abscess below testicle | Attacks of lymph fever | Do. Many | Recovery. Subsequent attacks of elephantoid fever. |
| 6 | C. C. | M., 33 | Fields | Suppurating hydrocele | None | Do. Two in three slides | Recovery very slow. Inflammation had spread to cord before admission, but there was no abscess outside the hydrocele. |
| 7 | J. | M., 40 | Fields | Abscess of cord | None | Do. Many | Recovery. No subsequent attacks in 18 months, but commencing elephantiasis scroti. |
| 8 | T. I. | M., 51 | None | Abscess of cord and suppurating hydrocele | None | Do. Many | Recovery. No subsequent attacks in past year. |
| 9 | K. U. | M., 25 | Fields | Abscess of cord | Obscure history of slight attacks | Do. Three in two slides | Recovery rapid. Subsequent history unknown. |
| 10 | O. T. | M., 40 | Fields | Abscess below testicle | Attacks of lymph fever | Do. Many | Recovery. Subsequent history unknown. |
| 11 | K. | M., 40 | Fields | Suppurating hydrocele | None | Do. A few | Recovery. Subsequent history unknown. |
| 12 | K. | M., 42 | Fields | Suppuration below testicle | None | Do. One in two slides | Recovery. In this case portions of a parent worm were obtained. |
| 13 | C. I. | M., 29 | Fields | Suppuration below testicle | Previous lymph fever | Do. Many | Recovery. Subsequent attacks of elephantoid fever. |
| 14 | K. K. | M., 36 | Fields | Abscess of cord | Doubtful history | Do. Many | Recovery. Subsequent attacks of elephantoid fever. |
| 15 | H. | M., 45 | Preacher | Abscess of cord | None | Do. Many | Recovery. Subsequent attacks of elephantoid fever and commencing elephantiasis scroti. |
| 16 | J. | M., 29 | Fields | Abscess of cord | Previous lymph fever | Do. Many | Recovery. Subsequent attacks of elephantoid fever. |
| 17 | E. | M., 28 | Fields | Popliteal abscess | None | Do. Many | Recovery. Sinus still persisting, and commencing elephantiasis of leg. |
| 18 | J. | F., 43 | Housework | Popliteal abscess | None | Do. Many | Recovery. Small sinus persists. No further attacks in 6 months. |
| 19 | O. | M., 19 | Fields | Suppuration in thigh | None | Do. A few | Recovery. Commencing elephantiasis of leg. |
| 20 | K. | M., 41 | Fields | Suppuration in thigh | Previous attacks | Do. One | Recovery. No attacks since, but history too recent—a week or two. |
| 21 | S. | M., 48 | Fields | Axillary abscess | None | Do. Many | Recovery. No subsequent attacks in a year. |
| 22 | J. | M., 50 | None | Retroperitoneal abscess | Previous attacks | Do. None | (?) Discharged himself, very low at the time. Abscess opened at border of erector spinæ. |
| 23 | A. | M., 43 | Shop | Ilio-pelvic abscess | Previous attacks | Do. None | Simulated appendicitis. Still under treatment, will almost certainly recover. |

further consideration will show that this is not so. Commencing in the way which is common to all abscesses, they follow different courses, and have to be treated in a different way.

1. *Suppurating Hydrocele.*—The patient has generally got a hydrocele of moderate or large size already present. At the commencement of the attack this swells to nearly double its previous size, and becomes intensely tender and painful. In a day or so its contents are purulent, and if left to itself the wall and skin over it will slough and the contents discharge. A long convalescence may ensue, as the hole thus formed may be very large. Tapping is only of use in the early stage, and when the contents have become purulent, incision and drainage should be adopted. Care should be taken to have the opening at the most dependent part, and the thick layer of lymph lining the hydrocele sac should be removed. Free bleeding will ensue, and the cavity may have to be packed for 24 hours with gauze. Healing is usually rapid, but care has to be taken not to allow the external opening to close too soon. I need hardly say that strict antiseptic precautions should be observed.

(2) *Abscess of the Cord.*—This is the most serious of the forms of abscess affecting the scrotum by reason of the liability of the inflammatory process to spread up the cord. In several cases I could trace the cord as a great hard rope as far up as the internal ring; moreover, it was intensely tender. Whether in these cases there is any associated inflammation of the peritoneal surface or not, I have no positive proof, but the fixity and tenderness of that part of the abdominal wall is suggestive, and it is well known that an acute septic infection of the cord may spread inwards and set up an acute septic peritonitis. But although the inflammation in these filarial cases may spread up the cord, the actual abscess in all the cases I have seen is outside the external abdominal ring. It is also the most serious of the forms of abscess affecting the scrotum as regards treatment. The abscess is apt to have loculi and pockets which interfere with the free drainage, and consequently with rapid healing.

3. *Abscess below the Testicle.*—This is the most simple of the filarial abscesses occurring in the scrotum. Drainage is easy and healing is rapid, a few days sufficing to end the affection, which does not extend far and is not of large size. It was from one of these I obtained the portions of a parent worm, and I should not be surprised if all the abscesses in this situation are due to a similar cause.

Turning now to (*b*) *Filarial Abscess in the Limbs.* As I have previously stated these occur in situations rich in lymphatic tissue, and generally in the immediate neighbourhood of the large vessels; and it is not an uncommon thing, on opening one of these abscesses, to be able to put one's finger on, or even around, the main vessel of the limb. It is one proof of the low form of inflammatory process that I have never seen one of these vessels give the slightest trouble from secondary hæmorrhage due to softening of the vessel wall and subsequent rupture.

Of these abscesses, those in relation to the femoral artery give the most trouble. This is partly on account of their deep connections and the difficulty of thorough drainage. And in some of them the lymphatic system seems to be so disorganised that they pass directly into the commencement of an attack of elephantiasis of the limb. Consequently one must be guarded in one's prognosis of the ultimate result of treatment. The treatment consists in free drainage, and owing to the difficulty of draining the deeper portions, it is well to make free openings under chloroform and insert large drainage tubes. Troublesome contracture of the lower limb may occur during the healing of large abscesses, especially those involving the popliteal space, and should be avoided by splinting the limb, and using massage as soon as possible. But among my Chinese patients who are absolutely intolerant of restraint, and over whom one has not the same command as at home, I am sorry to say troublesome contracture is by no means unknown.

(c) *Intra-abdominal and Intrathoracic Abscess.*—Of the latter form I have no experience, but of the former I have met with two cases.

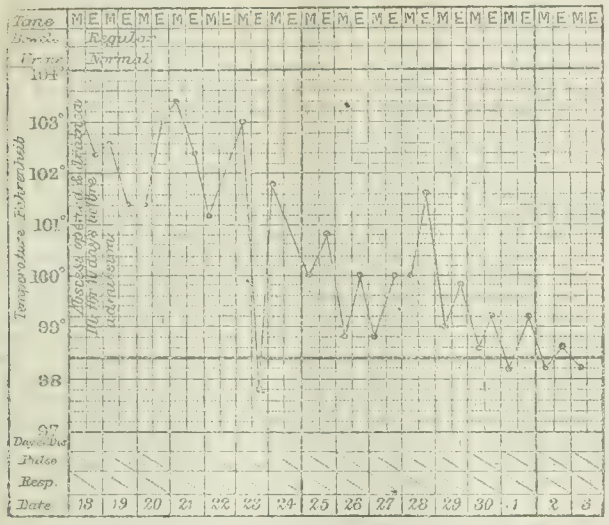



Chart C.

In each case the illness coincided with the cessation of lymph fever attacks, and each case was desperately ill when admitted to hospital. Both had commenced in the way I shall hereafter describe as typical. In the one case I found deep fluctuation in the left lumbar region and opened an abscess under chloroform, which was post-peritoneal and apparently had no connection with any of the large abdominal organs. The urine contained the faintest traces of albumen, but neither formerly or at the time of operation were there any symptoms pointing to disease of that organ. This case left hospital by his own request, and was still desperately ill. The abscess was draining well, but as he had been ill two and a-half months and was very weak, his recovery was far from certain, and the case is too recent for me to have had opportunity of learning the result. The second came into hospital looking like a typical case of appendicitis. He also was very ill and had been so for a month and a-half. The abscess proved to be extra-peritoneal and extended both into the iliac fossa and down into the pelvis. In my opinion it began in the loose tissue about the iliac vessels, and the fact that the disease began with a rigor, and immediate flexion of the right thigh on the abdomen to an extent I have never seen in an uncomplicated case of appendicitis gives some colour to this supposition. This case is still under treatment and the abscess cavity shows no great readiness to heal up, while the patient is extremely weak, so that it is difficult to say how this case will end. His bowels were regular and natural at the time of the attack.

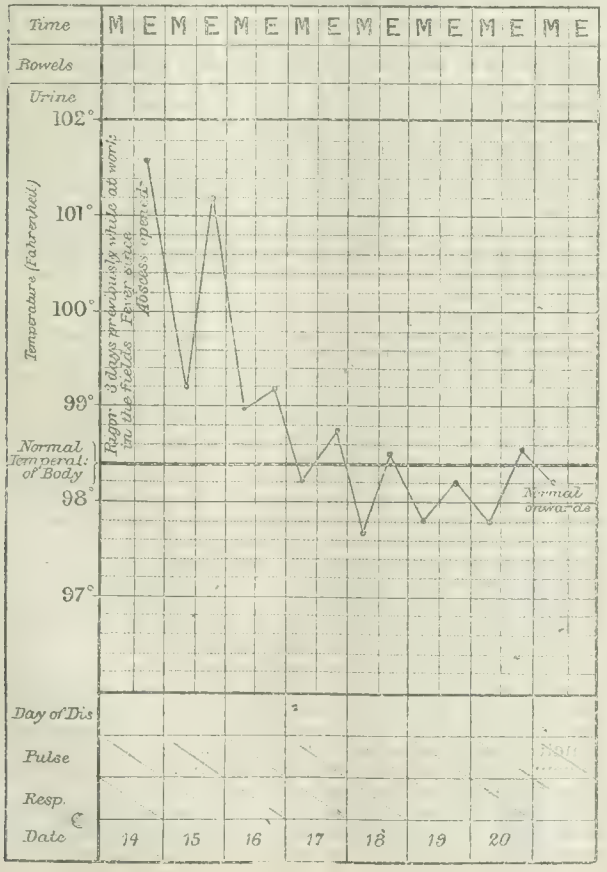



Chart A

I believe that Manson's advice on the subject of these abscesses is sound: "Deep-seated pain in the thorax or abdomen with inflammatory fever followed by hectic fever and a diminution in the number of embryo filaria in, or their entire disappearance from the peripheral blood, should, in such circumstances, suggest a diagnosis of filarial abscess and indicate exploration, and if feasible, active surgical interference."

Finally, we must discuss the onset of this malady and its typical temperature. Chart A is what I judge to be a typical temperature chart of the disease.

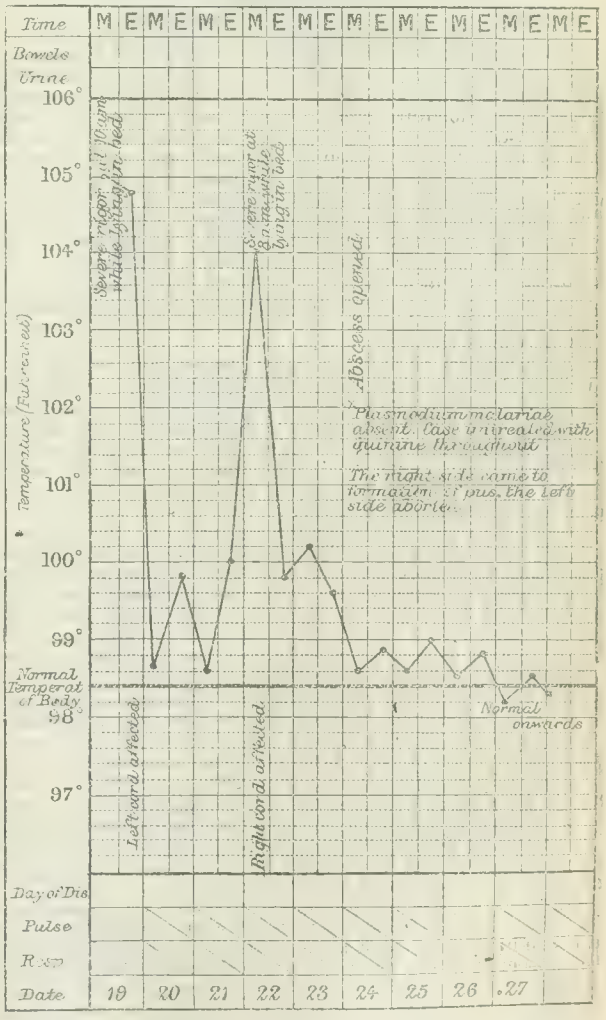



Chart B.

Rising rapidly with a rigor, which may occur while the man is at work in the fields, or cutting wood, or even lying in bed, it remains high for one to three days, and then descends by lysis, provided an unopened abscess is not left. On

the other hand, if the patient be under favourable conditions and it is possible to abort the attack, the temperature may descend very rapidly. (See Chart B, p. 611).

In neglected cases and cases which do not run a proper course owing to insufficient drainage or wide inflammatory focus, the temperature may assume a septic type. (See Chart C, p. 611.)

In criticism it may be urged that this temperature is the result of the plasmodium malariæ complicating the filarial attack. I reply, I would rely upon the following facts, first, that in many of the cases the blood was carefully examined by me for plasmodium malariæ with a negative result; secondly, that it is quite possible for the fever due to the presence of filaria sanguinis hominis and active malarial attacks to run concurrently, but in these cases both the diseases are clinically and microscopically distinct and moreover the patient, as I have proved in two instances, has been right in his statement that one night he had a filarial attack and the next an ordinary quartan paroxysm. I may add that in no case of filarial abscess of the limbs was there any focus of infection to be discovered on the surface of the limb.

## SOME POINTS CONNECTED WITH HUMAN FILARIASIS.

By J. EVERETT DUTTON, M.B.Vict.,
Walter Myers Fellow, Liverpool School of Tropical Medicine.

THE remarkable fact that the embryos of filaria Bancrofti, after reaching a certain stage in their metamorphosis in the body of the mosquito, tend to travel and collect in the proboscis of that insect, has attracted a good deal of attention among the students of tropical parasitology, and has opened up a new era in the etiology of filariasis.

It is interesting and worthy of note that this observation has been recorded by workers in many parts of the globe; Low[1] demonstrated the young filariæ in the proboscis in sections of *Culex ciliaris* obtained from Australia.

James[2] in India showed that in *Anopheles Rossii* the embryos of filaria Bancrofti were capable of development, and in the latter stage of metamorphosis eventually reached the labium of the proboscis.

The members of the Liverpool Expedition to Nigeria[3] in West Africa have recorded similar observations working with *Anopheles costalis;* and, lastly, Grassi and Noè[4] have traced the development of the embryo of filaria immitis of dogs in *Anopheles maculipennis* to its final stage, which is found in the labium of the proboscis of that insect; from this position they have shown that the young filaria passes into its definitive host when the insect bites.

It is to the question of transmission of the filaria Bancrofti to man by means of inoculation during the act of puncture of the skin by an infected mosquito, that I wish to draw attention. Many observers have repeated Manson's now classical work on the development of the embryo filaria Bancrofti in certain species of gnats, and it has been ascertained that many species of *Anopheles* and *Culex* are capable of acting as intermediary hosts for this parasite. Manson's original hypothesis that the young filaria after metamorphosis in the body of the mosquito were on the death of that insect transmitted to water or other medium, and from thence to man, was held as probably correct until Low, last year, found young filariæ in sections of the proboscis of infected mosquitos, and put forward the possibility of man becoming infected by the bites of these insects; previously Bancroft[5] in 1900 suggested that the young filaria nocturna, by making an independent passage for itself into the œsophagus of the mosquito, might pass down the proboscis into the human skin.

During the stay of the members of the Liverpool Malaria Expedition in Nigeria experiments were undertaken to study the life-history of filaria Bancrofti in its intermediary host. On dissection of specimens of *Anopheles costalis* which had been caught in native huts many were found to be infected with filaria (6 per cent.) nearly all the stages described by Manson were observed, and it was noted in a few specimens after teasing the thoracic and abdominal tissues no filariæ were seen, yet on dissection of the head, large, fully developed forms, very active in normal saline were discovered, thinking that these young filariæ were probably filaria Bancrofti, and that this mosquito might, therefore, act as a host to the parasite, specimens of this species hatched from the pupæ were fed on cases of filaria nocturna, every other day at 11.30 p.m., three to six times in all. The experiments at Old Calabar failed, but at Bonny more success was attained and the stages in the development of the young embryo were observed. On August 4th four mosquitos remained out of a batch fed on a case of filaria nocturna for the first time fifteen days previously, one of these mosquitos was found dead in the cage, this was dissected and in the labium a long filaria which appeared to be partly macerated was found. A mosquito was then taken from the cage and killed with chloroform, placing a needle through the thorax, the labium and maxillary palps were pulled away from the base of the head and stylets by gentle traction with the finger nail placed on the tip of the proboscis. In this way the exoskeleton of the labium was separated, leaving its two trachea and nerves attached to the head; on placing the dissection under the microscope from the loose connective tissue left behind a long actively moving filaria was seen to escape. The worm lived one hour in normal saline. It measured 1.006 mm. and 0.023 mm. broad. It tapered slightly to each end. At the anterior end, which was rounded off, the cuticle was thickened to form a few very small papillæ displaced round the oral orifice which was terminal.

The posterior end, which was also rounded off, was provided with four papillæ which arose almost at right angles to the axis of the body of the worm, the anus appeared terminal. The alimentary canal could be seen to run straight down the worm and showed no differentiation into œsophagus and intestine. Besides the alimentary tube two other tubes could be seen which were, for the most part, straight, but at one or two points were seen to twist round the intestine. Towards the head end, at a distance of 0.14 mm. from the anterior end there was an indication of the presence of a genital orifice, towards which the reproductive tube was seen to bend.

It is remarkable how far advanced in development the embryo had become. In fact, as shown above, nearly all the organs seen in the adult filaria Bancrofti could be traced, even sex could be distinguished, the worm thus resembled the adult form found in the lymphatics, only on a small scale, though retaining its four-lobed tail, no doubt a valuable aid in progression along the labium. In this connection it is interesting to note that among some new species of bird filariæ having hæmatozoal embryos described by the members of the expedition to Nigeria,[6] many immature adults were found in the tissues, and were very similar in structure to the young filaria nocturna as seen in the mosquito's proboscis. That the structure of the young filaria at this stage of its metamorphosis should so closely resemble the adult would tend to negative the idea of an independent existence in water or other medium.

It is extremely probable that the filariæ on reaching the proboscis lie extended in the loose connective tissue of the labium, and are not free amongst the stylets as Low[7] thought he had seen, although his illustrations represent them as lying in the labium. James[8] states he found a filaria on two occasions stretched out lengthwise within the tissues of the labium of the proboscis; from his drawing he clearly indicates the filaria in the labium.

Grassi and Noé[9] state definitely that the larvæ of filaria arrived at maximum development, progress towards the head, and collect there rapidly in the prolongation of the general body cavity within the labium.

It has been shown that the members of the expedition to Nigeria also found the filaria in this position after fifteen days from the first feeding on a case of filaria nocturna; the question now arises, How do the filariæ escape from the strong chitinous case of the labium?

Grassi and Noe[10] believe that, owing to the bending of the labium stuffed with filaria, when the mosquito pierces the skin with the stylets, the rupture of the integuments at the bend made in that organ near its centre is brought about, which allows the escape of the filariæ along its dorsal groove; in some specimens they believe they have seen the rupture after the escape of the filariæ.

That such a rupture in the chitinous exoskeleton could take place appears somewhat extraordinary; and, furthermore, if one considers the position of the filariæ inside the labium, it would appear a difficult matter for the filariæ to

escape, even if such a rupture as described by the Italian observers took place.

Now, the young filariæ in the stage found in the proboscis measure nearly half the length of the labium in *Anopheles costalis*. Supposing for the moment that the worm was situated in the distal half, then, to escape through the rupture occurring about the middle of the labium, it must either turn round—a supposition in itself very unlikely owing to the small internal width of the labium (about 52μ by 29μ)—in the distal half, which practically only admits of the presence of two filariæ; or it must emerge tail first, and would then have to travel some considerable distance to reach the skin.

Neglecting, then, for the moment the preceding hypotheses with regard to the escape of the filaria from the labium, the question arises, Is there any loophole in the anatomical structure of the labium whereby their exit would be facilitated?

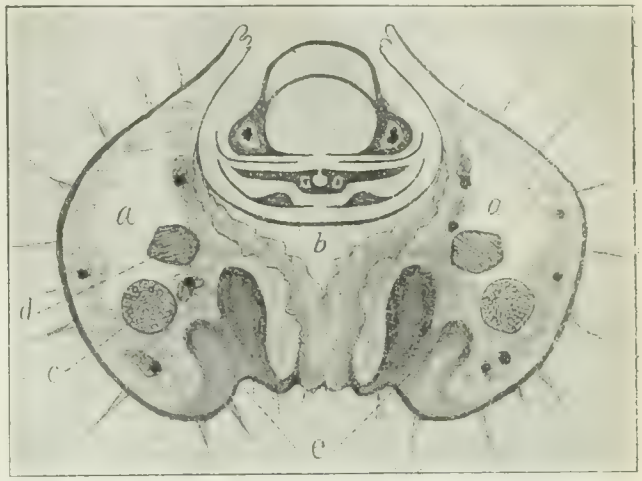
The labium, the largest of the mouth parts of the proboscis, is a rounded cylinder of chitin, lined with delicate connective tissue, and containing a pair of nerves, two large trachea, and a pair of muscles arising from its lateral surfaces. Externally it is covered with hairs and scales, except on its superior surface, which is of smooth, thick chitin, depressed inwards to form an oval channel in which the stylets rest. To the extremity of the labium are attached by true joints (pointed out by Dimmock[11]), two conical organs, the labellæ; convex on their outer surfaces, and hollowed out on their inner approximated surfaces; on these latter, from definite areas above and below project specialised hairs; centrally these surfaces are ridged and furrowed, and enclose the tips of the stylets and the tip of the labium proper. This latter structure is very delicate, and is formed by the continuation of the upper chitinous surface of the labium, which gradually narrows to a blunt point covered with minute hairs. In a transverse section of the labium at its junction with the labellæ (see Fig.) three areas can be made out; two lateral pear or kidney-shaped areas, the inferior broad rounded extremities of which are approximated towards the medium line; these areas articulate with the base of the labellæ. Between the pear-shaped areas is a roughly triangular region, bounded above by the stout band of chitin forming the upper surface of the labium, and on which the stylets rest, and on either side by the two lateral regions of the labium. This area is occupied by a very delicate loose membrane covered with very fine hairs; it is easily torn, and is rather difficult to see under the microscope owing to its transparency.

Above it is prolonged under the tip or tongue of the labium and blends with the lateral free edges and apex, whilst laterally it is in intimate connection with the labellar joints. This region appears to be the weak spot in the chitinous exoskeleton of the labium. It seems probable that this membrane would allow of play, and would be stretched when the labellæ are applied to the surface of the skin in the act of biting by the mosquito, and, further, it is not difficult to imagine the young filaria or filariæ abutting against it would further stretch and so cause its rupture, if indeed they were not able to rupture so delicate a structure by their own exertions. It is to be noted that this region is in very close relation to the skin when the mosquito draws blood, so that the young filaria would, if set free by the rupture of the membrane, be practically over the point of puncture of the epidermis; at the same time it would be protected from injury by the tongue of the labium when the stylets are about to enter the skin. The bending at the base of the proboscis, which gradually travel forward to the middle of the organ as the stylets sink deeper into the skin, would, in my opinion, tend to urge forward the filaria.

Manson[12] has suggested that the young filariæ can apparently discriminate between flesh and vegetable; he states "some mosquitos fed on bananas had not been deceived into passing into so inhospitable a medium, for up to forty days after the insect was infected, and after many meals of banana, they could be found coiled up in the head and stretching along the proboscis."

Grassi and Noè,[13] in a footnote to their paper on the Propagation of the Filaria of the Blood exclusively by means of the Puncture of Peculiar Mosquitos, state that "a great quantity of *Anopheles*, certainly infected within the labium on August 5th, submitted to a fruit diet presented the labium on August 10th completely empty."

It would appear from these facts that the filariæ may pass sometimes from the proboscis into vegetable substances.




Transverse section of proboscis of *Anopheles costalis* at labellar joints. *a*, Lateral pear-shaped end of main body of labium; *b*, triangular region. Above (*b*) chitinous surface of tip of labium; below, loose membrane; *c*, nerve to the labella; *d*, tendon to labella; *e*, regions of labellar joints.

From the investigations of the members of the Liverpool Expedition to Nigeria[14] on the bionomics of *Anopheles*, it is very probable that the female mosquito lives on blood alone, in fact, in the case of *Anopheles costalis*, and *Anopheles funestus*, blood is required at least every other day for the maturation of the ovary and the regular deposition of eggs, a process which was carried on in the case of some *Anopheles* under observation for nearly two months; there can, therefore, be no very great risk of the young filaria being lost in a fruit diet.

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## SOME REMARKS ON ASYLUM PRACTICE IN SINGAPORE.

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On arriving here in 1888 to take up my post as Medical Superintendent it seemed to me that I had gone back a hundred years at least. No case books; no medical journals; no *post-mortem* records. A register did exist, but the names of patients were unknown; the register and the numbers of the patients agreed, but that was all. There was a palatial asylum, badly drained and worse ventilated, mostly built in blocks of ten single rooms. Instead of one single room to about ten beds in dormitories, the opposite condition prevailed. Fixed bedsteads were placed throughout immediately below barred windows; proper supervision was difficult; and the Chinese patients, a most suicidal class, were prompt to avail themselves of their opportunities. Strait jackets were in evidence, and all criminal lunatics and lunatic criminals were in leg irons. Added to the above, one had to contend with quite a babel of tongues, for four dialects of Chinese, Malay, Tamil, Hindustani, and Javanese were commonly spoken; and Burmese, Japanese, Siamese, Annamite, and several different

Eastern Archipelago islanders, speaking but their own language, were all represented in the 200 odd patients I found awaiting me.

Descriptive rolls sent by the police with new patients are in many instances wrongly filled up, the answers in no way applying to the questions. The majority of the cases are wandering lunatics in, as is to be expected, the poorest of physical condition, and about whom no history can be gleaned. Relations they may have, but in China or India or Java and the many islands of the Archipelago, immigrants from which make up most of our population. But little can be done that is reliable in the way of elucidating the causes of insanity in such patients. The study of the mental characteristics of uneducated and semi-savage races is most difficult, and before any useful work can be done it is absolutely necessary that a thorough knowledge of their mode of life, their normal mental state, their theories as to witchcraft, ghosts, and dreams, and their folklore be gained. As has been noticed in India, so here, the majority of patients belong to the lowest classes, with minds unable to grasp the relations of cause and effect except in the customary affairs of life, and so constituted that anything outside their practical knowledge is, as a rule, given up as being incomprehensible.

In our admissions there has been and is a marked absence of the more acute forms of insanity, and that most prevalent appears to me but an exaggeration of a low standard of intelligence, passing fairly rapidly into a condition of dementia from which recovery is not infrequent. Again, many are admitted in a state of dementia—dull, obtuse, and indifferent to their surroundings—without having suffered from any previous acute mental disorder; here recovery also is frequent.

Delusions and hallucinations are of a far simpler character than those met with in European asylums; the former are but rarely persisted in to any extent, and the latter worry the patient but little.

All coolies—Chinese, Tamils, Malays, and Javanese—thoroughly believe in witchcraft, and a large percentage of my patients upon recovery assign this as the cause of their insanity. It is necessary to bear this in mind, especially when examining new admissions, otherwise the, to them, normal belief might be considered a symptom of insanity.

Cases of melancholia are somewhat rare, and never very acute. The theory held by some that mania is due to some disturbance of the lower developed portions of the brain, whereas melancholia is due to an affection of a later development, is hereby borne out. Dr. Greenlees finds a similar condition prevailing amongst his native patients in South Africa.

General paralysis of the insane is rarely if ever seen amongst Asiatics. With about 2,600 admissions during my thirteen years' residence in the East I have never seen a case, and it is not to be wondered at when we consider the simple life of the natives, their few or no worries, and the fact that there is no struggle for existence amongst them in the Straits Settlements. In a country where there is no cold, but little indulgence amongst natives in alcoholic excess, where food and lodgings are cheap and the least possible clothing is required, a disease originating in anxiety, mental worries, and great excesses is little likely to develop. I have had 3 cases in whom there were some symptoms, both physical and mental, of general paralysis; in none of them did these symptoms advance, nor was the sequence of events such as is seen in that disease. Eventually the cases were considered syphilitic, and the diagnosis was verified *post mortem*, a diffuse gummatous deposit in the pia being found in one case, nodes and ostitis of the vault in a second, and endoarteritis of some of the cerebral vessels in the third.

The female recovery rate is somewhat low, averaging 35·29 per cent. on the admissions for the last twelve years. The recovery rate of the males over the same period has been 41·10 per cent. Possibly a factor in the low recovery rate of females as compared with the rate in European countries is the rarity of puerperal insanity. Since 1887 there have been 389 females admitted with only 1 case of puerperal insanity. During the same period 2,330 males have been admitted, showing the peculiarity of the ratio of the sexes in the Straits. The ratio of males to females in the census just taken is in the colony 662 males per 1,000, and in the settlement of Singapore 747 males per 1,000 of population.

The average admissions from syphilitic insanity has been for the past few years 6 per cent., and considering the abnormal ratio of our sexes, the fact that prostitution is considered no disgrace by the Chinese who form the large majority of our population, and above all the abolishment of the Contagious Diseases Acts, it is not to be wondered at. Many, unfortunately very many, of our admissions besides the above show signs of present or past venereal disease, but in them the disease is probably not the cause of their insanity.

Cases of malarial insanity are not uncommon. The insanity from this cause is usually most acute, quite distinct from delirium, usually of but short duration and nearly invariably results in recovery. It has been rare for these patients to have any relapse of fever whilst under asylum treatment. I have the notes by me of 36 cases. Of these three have died, one from acute dysentery, one from pulmonary tuberculosis, and one from heart disease. The remaining 33 have all been discharged recovered. All were admitted noisy, dirty, violent, and destructive—temperature normal. From a few days to a fortnight after admission they became quieter, in fact many of them became somewhat stuporous and were fed with difficulty. From this condition they quickly recovered and 29 were discharged in from three to four months. The other four, three of whom had relapses of fever and insanity with delusions and hallucinations, were discharged recovered, 2 in eight months and 2 in from ten to twelve months. Careful blood examination showed nothing abnormal except in the relapsed cases. May not these cases be due to some substance in the circulation and may not that substance be some product of the malarial parasite? Our knowledge as yet does not take us very far on this road, and the causes of such insanity, as above described, are, in their very nature, most difficult of detection.

Opium smoking, a common indulgence in this part of the world, has been stated by many, most of whom I should imagine to be entirely unfitted to judge, to be a frequent cause of insanity. This statement I cannot but impugn. Of about 2,600 patients whom I have admitted, opium smoking was said to be the cause of the insanity in 30. I have most carefully inquired into the history of these cases, but few of them were the emaciated opium sot—in fact, one rarely sees that being in Singapore—all had been confirmed opium smokers, but usually in moderation. I was able to make out other causes for their mental breakdown in 22 of the cases: in the remaining 8 no cause was to be discovered. There were no special or peculiar symptoms in their form of insanity. Some were maniacal, others melancholic, and others were demented. Asylum patients broken of the opium habit without much trouble when first admitted, having recovered and been discharged and readmitted after intervals of more than a year, upon recovery from their second attack of insanity, have assured me that during the whole time they were outside they had not smoked a single pipe of opium. I have never yet seen a person of whom I could believe, or had any grounds for believing, that opium smoking was the cause of his insanity. The morphine habit, by subcutaneous injection, is a weakness of many Chinese, but none addicted to this habit have as yet found their way into my hands. There is a Chinaman, whom I saw lately in the prison, who shows on back and arms the scars left by many years' indulgence in the habit. He has always been quite sane, and is at present free from any craving for the drug.

The food question in an Eastern asylum is very important. Mohammedans will not eat food from a kitchen where food for Chinese has been cooked if they have the least glimmering of sense left, and Hindus will not touch food cooked by a lower caste man. Cases of refusal of food therefore must always be inquired into in detail, and not at once considered as a symptom of the patient's insanity.

What amusements to try and forward is a great difficulty, there being none of an active character so useful as aids to recovery with Europeans that I can discover attractive to Asiatics. A few play a game resembling draughts, all smoke, and a few appreciate an occasional theatrical or conjuring performance.

Native attendants are not very trustworthy nor sensible, as we understand the word. An amusing incident, which might have turned out seriously, happened in my early days in the

East. The night attendant in charge of the infirmary block, who up to that time kept the key of the dispensary at night, was attacked with diarrhœa at 12.30 A.M., and attracted the attention of a Tamil imbecile named Tamby, who was sleeping in the block. Tamby was employed daily in carrying the medicine basket around the asylum with the dresser, and, with the knowledge of drugs thus gained, imagined himself capable of treating the attendant beneficially. At his request, the attendant handed him the key of the dispensary, from whence he brought out something to give his patient. The attendant at first demurred to taking it, but was persuaded by Tamby offering to take half. One-half was taken by each, and the attendant, immediately feeling very ill, was just able to call up the assistant medical officer before falling down in convulsions, Tamby being found in a similar condition. Both were seriously ill for forty-eight hours, but rapidly made uninterrupted recoveries. The above manner of obtaining the medicine was described by the attendant: Tamby denied having entered the dispensary, or having taken anything, and accounted for his symptoms by fright caused by a big black cat rushing by him. I believe chrysophanic ointment to have been the drug taken, and, from the attendant's description, probably about 60 grs., equal to 3 grs. of the acid. I have not gone into the details of their symptoms, but they were not quite those of any poison described in the textbooks.

I have written on the subject elsewhere, but it may not be altogether out of place to make a few short remarks upon that mental condition, practically peculiar to the Malay race, the culminating point of which is commonly called "amok," and is a state of blind and furious homicidal mania, several cases of which have come under my notice during the past ten years. Fright, grief, a grave disease, brooding over real or imaginary wrongs, the sight of blood, malarial fever, and a peculiar condition of nervous depression, have all been noted as exciting causes. It may be that in some cases the individual wilfully works himself into a condition to amok, in others undoubtedly he passes into that condition insensibly and suddenly. The question for us is how far he should be held responsible for crimes committed when running amok. As in persons suffering from epilepsy, strong emotions will bring on a fit due to disturbances in the motor portions of the cerebral cortex, so I believe that in some Malays strong emotions cause a distubance in the sensory portions of their cerebral cortex, the result of which is an unconscious paroxysm of homicidal mania, or, as Maudsley calls it, an "epilepsy of mind." During this paroxysm the unfortunate individual will rush through the most crowded street or village, stabbing right and left, at man, woman, or child, relation, friend, or stranger. After such an outbreak nothing is remembered that took place during it, the usual explanation on the part of the individual being that the head was giddy, and that everything appeared red, or dark, or like blood to the eyes. All men that I have examined after having run amok, at periods varying from a day to a few weeks after the incident, had a wild furtive stare, showing much sclerotic, and, when questioned as to the amok, their respirations became hurried and their pulse quickened as they gave the above explanation or answered, "I don't know," "I can't remember." They remember that they were depressed, that they were upset, that they suffered from grief—in fact, that their affective nature was at fault, but nothing more. I could discover nothing further abnormal, except in 3 or 4 cases in whom undoubted symptoms of insanity were present and remained. The others were taciturn and averse to answering many questions, though perfectly rational and coherent.

I have had an opportunity of holding a *post-mortem* examination on 3 men who had run amok; in all the pia was thickened and adherent to the convolutions; no other gross changes were to be seen, and unfortunately the microscope was not used. Those who run amok from a sudden impulse are, in my opinion, quite unable to refrain from obeying that impulse, and, moreover, are unconscious as to what they do whilst obedient to their impulse, and therefore should not be held responsible for any action they may commit during their paroxysm of mania—a mania that would even come under the definition of insanity as held by lawyers. Those, on the other hand, who from some real or imaginary wrong, or any other cause, first wilfully work themselves into an uncontrollable rage and then run amok should be held, to a certain extent at least, responsible for their actions, for they must thoroughly understand what is likely to result from their first wilful action. As a man who of his own free will drinks heavily, and in blind drunken rage, more or less unconscious of his actions, commits a crime is responsible so are they.

Beri-beri is the scourge of institutions in the Straits, and for years past 50 per cent. of the mortality of this asylum has been due to it. Much work has been done, the symptoms and gross pathology are well known, and many theories have arisen and died and many yet exist as to the cause of the disease; but, unfortunately, I can end these disjointed remarks by quoting the following lines written by the late Dr. Moxon:

> The suffering the patient knows;
> The physical change the doctor knows;
> And
> The cause God alone knows.

Dr. F. M. Moffat (Uganda) remarked that it was a curious fact that in regard to nervous diseases among the natives in East Africa, such affections as locomotor ataxy and general paralysis of the insane were extremely rare, although syphilis, which was generally supposed to bear an etiological relation to them, was common enough. Sexual excesses and intemperance were both rife, and yet, in spite of all this, nervous diseases generally were rare among the natives of East Africa. The Soudanese, Nubians, and other tribes were especially addicted to running amok. In their own words they ascribed it to "seeing the devil," and they always professed absolute ignorance of their actions after the fit had passed over.

## AN EPIDEMIC OF ZINC POISONING THROUGH DRINKING CONTAMINATED WATER IN THE TROPICS.

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The poisonous effects of various salts of zinc have been demonstrated from time to time. In England they have been reported from brass foundries as due to the oxide, and have been traced to the sulphate in the adulteration of cheese, apparently to the oxide in injurious ice creams, to the chloride in cheap wearing apparel, as well as to the carbonate in drinking water supplied by means of galvanised iron pipes.[1] Instances of the latter kind of poisoning in the tropics are perhaps not so widely known as at home. In 1900 part of an Indian regiment, the Malay States Guides, stationed at Pahang, suffered from zinc poisoning to a very marked degree.

The 56 men who formed the detachment were transferred from the neighbouring State of Perak in March, 1900. I took over medical charge of this half-company in September, 1900, and found that the health of the men had been very bad during the previous six months. Gastro-intestinal complaints were so frequent and serious as to almost verge on an epidemic. Route marching han been curtailed, early bathing prohibited, and it had been supposed in July that a form of dysentery was endemic in the barracks. Inquiry showed that the half company was composed partly of Sikh soldiers and partly of Pathans, living in parallel and identical barracks on an isolated hill, a short distance from the town of Kuala Lipis and about 43 feet above it. The two buildings were erected in 1898 on an artificially-levelled flat, the surface of which was of stiff clay streaked with laterite. Each barrack was 90 feet in length by 40 feet wide, roofed in 1898 with sheets of 22 B.W.G. corrugated iron.

In 1900, for the convenience of water supply, a galvanised iron tank (capacity 400 gallons) had been supplied to each building, one being for the use of the 31 Sikhs, the other for the 25 Pathans who made up the strength of the half-company. Rain water was collected for the first time in January, 1900, from the roofs by means of zinc gutters and down spouts leading into the tanks. No rain-water separators or other appliances were in use with a view of discharging the first water collected. The water supply had previously been carried from a large river at the foot of the hill.

The galvanised iron roofs had not been covered with a

thatch and were not painted. The tanks only had been painted green outside and washed with cement inside. There is but little vegetation in immediate proximity to the barrack square, but the jungle soil in the vicinity of the barracks is shaded and thickly covered with vegetable and organic matter in an active state of growth and decay owing to the peculiarly hot and moist character of the climate.

In October I suspected that the cause acting so injuriously on the health of the Guides was due to the irritant action of some metallic poison, and surmised that it was some salt of zinc in combination with an organic acid or acids. By a rough application of the usual chemical tests I found in December that the water from each tank, as well as that caught directly from the roof, contained the metal zinc in poisonous quantities, and my deductions were subsequently confirmed by special analysis.

Mr. P. J. Burgess, M.A., Government analyst, Straits Settlements, whose report on this water is attached, reports that the water taken directly from the roof is organically a dirty water and unfit for domestic purposes, while water taken from the tanks is as far as organic impurities go, fit for drinking. And that the tank water held zinc in solution as the acid carbonate, 4.82 parts per million in quantity as compared to that taken directly from the roof which held 11.15 parts per million in solution.

It is thus proved that zinc existed in the water in sufficient amount to cause poisoning and the medical history of the health of the detachment will prove that to this alone was their illness due. Similar detachments from the Malay States Guides who occupied these barracks used water from other sources. They were under my care in 1898 and 1899. The numbers under treatment for gastro-intestinal complaints were not very large during these two years for this class of native.

The present detachment used the zinc-contaminated water from their first arrival in March, 1900, until the end of the year, when its use was forbidden and prevented. After its use was stopped the number of patients steadily decreased. There have been no new cases of this kind and the general health has much improved.

In 1900 colic, diarrhœa, and a spurious form of dysentery were persistently complained of. The health had never been affected in this way before, as the following records of attendance for this class of case, taken before, during, and after using this water supply will prove:

From March to October, 1898, 30 men were under treatment for this class of case; in 1899, for the same months, 58 patients. In 1900, during the same period, 219 men, and, at the close of the year, it was found that 43 different individuals out of the 56 had been on the sick list on account of gastro-intestinal disorders. Nine men and 1 woman had been transferred on medical certificate. One patient was recommended for four months' sick leave to India; 5 others, who had constantly been on the sick list, took all the leave which was due to them. Seven voluntarily left the service on the termination of their agreements on account of ill-health, and one of them subsequently died in Selangor. Another died at Kuala Lipis. The spirit of the remaining 31 men of the original Perak detachment was broken, and the general loss of tone was very noticeable.

During 1900—from January till April—only 22 have been treated for these complaints, and the figures are very striking when it is remembered that out of these 22 cases many have been old patients from 1900.

A brief clinical account of 6 cases typical of the prevailing sickness in 1900 is here given:

1. P. S., aged 25, lance-corporal, Sikh, had been an out-patient during April for "colic;" was admitted to hospital on May 10th, 1900, for "dysentery," remained sixteen days, and was discharged, but was re-admitted on June 30th for diarrhœa and colic, suffered from vomiting and violent retching; the vomited matter was sometimes streaked with blood. He was placed on milk diet and recovered, but was again admitted on July 30th for dyspepsia and anæmia; returned to duty, but was re-admitted for the fourth time on October 3rd, and was subsequently transferred to Selangor very much reduced in weight and strength.

2. A. S., aged 25, private, a Pathan of powerful physique, was first treated as an out-patient for diarrhœa at the commencement of June, 1900; was admitted to hospital on June 28th, remained eight days on milk diet, recovered, and was discharged, but readmitted on July 24th for diarrhœa. He remained ten days, and recovered on milk diet. On October 25th was readmitted for "dyspepsia" very much prostrated in strength, and was transferred to Selangor after two months in hospital. This man's weight was taken on October 1st, 1000; it was then 129½ lbs.; again on October 15th, 126 lbs.; again on October 31st, 123 lbs.

3. V. S., aged 27 years, private, Sikh, a fine soldier of good physique, was admitted on June 22nd for "dyspepsia" and "diarrhœa." Previous health bad, as he had been an out-patient for some time; suffered from stomatitis. He was readmitted on August 28th, and died on September 27th, 1900. He persistently complained of pain referred to the region of the stomach, suffered from violent vomiting and diarrhœa, and became much emaciated. The muscles of the calves and thumbs were notably atrophied; he had no fever and no cerebral sympioms, and died of inanition. No *post-mortem* examination was practicable.

4. S. S., aged 27, bugler, Sikh, a young soldier, had been an outpatient for two or three days in March, was admitted on June 18th for dysentery, was readmitted on October 5th for dyspepsia. He complained of colic, diarrhœa, and vomiting, and also had slight hæmatemesis. Progressive loss of strength and flesh was very marked. There were no physical signs of disease. Worms were suspected, and he was given castor oil and santonin without result. On December 5rd this man's weight was 106 lbs., on the 12th 101 lbs., on the 28th 98 lbs. He was given alcohol and cod-liver oil without benefit, and was subsequently transferred to Selangor.

5. P. B., aged 23, private, a well-built Pathan, had been treated as an outpatient for colic and dyspepsia, was admitted to hospital for diarrhœa on August 1st, 1900, discharged as cured after six days; had been placed on milk and rice-water diet. Readmitted on December 31st for "dysentery," thin, emaciated, and very anæmic in appearance; general febrile disturbance; griping pain in stomach; stools frequent, but not offensive; contained ropy mucus and blood. Was given phosphate of soda in 4-drachm doses three times a day. He recovered and was discharged in thirteen days, but readmitted on February 15th, 1901, for general debility. General loss of flesh, but no cramps or anæsthesia was complained of. Blood poor in quality on microscopical examination; chemical examination of the urine for zinc negative.

6. G. S., aged 26 years, private, Sikh, had been an out-patient since May 10th with "dysentery." Was admitted to hospital on May 13th for melæna, remained in the ward for five days, and recovered on milk diet; was supposed to have had ulcer of the rectum. Readmitted on October 9th with diarrhœa and melæna, recovered again in five days, but has been under treatment as an out-patient for anæmia.

This man, as well as the foregoing patients, was very anæmic.

Special points of interest in the clinical histories are:

1. The fact that gastric symptoms predominated over nervous symptoms. It is difficult to offer any satisfactory reason as to why this should have occurred, except that it is a common experience in the East that Sikhs suffer greatly from irritative dyspepsia even under ordinary circumstances, and are not often attacked with neuritis. As far as my experience in Pahang goes, they have been notably exempt from the prevalent form of peripheral neuritis which is very commonly met with in beri-beri.

2. The fact that all the Sikh patients had had their diets prepared at the barracks, and had their drinking water supplied from the contaminated tank all the time they had been in the wards. This was on account of their religious custom, which forbids them to use food prepared by others than their own nationality, or to drink water unless it has been carried by a Sikh. The Pathans, on the other hand, being Mussulmans, were supplied with the ward diets and water by the hospital cook, who is a Mohammedan. They were also accustomed to eat and drink with their Mohammedan friends in the town, but the Sikh soldiers had few opportunities of feeding outside barracks. The hospital returns show that the Sikh soldiers suffered in a proportion of almost 2 to 1 as compared to the Pathans.

3. The slow and deadly action of zinc poisoning by administration in small but continuous doses was well exemplified. In some cases it seemed to suggest the possibility of zinc being an accumulative poison. Emaciation was, generally speaking, an evident symptom, and was so marked in the case of V. S. as to suggest malignant disease of the stomach at the time of his death.

With regard to the chemical analysis of the water, it is necessary to say that the samples A and B mentioned in the analyst's report were taken from the Pathan's tank. It was not possible at the time, owing to a short drought, to send Mr. Burgess samples from the Sikhs' tank. An excess of zinc was found in this water by me as compared to the other. For the same reason it took some days to collect the sample C, which was taken directly from the roof. The surfaces of the corrugated iron were not flushed with rain as is usually the case. This no doubt accounts for the large amount of organic matter which was found in this particular sample, and may explain the excess of zinc in it through non-dilution of the water. The roofs at Kuala Lipis are covered with white patches of oxide of zinc.

The amount of carbonate in solution in the tank water which caused so much sickness at Kuala Lipis is comparatively small in quantity. It is less than one-fifteenth of that

found in the contaminated water supplied to Cwmfelin, near Llanelly, a few years ago.

It is interesting to note in connection with the latter instance, which is reported in the *Lancet* of July 29th, 1893, that the Pahang water was also essentially a soft water. The occurrence of this rather rare instance of poisoning suggests the advisability of a special inquiry with regard to a possible contamination of water in the towns of Australia and South Africa where galvanised iron roofs and tanks are used for the purpose of collecting and storing rain water; and although soil and circumstances undoubtedly play a chief part in the causation of typhoid fever in these countries, it is not unreasonable to suppose that zinc poisoning might be a factor in the causation of some of the gastro-intestinal symptoms. It appears that only after prolonged boiling and subsequent filtration water containing the acid carbonate of zinc might be harmless. It must be borne in mind, however, that the climates are essentially different, and perhaps in this may be found the determining cause of the Pahang epidemic. The mean annual temperature at Kuala Lipis in 1900 was 82.7° F., the minimum temperature 71° F., the rainfall 96.69 inches, with an average number of thirteen rainy days per month.

References.

[1] *Lancet*, vol. ii, 1897; vol. ii, 1896; vol. ii, 1893.

## Reports by Dr. P. J. Burgess, Government Analyst.

Government Analyst's Office,
Singapore, April 12th, 1901.

*Report on Three Samples of Water, and a Piece of Zinc Gutter sent for Analysis by the Resident Surgeon of Pahang.*

The samples were labelled as follows: A, B, C, D, E, and F. Of these A, B, C, D, and E were samples of water in soldered tins. Sample B was a duplicate of A, and sample E a duplicate of D.

Samples of water A, B, D, and E were taken from the storage tanks, and Sample C was taken direct from the roof.

Sample F was a wooden box, containing a piece of zinc gutter pipe.

*Experimental Results.*

A preliminary determination of the quality of the samples as drinking water was made, with the results as given in the attached Report I.

From these results it is shown that the water C is organically a dirty water, and unfit for domestic purposes, while A, B, and D, E, are fit for drinking.

These results, however, cannot be taken as true indications of the quality of the waters, on account of the time that had elapsed during the transit of the samples from the place of collection to this laboratory.

The results obtained by the resident surgeon of Pahang, namely, that zinc was present in the water, were then qualitatively confirmed, and an estimation of the amount of the metal was made. These results are given in Report II.

The water held the zinc in solution as the acid carbonate, and boiling the water in an open dish led to the precipitation of zinc, as the normal carbonate of zinc. The presence of zinc in this case is, in fact, precisely analogous to the frequent and harmless presence of calcium carbonate in waters which are technically termed "temporary hard."

An examination of the zinc gutter F showed that a considerable amount of dust and fine sediment had accumulated in the gutter. When this superficial deposit was removed round patches of a white powder were found closely adherent to the zinc surface. Portions of this powder were collected and analysed, and it proved to contain: zinc, 52.1 per cent.; carbon dioxide, 20.2 per cent. This percentage corresponds to approximately a basic zinc carbonate, and the practical difficulty in obtaining the white powder free from surrounding dust would naturally lead to results showing low percentage of zinc and carbon dioxide.

An analysis of the loose brown dust in the gutter was then made, and it was found to consist approximately: matter, insoluble in strong acids, 70 per cent.; zinc carbonate, 5 per cent.; ferric oxide, 0 per cent. Moisture and other soluble matter were present. Only an approximate analysis of this dust was made, because the composition varied with the mode of removing it from the gutter. The results, however, are sufficient to show that the dust contained considerable quantities of zinc salt.

*Conclusions.*

There can from the foregoing results be no doubt that the water under examination is contaminated with zinc, and the amount is sufficient to cause zinc poisoning by long and continued use of the water. The zinc is in actual solution in the water, and filtration would not be efficient in removing the zinc. This is shown by the quantitative results obtained on filtered and unfiltered samples of the water. (*Vide* Report II.)

The source of the zinc has undoubtedly been the zinc surface over which the water has run during the collection, and the water has been enabled to hold the zinc in solution by being impregnated with carbonic acid.

As this carbonic acid is expelled from the water the zinc is thrown out of solution, and it is to this partial purification of the water by standing, and loss thereby of carbon dioxide, that I attribute the amount of zinc in water A B and D E, being smaller than it is in sample C, which was taken direct from the zinc roof.

I am inclined to believe that, provided the surfaces of the roofs and gutters were clean, there would be no danger of zinc pollution of the water, and that the immediate sources from which the zinc is derived are the small patches of zinc carbonate, which are found in the gutter, and which I suspect would also be found scattered over the galvanised iron roof.

These patches of zinc carbonate are formed by the action of the decomposition products of organic matter, which may have collected, and have remained lying in the gutters and on the roof.

Report I.

| Samples. | A | B | C | D | E |
|---|---|---|---|---|---|
| Chlorine (grain per gallon) ... .. | 0.56 | 0.700 | 0.560 | 0.28 | 0.420 |
| Free ammonia (parts per million) ... .. | 0.07 | 0.128 | 0 420 | 0.01 | 0.000 |
| Albuminoid ammonia (parts per million] .. | 0.04 | 0.66 | 0.182 | 0.11 | 0.104 |

Report II.

| Samples. | A, B | C | D, E |
|---|---|---|---|
| Total solid residue (parts per million) ... ... | 72.80 | 52.80 | 45.70 |
| Total solid residue in filtered water (parts per million) ... ... ... ... ... ... | 46.00 | 34.20 | 16.00 |
| Zinc (parts per million) ... ... ... ... | 4.82 | 11.15 | 3.35 |
| Zinc, in filtered water (parts per million)... ... | 4.25 | 8.90 | 2.20 |
| Iron (parts per million) ... ... ... ... | 7.09 | 19.36 | 2.80 |

The remainder of the solid residue consisted of organic matter, salts of sodium and potassium, and traces of lime.

Mr. Cantlie drew attention to the suggested resemblance between beri-beri and many of the cases of arsenical poisoning from drinking adulterated beer in Manchester and elsewhere in England. He thought that it would be expedient that an expression of opinion on the subject should be got from those present who had seen beri-beri in China, the Straits Settlements, or elsewhere.

Dr. Max F. Simon, C.M.G. (Singapore), remarked that he did not think beri-beri could be traced to arsenic or any other metallic poisoning. There was nothing in common with the two complaints except neuritis. In beri-beri there were neither skin, eye, nor digestive symptoms present to justify such a conclusion.

Dr. Manson expressed a similar opinion, but pointed out the great difficulty he had in diagnosing between beri-beri and alcoholic neuritis when the patient suffering from the latter disease came from a country where beri-beri prevailed. Some definite clinical sign or symptom of beri-beri should be carefully and persistently sought for in order that a clear and precise diagnosis of the disease may be arrived at.

Dr. Edward Henderson fully endorsed what Dr. Manson said about the difficulty which might arise in distinguishing a case of alcoholic neuritis from one of beri-beri, but could not understand how much confusion could ever occur when the distinction had to be made between beri-beri and chronic arsenical poisoning. He had seen a large number of cases of beri-beri in China, but could not remember ever having seen skin pigmentation as a symptom in any of them. He regarded the theory of metallic poisoning as untenable.

*(To be continued.)*

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

### A CASE OF HYSTERIA IN A BOY.

S.B., aged 10, was brought to me on December 4th, 1900, complaining of pain in the back, which he had had for some little time. He was a strumous-looking, ill-nourished lad; an illegitimate child, very backward for his age, and extremely nervous. There was tenderness over the spinous processes of the lower dorsal vertebræ, but no deformity or prominence of any of the spines or any stiffness of the muscles. The next

day I was hurriedly summoned to him at 6 P.M., as "he was in a fit." When I arrived about half an hour later I found him lying huddled up in an arm-chair. He was quite conscious, complaining of pain across the back, giddiness, and nausea. The pupils were equal and natural. From the mother's account the boy had had a fit while having his tea. He suddenly stopped eating, turned his eyes up to the ceiling, cried out that somebody was beckoning to him, and then he is said to have lost consciousness and to have remained in this state about an hour. There were no convulsions or involuntary passage of urine or fæces. He had never had a fit before. I gave him a mixture containing bromides, but his condition gradually got worse. It was difficult to get him to take any food; he had no wish to do anything or go out, but lay huddled up complaining of pain in his back and head. The bowels were regular, and there was no trace of worms. He remained in this condition for some time. He was devotedly nursed and petted by his sympathetic and highly neurotic mother. There was a history of his having had a great shock through being shut up in a dark cellar for some hours by his grandmother before this illness came on.

One morning I found him in bed complaining of great pain in the abdomen. He was lying on his side, with the knees drawn up and the thighs flexed on the abdomen. He had an anxious expression, and also complained of severe pain on the top of his head. The temperature was normal, as it had been all through, there was no sickness, the tongue was clean, bowels regular, and pulse normal. When lying on his back the abdomen was distended, and the slightest attempt at manipulation apparently caused the greatest pain, although I noticed that the pressure of the bedclothes caused none at all. On getting him to take a deep breath and on deep palpation there was obviously no real pain or tenderness. The abdomen was resonant all over. The apparent distension was found to be due to the patient lying with his spine very much arched, and upon his lying flat in bed the distension at once disappeared. I explained to the mother that I thought his symptoms were entirely due to nervousness, but she was quite sure that there must have been something else, so he was seen by Mr. Baker of Waterloo Ville in consultation, who entirely agreed with me as to the diagnosis. The patient was got up and out of doors as much as possible, and the mother was told in his presence that if he did not get better he would have to be sent away to a hospital. This was very much against his wishes, and the threat was successful, as he improved and lost all his pains and is now quite well.

E. Percy Court, M.R.C.S., L.R.C.P.Lond.

Hambledon, Hants.

## *POST-MORTEM* EXAMINATION IN A CASE OF STRYCHNINE POISONING.

The following report is interesting, as there are few records of exhumation after strychnine poisoning.

A female child, about 4 years old, was on March 22nd, 1901, given about a teaspoonful of liquor strychninæ instead of cough mixture. Very shortly afterwards she died in convulsions, and was buried on March 26th. By the coroner's direction the body was exhumed on April 18th, from a grave about 6 feet deep.

The face, especially over the eyelids and mouth, was covered with a greyish green mould, varying from a quarter of an inch to an inch in depth. The body was clean, the abdomen green, the thighs bright yellow, the buttocks and back red. The hands were tightly clenched, the fingers over the thumb; the feet were inverted and arched; rigidity was well marked. The eyes were sunken, pupils equally dilated. The skin of the face was easily peeled off. The mouth was empty, the masseters rigid; the epithelium of the tongue was peeling off. The intestines were covered by normal omentum. The stomach was distended, and contained 4 ounces of greenish material and undigested food. The intestines contained partly digested food and fæces. The spleen, liver, and kidneys were normal. The bladder contained about a drachm of urine. The pericardium contained sanguineous fluid. The left side of the heart was empty; the right side was flaccid, and contained dark-coloured fluid blood. The lungs were normal, the posterior portion full of blood. The thymus was large and normal. The brain was injected over the surface and on section. The spinal cord was normal. Portions of the viscera and contents were found by Dr. Stevenson to contain sufficient strychnine to cause death in a child of 4 years old.

Wellingborough. H. Hollis, M.D.Cantab.

## JAMBUL IN ADVANCED DIABETES MELLITUS.

As doubt has been cast on the value of jambul in diabetes mellitus, the following case, which shows its power in reducing the amount of sugar excreted, may be of some interest:

The patient was a man, aged 40, who to my knowledge had suffered from diabetes for at least three and a-half years. The onset of the disease followed somewhat closely the rapid dilatation without an anæsthetic of a very narrow urethral stricture. In addition to this evidence of former gonorrhœa there were also well-marked symptoms of syphilis. At different times during the progress of the disease he had been treated with potassium iodide, codeine, uranium nitrate, and other drugs, with little or no improvement. Latterly, while under treatment as an out-patient, he was put on jambul, in doses up to ʒiij of the powder thrice daily. Under this substance he expressed himself as feeling better than he had done under any former treatment. He certainly improved in colour though evidently not much in weight.

The treatment had continued some weeks, when it was resolved to test the action of the drug as a sugar-reducing agent. He was accordingly admitted to hospital. It may be mentioned, as showing the advanced stage of the disease, that he had for some months shown a dense cataract of the right lens as well as a perceptible haziness of the left. For the first week in hospital he had no treatment, and for diet he had simply the ordinary hospital fare. The treatment by jambul had been suspended about a week before his admission so that for about a fortnight there had been an entire cessation of all treatment whatsoever. At the end of this time the urine was collected on three consecutive days and its sugar content estimated by standard Fehling's solution. The average daily quantity was found to be 256 ounces, containing on an average of 4.65 per cent. of sugar, that is, as nearly as may be, 11.9 ounces. He was then ordered jambul in doses to be rapidly increased from ʒi to ʒiij three times daily without restriction as to diet, with the result that for the next six days the average quantity of urine secreted was 214 ounces, containing on the average 3.92 per cent. of sugar, and corresponding to a daily output of 8.4 ounces. He was then put on a restricted diet, consisting chiefly of meat, and had saxin as a sweetening agent, the maximum dose of jambul remaining as before. The urine for the next seven days averaged 215 ounces (the lowest observed quantity being 190 ounces) with an average sugar content of 3.22 per cent., which gives a daily average of 6.9 ounces of sugar. The daily average output of sugar had thus been brought down from 11.9 ounces to 6.9 ounces, a decrease of 5 ounces, of which 3.5 ounces was to be ascribed to the action of the jambul, and 1.5 ounce to the restriction of diet.

From this result jambul, with or without restriction of diet, might reasonably be expected to control early and mild cases. I may say that the patient made no complaint regarding the action of the drug except to say that he thought that in the larger doses it slightly increased the constipation. It may be noted that at an earlier stage codeine had on several occasions been blamed for causing diarrhœa.

William Mackie, M.A., M.D.,
Visiting Physician and Surgeon, Grays Hospital, Elgin.

Elgin.

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Camberwell Infirmary.—On August 19th, Miss M. H. Grace Russell, M.D., was presented by the Medical and Nursing Staff of the Infirmary with a silver salver on the occasion of her resigning her appointment.

Donations.—Mr. Andrew Barlow of Shirley, Southampton, has given a sum of £13,650 to be distributed as follows:—£4,500 to the Royal South Hants and Southampton Hospital; £3,250 to the Southampton Branch of the Queen Victoria Jubilee Nurses' Institute; £1,700 to the Southampton Dispensary; £1,500 to the Hants Female Orphan Asylum; £1,500 to the Southampton Free Eye Hospital; £1,200 to the "Barlow Homes," Shirley, Southampton.

# REVIEWS.

## SOME RECENT ESSAYS IN BIOLOGY.

Apart from accidental causes of destruction, a protozoon does not die. It grows to a certain size, and then divides into daughter cells. The metazoa, on the other hand, grow old, and die as individuals; their germ plasm is nevertheless immortal. The essential difference between the protozoa and the metazoa is that the latter consist not of one, but of colonies of cells. The cells as they multiply do not separate, but cling together. To this difference, Dr. Mühlmann, who has recently published a book on the subject,[1] attributes age and death. He argues that to explain these phenomena we must study the processes of growth. The impulse to grow is given by the germ plasm, and this impulse is forwarded by, and depends on, the assimilation of nourishment. The whole question of nourishment is dependent in its turn on simple physical conditions. In the embryo each division of the cells takes place along a line at right angles to the previous division. The cells thus grow in three dimensions of space. Now the clinging together of one cell to another lessens the surface exposure, and so the intake of nourishment. In the blastula state of the embryo the inner cells become entirely separated from contact with the nourishment which bathes the surface layer of cells. This leads to retrogressive changes, and the formation of fluid within the blastula. To further the assimilation of nourishment, the wall of the blastula becomes folded in to form the gastrula. The effect of lessened nourishment which results from growth thus, according to Dr. Mühlmann, plays a most important part in the autogenetic and phylogenetic development of the animal world. To this he ascribes the radial and bilateral lines of growth, for the more centrally-placed cells are delayed in growth; while the well-nourished peripheral cells continue to extend. To this "law of nourishment" Dr. Mühlmann likewise attributes the folding of epithelial surfaces, such as are found, for instance, in the papillæ of the skin. In the higher metazoa, where the cells develop vascular systems to further their nourishment and growth, the vessels grow only in two dimensions of space, while the cells continue to increase in three dimensions. Hence the supply of nourishment always tends to fall behind the needs of the cells In consequence of this physical relationship of growth to nourishment atrophic, necrotic, and retrogressive changes accompany growth from the very first. Growth is thus clogged and impeded, and as the retrogressive changes continue death finally results. Just as the thirst for nourishment impels the cells to grow into enteric canal, air tubes, blood vessels, lungs, and so on, so the formation of retrogressive products impels the cells to form excretory channels. True growth, according to the author, consists only in the multiplication of blast cells. These are cells composed, like the protozoon, of protoplasm, and they alone are capable of assimilation. The blast cells cover the skin, the mucous membranes, the gland ducts, the vessels, and form the ova and the fibroblasts, chondroblasts, osteoblasts, sarcoblasts, and neuroblasts. Mühlmann argues that the formation of fat, glycogen, myosin in muscle, bone, cartilage, connective tissue, mucin, etc., are retrogressive changes. These substances are formed out of protoplasm, are partly oxidised products, and are incapable of assimilation. By series of statistics, many of which are the fruits of his own labour, Mühlmann demonstrates: first, that the growth of the blast cells continues right up to the time of death; secondly, that the curve representing the rate of growth rapidly lessens in steepness from the first hour of development onwards. Thus he calculates that the increase in weight of the embryo at the end of the first period of three months is 400,000,000 per cent, at the end of the second period of three months 5,182 per cent., while at the end of the third period it is 252 per cent. It will be seen from the above brief outline that Mühlmann considers the physical relationship of growth to nourishment as of primary importance in determining the evolution of living forms. He refuses to recognise that the future function of an organ determines its structure. Development, he says, must be studied without looking forward and hunting for purposes of design. The book is thoughtfully and suggestively written by a man who has studied widely, and is worthy of perusal by those engaged in elucidating the problems of pathology, physiology, and evolution.

[1] *Uber die Ursache des Alters.* [The Causation of Old Age.] Von Dr. M. Mühlmann. Wiesbaden: J. F. Bergmann; and Glasgow: F. Baumeister. 1900. (Roy. 8vo, pp. 208. 5s.)

Dr. Walter Kidd's book, *Design in Nature's Story*,[2] may be described as an attempt to reinstate teleology in the position from which it has been dislodged by modern habits of thought. It is evident that the author is widely read, and that he has carefully thought out and digested the matter which he has perused. He has not been fully convinced of the adequacy of the automatic processes of evolution to bring about all of the results attributed to them, although he is not prepared to deny their existence or their activity. Hence he falls back upon the idea of a beneficent directing intelligence, which, although in one passage he disclaims that it can have "condescended to peddle," is nevertheless elsewhere assumed to have interfered in matters of detail. His point of view is presented agreeably, and with due moderation, although we much doubt whether his book will carry conviction to those who are of a different way of thinking; indeed in places there seems to be some confusion of thought, and the argument becomes difficult to follow. Thus a great number of structures are cited as evidences of design, but the vast majority of these are exactly such as might have been cited by the most thorough-going evolutionist as adaptations fully explicable by natural selection. For instance, he cites the poison apparatus of snakes, which leads to the suspicion that he cannot be aware that even amongst animals at present living there exist a complete chain of transitional forms between the harmless and the poisonous snakes; and that the deadly cobra itself, as well as a large number of highly poisonous snakes, are actually transitional, as far as the apparatus goes, between the harmless snakes and the highly specialised viperine snakes. Quoting Professor Pearson, he holds that the function of the man of science ends with the observation and its record, that he has no concern with explanations, and that from that point he must give place to the philosopher. But surely there are great dangers in arguing from second-hand knowledge, which must always be liable to be superficial. Much stress is laid upon an appropriate environment having been prepared beforehand for plants and animals, but that a certain thing happens or appears when the environment is ripe for it is no argument that the environment was meant for it. One might as well argue that because the intestine of a dog suits a tapeworm admirably, therefore the dog was made for the purpose of harbouring the tapeworm. In fact, the author has attempted—and in this he does not stand alone—the impossible; he has endeavoured to prove by argument that for which the data for argument can hardly be said to exist, which leads almost inevitably into a begging of some of the premisses. Medical men will read with some surprise an attempt to whitewash the vermiform appendix, which, presumably because it contains lymphoid tissue, is said to be a place for the destruction of certain bacteria. If there be any warranty for this idea, it is surely a poor example of design when it so very frequently is quite the reverse of an advantageous possession. Doubtless there are some to whom the attitude of suspended judgment is the reverse of satisfying, and such may derive some satisfaction from the perusal of a book of this character, even though we cannot concede to it much argumentative force; at all events, it does not offend by calling names, a vice into which similar works are very prone to fall.

[2] *Design in Nature's Story.* By Walter Kidd, M.D., M.Z.S. London: Nisbet and Co. 1900. (Cr. 8vo, pp. 165. 3s 6d.)

There is no preface by which to ascertain for what purpose the late Mr. Grant Allen designed the collection of short essays to which the title *In Nature's Workshop*[3] has been applied; but we may hazard the guess that they were intended for, and perhaps have already appeared in, the pages of some magazine. They contain accounts of various curiosities of natural history, such as Sextons and Sea-

[3] *In Nature's Workshop.* By Grant Allen. London: George Newnes, Limited. 1901. (Cr. 8vo, pp. 248, 100 woodcuts. 3s. 6d.)

vengers, Masquerades and Disguises, Plants that go to Sleep, and the like, and they combine, as did the writings of this author generally, scientific accuracy with a popular style of narration. But we cannot help thinking that when these essays were brought together in a permanent form some of what might be termed the lighter touches might well have been left out by the editor. As it is they are irritating rather than amusing. But the little book, perhaps, does not aim very high, and it cannot be taken up without meeting with something or other of real interest, so that it may be confidently recommended to those who, without desiring to go very deeply into the subject, enjoy reading of the manifold contrivances to be found in plants and animals.

## BOTANICAL WORKS.

DRY, exceedingly dry! or frequently some stronger phrase, expressed the opinion of a very large percentage of those who studied botany under the old *régime*, when plants were not treated as living organisms, but rather as compounds of stereotyped patterns, the particular preconceived form of each figure being expressed by a simple or compound word having a smack of Latin or Greek in its composition. Even at the present day most of our purely local floras are characterised by what approaches perilously near to pedantry in the use of "terms" which are in no wise more expressive of the point under consideration than the use of simple English words would be. During recent years vegetable morphology and physiology and palæobotany have received much attention, and as a result myriads of technical terms have been coined; nearly every fresh investigator realising that those terms already in use did not quite express his view of the point under consideration. Hence the necessity for *A Glossary of Botanic Terms*[1], which, fortunately for all those interested in botanical work, suggested itself to Mr. B. D. Jackson. His intimate knowledge of botany in general, combined with indefatigable industry, and the fact that he is in touch with those most able to impart information on special sections, has resulted in the production of a work which is simply indispensable to all those interested in plant life, from the gardener, who will learn that to "ablaqueate" a tree means to loosen the soil round the root, to the physiologist, who will either think that he has forgotten his Latin or that some one has made a slip, when he is informed that "albication" means becoming blanched or variegated with white. Nevertheless, such terms, and others numbering about fifteen thousand, have been used, and thanks are due to Mr. Jackson for enabling us to ascertain exactly what they were intended to mean.

*Agricultural Botany*[2] is an excellent book, written by one whose extensive knowledge of the subject has enabled him to select just those features most essential, not only to the farmer and horticulturist, but to all those desirous of becoming acquainted with the structure, mode of life, and classification of agricultural plants, as also what to do and what to avoid, when the primary object is the production of good crops. In addition to the portion dealing with plants of economic value, special chapters are devoted to weeds of the farm and farm seeds, both subjects of primary importance. The chapter on bacteria is an excellent summary of the subject of nitrification, etc. The statement that a spore is a single cell is correct for only about half the known species of fungi, and "definite sexual reproduction appears to be wanting among the higher fungi" is a Brefeldian assumption not supported by facts.

The demand for the fifth edition of a textbook is in itself a guarantee that the work is generally sound, and among books attempting to embrace the whole field of structural botany the *Handbook of Practical Botany*,[3] by Professor STRASSBURGER, of Bonn, translated and edited by Professor HILLHOUSE, of Birmingham, ranks among the best known. The original German work, written by one of the most brilliant of the modern school of German botanists, was published about twenty years ago, and included all the latest discoveries and modes of manipulation. The same cannot, unfortunately, be said of the present edition. The translator has certainly added new and valuable information here and there, but such scraps of up-to-date information do not blend kindly with the condition of things as understood a quarter of a century ago. The gaps which at that period separated the supposed primary groups of plants have been now well nigh bridged over, and it is all important that the student should be enabled to realise this fact. The cryptogamic portion of the book is especially behind the times, not only in minor details but in broad and fundamental truths. For instance, when the book was originally written the presence of nuclei in many groups had not been demonstrated, whereas at the present day they have been proved to exist even in the simpler forms of fungi, not as bodies difficult to detect, but presenting the various characteristics of nuclear structure and division observed in the nuclei of the higher plants. Had the translator been acquainted with the researches of Mitzkewitsch on *Spirogyra*, important modification of the account given of its structure would doubtless have appeared. The statement respecting the basidia of *agaricus campestris* producing only two spores is incorrect, as has been shown long ago, and should have been omitted, as should also the equally incorrect figure illustrating a portion of the hymenium of the same fungus.

[1] *A Glossary of Botanic Terms, with their Derivation and Accent.* By Benjamin Daydon Jackson. London: Duckworth and Co. 1900. (Demy 8vo, pp. 340. 6s.).

[2] *Agricultural Botany: Theoretical and Practical.* By John Percival, M.A., F.L.S. London: Duckworth and Co. 1900. (Demy 8vo, pp. 810, 265 illustrations. 7s. 6d.)

[3] *Handbook of Practical Botany, for the Botanical Laboratory and Private Student.* By Dr. E. Strassburger. Translated and Edited from the German by W. Hillhouse, M.A., F.L.S. Fifth Edition. London: Swan Sonnenschein and Co. 1900. (8vo, pp. 510, 10s. 6d.)

## SOME DENTAL WORKS.

DR. CHRISTIAN GREVE has contributed to the *Handbuch der Prophylaxe*, now in course of publication, an essay on prophylaxis in diseases of the teeth and mouth, which, like other essays of this series, is published separately.[1] He begins by giving a summary of the more important contributions to the bacteriology of the mouth, in which the possibility that it serves as an incubating chamber for many pathological bacteria is discussed, though the very high percentage of mouths in which, for instance, the pneumococcus, the Klebs-Loeffler diphtheria bacillus, and the tubercle bacilli are found makes one incline to the idea that the author has selected for quotation the most striking rather than the average results. The researches of Miller have shown that complete sterilisation of the mouth is hardly possible even experimentally, much less as a daily routine, but that scrupulous cleanliness, combined with the use of antiseptics, results in an immense diminution of the bacterial flora. The more potent bactericides being, for one reason or another, unsuited for use in the mouth except under special circumstances, he recommends for habitual use mouth washes and tooth powders containing benzoic or borobenzoic acid and saccharin, with or without the addition of thymol, and urges that no tooth powder can be considered efficient without antiseptics. For special disinfection Miller found that sublimate in the strength of 1 to 2,500 was the most efficacious, its nauseous taste being disguised by eucalyptus and oil of peppermint. Inasmuch as dental caries has not so far been traced to any specific bacillus, but presents a mixed infection in which certain forms preponderate, the same measures likely to prove useful generally are equally appropriate for its prophylaxis.

Mr. DOUGLAS GABELL'S *Dental Anatomy Note Book*[2] is exactly what its title implies: On the one side stand headings of the more important matters on which a student should take notes, on the other a blank page of considerable dimensions, on which to do so. It is designed for use in conjunction with Tomes's *Dental Anatomy*, with the excellent dental series in the main court of the Natural History Museum, and with personal instruction. Though in a sense a cram book, it is one of an unobjectionable kind, as it leads the student to think and search for himself; and as the first edition was

[1] *Handbuch der Prophylaxe.* Abteil vi. Die Prophylaxe bei Zahn-und Mundkrankheiten. Von Dr. H. Christian Greve. Munich: Seitz and Schauer. 1900. (Demy 8vo, pp. 22. M.1.)

[2] *Dental Anatomy Note Book.* By Douglas Gabell, M.R.C.S., L.R.C.P., L.D.S. Second Edition. London: C. Ash and Sons. 1900. (Demy 4to, pp. 31. 3s. 6d.)

speedily exhausted, it may be presumed to have been found useful. It admits of improvement in several particulars: there is no more room for notes on very important matters than for those of less significance; one or two entries occur twice in such connection as to be puzzling to a beginner, and, as it is avowedly for use with a particular series at South Kensington, the actual sequence of specimens in the cases would have been more convenient to the note taker than the purely zoological order adopted. But the student who conscientiously fills it out with his own notes cannot fail to have learnt a good deal in so doing.

Professor ESSIG's *Dental Metallurgy*[3] just falls short of being a good book. It contains evidence of careless compilation. Thus, on pages 50, 142, and 270 three very different formulæ for type metal are given without adequate explanation, while in the inadequate index the only reference is to yet another page, on which little more than the word occurs. Tested by seeking some information which we happened to need, it was found wanting in that precision of detail essential for practical utility; yet it contains a good deal of useful matter not to be found collected together elsewhere.

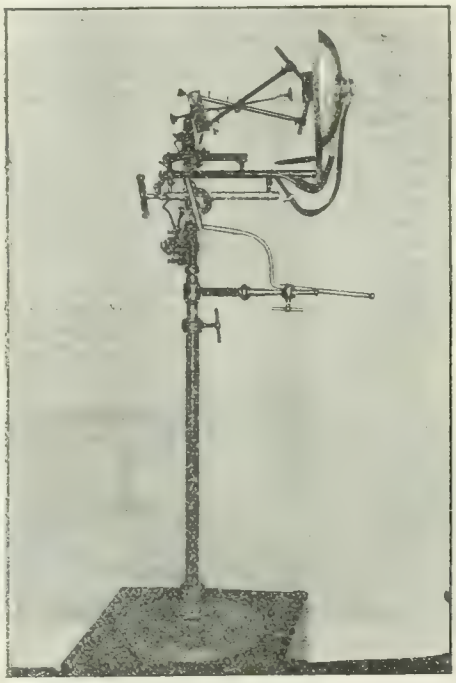
## NOTES ON BOOKS.

An earlier edition of Surgeon-Major CAVERHILL's *Self-Aid in War* (*Self-Aid in War*, by T. F. S. CAVERHILL, M.B., F.R.C.P.Edin., Surgeon-Major the Lothians and Berwickshire Yeomanry Cavalry. Enlarged edition. London: Williams and Norgate. 1901. 32 mo. Pp. 55. 1s.) was noticed some time ago. It is an excellent book, and we gladly welcome it in enlarged form and its fourth thousand. It would be well if it could be scattered in many thousands more, for it is so brief, lucid, and non-technical as to be within the capacity of the most ordinary soldier or civilian, and in many an emergency would be equally of use to both. It begins with general instructions for the wounded or injured, with short chapters on severe bleeding, management of wounds, and removal of wounded. In succeeding chapters there are rules and hints for the preservation of health in tropical and semitropical climates; concerning drinking water, sun, chills, clothing, sleep, rest, alcohol, all admirable in their terseness and simplicity. We heartily commend the book, which is bound in soft portable form for the pocket.

# REPORTS AND ANALYSES
AND
# DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

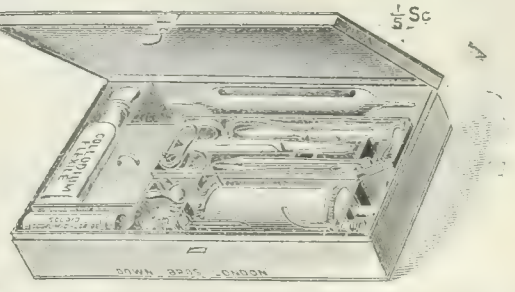
## MEDICAL AND SURGICAL APPLIANCES.

*A New Lupus Lamp.*—Dr. W. S. HEDLEY (Mansfield Street, Portland Place, W.) writes: The accompanying figure is a photograph of a new lupus lamp I have lately begun to use. With some modifications it is the apparatus described by MM. Lortet and Genoud in a recent communication to the Académie des Sciences. Its advantages are: (1) instead of the heavy currents (80 ampères) hitherto used, only 12 ampères are required; (2) a larger area (1 to 6 c.cm.) can be treated at a time; (3) the photo-chemical intensity is such that an exposure of 15 to 20 minutes is sufficient to obtain the required result instead of an hour or more, as with the Finsen apparatus. It has long been evident that with the last-named apparatus the output of energy available for the purpose in hand is ridiculously small in comparison with the total energy expended; one reason being that the concentration of luminous rays by means of condensers results in a considerable loss of chemical rays which are more or less absorbed by the media forming the condensers. It is also pointed out in the communication above referred to that if the luminous rays be used as near as possible to their source and before dispersion, condensers can be done away with. For this purpose the apparatus in question was devised. An adjustable arc is situated behind a screen perforated by an orifice (25 mm. in diameter) through which the beam is projected, falling upon the compressor which is situated immediately in front of the orifice.



The part to be treated is, of course, placed in close contact with the compressor. The screen has double walls between which water is kept in constant circulation, a circulation of water being at the same time maintained in the compressor as in the usual arrangement. As there are no self-adjusting arrangements, the arc must be watched by the operator; it will be found that it requires adjustment 8 or 10 times during each sitting; this is easily done by means of a screw. Either continuous or alternating current may be used, but I find that with the latter a longer exposure is necessary.

*Emergency Case.*—Dr. GEO. WM. DAVIS (Sidcup) writes: Messrs. Down Bros. have made for me the case figured in the block below. This may be carried in a bag or attached to the



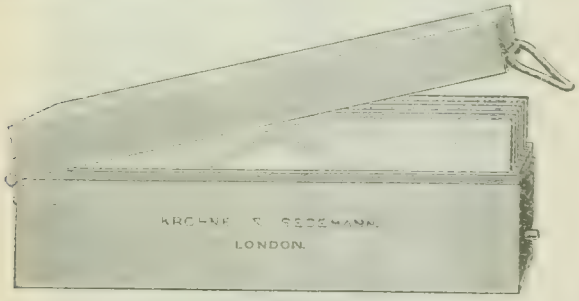
bicycle by means of a leather satchel, with space for a bandage. The case is furnished with instruments to treat internal hæmorrhage by gelatine subcutaneous injection and by the intravenous injection of normal saline solution. The distinctive features of the case are that it contains a tube of sterilised saline gelatine solution, and that the syringe and fittings are made of solid metal, plunger included, that all the fittings are non-corrodible, and that the junctions with

[3] *Dental Metallurgy: A Manual for Dental Students and Practitioners.* By C. J. Essig, M.D., D.D.S., Professor of Mechanical Dentistry and Metallurgy in the University of Pennsylvania. Revised by A. Koenig, B.S., M.D., Demonstrator of Metallurgy. Fourth Edition. London: Henry Kimpton. 1901. (Demy 8vo, pp. 286, 7s. 6d.).

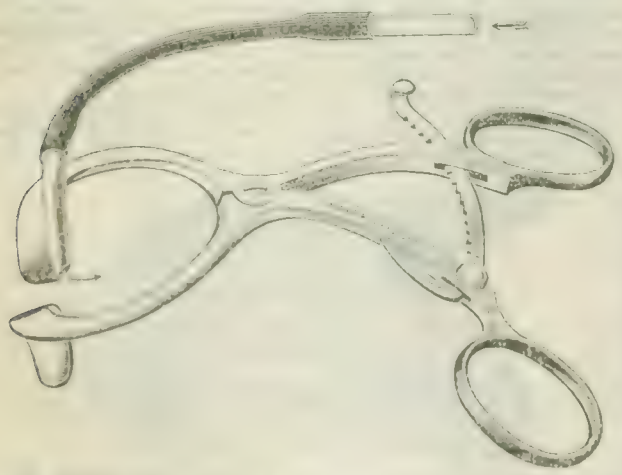
the syringe are rendered complete with bayonet catches. The dimensions of the case are $7\frac{1}{2}$ ins. × $5\frac{3}{8}$ ins. × $1\frac{1}{8}$ in., and it weighs $3\frac{1}{2}$ lbs. Beyond its special service in hæmorrhage, the syringe is useful as an aspirator and for exploration, and the other instruments are suitable for use in minor operations and accidents. The contents are as follows:

1. Rack, holding scissors, dissecting forceps, scalpel, and aneurysm needle. 2. Space for lint, rubber tubes, Bellocq's sound, and two bulldog artery forceps. 3. Syringe and platino-iridium needle and silver vein cannula. 4. Metal compartment for needles and chromic gut. 5. Flexile collodium. 6. Soloids of sodium chloride. 7. Hermetically-sealed tube of saline gelatine sufficient to make one injection of 5 ozs., and put up by Mr. Wm. Martindale, of Wimpole Street, at my direction.

*Box for Microscopic Slides.*—Dr. ALFRED C. COLES (Bournemouth) writes: For some time past I have been looking for a small box to carry microscopic slides in as small a space as possible without permitting adjacent slides to touch. Recently Messrs. Krohne and Sesemann have at my request made a very compact box measuring just over 3 inches in length, 1 inch in depth, and not quite $\frac{3}{4}$ inch in width. It has a rackwork fitting, so that half a dozen slides can be taken. The box goes comfortably into the waistcoat pocket. Those who like myself make their films on slides in preference to cover slips will find this small box very convenient. Films of blood, pus, etc., can be carried without risk of their being damaged by dirt or moisture. I have enclosed a drawing.




*A New Gag for Use in Operations in the Mouth and Naso-pharynx.*—Dr. R. J. PROBYN-WILLIAMS (Welbeck Street, W.) writes: The accompanying drawing illustrates a modification of Doyen's gag which has been made for me by Messrs. Mayer and Meltzer. For operations on post-nasal growths, etc., Doyen's original form of the gag has proved useful in many ways. It is less likely to slip than Mason's and other



gags, and both tonsils may be removed while it is in position, instead of a change being necessary from one side to the other. The arms of the gag fit more or less closely to the cheeks, so that it is quite possible to fit an ordinary facepiece over it, and to administer gas or ether with the gag in position. In this way time may be saved, and there is little risk of any part of the gag being caught in the pillow on which the head of the patient is resting. In my form the plates of soft metal on which the teeth rest have been made much smaller, as in the original form they were cumbrous, and occupied too much room when the gag was in position. A new ratchet has been substituted with many slots on it, so that small variations in the opening of the mouth can be readily obtained; and, in addition, a spring has been added, so that when necessary the gag can be quickly closed. A tube has been added for the administration of chloroform, which is so often necessary in prolonged operations. It is fixed behind the uppermost rest for the teeth, that is supposing, as is usually the case, the gag is inserted on the left side of the mouth. It is thus entirely out of the way of the operator. The tube itself is short, and of much wider bore than those usually added to the arm of a Mason's gag, as suggested by Dr. Hewitt. In consequence, the chloroform can be administered more freely when required, and the tube can be easily cleaned, which is practically impossible in the other forms. The ordinary tube from a Junker's inhaler may be fixed directly on to the metal tube, but I prefer to insert between them a short indiarubber tube, which may be easily cleansed if any blood enters it, and so keep the tube which belongs to the Junker's inhaler quite clean. The two indiarubber tubes are connected by a small piece of glass tubing. As this gag rests on the teeth, which are not, as a rule, so firmly fixed as those which are placed farther back in the mouth, more care must be exercised in placing the gag in position, and, if this is done, it will be found very useful in many cases.

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Tilley, H. Purulent Nasal Discharges. 1900.
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Twentieth Century Practice of Medicine, xix. Malaria and Micro-Organisms. 1900.
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American Orthopædic Association. Transactions. Vol. 13. 1900.
Association of American Physicians. Transactions. Vol. 15. 1900.
Chicago Health Department. Reports. 1893-1898.
Columbia College of Physicians and Surgeons. Report of Department of Pathology. Vol. 7. 1900.
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Middlesex Hospital. Registrar's Reports. 1898.
New Hampshire State. Board of Health Report. Vols. 13-16. 1897-1900.
New York State Board of Health Report. 1898.
Ophthalmological Society of United Kingdom. Transactions. Vol. 20. 1900.
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Bentley and Trimen. Atlas of Medicinal Plants.
British Journal of Dermatology. Vol. 2, part 3.
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———— für Bakteriologie. Bound volumes prior to 1899.
———— für klinische Medicin. 1880-1883; all 1888, 1891, No. 26; 1892, No. 17.
———— für medicinischen Wissenschaften. Vols. 1-19.
Congrès Français de Chirurgie. Transaction 1, 2, 3, 6, and 10.
Congrès Internat. d'Obstétrique et de Gynécologie. 1, Bruxelles, 1892; 3, Amsterdam, 1899.
Connecticut State Board of Health Report. Vol. xi. 1887-8.
Denman. Midwifery. 1801.
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Fothergill. Midwifery. (Recent).
Gale. Surgery. 1563.
Glasgow Medical Journal. 1833-1853. Nos. 2, 5, 9, 10, 12, 13 1856-1858. And No. 4, vol. 2. 1870.
———— Pathological Society. Transactions. Vols. 1 and 2.
Hare. Therapeutics. Vols. 3-4.
Indian Medical Gazette. 1866-1884.
Intercolonial Medical Congress of Australasia. Transactions of Fifth Session, Brisbane.
International Congress of Hygiene. Congresses 1 to 6.
International Ophthalmological Congress. Transactions of 5th, New York, 1876.
Johns Hopkins Hospital Bulletin. Vols. 1-10.
Journal of Laryngology. Vols. 1-9.
*Lancet*, 1850, vol. 2, pages 425-6.
Larrey (J.). Mémoires de Chirurgie Militaire et Campagnes. Tomes 3, 4, 5. 1812-17.
Ophthalmic Review, January, 1882.
Provincial Medical and Surgical Journal. 1840. Being the first 52 numbers before October 2nd, 1841
Recueil d'Ophtalmologie. 1891, Jan.-June: 1892, December.
Registrar-General's Annual Summary of Weekly Returns. 1866 73, 1876, 1880, 1887.
Revue Générale d'Ophtalmologie. Prior to 1888, and 1891-92.
Semaine Médicale. Prior to 1890, and title and index to year 1892.
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Willcock. Laws of the Medical Profession. 1836.

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# CORRESPONDENCE.

## THE MIDWIVES QUESTION.

SIR,—I had hoped at this late stage of the controversy that it would not be necessary to go over again the weary course. The case for legislation is practically this: There is a terrible mortality from puerperal fever in this country. This mortality is due to the inefficient attendance given by unregistered midwives. If midwives are registered this mortality will at once sink by at least a half, and, as Dr. Farrar puts it, in the words of the Obstetrical Society, legislation is demanded that the public may know whether any person calling herself a midwife is properly competent to the office. Now, I have said, and I say it again, that puerperal fever is already a disease compulsorily notifiable by law, and consequently a patient so suffering is liable to a visit from the medical officer of health in the same way as a person suffering from any other notifiable disease. As is generally known, the medical officer of health does not examine the patient in the way suggested by Dr. Farrar at these visits unless he has permission to do so. If the medical officer in the discharge of his duties does not act with great circumspection, he is liable to correction at the hands of the Local Government Board or his own sanitary authority.

I have suggested that if it is true that there is a lamentable loss of life throughout the country from this disease owing to the attendance of incompetent women, it would be wise to compel all persons who are not on the *Medical Register* to report the cases which they attend, so that the medical officer of health can make the necessary inquiries before the patient is in such a condition as to be beyond the reach of help. Neither Dr. Farrar nor anyone else can twist anything I have written or spoken into any other meaning. I quite agree with him that it is preposterous to demand that a surgeon should be present at every birth, but I do assert that it is reasonable to demand that everyone who undertakes the responsibility of attending at a confinement without being as fully competent as a registered practitioner of medicine should give notice to the sanitary authority, so that her practice may be overlooked and the disasters complained of prevented. We have heard of the excellence of the results obtained in maternity charities by midwives: I ask, Is not the practice of such women overlooked by registered practitioners, and in fact directed by them; and is it not therefore the case that, in these charities, it is the midwife who gives notice to the doctor?

Where, then, is the hardship if, when she leaves the charity, she is still compelled to give notice to a registered practitioner—the medical officer of health—who would have the power to send for a practitioner in midwifery if he found it necessary. It appears to me that when the lives of women, and possibly infants, are at stake, this is a very beneficent proposal; and that whether the mother is primiparous or not, or sensitive and shrinking, it ought to be the duty of someone to see that she has a fair chance. What is the doctor employed by a maternity charity but an official? And a man because he is officially employed cannot be less of a man than Dr. Farrar, even if he is not so capable of performing offices, such as changing sheets, etc.

Dr. Farrar's suggestion that the working classes are less capable than he is of distinguishing between a trained midwife and an untrained one would require a great deal of demonstration before I could believe it. Anyway, I am inclined to believe that I would sooner trust my life to a woman with a number of years' experience, than I would to one with a licence given after three months' training and a course of Mr.

Humphreys's lectures. I know the claptrap about Eve and her delivery well, but what about the stringent sanitary regulations of Moses? In the Mosaic era breach of these was, in some cases at all events, likely to end in being cut off from the children of Israel. Supposing Dr. Farrar had a conscientious objection to circumcision in those days, what would have been his fate, please?

I gather from Dr. Farrar's letter that he wishes the practice of midwifery in this country to be handed over to an uneducated class of women after three months' training—much less educated than the three years' trained nurse. If this is so I think that the House of Commons ought to be plainly told that this is the object of the promoters of legislation. I have no doubt myself that the House of Commons will license midwives, and will license them without any restrictions unless steps are taken to evolve some scheme such as that I put forward as a basis for discussion.

No collection of business men such as the House of Commons will split hairs about the terms "midwife" and "nurse." If such a body is told that midwifery is most safely practised by women because of the smallness of their hands, as the members of the Select Committee were told by an eminent specialist, or for some other reasons, how can it do otherwise than license them without restrictions, which, after all, must be inoperative when power to practise is given? A great many members of the profession are anxiously waiting to see the Bill which is to be brought forward, or at all events to understand the lines upon which it is to be based. I suppose that Dr. Farrar, as a warm supporter, will kindly oblige us with the information which we require.—I am, etc.,

Hatfield, Aug. 26th. LOVELL DRAGE.

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SIR,—Dr. Glover's letter in the BRITISH MEDICAL JOURNAL of August 24th is very satisfactory. It is straightforward and to the point, and if the author adhere to this attitude he need not fear the loss of his seat on the General Medical Council. The objections to a Midwives Board are, in my opinion, fatal. It would be constituted by Act of Parliament, and have powers coequal with the General Medical Council, and could, if necessary, over-ride the decisions and recommendations of the latter.

It is perfectly clear that a Central Board would not be self-supporting, and provision is made for this in the Midwives Registration Bill, and for this reason alone the administration should be local, as local authorities must find the money in any case. A Nursing Bill appeals to the sympathies of the benevolent, and an Obstetric Nursing Bill, such as I have drafted, would only be an extension of the system of sick nursing at present in operation in most of the large towns and in some country places.

Dr. Glover may take for granted that in any dispute about the conduct of a midwife under the Midwives Registration Bill, it would be to the Midwives Board and not to the General Medical Council that appeal would be made, and the General Medical Council has had ample notice that the Privy Council would scout their recommendations in a contest with a rival authority. Dr. Glover points out, by way of illustration, that

> The General Medical Council and the Committee of the British Medical Association have both stipulated that evidence of good character shall be forthcoming as a condition of registration.

But Mr. Humphreys said in my hearing at the Wandsworth Medical Society, when the Registration Bill was before Parliament:

> A certificate of character has no weight, no value at all—this must be left to the Midwives Board. Medical students have no certificate of character, and why a midwife?

I am glad I took these words down, as they afford a capital proof of my contention as well as a serious warning to the credulous. Dr. Glover says:

> Probably much of the mischief of Gamps comes in with the nursing function.

Quite so. Your readers may be surprised to hear of an experienced Gamp giving an enema *per vaginam* instead of *per rectum!* I have seen this and worse, and yet we are told, *ad nauseam*, that these respectable women must be registered!

I have no personal interest in this matter, but have had special experience of every phase of it, which is my only justification in trying to deal fairly and practically with the issues involved. It is some five years since I drafted my "Sick and Obstetric Nurses Bill," and by request submitted it to the hon. Member for the Richmond Division of Surrey. It was printed the following year (1898), and posted to the leaders of both sides, both lay and medical, including Dr. Brassey Brierley, Dr. Sam Woodcock, Dr. Broadbent, and Dr. Colin Campbell. The latter resides at Saddleworth, where Mr. David Owen says the Manchester Medical Guild scheme originated, and yet it lay dormant all through those years of agitation! And "as a matter of fact we were unaware of the existence of such a Bill at the time of considering the scheme"! All this is news to me after reading Dr. Broadbent's letter in the JOURNAL of June 29th, and a statement from another member of the Guild who claims to be the author of the scheme! My Bill was reviewed in the *Lancet*, the BRITISH MEDICAL JOURNAL, the *Medical Times and Gazette*, the *Medical Magazine*, and the Nursing Journals, and was applied for by medical men and others in all parts of the country. It is no fault of mine if the Manchester Medical Guild "were unaware of the existence" of my "Sick and Obstetric Nurses Bill" when they proceeded to formulate their scheme three years after its publication, and, in fact, their scheme is neither more nor less than my Bill in a mutilated form.

Our direct representatives also had copies of the Bill and the medical members of Parliament, one of whom wrote to say he wholly agreed with the Bill, and would support it if introduced by a lay member. Is it any wonder that we are such a helpless rabble? I want neither fee nor reward, but demand fair play, and it is remarkable that this national quality appears to be unknown in the medical profession. Had my Bill been taken up and remodelled where necessary by our direct representatives, it might now have been the law of the land.

If the other side win in this contest they deserve to, as they not only know their own minds but can act upon their convictions. The attitude of two of our three direct representatives towards each other is astounding. Dr. Glover accuses Mr. George Brown on a public platform of misleading his supporters by making promises which he knows he cannot perform: and instead of repudiating this statement on the spot Mr. Brown is silent until he is challenged in the JOURNAL of August 17th, and then writes asking his supporters "to suspend their judgment!"—I am, etc.,

Liverpool, Aug. 31st. ALEX. MCCOOK WEIR.

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## THE MEDICAL GUILD AND THE PROTECTION OF PARTURIENT WOMEN.

SIR,—As the one who first suggested that the Council of the Medical Guild should formulate a scheme with a view to legislation for the protection of parturient women and their offspring, and who was, in consequence, appointed convener of the Subcommittee, I can testify to the correctness of what the Honorary Secretary of the Guild has said in reference to Dr. McCook Weir's Bill. It was never once mentioned, and I am not aware that any member gave a thought of its existence. What Dr. Owen says of the practice which has been in existence thirty years or more at Saddleworth certainly was mentioned, and this was the actual basis of the scheme that was drafted. I had very little, if anything, to do with it, any further than convening the meetings and other details, except having first propounded the idea. One member—this was before the Committee was appointed—tried to throw cold water upon it: but our thanks were due to the then Chairman of the Council, Mr. G. A. Wright, F.R.C.S., that it was of no avail, who contended that, in spite of previous attempts, he saw no reason why this further attempt should not be made to settle the question.

In the Subcommittee perfect unanimity prevailed, and subsequently in the Council; and it was not until the special meeting of the Guild on May 17th last that a serious attack was made upon the scheme by Dr. Woodcock, who had been voted to the chair, and is a parish medical officer. This led to a smart passage at arms between him and Dr. Colin Campbell, but subsequently the whole of the scheme was unanimously passed with very little alteration.

One great object of the scheme, whether it ever comes to anything or not, is to indicate what we, as medical practitioners, consider to be the only sound method of dealing with

the question. We deem it dangerous to the public to legally license partially educated women as independent practitioners of midwifery just as it would be to license anyone with a few months' training as independent practitioners of medicine or surgery; and what we suggest is that no one shall be legally recognised to conduct cases of midwifery except under the direct and personal supervision of those who are registered under the Medical Acts. Any other course than this is fraught with danger, and it would be strange to find any medical man dissent from it. Ways and means have to be discussed as to the best method to carry it out, but until then all legislation upon the subject ought to be deferred. The first thing to aim at is to establish the most sound principle, and place it before the profession in order to obtain its sympathy and support. This being attained, it will not be long before the details will be supplied and worked out.

Dr. Reginald Farrar, British Medical Journal August 24th, p. 500, says that the majority of midwifery cases are "normal." Suppose we say nine-tenths[1] but what about the odd case? Is this to be left to the tender mercies of the "registered" midwife? Is it to be left to her discretion when a medical man is to be called in, and is he to be subservient by law to her dictum? Is this the right way about? Is not the proper course, rather, that she should be under his direct and personal supervision? This, surely, is the only safe course. One doubtful case in ten means 100 per 1,000, and anyone can see that if all these are to be left to the haphazard judgment of midwives the danger of a high death-rate both of mothers and children is great, to say nothing of injuries to both, which may prove a source of suffering and disablement for life. There is too little attention given to the number of preventable still-births. Does Dr. Farrar include such cases as these under his "normal" cases when the mother comes out safely?

And then as to the nine cases being "normal," what are we to understand by this? Who is to know in how many of these there has been rupture of the perineum? How many where there has been excessive hæmorrhage? And is the general health of the mother to be overlooked? How many cases are there which ought at the time, in the convalescent period, to have some medicinal treatment which might prevent a protracted period of debility?

The reception which the Guild scheme, p. 429, August 17th has met with is very gratifying. In the report of the meeting at Cheltenham, to hear the candidates for the General Medical Council election, in the British Medical Journal, August 10th, pp. 371-378, Mr. George Jackson and Mr. Horsley spoke definitely in favour of the scheme. Dr. Woodcock in the first paragraph in the second column on p. 376 spoke adversely to it as follows:

> If there was any unanimity of the profession, and if there was any encouragement from the public you might hope to insist on a medical man being called in to each confinement. But it is absurd to believe in any such thing which is so far from being practical.

Although Mr. George Brown did not mention the scheme I know that he is favourable to it, whilst as Dr. Glover made no mention of the scheme in his written address it cannot be expected that he will further it. He admitted at the meeting (p. 376), in reply to Dr. Cox, that he had voted in the General Medical Council in favour of the certificate of the Obstetrical Society of London. Dr. Major Greenwood pointed out that the holders of this certificate sign themselves "L.O.S.," thus implying that they are Licentiates! And yet all the time the President of the Obstetrical Society is silent, and does not (dare not?) condemn the practice.—I am, etc.,

Manchester, Aug. 26th. G. H. Broadbent.

## TUBERCULIN AND BOVINE TUBERCULOSIS.

Sir,—An absence from Manchester has prevented me drawing your attention sooner to some errors which have accidentally occurred in the report of the proceedings of the State and Municipal Section at the late Congress on Tuberculosis (British Medical Journal, August 3rd, p. 313).

My remarks regarding Dr. Koch's statements were not part of the opening address which I had prepared by request on How the Eradication of Bovine Tuberculosis can be secured by the Use of Tuberculin.

This address had been previously prepared. The day before it was read I saw the announcement of the position taken by Prosessor Koch regarding the innocuity of bovine tuberculosis. Had I been convinced that Professor Koch was right my communication would have seemed to me useless from the point of view of the human hygienist, and I should have withdrawn it. But I had previously gone carefully into the question (Tuberculous Infection through the Alimentary Canal, *Medical Chronicle*, 1895), and I felt convinced that for some reason or other Professor Koch had been misled by some accidental experimental results. Before reading my address, therefore, and with the permission of the President, Sir Herbert Maxwell, Bart., I recapitulated the reasons why we should still consider that bovine tuberculosis was a danger to public health, and it was only after the meeting—which was a large one—had passed unanimously a resolution which I moved with the approval of the President and secretaries, that I proceeded with my address. This resolution which you have published (*loc. cit.*) is, as you will notice, one which has for object to minimise the embarrassment which Dr. Koch's statement was causing to the health authorities. However convinced I was that Dr. Koch was mistaken, I respected as far as possible his great authority. This resolution was forwarded at once to Mr. W. Long, who also the next day, and at the request of Sir Herbert Maxwell, received a deputation from us. This first part of the business was, therefore, not in any sense a part of my communication.

It is, however, in the report of what I said regarding the use of tuberculin that the most serious errors are to be found. I am made to have said that: "Cure largely depended upon early diagnosis." Now, although this is true as a general statement, it has absolutely no meaning with regard to what I had to say with regard to tuberculin, and I did not once speak of cure, but only of administrative methods. My address related only to diagnosis of tuberculosis in cattle, and to the most economical way of disposing of tuberculous cattle.

I am also reported to have expressed the view that the administration of tuberculin "could not be enforced upon owners on account of the possible mischief to the cattle from its use." This is just the contrary of what I said, for I gave abundant proofs that tuberculin was entirely free from danger in that respect. As I carefully read every word I spoke on this subject, I am absolutely certain that I have not made by inadvertence the statements which I am anxious to see corrected. The usual accuracy of your reports and your well-known desire to make the Journal a most useful source of reference are sufficient guarantees to me that you will give publicity to these corrections.—I am, etc.,

Manchester, Aug. 26th. Sheridan Delépine.

## NOTE ON AIRBORNE TYPHOID.

Sir,—I have read Dr. Canney's paper on Airborne Typhoid in Armies and the discussion which followed the reading of it with much interest. Without doubting that polluted water is in India and other countries a common cause of outbreaks of typhoid fever, I am satisfied that this disease is often—I might almost say generally—airborne. Dublin has, with perhaps the exception of Belfast, the highest death-rate from typhoid fever amongst the larger towns of the United Kingdom, yet it has one of the purest water supplies in the world. Its street sewers and domestic drains are fairly good and water cisterns for storage are non-existent because of the constant water service. The soils on which the city is built were formerly highly polluted by leakages from imperfect drains and especially from midden privies, now happily practically all abolished. From these soils the *materies morbi* of typhoid fever is carried into the air by dust, and perhaps by air currents. In that part of the city where the soil is gravel the cases of typhoid fever are 50 per cent. more numerous than in the districts situated on the boulder clay. No doubt air currents and dust are more readily emitted from the looser soils. I have satisfied myself by experimental results that fermenting material impregnated with the dejecta of typhoid fever patients evolve into the air vapours and gases conveying the bacillus typhosus. In conclusion, I entirely agree with the remarks made by Dr. E. E. G. Simons and Surgeon-General Cuffe during the discussion on Dr. Canney's paper.—I am, etc.,

Charles A. Cameron,
August 25th. Medical Officer of Health for Dublin.

[1] Dr. Farrar, British Medical Journal, November 28th, 1896, p. 1605.

SIR,—Having been unable to attend the meeting of the Association, I was not present when Dr. Leigh Canney read his most valuable and interesting paper on The Theory of Airborne Typhoid in Armies. I am, however, directly interested in his account of the 1898 epidemic at Quetta, and venture to proffer the following remarks on Dr. Canney's paper, in as far as it relates to that outbreak only. I had the honour to be secretary of the Committee appointed to investigate that epidemic, and was then, and am still, of the opinion that it was due, in its inception and spread, primarily and mainly to aërial agencies. My reasons for this belief were, and are, that whereas all the troops in the station were exposed to the same conditions as regards water, milk, and bazaar supplies, the incidence of enteric was especially marked in those whose air supply was most likely to be contaminated by airborne particles from the filth pits. Major (now Lieutenant-Colonel) Davies did not, I may remark, "conduct the special commission of inquiry," but made entirely independent investigations which led him to practically the same conclusions. Dr. Canney, I understand, disagrees with these conclusions, and thinks that the possible water avenues of infection were not sufficiently considered. He enumerates these as follows:—(I take the account given in your issue of August 24th, and, to save room, simply quote the opening sentences of Dr. Canney's paragraphs.)

1. "The water supply in which the bacillus had been found in 1896, may have contained the bacillus again, etc." It certainly may have done so. We looked for it and could not find it. In addition, the number of organisms we did find was so extremely small, never much above 10 per c.cm. and sometimes less, that we were justified, I think, in rejecting the water supply as a probable cause of such a severe and localised outbreak. That the Committee did not reject the possibility of its being a minor cause favouring spread of the disease is shown by the fact that we recommended the substitution of direct laying on of pipes to barracks for the methods of hand distribution from standpipes then in use. Allow me further to remark that the bacillus was identified in 1896 by an observer working a distance of seventy-two hours by rail, and that the water samples were not, I have reason to believe, packed in the very careful manner necessary for an accurate examination. The results reported were not very striking, but of a large number of samples the bacillus was reported in two or three only, and not continuously in samples from the same sources. However, I was not in Quetta during that epidemic, and cannot pretend to be able to dogmatise on it. I would merely point out that to use the fact that the enteric bacillus was isolated in 1896 as an argument to elucidate the origin of an epidemic in 1898, in the face of examinations made in the latter year showing the extremely small probability of such contamination being present in the latter year, is barely scientific.

2. "The same insanitary conditions of bazaars," etc. Granted. But these affected all troops equally. Milk, I calculate, is consumed by the British soldier in amounts averaging two ounces per diem. The women and children consume far more, and were only equally (if equally) affected by the disease. Certainly not more affected. In any case the milk, butter, and soda water consumed in barracks did not come from bazaars, except to a very trifling extent. Vegetables and salads are, I regret to say, of infrequent occurrence at Quetta. A salad in barracks would have been a nine days' wonder, I imagine.

3. "The condemned pakhals and mussacks were still in use," etc. I imagine Dr. Canney has special information on this point. I personally went round the left British Infantry lines every week in September, October, and November of 1898, also during the earlier months up to May inclusive of the same year, and during that time they were not in use, metal buckets or pails being substituted.

4. "On field days, etc." There were few, if any, field days, certainly no organised manœuvres in the early part of 1898. Manœuvres that year were in November; and no considerable number of cases were reported among the troops taking part in the operations then or after their return from manœuvres.

5. "Lucerne and green food for horses is not referred to. ..... This would go largely to the Royal Artillery lines," etc. This is, I regret to say, a point which never occurred to Major Davies or myself. It is an extremely ingenious theory; the more ingenious in that the artillery at Quetta consists of two garrison companies, which have no horses, and one mountain battery, which has only mules. These mules are looked after by native drivers, not by European gunners. They may get lucerne; if so, they are more fortunate than the horses of the less opulent officers in the station (including my own stable except for a short portion of the year).

6. The Wiltshire Regiment were certainly newer to the country (as a regiment) than the Borderers. If they had all been young soldiers, and the Borderers all old soldiers, then the ratio of incidence of two to one (given by Dr. Canney) might hold good. The Wiltshires, however, when they landed, received a very strong draft from the other battalion, which was leaving India at the time the battalion, serving in Quetta in 1898, landed. Personally, speaking from impressions received at the time, I should feel inclined to doubt if they were on the whole a much younger population than the Borderers. Be this as it may, and accepting Dr. Canney's rule of two to one as accurate (I confess I should like to see this ratio substantiated with more detail), even this will not account for an incidence of 2.89 to 1. It is, of course, possible (all things are possible) that the Wiltshires may have been infected directly from the Royal Artillery, but not from the proximity of food or water of horses, which did not exist, or from that of mules whose attendants did not, and could not, in any case have mingled with the native cooks and servants of the British infantry. Also if the Wiltshires were infected directly from the Royal Artillery, perhaps Dr. Canney can explain (knowing the local conditions I confess I am unable to do so) how it was that the former gave 38 cases up to the end of July, and the latter gave only 4, while in August the former gave 38 to the 6 occurring in the latter.

I have no desire to prove that as a general proposition typhoid is either always airborne or always waterborne. For myself I consider that in Quetta in 1898 it was airborne, and this from careful and prolonged personal study. Of the other places mentioned by Dr. Canney I pretend to know nothing accurately, though as regards Mhow and Poonah I am not absolutely ignorant. In these it may be waterborne or airborne. Quetta in 1898 (not in 1896) I do know, and I distinctly object to Dr. Canney dogmatising about a station and an epidemic of which he knows nothing, which he has (I should judge) never seen, and whose local conditions he has not (even in first-hand reports thereon) ever taken the trouble to study, in opposition to the opinions of men (however mistaken) when those opinions are founded on local experience and careful study on the spot. As to the other Indian stations mentioned by Dr. Canney, I do not pretend to know anything, except in so far as twelve years' Indian service gives me a general knowledge of the country. I should consider myself rash if I ventured to dogmatise on them.

As a medical officer in the army I try (as my brother officers do) to block every possible avenue to enteric. I am not particular as to which avenue, and I try (as, in my experience, my brother officers also try) to be as little hampered as possible by preconceived ideas, or by second-hand knowledge, or—most dangerous of all—by previous experience earned under different conditions.

By all means boil your water (we did at Quetta); block that avenue certainly. But, for heaven's sake, do not suppose that because you boil your water (or rather, because you order it to be boiled) you have done all that in you lies, and that you may fold your hands and trust in Providence. I do not do Dr. Canney the injustice to suppose that he himself thinks so, though I am sure uneducated laymen would be apt to draw some such conclusion from his paper.

I have trespassed so far on your space that I will even venture further. Dr. Canney says, Boil your water. Certainly; so say I. Has Dr. Canney ever tried to boil the water for 1,000 men in England? Has he ever tried to do so in a country where no local fuel was obtainable and all had to be imported? Has he, if so, been certain it was boiled? Having boiled it, has he made certain that the men drank that and no other? How has he cooled it after boiling so as to make it a palatable drink? I hardly like to mention air and flies, but how has he prevented contamination from these agencies during cooling? How long do 12 gallons at 212° F. take to cool to 40° F., supposing the shade temperature to be 100° F.? If Dr. Canney can answer these questions, I—

and I feel sure my brother officers—will be much obliged. Ordering water to be boiled is as easy as "calling spirits from the vasty deep." The results are, I regret to say, often as practical. I do wish—I am not speaking in jest—Dr. Canney would tell me his method of incantation.

To conclude: Enteric I believe to be a local disease. Enteric in Quetta must be studied at Quetta. I have done so, and I feel competent to give an opinion on that station for the year in which I studied. As to the other places mentioned by Dr. Canney, I do not feel competent, and, if I may venture to say so, I think Dr. Canney has been somewhat rash in founding his arguments on second-hand accounts of epidemics in those places, unfortified by local study. In those places typhoid may be waterborne. In Quetta in 1898 it was, I believe, airborne, and to that opinion I must adhere in spite of Dr. Canney's experiences in Kailana, Mhow, etc.—I am, etc.,

Wokingham, Aug. 31st. CHAS. H. MELVILLE, Major R.A.M.C.

## TOTAL EXTIRPATION OF THE PROSTATE FOR RADICAL CURE OF ENLARGEMENT OF THAT ORGAN.

SIR,—On my return to town from my holiday I find a somewhat formidable accumulation of letters in the columns of the BRITISH MEDICAL JOURNAL awaiting reply.

I believe the Great Napoleon is credited with having first given utterance to the remark that the majority of letters if left unanswered for a certain period will be found to require no reply, through lapse of time and contingent circumstances. The letters of some of my critics require no reply; others to a large extent not only answer, but are destructive of one another.

Take, for instance, the letter of Mr. Anderson, whom Mr. Robson accepts as one of his champions, in which the following words occur:

> the removal of portions (of the prostate) by scissors or forceps, an operation which, I take it, most surgeons have abandoned as useless.

Why, this is McGill's operation pure and simple, which is now pronounced as useless! It is the operation performed in most of the cases recorded by Mr. Robson for which he claims a success, and it is that which enabled Mr. Clarke to recall, with his usual vivid imagination, the patients at Leeds carrying their prostates in jars and micturating without the aid of catheters. It is not improbable that if Mr. Clarke had seen these same patients before operation he might have witnessed the latter part of this interesting phenomenon, for there is nothing in the descriptions of most of McGill's and Robson's cases to indicate that they had been entirely dependent on the catheter; and this latter remark applies still more strongly to all the cases given in Mr. Clarke's own paper.[1]

Then, again, certain of my critics hold that my operation is impracticable from an anatomical point of view, though, with strange inconsistency, they themselves claim to have done it. Others consider it practicable, and state that they have been doing it for years, though they do not appear to have recognised the significance of what they were doing. Their position, in fact, reminds one of that of the *bourgeois gentilhomme* who had been speaking prose all his life without his knowing it.

But I must not lose sight of Mr. Robson, the central figure in the attack on my position, the others being regarded merely as skirmishers.

The fact of Mr. Robson having headed his paper in 1894 as "Suprapubic Prostatectomy, or McGill's Operation," is no proof whatever that in 1901 he did not attempt to father my operation on himself. In his first letter in the BRITISH MEDICAL JOURNAL of July 27th he clearly and emphatically did do so: otherwise, what is the meaning of his words:

> I anticipated Dr Freyer by thirteen years in the advantages claimed by the operation which he describes as new.

There is nothing that Mr. Robson's position in this controversy reminds me of so much as that of the irrepressible female figure in a Punch and Judy show, which, however chastised and buffeted, vanishes from the stage repeating the same parrot-cry. I have already shown that in his attack on my work he made statements that were proved, by internal evidence contained in his letter, not to be in accordance with fact; that he inflated his statistics of prostatectomy, thus giving them an air of authority, by including therein suprapubic lithotomies in which he nipped off a small portion of the prostate; and that he endeavoured to foist on the profession as "a success, both immediate and remote," a case which obviously died from the operation. After this exposure one would imagine that Mr. Robson would lie low for the present, till some more convenient opportunity presented itself to indulge his peculiar idiosyncrasy of claiming priority for surgical innovations. But he again repeats his parrot-cry of "You don't know your anatomy," and, to distract attention from the humiliating position in which his pretentions and statistics have placed him, metaphorically dances a war-dance over the mare's nest discovered by Mr. McLaren.

Mr. McLaren seems very curious as to why the description of Case 1 in my lecture is not in exactly the same words as in my book (*Stricture of the Urethra and Enlargement of the Prostate*). I am unacquainted with any code under which one is always bound to describe any particular case exactly in the same words. There is no alteration in the description of the facts in the case, though there is a difference—and designedly so—in the interpretation of those facts. I am not bound to say more; but being human, and flattered as I am by Mr. McLaren's close study of my writings as well as his congratulatory remarks, I will endeavour to satisfy his curiosity. The omission of the letter "s" in the word tumour is a typographical error, as he might easily have seen from the context, where the word "tumours" twice occurs, as well as from the woodcut, where three tumours are depicted. The words which he quotes in italics were designedly omitted, as not in accordance with my interpretation of the facts when the lecture was delivered. The first case was not approached with a view to performing a new operation. It was undertaken as a partial prostatectomy in the first instance: but as the operation progressed and at its conclusion it was recognised as new. Its full significance was not, however, at first recognised; it was only after much thought and study and careful examination of the tumours that I came to the conclusion that the whole prostate in its capsule had been removed, and that the anatomy of the prostate as given in the different textbooks is faulty, in treating that organ as one mass, instead of two distinct lobes approximated round the urethra in the manner described in my lecture. The first operation was therefore undesignedly arrived at, the other three undertaken designedly to remove the whole prostate in its capsule. I hope I have made myself plain to Mr. McLaren.

The words from Senn's *Pathology of Tumours* (page 171) on which I based my statement in my last letter are these:

> It was until recently supposed that the enlargement of this gland (prostate) in men past 50 years of age was a tumour resembling a myofibroma of the uterus. This idea, in the light of recent investigations, has been abandoned, and the enlargement is now regarded as a glandular swelling or tumour.

The mere assertion on the part of Mr. Clarke and others that I am ignorant of the pathology and anatomy of the prostate is not argument, nor does it prove that they are *savants* in these sciences.

It is not necessary—nor could I expect to be granted space in these columns—to reply in detail to my critics. Their contentions have already been mainly disposed of in my controversy with Mr. Robson. As the experience of some of these gentlemen in this particular branch of surgery must be very microscopic indeed, their opinions cannot count for much. Most of my critics who, from their position, are worthy of attention have devised operations or modifications of operations for prostatectomy themselves, and I could scarcely expect them to regard my operation as superior to theirs. But I really cannot understand the object of the remarks of Messrs. Nicoll and Clarke, seeing that their operations are in reality perineal and bear no resemblance at all to mine.

In conclusion, I would ask, has prostatectomy hitherto made any real headway or impressed itself favourably on the profession at large? McGill, Robson, Fuller, Nicoll, Dittell, and scores of others, have been in the field for many years now with various kinds of prostatectomy. Is there any one of these whose operation is accepted by surgeons at large, or even by specialists, as satisfactory? And if so, where are the records of successful cases in large numbers, considering the vast prevalence of enlarged prostate? It is possible that my operation may have been done before

[1] *Vide* BRITISH MEDICAL JOURNAL, vol. i, 1900, p. 1183.

—though I have as yet seen no similar cases reported—for we have scriptural authority that there is nothing new under the sun. But if these gentlemen have, as they say, been doing my operation, they have neither recognised its significance, explained the anatomical considerations under which it could be performed, nor put it forward before the profession in such a clear and forcible form and backed by that success that commands attention and respect. This I respectfully submit I have done in my lecture; and it is under these considerations I claim it as new. As Sidney Smith says: "That man is not the discoverer of any art who first says the thing; but he who says it so long and so loud, and so clearly, that he compels mankind to hear him."

Apologising for the length of this letter which I hope, so far as I am concerned, will be the last in this controversy.—I am, etc.,

Harley Street, Sept. 3rd. P. J. FREYER.

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SIR,—A very interesting lecture by Mr. P. J. Freyer appeared in your issue of July 20th on the above subject, and in the issue of the 27th some comments by Mr. A. W. Mayo Robson on the matter and claims put forth in this lecture. In the number for August 3rd there is a red-hot reply from the lecturer. I have very carefully read the whole three communications, and, as I am very much interested in this matter, I desire to make a few remarks as one speaking from afar.

With the question whether this operation which Mr. Freyer calls "my new operation" is really so, or only a very slight modification of the operation which has been done with varying degrees of success in every country of the world for the past ten or twelve years, I do not much concern myself. I wish to refer to what is commonly known as McGill's operation—suprapubic prostatectomy—and the strictures made concerning it in the lecture.

I presume the object in mind in any operation on the prostate is to remove the pains and disabilities which are due to its gradual hypertrophy in the last half of life, and whatever operation accomplishes this and permanently restores the normal bladder function is a proper operation to be accepted by the surgeon. It is of small consequence whether that be total extirpation which Mr. Freyer speaks of, or enucleation of all that projects into the bladder cavity or presses laterally or from beneath upon the first portion of the urethra. The prostate itself, except in so far as it disturbs bladder function, does not call for extirpation. In the view of Mr. Freyer nothing less than the sacrifice of the whole prostate is of any permanent service.

I quote from the lecture:—

From time to time various methods of so-called radical cure by partial prostatectomy whether by the urethral, perineal, or suprapubic route, have been introduced. I ventured to hold that partial prostatectomy by the suprapubic route first performed by Belfield of America, but best known in this country in connection with the name of McGill, who first brought it prominently before the profession in 1888, was the most valuable, as most commonly applicable, and on the whole most satisfactory in its results..... but apart from the mortality attending the procedure, it possesses the disadvantage that, though as a rule, followed by subsidence of the most prominent symptoms, temporarily at least, and rendering catheterism more easy, in a large proportion of cases the bladder fails to regain its expulsive powers .....Indeed, I am not aware of a single instance in which after the bladder had completely lost its expulsive power, namely, when all the urine had to be drawn off by the catheter, that power has been restored by this operation. The operation consists in opening the bladder suprapubically, and removing the outgrowth into that viscus, or as much as possible, by scissors, forceps, and finger. I have myself performed this operation frequently and with considerable success.

Let me say that I always understood the operation of McGill to be of wider scope than is here stated. Both McGill and Belfield, whilst advocating the removal of the whole mass that projects into the bladder, went much further and particularly the latter, who strongly urged that special attention be given the first portion of the urethra. I beg to refer the reader to an address given by the late Mr. McGill in 1889.[1] He cites a few cases:

One in October, 1887, a growth the size of a cricket ball attached to the right lobe, enucleated in seven pieces, the largest an inch in diameter.

December, 1887. Lateral lobes enlarged so as to measure two inches in their vertical diameter. These masses were enucleated with the fingers.

February, 1888. Both lateral lobes, much enlarged, were removed in seven pieces weighing over two ounces.

December, 1888. Portion of prostate weighing over two ounces was enucleated in one piece.

I quote from Belfield:[2]

An important advance in the removal of prostatic obstruction is the enucleation of all accessible masses in the substance of the organ, instead of a simple levelling off of projecting tumours by scissors or cautery; by this means not only the salient middle lobes, but also the no less obstructing though less obtrusive lateral lobes are easily removable. The lateral lobes can be and have repeatedly been removed by enucleation after suprapubic cystotomy. Of the several surgeons who have independently adopted this measure, McGill deserves special mention; in several instances he has enucleated lateral masses weighing from one-half to two ounces—such tumours can be enucleated after incision of the mucous membrane with surprising facility.

I think these quotations will suffice to show that the lecturer gave a very scant measure of recognition to the work of other surgeons. As has just been shown, not only has the projecting part of the prostate been removed, but also the enlarged lateral lobes and the middle lobe, by enucleation—thus the whole organ has been removed. How much of the prostate remains for Mr. Freyer's total extirpation? Where is his basis for terming that "my new operation," every step of which has been done very many times in Europe and America during the past fifteen years?

In 1898 I read a paper at the annual meeting of the Ontario Medical Association on McGill's operation, from which I quote the following with regard to the removal of the enlarged prostate:—

I use the scissors to cut deeply the projecting collar into halves, one blade being in the urethra and the other in the pouch behind the prostate. The knife is used to incise the mucous membrane along the whole margin of the growth on both sides. When it is intensely hard, as it often is, strong forceps are used to crush the growth or to steady it for the finger, but never to tear it away by force. Beginning at the median cut, the point of the finger is insinuated into the tissue, and by patience and hard work I enucleate, piece by piece, until I get away the whole of the gland that projects into the bladder, or *presses upon the urethra*. In this way large masses of gland tissue are removed. Having accomplished this much, the position and condition of the first portion of the urethra must now receive consideration. The vesical orifice should be made very free. Its floor must be made as low as the base of the bladder. No bar of tissue is to be left, etc., etc.

Thus was described briefly three years ago the operation I have always performed as the McGill operation. I may add that in every case as soon as I opened the bladder I made a thorough exploration by the eye, by having a finger of one hand in the rectum and the finger of the other in the bladder, and by passing a large steel sound into the bladder so that I could see and feel what it was that caused interference with normal bladder function. In doing the operation itself I continued the work of enucleation until I could easily pass the index finger past the middle joint into the urethra. In only one case was I able to get away the cause of obstruction by enucleation in one piece. I did not wait to consider whether or not I removed the whole gland, but I did remove every part that could in any way interfere with the normal bladder function, and in some of the cases I have no doubt whatever that the whole prostate was removed. I did not think I was doing a new operation, but my claims in that direction are surely as strong as Mr. Freyer's, and all of my operations alluded to in this paper were done years before his. I thought I was working along the lines laid down by McGill and Belfield, and I was anxious to show other surgeons that this operation is simpler, safer, easier, and more successful than it is usually supposed to be. I congratulate Mr. Freyer on being able to enucleate the gland in two pieces, because in all but one of my cases I was glad to be able to get it away in very many pieces.

In June, 1892, I performed this operation for the first time. The patient was a man over 60 years of age, from whom I removed twelve stones by lateral lithotomy six months before. As soon as the perineal wound healed all his bladder symptoms returned. He could void no urine without the use of the catheter. He returned to Guelph General Hospital and I did a suprapubic prostatectomy. The lateral lobes of the prostate projected over an inch and a-half into the bladder cavity. The mass removed seemed as large as two ordinary hen's eggs. It was brought away piecemeal, and was not weighed. This man is still living, voids his urine naturally, and there is no undue frequency. That is to say, he remains quite well without any sign of relapse for nine years. We are therefore, I think, entitled to consider the cure permanent. Will Mr. Freyer's total extirpation do any better?

In January, 1897, I operated in the same way on D. S., aged

[1] BRITISH MEDICAL JOURNAL, vol. ii, 1889, p. 863.

[2] *American Journal of the Medical Sciences*, 1890, vol. ii, p. 450-451.

81. The use of the catheter many times in the twenty-four hours was necessary for years. His sufferings became so intolerable that he was willing to run any risk. The mass enucleated was larger than in the last case, and there were also three small calculi. This man is still living and in his 86th year. He has no bladder symptoms and requires no catheter.

In February, 1898, P. D., aged over 70, dependent on the catheter for ten years. After recovering from the operation he required no catheter, and continued free from bladder symptoms till his death in March, 1901, from a severe attack of *la grippe*.

In October, 1899, W. L., aged 54, a history of five years of vesical distress. Since the operation he has regained natural control of his bladder functions, and requires no catheter.

In May, 1899, W. S., aged 83. Drainage of the bladder was advised on account of the extreme difficulty in passing any catheter, owing to false passages made by himself, having been for years dependent on the use of the catheter, although the man's age and physical condition left him but little chance of recovery. On opening the bladder I found that the obstruction arose wholly from a large growth limited to the right lobe and twisted to the front. After slitting its capsule, I succeeded in enucleating this growth in less than two minutes. It was the only one I got away in one piece; it was larger than a turkey's egg. He semed to rally from the operation, and to do very well the first week, but he died from exhaustion on the twenty-first day. The removal of the growth was not intended, but it was done so quickly and so easily that I cannot think it had any effect in determining the fatal issue.

Now a word as to success. Mr. Freyer was very pessimistic as to the results of the old or McGill operation. He said he had "considerable success" only. If he performed it in the same superficial way mentioned in his description, it is only a matter for wonder that he had any success. In the four cases I relate, the success was complete. Normal bladder function was permanently restored. I have fully explained the method of operation followed; the results are frankly stated. I leave it to Mr. Freyer to say, in case he still thinks he devised a new operation, whether an operation that can give such results deserves to be termed a "so-called radical cure," "unsatisfactory," etc.—I am, etc.,

Guelph, Canada, Aug. 19th. ANGUS MACKINNON.

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SIR,—Mr. Freyer's clinical lecture under this heading, in which he claims to have performed a new operation, and to have obtained better results than his predecessors in this department, has elicited a large correspondence both as to matters of history and matters of fact.

As the colleague of my lamented friend Mr. McGill it fell to my lot to witness his early cases of prostatectomy, and to be the first of his colleagues to follow him in it. His first 3 cases were done in March, April, and July, 1887; my first 2 in October and December of the same year. Of these 2 cases I append the particulars given in Dr. Mansell Moullin's list, 1892;[1] they were included in McGill's paper read at the British Medical Association meeting in Leeds in 1889, and, together with six others operated upon subsequently, formed the subject of a paper which I read at the British Medical Association meeting in Birmingham the following year.

It was thus in 1887—nearly fourteen years ago—that on October 21st I operated suprapubically, expecting to find a "middle-lobe" enlargement, instead of which I found an enormously-enlarged right lateral lobe, not easy to be dealt with by scissors. McGill, who was assisting me, suggested that, having removed a wedge with the scissors, I should try to shell it out of its capsule with the point of the finger. This I did, enucleating it in seven pieces, which appeared to be of adenomatous character. The result was admirable, the patient completely regaining the command of his bladder.

The second case, where the lateral lobes were equally enlarged, *plus* a pendant lobe overhanging the urethral orifice, was treated by removal of the last-mentioned mass by scissors and the enucleation of the lateral lobes. These, I believe, are the first two instances in which "enucleation" was practised, and that was my excuse for reading my paper at Birmingham in 1890, which (the year after McGill's paper) would have been superfluous, except for the innovation which my cases recorded, and which was subsequently practised by all my colleagues in suitable cases.

The capsule of the prostate, derived from the recto-vesical fascia, is certainly divisible into two layers between which the plexus lies. But I hold that, from the anatomical point of view, it is impossible to remove the whole prostate by any such method as Mr. Freyer describes without removing or damaging the prostatic urethra. The fascial covering or capsule must be left.

Hence Mr. Freyer's operation does not differ essentially from what we have all done any time these twelve years. The "newness," as it seems to me, lies in Mr. Freyer, not in the method.—I am, etc.,

Leeds, Aug. 28th. EDWARD ATKINSON.

[1] *Vide* Mansell Moullin's List in his *Operative Treatment of Enlargement of Prostate*, 1892.

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## COMBINATION IN THE MEDICAL PROFESSION.

SIR,—Mr. Nelson Hardy in his Carmichael Prize Essay points out the lesson to be learned from the combination of medical men at Lincoln, Stockport, etc.; in his own words, it "is instructive as to the power of such combination." I would like to say that the failure to combine in other towns is equally instructive.

In Leicester, for example, the efforts of the Medical Union were rendered futile by the obstinate opposition of four medical men. Hence the huge Provident Dispensary, which absorbs 50,000 of the inhabitants, continues to flourish, although it has no wage limit and pays the medical officers less than ½d. per week per head. How is it that large employers of labour are always at the head of these institutions and present the bitterest opposition to medical reform? I don't like to impute motives, but one explanation at once suggests itself—that is, by keeping down the expense of their workers large employers save many pounds in wages. Hence their guinea subscription becomes their most profitable investment, and at the same time enables them to pose as charity-mongers at the expense of the medical profession.—I am, etc.,

August 26th. A DISPENSARY DOCTOR.

| No. in List. | Date of Operation. | Age. | Condition of Bladder. | Retention Complete or Partial. | Catheterism. | Condition found. | Method adopted. | Result immediate and final. |
|---|---|---|---|---|---|---|---|---|
| 14 | Oct. 21, 1887 | 66 | Bladder distended above umbilicus. Urine acid, dark chocolate, with clots. Right side of prostate feels enlarged *per rectum* | Repeated retention for last five years. | Difficult, and always followed by bleeding. Of late every four hours, without relief | Growth the size of cricket ball attached to right lobe | Enucleated in seven pieces after wedge-shaped piece had been removed by scissors | Convalescence tedious owing to bronchitis and emphysema. Discharged January 14th. Writes at date saying that he is completely cured, and that he feels nothing of old complaint. |
| 15 | Dec. 20, 1887 | 71 | Symptoms for years. Bladder up to umbilicus. Urine bloodstained, the hæmorrhage persisting. Prostate *per rectum* greatly enlarged | Complete four days ago. | Catheterism failed of late | Lateral lobes 2 inches in vertical diameter. Pedunculated nodule, size of marble, hanging over urethral orifice from left | Pedunculated mass snipped off with scissors. Lateral lobes enucleated (weight ½ ounce each) | Wound healed, and natural micturition on January 14th. Died of pneumonia on January 30th. *Post mortem*, site of operation perfectly natural; no unhealed surface. |

## VACCINATION AND PROFESSIONAL UNDERSELLING.

SIR,—As I perceive that some interest has been excited on this subject, I trust you will permit me to make a few remarks on the correspondence that my letter has elicited. I must confess to disappointment at the tone of your correspondents, few of whom sympathise much with the object of my letter, namely, to promote better union in the profession. Nearly every writer is full of suspicion of the public vaccinator, and willing to do everything to prevent that official from having any relations with his patients. Public vaccinators may deserve this suspicion, although, personally, I think it altogether unwarranted, and, if so, the union I had in my mind becomes impossible. So long as the bulk of the profession regard a considerable minority of their brethren so unfavourably, there is little chance of the whole working together for the common interest, and the division that it indicates is more serious than that arising from the natural antipathy that must always exist between respectable practitioners and the reputed black sheep of the profession.

While such a feeling exists it is not likely that any voluntary attempt will be made to leave the vaccination of the community to the officials appointed for that purpose, although one of the results would be to prevent many of these officials from competing with their neighbours in private practice, and to tend to that state of things, eulogised by several of your correspondents, namely, the abstention of the public vaccinator from private practice.

I expressed an opinion that the actual financial loss to the practitioner by refusing to vaccinate at a lower rate than the public vaccinator would not be very great, and no one seems to contradict this, objections being solely to the opportunity given to the public vaccinator to tamper with their patients, if such a course were adopted. That any extensive mischief would arise in this way I decline to believe, and feel sure that if private practitioners were to regard the interests of public vaccinators, the latter would be equally careful of the interests of the former, by being most scrupulous in their dealings with those they were called upon to vaccinate.

As to the various ingenious reasons given by correspondents why the acceptance of a fee of 2s. 6d. for work, for which a brother practitioner would otherwise be paid 6s., is not underselling, I do not think that any advantage would arise from discussing them; but I admit the objection that the public vaccinator is required to do more, where he vaccinates a case, than a private practitioner, and hence should be paid a higher fee. It is not fair, therefore, to take the whole fee of the former as comparable with that of the latter. But supposing an ample deduction were made on this account, I cannot help thinking that the official fees for vaccination considerably exceed those paid by the public to private practitioners. I am of opinion that the official payment is not a penny higher than it ought to be, and consequently am bound to consider that the rates accepted by many practitioners are derogatory to the profession, especially as the plea of poverty of the patient cannot be raised, seeing that the best vaccination is offered gratuitously as a right to every member of the community. A correspondent last week, in his bias against public vaccinators, openly stated that he vaccinated all his patients gratuitously to prevent them falling into the hands of these officials. I must confess I see no difference between gratuitous advice and gratuitous vaccination, and regard both—whatever reason may be assigned to the contrary—as really forms of unprofessional advertising.—I am, etc.,

M. GREENWOOD,
Honorary Secretary, Poor-law Medical Officers Association.
Hackney Road, N.E., Aug. 26th.

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SIR,—Judging from the letters that have lately appeared in the BRITISH MEDICAL JOURNAL on the subject of vaccination, it would seem that a great amount of misconception still exists in the mind of the profession as to the true relationship existing between the fee usually charged by a private practitioner and that paid to the public vaccinator for his work. As a private practitioner I charge 2s. 6d. in a working-class practice for calf lymph vaccination, and consider myself better paid at that figure than I am when as a public vaccinator I receive 6s. In the first instance the patient is brought to my house at a fixed hour, is vaccinated and taken away, and on that day week brought for inspection, when, on my filling in the certificates, my work is ended.

But far different is the other side of the picture. As you are aware, Sir, the fee we receive for our work as public vaccinator is split up as follows: One shilling for each name on the list supplied to us by the vaccination officer, for which amount we notify the parent of our intention, and then visit the case. If, on visiting the case we vaccinate, we receive five shillings: but owing to refusals, removals, sickness, or other causes, we do not in the union I serve vaccinate more than one out of every three so visited.

If, owing to the sickness of the child, the presence of infection in, or the insanitary condition of the house, we do not deem it wise to operate, we must give a certificate postponing vaccination, and at the end of two months again visit the house, and, if necessary, again postpone, and so on till such time as we do vaccinate, or ascertain that the operation has been performed by some other, or that the child has removed from our district or has died. For all this we receive no fee of any sort, and I personally in this way have made as many as five visits, and in the end found that the child had been done by a private practitioner. In other words, I made five visits for a fee of 1s., minus five 3d. stamps.

Next, if we vaccinate, we receive 5s., for which fee we again visit the case a week after performing the operation, and our duty usually ends on our inspecting and dressing the arm. If, however, on our visiting to inspect, we do not find the child at home, we must continue to visit until we do, a by no means uncommon experience being that two or three journeys have to be made before success crowns our efforts. If, moreover, the arm should not take the first time, we must again vaccinate and again inspect, and so on until we have tried three times. Yet again, if the arm takes, but, owing to some one of the various accidents that may happen to a newly-vaccinated infant, anything goes wrong with the case, we must attend on it till it be recovered, be such time short or long, and find all necessary drugs and dressings. For all this we receive no fee whatever beyond the original 5s.

Furthermore, out of the shilling visiting fee we must find our own postage, and from the 5s. must be deducted the amount we expend on antiseptic dressings. It must also be remembered that the necessary writing entailed on the vaccinator of an average district occupies more than an hour each day, and that the work as a whole is irksome in the extreme. No comparison can therefore be drawn between the two cases from the point of view of fee unless the foregoing be taken into consideration.

So far as one can judge from the opinions that have been published in the BRITISH MEDICAL JOURNAL, the great, if not the only, grievance that the private practitioner has against the Act of 1898 is based on the fear engendered in his mind by the domiciliary visit of the public vaccinator. But surely, Sir, whether that visit be or be not made, depends in the large bulk of cases on the practitioner himself. The law gives him four clear months' start of the public vaccinator, and if during that time he does his duty to the child he has brought into the world, and to his country, by complying with the very simple requirements of the law, that officer's visit will never be made. All he has to do is to post to the vaccination officer a certificate stating either that the child is vaccinated, or that it is not in a fit condition to undergo the operation, and the name will not appear on the list sent to the public vaccinator—I am, etc.,

A PRIVATE PRACTITIONER AND PUBLIC VACCINATOR.
September 1st.

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SIR,—With interest I observe in the BRITISH MEDICAL JOURNAL of August 24th that you publish the resolution lately passed by the Medical Guild of Manchester which, if successful, will tend much in the interest of the general practitioner: "That in the opinion of the Medical Guild, seeing that vaccination is made compulsory in the interest of public health, the parent or guardian of a child should have the right to select any respectable medical practitioner who is willing to do so, to perform the vaccination, and that the cost of the same should be defrayed by the State at a fixed rate."

In my published inaugural address on "The Wants of the General Practitioner," when President of the West London Medico-Chirurgical Society, I gave several cogent

reasons for this reform, not only in the interest of the profession but also of the public, and prominently advocated this needed and useful reform when a candidate for one of the direct representatives of the General Medical Council both in 1891 and 1896, and I would desire through the columns of the JOURNAL to bring this resolution of the Manchester Medical Guild before the attention of the present candidates for the ensuing election of the direct representatives on the General Medical Council, for although I have practically retired I still take great interest in all that concerns the welfare of the profession, and particularly in all reforms that promise to improve the position and income of the general practitioner, in whose ranks I laboured for nearly forty years.—I am, etc.,

Bournemouth, Aug. 25th. FREDERICK H. ALDERSON, M.D.

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SIR,—Your correspondents in writing about vaccination and underselling appear to have overlooked one point, "the conscience clause." I am not a public vaccinator, but I vaccinate for the same charge as I did previous to the present Act. I only put one mark, as I believe one mark is better than none, and many of my poorer patients say, "If you won't vaccinate as I want, I will go before the magistrates and get an exemption." Therefore I put one mark on, and am paid between £30 and £40 a year for so doing. Of course where the public vaccinator acts honourably it always tends to efficient vaccination, but where (as has happened to me) the public vaccinator has on more than one occasion used his position to criticise my professional and private character to the patients when he called to vaccinate, it must lower the efficiency.—I am, etc.,

August 28th. COLLIERY SURGEON.

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## THE GENERAL MEDICAL COUNCIL AND UNQUALIFIED PRACTICE.

SIR,—In the BRITISH MEDICAL JOURNAL of August 24th you mention the facts of the Duchess and the Bonesetter, and I think it is a very good case to show how the General Medical Council tie down the qualified practitioner and yet allow bonesetting and quackery to go on. Below I point out the difference between being qualified and unqualified:

| QUALIFIED. | UNQUALIFIED. |
|---|---|
| A qualified man cannot employ an unqualified assistant to order medicine, dress a wound, or attend a midwifery case. He cannot advertise himself. He cannot even employ an assistant to help him who has spent three years at hospital. | Can act as a bonesetter, put his name on the door, advertise and go out visiting patients. Can lecture, send persons out with books of pictures, lecture upon treatment, and sell drugs and instruments, advertise, etc., patent medicines to cure everything, and call themselves Doctor under the cloak of a stamp. Can do anything. |

Now upon the above facts every member of the British Medical Association should take action and force the General Medical Council to act fairly, and either allow every medical man to employ unqualified assistance, or stop unqualified practice. I trust others will give their opinion upon this matter.—I am, etc.,

September 3rd. A MEMBER.

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## THE INDIAN MEDICAL SERVICE.

SIR,—The statement to which Surgeon-General Harvey took exception at the annual dinner of the Indian Medical Service—namely, that, with the single exception of Dr. D. D. Cunningham, no man had ever been rewarded for good professional work—was made originally, not by "a gentleman in a medical journal," but by the *Times of India*, one of the leading papers in India, in a leader (July 22nd, 1899). Perhaps you would print the paragraph *in extenso*:

> It is a legitimate cause of bitterness to an entire service to look back, at any rate for thirty years, and note that but a single medical officer—Dr. Cunningham, of Bengal—has had an honour from Government for something like purely professional work.....What honours we see are for services concerned with administration or for some outside detail; but we contend that the service, in so far as its work is purely medical and surgical, is consistently passed over.....So long as men like Freyer, Keegan, and Ross can leave the service unrequited and disregarded, so long will the reproach lie at the door of Government that they care nothing about surgery or diagnosis or therapeutics; and so long will the bitter taunt be justified that it is the policy of the state to withhold its laurels from that section of its medical officers who devote their lives to the service of humanity in being physicians or surgeons first.

In another "leader" on January 27th, 1900, the *Times of India* returns to the charge:

> While biennial honours are scattered about, often on unknown men for unknown causes, it is not creditable that the good work of the best surgeons should be consistently ignored, as if industry and eminence in the treatment of the sick were qualities positively repulsive and dishonouring to Government.

Were these remarks made by the BRITISH MEDICAL JOURNAL, a professional bias might, perhaps not unjustly, be read into them. But surely such bias may be excluded in the case of a lay newspaper, and one which very closely watches Indian affairs. The weakness of Surgeon-General Harvey's case is manifest when he has to drag in an officer "who, though not a member of, was in intimate relation with, the service." The discussion is as to the distribution of honours to the I.M.S., and not to officers "in intimate relation with" it. But the allusion to Mr. Haffkine's C.I.E. is not a happy one in any case, when one contrasts it with the K.C.I.E. conferred on Sir Andrew Wingate for his plague work; and one wonders if Mr. Haffkine had been an Indian civilian instead of only "in intimate relation" with the I.M.S., whether he, too, would not have got a K.C.I.E.

A categorical denial of the statement made by the *Times of India* is not enough. The only way of rebutting it, and the easiest, if it be "entirely untrue," would have been to have given the names of officers who have been rewarded for "purely professional work" as distinguished from administrative work.—I am, etc.,

August 25th. EYEMES.

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## THEORIES OF INHERITANCE.

SIR,—As a Lamarckian, and hence a believer in the hereditary transmission of acquired characters of a certain kind, I look on the address of Professor Adami on Theories of Inheritance, published in the BRITISH MEDICAL JOURNAL of June 1st as the most important utterance relative to biology in connection with medicine as well as organic evolution, that has appeared for a long time. As the Professor truly points out, physicians have hitherto almost wholly depended on biologists for their conception of living processes, but as these latter have interpreted living Nature from morphological, rather than from physiological or functional conceptions, it is manifestly time that physicians take up the questions and consider them from that aspect which chiefly appeals to them, namely, the physiological.

There are, it must be recognised, acquired characters and acquired characters, and whilst leaving to Professor Adami and those who hold with him the question as directly related to medicine, I shall consider very briefly that side of the question to which I have given most thought. Now, some acquired characters are transmitted, others are not. As physiologists we know that the brain controls the whole of the life processes of an organism, hence those acquired characters which do not affect the brain directly are not transmitted: on the other hand, those which do affect the brain directly, either through voluntary or involuntary action, are transmitted.

To illustrate—the loss of a tail does not affect the brain as the centre of control, except perhaps for a short time in a general way; neither does the removal of the prepuce. It is true we may find in the spinal centres a few cells affected by the loss of tail or prepuce, namely, those in connection with the nervous supply of those parts. But that derangement is soon rectified, and the living processes go on as before in spite of the loss of the parts in question, since even in the case of the tail the stump may still be wagged. The various nerve outposts—the ganglia—look after the loss without directly appealing, as we may say, to the great nerve centre—the brain, hence such acquired characters are not transmitted.

It is otherwise, however, when an acquired character directly affects the brain, that is, increases or lessens any of its functions in any way. If an animal, through a change of circumstances, has to make certain new efforts to obtain, food, etc., these efforts must originate from the brain, since they are voluntary, hence the brain is directly modified, and the parts in connection therewith are also modified. And if the change in circumstances is permanent, inducing similar efforts on the part of the offspring, gradually the modifications thus produced are inherited, and in time, if the changes

in structure are typical, change of species occur. Again, if through a change of climate an organism is affected through the whole of its surface nerves, a direct impression is made on the brain, which impression leads in time to a permanent modification of character. Such a change of character and its inheritance is seen in a change of complexion, as, for instance, where Europeans, as the Boers, gradually acquire a darker skin, and also where wool gives place to hair, in sheep introduced from a cold or temperate climate to a tropical one.

The above contentions may be illustrated in abundant ways. We thus learn that, not all kinds of acquired characters are inherited, but only those which produce a modifying effect on the governing portion of the nervous system, that is, the brain. These views I have elsewhere—*Natural Science* for October 1899—endeavoured to point out. Indeed, biologists seem to have overlooked the direct and modifying influence exercised by the nervous system, and brain in particular, in rendering organisms capable of reacting to the varying influences of the environment in certain definite ways, so that certain acquired characters may become gradually fixed through heredity, thus leading in time to change of species.

The above explanation tells us, then, why "hecatombs of cats' tails" or the "experience of the circumciser" has failed to shake the conviction of the believer in natural selection or Darwinism, failed, because such mutilations cannot be inherited, and hence are not crucial tests of the theory that "acquired characters are inherited" in suitable conditions or under suitable influences.—I am, etc.,

Bridgetown, Barbadoes, Aug. 15th. R. F. LICORISH, M.D.

## THE SPITTING NUISANCE IN DENMARK.

SIR,—I have just returned from a tour in Denmark and a visit to Professor Finsen's Hospital in Copenhagen, and I was very much struck by the following: At all stations, post offices, lavatories, etc., there are placed notices calling the attention of the public to the dangers of expectoration as a means of conveying tuberculous mischief, and a request is made to refrain from unnecessary spitting. These notices are placed in prominent positions and are printed in a bold type. The dangers are briefly but fully pointed out, and the result of having brought before the general public this matter in so open a way has been most satisfactory. It seems to give one a sense of safety to know that the dirty habit of useless expectoration is practically extinct in that Northern capital. The railway smoking carriages and the pavements could, indeed, teach us Britishers a lesson.—I am, etc.,

Shifnal, Salop, Aug. 22nd. LOUIS KNUTHSEN, M.D.

## SERVICES ON ST. LUKE'S DAY.

SIR, On or about St. Luke's Day the members of the Guild of St. Luke hold their annual meeting, and have an anniversary service at St. Paul's Cathedral. I beg to suggest that a similar service be held in every town in the kingdom on that day, or on the following Sunday, and that a collection be taken at each, of which one-fifth be given to the British Medical Benevolent Fund, one-fifth to the Royal Medical Benevolent College, Epsom, one-fifth to the Society for the Relief of Widows and Orphans of Medical Men, one-fifth to the *Lancet* Relief Fund, and one-fifth to church expenses. These most deserving charities would benefit greatly by these collections. St. Luke's Day (October 18th) will this year fall on a Friday. I am, etc.,

Bedford, Aug. 26th. HORACE E. HAYNES.

## NEURO-CHEMISTRY.

SIR,—The results obtained by Dr. Mott and Dr. Halliburton, and which you quote in a leading article, are not to my mind convincing. I refer to the discovery of cholin in the blood of general paralytics. The blood contains a certain amount of potassium salts, and on being evaporated to dryness, extracted with alcohol and treated with platinum chloride, these would be precipitated in exactly the crystalline form described for the double chloride of platinum and cholin. I have treated considerable quantities of cerebro-spinal fluid obtained *post mortem*, in the manner described, and obtained a sufficient amount of the crystals to make an analysis; and I found that on ignition they leave 60 per cent. of residue containing potassium, instead of the 36 per cent. of pure platinum that the cholin salt should leave.

Have Drs. Mott and Halliburton excluded the possibility of their crystals being the double salt of potassium? I obtained great quantities from the cerebro-spinal fluid of patients who had died of pneumonia, which was what one would expect for the potassium and salt. I should be much obliged if my doubts could be put to rest.—I am, etc.,

Lancaster, Aug. 26th. A. F. SHOYER, M.D.

## PROLAPSE OF THE FEMALE URETHRA.

SIR,—In the EPITOME of the BRITISH MEDICAL JOURNAL of August 17th, par 111, you record a very interesting case of "prolapse of the female urethra" in the practice of Glaevecke. Some fifteen years ago the late Dr. Henry Liston of Sunderland asked me to see with him at the Children's Hospital a similar case in a girl aged 11 years, who had been sent to him as a case of procidentia uteri. I can quote your words to describe the case: "A tumour about the size of a cherry was seen between the crescentic hymen and the clitoris. At about the centre of this tumour a small opening was found. On putting a sound through the opening it was found to lead into the bladder; the tumour was red, glistening, and bled on handling." We cut it off with scissors; slight bleeding continued until next day, when we found the bladder distended as far as the umbilicus with blood. We dilated the urethra, washed out the bladder, pulled out the stump of the urethra, tied the bleeding vessels, after which the patient made a perfect recovery.

I saw a still more remarkable case with Dr. Spencer at Hetton-le-Hole some ten years ago. He was called to see a married woman aged 20, four months pregnant, who was suffering from considerable pain of a bearing-down character and loss of blood, she was supposed to be a aborting; and on examination we found protruding from the vulva a purple bleeding mass about the size and shape of a Jargonelle pear, with two small openings in it, from one of which urine was dribbling. The other opening was blocked by a small uric-acid calculus, which we removed, and then returned the mass, which was the bladder inverted, after which she had no further trouble, and went on to full time. There was a history of a renal calculus of the left side for some months; this had left the kidney, and got arrested after passing down the ureter at the opening into the bladder; and the pressure from behind had caused the inversion and protrusion of the bladder.—I am, etc.,

Sunderland, Aug. 24th. JAMES MURPHY.

## "TWINS IN THE FAMILY."

SIR,—Has anyone ever suggested or believed that the paternal influence could determine a twin pregnancy? Except that it is unscientific to say that anything of the sort is impossible, one would be inclined to deny the possibility of such an occurrence. The following facts may be pure coincidence, but they are worth recording.

A family consisted of four brothers, A., B., C., D., and no sisters.

A. married, and became the father of twin sons and three other sons. B. was father of twin girls and three other children. C. was father of twin sons. The eldest of the twin sons of A. has again become father of twin sons. There is no history of twins on the female side in any of the marriages in the family.

Here, then, is a case where a man himself, his father, and three paternal uncles have begotten twins.

I suppress names, as I should be sorry to deter any lady from marrying into the family.—I am, etc.,

August 31st. J. B. H.

## ANOTHER WARNING FROM AUSTRALIA.

SIR,—One of the editorials in the BRITISH MEDICAL JOURNAL of May 11th, 1901, p. 1165, is headed "A Warning from Australia," and speaks of the remuneration of 4¾d. per week per family given by the N.S.W. Oddfellows. It may interest some of the readers of the JOURNAL to learn that we in New Zealand receive the princely wage of 3 1/3 d. per week, and that there are medical men anxious to get such appointments.—I am, etc.,

Waihi, New Zealand, July 17th. A. H. PORTER, Member B.M.A.

## BRITISH MEDICAL ASSOCIATION.
## SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, SEPTEMBER 7TH, 1901.

## THE REBUILDING OF LONDON.

Under this heading Dr. Bridges, so well known as a medical inspector of the Local Government Board for the past twenty years, recently contributed a letter to the *Times* in which he called attention to the serious evils likely to result from the system of building immense blocks of residential flats and artisans' dwellings on inadequate ground space, now so much in vogue in London and other cities, where the price of land has been forced up to its present exorbitant values by the pressure of population and the exigencies of business. The London Building Act of 1894, which was piloted so ably through the Houses of Parliament by Dr. Longstaff on behalf of the London County Council, did something to stem the tide of overcrowding on sites so far as London is concerned, but the opposition of the ground landlords, and of others interested in obtaining the largest returns possible from building land, whittled down the provisions of the Bill to a minimum, which, although an improvement upon the regulations (or absence of regulations current prior to 1894), is not regarded as adequate to safeguard the health of the ever-increasing metropolitan flat and block dwellers by those who have made a study of the subject.

It is a curious commentary upon our system of parliamentary government that the Local Government Board should have power to veto a system of building, if intended for the use of those under the guardianship of the Poor Law, which the Legislature has sanctioned for general use in the community. Anyone unacquainted with the absurd anomalies of our system of local government would imagine that the Government of this country sets a higher value on the lives and health of the pauper classes than on those of the professional and labouring classes who provide the taxes by which alone can the national life be continued.

The question raised by Dr. Bridges is one that should again receive the attention of the London County Council, with a view to inquiring how far the buildings erected as flats and block dwellings under the provisions of the Act of 1894 meet the requirements for the maintenance of a sound standard of health in the occupants, and in the event of alterations being required drafting the necessary amendments for the sanction of Parliament. To any such movement the National Association for the Prevention of Consumption should be asked to lend its support and authority, so that the great national questions raised by the recent Congress may be adequately stated to the Parliamentary Committees to whom such a Bill would be referred.

It is vain to hope that a return will ever be made in London and other densely-populated cities to the system of building separate self-contained houses and cottages. Unless the whole system of land tenure is radically altered, the value of land in the large towns will continue to rise, and the enormous revenues derived from ground rents will continue to show those wonderful expansions which have made multi-millionaires, without any responsibilities to the people who have contributed to their wealth, of men whose grandfathers were hardly even wealthy men. As in the United States, so in this country, the wealth of the nation will in process of time be disproportionately held by a few individuals, whose hereditary revenues will be greater than those of many reigning monarchs.

To stay the consummation of this gigantic evil—for it is in that light that most thinking men regard it—something might be done if the Legislature would seriously accept the principle that a limit should be placed upon the earning value of land, when that value is obtained at the expense of the health of those citizens who are forced by the modern economical conditions to crowd into the barrack dwellings which can alone be provided for them. It is for medical science to say what limit should be placed upon this crowding on space; and if the views of Dr. Bridges are shared by his fellow workers in this field of activity, it should not be long before a case might be presented to Parliament which would arouse the attention of the public, and might eventually be productive of good results.

## THE TREATMENT OF INTUSSUSCEPTION.

One of the most interesting of the prearranged discussions at the meeting of the Association at Cheltenham was that on the treatment of intussusception in children. The opinions there expressed may be usefully compared with those of Mr. Edmund Owen in the paper published at p. 573. The question which seems, very naturally, to have been accepted as the main topic for discussion was as to the relative values of inflation and operation. Inflation, when employed early and skilfully, combined when necessary with manipulation, has proved successful in a certain number of cases. When so successful the subsidence of the swelling and the swift abatement of the urgent symptoms are so striking that a vivid and very lasting impression is made. In all similar cases falling to the lot of the same surgeon there is a desire to repeat the same measures. If now unsuccessful, the failure is accepted as an evidence of undue procrastination and not of any inherent defect in the method. It is, indeed, only when the series of cases from a hospital are ruthlessly set forth that one can appreciate the unreliability and, if we may say so, the treachery of the method. Mr. Eve, the President of the Section, pointed out its inefficacy, and stated that of 24 cases so treated at the London Hospital not one was cured by inflation alone.

The general weight of opinion was definitely against

inflation, and against the delay which inflation, whether successful or not, necessarily entails. If employed, it should only be under conditions which permit of immediate operation in case of failure. The suggestion that the surroundings of a patient should influence a decision is hardly worth consideration if operation is imperative, for it is the surgeon's duty and his custom to carry his surroundings with him, and the social environment of the patient then matters little, if at all.

There can, we think, be little doubt that the outcome of the discussion is to show more clearly than ever the urgent need of early abdominal section. The real question in this case, as in so many others, is one of early diagnosis and "precocious" operation. The risks of a simple abdominal exploration have been reduced to a minimum; the hazard then of an abdominal investigation when matters are not far progressed cannot be serious. Exploration is safe, safer than ignorance, and incomparably safer than delay. It is the appalling mortality in the long-neglected, almost moribund, patients that has produced that antipathy to the "knife" of which Mr. Edmund Owen speaks so plainly.

## INFANTILE MORTALITY AND THE OCCUPATION OF MARRIED WOMEN.

THE high infantile mortality in our large towns has been attributed by some almost entirely to the occupation of married women in factories and workshops. Some even go so far as to assume that the death-rate of infants would at once decrease were married women forbidden by law to work. Mrs. F. J. Greenwood, sanitary inspector at Sheffield, in a recent pamphlet, published for the Freedom of Labour Defence, endeavours to show that these views are fallacious and harmful. She allows that a high percentage of occupied mothers may be one amongst a variety of causes, but has "no hesitation in saying that more than 50 per cent. of the infant deaths in Stockport and a corresponding proportion of non-fatal damage to child life are (in the words of Herbert Spencer) the result of unreasoning custom, impulse, fancy, joined with the suggestions of ignorant nurses and the prejudiced counsels of grandmothers." In regard to the question of prohibiting by law the employment of mothers in workshops and factories, she points out that such reasons as the love of work and desire for a higher standard of living, or for greater comforts than the husband's wages afford, influence some of the best women of the working class, who are industrious, self-respecting, and thrifty, and whose homes are often models of cleanliness and order. Moreover, to prevent women from earning after marriage would be to place them entirely in the power of their husbands, be they good, bad, or indifferent, and would practically repeal for many of them the Married Women's Property Act. Such measures would also, as Mrs. Greenwood points out, discourage the employment of women in the most highly paid and well organised industries; for "employers would hesitate to teach girls trades they might not continue in when proficient, and women themselves would not enter industries which would be practically closed to them after marriage."

The plan which Mrs. Greenwood advocates as the main remedy is education, especially education from early life. The elements of hygiene should be taught the children at school, and the older girls should be given some information with regard to the feeding and rearing of infants. In this respect she is at one with Dr. George Reid, Medical Officer of Health of the Staffordshire County Council. At the recent meeting of the British Medical Association at Cheltenham, Dr. Reid pointed out that the "Mother Gamp influence is still far too potent to succumb even to an army of lady visitors or sheaves of official memoranda as to how infants should be fed. One has only to observe the incredulous smile with which mothers receive the advice in order to realise how hopeless such efforts are. The only means by which we can hope to make any headway in breaking down the existing ignorance is to begin with the rising generation." One of the practical difficulties in this scheme would be to obtain suitable teachers—that is, teachers able to make the elementary facts of human physiology and hygiene intelligible and interesting to children. The demand would, however, after some time almost certainly create a supply of such instructors.

It is very difficult to estimate the share in producing the high infantile mortality of large towns which can be fairly assigned to the employment of married women in factories and workshops. Amongst other possible causes are alcoholism, syphilis, overcrowding, etc., which by lowering the health of the parents reduce the standard of vitality in the children. Whether or not the period of one month from the confinement, during which it is at present illegal for a mother to return to her work, should, as Dr. Reid suggests, be stretched out to three months, is a debatable point. Another question raised at times is whether a pregnant woman should be prohibited from work during the last term of her pregnancy, and a law passed in Switzerland in 1877 required women to abstain from work for the fortnight before they expected to be confined. At present, in England, of all the proposed measures on the subject, the scheme for introducing systematic teaching of the elements of hygiene, etc., at schools, appears the one most likely to yield good results in the future.

## A ROYAL COMMISSION ON TUBERCULOSIS.

IN the *London Gazette* of September 3rd it is announced that the King has been pleased to issue a Commission, under His Majesty's Royal Sign Manual, appointing Sir Michael Foster, K.C.B., M.D., F.R.S., Professor of Physiology in the University of Cambridge; German Sims Woodhead, M.D., Professor of Pathology in the University of Cambridge; Sidney Harris Cox Martin, M.D., F.R.S., Professor of Pathology at University College, London; John McFadyean, M.B., C.M., F.R.S.E., Principal and Professor of Comparative Pathology and Bacteriology at the Royal Veterinary College; and Rubert William Boyce, M.B., Professor of Pathology at University College, Liverpool, to inquire and report with respect to tuberculosis: (1) whether the disease in animals and man is one and the same; (2) whether animals and man can be reciprocally infected with it; (3) under what conditions, if at all, the transmission of the disease from animals to man takes place, and what are the circumstances favourable or unfavourable to such transmission. The Commission, or any three or more of them, are to have full power to call before them such persons as they shall judge likely to afford them any information upon the subject of the Commis-

sion; and also to call for, have access to, and examine all such books, documents, registers and records as may afford them the fullest information on the subject, and to inquire of and concerning the premises by all other lawful ways and means whatsoever. They, or any three or more of them, are further authorised to visit and personally inspect such places as they may deem it expedient so to inspect for the more effectual carrying out of the purposes aforesaid. The Commission will probably hold its first sitting early in October.

## THE ARMY MEDICAL SERVICE.

We understand that the scheme for the reorganisation of the Army Medical Service is ready, and has been passed by the Treasury. It only awaits the King's signature. The scheme is still in the "confidential" stage, but will probably be made public within the next two or three weeks. We are not at liberty at present to publish even an outline of the scheme, but we may say that we have reason to believe that admission to the service will be as heretofore, by competitive examination, though the nature of the examination may be somewhat modified. The pay, especially in the junior ranks, will be materially increased. In promotion the principle of selection by merit will be considerably extended. Opportunities will be given to officers to keep themselves well posted in professional knowledge, and encouragement will be given to the prosecution of work in special branches of medical science and practice. Lastly, the status of the Director-General will be more in accordance with the dignity and responsibilities of his office than has hitherto been the case, and a corresponding increase of pay will be attached to the office. The Royal Corps and the military rank and titles of its officers will be retained as they now are. On the whole, we think that a serious attempt has been made by Mr. Brodrick to grapple with the problem in a spirit of determination at once to secure the efficiency of a most important branch of the public service and to meet the legitimate demands of the medical profession.

## THE QUESTION OF BOVINE AND HUMAN TUBERCULOSIS.

In the *Berliner klinische Wochenschrift* for September 2nd, pp. 894-6, Professor P. Baumgarten, of Tübingen, has contributed an important paper on the relation of bovine and human tuberculosis, taking the contrary side to Dr. Hueppe (see p. 647), and supporting in great measure Dr. Koch's position. After referring to experiments made in his laboratory by Dr. Gaiser in 1893, in which two calves had bovine and human tubercle bacilli respectively injected into them, with the result that the former caused general miliary tuberculosis and the latter produced no effect, he supplies details of some unintentional experiments performed twenty years ago, which more or less satisfactorily supply the missing link in Dr. Koch's train of argument at the recent Tuberculosis Congress—that is, a negative effect from injecting bovine tubercle bacilli into man. A physician now dead, Dr. Rokitansky, in a hospital with which Dr. Baumgarten was connected as pathologist, had under his care several patients suffering from generalised malignant disease, both carcinoma and sarcoma, which being inoperable meant a soon or late fatal termination. Reflecting that tuberculosis rarely occurred with sarcoma or carcinoma, and on a similar principle to that by which erysipelas cultures have in recent years apparently exerted a remedial effect on similar growths, he hoped by injecting tubercle bacilli into these patients to favourably affect the malignant tumours. As at the time no suitable cultures of human bacilli could be obtained, and as those of the ox were believed to be identical with them, bovine tubercle bacilli were employed. Large quantities were injected under the skin of some half-dozen patients with absolutely negative results. In some cases small pustules developed at the point of inoculation which at first were found to contain a few tubercle bacilli, but when the wounds healed these were no longer to be found. Dr. Baumgarten, at the necropsies of some of these patients, found, after the most searching microscopical examination, that the small scars at the site of the injections were entirely free from tubercles or tubercle bacilli. Although most of the patients survived the inoculation several months no development of tubercle occurred. In meeting the obvious objection that the patients suffering from sarcoma and carcinoma were insusceptible to infection by tubercle bacilli, Dr. Baumgarten remarks that, as is now known, tuberculosis and carcinoma and tuberculosis and sarcoma are not rarely present in the same persons, and even indeed in the same organs, arguing from this that the subjects of malignant disease are not specially resistant to tubercle bacilli. He accordingly agrees with Professor Koch that bovine tuberculosis cannot be transmitted to man, but differs in believing that this is due not to their being different diseases, but to the modification the primitive tubercle bacilli have undergone by being grown in different hosts. That is, he emphasises the modification which bacilli undergo in accommodating themselves to the conditions of life in different animals, and that these modifications in the case of the bacilli of bovine tuberculosis have rendered them harmless to man. This theory, which was also referred to by Lord Lister and Professor Nocard at the recent Congress, is, he considers, more tenable than that which ascribes different kinds of bacilli to different species of animals, mammalian and other. Although, then, he believes in the harmlessness of bovine tubercle bacilli for man, he would not have any relaxation in the precautions against the possible transmission of the disease by food, at any rate until after the results of extensive experiments are known, and the existing regulations for the prevention of such a possibility must not be regarded as in any sense quixotic.

## SMALL-POX IN LONDON.

From a public health point of view, it would be difficult to point to any service of greater value to the metropolis than that which Mr. W. H. Power rendered when he repeatedly called attention, some twenty years ago and later, to the spread of small-pox from the hospitals of the Metropolitan Asylums Board. From the time these hospitals were opened, in 1871, they had been as unquestioningly used for the treatment of variola as of any other infectious diseases, and small-pox in London, compared with small-pox in the country, had become at least three times as prevalent as in the years previous to 1871. The entire disuse of the hospitals at Fulham, Hampstead, Homerton, etc., for small-pox, and the substitution of hospital ships, have been followed by a period of remarkable freedom from small-pox. Unfortunately this comparative absence of the disease has been accompanied by increasing neglect of the only sure preventive—vaccination and revaccination—so that the metropolis is becoming more and more liable to successful invasion, and of late the increase of small-pox in one or two districts has caused much public alarm. By means of the admirable system now in force for immediate removal of known cases to the hospital ships at Long Reach, by vaccination or revaccination of persons supposed to have been exposed to infection and possessed of sense enough to accept the protection, and by the usual means of disinfection, the dreaded disease has been so far prevented from any very extensive spread. As a result of newspaper congratulations or announcements of this fact, there is a risk of the belief being fostered that the danger is almost at an end. That is a very unsafe attitude to adopt in present circumstances. The regular

incubation period of the small-pox eruption is just about a fortnight, and in consequence the question of principal interest is not the daily but the fortnightly decrease or increment of notifications. Quite possibly every centre of infection may be discovered and dealt with by official activity and medical alertness. If so all will be well. Quite possibly, however, some mild attacks may escape recognition either by patient or doctor, and may set up irreparable mischief amongst the enormous number of persons in London now susceptible to infection. Experience shows that for months previous to a serious epidemic cases may occur singly or in small groups here and there, with appreciable intervals of diminution or even cessation of notifications. One great risk in a place where infantile vaccination has been to any great extent neglected is that the infection may find its way into elementary schools, where the conditions are almost of necessity most favourable to its spread. This was the most important factor in the terrible epidemic which raged in ill-vaccinated Gloucester a few years ago, and though the risk in London is not nearly so great the utmost vigilance should continue to be exercised for months after the disease is supposed to have died out, if indeed the course of the outbreak allows any such supposition to be entertained at any early date. But the fact that one day there are, say, eight cases reported, and the next day only two or three, is no sufficient ground for indulging in prophecy of immediate stamping out of the disease. No doubt a small-pox epidemic would furnish a splendid object-lesson of the value of vaccination, as, indeed, every such epidemic does, but deplorable as is the neglect of the Jennerian prophylaxis in London and elsewhere it is a plain matter of duty to stave off the object-lesson to the last possible moment, and nothing is more likely to be productive of disaster than the assumption that every fall in the number of notified cases means that the outbreak has been finally overcome. The total number of cases under treatment on September 4th was 91.

## CONFIRMATION OF THE OPEN-AIR TREATMENT FROM A CORONER'S COURT.

At a recent inquest held by Dr. Michael Taylor, the Deputy Mid-Surrey Coroner, a knowledge of what the open-air treatment of consumption can do and what it cannot do was brought home with considerable force to the public mind. The subject of the inquest, a man aged 25, had suffered from consumption, according to his brother's account, for about a year: but from the fact that he had been off work for the whole of that time, it must be inferred that his disease was of much longer standing. Nine months previously he had been admitted into the North London Hospital for Consumption at Hampstead, and subjected to the open-air treatment. His condition on admission may be gauged from the fact that at the time he was scarcely able to walk. He remained under treatment for three months, and was stated to have improved wonderfully. From the time he left the hospital until within twenty-four hours of his death he had remained free from any symptoms referable to his chest. After a bad night, he became unconscious, and died before a doctor could be called. At the necropsy the lungs were found to contain at their apices large areas of fibrosis, and, generally speaking, to be full of cavities, old and new, large and small. There was, in short, clear evidence that the chronic phthisical process of long standing, not merely of a year's duration, had undergone arrest, and had become active again shortly before the fatal termination. Death was due to syncope from pulmonary hæmorrhage. From the conditions found, the advanced state of the disease, the healed cavities, and the presence of subcutaneous fat in the body, it was felt by the medical man who made the necropsy that in the first place it was marvellous that the patient had improved at all; and secondly, that if the treatment had been prolonged, a complete arrest might have been expected. As the coroner suggested, the evidence adduced was much in favour of the open-air treatment, and it was most satisfactory to know that the disease, even in an advanced stage, could be arrested. He also stated that the case could not but give great encouragement to the Richmond guardians—and we would add to all other public bodies—who had experienced great difficulty in obtaining permission to erect wards for the open-air treatment. An important lesson of the case may also belong to those who have charge of arrangements for treating consumption by this method—that although early cases are the more favourable, and should therefore have priority over advanced cases, yet the more advanced cases are not themselves hopeless, and that no effort should be spared to make provision for the treatment by this means of all cases of tuberculosis of the lungs. Although it may be claimed that this country is well ahead of all others in the matter of providing special hospitals for consumption, yet what are they among so many? It must be admitted that it is far behind many others in the provision of open-air sanatoria.

## TUBERCULOSIS IN STATE POSTAL DEPARTMENTS.

The observations made by Dr. Mignot, Surgeon to the French Post Office, and member of the French Commission on Tuberculosis, in regard to the prevalence of consumption in the French Post Office are applicable, comparing large things with small, to every merchants' office throughout the country and every bank, much more perhaps than to the majority of British manufactories and mills. It has appeared to some that because the evil results of exposure to infection by tuberculosis are slowly manifested, there is a slowness in acknowledging the necessity for adopting measures to prevent the contact of the diseased with the healthy. The danger reaches its maximum among large numbers of men working in a limited space where no preventive measures against tuberculosis are adopted. There is, Dr. Mignot asserts, no State department in France where such numerous bodies of employees work in common as in the Administration of Posts and Telegraphs, yet tuberculosis has long been recognised officially among them only under two conditions—either on death certified to be from consumption or on inability to continue working from the same disease. All the risk to others from men passing through a chronic disease and not, as they consider, able to afford to relinquish work, has been ignored. During 1899 out of nearly 71,000 employees 200 were certified as having died from tuberculosis, and 88 were retired on account of the same complaint. Yet these must be taken to represent only a proportion of those suffering from the disease and liable to spread it. Dr. Mignot insisted in his communications to the department on the importance of preventing, as far as possible, contamination of the buildings, of disinfecting not only the office in which an invalid had worked but also his private residence, of substituting the damp duster for the sweeping brush, of requiring a weekly washing of floors, walls and ceilings, of making floors impermeable, of abolishing all cornices and ledges that could serve for the lodgment of dust, of avoiding dark colours which conceal dirt, and of employing removable paper covers even for telephone diaphragms. He insisted, also, on the importance of eliminating those merely suspected of tubercle from among the candidates for employment and the discouragement of such from leaving the country for town life. He, moreover, appealed to the department to establish a sanatorium of its own so that its employees when attacked with the disease could be at once retired and given suitable treatment there. These recommendations of Dr. Mignot, we are glad to know, have been put into practical operation by the French Postal Service, and the staff have, in addition, received practical instruction in the possibilities of the propagation of the disease. Mr. C. H. Garland has lately pointed out that in the English Postal Service nearly 50 per cent. of all deaths

are due to consumptien, and that while in the general population (which includes the weak, the rejected of the Post Office, and the employees of dangerous trades), the mortality from consumption is 1.3 per 1,000 living, in the postal staff with its selected lives it is no less than 2.4 per 1,000. We hope to see before very long in the English services a radical alteration in the direction indicated by the French Postal Service.

## PREVENTION OF INFANTILE DIARRHŒA IN NORWICH.

In view of the prevalence of epidemic diarrhœa among infants at this time of the year the example set by Dr. Cooper Pattin, the medical officer of health for Norwich, in issuing, from the Municipal Buildings, plain printed instructions for its prevention and for the feeding and care of infants is worthy of commendation and adoption. Judging from experience in the out-patient department of hospitals for sick children at least one-half of all cases of disease among infants are due to disturbance of the gastro-intestinal tract, and in a large proportion of cases are directly traceable to ignorance of safe methods of feeding. Emphasis is laid in these leaflets on the importance of cleanliness both in person and surroundings as a preventive, and simple instructions are given not only for free ventilation, the cleansing of private courts, alleys, and yards, and for preserving the efficiency of drains, but also for the boiling of food stuffs and the sterilisation of all food utensils. The wise precaution is enjoined of immediately disinfecting the bowel discharges of all diarrhœa patients, as well as all clothing and materials soiled with such discharges. The recommendations for the feeding and general care of infants are most explicit, and the leaflets, which are intended for wide distribution, cannot but favourably influence the health and lessen the mortality of Norwich.

## THE MEDICAL SERVICE OF THE ROYAL NAVY.

We have for some months past received many communications from naval medical officers which clearly indicate a considerable amount of dissatisfaction among all ranks. We have thought it well to summarise these complaints with the view of bringing them under the notice of the Admiralty, which will before long have to deal with the matter as the service is becoming depleted by retirements, withdrawals, and resignations, while the candidates for admission are a vanishing quantity. The inspectors-general and all other officers in medical charge of hospitals feel acutely their lack of requisite authority over the sick berth staff as compared with the corresponding ranks in the army. The deputy-inspectors and fleet surgeons in the larger hospitals feel it a burden that their alternate day off-and-on duty should continue, as in the days of their joining the service, and that more than one principal medical officer is compelled to be on duty after their daily ward work is finished. The fleet surgeons feel greatly the irksomeness of sea service with only one other surgeon as a rule, seeing that their accommodation, boat privileges, etc., are much the same as at entry over twenty years previously; they also complain of the virtual seniority promotions to administrative rank, and that war services, which fall to the lot of a few, are considered to be a higher claim for advancement than proved professional and administrative ability. This is a grievance in the junior ranks also, such promotions not being brevet but actual, to the detriment of the seniors, possibly with higher established professional and administrative claims. Another cause of dissatisfaction is that study leave is very sparingly granted. In all ranks the rates of pay fixed more than twenty years ago are considered inadequate in these days when the value of qualified medical men has so much appreciated in consequence of the action of the General Medical Council in prohibiting the employment of unqualified assistants, and the increased cost of medical eduction. The Admiralty of late years have granted some valuable reforms to the junior ranks of the service, but the scarcity of candidates for entry must clearly indicate that more is required. A naval life, with the small field for professional improvement, is not an attractive one to men zealous of professional improvement, after the first novelty of it wears off, despite its social advantages in most cases. The slow advance in rank as compared with their brother naval officers of the same age and junior, mostly educated in and by the service, is a general cause of discontent. It is not an increase of pay alone—though that is essential—that will satisfy the naval medical service, and consequently attract recruits. We would submit for the consideration of the Admiralty that they, like the War Office, should institute an inquiry into these grievances of the naval medical service to ensure the recovery of its contentment and former popularity in the medical schools.

## THE SCHOOL BOARD FOR LONDON AND MEDICAL FEES.

Owing to the drain on the ratepayers' pockets caused by the yearly augmented precepts of the School Board, that body finds it necessary to economise. To carry out costly schemes of secondary education, and to defend such illegal conduct in the law courts, must require a somewhat large expenditure, so that rigid economy is necessary in other departments, and the medical officers of the Board must not be too highly paid. A correspondent writes that he was recently asked by the Board to act as medical officer to their boarded-out blind children in his district, and offered 1s. 6d. for every consultation at his surgery, and 2s. for every visit. On his demurring to this scale of payment, he was informed that it was all that was allowed in other parts of London, and that hitherto no medical gentleman had objected. Such a scale is certainly not liberal, seeing that the Local Government Board insist on Poor-law medical officers receiving 2s. 6d. per visit in the case of paupers boarded out. No doubt more ought to be paid, but it is not likely that the Board will increase the rate while they can easily get the work done for the payments which they offer. Our correspondent reports that since his protest against the rate of payment some months ago he has heard nothing further on the matter. He is probably justified in suspecting that some other practitioner has accepted the terms offered. Our correspondent is much to be commended for his endeavour to uphold the dignity of the profession, but it is to be feared that his own interests have not been furthered thereby, and the result can only serve *pour encourager les autres*.

## AN AMERICAN MEDICO-MILITARY JOURNAL.

The American Association of Military Surgeons, which includes in its membership medical officers of the United States Army, Navy, Marine Hospital Service, and National Guard, has decided to publish a journal instead of a yearly bound volume of *Transactions*. The first number of the new journal will appear very shortly. The editor-in-charge is Captain James E. Pilcher, Assistant Surgeon United States Army, Retired, under the supervision of a Governing Board composed of such representative men as Surgeon-General Walter Wyman, United States Marine Hospital Service; Colonel Nicholas Senn, Illinois National Guard; Surgeon-General George M. Sternberg, United States Army; Medical Director A. L. Gilson, United States Navy, and others. There will also be a staff of associate editors, selected from medical officers prominent in the several Government services and in the National Guard, and a number of corresponding editors selected from the medical officers of various foreign armies. The journal will not only publish the proceedings and papers of the

annual meetings, but will also contain contributions on medico-military matters, and will furnish in full or in abstract all important contributions on such subjects which appear in current literature, and will also contain items of news likely to be interesting to members of the Association. The journal is intended to create a living and growing mass of medico-military literature, which shall be available for study and reference. It is intended also to be a medium for the interchange of views and ideas between medical officers of the State and National Services. The new journal is expected to promote the condition of preparedness in the medical departments of all services, with the purpose of reducing the suffering and diminishing the mortality in the armies of future wars. Finally, the publication is expected to foster a feeling of *esprit de corps* among medical officers, and to stimulate legislation beneficial to the medical departments of the State and National Services. No similar journal is, we believe, published in the English language.

## LEGISLATION AGAINST PELLAGRA IN ITALY.

AN influential group of Italian senators is promoting legislation for the prevention of pellagra, which is becoming more and more prevalent in the Venetian provinces, and is spreading to Central Italy, having already invaded Tuscany, Umbria, the Abruzzo, and most recently Latium. The last official statistics, which are admittedly very imperfect, as notification of pellagra is not compulsory, show that there are about 60,000 sufferers from the disease in Italy, only 3,000 of whom are in public institutions. The draft scheme forbids the sale of immature or deteriorated maize, or the use of flour made of such maize for the making of bread. The notification of every case of pellagra is made compulsory. In communes in which cases occur, the drying, preservation, and consumption of maize and its derivatives are to be strictly supervised by the local authorities; and the drying of the grain is to be carried out gratuitously by the municipality. Poor patients who cannot receive proper attention at home are to be received into special asylums or into hospitals.

## THE GELATINE METHOD OF TREATMENT IN AORTIC ANEURYSM.

A WIDE interest has been aroused by the facts elicited at an inquest recently held by Dr. Waldo at the Guy's Hospital Coroner's Court on two patients who died from tetanus which developed in the course of treatment for aneurysm by Lancereaux's method. Both patients—the one a carter, aged 37, and the other an engineer's labourer, aged 33—were the subjects of aneurysm of the aorta; and a third patient suffering from the same disease was treated in the same way about the same time. The latter was, however, discharged from the hospital, according to the medical opinion expressed at the inquest, thoroughly cured. The subcutaneous injection of gelatine solutions has been often used of late for the arrest of internal hæmorrhage, but M. Lancereaux has by this means obtained good and analogous results in causing clotting in aneurysmal sacs inaccessible to surgical operation. It must be admitted that his method in other hands has not been followed by anything like equally good results. Yet highly successful cases have been reported by other physicians, and, even allowing for the acknowledged difficulty in estimating the value of signs supposed to indicate filling of the aneurysm with blood clot, the successes have been sufficient to gain for the method a measure of favourable consideration. M. Lancereaux employs a 2 per cent. solution of white gelatine in normal salt solution. The solution is sterilised at a high temperature, and kept at a medium temperature for some days in order to see that it remains clear. The apparatus used consists of a glass flask closed with a rubber cork, through which pass two glass tubes, one reaching to the bottom of the flask and the other just projecting into it beyond the cork. To the former, which, of course, passes below the level of the fluid, an india-rubber tube is attached; this is connected with a hollow platinised needle, with which the puncture is made. The shorter glass tube is connected with some sort of force pump, and in it is a glass bulb filled with wool to filter the air as it is forced into the flask. The entire apparatus is sterilised by boiling, and the sterilised gelatine is kept fluid by placing the flask in a warm water bath. The injecting needle is driven deeply into the muscles of the buttock, after the skin has been thoroughly purified, and the injection, consisting of about 3 ounces of fluid, is made in rather less than 15 minutes. The patient after the injection is kept at rest. The instruction is that the injection should be repeated every 6 or 8 days until consolidation of the sac has occurred. In a recent discussion on the diagnosis and treatment of thoracic aneurysm held at the Medical Society of London three speakers referred to their experience of Lancereaux's method. Two described unfavourable results, in one case a fatal issue, with symptoms of cerebral thrombosis, comparing closely with cases described in Germany; but the third speaker, having employed the method in four cases, claimed to have had good results—that is, evidence of consolidation was observed in all. But one of the four cases contracted fatal tetanus, or what was believed to be tetanus, although the most stringent antiseptic precautions had been instituted. It is not easy to see what is the weak link in the chain of antiseptic precaution. It is difficult to believe that the spores, highly resistant though they are, could have been in the original gelatine and have resisted the prolonged and thorough sterilising processes to which it was subjected. Granting that the injection of a solution of gelatine into the intermuscular spaces can produce an effect on the coagulability of the blood—a premiss which is not yet fully established—the presence of tetanus bacilli or spores in the gelatine fluid is nothing more than an accidental circumstance which should be more or less easily avoided. Death from rupture of an aneurysm of one of the large vessels is of so tragic a nature, and in a sense so mechanical though so inevitable, that any method giving the promise of even an equal chance of success should be seriously considered. Aneurysm of the aorta is a desperate disease and therefore requires boldness in its treatment, just as other equally desperate conditions require bold surgical operations which in this instance are inadmissible.

## YELLOW FEVER EXPERIMENTS IN CUBA.

AN order was recently issued at the War Department, Washington, convening at Havana a Board of medical officers headed by Major Havard, chief surgeon of the Department of Cuba, for the purpose of examining into the proposition of Dr. Caldas and Dr. Bellinzaghi, to submit a cure for yellow fever and a serum designed to prevent the contraction of that disease. Dr. Caldas is a Brazilian, and his proposition was lately submitted to the War Department by the Brazilian Minister. A letter was received at the Surgeon-General's office from Major Havard saying that two suspected cases of yellow fever had been discovered in Havana. In connection with these experiments the Yellow Fever Commission agreed to supply the mosquitos. The Commission had eight insects which had bitten a person suffering from a severe attack of yellow fever. Two of the mosquitos subsequently bit two persons, who had since developed the disease in well-marked form. The eight mosquitos would be divided into two divisions. Two persons whom Dr. Caldas was to inoculate with his serum would be bitten by two mosquitos each. The other four mosquitos would bite two non-immunes, two each. As all eight mosquitos were infected from the same person, and as two of them had already given yellow fever to two persons, it was inferred that the arrangement would afford a good test of the preventive value of the serum. Soon after the com-

mencement of the experiments Major Havard announced that the mosquito tests as to propagation of yellow fever would be discontinued. The reason for this decision was that one of the non-immunes who was bitten by an infected mosquito had died of yellow fever. The man, who was a Spaniard, desired to become immune, and therefore allowed himself to be bitten by the mosquito. Another man who was bitten died; and Miss Clara Maas, a trained nurse from Orange, New Jersey, also died on August 24th from the bite of an infected mosquito. She had been bitten several times before without showing any ill-effects. According to Major Havard the cases due to mosquito infection prior to the first two fatal ones were light. But, as the insect infection had assumed a more dangerous form than the first experiments led the Yellow Fever Commission to expect, it was thought best not to allow Dr. Caldas's and other proposed experiments in this direction.

## INTERNATIONAL CONGRESS OF PHYSIOLOGY.

The fifth International Congress of Physiology will be held at Turin, September 17th to 21st, under the presidency of Professor Angelo Mosso. At the closing meeting, Professor Marey, of Paris, will present a report on the work of the International Committee for the Control of Registering Instruments and the Unification of Methods in Physiology. The Committee consists of Professors Mosso (President), Bohr of Copenhagen, Bowditch of Boston, U.S.A., Dastre of Paris, Héger of Brussels, Kronecker of Berne, Wedensky of St. Petersburg: the General Secretaries are Drs. Fano of Florence, Frédéricq of Liége, Grützner of Tübingen, and Professor Sherrington of Liverpool. It is proposed that in future one sitting of the Congress shall be devoted entirely to experimental psychology. A programme of questions to be discussed at the meeting in Rome in 1904 is already being arranged by a Committee, of which the President is Professor Luciani. These questions specially relate to the methods of measurement applied to the organs of the senses, and to the unification of these methods. An exhibition of physiological apparatus, etc., will be open from September 14th to 28th; among the exhibits will be a collection of the marine animals which are most useful for the purposes of comparative physiology, sent by the Naples Zoological Station. All communications should be addressed to the Local Secretary, Dr. Z. Treves, Corso Raffaelo, 30, Torino, Italy.

## THE HALIFAX BOARD OF GUARDIANS AND THEIR NEW INFIRMARY.

A representative meeting of medical men of Halifax and district was held on Wednesday, August 28th, to consider the action of the Board of Guardians for the appointment of the medical officer to the new Poor-law infirmary, and to pass a vote of sympathy with Dr. Dolan. Dr. E. West Symes, M.D., J.P., was in the chair. The following resolution was passed *nem. con.*:

That this meeting of medical men express their sympathy with Dr. Dolan in not having been appointed Medical Superintendent to the Halifax Poor-law Union Hospital.

Reference to the unworthy manner in which Dr. Dolan has been treated by the guardians after thirty years of faithful service as medical officer to the Halifax Workhouse Infirmary was made in the British Medical Journal of August 17th, p. 425.

## THE OPEN-AIR TREATMENT OF CONSUMPTIVES AT LIVERPOOL.

Liverpool, which has shown an excellent example to many other towns in providing for the care of the consumptive members of its population, will next week have a new sanatorium. The institution stands in its own grounds, which cover an area of forty-five acres, and is situated amid most healthy surroundings in Delamere Forest. The sanatorium will be ready for the reception of patients on Monday, September 9th. It is a branch of the Liverpool Hospital for Consumption and Diseases of the Chest, which is situated near the top of Mount Pleasant. This institution will be retained as a place for the treatment of out-patients and a hospital of observation, where the medical staff can select cases most likely to be benefited by the open-air treatment in Delamere Forest. We understand that it is hoped in time to rebuild the Mount Pleasant Hospital on a scale more commensurate with its requirements, and with all the structural and other improvements needed to bring it into harmony with the most advanced scientific teaching. In the meantime, however, the hospital will serve the purposes mentioned, and some of the patients can be treated at the new sanatorium. The institution will be under the medical superintendence of Dr. Herapath Wood, who, we believe, is himself a striking illustration of the efficacy of the open-air treatment which he underwent in Germany.

## VACCINATION CAMPAIGN IN SHOREDITCH.

Under this heading a local contemporary describes an honest endeavour of the vaccination officer of that borough to carry out the duties imposed on him by the law. It would appear that the officer had recently taken out summonses against some of the worst offenders against the Vaccination Acts, and in spite of a resolution of the Board of Guardians, practically requesting him to neglect his duty, refused to withdraw them: and on August 16th, they were heard by Mr. Haden Corser at Worship Street. In five of the cases a fine of 5s. and 5s. 6d. costs was inflicted, and in two others, where the plea of illness of the child was raised, the magistrate adjourned the cases for a week for a medical certificate to that effect, threatening to inflict the same fine if it were not forthcoming. To the contention for the defendants that the guardians objected to these proceedings, and wished to have the defendants before them to hear what excuses they might have, Mr. Haden Corser answered that the guardians might do so if they liked, but they must not interfere with the course of the law; he added that the mischief of the contention would be very great indeed, as it would put it in the power of local bodies to override the law of the land, which it was not intended they should do. At the next meeting of the Shoreditch Board of Guardians the following resolution was passed:

That this Board strongly condemns the action of the vaccination officer in prosecuting defaulters under the Vaccination Acts, and incurring law expenses without consulting the guardians, and instructs him in the future to take no steps towards instituting proceeding against defaulters until he receives the instructions of the guardians to do so.

One of the guardians said that he had taken the liberty of going to see the vaccination officer, and that Mr. Waterer assured him that he would not proceed with any more; he recognised the feeling of the Board, and that public opinion was against him in the parish. The vaccination officer was a man they could reason with, and there was no doubt he had been under severe pressure from other quarters. Parents had been threatened not so much by the vaccination officer as by the medical men, who for the sake of their fees were constantly calling at the houses of poor people, bullying and blackguarding them. Some people called upon had been treated in a most disgusting manner. Seldom, we trust, does it happen that a member of a public Board is so forgetful of his position as thus in his public capacity to inculcate open contempt for the law. That he has no conscientious objection to tampering with a public officer is scarcely to be wondered at, as he does not scruple to make charges as infamous as they are false against public vaccinators. He must know that the latter are not protected from injustice on the part of

the Board of which he is a member, like the vaccination officer, and that therefore they can be denounced with safety. Under their contract with the Board of Guardians the public vaccinators are bound to call at the houses of these poor people and offer to vaccinate their children, and it is their clear duty to warn those who decline that they must get a magistrate's certificate or they will be liable to be fined. This is what is styled "constantly calling at the houses of poor people, bullying and blackguarding them, and treating them in a most disgusting manner." With regard to the alleged seduction of Mr. Waterer, the vaccination officer, from his official duties, we decline to believe it. That official has now complete protection from any injustice on the part of the Board, and, were he so ill-advised as to allow himself to be influenced by pressure put upon him by local law-breakers, he would have to answer for his conduct to a much higher and more influential body.

## THE BENCH AND THE MEDICAL PROFESSION.

IN the BRITISH MEDICAL JOURNAL of August 24th, p. 505, there appeared under the above heading a brief report of a case recently tried at the Birmingham Assizes in which Mr. Justice Bigham delivered himself of some *obiter dicta* implying that Dr. J. F. Craig's attendances on the plaintiff, who brought an action against the City of Birmingham Tramways, had been unnecessarily frequent. In commenting on the case at page 487 of the same issue, we pointed out that it was inconceivable that any practitioner who valued his reputation would deliberately allow his patient to incur the heavy expense of thirty journeys from Birmingham to Coventry except at the special request of the patient. We think the Judge's remarks on the subject unjustifiable in themselves and insulting to the medical profession. Dr. Craig would, in our opinion, have failed in his duty as a medical practitioner had he not complied with his patient's express wish in the matter of professional attendance.

## SEGREGATION OF LEPERS IN THE PHILIPPINES.

THE United States War Department has received the report of a Board of officers appointed not long ago to gather data and report upon the conditions obtaining in the Batanes Islands lying to the north of Luzon, and to recommend a suitable island of the group for the segregation of lepers. The Board recommend the island of Barri, which is said to be uninhabited and of sufficient size, two miles by one mile, to accommodate the lepers of the district; its water supply is reported as good, soil fertile, timber good, and geographic location reasonably near Luzon. The disadvantages were stated as (1) its proximity to the island of Fuga, and (2) the fact that at certain seasons the group of islands to which it belongs is swept by typhoons.

## THE CINEMATOGRAPH IN SURGERY.

AFTER the general meeting of the Association held at Cheltenham, on the afternoon of Thursday, August 1st, a demonstration of surgical technique as shown by cinematograph representations of operations was given for Dr. Doyen, of Paris, by Dr. A. A. Warden. In addition, fixed projections of surgical instruments were exhibited. The demonstration included an operation for goitre, a resection of the vermiform appendix, a mastoid operation, one for osteomyelitis, a craniectomy, an excision of the knee, operations for congenital dislocation of the hip, for double cyst of the ovaries, and for a fibroid of the ovary with ascites, also a vaginal hysterectomy, a vaginal hysterectomy for prolapse, and an abdominal hysterectomy. A vote of thanks to Dr. Doyen was moved by the President, Dr. G. B. Ferguson, who was in the chair, and was carried unanimously. The first demonstration of this nature was at the Edinburgh meeting of the British Medical Association in 1897, and since then demonstrations have been given at the University of Kiel, at the International Congress of Gynæcology in Amsterdam, before the British Gynæcological Society in London, and at the International Congress of Medicine held in Paris.

## A LOCOMOTOR ATAXIA LEAGUE.

THIS is an age of leagues. We have leagues against tuberculosis, against cancer, against syphilis, against alcohol, against tobacco, against sea sickness, and others; the list of them would be almost as long as Homer's catalogue of the ships; and the cry is, Still they come. The latest, as far as we are aware, is the National Locomotor Ataxia League, which has recently been formed in New York. This league, however, differs from the others that have been enumerated in the important particular that membership is limited to sufferers from the disease. It is announced that the league intends to raise money for the erection and maintenance of a sanatorium, in the hope that the opportunities for special study thereby afforded may result in the discovery of a cure; and, further, that two members of the league have offered a reward of £2,000 for the first permanent and guaranteed cure of the disease. It is said that the league already numbers 300 members. We do not know whether all the members, or only a select few of them, intend to take up their quarters in the sanatorium and offer themselves as subjects of special study. It is not quite clear, moreover, whether they intend to study each other or to place themselves under medical observation. The idea of sufferers from a particular disease banding themselves together for a struggle against their affliction is not altogether a new one; many years ago an association of victims of hay fever was formed in the United States, and there is, we believe, an Appendicitis Club in New York. The idea is capable of indefinite development, and we may see dyspeptics, asthmatics, arthritics, nephritics, prostatics, etc., form themselves into leagues and build sanatoria where they may compare symptoms and try all the newest methods of treatment. Such establishments may indeed become the clinical schools of the future, if our antivivisectionist friends succeed in their philanthropic purpose of ruining the hospitals. The patients, being more intelligent than the ordinary run of hospital inmates, would be more valuable as "clinical material," and scientific medicine would doubtless gain by the exchange.

## THE SANITATION OF HONG KONG.

THE British residents in Hong Kong are making their wants known by letters to the press, and by a petition addressed to the Secretary of State for the Colonies. The cause of their thus bestirring themselves is the danger to the lives of the residents and the deplorable consequences to trade which the frequent recurrences of plague are causing. Since 1894 epidemics of plague during the spring-summer period have recurred yearly, with the exception of 1895, and the most recent outbreak, during 1901, happily now almost over, has proved perhaps more serious and alarming than any of its predecessors, chiefly owing to the number of Europeans attacked. Explanation of these visitations are many, but all seem to agree that the municipal work of the colony is indifferently managed, though were the Government to give over the purely municipal work of the colony to the residents themselves, the sanitation of the city of Victoria could be vastly improved upon. This, however, is a step which the Home Government does not seem inclined to take, and the direction of a Crown colony by a bureaucracy appears to be a form of government to which the Colonial Office, with all its recent advance, still adheres to tenaciously. Plague is markedly a disease which gains a firm hold in insanitary

localities, and where there are Chinamen dwelling together pretty well as they please, there is sure to be defiance of all sanitary rules. The petitioners, consisting of merchants, bankers, professional men, traders, artisans and others, after pointing out the sanitary defects of the city, beg that a commission be appointed of a person or persons, wholly unconnected with the colony, to investigate and report upon the sanitary condition of the colony and in the measures to be adopted for the improvement of the city of Victoria: also, that a sanitary expert be attached to the commission, and that directions be given that the recommendations of that commission be forthwith carried into effect. Many problems, however, have to be considered when the sanitation of Hong Kong and its liability to epidemics are being discussed. The proximity to the mainland, the daily traffic between Canton and Hong Kong of many hundreds of coolies, the tendency of the Chinese to huddle together in their dwellings, mostly for economic reasons, and their indifference to epidemic disease generally—all tend to render the problem of the sanitation of Hong Kong peculiar and especially difficult. Before, therefore, any elaborate scheme is adopted for the improvement of the sanitation of the colony there are one or two points to be considered: First, the nature of the disease against which they are especially fighting—namely, plague; and, secondly, that the "expert" recommendations be given and carried into effect by one acquainted with the sanitary necessities of a city in a tropical country. Were the municipal affairs handed over to the residents themselves, as they are in all intelligent British communities outside a few Crown colonies, Hong Kong might become in time a sanitary, as it is a commercial, rival of the "model settlement" of Shanghai, where the residents direct their own affairs.

## NATIVE COOKS AND ENTERIC FEVER IN THE BRITISH ARMY IN INDIA.

A reference to any of the annual reports of the Sanitary Commissioner with the Government of India will show that in regard to the prevalence of enteric fever in the British army the opinions of medical officers differ very widely as to the relative importance of various agents in causing this disease. Water, milk, dust from contaminated sources, flies, all have, more or less satisfactorily, been proved to stand in a causal relation with this scourge; and whereas some can be guarded against by careful attention to hygienic principles, others seem almost altogether outside the scope of practical politics. The British soldier cannot be prevented from drinking aërated waters in the native bazaar; and the vendor of these poisons is absolutely unamenable to conviction as to the necessity for employing even fairly clean water in the manufacture. But of the measures that can be taken to guard the soldier against infection a most important one is the abolition of the native cook. This, and making the men cook for themselves, should have a considerable influence on the enteric returns; and it is a good sign that in certain stations the experiment is being tried. To those who know nothing of India any description would probably fail to convey an idea of the sins against the first principles of hygiene that are habitually perpetrated in every Indian kitchen; and none is more glaring than the personal uncleanliness of the cook class. Hankin, in his *Cholera in Indian Cantonments*, gives numerous examples of the manner in which cholera and the kitchen are connected: "The cooks employed in regimental cookhouses are, I believe, the dirtiest people in India....If they are Hindus they wear *dhoties*, or loin cloths, which are nearly always insufferably dirty, and in a corner of which they will either boil a pudding or strain the soup as occasion arises." The system of having British soldier cooks in place of natives was tried a short time ago in the Gordon Highlanders, and is said to have had a most marked effect on the incidence of enteric in that battalion. It is to be hoped that the experiment now being tried on these lines will be a success, and that it will be extended to every regiment in India. One thing is certain—a considerable number of cases of enteric, as of cholera, in the past have been traceable to the native cookhouse. The native cook cannot be taught to be clean: therefore his removal should have a marked effect by the removal of one of the many sources of infection.

## THE ISLAND OF REIL IN DISTINGUISHED MEN.

In the *Medical Record* for June 15th, 1901, Dr. Edward A. Spitzka, of New York, has made a study of the brain of Dr. Edouard Seguin, whose name is so well known as a pioneer in the teaching of imbecile children at the Hospice de Bicêtre, and of the brain of his son Dr. Edward C. Seguin, himself a man of high literary attainment and of great teaching power, and has discovered, as he believes, a group feature of the brains of distinguished educated men. This consists in a high degree of development of that portion of the brain known as the Island of Reil. That this region has important relations with the faculty of speech has long been known; indeed, Meynert, Cornillon, Lépine, and others have regarded the area as the cortical centre for speech; and Charcot, as recently as 1883, maintained that some cases tended to show that the Island of Reil might, though exceptionally, preside over the speech function to the exclusion of Broca's convolution. Cases of aphasia associated with destructive changes in the Island of Reil have been explained, however, on different grounds, in this country, particularly by Bastian, namely, that they depend on interruption in the commisural fibres which pass from the auditory word centre to Broca's or the glosso-kinæsthetic centre, and that the interruption of the driving impulse normally following this path leads to a motor aphasia as absolute as that produced by destruction of the motor speech centre itself. Indeed, it is the more generally held view, at the present time, that the Island of Reil is an association centre beneath which lie these commisural fibres. In deaf mutes, as Waldschmidt has shown, this region is much under-developed, and the same has been pointed out by Donaldson. In the two brains examined not only is the Island of Reil much more amply developed than in the average person, but that of the left half of the brain is larger than that of the right. In the left insulæ of the two brains the fissures are deeper and the convolutions fuller than on the other side or in average brains. It is pointed out, as a suggestive fact, that both men were of high intellectual capacity, both facile writers and speakers, both linguists, speaking and writing three languages fluently; and in both the teaching capacities were remarkable, in the one case having been especially devoted to the patient efforts required in training the feeble-minded, and in the other developed in the highest degree in didactic lecturing and clinical teaching.

## LORD MOUNTSTEPHEN AND THE ABERDEEN ROYAL INFIRMARY.

Tuesday, August 27th, being the occasion of the presentation of the freedom of the city of Aberdeen to Lord and Lady Mountstephen, a very large and influential gathering was invited on August 28th, by the Chairman of the Directors of the Royal Infirmary to meet Lord and Lady Mountstephen. It will be remembered that by Lord Mountstephen's recent munificent gift of £25,000 the infirmary was completely cleared from the debt which had been a source of real embarrassment to the directors, and the enthusiastic reception of the benefactor was a token of the real gratitude of the people of Aberdeen to him for his timely generosity. An album of photographic views of the infirmary was presented to Lord

Mountstephen as a remembrance of his visit. Both Lord and Lady Mountstephen made a capital and thorough visitation of all the departments of the infirmary, and congratulated the town on the excellence and completeness of the equipment of the institution. In the course of their stay in Aberdeen, the Convalescent Home, the Hospital for Incurables, and the Maternity Hospital were also visited, and everywhere the philanthropic kindness of the distinguished visitors will long be remembered.

## THE JENNER SOCIETY'S REPORT.

The report of the Executive Committee of the Jenner Society for the years 1899 and 1900 has been published. It is an interesting document in which are discussed the influence of the Vaccination Act of 1898 on the prevalence of infant vaccination, on the attitude of indifferent or ignorant parents and of the Antivaccination League, the action of the magistracy under the conscience clause, compulsory revaccination, inefficient vaccination, and other similar questions. The report very properly points out the difficulty which exists in measuring the effect of the recent Act on the vaccination of infants. Of primary vaccinations there has been an undoubted and large increase —from about 500,000 in 1898 to about 670,000 in 1899—but how far this improvement is due to the overtaking of arrears of unvaccinated children under 14 years old, and how far to increase of vaccinations under 6 months or 1 year, it is impossible to say, though no doubt the same causes which tend to promote the vaccination of babies will tend to promote the vaccination of older children. It is pretty certain that domiciliary vaccination has done very much to diminish the evil influence of parental indifference or ignorance in this connection. That the conscience clause would have much effect in lessening the activity of prominent members of the Antivaccination League was not to be expected, but there was reasonable ground for hoping that it would lessen the influence of the League, which is not necessarily the same as its activity. That its influence has been lessened, and very considerably lessened, there can hardly be a doubt, but the Jenner Society is quite right in pointing out that some magistrates by their excessive stringency in refusing certificates of conscientious objection have played into the hands of the League. It is impossible within the limits of a paragraph to discuss the questions raised in the report regarding legislation for the promotion of revaccination, but the duty of the medical profession surely is to urge that whatever legislation is applied to primary vaccination should also be applied to revaccination. If the Legislature thinks differently, then the country must bear the consequences. As to inefficient or insufficient vaccination, the report points out the importance of a statutory definition of efficiency in the sense of area and number of marks. It also suggests, as one possible remedy, "the devolution of public vaccination on medical men who shall be restricted from general practice," and urges that this would tend also to prevent professional jealousies, and might even be economical, having regard to the largely increased cost of public vaccination under the new system. After referring to various recent illustrations of the value of vaccination, the report concludes with paragraphs on the general work of the Society and on the need for further educational effort. There is no doubt whatever that the Jenner Society, under the active inspiration of its untiring Secretary, Dr. Bond, is doing excellent work on behalf of the public, and is deserving of every encouragement. It is supported by voluntary contributions, and is well worthy of very much greater support than it at present receives.

## THE SANITARY INSPECTORS' ASSOCIATION.

A meeting of the Sanitary Inspectors' Association, including delegates from all parts of England, and from Capetown, Kimberley, and Bulawayo, was held on August 29th, under the presidency of Sir Hugh Gilzean Reid. The objects of this Association are to raise the standard of efficiency of sanitary inspectors, to secure for them a reasonable tenure of office, and to procure certain extensions of their power and privileges. It also aims at promoting the appointment of a Minister of Health and the formation of a health department in the Government. Papers on sanitary subjects were contributed by Sir Alexander Binnie and Professor Frank Clowes, with one on tuberculosis by Sir James Crichton-Browne. The latter speaker maintained that the grim ghost that Koch had raised could only be laid to rest by a Government inquiry, and he suggested that in the meantime sanitary inspectors should forget that Koch had spoken, and should act on the assumption that things remained exactly as they were.

## MEDICAL LEGISLATION IN CANADA.

At a congress of Canadian medical men held at Winnipeg on August 29th a scheme was proposed by Dr. T. G. Roddick, M.P. for Montreal, and approved by the Convention for the Dominion registration of medical practitioners. Dr. Roddick will, says the *Daily Mail*, press for legislation on the matter next session. The proposal is to substitute a general registration for the system now in vogue, by which each province controls its own registration. One result of the present system is that Canadian medical men are subject to disabilities in the imperial services and the British universities.

We understand that Surgeon-General Muir, C.B., Deputy Director-General of the Army Medical Service, has been offered, and has accepted, an extension of service up to December 31st. In the ordinary course he would have retired on October 4th. Surgeon-General Muir is at present absent on leave till September 24th.

We are requested to state that Sir Richard Douglas Powell, Bart., will preside at the dinner of the past and present students of University College Hospital, which, as already stated in the British Medical Journal, will take place at the Hotel Cecil at 6.30 P.M. on Tuesday, October 1st.

The Italian Minister of Public Instruction has appointed a Commission to study the reforms in regard to physical education which should be introduced into normal and secondary schools. Professor Angelo Mosso is the President of the Commission.

The annual dinner of the Continental Anglo-American Medical Society will be held in Paris on Tuesday, October 8th. A meeting of the members will be held in the afternoon at 5 P.M. at the residence of Dr. George Bull, the Hon. Secretary, 4, Rue de la Paix.

It is with deep regret we announce the death of Surgeon-General Professor Alwin von Coler, M.D., official chief of the Prussian Army Medical Corps. He had been fifty years in the service, of which for the last twelve years he had been head. He had a very large share in the reform of the organisation of the medical service and in the improvement of the general sanitary condition of the Prussian army. Surgeon-General von Coler was 70 years of age; his death was due to cancer. We hope to publish an obituary notice in a future issue.

Pasteur Institute, Lille.—From the opening of the Lille Pasteur Institute in February 15th, 1895, till January 1st, 1901, the total number of patients treated was 1,498. Of these 4 died of hydrophobia, 1 of whom, after a few inoculations, declined to submit to further treatment. The death-rate was 0.26 per cent.

## THE POTTERIES AND NEWCASTLE CRIPPLED CHILDREN'S GUILD.

We have received for publication the following letter from the medical officers of the Potteries and Newcastle Crippled Children's Guild in reference to a matter of which mention was made in the British Medical Journal of August 10th, p. 363, and August 24th, p. 485:

"Hanover House,
"Newcastle,
"Staffs.

"[To the Editor of the British Medical Journal.]

"Sir,—We, the undersigned honorary medical officers of the Potteries and Newcastle Crippled Children's Guild (the remaining members of the staff—Dr. Dawes, of Longton, and Dr. Hind, of Stoke, being away from home), having met to consider our position with regard to the Guild, have sought the advice of the General Medical Council on the issues involved.

"We are, Sir,
"Yours faithfully,
"Signed { G. Stokes Hatton, M.D.,
S. King Alcock, M.D.Lond.,
Reginald Alcock, M.B."

[We are informed that Drs. Griffiths of Fenton and Hill of Tunstall are also members of the staff. Dr. Griffiths approves of the resolution. Dr. Hill is absent from home.]

The following letter, addressed by the Duchess of Sutherland to Dr. G. Stokes Hatton, of Newcastle, Staffs., has also been sent to us for publication:

Stafford House, London, S.W., August 10th, 1901.

Dear Mr. Hatton.—The British Medical Journal, by a statement in its columns, communicated possibly from North Staffordshire, has roused a storm in a teacup.

I wish that before the press had thrown garbled and premature accounts of the matter to the public I could have had an opportunity of explaining the Guild's contemplated action to you, but it is no use regretting the thing that is done, and I am only sorry that in these hot August days you should be bothered by us all.

If we revert to the storm, I suppose the matter stands thus: Some of the doctors of the Potteries and Newcastle—which town you are kind enough to represent—have graciously responded to our invitation, and are acting as honorary medical advisers to the "Cripples Guild." When crippled children are brought by our secretary or members of the Committee to their notice, they have as a rule two forms of advice.

1. Let the child be received at the Infirmary.

2. Send it to a convalescent home or an orthopædic hospital in London or in some other large town.

It may well be believed that this advice has been followed when possible. It is certainly simple and practical advice if not exactly original.

There is, however, certain other treatment outside of hospital, of bones and ligaments, which can bring vast relief to neglected children, and effect improvement in their means of locomotion. No doctors will venture to deny this, but our honorary medical men have not the time to practise the treatment themselves—a treatment largely consisting of manipulation and massage. They have certainly not practised it hitherto.

Mr. Atkinson, the bonesetter, whose capabilities and whose limitations from some years' experience are equally known to me, offered our Guild to treat in his manner some of our cripples. He has the gift of touch developed in rather a remarkable degree. There are cases in my knowledge, which thus treated by Mr. Atkinson, would, I feel sure, benefit greatly; there are other cases—where disease is in question—that the Guild would not even ask him to treat.

It seems to me that there is a certain narrow-mindedness, a certain evidence of prejudice, and of undue forcing of medical etiquette in the attitude the Pottery doctors have taken up towards the action of the Guild. The Guild knows well that to ask them to meet in consultation an unqualified man would be outrageous, but it would adopt no such course; neither would it dream of taking patients, if there are any at present, from under the care of the local doctors, and handing them over to Atkinson—such procedure would not only be discourteous but foolish.

But there are many little children, believe me, with twisted ankles, club foot, etc., who are under no treatment at all. How can they be? The orthopædic hospitals of our large cities are already full; the convalescent homes can do them no permanent good. What special orthopædic treatment is given in the infirmary? Operations, of course, but I mean by manipulation or massage? Is there a special orthopædic ward? Is there any surgeon, I ask, in the district who makes orthopædic treatment a speciality? If there is pray tell me instantly.

I claim for Atkinson no superior power. Any doctor, if he had the time and inclination and peculiar training, could do all that Atkinson does and more. But have our local medical men the time, even if they have the inclination, to do it? As things are at present, I answer most certainly, "No."

I am, however, faced in this matter by the fear that all this misunderstanding may mean injury to the Guild. The Guild started for the care of poor children, and for whose welfare I am deeply concerned. The Guild boycotted by the doctors might mean a serious diminishing of funds, and this we cannot afford to risk.

No misconception or prejudice, no indiscretion or mistaken zeal shall, I am determined, cause our little children to suffer more than they suffer already. Therefore, Sir, I have considered it wise, as President of the Guild, to advise the Guild to disassociate itself from Mr. Atkinson. His treatment must in a measure be experimental, and under the circumstances the Guild must not bear the responsibility of, on the one hand, his possible failure, on the other hand, the boycotting of the doctors, and consequent loss of subscriptions, for in these days, wheels work within wheels. We want for our work all the money and interest we can get.

But for myself I hold a free hand. If I find a cripple that I think Mr. Atkinson may benefit, with the parents' consent and on my own responsibility do I allow him to treat that child, and of success or failure I accept the responsibility.

I want no "gentle forbearance." I want censure or approval in work such as this, as occasion calls, and I do not shrink from blame if blame is due.

I trust that my point of view will commend itself to the honorary medical advisers of the Guild, that they will be willing to let the burden of my action rest upon my shoulders and not upon the shoulders of the Guild, and that they will in fact consider that my "zeal" is now appropriately tempered by "discretion."

Believe me, dear Mr. Hatton,
Yours truly.
(Signed) Millicent Sutherland.

*** The case lies in a nutshell. In the British Medical Journal of August 24th we said that the Duchess of Sutherland must make her choice between "Professor" Atkinson and the medical profession. As President of the Guild she has chosen the latter, but for herself she claims a free hand to do what she likes. The situation reminds us of Harpagon's servant, who so carefully distinguished between himself as butler and as coachman. The Duchess may advise the Guild to dissociate itself from Mr. Atkinson, but it will not be easy for her to dissociate the Duchess of Sutherland from the President of the Guild. If the former judges that the opinion of the bonesetter would be helpful in a particular case there will not, we take it, be any strenuous opposition on the part of the latter. This circumstance alone is sufficient to make any co-operation between Her Grace and the medical advisers of the Guild impossible. The Duchess asks them to let the burden of her action in calling in Mr. Atkinson rest on her shoulders. May we, with all respect, point out that what the medical advisers object to is the position which the Duchess seeks to thrust upon them of appearing before their professional brethren and the public as the colleagues of an unqualified practitioner? The Duchess of Sutherland may take upon herself the responsibility of asking Mr. Atkinson to treat cases, but she has no right to ask the medical advisers of the Guild to share that responsibility with her. They could not escape such responsibility if they continued to give their services to the Guild, while the Duchess of Sutherland may at any time use her "free hand" to push them aside and put a bonesetter in their place. Her Grace's qualifications for the task, which she appears to be willing to accept with so light a heart, of selecting cases for treatment, may be judged from her extraordinary *apologia* for bonesetting. The *Staffordshire Sentinel* assures us that "love and sympathy are the qualities which the Duchess of Sutherland has brought to bear upon the truly Christian work of uplifting the lowly and succouring the afflicted amongst the teeming population of the Potteries." We have no reason to doubt that Her Grace is actuated by the truest benevolence, but we take the liberty to hint that she can find ample scope for the exercise of that fine quality without insulting men without whose disinterested help her charitable scheme is foredoomed to failure.

## THE PLAGUE.

### Prevalence of the Disease.

India.

For the two weeks ending the 3rd and 10th August, the plague deaths in India amounted to 2,003 and 2,618 respectively. The numbers are greatly in excess of those given for the corresponding weeks of last year, and point to a most unsatisfactory state of matters as regards this disease. The principal figures are for the weeks ending July 27th and August 3rd and 10th respectively: in the Bombay districts, 1,623, 1,730, and 2,198; in Bombay city, 106, 136, and 159; Mysore State, 164, 109, and 209. In the Bombay Presidency and in Mysore plague is severe, and some slight increase is taking place in Bombay city. In Calcutta during the same periods the deaths from plague were 14, 11, and 17; and in Bengal during the weeks ending August 3rd and 10th the plague was responsible for 4 and 10 deaths respectively. In the city of Bombay the great rise in general mortality is causing alarm, and evidently with good reason, for upon the low-caste Hindus a mortality of 156.26 was returned for the week ending August 3rd.

Cape of Good Hope.

For the week ending August 17th, Port Elizabeth was the only town in which plague occurred in South Africa, and 3 cases only were reported at this seaport, of which number 2 proved fatal.

## THE ANTIMALARIA CAMPAIGN.

### THE LIVERPOOL MALARIA EXPEDITION.

FROM an account of the progress of Major Ronald Ross's mission recently received by the Liverpool School of Tropical Medicine, it appears that having inaugurated his campaign against mosquitos in Sierra Leone he paid a visit to Lagos, where he was entertained by the Governor, Sir William Macgregor. At a luncheon given by His Excellency for the purpose of introducing Major Ross to the Lagos Ladies' League, Sir William Macgregor pointed out that the primary object in forming this League was the appalling infantile mortality in the town. They lost 42 per cent. of all children before they reached one year of age. In 1889 they lost 864; in 1900, 842. The principal causes of death were fever and bowel complaints. Fever was the great enemy. It was to combat fever by the administration of quinine that the Ladies' League was created. They were building additional dispensaries; they were earnestly trying to improve the water supply; they were reclaiming swamps; they were delivering courses of public lectures on sanitation; and a medical officer had been appointed for the sole purpose of attending the sick poor. But it was felt with all this that there would remain a residuum of the population which they would not be able to reach—and it was to reach it that the Ladies' League was formed. The League now numbered 95 members, who were the most refined and highly-educated ladies in the community—all animated by the right spirit to assist the less enlightened people of their country, to preach the use of quinine, the prevention of fever by scientific methods, and the cleanliness of private houses; and that they would succeed in doing very much good he had no doubt whatever.

His Excellency then introduced Major Ross, who in thanking him for his speech, said that he had been on the point of believing that his countrymen were becoming an unscientific and unpractical people. More than two years ago the fact that malarial infection was communicated by mosquitos had been established by the most stringent scientific and experimental proof; and yet to his knowledge practically nothing had been done by his countrymen to act on this new information, in spite of its economic importance. He had therefore accepted with alacrity the offer of a large sum of money and other facilities from a generous philanthropist and from Mr. A. L. Jones, Mr. John Holt, and others in England to pay the expenses of practical work against malaria in Sierra Leone. This work had been commenced with every promise of success by his friend, Dr. Logan Taylor, and he had therefore felt himself free to proceed to Lagos to watch the work being done there. He was delighted to find that his pessimistic attitude was not justifiable as regards Lagos. He strongly eulogised everything that was being done against malaria by Sir William MacGregor, himself a distinguished member of the medical profession, by his most able friend, Dr. Henry Strachan, and by the enlightened medical profession and the Ladies' League in Lagos. He had witnessed the rapid and successful filling up of marshes by sand from the lagoons, and the rational utilisation of gaol prisoners for this useful work. He had inspected numerous houses rendered mosquito-proof by fine wire-netting, which, while it did not exclude the breeze, as he expected it would, did exclude insects and damp, much to the comfort of the inmates. He highly commended the efforts of the Government to induce their officials and others to take quinine—a prophylactic which was much neglected in consequence of ignorance and faddism. He expressed himself as much delighted with the popular sanitary lectures of Drs. Strachan, Best, and Rice—a most useful and striking innovation in Africa—or, indeed, anywhere. Above all, he was delighted with the admirable measures—prompted by the highest scientific knowledge—taken to preserve the important line of railway from the deadly fever of the forest tract through which it passed, and with the Ladies' League, to which he offered, through the President, Mrs. Sapara Williams, an annual prize on behalf of the Liverpool School of Tropical Medicine. The speaker said that he had come prepared to teach but had remained to learn, and concluded by exhorting all present to support Sir William Macgregor in the splendid work which he was undertaking, not only for the benefit of Lagos, but as an example to the rest of the Empire.

Before the departure of Major Ross for Accra, Mr. C. Tambaci and other leading merchants promised to place an annual subscription of £150 in the hands of the Governor to pay for a "Mosquito Brigade" for Lagos.

Major Ross landed at Plymouth on September 2nd on his return from West Africa. Before leaving Plymouth for Liverpool he gave a press representative an account of the expedition sent out by the Liverpool School of Tropical Medicine. He said that this was his fifth expedition in connection with the Liverpool School of Tropical Medicine, and on this occasion he was accompanied by Dr. Logan Taylor, who was still on the coast, where he would remain for a year. Nearly the whole of the expenses were met by a Scotch philanthropist, who, in connection with a number of Liverpool merchants, fitted out the expedition which left Liverpool early in June last, and arrived at Sierra Leone at the end of that month. The first town visited was Freetown. There the party was heartily welcomed by the Governor, Sir Charles King Harman, K.C.M.G., and other principal residents. Operations were started without delay, large gangs of natives being employed in the work. The Governor supplied men and the necessary implements, carts, etc. One gang was employed in destroying mosquito larvæ in houses and surrounding areas. These labourers in thirty-four days cleared 2,473 houses and removed 358 cartloads of broken bottles, tins, and other *débris* in which the *Culex* mosquito breeds. Another body of men have been engaged in draining the breeding pools of the *Anopheles* mosquito and in destroying their larvæ by means of oil. As to the result of these efforts Major Ross said it was too early yet to speak emphatically, but the number of mosquitos in the centre of the town had certainly been largely reduced. There were hardly any to be found in Dr. Logan Taylor's house, where formerly they used to swarm. The same state of affairs prevailed at Government House, where Major Ross was living with the Governor. Dr. McKendrick, of the Indian Medical Service, who had been deputed to watch over the operations of the expedition on behalf of the Government of India, was not bitten once during a whole month. In former days he would certainly have been bitten at least five or six times a day. Major Ross said he had no doubt that the expeditions would be successful and that they would be continued as long as necessary. At Lagos the measures adopted by Sir William Macgregor were admirable and he was confident of success. The Governor of Accra, Major Nathan, was anxious to start similar work there at once, and doubtless experts would be sent out immediately by the Liverpool School of Tropical Medicine. On the whole, Major Ross expressed himself as being well satisfied with his tour. Personally he did not think the health of the Coast was as bad as was painted. He believed that by minute attention to details the place would be made as healthy as India for Europeans. Old West Africans were sober and careful, and generally lived in very good health. It was the improvident newcomer who generally seemed to suffer. He had been informed that there was a high rate of mortality amongst such on the Cape Coast.

### ITALY.

The Italian Society for the Study of Malaria is carrying on its beneficent campaign with great vigour and with good hopes of successful results. The nature and course of the malady is being investigated in the various regions where it is epidemic and the effects of the measures of prevention which are being carried out on a large scale on peasants, railway servants, tax collectors, etc., are recorded daily. The investigations are being pursued in the provinces of Rome, Pisa, Udine, Venice, Vicenza, Verona, Padua, Milan, Cremona, Mantua, Ferrara, Ravenna, Foggia, Lecce, Potenza, Cosenza, and Syracuse. In the Roman Campagna the fields of study are an extensive zone situated in the deep valley of the Aniene; and the territory within the sphere of influence of the Roma-Pisa, Roma-Palombara, and Roma-Fara Sabina systems around Foggia and in the Ofanto Valley. To ensure rigorous accuracy of observation the railway companies have handed their malarious employees over to the care of young specially trained physicians. The work of the Society is being carefully watched by foreign Governments,

several of which have sent delegates to study the malaria problem on the spot.

New York.

Dr. Doty, Health Officer of the Port of New York, has presented a report of his recent investigations on malaria in Staten Island. We take the following abstract of the report from the *Boston Medical and Surgical Journal:*

Dr. Doty selected a district known by the local practitioners to contain many cases of malaria, both acute and chronic. This section, consisting of a basin less than a square mile in extent, within whose boundaries were some twenty-five stagnant pools varying from five feet in diameter to an acre or more in area, contained not more than a hundred small wooden houses, some distance apart. A house-to-house inspection showed that at least 30 per cent. of the inhabitants were suffering from the acute or chronic form of malarial fever. In almost every house or yard were found typical breeding places for mosquitos, either in the shape of rain barrels, cisterns, and cesspools, or of abandoned receptacles thrown about the premises. Samples of water from these, as well as all stagnant pools, were examined, and larvæ in large quantities were found. Large tubes were distributed among the houses for the purpose of collecting some of the mosquitos infecting the neighbourhood, and among the latter the *Anopheles* were found. On two evenings live mosquitos were secured from one of the bedrooms of a house in which there were five malarial subjects. On the first night five were taken, and all but one were of the *Anopheles* species. On the second night twenty-two were collected, and of these more than one-half were the malarial insect. In a drop of blood taken from a child 7 years old suffering from acute malaria, who lived in a house on the opposite corner, a bacteriological examination showed the presence of the malarial parasite

The mosquitos were placed in large glass jars for observation. Many eggs have already been laid, and the laboratory work, when completed, will be published. Many tests have been made to ascertain the value of different agents in the destruction of mosquito larvæ. A solution of bichloride of mercury (1 to 2000), sufficiently strong to kill all microorganisms, affected the larvæ slowly, some being alive after twenty-four hours. In weaker solutions they lived indefinitely. It would, therefore, be unsafe to use this agent in ponds, etc., and the same might be said of carbolic acid and other agents experimented with. Potassium permanganate produced but little effect except in very strong solutions. During these tests the marked superiority of petroleum oil soon became manifest, and there seemed to be no special advantage of one petroleum product over another. The Lima oil which was used in petrolising the stagnant pools and rain barrels, etc., is a crude petroleum with a minimum amount of naphtha. One cubic centimetre of this added to 3,5000 c.cm. of water containing larvæ killed them in three or four hours. This is equivalent to about twenty drops of oil to a gallon of water; and, as a matter of fact, this result was usually obtained by less than this amount of oil. Dr. Doty is inclined to believe that the death of the larvæ is due to obstruction of respiration, and also that emanation from the oil or its odours, or both, is particularly repugnant, if not dangerous, to the full-grown mosquito.

There is no doubt, he says, that the best effect of the oil is gained by introducing it to a considerable depth under the water. In this way it is more surely brought in direct contact with the larvæ, particularly if the water is agitated. In petrolising stagnant pools it soon became evident that the long grass and weeds, particularly in the immediate vicinity of these places, were the abiding places of the mosquito during the day. Special attention was therefore given to the removal of this growth, the ground being afterwards petrolised with an ordinary sprinkling pot. The cisterns, rain barrels, and other such breeding places were treated by sprinkling the inside of the woodwork and the surface of the water with oil. If the boundaries of the section experimented upon included all the breeding places in this part of Staten Island, there is no doubt that a marked diminution in the number of mosquitos would have been apparent at once; but, unfortunately, many breeding places exist in the territory surrounding this place. Nevertheless, the opinion expressed by the inhabitants of the section indicates that there has been a positive change for the better. Dr. Doty thinks that this investigation has been of scientific value because it has shown (1) the intimate relation between the mosquito and malarial fever; (2) the true breeding places of the mosquito; and (3) that petroleum oil will surely and promptly destroy mosquito larvæ, and, so far as careful experiments indicate, it is the only agent which can be depended upon for this purpose. The suggestion that birds, dragon-flies, etc., should be propagated for the purpose of destroying mosquitos is, in his opinion, not entitled to serious consideration. He feels himself justified in saying that the continued presence of mosquitos in large numbers as a rule indicates defective drainage, or in some other way an insanitary condition of the infested section, and that the radical and scientific treatment of this condition is proper drainage and a compliance with modern sanitary regulations. Any other treatment is proper only when these measures cannot be enforced, and it is under the latter conditions that the use of petroleum is indicated. The responsibility of carrying out this important work must rest with the municipal, State, and federal authorities. Municipal sanitary codes should include strict regulations, not only against the existence of stagnant pools but of all forms of breeding places, and should empower sanitary officers to employ such means as are necessary to protect the public against these insects, and, when required, the application of oil should be made under their direction. In order to make this work uniform and effective the co-operation of the State and Federal authorities is absolutely necessary, and such action would, Dr. Doty thinks, be followed by the most gratifying results.

## THE ANNUAL REPORT OF THE METROPOLITAN ASYLUMS BOARD FOR THE YEAR 1900.

The annual report of the Metropolitan Asylums Board for the year 1900 is, like its predecessors, something more than a mere statistical statement—it is a most interesting and instructive review of the work of the largest organisation of its kind that ever existed. To convey some conception of the magnitude of the work directed by the Board, it may be pointed out that the managers possess hospital accommodation to the extent of upwards of 6,000 beds, open to any person who may suffer from certain notifiable diseases; asylums which accommodate 6,000 imbeciles; a training ship for 600 boys; schools for children suffering from ringworm; homes for mentally defective children (from which they can attend special schools); and seaside homes for children. Schools are in course of preparation for children suffering from ophthalmia, and also homes for children remanded from the police-courts. The Board maintains an ambulance service, which at any time of the day or night can place a properly equipped carriage and trained nurse at the door of any of the 600,000 inhabited houses which lie within the metropolitan area, and a river service for the conveyance of small-pox patients from the Board's special wharves to the hospital ships. The Board also receives, under special agreement, patients from the urban district of Tottenham; and the hospitals are open, when necessity arises, to any of the children of the schools outside the metropolis belonging to the London School Board or to the various metropolitan Poor-law authorities. The maintenance of so many hospitals and the care of so large a number of patients involve the service of 3,000 officers and servants of all grades. The population daily resident in the Board's institutions averaged 15,000 persons last year, and the expenditure on articles of food, clothing, and household necessaries approached half a million of money. With reference to the food supplied, the Board has adopted the precaution of having samples taken of the goods delivered at the different institutions, and submitting these to chemical analysis. On the whole, the results of these analyses have turned out fairly satisfactorily during the year.

It will be reassuring to the public to know that the managers have been enabled to make arrangements which it is believed will enable them to deal with any outbreak of plague which may occur. The increasing use by the public of the Board's infectious hospitals, and the necessity of making a further provision for the accommodation of imbeciles and for the various classes of children now entrusted to the Board's care,

have compelled the managers, from time to time, to enter upon considerable building operations, and during the past year the building of the Tooting Bec Asylum, which, when completed, will contain accommodation for 750 patients, with administrative accommodation for 930, has made satisfactory progress, and the building should be ready for occupation by the beginning of 1902. In April last the managers entered into a contract for the erection of a hospital for small-pox patients at Joyce Green, Dartford, at the sum of £222,459. This hospital has been designed to accommodate 940 patient in 22 pavilions of 40 beds each, with separate isolation accommodation for 60 patients. Works of extension and improvement have been carried out at the North-Eastern Hospital, the Grove Hospital, and the South-Eastern Hospital. The managers report that they experience great difficulty in securing houses suitable for the mentally defective children who have been placed in their care. One home at Pentonville for 20 girls has been successfully conducted throughout the year, and a home for 22 boys was opened at Fulham, and a third home at Peckham is in course of preparation for the care of children remanded from police-courts. With reference to the last mentioned class of children, it is stated that the necessary homes will be provided so soon as the London magistrates have been empowered to remand the children to these homes instead of to the workhouses. This legal difficulty in the way of magistrates sending children to the managers' homes appears to have been overlooked when the Local Government Board issued their Order empowering the managers to provide homes for the class of children in question. The training of boys on board the *Exmouth* for the Royal Navy and Mercantile Marine has been conducted throughout the year with the most satisfactory results: and of the 392 boys who were discharged during the year, 115 entered the Royal Navy, 145 entered the Mercantile Marine, of whom 70 were enrolled in the Royal Navy Reserve, 93 entered the Army as musicians, and 39 were returned to their respective parishes and Unions. Probably the facts dealing with notifiable diseases are of the most general interest to medical readers. The cases of infectious disease notified under the Public Health (London) Act, 1891, during 1900 numbered 35,247, as against 42,285 in the preceding year; they included 13,800 cases of scarlet fever, 11,776 of diphtheria, 209 of membranous croup, 4,291 of enteric fever, 70 of typhus fever, 73 of continued fever, and 87 of small-pox: the remainder were cases of diseases notifiable under the Act but not admissible into the Board's Hospitals. The following table serves to show the number of admissions into the Board's hospitals during last year and the preceding year, and the case-mortality from each disease during the same two years:—

| | Admissions. | | Case-Mortality per Cent. | |
|---|---|---|---|---|
| | 1900. | 1899. | 1900. | 1899. |
| Scarlet fever ... | 10,343 | 13,290 | 2.97 | 2.65 |
| Diphtheria ... ... | 7,873 | 8,673 | 12.27 | 13.95 |
| Enteric fever ... | 1,728 | 1,535 | 14.09 | 10.47 |
| Typhus ... ... | [illegible] | 11 | 22.23 | 0 00 |
| Small-pox ... | [illegible] | 18 | 4.35 | 20.69 |

As is well known, patients suffering from scarlet fever are liable to develop diphtheria, and *vice versâ*, and as a means of checking this it has been decided to use one of the Board's hospitals exclusively for scarlet fever and another exclusively for diphtheria and enteric cases. This new allocation will come into operation during the present year, and the experiment will be watched with much interest. Of 94 small-pox patients sent for admission to hospital during the year, the diagnosis was confirmed in 64 cases; these admissions are more numerous than those of any year since 1897. The bulk of the 64 cases admitted during the year owed their infection to persons who themselves had contracted the disease abroad or in the provinces, and were taken ill after their arrival in London. In several instances the disease was at first diagnosed as measles, chicken-pox, or some skin affection, its true nature not being recognised until the person fell very ill. Dr. Ricketts remarks in his report that it is unfortunate that medical men, as a rule, do not conceive it to be their duty to notify all cases where the diagnosis of small-pox appears to be not only possibly but probably the correct one and to allow the responsibility as to the disposal of such cases to rest with the managers; but the medical practitioner naturally hesitates before he commits himself to the diagnosis of a disease which, if not confirmed, gives rise to a great deal of alarm and often considerable expense to the householder. The constant provision of isolation for small-pox will always remain the Asylums Board's most important function from the point of view of the safety of the metropolis, and the cost to the metropolis, exclusive of ambulance charges, of this insurance against small-pox outbreaks is about £10,000 per annum.

Considerable as this annual charge is compared with the number of patients treated, its value is tested by London's comparative freedom from small-pox, and, when we look at the cost of past small-pox epidemics, both in lives and money, and at the dislocation of trade which epidemics involve generally, it will not be deemed excessive.

The subject of return cases of scarlet fever and diphtheria is still receiving the consideration at the hands of the Board which it demands, and we are informed that one of their medical officers has been instructed to supplement Dr. W. J. R. Simpson's work and to make a further report upon the subject.

During the past year 495 students attended the classes of instruction held at the managers' fever hospitals. Space only now remains to make a bare reference to the circumstance that many valuable facts are given by medical officers of the Board in their reports. Perhaps special mention should be made to a contribution by Dr. W. T. Gordon Pugh, senior assistant medical officer of the North-Eastern Hospital. His paper upon the Diphtheria Bacillus and its Significance in cases of Scarlet Fever records certain observations on the occurrence of diphtheria bacilli in cases of scarlet fever, and furnishes some very useful information on the subject of the origin and spread of post-scarlatinal diphtheria.

## SOME OPEN SCHOLARSHIPS AND PRIZES.

*(Continued from page 572.)*

IN a previous number of the BRITISH MEDICAL JOURNAL a list of Open Scholarships and Prizes in this country was given. The following are some of the more important open prizes in other countries:

The Alvarenga Prize of the College of Physicians of Philadelphia, of the value of £36, is awarded annually for the best essay on any subject in medicine not already published. The essays, bearing a motto but no name, are to be sent to the Secretary on or before May 1st of each year, and the award is made about July 14th following. A second is given by the Académie de Médecine in Paris, and a third by the Hufeland Society in Berlin, a fourth in Belgium, and a fifth by the Misericordia Hospital of Lisbon.

The Riberi Prize, which is of the value of £800, is offered by the Royal Medical Academy of Turin for original work in anatomy, physiology, pathology, or pharmacology. Research on the history of medicine since the Renaissance may also be submitted. The account of the research must be written in Latin, French, or Italian, and is to be sent to the Secretary of the Academy. The prize is awarded for work done during the previous five years, and the last award was made in 1897.

The Bressa Prize of the Royal Academy of Science, Turin, is of the value of about £400, and is given for the most important scientific work produced during a given term of years. The last award was made in 1899.

The Vallauri Prize, of the value of £1,200, is in the gift of the Royal Academy of Sciences of Turin, and it will be awarded to the scientific investigator, Italian or foreign, who within the period of four years from January 1st, 1899, to December 31st, 1902, shall be considered to have published the most noteworthy work on any of the physical sciences, taking that term in its widest sense.

One of the Nobel Prizes is awarded by the Carolinian Institute in Stockholm to the person who has been adjudged to have made the most important discovery in physiology or medicine during the preceding year. Recently two prizes, each of the value of about £11,000 sterling, have been awarded by the Nobel Institute, one to Professor Finsen, the founder of the Medical Light Institute at Copenhagen; and the other to the Russian physiologist Pawlow, for his researches in regard to nutrition.

About thirty open prizes are offered each year by the Académie de Médecine of Paris, of which the most valuable is the François-Joseph Audiffred Prize. This is of the value of £1,000, and is offered to any person, without distinction of nationality or profession, who in the opinion of the Académie de Médecine is rightly adjudged to have discovered a preventive or cure of tuberculosis. The following are also among the more important offered for the year ending with the end of February, 1902; the sum specified in each case does not necessarily go to one candidate but may be divided. The Academy Prize, awarded annually, worth about £40, is this year for a research on the *rôle* of toxins in pathology; the Baillarger Prize of about £80 (biennial) is for the best work on the treatment of mental diseases and the organisation of asylums; and the Charles Boullard Prize, also biennial, of £50, is for a similar subject. The Barbier Prize of £80 (biennial), is for the discovery of a cure for such "incurable" maladies as hydrophobia, cancer, epilepsy, typhoid and cholera. The Mathieu Bourceret Prize of £50 (annual) is for work on the circulation of the blood. The Campbell Dupierris Prize (biennial), of the value of £96, is for the best work on anæsthesia or the diseases of the urinary passages. The Chevillon Prize (annual) of £65, is for the best work on the treatment of cancer. The Desportes Prize of £55 (annual), will be awarded for the best work on practical medical therapeutics. The Herpin (of Metz) Prize (quadrennial) of £50, is offered for a research on the abortive treatment of tetanus. The Theodore Herpin (of Geneva) Prize of £125 (annual), is for a research on epilepsy and nervous diseases. The Laborie Prize of £210 (annual), is given for the greatest advancement in surgical science during the year. The Lefèvre Prize (triennial) of £75, is for a research on melancholia. The Meynot Prize (annual), of £108, is for the best work on ear disease; and the Saintour Prize (biennial) of £166, for the best work on any subject in medicine.

## PROFESSOR HUEPPE ON BOVINE AND HUMAN TUBERCULOSIS.

In the *Berliner klinische Wochenschrift* (August 2nd) F. Hueppe criticises Dr. Koch's statements as to the non-identity of the bacilli of bovine and human tuberculosis very severely. He points out that Koch and Schütz found (as some American investigators had found some years back) that human tubercle bacilli were not disposed to grow in cattle, and the former attempted to show that conversely the bacilli of bovine tuberculosis were not infectious for man. He considers that the experiments were not carried far enough to justify any conclusions. "Can one form any certain opinion from such negative inoculation experiments, whether the kinds of micro-organisms are different or identical?" he asks; and answers, "No." Mafucci and Koch made the same mistake when they claimed that the bacilli of avian and mammalian tuberculosis are different organisms. These bacilli had certain characteristic cultural differences, but these differences were due to modification of the culture media as well as varieties of environment. Fischer and Hueppe succeeded in producing these changes and variations artificially, and in grafting avian bacilli on to mammals, and mammalian bacilli on to hens. Nocard has shown that monkeys at times become infected with true avian tuberculosis. "And now Koch expects the sacrifice of intellect from us, and asks us to believe that the varieties of human and bovine tuberculosis which stand nearer to each other culturally, or, still more, are not distinguishable from one another, must be *toto cælo* divided from one another because they do not respectively attach themselves in his animal experiments."

After discussing the pathological conditions of the nodules found in bovine tuberculosis, and also found *in situ infectionis* by Koch, he proceeds to describe how he had noticed many years ago that bacilli in bovine tuberculosis nodules, stained in the usual way, exhibited slight differences in form from human bacilli, and, indeed, were more like human lepra bacilli. He looked upon these changes in form from the first as due to a parasitic form of adaptation to the peculiar soil of the cattle. He says that we have experiments which inform us better than Koch can. Although it is for the most part difficult to alter the differences of the bacilli of mammalian and avian tuberculosis, it is quite the reverse with the various kinds of mammalian tuberculosis. The bacilli behave in culture absolutely alike, and the carrying over such cultures to different suitable animals, for example, to guinea-pigs or rabbits, is easy; these animals apparently take the bacilli up readily and equally well. Only one sometimes needs to use greater quantities for one animal than for another. Thus it is only a question of virulence, and he especially refers to the work of Weleminsky on this subject. We are therefore justified, he says, in concluding that even in the bodies of our small experiment animals a complete equalising of the original slight differences takes place at once. And this is only possible if the causal organisms of mammalian tuberculosis, and especially of human and bovine tuberculosis are identical as far as kind is concerned. He regards a natural infection as consisting of an infecting parasite (in the present case the tubercle bacillus, or rather the parasitic form of a pleomorphic fungus) which, in suitable condition meets a susceptible individual of a susceptable race. He further believes that bovine bacilli can affect the human subject, and points to one method of infection by means of an intermediate host—the pig. As far as the dangers of tuberculous milk are concerned, he points out that Weleminsky has shown that micro-organisms taken in with fluids are more likely to be attracted to carious teeth and tonsils than to the intestinal wall. There is a danger of the milk introducing its organisms through the tonsil, and also from the surface of the tonsils, etc., to the respiratory passages directly, and he considers this to be a great danger. Turning again to Koch's arguments, he points out that primary intestinal tuberculosis is by no means so rare as Koch stated. Including cases of tabes mesenteriea, Heller puts the incidence at 50 per cent. of tuberculous affections of children. He finds that when the cows are kept on the marshes, as in the German Alps, raw milk being drunk indiscriminately, far less tuberculosis appears than when the cows are cooped up close to one another in stalls, and are obviously likely to carry the infection to one another. He concludes by dealing with the subject of general prophylaxis in a broad way, and calling attention to the importance of attacking both the bacilli in all their forms and the predisposing causes in the human subject.

## THE BRITISH ASSOCIATION.

### Arrangements for the Glasgow Meeting.

The annual meeting of the British Association for the Advancement of Science will commence in Glasgow on September 11th, and will continue till the 19th. This is the fourth occasion on which the Association will have met in Glasgow, and the meetings will no doubt be very largely attended, the magnificent International Exhibition forming a special attraction to the city at the present time. As might have been expected, the citizens of Glasgow are making every preparation to give the Association a hearty welcome. The University authorities have generously placed their premises at the disposal of the Association, and the meetings of the various Sections will be held in the lecture rooms of the University. The President's address and the special evening lectures will be delivered in St. Andrew's Hall.

At the opening meeting on the evening of September 11th, Professor Arthur Rücker, the distinguished Principal of the University of London and Secretary of the Royal Society, will assume the presidency in succession to Sir William Turner, and will deliver his inaugural address. On the evening of the 13th Professor Ramsay, of University College, London, will lecture on the Inert Constituents of the Atmosphere. Another evening lecture will be given on the 16th by Mr. Francis Darwin, of Cambridge, on the Movements of Plants, and a

special popular lecture for artisans will be delivered on the evening of the 14th by Mr. H. J. Mackinder of the Oxford School of Geography on the Movements of Men by Land and Sea.

The meetings of the various Sections for the reading and discussion of papers will occupy a large proportion of each day's proceedings, but arrangements have been made for a number of social functions which should form a very pleasant variety from the more serious business of the Association. The Lord Provost and the Corporation of Glasgow will give a reception in the City Chambers on the evening of the 12th, on the afternoon of which day Professor and Mrs. Cleland will hold an "At Home" on the occasion of the opening of the new Anatomical Laboratory at the University. Two garden parties will be given, the one by Lord Overtoun at his country seat on the 13th, and the other by Lord Blythswood at the Glasgow Botanic Gardens on the 16th. A reception and *conversazione* has been arranged by the Exhibition authorities for the 17th in the Exhibition Art Galleries, and a similar function takes place in the galleries of the Royal Scottish Society of Watercolour Painters on the 18th. Other functions of a similar nature are announced, including a dinner by the Faculty of Physicians and Surgeons for the medical members of the Association. As usual, the Saturday (September 14th) has been set aside for pleasure excursions, of which a most enticing programme has been drawn up, while on Sunday the 15th special services will be conducted in the Cathedral.

In addition to their other labours the local committee has prepared three handbooks (with maps) dealing with the industrial, scientific, and other features of Glasgow and the Clyde district, which should prove of great interest and use to visitors—(1) The General Industries of Glasgow and the Clyde; (2) the History of Glasgow (archæology, educational establishments, medical and charitable institutions, etc.): (3) the Scientific Aspect of the Locality (geological, botanical, zoological phenomena, etc.).

## THE PREVENTION OF TUBERCULOSIS.

LIVERPOOL.

THE Corporation of Liverpool was represented at the Congress on Tuberculosis recently held in London by six members of the Health Committee and Dr. Hope, the medical officer of health. The delegates have drawn up a report in which they say that in the State and Municipal Section nearly all the subjects discussed had important bearings upon the sanitary administration of cities. With regard to the notification of tuberculosis the principle of voluntary notification of consumption met with practically uniform approval. It was stated that in certain American towns compulsory notification of consumption had been adopted, but the statements of other American speakers left the impression that this system practically left the option of reporting cases, when deemed expedient, with the medical men. It would appear, therefore, that the system in America, under another name, is similar to that in vogue in Liverpool.

There was no reason to doubt that the advantage to be derived from the system would be largely governed by the attitude of the medical profession. If medical men as a body would notify those cases of consumption in which disinfection of houses or clothing, or other measures within the power of the Health Committee, could be carried into effect, considerable benefit would follow, but the benefits would not be restricted to disinfection only, but advice would be given as to precautionary measures to be observed to prevent the infection of the healthy by consumptive people whose condition or habits constituted a danger. The mischief resulting from the erection of dwellings without adequate means of ventilation, from overcrowding, from inattention to domestic cleanliness and ventilation were dealt with. Probably in no city in the world had a more gigantic experiment upon mankind been carried out in respect to insanitary dwellings in years gone by than in Liverpool, and this legacy of insanitary property furnished evidence which, if it stood alone, would be sufficient to substantiate the case against dwelling-houses which did not admit of thorough ventilation. On the other hand, the evidence available in Liverpool as to the benefits derived by substituting wholesome dwellings for insanitary ones was equally striking and conclusive. As to the housing question, Dr. Hope stated in his last annual report that in the decade 1866-1875 the annual average death-rate from tuberculous diseases was 430.8 per 100,000 inhabitants, in the next decade it was 349.8, and in the following decade 309.8, while the average in the past five years was only 253.2, the diminished mortality being attributed to improved sanitation. The control of the meat supply and of the milk supply were discussed at length. It was notorious that the same conditions which favoured the propagation of tuberculosis amongst man also favoured the propagation of the disease amongst cattle—loss of life resulting in the one case, loss of property resulting in the other case, but in the latter the necessity also arose to prevent the consumption of milk from tuberculous cows, and, under certain conditions, the meat from tuberculous animals. The great reputation of Dr. Koch rested upon investigations which had resulted in advancing the well-being of the human race; many amongst a mixed audience would unconsciously confuse his expressions of opinion with his well-established facts, and there was reason to think that this was so at the recent Congress, and that many went away with the impression that tuberculous meat might be eaten with impunity at any stage of the disease; that the contents of a tuberculous abscess of the udder would be harmless if swallowed with milk, and that all precautions in regard to these matters were futile and an unjust restriction upon the various trades and industries concerned.

The Committee reviewed briefly the considerations which had guided them in past years in dealing with the meat and milk supply. Official reports sufficiently recorded the policy which the Committee had adopted. A memorandum upon the subject, dated January 30th, 1890, pointed out that there were two distinct and definite grounds for the condemnation of meat, namely, changes which lessened its nutritive value, and changes associated with specific disease, comparable, in fact, with the adulteration of milk with clean water, or the adulteration of milk with sewage water, which might or might not contain specific germs. This memorandum went on to say that

> Opinion is practically unanimous that in advanced stages of tuberculosis the consumption of the flesh should be prohibited, not necessarily that it is considered to have any specifically prejudicial effect upon the consumer, but on the general grounds that the flesh is so deteriorated as to be no longer of the nature, quality, and substance of sound meat, and, if consumed, the consequences resulting from the ingestion of carrion may be looked for. There are various modes in which the virus or microbe enters the body ..... From the fact that the lungs are the commonest seat of the disease, inhalation would appear to be the usual way the disease is contracted ..... The second mode of entry is by the introduction of tuberculous material into the tissues beneath the skin or mucous membranes ..... Thirdly, in regard to heredity, it is considered that the tissues of one breed or race are especially favourably disposed to nourish the tubercle bacillus. Fourthly, another method of entrance of the microbe into the body, and one which specially interests us, is by swallowing. Tuberculous secretions—mucus, saliva, portions of tubercles from diseased tissues, and cultures of the bacilli have been swallowed by various animals, and some of these animals have subsequently developed the disease ..... infected parts were intentionally selected for the purpose ..... The evidence in support of this method of the ingress of the poison is far less conclusive than in support of the other methods, notwithstanding the careful selection of the most diseased portions for the experiments ..... But this fact, of course, affords no ground for abstaining from the removal of any danger, or impediment to further improvement.

The aspects indicated by these quotations from a report dated eleven years ago had been accepted by the Committee, and, indeed, by the medical profession of Liverpool from that date. The condemnation and seizure of carcasses of animals which had reached certain stages of tuberculosis did not necessarily rest upon apprehension of infection with tubercle any more than the condemnation and seizure of carcasses of animals which had suffered from swine fever rested upon the belief that persons consuming the flesh would contract swine fever from doing so.

In the annual report for Liverpool for the year 1897 there was pointed out the necessity for an absolute freedom of the milk supply from tubercle, together with the necessity for more efficient means of dealing with tuberculous animals in cowsheds either within or beyond the municipal boundary. The protection afforded by local Acts, however, was strictly limited to those few cities which possessed these local Acts; the rest of the country was wholly unprotected, and if the city of Liverpool, in pursuance of its powers, prohibited the importation of diseased milk from the country, there was

nothing whatever to prevent the owner of the diseased milk sending it to some other town or district which had no protecting clauses, or to prevent his selling the diseased cow to a dairyman in another locality.

The report went on to say that the Congress served to illustrate in many directions the broad principle in sanitation, namely, that measures directed with the special object of limiting or preventing one particular form of disease would frequently be instrumental in limiting other forms of disease. A conspicuous illustration of this was afforded in the case of a subject introduced by the delegates, namely, the relative advantages of sterilisation of milk, and of obtaining milk from herds free from tuberculosis. In this particular case the Committee had recognised that whilst sterilisation was a safeguard against tuberculosis, it was also a safeguard against other and more serious dangers than tuberculosis; but as to the desirability, for far wider reasons than those associated with tuberculous disease, that the milk should come originally from a healthy source there could be no two opinions. The delegates expressed the belief that one outcome of the Congress would be to emphasise the importance of the adequate provision of sanatoria throughout the country, similar to those contemplated by the various Poor-law authorities in Liverpool, or of that which had been erected at Delamere Forest. With regard to the dangerous and disgusting practice of indiscriminate spitting, the Health Committee had already recommended that powers should be obtained in the next local Act to minimise the extreme nuisance and danger which that habit gave rise to in Liverpool.

# ASSOCIATION INTELLIGENCE.

## COUNCIL.

### NOTICE OF MEETING.

A Meeting of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 23rd day of October, at 2 o'clock in the afternoon.

Sept. 5th, 1901. Francis Fowke, *General Secretary.*

### NOTICE OF QUARTERLY MEETING OF COUNCIL FOR 1901.

A meeting of the Council will be held on October 23rd. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before that meeting—namely, October 2nd.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

## LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

## BRANCH MEETINGS TO BE HELD.

Border Counties Branch.—The autumn meeting will be held at Jedburgh on the afternoon of Friday, September 20th. Members will have an opportunity of visiting the various places of interest in Jedburgh, and for the convenience of those travelling from the South a drive has been arranged from Hawick to Jedburgh (return fare, 2s.). Gentlemen desirous of joining the Branch are requested to communicate as early as possible with W. F. Farquharson, M.D., Garlands, Carlisle, Honorary Secretary.

### BRITISH GUIANA BRANCH.

The third quarterly meeting of this Branch was held at the Public Hospital, Georgetown, on July 25th, Dr. F. H. Edmonds, President, in the chair. Sixteen members attended. Dr. Moulton, Consul for the United States, and Dr. Low, of the London School of Tropical Medicine, attended as guests.

*Confirmation of Minutes.*—The minutes of the last meeting were read and confirmed.

*Auditors.*—Dr. J. H. Conyers and I. B. de Freitas were appointed auditors for the year.

*Communications.*—Dr. W. S. Barnes showed two cases of commencing cystic disease of the ovaries, on which he had operated with marked success. Dr. Low exhibited several specimens of filariæ, malarial parasites, mosquitos, etc., in various stages of development.

*Vote of Thanks to Dr. Low.*—The President proposed a cordial vote of thanks to Dr. Low for the interesting specimens he had exhibited, and announced that Dr. Low had promised if possible to give a paper before his departure. Dr. Godfrey, Acting Surgeon-General, seconded the vote of thanks, which was enthusiastically carried.

# SPECIAL CORRESPONDENCE.

## BELFAST.

*Queen's College, Belfast: President's Report.—The Seventy-first Annual Report of the District Lunatic Asylum.—Typhoid Fever among the Nurses of the Fever Hospital of the Belfast Board of Guardians.*

The annual report of the President of the Queen's College, Belfast, has lately been issued. Owing to the keen interest that the profession in Ulster have taken in the recent appointment of a Royal Commission on University Education in Ireland, to the movement for the better equipment of the College, and to the question of inequalities in the tenure of medical professorships, the report was looked forward to with more than usual interest; on these points, however, no new light is thrown. This was to be expected, as the report is always more or less formal. It is very satisfactory to learn that the numbers show a certain increase; there were 115 entrances, as against 99 of the previous year; the total attendances are also larger. University honours fall plentifully to Belfast; the medical studentship, the scholarship in mental diseases, the higher places in the second, the third and the final M.B. examinations in the Royal University were all secured by the Belfast Medical School. About 50 per cent. of the places in the M.B. are generally gained from the north, and this year was no exception, a fact which reflects no little credit on the collegiate, hospital, and extramural teaching. Lieutenant-Colonel Moorhead has been appointed Lecturer on Tropical Diseases; and Dr. J. Lorrain Smith, Professor of Pathology, has been appointed a member of the University Commission. The President says: "Professor Sinclair and Professor Byers were, on my recommendation, reappointed to their respective chairs for the same periods as before." This is one of those mysterious anomalies which it is hopeless for the uninitiated to comprehend. Other professors on exactly the same footing in every other respect hold office for life, and no professor desires that there should be the slightest difference. No matter what recommendation had been made, both Professor Sinclair and Professor Byers were bound to continue in their posts. A local wit impiously dared to suggest that as Parliament was no longer sitting, the President should submit the difficulty to Mr. Dooley, of America, who could perhaps, from his large experience of life, give a solution to the problem of why it was the case, and how to rectify it.

The seventy-first annual report of the Belfast District Lunatic Asylum was presented at the last meeting of the Committee. There were 499 males and 408 females. This is a considerable increase, but it is explained by the admission of 188 chronic cases from the workhouse, due to the lately

passed rules. The medical superintendent congratulates the Committee on their selection of the "villa system" for the new buildings at Purdysburn, and explains graphically the great advantages that may be expected from this principle. In the copy published in the public press no mention is made of new laboratories for research work in the new asylum, but it may be confidently left to the medical superintendent to see that this department of medical science is brought well abreast of the times; this is especially important in an asylum connected with a large medical school.

Typhoid fever has unfortunately broken out amongst the nursing staff of the Fever Hospital belonging to the Belfast Board of Guardians; 8 or 9 nurses are suffering from the disease. Dr. Ritchie, a medical member of the Board, said that "the nurses living in the hospital had drains leaking all around them, and closets which could not be emptied"; whereupon the Chairman said that that was a statement which should not be made in public. The Infirmary Committee promptly investigated the matter, and found several serious sanitary defects: these faults and some deficiencies in the dietary are to be remedied at once. Dr. Ritchie is to be congratulated in speaking out fearlessly; everyone knows that in such huge institutions defects are bound to crop up from time to time: and, instead of producing a panic, such language coming from a medical man, despite the frowns of the chairman, is a guarantee of real improvement.

## SYDNEY.

*Insanity in New South Wales.—Health of Sydney.*

THE report of Dr. Eric Sinclair, the Inspector-General of the Insane in New South Wales for the year 1900, has just been published. It states that the number of persons insane under official cognisance on December 31st was 4,396, an increase of 179 on the total for the year 1899. The average annual increase was 115, so that the increase of last year was much above the average. The proportion of insane to general population is 1 in 309. The number of admissions during the year was 859, of whom 730 were admitted for the first time, and 129 were readmitted; 334 were discharged recovered, equal to a rate of 38.88 per cent. of admissions and readmissions. This is under the average, since a number of patients were retained on leave who would have been discharged as recovered in the ordinary course of events. If these were included in the recoveries, and the figures from the Hospital for Imbeciles at Newcastle, from which no recoveries can be expected, were excluded the percentage of recoveries would be 44.72. The deaths numbered 276, a percentage of 6.61 on the average number of patients resident in the asylums, this being about the average for the last ten years. Nineteen accidents in the hospitals were reported, one of which was fatal. With the increasing population the number of insane persons is increasing in proportion, and though the buildings now completed and in the course of erection will accommodate the increase for the present and part of next year, overcrowding must inevitably begin to occur again unless additional wards are provided. The total receipts of the department amounted to £17,839 and the expenditure to £121,452.

The annual report of Dr. W. G. Armstrong, the Medical Officer of Health for the Metropolitan Combined Districts of Sydney, has just been published. It states that the year 1900 will always be a marked one in the sanitary history of the metropolis for many reasons, viz., the invasion of the city by the bubonic plague, the resumption by the State Government of certain slum areas, and the amendment of the Corporation Act of the City of Sydney in some most important directions. The birth-rate for the year was 27.78 per 1,000 of population and the death-rate 12.39 per 1,000. The latter is exactly the same as the previous year, and is, notwithstanding the prevalence of the plague and an increased death-rate from typhoid fever and diarrhœa, one of the lowest ever recorded in the metropolitan area, and is a very low one compared with that of other great cities of the world. There were 464 cases of scarlet fever notified during the year, but only 5 proved fatal, thus yielding a case-fatality of 1.08 per cent., and a death-rate of just over 0.01 per 1,000 living. The virulence of scarlet fever appears to have undergone a remarkable modification in the city in recent times; 983 cases of typhoid fever were notified from the metropolis, and 1,047 from the whole of the metropolitan combined districts, these figures showing a considerable increase over those for the year 1899. The attack-rate, 2.2 per 1,000 of the population, is high in comparison with the similar rate in the large towns of England where the highest scientific sanitary administration has been attained. This is the more remarkable because the general death-rate and that of most other diseases, except diarrhœa, is lower than in Great Britain. Further, since the enforcement of compulsory notification, very few outbreaks of typhoid fever in Sydney have been traced to the water supply, milk supply, shell fish, or other food supplies. The water supply is practically free from possibility of contamination by typhoid organisms, and hence the milk supply is also practically free from the same danger. The city suffered more from this disease during the year than in the two previous years, the number of cases notified being 248, of which 22 ended fatally. In 1899 only 177 cases were notified. Diarrhœal diseases were also more fatal in 1900, a death-rate of 1.39 per 1,000 of population having been recorded. An epidemic of cerebro-spinal meningitis also occurred during the year. This was not confined to any special locality, cases having been met with in scattered parts of the city. At least 17 deaths were due to this cause, but it is probable that this number is below the true one, and that some deaths attributed to simple meningitis were really due to the epidemic form. Deaths from phthisis numbered from 445, a death-rate of 1.02 per 1,000 living. This is the lowest death-rate from this cause ever recorded in Sydney, with the exception of that recorded in the year 1897. Since 1884 a steady and remarkable decline in the annual death-rate from phthisis and tuberculous diseases generally has occurred in Sydney, so that the death-rate now is less than half what it was in the year cited. No notification of phthisis is possible under the present law, and it is suggested that some special enactment might be passed which would not interfere too much with the ordinary life and business of the notified person, but would, nevertheless, inform the health authorities of his condition. The total number of cases of bubonic plague which occurred from January 19th to August 9th was 303, of which 103 died, a death-rate of 34 per cent. The epidemic was entirely confined to Sydney and suburbs, and, though 5 cases were notified from the country districts, infection in each case could be traced to Sydney.

## HONG KONG.

*Report of the Medical Officer of Health for the Year 1900.*

Dr. CLARK has issued his annual report on the health and sanitary condition of the colony. In this report reference to the epidemic of bubonic plague is omitted, as it was fully dealt with in a special report already published.

The average monthly temperature throughout the year has been 71.6° F., as compared with 71.9° in the previous year and 72.2° in 1898. The maximum monthly temperature was attained in August, when it reached 83.1° F., and the minimum monthly temperature, 55.6° F., was recorded in the month of January.

The total rainfall for the year was 73.73 inches, as compared with 72.7 inches in the previous year, and an average of 83.06 inches during the previous ten years. The wettest month was June with 26.52 inches, and the driest was December with only 0.155 inch of rain. The greatest amount of rain which fell on any one day was 8.45 inches on June 15th, while no rain fell on 210 days of the year. The relative humidity of the atmosphere throughout the year was 77 per cent., as compared with 75 per cent. in the previous year. The average daily amount of sunshine throughout the year was 5.03 hours, and on 28 days only was no sunshine recorded.

Referring to the general sanitary condition of the colony Dr. Clark says:

The year has been a very busy one, owing to the enforcement of the provisions of the Insanitary Properties Ordinance of 1800, which was passed on November 28th of that year, and which required *inter alia*, the provision of open spaces in the rear of many existing domestic buildings. A large number of old buildings throughout the colony have now been provided with these backyards, and although they rarely exceed the legal minimum of 50 square feet in area. Yet some improvement is already perceptible in the lighting and ventilation of the back part of many of these dwellings. All new domestic buildings must now be provided with backyards, or backlanes, varying from 6 feet to 14 feet in width, in accordance with the depth of the house, and as plans of no fewer than 1,319 new buildings have been sent in during the year it will be seen that this pro-

vision will gradually have a marked effect upon the general sanitary condition of the colony.

Several additional latrines were in process of erection at the latter end of the year, but there is still the same urgent need for urinals, especially in the City of Victoria. The need has been pointed out since 1897, and it is one of the principal causes of the offensive smells which arise from many of the street gullies and the drains, as in the absence of suitable conveniences the coolies have no option but to make use of these receptacles for the purpose.

The population is divided primarily into Chinese and non-Chinese. The total Chinese population, according to the returns to the middle of 1900, is 268,610, and of these 40,180 belong to the boat population. The non-Chinese comprise a white population of 10,020, of whom 4,342 are civilians and the remainder belong either to the army or to the navy. The coloured races (non-Chinese) number 4,788, and include East Indians, Malays, Filipinos, and a few Africans and Japanese, while the coloured Portuguese alone number 1,898.

The general birth-rate was 3.3 per 1,000, as compared with 4.3 per 1,000 in 1899 and 4.7 per 1,000 in 1898. Among non-Chinese community the rate was 15.1 per 1,000. The total number of deaths registered was 6,773 as compared with 6,181 during the previous year. From a table showing the death-rate for the last twenty years, it is seen that the average for 1881-90 was 27.84, and for the years 1891-1900 it was 23.40 per 1,000, thus showing a marked reduction during the last ten years. The principal causes of death among the non-Chinese resident civil community were as follows: Phthisis, 20; infantile debility and inanition, 16; heart disease, 15; bubonic plague, 14; accidents, 10; malarial fevers, 9; enteric fever, 9; general tuberculosis, 8; Bright's disease, 7.

The nationalities of the 14 persons who died of bubonic plague were as follows: European, 1; Portuguese, 4; Indian, 6; Japanese, 3. The European was a Britisher employed at the Naval Yard, and had only arrived in the colony six weeks previously. During the year there were 533 deaths of Chinese who had not been attended by a medical man, as compared with 463 during the previous year, and in every case the relatives of the deceased have been interviewed and the dead bodies inspected, and where necessary sent to the Government mortuary, with the result that no fewer than 46 deaths from bubonic fever and 1 death from small-pox were thus discovered and the premises disinfected and cleansed in the usual manner.

Dr. Clark says, referring to the mortality among infants:

There seems to be little or no improvement in the alarmingly high death-rate among the infant population of the colony, and no fewer than 20.9 per cent. of the total deaths recorded occur in infants under 1 year of age. The infant death-rate among the non-Chinese community during the year has been 122.6 per 1,000, as compared with 128 per 1,000 in the previous year; but among the Chinese population that rate was 928 per 1,000, which means that out of every 1,000 Chinese infants born in this colony, only 72 survive for a period of twelve months. Such an enormous mortality can only be the result of the gravest neglect on the part of the parents, and I cannot but think that the system, which has been tacitly permitted for many years past, of allowing moribund infants to be left at the doors of the various convents, without any inquiries being made, conduces largely to this neglect. The Chinese unfortunately do not recognise infanticide as a crime, and it can hardly be expected therefore that they will appreciate the criminality of this neglect of our infant population unless it is occasionally brought home to them by the strong arm of the British law.

The following table gives the infant death-rate per 1,000 during the past five years: 1896, 745; 1897, 593; 1898, 630; 1899, 848; 1900, 928 per 1,000. It will be observed that the year in which the rate was lowest was the only year of the five in which no epidemic of bubonic plague occurred.

The number of deaths of Chinese from phthisis alone was 845, or 61.5 per cent. of the total deaths from the respiratory diseases; this disease is intimately associated with overcrowding and insanitary dwellings. The total number of deaths among the Chinese from the malarial fevers was 887, as compared with 532 during the previous year and 506 during 1898; this is equal to a death-rate of 3.3 per 1,000. The death-rate among the boat population alone from this cause was 2.2 per 1,000, less, that is to say, than among the land population as in 1899. Dr. Clark says:

A certain amount of work was done during the year in the direction of the treatment of some of the *Anopheles* pools with paraffin, and of the filling up of others with concrete, but apparently without any great success, if we may judge by the number of deaths from malarial fevers recorded, which greatly exceeds that of previous years.

Dr. Clark recommends that the Government should secure and maintain an extensive European reservation in the new territory.

There were 361 deaths of Chinese from beri-beri during the year as compared with 197 deaths in the previous year. The number of deaths among the floating population alone was 66. The deaths occurred as under: January, 33; February, 26; March, 27; April, 30; May, 33; June, 31; 180. July, 25; August, 27; September, 25; October, 31; November, 41; December, 32; 181. There were 20 accidental deaths through the collapse of buildings. Dr. Clark remarks:

This appears to be a very heavy mortality from an obviously preventable cause, and suggests that a very much greater amount of supervision over the actual work, both of construction and of the repair of dwellings, is needed in this colony.

The total number of cases of enteric fever reported during the past year has been 85, as compared with 59 in 1899, but there has been a reduction in the number of European cases, namely 34, as against 36 in the previous year. The average age of the European cases was 25.5 years, while 16 of the Chinese cases were under 10 years of age, 7 of them being less than 1 year old. The case mortality of the non-Chinese cases was 36.6 per cent.

The majority of cases of small-pox occurred in the earlier months of the year, there being 28 cases in all, with 17 deaths, 1 being non-Chinese. The total number of vaccinations recorded last year was 4,406, as compared with 6,529 in 1899 and 7,051 in 1898. This appears to be a most unsatisfactory state of affairs, and I think that more encouragement should be given to this most important means of prophylaxis.

There were 13 cases of diphtheria reported during the year, the total number of Chinese cases being 9, and of these 7 succumbed, giving a case mortality of over 77 per cent.

There were 11 cases of puerperal fever in Chinese reported during the year, most of which were, however, discovered *post mortem*. It will be seen from the mortality returns that no fewer than 40 young Chinese women succumbed to diseases incidental to childbirth during the year. This represents a very serious loss of young adult lives, and is undoubtedly due to want of proper attention and of cleanly surroundings.

There was 1 case of scarlet fever and 1 fatal case of cholera: the latter was imported from Saigon, the patient being a Chinaman.

A new disinfecting station has been erected during the year. The system of disinfection of infected buildings has also been reorganised, and a staff of native workers is now being trained. Perchloride of mercury sprays have been in use now for some years for the disinfection of buildings, and in the hands of trained men they have been found to give satisfaction.

# OBITUARY.

## A. E. AUST LAWRENCE, M.D.,

Professor of Midwifery in University College, Bristol, and Consulting Physician Accoucheur to the Bristol General Hospital.

THE news of the sudden death of Dr. Aust Lawrence on August 29th was received in Bristol with a profound sensation of surprise and sorrow. Dr. Aust Lawrence had left Clifton for his holiday about three weeks previously, apparently in good health, and none of the many who knew him were in any way prepared for the sad intelligence. After a few days' absence on Dartmoor he had rejoined his wife and younger daughter at Bishopsteignton, mentioning that he had felt some slight discomfort about the heart, to which, however, he did not attach much importance. On the day preceding his death he seemed in excellent health and spirits, and, as was his way, was the life of the party in the evening: next morning he was found dead in bed, the absence of signs of disturbance favouring the view that death had occurred during sleep. The *post-mortem* examination showed that the fatal event was due to fatty degeneration of the heart.

He was buried at Redland Green, Bristol, on September 3rd, in the presence of a large concourse of medical men, patients, and friends assembled to do honour to his memory. Much sympathy is felt for his widow and his two daughters.

Alfred Edward Aust Lawrence was the son of a well-known citizen of Bristol, and was born at Stapleton, near Bristol, in 1848; he was therefore only 53 years of age at the time of his death. He was educated at the Bristol Grammar School, and commenced his professional course at the Bristol Medical School, completing it at the University of Aberdeen. He early displayed the qualities which stood him in such good

stead in later years, highly distinguishing himself during his student career at Bristol, where he afterwards held the post of Demonstrator of Anatomy. In 1872 he obtained the degrees of M.B. and C.M., and in 1874 that of M.D. at Aberdeen.

In 1872 he married Miss Broad, of Bath, and commenced practice in Birmingham; but, as he found that there was no prospect of the occurrence of a hospital vacancy there, he left that place after a few months and settled in Clifton. The special direction of his work was determined by his appointment as Physician-Accoucheur to the Bristol General Hospital in 1875, a post which he held until 1897, when he was made Consulting Physician-Accoucheur to the institution in question. In 1879 he was appointed Lecturer on Midwifery and Diseases of Women at the Bristol Medical School, becoming Professor in those subjects when the Medical School was incorporated with University College, Bristol, as its Faculty of Medicine, and he held the chair at the time of his death. He was a Vice-President of the Obstetrical Society of London; was Vice President of the Section of Obstetric Medicine at the annual meeting of the British Medical Association held in Bristol in 1894; filled the Presidential chair of the Bristol Medico-Chirurgical Society during the year 1896-97; and had just been appointed President-elect of the Bath and Bristol Branch of the British Medical Association. He was the author of many valuable contributions on subjects connected with his speciality, and was a frequent speaker at the meetings of the societies above referred to. He had the power of throwing into relief the important features of the subject which he was discussing; and his lectures and speeches were enlivened by many touches of humour, of which he had a keen appreciation.

He made such good use of his opportunities for special work that he early obtained a high reputation as an obstetrician and gynæcologist; and for many years he had had a very large consulting practice, not only in Bristol and its neighbourhood, but extending throughout the surrounding counties and the West of England and South Wales. As an operator he was bold and skilful, and at the same time very careful: and he faced any difficulty that arose in the course of an operation with courage and resource. His results were exceedingly good, as shown by his published statistics. He was very successful with a special operation which he devised for ruptured perineum. His striking power as a diagnostician was due both to his complete theoretical grasp of his work and his wide experience, and also to the wonderful training of his hand. As an obstetrician his manipulative skill was great, and there were few obstacles which in one way or another he would not surmount. He never appeared to better advantage than when facing a grave emergency—the more critical the occasion the more completely self-possessed and self-reliant he became. He possessed to a remarkable degree the power of inspiring confidence; in any such grave emergency he was a veritable tower of strength, and no one who has seen him under such circumstances will forget the sense of safety that his presence brought.

He was the type of what a specialist should be—he was a well-informed practitioner first and a specialist afterwards. He viewed his speciality from a clear scientific standpoint, and brought to bear upon it that strong common sense which was one of his most marked characteristics. He ran no risk of forgetting the existence of other organs than those with which his work was more particularly concerned, and it was no uncommon thing for him to point out in cases sent to him as a specialist that the conditions which had attracted notice were not those which chiefly needed attention.

To his professional brethren he was most loyal, and no one knew better how to put right an error in diagnosis or treatment while completely shielding its author.

He was conscientious almost to a fault, and felt the responsibility of his work in no ordinary degree. He spared no trouble to prove for himself the value of a new theory or novel method of treatment, and he would never undertake any procedure with which he was not familiar without first perfecting himself in all its details at the hands of those who were most skilled in its application. If he had the idea—whether rightly or wrongly—that there was any other man who could do better for a special case than himself, to that man the patient was immediately transferred; and he gave up active work at the hospital earlier than his inclinations prompted because his outside engagements did not allow him to give to his hospital operation cases more than an amount of attention that most would have considered ample.

As would be anticipated, he brought the same judicial mind to bear on matters outside his professional work. His friends were accustomed to go to him with their difficulties, whatever they might be; and his advice was marked by the same sound common sense and clear perception of essentials that distinguished him when dealing with more strictly medical matters. Only a day or two before leaving home he was concerned in the successful adjustment of a difference between two friends.

It is seldom that an outspoken man of strong character avoids giving offence to some: and Dr. Aust Lawrence was not an exception in this respect. The soul of honour himself, absolutely and uncompromisingly "straight," he was quick to discern meanness or obliquity of motive in others; and he was not careful to conceal his opinions. But, curiously, the failings that his detractors had been heard to urge against him were just those that his friends knew to be most foreign to his nature.

He was an excellent judge of a horse, and a good rider; and for many years had been in the habit of finding relief from the anxieties of work in hunting with the Duke of Beaufort's and Lord Fitzhardinge's hounds. He usually spent some part of his holiday in the country of the Devon and Somerset staghounds, which just before his death he was proposing to visit in a few days.

Dr. Aust Lawrence's kindly look and genial manner, which made him a favourite with all, were the true index of his nature. Trouble or distress of mind or body always appealed to his sympathy, and he was never happier than when he could give comfort and help; and many are the acts of kindness received at his hands which will now be brought to remembrance. His considerate way and instinctive gentleness robbed a professional visit to him of its terrors; his patients were devoted to him, and placed in him implicit confidence; and he became to them the trusted friend as well as the physician upon whose skill they safely relied.

Upright, honourable, and kindly, a loyal friend, and a leader in his profession—cut off when his experience was ripe and his intellectual vigour was in its prime; he was a man who could ill be spared; and his loss will be keenly felt by all who knew him.

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## JULIUS ST. THOMAS CLARKE, M.D., M.S., F.R.C.S.,

Senior Surgeon to the Leicester Infirmary.

By the death of Dr. St. Thomas Clarke Leicester has lost one of its oldest medical men, he having been in practice in that town for nearly forty years. He was educated at Guy's Hospital, where he took the Treasurer's Gold Medal in Clinical Surgery, and also the Exhibition and Gold Medal in Anatomy and the Gold Medal in Physiology at the University of London in 1861. Commencing general practice in Leicester, he was for some time medical officer to the workhouse, and relinquished that post on his election as Surgeon to the Leicester Infirmary, a position which he continued to hold up to his death, having been Senior Surgeon since the retirement of Mr. C. H. Marriott early in the present year. He was also medical officer to the Institution to the Blind.

Dr. Clarke was an indefatigable worker. Leaving London with the degree of M.B.Lond. and the diplomas of M.R.C.S. and L.R.C.P., he worked, in the scanty leisure allowed by a large practice, for, and passed successively, the examinations for F.R.C.S. (1877) and M.D.London (1892) and M.S.Lond. (1896).

He had much success as an operating surgeon, and had performed in his time many serious operations.

He had been an abstainer from alcohol for the greater part of his life, and was a keen advocate for total abstinence. He had also much experience in the treatment of patients suffering from the abuse of drugs, and had been consulting medical officer to a large and well known institution for the cure of such cases for many years. The singular and deplorable attack of which he was the victim in October of last year, namely, his being shot in the back by a lunatic who had formerly been a patient of his, and who had been sent to an asylum under

his certificate will be remembered by the readers of the British Medical Journal. The bullet was never extracted, and he had apparently almost entirely recovered from the effects of the injury, but he never quite regained his former vigour, and the assault, intensifying the effects of a failing heart, undoubtedly had its share in bringing on his final and fatal collapse, at the age of 64, on August 2nd.

His remains were taken to the chapel of the Leicester Infirmary, where, among his colleagues and friends and the nursing staff of that institution he had served so well, the last services were held on August 6th.

He was a man of much kindness of heart and strict notions of rectitude and duty, and his loss will be mourned by many patients and friends.

He leaves a widow and a large family.

## JOHN DAVIES CLEATON, M.R.C.S.,

Commissioner in Lunacy.

Mr. John Davies Cleaton, who died on August 21st, after a long illness, had long held a conspicuous position among the men who devote themselves to the study and treatment of the insane. Born in 1825 at Llanidloes, educated at Shrewsbury, studying at Guy's Hospital, and qualifying at the College of Surgeons in 1850, he was successively appointed Assistant Medical Officer to the Lancaster Asylum, Medical Superintendent of the Lancashire Asylum at Rainhill, and Medical Director of the West Riding Asylum at Wakefield. In 1866 he was selected by the Lord Chancellor to be a Commissioner in Lunacy, in succession to Mr. Gaskell, and he retained that office for upwards of twenty-seven years, devoting to its duties those qualities of fairness, kindliness, good sense, sound judgment, and capacity for work of which he possessed so large a share. By their exercise he not only secured the esteem and affectionate regard of his colleagues, but the confidence and respect of those among whom his chief work lay. In 1894 failing health compelled him to retire from the active and paid duties of the office, but the bestowal of an Honorary Commissionership retained up to the time of his death, for the public and his colleagues, his counsel and assistance as a member of the Board.

We regret to announce the death of Mr. John Griffith, F.R.C.S., who though only 35 had already won for himself a considerable reputation as an ophthalmic surgeon. He studied at St. Mary's Hospital, becoming a Licentiate of the Royal College of Physicians of London and a Member of the Royal College of Surgeons of England in 1889. He became a Fellow of the latter College in 1894. He was also joint author of the chapter on Refraction of the Eye in the second edition of Mr. Juler's *Ophthalmic Science and Practice*.

Mr. Anderson Critchett has favoured us with the following appreciation of Mr. Griffith's personal character and professional acquirements:

My dear friend and colleague, John Griffith, had such an interesting and attractive personality, and, during his too short life, had achieved so much work of sterling merit that his memory must long survive with all who knew him. Before he had finished his student's career he was attracted to the study of ophthalmology, and devoted himself to it with that keen indomitable energy which was one of his chief characteristics. He was an excellent pathologist, and enriched the museum at St. Mary's Hospital with many valuable specimens. His special knowledge in this direction met with early recognition at the Ophthalmological Society, where he was often nominated to serve on pathological subcommittees. He did not, however, pursue this particular branch of study as an abstract science, but chiefly as a means to acquire knowledge which he could turn to practical advantage in the relief of human suffering. For the last five years he assisted me in my private practice, where I had the happy experience of his exceptional ability, and it is with deep regret that I now pay this final tribute to a gifted colleague and a loyal friend.

J. L. J. writes: A notice of the death of Dr. McCraith, of Smyrna, recalls an incident which may be of some interest to those who knew him, particularly in view of the recent and not infrequent episodes of the same nature. During the Crimean war a staff composed of men holding office in various London hospitals was sent, in consequence of the congested state of the Crimean hospitals, to take charge of a large hospital converted to that purpose from the Turkish Barracks at Smyrna. The country round was infested by a band of robbers who levied tolls of varying natures from all classes, and, being very mobile, easily eluded their pursuers, the chief of the band being one Symiar, who had formerly been in Dr. McCraith's employ. Information was brought one midnight to Colonel (afterwards Sir Henry) Storks that Symiar had entrapped McCraith by a false message from a country patient, had carried him off into the mountains and demanded a ransom of £1,000 English. The medical staff with a company of Turkish soldiers and carapes thereupon armed and proceeded to the rescue. It will not surprise anyone who knows the character of the country, and the dense scrub covering the mountains, with the reluctance of the peasantry to give information in such cases, to hear that the expedition was utterly barren of results; the robbers and their captive quietly surveying our party from their hidden lair. McCraith was their prisoner for six days, and was liberated on payment of £400 furnished in the end by the Turkish Government, having been treated as comfortably and fed as well as continual movement and hiding would allow. Owing to the urgent representations of our Ambassador at Constantinople, and the vigorous measures consequently taken, the band was in about two months after completely broken up by dispersion and capture of some of their number, Symiar and another one or two being beheaded in the principal thoroughfare of the bazaar, and their heads placed, old-London-Bridge-fashion, over the Pasha's gate for a warning. I well remember being late for that sight, and having in the afternoon their heads rolled out of a horse's nose-bag by the sentry for my satisfaction. Habits and customs do not seem to have improved out there even at the present day.

Dr. J. Griffith Lock of Tenby, who died recently after a long and painful illness, was the senior medical practitioner in the town. For twenty-eight years he filled the responsible position of Medical Officer of Health for the borough, and only resigned his post in March last owing to illness. He also held the post of Medical Officer to the Pembroke Union for the Tenby and St. Florence districts. Dr. Lock, in his younger days, was associated with many projects for the advancement of Tenby. He was mainly instrumental in the erection of the Tenby Cottage Hospital, and evinced an interest in its work up to his death. He was one of the founders of the Tenby Volunteer Fire Brigade, and for many years was one of its members. The Royal National Lifeboat Institution found in him a ready and willing helper, and until quite recently he acted as honorary secretary to the local branch. He was born at Tenby in 1840, and was, consequently, in his 61st year. He was the eldest son of the late Mr. William Lock, Town Clerk of Tenby. He was educated at Harrow, and in 1859 went to Trinity College, Cambridge, where he graduated B.A. in 1863, and M.A. in 1866. He studied medicine at Cambridge and at St. Bartholomew's Hospital, and became M.R.C.S.Eng. in 1867, and L.R.C.P.Edin. in 1868. He began to practise at Tenby, where he has since resided. He was an active Freemason, having passed the chair of 1,177 (Tenby Lodge). He was also a P.M. of the Five Arches Lodge and Mark Master Mason, and P.Z. for the Dynbych Chapter, 1,177. In Provincial Grand Lodge, Western Division, he also held rank. He was a man possessing great strength of character, and was deservedly held in the highest respect. By the poor of Tenby he will be greatly missed. He was a J.P. for the Tenby borough and county of Pembroke.

Dr. Henry Child Buckley, who died suddenly on August 26th at the age of 57, formerly practised at Llanelly, and was well known throughout the whole of South Wales, but for some time past he had resided at 71, Linden Gardens, Notting Hill. The immediate cause of death was failure of the heart's action following an attack of pleurisy. Dr. Buckley was the son of the late Mr. James Buckley of Llanelly, at one time High Sheriff of the County. He received his professional education at St. George's Hospital and Aberdeen University, where he took his degree of M.D. in 1868. He was also M.R.C.S. and L.S.A. He settled in practice at Llanelly, and was appointed Medical Officer of Health, which position he

held for many years. He was a J.P. for Carmarthenshire, and held the position of Certifying Surgeon under the Factory Acts. He retired from practice in 1890 and took up his residence in London. On several occasions Dr. Buckley was asked to stand as a candidate for the parliamentary representation of the Eastern Division of Carmarthenshire, and also for the Carmarthen Boroughs. This honour, however, he firmly declined. He married Isabel, daughter of the late Mr. James Wilson, F.S.A., and he is survived by his widow, but leaves no children.

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WE regret to announce the death of Dr. WILLIAMS TORREY GRANT, who occupied an important medical position at Mansoura on the Damietta branch of the Nile. Dr. Grant, who was a son of the late Grant Bey, died in the railway train while proceeding to Cairo, but the telegram from Mr. Murdoch, the British Consul, gives no further particulars. He studied at the University of Edinburgh, where he took the degrees of M.B., C.M., in 1896. He was formerly Special Medical Officer of the East African Protectorate.

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FROM Lyons comes the announcement of the death, at the age of 55, of Dr. PAUL-FRÉDÉRIC COLRAT, formerly physician to hospitals in that city. He enjoyed a high reputation as an authority on diseases of children, and although he did not contribute to the literature of his profession, his opinion was greatly valued by his colleagues in and about Lyons. He had enjoyed good health all his life, but in December, 1899 he was laid up with acute pneumonia, after which the presence of albumosuria was recognised, and in the course of the following year and a-half the signs and symptoms of myelopathic albumosuria became fully established. A short notice of his case, the first of its kind that has been recognised in France, appeared in the BRITISH MEDICAL JOURNAL for July 15th. On August 3rd Dr. Colrat was seen in consultation by Dr. T. R. Bradshaw, of Liverpool, who expressed the opinion, endorsed by the other physicians in attendance, that apart from accidents, life might be prolonged for a considerable time, the bones being apparently affected only to a very limited extent. In the course of the next few days, however, the temperature rose, indications of pneumonia at the left base appeared, and death took place on August 8th. Dr. Colrat leaves a widow and a young family.

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WE regret to announce the death of Dr. DAVID FRANCIS SITWELL CAHILL, of Berwick, at the age of 80. In May of the present year he was knocked down in the street and sustained a fracture of one of his thighs and other injuries. From that time till his death he was confined to bed. Dr. Cahill was a son of the late Dr. Alexander Cahill, formerly a Surgeon-Major in the 25th Regiment of Foot, who retired from the army and settled in Berwick, of what he was Mayor in 1841. Dr. David F. S. Cahill was a graduate of Edinburgh, where he took his M.D. degree over fifty-six years ago, and on May 22nd he celebrated his jubilee as a medical practitioner. At that time he retired from active work. Dr. Cahill had an extensive practice not only in Berwick, but on both sides of the Border, and was well known not only for his interest in many public movements and objects, but also for his kindness of heart, genial disposition, and fund of humour. Dr. Cahill held one of the awards of the Royal Humane Society for assisting to save life many years ago. Dr. Cahill leaves a widow and grown-up son and daughter.

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WE regret to record the death of Dr. WILLIAM HUSBAND, one of the oldest and most respected members of the medical profession in Edinburgh. He graduated M.D. at the University of Edinburgh in 1846. Early in his career he interested himself in the subject of vaccination, and he served as vaccinator to the Royal Public Dispensary. It was he who introduced the method of preserving vaccine lymph in capillary tubes. He was for many years Superintendent of the Central Vaccine Institution for Scotland under the Board of Supervision and Local Government Board, whence is drawn the supply of lymph for the public vaccinators. He was the author of a monograph entitled *Exposition of a Method of Preserving Vaccine Lymph Blind and Active, with Hints for the more Efficient Performance of Public Vaccination*, published in 1860. Dr. Husband was nearly 80 years of age.

DR. JOHN SHOOLBRAID of Aldershot, who died recently, received his professional education at the University of Aberdeen, where he graduated M.D. in 1853. He became M.R.C.S.Eng. in the same year. Dr. Shoolbraid was one of the first medical men to Settle at Aldershot. He rapidly gained the confidence of many of the chief households in the town, and when, in 1866, it was decided that the growing importance of the place made it necessary and politic to have a specially appointed Medical Officer of Health, Dr. Shoolbraid applied for and obtained the post. He retired some eighteen months ago on a pension of £50 a year. He was twice married, and leaves a son and daughter.

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DR. ALFRED JAMES BELL, of St. John's Wood, who died on August 16th at the age of 55, was one of the oldest practitioners of the district. He received his medical education at King's College, and became a Licentiate of the Apothecaries' Society in 1868 and a Member of the Royal College of Surgeons of England in the following year. Mr. Bell, who was a member of the British Medical Association, was universally beloved and respected for his kindness of heart and unselfish devotion to his profession.

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DR. JOSEPH CLEGG, of Epping, who recently died at the age of 80, formerly practised in Epping for upwards of 30 years, and retired about 14 years ago. He became M.R.C.S. and L.S.A. in 1846. He was a surgeon to the benefit societies in the town, and took a great interest in all local affairs, especially the water supply and sanitary matters. He was the author of contributions to the BRITISH MEDICAL JOURNAL, and of a pamphlet on *Local, County, and National Government*, published in 1887.

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DEATHS IN THE PROFESSION ABROAD.—Amongst the members of the medical profession who have recently died are Dr. Stephen Foss of Brooklyn, who is said to have been one of the best Greek scholars in the United States, aged 76; Dr. Hermann Steinbrügge, Professor of Otology in the University of Giessen, aged 70; and Dr. Cunéo, Inspector-General of the Medical Service of the French Navy, aged 67.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## ROYAL NAVY RATIONS AND MEAL HOURS.

THE recent publication of the report of the Admiralty Committee directed to inquire into the Royal Navy rations and associated matters indicates not only the difficulties that had to be dealt with, but the very thorough and effective work accomplished.

As regards the difficulties arising from the complexity of the subject of naval victualling, the most important is the system of "savings" for articles of the daily ration not "taken up" by officers and men, as all are victualled alike, for which they receive a monetary payment in lieu. This system "being one that has been in force for upwards of 100 years, and to which the men of the navy are much attached," could not easily be abolished. As it was to be retained, it is obvious that all questions as to the amount of provisions to be provided, in peace time especially, were complicated by the uncertainty of the amount that would be left behind for "savings," that is for money payment in lieu. As much as 93 per cent. of salt beef was saved on one station in a year, the "savings" money being spent in providing a varied diet from the canteens, now very general in the navy, or from the shore. This affects the length of time the salt and preserved meats, flour, etc., purchased, would remain unissued, a most important point in connection with their nutritive value. The Committee therefore wisely recommended that an "age limit" should be established for such provisions, after which they should not be issued; from a dietetic point of view this is clearly a most important reform.

The decision of the Committee was to propose a scale of victualling for war, when extraneous supplies would not be available, that will maintain men in a fit state of health. We think that they have succeeded in their aim.

As regards the supply of fresh meat, it is now suggested that mutton may be allowed occasionally as a change. They also recommend an extension of the Government slaughter-houses now existing at Gosport, Plymouth, Portland, and Malta to the Chatham and Sheerness district, as preferable to the present supply from private contractors.

With reference to the sufficiency or otherwise of the ration, they adopt the views of one medical witness, who said, "I am more in favour of proved dietetic results than laboratory investigations. There are so many contributory causes to results of diets." A medical officer of high rank "had represented that the present naval ration is considered slightly deficient in albuminous matters and hydrocarbons, though richer in carbohydrates than the standard diet for laborious working men." The medical evidence, however, was not invariably in accordance with this view; it was, however, practically unanimous in regard to the lack of variety.

This question of variety was, however, a difficult one, though fully and carefully considered; but "considerations of cost, the necessity for maintaining stocks under varying climatic conditions, and the probability of men preferring to commute the ration for 'savings,'" necessarily influenced the the decision, which must be considered very satisfactory under the circumstances, as no assistance in warships can be obtained from the installation of a refrigerating plant and chambers.

*Fresh and Salt Meat.*

In accordance with the ascertained general feeling of the men, it was decided to recommend that the present ration of fresh and salt meat—beef and pork—namely, 1 lb. with bone, should be reduced to 12 ozs., and that 4 ozs. of corned or other preserved meat be added, for the breakfast and supper meals. The present sea ration of salt pork every other day, it is proposed, should in future be issued every third day, salt beef and preserved meat following on the intermediate days.

*Soft Bread.*

It was decided that soft bread could be provided only in harbour, but all biscuit is supplied now in tin-lined cases for the sea ration, and is consequently well preserved.

*Vegetables.*

It is recommened that the present ration of 8 ozs. of mixed vegetables be increased to 1 lb., and as far as possible of one variety at a time. This will be a very important dietetic reform when it is considered that vegetables in all parts of the world are issued in the rough. It is further proposed that 1 oz. of compressed vegetables per man be issued with salt and preserved meats, the present distasteful and unpopular granular preserved potato, issued with preserved beef only, being discontinued.

*Spirit Ration.*

The ration is 2½ ozs. of rum. The time for the issue of this stimulant, for adult seamen only, was fully considered; the medical evidence, as a rule, recommended its issue with the supper meal proposed, in warm climates especially, but it is a question affecting discipline as well as a medical one, and it is recommended to give Commanders-in-Chief discretionary power, as local and other circumstances have a considerable bearing on this question.

*Chocolate.*

In regard to "ship's chocolate," a naval special preparation, the evidence favoured a reduction of the present allowance from 1 oz. to ⅝ oz., and the addition of ½ oz. of coffee, with chicory according to the general desire, for the additional morning meal proposed.

Soluble chocolate may, as heretofore, be issued at the commanding officer's discretion when considered necessary at night; in bad weather, etc., this forms no part of the ration.

*Preserved Meats.*

We note the plural here with satisfaction, as at present preserved boiled beef alone is supplied, not a popular article; the generally-expressed opinion of the witnesses examined was in favour of a reduction of this ration from 12 to 9 oz. for the dinner meal, and that 4 ozs. of corned or other preserved meat for the breakfast or supper meal be added; the Committee recommend this change.

*Salted Suet.*

Salted suet, preserved at the Victualling Yards, is not a successful preparation; it preserves indifferently, and a substitute it is hoped may be found; it is used for the preparation of the popular "plum duff" and "sea pies" of the men.

For the proposed rearrangement of the men's meals an addition of tea ⅛ oz., sugar 1 oz., and raisins ½ oz. to the present allowances is recommended.

Tea ration proposed ⅜ oz. The tea-making hitherto has been in the ship's coppers for the men's messes, the sugar added in the coppers, and the resulting decoction served out to the individual messes. The Committee propose that facilities be provided to enable the men to infuse their tea served out to them "raw"—a valuable and sensible reform.

*Milk.*

It is stated that although the medical evidence obtained went to show that fresh milk would be "a great boon if supplied," the risk of disease from its use outweighed such advantage. This opinion we consider might refer to foreign and unsupervised supplies, or it is a remarkable deliverance regarding home milk, as all home hospitals, including naval ones, and public institutions have fresh milk. The Committee therefore propose a ration of ¾ oz. of preserved unsweetened milk, that being considered to preserve longer than the sweetened preparation; for this article no "savings" are recommended.

*Jam and Marmalade.*

Jam, various, and marmalade, according to the preference of the men, is proposed as an addition to the ration, presumably for the breakfast and supper meals, for which chocolate or tea, bread or biscuit are now only provided.

As to the present ration, the general appearance of the "Handy Man" may suggest that it is satisfactory, but the evidence shows it is not only supplemented by the "savings" money already referred to, but by mess contributions from the men themselves, the Committee estimate this from 2s. 6d. to 4s. per mensem, and thus the improved scale of victualling is justified.

It will be seen that a laudable effort has been made to vary and improve the present naval ration, although oddly enough the Committee introduce these valuable suggested reforms with a statement that "the Committee are satisfied that, taken as a whole, no real dissatisfaction in regard to the present navy ration exists." If so, why is it "saved" so largely and supplemented by the value of the "savings," averaging £4 12s. per man per annum, and by money contributions by the men themselves?

*In Time of War.*

We find no reference to the provision of refrigerating ships for the supply of fresh provisions to the fleets, such "fresh meaters" were employed by the United States navy in their recent naval operations, and we think that similar provision has been made in our navy of late in China.

*Meal Hours.*

At present the recognised meal hours in the Royal Navy for the men are: Breakfast about 5 A.M., dinner at noon, tea "supper" about 4.15 P.M. "The Committee are of opinion that this arrangement is unsatisfactory," an opinion long held in the Navy and by every sensible person cognisant of it. It is therefore proposed that the men should have chocolate about 5 A.M., breakfast about 8 A.M., dinner at noon, tea about 4.15 P.M., supper about 7.30 P.M., and that the time for meals be increased from 2 hours 30 minutes, as at present, to 3 hours 35 minutes.

There are many points of medical and general interest in this Report of the Committee on Navy Rations, obtainable by any bookseller, pp. 70, price 7d., on Naval Canteens and articles most popular; Provisions "saved," their amount, variety, and value; Scale of Navy Victualling present and proposed, including that for Boys' Harbour and Seagoing Training Ships; our space, however, will not permit of further notice of these subjects.

## ARMY MEDICAL REFORMS.

We continue to receive suggestions on this subject, which we cannot regard otherwise than as belated. The Committee is not sitting, but has sent in its report, and we now only await the promulgation of the new Warrant.

## ROYAL NAVY MEDICAL SERVICE.

STAFF SURGEONS E. E. BRAY, E. J. BIDEN, W. EAMES, C. W. SHARPLES, and R. W. ANDERSON have been promoted to be Fleet Surgeons, August 25th. Their previous commissions, which were simultaneous, were dated: Surgeon, August 25th, 1881; Staff Surgeon, August 25th, 1893. Fleet Surgeon Biden was Surgeon of the *Opal* during the Niger expedition in 1883, and at the punishment of Solomon Islanders, 1886; was Staff Surgeon of the *Scout* in the Red Sea during the Dongola expedition, 1896 (medal). Fleet Surgeon Eames was Surgeon of the *Sultan* at the bombardment of Alexandria in 1882, and during the Egyptian war; landed in medical charge of the Royal Marine detachment of H.M.S. *Sultan* at the surrender of Aboukir Forts, and was Surgeon of the *Grappler* at Suakin, and during blockade of the coast in 1885 (medal with clasp and Khedive's bronze star).

The following Surgeons, having completed twelve years' full-pay service, are promoted to be Staff Surgeons, dated August 22nd: P. V JACKSON, A. H. L. COX, A. MACLEAN, M.B.

The undermentioned qualified candidates have been appointed Surgeons in His Majesty's Fleet, dated August 10th: THOMAS B. SHAW, M.B., PERCIVAL T. NICHOLLS, ALFRED T. GAILLETON, M.B., GEORGE S. DAVIDGE.

The following appointments have been made at the Admiralty: FRANCIS H. A. CLAYTON, M.D., Surgeon, to the *Prometheus*, undated; JOHN ACHESON, Fleet Surgeon, to the *Illustrious*, undated; WILLIAM S. LIGHTFOOT, Fleet-Surgeon, to the *Amphitrite*, for medical charge on voyage home, undated; JOHN MENARY, M.D., Staff Surgeon to the *Gladiator*, on the *Illustrious* recommissioning, undated; JAMES M. ROGERS, Staff Surgeon, to the *Amphitrite*, September 17th, and to the *Tyne* on recommissioning, undated; HERBERT H. GILL, Surgeon, to the *Caledonia*, August 31st; ALBERT X. LAVERTINE, Surgeon, to the *Impregnable*, August 31st; ROBERT T. GILMOUR, Surgeon, to Royal Marines, Portsmouth Division, August 22nd; EDWARD S. MILLER, Surgeon, to Haslar Hospital, to join on expiration of full-pay leave after the manœuvres, undated; WILLIAM B. MACLEOD, M.B., Surgeon, to the *Iphigenia*, September 17th, and to the *Illustrious*, undated; SAMUEL CONNER, Surgeon, to the *Iphigenia*, for medical charge on voyage home, undated.

## ROYAL ARMY MEDICAL CORPS.

COLONEL R. H. CAREW, D.S.O., is placed on retired pay, August 10th. He was appointed Assistant-Surgeon, March 31st, 1865; Surgeon, March 1st, 1873; Surgeon-Major March 31st, 1877; Brigadier-Surgeon, August 1st, 1891; and Surgeon-Colonel, December 7th, 1895. He served in the Abyssinian campaign in 1868 with the 45th Regiment, and was present at the capture of Magdala (medal); with the Sikkim Expedition in 1888 as Senior Medical Officer (mentioned in dispatches, D.S.O., and medal with clasp); and in the campaign on the North-West Frontier of India under Sir William Lockhart in 1897-98 with the Tochi Field Force as Principal Medical Officer (mentioned in despatches, medal with clasp).

Lieutenant-Colonel F. W. TREVOR, M.B., is granted the local rank of Colonel in South Africa whilst Principal Medical Officer of a Division, April 7th.

The undermentioned officers are granted the local rank of Colonel in South Africa whilst Principal Medical Officers of General Hospitals: Lieutenant-Colonel J. L. HALL, May 7th; Lieutenant-Colonel G. H. SELVESTER, February 12th; Lieutenant-Colonel G. E. TWISS, February 5th; Lieutenant-Colonel F. A. B. DALY, M.B., February 5th.

The grant of the local rank of Colonel in South Africa made to the undermentioned officers is continued to them whilst holding the appointments stated against their names: Lieutenant-Colonel J. D. EDGE, M.D., Principal Medical Officer, Johannesburgh District and Lines of Communication, Klerksdorp-Sandspruit; Lieut.-Colonel J. A. GORMLEY, M.D., whilst Principal Medical Officer of a General Hospital: Lieutenant-Colonel J. C. DORMAN, M.B., whilst Principal Medical Officer, Eastern Line, Transvaal; Lieut.-Colonel A. T. SLOGGETT, C.M.G., whilst Principal Medical Officer of a General Hospital.

The undermentioned Civil Surgeons are appointed Lieutenants from the dates specified: JAMES WADDELL, June 19th; PATRICK G. HYDE, June 22nd; ANDREW M'MUNN, June 25th; ALFRED W. A. IRWIN, GEORGE H. H. USMAR, July 5th.

Lieutenant-Colonel B. M. BLENNERHASSETT, officiating Principal Medical Officer Bombay and Nagpore Districts, has been appointed P.M.O. Rawal Pindi District, *vice* Colonel R. H. Carew, D.S.O., who vacated on August 10th.

Lieutenant-Colonel H. J. W. BARROW, who is serving in the Madras Command, is granted the temporary rank of Colonel while officiating on the Administrative Medical Staff of the Indian army, from July 22nd.

Brigade-Surgeon THOMAS YOUNG BAKER died in London on August 21st. He was the youngest son of the late Rev. W. Lake Baker, Rector of Hargrave, Northamptonshire, and entered the Army Medical Service as Assistant-Surgeon, October 1st, 1860; became Surgeon, March 1st, 1873; Surgeon-Major, October 25th, 1875; and Honorary Brigade-Surgeon on retirement, October 7th, 1885.

The following are on passage home:—Majors E. C. FREEMAN, M. T. YARR, C. E. NICHOL, B. L. MILLS, H. J. BARRATT, J. E. NICHOLSON, Civil Surgeon R. A. DRAPER, C. W. DONALD, E. S. WELLS, C. M. EKINS, H. H. SWANZY, R. BOYD, E. TURTON, E. B. JONES, A. WADE, R. C. VERLEY, W. H. HUNTER, B. G. BROCK.

Lieutenant-Colonel JAMES DUNCAN was slightly wounded in the right ankle by gunshot near Dordrecht on August 29th.

The undermentioned officers have been discharged to duty from hospital in south Africa:—Major S. HICKSON, Captain H. W. VAUGHAN-WILLIAMS; Lieutenant W. H. ODLUM, Colonel J. G. MACNEECE; Civil Surgeon C. S. LANGLEY, J. A. H. BRINCKER.

The progress report states that Captain NIESIGH, of the New South Wales Medical Staff, has slightly improved, September 2nd.

Lieutenant-Colonel R. W. FORD, D.S.O., is appointed Deputy Surgeon, Royal Hospital, Chelsea, *vice* Lieutenant Colonel W. J. Macnamara, M.D., whose period of service in that appointment has expired, August 17th. Lieutenant-Colonel Ford entered the service as Surgeon, February 5th, 1881, and became Surgeon-Major February 5th, 1893, and Lieutenant-Colonel February 5th, 1901. He was in the Egyptian war in 1882, receiving the medal with clasp and the Khedive's bronze star, and in the South African war in 1899-1901, from which he returned in April last, to be stationed at Portland. He was mentioned in despatches for the latter campaign, and made a Companion of the Distinguished Service Order.

Captain W. H. P. LEWIS, Reserve of Officers, to be Major September 4th. Major Lewis joined the department as Surgeon-Captain February 4th, 1882, but retired with a gratuity April 5th, 1893. He has seen war service in the Soudan in 1884, being at the battles of El Teb and Temai (medal with clasp and Khedive's bronze star); with the Nile Expedition in 1884-5 (clasp); and in the Soudan in 1887-9, including the engagements at Sarras (mentioned in despatches), Arguin, and Toski (again mentioned, and received an additional clasp).

The undermentioned surgeons on probation are appointed Lieutenants, dated June 29th:—FREDERIC W. LAMBELLE, M.B., LAURENCE J. S. CAHILL, M.B., WALTER C. STEVENSON, M.B., MARTYN C. BEATTY, M.B., JOSEPH R. WELLAND, M.B., HENRY W. LONG, M.B., THEODORE F. RITCHIE, M.B., ALEXANDER W. SAMPEY, THOMAS J. POTTER, ALEXANDER J. WILLIAMSON, M.B., ERNEST V. AYLEN, HENRY ROGERS, M.B., WILLIAM DAVIS, JOSEPH C. HASTINGS, M.B., DENIS J. F. O'DONOGHUE.

## ARMY MEDICAL RESERVE.

SURGEON-CAPTAIN C. G. GRANT, 24th Middlesex Volunteer Rifles, is promoted to be Surgeon-Major, August 28th.

Surgeon-Captain S. CLARK, having retired from the Volunteers, ceases to belong to the Army Medical Reserve, August 24th.

Surgeon-Lieutenant J. H. P. GRAHAM is promoted to be Surgeon-Captain, September 4th.

## INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL A. F. DOBSON, Madras Establishment, is promoted to be Colonel, May 4th. He was appointed Assistant-Surgeon March 30th, 1872, and became Brigade-Surgeon-Lieutenant-Colonel, May 16th, 1895.

Major A. W. STEVENSON, Bombay Establishment, is promoted to be Lieutenant-Colonel, April 2nd. He dates as Assistant-Surgeon from April 2nd, 1881; as Major from April 2nd, 1893.

The retirement from the service of the undermentioned officers, which has been already announced in the BRITISH MEDICAL JOURNAL, has received the approval of the King:—Colonel T. J. MCGANN, Madras Establishment, May 4th; Lieutenant-Colonel G. WATERS, Bombay Establishment, April 23rd; Lieutenant-Colonel E. LAWRIE, M.B., Bengal Establishment, May 17th; Major G. H. FINK, Bengal Establishment, July 13th.

Colonel G. McB. DAVIS, M.D., C.B., D.S.O., Bengal Establishment, has been awarded a good service pension from July 14th, 1900, with the special additional pension of £250, in the room of Colonel J. H. Newman, M.D., Bengal Establishment, retired.

The retirement from the service of the following officers has effect from the under-mentioned dates, and not as previously notified: Colonel S. O'B. BANKS, Bombay Establishment, November 13th, 1900; Lieutenant-Colonel F. J. DOYLE, Madras Establishment, April 7th, 1901.

The following Lieutenants, having completed three years' full pay service, are promoted to be Captains from July 27th: T. HUNTER, M.B., Bengal; W. R. BATTYE, M.B., Punjab; H. B. MEAKIN, M.D., Bengal; G. HUTCHESON, M.B., Punjab; W. G. LISTON, M.B., Madras; H. BOULTON, Punjab; R. W. ANTHONY, M.B., Bombay; E. F. G. TUCKER, Bombay; G. E. STEWART, M.B., Bombay; F. S. C. THOMPSON, M.B., Bombay; T. S. NOVIS, Bombay; J. W. WATSON, M.B., Bombay; H. J. R. TWIGG, M.B., Bombay.

The following medical officers remain in China with the winter garrison:—Principal Medical Officer: Colonel O'Connor, Indian Medical Service: No. 15 British Field Hospital: Captains Browning, Hayes, Mitchell, and Brogden, Royal Army Medical Corps; No. 3 Native General Field Hospital: Lieutenant-Colonel Burton, Captain F. D. Browne, Lieutenants V. Roberts, D. N. Anderson, and Walter; No. 51 Native Field Hospital: Major Moore, Captains Sargent and Hunt, and Lieutenant Beamish; No. 57 Native Field Hospital: Majors W. White and Ozzard, Captain Cleveland, Lieutenant G. R. Stewart; No. 63 Native Field Hospital: Majors Greany and Ricketts, Captain Wall, Lieutenant McKechnie: Base Medical Store Depôt: Major Daly; 14th Sikhs: Captain Sharman; Hong Kong Regiment: Lieutenant McGaw; 1st Battalion 4th Goorkhas: Captain Lindesey; 6th Burma Battalion: Captain R. G. Turner; 2nd Rajpoots: Captain C. Hudson; 30th Bombay Infantry: Captain G. McPherson; on Special Service: Major Manifold. All the above, with the exception of the officers of the British Field Hospital, belong to the Indian Medical Service.

Brigade-Surgeon-Lieut.-Colonel JAMES BYERS THOMAS, late of the Madras Establishment, died at his residence, Braemar, Sandown, the result of an accident on the 1st instant, aged 50 years. He was appointed Assistant-Surgeon October 2nd, 1865, and became Brigade-Surgeon-Lieut.-Colonel April 30th, 1889. He retired from the service May 13th, 1893.

## IMPERIAL YEOMANRY.

MR. RICHARD M. MOYNAN, M.D., is appointed Surgeon-Lieutenant in the Glamorganshire Imperial Yeomanry August 6th.

Mr. HUGH KELLY, M.D., late Surgeon-Captain, 1st Volunteer Battalion Highland Light Infantry, is appointed Surgeon-Lieutenant in the Lanarkshire (Queen's Own Royal Glasgow) Imperial Yeomary, August 31st.

Surgeon-Lieutenant-Colonel H. W. KIALLMARK retires under paragraph 62 Yeomanry Regulations, retaining his rank and uniform, August 31st.

Lieutenant G. D. LAING, Medical Officer from the Imperial Yeomanry Department, is appointed Medical Officer to the 5th Battalion, with the temporary rank of Captain, April 9th.

## THE VOLUNTEERS.

SUPERNUMERARY SURGEON-CAPTAIN J. R. ATKINSON, 2nd Cheshire (Railway) Engineers, is absorbed into the establishment, August 24th.

Surgeon-Lieutenant H. S. OLIVER, 1st Volunteer Battalion the Buffs (East Kent Regiment), is promoted to be Surgeon-Captain, August 24th.

Surgeon-Captain J. WREFORD, 1st Northumberland Artillery (Western Division Royal Garrison Artillery) is absorbed into the establishment, August 31st.

### VOLUNTEER MEDICAL STAFF CORPS.

SURGEON-CAPTAIN W. F. SOMERVILLE, M.D., the Glasgow Companies, is promoted to be Surgeon-Major, August 24th.

### INDIAN PAY OF THE R.A.M.C.

IN a lengthy, but clear and able, statement as to the pay and system of payment of officers of the R.A.M.C. in India, a correspondent makes out a strong case for its thorough revision. The statement that "the War Office hands over the officers of the R.A.M.C. to the Indian Government like a flock of sheep, and fails to look after their interests," is but too true. The unfair treatment meted out to these officers in India is undoubtedly a large factor in the unpopularity of the corps.

Our correspondent, in drawing a comparison between the pay of different classes of officers shows that, while officers of the combatant ranks have their scanty home pay doubled or trebled in India, the captains and lieutenants in the medical corps have scarcely any equivalent addition for tropical service; it is, in short, not made worth their while to serve in India. Not only is the pay absolutely and relatively insufficient, but the system under which pay is given for extra duties done is most anomalous and unjust compared with all other branches of the Army, including the Indian Medical Service itself.

Officers in the combatant ranks have open to them all sorts of regimental and staff appointments for which they very properly receive extra pay; the Indian Medical Service receive charge pay when placed in positions of responsibility; any amount of responsibility, financial and other, can be and is thrust upon officers of the R.A.M.C. without a rupee charge pay or compensation. The unfortunate senior at a station is placed in charge of a huge station hospital, and saddled with sanitary cantonment responsibilities, without an anna charge pay; an officer of the same rank at the same station, but junior, has perhaps no responsibility at all, yet draws the same net pay as the overburdened senior. There can be no justice in such a wretched system, which reduces all the good, bad, or indifferent to the dead level of workmen in a trades union. The cry—often most untrue—that army medical officers fall behind professionally, and lack energy, if it has any basis, must surely arise from the total absence of any inducement or spur towards excelling. Ambition or talent cannot be cultivated if it has no opening and meets with no reward.

### VISION TEST FOR ARMY OFFICERS.

PERPLEXED writes: Would inability to close the left eye, and in consequence shooting from the left shoulder, handicap or disqualify a youth who aspires to be an artillery officer? Otherwise vision is good.

*** It is impossible to answer such a question without knowledge of concurrent conditions. We fear the defect described would probably disqualify for the army; but, as we understand the physical examination will now precede the literary, the disqualification would be decided before the competition. Meanwhile, the aspirant should get an expert opinion.

### "RESERVE OF OFFICERS."

BREVET writes that although a number of retired medical officers responded to the call to serve, and are shown in the active list in the *Army List* as serving according to seniority, with the addition after their names "reserve of officers," yet no general list of such officers is given. Is not this an omission? There is no provision made for them unless actually recalled; all are serving at home, and have had no chance of distinguishing themselves in the war, which is a sore disappointment. Many are doing admirable service at home, but can have no reward. Would not a system of brevet be a suitable reward?

*** Our correspondent is not entirely accurate. Two officers shown as "reserve" are serving in South Africa, as appears in our analysis of the August *Army List*—page 442 of the BRITISH MEDICAL JOURNAL. We question if it was ever intended that medical officers liable to be recalled to service should be sent abroad on active service; many are physically unfit for it, although able to do good at home; and for that a reward in the shape of a brevet step in rank might, as our correspondent suggests, be a suitable recognition.

We do not know why the general list "liable to be recalled" was suppressed, and certainly think it ought to be resumed in the monthly *Army List*.

### MILITIA MEDICAL STAFF.

CAROLUS wants to know whether he can be appointed to the Militia Medical Staff (not corps), and what would be the nature of his duties.

*** No appointments have been made to it for many years; the old officers have been allowed to die out, and there are not now twenty left. We do not know whether, under the scheme now under consideration, medical officers will be appointed to militia corps as formerly, but in any case our correspondent had better wait upon events.

### CARE OF SAILORS' TEETH.

M.B., R.N. writes: Mr. Read's letter in the BRITISH MEDICAL JOURNAL of August 17th, in which he draws attention to the lack of provision in the army for the care of soldiers' teeth, is worthy of most serious consideration. We know what the "careful attention of the authorities" is worth in these matters. The Admiralty has made an advance (!) in this direction on a par with the War Office's resolve of the eleventh hour to provide for the care of 200,000 soldiers' teeth by engaging the services of four dental surgeons. It supplies a so-called "dental outfit" to its medical officers. Newly-entered naval surgeons go through a short course in dental surgery conducted by the surgeon borne for dental duties at Haslar Hospital. The fact that medical officers are so borne at the hospitals and depôts is proof that the Admiralty recognises the value of dental surgery in the navy. It probably further recognises that the procuring of qualified dentists for service in the navy would have to be preceded by a wholesale raising of the Medical Department to an equitable level; their alternative is to contravene the spirit of the Medical Acts and uphold dental quackery—in principle at least. The remedy is drastic, and goes by a harsh name; it is called "boycotting." It has succeeded in the R.A.M.C.; it is being applied to the navy, and signs of its success are not wanting. Until a Chamberlain has the shaping of our professional interests in the public services it is the only way.

### CIVIL SURGEONS IN SOUTH AFRICA.

A CORRESPONDENT writes that certain complaints of civil surgeons in South Africa call for remark. He states that civil surgeons get £1 per diem, £61 at the end of a year's service, 3s. per diem field allowance, and in some cases servant's allowance also; this totals £480 for one year's service. Where could a house-surgeon or physician to a hospital or a recently-qualified young medical man earn as much? If anyone has cause to grumble, it must be the volunteer medical officers, who left their practices and for patriotic reasons volunteered with men of their respective corps, receiving only the pay and allowances of their rank. Take the case of a lieutenant or captain of less than five years' service: Pay at the rate of £200 per annum, field and colonial allowance each 3s. per diem, and at the end of a year's service a gratuity of £100—total £405; and out of this he has to pay for uniform and outfit. The civil surgeon, with less expense, thus receives £75 a year more than the volunteer medical officer.

This information will be of use to several correspondents who wish to know the terms upon which civil surgeons are employed in South Africa.

### ARMY MEDICAL REFORM.

STREFFORD, writing from India, hopes that the new scheme of army medical reform will include the following: 1. A considerable increase of pay in the junior ranks in India. 2. Charge allowance be restored. 3. Home and foreign service equalised. 4. Study leave granted. 5. Promotion examination abolished, and post-graduate course substituted.

*** There is no promotion examination in the Indian Medical Service.

### THE ROYAL RED CROSS.

THE *London Gazette* of the 3rd instant announces that the King has been graciously pleased to confer the decoration of the Royal Red Cross on Mrs. Lucy Scott and Mrs. Mary Davis, in recognition of services rendered to the sick and wounded in the military hospitals and hospital ship in Natal.

### ROYAL ARMY MEDICAL CORPS.

ERRATUM.—In the BRITISH MEDICAL JOURNAL of May 25th, p. 1310, amongst the names of R.A.M.C. officers who have left hospital appeared the following: "Surgeon C. Mattie, Tasmanian Bushmen." It should be "Surgeon-Lieutenant C. Mattei, Tasmanian Imperial Bushmen."

## MEDICO-LEGAL AND MEDICO-ETHICAL.

### A RUSSIAN DOCTOR CHARGED WITH MANSLAUGHTER.

AN inquest, involving serious charges against a Russian homœopathic practitioner, was held by Dr. Wise, deputy coroner, at the Walthamstow mortuary on August 15th. According to a report which appeared in the *Leyton Times* for August 16th, an inquiry was made into the death of Donald Weightman, a child, aged seven months, the son of Alfred Weightman. It appeared that on July 24th the child was unwell, and on the following day, acting upon the recommendations of her friends, the child's mother took him to Mr. Tchertkoff, who kept a dispensary in Hoe Street, where she was given some medicine, and was told to bring the child again if he was not better on the following day. She did not bring the child again, but a few days later Mr. Tchertkoff called, and continued in attendance until August 12th, when the child died.

The mother, who gave evidence before the Coroner, said that she understood that the defendant was a qualified medical practitioner, and said that he had told her that he was qualified in Russia. The child's father, who was also called, said that when he asked the defendant for his qualifications, he had been handed a card on which was inscribed "Dr. Tchertkoff, L.C.M.," the last three letters being struck through.

Dr. Baxter, who was brought in by the defendant on the day of the child's death, said that he was not asked to prescribe for the child but simply to see it. He found it in a state of collapse, with a temperature of 102.5°. He subsequently refused to sign the certificate because he did not feel justified in doing so.

Robert Tchertkoff, the defendant, was next called. After describing how he had treated the child, he said that his qualification had been obtained at Kiev in 1878. He did not know whether it was registered, but was almost certain it was. By the Coroner: He had been in England for eight years, but had not yet applied to the General Medical Council. He said he had been practising for gain in this country since November, 1900, that very few patients died, and that if the case got serious he always called in another doctor.

In the course of his summing up to the jury, the Coroner said: "I have taken the trouble to inquire whether a Russian doctor's qualifications can be registered in this country and I find that they cannot. I am strongly of opinion that the defendant made no inquiries, because he knew the answer would be unfavourable....So far as the actual cause of of death is concerned, you are satisfied, but you must also consider whether there was anything besides that which contributed to the child's death. If in misrepresenting himself as a partially or properly qualified doctor, he was responsible in any way for hastening the death, then it

becomes a very serious matter, and you must consider it very carefully. If anyone contributed to another's death it is more than simple neglect, and amounts to manslaughter. You have to consider whether the defendant was in a position to prescribe, and if he took the responsibilities of prescribing, whether he did not also become responsible for the termination of his treatment....The law does not allow anyone to misrepresent himself as a medical man, and so impose upon the public who are unable to find out whether he is qualified or not." The jury retired to consider their verdict. On their return the Foreman said: "The unanimous verdict is that the death was accelerated by the improper treatment of Mr. Tchertkoff, who practises, not being a medical man, and knowing well that such practice is illegal."

The Coroner: That amounts to a verdict of manslaughter.

The Foreman: That is the unanimous opinion of the jury, Sir.

Tchertkoff was committed for trial.

On August 23th the defendant was brought before the magistrates at the Stratford Police Court, charged with the manslaughter of the child. According to a report which appeared in the *Morning Advertiser* for August 26th, the solicitor who appeared to prosecute on behalf of the Treasury, after describing the evidence which had been given before the Coroner, said that in his view the fact that other treatment might have prolonged the child's life was not sufficient evidence to convict the defendant of manslaughter. He then said that he did not intend to proceed further with the case. Mr. Eliot Howard (chairman) addressed some remarks to the accused. He said: The case will be dismissed, but I hope you will realise the serious position you have placed yourself in, and refrain from practising as a doctor without the necessary certificate.

The prisoner was then discharged.

## CENSURES ON MIDWIVES.

THE *South London Press*, in its issue for August 24th, gives a report of an inquest held at the Camberwell Coroner's Court on the body of Rosetta H. H. Perrin, aged 32, who died from acute septicæmia, after her confinement. According to the evidence the deceased was confined on August 3rd, but medical assistance was not called in till the 16th, and she died in the Havil Street Infirmary on the 16th.

The midwife who attended the deceased, owing to ill-health, was unable to attend, but Dr. Keats, the Medical Superintendent of the infirmary, stated in answer to the coroner that he believed she was a properly-qualified midwife. The same witness further said that he believed the reason why midwives shrank from calling in doctors was that they feared to lose their patients. The coroner said there could be no doubt that a doctor ought to have been called in earlier, and that if the midwife acted in this way again she might find herself regarded as being concerned in causing the death of the patient. He hoped this would be a lesson to her.

The foreman of the jury expressed a hope that the coroner would severely censure her officially, and a verdict was returned in accordance with the medical evidence.

Again, in the *Newcastle Leader* for August 28th, there is a column headed, "'A Sugar and Water Diet'—Newcastle Midwife instructed at an Inquest." In this case there was shown lamentable ignorance on the part of the midwife of the first principles of infant feeding. She openly stated in court that she always ordered the babies she brought into the world to be fed for the first three days on sugar and water. The jury brought in a verdict of "Died from exhaustion due to want of sustaining food," which the coroner described as being against the midwife, and expressed an opinion that she was lucky not to be sent for trial.

Cases of this kind deserve special attention at the present time, when the question of the registration of midwives is being debated. The midwife in the first case was not a "Gamp," but, in the opinion of the medical witness, a fully-qualified midwife, and probably as capable a practitioner as is likely to be turned out under the training regulations of any of the Midwives Registration Bills that have hitherto been before Parliament. The fear of losing their patients if they call in a doctor, and so appear to the vulgar eye incompetent to perform their obstetrical duties, must tend to make midwives put off this unpleasant duty at all events to the last. Probably the chief coercing force which makes a midwife call in a doctor is the anxiety of the friends of the patient, who, knowing that the practitioner is only a midwife, insist on this step being taken. When she becomes a registered obstetrical practitioner this anxiety will not so readily arise, and more discretion will be left to the midwife. Whether the fact of her registration under any of the proposed conditions will make her more worthy of it is another question, but there can be no doubt that it will put her in a much stronger position to defend her conduct when it is impugned.

## CHARGE AGAINST A DOCTOR DISMISSED.

ON August 14th Dr. Gordon Hogg held an inquiry at Acton into the death of Walter Smith, aged 3 weeks, the son of Rose Smith, of Beaulay Laundry. According to a report which appeared in the *Middlesex County Times* of August 17th the mother, who was called as a witness, said that the child was healthy at birth, but weak afterwards. Five or six days after birth she sent the child to Dr. Christie, because she thought it was tongue-tied. The doctor, she alleged, refused to perform the operation because no doctor had attended her at its birth. The Coroner: That is a serious accusation to make against a doctor. The Witness: That is what the young woman said whom I sent with it. The Coroner: We must go into this thoroughly; it is a very serious thing. Dr. Christie: That is my wish. The midwife (Mrs. Smith's mother) who attended her in childbirth was next called. She said that she had advised her daughter to have the child operated on. When the young woman who brought the child to the doctor returned, witness was informed that the doctor would not operate because the child was not tongue-tied. The Coroner: Did she say anything to the effect that he would not attend it because it was not attended by a doctor at its birth?—Yes. You said just now that he said it was not tongue-tied, so do not you think that very foolish?—Yes. Dr. Christie was next called. He attended the child at its death. He emphatically denied the charge made against him. He was of opinion that the story had been made up since the case had been in the coroner's hands. The jury expressed themselves satisfied and returned a verdict in accordance with the medical evidence, at the same time exonerating Dr. Christie from all blame.

We heartily congratulate Dr. Christie on having cleared himself from the vile charge trumped up against him. It seems to have been made with the sole object of injuring him, as the incident had nothing whatever to do with the cause of the child's death.

## MEDICAL PRACTICE BY COMPANIES.

THE question of the legality of a dental practice being carried on by lay proprietors through the medium of a qualified officer was again raised at Bow Street on August 21st.

Helen Georgina Eskell-Paget, of 151, Strand, W., was summoned under the Dentists Act of 1878 for carrying on the business of a dentist not being registered as required by law. According to the report in the *Times* of August 22nd it appeared that the husband of the defendant, Edward Eskell-Paget, a registered dentist, had some years before carried on a dentist's business in conjunction with his brother. In 1896 he withdrew from the firm, giving a covenant not to practise within half a mile of the old premises. This covenant he has recently violated by opening another dental establishment at 151, Strand, and an injunction had been obtained by his brother against him from the High Court. Thereupon he turned his business into a company, with his wife as manageress.

For the defence it was pleaded that the defendant had nothing to do with the professional part of the business, which was conducted by a fully qualified dentist. On the other side, Mr. Turner contended that the General Medical Council could not possibly have any control where professional businesses were carried on without any registered proprietors.

Mr. Marsham considered that an offence had been committed, and fined the defendant 5 guineas with 3 guineas costs, to be reduced to 2s. if there were no appeal.

It cannot be doubted that much harm both to the public and to the medical and dental professions is caused by the present unsettled state of the law in this matter, and the withdrawal of the Lord Chancellor's recent Bill was a public misfortune. It is obvious that the control exercised by the General Medical Council over any practitioner must always be illusory if the latter, when closely pressed in his personal capacity, is able to step out of it, and put in its place the figment of a public company, of which he is merely a subordinate officer.

## PARTNERSHIP ARRANGEMENTS

A CORRESPONDENT asks the following question: A., B., and C. were partners, sharing alike. The partnership ceased by lapse of time at the end of 1900, and A. retired from practice altogether. B. and C. continued the partnership. In 1901 it was discovered that the dispenser had robbed the firm of £200, some £85 of which was for work done in 1900. Are B. and C. responsible for the third share of this £85 to A.? No arrangement was made with regard to the collection of A.'s share. Nearly all the money was stolen during 1901, and the dispenser was engaged by A. at the beginning of 1900.

*** This question is not free from difficulty. On the facts given we fear that B. and C. are liable to make good A.'s loss.

## CHEMISTS AND PRESCRIPTIONS.

A CORRESPONDENT writes that he gave a prescription to a chemist for a lotion some time ago, and owing to its effect on his patient he had occasion to doubt whether the lotion had been properly dispensed. On asking the chemist for his prescription he was told that it had been destroyed, but was shown a copy of it in the chemist's daybook. Our correspondent found that according to this entry the lotion had been made exactly double the strength he ordered. He states that his patient has been permanently injured by using the lotion, and he wishes to know what redress he has against the chemist. The Pharmaceutical Society have declined to interfere.

*** It is the patient and not the doctor who appears to be the chief sufferer, and the former might bring an action for damages against the chemist, who might have some difficulty in making a jury believe that the entry in his daybook was an accurate copy of the doctor's prescription, after his destruction of the latter. If the doctor could prove actual damage to himself from the chemist's mistake, he might also sue him, but unless the patient brought his action against the doctor instead of the chemist, and recovered damages, it would not be easy to do so.

## EMPLOYMENT OF UNQUALIFIED ASSISTANTS.

ENQUIRER writes that in his neighbourhood a practitioner employs a medical student to attend midwifery, prescribe when he is not in, and even to visit patients at their own homes. He wishes to know if the General Medical Council will move in the matter on being informed of the facts, or whether there is any society that would bring the matter before the Council, or whether the medical men of the district would have to take an active part in bringing him before it.

*** The employment of an unqualified medical student as described by our correspondent is altogether forbidden by the General Medical Council, and, if that body were informed of the facts and furnished with proper evidence as to their accuracy, it would no doubt see into the matter. Either of the Medical Defence Unions would also investigate the matter if it were brought to their notice. The medical men of the district might be required to give evidence as to the truth of some of the allegations.

A CORRESPONDENT writes to complain of the conduct of a neighbouring practitioner who keeps an unqualified assistant, and permits him to

visit and attend patients. He further states the evidence on which he has come to this conclusion.

*** Our correspondent should bring the facts under the notice of one of the medical defence societies, which would no doubt look into the matter.

## FEES TO MEDICAL WITNESSES IN SCOTLAND.

F. E. M. writes: A Scotch practitioner living in a country town, was twice precognosced—once by a local lawyer, and again by an Edinburgh lawyer - in a case which was about to be tried in the Court of Session. Both lawyers represented the plaintiff; the inquirer had been her medical attendant. The case went to proof, and the medical attendant was an important witness. He received £2 2s., and 15s. or so for travelling expenses. He was absent from work from 9.45 A.M. till 9.40 P.M. He sent an account for the two precognitions to the local law agent, charging 10s. 6d. for each. The local agent writes: "We have been advised that it is not usual to pay any witness for the time occupied in taking his precognition, all that he is entitled to being his fee for attending as a witness." Is this so? Could one decline to be precognosced until a fee were paid? The practitioner was called to give medical evidence.

*** We understand that it is the custom for professional witnesses to get paid for the time spent in getting precognosced. Any person can decline to be precognosced, but if cited cannot refuse to attend a court, and as the fact that the witness had refused to be precognosed would probably be brought out, it would lessen the value of his evidence. It is not unusual for medical men to inform the agent that it would be more satisfactory to give a written report, which, if necessary, could be supplemented by a precognition.

## CONSULTATION FEES.

W. B. H. sends us the following case for an opinion: A. is in attendance on a patient for a considerable time, but towards the end the patient's friends desire another practitioner, B., to be associated with A. This is done, and at the termination of the attendance A. sends in his account, charging double his usual fee for that portion of the attendance during which B. was associated with him. The friends of the patient demur to this. Are such charges usual?

*** After B. was associated with A. each time A. saw the patient it was in effect in consultation with B. It is a well recognised rule that a practitioner may charge a higher fee for seeing a patient in consultation than when he sees him alone. No fixed scale can be laid down as to the amount of increase of fee for consultation, but we believe that many practitioners charge double their ordinary one.

## FEE FOR INSURANCE EXAMINATION.

R. F. C. writes that an agent of an insurance society for which he is in the habit of examining applicants recently brought him a case. He carefully examined the man and filled in his paper, and only omitted completing it in order to gain information on one or two points in his family history which the latter promised to furnish him. He has since discovered that the man has gone away and cannot be traced. Can he claim any fee for this examination?

*** According to this statement the examination was not complete, and it is to be feared that no fee can be claimed. Even were our correspondent in a position to claim a fee, it would be a questionable policy to do so under the circumstances.

## A QUESTION OF AN ADVERTISEMENT.

CAMP asks if there would be any impropriety in advertising (1) in the public press, (2) in medical journals as follows:

"Open-air treatment encampment in ..... district. For particulars apply to (1) the lay manager, (2) the medical manager (the latter not being resident, but only financing and generally managing the matter)."

*** There appears to be nothing unethical in advertising the fact of the existence of such an institution, and the terms on which patients are received, but no names of medical practitioners ought to appear on the advertisement.

## ADVERTISING QUACKS.

A CORRESPONDENT sends us a cutting from a paper with an advertisement of an "oculist and aurist" whose name does not appear in the *Medical Register* for 1901, and asks if there are no societies for dealing with such quacks.

*** Such cases have frequently been brought before the medical defence societies, and attempts have more than once been made to put the law into force, but with only partial success. Until the present Medical Acts are amended, there is little chance of dealing successfully with this evil.

## PAROCHIAL MEDICAL OFFICERS AND LUNACY CERTIFICATES IN THE ISLANDS OF SCOTLAND.

A.M.—Owing to the vague terms of our correspondent's appointment it is difficult to decide what the "£2 10s. for lunacy" includes. It would be advisable for him to consult the Local Government Board on the subject, and if their opinion was favourable to his contention, then to approach the parish council. It would be well also to find out what is the usual practice in other parishes.

## REPURCHASE OF PRACTICE.

X. Y. asks for our opinion on the following: A. sells his practice to B., who in turn sells it to C. After a lapse of ten years, A. returns, and buys back the practice from C. Is A. justified in calling upon all those who were originally his patients, and trying to get them back again, regardless of the fact that some of them have become the patients of other doctors since he left the district?

*** Certainly not. A. cannot buy back his original practice; he merely purchases C.'s practice, and has no greater rights than those possessed by any other purchaser of the same practice. As it is not unlikely that some of A.'s old patients might return to him, when they find he has come back again, it is incumbent on A. to abstain from doing anything that might look like an attempt on his part to induce them to leave their present doctors.

## WORKMEN'S COMPENSATION ACT.

SEVERAL correspondents ask whether under the extension of the Workmen's Compensation Act, which came into force on July 1st last, doctors who keep gardeners and coachmen will be subject to its provisions.

*** This question, which is of importance to many members of the profession, is not altogether free from doubt. The Workmen's Compensation Act, 1900, was enacted to extend the advantage given to certain workmen by the Act of 1897 to workmen in agriculture. Section 1 makes that Act apply to the employment of workmen in agriculture by any employer who habitually employs one or more workmen in such employment. Section III expressly says that "agriculture" includes "horticulture, forestry," etc., so that gardeners would appear to come under the Act. In all cases to which the Act has hitherto applied the employers of the workmen have carried on a business or industry for profit, and it is to be presumed that the agriculture or horticulture defined in the extending Act is intended to be similarly carried on. If, therefore, a medical man or other person kept a gardener for the purpose of raising crops or fruit for the market, he would probably become an employer under this Act, but not so if the produce of the garden was only for his private consumption. This point, however, has not yet been decided. Coachmen do not appear to come under the provisions of the Act.

## A DOCTOR'S DUTY IN REGARD TO DEFECTIVE INFANTS.

A COUNTRY MEMBER writes: I recently delivered a lady after first use of instrument and then turning of a slightly hydrocephalic child. The child's heart was just beating, and I endeavoured by every means to restore it but failed. The father now says that as I knew it was hydrocephalic I exceeded my duty, and that I ought not to have endeavoured to restore it. The labour was a very bad one but the mother has made an uninterrupted recovery, although there was adherent placenta as well; I did not leave the mother for a moment, as I assisted by slapping the child with one hand whilst I kept the other on the mother's uterus, as I feared *post-partum* hæmorrhage which did come on. I have always in labours acted on the belief that medically and legally I was bound to save life if possible, but have always put the mother's life first. I shall be glad to learn whether my position was correct or not. Another point the father objects to is my having let him know the child was hydrocephalic, and that if it had lived it would probably have been an idiot; it seems to me that if I had not done so he might have accused me of causing the child's death with forceps. The father makes a point that no one would desire to have a hydrocephalic living child if it may live a few years; but this, though I agree with it, seems simply a question of sentiment, and does not affect the responsibility of a parent.

*** Our correspondent is right in thinking (1) that it was his duty to save life when possible; (2) that a reasonable husband and father would wish to know fully facts bearing on the health of his wife and children.

## SUDDEN DEATH WITHOUT INQUEST.

A CORRESPONDENT writes that a man aged 56, who had never previously been ill, did a day's work in the harvest field, went home as usual, had his tea, and went to bed. Next morning he was found dead in his bed. Nothing was known about him medically, and no inquest was held.

*** If the facts are as stated by our correspondent, it is certainly surprising that an inquest was not held.

## VACCINATION IN ONE PLACE.

M. R. T. writes that he was called to vaccinate a child, and after specially getting calf lymph for the purpose, on his arrival at the patient's house he was dismissed because he refused to vaccinate only in one place. On making a charge for his visit, payment was refused on the ground that the patient had called in another doctor, who had vaccinated in one place as required. Can he recover his charge?

*** Our correspondent would not be wise to carry his case into the county court. The defence would probably be that our correspondent refused to vaccinate the child as desired, and the evidence of the practitioner who vaccinated in the one place would be that there was nothing unreasonable in the defendant's request. It is sad to think that any practitioner can act in a manner so contrary to medical ethics. He must be aware of the comparative futility of the one-spot vaccination, unless the area is made equal at least to that covered by three or four ordinary inoculations.

### DOCTORS' NAMES IN DISPENSARY REPORTS.

A CORRESPONDENT sends us a copy of the report of the Committee of the Worksop General Dispensary and Victoria Hospital for 1900-01, and complains of the publication of the names of the doctors in the return of cases treated at the hospital. He asks if this is not objectionable. The following is an example of the return:

| Name. | Sex. | Residence. | Date of Admission. | Date of Leaving. | Doctors. | Results. | Remarks. |
|---|---|---|---|---|---|---|---|
| M. W. | F. | —Lane. | June, 1901. | July, 1901. | Brown. | Cured. | Operation. |

*** The column headed "Doctors" is certainly unusual in such returns, and is open to more than one objection. In addition to the charge made against the practice by our correspondent, it tends to make an unjust and invidious distinction between the officers of the hospital by drawing attention to the "results" in their particular patients. It might often happen that Jones's results were not nearly so good as Brown's, or *vice versâ*, where the bad results were in no sense due to the fault of the officer. It is to be hoped that the Committee of the Worksop Dispensary will see their way to omit this column from their next report, as it is difficult to see that it can serve any good purpose.

### ATTEMPT TO FORCE A CONSULTATION.

INTERFERENCE writes that he has attended a coachman's daughter for some weeks with subacute rheumatism, and that recently the coachman's mistress has telegraphed and made an appointment with her own doctor to meet him in consultation about the patient without asking his permission or referring to him at all. A little later he received a telegram from the lady saying that the consultant would meet him at a certain time at the patient's house, which is four and a-half miles from his own residence. Both parents and patient are averse to having another opinion forced on them. Is he right in refusing to meet this second doctor?

*** Our correspondent is perfectly justified in refusing to meet a consultant under the circumstances he details; but he should telegraph so as to save the consultant an unnecessary journey, and write to him courteously explaining his reason for refusing to meet him.

### ADVERTISEMENTS FOR RESIDENT PATIENTS.

A CORRESPONDENT draws attention to the following advertisement: "A hospital surgeon retiring from private practice, and living in a health resort in the West of England, and whose wife is a qualified midwife, and ex-matron of a midwifery institution, receives patients. Apply," etc.,

*** It is not unusual for medical practitioners desiring resident patients to advertise their willingness to receive them, taking care that no names are published. The above advertisement appears to be one of this nature.

### MEDICAL ADVERTISING.

ANTIHUMBUG.—A correspondent draws attention to a paragraph in a London suburban newspaper describing a successful operation for the removal of a piece of shell from the thigh of a soldier returned from South Africa, in which the names and addresses of the surgeons who performed the operation are given. The South African war has led to a good deal of professional advertising, part of it inevitable and natural, much of it probably due to enterprising reporters, for which the medical men concerned must not be held responsible. While we deprecate such publicity, we do not feel able to suggest a remedy (1) in the absence of direct evidence of personal responsibility for these announcements, and (2) the example set in the highest quarters of the profession. It is difficult to blame Smith, M.R.C.S., for an obscure notice that he has successfully operated upon John Jones, when all the papers announce that Brown, F.R.C.S., has performed a similar operation successfully upon His Grace the Duke of Ditchwater.

### PRACTITIONER AND *LOCUM TENENS*.

PRINCIPAL asks if he is obliged to pay for an unlimited amount of drink consumed by his *locum tenens*, and other extravagance practised by him during his absence on holiday. If this were the only annoyance he would put up with it, but he finds that his work has been generally neglected. He asks if there is no way of calling to account these gentlemen, who undertake the work of medical men for gain and so often leave the patients to get well as best they can.

*** It is to be feared that our correspondent has no resource but to pay the expense incurred. It is his duty, however, to warn the agent, if the *locum tenens* was introduced by one, of the way he has been treated.

### RATES AND RENT IN PARTNERSHIPS.

A CORRESPONDENT asks whether in partnerships between medical practitioners it is customary for the house rents or rates in connection with both partners' dwellings to be paid out of the proceeds of the practice, before the same are divided, or whether each partner has to pay his house rent and rates out of his individual income.

*** Where the practice is carried on at the house of each partner, it is not unusual for a portion of the rent, etc., of each house, proportionate to the number of rooms, etc., required for the practice, to be put down with the other business expenses; the difference only being paid by each partner out of his private income. This is a matter which usually is, and always ought to be, settled in the deed of partnership.

### SHARE OF PROFITS IN PARTNERSHIP.

C.P. asks for information on the following points: (1) A. buys a third share of a practice. Does that entitle him to a proportionate share of all accounts owing at the time of purchase? (2) B., who already has a third share, increases it to one-half. Does he divide all debts owing to the practice at that date equally with his partner, or only take a third of them and one half of all contracted since?

*** (1) A. is only entitled to a third share of profits on work done after he became a partner. (2) Similarly, B. can only claim half a share of profits on work done after the purchase of the half share of the practice.

# PUBLIC HEALTH
## AND
# POOR-LAW MEDICAL SERVICES.

### HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,525 births and 4,750 deaths were registered during the week ending Saturday, August 24th. The annual rate of mortality in these towns, which had been 22.4, 22.1, and 21.3 per 1,000 in the three preceding weeks, rose again last week to 21.6 per 1,000. The rates in the several towns ranged from 14.3 in Huddersfield, 14.4 in Bristol, 14.8 in Cardiff, and 16.3 in Croydon, to 27.5 in Salford, 28.5 in Newcastle, 29.1 in Sunderland, and 30.2 in Gateshead. The mean death-rate in the thirty-two large provincial towns was 23.2 per 1,000, and exceeded by 4.0 the rate recorded in London, which was 19.2 per 1,000. In the thirty-three large towns the zymotic death-rate averaged 7.5 per 1,000; in London this death-rate was equal to 4.6 per 1,000, while it averaged 8.7 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 11.3 in Leicester, 11.6 in Manchester, 11.7 in Sunderland, 12.1 in Hull, 12.7 in Salford, and 15.6 in Gateshead. Measles caused a death-rate of 1.2 in Salford, 1.9 in Birkenhead, and 2.5 in West Ham; scarlet fever of 1.1 in Wolverhampton and 1.2 in Blackburn; whooping-cough of 1.7 in Swansea; and diarrhœal diseases of 10.1 in Salford, 10.4 in Manchester, 10.8 in Hull, 11.0 in Sunderland, and 14.6 in Gateshead. In none of the thirty-three large towns was the death-rate from "fever" equal to 1.0 per 1,000. The 58 deaths from diphtheria in the large towns included 27 in London, 6 in Leicester, 4 in Salford, and 3 in Leeds. No fatal cases of small-pox was registered last week in any of the thirty-three large towns; the number of small-pox patients under treatment in the Metropolitan Asylums Hospitals, which had been 13, 11, and 13 at the end of the three preceding weeks, had further increased to 41 on Saturday, August 24th: 30 new cases were admitted during that week, against 4, 3, and 8 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of that week was 3,040, against 3,148 and 3,101 on the two preceding Saturdays; 273 new cases were admitted during that week, against 391, 306, and 300 in the three preceding weeks.

In thirty-three of the largest English towns, including London, 6,247 births and 4,613 deaths were registered during the week ending Saturday last, August 31st. The annual rate of mortality in these towns, which had been 21.3, and 21.6 per 1,000 in the two preceding weeks, declined again to 21.0 per 1,000 last week. The death-rates in the several towns ranged from 12.0 in Bristol, 13.8 in Swansea, 15.1 in Cardiff, and 15.9 in Halifax, to 27.7 in Manchester, 28.5 in West Ham, 29.3 in Hull, 30.2 in Newcastle, and 32.1 in Gateshead. In the thirty-two large provincial towns the mean death-rate was 22.5 per 1,000, and exceeded by 3.9 the rate recorded in London, which was 18.6 per 1,000. The zymotic death-rate in the thirty-three towns averaged 6.9 per 1,000; in London this death-rate was 5.3 per 1,000, while it averaged 7.8 in the thirty-two large provincial towns, among which the highest rates were 11.6 in Croydon, 12.1 in Hull, 12.4 in Preston, 13.2 in Gateshead, and 13.4 in West Ham. Measles caused a death-rate of 1.1 in Wolverhampton and in Sheffield, 1.2 in West Ham, and 1.9 in Oldham; whooping-cough of 1.0 in Plymouth and 1.2 in Newcastle; "fever" of 1.1 in Nottingham; and diarrhœal diseases of 10.7 in West Ham, 10.8 in Croydon, 11.0 in Hull, 11.5 in Preston, and 12.3 in Gateshead. In none of the thirty-three large towns was the death-rate from scarlet fever equal to 1.0 per 1,000. The 50 deaths from diphtheria in these large towns included 22 in London, 4 in Liverpool, 4 in Sheffield, and 3 in Birmingham. Seven fatal case of small-pox were registered last week in London, but not one in any of the thirty-two large provincial towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals, which had been 11, 13, and 41 at the end of the three preceding weeks, had further risen to 74 on Saturday last; 52 new cases were admitted during the week, against 3, 8, and 30 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 3,008, against 3,148, 3,101, and 3,040 on the three preceding Saturdays; 303 new cases were admitted during the week, against 300, 290, and 273 in the three preceding weeks.

### HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, August 24th, 956 births and 566 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.8, 19.2, and 19.0 per 1,000 in the three preceding weeks, further declined to 17.8 per 1,000, and was 3.8 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14.4 in Paisley and 14.5 in Aberdeen to 18.4 in Glasgow and 20.6 in Dundee. The zymotic death-rates in these towns averaged 3.9 per 1,000, the highest rates being recorded in Dundee and Greenock. The 271 deaths registered in Glasgow included 8 from measles, 6 from whooping-cough, 4 from "fever," and 45 from diarrhœa. Two fatal cases of measles, 2 of "fever," and 11 of diarrhœa were recorded in Edinburgh. Twenty deaths from diarrhœa occurred in Dundee, 5 in Aberdeen, 5 in Leith, 4 in Greenock, and 2 in Perth.

During the week ending Saturday last, August 31st, 916 births and 555 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 19.8 to 17.8 per 1,000 in the four preceding weeks, further declined to 17.4 last week, and was 3.6 per 1,000 less than the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 7.9 in Perth and 14.9 in Aberdeen, to 18.8 in Edinburgh and 22.8 in Paisley. The zymotic death-rate in these towns averaged 1.7 per 1,000, the highest rates being recorded in Dundee and Paisley. The 257 deaths registered in Glasgow included 12 from measles, 3 from whooping-cough, 7 from "fever," and 34 from diarrhœa. Three fatal cases of whooping-cough, 2 of "fever," and 16 of diarrhœa were recorded in Edinburgh. Two deaths from whooping-cough and 14 from diarrhœa occurred in Dundee; 2 from whooping-cough, 2 from "fever," and 6 from diarrhœa in Paisley; and 4 from diarrhœa in Leith, 3 in Aberdeen, and 3 in Greenock.

### DIPHTHERIA ANTITOXIN IN THE CHELMSFORD DISTRICT.

AT a recent meeting of the Chelmsford Rural District Council Dr. J. C. Thresh, the Medical Officer, reported that during the previous month 42 cases of diptheria had been notified in the district. In one village where it had assumed epidemic proportion of 44 cases 22 had been treated with antitoxin without one death and 22 without antitoxin with three deaths. As a prophylactic, antitoxin had been used in only 3 families, and among these only one person had an attack which was very mild, and as it came on very soon after the injection it was clear that the child had been incubating the disease when the preventive was injected.

### POOR-LAW MEDICAL OFFICER'S CLAIM FOR SUPERANNUATION.

WE see by the Nantwich *Guardian* that Dr. Thomas Moreton, who had been a medical officer in the Northwich Union for upwards of forty years, and who resigned his appointment in February last, has now written to the guardians to claim his pension of £85 per annum, to which he says he is entitled under the Poor-law Officers' Superannuation Act, 1896. This request of Dr. Moreton appears to have come under the notice of the Northwich Board of Guardians at their meeting held on August 9th, and the clerk on being questioned as to the legality of Dr. Moreton's claim did not hesitate to inform the Board that he was entitled to the pension he asked for, and that the guardians were bound by law to pay it. This statement, however, even when supported by the chairman, did not appear to satisfy the majority of the Board. Some guardians put forward as one reason for resisting payment the fact that on Dr. Moreton's resignation they had elected to the vacant office a gentleman who had succeeded him in his private practice on some very indistinct understanding that if so elected Dr. Moreton's pension would not be claimed. In answer to a question put by one of the guardians, however, no one was prepared to say that Dr. Moreton himself had ever been heard to express himself to that effect. The Chairman pointed out that Dr. Moreton had complied with the requirements of the Superannuation Act, and he did not see how the guardians could evade their liability in regard to his pension. It was further explained by the Clerk that when the guardians were about to fill up the vacancy occasioned by Dr. Moreton's resignation, he himself told them that they ought not to be influenced in their voting by any rumour which might have reached them in reference to Dr. Moreton's pension not being claimed. One member of the Board expressed the opinion that any such opposition to the payment in question would place the Board in a very undignified position, and if payment should be declined on the ground last referred to, he thought it would be very near bribery and corruption, as they were not justified in entertaining any such terms.

An interesting fact was elicited during the discussion of this question, namely, that by the contributions of the different officers of the Northwich Union a sum of £262 had accumulated, and that up to the present time no pension had been claimed; and, further, that the clerk believed that the contributions to the fund would in the future be sufficient to meet the requirements of the Act. The Northwich Guardians appear to have had this request of Dr. Moreton under consideration a second time, as it is reported that at their last meeting a resolution was passed by a large majority for the payment to be again deferred. We feel that very little need be said by us in support of Dr. Moreton's claim for superannuation; it is little short of ridiculous for the Northwich Guardians to contend that, if it is admitted, his pension will have to be paid out of the Poor-rate—this not being at all likely, as there is every reason to believe that the contributions paid will be sufficient for the purpose. Even, however, if such should not be the case, the common fund of the Union will not be seriously taxed, but may have to make up some slight deficiency. The guardians should be reminded that before the Superannuation Act came into operation Dr. Moreton did not contract himself out of its provisions, as he might then have done if he had wished, but instead of doing so he has contributed towards superannuation for upwards of four years past; and not one of the guardians objected to taking charge of the contributions paid quarterly by Dr. Moreton to the common fund of the Union for the express purpose of enabling him to claim a pension whenever the provisions of the Superannuation Act enabled him to do so. We should be sorry to think that there are other Boards of Guardians who would hesitate to acknowledge such a claim as this when made by an officer of forty-two years' standing. If the Northwich Board does not comply with Dr. Moreton's request we have no doubt his solicitor will find it an easy task to get a legal decision in his favour; we cannot see that the Guardians will have any defence whatever if legal action should be commenced against them.

### THE "CONSCIENTIOUS" OBJECTION.

DR. COLIN CAMPBELL (Saddleworth) writes: Antivaccinators have found in the "conscientious" objection clause an easy means of evading an important sanitary law. To most objectors the word "conscientious" means about as much as that "blessed word Mesopotamia," but to mouth it answers the purpose, and the author of the phrase remains to be blessed. Magistrates are easily satisfied. Occasionally one is found who also has a conscience. Colonel Sidebottom appears to object to being made a fool of. I enclose report.

*** The report states that, at the Stalybridge Police Court recently, Colonel Sidebottom declined to accept the mere statement of an applicant for a certificate of exemption that he had a conscientious objection. When asked if he thought vaccination would be injurious to his child, the applicant applied in the affirmative. Pressed by Colonel Sidebottom to state what grounds he had for this belief, the applicant said he had a brother who "was all right up to vaccination, but he was taken poorly and all the flesh came off his bones and he died." Asked if the medical man in attendance said this, the applicant answered that he did not know what he said. Colonel Sidebottom thereupon intimated that he was not satisfied with the application, and refused to sign a certificate of exemption.

# UNIVERSITIES AND COLLEGES.

### SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, August, 1901.—The following candidates passed in:

*Surgery.*—J. C. Baggs (Section II), St Thomas's and Westminster Hospitals; P. C. Burgess (Section II), Middlesex Hospital; D. Fletcher, St Bartholomew's Hospital; F. I. M. Jupe, Cambridge; G. J. W. Keigwin, (Sections I and II), London Hospital; E. R. Risien (Section II), St. Bartholomew's Hospital; W. B. Skelton, Guy's Hospital; M. J. Williams, St. Bartholomew's Hospital.

*Medicine.*—J. W. W. Adamson (Section I), St. George's Hospital; J. H. Beasley (Sections I and II), Birmingham; R. C. Bennett, University College Hospital; C. E. H. Leggatt (Sections I and II), St Mary's Hospital; E. T. Longhurst, St. George's Hospital; D. J. Morgan (Sections I and II), St. Mary's Hospital; E. Osborne (Sections I and II), Birmingham; J. E. Skey (Section II), Westminster Hospital; A. W. D. Thomson, St. George's Hospital; P. P. Tobit (Section II), King's College Hospital.

*Forensic Medicine.*—J. W. W. Adamson, St. George's Hospital; R. C. Bennett, University College Hospital; H. A. Chaplin, St. George's Hospital and Glasgow; C. E. H. Leggatt, St. Mary's Hospital; E. T. Longhurst, St. George's Hospital; D. J. Morgan, St. Mary's Hospital; E. Osborne, Birmingham; A. W. D. Thomson, St. George's Hospital; P. P. Tobit, King's College Hospital; S. C. Wilkinson, Leeds.

*Midwifery.*—R. C. Bennett, University College Hospital; T. S. Davies, St. George's Hospital; J. W. H. Morrison, Durham; E. S. Perkins, Leeds and Guy's Hospital; R. Rees, Cambridge and St. Mary's Hospital; S. C. Wilkinson, Leeds; F. W. B. Young, Leeds.

The diploma of the Society was granted to J. C. Baggs, E. T. Longhurst, D. J. Morgan, J. W. H. Morrison, E. S. Perkins, E. R. Risien, W. B. Skelton, A. W. D. Thomson, and M. J. Williams.

# MEDICAL NEWS.

THE sixtieth session of the School of Pharmacy, Bloomsbury Square, will open on October 1st, at 3 P.M., when the inaugural address will be delivered by Dr. Arthur T. Luff, of St. Mary's Hospital.

M. ANTOINE MARIE BRÉMOND has bequeathed his fortune, exceeding £40,000, for the foundation of a wet-nursing institution for the children born in the maternity departments of the hospitals of Lyons.

YELLOW FEVER IN CUBA.—At the end of the first week in August there were only 5 cases of yellow fever in Cuba, a state of things never before approached.

PASTEUR INSTITUTE, CHARKOFF.—In 1895 the Pasteur Institute, Charkoff, sold 59,267 doses of antidiphtheria serum at a profit of nearly £2,500. The expenses of the Institute amounted to about £4,200, while the income was about £6,680.

THE MEDICAL PROFESSION IN GERMANY.—According to the official *Reichsanzeiger*, the number of candidates who passed the State Examination for the licence to practise medicine in Germany in the year 1899-1900 was 1,384, being an increase of 20 as compared with the previous year.

NOBEL PRIZES.—Two Nobel prizes, each of the value of 200,000 kroner (something over £11,000), have been awarded to Professor Niels R. Finsen, Director of the Light Institute, Copenhagen, for his work in connection with the light treatment of lupus; and to Professor Pawlow, of St. Petersburg, for his researches in regard to nutrition.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE.—The Honorary Secretary of the Liverpool School of Tropical Medicine has received from the Colonial Office a letter in which Mr. Chamberlain expresses his appreciation of the continued efforts which are being made by the Liverpool School of Tropical Medicine to discover means of improving the conditions of health in British tropical colonies.

ACCIDENT TO A PHYSICIAN.—We regret to learn from the *Cornish Telegraph* of August 29th that a serious accident recently befell Dr. Domett Stone at Penzance. When seated in a carriage at Causewayhead, an infuriated bullock charged the vehicle and succeeded in getting his fore legs inside, with the result that Dr. Stone, who had risen to ward off the attack, was thrown out, turning a complete somersault, and alighting on his head. Fortunately the fall was broken by his body coming into contact with the side and wheel of the carriage. When taken up he was insensible and bleeding profusely from a wound on the head. He also sustained other injuries. He is, however, making satisfactory progress under the care of Dr. Russell Phillips.

## MEDICAL VACANCIES.

The following vacancies are announced:

BRITONAL GREEN ASYLUM. Assistant Medical Officer. Salary at the rate of £ per annum, with board, lodging, and washing. Applications to the Medical Superintendent at the Infirmary, Cambridge Road, N.E.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL.—House Surgeon. Salary £ per annum, with board, lodging, and washing. Applications to the Secretary by September 16th.

BIRMINGHAM GENERAL DISPENSARY. Resident Surgeon; unmarried. Salary, £ per annum and £ per annum for cab hire, with furnished rooms, etc. Applications to the Secretary by September 9th.

BOSTON AND SOUTH LINCOLNSHIRE ASYLUM. Junior or Assistant Medical Officer. Salary £ per annum, with board, furnished apartments, etc. Applications to the Medical Superintendent by September 19th.

BRENTWOOD, ESSEX COUNTY ASYLUM. Assistant Medical Officer: not under years of age. Salary £ per annum. Applications to the Medical Superintendent.

BRIDGEND, GLAMORGAN COUNTY ASYLUM. Assistant Medical Officer. Salary, £175, with board, lodging, etc. Applications to Medical Superintendent, by September 12th.

BRIGHTON, HOVE AND SUSSEX EYE BOAT AND EAR HOSPITAL. Non-resident Surgeon. Appointment for one year, but renewable. Salary at the rate of £ per annum. Applications to the Secretary.

BRISTOL MEDICAL MISSIONARY ASSOCIATION. Assistant Secretary. Young Medical Man. Salary £ per annum and lecture fees, with board and furnished room. Applications to Dr Ridge, Carlton House, Bristol.

CAIRO: KASR-EL-AINY HOSPITAL AND SCHOOL OF MEDICINE.—Physician to Hospital. Appointment for three years. Applications to Director, General Sanitary Department, Cairo, Egypt.

ARGYLL ASYLUM, [illegible]. Assistant Medical Officer, unmarried. "Gaelic" [illegible]. Applications to the Medical Superintendent.

ARGYLL AND BUTE ASYLUM, [illegible]. Assistant Medical Officer, to act as House-Physician for the second six months. Salary £ per annum. Applications to Secretary by [illegible].

BELFAST INFIRMARY. House Surgeon. Salary £100 per annum, with board, lodging, and washing. Applications to the Secretary, Infirmary, Belfast.

BLYTH AND DISTRICT INFIRMARY. Salary £ per annum, with board, lodging and washing. Applications to the Secretary.

BOLTON, WESTHOUGHTON AND LITTLE LEVER JOINT ASYLUM. Second Assistant Medical Officer. Salary £ per annum, with board, washing, etc. Applications to the Medical Superintendent, Bolton.

BRADFORD, YORKSHIRE. Dental Surgeon. Applications to the Secretary of Infirmary.

BRISTOL ROYAL INFIRMARY. Medical Officer for the Out-patient Department. Salary at the rate of £ per annum. Applications to the Secretary by September 16th.

CLAYBURY ASYLUM, Epsom. Assistant Medical Officer. Salary £ per annum, with board, lodging, washing, and attendance. Applications to the Medical Superintendent, Clayton Asylum, Epsom.

CLEVELAND ASYLUM, Middlesbrough. Assistant Medical Officer. Salary £ per annum, with board, lodging, and washing. Applications to the Medical Superintendent, West Rounton Manor, Grayston, by Northallerton.

COUNTY ASYLUM, [illegible]. Assistant Medical Officer. Salary £ per annum, with board, lodging, and washing. Applications to the Secretary by September 16th.

DARLINGTON MEMORIAL HOSPITAL. House Physician and House Surgeon. Appointments for six months from October 1st. Salary at the rate of £ per annum, with board, lodging, and washing. Applications to the Secretary by September 16th.

DERBY COUNTY AND BOROUGH ASYLUM. Assistant Medical Officer. Salary £ per annum, with board, lodging, and washing. Applications to the Medical Superintendent, Derby.

DEVON COUNTY ASYLUM, Exminster. Assistant Medical Officer. Salary £ per annum, with board, lodging, washing, etc. Applications to the Medical Superintendent, Exminster, Devon.

DEVONPORT AND EAST STONEHOUSE DISPENSARY. Assistant Medical Officer. Salary £ per annum, with board, lodging, and washing. Applications to the Secretary by September 16th.

DUNDEE ROYAL INFIRMARY. Assistant Medical Officer. Salary £ per annum, with board, lodging, and washing. Applications to the Secretary.

EAST SUSSEX COUNTY ASYLUM, Hellingly. Second Assistant Medical Officer. Salary £ per annum, with board, lodging, washing, and attendance. Applications to the Medical Superintendent.

EDINBURGH DENTAL HOSPITAL AND SCHOOL. Dental Surgeon. Salary £ per annum. Applications to the Secretary to Committee.

EDINBURGH ROYAL INFIRMARY. Medical Officer for the Out-patient Department. Appointment for a period of six months approved service. Applications to the Secretary by September 16th.

GLASGOW ROYAL INFIRMARY. Lecturer in Medicine and Surgery. Salary £ per annum. Applications to the Secretary, Royal Infirmary, West Rounton Manor, Grayston, by Northallerton.

GLASGOW ROYAL MATERNITY AND WOMEN'S HOSPITAL. Assistant Physician. Appointment for one year. Salary at the rate of £ per annum with board, lodging, and washing. Applications to the Secretary by September 16th.

GLASGOW ROYAL NORTH-WESTERN HOSPITAL. House Physician and House Surgeon. Appointments for six months. Salary at the rate of £ per annum with board, lodging, and washing. Applications to the Secretary.

GLASGOW VICTORIA INFIRMARY. Assistant Surgical Officer. Appointment for one year. Salary at the rate of £ per annum, with board, lodging, and washing. Applications to the Secretary by September 16th.

HALIFAX ROYAL INFIRMARY AND DISPENSARY. Medical Superintendent. Applications to the Secretary.

HAMPSTEAD GENERAL AND NORTH-WESTERN HOSPITAL. Assistant Physician. Appointment for one year. Salary at the rate of £ per annum, with board, lodging, and washing. Applications to the Secretary by September 16th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton. Assistant Physician. Appointment for one year. Salary at the rate of £ per annum, with board, lodging, and washing. Applications to the Secretary by September 16th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C. Assistant Physician. Appointment for one year. Salary at the rate of £ per annum, with board, lodging, and washing. Applications to the Secretary by September 16th.

HOSPITAL FOR WOMEN, Soho Square, W. Assistant Physician. Appointment for one year. Salary at the rate of £ per annum, with board, lodging, and washing. Applications to the Secretary by September 16th.

HOSPITAL FOR WOMEN, Soho Square, W. Assistant Surgeon. Appointment for one year. Salary at the rate of £ per annum, with board, lodging, and washing. Applications to the Secretary by September 16th.

HOSPITAL FOR WOMEN, Soho Square, W. Dental Surgeon. Salary £ per annum. Applications to the Secretary by September 16th.

HOSPITAL FOR WOMEN, Soho Square, W. Medical Officer for the Out-patient Department. Salary at the rate of £ per annum, with board, lodging, and washing. Appointment for a period of six months approved service. Applications to the Secretary by September 16th.

HOSPITAL FOR WOMEN, Soho Square, W. Medical Officer for the Electrical Department. Salary at the rate of £ per annum, with board, lodging, and washing. Appointment for a period of six months approved service. Applications to the Secretary by September 16th.

HOSPITAL FOR WOMEN, Soho Square, W. Medical Officer for the Electrical Department. Salary at the rate of £ per annum, with board, lodging, and washing. Appointment for a period of six months approved service. Applications to the Secretary by September 16th.

HOSPITAL FOR WOMEN, Soho Square, W. Medical Officer for the Out-patient

# LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private residence.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

## QUERIES.

MEMBER will be glad to know what cookery book gives the best recipes suitable for a chronic dyspeptic.

EUCAINE writes: Will any member oblige by informing me whether it is practicable or advisable to perform circumcision in case of tight prepuce with local anæsthesia? If so, with what anæsthetic, how apply, quantity, etc.? Also does slitting the foreskin and mucous membrane to the base of the glans not give sufficiently good results in the long run through contraction without removing a ring of tissue? Is it possible for the patient to go out a little the following day to attend to some urgent business?

M. M. would be glad of any information of a boys' school in the North of England where special attention is given to the treatment of stammering. The boy is 10 years old and stammers badly.

CAROLUS would be grateful if any reader could inform him of a home where a neurotic lady of limited means could be received for a course of Weir-Mitchell treatment.

PARENS would be grateful to any member who would inform him of a London hospital where a student could, for a moderate fee, receive instruction in Clinical Medicine and Surgery, together with residence. The pupil has passed all the necessary examinations, except the last for Medicine and Surgery, to qualify him for practice.

SCOTUS writes: I have had two examples of milk in the breasts of male infants in my practice lately. Unfortunately one or other of them goes on to suppuration usually. Has any member like experience? and why should the breasts of the very young male take on this function of secreting milk?

MARS would be most grateful for hints as to outfit and clothing and general equipment for his son, who will shortly sail for South Africa to join his regiment as a subaltern. The regiment has been much in action, and the boy will probably join the mounted infantry section out there. Suggestions for avoiding the prevailing diseases, and as to the value of the flannel body belt, would be most welcome.

NIGGER wishes to know: (1) Conditions of service and rate of pay for district surgeons in Natal, South Africa; (2) books specially suitable for practitioners in Natal.

DR. A. HEYS (Colne) asks for information as to any line of shippers willing to take an epileptic girl, aged 17, who has had no fits for nine months, and who is willing to do work in return for assisted passage to and from Australia. Sailing ship preferred.

DELTOID writes: Can any reader tell me of any book or books on rheumatoid arthritis, author's name, and by whom published?

M.B. would be grateful for information as to any institution for the training and treatment of a boy, aged 15 years, who is mildly idiotic. He can do housework in a way. His parents are not by any means in affluent circumstances. The father is a gamekeeper and could not afford to pay more than 8s. a week.

COTSWOLD wishes to know of a cheap, small, and compact book on urine analysis, containing illustrations of casts, crystals, and other microscopical appearances found in urine.

GONOCOCCUS would be obliged for information from any readers of the JOURNAL who have had any experience in the treatment of gonorrhœa with cedar wood oil as a substitute for sandal wood oil. He has tried it in three cases, in all of which the gonococcus was demonstrated by microscope. In two of those cases the result has been quite equal to, if not more rapid than, that with sandal wood oil. The trial being so limited he would be glad to have further experience, also any information as to published matter treating of the therapeutic value of cedar wood oil.

PILGRIM will be grateful for information as to the best means of arranging a series of twelve lectures on ambulance work which he has been requested to deliver to a large class of young men. Further, what books on the subject would be of any service to him?

A. S. H. would be glad if any reader could tell him if hypnotism has ever been tried as a treatment for "epilepsy," or of any books in which reference is made to it.

### CANCROIN.

A CORRESPONDENT is anxious to learn what results have been achieved from the use of cancroin for cancer of the uterus. Also whether it has been tested in England, or any English physician who can speak as to its value.

### NAUHEIM AT HOME.

PERPLEXED writes: Could any reader kindly give full directions as to management of a cardiac case at home—the number and constitution of the baths, when the carbonic acid is added, and other essential details? Would the fact of patient having had syphilis be a contra-indication to the treatment? Does the treatment predispose to aneurysm in patients who have suffered from specific disease? Is it necessary for the subject of treatment to remain indoors during course of baths, etc?

### HARVEST BUGS.

J. S. C. writes: I should be very grateful if any member could give me information about "harvest bugs." I am spending my holiday in the country, where my wife and sister have been almost driven mad and a great deal of their pleasure destroyed by their being bitten by what everyone tells us are "harvest bugs." There is no insect discoverable in the clothes, and they seem to choose the spots where there is any constriction in the clothing for their attack. The bite first causes a wheal, afterwards developing into a slightly raised yellow vesicle, giving rise, especially at night, to intense itching, continuing on and off for some days. The bites seem to have a tendency to spread in bands round both the trunk and the limbs. Do these pests exist only in cornfields? Is there any known preventive, and what is the best treatment for the bites? I have tried sprinkling the clothes with oil of eucalyptus, and the application which seems to give most relief, which, however, is only very temporary, is a mixture of hazeline and eucalyptus.

### HETOL IN TUBERCULOSIS.

T. T. H. would be glad to be referred to the literature of hetol in tuberculosis, its method of administration, and directions as to dosage (English).

*** The hetol treatment of tuberculosis was first introduced by Landerer, who published an account of his experience in his book, *Die Behandlung der Tuberculose mit Zimmtsäure* (The Treatment of Tuberculosis by Cinnamic Acid, Leipzig, 1898). He added in 1901 to the literature of the subject an article in the *Berliner Klinik* (March), Krämer (*Therap. Monats.*, September, 1900, and *Würthemb. Med. Korresp.*, No. 5, 1901), Krompecher (*Ann. de l'Inst. Pasteur*, October, 1900), Pollak (*Wien. klin. Woch.*, No. 9, 1901), Haentjens (*Ned. Tijdschr. voor Geneeskunde*, No. 3, 1901) Munn (*Zeitsch. für Tuber. u. Heilstätten.*, Bd. i, Heft. 6), Finkelstein (*Vratsch*, 1901, No. 5), Pidionsen (*Arch. f. klin. Med.*, Bd. 69), Hoedlmoser (*Wien. klin. Woch.*, No. 9, 1901), Kuhn (*Münch. med. Woch.*, March, 1901), Schroeder (*Zeitsch. für Tuber.*, Bd. ii, Heft. 2), and Guttmann (*Berl. klin. Woch.*, July, 1901) have contributed articles on the subject. Landerer advises its use as follows: Chemically pure hetol (cinnamate of sodium) is dissolved in sterile water to the strength of 1 and 2 per cent. The solution must be aseptic and slightly alkaline. At first he injects $\frac{1}{12}$th grain of the salt (=1m. of 1½ per cent. sol.) into a suitable vein, with every precaution once a day. He gradually increases the dose to ½ gr. (=10m of 2 per cent. sol.) carefully watching the temperature, which should not rise after the dose, while loss of appetite, *malaise*, etc., indicate that the dose should not be raised for a time. The injections are made with a small glass hypodermic syringe.

## ANSWERS.

O. G.—Mont-Dore has a great reputation for asthma, and is most frequently successful in those cases complicated by chronic bronchial catarrh. O. G. might consult "The Mineral Waters and Health Resorts of Europe," by Sir H. Weber and Dr. Parkes Weber (second edition, Smith, Elder, and Co.).

VERAX.—The address of the Medical Defence Union is 4, Trafalgar Square, London, W.C., Secretary, Dr. A. G. Bateman. The address of the London and Counties Medical Protection Society is 12, New Court, Lincoln's Inn, London, W.C., Secretary, Dr. Hugh Woods.

MORPHIA.—The licence of the Apothecaries Society is a registrable qualification, and confers on the holder of it all the rights and privileges appertaining to such qualification.

OMEGA.—As far as we are aware the light treatment has not been employed for the destruction of superfluous hair. On the contrary, it has been used by Bie and others with some success for the restoration of hair in alopecia areata.

W. M. M. J.—1. If the surface of the milk is freely exposed to the air a skin forms at temperatures exceeding 60° C. It probably consists of dried proteid, coagulated and non-coagulable, in which globules of fat are entangled. In the absence of fat, it has been recently shown, no film forms (*Journal of Physiology*, September, 1901, page 26). 2. In a general way the answer to this question should be in the affirmative. A wide-spread epidemic involving all kinds of persons, at various ages, and yet in all cases mild, can only be explained on the supposition that the virulence of the infecting agent is attenuated or of a low standard, and *vice versâ*. But in small epidemics and in individual cases there are many other contributing influences at work affecting the degree of virulence, for example, quantity of infection as well as quality, the power of resistance of the individual, etc. A reliable standardisation of the degree of virulence of pathogenic micro-organisms is a bacteriological problem for the future.

### SMOKING IN HOSPITAL WARDS.

J. T. W (Barrow-in-Furness).—The custom in regard to permitting smoking among patients in the wards varies in different hospitals. In some it is permitted every evening for a limited time even by those confined to bed, in others, probably in the majority, it is only permitted on special occasions, such as during Christmas festivities. Any objection that could be raised would probably have less force in respect of surgical than medical wards. The chief objection under the circumstances mentioned would probably arise from the individual discomfort of any particular patient who disliked smoke or smoking.

### MEDICAL SCHOOLS IN THE UNITED STATES.

G. P. (Hallaton).—There are no medical schools in Nevada, South Dakota, or Wyoming, but in Nebraska there is the Lincoln Medical College at Lincoln, and the Creighton Medical College and the Omaha Medical College of the University of Omaha, at Omaha.

### THE DESTRUCTION OF WEEDS.

TENERIFFE writes: In answer to "G. P.," in the BRITISH MEDICAL JOURNAL of August 10th, p. 388, I beg to state that a saturated solution of sulphate of copper will kill weeds and prevent their reappearance for two years, in my experience.

## LETTERS, NOTES, Etc.

### EDUCATIONAL NUMBER; CORRECTIONS.

*University of London.*—A correspondent writes to point out that in the Educational Number of the BRITISH MEDICAL JOURNAL, published on August 31st, the account of the subjects for the Matriculation Examination does not make it clear that a candidate may select a second optional language or an optional science, but not both.

*University of Birmingham.*—The Dean of the Faculty of Medicine, Professor Windle, M.D., F.R.S., calls attention to the fact that the University of Birmingham is not mentioned among the places where women can receive medical education and degrees. The degrees and courses of instruction of the University are open to men and women alike.

*University College, Sheffield.*—The Dean of the Medical Department, Dr. W. T. Cocking, calls attention to the omission of the College from the list of institutions published at p. 561, in which lectures and laboratory instruction are given for the D.P.H., and from the list of dental schools published at p. 569.

[We have much pleasure in rectifying these accidental omissions.]

### THE PROSPECTS OF THE PRACTITIONER.

ONE OF THE LESS FORTUNATE writes: Your optimistic article on "The Prospects of a Practitioner" contains a statement, a comparison, and an allusion that give an incorrect impression. It states that the Council has expressed disapproval of men taking office under "co-operative friendly societies." When did the Council condemn a mere union of clubs that does not tout for members and that does not put money in the pockets of laymen? You hold that such an appointment is slavery. Well, any doctor may be a slave to his patients; but that is his own look-out. You contrast the position of an assistant. The advantages of such a post depend upon the qualities of the parties to the contract. I have held that position, and have been medical officer to a club union. The latter position is preferable. One has regular work and really perfect independence. The few patients that are not considerate are easily taught to be so; night work hardly exists, and a message out of hours is rare. Other advantages are—no dispensing and a minimum of book-keeping. The position is not an ideal one, nor is that of the struggling practitioner without private means. It is not fair for your article later on to allude to "a commercial company." United clubs are not that.

### A CASE OF ADDER BITE.

DR. J. GOOD (Stockport) writes: I should like to thank Mr. J. H. Watts for his report on a case of "adder" bite, and agree with Dr. Gerald Leighton (BRITISH MEDICAL JOURNAL, July 27th) that hitherto our literature upon the subject has been very meagre indeed. I am of opinion that it is the bounden duty of medical gentlemen to report as fully as possible all cases of unusual occurrence or interest. I cannot understand from Mr. Watts's letter how his patient was bitten on the tongue. I am aware that member bears an ill-Biblical-repute, and have been told that the "serpent" entertained an embodiment of His Satanic Majesty. Yet, I believe this was but a temporary arrangement, and I do not think would have any influence nowadays. I should like to hear how the bite occurred. Last month I received a "viper" (I prefer this name) taken near Rugeley, Staffs, that would be, I think, within twenty miles of Burslem, where Mr. Watts's patient was bitten.

### "A CASE IN WHICH TRACHEOTOMY WAS PERFORMED TWICE IN THE ADULT."

DR. J. STAVELEY DICK (Manchester) writes, with reference to a case which appeared under the above heading in the BRITISH MEDICAL JOURNAL of July 20th, that the missing fragment of tube has been coughed up. It measures ¾ in. in length.

### ROYAL FREE HOSPITAL.

IN a paragraph which appeared in the BRITISH MEDICAL JOURNAL of August 24th, p. 450, it was stated that Mr. Peregrine Purvis had given £100 to the Royal Free Hospital. The amount of the donation was £1,000.

LETTERS, COMMUNICATIONS, ETC., have been received from

**A** Dr. C. MacA. Allan, Longton; Dr. F. H. Alderson, Bournemouth; **Alpha**; Dr. P. H. Aberromb e, London; Dr. F. P. Atkinson, Kew; A. S. H.; Antitoxin. **B** Brevet; Mr. G. H Broadbent, Manchester; Mr. P. Y. Byrne, Chesterton; Borax Consolidated Limited, Manager of, London; Mr. L. A. Bidwell, London; Mr. H. B. Bell, London; Dr. R. D. Batten, Brixham; Mr. C. A. M. Bailey, Guildford; Dr. J. Q. Bown, London; Dr. J. H. Battersby, Doncaster. **C** Mr. C. Campbell, Saddleworth; Country Member; Sir C. A. Cameron, Dublin; A. M. Corthorn, M.B., Bombay; Carolus; Civil Surgeon; C. M.; C. P.; Dr. J. F. Craig, Birmingham; C liery Surgeon; Dr. J. L. Cuppaidge, Totnes; Cotswold; Dr. J. B Coombe, Lowestoft; Mr. M. J. Chevers, Huddersfield. **D** Dr. E. W. Diver, Shotley Bridge; D. Douglas-Crawford, M.B., Liverpool; Mr. D. J. Drake, Dibrugarh; S. Delépine, M.B., Manchester; Dispensary Doctor; Dr. L. Drage, Hatfield; Deltoid; Mr. C. de la Court, Mulbarton; Dr. E. Deanesly, Wolverhampton Delta; A. G. Dutt, M.B., Hull; Dr. A. Duke, Cheltenham. **E** Eucaine; Eyemes; Enquirer; E. D. J. **F** Dr. W. T. Freeman, Reading; Dr. H. Ferguson, Edinburgh; F. E. M.; Dr. A. R. Friel, Waterford; Dr. P. J. Freyer, Oban; Dr. W. F. (Farquharson, Carlisle; Dr. W. Soltau Fenwick, London; Dr. W. T. Freeman, Reading; Mr. P. J. Freyer, London. **G** Mr. E. Gooch, London; Dr. W. H. Gilbert, Baden Baden; Mr. E. P. Gilbert, Stoke-on-Trent; L. D. Gamble, M.B., Abergavenny; Dr. H. Gladstone, London; Dr. P. Gardiner, Camborne; Mr. R. Ghosh, Calcutta; Dr. J. C. Gooding, Cheltenham; Glasgow; Gono-coquette; A. S. Green, M.B., Reading; Dr. R. M. Gibson, Hong Kong; Mr. O. Gwatkin, Grange-over-Sands. **H** G. E. Herman, M.B., London; Dr. G. S. Hatton, Newcastle-under-Lyme; F. W. E. Hutchison, M.B., Kelvedon; Dr. S. Harris, Guimar; Mr. H. E. Haynes, Bedford; Dr. C. E. Hoar, Maidstone; J. B. Hall, M.B., Bradford; Mr. S. P. Hosegood, North Walsham; Dr. W. S. Hedley, London; H. A. D.; A. Heys, M.B., Colne; Mr. D. Hadden, Wexford. **I** I. M. S.; Inference. **J** Mr. L. A. Johnson, Normanton; J. L. J.; J. S. C.; R. Johnson, M.B., London; Mr. G. S. Jones, Horsham. **K** Dr. L. Knuthsen, Shifnal; Mr. W. J. C. Keats, London. **L** Dr. R. F. Licorish, Barbodos; C. J. N. Longridge, M.B., Lowestoft; Mrs. G. Lock, Tenby. **M** Messrs. A. Marshall and Co., London; Member; B. Meakin, M.B., London; M. M.; Messrs. Meyer and Meltzer, London; M.B., R.N.; Dr. J. Murphy, Sunderland; Mars; D. S. Macdonald, M.B., Jura; Merphia; M.B.; A. Murchison, M.B., Uig; M. R. T.; Dr. A. Mackinnon, Guelph; W. P. Montgomery, M.B., Manchester; Mr. C. Mattei, Green Point, S.A.; Dr. D. McKenzie, Leytonstone; A. A. Mackeith, M.B., Southampton; Dr. C. J. Macalister, Liverpool; A Member. **N** Naval Surgeon; Nemo; Naval Medical Officer; Nigger; Nevin. **O** Omega; Opsimathes; Mr. J. E. O'Sullivan, Liverpool; One of the Less Fortunate. **P** Mr. S. Paget, London; F. M. Pope, M.B., Leicester; Principal; Parens; Perplexed; Mr. W. B. Pearsall, Dublin; Dr. J. C. Potter, London; Mr. G. H. Pinder, Manchester. **R** Dr. Rowland, Lichfield; Mr. S. Ryan, Sheffield; R.A.M.C.; Mr. W. A. S. Royds, St. Mary Bourne; R. K.; W. Ramsden, M.B.; Oxford; R. F. C. **S** W. A. Stephen, M.B., Loftus Sigma; Senior Surgeon, R.N.; A. F. Shoyer, M.B., Lancaster; Sussex; Scotus; Saloumfac; Mr. J. F. Steedman London; Dr. W. D. Stone, Penzance; Dr. E. M. Skerritt, Clifton. **T** T. F. L.; Dr. E. Thompson, M.P., Omagh; Mr. A. M. S. Turner, Hove; T. T. H.; J. H. Thornton, M.B., Hove; Dr. W. H. Thompson, Donaghadee; Dr. E. E. Taylor, Sheffield; Mr. J. J. Tisdall, Liverpool; Typhoid; Mr. M. R. Taylor, South Petherton. **V** Vitalia Limited, Manager of, London; Vermiform; Veritas. **W** W. B. H.; Mr. O Wattenbach London; Dr. A. McC. Weir, Liverpool; Dr. N. Walker, Edinburgh; Mr. J. R. Williamson, Guildford; W.; Mr. W. R. Williams, Machynlleth; W. R. G. H.; Mr J. A. Whitty, London; Mr. B. Watson, M.B., Northampton; Mr. W Wilson, Dublin; Dr. W. B. Warrington, Liverpool.

## BOOKS, ETC., RECEIVED.

Lessons on Massage. By Margaret D. Palmer. London: Baillière, Tindall and Cox. 1901. 7s. 6d.

Atlas and Epitome of Ophthalmoscopy and Ophthalmoscopic Diagnosis. By Dr. O. Haab. Edited by G. E. de Schweinitz, A.M., M.D. London and Philadelphia: W. B. Saunders and Co. 1901. 13s.

The Pathology and Treatment of Sexual Impotence. By Y. G. Vecki, M.D. Third Edition. London and Philadelphia: W. B. Saunders and Co. 1901. 8s.

Bacteriology and Surgical Technique for Nurses. By E. M. A. Stoney. London: London and Philadelphia: W. B. Saunders and Co. 1900. 5s.

Modern Obstetrics. By W. A. N. Dorland, A.M., M.D. Second Edition. London and Philadelphia: W. B. Saunders and Co. 1901. 10s.

Practical Surgery. By N. Senn, M.D., Ph.D., LL.D. London and Philadelphia: W. B. Saunders and Co. 1901. 25s.

The Science of Sex. By J. A. Godfrey. London: University Press. 1901. 10s. 6d.

La Cellule et les Tissus. Par N. Lewenthal. Basle and Geneva: Georg and Co. 1901.

Rhinology, Laryngology, and Otology, and their Significance in General Medicine. By E. P. Friedrich, M.D. Edited by H. H. Curtis, M.D. London and Philadelphia: W. B. Saunders and Co. 1900. 10s.

The Illustrated Medical Dictionary. By W. A. N. Dorland, A.M., M.D. Second Edition. London and Philadelphia: W. B. Saunders and Co. 1901. 19s.

La Peste Bubonique dans la République Argentine et au Paraguay. Rapport par Dr. L. Agote et Dr. A. J. Medina. Buenos Aires: F. Lajouane. 1901.

Points of Practical Interest in Gynæcology. By H. Macnaughton-Jones, M.D., M.Ch.Q.U.I. Second Edition. London: Baillière, Tindall, and Cox. 1901. 4s. 6d.

A Treatise on Materia Medica and Therapeutics. By R. Ghosh, L.M.S. Vol. I. Calcutta: Hilton and Co. 1901. 2s. 6d.

Physical Measurements of the Sailor. By Staff Surgeon C. M. Beadnell. London: John Bale, Sons, and Danielsson. 1901.

Guide to the Microscopic Examination of the Eye. By Professor R. Greef. Translated from the Second German Edition by H. Walker, M.A., M.B., C.M. London: Rebman, Limited. 1901. 5s.

The Sanitation of British Troops in India. By Major E. C. Freeman, R.A.M.C. Second Edition. London: Rebman, Limited. 1901. 2s. 6d.

The Theory and Practice of Medicine. By H. W. Syers, M.A., M.D. Vol. I. London: Rebman, Limited. 1901. 15s.

The Life-History of British Serpents. By G. R. Leighton, M.D. London and Edinburgh: W. Blackwood and Sons. 1901.

*** In forwarding books the publishers are requested to state the selling price.


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# OBSERVATIONS
ON
# BLACKWATER FEVER.

By Surgeon-Major F. K. KLEINE,
Assistant in the Royal Institute for Infectious Diseases, Berlin.

During his stay in 1897 in German East Africa, which was occupied with the investigation of a plague-like disease that had broken out in that region, Robert Koch turned his attention also towards other infectious diseases, especially malaria and blackwater fever. In a report[1] dated March 2nd, 1898, he asserted that blackwater fever was not a special form of malaria, but a quinine intoxication. After his return, Koch found on looking through the literature of the subject that he was not alone in his opinion, but that similar views had been published here and there for some years. It appears as if a Greek physician, S. Verétas[2] had first observed and reported hæmoglobinuria in a malaria patient after the use of quinine in the year 1858. Konsolas, Papavassiliou, Karamipas, and others[3] confirmed the assertion. But above all the credit is due to the Italian Tomasselli[4] of having in 1874 convincingly shown the dangerous toxic action of the "chief of all remedies." His demonstration and those of his pupils are throughout adequately proven. Of German physicians, F. Plehn[5] in particular has issued a warning against the use of quinine in blackwater fever, and has shown with examples how simple fever may be converted into hæmoglobinuric by this means. Nevertheless, with the exception of Tomasselli, the above-named authors, and indeed the majority of tropical physicians, regard quinine as at most one cause of blackwater fever; they hold that strain, chill, fatigue, excesses, psychical excitation, acute rheumatism,[6] specific disease germs, and many other causes can likewise evoke hæmoglobinuria. R. Koch, on the other hand, regards the black urine as chiefly and preponderantly a direct consequence of the use of quinine, without at the same time denying that in many cases one remedy or another or even some other cause can produce hæmoglobinuria. Moreover, he does not accept Yersin's bacilli[7] or F. Plehn's parasites.[8] On the heels of Koch's publication followed numberless assaults, especially in English journals. One author[9] expresses the wish that Koch had kept his unproved theory to himself and points out the great harm which it has ostensibly caused. A second[10] regards the view that quinine is the cause of the melanuria in the absence of any scientific proof as a simple superstition on the level of the innumerable errors regarding diseases, etc. These opinions can be explained as the result of a superficial knowledge of Koch's arguments. Cases are frequently appealed to in which the patients took quinine "not abundantly or not more than ordinarily," and yet were attacked by blackwater fever and the authors thus forget that such histories support Koch, who has never maintained that it is necessarily only large or unusual doses of quinine which lead to melanuria. Dr. Crosse[11] most of all mistakes the question at issue. He considers the quinine theory completely erroneous, because he has never seen anyone develop melanuria during a course of quinine prophylaxis.

In opposition to these numerous objections and misapprehensions Koch lays down his views in a comprehensive paper.[12] He shows:

1. That malaria parasites are very often absent in blackwater fever.

2. That when they are present their number bears no relation to the hæmoglobinuria, as it should on the analogy of Texas fever.

3 That malaria with very numerous parasites may occur without giving rise to hæmoglobinuria.

4. That an exact comparison between the attack of malaria and that of blackwater fever reveals quite essential clinical differences.

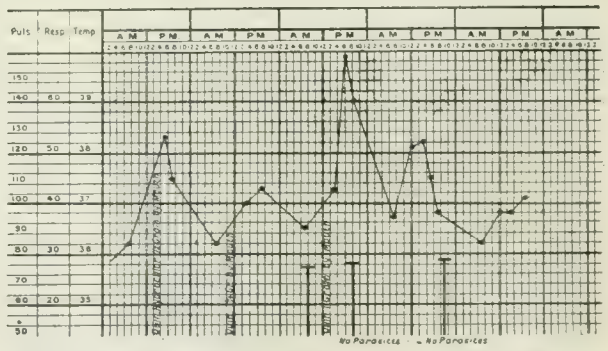
5. That blackwater fever may be associated with two[13] otally different kinds of malaria, namely, ordinary tertian and tropical fever.

These results, which were mainly obtained by systematic examination of the blood of 41 patients, prove that blackwater fever is not a variety of malaria. The true cause of the hæmoglobinuria was then convincingly demonstrated by the histories of 17 cases of malaria. It was invariably quinine which even in small doses after some hours evoked melanuria. The characteristic symptoms of the attack, high fever, rigors, and hæmoglobinuria, as well as nausea and vomiting can all be explained as consequences of the dissolution of red blood corpuscles. Exactly the same symptoms are observed after transfusion of blood from lower animals into man, since the red blood corpuscles of the one animal species are at once destroyed in the blood of another.

R. Koch hence recognises not a direct but only an indirect connection between melanuria and malaria. The latter is the predisposing while quinine is the exciting cause. On account of the definite geographical distribution of blackwater fever, it appeared not improbable that another hitherto not certainly determined factor must accompany the predisposing malaria. With regard to the factors involved in the question, more may be seen in the paper of Koch's already referred to. His hope that in the not far distant future careful etiological researches would certainly establish quinine in the minds of all as the most potent determining cause of blackwater fever has been only partially fulfilled. The sole sufficient contribution to the knowledge of the disease has been published by the Royal Society's expedition; the valuable results of this will be further referred to below. At the International Medical Congress in Paris, on the other hand, the onus was thrown, in addition to the influence of the precedent malaria infection, upon unfavourable hygienic conditions, such as want of comfort, alcoholism, and demoralisation. The infectious theory of the nature of bilious fever seemed also to have not yet been given up.

In these circumstances Herr Geheimrath R. Koch has requested me to publish the following 15 cases, histories which powerfully support his views. These histories are not in any way selected, but refer to all the patients suffering with melanuria who have been treated by Herr Geheimrath Koch himself since his last communication on the subject or concerning whom he has received information from trustworthy observers.

1.* C., merchant. First attack of fever, October 4th, 1899, after three weeks' stay in Stephansort. Relapse. Blood on January 8th, 1900, showed large tropical rings and half-moons. Quinine treatment. Later, on every ninth or tenth day a gram of quinine by the mouth. When the patient remained lastingly free from fever he took from the middle of March on only half a gram of quinine, and this dose irregularly. On April 2nd he felt ill and took a gram of quinine. Next day at noon he had a chill (38.5° C.); at 7.30 P.M. he took another gram of quinine. About midnight the patient awoke with a violent rigor, which lasted two and

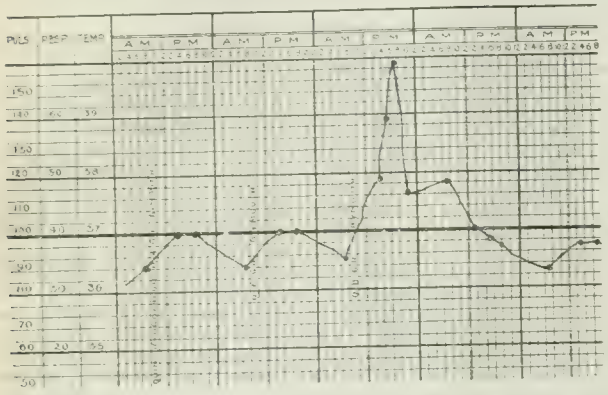



a-half hours, and was attended with vomiting. The urine passed next morning looked blackish-red; there was jaundice. During this day there were two more rigors, with vomiting. On the morning of April 5th the urine was somewhat clearer; nothing was found in the blood. The patient now took daily a small dose of quinine, beginning with a decigram by the mouth; the blood investigation remained negative, and the jaundice diminished. On April 14th he took a gram of quinine, and six hours later had a chill (39.9° C.). The urine passed in the night looked brownish, but contained no hæmoglobin; marked icterus. The dose of quinine was reduced to half and slowly raised. Gradual habituation to quinine followed without the recurrence of a blackwater fever attack.

2. W., machinist. Had first attack of fever, commencing without rigor and lasting only one day, twelve days after arrival in Friedrich-Wilhelmshafen. After the fall of temperature he took 1½ gram of quinine. Two days later he again had fever; he took another 1½ gram of quinine and

* All the histories relate to male patients between 22 and 40 years of age.

thereafter had fever about every eight days. From November, 1899, till the beginning of March, 1900, patient took as a prophylactic measure a gram of quinine every week. Then he stopped it, as the fever continued to recur in spite of everything. At 10.30 on the evening of April 6th, 1900, he felt ill and took a gram of quinine. Next morning he went to work, but was compelled to return home after half an hour on account of violent tinnitus aurium and vertigo. At 8 A.M. he had a severe rigor, with vomiting. The




urine was black, the temperature rose to 40.2° C. The patient was conveyed by boat to the hospital at Stephansort. On the way he micturated once, the urine being no longer black, but dark red. On his arrival (6 P.M.) he felt comparatively well, but had slight jaundice; examination of blood negative. On the night of April 7th-8th he had again suddenly a rigor and violent vomiting, and the urine became black. From April 12th on he took quinine in small but gradually increasing doses. On the 15th he had 0.8 gram by the mouth; in the afternoon he had chill, fever, brownish-black urine, and jaundice. After the urine had again become normal complete but still slower habituation to quinine was carried out.

3. (Personal observation by Surgeon-Major B.) During a stay of fourteen months in Togo had six attacks of fever (malaria tropica) while undergoing somewhat irregularly a prophylactic course of quinine. On September 22nd, 1900, felt ill and took in the morning ½ gram of quinine by the mouth. Three hours later had marked hæmoglobinuria which lasted four days, during which the hæmoglobin content of the blood sank to 38 per cent. Quinine treatment stopped. During the return journey to Europe there was another rise of temperature and ½ gram of quinine was taken as an experiment. Temporary hæmoglobinuria resulted. From February, 1901, onwards quinine in slowly increasing doses has been well borne.

4. O. G., officer, suffered for eight months in West Africa with fever about every four weeks, although he took half a gram of quinine every fifth day by way of prophylaxis. One evening he felt ill again, and on this account took next morning a whole gram of quinine instead of his customary half gram. Four or five hours later there was a rise of temperature to 40° C., and the urine was coloured with blood. Very slow convalescence, without the use of quinine. Return to Germany, and cure of the still persistent malaria with quinine, which was now well borne.

5. H., official, fell ill with fever after about eight months' stay in East Africa. Within eighteen months he had five malaria attacks of various duration which were treated with quinine. One evening he felt ill, and at 9 o'clock, before going to bed, took, for fear of a malaria attack, a gram of quinine. At 1 in the morning he was awakened by the need of micturition; he noticed a hæmorrhagic tint in the urine. The hæmoglobinuria lasted four days, during which he took no quinine. Three weeks later, on account of repeated attacks of fever, he had again recourse to the drug, but took only half a gram. Some hours later melanuria came on again with a rigor. He returned to Germany, and without quinine the attacks of fever completely subsided.

6. S., locksmith, after he had been three weeks in Cameroon, fell ill of fever which lasted four to five days, and was treated by a doctor with quinine. For prophylaxis he then took every fifth day half a gram of quinine. Despite this he had about six weeks later severe fever (no rigor) which lasted ten days. Later on he kept up the above-mentioned quinine prophylaxis for five months without escaping slight feverish attacks. After a rise of temperature to 41° C., the patient took next morning a whole gram of quinine, whereupon four hours later hæmoglobinuria supervened with a violent rigor. He returned to Europe, and was admitted into Koch's ward. The rings of tropical fever were found in the blood. Complete habituation to quinine was gradually established.

7. P., machinist, after living four weeks in Cameroon, was attacked with fever which set in without rigor, and was medically treated with quinine. Later on he took every fifth day for a year half a gram of quinine as a prophylactic, and then the same dose once a week. After the patient had followed this out for eight months he felt ill for some days, and without leaving off his work took accordingly half a gram of quinine; his temperature was then 37.5° C. Three hours later he could only pass a few drops of black urine. Severe rigors then set in, lasting four days at intervals of 12 hours. The urine retained its bloody appearance for two and a-half days. Convalescence occurred gradually, without the use of quinine. On the return journey to Europe the patient took a gram and a half of quinine in the course of five days, that is, 0.3 gram per diem. On this treatment the urine assumed, if not a bloody, at least a darker colour. Later on there was habituation to quinine.

8. P., a telegraph official, suffered during a stay of about five years in East Africa from numerous attacks of fever, returning at quite irregular intervals; they always came on with rigor, and were treated with quinine in doses of from half a gram to three grams a day. From time to time the patient also took quinine in uncertain doses as a prophylactic. One day, about two hours after taking a gram of quinine through feeling out of sorts, he suffered from melanuria. After the colour of the urine had remained quite light for some days the patient, on the advice of his doctor, again took a gram of quinine, with the result that six hours later the urine once more was of a hæmorrhagic tint. Later on quinine was for some months taken every third or fourth day in half gram doses as a prophylactic. Melanuria certainly did not occur, but the fever attacks still did not cease. Return to Europe. Treatment of the malaria attacks with ½ to 1 gram quinine, which ordinarily resulted in no unpleasant consequences. Only once was the urine dark again and the skin yellowish. The next time he felt ill the patient, accordingly, by the advice of his doctor took two grams of salipyrin. The next day the urine was tinged with blood, and in the following twenty-four hours became almost black. Splenic tumour; jaundice; tertian parasites in the blood.

9. S., station official, fell ill of tropical malaria after three months' residence in the Togo District. Quinine treatment. Four months later, having felt well during the interval, the patient, thinking that he felt the prodromata of a febrile attack, took a gram of quinine. Two hours later he had melanuria; the urine cleared up again after four days, within the space of about a year three attacks of blackwater fever followed. The bloody tinge of the urine occurred on each occasion about two hours after taking a gram of quinine; the temperature rose to 40.8 C. Return to Europe. After the last attack arsenical treatment.

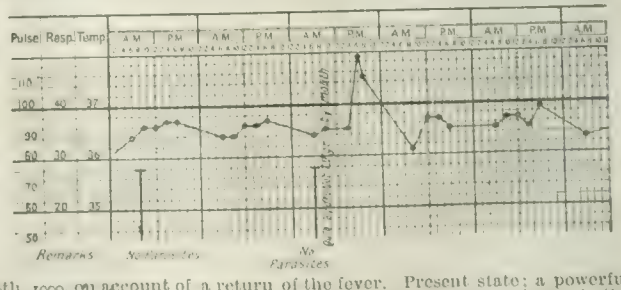
10. L., sergeant, was taken ill three weeks after his arrival in Cameroon with a rigor followed by fever for five days. Quinine treatment. Monthly slight febrile attacks. No quinine prophylaxis. After two years in the interior severe blackwater fever. Patient had on account of indisposition taken half a gram of quinine; half an hour later he lost consciousness, and remained insensible for six hours. Dark urine, then anuria for two days. From the fourth day on the urine gradually cleared up. He lay ill three weeks, and then went by train to the coast, and was taken into the Cameroon lazaretto. Here the patient received half a gram of quinine on account of a slight attack of fever. Directly after a rigor came on, and he lost consciousness; the temperature rose to 41.7° C. Camphor and ether injections. Protracted convalescence.

11. K., missionary, returned to Europe after staying four years in East Africa. In Africa he had repeatedly suffered from malaria tropica, and had treated it with quinine both therapeutically and, for a time, prophylactically. On the journey from the interior to the coast he apparently contracted a fresh infection, for after being in perfect health for a year he suffered on board ship from slight weekly fever. The attacks recurred in similar fashion in Germany as well. Here the patient once, after the temperature had fallen, took a gram of quinine, and for the first time suffered from blackwater fever. He had a rigor, and the temperature rose to 39.5° C.; the urine took on a dark hæmorrhagic coloration. The attack lasted three days and was repeated four weeks later. Patient had used half a gram of quinine as a remedy against neuralgic pains; three hours later the urine was bloody. The quinine treatment was countermanded.

12. (Personal observation by Surgeon Major H.). Repeated fever during two years in Dar-es-Salam. Irregular use of quinine. Arrived in Germany February 25th, 1901; last attacks on April 6th, 8th, and 10th. On April 11th patient felt indisposed, and at 10 A.M. took about 0.75 gram of quinine, repeating the dose at 3.30 P.M. Towards 9 o'clock in the evening a violent rigor came on again. Next morning the urine was of a blackish hæmorrhagic colour. The hæmoglobinuria continued for three days. In many preparations of the blood only quartan parasites of various generations were found.

13. Observation by Surgeon-Major Dempwolff. During a four years' sojourn in South-West Africa the missionary S. suffered on three occasions, the last in March, 1900, from blackwater fever, always consequent upon the use of quinine. Taken into hospital (Outyo) and treated with methylene blue; increasing failure of strength; tropical rings in the blood. On this account a further experiment with quinine was made on April 22nd, 1900; the patient received 0.3 gram by the mouth in the morning. Hæmoglobinuria at once set in and was followed by anuria. Death.

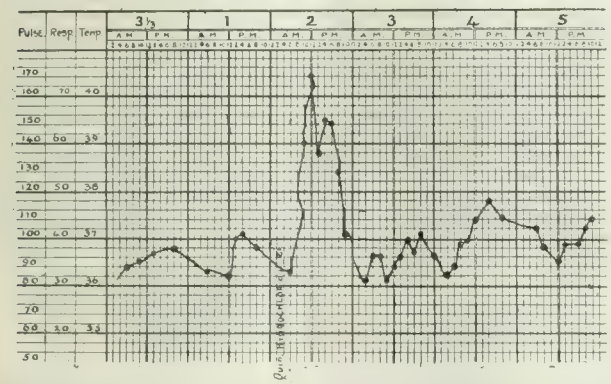
14. S., petty officer. During seven months in the interior of German East Africa seven attacks of fever (malaria tropica). Treated with quinine. The patient, to relieve a day's indisposition, took a gram of quinine hydrochloride and noticed two hours later that his urine was the colour of blood. Within five weeks this experience was repeated twice more. On each occasion the patient had previously taken a gram of quinine, as he believed he felt the signs of the onset of malarial fever. On the voyage home the patient suffered four times from fever without taking quinine; no melanuria. Admitted to Koch's wards on September




6th, 1900, on account of a return of the fever. Present state: a powerful man with faintly yellowish complexion, spleen palpable beneath the ribs. In the blood a few well-developed tropical rings, one half-moon. Nothing special in the urine. Temperature subfebrile. The patient was gradually accustomed to quinine. He received subcutaneously one-tenth gram of quinine hydrochloride, after some days one-fifth gram and so on. From September 27th on he had half a gram every seventh and eighth

day; temperature normal; no parasites remaining in the blood. As the patient wished to be discharged, and the continuance of the subcutaneous injections outside the hospital was inconvenient to him, he received on October 31st an experimental dose of a gram of quinine hydrochloride by the mouth. Eight hours later there was a rise of temperature; the urine was blood coloured; Heller's test gave a positive result. In the sediment were a few red blood corpuscles. Next morning the urine was clear. On November 8th half a gram of quinine hydrochloride was again given subcutaneously; no hæmorrhagic colour in the urine. If a gram of hydrochloride of quinine be given by the mouth when the stomach is almost empty about 30 per cent. (reckoned as anhydrous quinine) appears in the urine within twenty-four hours; of the half gram given subcutaneously only about 10 per cent. is thus recoverable. The quantity of quinine which our patient absorbed, and which caused his attack of blackwater fever, was thus six times as great as that which had previously been borne.

15. Observation by Dr. Nocht, Port Medical Officer at Hamburg. W., artisan. After three months' stay in Cameroon taken ill with remittent fever (apparently tropical). Patient was treated with quinine, and later on took every fifth day ½ gram as a prophylactic. Almost a year free from fever. On October 1st, 1900, a fresh attack of fever; took three times on successive days 1 gram of quinine. Four hours after patient had taken on the morning of October 7th ½ gram of quinine (again as a prophylactic) he was attacked with a sudden rigor, with violent illness and fever. The urine was at first dark-red like blood; later on, after patient had been taken into the lazaretto, it assumed a blackish-brown coloration. After two months' further treatment without quinine patient started on the homeward journey. On the steamer he once, about December 10th, took ½ gram of hydrochloride of quinine, which was followed next morning by an attack of blackwater fever. On January 4th, 1901, at Grabow (Mecklenburg), the patient's doctor gave him ⅓ gram of quinine on account of fever. Six hours later there was a typical blackwater fever attack with marked jaundice. Rapid recovery. On




March 12th he was taken into the Seamen's Hospital at Hamburg. Condition: A man of medium strength, no jaundice; striking anæmia of the skin: no fever, no œdema; liver slightly enlarged, spleen greatly enlarged. Blood examination showed 40 per cent. hæmoglobin, scattered large tropical rings and half-moons. In test tube experiments the blood of the patient dissolved quinine salts in the same concentration as normal blood. Nothing special in the urine. Treated with methylene blue. Since the presence of parasites in the blood continued the patient received at 8 o'clock on the morning of April 2nd, with his consent, a tenth of a gram of hydrochloride of quinine in a cachet. Two hours later the patient had a terrible rigor: he clung tight to the bed in order not to fall out. There was high fever: in the blood were a few large rings. He was collapsed in appearance, with rapidly increasing jaundice, violent vomiting, and a fluttering pulse. At 11 o'clock the urine looked ruby-red, and it soon became opaque. Heller's test for blood gave a positive result: in the sediment were no red blood corpuscles. Symptomatic treatment. After the cessation of the vomiting large quantities of fluid were given. On April 4th the hæmorrhagic colour of the urine had disappeared: the jaundice was also less, and the skin looked lemon-yellow. Treatment with methylene blue was again undertaken.

When we look through the histories of the patients we find that in each case the hæmoglobinuria followed more or less immediately the administration of quinine. This observation will be made the more frequently the more exactly inquiry is made into this particular point. Thus, in the sanitary report of the Royal Frontier Force in German East Africa for the year 1898-99, 33 attacks of blackwater fever are recorded, which affected 24 different patients. The onset of all the attacks was proved to be preceded by a shorter or longer use of quinine. In the report for the year 1899-1900, 19 attacks of blackwater fever in all came under observation, affecting 17 people. Two had admittedly taken quinine some time before—twelve days and six months respectively before the illness. One person—in spite of repeated intermittent fever—had never taken it (?). In 7 cases, on the other hand, quinine had been taken the day before, and in all the remainder the patients had partly on their own initiative, partly under medical advice, used the drug a few hours (three to seven) before the onset of hæmoglobinuria. Almost always it was expressly remarked that the temperature was not febrile when the remedy was taken. In view of such facts the question arises why in our latitudes a man who suffers from any given disease,[11] and takes quinine on that account, never has blood-coloured urine even after its abundant use. Against this it is to be remarked that in the first place so extensive and unregulated a use of quinine as in the tropics never occurs with us, thus we have absolutely no idea as to how, if at all, the prolonged administration of the drug influences the composition of the blood. In this second place the blood corpuscles which are destroyed in blackwater fever are not healthy, but have been already severely damaged by the preceding or still continuing disease of the blood—namely malaria. We often notice that patients who at once react to quinine with hæmoglobinuria, after some days bear the same dose without injury. This no longer appears accidental if we agree with Koch[15] that the destruction of red blood corpuscles is proportional to the extent of the existing morbid changes and the amount of quinine administered. The second dose, which is well borne, has no longer to deal with severely injured blood corpuscles. If the dose of quinine be increased hæmoglobinuria can again eventually ensue, as long as the dose is great enough to destroy also slightly ailing red blood corpuscles.[16] The so-called rehabituation of convalescents from blackwater fever to quinine is nothing more than a gradual purification of the organism from all more or less diseased blood cells. Commencing with minimal doses of quinine, we stop at the dose which is empirically useful in the contest against malarial plasmodia.

The view that quinine exerts its toxic influence especially upon diseased blood corpuscles is nothing out of the ordinary. A weakened organism is more powerfully acted upon by poisons than a healthy one. This can be proved by many analogies, and thus one can completely dispense with the so-called individual predisposition, which perhaps also plays a part. In Case 8 hæmoglobinuria followed the use of salipyrin. If other drugs beside quinine, such as for instance antifebrin, phenacetin, etc., were equally widely employed for malaria in the tropics, we should probably also obtain for observation blood-coloured urine after the use of these remedies. In the most recent literature on the subject a case is described[17] in which after quinine had ceased to be used a blackwater fever patient suffered from renewed hæmoglobinuria when a gram of phenacetin was given him.

Regarding the reports concerning blackwater fever without preceding use of quinine, it must be mentioned that critical limitation is here often necessary. As I have been repeatedly and expressly assured by experienced tropical physicians the obtaining of a correct history is a matter of great difficulty. The question "Have you taken quinine?" is negatived while the patient involuntarily means, "I have not taken quinine abundantly or not more than usual," or "some time has already elapsed since I have taken it." Stephens[18] refers to these difficulties. He states that in many cases the history given is in direct opposition to facts. He also maintains that the hæmoglobinuria of aborigines, who, according to the assurances of many observers, have never come into contact with quinine and yet suffer with this symptom, is in part certainly not identical with our blackwater fever, but is produced by the bilharzia hæmatobia. Among the blackwater fever cases of the English malaria expedition there is not a single one in which the use of quinine can be undoubtedly excluded. On the other hand, the hæmoglobinuria followed more or less rapidly on the heels of the quinine, and made the English observers certain that a causal relation existed between the two.[19] They thereby confirmed the conclusions of R. Koch. Two Belgian physicians draw different deductions from the same observations. Van Campenhout and Dryepondt[20] quote in the report of the work of the Mission Médicale Belge au Congo 16 cases of blackwater fever; 13 of these could be straight away ranked with my cases as cogent proofs of the quinine theory. A few hours after taking moderate doses of quinine blackwater fever, with its well-known accompanying symptoms came on; three of the patients died. In spite of the clear state of affairs the authors instituted thorough investigations into the cause of the hæmoglobinuria, which they chiefly attributed to chill. They consider that Koch's theory is entirely wrong, and hold that he himself has been led away by his prejudices. Some sentences from the publication of

the English Malaria Expedition[21] may here be literally quoted, as they seem to me to be very appropriate: "It would appear from the criticisms made on Koch by many writers that they have not taken the trouble to acquaint themselves at first hand with his writings, for views are constantly attributed to him which certainly are not to be found in his writings."

As a matter of fact, R. Koch has in nowise altered his views. Now as formerly he believes that in the majority of cases blackwater fever is the result of quinine poisoning in malaria patients. But, at the same time, he holds that by means of an appropriate quinine prophylaxis malaria, and with it, in the vast majority of cases, blackwater fever, can be stamped out. An imperfect quinine prophylaxis which does not entirely protect against malaria, on the other hand predisposes to blackwater fever, for in such a case plasmodia and quinine unite to act harmfully on the organism.

NOTES AND REFERENCES.

[1] R. Koch, *Reiseberichte*, Berlin, 1898. [2] Quoted from Laveran, *Extrait du Bulletin de l'Académie de Médecine*, Séance du 4 Décembre, 1900. See also Foustanos, *La Grèce Médicale*, No. 4. [3] Laveran, *loc. cit.* [4] S. Tomasselli, *La Intossicazione Chinica e l'Infezione Melanica*, terza edizione, Catania, 1897. [5] F. Plehn, Ueber das Schwarzwasserfieber an der afrikanischen West küste, *Deut. med. Wochenschrift*, 1895, No. 25 *et seq.* [6] Cardamatis, De la Fièvre Hémoglobinurique, *La Grèce Médicale*, 1900, No. 4. [7] G. Laveran, *Traité du Paludisme*, Paris, 1898, p. 197. [8] *Loc. cit.* and v. Jaksch, *Klinische Diagnostik*, Berlin and Vienna, 1901. [9] Moffat, Blackwater Fever and Hæmoglobinuria, BRITISH MEDICAL JOURNAL, September 24th, 1898, p. 926. [10] Harford Battersby, BRITISH MEDICAL JOURNAL, October 15th, 1898, p. 1200. [11] Epidemiological Society, BRITISH MEDICAL JOURNAL, March 25th, 1899, p. 731. [12] R. Koch, Ueber Schwarzwasserfieber (Hæmoglobinurie), *Zeitschrift für Hygiene*, etc., 1899, vol. XXX. [13] In the history of the patient given under No. 12 the blackwater fever was associated with a quartan ague. [14] Malaria of course excepted. In Cases 11 and 12 the first blackwater fever attack came on in Germany. [15] *Loc. cit.* [16] See Case 14. [17] *Rapport sur les Travaux du Laboratoire Médical de Léopoldville*, Bruxelles, 1901, p. 96. [18] Stephens, Blackwater Fever, reprinted from the *Lancet*, March 23rd, 1901. [19] Royal Society, *Reports to the Malaria Committee*, fifth series, London, 1901. [20] *Rapport sur les Travaux du Laboratoire Médical de Léopoldville*, Bruxelles, 1901. [21] *Loc. cit.*, p. 21.

## THE INFLUENCE OF COLOUR UPON ANOPHELES.

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IN pursuing our Studies in Relation to Malaria, which are appearing in the *Journal of Hygiene*, my colleague, Mr. A. E. Shipley, and myself thought it desirable, amongst other things, to study the influence of colour upon *Anopheles maculipennis*. From what is known of the behaviour of other insects to colour, and occasional hints we have obtained from observing the behaviour of *Anopheles*, we had concluded that we might, as the result of our experiments, obtain results having a definite practical bearing.

It seemed to us to be a matter of considerable practical utility to determine what influence, if any, colour exerted upon a known malaria-bearing species of mosquito; and we deem our results sufficiently striking to make it worth the while for those who are engaged in similar studies abroad to take the matter up systematically. Our experiments certainly indicate that *Anopheles maculipennis* is attracted by some colours and repelled by others, a matter which would have its practical application in the choice of the colour of clothing and the interior of rooms in malarious districts.

The preference of *Anopheles* for dark and shady places, whither they retreat during the daytime, has been noticed by a number of observers. The behaviour of the insects towards various colours has not as yet received sufficient attention. Whilst engaged upon our experiments we came upon a few data cited in the recent literature.

Austin[1] writes: "If the walls of the room be whitewashed, with a dark dado, it is interesting to note that the insects will always be found upon the dark strips, and never on the white portions of the wall." Buchanan[2] in India noted that "the men who collect the living *Anopheles* say that the *Anopheles* hide in a black coat, but avoid a white coat, so they hang up one or two black coats in the hospital ward" when they desire to catch the imago. Neither Austin nor Buchanan say anything about the influence of colour. The first, as far as we know, to refer directly to the influence of colour is Joly, who made observations on mosquitos in Madagascar. He states, without saying what genus, that "mosquitos" there were more attracted to black than to red soil or to white sand. Persons wearing black shoes and socks were more bitten than when these articles of apparel were white. Brown clothes protected less than those of white or blue. He states that the natives of Madagascar know the attraction black offers to mosquitos, and for this reason hang up a black cloth on the rafters of the room for the insects to collect upon. Joly observed that a yellow-haired dog was very much less bitten than a black one. For the same reason the natives are more bitten than the whites, although they suffer less from the after-effects.

Our experiments were made in a large gauze tent, which had been erected within a disused photographic establishment, the one end of the tent ending against large windows, into which the sunlight poured on bright days. Large stone basins were placed on the floor for the *Anopheles* to breed in, the stock being renewed from time to time.

It was noticed at the beginning that when one entered the tent in dark grey clothes the imagos frequently flew up and settled on the dark cloth, but that they never did this when the person entering the tent was clothed in white flannels. To test the influence of colour, a number of pasteboard boxes were taken which measured 20 cm. by 16 cm. and had a depth of 10 cm. The boxes were lined with cloth, having a slightly roughened surface, to which the insects could comfortably cling. All of the fabrics had a dull surface, and each box was lined with a cloth of different colour. The boxes were placed in rows upon the floor and upon each other in tiers, the order being changed each day after the observations had been made. The interior of the boxes was moderately illuminated by light reflected from the surface of the white tent. On seventeen days during a month, beginning with the middle of June, we counted the number of flies which had accumulated in the boxes. Counts were actually made on seventeen sunny and cloudy days, and with the following result:

| Colour of Box. | Number of *Anopheles maculipennis* Counted in each Box during Seventeen Days. |
|---|---|
| Navy blue | 108 |
| Dark red | 90 |
| Brown (reddish) | 81 |
| Scarlet | 59 |
| Black | 49 |
| Slate grey | 31 |
| Dark green (olive) | 24 |
| Violet | 18 |
| Leaf green | 17 |
| Blue | 14 |
| Pearl grey | 9 |
| Pale green | 4 |
| Light blue (Forget-me-not) | 3 |
| Ochre | 2 |
| White | 2 |
| Orange | 1 |
| Yellow | 0 |
| | 512 |

We see from the above table that dark blue was most attractive, the other colours being less and less attractive in the order of numbers given. A marked fall in the number of insects resting in the boxes begins with the "blue" box; the colour in this case was a rich full blue. Pale green, light blue, ochre, orange, and yellow, especially the last two colours, seemed to repel the insects.

The khaki uniform at present in vogue should therefore offer advantages besides being invisible to the human enemy. It is of course true that the *Anopheles* bite more frequently during twilight and at night, but the choice of clothing having a repellent colour should afford a measure of protection against the insects which may bite during the daytime. In any case, the number of insects congregating in dwellings might very well be lessened by the choice of colours of a suitable character applied to the walls. It has also occurred to me that some sort of trap might readily be devised, lined with a suitable colour, such as dark blue, within which the insects would congregate and easily be destroyed in considerable numbers. Our experiments with boxes have been so striking that such a plan immediately suggested itself. Unfortunately for the experiment we are not living in a country where *Anopheles* are numerous, so we will hope that those who are placed in more

favourable circumstances will make the attempt to see if colours can be made to afford a practical means of protection.

References.

[1] *Practitioner*, March, 1901, p. 341. [2] *Indian Medical Gazette*, April, 1901, p. 105. [3] *Arch. de Parasitologie*, May, 1901, p. 259.

## A FURTHER NOTE ON THE BIOLOGICAL TEST FOR BLOOD AND ITS IMPORTANCE IN ZOOLOGICAL CLASSIFICATION.

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In a former number of the British Medical Journal I published a preliminary note regarding the results of experiments with specific antiserums, a complete account of which appeared in the *Journal of Hygiene* for July. As stated in the latter publication we had gone a step further than mentioned in the preliminary note, finding it possible to detect human blood, or any other blood for which we had prepared a test serum, when that blood had been mixed with five or six other bloods, each blood in the mixture being present in the proportion of 1 to 500 or 1 to 600. In the papers above cited it was stated that 36 bloods had been tested. I have since tested 140 bloods, the result being consistent with what has been already described.

The 140 bloods tested were derived from all classes of vertebrates. None except monkey bloods gave a reaction with the antiserum for human blood. The monkey bloods tested were the following: Family *Cercopithecidæ*, Semnopithecus entullus (India), Cercopithecus Campbelli, Waterh. (W. Africa), C. patas (W. Africa), C. lalandi, Is. Geoffr. (S. Africa), C. diana (W. Africa), C. melogenys (W. Africa), C. callitricha (W. Africa), Macacus rhesus (India, 3 blood samples); M. cynomolgus L. (India, 2 blood samples) M. assamiensis (India). Of the South American monkeys, family *Cebidæ*, only two bloods have been tested: Mycetes seniculus (Colombia) and Cebus albifrons Geoffr. (South America).

All the bloods of the Old World monkeys gave a very marked reaction, less powerful, however, than that of human blood. They also reacted to weak antiserum. On the other hand, the South American monkeys gave but a slight reaction with human antiserum as compared with that of the other monkeys, and a weak antiserum produced no precipitation in the blood of Mycetes seniculus. Of course these tests require further study, but the result is in striking accord with the Darwinian theory as to the relationships existing between man and apes, the relation of the former, according to that theory, being closer to the Old World apes.

Tested on 140 bloods, the antiserum for dog's blood only gave a reaction with the blood of the jackal (Canis mesomelas) from South Africa. I have not as yet had an opportunity of testing the blood of other members of the canine family. None of the 140 bloods gave a reaction with the antiserum for horse blood; in this case no other members of the horse family were tried. The antiserums for ox and sheep blood only gave a full reaction with their homologous bloods, besides the slight reactions already mentioned in my previous communication.

Further tests have shown that ox antiserum produces a slight reaction with the blood of the goat, and a faint clouding in that of the roebuck and Burrhel sheep (Ovis Burrhel, from the Himalayas, of which two samples were at my disposal). Sheep antiserum furthermore gave a marked reaction with the blood of the Burrhel sheep and of another wild species of sheep, a slight but distinct reaction with the blood of a goat, and a faint clouding with that of the roebuck.

My investigations have been greatly furthered by the kind interest of Mr. Frank E. Beddard, F.R.S., Prosector of the Zoological Society's Gardens, and his assistant, Mr. E. Ockenden, as also by friends in different parts of the world, whose assistance I shall take occasion to acknowledge more fully elsewhere. I shall be greatly indebted to any readers of this article who may aid in the prosecution of this work, which I contemplate pursuing on an extended scale. I shall naturally fully acknowledge any aid which may be given. The object of my research is to gradually produce various antiserums besides those already mentioned, and by means of them to study the reactions which take place with the bloods of various groups of animals. It seems certain that interesting results from the point of view of zoological classification will thus be brought to light. Apart from this, owing to the importance of the reaction from a medico-legal standpoint, the test should be applied to as large a number of bloods as possible. The method of collecting bloods for the above-mentioned purpose is exceedingly simple, and is as follows:

### Method of Collecting Blood.

Blood may be collected from dead or living animals. It does not matter which, nor does it have any effect on the test if the animals have been dead as long as twenty-four hours, except in tropical countries. The method is so simple that sportsmen can readily collect samples whilst out shooting. The method consists in soaking up the blood (avoiding clots) upon strips of pure filter paper about 3 inches wide by 5 inches long.

One end of the strip is left clean, so that the name of the animal (both common and scientific), the date, place (of collection or natural habitat) and name of the collector can be noted thereon in lead pencil. The notes should be written clearly, this being facilitated by resting the paper upon a hard surface. The strips of paper dry rapidly when suspended in the air (sunlight can be used for hastening the drying) by being pinned against the edge of a table, shelf, or upon the branch of a tree. Strips of paper saturated with different bloods should not be brought in contact with one another in a moist state. If the collector is unable to wait for the strips to dry he can place them between sheets of impervious paraffined paper. The whole outfit can be carried in an ordinary envelope. When the strips have dried thoroughly, they may be folded and placed together in an envelope for transmission, at the collector's convenience, as an ordinary letter through the mails. It does not matter if the dried strips have been preserved for a month or two before being sent.

One strip of paper saturated with each kind of blood will suffice for the purposes of the investigation. I shall be happy to forward strips of filter paper, etc., to those who may be interested or willing to collect. Blood samples may be addressed to me as noted.

If it is desired to collect bloods from living animals this can be readily accomplished by pricking the skin with a needle, and soaking up a few drops on different parts of the filter paper.

## INOCULATION AND THE INCUBATION STAGE OF PLAGUE.

By Major W. B. BANNERMAN, M.D., B.Sc., I.M.S.,
Superintendent, Plague Research Laboratory, Bombay.

Dr. Calmette is reported to have given it as his opinion that a person in the period of incubation for a slight attack of plague would find the disease considerably aggravated if he submitted during this period to a preventive inoculation of Haffkine's vaccine. The case would almost certainly end fatally.[1]

The same opinion is again urged in the third Harben Lecture,[2] lately delivered by Calmette in London, and the advice given to refrain from inoculating those in direct contact with a plague case, though the measure is recommended as a means of immunising a population living round a plague centre.

As Haffkine, on the contrary, has all along maintained that inoculation with his vaccine is harmless in the incubation period of plague, and that this method of protection should be pushed with the utmost vigour amongst those immediately in contact with plague cases, it becomes necessary to examine this matter afresh, in the light of the extensive experience gained in India and elsewhere in the use of the plague prophylactic.

Calmette's ideas have been derived from laboratory experiments, for he has had no opportunity of studying the effect of plague vaccination during an epidemic among human beings. In India, on the contrary, hundreds of thousands of persons have been inoculated with Haffkine's plague vaccine,

*Names of Places where the Inoculations*

| Interval between Inoculation and Attack. | Byculla Gaol (Dr. Haffkine). | | | Damaon (Dr. Haffkine and Major Lyons). | | | Undhera (Dr. Haffkine). | | | Billimora and Konli (Dr. Mehta). | | | Dharwar: among those once Inoculated (Dr. Corthorn). | | | Dharwar: among those Inoculated for the Second Time (Dr. Corthorn). | | | Gadag: among those once Inoculated (Dr. Corthorn). | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Attacks. | Deaths. | Case-Mortality per cent. | Attacks. | Deaths. | Case-Mortality per cent. | Attacks. | Deaths. | Case-Mortality per cent. | Attacks. | Deaths. | Case-Mortality per cent. | Attacks. | Deaths. | Case-Mortality per cent. | Attacks. | Deaths. | Case-Mortality per cent. | Attacks. | Deaths. | Case-Mortality per cent. |
| Plague devoloped on day of inoculation or previously ... ... | 3 | 3 | 100.0 | 2 | 2 | 100.0 | — | — | — | — | — | — | 10 | 3 | 30.0 | 3 | 1 | 33.3 | 6 | 2 | 33.3 |
| Plague developed on 1st day ... | 1 | — | 0.0 | 1 | 1 | 100.0 | — | — | — | 1 | 1 | 100.0 | 2 | 1 | 50.0 | 1 | 1 | 100.0 | 3 | — | 0.0 |
| ,, ,, ,, 2nd day... ... | — | — | — | — | — | — | — | — | — | — | — | — | 11 | 3 | 27.2 | — | — | — | 1 | — | 0.0 |
| ,, ,, ,, 3rd day... ... | — | — | — | 4 | 2 | 50.0 | 2 | 1 | 50.0 | — | — | — | 5 | 4 | 80.0 | — | — | — | 1 | — | 0.0 |
| ,, ,, ,, 4th day... ... | — | — | — | — | — | — | — | — | — | 1 | 0 | 0.0 | 2 | 1 | 50.0 | — | — | — | 1 | — | 0.0 |
| ,, ,, ,, 5th day... ... | — | — | — | 3 | 1 | 33.3 | — | — | — | 2 | 2 | 100.0 | 10 | 5 | 50.0 | — | — | — | 2 | 2 | 100.0 |
| ,, ,, ,, 6th day... ... | — | — | — | 1 | — | 0.0 | — | — | — | — | — | — | 9 | 5 | 55.5 | — | — | — | 1 | — | 0.0 |
| ,, ,, ,, 7th day... ... | 1 | — | 0.0 | — | — | — | — | — | — | 1 | 1 | 100.0 | 5 | — | 0.0 | 2 | 1 | 50.0 | 1 | — | 0.0 |
| ,, ,, ,, 8th day... ... | — | — | — | 7 | 2 | 28 6 | — | — | — | — | — | — | 9 | 2 | 22.2 | — | — | — | 2 | 1 | 50.0 |
| ,, ,, ,, 9th day... ... | — | — | — | 3 | 2 | 66.6 | 1 | 1 | 100 0 | — | — | — | 1 | — | 0.0 | 1 | — | 0.0 | 1 | — | 0.0 |
| ,, ,, ,, 10th day... ... | — | — | — | 5 | 2 | 40.0 | — | — | — | — | — | — | 10 | 2 | 20.0 | — | — | — | 2 | 2 | 100.0 |
| Plague developed after 10th day ... | — | — | — | 65 | 24 | 36.9 | 5 | 1 | 20.0 | 34 | 21 | 61.7 | 61 | 25 | 41.0 | 26 | 9 | 34.5 | 10 | 8 | 80.0 |
| Total plague cases among the inoculated during the epidemic ... | 5 | 3 | 60.0 | 91 | 36 | 39.5 | 8 | 3 | 37.5 | 39 | 25 | 64.1 | 135 | 52 | 38.5 | 33 | 12 | 36.4 | 31 | 15 | 48.4 |
| Plague cases (which occurred after the date inoculation was begun) among the uninoculated in same communities ... ... ... ... | 27 | 14 | 51.8 | — | 1,482* | — | 27 | 26 | 96.3 | 94 | 78 | 82.04 | 1,100 | 889 | 80.8 | — | — | — | 288 | 213 | 70.4 |

* Number of cases among the uninoculated in Damaon not known, therefore the number of deaths is also omitted from the grand total.

and evidence has been now accumulated with sufficient accuracy to enable one to refute entirely the above suppositions of Calmette.

The remedy which we owe to Haffkine's genius, and which has passed successfully through the ordeal of examination by the Government Plague Commission, would be shorn of half its usefulness if it could not be used with perfect safety in the very presence of plague itself.

The table above has been compiled from records of reports submitted to Government by various officers,[3] after most painstaking collection of the facts.

The plague death-rate in an uninoculated Indian population varies of course with each epidemic, but may be taken as somewhere between 75 and 85 per cent.; so if Calmette's statement were true we should see among those inoculated in the incubation stage of plague a higher mortality than that in the table printed above. Far from this being the case, we see that those who were actually suffering from plague at the time of inoculation had a case-mortality of 48.8 per cent. only, which also closely approximates to the death-rate in the same outbreaks among those developing plague more than ten days subsequent to operation.

It is the universal opinion of plague inoculators in this country that it is advisable to operate on all who have been exposed to infection. Miss Alice Corthorn, M.B.Lond., who performed some 32,000 operations with her own hand in the towns of Dharwar and Gadag, says[4]:

I think that these and the Dharwar figures prove that so far from its being inadvisable to at once inoculate the contacts of a case of plague lest they be incubating the disease, it is desirable at once to inoculate all who have been exposed to infection. Precisely as in the case of small-pox breaking out, one vaccinates any unprotected person who has been exposed to the infection with the hope that the intervening vaccination shall modify at least the attack of small-pox, should this follow, so inoculation in those exposed to plague infection may be looked on as tending to avert attacks which would otherwise occur were no artificial protection given.

In a report on the outbreak of plague in Sydney, New South Wales, in 1900, submitted to the Government there by Dr. Ashburton Thompson, it is noted:

Among the inoculated public 13 were attacked. All these patients not merely recovered but had conspicuously light attacks. The cases occurred almost entirely among the earlier 200, while the virulence of the infection was at its highest (p. 12). It will be noticed that attacks which occurred at or before the lapse of about ten days from inoculation were not aggravated by it (p. 13).[5]

The figures given in the table (being all that are available from the reports yet published) are sufficiently large to enable any one studying them to arrive at a conclusion on the subject of the effect of inoculation on the case-mortality among persons who may be in the incubation stage of plague, or those in whom the symptoms of plague are already developed. In neither case can it be said that this is increased, but, on the contrary, it is seen that no harm results from the injection of Haffkine's plague vaccine in the very presence of plague itself.

But in addition to this the table furnishes interesting evidence in support of another of Haffkine's contentions, namely, that the prophylactic begins to act beneficially after a lapse of twenty-four hours' only. This pronouncement he first tentatively gave out after a study of the effect of inoculation in the House of Correction at Byculla, Bombay, in January, 1897; and a study of cases where—as at Undhera, for instance—the inoculations were all performed at one time, shows that this opinion is correct. In such cases the incidence of plague in the two groups is easily compared, though the same information may be equally derived from communities where operations are not all performed at one time. In all cases where a plague-stricken community has been divided into halves—one inoculated and the other not—and where accurate observations have been kept, it is found that the difference between the two portions has begun from the day following the operations. In explanation of this fact only two alternatives present themselves; either (*a*) the inoculators must have some mysterious method of selecting only those persons for inoculation who are not in the incubation stage of plague, or (*b*) the prophylactic itself must have the power of aborting the disease in this stage.

The Indian Plague Commission state[6]:

In Undhera, though plague continued among the uninoculated at the rate of 10 cases in the first week after inoculation, there were among the inoculated two persons, at most, who can be regarded as having contracted plague at the time of inoculation.

What is meant by this awkwardly-worded sentence is evidently that during the week succeeding February 12th, when the inoculations were performed, 10 persons belonging to the uninoculated group (which numbered 417) developed symptoms of plague, while among the 513 inoculated only 2 did so. At least these are the facts; and one may legitimately ask why did not the 513 inoculated furnish 11 (actual number 11.7) cases of plague within this period as they should have done, had they suffered in the same proportion as their 417 unin-

*were Performed and Name of Reporter.*

| Gadag: among those Inoculated for the Second Time (Dr. Corthorn). | | | Ahmednagar Villages (Mr. Anderson). | | | Ahmednagar Villages (Mr. Hudson). | | | Ahmednagar City and District (Major Sarkies). | | | Dharwar from Report of Indian Plague Commission (Dr. Hornabrook) † | | | Sydney (Dr. Ashburton Thompson). | | | Bulsar (Dr. Dadachanji). | | | Aden (Dr. Melita). | | | Grand Total for all these Places. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Attacks. | Deaths. | Case-Mortality per cent. | Attacks. | Deaths. | Case-Mortality per cent. | Attacks. | Deaths. | Case-Mortality per cent. | Attacks. | Deaths. | Case-Mortality per cent. | Attacks. | Deaths. | Case-Mortality per cent. | Attacks. | Deaths. | Case-Mortality per cent. | Attacks. | Deaths. | Case-Mortality per cent. | Attacks. | Deaths. | Case-Mortality per cent. | Attacks. | Deaths. | Case-Mortality per cent. |
| 4 | 2 | 50.0 | — | — | — | — | — | — | 1 | 1 | 100.0 | 11 | 7 | 63.6 | 1 | — | 0.0 | 2 | — | 0.0 | — | — | — | 43 | 21 | 48.8 |
| 1 | 1 | 100.0 | — | — | — | 2 | 1 | 50.0 | 13 | 9 | 69.2 | 9 | 4 | 44.4 | 2 | — | 0.0 | 1 | 1 | 100.0 | 3 | 3 | 100.0 | 40 | 23 | 57.5 |
| — | — | — | 5 | 5 | 100.0 | 1 | 1 | 100.0 | 8 | 7 | 87.5 | 8 | 3 | 37.3 | 1 | — | 0.0 | 2 | 1 | 50.0 | 3 | 2 | 66.6 | 40 | 22 | 55.0 |
| — | — | — | 3 | 2 | 66.6 | 2 | 1 | 50.0 | 8 | 5 | 62.5 | 7 | 5 | 71.2 | 1 | — | 0.0 | 2 | 1 | 50.0 | 3 | — | 0.0 | 38 | 21 | 55.3 |
| 1 | 1 | 100.0 | 2 | 2 | 100.0 | 3 | 3 | 100.0 | 5 | 3 | 60.0 | 8 | — | 0.0 | 3 | — | 0.0 | 1 | — | 0.0 | — | — | — | 27 | 10 | 37.0 |
| — | — | — | 2 | 2 | 100.0 | — | — | — | 6 | 6 | 100.0 | 6 | — | 00.0 | 1 | — | 0.0 | 3 | — | 0.0 | 2 | — | 0.0 | 37 | 18 | 48 6 |
| 2 | 1 | 50.0 | 3 | — | 0.0 | 3 | 1 | 33.3 | 4 | 1 | 25.0 | — | — | — | 1 | — | 0.0 | 1 | — | 0.0 | 1 | 1 | 100.0 | 26 | 10 | 38.5 |
| 1 | 1 | 100.0 | 2 | 2 | 100.0 | 4 | 3 | 75.0 | 8 | 5 | 62.5 | — | — | — | 1 | — | 0 0 | 1 | 1 | 100.0 | 2 | — | 0.0 | 29 | 14 | 48.3 |
| 2 | 1 | 50.0 | — | — | — | 3 | 3 | 100 0 | 1 | — | 0.0 | — | — | — | — | — | — | — | — | — | — | — | — | 24 | 9 | 37.5 |
| 1 | 1 | 100.0 | 3 | 2 | 66.6 | 4 | 3 | 75.0 | 2 | 2 | 100.0 | — | — | — | — | — | — | 7 | 4 | 57.1 | — | — | — | 24 | 15 | 62.5 |
| — | — | — | 2 | 1 | 50.0 | 2 | — | 0.0 | 2 | — | 0.0 | — | — | — | — | — | — | 5 | — | 0.0 | 2 | 2 | 100.0 | 30 | 9 | 30.0 |
| 149 | 58 | 39.0 | 14 | 7 | 50.0 | 29 | 16 | 55.2 | 12 | 8 | 66.6 | 93‡ | 30‡ | 32.2‡ | 2 | — | 0.0 | 59 | 23 | 39.0 | 7 | — | 0.0 | 566 | 230 | 40.6 |
| 161 | 66 | 40.9 | 36 | 23 | 63.8 | 53 | 32 | 60.3 | 70 | 47 | 67.14 | 142 | 49 | 34.5 | 13 | — | 0.0 | 84 | 31 | 36.9 | 23 | 8 | 34.7 | 924 | 402 | 43.5 |
| — | — | — | 244 | 174 | 71.3 | 42 | 36 | 85.7 | 2,253 | 1,708 | 75.8 | 628 | 404 | 64.3 | 290 | 103 | 35.5 | 23 | 15 | 65.2 | 83 | 65 | 78.3 | 5,079 | 3,726 | 73.7 |

† Hospital figures only. ‡ After five days subsequent to inoculation.

oculated relatives? We prefer to think that the inoculations account for the difference rather than believe with the Commissioners that only two among the inoculated had already "contracted plague" before the inoculations were performed.

Divination is not possible in these days even in India, and without invoking its aid the commissioners could not possibly diagnose how many had "contracted plague at the time of inoculation." We presume that "at" in the above quotation is a misprint for "before."

From a study of the figures of the "grand total" column in the above table, it is manifest that there is very little difference between the percentage case-mortality in those attacked respectively before and after the first ten days period subsequent to inoculation, the figures being 48.04 per cent. up to the ten days' interval, and 40.6 per cent. for the subsequent period.

The variations noted from day to day, and the small difference in the rates between the beginning and end of the ten-day period, seem to point to a sudden very considerable measure of protection being secured after the lapse of twenty-four hours only, though this desirable effect no doubt increases slightly with lapse of time.

NOTES AND REFERENCES.

[1] Report by Calmette to the International Congress of Hygiene and Demography, at Paris, September, 1900, as abstracted in the BRITISH MEDICAL JOURNAL, October 27th, 1900, p. 1255. [2] BRITISH MEDICAL JOURNAL, November 24th, 1900. [3] Abstracts of all the reasonably accurate statistics collected up to date may be found in the following: Statistics of Inoculations with Haffkine's Antiplague Vaccine, 1897-1900, compiled from Records of the Plague Department of the Secretariat and the Plague Research Laboratory, Bombay, by W. B. Bannerman, M.D., B.Sc., Major Indian Medical Service, Superintendent Plague Research Laboratory; Bombay: Government Central Press, 1900; price 6d. [4] Report on Anti-plague Inoculation Work in the Dharwar District, by Alice M. Corthorn, M.B., B.S., Medical Officer on Plague Duty; Bombay: Government Central Press, 1899. [5] Report on an Outbreak of Plague at Sydney, 1900, by the Chief Medical Officer of the Government and President of the Board of Health; Sydney: William Applegate Gullick, Government Printer, 1900. [6] Report of the Indian Plague Commission, chap. iv. para. 76, p. 73.

THE LIGHT TREATMENT AT SHEFFIELD.—There seems, if we may trust statements made apparently on good authority in the local press, to be a prospect of the light treatment of lupus soon being available both in the Royal Hospital and the Royal Infirmary, Sheffield. The Hospital Board is said to be taking immediate steps for the installation of the necessary apparatus, while the Infirmary Board has the matter under consideration.

## ALBUMINURIA IN PLAGUE.

By ALICE M. CORTHORN, M.B., B.S.Lond.,
Special Medical Officer on Plague Duty; late in charge of the General Plague Hospital, Poona, India.

DURING the Poona plague epidemic of 1900-1 868 patients were admitted into the General Plague Hospital who were suffering from this disease. Although it has been generally observed that albumen is present in the urine of plague patients, and the examination of the urine in isolated cases has been of a very exhaustive nature, there has been no attempt reported, so far as I am aware, to make a systematic daily examination of the urine of all patients coming under observation, whether suffering from a severe or a mild form of the disease, and in this way to obtain some evidence as to the significance of any morbid bodies present for the purposes of prognosis. I thought it of interest therefore, by means of daily examinations for each and every patient in the hospital, to record the presence or absence of albumen, its degree, and duration in cases which remained long enough under examination.

In the report of the Austrian Commission, vol. i, p. 200, the opinions of previous investigators are quoted, and these vary somewhat. According to Aoyama albuminuria is moderate. Bittu found albumen in most cases, generally very moderate in amount, and invariably present in fatal cases. Yamagiroa found albumen only rarely.

The members of the Commission report that they were able to examine the urine in 45 cases, in several continuously. They found the specific gravity generally very low and albumen to be present in all cases where repeated examinations were possible. The quantity increased to the third day of observation. Generally the albumen appears to have been moderate in amount—under ½ per cent., as measured by Esbach's apparatus.

Mr. R. N. Jadhav, the medical officer in charge of the Baroda Plague Hospital, stated before the Plague Commission (Minutes of Evidence, vol. ii, p. 285) that all cases he examined contained albumen varying from ⅛ to ½, but he does not state whether all cases, including those who convalesced were examined. My own aim was to make a daily examination of at least one specimen of the urine of each patient in the hospital until the disease had terminated either in death

or convalescence. But of the 868 patients under my charge I am only in a position to report on 597. This seems a very small proportion of the whole number, but it must be remembered that very many patients in a plague hospital die within a few hours of admission and before any examination of evacuations can be made. Again, owing to the habits of the sick in India generally, and of plague patients in particular, it is extremely difficult to collect the urine for examination. A further obstacle is that the evacuations of patients in Indian hospitals are removed by low caste, ignorant persons, the so-called sweepers, whom it is difficult to teach to save these for examination. In a rush of work, when the patients were being brought in in large numbers to be removed in many cases as quickly to the dead-house, the sister of the ward would often report that the collection of the daily specimens had been impossible.

Thus, of 576 fatal cases there is a report in 341 only, while of 292 who recovered 256 were examined. But in these latter the first examination was frequently made some days after admission, a fact which I think accounts for the negative results in many cases. Also of those who recovered in whom no albumen was found I find, where the duration of illness before admission could be ascertained, that 25 were stated to have been ill for a period varying from seven days to two months, and that 9 who gave an uncertain history had already fluctuating buboes, which fixed the length of their illness at not less than ten days.

A glance at Table II will show that in 60.9 per cent. of the convalescing cases in which albumen was found this had disappeared from the urine in seven days or under, and in 87.49 per cent. a fortnight marked the limit of duration. Some of these late admitted cases might have been found to be albuminuric if they had come earlier under observation.

The 235 fatal cases which escaped examination included nearly all those dying within forty-eight hours of admission, and would most probably have yielded a fairly large proportion of highly albuminous urines, making the percentage of these heavier than appears in my table.

To give the results which were obtained. The quantity saved frequently did not allow a systematic determination of specific gravity, but when examined I also generally found this to be fairly low—1008-1010. The boiling method was used for the determination of albumen, this being supplemented by the cold nitric acid test in very many cases. A drop of dilute acetic acid was always added to half a test tube of urine before boiling. After boiling the test tube was put on one side until all the deposit present had settled, and the proportion of this to the total volume of urine then read off and registered on the patient's chart in the ordinary way.

TABLE I.—*Showing the Amount of Albumen Present in the Fatal and Non-fatal Cases respectively (597 Total Examined, 341 Number of Fatal Cases Examined, 256 Number of Non-fatal Cases Examined).*

| Amount of Albumen. | Non-fatal Cases. | | Fatal Cases. | | Total. | |
|---|---|---|---|---|---|---|
| | Absolute Number. | Per-centage. | Absolute Number. | Per-centage. | Absolute Number. | Per-centage. |
| No albumen ... ... | 64 | 25.00 | 24 | 7.00 | 88 | 14.74 |
| Trace ... ... | 63 | 24.61 | 26 | 7.62 | 89 | 14.90 |
| Small deposit ... | 34 | 13.28 | 64 | 18.76 | 98 | 16.41 |
| One-twentieth ... | 20 | 7.81 | 20 | 5.87 | 40 | 6.70 |
| One-sixteenth ... | 2 | 0.78 | 9 | 2.64 | 11 | 1.90 |
| One-twelfth ... ... | 13 | 5.07 | 21 | 6.16 | 34 | 5.70 |
| One-tenth ... ... | 12 | 4.69 | 20 | 5.87 | 32 | 5.36 |
| One-eighth ... ... | 14 | 5.47 | 20 | 5.87 | 34 | 5.70 |
| One-sixth ... ... | 9 | 3.51 | 26 | 7.62 | 35 | 5.86 |
| One-fifth ... ... | 3 | 1.07 | 9 | 2.64 | 12 | 2.00 |
| One-fourth ... ... | 13 | 5.08 | 34 | 9.97 | 47 | 7.87 |
| One-third ... ... | 4 | 1.56 | 32 | 9.38 | 36 | 6.03 |
| One-half ... ... | 5 | 1.97 | 25 | 7.39 | 30 | 5.02 |
| Two-thirds ... ... | 0 | — | 5 | 1.46 | 5 | 0.83 |
| Three-fourths ... | 0 | — | 1 | 0.29 | 1 | 0.16 |
| Two-fifths ... ... | 0 | — | 4 | 0.17 | 4 | 0.66 |
| Five-sixths ... ... | 0 | — | 1 | 0.29 | 1 | 0.16 |

*Quantity of Albumen.*—Table I shows this in the fatal and non-fatal cases respectively. It will be seen that 25 per cent. of the non-fatal and 7 per cent. of the fatal cases gave a negative result, but these numbers must be checked by the foregoing remarks.

That the quantity of albumen is a certain guide to the gravity of the prognosis may, I think, be argued from this data, of which the following is a short summary showing this result still more forcibly.

From a trace to $\frac{1}{16}$ was found in 46.48 per cent. of non-fatal cases.
" " " " " 34.19 " " fatal "
From $\frac{1}{8}$ to $\frac{1}{4}$ " " " 15.23 " " non-fatal "
" " " " 17.98 " " fatal "
From to " " 9.66 " " non-fatal "
" " " " 20.23 " " fatal "
From $\frac{1}{4}$ to $\frac{1}{2}$ " " 3.53 " " non-fatal "
" " " " 16.77 " " fatal "
Over $\frac{1}{2}$ " *nil* " " non-fatal "
" " " " 3.20 " " fatal "

The one patient who showed $\frac{1}{8}$ albumen was a strong young sweeper woman who walked into the hospital and appeared to have a very mild attack. On the second day I found her urine was highly albuminous. Later in the day she became violently delirious and had several convulsions of uræmic character before death, which occurred the same night. Convulsions, frequently uræmic in character, were noted in 32 per cent. of the fatal albuminuric cases and in 2 per cent. only of the non-fatal.

TABLE II.—*Showing the Duration of the Persistence of Albuminuria in those who recovered.*

| 1 Day. | 2 Days. | 3 Days. | 4 Days. | 5 Days. | 6 Days. | 7 Days. | 8 Days. | 9 Days. | 10 Days. | 11 Days. | 12 Days. | 14 Days. | 2-3 Weeks. | 3-4 Weeks. | 4-5 Weeks. | Persistent until Discharge. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 9 | 17 | 19 | 20 | 18 | 28 | 8 | 6 | 16 | 6 | 5 | 10 | 10 | 1 | 1 | 12 |
| Up to 7 days, 117. | | | | | | | From 1 week to 1 fortnight, 51. | | | | | | | | | |

*Duration of Albuminuria.*—Table II shows this for those who recovered. The examination was always continued until the urine had been found clear of albumen for at least five days and patient was in other ways convalescent. As before noted in the majority of cases the albuminuria cleared up with the other signs of acute disease, but in no case did I find albuminuria established later than the third or fourth day of the disease.

*Microscopic Examination* was possible with the press of work in a few cases only. Casts both hyaline and granular were generally present and in some cases when the albuminuria was persistent the fatty variety also appeared. Plague bacilli were found neither by this method nor by cultures on agar slants when these were made. I found no other micro-organism than those generally abounding in more or less stale urine.

*Blood.*—Traces of blood were found in 11 cases and in three specimens this was present in sufficient quantity to give the urine a bright red colour.

*Retention.*—This symptom also showed a marked incidence on the fatal as against the non-fatal cases. Of the convalescents 28 only needed the aid of a catheter, that is, 0.19 per cent. of the whole. On the other hand, this was necessary in 69 of the 576 fatal cases, that is, 12.17 per cent. of the whole.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.—The American Electro-Therapeutic Association will hold its eleventh annual convention at Buffalo on September 24th, 25th, and 26th, under the presidency of Dr. Ernest Wende, of Buffalo. The Association was founded to determine the exact value of the electric current to be used in medicine, and to rescue medical electricity from the domain of charlatanism. The Association appoints from among its members Committees on induction coils, electrodes, meters, electric light apparatus for diagnosis and *x*-ray treatment, static machines and condensers, cataphoresis and constant-current generators and controllers; and endeavours when possible to secure from manufacturers such uniformity in construction that dosage and application may be trustworthy.

SIXTY-NINTH ANNUAL MEETING

OF THE

# British Medical Association.

*Held at Cheltenham, July 30th, 31st, August 1st, and 2nd, 1901.*

PROCEEDINGS OF SECTIONS

## SECTION OF TROPICAL DISEASES.

Major Ronald Ross, F.R.C.S., F.R.S., I.M.S. (Retired), President.

### A DISCUSSION ON STONE IN THE TROPICS.

I.—P. J. Freyer, M.A., M.D., M.Ch.,
Surgeon, St. Peter's Hospital for Stone, London.

I have in the first place to acknowledge the compliment paid me in inviting me to open this discussion on the important subject of "Stone in the Tropics." Though unable to resist an invitation conveyed in such kindly terms, I must confess that since its acceptance I have been haunted by a feeling that the position assigned to me might have more fittingly devolved on some one else. This statement may seem to you to savour somewhat of affectation, seeing that the subject is one that has always been of supreme interest to me, and one, may I say, with which my name has been more or less identified during the last twenty years or so. But what I wish to convey is this, that the purely surgical aspect of the question has through my professional life engrossed my attention, to the comparative neglect, I fear, of its theoretical side. And I take it that in a discussion of the kind we are engaged in to-day, the latter, involving the causation and distribution of stone, should take a prominent place.

India is the only tropical country of which I have had personal experience; and I venture to say that the causation of stone in India, as, indeed, in any other country, is one of the most abstruse and intricate questions to which the mind of man can apply itself, surrounded as it is by anomalies and obscurities. I make no pretence at solving the mystic problem; but there are certain conditions prevailing in connection with the distribution of stone in India which may give some clue to its causation, to which I will briefly direct your attention.

My remarks regarding the causation of stone in India must, generally, be regarded as applying to the urate and oxalate of lime varieties, which together account for probably about 95 per cent. of calculous disease in that country, but a much smaller proportion in England, I would remark. The causation of the phosphatic variety is well known to depend in all countries on local inflammation of the urinary tract, particularly the bladder, giving rise to ammoniacal urine, with resulting deposits of phosphates. This variety, as already stated, accounts for a much larger proportion of calculi in England than in India, owing to the greater prevalence of prostatic disease in this country, which I can only attribute to the earlier death of prostatic patients in India for want of that surgical care that is available for practically everyone in England.

We have, therefore, to deal only with the urate and oxalate types—the systemic varieties, if I may so term them, as they undoubtedly arise from the ingestion into the system of certain products of food and drink, and possibly other cognate circumstances, which interfere with the normal physiological actions.

Now it is a remarkable fact that certain tracts of India are practically exempt from stone. From the most recent available medical administration reports—those for 1899—I find that there were 4,486 operations performed for stone in the various hospitals in that year. The whole presidency of Madras accounts for only 40 of these, or about 1½ per million of the inhabitants. The Punjab, on the other hand, accounts for 2,105, or about 111 per million of inhabitants; so that stone in the Punjab is about 83 times more common than in Madras. But the "Eldorado" of the operating surgeon is the comparatively small town of Hyderabad in Sindh, the civil surgeon of which place has, I believe, been known to have performed 50 stone operations in a month! Broadly speaking, stone is mainly confined to the Punjab, North-Western Provinces, and Oudh, the upper part of Bombay (Sindh and Gujerat), and, to a lesser extent, Central India—that is, chiefly to the great alluvial plains watered by the Indus and upper half of the Ganges.

Let us examine the features common to these parts of India which are likely to influence the formation of stone.

The first has reference to *geological conditions and drinking water*. Broadly speaking, these stone tracts are coextensive with the great alluvial plains of the Indus and Upper Ganges. These two great rivers, with innumerable tributaries—many of them, such as the Sutlej, Ravi, Chenab, and Jelum, falling into the Indus, and the Jumna, Ramganga, Gumti, and Gogra falling into the Ganges, large rivers in themselves—have their origin in the great chain of mountains composed of the Baluchistan, Suliman, and Himalayan ranges, which bound India on the west and north, and contain different members of the chalky formations. Through countless ages these rivers have carried down with them the alluvial soil which covers these plains. Along the foot of these mountains, which form the watershed of these rivers there is a vast continuous belt of cretaceous formation, varying in width at different places, extending from Karachi in the west to the borders of Oudh on the east. Through ages these rivers have been changing their courses, with the result that these alluvial plains are impregnated with lime salts, most easily recognised in the form of *khunkar*, the nodular form of limestone. Consequently the water over this vast area contains lime salts in solution which eventually find their way into the system through the drinking water, and have a tendency to be deposited in the urinary tract in the form of oxalate of lime, or, by causing derangements of the digestive system, lead to the formation of uric acid and urates in excess, and eventually to deposits of crystals in the urinary passages resulting in the formation of stone. There is very little limestone in the lower Gangetic alluvial plain, and the rest of Peninsular India is composed of rocks and clay containing little or no limestone save in a few very limited areas. It is a remarkable fact that the region round about Hyderabad in Sindh, where stone is more common, probably, than in any other place in the world, in addition to being covered with lime-containing alluvial deposits, lies on the most marked cretaceous formation in India.

In the next place we have to deal with *climatic and meteorological conditions*. The region just described, over which stone predominates, is characterised by the scantiness of its rainfall as compared with the rest of India. It is further characterised by great alterations in temperature, being intensely hot in summer and cold in winter. These two conditions—the scanty rainfall and intense heat—promote excessive perspiration, most of the fluids of the body thus passing off by the skin and leading to concentration of the urine. It is reasonable to suppose that this condition would be more likely to facilitate the deposition of crystals in the urinary passages than that prevailing over the rest of India where the rainfall is heavy and the temperature equable, thus checking the perspiration and leading to dilution of the urine. It is very suggestive that even in the stone-producing region itself the incidence of stone is, as a rule, in direct proportion to the scantiness of the rainfall and the intensity of the heat.

The third condition that would naturally be expected to influence the formation of stone is that of *food and feeding*. Many theories have from time to time been advanced in this direction, but they have one and all—so far as India is concerned, at least, and I believe elsewhere as well—been found defective or misleading. Illustrative of the errors that one may fall into in this connection, I may mention that the late Sir William Roberts, one of the most acute observers and thinkers in the medical profession, in his Croonian Lectures, stated that the prevalence of stone amongst the natives of India was probably due to the use of rice as food, owing to its paucity in saline matter. Shortly after the delivery of these lectures I had the pleasure of making the acquaintance of Sir William, and he was much surprised when I pointed out that stone is in reality least common in those regions of India,

namely, Eastern Bengal and Madras, where rice is most commonly employed as an article of diet. Not that I attribute the immunity from stone to this fact: it is probably a mere coincidence, for rice is eaten by natives in all parts of India. It is largely grown and eaten in certain parts of the North-West Provinces, such as Pilibhit, Bareilly, and Gorakhpore, where stone is common, and the country round about Hyderabad in Scinde, where stone is most common, is an important rice-producing district.

Wheat and barley are mainly grown in the stone-producing districts, but are eaten all over India. The coarser cereals, such as *bajar* and *jawar*, are grown and eaten about equally all over India. Flesh is scantily eaten all over the country. The vast majority of Hindus are prohibited by their religion from using it, and Mohammedans and Hindus alike owing to its cost, the vast majority of the people being impoverished and living from hand to mouth. It is true the meat-eating Mohammedan is predominant in Scinde and the Western Punjab where stone is most common; but it is equally true that he is predominant in Eastern Bengal where stone is practically absent. Taking these circumstances into consideration one is irresistibly driven to the conclusion that food plays little if any part in the production of stone in India.

I would, therefore, suggest that the presence of lime in drinking water is probably the most potent factor in the production of stone; and next to this the climatic conditions I have indicated. I have no pretence to originality in this matter, which for years has been a subject of much thought in India, but I have endeavoured to place the theory before you in a plain and simple form. I do not dogmatise, for I recognise that there are weak points, even apparent anomalies, connected with the theory; but I consider that it is worthy of your thought and discussion.

Turning now to the surgical aspect of the question, I feel that I am on firmer and more congenial ground. Previous to the appearance of Bigelow on the scene in 1878 with his new operation of litholapaxy, perineal lithotomy was universally practised in India. The old operation of lithotrity with its numerous sittings never came into vogue in that country. It was totally unsuited to the idiosyncrasies of the native, who regards with aversion any method of treatment which involves several surgical proceedings extending over an indefinite period. Owing to the adverse criticism with which Bigelow's operation was hailed by some of the leading medical journals in England, and particularly to the depreciatory manner in which it was spoken of by Sir Henry Thompson, to whom, with his great reputation, the profession naturally looked for guidance in a matter of this kind, it made little or no progress in India during the first four years after its introduction. I had the honour of being one of the pioneers of this operation in that country. In the *Indian Medical Gazette*, 1882-83, I published two papers on my first 20 cases of litholapaxy; and in March, 1884, a third paper, on a further series of 57 cases. These contributions the editor of that journal, in a recent article (July-August, 1900) on the progress of stone operations in India, characterises as "the dawn of litholapaxy" in that country. In the *Lancet*, February, 1885, I gave details of my first series of 111 cases of litholapaxy, and challenged the position assumed by Sir Henry Thompson with reference to Bigelow's operation; and I venture to say that the results obtained by me put an end once and for all to those theoretical objections and gloomy forebodings advanced by surgeons brought up in the traditions and prejudices of the old school of lithotrity.

Then, in 1884, came Keegan's great advance in this operation, for in the *Indian Medical Gazette* of May of that year he demonstrated by a remarkable series of cases that the new operation might with safety be extended to male children of all ages. Though previously adverse to litholapaxy in male children, after reading this paper and verifying the excellent results in my own practice, no one more readily espoused or more enthusiastically endorsed this grand development of Bigelow's operation than I have. Keegan had, of course, previously to 1884, been operating by litholapaxy in adults simultaneously with myself.

Since then litholapxy has been growing in favour in India year by year, to the gradual displacement of lithotomy, as the various hospitals throughout the country become supplied with the necessary instruments, with the most brilliant results, involving large saving in human life and suffering.

In 1882 there were 2,592 lateral lithotomy operations in Indian hospitals, with a mortality of 13 per cent. In 1899—the latest year for which I can procure the returns—there were 4,486 operations for stone, namely, 106 suprapubic lithotomies, with a mortality of 21 per cent.; 1,276 perineal lithotomies with a mortality of 9.84 per cent., and 3,101 litholapaxies, with a death ratio of 4.5 per cent.

Keegan has collected statistics of the stone operations performed in the hospitals of the Punjab, North-West Provinces, and Bombay Presidency for five years to the end of 1895. There were 147 suprapubic lithotomies with 42.17 per cent. of deaths: 7,201 perineal lithotomies with a mortality of 11.02 per cent.; and 10,073 litholapaxies with a mortality of 3.96 per cent.

We have thus overwhelming evidence furnished by statistics involving many thousands of operations for stone in the bladder, performed by surgeons of varying experience in India, that litholapaxy from a mortality point of view is infinitely superior to either perineal or suprapubic lithotomy; and if the statistics of operations done by experts were given, the superiority would be emphasised still more strongly. In addition to this, litholapaxy involves only an average period of six or seven days in hospital and little or no suffering, in comparison with a lengthened period of pain and discomfort of three or four weeks after perineal lithotomy, and a still longer period after the suprapubic operation.

If we turn to the statistics of English hospitals we find the same tale exemplified. In St. Peter's Hospital, in the decade 1863-73, there were 118 operations for stone in the bladder, with a mortality of 15.25 per cent.; whereas in the seven years 1894-1900 there were 417 operations, with a death-rate of 4.1 per cent.; in 1900 it was only 3.03 per cent.—results mainly attributable to the substitution of litholapaxy for the older methods of operating.

Again, in the BRITISH MEDICAL JOURNAL of May 5th, 1894, Mr. Gilbert Barling published the statistics of 190 cases of stone in males under 20 operated on during five years, 1888-92, in six London and six provincial hospitals, the majority being medical schools, showing the following death-rates: Suprapubic lithotomy, 17.4 per cent.; lateral lithotomy, 5 per cent.; and litholapaxy, 5 per cent.

But, in spite of these statistics, you will observe from time to time papers in the medical journals advocating suprapubic lithotomy in cases of small calculi after an experience of one or two successful cases on the part of the writers. But you will search these journals in vain for any record of a death in the practices of gentlemen of this type!

It will be within the knowledge of many of you that the earlier and greater portion of my experience in this branch of surgery was acquired in India. It was in India I performed my first litholapaxy, and it was in that country, with its splendid opportunities, that I learnt how to operate for stone. You may therefore ask if there is anything peculiar to the native that renders him a better subject for litholapaxy than the European. I unhesitatingly reply in the negative. You will have observed it persistently alleged otherwise in medical journals by surgeons who have had no experience of India, that there must be something in the climate, the food, the constitution of the native, or the composition of the calculi to account for the marked success in litholapaxy by the surgeon in India. You will hear every cause assigned except the real ones namely, experience and the employment of proper instruments. The latest theory is that surgical success mainly depends on the state of the kidneys, and that the native possesses a wonderful pair of organs. But you cannot at one time, for political purposes, refer to the native as Lord Salisbury's "black man" with all the contempt and odium implied in these words, and then, when it suits you for your own surgical ends, endow that same native in imagination with a refined and æsthetic urinary apparatus in contrast with that stinkpot of iniquity, the English bladder. The description is incongruous and savours of hypocrisy.

In the first edition of my work on *Litholapaxy* I collected the statistics, already referred to, of 2,592 lithotomies performed in Indian hospitals in 1882, and found that the mortality (13 per cent.) was practically the same as that (12½ per cent.) occurring amongst 1,827 lithotomies in public hospitals

in England, collected by Sir Henry Thompson. If the native of India is not a better subject for lithotomy than the European, I am unable to comprehend why he should be a better subject for litholapaxy.

I am, however, fortunately in a position to speak with authority on this matter, being the only surgeon who has had large experience of this operation both in India and in England. Of the 1,023 operations for stone performed by me 867 occurred in India and 156 in this country. The mortality amongst 610 litholapaxies done in India was 2 per cent. in round numbers, and amongst 146 litholapaxies in England, 2¾ per cent., the slightly increased mortality being entirely due to the fact that there were very few children amongst the latter (7 out of 156), as against a large proportion of children met with in India (371 in 867).

There are some interesting features of contrast between my practice in India and in England, to which, in conclusion, I will direct your attention.

In the first place, the average of 149 adult Europeans operated on by me is fifty-seven years, nearly twelve years greater than the average of adult natives of India. Mr. Cadge, of Norwich, in his article on Lithotrity, etc., in Heath's *Dictionary of Surgery*, in contrasting the results obtained in my first series of 108 litholapaxies performed in India with a similar series of cases by Sir H. Thompson in England notices this marked difference in the average age. This is simply due to the fact that the "expectation of life" in India is probably about ten years less than in England, a native at fifty being as old, comparatively, as a European at sixty.

Secondly, the average weight of calculi removed by me from adults in London is 157 grains as compared with an average of 309 grains in India. This is a point to which Mr. Cadge also called attention, the average weight of calculi removed by me in India in the series referred to being nearly two and a-half times greater than the average of Sir H. Thompson's series.

Thirdly, I have met with a very much larger proportion of cases complicated with enlargement of the prostate in England than in India—about one-third of the whole—which accounts for the much larger proportion of phosphatic calculi in this country, as also for the more frequent recurrence of stone.

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II.—Surgeon-General ROBERT HARVEY, C.B., D.S.O.,
Director-General, Army Medical Department, India.

SURGEON-GENERAL HARVEY endorsed the statement Mr. Freyer had made concerning the success of litholapaxy in India. It was a most important point when crushing for stone to finish the operation at one sitting when practising amongst the poorer natives. When the old operation of lithotrity was in vogue, he had performed the operation many times in India, but on more than one occasion the patients, after one or two crushings, had run away from hospital with the fragments of the calculus in their bladders. He had operated on 22 cases of stone by lithotrity, of which number 3 died. To Freyer and Colonel Keegan surgery was indebted for having established on a sound basis the operation of litholapaxy, the result of the experiences gained by them in India.

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III.—PATRICK MANSON, C.M.G., M.D., F.R.S., LL.D.,
Physician Seamen's Hospital Society, Royal Albert Dock Hospital; Medical Adviser Colonial Office.

DR. MANSON said the suggestion that the distribution of stone was dependent on the presence or absence of lime in water or food was untenable. For although, according to Mr. Freyer, it seemed to tally with Indian experience, it certainly did not apply universally. Thus in Great Britain there were calcareous areas where stone was rare, whilst there were granitic areas—Aberdeenshire for example—where stone was very common. In Canton, the rock was granite, and stone was probably quite as prevalent there as it was in Hyderabad, Scinde. There were only two classes of calculus whose etiology was positively known, namely, those caused by foreign bodies introduced into the urinary tract, and those caused by the ova of bilharzia. The formation of the stone in both of these instances depended on the presence of a nucleus. Similarly he believed in other cases of stone, those whose etiology they were as yet in ignorance about, the explanation of their geographical distribution would be found from a study of the nucleus of the calculus. The patchy distribution of the disease, as well as the analogy of bilharzia calculus, suggested to his mind a parasitic cause; at all events the study of the etiology of calculus should start with the study of the nucleus.

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IV.—Lieutenant-Colonel G. M. GILES, I.M.S.

COLONEL GILES did not think that the theory of lime in the water of the country as the cause of stone would bear close examination. In the district in question mentioned by Mr. Freyer lime was by no means common. The bulk of the water came not from a limestone area but from metamorphic rocks, gneiss and schist with little or no lime. Again, in several places in which analysis showed much lime in the soil and in the water, there was no stone. Colonel Giles did not believe that an analysis of the well or drinking-water in the north-west districts of India, where stone was prevalent, would prove it to be more highly impregnated with lime salts than the well water of Lower Bengal.

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V.—MAX F. SIMON, C.M.G., M.D.,
Principal Medical Officer, Straits Settlements, Singapore (retired).

ACCORDING to Dr. Simon, urinary calculi were rarely met with in the Malay Peninsula. He had never seen a Malay afflicted with stone. All the cases he had seen in Singapore during twenty-five years' residence were immigrants, mostly from China.

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VI.—Captain CHARLES MILNE, M.B.Aberd., I.M.S.

CAPTAIN MILNE said that the theory that oxalate of lime and uric acid calculi prevailed in any district because lime salts in excess were present in the drinking water was open to discussion. In several districts of India where lime formation prevailed there were no calculi, and *vice versâ*.

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VII.—LEOPOLD G. HILL, M.R.C.S.,
Pakhoi, China.

IN Pakhoi, Mr. Hill stated, that well water was drunk, the soil was sandy, and that he had found no cases of urinary calculi amongst the 70,000 patients he had seen during five years' residence. This fact was all the more remarkable because in the City of Canton, in the same province as Pakhoi, and only some 200 miles distant, stone prevailed to a most marked extent.

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VIII.—R. U. MOFFAT, M.D.,
Uganda, East Africa.

DR. MOFFAT stated that, after ten years' residence in Uganda and East Africa, he had seen only one case of stone in the bladder, and that was due to a foreign body. It was interesting to note, as bearing on Mr. Freyer's theory, that there was no limestone known to exist throughout the tract of country lying between the coast and the Victoria Lake. Dr. Manson advanced the theory that in all cases the presence of stone was in the first place due to a foreign body or a parasite, but the calculus caused by the decomposition of ammoniacal urine was an instance of a purely mechanical process, and Dr. Moffat did not see why in the same way the absorption of water charged with lime might not lead to the deposit of stone.

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IX.—F. M. SANDWITH, M.D., F.R.C.P.,
Professor of Medicine in the Medical School, Cairo.

CONCERNING stone in Egypt, Dr. Sandwith said: Bilharzia is most prevalent in Upper and Lower Egypt, and it is a fact that the ova of this parasite form a vast proportion of the nuclei of urinary calculi. The water from the Nile is loaded with volcanic detritus, and becomes charged with lime in its passage through hills of limestone. This fact would perhaps serve to connect the presence of stone with lime-impregnated water, and also the fact that peasants and the poorer classes of people in Egypt prefer to drink their water muddy and unfiltered. This is probably the reason why the more cleanly European, who drinks water mechanically filtered, does not so readily contract stone.

X.—James Cantlie, M.B., F.R.C.S.,
Surgeon, Seamen's Hospital, Royal Albert Dock Hospital.

Mr. Cantlie gave an account of the difficulties attending the operation of crushing for stone in a tropical country. There was no doubt that the Chinese preferred an operation in which there was no wounding or cutting, but they had become accustomed to the operation of lithotomy in, at any rate, the coast ports, and with that conservatism which characterised the Chinese in every phase of life, they frequently asked to be cut for stone. Mr. Cantlie stated that he had operated upon 54 cases of stone by lithotomy, all by either the lateral or central perineal method except in one case, when he was induced to try suprapubic lithotomy. Of the 54 cases 2 died, and one of the two was the case of suprapubic lithotomy. In operating for stone by crushing the operator was dependent altogether on the quality of the lithotrite his surgical instrument maker supplied. An instrument which failed at the critical moment could be readily replaced in most places of Great Britain, but in the more out-of-the-way parts of the world, to obtain a new instrument to replace a damaged one, months might elapse before this could be done. Mr. Cantlie related an instance in which he went armed with two lithotrites to crush a stone in a private patient, a Chinaman. At the critical moment first one and then the other instrument became useless, and as the patient's friends refused to allow the patient to be cut, a pause in the proceedings ensued. By good fortune a third instrument was procured, and the operation was successfully concluded. Had this incident occurred at a still more remote part, where lithotrites were few—perhaps one or two—European surgery would have suffered in the estimation of the natives. Indiarubber and caoutchouc materials again were apt to deteriorate rapidly in a tropical country, and no one who had had any practice in litholapaxy in the tropics could fail to remember the anxiety with which he watched the fissures and cracks becoming deeper and deeper in the litholapaxy exhaust bottle as it was being squeezed during the operation. In the fatal case of suprapubic lithotomy mentioned above, the indiarubber rectal bag burst at that period of the operation in which the bladder was being opened, and the case in all probability was lost owing to the deterioration of the indiarubber of the rectal bag. These were some of the difficulties and drawbacks to litholapaxy in the more isolated parts of the worlds, but in large towns, where renewal of instruments was possible, litholapaxy had everything to recommend it.

Reply.

Mr. Freyer, in reply, thanked the various speakers for the kindly way in which they had referred to his work in this department of surgery. He was glad his remarks had led to such an interesting discussion and had given gentlemen an opportunity of each airing his particular views. It would be remembered that in putting forward the theory of causation of stone in regard to lime salts and climate conditions he neither claimed originality nor spoke with dogmatism, and he considered that on the whole the weight of criticism was in favour of this theory. With reference to Mr. Cantlie's remarks regarding instruments, he (Mr. Freyer) had constantly emphasised the necessity of using instruments made by the best makers, and he found that rubber apparatus did not rapidly deteriorate in India if in constant use.

## DUST AS A VEHICLE FOR THE GERM OF CEREBRO-SPINAL FEVER.

By Major W. J. Buchanan, B.A., M.B., D.P.H., I.M.S.,
Superintendent, Central Prison, Bhagalpur, Bengal.

In an article published in the *Journal of Hygiene* in April last (No. 2, p. 214), I made a contribution to the little known subject of the etiology of cerebro-spinal fever, based on an examination of the forms of labour from which prisoners attacked with this disease came during a long series of cases of this disease in the Central Prison, Bhagalpur.

In that paper I referred to 47 cases of epidemic cerebro-spinal meningitis, and I have now to add 13 more, making 60 in all, and will briefly rehearse the evidence which exists in favour of looking upon dust as a vehicle for the specific organism of this fatal disease. For details, which may be here omitted, those interested may refer to the former article in the *Journal of Hygiene*. I may premise that I have been unable to trace the original source of the infection in this gaol.

The arguments in favour of dust being considered a vehicle for the germ of this disease may here be briefly given:

1. The organism of this disease in India has been repeatedly shown to be the diplococcus intracellularis of Weichselbaum, thus proving its identity with the disease as known on the Continent and in America.

2. This organism has been shown by Jaeger and Germano[1] to be capable of offering considerable resistance to desiccation. Jaeger found the diplococcus in a handkerchief six weeks after being used by a patient suffering from cerebro-spinal fever. Germano made cultures of the diplococcus, and kept it alive, mixed with dust, for eighty to ninety days; and he concluded that this diplococcus is one of the "most resistent of non-sporogenic bacteria," and that it may well cause infection while floating in the air as dust. (Nuttall.) In other experiments Councilman[2] found that the organisms were alive after sixty hours' desiccation, but not after seventy-two hours.

3. Acting upon Germane's statement as to the resisting powers of this organism, I examined the records of all cases which had occurred in this prison for the past four years, and found that of 60 cases from January, 1897, till June, 1901, no fewer than 57 came from forms of labour in which they were constantly and much exposed to dust, whereas only 3 cases came from a majority of the prisoners who worked in buildings and on forms of labour where they were but little exposed to dust, as may be seen from the following table:

| Occupations with Exposure to Dust. | Cases. | Indoor Occupations, without Exposure to Dust. | Cases. |
|---|---|---|---|
| Public works and roof repairing gangs ... ... | 5 | Factory weaver ... ... | |
| Gardening gangs ... ... | 11 | Factory storeroom... ... | 1 |
| Brickfield gangs ... ... | 4 | | |
| Road sweepers ... ... | 2 | | |
| Limekiln ... ... ... | 2 | | |
| Road making ... ... ... | 10 | | |
| (Food-preparation gangs) | | | |
| Cooks' attendant ... ... | 4 | | |
| Wheat grinding ... ... | 8 | | |
| Pulse cleaning ... ... | 3 | | |
| Rice husking ... ... | 7 | | |
| Rice cleaning ... ... | 1 | | |
| Total .. | 57 | Total ... | 3 |

The so-called "dusty" occupations only furnished labour for a minority of the inhabitants of the prison, yet almost all the cases of this disease came from this minority.

4. Again, the monthly distribution of the cases is in favour of a dustborne origin. The most dusty months in India are those of the dry hot weather and of the dry cold weather; in the rainy season, from the middle of June to the end of September, airborne dust is at its minimum. The cases occurred as follows:

| | |
|---|---|
| The dry hot months (March, April, May)... ... | 37 cases |
| The cold dry month (October to February) ... | 19 ,, |
| The rainy season (June to September) ... ... | 4 ,, |

This shows at once the difference between the dry dusty months and the rainy non-dusty months.

5. Moreover, the few cases which did occur in the rainy months also support this theory, for these cases came all from forms of grain cleaning, where the dust is just as great at one time of the year as at another.

6. I had compiled elaborate tables in an endeavour to trace a connection between certain barracks and cases of this fever, but though certain barracks have furnished more cases than others, yet the times of the occurrence of these cases by no means pointed to infection derived from the ward; indeed, out of twenty-two barracks in the prison cases have come from all but four, and in the different outbreaks the number of cases have come as follows:

| | | | |
|---|---|---|---|
| Outbreak 1 | ... | 6 wards affected | |
| ,, 2 | ... | 10 ,, | ,, |
| ,, 3 | ... | 9 ,, | ,, |
| ,, 4 | ... | 8 ,, | ,, |

7. Certain wards escaped in nearly all outbreaks, for example, Nos. 1 and 2, where factory (that is, non-dusty) prisoners are confined only had 1 case in over four years. The wards which produced most cases were those in which short-time prisoners were housed, and these are the men usually chosen for the non-skilled forms of labour, such as shown in the table above. The long-term prisoners who worked in the factory at weaving, spinning, and other forms of skilled labour, and were not exposed to dust, escaped from this disease.

8. A close examination of all the associations and surroundings of the cases as they were admitted failed to discover anything pointing to direct contagion, and in no case were those in attendance on the sick attacked.

9. Acting upon this theory that dust, either atmospheric or that produced copiously in the various processes of husking and grain cleaning, was the vehicle for the distribution of the germ of the disease, I seven months ago took in hand a workshed from which 8 cases had occurred in 1900. First I had a brick-on-edge, well-cemented floor made, the walls were then thoroughly scraped and tarred, and afterwards limewashed, the mat-and-tile roof was renewed and thoroughly limewashed, and the floors were regularly swept and deluged with perchloride lotion. Next, taking advantage of a custom of the natives, who when they go along a dusty road like to cover up their mouths and noses with a cloth, I had issued to each workman a piece of cloth for this purpose, and I saw that they wore them while at work on the very dust-producing labour of husking rice.

So far theory; but the result proved admirable, for from a form of labour which produced 8 cases in 1900 not a single case came in this year, though the occurrence of cases in the road and garden gangs showed that the germ was certainly present. I can see no reason, beyond the precautions taken, why these grain-cleaning gangs should have this year escaped.

In conclusion, I would recall the attention of medical men in the tropics to the existence of cerebro-spinal fever, which has every claim to be reckoned with as one of the continued fevers of the tropics.

References.

[1] *Zeitsch. f. Hyg. u. Infekt.*, xxvi. p. 288. [2] *Boston Board of Health Report*, 1898, p. 78.

Lieutenant-Colonel G. M. Giles, I.M.S., said: I could wish my colleague, Major Mactaggart, I.M.S., Inspector-General of Gaols, N.W.P. and Oudh, were here, as I can only give secondhand and from memory the facts of a severe outbreak of cerebro-spinal fever in the gaols of N.W.P. last hot weather. It occurred, as Major Buchanan points out is usually the case, in the dusty time of the year, but our experience did not confirm his thesis that it is essentially a disease of occupation and not of habitation. For, as a matter of fact, the disease attached itself to certain barracks in a most fiendish way, and returned as soon as the barrack was reoccupied, in spite of long evacuation and careful disinfection. After all, however, infection sticking to certain buildings must essentially be one of dust infection, and the fact that all attempts at disinfection failed, may be merely said to show that we could not find the corner of the building from which the infected dust originated.

## FOUR CASES OF LIVER ABSCESS TREATED BY TAPPING BY TROCAR AND CANNULA AND SIPHON DRAINAGE (MANSON'S METHOD).

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Recently I have had further opportunities of testing Manson's method of treating deep-seated liver abscesses, namely, by tapping the abscess by a large trocar and cannula, introducing a large drainage tube stretched upon a metal rod through the cannula and applying siphon drainage to carry off the pus.

Of the 4 cases all operated upon within the last twelve months, 3 recovered and 1 died. The fatal case (an Indian) was, however, undertaken merely for purposes of relief, the patient being almost collapsed when admitted to the hospital. The 4 cases complete a series of 28 cases in all I have operated upon by this method, of which 24 recovered. Of the four cases that died two were the first operations of the kind I attempted; a third was not under my care after the operation, having been only called in to perform the operation itself; and the fourth was the case mentioned above, in which a successful issue was well nigh an impossibility.

The operation of treating deep-seated liver abscesses by trocar and cannula, in place of by hazardous cutting methods, were fully advocated at the meeting of the British Medical Association in 1900. On that occasion Colonel McLeod, Dr. Manson, and others testified to the advantages accruing to this line of treatment, and none of those experienced in tropical diseases who were present dissented from the views expressed. I have become more convinced than ever of the efficacy and safety of treating liver abscesses by the trocar and cannula, and still more ready to condemn operations by the knife.

The chief argument against the use of the trocar and cannula is that it is "unsurgical," whatever that may mean; and the advocates of the use of the knife declare any other method as being "timid" surgery; that they like to have "a good view of what they are doing," and that they like "to look their enemy in the face." These are not scientific arguments, but mere statements, and flavour of surgical braggadocio; and they are not statements that admit of scientific discussion. The unanimous opinion passed at the meeting last year was that operations as usually performed by the knife were overheroic, that they were unnecessarily severe, and that they offered certainly no advantages in results.

My chief argument against cutting operations is that the severity of the operation in many cases is such that the opening of the abscess is apt to be deferred until too late in the disease. To cut down by way of the chest, the pleura, the diaphragm, and the peritoneum to reach a liver abscess is an ordeal that the patient, if he knows anything of the treatment contemplated, is apt to shrink from, and even the medical practitioner is willing to try every available resource before condemning his patient to so severe a line of treatment. Again, hepatic abscesses occur for the most part in tropical countries where skilled help may not be available, where trained nurses are unknown, where the appliances for surgical operations may be but few, and where, therefore, heroic operations do not commend themselves, and can only be undertaken at great risk to the patient.

What after all is demanded when pus accumulatates in or around the liver? Free outlet to the pus and efficient drainage. The simplest method of obtaining this is the best, and I contend that the simplest, safest, and most ready plan is by the trocar and cannula, and the introduction of a drainage tube of sufficient size to ensure that the pus may escape without let or hindrance. The size of the tube necessary to permit of such drainage has been much exaggerated, and I believe that, with siphon drainage, the size of the tube used after tapping by the trocar and cannula will diminish rather than increase as time goes on and more experience is gained. The suction obtainable by siphonage is considerable, and often errs on the side of being too severe; for along a moderately small-sized tube even thick liver pus will readily pass.

It will be noted that my arguments in favour of the trocar and cannula are in connection with deep-seated liver abscesses, not abscesses which actually bulge either towards the abdominal wall or the ribs, so that the pus is close below the surface. The abscesses have in these instances been left so long that the pus has burrowed its way to the surface and the so-called "operation for liver abscess" is merely setting free pus which had perhaps its origin in the liver, but is now a mere subcutaneous collection. To argue upon the advantages of any kind of "operation for liver abscess" in cases of this sort is a mere misnomer—it is merely letting out subcutaneous pus. In the first place the abscess should never have been allowed to advance so far that the pus actually causes the parietes to bulge. The practitioner has either failed to diagnose the case, or has from timidity hesitated to operate. There is but little excuse for any practitioner allowing pus in the liver to gain such proportions that the abscess can be felt either to bulge or to

fluctuate. Therefore I debar all such advanced abscesses from being considered seriously. With abscesses allowed to attain such unjustifiable proportions it matters not what operation is undertaken, and cutting is perhaps the better. But it is not these abscesses I am dealing with—abscesses which should never have been allowed to develop so far—but with deep-seated abscesses which do not bulge either towards the anterior abdominal wall or towards the right lower intercostal spaces. I speak of deep-seated abscesses, and of these only, for they are the only collections of pus in the liver or its neighbourhood which present any difficulty. I have previously classified liver abscesses as suprahepatic, intrahepatic, and infrahepatic or subhepatic abscesses. Of these three varieties the last is quite rare, and but four cases are on record. The suprahepatic and intrahepatic abscesses are the forms usually met with: the former, the suprahepatic variety, being met with between the layers of the suspensory (or broad) ligament of the diaphragm, and involving the liver but to a small extent; the intrahepatic variety, as its name implies, occurs within the liver substance. Suprahepatic abscesses, constituting the majority of liver abscess which are said to collect "at the back of the liver," and from their situation press primarily upon the diaphragm and bulge upwards towards the chest. They are necessarily deep-seated and to reach them either the peritoneal cavity or the pleura has to be traversed. Intrahepatic abscesses in the early stage—in the stage in which they *ought* to be reached by operation—are necessarily also deep-seated. When the pus has bulged towards the liver surface and caused adhesive peritonitis and parietal bulging—a stage it should never have been allowed to attain unless the patient has not been under observation—it is no longer deep-seated, and anyone however unskilled in operations of the kind can proceed to deal with it.

My contentions are:

1. That pus should be sought for early, the moment, in fact, that there is a *suspicion* of liver abscess.

2. That it is perfectly safe, with the precautions mentioned below, to search for deep-seated pus by the hollow needle of a syringe or an aspirator.

3. That it is unnecessary to expose the liver before aspirating. Exposure of the liver surface when the pus is deep-seated shows nothing, adds nothing to one's knowledge of whether or not pus is present, is no guide where to put in the needle, and, if pus is found after the liver has been exposed by a laparotomy, there is greater danger of the escape of pus into the abdominal cavity than when the needle is introduced from the surface and no laparotomy performed. Colonel McLeod related a case at the meeting of the Section of Tropical Diseases at the British Medical Association in 1900, in which a surgeon performed laparotomy in a case in which liver abscess was suspected: that, when the liver was exposed, no further steps were taken because the liver looked quite normal, yet two or three days afterwards the patient passed a quantity of liver pus by the rectum. The exposure of the liver, therefore, may prove of no diagnostic value and its exposure frequently proves a deterrent to recovery should pus be found.

4. Should an abscess be seen after laparotomy to bulge on the surface of the liver, it is farcical to suggest stitching it to the edges of the wound before opening. If the abscess is of even moderate dimensions and its walls thin, the first puncture of the suture needle either pricks the wall of the abscess or so thins them that pus escapes, either in quantity or, still worse, in driblets, and the surgeon is in a fix. Packing with sponges, washing out the abdominal cavity, subsequent suturing, etc., are well enough on paper, but they are not quite what the surgeon wished for or expected when he began his operation, and the precautions constitute "the best that could be done" under the circumstances, but he had rather the circumstances had not happened.

5. It is well to disassociate the operation for hydatids and for deep-seated abscesses of the liver once and for all. The surgical steps in the former are not applicable in the case of the latter. The operations are quite distinct as the circumstances are seldom even approximately the same. Neither in their etiology, pathology, or treatment are hydatids and primary abscess of the liver identical. Hydatids no doubt suppurate, and a collection of pus the result of a hydatid may require special treatment, but the ordinary hydatid and the hepatic abscess are as far apart in their surgical bearings as in their etiological.

6. To reach a liver abscess by way of the chest, removal of a part of a rib or ribs, stitching the layers of the pleura together, cutting or tearing a pathway through the diaphragm, and if the abscess is intrahepatic opening the cavity of the peritoneum to reach it, or if suprahepatic, possibly missing it altogether, is a procedure which may occasionally be justifiable, but I have never met with a case of the kind, nor do I ever expect to. It is this operation especially which is regarded as over-heroic, and I have no hesitation in declaring against it absolutely. It is declared as being the only properly "surgical" procedure, and all who do otherwise are accused of surgical cowardice. Well, many good men, the men whose opinion I respect most in connection with this subject, are under this terrible ban, and I am content to place myself in line with them, and still consider we are doing the best for our patient.

When a liver abscess is suspected pus ought to be sought for without delay. This is done by introducing the hollow needle of an aspirating syringe or of an aspirator into the liver. If not found at once the needle may be inserted again and again—say six or seven times or more—into the liver in different parts or until pus is found or believed to be non-existent.

In my opinion the pus ought never to be sought for by a hollow needle unless the surgeon is prepared to operate at once should pus be found. In London hospitals, and in private practice at home and abroad, it is customary for a physician to first search for pus in his patient's liver, and then having found it, inform the surgeon that he wishes an operation performed. This is a dangerous procedure and one which no one is justified in doing. No physician ought to search for pus in the liver without a surgeon standing by ready to operate at once; or if the medical practitioner is abroad where he acts as both he must always be prepared to follow up the finding of pus by a surgical operation. The reason for this is obvious, for were a thin-walled abscess near the liver surface pricked in one or more places by a needle, the pus may quickly escape thence into the peritoneal cavity.

It is well to introduce the needle again in one or two places around the needle puncture at which pus has been found, to ascertain the lie of the abscess, so that drainage may be applied to the lowest part of it. Never introduce the same needle by which pus has been found into another part of the liver, or at least until the needle has been thoroughly cleansed.

Immediately the pus is found, and the lie of the abscess made out, incise the skin at the seat of the needle puncture for about three-quarters of an inch to admit the trocar. Plunge the trocar and cannula into the abscess, either through the chest wall between the ribs or through the abdominal wall, maintaining the direction followed by the hollow needle. It is well when aspirating to notice the most superficial point at which pus issues whilst the needle is withdrawn, the most superficial part being the distance to which only the trocar and cannula need be introduced. Now withdraw the trocar; stop the pus as it issues through the cannula from flowing by placing the thumb over the mouth of the cannula, as it is unwise during this stage to allow the abscess to empty completely; stretch the specially prepared rubber tube, some 9 inches long, with perforated ends, which I show you, on the long metal rod, and pass both through the cannula until the bottom of the abscess cavity is felt; slip the cannula out, and remove it over the stretched tube; relax the tube so that it shrinks towards the bottom of the cavity by steadying the end of the metal rod there, withdraw the rod, and leave the drainage tube in the abscess. The tube may now be stitched to the skin *without* the suture penetrating the lumen of the tube. Into the end of the projecting drainage tube insert a piece of glass tube of suitable size to fit the tube, and about 3 or 4 inches long. To the distal end of the glass tube fit a long piece (some 4 or 5 feet) of tubing, which serves to conduct the pus to a bucket by the side of the bed. The bucket should contain a sufficiency of antiseptic (carbolised) fluid to cover the end of the tube to the depth of several inches. A weight, or a piece of lead on a string (clip forceps will do temporarily), ought to be attached to the end of the tube to prevent it

slipping from the bucket. The tube should be filled with warm boracic lotion, if the pus is not issuing freely enough to find its way into the bucket, taking care that the fluid and pus are not forced back into the abscess cavity whilst the tube is being filled. This can be prevented by grasping the tube close to the body between the finger and thumb. Now surround the tube as it issues from the side with wet antiseptic gauze, and cover by the usual dressings.

The subsequent treatment consists chiefly in watching the flow of pus. If the patient complains of a dragging pain in the region of the liver or shoulder, raise the bucket from off the floor so that the siphon drainage is less powerful. Do not attempt to wash out the tube, or the abscess cavity, unless the flow has absolutely ceased and the temperature is going up. Let all remain unchanged except the dressings, if the temperature is satisfactory, until the fluid through the glass tubing is seen to be bile-stained, when the drainage tube may be cut off close to the body, and after a day or two a smaller and shorter tube used to replace it. The tube is gradually shortened until the wound heals.

Case I.—T. W., male, aged 40, marine engineer, native of England, went to China in 1889 in perfect health and continued so until October, 1900, when he had an attack of dysentery. He remainsd in hospital nine weeks and made a good recovery. On March 12th, 1901, he came to England for a holiday. During the first week of April, 1901, he experienced a severe pain in his right side which got worse day by day. He had no rigor, but felt feverish and had occasional night sweats.

On April 25th he was admitted to the Seamen's Hospital, Albert Docks, London. On admission the patient looked sallow, anæmic, and thin, having lost about three stone in weight. He complained of pain in the right shoulder and in the right side over the region of the liver. His tongue was coated and of a yellowish tinge; appetite poor; bowels moved naturally once a day; and, on the day of admission, the temperature was 99° F. at 2 P.M., and 101.2° F. at 10 P.M. The area of liver dulness was increased in every direction, but not more than about one inch in an upward and in a downward direction. In the epigastrium the left lobe was felt to be distinctly increased in size, so much so that attention was directed towards the left lobe as being possibly the seat of the trouble. This belief, however, was dispelled after a day or two's observation, and it was recognised that the enlargement of the left lobe was but the compensatory physiological enlargement consequent upon the left lobe taking up the work left undone by the diseased right lobe. There was distinct but not severe tenderness over the liver on percussion; when the liver was grasped between a hand placed behind and another in front acute pain was elicited in the right shoulder. Spleen not enlarged. Urine, specific gravity 1028, rather dark in colour; no albumen, no sugar; bile pigment a trace. The patient had a slight cough and some mucous expectoration. Heart normal; pulse 84, rather feeble. The patient suffered from sleeplessness, getting only a few snatches at a time; he ascribed the sleeplessness to the pain in the shoulder.

May 1st. The patient was given an anæsthetic, and pus was found 3⅜ inches from the surface, in the right mid-axillary line between the seventh and eighth ribs. A large trocar and cannula was at once plunged into the abscess, and a large drainage tube stretched on a metal rod introduced through the cannula. Pus to the amount of 20 ounces was drawn off at the time. Siphon drainage was applied and the tube stitched to the skin.

May 2nd. The morning following the operation the temperature fell to 97.4° F; in the evening the temperature rose to 100° F.

May 3rd. The temperature kept to the normal during the 3rd, and below the normal both morning and evening during the 4th, 5th, 6th, 7th, and 8th days. The patient was now practically convalescent.

May 10th. During movement in bed the patient violently pulled in the drainage tube, and it slipped out. It was found impossible to replace the tube, so an anæsthetic was given, and the tube inserted.

May 26th. The patient has continued fairly well, the temperature never rising over 100° F.

June 1st. Not so well. Congestion of base of right lung, and some blood in expectoration.

June 3rd. As the patient did not improve and dulness continued at base of right lung, and an empyema was suspected, he was again anæsthetised, the abscess cavity explored by the finger, a counter-opening made, and free drainage established.

June 5th. The discharge from liver practically *nil;* but cough and expectoration continued.

June 11th. Liver abscess almost healed, but the temperature keeps up, reaching in the evening 103.6° F. Erythematous patches appeared on the inner aspect of the right forearm and the outer aspect of the right, evidently of a pyæmic nature; pulse 116; respirations 32; expectoration muco-purulent and more profuse.

June 12th. Both lungs are consolidated at the base, the right lung being affected as high as the middle of the scapula.

June 14th. Expectoration profuse, tinged with blood.

June 17th. Patient much improved, blood disappeared from the sputum which is now muco-purulent.

June 24th. The temperature has been below and just above normal during past week.

July 1st. An abscess of pyæmic origin evidently was opened in the right forearm to-day.

July 10th. The patient quite convalescent and about to leave the hospital.

Case II.—W. W., aged 26, trooper 5th Dragoon Guards, native of England; served in India and South Africa. Whilst in India the patient had "fever" on several occasions and pneumonia, but never had dysentery. In South Africa he arrived in good health, but during April, 1900, had an attack of "remittent fever" with diarrhœa which lasted one month. There was no blood passed at stool, but on May 7th, 1900, whilst about to sail from Durban to England he noticed pure blood in stools for the first time. Blood continued to be passed at stool up to August 1st, 1900. During the early part of July, 1900, pain developed under the right costal cartilages of a "shooting" character; the pain gradually increased in an upward direction, and affected the right shoulder. During July and August, and up to the time of admission to the Seamen's Hospital on September 21st, 1900, had regular nightly attacks of rigors, fever, and subsequent sweating, with occasional attacks of vomiting.

On admission to the Seamen's Hospital, Royal Albert Docks, on September 21st, 1900, the patient looked anæmic and thin. Digestive system: Tongue coated white; appetite good; constipated. There was pain and tenderness in epigastrium and over the liver generally. Area of liver dulness considerably increased, extending from the lower border of the fourth rib to 2 inches below the costal margin in the nipple line. There was hepatic fulness in epigastrium and increase of liver area. Spleen dulness not increased, but there was tenderness on pressure in the region of the spleen. Temperature 101.6° on admission. He complained greatly of pain in the right side and shoulder, and of not having slept well for a considerable time.

September 25th. The liver abscess was operated upon by Manson's method. Pus was found 4 inches from the surface of the chest by an aspirating syringe, and a large trocar and cannula immediately introduced, when 12 ounces of pus escaped. A large-sized drainage tube stretched on a metal rod was introduced through the cannula and the tube cut short; no siphon drainage was established at first.

October 4th. The pus flowed freely enough after the first day or two. The patient is comfortable, temperature subnormal, and appetite good.

October 28th. A small quantity of pus only, but the track of the abscess cavity seems very long—as much as 6 inches, and causing some difficulty in drainage. It is contemplated to open the cavity further back so that the pathway to the surface is shortened.

November 9th. Still difficulty in getting free escape of pus owing to length of purulent track. Patient unwilling to be operated on again.

November 15th. Discharge almost *nil*; track healing. Patient convalescent; left hospital shortly afterwards.

Case III.—W. B. C., aged 52, native of England. He was in excellent health when he went to South Africa in 1879. Health remained good until the month of December, 1897, when he contracted typhoid fever in Johannesburg. From the attack of typhoid he seemed to recover perfectly. Present illness dates from December, 1899. The patient was then in Durban, when he was attacked by "jaundice" and "fever" with marked perspirations. His ailment was diagnosed as "catarrh of the stomach." The initial attack lasted about one week. During the following three months he had several recurrences, but none so severe as the first. The attacks described by the patient consisted mostly of recurrent febrile attacks which occurred during the night, when he had fever, bile in the urine, and severe perspirations. On the following morning the fever and jaundice symptoms, as a rule, had disappeared, and he was able to be out and be at work. The patient left Durban on April 27th, 1900, for Pietermaritzburg where for two months he kept quite well. In June 1900, however, the "jaundice" and feverishness returned and the diagnosis of scorbutic jaundice was made. This, however, no doubt on account of the accompanying increase of temperature, was altered to malarial jaundice. The patient subsequently went to Grahamstown, where for nine weeks he had weekly attacks of "liver and jaundice." The attacks from the patient's description were like ague with shivering, heat, and perspirations. December, 1900, the patient came to England, during the voyage home he had no "attacks"; on arrival in London, however, he had a slight recurrence, but not of sufficient severity to prevent him going to Birmingham on the next day. Immediately on arrival in Birmingham he had attacks every second day for three weeks. He was jaundiced and confined to his room, the diagnosis made, if the patient can be believed, was that he was suffering from gall stones. During this period he lost weight rapidly, and since the commencement of his illness had lost in all about 40lb. weight; he entered a private hospital in Birmingham where, during his five weeks' stay, he had no fever or attack of any kind. During the time he was in hospital he was on strict diet. For about five weeks after leaving hospital the patient had no fever, no jaundice and he increased in weight.

About the end of April, 1901, pains recurred in the back and over the pit of the stomach; the pain was not acute, but dull and wearying. This attack was different to any the patient had suffered from previously. He went to hospital, but, although an operation was contemplated, it was postponed. During the period of his stay the liver became enlarged and tender, he vomited when first taken ill, and had frequent attacks as if from ague.

When seen by me in London the patient was under the care of Dr. Rotheroe. The patient was very thin, and with a jaundiced tinge of feature. Daily his temperature rose to 100° and 101° F. Breathing normal, lungs normal; pulse from 80 to 95. There was no cough, but a gnawing pain persisted in the right hypochondrium. On examining the abdomen the right side of the chest wall bulged considerably, and there was subcutaneous œdema over the seventh and eighth ribs in the anterior axillary line. The liver could be made out to be enlarged slightly upwards; but there was no protrusion or dulness below the right rib cartilages. In the epigastrium the liver was but slightly tender and occupied a normal position. The patient had been seen the day previously by a physician in consultation, who provisionally diagnosed hydatids and advised operation.

June 16th, 1901. I came to the conclusion that the patient had a liver abscess; and, after the patient had been anæsthetised, searched for pus between the seventh and eighth ribs. Some 2 inches from the surface pus was found by an aspirating syringe; a large trocar and cannula was plunged into the abscess, a drainage tube passed through the cannula into the cavity of the abscess, and siphon drainage established. The pus that escaped through the cannula squirted out with great force, showing that it was under considerable tension. The pus was of a light yellow colour, very thin, and with a slight greenish hue, indicative of long retention.

There is nothing further to record in this case except an uninterrupted

recovery. On June 18th no pus was escaping by the drainage into the bucket in which the end of the drainage tube was placed, and the patient's temperature being normal, the tube was cut off short within a couple of inches of the side of the chest.

June 29th. No pus now escapes by the small drainage tube placed in the mouth of the sinus, and the patient is convalescent.

CASE IV.—S. S., aged 50, native of Zanzibar, a coal trimmer on board ship, last voyage from Australia. Admitted to hospital after twelve days' illness, no other history obtainable. On admission the patient was emaciated, weak, and almost in a state of collapse. The breathing was shallow; the respirations were at the rate of 40 per minute, pulse 78; temperature normal. Liver dulness increased in axillary, nipple, and median lines. Epigastrium very prominent, and evidently pushed forward by the liver. On the first day of admission a large stool was passed, looking like custard, but with no fæculent matter. The patient has been maintained during the last twenty-four hours by constant feeding with small quantities by brandy.

September 3rd. Pus was found by an aspirating syringe, and a large trocar was passed deeply into the abscess; about 8 ounces of pus flowed; a large drainage tube was inserted, and cut off short. No amœbæ were found in the pus. During the night the patient tore off the dressings, and with them the drainage tube was removed. The drainage tube could not be satisfactorily replaced.

September 6th. A great quantity of bile-stained pus escaped into the dressings, necessitating frequent change. The stools were very frequent, every half hour during some part of the day. The stools still preserved their custard-like appearance.

September 7th. A large drainage tube was introduced to-day, when some 20 ounces of pus welled out of the wound. In three hours afterwards, and again after an interval of four hours, large quantities of pus saturated the dressings.

September 8th. Great quantities of discharge still issue from and around the tube. The discharge consists of a bile-stained fluid of yellow, green, and brown hues. The patient is very weak, restless, and at times collapsed. Stools very frequent, passed unconsciously, and containing but little fæcal matter.

September 9th. For the first time amœbæ found in the pus. The patient grew gradually weaker and died on September 12th.

*Post-mortem Examination.*—No adhesions had formed between the liver and the abdominal wall around the seat of operation. Old adhesions were found at some distance from the seat of operation between the right lobe and the under surface of the diaphragm. No adhesions had formed between the liver and intestines. No fluid in the peritoneal cavity nor any signs of peritonitis. In the substance of the right lobe of the liver two abscesses existed, each about the size of cricket balls, separated by a partition about 1 inch in thickness. The trocar and cannula had traversed this partition, and had reached the far abscess, thus accounting for several of the peculiar features in connection with this case.

Three of the cases—I, II, and IV—were patients in the Albert Dock Branch of the Seamen's Hospital. They were all under Dr. Manson's care and the abstracts are from the notes of the cases taken by Dr. W. G. Ross, senior resident medical officer in the hospital. Case III was under the care of Dr. Rotheroe to whom I am indebted for notes on the case. All the cases, with the possible exception of No. II, were intrahepatic abscesses. Cases I and IV were distinctly post-dysenteric, the others gave no definite history of dysentery. In Case No. III the attacks seem to have been of a malarial nature; and intermittent malarial hepatitis, if we can recognise such an ailment, would seem to best describe the attacks described by the patient. Case IV was operated upon for the purpose of relief merely.

Mr. P. J. FREYER (London) differed from the opinion expressed by Mr. Cantlie as to cutting operations. He had quite abandoned operation by the trocar and cannula, and preferred the open method, namely, cutting boldly down and seeing definitely where the seat of the trouble was. He mentioned one case of speedy cure he had operated upon recently in which he had removed a part of the rib.

Dr. JORDAN preferred the open method of treatment by first inserting a small aspirating needle as far back as possible in order to get the natural siphon drainage of the lowest point of the abscess cavity while the patient was lying in bed, then he cut down on the needle as his guide. After this a silver tube was inserted for the first two or three days to keep a good patent opening. This, he said, was now the successful practice in Hong Kong.

Captain W. R. BATTYE, I.M.S., said that some months ago several cases were recorded in the *Indian Medical Gazette* by Colonel Hatch, I.M.S., of hæmorrhage following the insertion of the trocar. It appeared that such hæmorrhage might be more easily dealt with if the liver had been previously exposed.

Dr. WM. CHISHOLM (Sydney Hospital) had hesitation in speaking after experienced men like Mr. Cantlie and Mr. Freyer, but coming from Sydney where a younger generation of surgeons practised who rather advocated heroic surgery it was a pleasure to hear the comparatively simple method of operation advocated by such men as Dr. Manson and Mr. Cantlie. At a discussion in Sydney in cases of hydatid the opinion was universally in favour of free incision. In simple abscess the success of cases quoted was sufficient justification for the proceeding, and it had given him much pleasure to hear the advocacy of the simpler method of treatment.

Dr. MANSON said he had seen liver abscesses operated upon by the several operations spoken of, but he had no hesitation in declaring in favour of the trocar and cannula, and against the cutting operations, which to him had appeared always unnecessarily severe.

Mr. CANTLIE, in reply, said that most of those who had objected to the operation by trocar and cannula, referred to abscesses which were protruding from the liver and not to deep-seated abscesses. He stated that in his opinion hepatic abscesses should not be allowed to reach that stage if under the observation of a medical man, but that when the matter was so far advanced it mattered not whether a knife or a trocar were used, perhaps in these abscesses the knife was preferable. He specially spoke of deep-seated hepatic abscess only in discussing this operation, the superficial hepatic abscess requiring no more knowledge or experience than was wanted for an abscess, say on the outer aspect of the thigh. In reference to the danger from hæmorrhage mentioned by Captain Battye, Mr. Cantlie referred him to his previously published anatomical observations on the point. The chief danger was from the inferior vena cava, and to locate the position of this vessel from the surface of the body in the neighbourhood of the liver was a subject dealt with at the meeting of this Section in 1900. By measurements of frozen sections Mr. Cantlie found that the distance of the inferior vena cava from the surface of the chest wall, anywhere between the breastbone and the angles of the ribs, in a chest of 32 inches circumference was about 4 inches. When operating he used this observation as a guide to go by, and limited the depth of the punctures in proportion to the chest measurement.

## A DISCUSSION ON MALARIA AND ITS PREVENTION.

### I.—His Excellency Sir WILLIAM MACGREGOR, K.C.M.G., M.D. Governor of Lagos.

### NOTES ON ANTIMALARIAL MEASURES NOW BEING TAKEN IN LAGOS.

THESE few field notes to be read at a discussion on Malaria have been written on the suggestion of Major Ronald Ross. The writer of them is deeply sensible of the honour conferred on him by being asked to prepare them—a request which has very willingly been complied with.

The general outline of the natural history of the malarial parasites is here accepted as sufficiently established for practical purposes by the unique and glorious labours of Major Ross. In these notes, therefore, only the practical aspects of the question are touched upon.

It may at once be premised that to no other country of the same size is the subject of malaria of greater importance than it is to Lagos. Its economic and industrial future very largely depends on whether malaria can be successfully combated or not. Lagos has been a malaria centre that has earned a very unenviable reputation. It is very favourably situated for commerce; geographically it is the natural port of outlet of the great interior province of Northern Nigeria. It seems clear enough that practically only two things are wanting to make Lagos a great and prosperous commercial town, by far the greatest in West Africa. These two things are the extension of the Lagos Railway to Northern Nigeria, and the control of malarial fever. The two undertakings are in practice closely connected together, and perhaps malaria is not the less important of the two. Both are practicable, but malaria is the more urgent, and therefore should be dealt with first. Malaria can also be coped with on a greater or lesser scale in proportion to the means available from time to time. Some of the steps now being taken in Lagos to combat malaria will be mentioned herein, more particularly from the point of view of the administrator.

It may be admitted at once that at Lagos, as probably everywhere else, the academic rules of procedure cannot in

any one direction be carried out with scientific minuteness and detail. The measures adopted must be such as can be accomplished by the men and money at disposal; and as these coefficients will very likely not be on the same scale in any two British colonies, the attack on malaria will doubtless be planned out differently according to local circumstances. Were there ample funds at disposal the measures now taken in Lagos would be different from what they actually are at the present time.

It has been felt to be an important preliminary necessity that every effort should be made to acquaint with the general principles of the present malarial doctrine, not only the Europeans resident in this country, but also the natives of every degree of civilisation. For this purpose the reports of Professor Koch on his Eastern expedition, in which he demonstrates so effectively the specific action of quinine on malaria, have been translated and published in suitable pamphlet form, and have been widely distributed. The same course has been adopted with regard to Professor Celli's very convincing report on the use of mosquito netting on the Italian railways. Extracts have similarly been published and distributed from the reports of English expeditions and from other similar English works, including a paper on health read by Dr. Strachan, Chief Medical Officer of Lagos, at Liverpool. A short course of popular lectures on malaria and dysentery has been delivered in Lagos by Dr. Best. These lectures, in which the use of technical terms and phraseology has been carefully avoided, have created a much larger amount of interest, and been far better attended, than one could have dared to hope for. It is contemplated that teachers in public schools, who have diligently attended Dr. Best's course, should impart to their scholars the rudiments of the malarial doctrine in a health class, which will be examined by an inspector in much the same way as any other school class, and will count equally with reading and writing for the distribution of the school grant. The Chief Medical Officer is now preparing a general course of lectures on sanitary subjects; and it is intended that these shall be repeated at different places, in the native language, by one or more of the medical officers that are natives of the country. It is certain that by these means, and by an intelligent appreciation of the vast importance of the subject to this country, a degree of interest in the question has been created in the public mind here that one could not have expected. It is very important that people should at the outset generally understand and believe the theory of malaria. Belief has become more general than one could have foreseen. It is gradually becoming understood.

In active operations the greatest attention is being given (1) to the prevention of malaria by the administration of quinine; and (2) to the use of gauze netting; while (3) at the same time the mosquito is attacked in his breeding ground.

### The Administration of Quinine.

It appears highly probable that at least as much can be done here by the use of quinine as a preventive as by the employment of mosquito netting.

The greater number of Government officers take quinine regularly, but of course so long as taking quinine is not compulsory there will always be a residuum of men that, either because they cannot tolerate quinine, or for some other reason, will not use it as a preventive of fever. There are some half-a-dozen such in this service. This remedy is as much required for native as European officers. In 1900, 79 cases of fever in European officers, of an average duration of 4.5 days, were treated by the medical officers, as against 149 cases of an average duration of 3.4 days among native officers. From January 1st to May 23rd the figures have been 15 European cases of an average duration of 7.5 days, against 47 native cases averaging 3.38 days. This gives a total of 94 European cases and 196 native cases.

Recently no fresh case had occurred in Lagos for nearly a month. Then one case presented itself, and that one case occurred as opportunely for the malaria doctrine as if it had been made to order, for it was in the person of an officer on whom quinine produced its evil effects in an aggravated form, so that he could not take it as a preventive. As a symmetrical demonstration of the theory a second officer that shared the same quarters should have contracted the contagion from the first one, for the quarters were full of mosquitos. But he took much quinine and escaped, thereby illustrating the already proved value of quinine as a preventive.

In all probability the day will come before long when newly-appointed officers for places like Lagos will have to undergo a test as to whether they can tolerate quinine or not. A man that cannot, or a man that will not, take quinine should not be sent or remain in a malarial country, as he will be doing so at the risk of his own life and to the danger of others.

The more common method here is to take daily doses of from 2½ to 5 grs., but several take a large dose weekly, and others irregularly. Each Government officer has been directed to obtain from the chief medical officer the quinine he requires for his tour of service. It is not improbable that it may eventually become a rule of the service that when an officer that has not been taking his quinine regularly gets fever, he will lose salary for the time he is laid up with it, unless he can show that he cannot tolerate quinine. So far as officers of the Government are concerned, it seems to be already tolerably certain that by the use of quinine, regularly taken as a prophylactic, they can be kept practically almost free of fever. We have had no serious case this year.

The great difficulty is how to extend this preventive treatment beyond the service, more particularly to the uneducated masses of the natives. It is simply impossible to protect the whole population by quinine administered as a prophylactic. In the first place, the great mass of natives would not take the medicine; and, in the second place, the Government could not afford to pay for the 70 tons of quinine a year that would be required to give even a daily grain dose to each of 3,000,000 of people. Quinine as a preventive will not at present be given to natives outside of the town of Lagos. A special vote of £500 has been made for the purchase of this medicine for this particular purpose. A public dispensary already exists in the town, at some distance from the general hospital. At this dispensary between 2,000 and 3,000 patients are treated annually. A second dispensary is being constructed in Lagos, and a third one at the suburb of Ebute Metta. It was felt that this, and the appointment of a special medical officer to attend the poorer natives, would still fail to reach a large number of the indigent and more ignorant. To take up this work a large number of the educated ladies of Lagos have formed themselves into a league, chiefly for the purpose of administering quinine to native children and others suffering from or specially exposed to fever. These ladies are natives of West Africa, but many of them have been well educated in England. It is hoped that they may be able to induce many natives to take quinine that otherwise would simply refuse it. The league is at least an important educational institution.

### Mosquito Netting.

It is not likely that in a place like Lagos as good results can be obtained from the use of mosquito proof netting as in Italy. One great objection to it here is the serious and highly disagreeable way it checks ventilation. This is a difficulty that cannot be fully brought home to one in a cold climate. But in a low-lying, hot, and moist locality like Lagos it comes to be a choice of evils to sit inside the netting stewed and suffocated, or to be worried and poisoned by mosquitos outside. The netting is hardly a feasible remedy as regards native houses. It is not possible to protect even European quarters completely by it. Few officers or others are so occupied that they could spend the day in a mosquito proof room. Certain it is that any man that suffers from the singular delusion that mosquitos bite only during the night would have a speedy cure by spending a few days, or even a few hours, in Lagos. Operations here are being limited to supplying one mosquito proof room to the quarters of each officer. In this he will be able to spend the evening free from mosquitos if he chooses to do so. The European wards of the hospital are similarly protected. Hitherto we have used only muslin, as the wire netting ordered in England last November has only just now reached this. Much importance seems to be attached to the question of the material to be used in making the metallic netting, which alone can last in this climate. Muslin becomes full of mildew and rots in a few weeks when exposed.

We have had here a very useful experience as to the

materials required for the metallic gauze. In May, 1894, some 250 yards of galvanised wire netting was obtained from England and was used in building rose houses at Government House in August of the same year. Those houses have been examined by the Assistant Director of Public Works who says they will be good for four years more. This shows a vitality in this climate of some half score years for the galvanised wire netting. The experiment seems conclusive for Lagos, and in future this kind of gauze will be used instead of the expensive article made of compounds of copper.

### THE ATTACK ON MOSQUITOS.

The measures taken for diminishing the numbers of mosquitos are various. The most expensive is the slow, laborious, and costly one of filling in the swamps of Lagos. That is being done chiefly by convict labour, but will be much expedited soon by steam power. Meanwhile kerosene is being used on some of the swamp pools most favoured by the *Anopheles*. It is an unfortunate fact that the *Anopheles* is, at least in certain parts of Lagos, the most common mosquito. About 70 per cent. of the many that haunt Government House are *Anopheles*, and unhappily they puncture one all day long.

Many of the water tanks about European quarters are found to contain large numbers of mosquito larvæ. A tinsmith has recently been engaged from England whose first duty it will be to make all water tanks mosquito-proof. It appears from many observations that mosquitos do not breed in the Lagos wells, though they are seldom over 20 ft. deep, while many are considerably shallower. Fortunately for Lagos the town is built on sand, through which rain pools soon disappear by filtration. But for that accident the place would be simply uninhabitable.

It is strongly recommended in certain competent quarters that to get away from infected mosquitos Europeans should live at places apart from natives. This may be called the academic view. From the administrative point of view it is an unacceptable doctrine. The academic view is ungenerous, and would afford no radical remedy were it practicable, which it is not. The policy followed in Lagos in this as in other matters is to take the native along with the European on the way leading to improvement. Here they cannot live apart nor work apart, and they should not try to do so. Separation would mean that little, or at least less, would be done for the native, and the admitted source of infection would remain perennial. To simply protect the European from fever here would never make Lagos the great commercial port that it should become. What we can do in this matter for the uneducated part of the Lagos population will be effected chiefly by reclaiming swamps and administering quinine.

It is a fact that has been impressed on myself in a marked manner during the last few weeks that mosquitos are much more numerous about European quarters than about native dwellings. Up country there are not a few mosquitos at every European quarter we put up, while at many native camps there were none. The reason of the difference seems to consist in the tanks and other receptacles for water, and in the greater frequency of pools about the quarters of Europeans, one of the results of greater cleanliness. In the interior, speaking generally, the two places at which mosquitos most abound are European quarters and the tops of the hills, the two localities at which one would reasonably expect them to be least numerous. The explanation with regard to the residences of Europeans has been given. In the granitic or gneissic hills there are numerous natural fissures, sometimes large numbers of artificial excavations that have served as mortars for grinding corn. In these fissures and excavations mosquitos breed in large numbers. On the other hand, the low-lying country almost always consists of porous sandy soil through which rain is filtered into a subsoil of gravelly formation. A clay surface along which rain water runs is exceptional. The final result is that for six months in the year the propagation of mosquitos is practically at a complete standstill in the interior. The soil becomes extremely dry, and remains in that condition for several months. One hardly ever sees a pool anywhere save in the beds of rivers and creeks of a considerable size. As these latter are full of small fish the mosquito larvæ bred there have extremely little chance of survival. During the dry season there was not a mosquito to be seen at Oloke-Meji, on the Ogun River, a place that one would have expected to be infested with them. It is the sandy porous soil of this country and its long-continued dry season that reduces the number of mosquitos here to a very small fraction of those met with in a place like British New Guinea, for example. It would perhaps be possible to exterminate mosquitos altogether in the Lagos hinterland if it were practicable to prevent their production near the coast, and their arrival from elsewhere. It is quite clear that the dry season here is a mighty factor against the mosquito and a most encouraging ally of his enemies. It was very noticeable at Lagos this year how the first shower of rain that fell brought at once on the scene a considerable number of mosquitos where none were present before, just as if they had been unable to go abroad without something to revive them.

Doubtless it is in a great measure due to the long-continued absence of rain and to the nature of the soil that there is so little fever in many inland towns. The chiefs of some of them wish to make out that they have no fever at all. Others admit that they lose children by it. It is intended that the Medical Department should make a sufficient number of observations on children at those places to determine how far they are free from, or suffer from, fever. A European town would probably have much more on the sites of these native settlements on account of the freer use of water. The chiefs of these inland towns unanimously state that they have no "blackwater fever" there.

With the sanction of the Secretary of State the measures being taken to improve the sanitary condition of the town are being applied as far as practicable to the railway. "Borrow pits" near all stations are being filled up, or kerosene is used on them. The mosquito netting is to be employed there as in other quarters. Certain buildings have to be shifted. But there is nothing peculiar in this. In the dry season mosquitos will all but disappear on the railway with reasonable attention to drainage.

In the matter of large trees, of which there are not a few in Lagos, a compromise has been adopted. It did not appear desirable to deprive the Lagos subsoil, which is made up of sand and mud, of the great pumping power that must be exercised by the many large-crowned trees now growing here. On the other hand, these trees did afford shelter to many mosquitos. They have been thinned out, all undergrowth has been cut away, and all the lower branches that could be lopped off without disfiguring the tree have been removed to allow free passage to the sea breeze which generally blows at Lagos.

It is painfully apparent that what is being done at Lagos against malaria is far short of what is required, but it is a beginning, and if these measures are continued for even two or three years the effect will begin to be felt to such an extent as to encourage their continuance, let it be hoped, on a greater scale.

Malarial fever is not the only disease that creates a great mortality here. Large expenditure has to be incurred with special reference to dysentery for instance. The total sum set apart for sanitary and health purposes in this colony during the current year is not under £34,500, or about one-seventh part of the whole revenue. More cannot be done without deranging other parts of the administrative machinery, which in turn would stop sanitation.

[After Sir William MacGregor's paper was read copies of lectures which had been delivered to the general public in Lagos were passed round.]

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## II.—By Major RONALD ROSS, F.R.C.S., F.R.S.[1]

## NOTE ON THE HABITS OF EUROPEANS IN INDIA AND AFRICA IN RELATION TO MALARIA.

IT can scarcely be disputed that the health of Europeans on the West Coast of Africa is in general much worse than in India. We can, however, suggest two explanations of the fact. Either the disease potential of West Africa is greater than the disease potential of India, or the mode of life of Europeans exposes them to infection more in the one country than in the other.

[1] Taken as read in the unavoidable absence of the President.

The first of these explanations—that Africa is actually more unhealthy than India—is the one which is generally accepted, but before admitting it we should inquire whether the excess of sickness in Africa may not possibly be largely due to the neglect of certain precautions which are more generally taken in India. In my experience the habits of Europeans are very different in the two countries. How far does this difference influence the sick list, especially from malaria?

There is probably only one really accurate method by which we can determine the degree of malaria in a given locality, and that is by ascertaining the average time in which a newcomer becomes infected. The shorter this period the greater, evidently, the malaria potential of the locality. Native children constitute the class of newcomers most accessible for making the estimate, and in order to compare the malaria potentials of Africa and India it would be necessary to carry out extensive blood examinations of the native children in both countries. Such examinations have been frequently made in Africa, but not, so far as I remember, in India. Hence it seems to me we have no strict reasons at present for declaring that Africa is actually more malarious than India. It may prove to be the case that as many children are infected in India as in Africa; and certainly several informal observations of my own in various parts of India suggested that a large percentage of native children were infected in those parts (Secunderabad, Darjeeling, Terai, Nowgong District). If this surmise prove correct, we shall probably be compelled to attribute much of the malaria-rate among Europeans in Africa to other causes than to a greater malaria potential. What these other causes may be I shall now endeavour to indicate.

I would first draw attention to the following remarkable facts about Indian malaria. In Calcutta autocthonous malarial infection is scarcely known to occur (it is at least far from common) among the thousands of European citizens, who would indeed be very surprised to learn that Calcutta is a malarious city. But as a matter of fact malaria does exist, and to a very considerable degree, among the native population. The same thing occurs, according to my experience in Madras, Bangalore, Bombay, and probably in many other stations. In Madras, Maitland has noted an analogous fact—that while filariasis is very common among natives, it is very rare among Europeans.

On the other hand, as soon as we leave the large Indian stations, and travel into the districts, we find malaria to be much more rife among Europeans. Officials on district work, sportsmen, and troops on service frequently become infected. In certain large areas occupied by planters, such as the Nilgiri, Assamese, and Terai plantations, malaria is just as common, or even more common, among Europeans than among natives. In fact, to judge from my own observations, the conditions as regards malaria of the Europeans in these Indian plantations approximates closely to the West African conditions.

To what cause are we to attribute the comparative indemnity of Europeans in the larger Indian stations? It can scarcely be due to a smaller malaria potential, because the natives in these stations often suffer with great severity.

In considering this question I have been much struck of late by the fact that, as already mentioned, the habits of Europeans in the Indian stations differ in several important particulars from their habits in Indian plantations and in Africa. I refer especially to the habitual use of punkahs, mosquito nets, well-built houses, and comparatively good food in the Indian stations. On the other hand, these comforts are often or generally wanting in the Indian plantations and the African coast towns; and it is just where they are wanting that the Europeans suffer most sickness.

Let us compare, for example, the habits of a European in a business house in Calcutta with the habits of a European in West Africa. In Calcutta he sleeps under a punkah or mosquito-net, or both; he dresses and breakfasts under a punkah: he works all day at his office under a punkah: in the evening he takes vigorous exercise, and he dines under a punkah. He wears the lightest possible clothing; he lives in a solid, cool, airy house: and he obtains very good food. Once in five or six years he returns to Europe for leave. The result is that he leads a comparatively healthy, vigorous, and comfortable existence. Many men in Calcutta have informed me that they seldom feel unduly warm, and the constant use of the punkah certainly has the effect of cooling the skin and keeping off mosquitos and other obnoxious flies. The houses, being built in the European quarter and surrounded by a considerable "compound," are usually well segregated from the native neighbourhood, and the good food and exercise preserve the general health of the majority of European settlers.

In Africa the houses are frequently very bad. In Freetown, for instance, they are the same as the houses of natives, and are mingled with these, being often nothing but a kind of wooden shanty, without sufficient verandahs and gardens, and frequently built over native shops in a manner which fills a European coming from India with astonishment. The Anglo-African seems to imagine that he can live in the tropics in the same manner as he lives in England. He seldom uses a punkah, except, perhaps, for an hour at dinner time, and not seldom he neglects even the mosquito net. The food is often or generally execrable—fresh milk, butter, and vegetables not being procurable. Tea can seldom be obtained, and aërated waters cost sixpence a bottle. Owing to the frequent absence of gymkanas and clubs, the exile obtains little suitable exercise; and, the country being too "unhealthy" for ladies, sociable recreations are few. A similar state of things often prevails in the planting districts in India.

The result is that the European often leads in these countries a most doleful existence. Bathed day and night in perspiration, constantly bitten by mosquitos, without healthful exercise, cheerful society, good food, or even such comforts as ice, he is not only always open to malarial infection, but soon undergoes a marked general deterioration of his body due to the incessant heat and discomforts in which he lives. His one desire becomes, not to render his present life more agreeable, but to escape from it on leave to England as soon as possible—a state of things which does more than anything else to ruin the business and progress of the country.

I cannot record too strongly my own conviction, based upon experiences formed both in India and Africa, that the "unhealthiness" of the latter country is really chiefly due to the causes I have just referred to. Most especially I think it is due to the neglect of the punkah, even more, perhaps, than to the neglect of the mosquito net. It becomes more and more evident to me that the use of the punkah, or at least the electric fan, is indispensable to Europeans in the tropics, not only for keeping off mosquitos, but for preserving the general vigour of the body.

Scarcely less important are the dairy, the vegetable farm, the ice-machine, and the soda-water machine. All these comforts, foolishly called luxuries, are in reality absolute necessities for healthy life in the tropics. The European quarter, the well-constructed house, and the large open "compound," are no less important. The slow progress of the African colonies is chiefly due to the stupid indifference to these details; while the great fabric of our Indian empire is really based upon the wise habits of life which render existence tolerable for the men who have constructed it.

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### III.—J. M. Young, M.B., F.R.C.S.Ed.

### THE PREVENTION OF MALARIA IN HONG KONG.

The prevalence of malaria in the island of Hong Kong has not only been demonstrated by finding the various types (both benign and malignant) of the malarial parasite in the blood of patients, but also by whole districts mapped out as notoriously unhealthy, houses after being built standing uninhabited, whole terraces unletable, and having to be pulled down, because of the amount of fever from which the inhabitants suffered. For six months under the military and civil authorities I made extensive experiments over considerable areas, with the object of finding out the cause and making suggestions as to the prevention of malaria.

Alike from adult mosquitos secured and examined and from larvæ collected from various breeding pools and developed in captivity two distinct varieties of *Anopheles* are abundant—*Anopheles costalis* and *Anopheles sinensis*, and nearly a dozen distinct species of *Culex*, the proportion of *Anopheles* varying in different localities as shown in the following table made out by Mr. J. C. Thomson, M.D., M.A., taken from the Governor's *Gazette*, January 11th, 1901:—

| | Mosquitos examined. | Anopheles. | | Culex. | |
|---|---|---|---|---|---|
| | | Number. | Per cent. | Number. | Per cent. |
| No. 1 Station ... | 260 | 6 | 2.3 | 254 | 97.7 |
| Pokfulam ... ... | 39 | 13 | 33.3 | 26 | 66.7 |
| Aberdeen ... ... | 101 | 1 | 1.0 | 100 | 99.0 |
| Stanley ... ... | 147 | 3 | 2.0 | 144 | 98.0 |
| Shek O ... ... | 125 | 70 | 56.0 | 55 | 44.0 |
| Tai-po ... ... ... | 216 | 111 | 51.4 | 105 | 48.6 |
| Sha Teu Kok ... | 141 | 54 | 28.3 | 87 | 61.7 |
| Sheung Shui ... | 76 | 1 | 1.3 | 75 | 98.7 |
| San Tin ... ... | 8 | 1 | 12.5 | 7 | 87.5 |
| Tai O ... ... ... | 68 | 20 | 29.4 | 48 | 70.6 |
| Tung Chung ... ... | 55 | 11 | 20.0 | 44 | 80.0 |
| Choung Chau ... | 575 | 1 | 0.2 | 574 | 99 |
| Lamma ... ... | 32 | 2 | 0.2 | 30 | 93.8 |

The localisation of the various *Anopheles* breeding pools around twenty selected districts where malaria had distinctly and repeatedly manifested itself gives some important information as to the range of an infected area from a given nidus. From these I have chosen six, of which I give full details and measured distances, with rough sketch maps.

1. THE MILITARY SANATORIUM.

An isolated building, with accommodation for two companies and officers' quarters, situated on the hillside above Hong Kong City. The history of this building is most instructive. Three years ago, owing to the prevalence of malarial fever of a most malignant type (80 per cent. of the last company sent there being down with malaria) the building had to be closed. This valuable property had assumed a most deserted appearance, the trees, shrubs, and grass having grown up all over the hillside.

After carefully examining the various streams around, the haunts and breeding places of *Anopheles* were very distinctly localised; many adult *Anopheles* were captured, and the discovery of dozens of their breeding pools within a few hundred yards of the sanatorium made me safe in pointing out the cause of the notorious name which this building had acquired and in suggesting the remedy, by destroying them in the bush and preventing others from breeding in the pools and bogs around. In the immediate vicinity of this building numerous bogs of mud and rank grass, with an aggregate area of not less than half an acre, exist; these bogs lie hidden in the hollows of the hills, and nothing could be more like African fever swamp. These forming with the luxuriant vegetation around the best nidus for the development and subsequent life-history of mosquitos. (Within 80 yards of the main building with an ordinary teaspoon I scooped up four *Anopheles* larvæ at one time.)

The officer commanding (General Gascoigne) having given me full liberty and granted 150 Indian troops of the Hyderabad contingent, we began by clearing the hillside, working out from the main building, cutting and burning absolutely the undergrowth and tangled creepers—this for a distance of 300 yards occupied the men for a period of two months. The bogs and pools were then drained by ordinary surface draining, and for a period of at least two years this area is to be kept rigorously free from the dense impenetrable undergrowth. The health of the troops has remained good during the whole time, and the building is now inhabited by white soldiers.

2. LYEMOON BARRACKS.

A modern building situated 200 feet above the sea, on the hill commanding the Northern Pass to Hong Kong Harbour. The persistent outbreaks of fever and the almost continuous stream of patients sent to hospital from this building rendered the question an extremely important one to the military authorities.

On the north side, nestling in the hollow of the hills I found numerous pools and small bogs in which were hundreds of larvæ of *Anopheles*, especially in and around the rice fields cultivated by the Chinese, in one case within 80 yards of the barracks.

On the west side, 180 yards from this building, is the police station and Chinese village of Sakiwan, which have been free from malaria. Mosquitos have been regularly collected by the police, no *Anopheles* have been caught, and no "fevers" are reported among the native police or in the village of 1,500 population. Thus the distribution of *Anopheles* conforms accurately to the history of the outbreak of malaria, as, after exhaustive search, I was unable to find one breeding pool with *Anopheles* larvæ round Sakiwan.

3. MEN'S MARRIED QUARTERS, KENNEDY ROAD.

A magnificent new building, only opened a year ago in July. The rooms airy and all modern conveniences, little or no malaria in the district. Unfortunately the builders left rubbish and pools lying around the house. In one of these artificial ponds were hundreds of larvæ of *Anopheles* within fifty yards of this building. There were no *Anopheles* in the surrounding streams when I examined them in August. After a time these pools were filled up and drained, but before that hundreds of adult *Anopheles* must have developed and were then living in the bush; they were secured in and around the building. Note what occurred. When the *Anopheles* were driven from their breeding pools they took the next best pools, and I found them in December in the streams around, in pools which I had examined three months before with a negative result. Then gradually the children began to have feverish attacks, and the inhabitants of the houses around complained, the Military Women's Hospital became crowded with patients, until within six months of the opening of this building out of 73 women and children 33 per cent. had fever, of the children under 10 years 50 per cent., and unfortunately there were 3 deaths to record; and in a few selected cases among the children the blood under microscopic examination contained parasites.

4. POKFULAM.

The French Fathers sixteen years ago bought property for schools and training colleges, which four years later, owing to almost continuous attacks of fever and the sad loss of life therefrom, they had to relinquish at considerable loss and remove to another site about half a mile from the old place; again, in another building occupied by Madame Musso 300 yards further west, fever has been common. In the present building occupied by the Fathers and 150 children they have had little or no malaria; and on the most careful examination I was unable to discover one larva of *Anopheles*, while in and around the old site and around the house occupied by Madame Musso I found them breeding in hundreds. As this is the history extending over years, and as the facts conform accurately to the prevalence of *Anopheles* and malaria, it would afford strong presumptive evidence of the distance travelled by mosquitos over an infected area.

5. MOUNT RICHMOND.

One of the finest private residences in the Colony, originally costing 130,000 dols., was sold for something like 25,000 dols. At the request of the owner I examined this district, and from the report sent to him I read the following:

> The history you gave me of the various buildings and the prevalence of malaria was most instructive, and from it alone I felt sure that there must be some breeding pools in the immediate vicinity, but I hardly expected to find them so close to the building and so localised. I have to-day taken nearly a hundred larvæ of *Anopheles* from a single pool within 80 yards of your house. I have no hesitation in saying that you could not be without fever, and that this fully explains why for years the district has had a fever-stricken name.

Why is it that within 50 yards of this property, separated by a road and a clear space, other houses were free from malaria, and the inhabitants lived for years in comparative immunity? The cause and effect are so distinctly marked out that I was fully justified in promising the owner a permanent and effective cure which would greatly enhance the value of his property at a comparatively small cost.

6. TAI-PO POLICE STATION.

The following extracts from a report, dated Hong Kong, November 17th, 1900, by Drs. J. M. Young and John C. Thomson gives the results of an inquiry into the causation of the prevalence of malarial fever at Tai-po:

> We have the honour to report, for the information of His Excellency the Governor, that in accordance with His Excellency's instructions we proceeded to Tai-po for the purpose of inquiring into the causation of the marked prevalence of malarial fever there recently.

We already had before us the following statistics as to the prevalence of mosquitos at Tai-po during the preceding months:

| Date. | Mosquitos Caught. | Anopheles. | Culex. |
|---|---|---|---|
| September 4th ... ... ... | 50 | 1 | 49 |
| ,, 19th ... ... ... | 11 | 4 | 7 |
| ,, 24th ... ... ... | 62 | 23 | 39 |
| October 4th ... ... ... | 50 | 5 | 45 |
| ,, 17th ... ... ... | 37 | 33 | 4 |
| ,, 21st ... ... ... | 44 | 27 | 17 |
| November 12th ... ... ... | 55 | 33 | 22 |
| Total ... ... ... | 309 | 126 | 183 |

That is, *Anopheles* ... ... 40 per cent.
,, *Culex* ... ... 60 per cent.

So that during the period between September 4th and the date of our visit, 40 per cent. may be taken as the actual average prevalence of the *Anopheles sinensis* among all mosquitos found.

From police records placed at our disposal, we ascertained that the cases of fever among the police during the last twelve months have been as follows:

| | Number of Cases. | Average Police Strength. |
|---|---|---|
| Half November, 1899 ... | 5 | 2 Europeans, 7 Indians. |
| December, ,, ... | 2 | ,, ,, |
| January, 1900 ... | 1 | ,, ,, |
| February, ,, ... | 2 | ,, ,, |
| March, ,, ... | 2 | ,, ,, |
| April, ,, ... | 0 | ,, ,, |
| May, ,, ... | 2 | ,, ,, |
| June, ,, ... | 5 | ,, ,, |
| July, ,, ... | 13 | 3 Europeans, 22 Indians. |
| August, ,, ... | 27 | ,, ,, |
| September, ,, ... | 28 | ,, ,, |
| October, ,, ... | 17 | ,, ,, |
| Half November, ,, ... | 1 | ,, 14 ,, |

We made careful search in all directions around the Government buildings and matsheds for breeding places of *Anopheles*. From the results of our search, we direct attention to two important points: (1) that the breeding pools that proved most important, and which even at this late date in the year contain abundant larvæ, are within 80 yards of the police station, and 40 yards from the matshed occupied by the civil staff; and (2) that the marshy stream above referred to is a permanent and prolific breeding ground.

We examined under the microscope the blood of ten children from the village nearest to the police station.

| Sex. | Age. | Type of Parasite Found. |
|---|---|---|
| M. | 3 | Benign tertian gamete. |
| F. | 8 | Benign tertian rosette. |
| M. | 14 | *Nil.* |
| M. | 9 | *Nil.* |
| M. | 3 | Æstivo-autumnal gamete. |
| M. | 15 | *Nil.* |
| F. | 5 | Young æstivo-autumnal. |
| M. | 14 | Young æstivo-autumnal. |
| M. | 9 | *Nil.* |
| M. | 8 | *Nil.* |

Thus in 50 per cent. of the cases examined we found the parasites of malaria; 2 cases were of benign type and 3 malignant, and while all five children were infective to the mosquito, rendering any *Anopheles* feeding upon them capable of a few days later transmitting the disease to other persons, in 2 cases the form of the parasite that actually came under our observation was the gamete, namely, the form which when ingested by the mosquito is capable of undergoing metamorphosis in the body of that insect.

In the abundance of mosquitos of the *Anopheles* genus above described, with their breeding-grounds almost close up to the Government buildings, and in the near proximity of an extensively-infected native population, by which many of these mosquitos are being continuously rendered infective to healthy persons who may be bitten by them, we have the factors that account sufficiently and conclusively for the fevers that have prevailed among the Government officers at Tai-po.

We are of opinion that the seasonal increase of fever cases that has been observed at the time of ploughing, and at the period of harvesting the two rice crops, is due to the disturbance at these times of mosquitos usually resting among the grass or growing paddy, and feeding on Chinese coming within their reach, such disturbance resulting in their flying further afield and finding their way in larger numbers to the houses on the hills.

I would emphasise the practical impossibility of dealing with the larvæ of mosquitos by any germicide on account of the hidden nature of many of their breeding places, which were only found after the undergrowth was removed; and on account of the luxurious vegetation in which the adult mosquitos live. Culicicides, petroleum gas, lime, gallol, etc., are only subsidiary measures, although undoubtedly useful.

The only permanent and effectual method seems to be that adopted in Hong Kong: (1) clearing all long grass and undergrowth, and then (2) destroying all breeding places by draining, etc. Alike from observation and experiment, I would place a cleared area as of immense importance; no mosquitos will fly far without vegetation, and old residents in West Africa have by experience found this out, and regularly burn the bush, and this is over and over again emphasised in various localities in Hong Kong; even a road intervening made all the difference to the health of a community.

Extensive experiments have been made as to the destruction of mosquitos and their larvæ by the "natural enemies of mosquitos," dragon flies, tadpoles, small fish; the whole subject seems to me of little practical importance. I have repeatedly put 20 *Culex* larvæ and 20 *Anopheles*, collected from different pools, together. The effect was astonishing. Within twenty-four hours there was no trace of the *Anopheles* larvæ, and like Pharoah's lean kind the *Culex* did not seem any the fatter for having absorbed them; indeed, no one can realise the intensity of the struggle for existence which goes on in a stagnant pool until he forces himself with a large hand lens to watch the various forms of life with which the water is swarming. *Culex* larvæ, then, are an important factor explaining why in many places where mosquitos are more numerous there is no malaria, the weaker *Anopheles* being overcome in the struggle for existence.

### Conclusions.

These results, and the details of other places, led me to the following conclusions:

1. That malaria, in every place examined, was invariably associated with *Anopheles* breeding pools in the immediate vicinity.
2. That in no case were *Anopheles* found in the neighbourhood of houses without malarial fever manifesting itself repeatedly, that is, where *Anopheles* are found, there is fever, and in every district where there is marked malaria there the blood of children examined contained the malarial parasite, living *Anopheles* were caught and their breeding pools localised.
3. That in no case was there a greater distance from the breeding pools to the houses infected than 150 yards.
4. That the breeding pools were always localised and comparatively easily treated by surface draining.
5. That the only practical steps found effectual were by clearing the district of all shrubs, grass, bamboos, etc., to driving the adult female mosquitos and then draining their breeding pools; this combination is absolutely essential, to treat the pools with any larvicide alone means that they scatter and select other pools to lay their larvæ and breed from.

In conclusion, these results corroborate recent investigation made by others, and I believe if properly carried out, even over a limited area, would free that district from the haunts of *Anopheles*, and consequently the horrors of malarial fever. It is no Utopian idea to think that within a few years an island like Hong Kong or Stretton Island, New York, may be cleared by our breaking the extra-corporeal life circle of the malaria parasite. Within the last year I have visited Sierra Leone and seen Major Ross at work, have seen the ex-

periments at Stretton Island, New York, under Dr. Howard, U.S. Entomologist, and I unhesitatingly state that in none of these places would I be more hopeful of the prevention of malaria than in Hong Kong.

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IV.—Captain C. F. FEARNSIDE, I.M.S.

## THE INOCULATION OF MALARIA BY *ANOPHELES*.[1]

THE Central Prison of Rajahmundri, Madras Presidency, is one of the most malarious gaols in India, and from the years 1880-1897 no less than 60 per cent. of admissions for malarial fever in all the larger gaols of this Presidency were accounted for by this prison. In no fewer than seven years, between the above-mentioned dates, the admission-rate from this cause exceeded 1,000 per mille.

In 1889 Dr. Manson suggested that I should make investigations to see how far the *Anopheles* mosquito was the bearer of the malarial organism. In November last I dissected 40 free *Anopheles* which had at some time or other been feeding on the blood of the prisoners, and I found malarial sporozoites in 1, that is, 1 in 40. The prevalence of malaria in Rajahmundri and its prison makes the experimental inoculation by *Anopheles* a difficult matter, and this point must be borne in mind in dealing with the question. There are six varieties of *Anopheles* in Rajahmundri, and the one used was of a light fawn colour commonly found all the year round. The infected mosquitos were kept in a Bohemian beaker the mouth of which was covered with a piece of muslin. In this paper I have endeavoured to show that the zygote grows primarily in the epithelial layer of the stomach, and that it gradually pushes the middle coat outwards, and finally appears as a bud lying between the fibres of the outer or muscular coat.

The sporozoites are very numerous in the veneno-salivary gland from the 10th to 12th day after infection. From the fifteenth day after haustellation the numbers decrease, so that there are few sporozoites in the gland on the nineteenth day.

The infected mosquito can only infect a limited number of persons, and, further, to give a successful inoculation a considerable number of sporozoites must be infected, because if a small number only find their way into the blood the phagocytes destroy them. Of 17 *Anopheles* fed on blood containing summer-autumn parasites and crescents 9 were found to contain Ross's cysts. The failures I have explained, and the conclusion is that 70 approximately became infected. Of 7 fed on blood containing spring tertian parasites all became infected.

Eight persons were inoculated, and of these 7 contracted fever. The blood on which the *Anopheles* fed originally was examined and the parasite recorded, the blood of the person inoculated was examined from time to time and also recorded. The incubation period is from 12 to 25 days for both types of fever.

My own case is the most authentic because I have been in the best of health since 1891. The experiment in the tropics is not without danger and inconvenience. From January till the second week in April I was always more or less ill and had occasional attacks of fever. What gave me most trouble was a catarrh of the bowel and loss of appetite, and I lost almost a stone in weight during that period. I have now been home two months and am as well as ever. Another "victim" had one of the severest attacks of malarial jaundice that I have ever met with in the tropics.

The presence of malarial zygotes in the stomach and of sporozoites in the salivary glands, the attack of ague soon after the bite, 12 to 25 days (incubation), the presence of similar parasites in the blood of the inoculated corresponding to those found in the blood of the person who was the source of the infection, is strong presumptive evidence that the fever was produced by the infected *Anopheles*.

The prevention of the spread of malaria by means of zinc-proof houses and mosquito curtains is out of the question in India. To put the native population—men, women, and children, who sometimes have only sufficient money to keep body and soul together—under mosquito nets and in mosquito-proof houses is impossible. The next suggestion one hears of is the destruction of *Anopheles*. If this is to be done properly the rice fields, which are the main source of food throughout a great part of India, will have to be abolished. Is the population to starve in the meantime? Famine has been quite bad enough in recent years without the abolition of these fields.

The last remedies are the freer use of quinine and the segregation of infected individuals. The former seems the more practical, but the segregation of infected natives will be as difficult a task as the wholesale slaughter of the *Anopheles*.

[1] This paper appeared in the *Scientific Memoirs by Medical Officers of the Army in India*.

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V.—GEORGE A. WILLIAMSON, M.A., M.D.Aberd.,
District Medical Officer, Larnaca, Cyprus.

## NOTES ON CYPRUS FEVER.

THE mistaken ideas so prevalent in England with regard to the climatic diseases of Cyprus lead to the hope that the following few notes may not be without their use:

What would be understood by a person unacquainted with the island and its diseases by such a term as "Cyprus fever"? Surely it would mean either a fever peculiar to Cyprus, or the fever most commonly met with there.

Now, it should be fully recognised that there is no disease in the island peculiar to Cyprus; while the reports of medical officers in Cyprus since the occupation in 1878 up to the present time all go to show that malaria is the most common fever.

### NOMENCLATURE.

The giving of local names to diseases is confessedly a bad plan, as it so frequently happens that the disease in question is later on found to occur in many other places, in which case the original local name is plainly a misnomer. A typical example of this is seen in the affection now commonly called "Oriental sore," but which was formerly known by the titles, amongst others, of Delhi birl, Biskra button, and bouton d'Aleppe; such a system must lead to confusion, and to give the name of "Cyprus fever" to any disease met with here would only be to fall into this mistake.

The Cypriotes frequently speak of "local fever" (ἡ θέρμη τοῦ τόπου) meaning generally by this malarial fever, but the term is so loosely applied that it includes many diseases other than this, and is therefore of no value.

Dr. Carageorgiades of Limassol, in his pamphlet "Cyprus Fever or Febris Complicata in Cyprus,"[1] describes undulant fever, and distinctly states it to be so, as, amongst synonyms for Cyprus fever, he gives Mediterranean fever, Malta fever, rock fever of Gibraltar, and Neapolitan fever, all of which are universally acknowledged as being simply synonyms for the disease so well named by the late Major Hughes, R.A.M.C.,[2] "undulant fever." In this pamphlet reference is made to Dr. Veale's report on the fever to which he gave the name of "febris complicata." The identity of Cyprus fever (Carageorgiades) and febris complicata (Veale) with undulant fever (Hughes) is discussed and proved in Hughes's *Malta, Mediterranean or Undulant Fever*, and need not be further insisted on, as this disease is found also in at least the following countries—France, China, India, Africa, Greece, and Turkey—the title of Cprus fever can hardly be regarded as deserved.

The Colonial Office printed in 1886 a *Report on the Fevers of Cyprus*, by Dr. Heidenstam, the Chief Medical Officer.[3] In this the fevers described are all malarial in their nature, comprising (*a*) intermittent (with varieties—algid, choleraic, apoplectic, pneumonic, and neuralgic), and (*b*) remittent. The following paragraph from this report may be quoted here: "The difference existing between fevers consists principally in the cause from which the fever is derived. The intermittent and remittent are due to palus or paludal miasma known as malaria, and this is the principal form which exists in Cyprus, increasing or decreasing according to the circumstances favouring or disfavouring their origin, and the assumption that those fevers may result from other causes than from infection of malaria is simply puerile, and not based on correct principles." Here Dr. Heidenstam gives it as his opinion that in his wide experience of Cyprus and its fevers, malarial fever is the principal form met with; he does not discuss undulant fever.

### PERSONAL EXPERIENCE.

During my residence here since 1895 I have had excellent opportunities of studying the diseases of the country, and no special disease found here and here only has been observed. The "fevers" commonly met with are most certainly malarial, as proved by microscopical examination of the blood as well as by the usual clinical signs; a febricula, to be described later on, is also common; undulant fever is met with occasionally; no mention is made now of the exanthe-

[1] *Cyprus Fever] or Febris Complicata in Cyprus*, by John Carageorgiades, M.D., K.M., etc. Limassol, Cyprus, 1891.

[2] *Malta, Mediterranean, or Undulant Fever*, by M. Louis Hughes, Surgeon-Captain, Army Medical Service. London: 1897. With special reference to p. 10 of that book.

[3] *Report on the Fevers of Cyprus*. By Dr. F. C. Heidenstam, C.M.G., Chief Medical Officer of Cyprus. Colonial Office, May, 1886. Mediterranean. No. 23.

matous fevers, such as measles, which occasionally appear in epidemic form.

### Febricula.

The febricula referred to above appears to be the same disease as the "ephemeral fever, febricula, or simple continued fever" described by Sir Joseph Fayrer[4] as one of the fevers of India. In Cyprus it seems to be connected with the digestive system, the patient having complete anorexia, constipation, or more rarely diarrhœa, vomiting, white-coated tongue, headache; the raised temperature — rarely over 104° F.—lasts from two days to a week or ten days at most: complete recovery ensues: repeated examinations of the blood fail to show malarial parasites.

In the treatment quinine is unnecessary, except in tonic doses of a grain or two, and then chiefly after the fall of the temperature, when also cinchona bark and ammonium carbonate are useful. An early purge followed by a diaphoretic mixture is all that is medicinally required during the height of the attack; for the headache, cloths wrung out of cold water may be applied to the head; liquid diet for two or three days will be necessary.

Reference to Captain Porter's article on Simple Continued Fever in South Africa[5] will show that this simple fever is common in South Africa also, and it will be noted that the treatment recommended by Captain Porter is much the same as that mentioned above. It is worthy of mark that this disease occurs in places so widely apart as India, South Africa, and Cyprus, and therefore cannot be called "Cyprus Fever."

### Undulant Fever.

Undulant fever undoubtedly does occur in Cyprus, but is not common. During the first six months of this year only one case has come under my notice. It should be noted that the differential diagnosis between this and enteric fever is at times very difficult, chiefly in cases of enteric fever where, as frequently happens in warm climates, constipation rather than diarrhœa is a marked symptom.

### Malaria in Cyprus.

With regards to malaria, it is admitted on all sides that the pernicious malarial fevers are now not nearly so frequently met with as formerly, and this amelioration is ascribed chiefly to two factors: (1) The draining and filling-up of marshes: and (2) the planting of trees in places which were formerly marshy grounds. The principal forms of malaria met with are tertian and quartan fevers (the varieties of these, double tertian and double and triple quartan being included and not separated as quotidian). Experience in these forms impresses one with the fact that quartan is a much more difficult fever to cure permanently than tertian, attacks, evidently returns and not fresh infections, occurring after intervals of time amounting even to months. This frequency of quartan fever may be accepted as evidence of the island not being a country dangerous to Europeans on account of its malaria as it has been found, and the fact is regarded as an axiom that where quartan fever is common the fatal forms of malaria are more rarely met with.

From February 12th to June 30th, 1901, I examined the blood of 90 persons whose symptoms suggested they might be suffering from malaria or from some other disease complicated with malaria, and Table I shows the result of this examination. The first case presenting crescents in the blood was observed on June 20th.

Table I.

| | | |
|---|---|---|
| Number of persons examined | | 90 |
| Number of cases diagnosed as malaria, of which 7 had been under quinine before date of examination | | 42 |
| Parasite of quartan fever found in | 8 | cases. |
| ,, ,, benign tertian fever found in | 12 | ,, |
| ,, ,, æstivo-autumnal fever found in | 4 | ,, |
| Small ring forms, variety not recognised, found in | 8 | ,, |
| Pigmented leucocytes only found in | 2 | ,, |

Diagnoses, other than malaria, in 48 cases were febricula, gastritis, phthisis, bronchitis, dyspepsia, anæmia, supraorbital neuralgia, debility, puerperal fever, pleurisy, abscess, diarrhœa, enteric fever, hepatic congestion, tonsillitis, undulant fever.

[4] The Climate and Some of the Fevers of India, by Sir Joseph Fayrer, Bart., M.D., F.R.S., etc., on page 314 of *Allbutt's System of Medicine*, vol. ii.

[5] Simple Continued Fever in South Africa, by Captain F. J. W. Porter, R.A.M.C., British Medical Journal, June 15th, 1901, p. 1470.

Table II.

| | |
|---|---|
| Number of persons treated | 1,316 |
| Number of cases of malarial fever | 55 |
| ,, ,, ,, ,, febricula | 29 |
| ,, ,, ,, ,, undulant fever | 1 |

Table II shows the prevalence of the various diseases, malarial fever, febricula and undulant fever among 1,316 persons treated for different diseases from January to June, 1901. This clearly shows that febricula and malaria were the diseases (of the three mentioned) most commonly seen, and the frequency with which quartan and benign tertian fevers were met with in comparison with æstivo-autumnal fever will show that it is the milder forms of malaria that are common, at least during this part of the year, and the small proportion of cases of malaria to other classes of disease (these are precisely what are met with in the ordinary run of practice in the United Kingdom) will tend to show that Cyprus is far from being the fever-stricken island it is sometimes supposed to be.

### Mosquitos.

No reference to malaria would now be complete without a word as to mosquitos. There are numbers of mosquitos, too many for comfort, in Cyprus. The common mosquito, breeding in pots, petroleum tins, etc., containing water is of the genus *Culex*. Much less common is the *Anopheles*, in some places apparently unknown, perhaps because not carefully looked for. The first locality in which I found the *Anopheles* larva was in the neighbourhood of new irrigation works, where malaria had been extremely prevalent, and here the larvæ were found not in the reservoirs, but in small artificial pools of clear water formed by the removal of the soil for use in making embankments. It is satisfactory to know that these pools have now been filled up and these breeding places for *Anopheles* done away with. So far I have met with two species of *Anopheles*—one was evidently *Anopheles maculipennis*, the other was not recognised.

### Conclusion.

My hope in submitting these fragmentary notes was to be able to show:

1. That there is no disease found in Cyprus, and there only, to which the name "Cyprus fever" might be given.
2. That the forms of malarial fever met with most commonly in the island are those least fatal.
3. That febricula, the other fever so frequently met with, is not dangerous to life.

Finally, I would urge that the term "Cyprus fever" be abolished, as its retention, even among medical men practising in the island, can only lead to confusion.

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VI.—George C. Low, M.A., M.B., C.M.Edin.,
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## MALARIAL AND FILARIAL DISEASES IN BARBADOES, WEST INDIES.

The analogy between malaria and filariasis is in many ways a close and interesting one, both, as far as the tropics are concerned, being very often found coexisting in the same districts, and both being spread from man to man by their own special species of mosquitos. It is, therefore, interesting to be able to point to a tropical island, namely, Barbadoes, in which the former is non-existent, while the latter is extremely prevalent amongst all classes of the community. The reason for the presence of the one and the absence of the other is supplied by the fact that *Anopheles* mosquitos, the definitive host of the malarial parasite, are not found in the island, whereas *Culex fatigans*, one of the suitable intermediate hosts of filaria nocturna, abounds.[6]

Before considering certain local features of those two infections, a brief description of the physical characters of the island may be given with advantage.

### Description of the Island of Barbadoes.

Barbadoes, the most easterly of the Caribbean Islands, lies well in the ocean by itself in latitude 13° 4′ north, and longitude 59° 37′ west, about 100 miles distant from St. Lucia and St. Vincent. It measures 21 miles long by 11 miles broad, and comprises an area of 166 square miles, six-sevenths of which consists of a formation of coral limestone, the remain-

[6] British Medical Journal, June 1st, 1901.

ing one-seventh being formed of different geological strata, namely, the Scotland series, consisting of sandstone and dark clays, and the oceanic series, consisting of white earths and chalks.[7] The surface is more or less flat, the land rising gradually towards the centre of the island into two ridges, one of which running east and west attains a height of 400 feet above sea level, while the other to the north of this is about 1,000 feet high.

The population of the island numbers 200,000, 30,000 of those living in Bridgetown, the chief town, and 1,500 in Speightstown, the second town, while the remainder are scattered about in separate huts and hamlets or in small villages.

With the exception of one or two springs, which bubble up and find their way into the sea within a few hundred yards of their origin, there are no rivers, the water supply of the town being obtained by boring into the large subterranean reservoirs of water which exist underneath the coral.

Several ponds and larger collections of water are found at different parts of the islands, two such existing at Speightstown and Holetown respectively; three miles south of Bridgetown there is a permanent swamp.

In addition to these there is a creek communicating with the harbour, which runs inland for some distance in the centre of the town, and another swamp at the south of the island. The water in the latter, however, disappears during the dry season. After heavy rains, and during the wet season, various collections of water are found in hollows and other situations chiefly along the coast. The whole island is practically under cultivation, sugar cane being the staple product. Two seasons may be distinguished, a wet and a dry; the former in summer and autumn, the latter in winter and spring. The average rainfall is about 60 to 70 inches a year.

### Malarial Fever.

On arriving in Barbadoes, and talking with the medical men practising in the town and island, all were unanimous in the statement that indigenous malarial fever does not exist in the island. Cases are frequently met with in the General Hospital; all of these come from some of the neighbouring islands where malaria is very common. No one could point to a case which had originated in the island itself.

The interesting question now arises, Are any mosquitos of the genus *Anopheles* to be found in Barbadoes or not? As may be gathered from what has been already stated, the features of the island do not lend themselves very readily to the production of suitable breeding places for these insects, with the exception of the swamp at Worthing, three miles south of Bridgetown. This swamp is situated at the foot of some elevated ground quite close to the sea, with which it communicates by a canal, the exit, however, being very often blocked up with sand thrown up by the surf. It covers a considerable area of ground, and is divided up into canals and ponds with roads and paths running through it in various directions. The water, especially in the part near the outlet, is slightly brackish, and in parts it is very stagnant, smelling strongly of sulphuretted hydrogen, resulting from the decomposition of vegetable material. It is probably fed by springs of water, rain, and other collections which percolate from the neighbouring high ground. The surface of the water at many places is covered with algæ of various sorts and other forms of aquatic vegetation. On looking at it, it certainly appears to be a spot favourable for the development of *Anopheles* larvæ, but although larvæ of a species of *Culex* and those of dragon flies and other aquatic insects were always found in abundance, no *Anopheles* larvæ could be discovered. Confirmatory evidence of this was found in the fact that the people living in the vicinity never suffered from fever, but enjoyed remarkably good health. It is probable, from the close similarity of this place to *Anopheles*-infested swamps in the other and neighbouring islands, that such larvæ could live here perfectly well; whether they have ever been here and have died out, or whether they have never existed is a matter of speculation.

An examination of the other swamp at the south end of the island was not very hopeful, as at the time of my visit it had only filled up with water after some heavy rain, and contained practically no algæ or other vegetation; no *Anopheles* larvæ were found in it, the only result of my search being a species of *Culex* in small numbers. The creek in the centre of the town is very dirty and muddy, and is really an arm of the sea fed at its upper end by rain and other waters. Several examinations produced no larvæ of any sort, the water being probably too dirty for anything to live in. All the various ponds, springs, and other collections of water, though often having plenty of suitable vegetation in them, gave similar results; in some larvæ of *Culex* were found, in others nothing.

These observations coincide with the researches of Mr. Lefroy, entomologist to the Imperial Department of Agriculture, who has also made a systematic search for *Anopheles* larvæ with negative result.

The conclusions reached, therefore, bear out that suggested by the epidemiological fact that there is no malarial fever in the island, and once more go to prove that without mosquitos of the genus *Anopheles* no malarial fever exists.

### Filarial Diseases.

In marked contrast to the absence of malaria in Barbadoes is the large amount of filarial disease that is present. This is not to be wondered at when one considers the extraordinary abundance of the common domestic mosquito of those parts, *Culex fatigans*, which acts as an efficient host for the spread of the disease. It is an interesting fact that out of more than 600 blood examinations of people from all parts of the island only filaria nocturna was found, filaria demarquaii which exists in St. Vincent and St. Lucia, and which I lately found in Dominica, never being met with. Although the town of Bridgetown has now a very good water supply brought in pipes from the centre of the island, where it is pumped up from the subterranean collections of water, yet many tanks exist in the gardens of the large houses for watering purposes, and around the native huts barrels and tubs of water are kept and left standing for considerable periods. In those situations myriads of *Culex fatigans* breed and multiply, and may eventually act as propagators of the disease. An examination of the night blood of 600 cases, taken irrespectively of the patients suffering from disease or not, from the General Hospital, Central Almshouse, and from private sources, will show to what extent filariasis prevails in Barbadoes.

| Race. | Number Examined. | Non-Infected. | Infected. |
|---|---|---|---|
| Negroes ... ... ... ... | 401 | 359 | 44 |
| Mulattos ... ... ... ... | 160 | 142 | 18 |
| Whites ... ... ... ... | 39 | 28 | 14 |
| Total ... ... | 600 | 529 | 76 |

= 12.66 per cent.

The proportion of 14 infected whites out of 39 is manifestly much too high. Many of those whites, for one reason or another, were collected in the almshouse at the time of examination, others being more or less selected private cases. The table shows, probably correctly, the proportion of the coloured population affected. The figures referring to white people make clear a point on which sufficient emphasis has not been laid before, namely, that the white person is quite susceptible to filarial disease. This is specially so as regards Barbadoes, where persons, whether resident in the island all their lives, or only visiting it temporarily, often contract the disease; the rich and poor are alike in this repect.

In analysing the table, 27, or 4.5 per cent., had definite pathological changes indicative of filarial disease such as elephantiasis, chyluria, filarial lymphangitis, etc., whereas 49, or 8.1 per cent., had no symptoms whatever, the diagnosis being come to by the presence of the embryos in their blood. This latter class is a dangerous one as regards the spread of the disease; for it is manifest that unless sleeping under mosquito nets, which if they are negroes they never do, they nightly infect many mosquitos, which in turn infect other people and so spread the disease.

To get some idea of the number of infected mosquitos about, a series of dissections of 100 mosquitos of the species *Culex fatigans*, taken from the wards and corridors of the

7 *The Geology of Barbadoes*, Harrison and Jukes Brown, 1890.

General Hospital, in which there were cases with embryos circulating in their blood, was carried out. Of this number 23 per cent. were found to be infected with filaria nocturna at various stages of development, and in one mature forms were found in the proboscis, thus showing the danger of being near infected people.

The question arises, What can be done for the prevention of filarial disease? Much has now been done and tried for the destruction of *Anopheles*, the malaria-bearing mosquito. Similar or modified methods should be carried out for all domestic mosquitos. Considering that their breeding places are confined to houses and their vicinity, this should not be a task at all approaching in magnitude to the draining large swamps or to treating them in other ways. Taking Barbadoes as an example, as has already been stated, there is now a perfect water supply, and people can get this fresh from the stand-pipes at their doors. Such being the case, old wells ought to be filled up, no water barrels or tubs should be allowed, or, if kept, they should be emptied every week or so. Tanks and collections of water in gardens should all be periodically treated with kerosene, or have closely-fitting covers to prevent mosquitos getting in. These methods are all simple and inexpensive, and each householder should see that they are applied in his garden and grounds. The difficulty begins when one has to take into account the inability of the negro to grasp anything of a hygienic nature. The only way to get over this would be a system of sanitary inspection by a few competent men. For individual prophylaxis mosquito nets ought always to be used, but even many educated people still persist in sleeping without them; of course nothing in this line can be expected of the native population.

If such means were adopted for Barbadoes, the prevalence of filarial disease, which is at present quite alarming, could easily, with little trouble and expense, be greatly diminished, thus saving much suffering, as well as loss of time, hideous deformity, and, doubtless, in not a few instances, loss of life.

### VII.—Rubert Wm. Boyce, M.B.Lond.,

Holt Professor of Pathology, University College, Liverpool; Bacteriological Analyst, City of Liverpool.*

With regard to the proposed methods of dealing with the prevention of malaria I agree that in all measures of prevention on the West Coast it is most essential to do all we can for the native as well as for the European. From my intercourse with the leading West African and European native merchants I am convinced that if the native quarters were left out in any preventive measures which may be adopted the merchants would be dissatisfied. Therefore, it appears to me from an administrative point of view to be far better to treat a village or town as a whole, and get rid of infection from all quarters, both native and European, as originally suggested by Ross, and actually being carried out by him on the West Coast. We must never forget that the native helps us to make the money on the coast, and that the merchants must live close to him. Besides, from a humanitarian point of view it is but justice that the native should be treated similarly to the European. In addition, other considerations lead me to believe that more good will be accomplished by extirpation than by segregation.

### VIII.—Edward Henderson, M.D., F.R.C.S.Edin.,

Late Shanghai, China.

Dr. Henderson said: I have listened with much interest and pleasure to the various papers which we have heard read on malaria and its prevention. When I arrived in Shanghai in the autumn of 1868, our ideas regarding all this were vague and some were very erroneous, because founded on a wrong conception of the nature of the contagium. We believed then, and for many years after, that malaria was a miasm arising from the soil, from undrained marshy land chiefly, its production and extraction from the earth being favoured by a moderately raised temperature. Extremes of temperature we thought destroyed or attenuated the poison, accounting for the fact that marsh fevers were chiefly prevalent in Shanghai during the autumn and spring months. Oddly enough, I remember that shortly after I arrived in Shanghai a doctor, who had been for some time engaged in practice there before I arrived, told me that he believed that marsh fevers were caused by mosquitos: but I paid very little attention to this opinion, which I regarded as a guess only, and founded on little save the fact that the doctor had never himself seen these fevers in a district in which he had not also found mosquitos more or less troublesome. Certainly we never took mosquitos seriously into account in the early days in Shanghai. The advance made in knowledge which we owe to the discoveries made during the past few years in regard to the real character and true mode of dissemination of malaria has been a very great gain to practical medicine. Diagnosis is no longer founded on symptoms only, but is made positive by the examination of the blood of the patient. At the same time, we are able to trace the effect of our remedies in the arrested development and final disappearance of the parasite from the blood; while the subject specially under consideration to-day, prevention, is capable now and for the first time of being directed on definite lines and with definite objects. What will be the ultimate result of all this, and what the extent of the benefit which mankind generally will derive from it are questions on which opinions may differ. But all must admit that we are travelling now on the right road leading to success. Personally I believe I am myself neither a pessimist nor an optimist. I believe that in Europe and America much good will be done by the use of the preventive measures we have heard described to-day; and in such a comparatively limited district as the Roman Campagna the influence of malaria may be greatly restrained, and in the end possibly the disease entirely stamped out. But when I turn from Europe to the East, and especially to the Far East, with which I am myself alone familiar, I confess the prospect is by no means so encouraging. No doubt the educated and intelligent European and American communities in Hong Kong, Shanghai, and elsewhere will do a good deal to improve their own immediate surroundings, but there I fear the matter is likely to rest in the meantime. For when I consider the vast area of undrained land, and the millions of ignorant and careless natures which the Chinese Empire contains, and add to this that rice is the staple food of this people, and that rice needs for its cultivation in sufficient quantity the irrigation of extensive tracts of land nearly everywhere throughout the country, and for several months of every year ideal breeding grounds for the larvae of mosquitos—when I think of all this I am driven to the conclusion that it will be very long indeed before we can hope to see any sensible impression made in China on such a widespread and constantly-renewed organism as that to which malaria has been traced. What I say of China may be said, and nearly in the same words, of India, Africa, Central Asia, and the Straits. Still every community of white men scattered over this large part of the world's surface will, we hope, become a centre, and the influence which these centres exercise will gather strength as time goes on, and, though slowly extending, will advance in every direction like the ripples raised by the stone thrown in the lake. Among the means used to destroy mosquitos on the walls of rooms and outside mosquito nets, I have heard no mention of the mosquito lamp which I used to see so often in bedrooms and house boats in China. There is possibly some danger of fire if this little contrivance is carelessly used, but though I saw it often in the hands of native servants, amahs and coolies, I never heard of an accident happening from its use.

### IX.—Patrick Manson, C.M.G., F.R.S., LL.D.,

Physician to the Seamen's Hospital Royal Albert Dock; Medical Adviser Colonial Office and Crown Agent of Colonies.

Dr. Manson, referring to Sir Wm. MacGregor's paper, congratulated malarial colonists in having so able and sympathetic a man—a physician as well as an administrator—among their Governors. His efforts to diminish malaria by encouraging the education of the native in sanitary matters was, perhaps, of all the general measures suggested for the repression of the infection the most important. In sanitary matters nothing was so important as intelligent co-operation, and this could be got only by education. It was a mistake to recommend or condemn any particular measure on the strength of the limited experience derived from one locality. Thus Koch's success with the wholesale administration of

* This communication was read by the Hon. Secretary of the Section in the unavoidable absence of Professor Boyce.

quinine, in a very limited population and area in German New Guinea, was no guarantee that similar measures would succeed in the vast area and larger and unsympathetic population of German East Africa as had been proposed. There was a prophylactic measure which seemed to him to be a promising one, and which, so far as he was aware, had not received the attention it deserved. He referred to the reproduction of natural conditions inimical to *Anopheles*. That there were such conditions was certain, otherwise this genus of mosquitos would be as widely spread as *Culex*, for it was known that in many places species of both genus lived together. Dr. Manson referred to an expedition which—the necessary funds being forthcoming—would be sent out to the South Pacific to study this question, and endeavour to add yet another method for combating malaria. Many of the methods already recommended had been condemned because in operation they might not be uniformly successful. Relative success was of great value, and should be striven for.

X.—Lieutenant-Colonel J. L. POYNDER, I.M.S.

COLONEL POYNDER stated that it was not possible to teach the natives of India to take the most ordinary precautions as regarded sanitary measures, and he did not believe that the care required to prevent malaria by protection against mosquitos was ever likely to become general. It was impossible to even prevent them using water which was pronounced infected by cholera.

XI.—JAMES CANTLIE, M.B., F.R.C.S.,
Surgeon, Seamen's Hospital, Royal Albert Docks.

MR. CANTLIE said that in reference to the mosquito lamp mentioned by Dr. Henderson, he had prevailed upon a surgical instrument maker to manufacture a similar one, and the "Swatow lamp" could now be obtained in London.

## NOTE ON THE ENTRANCE OF ANKYLOSTOMA EMBRYOS INTO THE HUMAN BODY BY MEANS OF THE SKIN.

By F. M. SANDWITH, M.D., F.R.C.P.,
Professor of Medicine and Senior Physician to Kasr-el-Aini Hospital, Cairo.

IT has long been assumed that the chief mode of ankylostomiasis infection in the various countries from which the disease has been reported is by the mouth while eating or drinking. Dirty hands, muddy feet, and unwashed vegetables are daily factors in the peasant's life, and are probably responsible for much of the infection.

It is more difficult to see how drinking even muddy water can communicate the disease, for we find experimentally that running water kills the larvæ, while in stagnant pools or wells they soon sink to the bottom, and therefore can only be drunk if the water be stirred up. Dr. Looss finds in Cairo that in summer the larvæ are fairly active, but in the cool weather they sink to the bottom in half an hour. As an instance, however, of acute ankylostomiasis infection by the stomach I may recall an experiment carried out at the Cairo Medical School. The larvæ of an analogous worm, *Trigonocephalum ankylostomum*, were administered in milk to a healthy dog, aged 4 months. The animal had some retching at the time, but did not vomit, and for seventeen days he seemed fairly well. But on the eighteenth day he refused all food and died.

A *post-mortem* examination showed great anæmia, and the intestines were white, except about 8 inches from the pylorus, where they began to be swollen and bluish-red. Here bathed in bloody mucus were no less than 7,179 young immature worms, with a very few scattered above and below this spot. The blood was due to capillary hæmorrhage, which was not traceable to the very few bites which could be seen. All the ankylostoma embryos were the same size, from 6 to 7 millimetres long, of normal appearance, and without sexual organs.

In spite of evidence such as this, which seems quite conclusive that infection can take place through the mouth, it has for some years been a growing belief with me that the skin must play an important part in admitting to the human body embryos such as those of ankylostoma (uncinaria duodenalis) and distoma hæmatobium and perhaps some others.

But there has been no record of any parasite penetrating the skin, even the filaria medinensis being refused by modern authorities this mode of entrance, so when Dr. Looss[1] stated in 1898 that the ankylostoma embryos entered the human body by the skin as well as by the alimentary canal his statement met with only hostile criticism. He decided to write nothing more on the subject until he was able to definitely prove the the fact, and the chief object of this communication is to call the attention of the members of the Tropical Section to his interesting discovery.[2]

Like many another this discovery was made by pure accident. On one occasion, while working in his laboratory, a drop of water containing more than 1,000 lively larvæ of the ankylostoma duodenale happened to fall on the cleft between two fingers of Dr. Looss's left hand. He was surprised to find that this was followed by redness and burning at the spot, and he wondered if this could be caused by the larvæ. He therefore allowed another drop to fall upon another part of his hand, and this was again followed by a burning sensation and redness, while examination of the drop of fluid on his hand some minutes later showed countless empty embryo sheaths and a few sluggish embryos.

Most of the larvæ had evidently entered the skin, leaving their sheaths behind. Dr. Looss thereupon found himself reinfected with the worms; eggs reappeared in his fæces, debility and anæmia followed, requiring a prolonged cure of thymol. Both he and I then became convinced that this method of infection probably accounted for previous attacks of the disease for which I had had to treat him. For the last seven months he has continued to handle similar cultures of active embryos, but no reinfection has occurred since he has taken the precaution of washing his hands with 90 per cent. alcohol.

The experiment upon Dr. Looss is not convincing, because he had, as I have said, previously suffered from the presence of ankylostoma in his intestines.

He next experimented upon a piece of skin removed from a fresh human corpse, and warmed to 99° F.; but this did not show any entry of embryos, possibly because the skin at once became too shrivelled up.

The next attempt was more successful. It was made upon the leg of a boy, aged 13 years, one hour before the limb was amputated. The leg was thoroughly washed with soap, nail brush, and water, then dried; and then one drop of water containing many larvæ was dropped on the skin and left to itself without being rubbed in. The drop spread out and dried up in ten minutes, and produced no redness of skin. The patient was not asked whether he felt a burning sensation.

One hour after the drop came in contact with the leg the limb was amputated, and the suspected skin was at once removed from it and spread out with pins, gradually hardened in alcohol, and then embedded for section cutting. The sections when examined showed that the larvæ had entered the skin principally by the hair follicles. So far as the drop had spread there was hardly a hair follicle free from young ankylostoma.

In some there were single embryos, in others there were masses. In several cases the larvæ were seen in different stages of entry, the tail still outside, whilst the head had pushed itself between the hair and the neighbouring epidermal layer of the hair follicle. Some of the sections were unfortunately broken in preparing the photomicrographs, of which I now show you copies, but I have here one of Dr. Looss's sections under a microscope.

The progress of the larvæ seems to be as follows:—When once inside the hair follicle they push their way towards the hair papilla, during which process, if there are many of them, the root sheaths of the hair are almost completely destroyed. When they get to the hair papilla they leave it to pierce the surrounding tissue of the true skin.

Until they enter the hair follicle they have no purchase for their tails, but, having once entered, they progress by their own boring action and the side resistance offered to their propelling tails. It must be remembered that the hair follicle is a recess of the corium sunk below the general surface of the skin, and that the hair papilla is a cutaneous papilla rising up in the bottom of the follicle. The embryo, therefore, takes a

very practical way of forcing himself into the subcutaneous tissue. He never seems to penetrate into the ducts of the sebaceous glands nor into the sweat glands. Although the hair follicle seems to be the chief gate of entry, there are very likely other methods by which larvæ under other circumstances penetrate the skin. For instance, in Lower Egypt during the spring and autumn the dorsal aspects of the hands and feet of many of the peasants are blistered by pellagrous erythema, which may help the embryos to enter. This may possibly account for the fact that so many of our hospital patients suffer from the two diseases, pellagra and ankylostomiasis.

The Egyptian peasant works all day with his naked feet, legs, and hands exposed to a coating of mud, mixed with water containing ankylostoma embryos which have sprung from the eggs contained in the fæces of injected natives. Latrines are unknown in the country villages and every man eases himself whenever and wherever he thinks fit. The entrance of embryos of the ankylostoma into the human skin affects many countries besides Egypt, and may account for some of the infection reported from India, the Italian rice fields, St. Gothard tunnellers, and mine labourers in Southern Europe where men work with bare feet in infected mud and water.

I hope that we shall be able for some years to retain Dr. Looss in Cairo, and that he may be able by this discovery to throw some light upon the vexed question of how boys and girls in some countries become the victims of bilharziosis and other parasitic diseases.

With regard to ankylostomasis there is, of course, as yet no proof that the embryos can work their way from the subcutaneous tissue to the duodenum or jejunum. That can only be proved by future experiments upon individuals who are certainly free from ankylostomiasis infection, and preferably upon those who have never had any chance of becoming infected.

References.

[1] *Centralblatt für Bakteriologie, Parasitenkunde und Infecktionskrankheiten*, Bd. xxiv, p. 483. [2] *Ibid*, May 31st, 1901, for paper, and July 5th, 1901, for photographs.

Lieutenant-Colonel G. M. Giles, I.M.S., said: I rise to speak on this subject immediately after Dr. Sandwith merely because what I have to say is purely supplementary to his paper, because I happen to have seen and examined the section alluded to by Dr. Sandwith before it was unfortunately destroyed. Dr. Looss, as is well known, is a strong opponent of my theory of alternations of generation, so that I am about the last man who might be expected to be found as supporting his opinions. Two years ago I reaffirmed my belief in the alternation of generations—parasitic and free—of ankylostoma before this Section because no one had advanced any other than absolutely childish objections, such as that I had allowed my culture materials to contain ordinary earth nematodes, or that I had overlooked the presence in the fæces used to infect the culture of such big obvious things as *Anguillula stercoralis* embryos. While the objections remained of this absurd character I held to my view, and I do not say that I now definitely abandon it; but it is only right to say that Dr. Looss, when we met in Cairo, suggested to me a possible source of fallacy which has hitherto been overlooked by everyone else. He tells me he finds that the ova of non-parasitic—that is, never parasitic—nematodes are constantly swallowed by human beings, may be found in their fæces, and will develop to sexual maturity after they have passed through the intestine. He says, moreover, that my drawings show the presence of no fewer than three species of such outsiders in my cultivations. Well, that may or may not be the case, but it is at least a tenable objection, pointing out a possible source of fallacy which I had not foreseen, and against which I had been in no way provided. It invalidates all previous work, and will render adequately checked work in future extremely difficult, as we must needs feed the subjects supplying the fæcal matter used for cultivating for some weeks on food ascertained to be sterile of the ova of soil nematodes, but I admit the doubt. This, however, and what I wish to point out is that I feel sure that no one who saw Dr. Looss's preparations showing the embryos in all stages of their routes into the hair follicle and out of it into the mesoblastic tissues immediately outside, could have any doubt as to the possibility of infection through the skin being one of the methods of contracting the disease. It explains much. As you know, I have always maintained that infection by drinking water is most exceptional, and had therefore to assume that the infected earths reached the intestine much in the same way as lead poisoning is conveyed—namely, by dirty hands. But this, though perhaps sufficient, appeared doubtfully so, whereas Dr. Looss's discovery entirely explains the way in which it may be brought about.

Dr. Patrick Manson said: While recognising the interest of the observation that the embryo ankylostoma may enter a hair follicle, I would deprecate premature interpretation of the fact as indicating a phase in the normal life-history of the parasite or as a method of infection. Indeed, the active wriggling embryo placed on the skin can hardly avoid entering such a shelter. Before the fact can be accepted as more than a curiosity, further experiments on the lines suggested by Dr. Looss should be carried out, and carried out in a country such as this, in which ankylostomiasis is not endemic.

## CAUSATION OF ENTERIC FEVER IN INDIA.

By Andrew Duncan, M.D., B.S.Lond., M.R.C.P., F.R.C.S., Lieutenant-Colonel I.M.S. (retired); Physician, Seamen's Hospital Society, Royal Albert Dock.

### The Etiology of Enteric Fever in India.

The subject of the etiology of enteric fever in India is one that has been provocative of a vast amount of discussion, and has in its time excited the evolution of very curious theories to account for its increasing prevalence. I would, however, venture to submit that, if there is one country in the world where we would expect to find enteric fever rampant, it is India, and that it is rather a matter for surprise that the present large number of men who fall victims to the disease is not larger.

Before laying before you what I consider are the essential factors in the causation of the disease, I will briefly comment on some of the theories that have been upheld concerning enteric in India.

1. *The Vicarious Theory of Martin.*

(1) Hepatic insufficiency. In consequence of an excess of work being thrown on the hepatic system, either by an absorption of putrid matter or otherwise, there is an increased demand on the hepatic function, responded to at first by an increased activity of that function. Soon, however, the liver is unable to come up to time, so to speak, and can no longer bear the strain of eliminative work thrown on it. The second element now comes in—namely, (2) a vicarious and abnormal activity of the intestinal glands, supplemental to the hepatic insufficiency. This eliminatory function of the intestinal glands at length leads to a suppurative enteritis. This vicarious action is, in its turn, furthered by the third element—namely, (3) an idiosyncrasal proneness of the glands to this abnormal function.

In this way Dr. Martin would explain the origin of enteric fever from "increased temperature," or its occasional "spontaneous origin," and also its non-occurrence or rarity amongst the natives of tropical climates.

This theory requires little to refute it, for the glands affected in typhoid fever are the glands of Peyer; and the glands of Peyer are absorptive and not eliminated.

2. *The Transformation Theory of M. Colin.*—This French authority held enteric fever to be a unique malady in the tropics, and to result from the transformation of fever primarily paludal into enteric fever. He also held that in the tropics enteric fever may be spontaneously developed by its transformation from all acute febrile states. Now, if this were true, I would certainly agree with M. Colin that the enteric fever of the tropics is a unique malady; for we are here asked to believe that the sporozoön of malaria can become transformed into the bacillus of Eberth. But apart from the zoological difficulties of this supposition, the disconnection of enteric with malarial fever has been frequently noticed. Take, for instance, Demerara and British Guiana: were the two fevers allied, these two localities should have furnished a high ratio for both diseases, whereas, as Welch shows, the contrary is the case.

3. *The Theory of Surgeon-General Moore.*—The late Surgeon-General Moore, of Bombay, did not believe in the specific nature of any fever. According to him, enteric fever was simply a phase of fever, not a specific disease, while the enteric spots are only a petechial eruption. The eruptions of enteric, typhus, scurvy, and purpura are identical. Now, of course, on this theory, cases of enteric fever would increase and multiply; but it is only necessary to point out as regards

the identity of the eruption, that that of the latter three does not disappear on pressure.

4. *The Theory of Sir Joseph Fayrer.*—This authority thus writes:

To attribute all cases of enteric fever to fæcal poisoning is erroneous and dangerous; that geographical position and climatic influences, heat, moisture, organic decomposition, miasmata, and a variety of aërial and telluric conditions are more likely than a specific cause in India.

This theory may be considered jointly with

5. *The Climatic Theory*, which states "that climatic influences, acting on young and undeveloped constitutions, predisposed in some way specially to develop typhoid, may start the disease" (Clark, quoted by Fayrer); and "that typhoid fever in the British soldier in India is primarily due to climatic influences" (Bryden). Summarily stated, this theory is that climatic agencies acting on a young soldier recently arrived in India will start the disease. And with this is interwoven the influence of "atmospheric waves" of other writers. I believe by some observers the idea that a hot climate can *per se* start specific disease is still held, although, luckily for the sojourners in India, this dangerous theory is year by year less held. One might as well say that a hot climate could produce the various fauna and flora *per se* without the specific seeds thereof. Dr. Billings, of America, tersely criticises this idea in an incisive manner, when he states that "epidemic constitution is merely another phrase for want of knowledge"; whilst Dr. Edmund Parkes, the former revered Professor of Hygiene at Netley—a man whose memory will ever live in the minds of those who had the good fortune to sit under him, and of whom it may be truthfully said that his lovable disposition was combined with one of the acutest, if not the acutest, intellects that ever graced the medical service of the army—rightly spoke of such causation as belonging to the "mythical region of epidemic constitution."

6. *The Theory of Surgeon-General Gordon, of Madras.*—This officer held that there was no such disease as enteric fever in India at all.

7. *The Theory of Sir Antony Home.*—Subsequent to the last expression of opinion was that of this authority. He ordered that all fatal cases of fever in which at the *post-mortem* examination any ulceration of the intestines was found were to be returned as cases of enteric. I cannot better criticise this view than in the words of the late Dr. Wall of the Indian Medical Service:

I believe that a large proportion of cases returned as typhoid fever have no right to that name. If a man die in India after having an elevated temperature and an ulcer be found in his intestine, the case is at once called typhoid. But it takes a great deal more than an intestinal ulcer to make a typhoid fever. I have seen many cases that could not with certainty be referred to any type of fever, but which had, on the whole, more resemblance to remittent than any other, and which were found after death to be coincident with intestinal ulceration, but an ulceration distinctly not typhoid. It was an irregular ulceration, by no means selecting the site of Peyer's patches, and very often encircling the intestines; and my experience is that this form of ulceration often occurs in cases that would better bear the name "remittent" than anything else.

It is proverbially more easy to criticise than to construct a theory; but as regards the prevalence of enteric fever in India, I would lay down the statement that if there ever were a country where we should expect the white man to suffer from this disease, that country is India. And this statement holds good whether you hold with Murchison the "pythogenic theory," or with others the specific theory of fever. The factors concerned in the evolution of this fever in India are to be found in the following circumstances:

1. The yearly advent into the country of a large body of subjects at an age most liable to the disease.

2. The country presents an environment to these subjects also most favourable to the disease.

*As to the First Heading.*—The age at which the British soldier arrives in India is precisely that at which anyone is most liable to the disease. This has been found to be the case everwhere. M. Andral found that young medical students, for instance, were most likely to be attacked with enteric fever within a few days of their arrival in Paris. He forebore, however, to state that there was something in the climate of Paris especially calling forth enteric fever in young recently-arrived medical students.

*As to the Second Heading.*—The young soldier on his arrival in India is daily exposed to the chances of meeting with the specific infection of enteric, except during the period that he lives in his barracks, and here even, as I shall show presently, agents of infection can creep in. Doubtless if the soldier never left his barracks there would be much less enteric, but of necessity he cannot be confined there. In his walks abroad he goes to the bazaars or amongst the villages neighbouring to the cantonments. The late Professor Maclean, in alluding to these bazaars, stated that "they stand on soil for ages sodden with excrement." And another authority writes:

There is no station in India, however carefully its sanitary condition may be attended to, where the conditions for fæcal contamination of water easily accessible for drinking, though not intended for that purpose, does not exist.

Thus, on the pythogenic theory, there can be no difficulty in accounting for the origin of enteric fever. But at the present day it is held that a specific disease must have a specific cause; so that the presence of the bacillus of Eberth must be premised. Now as regards the natives of India, of late years the evidence has been increasing that they are subject to enteric. Sir William Guyer Hunter, from his experience as Professor of Medicine at Bombay, states that no race or sect is exempt. Long ago Scriven found it in the natives of Lahore. Deputy Surgeon-General A. C. De Renzy, C.B., who did so much to further the sanitary condition of the Punjab during his term of office, drew attention to the enteric fever prevailing at the gaol at Rawal Pindi, giving perfect histories and *post-mortem* results. Chevers noted it in Bengal, Crombie in Burmah, O'Brien in Assam. Wright has recorded cases in the 6th Bengal Infantry. Dr. Drury, Professor of Pathology at the Medical College, Calcutta, believes it to be more common in the natives of Bengal than is supposed. Freyer, of the R.A.M.C., showed by the Widal test that the majority of natives had had it in their youth; whilst Elliott of Madras finally states that all natives suffer for it at some time or other, and hence that a degree of immunisation is established, rendering the fever atypical.

Now if this be true, what does this mean? It means that owing to the want of sanitation the soil of India must be contaminated continually with the typhoid excreta and bacillus of Eberth. The vitality of the bacillus of Eberth is exceedingly long. Cayley records a case very pertinent in this respect. Typhoid stools were burnt in a dunghill. Some five weeks after, five persons employed in removing dung from the heap were attacked with typhoid; their alvine discharges were buried deeply in the same heap. Nine months after one of the two men employed in the complete removal of the dung heap was attacked with enteric fever, and died.

If we now consider that the soil of India is contaminated by the bacillus of Eberth, how then does the soldier get this organism into his system? Doubtless (1) the liquids he drinks in the bazaars are responsible to a large extent; but in a still greater measure two agencies are culprits. I allude to (2) dust and (3) flies. The enteric fever rate rises in the hot weather; so do the dust storms. Anyone who has experienced one knows how impossible it is to keep the dust out of one's bungalow during a storm. Consequently the dust bearing the typhoid bacillus settles on food that may perchance be exposed, and so gains entrance to the system. An example of this occurred definitely in the Soudan in 1885, where it was held that much of the enteric fever was due to the patients' excreta being rapidly dried, and then carried hither and thither by the wind. Lastly, as regards its diffusion by flies. We need only consider what happened in the Spanish-American war to understand what happens in India. Camps here were ravaged by enteric in spite of the most elaborate sanitary arrangements. A special commission appointed to inquire into the epidemic reported that it was due to the common house fly. The various camps were infested with millions of flies that carried the poison from the latrines to the food. Even with the purest water supply, whole messes and tents were infected at the same time.

I stated that even in his barracks the young soldier was exposed to the chance of infection. That this is so is evident from the fact that the chance of infection by flies cannot possibly be reduced to a negligible quantity; whilst considering the uncleanly habits of the native cooks, it would be a miracle if the food were not infected. I need only recall the celebrated instance of an attack of cholera that seized a party of officers some years ago, and which was traced by the logical mind of Professor Hankin to the dirty *jairans* employed by the native servants—*jairans* that infected with the cholera microbe.

Thus, to sum up the subject, it appears to me that it is a matter of marvel that more men are not infected with enteric than is at present the case in India, considering that—

1. There is a continual supply year by year of a large body of men most predisposed to the disease. Thus every year a fresh stock of the infective agency is added to the country.

2. This large body of men most predisposed to the disease, though living nominally in highly sanitary barracks, are yet daily exposed to the infection of enteric contained in—

(*a*) The liquids they imbibe in the bazaars,
(*b*) The dust of the station,
(*c*) The agency of flies.

3. The country soil is, moreover, becoming yearly more and more impregnated with the enteric bacillus.

*Prevention.*—What hope have we of counteracting these morbific influence? We cannot stop the men from entering the bazaars; flies can scarcely be prevented from contaminating their food; dust-storms cannot be prevented. It has, indeed, been proposed to lay the dust in cantonments by water-carts. This, however, will go but a short way, for dust is carried by the winds not only from the roads and fields in immediate relation to the barracks but also from afar off. One remedy is to annihilate the bacillus by burning the stools of the sick, and the most efficient way is to burn them with straw or some other vehicle impregnated with petroleum in incinerators as recommended by the late Professor Du Chaumont. Especial attention must be paid to the urine, as this is shown by Dr. Horton-Smith to contain the bacillus for a longer time than the motions. It is, however, more important to stop anyone getting enteric than to stop any further extension for a previous patient; and to do this the only remedy would seem to be that of compulsory inoculation. Vaccination for small-pox is compulsory in the army as a prophylactic; and that vaccination has had a beneficial effect can be testified by any medical officer of some years' standing. When I first went to India the majority of recruits were marked with small-pox; when I left, the majority of recruits were not so marked. The statistics hitherto published show that the method of preventive inoculation, so ably advocated by Professor Wright, small in number though they be, has had a well-deserved success. Thus, to briefly enumerate the results gained by this method they mention:—

In India, 1899:

(*a*) The percentage to strength of cases of typhoid was—
Amongst the inoculated 0.98 cases, with 0.2 mortality in 4,502 cases.
Amongst the non-inoculated 2.54 cases, with 0.5 mortality in 25,851 cases.

(*b*) Amongst the 15th Hussars at Meerut—
360 inoculated gave 2 admissions, 1 death.
179 non-inoculated gave 11 admissions, 6 deaths.

or

In the inoculated 0.55 per cent., mortality 0.27 per cent.
In the non-inoculated 6.14 per cent., mortality 3.35 per cent.

In South Africa, at Ladysmith, in the Princess Christian Hospital, in the Portland Hospital, in the Scottish National Red Cross Hospital, in the Kroonstadt Hospital, the results were all very favourable to inoculation. The only adverse report is one by Dr. Washbourn, of Guy's Hospital.

In Egypt and Cyprus during 1900, amongst the non-inoculated of 2,669 cases, the cases of enteric were 2.5 per cent., with a mortality of 0.4 per cent., whilst amongst the inoculated of 720 cases the cases of enteric were 0.14 per cent., with a mortality of 0.14 per cent.

Lastly, during the great epidemic at Maidstone, of 84 nurses and attendants inoculated not one was attacked; whilst of 120 not inoculated 16 were attacked. The evidence in favour of the prophylactic action of inoculation, so far, is incontestible.

Lieutenant-Colonel A. Crombie, I.M.S., (retired), did not believe that typhoid in practice was so common in India amongst natives as amongst Europeans. In some parts and amongst certain people the disease was prevalent, while in other parts it was almost unknown; thus amongst the Ghoorkas typhoid was very common, whereas in Madras and Lower Bengal enteric ulcerations were seldom found *post mortem*. Dr. Crombie mentioned an observation pertinent to the value of Widal reaction. He examined the blood of three natives of Bengal under the age of 30 living in London, and of three of similar race and similarly placed over the age of 40. The blood of the first group of cases gave well marked Widal reaction, although the men appeared in good health, never had they ever been laid up with typhoid nor were they ill at the time of examination. Of the cases over 40 years of age that were examined, no reaction occurred with Widal's test. Dr. Crombie believed that there were fevers which ran a twenty-one day course in India, in which there was no eruption, no diarrhœa, and but occasionally an enlarged spleen, which were not typhoid at all. In South Africa 75 per cent. of the cases returned as typhoid gave Widal's reaction. Concerning the value of Wright's antityphoid inoculations he had noted that of 300 cases convalescent from typhoid in South Africa 60 per cent. of the 300 had been inoculated once and 10 per cent. inoculated twice. He knew of one case inoculated a second time with six months' interval between inoculation to have had typhoid two months after the second inoculation, and second attacks of typhoid were not uncommon.

Captain W. R. Battye, I.M.S., stated that with the idea of testing the method of spread of typhoid an experiment had been made in India in which servants were made to rinse their hands in water in a common basin, but although they continued to do so for many days the bacillus of Eberth was not found in the water in the basin. Captain Battye believed that a harmless organism might become pathogenic under certain conditions such as the presence of decomposing matter would engender.

Lieut.-Colonel J. L. Poynder, I.M.S., said that enteric in India was probably a disease of youth, and that it was possible the men mentioned by Dr. Crombie as being over 40 and giving no Widal reaction in all probability had had the disease in their youth.

Professor F. M. Sandwith, M.D. (Cairo) held that the antityphoid inoculation method of Wright was not yet complete in any way. They scarcely even knew what they were injecting and the after-effects were very uncertain. Professor Sandwith mentioned that of twelve nurses who went to South Africa three got typhoid, although none of them died. He advocated systematic blood examination when Wright's treatment was being tried.

## SOME OPHTHALMIC COMPLICATIONS OF PLAGUE.

By Major F. P. Maynard, M.B., F.R.C.S.Eng., I.M.S.,
Civil Surgeon of Patna and Superintendent of the Temple Medical School.

All writers on plague describe the injected eyes as characteristic of the plague facies. The plague-stricken, and sometimes half-drunken, look which enables one often to recognise at a glance patients attacked by the disease is in part due to this injection.

Mr. Cantlie, in his article in the *Practitioner* Plague Number, says plague patients sometimes get inflammation in eye and loss of vision from changes probably beginning in the choroid. With this exception I have come across no description of the condition upon which this injection depends or of the serious results to which it may lead.

During the recent severe epidemic of plague in Patna I came across 12 cases in which there were ophthalmic complications. The notes are briefly recorded below. In all the attacks were severe, 7 had buboes that suppurated, and in the majority there was delirium or insensibility. The lesions met with were not, however, the result of lagophthalmus. They were rather the results of iritis and opacity of media apparently from interference with the nutrition of the eye.

Of the 12 patients examined 6 recovered with one eye sound. In the remaining 18 eyes the following lesions were noted: Cornea—hazy in 4, opaque in 2, and sloughed in 4. Iris—Signs of iritis, varying from a few dots of pigment on the anterior capsule to occlusio pupillæ, in 12 cases, and in 3 others the iris was prolapsed. Sclera—scleral staphyloma was met with twice. In both cases it was ciliary and in each the dark projection was separated from the corneal margin by a strip of healthy-looking sclera. In one the iris was evidently drawn up into the staphyloma, and its upper portion was not visible through the clear cornea. Lens—was hazy in 7 eyes and quite opaque in 5. The media were hazy in 6. The fundus was normal in 3, showed a hæmorrhage in 1, and the appearance of a limited retinitis pigmentosa in one

other. The tension was diminished in 12 cases, normal in the rest. Vision—*Nil* in 5, p.l. only in 8, and fairly good in 5.

The enumeration of these lesions shows the serious nature of the eye complications of plague when they occur. The most remarkable feature in plague *post-mortem* examinations is the extensive extravasation of blood that are met with throughout the body. I was prepared and on the look-out for similar hæmorrhages in the eye. In only one eye was one found. The media are so hazy usually, however, that more examinations of the fundus in various stages of the disease are required before dismissing this as a possible explanation of the destructive changes met with. The rapid development of scleral ectasiæ and the usual diminution of tension are rather remarkable. Scleral ectasiæ usually develop slowly, and oftenest from increased tension. In these eyes the sclerotic must have become less resistant to normal or even reduced pressure.

Treatment was of no avail, because started too late perhaps, in all except one case, where potassium iodide and nux vomica internally, atropine and blisters on the temples, seemed to have a good effect. The tension rose to normal, and the sight improved. It was the good result after treatment in this case that caused several of the others to consult me.

1. Male, 40 years old, seen January 12th, 1901, with ripe left cataract and otherwise healthy eyes. Four days later attacked by plague, and nearly died: delirium. Seen again February 11th, with superficial layers of left cornea sloughed and iris prolapsed. T—1, V. *nil*. Bubo on left side of neck subsiding. Right eye normal. In this case did the cataract render the eye more liable to destruction, or had the bubo anything to do with it by pressure on the sympathetic?

2. Male, 4 years old, seen February 15th, 1901. Plague twenty-four days ago. Now has suppurating buboes left side of neck and right elbow. On fourth day left eye inflamed. Now eye is soft: T 3. has iritis, pupil irregular, with posterior synechiæ, anterior capsule of lens dotted with pigment, and rather opaque. Ciliary injection. Eye sunk deeper in orbit than right, and looks smaller; is thin. V. can just distinguish the lamp. Fundus not visible.

3. Female, 20, seen February 17th, 1901. Plague four weeks ago; no buboes, septicæmic, high fever; delirium five days. Vision affected tenth day. Has a parenchymatous goitre. No pain or tenderness, but lachrymation in both, and photophobia in left eye. Right eye, V.=p.l., T.—2; pupil small, irregular, not reacting; no fundus reflex; cornea rather hazy, conjunctiva and sclerotic injected. Left eye V.=counts fingers. T—2.; eye same as right, but not quite so bad. Fundus reflex present, but no details visible. Treated by blisters on temples, atropine, boric lotion, and potassium iodide, and nux vomica internally. Seen again on March 10th (three weeks after): found much better. Left eye pupil dilated and round, but displaced upwards; iritic pigment dotted in small circle on centre of anterior capsule. T. n., a.c. deep. Still some circumcorneal injection, and interior ciliary veins enlarged. V. good. Right eye ditto, but injection deeper and T.—1. Pupil not quite round. Sees near but not distant objects. Ophthalmoscope direct. Right eye lens very hazy, reflex bad, and no details made out. Left eye—lens hazy, fundus not clear, but disc seen, and a hæmorrhage—recent, below and internal to disc. Disc edges ill-defined.

4. Female, 20, seen March 12th, 1901. Plague 13 days ago; suppurating bubo left side neck. Bubo began sixth day, and same day right eye became inflamed. Right eye injected deeply, but anterior ciliary veins not visible. T—1. Cornea and lens both hazy: pupil oval under atropine. Seen again April 11th, 1901—same. V.=counted fingers 6 metres. Fundus not clear. Iris adherent. Left fundus normal.

5. Female, 35, seen March 23rd, 1901. Plague 26 days ago: right submaxillary bubo, delirium. Eyes bad from beginning. Right eye injected deeply near cornea; cornea clear; lymph in a.c. V. = p.l. T.n. iritis. Left eye injected but less than right. Cornea hazy; has sloughed and iris prolapsed below. T—1. V. *nil*. Some tenderness. Is very weak. Ordered blisters and potassium iodide. Seen April 6th; no improvement.

6. Male, 40. Prisoner in gaol (inoculated). Had severe attack, high temperature, and delirium. Inguinal bubo. Moderate injection in both eyes. Seemed blind after in left and it squinted outwards. Under atropine on April 6th, 1901 (20 days after attacked). Right eye T. n., fundus n., media rather hazy. Left eye, T—⅓, media hazy, especially lens, and retinoscopy astigmatic. Disc normal. To its outer side retina just like retinitis pigmentosa, black, and vessels interrupted. No hæmorrhages. V. indifferent.

7. Male, 35. Plague two months ago: suppurating right femoral bubo; delirium and high fever. Seen April 3rd, 1901. Right eye T—2. Cornea has sloughed and iris prolapsed. V. *nil*. Left eye T—⅓. Cornea ulcerated below; above is fairly clear; conjunctiva deeply injected. V. fair p. l. Atropine and blister. On April 8th said V. was a bit better.

8. Male, 18 years. April 15th, 1901. Plague three months ago. Suppurating buboes both sides neck and right groin. Was insensible one day. Eyes were injected, but left more, and it remained closed. On recovery he had a leukoma, and after treatment for it says the staphyloma developed. When seen left eye large, mulberry-like, scleral staphyloma above, separated from corneal margin by about 2 mm. of healthy-looking sclera. T—1. Cornea slightly hazy, striæ in lens. Fundus not seen properly in consequence, though reflex good. Iris drawn up and not to be seen at all at upper part (has disappeared into the staphyloma?). A. c. deep. Some adhesions of iris to ant. capsule. Eye tender, not injected. Some lachrymation. V. counts fingers at 0 metres. Right eye normal in every way. Ordered eserine and bandage. Seen April 19th, 1901; condition the same. Pupil no smaller after the eserine.

9. Male, 13 years, seen May 10th, 1001. Plague four months ago; right inguinal and left submaxillary glands suppurated; was insensible. Had photophobia and left eye destroyed on recovery. In right dim vision; it gradually got worse painlessly. When seen he had spongy conjunctivæ. Left eye atrophied; right had opacity of lower and outer quadrant of cornea. Injection deeply marked below and to outer side; a. c. shallow, pupil occluded, and lens cataractous. Had tiny scleral staphyloma above, and two dots of pigment also showing through sclera near it. T. n. V.=p.l. only operated upon: the a. c. was found almost obliterated, and with much difficulty a bit of iris was removed. No improvement followed operation or subsequent treatment by iodide and mercury (pushed to salivation).

10. Male, 55 years, seen in May, 1901. Plague a year ago; submaxillary and inguinal buboes suppurated. Was unconscious. Left eye blind on recovery, right became so slowly up to November, 1900. When seen right eye = T—1, a. c. deep, old iritis, dense adhesions to lens; lens white, opaque, and moves a little. V. = p. l. good. Left eye = T — 1, same as right, but no p. l. even. Operation on right eye recommended, but not accepted.

11. Male, 60 years. Plague some months previously. Had dense white corneal opacity over whole cornea. V.=p.l.

12. Male, 37 years, seen May 28th, 1001. Plague three months ago; inguinal bubo suppurated; was unconscious. A week after attack began eyes became red and sight dim. They remained red for a short time after. When seen both showed dots of pigment over anterior capsule (old adhesions). Media hazy, discs and fundi normal. Vision good. T. n. in both eyes.

## MALADIES OF EUROPEAN CHILDREN IN HOT CLIMATES.

By Lieutenant-Colonel A. CROMBIE, I.M.S., M.D. (retired).

SPEAKING generally it may be said that the sick-rate of European children is lower in India than it is in the United Kingdom. In saying this I refer particularly to the children of civilians, amongst whom my experience exclusively lay. I have no statistics with which to confirm this estimate, but I am confident that the returns of such an institution as the European Orphan Asylum at Calcutta would bear me out. I am the more confident in making this statement because I find that the returns of the Army Medical Department with regard to the children of European soldiers in India, who cannot be so uniformly well cared for as those of the comparatively well-to-do civil European population, show hardly any increase over British rates. Thus in 1899 the sick-rate of 5,500 soldiers' children in India was 527.1 per 1,000, while in the United Kingdom it was 507.3. This was an average non-epidemic year, and may be taken as fairly representing the effect of normal conditions on the admission-rates of children in the two countries.

*Table showing the Sick-Rates and Death-Rates per 1,000, as well as the Case Mortality of the Principal Diseases affecting Children in India and the United Kingdom in 1899.*

| | Admission-Rate. | | | | Death-Rate. | | | | Case-Mortality per Cent. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | United Kingdom. | India. | United Kingdom. | India. | United Kingdom. | India. | United Kingdom. | India. | United Kingdom. | India. |
| | | | + | + | | | + | + | | |
| Eruptive fevers ... ... | 94.9 | 68.9 | 26.0 | — | 1.27 | 1.82 | — | 0.55 | 1.3 | 2.7 |
| Malarial ,, ... ... | 1.7 | 97.3 | — | 95.6 | — | 2.18 | — | 2.18 | — | 2.2 |
| Other ,, ... ... | 4.2 | 18.0 | — | 13.8 | — | 0.55 | — | 0.55 | — | 3.0 |
| Tuberculous diseases ... | 2.3 | 3.1 | — | 0.8 | 0.98 | 0.73 | 0.25 | — | 43.2 | 23.5 |
| Debility, etc ... ... | 18.0 | 38.4 | — | 20.4 | 0.98 | 2.36 | — | 1.38 | 5.4 | 6.1 |
| Other general diseases ... | 27.3 | 17.8 | 10.5 | — | 1.73 | 3.45 | — | 1.72 | 6.3 | 10.3 |
| Diseases of nervous system | 9.3 | 10.0 | — | 0.7 | 2.80 | 5.82 | — | 3.02 | 30.4 | 58.2 |
| Diseases of respiratory system ... ... ... ... | 134.9 | 68.0 | 66.9 | — | 4.46 | 6.91 | — | 2.45 | 3.3 | 10.2 |
| Diseases of digestive system ... ... ... ... | 103.5 | 96.2 | 7.3 | — | 3.71 | 13.09 | — | 9.38 | 3.5 | 13.4 |
| All diseases ... ... ... | 507.3 | 527.1 | — | 19.8 | 18.31 | 41.09 | — | 22.78 | 3.6 | 7.8 |

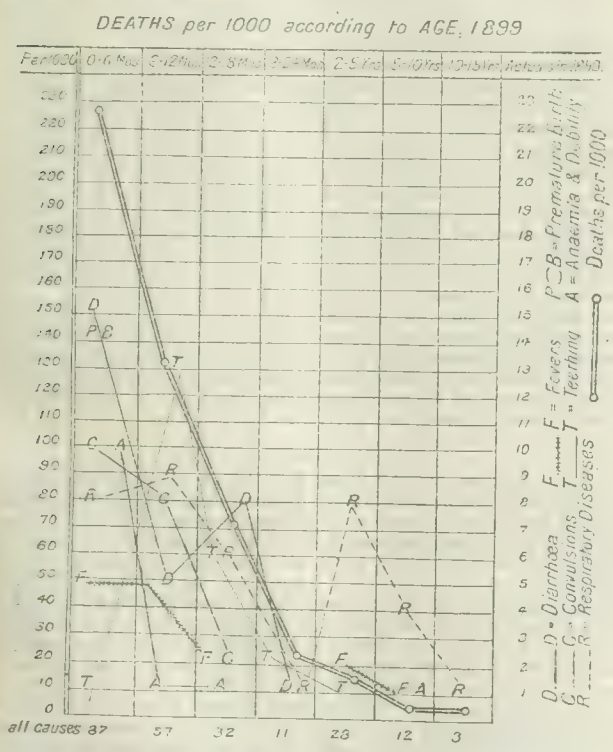
When we come to speak, however, of the death-rate the matter takes an altogether different complexion. The death-rate of soldiers' children in the United Kingdom is 18.31, while in India it is 41.09 per 1,000. It is obvious, therefore, that the illnesses of European children are more frequently fatal in India than are those of children at home, and it behoves us to inquire in what diseases and in what way these fatal illnesses occur. For the purposes of this inquiry I have drawn up the above comparative statements, in which the

relative admission and death-rates of the more important diseases to which children are particularly liable may be compared and contrasted in these different circumstances.

This table is a very instructive one, and brings into prominence the following interesting facts with regard to the diseases common to both countries, namely, that when you deduct from the 2,899 admissions among the 5,500 European children in India the 535 cases of malarial fever which is not common in both countries, the admission-rate in India is reduced to 429.8 per 1,000, or just about 100 per 1,000 less than it is in the United Kingdom; so that if you could defend these children from being bitten by the *Anopheles* mosquito, their chances of illness would be 10 per cent. better in India than in this country. It is a question largely of mosquito curtains, and is one to a great extent within the control of those responsible for the care and management of children in India. It is to this care, to a great degree, that the comparatively good health of the children of the well-to-do civil population is probably largely due.

But even including the great class of malarial fevers which, in the comparison, are shown to be almost exclusively present in the Indian statistics, and cause 97 admissions per 1,000 of the children borne on the strength of the European army in India, the admission-rate for children in India is only 19.8 per 1,000 in excess of that of the United Kingdom; and consequently, apart from malaria, it is clear that the same class of children suffer more frequently from illness at home than their brothers and sisters brought up in India. This is in accordance with common experience, so that up to a certain age Europeans do not hesitate to keep their children in India.

From this table it is evident that, apart from malaria, the higher admission-rate in this country is due chiefly to two classes of diseases—namely, the eruptive fevers and diseases of the respiratory apparatus.




Eruptive Fevers.

In the case of the eruptive fevers the difference amounts to 26 per 1,000. Of these exanthems, measles was almost as prevalent in 1899 in India as in the United Kingdom (60 against 63 per 1,000), but was relatively more fatal, with a case-mortality of 2.4 per cent. against 0.9. The idea that measles s a milder disease in India than at home is not therefore supported by these figures. Rubella was more prevalent at home in the proportion of 5.6 to 3.6 per 1,000, and scarlet fever in that of 14 to 2.3; and in this respect 1899 was an exceptional year in India, where usually scarlet fever is a rare occurrence. Chicken-pox was also more prevalent at home.

Respiratory Diseases.

It is in diseases of the chest, however, that Indian children have the greatest advantage. These diseases are just twice as frequent at home as in India. At home bronchial affections gave 126.2 admissions per 1,000, and in India only 58.2. In India, however, the case-mortality was 5 per cent., against 2 per cent. at home. In India both the admission-rate and case-mortality of pneumonia were higher than at home, the figures being 4.9 per 1,000 and 44.4 per cent., against 3.8 and 32 9 at home respectively. This appalling mortality of pneumonia in children in India, amounting to nearly one half of the cases, bears out what I have long held—namely, that pneumonia is by far the most formidable disease, next to cholera, which we have to treat in India, not only in children, but also in natives. Among European adults the case-mortality from pneumonia is about 12 to 14 per cent. both at home and in India. I firmly believe that a great part of the death-rate in India attributed to fever is, in fact, due to pneumonia in respect of the native population, with whom every illness accompanied by fever is "bokhar," and is returned as such. This is an observation which I have verified many times, not only clinically, but on the *post-mortem* table.

Digestive System.

It comes somewhat as a surprise to find that the generally-expressed opinion that whereas the brunt of disease is borne by the chest in cold climates, it falls on the digestive organs in the tropics is not true, comparatively speaking. As a matter of fact, at least among soldiers and their children, diseases of the digestive system are rather more prevalent at home than in India. At home in 1898 they caused the admission of 114 men per 1,000, and in India 110 per 1,000, and as regards children they caused 103.5 admissions at home, and only 96.2 in India in the same year, which was in no way an exceptional one.

It is not of their frequency but of their gravity that the received opinion is true, the case-mortality from these diseases being just four times greater in India than at home among children, and nearly six times greater among adults. (N.B.—The diseases I am now speaking of are exclusive of dysentery and cholera.)

Diarrhœa.

Analysing these diseases of the digestive system we find that diarrhœa gave 39 per 1,000 admissions among children in India and 35 at home, but the case mortality was 13.5 per cent. in India and only 4.2 at home. Diseases of the mouth and throat caused 35.2 admissions per 1,000 at home and only 14.5 in India. Dentition caused 22 admissions in India, against 6.7 at home, and the case-mortality was 12.2 per cent. in India and 5 per cent. at home. Enteritis caused twice as many admissions in India and the case-mortality was double. From these figures it is clear, however, that, excluding diseases of the mouth and throat, which are more prevalent at home than in India, diseases of the stomach and bowels are not only, on the whole, more frequent, but they are, at the same time, nearly four times more fatal in India than at home.

Dysentery.

If among these diseases we include the sickness and mortality due to dysentery we find that the admission-rate for that disease was 13 per 1,000 in India against 0.3 in the United Kingdom, and the death-rate 1.27 per 1,000 in India against *nil*. The case mortality from dysentery in India is 9.8 per cent. among children.

I may here say that the question of the diagnosis of dysentery is not the simple one which it is generally supposed to be, and it is one which would well repay careful inquiry on a scientific basis. The classical symptoms, the tormina, the tenesmus, the bloody mucus in the stools, are not sufficient to warrant the diagnosis of dysentery. In nine cases out of ten in which these symptoms occur they are not caused by true dysentery, but by a rectal catarrh or proctitis of a very

transient character, which will subside rapidly if you put the patient in bed, and a poultice on his abdomen, and put him on peptonised milk and a little Dover's powder.

These are the cases which made the name and fame of ipecacuanha, as they are now making the name and fame of the saline treatment of dysentery. I observed and recorded a great many cases of this kind of so-called dysentery, and my record has never been beaten; I think it was, on an average, recovery in two and a-half days. Ipecacuanha does the same in three days, and the saline treatment, I believe, in about the same time; but it is not dysentery, and it can be cured without either ipecacuanha or salines, especially in children.

### LIVER ABSCESS.

It is natural to pass from the consideration of dysentery to that of hepatic abscess, and the point which strikes us, as it has struck everyone who has given any thought to the subject, is the entire absence of the mention of the latter disease among those of children in India. In the year 1899, while there were 153 cases of liver abscess among the European soldiers in India with 85 deaths, there was not one among the children. The connection between certain forms of dysentery and abscess of the liver is well established and is not to be denied, and the only explanation of the immunity of children from hepatic abscess is that the kind of dysentery they suffer from is not that which is so frequently followed by liver abscess in adults. It is true that dysentery is just twice as common among European soldiers in India as it is among their children (25.4 to 12.9 per 1,000), but that does not account for the immunity of children, especially as the severity of the disease is much greater in children than adults, the case mortality being 9.8 per cent. among children and only 2.4 among adults. I never in the course of my six-and-twenty years of service in India diagnosed or heard of an abscess in the liver of a child.

### OTHER GENERAL DISEASES.

The only other group of diseases in which the admission rate is higher at home than in India is that of "other general diseases." The principal diseases included under this head are whooping cough, mumps, anæmia, and immaturity at birth. They do not seem to call for special remark here, except that there are included among them in India 5 cases of rickets, with 2 deaths. I do not know whether those among you with Indian experience will agree with me when I say that rickets is much less frequently met with in India than in this country, and more especially among native children in normal years. Those who have had to do with the famines of recent years will probably have a very different experience to relate; but, speaking of normal conditions, I do not think that the out-patient departments of Indian hospitals are filled with rickety children as they are, say, in London, where it is probably no exaggeration to say that 20 per cent. of the children seeking relief are more or less the subjects of this disease. But while the admission-rate for these diseases is lower, the death-rate is just double, and the case-mortality three times greater in India than at home.

With regard to rickets, the habit of nursing their children may account for its comparative infrequency among natives, and the absence of destitution and absolute privation among Europeans may do the same for them.

### FEBRICULA AND SIMPLE CONTINUED FEVER.

Turning to diseases which are more frequent among European children in India than at home, after malarial fevers already mentioned, we come first to fevers other than the eruptive, and under this head we have to deal almost exclusively with febricula and simple continued fever. The sickness recorded under this head varies greatly from year to year. Thus, while it was 18.0 per 1,000 in 1899, it was 32.4 in 1898. The case-mortality was, however, the same in both years—namely, 3 per cent. We may say at once that this mortality took place entirely among the cases of simple continued fever, for febricula is not a fatal disease; and this raises the question as to the essential nature of simple continued fever. It is a name given to a continued fever of a good many days' duration, which may extend to twenty-one days, but which does not present the usual clinical features of enteric fever, and on this ground practitioners have hitherto hesitated to give it this graver name, especially as in the majority of such cases the duration of the fever does not exceed a fortnight, and there is no eruption and no characteristic diarrhœa, and enlargement of the spleen, if it exists, may be due to a previous or concomitant malarial infection. Formerly, when we were obliged to rely on the clinical symptoms alone, this hesitation was justifiable; and, looking to our ignorance regarding infection by organisms morphologically related to Eberth's bacillus, it was dictated by the true scientific spirit; but now we possess an additional method of diagnosing these doubtful cases in Widal's reaction, and recent observations, especially in South Africa, show that 75 per cent. of cases of so-called simple continued fever give the serum reaction which is characteristic of typhoid fever.

Now the case-mortality of typhoid fever in children in India is 7.4 per cent., and as there were 3 deaths returned as from "simple continued fever," it follows that these fatal cases probably represent 40 cases of typhoid fever which were returned under our present heading, but which ought to have been included under that of enteric fever. Instead of the returns showing for 1899 only 27 admissions and 2 deaths from enteric fever among children in India, it probably would be nearer the truth to say that there were 67 cases and 5 deaths. This would leave 59 cases of febricula and simple continued fever which were not enteric, and giving no mortality, instead of 99 cases with 3 deaths, as shown in the returns. Similar remarks might with propriety be made with reference to remittent fever.

The application of Widal's serum reaction test is so easy, and the means of putting it into use have been so multiplied of late years in India, that there is now hardly any excuse for not seeking its aid in the diagnosis of all doubtful continued fevers. The proportion of cases of true typhoid fever in which the reaction does not take place at some period of the disease, and its occurrence in other diseases than typhoid, is so small as to be almost a negligible consideration.

I am here speaking only of Europeans, and this is hardly the place to enter into the question of the diagnostic value of Widal's reaction in the febrile diseases of natives of India. I think it will be found that a very large percentage of natives of India who are not suffering from any febrile condition, and who have never, or certainly not for many years, suffered from any fever which could be by any possibility diagnosed as enteric fever, give the reaction in a perfectly characteristic way. I have myself found it present in dilutions of 1 in 50 within half an hour in 3 out of 6 healthy natives of India living in London during the present year. The doubt which this observation throws on conclusions founded on the serum test in the diagnosis of febrile states in natives of India is sufficiently obvious.

I may add that in 4 cases convalescent from what was returned as "simple continued fever" in South Africa, I have found Widal's reaction in 3, and this seems the usual proportion. In the fourth case, which did not give the reaction, the whole course of the case and the character of the sequelæ pointed quite clearly to enteric as having constituted the real cause of the disability.

### TUBERCLE.

The question of tuberculous disease among European children in India has already been discussed by me in my report on the Congress on Tuberculosis at Berlin in 1899, which will be found reproduced in the Annual Report of the Sanitary Commissioner with the Government of India for 1898.

The statistics of the civil populations are not full enough or accurate enough to give us any information on this point, but there is a very general consensus of opinion among Indian medical authorities that it is much less frequent among children in India than it is at home.

"Taking strumous enlargement of the cervical glands as the commonest and most obvious form of tuberculous infection in children, Chevers states that he never saw a case in a native of the plains of India. In the orphan asylums of Calcutta, with an aggregate strength of 561 Europeans, East Indian, and Armenian children, and between 400 and 500 admissions to hospital per annum, there were, according to Webb, who was in charge of them for many years, no entries for scrofula."

Tabes mesenterica is certainly very rare among the civil

population. Chevers says he never admitted a case to hospital. Moorehead does not mention it as occurring in the large Byculla schools at Bombay, neither do Webb and Fayrer as regards the Calcutta schools, and the records of the Madras orphan asylums are also silent with regard to it. I cannot myself recall more than a few doubtful cases.

It was at one time, however, apparently very prevalent among the children of European soldiers serving in India, as the following figures show:

| | Admissions. | Deaths. |
|---|---|---|
| 1880 ... ... ... ... ... | 56 | 26 |
| 1881 ... ... ... ... ... | 43 | 24 |
| 1882 ... ... ... ... ... | 31 | 15 |
| 1883 ... ... ... ... ... | 32 | 21 |

Tabes mesenterica has become much less frequent of late years, and in 1896 there were only 2 admissions and no deaths in a strengh of 5,790 European children," and in 1899, 8 cases and 4 deaths. The other tuberculous diseases for which there were were admissions during the latter year were scrofulous glands 4 and tubercle of the lung 2. The 4 fatal cases (all from tubercle of the intestine) occurred in children, 2 under 6 months, 1 between 6 and 12 months, and 1 between 2 and 5 years; 3 of the 4 deaths were in children under 1 year.

### Tuberculous Meningitis and Hydrocephalus.

Tuberculous meningitis is met with from time to time among European children in India, but tuberculous disease of the hip-joint is "certainly unusual in India" (Birch). Chevers, in his long experience in India, saw only one solitary instance in a European girl—I never saw one myself. Hydrocephalus is by no means rare.

### Pulmonary Phthisis.

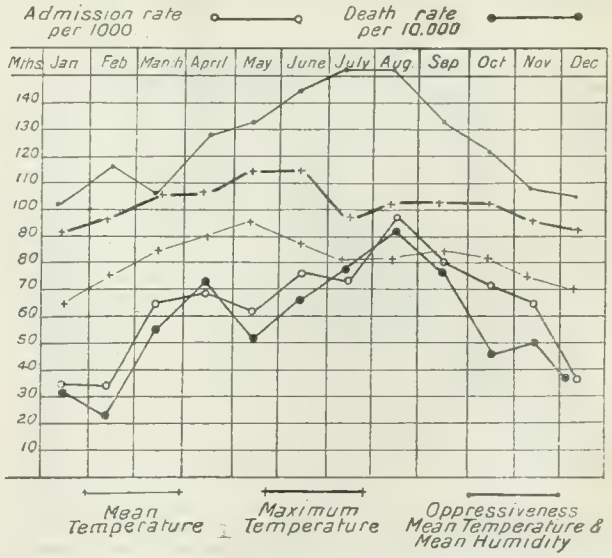
Of 15,116 deaths among the civil population of the North-West Provinces in 1897, verified by the medical staff and a professional agency, only 40 deaths from tubercle of the lung were so certified, and of these only 6 were children, all under the age of 18 months. This offers a great contrast to the statistics of European countries. There were 1,324 deaths from phthisis in England and Wales in 1899 in children under 5 years of age constituting 3.1 per cent. of the total mortality from that disease, and where the percentage of phthisis to total mortality is 7.3 against 0.26 in the North-West Provinces of India according to these statistics. Thus while the admission-rate for all tuberculous disease appears to be higher among European children in India, the death-rate and case-mortality are both lower. Here, however, the habit of invaliding to England may interfere with the true relationship of the figures to the facts. This remark does not invalidate the figures given above for the native population of the North-West Provinces.

### Anæmia, Debility, and Premature Births.

I have reserved to the last the diseases included under anæmia, debility, and immature birth, because they may be regarded as the master-key to the explanation of the figures we have considered under the different heads. These diseases gave 20 per 1,000 more admissions among children in India than in the United Kingdom—38.3 per 1,000 against 18.3 or fully twice as many. The death-rate was also $2\frac{1}{2}$ times greater, while the case-mortality was only greater in the proportion of 6 to 5. It is to be noted that every one of the children born prematurely died—14 in number.

### General Conclusions.

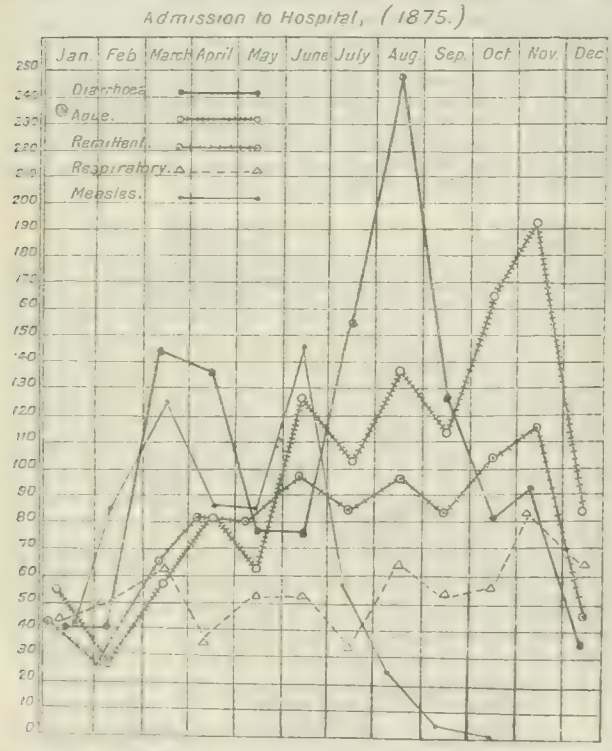
The lesson we learn from these, I fear somewhat tiresome, figures is that while European children in India enjoy a certain relative degree of immunity from some of the diseases prevalent in childhood, especially as regards respiratory diseases and the eruptive fevers, "other general diseases," and, to a slight extent, diseases of the digestive system, their death-rate and the case-mortality from all diseases, with the solitary exception of tubercle, is higher, in fact, more than double those prevailing in the United Kingdom among the same class. The difference in case-mortality is not in any one disease or class of disease, but is common to all, though it is most marked in those of the digestive system, the respiratory and nervous systems, and in "other general diseases." The key to this high death-rate is to be sought for, not in a greater virulence of any or all of the diseases included in these groups, but in the debility produced by an enervating and exhausting climate, which saps the strength and renders the struggle for life so difficult and so pathetic in these little sufferers. Who has not sat by the bedside of a child suffering from pneumonia, we will say, and which has to fight not only with a grave and vital disease, but has to struggle at the same time against the exhausting effects of the high temperature of an atmosphere saturated with moisture, with the sleeplessness caused by prickly heat and mosquitos, and wondered not that the case-mortality of the disease was 44 per cent., but that it was not more, and so with all the febrile, inflammatory, and exhausting diseases of children in India. So much impressed was I with this physical exhaustion, the effect of climate, as the principal cause of the high mortality and suffering in illness, especially among children in India, that when the General Hospital in Calcutta was to be rebuilt, I went earnestly into the question of cooled hospitals in India, where the internal temperature should never be allowed to rise above 75°. Lord Elgin took up the idea with enthusiasm, but it was found that the expense of such a scheme was so enormous as to be prohibitive. I do not altogether however despair of some such scheme being some day feasible on a small scale. The great cause of expense in such a proposal is the difficulty of removing the moisture before admitting the cooled air to the wards. How closely the admission-rates and death-rates are related to the heat and moisture of the atmosphere is clearly seen in the following table, which shows graphically the admissions per 1,000 and the death-rate per 10,000 for each month of the year.




In this diagram I have also traced in its upper part three lines which represent in order from below upwards the mean temperature, the maximum temperature, and the "oppressiveness" of each month of the year. I have chosen for the purpose the meteorological returns for Nagpur, which may be regarded as the central point of India, and to represent generally the course of temperature, etc., in an inland province. I have plotted out the curves for other stations, but though they differ from each other in detail, they have the same general character, which is enough for my present purpose. It is obvious that the sick-rate and death-rate curves are not closely related to the mean temperature. This reaches its maximum in May, and declines through June, July, and August, whereas the sick-rate, and more especially the death-rate, rise from May through June and July to their maximum in August. The fierceness of the maximum temperature is

reached in May and June, and falls nearly 20° in July and August. With the fall of maximum temperature in July there is a slight diminution in the sick-rate, but an increase in the death-rate, and both rise again in August. It is in the upper line that the parallelism is most marked at this season. This is the curve of "oppressiveness," and is obtained by adding the mean humidity to the mean temperature, and it may be taken as representing the stress and exhaustion caused by "climate." It rises steadily from March, and reaches its maximum in July and August, corresponding with the maximum of sickness and mortality, and as it declines steadily towards the end of the year, the sick-rate and death-rate decline with it. The comparatively high curves of March and April correspond with the sudden rise of maximum temperature in March and April, more marked in other stations than in Nagpur, as, for instance, in Lucknow, where the difference between the maxima in February and March is 30°, and is accompanied by a rise in every class of disease. The dip in May is difficult to explain on meteorological grounds, but the rise in the death-rate in November is due to malarial fevers and respiratory diseases, due the former to the prevalence of mosquitos and the latter to the onset of cold nights.

In the following diagram I have traced the admissions per month (1875) for ague, remittent and continued fevers




(together), diarrhœa and measles, as showing how they respectively affect the health of European children in India; and from this it will be seen that the cause of the bad pre-eminence in the admission-rate of August is due to diarrhœa, and that this disease to a large extent determines the character of the curve of the admission-rate from month to month, as shown in the preceding diagram. It shows at a glance the prevalence of each of these diseases during the successive months, and does not seem to require explanation.

Dr. EDWARD HENDERSON (late Shanghai, China) said: My personal experience regarding the health of European children in hot climates has been gained in the subtropical climate of Shanghai during the thirty odd years I was engaged in active general practice there. I had always in Shanghai a large number of these children under my care, and had ample opportunity of watching their growth and development under the different conditions of continued residence in China, or, in the majority, a life interrupted by more or less frequent and lengthened intervals spent in Europe. Of course the man who practises in a subtropical climate wants something of the experience of the man who does his work entirely in the tropics; but, on the other hand, he has the advantage of being able every year to contrast the health which his patients enjoy in cool or even cold weather with their condition when subjected to tropical heats. In Shanghai these climatic changes are always well marked, and our summers there are seasons of tropical heat, lasting for nearly four months. The effect of tropical heat on the European constitution is, as a rule, unfavourable; and children appear to suffer more in this way than adults. Anæmia and loss of tone are always more or less apparent in European children after a summer spent in Shanghai. Disease, too, during hot weather alters in character somewhat, affecting at that time the digestive organs, chiefly in the form of diarrhœa, dysentery, and infantile cholera. While it is evident that heat is the principal cause of this deterioration and these diseases, it is often difficult to say in what way exactly it has acted in individual cases. Heat causes general enfeeblement of the nervous and muscular systems, and through these affects the digestive organs, depriving the child of appetite, and making the assimilation of what food he is able to take a more or less difficult process. Heat probably favours the development of the specific germs on which such diseases as epidemic diarrhœa and dysentery depend. In addition, heat causes the rapid decomposition of all food stuffs, making much which is under ordinary circumstances perfectly wholesome, injurious or even positively dangerous. And milk, which is or ought to be the staple food of children, is peculiarly apt to suffer in this way. Of the more remote effect of tropical heat when long continued, I may mention the too rapid growth of children at the expense of general development. I have been quite often told by parents who have taken children home to England, that after their arrival there they stopped growing for a time, though gaining in weight and strength. The cycle of nature, both animal and vegetable, is shorter in the tropics, and the girl becomes a woman at an early age. Maturity is sooner reached and decline hastened. The practical outcome of all this is that the European ought not to be allowed to spend more of his young life in the tropics than can be helped. At the age of from 4 to 7 he should be sent to Europe, and kept there until growth is fairly well completed. Time presses, and in what I have still to say I will confine myself to a few general considerations regarding the disorders which affect the alimentary canal—the most common form of illness which the doctor who has children under his care in a hot climate is called on to treat. In the treatment of diarrhœa success will, I believe, usually be found to lie in the general management of the case; drugs playing a comparatively subordinate part. In the first few hours of alimentary canal disturbance which threatens to develop into a case of infantile cholera, the principal point is to stop the giving of food altogether, especially cow's milk. In such cases beef juice, or egg albumen diffused in water, comes in well later, and brandy is often of great service. The thirst from which the little patient suffers needs constant attention, and water must be given freely whether rejected afterwards or not. I mention these points to illustrate what I mean by general management of drugs in this disease. I know of nothing better than calomel, in fractional doses, frequently repeated. Whatever be the cause of infantile cholera, whether a specific germ or only the decomposition of naturally wholesome food, there can be no doubt that bottle-fed infants are much more apt to suffer from it than those who get their natural nourishment from the breast. Milk is a food which so easily decomposes in hot weather that in the tropics its condition needs constant attention; and the feeding of infants, which must be done at night as well as during the day, becomes a very difficult matter indeed for the nurse. Add to this that we have not always in the East an active and intelligent staff of officials to look after public dairies, and the native dairyman is emphatically not a man to be trusted. If, as often happens in hot climates, the European mother is unable to nurse her infant, a good wet nurse should be always provided, and she can usually be easily got among the natives if ordinary care be taken in her

selection. I speak, of course, from my own experience in China. In France a special form of diarrhœa used to be described under the name of "diarrhée sudorale," in which the mucous membrane lining the alimentary canal sympathised with the excessively acting skin, and excessive perspiration in children should always receive attention. It is difficult to keep children who are able to run about under a punkah; but in hot weather a punkah in the nursery, pulled during the hottest hours of the day, at the time of the siesta, which children should always be encouraged to take, is of great service in maintaining health. In very hot weather the child should sleep on soft matting such as we know in China under the name of Canton matting, and at night a punkah is often valuable. Of course, a child who sleeps under a punkah at night should be sufficiently clothed, and always have the abdomen covered. Among the outside causes which sometimes excite or may aggravate bowel disorders, the possible presence of intestinal worms should in the last always receive attention. From what I have myself seen I believe that lumbricoides are much more common abroad than in England. The presence of these worms may be unsuspected, as apparently they may exist for quite a long time, and even in considerable numbers, without causing any evident departure from health. I have myself seen on more than one occasion the vomiting of one of these worms as the first recognised sign of their presence. Sea-sickness in children returning from the East is often attended with an occurrence of the kind. I have said that in treating diarrhœa the general management of the case is usually of most importance, but I quite admit that when medicine is given our modern *Pharmacopœias* have much to offer of value in the bowel antiseptics which arrest fermentation, and the astringents which pass through the stomach unchanged to act on the intestine.

Dr. Manson asked Dr. Crombie for a definition of dysentery and what he meant by the dysenteries in children. He also requested information upon the presence of diphtheria, trismus neonatorum, and hypertrophic cirrhosis of the liver in India. Dr. Manson also asked for some information as to whether European children showed the proclivities as Mohammedan children. He agreed with Dr. Henderson's remarks concerning the advantages to the health of European children arising from being breast-fed in preference to the bottle-fed, and said that when the mother could not suckle the infant it was wise to obtain a native wet nurse.

Major W. H. Burke, I.M.S., stated that he should like to endorse the opinions expressed by Colonel Crombie regarding the rarity of enteric fever amongst natives of India; he had treated many cases of enteric amongst Parsees, and also amongst what might be called the scions of noble houses, sons and relatives of native chiefs. The Parsee had no caste prejudices, and the rajah was above them. This seemed to him to bear out the deductions Colonel Crombie drew. On the other hand, Colonel Crombie stated that tuberculosis was not common amongst natives in India, whereas at present there was an immense amount of tuberculosis amongst natives in Bombay. He was of opinion that Colonel Crombie had not dwelt sufficiently on the unhealthiness for European children of the rainy season in India, nor on the functional weakness of the livers of European children in India.

Mr. Cantlie (London) stated that trismus neonatorum was very prevalent amongst the Chinese infants in Hong Kong, and that the deaths from trismus formed 50 per cent. of the total mortality of the population. He had seen a death from trismus in a European infant. The monthly nurse was also a European, but she came straight from a convent where trismus amongst infants was always rife, and no doubt conveyed the infection. Tuberculosis was prevalent enough amongst Chinese, but the half-castes suffered more than any other section of the community. In fact, the proportion of half-caste women that lived to 30 years of age was very small indeed.

Dr. Crombie, in reply, said he could not define dysentery, but considered ulceration of the solitary glands an essential feature of the disease. Diphtheria and trismus were common in Calcutta, but hypertrophic cirrhosis of liver was unknown amongst European children in India: it was frequent amongst Hindus, but Mohammedans were exempt.

# SECTION OF PATHOLOGY AND BACTERIOLOGY.

J. W. Washbourn, C.M.G., M.D., F.R.C.P., President.

## INTRODUCTORY REMARKS BY THE PRESIDENT ON SOME PATHOLOGICAL NOTES FROM SOUTH AFRICA.

Gentlemen,—I think that some account of my medical experiences in South Africa will be of interest to you, and although my remarks will not be limited to pure pathology, they will nevertheless have a bearing upon the subject. I propose giving you some account of the principal diseases met with among the troops in South Africa, and I will chiefly confine myself to my experience at the Imperial Yeomanry Hospital in Pretoria as I have the notes at hand.

### Statistics.

This hospital was opened in the latter part of August, 1900, and from that time until the end of April 3,702 cases were admitted. Of these cases, 2,853 were medical and 849 surgical. You will thus see that there were three or four times as many medical cases as surgical. The 2,853 medical cases comprised the following: Enteric fever, 546; dysentery, 379; debility, 340; rheumatism, 296; malaria, 258; simple continued fever, 187; diarrhœa, 152; jaundice, 93; influenza, 71; tonsillitis, 70; bronchitis, 43; rheumatic fever, 2; while the remaining 405 cases were made up of various diseases, none being numerically prominent. You will at once notice the large number of diseases of the intestinal tract. If we add jaundice to enteric fever, dysentery, and diarrhœa, we find that 1,188 cases out of 2,853 came under this category. Mr. Williamson and Mr. Douglas, the surgeons to the hospital, informed me that among their surgical cases diseases of the rectum, especially hæmorrhoids, occupy a very prominent position.

### Sanitation of Standing Camps.

On the other hand, diseases of the lungs were exceptionally rare, only 43 cases of bronchitis and an occasional case of pneumonia were admitted. We may roughly infer from this that the air in South Africa is good, and that the food is bad. The diseases of the rectum are no doubt due to improper food, the absence of vegetables, for example; while the other intestinal diseases are due to contamination of the food with specific germs. I believe that, under proper sanitary conditions, enteric fever, dysentery, and probably diarrhœa, would diminish enormously; and I believe that, had there been a proper sanitary corps, under the supervision of a good sanitary medical officer to look after the standing camps, a large proportion of the disease would have been avoided. We hear a great deal about the difficulty of sanitary measures during a campaign. These difficulties, which are undoubted, apply to soldiers while on trek, and do not exist when the troops are in a standing camp. It is well recognised by everyone who has had experience in campaigning that sickness does not develop among troops on the march, but arises soon after they are stationed in a standing camp; and it is under these circumstances that sanitary measures could be, and ought to be, rigorously enforced.

Next to the intestinal diseases comes debility, of which 340 cases were admitted. Most of these cases did not require any special treatment, they were simply cases of men requiring a few days' rest which they could not obtain with their regiment.

### Rheumatism.

The next disease in numerical order is rheumatism, of which there were 296 cases admitted. The rheumatism took the form of a chronic muscular rheumatism, especially affecting the lumbar muscles, and, as a rule, without joint affection. Only two cases of definite rheumatic fever were admitted, both occurring in patients who had had the disease before in England. I have only seen a few cases of rheumatic fever occurring in South Africa, and I have not seen a single case in a patient who has not had the disease before he landed in the country. I think that the absence of rheumatic fever and the frequent occurrence of chronic muscular rheumatism show that the two diseases have no etiological connec-

tion. I cannot help thinking that this muscular rheumatism is more related to gout than to rheumatic fever, and that it is due to the nature of the food, especially to the absence of fresh vegetables.

### MALARIA.

Next to rheumatism comes malaria, of which there were 268 cases admitted. Some of these cases were possibly incorrectly diagnosed, for they came to us after the fever had subsided and without characteristic symptoms to guide us. In a number of cases we were enabled to discover the malarial parasites in the blood, but in other cases of undoubted malaria repeated examination failed. In all these latter cases quinine had been previously administered, and was no doubt the cause of the failure. Malaria by no means occurs all over South Africa, but is limited to well-defined areas. It is common in the district north of Pretoria, beginning in the Magaliesberg valley and extending all through the bush veld. It is also common in the low country east of Waterval Boven. It does not occur in the Karroo nor in the Orange River Colony.

### JAUNDICE.

There were in all 93 cases of jaundice, 71 out of these cases being admitted during January, February, and March. The actual monthly incidence was as follows: In August, 1 case: September, 1: October, 4: November, 5: December, 2. In January the number suddenly ran up to 26, in February there were 25, in March 20, while in April the cases again fell to 9. The disease runs a definite clinical course. There is nausea, which may be accompanied by vomiting or pain to the right of the epigastrium. The temperature may remain normal or there may be moderate pyrexia. The bowels may be regular, loose, or constipated. In three or four days jaundice appears. The jaundice is usually intense, and the motions become clay-coloured. As the jaundice appears the other symptoms usually subside. After the jaundice has lasted a few days it disappears and the patient recovers. The nausea, vomiting, and abdominal pain suggest an inflammation of the duodenum, which leads to blocking of the bile duct. The jaundice, according to this view, is a more or less accidental sequela, and is not the cause of the symptoms. In support of this view I may say that I have seen a number of cases with similar initial symptoms to those I have described, but without subsequent jaundice. The occurrence of the disease in epidemic form points to some infective agency, but none has yet been discovered.

### HEATSTROKE.

In spite of the intense heat in South Africa during the summer, I have never seen a well-marked case of heatstroke, and I have made various inquiries from medical officers who have been on trek with columns, and I have never heard of a single case that has arisen. This shows that something more than the actual heat of the sun is necessary for the production of heatstroke, and it supports the view that the disease is due to some infection.

### DIARRHŒA AND DYSENTERY.

Under the heading of diarrhœa, 152 cases were admitted, but this gives a very feeble idea of the occurrence of the disease, as it only represents such cases as were severe enough to be admitted into the hospital. Almost everybody shortly after arriving in South Africa is attacked with gastro-enteritis. The principal symptom is diarrhœa, which is sometimes accompanied by vomiting. The temperature may be raised for a short period, but there is usually no fever. The motions are liquid, and very occasionally contain a small quantity of blood and slime. The symptoms pass off as a rule in a few days, but the diarrhœa may continue for some weeks without otherwise affecting the health of the patient. This disease appears to be allied to the summer diarrhœa which occurs in England. From the incidence of the disease at times when dysentery is absent I feel satisfied that it has no etiological relation with this latter affection.

Of true dysentery 379 cases were admitted. Among these cases there were seven deaths, a mortality of 1.86 per cent. We may roughly divide the disease into two types. In the first type, the one which is most common, in addition to the passage of blood and slime, there is fever lasting about six days. With the subsidence of the fever the motions gradually assume their natural character, and the patient recovers. This is the usual course of the disease. Death, however, may ensue during the febrile stage, or it may occur some days after the fever has subsided. In other cases diarrhœa may continue after the fever has subsided, and the disease may become chronic. In the second type of dysentery the temperature does not fall at the end of six days, but it continues for two or three weeks longer. During this latter period the blood and slime disappear from the motions, which become liquid, and the symptoms are much more like those of enteric fever than of dysentery. In these cases the spleen not infrequently becomes enlarged, still further increasing the resemblance to enteric fever. In some cases neither blood nor slime is passed during the whole course of the disease, and the intestinal symptoms are quite in the background. In fact, in some cases there has been constipation during several days of the attack. I believe that in this type of dysentery there is a secondary infection, and the disease resembles the septic type of scarlet fever. The *post-mortem* appearance of South African dysentery are as follows: The large intestine is chiefly involved. In some cases the rectum, sigmoid, and the cæcum are alone involved, and in all cases they are the parts most severely affected. In many cases the whole of the large intestine is affected, and sometimes in addition the last two or three feet of the small intestine. The walls of the intestine are enormously thickened, and in all the cases which I have seen the mucous membrane has also been ulcerated. The ulcers may be small with clean-cut edges, or larger with ragged edges, and the floor consisting of slough. Not infrequently perforation occurs. I have read the report on asylum dysentery by Dr. Durham and Dr. Mott, and I have little doubt but that the dysentery in South Africa is the same disease as is met with in asylums at home. I believe that South African dysentery is infective, and that its prevalence is due to insanitary conditions. With regard to the pathology of the disease, I can only say that I am sure it is not due to amœbæ, for I have always failed to discover them in the evacuations. Abscess of the liver is a rare complication of South African dysentery. In one case I examined the pus carefully immediately after removal during life, and I found that it contained many streptococci and a bacillus belonging to the coli group; it did not contain any amœbæ.

### ENTERIC FEVER.

Of enteric fever, there were 546 cases with 50 deaths, a mortality of 9.1 per cent. The disease is precisely the same as occurs in England. The *post-mortem* appearances are similar, and the blood serum agglutinates a typhoid bacillus obtained from a case in England. In some respects the type is slightly different from that usually met with in England. The main features of the type are that constipation is much more frequent than diarrhœa, and that phlebitis is exceptionally common. I have seen practically all the same complications in South Africa which one meets with in England. In cases which I have observed during the incubation period I have frequently noticed a preliminary febrile attack, which has subsided a day or two before the onset of the enteric fever. I cannot help feeling that this is some indication of the changes that must be taking place during the incubation period. The concurrence of dysentery and enteric is not uncommon. I have seen the two diseases existing at the same time, but more frequently the one has ensued during convalescence from the other. Second attacks of enteric fever have not infrequently occurred, which may explain the unsatisfactory results of inoculation. From my own experience I do not think that inoculation in any way modifies the attack, and I doubt whether it has an important practical influence upon the incidence of the disease.

### SIMPLE CONTINUED FEVER.

Under the heading of simple continued fever 187 cases were admitted. Many of these cases consisted of moderate pyrexia lasting a few days, the only symptoms being those of *malaise*. Possibly these cases are abortive attacks of some specific disease. Some of the cases may be influenza, for this disease certainly occurred, and 71 cases were definitely diagnosed as such. Besides these indefinite fevers, I think it is probable that

other specific fevers occur which have not yet been recognised. I have seen several cases which I have no doubt were cases of Malta fever occurring in patients who had not previously been abroad. None of the cases have ended fatally, so that there has been no opportunity of discovering the Malta fever germ in the organs.

### Chill.

In conclusion, I would like to draw your attention to the influence of a chill in causing an attack of diarrhœa or dysentery. It is an undoubted predisposing cause. In England a chill will probably give rise to nasal catarrh, while in South Africa it causes intestinal catarrh, the difference being due to the prevalence of the corresponding germ.

The exact physiological changes which occur on sudden exposure to cold are well worthy of further study, and I would commend them to your notice.

Professor Clifford Allbutt responded with pleasure to the opportunity given to him of appreciating the Introductory Address of the President, an address having those qualities of precision and discrimination which were expected from its author. Among the many points deserving of discussion, of a fuller discussion than now possible, he would mention first the preliminary fever of enterica. He had never ventured to publish his own observations on this point, as he had no definite records of the febrile movements, but for many years he had noticed that such a preliminary disturbance often took place, giving way to the normal again before the typical staircase and the headache began. He regretted to hear that the President was unable to speak hopefully of the prophylactic virtue of inoculations against enteric fever. The remarkably low death-rate, both in dysentery and enteric fever, could not but attract attention, considering the privations and the travels which many of the patients of military hospitals must undergo. Climate might have been a large factor in this result, but as evidence of good hospital management this record must not be underrated. He noted with interest the return of "chill" into the field of etiology, and its reintroduction under such high authority. Clinical physicians, in their respect for bacteriology, had rarely ventured of late to invoke "chill" and like causes of pneumonia, pleurisy, dysentery, and so forth, or to allude to them only under their breath. For his own part, with the countenance of the President, he would bring chill and some such more general causes out of the false class of so-called "predisposing" causes, and would urge that far from being remote they might often be immediate causes—so-called "exciting" causes: that is, of a score of persons carrying morbific bacteria about them only the few subjected to the immediate cause of chill might fall ill.

## DISCUSSION ON LYMPHADENOMA.

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The term "lymphadenoma" comprises those diseases which are characterised by overgrowth of lymphoid tissue or which give rise to growths closely resembling in structure that of the lymphatic glands. True lymphatic glands are found only in birds and mammals (Spencer) and are most highly developed in man. Lymphoid tissue is widely distributed through the various tissues, and is formed of a network of fine connective tissue enclosing lymphocytes in its meshes with abundant capillary blood vessels. Further, this lymphoid tissue has a somewhat embryonic character and is capable, on irritation, of undergoing very rapid growth and development. Lymphatic glands are apt to undergo retrograde changes, especially in old age, but at any time may be excited to regeneration: a compound gland may develop from a simple follicle, or a new formation of glands take place in connective tissue by leucocytes wandering into it and splitting up its fibres into retiform tissue. The only difference in the lymphadenoid tissue arising from diseased products is that the arrangement of germ centres is not so well defined as in the normal gland.[1] Stiles[2] says that lymphatic glands may undergo fatty involution, but even then may at some future time, if irritated, become enlarged and their lymphoid tissue be increased, hence in cancer and lymphadenoma large numbers of glands appear which have before simply not been evident. He thinks that possibly there may also be a new formation of glands from fat lobules which have a closer relation than usual to lymphoid tissue, and possess an afferent artery and efferent vein connected by a network of capillaries. Bayer[3] has also shown how lymphadenoid tissue may form in connection with fat, and especially that such growths may occur in connection with the sheaths of the vessels either in the form of lymphoid follicles or of diffuse lymphoid tissue.

I have ventured to recall these few facts about the formation of lymphoid tissue, as they offer some explanation of the modes in which increased growth may take place in disease, even to the enormous extent that occurs in some cases of lymphadenoma, and show that there are great possibilities of increased growth in the already existing lymphoid tissue and also a ready means of new formation of it. Lymphoid tissue then may be looked upon as a specialised form of connective tissue capable under irritation of great development, and the growths in lymphadenoma partly arise in an overgrowth of pre-existing, and partly in a new, formation of lymphadenoid tissue. Lymphatic enlargements may be (1) local, (2) generalised.

Apart from simple inflammatory, scrofulous, and cancerous enlargements, the local forms may be further divided into (*a*) a local benign growth, which is a simple hypertrophy, or, according to some authors, more of the nature of a lymphadenitis, and which may persist in the same state for years, and (*b*) a malignant growth, variously called malignant lymphadenoma or lymphosarcoma which invades contiguous structures, and may give rise to metastatic growths but not to a generalised overgrowth of lymphoid tissue. In reading descriptions of cases of this character it is evident that what one observer describes as lymphadenoma or malignant lymphoma, another would call lymphosarcoma, and many recent authors think that there is no real distinction to be made between the two.[4] Others, however, consider that lymphosarcoma is distinguished by its more richly cellular structure and tendency to rapid infiltration of surrounding structures, whilst malignant lymphadenoma does not infiltrate and is more fibrous. It seems to me that it is difficult to draw any distinction between the two, and that cases vary according to the different degree in which (1) the cells (2) the reticulum predominate in the growth. In the first case the glands will be of the soft in the second of the hard variety. The local benign form is due to some irritation in the skin or a mucous membrane which keeps up the enlargement of the gland; in this form the two elements of adenoid tissue—reticulum and cells—increase in the normal proportion.

In malignant lymphadenoma or lymphosarcoma there is an inherent tendency to growth apart from any assignable cause. In these latter growths the structure, though varying somewhat in different instances, is essentially the same, being composed of a fine fibroid reticulum in the meshes of which are round cells like those of a round-celled sarcoma.

I shall refer to the lymphosarcomata again later; it is hardly necessary to add that they entirely differ from sarcomata occurring in the lymph glands, which present the usual features of such growths in any situation. All lymphadenomatous growths are peculiarly stable in character, have a very persistent vitality, and show very little tendency to degenerate or break down.

It may be added that in some cases local lymphadenoma appears, apart from a bacteriological examination, to be indistinguishable from a local tuberculous lymphadenitis. Further, a benign local enlargement of lymph glands may remain as such for a long time, even for years, and then may suddenly pass into the next group, a generalised enlargement of lymphatic tissue throughout the body.

Passing on to the general or generalised form of lymphadenoma, great difficulty is met with owing to the various names that have been given to the group of cases under consideration, cases obviously of the same nature being described

[1] Spencer, Erasmus Wilson Lecture on Pathology of Lymphadenoid Structures, *Lancet*, 1897, i, p. 646.
[2] *Edinburgh Medical Journal*, 1892.
[3] Aufbau lymphatischer Neubildungen, *Zeitsch. f. Heilkunde*. Berlin 1891, pp. 517, 552.
[4] See Eve, British Medical Journal, 1897, i, p. 584; Dreschfeld, *Deut. med. Woch.*, 1891; Delbet, *Medical Week*, 1893, ii, p. 452.

under different names, and conversely others which have little, perhaps only one prominent symptom, in common being grouped together under the same title. Hence a great deal of confusion has arisen, perhaps largely due to names having been given from what seemed to be at the time the most important feature of the disease, so that as the views with regard to its nature underwent modification with advancing knowledge, the names ceased to be appropriate. From analogy with other diseases it may be concluded that the mere fact of this diversity of names indicates that more than one disease is comprised in this group.

The names in general use to-day are: Lymphadenoma (Wünderlich, Ranvier), and Hodgkin's disease, used especially in England; lymphosarcoma (Virchow), malignant lymphoma (Billroth), pseudo-leukæmia (Colnheim), used especially in Germany: and adénie (Trousseau), employed by French writers.

These terms are all applied by different writers to the group of cases known as general lymphadenoma. Hodgkin's disease is the clinical term corresponding to lymphadenoma for a group of cases in which the same organs are affected, and of which the symptoms and course are similar. Briefly the chief features of the disease are a general enlargement of the lymphatic glands, anæmia, sometimes leucocytosis, enlargement of the spleen, generally moderate in amount, the presence of nodules of lymphoid growth in various organs of the body, pyrexia, emaciation, and often dropsy. Lymphadenoma may first of all be divided into two well-marked forms, (1) acute and (2) chronic. It is not necessary for me to describe in detail the pathological changes, but I should like before discussing the different varieties of the disease to make some remark on a few special points, in part based on the study of 43 recent cases that I have collected, and which seemed to be typical examples of the disease. First, with regard to age, 10 cases occurred below 10 years of age, 33 below 40. There were 32 males to 11 females. Secondly, the duration of illness was three months or under in 11 cases, these were therefore reckoned as acute cases. Thirdly, with regard to the glands first affected, the order given by Gowers[5] is cervical, axillary, inguinal, retroperitoneal, bronchial, mediastinal, and mesenteric. In the above 43 cases, of those in which this point is definitely mentioned, in 7 the acute cases of the disease began in the cervical glands, in one each in the occipital and mediastinal, and in 2 in the abdominal glands; in the chronic cases in 17 out of 23 the cervical glands showed the first sign of disease, so that there is a very striking preponderance in early affection of the cervical glands.

No distinction between the soft and hard varieties of glands as bearing upon the course of the disease or symptoms present, especially as to the presence of an increase of lymphocytes in the blood, appears to be justified, except that in the acute form of the disease the glandular enlargements are soft and boggy.[6] Sometimes large multinuclear cells and spindle cells are present, especially in the harder glands. The lymphoid deposits in organs resemble glands of the soft variety.

With regard to the changes in the blood, most observers say that in the early stage of the chronic cases it is normal, but later there is a diminution, generally moderate, in the number of red cells and amount of hemoglobin, with no increase in the white corpuscles; there may be a temporary leucocytosis, due to intercurrent inflammatory conditions, or a terminal leucocytosis. In both cases the leucocytosis is due as usual to an increase in the polymorphonuclear cells; very occasionally there is an increase in the number of lymphocytes.[7] Ehrlich and Lazarus,[8] however, state that "Ehrlich and Karewski, in some unpublished work, have investigated together a large number of typical cases of lymphoma malignum, and were able constantly to observe a lymphocytosis, which in some cases was of high degree, and bore almost a leukæmic character." In one case of my own, with a moderate leucocytosis, the large lymphocytes were slightly increased to 13 per cent., and in another case there was a relative increase in the lymphocytes, large 11 per cent., small 36 per cent. No importance in diagnosis seems to be attached to the eosinophil cells.[9]

Of the above 43 cases, in 22 of the chronic ones in which the state of the blood is given the red cells and hæmoglobin were diminished as the only change in 13, in 3 there was in addition a slight increase of the white corpuscles, in 1 a very marked increase, and in 2 there was a terminal leucocytosis, whilst in one case the white cells were in excess with "blood changes of profound anæmia." In two cases the blood was said to be normal. Of the acute cases (under three months' duration) in one the blood was normal; the red corpuscles and hæmoglobin were diminished in 4, this being the only change, whilst in 4 others there was in addition an excess of white cells, and in one of these it is mentioned that this affected the small mononuclear cells only; in 1 other case besides the reduction in red corpuscles and hæmoglobin, there were many nucleated red cells present, and the white corpuscles were increased to 24,000, of which 75 per cent. were lymphocytes.

More extended observations on the blood changes are required, especially on the relative numbers present of the different forms of leucocytes. Many case reports merely say that the white cells were or were not increased, without specifying the variety.

The spleen is mentioned as being enlarged, generally slightly or of moderate size in 19 cases, in 3 it is distinctly said not to be enlarged and in 2 it was enormous, and in these last the white blood cells were increased. With regard to the bone marrow the published statements are rather uncertain, the majority of writers consider that the changes sometimes found in the marrow are not distinct from those of profound anæmia, with the addition that lymphoid nodules occasionally occur in it.[10]

With regard to the pathogeny of lymphadenoma or Hodgkin's disease it appears, on reading through the cases published under these names or under those of pseudo-leukæmia or lymphosarcoma, that a number of cases have been grouped together, described by one or other of these titles, which present a more or less close similarity of symptoms during life, but offer considerable differences in the nature of the pathological processes found after death.

A large number of the cases included under lymphadenoma suggest from their course and symptoms that they are due to an infective process, and they more particularly closely resemble the class of diseases represented by tuberculosis; another set recall the features of new growths, especially the sarcomata, and others again seem more closely related to leukæmia, especially to lymphatic leukæmia. I think it will be best to approach the subject from the point of view of the relationship of lymphadenoma to infective disorders, especially tubercle, to the sarcomata, and to lymphatic leukæmia.

Lymphadenoma resembles the infective diseases in the following respects. 1. There is an acute and chronic form of the disease, and the acute cases may run a peculiarly rapid and malignant course. 2. The disease may remain as a local affection for years, then become generalised and lead rapidly to death much as an outbreak of acute miliary tuberculosis may supervene on a chronic tuberculous lesion. 3. The glands most frequently involved are those which are most readily infected through the skin or mucous membranes. The great preponderance of earliest affection of the cervical glands, and perhaps, although there is a difference of opinion on this point, of the submaxillary lymph glands which stand in relation to the tonsils,[11] and the not infrequent affection of the tonsils themselves in this disease, suggest the mucous membrane of the mouth and pharynx, and possibly the tonsils especially as the common point of entrance of the infective agent (see also later). Westphal[12] notes that of 21 cases of pseudo-leukæmia, in several the beginning of glandular swelling was, perhaps, connected with points of irritation and of entrance of poison in ulcerations and foci of suppuration in mouth, skin, and intestine. There were three examples of infection through a wound in the 43 cases above mentioned. 4. The specific

[5] Reynolds's *System of Medicine*, vol. v, p. 313.
[6] Bradford, Lymphadenoma, *Clin. Journ.*, vol. viii, p. 323.
[7] See Cabot *Clinical Examination of Blood*, p. 156; Stengel, *Twentieth Century Practice of Medicine*, vol. vii, p. 408; Murray, *Allbutt's System of Medicine*, vol. iv, p. 573.
[8] *Histology of Blood*, translated by Myers, p. 101.
[9] Kanthack, BRITISH MEDICAL JOURNAL, 1892, vol. ii, p. 320.
[10] Dreschfeld, BRITISH MEDICAL JOURNAL, 1892, vol. i, p. 893; Lovell Gulland, *Encyclopædia Medica*, vol. iii.
[11] Delbet, *Medical Week*, 1893, ii, p. 452.
[12] *Deut. Archiv f. klin. Med.* ii, vol. i, p. 83.

affection of one particular tissue only, the lymphoid, suggests the action of a toxin. 6. The mode of the spread of the disease in chronic cases, from lymph glands first affected to the neighbouring glands, and then from the latter to other organs. 7. The attacks of fever with recurring exacerbations. 8. Certain cases are said to owe their origin to foul air (Murray Leslie.[13]) 9. The final stage of the disease with cachexia, often diarrhœa, hæmorrhages from mucous membranes, purpura and pyrexia, resemble the final stages of a septicæmic process. 10. The undoubtedly beneficial influence of arsenic in many cases.

We may add the only case of direct infection: that of Obratzow's assistant, who helped to plug the nose and examine the excretions of a patient suffering from acute Hodgkin's disease and died a month afterwards.[14]

When we turn for confirmation of these views to the results of experimental investigation we find that various organisms have been found in the enlarged glands. Thus, Verdelli[15] states that in 24 collected cases bacilli were found 10 times, staphylococci 5, streptococci 3 times, pneumococci once, and not characterised bacteria 4 times. He himself in 2 cases of lymphadenoma (pseudo-leukæmia) and in 1 of leukæmia, cultivated from the blood and spleen shortly after death, staphylococcus pyogenes, and from injections into dogs of cultures or pieces of glands produced a disease characterised by enlargement of the lymph glands, liver and spleen, and by lymphoid infiltrations in various organs.[16]

Delbet found a bacillus in the blood of the spleen from a patient suffering from lymphadenoma with enlarged spleen: injected into a dog the bacillus produced a generalised enlargement of the lymph glands which again contained the bacillus injected in pure cultivation, the animal emaciated rapidly.[17] Mafucci and Piccini found mixed infection of bacilli and streptococci, Klein staphylococcus, Roux and Landois staphylococcus pyogenes aureus, and reproduced glandular enlargements in animals by injection of cultures from the blood and glands of patients. Dreschfeld found small bacilli in the kidney of one acute case, and Kelsch and Vaillard a short bacillus in the glands. So far, however, it cannot be said that any specific organism has yet been found, and the subject requires further research. It may well be that some of the organisms mentioned above occurred as a secondary infection, and the researches of Flexner and others have shown that a terminal infection by micro-organisms is very frequent in various diseases. Stengel[18] points out that the fact that certain investigators were able to demonstrate glandular enlargements after injection of their cultures is not surprising considering these enlargements occur in a great variety of infective diseases; and with regard to secondary infection he cites an instance in which Gabbi and Barbucci found the B. coli communis, an illustration of an infection which was almost certainly accidental.

To pass on to the connection of lymphadenoma with tubercle many of the reasons given above for regarding lymphadenoma as a specific infective disease will apply here. The age of incidence in both diseases corresponds. When tubercle affects the glands the cervical glands are most often affected. Professor Clifford Allbutt quotes Dr. Walsham[19] as showing that the tonsils are frequently affected by tubercle (in 20 out of 31 cases), the lungs and cervical glands being secondarily involved, and Krueckmann as finding tubercle in the tonsils in 60 per cent. of cases of tuberculosis, and as stating that tuberculosis almost always invades the cervical lymph glands by way of the tonsils.

In various forms tuberculosis is the most frequent antecedent in the family history of the patients, and is found associated with lymphadenoma in the same case; one of the earliest descriptions of this association is to be found in Turner and Sutton's cases.[20]

Then there is a general enlargement of the lymphatic glands which is tuberculous, and may follow an acute or chronic course. During the last few years cases have been described, which, clinically and sometimes in the naked-eye, pathological appearances were indistinguishable from lymphadenoma, but which bacteriological investigation proved to be tuberculous.

Thus of the acute form of general tuberculous adenitis Delafield[21] gives an example in a woman with pyrexia, enlargement of the lymphatic glands and spleen, moderate anæmia and leucocytosis, and retinitis. Tubercle bacilli were found in the glands and spleen, and the disease originated in the mesenteric glands. He quotes Hilton Fagge as giving 3 cases of general tuberculous infection of the lymphatic glands.[22] Another case is described by Miller,[23] and Sternberg[24] in 15 cases which presented the ordinary clinical features of Hodgkin's disease, found tuberculosis present which affected the whole lymphatic system. Chronic inflammatory patches, caseating areas, and presence of tubercle bacilli were the points of distinction from ordinary lymphadenoma.

In these and similar observations the tuberculous nature of the disease was recognisable at the necropsy, but in other cases of general infection of the lymphatic glands the clinical symptoms and pathological appearances were those of Hodgkin's disease, apart from the presence of tubercle bacilli;[25] whilst in a case by Bretano and Tangl,[26] where the appearances were those of pseudoleukæmia, the glands showed no tubercles or bacilli, but pieces inoculated into guinea-pigs produced tuberculosis. Other examples of general tuberculous infection of the lymphatic glands are recorded by Reinert, Courmont, Tixier and Bonnet, Troje, Cordua, Dietrich, Fischer, Czerny, etc. A remarkably interesting case of this kind will be found in a valuable paper by Crowder,[27] to which I am indebted for some of the above references. He considers with Sternberg[28] that there is nothing characteristic in the gross appearance of the glands in such cases. They are large, firm, sharply outlined from surrounding connective tissue. On the cut surface they often show small spots which look like areas of necrosis or even caseation, but such areas are not positive evidence of tuberculosis. In the liver, spleen, and other organs nodules resembling those found in Hodgkin's disease occur. Further, "the microscope does not of necessity reveal the tubercle. The connective tissue is moderately increased, and there are likely to be found areas of necrosis or nests of large pale cells rich in protoplasm, and having one or more deeply staining nuclei." Multinuclear cells of endothelial origin are also found. Failing detection of tubercle bacilli the only test is the inoculation of susceptible animals.

On the other hand, though Weisshaupt[29] reports one case in which the macroscopical appearances were indistinguishable from lymphadenoma, but tubercle bacilli were found in the glands, in 12 other cases he examined the glands with a negative result; and Westphal,[30] in 21 cases of pseudo-leukæmia found no indications of tuberculosis in any; in 2 cases there was caseation in the glands, but no bacilli. Many authors look upon the presence of tuberculosis as secondary and complicating, and not the primary cause. Such a view is probably true for a certain number of cases, the tubercle bacillus being prone to attack tissues whose vitality is lowered, and being known to affect glands which are the seat of malignant disease.[31] Again, caseation may occur in some glands associated with lymphadenomatous enlargement of others, and a similar combination occurs in animals.[32] Lastly, lymphadenoma may occasionally supervene on primarily tuberculous affection of the glands.[33]

To sum up so far it seems to me that the above considera-

[13] British Medical Journal, 1896, vol. i., p. 135.
[14] Murray, *Allbutt's System of Medicine*, vol. iv, p. 587.
[15] Sulla Etiolog. della Pseudo-leukæmia e della Leukæmia. *Cent. f. Inn. Med.*, 1895, S. 24.
[16] Verdelli, *Centralblatt f. d. med. Wissenschft*, 1893, No. 53.
[17] Quoted in *Gazette des Hop.*, 1897, p. 1,373.
[18] *Twentieth Century Practice of Medicine*, vol. iii.
[19] Allbutt's *System of Medicine*, vol. iv, p. 598.
[20] *Trans. Path. Soc.*, vol. xxiv, p. 343.
[21] *New York Med. Rec.*, 1887, vol. i, p. 416.
[22] *Trans. Path. Soc.*, vol. xxv.
[23] *Medical News, Philadelphia*, vol. lxv., p. 185.
[24] Ueber einen eigenartig. unter d. Bild. der Pseudo-leukæmia verlaufend Tuberculos. des lymphat. Appar. *Zeit. f. Heilkunde*, 1808; Bd. xix, also *Centralbl. f. d. Grenzgebiete d. Med. u. Chir.*, 1899; Bd. ii, pp. 641, &c.
[25] Askanazy, *Ziegler's Beiträge z. path. Anat. u. allg. Path.*, 1888; Waetzold, *Centralbl. f. klin. Med.*, 1890, p. 809.
[26] *Deut. med. Woch.*, 1896, p. 588.
[27] *New York Med. Journ.*, Sept. 15th, 1899.
[28] *Loc. cit.*
[29] Quoted by Flexner, *Johns Hopkins Hospital Reports*, vol. iii, p. 153.
[30] *Deut. Archiv f. klin. Med.*, li, vol. i. p. 83.
[31] Gilbert and Weil quoted by Crowder, *loc. cit.*
[32] Spencer, British Medical Journal, 1896, vol. i, p. 123.
[33] Trélat, quoted by Delbet, *loc. cit.*

tions almost conclusively show that lymphadenoma is an infective disease, occurring in both an acute and chronic form, but that the organism or organisms which are the true cause of the disease have still to be discovered. The fact that tubercle may produce a disease almost exactly simulating lymphadenoma is a corroboration of this view. Although a certain, probably large, number of cases described under lymphadenoma or Hodgkin's disease are in reality tuberculous, there is no warrant for the view maintained by some writers that the disease is merely a general lymphatic tuberculosis.

With regard to the relationship of lymphadenoma to malignant growths, especially to the sarcomata, some confusion has arisen from the term "lymphosarcoma," which has been used by many writers as synonymous with lymphadenoma or Hodgkin's disease.

Lindsay Steven[34] points out that the fact that many of the sarcomatous tumours within the thorax, especially the lymphosarcomata, originate in connection with the mediastinal glands, is not enough to relate them to Hodgkin's disease unless the constitutional signs of the latter disease are present. True lymphadenoma may begin in any group of glands, but will be characterised by general involvement of the lymphatic tissues. At the same time, the resemblance between the two diseases may be close, as in a case reported by Romberg[35] of lymphosarcoma of the mediastinum, with metastases in the lymph glands and skin, great enlargement of the spleen, and enlargement of the tonsils. The case ran a very similar course to one of lymphadenoma, and was likewise greatly benefited by arsenic. The cases of general sarcomatosis given by Hilton Fagge will also occur to one's mind. Histologically Gordon Sharp[36] considers lymphosarcoma is characterised by the presence of enormous numbers of round cells, with a small amount of fibrous tissue and endothelial plates, whilst lymphadenoma tends towards the formation of fibrous tissue, with a sparing amount of the cellular elements. Other observers consider that histologically there is no difference between them, the tendency to local infiltration and growth and absence of general lymphatic enlargement being the best distinction for lymphosarcoma.[37]

It would conduce to clearness to confine the term lymphosarcoma to tumours limited to one or more groups of lymph glands in contiguity, varying in rate of growth, perforating the gland capsule, infiltrating or invading the surrounding tissues, sometimes causing metastases in distant organs, but without general involvement of the lymphatic tissues, and composed of small round cells with a fine reticulum.

Lymphadenoma differs from new growths in involving exclusively one special kind of tissue all over the body. We know of no new growth which does this: in malignant tumours metastasis arise in different organs, but that is a different matter from the general involvement of one special tissue. Then, as Delbet points out,[38] it is not uncommon for the glands in lymphadenoma to be rapidly enlarged all over the body, whilst a malignant tumour begins at one spot, though some innocent growths are occasionally multiple. No neoplasm spreads with such want of uniformity and to such an extent, for example, the occurrence of large tumours in the neck and in the groin without any connection between them.

In passing on to consider the relationship of lymphadenoma to leukæmia, it is with acute leukæmia and lymphatic leukæmia that we are concerned. No changes in the blood akin to those of splenomyelogenic leukæmia are found in lymphadenoma, nor does there seem anything in common between the two diseases. Comparing first the features in acute leukæmia and acute lymphadenoma, we find acute leukæmia pathologically conforms to the type of lymphatic leukæmia. In most cases there is swelling of the lymph glands, of the cervical glands especially, but the axillary and inguinal may also be involved. The spleen is most frequently enlarged, but not to a considerable degree; the marrow has a red gelatinous appearance, leucocytosis is marked, chiefly affecting the large uninuclear lymphocytes, which may constitute 90 per cent. of the white cells: the small lymphocytes may also be increased. The disease runs a very acute course—one week to two months—to a fatal termination with fever, anæmia, hæmorrhages, often purpura and toxic symptoms.

In acute lymphadenoma the onset is also acute and the duration short, there are fever, hæmorrhages, especially from mucous membranes, purpura, general enlargement, sometimes considerable, of the lymph glands, slight enlargement of the spleen, changes in the marrow, not distinct from profound anæmia,[39] and there may be overgrowth of lymphoid tissue in the liver, kidneys, and intestines, and in some cases leucocytosis.

Dreschfeld classifies the disease clinically into three types; (1) in which it begins in the superficial (2) in the thoracic, (3) in the abdominal glands, but says that the affection is general in all.

As to the blood, in one of Dreschfeld's cases the white corpuscles, "mostly small," were 1 to 40 red, in another 1 to 100 red, and of the small, mononuclear variety. In two other cases it is said that there were no blood changes or no excess of white cells.

Acute lymphadenoma is a very rare disease, and more observations as to the blood conditions are required. Von Limbeck considered that it is extremely doubtful whether there is such a separate disease, and pointed out that similar symptoms may be produced by various pathological conditions such as acute sarcomatosis and chronic pyæmia. Dreschfeld looks upon acute Hodgkin's disease as a general infectious disease of specific type which may follow a local focus or be general from the first.

The chief difference between the two diseases appears to be that in some cases described as acute lymphadenoma the blood was unaffected, otherwise the symptoms of the two diseases as given above show a very close resemblance, suggesting that possibly the two conditions are varieties of the same disease. A carefully observed case is worth quoting in this connection.[40] The case started from infection of the lips, and lasted about eleven weeks. There were hæmorrhages, pyrexia, general enlargement of the glands, slightly enlarged spleen, lymphoid growths in the kidneys, liver, stomach and intestines, on inner surface of dura mater and on calvarium. Red cells and hæmoglobin were much diminished, leucocytes at first 24,000, later 17,500, of which 76 per cent. were lymphocytes, many nucleated red cells; cultures from blood sterile. On the last day of life the lymphocytes almost exceeded in number the red blood cells. The authors were struck with the close resemblance to lymphatic leukæmia.

With regard to the relationship between chronic lymphadenoma and lymphatic leukæmia, there can be no doubt that in earlier days the two diseases were sometimes confounded. This mistake would be likely to occur in those cases of lymphatic leukæmia in which the spleen is not greatly enlarged, as, if the blood were not carefully examined, this disease, with its soft enlargement of many groups of lymph glands, irregular pyrexia, cachexia and anæmia, gives a clinical picture very like that of lymphadenoma. The great difference in ordinary cases between the two conditions lies in the condition of the blood in lymphatic leukæmia, and in the majority also in the greatly enlarged spleen. Without a differential count of the forms of leucocytes present lymphatic leukæmia could not be certainly diagnosed from lymphadenoma with leucocytosis. Doubtless some cases of this kind have formerly been taken for lymphatic leukæmia. The most striking fact, and one upon which great stress has been laid with regard to the relation between the two diseases, is the occurrence of a leukæmic condition of the blood, that is, increase of large and small lymphocytes, in the course of what appeared to be an ordinary case of lymphadenoma, or as a terminal phenomenon of this disease. It has been stated that the leukæmic condition may be absent at first, present later, and disappear again before death. Some have gone so far as to regard lymphadenoma as merely a stage (a leukæmic forerunner) in the course of leukæmia, whilst others speak of an aleukæmic or preleukæmic stage of the disease. The occurrence of a true leukæmic condition of the blood as a terminal condition in

[34] *Mediastinal Tumours*, p. 10-11.
[35] *Deut. med. Woch.*, 1892, xviii, p. 19.
[36] *Journ. Anat. and Phys.*, vol. iii, p. 59.
[37] See Pepper and Stengel, *Internal. Med. Mag.*, 1895-6, iv, p. 79.
[38] *Loc. cit.*

[39] Dreschfeld, *loc. cit.*
[40] Virgnd and Martin, Notes from a Debateable Case of Hodgkin's Disease, *Montreal Med. Journ.*, vol. xxiv., p. 960.

lymphadenoma seems, however, to be very rare. Cabot considers there are only three well-authenticated instances.[41] The observations of Ehrlich and Lazarus, which have some bearing upon this point, as, if confirmed, they show that a lymphocytosis is more frequent in lymphadenoma than is commonly held, have been already mentioned. According to Martin and Mathewson,[42] the great variations in degree of leucocytosis in multiple lymphomata make it questionable whether cases described by Ebstein and others, in which leukæmia has followed Hodgkin's disease, are not really the same disease in different forms, and that it is difficult to say in such cases where one disease ends and the other begins. The argument advanced by some writers that the infrequency of cases of this kind is due to the fact that death occurs in lymphadenoma from some intercurrent disease hardly seems a valid explanation of the difficulty.

Stengel[43] thinks that there is no sharp dividing line by which the changes in the lymphatic glands in leukæmia can be separated from those in lymphadenoma. He quotes Birch-Hirschfeld, according to whom the only differences found are that the cells are rather larger and often multinuclear, or of the type of giant cells in lymphadenoma, and that attempts to inject substances held in suspension into the gland through the punctured capsule fail in lymphadenoma, whilst in leukæmia the substances injected may pass through the gland even into the efferent blood vessels. Obviously the striking difference between the two diseases is that, as a rule, in lymphadenoma, in spite of the enormous increase in size of the glands, the lymphocytes do not pass into the circulation in excessive numbers; the normal mechanism of the gland which prevents this remains intact. The exact nature of the difference is, however, not known. According to Askanazy,[44] it depends on the constant affection of the bone-marrow in leukæmia, but this view has not been generally accepted. Cases also occur with general enlargement of glands and great enlargement of the spleen, in which it has been thought that lymphadenoma and leukæmia existed side by side. In a well-marked case of this kind under my care, in which but for the huge spleen the case would have been regarded as Hodgkin's disease, a differential blood-count showed that though the leucocytosis was moderate, the condition of the blood was that of lymphatic leukæmia.

We may sum up this part of the subject by saying that in the past the two conditions of lymphadenoma and lymphatic leukæmia have sometimes been taken the one for the other, but that those cases in which, though the glandular enlargements resemble lymphadenoma, there are also greatly enlarged spleen and a leukæmic condition of the blood should be classed as lymphatic leukæmia, and that the two diseases should be regarded as distinct.

The resemblance of lymphadenoma to lymphatic leukæmia has led to the view that there may be (1) a splenic and (2) a myelogenic form of lymphadenoma, non-leukæmic counterparts of leukæmia, but there seems no positive evidence of this view, which in the former case would bring us very closely to the condition known as splenic anæmia. This disease indeed, has been considered by some to be a variety of pseudo-leukæmia beginning in the spleen. Osler[45] considers, rightly as I think, that there is no warrant for the opinion that cases of anæmia splenica have anything to do with Hodgkin's disease from which the clinical picture is very different. "Slight enlargement of the spleen is common enough in Hodgkin's case, but it rarely attains a large size, and I do not remember one in which it caused, *per se*, special symptoms."

In children there may be difficulty in distinguishing lymphadenoma from anæmia infantum pseudo-leukæmia, but this appears to be a different disease.

Lastly, in certain rare cases of lymphadenoma there may be great enlargement or persistence of the thymus gland. Virchow stated that he had seen a number of cases in young recruits which began in the thymus,[46] and Palma[47] has reported a case in which the clinical signs were those of Hodgkin's disease; later the blood showed the characteristics of leukæmia; *post mortem* a sarcoma of the thymus was found with metastases in organs, hæmorrhages, and suppurative nephritis.

There is a curious condition known as status lymphaticus or lymphatism, in which there is a partial or general hyperplasia of lymphatic glands especially the pharyngeal, thoracic and abdominal; enlargement of spleen, tonsils, often remarkable hyperplasia of the intestinal lymphatics, "individual glands standing out like peas" (Osler); persistent large thymus; hypoplasia of heart and vessels; lymphoid or red marrow. The patients are especially liable to very sudden death from trifling causes, such as undue excitement, whilst bathing, or during the administration of an anæsthetic. The cause of death is now attributed by Paltauf and others to deficient powers of resistance, and not, as was at one time thought, to the enlarged thymus. This disease would, *primâ facie*, appear to present considerable resemblance to lymphadenoma, but there is not yet sufficient evidence to determine the relationship.

[41] Clinical Examination of the Blood, *loc. cit.*

[42] British Medical Journal, 1896, vol. ii, Relation between Leukæmia and Pseudo-Leukæmia.

[43] *Twentieth Century Practice of Medicine*, vol. vii, p. 408.

[44] *Virchow's Archiv.* Bd. cxxxvii, Hft. i, p. 1.

[45] *Amer. Journ. Med. Sci.*, cxix, p. 55.

[46] *Berl. klin. Woch.*, 1891, p. 1185, quoted by Spencer, *loc. cit.*

[47] *Deut. med. Woch.*, September, 1892.

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II.—J. H. BRYANT, M.D., F.R.C.P.,
Assistant Physician to Guy's Hospital.

Dr. BRYANT said: In this discussion of the pathology of lymphadenoma I shall confine myself to a few remarks on the relation fibrosis bears to lymphadenoma. My interest in this particular point was aroused by the following case which I had the opportunity of investigating. Clinically no doubt was felt about the diagnosis of lymphadenoma being correct; at the *post-mortem* examination, however, there were such marked fibroid changes in the parts involved, and the organs presented such an unusual appearance that the question of it being due to some other conditions arose, and when specimens were subsequently examined under the microscope the doubt increased and the possibility of syphilis was raised. I submitted specimens to two of my colleagues skilled in the examination of pathological specimens, one held the view that the changes were probably due to syphilis, the other that they were the result of chronic lymphadenoma.

As I have already stated there was no doubt clinically about the diagnosis of lymphadenoma, but when the possibility of syphilis arose as it seemed to me with such an obscure disease as lymphadenoma as far as the pathology is concerned, such a case as I am about to relate to you would form a text on which to discuss the relation fibrosis bears to lymphadenoma, and the connection, if any, that syphilis has to this disease.

C. L., aged 41, race official, was admited into Philip Ward, Guy's Hospital under the care of Dr. Hale White (to whom I am indebted for permission to publish the clinical notes) on May 8th, 1900, for swellings in the neck, axillæ, and groins, and for wasting, anæmia, and indigestion.

He was born in Surrey and had been connected with the turf all his life, having served as stable boy and jockey, but during the last 20 years his work had not been arduous, consisting chiefly of looking after the carriage enclosure at race meetings. He stated that he had always been moderate with regard to alcohol. His family history was good. His father was alive and aged 79, mother 71, two sisters 39 and 44, and one brother 36 all of whom were well; 20 years ago he contracted gonorrhœa, and this was the only illness he had had with the exception of a few minor accidents until four years before, when his present trouble began to manifest itself. He first noticed a swelling under the left ear, which increased in size until the whole of the neck became involved in a large lumpy tumour, the right side of the neck then became enlarged; then the axillæ and finally the groins. He stated that the tumours have varied in size very much. At first he did not give up his work, but he gradually became weaker, lost weight, and had to give it up. During the five months before he was admitted he had been troubled with a nasty cough, and he used occasionally to spit up bright red blood. Another troublesome symptom had been general itching of the skin, especially over the tumours. Six weeks before admission the cough became worse, he felt much weaker and suffered from indigestion. He used to vomit after meals, and also complained of an acid taste in his mouth.

*State on Admission.*—Pulse, 108; temperature, 98.4°; respirations, 30. The skin was rather dusky, but there was decided anæmia. He was rather wasted. The hair was dark. The pupils were equal and reacted to light and accommodation.

(1) *Lymphatic System.*—There was very considerable enlargement of the lymphatic glands, the whole of the left cervical glands, superficial and deep were involved in a large botryoidal growth the limits of which were: Above the ear; below the clavicle; in front, the middle line of the neck some distance over the angle of the jaw, the parotid lymphatic glands being also involved; behind, a vertical line two inches away from and parallel with the vertebral column. The measurements were eight inches from above downwards and five inches from before backwards. There was no fluctuation. An aspirating needle was introduced into the left side of the neck, but nothing was withdrawn.

(2) *Right Side of the Neck.*—A chain of ten or twelve glands could be seen and felt running vertically down from behind the ear to the middle of the clavicle varying in size from a hazel nut to a pea. The largest was just in front of the ear overlying the zygoma.

(3) *Right Axilla.*—A large tumour three inches from above downwards and

from side to side occupied the space between the axilla and the breast. It was hard but was not fixed. A large glandular mass about three inches from above downwards and as thick as a cartridge occupied the posterior fold.

(4). *Left Axilla.*—One enlarged gland the size of a walnut was felt beneath the pectoralis major. There were no glands involved in either arm.

(5) *The Groins.*—In the left groin there were two glands as large as walnuts, and in the right groin three small glandular tumours. None of the glands in the leg were enlarged. The glands varied in consistency, some being as hard as bullets, whilst others were soft and almost fluctuating, for example, the left cervical mass. Some were loosely fixed to subjacent parts and others were quite loose.

*Urine*, 1032, high coloured: acid; deposit of urates: some albumen present; no sugar: urea 2.2 per cent.

*Abdomen.*—The liver and spleen were not palpable.

*Respiratory System.*—Chest long and rather narrow. The left side did not move as freely as the right. Dulness behind on the right below the ninth rib, and below the tenth on the left. Deficient entry of air at the right base. The sputum contained a little bright red blood. No tubercle bacilli were found.

*Circulatory System.*—Pulse full, 108. Cardiac impulse felt in fifth space just below and internal to the left nipple. Cardiac dulness normal. A faint diastolic *bruit* was heard in the second and third left intercostal spaces close to the sternum.

*Blood.*—Red blood corpuscles, 4,000,000; hæmoglobin, 60 per cent. No leucocytosis. A good many eosinophile cells were noticed.

*Diagnosis.*—Dr. Hale White diagnosed Hodgkin's disease with right pleuritic effusion.

*Progress.*—The patient was ordered 6 minim doses of liq. arsenicalis three times a day.

May 15th.—He complained of indigestion.

May 19th.—He was troubled by cough, and was relieved by the linctus codeinæ.

May 24th.—There was marked œdema of both legs, the penis, and scrotum, and over the sacrum and abdomen up to the manubrium. Two fresh glands were felt in the right axilla and three in the left.

May 26th.—The area of dulness on the left side of the chest had increased.

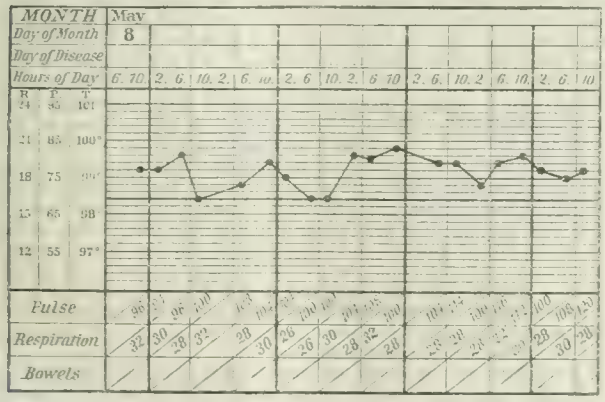
June 6th.—The glandular mass in the left side of the neck had increased. The skin appeared to be more dusky. The dulness had increased on the right side of the chest to the level of the second rib. The arsenic was increased to 7 minims.

June 8th.—There was signs of fluid in the peritoneal cavity.

June 9th.—The urine contained no albumen.

June 11th.—The abdomen had increased in size, and the œdema of the legs was more marked.

June 14th.—Paracentesis abdominis to 5 pints 12 ounces was performed. The fluid was turbid and rather milky in appearance, it was neutral, the specific gravity was 1014. It contained albumen. The turbidity was not




cleared up by ether. Microscopically a good many leucocytes were found, but no fat globules.

June 20th.—Paracentesis abdominis was again performed, and about 9 pints of chylous fluid was withdrawn. He was much relieved by the tapping.

June 24th.—He was again tapped.

June 27th.—The right pleural cavity was aspirated and 68 ounces of clear serous fluid was removed. At the end of the aspiration he coughed up a little bright red blood.

June 30th.—Sharp crackling *râles* were heard over the third and fourth left intercostal spaces in front. The aortic diastolic *bruit* was still audible. The lymphatic glands were swollen all over the body.

July 4th.—The abdomen was again tapped and 5 pints of chylous fluid was withdrawn. He was obviously much worse, and gradually sank and died from cardiac failure.

*Necropsy.*—The necropsy was performed fifteen hours after death. There were no signs of decomposition. There was well-marked rigor mortis. The body was very anæmic, it was fairly well nourished. There was no anasarca, sores, scars, or injuries. The brain weighed 51 ozs. There was no meningitis and it was quite healthy in appearance. The axillary glands were hard and much enlarged. The cervical glands were hard and very much enlarged also, causing a marked prominence of the neck on either side. The skin was not adherent to the glands, but it had the appearance of being tightly stretched. On making a section of the tumours formed by these masses of enlarged glands it was found to be quite impossible to trace the outline of the individual glands; they appeared to have fused together to form one large tumour. The lower part of the section presented a greenish yellow appearance, and it was rather soft, whereas the upper part was much firmer and tougher, was of a greyish colour, was opaque, and felt like and had the appearance of fibrous tissue. The thyroid was not enlarged. Three pints of yellow serous fluid were found in the right pleural cavity. The right lower lobe was covered with recent yellow lymph which readily peeled off, beneath it were many subpleural ecchymoses. Over the upper part of the right upper lobe the pleura was thickened and puckered. Several hard nodules could be felt in the lower lobe and on section nodules of growth from ½ inch to 1 inch in diameter were seen. Some of these nodules had a somewhat ragged, shreddy appearance in their centres as if commencing to break down. The peripheral parts of the nodules were of a greenish yellow colour streaked with brown, and the central parts were of a light brownish colour. Similar nodules were found in the left lower lobe. The rest of the lung was œdematous and there was a good deal of fibrous tissue infiltrating the lung. The bronchial and mediastinal glands were hard and enlarged and the right vagus nerve was found attached to and stretched over one of these large glands.

The larynx, trachea, and bronchi were all normal. Several small, hard, yellowish grey nodules were found on the pericardial sac. There was marked œdema of the pericardium. The heart weighed 9½ ozs. The valves and cavities appeared to be normal. The muscle was pale. The aorta was surrounded by hard dense tissue, which had the appearance of being due to chronic inflammation or possibly to new growth.

One large spherical nodule, about 2 c.cm. in diameter, was found on the anterior surface of the stomach, a little nearer to the cardiac than to the pyloric end. It appeared to have developed from the peritoneum, it did not involve the mucous coat. Several nodules of growth were found in the intestine: one large nodule extended from the mesocolon into the muscular and submucous coats of the colon just above the sigmoid flexure, but it did not implicate the mucous membrane. There was also one large nodule projecting into the transverse colon through the mucous membrane, the mucous surface being ulcerated and crateriform in appearance. It was pigmented, and there was also some blood on its surface. There was no ascites. The mesenteric glands were enlarged.

The liver weighed 1701 grams; it had a markedly spotted appearance, dilated lymphatic and numerous small nodules were seen projecting from the surface, mostly over the lower and inner quarter of the right upper lobe. On section a large number of yellowish round nodules were seen, varying in size from a mere speck to 75 c.cm. in diameter. This organ had the appearance of lymphadenoma more than any of the others examined. A large gland was found close to the neck of the gall bladder, another also was found near the head of the pancreas.

The spleen weighed 438 grams; it was large, hard, and nodular. Large nodules were seen on section, having a vascular, reddish brown, streaked and striated appearance. These nodules could be peeled out, although there did not appear to be any definite capsule. There were also a large number of small, hard, yellowish, fibrous-looking nodules.

The suprarenal capsules were healthy in appearance. The kidneys weighed 226 grams. The capsules were not thickened or adherent. The surfaces were smooth. On section the appearance was normal.

*Microscopical Examination.*—The nodules in the lungs were made up chiefly of fibrous tissue, and in places there were collections of lymphoid cells. A good many capillaries distended with blood were seen. In addition to the lymphoid cells a few isolated cells, which were quite twice as large as the lymphoid cells, were seen scattered about. These cells contained large, rather deeply stained nuclei, and they were also noticeable in the sections of the other organs.

The suprarenal capsules showed a good deal of fibrous infiltration. Isolated lymphoid cells and groups of cells were also visible in the fibrous tissue.

The glands showed very marked fibrous change with collections of lymphoid cells scattered about in the midst of it. The reticulum had a very thickened appearance.

The reticulum of the spleen was much thickened and fibroid. In places only the fibrous tissue could be seen. Collections of lymphoid cells were visible in the midst of the fibrous tissue. This organ presented a very similar appearance to the glands. The myocardium showed very little striation. The muscle fibres contained a good many pigment granules, which were arranged in groups on one side of the nucleus in the long axis of the fibres. The small nodules in the pericardial sac consisted of collections of lymphoid cells surrounded by fibrous tissue. There was a good deal of fibroid change in the liver. The fibrous tissue occurred in irregular-shaped patches, and was not confined to the immediate neighbourhood of Glisson's capsule. Isolated cells and groups of liver cells were seen in the midst of this fibrous tissue, and it had the appearance of a very marked but patchy interlobular and intercellular cirrhosis. In some of the patches a good many lymphoid cells were seen, but not nearly as many as are usually seen in a case of lymphadenoma.

I showed these sections to several of my colleagues and a variety of opinions were expressed. The liver certainly suggested a syphilitic cirrhosis, the lungs a gummatous condition, and the nodules in the pericardium lymphadenoma. There was no evidence of tuberculosis.

On the whole, it was thought that the condition was a very chronic lymphadenoma associated with marked fibrosis.

*Remarks.*—The macroscopic appearances of the organs were most peculiar and by no means characteristic of lymphadenoma. The most marked feature presented by the sections examined microscopically was the large amount of fibrous tissue present. This was particularly noticeable in the glands, spleen, and liver. In the liver the fibrous tissue was unequally grouped between the lobules, but was by no means confined to this area, for in many places it was infiltrating the lobules themselves, here and there replacing, and here and there surrounding the liver cells—in fact, the change had the appearance of a mixed interlobular and intercellular cirrhosis. There was only one part of the body in which a

lesion quite typical of lymphadenoma could be found, and that was in the pericardium.

One of the first questions which naturally arises is: Is this a case of lymphadenoma or tertiary syphilis? The changes in the pericardium point to lymphadenoma, those in the spleen and glands might be the result of syphilis or equally well of lymphadenoma. The changes in the liver, especially the irregular and intercellular distribution of a good deal of the fibrous tissue, suggested syphilis.

If it is agreed that the case was one of lymphadenoma, the next question which arises is, Had syphilis anything to do with it? Was it the cause of the fibrosis of the glands, spleen, liver, etc.? There was no direct evidence of syphilis, but there was a clear history of gonorrhœa twenty years before he was admitted. He had from all accounts led a rather loose life, and without much doubt had frequently exposed himself to the possibility of a syphilitic infection. If syphilis had anything to do with the production of this condition, the next question which has to be considered is: Is syphilis a predisposing or exciting etiological factor in the production of Hodgkin's disease generally? The evidence is decidedly against this view, in Gowers's 184 cases there were only 3 in which any history or evidence of syphilis could be traced.

There is another explanation for the fibroid changes in the liver, and it is that, in addition to lymphadenoma, the patient was suffering from alcoholic cirrhosis. The one point against this view is the curious distribution of the fibrous tissue in places which certainly suggests the possibility of a syphilitic infection. There is no definite evidence of alcoholism, but his occupation was undoubtedly alcoholic, and it is quite possible that what was moderate with regard to alcohol to him was not moderate to his liver. If this interpretation is put on the case, it would be then looked upon as lymphadenoma complicated by cirrhosis of the liver; and this, I think, is the most likely interpretation.

Another possibility is that it is a chronic uncomplicated case of lymphadenoma with secondary fibroid changes. Fibrosis of the glands, and even of the spleen, is generally accepted as a change which may result in lymphadenoma, but such a markedly cirrhotic condition of the liver is most unusual, and a further question arises, Does lymphadenoma lead to such marked cirrhosis of the liver?

I think, without doubt, some other changes—such as that which may result from syphilis and alcoholism, must be added to lymphadenoma to explain these pathological changes satisfactorily.

I am afraid this case does not help much to clear up the pathology of lymphadenoma, but it raises some interesting questions, and that was my reason for bringing it forward to-day. With regard to the pathology of lymphadenoma, I am quite in accord with Professor Clarke, that it is a separate disease, and, further, that it will eventually prove to be the result of an infective process.

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III.—G. LOVELL GULLAND, M.A., B.Sc., M.D., F.R.C.P.E.,
Assistant Physician to the Royal Infirmary, Edinburgh, etc.

DR. GULLAND said: The difficulty and doubt in regard to our knowledge of lymphadenoma is felt not so much by the pathologist as by the physician, for in nine cases out of ten by the time the case has reached the pathologist the diagnosis has been cleared up by the clinical history and by the mode of termination of the disease. Thus, for example, I have recently watched a case where the evidence against tubercle seemed strong, which was terminated by a typical tuberculous meningitis, and in which the disease in the glands was found to be tuberculous. In a further number of cases the naked-eye examination of the glands at the *post-mortem* examination is sufficient, but there remain a few cases where even then the diagnosis remains doubtful. With the clinical diagnosis we have here nothing to do, however.

The four conditions which are likely to be confounded are leucocythæmia, lymphosarcoma, generalised tubercle of glands, and true lymphadenoma, if such a condition exists. The first of these—leucocythæmia—ought never to give rise to difficulty if the case has been under observation for any length of time, and if the blood has been examined regularly and fully. In regard to this it should be noted that the differential count of the leucocytes is much more important than their absolute number, for there are many cases of lymphatic leukæmia where the total number of leucocytes never reaches a high figure. In one very exceptional case which I saw recently they never went above 8,000, but the percentage of lymphocytes was always over 90. Both in this form and in the "spleno-medullary" form the number of leucocytes may sometimes be high, and at other times—either during a remission or under the influence of a terminal or intercurrent infection—may fall to near or even below the normal number. In these cases, however, the differential count will almost invariably keep the observer from error, as the normal proportions are rarely if ever regained.

If the blood examination has been carefully made, the mere fact that the microscopic appearances in the glands, in lymphatic leukæmia in particular, are not unlike those described in the soft form of lymphadenoma, should give rise to no difficulty in the pathological diagnosis. If the blood has not been properly examined the pathologist may well be at fault. I have never seen a case of transition from lymphadenoma to leucocythæmia, nor do I regard the published cases of this change as free from suspicion, and I have never seen anything which made me regard the two conditions as essentially related.

Lymphosarcoma in the strict sense is a rare condition, and generally starts not in the lymphatic glands themselves, but in the lymphatic apparatus associated with the alimentary or respiratory tracts—for example, in the tonsils, in the lymphatic tissue of the intestine, especially about the ileo-cæcal junction, and in the lymphatic nodules of the bronchi; but often the secondary growth in the glands is disproportionately great and conceals the primary lesion, or draws the observer's attention away from it. *Post mortem* the initial focus can usually be found, and the infiltrating and invading character of the growth is more marked than in any of the other forms of glandular enlargement. Larger individual masses are formed, and bone and other tissues and organs may be invaded *en masse*. Histologically the majority of these growths are evidently sarcomatous, but some are made up of small round cells which it is exceedingly difficult to distinguish from lymphocytes. I recall one such case where the primary tumour was a large ulcerating mass at the lower part of the ileum and where almost every glandular region in the body showed great enlargement. The glands histologically were almost exactly like those found in lymphatic leukæmia, but the blood showed a very high leucocytosis, over 60,000, and almost all the leucocytes were polymorphonuclear. In other cases of a similar kind I have also seen a high polymorphonuclear leucocytosis. In another case, however, where a gland was excised for diagnosis during life many large cells with convoluted nuclei and other appearances like sarcoma were found, and yet the case was ultimately found to be tuberculous. I should not be inclined to regard any case as a true lymphosarcoma unless a primary tumour were found at the necropsy, and unless it were conclusively proved that the condition was not tuberculous.

The immense majority of cases clinically diagnosed as lymphadenoma are really generalised tubercle of glands. The cervical group is almost always first affected, but it is quite exceptional to find the primary focus. Thereafter the axillary and mediastinal glands are infected, and often simultaneously the cervical and axillary glands of the other side, then the lumbar glands, and lastly the internal and external inguinal groups. The mesenteric glands often escape. Sometimes the majority of the affected glands are found to be caseous or even suppurating, though the strong capsule of the gland may have prevented recognition of this during life, but this is by no means always the case, and, as already stated, glands which look sarcomatous on section may be found to be really tuberculous. Most of the confusion which has arisen seems to me to be due to incomplete microscopic examination of the glands. No case should be pronounced non-tuberculous unless it is found that none of the glands examined—and these should be numerous—contain tubercle bacilli, and unless they are found not to produce tubercle when animals are inoculated with them. The blood in tuberculous cases shows no very constant characters. There is usually a steadily progressive anæmia, with hæmo-

globin falling in correspondence with the fall in red corpuscles, or sometimes more rapidly. The leucocytes may remain normal or nearly normal in number, but usually there is a relative increase in the percentage of polymorphonuclear cells. In cases where there is much periadenitis or where suppuration is going on, there may, of course, be a more or less considerable leucocytosis.

Is there a true lymphadenoma apart from the conditions described? I am very doubtful of it. Of course there are many local hypertrophies of glands due to chronic peripheral irritation or bacterial infection, but, in speaking of lymphadenoma, one thinks, or ought to think, of a generalised glandular enlargement. One must remember that the classical descriptions of lymphadenoma were written long before the modern subtleties of histological research were dreamt of. I would plead for the most painstaking and minute examination of every doubtful case, and, in particular, for the careful exclusion of tubercle, before a pathological diagnosis of lymphadenoma is pronounced. Sarcoma and leucocythæmia ought, as a rule, to be easily excluded, but tubercle is much more difficult. One of the pitfalls which await the unwary was made evident to me a few weeks ago. Some glands from a *post-mortem* room were sent to me for examination. In one part of the mass I found numerous giant cells, though not a typical tuberculous arrangement, near some colourless bodies in the sections. I was almost certain that these bodies were portions of ligatures or sutures, and found, on inquiry, that the house-surgeon had cut into the mass some time before, and had closed up his wound. These giant cells surrounding a foreign body might easily have been taken for the giant cells of tubercle.

If a true lymphadenoma does exist, apart from tuberculous disease, one may postulate various things about it. It must almost certainly be a more or less chronic inflammatory change, caused probably by a slowly-growing organism. This organism must in the great majority of cases gain entrance somewhere in the upper part of the alimentary or respiratory tracts, and the infection must spread from gland to gland in an orderly way. The so-called "soft" and "hard" varieties must depend on the exact way in which the glands resist the attack of the organism. The gradually advancing emaciation, anæmia, and loss of strength, and the frequent fever must depend partly on the absorption of toxins, and partly on the interference with the function of various organs and tissues by pressure, or in other ways. All this, however, corresponds so exactly with what we know occurs in generalised tuberculosis of glands, that it is difficult to believe that any other organism can produce effects so precisely similar, and one is forcibly reminded of the old joke, that the *Iliad* and *Odyssey* were not written by Homer, as is usually supposed, but by another gentleman who lived about the same time, and bore the same name.

### IV.—Harold J. Stiles, M.B., F.R.C.S.Edin.,

Surgeon, Royal Hospital for Sick Children, Edinburgh.

Mr. Stiles said that as a surgeon to a children's hospital he was naturally much interested in diseases of the lymphatic glands. He appreciated the difficulty of differentiating lymphadenoma from tuberculous adenitis more perhaps than the pure pathologist because, difficult as it sometimes was to distinguish the two conditions in the *post-mortem* room, it was even more difficult to distinguish them clinically; indeed, he would go so far as to say that it was often impossible to diagnose the early stage of lymphadenoma, and it was only in the early stage that surgical treatment could be of any avail. Unfortunately, as the former speakers had shown, neither in tuberculous adenitis nor in lymphadenoma were the blood changes characteristic. For the ten years during which Mr. Stiles had had charge of the surgical laboratory of the University of Edinburgh he had examined several specimens of glands removed from patients who were supposed to be suffering from lymphadenoma, but in all cases he found them to be tuberculous. Such an experience made him very sceptical as to whether lymphadenoma really existed as a pathological entity, apart from simple hypertrophy, from tuberculous adenitis, and from lymphosarcoma. Within the last two years, however, he had operated on four cases of extensive lymphomatous swellings in the neck which were not tuberculous.

The first case that of a boy, aged 5½ years, proved to be an example of the hard form of lymphadenoma of a somewhat malignant type, but not a lymphosarcoma in the strict sense of the term—that is to say, the case was not one of primary sarcoma of a lymphatic gland, followed by secondary growths in the lymphatic glands. When first admitted to the hospital the boy had a large, firm, nodular, and somewhat matted glandular mass, extending from jaw to clavicle on the right side. He had some difficulty of breathing during sleep. On examining the throat it was found that the glandular mass had grown behind the carotid sheath, and, pushing the wall of the pharynx before it, had come to project markedly into the pharynx.

On the belief that the condition was tuberculous the whole mass was removed, along with the greater part of the internal jugular vein. Six weeks later a similar though somewhat smaller mass was removed from the opposite side of the neck. About two months later the boy again presented himself at hospital with difficulty of breathing and extensive recurrence on both sides of the neck. Tracheotomy was performed. The glands in both axillæ were now enlarged and the spleen extended well below the costal margin. Dr. Gulland, who was kind enough to examine the blood, reported some anæmia but nothing characteristic. Microscopic examination of the glands from both sides of the neck revealed the histological features of lymphadenoma. In none of the glands examined, and they were several, was any tubercle discovered. In the three other cases—aged respectively 6, 15, and 24 years—the glands (cervical) were much softer, and showed little tendency to adhere to one another. They were easily removed by operation. On section they had to the naked eye a very brain-like and sarcomatous appearance. Microscopically they were composed of adenoid tissue so densely packed with lymphoid cells that no differentiation into follicles and sinuses could be made out, neither were any germ centres to be seen. To the naked eye as well as under the microscope, therefore the tissue looked like a small round-celled sarcoma (lympho-sarcoma). Clinically, however, the cases had not behaved as such.

In what light were these cases to be regarded? They certainly did not appear to be tuberculous. Were they simple lymphomata or did they represent the early stage of lymphadenoma? He agreed with the former speakers in the belief that the condition was due to an infective process and that the organism gained entrance generally from the tonsils or naso-pharaynx. It seemed to him that possibly more than one organism was responsible for such conditions, and he believed that the streptococcus was very possibly one of them.

### V.—C. J. N. Longridge, M.D.,

London.

Dr. Longridge said: In connection with the infective origin of lymphadenoma I should like to mention a fact which was noted by Colnheim, and that is the marked and exceptional incidence of a disease which was then diagnosed as lymphosarcoma in the cobalt miners of Schneeberg. Of course I am not certain that the disease in that case conformed to the modern definition of lymphadenoma. But if it be of tuberculous origin, the cold, damp, dark mines in which the affected men worked formed hygienic conditions not incompatible with the view of tuberculous infection. It seems to me that a decision as to the truth of the tuberculous origin might be arrived at if injections of tuberculin into the patient and affected gland material into animals were made.

### Reply.

Dr. Michell Clarke, in reply, said that he was glad to find that the general trend of the discussion was in accordance with the views brought forward in his paper. Dr. Bryant's case was a very interesting one with regard to the relation between syphilis and lymphadenoma; he did not himself think that syphilis was a cause of lymphadenoma. He emphasised Dr. Gulland's remarks as to the importance of a differential count of the leucocytes and also of bacteriological investigation of the glands in the diagnosis of these cases. He did not agree with Dr. Gulland that lymphadenoma was in reality tuberculous disease of the glands. In conclusion, he thought that the cases described under lymphadenoma comprised cases of tuberculous disease, of lymphosarcoma, and of lymphatic leukæmia, but that, in addition, there was a disease (lymphadenoma) which might run an acute or chronic course, and was an infective disease.

## BACTERIOLOGICAL EXAMINATION OF THE BLOOD.

By J. Odery Symes, M.D.,

Assistant Physician, Bristol General Hospital.

The method which I have adopted in taking specimens of the blood for bacteriological examination has been as follows:

A bandage is fixed tightly above the elbow so as to distend the veins below. The skin over one of the most prominent vessels (generally the median cephalic or median basilic) is then cleansed by washing successively with soap and water, turpentine, carbolic acid 1 in 20, and ether. The needle of an exploring or serum syringe, previously sterilised by prolonged boiling, is then thrust into the vein, and from 5 to 10 c.cm. of blood withdrawn. The blood is at once transferred to tubes of nutrient broth, or spread over the surface of large sloped agar tubes, or of agar plates. Occasionally there is a little difficulty in obtaining a sufficient quantity of blood, and in such cases it may be necessary to make a small skin incision and expose the vein, or cultures may be made from the small quantity of blood which exudes from the point of puncture. In only one case have I found such a procedure necessary.

The syringe most suitable for this purpose is one having a solid glass or metal plunger which can be readily sterilised without injury.

In my experience it is better to employ fluid rather than solid culture media, for not infrequently where both have been employed at the same examination, organisms have been found in the broth tubes, whilst the agar cultures remained sterile. The explanation of this may be that when mixed with a fluid medium the blood is diluted and its bactericidal power reduced, whilst when spread on a surface of agar this power is unaffected. As it has been shown that blood serum, even when diluted to ten or twenty times its former bulk, has marked bactericidal powers, it is advisable to use large tubes containing from 10 to 15 c.cm. of broth, and to add to each such tube a quantity of not more than ½ c.cm. of the blood to be examined.

It is probable, too, that this bactericidal action is responsible for the delayed growth which is not infrequently seen in cultures made from the blood. In some instances no colonies appear on the surface of the agar, and no cloudiness or sediment is evident in the broth until after the expiration of 48 or 72 hours of incubation. I have notes of four such cases. It is therefore of great importance that blood cultures should be given a prolonged period of incubation.

Occasionally, although no colonies can be detected upon the surface of the medium, organisms are to be found in the clot which forms at the bottom of the tube, which therefore should always be carefully examined.

Broth cultures should be shaken from time to time to break up the clot present. I have never seen any bad effects following the puncture, nor is the patient much inconvenienced. The best results will be obtained when for each case a variety of nutrient media are used, and the cultures made under both aërobic and anaërobic conditions.

I have examined by the method just described the blood of 31 patients, and without going into details of the cases I purpose giving a brief summary of my results.

*Septic Diseases.*—Of 12 cases of septic infection examined, 9 were classified as septicæmia and 3 as pyæmia. In 4 of the cases micro-organisms were found in the blood, and of these 3 died and 1 is still under treatment. Of the eight cases in which no organisms were found 3 died, 3 recovered, and 2 passed out of observation. The cases in which organisms were found were as follows: (1) Puerperal sepsis in first week; staphylococcus albus present, died. (2) Puerperal sepsis. Culture taken on third day, sterile. Three months after confinement, there being pyæmic abscesses in the knee-joint and thigh, the blood showed staphylococcus albus. Patient still under treatment, making a slow recovery, 19 weeks after delivery, and 7 weeks from the date of the blood examination. (3) Pyæmia following wound of foot. A streptococcus and staphylococcus pyogenes albus were present in the blood. Patient died 14 days after the culture was taken, and at the *post-mortem* examination the organs were found to be infected with streptococci and staphylococci. (4) Septicæmia following wound. Micrococcus tetragenus was found in the blood. Patient died on the following day, and cultures taken from the spleen at the *post-mortem* examination showed micrococcus tetragenus, staphylococcus aureus, and B. coli.

*Acute Infective Endocarditis.*—Seven cases so diagnosed were examined. In 3 micro-organisms were present in cultures taken from the blood. All these cases ended fatally. Of the remaining 4, 1 died, 2 were discharged from hospital, and the fourth was lost sight of. The organisms detected in the blood were: (1) Streptococci. Films prepared direct from the blood showed short chains of cocci, and in two out of three cultures made at different periods large numbers of streptococci were found. The diagnosis was confirmed by *post-mortem* examination thirteen weeks later, and streptococci cultivated from the spleen. (2) Staphylococcus albus. The patient died two days after the culture was made. The diagnosis was confirmed at the *post-mortem* examination, there being vegetations on the mitral valve, multiple hæmorrhages, and infarcts in the spleen. (3) Staphylococcus albus. This organism was discovered at two separate examinations. Patient died a month after the last examination. There was a large vegetation on the mitral valve, and staphylococcus albus was present in spleen and heart's blood. That this method of diagnosis cannot be absolutely relied on is illustrated by the fact that in one case in which there were no organisms found in the blood, death occurred four weeks later. The diagnosis was confirmed at the *post-mortem* examination, and pneumococci found in the valves and spleen.

*Pneumonia.*—Three cases, in 2 of which organisms were present in the blood. One died, and 1 was discharged convalescent. The organisms present in these two cases were: (1) Pneumococci. The patient died, having developed a pneumococcal phlebitis of the superficial veins of the arm. This was not on the same side as the puncture, or in any way connected with it. (2) Streptococci and staphylococcus aureus. This was a case of right apical pneumonia in a child, aged 9 years. He subsequently had the other lobes involved. The temperature remained high for thirty-one days. During the sixth week he was sent to a convalescent home, there still being dulness at the right base. The third case, in which no organisms were found, recovered without complication.

*Anthrax.*—Two cases. In neither of these were organisms present in the blood. One recovered, and the other terminated fatally three days after the blood examination was made. This concludes the list of cases in which organisms were found.

The remaining cases examined included 2 of pernicious anæmia, 2 of cerebro-spinal meningitis (1 died), 1 of acute pemphigus, 1 of splenic anæmia, and 1 of spleno-medullary leucocythæmia. In none of these were organisms found to be present. Out of the total of 31 cases organisms were found in 9. Of these 7 died and 2 were still under treatment nine weeks and six weeks respectively after the taking of the culture. Of the remaining 22 cases in which the blood was sterile 7 died, 6 recovered, 2 left hospital, 1 remains under treatment, 6 passed from observation.

From the consideration of the foregoing cases and of others reported during the past few years it is possible to form some estimate of the value of the information gained from the bacteriological examination of the blood for the purposes of diagnosis, treatment, and prognosis. For purposes of diagnosis the bacteriological examination of the blood is seldom of real practical value. Negative results cannot be relied upon, and as a rule the nature of the disease is to be ascertained by ordinary clinical methods long before it is possible to demonstrate organisms in the blood. There are, however, some cases of cryptic infection which may be elucidated by this method; for example, unsuspected pyæmic or septicæmic conditions following infection from gastric or intestinal ulceration, or gonorrhœal lesions. In cases of suspected infective endocarditis the detection of organisms in the blood may confirm the diagnosis and indicate the nature of the infection.

*Treatment.* With regard to the question of treatment the bacteriological examination of the blood is of greater service. The detection of streptococci or pneumococci in the blood would be an indication for the use of antistreptococcus or antipneumococcus serum, and indeed it is only by the collation of a number of cases in which such an examination has been made that a proper estimate of this method of medication can be obtained. Unfortunately, in very few of the cases recorded up to the present time has this procedure been resorted to. Failure to detect the specific organism in the blood should not, however, be an indication for withholding the serum. In several of the cases of septicæmia which I examined and found the blood sterile, streptococci were present in the discharges, or in the pus from the peritoneum or from pelvic abscess. One such case terminated fatally. In such cases it would not be rational to withhold the serum on account of failure to find the organism in the general circulation.

| No. | Nature of Case. | Organisms Present. | Result. | Remarks. |
|---|---|---|---|---|
| 1 | Puerperal septicæmia | Staphylococcus pyogenes albus | Died | |
| 2 | ,, | *Nil.* | ,, | Culture taken 1 week after confinement, patient died two days later of acute suppurative peritonitis. |
| 3 | ,, | Staphylococcus albus | Still under treatment 19 weeks after confinement | Patient developed sepsis three days after confinement. The blood examined on the third day was sterile. Examined twelfth week of illness—cocci. Pyæmic abscesses in thigh and knee. |
| 4 | ,, | *Nil.* | (?) | |
| 5 | ,, | ,, | (?) | |
| 6 | ,, | ,, | Died | Blood taken four days after delivery of a dead macerated fœtus. Patient died ninety-three days later from rupture of a pelvic abscess into peritoneal cavity. Streptococci present in the pus. |
| 7 | Pyæmia | ,, | Recovered | |
| 8 | ,, | Streptococci and staphylococcus albus | Died | Septic wound of foot. Patient died fourteen days after culture was taken. *Post-mortem* examination showed an infection of organs by streptococci and staphylococci. |
| 9 | ,, | *Nil.* | Recovered | Multiple abscesses in joints, etc. |
| 10 | Septicæmia | Micrococcus tetragenus | Died | Patient died the following day. At *post-mortem* examination culture from spleen showed micrococcus tetragenus, staphylococcus aureus, and B. coli. |
| 11 | ,, | *Nil.* | Recovered | This was supposed to be of gonorrhœal origin. |
| 12 | ,, | *Nil.* | Died | Patient died three days after date of culture. An acute hæmorrhagic disease. Nature undetermined. |
| 13 | Acute infective endocarditis | Streptococci | Died | Streptococci were found in two out of three examinations, and one direct blood film showed diplococci. The diagnosis was confirmed at the *post-mortem* examination, and streptococci recovered from the spleen. |
| 14 | ,, | Staphylococcus albus | ,, | Patient died two days after culture. The diagnosis was confirmed *post mortem*. Vegetation on mitral valve, and multiple hæmorrhages and infarcts into organs. |
| 15 | ,, | *Nil.* | Case left hospital | This was a doubtful case. |
| 16 | ,, | ,, | ,, | |
| 17 | ,, | ,, | (?) | |
| 18 | ,, | ,, | Died | This patient died four weeks after the culture was taken. The diagnosis was confirmed *post-mortem*, and pneumococci found in the valves and spleen. |
| 19 | ,, | Staphylococcus albus | ,, | Cocci were found at two separate examinations. The *post-mortem* examination confirmed diagnosis, and staphylococci were found in spleen and heart blood. |
| 20 | Pneumonia | *Nil.* | Recovered | |
| 21 | ,, | Pneumococci | Died | Patient developed phlebitis. |
| 22 | ,, | Streptococci and staphylococcus aureus | Recovered | A case of right apical pneumonia in a child. The consolidation extended to the other lobes. The temperature remained high for thirty-one days, and at the end of six weeks the patient was sent to a convalescent home. |
| 23 | Anthrax | *Nil.* | Died | The blood was taken from within an inch of the pustule. Patient died three days later. |
| 24 | ,, | ,, | Recovered | |
| 25 | Pernicious anæmia | *Nil* | (?) | |
| 26 | ,, | ,, | ,, | |
| 27 | Splenic anæmia | ,, | Died | |
| 28 | Spleno-medullary leucocythæmia | ,, | Still under treatment at end of six months | |
| 29 | Cerebro-spinal meningitis | ,, | (?) | Case removed from hospital. |
| 30 | ,, | ,, | Died | Death a week after culture was taken. |
| 31 | Acute pemphigus | ,, | Recovered | |

*Prognosis.*—All observers agree that the discovery of micro-organisms in the blood renders the prognosis of the case an exceedingly grave one. This has especially been shown to be the case in pneumonia, in which disease a general blood infection is frequently the precursor of serious complications, or may indicate the speedy approach of a fatal termination. In septicæma and pyæmia if organisms can be demonstrated a fatal termination is seldom long delayed, but in infective endocarditis the patient may survive for many weeks. In other infective fevers, too, such as enteric or anthrax a general blood infection may precede the fatal termination. The frequency with which micro-organisms may be detected in the blood has been a matter of some dispute. In the present series of examinations they were demonstrated in 29 per cent. of the cases, and the death-rate amongst these was 77 per cent. The death-rate of the 22 cases in which no organisms could be demonstrated was 31 per cent., but several cases could not be traced to their termination.

Dr. J. W. H. EYRE said: On looking over my notebooks, both hospital and private, I find that during the past two years I have examined the blood from 20 cases diagnosed clinically as septicæmia, and 11 as ulcerative or infective endocarditis—a total of 31 cases. The result of the examination was positive in 7 of the former group of cases, and in 5 of the latter. Of the 19 cases returned as negative, the cultivations prepared from 14 of them remained sterile up to the end of three days' incubation at 37°C.; in the remaining 5, however, evidence of accidental contamination by the staphylococcus albus (four times) and the sarcina lutea (once) was forthcoming. Five only of these negative cases died, the remaining 8 recovered. Of the 5 that died a *post-mortem* examination was refused in one case; the cause of death in the others was acute miliary tuberculosis (once), and hæmorrhage from a perforating typhoid ulcer (once), and (?) toxæmia during the first week of typhoid (twice). Three of these cases gave cultures of the staphylococcus albus during life, but cultures direct from the heart blood, *post mortem*, remained sterile. Of the cases giving positive results, the organism obtained from the blood proved to be the streptococcus pyogenes longus 5 times, the diplococcus pneumoniæ 1, the gonococcus 1, and a mixed infection of the streptococcus longus and the staphylococcus aureus 1 each. In this last case, the opportunity arose of taking a large quantity of blood direct from the heart two hours after death, under conditions calculated to obviate the risk of accidental contamination, when the cultivations therefrom completely confirmed the results obtained from the blood examination during life. Apart from the question of diagnosis, does the detection of pathogenic organisms in the blood of the general circulation during life render any assistance as regards prognosis? Although the presence of

the streptococcus longus in the blood is a very serious condition, it does not apparently render the prognosis absolutely hopeless, even in the absence of serum treatment, or when no material improvement follows the administration of antistreptococcus serum. One extremely complicated case recurs to my mind, where a cerebellar abscess, probably secondary to otitis media, was followed in turn by streptococcus septicæmia—the streptococcus being isolated from the blood of the peripheral circulation—thrombosis of the lateral sinus, pneumonia, pleurisy, and endocarditis. Each of these complications, however, cleared up, and eventually, after a prolonged illness, the patient completely recovered, and is to-day pursuing his ordinary avocation. Again, an elderly lady, whose blood contained extremely long chains of cocci, which were of fairly high virulence when tested upon the mouse, refused to be treated with antistreptococcic serum, was put upon her favourite pick-me-up of nux vomica and gentian, and made an uninterrupted recovery. A case of puerperal streptococcus septicæmia made a good recovery after simply local treatment. On the other hand, in the only case where I have succeeded in isolating the pneumococcus from the blood during life the patient died within a few hours of the collection of the sample of blood.

Dr. RABAGLIATI remarked that Dr. Symes's statement reminded him of a case in which material taken from the tonsils in a case of doubtful diphtheria was reported by a bacteriological expert to be loaded with diphtherial micrococci, and apparently of a very virulent character. The child nevertheless showed no very grave symptoms, did not have antitoxin treatment, and made a rapid and unqualified recovery.

Dr. JUDSON DALAND (Philadelphia) said: In view of the opinions that have been expressed regarding the difficulty in securing a proper antiseptic serum, I venture to submit the case of a man, aged 60, who had been suffering from ulcerative endocarditis for seven months; 2.5 c.cm. antistreptococcus serum was injected with no effect, 5 c.cm. produced weakness, and 10 c.cm. two days later produced marked collapse, from which, however, he recovered. He died a few weeks later.

Dr. EDGAR TREVITHICK described a fatal case of general infection of the blood with staphylococcus aureus, the primary lesion being a whitlow.

A youth, aged 16, was admitted under my care last January at the hospital here with high temperature, showing an œdematous swelling of the left upper arm. He was sent as a case of acute rheumatism. On deep incision down to the bone thick pus in considerable quantity was evacuated. On careful examination of the hand, a small collection of pus was discovered about the nailbed of the middle finger. This had caused no pain or local inflammation, and had been overlooked. Cultures made from serum obtained by puncture in the neighbourhood of the arm incision, and from blood obtained by puncture of the lobule of the left ear both showed fairly copious growth of staphylococcus aureus. The culture from the arm was made six days before death, that from the blood of the ear three days before death. On the fourth day before death I gave an injection of antistreptococcus serum. I did this because there was no antidote obtainable labelled against the staphylococcus aureus. The injection had no good effect. I had the opportunity of examining the body four hours after death. A small abscess cavity was found in the nailbed. There was an abscess cavity under the biceps, with destruction of periosteum and involvement of the upper epiphysis of the humerus, and there was some pus in the shoulder-joint itself. There was a large yellow decolorised clot in the right side of the heart; several circumscribed firm patches of congestion (with, in two cases, purulent centres in right lung); intense congestion of left lung; liver 70 ozs.; spleen 17 ozs., diffluent. Great abdominal congestion, with some turbid fluid in the peritoneal cavity. Cultures grown from the heart blood yielded pure growth of staphylococcus aureus, and from the spleen pulp there aureus along with a rod-shaped organism, at any rate not unlike B. coli.

## NOTE ON THE ARRANGEMENT OF THE NISSL BODIES.

By J. J. DOUGLAS, M.D., F.R.C.P.E.,
London.
[From the Pathological Laboratory of Westminster Hospital.]

THE following observations were incidentally made during an examination of the cords in two cases of acute ascending paralysis, the result of which will shortly be published.

The points to which it is desired to draw attention are (1) the difference in the disposition of the chromophile substance in the large multipolar cells of the anterior horn, and in the cells of Clarke's column; and (2) the seeming constancy of this disposition.

In the cells of the anterior horn the chromophile granules (Held) are aggregated into very definite masses, the "Nissl bodies"; and these masses are distributed in a more or less uniform manner throughout the cell protoplasm.

In the cells of Clarke's column, on the other hand, the "Nissl bodies" have a more or less distinctly peripheral distribution, large aggregations of chromophile granules being only found at the periphery of the cell, while in the perinuclear area the chromophile substance, if present at all, is only so in fine granules or small aggregations. Thus if the same cell be traced through a series of sections, commencing with one through the plane of the nucleolus, it will be found that at first the cell appears to have a narrow border of chromophile substance, which border gets progressively broader as one approaches the surface of the cell, until at last, when one is looking at what may be called the outside wall of the cell, the "Nissl bodies" appear to have a similar arrangement to that which obtains in anterior horn cells—an arrangement which in these latter is found in sections through all the planes of the cell.

It was thought that possibly these appearances in the cells of Clarke's column might be due to a central chromatolysis, especially as they were first observed in the above-mentioned pathological cords, but they were afterwards seen in several other cords; and it is therefore suggested that they are normal and characteristic of the two groups of cells.

In illustrating these points two cells have been taken, not indeed from the same sections, but from the same region of the cord: the lower dorsal. The cord had been hardened in 10 per cent. formalin and embedded in paraffin. The sections were cut in series and of the thickness of 6μ; they were stained by Nissl's original method. For better comparison two cells were taken in which the pigment appeared little in quantity, and in which, as far as possible, no cell processes were included in the sections. The Clarke's cell was of the ordinary fusiform shape, and an averaged-sized anterior cornual cell was selected. The examination was made and the photographs taken with a magnification of 570 diameters.



Fig. 1.—Photograph of drawing of cell of anterior horn.



Fig. 2.—Photograph of drawing of cell of Clarke's column.

*Note.*—Photomicrographs of the actual cells from which the drawings were taken were thrown upon the screen.

*(To be continued.)*

A DEVOTED DOCTOR.—According to the *New York Medical Journal*, Dr. Louis Knapp, aged 40, a medical practitioner of St. Louis, has voluntarily isolated himself from the outer world in order to minister to a Chinese leper who was recently found in that city. Dr. Knapp took leave of his wife and four children on August 20th. The physician and his patient will live in a three-roomed frame house, now being built by the city authorities, at quarantine until necessity for his service shall have ended. Dr. Knapp will take his library to quarantine, and will devote the greater part of his time to the study of leprosy. It is said that there were five other applicants for the position. It may be mentioned that St. Louis was formerly one of the indigenous foci of leprosy in the United States. The disease was believed to have been imported from France. Towards the end of the eighteenth century a lazaretto was built on the outskirts of the town for the segregation of lepers.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

### HARVEST BUGS.

The harvest bug has been particularly offensive this summer on account of the long drought. The animal is the larval form of the silky trombidium (*Trombidium holosericum*—Linn.) order *Acarinæ*. It flourishes in large numbers in gardens and grass fields, chiefly in chalky districts and near the sea. It exists all over Europe, and a variety, perhaps identical, is common in Mexico. The animal is scarcely visible to the naked eye, and is very active. Specimens I have caught lately race over the glass tubes in which they are confined so that they can hardly be followed. It is bright scarlet, has six legs and stout, short mandibles. The larval form is laid as an egg about the end of May. In June and July (according to heat) the eggs are hatched and the larva emerges. It is entirely carnivorous, attaching itself to mankind, cats, rabbits, and all furry animals, even bees, caterpillars, and other insects. It bites into the skin and remains to suck blood or juices; it cannot travel under the skin, but moves with astonishing rapidity over the skin surface.

After the larva has obtained a full meal it falls off satiated and swollen to about five times its former size; it is then quite visible. In a fairly wet summer it usually disappears about the middle of August; this season it is still flourishing in September. The larva then hibernates, and in the following spring reappears as an eight-legged acarus, which is entirely herbivorous. A very good account of this pest is given in *Chambers's Encyclopædia*, taken entirely from the standard paper of M. Mégnin (*Annales des Sc. Naturelles*, 1876, iv, sér. vi).

The clinical effects of this acarus I have had good opportunities of watching, and they may be very severe. It runs up people's ankles from the grass; it is stopped by thick, close-fitting clothing, but attacks directly it reaches skin. The bite does not cause a large wheal, like a flea or bug, but a small vesicle, which ulcerates rapidly and causes the most intense irritation. This is probably due to the animal remaining under the skin. In addition a very intense urticaria may follow, and become prevalent over the whole body. I have recently seen several cases of more or less general urticaria result and persist for weeks, even for two or three months. The great remedy is proper stockings. Men are seldom bitten. The open-work stockings of ladies and girls afford an opportunity for first blood, and then the acarus moves up under the clothes, and halts naturally where outside pressure is greatest, or where the skin is thin—round the waist, the hams, the breasts, and the neck. To prevent the bites the lower legs and ankles should be kept dressed with essential oils, a mixture of eucalyptus, and some rectified paraffin, such as Dee oil with a small admixture of peppermint or clove oil will do.

The acarus seems active only in the late afternoon and evening, and in districts where it abounds sitting out of doors should be avoided, and lawns near the house should be kept well mown and watered if possible.

Some individuals, chiefly ladies, are seemingly attractive to the acarus, and the constitutional disturbance produced by the bites in such subjects is very profound.

Westerham, Kent. Arthur Maude.

### CAFFEINE IN CARBOLIC ACID INTOXICATION.

I was called by the police at 1 A.M. on May 5th last to a case of poisoning by absorption of crude carbolic acid, swallowed about three hours previously.

The patient was a young man, aged 23, an epileptic, who had previously attempted suicide. I found him deeply comatose, the skin being cold, covered with perspiration, and markedly cyanotic. The pupils were somewhat dilated and unaffected by light, the respirations slow, laboured, and noisy, the pulse almost imperceptible at the wrist, and he appeared to be in a dying condition. I gave a hypodermic injection of strychnine and one of apomorphine, meanwhile giving oil and glycerine by the mouth. The apomorphine was very slow and feeble in its effect, and did not act till after the stomach had been well washed out with a stomach siphon tube subsequently obtained. The washings smelt of crude carbolic acid, but there did not appear to be any considerable quantity free in the stomach. The coma was so profound that the patient took absolutely no notice of anything done to him, and, in fact, in passing the stomach tube, it entered the larynx, and although it passed down the trachea it excited no coughing.

The strychnine having apparently had no effect in lessening the coma, and profound respiratory and circulatory depression, I considered that as caffeine is added to phenacetin to prevent just such symptoms being caused by the phenyl radicle, so I might find benefit from its administration under these circumstances. I therefore gave a hypodermic injection containing 2½ grs. of caffeine dissolved in water with the aid of sodium salicylate, corresponding to nearly 5 grs. of caffeine-sodium salicylate.

In about an hour the patient's condition was improved, although he was still unconscious. I therefore gave him another hypodermic dose of caffeine of the same strength as before, and this time he made some slight reflex movements when the skin of the chest was pierced by the needle. In about half an hour he had so far improved that I judged it safe to have him removed to the General Hospital. On the way there he recovered consciousness sufficiently to speak loudly, and although I am informed that his condition remained precarious during the day, he made an uninterrupted recovery.

It is perhaps too much to draw definite conclusions from an individual instance; but I certainly think it probable that the caffeine had a considerable influence in combating the toxic effects of the phenol and cresols absorbed, which in this case constituted the principal danger, the amount of caustic action from the acid being apparently small. I have been unable to find any reference to the use of caffeine as an antidote in carbolic acid intoxication.

Nottingham. G. A. Ferraby, L.R.C.P.Lond., M.R.C.S.

### A CASE OF ALBUMOSURIA.

In the British Medical Journal for July 13th, 1901, Dr. T. R. Bradshaw, of Liverpool, drew attention to the rarity of albumosuria, and discussed several points of interest in regard to this condition. The rarity of albumosuria induces me to record the following case:

A man, aged 64 years, was taken ill about the middle of last February, and after ten days of illness I was called in to attend him. As a rule he enjoyed excellent health, and having no occupation he was fond of taking long walks daily. About the commencement of his illness he had an attack of vomiting, and for a few days previous to my seeing him he had complained of soreness in the throat.

On examining the throat the patient was found to be suffering from diphtheria, commencing in the region of the tonsils. By the next day the diphtherial membrane had spread over the whole soft palate and into the pharynx. On examining the urine as a matter of routine, expecting to possibly find some albumen I was surprised to find not albumen, but albumose or propeptone. It had the characteristic reactions of being precipitated in the cold by nitric acid, of dissolving in the heat, and of reprecipitating on cooling. The urine was acid in reaction, dark in colour, and gave no perceptible precipitate on simple heating without acid. The diphtherial membrane rapidly disappeared under both local and medicinal treatment, without the use of antidiphtherial serum or any remedy likely to affect the condition of the urine.

During the months of March and April the patient continued to have at very irregular intervals, ranging from a few days up to about a fortnight, attacks of violent rigors accompanied by more or less vomiting, and followed by great prostration lasting for some hours. With these attacks the temperature quickly rose from the normal up to 101° or 102°. The vomited matter was always small in quantity and contained bile, but otherwise presented no very characteristic appearances. There were no headaches, and the temperature returned to the normal, as a rule, within forty-eight hours after the onset of shivering. Between the attacks the stomach remained in an irritable state, hiccough being a prominent symptom, and required careful attention to the diet.

The patient's abdomen was full and fleshy, which made it difficult of examination, but from the time of first seeing him there was noticeable a hard fulness in the epigastric region. This swelling was tender to the touch, and gave a dull note on percussion. The above-mentioned conditions made an exact diagnosis difficult, but my opinion leaned towards the view that the hard fulness was due to enlargement of the left lobe of the liver.

The attacks of rigor and vomiting gradually grew less frequent and of less severity, and this improvement was accompanied by a decided diminution of the epigastric swelling and dulness. At the end of ten weeks the patient was well enough to go away for change of air, and has not again come under my care. Each time the urine was examined albumose was present in considerable quantity.

In presenting this imperfect clinical record of an interesting case, I would like to say that at the time of my attendance on the patient I was unaware that albumose in the urine possessed any recognised significance, otherwise I would have endeavoured to investigate the case more fully in regard to several interesting points. In particular, a thorough analysis of the urine and a minute investigation as to the presence of any soft tumours connected with any of the bones would have been of much interest. This case throws no light in regard to the mode of onset of albumosuria, for albumose was present in considerable quantity at the time the patient came under my observation.

Newcastle-upon-Tyne. J. A. BLAIR, M.D., D.Sc.

## MOLAR PREGNANCY.

THE following case of molar pregnancy I encountered some time back, and as the case is interesting I consider it well worth recording in your columns

G. D., aged 30, married ten years, six children, the last one 15 months old; one miscarriage four months after marriage. When I first saw her patient believed she was three months pregnant. About three weeks before this, whilst going about her household duties, bleeding suddenly came on, for which she procured some medicine from a doctor which stopped it after a little. There was throughout a good deal of abdominal pain, which was spread over the whole abdomen. Morning sickness had been a feature of the case throughout. Curiously in this case the breasts had actually grown smaller than they were before the case began. No movement had been felt in the abdomen except for about an hour three weeks ago. Since then, nor before, no movement of any kind had been detected by her.

On examination a centrally-situated swelling was detected reaching up to within 1½ inch of umbilicus and rising out of the pelvis, and was felt alternately to harden and soften. No fœtal heart sounds could be heard. Vaginal examination showed no change in colour of the mucous membrane, cervix was soft and os slightly patulous. There was a constant bloody discharge. The tumour rose to a height of 5½ inches above the pubes. On account of the constant loss of blood day and night I decided to dilate. Choloroform having been given, I dilated the cervix with Hegar's dilators. After a little I managed to pass the finger in and on removal a fragment of a hydatidiform mole with the characteristic vesicles followed. This naturally settled the diagnosis, and I at once proceeded to empty the uterus. This was done by external manipulation of the swelling with the left hand and internally by two fingers of the right. Récamier's curette and ovum forceps were also largely used in removing the mole. Very little hæmorrhage attended the process, the uterus contracting well. Afterwards the endometrium was carefully scraped and then washed out with iodine water. No trace of a fœtus could be found, the uterus containing nothing but the mole. The patient made an excellent recovery and has since given birth to a healthy male child.

F. W. ERNEST HUTCHISON, M.B., M.S.Glasg.

Kelvedon, Essex.

## A CASE OF VESICAL HERNIA.

WHILE I was acting as surgeon at Beaufort West Hospital, a negro was sent in to us to be operated on for strangulated hernia. The symptoms were not very well marked, and no history could be obtained from the patient, who was unable to speak English, but as all attempts at taxis failed, we decided to operate. A few ounces of urine were drawn off by catheter without diminishing the size of the tumour. On proceeding with the operation no sac could be made out, and it became evident that the bladder had passed through the inguinal canal into the scrotum. The constriction was divided and the hernia reduced, after which the bladder was stitched to the abdominal wall and the ring closed.

The patient stood chloroform very badly, and was somewhat collapsed on the following day. On the second day, however, he felt so well that he got up and washed himself, the orderly in charge having left the room at the time. In ten days the wound was healed and the patient perfectly well in every respect, and shortly after he was taken on the hospital staff as general handy man, which position he has since filled without any recurrence of the complaint.

F. LINDSAY DICKSON,
The Hospital, Deelfontein, Cape Colony. Civil Surgeon, A.M.S.

## SUPERNUMERARY DIGITS.

THE boy who was the subject of the deformity here described was 7 years old. The two extra digits, as will be seen from the illustration, which is reproduced from a photograph taken by Dr. McIlwraith, articulated with the distal end of the metacarpal bones of their respective thumbs, each digit having a distinct articular facet and cartilage. The digit on the left hand had three phalanges, the terminal one being rudimentary; but the other digit had only two phalanges. Each digit had a distinct arterial supply, a rudimentary flexor tendon, and a finger nail.



The family history is interesting: His father had one supernumerary digit arising from the proximal end of the metacarpal bone of the right thumb: one of the father's sisters had the same deformity as the father, but the rest of this family (nine in number) were free from it. The boy's grandfather had no such deformity, but one of his great uncles had it.

EDGAR WM. SHARP, M.B.Glasg.,
Senior House-Surgeon, Bury Infirmary.

## A CASE OF ANGINA LUDOVICI.

ON July 16th, at 7 A.M., I was called to see a lady, aged 59, and found her suffering from a sore throat. She felt it before going to bed the previous evening. She complained of pain on the left side of her throat, with difficulty in swallowing: the pain also radiated towards the left ear. The temperature was 101° and the pulse 104. She was perspiring, and looked ill. The throat was very much congested and œdematous, and the left tonsil enlarged; but she had great difficulty in opening her mouth sufficiently to allow an examination to be made. Her bowels were freely open, due to a saline aperient which she had taken. I ordered poultices to be applied, and gave her ice to suck, and the usual treatment for acute tonsillitis.

I saw her again on the morning of the 17th, and found that there had been a discharge of pus and blood from the throat. She could swallow with much less difficulty, and her condition seemed to have improved; the temperature was 99°, the pulse 110, but I noticed that there was considerable swelling on the right side at the angle of the jaw and tenderness on pressure; her breathing also seemed a little quicker

In April of this year I had previously treated her for quinsy, which took practically the same course as the present attack, but without extension to the other side. I saw her again in the evening, and found that the swelling had extended to the suprahyoid region. Her pulse had risen to 120, her temperature still 99°. I ordered her to be well fed with fluid meat extracts, beef-tea, etc., and freely stimulated. There was no doubt what the trouble was. On the 18th the swelling had extended to the nape of the neck behind, and was spreading down the chest. There was no evidence of fluctuation in the swelling, but it was brawny, hard, tender, and the skin a dark red in colour. I ordered three bottles of antistreptococcus serum from Allen and Hanburys, and gave one injection about 6 P.M., and another about 10 P.M.

There was no improvement in her condition, and she died on the 19th: there was no loss of consciousness until immediately before she died. The temperature was never above 99° after the first day of the illness, this being due to the severity of the poison.

It is, I think, rather uncommon to see quinsy in patients of this age, but I think it is quite common to find it affecting first one side and then the other.

Hampstead, N.W. J. Burnett Smith.

## CASE OF INFECTION OF LEPROSY THROUGH A WOUND.

C. T., 54, widow, Italian, was admitted to the Hospital Samaritano, Sao Paulo, Brazil, in February, 1899, with a well-marked scirrhus of the left breast. The whole breast was removed, as well as the axillary lymphatics and those subjacent to the pectoral muscles. The examination of the tumour proved it to be a cancer of the typical scirrhus type. The whole of the wound healed by first intention with the exception of the sternal end, where for some unknown reason suppuration occurred and the stitches had to be removed for drainage. Healing was very slow, but in about a month she left the hospital with a small, superficial, granulating surface, uncicatrised. She returned once or twice for dressing and then disappeared for some months. During her stay in hospital absolutely nothing suggestive of leprosy was observed. On the contrary, with the exception of the breast tumour, she looked a healthy and exceptionally fat woman. The breasts were very large and adipose.

In July, 1899, about six months after the above operation she returned to hospital and on examining the cicatrix a warty-looking patch was found near the inner end and on the upper side, with a few hard, ill-defined nodules along the inner half of the cicatrix.

She would not remain in hospital at this time, but about two weeks later she returned complaining of what she called erysipelas of the face. Her face presented a number of deep red, elevated, shiny swellings, more or less symmetrically arranged, and giving the patient a sensation of intense heat or burning. The sites of these patches were the supra-orbital regions, the malar prominences, along the lower jaw, and over the chin. Similar-looking patches were found on her arms and legs. Some of them were in the shape of large rings, chiefly about the elbows and on the forearms, the enclosed skin having a bleached and dry look. Most of these areas were completely or partially anæsthetic; anæsthesia was also found over extensive areas of the legs, chiefly on the outer aspect of the right leg and left ankle. On examining the mammary region, there was found around the part of the cicatrix that had healed by granulation an extensive area of skin with the same deep red hue; the skin looked very coarse and had a brawny feel. The patient stated that the "erysipelas" began first at this place, and afterwards appeared on the face and limbs. During her stay in hospital several fresh patches appeared on the legs and arms having the same characteristics. Dr. Lutz saw the patient with me at this stage, and agreed that she had a very acute infection of leprosy.

The woman, who belonged to the lower class, had been many years in Brazil. Her husband died some years ago as the result of an accident. She had one married daughter, and neither her husband nor daughter ever suffered from any disease like hers. By chance I learned from a visitor that the woman had a son who was suffering from a "skin disease," and I succeeded in examining this son. He was a youth of 18, who for three years had been suffering from typical leprosy of the mixed (tubercular and anæsthetic) form. His face had the well-known leonine expression, and the alæ nasi and lobes of the ears presented well-developed tubercles. On his legs and arms he had deeply-pigmented blotches and numerous anæsthetic areas. Since his illness became pronounced he has always lived with his mother.

This case is a very interesting one, furnishing, as it does, very strong evidence that the bacillus lepræ can find an entrance through an open wound. In all my experience of leprosy, now extending over some sixteen years, this is the first case in which I have been able to discover with any degree of certainty the source and mode of infection.

W. Loudon Strain, M.B., C.M.,
Surgeon to the Hospital Samaritano,
Sao Paulo, Brazil.

# REPORTS
ON
# MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

## PRETORIA HOSPITAL, TRANSVAAL.

### A DERMOID CYST IN THE RIGHT SIDE OF THE SCROTUM: OPERATION.

(By Herbert J. Godwin, M.B., B.S., M.R.C.S., L.R.C.P., late Civil Surgeon to the South African Field Force; Acting Surgeon to the Pretoria Hospital, Transvaal Colony.)

W. A. G. was admitted, suffering from a swelling of the right side of the scrotum about the size of a cocoanut.

*History.*—The patient, a fairly healthy-looking man, aged 42, stated that he had always had a swelling on the right side of the scrotum. He was a married man, and had had seven children, six of whom were living. He also stated that his father had a similar swelling, and also his (the patient's) eldest son. This swelling gave him no trouble till a few months previously, and just before the British occupation of Pietersburg, Transvaal Colony, he consulted a medical man, who tapped it and drew off a small quantity of fluid. He then came to Pretoria and consulted another medical man, who tapped it and injected it with iodine. Three days later the swelling became much larger and very painful.

*Condition on Admission.*—The right side of the scrotum was enormously swollen, red, and fluctuating. The superficial veins were very large and prominent. The swelling was very tense and painful to touch. The left testicle was normal.

*Operation.*—The patient was put under chloroform, and a free incision made; putrid gas and pus came out in abundance. This collection was between the tissues of the scrotum and tunica vaginalis. The tunica itself was found to be very much thickened; an incision was made into it, and on introducing the finger the whole cavity was found to contain hair and cartilage with signs of commencing suppuration. The cord was then tied and the whole mass removed. The cord was twice as large as normal, the arteries and veins being the same.

*Examination of the Tumour.*—It was found to be a cyst, the wall of which was quite ¼ inch thick; it was completely filled with a mass of brown hair, and projecting from the inner walls of the sac were pieces of cartilage an inch in length; no signs of any testicular substance could be found anywhere. The cord, which was very thickened, seemed to spread out over the sac just after its exit from the external ring. The vessels from the cord surrounded the sac in a tortuous manner, and were very large.

*After-History.*—The patient made an uninterrupted recovery.

*Remarks.*—This case seems of interest for the following reasons: (1) That dermoid cysts in this region are very uncommon; (2) that when they do occur an atrophied testicle or some remains of a testicle are generally to be found; (3) the fact that the patient's father and the patient's eldest son had a similar swelling; (4) the difficulty of diagnosis.

## No. 11 GENERAL HOSPITAL, KIMBERLEY, S.A.

### TWO CASES OF BULLET WOUNDS OF THE FEMORAL VESSELS IN HUNTER'S CANAL.

(By Major S. HICKSON, M.B., R.A.M.C.)

*Case 1. Aneurysmal Varix.*

J. D., a Boer prisoner of war, aged about 40, was admitted on May 9th, 1900, suffering from the effects of a bullet wound of the left thigh received at Rooidam on April 5th; range unknown. The bullet was probably a Lee-Metford, and had entered the front of the thigh 4 inches above the patella, passed upwards and backwards, and emerged 3 inches below the gluteal fold. The wounds were healed on his admission. About 10 inches below Poupart's ligament in the line of the femoral vessels there was a rounded pulsating swelling 4½ inches in diameter; the pulsation was expansile, and was accompanied by a very distinct thrill which could be traced upwards as far as Poupart's ligament and downwards to the popliteal space. There was also a continuous rough murmur audible all along the course of the vessels, an excellent example of the "bee in a paper bag" sound. No œdema of leg. The patient was unable to walk without the assistance of a thick stick; he complained of weakness in the limb, and shooting pains down the inner side of the leg as far as the ankle. The diagnosis of arterio-venous aneurysm was made.

*Treatment.*—He was placed on calcium chloride in full doses three times a day, and kept at absolute rest in bed for three weeks without any effect; afterwards instrumental compression of the femoral artery was given a trial, but caused no improvement. His heart and arteries being apparently healthy, it was decided to operate, and on July 17th the vessels were exposed in Hunter's canal by the usual incision. On drawing the artery to one side, it was seen that a communication existed between it and the vein: the latter vessel was considerably enlarged, and pulsated visibly, but there was no proper sac. The artery and vein were now separately ligatured above and below the point of communication, and about 1 inch of each vessel removed. The incision was closed in the usual manner, without any drain, and the leg wrapped in cotton wool and elevated. No ill effects followed the operation, the wound healed rapidly, there was neither loss of temperature in the limb nor œdema. He was discharged on September 22nd, 1900, able to walk without a stick, and apparently suffering no inconvenience.

*Case 2. Traumatic Aneurysm.*

Boer prisoner, W. P. van A., aged 32, admitted May 9th, 1900, for bullet wound of right thigh. Like the previous case he was wounded at Rooidam on April 5th. Projectile, Lee-Metford bullet; range unknown.

*Condition on Admission.*—The entrance wound was in front of the thigh, over the beginning of Hunter's canal, and the exit at a slightly lower level behind. The thigh was very much swollen, and a tense pulsating tumour existed in the region of the injury; the tumour was diffuse in character and painful, pulsation ceased on compression of the main vessels at Poupart's ligament, a rough systolic *bruit* was present. No pulse could be felt below the level of the knee. There was no œdema.

*Treatment.*—The tumour gradually increased in size and pain, shooting down the leg, became more constant. On May 12th an incision about 4 inches in length was made over the line of the artery in the upper portion of Hunter's canal. Beneath the fascia the intermuscular planes were found extensively infiltrated with blood clot. On the clot being cleared out and the femoral vessels exposed in the canal a punctured wound was found in the femoral artery, the vein being uninjured. The artery was ligatured above and below the wound and divided between the ligatures, the cavity irrigated with sterilised water, and the wound closed. There was never any loss of heat or œdema in the leg after the operation. He made an excellent recovery, and was allowed up on June 1st, and eventually handed over to the authorities as a prisoner of war.

## THE ALTRINCHAM HOSPITAL, CHESHIRE.

### SUCCESSFUL REMOVAL OF SPLENIC HÆMATOMA.

(By E. L. LUCKMAN, M.R.C.S., L.R.C.P., Surgeon to the Hospital.)

MRS. E., aged 25, married about five months, consulted me about her condition.

*History.*—She had been quite regular each month until after marriage. About two and a-half years previously, whilst shaking some carpets, she complained of pains in the left side below the ribs: and since then she had suffered great discomfort and noticed that side of the abdomen was increasing in size. Any exertion proved troublesome; she suffered from indigestion and constipation.

*State on Examination.*—The patient was cheerful in disposition, of pale complexion, height about 4 feet 11 inches. Examination of the abdomen showed a large tumour, filling the whole of the left side and extending to the right of and below the umbilicus. There was dulness on percussion in the left lumbar region. The surface was smooth, slightly notched at its lower part, and in the umbilical region felt like a cyst on digital compression.

*Operation* (August 2nd, 1900).—After the usual aseptic ablution of the abdomen, Dr. J. Maclaren administered the anæsthetic. Assisted by Messrs. W. O. Jones, Golland, and Ransome I opened the abdomen, making an incision four inches long in the middle line below the umbilicus. The tumour was easily pushed into view; a patch on its surface, about two inches in diameter, had a greenish appearance, and was somewhat tough. It was surrounded by a fringe of peritoneum. I inserted my fingers and gradually separated this from the splenic tumour, which was then free, with the exception of its attachment to the pancreas and the vessels entering the spleen. The cyst was aspirated and forty ounces of a sanguineous fluid withdrawn. The spleen was next carefully drawn through the abdominal incision, and a silk cord ligature tied firmly round the short pedicle embracing the splenic artery, vein, lymphatics, and a little of the tail of the pancreas and divided. The cut end of the pedicle was carefully examined for any oozing.

The abdomen was flushed with a warm, saturated solution of boracic acid until there was little or no discoloration of the fluid. The pedicle, appearing satisfactory, was returned to the abdomen. The wound was closed by ten silk sutures through the peritoneum, abdominal muscles and skin, dusted with iodoform and boracic acid, over which was placed a pad of iodoform gauze, salembroth wool, strapped and bandaged. Time occupied, operation and dressing, an hour and a half.

*After-History.*—The patient had a little vomiting after the operation, which was easily controlled. She passed a good night. The wound was dressed on the fifth day and the sutures removed on the eighth. The patient made an uninterrupted recovery, and left the hospital in five weeks. She quickened ten days after the operation, and on December 28th, 1900, was safely delivered of a male child 10lbs. in weight, the patient herself weighing less than 120 lbs. Since the operation her health has been remarkably good, with the exception of the last two months of pregnancy, when she had purpura of the upper and lower extremities, which passed away soon after the birth of the child.

The spleen was partly solid and partly cystic. Dr. Coutts, of Owens College, kindly examined the fluid, which was dark brownish red in colour, specific gravity about 1030, contained large amount of albumen, many blood corpuscles, and a large number of cholesterine crystals.

The tumour six months after operation, after it had been kept in spirit, weighed 12 ozs. Blood, eight months after operation, hæmoglobin 62 per cent.

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THE QUEEN'S NURSES.—The Queen's Institute for Nurses has received the sum of £500 from the executors of the late Mr. Richard Bowerman West.

THE DENTAL HOSPITAL OF LONDON, Leicester Square, has received the sum of £500 from the executors of the late Mr. Richard Bowerman West.

CONDITIONAL BEQUESTS TO HOSPITALS.—Under the will of the late Mrs. Margaret Maria Scholey, of Clapham, whose estate has been valued at £22,621, the residue, after £400 has been deducted for certain charitable bequests, is left in trust for her grandson and his children, or in the event of the failure of this trust, one moiety of the residuary estate is bequeathed to the East London Hospital for Children and the London Temperance Hospital.

# REVIEWS.

## AGUE.

THE second part of vol. iii of the *Thompson Yates Laboratories Reports*[1] is mainly devoted to malaria. The paper includes a well-illustrated reprint from the *Quarterly Journal of Microscopical Science* by Major Ronald Ross and Dr. Fielding Ould on the Life History of the Parasites of Malaria. Of the other papers the most important is the report of the Malaria Expedition to Nigeria. This is clearly written, and gives evidence not only of much careful work, but of a full appreciation of local variations in conditions and of the effects of such variations. The authors, Messrs. Annett, Dutton, and Elliot found in Nigeria, as in other malarial countries, that a large proportion of the native infantile population harboured the parasites of malaria. They completely confirm the observations of the first Liverpool malaria expedition as to the existence of tertian and quartan parasites on the West Coast of Africa. They examined the blood of over 360 natives, and in 17 they found one or more "crescents." The largest number recorded in any one case was 7. These figures hardly bear out the statement of the authors that crescents were frequently met with in the blood of natives. Such a proportion of crescents would be considered to be small in Europe. They observed no other form of gamete than the crescent in cases of æstivo-autumnal fever. Much attention was paid to the breeding grounds of *Anopheles*. The large share that careless and ignorant workmanship or neglect on the part of the European settlers has taken in forming such breeding places is very properly emphasised. The value of this portion of the work would have been increased if some attempt had been made to differentiate between the breeding grounds of different species of *Anopheles*. For prophylaxis in malaria the authors rely mainly on the segregation of Europeans from the native population. They treat the question from a broad point of view, and do not ignore, though some will consider they minimise, the difficulties attending this procedure. They attach great importance to surface drainage in most places as a subsidiary measure, but again point out that unless such measures as are undertaken are carried out intelligently and skilfully the evil may be increased. The amount of protection from mosquitos, they consider, could with care be greatly increased, and they show how faulty the nets in common use are, both in design, condition, and application. The report is profusely illustrated with excellent photographs, photomicrographs, maps, and charts. We note, however, that in Plate I, Fig. 4, the ovum taken as the type of *Culex* ovum appears to be that of *Stegomyia fasciatus Fab.* This egg differs as widely from the type of *Culex* ovum as does that of *Anopheles*. This selection is therefore unfortunate. The statement, page 235, fourth paragraph, that under certain circumstances *Culex* ova are deposited in patterns very similar to those of *Anopheles* is probably to be explained by the selection of a *Stegomyia* as the type of *Culex*, as it normally lays its eggs in a manner somewhat similar to *Anopheles*. The charts illustrating the relation between rainfall and malaria would be more valuable if the temperature curve also had been given. As temperature affects both the multiplication of the mosquitos and the time taken for development of blasts, it is not a negligible factor. The omission is probably due to the absence of available meteorological data. Meteorological factors are of much importance in determining the potentialities of a new country, but according to the authors of this report have received little attention from the authorities in Nigeria. The main points of the report are not affected by the minor defects indicated. It is a most valuable contribution to our knowledge of the etiological factors concerned in the propagation of malaria and deserves to be carefully studied by all interested in that subject. Though it deals only with districts actually visited the information given will be of value over a much more extensive area, and in part will probably be applicable to all moist warm countries. The authors append an account of an unclassified fever first described by Messrs. Thompstone and Bennett, to which they propose to give the name of "hyperpyrexial fever." Before this disease can be admitted as a special disease much more information will be required. A differential enumeration of the leucocytes in some of the cases would have been of special value, as the possibility of the "fever" having been a secondary malarial condition might then have been excluded. Of the papers dealing with subjects other than malaria, the two of most importance are the second part of a paper on the distribution of B. coli commune by Harriette Chick, B.Sc., which demonstrates conclusively the low resistance which that organism offers to unfavourable conditions, particularly in the absence of moisture: and one on the relation between B. enteritidis sporogenes and diarrhœa, by E. G. Glyn, M.B. The author's conclusion is that there is no satisfactory evidence that this bacillus is a cause of acute or of epidemic diarrhœa. The printing, illustrations, and general appearance of this volume are worthy of the previous issues from the University Press, Liverpool, and are much above that usual in English scientific reports, especially those issued by Government.

[1] *The Thompson Yates Laboratory Reports*. Edited by Rubert Boyce and C. S. Sherrington. Vol. iii. Part II. With illustrations and plates. At the University Press of Liverpool. 1901. Price 58. 6d. net.

The literature on malaria grows apace, it is in fact becoming unwieldy, and Dr. CUTHBERT CHRISTY'S *Mosquitos and Malaria*,[2] originally published for circulation in India, was, he tells us, compiled because the literature of the new malaria researches was so scattered and inaccessible. While we agree with his statement that his little book will supply a want felt by others requiring a general acquaintance with the subject, yet it is incumbent on medical men holding responsible positions in malarious countries to read all the important original communications for themselves, and to gain a practical acquaintance with the new malarial problems. Most of the important work that is done in malarial research is published from time to time in the BRITISH MEDICAL JOURNAL. The author has compressed in 66 pages a mass of facts in an extremely readable and assimilable form, and he has evidently taken pains to look up the references on the subject. He quotes freely from Ross's early reports, which were published in India, and also from Celli's more recent work. Those who have not followed closely the literature on the mosquito-malaria theory will find the first part of Dr. Christy's book an excellent summary of the subject. The chapter on the life-history of the mosquito contains many observations made by the author, and although there is little that is actually new it is well worth reading. The six original plates illustrating the various stages of the *Culex* and *Anopheles* add much to the interest of this chapter. The book concludes with generalisations on etiology and prophylaxis.

England is cold and damp, Barbadoes hot and dry, Singapore hot and moist. Admissions for ague are about fifteen times as numerous in Singapore as in Barbadoes. These facts Lieutenant-Colonel M. D. O'CONNELL, R.A.M.C., the author of *Ague or Intermittent Fever*,[3] appears to consider sufficient to prove that meteorological environment produces an intermittent increase of water in the blood. He argues that this intermittent excess of water produces intermittent fever, and that excess of water causes changes in the blood similar to the appearances described as malaria parasites. The author obviously has seen neither the changes in the blood from the addition of water, nor the parasites of malaria. He adduces no observations or experiments in support of his extraordinary thesis.

[2] *Mosquitos and Malaria, Summary of Knowledge on the Subject up to Date; with an account of the Natural History of some Mosquitos.* By Cuthbert Christy, M.B., C.M.Edin. London: Sampson Low, Marston, and Co., Limited. Bombay: Times of India Press. (Demy 9vo, pp. 92. Six plates. 6s.)

[3] *Ague or Intermittent Fever.* By Lieutenant-Colonel Matthew D. O'Connell, M.D., R.A.M.C., Principal Medical Officer, Peshawar District. Peshawar: Frontier Press. 1900. (Demy 8vo, pp. 23.)

## SOME WORKS ON PATHOLOGY.

DR. ROBERTSON, in the introduction to his *Textbook of Pathology in relation to Mental Diseases*,[4] explicitly disclaims any attempt to cover the whole field of pathological research in relation to mental diseases, and restricts his present work

[4] *A Textbook of Pathology in relation to Mental Diseases.* By W. Ford Robertson, M.D., Pathologist to the Scottish Asylums; formerly Pathologist to the Royal Edinburgh Asylum. Edinburgh: William F. Clay. 1900. (Roy. 8vo, pp. 396, 16 plates, 13 illustrations. 21s.)

mainly to facts of pathological anatomy. He does not attempt to frame any pathological classification of mental diseases, maintaining—and as we think rightly—that their pathology and etiology are as yet insufficient to justify such classification. The book is a very able contribution to the subject, and should do much to break up that spirit of indifference, if not disbelief, with regard to the value of pathological research which still obtains too widely amongst alienists. After a short account of histological methods, he passes to a discussion of morbid conditions of the scalp found in the insane, including in this the vexed question of hæmatoma auris or insane ear. Dr. Robertson reviews the various theories of its origin, opposes the traumatic and infective theories, and supports Fischer's view that it is a degenerative change in the cells of the ear cartilage. His conclusions are based on two series of 50 cases each, and show that whilst degenerative changes in the cartilage cells are as common in the sane as in the insane (only 2 cases in each series being free from changes); in the sane the changes were but slight, whereas in the insane the degenerative changes were most marked, 30 showing cystic formation, and of these 8 vascularisation of the cyst wall. The morbid conditions of the skull, dura mater, pia arachnoid, and intracranial blood vessels are next thoroughly considered. It is, however, in the second half of this work, when the changes in the neuroglia and nerve cells come under examination, that the chief interest lies. There is a very complete review of the work done by Continental and British investigators with regard to the development of these two tissues, their normal histology, functions, and reactions, and the pathological changes they undergo. Dr. Robertson joins issue with Weigert on the question of the anatomical discontinuity of the neuroglial cells and fibres, affirmed by the latter, and makes out a good case in support of their continuity. With regard to morbid neuroglial changes, it is interesting to note that of two series of cases, one from the Royal Edinburgh Asylum and the other from general hospitals, morbid conditions throughout the first layer of the cortex were observed in 83 per cent. of the 300 asylum cases examined, whilst of the 31 hospital cases in only 3 was there any general hypertrophy of cortical neuroglia, and of these 3 one turned out to be a case of senile insanity which could have been certified, and another a case of adult chorea. As Dr. Robertson well says:

> In the face of these statistics it is scarcely possible to maintain, as some have done, that the brains of the insane present no demonstrable structural changes that are in any way special.

The book is excellently illustrated and contains a valuable bibliography, the number of references in which (over 800) gives some idea of the thoroughness with which the subject is treated.

We noticed with approval the first volume of Dr. DÜRCK's work when it appeared about fifteen months ago; at the same time we expressed a doubt whether atlases of this kind, however well executed the plates may be, are really useful to the student. The volume now before us[5] completes the work, and treats of diseases of the liver, urinary apparatus, genital organs, nervous system, skin, muscles, and bones. The general plan of the book is the same as before, and again we have nothing but praise for the illustrations. In connection with the nervous system we note that the important recent methods of Marchi, Golgi, and Nissl do not find a place, and that illustrations of preparations made by these methods are conspicuous for their absence. Limited as the author apparently is to 60 plates, he must necessarily have had difficulty in selecting what to omit; but the omission of such valuable methods as those just referred to appears to be an error of judgment.

An authorised translation[6] of the *Atlas* is being prepared by Professor HEKTOEN of Chicago, and the first volume is before us. The translator has appended a few supplementary notes, enclosed in brackets, where he has thought necessary or desirable. Two more volumes are shortly to appear, the one completing special pathological histology, and the other dealing with general pathological histology. There is a satisfactory index.

Dr. STENGEL's *Textbook of Pathology*,[7] which has now reached its third edition, is an account of pathology from a clinical point of view. It is divided into two parts: general pathology, which includes the diseases produced by bacteria, hæmatozoa, and parasites; and special pathology, which includes the diseases of the organs and tissues. There is very little in the book that is wrong or out of date; it is well written, and is easy to read. The division of the subject is good, and the treatment of the several parts concise and clear.

## ARSENIC IN BEER.

THE recent outbreak of arsenical neuritis in beer drinkers has produced a large crop of literature, medical, hygienic, and chemical. The first kind is mainly devoted to an account of the symptoms of arsenical poisoning in general and of the 1900 epidemic in particular, the second deals with the measures which have been taken or suggested for stamping out the affection and preventing its recurrence, and the third with the comparative evaluation of the tests for arsenic. We have already noticed most of the points referred to under the first two headings, and to avoid repetition will mention them only very briefly in reviewing the recent literature of the subject.

Dr. E. S. Reynolds's paper on the Epidemic of Peripheral Neuritis Amongst the Beer Drinkers in Manchester and District appeared in the BRITISH MEDICAL JOURNAL of November 24th, 1900, and Dr. KELYNACK[8] showed great promptitude in following up the clue to the cause of the outbreak therein given. In his portion of the present work he summarises the information which he succeeded in collecting during the month after the appearance of Dr. Reynolds's communication. He gives a very good general account of the most frequently observed symptoms which he classifies under nine somewhat arbitrary "types." There is, unfortunately, no account of a *post-mortem* examination upon any of the cases, nor are any details given as to the number of patients actually seen by the author. The outbreak appears to have commenced about Easter or Whitsuntide, 1900, and to have affected moderate as well as heavy drinkers. The differential points between arsenical and alcoholic neuritis are well summarised. The illustrations, from photographs, are on the whole good, but the appearances produced by pigmentation are not very successfully shown. Mr. KIRKBY's contribution contains a careful comparison of the various methods of detecting small quantities of arsenic and a description of an ingenious device by which he has adapted Gutzeit's test to the estimation, with fair accuracy, of the poison in beer. He gives the details of a number of analyses made by him of various beers and brewing glucoses; he states that he was able to detect arsenic in the urine and desquamated skin of neuritis patients, but not in the milk of two who were suckling. One-fifth of the book consists of bibliography, very little of which is germane to the particular aspect of the question under discussion. There is no index.

Professor J. ALFRED WANKLYN's work[9] is a popular and readable account of the chemistry of arsenic, but is unfortunately somewhat disfigured by the virulence with which it attacks the Manchester Brewers' Central Association and Professor Delépine in respect of their methods of testing for the poison. The most interesting part of the book is the transcription of the original communication in which James

[5] *Atlas und Grundriss der speciellen pathologischen Histologie* (Atlas and Elements of Special Pathological Histology). By Dr. Herman Dürck, Assistant in the Munich Pathological Institute. Band ii. Munich: J. F. Lehmann. 1901. (Crown 8vo, pp. 220; 60 coloured plates. M. 11.)

[6] *Atlas and Epitome of Special Pathologic Histology.* By Docent Dr. Hermann Dürck of Munich. Authorised translation from the German. Edited by Ludwig Hektoen, M.D., Professor of Pathology, Rush Medical College, Chicago (Circulatory Organs, Respiratory Organs, Gastro-Intestinal Tract). With 130 coloured illustrations. London: W. B. Saunders and Co. 1900. (Crown 8vo, pp. 158, 130 coloured illustrations. 13s.)

[7] *A Textbook of Pathology.* By Alfred Stengel, M.D., Professor of Clinical Medicine in the University of Pennsylvania, etc. Third Edition. London: W. B. Saunders and Co. 1900. (Demy 8vo, pp. 873. 21s.)

[8] *Arsenical Poisoning in Beer Drinkers.* By T. N. Kelynack, M.D., M.R.C.P., Medical Registrar (late Pathologist) Manchester Royal Infirmary, and William Kirkby, F.L.S., Lecturer on Pharmacology in the Owens College, Manchester. London: Baillière, Tindall, and Cox. 1901. (Demy 8vo, pp. 140, 16 illustrations. 3s. 6d.)

[9] *Arsenic.* By Professor J. A. Wanklyn, M.R.C.S. London: Kegan Paul, Trench, Trübner, and Co. 1901. (Crown 8vo, pp. 100. 2s. 6d.)

Marsh introduced his famous test. This the author considers immeasurably superior to all others; and he particularly condemns Reinsch's test, which he believes to be useless for quantitative purposes. He suggests that the arsenic in the poisoned beer may have been in organo-metallic combination, but gives no reasons for this view; his chemical terminology is rather antiquated, as when he speaks of carbohydrogens, sulphurets, and so forth. He devotes some space to an account of the Styrian arsenic eaters, who, he says, commence with less than ½-grain doses of the drug. As the maximum medicinal dose is ½ gr., this statement seems to require verification.

The reprint in pamphlet form[10] of the papers, discussions, and abstracts relating to the analytical chemistry of arsenic, which have recently appeared in the columns of the *Journal of the Society of Chemical Industry* constitutes a most valuable guide to the best methods for detecting and determining this metalloid and the other poisonous elements associated with it. It comprises accounts of discussions which have taken place on the subject at the Society's sections in London, Liverpool, Manchester, New York, Nottingham, and Yorkshire. Attention is drawn to the almost universal distribution of arsenic; its occasional occurrence in malt is traced to the coke used in the kilns. With regard to its estimation various opinions were expressed, but a method of adapting Marsh's test to this end, which was suggested by the President of the Society, Mr. Otto Hehner, appeared to meet with general approval at the meeting of the London Section, which elected a strong Committee to further investigate the matter. The chemical manufacturers were in general of the opinion that it was practically impossible to guarantee the absolute freedom from arsenic of any product, but that if a standard were laid down which should be compatible with health, they could undertake to keep within it. This standard should bear relation to the quantities of the particular material liable to be consumed, for it would be obviously absurd to make it the same for beer and tartar emetic. The pamphlet contains also literature on selenium and tellurium, and is furnished with two excellent indices.

We have already published the substance of the *Reports* of Dr. Tattersall and Professor Delépine.[11] Nothing is more striking in the whole history of the epidemic than the promptitude with which Dr. Tattersall investigated and the success with which he traced its cause. Within four days of the news that Dr. Reynolds had discovered arsenic in the beer, Dr. Tattersall had succeeded in locating its source in the glucose, made with contaminated sulphuric acid, and within a week he had completely stopped the sale of arsenicated beer in Salford, 432,000 gallons having been destroyed. Dr. Tattersall estimates the number of cases of arsenical poisoning in Salford as 996, with 107 deaths; he considers that for the future prevention of such incidents it is necessary to go to the fountain-head and deal with the chemical manufacturer. Professor Delépine in his report recommends Reinsch's test, and gives a method of sublimate comparison which he has used for quantitative purposes.

The reports of Dr. Edward Sergeant and Dr. J. Campbell-Brown[12] relate to the epidemic in the administrative County of Lancaster, which has a population of just under 2,000,000. In this district 15 deaths occurred which were directly attributable to arsenical beer, and in all 372 cases came under observation. Out of 78 preliminary samples of beer, 27 contained arsenic. After due warning, the presence of the poison was made the ground of prosecution under the Food and Drugs Act. Over 4,000 barrels and 33,000 bottles of beer having been destroyed, the epidemic subsided.

We have already referred to Dr. Niven's[13] report, from which it appears that the tale of deaths in Manchester attributable to the epidemic amounts to nearly 100. In these are reckoned the remarkable increase noticed in the mortality from cirrhosis of the liver, as well as those which occurred with nervous symptoms. Dr. Niven gives a very careful account of his investigation as to the source of arsenic in glucose and malt, and also a summary of the excellent and effectual administrative measures which he enforced in the City of Manchester.

[10] *Detection and Determination of Arsenic.* Reprinted by Order of the Council from the *Journal of the Society of Chemical Industry.* London: Eyre and Spottiswoode. 1901. (Roy. 8vo, pp. 50. 1s.)

[11] *Special Report on the Epidemic of Arsenical Poisoning from Beer in 1900.* By C. H. Tattersall, Medical Officer of Health, County Borough of Salford: with Report on the Chemical Investigation by Professor Delépine, Owens College, Manchester. Salford: W. F. Jackson. 1901. (Demy 8vo, pp. 64, 13 tables.)

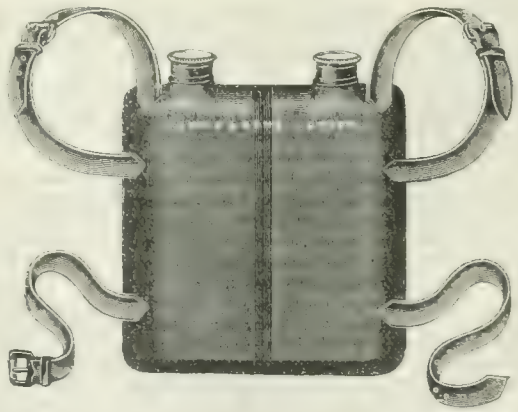
[12] Lancashire County Council. (1) Arsenic in Beer; Reports presented to the Public Health Committee, January 17th, 1901, by the County Medical Officer of Health and County Analyst. (2) Report submitted by the County Medical Officer of Health to the Royal Commission on Arsenical Poisoning, March 28th, 1901.

[13] Reports of the Medical Officer of Health of Manchester on the Outbreak of Arsenical Poisoning.

# REPORTS AND ANALYSES
AND
# DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

## MEDICAL AND SURGICAL APPLIANCES.

*The Twin Ice-Bag.*—Dr. Martin J. Chevers (Slaithwaite, Huddersfield) writes: Having in my practice felt very much in need of a special bag for applying ice to the thorax or abdomen of a restless patient, I gave Messrs. Arnold and Sons full instructions (dimensions included) to make me what I have been pleased to term the "twin ice-bag," of which a sketch is here given, and have found it to answer admirably. It is made entirely of plain rubber, straps included; it is thereby not injuriously acted upon by the secretions from the body. Having given it a good practical trial, I have found it to give complete satisfaction, and I can confidently recommend it to the profession. The advantages I claim for it are: First, in its application to the thorax, back or front, restlessness of the patient does not interfere with its perfect action. The ice or ice-water, owing to the two separate compartments, cannot gravitate from the side on which it is required to act. It can be emptied or filled with very little disturbance of the patient, if the night-dress is put on so that its opening corresponds to the seat of the ice-bag—namely, on either the anterior or posterior



surface of the body. It will be seen that, on loosening the shoulder straps (not interfering with the waistband) whilst the patient lies on his side, and allowing the upper portion of the bag to hang down, removing the stopper, and slightly pressing on the bag, the contents can be emptied into a dish and the bag refilled with a minimum of disturbance to the patient. If the patient is not too ill to sit up in bed it is no less easy to empty and fill the bag. The openings in the ice-bag are so placed that they are very unlikely to press on the patient, but, if they happen to do so, they are within

such easy reach of the patient that he can place them just as he likes. The application of ice in pneumonia I believe to be the most satisfactory treatment, especially from its effect in controlling the temperature. Secondly, in its application to the abdomen, as will be seen, the shoulder straps can be made use of round the thighs, and the appliance in this situation has all the advantages claimed in its application to the thorax. On the abdomen it is not only useful in cases of inflammatory troubles situated in this cavity, but simply as a general temperature reducer I have found it to act very beneficially. I see no reason why this bag should not be applied to the head as well in cases of refractory patients, using the shoulder straps under the armpits and the waistband under the chin.

## THE INDIAN MEDICAL SERVICE.

WE are requested by Surgeon-General Harvey, M.D., F.R.C.P., Director-General, Indian Medical Service, to publish the following notes on Dr. Mullick's resolution for consideration of the Parliamentary Bills Committee, British Medical Association:

These notes are based on a report in the *Indian Medical Record*, which is fuller than that in the BRITISH MEDICAL JOURNAL or *Lancet*, but for the accuracy of which I cannot vouch. Dr. Mullick's resolution states:

1. That the principle he condemns is "the present system."

2. That professorial chairs are filled "more by grade rank in the Indian Medical (Military) Service than by special professional ability."

3. That professors are "pitchforked" from one chair to another.

4. That the system "is a sinister bar to the advancement of original research in India."

In his speech he is quoted as saying:

5. "That there are now hundreds of practitioners qualified to do that beneficent work ..... men of the finest intellect, who for powers of keen perception and accurate observation would be the peers of any set of scientists."

6. That "the Indian Medical Service is a purely military body. Its members are only lent to the Civil Department when 'off duty' as it were."

7. That "those who were fortunate enough to be transferred to the capitals were appointed to the chairs, and occupied those places so long as they held a certain rank in the military service."

8. That "as soon as they rose in their grade they were either transferred to other places or were appointed to other chairs, and were thus suddenly called on to teach quite a different subject."

9. That "at present the Indians were practically disqualified from competition (for the Indian Medical Service), inasmuch as they were compelled to come to England on the off-chance of being successful."

These are the main points, and, if generally true, would go far to justify the resolution. I maintain, however, that they are not generally true, and assert, on the other hand, that the principle aimed at by the Government of India in the selection of officers for its medical professorships has always been the selection of the most suitable candidates. I am not concerned to deny that it has occasionally happened that the selection has not been entirely a happy one, but the same might be said of every medical school elsewhere. Professors have since 1896 been appointed on probation for five years, and can then be got rid of if unsuccessful, or if they fail to do their duty thoroughly. In the past, when specialism had not been developed as it is to-day, men have been appointed to chairs on their general professional merits and not as specialists; but this ceased long ago, and to the best of my knowledge and belief no one has of recent years been appointed to any chair unless he had special qualifications for it. The "system" condemned by Dr. Mullick has never obtained as a system, either in the past or the present. I should myself be the first to condemn it, and will show presently that I and my predecessors have always striven to obtain the appointment of the best men. This disposes of No. 1.

Statement No. 2 is absolutely inaccurate. Unless the special merits of two men were so equal as to make selection a matter of indifference, seniority in the Service would not influence the choice. Facts are more convincing than statements, and the following instances disprove Dr. Mullick's assertions:—

(*a*) Sir Joseph Fayrer was appointed to the Chair of Surgery when an assistant surgeon of nine years' service, because of admirable surgical work in the Burmese war and throughout the siege of Lucknow.

(*b*) Sir George King, F.R.S., K.C.I.E., was selected for the Chair of Botany when of about five years' service as the best botanist in India.

(*c*) Dr. Warden became Professor of Chemistry under five years' service, because of his special chemical experience.

(*d*) Dr. Edmondstone Charles got the Professorship of Midwifery after about eight years' service. He had been assistant to Sir James Simpson.

(*e*) I succeeded Dr. Charles when I had thirteen years' service, because I had been Resident Accoucheur at the Birmingham Dispensary, and had more obstetric experience than senior candidates, of whom there were several.

(*f*) Dr. H. Charles, who was made Professor of Anatomy at Lahore, because of his student's record as an anatomist, was transferred to Calcutta in the same capacity when he had only twelve years' service, because of his marked success as a teacher. Many most competent anatomists senior to him in the service desired the appointment.

All these appointments have been justified. Dr. Mullick admits Dr. D. D. Cunningham as a good selection. He also was appointed when quite young, because he was recognised by the Government of India as the best physiologist available. The professors of medicine and of surgery are commonly senior men, for the simple reason that there is always an *embarras de choix* for these two appointments. All of them have been able, many of them distinguished men, such as Twining, Vandyke, Carter, Chevers, McLeod, Raye, etc. Keegan might, I understand, have been professor of surgery had he cared for transfer from Indore. A great outcry was made by the *Indian Medical Record* when Lieutenant-Colonel Harris was appointed to act as Principal of the Calcutta Medical College and Professor of Medicine. It was said that he was not legally qualified, and demands were made that the appointment should be cancelled, as otherwise the General Medical Council would refuse to recognise the Medical College of Calcutta. This is a good example of the misstatements constantly made and repeated, and seems to be the case referred to by Dr. Potter in his letter to the BRITISH MEDICAL JOURNAL of September 8th, where he says that he knew of "a Licentiate in Surgery who could not have held a Poor-law appointment at home, but, owing to his appointment, got all the consulting medical work." To get this, he must have been called in by his brother practitioners. Why should they have done so if they considered him incompetent? As a matter of fact, no man is eligible to compete for the service unless he is fully qualified under the Medical Act, as Dr. Potter and the editor of the *Indian Medical Record* ought to know; and the gentleman in question was one of the best physicians in India, and, though not an M.D., was a Member of the Royal College of Physicians.

3. The assertion that professors are pitchforked from one chair to another is also grotesquely inaccurate, and Dr. Mullick should be called on for a categorical statement showing the cases in which this has happened, say, in the last ten or twenty years. The only cases I can recall are connected with the Chairs of Anatomy and Surgery, Medicine and Materia Medica, and Physiology and Pathology. The Professors of Medicine and of Materia Medica are the physicians to the Medical College Hospital, the Professors of Anatomy and Surgery are the surgeons thereto. Most physicians have a competent knowledge of materia medica; the Professor of Anatomy is also a surgeon, and pathology is closely related to physiology. The transfer of the professor from one to the other chair of any of these groups would usually be quite legitimate, yet except in the anatomy-surgery chairs it has seldom occurred, and when the Chair of Surgery fell vacant two years ago, I absolutely refused to allow the second surgeon and Professor of Anatomy to become first surgeon and Professor of Surgery as had previously been common. I could find a dozen surgeons, but not a Professor of Anatomy, in any way so good as the present incumbent. Raye and

McLeod were both promoted from the Chair of Anatomy to that of Surgery, but it is absurd to say that the College suffered in any way by their transfer. Both were excellent surgeons, and both got the Honorary Fellowship of the R.C.S. at the jubilee the other day. Harris, who acted as Principal and Professor of Medicine during the absence of the permanent incumbent on furlough, is now Professor of Materia Medica. He is thoroughly well up in his subject, has written several papers on it, and is the inventor of the *ipecacuanha sine emetinâ*. Bird, recently transferred from the Physiology to the Pathology Chair, is an M.D. of London, F.R.C.S. England, and one of our most brilliant young officers. He had less than five years' service when first appointed to the College.

4. The only bar to original research is the fact that most of the men in the College appointments are too busy to have time for original work, and are destitute of the usual stimulus to such. Yet many of them have done a good deal of such work, though it is not so generally known in Europe as it might be. The Government of India has now taken up the subject of research work in earnest, the establishment of a central research laboratory has been sanctioned by the Secretary of State, several provincial laboratories are already in existence, and others are to be established as funds can be made available.

5. The hundreds of practitioners qualified to do this work exist only in Dr. Mullick's imagination. If they exist, all they have to do is to enter the Indian Medical Service and prove their capacity. They will then have an equal chance with all their compeers of getting any appointment they prove themselves fitted for. In 1893 I prevailed upon the Lieutenant-Governor of Bengal to fill a temporary vacancy in the Chair of Materia Medica by the appointment of a native, whose qualifications seemed to me better than those of a European officer whom he wished to appoint. This Chair has twice been held by native members of the Indian Medical Service, and had my nominee proved a success he would have been confirmed in the appointment. He was not a success.

6. The statement that the Indian Medical Service is a purely military body is true in theory, but entirely untrue in fact. Three-fifths of the men are in civil employment, and as the civil medical work has to be carried on in war as in peace, the demand of the military authorities is limited to 40 per cent. of the total number in civil employment, even in case of great national emergency, while in fact the number of men withdrawn has never reached nearly 40 per cent. The recent call for China is the heaviest ever made and is equal to about 25 per cent. The College professors are practically untouched, except in the case of very junior officers, the men sent back to military duty being as a rule junior men, or men in charge of the less important civil stations. If a man escapes recall during his first few years in civil employment he is all but certain to escape altogether, and there are men now in the service who have never done any military duty.

7. "Those who are fortunate enough to be tranferred to the capitals are appointed to the chairs" is an extremely misleading statement. The best men, or those considered such, are selected for appointments in the capitals, and these have special opportunities of qualifying themselves for particular chairs, but in probably the majority of cases the professor is appointed from outside the capital. The present professors of anatomy, surgery, medicine, and midwifery were all outsiders. Formerly when the patronage of the appointments rested with the Local Government, a man in the capital may have had a better chance than an outsider, but in 1887 the Government of India took over the patronage of the Calcutta appointments in order that they should be open to every officer in the Bengal Presidency, including the whole of Northern India, instead of to those serving under the Local Government of Bengal. They have recently arranged for special departments for gaols and chemistry and are arranging for others in lunacy and bacteriology. This will give a succession of specialists in these branches. As to hygiene and medical jurisprudence, we have no lack of specialists, every civil surgeon being sanitary officer of his district, and having to do all the medico-legal work.

8. The practice of transferring the Professor of Anatomy to the chair of surgery has been already dealt with. The transfer to other places means that senior officers are no longer allowed to decline promotion when their turn comes for administrative appointments. This is a bad thing for the officers pecuniarily, but has the advantage of opening up the professorships to fresh men, of whom there are usually plenty in waiting.

9. The statement that Indians are practically disqualified from competition for the Service is disproved by the fact that there are some forty-six natives at present in the Service, to say nothing of a considerable number of Eurasians who are also in a sense natives of India. The class of men mentioned under head No. 5 should have no difficulty, if they really existed, in competing successfully for the advertised vacancies. As these exist in tens only, hundreds of men could not be provided for, and as professorships are still more limited in number, the throwing open of the chairs would help them little. So far as these men exist at all they have been trained by Dr. Mullick's "incompetent" professors. The Service is open to all natives who choose to compete, and it would be most undesirable to open it to men who have never left India, and are ignorant of Western manners and modes of thought. For those there is a local service, which has recently been greatly improved by a new grade carrying increase of pay, and the reservation of it of twenty-eight of the smaller civil surgeoncies formerly held by uncovenanted medical officers who are no longer to be recruited.

I think I have shown, then, that Dr. Mullick's statements are generally wanting in accuracy, and that the Government of India not only take pains to see that the professorial chairs are filled by competent men, but that they generally succeed in so filling them, and have always a succession of competent men to fill vacancies. The principle of *detur digniori* sounds well, and is followed as far as may be by the Indian Government, subject to the limitation that it takes the most worthy of its own officers for its own appointments, and does not throw them open to the world. If it did, it might conceivably get better men for particular appointments, though it is doubtful if the best men in any branch would come to India on speculation for the salaries given. Botany, Hygiene, Comparative Anatomy, Medical Jurisprudence are minor professorships carrying only £240 a year, and the salary of the full professorships may be taken at an average of £900, while the full professors are also Presidency surgeons, and have to attend gratuitously all Government servants. The teaching appointments are the big prizes of the service—not for the salary attached to them, but because of the opportunity they give of working up leading practices in the capitals; and an outsider ignorant of the language and customs of the country would be much handicapped in the competition for practice, and as regards the necessary furlough. The subjects of the Indian chairs all involve a special knowledge of tropical conditions, save, perhaps, Anatomy and Chemistry, and we see this principle practically accepted in England in the bestowal of the lectureships in the new schools of Tropical Medicine on men who have gained their experience in the tropics. It is because the service is known to possess these prizes that the class of candidates competing stands so high. All can hope for, though all cannot attain to them; and if they were taken away there would be an immediate deterioration in the class of men competing. It may be remarked, however, that in the rare case of a suitable officer not being available to fill a particular chair, the Government of India have never hesitated in appointing an outsider. The chairs of Botany, Comparative Anatomy, Chemistry, and Medical Jurisprudence have all at times been held by men not in the service; a physiological chemist has recently been appointed from outside the service, and our two most important bacteriological appointments are filled by Messrs. Haffkine and Hankin, who are not only not in the service, but are not even medical men. When a thoroughly qualified man is available in the service, the Government naturally appoints him. He is cheaper and is under discipline and control. If he fails, he can be utilised elsewhere.

The limitation of appointments to particular classes of men is not peculiar to India. Many London hospitals insist on their physicians and surgeons being Fellows of their respective colleges, and the British Medical Association is not likely to take up a crusade against them. I venture to think that the Government of India knows its own interests best, and is

not likely to be influenced by abstract resolutions based on erroneous information and incorrect statements. I trust the Parliamentary Bills Committee may see its way to table the resolution without further action.

My note is based on my personal experience of the Bengal Medical Service, but the same principles apply to those of Madras and Bombay. Since 1897, the three services have been amalgamated, and in the course of years the whole of the appointments throughout India will be open to all, and the sphere of selection materially increased. If further information is wanted I shall be glad to give it.

# NOVA ET VETERA.

## TELEGONY.

KNOWLEDGE upon the subject of telegony until recently depended entirely upon recorded cases, and although physiologists in past ages have accepted it more or less generally, and created theories to account for it, it has only within the last few decades aroused scientific interest.

Although with breeders generally belief in "infection" has long been an axiom, some, such as Settegast and Kühn in Germany, and Sir Everett Millais and others in England, have never known a case to occur, and although Millais believed in telegony as an abnormal and rare occurrence, he expressed himself upon the subject thus: "In a breeding experience of nearly 30 years' standing, during which I have made all sorts of experiments with pure-bred dams and wild sires, and returned them afterwards to pure sires of their own breeds, I have never seen a case of telegony, nor has my breeding stock suffered. I may further adduce the fact that I have made over 50 experiments for Professor Romanes to induce a case of telegony in a variety of animals—dogs, ducks, hens, pigeons, etc.—and I have hopelessly failed, as has every single experimenter who has tried to produce the phenomenon.[1]"

Various biologists have expressed opinions on the subject. Agassiz believed that the male influenced the ovaries of the female. Darwin, after dealing with the question of "the direct action of the male element upon the mother form" sums up with the words: "We have ..... seen that in the case of plants the male element may affect in a direct manner the tissues of the mother, and with animals may lead to the modification of her futury progeny."[2]

Romanes considered the evidence which he had collected "enough to prove the fact of a previous sire asserting his influence on a subsequent progeny."[3] He, however, came to the conclusion that it was an extremely rare occurrence, probably not taking place in more than 1 or 2 per cent. of cases.[4] Weismann does not believe in telegony, although he does not dispute its possibility, and he gives an explanation of how it might occur, which I shall refer to later.

Professor Cossar Ewart, who has for many years been carrying on breeding experiments to investigate, among other important questions, that of telegony, says: "Since I turned my attention specially to the subject, in 1894, I have, in addition to making experiments likely to give telegony the best possible chance of declaring itself, investigated a large number of alleged cases of 'infection.' The result, so far, is that the evidence in support of undoubted 'infection' having ever occurred is most unsatisfactory. In every case investigated the supposed 'infection' could be accounted for by the relatively simple reversion hypothesis, and the same hypothesis, I am now satisfied, is sufficient to account for what at first appeared as evidence of telegony in my own experiments. I do not by any means say telegony is impossible, that it never has occurred in the past, and never will occur in the future; but I think I am justified in saying 'infection' has never been experimentally produced, and that the kind of 'infection' so widely believed in by breeders, if not impossible, is at least extremely improbable—as improbable as the almost equally common belief that the colour of the offspring may be influenced by 'mental impressions,' as Laban's sheep and cattle are said to have been influenced by the peeled wands placed before them by his son-in-law, Jacob."[5]

Now the "tradition," as Weismann calls it, in which most breeders believe is that an "infected" animal "throws back" to the previous sire—that the subsequent offspring take after the first sire. These are expressions commonly used, but they convey no definite idea. Professor Ewart says that breeders believe in direct "infection," and the following example which he gives will indicate what he means by this: "My sable collie's pups to a Dalmatian have only four or five patches of colour, such as occur in foxhounds and pointers. According to the breeders' view of telegony, her next pups to a collie like herself should, if she has been 'infected,' be spotted like a Dalmatian."[6] He therefore evidently means by "direct infection" that the subsequent offspring will resemble the previous sire and not the offspring of the previous sire.

It is rather unfortunate, therefore, that he should have used the term "direct infection" in another sense in the following passage: "If telegony is due to the direct 'infection' of the germ plasm of the dam by the germ plasm of the first or of a previous sire, there seems no escape from the conclusion that the subsequent progeny should resemble the first offspring rather than the previous sire."[7]

Now in order to illustrate that breeders believe in the direct infection first referred to, Professor Ewart gives the following two cases which, he says, make this evident. "The race-horse Blair Athol had a very characteristic blaze.....It is said that mares, after having foals to Blair Athol produced Blair Athol-like foals to other sires utterly unlike Blair Athol. In the same way a fox terrier, after having pups to a Dalmatian had...spotted pups to a dog of her own breed."[8]...With great respect to Professor Ewart, in the absence of information as to the offspring to the first sire in each case, these examples, as stated, do not make his contention evident. Had he not drawn a distinction, by the illustration of the collie pups, between resemblance to a previous sire and resemblance to his offspring, the cases might have stood, but in view of that distinction they seem to be merely somewhat loose statements of cases of infection, and not to bind the person who states them to a belief in direct infection such as Professor Ewart suggests. I have indeed been unable to turn up anything making it clear that the general belief is such as Professor Ewart suggests and for the most part, breeders, in talking over the subject, do not seem very certain what "infection" does mean when the question is pressed home.

A few cases and opinions will make it clear that the idea of the resemblance of telegonous offspring to the previous offspring has long been current. "Mr. Giles put a sow of Lord Western's black and white Essex breed to a wild boar of a deep chestnut colour; the 'pigs produced partook in appearance of both boar and sow, but in some the chestnut colour of the boar strongly prevailed.' After the boar had long been dead, the sow was put to a boar of her own black and white breed—a kind which is well known to breed very true, and never to show any chestnut colour—yet from this union the sow produced some young pigs which were plainly marked with the same chestnut tint as in the first litter.[9]

Darwin mentions two other cases in which the subsequent offspring resembled the offspring of the previous sire, and also states that "farmers in S. Brazil.....and at the Cape of Good Hope.....are convinced that mares which have once borne mules, when subsequently put to horses, are extremely liable to produce colts striped like a mule."

Weismann[10] mentions the following case: "The philosopher Carneri mentions a case which came under his notice. He kept a herd of cattle of the dark grey Mürzthal breed. On one occasion he put one of the cows to a 'light-coloured Pinzgau' bull, instead of to one of the same breed. The cow threw a calf with the characteristic brown and white patches of the Pinzgau breed, as well as with distinct traces of the

[1] *Two Problems of Reproduction*, 1895, p. 20.
[2] *Animals and Plants under Domestication*, i, pp. 437, 438.
[3] *Contemporary Review*, April, 1893.
[4] *An Examination of Weismannism*, 1893, Appendix ii.
[5] *Penycuik Experiments*, p. lxviii.
[6] *Ibid.*, p. lxix.
[7] *Ibid.*, p. cxxxix.
[8] *Ibid.*, p. lxviii.
[9] Animals and Plants under Domestication, i, p. 436. [Taken by Darwin from *Phil. Trans. Roy. Soc.*, 1821, p. 23, where the words are "some of which we observed, with much surprise, to be stained and clearly marked with the chestnut colour which prevailed in the former litter."]
[10] *Germ-plasm*, p. 385.

'dark grey Mürzthal cross.' The cow was subsequently covered by a Mürzthal bull, and, contrary to expectation, the second calf was also a 'hybrid,' being for the most part grey, 'but possessing large brown spots like those of the Pinzgau breed.''

Now all such cases may be interpreted, as Professor Ewart had said, "by the relatively simple reversion hypothesis." What then did Millais mean by saying that he hopelessly failed to induce a case of telegony "as has every single experimenter who has tried to produce the phenomenon?" Did he mean that he had never seen a case of reversion? What did Romanes mean by saying that he had sufficient evidence "to prove the fact of a previous sire asserting his influence on a subsequent progeny?" Did he mean that he knew of direct infection, or was he referring to cases of reversion? It seems clear that the word "telegony" has been used in different senses, yet Weismann, who first used the word, makes it plain that he intended it to bear the meaning it had in Carneri's case, a resemblance of the telegonous offspring to the previous offspring. He explains his meaning as follows: Having mentioned a few cases he says, "such cases could only be accounted for, from our point of view, by supposing that spermatozoa had reached the ovary after the first sexual union had occurred and had penetrated into certain ova which were still immature. The immediate fertilisation of the latter is rendered inconceivable by the fact of their immaturity, and the sperm-cell must have remained in the body of the ovum until the maturation of the latter, with the nucleus of which it then united in the process of amphimixis. If this occurred some time after the first of the offspring was born it might easily have coincided approximately with the second coitus, from which the fertilisation would then apparently be due. If the "infection" were proved beyond a doubt, a supplementary fertilisation of an egg-cell in this manner must be considered possible. We certainly might then reasonably ask why mares, cows, or sheep should not occasionally become pregnant without being covered a second time. *But this has never yet been known to occur*, and I incline to Settegast's view that *there is no such thing* as an infection of this kind, and that all the instances which have been recorded and discussed critically by him are based upon a misconception.[11]

Thus telegony, according to Weismann, is merely a subsequent fertilisation by the first male, although Professor Ewart gives the following interpretation, which we venture to think erroneous: "Professor Weismann thinks telegony (if it occurs) is best accounted for by supposing that some of the germ plasm of the first sire reaches and penetrates some of the immature ova as well as the mature one from which the first embryo is developed. This germ plasm, instead of merely serving as so much nourishment to these immature ova, according to this view, retains its independence and eventually asserts its influence on the future progeny to a second and different sire."[12]

If, then, every case of telegony investigated is reducible to one of reversion, there seem to be three possible explanations:

1. That the reversion in the subsequent offspring was due to the influence of the previous sire.
2. That the reversion has masked or been mixed with telegony, or
3. That the reversion in the subsequent offspring after a cross was a mere coincidence.

1. There is one case which has occurred in Professor Ewart's experiments which has, I believe, been described as evidence against telegony. A skewbald Iceland pony, "Tundra," after producing a hybrid to a zebra, threw a foal to a bay Shetland, which not only showed no stripes, but was almost an exact likeness of its dam. If, however, we examine this case, we see a possible connection between the crossing of "Tundra" with the zebra and the strong prepotency she showed when mated with the Shetland pony. "Tundra," when young, produced a bay foal to a pony of her own breed; she was then mated with the zebra, and produced "a dark, faintly-striped, pony-like hybrid." She was covered again by the zebra, and the resulting hybrid was "so distinctly banded that it might almost pass for a zebra." She then produced the skewbald foal to the bay Shetland, and has since shown her prepotency again when mated with a bay Arab.

Now, of course it is possible that the first bay foal was begotten by an *extremely* prepotent male, but considering how prepotent "Tundra" has since shown herself to be, this explanation does not go for much. The prepotency of "Tundra" seems to have arisen after she produced her first foal, and it may not be unreasonable to connect it with her mating with the zebra.

If in all the other cases reversion in the second offspring was due to the previous sire's influence, the female must have been prepotent over her second mate since, in spite of him, she caused the offspring to resemble her own ancestors. The prepotency, therefore, of "Tundra" first becoming evident after she had been covered by the zebra may, after all, fall into line with the other cases.

2. As to the possibility of telegony being masked by or mixed with reversion, it has been suggested that the usual experiments should be reversed to "see if the progeny of a less highly specialised pair do not sometimes display traces of a previous union of the mother with a more highly specialised male," as "these effects could not be due to reversion."[13] There seem to be difficulties in this direction also, as the second mating, a cross, might produce reversion, and if it did not, apparent telegony might be due to a highly prepotent female.

In the case of "Tundra," at first sight, the first zebra hybrid being dark, pony-like, and faintly striped, is hopeful for telegony. A Clydesdale mare, however, which had not had a previous foal, threw a hybrid to the same zebra which was quite as faintly striped as Tundra's first hybrid. The only possible point in favour of telegony seems to be that "Tundra's" first hybrid is "the darkest of all the hybrids," and whether this is due to the previous mate, the Iceland pony, it seems impossible to say; at any rate, Professor Ewart does not suggest it.

3. As to the third possible explanation, that the occurrence of reversion in the subsequent offspring after a cross is a mere coincidence, there is little to be said. Reversion as a result of crossing is not uncommon, but reversion in pure-bred offspring is less common. It is strange that reversion has occurred in pure-bred offspring after a cross in many cases, but whether it is coincidence or cause and effect is not likely to be known until we have a clearer understanding of the laws which govern that complex problem, heredity.

[11] *Ibid.*, p. 385.

[12] *Penycuik Experiments*, p. cxxxviii.

[13] A Note on Telegony, Xenia, and Hybrid Cology, *Nat. Science*, May, 1899.

## REFORM OF THE ARMY MEDICAL SERVICE.

We have received from Dr. Edward Thompson, of Omagh, M.P. for North Monaghan, the following suggestions for the reform of the medical service of the army. Dr. Thompson states that nearly all the suggestions are the result of correspondence with army medical officers:—

*Name of Corps.*

Royal Surgeons, or Royal Medical Corps. The word "Army" is not necessary. Royal Surgeons seems the more favourite title, as it assimilates the medical corps to the other scientific corps of the army, namely, the Royal Artillery and Royal Engineers.

*Badge of Corps.*

The present badge of the R.A.M.C. is hideous and universally condemned. A committee of the senior surgeons of the R.A.M.C. should be asked to select a suitable badge and motto.

*Uniform of Corps.*

Blue, with red facings. The present purple facings are strongly objected to.

*Home of Corps*

should be at Netley. Same as Artillery and Engineers at Woolwich and Chatham. The whole training of the officers in drill, equitation, and sanitation, etc., should be carried out at Netley, to effect this object Netley should be brought in every way thoroughly up to date.

*Band at Netley.*

A band should be established at Netley. Same Government grant given to it as at Woolwich and Chatham.

*Entrance to R.A.M.C.*

By nomination by different medical schools in proportion to standing and importance of schools, every effort should be made to encourage university medical graduates. As soon as the depleted condition of the corps is remedied, entrance to it should be—as before—by competitive examination.

*Nature of the Examination.*

It should be remembered that candidates for the R.A.M.C. are all qualified physicians and surgeons; it is therefore quite unnecessary to examine them in elementary subjects such as chemistry, materia medica, or even in anatomy and physiology. The examination should be thoroughly practical and searching in medicine, surgery, and sanitary medicine. Until the R.A.M.C. is effectively officered the examination on completion of the Netley course should determine the position of the candidate as regards seniority.

*Physical Examination*

should be careful and searching on account of the severity of the work entailed on the army surgeon.

*Rank and Title.*

The Medical Department of the Army should be freely recognised by the War Office as a scientific corps and treated in every respect as such. There should be no holding back of either position or privilege. To effect this object the Royal Surgeons Corps—the best title—should take rank next to the Corps of Royal Engineers, and be so placed in the Army List. Until this is conceded neither the officers of the corps or the medical profession will be satisfied. It is, in fact, a *sine quâ non* of a successful ending of the present most unsatisfactory controversy.

Army rank and title must, of course, be fully preserved. Any interference with either would cause immediate and numerous resignations, and prevent any but the very worst class of candidate joining the Army Medical Service. It should never be forgotten there is no more expensive commodity than an inefficient and half-educated surgeon. The medical department should—subject, of course, to military authority and discipline—be placed under the control of its own head and officers, and their orders and recommendations enforced on the other departments of the army. The Director-General should rank as a Lieutenant-General and have equal pay and allowances. He should form one of the Army Board, same as adjutant-general, quartermaster-general, etc., and have free access to the Secretary of State for War.

*Pay and Allowances.*

All my correspondents complain of the present rate of pay and allowances, which must be increased if success is to follow the reorganisation of the department. For more than twenty years there has been no increase of pay, notwithstanding the increased cost and length of the medical curriculum, and the consequent increase in the value of the qualified surgeon. In considering this very important matter, it should not be forgotten that young surgeons can easily secure appointments worth £200 per annum almost immediately they are qualified, with rooms, fire, light, attendance, and food. The rate of pay proposed by most of my correspondents is as follows:

£250 per annum on joining corps.
£300 " after five years' service
£350 " after ten years' service
£400 " on promotion to major
£450 " after fifteen years' service
£500 " after twenty years' service.

Promotion beyond that of major should be by careful selection by a satisfactory promotion Board; the two divisions of lieutenant-colonels should be abolished; there should be a fixed number of colonels and lieutenant-colonels, and the senior grades should form the administrative department of the corps. The pay of a

Lieutenant-colonel should be £600 per annum and allowances.
" " " £700 after five years' service and allowances.
Colonel " £800 per annum and allowances.
" " " £900 after five years' service and allowances.

Every medical officer in India should be allowed horse allowance. Indian pay and allowances require especial attention I have received a memorandum which goes fully into this most important matter.

*Medical Officers of H.M. Guards.*

The present plan of appointing favoured medical officers to the Brigade of Guards should be abolished. It is a senseless plan, and causes much heart-burning. All medical officers should belong to one corps. (It is absurd to have special compound titles for the medical officers of the Guards.)

*Half-pay Appointments*

are generally approved of, and should be retained as at present.

*Principal Medical Officer of Army Corps or Division.*

The principal medical officer of army corps or division should have a recognised position on the staff of commanding officer, and all orders on sanitary or other matters touching the health of the troops (subject of course to the fiat of the commanding officer) should be distributed by him to the commanding officers of regiments or other officer in charge of troops. If this is not done, and the orders of the medical officer are not enforced, serious dangers are certain to arise. At present the suggestions of the army medical authorities are as a rule completely ignored.

*Examination for Promotion.*

Before promotion to the position of major or lieutenant-colonel there should be a thorough and searching examination.

*Formation of Messes.*

At all large stations medical officers should be obliged to form messes and live in barracks, and thus encourage social intercourse, which is so essential to discipline and *esprit de corps*. With this object in view, unmarried officers should be sent as much as possible to large stations, and the senior medical officer should be responsible that the mess is properly conducted. The Government should give the same allowance to R.A.M.C. messes as to those of other branches of the service in proportion to numbers. At all military hospitals, as is now the rule in naval hospitals, the resident medical officers should form a mess. At present army medical officers live generally in lodgings separated from each other and inimical to military discipline, to their own detriment and the good name of their corps.

*Medical Officers to be Attached to Regiments.*

There is a difference of opinion on this subject, but the great majority of my correspondents consider it would be a distinct advantage if the young medical officer as a matter of course was, after passing through Netley, attached to a regiment for two or three years. The training thus received would increase his knowledge of discipline and make him acquainted with those unwritten rules of military society which would help him greatly during his military career by developing those social qualities and manners which are so essential to success in after-life and so beneficial to the service generally.

*Strength of Corps*

should be raised to at least 1,400 officers. The undermanning of the corps has caused a great deal of dissatisfaction, by increasing the length of foreign service and preventing the usual furlough which is granted to all the other branches of the army service.

*Incessant Moves*

are greatly complained of. An officer when appointed to a certain position should be allowed to retain it as long as possible.

*Leave.*

An officer should be entitled to two months' leave every year.

*Equalisation of Home and Foreign Service.*

The non-realisation of this essential condition is universally condemned and resented. My correspondents unanimously consider five years foreign service should entitle the officer to at least five years at home, but all would be satisfied if the regulations definitely declared that five years service

abroad entitled the officer to three years at home, except, of course, in case of emergency.

*Routine Work and Returns.*

should be greatly simplified. Much of the labour which is now thrown on the medical officer could be omitted altogether or else carried out by a clerk.

*Supplies*

A medical officer should be empowered to obtain from certain fixed depôts the medical instruments and surgical appliances necessary without the delay and correspondence entailed under the present system or rather want of system.

*Excellence of Work.*

Medical officers should be encouraged in every possible way to excel in their work, which should be the only door to promotion to the higher grades of the service. With this very desirable and necessary object in view, officers should be advised to take out post-graduate courses of study at the various recognised schools of medicine, the cost of which should be defrayed by the State, after the authorities have been satisfied that the medical officer has fully and satisfactorily availed himself of the advantages offered him. The special departments of medicine and surgery should also be encouraged. Thus, if a medical officer obtains a qualification as an expert in diseases of the eye, ear, and throat, women and children, etc., or as an operating surgeon, his proficiency should be recognised by a small addition to his scale of pay, say 2s. per diem.

*Reserve of Officers*

should consist of two grades: (1) All retired military medical officers (except those who have left the service on a gratuity) up to the age of 50; (2) civil surgeons and physicians. A retaining fee of £40 per annum should be offered to certain classes of civil doctors. None should be eligible except those who have served as house surgeons or physicians for at least twelve months, or who have been engaged in private practice for five years. On entry candidates should be obliged to pass a searching practical examination in medicine and surgery, and should go through a course of training at the Military Medical Depôt at Netley. The age of entry should be between 28 and 35, and no officer should be allowed to serve beyond the age of 45. They should rank according to length of service with the officers of the R.A.M.C., and might be styled Reserve of Royal Army Surgeons, and have a distinctive uniform. I believe there would be keen competition for entry into this corps, which should consist of only picked, able, and experienced men.

*Indian Medical Service.*

There should be no amalgamation with the Indian Medical Service. It would be very unpopular.

*King's Cadets.*

The Director-General should have the power to nominate a certain number of the sons of naval and military officers who have proved themselves duly qualified.

*Honours.*

The R.A.M.C. officers should be qualified for any honour open to any other branch of His Majesty's naval and military forces. It is a stigma on the army surgeon as well as on the medical profession that medical officers are not considered qualified for some of the higher honours granted to other branches of the service.

*Entrance to Naval and Military Clubs.*

There are some naval and military clubs which exclude a medical officer simply on account of his profession. All my correspondents complain of such conduct on the part of these clubs, and consider the Secretary of State for War and the Commander-in-Chief should refuse to recognise any club which retains amongst its rules such a discreditable and unnecessary proviso. It is a most insulting brand to place upon probably the most important department of the army, and one which in the past has always performed its difficult duties with efficiency and a devotion second to no other corps in His Majesty's army.

*Militia and Volunteers*

should have a medical corps of their own to which all officers should first belong, and from which they should be nominated to the charge of regiments. The militia and volunteer surgeons corps should be under the control of the Director-General.

Many of my correspondents consider Netley very antiquated and out-of-date, and believe if it is to be retained as the great central home of the R.A.M.C.—the equivalent, in fact, for the Army Medical Service of Woolwich for the artillery and engineers—it should be greatly improved and brought up to date in every particular. It is also suggested that the army medical candidate should be sent first to Aldershot for field and ambulance training and then to Netley. This seems a very doubtful proposal; it seems to me and many others that it would be a much better arrangement if Netley could be so enlarged and improved that the education there afforded, both professional and military, would be consolidated, and Netley made in reality the home of the R.A.M.C. It is impossible to over-estimate the beneficial results which would result to the *moral* of the medical service of the army if this suggestion was properly worked out.

*Period of Probation.*

Considering the method of selection of candidates for th R.A.M.C., there should be a strict probationary period of service. The confirmation of the candidate's right to a commission should depend upon the report of those who have had the opportunity of observing his conduct at Netley, Aldershot, and elsewhere. The probationary period need not exceed twelve months.

There are, of course, hundreds of matters of detail which I have not ventured to mention in this report which require close attention if the reorganisation of the R.A.M.C. is to be thorough and effective. The Commission should remember that the whole medical world as constituted in these countries is watching with keen interest the proposals which will be made to improve the army surgeon's position and prospects. The profession supports the just claims of the army surgeon to an improved social position and emolument, because it knows that its own social standing is intimately associated with the position the army surgeon holds in the estimation of the military authorities. Therefore it behoves the Commission and those who are in authority, both at the War Office and Horse Guards, to understand that any slight or any inequality of treatment of the R.A.M.C. in comparison with the other scientific corps of the army will be resented not only by the army surgeon, but by the whole medical profession of these kingdoms. It is time the tinkering which has destroyed the Army Medical Service in the past was put an end to, and the jealousies of those in high military positions once for all stayed. The army cannot exist without its doctors, whereas the doctors can get on quite well without entering the army. Whatever is to be given to the R.A.M.C. should be given freely and ungrudgingly, and if this is done the Commission may rest assured its labours will not have been in vain, and that the result will be satisfactory and permanent.

# THE PLAGUE.

## Prevalence of the Disease.

India.

In the city of Bombay plague continues to increase, and according to the accounts given in the Indian papers most of the districts of Bombay during the third week of August were afflicted by plague. During the week ending August 24th, 207 deaths from plague occurred in Bombay. The Benares and Ballia districts are now free from plague, and the restrictions consequent upon the presence of plague have been removed. The disappearance of plague from Benares is a most fortunate occurrence. The filthy abodes, the tendency to frequent overcrowding owing to the influx of pilgrims, and the gathering of peoples from all parts of India, rendered the contamination of the city by plague a lasting danger to the whole of India. The disappearance of the disease from this city affords an example of the peculiar behaviour of plague; its stay seems dependent upon some other properties than dirt and overcrowding.

On August 17th plague was reported to be steadily increasing in Mysore city. In consequence, a large number of houses are being demolished in the more crowded localities for the opening up of new streets.

Egypt.

During the two weeks ending August 18th and 25th, 6 and 3 cases of plague respectively occurred in Egypt, and 3 and 2 deaths respectively

from the disease. Five of the cases and 2 of the deaths, all among Europeans, were reported during the week ending August 18th, from Alexandria, and 1 case and 1 death from Port Said, a native. During the week ending August 25th a further case of plague in a European was reported at Alexandria. At Zagazig no case of plague has been reported since August 9th. The eradication of the disease from Zagazig is a very satisfactory fact, and one upon which the Director General of the Sanitary Department and his staff are to be congratulated. We hope that when their attention is devoted to Alexandria the same success will attend their efforts as in the case of Zagazig.

On September 2nd there were, according to a Reuter's telegram, but 5 cases of plague in all Egypt, of which 2 were at Port Said, 2 at Mit Gamr, and 1 at Alexandria. Since the outbreak in April 7th, 1900, 132 cases of plague have been reported in Egypt, of which number 60 died.

At Port Said for many weeks past numbers of dead rats have been found. They have been proved to be infected with plague in most instances, and plague in human beings seems to be especially prevalent where dead rats abounded. On August 18th their numbers were reported to be diminishing.

MAURITIUS.

For the weeks ending August 23rd and 30th and September 6th the plague cases in Mauritius were reported to be 2, 5, 0, and the deaths from the disease 2, 2, 4 respectively.

CAPE OF GOOD HOPE.

During the week ending August 31st Port Elizabeth was the only town in South Africa from which plague was reported: 4 cases of plague occurred and 3 deaths from the disease at that port.

HONG KONG.

During the weeks ending August 24th and 31st and September 7th the number of fresh plague cases in Hong Kong were reported as 3, 3, and 6 respectively. During these weeks also the deaths from the disease numbered 2, 3, and 6. On August 23rd the Governor of Hong Kong reported that plague was not epidemic in the colony, and that clean bills of health were being issued.

# OBITUARY.

## J. L. W. THUDICHUM, M.D., F.R.C.P.

DR. J. L. W. THUDICHUM died at his residence, 11, Pembroke Gardens, Kensington, on September 7th, from cerebral hæmorrhage.

Ludwig Johann Wilhelm Thudichum was born at Büdingen in 1829, and in 1847 went to the University of Giessen, and subsequently to that of Heidelberg. In 1850 he acted as Volunteer Surgeon with the Schleswig-Holstein army, and was Assistant Surgeon to Field Hospital No. 4 at Kiel during the Danish war. In 1851 he obtained the degree of M.D. of the University of Giessen with a thesis on fractures of the upper end of the humerus.

He commenced practice in Giessen, but his attention had already been turned to the study of chemistry by the influence of Liebig, then in the height of his celebrity as Professor of Chemistry at Giessen. In 1853 Thudichum settled in London, and in the following year obtained the diploma of M.R.C.S.Eng.; in 1856 he became Physician to the St. Pancras Dispensary, and in 1858 was appointed Lecturer on Chemistry in the Grosvenor Place School of Medicine, a position which he retained down to the abolition of this School in 1863. He became M.R.C.P. in 1860 and F.R.C.P. in 1878. In 1865 he was appointed Lecturer on Pathological Chemistry at St. Thomas's Hospital, and Director of a newly-founded chemical and pathological laboratory there.

His studies in the changes produced by disease in the chemical actions of the body had already attracted the attention of Sir John Simon, then Principal Medical Officer to the Privy Council, who in 1864 engaged him to undertake a series of researches, the results of which were embodied in a series of "reports on chemical researches to promote and improve identification of disease." These reports were published as appendices to the reports of the medical officers of the Privy Council and the Local Government Board, and appeared at various dates down to 1882. It is possible that Thudichum attempted in these researches too much more, that is to say, than the then state of physiological chemistry had rendered it possible to achieve; at any rate, the results were not generally considered to correspond adequately to the time and money which they cost, and his views have not, we believe, been generally accepted by other workers in this field of chemistry. In 1871 he published, jointly with Dr. A. Dupré, a treatise on the origin, nature, and varieties of wine, and in the following year a manual of chemical physiology.

Later in life he gave special attention to diseases of the nose, and to the use of electricity in the treatment of disease. It would be impossible to enumerate all the publications which flowed from Dr. Thudicum's fertile pen, but he published a treatise on the chemical constitution of the brain in 1886, and in the same year published a work in German on anatomical and clinical chemistry. Dr. Thudichum was a man of genial disposition, and numbered many sincere friends, and if his life-long labours in physiological chemistry do not appear to have borne adequate fruit, it must be remembered that the subject when he took it up was almost untouched, at any rate, in those particular fields to which he more especially devoted himself.

## P. J. MOLONY, M.D.,

Wickham, Hants, and Cragg, co. Clare.

To few medical men, a friend writes, is it given to act in so many parts and do so well in all as did Dr. Molony, who died at Southampton on August 26th at the age of 62. By his father's early death he succeeded when very young to an ancient family estate in co. Clare, and, when little more than a boy, entered the French army, but, finding there much that accorded ill with his earnest straightforward character, soon returned to Ireland. He there threw himself ardently into sport, kept a pack of hounds, and few were more renowned in his own and the neighbouring counties during the late Fifties and early Sixties as a cross-country and steeple-chase rider than "The O'Molony," as he was then designated in recognition of his being chief of his name. He left Clare in 1862, and for four years travelled through most of the civilised world, became a skilled mariner, and hunted large game in the Rockies and elsewhere. Returning to Ireland in 1867 he entered Trinity College, Dublin, in the following year, and there his career, for a middle-aged man who had left school at 15 and never studied since, was extraordinary. In four years he had obtained a modern language prize (at entrance), matriculated B.A. as first respondent, M.B. and M.Ch. first place, won the senior medical exhibition of T.C.D. School of Physic, rowed in all the first-class matches of the University Rowing Club, and had seen a good deal of Dublin society. He subsequently graduated as B.A.Cantab. and M.D.Dub.

He commenced practice in the town of Cambridge, where in spite of rapidly-increasing professional work he found time to take part in many rowing contests, and to coach some of the college crews. Such unending work could not but tell even on his iron frame, and after some years he thought it wiser to dispose of his practice and take a year's rest, and it was characteristic of him that this "rest" should have been mostly devoted to hunting kangaroos and other marsupials in Australia. On his return he purchased a practice at Wickham, Hants, where his great energy found ample scope in a quickly-growing practice, hunting, and golf, with an occasional experience of mimic warfare as an officer in the Hampshire Yeomanry.

He obtained the Commission of the Peace for his native county before he took up a profession. Built on colossal lines, his strength was rivalled by his energy and mental power. He retired from practice about a year since, and bore a long and painful illness with the utmost fortitude.

WE regret to announce the death of Mr. HERBERT R. BRACEY, M.R.C.S., L.S.A., of Birmingham. He was the youngest son of the late Mr. Charles Bracey, a well-known practitioner of that city, and received his preliminary education at King Edward's School. He studied medicine at Queen's College, Birmingham, and afterwards at St. Thomas's Hospital, London. He was admitted a Member of the Royal College of Surgeons of England in 1872, and in the same year obtained the licence of the Apothecaries' Society. He commenced his professional career as a medical officer to the Peninsular and Oriental Steamship Company, and in that capacity made several voyages to India and the Far East. He afterwards succeeded to his father's practice in Birmingham. Mr. Bracey's professional skill made him widely known, and his genial manner and true kindness of heart won for him the personal regard of his patients. He leaves a widow, and a son who has just entered on the study of medicine in the University of Birmingham.

## BRITISH MEDICAL ASSOCIATION.
## SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

# British Medical Journal.

SATURDAY, SEPTEMBER 14TH, 1901.

## SMALL-POX IN LONDON.

Though the last published figures of the number of cases of small-pox admitted into the hospitals of the Metropolitan Asylums Board show a considerable decline, it would, we feel confident, be a mistake to found on this any very sanguine expectation that the outbreak of small-pox in London is coming to an end. In the eight weeks ending September 7th 135 cases of small-pox were admitted into hospital, and of this number 113 were admitted during the last three weeks of the period; the number for the week ending August 24th was 30 cases, August 31st 52 cases, September 7th 31 cases. It would be rash to assume that the decline shown last week will continue, and, as a matter of fact, we learn that in the first three days of this week 25 cases were notified, 6 on Sunday, 10 on Monday, and 9 on Tuesday. The cases admitted during the last eight weeks have not been limited to any one part of London; they have come from St. Pancras, Wandsworth, Marylebone, Bethnal Green, Islington, Hackney, Southwark, Paddington, Hammersmith, Lewisham, Westminster, Hampstead, Holborn, Finsbury, Chelsea, Stoke Newington, Lambeth and Kensington. This alone, by the mere multiplication of foci of infection, constitutes a source of danger.

But there is another point with regard to the present position of London which must give cause for anxiety: it is that the number of unvaccinated children has been steadily increasing for some years past, and is now undoubtedly very large. Dr. Climson Greenwood, the President of the Society of Public Vaccinators, has put down the proportion of unvaccinated children in elementary schools as one-third, and there are grounds for believing that this estimate is not excessive. We find, on reference to the last report of the Medical Officer to the London County Council, that the proportion of children unaccounted for in respect to vaccination has increased steadily since 1888. In that year it was 10.3 per cent. of total births; in 1892 it had risen to 18.4; and in 1897, the last year dealt with in the report, to 29.1. The number of persons over 10 years of age vaccinated in infancy who have not been revaccinated must also be very large, and will swell the percentage of the population of London specially liable to contract small-pox and to suffer from it in a severe form. Hitherto the statistics, so far as they are available, do not show any special incidence on childhood, but rather the contrary; it must be remembered, however, that the outbreak commenced before the Board schools assembled; the schools opened for the most part on August 26th, and the returns for the next few weeks will be awaited with anxiety.

The medical officers of health of the London boroughs are taking all the precautions in their power, and every case is isolated as soon as it becomes known to the sanitary authorities, but the machinery for dealing with small-pox in London is clumsy, and, owing to the number of authorities concerned, delays are almost inevitable. When the medical officer of health learns of the existence of a case of small-pox, he communicates on the one hand with the Metropolitan Asylums Board to arrange for the immediate removal of the patient to hospital, and on the other with the vaccination officer, whose duty it is to communicate with the public vaccinator, and invite him to offer vaccination to all persons who may have been in contact with the case.

In view of the large proportion of Londoners who are unvaccinated or not revaccinated, it would seem that, at any rate in any district in which cases have occurred, it would be desirable that a house-to-house visitation should be made in order to induce the inhabitants of neighbouring houses or streets to be vaccinated or revaccinated as the case may be. To do this it would be necessary to appoint assistants to the public vaccinator, and this has, we understand, been done in Marylebone; but the system ought to be carried out systematically throughout London, in view not only of the present prevalence of the disease, but of the possibilities of recurring outbreaks in the future.

At a meeting of the managers of the Metropolitan Asylums Board last Saturday, a letter was read from Mr. Wynter Blyth making a suggestion of some interest with regard to the diagnosis of modified cases of small-pox. The practice of vaccination has a double effect in rendering difficult the recognition of variola. In the first place, according to the measure in which it is carried out, it diminishes the prevalence of small-pox and increases the interval between epidemics. Everything, of course, which acts in that way lessens the opportunities of studying and becoming acquainted with the disease. In the second place vaccination so modifies and minimises the symptoms of small-pox in those who are insufficiently vaccinated to prevent attack as to make the nature of the disease very difficult to determine in many cases.

The present policy of the Metropolitan Asylums Board is that on a notification being received the patient is at once removed to the Board's wharves on the Thames, where a careful examination is made by a medical man of exceptional experience, and the case is then dealt with according to the opinion he forms regarding it. The Board encourages medical practitioners to have no hesitation in intimating any case as to which they have even a suspicion of small-pox, so that there is little need for a private practitioner to keep a patient under observation in his own home. This, however, does not meet the whole difficulty, as some cases may be so slight that the medical practitioner in attendance may have no suspicion whatever of the nature of a very much modified case, or may prematurely form a definite opinion that a case which ultimately turns out to be variolous in nature belongs to some other category of

disease. In these circumstances Mr. Wynter Blyth's suggestion is that the Board would do good service by publishing a series of life-size lithographs, drawn and coloured by competent artists, and accompanied by a clinical account, of selected cases of difficult diagnosis. Such a monograph, he believes, would command a sufficient sale to cover the cost of production. Wax casts, he points out, would be still better means of education, but these would be costly, and could only be kept for consultation in a museum.

A good deal can be said for the proposal. At first sight there may be a tendency to reject any suggestion that the medical men of London should be educated by the Metropolitan Asylums Board, but such objection will scarcely stand examination. The fact that small-pox has been of recent years so rare in London is a matter for congratulation, and if it were to become as rare as plague no practitioner would have any hesitation in admitting his unacquaintance with its manifestations. The present proposal is made by a medical man, and the publication would be essentially medical. Needless to say every textbook already deals with the diagnosis of small-pox from chicken-pox, measles, and so forth, but there is quite room, in addition to all that has been published, for such a monograph as is now suggested. Too much, however, must not be expected from any work of the sort. Sometimes in modified small-pox the individual has no suspicion of his disease, and such cases would still remain a risk to the community.

Once in a while, also, it is possible that an unscrupulous man may have a shrewd guess of the nature of one or two pimples appearing on his forehead or wrists, but, feeling perfectly well himself, and being anxious to continue at his employment, and being either sceptical of the possibility of infection of others from anything so trivial, or else being callous enough to disregard the public safety, he may spread small-pox in a manner quite baffling to all detective efforts. Nothwithstanding these obvious possibilities, and the fact that much modified small-pox is sometimes capable of deceiving the most expert, Mr. Wynter Blyth's proposal, if carried out, might sometimes be genuinely useful as a help towards the prevention of the spread of small-pox in London.

## ENTERIC FEVER IN INDIA.

SURGEON-GENERAL HARVEY'S annual report for 1899, which was issued a few months ago, contains much interesting information with regard to enteric fever in the British army, chiefly in the form of extracts from the reports of medical officers, which are worthy of careful analysis. Both the number of cases and the death-rate showed a great decrease in 1899, the admission ratio per 1,000 falling from 36.9 to 20.6, and the death ratio from 10 17 to 5.14. This marked decline cannot apparently be attributed to sanitary improvements, but only to a great decrease in the influx of young and susceptible material, the number of men arriving in India having fallen from 16,911 in 1898 99 to 3,369 in 1899-1900, a difference of over 12,000, or nearly one-fifth of the total European force in India. During the first year of residence in India 5 per cent. of our soldiers suffer from enteric fever, so that the fall of the admissions for enteric fever per cent. from 2.57 in 1898-99 to 1.79 in 1899-1900 is fully accounted for by this great reduction in drafts on account of the South African war, and when the accumulated time-expired men are relieved by young men, a great rise in the number of enteric cases may be expected unless more effective sanitary measures are carried out than in the past. For this reason alone it is of special importance to see what lessons can be derived from the last recorded year's experience.

Dealing first with the question of water supplies, we regret to find continued disappointing results from the great efforts made in this direction. Although in Delhi a good water supply is accompanied by little enteric, while a marked decrease of enteric in Jullundur is attributed to the care with which all drinking water was boiled and treated with permanganate (although in the last case the fact that a large number of young troops were sent to the hills was a factor probably equally or more potent); yet, on the other hand, very discouraging results were obtained from the same measures in Barrackpore, Chakra, Wellington, Jhansi, and other places. In the last-named place during the two and a-half years preceding the introduction of these methods 48 cases of enteric occurred, while the same period during which they were in force yielded 112 cases. The main cause to which such failures are attributed is the difficulty in cooling the water again so as to make it palatable without exposing it to infection through dust, etc., Mr. Hankin having found the enteric organism in one out of four specimens of water which was said to have been boiled and treated with permanganate. At Agra the experiment of giving up the use of municipal filtered water for the troops and reverting to carefully protected and regularly permanganated wells continued to be successful, the few cases of enteric in this cantonment having been attributed to infection in the bazaars, which are supplied with the municipal water, in which the enteric organism was detected by Mr. Hankin in every month between March and September, 1899, although it was never found in the cantonment well water. The defect in the Agra water supply, as well as in that of Lucknow and other Indian towns, is that the intake is too close below large native villages, as proved by the enteric organism having been found by the same observer no fewer than ten times in the river Jumna water close above the intake of the Agra waterworks. In this connection it is important to note that since the introduction of municipal piped water into the Agra cantonment in 1894 the number of admissions for enteric have more than doubled—a fact which may, perhaps, explain the recent controversy as to whether filtered water increases or decreases the prevalence of malarial fevers, the increased mortality under the very elastic heading "fevers" in some of the towns of the North-West Provinces being due to enteric and not to malarial fever.

Leaving on one side the perennial question of the amount of infection which takes place in bazaars, which although undoubtedly an important factor, is one which it is very difficult to estimate accurately, we may pass on at once to the consideration of the evidence on the very important question of infection through dust. In writing on the previous year's report,[1] an outbreak of enteric at Quetta was described, which was attributed to dust

[1] BRITISH MEDICAL JOURNAL, November 10th, 1900, p. 1391.

storms from the direction of neighbouring filth pits, and in the present report it is stated that the outbreak ceased on the removal of this source of infection. although another outbreak was reported in 1900, the particulars of which are not yet available. In Jhansi enteric is reported to prevail only in the dry months, while an unusual prevalence in Nasirabad is put down to the exceptional dryness of the year and the frequency of dust storms, and that, too, in spite of boiling and permanganating the water. High winds and dust storms were also noted at both Mhow and Rawal Pindi during the height of the enteric season, while on the other hand Rookee had very little enteric. an immunity attributed to its comparative freedom from dust. In this connection, the following instances of proximity to fæcal or urinary deposits in relationship to the prevalence of enteric are of interest. In Bangalore the introduction of a new water supply failed to reduce the number of cases. The source of infection was thought to be an open sewer and a night-soil deposit to windward of the barracks, and the irrigation of lucerne grass by sewage; the disease decreased three weeks after the remedying of two of these sanitary defects. At Ahmednagar the filth pits were situated 2,000 yards to windward of the barracks, while the cantonment excreta were deposited only 600 yards from the artillery lines, and enteric prevailed from the time that the winds blew from this direction. The removal of this source of danger is said to be under consideration. At Cherat the night soil was mixed with refuse, and dried in heaps before being incinerated, and enteric occurred in the cantonments at the time of high winds and abundant flies at this end of the cantonment, but ceased, except for a single case, when the water and cookhouses were protected from dust and flies, and the drying up of the night soil was stopped. At Kailana, in the hills, two latrines near the kitchens were removed and the site disinfected; cases still occurred near this place both before and after the rains, although not during the wet weather, but ceased when the men were removed from the neighbouring barracks—a most instructive case in view of recent work showing the occasional long infectivity of the urine after enteric.

The important question, then, is this: How far can the steady increase of enteric fever in India be attributed to a continuous pollution of the soil of the cantonments? In answering this question the undoubted influence of wars, and the increased yearly drafts of young soldiers under the short-service system, must be fully taken into account. If we examine the figures for the last three decades, we find a marked increase during the Afghan war of 1878-80, the Burmese one of 1885-6, and in the frontier campaigns of 1897-8, but as one occurred in each period they balance each other to a great extent. Turning, then, to the relationship between the average number of soldiers arriving in the country in relationship to the average death-rate from enteric fever in each decade, we find that between 1870-79 the new drafts averaged 9,103, and the enteric mortality 2.03; in from 1880-89 the figures were respectively 12,457 and 3.67; and in from 1890-99 14,210 and 6.54. These figures appear to show a greater increase in the mortality during the last decade than might have been expected in proportion to the increase of the new arrivals, and thus points to progressive pollution of the soil as an important factor in increasing the disease. If this conclusion is correct (leaving out of consideration for the time protective inoculation), the checking this contamination, in view of the recent work tending to prove that Eberth's bacillus can live in polluted soil, resolves itself into destroying by fire all the excrement of those living in cantonments, and prohibiting trenching of night soil near them—a somewhat troublesome measure, which, however, deserves a careful trial.

## GUNSHOT WOUNDS OF THE STOMACH.

The recent dastardly attack on the President of the American Republic will, doubtless, call attention to the modern advances in the treatment of abdominal injuries, and to the treatment of wounds of the stomach in particular. The details given in the bulletins of the extent of the wounds inflicted upon Mr. McKinley are meagre and incomplete, but they are at least sufficient for us to say that the treatment of the case in its promptitude and complete efficiency will rank as one of the greatest achievements in abdominal surgery yet recorded. Two wounds were inflicted by the assailant: the one small and comparatively trivial in the chest-wall, was caused by a bullet which "glanced off the sternum"; the other situate in the upper port of the abdomen, penetrated the entire thickness of the abdominal wall. An exploratory operation was performed within an hour. It was then found that the bullet had passed through the stomach, had wounded both the anterior and posterior walls and had then become buried in the muscles of the back. The openings in the stomach were sutured. The bulletins issued since the operation have been increasingly reassuring and it would seem that a good result of the operation is now almost certain.

A sharp contrast must be drawn between the treatment of bullet wounds received in the South African war and those received in civil life. There has gradually grown up, during the last year or more, a belief, doubtless founded upon the experiences of the war, that gunshot injuries of the abdomen may safely be dealt with by the expectant method. The conditions, however, in warfare and in civil life are widely different. The Mauser rifle used by the Boer discharged a small-calibre bullet with an exceedingly high velocity. The wound inflicted was rather the result of cleavage of the tissues than of actual destruction. It was soon found that in traversing the stomach or other abdominal viscus the wounds were so small that they might safely be left to the power of self-healing possessed by the peritoneum. The lessons of the war have no application in civil life. The weapons with which wounds are inflicted are often crude in type and coarse in their results. There is no cleavage, but rather a tearing and disruption. The wounds in hollow viscera are gaping, and the contents are therefore free to escape. In all such cases the indication for immediate operation is imperative. If no visceral lesion is discovered no harm results; if the stomach or bowel have been torn the wounds can be stitched before the peritoneum is overwhelmed by a bacterial invasion.

The character of the wounds is not the only factor to be taken into account. In the case of the stomach, as of the

intestine, the condition of emptiness or repletion is of chief importance. The investigations of Hamburger, Kitasato, Finney, and others, have shown that all the pyogenic organisms may, at one time or another, be present in the stomach, and that the stomach, even when empty, is rarely, if ever, sterile. The rapidity of onset and the virulence of a peritonitis resulting from leakage from the stomach will, therefore, depend in no small degree upon the quantity and character of the food present in the organ at the time of the injury. In Mr. McKinley's case the stomach is said to have been almost empty.

Cases of successful operation for gunshot wound of the stomach have been recorded. A. B. Johnson relates the case of a man shot in the abdomen by a revolver held against the front of the abdomen. An operation was performed and wounds of the anterior and posterior walls of the stomach, the mesentery, and the jejunum were all sutured. The operation was begun an hour and three-quarters after the receipt of the injury. Woolsey records a case in which he sutured two wounds of the stomach, two of the transverse and two of the ascending colon. The question of multiple wounds must always be considered, for a case is reported in which two wounds of the stomach were sutured, while from a third undiscovered wound leakage occurred which proved fatal.

While joining fervently in the hope universally expressed for the recovery of the American President, we cannot forbear to offer our warmest congratulations to the surgeons who by their skill and promptitude have made that recovery possible.

## THE BRITISH ASSOCIATION.

The annual meeting of the British Association was opened on Wednesday evening, when the retiring President, Sir William Turner, introduced the new President, Dr. A. W. Rücker, the newly-elected Principal of the University of London, who delivered his presidential address, which he devoted to a consideration of the atomic theory and its defence against certain destructive critics. He discussed the successive steps in the analysis of matter, Lord Kelvin's theories as to the nature of atoms and the properties of the basis of matter, the range of the atomic theory and the properties of the molecule, and rejected the suggestion that the living matter could suspend or modify any of the natural laws which would affect it if it were to cease to live. He recognised the limits of physical theories, and admitted that "when they are used in the attempt to penetrate deeper into the secrets of Nature it is more than probable that they will meet with insuperable barriers, but this fact does not demonstrate that the fundamental assumptions are false, and the question as to whether any particular obstacle will be for ever insuperable can rarely be answered with certainty." In conclusion, he summed up the general thesis of his address in the following words:—"If no other conception of matter is possible than that it consists of distinct physical units—and no other conception has been formulated which does not blur what are otherwise clear and definite outlines—if it is certain, as it is, that vibrations travel through space which cannot be propagated by matter, the true foundations of physical theory are well and truly laid. It may be granted that we have not yet framed a consistent image either of the nature of the atoms or of the ether in which they exist; but I have tried to show that in spite of the tentative nature of some of our theories, in spite of many outstanding difficulties, the atomic theory unifies so many facts, simplifies so much that is complicated, that we have a right to insist—at all events till an equally intelligible rival hypothesis is produced—that the main structure of our theory is true: that atoms are not merely helps to puzzled mathematicians, but physical realities." The work of the meeting, which is divided into eleven sections, will terminate on Wednesday next. Professor Cossar Ewart, of Edinburgh, is President of the Section of Zoology; Professor D. J. Cunningham, of Dublin, of the Section of Anthropology; Professor McKendrick, of Glasgow, of the Section of Physiology; and Professor I. Bayley Balfour, of Edinburgh, of the Section of Botany.

## DR. FARQUHARSON ON SANITARY LEGISLATION.

Last week Dr. Farquharson, as President of the Sanitary Association of Scotland, delivered at its annual meeting at Paisley one of those unconventional addresses in which he gives the profession the advantage of his ripe experience in political work. The title of the address was Domestic and Official Sanitation, and he dwelt upon the difficulties with which members of Parliament have to contend owing to ignorance, prejudice, and vested interests, and the not unnatural desire on the part of M.P.s to conciliate small bands of faddists who may assume a threatening attitude and extort pledges and concessions in favour of their views. This difficulty, he maintained, was only to be met by creating a strong and healthy opinion, which, "like a stimulating sou'wester, should sweep through the festering caves and underground humours of folly and prejudice, and let in the bright sunlight of science and knowledge to kill the bacilli of ignorance and vice." He advised his hearers not to go too far ahead of public opinion, but first to make it and afterwards to carry it along with them; they should not be aggressive, but conciliatory and convincing; they should not attempt to drive, but lead. He insisted upon the importance of attention to details in sanitary administration, and observed that one of the best things that had been done in the interests of sanitation had been the formation of combined districts, which could afford a reasonable salary to medical officers to devote all their time to their work. Such officers should be protected from self-interested prejudices, and possibly vindictive persecution and capricious dismissal, by the right of appeal to the Local Government Board. Each highly-instructed official, experienced in all the most recent methods of scientific investigation formed a centre of light and leading, diffusing information by formal and informal talks, counselling, instructing and supporting the family doctor in the discharge of his work, and removing prejudices and illuminating the darkness of the ordinary country gentleman and farmer, who were too often inclined to sneer at the conclusions of advanced sanitation, and grudged its expense. Referring to the difficulty of getting good sanitary legislation through the House of Commons, he said that nobody knew better than he the worries, disappointments, and discouragements which must attend anyone who tried to induce that body to listen to and actively support hygienic measures. By patience and conciliation, and tact and perseverance, however, success was often obtained even under the most unfavourable conditions; and he urged that all interested in sanitary work should in season and out of season engage in the missionary task of converting those who belonged to the ranks of the heathen in these matters. If this were done, and those who belonged to the Legislature would try to play their part, the combined result would be, he hoped, to add to the sum of human prosperity and usefulness by making life not only longer but happier and healthier, remembering at all times Herbert Spencer's sound motto that the great secret of success in life was to be a good animal.

## MILK AND MEAT FROM TUBERCULOUS ANIMALS.

Professor Koch's statement of his opinion as to the non-identity of human and bovine tuberculosis received exceptional publicity from the circumstances under which it was announced. This publicity is calculated to bring about a result which Dr. Koch in all probability neither anticipated nor desired. Medical officers of health and others interested in the health of the people have frequently met with considerable opposition to proposals for the supervision of meat and milk intended for human food, and such opposition will certainly not be diminished by the statement made by Dr. Koch. But Professor Koch's experiments do not by themselves prove that tuberculous milk and meat are not injurious if taken as food. His announcement at the recent Congress comes as a useful check to the growing tendency to look upon the regulation of the meat and milk supply as the main factor in the prevention of tuberculosis. It would, however, by no means justify the immediate and complete relaxation of precautions in the direction of careful inspection. It is, therefore, satisfactory to note that the Local Government Board has issued a warning that meat and milk inspection should not be relaxed until the question whether tuberculosis can or cannot be transmitted from animals to man is definitely settled. In this circular the Board impresses upon local authorities that, pending the report of the Royal Commission recently appointed, there should be no relaxation in the taking of proper measures for dealing with milk from tuberculous cows, and with tuberculous meat which may be intended for the food of man. Not only does the Board rely on the local authorities to continue the measures hitherto in force, but the opportunity is made to repeat the main points in the regulations for meat inspectors with reference to the seizure of tuberculous meat, and to point out the desirability of reminding inspectors of nuisances and sanitary inspectors of their duties in relation to the inspection and seizure of such meat. Local sanitary authorities throughout the country will no doubt treat this circular of the Local Government Board with the consideration which the importance of the subject demands. Medical officers of health will doubtless make a special point of advising their sanitary authorities in the spirit of the circular, and already some of these officers have issued special memoranda on the subject. Amongst these, that of Dr. George Newman, the Medical Officer of Health for Finsbury, is one of the most important: not only for its intrinsic merit, but from the fact that the Borough of Finsbury has a very high death-rate from consumption, and has also under its supervision the second largest meat market in London. Dr. Newman epitomises Dr. Koch's evidence in favour of the conclusion that human tuberculosis is not communicable to animals, and bovine tuberculosis is not transmissible to man. He emphasises Professor Koch's remark that the matter is not yet absolutely decided, and gives some of the evidence on the other side of the question. The recent Congress at a general meeting adopted a resolution to the effect "that in the opinion of this Congress, and in the light of the work that has been presented at its sittings, medical officers of health should continue to use all the powers at their disposal, and relax no effort to prevent the spread of tuberculosis by milk and meat." Dr. Newman strongly urges the Public Health Committee of the Metropolitan Borough of Finsbury to advise the Borough Council to continue to take the same vigorous measures as heretofore for the protection of the public from tuberculosis conveyed by means of food. In the result the Finsbury Borough Council, at a meeting on September 5th, accepted the recommendation of the Public Health Committee, and resolved to relax none of the precautions hitherto in force. It is to be hoped that all other sanitary authorities will adopt a similar attitude pending the results of the labours of the Royal Commission.

## THE TRANSMISSION OF BOVINE TUBERCULOSIS TO MAN.

An experimental test of Professor Koch's theory that bovine tuberculosis is not transmissible to human beings is about to be undertaken under the direction of the Chicago Health Department. Dr. Adolph Gehrmann, director of the Chicago City Laboratory, and Dr. W. A. Evans, of the Columbus Medical Laboratory, have devised a plan of investigation, the main feature of which is to make the experiment with lupus. They hold that just as satisfactory a test can be obtained by inoculating the skin of a human being with the bacillus from an animal as could be got from experiments with pulmonary tuberculosis, with the great advantage that there is no risk to life. Preparations are being made for the experiments, and two persons have already been secured who have consented to be inoculated. An effort was, it is said, made to secure a condemned murderer for the purpose, but the criminal said he preferred the gallows.

## AN ANTISPITTING LEAGUE.

The most recent addition to the ever-growing number of leagues is the Antispitting League which has just been formed in Paris. The object of the League is by means of tracts, envelopes, postcards, placards, "and by all means, procedures, examples, persuasive, correct, and stamped with the most delicate urbanity," to attract the attention of the public to the dangers of spitting in places of public resort. The League has had a badge designed for itself and is to publish a *Bulletin*. Every person who subscribes to the *Bulletin* and makes a further contribution in aid of the objects of the League will receive the title of "Membre Bienfaiteur." While heartily sympathising with the objects of the League, we doubt very much whether tracts or postcards decorated with warnings against expectoration will do much to abate the nuisance. As for measures inspired by the most delicate urbanity, we have no doubt at all about their utter uselessness. Until public opinion is educated to such a point that spitting on the pavement or on the floor of an omnibus or railway carriage is looked upon as an act placing the offender outside the pale of decent society, this disgusting and dangerous habit will be indulged in by the ignorant and the unmannerly. To make it an offence punishable by law might help, but the difficulty would be to get the law enforced. There is a law against the public use of profane or foul language in the Statute Book, but it is practically a dead letter. A law against spitting would probably be equally inoperative. The force of public opinion has got rid of duelling, drunkenness, and swearing in society; and as the teachings of hygiene gradually percolate the various social strata it may reasonably be hoped that public spitting will in time become a thing of the insanitary past.

## THE MIDDLESEX HOSPITAL CHAPEL.

After ten years the inside adornment of the Middlesex Hospital Chapel is finished, and it would be hard to find in all England a more beautiful example of marble and mosaic work. Here, wholly unknown to London sightseers, is a faultless gem of good art, as good as anything of the same size in Italy; every inch of it beautiful, glowing with gold and colour, yet not overloaded or impeded in its lines, exquisite in its design as in decoration; a veritable bit of St. Mark's, Venice, set in the middle of the hospital life. Three reasons have been suggested why every large hospital should have the very best chapel that money can buy for it, quite apart from its purpose as a place of worship. First, every good hospital ought to have a place set apart for the mere pleasure of seeing something that is beautiful. The patients and the hard-worked and often over-worked sisters and nurses have a right to one place made

for the delight of the eyes, and for something better than the dull and faded pictures and smug texts that adorn the average ward. Vast sums of money are spent on operating theatres—marbles and tesselated pavement, and the costliest metal-work and glass-work, where cheaper materials might do as well. It is a good thing, doubtless, for every hospital to have these "luxuries rather than essentials" of the operating theatre: but to the patients marble and mosaic in the theatre give hardly more pleasure than they do in the *post-mortem* room. Every large hospital, to be perfect, needs a place given over to beauty for its own sake, for the happiness and refreshment of its nursing staff and its patients. Next, every good hospital ought to satisfy, if it possibly can, that desire for music which is so strong in convalescents and in nurses. Music—not the sort that is given in the wards as a sort of Christmas dole—but music as a regular and frequent alleviation of hospital life: good, familiar tunes, to be enjoyed without difficulty and performed without practising. And, in a hospital, a chapel can ensure this sort of music. Finally, in every good hospital, there should be a place where the names of those who die in the service of the hospital shall be commemorated. In the little ante-chapel of the Middlesex Hospital Chapel, the names of those servants of the hospital who died at their work are inscribed in gold letters. This fellowship and unity in work can hardly be emphasised anywhere so well as in a chapel; and it is a blunder in any hospital that the faithful service of those who died "in harness" for the hospital should be left without recognition and record. In these days of a wider and more generous feeling between opposed beliefs, it is surely a dull and old-fashioned folly that would spend money on the over-adornment of the theatre, and leave the chapel mean and shabby. And it is something worse than folly if a new hospital should deliberately leave out the *unum porro necessarium*, a place set apart for the delight of the eyes, the solace of music, and the commemoration of the dead servants of the hospital.

## LONDON'S LUNACY.

The massive report of the Asylums Committee of the London County Council has just been issued, which informs us that there were 21,369 pauper lunatics in the County of London on January 1st, a reduction of 24 upon the previous year's total due partly to the deduction of the Penge cases and partly to a removal of cases from the pauper to the private list. Of the whole number, 15,274 are under the care of the London County Council or are in licensed houses. The Metropolitan Asylums Board is responsible for 5,567 imbeciles, but is no longer providing its proportionate share of accommodation, and its separate and anomalous position as a lunacy authority might with advantage cease to exist. The ratio per 1,000 of pauper lunatics in London is now 4.7, against 3.9 in 1891; it is therefore most gratifying to learn that this year the figures show not merely a reduction of the increase, but for the first time (and partly owing to the adventitious changes in classification to which we have alluded) an actual decrease. An analysis of new cases seems also to show that the high level of "occurring" insanity, which had been maintained for some years, tends towards abatement. There are 14,238 beds available at the London County Asylums, but there is an excess of cases amounting to 1,283, and for these and future cases there are in course of erection an asylum at Horton and an epileptic colony for males. The Committee is through its officers considering the desirability of adopting a style of building and a method of treatment such as have found favour on the Continent and in America; and the urgent need of providing receiving houses for due classification and observation before drafting to asylums is believed to be still engaging the deliberate attention of the Lord Chancellor, under whose immediate chaperonage are all lunatics and all lunacy legislation. The recovery-rate of the patients is higher than last year, being 23.95 per cent., and the death-rate continues about the same at 7.01 per cent. The weekly cost of maintenance per head has been raised from 10s. 1¼d. to 11s. 8d. Asylum dysentery, to which attention was called by Drs. Mott and Durham, appears to have been less frequent, especially on the male side, at Claybury Asylum; one fatal case of this disease was complicated with abscess of the liver, although the dysentery was of indigenous origin. Dr. Mott's report on the pathological department indicates the continued activity of the Claybury Laboratory. Only a few years ago London was far behind other cities at home and abroad in utilising its resources for investigating the pathology of insanity, while now we constantly hear the work of the Claybury Laboratory quoted as an incentive to other towns to seek to attain the highest standards. Dr. Tredgold's work emphasises the potent influence of alcoholism, consumption, and neuroses in provoking idiocy in offspring. Dr. Mott himself continues to accumulate evidence of the potency of syphilis in the causation of general paralysis, and of the unity of the latter with tabes dorsalis. In all some ten workers as well as Dr. Bolton, Assistant to the Pathologist, have been engaged in research at the laboratory during the past year, and much is expected of the new experimental psychological department, over which Dr. W. G. Smith, who brings with him the methods and experience acquired in the laboratories of Professors Wundt and Munsterberg, has been called to preside.

## THE ANTIMALARIA EXPEDITION.

According to the *Times*, the Liverpool School of Tropical Medicine has received the following telegram from Dr. Logan Taylor, who is at present in charge of the school's fifth antimalaria expedition now operating in Sierra Leone: "Beg to report progress of expedition since commencement of operations. We have now cleared 5,000 houses in Freetown of vessels of every description that previously served as sure breeding ground for mosquitos. Work going on steadily. Have fifty native assistants employed." Mr. Alfred L. Jones, chairman of the school, has received from Major Ross a letter under date August 30th, in which he reports that after spending a week at Lagos with Sir William Macgregor, he proceeded to Accra, where he stayed with the Governor (Major Nathan). As at Sierra Leone, before the arrival of the expedition, nothing had been done in a scientific way on the Gold Coast against malaria. The Governor is now, however, thoroughly prepared to take up the matter, and has already made arrangements to improve the sanitary conditions of Europeans at Accra by buying up several poor locations now planted in their midst. Major Nathan showed Major Ross an admirable plan for laying out the town of Sekondi, in accordance with scientific requirements, by buying out the poor locations on the foreshore, extending the European quarters along the bluff to the east, and placing the native town apart behind the railway. The Governor will probably also consider a similar scheme for Cape Coast, where there is a great mortality among Europeans. In Major Ross's opinion, however, the housing scheme alone will not suffice to put a stop to the fever, and the measures being adopted at Freetown and Lagos should be extended as soon as possible to the Gold Coast—Accra, Cape Coast, Sekondi, and Axim. In view of the importance of the matter, Major Ross did not hesitate to inform the Governor that the Liverpool School of Tropical Medicine would consider the advisability of sending out a delegate to direct operations in these towns. The Governor cordially approved and accepted the offer, promising every assistance in the way of labour and other support required. Major Ross says that if the school accepts the proposal there will be witnessed the inauguration, in all the chain of Colonies from the

Gambia to Lagos, of proper measures against the malaria which has so long paralysed the coast. After giving particulars as to the work of the expedition at Sierra Leone, the substance of which has already been published in the British Medical Journal,[1] Major Ross concludes with some general remarks on the Gold Coast, the unhealthiness of which he thinks has been much exaggerated. There is a considerable amount of malaria among Europeans, but on the other hand, there is little or no typhoid. Everywhere one meets men who have lived for years on the Coast in good health. It is the young, feckless, improvident, and sometimes intemperate newcomer who generally falls a victim to disease. The sober, sensible man can usually rely upon escaping. Major Ross can now permit himself to say with confidence that in nine cases out of ten if a man contracts malarial infection it is his own fault. The scrupulous use of a mosquito net, attention to domestic cleanliness, exercise, temperance, and an occasional strong dose of quinine are the things principally required. Intemperance is directly and indirectly a potent ally of malaria. Some of the worst malarial infections are undoubtedly acquired in the houses of native women. Even if a man does acquire a malarial infection, a three months' course of quinine ought to rid him of it. As a rule quinine is taken only when there is fever, and is stopped just when it begins to produce a good effect.

## REMOVAL OF THE STOMACH.

In 1897 Schlatter, of Zurich, performed the first total extirpation of the stomach; the patient lived for a year. Since then no fewer than 21 similar operations have been performed, with 18 recoveries. Schuchardt's survived two years. Ribeira, of Madrid, has the "record" number of three of these operations, but in one of his cases it was found that there had been an error of diagnosis as the disease was not malignant, the patient is still living two years after the operation. Four cases died from the operation, one on the table, two within a few hours and one on the sixth day. Boeckel, who reports his case in the current number of the *Revue de Gynécologie et de Chirurgie Abdominale* operated at Strassburg on October 5th, 1900. The patient was thirty-eight years old and had lost flesh from malignant disease which was diagnosed as seated in the transverse colon. There was a big ulcer at the pyloric end of the stomach and a cancerous mass in the wall of the lesser curvature. The patient was living and well on April 3rd, 1901; she had gained thirty-six pounds in weight. She had a good appetite and the fæces were normal. The essential steps of this operation are, first, the division of the gastro-colic ligament and gastro-splenic omentum; then a forceps is placed across the cardiac orifice, and another a little lower, the stomach being divided between them. The gastro-hepatic omentum is next divided; both curvatures and the cardiac end of the stomach are now free. It only remains to clamp the first part of the duodenum with two forceps, and to divide between them; the stomach is thus entirely liberated. Boeckel succeeded in making an end-to-end anastomosis between the cardiac end of the œsophagus and the cut end of the duodenum; the former cannot be drawn down, but the duodenum was in this case easily drawn up to the œsophagus. In some other cases œsophago-jejunostomy had to be practised. Boeckel promises further information concerning this remarkable case.

## SANITARY TEACHING IN LAGOS.

In an attempt to improve the health of a community two lines of action can be taken. One is by making and enforcing laws and compelling both individuals and corporations to adopt necessary precautions against disease. The other is to educate the people on the principles of health and show them how far it is in their own power to avoid disease.

[1] British Medical Journal, September 7th, p. 644.

Sir William McGregor, K.C.M.G., M.D., is to be congratulated on a combination of the two methods. In his administration of the Colony of Lagos he undertakes extensive public measures for the prevention or diminution of malaria, but he is also endeavouring to have the people taught how they can themselves greatly aid in the prevention of disease. "Health" is to be included in the subjects taught in the government schools in Lagos. It is compulsory on the teachers in these schools that they should obtain a certificate of their proficiency to teach this subject, and the scholars are to be examined in "health" as in other subjects, and this ranks with the others for the government grants. Special prizes to both teachers and scholars will also be given. A series of ten lectures, in accordance with this scheme, has been given by Dr. W. H. G. H. Best to sanitary inspectors, hospital nurses, and teachers in Government schools. The main subjects are malaria and dysentery. These lectures are couched in popular language, and technical terms have been carefully avoided. On the whole, they are admirably suited for the purpose for which they are intended, and are eminently practical. We note that in Lecture III the guinea-worm is stated to be carried by mosquitos instead of by cyclops, and in the same lecture it is said that it is only at the stage of sporulation that malaria can most easily be transferred from one man to another. In Lecture VIII Dr. Best strongly advocates boiling all drinking water, but suggests in addition filtering after instead of, as it should be, before boiling. The scheme is excellent, and the lectures are good; the working of the sanitary administration of Lagos and its effects on the public health will be watched with great interest. It is refreshing to find that in one British colony the executive is taking an active part in the diminution of disease in spite of obvious difficulties and preliminary expense.

## THE MEDICAL SERVICE OF THE ROYAL NAVY.

In the British Medical Journal of September 7th we dwelt on the dissatisfaction existing among all ranks of the Naval Medical Service, indicated by the numerous communications we have of late received from officers belonging to it. Our attention has since been called to confirmations of our views in the columns of our contemporaries of the public and the service press. *Truth*, on September 5th, drew attention to the unpopularity of the service among recently-qualified medical men, clearly reflecting the discontent in the service itself. We are now able to confirm the view taken by our contemporary as to the response made to the call for candidates for the advertised 14 vacancies at the examination for entry last month; 7 qualified men only came forward; of these 1 was found physically unfit, 2 failed professionally to satisfy the examiners, and only 4 passed. There has been an evident reluctance of late on the part of the Admiralty to publish the results of these examinations suggesting good reasons for such reticence. In the *Naval and Military Record* of the same date two naval surgeons furnish at some length their views as to the existing discontent in their branch of the service, fully confirming the views expressed by us, and further dwelling on what we have previously advocated—the absolute necessity for study leave and the difficulty of obtaining it in a service which offers, in the majority of its appointments, so limited a field for professional improvement or for keeping pace with the rapid advance of medical science, a necessity recognised in the military but not sufficiently in the medical branch of the naval service. The allotment of cabins is the cause of great dissatisfaction among the senior medical officers whose lengthened service secures no suitable consideration, though every consideration is shown to the seniors of the other branches, as a rule younger men. The necessity of increased pay for the R.A.M.C. and for promotion by selection as opposed to mere seniority

has been recognised by the Secretary of State for War. Unless the Admiralty hasten similar reforms they are unlikely to get candidates in future, unless it be the rare few who from heredity or special inclination will brave all to enter the navy. We hear also that leave to retire after twenty years' service, which senior medical officers fondly believed was their right in peace time, is difficult to obtain, and the same difficulty is said to be experienced by junior officers wishing to withdraw on the published gratuities according to length of service under twenty years, and by recent entries who wish to resign. If such reports are true, and the present undermanned condition of the service would explain a widespread desire to leave it, this again must seriously affect recruiting. We repeat that the Admiralty should institute an inquiry into these legitimate grievances of the Naval Medical Service.

## DISINFECTION AGAINST PLAGUE AT TURKISH PORTS.

A CORRESPONDENT in the *Standard*, September 3rd, 1901, gives a graphic account of disinfection at the Turkish station of Touzla, before entering Smyrna, whilst proceeding thither by sea from Constantinople. It seems that on arriving at Touzla the passengers were made to leave their steamer and get into a barge drawn up alongside. The hold of the barge was divided into two by a screen, one-half being for the reception of the contaminated and the other half for the purified. In the first room the passengers were told to strip to the skin and were handed rough cotton shirts in the most filthy condition imaginable wherewith to cover their nakedness, whilst their clothing was being disinfected. The barge, the cotton shirts, and the general environment were so forbidding that a few of the Englishmen on board broke away forcibly from the premises and refused to submit to the "cleansing" ordeal. Such is Turkish disinfection, and it is only by accident as it were that we hear of what actually takes place. The cotton shirts supplied during the disinfection of the wearing apparel are, perhaps, one of the potent means by which plague is spread in ports of this kind, for they are issued indiscriminately to the lowest classes of sailors and the poorer classes of travellers in Turkey, and washing the garment is not considered obligatory.

## THE PSYCHOLOGY OF ANARCHISM.

IN view of the dastardly outrage which has laid low the President of the United States and staggered the civilised world, it may not be out of place to look below the surface and discover if possible some clue to the etiology of so diabolical a deed. Political assassinations are unfortunately too frequent to entitle us to regard them merely as the isolated freaks of fanatics. There is only too good reason to believe that among the lowest classes of the proletariate, in varying proportions in various races, an anarchic cult or sect is generated which measures its own wretchedness against the wealth of others, while to its perverted egotism all forms of rule are equally obnoxious. We do not hold the belief, which is now fashionable, that the anarchist is to be regarded as an anthropological type. We are not of the school that affects to trace in the skull of a Charlotte Corday the predisposition to homicide, nor are we content to dismiss cases of so-called moral insanity by merely docketting them "degenerates." The neo-phrenologists will before long be read with as much or as little interest as we now afford to the works of Gall and Spurzheim, or to those of their not less enthusiastic exponent, Dr. Combe. Anthropology is one of the latest of the sciences, and like all new sciences its earlier years are apt to be misspent in attempts to make short cuts to the highest generalisations. If we place but little trust in craniological explanations of moral dispositions, we must not be held to underrate the reciprocal influence of physical and moral environment on the human mind. Statistics seem to point to the Latin and Slavonic races as the more fruitful sources of these secret agencies which war against social organisation. Racial and sociological factors doubtless contribute to the production of the desperado who imagines that he gratifies alike his vengeance and his vanity in compassing the destruction of the personified instrument of Government, simply because he is such, and often, as we have seen, with complete indifference as to whether the victim has been the worthy head of a constitutional State, or an irresponsible despot. We do not pretend to unravel the tangled skein of causes which alongside of twentieth-century civilisation has generated a parasitic growth of social pests whose evil eye sees nought but ill—

> Eye to which all order festers, all things here are out of joint,

for in such obscure and devious studies

> Science moves, but slowly, slowly, creeping on from point to point.

We can at least affirm that among races and peoples in whom a reasonable standard of comfort is within the reach of all, and who for generations enjoyed the blessings of civil and religious liberty, the preachings of anarchists are likely to fall on unfruitful soil; and that where the reverse conditions obtain, social misery and social neglect are apt to engender a hopelessness and helplessness which gives power and edge to political disaffection.

## TRICHINOSIS IN THE UNITED STATES.

THE Boston *Journal of Medical Research* for July contains an article by Dr. Herbert V. Williams on the Frequency of Trichinosis in the United States, giving the results of observations on 505 cadavers examined with a view to test the accuracy of the hitherto prevalent impression that the disease is not often met with unassociated with epidemics, and to remedy the "apparent lack of any such systematic research," previous statistics varying between 0.1 and 3 per cent. The investigations lasted over a period of six years, and the 505 cases examined were taken haphazard, without any selection as to their likelihood of infection, with a result that trichinæ were found in 27 cases, or 5.34 per cent. The muscles chosen for examination were submitted to careful microscopical scrutiny, showing the disease to exist in every degree of severity in the 27 cases which gave positive evidence. Analysis of the national averages shows a large proportion among those of German birth, with a larger percentage among American whites than Dr. Williams expected, and he suggests that some of these latter cases may have been of German parentage, continuing their ancestral fondness for uncooked pork. In Allbutt's *System of Medicine* it is stated that American pork examined at Havre was found to be trichinosed to the extent of 2.03 per cent., while American observations puts the average as high as 5 to 8 per cent., which is considerably higher than the percentage of "about 2 per cent." mentioned by Dr. Williams. The strict expert examination of pork in Germany is extended by many countries to imported American pork, showing reason to suspect that infection might be local among the American whites. We entirely endorse Dr. Williams's conclusion that too much stress ought not to be laid on the question of nationality without far more numerous and exhaustive statistics to work upon, as the ever-increasing facilities for travel and for the importation of food render it daily more difficult to fix the place and origin of infection. In none of the 27 cases in which trichinæ were found was the condition diagnosed during life, though in a few instances there was a history of symptoms that might have been due to their migrations. This want of symptomatic evidence is scarcely to be wondered at, since Cobbold is of opinion that probably any number less than 2,000 would not give rise to definite signs, and in some of the 27 cases only 2 or 3 were found. An unusually high percentage (12) is recorded among subjects who had been insane. The patho-

logical histology shows that eosinophile and "mast cells have no particular affinity for the encapsulated trichinæ," while newly-formed elastic fibres were sometimes noted, and Dr. Williams suggests that their existence may by diminishing friction lessen the pain from muscular movement. We trust that the impetus given to investigation by Dr. Williams's able article may lead to similar research in countries like our own where trichinosis is generally thought to be less prevalent.

## A HOSPITAL GRIEVANCE IN NATAL.

We have received from the President of the Pietermaritzburg Branch of the South African Medical Association an account of the steps taken by the Association since 1895 in the endeavour to alter the conditions under which Grey's Hospital, Pietermaritzburg, is at present managed. It appears that this institution, the Government hospital of the place, having over 100 beds and a large number of out-patients, has a medical staff consisting of one medical superintendent and one house-surgeon. The practitioners of the town consider it advisable that a full medical staff should be appointed comprising physicians, surgeons, and an ophthalmic surgeon, and that a separate ward should be set aside for paying patients, who should have the privilege of being attended by their own private medical men. They also suggest that the hospital should be used for the training of nurses in order to satisfy the great demand in the colony for trained nurses. They state that Grey's Hospital is the only one in South Africa which has a senior staff composed of a single officer, and that in all the other large South African hospitals, with the exception of Capetown, paying patients are admitted under the care of their own medical practitioners. The Colonial Office and the Board of Trustees of the hospital have replied that the suggested changes are undesirable, and the Pietermaritzburg Branch of the South African Medical Association has now petitioned the Governor of Natal to alter the state of affairs of which its members complain. The question at issue is purely a professional one; we note that no complaint is made as to any deficiency in the accomplishment of the primary object of the hospital—the relief of the suffering poor—although it is suggested that a larger staff would more adequately meet their requirements. At the same time, we fully sympathise with the medical men of Pietermaritzburg if, as they state, they are entirely excluded from the practice of the hospital, with its great advantages as regards the acquisition and refreshment of medical and surgical knowledge. The question of the admission of paying patients under private practitioners can be satisfactorily adjudged only by those who have a full knowledge of local circumstances; but there appears to be good ground for the suggested use of the hospital as a training school for nurses. We trust that, as the Medical Council of the colony has expressed itself favourably to the views contained in the petition, the Governor may see his way to granting a satisfactory reply.

## THE ETIOLOGY AND SERUM TREATMENT OF NEW GROWTHS.

Vlaieff publishes in *Vratch* of July 5th and 12th some extensive researches on the infective origin of new growths and their treatment by an antitoxic serum. Without giving exact details, he in the first place cites the following observations as evidence for an infective origin: the occurrence of inoculation during operations and necropsies, and the transference to animals by the transplantation of particles of new growth. Clinically, he also finds evidence in the occurrence of degenerative changes in the internal organs of cancer subjects, elevation of temperature and increased rapidity of pulse, enlargement of the liver and spleen, and the presence of albuminuria. He considers that the weight of evidence points to certain blastomycetes as the infective agents, in that a considerable number of observers have isolated such organisms in pure culture from cancers, and by inoculation produced growths of epithelial and endothelial character in animals. In his own experiments Vlaieff isolated similar organisms, and by injection into guinea-pigs he obtained growths of granulomatous character. He prepared a serum from inoculated animals of various species, and found that in rats and monkeys it had a protective power against the growths caused by the blastomyces. These animals to whom he administered an occasional dose, lived three or four months longer than those to whom a similar dose of blastomyces culture was given, but without subsequent administration of serum. In these rats and monkeys adenomata of cylindrical epithelium developed. If the same animals were systematically treated with the serum no growth developed, but to obtain this negative result it was necessary to begin the serum administration early. Subsequently Vlaieff used the serum in sixty cases of human carcinoma of the breast, face, tongue, liver, ovaries, peritoneum, etc., and came to the conclusion that in cases where it was given at the very outset of the disease, where the tumour was not ulcerated and where there were no large secondary growths in the lymph glands, the serum was capable of exercising a curative effect. Some illustrative cases are given. If metastases were well developed and there were signs of general infection, he found that the serum, while it had no curative effect, improved the general condition and appeared to prolong life. The serum employed was obtained from asses and geese, to whom a series of doses of blastomyces culture were administered, the organisms having been obtained from human malignant tumours. It was administered in doses of 5 to 10 c.cm., and injection caused considerable local swelling and also some temporary enlargement of the cancer itself, both of which reactions subsided in forty-eight hours. The growth then began to diminish in size and the enlarged glands grew appreciably smaller; the dose was repeated at intervals of a few days. Small growths appeared to undergo cystic degeneration; larger growths appeared to be impeded in their further extension. Vlaieff concludes that blastomycetes are causatively concerned in the production of malignant growths, and that a serum obtained by immunising animals against these organisms exercises a curative effect on cancers when these are not ulcerated and as yet localised.

## SCHOOLS FOR BACKWARD CHILDREN.

Ley of Antwerp (*Belgique Méd.*, p. 641, May 24th, 1900) believes that the backward children (*enfants arriérés*) should be clearly distinguished from the truly idiotic and imbecile. They are those with a certain degree of mental feebleness which prevents them profiting from ordinary school teaching. They ought to be taught not simply in special classes in an ordinary school, but in special schools, and all towns of not less than 20,000 inhabitants should have one such school. This is necessary to prevent them becoming the butt of the ridicule of the normal scholars, and to remove them out of a hostile or depressing environment. There must be considerable provision for outdoor exercise and play. Each teacher ought to have not more than twenty pupils, and in the case of the most backward children this number even must be reduced. In the cases bordering on idiocy eight or ten is the maximum. A great part of the time will be occupied in rhythmical exercises with the help of music. Reading, writing, and arithmetic will play a small part, and the real instruction will aim at making the children socially useful. Periodical or competitive examinations are altogether forbidden, The education of the hand and of the senses is of the greatest importance, and will be much aided by models; but Froebel's methods are too complicated to be used in their entirety. The coeducation of the sexes is to be en-

couraged in these schools, as it tends to make the education resemble that in the family with which it ought to be continuous. Medical supervision ought to be constant.

## THE ATTEMPT TO SWIM THE CHANNEL.

THE attempt made on August 24th by Mr. Holbein to swim across the Channel, though ending in failure, was a remarkable example of endurance. He started from Cape Grisnez at 3.50 A.M., and continued to swim for thirteen hours, when he was about six miles from Dover pier; the swimmer then appeared to the captain of the tug, which accompanied him, to be in danger, and was hoisted out of the water into the tug, which immediately proceeded to Dover. On Mr. Holbein's arrival at Dover pier, he was at once seen by Dr. Charles E. Murphy, who examined him twenty-five minutes after he had been removed from the water. Dr. Murphy informs us that the temperature under the tongue was 98.8° F., under the arm 98° F.; the pulse was strong at 78, cardiac dulness was normal, and the lungs were normal, but the stomach was dilated owing to the large quantities of salt water which he had swallowed. The swimmer was perfectly conscious and rational, and complained only of his eyes, some conjunctivitis having been produced from the continued contact of salt water. Dr. Murphy says that he was astonished at the absence of signs of exhaustion of any kind.

## THE MEDICO-LEGAL STUDY OF HAIR.

LONDON [1] from an extensive histological study of hair, both human and animal, has found that it is easy enough to distinguish by the microscope both human and animal hair from all other similar structures. After a certain amount of experience it is not difficult to differentiate a human hair from that of an animal, and even to decide to what species of animal the specimen belongs. If all the peculiarities of hairs are studied it is possible to determine the region from which a human hair has been derived. In a table the peculiarities of the hair from different situations are set out; many given are only to be appreciated by an expert. To determine whether hairs have fallen out or been torn out it is necessary to be possessed of several samples; the determination is based upon the character of the root. If the latter be irregular, with an undulating surface and excrescences of different form and thickness, it belongs in all probability to a hair that has been plucked out. If the root be small with a rounded extremity and smooth surface, the hair has probably fallen out. To determine whether a hair is grey or blonde macroscopic examination is insufficient; London has obtained satisfactory results only by the use of a polarisation apparatus. Experiments on the artificial changing of the colour of hair showed that chlorine solution is capable of completely decolorising black hair; acetic acid and caustic soda produce the same colour change but destroy the hair to a certain degree. London confirms the statement that arsenic can be demonstrated in the hair of the subjects of acute poisoning by the drug.

## CÆSAREAN SECTION FOR RETAINED FŒTUS

RETENTION of an ovum after its death early in pregnancy is not very rare, but Kleinertz [2] reports a case where the child died in the eighth month and was retained in the uterus for five and a half months after its decease. During the pregnancy the mother suffered severely from albuminuria, which steadily diminished after the death of the fœtus and ultimately disappeared. Kleinertz operated on account of constant fœtid discharge. The cervix was so rigid that dilatation could not be safely effected. Cæsarean section was therefore performed; it was difficult, owing to pendulous abdomen, umbilical hernia, and omental adhesions to the uterus. That organ was brought out of the abdominal wound and opened by a vertical incision. The fœtus lay with its breech presenting; it was partially macerated and covered with a brown grease. There were 10 ounces of a brownish-yellow, tenacious fœtid fluid in the uterine cavity, and the sloughy placenta was easily detached. There was no bleeding, except when a small vessel in the upper angle of the wound spurted as the placenta was being separated. The uterine cavity was washed out with a solution of one part of sublimate in two thousand of absolute alcohol. A strip of iodoform gauze was with some difficulty pushed downwards through the canal of the cervix, and the cavity of the uterus packed with iodoform gauze. The uterine wound was then closed with deep and superficial sutures of celluloid thread. Notwithstanding the formidable nature of the case and the septic contents of the uterus, the patient made a good recovery. The cessation of the albuminuria was an interesting feature in this case. The relatively late death of the fœtus makes the case akin to "missed labour," of which the possibility has been so much disputed.

[1] *Arch. d. Sciences Biol.* Tome vii., No. 2.
[2] *Centralbl. f. Gynäk*, No. 28, 1901.

## NEURASTHENIA AND SOCIAL CONDITIONS.

KARL PETRÉN, of Upsala, in the *Deutsche Zeitsch. für Nervenheilk.*, Bd.xvii., reports the results obtained in a recent investigation upon the frequency of neurasthenia in the various grades of society. Contrary to usual statements, he does not find a larger number of cases in the upper than the lower classes. Out of some 2,478 patients observed between 1895-99, he met with 285 (11.5 per cent.) cases of definite neurasthenia. These he resolves into three groups: (1) Artisans and peasants; (2) tradesfolk and under officials; (3) intellectuals. In further division as to sex, males are easily first with (1) 14.8 per cent., (2) 13.2 per cent., (3) 13.3 per cent. As regards women, the numbers are (1) 11.4 per cent., (2) 6.6 per cent., and (3) 6.6 per cent. In Sweden it therefore now appears that neurasthenia is more prevalent amongst the working classes. Petrén thinks that as previous writers have, on the one hand, drawn their statistics from the higher classes, and, on the other, from clinics, the results disagree because many neurasthenics do not come under hospital treatment, whilst those of the former status readily consult their doctors. That the disease is not dependent upon the rush of modern life seems apparent from the fact that the greater number of cases came from the provincial parts of Sweden, where life is very simple and tranquil. As regards causation, 62 cases have followed family disappointments, 24 financial difficulties, and 47 overwork. Twenty-nine cases occurred after influenza, 21 acknowledged venery or masturbation; in 16 females it complicated pregnancy and the puerperium, 8 were directly traced to alcoholic excesses, and 2 were produced by high temperatures experienced during their avocation. A prominent factor is that of hereditary alcoholism. In the early years of the century large quantities of spirits, etc., were almost universally consumed, and where the alcoholic tendency is not directly apparent its influence is felt in the nervous equilibrium of the present generation. Several cases are reported in which cerebral arteriosclerosis was present. Hygienic conditions also contribute to the increase amongst the lower classes. Lack of proper nourishment, insanitary dwellings, and monotony of existence are amongst some of the causes that need attention in order to prevent its further extension.

THE Dean and Faculty of Medicine of the University of Birmingham will hold a *conversazione* to inaugurate the opening of the season of the Medical Faculty on Tuesday evening, October 1st, 1901, at 8 P.M.

# ASSOCIATION INTELLIGENCE.

## COUNCIL.

### NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 23rd day of October, at 2 o'clock in the afternoon.

Sept. 5th, 1901. FRANCIS FOWKE, *General Secretary.*

### NOTICE OF QUARTERLY MEETING OF COUNCIL FOR 1901.

A MEETING of the Council will be held on October 23rd. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before that meeting—namely, October 2nd.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

### LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

## BRANCH MEETINGS TO BE HELD.

BORDER COUNTIES BRANCH.—The autumn meeting of this Branch will be held at Jedburgh on Friday, September 20th, at 5 P.M. A meeting of the Council will be held before the general meeting. Order of Business: Minutes of last meeting. Election of new members. The President will read a paper on the Motor Car in General Practice. Members will have an opportunity of visiting places of interest at Jedburgh, including the Abbey, Queen Mary's House, etc. Tea and light refreshments will be served at Abbey Green, the residence of Dr. Blair, about 5 P.M. Should any members be able to come to Jedburgh by train, arriving there at noon, Dr. Blair will be pleased to see them at luncheon at his house. Dr. Blair wishes it to be stated that if any members care to bring friends, ladies included, they will be heartily welcomed by him. It is earnestly hoped that there will be a good attendance at this meeting. Members intending to be present are requested to communicate with Dr. Blair not later than Tuesday, September 17th.—W. F. FARQUHARSON, Garlands, Carlisle, Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held at Lewes early in October. Members are invited to send notice of intended communications before the end of this month to J. W. BATTERHAM, Bank House, Grand Parade, St. Leonards, Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of this District will be held at the Victoria Hospital, Folkestone, on September 19th, at 2.45 P.M.: Dr. Tyson in the chair. Agenda: Mr. Moon: Varieties of Rickets and their Treatment. Dr. Larking will open a discussion on Contract Practice and its Difficulties. Clinical cases and specimens will be shown at the hospital. The Chairman kindly invites members to luncheon at his residence, 10, Langhorne Gardens, Folkestone, from 1.30 to 2 P.M. Members intending to avail themselves of Dr. Tyson's hospitality are requested to send acceptances by Tuesday, September 17th, or they will not be expected. Tea and coffee will be served after the meeting. All members of the South-Eastern Branch are entitled to attend these meetings and to introduce professional friends.—THOS. F. RAVEN, Barfield House, Broadstairs, Honorary District Secretary.

SOUTH MIDLAND BRANCH.—The autumnal meeting of this Branch will be held at Bletchley on Thursday, October 3rd, under the presidency of Mr. Kingcombe. The following communications have been promised:—Mr. Harris Jones: The Treatment of Corneal Ulcers with Hypopyon. Mr. Percival: Two Cases of Stone in Females. Mr. Harris Jones will be proposed as Honorary Secretary of the Branch in the place of Mr. Evans, resigned. Gentlemen desirous of reading papers or cases, showing specimens, drawings, and other objects of medical interest, are requested to communicate at once with the undersigned.—CHARLES J. EVANS, Northampton, Honorary Secretary.

## EAST ANGLIAN BRANCH.

THE autumn meeting of this Branch was held at Clacton-on-Sea on September 6th under the presidency of Dr. C. SCOTT KILNER, Bury St. Edmunds.

COUNCIL MEETING.

*New Members.*—The Council meeting was held at 12.30 P.M., when the following gentlemen were elected members of the East Anglian Branch:—Edward Chichester, M.B. (Colchester); James Lee, M.B. (Clacton-on-Sea); C. Peterson Weekes, M.R.C.S. (Walton-on-Naze). The following were elected members of the British Medical Association and of the East Anglian Branch:—J. Johnston Macgregor, M.D. (Colchester) and W. J. Sweeney, M.B., B.Ch. (Colchester). It was decided that the spring meeting in 1902 be held at Southwold.

*Presentation to Retiring Secretaries.*—The presentations to Dr. Barnes (Eye) and Dr. Beverley (Norwich), the two retiring secretaries of the Branch, will take place at Great Yarmouth on the occasion of the annual meeting in 1902.

*Luncheon.*—The members adjourned for luncheon at 1.15 P.M., twenty-seven members and ladies being present.

*General Meeting.*—The general meeting was held at the Middlesex Hospital Convalescent Home.

*Diphtheria Antitoxin and its Uses.*—Dr. J. C. THRESH, County Medical Officer for Essex, read a paper on this subject. After alluding to Klebs's discovery, in 1883, of a special bacillus in the pseudo-membrane on the throat of diphtheria patients, and to the further researches of Loeffler, Roux, Yersin, and Sidney Martin, he said those researches showed that a person suffering from diphtheria was suffering from the action of a poison, as certainly as a person who had taken an overdose of strychnine. As the outcome of investigations on strictly scientific lines—based on the researches of Pasteur and others on natural and acquired immunity—a substance had been discovered which neutralised the poison. With reference to the method of treatment, Dr. Thresh remarked on the old method of applying medicaments to the throat, but pointed out that the result of such treatment was of little avail, for the poison had generally commenced its deadly work before the medical man was called in. Was it not, therefore, the most common-sense and scientific plan to introduce into the system at the earliest possible moment its special antidote, antitoxin? He urged the necessity for the earliest possible treatment, pointing out that the poison in diphtheria acted more quickly than a swallowed poison. Having demonstrated that the treatment of diphtheria by antitoxin had a "strictly scientific basis," Dr. Thresh said they might then expect to find that the use of antitoxin had diminished the mortality from diphtheria, and that the earlier it was used the greater its success. That was exactly what they did find, and for the figures bearing out these conclusions he referred them to his pamphlet, *Diphtheria: Modern Views as to its Origin, Dissemination, Treatment, and Prevention.* Dr. Thresh, continuing, directed attention to the use of antitoxin as a curative. It appeared that the introduction of the antitoxin into the system rendered the mucous membrane less congenial as a habitat for the diphtheria bacillus. It, therefore, seemed probable that if a person of a susceptible age, who had been exposed to the risk of infection, were injected with a small quantity of the antitoxin, it would render him for a time, at least, more or less immune. He did not recommend its indiscriminate use amongst persons of a susceptible age who had unfortunately been in close contact with persons suffering from the disease. In New York antitoxin had been supplied free of charge by the Board of Health since 1895. From January 1st, 1895, to January 1st, 1900, immunising injections were administered to 6,806 individuals; of these 16 contracted diphtheria of a mild type, and only 1 case—of diphtheria complicated with scarlet fever—terminated fatally. Let these results be compared with the record of secondary cases occurring in families where the inmates had not been protected; in the two years 1898-9 there were 682 such cases, and of these 61 died, giving a mortality of 8.9 per cent. It was mentioned in the Massachusetts return for the return 1899

that out of 200 persons who had been immunised not one case had ended fatally. During the recent Cambridge epidemic the results following its use were most convincing. Of the persons examined 290 were found to be infected with the diphtheria bacillus, and, these being treated with antitoxin, only 1 slight case occurred amongst the whole. In several districts in Essex antitoxin was now being used as a prophylactic, and the results had been quite satisfactory. He had found that about 15 per cent. of the children in infected families contracted the disease, and of these four or five, on an average, died. He had records of about 100 children in infected families where antitoxin had been used as a prophylactic, and amongst these there had only been two slight attacks. In conclusion, Dr. Thresh said: "I am delighted to find that the Corporation of Colchester have adopted my views, and are entering upon a campaign which, if carried out vigorously and systematically, will, I feel certain, speedily stamp out diphtheria in that borough. They are highly to be commended for the action they have taken, and I hope their example will be followed by other districts in which diphtheria is prevalent."—Mr. GEORGE ELLISTON (Medical Officer of Health for Ipswich) mentioned that since January 1st of the present year he had injected fourteen patients at the Ipswich Fever Hospital with antitoxin, and only one case—where vomiting, which, he believed, was one of the worst complications, had set in—proved fatal. He also spoke of the great delay experienced by country practitioners in obtaining antitoxin, and pointed out that in Brussels the serum was circulated gratuitously in the same way that in England practitioners obtained calf lymph free. He (Mr. Elliston) had always urged the local authorities to use antitoxin, but without success. At Ipswich the Public Health Committee had refused to provide him with antitoxin for use in the borough fever hospital, being of opinion that it came under the category of "drugs," and that, therefore, the medical officer must provide it. Personally, he thought the antitoxin should be provided by the Government.—Dr. BARNES (Eye) thought, if a resolution were brought before the district councils, it would prove helpful, and he, therefore, moved the resolution:

That in the opinion of this meeting of the East Anglian Branch of the British Medical Association it is desirable that diphtheritic serum be provided at the expense of the sanitary authorities for the use of medical practitioners practising in the district.

—Dr. EVANS (Harwich) seconded the resolution.—Dr. BROWN (Maldon), in supporting, mentioned that during the last eighteen months he had made 88 prophylactic injections with successful results.—Dr. SINCLAIR HOLDEN, medical officer of four District Councils, also spoke in support of the resolution, which was then put and carried.

*Treatment of Chronic Eczema.*—Dr. ALFRED EDDOWES read a paper on the treatment of chronic eczema, illustrated by some interesting photographs of unusual cases.

*Vote of Thanks to Chairman.*—A vote of thanks was accorded to the Chairman on the proposition of Dr. ELLISTON (Ipswich).

*Tea.*—Tea was kindly provided by the matron, Miss Morgan, and the meeting was a most successful one.

## NORTH OF ENGLAND BRANCH.

THE annual meeting of this Branch was held at Gateshead-on-Tyne on July 24th, the PRESIDENT (Dr. R. S. Peart) occupied the chair. There were twenty-two members present.

*Confirmation of Minutes.*—The minutes of the previous meeting were read and confirmed.

*New Members.*—The following gentlemen were elected members of the Branch: W. Ross, M.D., West Hartlepool; A. E. S. Jack, M.B., West Hartlepool; A. Green, M.D., Gateshead-on-Tyne; A. S. Jaques, L.R.C.P. and S., Gateshead.

*Secretary's Report.*—The Secretary's report was read and accepted. The present membership of the Branch was stated to be 296.

*Financial Statement.*—The financial statement was read and accepted, having been duly audited and found correct.

*Reports of Representatives.*—The Branch Representatives upon the Council of the Association and upon the Parliamentary Bills Committee presented their reports, which were accepted.

*The Wage Limit.*—The following resolution, proposed by Dr. A. COX, seconded by Dr. MURPHY, was unanimously carried:

That this Branch of the British Medical Association is of opinion:

1. That the recognition of the principle of a wage limit is absolutely essential to the establishment of proper relations between the profession and the Friendly Societies.

2. That the wage limit of £120 mentioned by the Committee of the Association in its letter to the Friendly Society Conference (although perhaps erring on the side of liberality) might fairly be taken as a starting point for discussion.

3. That this Branch further trusts that the Council of the Association will take no further steps towards the establishment of a Conciliation Board until the Friendly Societies abandon their present unreasonable position, namely, that the wage limit shall not form a subject of discussion by such a Board.

*Election of Officers.*—The following gentlemen were elected for the ensuing year:—*President:* Dr. W. Mearns (Gateshead). *President-Elect:* Dr. Mark Wardle (Bishop Auckland). *Honorary Secretary and Treasurer:* Dr. T. Beattie (Newcastle). *Branch Council of Management:* Northumberland, Sir George H. Philipson, Dr. David Drummond, Mr. A. M. Martin; North Durham: Dr. W. Gowans, Dr. J. H. Wilkie Ridley, Dr. W. Robinson; South Durham: Dr. S. Walker, Dr. G. Middlemiss. Dr. Lionel Booth. *Representatives of Branch on Council of Association:* Dr. T. Beattie and Dr. J. Murphy. *Representative of Branch on Parliamentary Bills Committee:* Dr. Alfred Cox.

*Introduction of New President.*—The retiring PRESIDENT (Dr. R. S. Peart) then vacated the chair and introduced the President for the ensuing year (Dr. W. Mearns).

*Presidential Address.*—Dr. MEARNS delivered his presidential address upon The History of Medicine. A hearty vote of thanks was accorded to the President for his able and learned address, which was ordered to be printed and circulated to the members of the Branch.

*Dinner.*—After partaking of afternoon tea at the house of the President, sixteen of those who had been present at the meeting dined together at the Royal Hotel.

## SYDNEY AND NEW SOUTH WALES BRANCH.

THE regular general meeting of the Branch was held at the Royal Society's Room, on June 28th, Dr. FOREMAN, President, in the chair. There we also 52 members present, and 2 visitors.

*Confirmation of Minutes.*—The minutes of the previous meeting were read and confirmed.

*New Members.*—The PRESIDENT announced the election of the following members: Drs. Forster, Carlisle Thomas, J. J. Kelly, H. Throsby, and John Harris: and the nomination of Drs. George McLean, S. B. Burge, and P. S. Jones, jun.

*Death of Dr. Dagnall Clark.*—The PRESIDENT announced the death of Dr. Dagnall Clark, and reported that the Council had sent a letter of condolence to Mrs. Clark.

*Letter.*—A letter from Dr. Spencer was read with reference to the medical officers of the William Gaze Lodge, Newtown.

*Communications.*—Dr. BINNEY exhibited a case of an old man who had a large tumour of the back of twenty years' standing.—Dr. HINDER read a paper on tuberculous disease of the bladder and genitals, with illustrations. Drs. WORRALL, SYDNEY JONES, GORDON CRAIG, and TAYLOR YOUNG discussed the paper; Dr. HINDER replied.—Dr. THRING read a paper on appendicitis from a surgeon's point of view. A discussion ensued, in which Drs. WORRALL, HINDER, MORTON, MAITLAND, GORDON CRAIG, BINNEY, and FOREMAN took part. Dr. THRING replied.—Dr. JAMIESON exhibited some pathological specimens.

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WE announce with regret the death, at the beginning of what promised to be a useful and honourable career, of Mr. Robert V. West, who suddenly succumbed on September 3rd to an attack of enteric fever contracted whilst he was serving as House-Surgeon to the Seamen's Hospital, Greenwich. Mr. West, who was a Cambridge graduate, had been a student of the London Hospital, and held the diplomas of M.R.C.S. and L.R.C.P. He took a keen interest in surgical work, and on account of his high sense of duty, and of his kindly and amiable disposition, was much esteemed by all those, both seniors and juniors, with whom he was brought into contact in his brief but active course of professional work.

# CORRESPONDENCE.

## THE GENERAL MEDICAL COUNCIL.

### Medical Reform.

Sir,—No one who has followed the proceedings of the General Medical Council for the past series of years can have failed to note the unsatisfactory manner in which that body discharges its duties as the medical parliament of the kingdom. If further proof were needed of the failure of the Council to lead and guide the profession in medical matters, it is writ large in the proceedings of last meeting of Council. At that last meeting several matters were brought forward for consideration in which the decisions of the Council have given much dissatisfaction to members of the profession. We find, for instance, the London Colleges openly and defiantly breaking the rule—quite recently enjoined by the Council—as to the five years' course of study, and plainly telling the Council that with or without its consent they mean to continue their present mode of procedure. The Council, evidently afraid to enforce its own rules, first of all closured the discussion, and then remitted the matter to a Committee. It may be that the London Colleges are right in their violation of the rule, and that the rule as it stands ought not to to have been made; but having been made it ought to be enforced. In either case the incapacity of the Council is manifest, and its action in this matter is likely to lead to a perfect chaos as regards medical training. For the other sixteen licensing bodies in the kingdom, being to all intents and purposes competitors with the London Colleges in the race for candidates for qualifications, will not be slow to follow the lead given by these colleges, and we shall soon have the existing system of granting qualifications, bad as it is, made infinitely worse. Under the existing system, each of the seventeen licensing bodies in the kingdom practically makes its own rules as to the examination of candidates. In one case at least candidates are allowed, as an inducement to take this particular qualification, to pass their examinations piecemeal, that is, one subject at a time. When each of the seventeen qualifying bodies, who already seem to have the power to frame separate and varied rules for the conduct of their examinations, in addition frame rules—as the London Colleges do—regulating the term of medical study necessary for their respective qualifications, we reach a stage when the granting of medical qualifications is in many cases a sham, and the possessors of such qualifications are a source of danger to the general public. For it must be clearly borne in mind that under the existing system of granting qualifications, the seventeen qualifying bodies in the kingdom are really competing establishments, each pecuniarily interested in securing the greatest number of candidates for its particular qualification. When these competing bodies are allowed to offer as inducements to take their respective qualifications, easy examinations, and short terms of study, the result is obvious. To the medical profession it means large additions to its already overstocked ranks; to the general public the result will be a positive danger, for health, and even life, will, in many cases, have to be entrusted to partially trained and unskilful qualified practitioners.

It is almost unnecessary to refer to the cases of so-called "infamous conduct," which occupy far too much of the Council's time. It is well known that the decisions of the Council regarding many of them have caused much dissatisfaction, and there is a strong and widespread feeling in the profession that in connection with a number of these cases the Council is working at the wrong end—pruning the twigs but ignoring the diseased root. If the General Medical Council would only make and enforce stringent rules as to examinations and terms of study; or, better still, if it altered the existing system of granting qualifications—by adopting the one-portal system, for instance—so as to prevent the excessive "passing" of candidates by the seventeen licensing bodies, there would be fewer names to erase from the *Medical Register*. It would seem also from many of its decisions in this connection, as if the General Medical Council was much more lax and easy in its dealings with irregularities committed by any of the licensing bodies than when the offender is a poor medico. The Council can wink at a licensing body which examines candidates who spell badly (see Examiner's Report at last meeting of Council), or allows candidates to pass their professional examinations piecemeal—one subject at a time; but there is little consideration for the poor medical man who errs ever so little. I am no palliator of wrong doing, but in many cases brought before the Council one cannot help sympathising with the offending brother, who is often more sinned against than sinning. God alone knows the hard struggles for an honest livelihood of most of the offenders brought up before the Council; and on many points (for example, advertising) it seems very hard that a qualified medical man should be ruined for life for doing what an unqualified man can do with impunity. Would the Council not be much better employed in framing a Bill to put down quackery in all its forms than in punishing poor medicals for doing what, to a great extent, quackery compels them to do?

These are hard remarks to make regarding the General Medical Council, and, considering the high status of the individual members of Council, it may well be asked why should these things be? A glance at the composition of the Council throws much light on the subject, and reveals one of the most glaring anomalies or "jobs" of the present day. The Council consists of thirty (30) members: five appointed by the Privy Council, twenty elected by the seventeen qualifying bodies, and five elected by the whole body of practitioners in the kingdom, numbering upwards of 30,000—three being for England and Wales, and one for each of Scotland and Ireland. In Scotland we find that while seven members of Council are elected by and to represent the Scottish qualifying bodies, the whole body of general practitioners there can elect only one representative. It is no wonder, considering the composition of the Council, that medical affairs are in an unsatisfactory condition. The qualifying bodies have such a preponderance of votes that they negative all attempts at real medical reform of any kind, their *rôle* being to maintain the *status quo* with all its manifest imperfections, verging in many points on the scandalous.

One would think that the one-portal system or State examination, which would substitute a uniform qualifying examination for the seventeen varied and in many cases inefficient examinations held under the existing system, would commend itself to the Council. This uniform State examination, among other benefits, would relieve the Council of much disagreeable work. It would do away with the necessity for appointing inspectors to watch the examinations of suspected qualifying bodies, and would also do away with much unpleasant friction in the Council meetings caused by discussions on the inefficiency of the examinations of one or other of the qualifying bodies. But against these undoubted benefits is the other fact that a uniform State examination would mean fewer candidates to all, and the closing of the doors of several, of the existing qualifyng bodies: therefore the Council will have nothing to do with the one-portal system. And unfortunately it can easily adopt this attitude by reason of the one-sided distribution of representation in the Council, which has also enabled it again and again to negative motions for increased direct representation brought forward at its meetings. A motion to this effect was so treated no later than at last meeting of Council.

It has been proved times without number—and it is well to emphasise this point—that all failures in previous attempts at real medical reform have been due to deficient direct representation. There is little use in the five representatives of the whole body of practitioners fighting for reforms against the twenty representatives of the interested qualifying bodies; and until we get the grossly unfair distribution of representatives adjusted, until the 30,000 general practitioners have not five but twenty-five representatives on the Council, medical affairs will remain in an unsatisfactory condition.

With a view to the removal of this, the main obstacle to genuine medical reform, may I be pardoned for making a suggestion which is easily carried out, and which if complied with would, I believe, soon put the General Medical Council on a proper footing so far as representation is concerned? My suggestion is, that every medical society in the kingdom should at one of its meetings bring forward a resolution which, if carried, should be forwarded to the General Medical Council, requesting the Council to make representations to the Privy Council that it is expedient to grant increased repre

sentation to the qualified practitioners in each of the three parts of the kingdom. The terms of the Medical Act bearing on this matter are to this effect: "The General Medical Council may make representations to the Privy Council with respect to the expediency of depriving any body of their right to representation on the Council, or of granting increased representation; and the Privy Council are armed with powers for carrying such representations into effect."

While the General Medical Council, as at present constituted, being so largely interested in maintaining the *status quo*, simply negatives any motion for increased direct representation brought up at its meetings, it can hardly refuse to comply with the request of a large proportion of the practitioners throughout the kingdom, and the request is so fair and reasonable that I do not think there can be much difficulty in carrying such a resolution at most of our medical meetings. This is the only mode of procedure (and it is an easy one) for obtaining an increase in the number of our direct representatives, and I would earnestly appeal to all members of the profession to consider the matter carefully.

The next meeting of Council takes place in November, and, in order to hasten on much-needed reforms, it is of great importance that some such action as I have suggested be taken without delay. The names and addresses of the registrars for the three divisions of the kingdom will be found in the *Medical Register*.—I am, etc.,

Glasgow, Sept. 6th. ANGUS MACPHEE, M.D., etc.

## THE GENERAL MEDICAL COUNCIL ELECTION: SCOTLAND.

SIR,—May I venture to ask you to do me the favour of allowing me to announce that I mean again to be a candidate for the post of direct representative for Scotland on the General Medical Council? On a future occasion I hope to be able fully to explain my views on current topics to the Scottish profession, which has hitherto so handsomely trusted their interests in the Council to my hands.—I am, etc.,

WILLIAM BRUCE, M.D., Hon.LL.D.Aberd. Univ.

Dingwall, Sept. 6th.

## THE MIDWIVES QUESTION.

SIR,—Referring to the concluding paragraph of Dr. A. McCook Weir's letter under the above heading in the BRITISH MEDICAL JOURNAL of September 7th, I must again ask Dr. Weir not to accept without reserve Dr. Glover's version of what I have promised my supporters. If any of them were under the impression that I had misled them, it is highly improbable that they would have chosen Dr. Glover to be their mouthpiece. As yet not one of my supporters has made such an accusation, and I feel sure that none of them will believe me to be capable of such a gross abuse of their confidence.—I am, etc.,

Gibson Square, N., Sept. 10th. GEORGE BROWN.

SIR,—Dr. McCook Weir is still in trouble about the origin of the Medical Guild scheme. I also can assure him that neither he nor his Bill was mentioned in the Committee which was appointed to consider the question. As a matter of fact, the Guild has been discussing the midwives question since 1895, and in February, 1896, a Committee was appointed to report on this subject, which it did to the effect that legislation on this question should follow the lines of local registration, with sanitary regulations and that the minimum training of the "midwifery nurse" should be six months in a public lying-in hospital or union infirmary. Dr. Weir will therefore see that in two essential particulars, namely, local registration and in restricting her duties to nursing, the Guild was in evidence before him. If, however, Dr. Weir's scheme bears some resemblance to that of the Medical Guild, it cannot but be a source of satisfaction to him to learn that the latter is being discussed with considerable sympathy, as is testified to by the London correspondents of the *Manchester Evening News*, September 7th, 1901.

Dr. Weir goes out of his way to give a certificate of good conduct to Dr. Glover, and ventures to prophesy that he need not fear for his seat on the General Medical Council. I do not agree that Dr. Glover's conduct has been good from the point of view of the general practitioner; and though I should be sorry to prevent Dr. Glover from sitting down, I sincerely hope it will not be on the benches of the General Medical Council. How Dr. Weir can persuade himself that Dr. Glover agrees with him on this very question passes my comprehension. Dr. Weir insists upon "nursing." Dr. Glover writes[1]: "On one main point I feel strongly with Dr. Weir. The new midwife must be a nurse to her patient, 'as the old one has been.'" Pray how has the old midwife nursed her patients, and, indeed, how could she nurse them seeing that some of them in this district boast of attending *in propriâ personâ* upwards of 300 cases annually. She has gone about with her daily list, presiding at a confinement in one street, washing the perhaps purulent eyes of a baby in another street, and douching a feverish puerpera in another. All useful and necessary work doubtless, but surely a better and safer method might be discovered for performing it.—I am, etc.,

R. HANSON WOLSTENHOLME,
Salford, Sept. 7th. Chairman of the Medical Guild.

## THE SUBCUTANEOUS ADMINISTRATION OF GELATINE.

SIR,—The subcutaneous administration of solutions of gelatine, to which you refer in the BRITISH MEDICAL JOURNAL of September 7th, seems to have received less than the attention it merits from English practitioners. I have given the method an extended trial under many conditions, and though I am not in a position to give any precise information as to its value, I am yet convinced that there are decided advantages to be gained from it in certain cases.

I have administered gelatine hypodermically in the following conditions:

1. Innominate aneurysm.
2. Hæmophilia.
3. Post-operative hæmorrhage from the kidney.
4. Chronic jaundice before undertaking operation.
5. Hæmorrhage.

The results I have obtained may be briefly stated:

1. *Innominate Aneurysm.*—The patient was a woman, aged 52. Seven injections were made at intervals of three to nine days. No benefit whatever resulted. The common carotid and subclavian were tied and the aneurysm consolidated. At the time of the injections, and for about half an hour subsequently, the patient experienced an intense burning pain in and around the area of injection. For the last five injections gas was administered at the patient's request.

2. *Hæmophilia.*—The case occurred in a young man 23 years of age. Epistaxis had been intermittent for three and a-half days. Nasal plugging with lint and hamamelis, checked the hæmorrhage for about an hour on two occasions. With these exceptions the oozing had been continuous, and a severe blanching resulted. I injected gelatine into the abdominal wall, leaving the plugs in the nares untouched. The hæmorrhage stopped in about two hours, and did not recur, though a momentary trickle was noticed when the plugs were removed.

3. *Post-operative Hæmorrhage from the Kidney.*—The patient was a man 34 years of age, who was operated upon by Mr. Littlewood for supposed stone in the kidney. The kidney was split for purposes of thorough examination, and the wound stitched with catgut sutures. Hæmaturia was observed after the operation, and for 13 days persisted, in spite of the administration of styptics, and as the patient seemed in danger of losing his life the possibility of nephrectomy was considered. In Mr. Littlewood's absence I saw the patient, and advised the injection of gelatine. One injection was made in the abdominal wall, and within twenty-four hours the hæmorrhage had ceased, and the urine, which had been the colour of porter, became clear. No further injection was made.

4. *Cases of Long-standing Jaundice before Operation.*—The tendency to steady almost uncontrollable oozing after operations upon patients affected with chronic jaundice is well known. Chloride of calcium is generally administered before operation in such cases. In place of it I have in the last three cases—2 of floating stone in the common duct and 1 of malignant disease—injected gelatine on the third day before operation and on the day of operation. In none of the cases has hæmorrhage, either at the time of operation or subsequently, been troublesome or unusual.

[1] BRITISH MEDICAL JOURNAL, August 24th, 1901, p. 499.

5. *Hæmorrhage.*—In one patient suffering from the effects of prolonged uterine hæmorrhage the result of cancer, I gave gelatine on three occasions before I felt justified in operating. The injections were given on the ninth, sixth, and first days before operation. There was bleeding on the ninth and eighth days, none on the seventh day or any subsequent day. The condition of the patient on the day of operation was strikingly better than at the time of the first injection.

In assessing the value of any method such as this one is unable without a large and sustained experience to give any precise or even tolerably exact information. Coincidence must be excluded. "Impressions" derived from a few cases are of no great value, and "convictions" are poor substitutes for facts. Nevertheless, I am constrained to say that my opinion is that in the subcutaneous administration of gelatine we have a means of increasing the coagulability of the blood, which will not improbably be of great value in many surgical conditions. I would especially urge the treatment in cases of hæmophilia, and in those cases of chronic jaundice to which I have referred.

The solution I employ is a 2 per cent. solution in normal saline fluid. The solution is sterilised and kept in sterilised bottles until wanted. Immediately before use it is resterilised, and the needle and syringe are boiled. I have used a large glass syringe of a capacity of 8 ounces, and have injected 6 ounces of the fluid on each occasion. The injections may be made into the chest wall, abdominal wall, or thighs. My experience has been that the method is invariably a painful one. The patient first mentioned complained bitterly of the acute, almost intolerable "heat" felt during, and for a minute or two after, the injection. Pain or a sense of smarting lasts for about half an hour. The patient is kept in bed for at least eight days after an injection, as the temperature invariably rises to 100°, or slightly over, and does not return to the normal in less than forty-eight hours. I have always used a solution made within a week. and generally within a day, of its injection.—I am, etc.,

Leeds, Sept. 8th. B. G. A. MOYNIHAN.

## ON THE NATURE OF THE SO-CALLED "TETANUS' FOLLOWING GELATINE INJECTIONS.

SIR,—The great interest recently aroused in this subject emboldens me to make a few remarks and queries. As you mention in your article in the BRITISH MEDICAL JOURNAL of September 7th the cases of "tetanus" following subcutaneous injections of gelatine which occurred recently at Guy's Hospital are not the first of this kind. And not only are there the cases you refer to, but Freudweiler[1] has collected several other fatal cases following this treatment. The latter cases resemble uræmia rather than tetanus, and renal symptoms were conspicuous. But whether the cases be called tetanic or uræmic, in the majority convulsions are the conspicuous symptom. In a paper which I read recently before the Obstetrical Society of London, printed in the current number of that Society's *Transactions*, I endeavoured to show that there were many reasons for considering the convulsions of eclampsia as due to an increased coagulability of the blood leading to multiple thrombi in the tissues of the brain, kidneys, liver, and other organs.

Is it not possible, then, that the fatal convulsions which sometimes follow gelatine injections are also due to the formation of capillary thrombi in the nervous tissues, and not to the tetanus bacillus?

If this proves to be the case it is reassuring on the one hand and of serious importance on the other. Reassuring, because it shows that the elaborate precautions taken to sterilise the solution and apparatus are not futile. It seems almost incredible that three separate cases could each have been infected with tetanus on different occasions after careful antiseptic precautions had been observed. On the other hand, it shows a constant and very grave danger attaches to the method even when performed with rigid asepsis. So that, just as the injection of normal saline into the circulation of a woman with violent eclamptic convulsions will lessen and then stop the eclampsia by preventing thrombosis and dissolving thrombi already formed, so the injection of coagulating fluids into the circulation of a normal individual (or one with an aneurysm) may cause fatal convulsions by the production of minute capillary thrombi.—I am, etc.,

Bristol, Sept. 10th. ERNEST W. HEY GROVES.

SIR,—At the meeting of the Medical Society, the case referred to under the heading of the Gelatine Method of Treatment in Aortic Aneurysm, was said to have died of tetanus in, I think, less than forty-eight hours from the time of the injection; and it was suggested in conversation by Sir William Broadbent that, as the time was unusually short for the action of the tetanus bacillus, more probably death was due to the gelatine causing a coagulation of blood in the small vessels of the spinal cord, possibly already affected by endarteritis. No particulars are given of the cases at Guy's Hospital, but it would be interesting to learn if in them the tetanic symptoms came on unusually early.—I am, etc.,

Brighton, Sept. 10th. WALTER BROADBENT.

## ENTERIC FEVER IN ARMIES.

SIR,—The prominence you have given in your leading article of August 24th, and in the subsequent letters of Sir Charles Cameron and Major Melville, R.A.M.C., to the subject of my paper read at Cheltenham on the question of typhoid infection in armies prompts me to reply to some of the points that have since arisen. The question of the comparative efficiency of the avenues by air and by water to spread typhoid in camps of men is very important in practical military hygiene. If the Medical Department were to hold the view that if the avenues by water to an army are protected by an elaborate and careful system requiring a special corps and the co-operation of all officers and men there will still be a large number of airborne cases, then the authorities would be the less inclined to undertake the elaboration of such a system. The idea is not an "unworthy" one; it is a practical certainty that the authorities will not protect the water of armies if they understand it will be largely ineffective to prevent epidemics. Let me again call attention to the part of my paper referring to Assouan in 1886. It will be seen that the neglect continuously to protect the water supply was directly due to the opinion held by the medical officers that "its prevalence must be chiefly owing to climatic causes, and not to the insanitary condition of the camps or water supply." In proportion to the belief in the efficiency of air as an avenue of typhoid will one hesitate in practice to urge elaborate reforms in water supply.

Major Melville "objects to Dr. Canney dogmatising about a station and an epidemic of which he knows nothing, which he has never seen, and whose local conditions he has not (even in first-hand reports thereon) ever taken the trouble to study," etc. I have made a careful study of the Army Medical Department's reports of each of the Quetta epidemics, and the report of the special commission of inquiry. These reports contain probably more information than I could obtain in months at Quetta, they contain the wisdom of the special men who have been appointed to inquire into these epidemics, therein they give an account of the epidemics, dates, cases, local conditions bearing thereon, etc., and the conclusions drawn not from the actual epidemics, but from these observations or facts. I have not studied the Quetta epidemic, but the facts of this epidemic the Commissioners have observed and recorded and the conclusions they have drawn from the same. To study the epidemic I should require to be at Quetta; to study the conclusions drawn from a given official series of facts, it could not be of the slightest use to have resided at Quetta. If I say in London 2 and 2 are 6, it is not necessary for Major Melville to come from Quetta to investigate my conclusion, he will be correct in replying on lines such as I have followed in stating of Quetta—

The data on which the preference is given to the theory of airborne rather than to waterborne typhoid in this case are altogether insufficient, and that the balance of evidence is stronger in favour of the waterborne theory.

"Enteric at Quetta must be studied at Quetta," as Major Melville states, but the conclusions drawn by the Commissioners from a given set of data may be studied in London.

1. Major Melville states that his reason for believing aërial agencies to have been "primarily and mainly" the cause of the Quetta epidemic was the increased incidence in the troops more likely to be exposed to air infection by winds from the neighbouring filth pits. The Commission assumed that if

[1] *Centralbl. für klin. Med.*, July 7th, 1900.

the cause were one common to the whole camp (water, milk, bazaars, etc.), the incidence in these troops would have been, as compared with troops not so exposed, in the proportion of 1 to 1. I have shown that by reason of the great difference in the length of service in India of the respective troops, those in the track of the wind should have had an incidence of at least 2 to 1 if the cause had been common to the whole camp, and the small balance still remaining in favour of those in the dust track may be explained on other grounds. Major Melville practically admits the argument, and the fact that it was overlooked by the Commission, and therefore I presume I am right in supposing that the report in favour of an airborne conclusion is greatly weakened by these new facts.

2. Then, again, as regards the influence of the use of infected lucerne in the adjacent artillery lines in infecting by the men's hands the local water supplies, Major Melville "regrets this point never occurred to Major Davies and myself," and admits that "they may get lucerne." It is true, as Major Melville points out, that instead of the horses and European gunners I had expected there were mules and native drivers, which of course would not have made the lucerne the less dangerous, and my contention that these men with their infected hands may have infected the local water supplies (taps, buckets, chatties, etc.) still holds good.

3. The water supply. Major Melville rightly admits the bacillus may have been in the water supply as in 1896. He states:

> We looked for it and could not find it. The number of organisms we did find was so extremely small that we were justified, I think, in rejecting the water supply as a probable cause of such a severe and localised outbreak.

The outbreak was severe, and I have shown it was "localised" chiefly by reason of the calculable greater susceptibility of a certain regiment. If that regiment had been in any other part of the camp, and the water avenues unprotected, it would have had closely the extra incidence remarked. I have already stated the search for the bacillus long after an epidemic has started is of little value from its known rapid disappearance unless the pollution be continuous. The failure to find the bacillus is no reason whatever for concluding either that the water supply is free from the bacillus or from contamination.

4. The filthy bazaar soda-water freely drunk by the men, and that from the regimental soda-water factories, with the state of which Major Davies, R.A.M.C., "was not satisfied," still remain as fertile sources of this epidemic as in that of 1896.

5. The milk supplies were considered "only fairly satisfactory" (Major Davies), and that from the native bazaars known to be generally polluted are admitted by Major Melville, but he states the latter was only used "to a trifling extent." There may be differences of opinion as to what dose of a possible typhoid milk culture may be regarded as "trifling." Major Melville thinks that 2 ounces of possibly infected milk per man would be far less likely to cause an epidemic in the men than the same number of pints of this culture given to the women. It is not necessary to go to Quetta to investigate these conclusions. The remaining evidence brought by the Commissioners in favour of an airborne inception and spread of the disease Major Melville has passed over namely:

6. "The storms of wind and clouds of dust from May 2nd to 13th," and

7. "The outbreak was preceded by an epidemic of sore throat."

I have shown that both these conditions were quite opposed to this theory of the epidemic, especially the latter, for if the winds were able to give an epidemic of "sore throat" by infected dust, how is it that for at least forty-seven days after the "sore throats" only 6 cases of typhoid had developed in 2,138 men, whereas in the time following these forty-seven days, when the winds and consequent sore throats had long since ceased, sixteen times as many cases developed per month for the subsequent months.

Major Melville studied typhoid in Quetta in 1898, and concluded that it was airborne. I have studied the official data given in support of this conclusion, and I am of opinion that the conclusions are not clearly in accord with the data, and that the probability still remains in favour of a waterborne origin and spread.

Major Melville states:

> Do not suppose that because you boil your water (or, rather, because you order it to be boiled) you have done all that in you lies, and that you may fold your hands and trust in Providence.

Such advice he might well give in criticising the present methods in force in Indian stations, and he will find in the brief sketch I have made (in the Cheltenham paper) of a Royal Water Corps' duties, and also in the pamphlet entitled *Typhoid the Destroyer of Armies and its Abolition*, that neither the power nor the means of preventing these diseases in war or in peace rests with his corps as at present constituted. I have shown that the methods to secure success in war and in peace in India and elsewhere are wider and more comprehensive than his department has yet thought desirable to adopt or to urge.

With regard to Major Melville's numerous questions on the boiling of water for "1,000 men." or to do this in a country where "there is no fuel," etc., I have in that pamphlet shown the answer to these questions and many others which he has not asked, and that scheme which includes a plan to boil water for, and serve palatable drinks to, an army of 200,000 men or more in a few minutes as often as required, has been pronounced by a leading service paper as "perfectly feasible." If Major Melville and his brother officers are really interested in this scheme of prevention, they will in that pamphlet find the details. I see no difficulty in any of the questions Major Melville has raised.

Let me, in concluding, observe that, whilst we are discussing theory, established practice has been, and still is, neglected in our army in South Africa. I have shown that at Assouan a large camp of 1,000 Europeans and 7,000 natives, on a once-supposed evil site from the point of view of airborne typhoid, may be entirely protected from a single case of typhoid, though encamped on the same site for two years, and in spite of typhoid being brought nine times to the camp by fresh arrivals, by exact and complete attention to the water supply. In South Africa and for the army generally, we have no sound system of prevention in view. Lack of method, lack of education of all officers and men on the subject, and general public apathy as regards the disasters yet to come, is a standing disgrace. A joint Committee of the Royal Engineer Corps and the R.A.M.C. should sit until the scheme is produced which is best to meet the ends in view, and that scheme must be at once adopted. I venture to think, notwithstanding Lord Stanley's reply on the "entire impracticability" of the scheme for a Royal Water Corps on the lines which I have proposed, that practically that scheme will in the near future be adopted, and that until it is adopted the disasters therein recorded must be repeated.—I am, etc.,

Belsize Square, N.W., Sept. 8th. LEIGH CANNEY.

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SIR,—Dr. Canney's pamphlet on Typhoid in Armies, and his paper on Airborne Typhoid Fever, have evoked much comment and criticism, and there is danger that, in the multitude of words, the practical application of his work should be lost.

It would be a shame to us doctors if this were the case; if we let slip the opportunity of forcing home to the authorities and the public the fact that a practical solution of a question of national importance has been arrived at.

Dr. Canney's writings have placed beyond doubt (1) that epidemics of typhoid in armies are largely—probably chiefly—waterborne; (2) that it is possible by simple methods to supply pure water, and therefore to decrease enormously the incidence of typhoid and other waterborne diseases. Further, as upholding his main contention, he has shown (3) that in epidemics in India and elsewhere, attributed by official report mainly to dust and flies, the water avenues of typhoid have never been efficiently guarded; (4) that in the barrage works at Assouan, where the water supply was efficiently guarded, the camp, though placed on the site of an old typhoid-infected camp, was absolutely free from cases arising locally; (5) that the researches of Martin and Houston have placed infected soil (earth) practically *hors de combat* as a cause of epidemic typhoid.

Now, to the practical medical man, unprejudiced and unbiassed, there is, on the strength of these facts, only one working position tenable, namely, that the medical pro-

fession, both inside and outside the army, should insist upon the water supply of our soldiers being rendered innocuous.

A scheme is put forward by which it is claimed that this can be done, inexpensively, without serious addition to transport, and, above all, effectually. Lord Stanley has said this scheme is impracticable; the *Army and Navy Gazette* says it is perfectly feasible. Whether Lord Stanley speaks with the same ill-considered haste as he did in the matter of the Vlakfontein murders remains to be seen; but the point is this, not whether Dr. Canney's present scheme is to be carried out, but, that having before us scientific principles relating to prevention, any shirking of responsibility in bringing these principles to practical issue by the War Office and R.A.M.C. is criminal and nothing less. The Royal Water Corps may or may not be the right means; the scientific side of the problem has been demonstrated; it is for the War Office to bring the matter to a practical issue.

If in the coming African summer our soldiers are to die by hundreds from typhoid, it will be the duty of us doctors at the next General Election to fix the blame for their death where alone that blame is due.

One word more. The tardiness and inefficiency of the War Office have become proverbial, but in the South African campaign, both formerly and at present, professional and volunteer soldiers have been employed. If, by official neglect, no chance is given to "Tommy," we must at least claim that the volunteers—our own brothers and near relatives—have the right to try some such system as Dr. Canney's. But of course it must be done thoroughly, by men whose hearts are in their work, like the majority of our volunteer doctors. What would we not have paid out of our own pockets to mitigate the risks of typhoid and dysentery to our own relatives and friends at the front!

Let us not confound the issues; let us not fall into the fatal error of swearing that the shield (of nursery story), gold on one side, silver on the other, is that metal only which we happen to see, but let us be practical as far as we can, even if circumstances over which we have as yet no control still leave some loophole for disease and death.—I am, etc.,

Sutton Coldfield, Sept. 8th. JOHN O. TUNSTALL, M.D.Lond.

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SIR,—May I be allowed to offer a few remarks on the letter of Sir Charles Cameron published in the BRITISH MEDICAL JOURNAL of September 7th on Airborne Typhoid?

Sir Charles has stated on many previous occasions, as well as in the letter on which I now venture to comment, that with one exception Dublin, notwithstanding that it has one of the purest water supplies in the world, enjoys the unenviable reputation of having the highest death-rate from typhoid among the larger towns of the United Kingdom, and from this single fact he draws the inference that the "*materies morbi* is mainly spread by dust and currents of air." At the same time he has no doubt that in India and other countries polluted water is a common cause of outbreaks. The fact stated and the inference drawn from it appeared to me so anomalous, so opposed to the recorded opinions and experience of the best and most careful observers that, some eight years ago, I took a good deal of trouble to investigate the matter. The result of my inquiries was to satisfy me that there was no necessity to regard Dublin as an exception to the rule that typhoid is mainly spread through the agency of contaminated water, or milk tainted with such water, or articles of food or clothing washed in it. I found ample confirmation of the statement that Dublin has a most excellent water supply, but that, owing to imperfect fittings and means of distribution, the water as actually used by a large section of the population, the occupants of tenement rooms, is very far from pure. The following description of one among the many tenement rooms I examined will explain how this came about. The room was on the third floor, was of fair size, and was occupied by a man, his wife, and three or four young children. All slops had to be carried downstairs by hand, and all water required for the family carried up from the ground floor. I am not sure that the vessel in which the slops were carried down was not used to carry the water up. The drinking water was kept in an open metal bucket in a corner of the room, and the children, who were often thirsty at night, used to ladle the water out of the bucket, their hands being none of the cleanest. To complete the description the stairs were in a shockingly filthy state, the steps covered with a thick coat of slippery grime on which I fell and got severely hurt. The labour of carrying up water for a family over such stairs must have been very trying. There are no doubt tenements in a better state than the one I have described, but I found grave defects in all those I examined. *Ex uno disce omnes.* Under these circumstances I hold that the contention implied in the letter that the typhoid virus has not the necessary facilities for diffusing itself through the medium of water in Dublin is unwarrantable.

In the yard of one tenement I found some dairy utensils put out apparently to air and resting on the ground between one of the filthiest privies I have ever seen within a distance of less than three feet on one side, and a dunghill close by on the other.

I should like to offer a few comments on Major Melville's letter if you will grant me space in a future issue. I will now only express my entire concurrence in the opinion expressed by Dr. Canney that no matter how perfect the sanitary arrangements may be in other respects, unless the requirements of the water theory have been complied with a community can have no security against typhoid. I look upon his paper as of the greatest value. The experience of Assouan is most instructive and full of warning. When this place was occupied for a period of three years as a military cantonment it was reported by the military authorities to be swarming with typhoid and ninety-seven young men fell victims to the disease. And yet a few years later when the same site was occupied by thousands of workmen, native and European, though the disease was imported there again and again from other places it failed to spread in a single case, and the place has established for itself such a reputation for salubrity that it has become a sanatorium resorted to by invalids from all parts. Dr. Canney attributes this remarkable change to the wise adoption by Sir William Aird of measures for the protection of his workmen based on the water theory, and his opinion, being fully in accord with the experience of other places in analogous circumstances, appears well founded.

I agree, too, with Dr. Canney that the lesson of Assouan deserves careful consideration in India, where about half of the total mortality among the troops from all causes is due to typhoid, and I hope to be able to give good reason for believing that this mortality is mainly due to the use of contaminated water and that the influence of dust and flies in spreading the disease must be very trifling if any at all.—I am, etc.,

Ealing, Sept. 9th. A. C. C. DE RENZY, I.M.S. Surgeon-General (Ret.)

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## TOTAL EXTIRPATION OF THE PROSTATE FOR RADICAL CURE OF ENLARGEMENT OF THAT ORGAN.

SIR,—As one of Mr. Freyer's critics I feel that my opinions are possibly not free from bias, and should hesitate to express them were it not that Mr. Freyer has in more than one of his publications introduced my name, and, in dealing with views expressed by myself and others, has obviously, to my mind, formed some impressions not entirely free from suspicion of error.

It should be borne in mind that Mr. Freyer enters the field at a time when it is peculiarly difficult to gauge the position of matters in the surgery of the prostate. The entire question has been more or less in abeyance since 1895, when castration was put forward as a substitute for prostatectomy. In 1897 Mr. Mayo Robson wrote:

> The fashion has for a time turned from prostatectomy to castration in the operative treatment of enlarged prostate, but I am by no means converted. (BRITISH MEDICAL JOURNAL, February 28th, 1897.)

In 1898, in my second paper on prostatic surgery succeeding the description of the method of prostatectomy which I published in 1894, is the following:

> A year later, during 1895, castration or (vasectomy) as a practical form of treatment was brought before the profession. It appeared to me that if efficacious in causing atrophy of the hypertrophied prostate, it offered a mode of treatment simpler, and probably safer, than prostatectomy. I therefore decided to try it. My mind was then open on the matter, and is still open. (BRITISH MEDICAL JOURNAL, October 29th, 1898.)

It is common knowledge that many surgeons turned to castration in place of direct operative interference with the prostate at a time when, as the literature shows, prostatic

surgery was entering on a period of rapid development. It is clear that a number of surgeons are turning again to prostatectomy. During a period of five or six years—1895 to 1901 — prostatectomy has been largely neglected, or at least has not been prominent either in surgical practice or literature. In this fact probably lies the reason for Mr. Freyer's question (BRITISH MEDICAL JOURNAL, September 7th): Where are the records of successful cases—of prostatectomy—in large numbers, considering the vast prevalence of enlarged prostate? and also, I venture to think, of whatever difficulty Mr. Freyer has in seeing eye to eye with his critics.

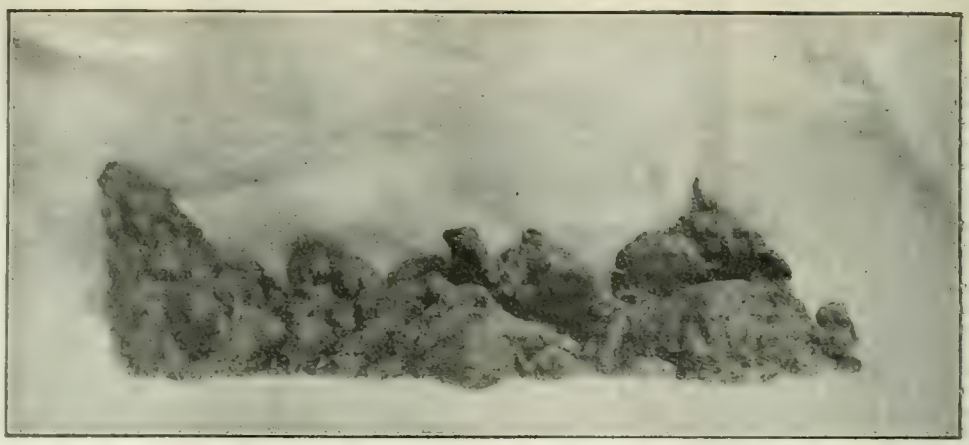


Fig. 1.—1¾ oz. of prostate, of average toughness, enucleated by the finger.

Mr. Freyer has, it would appear, during the past eighteen months published three different surgical operations which he believed to be new: (1) Total Extirpation of the Prostate; (2) A New Method of Performing Perineal Prostatectomy; (3) The "Author's Operation," or Method of Performing External Urethrotomy (*Stricture of the Urethra and Hypertrophy of the Prostate*, Freyer, p. 62); and there is in my mind no doubt, after carefully reading Mr. Freyer's publications, that he arrived at the ideas embodied in the operations independently. That they are new, however, I have been unable to convince myself. With the last mentioned I am not here concerned.

With reference to the first mentioned, namely, Total Extirpation of the Prostate, I need perhaps not repeat what I stated in my former letter as to having seen the operation performed by several different methods and having done it myself. I refer to the matter here to say that if the photograph of the excised prostate which I included in that letter (BRITISH MEDICAL JOURNAL, August 24th) be examined it is possible to discern the strands and contour of a fibrous investment. This is possibly what Mr. Freyer refers to as the "capsule" It may merit the term "capsule," but I should like to make it clear to Mr. Mayo Robson, Mr. Buckston Browne, and others that I do not for a moment suppose it to be the prostatic capsule as I have understood it from student days till now.

Regarding Mr. Freyer's second prostatic operation, entitled a New Method of Performing Perineal Prostatectomy, and published in the *Transactions of the Medical Society*, in Mr. Freyer's book, and elsewhere, while I cannot accept it as new the following paragraph, reproduced from my former letter, makes it clear that I make no claim to the method:

*The Operation which Mr. Freyer described to the Medical Society of London in March, 1900.*—This operation Mr. Freyer clearly regards and publishes as an improvement on mine, and therefore as something new. I, on the other hand, am under the impression that the operation described by Mr. Freyer is one of the well-known methods of performing perineal prostatectomy, consisting, as Mr. Freyer's operation did, in the hooking down of the prostate by a finger passed into the neck of the bladder while prostatic tissue was enucleated by instruments, etc., manipulated by the other hand. I formerly used to practise it as such before I adopted the method now known by my name, and was accustomed to make use of a small curved spatula or retractor to pull down the prostate, as occupying less room than the finger. The last case in which I practised it was that of a patient of Dr. D. Couper's of Denistoun, on whom I operated in Glasgow in January, 1894. The method of operating ranks, correctly or not, in my mind as having been, when I found it, a well-recognised procedure, with the establishing of which in practice I had nothing to do. It served me as a step in the evolution of the method I subsequently published, and was discarded by me in favour of that method for reasons which do not appear to me to require detailing in the present connection.

Mr. Freyer states in his book with reference to this operation as contrasted with mine, that by the former "Nicoll's objects are attained by a much less serious proceeding, etc." (page 105). Mr. Freyer loses sight of the fact that the operation he described fails to attain one, at least, of the main objects I had in view. That object has been appreciated by authors generally in describing the operation, and the most recently-published treatise on operative surgery (Bryant, vol. ii, page 1135) defines it as "maintaining the integrity of the mucous membrane of the bladder at the base, and thus preserving the perineal wound from vesical infection." It was because this method of perineal prostatectomy did not attain that object that I abandoned it.



Fig. 2.—Photomicrograph of section of average prostate, part adenoma and part fibromyoma.

In conclusion, I may say that I am by no means an advocate of enucleation of the entire prostate in all cases requiring prostatectomy. It is advisable in some, and the easiest form of operation in a few, cases. On the other hand, I formerly found partial prostatectomy both easy and efficient in certain instances. Cases vary within wide limits. In my former letter the excised prostate photographed is an exceedingly hard fibromyomatous mass. The two accompanying illustrations are a photograph of 1¾ ozs. of prostate enucleated by the finger, and a photomicrograph of a section of it showing it to be part adenoma and part fibromyoma. The case was selected as an average one, and the plates used to illustrate the paper in the BRITISH MEDICAL JOURNAL of October 29th, 1898.

Now that prostatectomy is returning to favour we shall doubtless in time be able to decide certain of the questions at present open, and acquire these "records" which Mr. Freyer pertinently asks for. Meantime I have to thank you for granting me space for so lengthy a letter.—I am, etc.,

Glasgow, Sept. 10th. JAS. H. NICOLL.

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SIR,—Mr. Freyer has described me, in company with many others who have taken exception to his views, as merely skirmishers. I have no objection to the title. Mr. Freyer is a skilful defender, and evidently appreciates the need for skirmishers to drive him from the wire entanglements and sangars with which he surrounds himself.

In one of his earlier communications Mr. Freyer stated he was not aware of a single case in which a patient after removal of his prostate could micturate naturally. When abundant evidence is brought forward on all sides to disprove his statement, with delightful *naïveté* he promptly shifts his position and throws doubt on the fact that McGill's cases, my own, and presumably others as well, were dependent on the catheter before we operated. I can answer for my own, that they were so dependent. It is really too comic to suppose that our prostatectomies were uncalled-for surgical procedures.

I am quite aware that my assertion that Mr. Freyer is ignorant of the anatomy and pathology of the prostate is not argument. It is a fact, and one which Mr. Freyer can easily prove or disprove, if he takes the trouble to look down a microscope. I shall be delighted to apologise and withdraw my statement if he can prove it to be incorrect.

But perhaps no remarks in his letter so well sum up his position as his quotation from that archpriest of cynicism Sydney Smith: "That man is not the discoverer of any art who first says the thing, but he who says it so long, so loud, and so clearly that he compels mankind to hear him." I can only hope that Mr. Freyer's advocacy of McGill's operation may help to place prostatectomy in that position which it deserves to occupy.—I am, etc.,

Harley Street, Sept. 10th. W. BRUCE CLARKE.

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SIR,—The not very edifying polemic which is being waged for the priority of having performed an operation for the removal of the prostate recalls to my mind an incident which, in this connection, may not be without interest, for it shows that the idea of such an operation was present to the minds of great surgeons long before it was put into practice by any of the present claimants.

On one occasion, in the early Sixties, I was a spectator in the operating theatre of King's College Hospital, and saw the late Sir William Fergusson perform a lateral lithotomy. The operation itself had no special feature, but on its conclusion Sir William (then Mr.) made the following remarks—and methinks I can now hear the very tone of the great surgeon's voice, as he said words to this effect: "In performing the operation you have just witnessed I came across a condition of the prostate which I have frequently met with, and I was impressed with the idea of how perfectly easy it would be to enucleate the gland, and I felt tempted to do so now." I was much struck at the time with these remarks, and a few days afterwards I repeated them to the late Mr. Le Gros Clark—who at the time was my surgical teacher—and who at once said:—What would happen to the urethra and pelvic fascia if such an operation was performed?

Beyond wondering, like Mr. Clark, what is the answer to this anatomical conundrum I am not concerned in the question, but thought it possible that a historical sidelight might interest some of your readers.—I am, etc.,

Edenbridge, Sept. 9th. C. E. SAUNDERS.

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## "FIRST OR BEST?"

SIR,—I have noticed with regret that a certain number of gentlemen have been struggling, with some confusion, to assert their several claims *re* prostates—or, rather, want of prostates, since it is the extirpation of that gland which has excited their wordy conflict.

To one who has never extirpated anything larger than a redundant foreskin—I do not know who was the first to perform this operation—it seems strange to hear so many more or less distinguished persons clamouring to be first. If the outcry had been "I was the last," I might have understood it, because it is reasonable to suppose that the surgeon who extirpated the last prostate must have had more data to hand than he who interfered at the beginning. Herrick has a certain couplet about a gentleman named Peevish, the perusal of which I would recommend to all those who exclaim so lustily, "Bags I."

Finally, being a country practitioner, I would remind these possible consultants that what I would most like to know is, not who did it first, but who does it best. To reach the North Pole may confer fame on the pioneer, but it is he who makes the most use of that achievement who will deserve the thanks of mankind.—I am, etc.,

Bogland, Swampstead, Sept. 9th. LOUIS REDMOUNT.

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## THE TREATMENT OF INTUSSUSCEPTION IN CHILDREN.

SIR,—There is one little point in the treatment of intussusception in children which seems to me scarcely to have received the attention it deserves in the recent discussion at the meeting of the British Medical Association. The relative merits of the injection of air or water into the bowel, and of abdominal exploration, were carefully balanced, but nothing appears to have been said about the employment of the two methods at the same time. This is the plan which, in suitable cases, I have adopted for some years past. An incision an inch long is made in the abdominal wall. The forefinger is introduced into the peritoneal cavity, and then warm water is injected into the bowel through an ordinary tube and funnel by any assistant. The various stages in the process of reduction can be felt generally without difficulty, and sometimes it can be assisted a little by gently moving the bowel from side to side. If it is complete, if there is no ridge or excessive thickening left, nothing further is required. The wound is closed by a single suture. If, on the other hand, there is the least suspicion that the bowel is not perfectly unfolded, the fluid is allowed to escape, the opening enlarged, and the exact state of things ascertained and dealt with in the usual way. Such an incision takes but a very short time, and adds scarcely anything to the gravity of the case; while it effectually answers the question whether reduction is satisfactory or not. I have not by me at the moment my record of the cases in which I have adopted this plan, but I can call to mind several in which it has prevented me from leaving things half done, and not one in which I have had occasion to regret it.—I am, etc.,

Wimpole Street, W., Sept. 10th. C. MANSELL MOULLIN.

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## THE SURGICAL TREATMENT OF PERFORATIONS OF THE STOMACH.

SIR,—The deplorable injuries of the President of the United States, and his rescue from them by surgical treatment seems to me a fitting opportunity to urge a claim to priority in suggesting operation in this class of case; this I did in a paper read by me at a meeting of the Bristol Medico-Chirurgical Society in the year 1883 and published in the Society's *Journal* of that date. The *Journal* has mainly a local circulation and the article is therefore not generally known to the profession; but my late friend Greig Smith, in his book on abdominal surgery, gives me credit for it, as did also Pearce Gould in an address which he delivered at the annual meeting of the Association in Bristol. I urge my claim at the present time because it seems a suitable opportunity; but if any surgeon can put forward a prior claim to the suggestion I shall readily but regretfully relinquish what by the light of subsequent events I have come to look upon as the happiest inspiration of my life.—I am, etc.,

Bristol, Sept. 10th. NELSON C. DOBSON, F.R.C.S.

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## INDIAN MEDICAL REFORM AND THE BRITISH MEDICAL ASSOCIATION.

SIR,—Dr. Barr in his reply to my letter is gracious enough to absolve me from all blame for having made charges against the Indian Medical Service, and admits that he had "no hesitation in saying that in my opinion there are many defects in the medical service in India." For such mercies many thanks, I say. I have, however, been the innocent

cause of raising his gorge because I have "failed to communicate with the Committee in any way." But, such is his consistency, that he immediately contradicts his own statements, for he goes on to expatiate in more than a column and a-half on the many communications which the Committee had received from me, and waxes sarcastic to relieve the monotony of the account. He admits that I communicated with the General Secretary on October 15th, then again on January 15th, and that I sent in my evidence on July 15th, that is, within the three months granted me. Dr. Barr cannot deny that. He seeks refuge in the fact that I was asked to send my evidence before the July meeting of the Council. Without in the least impugning Dr. Barr's veracity, I must say that there was no mention of the July meeting made to me, nor was the date of such a meeting sent me. Under other circumstances it would savour of impertinence to remind the chairman of a committee of the resolutions passed by his Committee, but in the present case it is necessary to quote for his benefit the following resolution passed by his Committee, "That this Subcommittee be adjourned for three months, and in the meantime Dr. Mullick be requested to furnish the Subcommittee with the information from India which he has referred to in his correspondence with the General Secretary." This was communicated to me by the General Secretary on April 30th, 1901. The evidence which I furnished was in support of my statement. It is unfair to say that I have been given two years and that I have not produced any evidence. I am quite prepared before an unprejudiced tribunal to prove my point from the papers which I have already sent in.

There is a most serious point which affects the whole of the working of our great Association, and that is the manner in which evidence before our committees should be treated. My papers, by all the unwritten codes of honour, should have been regarded as confidential. Dr. Barr had no justification for discussing them in the public press. He, as Chairman of the Subcommittee, is in the position of a judge, and it is not the spirit of English justice that a judge should take up the case of one party and argue it against the other. That is precisely what Dr. Barr has done. He takes my evidence and makes a brave show of arguing against me. He has no excuse; he did not have the permission of his colleagues, for the papers were not even laid before his Committee. Such a procedure undoubtedly injures my case, and is palpably unjust to my cause.

It was abundantly proved in the South African Commission that the greatest secrecy was necessary, and even then men hesitated to give evidence against their own service. What encouragement is there for men to do so in the present case, if, as Dr. Barr has done, their names are made public? They would be marked men. Think of the injuries it might entail. After all, the average man, dependent on the good graces of his superiors, does not care to quarrel with his bread and butter. The annual meeting plainly showed its temper when it compelled Dr. Barr to desist from discussing the evidence in public at the meeting.

Surgeon-General Harvey still harps on the old fallacy that the Indians have as much facility in entering the Indian Medical Service as the Englishman, and in support of his statement says that an Indian can compete in London in precisely the same manner as an Englishman, and that the fortune favours the most competent. He wisely omits the facts that the Indians have to leave their homes, have to risk the dangers and expense of a long and perilous sea voyage to England, and have to compete in a foreign language with men who are in their own homes, who have received the same training as their examiners, and whose mother tongue is the vehicle of examination. How would the Englishman feel if, in order to serve in England he had to find the money to go to India, to separate himself from all that is near and dear to him, to live in exile in an inhospitable climate amongst a strange people differing from him as the poles asunder, and then compete in an Indian language on the off-chance of being successful? If after this he was assured that he had no ground for complaint he would rightly consider such a statement to be an insult added to injury. It is the same thing with the Indians who are supposed to be "welcome through the open (so-called) door of competition." I submit, Sir, that the report of the Subcommittee, not having discussed the evidence, establishes nothing but the innumerable sins of omission and commission of which I am presumably guilty. If the admission of my heinous crimes would serve the function of the fatted calf and pacify the ruffled dignity of the powers that be, then I am cheerfully willing to undergo the sacrifice. I do not care a jot or tittle for the personal attacks which have been made on me. All I am concerned with is a principle which I firmly believe to be right; it affects 280,000,000 of His Majesty's subjects in India, who are as jealous of the honour of our Empire for fair play as any Englishman, and who, though far from Britain are entitled to the consideration of the members of an Imperial body such as our Association.—I am, etc.,

New Cavendish Street, W., Aug. 7th. SARAT K. MULLICK.

## AN IMPOSTOR.

SIR,—At the request of my good friend and former pupil, Dr. Hugh Brown Currie, who has been pursuing a most exemplary career on behalf of his country in South Africa, I avail myself of your columns to make known to the medical public a most infamous use of his name recently perpetrated by an impostor hailing from Brighton in a letter to me. The letter was one of the usual plausible kind, of which I have received several in my day, appealing for immediate assistance to save the writer from starvation. He had been (so he said) at Johannesburg before the war in a very good practice which, of course, was entirely broken up by the declaration of war. He then drifted about a good deal and finally returned to this country in a penniless condition, and had been trying for a practice or even a *loc. ten.* without success, etc. The one thing the rascally writer did *not* know was that I had maintained throughout the war a correspondence with the true Hugh Brown Currie and knew of his many noble deeds as a civil surgeon from Elandslaagte and Dundee onwards; and further that I had a letter from him on my desk, dating from South Africa, at the very time this scoundrel was personating him from Brighton. The police who were informed of the facts just failed to catch him, as he had absconded before they could get on his track; they informed me, however, of a few facts about him which they had not been able to make available for the above reason. I may add that there is only one Hugh Brown Currie in the *Medical Register* and that anyone who may be accidentally led to have any suspicion as to the impostor will do a real service to the public by placing what he may happen to know at your disposal or mine. The story told had so many points of *vraisemblance* that I should have been taken in for a time had it not been for the happy accident above adverted to. I have no doubt that the writer had been, as he said, at Johannesburg and in a position to know some of the facts.—I am, etc.,

Edinburgh, Sept. 3rd. W. T. GAIRDNER.

## THE EARLY DIAGNOSIS OF THE ACUTE SPECIFIC FEVERS.

SIR,—In the discussion on the early diagnosis of the acute specific fevers, as reported in the BRITISH MEDICAL JOURNAL of September 7th, it is noticeable that none of the speakers allude to the help in diagnosis afforded by the previous history of the patient. Without for one moment suggesting that second attacks of these diseases do not occur, I am inclined to think that they are much more uncommon than seems to be generally supposed. Repeated second attacks may be due either to misstatements on the part of the parents, or to an error in diagnosis on the part of the practitioner. Thus, for example, in the case of measles, I have been frequently told by the parents that their child had been previously under my care for the same complaint; but, whenever I have been able to refer to my own notes, I have found almost invariably that the previous attack had been one of rötheln, the mistake having arisen from the confusion between the ordinarily used "measles" and "German measles."

On the other hand, rötheln, in the first instance, may be mistaken for a mild attack of scarlet fever, and a subsequent genuine attack of the latter may be considered to be its occurrence for the second time.

When, however, an undoubted history of one of these three is forthcoming, it should, I think, have due weight in the diagnosis of a doubtful rash.—I am, etc.,

Dulwich, S.E., Sept. 8th. H. M. STEWART.

## PUBLIC AMBULANCES.

Sir,—Your paragraph in the British Medical Journal for August 24th calls attention none too soon to the great lack in London of proper means of transport for the sick and injured. Certain infectious diseases are well provided for by the Asylums Board. The well-to-do can depend on the St. John Ambulance Association, but the bulk of the workers who on account of accidents or illness require removal to hospitals or elsewhere can only exceptionally be moved in a proper ambulance.

The local need of a public horse ambulance in Woolwich forced itself on me many years ago. I then discovered that the police had an ambulance at Walworth which could be used by the public on payment of horse hire. This ambulance, however, is far behind modern requirements, and, as you point out, is not sufficiently accessible to be of practical use.

Two years ago the Woolwich Board of Guardians were induced to purchase an ambulance primarily for the removal of patients to the Poor-law Infirmary, and the Board also agreed to let it out on payment of a small charge (2s. 6d.) in addition to horse hire. But here again difficulties arose in the indirect horsing by the agency of a contractor, and it was decided to reserve the ambulance altogether for Poor-law patients.

I am now engaged in raising a fund by public subscriptions for the purchase of an ambulance which, when acquired, it is expected will be maintained and horsed by the Borough Council. The latter have no power to expend money out of the rates on ambulances for other than infectious cases, but there can be no doubt that they are the most suitable body to maintain it when provided.

My experience in this matter may be of use to others, and possibly some of your readers may be disposed to assist in obtaining an ambulance for Woolwich, where reside over 100,000 working-class people for whom there is no generally available hospital nearer than eight miles.

I may mention that during the time the Board of Guardians lent their ambulance out it was used by the general public on an average once a week. One of the nurses of the District Nursing Association usually superintended carrying the patient into the ambulance, and frequently accompanied cases to the hospital.—I am, etc.,

Woolwich, Sept. 4th. Sidney Davies.

## NEURO-CHEMISTRY.

Sir,—The question has been raised by Dr. Shoyer in the British Medical Journal of September 7th as to whether the platino-chloride of choline which Dr. Mott and I have described may not have been the platino-chloride of potassium. If Dr. Shoyer will read the paper we have published on the subject in the *Philosophical Transactions* (1899, vol. 191, ser. B) he will find that the question has been fully considered by us. Another paper in the *Philosophical Transactions* now in the press will be shortly published, and Dr. Shoyer will find the same point discussed there more fully, and reference given to the work of other investigators who have confirmed the statements originally made by Mott and myself. I shall have much pleasure in sending Dr. Shoyer a copy of this paper when it appears.

The identification of choline does not rest upon a single test, and with regard to the platinum test to which Dr. Shoyer refers, we were quite alive to the fact that the mere shape or colour of a crystal is not a trustworthy guide to its identity. By repeated extraction with absolute alcohol, the presence of potassium salt may be practically excluded. The crystals themselves when ultimately obtained differ in their solubilities from those of potassium platino-chloride; they yield on ignition 34 per cent. of platinum, and give off the odour of trimethylamine.—I am, etc.,

King's College, London, Sept. 7th. W. D. Halliburton.

## LACHNANTHES.

Sir,—As there has recently been some correspondence in the daily papers respecting the so-called "Lachnanthes Cure" for phthisis, and as in all probability many of your readers are being inundated by their patients with questions respecting the origin and properties of lachnanthes, I venture to send you the following notes compiled from various sources: The botanical name of the plant is *Lachnanthes tinctoria*, and it belongs to the N. O. *Hæmodoraceæ*. Its popular names are "red root" and "spirit weed." It is a native of the United States, and grows abundantly in sandy swamps, and on the borders of ponds near the Atlantic Coast from Rhode Island to Florida. It flowers in July, and the root is a dye. A saturated tincture of the whole plant is prepared. In large doses it dilates the pupils, impairs vision, produces dizziness, and "other unpleasant symptoms." As is usual with this class of remedy it is an unfailing specific for pneumonia, nervous and typhus fevers, diseases of the brain and spinal cord, delirium tremens, wry-neck, hoarseness, laryngeal cough, tinnitus aurium, and nervous headache. The dose is 2 minims every three or four hours, and it must be well diluted with water. Its pharmacological action has not been investigated, and no active principle has been obtained from it. There seems to be no more reason for employing it in phthisis and other tuberculous diseases than there is for using the thousand and one other drugs which are described in every herbal and dispensatory with equal accuracy and attention to minute detail.—I am, etc.,

Welbeck Street, W., Sept. 8th. William Murrell.

## NURSING IN WORKHOUSES.

Sir,—The fact that a deputation from the Workhouse Infirmary Nursing Association has been received by the President of the Local Government Board, and that its statements and suggestions have been listened to, is a cause of congratulation to all who have the good of the pauper sick at heart. But, unfortunately, one is accustomed to the official civility which seems so deeply interested, whilst all the time the case is prejudged and decided before the counsel comes into court. The country must not be satisfied with the policy of drift, the scandal which clings around the nursing of the sick pauper has been admitted on all sides, and it is time that something effective was done. Now that an intelligent Nursing Order has been issued in Ireland we may take hope for the "adjacent isles," and if only Mr. Long would make some similar decree from Whitehall many of the difficulties would be cleared away. I hope that the Workhouse Infirmary Nursing Association will peg away until the wrongs of these silent suffering sick paupers have been righted.—I am, etc.,

Nurses Hostel, Francis Street, W., Sept. 10th. C. J. Wood.

## ASSOCIATION OF PHYSICIANS AND SURGEONS (SOCIETY OF APOTHECARIES).

Sir,—This Association, in answer to questions, has received satisfactory replies from all the candidates for the General Medical Council, who are unanimously in favour of a more extended title in place of L.S.A. for licentiates of the Society of Apothecaries.

With regard to the Midwives Bill, it is to be hoped that in the case of active legislation the principle of direct medical supervision in every case attended will be adhered to. The profession can hold back or block every Bill not conforming to this view with great ease, and it is high time some administrative power should be shown. We are much too easily imposed upon and undersold for the benefit of a not too thankful public.—I am, etc.,

Percy G. Lodge, L.R.C.S., L.S.A., President.

September 6th.

## SEA-SICKNESS.

Sir,—*Apropos* of your leaderette of last week on sea-sickness, possibly my personal experience might be useful to others. I had always been a speedy victim to *mal de mer* though accustomed from youth upwards to enjoy sea bathing. On leaving Milford Haven for Cork I selected a couch in the airy saloon, and before the boat moved off I lay down on my right side, a position I maintained from 9 P.M. to 2 A.M., when I awoke after two hours' sleep: feeling quite comfortable, I slowly turned on to my back and slept on. I did not venture to leave the recumbent posture till the boat was secured at Passage. Although the night was very stormy I escaped all the well-remembered horrors of sickness. On returning from Kingston to Holyhead I adopted the same plan, with like

success. On going from Dover to Ostend and on returning last month I secured a cabin on deck and adopted the same course on each occasion with perfect immunity from the dreaded symptoms.

I consider it very desirable that shortly before sailing a substantial meal be taken, liquids sparingly; that on going aboard recumbency should immediately be assumed and the eyes kept closed.—I am, etc.,

Cheltenham, Aug. 27th. J. C. GOODING, M.D.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## ROYAL ARMY MEDICAL CORPS EXCHANGE.

*The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post-office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.*

A LIEUTENANT-COLONEL R.A.M.C., serving in Mauritius, due to go to England in less than a year, is open to an offer from an officer serving in Bengal or Punjab commands with over two years to serve abroad.—Address No. 4,200, BRITISH MEDICAL JOURNAL Office.

## ROYAL NAVY MEDICAL SERVICE.

DEPUTY INSPECTOR-GENERAL R. S. P. GRIFFITHS has been promoted to be Inspector-General, July 5th. He was appointed Surgeon, November 12th, 1867; Staff Surgeon, March 14th, 1879; Fleet Surgeon, August 10th, 1888; and Deputy Inspector General, September 1st, 1897. He was Staff Surgeon of the *Orontes* during the Egyptian War in 1882, and has the naval and Khedive's bronze star for that campaign.

The following appointments have been made at the Admiralty:—WILLIAM G. K. BARNES, M.D., Staff Surgeon, and ARTHUR F. FRASER, M.B., Surgeon, to the *Formidable*, undated; ALFRED PATTERSON, Fleet Surgeon, to Pembroke Dockyard, September 11th; JOHN D. HENWOOD, Fleet Surgeon, to the *President*, September 8th; GEORGE D. TWIGG, Fleet Surgeon, to the *Benbow*, September 8th; GEORGE A. DREAPER, Staff Surgeon, to the *Boscawen*, for sick quarters, Portland, September 25th; ROBERT F. BOWIE, Staff Surgeon, and JOHN WHELAN, Surgeon, to the *Empress of India*, undated; PAUL H. M. STAR, Surgeon, to Jamaica Hospital, September 9th; JOHN K. ROBINSON, M.B., Surgeon, to the *Wildfire*, September 9th.

## ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL A. P. O'CONNOR is granted the local rank of Colonel whilst holding the appointment of Secretary to the Principal Medical Officer at the Base, Capetown, November 20th, 1899.

Major R. J. S. SIMPSON, M.B., is granted the local rank of Lieutenant-Colonel whilst holding the appointment of Secretary to the Principal Medical Officer of the Forces in South Africa, August 3rd, 1020.

Quartermaster and Honorary Lieutenant H. BRADLEY retires on retired pay, September 11th. He was appointed to the Department, February 10th, 1900.

Civil Surgeon C. W. DONALD and E. S. WELLS are on passage home from South Africa.

The progress report states that Captain NIESIGH, New South Wales Medical Staff Corps, shows no change, September 6th.

Assistant Surgeon ROBERT LYNN HEARD, M.D., died at Blackrock, co. Dublin, on August 31st, at the age of 67. He was appointed to the 67th Regiment, September 15th, 1857, and resigned his commission, February 13th, 1867. He served with the 67th throughout the campaign in North China, including the action of Sinho, the taking of Tanku, and the storming and capture of the inner Taku Fort, and at the surrender of Pekin. He received a medal with two clasps.

Civil Surgeon ALEXANDER STEVEN died of pneumonia, at Kroonstad, on September 6th.

## INDIAN MEDICAL SERVICE.

BRIGADE-SURGEON ABRAHAM NICKSON HOJEL, formerly of the Bombay Establishment, died on September 1st at Birchington-on-Sea at the age of 60. He was appointed Assistant Surgeon, July 27th, 1859, and became Brigade-Surgeon, April 1st, 1887, retiring from the service April 30th, 1891. He was employed during the disturbances in Persia from 1866 to 1871, taking part in the dethronement of two revolutionary sultans of Muscat, in the bombardment of, landing at, and capture of Bahrim Fort, and in the capture and destruction of Arab war vessels and piratical craft, being mentioned in despatches.

## IMPERIAL YEOMANRY.

TEMPORARY-CAPTAIN R. G. MURRAY, unattached, relinquishes his commission, August 9th.

## VOLUNTEERS.

SURGEON-LIEUTENANT I. E. HODGSON, M.B., 1st Cumberland Artillery, resigns his commission, September 7th.

Surgeon-Lieutenant J. L. CUFFAIDGE, M.D., 5th (the Hay Tor) Volunteer Battalion the Devonshire Regiment, is promoted to be Surgeon-Captain, September 7th.

## VOLUNTEER INFANTRY BRIGADE.

SURGEON-MAJOR J. A. GRAY, 5th Volunteer Battalion the Royal Scots (Lothian Regiment) is promoted to be Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer to the Forth Brigade, September 7th.

## SOUTH AFRICAN DESPATCHES.

THE *London Gazette* of September 10th publishes a despatch from Lord Roberts, dated September 4th, in continuation of that of April last, containing a further list of officers, non-commissioned officers, and men serving under his command in South Africa who have rendered specially meritorious service. From it we extract the following:

*Grenadier Guards.*—Surgeon-Major E. N. Sheldrake, Medical Officer.

*Coldstream Guards.*—Surgeon-Lieutenant-Colonel J. Magill, Medical Officer; Surgeon-Major W. R. Crooke-Lawless, Medical Officer.

*Scots Guards.*—Surgeon-Lieutenant-Colonel G. S. Robinson, Medical Officer; Surgeon-Major W. C. Beevor, Medical Officer.

*Royal Army Medical Corps.*—Colonel J. A. Clery, Colonel R. Exham, Lieutenant-Colonel T. R. Lucas, Lieutenant-Colonel F. A. B. Daly, Major S. Westcott, Major R. Kirkpatrick, Major R. J. Geddes (attached East Kent Regiment), Major O. R. A. Julian, Captain S. G. Moores (attached Scots Guards), Captain F. Smith (attached Wiltshire Regiment), Captain H. J. Parry, Captain J. H. E. Austin (attached Grenadier Guards), Captain E. M. Pilcher, Captain W. A. Ward, Lieutenant G. G. Delap (attached "G" Battery Royal Horse Artillery), Lieutenant O. Challis, Lieutenant L. N. Lloyd (attached Royal Dublin Fusiliers), Lieutenant T. C. MacKenzie (attached Highland Light Infantry), Lieutenant T. E. Fielding (attached Mounted Infantry), Quartermaster and Honorary Captain T. F. Kennedy (retired), temporarily employed; Quartermaster and Honorary Captain J. H. W. Beach, Quartermaster and Honorary Captain E. Thowless, Quartermaster and Honorary Captain R. Adams, Quartermaster and Honorary Captain J. Hirst, Quartermaster and Honorary Lieutenant J. Tandy, Quartermaster and Honorary Lieutenant A. Bruce, Quartermaster and Honorary Lieutenant J. C. B. Whitehorn, Quartermaster and Honorary Lieutenant G. H. Painton, Quartermaster and Honorary Lieutenant S. Duffield (deceased), Quartermaster and Honorary Lieutenant F. W. Hall, Quartermaster and Honorary Lieutenant W. Duncan, Quartermaster and Honorary Lieutenant F. Bruce, Quartermaster and Honorary Lieutenant T. Exton, Quartermaster and Honorary Lieutenant F. Crookes, Quartermaster and Honorary Lieutenant T. J. Jacomb, Quartermaster and Honorary Lieutenant A. H. H. Niblett, Sergeant-Major R. Watson, Sergeant-Major F. Soule, Sergeant-Major A. R. Titchener, Sergeant-Major D. Roberts, Sergeant-Major R. Burrows, Sergeant-Major C. H. Cooper, Sergeant-Major R. H. Green, Sergeant-Major W. H. Bowden, Sergeant-Major F. B. Bowyer, First-Class Staff-Sergeant F. H. Dolman, First-Class Staff-Sergeant J. R. Gibbons, First-Class Staff-Sergeant S. McNamara, First-Class Staff-Sergeant C. W. Measures, First-Class Staff-Sergeant J. de S. Stewart, Second-Class Staff-Sergeant N. Cornell, Second-Class Staff-Sergeant T. Johnstone, Second-Class Staff-Sergeant H. Lattemore, Second-Class Staff-Sergeant F. S. Marsland, Second-Class Staff-Sergeant W. Furness, Second-Class Staff-Sergeant A. T. Mears, Second-Class Staff-Sergeant A. E. W. Mister, Second-Class Staff-Sergeant J. Wilton, Second-Class Staff-Sergeant J. Davis, Second-Class Staff-Sergeant C. Greenhough, Second-Class Staff-Sergeant J. Hampton, Second-Class Staff-Sergeant J. Leonard, Second-Class Staff-Sergeant E. I. Cadogan, Sergeant D. E. Dixon, Sergeant G. Hamilton, Sergeant T. H. V. Coad, Lance-Sergeant J. Bright (killed in action), Lance-Sergeant H. G. Wales, Lance-Sergeant T. Davey, Lance-Sergeant W. Hicks, Lance-Sergeant F. G. Bright, Corporal B. Heponstall, Corporal J. J. Hultahan, Corporal G. R. Moore, Corporal W. Richardson, Corporal G. Skinner, Corporal W. H. Servey, Lance-Corporal A. Butler, Lance-Corporal T. H. Fogden, Lance-Corporal A. Lamont, Lance-Corporal A. Nunns, Lance-Corporal H. Burford, Lance-Corporal R. N. Macgregor, Private G. Allen, Private B. C. Bloomfield, Private G. Brown, Private W. Furness, Private J. Harvey (deceased), Private F. Shoults, Private M. T. Sparkes, Private J. T. Woodley, Private D. Stuart (Hospital Orderly (attached), Private F. W. Woodier (Hospital Orderly, attached).

*Indian Medical Service.*—Major W. H. W. Elliott, M.B., First-Class Assistant-Surgeon J. Moore, Third-Class Assistant-Surgeon R. H. W. Hart, Assistant-Surgeon F. de Santos.

*Imperial Yeomanry.*—3rd Battalion—Civil Surgeon H. A. Lowndes, Medical Officer. 4th Battalion—Captain R. M. Wilson, Medical Officer; 5th Battalion—Captain E. Davidson, Medical Officer; 6th Battalion—Captain W. J. Naismith (Surgeon-Lieutenant-Colonel Ayr Imperial Yeomanry), Medical Officer; 7th Battalion—Captain F. Wellford, M.B., Medical Officer (since died of wounds); 12th Battalion—Civil Surgeon H. Manden, Medical Officer; 15th Battalion—Surgeon Captain E. Hopkinson, Medical Officer; 16th Battalion—Captain G. H. Reynolds, Medical Officer; 20th Battalion—Captain T. Walcot, Medical Officer.

*Volunteers.*—Elswick Battery (1st Northumberland Volunteer Artillery), Surgeon-Captain J. Wreford, Medical Officer; City of London Imperial Volunteers, Surgeon-Captain R. R. Sleman (20th Middlesex Volunteer Corps); Field Battery, Surgeon Captain A. Thorne, M.B. (2nd Middlesex Volunteer Artillery Corps); Colonel Lumsden's Corps, Surgeon-Captain S. A. Powell, M.D. (Surma Valley Light Horse Volunteers).

*Colonial Corps.*

*New South Wales.*—Major W. L'E. Eames (New South Wales Army Medical Corps), Honorary Major A. MacCormick (New South Wales Army Medical Corps), Lieutenant B. J. Newmarch (New South Wales Army Medical Corps), Lieutenant J. A. Dick (New South Wales Army Medical Corps), Lieutenant A. H. Horsfall (New South Wales Army Medical Corps), Nursing Sister E. Nixon.

*Civil.*

Mr. W. H. Brodie (Civil Surgeon), with hospital ships; Mr. G. Carré (Civil Surgeon), with prisoners, Simonstown; Mr. Denyer (Civil Surgeon), attached Royal Horse Artillery; Mr. Engelbach (Civil Surgeon), killed in action; Mr. E. T. E. Hamilton (Civil Surgeon), with hospital ships; Mr. T. Kay (Civil Surgeon), attached 6th Battalion M.I.; Mr. R. O. Moon (Civil Surgeon), attached 2nd Battalion Manchester Regiment; Mr. Perkins (Civil Surgeon), Mr. A. Ricketts (Civil Surgeon), attached 12th Brigade Field Hospital; Mr. A. E. Stephens (Civil Surgeon), attached Bearer Company 19th Brigade; Mr. Willis (Civil Surgeon).

*Civil Staff, Kimberley.*—Dr. Smart.

In conclusion (Lord Roberts writes) I wish once more to draw attention to the great civil hospitals in South Africa, which did so much to alleviate suffering and to moderate the strain thrown on the Royal Army Medical

Corps, and to the patriotic efforts of Sir John Furley, Lieutenant-Colonel . S. Ryerson, Commissioner of the Canadian Red Cross Society, and Major W. G. Macpherson, Royal Army Medical Corps, and the Red Cross ociety; and finally to bring to your notice the following names, in addition to those previously submitted, of persons who helped to raise and quip these hospitals, and maintain them in a state of efficiency:

*Irish Hospital.*—Lord Iveagh, the Hon. Rupert Guinness, Drs. G. Stoker and Coleman, and Captain W. T. Mould, Royal Army Medical Corps.

*Yeomanry Hospital.*—Drs. Stonham, Green, Evans, and Sheen; Major G. E. Hale, D.S.O., Royal Army Medical Corps.

*Langman Hospital.*—Mr. J. L. Langman, the donor of this hospital, and his son, Mr. A. Langman; Drs. C. Gibbs and H. Scharlieb.

*Welsh Hospital.*—Sir John Williams, Bart., M.D., Drs. Lynn Thomas, F.R.C.S., and R. H. Mills Roberts, F.R.C.S.E.

*Princess Christian's Hospital.*—Mr. Alfred Moseley, Major H. B. Mathias, D.S.O., Royal Army Medical Corps.

*Edinburgh Hospital.*—Dr. Francis D. Boyd, M.D., F.R.C.P.E., Major Sir James Clarke, Bart.

*Scottish National Hospital.*—Deputy Surgeon-General H. Cayley, Honorary Surgeon to the King (retired Indian Medical Service).

*Van Alen Hospital.*—Mr. Van Alen.

*Portland Hospital.*—The Duke of Portland, Drs. E. G. G. Calverley, C. Wallace.

As this despatch is in continuation of my despatch dated London, April 2nd, 1901, I would request that all the mentions herein made may be considered as bearing the same date—November 29th, 1900—as those in that despatch.

## THE GAMBIA EXPEDITION.

The *London Gazette* of Tuesday last contains a despatch from Sir George Denton, Governor of the Gambia, forwarding a report from Lieutenant-Colonel H. E. Brake of the operations in the Gambia Colony in the early part of this year. The expedition was necessitated by the spirit of lawlessness and rebellion which prevailed on the Gambia, increased by the absence of British troops engaged in Ashanti.

After detailing the nature of the operations undertaken and the success achieved, Colonel Brake writes: "Most of the Europeans serving with the field force suffered from fever at different times, but the majority of the attacks were not sufficiently severe to oblige them to report themselves sick. Amongst the native soldiers, both West Indian and Central African, the most prevalent complaints were dysentery and diarrhœa. I am inclined to attribute many of the cases amongst the West Indians to the quality of the rations of tinned meat issued to them. This has been made the subject of a special report to the officer commanding the troops at Sierra Leone."

In summing up the services rendered by his officers, Colonel Brake writes: "Fleet Surgeon F. J. Lilly volunteered to organise a base hospital at Tendebar, as there were not sufficient medical officers to spare from the field columns for this duty. The hospital was a model of what it should be, and Fleet Surgeon Lilly was untiring in his exertions. ..... Lieutenant H. Hardy, R.A.M.C., is a hard-working and capable officer, and deserves my thanks. He accompanied me through Gambia, and did good service."

## THE NANDI EXPEDITION.

A despatch from Sir H. H. Johnston, His Majesty's Special Commissioner in Uganda, enclosing a report on the Nandi Expedition of last autumn from Lieutenant-Colonel J. Evatt, who commanded the expeditionary force, appears in the *London Gazette* of September 10th.

Colonel Evatt expresses his regret at the loss of Dr. J. L. Sherlock, Uganda Medical Service, in one of the engagements with the enemy, and, speaking of the native porters, says: In spite of having to work in an unfavourable climate, "their health and death-rate compare not unfavourably with those of the troops, a result mainly due to the care bestowed on them by the Principal Medical Officer of the force and to other officers to whose columns the Kavirondo were attached as porters."

"Captain P. B. Haig, Indian Medical Service (Colonel Evatt writes), was in charge of the medical arrangements of the force. It is due to his management and careful attention to the most minor complaint of the meanest native that confidence was established amongst the horde of savages employed as auxiliaries and porters in the desire to secure their well-being, and that so small a proportion of wound cases terminated fatally. The ready and cheerful assistance rendered by this officer, whether connected with his department or otherwise, deserves the warmest acknowledgment.

"I venture to commend to notice the assistance rendered by Mr. R. J. Storey, Principal Veterinary Officer to the Protectorate, who placed his surgical skill at my disposal at a time when there were a considerable number of severe wound cases, to attend which there was no medical officer available, in consequence of the regretted death in action of Dr. J. L. Sherlock. I would invite attention to the testimony recorded in the medical report on the expedition on the care and skill with which these cases were conducted."

## NAVAL MEDICAL PROVISION FOR WAR SERVICE.

In the *Times* of August 31st a correspondent showed, with copious quotations from official papers, the present unsatisfactory state of naval medical equipment for war, and for minor punitive or relief expeditions in a hostile country. When our readers are informed that in these days of compressed drugs, and modern antiseptic dressings, bandages, etc., the navy is almost entirely supplied with the medicines, drugs, dressings, etc., of twenty or thirty years ago, they will scarcely credit it. If it is the case that reforms are under consideration, as this correspondent understands, they cannot be too quickly carried out. Much, we are aware, has been done by the present administration to make good the leeway, as the sailor might say, which they discovered on entering on office, but it is evident that much remains to be done to render the medical equipment efficient. The *Times* correspondent draws attention to the effects of shell fire and the fires arising from it, as experienced in the recent naval actions between the Chinese and Japanese fleets, a novel experience that indicates the need of ample provision for burns and scalds, for which the present naval medical stores on board ship seem quite inadequate. The staff of medical officers on board our men-of-war would also appear to be too small when we find only two medical officers in battleships with from 740 to 775 officers and men.

## DENTISTS FOR THE ARMY.

We learn that, on the recommendation of Surgeon-General O'Dwyer, Mr. Marshallsay of Aldershot has been appointed dentist to the troops in the Aldershot district. It is hoped that this will lead to the appointment of dentists generally for the troops at home and abroad.

## THE ARMY MEDICAL SERVICE.

Over Twenty Years' Service writes: What sort of a man is "Centurion?" Here are we almost overwhelmed with an enormous mass of difficulties and he talks about the colour of our facings as being of cardinal importance. What utter want of proportion? I think his wife must have written the letter. Depend upon it, we want something substantial, something we can feed on and feel better after it. We want less work and more pay. Our position is all right, and we do not want to be placed in antagonism to the other officers. We are all working for the old flag, and we want no subdivisions. Its "one for all, and all for one," but we are overworked, continuously in hot and enervating climates; we are used up before our time; we get dyspeptic, irritable, we can't sleep, we have no reserve energy, we labour at work which should not try us, all symptoms of overpressure, but though we feel this, we have shown in this last war that when it comes to the pinch, that when the country wants us, pay or no pay, overwork or sickness or anything else, we are ready, but it's very trying, and personally, as I have been doing three men's work and more for some time past, I feel as if Nature exhausted must pause. Please excuse the tone of my letter, you will understand the state of my nerves. While we are cackling, the navy medicals are laying eggs and laughing at us.

## THE COMPOUND TITLES.

R.A.M.C. writes: Old retired officers complain of being still handicapped by the unwieldy compound titles, but the odour of them still clings to the active list, as witness page 1,148 *Army List* for July. After the heading Lieutenant-Colonels under article 362 of Royal Warrant, "the first date up to June 28th, 1898, after each officer's name shows that of his promotion to late rank of Brigade-Surgeon-Lieutenant-Colonel," would the following not be better: Lieutenant-Colonels under Article 362 from first date opposite their names; second date that of promotion to rank of Lieutenant-Colonel?

*** The Brigade-Surgeons advanced under Article 326 before June 1898, will soon all disappear, and then the explanation will be un necessary.

## GRIEVANCES OF THE CIVIL SURGEONS EMPLOYED WITH THE ARMY AT HOME.

A Correspondent writes: There are several hundreds of civil surgeons employed by the War Office in Great Britain and Ireland who are greatly dissatisfied in the way they are dealt with as regards pay. They receive less remuneration than the civil veterinary surgeons employed at home; only £270 per annum, with no allowances, no gratuities, and of course no pension. Compare that with the pay of the following medical officers doing exactly the same work: (1) Lieutenants, Militia Medical Staff Corps—pay, allowances, gratuity, £373 per annum; (2) Lieutenants of Volunteers—pay, allowance, and gratuity, £373 per annum; (3) Lieutenants R.A.M.C.—pay and allowances £273 per annum, and pension; (4) civil veterinary surgeons at home—pay, allowances, and gratuity, £360 per annum. The civil surgeons, moreover, being older men, may also instruct the young R.A.M.C. officers in many professional points, for which they get nothing, and have no guarantee beyond six months' employment. Many joined in the expectation of being sent to South Africa, but proving useful at home were kept there, while fresh men were sent to the front.

The Secretary of State for War has been appealed to for an increase of salary without result; also for the gratuity under Army Order 136 of June, 1901, but were declared to be ineligible. It would be but just that the civil surgeons who came forward in great national emergency and prevented a complete breakdown in the R.A.M.C should be fairly remunerated.

*** We certainly think the civil surgeons doing duty with the Army at home should be well paid; but the work being optional on their part, the War Office argues it engages them in an open market, and presumably at a market price. Civil surgeons who have done good duty for a year or more with troops should, we think, at least get the gratuity spoken of when they cease to do duty.

# MEDICO-LEGAL AND MEDICO-ETHICAL.

## PROSECUTION UNDER THE LUNACY ACTS.

On September 5th at the Richmond Police Court, Mr. and Mrs. Weston, of Blenheim House Medical and Surgical Home and Nursing Institute, were summoned for receiving and taking charge of lunatics in an uncertified institution. For the prosecution it was argued that an offence was committed whether the defendants were or were not aware of the mental conditions of the patients, who were suffering from general paralysis and therefore from dementia. On the other side, three local practitioners gave evidence that in their opinion the cases in question were not certifiably insane. The Bench convicted, imposing a fine and costs to the amount of £58 9s. 3d.

*** This seems to be a somewhat hard case. Many cases of general

paralysis, especially in an early stage, are treated outside asylums, and their mental condition would hardly warrant their committal to a lunatic asylum. Technically speaking, however, there can be no doubt the conviction was in accordance with the law, and all proprietors of uncertified institutions must be careful not to admit such cases, although the mental symptoms may be of a very moderate character.

## PAYMENT FOR ATTENDANCE UPON THE FAMILIES OF MEDICAL MEN.

M.R.C.S.ENG.—We have repeatedly pointed out (see BRITISH MEDICAL JOURNAL, September 8th, 1900; January 5th, 1901; May 11th, 1901) that no medical practitioner has the right to the services of a colleague for himself or his family without payment. Payment should always be offered, and we believe in most instances it would be refused, but there are cases in which fees might quite properly be accepted. If our correspondent is not disposed to give his services gratis, and cannot obtain remuneration, he should decline to continue his attendance; but we should deprecate any further steps being taken to recover payment for services already rendered.

## PAYMENT TO MEDICAL WITNESSES.

A MEDICAL PRACTITIONER in the country draws attention to the disgracefully inadequate payments to medical witnesses for travelling expenses when attending inquests at a distance. He had recently to attend an inquest twelve miles from his residence across country, where there was no rail, and was allowed no more than 3d. a mile one way, that is, 3s. for a journey of 24 miles. On complaining to the coroner, that official very courteously wrote to the Local Government Board, drawing attention to the hardship involved, but the reply he received was in the following terms:

"SIR,—I am to acquaint you in reply that the Secretary of State does not think any useful purpose would be served by a discussion of the matter, as he has no authority to take action in regard to it."

*** The subject of inadequate remuneration of medical witnesses at coroners' inquests has been under the consideration of a Subcommittee of the Parliamentary Bills Committee, which presented to the meeting of the Committee on July 9th, 1901, a report setting out the general lines upon which they propose that the Bill for the amendment of the Coroners Act should be drafted. The report will be found in the BRITISH MEDICAL JOURNAL of July 20th, 1901, p. 169. One of the proposals of the report is that a qualified medical witness summoned by the coroner to give evidence at an inquest should receive for every day and for each adjournment at which the medical practitioner attends at the request of the coroner to give evidence at an inquest, one guinea. The question of travelling expenses is not mentioned.

## LIABILITY FOR FEE FOR A MIDWIFERY ENGAGEMENT.

F. W. writes: A., in consulting practice in London, and residing in the country, where he is in residence from Friday to Monday, has a patient who wishes to be confined in the country, and brings her down to his village, and asks B., if A. is at home, to assist, or, if away, to attend the case and give subsequent attendance during his absence in London. A. goes for his holiday, and the case comes off during his absence, but B. is not sent for, and only hears of the event by seeing the notice in the paper. Can B. under these circumstances claim a fee from A. as agreed between them?

*** A. should be asked for an explanation. B. certainly has a claim if there was a distinct understanding that he was to hold himself in readiness to attend the patient.

## PAYMENT IN LIEU OF NOTICE.

W. writes: A. has a resident patient with his wife and family. The patient's father pays a quarter's charges in advance, but during the quarter thinks a quarter's notice too long, so arranges with A. to have a month's notice on either side. A fortnight before the first quarter expires the patient's wife dies, and the father thinks that it would be too trying for the patient to continue to live in the house where his wife died and removes him. Is A. under these circumstances entitled to a month's charges in lieu of notice?

*** A. would appear to be entitled to another fortnight's charges.

## LIFE ASSURANCE WITHOUT MEDICAL EXAMINATION.

A CORRESPONDENT sends us an advertising pamphlet issued by the Sun Life Assurance Society, drawing attention to its system of allowing monthly payment of premiums and of doing away with the usual medical examination of candidates. He takes exception to two points: (1) The doing away with the medical examination as being another attempt to curtail the income of the suffering general practitioner. (2) The intimation that the private medical attendant of the proposer will be communicated with to verify the truth of the latter's statements when effecting an insurance. He suggests that this would be a violation of professional confidence.

*** (1) It is a matter entirely for the life assurance companies whether it is worth their while to insist on a medical examination of proposers. If they decide not to do so, but require information of a professional character from the medical attendant of a proposer, he will of course insist on being paid in the same way as if he had made the ordinary examination. (2) It would be a violation of professional confidence without the consent of the patient; but in such cases it is to be presumed that the proposer will have instructed the assurance company to write for the information in question to his or her private doctor. The boon to the public from doing away with the medical examination is not very evident, according to the "Sun's" pamphlet. It appears that if the death occurs from natural causes during the first year afte insurance, only one-third of the policy will be paid, and if during the second year only two-thirds. A good many proposers might prefer to be medically examined rather than risk this very substantial reduction of their policies during the first two years.

## A HOLIDAY DIFFICULTY.

ANTITOXIN has asked for an opinion on the following: Y., a medical practitioner, went for a holiday, and during his absence K., an old friend and patient, sent for him to attend his children, who had sickened with scarlet fever. K. would not accept Y.'s *locum*, but called in E., who agreed to attend while Y. was absent. K. then wrote to Y. saying it was his desire that E. should continue to attend till the end of the illness, and Y. replied that he would ask E. to talk the matter over with K. On his return, however, he went to visit the patients, and was somewhat angrily told by K. that he insisted on E. continuing the attendance. Y. accordingly retired and E. finished the case. K. has since written to Y. in a friendly spirit, saying that in future he proposed having two medical attendants, of which one would be E. and the other himself, but that he reserved the right of employing either just as he thought fit. 1. What course should Y. take? 2. What ought E. to have done? 3. If E. hands over the attendance to Y., what proportion of the fees ought the latter to pay E.?

*** 1. This is a question for Y. to decide for himself. It was unwise on his part to have opposed K.'s wishes, although otherwise it would have been more usual for E. to have retired in his favour on his return. Y. would be perfectly justified in refusing to accede to K.'s arrangement, as his inclination prompts him, but as to the policy of so doing he is the best judge. 2. E.'s conduct under the circumstances appears to have been quite correct. 3. E. would, we think, be entitled to the fees for the time he actually attended.

## MEDICAL ADVERTISING.

"DENTIST" complains of a laudatory notice and not very flattering portrait of a dentist in the West-End of London, which has appeared in the *Weekly Freeman*. Among other statements the gentleman in question is said to be known as "the Prof. Koch of the dental profession."

*** Such notices are greatly to be deprecated, but in the absence of any evidence it is impossible to hold the subjects of them responsible.

A CORRESPONDENT writes to complain of the appearance in a Dublin paper, under the heading of "Court and Fashion," of notices intimating the departure or return of various medical men in the Dublin district from or to their homes, and condemns it as a practice peculiar to Dublin.

*** Unfortunately this is not the case, as the London daily papers at this season of the year testify. It is generally understood that these notices are paid for by the person whose movements are chronicled, but the practice seems to be tolerated by our highest medical authorities, and if it is to be checked this can only be done by the Royal Colleges whose Fellows or Members are the principal offenders.

## VALUE OF PRACTICE.

E. D. I. asks what is the correct market value of a medical practice of £500 per annum in a large town, which has been established six years. He gives various details, and states that the price demanded is one and a-half year's purchase, and he is promised from three to six months introduction.

*** Judging from the details given—but we have not heard the other side—we should have thought the market value of such a practice would not be more than one year's purchase.

## "SAVE ME FROM MY FRIENDS!"

A CORRESPONDENT from Ceylon sends us the following cutting from a local newspaper: "Dr. Wm. C. Peries, the D.M.O., has successfully performed his second 'Ovariotomy,' and he is to be congratulated on the result. The patient came for treatment from a village called Ninitigalla near Ratnapura, and she is convalescent and is about to leave the hospital." He asks if such a communication to a newspaper is in accordance with medical etiquette.

*** If Dr. Peries is in any way responsible for the appearance of this paragraph, his conduct is certainly open to censure. It must not be forgotten, however, that paragraphs of this nature are not infrequently inserted in local newspapers without the consent and against the wish of the practitioners referred to.

## CERTIFICATES OF INSTRUCTION IN MASSAGE.

EDINBURGH.—We think everything depends upon the form. Such a certificate given on an ordinary piece of note paper would be unobjectionable, but if engraved or printed so as to resemble a diploma it would be misleading.

## CHARGES TO HOSPITAL NURSES.

NEVIN.—A correspondent writes that he has recently been attending a hospital nurse, who is in a good social position. The patient has asked for an account, and insists on paying for his services. He would like to know if he is justified in charging under the circumstances.

*** Our correspondent is perfectly justified in charging under the circumstances

# PUBLIC HEALTH
AND
# POOR-LAW MEDICAL SERVICES.

## PROVISION OF ISOLATION HOSPITALS BY LOCAL AUTHORITIES.

THE Local Government Board has recently issued a circular to the various County Councils throughout the country, drawing attention to the Isolation Hospitals Act, 1901 (1 Edw. VII, Cap. 8), and pointing out the changes in the existing law that it introduces. They may be briefly enumerated under the following heads:—

1. *Transfer by Local Authorities of Hospitals to use as Isolation Hospitals.*—Hitherto there has been some doubt as to the capacity of a local authority to do this, but by Section 1 (1) of the new Act it is put beyond all doubt.

2. *Contribution by County Council to Hospitals provided by Local Authority.*—By Section XXI of Isolation Hospitals Act, 1893, power was given to the County Council to contribute in the case of hospitals erected under that Act, but not in the case of those provided under the Public Health Act, 1875, and this distinction has been done away with by the new Act. It further gives power to the County Council to borrow money for isolation hospitals, not necessarily repayable out of the rates of the district concerned.

3. *Power of Hospital Committees under the Isolation Act, 1893, to Contract for Hospital Accommodation.*—Hitherto difficulties have been experienced under the Act of 1893 in hiring temporarily a hospital from a District Council, while a permanent hospital was being erected; also in sending patients from their districts to the hospitals of other authorities, and in paying for them when circumstances rendered it desirable. These difficulties are met by Section III (1) of the new Act.

4. *Rate of Interest on Money Repayable by County Council.*—Hitherto under the Act of 1893 money borrowed for purposes of the Act has to be repaid out of the local rate at 4 per cent. interest. The interest may now be mutually agreed upon by the County Council and Hospital Committee, and in default of such agreement may be decided by the Local Government Board.

5. *Appeals to Local Government Board as to Formation of Hospital Districts.*—The Act of 1893 gave power to County Councils to make orders constituting a hospital district, but the local authority had the right of appealing against it to the Local Government Board. Some doubt existed as to the power of the latter on such appeal. Section V of the new Act clearly defines the power of the Board, making its decision absolute and final.

6. *Local Authorities in Rural Districts.*—Section VI (1) of the new Act makes the Rural District Councils the local authorities to the exclusion of any other authority. Copies of all orders made by County Councils with regard to the establishment of isolation hospitals must now be sent to the Local Government Board, and by Section VIII of the new Act representation of the County Council on the Hospital Committee of the hospital district need not be confined to members of the County Council.

## TUBERCULOSIS AND THE MILK AND MEAT SUPPLY.

THE Local Government Board has issued, under date of September 6th, to the councils of metropolitan and other boroughs and of urban and rural districts a circular letter in which, after referring to Professor Koch's address to the recent Congress on Tuberculosis and the appointment of another Royal Commission on Tuberculosis in Animals and Man, it goes on to impress upon the authorities that pending the investigations and report of the Royal Commission there should be no relaxation on their part or on that of their officers in taking the proper measures for dealing with milk from tuberculous cows, and with tuberculous meat which may be intended for the food of man. The Board further states that representations have been made to the effect that the action of officers of local authorities in the seizing of tuberculous meat is not uniform, and in consequence strongly urges upon the local authorities to direct officers employed as meat inspectors to act in accordance with the following principles laid down by the Royal Commission on Tuberculosis, which reported in 1898.

We are of opinion that the following principles should be observed in the inspection of tuberculous carcasses of cattle:

(*a*) When there is miliary tuberculosis of both lungs.
(*b*) When tuberculous lesions are present on the pleura and peritoneum.
(*c*) When tuberculous lesions are present in the muscular system or in the lymphatic glands embedded in or between the muscles.
(*d*) When tuberculous lesions exist in any part of an emaciated carcass.

} The entire carcass and all the organs may be seized.

(*a*) When the lesions are confined to the lungs and the thoracic lymphatic glands.
(*b*) When the lesions are confined to the liver.
(*c*) When the lesions are confined to the pharyngeal lymphatic glands.
(*d*) When the lesions are confined to any combination of the foregoing, but are collectively small in extent.

} The carcass, if otherwise healthy, shall not be condemned, but every part of it containing tuberculous lesions shall be seized.

In view of the greater tendency to generalisation of tuberculosis in the pig, we consider that the presence of tuberculous deposit in any degree should involve seizure of the whole carcass and of the organs.

In respect of foreign dead meat, seizure shall ensue in every case where the pleura have been "stripped."

The circular further insists on the importance of the person who is to act as a meat inspector possessing proper qualifications for the office. He should, as pointed out by the Royal Commission, be acquainted with

(*a*) The law of meat inspection.
(*b*) The names and situations of the organs of the body.
(*c*) Signs of health and disease in animals destined for food both when alive and after slaughter.
(*d*) The appearance and character of fresh meat, organs, fat, and blood, and the conditions rendering them, or preparations from them, fit or unfit for human food.

It is added that any inspector of nuisances or sanitary inspector to whom either of these orders applies is required in any case of doubt in connection with the inspection and seizure of meat to report the matter to the medical officer of health with the view of obtaining his advice thereon. The Board thinks it desirable that any such inspector of nuisances or sanitary inspector should be reminded of his duty in this respect.

## HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,590 births and 2,470 deaths were registered during the week ending Saturday last, September 7th. The annual rate of mortality in these towns, which had been 21.3, 21.6, and 21.0 in the three preceding weeks, further declined last week to 19.4 per 1,000. The rates in the several towns ranged from 9.5 in Bristol, 13.6 in Cardiff, 14.3 in Derby, and 14.8 in Huddersfield to 23.4 in West Ham, 26.3 in Hull, 27.1 in Newcastle, and 36.8 in Gateshead. In the thirty-two large provincial towns the mean death-rate was 21.1 per 1,000, and exceeded by 4.2 the rate recorded in London, which was 16.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 5.7 per 1,000; in London this death-rate was equal to 4.3 per 1,000, while it averaged 6.7 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 9.5 in Croydon, 9.6 in Leicester, 10.6 in Salford, 11.0 in Sunderland, 11.9 in Hull, and 16.0 in Gateshead. Measles caused a death-rate of 1.0 in West Ham, "fever" of 1.3 in Nottingham, and diarrhœal diseases of 8.3 in Wolverhampton and in Leicester, 8.5 in Croydon, 9.2 in Sunderland, 10.8 in Hull, and 15.1 in Gateshead. In none of the thirty-three towns was the death-rate either from scarlet fever or from whooping-cough equal to 1.0 per 1,000. The 65 deaths from diphtheria in these towns included 20 in London, 6 in West Ham, 6 in Manchester, 5 in Sheffield, and 4 in Leeds. Seven fatal cases of small-pox were registered last week in London, but not one in any of the thirty-two large provincial towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, September 7th, was 92, against numbers increasing from 11 to 74 on the four preceding Saturdays; 31 new cases were admitted during the week, against 8, 30, and 52 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 3,148, 3,101, 3,040, and 3,008 at the end of the four preceding weeks, had further declined to 2,904 on Saturday, September 7th; 346 new cases were admitted during the week, against 290, 273, and 303 in the three preceding weeks.

## HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, September 7th, 084 births and 568 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.0, 17.8, and 17.4 per 1,000 in the three preceding weeks, rose again to 17.8 per 1,000 last week, but was 1.6 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 16.2 in Aberdeen and 16.7 in Edinburgh to 22.1 in Greenock and 23.4 in Leith. The zymotic death-rate in these towns averaged 3.1 per 1,000, the highest rates being recorded in Leith and Greenock. The 251 deaths registered in Glasgow included 6 from measles, 7 from whooping-cough, 4 from "fever," and 26 from diarrhœa. Two fatal cases

of measles and 17 of diarrhœa were recorded in Edinburgh. Two deaths from measles and 7 from diarrhœa occurred in Dundee; 2 from scarlet fever and 5 from diarrhœa in Greenock; and 9 from diarrhœa in Leith, 6 in Aberdeen, 5 in Paisley, and 2 in Perth.

## HEALTH OF IRISH TOWNS.

THE summary of the weekly returns of births and deaths in the Dublin registration area and in twenty-one of the principal urban districts in Ireland for the quarter ending June 29th, 1901, shows the following figures:

*Registration—Quarter (13 Weeks) ended Saturday, June 29th, 1901.*

| Towns and Districts. | Population. | Annual Rate per 1,000 Persons | | | |
|---|---|---|---|---|---|
| | | Births. | Deaths. | | |
| | | | All Causes. | Principal Zymotic Diseases. | Phthisis. |
| Total of 22 town districts ... | 1,079,708 | 28.0 | 22.9 | 2.1 | 974 |
| Dublin Registration Area ... | 375,076 | 27.8 | 24.6 | 1.5 | 354 |
| *Urban Districts.* | | | | | |
| Belfast ... ... ... ... | 350,862 | 31.8 | 22.9 | 3.5 | 335 |
| Cork ... ... ... ... ... | 75,978 | 22.8 | 23.2 | 1.5 | 80 |
| Londonderry ... ... ... | 39,873 | 26.5 | 18.8 | 2.1 | 30 |
| Limerick ... ... ... ... | 38,085 | 24.2 | 24.2 | 0.7 | 37 |
| Waterford ... ... ... ... | 26,743 | 22.9 | 14.5 | 0.6 | 15 |
| Galway ... ... ... ... | 13,414 | 23.9 | 26.2 | 0.6 | 9 |
| Dundalk ... ... ... ... | 13,067 | 24.5 | 15.0 | 1.2 | 7 |
| Drogheda ... ... ... ... | 12,765 | 22.9 | 21.3 | — | 2 |
| Newry... ... ... ... ... | 12,587 | 21.6 | 14.6 | — | 8 |
| Lurgan ... ... ... ... | 11,777 | 21.7 | 18.7 | 0.7 | 12 |
| Lisburn ... ... ... ... | 11,459 | 24.1 | 19.2 | 0.7 | 10 |
| Wexford ... ... ... ... | 11,154 | 27.2 | 31.2 | 7.9 | 8 |
| Ballymena ... ... ... ... | 10,880 | 31.6 | 17.3 | 0.4 | 11 |
| Sligo ... ... ... ... ... | 10,862 | 22.1 | 19.5 | 0.4 | 4 |
| Kilkenny ... ... ... ... | 10,493 | 23.6 | 22.9 | 0.4 | 3 |
| Clonmel ... ... ... ... | 10,209 | 20.8 | 15.7 | 0.8 | 8 |
| Portadown ... ... ... ... | 10,046 | 36.2 | 22.3 | 3.6 | 6 |
| Tralee... ... ... ... ... | 9,812 | 28.5 | 30.2 | 5.3 | 15 |
| Newtownards ... ... ... | 9,110 | 28.1 | 22.4 | 3.5 | 6 |
| Queenstown ... ... ... | 7,887 | 31.4 | 19.8 | — | 6 |
| Armagh ... ... ... ... | 7,569 | 21.7 | 21.1 | 2.1 | 8 |

In the Dublin registration area the general death-rate was 24.6, as compared with an average of 24.8 for the second quarter of the previous ten years. The zymotic mortality was 0.2 under the average for the preceding ten years; 74 from whooping-cough, 26 from diarrhœa, 64 from influenza, and 18 from enteric fever constituted the principal deaths in this category. In addition to the 354 deaths registered as due to phthisis, there were 20 more in persons admitted to Dublin institutions from outside districts, but furthermore to the list of the mortality from tuberculosis there must be added 66 deaths from tabes mesenterica, 30 from tuberculous meningitis, and 55 from scrofula tuberculosis, making in all 531 deaths during the quarter from this disease. The total of deaths registered during the quarter was 2,398, from tuberculosis 531, and from zymotic diseases 249. In regard to the urban districts, the high zymotic mortality in Belfast was due chiefly to measles (123 deaths), enteric fever (70), diarrhœa (38), and whooping-cough (56). Wexford and Newtownards both suffered from an epidemic of measles, while Tralee and Portadown had 9 deaths each from whooping-cough. Typhus fever, which is almost extinct in Ireland, caused 7 deaths during the quarter—namely, 1 each in Dublin, Londonderry, Sligo, and Tralee, with 3 in Waterford.

## APPOINTMENT OF DISTRICT MEDICAL OFFICER RENDERED VACANT BY CHANGE OF RESIDENCE.

WE see by the *Pall Mall Gazette* of August 17th that a district medical officer at Worthing, in the East Preston Union, has now to contend with one of the technical difficulties associated with his appointment in consequence of an old regulation of the Local Government Board being still rigidly enforced. This regulation renders the appointment of the medical officer in question vacant because he finds it necessary to change his residence, and to take up a fresh abode which will not be at a distance from his former one, but will be only on the opposite side of the road to that on which he has hitherto lived.

So much inconvenience has arisen from this regulation being kept in force, that we are surprised that it has not long ago been rescinded or in some way modified. Of course, it may be assumed that a medical officer who is actually residing within the district for which he is appointed is more readily acceptable than if he lived at a distance from it; but such is not always the case, and it may be even the reverse.

It would, we consider, be a very great improvement on the present system if this regulation were so far relaxed as to enable a district medical officer to continue to hold his appointment as a permanent one even if at any time he should cease to reside in his district; and should a line of road only intervene between his residence and the nearest point of his district, such as now appears to be the case at Worthing, we can see no possible objection to such an officer being deemed to be a resident in his district when only separated from the same by an intervening line of public road. The difficulty of finding a suitable residence with stabling in many rural districts is sometimes very great, and some change of regulation to meet this appears to be urgently required. We hope it will not be much longer deferred.

## REMUNERATION OF WORKHOUSE MEDICAL OFFICER'S DEPUTY.

J. H. B. states that he has just been appointed medical officer to a provincial workhouse at a salary of £75 per annum, and he is to supply all medicines. He finds he has to appoint a deputy to act for him during his absence or illness; and asks what would be a fair annual payment to offer for the work the deputy may have to do?

*** It is impossible for anyone but the medical officer himself to form an opinion on this question, as the amount of work which would fall upon the deputy must mainly, if not entirely, depend upon the habits of the medical officer himself, and the frequency (or the reverse) of his absence from home. We believe it is very unusual for a Poor-law medical officer's deputy to be paid for his services by a fixed salary, and that it is more common for an amicable arrangement to be made for a payment of fair remuneration after the expiration of a certain period of time, when the amount of work which the deputy has had to perform can be estimated without any great difficulty.

## FEES FOR NOTIFICATION.

TYPHOID asks the following: (1) Under the Infectious Diseases Notification Act, 1899, is it obligatory on a medical man who has been called to an infectious disease to which the Act applies to notify the same to the medical officer of health, although it may be known to him that the case has already been notified by a medical man? (2) Can the sanitary authority refuse to pay the notification fee on the ground that the case has already been notified? (3) If a private practitioner notifies a parish case, which is also notified by the district medical officer, is the private practitioner entitled to 2s. 6d. or 1s.?

*** If a medical man knows for certain that the case has been already notified by another practitioner, common sense would seem to suggest that he should not notify it again; but some medical officers of health take a different view and the words of the Act seem to support them; in any case if there be any uncertainty, it is better to notify. (2) No; if necessary, the fee can be recovered in the county court. (3) A private practitioner is entitled to 2s. 6d.

## STAFF OF A ISOLATION HOSPITAL.

M.O.H. has an urban district of 15,000 inhabitants, with a hospital for twenty beds. His ordinary staff consists of a matron, a probationer, an occasional charwoman, and a porter, who lives away. The cases are usually few, but when many or of several kinds a nurse from a neighbouring institute is obtained. He wishes to know what we think as to the staff.

*** There should be, in addition to the matron, at least one experienced nurse on the regular staff. The usefulness of an isolation hospital depends upon its being immediately available. Suppose a case of scarlet fever in, and he wishes at once to send in one of croup, requiring tracheotomy. What is to be done? Is he to trust the tracheotomy case to the probationer until a nurse can be sent for from the institution? Even when she comes, the staff would be scanty for two kinds of disease. We cannot, of course, say how far the "probationer" comes under the description of an experienced nurse. If the cases are only few, she cannot be learning very much, and can have seen very little variety of illness.

## DISTRICT MEDICAL OFFICER'S CONTRACT WITH GUARDIANS.

J. A. writes that he is a district medical officer and that in his contract with the guardians there is a clause by which he agrees to accept the fixed salary as full remuneration for his services, and that he is not to claim any extra fees for confinements or operations. He asks whether "this clause is legal."

*** If our correspondent's contract with the guardians has been sanctioned by the Local Government Board and bears their seal it is no doubt binding, but unless that Board has sanctioned the terms described it would appear to be contrary to regulation and consequently not binding on either party.

## FEES FOR EXAMINATION OF WORKHOUSE PROBATIONER NURSES.

G. P. J., who is a workhouse medical officer, says he has been asked by his Board of Guardians to state on what terms he could undertake to conduct the examination of probationer nurses, who have had three years' training, for their certificate of efficiency, it being probable that there would not be more than three or four of them for examination at one time. He asks what we consider would be a fair fee.

*** This is not an easy question to answer, as so much depends upon what the examiner himself would consider fair remuneration for this special duty. We assume that the examination would be partly written and partly oral, and if so it would necessarily take up a considerable amount of time. We should, therefore, be inclined to regard three guineas as a suitable fee for the examination if any number of candidates up to four, and half a guinea each, in addition, for all above that number.

# MEDICAL NEWS.

The Russian Government has made a grant of 200,000 roubles for the erection of a sanatorium at Port Arthur.

Successful Vaccination.—Dr. W. J. Franklin Churchouse of Long Buckby has received the Government grant for successful vaccination.

Captain R. J. Blackham, R.A.M.C., has been unanimously elected Worshipful Master of Lodge "Triune Brotherhood" 2121, E.C. (Kassali, Punjab) for the ensuing year.

Soldiers' and Sailors Help Society.—A cheque for £1,000 has been received by the Incorporated Soldiers' and Sailors' Society from the Central British Red Cross Committee, per Major W. G. Macpherson, R.A.M.C., Honorary Secretary. This amount is the first instalment of £5,000 set aside in aid of the work which the Society has undertaken at the request of the War Office to provide accommodation and maintenance for sick and wounded soldiers on sick furlough after arrival in this country from South Africa. The sum will be placed to the Society's general fund for the benefit of the invalids from South Africa, The secretary's annual report shows that down to December. 1900, 1,550 sick and wounded soldiers were received into the Society's homes, and at least another 1,000 may be added to bring the total number down to date.

Deaths under Chloroform.—At Burton lately an inquest was held on the body of a boy, age 12, who had died while under the influence of chloroform which had been administered for the operation of excision of the tonsils. The boy took the chloroform very well and everything went on all right, the operation was finished, and he was beginning to come round when his face turned blue and he fell back dead from cardiac failure. At the necropsy vegetations were found on at least one cardiac valve and the muscular wall of the heart was very thin. Artificial respiration had been continued for an hour and a half without effect. At Birmingham in a workhouse infirmary the death of a man, aged 44, occurred during the administration of an anæsthetic required for an operation on the abdomen, peritonitis being present. Four drachms of pure chloroform were administered in the first place then a mixture of one part ether to two parts of chloroform. He suddenly changed colour and respiration ceased. Tracheotomy was performed but without any good result. As a result of a necropsy it was decided that death was due to syncope.

Bequests.—Mr. Alfred Joseph Dettmar, who died recently leaving personalty of the net value of £61,911, has appointed as the sole executor of his will, Mr. Charles Stormont Murray, of 55, Gloucester Place, who is to set apart and invest as a fund for charitable purposes a sum which will produce an income of £1,500 a year, and three trustees, of whom the executor is to be one, and the other two, in default of any nomination by the testator, are to be nominated by Mr. Murray, are to distribute during fifteen years £1,000 a year in such proportions as they may think fit among the National Hospital for the Paralysed and Epileptic (Albany Memorial), Queen Square; the Hospital for Epilepsy and Paralysis and other Diseases of the Nervous System, 32, Portland Terrace, Regent's Park; and St. Mary's Hospital, Cambridge Place, Paddington. The trustees may at their discretion after notice discontinue the annual payment to one or more of these institutions, and after the expiration of the period of fifteen years, or in certain events earlier, they are to distribute the capital of the fund producing the £1,500 annuity among the three hospitals before named, to be held for the benefit of the hospitals in the name of the late Mr. Dettmar.

American Public Health Association.—The twenty-ninth annual meeting of the American Public Health Association will be held at Buffalo, New York, September 16th to 21st, under the presidency of Dr. Benjamin Lee of Philadelphia. The following subjects are on the programme: The pollution of public water supplies; the disposal of refuse material; animal diseases and animal food; car sanitation; etiology of yellow fever; steamship and steamboat sanitation; relation of forestry to the public health; demography and statistics in their sanitary relation; cause, prevention, and duration of infectious diseases; public health legislation; cause and prevention of infant mortality; disinfectants and disinfection; national leper homes; dangers to the public health from illuminating and fuel gas; transportation of diseased tissue by mail; the teaching of hygiene and granting of Diploma of Doctor of Public Health; school hygiene; sanitary aid societies. In the Section of Bacteriology and Chemistry the following questions will be discussed: On standard methods of water analysis; bacteriology of milk in its sanitary relations; variations of the colon bacillus in relation to public health; and exhibition of laboratory apparatus and appliances for teaching hygiene.

Kent Benevolent Medical Society.—The annual meeting of the members of this Society was held on July 17th at Maidstone, under the presidency of Dr. C. E. Hoar. The accounts for the year ending July 5th, 1901, were laid before the meeting, after being duly audited, and as it appeared that a balance of £415 might probably be anticipated for the coming year, it was resolved that a sum of £100 should be added to the invested capital of the Society, and that the sum of £255 should be distributed amongst the several applicants for assistance whose names were then before the meeting. The Society, which was instituted in the year 1787, has been the means of benefiting the widows and orphans of its members (and in some cases the members themselves) and thus has relieved distress in the families of those who had long and honourably laboured in the medical profession. For several years past the Society has been enabled to distribute annually a sum of about £300 towards the relief of deserving cases, and the fact that the Society has an invested capital of £9,500 is a guarantee that the good work which has been carried out in the past will be continued. The annual subscription is one guinea. The secretaries of the society are Dr. C. E Hoar, of Maidstone, Dr. H. G. Sadler, of Canterbury, and Dr. H. C. Burton, of Lee, and the assistant secretary is Mr. James Wiltshire, of the Bank, Canterbury, any of whom will be plea sed to furnish any further particulars which may b desired.

Antirabic Inoculations in St. Petersburg.—In the current number of the *Archives des Sciences Biologiques publiées par l'Institut Impérial de Médecine Expérimentale à St. Petersbourg*, Dr. V. Kraïouchine, in his annual report of the department of preventive inoculation, states that during 1889 the number of persons who presented themselves for treatment was 745. Of this number 103 were not treated; of these 25 were found to have been bitten by animals who were proved to be not rabid; in 20 there was no wound, or only a slight mark of injury; and in 36 the clothes were intact at the place where the bite was inflicted; 2 were bitten through thick clothing: 18 declined to undergo the inoculation, and in 2 hydrophobia had already developed. Of those treated 29 had only had their hands soiled with the saliva of rabid animals, but they were subjected to a course of inoculation as a precautionary measure; in 15 cases treatment was interrupted either because the patients declined to continue it or on account of an intercurrent illness having nothing to do with rabies; in 9 cases in which the full treatment was administered the animals which inflicted the bites were found to be quite healthy; and in 2 the patients insisted on being treated although their clothes at the supposed seat of injury were intact. Deducting all those cases, 587 were treated, of whom 7 died of hydrophobia. The total rate of mortality, therefore, was 1.2 per cent. In 4 of the fatal cases, however, the disease developed during the course of inoculation. Deducting these cases, the death-rate was 0.5 per cent.

## MEDICAL VACANCIES.

The following vacancies are announced:

BANBURY; HORTON INFIRMARY.—House-Surgeon and Dispenser. Salary, £80 per annum, with board and lodging. Applications to Mr. C. H. Davids, Hon. Secretary, 21, Marlborough Road, Banbury.

BIRMINGHAM CITY ASYLUM.—Junior Assistant Medical Officer, unmarried, and not over 30 years of age. Salary commences at £150 per annum, with board, apartments, and washing. Applications to the Medical Superintendent.

BIRMINGHAM CITY FEVER HOSPITAL.—Assistant Medical Officer. Salary, £120 per annum, with board, residence, etc. Applications to the Medical Superintendent.

BIRMINGHAM GENERAL HOSPITAL.—House-Surgeon. Appointment for six months. No salary, but residence, board, and washing provided. Applications to the House Governor by September 28th.

BODMIN: CORNWALL COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £120, rising to £150 per annum, with board furnished apartments, etc. Applications to the Medical Superintendent by September 19th.

BRENTWOOD: ESSEX COUNTY ASYLUM.—Junior Assistant Medical Officer; not over 25 years of age. Salary, £140 per annum. Applications to the Medical Superintendent.

BRIGHTON: HOVE AND SUSSEX THROAT AND EAR HOSPITAL, Church Street, Brighton.—Non-resident House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £75 per annum. Applications to the Secretary.

BRISTOL GENERAL HOSPITAL.—Assistant House-Physician. Salary, £70 per annum, with board, residence, etc. Applications to the Secretary by September 24th.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—Assistant Secretary. Young qualified man, total abstainer. Salary, £150 per annum and lecture fees, with board and residence with Honorary Secretary. Applications to Dr. Ridge, Carlton House, Enfield, Middlesex, by September 21st.

CAIRO: KASR-EL-AINI HOSPITAL AND SCHOOL OF MEDICINE.—Physician to Hospital and Professor of Clinical Medicine in School. Appointment for two years. Salary, £E320 per annum. Applications to Director, General Sanitary Department, Cairo, by September 25th.

CHICHESTER INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by September 30th.

DERBY COUNTY ASYLUM, Mickleover.—Senior Assistant Medical Officer. Salary £130, rising to £150, per annum, with furnished apartments, board, washing, and attendance. Applications to the Medical Superintendent.

DENBIGH: DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary, £100 per annum to commence, with board, residence, and washing. Applications to the Secretary.

DENBIGH: NORTH WALES COUNTIES LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary, £120 to £160, with board, residence, and washing. Applications to Clerk to the Visiting Committee.

DENTAL HOSPITAL OF LONDON, Leicester Square, W.—(1) Dental Surgeon. (2) Assistant Dental Surgeon. Applications to the Secretary by October 7th.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary, £75 per annum, with apartments and board. Applications to the Secretary, 88, West Regent Street, Glasgow, by September 26th.

GLASGOW UNIVERSITY.—Additional Examiner for Degrees in Medicine and Science, with special reference to Physics. Salary, £30 per annum. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by September 26th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, N.—(1) House-Physician, (2) Junior House-Surgeon, (3) Junior House-Physician, and (4) Non-Resident Assistant House-Surgeon. Appointments for six months. Salaries at the rate of £60 per annum for (1) and £30 per annum for (2), (3), and (4). Board, lodging, and washing provided for (1), (2), and (3), and luncheon and dinner for (4). Applications to the Secretary by September 16th.

LEITH HOSPITAL.—(1) House-Physician, (2) Assistant House-Physician, (3) House-Surgeon, (4) Assistant House-Surgeon, (5) Surgeon for Out-door Department. Appointments for six months. Applications to the Secretary by September 16th.

LONDON HOSPITAL, Whitechapel, E.—Surgical Registrar. Salary, £100 per annum. Applications to the House-Governor by October 3rd.

MACCLESFIELD: CHESHIRE COUNTY ASYLUM.—Junior Medical Officer, unmarried, and not over 30 years of age. Salary £130, rising to £150 per annum, with furnished apartments, board, washing, and attendance. Applications to the Medical Superintendent.

MACCLESFIELD GENERAL INFIRMARY.—Senior House-Surgeon. Salary, £100 for the first year, with board and residence. Applications to the Chairman, House Committee, by September 18th.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—(1) House-Physician, (2) House-Surgeon, (3) Assistant House-Physician, (4) Assistant House-Surgeon. Appointments for six months. Salary, (1) and (2), at rate of £40 per annum, (3) and (4) at rate of £20 per annum. Applications to the Secretary by September 16th.

NOTTINGHAM CHILDREN'S HOSPITAL.—House-Surgeon, unmarried. Appointment for six months, but eligible for re-election. Salary at the rate of £100 per annum, with board and residence. Applications to the Secretary, Mr. A. F. Kirby, St. Peter's Church Walk, Nottingham, by September 30th.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Physician. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by September 27th.

PADDINGTON INFIRMARY.—Clinical Assistant and Second Assistant to the Medical Superintendent, unmarried, and between 21 and 30 years of age. Appointment for six months. Honorarium £35, with board, lodging, and washing. Applications to the Medical Superintendent, 285, Harrow Road, W., by September 17th.

PLYMOUTH PUBLIC DISPENSARY.—Second Medical Officer. Applications to Secretary by September 17th.

POPLAR HOSPITAL FOR ACCIDENTS, E.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Salary at the rate of £50 per annum, with board and residence. Applications to the House-Governor by September 20th.

READING: ROYAL BERKSHIRE HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but eligible for senior posts when vacancy occurs. Salary, £50 per annum, with board, lodging, and washing. Applications to the Secretary by September 20th.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—Curator and Librarian. Salary, £120 per annum. Applications to the Secretary by October 10th.

SALFORD ROYAL HOSPITAL.—(1) House-Surgeon, (2) House-Physician, (3) Junior House-Surgeon. Salary, (1) £100 per annum, (2) £80 per annum, (3) £70 per annum, with board and residence in each case. Applications to Superintendent and Secretary by September 19th.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Marylebone Road, N.W.—(1) Two Anæsthetists Honorarium, £20 per annum. (2) Physician to the Out-department. Applications to the Secretary by October 1st.

TAUNTON: TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Appointment for six months. Salary at the rate of £60 per annum, with board, lodging, and laundry. Applications to the Honorary Secretary.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, S.W.—House-Surgeon. Appointment for six months. Honorarium, £25, with board and lodging. Applications to the Secretary by September 28th.

WANDSWORTH AND CLAPHAM UNION INFIRMARY, St. John's Hill, S.W.—Junior Assistant Medical Officer. Salary, £70 per annum, with board, lodgings, and washing. Applications to the Medical Superintendent.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House-Surgeon. Salary, £50 per annum, with board, lodging, washing, and attendance. Applications to the Secretary.

WESTERN GENERAL DISPENSARY, Marylebone Road.—Second House-Surgeon. Salary, £80 per annum, with board, residence, and laundry. Applications to the Honorary Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) House Physician, (2) House-Surgeon. Appointment for six months. Board and lodging provided. Applications to Secretary-Superintendent by September 23th.

WORCESTER COUNTY ASYLUM, Powick.—Third Assistant Medical Officer. Salary, £120 per annum, rising to £140, with board, residence, etc. Applications to the Medical Superintendent by September 24th.

WREXHAM INFIRMARY.—Lady Dispenser. Salary, £30 per annum, with full board and washing. Applications to the Secretary before September 23rd.

## MEDICAL APPOINTMENTS.

ANDERSON, Wm. A., M.B., C.M.Edin., appointed Assistant Medical Officer to the Plymouth Borough Asylum, Ivybridge, Devon, *vice* Dr. Haywood Hadfield, resigned.

ANDREWS, W. H., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Kingsbridge Union, *vice* H. Grenfell, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

BREW, R. H., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health for the Clutton Rural District, *vice* A. H. Whicher, M.R.C.S.Eng., resigned.

BUTT, F. J., M.B., C.M.Edin., appointed Medical Officer of Health for the Hoole Urban District, *vice* R. E. Burges, M.D., M.Ch.R.U.I.

CLARKE, Astley Vavasour, M.D., B.C.Cantab., appointed Physician to the Leicester Infirmary and Fever House, *vice* J. Headley Neale, deceased.

DAKIN, T. B., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Glanford Brigg Union, *vice* T. Baron, M.R.C.S.Eng.

GORDON, T. E., M.D.Durh., appointed Medical Officer of Health for the Towyn Urban District, *vice* T. I. Bonner, M.B., C.M.Aberd., resigned.

GORNALL, J. Guest, M.A., M.B., D.P.H.Cantab., appointed Medical Officer of Health for the County Borough of Warrington.

HIPWELL, H., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Banbury Union, *vice* W. A. Shelswell, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

KIRBY, Saml. J. J., M.D.Brux., L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health to the Hoxne Rural District Council.

LIVINGSTONE, T. H., M.B., C.M.Edin., appointed District and Workhouse Medical Officer of the Weardale Union, *vice* T. Livingstone, M.D.Glas.

PEAKE, A. E., M.R.C.S., L.R.C.P.Lond., appointed District and Workhouse Medical Officer of the Henley Union, *vice* A. Rigge, L.R.C.P.Lond., M.R.C.S.Eng.

PEILE, William H., M.A.Cantab., M.R.C.S., L.R.C.P., appointed First Assistant Medical Officer to the Bethnal Green Infirmary, Cambridge Heath, N.E.

SALTER, F. W., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Newtown and Llanidloes Union.

STEVENSON, Roland A., L.R.C.P.Lond., M.R.C.S.Eng., appointed Junior Resident Medical Officer at the London Open-air Sanatorium, Pinewood, Berkshire.

THOMAS, W. J., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Merthyr Tydfil Union.

TROUP, J., M.B., C.M.Aberd., appointed District Medical Officer of the Bury Union, *vice* A. T. Dochard, M.B., C.M.Edin., resigned.

WATTS, Alexander Minter, M.B., B.S.Durh., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer of Health to the Holbeach Urban District Council.

WHITTINGHAM, G. M. Y., M.R.C.S., L.R.C.P.Lond., appointed Assistant Medical Officer to the Wandsworth and Clapham Union, *vice* W. M. Stanley, resigned.

ST. THOMAS'S HOSPITAL.—The following gentlemen have been selected as House Officers from Tuesday, September 3rd, 1901:

House-Physicians—L. H. C. Birkbeck, B.A., M.B., B.Ch.Oxon.; V. S. Hodson, B.A., M.B., B.Ch.Oxon.

Assistant House-Physicians—W. M. Glanville, B.A., M.B., B.Ch.Oxon.; T. W. S. Paterson, M.A., B.C.Cantab., L.R.C.P., M.R.C.S.

House-Surgeons—C. A. R. Nitch, M.B.Lond., L.R.C.P., M.R.C.S.; W. H. O. Woods, B.A., M.B., B.C.Cantab.; S. Hunt, L.R.C.P., M.R.C.S.; A. S. Grimwade, L.R.C.P., M.R.C.S.

Assistant House-Surgeons—G. A. C. Shipman, M.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S.; W. Hill, B.A.Cantab., L.R.C.P., M.R.C.S.; T. W. H. Downes, L.R.C.P., M.R.C.S.; F. J. Child, M.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S.

Obstetric House-Physicians—(Senior) H. S. Stannus, L.R.C.P., M.R.C.S.; (Junior) Z. Mennell, L.R.C.P., M.R.C.S.

Ophthalmic House-Surgeons—(Senior) H. S. Harris, L.R.C.P., M.R.C.S.; (Junior) F. B. Skerritt, B.Sc.Lond., L.R.C.P., M.R.C.S.

Clinical Assistants in the Special Department for Diseases of the—(Throat) H. T. D. Ackland, L.R.C.P., M.R.C.S.; A. D. Hamilton, L.R.C.P., M.R.C.S.; (Skin) F. Clarkson, M.B., B.S.Durh.; J. L. Tummins, M.A., B.C.Cantab.; (Ear) H. Spurrier, B.A.Cantab., L.R.C.P., M.R.C.S.

Clinical Assistant in the Electrical Department—H. T. D. Ackland, L.R.C.P., M.R.C.S.

Several other gentlemen have received an extension of their appointments.

## DIARY FOR NEXT WEEK.

### MONDAY.

**Medical Graduates' College and Polyclinic**, 22, Chenies Street, W.C.
4 P.M.—Clinique (Skin).

### TUESDAY.

**Medical Graduates' College and Polyclinic**, 22, Chenies Street, W.C.
4 P.M.—Clinique (Medical).

### WEDNESDAY.

**Medical Graduates' College and Polyclinic**, 22, Chenies Street, W.C.
4 P.M.—Clinique (Surgical).

### THURSDAY.

**Medical Graduates' College and Polyclinic**, 22, Chenies Street, W.C.
4 P.M.—Clinique (Surgical).

### FRIDAY.

**Medical Graduates' College and Polyclinic**, 22, Chenies Street, W.C.
4 P.M.—Clinique (Ear).

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTH.

PROWSE.—At 5, Lansdown Place, Clifton, Bristol, Bristol, on September 7th, 1901, the wife of Arthur B. Prowse, M.D.Lond., F.R.C.S.Eng., of a son.

### MARRIAGES.

BURGESS—ROBINSON.—On the 10th inst., at the Parish Church, Leek, Staffs, by the Rev. W. Charlton Nicholls, B.A., assisted by the Rev. J. E. Peacock, B.A., Arthur Henry Burgess, M.B., M.Sc., F.R.C.S., of Manchester, to Elsie, second daughter of Thomas Robinson, of Leek.

ROBERTSON—WALKER.—On September 5th, at Bolton Abbey, Yorkshire, by the Rev. A. P. Howse, M.A., Rector, W. H. Robertson, M.B.Edin., to Ethel Walker, younger daughter of Harry Walker, Esq., Albert Road, Colne, Lancashire.

SNELL—GREEN.—On September 4th, at St. Anne's Church, Eastbourne, by the Rev. Thomas Myers and the Rev. Charles Green, uncles of the bride, and the Rev. W. Jay, Vicar of the Parish, Sidney H. Snell, M.D., B.S.Lond., D.P.H., etc., of Wandsworth Common (late of Scarborough), to Emily Hilda, only child of the late William Green, of Durham.

WILSON—MORROW.—On September 5th, at the residence of the bride's father, by the Rev. James Kennedy, William James Wilson, M.B., R.U.I., son of Thomas Wilson, Straid, to Edythe Mabel, daughter of James Morrow, Ulster Bank House, Larne.

### DEATHS.

MOLONY.—On August 26th, at 15, Ordnance Road, Southampton, P. J. Molony, M.D.Dub., late of Wickham, Hants, and of Cragg, co. Clare, Ireland, aged 62 years.

ROBERTS.—On September 8th, at 28, Peel Square, Bradford, Wm. Lake Roberts M.R.C.S.Eng., in his 56th year.

# LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

## QUERIES.

D. M. desires to know where (in London) a young lady could get the necessary instruction to qualify as a dispenser of drugs.

PERPLEXED asks if any classical scholar will kindly supply him with the full quotation, of which "Non nimis diligentiæ . . . tot cures" are the only words he can recall.

ALCOHOL desires to know of a home or institution where a working man, aged 40, a dipsomaniac, could be taken care of for a few months, either under the Act or not. Friends could pay 10s. to 15s. a week.

PERPLEXED would be glad to know if there is any establishment or institute where a girl could receive a course of lectures or a few months' training in practical hygiene, as applied to the bringing up of children.

M. S. desires to hear of an institution where a child (female) aged 8 years suffering from myxœdema could be received for educational purposes. She is fairly intelligent and improves every year under thyroid treatment.

W. H. will be glad to know of a home for an aged patient willing to pay up to 10s. a week. The patient is not suffering from any acute disease, but wants a permanent home where she will be cared for.

C. P. asks: (1) Which would be the greater tax upon the nervous system of a constitutionally delicate person—one hour's pianoforte playing (scale and exercise), or one hour's singing per diem. (2) Would not two hours practising per diem be far too much for a delicate girl who is markedly neurotic, and whose whole family show various neuroses (tendencies to chorea, etc.)?

F. C. would be grateful to any reader of the BRITISH MEDICAL JOURNAL for assistance in the treatment of a case of threadworms passed *per urethram* (male). ¶There is a good deal of renal and vesical irritation suggesting probably their renal origin. They manifest decided movement and live some time after being voided.

*** Is our correspondent quite sure of his facts?

### MOTOR CARS.

W. D. (Ireland) asks to be recommended a motor car for use in a medical practice, the cost to be about £150.

*** So far as we can ascertain there is not at the present time any car suitable for the purpose at the price named, unless it be the American steam car, which for fairly flat roads and short journeys certainly possesses many advantages. The petrol cars are at present all rather noisy, and considerably over £200 would have to be given for a reliable car with two cylinder engine. At the present time we are informed that alterations are being made in the cars for the coming year, and that it would probably be wiser to wait till after the winter before purchasing.

## ANSWERS.

B. N. R. writes in reply to "Cotswold" that Dr. Aubrey Husband's *Urine in Health and Disease* (Edinburgh: E. and S. Livingstone) will, he thinks, supply all the information desired.

D. J. D.—It is no doubt important that the candles of filters should be carefully tested, but the fact that a solution of potassium permanganate passed through unchanged would not prove that a candle was inefficient.

### THE HUTTON-DIXON CURE FOR ALCOHOLISM.

PRO BONO PUBLICO would be glad for information regarding to Hutton-Dixon "cure" for inebriates, etc., whether results are equal to the pretensions, and the treatment rational, tested, and recognised by members of the medical profession.

*** The Hutton-Dixon cure for alcoholism is an American secret remedy recently introduced into this country. Its composition is unknown. The treatment is not recognised by the medical profession generally.

### THE GENERAL MEDICAL COUNCIL ELECTION.

DR. EDWARD JEPSON (Durham).—The mode of election of direct representatives on the General Medical Council is governed by Section VIII of the Medical Act, 1886, and by the Order in Council issued on August 27th, 1886. The subsections of Section VIII, which contain an answer to our correspondent's question, are as follows:

3. The President of the General Council, or any other person whom the General Council may from time to time appoint, shall be the returning officer for the purpose of elections of direct representatives, and such returning officer shall, some time not less than six weeks nor more than two months before the day on which the term of office of any such representative will expire, and as soon as conveniently may be after the occurrence of any vacancy arising from the death or resignation of any such representative, issue his precept to the Branch Council for that part of the United Kingdom in which such representative was elected, requiring the said Branch Council to cause a representative to be elected by the registered medical practitioners resident in that part of the United Kingdom within twenty-one days after the receipt of the precept of the returning officer.

4. The election shall be conducted in such a manner as may be provided by regulations to be made by the Privy Council, provided as follows:

(*a*) The nomination shall be in writing, and the nomination paper of each candidate shall be signed by not fewer than twelve registered medical practitioners; and

(*b*) The election shall be conducted by voting papers, and it shall be the duty of each Branch Council in any part of the United Kingdom in which an election is to be held, to cause a voting paper to be forwarded by post to each registered medical practitioner resident in that part at his registered address, but the election shall not be rendered void by reason of the omission of the Branch Council to cause such voting paper to be forwarded in any particular case or cases, and any registered medical practitioner to whom a voting paper has not been sent in pursuance of this Act may on application to the Registrar of the said Branch Council obtain one from him; and

(*c*) Any registered medical practitioner entitled to vote at such election may vote for as many candidates as there are representatives to be elected.

5. Each Branch Council shall certify to the returning officer the person or persons elected by the registered medical practitioners resident in the part of the United Kingdom to which such Branch Council belongs.

The Order in Council instructs the returning officer to fix the last day on which nomination papers are to be sent in, and at least fourteen days before the day so fixed shall cause a notice of the election to be published, specifying the number of persons to be elected, the place where the nomination papers are to be sent in, and the last day when they are to be sent in. The notice must be published in two or more newspapers circulating in the part of the United Kingdom in which the election is to be held. Each candidate for election must be nominated by a separate nomination paper, signed by not fewer than twelve registered medical practitioners resident in that part of the of the United Kingdom in which the election is to be held. Every nomination shall state the name, address, and registered qualification or qualifications of the person nominated, and also the addresses and registered qualifications of the persons signing such paper. The form can, we believe, be obtained on application to the Registrar for the Branch Council (in England, 299, Oxford Street, London, W.; in Scotland, 54, George Square, Edinburgh). Every person entitled to vote at the election may sign the nomination paper of a candidate or of any number of candidates not exceeding the number to be elected. Every nomination paper must on or before the last day fixed for the sending in of nomination papers be delivered by post or otherwise at the appointed place, and shall be accompanied by a declaration in writing signed by the person nominated, acknowledging that such person consents to be nominated.

### HARVEST BUGS.

A. K. P. writes: "J. S. C." will find that kerosene oil rubbed into the parts bitten by the "harvest bugs" relieves the irritation, and for some time prevents fresh bites. I have tried it for myself in the West Indies with great success.

MR. GEORGE PERNET (Gloucester Place, N.W.) writes:—The harvest bug gives rise to very distressing irritation of the skin, with formation of wheals, scabbed, and sometimes crusted lesions, with superficial ulceration. "J. S. C." should try naphthol 5ss, cret. præp. 5ss, adipis 5j. M. Ft. ung., or a mild ammoniated mercury ointment (say gr. x. ad. 5j.). A little balsam of Peru is serviceable. The parasites are not in the clothes. They are minute creatures, like a cayenne pepper grain, which bore into the skin with their head to get their nourishment. They are said to be plentiful on French beans, in stubbles, etc., and to be specially numerous on chalky downs and near the sea. I should feel obliged if "J. S. C." would kindly let me know the part of the country (and soil) he is staying in, as I am interested in the matter.

DR. FREDERICK PORTER (Earnhope, Comrie, N.B.) writes in the course of a reply to "J.S.C.": I should recomend bathing the surface of the body with an infusion of quassia, as a preventive. When the skin is actually attacked, I think he will find some relief by the application of liquor ammonii or chloroform. I have found this pest to be very prevalent in certain districts in the Scottish Borders, and there it is certainly not limited to cornfields. I found it in any luxuriant vegetation, especially among dying nettles and vegetation on river banks. An insect which affects the skin in a similar manner, called the "berry bug," is found among gooseberry bushes, and the two are supposed to be similar.

### TREATMENT OF PHIMOSIS.

MR. JAMES TURTON, F.R.C.S. (Preston Park, Brighton), writes: Replying to "Eucaine" in the BRITISH MEDICAL JOURNAL of September 7th, the answers to his queries must of necessity depend on his patient, both generally and locally considered, but I am reminded of a case in which

some years ago I slit up the prepuce for phimosis. The patient was an acrobat; the operation was performed in my consulting room after the patient's evening performance was over; he disdained the use of an anæsthetic, and to my astonishment and admiration he resumed his tumbling performances the following evening. Such fortitude is very rare in my experience, and I often wish some of my neurotic patients had a little of the "grit" of the poor acrobat.

A.K.P. writes: It answers every practical purpose to slit the prepuce and mucous membrane in the way described. It is not even necessary to put in any sutures. The operation is done so quickly that an anæsthetic is quite unnecessary. The patient could go out next day, but it would be wiser to rest a little longer. The wounded part should be well protected and kept up by a bandage. Of course some œdema must be expected.

C. P. writes: My personal experience may interest your correspondent "Eucaine." Several years ago I tried to dilate my own prepuce, which was very tight and had never been retracted. I used a mechanical instrument for the purpose, and succeeded in dilating to a certain extent, but not sufficiently so for comfort. Therefore I determined to subject myself to a more radical operation. I accordingly anæsthetised the parts by first painting the mucous membrane with a 5 per cent. solution of cocaine, and then injecting about 10 or 15 minims at the junction of skin and mucous membrane. I then made an incision down the glans, through skin and mucous membrane, only cutting off a little redundant tissue, put in a few sutures, and dressed the wound with lint steeped in carbolic oil. I was at the time an assistant in a busy practice and went about my work as usual, though I can hardly say with the usual comfort. The subsequent result of the operation is most successful, as it would be hardly possible to tell now after some years that any operation had been done.

## LETTERS, NOTES, Etc.

### PREVENTION OF INFANTILE DIARRHŒA.

WITH reference to a paragraph published in the BRITISH MEDICAL JOURNAL of September 7th, p. 637, describing the printed instructions for the prevention of infantile diarrhœa and for the feeding and care of infants, issued by Dr. Cooper Pattin, the medical officer of health for Norwich, we have received from him a note pointing out that it is only fair to state that Dr. Boobbyer, M.O.H. Nottingham, has been issuing similar instructions for several years.

### LIVERPOOL ROYAL INFIRMARY.

DR. EDMUND L. ANDERSON (Liverpool) writes: In describing the appointments at the Liverpool Royal Infirmary in your Educational Number, you mention "an extern house-surgeon to the Thornton Gynæcological Wards." Since 1898 the post has been a resident one, my successor being the last extern house-surgeon and the first resident house-surgeon.

### AN APPEAL TO MASONS.

DR. JOSEPH POLLARD (51, Queen Anne Street, Cavendish Square, London, W.) desires to call the attention of brother Masons to the application of Reginald E. A. Webster, the son of the late Dr. George L. Webster, who is a candidate at the October election at the Royal Masonic Institution for Boys. Dr. Webster died of acute pneumonia after a brief illness, leaving a widow and four children practically unprovided for. This is the boy's only chance. The case is recommended by the Charity Committee of the Province of Surrey and by the W.M. and members of the Addiscombe Lodge. The late Dr. Webster was a member of this Lodge, and also P.M. of the Lechmere Lodge, and a life subscribed to the institution. Votes will be received by Dr. Pollard.

### INSECT PESTS.

AS insect pests of one kind or another appear to be prevalent at present, the method of protection in use by the Hudson Bay Company may be of interest to some readers. It is described by a medical writer in *Munsey's Magazine* as follows:

"If pyrethrum powder is moistened, shaped into little cones like a chocolate drop, and dried in an oven. When these are burned in a tent or a room they smoulder slowly and stupefy all insects, which fall to the floor and may be swept up and burned. For personal relief the woodsman will neglect any part of his toilet sooner than his tar oil for his face and hands, and if he has work to do he will set his birch bark smudges where the breeze will blow the fumes towards him."

### EFFECTS OF LIGHTNING STROKE.

DR. L. A. JOHNSON (Normanton, Yorks) writes: The following case showing the peculiar effect of lightning stroke may be of interest to some readers:—On the afternoon of August 11th I was called to see a young man—a robust and well-known footballer. I found him in a state of great nervousness, visibly trembling, and complaining of numbness along his arms. The history he gave was that about 2 that afternoon he was cycling gently up a steep hill, when quite unexpectedly a flash of lightning appeared to strike the ground a few feet in front of him; then it seemed to divide into two sections, one of them coming straight towards him. From that instant he lost consciousness completely, and did not regain it until he fell off his machine in attempting to turn a corner in close proximity to his house, a distance of two miles from the place where he was struck. He emphatically stated that his mind was a complete blank from the time of seeing the flash to his arrival home. He had had no alcohol that day, and at all times he is very abstemious, and he has never had epilepsy. His face and hands were badly bruised, there was a deep cut over the angle of the jaw, two buttons each were missing from his coat and waistcoat, and his clothes were soaking wet although he himself had never seen or noticed any rain. People who met him going home after the accident noticed that he was scorching tremendously, and were much surprised, as he is a notoriously careful rider; otherwise his demeanour appeared natural. His motor functions were apparently intact, whilst his perceptive faculties were temporarily paralysed.

### THE MEDICAL SERVICES, CIVIL AND MILITARY.

VERMIFORM writes: A political medical union and a confraternity of its several "units" is indicated, for without "votes" and the influence such "votes" carry in Parliament the political powerlessness of the medical profession as a class will so long continue. It is roundly declared unless incomes and emoluments are increased over present rates by at least 33 per cent. the profession must suffer. A more active political union does appear necessary on the part of the old universities and the medical associations throughout the country. The bad pay and the subordinate positions of the holders of Poor-law medical appointments, and of those in club practice, as well as the scarcity of medical men, shows only too clearly the unpopularity of the profession.

### MEDICAL GRADUATES AND THE SUPPLY OF MEDICINES.

DR. LEO. D. GAMBLE (Abergavenny) writes: Most Edinburgh graduates will be, like Dr. Keay, surprised at the futile resolution of the Senatus Academicus published in the BRITISH MEDICAL JOURNAL of August 10th. Surely they are not so absorbed in the contemplation of the Carnegie millions as to be ignorant of the fact that practically all the medical men in the smaller provincial towns and country districts of England dispense their own medicines. I have as high an opinion of the dignity of my profession as even an Edinburgh professor, but I do not consider that I lower it by dispensing my own patients' medicines or by keeping a dispenser, which amounts to the same thing. My strong feeling is that every general practitioner should dispense; he has thus far more control over the medicinal treatment of the patient, can guarantee the good quality of the drugs used, can stop any particular drug or drugs at any moment he desires, and can avoid adding to the baleful flood of prescriptions with which consultants have covered the country.

LETTERS, COMMUNICATIONS, Etc., have been received from **A** Dr. J. D. Adams, Martok; A. K. P.; Alcohol. **B** Mr. J. J. Byrne, Preston: Mr. H. N. Barnett, Knock; J. W. Batterham, M.B., St. Leonards; Mr. J. K. Barton, London; Dr. W. Broadbent, Brighton; Dr. T. Beattie, Newcastle-on-Tyne; Mr. W. N. Barron, Ascot. **C** Messrs. J. and A. Churchill, London; Cured Phimosis; Dr. H. E. L. Canney, London; W. B. Clarke, M.B., London; Dr. H. Cooper-Pattin, Norwich. **D** Dr S. Davies, Woolwich; Mr. R. T. E. Davies, New Tredegar; Deluded; Mr. N. C. Dobson, Bristol. **F** Mr. H. G. Fuller, St. Andrews; F. C.; Forceps. **G** E. H. Gibbon, M.B., South Shields; Mr. H. C. T. Gardner, London; E. W. H. Groves, M.B., Bristol. **H** Mr. E. Henry, Porthleven; Dr. S. P. Huggins, London; Mr. H. W. Haydon, Wadebridge; A. J. Hall, M.B., Sheffield; Dr. J. Holmes, Birmingham. **J** Mr. A. V. Jennings, Dumfries; Dr. E. Jepson, Durham; J. N. **K** Mr. A. Kinsey-Morgan, Bournemouth; Kensal Rise. **L** Dr. G. B. Longstaff, Morthoe. **M** Dr. F. W. D. McClew, M.B., Ilkley; Dr. W. Murrell, London; Dr C. W. M. Moullin, London; M.R.C.S. Eng.; Dr. A. Macphee, Glasgow; Dr. L. J. Milne, Mirfield; G. B. Muriel, M.B., Whitehaven; Dr. H. G. Malony, Ballingarry; Dr. W. L. Mackenzie, Edinburgh; Mr. A. Maude, Westerham; Mr. C. E. Murphy, Dover. **N** B. H. Nicholson, M.B., Colchester; J. H. Nicoll, M.B., Glasgow; Dr. D. N. Nabarro, London. **O** r. R. Owen, London. **P** Mr. S. Paget, London; Mr. J. Pollard, London; E. Phillips, M.B., Coventry; J. B. Page, M.B., London; F. Porter, M.B., Comrie: Mr. F. Pope, Kroonstad; Perplexed. Mr. J. F. Palmer, London; Dr. R. Purdon, Belfast; Mr. C. C. Preston, London. **R** Rusticus. **S** Mr. A. Strange, London; W. R. Speirs, M.B., Haltwistle; S. M.; Dr. H. M. Stewart, London; Dr. C. E. Saunders, Elenbridge; Mr. M. Style, Moreton-in-Marsh. **T** Mr. J. Turton, Brighton; C. H. Taylor, M.B., Derby; Dr. J. O. Tunstall, Sutton Coldfield; Dr. G. G. S. Taylor, Liverpool; Dr. E. C. Thompson, M.P., Omagh; Dr. C. L. Tuckey, London; Dr. J. C. Thresh, London; Dr. J. C. Thomson, Hong Kong. **W** W. H.; Mr. R. H. Wolstenholme, Salford; H. C. Woodhouse, M.B., Dawley. **Y** York, etc.

## BOOKS, ETC., RECEIVED.

Die Malaria; Studien eines Zoologen. Von Battista Grassi, ordentlicher Professor der vergleichenden Anatomie in Rom. Zweite vermehrte Auflage. Jena: Gustav Fischer. 1901. M. 20.

Scientific Memoirs by Medical Officers of the Army of India. Edited by Surgeon-General Robert Harvey, M.D., C.B., LL.D. Part XII. 1901. Simla: Government Central Branch Press. 1901. Rs. 5/12/0.

Diseases of the Nose and Pharynx. By J. B. Ball, M.D Lond. Fourth Edition. London: Baillière, Tindall, and Cox. 1901. 7s. 6d.

Syphilis and other Venereal Diseases. By H. de Méric. London: Baillière, Tindall, and Cox. 1901. 5s.

Surgical Applied Anatomy. By Sir Frederick Treves, K.C.V.O., C.B., F.R.C.S. New edition revised by the Author with the assistance of Arthur Keith, M.D., F.R.C.S. London: Cassell and Co. 1901. 9s.

Libertinism and Marriage. By Dr. Louis Jullien. Translated by R. B. Douglas. Philadelphia: F. A. Davis Company. 1901. 1 dollar net.

The Sanitary Inspector's Handbook. By Albert Taylor. Third Edition. London: H. K. Lewis. 1901. 6s.

Advice to Women on the Care of the Health before, during, and after Confinement. By Florence Stacpoole. Third Edition. London, Paris New York, and Melbourne. 1901. 2s.

*** In forwarding books the publishers are requested to state the selling price.


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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

# NOTE
ON
# A SIMPLE AND RAPID METHOD OF PRODUCING ROMANOWSKY STAINING IN MALARIAL AND OTHER BLOOD FILMS.

By Major W. B. LEISHMAN, M.B., R.A.M.C.,
Assistant Professor of Pathology, Army Medical School, Netley.

(From the Pathological Laboratory, Netley).

Since the appearance of a note by me in the British Medical Journal of March 16th, 1901, on Romanowsky staining, with special reference to its action on the parasite of malaria, I have endeavoured still further to simplify the method by isolating the active staining ingredient of the compound dye and using it as a single stain. The results have exceeded my expectations, and the method which is described below gives not only the characteristic appearances of Romanowsky staining, but is so easy in its application, and necessitates so little time and skill in its manipulation that I venture to think it may with advantage be used for ordinary blood staining, in preference to many of the methods in general use. Beautiful results have also been obtained in the examination of "smear" preparations from bone marrow, from glands such as the spleen and liver and from cancer juice. The presence of bacteria in blood films and smear preparations is also demonstrated by this method with the greatest clearness and precision, while as a selective tissue stain for sections it appears to present many advantages. As a blood stain, from the point of view of time saving, it is also no small gain that in this method no separate process of fixation of the film is necessary, fixing and staining being performed at one and the same time by the staining fluid.

The isolation of the active staining ingredient from the mixed solutions of methylene blue and eosin presented no great difficulty, but the selection of a suitable solvent and the practical application of the stain so as to simplify and shorten the technique was not so easy. It was found that the new dye when dissolved and applied to blood films only gave Romanowsky staining feebly and after being allowed to act for some hours, and it thus appeared to present little advantage over the method previously described by me. But, after further experiment, it was found that the simple addition of distilled water in a particular manner produced brilliant Romanowsky staining in from two to five minutes according to the thinness and evenness of the blood film.

The method which I will now describe as briefly as possible has been used by myself and others in this laboratory for the last five months, and the results have proved extremely regular and satisfactory. I have also recently received a good report of its efficacy in the staining of malaria from Lieutenant McKendrick of the Indian Medical Service, who is at present attached on behalf of the Indian Government to Major Ross's Malaria Expedition to the West Coast of Africa.

*Preparation of the Stain.*

Solutions of alkaline medicinal methylene blue and eosin were prepared in the manner described in my previous note. *Solution* A: Medicinal methylene blue (Grübler). A 1 per cent solution of this was made in distilled water, and then rendered alkaline by the addition of 0.5 per cent. of sodium carbonate. The solution was then heated to 65° C. in a paraffin oven for twelve hours, and afterwards allowed to stand at room temperature for ten days before use. *Solution* B: Eosin, extra B. A. (Grübler). A 1 in 1.000 solution in distilled water. Equal volumes of these two solutions, A and B, were then mixed in a large open vessel and allowed to stand for from six to twelve hours, being stirred from time to time with a glass rod. The abundant flocculent precipitate which resulted was then collected on a filter, thoroughly washed with distilled water until the washings were colourless or had only a pale blue tinge, and the insoluble residue carefully collected, dried, and powdered. The resulting powder, which has a greenish, metallic lustre, constitutes, or at least contains, the active staining ingredient in Romanowsky's method. Full directions for the manufacture of this dye have been furnished by me to the firm of Dr. G. Grübler and Co., Leipzig.

*Solvent.*

The best solvent which I have found for this new dye is pure methyl alcohol (Merck's "for analysis"), and, by taking advantage of the powerful fixative properties of this alcohol – as in the case of the well-known compound blood stain of Louis Jenner[1]—I have been able to dispense with any separate process of film fixation.

The dye, prepared as above, should be dissolved in methyl alcohol in the proportion of 0.15 per cent., and the resulting solution kept in stoppered glass bottles until required for use. The solution does not deteriorate by keeping; some of the dissolved dye which I have had in use for over five months has lost none of its fixing and staining properties. The solution is of a clear dark-blue colour, and shows a greenish iridescence when illuminated by reflected light.

*Method of Application.*

Films of blood or smear preparations from bone marrow, spleen, cancer juice, etc., are made in the usual way upon perfectly clean polished coverglasses and allowed to dry in the air. In the case of blood films the thinner and more even the layer the better will be the results, especially when staining for malaria. A coverglass, with the film uppermost, is picked up with a pair of Cornet's forceps, and three or four drops of the stain are allowed to fall upon the film. The forceps are gently rotated from side to side, so as to ensure the stain being evenly distributed over the whole surface of the glass. No attempt is to be made to check evaporation. After about half a minute, double the quantity of distilled water—that is, 6 to 8 drops—is added and allowed to mix with the alcoholic solution of the dye. Intimate mixture is hastened by rotating the forceps as above.

The film is now allowed to stain for five minutes. This time, in my hands, has given the best results, but in the case of a thick blood film, or of smears from cellular structures, ten minutes may be necessary.

The stain is now gently washed off with distilled water, and a few drops of the water are allowed to rest on the film for one minute, at the end of which time the specimen is ready for examination, either directly in water under a $\frac{1}{4}$ or $\frac{1}{6}$ inch objective, or, after drying (without heat) and mounting in xylol balsam, under an oil-immersion lens.

The whole operation, from the withdrawal of the blood from the finger to the mounting of the stained film for microscopical examination, can be completed within seven or eight minutes, and no reagents are needed beyond a few drops of the stain and a little distilled water. Where the latter is unavailable, it may be replaced by rain water or soft tap water without greatly affecting the results.

The part of the procedure in which the stained film is allowed to soak in distilled water for a minute after staining and washing has a triple importance. It intensifies the Romanowsky staining, it removes the remains of the deposit, and it alters the tint of the red blood corpuscles from a greenish blue to a transparent pink. The same effects are produced by absolute alcohol almost instantaneously, but it is apt to decolorise the specimen unless its action is very carefully controlled.

*Appearances of Blood Films stained by the above Method.*

*Red Blood Corpuscles.*—Pale pink or greenish in tint, semi-transparent.

*Polynuclear Leucocytes.*—Nuclear network—stained a deep ruby-red colour with sharply-defined margins. Extra-nuclear protoplasm, colourless. Fine eosinophile granules red.

*Mononuclears.*—Nuclei—ruby-red with extremely sharp clear outlines. Extra-nuclear protoplasm—pale eau-de-Nil or blue, occasionally showing a few red granules.

*Lymphocytes.*—The same as mononuclears, except that the nuclei are, as a rule, more deeply stained.

*Coarse-grained Eosinophiles.*—Nucleus ruby-red but not so densely stained. Granules pale pink.

*Basophiles.*—Granules very densely stained, of a deep purplish-black tint. Nucleus red, but usually more or less masked by granules overlying it.

*Nucleated Red Cells.*—Nucleus almost black, with sharp outline; extranuclear portion, grey.

*Blood Plates.*—Deep ruby-red with spiky margins, frequently showing a pale-blue peripheral zone surrounding the red centre.

*Bacilli and Micrococci.*—Speaking generally, these stain evenly blue, but, by prolonging the period of staining, and subsequently decolorising with absolute alcohol, many interesting differences may be noted with different organisms by which structural details are brought out, not generally observed by other staining methods.

*Malaria Parasites.*—The body of the parasite stains blue and its chromatin ruby-red; in the case of the tertian parasite Schüffner's dots are well marked in the containing red blood corpuscle. The coloured plate accompanying the article on Romanowsky staining, previously referred to, might have been drawn from specimens stained by this method, the appearances being identical.

For most clinical work in connection with blood examination for malaria parasites, census of leucocytes, etc., where a permanent preparation is not wanted, it is quite sufficient to examine the films in water with a $\frac{1}{6}$ or $\frac{1}{8}$-inch objective. The staining is so sharp and clear that it is unnecessary to use an oil-immersion lens except to determime the presence of bacteria or the detailed structure of parasites or cells.

*Postscript.*

While this note was in preparation for publication articles on the same subject, by Dr. Karl Reuter, appeared in the *Münch. med. Woch.* of July 30th, 1901, and in the *Centralbl. f. Bakt.*, vol. xxx, 6, of August 26th, 1901. While it is evident that Dr. Reuter has been working on similar lines, and has also succeeded in isolating the active staining ingredient in Romanowsky's method and applying it as a single stain, I may briefly indicate a few material points in which his method differs from mine. (1) He employs as a solvent absolute alcohol. (2) A separate process of film fixation occupying "at least one hour" is necessary before staining. (3) The staining process in itself "occupies two to three hours." (4) More elaborate precautions are necessary to avoid precipitation on the film.

Note.

[1] I have found that by treating Louis Jenner's blood stain with distilled water, in a similar manner to that described for the stain in question in this note, the results are greatly improved, the usual pale-blue nuclear staining being intensified to a deep Oxford blue, while the granular staining is as well marked.

## THE VALUE OF NEISSER'S STAIN IN THE DIAGNOSIS OF DIPHTHERIA.

By R. M. BEATON, F. FOORD CAIGER, and WALTER C. C. PAKES.

*(Preliminary Communication.)*

Since Neisser published the account of his differential stain for the bacillus of diphtheria many bacteriologists have used it, but they appear to differ in opinion as to its value in the diagnosis of this organism. There seems to be no doubt that the great majority of the bacilli obtained from a young and pure culture exhibit the differential staining described by Neisser, but a doubt exists whether the stain is altogether satisfactory when used for mixed cultures such as are obtained from the throats of patients suffering from diphtheria.

We determined therefore to make a series of observations under the conditions which so frequently holds nowadays, namely, when the bacteriologist is not also the physician, in order to test the value of the stain in the diagnosis of diphtheria. Each of the cases was diagnosed independently at the South-Western Hospital by Mr. A. W. Daniel and confirmed by one of us (F. F. C.) from a consideration of the whole of the clinical evidence, and by the others of us at Guy's simply by the presence in the cultures of bacilli having the characteristic staining reactions described by Neisser, and the clinical and bacteriological evidence was subsequently compared.

Swabbings were taken with every necessary precaution from the throats of all cases certified as diphtheria which were admitted into the South-Western Fever Hospital; tubes of Loeffler's blood serum were inoculated, and both swabs and culture tubes were sent to the laboratory at Guy's Hospital without having been previously incubated.

When the cultures and swabs reached the laboratory, the swab was examined at once, and the culture was placed either in the incubator or the ice chest and subsequently in the incubator; the reason for this latter proceeding was that it was desirable to examine the cultures after eighteen hours incubation at 37° C. At the end of this time preparations of the growth were made and stained.

The method of preparation adopted was the usual one, the films being fixed by heat. After fixation, the films were stained for two minutes in the methylene-blue solution, washed well in water, stained for two minutes in the watery vesuvin, dried and mounted in canada balsam. It will be noticed that in our experiments we have not adhered to the method of Neisser as regards the time necessary for staining in each of the fluids. The reason for this alteration was that we found that, even when dealing with pure cultures of the Klebs-Loeffler bacillus, the bacilli did not always show the characteristic appearance after being stained for a few seconds as recommended by Neisser. When the films were stained for two minutes, however, we found that the bacilli invariably exhibited the characteristic appearances.

All the specimens were examined by two of us separately (R.M.B. and W.C.C.P.), and the bacteriological diagnosis arrived at independently of each other. If, upon comparing notes, we agreed, the diagnosis was made accordingly. When, as happened on three or four occasions, there was any discrepancy in the verdict, the films were again examined by each of us, and fresh specimens were made and examined. The bacteriological diagnosis of each case was, therefore, that arrived at by both of us.

On several occasions we found that blue granules were present in bacteria which appeared to us to be definitely cocci. We had to satisfy ourselves, therefore, in order to arrive at a positive diagnosis, that the bacteria in which were the blue granules were definitely bacilli.

In several cases we have found Klebs-Loeffler bacilli present in only small numbers in comparison with those of other bacteria. We therefore made series of subcultures in order to determine whether the bacilli retained the property of staining in this particular manner when they were in an obvious numerical inferiority, and therefore under a disadvantage as regards ease of growth.

The cultures which we chose for these experiments were those containing only Klebs-Loeffler bacilli and cocci, generally staphylococci. These were subcultivated daily and examined. Each subculture, when the staphylococcus aureus was present, was found to contain fewer Klebs-Loeffler bacilli than the culture from which it was made, and finally this bacillus disappeared altogether. The bacilli became increasingly difficult to find, but when they were found they showed the granules as well marked as in the case of a pure culture. We conclude, therefore, that under the conditions of our experiment the Klebs-Loeffler bacillus will show the blue granules, even when it is growing with difficulty owing to the synchronous growth of other bacteria.

Our observations are concerning 100 cases, with the following results:

| | |
|---|---|
| Clinical and bacteriological diagnosis both positive ... ... | 53 |
| Clinical and bacteriological diagnosis both negative ... ... | 17 |
| Clinical diagnosis positive, bacteriological diagnosis negative | 25 |
| Clinical diagnosis negative, bacteriological diagnosis positive | 5 |

The clinical and bacteriological diagnoses, therefore, were in accord in 71 cases and differed in 30. Of the cases, 5 in number, in which the clinical diagnosis was negative and the bacteriological positive, one had the appearance of a follicular tonsillitis, another was a case of scarlet fever with yellow spots upon the tonsil, another was suffering from measles and pronounced laryngeal stridor; another, admitted on the fifth day of illness, showed an ulceration of the tonsils which suggested the recent separation of membrane. So that in 4 out of these 5 cases the condition of the throat was compatible with the presence of diphtheria, and in one instance only in this series of 100 cases did the Neisser test warrant a diagnosis of diphtheria when the clinical evidence was entirely

negative. This, considering the well-known fact that Klebs-Loeffler bacilli are occasionally to be found in the throats of healthy persons, is eminently satisfactory.

The most disappointing feature about our series is that on 25 occasions we failed to find Klebs-Loeffler bacillus on the swab or culture taken from cases which were clinically diphtheria. Some of these cases were very typical, several of them dying of cardiac failure; others, however, were less distinctive. The fallacies of a negative examination are obvious.

First, our inability to find the bacilli on the coverslip does not necessarily prove their absence from the culture in which they may not be very numerous.

Secondly, insemination of the culture media may have failed.

Thirdly, the bacilli may not have been transferred from the throat to the swab. In purely laryngeal cases it is quite possible that the bacilli may be present in the throat in very small numbers, or be absent. In pharyngeal cases—and especially in those cases where other bacteria are present in large numbers—only a very few Klebs-Loeffler bacilli may be transferred to the swab.

Fourthly, though the bacilli may be transferred to the swab, they may be incapable of growth, as when a swab is taken directly after the throat has been treated with an antiseptic.

Lastly, there is the general fallacy attaching to a single negative result. For this reason it cannot be too strongly urged that where there are definite clinical symptoms pointing to a diagnosis of diphtheria the value of a single negative bacteriological examination is practically *nil*: it is not until several negative results have been obtained that one is justified in believing that the disease is not diphtheria. The importance of this can hardly be too strongly insisted on.

Concurrently with the examination of this series, two of us have been examining a second series consisting of about 40 cases, in which we have examined preparations from the cultures after staining by methylene blue as well as by Neisser's method. On two occasions Neisser's stain enabled us to arrive at a positive diagnosis with ease when there was some difficulty with the methylene-blue specimens; but in both cases we were satisfied, after careful examination, that the Klebs-Loeffler bacillus was present in the methylene-blue preparations. One of the two cases was undoubtedly diphtheria clinically. In no case did we find that Neisser's stain showed bacilli having the staining reaction of the Klebs-Loeffler bacillus, when at the same time the methylene-blue specimens failed to shew Klebs-Loeffler bacilli.

One of the most satisfactory features about our series is that out of the 48 cases in which the bacillus of diphtheria was found in the culture we were able to diagnose 18 by the microscopical examination of the coverslips made directly from the swab.

We feel convinced that if coverslip preparations were made directly from the throat without the loss of any time, this number of positive results would be increased. On many occasions it is highly desirable to make a diagnosis at as early a moment as possible, and our observations show that a positive diagnosis was possible from the examination of the swab in 18 per cent. of all the cases, and in 37.5 per cent. of the cases of proved diphtheria. If more care were expended in the taking of the swab, so that a really good coverslip preparation could be made from it, we think that a higher percentage of cases would yield an indisputable result. Of course, a negative result would be of little or no value, and it is always well to confirm the result, even if positive, by subsequent examination of the culture.

As a result of our observations, we feel that Neisser's stain is a valuable one in several ways:—

First, a positive diagnosis is rendered more certain for those who cannot be considered as experts, since it is often easier to diagnose the Klebs-Loeffler bacillus after staining by Neisser than after staining by ordinary methylene blue, as we think that for the inexperienced the bacilli after staining by Neisser's method, are much more characteristic than after staining by methylene blue.

Secondly, a trustworthy positive result may be obtained from the microscopical examination of a preparation made direct from the swab, and this method is, we think, not only more reliable when Neisser's stain is used than when the ordinary methylene blue is employed alone, but is more obvious.

Thirdly, the use of Neisser's stain does not appear to introduce any fallacy not found in the application of other methods.

## TWO SUCCESSFUL CASES OF OPERATION FOR PERFORATED GASTRIC ULCER.

By E. COLLINGWOOD ANDREWS, M.A., M.D., B.Sc.,
Surgeon to the Hampstead Hospital.

It appears to me that it is still desirable to publish the details of successful operations for gastric perforation, even if the only purpose served is to impress once again the necessity for prompt diagnosis and early treatment.

I cannot doubt that both the patients whose cases are here recorded largely owe their lives to the immediate and accurate judgment of the medical men who first saw them. In the search for the perforation, minute flakes of recent lymph are most suggestive indications as to the locality of the lesion, and should be carefully looked for. In both cases a considerable quantity of food was present in the stomach, and in neither was it possible to empty the organ through the pyloric opening. The constant welling-up of semi-digested food through the perforation was a considerable impediment to the introduction of the first few sutures. Another difficulty was the fixation of the stomach by old and firm adhesions.

It will be observed that in the first case irrigation with saline solution was employed. It is my practice, in dealing with the perforation of a viscus, to irrigate if the food is widely diffused, but to content myself with careful sponging if the escape is confined to a limited area. I must also express a decided preference for Halsted's suture, at any rate for the second layer of stitches.

For the notes of the first case I am indebted to Mr. Geoffrey Hobbs, the resident medical officer at the Hampstead Hospital.

Case I.—C. D., aged 23, a housemaid, had suffered from "indigestion" for some months, but had never vomited blood. For a fortnight the indigestion had been worse, and on the day of admission (February 7th) to the Hampstead Hospital, after a substantial lunch of cold mutton and suet pudding, the patient was carrying up the tea-things, when she suddenly felt intense pain in the stomach, and fell down collapsed. Dr. William Boulting saw her soon after, diagnosed the condition as gastric perforation, and ordered her removal to the hospital. Dr. Andrews saw the case soon after admission, and found the abdomen motionless, board-like, and exquisitely tender, especially in the region of the stomach. There was marked diminution of the liver dulness, a feeble pulse of 120, and all the symptoms of general collapse. Immediate operation was considered necessary, and at 9 P.M. Dr. Andrews made an incision 4 inches long in the middle line between the costal angle and the umbilicus. On opening the peritoneum gas escaped, and the anterior surface of the stomach presented in the wound. To examine the surface it was necessary to separate extensive adhesions, and towards the cardiac end a collection of recent lymph and particles of semi-digested food were noticed. Continuing the search in this direction the perforated ulcer was found near the cardiac orifice on the lesser curvature, the aperture being rather smaller than a threepenny-piece. The peritoneum round the perforation was united by two layers of Lembert sutures, the area around carefully sponged, and the whole of the peritoneal cavity well flushed with saline solution. A gauze drain was inserted into the upper portion of the wound, and a large drainage tube in the lower angle.

February 8th. Patient has vomited since the operation, but has had some sleep. She is fed by rectal injections of peptonised milk and beef-tea every four hours. Pulse 120, temperature normal.

February 9th. Patient has been sick once at 10 A.M., but had a good night. Wound was dressed and gauze drain removed. There is only a slight serous discharge, and the abdomen is less distended. Complains of pain under left shoulder blade. Temperature normal. Pulse 100.

February 10th. Has passed a good night. Discharge still serous. Abdomen less distended and moving with respiration. Drain tube removed. Pulse 100.

February 12th. Had a free action of the bowels after oil injection. Milk given by mouth. Pulse 90.

February 19th. Progress continued and stitches taken out. Patient commenced farinaceous food. Henceforward recovery was uneventful.

Case II.—M. C., a gentleman aged 30, was seized with violent abdominal pain while riding on an omnibus, and on reaching home fell down in his dining room. The last meal of pork, potatoes, etc., had been taken some three hours earlier. Dr. McLelland was called to the patient, and diagnosed a perforated gastric ulcer. On seeing the patient some two hours later I found the pulse 124 and almost imperceptible, the face pale and sunken, and skin cold and clammy. There was a history of chronic dyspepsia, chiefly occurring before meals. The abdomen was rigid and distended, and no liver dulness could be elicited. Dr. Hale White and my father (Dr. James Andrews) concurring in the diagnosis, I decided to operate forthwith. A median incision was made in the epigastric region

4½ inches in length, and on opening the peritoneum there was a rush of gas. The stomach was distended with fluid food, and the gastric vessels much engorged. The anterior surface and cardiac end of the stomach were examined without result. To complete the examination it was necessary to make a transverse incision 3 inches in length, and close to the pylorus a few small flakes of recent lymph were observed. Close to these, just on the lower border, three-quarters of an inch from the pyloric orifice, I found the perforation. It was one-third of an inch in diameter, and surrounded by an area of hard and dense cicatricial tissue with the diameter of an inch. A single row of Lembert sutures were first inserted with silk, and then over these another series of Halsted sutures. Partially digested food was present in considerable quantity beneath the liver, but none could be detected in any other part of the abdomen. The infected area was well cleansed by sponging, and irrigation was not employed. A large rubber drainage tube was inserted reaching to the back of the abdomen, and packed round with gauze. The difficulties of the operation consisted in the fixity of the pylorus, which necessitated working at a great depth, and the constant retching caused by the manipulation of the stomach. The patient stood the operation well, and the pulse and general condition were better after it than before I began. He was fed *per rectum* for seven days, the gauze being removed on the second day and the tube on the sixth. On removing the gauze a considerable mass of omentum which adhered to it issued from the wound. Two ligatures were placed around the base of this, and it was excised, the patient experiencing hardly any pain. With the exception of a sharp attack of phlebitis in the right leg recovery was uninterrupted.

SIXTY-NINTH ANNUAL MEETING

OF THE

# British Medical Association.

*Held at Cheltenham, July 30th, 31st, August 1st, and 2nd, 1901.*

## PROCEEDINGS OF SECTIONS

## SECTION OF PATHOLOGY AND BACTERIOLOGY.

J. W. WASHBOURN, C.M.G., M.D., F.R.C.P., President.

### DISCUSSION ON THE PATHOLOGY OF PNEUMOCOCCUS INFECTION.

I.—ALEXANDER G. R. FOULERTON, F.R.C.S.,

Bacteriologist and Lecturer on Bacteriology, Middlesex Hospital.

MR. FOULERTON said that the pathology of pneumococcus infection was concerned with many cases of disease which in their clinical aspect might have little in common, and in their morbid anatomy might vary as widely. The specific organism of this infection, the pneumococcus, micrococcus pneumoniæ, or diplococcus lanceolatus, belonged to the class of strict parasites, so far as our present knowledge went. Further, it occurred as infecting man alone and had not yet been found as a parasite of the lower animals. It had been but rarely met with outside the human body, but Emmerich had succeeded in isolating it from the dust of the floor of a ward in which there were patients with pneumonia, and Uffelman claimed to have isolated it from the air of a cellar. From what was known of its biology it was improbable that the pneumococcus as it was found as a parasite of man could maintain a separate existence as a saprophyte and away from a living host for any length of time. Micrococcus pneumoniæ was a fairly common parasite of the mucous membrane in man, and not necessarily under pathogenic conditions. It was first discovered accidentally by Pasteur, Chamberland, and Roux on inoculating rabbits with the saliva of a child who had died from hydrophobia, and at about the same time by Sternberg on inoculating some of his own healthy saliva into rabbits as a control to some other experiments, and both accounts of the organism were published almost simultaneously in 1881. Subsequent investigations had shown the frequency with which the organism existed as a parasite on the mucous membranes of perfectly healthy individuals; infesting more especially the mouth, where Sternberg found it in 20 per cent. of all cases examined, and Netter in about 15 per cent. It was also found in the anterior nares; von Besser isolating it from the nasal secretion of 14 out of 57 individuals examined. Arnold Lawson when investigating the bacteriology of the conjunctional sac in 200 healthy individuals, found micrococcus pneumoniæ present in two, and in each in pure culture. The parasite also occurred in the vagina, but it was probably rarely present there, since Doyen was the only one of the large number of those who had worked at the bacteriology of this canal who had isolated it from the healthy vaginal secretion, and he only in a single case.

#### THE VIRULENCE OF THE PARASITE FROM HEALTHY INDIVIDUALS AND WHEN EXISTING UNDER PATHOGENIC CONDITIONS.

The first point that had to be considered in studying the pathology of pneumococcus infection was whether the organism as it existed as a parasite of healthy individuals was possessed of the same degree of virulence as it exhibited when found as an actively pathogenic agent. Evidence on this point could be obtained only by animal experiment. Micrococcus pneumoniæ, although not found occurring naturally in the lower animals, was actively pathogenic for many of them—the rabbit, wild and tame mice, wild and tame rats, the guinea-pig, the sheep, and the dog being all more or less susceptible to infection. This susceptibility was most marked in the rabbit, least in the dog, and in the other species according to their position on the list. Pigeons and poultry were, according to Washbourn, immune against this infection. And in testing the organism as obtained from healthy saliva, its virulence for the rabbit would usually be found quite as well marked as the virulence of a strain isolated from, for instance, a case of pneumonia. When, therefore, the parasite became pathogenic for its human host, there was no reason to suppose that infection had happened because of any sudden access of virulence to a previously harmless parasite; but rather it was probable that the condition of the host had afforded opportunity which was usually wanting, under the conditions of ordinary good health, for the exercise of a natural pathogenic power. In connection with this, Netter had noticed one very interesting fact when investigating the virulence of the coccus in the sputum of cases of pneumonia. He found that during the two weeks immediately succeeding defervescence the pneumococcus lost its virulence for the rabbit, but regained it at the end of that time. Testing the virulence of cultures immediately after isolation from cases of recent infection in man, he himself had found that its degree was remarkably constant in a series of experiments on rabbits with the organisms isolated from 11 cases of empyema in children, 2 cases of empyema in adults, 3 cases of lobar pneumonia, 2 cases of meningitis, 1 case of cellulitis, and 1 case of circumscribed abscess of the finger. So far, then, as man, its natural host, was concerned, micrococcus pneumoniæ in its character as a normal, and only occasionally pathogenic, parasite resembled in some degree bacillus coli communis. The latter organism, although a universal and, according to Bienstock, a useful parasite of the intestinal tract, became, nevertheless, like the pneumococcus actively pathogenic when it found the opportunity of penetrating below the mucous membrane.

#### THE PATHOGENIC ACTION OF MICROCOCCUS PNEUMONIÆ IN MAN.

The pathology of pneumococcus infection might conveniently be considered with special regard to the following points: (1) The general results of blood infection and those of the toxæmia produced by the absorption and circulation of toxins formed at the local foci of infection in the tissues, or produced by bacteria which had infected the circulating blood itself; (2) the direct action of the parasite on the various tissues in which it becomes located in the course of an infection; and (3) what might be termed the secondary results of the infection, that is to say, those results due not to the direct action of the infecting organisms, but arising out of the new morbid conditions brought about by the infection.

In the case of pneumococcus infection these last secondary results were often of much consequence; in lobar pneumonia there was the effect on the right heart of the obstruction to the passage of blood through the infected area of lung, and the effect of a sudden diminution of the surface available for the proper oxygenation of the blood; in other cases the effect of the embolism of arteries and thrombosis of veins which

occasionally occured; in meningitis the effect of the pressure of the exudation, and so on.

### Toxæmia in Pneumococcus Infection.

With regard to the exact nature of the toxic substances which were produced in the course of pneumococcus infection, very little was known; whether such were actually secreted by the cocci themselves, or whether they were formed from the infected tissues by the action of the cocci. Klemperer had isolated a toxic albumose, pneumotoxin, from broth cultures of the coccus by treatment with sulphate of ammonia and alcohol; formic acid was also produced in cultures in some quantity. Auld had isolated an albumose-like body from the tissues of infected rabbits by macerating them in rectified spirit for from four to six weeks, and then extracting with water. The spirituous and aqueous extracts were then filtered, concentrated, and precipitated with absolute alcohol. The final precipitate had the characters of an albumose, and on evaporation of the alcoholic filtrate a viscous, amorphous substance which contained a quantity of an organic acid was obtained. A solution of the albumose injected into the thorax produced in the case of one rabbit a lobar pneumonia with pleural effusion, and in another a lobar pneumonia with pleural and pericardial effusion. In a third rabbit a subcutaneous injection of the albumose was followed by a sharp attack of cellulitis, terminating in recovery on the sixth day. In all three animals there was a marked rise in temperature. On the other hand, injection of the acid-containing residue (soluble in alcohol) was not followed by any injurious results.

As regarded the action of the pneumococcus toxins on particular tissues as manifested by histological changes, again but little was known. Carnot and Fournier had stated that definite alteration of the cardiac muscle in rabbits was produced by the injection of small quantities of pneumococcus toxins; the changes including an exaggeration of the transverse striation, with vacuolation, dissociation, and fragmentation of the muscle fibres. There was also sometimes a swelling of the connective tissue of the muscle, with a subsequent hyaline degeneration. Similar changes were also to be found in the skeletal muscles. In two cases of pneumonia in man changes in the heart muscle, similar to those produced in the rabbit, were found.

Maragliano, on the other hand, believed that the changes found in the heart muscle in pneumonia were not due to any direct action of the toxins, but were secondary to nerve lesions. There was also a certain amount of evidence that changes in the motor nerve ganglion cells might occur in pneumococcus infection. Campbell Thomson and himself, when investigating the action of various bacterial toxins on the motor cells of the cerebral cortex, had found some indication of structural alteration in these cells in experimental pneumococcus infection when stained by Nissl's method. In the mouse the ganglion cells showed merely an appearance of uneven staining. In the rabbit changes were more marked; the cells were swollen and showed uneven staining, irregular dark areas alternating with areas of lighter staining; the nuclei were indistinct, and the cell body generally had a blurred appearance. There was, however, no reason to suppose that these changes were specific or in any way peculiar to the particular bacterial toxin used, such as were the changes in these nerve cells which they had found in cases of tetanus. The changes in pneumococcus infection nearly resembled, in fact, those which Campbell Thomson had found in a variety of morbid conditions in which the common factor of a high temperature came into play. Cases of post-pneumonic paralysis had been described in man, and Auld had observed a paralysis of the extensor muscles of the fore-limbs occurring in rabbits at some long interval after the injection of pneumococcus toxin. It was possible that to this cause might be attributed the death which sometimes occurred after much muscle wasting, but without any gross lesions, in rabbits at a considerable interval after injection with the toxins.

### The Local Action of the Pneumococcus on the Tissues Infected.

The local action of the pneumococcus under the conditions of a natural infection varied partly according to the susceptibility of the individual attacked and the nature of the tissue which was the site of infection, and partly perhaps, although probably in a much less degree, according to the virulence of the actual strain of coccus present. Carnot and Fournier had pointed out that the nature of the lesions produced in man, in the guinea-pig, and in the rabbit presented a gradually increasing grade of severity, the exudations being sero-fibrinous, purulent, and hæmorrhagic in the respective cases. This was of course only true generally, and in man lesions accompanied by any of the three varieties of exudation might be seen; the exudation might be purulent from the first, sero-fibrinous and becoming purulent, sero-fibrinous throughout, and occasionally it might be hæmorrhagic.

The local manifestations of pneumococcus infection might be considered in detail.

### Pneumococcus Abscess and Cellulitis.

The simplest form of pneumococcus infection was that resulting from a poisoned wound of the subcutaneous tissue; a localised abscess, or a more or less spreading cellulitis. The following was a well-marked example of the latter type: A medical man cut his finger when carrying out the *post-mortem* examination of a young woman who had died with a cerebro-spinal meningitis after an illness of only two or three days duration. On the day following there was a good deal of inflammation in the neighbourhood of the wound, and within forty-eight hours there was an acute cellulitis extending up the forearm; incisions were made, and a quantity of blood-stained purulent fluid came away. This fluid was found to contain micrococcus pneumoniæ in pure culture. The same coccus was found from time to time in small, but acute, circumscribed abscesses on the hands of those who performed *post mortem* examinations. Circumscribed abscesses containing the same organism in pure culture also occurred in the tonsil.

### Fibrinous Lobar Pneumonia.

The first point that had to be considered in connection with the fibrinous lobar pneumonia which resulted from pneumococcus infection was whether the pneumonia was merely a manifestation of a general infection, or whether it represented a purely local infection. Latterly the general tendency had been to accept the former explanation, the pneumonia being looked upon as an incident in the course of a general infective disease. He himself, however, thought that the evidence available showed that usually the lung infection was the primary condition, and that any blood infection was secondary to this, and, moreover, not of such common occurrence as some had suggested. The most reliable statistics that he knew of as dealing with blood infection in pneumonia were those of Franklin W. White of Boston, U.S.A., who had examined the blood in 19 cases, drawing off 5 c.cm. of blood directly from a vein with a syringe. On transferring the blood to culture media, a culture of micrococcus pneumoniæ was obtained in only three of the cases, and each of these three proved fatal. Two of the three cases were examined *post mortem*, and in both of them evidence of general blood infection was found. In 7 other cases out of the 19 which also terminated fatally, and in which the blood drawn off during life had proved sterile, there was no evidence *post mortem* of any general blood infection. Indirect evidence of a general blood infection was obtained in a certain number of cases in which, after pneumonia, lesions, such as pneumococcus endocarditis, meningitis, arthritis, and the like, occurred in parts remote from the lungs. But, as compared with the frequency of pneumonia such cases were distinctly rare. Acute parotiditis, due to a pure pneumococcus infection, might be mentioned as an extremely rare sequela of lobar pneumonia. It would also be remembered that Fraenkel and Reiche had found the pneumococcus in the kidney in 22 out of 24 cases of pneumonia examined *post mortem*. With regard to the actual causation of fibrinous lobar pneumonia, and looking upon the lesion as produced by a local infection of the lung, it was quite likely that the old belief as to "a chill" or exposure to cold having an influence on the matter was well founded. There was no doubt that exposure to cold might produce some temporary congestion of the capillaries of the lungs, and under those conditions it was quite likely that there was just sufficient alteration in the state of the cells lining the air vesicles to render them less efficient in

resisting invasion by any bacteria which might come to rest on them. The access of potentially pathogenic bacteria by means of the air in normal respiration through the nostrils was prevented by the mechanism which provided for the destruction or arrest of such bacteria in the nares; but given an attack of reflex coughing, due to the irritation set up by a congested state of the air passages, it seemed possible that minute particles of mucus from the mouth or pharynx charged with cocci, having been disturbed by expiratory efforts in coughing, might subsequently be inhaled directly into the lungs by the after-coming deep inspiration taken through the open mouth.

Another point of interest was as to what proportion of cases of fibrinous lobar pneumonia were due to pneumococcus infection. Weichselbaum had identified the pneumococcus in the exudation of 94 out of 129 cases examined, his results being confirmed by cultural tests in 54. Netter gave the proportion at about 75 per cent., and other pathologists had given a still higher proportion as the result of their examinations.

He thought that what was known as "epidemic" pneumonia was not caused by micrococcus pneumoniæ. During the last year he had examined material from cases of epidemic pneumonia then prevalent at Middlesbrough. The disease had certainly been characterised by fibrinous lobar pneumonia, but none of the cases which he had examined had been due to pneumococcus infection. In the case of this particular epidemic he had come to the conclusion that the causative parasite was a bacillus having all the characters of bacillus coli communis, a conclusion which corresponded with that arrived at by Klein and Ballard when they investigated a similar outbreak of epidemic pneumonia at the same place some years previously.

Fibrinous lobar pneumonia was not, of course, the only result of pneumococcus infection of the lung; there was a pneumococcus broncho-pneumonia, especially in children, and the pneumococcus perinodular pneumonia found in cases of pulmonary phthisis.

### Pneumococcus Empyema.

The initial pleural effusion which occurred to a greater or less extent in probably every case of lobar pneumonia was, in the majority of cases, due at first to the irritation of toxins passing through from the neighbouring infected portion of lung, and not to the presence of cocci themselves in the pleural sac. And, excepting one case which occurred in a child, he had never found the pneumococcus in a non-purulent pleural effusion which was sufficiently extensive to require tapping. The single exception which he referred to was one in which a slightly turbid fluid was removed by tapping, and the organism isolated resembled the pneumococcus in all the usual cultures, and also morphologically, except that there was no obvious capsule; and it was further atypical in that it was not pathogenic for the rabbit in moderate doses, and in that respect differed from any other strain of the coccus which he had ever isolated from a recent infection. In adults a pleural empyema usually occurred as a complication of a lobar pneumonia. In children the pleural lesion was, he thought, frequently a primary one. He understood that there might be considerable difficulty in the diagnosis of a broncho-pneumonia in a child in the presence of an empyema; but, considering how well cases of empyema in children did under surgical treatment, it was difficult to believe that there was a lobar pneumonia, at any rate, underlying any large proportion of them. Bacteriologically there was a marked difference in the causation of pleural empyema in children and in adults. The two parasites which had caused a very large majority of all the cases of empyema which he had examined were streptococcus pyogenes and micrococcus pneumoniæ; but in spite of the obvious connection clinically between empyema and pneumonia in adults he found that 5 per cent. of the cases in adults were caused by the streptococcus pyogenes and 25 per cent. only by the micrococcus pneumoniæ, whereas in children at least 75 per cent. of his cases were caused by micrococcus pneumoniæ and about 25 per cent. by streptococcus pyogenes; this was excluding a small minority of cases in adults, and an extremely small one in children, in which bacteria other than these two were present.

### Pneumococcus Arthritis.

Cave had recently published an excellent paper on the arthritic manifestations of pneumococcus infection, in which he gave details of a case occurring in his own practice and of 30 other recorded cases. Of 31 cases 23 died and only 8 recovered. In 1 case the symptoms of arthritis apparently preceded those of pneumonia: in 27 cases the pneumonia preceded the arthritis, and in 3 cases there was no history of pneumonia either antecedent or subsequent. In 19 cases only one joint was affected, in 7 cases two joints were affected, and in 2 cases the arthritis was multiple—that is to say, more than four joints were affected. When the details of published cases were considered it was seen that the joint affection might take one of three forms: it might be purulent from the outset, it might be at first sero-fibrinous and then purulent, or it might remain sero-fibrinous, in the last case assuming sometimes the type of an osteo-arthritis with neighbouring teno-synovitis. Rendu had recorded a case of pneumococcus infection of the sterno-clavicular and knee-joints, in which at the time of examination the fluid in both knee-joints was still sero-fibrinous, whilst on the sterno-clavicular joint it was purulent. As examples of the less acute forms of pneumococcus arthritis the cases recorded by Fernet and Lacapère, and by Fernet and Lorrain, might be quoted. The first case was one in which an osteo-arthritis of the wrist-joint with teno-synovitis followed an attack of pneumonia; and in this case full bacteriological evidence of the nature of the joint affection was obtained. In 2 other cases, those recorded by Fernet and Lorrain, a similar osteo-arthritis with synovitis followed on pneumonia, but the diagnosis of pneumococcus infection was founded on clinical evidence only.

### Pneumococcus Meningitis.

A pneumococcus meningitis might be acute and purulent, or chronic and sero-fibrinous. The purulent form might be the only lesion due to the infection found and apparently the primary one, and in that case it was possible that infection occurred by way of the nose. Or a purulent meningitis might be secondary to fracture of the base of the skull involving the middle ear, to otitis media, or to pneumonia, or some other preceding pneumococcus lesion. The following was a typical case of a primary pneumococcus meningitis of the purulent kind: it was classed as primary, because the patient had been in perfect health up to the time of his sudden attack, and no focus of infection other than the meninges was found after death.

F. S., male, aged 30, was admitted into the Middlesex Hospital under Dr. Pasteur. The history previous to admission was that the man was following his occupation as a porter, when he suddenly complained of feeling sick and giddy, and then fell down. He was at once brought to the hospital, and when admitted was not fully conscious, but it was understood that he was suffering from frontal pain, with occasional paroxysms of pain in the occipital region. His breathing was laboured, but not stertorous; occasionally it was of the Cheyne-Stokes character. For most of the time he lay on his back, but made attempts now and again to get out of bed. There was no motor paralysis of the limb muscles, no facial or ocular paralysis; the pupils were of natural appearance; the patellar and plantar reflexes were in abeyance. The temperature was 101.6° F., the pulse-rate 120. The urine was normal in quality. On the following day the patient was quite unconscious. The left pupil was rather larger than the right one; temperature was 101.6° F. in the morning, 102.4° F. in the evening. Next morning the temperature was 104.8° F., and the patient was lying deeply comatose, with marked Cheyne-Stokes breathing. In the evening the temperature was 105° F., the pulse rate 156. In the course of two hours the patient had four attacks of severe general convulsions and died comatose early on the following morning, just sixty hours after the onset of his illness. The *post-mortem* examination was made by Dr. Campbell Thomson; rigor mortis was well marked at the time of examination, eleven hours after death. On opening the skull the convexity of the brain appeared to be normal, except for some œdema of the pia mater. At the base of the brain in the subdural space there was some excess of turbid fluid. Beneath the arachnoid there was a purulent infiltration of the pia mater extending

over the base of the brain, backwards over the surface of the cerebellum, and downwards along the cord—especially along the dorsal surface—to its lower extremity. The dura mater was everywhere of natural appearance; there was no extension of the exudation along the Sylvian fissures; the lateral ventricles contained an excess of brown turbid fluid. Micrococcus pneumoniæ was present in pure culture in the exudation on the pia mater and in the ventricular fluid.

The case in its clinical aspect was typical of the purulent form of pneumococcus cerebro-spinal meningitis, such cases being apparently always acute in their onset and of rapidly fatal course.

The chronic and sero-fibrinous form of pneumococcus meningitis was probably less common than that just spoken of, and had apparently been met with chiefly in children. Levi had recorded 2 such cases occurring in children, aged 3 months and 6½ months respectively, the diagnosis being confirmed by isolation of the coccus in each case. Lazarus-Barlow had also had 2 cases of the sort in children; in each case micrococcus pneumoniæ was isolated. There had formerly existed a certain amount of confusion as to the identity and causation of the pneumococcus and other forms of meningitis, but this confusion had been cleared up chiefly by the excellent work of Councilman, Mallory, and Wright, embodied in their monograph on *Epidemic Cerebro-spinal Meningitis*. Excluding tuberculous and syphilitic cases, cerebro-spinal meningitis was commonly caused by one of three species of cocci—micrococcus pneumoniæ, streptococcus pyogenes, and diplococcus intracellularis meningitidis of Weichselbaum—a few rare cases with other causation only remaining, as, for example, meningitis due to bacillus coli communis infection.

Clinically these cases of meningitis might be classified as "epidemic" meningitis and "sporadic" meningitis. So far as pathological diagnosis was concerned, all cases of "epidemic" meningitis might be put on one side as caused by diplococcus intracellularis meningitidis; earlier epidemic outbreaks which had been ascribed to the causation of micrococcus pneumoniæ were open to objection on the score of the insufficient bacteriological evidence on which a diagnosis had been founded.

Sporadic cases might be due to any of the three cocci mentioned; and each of the three cocci might be the cause of the purulent form. The sero-fibrinous forms of meningitis were due either to micrococcus pneumoniæ or diplococcus intracellularis meningitidis. He had already referred to the pneumococcus sero-fibrinous meningitis, and they were familiar with the sero-fibrinous form caused by diplococcus intracellularis meningitidis by the careful work of Still on posterior basic meningitis in children. Lazarus-Barlow had shown that the symptoms and gross morbid changes in these two forms of meningitis might be practically indistinguishable, and the differential diagnosis was only made by isolation of the causative parasite.

With regard to the purulent form of sporadic meningitis caused by any one of these three cocci, the position was very much the same; in any case, the naked-eye appearances were those of a purulent infiltration of the pia mater, with more or less subdural or ventricular exudation, and there were so far no definite points of distinction. Histologically there were certain differences which Councilman, Mallory, and Wright had pointed out. In the meningitis due to diplococcus intracellularis the inflammatory process tended to extend downwards from the pia mater into the substance of the cord to a much greater degree than it did in either the pneumococcus or streptococcus forms; there was also in the first a more marked purulent exudation, especially along the pial vessels, than was found in the other two. In both the pneumococcus and streptococcus forms there was, according to these writers, a marked endarteritis which they had not found in the other form. He had himself met with all three forms, but did not think that he would have been able to differentiate them from the histological appearances only; differentiation was of course easy enough by the bacteriological examination.

### Pneumococcus Peritonitis.

Peritonitis was the only other manifestation of pneumococcus infection to which he would refer at any length. It, like many other of the conditions caused by pneumococcus infection, might occur in two forms, the sero-fibrinous and the purulent. It was most frequently met with in children, only two out of seventeen cases collected by Dieulafoy having occurred in adults. Ménétrier and Legroux had recorded two additional cases occurring in adults which afforded good examples of a more acute purulent, and a less acute sero-fibrinous form. The first case was that of a man, aged 32, who died on the eighth day after the onset of an illness accompanied by violent abdominal pain, vomiting, and diarrhœa. After death a general purulent peritonitis was found. The second case was that of a man, aged 35, who had suffered from an indefinite sort of illness for about a fortnight before his admission into hospital, at which time he was suffering chiefly from abdominal pain and vomiting; he died 23 days after admission. At the *post-mortem* examination the peritoneal sac contained a turbid exudation, with lymph on the visceral peritoneum. There were infarcts in the spleen and in both kidneys. Embolism of the left Sylvian artery, of the left brachial and radial, and of the right popliteal and posterior tibial had occurred; there was some gangrene of the skin of the forearm and foot corresponding with the obstructed arteries. Micrococcus pneumoniæ was isolated with other organisms from the peritoneal fluid, and in pure culture from the embolus in the Sylvian artery. Amongst children peritonitis from this cause was most common in girls, whilst the cases recorded in adults had occurred in males.

### Other Manifestations of Pneumococcus Infection.

Time would only allow him to just mention the remaining manifestations of pneumococcus infection which were of more or less frequent occurrence.

*Pericarditis.*—This occurred either as a complication following a primary pneumonia or empyema, or might itself be the only manifestation of the infection to be found after death.

*Endocarditis.*—It was doubtful as to what proportion of cases of infective endocarditis were caused by micrococcus pneumoniæ. A considerable number of cases recorded as such were valueless for scientific purposes because the writers had failed to differentiate clearly this organism and streptococcus pyogenes.

*Salpingitis.*—Cases of pneumococcus salpingitis occurred after childbirth or following vaginitis. They were certainly uncommon so far as his own experience went, but Witte had isolated the coccus four times from 39 cases of salpingitis examined, and Hartmann and Morax twice from 33 cases examined; Zweifel, Frommel, and Wertheim had each recorded one case.

*Otitis Media.*—Considering the facility which existed for infection from the mouth, one was not surprised to find that micrococcus pneumoniæ was a fairly common cause of inflammation of the middle ear. Amongst a number of others who had studied otitis media from the bacteriological point of view, Schreiber found the coccus in 6 out of 16 cases of otitis media examined.

*Keratitis.*—In a certain number of cases of keratitis micrococcus pneumoniæ had been found present, and as the probable cause of the lesion; out of 50 cases of purulent keratitis examined Uhthoff found the organism twenty-four times in pure culture and seven times in association with other bacteria; it was also found in 2 cases of panophthalmitis.

### Immunity and Serum Diagnosis.

As regarded the possibility of an acquired immunity in man after a pneumococcus infection they were not able to say anything definite. The matter was one with regard to which it was difficult to come to any conclusion on the results of clinical experience. If it could be shown that good results followed the use of antipneumococcus serum—which was at present a matter of some doubt—then one would be able to infer that since in this way a passive immunity could be conferred, a certain degree, at any rate, of active immunity resulted in those who survived an attack of pneumonia. The question as to whether it was really possible to confer a definite active immunity against pneumococcus infection on a susceptible animal like the rabbit had also been raised by some, and it appeared that any immunity conferred was in this case of rather short duration.

As to the serum diagnosis of pneumococcus infection, he himself had but little experience to speak of. But Bezançon

nd Griffon claimed that they had attained to a considerable amount of success in this direction. In their method a small quantity of blood was drawn off from the patient, the serum was collected in a small tube inoculated with a culture of micrococcus pneumoniæ, and incubated from fifteen to eighteen hours. At the end of that time the contents of the tube were examined. If the case were one of pneumococcus infection there was a more or less adherent sediment of growth at the bottom of the tube, and the serum above was quite clear. If the case were not one of pneumococcus infection then the serum was finely turbid throughout. In the former case a microscopic examination would show that growth of the cocci had occurred in the form of long, intertangled chains or masses; in the latter case the organisms would be found as isolated pairs of cocci, or, in short chains of four elements. These observations of Bezançon and Griffon had not, so far as he knew, been confirmed yet.

### II.—J. W. WASHBOURN, C.M.G., M.D., F.R.C.P.,

Physician and Lecturer on Bacteriology, Guy's Hospital; President of the Section.

THE PRESIDENT believed that the pneumococcus existed in Nature outside the body of animals, but in an avirulent form, which under certain conditions might become virulent. He thought that the older experiments with regard to virulence of various strains of pneumococci required repetition with the more accurate methods now in vogue. He was not satisfied with the results that had been obtained by several observers upon toxic substances extracted from cultivations. He had never been able to demonstrate definite toxic substances himself. Dr. Foulerton spoke of pneumococcus septicæmia in the human subject as being a secondary and not a true septicæmia, but the speaker pointed out that all septicæmia in the human subject were of this nature. He gave an account of several cases of pneumococcus pleurisy, and referred to cases described by Drs. Rogers and Brodie of pneumococcus meningitis. With regard to the serum diagnosis of pneumonia, he regretted that his experiments conducted with Dr. Eyre did not yield a satisfactory result.

### III.—W. S. LAZARUS-BARLOW, M.D., F.R.C.P.,

Pathologist and Lecturer on Pathology, Westminster Hospital.

DR. LAZARUS-BARLOW communicated 2 cases of posterior basic meningitis due to infection by the pneumococcus, which are printed at page 766.

### IV.—E. J. CAVE, M.D., M.R.C.P.,

Physician, Royal United Hospital, Bath.

DR. CAVE referred to the arthritic localisation of the pneumococcus, and added another to the series which he had collected and published in the *Lancet* for 1901—a case which came on during an acute otitis media and recovered after aspiration and flushing with a solution of carbolic acid, the effusion being sero-fibrinous. He also referred to a case of pneumococcus peritonitis which recovered after free incision and the evacuation of a large purulent effusion. The patient was a school-girl.

### V.—J. H. BRYANT, M.D., F.R.C.P.,

Assistant Physician to Guy's Hospital.

DR. BRYANT made a few remarks on pneumococcus peritonitis based on three cases which are printed on p. 767. He was strongly of opinion that cases of so-called idiopathic peritonitis, if examined bacteriologically, would prove to be pneumococcal. The three cases were two girls aged 5 and 4 and a man aged 45. He drew attention to the frequency with which this form of peritonitis attacked children, particularly girls, for example, of 40 cases in children 34 were girls. This fact he considered important when considering the source and channel of infection, for it seemed to point to the uterine organs as the primary focus of infection. He then considered the possibility of infection through the alimentary canal, blood, lymphatics, and skin. He mentioned in connection with infections through the alimentary canal a case of pneumococcus enteritis published by Boulay. In connection with the blood as the channel of infection, he stated that one of his cases was certainly an example of pneumococcus septicæmia, for pneumococci were found in the blood, spleen, and pleural and peritoneal cavities. All the cases were clinically cases of acute peritonitis, but whether the peritonitis was the local manifestation of a general blood infection or the primary focus of a general blood infection, it would be difficult to say. The three cases were examples of general diffuse peritonitis. There was another form of pneumococcus peritonitis which might be described as local or encysted. This variety usually affected the peritoneum covering the pelvic and subdiaphragmatic organs, and the lymphatics were probably the channels by which the pneumococcus reached the peritoneum. Taking into consideration the symptoms, the physical signs, and the pathological changes found in his cases and in those reported by others, he was of opinion that in primary diffuse pneumococcus peritonitis, the organism reached the peritoneum either through the alimentary canal or the uterine organs. He then drew attention to the characteristic appearance of the fluid in pneumococcus peritonitis and pneumococcus empyema, in both of which conditions it was turbid, and on being placed in a specimen glass a thick greyish-yellow deposit of pus cells and lymph fell to the bottom of the glass, forming about a quarter of the whole. He contrasted the appearance of this fluid with the thick yellow opaque purulent fluid found in a streptococcus or staphylococcus empyema. He also pointed out the importance of making a careful examination of the pus obtained by exploring the pleural cavity, for it had a very important bearing on the treatment. If pneumococci were the only organisms found, aspiration would suffice. If streptococci or staphylococci were found as well as pneumococci, it was advisable to drain the thorax.

### VI.—J. MICHELL CLARKE, M.D., F.R.C.P.,

Professor of Pathology, University College, and Physician to the General Hospital, Bristol.

DR. MICHELL CLARKE with regard to the production of endocarditis by the pneumococcus, said that this was best known as the consequence of general infection in pneumonia, but was occasionally found under other circumstances, when the source of infection was uncertain. In illustration he showed specimens from a case of general infection in which there were found after death resolving pneumonia, meningitis, and acute endocarditis of the mitral valve; in these lesions the pneumococcus was found. He also showed specimens from a case of malignant endocarditis of the tricuspid and aortic valves in which the patient had never had pneumonia, nor was the source of infection discovered. The blood was free from micro-organisms during life; the illness lasted four months, and there was a history of some previous cardiac affection. Pneumococci were found on the diseased valves. He also showed a specimen illustrating a very rare complication of pneumonia, namely, thrombosis of veins. The veins affected were those at the bend of the left elbow and part way down the forearm. Nine days after onset of pneumonia thrombosis of the veins set in with a rigor; pneumococci were found in the blood. There was only a slight leucocytosis, 20,000 to 1 c.cm.; three injections of antipneumococcus serum were given without effect. Septic infarcts were found in the spleen and lungs. Pneumococci were found in all the lesions. In view of the extreme coagulability of the blood after death from pneumonia it was curious that thrombosis of veins during life was not more frequent. In the above case of meningitis this complication came on ten days after the onset of pneumonia and in his small experience of this complication it did not appear at the onset, but was a secondary phenomenon. In this and another example shown the distribution of meningitis was universal, but it was far most pronounced over the convexity. Another specimen shown was an example of pericarditis due to pneumococcus occurring as a terminal affection in chronic Bright's disease.

### VII.—J. W. H. EYRE, M.D., D.P.H.,

Bacteriologist and Lecturer on Bacteriology at Charing Cross Hospital.

DR. EYRE said: Foà and Carbone, during the course of their investigations into the life-history of the pneumococcus, were so impressed with the manifold and diverse pathological conditions met with that they assumed no one organism could be responsible for them all. They therefore proceeded to describe two varieties of cocci, under the cumbersome

titles of the "fibrinogenetic" pneumococcus and the "œdematogenetic" pneumococcus, and stated that the lesions following infection by the former of these two varieties were characterised by the formation of fibrin, whilst œdematous exudation, either serous or hæmorrhagic, was the predominant tissue reaction following infection by the latter. It was now known that the distinctions so carefully drawn between the two varieties were based upon fallacious premisses, and were to be attributed solely to differences in the virulence and the age of their cultivations, differences in the doses used, and, lastly, differences in the individual resistance of the animals employed in their experiments. Further investigations had shown that, just as the tubercle bacillus might be responsible for such widely-differing lesions as the so-called "pulpy disease" of the knee-joint, tabes mesenterica, dermatitis, and pulmonary phthisis, so one and the same pneumococcus might be the specific organism concerned in the causation of serous pericarditis, suppurative peritonitis, otitis media, and acute lobar pneumonia—for these several lesions, in a particular case he had in mind, were amongst the clinical evidences of a general pneumococcus septicæmia. Dr. Eyre continued:

That the early investigators should have fallen into errors such as these is by no means surprising—the pneumococcus exists in Nature under two forms—a parasitic one, a delicate and sensative organism, so difficult of cultivation under laboratory conditions that until a few years back the vitality only extended to a few days; and even during that short time its virulence steadily decreased, and a saprophytic form, more highly resistant, and presenting no difficulties in cultivation, which is practically non pathogenic, although capable under certain conditions, as has been shown by Washbourn and myself, of evolution into the parasitic form.

Thanks, however, to Washbourn, our President of to-day, to whom we owe the application of "blood agar" to the cultivation of the pneumococcus, as well as the exact methods for estimating its virulence (and also the measurement of the doses employed) the life of the highly parasitic pneumococcus is measured by months instead of days, and its initial virulence is retained unimpaired throughout the greater part of that life. By the aid of these improvements in technique we are now able to demonstrate experimentally that the same strain of pneumococcus can, by varying the conditions of the experiment, be made to provoke tissue reactions belonging to either the fibrinous or the œdematous group.

At the same time it must be conceded that these two features—the production of fibrin and of œdematous exudation—characterise the two most important groups of pathological conditions induced by the pneumococcus, although as a general rule no hard-and-fast line can be drawn between the two processes, and in fact in spontaneous infection by the pneumococcus the two processes will be found going on side by side.

Take, for example, a piece of lung from a case of acute lobar pneumonia—microscopic examination, after appropriate staining method, as by Weigert's fibrin stain, will show that some of the alveoli, filled with exudation products, leucocytes, red discs, pneumococci, contain a large amount of fibrin, whilst in neighbouring alveoli, equally crowded with leucocytes, red cells and pneumococci, absolutely no fibrin formation can be demonstrated.

The pneumococcus, however, like so many other of the specific organisms, will under certain conditions, assume purely pyogenetic properties—therefore, to the above-mentioned groups must be added a third, but little less important, characterised by the formation of pus.

Now how do these statements agree with those facts observed as the result of experimental inoculation of susceptible animals? Confining ourselves to the infection of the subcutaneous tissues over the abdomen of the full-grown rabbit, we find that practically any dose of the pneumococcus of "standard" virulence, down to the minimal fatal dose causes death within forty-eight hours from acute pneumococcus septicæmia. At the seat of inoculation the reaction, usually small in amount, and limited in area, is practically always œdematous in character, and either of the serous, sero-hæmorrhagic, or more rarely, hæmorrhagic type.

If, however, we substitute a partially immunised rabbit, and inject a similar dose from the same cultivation, or, on the other hand, employ an ordinary rabbit, but infect it with a pneumococcus of lower virulence, the animal survives for a much longer period, say three or four days, or even a week. Now the local reaction at the seat of infection is a much more extensive process. A dense, almost solid, opaque exudation, consisting of fibrin and leucocytes, together with red blood discs, has been thrown out, and occupies the subcutaneous cellular tissue for a considerable distance around the needle puncture, frequently indeed extending down to the peritoneum below, whilst at its periphery the tissues are infiltrated by a spreading serous exudation.

Finally, if a highly immunised animal is infected with a highly virulent pneumococcus, or a susceptible rabbit inoculated with a pneumococcus of very low virulence, the local lesion at the seat of inoculation consists of a larger or smaller circumscribed œdema, usually noticed within twenty-four hours of infection, which enlarges slightly, though remaining strictly localised, during the next few days, becomes soft, can be made to fluctuate, and contains pus. If untreated, the skin over the abscess undergoes necrosis, sloughs, and gives exit to a thick creamy yellowish pus, simply teeming with pneumococci.

From these remarks it will be seen that the predominant features of the lesions produced by the pneumococcus depend on at least two factors, namely, the virulence of the infecting pneumococcus and the individual resistance of the subject infected. In the case of the human subject we have no means of measuring the latter factor, although we know, from the rarity of general pneumoccocus septicæmia in adults, that they at least are much more resistant than the rabbit. The virulence of the various strains of pneumococci producing the different lesions can, however, be measured with great exactitude by methods already described by Washbourn and myself. To do this an accurately calibrated loop is employed to remove a portion of the twenty-four hours' growth of the pneumococcus from the surface of "blood agar." Such a loopful is emulsified with a definite quantity of sterile broth, and diluted down, until the desired dose is contained in a convenient quantity of broth. A pneumococcus of such virulence that a dose of 0.000001 of a loop, holding 0.5 milligram of culture, is considered as of "standard" virulence.

Measured in this way, strains of the pneumococcus isolated from various pathological conditions in the human subject are found to differ greatly in their virulence. In a paper on the Varieties and Virulence of the Pneumococcus, Washbourn and I referred to three such strains of pneumococci which we had tested. Two of them were isolated from the sputum of cases of lobar pneumonia, the third from the pus in a case of meningitis complicating pneumonia. The virulence corresponded respectively to about minimal fatal doses of two loops, one loop, an entire "blood-agar" cultivation—perhaps one hundred loops. A fourth strain, isolated from the saliva of a healthy individual, was also investigated; its virulence corresponded to one loop. To these four strains I can now add six.

One was a case of pericarditis and pleurisy complicating lobar pneumonia in a child aged 8; the virulence of this pneumococcus was up to standard—that is to say, 0.000001 loop caused death in the inoculated rabbit within forty-eight hours.

Case II, pericarditis, suppurative peritonitis, meningitis, pleurisy, and fibrosis of the lung in a child of 3; here, again, the pneumococcus (isolated from the pus in the peritoneum) was of standard virulence.

A third was a fatal case of pericarditis in a child aged 15 months; the pneumococcus isolated had a virulence corresponding to a minimal fatal dose of 0.1 loop.

In Case IV, cerebro-spinal meningitis in a child of 11 weeks, the pneumococcus isolated was found to have an initial virulence corresponding to a minimal fatal dose of 0.1 loop.

Case V—empyema following pneumonia—the specific organism possessed a virulence equal to a minimal fatal dose of 2 loops.

Case VI was one of endocervicitis occurring in a woman of 26; in this case the virulence of the pneumococcus was not accurately estimated, but was at least equivalent to a minimal fatal dose of 0.1 c.cm. of a twenty-four-hours broth cultivation.

*Notes of Cases.*

| No. | Sex. | Age. | Pathological Conditions. | Pneumococcus Tested was Isolated from | Minimal Fatal Dose of Pneumococcus. Cultivations Correspond to | Remarks. |
|---|---|---|---|---|---|---|
| 222 | Female | 8 years | Purulent pericarditis and sero-purulent pleurisy, with membrane formation on pericardium and pleura, complicating lobar pneumonia | Pericardial pus | 0.000001 loop | *Post-mortem* 3,282 (15 hours after death). Meninges and peritoneum normal |
| 306 | Male | 3 years | Serous pericarditis, sero-fibrinous pleurisy, suppurative peritonitis, sero-purulent meningitis | Pus from peritoneum | 0.000001 loop | *Post-mortem* 2,435 (40 hours after death). Fibrosis of lung (tuberculous) |
| 100 | Male | 15 months | Sero-fibrinous pericarditis | Pericardial exudation | 0.100000 loop | *Post-mortem*, 2,293 (8 hours after death). Other organs normal. |
| 150 | Male | 11 weeks | Purulent cerebro-spinal meningitis (secondary to double otitis media) | Pus from ventricles | 0.100000 loop | *Post-mortem* 2,328 (12 hours after death). Other organs normal. |
| 146 | Male | 17 years | Empyema following pneumonia | Pus from pleural cavity | 2.000000 loop | — |
| — | Female | 26 years | Endocervicitis | Pus from cervix uteri | 0.1 c.cm. of a 24-hours broth culture | — |

| | | | |
|---|---|---|---|
| Acute lobar pneumonia | Sputum | 2 loop | Referred to in paper varieties and virulence of the pneumococcus. |
| Acute lobar pneumonia | Sputum | 1 loop | |
| Meningitis, pericarditis and empyema complicating lobar pneumonia | Pus from meningitis | Entire blood agar culture | |
| Healthy male | Saliva | 1 loop | |

From these few observations it is impossible to draw any reliable inferences. I will therefore content myself with suggesting that an accumulation of similar observations may help us to a more complete appreciation of the interrelationship of virulence and resistance which evidently underlies all the pathological conditions following infection with the pneumococcus.

### VIII.—Theodore Fisher, M.D., M.R.C.P.,

Pathologist, Bristol Royal Infirmary; Physician to Out-Patients, Hospital for Sick Children and Women, Bristol.

Dr. Theodore Fisher wished to draw attention to the question of abscess of the lung as a complication of pneumonia. In his experience it was not so rare as was generally considered. He had seen five cases. In one the whole lower lobe had broken down into pus. The cases examined bacteriologically had proved to be mixed infections. The pneumococcus was associated with the bacillus coli or with streptococci.

### IX.—Edward Rist, M.D.,

Paris.

Dr. Rist said: In investigating several cases of putrid empyema, which I have proved elsewhere to be caused by obligate anaërobic microbes, I met one case which I think might be of some interest in the present discussion. A woman, 34 years of age, alcoholic, was affected by angiocolitis and developed several liver abscesses, one of which opened through the diaphragm into the right pleural cavity. A putrid gaseous pleurisy was caused by that accident, and the patient subsequently died. I investigated the pus of one of the closed liver abscesses and cultivated out of them two virulent species of obligate anaërobic microbes. The same microbes were to be found in the empyema, but they were associated with a small number of virulent pneumococci, which did not exist in the liver abscess. The development of pneumococcus was doubtless secondary to the invasion of pus into the right pleura. And it was to be supposed that it was caused by a lessened resistance of the traumatised lung tissue.

### X.—George B. Batten, M.D.,

Dulwich.

Dr. Batten said: I should like to mention the case of a commercial traveller, aged 30 years, whom I saw in consultation with Dr. Edwards, who was attending him. He had double pleuro-pneumonia in September, 1900, which was much more extended in area in the right lung. He was ill for many weeks, and there was a suspicion of empyema on the right side, but no tapping or operation was done. He had some jaundice, I believe, during convalescence. He continued his work as a commercial traveller until a certain Tuesday in March of this year, when he went to bed at Maidstone, and would not get up and would not eat. He was brought home by his wife on the Friday, and I saw him on the Saturday. He seemed confused in mind, and during the next few days alternated between a semi-comatose condition and almost apparent clearness of brain function. His right pupil was contracted, and there was decided loss of plantar sensibility on the left side, and he had optic neuritis which was more decided on the right side. Dr. Hale White saw him in consultation with my partner and myself, and diagnosed meningitis. He died, and we were only allowed a *post-mortem* examination on the head. We found great fulness of meningeal veins but no meningitis, but there was an abscess as large as a small orange in the right frontal lobe which did not come to the surface of the brain anywhere, and broke into the right ventricle, I think only as the brain was removed. The abscess was very putrid, and a specimen carefully taken was found by the Clinical Research Society to contain staphylococci and large numbers of an organism morphologically indistinguishable from pneumococci. No inoculation experiments, however, were done with these, as the Clinical Research Society had no licence. There was not and had never been any ear disease. It seemed possible that the cerebral abscess was etiologically related to the severe pneumonia which had occurred six months earlier.

#### Reply.

Mr. Foulerton, in replying, said that the pneumococcus was a strict parasite in the sense that it was practically only found on a living host. It was, of course, possible by repeated subcultivation of the organism on artificial media and at artificial temperatures to gradually habituate it to a saprophytic existence. But he did not think that this could be taken to imply that the coccus existed as a saprophyte under natural conditions. With regard to infection by the vagina as a cause of pneumococcus peritonitis, it must be remembered that although amongst children pneumococcus peritonitis was more common in girls that in boys; in adults, on the other hand, all the recorded cases which he could recall had occurred in men.

## THE BACTERIOLOGY OF POSTERIOR BASIC MENINGITIS.

By W. S. Lazarus-Barlow, M.D., F.R.C.P.,

Pathologist and Lecturer on Pathology at the Westminster Hopital.

The point which I should like to add to the discussion* is derived from the investigation of two cases of posterior basic meningitis which died in the Westminster Hospital. They show, I believe, that that condition which has been especially investigated by Dr. Still from its bacteriological standpoint is not so exclusively caused by the diplococcus intracellularis as his researches would lead us to understand. At the very outset, however, I would wish to make it clear that the cases which I am about to mention are not to be taken as contradictory of Dr. Still's work, but only as supplementary.

* The cases were referred to in the discussion on Pneumococcus Infections (see p. 764).

The clinical signs and symptoms of posterior basic meningitis are so definite and the importance of the diagnosis is so great from the point of view of the bacteriology, that it is necessary to quote the clinical notes of my two cases in some detail. This is the more important in that it is on all hands agreed that not a few cases of suppurative meningitis are undoubtedly caused by the pneumococcus.

The first case was that of a female child, aged 1 year and 5 months, who was admitted to hospital on August 2nd, 1900. She was said to have been ailing for about two months, and for the past few weeks had been very restless and irritable, and had vomited occasionally for no obvious reason. On admission, the head was retracted, the eyes were widely open with the pupils equally dilated, the legs were rigidly extended, the abdomen retracted; there was great emaciation, and the child cried when touched or handled. On August 13th she developed a well-marked attack of varicella, but had fully recovered from this by the 23rd. The child lay in a condition of extreme extension except for marked retraction of the head. The feet were strongly flexed. During September it was noticed that the fontanelles had begun to bulge. On September 14th the maximum occipito-frontal circumference was 18 inches, and on October 5th this was increased to 19½ inches. On October 2nd the arms became rigidly flexed with extreme pronation, and a little clear serous fluid was discharged from both ears. On October 7th the temperature began to rise, and the child died comatose on October 9th. There was obstinate constipation throughout the illness. The duration of the illness was therefore about four months, of which over two months were spent in hospital, where she was under constant observation.

The necropsy was made twenty-two hours after death. The emaciation was extreme, and extreme flexion of the ankles, toes, wrists, and hands were still visible. The visceral organs showed no abnormalities. The brain was soft and a small amount of fibrin was present at the base, but did not extend over the convexity. The ventricles were widely distended with clear fluid, in which no flakes of fibrin were visible.

The second case happened to be in the hospital at about the same time. It was that of a female, aged 9 months, who was brought to hospital on September 21st, 1900, and admitted for "fits of stiffness" and "feverishness." She was first noticed to be ailing about a month before admission, when she vomited at frequent intervals. Retraction of the head was first noticed five days before admission. On admission, there was rigid retraction of the head with some photophobia. The pupils were equal and contracted. The child was fairly quiet. The abdomen was not retracted. All four limbs were flexed. The optic discs appeared to be normal. During the stay in the hospital there was occasional vomiting, and the constipation which obtained before admission gave place to a green, offensive diarrhœa. At the same time the head became more and more retracted, and the flexion of the limbs gave place to rigid extension, with equally rigid flexion of the ankles and feet and the wrists and hands. The anterior fontanelle, too, was seen to bulge. The child died on November 1st, after a stay in the hospital of six weeks duration.

The necropsy was made sixteen hours after death. The body weighed only 10 lbs. There was definite broncho-pneumonia in both upper lobes, but the lower lobes appeared to be normal. With this exception the viscera showed nothing abnormal. The cerebral convolutions were much flattened; the lateral and third ventricles were dilated and full of a thin, clear, watery fluid. Some gelatinous material was present at the base, but no pus or deposited fibrin.

In both these cases one of the most important points to set at rest was the presence or absence of tuberculosis. Although this question might almost be regarded as being answered in the negative by the clinical histories alone, special care was taken at the necropsy to determine it. As a matter of fact, there was not a trace of tuberculosis in the body of either infant, whether in the recent or in the arrested form.

The bacteriology of the two cases may be taken together, for although the cultures obtained from them were carefully separated, the characters of the micro-organisms isolated were identical in both. No micro-organisms could be found in coverslip preparations of the cerebro-spinal fluid or the inflammatory material at the base of the brain in either case.

The method of procedure was the formation of glycerine-agar plates by the inoculation of prepared plates with some of the fluid of the ventricles. It was impossible to inoculate any fibrinous material from the ventricles, for none could be seen. In each case the micro-organism was not obtained in a pure culture on the plates, but numbers of small points were found on the third day which were easily isolated. These micro-organisms were found to be diplococci which grew in broth into short chains of streptococci. They refused to grow on gelatine or at the room temperature, and were most easily cultivated upon glycerine-agar. They retained the colour when stained after Gram's method, and as this point is highly important with reference to their differentiation from the diplococcus intracellularis, the actual method which was adopted will be given. Films were made in the usual way and were immersed in aniline-gentian-violet (freshly prepared) for ten minutes: Gram's iodine mixture was then poured on the coverslips, and was allowed to act for one minute; the films were then placed in a small dish of absolute alcohol, which was changed after five minutes for fresh absolute alcohol. After ten minutes' exposure to the alcohol the films were examined, and it was found that the organisms still retained the violet dye. Other films similarly prepared were exposed to the action of absolute alcohol for twenty minutes, but by this time, although a certain amount of violet colour remained, it was very slight. After fifteen minutes exposure it was still distinct.*

* Although this method was adopted it is in practice more convenient to use carbol-gentian-violet owing to its greater stability. The other steps in the process are the same as in the ordinary Gram's method. Another great advantage of using the carbolic instead of the aniline water stain is that the ultimate preparations are much cleaner.

Of the two cultivations, that derived from the first case has unfortunately died out, and all attempts to resuscitate it have failed. It was, however, kept alive for nearly six months by making fresh cultivations about every fortnight or three weeks. The cultivation from the second case is still living, and I show specimens on glycerine-agar and in broth. On glycerine-agar growth appears sometimes on the next day, but more commonly on the next day but one, in the form of minute greyish, translucent colonies which have little or no tendency to run into one another. In broth a growth is generally visible after twenty-four hours as a flocculent material which shows a great tendency to attach itself to the sides of the test tube, but subsequently sinks to the bottom.

So far as the characters of the micro-organism are concerned which have been given above they are fully compatible with the view that they are micrococcus pneumoniæ (Fraenkel) and are undoubtedly against the view that they are diplococcus intracellularis. Especially important is the fact that they undoubtedly retain the stain when treated by Gram's method. But one important mode of distinguishing the two varieties of diplococcus is wanting, namely, that derived from inoculation of rabbits. Unfortunately I can give no information on this point owing to the lack of facilities for animal experiment at the Westminster Hospital. Mr. Foulerton of the Middlesex Hospital kindly undertook to make the necessary inoculations for me and I supplied him with cultivations for the purpose. But unfortunately the micro-organisms show a great dislike to being transferred from one set of a medium to another, and Mr. Foulerton was unable to obtain a sufficient quantity for the inoculations. At the present time I fear that inoculations would be useless as the diplococci must have become, by now, attenuated to an extreme degree.

In any case, however, the examples I have brought forward are sufficient to lead to further investigations on the subject. That more than one variety of micro-organism should be capable of leading to posterior basic meningitis is certainly possible, and, in my own opinion, it is extremly probable. And, knowing what we do of the variability of the phenomena that are produced by pneumococcus infections, it would not be surprising if we had to add certain cases of posterior basic meningitis to their number.

## PNEUMOCOCCUS PERITONITIS.

By J. H. BRYANT, M.D., F.R.C.P.,
Assistant Physician to Guy's Hospital.

DURING the last fourteen months I have had the opportunity of investigating 3 cases of pneumococcus peritonitis, and in this discussion on pathological conditions caused by the pneumococcus I shall confine myself to a few remarks on the pathology of this rare form of peritonitis.

Very few cases of this nature have been recorded in England: in fact I have only been able to find one at all fully worked out.

Fisher, in a letter published in the *Lancet* on November 10th, 1900, in reply to a short leading article on the subject mentions the case of girl, aged 8, who was admitted into the Bristol Infirmary in 1899 suffering from acute peritonitis of five days' duration. Abdominal section was performed, but no cause was found to account for the peritonitis. She died on the following day, and at the necropsy no lesion of the abdominal or pelvic viscera was found, in fact there was no septic focus discovered anywhere.

Coverglass preparations of the pus showed capsulated diplococci and streptococci, and cultures showed the presence of the diplococcus pneumoniæ. Most of the observations made on this disease and the cases reported have been by French observers.

One of the first cases of pneumococcus peritonitis was described by Cornil in 1886. In the same year Netter demonstrated the presence of pneumococci in the peritoneal fluid of patients who had died from pneumonia, although in these cases there was no evidence of any morbid changes in the peritoneum.

Since Cornil's case a number of examples of this form of peritonitis have been described by French authors.

Pneumococcus peritonitis is undoubtedly a rare condition, but I have no doubt in my own mind that if systematic histological and bacteriological examination of the pus from all cases of peritonitis were made, it would not be so rare as it appears to be at the present time.

Blackburn in his thesis mentions that Netter stated that of 151 pneumococcus infections noted by him there were only two in which the peritoneum was affected, and these two were in children. There is a form of peritonitis which has been, and is now, sometimes classed as idiopathic, a form in which no obvious primary lesion can be found to account for the inflammation of the peritoneum. I am strongly of opinion that these cases are nearly all, if not all, examples of pneumococcus infection. As far as peritonitis is concerned, the term "idiopathic" ought never to be applied to any case unless most careful and exhaustive histological and bacteriological examinations have been carried out with negative results and inoculation experiments have failed to show the presence of a pathogenic organism. The following is an account of my cases. I will read them in the order in which they occur:—

CASE I.—Daisy S., aged 5 years, was admitted on May 20th, 1900, under the care of Dr. Newton Pitt for diarrhœa and vomiting. She had been a fairly healthy child but was subject to colds. When sixteen months of age she had an attack of whooping-cough, and when three years measles. On Saturday, May 19th, she appeared to be perfectly well. The mother stated that she had eaten some raw rhubarb on this day. On Sunday morning, the 20th, about 8 A.M., she vomited freely, and about the same time suffered from diarrhœa. Both the vomiting and the diarrhœa continued to be profuse throughout the day, and she complained of "pain in her stomach." She was very fretful and only took a little milk and soda water. At 6 P.M. she was much worse, and at 7 P.M. she was admitted into the hospital.

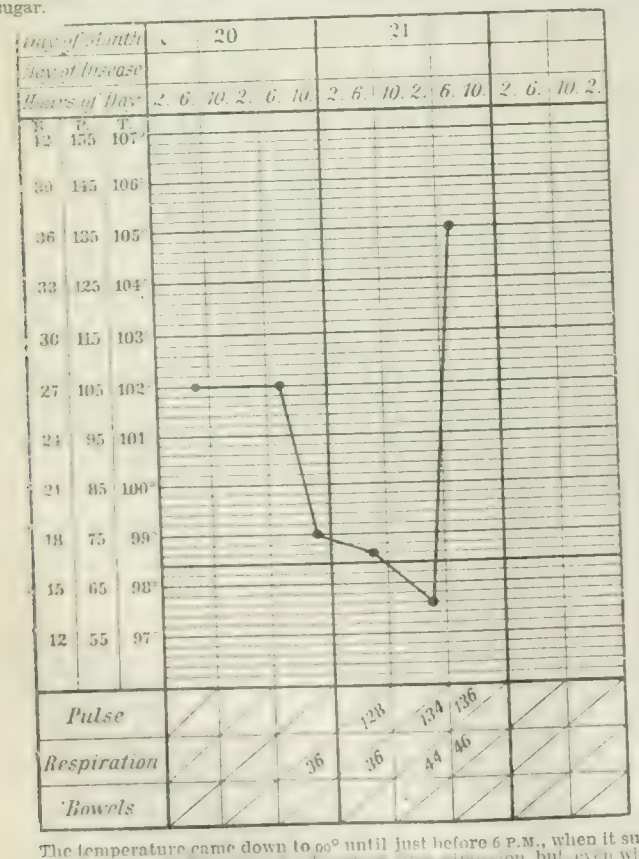
*Condition on Admission.*—Temperature 102°, pulse 124, respirations 36. She was a well-nourished child, but was very fretful, and seemed to be wandering in her mind. She appeared to be in pain, and was very thirsty.

*Respiratory System.*—She had no cough. A pleuro-pericardial rub was heard over an area about 2 inches in diameter just below and external to the left nipple.

*The Pulse* was small and of low tension. The cardiac dulness was not increased. There were no *bruits*.

*Alimentary System.*—Lips dry; teeth good; tongue furred on the dorsum, but clean at the tip; papillæ red and prominent; fauces normal. The abdomen moved on respiration, and was quite supple. Palpation appeared to give her pain. The percussion note was normal.

*Urine*, acid, 1021. Small amount of albumen present. No blood, pus, or sugar.




The temperature came down to 99° until just before 6 P.M., when it suddenly rose to [illegible]. There was [illegible] remission, but even with the temperature down, she seemed ill, and was very fretful and thirsty. She vomited once during the afternoon for the first time since admission. At 5.45 P.M. she again vomited, and then went into a fit. She became quite pulseless, and remained collapsed for two hours in spite of the administration of oxygen and injections of brandy, strychnine, and ether, and a saline injection. She died at 7.45 P.M.

The *post-mortem* examination was made on May 21st, fifteen hours after death. Rigor mortis was well marked, and there was marked hypostasis of the back, neck, and gluteal region. The extremities were much cyanosed. The body was well nourished. There was no anasarca. There was no otitis and no meningitis. The spinal cord, cervical glands, and thyroid were healthy. There was a good deal of subpleural ecchymosis on the upper two-thirds of the right lower lobe of the lung, and this part of the pleura was also covered with very thin flakes of recent lymph. There was also recent lymph covering the base of the left lung. There was no pneumonic consolidation.

The larynx, trachea, bronchi, and bronchial glands were normal. There was a little recent lymph covering the outer surface of the pericardial sac. The heart weighed 75 grams. There was no endocarditis, and the cavities were not dilated. The arteries were healthy. The mouth, pharynx, œsophagus, and stomach were normal. There was general acute peritonitis. The peritoneal cavity contained about 10 ounces of thin greenish yellow, opaque purulent fluid. The liver, spleen, and intestines were covered with small flakes of pale yellow lymph. The appendix vermiformis was quite healthy. There was no local collection of pus which would have caused the peritonitis, and there was no perforation of any of the hollow viscera. The pelvic organs appeared to be quite healthy.

The liver, gall bladder, and pancreas were normal. The lymphatic glands were swollen and sodden. The spleen weighed 54 grams, and was normal. The suprarenals were healthy. The kidneys weighed 83 grams, and were quite normal.

Coverglass preparations were made from the peritoneal fluid, and stained with methylene blue and with capsule stain. An almost pure growth of capsulated diplococci was seen. A few large long thick rod-shaped bacilli were seen also.

CASE II.—Thomas S., aged 45, a stone carver, was admitted on October 9th 1900, under my care for abdominal pain. He had always enjoyed good health, with the exception of an abscess on his knee, which he had when he was a boy. On October 1st he first noticed a pain in his epigastric region, which was accompanied by flatulence. From October 1st to October 3rd he suffered from constipation. He was able to work on the 1st, but on the 2nd had to give it up, and he went to bed until the 4th. He attempted to work again on the 4th, but soon had to give it up. On the 5th his motions were scanty and fluid. He remained in bed on the 7th, feeling very ill and suffering considerable pain, which was continuous, with occasional exacerbations which made him cry out. He was admitted on the 9th.

*Condition on Admission.*—Temperature 101.2°, pulse 100, respirations 36. He was very pale, and his eyes were much sunken. He complained of extreme tenderness all over his abdomen, but the muscles were not rigid. I saw him soon after admission, and diagnosed general suppurative peritonitis. I called in my college Mr. Dunn, who decided to operate at once. On opening the peritoneal cavity about a pint of thick green fluid was evacuated, and it was found that the peritoneum was covered with flakes of recent greenish-yellow lymph.

On the following day he felt much better. He was taking peptonised milk well.

On the 11th he became very restless, and endeavoured to get out of bed. He gradually became worse, and died at 5 A.M. on the 11th.

The *post-mortem* examination was made ten hours after death. The body was rather emaciated. There was a vertical incision in the median line of the abdomen about 10 cm. in length, 5 cm. of which was above and 5 below the umbilicus. The brain and meninges were normal. The posterior surface of the right lung was covered with a thin layer of quite recent lymph. There was very marked subpleural ecchymosis over the posterior surface of this lobe. The lungs were engorged with blood, but there was no pneumonic consolidation. The larynx, trachea, bronchi, and bronchial glands were normal. There was no pericarditis. The heart weighed 302 grams. All the valves were competent, and there were no signs of recent or of old endocarditis. The right ventricle was very much hypertrophied, and the myocardium was firmly contracted. The left ventricle was not hypertrophied. The first part of the aorta was very atheromatous, and the coronary arteries were also thickened and atheromatous. There was a good deal of *post-mortem* digestion of the mucous membrane of the œsophagus. The cardiac end of the œsophagus was much ecchymosed. There was no ulceration. There was neither ulceration nor perforation of any part of the intestinal tract. The appendix vermiformis was quite healthy. There was general acute suppurative peritonitis. The peritoneal vessels were much injected, and all the viscera covered with peritoneum were clothed with thick layers and patches of greenish-yellow lymph. No local cause for the peritonitis could be found.

The liver weighed 1,367 grams. There was a good deal of subscapular ecchymosis. The organ was very pale from fatty degeneration and infiltration. The gall bladder and pancreas were normal. The mesenteric glands were enlarged. The spleen weighed 108 grams. The suprarenal capsules were normal. The kidneys weighed 250 grams; they were healthy.

The following report of the bacteriological examination was made by Mr. Pakes:

"Pneumococci and streptococci were present, the former as well as the latter being found in the cultures from the heart blood of a mouse inoculated with the original culture of the peritoneal fluid."

CASE III.*—Harriet S., aged 4, was admitted into Guy's Hospital under my care on May 11th, 1901, for vomiting and abdominal pain. She had always enjoyed good health until Thursday evening, May 9th, when she was seized with severe vomiting after taking her supper. She vomited about six times during the night. The vomiting ceased on the following morning, but she appeared to be very ill, and would not take her food. On the morning of the 11th, as she was much worse and had not taken any

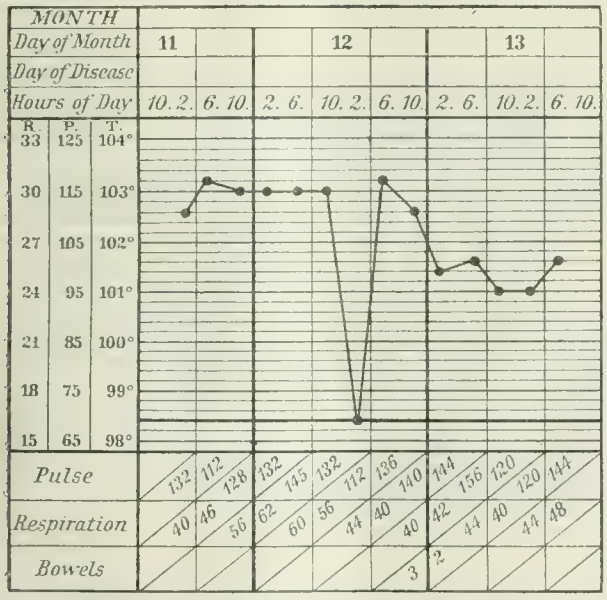
* This case was read before the Society for the Study of Disease in Children.

food, she was brought to the hospital and was at once admitted. She had not vomited since Thursday evening. The bowels were opened on Friday, and the motion appeared to be natural. There was no discharge of blood or mucus from the rectum.

On admission the pulse was 140, the temperature 102.8°, and respirations 40. She appeared to be very ill, and had a drawn and anxious expression. The abdomen was tense, rigid, and very tender all over. There was no particular pain or tenderness in the right iliac fossa. There were no physical signs of pleurisy or pneumonia. I saw the child soon after admission, and came to the conclusion that she was suffering from acute peritonitis or diaphragmatic pleurisy, and I suggested the possibility of a pneumococcus infection on account of the absence of any localising symptoms of appendicitis or other diseases. Mr. Dunn saw the child with me shortly afterwards, and decided not to operate, chiefly on account of the absence of vomiting and constipation and because he was inclined to the view that the condition was due to diaphragmatic pleurisy or pneumonia.

During the night the child was decidedly worse. The abdomen became more rigid and tender, but the drawn anxious expression was not so well marked; she also vomited three times; it was with great difficulty that she could retain any food.

On Sunday morning, the 12th, Mr. Dunn saw the child with me again, and decided to operate. The abdomen was opened in the median line, and general peritonitis was found. There was a good deal of slightly turbid fluid in the peritoneal cavity, and the intestines were covered with flakes of pale greyish-yellow lymph. The fluid had no odour. The appendix vermiformis appeared to be a little swollen, and was removed. A subsequent examination showed no ulceration, and the swelling was no more than could be accounted for by the peritonitis. It was certainly not the primary focus of the peritonitis. The peritoneal cavity was washed out and a drainage tube was left in. I examined some of the peritoneal fluid, staining some coverglass preparations with Maconochie's capsule stain, and found a number of capsulated diplococci, which I considered were pneumococci. Cultures were also taken, but no growth resulted.




After putting the child back to bed the pulse became very feeble, and stimulants were administered. In the afternoon she had an attack of profuse diarrhœa, which was stopped with a starch and opium enema and bismuth. As the pulse did not improve, saline enemata and infusions of saline solution into the axillæ were administered. During the night she became very restless, and continued so all the following morning. She died suddenly on Monday afternoon at 4.30 P.M.

I made the *post-mortem* examination 21 hours after death. Rigor mortis was well marked. The body was rather wasted and anæmic. There was general acute pleurisy, both lungs being covered with light, greyish-yellow, thin recent lymph. There was a small quantity of thin, slightly turbid serous fluid in both pleural cavities. There was no pneumonic consolidation of any part of either lung, and no evidence of any commencing pneumonia. The larynx, trachea, and bronchi appeared to be normal. There was no pericarditis. The heart weighed 51 grams. It was healthy. The arteries were normal. There was general acute peritonitis. The peritoneal blood vessels were congested. The coils of intestine were adhering to each other by means of pale greyish-yellow lymph. In the pelvis there was a little turbid serous fluid. There was no local lesion to account for the peritonitis. There was no ulceration of the stomach, duodenum, small or large intestine. The condition of the appendix vermiformis has already been mentioned. There was no suppuration of any of the abdominal viscera. The liver weighed 840 grams and the spleen 54 grams; they were both normal. The kidneys weighed 102 grams and were quite normal.

Cultures were taken from the blood in the right ventricle, from the spleen, pleural and peritoneal cavities, and pneumococci were found in pure culture in the first three, and staphylococci in the last. Mr. Pakes examined the cultures and coverglass preparations, and confirmed the opinion that the diplococci were pneumococci. Microscopical preparations from these sources also showed capsulated diplococci.

### Remarks.

Pneumococcus peritonitis may be classified in two ways:

1. Primary, when the peritoneum is the first structure to be involved.

2. Secondary, when the peritoneum is infected as a complication of some other pneumococcus lesion.

Or according to the distribution: (*a*) Local or encysted; (*b*) general or diffuse.

#### *Morbid Changes.*

In the general or diffuse form the abdomen is distended, partly from the presence of fluid in the peritoneal cavity and partly from tympanitic distension of the intestines. On opening the peritoneal cavity a fair amount of turbid, light greyish-yellow fluid may be found. If this is collected and allowed to stand, the upper portion becomes much clearer, and a thin pale, greyish-yellow deposit of pus cells and flakes of lymph falls to the bottom of the glass. Coverglass preparations of the pus stained with Maconochie's stain show the presence of capsulated diplococci. The intestines are, as a rule, distended with gas. The peritoneum, both visceral and parietal, is covered with pale yellow flakes of lymph and coils of intestine may be adhering to each other and to adjacent viscera. The lymph peels off with ease, leaving a slightly dull surface, and the peritoneal blood vessels are found to be congested, dilated, and distended with blood. In virulent infections there may be actual extravasations of blood.

In the local or encysted variety a similar condition of a portion only of the peritoneal cavity may be seen, and the parts most likely to be involved are the upper surface of the liver, the upper surface of the spleen, the pelvic cavity, and occasionally the right iliac fossa. In some cases the lymph is very thick and there is little fluid.

The fluid is quite different to what is found in a streptococcus peritonitis. In the latter condition it is thick yellow or green pus; on standing in a glass it remains thick and opaque throughout, whereas in the former it resembles diluted pus and separates into two layers, an upper, slightly opaque liquid and a thick, greyish-yellow, opaque deposit.

When the peritonitis is localised to the pelvis, an abscess containing this thin pus may form, become walled off from the rest of the peritoneal cavity, and open spontaneously into the vagina, bladder, rectum, or even at the umbilicus. As a rule, there is no obvious primary focus to be discovered in the abdomen to account for the peritonitis. In each of my cases pleurisy was found at the necropsy; it varied in degree and extent; in some cases it appeared to be secondary to the peritonitis, whereas in others it looked as if it was a part of a general infection, and had the appearance of having been affected at the same time as the peritoneum. In none of my cases was the pericardium affected, and in none of them was there any sign or evidence of pneumonia or broncho-pneumonia.

Pericarditis, endocarditis, meningitis, pneumonia, broncho-pneumonia may in some cases be associated with the peritonitis.

Pneumococcus peritonitis rarely occurs in adults. One of my cases was a man aged 45. Dieulafoy found only 2 cases in adults out of 17. Ménétrier and Legroux report 2 cases, one a man aged 32, and the other a man aged 35. Témine, in his thesis published in 1898, reports only 3 cases occurring in the adult.

Cassaet draws attention to the fact that in adults men are more liable to be affected than women. In children, on the contrary, girls are much more frequently attacked. Two of my cases were girls aged 4 and 5 respectively.

Quéhart, in his thesis, collected 33 cases, of which 27 were girls and 6 boys. Of these, 15 were between the ages 2 and 5; 12 were between the ages 5 and 10; 6 were between the ages 10 and 15.

Brun also draws attention to the fact that girls are more frequently affected than boys, and mentions 11 out of 14. Hagenbach-Burckhardt reports 2 cases, both of which were girls, aged 2 and 6 respectively. Audion also reports 2 cases, girls aged 3 and 2½ respectively.

There appears to be no very obvious reason why the peritoneum should be attacked by the pneumococcus. The disease usually begins suddenly in children who are apparently

quite well. In 2 of Quéhant's cases there was evidence of abdominal injury, 3 were secondary to pneumonia, and 1 to sore throat. In the remaining 25 it was apparently primary, there being no obvious cause or source of infection.

In 1 of Audion's cases the peritonitis followed double broncho-pneumonia and otitis. Broca has published 2 cases which followed attacks of appendicitis; Galliard, 1 case secondary to salpingitis; Guido Banti and Weichselbaum, cases associated with the presence of abdominal neoplasms.

No apparent cause was found in any of my cases; the first indications of the disease in all 3 were abdominal pain and vomiting. In Case III there was a history of the child having eaten a quantity of raw rhubarb, which may have started the gastro-intestinal symptoms. In a good many cases there is a history of a chill.

### THE SOURCE AND CHANNEL OF INFECTION.

Goldenberg, Weichselbaum, Wolf, and others have demonstrated the important fact that pneumococci can frequently be found in the mouths of perfectly healthy people. Bezançon and Griffon have also reported the result of their investigations on the throats of healthy persons. They used the serum of a young rabbit for their culture medium, and found by making bacteriological examinations of the secretion from the tonsils of forty healthy persons, under various conditions, that pneumococci were present in every case.

There are several possible channels of infection, namely:

1. The alimentary canal.
2. The uterine organs.
3. The blood vessels.
4. The lymphatics.
5. The skin.

I have already alluded to the fact that pneumococci are frequently found in the mouths and throats of healthy people, and therefore must be constantly swallowed with the saliva and food, thus getting into the alimentary canal as easily and probably as frequently as into the respiratory tract. A possible explanation of the fact that the peritoneum is so rarely affected by this organism is that the normal digestive fluids are inimical to the growth and development of the pneumococcus. If, however, there is severe gastro-intestinal disturbance caused by the ingestion of some unsuitable and indigestible food, which may have caused gastro-enteritis leading to severe vomiting and diarrhœa, there will be not only a general lowering of the resistance of the body but also a local lowering of resistance in the stomach and intestine and also an altered condition of the gastro-intestinal secretions. Such a series of changes might well predispose to the growth and development of the pneumococcus in the gastric and intestinal mucosa, and might also allow of the passage of the organisms by means of the blood vessels and lymphatics to the peritoneum itself, and in this way a peritonitis might be brought about. That the pneumococcus does actually attack the mucosa is proved by the case of pneumococcus enteritis published by Boulay.

The question may be asked why the pleura is so much more frequently affected than the peritoneum? The answer to this, I take it, is that by far the most frequent manifestation of a pneumococcus infection is pneumonia, and the close relation of the pleura to the lung is the explanation of it so frequently being involved.

#### 2. *The Uterine Organs.*

The very large proportion of girls to boys (Quéhant, 27 girls to 6 boys; Brun 11 girls, 3 boys; Hagenbach Burckhardt, 2 girls; Bryant, 2 girls; Fisher, 1 girl) affected by this form of peritonitis is very suggestive that the uterus and Fallopian tubes are the channels by means of which the pneumococcus gains access to the peritoneal cavity. It is not easy to explain, however, why it is that when adults are attacked they are nearly always men.

Boulay has noted the presence of the diplococcus pneumoniæ in the cavity, and in the walls of the uterus, an important observation which indicates that the micro-organism may easily reach the peritoneum through the Fallopian tubes or the lymphatics or blood vessels of the uterus.

Another point which favours the view that this is often the source and channel of infection is the fact that the pelvic peritoneum is much more extensively involved than the rest of the peritoneum, even when the peritonitis is diffuse and that when the peritonitis happens to be local or encysted the pelvic peritoneum is frequently the part which is affected.

It has been well established that peritonitis may result from gonococcus infections of the uterus and Fallopian tubes and in cases of tuberculous peritonitis, even in young children it is not unusual to find advanced tuberculous disease of the uterus and Fallopian tubes, and from their appearance it would seem that they were the first parts to be affected, and were the primary focus of the disease. Peritonitis also frequently follows septic conditions of the uterus, the result of parturition or abortion. These examples of primary disease of the uterine organs illustrate their importance as sources and channels of infection.

There were no obvious changes in the uterus and Fallopian tubes in my two cases, and, unfortunately, no bacteriological examinations were made, so that there is no conclusive evidence to show what part these organs played in the production of the peritonitis.

#### 3. *The Blood Vessels.*

There is no doubt that many cases die as a result of a general pneumococcus septicæmia, and then the question naturally arises in such cases whether there was a general blood infection from the first, with a primary peritoneal manifestation and subsequent morbid changes in the pleura, pericardium, and other structures; or whether, as a result of a general blood infection, all these structures were attacked at or about the same time.

Case I appears to have been an example of a general blood infection, and the symptoms point to the peritoneum as being attacked quite early in the disease, for the symptoms were:—A sudden onset, with vomiting, diarrhœa, and abdominal pain. On admission a pleuro-pericardial rub was heard, and it would appear from this, that the pleura most probably was involved at the same time, or at least very soon after the peritoneum. In Case II the clinical evidence points to primary infection of the peritoneum, with a secondary implication of the pleura, which may have been due to a general blood infection, or to a local infection through the lymphatics

Case III died from pneumococcus septicæmia, pneumococci having been demonstrated in the heart, blood, spleen, peritoneum, and pleura. The clinical and pathological evidence pointed to the peritoneum as the first structure to be involved, the pleura probably being soon after infected. Whether it was a general blood infection from the first, or whether the peritoneum was first infected and then the blood, there is no positive proof. I consider, however, that both the clinical and pathological evidence is in favour of a primary infection of the peritoneum, probably through the alimentary canal, with a subsequent general blood infection leading to general acute inflammation of the pleura.

#### 4. *The Lymphatics.*

Very frequently when making *post-mortem* examinations it is found that the upper surface of the liver is firmly attached to the under surface of the diaphragm by means of fine fibrous adhesions, and that the base of the right lung is also fixed to the upper surface of the diaphragm in a similar manner; on the left side the spleen and base of the left lung may be similarly attached to the diaphragm. In many of these cases a definite history of pneumonia or pleurisy may be traced, and I am of opinion that the majority are examples of cured local pneumococcus peritonitis, the primary lesion being pneumonia or pleurisy, and the peritonitis being caused by a secondary infection through the lymphatics.

With regard to the lymphatics as a channel of infection, a few months ago I made a *post-mortem* examination on a case of right pleuro-pneumonia, and found the right lung adherent to the adjacent part of the pericardial sac by means of recent lymph. There was commencing peritonitis, but only the outer two-thirds of the pericardium, covering the right ventricle, was involved; the most advanced changes were noticed on the outer part of the right ventricle, which was covered with small flakes of lymph; then internal to this came an area of pericardium, dull and granular in appearance; then a zone showing increased vascularity, and finally the pericardium covering the outer third of the right ventricle

and the whole of the left ventricle, was smooth and shiny, and appeared to be perfectly healthy.

I do not consider that in any of the three cases I have recorded the lymphatics were the primary channels of infection. In Case I the symptoms point to a general blood infection. In Case II the pleura without much doubt was infected at a subsequent date to the peritoneum, and it is possible that the pneumococci were conveyed through the lymphatics of the diaphragm, as the bases of the lungs were the parts most involved.

To sum up, then, it appears that when the peritoneum is infected through the lymphatics it is nearly always secondary to pneumonia or pleurisy, and the part of the peritoneum most involved is that covering the upper part of the liver and spleen. In some of the cases of local pelvic peritonitis also the organisms may be conveyed from the uterine cavity to the peritoneum, by the lymphatics, and not by the Fallopian tubes; in fact I consider that when the infection is carried by means of the lymphatics, the peritonitis is much more likely to be local than general.

5. *The Skin.*

The skin is another possible channel by means of which the pneumococcus can reach the peritoneum: but there have been no cases, as far as I know, published which point to this manner of infection. An umbilical fistula, abscess, or other lesion of this part of the abdominal wall, or old adhesions binding the intestines to the parietal peritoneum lining the anterior abdominal wall, might predispose to such a mode of infection.

Taking into consideration the symptoms, the physical signs, and the pathological changes found in my cases and in those reported by others, I am inclined to the view that in primary diffuse pneumococcus peritonitis, the pneumococcus reaches the peritoneum either through the alimentary canal, or uterine organs. I consider that undoubtedly some of the cases are manifestations of a general pneumococcus blood infection, and that others start as a peritonitis, and die from a subsequent pneumococcus septicæmia.


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## THE PATHOGENY OF EXOPHTHALMIC GOITRE.


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Among the most discussed of medical questions is that of the pathogeny of exophthalmic goitre. It seems, however, that thanks to work published during later years it is now possible to limit in some measure the field of hypothesis.

First, the old theories have been definitely abandoned. No pathologist now considers exophthalmic goitre to be simply a cardiac disease or a pure neurosis.

Secondly, the more recent theory of the functional overactivity of the thyroid gland, the so-called hyperthyroidation or "thyroidism" must also be abandoned. Since this hypothesis has become known, one has observed that injections of thyroid extract or "thyroid feeding" never produce the syndrome described by Graves and by Basedow. It would have been difficult, however, in case this view had been exact to support it by experimental phenomena. In fact, no one has succeeded in producing the malady even by giving thyroid extracts to animals during a long period. Brissaud has already affirmed this in 1895 in his communication on Le Corps Thyroide et la Maladie de Basedow at the Sixth Congress of the French Alienists and Neurologists in Bordeaux, and Brissaud said that "in the dog, the ingestion of the thyroid lobes in considerable quantity never brings out either tachycardia or exophthalmos or goitre."

As for the results which, in man, are produced by excessive thyroid medication, they have no connection whatever with Basedow's disease. At that Congress I myself showed that most of the symptoms of the exophthalmic goitre, if not all, could as well be explained by a diminution as by an exaggeration of the thyroid function. A little later Walter Edmunds wrote[1]: "The contrast between Graves's disease and myxœdema only holds good with chronic myxœdema. In the acute myxœdema as seen in dogs, and sometimes in monkeys, there are tremors, with attacks of dyspnœa resembling those of Graves's disease."

The only argument which could still be advanced in favour of the hyperthyroidation theory is that which has been drawn from the good effects of the thyroidectomy in exophthalmic goitre. The statistics of this treatment, which have been published at the Seventy-First Meeting of German Naturalists and Doctors,[2] show nearly 70 per cent. of ameliorations (Rehn, Reinbach, Rimmel). But Allen Starr, in statistics published in 1896 in the *Medical News*, states that upon 190 operations (partial thyroidectomy) there were 33 immediate deaths, and we must add to these disasters the simple failures, and the cases of temporary amelioration followed by recurrence. At last one must remember that one has several times obtained the cure of exophthalmic goitre not only by very different medical treatment, of which for the present I need not speak, but also by the excision of the cervical sympathetic nerve, or by the thyroid alimentation. The observations concerning this last method, very difficult to explain by the partisans of "hyperthyroidation," cannot be doubted.

Although I do not practise medicine, I had the occasion, some years ago, to apply this treatment in a severe case of exophthalmic goitre, and with some success; I have seen the goitre diminish, the tremors disappear, the heart beat more slowly, and strength partly return. So the therapy of the exophthalmic goitre is by no means simple. The old aphorism—*Naturam morborum attendent curationes*—does not apply to the surgical treatment of this disease, for it has no value unless it is absolute. And medication can have no pathogenic value without it succeeds in every case. The "hyperthyroidation" theory loses then its apparently most important proof.

Thirdly, with the "hyperthyroidation" theory another conception came to light, bringing with it a new treatment of exophthalmic goitre, based on what appeared to be the most certain data. This theory ascribed the cause of the disease to a permanent excitation of the cervical sympathetic. This idea, which had been suggested by Trousseau, was implicitly taken up by Jaboulay (of Lyons) to justify the method of treating exophthalmic goitre by section of the cervical sympathetic. It was supported very strongly by Abadie.[3]

It is true that by supposing a constant excitation of the vaso-dilators of the thyroid gland and of the head one may explain the dilatation of the arteries of the head and of the neck, the projections of the ocular globe, the swelling of the thyroid gland; on the other hand, the tachycardia and the dilatation of the pupil may result from the excitation of the cardiac accelerator fibres and from the irido-dilators, which have a common origin in the medulla, and which follow the same course as the vaso-dilator fibres of the head.

However, in this conception, neither the tremor nor the diarrhœa, nor the boulimia, nor the dyspnœic attacks, nor the polyuria, nor the epileptiform convulsions, nor the anæmia, nor the feebleness, nor the cachexia which are so often present are explained. However, I will not insist upon this point as I have a more important remark to make.

Upon what this permanent excitation of this part of the sympathetic system depends we are not told. This phenomenon needs in its turn an explanation. It may be explained that this theory, like all pathogenic theories called nervous, are not sufficient in themselves. A nervous lesion, a functional nervous disturbance, may well account for a number of disorders, but they must have themselves a cause which it is necessary to determine. This conception, sup-

posing it to be admitted without reserve, could only constitute one link in the chain of explanations.

Fourthly, about the same period that this theory was discovered our knowledge of the physiology of the thyroid apparatus underwent a process of evolution. Until 1891 the physiologists knew only of the thyroid gland proper. My researches, published at the end of that year and in 1892-93,[4] proved the important *rôle* of the glandules annexed to this gland, or parathyroid glandule.

This view was confirmed by several experimenters. A. Nicolas (Nancy)[5] and Kohn (Prague)[6] showed that the glandules are not two in number, as I had first believed, but four. The existence of these two pairs of glandules was demonstrated in animals of different kinds. It became then necessary to discover what would be the effects of the simultaneous extirpation of all the parathyroids. I had before found[7] that the extirpation of the external glandules caused no ill-effect, but it might have happened that the suppression of them and of the two internal glandules at the same time would have caused disorder. This experiment was first performed by Vassale and Generali.[8] The dogs and cats operated on showed the usual disturbances of thyroidectomy followed by a rapid death. Rouxeau (Nantes) and myself, independently, showed that the same fact could be observed in the rabbit;[9] I proved it also for the dog,[10] and Moussu[11] confirmed the results of the researches of Vassale. From these new facts several experimenters soon inferred that the gland and the glandules had absolutely distinct functions.

It is not perhaps without interest to observe how much this conclusion was premature. I have noticed two cases where the dogs survived after extirpation of all the glands, a single lobe of the thyroid being preserved. On the other hand, I have observed in two other animals, after the same operation, a slow development of disturbances which became grave after ablation of the remaining lobe of the thyroid, and then caused death. I have seen the same thing in the cat. Another dog, after parathyroidectomy, presented only nutritive disturbances, which caused a fatal issue a month later. In the rabbit I have seen on several occasions extirpation of the external glandules, extirpation of the thyroid gland having been previously made, followed merely by chronic nutritional disorder, resulting in death in about a month. Walter Edmunds has observed, also, two cases of survival (4 and 9) after parathyroidectomy in dogs.[12] He considers this operation, differing from Vassale and Generali, from Moussu and Lusena, as less grave than complete thyroidectomy—that is, ablation of the whole thyroid apparatus, gland and glandules; and such is also my opinion.

The view of an absolute distinction between these two parts of the same apparatus is therefore controverted by these experiments. Other facts, of a different kind, also contradict it. Thus Walter Edmunds has shown that suppression of the parathyroids causes histological changes in the thyroid gland. Vassale and Generali have themselves found that in dogs which died after parathyroidectomy the lymphatic vessels of the thyroid did not contain any colloid substances. G. Lusena,[13] verifying this observation, has found that in the cells of the thyroid of dogs dying from tetanus there were no longer colloid granules. This secretion is then strictly dependent on the presence of the parathyroid glandules, and the physiological function of the colloid secretion seems to be certain. Other experiments of the same author establish the fact that the parathyroid medication acts as well in remedying the disorder consecutive on thyroid extirpation as in those which follow extirpation of the parathyroids. I would recall that I have found[14] more iodine in the glandules than in the gland, both in the dog and in the rabbit, and that Lafayette-Mendel[15] has recently confirmed this interesting observation; and it is known that iodine is necessary to the action of the thyroid secretion. Lastly, Ver Eecke,[16] in experiments on the rabbit, has established the fact that metabolic changes of the same kind occur after total or partial thyroidectomy, even if reduced to ablation of the thyroid proper.

For all these reasons, it seems to me that the idea I have maintained since 1897[17]—that a true functional association may possibly exist between the thyroid and the parathyroids becomes more and more probable. Walter Edmunds has also concluded from his researches[18] that the two sorts of glands are not independent, since the extirpation of the thyroid lobes causes structural changes in the parathyroids, and since the extirpation of the parathyroids causes also alterations in the thyroid.

From the pathological results of these researches on the parathyroid glandules, it appears that two theories more or less directly arise in regard to the pathogeny of exophthalmic goitre:

First, the experiments of Vassale and those of Moussu point to the conclusion that the thyroid gland and the parathyroid glandules are different organs, the removal of the former causing trophic disturbances similar to those of myxœdema in man, and that of the latter causing convulsive disorders and death. D. A. Welsh[19] might also be taken to be amongst the holders of this theory. Moussu,[20] applying this idea to pathology, formulated the theory that exophthalmic goitre depended on parathyroid insufficiency. But how this author could conceive that the symptoms of Graves's disease resulted from the abolition or the diminution of the function of the parathyroids, when the effects of extirpation of the parathyroids were not identical with the symptoms of the disease, it is difficult to understand.

A little later Moussu tried to support this hypothesis from the results of the treatment of exophthalmic goitre by the administration of parathyroid substance; but there has been published only a single case in which an amelioration of the disease has followed on this treatment.[21] Easterbrook and Hutchison,[22] on the other hand, found that parathyroid feeding was useless in myxœdema; but for the establishment of such a theory as that of Moussu a certain number of cases are necessary. The result he obtained is susceptible of another explanation. It might be supposed that the introduction of parathyroid substance into an organism in which the functions of these organs were over-active or incomplete brought to the thyroid body itself, unquestionably altered as it is in Graves's disease, something in which it was deficient, and by which its normal function was re-established. In fact, Lusena,[23] who has recently studied the effects of parathyroidectomy, has declared that the administration of parathyroid substance as certainly exercises beneficial effect after the removal of the thyroids as after that of the parathyroids; and Walter Edmunds[24] has shown that after extirpation of the parathyroids the thyroid gland develops profound changes; while the observation of Easterbrook and Hutchison might be possibly explained on the supposition that parathyroid feeding did not produce any effect in many cases of myxœdema, because the thyroid gland was seriously diseased, and that therefore the substance administered did not find enough healthy tissue on which to act.

Secondly, it is necessary in order to obtain a new theory based on satisfactory grounds to have recourse to histo-physiological and chemical experimentation.

Among the histo-physiological evidences available are certain facts which have been so well observed by Walter Edmunds. This experimenter, on the one hand, found in the dog after extirpation of the parathyroids, if the animal survived several days, a hypertrophy of the thyroid gland, clearly due to development of the vessels and of embryonal tissue; he found, moreover, that the colloid substance disappeared from the vesicles. The latter observation has also been made by Vassale and by Lusena, as I have already remarked. On the other hand, Edmunds has observed in exophthalmic goitre an analogous change, the development in the thyroid gland of a tissue resembling the parathyroid. Renaut (of Lyons) has also noticed that in exophthalmic goitre the thyroid gland does not contain any colloid substance.[25] We know that the colloid secretion of the thyroid contains the active substance formed by that gland. It is clearly necessary, therefore to make a microscopic study of the parathyroid glandules in a certain number of cases of exophthalmic goitre.

It is a fact that the thyroid itself may be altered in this disease and Oswald (of Zurich) and I have found a diminution in the iodine of the gland. It is now well established and recently confirmed by E. de Cyon and Oswald[26] that the active substance of the thyroid secretion is an iodo-proteid. The fact of the diminution of this iodo-proteid in Graves's disease is of real interest. Oswald[27] has found, in one case, 0.0039 gram of iodine for 100 grams of the fresh gland; in another case I have found[28] 0.00201 gram per 100. The

average of these observations is 0.00295 gram, or in round numbers 0.03 gram of iodine in 100 grams of the normal resh gland. One may, therefore, say that there is about ten times less iodine in exophthalmic goître than in the normal gland. But further observations on this point are desirable.

If, then, the thyroid and parathyroids be considered as functionally associated, and that, for example, the proteo-iodide substance is not produced in the thyroid without the assistance of the parathyroids, it follows that if the latter are altered its formation is diminished.

By degrees, then, we come to this theory, that exophthalmic goître is due to an alteration in the thyroid apparatus involving in the first place the parathyroid, whose normal function is disturbed.

It is well known from the researches of Oliver and Schäfer[29] and also of Haskovee[30] (Prague) that cardiovascular effects follow the intravenous injection of normal thyroid extract. Haskovee in particular has proved that this extract produces a stimulant action on the sympathetic system, and also a direct depressant antitoxic action on the heart. In a recent research this author satisfied himself that in cases of exophthalmic goître the thyroid gland was diseased, and came to the conclusion that the mechanism by which the symptoms of the disease were produced was the entrance into the organism of toxic substances that had a selective action on the sympathetic system. It is justifiable to believe that these substances, like certain vegetable poisons, may act on a special part of the nervous system, as, for example, those portions of the cord transmitting the accelerator nerves of the heart, the vaso-dilators of the head and neck, and the dilators of the pupil. May we then believe that these toxic substances result from the lowered functional activity of the parathyroid glandules because of the inability of the secondarily diseased thyroid to neutralise them? It must be admitted that the facts at our disposal do not as yet permit us to answer this question. The exact nature of the functional disorders of the parathyroid and their relation to disorders of the sympathetic nervous system are yet to be ascertained.

This, at any rate, may be concluded from the critical study of the subject that I have made—that there has been considerable progress during late years in our knowledge of the pathogeny of exophthalmic goître.

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## THE PATHOLOGY OF EXOPHTHALMIC GOITRE.

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WHETHER the causation of Graves's disease is primarily in the nervous system or in the thyroid there can be no doubt that the abnormalities, wherever they may be, are of a chemical nature. The starting point of the changes which follow excision of the thyroid and parathyroids is in all probability the loss of the secretion of these organs, and as the symptoms are mainly in connection with the nervous system we must consider that the secretions have much to do with the nutrition of the central nervous system. This is, in fact, the conclusion at which Sir John Simon arrived from his observations, made now more than fifty years ago.

I have recently been making some experiments with a view of determining the nature of the changes in the central nervous system caused by total excision of the thyroid and parathyroids. The observations are not yet complete, but the announcement of Professor Gley's interesting communication has tempted me to make them the subject of a preliminary communication.

The experiments were made on dogs; altogether on eight. In four the thyroids and parathyroids were all excised at the first operation: in four the total excision was done in two stages with an interval between. In all the cases dealt with the usual well-known symptoms followed the complete (or completing) operation within a few days.

The cord and medulla, and in one case also a portion of the brain, were preserved in methylated spirit or formalin and methylated spirit. In order to have the advantage of Dr. Mott's experience and kind assistance, the material was with his permission taken to the pathological laboratory of Claybury Asylum, and the examination of it made there. The specimens were embedded in paraffin, cut and stained, mostly by Nissl's method, but sections were also stained by Heidenhain's method.

Examination of the specimens showed in all the experiments the same changes, varying in degree, but in the most marked specimens there were profound changes.

The Nissl "bodies" were no longer defined; the substance sometimes appeared as fine dust, and sometimes the chromophilous elements seemed fused together, and had in fact undergone "chromatolysis"; sometimes the substance in the cells, in specimens which had been properly prepared, took the stain too deeply. In some of the cells the chromophilous substance was absent, only the network within the cells being visible: in some of the cells there was considerable swelling of the nucleus; of some of the cells the processes were wanting, and in fact cells might be found in every stage of destruction.

These changes are very similar to those described by Dr. Mott in his Croonian Lectures last year as occurring in some forms of acute poisoning; in fact, it appears that athyroidea is a form of acute poisoning affecting the central nervous system. From the fact that the acute nervous symptoms can be produced by the excision of the parathyroids alone, and as a rule only myxœdema, or not even that, by the excision of the thyroid alone, it seems probable that the absence of the parathyroid secretion is in some way the cause of the acute symptoms, and, from the nature of the changes in the cells, it seems that it acts by its presence being necessary to the extraction from the blood and deposition in the cells of the Nissl bodies, which are supposed to be the food of the cells; Dr. Gley having shown us that there is a large amount of iodine in the parathyroids, it is natural to suppose that iodine plays an important part in these chemical reactions.

In Graves's disease the colloid of the enlarged thyroid resembles that of the "compensating" hypertrophy of the thyroid of experiments in not staining so deeply as does normal colloid; it has, in fact, undergone a chemical change. As to the pathology of Graves's disease, its symptoms so much more resemble the nervous symptoms following excision of the parathyroids than myxœdema, which we know to be due to defect of the thyroid proper, that it suggests itself that Graves's disease is due to partial aparathyroidea, and it would be desirable that those who may have the opportunity of making necropsies in cases of Graves's disease should especially examine the parathyroids.

## A NEW CENTRIFUGE FOR BACTERIOLOGICAL WORK.

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AT the Aberdeen Congress of the Royal Institute of Public Health (August, 1900), I described a new model centrifugal machine specially adapted for use in the bacteriological examination of milk, and I then stated that my experiments

in this direction led me to believe that, in order to obtain reliable results, the preliminary concentration of the bacteriological flora of a "mixed" milk must be performed in a machine which conforms to certain requirements. These requirements may be stated as follows:

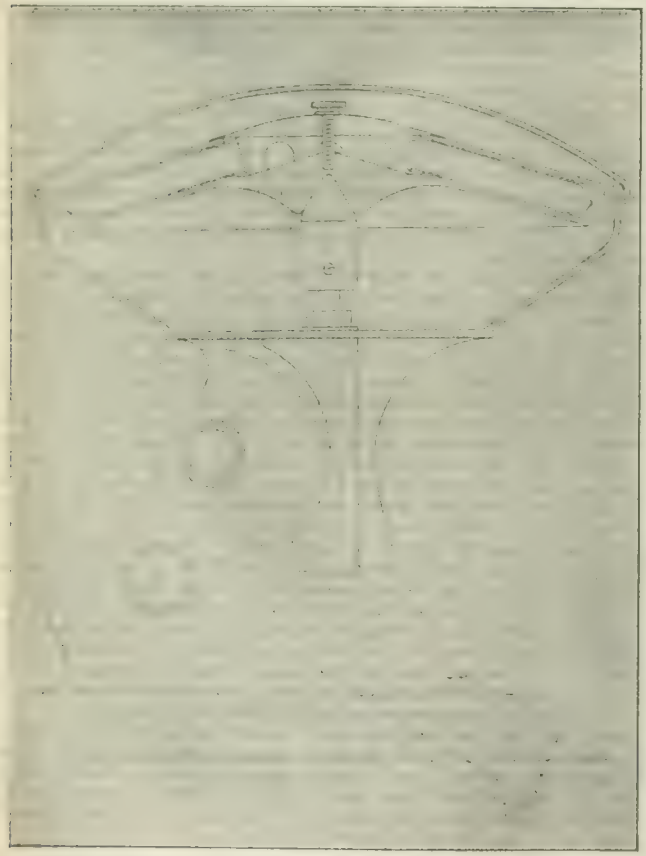
1. The centrifugal machine must be of such size, or should carry tubes of such capacity, as to enable from 250 to 500 c.cm. of milk to be manipulated at one time.

2. The rate of centrifugalisation should be from 2,500 to to 3,000 revolutions per minute.

3. In the case of hand-driven machines the gearing should be so arranged that the requisite speed is obtained by 40 or 50 revolutions of the crank handle per minute, so that it may be maintained for periods of twenty to thirty minutes.

4. The handle should be provided with a special clutch, similar to that utilised for the free-wheel of a bicycle, or should be readily detachable, so that, on ceasing to turn, the handle should not, by its weight and air resistance, act as a brake and stop the machine.

5. The portion of the machine destined to carry the tubes should be a metal disc, of sufficient weight to ensure good "flank" movement, continuing over a considerable period of time. In other words, having ceased to turn the handle, the machine should run down very gradually and slowly, thus obviating any disturbance of the relative positions of particulate matter in the solution that is being centrifugalised.



At the above-mentioned meeting I showed the designs of a machine that was being built to embody those several points. The centrifuge was duly built and delivered, when it was found that the discs had been made too small, and consequently the tubes with which it was supplied were unable to carry a sufficiently large volume of milk, and further, the physical exertion required to work the machine was so great that no one who tried the machine was able to even get up the requisite speed, much less continue it for the necessary time. This instrument I designate Model No. 1. Model No. 1 having proved a failure, Model No. 2 was at once started, and in the planning of this I have been fortunate enough to secure the skilled co-operation and advice of my friend Professor Sharp, with the result that this second model fulfils all the requirements and is quite easy to manipulate. On account of difficulties of transport I have been unable to show the machine itself at this meeting, but I think I can point out its chief features by the aid of the design shown here, which is drawn to full size. The machine may be said to consist of three portions—the motion, the bearing spindle, and the disc. The motion is enclosed in a metal box, which is filled up with oil, so that the gearing wheels are running in a regular oil bath. It consists of one pair of spur wheels and a pair of screw wheels, which transmit movement to the upright spindle through a smaller wheel, and the gearing is so arranged that one revolution of the driving wheel—corresponding, of course, to one revolution of the handle—is equivalent, in round numbers, to fifty revolutions of the bearing spindle, so that 40 turns of the handle per minute give a speed of about 2,000 revolutions of the disc in the same time, and the labour involved in producing this speed is well within the powers of the ordinary laboratory boy.

The handle is attached to the spindle of the driving wheel by means of a short screw with a quick thread, so that, on ceasing to turn the handle and holding it steady, two or three revolutions of the driving spindle completely unship the handle and leave it free in the hand.

The upright spindle is surmounted by a gun-metal cup containing a cone-shaped block of vulcanised rubber, renewable at will, upon which in turn rests the metal disc, carrying the centrifugal tubes. This disc is of cast steel, 14 inches in diameter, and weighing 50 lbs., drilled to carry twelve stout glass tubes, 6½ by 1⅛ inches each, holding rather over 50 c.cm. of milk. The disc, it will be noticed, is not *fastened* to the bearing spindle, it merely has a conical cup in the centre of its under surface, which receives the rubber cone that forms the head of the spindle, the friction clutch being quite sufficient to transmit the speed to the disc without the least diminution. This rubber head, on account of the amount of play it allows, serves a very important function, in that it renders the machine practically self-centring and automatic in its balancing. For instance, if only two tubes full of milk are placed in the machine, even in two contiguous holes, the machine can be run as rapidly and as smoothly as when the disc is either empty or completely filled with tubes.

The central aperture in the disc, through which the tubes are introduced, is closed by a copper cap, which screws into the body of the disc, and the disc itself is enclosed in a copper basin, with a loose cover, both these details being introduced in order to lessen the air resistance the machine has to overcome.

## ON THE URINE IN TUBERCULOUS INFECTION.

*(A Preliminary Communication.)*

BY

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THE communication which we have now to make deals with a portion only of an investigation into the condition of the urine in tuberculous infection on which we are at present engaged. Specimens of urine have been examined from 25 cases of more or less chronic, tuberculous, pulmonary phthisis; in each of which cases bacilli resembling B. tuberculosis, both morphologically and in their staining characteristics, were found in the sputum; the diagnosis being confirmed in some of the cases by guinea-pig inoculation with the sputum. The cases examined were cases which had been admitted into the Middlesex Hospital for treatment, and were consequently all in a fairly advanced stage of the disease; a short note of the clinical condition of the cases in which animal inoculation with the urine was carried out will be given further on.

With two exceptions, all the cases examined were males; the reason for excluding females was partly in order to eliminate any fallacies which might arise from the presence in the urine of traces of proteid matter from the vaginal secretion, and partly in order to minimise the chance of error in the microscopic examination from the presence of so-called smegma bacilli, some of which are alcohol-fast as well as acid-fast, and are more commonly found in the urine of the female than in that of the male. In six cases only a chemical and microscopical examination of the urine was made, in the other 19 cases the urine was tested by animal inoculation as well. All the cases were selected as being free from any evident tuberculosis of the urinary tract, and of the 11 cases that died, only one (Case XIX) showed *post-mortem* evidence of tuberculosis of the kidney. The cases may be grouped as follows:—

1. *Cases in which the Urine was tested by Animal Inoculation (Cases* I *to* XIX):

(*a*) Cases dying and examined *post mortem*; no tuberculosis of urinary tract:

(1) Positive result on inoculation, 6 cases (I to VI).

(2) Negative result on inoculation, 2 cases (VII and VIII).

(*b*) Cases leaving hospital alive:

(1) Positive result on inoculation, 3 cases (IX, X, and XI).

(2) Negative result on inoculation, 7 cases (XII to XVIII).

(*c*) Case dying: tuberculosis of kidney found *post mortem* (Case XIX).

2. *Cases in which only a Chemical and Microscopic Examination of the Urine was made (Cases* XX *to* XXV).—Of these 6 cases, 2 died and 4 left hospital alive. No tuberculosis of the urinary tract was found in either of the 2 fatal cases, and the chemical examination of the urine was negative in all 6, so far as the presence of albumen or the occurrence of a diazo-action was concerned.

*Chemical Examination.*—As a rule, samples of the daily excretion were examined from each case on four alternate days, the total amount for the twenty-four hours being collected as near as possible.

*Albuminuria.*—Sixteen out of the 25 cases, when examined on various occasions, never showed any trace of proteid coagulable by picric acid; 8 cases (I, II, IV, VI, VIII, IX, XI, and XIX) showed at one time or another what we described as a "faint haze" or a "slight cloudiness" on treatment with picric acid, the cloudiness not clearing up on heating; and in 1 case only (Case V) was there what could be described as a distinct "precipitate" of albumen on the addition of the reagent. In this last case, examination of the urine, both chemical and by inoculation, was made in March and again in the following June; in the former month the urine was free from albumen and the animal inoculations gave a negative result; in June albumen was found in the urine, and the inoculations gave a positive result. Excluding Case XIX, in which there was tuberculosis of the kidney, it will be noticed that of 9 cases in which the urine contained B. tuberculosis, and in 6 of which a *post-mortem* examination showed that there was no tuberculosis of the kidney, traces of albumen were found in 7. And of 9 cases in which animal inoculation showed the absence of B. tuberculosis from the urine, albumen was found in only 1 (Case VIII). In the 8 cases in which a mere cloudiness was obtained on the addition of picric acid, the albuminuria was constant in only one, in the others it was intermittent, being obtained in one day's excretion and not in another.

*Urea.*—The amount of urea excreted daily was not estimated accurately in every case, because of difficulties in ensuring that absolutely the whole of the twenty-four hours' excretion had been kept for examination in many of the cases. In 8 cases, however, we were able to get the entire daily excretion on three or more occasions; and the amount of the average daily excretion in these cases was respectively 46 grams, 35 grams, 26 grams, 28 grams, 19.8 grams, 14.8 grams, 14.3 grams, and 9 grams. There was thus a wide range of difference in the amount of urea excreted daily in this series, and at present we are unable to correlate variations in this respect with any differences in the clinical condition of the cases.

*Diazo-Reaction.*—Various samples from each case were tested for a diazo-reaction by Ehrlich's method. A definite diazo-reaction was obtained in 5 out of 11 cases which died whilst still under observation, and in 2 out of 14 which left the hospital alive. In testing for the diazo-reaction, as in testing for albumen, the results were inconstant. In not one of the 7 cases was the reaction obtained on every occasion when the urine was tested. The reaction was obtained in 4 cases out of 10 in which inoculation experiments or microscopic examination proved the presence of B. tuberculosis in the urine, and in 3 out of 9 cases in which inoculation experiments gave negative results. Speaking generally, the reaction was more frequently obtained with cases which were nearing a fatal termination; and our results in this respect confirm what has been stated by Penzold, Petri, and others as to the occurrence of this reaction being an indication of an actively progressing stage of tuberculosis.

*General Microscopic Examination.*—The general microscopic examination of the sediment of the urine, obtained in the way next to be described, failed in every one of the 25 cases to show any histological evidence of nephritis or other lesion of the urinary tract.

*Bacteriological Examination.*—With only one or two exceptions, in which fewer samples were examined, a careful microscopical examination was made of 6 samples of the daily secretion from each case; 150 c.cm. from an average twenty-four hours' excretion were centrifugalised for twenty minutes in a Runne's machine, driven by a ⅛th horse-power electric motor, and running at a rate of 2,000 revolutions a minute. Coverglass preparations of the sediment thus obtained were stained for fifteen minutes in warm carbol fuchsin, then decolorised in 33 per cent. nitric acid in water, washed in water, and counterstained for ten minutes in a saturated solution of methylene blue in absolute alcohol. Six coverglass specimens were prepared from each sample, that is to say, 36 from each of the majority of the 25 cases. And in the result B. tuberculosis was identified in one case only, and that the one (XIX), in which the *post-mortem* examination showed the presence of tuberculous nodules in the kidney. Animal inoculations were carried out with urine from 19 of the cases, one, two, three, or more samples from each case being tested in this way, and two guinea-pigs being inoculated from each sample. The inoculations were carried out as follows: One hundred and fifty c.cm. of the twenty-four hours excretion were centrifugalised as already described, and 5 c.cm., containing any sediment present, were pipetted off from the bottom of the tube. Of these 5 c.cm., 2 c.cm. were injected into the popliteal space of each of two guinea-pigs.

*Details of Cases Examined by Guinea-Pig Inoculation.*—We may now give a brief extract of the clinical and other details of the cases tested, together with the results of the guinea-pig inoculations. It will scarcely be necessary to say that the presence of B. tuberculosis in the lesions of any animal apparently infected was always verified.

1. *Cases in which a Post-mortem Examination was obtained.*

(*a*) Guinea-pig inoculation followed by tuberculous infection:

CASE I.—C. B., female, aged 50 years; admitted September 20th, died October 14th.

*Clinical Condition on Admission.*—Duration of disease, eight to nine months; wasting for about seven months; severe cough; profuse expectoration; persistent vomiting; temperature ranges from normal to 100° F.

*Necropsy.*—Small cavities in both apices; grey miliary tubercles scattered throughout both lungs; liver fatty and cirrhotic; no evidence of tuberculosis of urinary tract.

*Animal Inoculations.*—Guinea-pigs 3 and 4 inoculated from urine of October 8th, and guinea-pigs 7 and 8 from urine of October 11th. Guinea-pig 4 died fifty-two days after inoculation, and guinea-pig 3 was killed sixty days after inoculation; both showed an infection of the popliteal, inguinal, and abdominal glands, with nodules in the spleen. Guinea-pigs 7 and 8 died twenty and nine days respectively after inoculation, and showed no obvious signs of infection.

CASE II.—J. R., male, aged 38 years; admitted September 20th, died October 20th.

*Clinical Condition on Admission.*—Hæmoptysis and night sweating; temperature ranges between normal and 103° F. Physical signs of excavation at both apices.

*Necropsy.*—Both lungs showed extensive excavation; upper lobes generally adherent to parietal pleura; no evidence of tuberculosis of the urinary tract.

*Animal Inoculations.*—Guinea-pigs 9 and 10 inoculated from urine of October 11th. Guinea-pig 9 killed sixty-three days after inoculation, and showed tuberculous infection of popliteal and other glands, together with tuberculous nodules in the spleen and liver. Guinea-pig 10 died twenty days after inoculation, and showed no signs of infection.

CASE III.—R. C., male, aged 32 years; admitted October 26th, died October 31st.

*Clinical Condition on Admission.*—Cough and night sweating for three months; wasting; temperature ranges from normal to 102° F. Died after an attack of hæmoptysis.

*Necropsy.*—Tuberculosis of both lungs; cavity at right apex, with pulmonary aneurysm.

*Animal Inoculations.*—Guinea-pigs 15 and 16 inoculated from urine of October 31st: both killed eighty-three days after inoculation. Guinea-pig 15 showed no evidence of infection. Guinea-pig 16 showed infection of popliteal and lumbar glands, with nodules in spleen and liver.

CASE IV.—T. J. R., male, aged 50 years. Admitted March 20th, died May 20th.

*Clinical Condition on Admission.*—Temperature subnormal; physical signs of cavity at left apex and dulness at right base in front and behind.

*Necropsy.*—Recent general tuberculosis of both lungs; several small cavities in left upper lobe; no tuberculosis of urinary tract.

*Animal Inoculations.*—Guinea-pigs 30 and 31 inoculated from urine of March 25th, guinea-pigs 34 and 35 from that of April 1st. Guinea-pigs 30, 31, and 34 died respectively fourteen, twenty-two, and seven days after inoculation, and showed no signs of infection; guinea-pig 35 was killed fifty-eight days after inoculation, and showed an infection of the popliteal, inguinal, and aortic glands, with a single tuberculous nodule in the spleen.

CASE V.—P. F., male, aged 23 years; admitted March 9th, died July 1st.

*Clinical Condition on Admission.*—Duration of illness about eighteen months. Some cough; occasional hæmoptysis; wasting. Temperature ranges between normal and 102° F.

*Necropsy.*—Both lungs honeycombed with small cavities; large cavity at left apex; grey miliary tubercles scattered through both lungs; no tuberculosis of urinary tract.

*Animal Inoculations.*—Guinea-pigs 25 and 26 inoculated from urine of March 26th; guinea-pigs 27 and 28 from that of March 25th; guinea-pigs 58 and 59 from that of June 12th; and guinea-pigs 60 and 61 from that of June 18th. Guinea-pigs 25, 26, 27, 28, and 61 died respectively twenty-eight, eighteen, thirteen, eighteen, and eight days after inoculation, and none of these showed any signs of tuberculous infection. Guinea-pigs 58 and 59 were killed forty-one days after inoculation, and the former showed a tuberculous infection of the popliteal, inguinal, and lumbar glands, whilst the latter showed a tuberculous infection of the same glands, and numerous tuberculous nodules in the spleen as well. Guinea-pig 60 was killed thirty-four days after inoculation, and showed tuberculous infection of the inguinal and lumbar glands only.

CASE VI.—A. K., male, aged 55 years, admitted April 20th, died June 13th.

*Clinical Condition on Admission.*—History of cough and excessive expectoration for last weeks; temperature ranges between 97° F. and 102° F.

*Necropsy.*—Old vomicæ with recent excavation at both apices; ulceration of trachea; ulceration of small intestine; no tuberculosis of urinary tract.

*Animal Inoculations.*—Guinea-pigs 44 and 45 inoculated from urine of May 14th. Guinea-pig 45 died eight days after inoculation, and guinea-pig 44 was killed at fifty days after inoculation. The latter showed an infection of the popliteal, inguinal, and lumbar glands, and caseous tuberculous nodules in the spleen.

*Guinea-pig inoculation negative.*

CASE VII.—H. R., male, aged 31 years; admitted April 9th; died April 19th.

*Clinical Condition on Admission.*—History of cough for ten months; night sweating; occasional hæmoptysis; temperature 98° F. to 103° F. Physical signs of cavity at right apex.

*Necropsy.*—Numerous cavities in right upper lobe, a few in right lowest lobe, left lung less severely infected than right, no tuberculosis of urinary tract.

*Animal Inoculations.*—Guinea-pigs 36 and 37 inoculated from urine of April 14th. Guinea-pig 36 died seven days after inoculation, and guinea-pig 37 was killed 47 days after inoculation; both were free from any sign of tuberculous infection.

CASE VIII.—H. H., male, aged 50 years; admitted June 13th; died June 29th.

*Clinical Condition on Admission.*—Cough and profuse expectoration for last three months; has suffered from dyspnœa lately.

*Necropsy.*—Recent and old cavities throughout right lung; some caseating nodules in middle lobe; old cavities in left lung; no tuberculosis of urinary tract.

*Animal Inoculations.*—Guinea-pigs 62 and 63 inoculated from urine of June 15th, and guinea-pigs 64 and 65 from that of June 24th. The two former were killed thirty-five days, and the two latter thirty-two days after inoculation, all were free from any sign of tuberculous infection.

## 2. *Cases Discharged from Hospital Alive.*

### (*a*) Guinea-pig inoculation followed by tuberculous infection.

CASE IX.—W. C., male, aged 42 years; admitted September 2nd, discharged October 29th.

*Clinical Condition on Admission.*—History of cough for two years; some hæmoptysis; wasting. Temperature subnormal. Signs of cavity at right apex, bronchophony, pectoriloquy, and *râles*.

*Animal Inoculations.*—Guinea-pigs 13 and 14 inoculated from urine of October 3rd. Guinea-pig 13 died twenty-three days, and guinea-pig 14 thirty-two days after inoculation; the former showed infection of the popliteal and lumbar glands, the latter of the lumbar glands only.

CASE X.—W. S., male, aged 17 years, admitted April 9th, discharged April 22nd.

*Clinical Condition on Admission.*—History of cough for eighteen months; night sweating. Temperature ranges between 97° F. and 103° F. Whispering pectoriloquy and cavernous breathing at left apex.

*Animal Inoculations.*—Guinea-pigs 38 and 39 inoculated from urine of April 16th, and guinea-pigs 42 and 43 from that of April 19th. Guinea-pigs 38 and 39 were killed fifty-six days, and guinea-pigs 42 and 43 were killed fifty days after inoculation. Guinea-pig 38 showed no sign of tuberculous infection; guinea-pigs 39, 42, and 43 all showed similar tuberculous lesions, infection of the popliteal, inguinal, and abdominal glands, and tuberculous nodules in the spleen.

CASE XI.—J. O'S., male, aged 25 years; admitted May 16th, discharged May 25th.

*Clinical Condition on Admission.*—History of cough for two years, night sweating. Temperature ranges between 97° and 99° F. Breath sounds weak; crackling *râles* at both apices.

*Animal Inoculations.*—Guinea-pigs 46 and 47 inoculated from urine of May 24th; both were killed thirty-five days after inoculation. Guinea-pig 46 had a tuberculous abscess in the popliteal space, infected inguinal and abdominal glands, and numerous tuberculous nodules in the spleen. Guinea-pig 47 showed infected inguinal and abdominal glands, and tuberculous nodules in the spleen.

### (*b*) Guinea-pig inoculations negative:

CASE XII.—E. C., female, aged 58 years; admitted September 4th, discharged November 5th.

*Clinical Condition on Admission.*—Chronic "winter cough," night sweating, thrombosis of external saphenous vein. Temperature ranges between 98.6° and 100.5°. Signs of cavity at right apex, cavernous breathing, pectoriloquy, bronchophony, and moist *râles*.

*Animal Inoculations.*—Guinea-pigs 1 and 2 inoculated from urine of October 8th, guinea-pigs 5 and 6 from that of October 11th, and guinea-pigs 11 and 12 from that of October 23rd. Guinea-pigs 1, 2, 5, and 11 died thirty-three, fourteen, twenty, and thirty-two days respectively after inoculation; guinea-pigs 6 and 12 were killed sixty-three and fifty-one days after inoculation. All were free from any sign of tuberculous infection.

CASE XIII.—J. L., male, aged 37, admitted August 24th, discharged December 6th.

*Clinical Condition on Admission.*—History of cough and hæmoptysis for last five years; temperature ranges between normal and 100°. Signs of consolidation and excavation at both apices, moist *râles*.

*Animal Inoculations.*—Guinea-pigs 17 and 18 inoculated from urine of November 1st, and guinea-pigs 19 and 20 from that of November 16th. Guinea-pig 17 died twenty-six days after inoculation, and the other three were killed sixty-two, thirty-eight, and fifty-seven days respectively after inoculation; all were free from any sign of tuberculous infection.

CASE XIV.—C. S., male, aged 25 years; admitted January 31st, discharged March 27th.

*Clinical Condition on Admission.*—Wasting, cough, night sweating, and occasional vomiting. Temperature ranges between normal and 103° F. Whispering pectoriloquy and *râles* at right apex.

*Animal Inoculations.*—Guinea-pigs 21 and 22 inoculated from urine of February 19th. Both killed sixty-eight days after inoculation, and found to be free from any sign of tuberculous infection.

CASE XV.—H. F., male, aged 56 years; admitted February 1st, discharged March 8th.

*Clinical Condition on Admission.*—Some slight wasting; history of cough for last ten years; occasional hæmoptysis. Temperature normal. Whispering pectoriloquy, cavernous breathing, and *râles* at both apices.

*Animal Inoculations.*—Guinea-pigs 23 and 24 inoculated from urine of February 20th. Guinea-pig 23 was killed sixty-seven days after inoculation, and guinea-pig 24 died seven days after inoculation; both were free from any sign of tuberculous infection.

CASE XVI.—T. C., male, aged 42 years; admitted March 20th, discharged May 20th.

*Clinical Condition on Admission.*—History of cough and night sweating during last few months; hæmoptysis on one occasion. Temperature ranges between 98° and 101° F. Whispering pectoriloquy, bronchophony, and *râles* at left apex.

*Animal Inoculations.*—Guinea-pigs 40 and 41 inoculated from urine of April 10th. Both were killed fifty-two days after inoculation, and both were free from any sign of tuberculous infection.

CASE XVII.—W. M., male, aged 43 years; admitted May 30th, still under observation (August 1st).

*Clinical Condition on Admission.*—History of cough for about three months; some loss of weight; dyspnœa. Weak breath sounds, diminished vocal fremitus, and whispering pectoriloquy at right apex.

*Animal Inoculations.*—Guinea-pigs 48 and 49 inoculated from urine of June 4th; guinea-pigs 52 and 53 from that of June 7th; and guinea-pigs 56 and 57 from that of June 12th. Guinea-pig 53 died twenty-eight days after inoculation, guinea-pigs 48, 49, and 52 were killed thirty-five days after inoculation, and guinea-pigs 56 and 57 were killed forty-one days after inoculation; all were free from any sign of tuberculous infection.

CASE XVIII.—E. O'C., male, aged 18 years; admitted June 1st, discharged June 11th.

*Clinical Condition on Admission.*—History of cough for two or three years; two attacks of hæmoptysis; temperature subnormal; breath sounds at right apex have a suggestion of a cavernous character; crackling *râles* at both apices.

*Animal Inoculations.*—Guinea-pigs 50 and 51 inoculated from urine of June 4th, and guinea-pigs 54 and 55 from that of June 7th. Guinea-pigs 50 and 51 were killed thirty-four days, and guinea-pigs 54 and 55 thirty-five days after inoculation; all were free from any sign of tuberculous infection.

With reference to these animal experiments we may just mention that guinea-pigs 48, 49, 50, 51, and 52 all presented a number of whitish nodules in the spleen when examined *post mortem*. These tubercles were readily distinguished from the lesions of a tuberculosis caused by Koch's bacillus by the absence of a chain of infected glands leading from the site of inoculation, the popliteal space; no nodules or sign of infection being found anywhere except in the spleen. Moreover, B. tuberculosis could not be found in any of the nodules examined; but they contained a large number of bacilli which did not stain by Gram's method, and which resembled bacillus coli communis in point of size. A similar condition

was found among some stock guinea-pigs dying at about the same time, and there was no reason to believe that the lesions had any connection with the injection of the urines.

The results of these inoculation experiments may be summarised as follows:—Of 18 patients suffering from more or less chronic, tuberculous, pulmonary phthisis, the urine contained B. tuberculosis in 9. In 6 of these 9 cases the absence of tuberculosis of the urinary tract was proved by *post-mortem* examination, and there was no reason to suspect that the condition existed in any of the other 3. So far, therefore, as we can generalise from a series of only 18 cases, we can say that the urine of 50 per cent. of fairly advanced cases of tuberculous pulmonary phthisis contains B. tuberculosis, such organisms being in a virulent condition for the guinea-pig.

It was obvious that the specific bacillus was present in the urine in very small numbers in the majority of the cases. In experimental tuberculosis induced by inoculation, such as we practised in these cases, the rapidity of the progress of infection has a very definite relation to the initial dose of bacilli injected; and in nearly all our guinea-pigs the course of infection showed that the original dose of bacilli was a small one. This was further shown by the fact that in some of the experiments, as in the cases of guinea-pigs 15 and 16 inoculated from Case 11, and guinea-pigs 38 and 39 inoculated from Case x, although each of the pair of animals received two-fifths of the bacterial residue of 150 c.cm. of the urine, yet only one animal of each pair became infected. As there is probably never a natural immunity against tuberculous infection in the guinea-pig, it is possible that in each of these two 150 c.cm. samples of urine there was only a single clump of bacilli, or even only a single bacillus.

Further, as we have already stated, six coverglass specimens from each sample were stained and examined. And in all our cases the microscopic examination was conducted with what we would venture to describe as perhaps unusual care. Yet in each of 9 cases in which guinea-pig inoculation proved the presence of B. tuberculosis in the urine, we failed uniformly, on repeated examination, to demonstrate the specific bacillus by the ordinary microscopic method.

We may now give the details of the one case in which tuberculosis of the kidney was found *post mortem*, and in which B. tuberculosis was found in the urine on microscopic examination.

Case xix.—J. D., male, aged 34. Admitted March 15th, died April 24th.

*Clinical Condition on Admission.*—History of cough for four months; profuse expectoration; considerable wasting. Temperature ranges between 99° F. and 101° F.

*Necropsy.*—Disseminated, grey, miliary tubercles in both lungs; in the cortical portion of each kidney there were three small nodules, not much larger than pin heads, in which B. tuberculosis was present.

*Chemical Examination of the Urine.*—Six coverglass specimens of the urine of April 11th were stained and examined for B. tuberculosis, the sediment from 150 c.cm. of the urine being taken. A few—three, four, or more—bacilli were found in each coverglass.

*Chemical Examination.*—On the addition of picric acid a faint cloudiness, not disappearing on heating; diazo-reaction obtained.

*Animal Inoculations.*—The guinea-pigs inoculated from this case died prematurely from causes other than tuberculosis; guinea-pig 29 was inoculated from the urine of March 25th, and guinea-pigs 32 and 33 from that of April 1st. The animals died respectively five, eight, and sixteen days after inoculation, and no evidence of tuberculous infection was obtained in this way.

The fact that out of 7 cases which were examined *post mortem*, and in which the urine during life contained tubercle bacilli, only 1 showed any evidence of infection of the kidney, raises several questions of importance in conection with the method of elimination of such bacteria from the blood by this organ. Our facts show that a general blood infection, as evidenced by the presence of bacilli in the urine, is more common in cases of tuberculous pulmonary phthisis than is commonly supposed. The evidence further shows that when B. tuberculosis invades the blood in cases of pulmonary tuberculosis, it does so usually in extremely small numbers, and that there can be but little tendency for it to multiply there, but that any occasional bacilli that may get into the blood stream are eliminated by the kidneys; these glands showing only a slight tendency to become infected in the process.

It seems probable that in cases of pulmonary tuberculosis the patient in many cases is gradually undergoing a process of auto-immunisation, and that after a time the tissues generally are less susceptible to infection than they were when the primary pulmonary infection occurred; and it is only on this assumption that we can explain the fact that, considering the frequency with which the specific bacilli apparently obtain access to the circulating blood, dissemination of the tuberculosis is comparatively uncommon in chronic, tuberculous, pulmonary phthisis in adults.

*The Value of Guinea-Pig Inoculation in the Diagnosis of Tuberculosis of the Kidney.*

Our inoculation experiments do not throw much light on this question, for the reason that practically all the cases examined were in such an advanced stage of phthisis that probably no surgical operation on the kidney would have been contemplated under any conditions. And we are at present without any information as to the occurrence of the specific bacilli in the urine in cases at a less far advanced stage in which exploratory or other operation on the kidney might be advisable, but before the performance of which it would be necessary to exclude tuberculous disease of the organ. This is a matter of practical importance in view of the frequency with which guinea pig inoculation is now relied upon in the differential diagnosis of surgical disease of the kidney, and in view, on the other hand, of what we know as to the frequency of occurrence of chronic pulmonary tuberculosis in adults, often in such a form that it does not attract attention during life, and is only recognised after death by the traces which it has left in healing. We hope, however, in the continuation of our investigations to be able to include some observation on the urine of early tuberculosis.

*Toxicity of the Urine in Pulmonary Phthisis.*

In a number of the cases in which 2 c.cm. of the urine were injected into healthy experimental guinea-pigs, careful observations were made to ascertain whether such urine showed any difference, as regards immediate toxicity, from the urine of healthy individuals. We were, however, unable to detect any difference between animals inoculated with tuberculous urine and control guinea-pigs inoculated from healthy urine.

*Specific Toxicity of Urine from Tuberculous Cases for Animals Artificially Infected with Tuberculosis.*

We have also carried out some experiments in order to ascertain whether the urine from cases of tuberculosis, on being injected into guinea-pigs in various stages of tuberculous infection, would cause any specific temperature reaction which might be of assistance in diagnosis. Our experiments on this point are not yet concluded; but, so far as they go, they do not indicate that any reaction of this sort is sufficiently constant or well marked to prove of any diagnostic value.

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## FOCAL NECROSIS OF THE LIVER.

By C. J. N. Longridge, M.D.,
London.

The anatomical position of the liver, situated as it is between the vascular system of the alimentary canal and the general circulation, is one of great significance. The potentiality of this arrangement is more obvious now that a definite antitoxic function is being added to the already complex functions of this the largest gland in the body. To illustrate this principle, some experiments by Heeger may be quoted. These experiments were afterwards repeated and confirmed by Roger at Bouchard's request. Various alkaloidal bodies, such as morphine, strychnine, and nicotine, were injected into the portal veins of animals, and were found to be only half as toxic as when injected into the jugular vein. That is to say, if $x$ be the quantity of a given poison, which when injected into the portal vein is just sufficient to kill an animal of given weight, then the amount of the same poison necessary to kill a similar animal is $\frac{1}{2}x$ if it be injected into the jugular vein. It seems, therefore, that the liver can exercise some definite influence upon a certain class of poisons.

Toxæmia as a solution of many knotty points of pathology now rests an assured conception. As examples of the anatomical basis for such a conception, such facts as neuritis dependent upon the toxæmia of diphtheria, scarlet fever, and other diseases may be quoted.

I purpose to point out in this paper certain lesions which are to be found in the liver in conditions of toxæmia. We presume that, in typhoid fever of the ordinary type, that is with intestinal lesions, the toxin which causes the general symptoms is generated at the site of the primary lesions. The poison is gathered up by the radicles of the portal vein and comes into intimate contact with the parenchyma of the liver. There are certain definite lesions which are to be found in this organ. One of the commonest is the presence of areas—more or less extensive—of necrosis of the liver cells. These areas were at one time known as lymphoid nodules, but their real character has since been demonstrated by a variety of observers. Careful examination of the position of these areas has failed to assign them to any special zone of the hepatic lobule; one would perhaps expect to find them in the outer zone more than the inner, on the presumption that the portal vein is the afferent channel. The areas themselves vary in size, ranging from that of a glomerulus of the kidney to even half a lobule. They consist mainly of nuclear material in irregular masses, embedded in a matrix of fairly homogeneous degenerated protoplasm. Faint interlacing lines are to be seen in this matrix and in one or two spots.

The outlines of the degenerated cells can generally be traced. In places there is to be seen a well-marked and suggestive small-celled infiltration of the portal canals; but nowhere have I seen it approach the intensity which led Handford to describe such infiltrations as miliary abscesses.

Perhaps some of you may remember some specimens of a liver which Dr. T. D. Lister showed last year from a case of ulcerative colitis. In that case there was a very marked small-celled infiltration of the portal canals, and the question arose as to whether such a condition could give rise subsequently to cirrhosis. I have a drawing here of a portal canal showing young fibrous tissue taken from a case of rickets. The character of the lesions seems to me to depend upon the acuteness or otherwise of the absorption of poison. Chronic absorption gives rise to cirrhotic lesions, which in Nature's eyes may be conservative in character, while the more acute toxæmias cause degenerative changes.

A second well-marked characteristic is the fact that the columns of liver cells are markedly separated from each other. How far this condition is a pathological process, brought about by the dilatation of the intralobular capillaries, it is difficult to say; but the shrinking the liver cells undergo during preparation is a factor that must not be lost sight of. There are, however, spots in which the dilatation of the capillaries is so extreme as to give rise to an appearance which is very suggestive of the stroma of an angioma. True angiomata they are not, for on examining the spots with a higher power the tissue between the somewhat rounded spaces is seen to consist of compressed liver cells. The spaces are enormously-dilated capillaries, which have tightly squeezed the liver cells between them, so that they appear somewhat like a meshwork; no hæmorrhages are discernible about these areas. The condition is quite in accordance with Flexner's results in experimental cases of ricin and abrin intoxications, but while he has usually found the nuclei in such compressed cells disappear, in the present case the nuclei appear perfectly healthy, nor are any marked changes (except those due to stretching) apparent in the endothelium of the capillaries.

Finally, there are changes to be noticed in the liver cells which are not actually necrotic. There is a marked vacuolation of most of the cells and an evident tendency to division among the nuclei. This tendency seems not uncommon in early stages of degeneration, as witness the multiplication of the nuclei in the sheath of Schwann during degeneration of peripheral nerves.

The focal character of the lesions is a matter for some discussion. Flexner has shown by means of injected specimens that the more intense capillary lesions take place within the areas of necrosis, and considers that in these capillary lesions the main cause of the necrosis is to be found. For since injury to a capillary means increased permeability of its walls, and, as Cohnheim pointed out, the greater the permeability of a vessel wall the more concentrated will the lymph passing through it be, it is obvious that here we have the true cause of the necrosis. For in spots where the capillary wall is a little more damaged than elsewhere, the lymph which bathes the cells becomes more concentrated and thus the cells are immersed in a bath of poison, and their functional activity being destroyed, they die. Such seems to me the most feasible explanation of the focal character of the lesion.

No causal relationship has been made out between the necrotic spots and typhoid bacilli. Clumps of typhoid bacilli are found in the liver; whether or no they are found depends on the length of time which ensues between the death of the animal and the time of subjecting the tissues to the action of hardening reagents. If the liver be taken out of the body and kept for twenty-four or twenty-six hours at a suitable temperature the bacilli rapidly multiply; so that whereas it is with great difficulty that they can be found if the tissue has been hardened immediately after death, at a later time numerous colonies can be found.

As regards the final disposition of these foci some difference of opinion seems to exist. Looking at the matter purely from the theoretical point of view of pathology, one would expect to find these areas invaded by the scavengers of the human body, the dead tissue removed and its place taken by young connective tissue, which would subsequently organise and leave a dense round ball of fibrous tissue. Actual observation has added weight to this view, and in support of it a case which Reed was fortunate enough to be able to examine may be quoted. The case was that of a woman 70 years of age who had had typhoid fever twenty-five years before death. Definite evidence of this fact was obtained at the necropsy. In the liver, in addition to the senile atrophy of the liver cells, there were found in almost every field from one to three small areas of dense connective tissue, corresponding with the situation of focal necrosis in cases of typhoid. To found on such an isolated case any general rule would hardly be in accordance with the dictates of common sense, but the dense ring of young connective tissue which Handford has found surrounding the areas of focal necrosis supports the view which the general laws of pathology would lead one to hold. On the other hand Wagner, one of the earliest writers on this subject, describes a case in which two and a-half months after recovery no microscopical change whatever could be detected in the liver. He suggests that their disappearance is due to a process of absorption, and that the degenerated cells are reproduced by proliferation of the sound ones around the affected area. Undoubtedly an active process of nuclear division takes place in the cells outside the area of destruction, but because the nuclei divide there is is no cogent necessity for the cell protoplasm to divide also.

Turning now to eclampsia: The occasional occurrence of jaundice in conjunction with this affection early led some of the Continental pathologists to examine the liver. Pilliet and Letienne have been particularly active in this respect, and state that distinctive hepatic lesions are invariably present in the fatal cases. The commonest lesions are dilatations and rupture of the hepatic capillaries, and necrosis of the liver cells. In some cases of eclampsia complicated by jaundice the liver has been microscopically indistinguishable from acute yellow atrophy, and the symptomatology of the two conditions is so similar as to lead one to think that there is some connection between the two.

One of my microscopical preparations is a very beautiful example of an area of necrosis from a case of eclampsia. The capillary ectasia is marked, and there is also an extensive vacuolation of the liver cells; many of these are pale, swollen, and no trace of the nucleus is visible. It seems to me perfectly legitimate to describe these cells as necrotic. I think the vacuolation depends upon fatty changes.

I have endeavoured to show that the liver can exercise an antitoxic function. We presume—and there is a material basis for the presumption—that there is a poison in circulation in eclampsia. The whole mystery of eclampsia lies in the character and source of the poison. The liver, in endeavouring to deal with the poison, is in a state of high-pressure functional activity. It is reasonable to suppose that the more intense the intoxication, the higher must be the pressure at which the antitoxic function is run. This can only be done, first, by calling upon the reserve vitality inherent in the healthy cell; and, secondly, by keeping up the nutrition of that cell by a rapid and copious blood stream. Hence one would expect to find a large amount of blood in the liver; and this may be the cause of the capillary dilata-

tion. I imagine that the poison which circulates through the system of the eclamptic patient finds its greatest resistance in the liver and kidneys. The latter refuse to pass it. The former endeavours to stem the advancing tide of toxæmia. The hepatic capillaries dilate to their fullest extent, and the cells are driven at the extreme of their functional activity. But the vitality of a cell is a limited quantity, and when that vitality is expended by such a call the inevitable result is death. The products of such a struggle are probably of a highly toxic character. The possibility of an ulcer being produced in a mucous membrane by the passage of a toxin during excretion has been proved by the experiments of Enriquez and Hallion. Moreover, Flexner in the course of his experiments frequently found small ulcerations in the mucous membrane of the alimentary canal: and it is not impossible that the albuminuric ulceration of the intestine described by Dickinson may be of a similar character. Now, Hunter has given it as his opinion that the duodenal ulcers occasionally met with after severe burns are in all probability due to poisons being absorbed from the large raw surfaces and being eliminated in the bile. The bile, highly charged with toxins, then comes in contact with the duodenum and causes ulceration. Now, in one of Jardine's cases when all seemed to be going well the patient suddenly complained of severe epigastric pain, became distended, collapsed, and died, and a perforated duodenal ulcer was found. The significance of this case seemed to me so deep that I wrote and ascertained from Dr. Jardine that this ulcer was situated exactly opposite the opening of the bile duct, and a probe passed along the duct passed out at the perforation. There were no adhesions around, and the perforation looked as if it had been cut out with a sharp punch. Unfortunately no microscopical examination of the liver was made.

Here then we have an illustration of the class of facts upon which the toxic conception of disease is based, without which it remains but a theory, a creature of the imagination. But it would seem that a further deduction may be drawn from these changes. Granted a greater intensity of poison brought to the liver and in consequence a greater number of necrotic areas; let them spread, coalesce, and what then? Such a condition would hardly be distinguishable from acute yellow atrophy of the liver. Nor is it wholly unlikely that such an occurrence does take place, for—and this is a fact pregnant with suggestiveness—in no fewer than 3 of the 2,000 Munich necropsies of typhoid acute yellow atrophy was found.

It would perhaps be too premature a statement to make that eclampsia and acute yellow atrophy are one and the same disease, the former being the early stage of an acute toxæmia, which when more advanced develops into the latter. But if not the same they are yet fruits of the same tree. What is certain is the similarity between the symptomatology of the two on the one hand, and on the other the histological evidence is of such a character that the close relationship of the two would seem not improbable.

Dr. O. F. F. Grünbaum said: We have heard that duodenal ulcer after burns is now much more rare than years ago. Is it not possible that this is due to the aseptic treatment of the lesions? Years ago the toxins produced by the charring of tissues along with those produced by micro-organisms led to ulceration, but now the latter are seldom produced, and the toxin due to the charred tissues alone is rarely sufficient to lead to duodenal ulceration. With regard to cirrhosis, I should like to draw attention to an experiment by Cavazzani, which showed that methyl violet was retained by connective tissue cells. How are these cells affected in toxæmia accompanied by focal necrosis?

Mr. A. G. R. Foulerton thought that the direct action of bacteria as a cause of these focal necroses could not be ignored in every case; such lesions might be found crowded with bacteria in specimens prepared from the livers of experimental animals when the tissues had been put into alcohol immediately after death, and there had been no opportunity for *post-mortem* multiplication of the organisms. He thought, also, that Hektoen's work on bacterial cirrhosis of the liver showed that a bacterial necrosis of the liver tissue did actually occur sometimes.

Dr. Lazarus-Barlow had seen focal necroses in the liver in cases of ulcerative colitis.

## THE PRESENT POSITION OF THE BACTERIOLOGY OF RHEUMATIC FEVER.

BY

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and Alexander Paine, M.D., Assistant Bacteriologist to St. Mary's Hospital.

The microbic origin of rheumatic fever has met with such general acceptance in this country and on the Continent that there is no need upon this occasion to recapitulate the many reasons in favour of this view. We will accept it, and endeavour to go a step further, and consider the present position of the bacteriology of the disease. It may be wise, nevertheless, to state from the first that the most ardent bacteriologist does not pretend that the presence of a micro-organism explains all the phenomena of rheumatic fever. There are other important factors, such as the season of the year, exposure to cold, and above all heredity, to be taken into account, and the entire problem is no doubt a very complex one. It is perhaps on account of this complexity that some observers, dubious of the value of bacteriology, have been inclined to deride the possibility of rheumatic fever being a result of bacterial invasion. Yet they themselves have sometimes gone astray, and have added to the difficulty of the subject by including under rheumatism a heterogeneous collection of morbid conditions, which represent their own particular experience of the disease.

In order to arrive at any scientific conclusion about rheumatism, it is clearly necessary to start from the known, and work towards the unknown, rather than the reverse, and though the basis of the known must necessarily be at first too narrow, this can with increase of our knowledge be cautiously enlarged. Rheumatic fever in childhood has been chosen by most authorities as the soundest working basis, for it is a disease which is well understood, both clinical and pathologically, and its characters can be clearly traced in the disease, as it occurs in young adults. In later life gout and rheumatoid arthritis add considerable difficulty to its recognition.

We therefore, in accordance with the most correct English teaching, have considered rheumatic fever in childhood as the type of rheumatism, and it is with this type we are concerned in our paper. To us, as to many others, this seems a very definite disease, as definite, indeed, as tuberculosis or malarial fever, though we freely admit that upon this point there is no general agreement.

When the numerous bacteriological investigations upon rheumatic fever are considered, there is certainly no general agreement in the results that have been recorded; sometimes they have been positive and sometimes negative, and among the positive results there has been variance.

This discord emphasises the necessity there is for extreme caution in the choice of the cases used for investigation, so that a common ground for comparison can be obtained. Thus, for example, at present, all suppurative arthritis must, we think, be excluded. There may be very possibly a suppurative form of rheumatic arthritis: there may, indeed, be rheumatic suppuration as there are pneumococcus suppurations, but as yet all suppurative conditions must be set aside as a basis for investigation.

When the views upon the bacteriology are classified there appear to be five.

1. That rheumatic fever is the result of an infection with a diplococcus. The researches of von Leyden, Triboulet, Dana Apert, Wassermann and Malakoff, Fitz Meyer, and ourselves have especial bearing upon this view.

2. That it is the result of an infection with a specific anaërobic bacillus. Achalme, Thiroloix, and several French observers have worked to establish this, and have concluded that rheumatic fever is due to this specific anaërobic bacillus, which is of large size, and remarkably variable in its morphological characters. It is important to state that ac-

cording to these observers this view rests on a sure basis. The organism has been obtained with constancy. The symptoms of rheumatic fever have been produced in rabbits, and the bacillus has been isolated and cultivated in a medium of milk and bouillon, anaërobically. We worked for some considerable time upon the question but failed to confirm these results, and it is remarkable that such a large bacillus should have escaped our observation, for we examined the tissues with much care. On the other hand Dr. Hewlett, at the discussion on rheumatism before the Chelsea Clinical Society this year, stated that he had isolated an organism from the only fatal case of rheumatic fever which he had investigated that resembled Achalme's. The position of this view is clear, for the statements by Achalme and his corroborators have been definite, and it only remains for further research to settle the specific nature of this organism.

3. The third view supposes that rheumatic fever is not due to any particular micro-organism, but is a particular reaction to varied infections. This view, until there is more evidence in its support, seems so contrary to our experience of rheumatic fever in England, as to require no more than passing mention.

4. Yet another view maintains that simple uncomplicated rheumatism which reacts to salicylates is due to some unknown virus, and the complications are the results of secondary infections usually with cocci. The more closely this view is scrutinised, the less, we believe, it is likely to meet with acceptance. If the rheumatic fever of childhood is taken as the type, it is difficult to say which lesions are to be considered as complications, and which as part of the disease itself. The reaction of the arthritis to salicylates can hardly be claimed as scientific evidence of the occurrence of simple uncomplicated rheumatic fever, for it is too empirical a test. Again, the lesions in rheumatic arthritis are quite analogous to such lesions as pericarditis, valvulitis, and nodule formations. Further, we have found the diplococcus in nearly all these lesions, in the arthritis, valvulitis, pericarditis, nodules, pleurisy, and pneumonia of rheumatic fever.

That there is a hereditary tendency to rheumatic fever we must all agree, but that any true distinction can be drawn between simple and complicated rheumatic fever appears to us impossible. Nor does it seem strange that much difficulty is found in demonstrating any specific micro-organisms in the so-called simple cases, for they are rarely fatal, the resistance to the disease great, and the acute joint effusions we have found by experiment as a rule contain very few organisms, for these lie in the areolar tissue which binds the synovial lining to the strong fibrous groundwork of the joint capsule. The more severe cases of rheumatic fever sometimes end in a lingering death, and then it is not unlikely that in the last days of life secondary infections may occur, but it appears to us that the disease is usually the result of an infection with micro-organisms of one particular kind which are present in the various local lesions and rapidly destroyed at these sites.

The fifth and last view, which is ably supported by Gustav Singer, maintains that rheumatism owes its origin to staphylococcal or streptococcal infection, that it is, in fact, an attenuated pyæmia due to pyogenic cocci.

This view Singer has supported with much vigour in a recent paper, in which he attacks Wassermann and Fitz-Meyer, who claim that the diplococcus they have isolated is specific. He makes no allusion to our investigations, so that we are for the present spared his attack. In this paper entitled Weitere Erfahrungen uber die Aetiologie des acuter Gelenkrheumatisme (*Wien. klin. Woch.*, 1901, No. 20), he maintains that rheumatic fever is pyæmia of an attenuated type, and not an entity as a disease, and that in the face of the evidence he has previously obtained the search for a specific organism is futile. He criticises the claim brought forward by Wassermann and Meyer that the high alkalescence of the medium which they used is of any diagnostic importance, and points out that a highly alkaline medium had been shown by Lingelsheim to be suitable to the streptococcus pyogenes, and that this organism will grow in very various media. The diplococcus Wassermann and Meyer describe he maintains to be nothing but the streptococcus pyogenes.

Again, he criticises the experimental results, and points out that, though Wassermann obtained a purulent arthritis, and Meyer a serous arthritis, both claimed the disease to be rheumatic fever. He remarks that Wassermann considered the constant production of polyarthritis in a series of rabbits to be a proof that the disease was rheumatic fever, while he himself considered it to be no proof of rheumatic fever, and that the constant occurrence of polyarthritis was not in accord with the clinical history of rheumatic fever, in which polyarthritis is only an occasional occurrence. He maintains, further, that rheumatic fever cannot be reproduced in animals. When we turn to the evidence in the paper in support of his own view, he also, in our opinion, lays himself open to criticism. In the first place, he briefly narrates 5 cases, all of which we willingly accept as cases of rheumatic fever, and he lays stress on the non-suppurative nature of the lesions. Strepto-diplococci were demonstrated in, and isolated from, the tissues, but no experiments were recorded. This organism Singer calls the streptococcus pyogenes, on account of the morphological and cultural characters. Yet the lesions were non-suppurative, and our present knowledge of the morphology and cultural characters of several organisms in the coccus group make any assertion on these grounds as to their exact nature a very doubtful proceeding. He next records two fatal cases of chorea, from one of which strepto-diplococci were isolated. In the second case there was suppurative arthritis, and the staphylococcus aureus was isolated. This latter case we cannot admit as a case of rheumatic fever. It does not appear to us that this paper gives any really satisfactory support to Singer's view. His position is, nevertheless, most difficult to assail, for he does not accept experimental evidence of the production of rheumatic fever, which we believe to be established, and our knowledge of the nature of the poisons produced by these organisms is not sufficient to enable any chemical test of their nature to be made. If this were possible the difficulty might perhaps be settled.

If Singer would accept that rheumatic fever can be produced experimentally, then there is some possibility of proving or disproving his view, for if it is the correct one it should be possible to attenuate a virulent culture of the streptococcus pyogenes, or staphylococcus aureus, in such a way as to produce with them experimental rheumatic fever; and, on the other hand, it should be possible to raise the virulence of cultures obtained from cases of rheumatic fever in such a way as to produce a septicæmia indistinguishable from that produced by virulent cultures of these pyogenic cocci. We have failed to obtain these results at present, but many more investigations are requisite to settle this point.

The only other way we can see of weakening or strengthening Singer's position at present is for other investigators to corroborate either that rheumatic fever can be produced by various pyogenic cocci, or only by the strepto-diplococcus. If, as we believe, the latter prove to be correct, then his position is weakened thus far, that rheumatic fever is the result of infection with one and not several different kinds of cocci. Whether or not this coccus is the streptococcus pyogenes in an attenuated form must remain at present an open question.

Should it prove eventually to be the streptococcus pyogenes in an attenuated form, even then the attenuation is so constant and the disease produced so definite as to make it in this attenuated state to all practical purposes specific.

To revert now to the view that rheumatic fever is the result of an infection with a diplococcus. Though not the first to associate a diplococcus with rheumatic fever, we may, we believe, without presumption claim to have investigated this organism with the most detail, and have published our results and a summary of the work of others in the *Lancet*, *Transactions of the Pathological Society*, *Clinical Journal*, and *Practitioner*, and there is no need to allude to them again here. Our conclusion, founded upon a study of 18 cases of rheumatic fever, was that this organism is a cause of rheumatic fever, and that its occurrence is so constant, and the explanation of the symptoms of the disease that it affords is so satisfactory that it appears to us that to it the name of "diplococcus rheumaticus" can be justly given.

We have not isolated the staphycococcus pyogenes aureus from any of these cases, and for this reason we cannot agree with Singer that rheumatism is the result of an infection with attenuated pyogenic cocci.

In conclusion, it appears to us that when this subject is

reviewed with an open mind at present the view that rheumatic fever is due to a diplococcus infection is the one which has met with the greatest support. We believe that very shortly, if not already, an advance can be made from the position that rheumatic fever is due to a bacterial infection, to the position that it is due to a diplococcus infection. The exact place that the diplococcus will take in the coccus group may take some time to ascertain with certainty, but it seems more likely to lead to advance in our knowledge if we look upon it as specific, rather than if we regard it as an attenuated form of some other coccus infection.

In the history of rheumatic fever heredity takes such a prominent place, and the rheumatic constitution is so clearly recognised, that it is hard to escape from the conviction that the disease is not to be explained by the presence and nature of the micro-organism only, but that in addition there must be some condition of the human tissues which also is of importance.

If, then, we explain rheumatic fever by the view that it is due to attenuated pyogenic organisms, we seem to neglect this factor of the human tissues, for we are not aware that there is a constitutional predisposition to suppurative infections. We admit that rheumatic fever in man is not always hereditary, but the diathesis is such an important fact, that it is probable that there is some peculiarity in the tissue changes of rheumatic fever, which is specific.

The criticisms by Singer are of great value, for they bring into prominence the difficulties which are at present an obstacle to progress. The question at stake is a very important one, for if the disease be proved to be due to a specific organism, then there is hope that we may gain a knowledge of the toxins that are formed, and even perhaps may learn why in one case the heart is chiefly affected, another the joints, and another the brain. Much light, too, may be thrown upon the malignant types of rheumatic fever, which at present are such melancholy examples of the disease. It is natural to hope, also, that an antitoxin may be found: but this word needs to be used with great caution, for in the minds of those who are unacquainted with the intricacy of the subject it is apt to raise false hopes. At present all our own researches point to the organisms in rheumatic fever being widely distributed throughout the body in the local lesions, and not to their being limited in their distribution as in the case of diphtheria, in which an antitoxin has proved so successful. The discovery of an antitoxin may be a long and difficult task though it is unwise to prophesy. In the meantime there is this advantage about investigations of this nature, that they do not interfere with the methods of the practical physician, and if only the results of scientific research are not hastily thrust into practical medicine, they do not interfere in any way with the present methods of treatment.

Mr. Foulerton asked in what proportion of the rabbits inoculated vegetations had been found on the heart valves; shortly after the appearance of Drs. Poynton and Paine's paper he had examined the hearts of rabbits killed or dying in his own laboratory, and he had been struck by the fact that two out of the first nine rabbits examined showed well-marked vegetations on the mitral valve; it was evident that such lesions occurred in rabbits quite independently of inoculation with this diplococcus. Mr. Foulerton did not think that Achalme's work was reliable; the bacillus which Achalme had isolated from cases of rheumatic fever was probably the well-known sporing, anaërobic bacillus enteritidis sporogenes of Klein, and it was most improbable that it had anything to do with the causation of the disease. Mr. Foulerton also asked whether Drs. Poynton and Paine had been able to immunise rabbits against infection with their coccus; rheumatic fever was a disease in which a previous attack seemed to predispose to another rather than to confer any immunity, and that being so, the results of any attempts to confer immunity on rabbits would be interesting.

Dr. Rist (Paris) said: I should like to know whether Dr. Poynton and Dr. Paine have met the bacillus described by Achalme; it was an anaërobic bacillus which he cultivated in milk; the micro-organism is a sporulent one. Since Dr. Achalme's paper appeared it seems that the same bacillus has been found very often in a great number of cases, pathological or not, where rheumatism was out of the question. The spores are even to be found in milk which has not been sterilised for a sufficient time, which might account for the presence of the bacillus in cases of rheumatic fever. I would ask also if an explanation can be given why so many previous investigators have failed to find a microbe which, as it seems, does not offer especially great difficulties in staining or in cultivating. I think it is absolutely necessary to give that explanation when one is dealing with a disease which has been investigated without result by a great number of bacteriologists.

Dr. Harry Campbell asked if the diplococci had any special affinity for the red blood corpuscles, and whether one could account for the anæmia which was so characteristic of rheumatic fever by assuming that the chromocytes were actually destroyed by the micro-organisms. He also asked whether the experimental endocarditis produced in rabbits attacked (as in the rheumatic fever of man) the left side of the heart more frequently than the right.

### Replies.

Dr. Paine, in reply to Dr. Rist's question as to whether they had met with Achalme's bacillus in their researches, said that in the first three cases they investigated they found a bacillus in their cultures with the diplococcus, and being then intent on Achalme's researches, the organism was isolated, and after careful investigation found to be the lactic acid bacillus. Since then they had always carefully sterilised their media and incubated it over-night to ensure its sterility.

Dr. Poynton thanked the meeting for the kind way in which they had received their contribution. In answer to the President's question, he could only say that the number of cases (about 15) of fatal rheumatic fever they had investigated was to be explained by the exceptional advantages they had been given by the physicians at the Hospital for Sick Children, Great Ormond Street, and St. Mary's Hospital. Every case had been put at their disposal, and their investigations had extended now through two years. Every precaution was taken in examining the rabbits to ascertain that they were sound, and the changes they had found in the valves were active. Organisms had been discovered in them, and pericarditis and myocarditis also occurred. They did not see how to guard further against any fallacy in this direction. They had not produced immunity. In answer to the question why others had not succeeded, they thought there were two main reasons; one was the difficulty of finding the organisms in the tissues, the other was the probability that a coccus growing in chains would be thought to be a contamination, or to be labelled the streptococcus pyogenes—this mistake they had made themselves. The left side of the heart was affected especially, as in man. The organism gave rise to great hyperæmia in the tissues of the rabbits, as it does in man. He remarked that the differentiation of these various diplococci seemed a most difficult question, and clinical experience pointed in the same direction. He thought great care would be required to differentiate them. He confessed to scepticism as to the advisability of laying overmuch stress upon Gram's method as a means of differentiating two organisms.

## THE HÆMOGLOBIN VALUE OF THE RED BLOOD CORPUSCLE.

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[Preliminary Communication.]

In the lowest groups of the animal kingdom, the protozoa and cœlentera, oxygen as well as food is obtained directly from the water they inhabit without the medium of a vascular system.

Higher in the scale we find the echinoderms and acephalous molluscs with a water vascular system: and higher still the tunicates, with a circulating fluid chiefly composed of sea or fresh water in which the creature lives, but containing also a number of cells like the white corpuscles of vertebrate blood.

Lastly, there are certain groups of invertebrates whose

blood is a highly organised fluid, containing in solution much organic matter and numerous corpuscles—the hydrolymph; but the respiratory function of the blood is not represented, the organism receiving its oxygen by direct interchange between its tissues and the water it inhabits. In the hæmolymph, on the contrary, in many animals of the invertebrate subkingdoms we find a respiratory pigment—hæmoglobin or hæmerythrin, hæmocyanin, or chlorocruorin—but in these invertebrates, with few exceptions, the respiratory pigment is merely dissolved in the plasma, while in the vertebrates it is carried by special corpuscles.

Various as may be their source of origin in early fœtal life, modern physiologists regard the red corpuscles during the period of growth and adult life as being developed from coloured nucleated cells termed erythroblasts, which are found in the red marrow which fills the internal cavities of many bones, and especially the ribs. These erythroblasts multiply by karyokinesis, and gradually become transformed with disappearance of the nucleus into the red blood discs. Thus formed the corpuscle consists of a membrane or external envelope with coloured fluid contents.

Crystallised oxyhæmoglobin is now regarded as a body of constant chemical composition, and as it contains, according to Preyer's assumption, one atom of iron, its empirical formula may be taken to be $C_{600}H_{960}N_{154}Fe_2SO_{170}$. This huge molecular weight Bunge suggests as necessary for the carriage of the heavy atom of iron.

The corpuscles thus evolved from the erythroblasts have arrived, as far as we know, at the highest stage of their development, and may be degenerating even from the moment of their birth. At all events, the hæmoglobin they carry cannot be added to from other sources during their separate existence, and they carry it unimpaired until they are broken up, and the colouring matter goes to take part in the formation of other pigments.

A recent explanation of the form in which hæmoglobin occurs in the red corpuscle is that it exists in the form of a compound with an unknown constituent of the corpuscle.

That it is not in mere aqueous solution is negatived by the fact that it is only sparingly soluble, and the corpuscles are among those parts of the body which contain the least water; while in some animals, in which the hæmoglobin is less soluble, the whole of the water contained in the blood would be insufficient to dissolve the hæmoglobin contained in the coloured corpuscles.

That it does not occur in a crystalline state is contraindicated by the fact that no crystalline structure can be detected by any power of the microscope and also by the result of polarimetry. The corpuscles when observed through crossed Nichols are not doubly refracting while hæmoglobin crystals, even when most minutely subdivided, are found to be so.

The amount of hæmoglobin contained in any fluid may be estimated quantitatively by several methods:

1. Chemically.
2. By spectrometry.
3. By colorimetric analysis.

If we have in oxyhæmoglobin a body of known molecular weight its quantitative estimation should be easy by chemical analysis. This may be done either by the estimation of the iron in the ash or by the ferricyanide method described by Haldane, whose method depends upon the fact that the combined oxygen is liberated rapidly and completely on the addition of a solution of ferricyanide of potassium. His results give in the case of ox blood an average of 22.39 c.cm. oxygen to 100 volumes of blood.

But of these several methods the quickest and the one most useful for clinical research is the colorimetric. The objection to it is that it depends so much upon the personal equation of the observer, but it is reasonable to expect that with constant practice the sense of a minute difference between two tints will be so improved in the individual observer that the limits of error will be reduced to very small dimensions.

There are three methods in common use named after their devisers respectively Oliver, Von Fleischls, and Gowers.

Oliver uses discs of coloured glass which he balances against a dilute solution of oxyhæmoglobin; riders are superposed until the tints match. The objection to this method lies in the fact that the colour of the glass is never precisely the same as that of the oxyhæmoglobin solution.

The same objection applies to Von Fleischls's instrument, where we find a glass slip of the same tint as the oxyhæmoglobin solution, which ranges from a deep red to a pale carmine by insensible gradation. The shade observed in the cell is therefore itself not uniform, the effect of different sources of illumination on the colours are various, and again the very small capillary used for the blood can only theoretically contain the right quantity.

Lastly we have the well-known instrument of Gowers. His standard is a solution of carmine in glycerine jelly, which is equivalent to the colour of normal blood diluted to a certain definite amount. Having found that the percentages of hæmoglobin tried by various Gowers's hæmoglobinometers gave the same result, I have used his instrument in my experiments, but we know that the solution in the jelly tube tends to become too yellow, and there is the same difficulty with regard to the illuminant.

The objection to Gowers's instrument appears to me to have been entirely abolished by a recent modification by Haldane and Lorrain Smith, and here we have what is no doubt the ideal hæmoglobinometer. I very much regret that this method had not been published until I had been working at the subject for many months, for I am sure that my results would have been more accurate with its help.

In their article in the *Physiological Journal* they discuss the difficulty of a definite and permanent colour standard and note that Hoppe-Seyler's suggested solution of pure oxyhæmoglobin was difficult to obtain and easily altered, and point out that the variation in the hæmoglobin value of normal blood vitiates the result of a perfectly adjusted Gowers's instrument.

Quoting former experiments in which they found that the colouring power of the blood of various animals varies directly as its oxygen capacity as determined by the ferricyanide method they used a dilute solution of blood of known oxygen capacity saturated with coal gas and this they find is permanent.

Against this standard they titrate a specimen of blood diluted and shaken with coal gas, in fact they test CO hæmoglobin against CO hæmoglobin. A most important point, therefore, is that in this new instrument for the first time we have two identical pigments to balance one against the other and also get rid of the great difficulty arising from the source of light. The pigment being identical the same source of light, whether daylight or artificial light, will have the same effect upon the contents of either tube, and they have found that using Gowers's instrument with a standard solution of CO hæmoglobin properly graduated that they get extremely accurate results.

The method I have used in these experiments invites five different investigations:

1. The estimation of the hæmoglobin value of the blood by Gowers's hæmoglobinometer.
2. The corpuscular count (Thoma-Zeiss).
3. The percentage of corpuscles to plasma.
4. The count of the precipitated corpuscles.
5. The hæmoglobin value of the corpuscles.

To secure that the blood should be as nearly as possible in the same condition as regards the intake of food, in the great majority of cases it was taken at 4 o'clock in the afternoon—that is, about three hours after the last meal. Uniformity of composition was further insured by taking it from the root of the nail of the ring finger. The first two experiments involved no particular difficulties; their fallacies, together with those attending the others, will be noted later.

To determine the percentage of corpuscles to plasma I used the centrifuge. At first the blood was simply drawn up into capillary tubes of about 50 c.mm. length and centrifugalised until no further precipitation took place. This I found to involve about three minutes' rapid revolution on the centrifuge. The relation of corpuscles to plasma was then read off with the assistance of a millimetre measure and the percentage calculated. This was easy enough. My difficulties commenced with the count of the corpuscles and the estimation of their hæmoglobin.

A large number of my earlier experiments were spoiled by the clotting of the contents of the capillary tubes. It became therefore necessary to provide against this by the

addition of something that would prevent, or at all events retard, this mishap.

At first I tried filling the tubes with a saturated solution of various salts which prevent speedy clotting. They were then allowed to dry, and I hoped the blood would take up the salts therein deposited, and my object be attained. This plan did not answer, possibly because the relation of surface to contents was such as to favour speedy clotting, and also possibly to the rough nature of the deposited crystals, which would have a similar effect. I was at last freed from this formidable difficulty by the addition to the blood of one-tenth of its volume of a saturated solution of potassium oxalate with 20 grs. per cent. of potassium sulphate.

In order to economise the very small quantity of blood I could obtain from each case, an instrument was devised consisting of a thermometer tube with a bulb blown upon it, something after the fashion of the mixing tube in Thoma-Zeiss's hæmatocytometer. The lower end of the tube was divided into tenths. The first tenth was filled with the solution, and the other nine with the blood, which as it flowed pushed in front of it the solution until it reached the upper mark. The blood and solution were next thoroughly mixed in the bulb by forcing them thither by means of a rubber tube attached to the lower end of the instrument.

After a thorough mixing the contents of the tube were then transferred to two capillary tubes for centrifugalisation. This device entirely did away with the trouble from clotting which has only occurred in one or two cases of chlorosis.

As the same tubes which are used for determining the percentage of corpuscles can also supply the precipitate, I estimated the percentage in the mixed blood, taking one-tenth off the plasma and solution to neutralise the effect of the addition of the latter. Loss of blood during centrifugalisation was guarded against by sealing one end of the capillary tube, which in sealing was drawn out to a fine point, in order that it could be readily broken off.

After centrifugalisation I cut off the portion of the tube containing the precipitated corpuscles in order to avoid the admixture of plasma with them, and also its sealed end. Then, fitting a rubber tube of fine calibre to its proximal end, a drop of the viscid contents was blown out and drawn into the mixing tube of the Thoma-Zeiss hæmatocyometer.

At first I filled the graduated pipette up to the 5 c.mm. mark, but finding that the number of corpuscles to be counted was so great that an accurate count was impossible, I came to use only 3 c.mm. This count generally exhausted the contents of one tube. Its fellow was then treated in precisely the same way, and the hæmoglobin value of 5 c.mm. of the precipitate estimated by Gowers's hæmoglobinometer.

It will be well now to indicate the fallacies attending the several stages of this method.

1. In the case of hæmoglobinometry by Gowers's instrument, I have already pointed out the possible mistakes which may be made with it, and can only say that I was always careful that exactly 20 c.mm. of blood were taken, and further that my instrument was a new one, which corresponded exactly with that in the laboratory in which I worked.

2. With regard to the corpuscular count, I used the instrument of Thoma-Zeiss. The personal equation came in, of course, in the amount of pressure applied to the coverslip and in the actual count itself.

3. In the estimation of the proportion of corpuscles to plasma there is still more likely to be a discrepancy. Given that the blood has been properly mixed with the solution and transferred as rapidly as possible to the tubes for centrifugalisation, we have to remember that the tubes are not really cylinders with a uniform bore. They are drawn out by means of the blow-pipe from a larger tube, and their bore is, from the nature of their manufacture, like a truncated cone. I can only say that the tubes used were as nearly as possible of the same capacity, and that all which were obviously wider at one end than the other were rejected. Further, with regard to their capacity, precipitation would be more likely to be perfect in a tube of larger bore on account of the action of the sides of the tube on its contents, surface to contents varying in a mathematical ratio with the size of the bore.

4. In the count of the precipitated corpuscles. Theoretically similar blood should deposit its corpuscles in the same way with regard to precipitation under similar conditions of centrifugalisation and bore of the capillary tubes. The bore has already been discussed in relation to the precipitate. With regard to the centrifugalisation, we cannot always ensure a uniform rate of the centrifuge, and differences in the corpuscles themselves with regard to weight and mass may prevent a similar number being present in a given volume, even though the rate and time of centrifugalisation are identical and also the bore of the tubes used for the purpose. This latter question with regard to weight and mass is one of extreme importance, and may explain many of the remarkable variations met with in blood examinations.

5. This latter paragraph may be enlarged to cover the fallacies attending the estimation of the hæmoglobin value of the corpuscles. Though I always estimated 5 c.mm. taken from the distal end of the capillary tube, it is possible that the heavier corpuscles, which would naturally be precipitated further away from the centre, may contain bulk for bulk more or less hæmoglobin than those which are found nearer the layer of white corpuscles which forms on the proximal end of the precipitated corpuscles.

Moreover, differences in the composition of the plasma itself will make a difference in the quantity of plasma which surrounds the corpuscles in the precipitate, and so make the numbers in a given volume vary somewhat, to say nothing of the fact that the higher the specific gravity of the plasma the less readily they will be deposited.

In this connection it is worth recognising that small variations in the number of the large proteid molecules present in the plasma might easily escape recognition in estimating the specific gravity or by other means, and might yet materially alter the efficiency with which the corpuscles themselves are deposited.

I may now briefly recapitulate the results of my investigations. My instrument makes the average hæmoglobin value of the series 117 in men and 105 in women. By regarding 117 as the normal, and calling this 100, the value of the corpuscle in woman's blood comes out at 89.7, which is near enough to Dr. Haldane's figure (100 and 89), and I take this correspondence as an indication that my work has been correct as regards the colour estimation of the hæmoglobin.

With regard to the blood count, I got an average of 4,860,000 per c.mm. from my series of healthy males and 4,350,000 in the series of females, so that the latter come out just 500,000 below the males, as they should if the normal for the latter is 5,000,000. I may fairly put the small difference down to experimental error.

The average value of 5 c.mm. precipitated corpuscles alone was in men 80. The average count of the precipitated corpuscles was 12,000,000. The average hæmoglobin value of the corpuscle equals 100. In females the average value of 5 c.mm. precipitated corpuscles alone was 84. The average count of the precipitated corpuscles was 13,500,000. This gives an average hæmoglobin value of 97.6, or corpuscle for corpuscle male and female 100 to 86.5. The average relation of corpuscle to plasma was in men 37 per cent.; the average relation of corpuscle to plasma was in women 30½ per cent. That is to say, that under similar conditions a similar number of women's corpuscles will occupy a smaller space than a similar number of men's, and that the average corpuscle in women is smaller than that in men; roughly their bulk is as 11 to 8.

My object being a more correct determination of the hæmoglobin value of the individual corpuscle than can be obtained by simply estimating the hæmoglobin value of a specimen of blood and then counting the corpuscles, I precipitated the corpuscles in the hope of getting a constant number in the precipitate and so doing away with a serious source of error, for in the old method we are never dealing with the same drop of blood: we know the enormous differences as regards relation of plasma to corpuscle that occur with varying pressures applied to the puncture, and even granted that the same drop could be used for the hæmoglobin estimation and for the cytometry, the different bore of the two pipettes used would influence the composition of the blood in the two estimations.

My figures, however, show that the counts of the precipitate even in people of normal health vary enormously, quite 25

per cent., and there are great variations, too, in the hæmoglobin values of the precipitate. Had my corpuscular values set forth in columns A and B nearly corresponded as they might have done I should have been nearer my goal. As it is they only roughly correspond, and the work seems at present to be more of scientific than practical interest.

I may mention that I have examined 20 specimens of anæmic blood in the same way, and here the figures are still more startling, for whereas the precipitate count in healthy men and women averages 12,000,000 and 13,500,000 in certain cases of anæmia, I have found as many as 20,000,000. The figures of this series of cases has not yet been worked out, but I hope to make it the subject of a future communication.

*Males.*

| Name. | A. Hæmoglobin Value of Individual Corpuscle Corrected for Hæmatocytometer and Hæmoglobinometer to 100. | B. Hæmoglobin Value of Individual Corpuscle (Precipitate) Corrected for Hæmatocytometer and Hæmoglobinometer to 100. | Hæmoglobin Value of Bulk Corpuscles in Precipitate raised to 100. |
|---|---|---|---|
| B. ... | 86.3 | 76.8 | 86.4 |
| Ch. ... | 95.7 | 76.5 | 86.4 |
| A. ... | 91.4 | 80.2 | 86.4 |
| G. ... | 91.7 | 95.0 | 91.3 |
| D. ... | 119.6 | 92.5 | 89.0 |
| P. ... | 106.0 | 90.1 | 86.4 |
| F. ... | 92.3 | 75.3 | 89.0 |
| G. ... | 108.7 | 108.0 | 113.6 |
| Ch. ... | 88.0 | 116.0 | 105.0 |
| M. ... | 88.8 | 102.0 | 98.7 |
| T. ... | 78.6 | 98.7 | 103.7 |
| H. ... | 119.6 | 102.0 | 108.6 |
| G. ... | 94.8 | 96.3 | 92.6 |
| G. ... | 102.5 | 93.8 | 102.4 |
| P. ... | 124.0 | 123.0 | 115.6 |
| K. ... | 90.6 | 84.0 | 110.0 |
| G. ... | 87.1 | 160.0 | 107.4 |
| W. ... | 118.8 | 129.0 | 108.6 |

*Females.*

| Name. | A. Hæmoglobin Value of Individual Corpuscle Corrected for Hæmatocytometer and Hæmoglobinometer to 100. | B. Hæmoglobin Value of Individual Corpuscle (Precipitate) Corrected for Hæmatocytometer and Hæmoglobinometer to 100. | Hæmoglobin Value of Bulk Corpuscles in Precipitate raised to 100. |
|---|---|---|---|
| G. ... | 104.7 | 94.1 | 106.5 |
| K. ... | 95.6 | 72.5 | 82.8 |
| F. ... | 91.4 | 94.5 | 104.1 |
| H. α ... | 102.8 | 87.0 | 99.4 |
| H. β ... | 114.2 | 82.2 | 97.1 |
| H. γ ... | 106.6 | 94.8 | 108.8 |
| D. ... | 101.5 | 116.0 | 105.5 |
| B. f. ... | 138.0 | 114.0 | 99.4 |
| B. m. ... | 110.4 | 120.4 | 110.0 |
| G. ... | 76.1 | 80.0 | 94.6 |
| R. ... | 92.3 | 82.0 | 82.6 |
| R. ... | 91.4 | 91.4 | 112.4 |
| F. ... | 80.0 | 96.4 | 97.1 |
| M. ... | 104.7 | 72.4 | 76.8 |
| H. ... | 83.8 | — | 112.4 |

## BACTERIOLOGY OF CEREBRO-SPINAL MENINGITIS.

BY

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AT the present time the causal relationship of micro-organisms to meningitis is an accepted fact, but as our present state of knowledge is dependent upon the observations and experiments of the last twenty years, it is of interest to give a brief historical summary of the literature of this subject.

The early observations of Murchison, Richardson, and others, suggesting the origin of meningitis from articles o diet, telluric influences, etc., are only of passing interest.

The investigations of Klebs, Eberth, and others, who were among the first to describe the presence of micrococci in meningitis, are of little value, owing to the doubtful nature of the technique of that time.

In 1881, Gaucher[1] demonstrated the presence of micrococci in the blood of a patient suffering from meningitis and in the meningeal exudate after death.

In 1883, Leyden[2] and Ughetti[3] described a large round or oval micrococcus present in large numbers in the meningeal exudate of a case of sporadic cerebro-spinal meningitis.

These observations were confirmed in 1884 by Marchiafava and Celli,[4] who found micrococci not only free in the meningeal exudate, but also in the protoplasm of the leucocytes forming part of the exudation.

In 1886, Leichtenstern,[5] during on epidemic of cerebro-spinal fever, invariably found in the meningeal exudate micrococci which were intracellular and which he likened to gonococci.

Up to this time the invariable presence of large numbers of micrococci in the meningeal exudate and pial tissue had been conclusively demonstrated, but all efforts to cultivate these micrococci and to determine their etiological significance had failed.

In 1887 Weichselbaum[6] gave an accurate description of the micrococci, which were apparently the causative agents in the production of cerebro-spinal meningitis. He investigated 8 cases. In 2 of these he found diplococci which morphologically were identical with pneumococci. In the remaining 6 cases, however, he found no pneumococci, but diplococci, which always occurred in pairs, were of variable size, and resembled gonococci not only in these characteristics, but also in the facts that they were present generally in the protoplasm of the leucocytes, and also decolorised by Gram's method of staining.

Foà and Bordoni-Uffreduzzi,[7] Goldschmidt in 1887,[8] and Netter in 1889[9] confirmed these results.

While the majority of observers now admitted that diplococci were invariably present in the meninges in cases of cerebro-spinal meningitis, the nature of the diplococcus was the subject of an important divergence of opinion.

On the one hand, it was regarded as the pneumococcus of Fraenkel—the diplococcus lanceolatus—or a variety of this. Foà in 1890[10] concluded that this diplococcus—or meningococcus, as he described it—was a variety of the pneumococcus which could, under certain conditions, be converted into or arise from the latter. He was supported in this contention by Righi and Quadù[11] and other Italian observers, who confirmed Foà's opinion that the diplococcus found in meningitis was simply a modified form of the pneumococcus, and concluded, further, that meningitis was a local manifestation of a general diplococcus infection.

Netter and the French school also regarded the diplococcus as a variety of the pneumococcus. The presence of these micrococci in the cells of the exudate they looked upon as evidence of degeneration and phagocytosis. Lenharz[12], Hunermahn[13], and Vincenzi[14] supported this view.

It is admitted that the pneumococcus may produce meningitis, or be present as a secondary infection in meningitis; and it is a well known fact that the pneumococcus is an organism of very wide distribution. But that meningitis often complicates pneumonia, or *vice versâ*, is no criterion that the pneumococcus is the specific causative agent of the disease we know as cerebro-spinal meningitis, either in its epidemic or sporadic forms.

On the other hand, the diplococcus described by Weichselbaum was looked upon as a distinct micro-organism and the specific agent at work in the causation of cerebro-spinal meningitis.

There is every reason to believe that Weichselbaum's diplococcus is very different from the diplococcus of Fraenkel. There is also reason to doubt whether the cocci described by some observers in cases of meningitis were pneumococci. Kamen[15] quotes the observations of Panfenski[16], who reported 13 cases of meningitis as due to the pneumococcus, but advanced insufficient evidence to prove conclusively that the micrococci were in reality pneumococci.

Recently the original observations of Weichselbaum have

received much support and confirmation. Jaeger in 1895,[17] Huebner,[18] Councilman, Mallory, and Wright (in an exhaustive report on cerebro-spinal meningitis to the Massachusetts State Board of Health) and Osler in the Cavendish lecture for 1899, advanced extremely strong evidence in support of the view that the diplococcus of Weichselbaum is the specific agent at work in the production of cerebro-spinal meningitis in its epidemic and sporadic forms.

Huebner, for instance, reproduced the same train of symptoms and pathological changes in goats by the subdural injection of pure cultures of Weichselbaum's diplococcus isolated from cases of cerebro-spinal meningitis in man. And Councilman, Mallory, and Wright, by inoculation into the spinal canal of a goat, produced a fatal result in twelve hours, and found diplococci in large numbers in the cerebral cortex, with a marked semi-purulent meningeal exudate containing a few diplococci.

From this survey of the most important literature, it is evident that there is much difference of opinion as to the exact nature of the micrococci present in the exudate in cases of cerebro-spinal meningitis.

Apart from the fact that meningitis may be caused, under certain conditions, by a great variety of micro-organisms, as staphylococci, streptococci, B. influenzæ, B. coli, B. typhosus, etc., the position taken by the leading authorities as to the nature of the micro-organisms found in cerebro-spinal meningitis in its epidemic and sporadic forms, may be described as follows: The French school, headed by Netter, hold that cerebro-spinal meningitis is caused by the pneumococcus or a variety of it, the diplococcus of Weichselbaum; and the German and American schools contend that the diplococcus intracellularis meningitidis of Weichselbaum is, in all probability, the specific agent in epidemic or sporadic cerebro-spinal meningitis, the pneumococcus being of secondary importance.

In 1898 Still[19], in two articles on Posterior Basal Meningitfs in Children, concluded that this disease was probably a sporadic form of cerebro-spinal meningitis, and based his opinion on the bacteriological examination of his cases, in which he found the invariable presence of intracellular and extracellular diplococci, which morphologically resembled almost exactly the diplococcus of Weichselbaum; and in 1899 Pfaundler,[20] from the bacteriological examination of seven cases of meningitis, asserted the cause of epidemic cerebro-spinal meningitis to be cocci of a well-defined group of which Weichselbaum's diplococcus is the leading type.

Still's observations are most important, and his conclusion that posterior basal meningitis is a sporadic form of cerebro-spinal meningitis, and is caused by Weichselbaum's diplococcus, if confirmed by wider investigation, will be a great addition to our knowledge of the etiology of sporadic cerebro-spinal meningitis and its relation to the epidemic form.

Recently, the authors of this paper have reported the results of the bacteriological examination of the cerebro-spinal fluid obtained by lumbar puncture from 9 cases of meningitis in children and 1 in an adult. It was impossible in these cases to determine with certainty from a clinical point of view the nature of the meningitis, whether simple or tuberculous. As a means of diagnosis lumbar puncture was performed, and the results of the bacteriological examination of the cerebro-spinal fluid proved of the utmost value in determining the exact nature of the morbid process present.

In each of these cases a diplococcus which has the following morphological and biological characteristics was isolated from the cerebro-spinal fluid:

1. *Microscopical Appearances.*—Cocci in pairs, tetrads, or short chains. Very variable in size, especially in cultures. The components of a pair are almost always of the same size: they are coffee-bean shaped, and may be obviously separated, or lying so closely opposed that the greatest difficulty is experienced in distinguishing the diplococcus from a staphylococcus. Division is parallel to the long axis of the cocci.
2. *Staining Characteristics.*—Good with methylene blue, fuchsin, and the ordinary dyes. With Gram-Weigert (and Claudius's modification) results are indefinite and unreliable. A minority of the cases decolorised, the majority retained the stain.
3. *Capsule.*—Present in all cases; also in cultures.
4. *Relation to Temperature.*—Best at 37° C.; faint at 22° C.
5. *Gelatine.*—No liquefaction. Growth occurs either as minute, delicate greyish-white colonies, or almost imperceptibly.
6. *Agar-agar.*—Very delicate greyish-white colonies, remaining separate, or more luxuriant growth of greyish-white, moist tenacious colonies tending to run together.
7. *Glycerine-Agar.*—Same as on agar, but more luxuriant; and in some cases very luxuriant.
8. *Bouillon.*—Growth occurs with little or no turbidity, or in some cases good growth with marked turbidity.
9. *Ascitic-fluid Bouillon.*—Luxuriant growth in all cases.
10. *Stiffened Blood Serum.*—Either growth of very transparent, minute, greyish-white colonies of irregular outline, or luxuriant growth of white, porcelain-like colonies.
11. *Milk.*—Growth occurs. No change in the milk.
12. *Litmus Bouillon.*—Growth occurs. No acid reaction.
13. *Potato.*—Growth occurs, either invisibly or as a viscid, transparent layer.
14. *Length of Life.*—At least 40 days, probably more.
15. *Presence of other Micro-organisms.*—Other micro-organisms frequently present.
16. *Experimental Inoculation.*—Eighteen experiments were made with either a 48-hours culture in ascitic-fluid bouillon or an emulsion of a 48-hours culture on agar-agar. In 6 cases intraperitoneal inoculations of $\frac{1}{2}$ c.cm. were made into white mice. In 6, intraperitoneal injections of 1 c.cm into guinea-pigs; and in 6 subcutaneous inoculations of 1 c.cm. into guinea-pigs. In no case was any effect whatever noticed.

It was not possible to extend the interesting experiments of Huebner, and Councilman, Mallory, and Wright, who, by subdural and intraspinal inoculation into goats of virulent cultures of the diplococcus obtained from cases of cerebro-spinal meningitis, produced an undoubted cerebro-spinal inflammatory process and the same pathological results as are met with in cases of cerebro-spinal meningitis in man.

The diplococci isolated from the cerebro-spinal fluid in these ten cases fall into two classes, as follows:—

| | TYPE A. | TYPE B. |
|---|---|---|
| Staining characteristics. | Gram indefinite, usually negative | Gram positive. |
| Agar and glycerine agar. | Very delicate growth of almost transparent colonies | Luxuriant growth of viscid colonies which tend to run together. |
| Gelatine. | Growth very delicate; no liquefaction | Growth slight, if any; no liquefaction. |
| Bouillon. | Growth slight | Good growth with marked turbidity. |
| Stiffened blood serum. | As on agar | Good growth; porcelain-like colonies. |
| Potato. | Slight growth, invisible | Good growth; viscid. |

These results correspond almost exactly with the descriptions given by Pfaundler,[21] who distinguished two distinct varieties of diplococci in the cases he examined. He tabulated the micro-organisms described by previous investigators, and found that they could be grouped under two heads. Thus the diplococci described by Weichselbaum, Bernheim and Moser, Councilmann and Pfaundler, correspond with the above Type A; while those described by Jaeger, Huebner, Urban, Still, and Pfaundler, form a group which corresponds with Type B.

Although the diplococci isolated from the above ten cases fall into two groups, there is every reason to believe that they represent one and the same micro-organism. Morphologically no distinction can be made out; their resemblance to gonococci, their extreme variability in size and shape, the invariable presence of a capsule, even in cultures, all point to their similarity. The fact that the majority of the strains grow only with extreme delicacy on certain media, and that other strains grow more luxuriantly on the same media, does not, in our opinion, mark a distinction between the two varieties nor disprove their identity.

Further, clinically the cases presented no corresponding points of distinction, and this is in agreement with Pfaundler. He comments on the marked difference of the two types culturally, and states that "etiologically a difference cannot be observed, that is, the intervention of the one form or the other is without influence on the course of the disease."

A point of great interest is the constant negative result obtained by experimental inoculation: in no case was there any lethal result after intraperitoneal or subcutaneous inoculation into mice, guinea-pigs, or rabbits.

In the experiments of Councilmann, Mallory, and Wright, rather different results were described. Subcutaneous inoculations were uniformly negative. Intrapleural and intraperi toneal inoculations were fatal in 6 out of "many" cases, the pus in the peritoneum containing diplococci in enormous numbers, while no diplococci were found in the tissues. Intraspinal inoculation in a goat produced the result previously described.

The diplococcus was isolated in pure culture in 4 cases out of the 10. It was frequently associated with other micro-organisms in the cerebro-spinal fluid. In 3 of the cases there was present with the diplococcus a bacillus which, in its morphological and staining characteristics, was identical with the bacillus influenzæ of Pfeiffer. The presence of the

influenza bacillus in the meningeal exudate in cases of suppurative meningitis has been demonstrated by Pfühl,[22] Nauwerk,[23] Högarstedt (cited by Netter), Leichtenstern,[24] and others. Two cases of a specific meningitis caused by the bacillus influenzæ have been described—one by Slawyck,[25] and the second by Lander,[26] in which the meningitis occurred as part of a general influenzal infection.

Since Holdheim[27] demonstrated the association of the diplococcus intracellularis with the bacillus tuberculosis, a number of confirmatory accounts of this fact have been given by Huebner,[28] Lenharz,[29] Netter,[30] and quite recently by Pfaundler. Not only was this association determined by *post-mortem* examination of the meningeal exudate, but also by bacteriological examination of the cerebro-spinal fluid obtained by lumbar puncture during life. The diplococcus intracellularis and the bacillus tuberculosis were present together in one of the above cases. It is a significant fact that there was a general miliary tuberculosis present in this case. Had a bacteriological examination of the cerebro-spinal fluid not been made, the case would have been regarded as an uncomplicated case of tuberculous meningitis.

In 2 cases there was a mixed infection with a large capsulated bacillus, which morphologically and biologically was identical with the descriptions given by Centanni and Neumann (Migula) of a bacillus called the bacillus meningitidis, found by them in the meningeal exudate in cases of meningitis. In 2 of the 10 cases the diplococcus was associated with ordinary pyogenic cocci: but this was due, in all probability, to accidental contamination, as the pyogenic cocci were not present in the meningeal exudate obtained *post mortem*.

CONCLUSIONS.

1. In 10 cases of meningitis a diplococcus was isolated from the cerebro-spinal fluid obtained by lumbar puncture during life.

2. This diplococcus agreed in its morphological and biological characteristics with the diplococcus intracellularis meningitidis of Weichselbaum.

3. The diplococcus occurred in two slightly different forms—Types A and B.

4. In some cases the diplococcus was present in pure culture, in others associated with other micro-organisms—for example, bacillus influenzæ and bacillus tuberculosis.

5. The clinical picture and pathological changes found in these cases were those met with in posterior basal meningitis.

6. In all probability posterior basal meningitis is a sporadic form of cerebro-spinal meningitis, and is caused by the same micro-organism—the diplococcus intracellularis meningitidis of Weichselbaum.

7. In the majority of the cases it was impossible, from the clinical aspect alone, to make a correct diagnosis of the variety of meningitis present.

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Mr. FOULERTON thought that Drs. Nuthall and Hunter had been working with two distinct species of coccus, and not merely with two types of the same species: it was quite certain that diplococcus intracellularis meningitidis, as described by Weichselbaum, and by Councilmann, Mallory, and Wright, and as he himself had isolated it, did not stain by Gram's method. He had found that the latter organism was uncertain of growth on ordinary media, but, if it grew at all, it usually grew fairly freely; but sometimes no growth at all would occur on one or two tubes out of a series inoculated at the same time. Also the results of animal inoculation were uncertain, some animals of a series dying, whilst others survived. He agreed that the organism described by Still in cases of posterior basic meningitis was diplococcus intracellularis meningitidis of Weichselbaum; but it was clear that Drs. Nuthall and Hunter had come across a totally different coccus in, at any rate, some of their cases. The three common organisms causing a general cerebro-spinal meningitis—diplococcus intracellularis, micrococcus pneumoniæ, and streptococcus pyogenes—all possessed distinctive characters, and, given a thorough bacteriological examination, no confusion need arise. He had seen cases of purulent cerebro-spinal meningitis caused by each of the three organisms, and the general naked-eye appearances might be very much the same with all three. Dr. Lazarus-Barlow had also shown that a sero-fibrinous meningitis produced by micrococcus pneumoniæ might present appearances and symptoms identical with those of the posterior basic meningitis described by Still, and caused by diplococcus intracellularis. Mr. Foulerton said that Gram's method of staining gave most reliable results, if only it was used in the proper way. The method was founded on a chemical reaction, and chemical reactions did not vary. Of course, in old cultures some of the organisms might lose in greater or less degree a capacity for holding the stain which they had once possessed. But if the method was carried out as a chemical reaction should be—that is to say, with a careful regard to the constant composition of the reagents—and if the results of staining fresh cultures under exactly the same time and other conditions were compared, the test would be found to be absolutely reliable. Diplococcus intracellularis meningitidis was an organism which was readily decolorised when treated by Gram's method, and he could not agree that the coccus described as "Type B" by Drs. Nuthall and Hunter, which stained by Gram's method, was the coccus known under that name.

Dr. RIST (Paris) said: I should like to say some words in favour of Gram's reaction, which is, I think, one of the most useful methods of bacteriological diagnosis. The positive or negative Gram's reaction is absolutely constant for certain species, and characteristic for them, provided that the technical details are carefully observed. Of course there are species which behave very inconstantly towards Gram; but, then, this very inconstancy is a characteristic feature of these species. I have been working especially with anaërobic species, and find that the Gram test is most useful. I can even go further, and state that in certain species Gram's reaction can be considered as a really vital reaction. I take, for instance, Fraenkel's bacillus phlegmones emphysematosus, which has been also described by Dr. Nuthall. It remains stained after Gram, most distinctly stained: but as soon as the microbe in culture has died away, it remains absolutely unstained after Gram.

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## A COMPARATIVE STUDY OF DYSENTERIC BACILLI.

By SIMON FLEXNER, M.D.,
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AT the last meeting of the British Medical Assiciation I had the pleasure of presenting to the Section of Pathology the results of my studies upon the bacteriology of the endemic dysentery of the Philippine Islands. Since that time the subject of the causation of acute dysentery has been pursued in America and in Germany, and it is now possible to speak with more certainty upon the etiology of that disease. This paper is offered in continuation of the subject as presented to you last year.

Since the publication of Shiga's[1] investigations of the bacteriology of epidemic Japanese dysentery, in which a bacillus exhibiting pathogenic properties and agglutinating with the blood serum of persons suffering from dysentery is described for the first time, several additional bacteriological investigations of dysentery have been reported. The study which followed shortly upon that of Shiga was made by the writer in Manila, Philippine Islands.[2] It resulted in securing from a number of cases of acute, severe, and often fatal dysentery occurring among the American troops in Luzon, a bacillus which was identified with the organism previously isolated by Shiga. After the departure of the Johns Hopkins University Commission from Manila, the bacteriological ex-

amination of dysentery was continued by Lieutenant R. P. Strong, who had previously assisted the writer in the course of the work, with results entirely confirmatory of those published by him. The outcome of Strong's study is given in an excellent paper.[3]

Soon after his return to Philadelphia the writer had the opportunity, through the courtesy of Dr. J. H. Musser, of examining a case of subacute or chronic dysentery contracted by an American soldier at Porto Rico, with the result of isolating a similar organism from the intestinal contents. Lieutenant C. F. Craig, stationed at the Presidio, San Francisco, examined the dejecta of a number of soldiers who returned from the Philippines invalided on account of dysentery, and succeeded in isolating the same bacillus.[4] In October, 1900, Kruse[5] published an account of the bacteriological examination of an epidemic of dysentery which occurred the previous July in the manufacturing town of Laar in Germany. The epidemic was of considerable size, having attacked about 300 persons and caused 30 deaths. The method pursued was similar to that previously employed by Shiga and the writer; and by its means Kruse isolated a bacillus which he regarded as peculiar and the cause of the local disease. The properties of the bacillus closely resembled, although there were differences, those of B. typhosus, and the agglutination reaction with the blood of dysenteric patients was positive and unmistakable. Kruse regarded this organism as related to, but probably distinct from, the bacillus of Shiga.

During the past winter I have had opportunities of making a comparative study of several cultures of bacilli obtained from cases of dysentery, the result of which will be given in this paper. The Manila cultures had been kept alive; through the kindness of Dr. Grünbaum, of Liverpool, a culture of Kruse's bacillus was procured; Shiga had sent cultures of his organism by Dr. Noguchi, who arrived in America last October; the cultures of the Porto Rican case were also available; and, finally, Dr. Strong sent several cultures, of more recent date than the writer's, from Manila.

The comparative study was made in the usual manner upon culture media, and the reactions towards blood obtained from cases of dysentery and from immunised animals were noted. The dysenteric blood was obtained from several sources: (1) The case of Porto Rican dysentery; (2) from Manila, through the kindness of Lieutenant Strong; (3) from the Presidio from cases of chronic dysentery, through the courtesy of Lieutenant Craig; (4) recently, from several cases of dysentery occurring in the insane wards at the Philadelphia Hospital; and (5) through the kindness of Dr. R. D. Ross, of Morven, N. C., from several convalescents from the disease. With respect to numbers (4) and (5) it should be stated that the cases of (4) are still under investigation with reference to the occurrence of the bacillus of dysentery in the stools; while of (5) it is to be noted that the epidemic from which the blood was secured had not been heard of until its extension was at an end and the patients were convalescent. A later report may be expected upon (4), while both are important in that the blood in each reacts positively with the bacilli of dysentery and not with closely-related bacillary (for example, B. typhosus) forms. The sources of the animal blood was a goat partly immunised in 1900[6], and several rabbits treated with dead cultures as follows: (*a*) Flexner; (*b*) Strong; (*c*) Kruse: (*d*) Shiga.

*Cultures.*—The following sets were made: Gelatine stabs and plates; agar stabs, slants, and plates; glucose-agar; potato (parallel); sugar-free bouillon; saccharose, glucose, and lactose bouillon in fermentation tubes; litmus milk. The observations were paralleled. The colonies, stroke, and slant growths were practically identical: bouillon was uniformly clouded, and a pellicle was not formed. No gas was made upon any sugar medium; acid was produced and with little variation in glucose media; litmus milk was at first very slightly acidified, later to become alkalised again; the potatoes showed very slight differences.

The behaviour upon potato requires a moment's consideration. Kruse in a later communication[7] thinks that a minor difference in growth upon this medium between the "Kruse" and "Flexner" cultures, sent by me, exists. He says: "The cultures obtained from Flexner grow somewhat less vigorously upon all culture media than mine, and the tendency to surface growth is somewhat less marked in it. In parallel cultures upon potato I noticed, however, striking differences; whereas my cultures produced in general a yellow growth along the stroke surrounded by a lighter zone in the potato, the Flexner bacillus grew very sparingly and in a manner resembling the invisible typhoid cultures. This difference may, perhaps, depend upon the feebler growth in general of the Flexner bacillus." Kruse considerately states that only after more extended experience with many cultures under parallel conditions can a final decision be given upon the significance of these distinctions. In view of the differences observed by Kruse, it is interesting and important to consider the results upon American potatoes.

I began a series of parallel experiments early in the year, and completed the last from May 14th to June 1st. As a rule, two sets of cultures were made at one time; two large potatoes having been selected, complete sets of tubes were prepared from each. Each series was inoculated as follows: with Shiga, Kruse, Strong, Porto Rico, Flexner (G) and (H) (from two cases. "Gray" and "Harris"). After forty-eight hours the differences noted were minimal; growths had taken place along the line of stroke and extended slightly laterally; they were elevated, moist, granular, and greyish-brown in colour. The potato was somewhat discoloured about the growth. The "Shiga" and "Strong" spread more laterally than "Kruse" and "Flexner." At the end of two weeks the "Kruse" had outgrown "Strong" slightly, while "Shiga" and "Flexner" were indistinguishable. From these results it is, I think, fair to conclude that the differences of growth are slight, and probably depend upon purely accidental circumstances.

*Morphology.*—A comparison of the morphology of the bacilli shows only very minor differences. There are slight variations in length and thickness—differences which are due partly to the medium of growth; temperature and rapidity of division and growth also probably influence the result. The morphology in general is that of a slender rod with slightly rounded ends. The bacilli are commonly single; rarely do they remain united after division into pairs or longer threads. Kruse found my cultures slightly more slender than his, but he says immediately: "I attach, however, very little importance to this character, in that such differences lie well within the limits of normal variation. Every bacteriologist will recall having made similar observations with cholera vibrios and other organisms."

*Motility.*—In respect to this character, Kruse's statements differ from those of Shiga, Strong, and myself. Kruse has not observed motility at any time in his culture; Shiga states his to have been feebly motile, while mine were at first slightly motile, but soon became quiescent in artificial cultivation and did not regain motility. Strong's observations coincide with mine. The motility at best is feeble, does not affect all individuals in a field, and is slow and laboured. Brownian movement is active. This difference remains unexplained. I do not regard it as important. It may, indeed, readily happen that some varieties are permanently non-motile. It may depend on other conditions (composition of medium) or temperature, or time of growth, as has been noted in certain colon stains.

Flagella are possessed by the bacilli. Shiga did not succeed in finding them, and a few tests which I made were negative. The question has recently been taken up seriously by Messrs. Vedder and Duval of the Medical School, and they have succeeded in demonstrating flagella by Van Ennengheim's method in several cultures—to wit, Shiga, Kruse, Strong, Flexner. The flagella are long (8 to 20 $x$ length of bacilli), lightly spiral in form, and dispersed about the bodies of the bacilli (peritricha).

The serum reactions have been of the greatest importance. They are, moreover, unmistakable in significance; they indicate close relationship between the bacilli from Japan, Manila, Porto Rico, and Germany, and they further render probable the identity of the epidemic dysentery of this country with that of the East and Germany.

The blood sent from Manila by Lieutenant Strong and that sent from the Presidio by Lieutenant Craig reacted positively in dilutions 1 in 10 to 1 in 50 with Shiga, Kruse, and Flexner. Differences were observed in certain bloods which reacted more readily or in greater dilutions with one culture than with another, reminding one of the behaviour of certain

bloods in typhoid fever with certain strains of typhoid bacilli. Normal blood controls (1 in 10) were uniformly negative, and B. typhosus in 1 in 10 dilutions with dysenteric blood was equally negative. The cultures of typhoid bacilli were agglutinated readily with blood from cases of typhoid fever.

The tests with animal blood were positive in greater dilutions (tested up to 1 to 200), but with some variation also. Certain strains were less active agglutinators, stronger concentrations or longer time being required than with other cultures; the rabbit's blood was less active than that of the goat; B. typhosus reacted again negatively in short concentrations.

One difference noted was in the manner of agglutination. Some cultures in undergoing clumping formed large masses composed of distinct, interwoven threads, as though the union of the organism was end to end, as well as end to side, side to side, etc. The same phenomenon was noted and described by Kruse.

The results of this comparative study leave no doubt of the identity of the several bacilli with which I have worked. They indicate, moreover, that the acute dysenteries, tending to arise in the form of groups of cases and in epidemics, whether in the Far East, Germany, or the West Indies, are due to the same organism. The justification for the view of a specific organism of dysentery would, therefore, seem to be near at hand.

There is little doubt in my mind that the acute, epidemic dysenteries of this country are caused by the same micro-organism. What the results will be so soon as an opportunity for study is obtained are foreshadowed in the effects of the blood of convalescents from dysentery already mentioned. A brief reference to the nature of the cases from which the blood giving positive agglutinative reactions was obtained will be added. The notes were kindly supplied by Dr. R. D. Ross, to whom I wish to acknowledge my great indebtedness. Lizzie D., whose blood has given positive reactions, was taken ill with dysentery on May 7th, and began to convalesce about May 22nd. On June 1st a relapse set in, after which she had fever continuously, and her state became "typhoidal" until June 24th, when the temperature fell to normal. She has no fever now, but is very much emaciated: she had three to four stools during twenty-four hours with an occasional tinge of blood (about July 1st).

Jesse G., a strong coloured boy, was taken ill about three weeks ago with acute dysentery. He was beginning to convalesce when he developed acute articular rheumatism. He is still very ill (about July 1st). Besides these cases, in which the serum reaction is positive, notes from two other cases, one with doubtful serum reactions (only in strong concentrations) and one with negative reactions, have been supplied by Dr. Ross. The doubtful case is Cora D., taken ill with dysentery May 7th, ill until May 22nd. Now well. It is, of course, possible in this case that the reaction has disappeared. The negative case (J.C.) was taken severely ill on May 15th, and began to convalesce on June 19th, in which condition she has been reported.

Kruse[9] has added a paragraph on the "pseudo-dysenteries" of insane asylums. While it is admitted that epidemic dysentery may be introduced into asylums, the dysenteries so commonly found among the insane are regarded as distinct and probably of different and variable origin. Whether closer study will confirm these views remain to be seen. Kruse examined material from twelve stools and two necropsies, and comes to the following conclusions: "I was not able in any case to find bacteria possessing all the properties of the dysenteric bacillus. On the other hand, I obtained from one stool and from both necropsies a bacillus whose morphological and cultural properties could not be distinguished from those of the B. dysenteriæ. The only points of difference was found in the reaction to the specific dysentery—blood serum. The blood of the asylum cases (11 out of 15) agglutinated the three strains of bacilli in dilutions of 1 to 100 or more. But this blood had no effect upon the true dysenteric bacillus. Blood from an animal (sheep) immunised to B. dysenteriæ had only slight effect upon bacilli of 'pseudo-dysentery' (1 to 50 and strong effect upon bacilli of true dysentery 1 to 250). Contrariwise, animals treated with the bacillus of 'pseudo-dysentery' agglutinated those strains strongly without reacting with the B. dysenteriæ." The conclusion drawn is that in "asylums a form of dysentery occurs that has nothing to do with true dysentery, but which probably owes its origin to similar micro-organisms of which there are probably several distinct types." I must regard this conclusion as premature. In the first place because of the two cultures (different strains) which I sent Kruse, both from typical cases of Philippine dysentery; one which he calls "America" he finds to agree culturally, and in its serum reaction with the strains obtained by him from the asylum cases. This culture he excludes from being the dysenteric bacillus. And in the next there are now under study two cases of dysentery, which developed in the wards for the insane in the Philadelphia Hospital (in one the blood was obtained after the stools had become almost normal), in which the blood is positive for the several dysenteric bacilli mentioned in this paper. A further report upon that phase of the subject, and upon the American dysenteries in general, will, it is hoped, soon be ready for publication.

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## FURTHER OBSERVATIONS ON THE STANDARDISATION OF NUTRIENT MEDIA.

By J. W. H. EYRE, M.D., F.R.S.Edin.,

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At the annual meeting of the British Medical Association last year (1900), I communicated to this Section the method employed in my laboratory in order to ensure a constant "standard" reaction in those nutrient media which are derived from meat extract. Briefly, the method consisted in titrating small quantities (25 c.cm.) of the medium against decinormal alkali (using phenolphthalein as the indicator), in order to estimate the initial reaction, and, from the data thus obtained, calculating the amount of reagent required to produce any given reaction in the bulk of the medium. The reaction of nutrient media is conveniently expressed by stating the number of c.cm. of normal reagent required to produce absolute neutrality in one litre of the medium, the signs + and − being prefixed to indicate that a medium reacts acid or alkaline respectively. Thus, in referring to a medium as having a reaction of + 10, one implies that every litre of such medium still requires the addition of 10 c.cm. of normal caustic soda to render it neutral to phenolphthalein; in a similar manner a medium having a reaction of − 10 would require 10 c.cm. of normal hydrochloric acid.

Without discussing the importance of this question of reaction, the need for greater uniformity will, I think, be allowed when I state that the reaction of samples of bouillon obtained at different times from six different London laboratories, by the courtesy of their respective directors, ranged from + 20 to − 10.

I suggested last year that media having a reaction of + 10 should be adopted for general laboratory use—at least as a provisional standard—and further experience has proved that this is a good working reaction.

Now, it occasionally happens that certain changes take place in media during their preparation, which render the attainment of the "standard" reaction a matter of some difficulty; further, having once obtained a definite reaction it appears that this desirable result may be modified to some extent by the subsequent sterilisation. For example, 1 litre of bouillon when first prepared had an estimated reaction of + 20. Sufficient caustic soda was added to reduce the acidity to + 10, and the medium steamed and filtered into a flask. Its reaction was now found to be equivalent to + 11, and after each of the three sterilisations it stood at + 11.2.

Although aware of these facts, I did not then direct special attention to them, as they did not occur with any degree of constancy, and at that time I was unable to suggest measures which would effectually eliminate all discordant results: moreover, I hoped that by introducing a subject of such obvious importance others might be induced to give it careful consideration, and perhaps assist by working out the causes of the peculiar behaviour of some batches of media.

In this present communication I wish to point out the practical measures I have found useful in my attempt to attain and retain the standard reaction, and in doing so I propose to deal with, first, the preparation of *Fleischwasser*, or that watery solution of meat extractives, etc., which forms the basis of nutrient bouillon, gelatine, and agar, and then in turn with each of these media.

*Fleischwasser.*

1. Measure 1,000 c.cm. of distilled water into a large flask (or glass beaker, or enamelled iron pot), and add 500 grams of fresh lean beef, finely minced. (The mincing should be done if possible by the aid of a mincing machine.)
2. Heat the mixture in a water bath at 40° to 45° C. for twenty minutes, frequently agitating the contents of the flask during the process, and taking care that the bottom of the flask does not come into contact with the bottom of the water bath. (This dissolves out all the soluble proteids, extractives, salts, etc.)
3. Raise the temperature of the mixture to the boiling point, and maintain it there for ten minutes. (This precipitates some of the albumens, the hæmoglobin, etc., from solution.)
4. Strain the mixture through butter muslin, or a perforated porcelain funnel, and filter the fluid through Swedish filter paper into a sterile flask. (Loss from evaporation, etc., has now considerably reduced the bulk of the *Fleishwasser*; distilled water sufficient to again make it up to 1,000 c.cm. must therefore be added to the filtrate.)

Such a watery beef extract invariably possesses an acid reaction when tested with phenolphthalein. This reaction has been shown to depend upon the presence of monobasic sodium and potassium phosphates, weak organic acids of the glycolic acid series, and organic compounds in which the acid character predominates. The amount of the acidity varies with the different samples of meat, and expressed according to the proposed scale, the reaction of my last fifty batches of *Fleischwasser*, estimated at a temperature of 100° C., has ranged between + 12 and + 24, the average being + 19.

But, on the other hand, because of the low electrolytic dissociation constants of the substances producing this reaction, there is a marked difference in the acidity of any given sample, according to whether it is estimated at the boiling point or cold. In order, therefore, to arrive at the total potential acidity of the *Fleischwasser*, and at the same time to eliminate any possible fallacy due to the retention of $CO_2$ by cold solutions, it is necessary to titrate as near the boiling point as possible. Further, it was noted that the *Fleischwasser*, when maintained at or near the boiling point for any length of time, underwent decomposition changes, probably hydrolytic in character, resulting in the formation of new acid bodies, which increased the amount of free acid in the solution. This alteration in the acidity, although varying with each sample, is always a progressive one; and experiments show that the *Fleischwasser* requires a certain definite exposure to a temperature of 100° C. before the maximum is reached, and the acidity becomes a constant factor. Therefore it is highly important to ensure, by sufficient heating, that the *Fleischwasser* shall attain its maximum acidity.

Boiling the *Fleischwasser* over the direct flame undoubtedly effects this in the shortest time, but, unfortunately, as has been shown by many observers, the slightest "scorching" is sufficient to render the medium unsatisfactory for the cultivation of many species of bacteria; bubbling steam at 100° C. through the solution is equally rapid and efficacious, but in practice it is almost impossible to prevent a certain amount of condensation, resulting in a variable and inconstant increase in the bulk of the *Fleischwasser*; boiling in a water bath has many disadvantages in addition to the necessity for frequent measurings to estimate and correct the loss from evaporation. Heating in an atmosphere saturated with steam at 100° C., as in the ordinary steam steriliser, obviates the risk from burning, and experiments involving the prolonged steaming—that is, one, two, three, and four hours—of accurately measured volumes of distilled water, and of *Fleischwasser*, prove that the loss from evaporation under these conditions is so minute as to be negligible. This last is, therefore, the method usually employed; and the next point to determine is the length of time requisite to obtain the maximum acidity of the *Fleischwasser*. To do this the acidity of a number of samples of *Fleischwasser* was estimated after various periods of steaming up to sixty minutes, and the result of some of these observations is expressed in tabular form:

Table I.

| No. of Sample. | Reaction of *Fleischwasser* (Cold). | Reaction after Steaming. | | | | |
|---|---|---|---|---|---|---|
| | | 10 Minutes. | 15 Minutes. | 30 Minutes. | 45 Minutes. | 60 Minutes. |
| 1 | + 17.6 | + 21.8 | + 22.4 | + 22.8 | + 23.2 | + 23.2 |
| 2 | + 14.0 | + 18.0 | + 21.8 | + 27.6 | + 27.6 | + 27.6 |
| 3 | + 20.8 | + 24.0 | + 26.0 | + 29.2 | + 30.0 | + 30.0 |
| 4 | + 14.0 | + 16.4 | + 23.8 | + 23.8 | + 23.8 | + 23.8 |
| 5 | + 10.0 | + 10.4 | + 10.6 | + 13.8 | + 14.0 | + 14.0 |
| 6 | + 9.0 | + 12.6 | + 14.8 | + 16.0 | + 16.2 | + 16.2 |
| 7 | + 13.0 | + 13.6 | + 14.0 | + 15.0 | + 15.0 | + 15.0 |
| 8 | + 17.0 | + 17.0 | + 17.2 | + 17.4 | + 17.4 | + 17.4 |
| 9 | + 10.8 | + 12.2 | + 12.8 | + 12.8 | + 13.2 | + 13.2 |
| 10 | + 13.0 | + 17.6 | + 18.0 | + 18.0 | + 18.0 | + 18.0 |

It will be seen from the above table that the maximum acidity was reached after varying intervals, but in no case was it delayed beyond 45 minutes, and this may be taken as the standard time for steaming.

My next point refers to the actual process of titration. During this operation, the small bulk of *Fleischwasser* that is being titrated rapidly loses heat, and consequently acidity; whilst the addition of successive small quantities of a fluid (the decinormal soda solution) at the temperature of the room, also contributes to this end. The first fallacy is obviated by immersing the beaker or flask in which the estimation is performed in a basin of water kept boiling during the process by means of a small flame; the second by doing a control estimation, in which a convenient amount of normal soda (represented, of course, by an extremely small quantity of fluid) is first run in from a 1 c.cm. pipette graduated in hundredths, and the titration completed by using the decinormal soda.

*Bouillon.*

The preparation of ordinary bouillon consists in the incorporation of 1 per cent. peptone and 0.5 per cent. of sodium chloride, with convenient quantities of *Fleischwasser* by means of heat, and the subsequent regulation of the amount of free acid present in the solution.

After the addition to the peptone, etc., I formerly steamed my media for twenty minutes, or even less; consequently, although the finished medium was sometimes satisfactory, it occasionally happened that, after reducing it to + 10, steaming, and filtering, there was still a slight excess of acid present, requiring a further addition of alkali. Occasionally this process would have to be repeated, and finally the bouillon was sometimes found to increase in acidity with each sterilisation. A few examples will serve to make my meaning clear.

Table II.

| No. of Sample. | Initial Reaction of *Fleischwasser* (Hot). | Reaction after addition of Peptone and Salt. | Reaction after making + 10 and Steaming. | Reaction after again making + 10 and Steaming. | Reaction after each Sterilisation. | | |
|---|---|---|---|---|---|---|---|
| | | | | | 1st Day. | 2nd Day. | 3rd Day. |
| 11 | + 18.0 | + 21.0 | + 16.0 | + 11 | + 12.8 | + 13.2 | + 13.6 |
| 12 | + 19.6 | + 21.6 | + 12.0 | + 12 | + 13.4 | + 13.8 | + 13.8 |
| 13 | + 16.0 | + 22.0 | + 10.6 | — | + 10.4 | + 10.6 | + 10.6 |
| 14 | + 14.5 | + 18.5 | + 13.2 | + 10 | + 10.4 | + 11.6 | + 11.8 |
| 15 | + 20.8 | + 21.0 | + 10.8 | + 10 | + 10.0 | + 10.0 | + 10.0 |
| 16 | + 22.0 | + 24.0 | + 12.8 | + 10 | + 10.0 | + 10.0 | + 10.0 |
| 17 | + 13.2 | + 14.0 | + 10.4 | — | + 10.4 | + 10.4 | + 10.4 |

In the light of my remarks concerning the rise of manifest acidity that takes place during the prolonged heating of *Fleischwasser*, it is easy to see that these results were largely

due to insufficient heating and consequent non-production of the total acidity, and would have been overcome by steaming for forty-five minutes. This, however, I did not realise until later, and the first explanation of the peculiar behaviour that suggested itself to me was that my standard solutions were not accurately standardised, or were not strictly comparable, or were taking up $CO_2$ from the air. So to obviate this source of error, dekanormal soda is now prepared in bulk—2,000 c.cm. at a time—and kept in an aspirator bottle, to which air can only gain access after passing through concentrated sulphuric acid and over soda lime. The soda solution is drawn from the bottle by means of a long delivery tube, connected by a three-way tube with a 1 c.cm. pipette, graduated in $\frac{1}{100}$ (to serve as a burette), and a delivery nozzle, the upper end of the pipette being in turn connected up with the interior of the stock bottle. This stock supply of 10N, NaOH is used in neutralising media, and also in the preparation of the normal and dekanormal soda solutions necessary for the titrations. By this means strictly comparable solutions free from $CO_2$, which are constantly being restandardised, are always at hand.

As a result of these improvements in technique, the nutrient broth no longer gives trouble, but comes out at standard reaction, and retains this reaction throughout sterilisation. Still as a precautionary measure I would advise the estimation (and correction if necessary) of the reaction to be performed after, as well as before stage 6 (*vide infra*) until a certain amount of experience in the neutralisation of media by this method has been acquired. The detailed steps in the preparation of bouillon are given below:

*Bouillon.*

1. Measure out 1,000 c.cm. *Fleischwasser* into a flask.
2. Weigh out 10 grams Witte's peptone (that is, 1 per cent.); weigh out 5 grams salt (that is, 0.5 per cent.).
3. Mix the peptone and salt into a smooth paste, leaving no unbroken globular masses of peptone, with 20 to 30 c.cm. of the *Fleischwasser*, previously warmed to about 60° C., and add to the remainder of the *Fleischwasser* in the flask.
4. Replace the flask in the steamer and steam vigorously for forty-five minutes.
5. Estimate the reaction, control the result, and calculate the amount of normal or dekanormal soda required to produce a reaction of +10, then add the requisite quantity of reagent to the medium.
6. Again place in the steamer, this time for twenty to thirty minutes, to complete the precipitation of the phosphates, etc.
7. Filter, tube, and sterilise in the steamer for twenty minutes at 100° C. on each of three successive days.

The required reaction is produced, when possible, by the addition of dekanormal soda, on account of the minute increase it causes in the bulk of the medium, and by means of a pipette graduated to 0.01 c.cm. it is easy to measure very small quantities; but if the calculated amount runs into thousandth parts of a c.cm., these latter are replaced by corresponding quantities of normal soda. In this way the amount of soda solution per litre added to the medium rarely exceeds 2 c.cm.

For example:—

1,000 c.cm. bouillon were prepared; on titration it was found that

25 c.cm. required 5.50 c.cm. $\frac{n}{10}$ NaOH to complete neutralisation.

Control—

25 c.cm. ,, 5.65 c.cm. $\frac{n}{10}$ NaOH ,, ,, ,,

The figure yielded by this second titration is taken as the correct one, then

(1,000-50) = 950 c.cm. require 214.7 c.cm. $\frac{n}{10}$ NaOH to complete neutralisation.

or 21.47 c.cm. $\frac{n}{1}$ NaOH ,, ,, ,,

or 21.47 c.cm. — 9.5 c.cm. = 11.97 c.cm. $\frac{n}{1}$ NaOH

to produce a reaction of + 10.

or 1.197 c.cm. 10N, NaOH to produce a reaction + 10.

If now 1.19 c.cm. of dekanormal soda solution is added to the medium remaining in the flask, plus the amount of normal soda corresponding to 0.007 c.cm. of dekanormal, that is 0.07 c.cm., we produce the desired reaction by the addition of only 1.26 c.cm. of fluid—an amount much too small to materially alter the percentage composition of the medium

*Nutrient Gelatine.*

As nutrient gelatine is only bouillon rendered solid by the addition of a percentage of French gelatine varying from 5 to 20, according to the seasonal temperature or cultural requirements, the difficulties met with in preparing standard reaction broth, and referred to under that medium, apply equally to gelatine. In this medium, however, the increase in free acid after the addition of the calculated quantity of soda solution was noted, not occasionally, but constantly (see Table III), and so rendered many titrations and corrections necessary if strict accuracy was desired.

TABLE III.

| No. of Sample. | Initial Reaction of *Fleischwasser* (Hot). | Reaction after addition of Peptone, Salt, and Gelatine. | Reaction after making + 10 and Steaming. | Reaction after again making + 10 and Steaming. | Reaction after each Sterilisation. | | |
|---|---|---|---|---|---|---|---|
| | | | | | 1st Day. | 2nd Day. | 3rd Day. |
| 18 | + 20.8 | + 30.0 | + 17.2 | + 11.4 | + 11.4 | + 11.2 | + 11.40 |
| 19 | + 14.0 | + 32.0 | + 14.8 | + 12.0 | + 13.0 | + 13.0 | + 12.95 |
| 20 | + 17.6 | + 35.6 | + 15.4 | + 13.2 | + 13.4 | + 13.4 | + 13.40 |
| 21 | ? | + 30.8 | + 11.7 | + 10.1 | + 10.1 | + 10.1 | + 10.10 |
| 22 | + 18.4 | + 33.6 | + 18.0 | + 13.6 | + 13.6 | + 13.6 | + 13.80 |
| 23 | + 20.0 | + 35.2 | + 13.2 | + 10.0 | + 10.0 | + 10.0 | + 10.00 |

Moreover, this increase in acidity continued to be a source of trouble long after the methods so successfully employed in the case of the apparently similar behaviour of bouillon had been extended to the preparation of gelatine; and finally it became apparent that there was a direct relationship between the quantity and percentage of nutrient gelatine that was being prepared and the rise in acidity—that, for example, the increase in bulk 1 litre of *Fleischwasser* undergoes, in taking up 100 grams of gelatine, is too big a factor to ignore in calculating the amount of soda solution necessary to produce any given reaction of the entire mass. A series of careful measurements was therefore instituted to ascertain the exact value of this increase.

Solutions of varying percentages of gelatine in 100, 250, and 300 c.cm. of distilled water (and also of *Fleischwasser*) were therefore measured at different temperatures between 0° C. and 100° C. From the average of these observations it appears that at 20° C. every cubic centimetre of *Fleischwasser* increases in bulk to 1.008 c.cm. for every 0.01 gram of gelatine (that is, 1 per cent.) it holds in solution, and this factor proves to be, experimentally, sufficiently accurate for the purpose of neutralisation, without taking into account the factor for temperature expansion, for by taking it into account in the calculations one is able to produce nutrient gelatine of standard reaction.

It follows, therefore, that having prepared 1,000 c.cm. of 10 per cent. nutrient gelatine, the medium mass will now measure 1,000 + (1,000 × 0.008 × 10) = 1,080 c.cm., and after titrating two samples of 25 c.cm. each the amount of soda solution required to produce any given reaction in the remainder of the medium must be calculated as for 1,030 c.cm., not for 950 c.cm.

The following table has accordingly been constructed to save the trouble of calculating the increase in bulk for the varying percentages of gelatine:

TABLE IV.

At 20° Centigrade.

| 100 c.cm. *Fleischwasser*. | | 1,000 c.cm. *Fleischwasser*. | |
|---|---|---|---|
| grams. | c.cm. | grams. | c.cm. |
| *Plus* 5 gelatine measures | 104.0 | *Plus* 50 gelatine measures | 1,040 |
| ,, 6 ,, ,, | 103.8 | ,, 60 ,, ,, | 1,048 |
| ,, 7 ,, ,, | 105.6 | ,, 70 ,, ,, | 1,050 |
| ,, 8 ,, ,, | 100.4 | ,, 80 ,, ,, | 1,004 |
| ,, 9 ,, ,, | 107.2 | ,, 90 ,, ,, | 1,072 |
| ,, 10 ,, ,, | 108.0 | ,, 100 ,, ,, | 1,080 |
| ,, 11 ,, ,, | 108.8 | ,, 110 ,, ,, | 1,088 |
| ,, 12 ,, ,, | 109.6 | ,, 120 ,, ,, | 1,096 |
| ,, 13 ,, ,, | 110.4 | ,, 130 ,, ,, | 1,104 |
| ,, 14 ,, ,, | 111.2 | ,, 140 ,, ,, | 1,112 |
| ,, 15 ,, ,, | 112.0 | ,, 150 ,, ,, | 1,120 |
| ,, 20 ,, ,, | 116.0 | ,, 200 ,, ,, | 1,160 |

The individual steps in the preparation of nutrient gelatine are detailed below:

*Nutrient Gelatine.*

1. Measure out 1,000 c.cm. *Fleischwasser* into a flask.

2. Weigh out 10 grams Witté's peptone; weigh out 5 grams salt.
3. Mix the peptone and salt into a smooth paste with 20 to 30 c.cm. of the *Fleischwasser*, as in preparing bouillon, and add to the remainder of the *Fleischwasser* in the flask.
4. Weigh out that quantity of best gold label French gelatine necessary for the required percentage, usually 90 to 120 grams (that is, 9 per cent. to 12 per cent.), and add it to the *Fleischwasser* in the flask.
5. Place the flask in the steamer, raise the temperature rapidly and keep it at 100° C. for one hour, in order that the solution of the gelatine may be complete.
6. Estimate the reaction, control the result, and calculate the amount of normal or dekanormal soda required to produce a reaction of + 10 in the calculated bulk of medium; add the requisite quantity of reagent to the medium.
7. Again place in the steamer, this time for twenty to thirty minutes, to completely precipitate the phosphates, etc.
8. Allow the medium mass to cool down to below 60° C. Well whip the whites of two eggs, add to the contents of the flask, and replace in the steamer at 100° C. for about half an hour, or until the egg albumin has coagulated and formed large firm clots floating on and in clear gelatine.
9. Filter through papier Chardin, tube, and sterilise in the steamer for twenty minutes at 100° C. on each of three successive days.

*Nutrient Agar.*

Nutrient agar, or bouillon rendered solid by the addition of agar-agar, is in point of fact an easier medium to prepare to standard reaction than gelatine, in spite of the trouble usually attending its filtration, the reason being that the prolonged steaming necessary to ensure thorough solution of the agar guarantees that the *Fleischwasser* from which it is made shall reach its maximum acidity, whilst the quantity of agar powder required to make a solid medium is so small as to cause but a slight increase in the bulk of the medium mass. As a consequence the difficulties that confronted us during the preparation of standard bouillon and gelatine were less pronounced when agar was being made, and the following table shows that after standardisation the medium was never very far removed from the intended reaction, whilst occasionally, and then probably owing to some carelessness in measuring out the soda solutions, the desired reaction was actually obtained.

TABLE V.

| No. of Sample. | Initial Reaction of *Fleischwasser* (Hot). | Reaction after Addition of Peptone, Salt, and Agar. | Reaction after making + 10 and Steaming | Reaction after again making + 10 and Steaming | Reaction after each Sterilisation. | | |
|---|---|---|---|---|---|---|---|
| | | | | | 1st Day. | 2nd Day. | 3rd Day. |
| 24 | + 19.0 | + 21.6 | + 12.0 | + 10.8 | + 10.8 | + 10.4 | + 10.6 |
| 25 | + 20.0 | + 23.0 | + 10.0 | — | + 10.0 | + 10.0 | + 10.0 |
| 26 | + 15.0 | + 16.4 | + 9.0 | — | + 9.6 | + 9.6 | + 9.6 |
| 27 | + 16.4 | + 20.8 | + 19.2 | — | + 10.2 | + 10.2 | + 10.2 |
| 28 | + 21.1 | + 29.0 | + 10.6 | — | + 10.0 | + 10.0 | + 10.0 |
| 29 | + 19.0 | + 23.0 | + 10.0 | — | + 10.0 | + 10.0 | + 10.0 |

As, however, strict accuracy was required, a series of observations were made on the expansion of measured volumes of distilled water and of *Fleischwasser* resulting from the solution therein of 0.5 per cent., 1.0 per cent., 1.5 per cent., and 2 per cent. of agar-agar powder. Averaging the results, the factor is found to approximate very closely to the expansion factor for gelatine—1 c.cm. of *Fleischwasser* increasing in bulk by 0.0053 c.cm. for every 0.01 gram of agar held in solution. The expansion of various quantities of the ordinarily prepared percentages of agar is tabulated below, and shows at a glance the bulk of medium that is necessary to calculate for in producing any required reaction.

TABLE VI.
At 20° Centigrade.

| 100 c.cm. *Fleischwasser*. | | 1,000 c.cm. *Fleischwasser*. | |
|---|---|---|---|
| *Plus* 0.5 gram agar measures | c.cm. 100.265 | *Plus* 5 grams agar measures | c.cm 1,002.05 |
| 1.0 " " | 100.530 | 10 " " | 1,005.30 |
| 1.5 " " | 100.795 | 15 " " | 1,007.95 |
| 2.0 " " | 101.060 | 20 " " | 1,010.60 |

The process of making nutrient agar may be detailed as follows:

*Nutrient Agar.*

1. Measure out 1,000 c.cm. *Fleischwasser* into a flask.
2. Weigh out 10 grams Witté's peptone; weigh out 5 grams of salt.
3. Mix the peptone and salts into a smooth paste with 20 to 30 c.cm. of the *Fleischwasser* warmed to about 60° C.
4. Weigh out that quantity of powdered agar necessary to produce the required percentage, usually from 15 to 20 grams—that is, 1.5 per cent. to 2 per cent.—and mix it into a smooth paste by the help of some 200 c.cm. to 300 c.cm. of the *Fleischwasser* (which must be quite cold, as the agar powder undergoes considerable expansion when first mixed with hot fluids, and before solution takes place). Mix with the peptone and salt emulsion, and add to remainder of the *Fleischwasser* in the flask.
5. Steam in the steamer until the agar is completely dissolved, this will take from sixty to ninety minutes.
6. Estimate the reaction, control the result, and calculate the amount of normal or dekanormal soda required to produce a reaction of + 10 in in the calculated bulk of medium; add the requisite quantity of reagent to the medium.
7. Again place in the steamer, this time for twenty to thirty minutes, to completely precipitate the phosphates, etc.
8. Allow the medium mass to cool down to below 60° C. Well whip the whites of two eggs, add to the contents of the flask, place in the steamer at 100° C. for about half an hour, or until the egg albumin has coagulated and formed large firm clots floating on and in clear agar.
9. Filter through papier Chardin by the aid of a hot-water funnel, tube, and sterilise in the steamer for twenty minutes at 100° C. on each of three successive days.

It now only remains for me to mention a method I have recently adopted for the more rapid solution of gelatine and agar in the preparation of the nutrient media rendered solid by the addition of these substances, and which, although still in the trial stage, can be strongly recommended. I can, perhaps, explain the method better by describing the preparation of an actual batch of 1,000 c.cm. of 2 per cent. agar.

Five hundred grams of lean beef, finely minced, were added to 1,000 c.cm. of distilled water in a three-litre flask, which was placed in a water-bath, and the temperature of its contents raised to and kept at 45° C. for twenty minutes; then rapidly raised to 100° C., and maintained there for ten minutes. The mixture was then filtered, and the filtrate found to amount to 650 c.cm. Ten grams of peptone, 5 grams of salt, and 20 grams of powdered agar were weighed out, mixed, and made into a thick paste with 150 c.cm. distilled water then added to the 650 c.cm. of *Fleischwasser* in the flask, which was returned to the water-bath. By the side of this was arranged a 10-litre tin can (with copper bottom, such as is used in the preparation of distilled water), filled with boiling water, and fitted with a long safety tube and a delivery tube, bent twice at right angles, sufficiently long to reach to the bottom of the interior of the flask. The water in the can was kept vigorously boiling, and steam at 100° C. consequently bubbling through the medium mass for twenty-five minutes, by which time complete solution of the agar had been effected. (If one had been preparing 10 per cent. or 12 per cent. gelatine instead of agar, bubbling the steam through for a period of ten minutes would have been ample.) The medium mass was then rapidly cooled to 15° C. in a normal measuring flask, and found to amount to 900 c.cm. A further 100 c.cm. of distilled water was then added, the medium melted up, titrated, and controlled, and the reaction estimated as being + 20. Dekanormal soda solution 0.95 c.cm. was therefore added to produce a reaction of + 10 in the 950 c.cm. of medium remaining in the flask, and the medium egged, steamed, filtered, tubed and sterilised in the usual way. The reaction of the finished medium was finally estimated as + 10.

## THE DIAGNOSIS OF THE PRESENCE OF BACILLUS COLI COMMUNIS BY MEANS OF NEUTRAL RED.

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WITHIN the past few years a considerable amount of attention has been paid to the methods of distinguishing the bacillus coli communis from the bacillus typhosus. Of the many tests which have been proposed—as the milk test, the indol reaction, etc.—there is scarcely one which may not fail. Even the agglutination test is not always reliable.

Quite recently a good deal of attention has been directed to the use of coloured media as a means of diagnosing between the bacillus coli communis and the bacillus typhosus. Many of the methods proposed have proved to be highly satisfactory. This is mainly due to the fact that the slightest change in the colour of the tinted medium is easily recognisable. The majority of the earlier methods have all one great drawback—that is, they do not afford an opportunity of rapid diagnosis. Now, in the case of the bacillus typhosus and bacillus coli communis, it is usually important to give an early diagnosis, therefore coloured media upon which these micro-organisms grow rapidly must be employed. Of these, the most valuable is that proposed by Rothberger in 1898. This investigator found hat if small quantities of

neutral red (in saturated watery solution), be added to tubes containing agar-agar, and these inoculated with the bacillus typhosus and the bacillus coli communis, a striking result is obtained. In the case of the tubes which have been inoculated with the bacillus coli communis, the neutral red agar becomes greenish-yellow and fluorescent within twenty-four to thirty-six hours. In those which have been inoculated with the bacillus typhosus no change is produced in the medium.

During the past two years I have had frequent opportunity of studying the morphological and biological characteristics of the bacillus typhosus and the bacillus coli communis, and ultimately came to the conclusion that with the present methods it was scarcely possible to determine with certainty the presence of bacillus typhosus or bacillus coli communis in pure culture. The method proposed by Rothberger, however, appeared to me to be worthy of further study, and the results which I obtained I published in the *Lancet* of March 2nd, 1901. Since I commenced my experiments I have tested a large number of strains of bacillus typhosus and bacillus coli communis, and have always obtained absolutely constant results. Bacillus coli communis always produces a fluorescence and change of colour of the neutral red media in twenty-four hours, the bacillus typhosus never.

At the same time the reaction cannot be regarded as specific. Other micro-organisms as bacillus tetani, B. œdematis maligni, bacillus proteus vulgaris, B. prodigiosus, etc., also give the reaction. This, however, does not affect the value of the reaction in regard to the diagnosis between bacillus typhosus and bacillus coli communis. So far all investigators are agreed that no strain of bacillus typhosus is able to affect the slightest change in colour of the neutral red agar.

The conclusions which I feel justified in drawing are the following:

1. That the B. coli communis and a few other micro-organisms possess the power of reducing neutral red to a canary yellow fluorescent colour.

2. That the B. typhosus never possesses this power of reduction.

3. That it is possible within twelve to twenty-four hours to diagnose with accuracy by means of neutral red, the typhoid group of micro-organisms from the true coli group.

## TYPHOID FEVER WITHOUT INTESTINAL LESION.

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THE number of cases of typhoid fever in which intestinal lesions are absent is necessarily small. This is partly owing to the doubt which always obtains when a case which has clinically been diagnosed as typhoid fever is found at the *post-mortem* examination to present a complete absence of intestinal lesion, and partly because the definite scientific proof that a bacillus isolated from the organs of the dead body is the true typhoid bacillus is so difficult to obtain. For this reason, although we might *a priori* anticipate that cases of typhoid fever without intestinal lesion should every now and then occur, the number in which the truth of the proposition can be said to be proved is exceedingly small. In fact, it is in fewer than 20 cases altogether that the question has been approached from the bacteriological side, from which alone the matter can be settled. And of these 20 cases a large number are doubtful because their investigators have not sufficiently differentiated between the typhoid and the colon bacillus. There is considerable reason to suppose that this objection applies to all but 5 or 6 cases. Moreover, the difficulty of distinguishing between the colon and the typhoid bacilli is now recognised to be far more difficult than was at one time supposed, and there are some authors who believe that they are both derived from a common stock. One point of difference, however, has been discovered during the past few years, namely, the agglutination test, which affords help that was not available when earlier cases were reported, and in addition to this other more or less distinctive characters between the two varieties of bacillus have been introduced. Use has been made of all these in the case to be described.

The actual case which forms the subject of this paper was that of a child, aged 13 months, who died in the Westminster Hospital in October, 1900. He was one of a family of seven individuals of whom six suffered from the disease. The proof that the disease from which all were suffering was typhoid fever is so strongly supported from the clinical side that short notes of the cases of the other members of the family may be given. They are as follows:

Joseph H., aged 40, father of the family. Admitted on the thirteenth day of the disease with diarrhœa, sickness, and headache. He was drowsy and languid, his temperature was raised, the splenic dulness was a little increased, there were no "rose spots" on admission, but a few doubtful spots were present on the abdomen two days later; there was no bronchitis. The temperature began to fall on what was apparently the twentieth day of the disease, and gradually returned to normal. Widal's reaction was given by the blood in a 1 in 10 dilution with certainty, and in a 1 in 50 dilution doubtfully on the twenty-eighth day of the disease, and with certainty in twenty-five minutes in a 1 in 100 dilution on the thirtieth day of the disease. The man recovered perfectly.

Harriet H., aged 15. Admitted on the thirteenth day of the disease with diarrhœa, nausea, headache, and a slight cough. The spleen was enlarged and palpable. Definite "rose spots" were present on the following day, and successive crops came out. The temperature became normal about the thirtieth day of the disease. Widal's reaction was given completely in a dilution of 1 in 50 in ten minutes on the twenty-first day of the disease. The patient recovered completely.

Fred H., aged 3. Admitted on the fourteenth day of the disease with alternating diarrhœa and constipation, abdominal distension and pain; no bronchitis; spleen not felt; "rose spots" present on admission. The temperature was raised until the twenty-fourth day of illness and then gradually came down. Widal's reaction was given completely in a 1 in 100 dilution in less than fifteen minutes on the fifteenth day of the disease. Recovery was complete.

Alfred H., aged 13 months. Admitted on the sixteenth day of the disease with diarrhœa, bronchitis, and abdominal distension. "Rose spots" present on admission. Spleen not felt. The temperature was raised throughout the entire illness, and the patient died on the twenty-fifth day of the disease. Widal's reaction was given in a 1 in 100 dilution in less than fifteen minutes, and in a 1 in 50 dilution "immediately" on the seventeenth day of the disease. The *post-mortem* examination was made twelve hours after death. There were found some bronchitis, broncho-pneumonia, and pulmonary collapse, and a firm and somewhat enlarged spleen. Nothing further of a macroscopically morbid nature was found in the body, and in particular there was not the slightest trace of any ulceration, either recent or old, in the intestines. The Peyerian patches and the solitary follicles were quite indistinguishable from those of an ordinary child of the same age. They were not swollen, neither was there any congestion in their neighbourhood. Cultures were made from the spleen. It is this case which forms the subject of the present paper.

The patients mentioned above were all in the Westminster Hospital. In addition two other members of the family were in St. Thomas's Hospital, and I am much indebted to Drs. Acland and Hawkins, under whose care they were, for permission to refer to them. I am also much indebted to Dr. Sikes, Medical Registrar of St. Thomas's Hospital for the facilities he gave me for seeing their notes.

Nathaniel H., aged 11. Admitted apparently on the first day of the disease. "Rose spots" definitely seen on the fifth day, and the spleen was enlarged on the ninth day. By the twelfth day the patient was heavy and drowsy. The temperature was that of typhoid fever. Widal's reaction was given in a 1 in 20 dilution in thirty minutes, and partially given in a 1 in 50 dilution in thirty minutes on the third day of the disease, and definitely given in a 1 in 50 dilution on the fifth day. The patient recovered completely and left the hospital well fifty-four days after admission.

Alice H., aged 8. Admitted on apparently the sixth day of the disease with sickness and epistaxis of sudden onset. She was found to have a large spleen, and "rose spots" were present on the abdomen. There was a little bronchitis and she vomited from time to time. She was definitely deaf, but there was no discharge from the ears, neither had there ever been. Widal's reaction was negative on the twelfth day of the disease; on the twenty-eighth day a reaction was given by a 1 in 20 dilution "immediately," but no reaction was given by a 1 in 50 dilution; on the fifty-third day there was loss of motility of the bacilli and definite clumping in a 1 in 20 dilution in thirty minutes, and loss of motility and doubtful clumping in a 1 in 50 dilution. By this date the patient was practically well and was leaving the hospital.

From the short extracts from the clinical notes there can be no doubt that all the patients were suffering from typhoid fever. It should be added that they all came under treatment between September 15th and October 6th, Alfred and Fred being admitted on September 15th, Harriet on the 20th, Joseph and Nathaniel on October 1st, and Alice on October 6th.

From the spleen of the child Alfred more than one kind of bacillus was obtained, but all of those which did not liquefy gelatine were subjected to rigorous tests. Ultimately the number of varieties was reduced until six were obtained which were certainly either colon bacilli or typhoid bacilli. One of these six was ultimately adopted as the true typhoid bacillus because of the positive manner in which it reacted to the tests available for distinguishing between B. coli communis and B. typhosus. The characters of this variety will now be given.

*Motility, etc.*—The bacilli are somewhat variable in length,

but for the most part a coverslip preparation shows that they bear a close resemblance to B. typhosus. In a hanging-drop they are fairly motile, but the motility is not so great as that found in most cases of B. coli communis, and is quite comparable with the motility of true typhoid bacilli. Some long members are seen with serpentine and slow movement. Growth on potato was characteristic of B. typhosus.

*Flagella.*—In most cases six to eight flagella are present, but sometimes they are more numerous. The number of flagella varies in different slides but probably those in which the greatest number of flagella are present are the most accurate owing to the ease with which flagella become detached. As a rule B. coli communis has less than six flagella. Staining was by van Ermengem's and by Blackburn Smith's methods.

*Gas Formation.*—No gas is formed in 5 per cent. gelatine in six weeks. This test eliminates the possibility that the bacillus in question is one of the "Gaertner group," which the number of flagella might not do.

*Litmus Gelatine.*—Slight formation of acid recognised about the third day and increasing. By the sixth week the litmus has completely become reddened. At this time cultivations of Gaertner's bacillus in alkaline litmus gelatine are still alkaline. The gelatine is not liquefied.

*Milk Tubes.*—Milk is not coagulated even up to two months. In fact the tube may be left to dry up and at no time will coagulation of the milk have occurred.

*Indol.*—Indol is formed in small quantity. A broth cultivation ten days old take over forty-eight hours after applying the test to give the characteristic coloration.

*Agglutination Test.*—With a typhoid serum obtained from an artificially-immunised horse, the laboratory culture of B. typhosus, which is very actively motile, clumps in one hour in a 1 in 2,000 dilution. With the bacillus under examination clumping takes place with a dilution of 1 in 200. Clumping is best seen with cultivations off agar. Against the serum of Joseph H. this bacillus clumps poorly in a dilution of 1 in 50.

*Media of Capaldi and Proskauer.*[1]—In Medium I. the bacillus under examination fails to grow completely, whereas B. coli communis grows well and forms acid. In Medium II the bacillus in question grows readily and forms acid. It was affirmed by the authors that this formation of acid by the B. typhosus distinguishes it from B. coli. Although the bacillus under examination forms acid the reliability of the test is not so great as is claimed. In two cases out of three (strains from different sources being used) I found that B. coli produces acid in Medium II.

"*Neutral Red*" *Medium.*—Cultivated upon a nutrient agar medium, coloured with neutral red, the bacillus in question fails to discharge the colour at any time. With the laboratory cultures of B. coli communis the colour has commenced to be discharged within twenty-four hours and is completely discharged after forty-eight hours. In both cases the growth of the organism is prolific. Cultivation made at 37° C.

So far, then, as concerns the bacillus isolated from the spleen of Alfred H. there is very strong probability, almost amounting to certainty, that the organism is the true typhoid bacillus. The weakest point in the chain of evidence is, unfortunately, that at which it was hoped that it would be strongest, namely, in reference to the agglutination test. It must be allowed that agglutination in a dilution of 1 in 200, when a serum is used which agglutinates an undoubted typhoid bacillus in a dilution of 1 in 2,000, is a serious consideration. Nevertheless, it is not fatal, for it is well known that strains of typhoid bacilli differ greatly in regard to the ease with which they are agglutinated. Moreover, in the case of the laboratory cultures of B. coli, the highly effective typhoid serum barely agglutinated in a dilution of 1 in 10. It is true that some strains of Gaertner's bacillus agglutinate in a dilution of 1 in 500 (Durham), but this is very rare, and evidence has been brought forward to exclude the possibility that the baccillus under examination is Gaertner's bacillus. Bearing in mind the entire list of tests to which the micro-organism has been subjected, and the large number of them in which the evidence has been in favour or the truly typhoid nature of the bacillus, it is probably justifiable to say with certainty that the micro-organism isolated from the spleen of Alfred H. was B. typhosus. When we further bear in mind the clinical history of the case itself, and the clinical histories of the other five members of the family, it is quite unreasonable to doubt that here we had a case of typhoid fever without intestinal lesion.

It would have been of great use if it had been possible to test the bacillus isolated from the spleen against some of the patient's own serum. The importance of this was unfortunately recognised too late. An attempt was, however, made to rectify the omission as far as possible by testing the bacillus against some of the father's blood serum. This was done on the supposition that, as the entire family had obviously become infected at about the same time, it was possible that the same strain of typhoid bacillus was concerned in causing the illness. It was, however, found that the father's blood serum, which clumped undoubted typhoid bacilli in a 1 in 100 dilution in twenty-five minutes, only clumped the bacilli under examination doubtfully in a 1 in 50 dilution in one hour. It must be mentioned that the test was applied to the different strains of bacilli at different times; nearly a month elapsed between the two examinations. When it is noted (see above) that the agglutinating power of the serum of Joseph H. increased remarkably between the twenty-eighth and the thirtieth days of his disease, it is not impossible that a corresponding diminution in agglutinating power was taking place with approximately corresponding rapidity at the time the second test was applied.

An interesting point is brought out incidentally with reference to the Widal reaction by the series of cases that has been cited above. It is that, although the members of one family were affected with the disease, and although it is not improbable that the same strain of bacillus was concerned in all the cases, yet the degree to which the blood serum gave the agglutination reaction varied very greatly. It is unnecessary to dwell on this point here, for the data are fully given above, but the fact that in the case of one member agglutination was given in a dilution of 1 in 100 in less than fifteen minutes, whereas in another the best reaction was one of 1 in 20 in thirty minutes, is well worth attention in estimating the value of the reaction itself in typhoid fever generally.

REFERENCE.

[1] *Zeits. f. Hyg.*, Bd. xxiii, 471.

Dr. Bryant alluded to a similar case which he had published in the British Medical Journal a few years ago. The patient was a child about 2 years of age, who was admitted into Guy's Hospital under the care of Dr. Washbourn for vomiting and diarrhœa. After being under observation for a week, during which time the temperature was high and continuous, a diagnosis of typhoid fever was made. The diagnosis was confirmed by a positive Widal reaction being obtained. A brother and sister of the patient were also in the hospital suffering from typical attacks of typhoid fever, the serums in both cases giving a positive Widal reaction. At the *post-mortem* examination which he performed, no intestinal lesion was found. There were a few patches of bronchopneumonia in the lungs; the spleen and the mesenteric glands were enlarged. A pure culture of the bacillus typhosus was obtained from the mesenteric glands. A recent broth culture of the organism was treated with some serum from an immunised rabbit (to typhoid), and a smart Widal reaction was obtained.

Dr. Michell Clarke mentioned that he had seen two cases of enteric fever in which the lesions were confined to the large intestine, and there were no ulcerations in the small intestine.

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Reversionary Bequests to Hospitals.—By the will of the late Mr. John Augustus Nicholay, of Iver Grove, Iver, Bucks, the accumulated residue of his estate at the end of twenty-one years, or in case of the death of a legatee before that time, is to be divided into 174 equal shares, ten of which are to be paid to the Middlesex Hospital, the Brompton Consumption Hospital; St. Mark's Hospital, City Road; St. Mary's Hospital, Paddington; the Cancer Hospital at Brompton, the Royal Sea Bathing Infirmary at Margate, and the Royal Hospital for Incurables; while five shares are to be paid to the Surgical Aid Society and the City of London Truss Society.

# SECTION OF DERMATOLOGY.

JOHN JAMES PRINGLE, M.B., President.

## A DISCUSSION ON THE ROLE OF COCCI IN THE PATHOLOGY OF THE SKIN.

### I.—Dr. SABOURAUD

Chef du Laboratoire de la Ville de Paris à l'Hôpital St. Louis, Paris.

THERE are three microbes of the genus "coccus" which play an important *rôle* in the pathology of the skin.

The first is the streptococcus of Fehleisen, the special cutaneous lesions produced by which is the impetigo contagiosa of Tilbury Fox.

The second is the staphylococcus aureus of Rosenbach, the special cutaneous lesions produced by which is the follicular orificial pustule of the impetigo of Bockhart.

The third is a grey cultured staphylococcus (morococcus of Unna), the special lesion produced by which is pityriasis simplex wherever situated.

Apart from their specific lesions each of these microbes may be accidentally found in other lesions as a "secondary infection," the evolution of which it may modify in its own special pathogenic manner.

*The Streptococcus.*

The streptococcus which may cause a great number of general lesions may produce very diverse cutaneous lesions.

In the course of streptococcus septicæmiæ the bullæ of infectious pemphigus may arise. In them cultures prove the existence of the streptococcus as in the different metastatic lesions of the visceral organs which it also causes.

In the course of these infective states lumps may develop in the skin similar to those of erythema nodosum, which are the result of streptococcus thrombi in the blood vessels of the derma.

Direct inoculation of streptococci into the derma may produce erysipelas, characterised by the proliferation of the microbe in all the epidermic and dermic layers of the affected region.

But the specific lesion which the inoculation of the streptococcus provokes in the epidermis is the impetigo contagiosa of Tilbury Fox. It begins by a flaccid bulla of very ephemeral existence, which yields an enormous quantity of serous liquid. This exudation dries up to form a yellow, scabby, adherent crust. Under the crust is found a little fibrinous exudation characteristic of the proliferation of streptococcus on the ulcerated epidermis. The lesion disappears without leaving any cicatrix.

Streptococci very often occur as complications of a great many diffuse lesions of the epidermic surface (eczema). Their secondary proliferation reproduces the two capital symptoms, that is, the diffuse exudation of limpid serum and the slight fibrinous, greyish-blue exudation on the surface of the epidermis deprived of its horny layer.

The streptococcus may cause dermic ulcerations deeper than mere epidermic erosions: the rupia of Bateman. These are conical ulcers with thin scabs and containing a sanious liquid. This lesion is now erroneously known in France under the name of "ulcerated ecthyma."

The proper treatment of the streptococcic lesions of the epidermis is the local application of solutions of the sulphates, for example, sulphate of zinc 1 gram, aqua destill. 100-200 grams.

*The Staphylococcus Aureus.*

The specific lesion of the staphylococcus aureus is the pustule. This intra-epidermic pustule is generally perifollicular. Often it is deeper than the epidermis, and produces a small cicatrix in the derma. The perifollicular pustule contains groups of staphylococci under its horny covering. The cavity of the pustule is full of leucocytes, and at its base is a point of dermic necrosis.

This pustule may extend in depth and thus cause a boil, a furunculous abscess, or a sycosis as the result of a deep multiplication of the microbes consecutive upon a superficial orificial perifollicular invasion. These pustules may appear spontaneously (impetigo of Bockhart), or as the result of trade traumatisms (dermatitis of hands of washerwomen), or after some medicinal applications (acne picis, pustular mercurial eruptions, etc.). In hairy regions pustular eruptions become very chronic, for example, sycosis. These pustules may be secondary to a pre-existing local necrobiosis. Thus, boils, acne keloid, and acne varioliformis necrotica are pustules caused by staphylococcus aureus, originating round comedones.

The staphylococcus aureus may secondarily infect all lesions where the derma is exposed, either spontaneously (for example, eczema), or accidentally (for example, vesicant applications).

It may grow and multiply on lesions which it has not caused, and may spread to evoke near them, or even on them, its own special lesion, the follicular orificial pustule with all the complications—boils, etc. These pustules, so abundant on the surface of chronic eczema, have been erroneously classed by Unna as the elementary and microbic lesions of eczema.

It is easy when we meet with a lesion containing the staphylococcus aureus to know if it is this microbe itself which has caused it, for in the lesions which it causes the staphylococcus aureus exists alone. No microbic secondary infection can come after it.

The local remedy for pustular lesions produced by the staphylococcus aureus is sulphur; for example: Alcohol 30 grams, sulphur precip. 19 grams, aq. rosæ 100 grams. It succeeds in all cases where the staphylococcic pustule is not superimposed upon a dermatosis in itself irritable or intolerant to its action, such as eczema.

*The Grey-cultured Staphylococcus.*

This is the most common microbe on the surface of the human skin. It always occurs in single scattered elements. But on certain skins it finds conditions propitious for growth. It then breaks up the horny epidermis and causes pityriasis. In such lesions it does not exist as isolated elements, but in masses more or less considerable and numerous. It causes the fine pityriasis of the surface of acneic skins, the pityriasis simplex of the scalp or fatty pityriasis, miscalled seborrhœic eczema by Unna.

This microbe causes cleavage of the horny cells of the epidermis, which it raises by multiplying underneath them. It causes itching and multiplication of the epidermic cells, which result in the formation of scales—the elementary lesion of pityriasis.

When its action is prolonged it causes a disturbance of the function of cornification which characterises the normal horny layer. Thus, the scale becomes fatty, the so-called seborrhœic "eczema" of Unna. When this proliferation takes place on a dry skin, the pityriasis, after having begun by a round spot, loses its regular form. When this proliferation takes place on a previously fatty skin, its lesions keep their regular circinate form, as in the type which is called "circinaria" by Payne, "figurated seborrhœa corporis" by Duhring, "lichen annulatus" or "serpiginosus" by E. Wilson, and in French *eczéma parasitaire* (Besnier) or *flanellaire*.

In all these pityriasic forms it is frequent to find near the grey-cultured staphylococcus the "fläschchen bacillus of Unna" (spores of Malassez), which, perhaps, is only a degenerated form of the grey-cultured staphylococcus itself.

When this special staphylococcus grows on a skin already infected by other microbes, little pustules may accidentally form, which evolve almost without any functional symptoms. The most typical of these pustules is presented by the common little pustules of polymorphous acne.

The best topical remedy against this microbe and for the pityriasis that it causes is coal tar combined with the mercurial peroxide: Oil of cade (juniperus oxycedrus) 10 grams, yellow bioxide of mercury 1 gram, yellow vaseline 30 grams.

### II.—JAMES GALLOWAY, M.D., F.R.C.P.,

Physician, Skin Department and Joint Lecturer on Practical Medicine Charing Cross Hospital.

I AM glad that the subject of the influence of the streptococci and staphylococci on diseases of the skin should have been chosen as one of the principal subjects for discussion at this meeting of our Association. A large amount of bacteriological observation has accumulated in recent years concerning the

diseases of the skin, and has brought us to the stage of knowledge when slight differences are magnified and receive too great consideration. Organisms have received names with two, three, or four adjectives, and have obtained the distinction of being considered as specific in the case of the disease in which they have been encountered. When this stage has been reached concentration and simplification of our knowledge becomes imperative unless we are content to remain incapable of further advance.

At the International Congress in Paris last year the trend in this direction was very marked, and in the Dermatological Section one organism at any rate which had claimed a great place in our pathology made a very rapid descent from its unstable eminence, though I believe that the "morococcus" in the humbler situation it now occupies may claim a more important *rôle* in pathology than it ever could have done as the specific organism of eczema. This trend has been much helped by the observations and accentuated by the writings of our distinguished visitor from the St. Louis Hospital who opened this discussion.

Perhaps the most important bacteriological observation permitting of this process of simplification is the fact of the extreme variability of many bacteria, not only in their cultural appearances but also in the degree of virulence possessed by them under various conditions. These conditions are being gradually studied, and in many cases are found to be under artificial control so that in the case of some bacteria, at least, the same strain of organisms can be made to vary in pathogenic properties through wide degrees of virulence, and at different periods to show great differences in their cultural characteristics. This variability is found in many pathogenic species of bacteria, and amongst others very markedly in the case of the pathogenic streptococci and staphylococci.

In the case of the streptococcus pyogenes this is well established, as it is also in the case of the staphylococcus pyogenes aureus. More recently the same variability is found to pervade, perhaps in a more marked degree, the whole race of cocci producing white cultures (staphylococcus pyogenes albus).

There are two elements of difficulty in investigating the bacteriological character of cutaneous lesions to which I wish to allude, as they explain many of the errors made by us all; and as they still exist, we may by recognising them be able to avoid them.

The first is that lesions produced on the skin are rarely the result of one single factor, nor of one single organism. Mixed infections are probably the rule, and unless this is borne in our minds prominently, we shall still be liable to consider the first organism we can imprison in a culture tube as the specific organism of the disease, an error which has only too often been made. This is especially true in the case of the organisms with which we are concerned to-day. It is very suggestive to look back on the observations of ten years ago. We find that in impetigo, for example, streptococci and staphylococci of various sorts were found present by the same observer or by different observers, and little attempt at discrimination was made. It was difficult, if not impossible, to define the *rôle* of each, and sometimes one, sometimes the other, was affirmed to be the cause of the disease.

This difficulty is aggravated if the earliest lesions of the disease are not especially carefully investigated. The later lesions are almost certain to become contaminated. But supposing that the early lesion is produced by the inoculation of a virulent organism from a fresh source, still it must be recollected that the organisms already present on the skin have to be accounted for, and eliminated as factors of disease if that is possible.

The second difficulty in the way of obtaining trustworthy results is that of bacteriological technique, and especially of obtaining cultures which contain the pathogenic organism and not the normal or accidental flora of the skin.

Let me then mention the opinions held during the past ten years as to the general characters of the lesions produced by these organisms, and consider at the same time whether the catalogue of organisms can be in any way simplified, and whether more definite ideas may be held as to their pathogenic effect in the skin.

1. *The Streptococcus* (S. pyogenes). Our ideas of the pathogenic effect of the chain coccus are no doubt largely and correctly influenced by our knowledge of its mode of infection and its effect in erysipelas and the group of allied diseases. The remarkable manner in which the organisms fill up and pass along the cutaneous lymph channels from a point of infection is no doubt the cause underlying the rapid and widely-spreading infiltration and œdema of an attack of erysipelas. So that when a pus-forming lesion, possibly producing local necrosis of the cutis with a spreading margin of œdema and erythema, is seen, we feel inclined to consider the streptococcus as the cause, especially if on investigation its presence is ascertained, and although other pathogenic organisms may be present. The severity of such an attack varies within wide limits, and may be very slight; the degree of pyrexia, the amount of necrosis, of pus formation, œdema and erythema will depend on such conditions as the virulence of the infection and the resistance and power of retaliation of the tissue.

In addition to the erysipelatoid group of diseases there are two other examples which are worthy of being mentioned as being in all probability the effect of the growth of this organism.

First, the attacks which occur in *elephantiasis*, associated with swelling and erythema of the affected part, usually with some degree of pyrexia. These attacks, it can scarcely be doubted, have much to do with aggravating the local conditions, and in the case of non-filarial elephantiasis are probably the chief factor in bringing about the changes of the connective tissues of the cutis which cause the elephantoid state to become permanent.

Secondly, *the chronic œdema* of parts of the face, such as the lip, and especially the loose tissues of the eyelids and orbits which show very similar phenomena of recurrences of erythema, œdema, and pyrexia.

Do streptococci produce localised lesions of other characters? Dermatologists are very familiar with the type of impetigo, which is now affirmed by certain observers to be the result of pure streptococcus invasion. It is the impetigo long recognised by English observers—the impetigo of Tilbury Fox as Dr. Sabouraud calls it—commencing as an interepithelial vesicle or phlyctene, and passing on to the formation of the rounded nummular crust, so often seen in the face of children. In the early vesicles of this type of disease it is stated that streptococci only are found.

The evidence of observers so distinguished as the leader in this discussion is hard to gainsay; but, to my mind, it is not yet convincing. If we regard the staphylococcus epidermidis albus as being a normal denizen of the skin, and admit its identity with the staphylococcus pyogenes albus, it is difficult to believe that this form of impetigo is not a mixed infection just as other forms of impetigo, in which, however important the streptococcus may be, the white staphylococcus plays an important part.

2. *Staphylococcus Producing Yellow Cultures* (S. pyogenes aureus).—The effects produced by this organism are better understood and ascertained than in the case of the others. It is the most common of the organisms concerned in ordinary suppuration and the formation of abscesses, and just as it is ascertained to be the pathogenic organism concerned in such conditions as acute osteo-myelitis and other conditions, so also it is the organism mainly concerned in producing suppuration on the surface. Thus it is mainly concerned in the causation of carbuncles, furuncles, whitlows, in most of the forms of follicular inflammation, and especially in those producing necrosis, such as the very characteristic acne necrotica, and of many cases of impetigo. It has been especially identified by those who wish to distinguish between the forms of impetigo in that type of the disease commencing as an inflammation surrounding one of the skin follicles (the impetigo of Bockhart).

This organism varies through a very wide scale of virulence just as the other organisms with which we are concerned. Its cultural peculiarities are notoriously various; its colour is by no means constant, the same strain of organism producing, according to the media in which it is grown and as the result of other conditions, at one time whitish-grey colonies which may readily assume a golden and even an orange colour, but, more commonly, the golden yellow tint from which it receives its name.

A point of great importance in studying the pathology of inflammations of the skin is that this organism seems never to exist alone in lesions, but is always associated with cocci which produces white cultures. This fact opens up the discussion whether after all the staphylococci of suppuration may not be really of one race, and whether the occurrence of pigmentation which has been recognised as the distinct feature of them is after all only an accidental circumstance.

3. *Staphylococcus Producing White Cultures* (S. pyogenes albus).—I need not explain to this audience that the organisms to which I now refer are, in some respects, the most difficult of study of the bacteria of the skin. The slight differences which are observed in different strains have given rise to much confusion, and it cannot be doubted have led us into more errors than in the case of any other organism. It has especially given rise to the discovery of more "specific organisms" of diseases than I care to recall at present. The peculiarities of this group are still under investigation, and the opinions which I am about to express must be regarded as those to which I have been led by my own observations.

It cannot be doubted that staphylococci producing white cultures are constant denizens of the epidermis. The observations of Welch, of Baltimore, seem to establish this firmly even without the constant support which they have obtained by almost all observers since the date of his experiments. The names which it has received such as S. cutis communis, S. epidermidis albus, are evidence of the common opinion, and I think it may be safely regarded as being constantly present. These organisms normally existing in the skin seem, as a rule, to be quite innocuous, but when obtained under these circumstances and cultivated outside the body it is shown that they possess slight pathogenic properties producing localised inflammation and even suppuration when inoculated into animals. This pathogenic property can be cultivated so that they may at length assume a very considerable degree of virulence.

In probably all inflammatory conditions of the skin, especially in those of low grade, cocci, agreeing in nearly all particulars with these organisms can be identified and isolated. They are present in extraordinary numbers, especially in certain conditions characterised by very slight inflammation and considerable disturbance of the epithelium. Circinate seborrhœic dermatitis of the body and of the scalp may be taken as types of such lesions, but they are found also in overwhelming numbers in the more distinct inflammatory affections of which seborrhœa seems to be a precursor, such as the various forms of intertrigo, certain variations of eczema, etc. The low degree of virulence of this "white coccus" and its variability on artificial cultivation have caused it from time to time to receive different specific names, the most important attempt to form a special species within the group being the well-known morococcus. But even in this case it has recently been demonstrated that white cocci derived in pure cultures from typical cases of the form of eczema with which it is associated can be grown under artificial conditions, so that much greater virulence is assumed, while its appearances on cultivation change so that it cannot be recognised from the S. pyogenes albus. Commencing from the other side the S. pyogenes albus can be made to assume characteristics not different from the slightly virulent coccus usually found in the skin. In view of these facts ascertained by experiment, I do not think we have sufficient ground to allow of specific differences being established between these various strains of organisms based upon differences in virulence and the slight cultural peculiarities to which I have already alluded. On the other hand, I think they must be regarded as variations of the same species, and capable under proper circumstances of acquiring or losing virulence.

It is generally admitted that the pathogenic properties of the S. albus are not so great as those of the S. aureus, but even in its most innocuous condition I do not think that anyone would deny pathogenic properties to this organism. When, therefore, we see a white coccus multiply in extraordinary numbers, and so constantly associated with the appearances of forms of dermatitis such as the circinate seborrhœa, to which I have alluded, and the forms of eczema to which it gives rise, one can scarcely resist the conclusion that this same white coccus is a factor, and probably a principal factor, in their production.

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III.—ARTHUR WHITFIELD, M.D., M.R.C.P.,

Physician, Skin Department, Great Northern Hospital, Assistant Physician in charge of Skin Department, King's College Hospital.

DR. WHITFIELD said that the points he wished to bring out were merely the results of his own work in controlling the results of Dr. Sabouraud. First, as regarded the division of the cocii, he would separate the staphylococcus cutis communis on account of its never liquefying gelatine, in producing a butyric odour, and in not producing suppuration in animals. Secondly, as regarded the action of streptococci in producing impetigo, he had been able to grow the streptococcus in every case, but in only one of many had he been able to get it pure from the first from the face. He considered, however, from its great preponderance in cultures of early lesions and from its purity once, that the streptococcus was the causal agent of impetigo contagiosa of Tilbury Fox. Other diseases in which he had controlled Dr. Sabouraud's work with complete agreement, were folliculitis of the head and beard, folliculitis decalvans, all being due to staphylococcus pyogenes aureus. He would ask Dr. Sabouraud whether he considered his amicrobic deep vesicle to be at present inexplicable, or whether he related it to streptococci in the neighbourhood.

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IV.—T. D. SAVILL, M.D., M.R.C.P., D.P.H.,

Assistant Physician, Hospital for Diseases of Skin, Leicester Square; Physician, West End Hospital for Diseases of the Nervous System.

DR. T. D. SAVILL remarked that these researches had a practical outcome. He had procured some streptococcus vaccine through the kindness of Professor A. Wright (Netley), and treated a severe case of furunculosis. The patient had suffered from the boil for three months, but by three hypodermic injections at intervals of a few days a complete cure had been obtained. This did not altogether correspond with the bacteriological results which attributed boils to a staphylococcus infection.

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V.—WILLIAM ALLAN JAMIESON, M.D., F.R.C.P.Ed.,

Physician for Diseases of Skin, Edinburgh, Royal Infirmary, Lecturer on Diseases of Skin, University of Edinburgh.

DR. ALLAN JAMIESON asked if Dr. Sabouraud could explain how it was if the streptococcus of Fehleisen was the cause of impetigo contagiosa it did not give rise even in school epidemics to erysipelas? The question of symbiosis might explain this. To the effect of the combined action of organisms future investigations should be directed.

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VI.—WILLIAM DUBREUILH,

Professeur Agrégé et Chargé du Cours Complémentaire des Maladies de la Peau à la Faculté de Médecine de Bordeaux.

PROFESSOR DUBREUILH said he was quite ready to admit that Tilbury Fox's impetigo contagiosa—the only true impetigo—was due to the streptococcus, although he had written the reverse ten years ago; that the streptococcus was not the specific organism, was shown by the fact that impetigo might arise from another suppurating lesion, not necessarily an impetigo. It frequently arose from an injury, or from an otorrhœa.

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VII.—HENRY RADCLIFFE CROCKER, M.D., F.R.C.P.,

Physician in the Skin Department, University College Hospital.

DR. RADCLIFFE CROCKER said he could reply to the question raised by Dr. Jamieson by relating a case of an infant who contracted impetigo contagiosa soon after vaccination, which was allowed to remain uncured for several weeks, and nearly two months after the vaccination a rapidly-spreading lymphangitis of an erysipelatous character developed and spread up the whole right leg on to the abdomen and down the left leg, accompanied by a high temperature, and greatly imperilling the child's life.

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VIII. THOMAS COLCOTT FOX, M.B., F.R.C.P.,

Physician, Skin Department, Westminster Hospital and Paddington Green Children's Hospital.

DR. COLCOTT FOX had no difficulty in recognising the cle

clinical distinction which existed between the impetigo of Bockhart and the phlyctenular impetigo. He desired to seize this oppotunity of cross-examining Dr. Sabouraud in order to ask him to explain exactly what he meant clinically by ecthyma. It appeared to him that there was danger of confusion by reason that Dr. Sabouraud meant by this streptococci ecthyma something that did not entirely correspond with the ecthyma portrayed by Bateman.

IX.—Norman Walker, M.D., F.R.C.P.Ed.

Assistant Physician Skin Department, Edinburgh Royal Infirmary.

Dr. Norman Walker thought it remarkable that observers should be so anxious to prove that eczema was non-microbic. Pure streptococcus cultures could be obtained every time from impetigo contagiosa. He used agar first, then a fluid medium. The other two organisms found in the skin were the staphylococcus aureus and the staphylococcus epidermidis albus. He agreed with Dr. Sabouraud in the main.

X.—George Pernet, M.R.C.S.,

Pathologist to the Hospital for Diseases of Skin, Blackfriars.

Mr. George Pernet said with regard to Bockhart's impetigo he did not see the necessity of this new designation for what had long been currently known in University College Hospital as pus inoculation or pustular folliculitis. With regard to impetigo contagiosa, streptococcus had been cultivated by Dr. Nabarro, of University College Pathological Laboratory, from an early vesicle of the face in a case attending Dr. Radcliffe Crocker's out-patients and from which Mr. Pernet had inoculated a bouillon tube with the usual precautions. Mr. Pernet also referred to a case of pemphigus neonatorum he had visited at the house of a recently delivered woman (University College Hospital Maternity Department.) The family lived in one room, and three other children he saw there were all suffering from marked impetigo contagiosa. He asked Dr. Sabouraud whether he had seen such cases, and also whether he had cultivated organisms from early pemphigus neonatorum bullæ. In one such case recently attending Dr. Radcliffe Crocker's clinic, a pure culture of staphylococcus was obtained, no streptococci being found, although looked for. This agreed with the result obtained in previous cultivations from the lesions of pemphigus neonatorum. Mr. Pernet had also seen impetigo contagiosa in sucklings whose mothers were suffering from abscesses of the breast.

## PAGET'S DISEASE OF THE VULVA.

By William Dubreuilh, M.D.,

Professeur Agrégé et Chargé du Cours Compleméntaire des Maladies de la Peau à la Faculté de Médecine de Bordeaux.

Paget's disease of the nipple has sometimes been observed outside of the female breast, and several cases occurring on the male genitals have been published, but no case of Paget's disease of the female genitals is on record. The following case is a faithful reproduction in a different spot of the disease as it occurs on the breast. It also offers an opportunity of ascertaining how the disease affects the mucous surfaces and mucous glands.

Mrs. B., aged 51, came to the hospital in September last complaining of an irritation of the vulva which began in the neighbourhood of the clitoris and gradually spread.

*State on Admission.*—The anterior half of both labia majora, the clitoris and meatus are occupied by a large red and angry-looking patch. The patch has a well-defined outline, it is hard, slightly swollen and raised, though not enough to alter the general shape of the region. Its surface is dark, red, excoriated, oozing, smooth and dotted with small white spots which are raised a little above the surface and appear as islands of thickened epidermis. There is no itching but occasional darting pains. There is a swollen lymphatic gland in the left groin. The whole patch was excised, and until now no recurrence has taken place. Microscopical examination shows the diseases patch to be devoid of its stratum corneum, except on the white spots mentioned above. The lower strata of the epidermis are deeply altered and present the appearance of an ordinary epithelioma which would be spread out on the surface of the skin instead of forming a tumour. In some parts are to be found small epitheliomatous nodules deeply imbedded in the skin, but it is easily ascertained that they are due to the spreading of the superficial alteration down into the hairy follicles of the labia majora or the mucous glands of the labia minora. The sudoriparous glands are everywhere sound, and nowhere has the epithelioma penetrated along their ducts.

## CONTRIBUTION TO THE HISTO-PATHOLOGY OF YAWS.

By J. M. H. MacLeod, M.D., M.R.C.P.,

Assistant to the Dermatological Department, Charing Cross Hospital Medical School.

The communication which I have now the honour of making to this Section of the British Medical Association is the result of a histo-pathological examination on the subject of yaws which I have been carrying out intermittently during the last two years, both in my own private laboratory and with the assistance of my pupil, Dr. Ormsby, in the Dermatological Laboratory at Charing Cross Hospital Medical School.

It is a far cry from London to Ceylon, one of the nearest countries where yaws is endemic, and although I am clinically unfamiliar with the disease, still from a histo-pathological standpoint the skin lesions of yaws have had a peculiar interest for me owing to the close resemblance in their microscopical appearances to those of several of the other cutaneous granulomata.

Though it may be said with some truth that little has been really added to our knowledge of yaws since James Maxwell's classical essay was published in 1839, yet quantities of literature in the shape of Government reports and contributions in the various journals have collected round the subject since then, and recently the interest of the dermatological world has been aroused by the controversy which is at present being carried on regarding the identity of yaws and syphilis.

It was this controversy which awakened my own interest in yaws and I considered that by attacking the subject from the histological standpoint, a definite advance might be made in settling the vexed question. In following out this polemic, I felt convinced that it was only those fortunate observers who had had a vast clinical experience of the disease whose opinion on the subject could be regarded as competent, but that histologically the case was entirely different, for happily there was not the same difficulty in acquiring the necessary pathological material as in obtaining cases for clinical study, and provided the tissues examined had been chosen intelligently by someone who had a thorough clinical knowledge of the disease, it could make no difference in the validity of the results, whether these tissues were examined in London or in the tropics.

For the materials on which this paper is based I am indebted in the first instance to Sir William Kynsey, late Inspector-General of Hospitals in Ceylon. He kindly obtained for me from the Kurunegelle Hospital, Ceylon, a variety of the lesions of yaws in different stages of evolution, which had been excised for the purpose of examination by the surgeon in charge of the patients. In connection with six of the cases in which a biopsy had been performed, the hospital case-sheets were also sent to enable me as far as possible to picture the exact stage of the disease and the clinical type of the lesions in each of the cases. Squamous papules, larger crusted papules, varying-sized tubercles, one or two lesions commencing to fungate, and a number of intermediate types were contained among the specimens which were sent. These were preserved in spirit and for ordinary histological purposes they were in no way injured by their journey from Ceylon.

When dealing with a subject such as frambœsia or yaws, we are always face to face with the great difficulty which the nomenclature is bound to possess. A disease endemic only in tropical countries, and affecting for the most part the native population alone, must of necessity collect around it a vast number of native names, which are too frequently generic in nature and include a variety of very different affections. The nomenclature of yaws is no exception to this rule, for it is almost more prolific than that of any other disease which comes within the range of dermatology. To eliminate this difficulty the cases which were chosen for examination were selected with care by Mr. Modder, of the Ceylon Medical Service, so that only pieces of tissue were sent which had been excised from typical examples of the disease. The clinical descriptions of the cases confirmed this as they so closely resembled those in the admirable accounts of the disease given in Nicholls's report on Yaws of 1894.

Without further reference to the subject of the nomenclature it may be assumed that the histological examination about to be detailed refers entirely to cases which may be described as examples of typical yaws.

It will be advisable, in the first place, to refer briefly to a few of the more important contributions to the literature on the subject in which a reference to its histopathology has been found.

Charlouis[2] in 1881, in his description of yaws in Java (polypapilloma tropicum) described the following microscopical changes in a small pin's-head-sized papule, which was surmounted by a yellow crust. He noted that the crust was composed of sebaceous material, granulation cells, and prickle cells. He found even in a small lesion such as that which was examined that the papillæ were elongated and that the Malpighian layer was thickened; but that the primary changes occurred in the corium, where he recorded (*a*) a dilatation and tortuosity of the superficial, and then of the deeper vascular plexuses, accompanied by a diapedesis of leucocytes; (*b*) an elongation of the papillæ: and (*c*) an infiltration of "granular cells" (or leucocytes) between the fibres of the corium, between the layers of the hair follicles, and around the sebaceous gland and arrectores pili muscles.

He considered that the peculiar clinical appearances of the larger skin lesions of yaws were due to the dilatation of the orifices of the glands and to the elongation of the papillæ.

Breda,[3] in a contribution to the histology of Brazilian yaws in 1895, noted a hyperkeratosis, a fatty degeneration of the stratum granulosum, a thickening of the epithelium and an increase of the papillæ and inter-papillary processes. In the neighbourhood of the lymphatics in all the sections he detected a number of enlarged cells arranged in groups or rows. These had often an abundant protoplasm which was homogeneous or granular. These cells corresponded to the "plasma cells" of Unna. He found, also, within certain cells variously sized globules which he regarded as products of degeneration, and he also noticed other cells in a state of complete hyaline degeneration. He noted, further, a hyperplasia of the connective tissue which occasionally formed meshes filled with the cellular deposit.

In 1894 Dr. Nicholls's[4] elaborate report to the Colonial Secretary on Yaws in the West Indies, was published, and marks a distinct advance in our knowledge of the subject. He divided the skin lesions in yaws into three varieties, or rather into three stages in their evolution, namely, squames, papules, and tubercles. He described in detail the histological changes present in these three stages, of which the following were the most important observations:

1. In the squame he found that the epidermis was thickened, that the stratum corneum was flaky and that the papillæ at the margin of the lesion had increased in size while at the centre they were diminished.

Islands of granulation tissue were detected in the corium near the hair follicles and blood vessels, and the follicles were filled with *débris* in which cocci were found.

2. In the papular stage he observed that the papillæ were greatly increased at the centre, that the horny layer was considerably thickened and that the changes previously observed in the squame had become more definite.

3. In the tubercle the elongation of the papillæ was even more pronounced and many of them were club-shaped and lobed at the extremities. The granulation cells were present throughout the corium, and contained a large nucleus; he did not regard these cells as leucocytes. The crust was composed of an inspissated yellow secretion mixed with a few hæmocytes and other *débris*, but it was not pustular. The pigment cells had broken down and the melanin had been discharged into the crust. After the tumour had disappeared only a macule was left.

Unna[5] in his *Histopathology of the Skin* (English Edition, 1896) gave the result of an examination of a dry tubercle of yaws.

He observed that "the general dry and firm character of the growth pointed to a great share of epithelium in its formation." He found that the papillæ were greatly increased in length and that the papillary vessels were dilated.

Accompanying this there was a downgrowth of the epidermis and a marked hyperkeratosis. The granular layer varied in different situations, being most pronounced where there was a tendency to the formation of a scab. Unna found a fibrinous coagulum and the remains of leucocytosis between the lamellæ of the basal layer of the stratum corneum, and a dilatation of the interepithelial spaces. He observed that in the corium plasma cells were very abundant, and that under the epithelial growth they formed a layer which extended in thin cords into the individual papillæ. These plasma cells had no marked relation to the epithelial appendages. Nowhere could Unna find giant cells or any form of degeneration of the plasma cells. The fibrous elements in the granuloma were reduced to a fine network in the midst of the plasma cells. The raspberry type of lesion of yaws he regarded as due to an extreme dilatation of the vessels and an increase of the papillary layer.

From time to time organisms have been isolated in sections of yaws which have been regarded for a short period at least as specific.

Breda described a specific bacillus which he named the "Boubas or framboesia bacillus." This organism was straight or slightly bent, measured 0.3$\mu$ to 0.45$\mu$ in length and 0.08$\mu$ in breadth, and was invariably found by Breda in the epidermis and corium in yaws. It stained deeply by Ziehl-Neelsen's method, and also with boro-fuchsin (after Lubinoff).

Powell,[6] in his paper on yaws in India in 1896, found in two cultivations from yaws a yeast which on stroke-cultures in acid media formed opaque, cream-coloured drops. Inoculation experiments on both a guinea-pig and a dog were unsuccessful. He found these yeast cells in the granuloma and also between the epithelial cells. There were also large round doubly contoured cells looking like starch grains which were possibly, according to the observer, encapsuled yeast cells.

Nicholls and Watts[7] in 1899 found a micrococcus in the secretions of yaws and obtained pure cultures of it. The cultures were salmon-tinted, oval, mucoid masses. The coccus occurred singly or in groups of 2, 3 or 4, or in short chains. It was absent in the blood but was found in one instance in the lymphatic system, a fact which made the authors conclude that it was the cause of the disease. Inoculation into animals failed.

I have thought it unnecessary to do more than briefly abstract the foregoing communications and not in any way to criticise the various histological and bacteriological findings of these writers, as the following account of the results of my own researches will sufficiently show in what I am at one with these observers, and in what I differ from them.

*Histo-pathology.*

From the examination of a large number of sections of the different varieties of lesions which occur in yaws the truth of Nicholls's observation was strongly corroborated, namely, that the skin manifestations of this disease could be best divided for purposes of description into squames, papules and tubercules, and that these were simply stages in a process of evolution in which the framboesiform tubercle was the most highly developed type. The majority of the lesions which had been sent for examination belonged to the two latter varieties, as possibly it was considered that the larger lesions would be more valued for histological purposes than those which were smaller and less developed, and only a few of the specimens unfortunately belonged to the squamous stage.

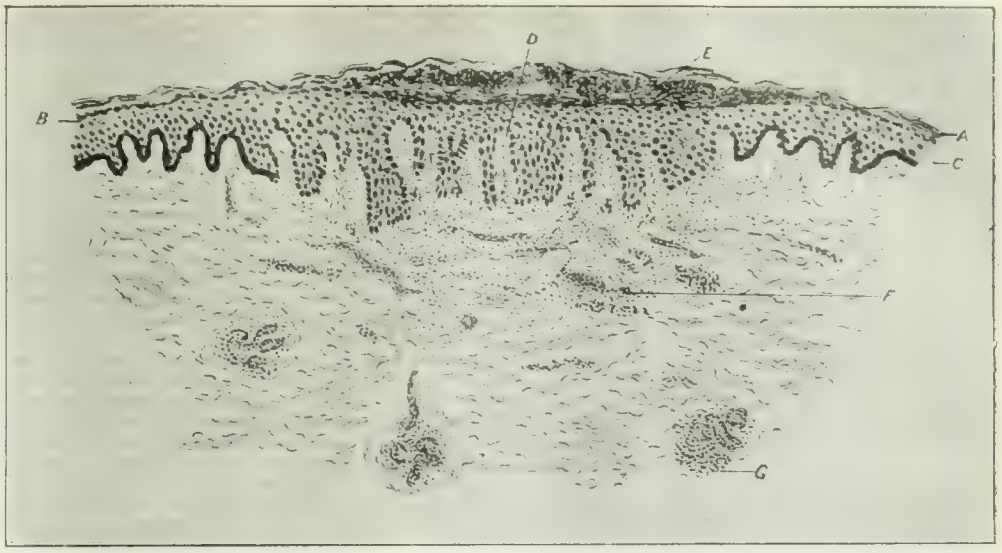
In the earliest skin manifestation of yaws, namely, the squame, the initial change occurred in the superficial layers of the corium and was evidenced by a slight dilatation and tortuosity of the papillary and sub-papillary vessels in the neighbourhood. The most careful examination of the vessels, however, at this stage failed to reveal any distinct proliferation of their walls such as an endothelial hyperplasia or an increase in the adventitial layer. Around these vessels there was a marked extravasation of leucocytes which passed from them into the lymphatic spaces between the fibrous bundles and eventually reached the epidermis.

Here and there in the neighbourhood of the blood vessels, but not definitely connected with them, there was an infiltration of cells belonging to the type of the plasma cells of Unna; these latter cells gave the first indication of the true nature of the lesion. Plasma cells, though present to a greater or less extent in the corium in connection with a large number of chronic inflammatory processes, naturally place the

condition in the category of the "infective granulomata of Virchow," when they occur in such numbers as to form one of the most marked features in the histological picture.

At this period in the evolution of the lesions little or no change was noticeable in the hair follicles or coil glands, except that there was a slight infiltration of cells, similar to those which have been described, surrounding them. Though the epidermal appendages were but slightly affected, the epidermis itself became very rapidly implicated. The interpapillary pegs were considerably elongated and sometimes thickened, and not infrequently the interepithelial spaces appeared to be widened and the cells enlarged and slightly œdematous.

The overlying stratum granulosum was defective, and evidence of an interference with the process of cornification, by the persistence of nuclei in the horn cells and a tendency to form lamellæ, could be detected. The clinical appearance of the squame with its reddened, slightly raised and scaly surface, was thus easily explained by the vascular dilatation, the deposition and infiltration of plasma cells and leucocytes, the epithelial proliferation, the interepithelial œdema and the imperfect cornification. As the squamous lesions gave place to the more raised papules the changes which have already been noted became more pronounced, and to them a few other characteristics were added. In the more highly evolved lesions the infiltration of plasma cells became more general and the character of the infiltration more pronounced.



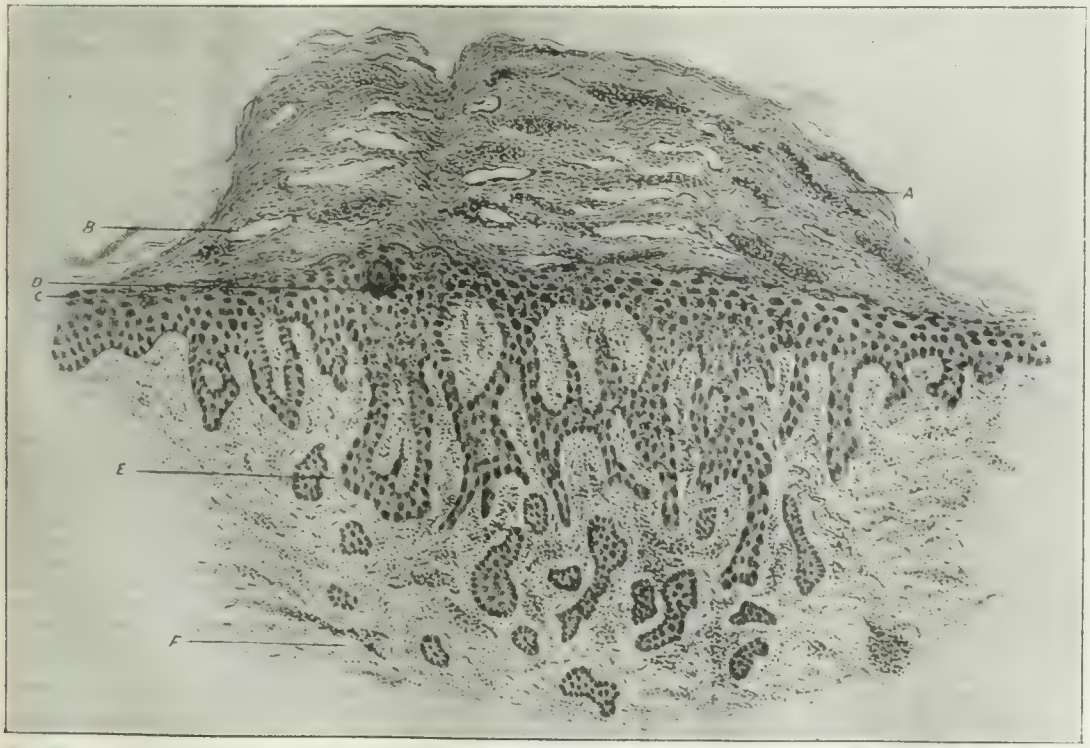

J. MacLeod del.

Fig. 1.—Early squamous lesion of yaws (Leitz obj. I.; Ocular 3). *a*, Stratum corneum. *b*, Granular layer. *c*, Broad layer of epidermis with pigment in and between the cells, which disappears in the affected region. *d*, Papillary body in which the vessels are dilated and there is a cellular infiltration. *e*, Commencing crust formed of lamellæ of partially-cornified cells between which are layers of leucocytes and fibrin. *f*, Dilated vessel with surrounding cellular infiltration. *g*, Coil gland surrounded by infiltration.

The plasma cells were now arranged in diffuse sheets occupying chiefly the papillary and subpapillary regions and thinning down towards the hypoderm.

They were somewhat more thickly clustered around the blood vessels and formed occasional foci in the neighbourhood of the follicles and glands. These cells were not, as a rule, so collected in groups or nodules as they are in the common forms of tuberculosis of the skin, nor were they so definitely clustered around the vessels as usually pertains in syphilis.

The actual type of cell which largely composed the infiltration was, as has already been noted, that which Unna has made so familiar to all workers in dermatology — the plasma cell; and in this granuloma they formed most




J. MacLeod del.

Fig. 2.—Crusted papule or tubercle of yaws (Leitz, obj. I. Ocular 3). *a*, Crust. *b*, Space between partially cornified lamellæ. *c*, Granular layer. *d*, Horny pearl. *e*, Down-growing epithelial processes. *f*, Dilated blood vessels.

perfect examples of the type. They were large oval or polygonal cells whose protoplasm stained readily with alkaline aniline dyes, whose hyaloplasm was slightly granular and which contained a large oval or roundish nucleus situated eccentrically in the cell. A few of these cells were enlarged and presented two nuclei, and these were evidently cells in which the nucleus had divided without a corresponding division of the cellular protoplasm. Scattered among these plasma cells there was a number of small round cells encircled by a slight halo of protoplasm, which were probably the result of the division of the larger mother plasma cells. It was impossible, however, to distinguish many of these small round cells from mononuclear leucocytes. Numerous polynuclear leucocytes were present more or less throughout the infiltration: these were particularly noticeable in consequence of their multiform nuclei and the grotesque shapes which they assumed from their power of amœboid movement. Large connective tissue cells were here and there present, some of which were oval in shape, while others were tapering and spindle-shaped, the former being in reality the nuclei of cells, the protoplasm of which had either remained unstained or had been transformed in the evolution of the fibrous bundle. No newly-formed fibrous tissue could be detected, and there were no spindle cells with long fibrous branches such as can generally be found in syphilis even in the earlier lesions of the disease, and in none of the numerous sections which were examined could evidences of organisation be detected, though probably we might have succeeded in finding them had we had the opportunity of examining lesions which were in the process of involution. At the outskirts of the granuloma and chiefly in the neighbourhood of the vessels, a number of mast cells were detected.

The central portion of the granuloma was supported by a fine network of attenuated collagen and elastin, which nowhere suggested a new formation. The plasma cells seemed to develop at the expense of the fibrous elements, for the more dense the infiltration became the more rarefied was the supporting stroma. The collagenous fibres appeared to split at the edge of the granuloma into their component fibrils, which passed between the cells in a wavy manner. The elastin became split up in a similar manner, but no degenerative products of either collagen or elastin were detected.

The vessels in the midst of the infiltration persisted almost unaffected, while the hair follicles, sebaceous glands and sweat glands were not involved to any marked extent. Large multinuclear cells and typical giant cells with a central homogenisation were not detected in any of the sections, nor were there any traces of intracellular hyalin degeneration.

The secondary changes in the epidermis also became more marked in the grosser lesions. The proliferation of the down-growing interepithelial processes gradually increased until long-growing epithelial taps might be found as far down as the pars reticularis; these gradually formed an irregular epithelial network enclosing islands of the cutis, and suggesting that the latter had been cut off by the junction of the branching epithelial processes, a condition which was in great measure, however, due to the sections having been cut more or less obliquely. Epithelial islands were also present in the corium produced by sections of the epithelial processes. The proliferating epithelium was invariably limited by a distinct basal layer, and reminded one of the condition of the epidermis which pertains in condyloma acuminatum. The epithelium overlying the elongated papillæ was not thickened to any extent, so that the tortuous vessels came very near the surface, and thus the great tendency which the fungating yaw has to bleed was readily explained. In the widened spaces between the prickle cells such large numbers of leucocytes were present as to form a feature in the histological picture. The second important peculiarity in the epidermis, and one which has invariably been noted, was the great activity of the epidermis in the process of cornification. This could not be regarded as a true hyperkeratosis, as, although the horny layer was now enormously thickened, the horny lamellæ were composed of cells in which cornification was not complete, and in which the nuclei could generally be detected. In some situations where the epithelial œdema was less marked, as, for example, at the edges of the tubercle, a more perfect hyperkeratosis was occasionally present, and not infrequently perfect horny plugs might be found passing down into the dilated openings of the follicles, and here and there in the epidermis typical horny pearls were observed, similar to those which characterise the flat epitheliomata.

The state of the transitional layers varied according to the extent of the epithelial œdema, for in those situations where the œdema was at its maximum the granular layer had practically disappeared, while at the edges where the œdema was less pronounced a somewhat thickened granular layer was sometimes noted. The thickened stratum corneum did not form, as a rule, a solid horny mass, but was broken up into lamellæ, between which were layers of leucocytic *débris* and fibrin, and it is these which give to the horny crust in yaws its peculiar, crumbly and cheesy consistence. In all the sections since the preparations were obtained from dark subjects pigment granules were present to a greater or less degree.

These granules of melanin were confined chiefly to the cells and intercellular spaces of the basal layer of the epidermis and those cells immediately overlying them, but they occasionally extended almost as far up as the granular layer. Between the epithelial cells they formed irregular branching figures following the intercellular spaces. They frequently surrounded a leucocyte, and thus suggested a branching cell with a nucleus, and gave rise to the figures which have erroneously been described as "branching pigment cells."

Melanin granules were occasionally present in the connective tissue cells of the papillary layer, and in and between the cells of the prickle-cell layer of the hair follicles.

Towards the centre of the lesions where the epithelial proliferation and granuloma were at their maximum, the pigmentation became diminished or completely disappeared, but at the edges pigment could easily be detected. After healing has occurred in the lesion of yaws the frambœsiform tubercle is replaced by a pigmental macule: unfortunately none of these macules were sent for examination, but Nicholls, who has had an opportunity of examining them, has reported that the increase of pigment chiefly takes place in the lower layers of the epidermis, in the papillary layer and its immediate neighbourhood.

A search for a specific microbe in these sections proved futile. An examination for a new micro-organism in sections of tissue is unsatisfactory at any time, and in the skin this is even more markedly the case.

When we consider the large number of micro-organisms which have been isolated from the normal stratum corneum we get some idea of the difficulties and hopelessness of the task. In fact in dealing with the smaller micro-organisms such as cocci and micro-bacilli a recognition of new types in sections without corroborative cultivation experiments is practically impossible. We had no difficulty in finding micro-organisms in the horny layer in a number of sections which we stained in diverse ways for the purpose, but we only found types which could not be distinguished in their appearance from those which occur in the normal epidermis such as cocci, diplococci, sarcinæ and a few short bacilli. We failed to find the yeast fungus of Powell and without cultivation experiments were unfortunately unable to verify the frambœsiform bacillus of Breda or the micrococcus of Nicholls and Watts.

*Differential Histological Diagnosis.*—Since the essential histological structure in yaws definitely places it in Virchow's group of the infective granulomata, any difficulties which the microscopical appearances may present with regard to differential diagnosis must be chiefly in distinguishing it from the other members of this group. The infective granulomata are histologically so clearly demarcated from the superficial inflammatory conditions of the skin on the one hand, and the so-called neoplasms on the other, that it will be unnecessary to refer to the points of distinction from them, which are generally obvious. From the majority also of the infective granulomata, yaws can be distinguished with almost equal ease.

From the lepromata it may be differentiated by the absence of the characteristic bacillus of "Hansen."

The peculiar architecture of tuberculous lesions in the skin apart from the presence of the tubercle bacillus, generally renders their histological diagnosis from yaws a matter of no great difficulty. In the tuberculous nodule, the

giant-cell formation, the numerous small, round, so-called daughter plasma cells, the almost complete destruction of the fibrous elements, and the disappearance of the blood vessels in the centre of the granuloma render the distinction from yaws, except in a few rare instances, comparatively simple.

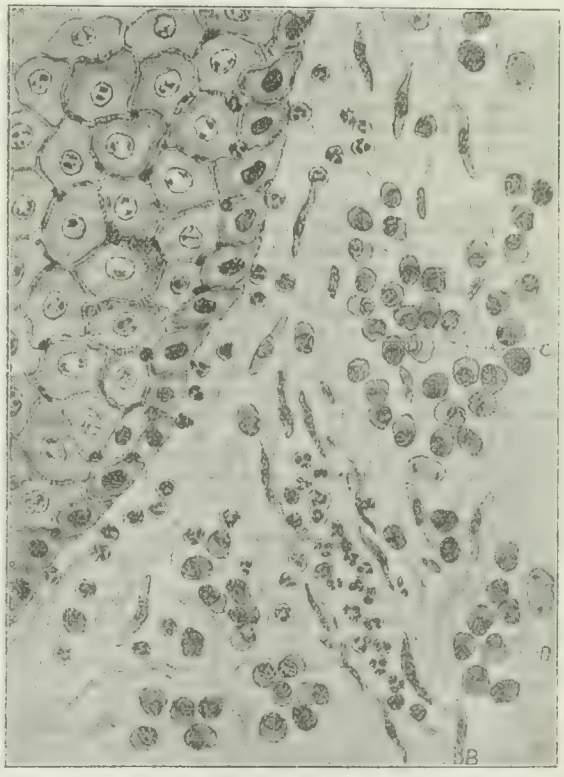
Rhinoscleroma and actinomyosis may be readily differentiated by the presence of their specific micro-organisms. Mycosis fungoides, a granuloma in which, like yaws, a definite micro-organism has not been isolated, may occasionally present some difficulty in this connection, and clinically also, apart from the other circumstances of the case, it may be extremely difficult to distinguish the smaller framboesiform lesions of mycosis fungoides from the raspberry-like fully evolved lesions of yaws. In mycosis fungoides, however, the tendency to what has been called "fragmentation of the cells" in which they become crenated, irregular, and finally break up, and also the rapid destruction of the fibrous elements in the granuloma, heralded by a degeneration of the fibres, in which both the elastin and the collagen attract basic dyes with greater avidity than normal, serve, as a rule, to distinguish it from yaws. The differentiation from the granuloma of syphilis requires an even greater attention to detail than is necessary in the case of the other granulomata which have been mentioned, and sections may be found, though they are in my experience the exception, from which it would have been impossible to venture more than a tentative opinion regarding the diagnosis.

Considering the present hot controversy on the latter subject in its clinical aspects, any light which the histological study of yaws may throw upon it must naturally be of interest. I may definitely state at the outset that after an examination of a very large number of sections of yaws, and a comparison of them with sections of various syphilides, I have come to the conclusion that we are dealing with two types of lesions which are histologically distinct, and that though in the absence of a specific micro-organism having been definitely proved in either case, the histological differentiation may be extremely difficult, and at times practically impossible, still in sections in which the peculiar characteristics of yaws are well marked, it should be no more difficult to differentiate yaws from syphilis histologically than it may be to distinguish between the histological pictures of tuberculosis and syphilis.

I would suggest the following details in the histological architecture of syphilis and yaws, as aids to their differentiation; at the same time I would point out that these details must be considered collectively, as there is no individual characteristic which might not in exceptional circumstances occur in both. Beginning with the essential lesion, namely, the granuloma, we find that in both diseases the plasma cell is the most characteristic type in the infiltration, but that the arrangement of the cells in many instances presents points of difference. In both the plasma cells are at first collected in foci chiefly around the blood vessels; but in yaws they appear to become more rapidly diffused throughout the neighbouring cutis than they do in syphilis.

In syphilis, owing to the persistence for a longer period of the fibrous bundles in an almost healthy state in the granuloma, the plasma cells lying between the bundles frequently tend to become deposited in rows, and this linear arrangement I have rarely noted in yaws.

The plasma cells in yaws form a more diffuse infiltration as a rule, and not nearly so dense a one as that which obtains in the latter stages of syphilis. Occasionally also in syphilis definite grouping of the plasma cells in foci surrounding a more or less perfect giant cell, and even suggesting the architecture of tuberculosis may be detected, while in yaws I have not succeeded in finding a true giant-cell formation, though occasionally the plasma cells in the latter disease, owing to the sluggish division of their protoplasm, might present more than one nucleus. In fact, in yaws the plasma cells appeared to retain their original type better than in any other of the granulomata, and for this reason the granuloma of yaws presents the most perfect example of the so-called plasmomata. In the neighbourhood of the blood vessels numbers of mast cells might usually be detected; these were, however, of no diagnostic value, as they are generally present in similar situations in syphilis. There is another characteristic which is present in syphilis and which was absent in the sections of yaws which I had the opportunity of examining, namely, the tendency which the granuloma of syphilis, especially in the initial and tertiary lesions, has to organise, to, so to speak, show an almost simultaneous development of fibroma and plasmoma. In none of the sections which I examined could I find transitional branching connective tissue cells, but doubtless had one been sufficiently fortunate as to have obtained specimens of the lesion in the process of healing, organisation might have been detected. The white fibrous bundles persist to some extent in the granuloma of yaws, but are much thinned, and this is the case even in the most highly developed lesions. In the latter they form a coarse network, in the meshes of which lie the plasma cells, which are separated by a fine reticulum composed of collagen fibrils. The behaviour of the collagen in syphilis is somewhat similar, though in syphilis it seems the more resistant and organisation may frequently be detected. In no sections of yaws were definite degenerative products of plasma cells, collagen or elastin observed, such as intracellular hyaline degeneration, or the colloidal degeneration of the fibrous stroma which occurs in syphilitic gummata.




*J. MacLeod del.*

Fig. 3.—Commencing granuloma of yaws in the papillary layer; (Leitz obj. oil im. $\frac{1}{12}$ Oc. 4.; *a*, Part of interepithelial process; basal layer complete, prickle cells swollen and œdematous; intercelluar œdema, leucocyte between the prickle cells. *b*. Blood vessel dilated and filled with leucocytes which are extravasating into the corium; *c*, Rarefied fibrous stroma. *d*, Plasma cells.

The blood vessels of the papillary and subpapillary layers of both syphilis and yaws are dilated, but in the former there is frequently a marked proliferation of the walls of the vessels which does not occur to any extent in yaws. In yaws there is, as a rule, a pronounced extravasation of leucocytes around the vessels, extending from them between the cells of the granuloma, gradually reaching the interepithelial lymphatics, and, finally, the stratum corneum, where they become deposited between the lamellæ of that layer; these leucocytes are chiefly of the polynuclear variety. This leucocytic extravasation has been present to a greater or less extent in all the sections of yaws which I have examined, and though it should not be regarded as a necessary

characteristic it is certainly a feature of great constancy. A leucocytic extravasation is also present in syphilis and especially in the pustular syphilides, but it is unusual for it to reach the degree which seems to obtain generally in yaws.

The sebaceous and coil glands are sometimes distinctly enlarged in yaws, but this is a characteristic of no diagnostic value from its inconstancy and from the fact that it may occur in syphilis.

Secondary changes occur in the epidermis in both granulomata, but those of yaws are so much more constant and pronounced that they are of considerable diagnostic moment. In the first place, in yaws there is invariably a more or less marked proliferation of the prickle-cell layer which manifests itself in a downgrowth of the interpapillary epithelial processes. These latter processes may grow down irregularly into the corium, giving in the case of the larger lesions an appearance of an epithelial network, enclosing cut-off islands of the cutis on the one hand, or islands of epithelium surrounded by the cutis on the other. In the condylomata alone of the syphilitic lesions does the epithelial proliferation reach the same degree.

The second important peculiarity in the epidermis in yaws is connected with the process of cornification. This consists in part of a hyperkeratosis, with the formation of horny plugs and the development of horny pearls even deep down in the epidermis, but in the main it is a process of imperfect cornification in which heaped-up masses of defective horny cells are found enclosing layers of leucocytes and leucocytic *débris*. These anomalies in the cornification process occur rarely in syphilitic lesions; they are the exception in syphilis, but the rule in yaws.

### Summary of the Histological Changes which Suggest that Yaws and Syphilis are Different Histological Entities.

(*a*) *Cellular Infiltration.*—The plasma cells are not so definitely clustered around the vessels in yaws as they are in syphilis, nor do they ever form foci suggesting a tuberculous nodule, as they occasionally do in the latter disease. They are seldom arranged in rows, which frequently occurs in syphilis. Large multinuclear cells (chorioplaques) and true giant cells, which may be present in syphilis, are absent. No hyaline degeneration, such as may be found in syphilis, is detected in the plasma cells.

(*b*) *Fibrous Stroma.*—The rarefaction of the collagen is more marked in yaws than in syphilis; organisation is not detected, and colloidal degeneration such as occurs in a syphilitic gumma, is absent.

(*c*) *Blood Vessels.*—There is no tendency to thickening of the vessel wall or to endothelial proliferation, such as so frequently pertains in syphilis.

(*d*) *Epithelium.*—The proliferative changes in the epidermis in yaws are only equalled in syphilis in the condylomata, while the marked tendency of the stratum corneum (hyperkeratosis), which is an invariable characteristic in yaws, is unusual in syphilis.


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### Demonstration.

Sir William Kynsey, in showing a number of plates which the Sydenham Society is publishing of the diseases in Ceylon included under the term "parangi," namely, yaws, a tertiary syphilide (of shoulder), lupus vulgaris, tuberculous osteomyelitis of fingers (dactylitis), with cicatrices of lupoid ulceration on the back of the hands and arms, stated that the term "parangi" was the same as feringee; the Portuguese were known as feringees, and the parangi as the disease of the foreigners or strangers. There is no doubt the word was, and is still, applied by the natives to syphilis, but it also included the diseases enumerated above, and perhaps others.

The best definition of yaws is given by Dr. Nicholls in vol. xvi of the *Twentieth Century Practice of Medicine*, and his able and accurate description of the disease leaves nothing to be desired. I must refer you to to it for fuller information than time permits me to give. I have no hesitation in stating that the yaws of the West Indies is the same disease as the yaws of Ceylon, one of the diseases included under parangi.

I. Why is yaws confounded with syphilis: (*a*) Both are highly contagious diseases. (*b*) In many of the descriptions of yaws the nomenclature of syphilis has been followed, and it has been divided into primary, secondary, tertiary stages, with sequelæ instead of into incubative, febrile and eruptive, and if there are sequelæ they are accidental. (*c*) The condylomata of syphilis are often mistaken for the granulomata of yaws. (*d*) Polyadenitis occurs in both. (*e*) The granulomata of yaws when covered with crusts resemble superficially the rupia of syphilis. (*f*) In many descriptions of yaws, syphilitic lesions are included, and there is no doubt a mixed disease—syphilis and yaws, or lupus and yaws. (*g*) The remedies used in the treatment of yaws and syphilis—mercury and iodides—are the same; both are unnecessary, and often harmful in yaws.

II. The differences between yaws and syphilis are many and essential: (*a*) Histological; these have been given very fully in the able and learned description we have just heard from Dr. MacLeod. Briefly stated "The yaw is more simply constructed than a syphilide. It is a plasmoma of the cutis complicated with epithelial growth and hyperkeratosis. The strawberry appearance after removal of the crust is the result of the great increase of the papillary body, and its thin covering with the suprapapillary prickle layer. The cellular infiltration consists of plasma cells." (Unna.) (*b*) Dr. Charlouis, of Samarang, Java, states: "I have proved by direct experiment that framboesia is not syphilis." (1) A patient who was suffering from framboesia was inoculated on the right breast with the secretion of a hard chancre. At the end of three and a-half months he had a syphilitic eruption over his whole body. The framboesial eruption which he had at the time was not in the least modified by the syphilis. (2) A patient with framboesia over his whole body contracted a hard chancre in the sulcus retroglandularis from sleeping with a woman. The chancre was allowed to run its course without any treatment, it left behind a hard base which ulcerated anew from time to time. After nine weeks there appeared over his body a maculo-papular syphilide with condylomata in the mouth and around the anus (*Vierteljahresschrift für Dermatologie und Syphilis*, viii, 1881, and vol. clxi, New Sydenham Society).

Dr. Powell, of Assam, who has taken much interest in the question of the differential diagnosis of syphilis and yaws, records two similar cases. (*c*) In the early years of the last century yaws prevailed in some of the country districts of Scotland and Ireland. It was one of the diseases included under the term sibbens or sivvens, the other diseases being syphilis and lupus; the framboesia has completely disappeared from Scotland; syphilis and lupus remain. H. F. Autenrieth, M.D., a German physician who travelled in Scotland in 1823, was unable to see a case of recent framboesia, but he saw many cases of syphilis and lupus. In Ireland yaws was described by Dr. (afterwards Sir Dominick) Corrigan as prevailing in some country districts under the name of "Button Scurvy of Ireland" (*London Medical and Surgical Journal*, vol. vii, p. 715, 1835); by Wallace under the name of "a fungous eruption curable by mercury, but not of venereal origin" (*Medico-Chirurgical Transactions*, xiii, p. 469, 1827).

Carmichael, in his lectures on Venereal Diseases (Dublin, 1842, p. 188), gives the differential diagnosis between button scurvy and syphilis. The button scurvy or yaws has disappeared, the syphilis remains. (*d*) Yaws is, in the present day, confined to the tropics. In Ceylon it is a rural disease, and is rarely met with in the towns. Syphilis prevails extensively in the towns, and is not unknown in the country districts. Syphilis is very prevalent among the Indian labourers. I have never seen or heard of a case of yaws among them, because they are not exposed to its contagion. (*e*) It is the opinion of nearly all observers who have seen syphilis and yaws that they are essentially distinct diseases. Professor R. Koch, head of the German Malaria Expedition, states as follows: "Among the many persons pointed out to me as

suffering from syphilis, lupus, and leprosy there were none suffering from any of these diseases. What was mistaken for them was frambœsia, a disease which appears to be very common in Saipan. This malady, called by the English yaws, is extraordinarily widespread in the South Sea. In the Bismarck Archipelago I have seen places in which almost all the children were affected therewith; even the children of Europeans occasionally suffer from it. Very often frambœsia is mistaken by laymen, and even by medical practitioners, for syphilis, and I feel warranted in assuming that the statements as to the great diffusion of syphilis in the South Sea, and particularly in the German colonial region, are based on the confusion of syphilis with frambœsia."[1]

(*f*) The clinical history, evolution of the eruption symptoms, etc., of syphilis and yaws are essentially different. The local lesion of yaws, when present, either acquired by contagion or experimentally inoculated, always shows a soft sore and there is never sclerosis. Charlouis inoculated 49 patients with only 10 failures, the initial lesion was always a soft sore. Paulet inoculated 14, in 4 there was no local lesion, but a general eruption, in others a papule which developed into a granuloma. Nicholls inoculated 8 successfully, in 3 there was no lesion at the site of inoculation, a general eruption followed; in 5 the papule became a granuloma. "A lesion at the point of entrance of the contagion is not necessary and if present is not characteristic" (Nicholls). Uncomplicated yaws is a non-ulcerative disease. Whenever ulceration occurs it is the result of neglect, infection by pyogenic organisms, or the occurrence of the disease in strumous subjects, and sometimes to the abuse of mercury. The eruption may come out in crops and is not polymorphic, the pathognomonic lesion is a granuloma, as a rule painless, and it is always the same throughout the course of the disease whether in the child or adult; the granuloma disappears by absorption and leaves no cicatrix, but a black stain to mark its site. There is frequently intense itching both in papular and granulomatous stages. No matter how long the eruption of yaws lasts the constitution never seriously suffers.

The disease is always limited to the skin and mucous membranes, and never penetrates deeper. In syphilis all the organs of the body may suffer.

It is a disease of childhood, but no age is exempt, the most usual age is from 3 to 15; it is never congenital; one attack is no certain protection against another. The parents of affected children are usually perfectly healthy, and there is no history of previous abortion, alopecia, sore throat or iritis. The nervous system is never affected in yaws.

(*g*) The disease is slowly disappearing in Ceylon, due in part at all events to the supply of good water providing the means for greater cleanliness, better food enabling those attacked to recover more quickly, and better house accommodation preventing overcrowding and lessening the danger of contact of the diseased and healthy.

## THE NATURE OF THE DISEASE KNOWN AS ERYTHEMA INDURATUM SCROFULOSORUM.

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[ABSTRACT.]

DR. WHITFIELD, after alluding to Bazin's original description of the disease as occurring in young girls, proceeded to analyse some of the literature dealing with the pathology of the affection. He pointed out that two opinions, supported by histological findings, had been held. One maintained that the change was a necrosis associated with vascular changes, but with no granuloma resembling tubercle, the other that the disease was the result of a granuloma simulating tubercle if not actually tuberculous, with considerable affection of the vessels. He pointed out that in most cases of the former class the age of the patient was considerably greater than in the latter. Notes of two cases were then given which had recently been under Dr. Whitfield's own care. The first case, which occurred in a girl aged 14 years, proved very obstinate to treatment, and showed a microscopical picture extremely suggestive of tubercle. The other was in a woman, aged 37, which yielded very rapidly to mere rest and elevation of the limb, and showed no structure at all of a granulomatous nature, but merely a phlebitis of small veins. In neither case was tuberculosis obtained by inoculation of a guinea-pig with the diseased tissue, though this had on more than one occasion occurred from cases of the granulomatous class.

He concluded by expressing the opinion that there were at present two diseases described under the same name, one of which was a tuberculosis of very slight severity, while the other had no relation to tuberculosis at all.

[1] BRITISH MEDICAL JOURNAL, Nov. 24th, 1900, p. 1514.

## ON A CASE OF PITYRIASIS RUBRA PILARIS.

By WALLACE BEATTY, M.D.,

Physician to the Adelaide Hospital, Dublin.

JUDGING from the small number of cases of pityriasis rubra pilaris recorded in the English journals, the disease is an exceedingly rare one in England. I have now under my care a case which is the only typical example of the affection which I have met with during my practice in Dublin for the past nineteen years. I have met with one other case which may have been the same disease, but which, as it presented some unusual features, may rather be regarded as an extensive and peculiar variety of lichen. It seems, however, to form, from a clinical point of view, a link between generalised lichen and pityriasis rubra pilaris.

CASE I.—D. K., aged 10, parents of the labouring class and healthy, was first seen by me on March 7th, 1901. His mother stated he had been quite a healthy boy, and except that he had been subject to an eruption (eczema) behind the ears, he had been quite free from any cutaneous affection till January, 1901. On the ninth of that month the boy complained of itchiness of the back and asked his mother to rub it. She then noticed that the skin of the back was red. The next morning there was a copious eruption over his body, which was pronounced by a medical man to be measles; the boy was not sick; the skin after a few days became scaly, the eruption persisted. After some weeks the boy was brought to Dr. O'Sullivan, of Lower Gardiner Street, Dublin, who recognised that the condition of the skin was a rare and peculiar one, and sent him to me. The boy's skin presented a remarkable appearance, the scalp was universally dry and scaly; the scales were abundant and dry like a dry seborrhœa; the forehead, parts of the cheeks, the point of the nose and ears were covered with an extraordinarily thick mass of dry scales; the scaly covering had a greenish-grey colour and was split on the surface into a kind of mosaic, the condition resembled the picture of ichthyosis of the face in Kaposi's *Handatlas*; the skin of parts of the face was soft and natural, but the mother stated that scales had been present on these now unaffected parts, the scales had evidently begun to clear off the face, the body was universally reddened and dry, of a pale pinkish red colour, and beset with small scales, readily loosening and dropping off, thus the floor of the room was strewn with scales when the boy removed his shirt, the lines of the skin were deepened. The appearance was at first sight not unlike a pityriasis rubra, but the redness was not so marked and the scales were mostly small. The extensor aspect of the elbows and knees was thickly covered with scales forming a mosaic. The horny layer of the palms and soles was thickened, cracked, and dry. At this time there were no distinct horny projections to be observed in the hair follicles on the backs of the hands and fingers. The whole surface horny layer there was dry, thickened and scaly. The boy's general health was excellent. I was not at first able to name the disease, which in parts looked like a seborrhœa, in parts like a pityriasis rubra or an ichthyosis, but later I was able to recognise it as a pityriasis rubra pilaris. On May 22nd, 1901, I noted that the case was a typical one of pityriasis rubra pilaris. The scalp under treatment—zinc-ichthyol ointment and ichthyol soap were prescribed for the entire body—was not as copiously covered with scales as at first. The scales which were present on the face had mostly cleared off, except in the seborrhœic regions, namely, the root of the nose, the nasolabial folds and round the mouth. Here were present greyish scales. The body was of a pale red colour, the surface dry and rough, and more or less scaly, the scales small. The lines of the skin were unduly distinct, but one could not observe distinct isolated papules, the whole surface being affected. There were abundant dry scales on the upper part of the intergluteal region and the lower part of the sacrum. The arms were in a somewhat similar condition to the trunk, pale red, the lines of the skin deepened, and the scales pretty abundant. The forearms on the dorsal surface were rough, especially nearly the wrists. Here were numerous follicular elevations due to dry dark horny plugs in the follicles. The backs of the hands showed numerous very small follicular papules, and groups of these papules were present on the dorsal aspect of the first phalanges. The palms were dry and scaly. The outside of the thighs was very rough, and numerous follicular papules were present giving the sensation to the hand, when passed over it, of a nutmeg grater. The condition of the legs was much as elsewhere, pale red and scaly, with deepening of the lines of the skin. There were a few areas in which the skin was smooth and natural. Thus there was an area on the back of each shoulder, and on the back of the thigh. These were recovering parts. A week later (May 31st) I noted that the healing areas had increased in size, and fresh ones had appeared. These areas in which involution had occurred were soft and white and supple. They were situated on the back of the scapulæ, the back of the arms, the thigh and legs. The contrast between the red, dry and slightly squamous diseased

parts, and the white, smooth, soft and supple parts was very remarkable The skin of the front of the neck, a triangular area of skin in the mid-sternal region, and the skin of the dorsal surface of the fore part of the hand, and first phalanges of the fingers, with the exception of the small follicular lesions, had also recovered. I may note that the flexor aspect of the joints, namely, the axillæ, the antecubital region, the genito-crural region and the popliteal space remained affected. In this latter place the follicular papules were hard and file-like. The recovered places were tracts bounded by sinuous borders: on the thighs at the upper part a remarkable figuration was produced. The healed parts looked quite normal, with the exception of a few small follicular lesions here and there. Thus the disease tended to linger longest in the follicles. This could be well observed on the back of the neck; at the upper part of this region where healing had commenced were numerous minute horny papules closely set but with healthy skin between. Lower down on the neck the skin was continuously affected, the follicular papules standing out with some degree of prominence. Professor Alfred Scott made and examined for me sections of a piece of skin excised from the back of the hand. In this piece of the skin were three small follicular lesions with the intervening skin apparently normal. He found the horny layer thickened with horny projections projecting down into the hair follicles, the granular layer thickened; there was a small amount of cellular infiltration in the neighbourhood of the follicles. He found no micro-organisms in the sections.

On reviewing the case one may specially note:—

1. The rapid onset, the body was extensively affected in the course of a few days.
2. The seborrhœic-like condition of the scalp and face.
3. The thick scaly masses on the face early in the case, which cleared off except that in the seborrhœic regions dry grey scales remained behind.
4. The universal redness of the trunk and extremities, the redness being a pale red.
5. The deepening of the lines of the skin and the presence of loose scales on the interlinear reddened spaces.
6. The absence in the early stages of well-defined follicular lesions which later became manifest in certain parts as the general hyperkeratosis lessened; these parts being the back of the first phalanges of the fingers, the dorsum of the hand and of the lower part of forearm, the back of the neck, the outside of the thighs, and the popliteal space.
7. The mode of involution, healthy skin appearing here and there, the healing parts being bounded by sinuous lines.
8. The disease tending to linger longest in the follicles.
9. The absence of pigmentation.
10. The absence of any disturbances of the general health.

CASE II.—B. S., age 10, unmarried, first consulted me in January, 1896. She stated that six years previously she noticed her arms becoming very red, the body, however, remained free until two years ago when groups of pimples appeared on the chest, back, and abdomen; the condition present when I first saw her was as follows: On the prominent parts of the body the parts mainly exposed to friction of the clothes, namely, scapulæ, shoulders, and gluteal regions, the skin was reddened and there were numerous flat partially attached scales which could be easily removed, especially numerous on the shoulders, like a pityriasis rubra, the arms and forearms, thighs and legs, were universally affected with the exception of the flexor aspect of the joints; the skin was of a deep red colour, in places purplish red. On careful inspection, especially with a lens, one observed closely set 1mm. diam. slightly (scarcely) elevated red flat-topped lesions (papules) running in the direction of the lines of the skin, thus running obliquely on the thighs and legs; on the thighs and legs many of the lesions were capped with firm greyish scaly projections; on the legs the redness was with difficulty pressed away, a light brown colour remained, the interscapular regions and the front of the chest were unaffected; the skin here was soft and supple, the skin of the former region was rather greasy, the flexures of the joints were mostly free, also the palms and soles; the palms and soles were, however, dry; the skin of the eyelids was red. I lost sight of the patient after a few weeks' attendance until about May, 1899. The skin had remained affected since her former attendance. A few additional points were, however, then noted.* Her scalp showed a slight dandruff. There was some scaliness of the face—ill-defined squamous seborrhœic patches. The skin of the face had a tightly drawn appearance. There were yellowish-red scaly patches on the eyebrows, eyelids, upper lip and and chin; the redness of the eyelids was intensified by the presence of minute brownish-red spots not disappearing on pressure, apparently minute hæmorrhages. The extremities and the parts of the trunk adjoining the extremities (shoulders, buttocks) were most involved. On the trunk the lesions seemed to be present mostly on the parts subjected to the pressure of the clothes, but this was not invariably the rule. The mucous membranes were unaffected, also all scars. The skin of the extremities was continuously affected with the exception of the flexures of most of the joints, a few small islands on the outer aspect of the arm, the palms and soles. The backs of the hands showed no papules, but the skin was reddened and the natural lines were abnormally marked; on the dorsum of the phalanges the hair follicles were more distinct than usual; on the abdomen there were only a few scattered papules, in the lumbar region a few papules only were present, but round the waist was distinct scaling. The eruption presented the following characters in the different parts. On the neck there was a general reddish yellow tinge slightly scaling and ill-defined, somewhat angular, flat-topped shiny papules, 1 to 2 mm. in diameter, running in circular lines. On the trunk the affected parts were more of a reddish beet-root colour, with some scaliness, particularly on the right breast. The papules here were not well defined: they were shiny and flat and angular, and ran in somewhat irregular curved lines, giving rather a mottled appearance to the skin in parts. Over the shoulders the papules ran very distinctly in the lines of the skin. On the arms the lines of the skin were exceedingly well marked and bounded the papules. The general health was all along excellent, and there was scarcely any itchiness. Dr. Walter Smith had the patient under his care subsequently, in Sir Patrick Dun's Hospital, and succeeded in bringing about a vast improvement in her condition.

* Notes taken for me by Dr. Eva Massy.

I regarded the case at the time as a peculiar form of lichen planus for the following reasons:

1. The papules, very small, were angular at the base and flat-topped.
2. They were bounded by the lines of the skin.
3. Histologically, there was a cellular infiltration in the upper part of the corium, and a few small horny taps were observed. The portion of the skin examined was taken from the arm. (The histological appearances resembled those described and figured by Taylor, of New York, in his cases of lichen ruber, namely, thickened horny layer, stratum lucidum distinct, thickened granular layer, wandering cells in the epidermis, a fairly abundant cellular infiltration of the upper part of the cutis, the cells varying in size.) But I noted the following peculiarities:
1. The affection was one in which in the main the continuous tracts were affected.
2. There was present a good deal of scaliness. The scales were abundant on the shoulder. They were small, dry, and easily detached.
3. The flexures were mostly spared, and the interscapular and intermammary regions—the sweating regions escaped.
4. The chronicity.
5. The absence of all constitutional symptoms.

On further consideration I came to regard the condition as a peculiar form of pityriasis rubra pilaris, the general redness and dryness with deepening of the lines of the skin, the scaliness, scales small and easily detached, and the fact that the hair follicles on the back of the fingers were unduly prominent though they were no distinct horny papules, were suggestive of the disease; but if its chronicity and the peculiar freedom of most of the flexures and the central parts of the trunk are sufficient to negative the diagnosis, one must call it a chronic lichen resembling pityriasis rubra pilaris and forming a kind of connecting link between the two affections.

The relationship of the lichens and pityriasis rubra pilaris has already been ably elaborated by Besnier and Düring and others. I do not propose to raise a discussion on this relationship, but shall as briefly as I can state my own limited experience and the view which this experience has led me to hold.

1. Lichen planus is not very commonly met with in Dublin: however, I have seen a good number of cases: the majority of these showed localised and very limited disease. In such cases of lichen planus, while the majority of the lesions were typical in shape, yet there were usually papules present of a round shape and convex surface.

2. I have seen very few cases of generalised lichen, and never a case with a fatal termination. In one of these cases there had been for years on the leg a local patch o lichen planus. A generalised lichen developed: the body became thickly covered with papules, some typical plane ones, others rounded and convex: there was intense itching, and slight constitutional trouble. Here was a generalised lichen developed out of a localised chronic lichen planus.

3. My first cases resemble in nearly all the details Taylor's cases reported by him as lichen rubra in the *New York Medical Journal*, Jan., 1899. He figures the follicular lesions on the back of the hands so characteristic of pityriasis rubra pilaris. Pigmentation, however, followed the disappearance of the eruption in his case: there has been no pigmentation in mine. Taylor made no allusion to pityriasis rubra pilaris. Perhaps the presence of pigmentation during involution stamps the disease as a lichen rather than the other, though his cases are generally regarded, I believe, as examples of pityriasis rubra pilaris.

4. The histological characters of pityriasis rubra pilaris bear a close resemblance to those of lichen in the presence of thickening of the horny layer and of the granular layer, and in the presence of horny projections into the hair follicles and the occurrence of a superficial cellular infiltration of the cutis, and might justify one in regarding pityriasis rubra

pilaris as a special variety of lichen, but there appear to be histological differences sufficiently distinctive between the two diseases which v. Düring and Unna insist upon. I regret I have not had an opportunity of reading Besnier's monograph. Among others the fact that the papules of lichen are more dermic, those of pityriasis rubra pilaris more epidermic, and that the cellular infiltration of the superficial part of the cutis is, in lichen, made up mainly of small (inflammatory) cells, in pityriasis rubra pilaris largely of spindle and plasma cells.

5. All considered I am disposed to believe that there are two distinct diseases to be separated from each other—lichen and pityriasis rubra pilaris. That lichen varies in different cases in extent, distribution, and in the shape and arrangement of its elementary lesions, and in the presence or absence of constitutional symptoms. When localised, these papules are mostly of the shape and character described by Erasmus Wilson; when generalised, they vary in shape. Lichen when generalised may give rise to nervous symptoms. Lichen ruber of different writers is either a general form of lichen or pityriasis rubra pilaris. The clinical and the histological features of pityriasis rubra pilaris are sufficiently distinctive to mark it out as a disease different from lichen.

6. Of course, lichen pilaris and lichen scrofulosorum are different diseases from true lichen and should not bear its name.

7. The connection between seborrhœa and pityriasis rubra pilaris deserves some consideration, most cases of pityriasis rubra pilaris showing a seborrhœic condition of the scalp and face. What the relationship is, is at present a mystery.

## ON A CASE OF PARAKERATOSIS VARIEGATA.

BY

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Within recent years a number of cases of psoriasiform and lichen-like eruptions have been reported, chiefly on the Continent, which do not conform to any of the ordinary recognised types.

The cases of parakeratosis variegata belong to this category. Since our case is, as far as we know, the first which has been definitely recognised in London, we considered that a clinical and histological description of it and a reference to the subject of these eruptions in general might be of interest, to you, and might at the same time prove of some value in helping to reduce order out of the present chaotic state of the subject, which has been, to a large extent, the result of the complicated nomenclature with which it is associated.

### Description of the Case.

Arthur P., aged 36, of medium height, a native of Newcastle, has been working in London for fifteen years as a compositor. He came to Westminster Hospital on November 7th, 1900, suffering from a chronic, finely scaly, almost universal dermatitis.[1]

In neither the family history nor the past personal history were there any facts which had an important bearing on the condition of the patient's skin.

*History of the Skin Disease.*—Five and a-half years ago—in May, 1895—while the patient was busy at work, he noticed that the skin of the lumbar region had become peculiarly dry and somewhat scaly. The affected area was well circumscribed, and according to the patient's statement was covered with "a white crust," which made the patch feel raised above the level of the surrounding skin. The crust cracked readily from the friction of his clothes and tended to desquamate in fine powdery scales like a "white flour." When the crust came off in this manner it left the skin red and glossy, but without any tendency to bleed. The patient was not aware of the existence of the skin disease till the patch had reached the size of the palm of his hand. His attention was first attracted to it, not by any irritation or itching produced by it, but simply because when stooping at his work the affected skin felt stiff and tended to crack. A short time after this the patient was conscious that the palms of his hands had become affected in a somewhat similar manner. He noted that the skin there had become dry and hard, and, as he described it, "had become covered with a casement" which greatly interfered with his work of setting up type, making his hands stiff and difficult to open, and taking away the fine sense of touch which is so essential for a compositor. Cracks made their appearance in the thickened skin of the palms, but these did not bleed, nor did the skin feel itchy.

The affection of the back and palms had thus come on, according to the patient's story, rapidly, without premonitory symptoms. In spite of the implication of his hands the patient was able to continue his occupation. This dry and scaly condition of the skin gradually spread from the back and the palms of the hands over other parts of the skin, until by the winter of 1895-96 the patient felt that he was "cased in all over with a hard, dry skin." He felt that the skin of his arms had become stiff and tight as if it was too small for the surface it had to cover, that the palms of his hands were hard and "like rock," and that his sense of touch was much dulled. The soles of his feet were hard and caked like the palms of the hands, and the skin of the whole body, with the exception of that of the face, was affected to a greater or less degree. The face was practically free with the exception of a slight scaliness about the eyelashes, and a dryness behind the ears. The scalp was scurfy, and the hair tended to fall out, but the nails were unaffected. The mucosa of the mouth did not seem to be implicated, and caused no subjective symptoms. The patient was frequently constipated at this time, but his general health was otherwise perfect. He noted that the scales were small and brittle and came off easily, except on the palms and soles, leaving the skin red, but he also observed that redness of the skin invariably preceded the formation of scales. The patient at this time consulted a doctor, who diagnosed the condition as sclerodermia, and treated him off and on for three years with a brown mixture for the constipation, a white ointment to rub on, a special soap, and Turkish baths. The patient derived considerable benefit from the Turkish baths, and the cracking feeling disappeared from the skin of his back. He was, however, dissatisfied with his progress, and in consequence went to a hospital for skin diseases, where the affection was diagnosed as eczema, and treated for six months without apparent benefit. Nine months ago he became an out-patient at another hospital for skin diseases, where the condition was diagnosed as eczema rubrum. A brownish-yellow ointment was prescribed, and thyroid tabloids to be taken, one each day for a month. The tabloids caused severe headache, with a tight sensation at the top of the head, and made the patient highly nervous: in consequence of these disagreeable symptoms the thyroid treatment had to be discontinued. The patient had also tar baths. He did not, according to his statement, improve to any appreciable extent, and he next sought advice at the Westminster Hospital.

*Present Condition.*—The patient looks fairly healthy. He eats and sleeps well. He has a glass of beer each day and an occasional whisky "peg," but has never been intemperate. He is intelligent, active, and presents no neurotic symptoms. He is married, and has three healthy children. His general health is unexceptionable. A physical examination of his chest reveals no abnormal signs, and his urine is that of a healthy man. The patient does not readily perspire. His whole skin, with the exception of that of his face, is more or less affected with a reddish mottled finely scaly dermatitis, which presents a characteristic appearance, but which it is almost impossible to adequately describe.

*Trunk.*—The skin of the trunk exhibits a yellowish-red mottling, produced by a hyperæmia in the form of a patchy network enclosing areas of only slightly reddened skin. The meshes are comparatively regular in size, averaging 2 to 3 mm. in diameter, and are polygonal and irregular in shape. The hyperæmic threads of the network average about 1 mm. in breadth, but are sometimes almost as broad as the meshes. Pressure with the diascope reduces the hyperæmia, but does not wholly obliterate the network. This is due to the fact that the network is produced by the coalescence of numerous reddish-yellow, occasionally brick-coloured macules or slightly raised papules covered with fine scales, and it is impossible to wholly obliterate these by the instrument. It reminds one of the retiform patterning which may be seen in erythema (ephelis) ab igne on the shins, in copious eruptions of the macular syphilide, in the pigmentary syphilide of the neck, and on the limbs of fat babies exposed to cold. If to a retiform patterning such as these there be added a superficial inflammatory condition affecting the meshwork but not the enclosed meshes, accompanied by the formation of macules, and flat papules covered with fine scales, the peculiar picture which this dermatitis presented might be suggested. On the back and abdomen it is more difficult to distinguish a network, and the mottling is far more irregular, coarser and more patchy than on the chest and about the shoulders. The degree of scaliness also varies considerably on the trunk, but is invariably less definite and far more insignificant than in psoriasis, nor does it evidence a tendency to be heaped up as in the latter disease, and the scales are rather more adherent.

*Arms.*—On the arms the colour of the dermatitis is more vivid than on the trunk, and on the backs of the forearms and hands it has a slightly purplish tinge, due to the influence of a weak peripheral circulation and a venous congestion. On the extensor aspect of the arms the network is coarser and more patchy, papular elements can more easily be found, and the scaliness is more prominent. These papules are angular in shape as a rule, flat-topped, and occasionally they are shiny and milky so as to remind one of lichen planus papules. The skin of the palms of the hands and also of the flexor aspect of the elbows is thickened and furrowed, presenting in the latter situation transverse grooves like those found in chronic eczema. The skin of the palms though thickened and stiff is not scaly. The nails appeared to be perfectly healthy.

*Legs.*—The legs are affected with an efflorescence similar to that on the abdomen, but in the extensor aspects slightly raised papules can more easily be detected than on any other part of the skin. On the dorsa of the feet a fine desquamation is present, and the skin is not so red as elsewhere. The skin of the plantar aspects is slightly thickened and scaly. The penis is not affected.

*Face.*—The skin of the face is redder in colour than is usual, but shows no mottling, papules, or scales. The conjunctivæ are inflamed, but this is due to previous stoppage of a lachrymal duct and to a long standing conjunctivitis.

*Scalp.*—The scalp is scurfy, and presents a number of greasy crusts, but is not reddened.

*Treatment.*—The local treatment adopted since he has been under observation at Westminster Hospital has been simply dabbing the skin with ol. carbolatum (1 in 40), soda baths, rubbing on vaseline to keep down the tendency to scaling, and the application of a cream of glycerine of starch and zinc ointment to the palms of the hands where the skin felt stiff and hot and was slightly thickened. Internally, however, thyroid powders were prescribed, and this time with no unpleasant symptoms, and he fancies that they had to some extent benefited him. We began with a 5 grain dose, twice daily, last November, and increased it to 7 grains, three times daily, in January, and to 10 grains, three times daily, in May, 1901. He tolerated the thyroid treatment excellently, but we have been able to detect no very marked improvement. The efflorescence is

certainly less vivid in colour, but the scaling tendency persists and all the mottling and other characteristics are much *in statu quo*. He stated that before he came to Westminster Hospital he had noted at periods remissions and exacerbations in the course of the disease. We have had him under observation now for six months, and up to the present we have been unable to certify to any definite remission, or to the appearance of further groups of fresh lesions, and have been struck by the persistent stereotyped characteristics of the case.

*Synopsis of the Case.*—(1) The patient was a healthy adult male, aged 36, a compositor by trade, with a good family history, and no personal history of intemperance, tuberculosis, or syphilis.

(2) At the age of 31 a circumscribed red patch, covered with fine scales, appeared on the skin of the lumbar region, which caused no subjective symptoms, with the exception of cracking on bending.

(3) About the same time the skin of the palms became thickened and the sense of touch dulled.

(4) In six months the patient says he was "eased all over, except on the face, with a hard, dry skin."

(5) The face was not affected, the scalp was scurfy and the hair fell out to some extent, but the nails were healthy.

(6) This condition of the skin had persisted in spite of treatment with thyroid extract, tar baths, and other local applications for five years practically *in statu quo*, and the general health had not been interfered with.

(7) The efflorescence consisted of a hyperæmic mottling in the form of a network, the threads of which were made up of macules and slightly raised papules covered with scales. There was a hyperkeratosis of the palms, and, to a less extent, of the soles.

*Histological Examination.*—The patient fortunately consented to have a biopsy performed, and for the purpose of examination a small, apparently fresh lesion was chosen. A very slightly raised papule, 4 mm. by 2 mm. in size, with an angular outline, was excised from the outer aspect of the right thigh of the patient. The papule before excision was reddish-violet in tinge, and presented a smooth surface with a slight tendency to scaliness, chiefly at the margins; it was connected with similar lesions by the fine, reddish network, which is so characteristic of the disease. This lesion was chosen as it appeared to be the prevailing type of lesion, which resembled a very flat lichen planus papule surmounted by a fine scale. The excision was made sufficiently beyond the lesion to avoid damaging it in the process of removal.

The tissue was fixed and hardened in alcohol, imbedded and cut in paraffin, and stained by a number of methods to determine the changes which had taken place in the epidermis and the corium.

Figure I (shown) gives a fairly accurate representation of one of the sections, stained with borax methylene blue, as it appeared with a low power. The central portion of the section corresponds to the papule; to the left of it there is little or no affection of the skin, but to the right there are evident changes. It will be noted at the outset that the central part instead of being slightly raised is slightly depressed, but this is easily explained by the fact that the raising was evidently due to an œdema of the cutis immediately underlying the epidermis, which naturally disappeared after excision, and was not the result of a permanent hyperplasia of tissue elements.

Let us consider first the changes which occurred in the corium. There the most noticeable features were a dilatation of the sub-epidermal capillaries, an infiltration of small cells in the neighbourhood of these dilated vessels, a rarefication and œdema of the fibrous bundles in the neighbourhood, and a flattening and almost complete disappearance of the papillary body.

The superficial capillaries alone were implicated, while those of the pars reticularis seemed perfectly healthy. The dilatation, though perfectly pronounced, was not nearly so excessive as in psoriasis, and suggested more closely the amount of dilatation which may be met with in a recent papule of seborrhœic eczema. On examining the vessels with a high power one could detect no endothelial proliferation nor increase of the connective-tissue cells of the tunica extima. The change seemed to be a simple dilatation, such as might be produced by a stasis in the capillaries.

But around these dilated vessels there was a pronounced œdema of the fibrous stroma. The spaces between the collagenous bundles were markedly dilated. The collagen itself seemed moist, mushy, structureless, and stained faintly, and was broken up here and there into fine fibres. It did not give the staining reactions suggestive of a basophilic degeneration. Only here and there on the affected area a connective tissue nucleus could be seen still adherent to its bundle. The elastin showed changes somewhat parallel with those of the collagen, but it seemed more resistant. It was soft, and instead of appearing after staining as dark brown well-defined wavy branching threads, it presented a fainter pinkish-brown tinge, was swollen, and more indefinite. The elastin did not give the reaction of elastin degeneration, and probably the fluid bathing it prevented its staining well. Immediately beneath the subepidermal layer the collagen and elastin were healthy in structure and stained normally. Around the dilated capillaries and filling the rarefied œdematous meshes of the fibrous stroma there was a rich infiltration of small cells.

In Figure II (shown) this infiltration is represented by a high power. It consisted of cells the size of lymphocytes, with here and there polynuclear cells; but the cells suggesting lymphocytes greatly predominated. No plasma cells were found, and we did not observe a single mast cell. It was impossible to be dogmatic about the nature of these cells when we remember that Unna has asserted that the cells, precisely similar to the majority of these, which occur in psoriasis, are of connective tissue origin. Since, however, we were able to detect no proliferation of endothelium or extima of the blood vessels, but simply an œdema and its consequences, we were inclined to regard the infiltration provisionally as mainly composed of leucocytes.

As we have already observed, the papillary layer was practically non-existent. In the sections the line between the epidermis and cutis was only slightly undulating. When we considered the amount of œdema present in the subepidermal layer, and also the œdema and softness of the overlying epidermis, and the pressure which must have been exerted by the œdematous papillæ on the soft and pliable epidermis, the explanation of this flattening became very apparent. But in our preparations there was more than a flattening of the papillary body; there was an œdematous implication of the basal layer extending up through the epidermis, and in the papule itself the lower margin of the epidermis was so blurred that in places it was difficult to tell where the epidermis ended and the cutis began. This difficulty was greatly increased by the extension of the small-cell infiltration between the prickle cells of the epidermis.

*Changes in the Epidermis.*—The stratum Malpighii over the cellular infiltration was definitely thinned. The basal layer was broken up by the advancing œdema. The prickle cells were swollen and stained faintly. In many of the cells the nuclear spaces were greatly dilated, and the nuclei appeared in some instances to be lying free in the dilated spaces.

Occasionally a leucocyte appeared in the space. In the cells where the spaces were large the protoplasm of the cell was distended and formed a thin ring round it, and this sometimes gave way to form a communication with the intercellular spaces, and hence the presence of the leucocytes in the former situation. For although the nuclear space appeared to be definitely circumscribed by a halo of protoplasm in the section, there was no reason for not presuming a connection with an interepithelial space in another plane. The nuclei themselves seemed much more resistant to the action of the œdematous fluid than the cell bodies. The chromatic network stained deeply, and the nuclear membrane and nucleoli were everywhere defined. Any shrinkage and irregularity of the nuclei might be reasonably explained by the process of hardening.

In one or two instances, the nuclei of the basal layer, in spite of the œdema affecting them, were evidently mitosing, and mitotic figures were detected. Considering the condition of the epidermis it was not thought necessary to excise another papule and fix specially in Flemming's solution for the detection of mitosing nuclei. But the fact of a mitosing nucleus being present in a markedly œdematous basal layer showed the enormous degree of resistance possessed by the nuclei and their great vitality. The interepithelial spaces were everywhere dilated and the prickles stretched, but here, again, the prickles seemed to be able to resist the degree of œdema present and did not give way; consequently no intercellular vesicular formation occurred. In the dilated interepithelial spaces a number of leucocytes had made their way; these were squeezed into various shapes. We say leucocytes, in this connection, advisedly, because, though the interepithelial œdema was considerable, it was insufficient to allow small connective tissue cells, which did not possess the power of amœboid movement, to be washed in between the prickle-cells.

The condition of the granular layer was an important feature in the preparations; it was diminished in some situations, occasionally absent, but well defined elsewhere, and it was present over the centre of the papule. The nuclear spaces of the granular cells were greatly swollen, like those of the prickle cells, and the cells themselves were larger than usual, owing to the œdema. We were struck by the fact that the granular layer had not completely disappeared over such an œdematous Malpighian layer. At first we were unable to detect any pronounced defect in the process of cornification, but since we reported the case we have in one or other sections found a few cornified cells here and there in which the nuclei persisted (parakeratosis). But nowhere in our preparations have we found deficiency of cornification to be such a marked feature as to warrant the christening of our case a "parakeratosis." Where the granular layer was well preserved the stratum corneum, though showing a tendency to desquamate, was also well formed. We were not able to define a stratum lucidum. Doubtless, the scaliness was due to a greater cohesion of more pliable soft horn cells than is usual, and these, instead of drying and coming off singly, adhered and desquamated in lamellæ. Where the stratum granulosum was non-existent the overlying horn cells were imperfectly cornified and preserved the remains of their nuclei.

The histological appearances presented by the horn cells in section were verified by staining the individual cells after maceration in hydrogen peroxide.[2] The horn cells were found to be much swollen, extremely difficult to separate by maceration, the prickles in some of the cells were less shrunken than is usual, and in a number of the cells the remains of nuclei could be detected.

*Summary of the Histological Changes.*—(1) Dilatation of the subepidermal capillaries.
(2) Flattening of the papillary body.
(3) Œdema affecting the fibrous stroma near the dilated vessels.
(4) Œdema and rarefication of the collagen; stains badly.
(5) Elastin does not stain well.
(6) Infiltration of small cells like lymphocytes with a few polynuclear leucocytes among them. Neither plasma cells nor mast cells found.
(7) Thinning of the overlying epidermis.
(8) Interepithelial œdema and presence of leucocytes.
(9) Dilatation of the nuclear spaces.
(10) Œdema of the granular cells, occasional absence of them.
(11) No stratum lucidum detected.
(12) Stratum corneum showing tendency to desquamate.
(13) Only here and there could imperfectly cornified cells be found retaining nuclear remains.
(14) Where these latter cells were present the granular layer was deficient.

## Reported Cases of Parakeratosis Variegata and other Allied Skin Affections.

The first cases to which the name of "parakeratosis variegata" was given were described by Unna, Santi, and Pollitzer in 1890, though cases of the same dermatitis had evidently been observed before, since there is in Tilbury Fox's *Atlas of Skin Diseases*, 1877, an illustration in which the features of our case are reproduced in a striking manner. It was drawn from a Baretta model placed by Erasmus Wilson in the Museum of the Royal College of Surgeons, and

the original is in the Museum of the Hôpital St. Louis, labelled "lichen ruber—tronc, Lailler, 1871." The patient was under the care of Lailler, who termed the affection pityriasis rubra. E. Wilson (Lectures on Dermatology, p. 63, 1873) designates it as a lichen planus retiformis. In the descriptive catalogue of the dermatological collections (models and casts) contained in the Museum of the Royal College of Surgeons, 3rd edition, 1895, the model is numbered 88, and named "lichen planus, var. retiformis." The editors say: "It is difficult to see on what ground Erasmus Wilson considered this to be lichen planus; it seems more probable that Lailler, under whose care the patient was treated, was right in regarding it as a variety of pityriasis rubra." Dr. Radcliffe Crocker has since pointed out to us that the case was certainly parakeratosis variegata.

Since 1890 several instances of the disease have been recorded. At the meeting of this Association in Edinburgh in 1898, Dr. Allan Jamieson exhibited three doubtful cases. These were doubtful in so far that the exhibitor and several other dermatalogists present regarded them as examples of an anomalous type of lichen planus, while Unna identified them as excellent examples of parakeratosis variegata. During the last session of the Dermatological Society of London, besides our case, Dr. Radcliffe Crocker exhibited two undoubted cases of this affection. In addition to the cases which may be definitely labelled parakeratosis variegata, a number of anomalous cases presenting closely similar characteristics have been reported on the Continent.

Brocq has described a case of what he called "erythrodermie pityriasique en plaques disseminées," and two other cases similar to Brocq's have been reported by White of Boston. These cases differed so slightly from P. variegata in their histology and clinical appearances, except in the arrangement of the initial lesions, that we might venture so far, in spite of minor differences, as to regard them as variants of the same species.

At the Fourth German Dermatological Congress Jadassohn showed a patient who presented a "peculiar psoriasiform and lichenoid eruption," the description of which case suggested that it formed a connecting link between psoriasis and P. variegata. Juliusberg has also described an affection of the skin closely related to this disease under the heading of "pityriasis lichenoides chronica," and this condition, of which seven cases have altogether been reported, Neisser has christened the "lichenoid and psoriasiform exanthem."

### Differential Diagnosis.

We have now to consider briefly the differential diagnosis of our case of parakeratosis variegata from other dermatoses to which it bears a clinical or histological resemblance. First of these we have to distinguish it from psoriasis, and we must frankly confess that, being unfamiliar with Unna's cases, and only having seen Jamieson's three doubtful cases at Edinburgh, we had some little difficulty on first seeing this case of distinguishing it from a widely-distributed old-standing case of psoriasis in a state of involution. Of course, there was no difficulty in recognising it from a typical case of psoriasis, for the seats of election of that disease were not more involved than other situations, and the scalp, which is so commonly affected in psoriasis, and is practically invariably so in a severe case, was free of the disease. We have to consider, however, more particularly the points of distinction which were here present which served to differentiate it from an involuting generalised psoriasis. In the first place we have the peculiar retiform appearance of this dermatitis which is replaced in psoriasis by a more uniform redness. Here we had to deal with macules and papules forming the initial lesions which were tolerably uniform in size, resembling lichen planus papules in shape but differing from them in being scaly. In psoriasis of the guttate type small lesions undoubtedly exist, but in an old case large patches are almost invariably present.

The scales in our case were yellowish-white and powdery, and had not the silvery appearance of psoriasis scales, and on being scratched off no bleeding occurred. The duration and course of the disease was also against psoriasis, since for five years, except for slight exacerbations and remissions, according to the patient's statement, it had persisted in spite of almost continuous treatment very much *in statu quo*. This dermatitis also seemed extremely resistant to treatment. We have not been able to ascertain the precise treatment which was adopted previously to his coming to Westminster Hospital, except in so far that he tells us that he has had a variety of ointments, tar baths, and thyroid tabloids, but without any appreciable benefit. Subjective symptoms were wholly absent, which is not the case in a severe psoriasis.

Histologically it was distinguished from psoriasis by the comparatively slight vascular dilatation, the absence of epithelial proliferation, the presence of a granular layer, the slight amount or total absence of "parakeratosis," and the absence of those small collections of leucocytes between the lamellæ of the stratum corneum which are so characteristic of psoriasis.

We have next to consider the question of diagnosis from a universal chronic lichen planus. In the latter condition the marbled variegated appearance is absent, the infiltration is greater, verrucose patches are generally present on the shins, and subjective symptoms are decidedly evident (severe irritation of the skin and other nervous disturbances), and on microscopical examination there is a proliferative activity of the epithelium in lichen planus.

The condition of the skin did not suggest an eczema in any sense of the term. At no period in its course was it ever vesicular, nor did the scales resemble the oily scales of eczema seborrhœicum. Under the microscope, however, except that the interepithelial œdema never reached the stage of vesiculation, and there was no epithelial proliferation, the section showed more resemblance to some we have seen of very chronic eczema than they did to psoriasis.

It was distinguished from exfoliative dermatitis, whether that be regarded as a special disease or, as secondary to some other dermatitis, by the marbling, and by the absence of severe subjective disturbances, and of implication of either the hair or the nails.

From the other diseases which Unna includes under the heading of the "parakeratoses," such as ichthyosis, pityriasis rosea, trichophytia, etc., the differential diagnosis was obvious.

To "erythrodermie pityriasique en plaques disseminées" (Brocq), except in so far that instead of efflorescing in disseminated plaques it formed a meshwork, the resemblance in almost every detail was so striking as to show that the two conditions were closely allied to one another, and Brocq considered that both belonged to the same group. Jadassohn's "peculiar psoriasiform and lichenoid exanthem," though resembling it in the general description of the initial lesions differed in that the lesions in Jadassohn's case easily bled on being scratched, and were not arranged in a reticulate manner. We have already described Jadassohn's case histologically as a connecting link between psoriasis and parakeratosis variegata.

The pityriasis lichenoides chronica of Juliusberg, the lichenoid and psoriasiform exanthem of Neisser, and the dermatitis psoriasiformis nodularis of Jadassohn all presented the same resistance to external remedies, the same absence of marked subjective symptoms, and much the same clinical appearances and microscopical details in the initial lesions as parakeratosis variegata. They further resembled the latter disease in the regions of the skin affected, though they differed with regard to the distribution of the lesions.

### General Discussion of the Case.

Have we then in "parakeratosis variegata" a special entity, or are we dealing after all with an anomalous type of psoriasis, lichen planus, or other recognised dermatitis? Clinically our answer to this question can be perfectly definite, for the naked-eye appearances are so peculiar and characteristic as to distinguish it from any other forms of dermatitis with which we are familiar. But histologically, although there are certain uniform pathological changes, he would be a bold expert who, from an examination of sections alone with no previous knowledge of the case, would venture an unqualified diagnosis of parakeratosis variegata. On the other hand, from a histological examination alone, it should be possible to refer it to the group of diseases we have just been discussing, of which Brocq's "erythrodermie pityriasique" might be taken as the type, and to distinguish it from psoriasis, eczema, or lichen planus. There is a marked

similarity running through every member of this group when examined histologically. In all of them there is a superficial inflammation practically confined to the papillary and subpapillary layers, with dilatation of the capillaries, œdema, and cellular infiltration, an interepithelial œdema, and a defective type of cornification, not so advanced as is usual in either psoriasis or eczema, but sufficient to cause the horn-cells to adhere together and to form scales. The prickle cells show a parenchymatous œdema, with here and there dilatation of the nuclear spaces, but this never advances sufficiently to cause the *altération cavitaire* of Leloir and the formation of a parenchymatous vesicle; nor was the interepithelial fluid in sufficient quantity to separate the prickle cells till their connecting bridges are ruptured, and so form a vesicle in that manner. The interepithelial fluid seems to possess no poisonous properties which could by a process of necrosis cause a destruction of the cells and their uniting filaments, and the actual prickle cells appear to be comparatively healthy in spite of the œdema. The histological appearances in our case suggested not so much an epithelial œdema produced by a positive chemiotaxis engendered by the irritant properties of micro-organisms on the surface, as an œdema which was due to a vasomotor disturbance in the superficial blood vessels. The fact that the condition was clinically most marked in the regions where stasis was liable to occur, such as the acroteric regions, and that in our case there was distinct evidence of a feeble peripheral circulation, would lend colour to this hypothesis. This might also in some measure explain the peculiar resistance to local treatment, for here reducing agents, keratolytics and germicides, though they are distinctly indicated where we have a presumptive parasitic cause, or where proliferation of the epithelium is the most pronounced feature of the disease, would naturally be useless if the dermatitis were secondary to changes occurring in the blood vessels accompanied by œdema.

We have in parakeratosis variegata one of the members of a group of diseases for which we have not yet got a generic name. It is true that they might all come under the heading of "parakeratoses" in the wider sense of Unna, but they present such definite clinical and histological peculiarities of their own, distinguishing them from the other members of the group and associating them together, that they deserve a more specific title, and we might suggest as a provisional clinical heading for the group the following:—

*Resistant Maculo-Papular Scaly Erythrodermias.*

And include under that heading:—

(1) Erythrodermie pityriasique en plaques disseminées (Brocq).
(2) Dermatitis psoriasiformis nodularis (Jadassohn).
(3) Pityriasis lichenoides chronica (Juliusberg).
(4) Lichenoid psoriasiform exanthem (Neisser).
(5) Parakeratosis variegata.

These conditions are all closely allied, and differ in little else, either clinically or histologically, than in the grouping and general arrangement of the initial lesions in the skin.

Conclusions.

(1) Parakeratosis variegata is a clinical entity.

(2) It attacks chiefly the male sex, usually occurs in adult life, and the patients are generally in robust health when attacked by it. We know little of its etiology, through from its general configuration and histology it suggests a vasomotor disturbance associated with œdema and infiltration of cells in the corium and secondary changes in the epidermis.

(3) The initial lesion is a macule, or a maculo-papule of small size, flat on the surface, and covered with a fine adherent scale, which may be scratched off without causing bleeding.

(4) By the coalescence of the lesions a peculiar retiform arrangement results, in which areas of normal skin are enclosed, and which, combined with differences in the colour of the lesions in the more dependent parts of the body, produces the marbled or variegated appearance, which is one of the most pronounced characteristics of the dermatitis.

(5) It affects the skin almost universally, except as a rule that of the face, scalp, palms, and soles.

(6) It is subject to remissions and exacerbations, but is peculiarly chronic in its course.

(7) Marked subjective symptoms are singularly absent.

(8) It is strangely resistant to local treatment.

(9) It consists histologically of a superficial inflammation affecting the subepidermal layer with dilation of vessels, œdema, and infiltration of cells; and an œdematous condition of the epidermis with more or less defect in the process of cornification.

(10) It may be regarded as belonging to a group of superficial inflammations of the corium, with secondary changes in the epidermis which we have provisionally entitled "resistant maculo-papular scaly erythrodermias," which might include besides this variety, erythrodermie pityriasique en plaques disseminées (Brocq), pityriasis lichenoides chronica (Juliusberg), dermatitis psoriasiformis nodularis (Jadassohn), and the lichenoid psoriasiform exanthem (Neisser).

N.B.—Microscopical sections and diagrams of the case were exhibited at the meeting.

Notes and References.

[1] This case was shown by Dr. Colcott Fox at the Dermatological Society of London on November 14th, 1900, and microscopical preparations from it were exhibited by Dr. MacLeod at the January meeting of the same Society. (Vide *British Journal of Dermatology.*, 1901, p. 6, s, 53.) [2] For a description of the above method, *vide British Journal of Dermatology.*, 1899, vol. xi. p. 157.

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## SOME POINTS IN THE MANAGEMENT OF ECZEMA.

By Henry Waldo, M.D., M.R.C.P.,
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Eczema should always be treated, and no attention should be paid to the doubts expressed by some as to injurious constitutional effects arising as a consequence of its cure, these are relics of the ignorance of the Middle Ages. To keep the part affected scrupulously clean would seem to be an important point. And especially is this the case if it be true that the majority of cases of eczema depend upon the action of micro-organisms. Kaposi, however, is not of this opinion, as he says that it is of the utmost importance to realise the fact that the basis of eczema is inflammation of the superficial layer of the skin, and that the various lesions occurring in its course—papules, vesicles, crusts, etc.—are merely the outcome of such inflammation. And, furthermore, he says that eczema may be provoked at will in any part of the skin of any person by mechanical, chemical, or thermal stimuli. And he considers that this fact is strongly opposed to the theories of the parasitic origin of the disease. Nevertheless the eczematous part must be washed in some way. For although no single parasite has yet been recognised as present in all forms of the disease and as capable of inducing eczema when intentionally transmitted from one individual to another, yet a large number of micro-organisms can always be recognised upon an eczematous surface. Neither plain water nor soap, however, must be used. The harm done in many cases by using water is by allowing it to evaporate and so to produce cold, the resisting power of the tissues being at a low ebb. But it sometimes seems under any circumstances to act as an irritant and it is a safer plan to cleanse the part with rain water with the juice of bran, or starch or boiled oatmeal once every twenty-four hours. Immediate drying with a soft towel is recommended. The addition of a drachm of bicarbonate or biborate of soda to the pint is useful if there is much exudation in the form of crust. Some antiseptic fluid may also be added with advantage. This washing should be undertaken by an attendant, as an important point in treating eczema is to ensure rest to the part. The sound parts of the skin should be washed daily with soap and water. By doing so the eczematous surface is much benefited. If an eczema is present on both arms or both legs and it is decided to apply different applications to each limb it must not be taken as a test of the relative value of the two agents, as one side always responds to a successful treatment of the other. It follows that a very important point is to clean and polish the general surface of the body which is not the seat of disease, and so to take this sympathetic relation of the two sides of the body into account.

The eczematous surface should always be protected by some application. I do not think the kind of application is so important as the protection of the part. If the attack is acute apply soothing remedies. If stimulating applications are indicated paint them on once or twice a day only. In the local treatment of chronic eczema begin by removing all crusts. When much exudation is present an oily covering acts well in removing it. If a parasiticide is thought necessary it must be one that does not irritate. To a wet eczema it is often better to apply lotions as in this way the local remedy is enabled to come into close contact with the living tissues.

I have purposely spoken of local treatment first because it is considered to be by far the most important. But internal treatment must not be ignored. As Bulkley says:[1] "No one can rightly deny the power of micro-organisms to produce disease, for the results of aseptic surgery are incontrovertible, but there is great danger in connection with diseases of the skin lest local pathology lead to a neglect of the more important consideration of the soil on which the germs flourish." A striking illustration, he thinks, of the bearing of this remark is found in the change of opinion which has come over the medical world in regard to the relative importance of attention to the microbe in tuberculosis, as compared with the more important elements of the nutrition and hygienic condition of the patient. He thinks this points once more to the wisdom of the precept that it is often the patient who is to be treated rather than the disease by a specific name. Bulkley advocates the taking of milk in eczema, especially in neurotic eczema, and says the results will often be very striking. He considers it very important that the milk should be taken between meals. I have ordered warm milk for years in suitable cases, but I consider it should always be taken with meals. The stomach requires rest, and the only thing permissible between meals, in my opinion, is water. Singularly enough Hutchinson some years ago thought that milk produced eczema. In many cases of eczema I find blue pill very useful. Aperients play an important part in the internal treatment of many cases, and especially is this the case if the local disease is due to gout. This influence in eczema has been strongly contested by some authors; but Hyde, of Chicago, says the importance of gout as a factor, at least in eczema of the genital region, scarcely can be overestimated. Quinine is sometimes valuable as, in addition to its other qualities, it has some control over pruritus.

If auto-intoxication is suspected I know of no better intestinal antiseptic than benzo-naphthol, which is odourless and tasteless.

Alcoholic beverages often aggravate eczema if it is at all acute. But in its chronic forms Dr. Pye-Smith considers that red wine taken with meals, and still more often porter, or, if this is not well borne, one of the lighter kinds of ale, is not only harmless but useful. He also says that for the marasmus we sometimes see along with general eczema in young children there is no drug so valuable as brandy. I think all alcohols increase the itching which is often such a troublesome symptom. The majority of writers consider that alcohol if taken at all in any stage of eczema should be taken most sparingly.

In some forms of eczema a microbicide taken internally appears to assist in the treatment. Salicin is sometimes given with this idea.

The effect of diet upon eczema has been much discussed. Dr. Pye-Smith considers that "dieting" has been carried to an extreme and often a ridiculous minuteness. He believes excessive quantity of food and imperfect mastication are much more important causes of illness than special quality. He thinks that what most people eat is for most people wholesome, and what a natural appetite finds appetising seldom disagrees. He further says that some kinds of eczema are certainly better for restriction of animal diet. I believe with dietetics as with drugs the idiosyncrosy of the individual is a real and perplexing difficulty. As Dr. Walter Smith says: In very many cases an intelligent and temperate patient knows, or ought to know, better than his doctor what suits him and what aggravates his complaint. Sir Wm. Roberts's rule of conduct is worth remembering, namely, it may be regarded as certain that any food, or food accessory, the use of which is followed by a sense of discomfort, is not beneficial to that individual.

It is a rule among dermatologists to discourage patients from going to the sea when their eczema is at all acute, and I think it is generally a good rule. Hyde, of Chicago, says, as a rule, a residence in countries lying near the seashore is favourable for persons who have contracted an eczema in the inland territories, as the climate of the seaboard is greatly influenced by proximity to the ocean. He also thinks the Alps, in Switzerland, furnish climatic conditions unfavourable for eczematous subjects in consequence of the attenuation of the air, and the direct action of the sun upon the skin.

The clothing of the eczematous patient is a matter of great importance. Woollen underclothing may be too irritating, and it is often well to advise silk, muslin, or linen undergarments be worn next the skin. These are the chief points which have occurred to me in the management of eczema.

REFERENCE.
[1] *Journal of the American Medical Association*, March 30th, 1901.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

### CASE OF PRIMARY CHANCRE OF THE TONSIL: PROBABLE INFECTION FROM A TONSILLOTOME.

The following case is instructive as illustrating the great importance of sterilising surgical instruments before use, and is also of interest as an example of a comparatively rare affection.

A. W. S., aged 28, attended the Central London Throat, Nose, and Ear Hospital in January, complaining of "sore throat" of about a month's duration. Over two months previously he had both faucial tonsils removed at a hospital in London, in consequence of having repeatedly suffered from attacks of tonsillitis during the preceding four or five years. Two tonsillotomes were used at the operation, the first of which the patient saw taken out of the steriliser where it had been boiled; the second, a smaller instrument, which was used to remove a part of the left tonsil which had escaped the larger tonsillotome, was taken out of a drawer and used without being first sterilised, according to the patient's statement.

About three weeks or a month after this operation the throat became "sore," particularly on the left side, and on looking at his throat in a mirror he saw a "whitish spot" on the left tonsil.

He consulted a doctor, who prescribed medicine and a gargle, which were used for two or three weeks: but, as the throat felt no better, he applied for advice at the Central Throat, Nose, and Ear Hospital.

Examination then showed swelling and redness with slight erosion of the left tonsil region; the adjacent faucial pillars, soft palate, and uvula (and less so the corresponding right side of the throat) being covered with mucous patches. The left tonsil was slightly indurated, and the left submaxillary lymphatic glands were enlarged. The skin rash was very slight, and there was no falling of the hair noticeable to the patient. There was no sore on the penis or on any other part of the body.

My diagnosis was primary chancre of the left tonsil, with commencing secondary lesions, and this opinion was confirmed by several of my hospital colleagues.

The treatment prescribed was: (1) Liq. hydrarg. perchlor. ℥j, pot. iodid. gr.v, t.d.s.: (2) a mouth wash of lotio nigra, half strength: (3) lozenges, each containing ½ gr. of grey powder: (4) a pigment of iodine and carbolic acid, of each gr.iv to the ℥j. Alcohol and smoking were prohibited. He began to improve from the first day he commenced this treatment; in a week all soreness of the throat had gone, and in little over two weeks there was no trace of mucous patches to be seen in the throat. He has continued well ever since, and is still, of course, under treatment.

Peter H. Abercrombie, M.D.,
Assistant-Surgeon, Central London Throat, Nose, and Ear Hospital.
Harley Street, W.

## A CASE OF ACUTE PUERPERAL SEPSIS TREATED WITH ANTISTREPTOCOCCUS SERUM: RECOVERY.

ON May 29th, 1901, at 10 P.M., Mrs. C., aged 36, was delivered of her seventh child, which was premature (six months). On the 30th at 5 A.M. I was called to see her. She said she "felt" the child (which I did not see) a few hours before its birth and also that the labour was "short and easy." One vaginal examination was made by a nurse previous to the birth. The patient complained of abdominal pain and tenderness. The discharge was foul. Temperature 102°F., pulse 105. She was douched (creolin) and given a hypodermic of morphine (gr. ¼). On the 31st the pain and tenderness continued. Temperature 102° F., pulse 110. Brandy and quinine were ordered. On June 1st she was much worse, the pain and tenderness were great, and there was a swelling in the right side, also the right leg was swollen. The discharge, which was very offensive and scanty, contained pieces of placenta. Temperature 103.5° F., pulse 130. She was douched three times a day. On this date a soap-and-water enema was given. On the morning of the 2nd her condition was very grave. Temperature 104°F., pulse 130. The pain seemed less, but the tenderness and swelling were marked. An injection of 10 c.cm. of antistreptococcus serum was given. In the evening the temperature rose to 104.5°F. Next morning the temperature being 102°F., pulse 115, another injection of 10 c.cm. antistreptococcus serum was given. On the morning of the 4th the temperature was 101°F., the swelling and tenderness had decreased, but in the evening the temperature reached 103°F., when a third injection of 10 c.cm. of antistreptococcus serum was given. On the morning of the 5th the temperature was down to 100°F., pulse 105. From this date the patient slowly but steadily improved, the thermometer never registering higher than 100°F., except on the evening of the 7th, when the temperature reached 101°F. This was overcome by a dose of castor oil.

The injection of antistreptococcus serum which was given between the scapulæ was followed by no unpleasant symptoms, and to it I attribute the patient's recovery.

Ballindine, co. Mayo. M. F. HESSION, L.R.C.P. & S.I.

## A CASE OF FOREIGN BODY IN THE LARYNX: TRACHEOTOMY.

MONTEQUELA, a Kaffir girl, 5 years old, from Teteleku's kraal, Zwaartkop, was brought to me on Saturday afternoon, July 31st, 1897. Her parents stated she had swallowed a bead two days previously. The child was hoarse, and had a paroxysmal cough, and they said she had had several severe fits of coughing in the night. On making an examination with the laryngoscope the bead could be seen below the vocal cords: it only came into view when the child coughed violently. It was afterwards found to measure § in. in diameter, and was apparently too large to pass down into the trachea, and could not be expelled by coughing. Attempts to extract the bead by means of forceps through the mouth having failed, after a consultation with Dr. Buntine, it was decided to perform tracheotomy.

On Sunday morning, August 1st, Dr. Buntine again examined the child's larynx, and was able to see the bead, although it did not come so well into view as on the previous day. There was considerable congestion of the laryngeal mucous membrane, and the parents stated that she had several severe fits of coughing during the night.

Tracheotomy was performed at 12.30 P.M., the cricoid and upper two tracheal rings being divided. Chloroform was administered by Dr. Buntine. A No. 13 *bougie à boule* was passed up from the wound through the larynx, and pushed out the bead which the child unfortunately swallowed. A Bryant's tracheotomy tube was left in the trachea, and a few catgut stitches inserted above and below to draw the skin together. The next day a Morrant Baker's indiarubber tube was put in the trachea instead of the silver one, and a dose of castor oil administered. Temperature, 101°.

Tuesday, August 3rd. The child passed a good night. Temperature, 99°. The bowels acted during the night, and the bead was recovered from the motions. Tracheotomy tube left out to-day.

Monday, August 9th. Child was taken home to-day by its parents. Wound healed, no cough or hoarseness. Voice normal.

REMARKS.—In cases of foreign body in the air-passages, it is best to remove at once if possible, and not to wait for natural expulsion. The late Arthur Durham collected and classified 636 cases in Holmes's *System of Surgery*, vol. i, p. 765. In 298 cases in which the expulsion of the foreign body was left to Nature, aided in a few cases by emetics, the death-rate was 40.94 per cent., whilst in 338 cases in which operative measures were adopted, the death-rate was 23.08 per cent. The operative measures adopted in those 338 cases were—extraction through the mouth, 9; inversion of body and succussion, 15; laryngotomy and laryngo-tracheotomy, 51; tracheotomy, 263. Cases in which death and expulsion followed immediately after the accident are excluded from this list.

Out of 212 cases of tracheotomy for foreign bodies in the air passages 157 recovered, and in all of these the foreign body was expelled or removed; out of 55 of these 212 cases in which death occurred, in 48 the foreign body was retained till death in spite of the operation of tracheotomy having been performed. Of those cases in which it was possible to remove the foreign body only 7 proved fatal.

From these statistics it is clear, therefore, that operative measures give the patient the best chance of recovery, and the moral is plain—that a foreign body in the air passages should be removed as soon as possible. In some cases the surgeon has been greatly assisted in locating a foreign body by the aid of the *x* rays, and skiagraphy should never be omitted in cases where one is unable to see the foreign body with the laryngoscope.

O. J. CURRIE, M.B.Lond., M.R.C.S.Eng.

Maritzburg, Natal.

## STRANGULATED EPIPLOCELE, GIVING RISE TO SYMPTOMS OF BOWEL OBSTRUCTION.

As this condition seems more or less unaccountable, perhaps a report of a case might be of interest.

On Thursday, August 1st, I operated, with the assistance of Dr. Weldon, on Mrs. T. who was suffering from complete constipation, stercoraceous vomiting, suppression of urine, with tympanitic distension, and slight pains over the abdomen. There was an inguinal hernia on left side which I found to contain nothing but strangulated omentum. This I returned into the abdomen, having relieved the constriction; I ligatured the neck of the sac, the body of which I removed, and then closed the ring and wound. The patient made an uninterrupted recovery, vomiting ceasing at once, and the bowels moved spontaneously the fourth day. One thing very striking about the case was that the patient suffered practically no pain.

Gorey, Ireland. FRANCIS NOLANS, F.R.C.S.I.

## A CASE OF PUERPERAL ECLAMPSIA (ALBUMINURIC) TREATED BY MORPHINE.

ON June 29th of this year I was asked to see Mrs. R. with a view to making an engagement to attend her in her first confinement, expected in about one month. She expressed herself as perfectly well, but she had great œdema of the feet and legs, and some of the hands and face. She was passing very little urine. The urine (drawn off by catheter) contained nearly half a column of albumen. There had been no pain, headache, affection of vision, or *malaise*.

On July 5th Dr. Purslow, of Birmingham, saw her with me. She was ordered absolute rest in bed, milk diet, and diuretics.

The next morning I was sent for at 6 A.M. Labour had commenced, the os being slightly dilated. I ordered her chloral hydrate, gr. x, every hour. At 10 A.M. I was sent for. She had just had a convulsion, from which I found her recovered. As the os was now well dilated I sent for my partner to give chloroform. The patient became violently convulsed immediately after his arrival. Chloroform was at once administered, when the convulsion ceased, and I ruptured the membranes, and delivered quickly with forceps. One stitch had to be put into the perineum. The child (whose heart sounds had been clearly heard the previous day) was born dead, much cyanosed. It appeared to be about an eight-

months fœtus, which was in accordance with the mother's calculation. On coming round Mrs. R. was comfortable but appeared dazed. Perfect quiet, a darkened room, and strict milk diet were ordered and persisted in for some days.

At 4 P.M. on the same day I was sent for, and found the patient just recovering from a convulsion. I gave her ⅓ gr. morphin. sulph. hypodermically, and left ⅓ gr. to be given under the tongue if again convulsed. At 6.30 P.M. she had a very slight convulsion and was given the morphine. At 9 P.M. there was another convulsion. I saw her at 10.30 P.M., and while in the room she had a slight convulsion. I gave her another ⅓ gr. morphine hypodermically. This was the last convulsion she had. It was very noticeable that slight disturbances, such as the effort to put on a binder, brought on convulsions.

The next day pulv. jalap. co. gr. xl was administered in the morning and a simple enema at night, which acted freely. The further progress of the case was uneventful. She at once began to pass urine freely. On the 17th it was nearly, and by the 22nd quite, free from albumen. Considerable excitability, mental dulness, and twitchings of the hands, etc., persisted for a few days after parturition.

On the 29th, three weeks after her confinement, the patient was downstairs and apparently perfectly well.

The interest of the case lies in the fact that ⅝ gr. morphine, the total quantity used, stopped the convulsions, and had no unfavourable effect on diuresis. Considered in connection with other cases similarly treated, as published in the British Medical Journal some three months ago, the treatment by morphine seems to promise very highly.

Selly Oak. A. G. C. Irvine.

## BISMUTH SUBNITRATE AS A DRESSING FOR WOUNDS.

In the Epitome of the British Medical Journal of July 20th, there is an extract from a communication by Mühlig to the *Münch. med. Woch.*, April 9th, 1901, as to the safety of the application of bismuth subnitrate to external wounds.

I have lately had two cases of carbuncle in the thigh, which shelled out in less than forty-eight hours (without incision) by the use of the carbolic spray for five minutes by the watch night and morning, leaving deep but perfectly healthy wounds. In the latter of these two cases the wound was covered with a powder consisting of iodoform, bismuth subnitrate, salol, and cinchona, in equal parts under a dry dressing. The wound was uncovered after four days, and was found to have filled up with healthy granulations. It was redressed with the same powder, and again looked at in four days. I was surprised to find it covered round the edges with a thick white substance, and the granulations were all white-tipped. There was a deep-red areola round the wound merging into another of a dark blue-grey extending to the breadth of about three inches. My patient remarked, "How blue it looks!" I agreed, and was puzzled at the same time. Finding this white substance did not come off under the usual spraying, I scraped it off. Not satisfied with the dressing, and having nothing else handy, I strapped the wound. The blue areola had disappeared next day. Under the strapping the wound healed up in a week.

My experience may be useful to others at a nonplus to account for the blue look of a wound dressed with a powder containing bismuth subnitrate, and acknowledging my indebtedness to Mühlig for the explanation, I pass it on.

My patient showed no other evidence of bismuth toxæmia, which is due no doubt to the smallness of the wound exposed to its influence.

Funchal, Madeira. Rowley Conolly, M.R.C.S.

## PUERPERAL FEVER IN MARES AND ITS POSSIBLE CONVEYANCE TO WOMEN.

Some months ago I was engaged to attend a lady whose confinement was expected to take place early in May of this year. She resides at a farm where a large amount of horse-breeding is carried on each year. Early last April several of the mares cast their foals (aborted), and became ill with a condition, which upon making inquiries from the veterinary surgeon in attendance, appeared to correspond to puerperal fever in the human being. There was high fever, and profuse fœtid purulent discharge from the uterus, followed in some cases by purulent metastatic deposits in the lungs, joints, and other tissues. The stables were within a hundred yards of the house, and various articles used in attending the mares—such as rugs, buckets, etc.—had been frequently brought into the house. There was abundant proof that the condition was very highly infectious amongst puerperal mares, and the point arose as to whether it would be safe for the lady to be confined at home. Following my advice, she went away to some distance, and had an uncomplicated labour, and convalescence. In the books upon the subject to which I have access, there is no mention of the possibility of the conveyance of puerperal infection from animals to the human being, and the matter appears to me to open an important field for investigation. It seems possible that some of the very obscure cases of puerperal infection, for which after most searching investigation, no cause can be found, are due to infection from domestic animals.

Chester. Wm. A. Newall, M.D., Ch.B.Vict.

# REPORTS
ON
# MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

## BRIDGWATER INFIRMARY.

CASE OF RUPTURED BLADDER: OPERATION: RECOVERY.

(By R. H. F. Routh, L.R.C.P., M.R.C.S., Surgeon to the Infirmary.)

The patient, a man aged 34, was admitted to the infirmary at 10.30 P.M. on December 5th, 1900, complaining of inability to pass water.

*History.*—He was sent in with a history of having been kicked in the abdomen on the previous day, while under the influence of drink. He last made water at 4 P.M. on December 4th. The injury caused him much pain at the time, but this soon passed off. At about 9 P.M. on that day he felt a desire to micturate, but could not, and a little blood escaped from penis.

*State on Examination.*—On examination, thirty hours after injury, there was found dulness up to the umbilicus, pain on palpation, and a little swelling in the abdomen, but none in the perineum. A full-sized soft indiarubber catheter was passed, with no result save that a little blood was found in the end of the catheter. The temperature was 99.2°F., pulse 108. Calomel, gr. v, and a soap-and-water enema were administered, and a hot hip-bath and turpentine stupes ordered.

*Progress.*—On December 6th, eight hours after admission and thirty-eight after the injury, 10 ounces of boracic lotion were injected into the bladder but did not return. He complained of tenderness over pubes. There was no sickness, but he was inclined to doze. The bowels acted once. He was sweating; his temperature was 99.4°, and his pulse 106.

*Operation.*—At 4.30 P.M. the patient was put under ether, and a vertical incision three inches long was made above the pubes in the middle line. The bladder was easily reached, and by injecting warm boracic lotion *per urethram* it was seen that there was a small round hole on the anterior and upper surface of the bladder. This appeared to pass upwards beneath the peritoneum, which was stripped off by the operator, and it was then seen that the round hole was only one end of a linear tear extending 1¼ inch upwards. After thoroughly cleansing the abdominal and bladder cavities with boracic lotion, the mucous membrane was stitched with continuous catgut suture and the muscular coat with interrupted; the external wound was closed, and a soft indiarubber catheter tied into urethra.

*After-Progress.*—That night at 8 o'clock some bleeding was seen at the lower angle of the wound, where a small vessel had been twisted; the dressings were removed and the wound covered with boracic lint dipped in compound tincture of benzoin. There was no recurrence. The patient was given *per rectum* Liebig's extract ℥ iij, brandy ℥ j, milk ℥ j, yolk of egg ℥ j, and was fed on beef juice, cream, and barley water.

December 7th. Since the operation 36 ounces of urine had escaped. The temperature was 99.2°. The tongue was coated with a thin white fur. There was no pain, and he felt very comfortable, but thirsty. The pulse was good. The urine was acid and contained blood. The patient has had brandy ℥iv, milk ℥47, beef tea ℥xj. The catheter came out this evening and was replaced with stitches.

On December 8th there was no hæmorrhage, and he seemed quite comfortable, without pain or sickness. He was sleepy and thirsty. The bowels were opened twice. His temperature was 98.6°, pulse 99. Sixty-one ounces of urine escaped. A mixture of benzoic acid and buchu was given every four hours, and the bladder was washed out with quinine once and with boracic acid once.

On December 10th the patient was fairly well. He was taking nourishment well. The bladder was washed out twice. The urine was alkaline and mixed with small clots. The bowels opened five times. The temperature was 100°.

On December 11th the condition was much the same. To-day some swelling on the left side of the scrotum appeared, obviously emphysematous. This was punctured and gas escaped, the swelling subsiding. He was thirsty and sweating freely. The temperature was 101°. The quantity of urine was 54½ ounces.

On December 12th the patient was not so well; he had been sick. The penis and the right side of the scrotum were emphysematous and were punctured. Burning pain was felt in the abdomen, which was much distended. The temperature was 101.4°. The wound was inflamed and the patient was much depressed. The quantity of urine was 50 ounces.

On December 14th the end of the incision was open and sloughing, with a free discharge of pus. It was dressed frequently with iodoform and blue gauze. A tube 6 in. long was inserted. The genitals were still swollen. The quantity of urine was 29 ounces. The temperature was 100.6°.

On December 15th the wound was gaping, with a purulent discharge. The quantity of urine was 40 ounces. The temperature was 100.4°, and the pulse 100.

On December 16th the whole wound was sloughing. The patient was placed on his side. The urine (15 ounces) had a specific gravity of 1010, and was alkaline and contained albumen but no blood. His temperature was 99.4°.

On December 17th the wound was looking better; there was free drainage. The pulse was 116; the temperature was 99.2° and the quantity of urine 41 ounces.

On December 19th a tube was inserted into the bladder. The patient said he felt all right, but he was much thinner. He was feeding well. His temperature was 98.4°, and the quantity of his urine was 31 ounces.

On December 21st the wound was granulating; the edge of the bladder wound being continuous with the abdominal wall. He was passing less urine. His temperature was normal.

On December 25th the incision was nearly healed. He passed urine freely through a catheter, but involuntarily.

On December 28th he was improving rapidly. The pulse and temperature were normal.

January 14th, 1901. During the past fortnight the patient continued to improve. The abdominal wound was quite closed. To-day a wooden plug was tied into the end of the catheter, which was removed every three hours.

On January 19th the patient expressed a desire to pass water, and did so voluntarily. The urine was slightly purulent, with specific gravity 1020, and acid.

On January 22nd the catheter was withdrawn entirely, and the patient passed water unaided, 49 ounces in quantity.

On February 22nd the patient went out for 15 minutes, and on the 26th was discharged well. The urine was acid, with a specific gravity of 1022, and contained urates.

REMARKS.—The interesting points to observe were that he had actually passed water one hour before the injury, so that the bladder could not have been much distended; (2) the long; time passed previous to seeking admission to the hospital (3) the fact that blood kept oozing all that time from the urethra rather suggested laceration of that structure; (4) that the round hole in the bladder extended upwards beneath the peritoneum, which had not been torn nor stripped off; (5) and lastly, the steady recovery he made from the third day after the abdominal wound opened. To the house-surgeon, Dr. Jubb, I am indebted for these notes.

# REVIEWS.

## SKIN AND VENEREAL DISEASES.

THE monograph on *Leprosy*[1] from the pen of the Professor of Pathology in the University of Bucharest forms part of Nothnagel's encyclopædic *Handbuch*. Professor BABES has for many years been known as an original investigator of the pathology and bacteriology of leprosy. Moreover, as the disease is endemic in Roumania, he has had ample opportunities for pursuing his study of the matter in all its aspects; and, taking the book as a whole, the author may be congratulated on having successfully grappled with a big subject, and having given us a complete and fair survey, without sacrificing the individual note which reveals the man who has thought for himself. All through the monograph all opinions are fairly stated and sifted. On the question of contagiousness, the author, whilst admitting that much remains to be done, concludes that the facts taken as a whole point to the spread of leprosy by contagion. The chapters on the bacillus and pathology are very exhaustive and complete, as was to be expected, but the same care and thoroughness has been bestowed on the other portions of the work, such as the historical survey, geographical distribution, symptoms, diagnosis, treatment, prophylaxis, and so forth. Here and there some statements of minor importance might be singled out for criticism, but as they do not detract from the value of the book as a whole they need not be insisted on. The numerous illustrations will be found useful. Eight of the ten plates are in colours. They are all, with the exception of one, of clinical interest, and include four radiographs of the changes in the bones of the hands and feet. There is a map of the geographical distribution of leprosy, with a special map of Roumania, and a fair index.

The last volume of *Selected Essays and Monographs from Foreign Sources*[2] issued by the New Sydenham Society is devoted to syphilis and dermatology. Dr. von Marschalko's statistical study of tertiary syphilis, in which he discusses the influence of mercurial treatment upon the development of tertiary symptoms leads him to the conclusion that the omission or inadequacy of mercurial treatment in the early stages is the chief determining factor in the development of tertiary symptoms. This view is supported by the results of Dr. Ehler's statistics of some 1,500 cases of tertiary syphilis. Dr. Marschalko insists also on the importance of mercury in the treatment of tertiary manifestations. The part played by syphilis in the production of locomotor ataxy is carefully and impartially considered by Professor Erb, his conclusion being that in the majority of cases tabes is undoubtedly a result of syphilis. Erb admits that further research is necessary to clear up the matter completely. His remarks on treatment will well repay perusal, although as is too well known the results have not been at all encouraging. Dr. Lasch's paper on icterus syphiliticus precox touches on a phase of syphilis which has received little attention. The table of 49 cases which accompanies this contribution should prove of service to future investigations. In his notes of syphilis and general paralysis in Iceland, Dr. Ehlers disposes of the views which have been held with regard to the disease in that island. On the other hand, general paralysis appears to be extremely rare, and three instances only are referred to. The interesting paper by Professor Alfred Fournier on recurring syphilitic roseolas also touches on a symptom rarely observed. The syphilitic nature of these rashes, which often appear as erythematous rings, sometimes of large diameter, may be readily overlooked. The paper on drug rashes by Professor Jadassohn deals with some interesting points, especially the relative susceptibility of the skin and mucous membranes to iodoform. Much importance is rightly attached to idiosyncrasy, but nothing is said of faulty elimination due to renal or cardiac disease. The volume contains other interesting papers, but there is no index. There are a few errors, such as Banereau for Bassereau, half-viur for half-vinr (Icelandic for

[1] *Die Lepra* [Leprosy]. Von Victor Babes. Vienna: A. Hölder. 1901. (Roy. 8vo, pp. 338, 66 illustrations, 10 plates. M. 10.60.)

[2] *Selected Essays and Monographs from Foreign Sources*. By various authors. London: New Sydenham Society. 1900. (Demy 8vo, pp. 305, 4 illustrations.) The annual subscription to the New Sydenham Society is £1 1s. Agent: Mr. H. K. Lewis, 136, Gower Street, W.C.

half-friend, Danish ven=friend). As to the translations, they are at times more literal than idiomatic.

Professor Lesser has edited a volume on Skin and Venereal Diseases,[3] which forms one of a series of encyclopædias devoted to special branches of medicine, and has succeeded in producing a work which should prove valuable as a guide and useful for ready reference. He has been fortunate in securing the services of a number of well-known authorities and competent writers. It is not possible in this place to give a complete list, but the following may be mentioned to show that the subjects have been entrusted to able hands: Professor Caspary of Königsberg, Finger of Vienna, Anovski of Prague, Neisser of Breslau, von Petersen of St. Petersburg, Rille of Innsbruck, Veiel of Canstatt, Welander of Stockholm, Wolff of Strassburg, von Zeissl of Vienna, and others. The numerous articles vary greatly in length and quality. Many are very full, such as those on eczema, leprosy, diseases of the nails, syphilis of the brain, etc. In only three or four cases is a bibliography appended, so that the text is not overburdened with references. The strictly dermatological contributions deal with the symptoms, diagnosis, etiology, and treatment of the various diseases much in the same way as obtains in English books, prominence being of course given to German views. As a rule they are well arranged and succinct. The articles on therapeutical methods and the numerous drugs employed are very complete, whilst those on the anatomy and physiology of the skin contain many details of interest. The account of leprosy is a good survey of a complicated subject. Basing the opinion chiefly on the experience gained in studying the development of the disease in the Memel district, it concludes in favour of contagion. Syphilis occupies a great portion of the book. It is most exhaustively handled, and the papers are important contributions to a subject of perennial interest to the medical mind. Special articles are devoted to the disease as it affects the organs and viscera. The latent period, hereditary syphilis, and treatment are dealt with in a manner at once thorough and practical. Gonorrhœa is just as fully worked up; nor are the social aspects of venereal diseases overlooked, special sections being devoted to their examination. In a review of a book of this kind it is, of course, impossible to take the articles *seriatim* for purposes of criticism. A few points must, however, be touched upon. Tinea nodosa, first described in this country, is not mentioned as such, but appears under piedra as "piedra nostras," a very recent christening. Erysipeloid of Rosenbach, it may be remarked, was apparently well known to the late Mr. Morrant Baker, who named the condition "erythema serpens." The tertiary palmar syphilide still retains the incorrect designation of "psoriasis palmaris et plantaris," qualified by the addition, it is true, of "syphilitica." Acanthosis is erroneously referred to as a proliferation of the stratum corneum, and *bouton du Nil* as a synonym of prickly heat. Some other slips might be added, but these must suffice. The errors in the spelling of names are few—"Rumstaedt" for Bumsted, for instance, and, peculiarly enough in a German work, Kaposi is twice spelt Caposi in as many lines. The book is well printed in two columns on good paper. Arranged as it is in alphabetical order, with cross references, it is very convenient.

Eczema is admittedly a difficult subject to write about, but Dr. Tom Robinson cannot be congratuled on his presentation of the matter.[4] His book, though short, is diffuse. In the introductory chapter there is a good deal of vague reference to diathesis and temperament. The conditions which the author calls "relapsing erysipelas" is a well-known form of eczema which has nothing to do with erysipelas, although it is frequently taken for the latter; nor does pityriasis rubra always arise from eczema. Lichen planus is a better designation than lichen ruber. Dermatologists will not agree with Dr. Robinson that lupus erythematosus must be regarded as an eczema. Were the book brought up to date, and condensed to half its present size, with some regard to conciseness and definiteness it might be of more use than in its present form.

This booklet is one of a series of dermatological lectures by Dr. Jessner.[5] The aim of the author is to treat the various subjects in a succinct and practical manner for the benefit of medical practitioners. As far as the lecture dealing with the causes and treatment of loss of hair is concerned, Dr. Jessner may be said to have attained his object. He gives a very fair account of the various conditions which give rise to alopecia, and his remarks on treatment are on the whole satisfactory. He includes alopecia due to ringworm and favus (alopecia mycotica), but his description of the parasitic diseases of the scalp are incomplete, as they will be dealt with at greater length in a special lecture. The pages devoted to seborrhœic alopecia are to the point. Jessner is not prepared to accept the views of Sabouraud as to the common etiology of alopecia seborrhoica and alopecia areata. The booklet contains a number of formulæ which the author has found useful in his own practice.

[3] *Encyklopädie der Haut-und Geschlechts-Krankheiten.* [Encyclopædia of Skin and Venereal Diseases.] Edited by Professor Lesser, Berlin. Leipzig: F. C. W. Vogel. 1900. (Roy. 8vo, pp. 548. M.30.)

[4] *The Diagnosis and Treatment of Eczema.* By Tom Robinson, M.D. Second Edition. London: J. and A. Churchill. 1900. (Cr. 8vo, pp. 136. 3s. 6d.)

[5] *Des Haarschwunds und Behandlung.* [The Causes and Treatment of Loss of Hair.] Von Dr. Jessner. Zweite Auflage. Wurzburg: A. Stuber. 1900. (Demy 8vo, pp. 51. M. 0.80.)

# NOTES ON BOOKS.

## REPORTS AND TRANSACTIONS.

### Transactions of Societies.

The fifth volume of the *Transactions of the Dermatological Society of Great Britain and Ireland* (edited by George Pernet and W. T. Freeman. 1899. London: H. K. Lewis. 1899. Roy. 8vo, pp. 108, 5s.) compares well with its predecessors in point of interest. During the session 1898-99 papers were read on the therapeutics of diseases of the skin, the nature and varieties of drug eruptions and recurrent desquamative scarlatiniform erythema. As the proceedings of this Society have been reported in these pages from time to time the mere mention of these papers will be sufficient.

The sixth volume of the *Transactions* of the same Society (vol. vi, 1899-1900. London: H. K. Lewis. 1900. Demy 8vo, pp. 75, 1 illustration, 5s.) represents the work done during the session 1899-1900. Its contents show no falling off in the number of interesting cases brought before the Society. Among them will be found examples of uncommon affections, such as leprosy, granuloma fungoides, urticaria pigmentosa, dermatitis herpetiformis, and so forth, together with anomalous cases exhibited for diagnosis, which gave rise to good discussions. Further, various papers have been contributed, such as Mr. Jonathan Hutchinson's address on Diseases of the Nails, Dr. Radcliffe Crocker's on the Influence of the Individual upon the Diseases of the Skin, which contains much that will prove of interest both to those engaged in the study of dermatology and in general practice.

*The Transactions of the American Dermatological Association* for 1899 contains some extremely interesting subject matter. Among the more important contributions are the following: A paper by Dr. M. B. Hartzell on Epithelioma as a Sequel of Psoriasis, in which he suggests that the possible exciting cause of the carcinoma was the arsenic that had been given internally for the psoriasis; a paper on the Relation of Imperfect Renal Activity to Diseases of the Skin; a paper by Dr. G. T. Elliot on the *Rôle* of the Pus Organisms in the Production of Skin Diseases, and one on the Bacteriological and Microscopical Study of over 300 Vesicular and Pustular Lesions of the Skin, with the results of a research on the etiology of acne vulgaris by Mr. T. C. Gilchrist.

*The Transactions of the American Dermatological Association* for 1900 (Chicago: P. F. Pettibone and Co., 1901, Roy. 8vo, pp. 232) also contains, in addition to the presidential address by Dr. Stelwagon, some interesting and important contributions to dermatology. Dr. G. T. Jackson communicated a clinical study of loss of hair founded on 300 private cases. Nearly all belonged to the so-called intellectual classes, in 218 there was dandruff, and 132 a family history of baldness. Dr. W. T. Corlett contributed a paper on the Frequency of Parasitic Diseases of the Skin and the Measures advisable for limiting their spread in which he makes interest-

ing reference to ringworm schools and the spread of ringworm from domestic animals. There are several papers on cancer of the skin and others on blastomycetic infection of the skin, in one of which its relation to yaws is discussed.

The twentieth volume of the *Transactions of the Ophthalmological Society of the United Kingdom* (London: J. and A. Churchill. 1900. Demy 8vo, pp. 388, 12s. 6d.) contains the inaugural address delivered before the Society on the Extraction of Senile Cataract, by Mr. G. Anderson Critchett; and the Bowman Lecture by Mr. Marcus Gunn on Visual Sensation. The communications brought before the Society during the session 1899-1900 having been epitomised in our reports of the proceedings of the Society, we may be excused from making further reference to them.

The volume of the *Transactions of the Thirty-fifth Annual Meeting of the American Ophthalmological Society* is largely occupied with reports of particular cases of interest, but it contains several papers having wider bearings. Among these may be mentioned a paper by Dr. C. S. Bull on Retinitis Albuminurica as a Factor in the Causation of Secondary Glaucoma; one by Dr. R. L. Randolph on one of the newer local anæsthetics—Acoin; and one by Dr. C. H. Williams being a plea for More Uniform Tests of Vision, Colour Sense, and Hearing. Other noteworthy contributions are on Sympathetic Ophthalmia caused by Glioma of the Retina, by Dr. A. Alt, and a case of Spontaneous Rupture of the Eyeball, recorded by Dr. B. L. Millikin.

Perhaps the most interesting communication for the general reader in the second volume of the *Transactions of the Glasgow Obstetrical and Gynæcological Society* (Glasgow: A. Macdougall. 1901. Demy 8vo, pp. 248. 7s. 6d. to non-members) is not strictly gynæcological. It is a lecture on William Hunter, Anatomist, by Dr. John H. Teacher. It is in some sort a counterblast to the praise the more noted John Hunter has received at the expense of his elder brother. The articles proper to the subject are numerous and of considerable importance. The volume would be improved as a book of reference if it contained a table of contents.

The twenty-fifth volume of the *Transactions of the American Gynecological Society* for 1900 (Philadelphia: W. J. Dornan. 1900. Demy 8vo, pp. 500) contains a full complement of valuable and interesting papers. One of the more outstanding is an account of experiments on anastomosis of the ureters with the intestine, together with a historical research on the subject by Dr. Reuben Peterson. Other noteworthy communications are one by Dr. Howard Kelly on the evolution of his technique in the treatment of uterine fibroids, one by the veteran Dr. Thomas Addis Emmet entitled Personal Reminiscences Associated with the Progress of Gynæcology, and one by Dr. Alexander J. C. Skene on the Status of Gynecology in 1900 as compared with 1876.

The *Transactions of the Epidemiological Society of London* for 1899-1900 (London: Shaw and Sons. 1900. Demy 8vo, pp. 218) contains an obituary notice of the late Sir Richard Thorne-Thorne, and his portrait forms the frontispiece to the volume. After the inaugural address of the session on the Comparative Mortality of English Districts by Dr. Franklin Parsons come a group of papers describing the precautions taken against plague in the Red Sea ports by Dr. Ruffer, at Oporto by Dr. Shadwell, and in the Presidency of Madras by Dr. Spencer Low. There are two communications on the utility of a bacteriological examination in diphtheria epidemics in schools. After the record of a discussion on the infectivity of enteric fever the volume closes with papers on immunity and resistance as factors in the epidemicity of infective disease by Dr. H. E. Durham, and on seasonal variations in age-distribution of deaths from certain infectious diseases by Mr. Shirley Murphy.

The first volume of the *Transactions of the Otological Society of the United Kingdom* (London: J. and A. Churchill. 1900. Demy 8vo, pp. 100. 6s.), one of the most recently born of the medical societies, although consisting of only some 60 pages in addition to those occupied by the inaugural address of the President, Sir William Dalby, contains the record of some thirty communications on otological subjects, and nine illustrations, mostly full page. Most of the communications have already been referred to in our reports of the proceedings of the Society.

Reports of the Society's proceedings contained in the second volume of the *Transactions of the Society of Anæsthetists* (London: The Medical Publishing Company. 1899. Crown 8vo, pp. 256. 5s.) have been published from time to time in this JOURNAL: but we would recall that Professor Ramsay, F.R.S., advocates the keeping of chloroform constantly in the dark, since its decomposition and the formation of the irritating carbonyl chloride only occur in the presence of light, and that the presence of a little slaked lime in the chloroform keeps it always "sweet." Similarly that the addition of a few drops of mercury to the bottle of ether prevents the formation of that ethyl peroxide which is usually found in old samples, but never in a fresh specimen.

The third volume of the *Transactions of the Society of Anæsthetists* (London: Medical Publishing Co. 1900. Cr. 8vo, pp. 168) contains, in addition to the reports of several cases of accident during anæsthesia, a paper by Dr. G. H. Savage on the Relationships between Anæsthetics and Insanity, which is of permanent value, and the record of two interesting discussions, one on the After-effects of Ether Inhalation on the Respiratory System, and the other, introduced by Mr. Edgar Willett, on the Administration and Choice of Anæsthetics for Infants and Young Children.

More than half the volume of the *Transactions of the Forty-sixth Annual Meeting of the Medical Society of the State of North Carolina*, for 1899 (Charlotte, North Carolina: *Observer* Printing and Publishing House. Roy. 8vo, pp. 255) is taken up with the private business of the Society, but the remainder contains some interesting contributions to medical science, among which is a paper on The Rôle of the House-fly in Disseminating Typhoid.

*The Transactions of the Louisiana State Medical Society*, at its twenty-first annual session held in April, 1900, contains—among much that is of interest only to members of the Society—a valuable paper on Local and Regional Anæsthesia in Minor and Major Surgery, including an account of the spinal subarachnoid method of cocainisation.

Many of the articles contained in the third volume of the *Transactions of the Chicago Pathological Society* (Chicago: American Medical Association Press. 1900) have already appeared in American medical journals. The volume contains the report of a necropsy in a case of acromegaly; a study of sarcomata of the thyroid, cases of tumours of the mediastinum and pericardium; two cases of gangrenous pancreatitis; a report on hepatic cirrhosis in the guinea-pig produced by inoculation with a bacillus; a somewhat long paper on tuberculosis of the cæcum, based on two cases: a description of an early placenta *in situ* obtained from the living; and several interesting papers on diseases of the blood and the infective disorders. It must be considered as one of the many storehouses of valuable pathological matter.

# REPORTS AND ANALYSES
AND
# DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

## MEDICAL AND SURGICAL APPLIANCES.

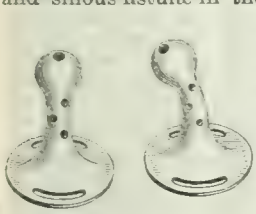
*The Bi-resonating Stethoscope.* — Dr. J. COUBRO-POTTER, (Sutherland Avenue, W.), writes: I have devised this instrument with a view of intensifying and rendering more distinct the sounds which the auscultator is accustomed to listen for when examining a patient. As seen from the illustration the



stethoscope is a simple one, no complex mechanism being brought into its formation, thus avoiding any danger of the

production of accessory sounds, which might be produced by the friction of a complex mechanism. The difference between my instrument and those that are already used for the same purpose is, that in others there is only one resonating chamber, and that is placed against the chest wall, or in very close proximity. In my instrument it will be observed that there are two resonating chambers, and they are placed in close apposition to the ear pieces. The advantage of the arrangement is that the sounds are conveyed up the almost straight tubes, and enter the resonating chambers; there they are intensified, and the impressions are conveyed direct to the ears, and have not to travel through any tubing, after being so rendered more distinct. Another great advantage in this instrument is that by the position of the resonating chambers the sounds have the impression to the auscultator of being very much nearer, thus some of the minutest sounds are comparatively easily heard and detected. The resonating chambers have been so constructed that no buzzing sound is experienced while using the instrument. The instrument is light in weight and compact, being very similar to the ordinary stethoscope. The spring is fixed on to the tubes by means of an additional plate, thus the lumen of the tubes are in no way interfered with. Any chest piece can be used with this instrument, but the one I find best is of simple construction, and is dome-shaped, as seen in diagram. The instrument has been made for me by A. Schollar, 64, Praed Street, W., and costs complete 12s. 6d.

*Aseptic Glass Drainage Tubes.*—Dr. L. H. Ormsby, F.R.C.S.I. (Surgeon to the Meath Hospital and co. Dublin Infirmary) writes: In the after-treatment of small abscesses and sinous fistulæ in the region of the neck and other parts of the body it is very desirable that the openings made should not be allowed to close too soon, that is, before a complete exit has been afforded to all deleterious matter. Also after operating where tension is anticipated owing to collection of blood or serum. I have for very many years been endeavouring to discover some aseptic material to form a small drainage tube which would carry out efficiently these requirements. In the region of the neck, particularly where small abscesses are so common, the result of suppurating glands in young and delicate persons, it is all-important to establish a free drain and thus prevent such abscesses closing too soon, only to break out again and leave, in many instances, a very unsightly mark, or deforming cicatrix or scar. I have used in turn various materials such as strands of twisted catgut, twisted silver wire in the form of a loop, india-rubber drainage tube, tampons of gauze, etc.; but all these forms had disadvantages of one character or another, and it occurred to me that a small drainage tube composed of toughened glass about the size and shape of a collar stud would be large enough and yet suit admirably for the purpose. I tried some cases with this form, and found practically that it fulfilled all requirements, and now I use no other. They are made of toughened glass in various sizes, blunt and rounded on the top, straight and curved, provided with a round flange to prevent their slipping into the abscess or wound, which is the fault of many other kinds in use. The stem of the tube is perforated with a number of small holes, and it can be kept in place by a fine aseptic ligature fastened through two apertures in the flange of the tube, and then passed round the neck or limb as the case may be, and tied in that position. The accompanying sketch gives the forms and sizes of the tubes I have suggested, and I find they can be supplied for from 2d. to 3d. each. These tubes are now known to instrument makers as the glass drainage tubes invented by me. They are made by Messrs. Smith and Shepherd, 124, Stephen's Green, Dublin, and Messrs. Atlay and Co., agents for Messrs. Seabury and Johnston, 64, Middle Abbey Street, Dublin.



An anonymous benefactor has promised to defray the cost of erecting a sanatorium for thirty children in the grounds of the sanatorium of the Berlin-Brandenburg Sanatorium Association at Bebzig.

## THE BACTERIOLOGICAL DIAGNOSIS AND ANTITOXIN TREATMENT OF DIPHTHERIA.*

The first feeling in reading Professor Sims Woodhead's report is one of regret that its issue has been so long delayed. We are informed that the main part of the report has been in type for nearly three years, but that the stress of Dr. Woodhead's Cambridge work, and the necessity for a complete revision of the statistics embodied in the report, have caused the delay. Much of the subject matter of the report, however, possesses immense permanent value, and it will be found an invaluable mine of information to all desiring accurate and complete information on the scientific aspects of the diagnosis of diphtheria, its treatment by antitoxin, and the methods of preparation of that substance.

### Bacteriological Diagnosis.

The description of methods of obtaining "swabs," of staining (by a modification of Gram's method, carbolic acid being substituted for aniline water), of the morphology of the diphtheria bacillus, and forms liable to be confused with it, leave little to be desired. Professor Woodhead prefers not to use the term "Hoffman's bacillus," "as, owing to the great differences of opinion that have arisen as to the exact forms that are included under that term, there appears to be very little agreement as to what Hoffman's bacillus really is."

During the period under review, 24,933 cultivations were examined and assigned to 12,172 patients. From these, the chief statistics of the report are deduced. Evidence of the presence of diphtheria bacilli was obtained in 73.4 per cent., and in 5 per cent. of the whole it is concluded that bacteriological examination failed to assist in the diagnosis of bacteria.

*Presence of Diphtheria Bacilli at Time of Discharge.*—Out of 12,172 cases, diphtheria bacilli were found in 4,052 or 33.3 per cent. of the whole. The weighty remark is added: "There can be no doubt that in a certain proportion of cases the patients when discharged had in their throats diphtheria bacilli which, under favourable conditions, might be transmitted from the patient to those with whom he or she afterwards might come in contact. Bearing in mind the continuance of diphtheria in London, and the recognised fact that diphtheria bacilli can be readily transmitted by patients who are apparently no longer suffering from the effects of the disease to those who have weak or ulcerated throats, I am strongly of the opinion that more attention should be paid to the continued isolation of diphtheria patients in whose throats even slightly virulent diphtheria bacilli still remain."

*Failure to find diphtheria bacilli at the first examination* occurred in 607 cases in which they were discovered subsequently.

*The persistence of diphtheria bacilli* was shown by repeated bacteriological examination of certain cases: 125 cases were examined 7 times, 74 cases 8 times, 50 cases 9 times, 42 cases 10 times, 25 cases 11 times, 21 cases 12 times, 11 cases 13 times, and 1 case as often as 22 times. On an average cases were examined 2.4 times. In 2 cases diphtheria bacilli were found at the end of 200 days, and in 79 cases they persisted beyond 100 days from the day when they were first found in the throat.

*Mixed infections* are shown by the statistics to be always more fatal than are simple diphtheria intoxications; but, contrary to what is usually stated, the staphylococcus reinforcing the diphtheria bacillus appeared to be associated with a more fatal form of the disease than when a mixture of a streptococcus and the diphtheria bacillus was found. This is particularly true when the shorter and irregular forms of the diphtheria bacillus were present.

*The true significance of the short bacillus* is open to doubt. The statistics, as Professor Woodhead states, indicate that it is really a pseudo-form, or has such slight virulence that it usually, but not always, gives rise to a very mild attack of the disease. Hence he cannot recommend that patients in which only the short form can be found should be discharged as free from infection.

*Fatality in Relation to Form of Bacillus.*—Cases certified as

* *Report on the Bacteriological Diagnosis and the Antitoxic Serum Treatment of Cases admitted to the Hospitals of the Metropolitan Asylums Board*, 1895 and 1896, by Professor G. Sims Woodhead, M.D. (P. S. King and Son, Westminster, and H. J. Glaisher, 57, Wigmore Street, W., 7s. 9d. net).

having diphtheria, but showing that form alone, had a fatality of only 3.3 per cent. During the two years 1895-6 the cases showing pure cultures of long diphtheria bacilli had a fatality of 18.9 per cent. The fatality among cases showing mixed diphtheria bacilli and streptococci was 20.5, or, omitting the cases in which only short forms were found, 22.3 per cent. Diphtheria bacilli *plus* staphylococci give a percentage fatality of 25.4, or omitting the cases with short bacilli, of 27.3 per cent.

*Scarlet Fever complicated with Diphtheria.*—Among these cases, numbering 1,745, the fatality was only 13.1 per cent., as compared with 61.9 per cent. in the preantitoxin period 1890-94.

*Cases certified as Diphtheria: No Diphtheria Bacilli Found.*—This occurred in 26.5 per cent. of the whole number of cases examined in the laboratory during 1895-6. Allowing for errors of observation, it is clear that in over 20 per cent. (or about 3,000) of the cases notified as suffering from diphtheria, and admitted into the various hospitals, no bacteriological evidence of this disease appeared. The fatality among these cases in the aggregate was 9.3 per cent. lower than that for cases in which the diphtheria bacilli were found, but too high for non-diphtherial sore throat. It is clear that these cases were a mixture in doubtful proportion of sore throats other than diphtheria and diphtheria in which the cultural experiment failed.

*The bacteriological examination of scarlet fever* (altogether 1,275 cases) in which no diphtheria bacilli were present brought out some interesting results. When only staphylococci were demonstrated the fatality was as high as 17.7 per cent., when only streptococci, 9.1 per cent. For all these cases the fatality was 12.8 per cent., as compared with 13.1 per cent. (*supra*) for cases mixed with diphtheria.

### RESULTS OF ANTITOXIN TREATMENT.

Of the 2,503 cases under 5 years of age in which diphtheria bacilli were found, only 31.5 per cent. died, as against 47.4 per cent. in the preantitoxin period. In 1895, in cases in which the fauces alone were affected, the percentage fatality was 12.1; when fauces and nares, 39.5; fauces and larynx, 37.3; larynx alone, 30.7; when all three, 62.2 per cent. In 1896, when the antitoxin treatment had improved, a considerable fall in the fatality occurred. In the preantitoxin year 1894 there were 261 tracheotomies with a fatality of 70.4 per cent. In 1896, with 246 tracheotomies the fatality was 41.5 per cent.

The statistics show that the free use of antitoxin does not increase the percentage of cases of albuminuria. Among the cases of paralysis following diphtheria, the fatality (32 per cent.) was higher among those not injected with antitoxin than among those where antitoxin was used (30.5 per cent.), although the former "must be looked upon as being the result of comparatively mild attacks of the disease," not necessitating the administration of antitoxin. In 1896, when antitoxin was given much more freely, the fatality among the paralysed in the non-infected group fell to 18.4.

Without entering into further details on the figures, they clearly show the efficacy of the antitoxin when given at an early stage of the disease; and that the larger the quantity of antitoxin given during the earlier stages of the disease, the lower is the fatality. Conversely the larger the number of cases that come under treatment in the later stages, however large be the quantity of antitoxin given, the higher is the percentage fatality.

### THE PREPARATION OF DIPHTHERIA ANTITOXIN.

The statistics briefly summarised above comprise the first 96 pages of this important report. Pages 96 to 160 are given to a description of the preparation of antitoxin, while an appendix of 110 pages gives very full details of the hospital statistics for the years under report. In the second part there is first an abstract of the negotiations between the Metropolitan Asylums Board and the Laboratory Committee of the two Colleges and the Goldsmiths' Company, whose generous assistance rendered Professor Sims Woodhead's work practicable. Next is described the method of preparation of diphtheria toxins, then Dr. Cartwright Wood's more rapid and safer method of producing antitoxin; afterwards details are given of the technique employed in injecting horses, collecting blood, separating and distributing the serum: the treatment of individual horses, and the principles and methods of testing the potency of antitoxic serum. For particulars on these important technical points the original report should be consulted. It suffices here briefly to indicate one or two points. The theoretical standard of 100 times the lethal dose has been taken as the amount necessary to neutralise one unit of antitoxin. Professor Woodhead found that in certain cases 20,000 units and in one 40,000 of antitoxin were formed for every unit of toxin injected; while in no case in which there was any rise at all were there fewer than 63 antitoxin units for every unit of toxin injected. Animals treated with antitoxin, as pointed out by Roux and Vaillard in 1893, may lose blood equal to the whole body weight, if this loss be prolonged over a period of several days, without any material decline in the antitoxic value of the blood that remains. It is clear, therefore, that antitoxin still goes on being formed after all the toxin has disappeared, being probably "the continued result of a special stimulation of the antitoxin-forming cells."

## LUNACY IN ENGLAND AND WALES.

### INCREASE OF CERTIFIED LUNATICS.

IT appears from the fifty-fifth annual report of the Commissioners in Lunacy for England and Wales that the number of lunatics brought under the official cognisance of the Commissioners again shows an increase in the year 1900. On January 1st, 1901, there were 107,944 officially noted, being an increase of 1,333 as compared with an increase of 1,525 in 1899, and 967 below the average of the five preceding years. The Commissioners observe that it would not be prudent to reckon on a continuance of this satisfactory decrease, as previous experience has shown. Local authorities having the care of the pauper insane should therefore look well ahead as regards the provision of accommodation, in order to avoid the grievous inconvenience and serious expense which have so often resulted from procrastination in this matter.

Private patients increased by 143 in county and borough asylums, 9 in registered hospitals, 11 in provincial licensed houses, and 10 as "single patients," but decreased by 29 in metropolitan licensed houses and 10 in naval and military hospitals.

This increase in the number of private patients admitted into county and borough asylums is noteworthy as showing the success of recent legislation in giving to these institutions the power to provide for the accommodation of private patients for whose maintenance in many instances a low rate is charged.

### PROPORTION OF LUNATICS TO POPULATION.

Assuming the results of the last census so far published to be correct, the Commissioners conclude that there is now 1 officially known lunatic to 301.32 of the population, against 1 to 335 nine years ago, and 1 to 536 in 1859.

### NUMBER OF ADMISSIONS AND RECOVERY-RATE

The total number of admissions during 1900, excluding transfers from one institution to another (technical readmissions) and admissions into idiot asylums, was 19,837, and of these 16,192 were first admissions.

Calculated upon the number admitted, the recoveries amounted to 38.37 per cent., showing that since 1869 the rates of recovery do not give evidence of any substantial advance or much variation.

### DEATH-RATE.

The death-rate among our insane population was 10 per cent. of the daily average number, and shows but a slight increase upon an average rate that for the last ten years shows little change.

### CHRONIC AND AGED PATIENTS.

The Commissioners again emphasise the importance of providing asylum accommodation of a cheaper kind for the chronic incurable, imbecile, helpless, and aged patients who of late years have been sent from the workhouses into asylums and monopolised the accommodation these institutions have provided for the acute and curable cases. They state that:

The ordinary modern county and borough asylum being essentially and

primarily a hospital for the treatment of disease is necessarily costly in construction when equipped with whatever is needful to promote restoration to health of mind and body. At present its resources are largely monopolised by the class to which we have referred (chronic incurable, imbecile, and aged), many of whom do not need its costly appliances and are not benefited by its hospital equipment, and they crowd out those who are urgently in need of both.

The remedy the Commissioners suggest is:

A greater differentiation of asylum buildings in the provision of everything that the hospital system can secure for the recoverable and the acutely sick, and of simple inexpensive buildings either in the form of cottages or otherwise for those who need a home under supervision and nursing should they be or become sick.

This expression of official opinion is in harmony with that of many of those actually engaged in the management, care, and treatment of the insane who believe that the plan of having cheap blocks for chronic patients with acute blocks as hospitals for acute and curable all on the same estate affords opportunities for the highest scientific treatment with the greatest economy.

After years of fighting for the necessary accommodation and equipment of our modern asylums to bring them up to date, we now find the remedy proposed by the Commissioners is to limit the waste of expensive machinery, and enable due provision to be made without imposing an intolerable burden upon the public. So impressed are the Commissioners with the growing tendency to extravagance in certain details, and especially in those parts of the buildings which are devoted to official and administrative purposes, that they have thought it desirable to issue a circular calling the attention of the authorities concerned to the subject.

### Dysentery and Diarrhœa.

The deaths from colitis (dysentery) and allied diarrhœal disorders in county and borough asylums caused 3.54 per cent. of the total deaths from all causes, and the hope is expressed that the valuable report upon this subject made to the London County Council by Drs. Mott and Durham may do much to diminish the prevalence of these diseases.

### Tuberculosis.

With regard to tuberculosis the mortality in 25 large county asylums containing upwards of 1,000 patients ranged from 8.3 to 33.8 per 1.000., and an interesting feature in this connection is the comparatively low rate of deaths from tuberculosis in the large London County asylums compared with the two Kent asylums, although one of them contained a considerable number of London patients. In the remaining county asylums the highest mortality from tuberculosis was 33.2 per 1,000, and the lowest 2.0. In borough asylums the highest was 33.0 and the lowest 3.6 per 1,000.

## THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

[From our Correspondent.]

As was briefly announced last week the seventy-first meeting of the British Association began in Glasgow under the presidency of Professor Rücker, Principal of London University, on Wednesday evening, September 11th. The opening meeting was held in the St. Andrews Halls, and after Sir William Turner, the retiring President, had introduced the new President, Dr. Rücker proceeded to deliver his inaugural address, to which reference has already been made.

### Inert Constituents of the Atmosphere.

On the evening of Friday, September 13th, a very interesting lecture was given to a large audience in the St. Andrews Halls by Professor William Ramsay (London) on the inert constituents of the atmosphere. Professor Ramsay began his lecture by explaining the principal facts regarding the elements generally and the ways in which they might be grouped. There were several gaps in the series of the elements, but these were gradually being filled by the discovery of new elements, and there were still some on their trial. He went on to describe the series of long and painstaking experiments and researches that resulted in the discovery of argon in 1894, and showed how the study of that newly-found constituent of air led to the discovery of helium in 1895, while the liquefaction of air led to the discovery in 1898 of three other elements which exist in the atmosphere, and to which the names of neon, krypton, and xenon had been given. The address was most attractively illustrated by numerous lantern slides, diagrams, and experiments, and was followed with sustained interest.

### Election of President for 1902 Meeting.

At a meeting of the General Committee, held on September 13th, Sir Archibald Geikie moved that Professor James Dewar should be the President-elect of the meeting to be held in Belfast next year, and this motion was adopted.

It was also arranged that the meeting in 1903 should be held in Southport, an invitation having been received from that town. Reference can only be made shortly to such parts of the proceedings of the sections of the Association as are likely to be interesting to medical readers.

### Section of Physiology.

#### *The Theory of Life.*

Professor McKendrick (Glasgow), the President, in his opening address indicated the progress made in physiology since the British Association last met in Glasgow twenty-five years ago. Their knowledge in every department was now more accurate, went deeper into the subject, and had more of the character of scientific truth. The body of one of the higher animals was a very complex mechanism, consisting of systems of organs, of individual organs, and of tissues. Physiologists had been able to give an explanation of the more obvious phenomena. It was when they came to the phenomena in the living tissues that they found themselves in difficulties, and it was now recognised that to give any adequate explanation of the phenomena of life these must not be studied in the body of one of the lower organisms, where there was but little differentiation of function. When cells were examined with the highest microscopic powers, and with the aid of the highly elaborated methods of modern histology, they did not seem to have advanced very far towards an explanation of the ultimate phenomena of life. There was the same feeling in the mind of the physiologist when he attacked the cell from the chemical side. But it would appear that the phenomena of life depended on changes occurring in the interactions of particles of matter far too small even to be seen by the microscope. The physicist and the chemist to explain many phenomena had had recourse to the conceptions of molecules and atoms, and of the dynamical laws that regulated their movements. The conception of the existence of molecules in living matter had not escaped some astute physicists, and Professor McKendrick considered Clerk Maxwell's argument on this point. Probably the germinal vesicle of an ovum contained millions of millions of organic molecules, and the imagination could conceive of complicated arrangements of these suitable for the development of all the parts of a highly complicated organism and sufficient to satisfy the demands of a theory of heredity. Such a thing as a structureless germ could not exist. Further the conception of the physicist was that molecules were more or less in a state of movement, and the most advanced thinkers were striving towards a kinetic theory of molecules and of atoms of solid matter which would be as fruitful as the kinetic theory of gases. It was conceivable that vital activities might also be determined by the kind of motion that took place in the molecules of the living matter. It might be different in kind for some of the motions known to physicists, but it was possible that life might be the transmission to dead matter, the molecules of which had already a special kind of motion, of a form of motion *sui generis*.

#### *Other Papers.*

Among the other papers read may be mentioned:—The Use of the Telephone for Investigating the Rhythmic Phenomena of Muscles, by Sir John Burdon-Sanderson; Some Experiments on the Brain of the Anthropoid Ape (chimpanzee), by Professor Sherrington, experiments which gave results very closely resembling those got in the human subject; Colour Vision, by Dr. Edridge-Green; Dr. Robert Kennedy (Glasgow), read a paper on the Restoration of Voluntary Movements after alteration of the Nerve Supply by Nerve Crossing or Anastomosis. Experiments on animals suggested the practical application of nerve crossing in cases of paralysis in other defect of a muscle or group of muscles supplied by a

particular nerve. A portion of the nerve below the lesion could be grafted on to a neighbouring normal nerve with a probability of restoration of function of the affected muscles. Dr. Kennedy showed a number of lantern slides of the case of a woman suffering from a facial spasm of long standing, which he had treated by dividing the facial nerve and grafting its distal end on to the spinal accessory with the result that voluntary movements of the face had already been in great part restored and the spasmodic condition had not returned. Professor McKendrick gave a demonstration of the apparatus employed in his researches on the subject of phonetics.

### SECTION OF ZOOLOGY.

*The Experimental Study of Variation.*

This Section was opened by an address on this subject by its President, Professor COSSAR EWART (Edinburgh). Having premised that the study consisted (1) in noting and classifying the differences between parents and their offspring, and (2) in determining by observation and experiment the causes of these differences, especially why only some of them were transmitted to future generations, he said that the systematic study of variation was of very recent date. In discussing variability he should assume that all variations were transmitted by the germ cells; that the primary cause of variation was always the effect of external influences, such as food, temperature, moisture, etc.; and that "the origin of a variation was equally independent of selection and amphimixis," amphimixis being simply the means by which effect was given to differences inherited, and to the differences acquired by the germ cells during their growth and maturation. Theoretically the offspring should be an equal blend of the parents and (because of the tendency to reversion) of their respective ancestors. In as far as the offspring departed either in an old or in a new direction from this ideal intermediate condition they might be said to have undergone variation. Frequently some of the offspring closely resembled the immediate ancestors, while others suggested one or more of the remoter ancestors, were nearly intermediate between the parents, or presented quite new characters. Could they by way of accounting for these differences only with Darwin say variations were due to fixed or immutable laws, or at most subscribe to the assertion of Weismann that they were "due to the constant recurrence of slight inequalities of nutrition of the germ plasm?" During the course of his own experiments on variation he endeavoured to find an answer to the question, "Is age a cause of variation?" From results he had obtained it followed that when old and young but slightly different members of a variety or species were marked a wonderfully perfect series of intermediate forms was likely to be produced. Amongst wild animals the young males rarely had a chance of breeding with the young females; hence amongst wild animals, owing to age being a cause of variation, a considerable amount of material was doubtless constantly provided for selection, thus affording a variety an additional chance of adapting itself to slight fluctuations in the environment. In the results obtained by crossing mature, vigorous, and, in some cases inbred males with barely mature females an explanation might be found why in some families the same features had persisted almost unaltered for many generations; why in his features the squire of to-day sometimes exactly reproduced the lines of his ancestors, as seen in portraits and monumental brasses. It should, however, be borne in mind that highly prepotent forms were capable from the first of so completely controlling the development that they transmitted their peculiar traits to all their offspring. While difference in age might sometimes account for the earlier broods and litters resembling one of the parents, it failed to account for the very pronounced variation often found in a single brood or litter, and for much of the dissimilarity between members of the same human family. When a single fertilised germ cell, as occasionally happened, gave rise to twins they were always identical; hence it might be assumed the differences in members of the same family had their source in differences in the germ cells from which they sprung. If the offspring varied with the maturity of the soma it might also vary with the maturity of the germ cells, or at least with their condition at the moment of conjugation. There was a considerable amount of evidence in support of the view that changes in any part of the body or soma which affected the general welfare influenced the germ cells. It might first be asked, did disease, in so far as it reduced the general vigour or interfered with the nutrition of the germ cells, act as a cause of variation? Results which he obtained with pigeons suffering from malaria seemed to indicate that the germ cells were liable to be influenced by fevers and other forms of disease that for the time being diminished the vitality of the parents. Sometimes the germ cells suffered from the direct action of their immediate environment, from disturbance in or around the germ glands. It had long been recognised that a change of surroundings might profoundly influence the reproductive system, in some cases increasing the fertility, in others leading to complete sterility. Judging from the results he had obtained, intercrossing of two distinct varieties resulted, as a rule, in the loss of the more striking characters of both parents that was in more or less marked reversion. If new varieties, well adapted for their environment, were not only sufficiently prepotent to escape being swamped by other varieties, but were also able to hand on the prepotency almost unimpaired to a majority of their descendants, progressive development along a definite line would be possible. Prepotency might be said to supplement and complete the work of the environment. The environment seemed to be mainly concerned in eliminating the unfit; whether any of the survivors persisted depended not so much on their surroundings as on whether they were sufficiently prepotent and exclusive to escape being swamped by intercrossing. This way of accounting for progress in one or more directions might prove as inadequate as the one suggested by isolationists, but it had the merit of being more easily tested by experiment. Referring to certain supposed causes of variation, he mentioned maternal impressions, and said that if they influenced the offspring they must be most effective causes of variation. In his experiments, however, not a particle of evidence had he found in support of the maternal impression doctrine. Of the doctrine of the transmission of acquired characters, he need say little more than that he had failed to discover any evidence in its favour. The belief in telegony was less deserving of consideration than that of the transmission of acquired characters.

### SECTION OF ANTHROPOLOGY.

This Section met under the presidency of Professor CUNNINGHAM, Dublin, who gave his opening address before a large audience on the "Evolution of the Human Brain."

*Cerebral Growth and Head Forms.*

One of the most striking peculiarities of man when regarded from the structural point of view was the relatively great size of his brain. The cranium was the outward expression of the contained brain, and the brain was the most characteristic organ of man; cranial peculiarities therefore must always and should always claim a leading place in the mind of the anthropologist. It was to certain of the growth changes in the cerebrum which he believed to be specially characteristic of man, and which unquestionably had had some influence in determining head forms, that he wished particularly to refer to in his address. The pattern assumed by the convolutions, while showing many subsidiary differences, not only in different races and different individuals, but also in the two hemispheres of the same person, was yet arranged on a consistent and uniform plan in every human brain, and any decided deviation from this plan resulted in an imperfect carrying out of the cerebral function. In unravelling the intricacies of the human convulutionary pattern it was very early found that the simple cerebral surface of the ape's brain in many cases afforded the key to the solution of the problem. More recently the close study of the manner in which the convolutions assumed shape during their growth and development had yielded evidence of a still more valuable kind. The primate cerebrum was not only distinguished from that of all lower mammals by the possession of distinct occipital lobe, but also by a convolutionary design, which in all but a few fundamental details was different from that of any other order of mammals. During the development of the brain the cranium expanded according to the demands made upon it. The initiative lay with the brain, and in

normal conditions it was questionable if the envelope exercised more than a limited influence upon the form assumed by the contents. Man's special endowment—the faculty of speech—was associated with striking changes in that part of the cerebral surface in which the motor centre for articulate speech was located. Though the active speech centre was placed in the left cerebral hemisphere, yet the corresponding region on the right side went through the same developmental steps. The stimulus which must have been given to general cerebral growth in the association areas by the gradual acquisition of speech could hardly be exaggerated. The manner in which the faculty of speech originally assumed shape in the early progenitors of man had been much discussed by philologists and psychologists, and there was little agreement on the subject. It was obvious that all the more intelligent animals shared with man the power of giving expression to certain of the simpler conditions of the mind both by vocal sounds and by bodily gestures. These vocal sounds were of the interjectional order, and were expressive of emotions or sensations. Thus the dog was said, as a result of its domestication, to have acquired the power of emitting four or five different tones, each indicative of a special mental condition, and each fully understood by its companions. The common barndoor fowl had also been credited with from nine to twelve distinct vocal sounds, each of which was capable of a special interpretation by its fellows or its chickens. The gestures employed by the lower animals might in certain cases be facial, as expressed by the grimaces of a monkey, or changes in bodily attitude, as in the dog. It might not be unreasonably inferred that in the distant past the remote progenitors of man relied upon equally lowly means of communicating with their fellows, and that it was from such humble beginnings that speech had been slowly evolved. There could not be a doubt that this method of communicating by vocal sounds, facial expression, and bodily gestures was capable of much elaboration; and, further, was it possible, as some held, that it might have attained a considerable degree of perfection before articulate speech began to take form and gradually replaced it? Much of it, indeed, remained with us to the present day. A shrug of the shoulders might be more eloquent than the most carefully-prepared phrase; an appropriate expression of face, accompanied by a suitable ejaculation, might be more withering than a flood of invective. Captain Burton had told of a tribe of North American Indians whose vocabulary was so scanty that they could hardly carry on a conversation in the dark. It was a significant fact also that gesture-language was, to a large extent, the same all the world over. Many of the words employed in early speech were undoubtedly formed, in the first instance, through the tendency of man to imitate the natural sounds he heard around him. To these sounds, with various modifications, was assigned a special conventional value, and they were then added to the growing vocabulary.

*Speech as a Factor in Brain Development.*

But, although much of early articulate speech might have arisen by the development of interjectional sounds and the reproduction, by the human vocal organs, of natural sounds, it was very unlikely that these afforded the only sources from which words were originally derived. The value of spoken language as an instrument of thought was universally admitted, and it was a matter incapable of contradiction, that the higher intellectual efforts of man would be absolutely impossible were it not for the support which is afforded by articulate speech. Such being the case, he thought we might conclude that the acquisition of speech had been a dominant factor in determining the high development of the human brain. The mental effort required for the coining of a new word had been immediately followed by an increased possibility of further intellectual achievement through the additional range given to the mental powers by the enlarged vocabulary. The two processes, mutually supporting each other and leading to progress in the two directions, had unquestionably yielded the chief stimulus to brain development. More than one philologist had insisted that "language begins where interjection ends." For his part he would say that the first word uttered expressive of an external object marked a new era in the history of our early progenitors. At this point the simian or brute-like stage in their developmental career came to an end and the human dynasty endowed with all its intellectual possibilities began. The period in the evolution of man at which this important step was taken was a vexed question. Darwin was inclined to believe that articulate speech came at an early period in the history of the stem-form of man. Romanes gave a realistic picture of an individual decidedly superior to the anthropoid ape, but distinctly below the existing savages. This hypothetical form, half simian, half human, was, according to his sponsor, probably erect; he had arrived at the power of shaping flints as tools, and was a great adept at communicating with his fellows by gesture, vocal tones, and facial grimaces. With this accomplished ancestor in his mental eye, it was not surprising that Romanes was inclined to consider that articulate speech might have come at a later period than was generally supposed. At the time that Romanes gave expression to these views he was not acquainted with the very marked structural peculiarities which distinguished the human brain in the region of the speech centre. These structural characters constituted one of the leading peculiarities of the human cerebral cortex, and were totally absent in the brain of the anthropoid ape and of the speechless microcephalic idiot. Further, it was significant that in certain anthropoid brains a slight advance in the same direction might occasionally be faintly traced, whilst in certain human brains a distinct backward step was sometimes noticeable. Assuming that the acquisition of speech had afforded the chief stimulus to the general development of the brain, and thereby giving it a rank high above any other factor which had operated in the evolution of man, it would be wrong to lose sight of the fact that the first step in this upward movement must have been taken by the brain itself. Some cerebral variation—probably trifling and insignificant at the start, and yet pregnant with the most far-reaching possibilities—had in the stem-form of man contributed that condition which had rendered speech possible. This variation, strengthened and fostered by natural selection, had in the end led to the great double result of a large brain with wide and extensive association areas and articulate speech, the two results being brought about by the mutual reaction of the one process upon the other.

*Other Papers.*

Among the other papers may be mentioned one on the Cartilage of the External Ear in the Monotremata in Relation to the Human Ear, by Professor Cleland, and another on the Origin of the Cartilage of the Stapes and its Continuity with the Hyoid Arch, by Dr. James F. Gemmell.

Section of Chemistry.

In this Section an interesting discussion took place on sewage and bacteria beds. Professor Letts read a paper by himself and Mr. R. F. Blake on the Chemical and Biological Changes occurring during the Treatment of Sewage by the so-called Bacteria Beds. He pointed out that a considerable portion of unoxidised nitrogen disappeared in the process, not being found in the effluent from the bacteria beds, and discussed the probable explanations of this.—Dr. Rideal read a paper on Humus and the Irreducible Residue in the Bacterial Treatment of Sewage. In this Section a paper was also read on Duty-Free Alcohol, by Dr. Lawrence. A plea was made for a reduction in the duty imposed on alcohol used for chemical and other research, and a Committee was appointed to take what steps they could to attain this object.

Section of Economical Science and Statistics.

An important paper was read before this Section by Dr. Sutherland, Deputy Commissioner in Lunacy for Scotland, on the Growth and Geographical Distribution of Lunacy in Scotland. The lunacy referred to was what was termed rather unfortunately "pauper lunacy," for it related to the lunacy arising in 80 per cent. of the population, while indigence and pauperism accounted for about 10 per cent. In the last ten years the ratio per 10,000 for Scotland had risen from 26 to 29.4, representing an increase of 13 per cent., while for the same period the increment of population had been 11.4 per cent. Thus for Scotland the increase of lunacy, not warranted by the growth of population, had been 1.6 per cent. Dr. Sutherland then analysed the statistics for the different districts of the country, demonstrating the fact that the returns were much more favourable for the midland

counties with large industrial populations, and less favourable for the outlying districts, especially those of the Western Highlands. He then discussed some possible explanations of this distribution.

SECTION OF EDUCATIONAL SCIENCE.

This Section, established for the first time at this meeting, was presided over by Sir JOHN GORST, Vice-President of the Committee of Council on Education, who, in his presidential address discussed the present position of primary, secondary, and technical education in this country. Under the first head he referred to the children of the State (deserted children, destitute orphans, and children whose parents were criminals or paupers), and observed that such a practice as that of permitting dissolute pauper parents to remove their children from public control to spend the summer in vice and beggary at races and fairs, to be returned in the autumn, corrupt in body and mind, to spread disease and vice amongst other children of the State, would not be tolerated in a community intelligently alive to its own interest. He contended that children should not be admitted to primary schools until they had reached seven years of age, for there could be no worse mistake than to attempt by too early pressure to cure the evil of too early emancipation from school. Greater variety in primary education was necessary, and it should be recognised that it was a fallacy to suppose that examinations were the best instruments for promoting mental progress. As it was, a large proportion of children in schools both elementary and secondary were not really educated at all, but only prepared for examinations. Physical exercises, he said, were a proper subject for primary schools, especially in the artificial life led by children in great cities—both those which developed chests and limbs, atrophied by impure air and the want of healthy games, and those which disciplined the hand and the eye, the latter to perceive and appreciate more of what was seen, the former to obey more readily and exactly the impulses of the will. Advantage should be taken of the fact that the children come daily under the observation of a *quasi*-public officer, the school teacher, to secure them protection, to which they were already entitled by law, against hunger, nakedness, dirt, overwork, and other kinds of cruelty and neglect. Children's ailments and diseases should by periodic inspection be detected; the milder ones, such as sores and chilblains, treated on the spot, the more serious removed to the care of parents or hospitals. Diseases of the eye and all maladies that would impair the capacity of a child to earn its living should in the interest of the community receive prompt attention and the most skilful treatment available. Special schools for children who were crippled, blind, deaf, feeble-minded, or otherwise afflicted should be provided at the public cost, from motives, not of mere philanthropy, but of enlightened self-interest. So far as they improved the capacity of such children they lightened the burden of the community. Speaking of secondary education he recognised the good work done by the old secondary schools, especially in the formation of character, but said that the importance of science as a part of a general liberal education was still imperfectly understood. The lack of time and the preparation of scholars to pass examinations caused too much attention to be paid to theory and too little to practice, though it was by the latter that the power of original research and of original application of acquiring knowledge was best brought out. Speaking of technical training, he said that efforts at reform in this country had been abrupt and disconnected; moreover, students were often invited to climb the higher rungs of the ladder of learning who had never trod the lower. It was useless to accept in the higher branches a student who did not come with a solid foundation on which to build. In such institutions as the polytechnics at Zurich and Charlottenburg, the students were drawn exclusively from those who had already completed the highest branches of general education; in this country there was hardly a single institution where this could be said of more than a mere fraction of its students.

Papers read in the Section have had reference chiefly to the organisation of scientific teaching. Professor H. E. ARMSTRONG argued that the time had come when humanists must enter into alliance with scientists on equal terms, and Professor MINCHIN exhibited a diagram showing that out of 10,000 school hours in public schools science occupied less than 300. Professor L. C. MIALL gave an address on the experimental method of teaching in which he urged that it might be extended even to village schools. Sir MICHAEL FOSTER, M.P., said that when thirty years ago he was called to teach physiology in Cambridge he was asked what kind of a lecture room he required, and he replied that he did not want one at all, he wanted a laboratory; it was in the laboratory that science was taught, though time could be wasted there. The teaching of science was difficult, those who taught the humanities had the traditions and experience of centuries to go upon, while men were only beginning to learn how science was to be taught. In another paper Professor John Perry condemned the present method of teaching mathematics, and was supported by the large majority of teachers of mathematics present.

*(To be continued.)*

## LITERARY NOTES.

THE *Egypte Médicale* is the title of a new monthly medical journal which has recently begun to appear at Alexandria under the direction of Dr. Armand Ruffer, with the co-operation of Dr. P. Trekaki, Physician to the Greek Hospital, and Dr. Jean Roger.

It has already been stated in the BRITISH MEDICAL JOURNAL that the *Vratch*, which by the express wish of its founder, the late Professor Manassein, will cease to exist at the end of the present year, is to rise again immediately from its ashes with a slight alteration of name. Instead of *Vratch* ("The Medical Practitioner") it is to be known as "*Russi Vratch*" ("The Russian Medical Practitioner"). The new journal will be under the editorial control of Dr. Valerian Podwyssotzki, Professor of Pathology at Odessa, and Dr. S. Wladislawlew, of St. Petersburg, who has been in charge of *Vratch* since the death of Professor Manassein.

Few men probably have better opportunities, when they have the mind, to make valuable archæological observations and notes of churches out of the beaten track, than country doctors. It is a useful and interesting hobby, and, when a man has a hobby, he will generally find the time to gratify it. This appears to be the experience of Dr. Alex. D. H. Leadman of Pocklington, already known for his work *Battles Fought in Yorkshire*: for he has now reprinted, under the title *Five East Riding Churches*, papers contributed to the *Yorkshire Archæological Journal*, giving very thorough descriptions of five more or less interesting parish churches lying within a radius of three or four miles of Pocklington. He has in each case printed lists of the inscriptions in the church and in the churchyard, of testamentary burials, of rectors, and of briefs, together with some other extracts from the registers. Of these extracts, the following strikes us as of most general interest:

1693. Sarah, ye daughter of Jane Micklefield, was buried June ye 12th. *Memorandum.*—This was a young woman of very great stature and strength as within a great way of her (so it is in the register; the meaning is she was the tallest woman for some miles around) being about thirty years of age, but it pleas'd God on ye 11th day of June, being Trinity Sunday, yt she was struck down dead in her own doorstead by a violent and terrible stroak of Thunder and Lightning, so dead yt she was not perceiv'd to move ye least, nor her voyce at all to be heard, and yet where she was struck down a child about threequarters old was in her arms, but receiv'd no damage, neither by ye Thunder, nor by her falling, and her Mother and many Children was about her, but all excepting her selfe escaped ye danger, and yet her selfe was not wounded in any part of her portions.

The following new books will shortly be published by Messrs. J. and A. Churchill: *A Manual of Anatomy*, by the late Alfred W. Hughes, Professor of Anatomy at King's College, edited by Arthur Keith, Hunterian Professor, Royal College of Surgeons; *Clinical Essays and Lectures*, by Mr. Howard Marsh; *Gynæcological Pathology*, by Dr. Charles Hubert Roberts; *The Bacteriological Examination of Water*, by Major Horrocks, of the Army Medical School, Netley; *Serumtherapy*, by Dr. R. T. Hewlett; *A Textbook of Clinical Medicine*, by Dr. T. D. Savill; *A Handbook of Nursing: Medical and Surgical*, by Dr. Hadley; *Elementary Ophthalmic Optics, including Ophthalmoscopy and Retinoscopy*, by Mr. J. Herbert Parsons; Vol. iv of *Groves's and Thorp's Chemical Technology: Electric Lighting and Photometry*, by Messrs. W. J. Dibdin and C. E. Cooke.

## BRITISH MEDICAL ASSOCIATION.
## SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

# British Medical Journal.

SATURDAY, SEPTEMBER 21ST, 1901.

## A "SPORT" OF SMALL-POX.

In the British Medical Journal of May 11th last there appeared a paper entitled Notes on a Mild Type of Small-pox (Variola Ambulans?), by Dr. Montizambert, Director-General of Public Health, Ottawa. The article gave a short account of a remarkably modified outbreak of small-pox which had spread northwards into Canada from the United States. In the monthly *Bulletin* for July of the Health Department of Chicago the same subject is dealt with by Dr. Heman Spalding, Chief Medical Inspector, under the title of Diagnosis of Mild and Irregular Small-pox as found in the Present Outbreak in the United States. The subject is of much interest, alike in its present-day practical aspects and in its historical relationships.

According to Dr. Montizambert, the outbreak, though its exact origin is impossible to establish, began in the Southern States several years ago, and is not to be attributed to soldiers returning from Cuba or the Philippines, as it prevailed before the war with Spain. Owing to unusual mildness of type the variolous nature of the disease has been doubted, and it has been variously named "chicken-pox," "German measles," "impetigo contagiosa," "giant chicken-pox," "Cuban itch," "cedar itch," and so forth. In nearly 12,000 observed cases, the fatality has been only 1.31 per cent. and very many attacks have no doubt escaped recognition altogether, so that the fatality-rate may have been even under the percentage stated.

Reasons for regarding the malady as small-pox are given by both the observers quoted. As distinguished from chicken-pox, adults are attacked perhaps oftener than children, the recently vaccinated escape, the unvaccinated are infected, the appearance of the eruption, no matter how trifling, is always accompanied by improvement of the general symptoms, and a "shotty" feeling of some of the papules or vesicles, owing to the true skin being involved, is usually found. In Chicago the mildest and the most severe attacks have been treated in the same wards side by side, and no cross-infection has taken place, as would have occurred had the cases been different in nature. Typical examples of severe confluent and even fatal small-pox have always been present. Of 310 cases in the Chicago Isolation Hospital, 1 was hæmorrhagic and proved fatal, and 13 were confluent, with 3 deaths. These being hospital cases, their average severity is probably much greater than that of cases not detected, and therefore not subjected to isolation. Dr. Spalding records examples of variola corymbosa, variola verrucosa, variola cornea, and variola varicelloides.

Obviously so mild a malady is practically impossible to control by any such means as isolation or disinfection, and in this respect there is suggested a resemblance to the difficulties which in this country are being experienced nowadays in dealing with mild scarlet fever. In Chicago men have been found in the pustular stage of the disease working in printing houses, packing houses, and factories, feeling no inconvenience and quite unaware of the danger to which they were submitting their fellow workmen. The presence of such cases in Chicago packing houses, from which tinned foods are distributed all over the world, opens up possibilities of a very wide spread of infection. Such possibilities are perhaps remote, but the late Dr. Robert Pringle recorded an outbreak of small-pox in India, which originated in small-pox crusts having in some way become mixed with sugar used for human consumption.

Though mild scarlet fever and mild small-pox resemble each other in spreading disease by means of unrecognised cases, and in the consequent comparative futility of hospital isolation as a preventive measure, they differ in the one essential particular that against small-pox the individual can protect himself by vaccination, whilst scarlet fever has no similar shield. If there were no exceptions to the very trivial character of the variola in the present American outbreak, the question of risking attack might conceivably be open to discussion, but seeing that confluent and hæmorrhagic small-pox may and do result from infection derived from the mildest cases, the only safety is to be found in vaccination, and the last words of Dr. Spalding's bulletin are, "the disease follows the rule of small-pox in attacking exclusively those not protected by vaccination." The protection referred to here of course is relative to the sufficiency and recency of the vaccination.

Regarding the cause of the exceptional character of the outbreak, there seems little or nothing to be learned. Dr. Montizambert points out that the theory of its being due to some meteorological conditions is opposed by the fact that since its commencement there has been at least one intercurrent outbreak of a very virulent form of the disease introduced from the Orient, the fatality-rate in a quickly limited explosion being over 50 per cent.

Such "sports" of small-pox as are here discussed were not unknown in prevaccination times, though then as now they were not universally regarded as of variolous origin. Dr. Spalding is satisfied that in the Chicago epidemic of 1894-5 he saw about 30 cases of variola sine eruptione, but as all the patients had old vaccination marks the question of type is confused. Sydenham met with variolous fever without eruption, but in reading his works, his theory of atmospheric constitutions must be borne in mind, and in presence of what he regarded as a variolous constitution of the atmosphere, with abundance of ordinary eruptive small-pox, it is open to argue that he might be led to consider any concurrent febrile outbreaks as variola sine variolis, though their nature might be essentially different. In the eighteenth century or earlier many poxes were spoken of—horn-pox, stone-pox, water-pox, wind-pox, sheep-pox, swine-pox, etc. The last named of these recalls a very

interesting episode in the life of Jenner.[1] In 1789 an outbreak of eruptive disease spoken of as swine-pox by the common people, occurred in Gloucestershire, and greatly puzzled the medical men there. Jenner's friend Dr. J. H. Hickes read a paper about it to the Gloucestershire Medical Society, and he mentions one girl whose eruption "looked so much like the small-pox that the medical gentlemen who saw her on the same day with myself were not able to determine whether it was that disease or not, though both of them had been in the habit of inoculating, and one of them is a man of acute observation and penetration, and who has very deservedly acquired extensive practice and much reputation, namely, my friend, Dr. Jenner, of Berkeley." Jenner, his mind evidently occupied with the whole question of inoculative methods of preventing small-pox, performed several inoculations with the matter of the outbreak, his son Edward being among the number, but the results did not seem to promise anything obviously milder than sometimes followed on ordinary small-pox inoculation. The curious fact, however, may be noted in passing that this experiment of Jenner is sometimes adduced by the ignorance of modern antivaccinators as proof that Jenner inoculated his own son from a pig. The minutes of the old Gloucestershire Society indicate that there was some intention of collective investigation and publication of results of inoculation and experiments with swine-pox, but the publication was never made, and seven years later Jenner was busily occupied with those cow-pox investigations of which the outcome has been so beneficial to the human race. The establishment of vaccination did not entirely put an end to experimentation with mild forms of small-pox when these occurred as epidemics, and in particular Dr. Adams, who succeeded Woodville at the old Small-pox Hospital of London, used a sport which he called "pearl-pox" for inoculative purposes.

We venture to suggest that the much modified small-pox which at present prevails in America should not be allowed to pass without being made the subject of research. In Jenner's time, when small-pox inoculation was a matter of course, observations of the effects of swine-pox and the like were freely made on human beings. Instead of the human subject, the monkey, which was so largely used by Dr. Buist, of Edinburgh, in his researches published in 1887, and which has quite recently been again resorted to, this time by Dr. Monckton Copeman, of the Local Government Board's Medical Department, is available for inoculative purposes in America, and modern observers have the enormous advantage of the methods of bacteriology, a science which was undreamt of when Jenner accomplished his immortal work.

## THE DIAGNOSIS AND TREATMENT OF DIPHTHERIA.

PROFESSOR SIMS WOODHEAD'S important report is summarised, in so far as it is practicable to summarise so complex a technical statement, on page 815. The portion of it relating to the results of the treatment of diphtheria by antitoxic serum, suffers in interest from the fact that as its statistics deal with the experience of the Metropolitan Asylums Board during the years 1895 and 1896, they are partially superseded by more recent statistics, bringing our experience of the value of antitoxic serum more nearly up to date. Notwithstanding this drawback,—the reasons for which are given in the report,—the statistics given have a high and permanent value. As stated in the report, "they will form a standard of comparison for future work by which may be gauged improvements in treatment, and in the results obtained, that may be of inestimable value." The fact that the fatality for patients under 5 years of age declined from 47.4 per cent. in the preantitoxin period to 31.5 per cent. in 1895-6 is good evidence of the value of antitoxin, but the evidence for more recent periods is even more striking. Thus from the statistics for the Brook Hospital, given in the recently issued first annual report of the Hospitals Committee of Metropolitan Asylums Board, we find that in 1900 the fatality among 345 patients under 5 years of age was only 15.6 per cent. In cases requiring tracheotomy the improvement has similarly increased. From a fatality of 41.5 per cent. under treatment by antitoxin during 1895-6, there is a decline to 33.7 per cent. in 1900. Professor Woodhead's figures show the importance of early treatment by antitoxin. This is emphasised in the recent report of the Metropolitan Asylums Board. At the Brook Hospital during 1900, 854 cases of diphtheria were treated by antitoxin. Of these, 31 were treated by antitoxin on the first day without a single death; among 249 treated on the second day the fatality was 3.6 per cent.; among 238 treated on the third day it was 6.7 per cent.; among 161 treated on the fourth day, 14.9 per cent.; and among 175 treated on the fifth or subsequent days in was 21.2 per cent.

On the question of bacteriological diagnosis of diphtheria, Professor Woodhead's report is even more interesting. His description of the technique and of the essential points in diagnosis will be of value to all who have the responsibility of issuing certificates of the results of examination of "throat swabs." The crux of the difficulty consists in the short small bacilli, certain of which are usually known as Hoffman's bacillus, though Professor Woodhead prefers not to use this name, it having been employed in different senses by various observers. It was clearly necessary under the conditions of the reports required by the Metropolitan Asylums Board that a morphological diagnosis should be made, time not permitting of distinguishing the Hoffman bacillus by its absence of acid formation in glucose media and absence of pathogenic power. Often over 100 specimens had to be reported on during a single day. The same reasons of urgency operate in connection with all bacteriological diagnoses for public health purposes. Dr. Cobbett has recently[1] expressed the opinion that it is possible to train the eye to distinguish, with a sufficient degree of precision, the diphtheria bacillus from the bacillus of Hoffman. Were this true for the majority of experienced observers, the difficulty in connection with these short bacilli would almost disappear. We notice, however, that Dr. Cobbett is of opinion that the eye cannot become sufficiently trained for this purpose unless the observer frequently tests the opinions which he thus forms by isolating his cultures and testing them in various ways, including the

[1] See Jenner Number of BRITISH MEDICAL JOURNAL, vol. i, 1896, p. 1297.

[1] *Journal of Hygiene*, vol. 1, No. 2, p. 236.

injection of animals; and adds that such tests should never be omitted in cases of doubt or when much depends upon the issue. That represents the present state of skilled opinion on this important question. Probably it may for practical purposes be summed up in the aphorism—Implicitly accept positive certificates; do not be misled by negative certicates.

The perusal of Professor Woodhead's report as well as of the annual reports of the Statistical and Hospitals Committees of the Metropolitan Asylums Board has impressed us with the immense fund of important medical knowledge here capable of being drawn upon. What is required to ensure that this knowledge shall be made fully available for the benefit of humanity, and for the increased efficiency of the metropolitan system of hospital isolation, is uniformity in the system of tabulation of statistics in the different hospitals of the Board, so that all results may be truly comparable in every respect.

It is unfortunate, furthermore, that metropolitan medical officers of health are not more closely in touch with the superintendents of the fever hospitals as to patients discharged in whose throats diphtheria bacilli are still present. It is clear that Professor Woodhead attaches great importance to the fact that a large proportion of the diphtheria patients discharged from hospital during 1895-96 still had diphtheria bacilli in their throats. It ought to be practicable to ensure for such patients a modified isolation after their return home, or at the least to prevent their return to school. This could be best secured by a system of notification of such cases by the superintendent of the fever hospital to the medical officer of health.

## THE CASE OF PRESIDENT McKINLEY.

The announcement of the death of President McKinley has been received throughout the world with a genuine feeling of sorrow. It cannot be denied that the bulletins issued during the illness were of so sanguine a character and so hopeful in forecast, that a feeling of amazement, almost of consternation, was aroused when it was announced that death was inevitable. The bulletins, however, though sanguine in tone, embodied some facts which might have aroused a suspicion that all was not entirely well. The pulse-rate was never even moderately satisfactory. It was only once recorded as 100, once as 104, and on all other occasions was over 110, and went as high as 146. In abdominal cases the character of the pulse and its frequency are, it is no exaggeration to say, of greater consequence and import than all other signs. The pulse-rate in this instance was always rapid, and the suggestion that it was due to a tobacco heart gave neither comfort nor encouragement.

It is stated that a full report of the necropsy will be published later; but the most striking part in the abstract already issued is the fact that there was gangrene of the stomach walls and gangrene along the whole track of the bullet. As was pointed out in our last issue, the distinguishing feature of gunshot wounds inflicted by weapons of the type employed is the tearing or disruption of the tissues along the course of the bullet. In this instance a bullet of large size was discharged close to the abdomen with a velocity insufficient to carry it through the body. It would naturally be expected that the wound thereby produced would be contused in character, that bruising would extend for some distance round the track of the bullet, and that the vitality of all the tissues so bruised and torn would be very seriously damaged. If this bruising were unusually severe and hæmorrhage in the track fairly copious, it is not surprising that sloughing resulted. This, we take it, is the explanation: A large bullet was discharged, with low velocity; instead of a clean wound the result of cleavage, there was a wide channel, with much surrounding bruising and laceration, and sloughing followed. There is no need to assign any influence to a supposed escape of pancreatic secretion or to a poisoned bullet. The mechanical conditions are ample to account for all the disturbance found. Much also seems to have been made in comment by the lay papers of the absence of healing described in the record of the necropsy. Such a lethargy on the part of wounds is, unfortunately, not an infrequent experience in abdominal surgery. In gastro-enterostomy for malignant disease of the pylorus, or in any short-circuiting operations performed in conditions of acute obstruction or of exhaustion resulting from malignant disease, complete absence of reparative power may be observed. One hears the pathologist say that the serous surfaces of the wound "fell apart" when examined, or that there was "no attempt at healing," and so forth. If the bruising of the stomach spread widely from the perforations made by the bullet, it is not idle to suppose that a local and coextensive "stunning," a complete cessation of activity, was also present. In such a condition healing is impossible.

We can only repeat, though perhaps with greater emphasis, as more is now known of the facts, what was said last week as to the conduct of the case. In such a catastrophe operation affords the only hope of relief, and the earlier it is performed the greater the chance of success. Whether a resection of the bruised portion of the stomach would have affected the result we cannot, in the absence of exact details, determine; but this we may with confidence assert, that American surgery ranks as high as that of any country in the world, and that in the medical men chosen to attend the late President, America was worthily represented. Success in such a case would have been a triumph, but defeat is not disgrace.

## SKIAGRAPHY IN ABDOMINAL BULLET WOUNDS.

A question which has much exercised the minds of many members of our profession during the last few days concerns the likelihood of benefit which might have arisen from the use of the x rays in President McKinley's case. The operation is said to have taken almost an hour for its performance; a wound of the kidney was overlooked and the exact location of the bullet was not discovered. What would have happened if the Roentgen rays had been applied? There can be no question that with the most recent appliances a good stereoscopic skiagraph taken with proper geometrical arrangements would have shown the exact position of the bullet, and with a piece of lead wire placed upon the wound of entrance the track taken by the bullet might have been inferred. The surgeons in attendance, of course, knew this; but, doubtless, they considered that with a wound of the abdomen in such a position as to make it certain that a hollow viscus had been wounded the delay of a few minutes for the taking of a skiagraph would have

added some appreciable risk to the operation. We certainly think that immediate operation was the wisest procedure, and the *post-mortem* findings are evidence of this. For had the surgeons known at the operation all that the necropsy revealed, their treatment could not have been bettered. The wound in the kidney was so trivial that blood in the urine was not discovered by the microscope, and the bruise of the pancreas could only have been left alone. The removal of the bullet from the back would have been unwise. The *x* rays applied at once might have added an interest to the case; they could hardly have been of real value. The criticism indeed may be offered—the *x*-ray apparatus was under the control of a layman. That was wrong. The application of this method and the interpretation of its results should be the work of medical men. Without intelligent direction and appreciation the skiagraph is only a pitfall, and therefore a trained and accurate observer should alone be held responsible.

## PHYSICAL CULTURE IN SCHOOL CHILDREN.

SIR JOHN GORST in the course of his presidential address to the Section of Educational Science of the British Association, last week, dwelt on the importance of utilising the machinery of compulsory education to improve the physical condition of school children, especially in towns where opportunities for healthy outdoor exercises were few. The same subject had led to an interesting discussion at the annual meeting of the American Medical Association in June last. It was introduced by Dr. J. Madison Taylor, who contended that it was essential that school children should have the benefit of skilled medical supervision during their growth, for early faults of attitude if uncorrected remained and even grew worse. Some of these errors were the outcome of faulty physique, others were inherited, and some acquired by imitation. Among causes which required the interference of the skilled specialist, defects of the eye, the ear, and the nasopharynx were mentioned. A proper development of the breathing capacity was important, and to secure this the thorax should be free from all compression. "In the study of the chest," Dr. Taylor said, "one error was long taught as a truth, and that is to throw the shoulders back, and the chest out, the head up and the chin in." A simple rule which can involve little error was to let the shoulders alone, free from tension, but to keep the back straight. The shoulders and arms should be free from constraint, so as to be capable of being moved in any direction. Both diaphragmatic and costal breathing should be taught and practised, the former being often neglected. In children with feeble muscular tone, stooping shoulders, sunken chests, drooping heads, and partially bent knees were often seen. Proper training would correct these faults. Special conditions arising from occupations included lowered right shoulder, tilted pelvis, pigeon toes, and exaggerated lumbar or dorsal curves. These defects were often associated with lack of extensor power. The teacher should so train and adjust the movements of the body and limb that the extensor muscles were not neglected but encouraged to perform their work fully. Dr. Edgar Darnall urged that at the period of pubescence the school girl should have plenty of open-air life, and too much time must not be given to books or music. Hysteria, crossness, irritability, and neurasthenia might be the result of mental overstrain. The girl's life should be carefully watched, and her studies restricted if necessary. Especial attention should be paid to evacuation of the bowels, and all stimulants and excitement such as late hours, parties, and suppers should be restricted. The habit of eating between meals should be prohibited. Dr. J. Stoer and Dr. Work referred to the numerous instances of children who, having been submitted to a process of mental "forcing," broke down in a few years and became thereafter failures in life. Dr. Learned said the child would learn faster and more thoroughly, and really make more progress in the long run, if he were not started to school until the age of eight years at least. Dr. Leigh Baker said it was the duty of physicians to unite and place the right kind of men on School Boards. A medical man should be at the head of the department of school hygiene, and he should be at the same time a school sanitarian.

## ANTIVIVISECTIONISTS AND THE GENTLE ART OF GARBLING.

UNDER this heading reference was made in the BRITISH MEDICAL JOURNAL of July 6th, page 35, to a crushing exposure by Professor W. W. Keen of Philadelphia of certain dainty devices of the antivivisectionist fraternity on the other side of the Atlantic. He showed that many of the statements made in a pamphlet issued by the American Humane Association were so vague and indefinite that he could not look them up; while of those he could, some were garbled and inaccurate. From a letter from Professor Keen which appeared in the *Philadelphia Medical Journal* of August 10th, we learn that Mr. James M. Brown, the President of the Association aforesaid, did not take up the gauntlet: and that the only reply to Professor Keen's indictment which has been attempted is an anonymous pamphlet entitled The Reality of Human Vivisection, which is put forward as "review" of his letter. In this pamphlet it is insinuated that the reason why no reply has been made to Professor Keen's letter is that "no sufficient rejoinder ..... would be admitted to the columns of these medical periodicals." This is apparently intended to convey the impression that a reply had been sent and had been suppressed by the editors of the journals in question. Professor Keen is, however, able to state that no such communication has ever been received. But even if the medical periodicals declined to print a reply, what was there to prevent Mr. Brown publishing it elsewhere? In the pamphlet the inaccuracies exposed by Professor Keen are practically admitted, but are explained as "translator's exaggeration," "blunders of a copyist," and "errors of a translator." "Translator's exaggeration" is certainly an ingenious way of describing a deliberate lie: the American Humane Association would seem to have special cause to agree with the proverbial philosopher to whom we owe the maxim *Traduttore traditore*. We cannot sum up the case more tersely than Professor Keen, who says: "When a translator says what the author did *not* say; when the word 'collapse' is translated 'final collapse,' and an oration is made upon the death of patients who did not die; when the American Humane Association in reference to these very cases quotes on the the cover of its pamphlet 'Is Scientific Murder a Pardonable Crime?' in spite of the published fact that the patients referred to did not die; when the translator again and again interpolates words, phrases, and sentences which do not exist in the original; when essential phrases and paragraphs are omitted; these, I submit, are not the mere 'errors of a translator,' but deliberate misrepresentations." Characteristically, the American Humane Association seeks to repudiate responsibility for the garbling and misrepresentation of which its anonymous pamphleteer stands convicted. This is a way antivivisectionists have when they get into controversial difficulties, as was illustrated by Miss Frances Power Cobbe in her famous controversy with Mr. Victor Horsley. The *Philadelphia Medical Journal* of August 31st contains what seems to be intended as a reply to Professor Keen from Mr. Brown. All that the President of the American Humane Association has to say, however, is that the pamphlet, "after amendment and revision," has been reprinted together with Professor Keen's first letter, and that a copy may be obtained gratuitously by any physician in the United States. In regard to Professor Keen's latest letter, Mr. Brown says that, if space permitted, "there could

be pointed out in this document some very serious misquotations leading him (Professor Keen) to misstatements and comments which ordinarily would be without excuse." Instead of pointing them out, Mr. Brown wishes Professor Keen a pleasant voyage round the world, and prefers "to leave his misconceptions and mistakes to his own sober judgment, and the rectification that time will surely bring." We admire the discretion and charity of Mr. Brown, but we cannot help feeling that it would have been more in keeping with the humanity which he professes if he had helped Professor Keen to find salvation by pointing out his errors. There are, too, the antivivisectionist brethren to be thought of; they can support their belief on the merest husks of evidence, but still they need something to nourish it. The President of the American Humane Association, however, gives them nothing but irrelevant platitudes.

## NEW ANATOMICAL DEPARTMENT, GLASGOW UNIVERSITY.

The new Anatomical Department of the University of Glasgow was formally opened by Lord Lister on the afternoon of September 12th. The department had for years been hampered by an unsuitable and insufficient accommodation, and the splendid new buildings now inaugurated have been provided through the munificence of the trustees of the late Mr. J. B. Thomson, the well-known shipbuilder. The new buildings include an excellent laboratory and museum, and for this museum Professor Cleland has presented to the University his fine collection of anatomical specimens. In his address, Lord Lister dwelt on the importance of the study of anatomy, and congratulated Professor Cleland and the University on the excellent accommodation which was now set apart for that study. Amongst the others who took part in the proceedings were Principal Story, Lord Provost Chisholm, Sir William Turner, and Professor Cleland; and after the speeches the premises were inspected by the company, and afternoon tea was served.

## THE KITS OF TYPHOID CASES IN THE WAR.

According to a correspondent to the *Times* the Medical Officer of Health to the Southwark Borough Council has prepared for submission to the Council a report dealing with a case of typhoid fever alleged to be due to infected clothing sent home from the Transvaal. The case was that of a youth, aged 19. His father, who was serving with the Fusiliers, died at Krugersdorp in July 1900, of typhoid fever. His kit was sent home to his family, and reached them about the middle of July, 1901. The patient unpacked it at once and found some of the clothing soiled. He, however, began to wear certain of these articles, and after a little more than a week began to feel ill, and on August 1st was obliged to give up work. On August 6th he was admitted into St. Bartholomew's Hospital, from which he was certified as suffering from typhoid fever. The Public Health and Sanitary Committee of the Council accordingly expressed the opinion, in a report, that the case was sufficient to show that the practice of sending home the kits of men who had died in this war was most undesirable and capable of proving a grave source of danger to the public health. They, therefore, recommended the Council to communicate with the War Office urging that the whole of the articles of clothing taken from typhoid fever patients among the troops should be at once destroyed, and that no articles should be allowed to be sent home without first having been satisfactorily disinfected. We believe that the Army regulations bearing on this case are that on a man being admitted into hospital, for any cause, his underclothing should be at once washed and replaced in his kit; and further, that if there is reasonable ground for a suspicion of infectious disease the entire kit should be disinfected. On active service, however, it is very possible that these precautions are allowed to lapse, in many cases probably of necessity, and in this particular case it is possible that the soiled articles were really sent home in the kit without any cleansing or disinfection. But it is also an army regulation that soldiers' kits should be sold on their death and the proceeds credited to the next-of-kin; only personal effects, such as money, medals, or watches being sent home. It will probably be found on investigation that the kit was sent home by some private person without the knowledge of the authorities on the spot. It would obviously have been impossible to have sent home the kits of thousands who have died during the war, but the present story is so circumstantial that we hope it will be thoroughly investigated.

## THE WORK OF THE R.A.M.C. IN SOUTH AFRICA.

We have received from a well-known member of our profession an extract from a letter written by a relative who was recently severely wounded in South Africa. This tribute from a "combatant" officer of high rank to the admirable way in which our military brethren are doing their work during the present war will be read with interest. The writer says: "I never ceased to marvel at the results of the labours of the R.A.M.C. and the civil surgeons, not so much from a medical point of view—excellent as they were, as this is what one sees at home—but at the way they organised comfort and order out of chaos and scarcity in the veld. As a patient I could never see how this was accomplished, as it was so well and quietly done that we saw nothing of it; but we knew and could not fail to wonder at the results, which were simply astounding under the conditions which we knew the surgeons and doctors worked under." This is the testimony of a man who has had intimate personal experience of what is going on, and such personal testimony may very well be allowed to outweigh reams of denunciatory writing founded on hearsay evidence and coloured by personal bias or wounded self-sufficiency. All through this war our bitterest critics have been men of our own race who, from motives which we do not desire to analyse, have circulated charges of brutality against our soldiers, and of callousness and incompetence against the Army Medical Service. Whenever the charges against the medical arrangements have been sufficiently detailed to permit of investigation they have been proved to be grossly exaggerated or have altogether broken down. But as a rule they have been general and indefinite. Yet they have caused acute mental distress to many of those who have had relatives wounded or sick in South Africa. The frank testimony quoted above will, we may hope, comfort those who still have sick or wounded friends with the army, or who may yet have to pass through this painful experience.

## JAMESON PORTRAIT FUND.

In response to the expressed desire of many officers it is proposed to present Surgeon-General J. Jameson, M.D., C.B., K.H.S., late Director-General Army Medical Service with his portrait; and that duplicate copies should be printed for the Royal Army Medical Corps messes at Netley and Aldershot, if funds permit. Such presentation would express the high esteem in which Surgeon-General Jameson is held by his brother officers, and form a suitable recognition of his great services to the Royal Army Medical Corps, and to the Army. It was during his tenure of office that the Royal Army Medical Corps was constituted, and on that ground alone it is most desirable that his name and personality should be handed down in portrait form to future generations of army medical officers. A committee for the furtherance of this object has been formed in London, and the consent of Surgeon-General Jameson to sit for his portrait, and to nominate an artist, has been obtained. We are requested

to state that Messrs. Holt and Co., 3, Whitehall Place, London, S.W., have kindly consented to receive subscriptions, which should be marked for "The Jameson Portrait Fund."

## THE STAFF SURGEON-GENERAL OF THE GERMAN ARMY.

SURGEON-GENERAL RUDOLF FERDINAND VON LEUTHOLD, First Physician in Ordinary to the German Emperor, has been appointed Staff Surgeon-General of the German Army in succession to the late Surgeon-General von Coler. Surgeon-General von Leuthold was a pupil of the Friedrich-Wilhelm Institute and received his professional educational at the University of Berlin. After passing the State examination in 1857 he became an Assistant Surgeon in the Medical Department of the Army, rising to be Staff Surgeon in 1862, Staff Surgeon-Major of the Second Class in 1867, Staff Surgeon-Major of the First Class in 1875, and Surgeon-General in 1889. He was associated with the late Professor von Lauer in the medical care of the Emperor William I, and on the accession of the present Emperor was chosen by him to be his Physician-in-Ordinary. Surgeon-General von Leuthold was for many years Professor of Military Surgery in the Kaiser Wilhelm Academie, and was at the same time editor of the *Deutsche militärärztliche Zeitschrift*.

## THE NITROGENOUS METABOLISM IN SEVERE MUSCULAR EXERCISE.

THE investigation carried out by Messrs. Atwater and Sherman [1] on three trained bicycle racers in a six-day contest, December, 1898, at the Madison Square Garden, New York, has yielded interesting results, supplementing those previously obtained by Flint and by Pavy on the professional pedestrian, Weston. The winner of the race, C. W. Miller, a rather short and very muscular man, aged 24, worked on the average twenty out of twenty-four hours, and succeeded in riding 2,007 miles during the six days without showing signs of physical or mental weakness at the end. The second subject of experiment covered 1,822 miles, and came out fourth at the finish. The third subject left off after the third day of the race. Estimates were made of the foods consumed, and the urines and fæces were collected and analysed. The fuel values of the dietaries in calories were about 50 per cent. above the average for American mechanics, the proportion of protein averaging 169 to 211 grams per diem, nearly twice the ordinary amount for mechanics. Yet the protein burned up by metabolism in these athletes was decidedly in excess of that absorbed from their food. In 1876, when the pedestrian Weston took sufficient food to keep up his nitrogenous equilibrium, the amount of protein in his dietary was considerably greater than in Miller's at Madison Square. It appears, however, from the Madison Square results that trained athletes can lose relatively large amounts of body nitrogen without any apparent ill-effects. Albumen has frequently been found in the urine of young men after severe muscular exertion, and it is noteworthy that, though the urine of each of the athletes (that is, thoroughly trained ones) was tested each day for albumen and sugar, no trace of either was found in any sample.

## EMERGENCY CASES AND THE DUFFERIN HOSPITALS.

THE National Association for Supplying Medical Aid to the Women of India was founded in a spirit of true and wise philanthropy, and has done a great deal of good work. It does not do, however, all that it might be expected to do, and we have felt compelled on several occasions to undertake the ungrateful task of criticising its administration. Its counsels would seem to have become infected with timidity, and its methods to be hampered by red tape. A correspondent, whose letter is published in another column, states that there is a rule forbidding the admission to the hospitals of the Association of any woman not of the "respectable" class, and that this rule is enforced even in cases of emergency. We do not know precisely what is meant by "respectable" in this connection. The primary function of a hospital is to relieve suffering and prevent death, and it is the rule of all hospitals to admit a patient whose life may depend on immediate treatment, and to inquire afterwards whether the patient is a suitable person to be retained in the hospital after the immediate danger is past. Apparently there is an order of the Government of India to this effect, although our correspondent does not clearly state whether it is intended to apply to a voluntary institution such as a hospital supported by the Dufferin Association. However this may be, the fact that these hospitals are supported by public subscription would only make the case for the immediate admission of emergency cases all the stronger. The Dufferin Hospitals in India are, we believe, managed by lay committees, on which the medical profession are very inadequately represented, and the medical women who do the work of the hospitals not at all. If there were such a representation we cannot believe that such a rule as that described by our correspondent could ever have been proposed, much less enforced. We think that our correspondent should lay the facts before the Committee of her hospital, and in particular give details of the unfortunate experiences to which she refers; if this fails, an appeal should be made to the representatives of the Association in this country, for we have no doubt that public and professional opinion would support her contention that a hospital which refuses assistance to a dying woman because she is supposed not to fulfil some fanciful definition of respectability, fails to discharge one of its most important duties, and falls short of the expectations of those by whose gifts it is maintained.

## INSOLUBLE CAPSULES AND APPENDICITIS.

CAPSULES, coated pills, and similar elegant products of modern pharmacy often prove to be far less soluble than intended, so that they are passed in the motions more or less entire. Dr. L. O. Polak of Brooklyn records a case in which a capsule became impacted in the appendix vermiformis.[1] A woman, 54 years of age, had suffered when about 46, from acute obstruction, apparently intussusception. There was persistent pain in the left side, which latterly became severe. Dr. Polak found that massage, rectal irrigation, and the internal administration of antiseptics relieved her. As there was deficient secretion of bile he administered ox-gall, pancreatin, salol, and ichthyol in capsules. About forty-eight hours after the first dose the patient had a severe attack of pain in the right side with tenderness over the site of the appendix. Inflammation of the appendix was diagnosed, and the diagnosis was confirmed by operation. The appendix was removed, it showed no sign of perforation, but contained a capsule. The gelatine coating had dissolved, but the contents had reached the large intestine undissolved; they are certainly not intended to go intact so far down the alimentary canal.

## THE WET CLEANSING OF PUBLIC VEHICLES.

IN a letter to the *Times* of August 31st, Dr. Alfred Greenwood, of Crewe, has stated his conviction that systematic and frequent wet cleansing of railway carriages, tramcars, and omnibuses should be made compulsory by law. He summarised his conclusions as follows: That tuberculous sputum dries on the floors of railway carriages and spreads as dust into the atmosphere. That this dust is infectious

[1] *The Effect of Severe and Prolonged Muscular Work on Food Consumption, Digestion, and Metabolism*, Washington, 1901.

[1] *Amer. Gynec. and Obstet. Journ.*, August, 1901, p. 150.

and may act as a contributory cause to the incidence of consumption, and that the interiors of railway carriages are not disinfected and cleansed at sufficiently frequent intervals to prevent the retention of this infection. In addition to the wet cleansing and disinfecting of public vehicles, he advocates the fixing of cautionary notices in all railway compartments; the imposition of penalties for infringing this rule and the construction of railway compartments in such a way that the cushions and flooring should be detachable, and that the cushions should be made of a less pervious material than that used at present. As a result of his own recent researches he has come to the conclusion that those railway carriages which contain spitting notices are more free from evidences of this habit than those in which there are no such notices. This is encouraging, and the abolition of the dry duster and sweeping brush should be the next step. To flick about dust from one place to another or to scatter it through the air are, to say the least, futile measures, and the development of a domestic fashion of substituting a damp cloth or the use of antiseptic solutions for cleansing purposes would do much both to free dwelling houses and public places from "stuffiness" as well as from infective microbes.

## SYPHILIS *D'EMBLEE* WITHOUT PRIMARY SORE.

Dr. Louis Jullien, of Paris, has recorded two extremely interesting cases of syphilis accidentally contracted by a surgeon and his assistant in the course of an operation. The details are shortly as follows: On June 9th, 1899, they removed a tuberculous growth, situated over the sternum, in a woman aged 32. The needle used for suturing the wound did not act well, and the surgeon, in drawing it through, cut himself badly about the end of the right forefinger. The needle was two-edged, so the wound inflicted by it was deep and bled a good deal. The assistant then tried to pull the needle through, and in doing so injured his right forefinger in exactly the same way. In both cases the wounds healed in three or four days. The patient was dressed for the first time on June 17th. There was slight ulceration and redness about the points of entry and exit of the stitches. This led to a suspicion of syphilis. On the following day a macular syphilide developed, and, on examination of the genitalia, an involuting sore was found about the fourchette with some inguinal adenitis. On July 5th—twenty-six days after the infliction of the wound—the surgeon was suddenly seized with febrile symptoms and remained in bed for twenty-four hours with a temperature of 39° C. (nearly 103° F.). The end of the injured forefinger became swollen and the wound broke down superficially, giving rise to a very insignificant amount of ulceration. On July 9th—thirtieth day—a confluent macular syphilide appeared, followed on the 16th by moist papules on the scrotum, and on the 18th by mucous plaques on the finger. This was accompanied by joint pains which lasted to the end of July. On July 26th a papular syphilide developed on the palms. The assistant remained well until July 9th (thirtieth day after the accident), when he had a febrile attack. There was no reaction at the site of the wound. A macular syphilide made its appearance on the thirty-third day. The conclusions to be drawn from the above are of scientific as well as practical interest. The facts confirm Pellizzari's experiments that the blood of syphilitics is infectious, although it is not known exactly at what time it becomes so. In this instance the blood of the woman was certainly infectious nine days before the secondary syphilitic eruption. The primary sore in the woman was probably about thirty days old. Another point of perhaps greater interest is the fact that the syphilitic virus was directly introduced into the blood of the surgeon and his assistant *d'emblée*—that is, immediately—without going through the usual stages of primary sore and lymphatic infection. The latter stage was skipped, the glandular barriers avoided and the organism taken as it were by sudden assault and surprise. It should be mentioned that the lymphatic glands corresponding to the wounds were not enlarged. Adenitis occurred only after the secondary manifestations as a result of involvement of the mucous membrane. This mode of invasion was some time ago theoretically discussed by Professor Oltramare of Geneva. The two cases here recorded are a clinical confirmation of those *a priori* views. The practical lesson conveyed is also an important one, and demonstrates once again how careful surgeons should be to avoid wounds in the course of operations. Had the French surgeon pulled the needle through by grasping it with some kind of forceps, unpleasant consequences would have been avoided. Now, as to the expression *d'emblée* used by French writers the foregoing details offer a sufficient explanation of what is meant: To develop without the usual preliminary stages (as in mycosis fungoides *d'emblée*, for instance), to take by assault and surprise. Littré derives it from *involare*.

## SPECTACLED SOLDIERS.

Army reform occupies so large a part of contemporary interest and is so many-sided a question, that it is not surprising to find aspects of it which present considerable interest to the profession. The old *régime* is undoubtedly passing away, and the introduction of long-range weapons and smokeless powder has not only given rise to new views of tactical formations and other matters of purely military interest, but must inevitably lead to alterations in the views hitherto held as to the physical requirements of the soldier. It is a remarkable fact that in journals such as the Indian *Pioneer*, which are certainly not without weight in military matters, the question of the vision of the soldier and its correction should be freely discussed. Articles have recently appeared in the Indian press dealing with this all-important question; and as the new musketry comes in, and men are compelled to fire at ranges which have hitherto been regarded as unnecessary, there can be no doubt that more attention will be paid to the difficulties of getting men to shoot at these distant objects. Does it follow because a recruit passes the by no means stringent visual test that he will become a good shot at a target 2,000 yards off? And, if men are as scarce as they seem to be, is it sound policy to reject them merely because they have a slight degree of ametropia which could be easily corrected? Hitherto, no doubt, there has been a prejudice against spectacled soldiers in our army; but there used to be a prejudice in favour of tight tunics and useless regulation helmets, which has had to go the way of others, under the stress of modern war. If we are to get men, in quantities anything like sufficient for the army, by voluntary enlistment, it would seem that the meshes of the net must not be made too large; and, although every endeavour should be made to get men who possess the average physical equivalents of their class and age in the general population, it certainly seems absurd to demand a qualification,—emmetropia—which must enormously limit the number of men available. The proportion of men with some defect of vision, out of 300,000 of the general population is considerable; if conscript armies are prepared to take such and turn them into soldiers there is surely no reason why we should insist on regarding them as useless.

## CANCER IN BUFFALO.

Lyon (*Amer. Journ. Med. Sci.*, June, 1901) publishes the results of a research into the distribution and statistics of cancer in Buffalo for the period 1880-1899. The material analysed consisted of the mortality records of the City Board of Health, and in estimating the distribution, 2,005 cases whose residence was known were assigned to their proper quarters. A marked concentration was found in

the German wards, and no other relation than that of race could be determined to exist between this area of concentration and local conditions. Tables constructed to show racial prevalence showed that cancer was much more frequent among the foreign born—and particularly the Germans—than among the native born. A low cancer rate was found in the Italian quarter, and a corresponding low position was occupied by the Italians in the race table. The Germans and Poles exhibited two other peculiarities in that the rate among males closely approximated the rates among females, whereas among other classes the female members were almost double the male members. These two nationalities were also distinguished by the very large number of cases of cancer of the stomach, and the comparatively small number of cases of cancer of the uterus and breast. Lyon considers that the figures support the idea that the peculiar diet of the Germans is responsible for the high rate amongst them. The statistics show a general increase in the cancer rate from 32 to 52 per 100,000 of population.

## NARCOLEPSY.

LOUIS FURET (*Thèse de Paris*, 1901) refers to the interesting condition known as narcolepsy which is characterised by "irresistible attacks" of sleep. These may come on at any time during the day, but are usually of brief duration as contrasted with the so-called sleeping sickness of West Africa, where prolonged somnolence and even lethargy are the characteristic symptoms. In 1880 Gelineau gave the name of *narcolepsie* to this disorder, which he regarded as an affection of the nervous system *sui generis*. Soon afterwards attention was called to its occurrence in diabetes. Féré regarded it as a disease having affinities with epilepsy, and Dutil thought it was allied to hysteria. More recently Robin[1] and Paul Sainton[2] have recorded cases which show a close association between obesity and the tendency to narcolepsy, and in which treatment and cure of the obesity cured the narcolepsy. It has been suggested that a condition of thyroid insufficiency is one of the factors underlying both obesity and narcolepsy, and in this connection the habitual apathy and somnolence of myxœdema are certainly noteworthy. Furet points out that the sleep in narcolepsy has all the features of normal sleep—relaxation of muscles and limbs generally, subsidence of sensorial and psychical activity, slowing of the heart and of respiration, and dilatation of the pupil. On waking the patient recollects having slept and feels refreshed as after habitual sleep. He does not awake with the feeling of lassitude and the sense of exhaustion of the epileptic after a fit. The average duration of narcoleptic sleep is from ten to thirty minutes, and it may occur once or several times daily. Differential diagnosis must be made from the sleeping sickness of Africa, which is marked by an elevation of temperature, from meningo-encephalitis of influenzal origin, from coma of renal or diabetic origin, and from hysterical sleep. In cases of narcolepsy associated with diabetes, obesity, or nervous affections prognosis is on the whole favourable. If hepatic disease is present the prognosis is bad. Treatment should be directed towards the fundamental morbid conditions present. Thus, for example, if neurasthenia is present, rest, fresh air, generous feeding, and the administration of glycero-phosphates should be the treatment adopted; if the patient is obese, the systematic reduction of fat and the increase of general body metabolism by the use of exercises, strict and appropriate dieting, and thyroid administration form the principles of treatment. Increased elimination of toxins by the bowel should be favoured by the use of saline aperients or vegetable laxatives, and digestion should be carefully regulated. The total withdrawal of alcohol from those accustomed to indulge rather freely in it is often an aid to treatment.

[1] *Bull. Gén. de Therap.*, 1895.
[2] *Rev. Neur.*, March, 1901.

## THE PATHOLOGY OF THE JEW.

KRETZNER of St. Petersburg contributes to the *St. Petersburger medicinische Wochenschrift* of May an interesting paper on the Jew as affected by disease. The low mortality and high fecundity of Jews are well known, and are amply borne out by Hoffman's statistics for a period of eighteen years in Prussia. The Jewish mortality was 21.6 per cent., while for the rest of the Prussian population it was 29.6 per cent. Their fecundity is shown by the fact that whereas the increase of the Jewish population for that period was 34.7 per cent., the proportion was less than 28 per cent. for the rest of the population. Professor Benedikt of Vienna also concurs in this view of the relatively prolific nature of Jewish women. "At the present day, among orthodox Jews, every female is condemned from nativity till the menopause to an uninterrupted series of pregnancies, parturitions, and lactations." One interesting feature as regards the proportion of the sexes is the unusual excess of boys over girls amongst Jews in both Austria and Prussia. Thus in Austria, according to the researches of Schwimmer, 128.5 boys are born for every 100 girls born among Jews, while in the general population the ratio is 105.8 boys to 100 girls. Of Jews who have attained to eminence in the medical profession of late years the following are mentioned: Bernstein, Cohnheim, Freund, Henle, Heidenhain, Hirschberg, Jaffe, Liebreich, Mendel, Meynert, Saenger, Schreiber, Senator, Traube, and Zuckerkandl. The nervous system of the Jew is especially prone to be subject to disorder, and this applies to both sexes. Puerperal psychoses are very common among Jewesses, and general paralysis is prevalent among the men. The official report for Bavaria and Prussia for 1871 showed that blindness, deaf-mutism, and insanity generally were twice as prevalent among the Jews as compared with the native Germans. Myopia and trachoma are both frequent among the Jews in Russia. On the other hand, pulmonary phthisis, as shown from military statistics, is infrequent among the Jewish soldiers, the relative frequency being 1 Jew to 22.3 Christians and 1.7 Mohammedans in the Russian army.

THERE is no very decided change with regard to the prevalence of small-pox in London to chronicle during the past week. The number of cases under treatment at midnight on Saturday, September 14th, was 132; 10 cases were admitted on Monday, 6 on Tuesday, and 4 on Wednesday. The total number of cases in the hospitals on Wednesday was 144.

THE number of applications from individuals to benefit under the conditions of the Carnegie Trust as to payment of education fees has been very large—between four and five thousand we believe. The list is now closed and the applications are being classified. The committee is to meet for the consideration of the applications within the next few weeks.

IT is announced that the trustees of the Frank James Memorial Home for Seamen, East Cowes, Isle of Wight, have offered the Home to the Prince of Wales's Hospital Fund for London on the understanding that the Fund would choose a London hospital requiring such a convalescent home for its patients. The Home was originally intended for the benefit of aged seamen, and a hospital for sailors is, if possible, to be chosen. The trustees, Messrs. Arthur and William James, have undertaken to endow the Home with the sum of £10,000. The offer will take effect after the termination of the war, as the Home is at present at the disposal of the War Office for convalescent soldiers from South Africa.

# THE PLAGUE.

## PREVALENCE OF THE DISEASE.

### INDIA.

DURING the two weeks ending August 17th and 24th the plague returns for all India show 3,152 and 3,404 deaths respectively as having occurred from the disease. Dharwar, in the Bombay Presidency, seems to be the district most severely afflicted during the week ending August 24th: 1,103 deaths from plague have occurred there. In the districts of Kolhapur and Satara also plague is rife. In the City of Bombay during the weeks ending August 10th and 17th the deaths from plague numbered 139 and 210 respectively, and in the Bombay districts 2,198 and 2,720. In the Bengal districts plague has almost disappeared, the deaths from the disease during the week ending August 17th numbering 5 in all. In Calcutta during the same period 20 persons died of the disease. Benares seems free from plague. In Mysore State the deaths from plague during the week ending August 17th reached 180, being 29 fewer than during the previous week.

### EGYPT.

The Director-General, Sanitary Department, Egypt, reports during the week ending September 1st 7 cases of plague in all Egypt, and of these 5 died of the disease. Since August 6th no case of plague has occurred at Zagazig. During the week ending September 1st, 4 fresh cases have been found at Mit Ghamr and 3 at Port Said. The outbreak at Mit Ghamr is well in hand, and there is little likelihood of the disease spreading. According to a Reuter's telegram dated September 16th, the number of plague cases existing in Egypt at that date numbered 11—4 at Alexandria, 6 at Mit Ghamr, and 1 at Benha. All the victims are natives. The total number of cases since April 7th, when the recurrence of the disease was first officially noted, amounts to 155, of which number 74 have ended fatally.

### CAPE OF GOOD HOPE.

During the week ending September 7th Port Elizabeth was the only town or district in South Africa in which plague was reported, and here only one person (a European) developed the disease. At Port Elizabeth also during the same week 2 deaths occurred from plague, one of the victims being a European and the other a native.

### HONG KONG.

During the week ending September 14th, 11 fresh cases of plague were reported in Hong Kong, and 11 deaths from the disease. It would appear that plague is entering a new phase in Hong Kong, as during September it is unusual to find the disease prevailing.

### MAURITIUS.

For the week ending September 12th, 16 cases of plague were notified in Mauritius, of which number 13 proved fatal.

# ASSOCIATION INTELLIGENCE.

## COUNCIL.

### NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 23rd day of October, at 2 o'clock in the afternoon.

Sept. 5th, 1901. FRANCIS FOWKE, *General Secretary.*

### NOTICE OF QUARTERLY MEETING OF COUNCIL FOR 1901.

A MEETING of the Council will be held on October 23rd. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before that meeting—namely, October 2nd.

### ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

## LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

## BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held at the White Hart Hotel, Lewes, on Thursday, October 10th, at 3.30 P.M. Dinner at 5.30; charge, 6s., without wine. Notice of intended communications should be sent before the end of September to J. W. BATTERHAM, M.B., 3, Grand Parade, St. Leonards, Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting of this District will be held at the White Hart Hotel, Reigate, on Thursday, October 10th, at 4 P.M., Dr. S. W. MacIlwaine, of Redhill, in the chair. Agenda: Minutes of Croydon meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. The following papers, etc., have been promised: Dr. Lauriston E. Shaw: The Selection of Cases of Pulmonary Tuberculosis for Sanatorium Treatment. Mr. L. A. Dunn: Difficulties and Treatment of Strangulated Hernia. Dr. George Blacker: Some Remarks on the Pathology and Treatment of Eclampsia. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. Dinner at 6 P.M.; charge, 7s., exclusive of wine. The Honorary Secretary would be much obliged if members would kindly inform him by postcard whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner. By so doing they will very materially facilitate arrangements, and promote the success of the meeting. All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends.—HENRY J. PRANGLEY, Tudor House, Anerley, Honorary Secretary.

SOUTH MIDLAND BRANCH.—The autumnal meeting of this Branch wil be held at Eight Bells Hotel, Bletchley on Thursday, October 3rd, under the presidency of Mr. Kingcombe. The following communications have been promised:—Mr. Evan Harries Jones: The Treatment of Corneal Ulcers with Hypopyon. Mr. Percival: Two Cases of Stone in Females. Mr. Evan Harries Jones will be proposed as Honorary Secretary of the Branch in the place of Mr. Evans, resigned. Gentlemen desirous of reading papers or cases, showing specimens, drawings, and other objects of medical interest, are requested to communicate at once with the undersigned. Luncheon will be provided at the hotel at 1.45 P.M. at 2s. 6d. each, exclusive of wine, etc., and gentlemen wishing to be present are requested to intimate their intention to the Secretary not later than September 30th.—CHARLES J. EVANS, Northampton, Honorary Secretary.

NORTH WALES BRANCH.—The autumn intermediate meeting of this Branch will be held at Llanberis on Thursday, September 26th, at 2.30 P.M. After lunch at 1.30 at the Victoria Hotel the ascent of Snowdon on the mountain railroad will, if fine, be taken, and the meeting held at the summit. The President, Rob. Parry, M.B.Lond., will deliver his address. A discussion the club question will be opened by Dr. Jones Morris. The following papers are promised: R. H. Mills Roberts, F.R.C.S.Edin.: Surgical Experiences in South Africa. J. Lloyd Roberts, M.B.: Goitre, including Graves's Disease. Price Morris, L.R.C.P.Edin.: Empyema. H. Briggs, M.D.: Cases of Old-fashioned Ovarian Tumours: Note on Diagnosis. Rushton Parker, F.R.C.S.: Perforative Appendicitis with Purulent Peritonitis: Recovery after Abdominal Section. The following resolution has been received: "That this meeting of the Shropshire and Mid-Wales Branch having discussed the whole question of Club practice within its area, desires to place on record its conviction that the present system of contract practice is inadequate, and considers that no medical man residing in the Branch area ought to accept less than 5s. per annum per adult member." After the meeting, Mr. Brinkmann, the Local Manager, will be happy to show the famous quarries of Mr. G. W. Duff Assheton Smith, and Dr. Mills Roberts invites inspection of the Quarry Hospital.—W. JONES MORRIS, Is-y-Coed, Portmadoc, H. JONES ROBERTS, Gwydd-fôr Pen-y-groes, Honorary Secretaries.

# SPECIAL CORRESPONDENCE.

## PARIS.

*Dr. Arloing on the Transmissibility of Human Tuberculosis to Cattle.—The Chair of Clinical Ophthalmology.—The Annual Dinner of the Continental Anglo-American Medical Society.*

IN the recent number of the *Revue de la Tuberculose*, Professor Arloing contributed a critical examination of the views of Professor Koch on the possibility of the transmission of tuberculous infection. He says that Dr. Koch considers that to decide on the alimentary origin of an infection, the infection must be localised and must remain in the intestine. Dr. Arloing considers this criterion too strict. The propagation of the lesion sometimes takes place so rapidly that it is difficult to decide which was the primitive lesion. He goes even further and believes that tuberculous lesions can appear at the seats of election without the virus having left any trace at its point of introduction, that is, he admits the possibility of a "pulmonary tuberculosis of alimentary origin without any intestinal lesions." In experimental inoculations,

especially in rabbits, Dr. Arloing has obtained visceral tubercle, without any trace of tubercle at the point of inoculation or in the subsequent course followed by the infecting matter. To reduce still further the dangers from bovine tuberculosis, Dr. Koch, in the insufficient number of cases of alimentary origin which he recognises, makes a distinction between the cases due to ingestion of bovine tubercle and those due to the ingestion of bacilli of human origin. Dr. Koch indicates as a criterion that on making a pure culture of the bacilli existing in the tuberculous lesions and inoculating them under the skin of cattle "characteristic results" will be obtained, if the tuberculosis is of bovine origin "after an incubation period of about a week large tuberculous lesions will be found in the organs of all the animals injected." Dr. Arloing has injected bovine tubercle into the subcutaneous connective tissue of heifers without obtaining any visceral lesions; the effects were limited to local lesions and tuberculous nodules in the nearest lymphatic glands. Lesions of human origin have not necessarily and always the same virulence. Dr. Arloing has shown that glandular or scrofulous lesions and many surgical tuberculous affections are less virulent than the majority of tuberculous lesions of the viscera or the serous cavities. The latter infect the rabbit and the guinea-pig, while the former only infect the guinea-pig. Moreover, certain tuberculous lesions, which at first infect the guinea-pig alone, will after several passages from one guinea-pig to another, increase in virulence, and will then infect the rabbit. His pupils, Courmont and Denis, have also found attenuated bacilli from the human lung, analogous to those in tuberculous surgical affections, able to infect the guinea-pig but producing no effect on the rabbit. Dr. Koch says that human tuberculosis cannot be transmitted to cattle, with which he classes the pig, sheep, goat, and ass. Dr. Arloing has kept in his laboratory on glycerinated potatoes, a culture of very virulent tubercle bacilli of human origin, with which he has made intravenous injections in the ass and goat, subcutaneous injections in the cow and guinea-pig, and intraperitoneal injections in the rabbit.

*Inoculation of the Ass.*

Two asses were injected on September 25th, 1896. At the *post-mortem* examination lesions were discovered limited to the thoracic cavity.

In the first ass, which died in less than a month, the lungs showed here and there congestive lesions, and, in addition, throughout the lungs but especially in the anterior lobe of the left lung, were some tubercles, giving to the finger the sensation of resistant grains.

In the second ass, killed on November 28th, the lesions were more evident to the touch than to the eye; the finger felt a large number of resistant circumscribed points. Microscopically, in the first ass were found tuberculous granulations more or less accompanied by simple inflammatory lesions classical in type. In the second ass, tuberculous granulations were easily recognised, but they were invaded by connective tissue.

A third ass received two injections at fifteen days' interval (March 27th). On May 27th the animal was killed, and showed (*a*) a multitude of small elevations, shining at the apex and here and there surrounded by a zone of congestion; (*b*) a large number of flat circular spots of the diameter of a pea, and of a whitish colour. Microscopically the firm shining elevations were found to be tuberculous granulations, the peripheral elements, the epithelioid cells forming them, seem to be in full activity and surrounded giant cells of marked distinctness. The white spots were formed of a mass of cells in a mesh of connective tissue fibres.

In all these animals the lymphatic system was but little affected, the bronchial, œsophageal, and prepectoral ganglia were not swollen; in one case only were one or two little tubercles found.

*Inoculation of the Goat.*

Seven goats were inoculated on April 20th, 1899. On *post-mortem* examination all of them showed tubercle in the lungs, especially in the anterior lobes, some of the granulations showing commencing caseation.

*Inoculation of the Guinea-pig.*

Four guinea-pigs were inoculated with the same culture on April 21st, 1899; they died on June 16th with a generalised tuberculosis.

*Inoculation of Cattle.*

A dose of 10 c.cm. of the same culture was inoculated under the skin of the supranasal region in a heifer. A tuberculous nodule developed by degrees at the point of inoculation. The lymphatic glands in the maxillary region were slightly swollen. A long time after the inoculation the subcutaneous gumma softened and opened spontaneously. The disease did not spread to the viscera.

*Inoculation of the Rabbit.*

Injected into the peritoneal cavity an eruption of tubercles occurred on the epiploon, and on some points of the parietal and visceral peritoneum. Staining showed the presence of the bacillus of Koch.

The above inoculations in the guinea-pig and heifer, as well as the intraperitoneal inoculation in the rabbit, were done with the object of testing the infective power of the culture, in case the intravenous inoculation should have given doubtful or uncertain results in the ass and goat. In the case in question they were superfluous. The above experiments are so many positive results against the negative results obtained by Dr. Koch.

Dr. F. de Lapersonne has been appointed Professor of Clinical Ophthalmology in the Faculty of Medicine in Paris, replacing his former teacher, Professor Panas. Professor de Lapersonne received his medical education in Paris, but since 1886, when he was appointed Professeur Agrégé, he has been in Lille, where he occupied the position of Dean of the Faculty of Medicine.

The annual dinner of the Continental Anglo-American Medical Society will be held at the Hôtel Ritz in Paris on Tuesday, October 8th. Sir James Crichton-Browne has promised to occupy the chair.

## BERLIN.

*The Society of Prussian Medical Officers.—The Prevention and Treatment of Inebrity.—The Sick and Wounded from China.—Professor Virchow's Eightieth Birthday.*

The Society of Prussian Medical Officials (*Preussische Medizinal-beamten Verein*), which numbers 1,040 members, met for its annual meeting in Berlin on September 13th. Kreisarzt Krause read the first paper on the Struggle against Tuberculosis. He urged compulsory notification, and recommended the Norwegian system of temporary isolation of patients. The best results might be hoped for from the popularisation of hygienic ideas, and from the hygienic education of the tuberculous. The latter desideratum could be best attained in sanatorium treatment. An interesting paper on Prophylactic and Disinfecting Measures during Epidemics was read by the Director of the Hygienic Institute in Posen, Professor Wernicke. Broadly speaking there were two methods, he said—one depending on general hygienic and preventive measures, which was connected with the names of Pasteur and Koch, whilst the other had for its object the internal disinfection or immunisation of the individual. The father of this latter method was the immortal Jenner, while in our own day it had been extended by Behring. The meeting, which lasted two days, was closed by an animated discussion on the new "Kreis-arzt" law.

The modern theory that dipsomania is primarily a disease, and a mental disease, is gaining ground more and more. At the recent Lübeck meeting of the German Society for Almonry both introducers of the subject, the Mission of Almonry with regard to Confirmed Drunkards, accepted it as a recognised fact, and both seemed to think the time not far distant when, with the help of legislative measures, pauper dipsomaniacs might be received into, and even forced to enter, special sanatoria. Statistical tables showed clearly the large number of drunkards in the general hospitals and lunatic asylums of Germany. The numbers were:

| | From 1886 to 1888. | From 1889 to 1891. | From 1892 to 1894. | From 1895 to 1897 |
|---|---|---|---|---|
| In Prussia ... ... | 31,782 | 31,095 | 32,644 | 36,683 |
| In Germany ... ... | 30,202 | 36,874 | 40,190 | 46,042 |

After an animated discussion the following theses were proposed and adopted by a large majority of the meeting: (1) Public Almonry for many reasons, pecuniary among others, has the deepest interest in the drink question: its task must, therefore, be to further abstemiousness by every means in its power. (2) It is the duty of the Board of Guardians to provide proper treatment for needy persons suffering from dipsomania in the form of disease. (3) It is urgently desirable that legislative regulations be issued for the interdiction of confirmed drunkards. (4) Dipsomaniacs should be encouraged and persuaded to enter a proper sanatorium voluntarily. Should persuasion prove unavailing, recourse should be had to legal interdiction and forcible removal to a sanatorium. (5) Pauper incurable drunkards, especially those of advanced age, can be best dealt with in sanatoria, and should

be interdicted, in order to render forcible detention possible. They would thus be preserved from further mental and bodily decay, and—as far as possible—might be usefully employed.

The temporary barrack-hospital erected for sick and wounded soldiers home from the Chinese Expedition is now quite full. Great is the interest taken in the inmates by the Berlin population; and the convalescents, who walk about in the reserved open space, are eagerly watched day by day through holes in the wood fencing.

The programme for the festivities and celebrations in honour of Professor Virchow's eightieth birthday, which will fall on October 13th, has not been definitely fixed as yet. On October 12th Virchow intends to hold a reception in the Pathological Institute and to exhibit the treasures of his pathological museum. October 13th will be reserved for the presentation of addresses, gifts, etc., and for the usual banquet. There is much talk of the foundation of a "Virchow-Haus" (on lines similar to the "Langenbeck-Haus" and "Hoffmann-Haus"), but it is understood that Virchow himself is not in favour of the plan, and that he would prefer the subscriptions to go to the strengthening of the "Virchow-Stiftung," a fund which was established on the occasion of his seventieth birthday for the advancement of scientific and archæological research. The municipality of Berlin has passed the following resolution:—

On October 13th our honorary citizen Town Councillor Geheimer Medicinalrath Professor Dr. Rudolph Virchow will complete his eightieth year. On this occasion we have decided to honour the venerated member of our municipality by assigning the sum of 100,000 marks (£5,000) to the "Virchow-Stiftung" for the furtherance of its objects, and we propose that the day be celebrated by a municipal banquet in the banquetting hall of the Rath-Haus.

## CARDIFF.

*The Health of Glamorgan County: Zymotic Diseases: Isolation Hospitals: River Pollution: Bacteriological Work of the Cardiff and County Laboratory.—The Health of Cardiff: Error in Estimation of Population: Corrected Death-rate: Phthisis.—Water Supply.*

The annual report of the Medical Officer of Health to the Glamorgan County Council has just been published.

The total population of the whole county, 860,022, as given in the census returns, shows a steady but very marked increase of 172,804 since 1891. The population, 616,270, of the administrative county is, however, considerably less, Cardiff and Swansea not being included in the administrative county. The death-rate is 17.2, as compared with 18.3 for England and Wales, but the zymotic death-rate is higher by 0.9 per 1,000, the increase being mainly due to increased mortality from measles and diphtheria. In regard to diphtheria 35.83 cases were notified with 484 deaths. The death-rate works out at 0.76 per 1,000, as compared with 0.29 for England and Wales, a very large difference (0.47). One case of bubonic plague is reported, but no further spread took place. The work of the County Council with regard to the provision of isolation hospitals for the various districts has borne very valuable fruit. Previous to 1895, when the Council decided to enforce the provisions of the Isolation Hospital Act, only nine of the twenty-eight sanitary districts had provided isolation accommodation. At the present time, with two exceptions, all either have isolation hospitals in use, in course of construction, or plans passed ready for construction, so that in a few years provision for this class of patients will be available in nearly every sanitary district. This gratifying result is largely due to the perseverance and energy of Dr. Williams, the County Medical Officer.

The disposal of sewage and the pollution of rivers is very fully treated in this report, and details of a large number of sewerage schemes in hand are given. The medical officer considers that this is the most important feature connected with the progress of sanitation in the county during recent years. In Glamorganshire all the rivers are contained practically entirely in the county, and are swift-running streams, so that pollution takes place entirely within the county, and should therefore be less difficult to abate. The sewage of three-fifths of the total population is discharged into tidal rivers, estuaries, or the sea. About twenty sewage farms are contained in the county. Several comprehensive joint sewerage schemes, which are a great success, are in working order, while others are proposed or in course of construction. Besides pollution from sewage, small coal and refuse from tinplate works are common causes of river contamination. Practicaliy no precautions are taken against small-coal pollution.

Incorporated with the report is the report of the Bacteriologist to the Cardiff and County Laboratory. This recently-established laboratory has proved of very great service both to Cardiff and the administrative county. All the main water supplies of the county are examined bacteriologically and chemically every quarter. It has been of the utmost value also in connection with the case of plague.

The annual report for 1900 of the Medical Officer of Health for Cardiff has also been issued recently. Cardiff is a striking example of the unavoidable errors of the Registrar-General's method of estimating population. The estimated population for 1900 works out at 194,247, and 203,050 for the middle of 1901. The actual census figures were 164,315, or 165,200 to the middle of the year 1901. The discrepancy is, therefore, very large, the population having been over-estimated to the extent of 37,850. This deficiency can be readily understood when the percentage-rate of increase for the decennial period is considered. This was 55.8, and it was hardly to be expected that this exceedingly high rate of increase, the second highest for the thirty-three great towns, would be maintained. As a matter of fact the actual percentage increases for 1891-1901 was 27.5, next to Croydon, the highest for the thirty-three great towns. The population estimated from the number of inhabited houses is also given, but this, though nearer the true population, is still greatly in excess. All the figures of the vital statistics are based on the estimated population. The birth-rate shows a gradual decline, being 26.8 for 1901; in the two previous years it was 28.6 and 31.1. This decline corresponds with a general decline throughout the country.

The death-rate is given as 13.7 per 1,000, the lowest figure for all the thirty-three large towns. The influence and importance of a correct estimation of the population is here very obvious. With a population deduced from the census of 1901 the death-rate increases to over 16 per 1,000; but this is low, and the healthiness of the town is further shown by the infantile mortality-rate which is 141, being third in order from the town which has the lowest rate.

Of the zymotic diseases, 4 cases of small-pox were notified during the year; scarlet fever showed a slight increase; 706 cases of diphtheria were notified, of these 81 died, giving a case-mortality of 11.4 per cent. a very low rate of mortality, reduced still further—that is, 8.1 per cent.—amongst the cases admitted to the Borough Hospital. As usual, the number of cases of enteric fever was not large. One case of plague occurred just outside the municipal boundaries, and was admitted to the Borough Hospital. The man travelled to Cardiff by train from South Shields, and the case shows the importance of considering methods of transit other than by infected ships. Most rigid precautions were taken to prevent the entrance of plague from infected ships and persons on board. The number of deaths from phthisis was 212, but it was possible to disinfect in 84 instances only—an unsatisfactory proportion.

A concise account of the extensive water supply is appended. The water is obtained in abundance and of excellent quality from the gathering grounds at the foot of the Brecon Beacons, the highest ground in South Wales, where the annual rainfall averages 70 inches.

## BELFAST.

*Reports of Professors Letts and Lorrain Smith on the Experimental Contact Beds for the Treatment of Sewage.—Annual Report of the Medical Officer of Health of Lurgan.*

Dr. Letts, Professor of Chemistry in the Queen's College, Belfast, and Dr. Lorrain Smith, Professor of Pathology and Bacteriology, have presented their reports to the Belfast City Council on the experimental contact beds for the treatment of sewage. The former deals with the chemical aspects of the question, and the latter with the bacteriological; the two reports

together cover 86 pages. The adoption of the recommendation of the Health Committee to ask these two gentlemen to report on the experimental beds was carried on December 1st, 1900, so that about eight months have been devoted to the work. These experimental beds are composed some of brick and some of coke, broken to a diameter of half an inch to three inches. The sewage, after it has been screened and sedimented, is passed into the upper bed, and allowed to remain there for three hours; it is then passed into the lower where it remains for the same time. As regards the purification effected by the bacteria beds, Dr. Letts's tables of results show that 27½ per cent. of "free ammonia" is lost after single contact, or rather after contact with the upper bed, and 51½ per cent. after double contact; the corresponding figures for the "albuminoid ammonia" are 41.6 and 70.7. The superiority of the beds filled with brick over those filled with coke is brought out by the tables. He recommends an investigation as to the best material for filling the bacterial beds, and suggests a finer grained material for the lower; and to try the effects of "septic tank" treatment on the sewage previous to the bacteria beds. As regards the "foreshore nuisance," he explains the growth of the alva latissima in enormous quantities on slob lands where sewage is discharged, and its decomposition in summer as the cause. He recommends the reclamation of these slob lands and an energetic attempt to keep them clean, and suggests the utilisation of the seaweed itself as a purifying agent in beds or large tanks under control, owing to its enormous powers of ammonia absorption. It is pointed out that there is a certain dispersion of nitrogen into the air, and it is suggested that this dispersion may depend on the growth of a particular species of microbe. If this be so, a great deal might be done to further the object of the investigation by a special cultivation of this microbe. A very interesting phenomenon brought to notice is the cyclical order in which forms of life appear and disappear during the process; the later forms causing a more or less complete extermination of those appearing earlier in the series. "The bacteria, we may suppose," says Dr. Lorrain Smith, "have absorbed the greater proportion of nitrogen available for food. They become in turn the food of infusorians, which live in and form the sediment on the bricks. The cycle reached its final stage with the introduction of worms; these would ultimately pass into the lough and become the food of fishes; all the nitrogen which can be diverted to this end vanishes from solution, and the sewage is purified in proportion." Both investigators recommend further experiments, as the percentage of purification is, in their opinion, not high enough. Not only the size of the material, but the depth of the beds, the duration of contact, the period of rest, the cause of a bed being "sick" or not working are all mentioned for further investigation.

Dr. Agnew, the Medical Superintendent Officer of Health for the Lurgan Urban Sanitary District, has lately presented his annual report for 1901; accompanying it is the report on the sanitary circumstances and administration of the district by Dr. Clibborn, Medical Inspector of the Local Government Board. Both these pamphlets are interesting and instructive from several points of view. This is the first year of the office of superintending officer of health. The local sanitary authorities within the last couple of years have initiated many praiseworthy reforms. Dr. Clibborn gives a short history of the town, which dates from 1619, when a grant of land was obtained from James I., and shows its gradual progress and the various improvement schemes that have been entered upon. Among these are a new water scheme in 1893 from Lough Neagh, which after filtration affords an excellent supply in both quantity and quality; new sewerage and a sewage disposal system on the lines of that of Exeter; insanitary courts have been closed and separate enclosed yards and privy accommodation for each house insisted upon; some 500 middens have been altered in the last two years; dairy keepers have been instructed as to the sanitary condition of their cowsheds; a public abattoir has been decided upon. Lurgan is a town of about 12,000 inhabitants, mostly engaged in manufactures; the birth-rate was 35.3 and the death-rate 24.5; of the 280 deaths, 37 occurred from phthisis, and Dr. Agnew joins in the cry for a suitable sanatorium for these cases. It is most satisfactory to find the efforts of the medical officer of health so loyally supported by the Council.

# CORRESPONDENCE.

## INOCULATION AND THE INCUBATION STAGE OF PLAGUE.

SIR,—The questions discussed by Major Bannerman in the BRITISH MEDICAL JOURNAL of September 14th, under the title "Inoculation and the Incubation Stage of Plague," are of such practical importance that it seems to me undesirable that in the midst of certain apparently correct deductions made by him there should be propagated others which are not warranted by the evidence he offers. He declares that "either (*a*) inoculators have some mysterious methods of selecting only those persons for inoculation who are not in the incubation stage of plague; or (*b*) the prophylactic itself must have the power of aborting this disease in this stage." The opinion of Haffkine, quoted by Major Bannerman, as to beneficial effects of inoculation *after the lapse of twenty-four hours*, the experiments on animals by Calmette and by the German Commission, and the recognised slow production of antitoxins and bactericidal substances following the stimulation of injection of toxins and dead bodies of bacteria, go to show that resistance to infection would be greater on the tenth than on the first day after inoculation; so that, as suggested by the Undhera figures, a less number of attacks might be expected in an inoculated population at the end of a week than in an uninoculated, seeing that incubation is not necessarily of ten days but often of two to five days duration. This gradual increase of resistance in an inoculated population, however, by no means warrants Major Bannerman's contention than an aborting of the disease is brought about: that is to say, that the disease in the case of those undergoing incubation is definitely prevented from running its course, or, in other words, that disinfection of the system is accomplished.

Neither do I consider that the "case mortality" statistics quoted by Major Bannerman exclude the probability that the injection of haffkinine in the case of those actually undergoing incubation of plague, is not to their detriment. If evil effects are to be exhibited, certainly they would be more readily demonstrable the closer the date of injection is to the development of the plague. Now, Major Bannerman's statistics show that if injection occurred on the day of development of plague the patient had 8.2 per cent. more chances of dying than if ten days had expired. Why should this mortality be ignored by him?

The truth is—Major Bannerman could best have illustrated his contention, if tenable, by showing the relative number of those who died within, say, the first forty-eight hours of the disease who had and had not been injected on the day of development of plague respectively. It would be contrary to all existing deductions from laboratory experiments to believe that the injection of large doses of toxins on the day of development of disease would not be injurious. Nevertheless, the chances of the conjunction of the two events in individuals are not so great, or the risk, therefore, so evident as to justify the withdrawal of the very decided advantages of haffkinine inoculation from a population during an epidemic, as apparently advised by Calmette. At the same time discretion would dictate, in special instances where history shows actual infection is highly probable, that the Calmette-Yersin serum should be employed as a temporary expedient, haffkinine being reserved for use as soon as the period of possible incubation has passed, so as to secure the best available grade of prolonged protection.

In my opinion, Major Bannerman has confused the question of the acquirement of resistance to infection after artificial immunisation with that of aborting the disease after accidental infection. To prove that haffkinine possesses an aborting power (which from its composition there can be no *primâ facie* reason to believe it does) should be an easy matter, and demands no use of statistics, of which the treatment is always open to contention. In the absence of such proof, the acceptance of the doctrine advanced by him would be sanitarily dangerous.—I am, etc.,

W. G. KING, Lieut.-Col., I.M.S.

Parkstone, Dorset, Sept. 17th.

## THE ETIOLOGY OF CANCER.

Sir,—The Registrar-General in his sixty-second annual report gives (p. xxx) an interesting table showing the parts of the body affected in upwards of 26,000 fatal cases of cancer registered in England and Wales in 1899.

The table shows that the two sexes suffered in the proportion of 2 males to 3 females, the excess of the latter being rather more than accounted for by cases affecting the breast and uterus.

As regards the other parts of the body, 559 men suffered from cancer of the tongue, and 168 from cancer of the lip, against 55 and 17 women respectively, or 10 men to one woman. These cases are usually attributed for the most part to smoking and on that hypothesis the different incidence in the two sexes is what might be expected. I desire, however, to call attention to some other differences between the sexes.

| Parts Affected. | Males. | Females. |
|---|---|---|
| Ear | 31 | 9 |
| Larynx, trachea | 187 | 63 |
| Lungs | 139 | 92 |
| Parotid | 29 | 11 |
| Mouth | 114 | 35 |
| Pharynx, throat | 233 | 74 |
| Œsophagus | 650 | 193 |
| Neck | 290 | 125 |
| Jaw | 274 | 87 |
| Total of above parts | 1,947 | 689 |

This table, compiled from that of the Registrar-General referred to, shows that cancer attacks men in the parts of the body named therein nearly three times as frequently as women. Now these organs are all closely related to the mouth, and I suggest that, as in the case of cancer of the lips and tongue (though possibly to a less extent) the difference in incidence may perhaps be attributed to smoking. The excess amounts to 1,258 cases, as against an excess of 655 cases of cancer of the lip and tongue, so that if this cause should be the true one we should credit smoking with about three times as many cases as we do now.

There is another set of organs shown in the following table, which in women appear to be affected more often than in men in the proportion of 5 to 3:

| Parts Affected. | Males. | Females. |
|---|---|---|
| Intestine | 689 | 978 |
| Liver, gall bladder | 1,379 | 2,289 |
| Peritoneum | 110 | 274 |
| Mesentery | 34 | 53 |
| Abdomen | 187 | 362 |
| Pelvis | 49 | 75 |
| Axilla | 18 | 39 |
| Total of above parts | 2,466 | 4,070 |

It is not obvious why women should suffer more than men from cancer of the liver and intestine (cancer of the rectum is more fatal to men, 948 cases to 799), but it seems not improbable that cancer of the other parts named may have really started in the uterus, or, in the case of the axilla, the breast.

There may not be much in my suggestion, but cancer is such a terrible disease that any clue, even the slightest, is worth following up.—I am, etc.,

Mortehoe, Sept. 5th. B. G. Longstaff, M.D.

## THE INFLUENCE OF COLOUR UPON *ANOPHELES*.

Sir,—It would be interesting to know whether certain colours are passively grateful to *Anopheles* or whether an active gratitude is shown for a relative invisibility conferred by those colours. I would suggest that Dr. Nuttall might with advantage extend his interesting experiments by observing what colours offer to *Anopheles* most protection from enemies. "A yellow-haired dog was very much less bitten than a black one." Possibly appetite overrides discretion in the matter of human skin. Probably some unknown factor is more powerful in the case of man than a mere colour attraction and repulsion (whatever may be the explanation of the latter). One would think that a tolerance for malarial poison established in its prey need not hinder the depredations of a mosquito—does the parasite cause a selective action on the part of its host?—I am etc.,

Mossley, Sept. 16th. Sidney Vines.

## AIRBORNE TYPHOID FEVER.

Sir,—I do not think that Surgeon-General De Renzy could have read my papers on the incidence of typhoid fever in Dublin, or the joint paper on the same subject by the late Registrar-General for Ireland, Dr. Grimshaw, C.B., and myself. If he had, I am sure he would not have alleged that my opinion that typhoid fever is an airborne disease—not solely so—rests upon the simple fact that Dublin has a pure water supply. It rests upon the following facts: That in the districts in which the soils are loose typhoid fever prevails most, and where the boulder clay is built on there is the least typhoid. As there are no wells used for domestic water supplies, the soil can have no influence in Dublin—though it has elsewhere—in propagating typhoid fever by fouling the ground water.

The Surgeon-General admits the Dublin water to be pure, but contends that by bad fittings and the filthy condition of tenement houses it becomes contaminated. But if the water becomes contaminated after it has come from the mains, it must surely be from foul air being absorbed by it. The tenement-house argument falls, however, to the ground, from the simple fact that our vital and mortal statistics show that typhoid fever is as likely to occur amongst the rich as the poor, in the new houses in the fashionable suburbs as in the old and dilapidated dwellings in the town. It is the one zymotic disease in Dublin in which poverty is not a factor.

Although the Surgeon-General and I are not in accord as to typhoid fever being an airborne as well as a waterborne disease, I would like to say how much I admire the admirable sanitary work which he performed in India. His valuable reports on the sanitary administration of the Punjab are classics in the literature of Indian hygiene.—I am, etc.,

Dublin, Sept. 16th. Charles A. Cameron.

## THE DIETARY OF TYPHOID FEVER.

Sir,—I regret being unable to make myself understood by "T. P. T." in my letter published in the British Medical Journal of August 17th. I stated definitely that a diet composed almost entirely of milk does not agree with all patients, and in protracted cases it is insufficient to counteract the wasting followed by loss of recuperative power; that it may in many instances be supplemented by other foods with safety and benefit. Then why deny the patients these advantages? Patients with good digestive powers and insufficiently fed are to a great extent deprived of sleep and comfort by a gnawing appetite. I gave briefly what seemed to my mind the indications for the different foods.

I have given no hard-and-fast rules for the dietary of epidemics, believing that each case should be treated on its own merits, stating that "the digestive powers of each patient should be carefully noted." It may be necessary to change the dietary frequently during the disease, according to the varying condition of the patient; and certainly no medical man with any intelligence will give his patients "anything indigestible or insufficiently cooked," as mentioned by "T. P. T."

"T. P. T." states:

> It is safer to let the general public be impressed with the importance of a strict dietary, such as milk, milk puddings, arrowroot, beef-tea, etc. (just as each individual case requires).

This is almost exactly what I have suggested; but I would impress the nurse in charge and not mind the general public. I entirely fail to see any danger arising from ordering vegetables—for the purpose of extracting the juices contained—in the preparation of soups. If so, it must be very risky to order, for example, ox-tail soup, as the patients may eat the ox-tails also. "T. P. T." would seem to have little faith in his nurses.

The patients I mentioned as dying with symptoms analogous to scurvy were kept exclusively on a diet of milk and beef-tea for periods varying from ten to twelve weeks, and the fact that "T. P. T." has not seen similar cases does not

prove that such do not occur. Out of a large number of patients who have come under my observation in hospital and private practice, I have only seen 4 marked instances, and in all these the duration of the fever was exceptionally protracted. It is obvious such cases are rare, though I have occasionally detected some milder symptoms indicative of the same disease, such as a soft condition of the gums and a tendency to ecchymoses after slight violence.

Correctly or incorrectly I attributed these unfortunate results to a want of vegetable juices in the dietary over so long a period. I have not advocated "injudicious friends or improper foods" as "T. P. T." would seem to hint, though I believe that occasionally a useful lesson may be learned from those who are apparently injudicious, and even from the lower animals. The virtues of digitalis and cinchona were, if I am not mistaken, discovered by individuals who were ignorant of medical science, and these are but a few of the many examples which might be quoted.

I have under my care at present 7 cases of typhoid, 5 of which are convalescent: in each instance the digestive power has been good, and the diet allowed during the greater part of the illness included milk, beef-tea, malted foods, fish (sole), cream in small quantities, eggs, milk puddings. The appearance of these patients has scarcely changed from normal; the wasting is slight, and the strength well maintained. I have no hesitation in saying that such a satisfactory condition would not be attained if the patients were dieted exclusively on milk and beef-tea.—I am, etc.,

Chesterton, Staffs, Aug. 27th. P. J. BYRNE.

## STERILISATION OF ENTERIC STOOLS.

SIR,—In his address on "Causation of Enteric Fever in India," which was read before the Cheltenham meeting of the British Medical Association, Lieutenant-Colonel A. Duncan, I.M.S. (retired) states, under the head of Prevention, "One remedy is to annihilate the bacillus by burning the stools of the sick, and the most efficient way is to burn them with straw or other vehicle impregnated with petroleum in incinerators, as recommended by the late Professor Du Chaumont."

This method of destroying enteric excretions was tried in some at least of the hospitals during the earlier stages of the South African campaign, and was found very unsatisfactory. It was almost impossible to completely burn the straw when saturated with excreta, and before this could be done much of the infective matter had oozed away and contaminated the site where the incineration took place.

During the last twelve months or more, sterilisation by boiling has been carried out in most, if not all, of the hospitals in South Africa. It is both easy and effective. The disinfector which I had constructed for the Stationary Hospital in Potchefstroom was built entirely of corrugated iron. Its dimensions were 24 by 10 feet, and its elevation 8 feet. A space of 9 inches was left open between the walls and the roof so as to ensure free ventilation. The interior was divided into two compartments, one of which was used for soiled linen, the other for excreta. In the former, two iron boilers of 30-gallon capacity, and in the latter two Kaffir cooking-pots of 16 gallon capacity, were built into brick stoves. There was a separate fireplace under each utensil, so that it could be used independently. All excretions, slops, soiled linen, etc., from the enteric wards were at once removed to the disinfector, and were briskly boiled for half-an-hour. After this interval the excretions were found to be absolutely sterile, and were removed with the ordinary night soil.

It is much to be desired that these disinfectors should be introduced into all military stations in India. They can be constructed at a trifling cost, and the only expense incurred in working them is that for fuel.—I am, etc.,

September 18th. G. H. YOUNGE, F.R.C.S.I., Lieutenant-Colonel, R.A.M.C.

*** The method of sterilising excreta in use in Pretoria was described by Major H. A. Cummins, R.A.M.C., in the BRITISH MEDICAL JOURNAL of November 10th, 1900, p. 1369, and April 20th, 1901, p. 954.

## CÆCAL INTUSSUSCEPTION.

SIR,—My attention has been attracted to the remarks made by Mr. Eve at the recent meeting of the British Medical Association, and reported in the BRITISH MEDICAL JOURNAL for September 7th, on the subject of cæcal intussusception. "This variety was," according to Mr. Eve's belief, "first observed by himself in 1897," and referred to by him in a clinical lecture reported in the *Clinical Journal*, 1899. Mr. Bernard Pitts, on whose paper the discussion took place, said in his reply that "he should make a point of looking out in future for cases occurring primarily in the caput cæci, as described by Mr. Eve." Quite a large number of surgeons appear to have been present at this discussion, but none of them said they were already acquainted with cæcal intussusceptions. This surprises me a great deal, as I have been familiar with this form of intussusception for several years. I reported in the *Lancet*, 1894, vol. i, p. 473, "A case of cæcal intussusception in an infant aged 7 months," and I have seen other cases both before and since, as no doubt have many surgeons of longer experience than myself.

I should like to take this opportunity of stating my hearty concurrence in the almost unanimous opinion expressed by the various speakers that intussusceptions should be treated by operation as early as possible. I have seen very few cases reduced by injections, and in many there has been a great waste of valuable time by employing it. I have only seen one case in which it was possible to feel sure that the intussusception had been reduced: but I have seen many in which the tumour ceased to be palpable, though, as the sequel showed, it had not been reduced. The lower part of the intussusception is generally quite easily reducible, and so the tumour is forced up by the pressure of water and hidden, usually, in the left hypochondrium. The surgeon is then obliged to wait till the persistence of symptoms and possibly the return of the tumour show that reduction has not been effected. I feel sure that if the various methods of exerting fluid pressure through the anus were abandoned and immediate operation resorted to the treatment of intussusception would be more successful.—I am, etc.,

Harley Street, W., Sept. 13th. BILTON POLLARD.

## TOTAL EXTIRPATION OF THE PROSTATE FOR RADICAL CURE AND ENLARGEMENT OF THAT ORGAN.

SIR,—Mr. Freyer's methods of controversy are most unsatisfactory. When his statements are completely proved to be incorrect, he takes no notice whatever of the correction, and for the sake of wounding and abusing he drags in the names of men without the slightest need. For instance, in discussing prostatectomy he must needs refer to Sir Henry Thompson, from whom at one time he was glad to learn, and this, too, on a question of stone in the bladder, when that question is not being considered, and also in the BRITISH MEDICAL JOURNAL of September 14th he draws in the name of Lord Salisbury, who has absolutely nothing to do with the matter in hand.

With reference to prostatectomy Mr. Freyer claimed to have removed the whole prostate without injuring the prostatic urethra, the seminal ducts, prostatic capsule, and prostatic veins. This is so anatomically absurd that when challenged Mr. Freyer is wisely silent. He also stated that he at any rate was the first to have restored the power of natural micturition to a patient long entirely dependent upon catheterism. I proved this to be untrue in my letter which appeared in the JOURNAL of August 17th, in which I refer to my paper read before the Medical Society of London on March 6th, 1893, when a gentleman of integrity and position was good enough to attend in person. He had used a catheter for twenty years and had passed no water naturally for ten years. A year before my paper was read I had performed prostatectomy. The patient was seen to be in good health and no catheter had been necessary since the operation, the bladder entirely emptying by its natural efforts. I am glad to say that this gentleman is "still alive and in very good health," and that he is able to write and say that no catheterism has been necessary since he left my care. He is now 81 years of age, and it is nine years since the operation. Again Mr. Freyer is silent.

The fact is that prostatectomy has been abandoned by the majority of surgeons as too dangerous an operation to be undertaken save under very exceptional circumstances. The prostatic patient has nothing to fear if he be thoroughly well treated from the very beginning of his troubles, and only very rarely is any surgical operation necessary.

In connection with Mr. Freyer's more recent remarks on stone in India,[1] I wish to state most emphatically that no English surgeon has ever spoken opprobriously of the man of colour. I have spoken of "the marvellous tolerance of the Indian bladder," of which I have ample published proof. I am convinced that the Indian urinary organs are more tolerant of surgical interference than the English, and I know that the English are more tolerant than those of the Irish, which are perhaps the most sensitive in the world. It therefore ill becomes Mr. Freyer in the generous and hospitable land of his adoption to speak of "that stinkpot of iniquity, the English bladder."—I am, etc.,

Wimpole Street, Sept. 14th. G. Buckston Browne.

Sir,—Officers of the Indian Medical Service must have read with satisfaction Major Freyer's lecture on total extirpation of the prostate. Of course we have all read of removal of prominent and obstructing portions of prostate by enucleation, cutting, or evulsion; but, notwithstanding what Mayo Robson says to the contrary, we were unaware that it was possible to enucleate the entire organ. Enucleation being so easy a matter, the question raises itself as to whether the enlarged prostate could not be more easily and more safely removed by a median perineal incision without any interference with the urinary tract. In Major Freyer's operation the urinary tract is twice incised; first a suprapubic cystotomy, and subsequently a prostatic internal urethrotomy, are performed.

The depth at which the prostate, and especially an enlarged prostate, is situated, might render the perineal operation one of difficulty, but one would think that the same difficulty would arise in the vesical operation. If drainage of the bladder and removal of calculi were required, these could be equally attained through the perineal incision after removal of the prostate.—I am, etc.,

C. Duer, Capt. I.M.S.,

August 25th. Junior Civil Surgeon, Rangoon.

## HUMAN AND BOVINE TUBERCULOSIS.

Sir,—In reading your report of Professor Koch's address at the recent Congress on Tuberculosis, and of the experiments which led him to the conclusion that human tuberculosis is not transmissible to bovine animals, I was struck by the fact that no mention was made of the physical condition of the cattle experimented upon beyond the statement that according to the tuberculin test they were free from tuberculosis. As it is usual, however, to select only perfectly sound animals for such experimental purposes, it may be safely assumed in the absence of any contrary statement that the nineteen young cattle referred to by the Professor came under this description. Now, it is well known that certain infectious diseases, such as syphilis, small-pox, and anthrax, commonly affect individuals who up to the time of infection were in perfect health, the particular disease, in fact, manifesting itself in practically all those who are inoculated with its germs. But as regards human tuberculosis the case is quite different, and in spite of the unfortunately too great prevalence of this scourge, we know that among healthy individuals only a small proportion of those who breathe, eat, and drink living tubercle bacilli are infected with the disease, though all are susceptible to it. Take, for example, medical students, hospital nurses, and doctors whose daily work is carried on in centres of infection where living tubercle bacilli must inevitably introduce themselves into their systems, we do not regard this class as insusceptible, because most of its members who as a rule are healthy subjects escape infection.

Tuberculous disease, as we know, is usually preceded by some acute physiological depression or pathological alteration of the organ affected, in the case of the respiratory system most commonly by repeated attacks of bronchitis, or, after influenza, pneumonia, etc., by some previous catarrhal disorder in the case of the digestive tract, or by injuries or blows in the case of the bones and soft tissues.

If bovine tubercle is distinct from human tubercle, the fact that healthy cattle inoculated with bovine tubercle readily exhibit signs of tuberculosis is no reason why healthy cattle inoculated with human tubercle under similar conditions should become tuberculous, for neither do healthy human beings necessarily acquire tuberculosis after the introduction of living tubercle bacilli into their systems. As has been stated above, some previous weakening of a particular organ or of the whole system is as a rule required. Moreover, the infection takes place with greater ease at certain age periods. In old age, man is rarely infected with tuberculosis, which goes to show that, though his race is susceptible to tuberculous infection, certain other physical conditions beyond the mere introduction of tubercle bacilli into his system are necessary for that infection to take place.

In order, therefore, to prove the susceptibility or non-susceptibility of cattle to human tuberculosis, the animals experimented upon should be such as are in a state of health similar to that in which man is known to be infected. They should be debilitated, ill-conditioned beasts, proved, nevertheless, to be free from tuberculosis by the tuberculin test, weak animals in a state of physiological depression—as after giving birth to their young, and so on. Such animals would fulfil the necessary conditions better than sound ones, and failure to succeed in inoculating them with human tuberculosis would, I venture to believe, be more conclusive evidence in favour of Professor Koch's theory than the results of experiments carried out on healthy young cattle only.—I am, etc.,

George H. Masson, M.D.

Port of Spain, Trinidad, Aug. 30th.

## DANGER OF INFECTION FROM PHTHISICAL PATIENTS ON PASSENGER SHIPS.

Sir,—During my service as medical officer in the P. and O. and Orient Companies, the danger to the travelling public from infection by those who are taking sea voyages for pulmonary phthisis, has struck me very forcibly. In too many cases these patients are unable to pay for a cabin to themselves, and, if able, often do not trouble to do so, the danger to others not having been brought before them. What must be the risk to other passengers occupying cabins with a consumptive invalid, say, on a six weeks' voyage from London to Australia, during a part of which time at least all outside ventilation is closed, and two, three, or four passengers are boxed up together suffering from *mal de mer*? And if this in the first saloon, how much worse in the third, where there is not so much air space, and the attention to comfort is naturally not nearly so great? This constitutes a very real danger to the travelling public, especially in liners where a dozen or more of these patients are often carried, and it is one which would be very much minimised if notification of phthisis were carried out systematically; then passengers would probably be obliged to occupy single cabins, and in any case we should know what class of case we were getting on board. As it is, often the patient does not mention what they are travelling for till obliged to consult the medical officer for some symptoms of the disease.

These considerations are not alone for others, but also for the patient's sake, for how can it be imagined that good will result to a phthisical patient who is perhaps one of four in a cabin, and very liable to be upset by a rough sea, and so confined to the said cabin day and night? It does not require much technical knowledge to recognise that a patient at all far advanced in phthisis must lose ground rapidly if for any considerable part of a voyage he is forced to breathe close air, eat no food, and is subject to violent vomiting which induces fits of coughing, the process sometimes ending with an attack of hæmoptysis. It makes those who have had practical experience inclined to smile when reading under the heading of sea voyages for phthisis that the patient is to take so much exercise every day, and to eat so much at stated hours, and so arrive at his journey's end so much better. Evidently those who pen such advice have never thought that these excellent rules are often impracticable for the reasons already stated; and unfortunately it is sometimes the case that when unsuitable cases are sent they arrive at their journey's end worse instead of better. One is indeed thankful that the days of ordering dying patients to take long sea voyages have passed, but there is

[1] British Medical Journal, September 14th.

still much to be desired in the choice of cases. I would suggest that medical men who have not had personal experience of different climates should study one of the excellent books on climatic treatment before ordering their patients abroad, for it is my almost invariable experience that the patient gives a note from his medical adviser which states that he is ordering him to Australia for his health, evidently little knowing that there are as many climates in Australia as in Europe. As an example I may give the case of a third-class passenger who had been ordered to New Zealand; his medical adviser, however, omitted to tell him which island; the patient unfortunately chose the wrong one and arrived in a snowstorm; he found after a short time that he was getting rapidly worse, and, having spent nearly all his hard-earned savings, he just managed to scrape enough together to pay his passage home to England. His was a good case for climatic treatment, and had he been properly directed he would doubtless have improved in health.

I would emphatically state, in conclusion, that only those cases which are in the early stages should be sent on long sea voyages, and of them only those who can afford a cabin to themselves and a fair amount of comfort *en voyage;* for the others they are better off with home comforts and home treatment.—I am, etc.,

Knock, co. Down, Sept. 6th. H. NORMAN BARNETT, Late Medical Officer P. and O. and Orient Services.

## METHOD OF RENDERING JAPANESE PAPER HANDKERCHIEFS IMPERMEABLE FOR CONSUMPTIVE SPUTUM.

SIR,—I am advised by the Medical Officer of Health to send for publication in the BRITISH MEDICAL JOURNAL the appended method of treating Japanese serviettes, so as to render them impervious and thus suitable for isolating the sputa of consumptive persons for a reasonable length of time. The process appears to slightly toughen the texture, and leaves it pliable and without the crispness which is the objectionable feature in more durable impervious papers. Cotton and other fabrics may be treated in the same manner.—I am, etc.,

G. H. LOCK,
Chief Clerk in the Tuberculosis Department,
Public Health Office, Manchester.

September 13th.

Dissolve with gentle heat 2 ozs. cera alba japonica and 1 oz. paraffin (or spermaceti) wax in about 10 oz. of turpentine. Spread a thickness of about a dozen serviettes on a non-absorbent surface, and brush over with the warm solution until well saturated; separate, and hang to dry for several days.

A better, but more expensive, solution is prepared as above, with the addition of a small quantity of pure rubber thoroughly dissolved in turpentine.

The quantities of the ingredients may be varied with advantage with regard to the special texture of the serviettes to be treated. The more open the texture the larger will be the amount of Japanese wax required.

## RESULTS OF SANATORIUM TREATMENT OF TUBERCULOSIS.

SIR,—Much has been said of late in reference to the results of sanatorium treatment of tuberculosis, and, as I have given the subject a considerable amount of attention during the past five or six years, I trust I may claim your indulgence to briefly give my experience, that is, with an individual average of about four months' residence, generally speaking 76.4 per cent. of febrile cases become apyrexial, and respond to treatment in the course of fourteen or twenty-one days. Apyrexial cases with rapid pulse and feeble heart sounds do badly, in other words, arrest or quiescence of the disease occurs in 31.8 cases, improvement in 44.6, while in 36.6 per cent. no improvement occurs. About 90 per cent. respond to treatment so far as weight is concerned, and when increase of weight is steadily gained it denotes healthy metabolism and arrest of disease, whereas rapid laying on of weight (subcutaneous fat) is of doubtful advantage. When the disease is limited to one lobe and no cavity exists quiescence is invariably attained. An arrested case of tuberculosis may remain quiescent for a number of years in the absence of septic conditions and a lowered resisting power; indeed, I am fully convinced that the activity of the tubercle bacillus much depends on sepsis.—I am, etc.,

A. KINSEY-MORGAN, M.D.

Brinklea Sanatorium, Bournemouth, Sept. 7th.

## A PLEA FOR UNBOILED MILK.

SIR,—Mr. Kingsford's letter of August 24th gives, I think, a very good suggestion as to the way in which the tubercle bacillus may find an entrance into the human body, and following up the view he has propounded I would say that children placed as they are upon the floor may, by means of their wet fingers and "soothers," take into their mouths a fair quantity of tubercle-laden dust, and instead of this fact being recognised, the food or drink may be put down as the cause of tuberculous deposits, whereas in reality they may be entirely blameless. There can be no question we have yet a great deal to learn as regards the propagation of tuberculous disease.—I am, etc.,

Bexhill-on-Sea, Sept. 2nd. F. P. ATKINSON.

## OBSERVATIONS ON SEA-SICKNESS.

QUITE accidentally, lately, I have noticed Dr. Wortabet's reply to my article on the Cause of Sea-sickness in the BRITISH MEDICAL JOURNAL of March 30th. I have carefully noted Dr. Wortabet's observations, and have come to the conclusion that they furnish additional evidence in favour of my original statement—namely, that sea-sickness is caused primarily by a cerebral disturbance due to stimulation of the terminal fibres of the nerve supplying the semicircular canals by the movement of the endolymph contained within them.

The attacks which Dr. Wortabet has personally experienced have no doubt been true "bilious attacks," and probably would have occurred had he been on *terra firma*—in fact, he acknowledges this in his second paragraph.

His observation "that persons who at once went to sleep on coming on board often escaped the malady" is further evidence in favour of my statement. During the period of unconsciousness the terminations of the nerves would become accustomed to the new movement of the endolymph, and the person would feel comparatively well on waking. Possibly Dr. Wortabet may have noticed, after travelling so many miles, that passengers, often having become used to the motion of the ship, are in good health; but as soon as they step on shore and experience a different movement they suffer from giddiness and "land sickness." I should be pleased to hear how Dr. Wortabet would explain this fact.

Dr. Wortabet mentions the motions of the ship pitching and rolling—still fresh evidence—if the sickness and giddiness were primarily due to a disturbance of the abdominal organs, pitching should not affect the person more than rolling—it essentially points to a disturbance, primarily, of the centres for maintaining equilibrium.

Only this evening I have been most interested in watching for about half an hour the flight of about twenty pigeons. They flew steadily in a circle for about ten minutes, then suddenly for some reason or another the flight was reversed with the result that 75 per cent. of them suddenly became "tumblers." I have not ascertained whether any sickness accompanied this phenomenon; probably it did.

In Dr. Wortabet's concluding statement he admits that no remedies are of much value. Surely if this malady were due primarily to a disturbance of the abdominal organs, as Dr. Wortabet maintains, then it could soon be neutralised. After reading Dr. Wortabet's article, I feel more convinced than ever that my observations and statement carry weight with them.—I am, etc.,

C. BUTLER SAVORY, M.D., M.Ch.,
Surgeon Royal Artillery, Leeds, late Surgeon Peninsular and Oriental Steam Navigation Company.

September 12th.

## REFUSAL OF EMERGENCY CASES AT DUFFERIN HOSPITALS.

SIR,—I should be glad if you would kindly give an opinion as to whether a practitioner is justified by the ethical code of the profession in retaining his post under the following circumstances:

I accepted a post under the Association for Providing Female Medical Aid for the Women of India (usually known as the Dufferin Association or Dufferin Fund), knowing that at the particular hospital which I was invited to superintend a rule obtained that only women of the "respectable" classes were eligible. It had not for a moment occurred to me, how-

ever, that any "hospital" could possibly refuse cases of urgent distress and in immediate danger of death. After six months' experience here I find that under no circumstances whatever will the committee (which numbers only one medical practitioner) sanction the admission of emergency cases unless they are of the prescribed classes. My orders are to render first aid to ineligible cases and to send them on to Government hospitals. Such hospitals exist within ten minutes' walk, but the delays, almost unavoidable in all large institutions and quite unavoidable in an Eastern land, render it probable that such cases would not receive skilled aid for at least an hour after leaving my out-patient department. Not only so, but as it is only quite recently that the committee has limited the advantages of in-patient treatment to certain classes, numbers of women present themselves who have been admitted in former years. The committee urges that strictly purdah women will not come in if any other women—that is, Christian women and women too poor to maintain seclusion—are admitted. Such is by no means the opinion generally held, as your editorials of June and September of last year show and the letter from Dr. Mildred Staley in the BRITISH MEDICAL JOURNAL of September 8th. The committee moreover fails to realise the fact recorded by all medical women practising in India, that nearly all the native women of the lower classes and many Eurasian women, though they are allowed to meet men freely in the ordinary walks of life, shrink from any medical treatment from them, more especially of a gynæcological nature. So much is this the case, that I know of three deaths which have resulted in cases which have sought admission at my hospital in a very critical condition, and which I urged to proceed to Government hospitals as they were ineligible at mine. One returned home to die, and the others only consented to go to the Government hospitals when in a moribund condition. May I ask, Sir, if it is not the case that emergency cases are admitted at every hospital in the world, even where the hospital is set apart for some special disease or some special class, such as a lying-in hospital for married women, or a pauper infirmary, or a hospital for diseases of the chest, except, possibly, where the disease treated in the hospital is infectious and likely to damage the case seeking admission for a non-infectious malady?

Your opinion would be all the more valuable because a medical man of deservedly high repute in Government service takes the opposite view to myself, in spite of an order of the Government of India in 1891 to the effect that emergency cases were to be admitted into any hospital, "any question as to which institution would have been most suitable being reserved for subsequent consideration."—I am, etc.,

July 17th. M.D.LOND.

## APPOINTMENTS IN INDIA NOT UNDER GOVERNMENT.

SIR,—In the BRITISH MEDICAL JOURNAL of July 13th, 1901, p. 119, "Victim" writes warning medical gentlemen from coming out to these appointments without the most searching inquiry as to the terms of agreement and several other matters. I can assure you, Sir, such warning is quite timely for those who may be apt to forget that "all is not gold that glitters." The food in mostly all districts outside of the large towns and military stations is twice the price as in such towns and stations, and servants are not only very difficult to get in many cases, but cost an absurd amount. The water supply is often bad, and in practically most respects you will get nothing but what is stated in the agreement. The injury to health by living in a very malarial district with overwork can never be compensated for by a given number of rupees. In Upper Bengal low fever, malarial fever, and black water are very prevalent, and Rs.1,000 a month should be the least offered. I should advise any young medico to think twice before coming out to India. Even in the large towns practice is not easily acquired owing to competition among Indian medical officers, subordinate medical officers to the I.M.S., Parsee, Hindu, Mahommedan, and other caste doctors besides quacks galore. Policy demands I shall use a *nom de plume*, but I enclose my card.—I am, etc.,

August 1st. VICTIM II.

## THE COLONIAL MEDICAL SERVICE.

SIR,—"Medical Officer," in the BRITISH MEDICAL JOURNAL of August 24th has touched a few points of vital interest to the Colonial Medical Service in Tropical Africa.

It is often difficult for the Governments in Tropical Africa to secure the services of medical men; and they find it more difficult to keep the medical men when found.

There is a great spirit of unrest among the medical officers of these Governments, and the causes of it are not hard to find.

The terrible climate gives men, especially if married, considerable food for thought and uneasiness. Pension is far too long in coming, and is far too miserable for the sap of life a man gives in exchange.

There ought to be a widow and orphans fund; or the Governments should pay the extra premiums demanded on Tropical African lives in insurance companies. Pension should come after ten years' service and be at the rate of £1 per diem.

Nothing else need be done. Other nuisances will cure themselves and the Governments will be rewarded by having a great many candidates for appointment and more contentment among the medical officers.

The Government losses will be minimised by having a man willing to stay and a better class of married man will be much less burden in the way of ill health, for he will not be so reckless. Furthermore, the Government can well afford the extra expense. At present the medical service in some parts of Tropical Africa is in a most unstable and tottering condition.—I am, etc.,

August 26th. VERITAS.

## REFUGEE CAMPS.

SIR,—May I ask you through your paper to warn any medical men who may think of coming out as medical officers to these camps not to do so unless they have distinct assurance in writing from the Colonial Office that the tents will be furnished and that the rations advertised will be cooked and served? The rations offered us are flour and raw meat, with a little coffee, etc., and there are no facilities whatever for getting them cooked. The position of civil surgeon under the War Office is, therefore, better from the point of view of comfort as well as of pay. As it is very doubtful whether the district surgeonships to be offered us at the end of the war will be worth having, I should advise men thinking of coming out to have a definite understanding with the authorities that their return passage will be given if required.—I am, etc.,

Refugee Camp, Kimberley, South Africa, Aug. 14th. DELUDED.

## MR. BURDETT-COUTTS AND THE TREATMENT OF THE SICK.

SIR,—As one who was on duty as a surgeon in South Africa from March to October, 1900, and heard and saw much of what Mr. Burdett-Coutts described, I wish to say that in my opinion the way he has been treated is unworthy. Immediately after his letters were published an immense improvement took place in the treatment of the sick by the authorities. Most of us have relatives or friends at the front either in the regular Army or among the Volunteers. Scarcely any soldier passes through a campaign without at some time or other being in hospital, and both the soldiers who fall sick and we at home who have relations and friends at the war owe Mr. Burdett-Coutts a debt of gratitude for the better treatment which they now experience.—I am, etc.,

ALFRED R. FRIEL, M.A., M.D., F.R.C.S.I.

Waterford, Aug. 18th.

## WORKHOUSE NURSING IN SCOTLAND.

SIR,—I have been greatly interested by your report of the deputation of the Workhouse Infirmary Association to the President of the Local Government Board, and I should be glad to hear whether anything is being done on similar lines in Scotland, where for long we have boasted of leading the van in matters relating to Poor-law administration. I have for twenty years been a constant visitor at a small poorhouse—a poorhouse too small to claim the trained nurse whose employment is "suggested" by the Scottish Local

Government Board, and where the so-called "nursing" is done entirely by paupers—very frequently by imbecile paupers. During that time I have seen severe cases of cancer, bronchitis, etc., and constant cases of consumption, sores of various kinds, heart disease, epilepsy, paralysis, and so on. Many of these cases must have required constant attention, not to speak of night nursing; and the attention given by a fellow pauper may be better imagined than described. Besides the above there are of course constant midwifery cases, and the medical officer, I may mention, resides a considerable distance off and is a busy county doctor. Now has the time not come for an order similar to that recently issued in Ireland to be made by the Local Government Board of Scotland which shall enforce the appointment of trained nurses and establish a standard of nursing which will prevent inefficient women being appointed to perform the duties devolving upon them?

We should avoid falling into the errors which have been made on the other side of the Border, by establishing a subdepartment of the Local Government Board to deal with the whole subject of nursing in poorhouses, and if necessary undertake the training of its probationers in properly-equipped schools. The treatment of our sick and aged paupers is fast becoming a disgrace in an age of civilisation and in the eyes of those nations which have devised other and better methods of meeting the evils of pauperism.—I am, etc.,

September 14th. SCOTSWOMAN.

## INSUFFICIENT LAVATORY ACCOMMODATION IN GIRLS' SCHOOLS.

SIR,—The importance of this question cannot be too forcibly impressed upon parents and guardians, now that vacation is ended and schooltime recommencing.

The evil, for the most part, exists in high-class private schools at fashionable seaside resorts, where probably some twenty to forty children and growing girls are residing, without counting the teaching staff and servants.

Otherwise liberally conducted, the absolute and paramount necessity of providing an adequate number of waterclosets is not recognised or met, and habits of irregularity are started and fostered which, in their evil consequences, last a lifetime, and from which arise anæmic and dyspeptic troubles, apart from others more vital and serious.

As both parent and a member of the medical profession, to me the subject, of course, becomes one of grave interest. Children hitherto carefully trained to habits of regularity at home, during school term are perforce compelled into habits of serious irregularity merely from insufficient accommodation. The "constipation" (save the mark!) resulting is then treated medicinally—insult added to injury. Let any father or mother question their children, and in all probability the veracity of the following statement will be amply corroborated: "We have often to stand in a line after breakfast waiting our turn. There is a regular rush. Then when my term comes I don't want to go, and besides, we must be quick so as to be ready for our morning walk. I often miss a day or two, and then I am told to go and ask the governess for 'pills.'" Beneficent Nature's impulse thwarted, and the vile habit of pill-aided peristalsis commenced, never, perhaps, to end as long as life lasts!

More searching inquiries will elicit the fact that for about 27 girls, of ages varying from 11 to 19, and 4 governesses, but 2 waterclosets are provided. Of these two conveniences, one is up and the other downstairs. The upstair accommodation is, except under special conditions, practically prohibitive; indeed, "the girls lose a mark if found there." Therefore, to the after-breakfast morning call of Nature—that most general and important function which should never be checked—and within the limited space of time allowed between that meal and the morning walk, for some 27 pupils is provided only one convenience, and, doubtless even to that access is governed by the school rule of *seniores priores!*

Now, how should this practical and simple illustration of the difficulties which beset our little ones at boarding school be met? That such should not exist is my emphatic opinion, both as medical man and parent. Schools otherwise conducted on irreproachable lines are grievously at fault in this particular, and, as a simple but efficacious remedy, I suggest that each local governing Board should empower and instruct the medical officer of health for the district to visit and inspect all scholastic establishments; to issue certificates or refuse them until adequate lavatory accommodation is provided *per capita* on a basis, say, of at least 1 watercloset to 6 pupils. Parents, again, when seeking a school for their girls (boys are generally better provided for) should mentally compare the number of pupils with the lavatory accommodation provided, and be guided in their choice of school thereby.

How such a type as quoted above derives its being is easily understood. At some favourite resort a private house is taken, and some half a dozen or so pupils are installed. At this stage the lavatory accommodation is sufficiently ample; but prosperity and more pupils come, whilst the lavatory accommodation required does not increase *pari passu* with the pupils' advent, and the evils I have endeavoured to point out result.—I am, etc.,

HUGHES R. DAVIES, L.R.C.P.Lond., M.R.C.S.

Bow, E., Sept. 11th.

## PARAFFIN IN DIPHTHERIA.

SIR,—In reference to Dr. Lambert Hall's letter on "Paraffin in Diphtheria" in the BRITISH MEDICAL JOURNAL of August 24th, I beg to enclose for your perusal a copy of my letter on the subject dated August 17th, 1891, written and sent to the BRITISH MEDICAL JOURNAL, and which appeared in the currrent issue. I may fairly lay claim to whatever credit may attach to the invention of this treatment of diphtheria. I found in my practice that the treatment was applicable and beneficial to patients of all ages.—I am, etc.,

Hove, Sussex, Aug. 27th. A. M. SYDNEY-TURNER.

## THE MIDWIVES QUESTION.

SIR,—I shall be glad if you will allow me a few lines of rejoinder to the letter of Dr. Lovell Drage in the BRITISH MEDICAL JOURNAL of September 7th.

The "case" for the registration of midwives is not solely, as he would assume, the undue prevalence of puerperal fever, though that may well be placed in the forefront; and although, as he points out, this is a notifiable disease, it is one which cries aloud for prevention rather than cure, and the visit of the medical officer comes too late and is practically useless, even in preventing a spread of the infection, in the present absence of any law forbidding a midwife to continue to practise immediately after attending a case of this kind.

What the promoters of the Bill, and perhaps especially the women's "Association for Promoting Compulsory Registration of Midwives," have ever before them is the piteous condition of the poorer mothers, who have no choice but to employ whatever midwife may be in their neighbourhood, or their slender means can afford. In innumerable cases which come under our notice, there may indeed be no puerperal fever, no fatal injury to mother or child, but there is every kind of miserable and sordid suffering that ignorance can inflict—mothers lying unwashed and with linen unchanged for hours, even days after delivery, owing to the Gamp's dread of clean water; the free use of spirits during or after labour for mother and child alike, midwives doing their work while intoxicated, the babies eyes' uncleansed, with the result that three-fifths of the cases of blindness in our institutions are proved to be due to infantile ophthalmia. These and every description of unquotable misery, are what we seek to remedy by the registration and supervision of midwives, who are an absolute necessity to the public. These miseries will not be prevented by official medical visits of inspection, but only by the gradual extermination of the old style of midwife—dirty, ignorant, and irresponsible—and the substitution of women trained according to a uniform standard in the principles of absolute cleanliness and in the conduct of normal labours. These will be responsible to a supervising authority for negligence or misconduct or failure to carry out the regulations for their practice laid down by the central authority.

At present the functions of midwives are unlimited, and their position absolutely irresponsible; and it is, now that these facts are universally known and admitted, a tremendous responsibility to delay legislation on the ground that a legal status and dangerous freedom of action will thereby be con-

ferred upon women to whom we allow unlimited freedom of action, to the grave danger of the public, so long as we ignore the fact of their existence. That, Sir, seems to me too often the argument of letters that I read on this subject. The "three months' training" so often referred to exists only in the imagination of those who have not read the Bill. Those who have know that there is no mention whatever of any specified length of training; that and all other matters concerning the regulation and limitation of the work of midwives is left entirely to the discretion of the Central Midwives Board. It is not to be stereotyped in an Act of Parliament, but will be left to the responsible authority to lay down, with power to modify from time to time as public welfare may indicate.

Compulsory medical visits of inspection after every confinement would be useless, injurious to the patient, and powerless to prevent the kind of suffering I have indicated. Moreover, it would be impossible to impose upon the poor a system which would not for an instant be tolerated by the rich. —I am, etc.,

A. Mabel Bruce (Mrs. Wallace Bruce),
Association for Promoting Compulsory Registration of Midwives.
Airlie Gardens, W., Sept. 13th.

## THE MANCHESTER MEDICAL GUILD SCHEME.

Sir,—I regret having to address you again on this subject, but the Chairman of the Manchester Medical Guild will have it so. In his letter in the British Medical Journal of September 14th, Dr. Wolstenholme says:

> As a matter of fact, the Guild has been discussing the midwives question since 1895, and in February, 1896, a committee was appointed to report on the subject, which it did to the effect that legislation on this question should follow the lines of local registration, etc.

The object of this statement is to show that my Bill was anticipated by the Guild, and it is necessary to inquire into the truth of it. Writing in the British Medical Journal of June 29th, Dr. Broadbent, a leading member of the Guild, says:

> After reading Dr. Weir's Bill I could not help thinking that he had grasped the essentials of the situation before any of us, and although I made the suggestion of this other scheme through a different line of reasoning, yet in fairness to Dr. Weir it ought to be said that although I had forgotten his Bill and its contents, it is just possible that some of his ideas have been embodied in the scheme by some of us through an act of unconscious cerebration.

If this is a *bonâ fide* statement, may I ask Dr. Wolstenholme to say how "my ideas could be embodied" in a scheme which he says was in existence at least two years before mine was published? Nor is this all. As soon as I heard of the "scheme," I wrote Dr. Broadbent and he sent me a copy of the agenda of their meeting of Council on June 7th with a printed report of the "scheme" as adopted at a special meeting on May 17th, 1901. And on June 10th Dr. Broadbent wrote me as follows:

> I had no idea that we were entrenching on your lines in the scheme. I enclose a copy of what we have done so far.

I utterly fail to reconcile these statements with that of Dr. Wolstenholme. Again, on July 18th I received an unsolicited letter from another leading member of the Guild who resides at a distance from Manchester. He says:

> No one will be more ready, I believe, than the members of the Guild to admit that you were first in the field.

This gentleman was a member of the subcommittee convened by Dr. Broadbent, who "first propounded the idea,"[1] and he goes on to say:

> At the first meeting of the Subcommittee I submitted a complete scheme which was adopted with a few verbal alterations, and I was surprised it had not been thought of before, and yet it appeared new to the Subcommittee and to the Council, and to the general body of the members.

Thus while this gentleman gives me credit for being "first in the field," thus independently corroborating Dr. Broadbent, he claims to be the author of the "scheme"; and again I fail to reconcile such opposing statements as that of the chairman and these two able and active members of the Guild. Again, on what grounds does Mr. David Owen, the secretary, refer the origin of the "scheme" to Saddleworth, where, he says, it has been in existence "for a number of years"; and Dr. Broadbent helps to propagate this fiction in the Journal of September 7th, although he adds in the next sentence that he "first propounded the idea"!

Amidst all these contradictions, the object seems to be to get behind the date of the publication of my "Sick and Obstetric Nurses Bill" (February, 1898). The actual date of the Guild Scheme (so-called) was May 17th, 1901, when it was adopted at the special meeting alluded to on page 624 of the Journal of September 7th.

On one thing all the defenders of the Guild scheme are agreed, and that is that neither my name nor my Bill was so much as mentioned or even "thought of" at the discussions of the "scheme." I am not surprised at this, as the receivers of stolen property seldom acknowledge the owner. It might lead to unpleasant results!—I am, etc.,

Liverpool, Sept. 15th. Alex. McCook Weir.

[1] British Medical Journal, September 7th, 624.

## REFORM OF THE ARMY MEDICAL SERVICE.

Sir,—In the scheme of Army Medical Reform which you were good enough to publish in the British Medical Journal of September 14th, which is practically the outcome of the suggestions so kindly forwarded to me by officers of the R.A.M.C., and which I have pressed upon the attention of the Secretary of State for War in more than one communication, there are one or two omissions which I desire to add, and which were somehow left out of the draft scheme which I forwarded to you, namely:

*Retired Pay.*

To be calculated in proportion to the increased pay suggested. Every army medical officer to have the right to retire after twenty years' service on a pension of £1 1s. per diem. Officers who have served over fifteen years to have the option of retiring on a proportionate pension or a gratuity as at present.

*Indian Pay and Allowances.*

To be the same as granted to combatant officers of similar rank and title.

A medical officer serving in a high position in India was good enough to send me a very exhaustive scheme of army medical reform which referred especially to Indian pay and allowances. This I forwarded along with my own suggestions to the War Secretary. I also enclosed a very sensible letter from a medical officer serving in Burmah, which entered fully into the army surgeons' grievances, and suggested many valuable improvements. I trust all the efforts which have been made in so many quarters will impress Mr. Brodrick with the strength of the force demanding army medical reform, and that he will bring out a warrant which will be a credit to himself, and which will induce the very best qualified young surgeons in the medical profession to enter the Medical Department of H.M. Army. The War Secretary has already informed me that most of the more important suggestions forwarded to him by me have been adopted by the Committee.

When the new warrant appears, if it is unsatisfactory I shall be glad to hear further from army medical officers, and, along with the other medical members of the House of Commons, I think I can safely promise that we will do our utmost to ensure a settlement of army medical affairs which shall be final and satisfactory.—I am, etc.,

Omagh, Sept. 15th. Edward Thompson, F.R.C.S.I.

*** As some misapprehension appears to exist, it seems desirable to state that the scheme published by Dr. Thompson in the Journal of September 14th, page 723, and extended in the above letter, represents his views, for which we take no responsibility. We would suggest that objections to it should be forwarded to Dr. Thompson, who has shown himself most anxious to make use of all such criticisms.

## VACCINATION AND PROFESSIONAL UNDERSELLING.

Sir,—Some of the suggestions with regard to public vaccination can hardly have been made by those acquainted with the details of its working under the present Act. The essential feature of this Act is the house-to-house visitation, with the facilities it gives for all to have their children vaccinated. This can only be done by a duly-appointed official. The object of the Act is to meet that large number of cases in which the mother of the child, either from laziness or from real inability to leave her house, neglects to have it vaccinated.

Another great advantage is its educational value. It is no exaggeration to say that the great majority of the poorer

classes are absolutely ignorant of the *raison d'être* of vaccination, while most of them are well-acquainted with the arguments urged against it by the antivaccinator. The latter has hitherto had the field all to himself. Now the opportunity has arisen for the diffusion of knowledge. One of the implied duties of the public vaccinator is to explain the nature and objects of vaccination, and to contend, with all the arguments at his command, for insertion by four punctures instead of two. The latter duty, indeed, is expressly stated. I venture to think that in addition to the difficulty of inspection and the cessation of house-to-house visitation, the spreading of the office of public vaccinator would still further reduce the number of vaccinations by the loss of these opportunities of persuasion. The difficulties relating to the rather voluminous clerical work and the numerous unsuccessful visits required have been already referred to.—I am, etc.,

ANOTHER PUBLIC VACCINATOR.

### AN ETHICAL SECTION AT THE ANNUAL MEETING.

SIR,—I was glad to see that the Medical Guild had passed a resolution in favour of an Ethical Section at the Manchester meeting. Apart from the little personal episode which occurred at the Carlisle meeting, it cannot be denied that the work performed was both interesting and useful. If I may be allowed to express a personal opinion, I should say that to make such a Section perfectly successful it is necessary to appoint a President who has had some experience in the conduct of meetings, and a Secretary who has had some knowledge of the subjects which concern the welfare of the profession. As the city of Manchester is literally full of medical men who have taken a warm interest in professional questions, it would not be a difficult matter to find two gentlemen who would answer the above requirements.—I am, etc.,

Cardiff, Sept. 14th. T. GARRETT HORDER.

### UNQUALIFIED ASSISTANTS AND UNQUALIFIED PRACTITIONERS.

SIR,—I should like to ask the General Medical Council to ask themselves how they consider they are treating qualified men when they allow bonesetters to advertise and treat cases without any qualifications; and when they allow midwives without any qualification to attend cases, and yet strike off medical men for allowing unqualified assistants to attend a case. How they can allow advertising for such cases as Dr. Williams's Pink Pills, and would strike off anyone for advertising in the papers; the above and many more things, such as the prescribing of medicine by chemists.

I shall be pleased to see that after this letter to you many of our profession send you their opinions upon this matter. Why should the General Medical Council prevent an unqualified assistant from attending a midwifery case and yet allow anyone else to do so? Why should they allow a bonesetter to advertise and take no notice of him? Why should they allow the vicar and others like him to go from door to door and lecture and advertise themselves and yet prevent a qualified man from employing an assistant who may have spent many years in study? If every member of the British Medical Association would sign a petition to the General Medical Council I believe there would be a very different state of affairs in a very short time.—I am, etc.,

September 15th. JUSTICE.

### MEDICAL GRADUATES AND THE SUPPLY OF MEDICINES.

SIR,—I had hoped to see some discussion in the BRITISH MEDICAL JOURNAL *re* dispensing one's own patients' medicine. There are so many shoppy men in the profession that I am afraid that it will be a long time before all medicines are dispensed by chemists. I feel strongly that no medical man should dispense his own patients' medicine, and that Boards of Guardians and committees of clubs should have their own contracts with chemists for the supply of medicine, and the doctors paid for visits and advice only. After visiting my patients I waste hours daily during the winter months dispensing. I cannot afford to keep an assistant or a dispenser. I have what one would call an extensive country practice, and it takes me some time to see all my patients, and when I get back, very often very tired, I find my surgery full waiting for their medicine; no time to read—I have not been to a concert for years. I have asked several chemists to agitate to stop doctors dispensing their own patients' medicine. When paying their bills some patients complained that they had had only a few bottles and a box of pills.—I am, etc.,

September 17th. ANTISHOP.

### THE POTTERIES AND NEWCASTLE CRIPPLED CHILDREN'S GUILD.

SIR,—I beg to inform you that the controversy between Her Grace the Duchess of Sutherland and the honorary medical officers of the Potteries and Newcastle Crippled Children's Guild has been settled in a manner satisfactory to the honorary medical officers, who will therefore continue to act as before.—I am, etc.,

Newcastle-under-Lyme, Sept. 17th. G. STOKES HATTON.

## ROYAL NAVY AND ARMY MEDICAL SERVICES.

### THE SCIENTIFIC APPENDICES TO THE REPORT OF THE ARMY MEDICAL DEPARTMENT, 1899.

ATTACHED to the report of the Army Medical Department, the administrative part of which has already been reviewed in the BRITISH MEDICAL JOURNAL of June 22nd, page 1588, are appendices, to the number of 11, on a variety of subjects.

#### STERILISATION OF DRINKING WATER.

Major W. H. Horrocks, R.A.M.C., furnished a series of short abstracts of the recorded work on hygiene and kindred subjects during 1900. Of special interest is that part in which the question of the sterilisation of drinking water on field service is reviewed. For use at the base and on the lines of communication the Waterhouse-Forbes machine is favourably spoken of. As this is a method of sterilisation by heat, it is not suited for the field army. For the latter Major Horrocks speaks highly of the bromine method; bromine is carried dissolved in a solution of potassium bromide, and after sterilisation is removed from the water by sodium sulphite and dried sodium carbonate.

#### THE ROYAL VICTORIA HOSPITAL, NETLEY, DURING THE YEAR 1899-1900.

*Operations.*

This report, by Major Dick, R.A.M.C., and Major C. Birt, R.A.M.C., includes notes on some of the operation cases of interest, and remarks on some of the work in the surgical division. The number of operations was 195 in all, of which the radical cure of hernia furnished 76 and operations for the removal of sequestra 37. The greater number of the cases of sequestra were the consequence of fracture from gunshot injury. Two cases of abscess of the liver are recorded, both recovering after prolonged drainage. A case of empyema is of interest in that a streptothrix with characters different from those of any described form was discovered in the pus and also in the sputum. In the operations for the radical cure of hernia simple ligature and resection of the sac, with suture of the pillars of the external ring, was the procedure adopted; the immediate result appears to have been very satisfactory, but no records of the permanent value of the operation are available. Ten cases were operated on for the removal of bullets and metallic fragments; in the localisation of these foreign bodies Mackenzie Davidson's device was found of much value. Two skiagraphs are taken, the patient remaining in the same position, but the centre of the anode being removed given distances to left and right respectively; by means of the two shadows obtained the direction of the rays from the two positions is ascertained and the body localised at the point of intersection. One of the patients from whom a bullet was extracted was a Seaforth Highlander wounded in four places at Magersfontein. One of the bullets fractured the femur about the middle, that extracted was lodged deeply in the popliteal space, and the other two inflicted flesh wounds of the left thigh and right leg respectively. Recovery was complete.

*The Medical Division.*

Professor K. McLeod narrates two cases, one of hepatic abscess, followed by subphrenic abscess and abscess of the right

lung, with left empyæma and pericarditis; the other of right empyæma, probably originating in a hepatic abscess following enteric fever. In the first case the liver abscess was of long standing but was not recognised until it had made its way into the right pleura. The resulting empyæma was treated with apparent success, only to be followed three years later by symptoms due to pulmonary disorganisation which resulted in death. In the second case there was found at the *post-mortem* examination a mass of cicatricial tissue immediately beneath the lung abscess and occupying the upper surface of the right lobe of the liver, which appeared to be the remains of hepatic and subphrenic abscess. Professor McLeod deduces from these cases and others published in the report for 1897, that in cases of liver abscess which are followed by secondary abscess of the lung, reparative changes progress in the liver while destructive processes advance in the lung. The surgical procedures undertaken in the two cases recorded do not appear to have been sufficiently radical.

### The Paris Exhibition.

Major W. G. Macpherson, R.A.M.C., furnishes a report dealing with (*a*) the work of the International Congress of Œuvres d'Assistance en Temps de Guerre at the Paris Exhibition, (*b*) the organisation of voluntary aid in France, and (*c*) the Russian army medical exhibits at the exhibition.

At the Congress, which was unattended by any delegates from the chief European Powers, the first subject discussed was the revision of the Geneva Convention. Modifications recommended included the substitution of the term "*inviolable*" for the term "*neutre*" throughout, provision for the inclusion of voluntary aid societies in the articles and the protection of the Geneva Cross by international copyright against its use for any other purpose than as a heraldic sign of the *personnel* and equipment protected by the Geneva Convention. Government assistance to Red Cross Societies was discussed in regard to the state of affairs in France where many of the privileges of other charitable societies are withheld from them. An important subject considered by the delegates was the modification of the Geneva Convention in regard to the detention of medical *personnel* and *matériel*, and alterations were recommended in such a way that a captured field hospital not in work could not be detained as at present, but must be employed for attendance on the wounded or allowed to rejoin its own army; secondly, that after a battle medical *personnel* and *matériel* captured should only be retained until all the wounded are dressed, and afterwards in the proportion of a fixed number of surgeons for every hundred wounded.

From a paper by Dr. Duchaussoy it would appear that in France the arrangements for the training of female nurses in military hospitals are much behind those in most other countries, including England. Other discussions reported on by Major Macpherson were concerned with voluntary aid in maritime warfare and the use of transports as hospital ships, the obviation of difficulties of transport for the stores of Red Cross societies in war, and the question of assistance to prisoners of war by the Red Cross societies.

In the second part of the report the organisation and resources of voluntary aid in France are described. There are three societies recognised by the Government—La Société de Secours aux Blessés, L'Union des Femmes de France, L'Association des Dames Françaises. Their relations to the Government are detailed in the decree of October 19th, 1892, and by its articles the national resources of voluntary aid are placed under clearly-defined regulations, and a maximum of efficiency is maintained. In the army medical regulations all details of the formation, equipment, and *personnel* of the establishments are laid down. They are not allowed in advance of the lines of communication, their first stations being the so-called *infirmeries de gare*, placed along the railways; these are provided solely by the first-named society. Auxiliary field hospitals utilised in the *zone de l'arrière*, and corresponding to our stationary hospitals, and auxiliary territorial hospitals are also provided by the societies. A central committee, consisting of the Director-General of the Army Medical Service, six representatives of the societies, and six of the Army and Navy Medical Service form a consultative body on all questions connected with medical aid. The Government will make contributions to the societies in time of war according to the work done in the hospitals. Major Macpherson remarks that the system of regulation is simple, logical, and practical.

The third section of the report comprises notes on the Russian Army Medical Service, in which are given details of the material provided to accompany troops in the field. The equipment does not differ much from that provided by the Army Medical Department of this country, except in the provision of field bacteriological and chemical laboratories to accompany each *corps d'armée*.

### The General Organisation of the Medical Service of the French Army.

This report is also by Major Macpherson. The medical service is entitled the Corps de Santé de l'Armée de Terre. The *personnel* consists of medical officers, apothecaries, administrative officers (performing quartermasters', purveyors', and registrars' duties), and hospital orderlies. The Medical Department at the Ministry of War consists of an administrative section dealing with *personnel* and mobilisation, material and accounts, and a technical section dealing with sanitation and statistics. In the field the medical service consists of a "*service de l'avant*" and "*service de l'arrière*." The *service de l'avant* consists of the regimental service, the ambulances and the field hospitals; the *service de l'arrière* of the stationary hospitals, the evacuation of the sick and wounded, and the replenishing of medical and surgical stores. The regimental service per battalion of 1,000 consists of 1 medical officer in peace and 2 in war, of 1 "*infirmier*" or hospital orderly in peace and 4 in war, and 16 stretcher bearers. The bandsmen of the regiment are also stretcher bearers, and during an action are at the disposal of the medical officers. The ambulances aid in the collection and removal of wounded, form dressing stations and afford hospital treatment until the field hospitals come up. They correspond nearly to our bearer companies, but are larger in *personnel* and equipment and perform more extensive duties. The field hospitals are organised for 100 beds; they carry no tents, beds, etc., and all such articles have to be obtained from the resources of the locality. The whole service has complete autonomy. The designation of the different ranks is as follows:—*Médecin inspecteur général*, *médecins inspecteurs*, *médecins principaux*, *médecins majors*, and *médecins aides-majors*.

### Ankylostomiasis and its Treatment by Thymol.

Captain P. H. Whiston, R.A.M.C., gives notes of 30 cases of ankylostomiasis, which is common among the civil and military population in Egypt. It is spread by infected subjects passing their fæces on land under cultivation. The most prominent symptom is anæmia, the patients are apathetic and stupid, and the skin of a dirty yellow colour. In only one case was a *post-mortem* examination possible; here a mass of ankylostoma was found in the lower part of the duodenum adherent to the mucous membrane, scattered over which were numerous ecchymoses. Thymol was administered as follows: Two grams were given at 8 A.M., repeated at 10 A.M., and followed two hours later by an ounce of castor oil. A week later this treatment was repeated, and continued until the stools were found free from worms on two successive occasions. A considerable degree of collapse follows about half an hour after the thymol is taken, accompanied by faintness, nausea, and a fall in temperature. The percentage of cases is highest amongst the agricultural population of Lower Egypt. The table of cases show that the treatment was followed by very satisfactory results in most instances.

### The Serum Test in the Diagnosis of Fevers in India.

This report is by Captain J. G. McNaught, R.A.M.C. The method used most often was that of Johnson and McTaggart, a few drops of blood being collected on a slide and allowed to dry; when required for use the dried blood is moistened with sterile water. A control specimen was made in every case. The results of the investigation may be summarised as follows: (1) In the great majority of instances the reaction is obtainable within the first fortnight, and often within the first week; yet in exceptional cases it is further delayed. (2) In all the cases which presented typical symptoms the bacteriological test confirmed the clinical evidence. (3) In cases presenting difficulties of diagnosis the reaction was

found of great practical use. (4) A series of cases were examined during convalescence and later; the results appeared to show that the period during which the reaction is obtainable after convalescence sets in is very variable. (5) All the control experiments were negative.

THE ASSOCIATION OF UNITED STATES MILITARY SURGEONS.

Colonel W. McWatters, R.A.M.C., attended the eighth and ninth sessions of the Association of United States Military Surgeons, September 27th-29th, 1899, and May 31st-June 2nd, 1900, as a delegate and gives short abstracts of the papers and discussions. At the 1899 session Dr. Nicholas Senn read a paper on First Aid Dressings, and showed a first-field dressing designed by himself, the chief peculiarities being the inclusion of a teaspoonful of "boro-salicylic" powder and the wrapping of the whole in aluminium foil. Colonel McWatters comments favourably on an emergency carrier, a folding stretcher and a sanitary carrier exhibited, their chief characteristic being great portability. The folding stretcher is not suitable for carrying badly wounded men, but a collecting stretcher was shown by Lieutenant-Colonel Oliver, much lighter than the ordinary field stretcher and capable of being carried transversely, one bearer on each side, by the provision of side hand grips. At the 1900 session the first paper was on the subject of the standard of vision that should be required in recruits, the writer, Captain Standish, maintaining that if the recruit possesses $\frac{20}{20}$ vision in the right eye, $\frac{20}{40}$ in the left eye should suffice, and that $\frac{1}{20}$ in both eyes should be considered ample.

Among other papers was one by Captain J. Huddlestone recommending the Schumberg (bromine) method of water purification (see above), one by Assistant-Surgeon F. M. Kemp on Field Work in the Philippines, in which he urged the necessity for more efficient training in the use of the first field dressing, and a third by Medical Inspector C. U. Gravatt, U.S. Navy, on the Transportation of Wounded on Shipboard. In the last paper attention was drawn to a light pine board litter on which a wounded man may be fixed and carried with safety at any angle. At the final meeting of the Association, Captain W. C. Borden read a paper on the Mortality of War Wounds. Of the immediate death-dealing effects of modern rifles, he stated that the percentage was, from wounds of the head 40, abdomen 29, chest 27, and extremities 4, and that this was much the same in both the American Civil War and the Spanish-American war, but in the same comparison the remote mortality had been reduced by half, owing to the greater humanity of modern weapons and to aseptic surgery.

PREVENTIVE INOCULATIONS AGAINST ENTERIC FEVER.

Statistics relating to preventive inoculations against enteric fever in 1899 are divided up according to station. The great majority of the troops tabulated were in India, no South African returns being yet available. Of the troops stationed at Malta 61 were inoculated, 2,456 not inoculated; among the former there were no cases, among the latter there were 17 cases and 5 deaths. In Egypt, of 4,835 troops, 461 were inoculated; among these there were no cases, among the remainder 30 cases and 7 deaths. In India, of 30,353 troops, 4,502 were inoculated, leaving 25,851 not inoculated; among the inoculated there were 44 cases and 9 deaths, among the non-inoculated 657 cases and 146 deaths. Taking the Indian statistics and estimating percentage to strength, we find amongst the men inoculated—admissions 0.98, deaths 0.2; amongst the men not inoculated—admissions 2.5, deaths 0.56. The results obtained were therefore apparently very favourable. The P.M.O. India remarks that they would probably have been more so had second inoculations been always practised, but many of the men were prejudiced against the operation. The cases which occurred amongst the inoculated men were in the majority of instances of a mild character.

CHINA DESPATCHES.

THE *London Gazette* of September 12th contains a despatch from Sir Alfred Gaselee, commanding the British Contingent of the China Expeditionary Force, dated July 6th, 1901. In this, his final despatch, Sir Alfred says, it is only necessary to allude to what has occurred since his previous report. Military operations during this phase have, so far as the British troops are concerned, been chiefly confined to the repression of brigandage.

In bringing to notice the names of officers not mentioned in his previous despatch, Sir Alfred says: "Colonel J. McB. Davis, M.D., C.B., D.S.O., Indian Medical Service, Principal Medical Officer, has performed his duties to my satisfaction." The following are also brought to notice: Lieutenant H. A. Williams, Indian Medical Service; Major T. McCulloch, M.B., Royal Army Medical Corps, Secretary to the Principal Medical Officer.

## THE UNDERMANNING OF THE ARMY MEDICAL SERVICE.

THE following is the distribution of medical officers according to the *Army List* for September, 1901:

*Distribution in September Army List.*

| Ranks. | Home. | South Africa. | Other Foreign Stations. | Not Posted. | Total. | Remarks. Seconded. | Reserve of Officers. |
|---|---|---|---|---|---|---|---|
| Surgeon-Generals ... | 5 | 1 | 4 | — | 10 | — | — |
| Colonels ... ... ... | 9 | 7 | 10 | 1 | 27 | — | — |
| Lieutenant-Colonels... | 63 | 61 | 89 | 1 | 214 | 5 | 26 |
| Majors ... ... ... | 37 | 138 | 113 | 3 | 291 | 3 | 4 |
| Captains ... ... ... | 29 | 80 | 119 | 3 | 231 | 7 | 3 |
| Lieutenants ... ... | 33 | 131 | 50 | 6 | 220 | 2 | — |
| Total ... ... ... | 176 | 418 | 385 | 14 | 993 | 17 | 33 |

The changes since last month are again slight. The total number is increased by 4, but the distribution is little altered; there are 2 more at home; 4 fewer in South Africa; and exactly the same number, 385, at the other foreign stations; the unposted are 6 more, and the seconded 6 fewer; while the number of the reserve employed, 33, remains unaltered.

Deducting the reserve and the seconded, 50, from the total of 993, the real available active strength of the service is 943, or apparently 10 more than in August. The number of retired officers employed is 69.

Two officers of the Militia Medical Staff Corps are still in South Africa.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

| | From. | To. |
|---|---|---|
| Colonel W. F. Burnett ... ... ... ... | Mandalay ... | Bengal. |
| ,, A. H. Anthonisz, M.B. ... ... | Bombay ... | Madras. |
| Lieutenant-Colonel B. N. Blennerhassett, C.M.G. ... ... ... ... | ,, | Punjab. |
| ,, A. Keogh, M.D., C.B. | — | Home District. |
| ,, E North ... ... | South Africa... | Bermuda. |
| ,, T. F. MacNeece ... | Madras... ... | Punjab. |
| ,, R. W. Ford, D.S.O.... | Portland ... | Chelsea Hospital. |
| ,, T. B. A. Tuckey ... | South Africa... | Aldershot. |
| ,, T. A. Dixon, M.D. ... | Punjab ... ... | Madras. |
| ,, E. J. E. Risk ... ... | Barbadoes ... | Portsmouth. |
| ,, M. Dundon, M.D. ... | South Africa... | Malta |
| ,, G. W. Brazier-Creagh, C.M.G. ... | Woolwich ... | South Africa. |
| Major L. Haywood, M.B. ... ... ... | South Africa... | Portsmouth. |
| ,, A. E. Tate ... ... ... ... | ,, | ,, |
| ,, G. J. A. Tuke ... ... ... ... | Devonport ... | Woolwich. |
| ,, J. B. W. Buchanan, M.B. ... ... | South Africa... | Shorncliffe. |
| ,, H. T. Knaggs, M.B. ... ... ... | ,, | Chatham. |
| ,, R. Caldwell ... ... ... ... | Edinburgh ... | South Africa. |
| ,, E. C. Freeman ... ... ... ... | South Africa... | Bermuda. |
| ,, A. Wright... ... ... ... ... | ,, | Devonport. |
| Captain C. Dalton ... ... ... ... | Hounslow ... | Sierra Leone. |
| ,, C. J. Healy, M.B. ... ... ... | Bengal ... ... | South Africa. |
| ,, E. W. Slayter, M.B.... ... ... | Golden Hill ... | Portsmouth. |
| ,, G. S. Mansfield, M.B. ... ... | South Africa... | Aldershot. |
| Lieutenant T. Biggam, M.B.... ... ... | ,, | Dublin. |
| ,, F. S. Walker ... ... ... | ,, | Cork. |
| ,, A. C. Duffey, M.D. ... ... | Dublin ... ... | South Africa. |
| ,, H. E. J. A. Howley ... ... | Devonport ... | ,, |
| ,, R. F. M. Fawcett ... ... | Aldershot ... | ,, |
| ,, W. L. Steele ... ... ... | ,, | ,, |
| ,, E. G. Ffrench ... ... ... | — | ,, |

Lieutenant-Colonels W. A. Gardiner and H. W. Joynt, retired pay, have relinquished the medical charge of troops at Ipswich and Taunton respectively.

Lieutenant-Colonel H. J. Robbins, M.D., retired pay, has been transferred from Parkhurst to Canterbury.

Captain H. L. G. Chevers, retired pay, has accepted service in South Africa.

Major G. H. Barefoot has been transferred from the command of A Company at the Aldershot Training School to be Second in Command and Instructor at the School.

## ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: JAMES J. WALSH, M.D., Staff Surgeon, to the *Brilliant*, October 1st; JOHN P. J. COOLICAN, Staff Surgeon, to the *Sans Pareil*, October 1st; WILLIAM E. MATTHEW, Surgeon, to Plymouth Hospital, September 12th; MICHAEL J. SMITH, Surgeon, to the *Cambridge*, September 25th; JOSEPH R. MCDONNELL, Staff Surgeon, to the *Empress of India* from the *Cæsar*, on recommissioning, September 16th.

## ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL B. M. BLENNERHASSETT, C.M.G., who is serving in the Punjab command, is granted the temporary rank of Colonel while officiating on the Administrative medical staff of the Indian army, from August 10th.

The undermentioned officers have been discharged to duty from hospital in South Africa: Civil Surgeons H. GOULD, H. FORD, T. E. DOBBS, G. MCWATT.

The following are returning home: Captain N. MARDER. Civil Surgeons R. C. VERLEY, W. H. HUNTER, B. G. BROCK, DUNN, SIMPSON. LOWE, BREW, COLLYNS.

The progress report states that Captain NIESIGH, New South Wales Medical Staff Corps, has improved, September 12th.

## SOUTH AFRICAN DESPATCHES.

THE name of Civil Surgeon H. Manden, 12th Battalion Imperial Yeomanry, which appeared in the list quoted in the BRITISH MEDICAL JOURNAL, September 14th, p. 748, should have been Dr. Horace Manders. The name of Trooper A. H. Hogarth, Medical Orderly to the 15th Battalion Imperial Yeomanry, should have appeared in the same list.

## EMPLOYMENT OF RETIRED MEDICAL OFFICERS.

THE question whether retired medical officers should be employed in considerable numbers, if at all, has, we are aware, given rise to considerable differences of opinion. Some contend that their employment shortens the tours of home service, and lessens the number of desirable stations for those on the active list; and altogether enables the military authorities to scrape along with an attenuated and undermanned active establishment. The active and retired officers naturally look upon the matter from different points of view; while the War Office probably considers it, wholly from the standpoint of convenience and expense, for it is an easy and wonderfully cheap method of eking out a short establishment. But it has been pointed out that there should not be any real antagonism between the active and retired lists on this question, and that the number of retired officers employed might be greatly increased with much advantage to the active list as well as to the State. It has been proposed that all the small home stations should if possible be filled by retired officers, and those on the active list serving at home as far as possible concentrated in the large stations. Such concentration would enable them to be drilled and trained in all military duties to the best advantage, would lessen the amount of irksome orderly duty, and would enable them to have a reasonable amount of private and study leave. At present the lives and talents of the younger officers are frittered away in small stations, without a chance of improvement either in professional or military work.

Such points are certainly worth consideration and discussion, always supposing that the employment of retired officers shall not be made an excuse for undermanned active establishments. Meanwhile, there is considerable speculation as to how undermanned establishments are to be dealt with in the forthcoming reforms, for the true success of any scheme will undoubtedly largely depend upon the solution of that question.

## CONTRACT RATES AND GRATUITIES.

A CIVIL MEDICAL OFFICER, who has had charge of a military station and troops since before the war at contract rates, writes to inquire whether he and others in the like position would come under Army Order 136 of June last, Revise of Pay Warrant, entitled "Gratuity and Outfit Allowance to Officers."

*** We cannot give an authoritative interpretation of an Army Order; but no doubt that could be obtained by our correspondent on official application to the War Office. We have read the Order, and much doubt if it would at all apply to those in our correspondent's position, although there is ambiguity in defining the eligibility of officers in para. 3 of Art. 601 B, which runs thus: "Ex officers or *civilians* appointed to military positions in Imperial Forces."

## CIVIL MEDICAL OFFICERS AND GRATUITIES.

S. A. writes:—"Are civil medical officers, employed with the R.A.M.C. in South Africa, entitled to a proportionate share of the special war gratuity, voted by Parliament to all ranks of men and officers serving in South Africa during the war—Colonials, Volunteers, Regulars, Militia? As part of a civil medical officer's contract pay he gets £60 bonus; this before any special war gratuity was voted by Parliament. In answer to a question in Parliament *re* pay of civil medical officers, a member stated that it was £1 per diem plus bonus, irrespective of any special war gratuity which might be voted in the House, from which I take it that civil medical officers are entitled to a share of the special war gratuity. Militia officers get a bonus as part of their arranged pay, and in addition I understand they get their proportionate share of the special war gratuity also."

*** This is a question that can be authoritatively answered only from the War Office. We should say the phrase "all ranks" in South Africa would certainly include civil surgeons employed with troops; also, as they already receive the "bonus" of £60, they could hardly be refused the "special war gratuity." Such questions could hardly have arisen had civil surgeons engaged for the year, or during continuance of the war, received "acting" commissions, as ought to have been the case. Such commissions were given to "acting assistant-surgeons" during the Crimean War.

## ARMY SANITATION.

A CORRESPONDENT writes: The following from Army Order No. 189 of this month deserves public notice:

"No cell is to be occupied until it has been certified by the Inspector-General of Military Prisons (who is not a medical man) to be of the size, and to be ventilated, warmed, and fitted up in such a manner as may be necessary for the health of the prisoners. .....

"At stations abroad the duty of ascertaining the state of the cells will devolve upon a military staff officer appointed by the General Commanding, assisted by an officer, Royal Engineer. ....." [Medical officers are not staff officers.]

Where does the doctor come in? Is it surprising that sanitary matters are not always satisfactory in the army? It would be interesting if the public would compare the procedure under which a medical officer of health in civil life performs his duties when contrasted with the rules and regulations that govern the army doctors acting under similar circumstances.

## DR. THOMPSON'S PROPOSALS.

CAPTAIN, R.A.M.C. writes: For myself and many officers of the Royal Army Medical Corps, at home and abroad, I wish to express our best thanks to Mr. Edward Thompson, F.R.C.S.I., M.P., of Omagh, for the time and trouble he has devoted, and is devoting, to the questions of reform in our service at this critical period of its history. Also for the able manner in which he has given publicity to his recommendations, inviting criticism upon them, and laid them before the proper military authority without loss of time. Officers with Irish qualifications will especially appreciate the work of Dr. Thompson, knowing as they do the sympathy and interest that the profession in Ireland has always shown in all matters relating to the welfare of the military medical service. This is chiefly to be explained by their closer association with and more intimate knowledge of the requirements of the army than the great majority of their brethren across the water in England, Ireland being essentially a military country. Most if not all of Mr. Thompson's suggestions, as tabulated in the BRITISH MEDICAL JOURNAL of May 25th, may, I think, be taken to represent the wishes of the majority of the officers of the Royal Army Medical Corps on the subject of the most pressing reforms. We sincerely trust that the recommendations of the Special Committee, embodying, as we are informed they do, most of Mr. Thompson's suggestions, will soon be made public, and obtain the sanction of Parliament. Should this occur, the name of the present Secretary of State for War will be handed down to posterity as the father of the modern Magna Charta of the liberties of the Royal Army Medical Corps.

## NATIVE COOKS AND ENTERIC FEVER IN INDIA.

MAJOR G. H. FINK, I.M.S., M.R.C.S., L.S.A., in the course of a note on this subject writes: With reference to the remarks in your issue of September 7th, re "Native Cooks and Enteric Fever in the British Army in India," I would draw attention to my original article in the *Indian Medical Record* of July 16th 1896, when, I believe, I was the first medical officer in India who wrote on the subject of "Chamars" and "Mehters," who were being largely employed in the country to the detriment of the health of the European community, and the professional cook proper ousted from establishments which our forefathers had so admirably managed and arranged for in the past. The professional cooks of the past were "Mughs," "Kowrahs," and "Mussulmans," and they did not lead the insanitary lives of those who have superseded them in India. Chamars and Mehters were formerly tanners, taxidermists and scavengers, who, after ten days' work as cooks to Europeans, returned to their insanitary homes and scraped skins of cattle that had died of disease, using their masters' dusters ("jahrans") which they once more took back to the kitchen and used the following day.

The discovery of the methods of cattle poisoning struck a heavy blow to the Chamar, whilst the establishment of Cawnpore leather and hide factories sounded the death-knell of their profitable trade. They have resorted to other practices, namely, driving cattle to urinals which are to be seen in barracks, police lines, etc., where the urine in the early morning hours lies in huge cylinders or buckets; cattle drink greedily, result: death from symptoms of acute uræmic poisoning. I think I can claim to be first in pointing this out, and we know how typhoid germs exist in urine much longer than in other vehicles. Urine is also thrown on the floor of bath rooms in every station by Mehters.

Driven from his trade, the Chamar dons the spotless robe and grows a beard to pass off as a Mussulman cook: and he takes in the stranger from the Far West, for when asked his caste high-sounding titles as "Jaiswara," "Deswali" (not used by Bhakachariya in his *Castes and Sects of India*) are used to try and bring himself within the pale of Hindu society, who otherwise relegate him to the "other castes," whose shadow and the shadow of those he ministers to, falling on their food, is pollution, and the food is then only fit for dogs and swine.

Imagine the effect on the better grades of Indian society, which no amount of primers on sanitation and hygiene could remove without example and sound practice, so conservative are they. The Chamar and Mehter, though lifted up to a loftier sphere in culinary art, and more useful, perhaps, than the doctor, is still a Chaman and Mehter at home. He lives in the bosom of his trade as a skin scraper of diseased cattle, and his sons help him at home to turn a penny. No primers can alter his insanitary surroundings for which Hindu society has provided in

the past, and in the future a corner of his village he must occupy, and he loves it, as without it he would die.

I predict a new era in sanitation for India and its people (European, Eurasian, and native), who are all as anxious and jealous of the glory and greatness of the British Empire and dominion as any of His Gracious Majesty's subjects across the seas; for

We are brothers, we are men.
We live and learn, and learn to live.

# MEDICO-LEGAL AND MEDICO-ETHICAL.

## OBJECTIONABLE CIRCULARS.

Some time ago (British Medical Journal, June 8th, 1901, page 1,453) we drew attention to an objectionable postcard which was being circulated by the Norwich Pharmacal Company, Norwich, U.S.A., a copy of which was sent by us to the Postmaster-General, who promised to consider whether he could usefully make any representation to the United States Post-Office Administration on the subject. Our comment brought a letter from Messrs. Thomas Christy and Co., the agents in Great Britain for the advertisers, in which they expressed agreement with our remarks, and said they had requested the company to discontinue the circulation of the cards referred to. So far as we are aware, the circulation of these cards has ceased. We have received from the Postmaster-General a copy of a letter addressed to him from the United States Post-Office Department at Washington, from which it would appear that a rather different standard of public feeling exists on the other side of the Atlantic, and that our views as to the objectionable character of this card are not shared by the postal authorities in America.

Two correspondents write to complain of the circulation of pamphlets in open envelopes by the Od Chemical Company of New York. We quite agree as to the objectionable character of these pamphlets, but as they are sent under cover and addressed to medical men we do not think from our experience in the above case that any action on the part of the Post-Office authorities of the United States is to be expected. The real remedy for the nuisance is to make the advertisers feel that these circulars defeat their own ends. Every medical man must guard his own mail against the prying eyes of children or servants, who, it is suggested by one of our correspondents, may get access to matter not intended for them.

## PAYMENT FOR ATTENDANCE UPON THE FAMILIES OF MEDICAL MEN.

Dr. John W. Martin (Sheffield) writes: In your reply to "M.R.C.S Eng.," in the British Medical Journal of September 14th, 1901, page 750, I note you say: "No medical practitioner has the right to the services of a colleague for himself or his family without payment."

There may be no question of right as a matter of compulsion, but to render such services freely and without expectation or desire for payment has been a time-honoured custom which, I trust, for the honour and credit of the profession, may never be departed from. In an experience extending over thirty-three years, I have never known amongst the men I have met in all grades of the profession any other spirit than that of pleasure in doing all they could for their medical brethren and their families, and personally I have always felt it to be an honour and privilege to be asked to give such services as a mark of the confidence my professional brethren had in me. Indeed, it is one of those characteristics which set apart our profession from the money-grubbing spirit of trade that so pleasant a spirit of Freemasonry exists in our ranks. I doubt if any other profession shows such a regard and care for each other in their ranks as we find to exist in ours. The services we render to others may not return directly to ourselves, but they are handed on to others, and so go the rounds. When I remember the kindnesses that I have received at the hands of my brethren in my own case, it has ever been a source of pride and pleasure to be able to do my share for others, when my turn came to be called upon. There may be cases when payment is made, but the circumstances must be exceptional, and the desire that such payment should be made should come from the person to whom the services are rendered, rather than from the man who has rendered them. No man has a right to be placed under an obligation which he has no wish to incur. Services must not be rendered to the families of medical men who are left well provided for when the head of the family is dead. Services need not be rendered to members of the profession who have retired from the practice of the profession, and are known to be well off. These, however, are the few exceptions to the broad general rules. I trust that amongst those members of the profession who are actively engaged in its practice, and who, with their families, are dependent upon their work for their living, the good old time honoured custom may continue, that they may look for, with the utmost confidence, the best services of their brethren in the hour of their need, in the case of themselves or of the members of their families. I should regard with contempt the man who grudged to render them. I have never met such, and I hope I never may.

## WHAT IS A PHYSICIAN?

Listerian writes: (1) A rule of one of our local hospitals respecting its staff reads, "Physicians to the hospital must be Members of a Royal College of Physicans and *in practice solely as physicians.*" Could you kindly give an authoritative opinion as to what the words italicised really should mean in the provinces? In London the term is well understood, but in the provinces minor surgery and midwifery seem to be included as the legitimate work of the physician, by others excluded. Will you kindly define what is a physician? not in the dictionary sense, but from the point of view of the practising profession, differentiating the physician from the surgeon and the general practitioner. (2) Is there any academic costume peculiar to the Members of the Royal College of Physicians, London?

*** (1) It is impossible to determine the precise meaning of the phrase quoted. Formerly it was understood that a physician did not practise midwifery or surgery and had nothing to do with the sale or dispensing of drugs, that is, he was neither a midwife, a surgeon, nor an apothecary. It is probable that when the rule in question was framed some such idea of a physician's practice may have been in the minds of the hospital authorities, but many Members and Fellows of the London College of Physicians have practised midwifery, and of late years some at least have performed major surgical operations, for example, ovariotomy. (2) We are not aware that the Royal College of Physicians of London has adopted any academic costume for its Members or Fellows; they have been asked to wear their doctors' gowns at College ceremonies.

## TOUTING FOR PRACTICE.

K. R. writes: (1) The wife of a medical man in practice goes about the neighbourhood leaving her cards advertising herself as a qualified nurse and midwife, mentioning at the same time that she is the wife of Dr. ——, who, if any difficulty arises, will always be available. Is this medical advertising? (2) Is this medical man engaged in the practice of "covering" his unqualified wife.

*** (1) If the facts are as stated it would be better described as "touting" for practice. (2) We do not think any charge of "covering" would lie, as in the present state of the law any woman may practise midwifery. If the allegations of our correspondent can be supported by the necessary evidence, we think the touting complained of might be checked by an appeal to the licensing authorities from which the medical man in question holds his diplomas; but we must remind our correspondent that it is no use to make charges unless he can support them by conclusive evidence. The secretary of either of the medical defence societies would, no doubt, if our correspondent is a member, advise in the preparation of the needful evidence.

## COMMISSION FOR DEBT COLLECTION.

Vendor asks what is the usual commission to offer an agent for the collection of debts left on the sale of a medical practice.

*** This must depend on the character of the debts in question. Ten per cent. is a fair average commission, but if there is no difficulty involved in their collection and all the debtors are solvent, it might be less, while if the opposite conditions held, the commission would be more.

## VALUE OF OUTSTANDING ACCOUNTS.

York desires to know what percentage is usually paid by the continuing partner to the outgoing one for outstanding debts.

*** It is a matter of arrangement when a partner goes out of a firm what price shall be paid him for relinquishing his claim on future payments of outstanding debts. The amount will be regulated by the estimated value of these debts. Two-thirds of the full value of his share if all the debts were paid up would often be a fair compensation.

## RELINQUISHMENT OF MIDWIFERY ENGAGEMENTS.

Forceps writes that he has disposed of his practice, but that a few midwifery engagements fall due after the time he is bound to leave. He asks if the patients would have any claim on him in the event of their accepting the services of his successor.

*** If our correspondent informs the patients in question of the fact that he is leaving the neighbourhood and gives them the option of accepting his successor or going elsewhere, he would incur no personal liability whatever. If, however, the patients are not informed of the change, and only find it out when they send for his services, then the successor will only be in the position of an assistant to, or deputy for, our correspondent, and in the event of neglect or malpraxis, the latter might be held liable in a civil action.

## MEDICAL ADVERTISING.

Enquirer writes to ask our opinion about a publication called *County Biographies*, published by Messrs. J. G. Hammond and Co., Limited, High Street, Birmingham, at the price of five guineas. Our correspondent has received a form in which he is asked to fill up his name and residence, particulars of birth, education, degrees, etc. The letter from the editor mentions the names of four members of the medical profession who are also justices of the peace as allowing their biographies to appear, and our correspondent wishes to know whether such a publication can be considered advertising in a sense to which the General Medical Council would be likely to take exception.

We have received a similar communication from a correspondent resident in Yorkshire.

*** This publication is on the same lines as one which has been going on for the last few years for the great cities. We think the question of permitting such notices to appear is a matter of taste. We are informed that most of the leading men in Manchester and Birmingham declined, and we share our correspondent's objection, but we do not believe the General Medical Council would take any notice of the matter.

Our attention has been drawn to the following advertisement which appeared in the *Times* of July 29th:

"Board and Residence, Apartments, etc.

"INVALID LADIES RECEIVED into HOME of experienced Gynæcological Physician; special and rapidly successful treatment of Neurasthenia, Nervous Exhaustion, etc. Beautiful house facing sea, near parks and golf links. Dry bracing air.—R. C. S., Falmouth Lodge, Weston-super-Mare."

*** Such an advertisement appears to us to be altogether out of place in a lay newspaper.

### PENNY CLUBS.

Curious writes: Many medical men in this district, in order no doubt to increase the income derived from the practice of their profession, employ "collectors," whose business it is to go round from house to house weekly collecting the sum of one penny, per head, to secure for various families, medical attendance and medicine in time of need. This system is known as "The Penny Club" or "Dr. So-and-So's Private Medical Club." In some cases when a family consists of more than four members, fourpence insures the whole of the household; in other instances, sixpence is the maximum fee. The collector receives as his portion of the spoil "25 per cent." on his total gatherings. This in itself seemed by no means a meagre proportion for a layman to obtain as wages through the skill of a professional worker. But on obtaining a new member from the club (of course, it is in the collector's interest to obtain such), the servant of the practitioner takes what is spoken of as "first four down," that is, the penny for the first four weeks goes into the pocket of the persons who calls for the money, not into that of the medical attendant. Is not this "touting?" Would some member strong in medical ethics or, it may be, more acquainted with the inner working of the General Medical Council than the writer, inform him how steps might be taken to draw the attention of the authorities to such a state of affairs?

### FEES.

F.R.C.S., practising in the country, asks what fee he would be entitled to charge in the case of attendance on members of a well-to-do family, residing in a house rented at over £100, and four and a-half miles distant. He has charged 10s. 6d. for the first patient, and 5s. for any second patient seen at the same time; these charges to include medicine. He also asks what would be a proper fee for a special journey to reduce a dislocated elbow complicated with fracture.

*** The fees mentioned appear reasonable under the circumstances. A reasonable fee for attendance in the case of dislocation of the elbow joint would be £3 3s.

# OBITUARY.

We regret to have to announce the death of Dr. Henry William Livett, J.P., of Wells, Somerset, who died on his 87th birthday, after a comparatively short illness. He was born on August 28th, 1814. He received his medical education at St. Bartholomew's Hospital and in Paris. He became M.R.C.S. and L.S.A. in 1837, commenced practice in Wells in 1838, and continued in active work there almost up to the time of his death. He was Medical Officer to the Workhouse for more than sixty years, and, besides being Medical Officer to various charities, including the local dispensary, was Medical Officer of Health to the City. He took a great interest also in many extraprofessional subjects, especially in entomology, botany, and music, and was an enthusiastic Freemason. He was one of the earliest to join the volunteer movement, and eventually became Surgeon to the local battalion. The high position he acquired in the town and district was probably mainly due to his remarkable personality, together with his unassuming, kindly nature, his ready appreciation of other men's virtues, and a wide toleration of their faults. He was universally recognised as a courteous and high-minded man.

Dr. William Augustus Newell, who recently died at Allentown, New Jersey, at the age of 82, was, we learn from the *New York Medical Journal*, the originator of the life saving service of the United States. He conceived the idea of shooting a life-line from the shore to a stranded vessel. From this first step has grown an organised system whereby more than 100,000 human beings have been rescued from death and many millions worth of property saved. Dr. Newell, then a member of the National House of Representatives, secured in 1848 the first appropriation of 10,000 dollars for a life-saving service on the New Jersey Coast. With this money life-lines, surf-boats, and other apparatus were procured. The system has expanded till there now are 269 stations along the shore lines of the United States. Of this number 194 are situated on the Atlantic and Gulf Coasts, 58 on the shores of the great lakes, 16 on the Pacific Coast, and 1 at the falls of the Ohio, Louisville. Dr. Newell was born in Franklin, Ohio, in 1819, and took his Doctor's degree at the University of Pennsylvania in 1839. He was elected to Congress in 1846, and served three terms. He was elected Governor of New Jersey for three years in 1856. In 1864 he was again elected to Congress, but served only one term. When John Quincy Adams fainted in the House of Representatives he fell into the arms of Dr. Newell, by whom he was attended till his death thirty-six hours later.

# PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

### HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,261 births and 4,018 deaths were registered during the week ending Saturday last, September 14th. The annual rate of mortality in these towns, which had been 21.6, 21.0, and 19.4 per 1,000 in the three preceding weeks, further declined last week to 18.3 per 1,000. The rates in the several towns ranged from 11.0 in Plymouth, 13.8 in Derby, 14.5 in Cardiff, and 14.8 in Huddersfield to 24.5 in Sunderland, 26.4 in Salford, 27.8 in Newcastle, and 28.8 in Gateshead. In the thirty-two large provincial towns the mean death-rate was 19.7 per 1,000, and exceeded by 3.7 the rate recorded in London, which was 16.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 4.4 per 1,000; in London this death-rate was equal to 3.1 per 1,000, while it averaged 5.2 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 7.4 in Manchester, 8.0 in Salford, 8.3 in Wolverhampton, 9.1 in Sheffield, and 10.1 in Gateshead. Scarlet fever caused a death-rate of 1.2 in Bolton; whooping-cough of 1.4 in Gateshead and 1.7 in Leicester; "fever" of 1.1 in Swansea, in Nottingham, in Huddersfield, and in Sheffield, and 1.9 in Birkenhead; and diarrhœal diseases of 5.9 in Manchester and in Sheffield, 6.0 in Preston, 6.4 in Salford, 7.7 in Wolverhampton, and 8.0 in Gateshead. The mortality from measles showed no marked excess in any of the large towns. The 77 deaths from diphtheria in these towns included 28 in London, 9 in Sheffield, 6 in West Ham, 4 in Bristol, 4 in Manchester, 3 in Leicester, and 3 in Gateshead. Nine fatal cases of small-pox were registered in London last week, but not one in any of the thirty-two large provincial towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, September 14th, was 135, against numbers increasing from 11 to 92 on the five preceding Saturdays; 60 new cases were admitted during the week, against 30, 52, and 31 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had decreased from 3,148 to 2,204 at the end of the five preceding weeks, had risen again to 3,065 on Saturday last; 457 new cases were admitted during the week, against 273, 303, and 346 in the three preceding weeks.

### HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, September 14th, 941 births and 556 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.4, and 17.8 per 1,000 in the two preceding weeks, declined again last week to 17.5 per 1,000, and was 0.8 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14.2 in Perth and 15.0 in Paisley, to 19.1 in Greenock and 24.8 in Leith. The zymotic death-rate in these towns averaged 2.3 per 1,000, the highest rates being recorded in Dundee and Leith. The 262 deaths registered in Glasgow included 6 from measles, 2 from scarlet fever, 3 from diphtheria, 8 from "fever," and 15 from diarrhœa. Three fatal cases of whooping-cough and 6 of diarrhœa were recorded in Edinburgh. Three deaths from whooping-cough, 2 from "fever," and 8 from diarrhœa occurred in Dundee; 2 from whooping-cough and 4 from diarrhœa in Leith, and 3 from diarrhœa in Aberdeen.

### EPIDEMIC OF ENTERIC FEVER AT COVENTRY.

An epidemic of enteric began at Coventry on August 22nd. On August 3rd a case of enteric was notified in No. 4 Court, Sherbourne Street, and a second on August 8th in the house adjoining that in which the first case occurred. Exactly fourteen days after the notification of the second case the epidemic began to be notified, 1 case on August 22nd, 1 on August 23rd, 2 on August 26th, 4 on August 27th, 4 on August 28th, 2 on August 29th, 15 on August 30th, and 4 on August 31st. The neighbourhood in which the epidemic has occurred appears to be insalubrious, containing many courts and back-to-back houses, so that the attention which the committee is giving to the matter will hardly be superfluous. The age incidence is somewhat striking; out of 35 cases which have occurred in the street 24 are 16 years old or under, and only 6 are over 21. So far as can be gathered from the report of the medical officer of health no cause has as yet been assigned for the first two cases. Three causes are suggested for the epidemic, first the pump in Court No. 4 which, although it was examined chemically at the end of August by Dr. Snell and was found to give no evidence of sewage pollution, cannot be excluded; secondly, the habit of the inhabitants of emptying their slop water into the court, by which it may have been specifically infected, and thirdly, the fact that the river in the immediate vicinity of the street, the banks of which form a playground for the children living in the street, is contaminated by sewage.

### THE DIAGNOSIS OF SMALL-POX.

A CORRESPONDENT practising in the West of London informs us that he recently reported the case of a child as "variola discreta much modified by vaccination." The child, he states, has vesicles typical of varicella, but it also had about twenty pustular vesicles which were umbilicated, and appeared of a doubtful character. The type of attack was also more severe than is usually found in varicella. The case was returned home as not one of small-pox. Our correspondent expresses the opinion that when the medical authorities of the Metropolitan Board receive a patient certified by a medical practitioner as a modified case of small-pox, it is their duty to keep the case for a reasonable period under observation, and not to return it at once to the friends, and thus cause a reflection upon the skill of the medical man reporting the case.

*** We sympathise with our correspondent in the position in which he has been placed in endeavouring to comply with the desire of the Metropolitan Asylums Board as quoted in the BRITISH MEDICAL JOURNAL of September 14th. The remedy would appear to be for the Asylums Board to provide observation wards in which cases notified by medical men as to which their medical officers feel doubt could be retained for some days until the doubt was at an end.

# MEDICAL NEWS.

A BILL for the registration of nurses has been introduced into the New Zealand Legislature by the Hon. Mr. Walker, Minister for Hospitals.

FRENCH GYNÆCOLOGICAL CONGRESS.—The triennial meeting of the French Congress of Gynæcology, Obstetrics, and Pædiatrics will open at Nantes on September 23rd under the presidency of Dr. Sevestre.

LIVERPOOL CONSUMPTIVE SANATORIUM.—The sanatorium at Delamere Forest for consumptive cases from Liverpool has been taken into use this week, and 18 cases, selected by Dr. Herapath Wood, the resident medical officer, as likely to become absolutely free from tuberculosis, have been admitted.

AT the annual dinner of past and present students of St. Mary's Hospital, which, as already announced, will take place at the Whitehall Rooms, Hotel Metropole, on Thursday, October 3rd, with Colonel A. B. R Myers in the chair, those members of the hospital who have returned from South Africa will be entertained as guests.

WE are requested to state that the annual dinner of the past and present students of the Westminster Hospital, which, as already announced, will be held on Friday, October 4th, at the Hotel Cecil under the chairmanship of Mr. Charles Stonham, is fixed for 7 for 7.30 P.M.

PRESENTATION.—Dr. Hughes, of Llanilar, Aberystwith, was recently presented with a valuable cabinet of silver containing upwards of 200 pieces on the occasion of his retiring from practice. The cabinet bore the following inscription in English and Welsh: "Presented to Dr. John Evan Hughes, Cwrtycadnaw, by 1,170 of his friends and admirers, as a recognition of his untiring services during the past twenty-five years as medical officer of health. August 31st, 1901." At the same time Mrs. Hughes was presented with a massive gold bracelet, and Miss Hughes with a pearl necklace.

AN ALLEGED CURE FOR CANCER.—It is announced from Copenhagen that at the Congress of Northern Surgeons, Professor Howitz, the oldest of Danish gynæcologists, stated that he had cured many cancerous ulcers by freezing the tissues with "anæsthin." Equally good results are said to have been obtained by him by the same method in cases of lupus. What "anæsthin" is does not appear to have been revealed, nor are any details of the cases given. We merely mention this as a piece of news, because the author of the reputed "cure" has a name justly held in honour by the medical world. We must not be understood as guaranteeing in any way the accuracy of the facts.

## MEDICAL VACANCIES.

The following vacancies are announced:

BANBURY: HORTON INFIRMARY.—House-Surgeon and Dispenser. Salary, £80 per annum, with board and lodging. Applications to Mr. C. H. Davids, Hon. Secretary, 2 Marlborough Road, Banbury.

BIRMINGHAM CITY FEVER HOSPITAL.—Assistant Medical Officer. Salary, £120 per annum with board, residence etc. Applications to the Medical Superintendent.

BIRMINGHAM GENERAL HOSPITAL.—House-Surgeon. Appointment for six months. No salary, but residence board and washing provided. Applications to the House Governor by September 26th.

BRADFORD ROYAL INFIRMARY.—House-Physician, unmarried. Salary, £100 per annum, with board and residence. Applications, endorsed "House-Physician," to be sent to the Secretary by September 24th.

BRENTWOOD: ESSEX COUNTY ASYLUM.—Junior Assistant Medical Officer; not over 25 years of age. Salary, £140 per annum. Applications to the Medical Superintendent.

BRIGHTON: HOVE AND SUSSEX THROAT AND EAR HOSPITAL, Church Street, Brighton.—Non resident House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £75 per annum. Applications to the Secretary.

BRISTOL GENERAL HOSPITAL.—(1) Assistant House-Physician. Salary £70 per annum, with board, residence, etc. (2) Physician to the Skin Department. (3) Physician. (4) Assistant Physician. Applications to the Secretary for (1) by September 24th, and for the remainder by October 2nd.

CAIRO: KASR-EL-AINI HOSPITAL AND SCHOOL OF MEDICINE.—Physician to Hospital and Professor of Clinical Medicine in School. Appointment for two years. Salary, £E320 per annum. Applications to Director, General Sanitary Department, Cairo, by September 25th.

CARDIFF INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £75 per annum, with board, washing, and apartments. Applications, endorsed, "Assistant House-Surgeon," to be sent to the Secretary by September 30th.

CHICHESTER INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by September 30th.

DENBIGH: DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary, £100 per annum to commence, with board, residence, and washing. Applications to the Secretary.

DENBIGH: NORTH WALES COUNTIES LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary, £120 to £180, with board, residence, and washing. Applications to Clerk to the Visiting Committee.

DENTAL HOSPITAL OF LONDON, Leicester Square, W.—(1) Dental Surgeon. (2) Assistant Dental Surgeon. Applications to the Secretary by October 7th.

FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, residence, and laundry. Applications to the Secretary before October 1st.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary, £75 per annum, with apartments and board. Applications to the Secretary, 88, West Regent Street, Glasgow, by September 25th.

GLASGOW UNIVERSITY.—Additional Examiner for Degrees in Medicine and Science, with special reference to Physics. Salary, £30 per annum. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by September 26th.

HERTFORDSHIRE COUNTY ASYLUM, Hill End, St. Albans.—Junior Assistant Medical Officer, unmarried, and not over 30 years of age. Salary, £160 per annum, with board, furnished apartments, and washing. Applications to the Medical Superintendent.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House-Physicians. Appointments for six months, honorarium £25 each. Applications to the Secretary by September 26th.

LIVERPOOL: HOSPITAL FOR WOMEN.—House-Surgeon. Appointment for six months. Honorarium, £35. Applications to the Honorary Secretary.

LIVERPOOL INFIRMARY FOR CHILDREN.—House-Surgeon. Salary, £85 per annum, with board and lodging. Applications to the Honorary Secretary by September 30th.

LONDON HOSPITAL, Whitechapel, E.—Surgical Registrar. Salary, £100 per annum. Applications to the House-Governor by October 3rd.

MACCLESFIELD: CHESHIRE COUNTY ASYLUM.—Junior Medical Officer, unmarried, and not over 30 years of age. Salary, £130, rising to £150 per annum, with furnished apartments, board, washing, and attendance. Applications to the Medical Superintendent.

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury.—Medical Officer for the Dispensary. Salary, £180 per annum. Applications to the Secretary, Children's Dispensary, Gartside Street, Manchester, by October 9th.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon. Salary, £80 per annum, with apartments and board. Applications to Mr. H. Teague, Secretary, 38, Barton Arcade, Manchester, by September 8th.

MANCHESTER: MONSALL FEVER HOSPITAL.—Medical Superintendent, unmarried. Salary, £250 per annum, with residence, maintenance, and attendance. Applications, endorsed "Medical Superintendent," to be sent to the Town Clerk, Town Hall, Manchester, by September 28th.

MANCHESTER: OWENS COLLEGE.—Junior Demonstrator in Physiology. Stipend, £100, rising to £150 per annum. Applications to the Registrar by September 24th.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House-Surgeon. Honorarium at the rate of £50 per annum and board. Applications to Mr. G. W. Fox, 38, Princess Street, Manchester, by October 4th.

MARGATE: ROYAL SEA-BATHING HOSPITAL.—Resident Surgeon. Salary, £120 per annum with board and residence. Applications to the Secretary at the offices, 30, Charing Cross, London, S.W., by October 5th.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—(1) Female Senior Clinical Assistant for Children's Department. Appointment for two years. (2) Female Clinical Assistants in the Out-patient Department. Applications to the Secretary by October 2nd.

NOTTINGHAM CHILDREN'S HOSPITAL.—House-Surgeon, unmarried. Appointment for six months, but eligible for re-election. Salary at the rate of £100 per annum, with board and residence. Applications to the Secretary, Mr. A. F. Kirby, St. Peter's Church Walk, Nottingham, by September 30th.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Physician. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by September 27th.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—Curator and Librarian. Salary, £120 per annum. Applications to the Secretary by October 10th.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Curator of Museum and Assistant Pathologist. Salary, £160 per annum. Applications to the Dean by October 5th.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road.—Physician-Accoucheur. Applications to the Secretary, Mr. H. P. Bodkin, 28, Gordon Street, W.C., by September 28th.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Marylebone Road, N.W.—(1) Two Anæsthetists. Honorarium, £20 per annum. (2) Physician to the Out-department. Applications to the Secretary by October 1st.

SEAMEN'S HOSPITAL, Greenwich, S.E.—House-Surgeon. Salary, £50 per annum, with board, residence, and washing. Applications to the Secretary by October 5th.

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House-Surgeon, unmarried. Salary, £50 per annum, with board, washing, and lodging. Applications to the secretary. Honorary Medical Staff, Dr. Stanley Riseley, 389 Glossop Road, Sheffield.

SOMERSET AND BATH LUNATIC ASYLUM, Cotford, Taunton.—Assistant Medical Officer, unmarried, and not over 30 years of age. Salary, £130 per annum rising to £150, with furnished apartments, board, washing, etc. Applications to the Medical Superintendent by September 25th.

STAFFORDSHIRE COUNTY ASYLUM, Burntwood, near Lichfield.—Junior Assistant Medical Officer, unmarried, and under 30 years of age, salary, £150 per annum, increasing to £220, with board, lodging, attendance, and washing. Applications to the Medical Superintendent.

STOKE-UPON-TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House Physician. Salary, £100 per annum, increasing £10 yearly at discretion of Committee, with furnished apartments, board, and washing. Applications to the Secretary by October 21st.

SUNDERLAND: MONKWEARMOUTH AND SOUTHWICK HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary by September 30th.

TAUNTON: TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Appointment for six months. Salary at the rate of £80 per annum, with board, lodging, and laundry. Applications to the Honorary Secretary.

TOXTETH PARK TOWNSHIP. Assistant Medical Officer of the Workhouse and Infirmary. Salary, £100 per annum, with board, washing, and apartments. Applications to the Clerk to the Guardians, 15, High Park Street, Liverpool, by September 25th.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon, unmarried. Salary, £80 per annum, increasing £10 yearly, with board and apartments. Applications to Mr. J. C. R. Crewes, 4, Parkvedras Terrace, Truro.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, S.W.—(1) House-Surgeon, (2) House-Physician. Appointments for six months. Honorarium £25, with board and lodging. Applications to the Secretary for (1) by September 28th and for (2) by October 5th.

WESTERN GENERAL DISPENSARY, Marylebone Road.—Second House-Surgeon. Salary, £90 per annum, with board, residence, and laundry. Applications to the Honorary Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) House Physician, (2) House-Surgeon. Appointment for six months. Board and lodging provided. Applications to Secretary-Superintendent by September 25th.

WORCESTER COUNTY ASYLUM, Powick.—Third Assistant Medical Officer. Salary, £120 per annum, rising to £140, with board, residence, etc. Applications to the Medical Superintendent by September 24th.

WREXHAM INFIRMARY.—Lady Dispenser. Salary, £30 per annum, with full board and washing. Applications to the Secretary before September 23rd.

## MEDICAL APPOINTMENTS.

AHRENS, H. A., M.R.C.S.Eng., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Basingstoke District of Hampshire.

AITKEN, Peter, L.R.C.P., L.R.C.S.Edin., appointed Certifying Factory Surgeon for the Bo'ness District of Linlithgow.

ALWYNE, T. Compton M.R.C.S., L.R.C.P., appointed Second Assistant Medical Officer, St. Mary Islington Infirmary, Highgate Hill, N.

BAILEY, B. E. G., M.R.C.S., L.R.C.P.Lond., appointed Second Assistant Medical Officer to the Shoreditch Infirmary.

BICKLE, L. W., M.R.C.S., appointed Honorary Surgeon to the Adelaide Hospital, South Australia.

BLAKESLEY, H. J., F.R.C.S.Eng., appointed Honorary Surgeon to the Leicester Infirmary, *vice* J. St. Thomas Clarke, M.D., M.S.Lond. deceased.

BROWN, John, M.D.Vict., D.P.H., reappointed Medical Officer of Health for the Borough of Bacup.

CRICHTON, David, L.R.C.P., L.R.C.S.Edin., appointed Certifying Factory Surgeon for the Newtyle District of Forfarshire.

EASTERBROOK, A. M., M.B., C.M.Edin., appointed Certifying Factory Surgeon for the Gorebridge District of Midlothian.

FINDLAY, John, M.B., M.Ch.Aberd., appointed Second Assistant Medical Officer to the Dorset County Asylum, *vice* George Potts, L.R.C.P.&S.Edin., resigned.

FORBES, W. J., M.B., B.Ch.R.U.I., reappointed Medical Officer to the Knaresborough Rural District Council.

FULLER, Laurence O., M.R.C.S.Eng., L.R.C.P.Lond., appointed Fourth Assistant Medical Officer at the Darenth Asylum.

GIBBES, A. E., M.B., appointed Government Medical Officer and Vaccinator at Greta, New South Wales.

GREENHAM, Miss E. C., M.B., appointed Resident Surgeon to the Lady Bowen Hospital, Brisbane.

HICKS, E. H., M.R.C.S., L.S.A., appointed Medical Officer to Wymeswold District of Loughborough Union.

MARE, G. W. S., M.B., appointed Assistant Medical Superintendent of the Hospital for the Insane at Toowoomba, Queensland, *vice* Herbert Chesson, M.R.C.S.Eng.

MYLES, F. J., M.D., appointed Medical Referee under the Workmen's Compensation Act, and Certifying Factory Surgeon for the County of Longford.

PIKE, N. H., M.B., B.S.Lond., appointed District Medical Officer of the Dewsbury Union.

REID, George, L.R.C.S.I. appointed Government Medical Officer and Vaccinator at Picton, New South Wales.

RODGER, A., M.B., C.M.Edin., appointed Certifying Factory Surgeon for the Yetholm District of the County of Roxburgh.

YOUNG, D. H., M.B., appointed Officer of Health for Shire of Towong, Victoria.

## DIARY FOR NEXT WEEK.

**MONDAY.**

**Medical Graduates' College and Polyclinic,** 22, Chenies Street, W.C., 4 P.M.—Clinique (Skin).

**TUESDAY.**

**Medical Graduates' College and Polyclinic,** 22, Chenies Street, W.C., 4 P.M.—Clinique (Medical).

**WEDNESDAY.**

**Medical Graduates' College and Polyclinic,** 22, Chenies Street, W.C., 4 P.M.—Clinique (Surgical).

**THURSDAY.**

**Medical Graduates' College and Polyclinic,** 22, Chenies Street, W.C., 4 P.M.—Clinique (Surgical).

**FRIDAY.**

**Medical Graduates' College and Polyclinic,** 22, Chenies Street, W.C., 4 P.M.—Clinique (Eye).

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

BOWKER.—On September 13th, at 11, North Parade, Bath, the wife of George E. Bowker, M.B., C.M.Edin., a daughter.

LAWSON.—On September 13th, at 46, Leytonstone Road, Stratford, E., the wife of H. A. Wellesley Lawson, L.R.C.S.&P.Edin., of a son.

NEWTON.—At Brook Hill, Sheffield, on September 17th, the wife of Duncan Gray Newton, M.B., C.M.Edin., of a son.

### MARRIAGES.

CRACE-CALVERT—ADAMS.—On September 11th, at Clapham Congregational Church, by Rev. J. C. Thompson of Heathfield, George Alfred Crace-Calvert, M.B., M.R.C.S., Llandegr Hall, Ruthin, to Ellen Marguerite Adams, elder daughter of Francis Adams, Shamrock Lodge, Park Hill, Clapham, S.W.

DARBYSHIRE—WORLEY.—On August 1st, at St. John the Baptist's Church, Perth, Western Australia, by the Right Rev. the Lord Bishop of Perth, Douglas E. Darbyshire, M.B., M.R.C.S., L.R.C.P., of Carnarvon, W.A., to Florence, second daughter of William Charles Worley, Esq., M.R.C.S., L.R.C.P., 163, Green Lanes, London, N.

THORMAN—ADAIR.—On September 11th, at Bathford by the Rev. H. B. Tillbrook, brother-in-law of the bride, assisted by the Rev. R. Thorman, vicar of Christ Church, Skipton, brother of the bridegroom, William Henry Thorman of Kirkburton, Yorkshire, fifth son of Robert Thorman, of Seaham Harbour, to Jeanie, youngest daughter of the late Major Wallace Adair and Mrs. Adair, the Sycamores, Bathford.

### DEATH.

ROBERTS.—On September 8th, at 28, Peel Square, Bradford, Wm. Lake Roberts, M.R.C.S.Eng., in his 56th year.

## LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

### QUERIES.

K. H. H. (Turkey) asks for advice as to the best apparatus to retain fæces after the operation of colotomy.

ENQUIRER would be much indebted to any reader who could inform him of the titles of some publications (and publishers) dealing with (1) Influence of mental impressions on health and disease: (2) so-called miracles, for example, at Lourdes; (3) so-called Christian Science.

"SINIM" would be glad to know of any home or institution—under medical supervision—where a boy, aged 11 years, suffering from epilepsy could be received. The patient is weak both physically and mentally and addicted to masturbation.

G. B. would be glad to have any information on the following subjects: (1) Some means, short of operative interference, which is efficient as treatment for an anal fissure; the usual local remedies have failed. (2) Some literature on the history of medicine—especially relating to very ancient times—giving theories, etc.

INSECT PESTS.

M.T. asks: Can pyrethrum powder be used for fleas on dogs, and how?

SWEATING HANDS.

DISTRESSED would be glad to hear of a remedy for profuse perspiration of the hands. The patient is a young lady, rather nervous, and the dread of having to shake hands causes the hands almost to drop with moisture.

TREATMENT OF CHRONIC URTICARIA.

W. C. C. would be grateful to hear of any treatment likely to be of benefit in the following most chronic and troublesome case of urticaria: The patient is a somewhat anæmic girl of about 20 years of age, and the disease has been going on for nearly three months. During the whole time she has not had a single day free from the trouble, though sometimes it has appeared to be nearly gone, only to return with increased violence. She has had fair trials of the following drugs, besides others—namely: Iron, arsenic, quinine in large doses, ichthyol, the bromides, potassium iodide, and antipyrin, none of which have had the least effect. She has also used many external applications—that is, alkalies, acids, lead, tar, cocaine, dusting powders, etc., besides medicated baths, which only relieve the irritation for a very short time. Needless to add, the diet has been carefully regulated, and from time to time completely changed.

### ANSWERS.

R. B. has omitted to send his name.

A. S. H. will find hypnotism as a treatment for epilepsy referred to in Allbutt's *System*, 1899, vol. viii, p. 424; and in Dr. Lloyd Tuckey's *Treatment by Hypnotism and Suggestion, or Psycho-therapeutics*, 1900, p. 177.

EDUCATIONAL, I.M.S.—We should recommend our correspondent to obtain a copy of the regulations from the Military Secretary, India Office, London, S.W. The holding of the appointments mentioned is not compulsory. The certificate of attendance at an ophthalmic hospital is a special certificate, but there is no regulation requiring the attendance to be made after a degree or diploma has been obtained.

DR. P. GARDINER.—The light treatment has been tried for rodent ulcer with fair success. We gather from the literature that has appeared that the treatment by *x* rays has been more successful. Dr. J. W. Sequeira reported several cases in the BRITISH MEDICAL JOURNAL of February 9th, 1901, p. 332; and others were referred to in a discussion in the Section of Dermatology at the recent annual meeting of the Association.

MOTOR CARS.

DR. F. HYDE MABERLY (Rushbrooke, co. Cork) writes: It is possible that the paraffin oil car of Messrs. Roots and Venables, 100, Westminster Bridge Road, London, might suit "W. D." My experience of it is limited to a demonstration by the makers, so I give the following particulars from memory. Price, about £160 for a two-seated car. It uses ordinary paraffin oil—an important matter in Ireland, where petrol is scarce. The cost of the oil amounts, I believe, for the car mentioned to a small fraction of a penny per mile. No batteries or accumulators to get out of order, only a lamp, which takes about five minutes to start

the engine when cold. Speeds from four to twelve miles an hour, regulated by friction clutch. Engine built by the Birmingham Small Arms Company.

INSTRUCTION IN DISPENSING.

A. G. E. writes in reply to to "D. M." that the instruction required may be obtained at: The London College of Pharmacy for Ladies, 5, Westbourne Park Road, Porchester Square, W.; the Metropolitan College of Pharmacy, 162, Kennington Park Road, S.E.; the Westminster College of Pharmacy, Trinity Square, Borough, S.E. "D. M." must pass the Assistants Examination of the Apothecaries' Hall.

HARVEST BUGS.

DR. JOHN GOULD, of Hatherleigh, states that harvest bugs have recently infested raspberry bushes in large numbers, and that under the microscope the insect appears to be of a dirty orange colour: in shape that of a common bug with four legs, some scattered hairs around the posterior parts, and two fine pointed antennæ which can be protruded and retracted at will. As to treatment, he adds: Having been severely bitten myself I have tried almost everything, including ammonia, carbolic acid, prussic acid, chloroform, and laudanum without relief. The most effectual method I found was a good scratching until blood came, not a very pleasant remedy I admit.

DRY CLIMATES IN ENGLAND.

LIEUTENANT, R.A.M.C.—The driest counties in England for residential purposes are Essex and Suffolk. The absolutely lowest rainfall is found at the eastern point of Spurn Head, Yorkshire, at the mouth of the Humber. The mean rainfall at that station on an average of ten years is 19·1 inches. Shoeburyness, in Essex, on an average of twenty-five years, has an annual rainfall of 20.6 inches. Clacton-on-Sea, in Essex, a rising health resort, had 18.66 inches on one hundred and seventy days in 1900, compared with 17.31 inches on one hundred and forty-six days at Shoeburyness. Felixstowe, in Suffolk, near Ipswich and Harwich, is also noted for the dryness of its climate and a small rainfall. The depth of rain in 1900 was 21.6 inches on one hundred and sixty days. The mean relative humidity of the spring and summer months on the coasts of Suffolk and Essex, is probably 78 per cent., but we have no actual figures at hand. At the Sussex watering places the rainfall is heavier than in Essex or Suffolk, but at some, at Eastbourne for instance, the soil dries quickly even after heavy rain. The east winds on the coast of Suffolk and Essex are trying in the spring to persons not in robust health.

MUSIC PRACTICE AND NEUROTIC GIRLS.

P. B. G. writes in answer to "C. P.": (1) The singing will be better than the practice: (2) two consecutive hours' piano is too much for a delicate neurotic girl. A better plan is one hour physical drill and one hour piano, and as the bodily strength increases so may the piano lesson be lengthened. Four years in Dresden convinced me of the danger too much music entailed on the neurotic girl.

DR E. D. KIRBY (Edgbaston) writes: In answer to "C. P.'s" query as to (1) whether piano-playing or singing for an equal time causes the greater strain on the nervous system, one has to take into consideration several factors. In the first place, it all depends upon the teacher: severe professional training in either, of course, causes much more strain than the more usual sort that is meant merely for the drawing-room amateur. Secondly, one has to consider the relative strength of the throat and forearm; and, thirdly, while of course the hour in piano-playing may be subdivided, this is imperative in singing, when a delicate person should not exceed one quarter of an hour at a time. All these points being taken into consideration there probably will not be much difference. As to (2) the duration of practising in a delicate person I do not think two hours should be too much, provided always that she gets plenty of fresh air, and is not taxed with other physical or mental work.

## LETTERS, NOTES, Etc.

THE SERVICE ON ST. LUKE'S DAY.

SURGEON-MAJOR writes: In reference to the service which I presume will be held again this year at St. Paul's for the medical profession, I beg to protest at the very unjust division of the seats for medical men. On previous occasions nearly all the front and best seats were occupied by women, young girls, and even boys, to the exclusion especially of elderly medical men, who, on the last occasion were shunted to the side seats, where they could neither see anything, or even hear the preacher. As the above service is understood to be solely for members of the medical profession, I think it incumbent on the authorities to arrange a fairer distribution of seats.

A CASE OF PLACENTA PRÆVIA.

DR. J. HOLMES, Moseley Road, Birmingham, writes: On August 16th I was called to see a case said to be a miscarriage. On my arrival I found the woman, aged 26, very pale and bloodless. The woman acting the part of a midwife stated "that she put away what had come all but the after-birth, which she had kept for me to see." On my asking if there had not been much loss I was told—"Yes, a bucketful." I was assured there was then no further hæmorrhage. I felt the uterus was contracted. I gave a dose of ergot, and ordered brandy and eggs, etc. Two and a-half hours afterwards a sister of the patient came and said "a child had been partly born for over two hours." After the statement of the nurse (?) and my having felt the condition of the uterus, I could not understand the remark. I immediately again visited the patient. The nurse said "there had not been any more loss, but you had better examine." I did so, and found an eight-months child born all but the pelvis and lower extremities. I immediately removed the fœtus, which, of course, was dead. The funis was broken. I gave warm water enemata, iron, eggs beaten up, beef-tea, and milk. The woman has done well and was up on Aug. 21st, 26th. The child must have been in the position in which I found it for some hours. The uterus would not have been contracted had not the child been born, all but the parts remaining in the vagina. The nurse said "she thought that after the after-birth had come there never was more to come." The case was one of placenta prævia. The woman was not married, and had not named her condition to anyone—in fact, she was an out-patient at one of the hospitals. Perhaps the treatment she was under induced the premature labour.

THE NEW YORK INSTITUTE OF SCIENCE.

DR. CHARLES LLOYD TUCKEY, M.D. Aberd. (Park Street, W.) writes: The answer to your correspondent "Hypnotist," in the BRITISH MEDICAL JOURNAL for August 24th, evidently refers to me, though my name is not spelt quite correctly. I have no knowledge of the quack New York Institute referred to, and you will see from the enclosed letter which the *Lancet* published on June 1st, that I took an early opportunity of repudiating any connection with it. My name is rather well known from my writings in connection with medical hypnotism, and I have been put to much trouble and annoyance by this unauthorised use of it.

THE THIRD STAGE OF LABOUR.

OPSIMATHÈS writes: Could you find room for some remarks, by practical men, on this elementary but very important subject? "Expression" of the placenta, when it can be effected without undue force, is admirable. But it often fails. To "go up" for the placenta is easy, but this procedure involves the risk (in spite of every precaution) of sepsis. Traction by the cord is discountenanced by the highest authorities—no doubt, with good reason. Yet I have seen an experienced practitioner, to my amazement, remove the placenta by this means, within three minutes of the birth of the child, without ill-result. He stated that he invariably acted thus without disaster. In my limited experience the typical *dolores cruenti* frequently do not occur, though one may wait twenty minutes or more for them.

LETTERS, COMMUNICATIONS, ETC., have been received from

**A** A. G. E; Assistant; Anti-shop; Antitoxin; Anglo-American and Continental Pharmaceutical Company, Manager of, Croydon; A. B.; Audi alteram partem. **B** Dr. T. Barlow, London; Mrs. W. Bruce, London; Mr. G. B. Browne, London; B. R.; J. W. Batterham, M.B., St. Leonards-on-Sea; Mr. W. R. Bannerman, London. **C** Captain R.A.M.C.; Mr. D. L. Clay, Wellington N.Y.; Dr. F. Collie, London; Messrs. Callard and Co., London; Sir C. A. Cameron, M.D., Dublin; Dr. H. Corner, Southgate: Curious; Dr. H. A. Caley, London. **D** Mr. H. R. Davies, London; Delta; Dr. B. Duke, London; Distressed; Sir G. F. Duffey, M.D., Dublin. **E** Mr. P. Edwards, Liverpool: Enquirer; Educational I.M.S; Eblana. **F** Dr. W. Fairbanks, Wells. **G** Mr. J. Gould, Hatherleigh; Mr. H. C. T. Gardner, London; Mr. G. T. Gifford, Darwen: Mr. W. Gosse, Sittingbourne. **H** Mr. F. G. Hallett, London; Dr. C. J. Heaton, Westgate-on-Sea: Mr. T. G. Horder, Cardiff; E. Hopkinson, M.B., Oxford: Messrs. Hockin, Wilson, and Co., London; Dr. A. D. Heath, Birmingham; H. R.: Dr. G. S. Hatton, Newcastle-under-Lyme; Mr. H. W. Haydon, Wadebridge; H. O. I. **J** Dr. H. L. Jones, London: Justice; Mr. F. W. Jollye, Alresford. **K** Dr. E. D. Kirby, Birmingham. **L** Listerian: Lieut. R.A.M.C.; Dr. P. W. Latham, Cambridge. **M** Dr. J. M. H. MacLeod, London A. A. Martin, M.B., Sheffield; Dr. J. W. Martin, Sheffield: Dr. D. McKenzie, Leytonstone; Dr. F. H. Maberley, Rushbrooke; Manhu Food Company, Manager of, London. **N** Dr. J. Norton, London: Naval Surgeon; Mr. B. A. Nicol, London. **P** Mr. G. Pernet, London; Mr. G. H. Pinder, Higher Broughton; B. Pollard, M.B., London: Dr. L. H. Pegler, London; P. B. G.; Puzzled. **R** R. M.; Dr. T. H. Redwood, Rhymney: R. B. **S** Simm; Dr. C. B. Savory, Leeds; Staff Surgeon; S. A.; Scapula; Mr. P. B. Spurgin, London; Mr. J. B. Smith, London; Strenbo Company, Manager of, Manchester; Scotswoman; C. Smith, M.B, North Collingham; E. W. Sumpter, M.B., Cley-next-Sea. **T** Dr. E. Thompson, M.P., Omagh; Dr. J. C. Thomson, Hong Kong; W. Turner, M.B., London: Dr. G. G. S. Taylor, Liverpool. **V** Mr. S. Vines, Manchester. **W** W. C. C.; Dr. A. McC. Weir, Liverpool; O. R. M. Wood, M.B., Woolpit; Dr. H. E. Wingfield, Winchester; etc.

## BOOKS, ETC., RECEIVED.

Clinical Pathology and Practical Morbid Histology. By T. S. Pigg, M.A. Second Edition. London: Strangeways and Sons. 1901. 5s.

Die Kindes Ernährung, Ernährungstörungen, und Ernährungstherapie. Von Professor A. Czerny und Dr. A. Keller. Zweite Abtheilung. Leipzig und Wien: F. Deuticke. 1901. M.4·50.

Handbook of Physiology. By W. D. Halliburton, M.D., F.R.S. Fourth Edition. London: John Murray. 1901. 14s.

Pulmonary Tuberculosis; its Prevention and Cure. By Professor C. Ruata, M.D. Bristol: John Wright and Co. 1901. 3s.

Kitchen Physic: At Hand for the Doctor and Helpful for Homely Cures. By W. T. Fernie, M.D. Bristol: John Wright and Co. 1901. 6s.

A Manual of the Practice of Medicine. By Frederick Taylor, M.D., F.R.C.P. Sixth Edition. London: J. and A. Churchill. 1901. 16s.

Sewage and the Bacterial Purification of Sewage. By Samuel Rideal, D.Sc. Second Edition. London: The Sanitary Publishing Company, Limited. New York: John Wiley and Sons. 1901. 14s.

The Criminal Mind. From the French of Dr. Maurice de Fleury. London: Downey and Co., Limited. 1901. 3s. 6d.

Unprofessional Tales. By Normyx. London: T. Fisher Unwin. 1901. 6s.

Medical Diagnosis, with Special Reference to Practical Medicine. By J. M. Da Costa, M.D., LL.D. Ninth Edition. London: Smith, Elder, and Co. 1901. 24s.

*** In forwarding books the publishers are requested to state the selling price.


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SIXTY-NINTH ANNUAL MEETING

OF THE

# British Medical Association.

*Held at Cheltenham, July 30th, 31st, August 1st, and 2nd, 1901.*

PROCEEDINGS OF SECTIONS.

## SECTION OF DERMATOLOGY.

John James Pringle, M.B., President.

## DISCUSSION ON THE TREATMENT OF LUPUS VULGARIS AND SOME OTHER DISEASES OF THE SKIN BY FINSEN'S LIGHT METHOD AND X RAYS.

I.—Malcolm Morris, F.R.C.S.Edin.,

Surgeon to the Skin Department, St. Mary's Hospital.

Mr. Malcolm Morris, after giving a brief sketch of the scientific principles on which the light treatment is founded, stated that in 1899 he visited Copenhagen, where Professor Finsen gave him full details of the treatment. He had been so struck by what he saw at Copenhagen that he at once determined to introduce the treatment into England, but it was a considerable time before he was able to overcome the difficulties of one kind or another that arose in his path. For some eighteen months now the light treatment had been carried out in a fully-equipped establishment in the West End of London under his direction, with the able assistance of Dr. S. Ernest Dore.

Mr. Morris proceeded: The apparatus employed is identical with that used by Professor Finsen, but we use only electric light. The method of applying it is also in essentials the same as that enjoined by Finsen, but there are a few points in the technique as to which our experience has taught us some practical lessons which may perhaps be useful to other workers. Thus in respect of current, we have found one of about 70 ampères and 60 volts sufficiently strong to produce the effect required in most cases; and it has been thought better to shorten the time of exposure rather than to lessen the intensity of light.

In order to get a powerful light it is most important that care should be taken that (1) the lenses, especially the bottom one, are clean and bright; (2) the water is clear and free from floating particles; the bottom lens should be kept thoroughly cleaned and polished, and this is greatly facilitated by having it made detachable.

As regards focus, accuracy is of the first importance, and if the disease is so situated as to make this impossible, the result is not satisfactory. In such cases, as will be seen later, the Roentgen rays prove of service. The area treated is, as a rule, kept well within the focus of the light, but a smaller focus, if it can be borne, has a greater effect. Thumbscrews are more convenient than the ordinary ones for focussing. It is very important that the tubes should be kept in a straight line with the light rays, so that none of these are lost by impinging on the side of the telescope, and we have found a new adjustment which gives a larger range of movement of service in this respect.

It is essential that the rays should fall perpendicularly on the compressing glass, and to ensure this we have found the use of screens advantageous, especially when the attendant is a person of little experience. By the use of cardboard or metal screens fixed to the end of the tubes, the slightest deviation of the glass will be at once revealed by the fact of its throwing light on the screen, and can at once be rectified.

Up to July, 1901, the total number of cases treated was 60. In 36 of these the disease was lupus vulgaris; in 6 lupus erythematosus; in 14 rodent ulcer; in 2 alopecia areata; in 1 keloid; and in 1 epithelioma. Of the cases of lupus 8 may be claimed as instances of cure; in 3 the treatment was abandoned on account of failure of health, while in 6 the result was unsuccessful or unsatisfactory. The remainder are still under treatment. Of the rodent ulcer cases 7 were cured; in 2 the unsatisfactory state of the patient's health made it impossible to go on with the treatment, and 2 are still under treatment.

Of the cases of lupus erythematosus, in 2 the result was satisfactory, in 3 the treatment had to be discontinued, and 1 is still under treatment. Of the cases of keloid and epithelioma nothing definite can yet be said.

In the successful lupus cases the number of sittings varied from 8 to more than 370. They were mostly favourable cases in which the disease was superficial and of small extent. The following brief notes of the cases will suffice to indicate their general characters.

R. B., aged 12.—This case was favourable in that the boy was young and there were only two or three nodules. The disease had, however, been excised five times and "cauterised once or twice a week for two or three months," so that the resulting scar was against him. He had eight sittings.

Miss T.—In this case there was only one nodule of two years' duration. It, however, came on to the top of a mole. Treatment was continued until the lupus and the male had disappeared. There was no scar. Fourteen applications.

Mrs W.—The disease was superficial and small in extent. The greater part had been previously removed by operation. Nine applications.

Miss G.—Small patch on chin 1/2 in. by 1/2 in. Untreated, but considerably infiltrated. She had sixty-one applications.

Miss B.—Small erythematous patch with diffuse superficial infiltration of lupus. Seventeen applications.

Miss L., aged 19.—Small but infiltrated patch. Twenty-nine applications.

Miss R.—Very anæmic, which was probably in her favour as regards the treatment. 190 applications, now nearly well.

Annie P., aged 32.—Thin skin and fair complexion. Always reacted well. About 320 applications.

The following are brief notes of the cases of rodent ulcer in which the treatment was successful:—

Mr. W., aged 44.—Small rodent of three years duration on cheek. Seven applications.

Mrs. W., aged 35.—Small rodent of nine years duration on cheek. Twelve applications.

Mr. B., aged 73.—Superficial spreading rodent of seven years duration. Thirteen applications.

Mr. H., aged 83.—Small rodent, two years duration, inner canthus right eye. Seven hours and a-half.

Mrs. W.—Excavating ulcer of cheek, infiltrating growth near right ala of nose and right angle of orbit. Thirteen years duration. Thirty-five applications of Finsen; finished with *x*-rays.

Miss F. Rodent on lower lip, had been excised twice. Eleven applications.

Mrs. P.—Rodent on upper lip, eight years duration, excised once. Twenty-two applications.

Of the two cases of successful treatment of lupus erythematosus in one (Mrs. B., aged 43) the disease was of fifteen years duration and was very extensive and superficial; the areas formerly covered by the disease are now occupied by fine white scar tissue. In the other (Mr. W.) the disease was more chronic and there was deeper scarring.

In regard to one of the cases of rodent ulcer successfully dealt with, it was noted that the *x* rays had been applied by way of reinforcement of the light treatment. The *x* rays are of great service in cases where the disease is not easily accessible to the light rays, as for instance in the interior of the nose where the primary focus of lupus of the face is generally situated. This combined method has been used in the Copenhagen Institute but not as a systematic procedure. It is based on the fact that while the light rays cannot be made to act on any but plane surfaces, the *x* rays owing to their power of penetrating soft tissues, can be directed on mucous membranes lining the cavities of the body. As an instance I may cite a case in which lupus of the cheek implicated the nasal fossæ. In treating this case we had the advantage of the co-operation of Dr. H. Low, Honorary Secretary of the London Roentgen Ray Society. A mask made of cardboard and lead foil was applied to the face and an aperture cut in it corresponding to the part on which we wished to direct our therapeutic rays. A six or seven inch spark was employed, and a series of exposures, each lasting from ten to fifteen minutes was made till inflammatory effects were produced, when treatment was suspended for a few days. After about fifteen or sixteen exposures, a decided improvement was visible.

Having thus stated our results I proceed to describe the manner in which the light rays produce their remedial effect on the diseased skin, and then mention some of the difficulties that interfere with their action.

The application of the light is followed by an inflammatory reaction consisting in hyperæmia and redness, followed by the formation of a bleb which breaks and dries in about a week

into a thick yellow crust. Healing is complete in ten days or a fortnight. In places where the tissues are loose, for instance near the eye, there is often great swelling of the neighbouring parts. The intensity of the reaction varies in proportion to the intensity of the light and also according to the structural peculiarities of the patient's skin, and especially according to the local conditions produced by the disease. In persons with a thin skin the reaction is greater, while it is less painful in coarse thick skins. The reaction comes on from five or six to twenty-four hours after the application of the light. It is usually slight at the beginning of the treatment, and sometimes becomes greater as it is continued. Even after prolonged treatment it still shows a tendency to increase rather than diminish. The Danish physicians say the treatment is painless, but this is not strictly accurate. There is, indeed, seldom anything that can be called pain at the time the light is applied, though sometimes a feeling of heat is experienced in the part and pressure over a bony prominence may cause pain. But the after-smarting is often considerable, and the inflammatory phenomena constituting the reaction are also more or less painful. There is seldom any constitutional disturbance. In the case of deeply ulcerated surfaces there is no blistering or crusting; a much larger number of consecutive applications can, therefore, be made without inconvenience to an ulcer than to an area of intact skin. Reaction is manifested by redness and soreness, which are sometimes accompanied by some swelling of the surrounding parts and tenderness on pressure. These effects are seen about the fourth or fifth day, and if the applications are kept up the skin around the ulcer becomes inflamed.

According to my experience, the remedial effect of the light rays is directly proportionate to the intensity of the reaction; the production of a considerable reaction should, therefore, always be aimed at. If the disease extends into the deeper layers of the skin, and if there is much scarring, this forms an obstacle to the penetration of the light rays. Another circumstance which makes the passage of the rays increasingly difficult as the treatment is prolonged is the pigmentation caused by the frequently-repeated applications of light.

From what has been said it may be gathered that a thin skin is a favourable circumstance for the treatment; a coarse thick skin is less readily penetrable by the light rays. The amount of pigment naturally present in the skin must also be taken into account. Brunettes are not such good subjects as blondes, and the darker they are the less amenable are they to the light treatment. Hence there are great difficulties in applying it to patients of black or mixed race. When the disease extends deeply, and there is great thickening and infiltration of the tissues, it is difficult for the light to penetrate, and a large number of exposures is required to make an impression on the mass of diseased tissue. In elephantiasis-like forms of lupus, sometimes seen on the ears, cheeks and elsewhere, the reactions may be so severe that they cannot be borne by the patient. In hypertrophic cases the use of pyrogallic acid ointment alone or combined with salicylic acid may reduce the thickening and allow a freer penetration of the light. In other cases the internal administration of thyroid extract is useful in reducing thickening and œdema.

The large extent of the area involved is sometimes a most serious difficulty as only a small spot can be treated at a time, and thus it is scarcely possible to deal with all the nodules as they develop on the edge of the patch. The only hope of keeping pace with the disease in such cases is to retain the patient under treatment two or three hours daily. This is seldom possible as the patient cannot spare the time or cannot bear the prolonged immobility required. Moreover, the reactions tend to become so severe that they cannot be borne. Cases in which mucous membranes are involved are unfavourable because (1) the disease is often inaccessible, being situated on the palate, the gum or the floor of the mouth; (2) they are often badly ulcerated and do not seem to have the same aptitude for repair as skin; and (3) they are always moist and offer a good breeding ground for micro-organisms. The first of these difficulties can be got over by the use of the *x* rays to supplement the light; but the others it is beyond our power to obviate. It may be mentioned that there are parts besides the cavities of the mouth and nose which are difficult of access; for instance it is not easy to get into corners such as the internal canthus. This difficulty has however been overcome by the use of a special compressor. In several cases the eyelids have been treated and it has been found possible to keep up considerable pressure on the eyeball without doing any harm to the eye or seriously inconveniencing the patient.

In estimating the prospect of a cure by means of the light treatment in a given case of lupus, a number of circumstances have to be taken into account. Cases that have not been treated are, other things being equal, the most suitable for the light method. In old cases that have suffered many things from many physicians, the seat of disease is likely to be so deeply scarred by the cauterisations and scrapings it has undergone as to be almost impenetrable to light. If the disease is recent, if there is no scarring or thickening, and if the configuration of the part is such that the pressure glass can be accurately applied to it (a most important point in practice) there is every reason to look for a thoroughly satisfactory result. If the disease is extensive the treatment must at the best be tedious. It should be applied daily on six days a week, if there be nothing, as for instance, excessive reaction, to make interruption necessary. In cases where there may be a special urgency, the treatment may be carried out twice or three times a day without any ill-effect.

The success of the light treatment depends more on the attendant who has the actual management of the details than on the doctor who has the supervision of the case. Her duties require not only intelligence or skill, but devotion, for the work places an enormous tax on the patience. Another condition of success is in the patient himself, to whom the absolute passivity enforced during an hour or more daily is apt to be exceeding irksome, and he must continue to submit to this restraint for months together. One of my patients who was originally under treatment in Professor Finsen's Institute has persevered for two years.

The length of time over which the treatment has to be prolonged is indeed one of the chief drawbacks of the method. As regards the time required, it may be said in general terms that in a case in which, for instance, both sides of the face are extensively involved, a year, with intervals of rest, will be required. In such a case progress is necessarily slower than when smaller areas have to be dealt with, for, as already said, when one spot is destroyed several others spring up, or at least come into view. The use of pyrogallic acid by reducing thickening and thus allowing an easier passage to the light, helps to shorten the treatment. We have used it in a few cases in an ointment of the strength of 5 per cent. applied daily for a week; then the part is allowed to heal and the light treatment is resumed.

As to the future of the light treatment, nothing definite can be said. At present we must be content to know that we have in the light rays the best remedy for lupus that has yet been found. This remedy, however, is by no means infallible, and it has a comparatively limited field of application even on what may be called its own ground. The disease in which, next to lupus, it has been most successful is rodent ulcer—a fact which cannot be explained by the bactericidal properties of light, as there are no specific bacilli to be killed. In lupus erythematosus it does some good, but in alopecia areata I have not had the success which is claimed by Dr. Bie. As to the value of the light treatment in general, however, our results go to confirm his statements.

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II.—Arthur Barry Blacker, M.D., B.S.,

Superintendent of *X*-Ray Department St. Thomas's Hospital and Hospital for Consumption, Brompton.

Dr. Barry Blacker said that he wished to compare the Finsen's light and *x*-ray treatment as regarded their relative effects. The original light apparatus of Finsen was well known, but a modification which was now being extensively used in the treatment of lupus had been introduced by Dr. Lortet and Dr. Genoud, of Lyons, which was cheaper, more convenient and employed less current. Moreover, the exposure was only fifteen instead of sixty minutes daily and the results from this apparatus were so far very satisfactory, but time must elapse before it could be proved to be equally efficacious. Dr. Blacker was now in his own practice employing both Finsen's and Lortet and Genoud's apparatus, using them both on the same patch daily so as, if possible, to obviate in some measure the tediousness which was one of the

drawbacks of this form of treatment. A comparison was made between the reactions observed with Finsen rays and the *x* rays on the skin, with the former reaction occurred in from 4 to 24 hours, in the latter in from 4 to 24 days; the first was comparatively slight and easily controlled, the second was sometimes severe and an ulcer might be produced which would last for months. He wished to emphasise the fact that there was a definite danger of producing this intractable form of ulceration after the employment of the *x* rays. This could, in some measure, be guarded against by the employment of a "high" tube, by the protection of the surrounding skin with lead foil, and by watching with care the effect of short exposures on the patient. The reaction was more severe in fair people, in those who suffered from an irritable skin, and in neurotic individuals. In many cases, however, it could only be attributable to an idiosyncrasy. The action of the *x* rays on lupus vulgaris was very often marked and was apparent after a few applications, sometimes, however, it was slow, and it was interesting to note that occasionally other patches of lupus than those which were being treated improved at the same time, although they were not immediately under the influence of the rays. In the removal of superfluous hairs the action of the *x* rays was doubtful, as in all the cases in which he had seen the hair removed it had returned within the following six months. It might be found useful in tinea tonsurans. In the treatment of the pain accompanying ulceration he had found chloretone and orthoform of service. There was much to be learned about the treatment of skin diseases by means of rays; especially was this the case as regards the employment of the *x* rays, which would appear to be mixture of many kinds of rays, some of which might produce harm. The difference between the action of rays from the violet end of the spectrum as employed with Finsen's apparatus, and the rays emanating from an *x*-ray tube were very marked; they differed in the reaction produced on the skin, in their penetrative power, in their mode of production, and in their employment. As regarded the rays, either from the sun or from the electric arc lamp, he considered that the results obtained in the treatment for lupus were sure and that they gave excellent results. On the other hand, he thought that much more had to be proved before the *x* rays could be considered as being safe or reliable.

### III.—James Harry Sequeira, M.D., M.R.C.P.,

Physician, North-Eastern Hospital for Children; Dermatological Assistant, London Hospital.

Dr. Sequeira said that from an experience of fifteen months work at the London Hospital, where there were three lamps continually in use and where nearly two hundred patients had been under treatment, he had observed improvement in every case of lupus vulgaris. Cases of every degree of severity had been treated. In two instances, where the disease was quite recent, two applications had resulted in absolute disappearance of the lupus. In other and more extensive cases two hundred and even three hundred sittings had been given, and the patients were still under treatment. He had found it very difficult to determine exactly when the treatment could be stopped with safety, and had seen cases where small recurrences had occurred. These were, however, easily cured. He quoted the latest statistics of Finsen's clinic, mentioning that over one hundred and thirty patients were known to be free from recurrence from one to five years after treatment. In lupus erythematosus, a certain proportion of cases did well, but in others there was no improvement at all. Those in which the erythematous element was very marked were particularly unsuitable. He demonstrated his new lamp, modified from that of Lortet and Genoud, which was easily worked from an ordinary street service, and the manipulation was so simple that the great expense of the Finsen treatment could be materially lessened. Moreover, the sittings were of a quarter of an hour's duration only, and an area of skin one and a-half inch in diameter could be treated at each sitting. Referring to the relative valve of the Finsen and *x*-ray treatment, he had found that ulcerative forms of lupus yielded excellent scars with *x*-ray treatment, but in the scars typical lupus nodules were visible, even when the treatment had been carried on for several months. He endorsed Mr. Malcolm Morris's experience of the *x* rays in lupus of the mucous cavities. Since his first case in June, 1900, he had treated forty-five cases of rodent ulcer with the *x* rays. The ulcers healed rapidly, and huge cavities filled up in a remarkable manner. Difficulty was experienced with the hard raised edge, and slight but easily treated recurrences had been observed. In his small experience of the treatment of cancer by the *x* rays he had found pain to be relieved and ulceration to be dried up, but in some cases the tumours grew rapidly in spite of the rays. A single case of nodulated leprosy of the skin had shown a marked improvement, the hard masses softening and becoming flat. In sycosis, he had also obtained satisfactory results.

### IV.—W. Allan Jamieson, M.D., F.R.C.P.Edin.,

Physician for Diseases of the Skin, Royal Edinburgh Infirmary; Lecturer on Skin Diseases, University of Edinburgh.

Dr. Jamieson said that as there was not yet any installation for the Finsen light method in the Royal Infirmary, Edinburgh, his remarks would be limited to the effects of the *x* rays, and even with respect to these he could not claim a very wide experience. A coil with 10-inch spark had been at his disposal for more than a year, and a number of patients had been submitted to the rays; but as most had been out-patients, and in some instances at least not very regular in attendance, the precise determination of results had been somewhat difficult. His first efforts were devoted to lupus vulgaris. In the commencement, perhaps unduly anxious about dermatitis, caution was exercised, and yet while still careful, since no example had occurred in his own cases, this had come to be disregarded. In lupus the rays had disappointed him. Without entering into details of cases, he did not think that any more than slight paling of the parts, possibly the disappearance of a few nodules, nothing approaching a cure had followed, even exposure for months. He meant by that exposures of ten minutes four times a week daily, at a distance of from six to two inches, with a soft tube and an amount of current which averaged two and a quarter ampères. Since lupus was in essence a parasitic disease, though the germ was but scantily present, and was fairly deeply seated as regards the epidermo-dermis, and if the rays had no direct parasiticide power, as had been averred, it was not easy to see what good they were to get which could not be obtained by other methods which acted as caustics or induced a substitutive inflammation. When Dr. Sequeira published his remarkable results in the treatment of rodent ulcer, in the British Medical Journal of February 9th, he was much impressed by them, and for this reason. In epithelioma they had a disorder of an element which was the most superficial, the most accessible of any. Whatever the ultimate cause, the ailment essentially consisted in perverted growth, and it was thus a quite conceivable inference that these powerful rays might exert some restrictive influence on this undue proliferative energy; and all his experience so far went to prove that they had such an action. Two cases presenting examples of rodent ulcer, but of very varied course, had been treated by him, one for two months, the other for five. The cases were as follows:

P. I., 53, papermaker from country district. No history of syphilis. First seen in March, 1901. There were then three bands of rodent half an inch broad, crusted, and enclosing fields of sear tissue. Practically the whole of the right side of the face was or had been affected. Under boric starch poultices the surface became clean, and he was admitted to my ward for treatment by the *x* rays on April 23rd. Between this date and June 29th he had thirty exposures, usually of ten minutes each, the distance varying from six to four inches. A temporary reddening lasting a quarter of an hour was the sole sign of reaction, though towards the end of treatment the whiskers and that side of the moustache had thinned perceptibly, but had not wholly fallen out, while the hair of the scalp was unaffected. During the same period the diseased portions were thoroughly scraped four times, the area so treated having greatly diminished each time. By the end of June the entire side of the cheek was a uniform smooth, fine, hairless surface, soft and pliable, and without trace of disease.

He returned for inspection on July 27th. The hair had re-grown quite thickly. The entire central space was smooth and healthy, but on three or four minute points at the extreme margin, there were specks of rodent. These were scraped out, and the pits so made cauterised with fused chromic acid, and covered with salicylic wool and collodion, which the patient was told not to disturb till it became loose spontaneously.

In this case the rodent had spread in area, little in depth, and the rays had every chance to exert their full influence, as the spoon cutting away the morbid tissue exposed a thin layer to their action, and the result was prompt and satisfactory.

The other case was different, inasmuch as there was not only skin but mucous membrane and bone attacked.

Mrs. F., aged 34. She consulted a doctor in 1895 for a small rodent on the right side of the nose, which he scraped, but it did not heal. She then came to me and I handed her over to Professor Chiene, and two operations were performed in his ward by Mr. Wallace. At the second all the bones and cartilages of the nose were removed to the level of the skin. In January, 1901, she returned, as the disease was again active. There was a triangular gap with the apex uppermost, about an inch and a-half in each long diameter. There was a hard, somewhat elevated cushion round this, with an inflamed border half an inch broad beyond. The disease was spreading in all directions, but particularly to the right. A copious fœtid discharge forming thick crusts exuded. As it was evident that only a very extensive operation could be undertaken, she came to me for treatment by the rays on January 28th. She was treated till March 19th, having six exposures weekly of ten minutes duration. The gap had contracted in all directions, the discharge had entirely ceased for weeks; there was no active disease visible anywhere, and there was a line of healthy young epithelium extending from each margin. A portion of the exposed mucous surface was removed and examined by Dr. Welsh, pathologist to the infirmary, and found healthy. As she had to go home, treatment was intermitted for nearly a month. In the middle of April it was seen that the disease was again extending on the right side, a considerable extent of exposed bony surface being affected, as well as two points at the margin. This was carefully scraped, and the exposures resumed when healing had occurred. She had had four exposures weekly for a quarter of an hour each since then. The left side had continued well, but there was distinct advance on the right, and nodules had appeared at the edge even under treatment. The discharge had not reappeared, but there were painful and tender points on the bony surface of one-third of the gap to the right. This was again scraped very thoroughly, and a week later she submitted herself once more to the rays. Only two exposures were given, when severe reaction asserted itself, and the parts swelled so much and became so hot and tender, that when I left Edinburgh the treatment had to be discontinued. The exposures had been most carefully carried out by Drs. Grey Brown and Raeburn, my house physicians.

This case seemed to him to demonstrate that the epitheliomatous process became more virulent the further it was removed from the original focus from which it started, provided the direction taken was towards depth. The deeper the cell perversion advanced the more succulent the environment, the more rapid and unmanageable it became. The rays evidently acted most efficiently the nearer the surface, and the more the epithelioma was restricted to the skin, the nearer in fact the disease was to its original starting point, the more closely it was confined to the same soil as that in which it commenced. It would appear that in both the Finsen and *x* rays they were dealing with but a portion of the spectrum. Light in its entirety had a marvellously beneficial effect on the integument, provided that the exposure to it in its full intensity was not too sudden so as, as it were, to take the skin unprepared. By eliminating certain rays and employing selected elements those singled out would act on particular components and influence their nutrition. It would seem that the *x* rays at least exercised their chief power over perversions of growth. In this way they might, perhaps, explain their effect on epithelioma and on keloid. But their function could not be regarded as an exclusive one; while it was possible that in some cases a cure might follow their unaided employment the best results, as had been proved at Copenhagen with the Finsen light method, and, as far as his own experience went with the *x* rays also, were obtained when they were used in conjunction with other and tried procedures. Both were but additions to their armamentarium, to be had recourse to in special circumstances only, not indiscriminately.

He had only indirectly and casually alluded to the effect of the *x* rays in causing the hair to fall off. This, it would appear, was an uncertain result. A case of ringworm of the scalp in which he desired to obtain loosening of the hair had had, up till the date of his leaving Edinburgh, more than twenty-five exposures, but the hair was as firm as ever.

### V.—HENRY A. G. BROOKE, M.B., M.R.C.S.,

Physician, Manchester and Salford Hospital for Skin Disease; Lecturer on Dermatology, Owens College.

DR. BROOKE strongly supported the recommendation of the two treatments by the previous speakers. The results which he had seen in Finsen's clinic, although still not perfect, were infinitely superior to any that had been previously produced by other methods. One chief reason for the relapses which occurred so frequently in the face was the persistence of an inaccessible focus of disease in the lachrymal canal, whence fresh growths were constantly spreading on to the mucous membrane and skin. The *x* rays were most useful in the more inaccessible areas of disease in the nasal and oral cavities, and in extensive cases as a preliminary treatment. They were, however, much more difficult to manage than the Finsen light rays, on account of the danger of producing trophoneurotic ulceration. The best procedure was a combination of the two processes; but he agreed that they by no means completely replaced all the older methods.

### VI.—NORMAN WALKER, M.D., F.R.C.P.Ed.,

Assistant Physician, Skin Department, Royal Infirmary, Edinburgh.

DR. NORMAN WALKER said Dr. Jamieson had given his views of this new method of treatment as practised in Edinburgh. Perhaps he (Dr. Walker) was a trifle more enthusiastic regarding it, and he had now had a considerable experience in the method. He thought one of the most satisfactory features was the success which attended the *x*-ray method in diseases which were extremely obstinate to other forms of treatment. In Edinburgh they had greater opportunities of observing its effects in favus than in any other part of this country, and in that disease he had no hesitation in saying the results were unapproached by any other method. It was hardly necessary to add one word of approval as to its use in lupus. It seemed to him that it was especially suited for those widespread distressing cases which were practically social lepers, and it was with great satisfaction that he heard from a patient whose lupus stretched from his forehead to the top of his sternum, which had destroyed the greater part of both his ears, and who, when he took him in hand, although an educated man, was unable to obtain any but the most menial employment, that after eight months of treatment, one exposure being made weekly, he had obtained employment as a clerk in one of the large shipping houses in Glasgow. In sycosis, too, he believed it to surpass any other remedy in efficiency. He did not say that all cases were suitable, but certainly many which had proved utterly obdurate to other forms of treatment had done remarkably well with this. But in commending the treatment and giving it his heartiest approval in suitable cases he wished to take this opportunity of expressing a solemn and serious protest against its abuse. There were many forms of evil in medicine; quackery was not confined to the prescribing chemist, and anything new which had had such publicity as this given to it suggested ground for fear in that direction. Certain of the narrower-minded members of their profession—or should he say of the more conservative members—objected altogether to specialism, and to the evils of narrow specialism he hoped most of them had their eyes open; but if there was one form of specialism which was very far on the high-road to absolute quackery it was treatment specialism—the notion that one form of treatment was applicable to each and every form of disease. It was the quintessence of quackery and one already saw dangerous signs of its raising its head. It was a mere detail whether the treatment of a rodent ulcer was supervised by a dermatologist or a surgeon. But it was not a detail that the ignorant public should flock to an ignorant electrician because they had read in the *Daily Mail* that the *x* ray or some other form of electricity was good for so and so. Their duty as dermatologists was to take an intelligent interest in the development of electrical methods; after all a working knowledge of electricity was not so difficult to acquire, and to retain if not the actual treatment, at all events, the direct supervision of the cases. He could himself see no more harm in sending a patient to a surgical instrument maker with directions as to distance and time of exposure than there was in the surgeon who now sent him to be measured for a truss or an artificial limb. If the practical electrician would accept that position then one would be only too pleased to hand over to him the actual treatment of the cases, for after all in most hospitals was not the actual exposure done by a boy with the salary of perhaps 10s. per week? He did claim that the supervision and the responsibility for the cases should rest entirely with those who were specially familiar with the disease and other methods of treating it.

### VII. GEORGE G. STOPFORD TAYLOR, M.D.,

Physician to the Liverpool Skin Hospital.

DR. STOPFORD TAYLOR said that the introduction of the *x* rays into the field of therapeutics had inaugurated a new system of treatment which had an especial interest for dermatologists.

Earlier experimenters claimed that the rays possessed bactericidal powers, while Wolfenden and Forbes Ross had since demonstrated that the tubercle bacillus and other organisms grew luxuriantly in artificial media when exposed to their influence. This difference of opinion, while extremely interesting from a bacteriological standpoint, might be left for the time being in abeyance. They were concerned for the present with the therapeutical effects of *x* rays upon diseased tissues. The remarks which followed were based upon his personal experience of the effects of the rays upon a series of cases which comprised :—

22 cases of lupus.
1 ,, ,, scrofuloderma.
5 ,, ,, rodent ulcer.
1 ,, ,, large ulcer of the left forearm after burns.
1 ,, ,, favus.
2 ,, ,, epithelioma.
1 ,, ,, pigmented carcinoma.

In the first place let them consider their action upon lupus vulgaris. He observed that when the rays were applied to a moist surface the discharge was lessened and became altered in character, assuming a purulent in place of a serous appearance.

2nd. That normal epithelium developed very rapidly and healing quickly followed.

3rd. That when applied to dry surfaces exfoliation of the epidermis took place, and the part exhibited a dried and shrunken appearance.

4th. That absorption of morbid products took place, resulting in a smooth, soft, and pliant scar.

5th. That an erythema of uncertain duration, depending not altogether upon the length of exposure or its strength, always accompanied these changes, and that unless this was permitted to disappear between each successive application of the rays an aggravation of the disease occurred.

This happened in two instances in his experience, and superficial destruction of tissue took place in 3 cases as if an escharotic had been used. He noticed that this so-called *x*-ray erythema supervened more speedily in scrofulous children, and that the superficial destruction of tissue referred to occurred over bony prominences. It was not always easy to distinguish an erythema due to the rays and that due to coexisting septic conditions. In a doubtful case, however, time and antiseptic measures would decide. Too much had been expected from the *x* rays in the treatment of lupus. He considered their action to be of the nature of a stimulant, and that they should be applied as such and care taken that over-stimulation did not occur. Any treatment of tuberculosis must of necessity prove tedious and, also, often disappointing.

With a view, therefore, to accelerating the action of the rays he had not hesitated in a few instances to employ, in addition, any other means which seemed requisite, the result being most encouraging.

While all traces of secondary inflammation in some cases had not been removed, he had not succeeded as yet in causing the total disappearance of the characteristic apple-jelly nodules. The cases chosen for treatment were not selected. Many of them had been under his care for years, and some had undergone various operations such as curetting, cauterisation, scarification, excision, and the injection of tuberculin; but under no treatment had he observed the same steady and painless tendency towards recovery as during his experience with the *x* rays. The effect of the rays upon that form of rodent ulcer which had a natural tendency to heal in one part while it spread in another had been a perfect revelation. Mr. G. E. Walker, of St. Paul's Eye Infirmary, sent him a case of multiple rodent ulcers of the left upper cheek and lower eyelid. After a series of twenty-minute exposures to the rays, amounting in the aggregate to four hours, no visible trace of the disease was left.

In other cases similarly situated, where the disease had involved the periosteum, the results had not been so satisfactory. The healing had broken down again. In one case of inoperable rodent ulcer of the scalp in a workman, aged 69, from whose photograph (handed round) it would be observed that the surface had almost completely healed over, time after time the epithelium had melted away to be as quickly restored by the influence of the rays. They had succeeded in removing most of the hair off the scalp of a lad suffering from favus, but the presence of the fungus was still in evidence. The simplicity and painlessness of this method stood in marked contrast to the tediousness and painfulness of epilation by forceps. They had noticed that the rays had the power of exciting the rapid development and temporary growth of epithelium even upon the surface of carcinomatous ulcers. For example, they observed this gratifying result in two cases of epithelioma, and in a rapidly fatal case of pigmented carcinoma of the scalp the application of the rays caused the development of a sheet of new epithelium over the whole diseased area, through which, however, the pigmented tumour cells could still be clearly discerned. A further proof of the remarkable effect of the rays in stimulating the growth of epithelium was afforded by the following case:

A small boy who had sustained a severe burn of the left arm in the region of the elbow-joint, came to the Liverpool Skin Hospital for treatment. His arm had been grossly neglected by those who had charge of him, and where any healing had taken place the scar was hard and fibrous, and the prospect of a very troublesome contracture looked ominous. The *x* rays were applied, and the remaining part of the ulcer healed up rapidly, with a soft and pliant scar, and the child had now a serviceable arm with good movement. In a few cases which had appeared to be at a standstill, or doing badly, treatment had been suspended for two or three weeks, with the result that they had returned strikingly benefited by the rest. With this experience he did not expose his patients now as frequently as formerly. Of course, no exact rules could be laid down, as every case had to be treated according to its existing pathological conditions.

### VIII.—Dr. Noiré,
Paris.

Dr. Noiré said that two years ago he went to Copenhagen to study Professor Finsen's light method. As a result, the apparatus was fitted up in Dr. Sabouraud's laboratory at the Saint-Louis Hospital. Fifty cases of alopecia areata had been treated by light, but notwithstanding improvement in some cases, the results were not such as to lead them to substitute that method for the other methods of treatment already in vogue for that complaint. Twenty cases of lupus vulgaris gave the following results: five, in which the diseased area was of the size of a shilling, were completely cured by five exposures of one hour each at four days interval. In twelve other patients with extensive lupus, marked improvement was obtained, some portions of the diseased area being cured. As to lupus erythematosus, the results were disappointing, even with exposures of two hours repeated many times. The drawbacks to the employment of the Finsen method were the high price of the apparatus, the great length of the treatment, and the necessity for an experienced trained staff. These difficulties had been overcome by Drs. Lortet and Genoud of Lyons. The advantages of their apparatus were as follows: the patient himself pressed the diseased parts against the lens; the apparatus could be placed in any position; and a larger surface could be treated in less time. Reaction was much more marked owing, no doubt, to the large surface treated. The results with lupus erythematosus and lupus vulgaris had been very good. Dr. Noiré added that the curative effect with the Lortet and Genoud apparatus went less deeply than was the case with the Finsen method. Perhaps by increased pressure on the part of the patient, with longer exposures and a larger amount of electricity, the former apparatus might come to be preferred to others owing to its small size and easy manipulation.

### IX.—Dr. Sabouraud,
Paris.

Dr. Sabouraud reported that during the year 1899 he had installed in the laboratory of the City of Paris at Saint-Louis Hospital the phototherapic Finsen apparatus. With it he had treated nearly 50 cases of alopecia areata and 20 of lupus. In the treatment of alopecia areata the action of phototherapy was useful, especially in cases in which the areas were limited, and in which the skin was thin and atrophic, when these areas had ceased to spread, and for a long time had not grown new hair. In other cases of this affection the treatment was not better than many other methods. In tubercu-

lous lupus the results of this treatment were marvellous. There was no other therapeutic method which could be compared with it. This method had only three drawbacks: 1. The enormous price of the apparatus. 2. The great expense of its employment. 3. The time and the number of applications before a perfect result was attained. The new apparatus of Drs. Lortet and Genoud, of Lyons, which was only a very happy modification of Finsen's apparatus, obviated these main drawbacks. The surface of application was twice as large as that of Finsen's apparatus, and this yielded results twice as rapid. The sittings were four times shorter to produce the same effects, that was, a quarter of an hour's application sufficed instead of an hour. The apparatus was six times cheaper to buy and three times cheaper in the cost of working.

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### X.—J. F. HALL-EDWARDS, L.R.C.P.Edin.,

Superintendent, *X*-Ray Department, General Hospital and Royal Orthopædic Hospital, Birmingham.

MR. HALL-EDWARDS said that two years ago at the annual meeting of the Association at Portsmouth, he had the pleasure of reading a paper upon this subject, and he then promised to continue his observations in the ensuing year. Owing to his being occupied at the time in South Africa, he, for more than eighteen months, had been forced to discontinue his experiments in that direction, and he came to that meeting with the firm conviction that he was about to fill up the gap that had occurred, and that, upon leaving the room, he should know all about it. They had had the notes of many cases which had been cured or relieved by the treatment, but they had had no light thrown upon the most important points upon which he had hoped to gain some information. From an examination of the interesting cases exhibited, he noticed that the same pigmentation which he always looked for, during the treatment with the *x* rays, occurred in cases treated by the Finsen light. He hoped to have heard more of the theories which were to account for the phenomena produced, and he felt disappointed at the little progress which had been made in isolating the cause of the curative and hurtful effects produced the *x* rays. He had previously stated that in his opinion the effects were, to a great extent, electrical, and more especially those which had any therapeutic value. That some of the effects were due to the *x* rays or to some other rays which proceed from an *x*-ray tube, he was certain; but they could not make any true progress until experiments enabled them to isolate the electrical from the purely *x*-ray effects. In his first experiments, a limited area of skin was purposely destroyed, the remainder of the surface being protected by a coating of iodoform suspended in gelatine, and he was even now uncertain if a limited amount of inflammation was not an advantage. He had hoped to have heard more of the condition of tube which was necessary to produce the most satisfactory results, and something of the effects of high tension currents by themselves. He felt that no real progress could be made until the physiological and pathological changes which occurred in the tissues were more fully investigated. It had been stated that the *x* rays encouraged the growth and multiplication of the tubercle bacilli. Was it not possible that the rapid multiplication under the influence of the *x* rays might bring about their ultimate destruction? Further experiments in this direction were urgently needed.

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### XI.—GEORGE BECKETT BATTEN, M.D.,

Dulwich.

DR. GEORGE B. BATTEN said he had no experience with the Finsen light method. He had found *x*-ray treatment was excellent and quite painless if no dermatitis was caused. With care this could be quite prevented except in rare instances of idiosyncrasy. Dr. Walker said that treatment should be only in the hands of medical men, and not in that of electricians. He fully agreed with this, but begged humbly to add that the medical man should also be something of a physicist and electrician also. He referred to Mr. Gardener's diagram in the *Roentgen Archives*. One should never use a tube except with a blue cloud in front of the anticathode, and not one with the blue cloud behind the anticathode. A soft tube gave similar results, but was more dangerous. Enough current should be maintained, that was, a heavy discharge tube should be used. He agreed with Mr. Hall-Edwards that electric radiation had a great deal to do with the effect produced, and he believed, from experiments done on his own arm, that both Finsen and *x*-ray treatment would soon possibly not be replaced, but largely supplemented by the high frequency electric discharge which he had used a good deal, and which Dr. Chisholm Williams was demonstrating in another part of the building. That gentleman had healed several cases of lupus and rodent ulcer by the painless application of high tension currents. Dr. Batten believed that the Finsen and *x* rays, and also the high-frequency current, acted by over-stimulation of cells.

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### XII.—JOSEPH S. BOLTON, M.D.,

Nottingham.

DR. BOLTON remarked that cases of skin disease were being cured by four different kinds of treatment—by Finsen light treatment, by *x* rays, by high-frequency currents and by the ordinary wave current from an influence machine. What was the relation of these treatments to each other? What was the curative agent? For example: when *x* rays were used was the cure due to the rays? and if so, why was it not possible to treat a skin with the tube two yards away from a patient, just as they could take a photograph? Was it not more likely that the electric discharge was the curative agent?

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### XIII.—WILLMOTT H. EVANS, B.S., F.R.C.S., B.Sc.,

Assistant Surgeon and Surgeon to the Skin Department, Royal Free Hospital.

MR. WILLMOTT EVANS said the main object of his taking part in this discussion was to mention that he had obtained excellent results in the treatment of lupus by light by a small arc lamp in which the carbons were cooled by means of a current of water close up to the arc. The current employed was about fifteen ampères, and the apparatus was small and portable. The reaction was much more readily obtained than with the ordinary Finsen's apparatus, and in his opinion the improvement was more rapid.

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### XIV.—H. RADCLIFFE CROCKER, M.D., F.R.C.P.,

Physician Skin Department, University College Hospital.

DR. RADCLIFFE CROCKER congratulated the speakers on the accuracy and completeness of their remarks. He had had more experience of the Roentgen rays than the Finsen light, and had had some excellent results. He had come to the conclusion, first, that in the favourable cases the results were as good as it was possible to achieve, but, secondly, that the number of such cases was not very large. The Finsen treatment was limited in its scope owing to the expense and complexity of the apparatus, and when it was borne in mind that some cases required 300 sittings the applicability of the treatment must necessarily be limited. But the Finsen and *x*-ray treatment had evidently come to stay. Nevertheless, it would be a great mistake to abandon the older and still excellent methods. He referred to a case attending his clinic at University College Hospital in which Mr. George Pernet had performed multiple scarification with results that could not have been surpassed by light treatment. He had worked with Roentgen rays chiefly with low-tension tubes, and he could not agree with Dr. Batten in the advocacy of high tension. The excitation of a small amount of inflammation was not altogether a disadvantage. Something like five ampères was, he believed, necessary. The real practical difficulty was to know the number of exposures necessary; one case would require as many as 80 and another 24. The expense was an obstacle. A case could be scraped and while healing could be exposed to the rays. This combination of methods he had found give good results. Some cases required one treatment and some another, the one thing to bear in mind was that they must not limit themselves to one kind of treatment.

## DISCUSSION ON SEBORRHŒA.

1.—T. Colcott Fox, M.D., F.R.C.P.,
Physician for Diseases of the Skin, Westminster Hospital and to the Skin Department of the Paddington Green Children's Hospital.

Dr. Colcott Fox said: The subject which I have the honour to introduce for this morning's discussion is seborrhœa, or more properly, steatorrhœa.

First, let me briefly remind you of some of the functions and the distribution of the sebaceous and sweat glands. The sebum is formed in unilobular, bilobular, or multilobular acinous glands by the transformation of cell contents into the fatty and other constituents of the sebum, and this fat is liberated by the rupture of the cells. The sebum, therefore, consists of free oil, cholesterin, cell *débris*, and a number of unruptured cells. The relative proportion of free oil and unruptured cells is of interest. The vascular plexus around the sebaceous glands is less rich than that enclosing the sweat glands. Little seems to be known about the nerve supply and the influence of nerves on the secretion, but some authors say that the secretion is increased by extravascular supply and temperature. Duhring thinks the sebum is subject to variation in quantity and quality under nerve influence. Darier, however, says no direct influence of excito-secretory nerves has been proved. "We have as yet no evidence that the sebaceous glands vary in activity and their very peculiar form is not adapted to sudden changes," writes Sir Michael Foster.

There is no reservoir for the sebum and the excretion is by *vis a tergo*, and probably Hesse's theory of the extrusion of sebum by the contraction of the arrectores muscles is erroneous. Unna says the tissue changes and chemical processes in the sebaceous glands, next to those of the small glands of the mucous membrane, are the simplest and least active of all known glands.

As to the uses of sebum, there are important differences of opinion.

Some observers think it almost exclusively a hair lubricator, whilst the prevalent opinion has been that it is also the lubricator of the general surface, in which, recent authors add, it may be assisted by the sweat glands. Let us note in this connection that the sebaceous glands are altogether independent of the hairs on the labia minora and areola of the mamma in the female. Then, again, the variation in size and number of the sebaceous glands in various regions, whilst demonstrating the intimate relation with the hairs, show the glands to be much larger, for instance on certain parts of the face, than is necessary for mere lubrication of lanugo hairs. On the other hand we see the palms and soles to be free from sebaceous glands and kept supple by other means than the sebum.

The sweat or coiled glands are only wanting on certain limited areas of the genitals and the red border of the lips. They are comparatively scanty on the inside of the thigh, the cheeks, neck, back, and buttock, and smallest on the eyelids, nose, and pinna of the ear. The sweat escapes from the secreting cells without the rupture of the latter, so that epithelium is not a part of the sweat secretion. The glomeruli may form little reservoirs and the secretion may be pushed out by the special muscular coat of the coil. Moreover, the secretion is notoriously varied under the influence of different conditions and the nervous system.

At the International Medical Congress of 1881, Unna upheld the view that the lubrication of the skin was chiefly due to the sweat secretion, which is a mixed fluid usually derived from different sources. In the *British Journal of Dermatology* for September, 1894, he reaffirmed his contention, and set forth striking proofs of the presence of oil in sweat. He adopted Henle's view that the "sweat glands as a whole secrete fat, and besides that sometimes also watery sweat without fat." "It is irrefutable," said he, "that the ordinary sweat glands in man secrete fat, which at any time can be proved both on sections of the skin and in the sweat of the hands, by means of treatment by osmic acid—a fat which, though similar to that of the sebaceous glands, is different from it as stearic acid (and margaric acid) are from oleic acid." He attributes, as is well known, a very important *rôle* to the oil of the coil glands. It is now generally acknowledged that a certain production of oil takes place in the coil glands. Some observers say it is very slight, and many hesitate to believe that the skin is chiefly lubricated by the sweat secretion or that the latter could present as a marked oily coating. Meissner said that this oil might appear in the aperature of the glands in the palm as a shining droplet, and Unna extends this view so as to make the so-called seborrhœa oleosa a hyperidrosis oleosa.

This question of the relative parts played by the sebaceous and sweat glands in the production of oil on the surface of the skin is of much importance in the problems we have to consider. It is also to be noted that oil, whatever its origin, is not produced with equal activity in all parts of the body. Arnozan, by a special method—and the results were confirmed by Hallopeau—showed that certain regions, such as the scalp, forehead, the end of the nose and neighbouring parts, the front of the sternum, the interscapular region, the pubes and the inguinal regions are parts where normally fat is found in great abundance.

Now the old-established rule being that the sebum is the chief lubricator of the skin, it was held as a matter of common experience that in normal conditions the sebum manifested itself only in giving the surface of the skin what Kaposi calls a "physiological unctuosity," which no doubt might vary within certain limits. Besnier says there is also a physiological sebaceous hyperexcretion (he does not say hypersecretion) which manifests itself under analogous circumstances to those which produce physiological sweat excitation, namely, heat and solar action, causing a greasy state of the face and the scalp. Negroes are said to be subject to a physiological seborrhœa universalis.

The term seborrhœa simply conveys the idea of an abnormal output of sebum, though most authors have admitted also a qualitative alteration, which may be concurrent. I particularly wish to draw your attention to the possibility of such a variation in the quality of the sebum, for on this theory was founded the clinical distinction between a seborrhœa oleosa characterised by a pure oily coating and the appearance perhaps of oil droplets at the mouth of the follicles, and more or less plugging of the follicles, and S. sicca, characterised by the formation of pellicular layers, more or less rich in grease. Unna in a historical survey has pointed out that Rayer, Biett, and Fuchs thought an increased secretion, otherwise normal, could set in drying, but he holds this to be impossible.

Hebra, under the influence of Kölliker's views, described the sebum as a secretion of epidermis impregnated with oil, and with Bärensprung he advanced the subject in that he noted that the concretion of S. sicca was not merely set grease but a mixture of grease and scales, and that the oily or crusted condition depended on the relative proportion of oil and scales. Erasmus Wilson, too, who distinguished between oily and tallowy seborrhœa, held that "the sebaceous secretion is subject to variations in composition, the essential variations being the plus or minus of fluid or solid matter, the former consisting of water and oil, the latter of cell tissue and pigment." The predominance of the oily form with active formation produced S. oleosa, and the tallowy characters of the secretion were due to inspissation and concretion and the predominance of cell tissue. We are therefore confronted with the problem whether sebum is always an oily liquid, or whether it can contain a more or less considerable cell element from the sebaceous glands, as was formerly taught.

Clinically all degrees of this S. sicca condition were noted from the formation of thin plates or scales with a minimum of grease (pityriasis capitis) to the formation of more or less greasy concretions and oily crusts, and asbestos-like sheathing and matting of the hair, and these differences were attributed to the varying amount and quality of the sebum poured out. Hebra thus grouped together as interindependent processes S. oleosa, the old pityriasis capitis and the various phrases of S. sicca. Some authors, however, such as Pincus, Piffard, and Van Harlingen kept pityriasis capitis apart, and the latter author pointed out that only in P. capitis were true horny cells found, his point being that in the one case the cells came from the glands and in the other from a desquamation of the surface of the scalp.

The next point of interest is that these seborrhœas were considered to be functional and non-inflammatory, chiefly owing to the frequent absence of rubor and calor. Various authors, however, pointed out that inflammation could occur

secondarily from decomposing material or otherwise. In 1847 Cazenave and Schedel described *acne sebacée* which they say Biett had lectured upon for years, as a phlegmasia of the follicles presenting several degrees from a simple excitation to a more intense inflammation giving rise to an extraordinary flow of sebum, which becomes more consistent and accumulates, and also to a notable alteration in the skin. The slightest degrees did not lead to any reddening of the skin, but on the other hand the inflammation could pass into eczema. Here comes in an important fact, namely: that moderate inflammation of the superficial layers of the scalp by no means always has redness as a symptom. We see this borne out daily by the contrast between the microsporon affection of the scalp and glabrous skin. So too in many cases of a seborrhœa of the scalp extending on to the glabrous skin a similar contrast is noticeable.

I need hardly occupy time by dwelling further on the clinical characters assumed by these so-called seborrhœas in different regions. They were recognised as localised and rarely with more or less generalisation. The seborrhœa oleosa is most typically seen on the face, but occurs on the scalp in perhaps a less characteristic form as the hair takes up a lot of oil, and because probably it is here more commonly complicated with desquamative epidermitis. In both sites it was held that in exaggerated cases the sebum might dry into lamellar crusts of various tints sometimes with prolongations going into the pilo-sebaceous follicles. Similarly the various grades of seborrhœa sicca might be localised or diffused with a particular predilection for the scalp, and the skin might be healthy or slightly reddened.

In adults Hebra and Kaposi described it as occurring on the chest, face and back, and this no doubt included the well-known "flannel rash" depicted by E. Wilson as a serpiginous annular lichen. Ernst Veiel also included the ringworm-like eruption of the trunk. The Philadelphia physicians, such as Van Harlingen and Duhring, definitely called this seborrhœa corporis, possibly as an outcome of their studies in Vienna. No idea of contagion was entertained. The rightful inclusion of some phases, both localised and generalised, are open to criticism. For instance, the localised seborrhœa of the scalp of newborn infants was considered as a remnant of the vernix caseosa and this in turn was thought to be chiefly of sebaceous origin. Nowadays the vernix caseosa has been stated to be of coil-gland origin, but this view is not universally accepted. Wallace Beatty expressed his doubts, and I find a recent author, Jacquet, writing that "the function of the sebaceous glands is extremely active in the fœtus from the fifth to the sixth month and coincides with an active growth and fall of hair. In the terminal portion of intrauterine life a fatty coating invests certain regions (face, upper part of trunk); the sebaceous pores, especially on the face, are large, and punctuate with white grains the forehead, nose, chin and lips. One can extrude from each a vermiform fatty cylinder." Again, the seborrhœic nature of the concretion on the penis which often ends in balanitis is denied. Of the generalised forms pityriasis tabescentium is a doubtful seborrhœa, and we may almost certainly exclude the grave and rare so-called seborrhœa universalis neonatorum with its deep-red glossy and varnished skin and consecutive fissuring. If time permitted it would be interesting to discuss the relation of seborrhœa (1) to certain follicular eruptions with plugging of the ducts, which are met with on the body and limbs (2) to the warty patches leading to carcinoma of the sailor's skin, (3) to the so-called seborrhœic warts of old people, in which Unna has demonstrated large fat drops in the coil glands, and (4) to the fatty crusts which form after severe small-pox eruptions.

As for etiology it was often considered unascertainable; at other times it was found to be consecutive to a local inflammation, as erysipelas, eczema, variola, but in many cases it was ascribed to any conditions characterised by general debility and faulty nutrition. French writers attach importance to so-called "lymphatism," and Hallopeau has added intoxication, especially following gastro-intestinal troubles, and the accumulation of fat in the system from the frequent abuse of fatty and starchy ailments and to correlative insufficiency of muscular exercise. The development of puberty and the coincident activity of hair formation has especially to be noted.

We now open another chapter. In 1882 Unna predicted a revolution of our ideas with regard to diseases of the sebaceous glands, especially the so-called seborrhœas. "We are accustomed," he said, "to attribute excessive lubrication of the skin to the action of the sebaceous glands." He suggested that the oily as well as the dry form of seborrhœa had nothing to do with the sebaceous glands. The former is a pure hypersecretion of the sudoriparous glands, the latter is a superficial catarrh of the skin with formation of scales which are more or less lubricated by the normal secretion of the same glands. In 1887 at the Ninth International Congress at Washington he said, "There does not exist any hypersecretion of the sebaceous glands which can clinically, with justice, be considered as a so-called dry seborrhœa, due to a deposit upon the sufacce of firm products of the sebaceous glands. What we have hitherto classed together as seborrhœa are two entirely distinct and different things. First we have a true fatty hypersecretion which, however, does not proceed from the sebaceous glands but from the coiled (sweat) glands." It is a pure exalted function of the sweat glands and should be called hyperidrosis oleosa. The varieties of dry seborrhœa (and pityriasis capitis he included tentatively) he recognised clinically and histologically as different forms of a definite inflammatory state. The proofs that all so-called seborrhœa, save only S. oleosa and the vernix caseosa, are in flammatory catarrhs are grouped by Unna as follows:—

1. *Clinical* (beginnings, difference from simply fatty hypersecretion, the morphology assumed on the body, the manner of cure); 2. *Histological* (the parakeratosis, the acanthosis or epithelial proliferation, the presence of inflammation varying in depth, the characteristic augmentation of fatty secretion of the skin associated with an increased activity of the coil glands); 3. *Etiological* derived from its probable dependence on micro-organisms. This inflammatory state is distinguished from ordinary eczema by a richness of fat in its products, and this abundance of oil is not situated in the surface scales alone, as is generally believed, but it penetrates the whole thickness of the corium and epidermis, as in no other disease hitherto known. The lymph channels of the whole skin are injected with fat, and the production of fatty scales is hence a necessary and not at all surprising result. This oily infiltration seems to encourage parakeratosis, but to diminish interstitial secretion by which vesicles are formed, hence these eruptions belong mostly to the dry catarrhs. Nevertheless the serous exudation may be in excess and lead to vesicle formation and weeping inflammation. Unna admits the difficulty of demonstrating microscopically the increased fatty secretion, but he claims to show its origin by the following facts, namely:

(*a*) The constant increase of droplets blackened by osmic acid in and around the coil glands, the augmented size of the coil gland and duct, and the proliferative activity of the cells. He found fat in the sweat glands in 54 out of 59 cases of seborrhœic eczema of the head in dead bodies.

(*b*) Osmic acid blackening of the cells of the crusts just around the pores, and their infundibular outline is observed.

(*c*) He identifies the fat in the cutis, epidermis, and scales with the fat of the coil glands.

(*d*) There is an increase in size of the panniculus adiposus whence the increased fatty secretion of the coil glands is derived through the medium of a fat-loaded lymph.

There is also the clinical fact that patches may develop on the palms, and it is said on cicatrices (Audry). It is notable that in the crusts fat is found only in the upper layers, whilst the lower ones are free and moist. Unna accounts for the absence of fat in the lumen of the coil gland by the theory that it is rapidly taken up by the cuticulum of the pore and the neighbouring horny layer which stain with osmic acid.

In his *Histo-Pathology* he describes the pilo-sebaceous follicle in pityriasis capitis as dilated down to the entrance of the sebaceous duct by an accumulation of concentric layers of horny cells, whilst there is no evidence of stagnation of sebaceous secretion. It will be noted further on that Sabouraud says nothing of this plugging in pure pityriasis capitis. In eczema seborrhoicum crustosum capitis there is a similar dilatation and plugging of the pilo-sebaceous follicle, with increased secretion of coil-gland fat, which is sucked up by the horny layers. It is only later on

that there is an increased formation of sebaceous gland fat, which works up through the plug, be it noted, and lies on the surface as a coherent layer. In correspondence with this the sebaceous glands hypertrophy. In the scalp of the newborn infant the increase of fat can only be explained by increased coil-gland secretion for the sebaceous glands at this period are very small and show no sign of hypersecretion.

As to organisms, Unna describes the bottle bacillus as very frequent in the scales of the surface and infundibula of pityriasis capitis. In the S. sicca forms the bottle bacillus is not so predominant, but Unna's morococci are found in the upper layers of the crust and in the under layers, and in the infundibula a very tiny bacillus and a larger form, and another in the sebaceous gland.

With regard to the fall of the hair so characteristic of these seborrhœas, Unna says there is an increased tendency to a more rapid casting of the hair, and owing to the permanent plugging of the follicles, an increasing difficulty in forming young hairs, which leads to complete arrest. In the moist forms the plugging does not occur to the same extent, and hence persistent alopecia is not such a feature.

In subsequent writings Unna completed his synthesis of his eczema seborrhoicum, the name he substituted for seborrhœa, and his clinical description has been widely accepted. The use of the term eczema in this connection has been, however, strenuously opposed, and the term is preferred by Audry, Brocq and Hallopeau. A discussion on this occasion of the fitness of the term eczema would lead us too far afield from the immediate subject of our debate.

Unna especially insisted on the extreme frequency with which the scalp is first affected; on the descending evolution of the patches, and on the strong predilection for peculiarly oily regions. It very rarely also originates in the margin of the eyelids or in one of the regions rich in sudoriparous glands, for example, the axilla, elbow bend, or cruro-scrotal fold.

Lastly Unna regards the inflammation as a specific one caused by a definite organism, or perhaps organisms, which probably amongst other things stimulate the oil-producing function of the sweat glands. On the other hand some authors make the obvious criticism that the excretion of fatty matter constitutes a favourable soil for the development of diverse microbes, several of which are pathogenic, and difference of soil and organisms will explain the variety of eruption.

I now come to Sabouraud's remarkable observations, by which he seeks to establish the fact that pure oily seborrhœa is really due to a microbial infection of the pilo-sebaceous follicles and not to a functional activity in direct relation with sexual development. Starting from the well-known fact that at the approach of puberty and as a forerunner symptom of sexual development, the pilo-sebaceous pores of the alæ and lobule of the nose and of the cheek prominence dilate and become visible, reminding one of the aspect of a mandarin orange, he goes on to point out from these dilated pilo-sebaceous follicles plugs can be expressed of various sizes and consistence. Parallel with these symptoms and on the same regions there commences a peculiar sebaceous flux which forms a more or less marked oily coating on the surface. This oil does not come from coil glands, as Unna maintains, and it is to be noted that there is no formation of scales. Sabouraud demonstrates, as Unna had done in pityriasis and seborrhœa sicca capitis, that the dilated upper part of the pilo-sebaceous follicle is occupied by a plug or cocoon composed of lamellated corneous layers, which he says encloses sebum and myriads of a special microbacillus. It is to this microbacillus, which gradually infects all the pilo-sebaceous follicles, and reinfects them, that the hypersecretion of oil and the consequent loss of hair ending in calvities is due. The original pure seborrhœic infection due to the microbacillus extends upwards from the face to the temples and vertex, which becomes the seat of the characteristic loss of hair.

The general scheme for the seborrhœic infection in all sites is as follows: The hair follicle is infected by its external orifice, and the microbacillus colony insinuates itself as a thin layer between the hair and the epidermic wall of the follicle, and thence descends to the junction of the sebaceous gland orifice. The irritation of the epithelium determines an increased formation and desquamation of corneous cells which encyst the colony to form a cocoon, and pushes the hair to one side. Then immediately follow four reactionary phenomena, namely, a sebaceous hypersecretion; a progressive glandular hypertrophy; an accumulation of lymphocytes and mast cells around the follicle, leading to consecutive loss of the functional activity of the papilla, and in order disturbance of pigment distribution and decolorisation of the newly-formed hair, cessation of production of medullary cells and progressive lessenings of the bulb of the hair; fourthly, complete cessation of hair production. In this way calvities is brought about, possibly by the action of toxins manufactured by the microbacillus. There is no doubt about the symptoms and histology, but, although Sabouraud, by laborious investigation has rendered the proof of his conception almost complete, the full proof must be considered lacking. It is difficult to understand why females should suffer so much less strikingly than men from calvities.

Sabouraud also maintains that the alopecia areata (porrigo decalvans) of Bateman, as distinguished from the ophiasic alopecia areata of Celsus, is a seborrhœic affection. In contrast to ophiasis it is very rare in the child but can commence about the age of 11 or 12 years, and commences anywhere on the scalp and develops by peripheral extension round a centre or by the indefinite multiplication of new plaques like the first. The characteristic oily seborrhœa is found with the forming of plugs, and the rapid fall of hair from all the surface of the area is due to an acute circinate seborrhœa, perhaps due to a special virulence of the microbacillus. This is a somewhat startling proposition, and some time must elapse before it can be thoroughly tested. There are importants facts in favour of this view.

This oily seborrhœa has some extremely interesting developments according to Sabouraud. During the evolution of sexual development other organisms make an entrance and, engrafted on this necessary substratum, set up all the lesions which are characterised by the name "polymorphic acne." Everyone recognises the frequency with which S. oleosa occurs in connection with acne, but it is not so easy to prove clinically the source of this oiliness. Unna, as you know, described acne as commencing "by a superficial keratosis of the epidermis which, extending to the follicle mouths, leads to the formation of comedones." Thus, whilst the pilo-sebaceous follicles are plugged and dam back the sebum, the sweat follicles are not so obstructed. At any rate, according to Unna, the latter allow the active coil glands to pour out oil. This observer also finds in the comedo a swarm of micro-organisms, often in pure culture, namely, the bottle bacillus, and the diplococcus of seborrhœic eczema in the head and mantle, and a special form of bacillus inside, which Unna surmises is the "actual cause of the comedo formation and therefore of acne in general." What then causes the keratosis of the surface and the activity of the coil glands? How is the peculiar distribution of acne accounted for? For my part I am attracted by Sabouraud's schema. Acne varioliformis is also considered by Sabouraud to be a result of an analogous secondary infection.

In conclusion I must draw your attention once more to the so-called eczema seborrhoicum. The oily seborrhœa of Sabouraud, the hyperdrosis oleosa of Unna, appears, according to both these authors, to be quite distinct from eczema seborrhoicum, but Sabouraud says that certain forms of the latter catarrh are engrafted upon the oily seborrhœa. It would be very interesting to hear an exposition of his views on this point. He also regards it as probable that certain organisms can excite a desquamative dermatitis (the old pityriasis capitis) quite independently of the seborrhœa. When, however, the desquamative dermatitis is engrafted on the oily seborrhœa of the scalp we get the various forms of seborrhœa sicca (greasy squamous seborrhœa), Now as seborrhœa oleosa only occurs with the evolution of puberty we cannot get greasy squamous seborrhœa in young children, excepting perhaps the special eczema of infants starting from the remains of the vernix caseosa in the scalp. According to Unna's views, however, his eczema seborrhoicum may occur at any age. It is certain that the most greasy forms of this seborrhœic catarrh are seen in the adult and affect preferentially certain specially oily sites. And I believe it is the fact that the remarkably numerous cases of so-called seborrhœic ca-

tarrh in children are not notably greasy. In connection with the existence of a pure microbial pityriasis capitis, I should like to remind you of the macules of pityriasis alba (S. sicca) seen so commonly in children, and chiefly about the face and neck. Few authors, I think, give any good description of this condition, which is popularly ascribed to the use of soap, to cold winds, etc. These macules extend centrifugally to all sizes, but usually have an irregular outline, and may become confluent into diffuse sheets. The changes of colour, of texture, and of surface are sometimes appreciable only in certain sidelights, but often there is the slightest grade of inflammation present with redness. The top layers of the cuticle tend to separate in little scales which long remain characteristically adherent and slightly detached at the edges. In this way the movements of the face bring about a striking patterning in lines and reticulations. Savill has called attention to the epidermic prevalence of this eruption in London, and Arthur Whitfield carried out a laborious investigation in order, if possible, to determine its causation by an organism. He found a micrococcus with two subvarieties invariably present, which never liquefied gelatine.

Gentlemen, this subject of seborrhœa bristles with debateable points, and without occupying your time further, I will refer you to the headings of my address, which I have distributed amongst you, for the more important points which need elucidation.

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II.—Dr. Sabouraud,

Chef du Laboratoire de la Ville de Paris à l'Hôpital St. Louis, Paris.

Dr. Sabouraud said: The word "seborrhœa" was first used by Fuchs of Göttingen (1840) to designate sebaceous excretion when it becomes visible on the skin and makes it greasy. This word has been altered from its primitive sense by Hebra, who under the name of seborrhœa designated not only true seborrhœa (oleosa), but also pityriasis (seborrhœa sicca), an absolutely deplorable confusion.

Pincus, Piffard, Van Harlingen, and then Unna showed us that the scale of pityriasis did not come from the depth of the sebaceous glands as Hebra had thought and said, but that these scales were produced by the exfoliation of the superficial horny epidermis. It is then necessary to separate pityriasis essentially from seborrhœa; it is their confusion which darkens all the subject.

The forms of pityriasis—that is, of exfoliation of the horny layer—have a microbic flora, a peculiar and specific cause, namely, the grey-cultured coccus and the bottle bacillus. They have a special elementary lesion—the scale. They may exist without any fatty state of the skin, and when we find them in connection with true seborrhœa it is by superposition of two diseases. They are on seborrhœic skin, and not properly seborrhœic by themselves. Seborrhœa (in its etymological sense—flow of sebum) is the hypersecretion of the sebaceous glands. It is only this. Seborrhœa is never scaly; it is always and exclusively fatty.

*Forms of Seborrhœa.*

Seborrhœa exists in two forms: a moist type—acne sebacea of Biett, Cazenave, flux sebaceus of Rayer, seborrhagia of Fuchs, seborrhœa oleosa of H. Hebra, steatorrhœa of E. Wilson; and a cystic type (acne comedo or acne punctata) of all authors.

The elementary lesion of seborrhœa is a fatty plug which oozes from the sebaceous ducts when sebaceous skin is squeezed between the fingers. This plug is microbic: it is made of pure fat containing an enormous quantity of very small bacilli, which exist under the form either of separate elements or of composite mycelial clumps. This microbic colony is absolutely constant. It is positively pure in each seborrhœic follicle. It exists in each follicle as soon as the sebaceous flow makes the skin shiny and greasy. It is characteristic of seborrhœa.

The second clinical form of seborrhœa is the comedo. The comedo is only the cystic transformation of a primitive seborrhœic plug. This special transformation occurs only on one seborrhœic plug among thousands of others which will persist as seborrhœic plugs, and never become comedones. After a time the comedo is almost always infected by the common cocci of the human skin. The most common infection is by the grey-cultured coccus. It makes the red acneic papule, the pustule of superficial or of deep acne (acne indurata) thus bringing about all the varieties of polymorphous acne. The comedo may be infected by more virulent microbes—for example, by the staphylococcus aureus. Thus is caused acne necrotica varioliformis, acneic furunculosis, chronic furunculosis of the neck, sycosis, and acne keloid. This acne is only the result of infections secondary to the original microbacillary seborrhœa. Microbacillary seborrhœa and acne synchronise with the sexual development. Its localisations all centre round the vertical axial line, the centre of the face, the interscapular space, the back of the neck, the presternal region, a periumbilical ring, another perigenital, another perianal, and on the region of the sacrum. The localisation on the centre of the scalp gives rise to common baldness of man. Baldness is the microbacillary seborrhœa of the vertex. Each follicle which loses its hair is first invaded by a colony of the microbacillus. The phenomena of alopecia are similar on all the parts of the body, only on some of them they are less visible. The same microbacillus is certainly present in all seborrhœic manifestations, for cultures (which are in all cases difficult) are possible, and are the same in all cases.

These cultures grow on acid media: they are conical in form, and of a red colour. In the cultures the bacillus has the same form, the same dimensions, and the same selective methods of staining (Gram).

The conclusions drawn from my work on this subject are:

The terms acne sebacea, sebaceous flux, seborrhœa, seborrhagia, steatorrhœa signify the same morbid phenomenon, which is hypersecretion of the sebaceous glands. This disease has a constant microbic expression—namely, the seborrhœic microbacillus.

From seborrhœa thus defined all acnes arise which are either the result of spontaneous transformations in the microbic seborrhœic plug or of secondary infections of the elementary seborrhœic lesion. Of course seborrhœa constitutes a cutaneous soil propitious for the development of a multitude of skin diseases, differing in their cause and nature. There are, for instance, the seborrhœic wart of old persons, the molluscum contagiosum of Bateman, etc. There are also the forms of pityriasis.

The different forms of pityriasis constitute a special and independent skin disease. They are not seborrhœic. They have a special lesion—the scale—which consists of epidermic horny exfoliation. They result from a special microbic growth which is not a microbacillus. They are morbid processes entirely different from seborrhœa, but which are frequently superimposed on seborrhœa. The seborrhœa is for them an elective ground and substratum. On seborrhœic skin they produce circinate pityriasis—the circinaria of Payne. On the scalp they cause dry and fatty pityriasis.

The term "seborrhœic eczema" of Unna signifies a hybrid mixture of pityriasis and seborrhœa, which is as frequent as pure seborrhœa, but the original clinical types of which must be all the more carefully distinguished, inasmuch as they generally coexist on the same patient.

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III.—W. Allan Jamieson, M.D., F.R.C.P.Edin.,

Physician for Skin Diseases, Royal Infirmary; and Lecturer on Skin Diseases, University of Edinburgh.

Dr. Allan Jamieson said two points only occurred to him as deserving fresh consideration. One, the qualitative alterations in seborrhœa. The fluid form which the hair by its capillary attraction drew as fluid oil from the follicle, seemed to him probably not due to micro-organisms, but to pathological change. The other, the separation between pityriasis and seborrhœa. The occurrence of pityriasis from micro-organisms might explain normal desquamation, whilst so-called "innocent" organisms might really be the cause of regular shedding of surface epithelium.

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IV.—Norman Walker, M.D., F.R.C.P.Edin.,

Assistant Physician, Dermatological Department, Royal Infirmary, Edinburgh.

Dr. Norman Walker desired to criticise. The subject was very difficult and the differences great. He thought the word wanted definition, for they were talking of different things. Unna's seborrhœa capitis was a scaly dermatitis; Sabouraud's was a fatty excretion. He had, after many efforts, only once

found Sabouraud's bacillus, and that was in a case of hypertrichosis, so that he could not follow the view that baldness was due to the growth of the bacillus. His experience was that persons who suffered from seborrhœa oleosa did not become bald. He held by Unna's clinical description of seborrhœic eczema, though he thought the word eczema should be altogether dropped.

V.—J. M. H. Macleod, M.D., M.R.C.P.,
Assistant in Dermatological Department, Charing Cross Hospital.

Dr. Macleod discussed the relation of the papery type of alopecia areata in which inflammatory changes were present from the first. Excised portions showed a proliferation of the epidermis at the orifice of the follicles, with œdema in and between the cells. This spread down in the prickle-cell layer of the follicle. Deficiency of the granular layer was less in those present, with impaired cornification. This showed the relation of this type of alopecia to the eczema seborrhoicum of Unna.

VI.—Henry Waldo, M.D., M.R.C.P.,
Physician to Bristol Royal Infirmaryin charge of Department of Diseases of Skin.

Dr. Waldo said it much simplified the subject to find that seborrhœa sicca and seborrhœa oleosa were totally distinct affections, the former having no connection with the sebaceous or sweat glands, their pathological product being not sebum but epithelium from the horny layer of the skin. Then the chief question was, did seborrhœa oleosa depend for its existence upon a micro-organism or not? He had always thought that the condition it was said to lead to, namely, coronal baldness, might be simply a degenerative process. But whether micro-organisms were the cause or not, he believed that seborrhœa, when once occurring, recurred again and again unless constantly treated. A few years ago Dr. Sabouraud told them that the toxins from the micro-organism in alopecia areata, if injected under the skin of rabbits, loosened the hairs, and led them to think that this might be useful to them in treating tinea tonsurans by loosening the diseased hairs. Might he ask him if he had confirmed this? He felt doubtful whether seborrhœa played any part in inducing lupus erythematosus or even lupus vulgaris. The case of lupus erythematosus he showed on the previous day certainly was the subject of seborrhœa, but it was impossible to say with any certainty what connection there was between these two conditions.

VII.—T. D. Savill, M.D., M.R.C.P.,
Assistant Physician to St. John's Hospital for Diseases of Skin, and to the West End Hospital for Diseases of Nervous System.

Dr. T. D. Savill remarked on the fact that the same microbacillary process could produce two very different clinical lesions—the papule of acne, and the scaly or papular elements of seborrhœic dermatitis. He asked Dr. Sabouraud how he could explain this? He (Dr. Savill) could quite understand a bacillary process, which specially attacked the sebaceous follicles, appearing especially at puberty, for at this time all the hair follicles of the body took on a special physiological activity, and were, therefore, predisposed to pathological processes.

VIII.—William Dubreuilh, M.D.,
Professor-Agrégé, University of Bordeaux.

Professor Dubreuilh said that among the numerous doctrines proposed with regard to seborrhœa and seborrhœic eczema, that proposed by Dr. Sabouraud was the most satisfactory, though many points of it were not proved. He could not say much of his personal experience on the bacteriological side of the question, but he desired to call attention to some clinical facts, which were not sufficiently cleared up by the theory which had been put forward. Dr. N. Walker had justly remarked that seborrhœa oleosa might last a very long time without bringing on baldness; whereas seborrhœa sicca, or if some preferred, pityriasis alba, might bring about very early baldness, although they had been told it had nothing to do with seborrhœa. Another point was that of the flannel rash which they were told was not seborrhœa, but he remarked that it especially occurred on a greasy skin. It must, therefore, be admitted that there was some connection between the two.

IX.—Leslie Roberts, M.D.,
Dermatologist to the Royal Infirmary, Liverpool.

Dr. Roberts was of opinion that they should not be in too great a hurry to dissociate seborrhœa from the so-called seborrhœic eczema. They did not yet understand the true relation between these processes, but it was quite conceivable that the seborrhœa prepared the skin for the parasitic organisms which they believed to be the cause of the dry eczemas.

X.—George Pernet, M.R.C.S.,
Pathologist, Hospital for Diseases of the Skin, Blackfriars.

Mr. G. Pernet wished to agree with Dr. Norman Walker that seborrhœic eczema was an unfortunate term. He considered that Dr. Sabouraud had proved that seborrhœa and eczema were distinct pathological processes.

Replies.

Dr. Colcott Fox, in reply, said he felt strongly the disadvantages under which he had undertaken this subject for debate. At the present era the whole subject was largely concerned with histological and bacteriological advances, and it was in this particular field that he felt himself incompetent either to add the results of original research or to criticise effectively the work of others. Under those circumstances he limited himself to as clear an exposition as possible of the subject as it had presented itself up to the present time. He confirmed Dr. Norman Walker's observation that hypertrichosis of the chin in women was frequently associated with a plugging of the pilo-sebaceous orifices. This had struck him as a point adverse to Sabouraud's view. With regard to the fall of hair, however, they must bear in mind the two views (1) that the hair papilla was poisoned by a toxin, and (2) that the alterations in the follicle wall destroyed the power of formation of bed-hairs. With regard to the term eczema seborrhoicum he was much inclined to side with those who objected to this extension of the term eczema. The adjective seborrhoicum might be justified if Unna's views were correct that in these eruptions there was a peculiar infiltration of the tissues with fat. Nevertheless the term eczema was so far justified by the extreme frequency with which the dry catarrhs (pityriasis, seborrhœa sicca) were complicated by serous catarrh, so that the vesicular eczema of Willan might be closely simulated. With regard to psoriasis its relation to so-called eczema seborrhoicum was still to be worked out. He, however, refused to place much reliance on the clinical resemblance found in the scalp any more than he should in the nails or palms for instance. In conclusion, Dr. Fox said the Section had been peculiarly fortunate in the presence of their French friends, and personally he begged to tender his acknowledgments for the great advantages he had derived from their presence and demonstrations.

Dr. Sabouraud, in reply, said he did not think that baldness occurred without microbacillary seborrhœa. As he had produced alopecia in rabbits by injecting cultures of the microbacilli hypodermically in rabbits, it had been asked why he had not tried to treat ringworm of children by such means. His experiments in this direction had extended over three years, and he did not think that they would lead to anything. The alopecic areas did not occur at the seat of inoculation in rabbits, besides there were other drawbacks which quite precluded, in his opinion, the attempt to treat human beings on such lines. Dr. Savill had asked how it was that one and the same microbacillus produced two such different conditions as acne and seborrhœa. In the first place the two things were not so different, for even in pre-bacteriological days, writers such as Fuchs and Erasmus Wilson had called attention to the identity of causation in both. He (Dr. Sabouraud) was about to publish a book on the subject, in which the matter would be thoroughly gone into. As to what Dr. Dubreuilh had said, he agreed that pityriasis and seborrhœa were closely connected. But when seborrhœa was grafted on pityriasis the form of the rash was circinate. With regard to the objections of Dr. Walker and of Dr. Fox, he would submit that sexual development appeared to be the necessary precedent condition for seborrhœa to occur; and

further the complete virile development was similarly necessary for baldness to take place. This evolution corresponded no doubt to a chemical change in the sebum. He also pointed out that bald men were, apart from the scalp, the most hairy individuals. Hypertrichosis was one of the most frequent precedent phenomena of seborrhœa and baldness. Baldness was a male disease, and only occurred in women who presented secondary male characters more or less accentuated.

## THE ACTION OF ARSENIC ON THE SKIN.

By H. G. BROOKE, B.A., M.B.,

Physician, Manchester and Salford Hospital for Skin Diseases; Lecturer on Dermatology, Owens College, Manchester.

[ABSTRACT.]

THE eruptions due to arsenic with which we have been hitherto, and almost exclusively, acquainted in this country are those caused by the action of the arsenious acid or arsenites of our pharmacopœial preparations when given in small doses to persons who have proved to be peculiarly susceptible to its influence. Most of the epidemics which have been recorded have occurred from the inhalation of arsenical fumes or dust during the manufacture of pigments, and the internal action of the drug has been confused with its caustic action on the skin and mucous membranes. In the epidemic of arsenical beer-poisoning during the last year an opportunity presented itself of observing on a large scale the unrestricted effects of the drug in a fresh form of chemical combination (arsenates or organic compounds of arsenic) on subjects who were previously healthy. Such an epidemic occurred in Paris in 1828, and was well described, although its cause was not then recognised. In both instances it was found that the cases might be divided into two main classes, those in which the skin displayed the most striking symptoms, and those in which the nervous system bore the brunt of the attack. The two classes rarely overlapped to any great extent; certainly the patients affected with pronounced skin eruptions were extraordinarily free from nerve lesions. That the patients showed any symptoms whatever was apparently entirely a matter of idiosyncrasy, for only a tithe of those who drank the beer were poisoned, and the preponderance of symptoms in one or another patient probably depended on the susceptibility of the particular tissues to be affected by arsenic, or the extent to which they stored it up, or the rapidity with which it was eliminated.

The nerve cases, which greatly preponderated in number, were certainly more alcoholic than the cases with pronounced skin eruptions, but in neither was the alcohol a necessary factor in the poisonous effects, the quantity taken having been, in many cases, very small. The exaggeration of the skin lesions and their complication with erythematous eruptions on the one hand, and the unwonted admixture of the slighter lesions with a mass of unusual nerve symptoms on the other hand, accounts for the delay in the recognition of the cause of the epidemic. The skin manifestation separated as much as possible from the nerve symptoms (paræsthesiæ and paralyses) may be thus briefly classified:

*Eruptions due to the Action on Vasomotor Centres.* These consisted of more or less extensive diffuse erythematous eruptions, scarlatiniform, morbilliform or erythrodermic, of very unequal intensity in different parts (like all arsenical eruptions), but usually preponderating on the trunk and upper limbs, especially in front. They often faded quickly, but at other times became deep-red or even of a coppery hue, gradually passing into brown pigmentations. As in other drug eruptions, pruritus and urticarial wheals were often present.

Circumscribed erythematous patches often developed on the limbs and occasionally on the trunk. On the fingers and toes they closely resembled perniones, and on the hands and feet and lower legs and forearms they took on the form of erythema papulatum and circinatum. The extensor surfaces of elbows and knees were in some cases covered with erythematous papules.

Huge erythematous patches were found, chiefly on the lower limbs, but at times blotched over the whole body. At first of a bright red colour, they became darker in hue, livid or violaceous on the extremities and coppery on the limbs and trunk.

All the erythematous eruptions ended in desquamation. The patches on the peripheral parts of the limbs often passed through a marked stage of hyperkeratosis, after which the desquamation was retarded and greatly prolonged. Minute papules and vesicles formed on some of the papular and circinate patches in rare instances, and eczematous-looking scabs resulted; this appeared, however, to be more of a phlyctenular than an eczematous process.

*Phenomena due to Action on Nerve Trunks.*—Under this heading were to be placed the flushing, cyanosis, and œdema so frequently observed on the face and extremities, and the transient œdema which occurred on other parts of the body. All these symptoms were non-inflammatory and obviously due to vaso-motor paresis. Herpes, though common in the nerve cases, was rare in those with marked skin eruptions. At times the pain was present without the vesicles.

Pemphigoid eruptions were very rare, and only occurred as a late symptom in the nerve cases.

Hyperhidrosis which might be due either to direct nerve action or to direct local stimulation of the sweat glands, was one of the commonest and earliest symptoms in all cases. It was usually confined to the palms and soles, but was found in lesser degree in other parts of the body. Though usually accompanied by hyperæmia, it was at times profuse when the skin was pallid. It generally disappeared early after the beer drinking was stopped.

Of all this group of vasomotor symptoms, only those which result from the paresis of the vasomotor nerves, such as the flushing, œdema, and cyanosis, can be regarded as essential features of the action of arsenic, and these are partially due to its poisonous action on the activity of the heart. The erythemata (which are never truly inflammatory) may or may not be present, and although when present they usually, on account of hyperæmia, exaggerate the typical arsenical symptoms, these symptoms may be fully developed when erythematous conditions are entirely absent. Thus hyperidrosis, hyperkeratosis and pigmentation can take place without any signs of preceding or accompanying erythema.

*The Nutritive Group.*—This group comprised those changes which affected the normal growth of the skin apart from any inflammatory change. Pigmentation was present in almost every case in some degree. It affected chiefly the areas of normal hyperpigmentation (neck, axillæ, chest, groins, genitals), parts subjected to pressure, and the periphery of scars. Sometimes it was universal, but the face, palms, and soles were markedly freer than other regions. The colour varied from a simply dirty appearance to that of a mulatto, but was never "bronzed" as in Addison's disease. Its distribution was most varied, usually diffuse, it also occurred locally in the form of freckles or larger blotches and often left clean-cut areas of normal white skin in the midst of large discoloured tracts. The pigment was frequently thrown off early with the desquamation, but its elimination was often slow.

Hyperkeratosis, though usually confined clinically to the palms and soles, the areas of normal hyperkeratinisation, was seemingly, though in minor degree, as extensive as the pigmentation and desquamation, and might be regarded as the most prominent symptom of the action of arsenic on the skin. The erythromelalgia of the palms and soles, combined with hyperkeratosis and more or less hyperidrosis, was the most invariable symptom among the victims of the epidemic, the tenderness combined with the stiffness of the hands and feet resulting from the thickened leathery epithelium rendering working and walking equally impossible. The thickening is usually diffuse, but spares the centre of the palm and hollow of the sole. In many cases minute hillocks are formed, wrongly called "arsenical warts," but they are by no means invariable. Where there is much pressure they harden to horny nail-like plugs. When the hyperidrosis ceases the thickened horny layer becomes very dry and hard and peels off in rough flakes; but some amount of thickening lasts long, and in many of the cases which have been brought on by medicinal doses of Fowler's solution it remains permanently.

The nails, like the horny epithelial layer, may be stimulated in their growth, leading either to an over-rapid growth in the normal direction, or to irregular transverse thickenings,

varying according to the amount of arsenic at work at the time and to the extent to which the underlying nailbed is implicated. When much over-stimulated the nail becomes brittle, and desquamates more or less completely. The hair was but little, if at all, affected; no patient ever complained of any noticeable alteration in its quantity or texture. The changes in the nails were also uncommon even in patients who were badly poisoned, which is all the more remarkable in that arsenic was always readily obtainable from both tissues. Desquamation has been long recognised as one of the essential features of arsenical poisoning quite apart from the coexistence of erythema; it is apparently an eliminative process akin to that of scarlatina. It affects all parts, and occurs either in the form of branny scales, or of large papery lamellæ which often carry away the pigment with them, leaving clean white skin beneath.

Fatty degeneration, although not clinically visible, affects the walls of the small vessels leading to the production of ecchymoses and purpuric spots. Atrophy, though not visible clinically in the early stages, is a constant result of prolonged over-stimulation. The excessive desquamation causes a loss of epithelium which the exhausted cells cannot replace, and the outer skin may be reduced in extreme cases to two or three layers merely of degenerate cells.

One of the most remarkable lesions was found in the combination of erythematous patches with hyperkeratosis. The pernio-like lesions on the hands, which were often exceedingly small, if they occurred on the knuckles became covered at once with thick rough epithelium, as if chapped; if they occurred anywhere within the palmar or interdigital areas they were at once covered with thickened epidermis, forming the so-called arsenical warts. On the back of the hand and on the forearm the granular (keratohyalin) layer became thickened, the white granules covering the underlying erythema, so as to produce a milky or violaceous tint exactly like that seen in lichen planus, a resemblance which was often increased by the supervention of pigmentation. Where the skin was thin the whole of these changes were removed by desquamation, but on the palms the hyperkeratosis was much more persistent. Precisely similar lesions occurred on the feet and lower legs. When the erythematous patches desquamated without the intervention of the milky layer they bore a strong resemblance to the eruptions in inflammatory psoriasis or seborrhœic dermatitis.

Microscopic examination of the changes in the skin at various stages showed a regular sequence of events, the degree of development of which depended partly on the anatomical character of the region affected (such as normal thickness of skin and pigmentation) and partly on the intensity and duration of the poisoning. As in all the effects of arsenic there was the greatest irregularity even in closely contiguous spots of the same lesion, and the division between the injured and normal skin was often quite abrupt.

The erythema, as stated before, was a collateral and not an essential symptom; beyond an increase of wandering cells there were no signs of active catarrhal inflammation. When present it simply exaggerated the other factors of the process.

The main action of the arsenic was obviously a stimulation of the growth and functions of the epithelium. The interpapillary pegs were very irregularly enlarged and prolonged downwards, the prickle-cell layer increased, the granular layer always and often very considerably thickened, the stratum lucidum was abnormally well marked, and the horny layer was altered in character and unusually pronounced. The pigmentation, which was often found microscopically where clinically it was invisible, was always most marked in the basal epithelial layers, and was so completely independent of the assistance of wandering pigment cells from the corium that it is obviously a result of an over-stimulation of what must be regarded as a normal function of these cells. As the poisonous action continues, either by further absorption or by the process of elimination of the arsenic through the skin, the hyperidrosis ceases, and the horny layer becomes dry and lamellar and scales off rapidly. Usually this is the preliminary to a restitutio, but in pronounced cases the stimulation may have been so great that the cells are unable to recover and atrophy of a more or less complete character sets in. The papillæ flatten, the cells lose their position and special characters until the whole epithelial layer is represented by three or four rows of degenerate cells, with a last trace of a stratum lucidum and a covering of very thin flat paper like lamellæ. In this stage, at the last, the corium is also wasted, its vessels and glands disappear, and nothing remains but flat parallel layers of thread-like connective tissue fibres. A certain amount of such atrophy was found to be present even in primary freckle-like pigment spots such as have long been known to accompany the action of arsenic. Evidently the stage of hypertrophy if it had been present at all, had been of a very transitory kind. The sebaceous glands were not affected except by general atrophy, their fatty contents apparently rendering them immune to the action of the drug.

There were other rare lesions of a vesicular character which there was no opportunity of examining, but the great bulk of the alterations in the skin were concerned with the nutritive processes of the production of horny tissue, pigment, and sweat. The changes point to the action of the drug in producing a stimulation of one or all of these processes in the most varying degrees leading to hyperkeratosis or profuse desquamation, or both to hyperpigmentation, and to hyperidrosis. If continued the hypertrophy passes to atrophy, the cellular growth being almost completely inhibited, but the tendency to hyperkeratosis and hyperpigmentation remain almost to the final stage, in which all the tissues are wasted beyond recovery.

## THE ACTION OF ARSENIC ON THE HEALTHY TISSUES OF THE SKIN.

By Leslie Roberts, M.D.,

Honorary Dermatologist to the Liverpool Royal Infirmary.

It is not unreasonable to ask ourselves whether we know more of the character of arsenic since the recent epidemic of arsenical beer poisoning than we did before this event. We are bound to admit that the eruptions which we observed, and which have been recently described in a joint pamphlet by Dr. Brooke and myself (*British Journal of Dermatology*, April, 1901), had been seen and recorded by other observers. That arsenic produced pigmentation was known to Hunt and Devergie. Since their time a great number of observations on the arsenical dermatoses have been published in different countries. Only so recently as 1897, M. Méneau[1] gave us an excellent summary of these observations. Various epidemics of arsenical poisoning have occurred and have been ably recorded since the beginning of the eighteenth century. Further, arsenic is a remedy of great antiquity. Orpiment and realgar, native sulphides of arsenic, were known to the Hippocratic school, 500 B.C. Indeed, was there ever a time in the history of medicine when the art of healing was incognisant of this drug? Yet, in spite of this long familiarity with arsenic its action is still surrounded with a veil of uncertainty and mystery. It is not from its clinical side that we can overcome this uncertainty. To learn the character of arsenic and its action on the tissues we must study its chemical properties and elementary action. Excellent work has been done in this direction by able investigators both in this country and abroad. My aim in addressing you to-day is simply to bring the knowledge we have gained from the recent epidemic into the light of their researches. It is for you to say how far this light expels the mystery, and whether it affords us a reasonable hypothesis of the mode of action of arsenic on the tissues of the human body.

### I.—The Universality of Distribution of Arsenic.

Arsenic, like nitrates and nitrites, is a soil ingredient and capable of entering into the tissue of plants and animals. It is closely associated in its distribution with iron, nickel, and cobalt. Vegetables grown in pyrites soil are prone to absorb arsenic. Stein found arsenic in a large number of vegetables, including the cabbage, turnip, potato, and rye straw.[2] Chemists have asserted that arsenic is frequently the satellite of iodine. Gautier found arsenic and iodine juxtaposed in the lower vegetable organisms (algæ). This able investigator has also chemically demonstrated the presence of arsenic as a normal ingredient in some of the healthy tissues of certain carnivorous and herbivorous animals, including man. To

this point I must advert when I come to speak of the chemical action of arsenic. It is astonishing how readily arsenic can gain access to human food. Its admixture with bread occasioned the arsenical epidemics of Saint-Denis and of Würzburg. Both wine and beer have given rise to similar epidemics. Nearly all mineral waters are said to contain traces of arsenic. Garments such as stockings, vests, and gloves are not infrequently contaminated with this metalloid; even house furniture does not escape: wall papers and tapestries have often been instrumental in causing arsenical poisoning. The source in such cases may generally be traced to the use of aniline dyes and arsenical green pigments. The nursery itself may be invaded, as when infant powders are contaminated with the drug, or when infantile laxatives such as phosphate of soda are (as was once actually the case) found to contain a large proportion of arsenic. So widely distributed in Nature is arsenic that chemists when proceeding to test its presence in any body require previously to satisfy themselves of its absence in all the reagents and apparatus which they employ in its detection, even to the glaze of the porcelain of their laboratory dishes.

### II.—Dynamic Action of Arsenic within the Body.

Different theories have been propounded to explain the action of arsenic. For some time Liebig's hypothesis was generally accepted as true, and it appeared to lend some colour to the popular conception of the influence of arsenic on the bodily tissues. According to this hypothesis arsenic arrested the vital operations of the cell by entering into combination with its protoplasm. As a result of this combination an antiputrefactive arsenio-albuminate was formed which had the power of resisting decomposition. We now know that there is no truth in this hypothesis: it was abandoned even by Liebig himself. The truth is the reverse of this. The arsenic does not combine with the albumin: it does not arrest the processes of the cells, but incites to greater activity. This is entirely borne out by our clinical experience of arsenic. We know also that the bodies of persons who have died of arsenical poisoning decompose like other corpses. But it is only within the last twenty years that scientific research has laid the foundation for a rational explanation of the influence of arsenic on the tissues. It has long been known that arsenic, like iron, nitrogen, phosphorus and other elements, has a lower and higher affinity for oxygen: that it forms two oxides, one of which contains two atoms of oxygen over and above those in the lower oxide. And just as the ferric oxide in a ploughed field is reduced in the presence of air and water and organic matter to ferrous oxide, so arsenic acid ($As_2O_5$) could under certain circumstances be reduced to arsenious acid ($As_2O_3$). In 1879 Professor Binz and H. Schulz, starting from this chemical fact, demonstrated by exact experiments the existence of certain transformations which arsenious acid and arsenic acid underwent in the presence of living protoplasm, both within and without the animal body. They tested the effects of digesting solutions of these oxides with albumin and fibrin, with blood and oxyhæmoglobin, with fat, brain, pancreas and vegetable protoplasm (lettuce leaves). The result of these investigations was to show that the behaviour of the oxides of arsenic was different in relation to different parts of the animal organism. Thus albumin and fibrin had the effect of reducing arsenic acid to arsenious acid: blood exerted a powerful reducing action on arsenic acid, but had no action on arsenious acid. The observation that blood had no oxidising action is important, and tallies with other experimental observations on the negative action of blood on such oxidisable bodies as the aldehyde of salicylic acid and benzyl alcohol. Fat exerted no action on the oxidation: both oxides remained unchanged. The brain and pancreas, liver and kidney, exerted a decided influence; the arsenic acid yielded up its separable molecule of oxygen, thus acting as an oxidising agent, and being reduced to arsenious acid. If arsenious acid were present it acted as a reducing agent, taking up oxygen and becoming arsenic acid. The leaves of plants acted in exactly the same manner at the temperature of the body. These results were obtained only so long as the protoplasm was in a living or dying condition. Dead tissues were devoid of influence on the oxidation of arsenious acid and on the reduction of arsenic acid.

The weight of this evidence was increased by the results of experiments on the living body. These observers showed that the mucous membrane of the intestine of rabbits and dogs exerted the same influence on the oxides of arsenic, namely, that the arsenious acid was converted at the expense of the tissues into arsenic acid, and that the latter was reduced to arsenious acid. This important discovery has never been invalidated. On the contrary, the later work of Professor Binz and his pupils and others, has brought to light the fact that arsenic is only one of a group of elements including also nitrogen, lead, phosphorus, antimony, bismuth, and vanadium, all of which have in common the property of carrying separable energetic atoms of oxygen. But when it was discovered that all these chemical bodies were closely allied by their toxicological effects on the tissue of the body—when, for example, it became known that the effects of nitrites on the frog presented a remarkable likeness to those of arsenites on the same animal, and that the effects of arsenic on bones were parallel to those of phosphorus—then the hypothesis at once asserted itself that the effects of arsenic and the other members of this group on the animal tissues resulted from the development of active oxygen through the agency of these substances. Starting, then, from the scientifically established fact that arsenic possesses, like hæmoglobin, a respiratory property, we must seek an answer to the question whether the development of active oxygen within the tissues of the skin is actually the direct cause of the morbid changes in these tissues and of the whole train of symptoms which accompany arsenical poisoning. In other words, Is the action of arsenic dynamic rather than simple and direct, and are the extraordinary effects which it produces of a nutritive rather than of an inflammatory order?

### III.—The Normal Distribution of Arsenic in the Human Body.

When speaking of the universality of the distribution of arsenic, I mentioned that M. Armand Gautier[3] had discovered this substance in certain tissues of the body. If you refer to this table you will see what organs contain arsenic, and those in which no known method of analysis can detect the faintest trace.

*Arsenic in Milligrams in* 100 *Grams of the Fresh Organ.*

| Organs normally containing arsenic. | | Organs normally free from arsenic. |
|---|---|---|
| Thyroid gland, 0.75 mgr. | | Liver. |
| Mammary gland, 0.13 mgr. | | Kidney. |
| Brain: very variable or none. | | Spleen. |
| Thymus: an appreciable quantity, not measured. | | Muscles. |
| Hair | traces. | Testicles and seminal matter. |
| Horn | | Pancreas (?). |
| Skin | | Pituitary body. |
| Milk | | Mucous membrane of stomach and intestines. |
| Bone | | Lymphatic cellular tissues in neighbourhood of small intestines. |
| | | Salivary glands. |
| | | Ovaries. |
| | | Uterus. |
| | | Bone marrow. |
| | | Blood. |

It will be seen that by far the larger quantity of arsenic is contained in the thyroid gland. Gautier was able to obtain almost 1 milligram of arsenic (0.95 mgr.) from 127 grams of human thyroid collected from six individuals. The thyroid of the dog, the pig, and the sheep were likewise found to contain arsenic. The mammary gland of the cow yielded a small but still measurable quantity of the metalloid, namely, 0.13 mgr. per 100 grams of the fresh organ; 148 grams of the skin of the pig, deprived of hair and subjacent cellular tissue, yielded a slight trace of arsenic; 42 grams of hair[4] from the beard of a man who had not taken any arsenical preparation was likewise found to contain traces of arsenic; 150 grams of ox horn yielded a trace of the metalloid. It is remarkable that not a trace of arsenic could be detected in the blood. No sign of this drug could be detected in the urine. An excessively minute trace of arsenic was detected in 260 grams of human fæces. There are two striking points to be noted in this normal distribution of arsenic. If you refer once more to the table you will see that the arsenic is with one variable exception found only in the areas of quiet oxidation, while all the areas of

rapid oxidation are free from all traces of it. The second point is that normal physiological arsenic is removed from the body chiefly by the keratinised cells of the cutaneous epithelium, and also, but in very minute quantities, by the fæces. If these researches are confirmed we may say that the thyroid gland is the normal repository of arsenic in the human body. M. Gautier believes that arsenic combines with the nuclein. This is merely a hypothesis, but it is a hypothesis with something in its favour. By peptic digestion Gautier separated the thyroid substance into peptonisable and non-peptonisable parts and found that the non-peptonisable parts contained the nucleins, most of the iodine, all the phosphorus and the whole of the arsenic. Recent researches on the function of the thyroid have shown that it is exactly this non-proteid portion of the colloid of the thyroid gland which constitutes the active therapeutic agent in the treatment of myxœdema. In other words, the inference is natural that the health of the body as well as the maintenance of the healthy metabolism of the skin is dependent on the chemical partnership of nuclein, iodine, phosphorus, and arsenic. It is not advisable to push our speculations beyond ascertained facts. We know really nothing as regards the nature of this partnership, or as to whether arsenic or other metals and metalloids of high molecular weight attach themselves to the nucleus of the cells. It is at all events a great advance from our old conceptions of arsenic to be able to say that in excessively minute quantities this "drug" plays a necessary part in the healthy life of the skin. For if arsenic is one of those functional elements which, together with iodine and phosphorus, is essential to the active existence of the thyroid and if without the thyroid there can be no health; then there is nothing forced in the inference that arsenic is essential to the health of at least some of the tissues of the body of which the skin is one.

### IV.—The Effects of Arsenical Oxidation on the Tissue of the Skin.

By the expression "arsenical oxidation" I mean that modification of normal oxidation which occurs when the presence of arsenic in the skin rises above the normal level. We have had ample opportunity in the recent epidemic of witnessing these effects. The clinical picture is not always easy to read. At first we were confused by the prominence of the erythemas, and by the various combinations of one symptom with another. But we have now learnt that through all these collateral and variable combinations of symptoms run the main physiological effects of arsenic. These effects are (1) pigmentation, (2) hyperkeratinisation, (3) desquamation, (4) atrophy, (5) fatty degeneration.

(1) *Pigmentation.*—The pigment is melanin. So far as we know, it is the normal melanin greatly increased in quantity. Its condition is non-crystalline, and brownish-yellow in colour. In marked cases of arsenical pigmentation it pervades the whole of the epithelium from the germinal cells to the flat horn surface cells, in fact the pigment is excreted by the horn cells. The melanin is not dissolved by absolute alcohol. Aniline oil and clove oil rapidly dissolve it. Peroxide of hydrogen only partially dissolves it. As to whether the pigment contains iron is doubtful. Some sections from a very early stage exhibited a greenish-blue coloration in the epithelium in reaction to Perl's test, but other sections from advanced cases gave negative results. Whether my technique was erroneous or not I certainly did not obtain any deep Prussian-blue reaction such as that described originally by Perl, and later by Professor Delépine. The question respecting the origin of this melanin or cutaneous pigment is a physiological problem of great interest and one on which Delépine has already thrown some light.[5] The old conception of the origin of melanin from hæmoglobin derives no support from our observations of arsenical pigmentation. When the epithelium was black with pigment the underlying cutis was in many places absolutely free from it. As a rule pigment could be seen in the connective tissue corpuscles lying in spaces parallel and near to the superjacent epithelial. But the quantity was trifling in comparison to that in the epithelium. But the strongest argument against the hæmic origin of the epithelial pigment is the fact that no natural affinity exists between arsenic and blood (Binz). It does not directly influence the corpuscular elements of the blood, and if it be generally true, as Dr. J. C. Muir has proved in some cases,[6] that arsenical hypermelanosis is actually accompanied by an increase in the number of red blood corpuscles, then this must be attributed to the stimulating action of the arsenic on the bone marrow. All the facts appear to me to point to the conclusion that the melanin is developed within the germinal epithelial cells as a result of the arsenical stimulation. But as to whether Professor Delépine is right in saying that the melanin is itself the source of the hæmoglobin I will not now venture to pass any opinion.

(2) *Hyperkeratinisation.*—If we examine the skin in an early stage of arsenical poisoning the rete is found to be considerably hypertrophied. The enlargement is chiefly in the strata above the cones. The inward growth of epithelium as represented by the cones may be already arrested. The tendency is towards complete arrest of the inward growth, so that the cones under arsenical influence are sooner or later obliterated, and the epithelium comes to be represented by a flat plate, which in some cases is of extraordinary thinness. But if the stage is early enough we may see some of the cones actually enlarged, while others are contracted in size and diminished in substance. This would seem to show that the arrest of inward growth is preceded by a short temporary stage of hypertrophy. In the early stage the germinal cells are well formed, normal in position, nuclei large and distinct and well stained by hæmatoxylin. The prickle cells show no trace of œdema; the prickles and intercellular channels are distinctly seen. These cells even in the early stage may show considerable increase of amorphous pigment granules, not confined to the germinal cells, but scattered through the epithelium. The granular layer is very pronounced, and may consist of five or six rows of cells packed with keratohyaline granules. The stratum lucidum is well developed, outside which the flat horn cells are greatly increased in number. The sweat glands are enlarged, the nuclei round and well-developed, the central cavity is widely distended, showing that the functional activity of the glands is increased. There are no special signs of irritation or of keratosis in the immediate vicinity of the glands, as we may reasonably have supposed to have occurred if the arsenic had been eliminated by the sweat glands; the cells of the sebaceous glands have a perfectly healthy aspect. The corium is unchanged. Leucocytosis, or collections of wandering cells under the epithelium, is quite exceptional. In some sections a patch of cells can be seen, but their origin was probably incidental. Wandering cells, however, can be seen surrounding the congested vessels like a mantle. It is quite clear from the picture of the changes in epithelium during the early stage of arsenical poisoning that a strong tendency to keratinisation is impressed on the cells.

Clinically there is no more important sign of arsenical poisoning than hyperkeratosis. Its most characteristic forms are met with on the palms and soles. Whoever has seen a well-marked arsenical palm is not likely to forget it. The palm, simian rather than human in type, is clammy with excessive perspiration, the grooves and surface lines are deep and coarse and dull red in colour. To the touch it feels like wet shagreen, tough and resistant. If held horizontally and the light allowed to strike the observer's eye obliquely, the surface is seen to be studded with little nodules, which sometimes may be more easily felt than seen. Some of these nodules may be obviously horny. Previously existing cones and callosities are enlarged.

(3) *Desquamation.*—This symptom is highly characteristic of arsenical poisoning, and more especially in its chronic manifestation. Its development was long ago observed by Ringer, Murrell, and Emily Nunn in their researches on the action of arsenic on the frog's tissues. In no region of the body was the desquamation absent, not even in the nail, but it was more pronounced on the chest and abdomen. In this situation the exfoliation was lamellated, the cuticle being partially detached over larger areas and lying like a corrugated membrane as if too big for the surface it covered. The exfoliated scales were blackened by pigment, in fact much of the pigment was thrown off in this way. The degree of desquamation was very irregular, like all the effects of arsenic. In some areas the skin was velvety, in others harsh and rough and covered with fine branny scales. It must be borne

in mind that this arsenical desquamation is not the final stage of erythema, but is the direct result of the action of the arsenic on the epithelium.

(4) *Atrophy.*—The inital hypertrophy of the more delicate parts of the epithelium soon ceases; a reverse process sets in, which sooner or later terminates in atrophy. The first portions to disappear are the cones, then the cells lying between the granular layer, and the germinal cells are slowly reduced in number. The sweat glands are involved later and the sebaceous glands still later and only in the fatal and most advanced cases of atrophy and general marasmus. In these extreme cases the cutis also suffers, most of the white fibres disappear, leaving a skeleton network of elastic fibres.

(5) *Fatty Degeneration.*—The occurrence of this change in the skin as a result of chronic arsenical poisoning was, I believe, first pointed out by Dr. Brooke and myself. Sections immersed in osmic acid became in a few seconds almost black. On mounting such sections in balsam the horny layer immediately above the stratum lucidum is seen to present a dark brown ribbon-like band which runs from end to end of the section, and a similar band which runs along the surface and dips down into the orifices of the sweat ducts, some of which are stained dark brown. The secretory portion of the sweat glands is stained black. In unstained specimens, the protoplasm of the secreting cells of the sweat glands is seen to be filled with clear translucent globules.

In the final stage the nutrition of the skin is profoundly altered, the epithelium is represented by an extremely attenuated delicate plate, in places composed of two rows of cells on which lie the stratum lucidum and flat horn cells. The granular layer has partially or entirely disappeared. The germinal cells lie flatly, or obliquely, and contain very little more than a nucleus surrounded by amorphous pigment granules. It is remarkable that even in this final stage these germinal nuclei take on a deep hæmatoxylin stain. Osmic acid preparations show the complete disappearance of fat.

Although it is true that epithelium has an extraordinary affinity for arsenic it is not the simple direct affinity of one chemical body for another. Even if it be granted that the arsenic molecule attaches itself to the nucleus and thereby largely increases the respiratory function of the cell, it is still left to the cell protoplasm to determine the effects of the more active oxidation. Thus the number of victims of arsenical beer poisoning in Lancashire must have been only a fraction of the total number of those who partook of the same contaminated beer. The tissues of alcoholics and those of badly nourished, ill-fed, individuals show the effects of arsenical oxidation much more rapidly than those of strong healthy persons. Young active growing cells can dispose of the surplus oxygen more readily than old, worn-out tissues. The more unstable the protoplasm is, the more violent are the commotions engendered in it by the nascent oxygen. A foregoing disease such as syphilis, or the coexistence of tubercle, have been shown to exaggerate the effects of arsenical poisoning, and this is probably owing to the nutritive condition of the tissues produced by these diseases. The degree of irritability of the cell at the moment of the arrival of the arsenic in its vicinity is also a matter of some importance in relation to the effects of the arsenic.

Irritated epithelium manifests nutritive changes more quickly and more intensely than non-irritated epithelium. For example note the concentration of melanin in regions exposed to the friction of clothes, or to the pressure of garters or stays. Compare also the action of minute doses of arsenic on a skin affected with psoriasis. The patch of psoriasis is an area of rapid oxidation and exalted nutrition in comparison to the surrounding normal parts, and the psoriasis patch is the first to be affected by the arsenic. I believe that here we have the key which opens what has always been a closed mystery—I mean the selectiveness of arsenical action. The pigmentation and hyperkeratosis and all the other effects of the action of arsenic are all irregular in distribution and unequal in intensity. I would explain this on the supposition that the skin is a mosaic of areas of unequal metabolic activity. The areas of higher activity feel the effects of the arsenic sooner than the quieter areas, for the reason that they are the first to effect the oxidation of the arsenious acid. And a broader view of the action of arsenic strengthens this hypothesis. We find that nerves are affected sooner than muscle, and muscle sooner than bone: unstable explosive nerve cells are influenced sooner than quieter and more stable nerves, and glands of high metabolic activity sooner than such glands as the thyroid, and thymus.[7]

Further, I know no better explanation than this of the remarkable tolerance of arsenic manifested by certain species of animals (horses and sheep), and of certain vegetable organisms (algæ and fungi). In these organisms the cells effect the oxidation and deoxidation of arsenic so slowly that the nutrition of the cells or tissue is improved and not impaired. It is well known that where arsenic is tolerated improvement of nutrition results, and this improvement is specially shown in the keratinised structures, such as hair and cuticle.

### Conclusion.

I think we do not yet perceive the full significance of these facts. Gautier infers, and it may be in the future that his inference will be confirmed and amplified, that there exist in the body certain functional elements, of which very few have yet been discovered, but which he presumes to be essential to the performance of certain specific functions. Thus manganese is said to be essential to the oxidising ferment; iodine to the thyroid; phosphorus to nucleins; fluorine to the bone cells. In the list of these functional elements some appear to play the part of "principal actors in the body, while others may be styled substitution elements, or understudies, so to speak, of the principal actors." Thus arsenic may, to some extent, take the part of phosphorus in relation to nucleins[8]; selenium is said to be capable of acting for sulphur; copper, zinc, or manganese may replace iron; while phosphorus, arsenic, vanadium, bismuth may play the *rôle* of nitrogen. But one thing we have at least attained to, namely, the knowledge that arsenic is not merely a drug possessing curative powers; that it is not necessarily an irritant poison; that it is not a poison in itself, but that its action is initiated and determined by the tissues themselves; that its effects are essentially of a nutritive order brought about by the agency of active oxygen; that these effects are beneficent to the organism when the oxidation is slow and injurious when too rapid; that the more highly organised the cell, the more unstable its protoplasm, and the more rapid its metabolic processes, the more readily does it feel and manifest the action of arsenic.

### Notes and References.

[1] Les Dermatoses Arsénicales, *Ann. de Derm. et Syph.*, 1897, p. 345. [2] Stein, *Journ. für prakt. Chem.*, vol. li, p. 302; vol. liii, p. 37, quoted by Gautier (*q.v.*). [3] Sur l'Existence Normale de l'Arsenic chez les Animaux et sa Localisation dans certain Organes. *Comptes Rendus de l'Académie des Sciences*, vol. cxxix, 1899, p. 929; vol. cxxx, 1900, p. 284. [4] Quite recently arsenic has been discovered in the hair of three healthy persons by Messrs. Knecht and Dearden, of Manchester. *Lancet*, March 23rd, 1901, pp. 854 and 878. [5] *Jour. of Physiology*, vol. xii., 1801, p. 27. [6] The Condition of the Blood and Bone Marrow in Chronic Arsenical Poisoning, with Special reference to the Occurrence of Cutaneous Pigmentation. By J. C. Muir, M.D. Dr. Muir, in his investigations, ascertained that yellow marrow was converted into red marrow under arsenical influence. The marrow presented greatly increased vascularity, diminution of fat, a greatly-increased number of marrow cells. These changes closely agree with those observed by Professor Stockman and Dr. Greig in the bone marrow of rabbits to whom arsenic had been administered. [7] In all the cases of arsenical beer poisoning seen by Drs. Reynolds and Dixon Mann no clinical alterations in the thyroid gland was observed. [8] M. Bouilhac has shown that arsenates may partially take the place of phosphates in the nutrition of many algæ (*Jour. of Chem. Soc.*, Part ii, 1898).

## EPITHELIOMA SUPERVENING ON ARSENICAL KERATOSIS.

BY

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and

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Cancer, as a result of arsenical keratosis, is sufficiently rare for any fresh case to be placed on record. The subject has been dealt with so recently in the course of Nielsen's paper on Melanosis and Keratosis Arsenicalis[1] that it is not necessary to go over the same ground again in this place. It may be pointed out that since the foregoing was published Ullmann has contributed a short paper to the *Proceedings* of

the Paris Dermatological Congress,[2] in which he gives the clinical and histological details of another case.

The patient forming the subject of the present paper was a gentleman, aged 60, who consulted one of us (H. Radcliffe Crocker) in March, 1900, for a small painful sore situated on the ulnar border of the right hand, close to the metacarpo-phalangeal joint of the little finger, and of six months duration. It began as a mattery speck two years previously, and it had gradually increased in size. The sore had been more painful since Christmas, 1899, the pains being described as shooting and darting. The sore itself was nearly a quarter of an inch in diameter, more or less circular, flat, and was surrounded by a half-inch zone or more of slightly lobulated and stony hard induration, over which the skin was thickened, but not red. Near the sore were two smaller circular ones, and also some warty indurations. There was an enlarged gland in the corresponding axilla; it was freely movable. There had also been a sore of the left index finger, which had healed. Scattered about the hands were several small warty specks, and the epidermis was slightly pitted, but there was not general arsenical keratosis.

The patient had suffered from psoriasis from the age of 20, for which he had had arsenic, but he had not had any treatment for 38 years, and, as far as he knew, he had not taken arsenic since then. On the whole the psoriasis had got better the last two to three years. It had cleared off the body, but there were still a few patches on the legs. The growth was excised in April, 1900, by Mr. Cantlie. When the patient was again seen two months later he complained of pain about the deltoid and knuckles on the affected side. The painful symptoms were severe.

In October the pain in the shoulder had nearly gone, but there was great pain and burning at the seat of the operation and the neighbourhood. There was marked induration on either side of the incision, but the skin was not involved. Amputation was then recommended and refused, but the removal of the growth with the little and ring fingers was carried out.

Histological examination of the growth removed at the first operation showed proliferation of the prickle cells of the epidermis and in parts commencing invasion of the corium. This was much more marked in the tissues removed at the second operation. Keratosis and acanthosis with epitheliomatous growth, together with leucocytic cell infiltration of the papillary and deeper layers of the corium, were noted. Numerous mast cells were present, especially about the sweat coils.[3] An interesting feature of the case is that warty growths persisted so long after the arsenic was left off, and that from these the cancer developed after so long an interval.

NOTE AND REFERENCES.

[1] Selected Essays and Monographs, New Sydenham Society, vol. clxx. 1900, p. 249. [2] XIII Congrès International de Médecine, Paris, 1900. Section de Dermatologie et de Syphiligraphie, p. 221. [3] Polychrome methyl-blue and glycerine ether sections were shown.

## NOTES ON A CASE OF PURPURA HÆMORRHAGICA ASSOCIATED WITH GENERAL TUBERCULOSIS.

By Eldon Pratt, M.D.,
Cardiff.

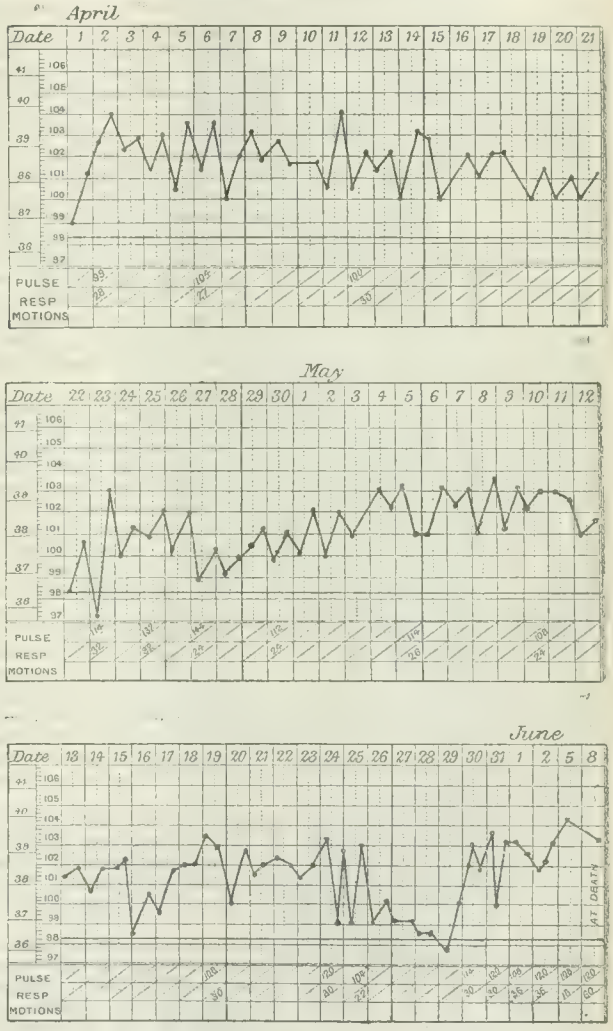
As the association of purpura hæmorrhagica with general tuberculosis is so extremely rare I thought that brief notes on this case would be of interest to those attending this, the Dermatological Section of the Association.

G. V., age 25, a Greek sailor, was admitted to the Cardiff Infirmary, April 1st, 1897. He spoke barely any English, the history obtainable was that he had felt weakness for some six weeks but had been worse the last ten days with pains all over the body and slight cough.

*On Admission.*—Looked fairly healthy, temp. 103°F. Some slight cough but no sputa, a few rhonchi were heard over the right lung. Nothing else abnormal found. Urine, 1028, no albumen or sugar.

*Progress.*—His condition continued much the same, with considerable pyrexia, varying between 100° and 104° (see chart). Pulse-rate was usually about 100, and respirations between 20 and 30 per minute. There was slight cough, but little to be heard on auscultation. Three weeks after admission (April 22nd) he had epistaxis. Widal's reaction was negative; further, there were no spots suggestive of typhoid fever. April 23rd.—Marked hæmaturia, with continued epistaxis at intervals. He had no cough, but a few crepitations were heard over the lungs, especially at the right apex. April 26th.—Blood in the stools, hæmaturia and epistaxis continuing. Patient was visibly getting weaker. April 27th.—Two or three purpuric spots on the back and near the lips. Patient quite prostrate. April 29th.—Purpuric eruption on arms, chest and abdomen, and around the lips marked. May 1st.—Glands at the angles of the jaws enlarged and tender. Patient profoundly anæmic. Heart normal. May 3rd.—Parotid glands suppurating. Still no cough, and very scanty signs in the lungs. The left parotid gland was incised on May 12th, and the right one on May 15th, a good deal of pus escaping from each. May 22nd.—Patient very wasted, and feet œdematous. Takes food badly, and cares for nothing but fruit and maccaroni. Is delirious at nights, and perspires greatly. Much bleeding from sore gums. May 27th.—The purpuric eruption extensive now over most parts of the body. Patient gradually sank and died on June 8th, nearly ten weeks after admission.

*Post-mortem Examination.*—Extensive miliary tuberculosis affecting all organs, especially the lungs, spleen, and pleuræ, with ulcers in the gastric mucous membrane. Marked enlargement and caseation of lymphatic glands in all parts. Purpuric areas marked.




This patient was under observation for nearly ten weeks, and the probable duration of the whole illness must have been between three and four months. Although a case of acute miliary tuberculosis, the most marked signs were those of the purpura hæmorrhagica and pyrexia. The former first appeared seven weeks before death, epistaxis, hæmaturia, blood in the stools, and lastly, the eruption, following one another in rapid succession, and continuing with varying severity until death.

It is surprising how little literature there is on this cause of purpura, yet surely it is not surprising to find severe purpura occurring in the course of such a prostrating disease as acute general tubercle? It would seem to suggest that its pathology is to be found in a general bacterial infection. After all, purpura hæmorrhagica is only a symptom. Dr. Stephen Mackenzie[1] records 200 cases of purpura, four of which were

associated with tuberculosis, but what form of tuberculosis is not stated. At any rate, cause and effect in our case is obvious. My thanks are due to Dr. Vachell, of Cardiff, for permission to use the notes of the case.

REFERENCE.

[1] Allbutt's *System of Medicine*, vol. v, p. 572.

## THE TREATMENT OF ADVANCED LUPUS.

By HERBERT SNOW, M.D.Lond., etc.,

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I PROPOSE to lay before the Section very briefly a novel method of dealing with that extremely obstinate malady, lupus. For those advanced cases in which operative treatment had already been many times resorted to it has proved in my hands more successful than any other. The difficulty we have to face is that of perfectly enucleating or of otherwise destroying the minute "apple jelly" loculi of low cell growth which are prone to escape the most assiduous scraping, and which involve eventual "recurrence." With a small patch, failing cure by unguent. hydrarg. oxidi rubri, it is, of course, best to excise *en masse*, suturing together the divided healthy skin. With cases beyond the feasibility of such a measure I submit that the principle should be, after the gross removal of affected tissue, to cause such local inflammation as will effectually kill all residual cells or bacilli. We know that a mere erosion with Volkmann's spoon is useless, and that even when followed up by a free use of Paquelin's cautery, the results are only a little better, the actual cautery being too superficial in its action.

The method I advocate and have employed for several years consists in scraping away as thoroughly as possible the soft cell growth, and then, as soon as bleeding has ceased, applying to the raw surface lint soaked in lin. iodi. The latter is removed on the following morning; if not there is apt to be vesication. Then an emollient dressing is substituted; after this "recurrence" is most exceptional. I think I may fairly say that it never occurs, except when a mucous membrane in close proximity, as that of the mouth or nose in facial cases, is also implicated. One of my patients had been scraped fourteen times previously, another had received 51 hypodermic injections of Koch's lymph.

I had previously tried simple erosion, then erosion followed by the cautery; next, erosion, with subsequent free application of silver nitrate; last of all, iron lint (lint soaked in liq. ferri perchloridi fortior and then dried). The latter proved very efficient, but had the disadvantage of occasionally causing an unsightly keloid scar. Iodine, while destroying the residual cell growth, has no such drawback, and I have abandoned the former for skin lesions.

This iron lint, a most useful styptic for all sorts of purposes—one specially valuable is the extirpation of nasal polypi—has its place, however, in the treatment of lupus when the nares, as so often happens, are implicated. Plugs left in after erosion immediately arrest all hæmorrhage, besides destroying residual growth.

I have no knowledge of the new light treatment, but understand that considerable selection is exercised in the cases submitted to it, and that it is not applicable to lesions implicating mucous cavities. The method in question is specially indicated for advanced forms of the malady, in which everything else has previously been tried without success. I need not point out that the permeating qualities of iodine, combined with its microbicidal activity, naturally indicate this plan of treatment.

CASE I.—Eliza B., 20. Duration 8 years; 9 previous scrapings, entire face covered by cicatrix, with numerous lupus patches; eyelids infiltrated, and nebulous patch on one cornea. Cautery to eyelids, and scraping, with iron lint, to skin. Treated October, 1893. No recurrence to present time.

CASE II.—Charles T., 20; 13 years duration; 51 injections with Koch's lymph. Extensive disease of face, with nares. Scraping and iron lint. Cure.

CASE III.—Rose B., 20; 14 previous operations. Nose and upper lip entirely destroyed, also a considerable part of the lower lip. The whole face covered by scar tissue containing numerous lupus puncta. Extensive ulceration around the mouth. Scraping, iodine, iron lint to nares in January, 1900. Cure.

CASE IV.—James M., 12. Here no previous operation. A serpiginous patch, 3 inches in diameter, on forehead; another in front of right ear; a smaller one on shoulder. In February, 1900, scraping only. Prompt recurrence, and in June ditto, with subsequent iodine application. Healthy cicatrices and no further return.

CASE V.—Agnes G., 25. Face and nose, with mucous membrane of nares. Scraping and iron lint in April, 1893. Cure.

CASE VI.—Esther B., 9. Large lupus patch on right cheek. Erosion, with lin. iodi, subsequently applied by brush (not lint) in Feb., 1895. Cure.

CASE VII.—James W., 40, large lupus patch on right wrist of 8 months duration. Scraping with iron lint in January, 1895. Cure.

CASE VIII.—Ellen H., 21, a lupus patch covering nose, cheeks, and chin. One previous operation. Scraping with iron lint in March, 1892. Cure.

CASE IX.—Lucy S., 62, seen in October, 1893. Had been previously scraped several times, and had been treated in the Cancer Hospital by seven injections of Koch's fluid. The left auricle covered by lupus deposit, and nearly whole left cheek. Scraping with iron lint. Cure.

CASE X.—Alice K., 19, diseased since age of 5. Fore and middle fingers of right hand have been amputated for tuberculosis, and very numerous other scrapings. Face and right arm covered with scars. Among these patches of lupus some 3 inches in diameter. Scraping with iron lint. No further deposits.

## MULTIPLE DISSEMINATED LUPUS FOLLOWING MEASLES: DEATH FROM TUBERCULOUS MENINGITIS.

By ARTHUR HALL, M.A., M.B., M.R.C.P.,

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[ABSTRACT.]

A BOY, aged 5 years, was admitted into the Sheffield Royal Hospital on May 4th, 1901, for an eruption on the skin of some months duration.

*Previous History.*—Convulsions when 9 months old; measles 2 years ago, very ill, followed by bronchitis and discharge from left ear; pneumonia 18 months ago, never been well since.

*Family History.*—Father died of diabetes 3 years ago.

*History of Present Illness.*—The eruption was first noticed considerably over a year ago, and has been gradually spreading since. The child always seems languid, and frequently lies down all day complaining of being tired and sleepy. There has been no particular headache or vomiting.

*Present Condition.*—Anæmic and apathetic. The eruption consists of two distinct portions, the one, of which there are only two or three, or four patches altogether, about the neck, and under the chin, consists of more or less circular raised inflamed areas, with rough scaly surface size of a sixpence to a shilling. These proved microscopically to be patches of large-spored ringworm. The rest of the eruption is distributed over the face, front of neck, axillæ, upper arms, and gradually fewer lower down the upper extremities, also over the lower abdomen, groins, pubes (one on the penis), thighs, and fewer down to the feet, on the back in the scapular region.

*Character of Eruption.*—The spots are isolated, but here and there form more or less of groups, round or oval in shape, considerably raised above the surface. Diameter ¼ to ⅜ in. They have a translucent lean ham colour, do not fade on pressure. The surface of each spot has a puckered appearance with a few slight scales. In the spots on the face there are dilated capillaries and here and there round yellow points, distended follicles. On the face, and especially about the forehead and nose, there are smooth, flat, disc-like, non-inflamed swellings, like warts. The provisional diagnosis made was disseminated lupus. In the course of a few days after admission a development of the disease took place which made the diagnosis certain, as will be seen further on. The mother says that several spots have completely disappeared during the course of the eruption without leaving any mark.

May 7th, 1901 (3 days after admission). He vomited several times.

May 11th. Very cold, drowsy, and takes no notice of anything, keeps his his eyes half closed. Taking food badly. Pupils react normally.

May 12th. Spasmodic tonic contraction of left arm and leg which are quite rigid, moves right arm and leg sometimes, chiefly irregular up and down movements. Right eye internal strabismus. Pupils large, slight response to light. The ocular spasms vary, sometimes one eye turned in, sometimes the other. On handling the left side irregular movements are made on the right side. Teeth tightly clenched on attempting to feed him. No rigidity of neck. Respirations quiet and regular. No pyrexia. Dr. Stanley Riseley kindly examined the discs and found them normal.

May 13th.—Convulsions. Ptosis and internal strabismus of left eye; paralysis of left side of face, Condition of limbs unchanged. Later in the day he improved slightly, seemed more intelligent in his looks, and used his right arm more purposively. After this date he steadily got worse. The temperature, which began to rise on the 12th, reached 104.4° on the 14th, and went up to 106.4° immediately before his death on May 17th. No necropsy was permitted. One of the nodules on the skin, in the neighbourhood of the left shoulder, was, however, excised for microscopical examination. It was noticeable that during the progress of his cerebral trouble the patches of ringworm became much less marked. Possibly this was due to the soil being impoverished, or poisonous to them, or possibly it was due to the pyrexia.

*Pathological Report.*—Section of one of the tumours shows a typical "lupus" nodule, quite small, consisting of an inflammatory collection of leucocytes, with several well-marked giant cells. It is situated in the dermis, close beneath the epidermis. In the upper part is seen a large dilated cavity—probably the obstructed opening of a sweat duct. Although a large number of sections were carefully examined for me by Dr. Monro Hector, Demonstrator of Bacteriology, University College, Sheffield, for the tubercle bacillus, as yet no definite result has been obtained.

In an article written by Du Castel[1] under the title Tuberculosis of the Skin consecutive to Measles, attention is drawn to a few cases of this rare condition, and the association of

the two affections is, I believe, there remarked upon for the first time. He personally reports three cases.

Case I.—Boy, aged 5 years. Had measles two years previously to being seen by M. Du Castel. The eruption appeared during convalescence. It consisted of what appeared to be disseminated lupus nodules on the cheeks, on the right wrist and thumb, and on the inner side of the thighs. The mother said that there had been more, but that they had disappeared.

Case II.—Girl, aged 10 years. Commenced several years before during convalescence from measles. Eruption consists of disseminated groups of tubercles on the trunk, face, limbs, dorsum of foot—altogether about 50. The patient says that some have disappeared spontaneously, but the rest have remained unchanged, showing no tendency to ulcerate or cicatrise.

Case III.—Boy, 3½ years. Had measles fourteen months previously This eruption began three weeks after the measles commenced. It consists of groups of two or three tubercles scattered over the face, trunk, limbs, fingers, and toes. On the knee there is a group in a semicircle. He also has on the left elbow an ulcer, and on the left foot an abscess. There is also evidence of enlarged bronchial glands.

Haushalter also read to the Dermatological Society of France in May, 1898,[2] a paper on two cases of lichen scrofulosorum, in one of which there were multiple nodules apparently similar to the above. In both these cases the eruptions had appeared during convalescence from measles, and in both of them scrapings from the eruption injected into guinea pigs produced general tuberculosis. As these cases bear closely upon the subject, I shall quote them briefly:

Case IV.—Boy, 12 years old. Measles one year ago, offensive discharge from left ear, enlarged glands of neck. Eruption consists of numerous papules—size of a millet seed to a hemp seed—flattened, red, usually having a small crust or scale at the top. They are distributed over the face, trunk and limbs.

Case V.—Girl, aged 5 years. Measles six months before, and was immediately followed by the eruption. Enlarged hard glands under jaws. Eruption is of two kinds; there are small papules (lichen scrof.), many of which have died away, leaving small depressed scars; there are also larger spots—size of a pea to lentil—some deep in the dermis and described as being like "gummata" (an unfortunate description), others prominent and warty in character.

It will be noted that in the latter case the author does not refer to the likeness to isolated "lupus nodules," and as this is so striking a feature in my case, I feel sure that these "gummatous"-like lesions were somewhat different. But the important fact remains that they were tuberculous and capable of producing tubercle in guinea-pigs; also that both these rashes followed immediately after measles.

Adamson[3] records a case of multiple cutaneous lupus following measles as follows:—

Case VI.—Boy, 3 years old. Eruption followed directly after measles, one year ago. Lesions raised, purplish brown patches, size ¼ to ½ inch in diameter; hard sharply defined, almost perpendicular edges. Many were scaly, some warty. They were most abundant on right arm, both knees, and on right ankle and foot. One year later the eruption had almost disappeared; no scars, but a trace of pigmentation at the site of former spots.

A case has been recorded by Boeck of a lichen scrofulosorum in which later there developed typical lupous nodules similar to those in the case I have related, but unfortunately no excision of a nodule was allowed, and so far as I can gather, they eventually disappeared.

The cases which I referred to above following measles, seem to have been neither excised for examination nor inoculated and to have remained stationary, although their appearance gave no doubt as to their lupous character. In my case, which there is no doubt was similar to these, the onset of what must have been tuberculous meningitis, although unfortunately no necropsy could be obtained, together with the histological examination, which shows typical lupus structure, shows that these cases are not always quiescent and harmless, but that they may be associated with a fatal general infection as much as any other tuberculous lesion.

References.

[1] *Annales de Dermatologie et de Syphiligraphie*, 1898, p. 455. [2] *Ibid*, p. 729.
[3] *British Journal of Dermatology*, 1899, p. 20.

A Sanatorium at Lille.—Drs. Ausset and Calmette have lately, in the name of the Ligue du Nord contre la Tuberculose, handed over to the Conseil Général of the Department a sum of 140,000 francs collected for the establishment of a sanatorium of 100 beds. In addition to this, the hospitals of Lille have given 40,000 francs besides a site, while the State has promised 200,000 francs from the Pari-Mutuel Fund.

Tuberculosis Camps in Wisconsin.—The Wisconsin State Board of Health is said to be considering favourably a plan for the establishment and maintenance by the State of open-air camps for consumptives in the pineries in the northern part of Wisconsin.

# SECTION OF LARYNGOLOGY AND OTOLOGY.

T. Mark Hovell, F.R.C.S.Edin., President.

## DISCUSSION ON THE TREATMENT OF NASAL OBSTRUCTION FROM INTRANASAL CAUSES OTHER THAN MUCOUS POLYPUS.

I.—Frank Marsh, F.R.C.S.,

Surgeon, Birmingham and Midland Ear and Throat Hospital; Surgeon and Lecturer on Clinical Surgery, Queen's Hospital, Birmingham.

Mr. Marsh said: In opening this discussion it is advisable first of all to define what is meant by the term "nasal obstruction." I would define it as inability to breathe freely and equably at the same time through both nostrils. The degree of obstruction may thus vary between a slight insufficiency of one nostril and complete occlusion of both.

That free and equable nasal breathing is essential will, I think, now be generally conceded by all who have experience of ear and throat diseases. I can only say here that experience has convinced me that it is of the very utmost importance.

In accordance with the wish of the officers of the Section, I propose to speak only of obstruction due to abnormal conditions of the turbinal bodies and septum, and to omit such causes as congenital smallness or stenosis of posterior or anterior nares, catarrhal and inflammatory conditions, foreign bodies, rhinoliths, new growths, bulging of inner wall of antrum, collapse of alæ nasi, etc.

First, then, with regard to obstruction due to abnormal conditions of the turbinal bodies. This group will include

(A) *Bone obstruction.* (1) The bony framework of the inferior turbinated being larger than normal from congenital or hypertrophic causes, or projecting too much into the cavity of the nostril. (2) A bulbous condition of the middle turbinate with downward enlargement, entrenching upon, and in severe cases occluding, both the middle and inferior meati.

(B) *Soft tissue obstruction.* (1) Hypertrophy of mucous and submucous tissues of inferior turbinate, either general or most marked at either extremity. (2) Hypertrophy of similar tissues of middle turbinate. (3) Passive congestion of soft tissues of inferior turbinate, often alternating, and often only present in the recumbent posture, and varying with vasomotor tonicity.

(C) *A combination of two or more of these conditions.*

A. (1) Bony enlargement of the inferior turbinate may be treated by three methods, namely, turbinectomy, anterior turbinectomy, crushing outwards of bony framework.

Turbinectomy by Carmalt Jones's turbinotome is applicable to those cases in which there is also mucous hypertrophy, most marked posteriorly, obstruction great, and the septum sufficiently straight to admit the passage of the turbinotome. The turbinotome must be sharp, must be carefully placed in position, and must be kept in the right plane during the forward sweep. General anæsthesia with gas or ethyl chloride enables this to be done with greater certainty, and a forefinger in the posterior nares is a valuable adjunct. Hemorrhage is often free, but is usually controllable by application of, or light packing with gauze dipped in, solution of adrenalin chloride. The result of a well-performed turbinectomy in a suitable case is very satisfactory, and reproduction of the turbinal body is sometimes remarkable.

Anterior turbinectomy is applicable when the enlargement is chiefly anterior, when a deviation or irregularity of the septum renders the passage of a turbinotome difficult, and when an anæsthetic is not advisable or is vetoed by the patient. To Mr. Richard Lake belongs the chief credit for this operation. It is best performed with a pair of scissors, strong but light, and curved both at an angle and on the flat. From ½ inch to 1 inch should be excised, and the margin left should be sloped and rounded off carefully. A cold wire snare should be used if there is any difficulty in removing the fragment. In slighter cases Grünwald's conchotome, or one of the many modifications thereof, may be the only in-

strument needed, small fragments being punched out until the necessary space has been obtained.

Crushing outwards of bony framework or shell. This method is a useful one when the occlusion is mainly due to projection inwards of the bony shell with little or no mucous hypertrophy. In typical cases the turbinal body forms a right angle with the outer wall of the nostril. It is often bilateral.

The crushing may be done with either a pair of Walsham's straightening forceps or a broad-bladed pair of polypus forceps. A blade is passed into each nostril, resting over the bony projection, and the forceps opened, sufficient force being used to reduce the projection by at least one-half. The compressing force can be exercised on the whole or any portion of the bone. The septum must not be used either as a fulcrum or for counter-pressure. The procedure is a quick one, can be easily done under gas or cocaine, there is but little hæmorrhage and the result is satisfactory.

(2) Bony enlargements of the middle turbinate must be removed with cold wire screw snare, scissors, or Grünwald's forceps, as may be found most suitable for the individual case.

B. (1) Soft tissue hypertrophy. True hypertrophy of mucous and submucous tissues. If slight and general the galvano-cautery is as a rule sufficient; several applications may be needed, and the direction and manner of cauterising must depend on the shape and extent of the hypertrophy. If, however, the hypertrophy is most marked at each or either extremity the cold or galvano-cautery snare should be used. Removal, when the anterior extremity is the one involved, can often be best and most expeditiously performed with scissors or conchotome.

(2) Hypertrophy of the mucous membrane over the middle turbinate is generally associated with bone hypertrophy, though in cases of asthma I have seen the mucous tissues enormously enlarged—a result rather than a cause. Removal should be effected with either wire snare, scissors, or punch forceps.

(3) Passive congestion of the soft tissues over the inferior turbinate bone is undoubtedly a condition most appropriately treated by the galvano-cautery. A groove in long axis, button holes, or isolated points being made according to the degree and extent of the congestion. Most of these cases occur in the overworked, the neurasthenic and neurotic—in short, wherever there is a diminution of vasomotor tone—and, therefore, general tonic treatment, rest, and change are important adjuncts to the local treatment.

(C) Combinations of bony and soft tissue obstruction must be treated by a combination of the above methods according to the requirements of the case, anterior turbinectomy with the cautery being perhaps the most frequent one.

I come now to obstruction due to abnormal conditions of the septum. These may be:

(A) *Bony or cartilaginous*, comprising (1) deviations of the bony septum; (2) deviation of cartilage of septum; (3) dislocations of cartilage of septum; (4) exostoses and ecchondroses of septum; (5) deviations with exostoses or ecchondroses.

(B) *Hypertrophy of mucous and submucous tissues over septum.*

A. (1) Deviations of the bony septum may be simple or compound, and may vary in degree from an almost imperceptible departure from the straight line to an acute angle. They are generally either ridge-shaped of varying width, or "bossed." The former generally extend the length of the septum in antero-posterior axis, the latter are generally more localised. There is often some bony thickening over the convexity or angle of the deviation, and hypertrophy of the mucous membrane (compensatory) over the inferior turbinate on the side opposite the deviation. The treatment depends upon the degree of the deviation, the size of the nostril, and the condition of the inferior turbinates. In many of the slighter cases, in roomy nostrils, treatment of the inferior turbinates on the lines already indicated will give a sufficient breathing space. Whenever this is not sufficient the deviation itself will need treatment. In the ridge-shaped cases, especially when there is bone thickening, a cutting procedure should be undertaken. Under cocaine and adrenalin chloride solution the ridge should be cut away either with the saw, spokeshave, or Moure's osteotome. If the ridge is formed by an acute angle deviation, it is almost certain a communication will be made with the other nostril. This is of no consequence, and in some cases may be an advantage: for instance, those with a collapsed ala nasi from disuse. If the deviation of the septum is localised and rounded, a good result may be obtained with the starring forceps, used in one, two, or more places, according to the area involved. It can be done under gas or ethyl chloride, and when the bone is thoroughly starred, readjustment with Walsham's or any flatbladed forceps, or the finger, is easily accomplished. The difficult cases are those where the whole of the septum is deviated, sinuous from before backward and concavo-convex from above downwards—both nostrils being obstructed and undeveloped from disuse—chloroform or ether is necessary, and Asch's or one of the various modifications of his operation must be performed. The area of deviation must be cut through or fractured in such directions that replacement can be made with straightening forceps and the new position retained without pressure splints. A supporting splint in one or both nostrils is often desirable, and I have found lengths of drainage tubing of various sizes, or a splint cut out of a sheet of rubber, effective for this purpose. They are easily sterilised, cleanly, and better tolerated than most other material. I have long ago discarded the vulcanite and rubber plugs, my results with them being most disappointing.

The splints may as a rule be taken out at the end of the first week, but the patient should be kept under close observation for some weeks. Any tendency to relapse calls for the reinsertion of the support. Care must be taken to prevent adhesions, and if there is any fear of this, a piece of guttapercha tissue should be kept between the opposing surfaces until healing is accomplished.

(2) Deviations of the cartilage of the septum occur generally as a convex bulging to one side. Petersen's and Hajek's methods are efficient, but somewhat tedious and complicated. I have found it sufficient to thoroughly star the cartilage, replace it in position, and keep it there with supporting splints.

(3) Dislocation of the cartilage of the septum and eversions of the median edge of the lateral cartilages are best treated by excision of the projection, the mucous membrane being first incised and reflected.

(4) Exostoses and ecchondroses of the septum are often found in association, the superficial layer being composed of cartilage, the deeper parts of bone. The younger the person the greater the proportion of cartilage. They may occur at any part of the septum, but their favourite sites are the lines of juncture of the bones and cartilage forming the septum. In shape they vary from a small spine or spur to an elongated ridge or crest. The method of removal will depend chiefly upon the size, shape, and density of the projection. In the case of small spines, the galvano-cautery will perhaps most easily achieve the desired result, being bloodless, painless under cocaine, and not alarming to the timid and nervous; or one of the many cutting hooks or ring knives may be used. I, however, generally employ a blunt-pointed bistoury or strong blunt tenotome, both for these and all those of moderate size composed chiefly of cartilage. The larger and denser ones must be removed with a spokeshave, Moure's osteotome, or a saw. If the projection is so shaped that it can be engaged posteriorly with a spokeshave or osteotome, they should be used in preference to the saw; the process is more rapid and less painful, the line of incision is clean, and the fragment is easily removed. I have not yet had occasion to adopt Moure's suggestion to make a groove with the galvano-cautery for the reception of the blade when there is no engaging projection. The saw—Bosworth's or Woakes's, according to the length of the exostosis—should be used for cases unsuitable for the above method. When practicable the sawing should be done from below upwards, the line of the septum should be maintained as far as possible, and it is better to err on the side of cutting too much rather than too little. Scissors or the wire snare may sometimes be needed to complete the severance of the fragment.

Of treatment by electric trephines, burrs and saws, and electrolysis I have no experience.

(5) Combinations of exostoses and ecchondroses with deviations—the most common of all—should be treated by a combination of cutting away and straightening, if free removal of

the thickened portion is not sufficient, according to the principles enumerated above.

In all these cutting procedures hæmorrhage must be taken into account. It can usually be restrained during the operation by the application of adrenalin solution, and afterwards by a strip of gauze soaked in this solution and introduced into the nostril. This should be removed as soon as loose—about forty-eight hours afterwards—and the nostrils kept clean and aseptic by the frequent use of an alkaline antiseptic wash or spray. It is most desirable that the patient be kept under observation until healing is complete, often a matter of some weeks.

(B) Hypertrophy of the mucous tissues over the septum is rare and seldom sufficient of itself to cause any great degree of obstruction. I have seen a few cases where it was very marked, but a satisfactory result was obtained by the use of the galvano-cautery.

Lastly, I wish to speak of adhesions between the septum and turbinal bodies, the result of previous ulceration, traumatism from the rough use of forceps in removal of polypi, and chemical agents. One of the worst cases I have seen was from the treatment of mucous polypi by rubbing with solid nitrate of silver. The septum and inferior turbinate were closely welded together, and it was infinitely more difficult to overcome this than to remove the polypi. The adhesions should not only be freely divided with scissors, but if practicable some of the turbinal tissue should be excised. Trichloracetic acid should then be applied to the raw surfaces, and a piece of gutta-percha tissue kept between them until healing has taken place.

Owing to the extent of the subject, and the limited time allowed, I have had to deal briefly with many important points, and to omit much detail. I have given my own personal experience, and trust that, although I have enunciated but little that is new, I have raised questions sufficient to stimulate and promote some discussion.

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II.—A. Brown Kelly, D.Sc., M.B., C.M.,
Surgeon for Diseases of the Throat, Nose, and Ear, Victoria Infirmary, Glasgow.

Dr. Kelly said: The part of our subject of discussion to which I desire to direct your attention is the treatment of swelling and hypertrophy of the inferior turbinate.

It might not be amiss to preface my remarks by a consideration of how we should act when turbinal enlargements are associated with certain other morbid conditions. I would refer first to adenoids. In children there is no doubt that the treatment of the naso-pharynx should take precedence of any intranasal measures that may at first seem necessary, and that the latter should be delayed until the effects of the adenoid operation have been observed. In adults the question of procedure is more difficult. Thus we not infrequently meet with a case presenting the following symptoms: susceptibility to colds, post-nasal catarrh, and tendency to buccal respiration. On examining the patient we find little or no evidence of intranasal disease, and in the naso-pharynx only a small mass of adenoids which just hides the choanal arches. Are we to attribute the symptoms to intermittent swelling of the inferior turbinates, to the adenoids themselves, or to the influence which some writers suggest is exercised by the adenoids in causing passive congestion of the turbinates? After observing the results of treatment in a number of such cases, I have come to the conclusion that a small mass of adenoids in an adult plays an insignificant part, if any, in producing the symptoms mentioned and in maintaining turbinal engorgement. Attention to the intranasal affection will therefore be of primary importance in these cases.

The association of a spine or deviation of the septum with turbinal enlargement—especially in a patient in whom only mild measures are permissible—may lead one to speculate as to whether treatment of the turbinate alone cannot suffice. Until comparatively lately there has been a tendency to avoid interference with the septum owing to the severity of the measures necessary and often unsatisfactory results, and to aim at obtaining the desired patency rather by sacrificing the turbinate to a greater or less degree. On the other hand, some rhinologists, believing that a septal outgrowth excites hypertrophy in the turbinate opposite—a view which is not supported I think by clinical evidence—have regarded the treatment of the septum as essential. Between these two extremes a middle course is to be steered. In general terms, septal and turbinal affections should be treated as far as possible according to their respective requirements.

The futility of treating a swollen turbinate in the presence of an accessory cavity suppuration need only be mentioned.

It is often a matter of considerable difficulty in treating pathological states of the inferior turbinate to determine how much should be done. This is particularly so when an intermittent congestive condition is present which gives rise to pharyngeal symptoms only, and is unaccompanied—at least, so far as the patient has noticed—by nasal obstruction. Rhinoscopy in such cases may yield a false impression as to the patency of the nasal fossæ, if it be not borne in mind that the psychical disturbance—excitement, mental tension, or whatever it may be—during the examination exercises a peculiar influence on the inferior turbinates, whereby they become collapsed. Under these circumstances, although we may feel fairly sure that the symptoms are of nasal origin—or, rather, that they are not of pharyngeal origin—it is desirable, before beginning operative measures, to obtain evidence of the suspected stenosis. For this purpose a drug having local vasodilator properties would be invaluable. In the meantime we must trust to the patient, and ask him to test for a few days the patency of each nasal passage from time to time, especially while lying in bed, for then the turbinates, more particularly that on the side upon which he lies, show the greatest tendency to engorgement. Sometimes we may chance to see the abnormal swelling if an examination be made at the end of the visit, or at a second visit, when the patient has become more accustomed to his surroundings. Exceptionally, we meet with persons whose statements as to the presence or degree of nasal obstruction are exaggerated or unreliable. Thus, sufferers from cardiac disease may attribute their dyspnœa to a supposed nasal affection, and hysterical, neurasthenic, and asthmatic individuals may complain loudly of insignificant obstruction. In these cases it is often extremely difficult to decide as to whether the local condition has played a part in producing and maintaining the dyscrasia, or is merely an expression of the general loss of tone and heightened reflex irritability from which the patient temporarily suffers. In regard to asthma, I have seen so much benefit follow comparatively trivial intranasal procedures that I feel encouraged to operate when the indications are slighter than would warrant similar measures in non-asthmatics. Upon considerations such as these should be based not only the diagnosis but also the estimate of the amount of treatment to be carried out at each sitting.

Various medicaments, chiefly astringents, vaso-constrictors, antiseptics, and alteratives, have been recommended for the reduction of turbinal engorgements. The benefit derivable from these is limited and temporary, and is best seen in cases in which the nasal affection is secondary to a constitutional disturbance.

For the more obstinate cases of swelling, as also for moderate degrees of hypertrophy of the inferior turbinate, recourse must be had to other measures. Amongst those that have been advocated are bougies (Wagner), tents (Solis-Cohen), elastic balloons distended with water (Dionisio), injection into the enlarged turbinal of ergot (De Blois), carbolic acid (Henderson) or zinc chloride (Viollet), scarification, electrolysis, massage, compressed air (Massei), and hot air (Lermoyez and Mahu).

Without denying a possible value to these methods in some instances, experience has proved that cauterisation yields with most ease the best results in the largest number of cases. The agents that have been found most suitable for cauterisation of the nasal mucous membrane are the galvano-cautery and chromic acid; trichloracetic acid, for which so many advantages have been claimed, is inferior to chromic acid excepting in non-toxicity.

The galvano-cautery and chromic acid may be used interchangeably, although, as a rule, one or other is to be preferred in each case. Thus, for turgescence, slight hypertrophies, and in sensitive patients the cautery is probably the better agent; when catarrh is a prominent feature, chromic acid is more efficient (M'Bride); and, when the hypertrophy is consider-

able, both cautery and acid may be advantageously employed at the same sitting.

Little need be said as to the manner of carrying out what to most of us is an everyday procedure. It is commonly recommended to make three parallel furrows along the inner surface of the inferior turbinate. This, I believe, is rarely necessary; and I would deprecate the great destruction of glands thus caused. If the cauterising agent be applied along the lower edge of the turbinal, where the glands are scantier, the desired reduction will be effected in the majority of cases and with greater impunity. The depth to which the cautery point is to be plunged, and the thoroughness with which the chromic acid is to be rubbed in, will depend upon the amount of enlargement present. No after-treatment is called for beyond the insufflation of an antiseptic powder and confinement indoors for the remainder of the day. An alkaline wash may be used afterwards if the discharge becomes abundant or tends to form crusts.

A second cauterisation should not be made until the wound caused by the first has healed and the cicatrix contracted. This requires three weeks or longer, the duration of the process depending largely on the patient's constitution. There is considerable diversity of opinion as to the frequency with which cauterisation should be repeated. In the majority of cases two applications to each side should suffice, and it is very exceptional that more than three are needed. The patients in whom I have had greatest difficulty in effecting the necessary reduction were boys of from 8 to 12 years of age, in several of whom asthma was a prominent symptom; the intranasal appearances in these cases were in no way unusual.

One should be chary of treating medical men who are attending cases of influenza. In several instances I have seen a severe attack of this disease follow cauterisation in such a manner as to suggest a relation.

When the inferior turbinate presents large hypertrophic masses their direct removal is preferable to slow destruction by cauterisation. Of the instruments recommended for the treatment of this condition the galvano-cautery snare is the best. The cautery snare is usually applicable to hypertrophies of the anterior end—with or without the aid of a transfixion needle—to those along the lower edge of the inferior turbinate, and to the masses occasionally found on the outer side of this body which are brought into view with the probe. The posterior end, on the other hand, cannot always be encircled owing to the narrowness of the nasal chamber and the thickness of the ligature tube. In these cases the cold snare, which is more easily manipulated, should be tried.

To catch the hypertrophied posterior end of an inferior turbinate is sometimes a matter of considerable difficulty. It should be carried out, when possible, as it usually is, under anterior rhinoscopy; failing this posterior rhinoscopy may be employed, and if the latter also prove impracticable attempts should be made to hook the mass in the loop of wire, the feeling of resistance being our guide. The introduction of a forefinger into the naso-pharynx to place the loop in position is unnecessary and extremely disagreeable to the patient.

At one time I believed—what is still current in many text-books—that it was necessary in this operation to employ an *écraseur*, and to constrict the mass very slowly in order to avoid excessive bleeding. Experience showed, however, that this was by no means a safeguard. Subsequently I abandoned the *écraseur* in favour of an ordinary snare with which I am in the habit of severing the hypertrophy in two or three minutes instead of an hour or more as previously; I have noted but slight, if any, increase in the hæmorrhage since adopting this plan. I would repeat, however, that the galvano-cautery snare, when applicable, should be used in these cases. The operation with the cold snare is followed as a rule in half an hour to an hour by bleeding. The patient should be warned of this, and instructed as to the measures to be adopted in the event of the hæmorrhage becoming profuse (for example, pediluvia, sucking ice, and recumbent posture). I have performed this small operation over 200 times, and although I apply neither styptic nor packing to the bleeding surface afterwards, I have had no alarming hæmorrhage nor one requiring my personal attention.

In dealing with these posterior hypertrophies it is well to keep the following facts in view: (1) That no amount of treatment applied to the anterior two-thirds of the turbinal will appreciably lessen the size of the posterior third. (2) That removal of a hypertrophied posterior end is not infrequently followed by subsidence of the swelling of the rest of the turbinate. The snaring of the posterior end should therefore be undertaken at an early stage in the treatment of these cases. (3) That after removal of what at the operation appeared to be the entire posterior end, considerable enlargement may still be present when healing has taken place. This is probably due to swelling of the parts immediately anterior to the line of section. It is therefore advisable when removing a posterior end to include a tapering portion of the soft tissues along the lower border of the posterior third of the turbinal. (4) That after removing the posterior end on one side, that on the other, which previously appeared normal, may become enlarged.

Hypertrophied parts of the inferior turbinate may also be removed by scissors, cutting forceps, or the spokeshave. These instruments, however, are inferior to the snare in adaptability, precision, or hæmostatic action.

The spokeshave, or ring-knife as it was originally termed, was introduced for the removal of the hypertrophied posterior end of the inferior turbinate. This instrument might have retained an irreproachable place in our armamentarium had its use been restricted to that for which it was designed. Unfortunately, it found a wider application, and was modified in order to remove not only the hypertrophied mucous membrane but the whole or greater part of the turbinated body. The operation of turbinotomy has not redounded to the credit of British rhinology, and at present I would merely have disclaimed any partiality for it had the suggestion not been made that the subject should form part of our discussion. The following may be mentioned as some of the objections to turbinotomy: 1. That in aiming at the improvement of certain functions it removes the organ chiefly concerned in the performance of these functions. 2. That it accomplishes no more than can be attained by milder measures, and, I would ask, Which of us would submit to turbinotomy in preference to treatment by snaring or cauterisation? 3. That there is the liability afterwards to dryness of the mucous membrane of the upper air passages. I am told on good authority that even ozæna may be a sequela, but of this I have no personal knowledge.

I might here remark that any operation whereby the nasal fossæ are made unduly free may be followed by abnormal dryness of the parts below. There are few conditions of the upper respiratory tract in which the rhinologist feels so helpless as that of wide nasal chambers with pharyngitis sicca and tendency to laryngitis. Caution, therefore, is always called for, but especially I think in dealing with advanced cases of polypoid rhinitis in which the obstruction is due to inert hypertrophic masses, the tissues of which appear to have lost their characteristic expansile and contractile properties.

Is complete turbinotomy ever indicated? The only cases in which I can conceive it might be are those of great deviation of the septum as a whole in a very narrow nose; it might then be beneficial to remove the rudimentary inferior turbinate from the narrow side. The only occasion on which I attempted a complete turbinotomy was when operating in nasal fossæ such as described. The patient presented a most unusual group of symptoms, namely, occlusion of the narrow side by swelling of the inferior turbinate, accompanied by severe pain in the corresponding eyeball and marked contraction of the pupil, whereas, when the narrow nasal fossa was patent the pain in the eye was absent and the pupils were equal in size.

Turbinotomy probably owes the support it receives chiefly to two reasons:

1. It effects the removal of the enlarged posterior end of the inferior turbinate and secures the benefit resulting therefrom.

2. As stated by one of its advocates, it demands only ordinary dexterity, while the snaring of a posterior end, on the authority of the foremost writer on rhinological technique is one of the most delicate operations in the nose.

Anterior turbinectomy, or removal of the anterior third of the inferior turbinate, is highly commended by several writers.

By this method a satisfactory breath channel may sometimes be established when the fore part of the septum is deviated. I consider, however, that the treatment of a pure turbinal enlargement need never include the removal of bone as is practised in this operation.

Time does not permit of my doing more than mention the importance of general treatment. Continued exposure to a vitiated atmosphere, an error in diet, or the neglect of a diathesis, or systemic disease, may go far to nullify local treatment, however well carried out.

### III.—C. A. Parker, F.R.C.S.,

Surgeon to the Throat Hospital, Golden Square.

Mr. Parker said: The methods of operating for the relief of nasal obstruction have been fully dealt with by various authorities during the last few years, and therefore I will not touch on this part of the subject, but will consider briefly some of the indications for operative interference.

I have recently made some observations on the directions of the air currents in the nose, an account of which has been lately published in the *Journal of Laryngology*, and therefore I shall only allude to them in so far as they bear on the subject of this discussion.

The method I employed for ascertaining the direction of the inspiratory air current was to blow lycopodium into the air the patient was breathing, afterwards noting the distribution of the powder in the nose, and for expiration I noted the course which tobacco smoke took on being exhaled through the nostrils.

In the normal nares the distribution of the powder on the mucous membrane showed without any doubt whatever that the current of inspired air passes upwards and backwards through the middle and superior meatus, entirely missing the inferior meatus; that it then sweeps over the vault of the naso-pharynx, and passes down the posterior wall of the pharynx to about the centre of its oral portion, from whence it takes a straight course on to the arytenoids.

In expiration the air, as shown by the smoke, takes a lower course, passing chiefly through the inferior meatus.

Having determined the airway in the normal nose, I next examined by the same methods cases in which various abnormalities existed, by doing which many points of interest and usefulness were suggested. The chief points to be kept in view in considering a case of nasal obstruction, and in determining what, if any, treatment should be adopted, are:

1. Difficulties of inspiration.
2. Difficulties of expiration.
3. The efficiency of the drainage of the nose.
4. The possibility of the abnormality being a source of chronic inflammation.

1. Difficulties of inspiration. In considering this question, I wish first to point out that the use of lycopodium may be applied for practical purposes. In normal nares the powder is deposited on the septum in a broad band curving upwards and backwards through the middle and superior fossæ, and it is also seen on the anterior end and under-surface of the middle turbinate, whereas in obstructed nares the powder is diverted from its usual course, and the hypertrophy, spur, or deviation causing the obstruction is thickly coated with powder. It is thus possible to see, and to limit the operation to, the exact portions which require removal in order to establish free inspiration. This may be of great importance, for, seeing that the inspired air does not come into direct contact with the inferior turbinate, it is probable that the mucous membrane covering the structures in the middle and upper passages has more to do with warming and moistening the air than is generally supposed. Speaking generally, it may be said that any abnormality situated or projecting in front of a line drawn from the floor of the nose, just within the vestibule, to the anterior end of the middle turbinate, will cause difficulty of inspiration, and should therefore be removed.

The principal abnormalities, excluding tumours and specific diseases which may cause inspiratory obstruction, may be tabulated for the purposes of description as follows:

(A) Alterations in the inferior meatus: (*a*) Dislocations and thickenings of the anterior end of the septal cartilages; (*b*) spurs of the septum; (*c*) tumefaction and hypertrophy of the inferior turbinate. (B) Alterations in the middle meatus: (*a*) Simple deviations of the septum; (*b*) deviations with spurs; (*c*) enlargements of the middle turbinate. (C) Alterations in the post-nasal space: (*a*) Adenoid hypertrophy; (*b*) new growths.

These abnormalities will be mentioned more in detail under their respective headings.

(A) Alterations in the inferior meatus.

(*a*) Of the anterior end of the septal cartilage. Dislocations and thickening of this part of the septum are a most fruitful source of obstructed inspiration and obviously require operative treatment. Whilst operating, the normal air course should be borne in mind and sufficient of the cartilage removed to give a free air way from the nostril to the middle meatus. To effect this it is necessary to take away not only the lower protruding part, but also any thickening which may exist higher up towards the middle meatus.

(*b*) Spurs of the septum. When situated in the lower meatus spurs seldom give rise to any inspiratory difficulty. The majority of them are situated low down and far back, and do not project in front of the imaginary line already defined, and on applying the lycopodium test the powder is seen to have taken its usual upward course, leaving the spur untouched. Occasionally, however, a spur may project in front of the line and cause obstruction, in which case the lycopodium will be diverted from its usual course, and the projecting portion of the spur will be thickly coated with powder. Under these circumstances operation is clearly indicated, and sufficient of its anterior end must be removed to restore a free passage from the vestibule to the middle meatus.

(*c*) Enlargements of the inferior turbinate. The normal path of inspired air being through the middle and upper passages, it follows that the inferior turbinate may be considerably enlarged without in any way interfering with inspiration—a fact constantly observed in practice. Sometimes, however, the anterior end is enlarged in a forward and inward direction, and crosses the line drawn from just within the vestibule to the anterior end of the middle turbinate, in which case it will cause obstruction and operative treatment is indicated. In doubtful cases the use of lycopodium is helpful, for if the anterior end is covered with powder it is probably a source of obstruction, as normally none should be seen there.

As regards the posterior end we shall see presently that its enlargement is more likely to cause difficulty of expiration, but excessive enlargement may also obstruct inspiration. In either case operation is indicated. As regards complete turbinectomy, I do not consider it ever necessary for the relief of inspiratory difficulties.

(B) Alterations in the middle meatus.

(*a*) Deviations of the septum. These are far more productive of inspiratory obstruction than spurs, and unfortunately are harder to deal with. By the use of lycopodium it is seen that even slight deviations may considerably interfere with the air way, and especially those which involve the cartilaginous septum, and in which the greatest convexity of the bulge is situated towards the front part of the middle meatus. These slight cases cause considerable difficulty to the patient and marked cases may be productive of complete stenosis; in either case, therefore, operation is indicated. The best method of dealing with the slight cases is a matter of some doubt, for the departure from normal is often so small that one hesitates to perform an extensive operation. In several cases I have found the free application of the cautery enough, and in others I have obtained sufficient room by taking off the smallest shaving of the mucous membrane and cartilage with a knife. In marked cases I prefer the method described by Dr. Lack in Watson Cheyne's new volume.

(*b*) Deviations with spurs of the septum. These deformities are also productive of obstruction. There are two varieties to be considered, first, a simple spur lying in the lower meatus with a deviation obstructing the middle meatus, and secondly a deviation the convexity of which is thickened into a spur. In the former variety it is the deviation which causes the obstruction and requires treatment; the spur as a rule is below the air current and may be left alone. The use of lycopodium will determine whether the spur is adding to the obstruction and if so to what extent it should be removed. In the second variety operation is usually indicated, and it is generally possible to remove sufficient of the thickened septum to establish

a free air-way without making a perforation. If, however, in the course of operation the saw penetrates the opposite side to any extent, removal should be abandoned and the operation continued as for simple deviation.

(c) Enlargements of the middle turbinate. Seeing that in normal nares the air traverses the superior meatus, enlargements of the middle turbinate when sufficient to cause obstruction between the middle and upper passages seem to assume more importance than is generally attached to them. Enlargements are met with in three distinct classes of cases, first, in rhinitis sicca, secondly accompanying muco-purulent rhinitis, and thirdly in cases of commencing or established polypus.

In dry rhinitis the enlargement may be caused by foreign particles in the air impinging on a dry mucous membrane and producing chronic inflammatory thickening, but I would suggest that the enlargement may also be the cause of the dry rhinitis, for the superior meatus being blocked, all the air must pass through the middle meatus, and thus the warming and moistening powers of its mucous membrane may be overtaxed. I would, therefore, further suggest the advisability in these cases of restoring the air way from the middle to the superior meatus by amputating the anterior end of the middle turbinate.

In muco-purulent rhinitis accompanied by enlargement of the middle turbinate there is sometimes a distinct set of symptoms; the discharge is very profuse and sticky and is voided with great difficulty, the voice has a distinct nasal *timbre*, and the patient complains of inability to breath through the nose. This last symptom is more subjective than real, for, on being told to do so, he can close the mouth and breathe fairly freely through the nostrils. On examination the inferior meatus is often found to be unusually roomy, but the middle turbinate is much enlarged and surrounded by thick muco-purulent discharge. This set of symptoms I consider to be an indication for removing the anterior end of the middle turbinate. The nasal voice and the difficulty of nasal inspiration will be at once relieved, and with appropriate treatment the discharge will soon cease.

The third variety of enlargement of the middle turbinate does not come within the limits of this discussion.

(c) Alterations in the post-nasal space.

When it is remembered that normally the air current sweeps over the roof of the naso-pharynx, it is readily seen that any hypertrophy or growth springing from the roof will be a source of obstruction. The fact that quite small pads of adenoids, even in adults, cause obstruction is thus readily explained, and the importance of their removal is obvious.

2. Difficulties of expiration. From the results of the smoke test and from the patient's subjective sensations it is evident that it requires far greater abnormalities to interfere with expiration than it does to impede inspiration. In expiration the air stream, though normally passing through the inferior meatus, seems easily diverted into the middle meatus when the former is obstructed; in inspiration, on the other hand, even slight abnormalities which divert the air stream cause considerable discomfort. This difference may perhaps be accounted for by the fact that inspiration is due to muscular action whereas expiration is the result of elastic recoil. Anyhow there may be great obstruction of the inferior meatus without any difficulty of expiration, but if there is obstruction of the middle meatus as well then expiratory obstruction will be complained of. This I have proved by plugging the inferior meatus with cotton wool and watching the course of exhaled smoke. The smoke finds its way through the middle meatus and no sensation of obstruction is experienced, but if in addition the smallest piece of wool is inserted into the middle meatus, both inspiration and expiration at once become difficult. Hence it is evident that operative interference in the inferior meatus is seldom indicated for the relief of expiratory obstruction. There is, however, one abnormal condition which often obstructs expiration whilst leaving inspiration comparatively free, namely, enlargement of the posterior end of the inferior turbinate. If this enlargement is at all considerable it will block the inferior meatus and partially obstruct the middle, thus producing a condition which would naturally be expected to produce such symptoms. When, therefore, the difficulty of expiration is in excess of that of inspiration, enlargement of the posterior ends of the inferior turbinates should be suspected.

3. The efficiency of the drainage of the nose. The efficient drainage of the nose is as essential to the health of the nasal cavaties as is the free air way. It is therefore important to inquire in what way intranasal abnormalities may interfere with this important process. From careful observations it seems probably that the secretions gravitate to the inferior meatus, whence they are expelled in an unobstructed passage by the expiratory air stream on blowing the nose. If the inferior meatus is obstructed in any part of its course the expiratory air stream is, as has already been pointed out, diverted into the middle passage, at the same time losing much of its force, and hence the secretions collect in the lower passage causing irritation, chronic inflammation, and much discomfort to the patient. Again difficulty of both inspiration and expiration are often met with in cases which the intranasal abnormalities are limited to the inferior meatus. On examining such cases carefully the middle meatus is found to be full of secretions—often muco-purulent and sticky—which are voided with great difficulty and which consequently collect and cause obstruction. The abnormalities in the lower meatus are found to be very marked, and to be such as to prevent the discharges gravitating from the middle to the inferior meatus.

Operation for the relief of an obstructed inferior meatus is therefore indicated in those cases in which secretions are found collecting in either the inferior or middle fossæ. The conditions which may require operation are enlargements of the anterior end of the inferior turbinate or of its posterior end, true hypertrophic outgrowths of the inferior turbinate and some few spurs of the septum. It is never necessary to remove the whole of the inferior turbinate as the anatomical widening of the middle part of the inferior fossa always allows sufficient room for both expiration and drainage.

It is seen, therefore, that as regards the respiratory function of the inferior meatus operative measures are seldom necessary, but for the purpose of drainage it is often advisable to establish a freer passage.

4. The last point for consideration is the possibility of nasal obstruction being a source of chronic inflammation. It is more or less an accepted doctrine that spurs, for example, may by their mere presence give rise to chronic rhinitis, and, secondarily, to chronic otitis, pharyngitis, laryngitis, or bronchitis. From closely observing these cases I am of opinion that spurs never cause chronic rhinitis and its sequelæ unless they interfere either with respiration or the efficient drainage of the nose. Of all intranasal abnormalities I should say that spurs projecting into the inferior meatus are the most innocent. To bear this out one only has to remember the vast number of spurs which cause no symptoms whatever. Apart from the question of respiration and drainage, the only indications for their removal are hay fever and hay asthma. In these troubles, owing to the sudden engorgement of the inferior turbinates, it is possible that spurs may still further increase the obstruction and add to the irritation. In hay fever and hay asthma complete turbinectomy is also occasionally indicated.

In conclusion, I would suggest the following points more especially for discussion:

1. That even slight abnormalities occurring in the middle meatus are of more importance than great abnormalities in the inferior meatus.

2. That abnormalities causing obstruction between the middle and superior meatus are productive of harm, and may require treatment in order to restore the air way.

3. That in view of the fact that the inspired air does not pass directly over the inferior turbinate, it is probable that the mucous membrane covering the structures of the middle and upper passages shares the important function of warming and moistening the inspired air, and consequently—

4. That operative interference should be strictly limited, no more of the parts being removed than is absolutely necessary to restore the natural air way.

5. That the inferior meatus is the natural channel for the drainage of the nose, and that removal of obstructing abnormalities is often necessary to render it efficient for this purpose.

### IV.—M. P. Mayo Collier, M.S., F.R.C.S.,

Senior Assistant Surgeon to the North-West London Hospital.

Mr. Mayo Collier took exception to Mr. Marsh's definition of nasal obstruction as "inability to breathe freely and equably at the same time through both nostrils." The words "at all times" should be added to this definition to render it complete. He had frequently drawn attention to a numerous class of cases in which the obstruction was almost entirely nocturnal, coming on when the patient lay down in bed, and being most marked in the dependent nostril. He suggested the term latent nasal obstruction as suitable for such cases The spongy tissues of the turbinates, when atonic and relaxed, were almost of the nature of a water bed, and filled up rapidly as soon as the body assumed a horizontal posture. Such cases required not only general treatment, but the application of the galvano-cautery to several points of the tissue to pin down the covering and lessen the tendency to obstruction.

### V.—L. H. Pegler, M.D.,

Surgeon, Metropolitan Ear, Nose, and Throat Hospital.

Dr. Pegler, in endorsing Mr. Mayo Collier's remarks, quoted from a paper read by him at the Ipswich meeting, and said he thought the term "nasal insufficiency" aptly described the condition existing in narrow noses which were free from genuinely morbific processes, and in which the choanæ were not blocked by swellings in the naso-pharynx. Owing to the varying vascular condition of the intranasal structures, absolute obstruction was hardly ever seen in the cases under discussion. He referred to obstruction of the vestibule from displacement of the mesial crus of the lower lateral cartilage, and showed the instruments he had devised for operating in this condition. Impediments in the middle meatus were often troublesome owing to their association with septal deflection, and he preferred to make room in the lower meatus rather than sacrifice a middle turbinal that was not greatly hypertrophied. If after removing the anterior part of the lower turbinal he found that a septal deflection interfered with the result he never hesitated to remove the rest of the body, and he had never regretted a complete operation, although incomplete ones had given him endless trouble. Obstructions in the back part of the inferior meatus were most difficult to treat. Not infrequently there was bony contact between the inferior turbinal and the septum in this part, and in such cases the spokeshave could easily be brought out at the point where the contact ceased. Septal thickenings might be due to the pressure of an inferior turbinate, and would disappear when the pressure was removed. A recent case in his own practice illustrated this. He commended Moure's operation on the septum but deprecated routine procedures of any kind in these cases. Each one should be studied on its merits and treated accordingly. He preferred the solid rubber splint to any kind of hollow one.

### VI.—Watson Williams, M.D.,

Laryngologist to the Bristol Royal Infirmary.

Dr. Watson Williams thought it most important to consider every case on its own merits, for the same degree of obstruction would in one patient cause severe symptoms, and in another none at all. Subjective symptoms varied immensely, and especially the nervous depression, which was so marked a feature in some cases. He thought Mr. Collier's group of "latent" cases was an important one. They were often associated with or caused by gout, rheumatism, and various gastro-hepatic disorders in which there was vascular atony. General treatment, such as Turkish baths, a visit to a spa, or a course of nervine tonics was indicated in such cases rather than surgical treatment. Even when operative treatment was necessary complete relief could often be obtained by very slight measures, such as anterior inferior turbinotomy. In others more radical measures, such as Asch's operation, might be necessary. Very rarely in his experience was complete turbinectomy called for.

### VII.—StClair Thomson, M.D., F.R.C.S.,

Assistant Physician for Diseases of Throat, King's College Hospital; Physician, Throat Hospital, Golden Square; Surgeon, Royal Ear Hospital.

Dr. StClair Thomson thought the papers of the introducers marked real progress in rhinology. With regard to "latent," "intermittent," or "congestive" cases, he had found them sometimes associated with a tendency to emphysema, asthma, and hepatic trouble. In other cases the affection was reflex, and due to distant irritation, such as pelvic mischief. Iodides were useful in asthmatic cases. He agreed with Dr. Kelly regarding the removal of posterior hypertrophies, but thought it was often difficult without the finger in the naso-pharynx. They owed a debt of gratitude to Dr. Wyatt Wingrave for first prominently directing attention to turbinal varix. Mr. Parker's remarks on defective nasal drainage were important, and might explain some cases of muco-purulent rhinitis simulating ethmoiditis, but which could not be traced to any sinus. Operative treatment should be most carefully avoided in cases exposed to influenza infection; he had seen alarming symptoms undoubtedly caused by such infection. Finally, he could not agree that a patient was always better without a useless turbinal: it was better to have slight nasal obstruction than a freely pervious nose and pharyngitis sicca.

### VIII.—W. Milligan, M.D.,

Surgeon, Manchester Ear Hospital; Aural Surgeon, Manchester Royal Infirmary.

Dr. Milligan thought the conservative tendency apparent in nasal surgery of late years was a very healthy one. He wished to endorse Mr. Marsh's remarks about solid rubber splints. As regarded complete inferior turbinectomy, he quite agreed with Dr. Kelly as to the importance of preserving turbinal tissue, but yet in a few cases it was a necessary operation. Minor measures should, however, be tried first, such as removing the anterior third or the posterior extremity of the body. Submucous incision of the inferior turbinal was often extremely useful, and he had sometimes passed a probe armed with chromic acid along the incision, which added a caustic action to the benefit of depletion. Mr. Parker's method promised, if confirmed, most valuable results. It was impossible to prescribe set operations; every case should be studied on its merits, and as much of the interior of the nose preserved as possible.

### IX.—William Permewan, M.D.,

Laryngologist, Royal Southern Hospital, Liverpool.

Dr. Permewan expected great things of Mr. Parker's method as affording definite scientific indications for operation. The air diagrams formerly in use were an attempt in the same direction. Complete inferior turbinectomy was certainly sometimes necessary: sufficient tissue must be removed to relieve obstruction wherever it occurred. He wished to endorse Dr. Watson Williams's remarks on the importance of general treatment in some cases of nasal obstruction.

### X.—Scanes Spicer, M.D.,

Surgeon to Throat Department St. Mary's Hospital.

Dr. Spicer thought Mr. Parker's valuable observations helped to explain why the operculum and subjacent parts were the favourite seat of inflammatory changes, as the dust-laden inspiratory current passed over that region. He preferred the term nasal insufficiency for the slighter cases, including those alluded to by Mr. Collier as "latent" obstruction. "Inadequacy" was, he thought, another good term. A distinctive name was useful by arresting attention. He disclaimed sympathy with indiscriminate turbinectomy, but the operation was an excellent one in suitable cases, and he had never seen any of the bad results attributed to it. Discharge continued for a time, but not permanently. The operation was indicated in some cases of imperfect development of the nose, in certain difficult septal cases (complex deflections, and so on), and in some cases of patients from a great distance who could not afford the time and money required for tedious tentative preliminary treatment. No practical man could disregard such considerations. From the opinions already expressed, he ventured to think that experts would not differ about more than 5 per cent. of the cases of complex structural obstruction.

### XI.—James Donelan, M.B., M.Ch.,

Physician and Laryngologist, Italian Hospital, Queen Square.

Dr. Donelan had found considerable advantage from the use

of a five-grain tabloid of suprarenal substance at bedtime in certain of the "latent" "nocturnal" congestive cases which were not suitable for operation. The patients gained much comfort, and in some cases complete relief for about twelve hours after administration.

XII.—ROBERT HENRY WOODS, M.B., F.R.C.S.I.,
Surgeon to the Throat Department, Richmond Hospital, Dublin.

DR. WOODS referred to the frequency of septal spurs in white races, and suggested that it might perhaps be due to the recession of the lower jaw in man. As the jaw receded the nasal septum became buckled in order to adapt itself between the upper jaw and the brain case. In the lower negroes and in the aborigines of Australia spurs were much less frequent than in white races. As regarded complete turbinectomy it was very rarely necessary. The rule to follow in operating was to remove as little tissue as possible compatible with complete relief of the patient. This implied greater accuracy than was likely to be attained with the spokeshave. The operator should be able to see what he was doing. Posterior hypertrophies he removed with the galvano-caustic snare, preferring it to the cold wire. The cases which Mr. Collier described as "latent" obstruction were the same as those to which he had directed attention some years before as "nocturnal" obstruction. He thought "latent" the better term.

XIII.—HERBERT TILLEY, M.D., F.R.C.S.,
Surgeon to the Throat Hospital, Golden Square.

DR. TILLEY agreed with Dr. Milligan as to the great usefulness of submucous division of the tissues in general hypertrophy of the mucosa of the anterior part of the inferior turbinal. A tenotomy knife answered the purpose, and the edge should be kept well against the bone. He preferred the cold snare in removing posterior hypertrophies, and advised the introduction of the finger into the naso-pharynx under light cocaine anæsthesia. Complete inferior turbinectomy was very rarely advisable: patients sometimes complained afterwards of the impact of cold air in the naso-pharynx, even when there was no special dryness of the throat.

XIV.—SAMUEL DODD CLIPPINGDALE, M.D., F.R.C.S.,
London.

DR. CLIPPINGDALE criticised the use of "nasal inadequacy" and "nasal obstruction" as synonymous terms, pointing out that one of these conditions could exist to some extent without the other.

XV.—C. E. G. SIMONS, M.B., D.P.H.,
Merthyr Tydfil.

DR. SIMONS had performed complete turbinectomy in 3 cases with good results, and there were no unpleasant after-effects. One patient was a keen mountain climber, but he made no complaint of the inspiration of cold air. Turbinal congestion during a menstrual period generally yielded to bromides. Miners suffered frequently from nasal insufficiency, but such cases were better without surgical treatment, as the trouble returned when they went back to work. No doubt the cause was the inhalation of dust.

XVI.—T. MARK HOVELL, F.R.C.S.Edin.,
Aural Surgeon and Lecturer on Diseases of Throat, London Hospital; Consulting Surgeon, Hospital for Diseases of Throat, Golden Square; President of the Section.

THE PRESIDENT thought the discussion marked a distinct advance in the right direction. He had long ago protested against the reckless removal of turbinals by some specialists, and was glad to find the Section endorsing this view. Only when the needful air space was unobtainable by other means was the operation justifiable. He preferred the cold snare for removing posterior hypertrophies on account of the proximity of the Eustachian tube, but he did not tighten the loop slowly, and he had never met with troublesome bleeding. In all adenoid cases posterior hypertrophies should be sought for and removed at the time if found. In most cases a considerable piece came away, large enough if left to have interfered with the success of the operation for adenoids. Cartilaginous obstructions at the entrance of the nostrils he dealt with by shaving them off with a bistoury.

REPLY.

MR. F. MARSH, in reply, eulogised Mr. Parker's original work as likely to afford valuable guidance in treatment. Complete turbinectomy, though rarely called for, was sometimes indicated in cases of asthma with almost complete obstruction. Intranasal structures should be preserved as far as possible, and every case should be considered on its merits.

## PRACTICAL POINTS IN THE TREATMENT OF NASAL SUPPURATION.

By JOHN MACKIE, L.R.C.P.Edin.,
Nottingham.

THOUGH it may not be correct anatomically, it is, perhaps, more convenient clinically to dissociate disease confined to the middle turbinal from disease of the ethmoid cells and to connect it more with allied conditions about the lower turbinal. Adopting this method, my list of 70 cases (See table pp. 876-7) comes out as follows:

| | | | | |
|---|---|---|---|---|
| Ethmoid (single 20, double 24) | ... | ... | ... | 44 |
| Antrum ... | ... | ... | ... | 11 |
| Frontal ... | ... | ... | ... | 8 |
| Sphenoid... | ... | ... | ... | 8 |
| Middle turbinal | ... | ... | ... | 14 |
| Lower turbinal | ... | ... | ... | 6 |

I have given polypi and ozæna in columns, which show polypi present in 31 out of 70 cases, and ozæna in 9.

The ethmoid cases will be seen greatly to predominate. This is not an experience confined to one year's work, and I have long been at a loss to understand the frequent statements that disease of the antrum is more common than that of the other sinuses. With very few exceptions the ethmoid cases are associated with polypi.

There are only 11 antrum cases. As to the causation of these, I strongly suspect that we attach too much importance to dental mischief, and that the specific fevers, and more particularly of late years influenza, is responsible for far more cases than diseased teeth.

In the sphenoid cases, as a rule, I have been unable to fix a beginning or trace a cause. In Case 49, the history given by the patient is interesting. W. B., aged 30, says that three years ago he was seized with an acute illness. His throat got made up, his face swollen, he could not swallow. His medical man, evidently suspecting a quinsy, made incisions in the neighbourhood of the tonsil, but failed to find pus. The patient was ultimately relieved by a violent fit of coughing in which he expectorated a large quantity of foul pus. The swelling at once subsided and relief was obtained. This of course looks very like the course of ordinary quinsy, but ever since then this patient has had daily fits of coughing, with the free expectoration of brown pus, often blood stained. His medical men have generally been able to satisfy themselves that there was sufficient lung mischief to account for these symptoms, and the patient has been treated for consumption. I can however, now demonstrate that this pus comes from the sphenoid, and I have no reason to suspect any other origin for it. Mistakes such as this are, I believe not infrequent, not in sphenoid disease alone, but in other sinus suppurations. It will be noted that ozæna is present in most of the sphenoid cases, and in all cases of ozæna I think it would be well to satisfy ourselves as to the condition of these cells. No. 5 bears on this point.

A. G., aged 26, a young man in a good commercial position, for some time had found himself unequal to his work. He distrusted his capacity, got melancholic, and contemplated suicide. When seen by me he had unilateral ozæna and pus in his pharynx. From the wasted condition of his middle turbinal I had little difficulty in diagnosing sphenoid disease and establishing free drainage. He got immediate relief, his mental condition and business capacity at once improved, and he was soon able to resume his old position in his firm, a position which some time before he had been obliged to resign for one less responsible and less remunerative.

There are 14 cases which I have classed as due to local conditions about the middle turbinal. In these I have not found headache, mental and nervous disturbances less marked than where the sinuses are involved. On the contrary it has seemed to me that a blocked upper naris (from enlargement, cystic or otherwise, of the middle turbinal), is very prone in-

deed to set up nervous disturbance. This, I take it, may be due chiefly to pressure in a sensitive neighbourhood, though the blocking of the anterior outlet from the upper passages and the diverting of a trickling discharge into the pharynx brings with it its own train of consequences.

The following case may be taken as an example of what I speak of:

No. 44, M. L., aged 32, for five years suffered from headache, spasmodic cough, and phlegm in the throat, with feverish attacks about once a month, simulating influenza. Relations were anxious, and the ingenuity of the medical profession was strained to its furthest limit. The patient's bedroom became a museum in which was collected all that is marvellous or impressive in the way of sprays, douches, and temperature takers, over which indulgent relatives presided with unremitting enthusiasm. I found the patient with a blocked upper meatus and pus trickling into the pharynx. I removed the swollen and granular anterior end of a cystic middle tribunal. Almost immediately her symptoms disappeared, and when I last saw her she was a ruddy healthy woman.

The following case No. 35 was, I expect, one of coryza caseosa, described by McBride and others:

Mrs. E., aged 33, had suffered for several years with a stuffed nose, with occasional blasts of offensive odour, but with no very marked or persistent discharge. I found a mass of nodulated, granular-looking material blocking the upper part of the right naris, into which a probe passed with only slight resistance. I removed the whole mass with a hooked curette, letting loose one of the vilest smells I have ever experienced. The removed material was for the most part greyish-white, and of the consistence of over-ripe cheese. The cure was immediate and complete.

In a few instances the focus of disease was in the lower turbinal. One case is interesting as bearing on the relationship between pus and polypi:

Case No. 9, W. C., aged 40, consulted me about a blocked nose and purulent discharge. I found a large polypus growing into the post-nasal space. This I removed with difficulty, owing to the prominence of the posterior half of the lower turbinal. Wishing to secure more than temporary relief, I removed this bulging mass of turbinal, and here show it. Its incurved surface will be seen to present a mass of small polypi. As I satisfied myself that there was no antrum disease to communicate with the inferior meatus, I think we may take this as a case of nasal polypi occurring without sinus disease.

With regard to the cases complicated with ozæna, I may mention that three of these (Nos. 46, 59, and 60) I treated two or three years ago for ozæna as a primary disease. In the case of No. 60 I, however, find noted in my case book a suspicion of deeper mischief. But whether in these cases the ozæna or the sinusitis was the primary disease I cannot say.

*Treatment.*—In this list of cases coming under observation during the past twelve months, it is, of course, impossible to estimate the proportion of cures. In a considerable number I can, however, claim such a result, while in those under treatment the progress is decidedly in that direction.

With the methods of treating nasal suppuration now adopted, I think we can almost promise our patients a cure, provided they are faithful and continue with us to the end. And I am not aware of any disease in which we can rely more on the steadfast co-operation of the patient than in chronic nasal suppuration. The symptoms are so distressing, the result of treatment so marked, that it is the rarest thing for them to grow weary or to fall out by the way.

I do not think that in the earlier stages of treatment, much is gained by an over-minute regard for anatomy, nor even by any great anxiety as to an exact diagnosis. If we have a chronic discharge of pus from the nose, which persists after free drainage has been established by the removal of granulations, polypi, or bony obstructions, in treating for a cure there is only one course left to us. We must lay open the diseased parts. In doing so, provided we keep in clear view the position of the brain and orbit, and provided always that we keep in the path of the pus, there must be only slight danger of accidents. In a long-standing case—say of ethmoid disease with granulations and polypi—the hesitating and timid hand is not likely to meet with much success. To remove what is often a huge mass of disease free and vigorous treatment is necessary. This cannot well be carried out under cocaine, while chloroform and ether are inconvenient in many ways. For some time I have used ethyl chloride in this work. I have found it give in point of time sufficient anæsthesia for all requirements; while it seems free from danger, and after its use your patient gets up and walks away with no bad effects. I would certainly say that the use of ethyl chloride has helped me more than anything else towards the satisfactory and successful treatment of disease of the nasal sinuses.

With pus in the middle meatus, the focus of disease may lie in the middle turbinal, or practically speaking in any of the sinuses—in any combination of them, or in them all. That being so, we are little likely to meet with striking success if we do not in the first instance establish free drainage in this region. When that is done, if the flow of pus continues, at longer or shorter intervals according to the necessities of the case or the convenience of the patient, the disease must be followed up with the punch forceps or curette. By avoiding undue haste in treatment, and by allowing time for the healing process between our operations, I think we are able to conserve healthy parts, which by more precipitate measures may be swept away.

In ethmoid and frontal trouble the necessity for a thorough clearance of the middle meatus is obvious, but I doubt if the same necessity is always recognised in antrum suppuration. To those of us who can recall the difficulties attending earlier and less methodical work here, it is now a pleasure to find how quickly an opened antrum will clear up when thorough drainage has been established through the natural opening.

Mrs. H., No 60, had been treated elsewhere for antrum empyema for over six months. The discharge continued foul and copious, though irrigation was being well carried out with hydrogen peroxide and other solutions. I enlarged the opening in the canine fossa, removed the anterior end of the middle turbinal, and cleared out a blocked middle meatus, and was able to send the patient home at the end of a month some days quite free from discharge. This young lady suffered from unilateral ozæna. In passing through Nottingham recently she called on me. I then found no ozæna, and for over a month she told me she had neither crusts nor smell.

It is not alone that drainage is not so free, but with disease in the middle or upper meatus you may have the antrum filled from above and acting as a reservoir. I actually found this taking place in one or two of my cases.

In all frontal cases the ethmoid cells were also involved. And, whether in frontal disease, it is the proper treatment to open the sinus from the outside as some claim, or, whether it is possible, as doubless many of us have found, to secure a good result from intranasal treatment, for success either way it is certainly essential to clear out the diseased ethmoid cells. If this has been done and pus comes from the frontal opening, by careful curetting and irrigation I maintain you may cure these cases. Certainly in many you relieve the pain and reduce the discharge to a minimum, and it is questionable whether in the average case, we had not better be content with this result than run the risk of an external operation, and perhaps the disfigurement of a fair young face. In one case, which I find I have omitted from my list, where the the pain was excessive, and where I failed to relieve it by intranasal measures, I performed the external operation described by Dr. Tilley, with most satisfactory results.

These remarks are the result of an experience gained apart from the centres of medical study and discussion, and to most here they must appear crude and commonplace, but I hope that they may be accepted as an earnest of honest effort.

Dr. Milligan congratulated Dr. Mackie upon his results and the admirable way in which he had worked them out. Sphenoidal empyema seemed to be very frequent in Dr. Mackie's experience; he would like to know whether his cases showed eye symptoms, and whether he removed the whole of the anterior wall. In his own experience of such cases eye symptoms were generally present. He agreed that a large number of antral cases were due to intranasal causes, and had nothing to do with the teeth. He had had a good many troublesome and unsatisfactory antral cases which went on suppurating more or less for months, so that it was impossible to close the wound. In operating he recommended that the inner wall should be very freely removed below the attachment of the lower spongy bone. With regard to frontal cases, the more he saw of this sinus the less inclined he became to do the external operation. If the *x* rays showed a cannula in the sinus, then intranasal treatment should have a most exhaustive trial. He had found some of these cases most troublesome to the surgeon and most distressing to the patient. He hoped they would get a definite expression of opinion from the Section.

Dr. Herbert Tilley congratulated Dr. Mackie upon the extraordinary wealth of his material, especially in sphenoidal cases. Most would agree that sphenoidal sinus suppuration was much more frequent than had been supposed, and even this sinus was not difficult of access if part of the middle

*Dr. Mackie's Table of Cases of Treatment of Nasal Suppuration.*

| | | Age. | Duration. | Ethmoid. | Antrum. | Frontal. | Sphenoid. | Middle Turbinal. | Lower Turbinal. | Polypus. | Ozæna. | Treatment. | Remarks; Results. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Years. | | | | | | | | | | |
| 1 | R. L. | 24 | 3 | R.L. | — | — | — | — | — | R.L. | — | Forceps and curette | Case gave very little trouble. Cured. |
| 2 | Mrs. S. | 40 | 4 | R. | R. | R. | — | — | — | — | — | Clear middle meatus; open antrum | Frontal still draining; headache and other symptoms gone. |
| 3 | Mrs. H. | 34 | 15 | — | L. | — | — | — | — | — | — | Open canine fossa | Did well, but patient has insisted on keeping in the tube. |
| 4 | C. F. | 30 | 4 | R.L. | — | — | — | — | — | R.L. | — | Curette and forceps | This patient I had treated by the snare for years. Now cured |
| 5 | A. G. | 36 | 5 | — | — | — | R. | — | — | — | R. | Open and irrigate | Melancholia and loss of business capacity. Cured, slight non-fœtid ozæna still. |
| 6 | Mrs. F. | 45 | 2 | — | — | — | — | R. | — | — | — | Forceps and irrigation | Headache and nervous disturbance. Cured. |
| 7 | S. A. | 18 | 7 | — | — | — | — | — | R.L. | — | — | Turbinectomy | Discharge profuse, treated for phthisis. Cured. |
| 8 | Mrs. L. | 21 | 8 | R.L. | — | — | — | — | R. | L. | — | Snare, forceps, and curette | Marked constitutional disturbance. Cured. |
| 9 | W. C. | 40 | 6 | — | — | — | — | — | R. | R. | — | Turbinectomy | Specimen shown with attached polypi. Cured. |
| 10 | Mrs. B. | 47 | 3 | R.L. | — | — | — | — | — | R.L. | — | Forceps and curette | Required a general anæsthetic each operation. Cured. |
| 11 | Mrs. A. | 31 | 12 | R. | — | — | — | — | — | — | R. | Forceps and curette | Ozæna has completely disappeared here. Cured. |
| 12 | E. S. | 28 | 13 | L. | — | — | — | — | — | L. | — | Forceps and curette | Only seen three times. Seemed free on last visit. |
| 13 | F. K. | 30 | 5 | — | — | — | — | — | L. | — | — | Removed papillomatous growth last September | I have just seen this case (July) with polypi in the left middle turbinal region. |
| 14 | G. M. | 30 | 4 | L. | — | — | — | — | — | — | L. | Forceps, curette, irrigation | General ill-health. Improved. |
| 15 | T. E. | 32 | Years | R.L. | — | L. | — | — | — | R.L. | — | Snare, forceps, curette | General health wrecked; improvement marked, but frontal still discharging slightly. |
| 16 | R. E. | 27 | Years | R.L. | R.L. | R.L. | R.L. | — | — | — | R.L. | Irrigation and specific treatment | Not deemed suitable for surgical interference. |
| 17 | Mrs. W. | 37 | 5 | — | — | — | — | R. | — | — | — | Bone cyst broken up, passage freed | Headache. Relieved. |
| 18 | Mrs. W. | 20 | 3 | — | — | — | — | R. | — | — | — | Turbinectomy | Discharge in pharynx most troublesome. Cured. |
| 19 | H. A. | 21 | Years | R.L. | L. | — | — | — | — | R.L. | — | Forceps and curette | Antrum mischief only made out later (July 5th). |
| 20 | Mrs. S. | 48 | Years | — | — | — | — | L. | — | — | — | Turbinectomy | Pharyngitis. Relieved. |
| 21 | Mrs. T. | 42 | Years | R.L. | — | — | — | — | — | R.L. | — | Snare, forceps, curette | Marvellous improvement in general health. Cured. |
| 22 | Mrs. S. | 36 | 4 | — | — | — | — | L. | — | L. | — | Forceps and snare | Bone cyst with enclosed polypi. Cured. |
| 23 | L. A. | 21 | 2 | R.L. | — | — | — | — | — | — | — | | Sent for opinion. |
| 24 | B. W. | 24 | 9 mos. | R. | R. | — | — | — | — | — | — | Disappeared | Again turned up (July 14th); says he has been unsuccessfully treated by herbalist meanwhile. |
| 25 | L. A. | 26 | 3 | — | — | — | — | L. | — | L. | — | Forceps | Middle turbinal distended by cyst blocking upper meatus, discharge into pharynx. Cured. |
| 26 | J. C. | 23 | 4 | R. | — | — | — | — | — | — | — | Forceps and curette | From a distance: only seen once. |
| 27 | Mrs. L. | 32 | 6 | R.L. | L. | — | — | — | — | R.L. | — | Forceps and curette; antrum opened | Troublesome case, but nose now free, and only slight discharge from antrum. |
| 28 | S. S. | 30 | Years | — | — | — | — | R. | — | — | — | Turbinectomy | Chronic pharyngitis. Relieved. |
| 29 | H. E. | 22 | 4 | R.L. | — | L. | — | — | — | R.L. | — | Forceps, curette | Pain relieved, health improved; slight discharge from frontal. |
| 30 | Mrs. W. | ? | Years | R.L. | — | — | — | — | — | R.L. | — | Forceps, curette | Bone cyst in left. Doing well. |
| 31 | W. M. | 31 | Years | R.L. | — | — | — | — | — | R.L. | — | | Case sent for opinion. |
| 32 | Mr. S. | 32 | Years | R.L. | — | L. | — | — | — | R.L. | — | Forceps and curette | Still under treatment. Doing well. |
| 33 | Mrs. H. | 37 | — | — | L. | — | — | — | — | — | — | Forceps and curette; antrum opened twice | Troublesome case, but now practically well. |
| 34 | T. A. | 18 | 4 | — | — | [illegible] | — | R. | — | — | — | Turbinectomy | Atrophic pharyngitis. Improving. |
| 35 | Mrs. E. | 33 | Years | — | — | — | — | R. | — | — | — | Removed granular fœtid mass from middle meatus | Rhinitis caseosa, I presume. Immediate relief. |
| 36 | Mrs. S. | [illegible] | [illegible] | — | — | [illegible] | — | L. | — | L. | — | Forceps and curette | Cystic middle turbinal. Cured, I believe. |
| 37 | B. J. | 28 | [illegible] | R. | — | — | — | — | — | — | — | Forceps | Have only note of one visit. |
| 38 | Mrs. S. | — | — | R.L. | — | — | — | — | — | R.L. | — | Forceps and curette | Treatment for cure declined. Relieved. |
| 39 | Mrs. I. | — | — | R. | — | — | — | — | — | R. | — | Forceps and curette | From a distance; no after-history. |
| 40 | Miss G. | — | 1 | — | — | — | — | R.L. | R.L. | — | — | Irrigation and general treatment | Attacks of vasomotor rhinitis with exophthalmos. Seen only twice. |
| 41 | Mrs. T. | 30 | 16 | — | — | — | — | L. | — | — | L. | Forceps, irrigation | Ozæna and headache. Relieved. |
| 42 | Mrs. B. | — | Years | R.L. | L. | — | — | — | — | R.L. | — | Forceps, curette; antrum opened | Headaches; general health wrecked. Cured, tube still in antrum. |
| 43 | Mr. K. | 28 | 20 | L. | — | — | — | — | — | L. | — | Forceps, curette, irrigation | Headaches (intense) relieved. Frontal discharges sometimes absent for whole days. |
| 44 | M. L. | — | 5 | — | — | — | — | R. | — | — | — | Forceps, curette; pharnyx | Spasmodic fits of coughing. Cured. |
| 45 | Mrs. H. | 48 | Years | — | — | — | L. | — | — | — | L. | Will only submit to irrigation | — |
| 46 | Mrs. W. | 30 | 1 | L. | — | L. | — | — | — | — | — | Forceps and curette | Seen years before for ozæna; no discharge. Frontal seems cured. |
| 47 | Mr. D. | — | Years | R.L. | — | — | — | — | — | R.L. | — | Forceps and curette | Cured, I believe. |
| 48 | Mrs. D. | — | Years | L. | — | L. | — | — | — | — | — | Forceps and curette | Marked improvement. Still under treatment. |
| 49 | W. B. | — | — | — | — | — | R.L. | — | — | — | — | Sent for opinion | Can blow out pus through cannula. Further treatment declined for present. |
| 50 | S. J. | — | — | L. | — | — | — | — | — | L. | — | Snare, forceps and curette | — |
| 51 | H. A. | — | — | R.L. | — | — | — | — | — | R.L. | — | Snare, forceps and irrigation for month | Not seen again. |
| 52 | Mr. R. | 34 | Years | R.L. | — | — | — | — | — | R.L. | — | Curette and forceps | Huge masses removed. Cured. |
| 53 | Mr. M. | 21 | 3 | — | — | — | L. | — | — | — | L. | Middle turbinal removed, irrigation of sphenoid | Marked improvement. |
| 54 | H. M. | 47 | Years | R.L. | — | — | — | — | — | R.L. | — | Snare and curette | Nose completely blocked; now clear of polypi, but slight discharge from sinuses. |
| 55 | Mrs. S. | 55 | Years | — | L. | — | — | — | — | — | — | Opened through canine fossa | Doing well. |
| 56 | Mr. M. | 47 | 20 | L. | — | — | — | — | — | L. | — | Forceps and curette | An old patient of Morell Mackenzie's. Cured. |
| 57 | Miss M. | 21 | 8 | R.L. | — | — | — | — | — | R.L. | — | Forceps and curette | Asthmatic, health much impaired. Improved. Asthma cured. |
| 58 | Mrs. W. | 19 | ? | — | — | — | — | R. | — | — | — | Wishes to try irrigation for two months | Middle turbinal blocking whole upper nares. |
| 59 | W. A. | 23 | 5 | L. | — | — | L. | — | — | — | — | Forceps, curette; sphenoid opened | Treated for ozæna four years old. Relief marked and immediate. |

*Dr. Mackie's Table of Cases of Treatment of Nasal Suppuration.—(Continued).*

| | | Age. | Duration. | Ethmoid. | Antrum. | Frontal. | Sphenoid. | Middle Turbinal. | Lower Turbinal. | Polypus. | Ozæna. | Treatment. | Remarks; Results. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60 | Mrs. H. | 27 | Years 6 | L. | L. | — | — | — | — | — | L. | Middle meatus cleared, irrigation, opening into antrum made elsewhere enlarged | Antrum doing well. Ozæna gone. |
| 61 | Miss S. | 35 | Years | L. | — | — | — | — | — | L. | — | Forceps | Right side been treated and cured in London. Cured. |
| 62 | Mr. R. | 33 | 4 | R.L. | — | — | — | — | — | R.L. | — | Forceps and curette | Headache, depression, loss of business capacity. Doing well. |
| 63 | Mrs. W. | 27 | 12 | R.L. | — | — | — | — | — | R.L. | — | Forceps and curette | Headache marked symptom. Immediate improvement. |
| 64 | Mrs. W. | 43 | 5 | — | — | — | — | L. | — | — | — | Forceps | Blocking and pressure marked. Sent by oculist. Improved. |
| 65 | W. J. | 65 | 4 mos. | L. | — | — | — | — | — | — | — | Forceps and irrigation | Began acutely, with eye symptom and much pain. Nearly well. |
| 66 | H. L. | 25 | 3 | — | — | — | — | — | R. | — | — | Remove posterior end | Pharynx twice curetted elsewhere. Cured. |
| 67 | S. M. | 20 | 2 | R. | — | — | — | — | — | — | — | Sent for opinion | Enlarged thyroid and exophthalmos. |
| 68 | S. L. | 18 | 2 | — | — | — | R. | — | — | — | — | Forceps, middle turbinal removed | Began with measles. Under treatment. |
| 69 | L. J. | 47 | Years | R.L. | — | — | R.L. | — | — | — | — | Treatment deferred | History of discharge since childhood. |
| 70 | C. M. | 22 | 6 mos. | — | R.L. | — | — | — | — | R. | — | Antra opened and drained through sockets | History of injudiciously-stopped teeth. |

turbinal were removed. He thought many frontal cases might be practically cured without external operation. If a patient only required one handkerchief a day it was, he thought, doubtful whether the external operation should be performed, especially in a young unmarried woman. With free drainage into the nose the risk of cerebral complications was small. With regard to the troublesome cases alluded to by Dr. Milligan he thought that if the sinus was not allowed to close after the external radical operation until its internal surfaces were covered with healthy granulation tissue such cases would be less frequent.

Dr. Brown Kelly favoured the external operation in chronic frontal sinus operation, partly because of the good results, and partly because he had never seen a case cured by intranasal methods. Failures of the external operation were due, he thought, either to incomplete removal of the diseased lining membrane, or to associated suppuration in the anterior ethmoidal cells. The great difficulty in distinguishing between these two conditions accounted, he thought, for the variance between published statistics. Some writers described a large number of frontal sinus cases, and but few ethmoidal ones, and others *vice versâ*.

Dr. Scanes Spicer thought the first thing was to make a thorough examination under an anæsthetic with the patient sitting up and with full illumination. The next step was generally the resection of the anterior end of the middle turbinal to promote drainage and render the parts accessible. In chronic antral cases he operated through the canine fossa, made a very large opening into the nose, and resected the anterior half of the lower turbinal. All subsequent treatment was carried out through the nasal opening. The buccal wound was stitched at the time of operation. He was never satisfied with anything less than absolute cure, and he thought it was almost always attainable by perseverance and the thorough application of surgical principles.

Dr. R. H. Woods said he thought dental caries played a larger part in the causation of maxillary empyema than was generally believed. He advocated taking a skiagram as a routine procedure in such cases in order to see if the molar stumps were sound. This could be told with great accuracy if the skiagraph was good.

Dr. Mackie, in reply, said that he thought that sphenoidal disease was much more common than was generally supposed. As far as his cases were concerned, he ought to say that a few of them were carried over from past years, when he perhaps hesitated more both in diagnosis and in treatment than he now did. In the treatment of sphenoid disease he almost thought there ought to be less difficulty and perhaps too less danger than in that of other sinus diseases. In some of his cases there was atrophic rhinitis which greatly simplified diagnosis and facilitated treatment. In other cases, with pus in the upper meatus, he did not see why we should hesitate to remove the middle turbinal, which would clear up matters. In frontal disease, except when by intranasal means they were unable to relieve pain or to modify excessive discharge, he certainly did not advocate an external operation. In one of his cases he had to resort to this, while in another he might do so. But both were cases of exceptional severity.

## A DISCUSSION ON THE LOCAL TREATMENT OF TUBERCULOSIS OF THE LARYNX.

I.—John Middlemass Hunt, M.B.,
Laryngologist, Liverpool Royal Infirmary.

Dr. Hunt said: It is no doubt the fact of the British Tuberculosis Congress being held in London this year, together with the renewed activity in the fight against tuberculous disease that the past year has witnessed, which suggested the subject of to-day's discussion. I find, too, that it is eleven years since the treatment of laryngeal phthisis was discussed by this Section of the Association. In 1890, when a similar discussion took place at the Birmingham meeting, the epoch-making work of Heryng on *The Curability of Laryngeal Phthisis* had not long been published, and English laryngolists were making their earliest, tentative experiments in the surgical treatment of this disease. In the eleven years which have elapsed since then our experience in this direction has grown enormously, and we are now able to pass judgment on the value of those methods of active treatment, which were then only beginning to be employed in this country.

But there is yet another reason why the present time is appropriate for such a discussion. There has been noticeable of late, especially among our American colleagues, a tendency to return to the "bad old times" of therapeutic nihilism in regard to this disease which prevailed before 1880. This seems to me utterly unjustifiable. I admit that all the bright hopes with which the writings of Krause and Heryng inspired us have not been realised, but a great and permanent advance in the treatment of a desperate disease has been made, and we must not go back. Though the number of complete and lasting cures is still admittedly very small, it is no exaggeration to say that thousands of lives have been prolonged and an incalculable amount of suffering averted as a result of the work which has been done in this field.

I regret the complete absence of novelty in what I have to bring before you to-day. I have no new method of treatment nor even a new drug to commend to you. I have simply prepared a brief statement of the principles and methods of treatment which I employ in my own practice, and which are probably identical with those followed by the great majority of the members of this Section.

In every case of laryngeal phthisis coming under my care

I try to determine whether it is one for curative or for palliative treatment. This is not always easy to do. At times cases of limited disease, in which we expect a cure, go to the bad, while in others extensive ulcerations, which appear hopeless, will heal up, and the disease become arrested for long periods.

Curative treatment, as I understand the term, is essentially surgical. It means the removal of all diseased tissues by cutting instruments, or their destruction by caustics, such as lactic or chromic acid.

Palliative treatment includes all antiseptic and local anæsthetic applications, and is only occasionally surgical, as when the necessity arises to relieve dyspnœa or severe dysphagia.

The cases suited for curative treatment are those of limited disease, preferably situated intralaryngeally, and of a hypertrophic form indicating local resistance: cases in which the lung disease is slight in amount, and either stationary or only very slowly progressing, the general health and appetite being good, the patient being free from fever, and of a courageous and hopeful temperament.

Whenever we have extensive ulceration or infiltration, especially with much œdema or perichondritis, where there is high fever, loss of appetite, advancing lung disease, or evidence of the patient being deeply stricken, our treatment must be strictly palliative.

For carrying out curative treatment, I employ the curette, cutting forceps, and lactic acid. Which of these agents we choose for a particular case will depend on the nature of the lesion to be dealt with and on its situation. In my opinion neither lactic acid nor any other application will remove an infiltration covered by unbroken mucous membrane. Wherever we have well-defined, or at least limited, infiltration without ulceration, a mass of granulations, or a distinct tumour formation, the first step must be the thorough removal of the diseased tissue by the curette, followed by an application of lactic acid. These operations are often extremely difficult, far more so than the removal of simple growths, on account of the great irritability of the pharynx in this disease, and are apt to be very painful when performed on parts at the entrance to the larynx. With the simple curette hæmorrhage is trifling, but once or twice I have seen it rather free after using the cutting forceps.

I have never performed the extensive operations advocated by Schmidt, Krause, and Heryng, and in this country by Lake, but have confined my use of the curette and forceps to cases of limited disease, where there appeared to be a reasonable probability of removing the whole diseased tissues by operation.

Other methods of dealing with tuberculous infiltrations, such as scarification with the rubbing in of lactic acid, or the submucous injection of creosote, iodoform emulsion, lactic acid, chloride of zinc, etc., have now been almost entirely abandoned as unsatisfactory in their results.

In the great majority of the cases we meet with, ulceration is already present. If it is superficial and not too extensive, especially when situated on the cords, ventricular bands, or posterior wall, lactic acid alone will usually secure healing. I believe it is still the best application we possess for treating tuberculous laryngitis in the stage of ulceration. I am aware that a recent American writer has spoken of the lactic acid treatment as "antiquated and barbarous," but the only substitute this writer offers us is an emulsion of menthol and orthoform, which, however valuable for palliative treatment, is utterly useless to obtain healing of ulceration or to destroy infiltrations.

There is still some difference of opinion as to how to use lactic acid. We must remember it is not as an antiseptic but as a destructive agent that we employ it in laryngeal phthisis. It is of little use, therefore, to employ solutions of less than 50 per cent., and we should rapidly go on to pure acid. We should not worry the larynx by frequent applications, but having thoroughly rubbed into the ulcerated surface a strong solution, wait till the slough clears off, in a week or a fortnight, before renewing our application. In this way three or four applications will usually bring about cicatrisation. We occasionally meet with cases in which these strong solutions are not well borne, and must then use weaker ones of 20 to 30 per cent., but such cases are very rare in my experience.

In the case of deep, granulating ulcers of limited extent, the lactic acid should be energetically applied in the same manner, but it will often hasten healing if we first thoroughly curette the ulcerated surface.

Unfortunately a large number of the cases we meet with, especially among our hospital patients, only admit of palliative treatment. The extent of the disease and the state of the general health prevent any hope of eradicating or even arresting the disease, but still we can do much to relieve their sufferings. We know that an untreated case of laryngeal phthisis goes more rapidly bad, and with more suffering to the patient, than a treated one. The inflammatory œdema, often the cause of dyspnœa and dysphagia, we know to be due to secondary infection by streptococci and staphylococci. This secondary infection may be prevented, or at least held in check, by the use of antiseptics such as menthol, carbolic acid, iodoform, etc., applied by brushings, sprays, injections, or inhalations. Nearly all these drugs have at some time been recommended to procure the healing of tuberculous ulceration of the larynx, but it is doubtful if any merely antiseptic application will bring about cicatrisation of a tuberculous ulcer.

A difficult question, and one which must largely be left to individual experience, is to what extent we may use surgical means in the palliative treatment of this disease. The incision of an inflammatory œdema of the arytenoid or epiglottis, which was first practised by the English physician Marcet, is a rational surgical procedure which will often relieve dysphagia, and is not followed by ulceration as was at one time feared on purely theoretical grounds.

That the punching out of a painful ulcer on the edge of the epiglottis, or over an arytenoid, is often the most effective way of relieving the terrible dysphagia there is no doubt, and I employ this method where the condition of the patient permits if lactic acid alone does not give the necessary relief. But I am opposed to performing these painful operations in advanced and hopeless cases, where we can at least mitigate the sufferings of the patient by the use of local and general anæsthetics. It is in such cases that Freudenthal's emulsion will be found of value.

With regard to external surgical treatment, tracheotomy will occasionally be required to relieve dyspnœa, though as Schmidt, its most strenuous advocate in this disease, admits, much less frequently now than formerly. The improved intralaryngeal treatment has lessened the necessity for it.

As a curative measure it has now been replaced by thyrotomy in those cases where the laryngeal disease from its extent or situation cannot be completely removed by intralaryngeal operation, there being very little or no disease of the lungs present, and the general health being good. That a partial laryngectomy might be a justifiable operation in certain rare circumstances, such as severe one-sided laryngeal disease with a good general state of health and absence of disease of the lungs, we may admit, but the conditions which justify external operation in tuberculosis of the larynx are so extremely rarely met with, that they need hardly be considered in a discussion on the local treatment of that disease.

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II. Barclay J. Baron, M.B., C.M.Edin.,
Physician-in-Charge of the Throat and Nose Department of the Bristol General Hospital.

Dr. Baron said: Before proceeding with the subject of our discussion, I think we may profitably ask ourselves a question as to the extent to which laryngeal tuberculosis can be looked upon as curable. The day has gone by when we need debate as to whether it is curable, but it is open to us to hold divergent opinions as to the extent to which it is curable. No doubt the optimism which arose after it was clearly demonstrated that certain surgical measures were able to cope with the disease was not quite justifiable and has not been realised. But we now say, with the experience of very numerous cases having been treated, that in a small proportion of cases we are able really to cure the larynx, spite of the well-known fact that recurrence is so apt to take place. Where we do succeed to our entire satisfaction, we only do so where we deal with the patient in whose lungs we are able to bring about a healed cica-

tricial fibroid condition. We can, therefore, only look for cure where we have a favourable pulmonary and constitutional state, and only in a small proportion of all such cases where lung and larynx are both attacked.

Local treatment alone will not, I believe, suffice to effect a cure, and it must always go hand in hand with general treatment. I have seen complete healing of tuberculous ulceration of the larynx where the open-air treatment was thoroughly carried out, lungs and larynx healing *pari passu*, and where the local treatment was of the simplest character. I have never seen local treatment alone do this.

The aim of local treatment is threefold. First to attack and destroy by direct surgical and topical medical treatment the bacilli. Secondly, by giving rest to the affected organ and by protecting its tissues from irritation and inflammation to restore the natural resistance to disease which, if attacked by bacilli, they have largely lost, and so, indirectly, destroy the bacilli; also to help tissues not yet attacked to retain their health and so prevent spread of the mischief. Thirdly, in cases where we are unable to do much in either of these directions, to ameliorate symptoms, of which the most important is dysphagia. The most definite results of local treatment are seen where ulceration has taken place, and where it is legitimate and right to attack vigorously, by instruments, and powerful remedies topically applied, the diseased surface and necrosed structures. It is very difficult to say what amount of good we are doing by the application of local measures in the pre-ulcerative stage of the disease when we know that our remedies must usually reach the affected parts by roundabout channels.

In the early stage of the disease where we are dealing with a laryngeal inflammation, and where the inflammation, if any be present, is so slight as to make it very difficult to diagnose the condition from a simple laryngitis, our treatment should be of the mildest possible character. It should merely consist in giving such instructions to the patient as will give rest to the organ, and in every way should be that suitable for a simple laryngitis.

In the next stage of infiltration, speaking generally, we must shield the larynx from all irritation; for example, avoidance of too much voice use, irritating articles of food and drink, tobacco smoking, the inhalation of irritating chemical substances, and of dust, as in various manufactures, handling vegetables, hides, etc.

The use of soothing and antiseptic substances inhaled: benzoin, creosote, menthol, etc., or sprays of menthol and guaiacol or intratracheal injections of the same is beneficial. Naturally drugs that stop tickling purposeless cough, especially codeine, cocaine, menthol, antipyrin, etc., in pastille or lozenge are of value.

Submucous injections of cocaine, guaiacol, lactic acid, perchloride of mercury, etc., have been recommended during this stage, but I do not approve of this, as I do not believe that we can thereby directly act on the bacilli, nor do I think that we can practise this method without the obvious risk of increasing or setting up inflammation, which makes the tissue less resistant to bacillary invasion. The use of lactic acid applied to the unbroken infiltrated mucous membrane has been recommended, and I have tried it, but I have not seen it sufficiently useful to induce me to continue it.

Some specialists have removed cartilages, for example arytenoids and even the epiglottis, in this stage. I have no personal experience of these severe measures, but I must confess to a feeling of great dissatisfaction with my present methods, and I should like to know from those who have done this if they consider surgical interference admissible in the pre-ulcerative stage as it is after ulceration has taken place.

For the dysphagia which is so often a symptom when the epiglottis is infiltrated, I know of no remedy of recent invention equal to cocaine, or eucaine, and I find that the addition of sulphate of soda to hydrochloride of cocaine, as recommended by Wingrave, much increases the analgesic property of that drug, and so enables us to use effectually a solution of weaker percentage strength. It is a matter of indifference how we apply the drug, by spray, swabbing, or in a pastille. I have not found orthoform, or any other drug, as good as these.

It is in the third or ulcerated stage of the disease that local treatment is most definitely valuable, because the application of surgical methods has enabled us to do a good deal to ameliorate the suffering, if not rid the patient of the disease. Although this is an advanced stage of the disease I do not feel so helpless in treatment as I do in the preceding pre-ulcerative condition.

Our evident task is to destroy bacilli and set up a healthy healing action in ulcerated and necrosed structures by so doing. Seeing that morbid processes are surely, if slowly, destroying the tissues, it is reasonable to act with energy, and the published results of the removal of the diseased arytenoids, and even the epiglottis, go far to induce us to perform these operations more frequently than has hitherto been done. Personally, I usually curette the ulcerated surfaces, and afterwards thoroughly and accurately rub in lactic acid. I think that we ought to begin with a 50 per cent. solution, and as rapidly as possible go on to full strength. This should be repeated after an interval of seven to ten days. I do not believe in using weak solutions daily, as we get practically no good effect at all from them. I have often seen a distinctly anæsthetic effect follow this treatment, presumably from the eschar protecting the nerves exposed by ulceration. I have never seen serious inflammatory œdematous swelling follow its use, although we ought always to bear in mind the possibility of its occurrence, and guard against it by enjoining on the patient rest of the voice for a few days. A great many other substances have been recommended to attain the same end, but I have not found any of them so thoroughly satisfactory as lactic acid.

I have recently seen a case of extensive tuberculous ulceration very successfully treated by Dr. McColl by the daily insufflation of resorcin one part and orthoform two parts, and whilst one cannot come to any conclusion in tuberculosis unless a fair number of cases have been treated, what I saw will induce me to give this method a trial.

What are the contra-indications to surgical interference? First and principally, advanced and progressing tuberculosis of the lung with high temperatures, night sweats, and emaciation. Secondly, acute inflammation of the larynx, especially perichondritis. I have seen serious shortening of life occur in a case of advanced pulmonary phthisis after *curettement* of the epiglottis and rubbing in of lactic acid, due to the pain and worry of the operation, and after it; in fact, so far from diminishing the dysphagia, it increased it, and the patient rapidly deteriorated. We ought, therefore, carefully to select our cases, and only operate on those which give fair promise of cure, always keeping in mind the general condition of the patient. For the relief of pain, cocaine, eucaine, menthol, etc., are all of value, but orthoform insufflated on to the ulcers or used as an emulsion by means of a spray is most satisfactory. The anæsthesia is much longer, and the drug is practically not poisonous. I use guaiacol with menthol in a spray of oily solution, and as an intratracheal injection, but I am very sceptical as to its value as an antiseptic, an analgesic, or a germicide when used in weak solution.

Lastly, ought we to practise tracheotomy in these cases more than we do, in order to give physiological rest to the diseased inflamed organ? We know how beneficial it often is in malignant disease and in syphilitic perichondritis where there is encroachment on the lumen of the glottis, and so difficulty of respiration. Is it so in tuberculosis? I have no personal views to lay before you, but from what I read it is disappointing.

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### III.—Richard Lake, F.R.C.S.,

Surgeon Royal Ear and Metropolitan Ear, Nose, and Throat Hospitals; Surgeon-Laryngologist North London Hospital for Consumption.

Mr. Lake said: I propose to confine my remarks entirely to the question of the operative treatment of laryngeal tuberculosis. The indications, or contraindications, for operative treatment which we shall have to discuss must be considered as applying expressly to the use of scraping and cutting instruments. We may preface the consideration of this subject with a brief summary of the contraindications, as enunciated by Heryng.[1] "Advanced pulmonary phthisis, with hectic and wasting; diffuse miliary tubercle of the larynx; all cachectic conditions; severe stenosis of the larynx, caused by inflammatory

[1] *Journal of Laryngology*, 1895.

swelling: in nervous and timid patients, and especially in those whose condition promises little hope of recovery." I desire to take this opportunity of apologising to Dr. Heryng for having attributed to him a too universal application of operative methods.[2]

*Indications for Operation.*—I would state at the outset that, taking all cases of laryngeal phthisis, from the very slightest lesion that can be demonstrated to be tuberculous to the most grave, not more than 15 per cent. of them require cutting operation, or can be more improved by this means beyond what can be otherwise obtained.

Let us now consider those conditions which indicate or contraindicate the use of operative measures and guide us in the selection of the form of treatment we are about to employ. The first point that should be considered is the state of the lungs, for of all factors influencing our decisions this is the chief: the relative acuteness of the disease, its extent, its rate of progress, and the tendency to cavity formation are among the points to which one's attention should be particularly directed as having a direct and important bearing on the subject; thus, with regard to the lung, general miliary tuberculosis and rapidly extending disease are contraindications. On the contrary, a tendency for the disease to become stationary, to be limited in extent, or chronic, point towards our being able to obtain a good result in the throat, and correspondingly the fewer indications there are of lung mischief the better our prognosis and the bolder should be our operative measures.

*In the Matter of General Local Conditions.*—Should the pharynx, palate, or base of the tongue, be involved in the pathological process, the less that is done surgically, with a view of cure, the better. This naturally does not include surgical operations for the relief of pain.

From the temperature chart much information is derived. A steady temperature should usually be considered an essential indication before undertaking curative treatment. Like all general statements this is liable to exceptions, those exceptions being where, from a careful observation of the patient, and a frequent examination of the patient's lungs, there is reason to believe that the rises of temperature are chiefly or entirely due to the laryngeal infection. Exceedingly irregular temperatures, or a regular temperature, where daily the rise exceeds 100.5°, should make one hesitate before operating, unless for the relief of pain or dyspnœa; that is to say, palliative operations are not contraindicated, whilst curative are.

Whilst on the subject of temperature, there is another point which has engaged my attention during the last few months with a view of bringing forward to-day something, however small, which had escaped the attention of previous observers, this is, the effect of operation on the patient's temperature.

*Table showing After-effect of Operations on the Larynx on the Temperature. Result.*

| No. of Cases. | Negative. | Post-operative Rise. |
|---|---|---|
| 35 | 31 | 4* |

* 1. Ablation of epiglottis, rise lasted six days. 2. Small piece punched out of epiglottis (101.6°). 3. Arytenoid, operations. 4. *Curettement* of ventricular band.

In the table it will be seen that we have a list of 35 cases operated on in which the effect of operation on the temperature chart has been noted, and in only 4 of these cases was there any subsequent rise of temperature; and, from a careful observation of these cases, I would suggest that the post-operative rise is not usually due to the effect of the operation, but frequently due to neurotic influences. I, however, consider these rises in temperature as indications for a temporary postponement of further operative measures on the ground that everything which tends to raise the temperature of a tuberculous patient should be avoided as hurtful and likely to cause more harm generally than operation would do good locally.

Passing on to the local conditions, one finds that cases which offer us but little hope even of relief are acute miliary tuberculosis of the larynx, but to my mind there is no other condition of the larynx in this disease which should of itself prohibit operative interference, that is to say, it is from the general considerations that we find our contraindications and not from the state of the larynx.

Finally, the relief of pain, dysphagia, or dyspnœa, whether constant, or caused by speaking, swallowing, or exertion, are invariably indications for operation when other means have failed to give relief. Remedial measures have been already amply discussed by my colleagues, Middlemass Hunt and Barclay Baron. It is for the relief of dysphagia, and particularly in this connection alone, that removal of the epiglottis finds its justification. Severe involvement of the epiglottis almost invariably ends fatally, but its removal, to the greatest extent possible, is justifiable from the immense relief from dysphagia obtained by this means alone. Life is also undoubtedly prolonged by this procedure, judging by my cases, to the extent of one or two months, and the patient's general mental condition is ameliorated.

*Operative Treatment.*—In considering the various forms of operative treatment, I would take as the mildest form of operative interference the submucous injection of fluids, and would premise that all fluids so injected have the same action on the tissues; that is to say, whether the medium be of an oily nature, with an essential oil as its active principle, an acid, or an alcid mineral salt, the effect is the same: first, it causes a local hyperæmia, and ultimately a submucous contraction by organisation and contraction of the small-celled infiltration. This treatment, as everyone is aware, was largely introduced into England by Watson Williams, and has since been brought very much to the fore by Chappell of New York. I cannot speak from personal knowledge of the effect of the submucous injection of guaiacol or creosote, but these drugs have the reputation of causing at times too violent a reaction. My own injections have been confined to 5 per cent. solutions of chloride of zinc.

In making the mucous injections the needle should be fairly deeply buried, and should only be introduced where the tissue is deep and the possibility of swelling exists. It seems to me that it has its chief use in subglottic thickening or swelling and ulceration of the ventricular band, especially the two former, when due to perichondrial inflammation. These injections should never be made where the tissue is shallow and the possibility for swelling does not exist; otherwise extensive sloughing will occur.

Of the various forms of syringe it does not appear to me that any one can claim marked superiority over the others.

*Incision and Scarification.*—Moritz Schmidt is the ablest exponent of this form of treatment, and his results are most gratifying, showing out of a total of 300 cases, 16 cures and 23 improvements. Scarification and incision are, of course, chiefly indicated in œdematous swelling of the arytenoids and of the ventricular bands.

Galvano-puncture has many indications in common with submucous injection, but is also capable of use in places where the tissue is shallow, and Watson Williams has recently depicted a larynx in which an extensive subglottic infiltration was relieved by this means, and the galvano-cautery point may be used also to the surface, especially in the subglottic region, to large or flat swellings which do not lend themselves to removal by the forceps.

Removal of the epiglottis by the galvano-cautery snare has proved, in my hands, very useful and quite painless. I have three times removed the major part of the organ: in the small jar which I send round are two of these specimens. Its use, however, is confined to the removal of this organ, and, as far as I can see, is not likely to find that use extended to other regions. I had the erroneous idea that my case was the first reported, but Solis Cohen and Hajek[3] had each reported the entire removal of the epiglottis for tuberculous laryngitis.

It is to Heryng and Krause that laryngeal curettes and punch forceps owe their origin. The curettes find their chief use in the removal of granulomata and exuberant granulations from the region of the processus vocales, in scraping away granulation tissue from the base of ulcers in the ventricular bands and on the lower aspect of the epiglottis; also less frequently they may be used for ulcers on other parts, the true chords and interarytenoid region, but, speaking generally

[2] *Laryngeal Phthisis.* Lake. 1901.

[3] *Jour. Laryngology*, page 401, 1894.

ulcers on the true chords do not, in my opinion, require *curettement*.

The use of the punch forceps is confined to swellings, or swellings with ulceration, more especially on the posterior half of the larynx, which includes the interarytenoid region, the arytenoid eminences, and aryepiglottic folds, together with great hypertrophies of the ventricular bands. Not unnaturally, the forceps which bear my name are those which I prefer, but equally good results can be obtained by the use of Heryng or Krause's double curettes.

Operations of this class are never painful, appear seldom to have any bad local after-effects, and are very rarely followed by pain on deglutition. At each sitting as much should be removed as can be tolerated by the patient. The amount of local anæsthetic required—whether it be eucaine, or cocaine, or a mixture of the two—for these operations is extremely small, and should be used as much to abolish sensibility in the epiglottis and base of the tongue and surrounding parts as in the larynx itself, and my experience leads me not to delay at all after the painting, especially if these operations require to be frequently repeated, as there appears to be in tuberculous patients a peculiar tendency to the establishment of an intolerance of eucaine and cocaine.

Tracheotomy as a curative measure in tuberculous laryngitis should never be employed. In cases of laryngeal stenosis in which syphilis is superadded to the tuberculous disease it is, however, most valuable. Laryngo-fissure would at first sight appear the ideal treatment for primary infection of the larynx, but the risk of the case not being primary, and the consequent exposure of so large a cut surface to the malign influence of the tubercle bacilli quite counteracts the possible advantages, though there are cases on record. Dr. Wood's case may be of course an exception, and one we shall listen to with interest.

After all operations the same line of treatment is indicated. The patient may continue his ordinary course of treatment, whether that be open air or not. Even removal of the epiglottis does not necessitate any special alteration in the temperature, provided this be not below 60° F. The moment the operation is completed the parts should be freely rubbed with that antiseptic preferred by the operator. For my part this is usually the 5 or 7 per cent. formalin, and if the removal of tissue is from the ventricular bands or epiglottis, equal parts of orthoform and amyloform are insufflated, to be repeated when necessary. The larynx is also painted, and the insufflation repeated every morning. The patient is usually told not to talk or move about for half an hour after the operation, but that is the only restriction placed on his actions.

In conclusion, I believe that the wider one's experience of this disease the less frequently will one operate, but the more freely will one operate when one does operate. At the North London Hospital for Consumption since the introduction of the open-air treatment, despite the addition of 40 beds since I was first connected with the institution, the cases on which I operate are now far fewer. This may of course be, and is partly, due to the fact that the cases selected for open-air treatment are early and not often cases of miliary tuberculosis. It is necessary that one should buy one's own experience, and no one can by reading alone avoid operating on cases which, were his judgment more matured, he would have left alone.

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### IV.—Anthony McCall, M.D.,

Boscombe.

Dr. McCall referred to a case of his which had been practically cured by insufflations of resorcin and orthoform. This combination, in proportions varying from one-third to two-thirds, applied every second day, had given him excellent results in cases with ulceration and exuberant granulations, such cases as were usually curetted. In flat superficial ulcerations, such as occurred on the epiglottis, for instance, orthoform, combined with bismuth, morphine, or cocaine answered better. To get the best results local and constitutional treatment should go hand in hand. No doubt the throat sometimes improved without local treatment; but, on the other hand, throat symptoms sometimes got worse, whilst the general condition improved. In his own experience considerable relief had always followed suitable local treatment.

### V.—W. Jobson Horne, M.D., B.C.Cantab.,

Surgeon to the Metropolitan Ear, Nose, and Throat Hospital.

Dr. Horne said it would be difficult to overrate the importance of the subject: it would also be difficult to overstate the frequency with which it had been discussed, but it would be still more difficult to draw any precise conclusions from what had been published as to the lines of treatment to be followed. The surgical treatment of the disease had its limitations, and within these limitations he considered it had undoubtedly been beneficial. The extreme surgical measures which had been advocated by some could not be regarded as remedial; at their best they were only mechanical means of overcoming physical difficulties, which comparatively seldom occurred. Too much stress could not be laid upon the important pathological fact, which he himself had observed, that by the time the larynx was so extensively involved in the disease as to require surgical treatment, cavitation was already established in the lung; so that in treating the larynx for tuberculosis they were dealing with but a part of a diseased respiratory tract; and the need for general treatment must not be lost sight of. In the more chronic form of the disease in which thickening of the mucous membrane occurred without ulceration, Dr. Horne considered it was irrational to cause a breach of surface by curettes or cutting forceps. The hyperplasia, and the accompanying fibrosis constituted a protective action of the epithelium, which was to be hoped for and encouraged as being a process of arrest of the disease which surgery could not assist. He noted that no mention had been made of tuberculin. This he had found of service; it seemed to render localised lesions in the larynx more amenable to surgical treatment.

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### VI.—Watson Williams, M.D.,

Physician, Throat Department, Bristol Royal Infirmary.

Dr. Williams remarked that tubercle was rarely confined to the larynx, and its presence there rendered the prognosis of the lung disease still graver. Hence the great importance of the patient's general condition. Only a small proportion of cases of laryngeal tubercle were curable in his experience. Success was limited to cases of circumscribed deposit, such for example as (1) mamillated or papillary hypertrophy or a distinctly defined neoplasm; or (2) localised deposit with ulceration. In such cases he removed the deposit and applied lactic acid with very satisfactory results, if the conditions were otherwise suitable. For localised tuberculous infiltrations without breach of surface he recommended submucous injections, using 1 or 2 minims of a 20 per cent. guaiacol or 1 in 1,000 biniodide of mercury solution. The slight local reaction soon subsided, and was followed by relief of pain, and after repeated injections by diminution or disappearance of the deposit. In some of these cases he had afterwards curetted and applied lactic acid for subsequent superficial ulcerations. He desired to emphasise (1) the importance of general therapeutic measures and sanatorium treatment; (2) the enormous value of prolonged rest of the larynx. He would not even allow whispering.

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### VII.—StClair Thomson, M.D., M.R.C.P., F.R.C.S.,

Assistant Physician for Diseases of Throat, King's College Hospital Physician, Throat Hospital, Golden Square; Surgeon, Royal Ear Hospital.

Dr. StClair Thomson thought that in spite of much work expended upon this subject during the last eleven years the results were still extremely unsatisfactory. He would like to see definite statements of results, such as had been made in the case of malignant disease of the larynx. By "cure" he understood cure of the whole disease, both pulmonary and laryngeal. There was little satisfaction in marking a case paper "died cured of tuberculous laryngitis!" Rest of the larynx was, he considered, just as important as rest of a tuberculous hip or knee. In 50 consecutive necropsies, Dr. Fowler had found the arytenoid joint affected in every one, and he was inclined to regard joint disease as playing a considerable part in the affection. He took exception to Dr. Hunt's statement that untreated cases went down the hill faster than treated cases. He had seen cases aggravated by local treatment, and he had also seen cases heal when left alone. He was very hopeful of progress in the direction of early dia-

gnosis, but not in the surgical treatment of cases in the third stage. Sanatorium treatment and rest of the larynx were the principal things; in the later stages treatment was only palliative. Pathological observations such as those of Horne, Fowler, and others supported the view that rest was essential in treatment.

VIII.—R. H. Woods, M.B.,

Surgeon, Throat Department, Richmond Hospital, Dublin.

Dr. Woods showed an instrument devised by himself for applying lactic acid to the larynx. It was shaped like a Schrötter's dilator, having round its lower end a circular wick to hold the acid. The object of the instrument was to enable a prolonged application to be made to the larynx without interfering with the patient's respiration. As the instrument lay in the larynx the wick rested against the ulcerated surfaces, and the patient at the same time breathed through the centre of the tube. The application was therefore much more prolonged and the intimacy with which the drug was applied to the tissues proportionately greater. The instrument, which was of metal and could be boiled, was made by Mayer and Meltzer. Dr. Woods did not share Dr. StClair Thomson's pessimism. He had seen cases apparently cured for a year or more. He narrated a case of thyrotomy for laryngeal tuberculosis.

A young lady, aged 28, consulted him on March 6th, 1901, for a feeling of relaxed throat of some months duration. There was dysphagia of six weeks standing. The voice was normal. The arytenoid regions and left side of the larynx were infiltrated, and the epiglottis ulcerated and thickened. There were no tubercle bacilli found in the sputum. To relieve the dysphagia the larynx was curetted and the lady sent to a sanatorium. After a week or two she got a febrile attack, was sleepless at nights, and the dysphagia returned. The lung disease now advanced, and it was decided that her only hope lay in a radical operation on the throat, as the dysphagia was getting unbearable. On May 6th he performed tracheotomy, and opened the larynx, the chloroform being given through a modified Trendelenburg's inhaler. All infiltration tissue was removed from the larynx, and the wound closed. The patient was fed for forty-eight hours exclusively by the bowel; after that time she could swallow, and rectal feeding was only used as a supplement. The tracheotomy tube was taken out on the third day. On the fourth day 14 ounces of milk and water were taken *per os*. On the fifth day the stitches were removed, and 20 ounces of milk and arrowroot were taken without any trace returning through the tracheotomy wound. The patient was entirely free from pain and dysphagia. She did very well for a week, when she was attacked by cough. The left lung showed signs of extension of the disease; her temperature slowly rose; there was great difficulty in getting up the sputum; and she finally died from asthenia eighteen days after operation.

There was no attempt at repair of the operation wound, the patient's vitality being evidently very low, yet she had great relief from pain and distress after operation, and said before she died that she was very glad she had had it done.

IX.—F. De Havilland Hall, M.D., F.R.C.P.,

Physician to the Westminster Hospital.

Dr. de Havilland Hall remembered the miserable condition of patients with laryngeal phthisis in the days before local treatment, and he could affirm that much benefit had resulted in the relief of pain, dysphagia, and cough. He only used the curette to ulcerated surfaces, and he preferred to apply lactic acid in weaker solutions at first—25 to 30 per cent.—which might be gradually increased to 50 and 60 per cent., or even the pure acid. The preliminary cocainisation ought to be most careful and thorough. He described a very bad case with extensive ulceration and sloughing of the epiglottis, in which the energetic use of lactic acid had brought about healing, much to his own surprise, as he thought the case hopeless, and continued treatment rather in deference to the wishes of the friends than with any great hope of success. He had found orthoform very valuable.

X.—William Permewan, M.D., F.R.C.S.,

Honorary Laryngologist, Royal Southern Hospital, Liverpool.

Dr. Permewan thought methods and results could not be too definitely stated. His own experience was limited to (1) Palliatives, (2) lactic acid, and (3) curetting with Heryng's curettes. Most cases improved in his experience, but some got worse, and a few were cured. Cases of localised ulceration or outgrowth were in his experience favourable; cases with general infiltration or much swelling were unfavourable. Rest of the voice was important, but he did not forbid whispering; irritable cough often required soothing. By "cure" he meant arrest of disease in the larynx; he did not agree with Dr. Thomson that the lung disease also should be included.

XI.—James Donelan, M.B.,

Physician and Laryngologist, Italian Hospital, Queen Square.

Dr. Donelan agreed with Dr. de Havilland Hall and Dr. Perwewan. Formerly he always used lactic acid, but increased experience taught him that in all cases with superficial ulceration and little infiltration lactic acid and submucous injections caused needless suffering. The latter method was useful in subglottic thickenings and in ulcers of the ventricular band and interarytenoid fold. Rest and cleanliness were the best aids to natural cure, the tendency to which in the larynx was very strong. Early diagnosis was important, and even when the larynx seemed sound it should be frequently examined and regularly cleansed with an antiseptic spray. Cleansing was still more important after the larynx was attacked, and should be done especially in the morning and after meals. After cleansing he applied lactic acid, and after a few days guaiacol according to Chappell's formula. At first applications must be made two or three times a day, the cleansing and stimulation being persistently maintained. Wonderfully good effects followed even in a few days. He had no cures to report in the sense of complete recovery, but in several cases the larynx had become healthy and remained so till death from other causes. He did not approve of the major operative proceedings.

XII.—William Milligan, M.D.,

Honorary Surgeon, Manchester Ear Hospital; Aural Surgeon, Manchester Royal Infirmary.

Dr. Milligan said that he had had no experience of the heroic surgical measures which some surgeons advocated in the treatment of laryngeal tuberculosis. The cases which had come under his notice he had treated by such measures as curetting, rubbing in of lactic acid, and the employment of various antiseptic remedies. He did not regard radical surgical measures as likely to lead to any very permanent results, as it had to be remembered that in almost all cases of laryngeal tuberculosis there was concomitant disease within the lung, which would naturally reinfect the larynx. He had had one case in which he had performed a thyrotomy for laryngeal tuberculosis. The patient had very marked laryngeal disease and very slight disease of the lung. The result was not very gratifying, although the patient was alive and moving about, but since the operation the disease in the lung had slightly increased. This of course might not be due in any way to the operation. He wished to endorse what Dr. de Havilland Hall had suggested—that at a meeting of the Laryngological Society definite statements and definite statistics should be brought forward so as to give them a basis upon which to form opinions as to the value or otherwise of the various methods of treatment.

XIII.—Adolph Bronner, M.D.,

Senior Surgeon, Bradford Eye and Ear Hospital.

Dr. Bronner said that his own experience of laryngeal tuberculosis had been comparatively small, but in the cases which had come under his care he had had good results from formalin as a spray or pigment. He thought orthoform deserved to be more extensively used, as it was non-toxic and patients could apply it themselves.

XIV.—N. C. Haring, M.B.,

Assistant-Physician, Hospital for Consumption and Diseases of Throat and Chest, Manchester.

Dr. Haring thought the intermittent course of tuberculous diseases might explain some cases of apparent arrest or cure. General treatment was important to strengthen the resistance of the tissues. Irritants should be avoided in early cases, and intact surfaces should never be injured. Simple intralaryngeal injections gave fairly satisfactory results. Orthoform relieved dysphagia most efficiently

XV.—Charles A. Parker, F.R.C.S.,
Surgeon to the Throat Hospital, Golden Square.

Mr. Parker remarked that as the larynx had to be cocainised to produce anæsthesia and avoid bruising, one might as well apply the strong lactic acid at once. He used the pure acid, and had never seen excessive reaction, rather the opposite. If lactic acid failed to produce sufficient reaction chromic acid sometimes succeeded. With regard to operation: for a case to be suitable the whole disease must be capable of removal. He divided cases into—(1) Local tumours; (2) ulcerations with limited œdema; (3) extensive œdema with little ulceration; (4) extensive ulceration and œdema. Local tumours capable of complete removal should be removed, as they generally broke down and caused extension of the disease. Ulceration with localised œdema was satisfactorily treated by curetting and lactic acid. These were the picked cases for operation. With regard to cures: he could recall three cases cured in over three years. In extensive œdema with little ulceration the less local treatment the better, and in the final stages treatment should be purely palliative. Reinfection of the larynx from the lungs had been mentioned: he thought that occasionally it was the other way, the larynx infecting the lung.

XVI.—Griffith Wilkin, M.R.C.S.,
Late Surgeon, London Throat Hospital.

Mr. Wilkin described a case in which he had obtained very great benefit from the insufflation of menthol at first in small quantity, and now after two years in large quantity. The arytenoids were swollen in this case and the false cords thickened, and insufflations of morphine had failed to give relief.

XVII.—T. Mark Hovell, F.R.C.S.,
Aural Surgeon and Lecturer on Diseases of the Throat, London Hospital; President of the Section.

The President remarked that general treatment should accompany local treatment: no cure of the larynx could be expected as long as there was active disease in the lung. For the relief of pain the insufflation of morphine or heroin was efficient, and had more of a local than a general effect. This was true of all sedatives so used, and hence large doses were well borne. A method of relieving odynphagia which deserved to be better known was the following: Place the palm of each hand with the fingers pointing upwards over the ears on the corresponding sides, and make very firm pressure whilst the patient was swallowing. The greater the pressure the greater the relief to the pain. It was best to stand behind the patient while making the pressure.

Replies.

Dr. Middlemass Hunt, in replying, did not agree with Dr. Thomson that the discussion on this subject was so unsatisfactory. They could often relieve suffering, and so prolong life. He recalled several cases of cure, one a very bad one, last treated twelve years ago, in which there was complete arrest, in a man in whom both testicles had been removed for tubercle, so that there was no doubt of the diagnosis.

Dr Barclay Baron, in replying, emphasised the importance of rest, although he did not think it necessary to forbid whispering. He disapproved entirely of submucous injections. Sticking in a needle and injecting irritating liquids would certainly not strengthen the resisting power of already inflamed, and therefore weakened tissues. Their chance of thus directly destroying bacilli was a very small one. He deprecated frequent applications of weak lactic acid, which worried the larynx and did no good. He agreed that there was a great want of definite published results of the various modes of treatment.

Mr. Richard Lake thought one year's freedom might be considered cure. Limited swellings were, in his opinion, suitable for operation, even before there was any breach of surface.

## THE TREATMENT OF LARYNGEAL GROWTHS IN CHILDREN.

By G. Hunter Mackenzie, M.D.,
Senior Surgeon to the Eye, Ear, and Throat Infirmary, Edinburgh.

The subject of laryngeal growths in children is one of considerable importance, and I therefore regret that the time at my disposal will not permit of my dealing with it in its entirety. I consequently intend in the present communication to limit myself to the consideration of the surgical treatment of the most common variety—that of papillomata or warts—and to consider this from the following points:

1. *Thyrotomy.*—It will, I think, be obvious to anyone who has had experience of this operation, or is acquainted with its literature, that a more unsatisfactory method of treating children, the subjects of these growths, could hardly be devised. Apart from the risks attendant upon its performance, such as permanent alteration or other injury of the voice, chronic stenoses of the larynx, and sometimes death, it is invariably followed by recurrence, more often by recurrences, and frequent repetitions of the operation, usually at very short intervals, are necessary. Some striking examples of this have been put on record. Lendon reports its performance seventeen times within two years in a child, and eventually a stenosis of the larynx ensued, which necessitated the permanent use of a tracheotomy tube. Abbe opened the larynx four times in a child suffering from suffocating laryngeal papillomata, removed the growths, and cauterised their seat of origin. Notwithstanding this extremely radical treatment, they continued to recur, and eventually tracheotomy had to be resorted to. Another case has been recently recorded by the same surgeon, with the following operative history: Tracheotomy and thyrotomy; two months afterwards a second thyrotomy; a few months afterwards a third thyrotomy; then a fourth thyrotomy: and, finally, a second tracheotomy. In this country Permewan mentions the case of a boy of 11 years, whom two complete thyrotomies, with thorough cauterisations of the affected parts, failed to cure. The growths recurred for the third time, and although, to all appearances, he had not attained a condition of urgency, he was found dead one morning of asphyxia. Walker Downie had a 2-year-old child in whom thyrotomy had to be performed six times in one year.

Similar cases illustrative of the inefficiency of thyrotomy, even with thorough cauterisation, in the treatment of laryngeal growths in children are abundantly met with in medical literature, and were I to particularise all the instances I have come across the time at my disposal would be entirely occupied. The cases I have now submitted may without exaggeration be considered representative of the results attained, and will, I trust, carry conviction as to the uselessness, and I would even say the unjustifiableness, of thyrotomy in this class of disease in children.

2. *Endolaryngeal Operation.*—I am, of course, aware that there is not the same objection to this variety of operation in regard to immediate and remote risks that obtains in the case of thyrotomy. Bergeat mentions the case of a nine months' old child who died of emphysema after an endolaryngeal operation for removal of growths, and Dundas Grant found the operation productive of acute laryngitis. Hopman experienced such a degree of asphyxia after this operation that tracheotomy was rendered necessary. But such incidents or accidents are alike few and trifling compared with those that sometimes follow thyrotomy. The most serious objections to endolaryngeal operations are the difficulty of performing them in very young children, and the impossibility of carrying them out thoroughly and radically in those of any age. As these growths are sometimes congenital, their removal may be indicated at an early period of life, and if, as we have already seen, thyrotomy, even with thorough cauterisation and removal of the vocal cord or other portions of the larynx from which they grew fail to prevent recurrences, it is most unlikely that such an uncertain operation as endolaryngeal removal will succeed. And so it is.

I do not forget that I am speaking in the presence of an accomplished operator in the person of our President, whose skill in this branch of surgery I had frequent opportunities of witnessing at the Throat Hospital, Golden Square, when he was house-surgeon there, now nearly a quarter of a century

ago. But even he had to operate fourteen times under chloroform in order to clear the larynx of a boy, aged 3½ years, at that time the youngest on record. But this pales before Stoker's case, that of a patient 30 years of age, who from the age of 7 had suffered from papillomata in the larynx. During this period (and before coming into Stoker's hands) he had been operated on by one man 100 times, and by another 120 times. He then seemed to awake to the consciousness of the fact that he was occupying more than his share of professional time and skill, for he invested in the necessary armamentarium, and thenceforth performed his own operations! Bond has recorded the case of an 18-year-old girl, in whom, since she was 10 years old, papillomata had been removed every two months, amounting to nearly fifty operations. Some may consider these cases extreme examples of recurrences of growths and multiplicity of operations, but with the exception of Stoker's case they may be taken as fairly representative of the results of this branch of endolaryngeal surgery in children.

It is to be feared that the published results of many operations claiming success are more or less invalidated by premature publication. This is particularly apt to be the case with laryngeal papillomata in children, not only on account of their marked tendency to recurrences, but also of the indefinite periods at which these may take place. In some instances recurrence or recrudescence may ensue almost immediately after operation; in others, after a few months, rarely after a year. Hence any report published or opinion expressed a few days, or even months, after operation is of no value whatever from the point of view of permanent recovery. At a meeting of the Laryngological Society[1] some time ago, a boy aged 3½ years was exhibited. He had suffered from papillomata of the larynx from about his seventh month, and had been operated on five times by two different specialists. He was now exhibited as being interesting as a proof of the practicability of removing laryngeal growths in young children by the endolaryngeal method under local and general anæsthesia, and although only fifteen days had elapsed between the last operation and the date of exhibition, the result was declared by an eminent laryngologist to be most satisfactory, and one on which the operator ought to be congratulated. The further history of the case shows that within two months recurrence took place, another series of four operations was performed by the surgeon who had previously operated on and exhibited the patient, but without permanent benefit, for a second recurrence ensued, and ultimately tracheotomy was necessary. This patient, who has been sent to me from India, is now under my care, still wearing the tracheotomy tube.

I need hardly add that I do not quote this case and continue its history with the view of disparaging the operator, but because it brings home to us in a striking way the futility of such operations in children, even at the hands of skilled experts, and the propriety of allowing a considerable time to elapse before expressing opinions on the results.

3. *Tracheotomy.*—In some cases tracheotomy may be a matter of urgency owing to sudden or threatened asphyxia, in others it may be preliminary to thyrotomy or endolaryngeal operation, or, again, it may be performed not only with a palliative but also with a curative object. It is chiefly from the latter point of view that I now propose to consider it, and in doing so I shall deal in the first instance with my own cases, and afterwards with those of others. In regard to my own cases, I shall refer to those only which have continued under reliable observation for a minimum period of two years from the date of operation or commencement of operations.

Having experienced the usual recurrences in 2 cases in which I performed thyrotomy, I determined (in 1883) in a case of sudden severe laryngeal stenosis in a child, due to what turned out to be warty (papillomatous) growths originating in chronic laryngitis after measles, to rest satisfied with tracheotomy, which had been rendered necessary by the respiratory difficulty, and await the course of events. I did so in the view that, by diminishing cough, affording respiratory and phonatory rest to the larynx, and abstaining at the same time from all operative interference and irritation, a spontaneous cure, similar to what Nature sometimes works out in her own way, would ensue. The result was most satisfactory. The cannula was withdrawn after a year, and a note of the case was published in 1884.[2] The patient was watched by me under great difficulties for a further period of five years, and another report on his condition, which continued highly favourable alike in respect to the voice and the respiration, was published in 1889.[3] I lost sight of him two years afterwards, when he had developed into a strong healthy lad. Including this case, I have had 7 cases which fulfil the condition of having been under observation for a minimum period of two years. Of these, 4 completely recovered after having used the cannula for from six to fifteen months; 1 who had previously undergone thyrotomy by another surgeon disappeared, wearing the cannula after two and a-quarter years; and 1, a very badly-nourished child, died from independent disease about two years after tracheotomy and one and a-half year after removal of the cannula. The seventh case is the boy from India already referred to as still wearing the tracheotomy tube. Since tracheotomy was performed several pieces of growth have been found in the expectoration, and the right vocal cord from which they grew is now clear, except towards its anterior extremity, where slight nodular thickening is present. The removal of the tube is being delayed by the presence of an infraglottic pedunculated papilloma on the right side, the spontaneous separation of which I am now waiting. It is worthy of notice that the only case which gave any trouble in connection with the permanent removal of the cannula was that upon which thyrotomy had been previously performed. My opinion is that "virgin" cases are more rapidly benefited by tracheotomy than those which have undergone either thyrotomy or endolaryngeal operations.

Since the publication of my first case confirmatory cases and opinions have been recorded and expressed by the following observers amongst others:

Massei,[4] case of papilloma of the larynx, in which, after tracheotomy, the vegetations in the course of a year disappeared in a wonderful way. "In stenosis due to papilloma, tracheotomy in not only an admirable palliative, but also a radical treatment."

Garel[5] (2 cases), girl of 4: tracheotomy on June 11th; tube removed on July 30th; voice perfect. Boy of 11 years: papillomata of epiglottis and larynx; tube removed after two years; tracheotomy strongly recommended.

Oertel[6] (2 cases), quoted by Hoffmann.

Railton[7] (2 cases), aged 3 and 4 years; growth appeared also at tracheotomy wound; these were shaved off and ultimately atrophied. Tubes used for 3½ and 2½ years.

Eliasberg[8] (1 case), 12-year old boy, thyrotomy twice, with removal of the vocal cord on which the growths were situated; recurrences; tracheotomy; cannula removed after three months; no recurrence after two years.

White[9] (1 case), boy aged 6 years, growth removed *per vias naturales* several times; recurrences with suffocative attacks which necessitated tracheotomy: subsequent attempts to remove the growths resulted in increasing the neoplasms. When all operative efforts ceased, the growths began to disappear, and the boy is now quite well; tracheal growths also disappeared: tube worn for five years.

Cowgill[10] (1 case), child aged 6 years: spontaneous recession of laryngeal papillomata after tracheotomy; tube worn for three years and eight months.

Chappell and Gleitsmann[11] (1 case), girl with larynx full of papillomata; tracheotomy; spontaneous disappearance of all the growths in five months.

Baumgarten[12] noticed a remarkable diminution of papillomata in nearly every case after tracheotomy.

Carmichael[13] (2 cases), not yet reported, but authorised to be quoted in this paper.

These records of cases by other observers, which might easily have been augmented, have one feature in common with my own cases—they make no references to recurrences of the growths, and consequently none to repetitions of the operation. In this respect the results bear a striking difference to those obtained by thyrotomy or endolaryngeal operations, in which, as we have seen, recurrence is the invariable rule.

The sole reference to recurrence after tracheotomy only which I have been able to find is by Simpson, who, in the course of a discussion at the Carlisle meeting of the Association in 1896 on a paper read by me on this subject in the Section of Diseases of Children, said he had seen a case in which the growths recurred after tracheotomy. No details were given of this most unusual occurrence, nor has it been confirmed by any other observer, and I am therefore disinclined to accept it as a record of an actual fact.

A point of some importance for determination is as to the period when tracheotomy should be performed. Children with laryngeal papillomata occasionally show a tendency to develop sudden and intense dyspnœa, which may rapidly

pass into complete asphyxia with a fatal termination as in Permewan's case, and in one narrated by Kanthack. I have seen one case in which the sudden accession of dyspnœa rendered tracheotomy necessary at an earlier period than I had anticipated. Brouardel remarks that in adults sudden death may be due to a polypus in the larynx, and that a tracheal growth may give rise to spasm which may prove fatal, but whether this spasmodic element may be present in children I have been unable to determine. It seems to me that a safe rule to follow would be to open the trachea whenever complete and permanent aphonia is present without waiting for the onset of dyspnœa. It is right, however, to bear in mind that infraglottic papillomata may be present without much vocal alteration, but with considerable respiratory disturbance.

The drawbacks and objections to tracheotomy, apart from those connected with the performance of the operation and the subsequent management of the case, and which are really *nil* in the hands of an experienced surgeon, may be considered as belonging to the bogey class. The first bogey is the old one that tracheotomised children seldom attain to puberty—an assumption which has long been falsified by the statistics of Jacobi and others. Bogey No. 2 may be found in a recent work of surgery, where the author referring to the treatment of papillomata of the larynx by tracheotomy only, says, "even if this were true, the risks to the child are considerable as respiratory affections are common and very dangerous in tracheotomised patients." These assertions are directly opposed to my experience as they are to that of all others whom I have addressed on the subject.

4. *Other Methods.*—I shall glance very briefly at these. Intubation has been made use of, and although I have practised this operation in numerous cases of laryngeal diphtheria in children, I have never used it in papillomata. Lennox Browne saw severe hæmorrhage ensue after its employment, and upon the whole the general opinion is that it is unsuitable. At any rate I can find no records of success from its use, with the exception of a case by Baldwin, who reports an 8-year-old girl cured by what is known as "intermittent intubation."

The relation of adenoid growths to papillomata of the larynx has been raised by Lennox Browne, who mentions a case in which the growths disappeared after adenotomy. There can be no doubt that it is good surgery to remove whatever may be causative of laryngeal irritation or inflammation, and in this category such conditions as adenoid growths, enlarged tonsils, and post-nasal catarrh undoubtedly fall.

None of my cases which underwent tracheotomy had adenoid growths. I have, however, seen a few cases in which the persistent huskiness which is sometimes an early prelude to the development of papillomata, completely disappeared after the removal of adenoids. I may add that in the case from India already referred to adenoids and enlarged tonsils were removed without preventing the subsequent recurrences.

In conclusion, I ought to notice what is doubtless already known to you, that these warty growths are sometimes the result of congenital syphilis, especially when they are multilocular (in situation). Delie mentions a case of papillomatous vegetations of the fauces, pharynx, and larynx, which rapidly yielded to antisyphilitic treatment, and Freundweiler, in a case of multiple papillomata of the palate and larynx, found that they had the microscopical characters of condylomata.

Note and References.

[1] *Internat. Centralbl. für Laryng.*, Jahrgang xvi, No. 4, p. 211: *Journal of Laryngology*, vol. xiv, p. 255. [2] *Edinburgh Medical Journal*, November, 1884. [3] *Lancet*, April 6th, 1889. [4] *Internat. Centralbl. für Laryng.*, Jahrgang x, p. 362. [5] *Annales des Malad. de l'Oreille et du Larynx*, June, 1891. [6] *Sammlung klinischer Vorträge*, No. 315, p. 2807. [7] British Medical Journal, February 19th, 1898. [8] *Journal of Laryngology*, vol. v, p. 245. [9] *Ibid.*, vol. vi, p. 486. [10] *Philadelphia Medical News*, October 4th, 1890. [11] *Journal of Laryngology*, vol. ix, p. 355. [12] *Internat. Centralbl. für Laryng.*, Jahrgang xv, p. 249. [13] Dr. James Carmichael, Consulting Physician to the Royal Hospital for Sick Children, Edinburgh.

Dr. Permewan thought the removal of the tracheotomy tube was the real difficulty, but he quite agreed that the results of other methods were unsatisfactory.

Dr. Scanes Spicer could by no means agree with Dr. Hunter Mackenzie that endolaryngeal removal of multiple papillomata in children was futile. He thought it was easy and should be tried first. It was true he only spoke from a personal experience of four cases, but in two of these a complete and permanent cure lasting over years had resulted. He removed these growths at repeated sittings under combined general anæsthesia and local cocainisation as originally described by him at the Bristol meeting of the British Medical Association. His third case—a tuberculous child—died of pneumonia some months after the operative treatment. His fourth case he now heard of again after over a year's interval in Dr. Hunter Mackenzie's paper. This last case, a boy of 3½ years, son of an I.M.S. doctor, was never claimed as a cure of multiple papillomata, but was shown at the Laryngological Society of London as a proof that it was quite practicable to thoroughly clear a young child's larynx of multiple papillomata by endolaryngeal means and restore the voice at once, after two leading laryngologists had stated this was not practicable, and that the patient must wait for relief until he was of such an age as to assist—instead of resisting—laryngeal manipulations. This child had to return to India at a period at which anyone knowing the course of papillomata could not have possibly guaranteed a cure, and indeed recurrence was so much expected that emergency tracheotomy was recommended whenever the dyspnœa became serious, pending the continuance of endolaryngeal measures to stamp out the growths. The endolaryngeal method could not be condemned on the strength of this case, as it had not been persistently applied, while judging from the report the emergency tracheotomy which was done in India over a year ago had had but little effect on the growths or on the voice, and the problems of the removal of the tube and the education of the voice had still to be dealt with.

Dr. Herbert Tilley thought that inefficient removal of papillomata of the larynx accounted in great part for their frequent recurrence after endolaryngeal removal, and that anything which aided more complete ablation of these growths would tend to enhance the value and more permanent results of such operative interference. He laid great stress on the perfection of anæsthesia, and in his own experience those cases had been very satisfactory when a highly skilled anæsthetist had assisted him. The little patient was operated on in a sitting position and the manipulations of the operator were carried out during successive intervals, in which the laryngeal reflex was abolished. This period could only be maintained for some twenty or thirty seconds at a time, the reappearance of deglutition being a sign for further anæsthetisation. Under such circumstances the operation was by no means difficult to a skilled laryngoscopist. He thought that endolaryngeal methods should be given a very fair trial by skilled operators before tracheotomy was performed, especially in the better class of patients. The latter operation not only entailed a distressing loss of speech for many months but also interrupted the education of the child and prevented the enjoyment of many games and social exercises which played an important part in the education of children.

The President thought most cases could be cured by time and patience. Tracheotomy was not curative, although it might tend to prevent recurrence. He disapproved of thyrotomy on account of the injury to the voice. Under anæsthesia in a young child it was only during the first half-minute that a view could be obtained, and there must be no sponging. A view was not necessary if the operator was familiar with the larynx and if the situation of the growths was known. Insufflations of dried alum two or three times a week were useful in preventing recurrence.

## NOTES ON A CASE OF RECURRENT PAPILLOMATA OF THE LARYNX IN AN ADULT TREATED LOCALLY BY FORMALIN.

By Adolph Bronner, M.D.,
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Cases of recurrent papillomata of the larynx are most difficult to cure, and are a source of great anxiety and trouble to the patient and the surgeon. In children tracheotomy seems to

be the best method of treatment. A great deal has been written about thyrotomy, but this is by no means devoid of danger or attended with great success. In adults cases of recurrent papillomata are fortunately very rare. I have recently had a case under my care in which the growths were removed many times: lactic acid, salicylic acid, etc., were applied, but without success. I then tried a spray of formalin, which seemed to prevent recurrence of the growths. This may, I admit, have been a coincidence, and I am bringing the case before you to-day in the hope of eliciting information, if any similar cases have been treated with formalin, and with what results.

Mr. P., a man of 45, was seen by me in June, 1896. He had been hoarse off and on for over two years, and was steadily getting worse. Both vocal cords and parts of the ventricular bands were covered with typical papillomata. These were removed by forceps. When I saw the patient again in three months, the growths were more numerous than before. They were again removed, and lactic acid was applied. In July they were as bad as ever. This time salicylic acid was applied. In December, 1897, patient had a severe attack of laryngeal spasm and hæmorrhage, which nearly proved fatal. In December, 1898, a large number of growths were removed and a spray of formalin was ordered, at first 1 in 1000 and then up to 1 in 100. In March, 1899, a few growths were found. They were more rounded and not so pedunculated or so much of the cauliflower type as before. Since then there has been no recurrence. The vocal cords are thickened and irregular, but the voice is fairly good and the patient is quite content.

## MULTIPLE PAPILLOMATA OF THE LARYNX.

By N. C. Haring, M.B.Lond., M.R.C.S., etc.,

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[Abstract.]

Laryngeal papillomata occur (1) singly or in small numbers, or (2) in the multiple form like cauliflower masses, which vary in colour from white to red, and which may conceal from view considerable portions or the whole of the larynx. Only the multiple form will be here considered.

The growth occurs usually in pinkish masses, each not larger than a small pea, sessile or shortly pedunculated principally springing from the vocal cords and anterior portions of the larynx, but also in many cases arising from almost the whole surface of the larynx. Most serious are the cases, with much subglottic growth.

The growth may be congenital; there is usually no history of any antecedent chronic laryngeal disease. Microscopically the character is that of papilloma with but little fibrous structure, and may closely simulate an epithelioma. The distinction from a malignant growth may be difficult, unless it can be clearly shown that the epithelial cells do not extend below the border-line between the laryngeal epithelium and connective tissue.

It forms a large percentage of the laryngeal growth in children up to the age of puberty, is less common afterwards, and is not common in adults. As with most laryngeal growths the male is more liable than the female.

The symptoms are hoarseness or even aphonia, cough, and dyspnœa: pieces of the growth may be expelled during a coughing fit, and this may establish the diagnosis which can only otherwise be made by obtaining a view of the growth.

In adults there is usually no difficulty in obtaining a view by the ordinary means, but in children it may be quite impossible unless one has resort to the method of direct view into the larynx (autoscopy) with Kirstein's or Escat's tongue depressor, with or without the aid of an anæsthetic. In children there is little fear of malignancy, but in persons over 25 years of age it is impossible to place out of court the possibility of the growth being epitheliomatous unless there is no infiltration of the parts adjoining the growth, and no interference with the normal movements of the larynx in respiration and phonation. Ulceration would indicate malignancy, but small hæmorrhages may occur without unfavourably modifying the diagnosis.

Endolaryngeal treatment is rarely successful, although I have heard of cases where painting with phenol-sulphoricinate followed by curetting effected a cure. Tracheotomy is indicated not only to relieve dyspnœa, but in some cases as in itself a cure; the trachea should be opened fairly low, so that, should thyrotomy afterwards be necessary, the subglottic region and upper portion of the trachea may be freely reached. Removal of the growth is best effected by thyrotomy.

Care must be taken to divide the thyroid in the middle line, and to avoid injuring the cords. After the larynx is opened suprarenal extract spray diminishes the subsequent hæmorrhage, the bulk of the growth can now be cut away with curved scissors, the bases of the growth curetted and cauterised with fused solid chromic acid. Absolute thoroughness of removal is essential to prevent recurrence. A median division of the thyroid cartilage with proper apposition of the parts will give every probability of the patient having a fair speaking voice, as, even should the vocal cords have been partially destroyed, a couple of folds will usually form and vicariously discharge the functions of phonation.

*Details of Cases Observed and Operated.*

| Sex. | Name. | Age. | Duration of Symptoms. | Examination. | Treatment, etc. | Result. |
|---|---|---|---|---|---|---|
| Female | H. W. | 45 | Cough, hoarseness about six months | Ordinary laryngoscopy: spasm easily set up | Repeated endolaryngeal; phenol-sulpho-ricinate no use; pneumonia probably set up by inspired portions of growth | Death from sudden laryngeal spasm. |
| Male | J. W. | 11 | Hoarseness about two years; cough | Ordinary laryngoscopy easy | Endolaryngeal treatment caused proliferation of growth; phenol-sulpho-ricinate no use: tracheotomy to relieve dyspnœa; three months later thyrotomy (which had to be repeated) with complete removal of growth by scissors, curette, chromic acid | No recurrence two years; good voice; can sing with harsh voice. |
| Male | J. M. (Tom) | 9 | Hoarseness about eight months | Ordinary laryngoscopy | Endolaryngeal treatment caused irritation; phenol-sulpho-ricinate of no use; tracheotomy, thyrotomy, scissors, curette, chromic acid | No recurrence five years: fairly good voice. |
| Male | L. R. (Levi) | 4 | Always hoarse; much worse last few months | Direct view; ordinary laryngoscopy impossible | Tracheotomy after three months; thyrotomy, scissors, curette, chromic acid | No recurrence 14 months; voice strong but rough |
| Male | R. N. (Robert) | 3 | Dyspnœa from birth; hoarse a few months | Ordinary laryngoscopy: severe spasm | —— | Death from laryngeal spasm two days before day fixed for operation. |
| Female | E. M. (Elsie) | 2 | Hoarse from birth. | Direct view; ordinary laryngoscopy very difficult | At present under treatment; phenol-sulpho-ricinate and endolaryngeal | —— |

## NOTES OF TWO CASES IN WHICH CHRONIC HYPERTROPHIC LARYNGITIS PRECEDED PAPILLOMATA:

### CURE OF ONE CASE BY ENDOLARYNGEAL OPERATION.

By William Lamb, M.D., M.R.C.P.,

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As the relation of chronic inflammatory processes to new formations is a subject upon which evidence is as yet scanty, I have thought it worth while to record the two following cases:

1. Mrs. D., aged 35, was brought to me three years ago with the following history:—For twenty years, or rather more, she had been voiceless—unable to speak except in a hoarse whisper. This dated from an attack of measles from which she suffered when she was a girl of about 12. Her general health during all those years was bad; she was thin, weakly, short of breath, and subject to occasional attacks of dyspnœa, which lasted a few days and subsided under ordinary treatment. These attacks were generally ascribed to cold.

In the summer of 1898 she had the good fortune to come under the care of Dr. Beilby of Bromsgrove for one of her attacks of dyspnœa. He diagnosed the condition as laryngeal but was unable at first to get a view of the larynx. Before he had the opportunity of trying again the patient got a very bad attack of dyspnœa, and he was hastily summoned to find her unconscious—asphyxiated; but by promptly opening the trachea and performing artificial respiration he succeeded in bringing her round. A few days later he got a view of the larynx, and found a condition of "puffy-looking pale pink swelling involving especially the ventricular bands and the aryteno-epiglottidean folds." The left cord could not be seen at all, but an occasional glimpse could be caught of a small part of the right cord in front of and behind the enlarged ventricular band. This was practically the condition of things when I first saw the larynx a few days later. There was some stringy muco-pus about the glottis. Obviously we had to do with a subsiding œdema, but the cause of the chronic stenosis of the larynx was not yet clear.

A fortnight later I noted that the enlarged ventricular bands, although but little reduced in size, were no longer smooth and puffy, but looked much firmer and presented a somewhat mammillated appearance with a crenated outline—they were plainly papillomatous. A third swelling was also made out projecting from the posterior wall and largely filling up the triangular interval between the enlarged ventricular bands. The three swellings almost filled the lumen of the larynx.

As my suggestion of thyrotomy was declined by the patient I removed the projecting part of the enlarged ventricular bands with the galvano-caustic snare. This brought into view a broad fringe of subglottic papillomatous growth projecting beyond the edges of the cords. This growth I scraped away with a curette in successive sittings and rubbed concentrated lactic acid into the raw surface. The swelling on the posterior wall was treated in the same way. At several points below the glottis I experienced considerable difficulty in destroying the extremely tough, leathery tissue which underlay the papillomatous growth, and which projected in places beyond the edges of the cords. Vigorous and repeated scraping was necessary and several applications of lactic acid.

There was marked paresis of the adductors for some time after the larynx was free, but when this passed off the patient recovered a very good voice. Her general health improved enormously, and from being a feeble invalid she became a brisk active woman. After the conclusion of active treatment I continued to swab the larynx occasionally with 10 per cent. salicylic acid in alcohol. In spite of this, however, some recurrence took place within six months at the anterior commissure, and below the glottis on the antero-lateral wall. This necessitated two scrapings with the curette, followed by two cautious applications of the galvano-cautery to both places. It is now fifteen months since the last application and here is no sign of any recurrence of growth. The voice is excellent.

#### Remarks.

I retained the tracheotomy tube till the treatment was practically concluded, although the patient wore a plug in it after the first month. I felt that it gave me a free hand in working in the larynx, but as a matter of fact there never was any appreciable reaction. The patient did her housework as usual all the time and came to my rooms to be treated. The most unpleasant part of the treatment, she said, was the rubbing in of cocaine at the beginning of each sitting.

The date at which papillomata first developed in this case cannot obviously be determined, but it is, I think, practically certain that they were preceded by hypertrophic catarrh, for the following reasons:

1. The history begins quite definitely with an attack of measles, and the primary trouble in the larynx was without doubt a laryngitis which did not pass off, but became chronic and gave rise to a considerable degree of stenosis.

2. The presence at various points below the glottis of extremely tough fibrous tissue from which the papillomata sprang. This tissue projected very considerably beyond the edge of the cord at one part, and was extremely troublesome to remove. The success of endolaryngeal methods in an aggravated case is, I think, worth recording.

2. My second case is that of G. C., cabinetmaker, aged 33, a cousin of the first patient, who sent him to me about two and a-half years ago. He was a delicate-looking man and complained of loss of voice of two years' duration. The aphonia came on gradually with "colds." On examination the larynx presented the picture of a pronounced chronic catarrh—general dusky redness with some secretion—and in addition there was very marked enlargement of the left ventricular band. The enlargement was tolerably uniform and smooth in outline, dipping down anteriorly between the cords and bulging out posteriorly towards the middle line of the larynx. There was no line of demarcation between the swelling and the surrounding mucous membrane. The movements of the left side of the larynx were considerably diminished, and there was crossing of the arytenoids during attempted phonation, the right passing in front of the left. The left vocal cord was completely concealed by the swelling. I punched a circular piece out of the most prominent part of the swelling, and it showed under the microscope the appearance of chronic inflammatory hyperplasia, but nothing to suggest tubercle, syphilis, or cancer. I accordingly removed the bulk of the swelling with Krause's double curettes. Most of the tissue was so tough that I found it quite impossible to punch out circular pieces, but with the curette that works vertically I was able to partly detach pieces of tissue, and so bring them within reach of the curette that works laterally, which clipped them off. Nearly all the swelling was removed in four sittings. On three occasions I rubbed precipitated sulphur into the raw surface after curetting. This is a painless application, but (as pointed out by Mr. Arbuthnot Lane) it acts as an efficient caustic, styptic, and antiseptic.

The patient recovered a very fair voice after the second sitting; but it was evident that he was using the ventricular band on the diseased side, and the vocal cord on the sound side.

After an interval of nine months the patient returned to show himself while recovering from influenza. He reported steady progress, and said he could now "shout" to his shopmates! On examining the larynx, however, I found some recurrence of the enlargement of the ventricular band, and there was a small ulcer at its posterior and upper part. A disc of tissue punched out from the immediate vicinity of the ulcer showed a typical papillomatous structure, and the sputum contained a few tubercle bacilli. Thus the ulcer was probably tuberculous and the swelling of the ventricular band was no longer simply inflammatory but had become papillomatous. The two pieces of tissue, which show this difference in structure, were removed as nearly as possible from the same part of the larynx at an interval of a year. You will see the sections under the microscopes. The ulcer healed after being curetted and rubbed with lactic acid, and as the voice was quite satisfactory I decided to let well alone.

A year later—a few months ago—the patient returned to me with hæmoptysis. He recovered quickly and considers himself well, although there is distinct evidence of shrinking of the apex of one lung. A puckered cicatrix marks the site of the healed ulcer, and the ventricular band is little if at all changed. The papillomatous part seems to have a very slight tendency to increase.

## *MORCELLEMENT* OF THE TONSILS.

By L. H. Pegler, M.D., M.R.C.S.,

Surgeon to the Metropolitan Ear, Nose, and Throat Hospital; Curator to the Laryngological Society of London; Corresponding Member of the French Society of Laryngology, Rhinology, and Otology, etc.

This operation was originally described by Ruault in a paper that appeared in *L'Union Médicale*, January 17th, 1893. He employed it in all cases of tonsillar hypertrophy, and in his

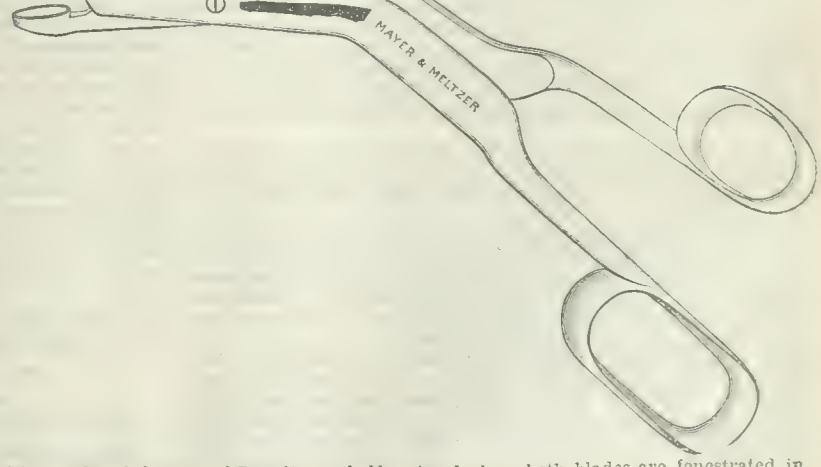



Fig. 1. Punch forceps of Ruault, one-half natural size; both blades are fenestrated in Mayer and Meltzer's specimen.

hands it superseded amygdalotomy with the guillotine. The instrument he devised (Fig. 1) was ponderous, and for reasons of his own only one of its blades was fenestrated; we have improved upon it now, but Ruault was a pioneer: he struck out a new line of practice, and anticipated results from which we are deriving the benefit. The operation was not complete in his view without the subsequent swabbing of the wound with an iodine solution somewhat similar to Mandl's. The first account of *morcellement* in this country was by Brown Kelly of Glasgow, in the *Lancet* for July 7th, 1894. This writer detailed his method of operating with a "pull and push" forceps of his own invention, and gave indications for its employment; since then many modifications of punch forceps have been brought out. The term *morcellement*, which is to be found in Ruault's paper, well conveys the nature of the procedure, the object of which, as now practised, is to extirpate piecemeal unhealthy tonsils that cannot be reduced so efficaciously by any other means. My object in ventilating the subject at this meeting is to give expression to its importance and applicability in the light of present-day improvements, and to collect any suggestions that can be gathered from the Section towards its further development. While fully recognising that we are not justified in interfering with slight hypertrophies in the absence of symptoms, I am none the less convinced that the converse is true, and I believe that the apparent difficulty of dealing radically with abnormal glands which, owing to various circumstances, cannot be amputated even with a fork guillotine, is responsible for the fact that a vast number of patients suffering from chronic throat trouble go about unrelieved. Perhaps if the general medical practitioner were better informed as to the feasibility of getting rid of one great source of these troubles by selecting the right method and instrument, this condition of things would cease to be. I have no hesitation in saying that much faucial irritation and discomfort in voice users is attributable to mischief set up and maintained by depraved organs of comparatively innocent appearance which are on this account overlooked. These are the cases that find their way to the throat specialist for radical treatment after a variety of palliative remedies in previous hands has failed.

Indications: As a secondary operation *morcellement* is useful in finishing up after the guillotine, when too much stump or an uncomely one has been left behind. As a primary procedure, the method is suitable for practically all cases in which the guillotine cannot be satisfactorily applied, and which would consequently necessitate some alternative—for example, enucleation, the scissors or probe-pointed bistoury, galvano-puncture, or slitting up, *plus* a caustic application—over all of which it offers many great advantages. A brief enumeration of the more characteristic lesions for treatment by *morcellement* may include:

1. Long flattish tonsils ensconced between and often adherent to the pillars, and reaching down from the supra-tonsillar to the hyoid fossa.

2. Smaller glands, the subject of chronic lacunar tonsillitis from which fœtid cheesy masses are continually being extruded and hawked up. They are often traversed by pockets opening in various directions, or crossed by furrows on the surface which are partly bridged over by old inflammations. By the mere accident of closure of the crypt-mouths, this class of tonsil is not rarely converted into a collection of cysts.

3. Soft unhealthy-looking tonsils in which the parenchyma is disposed in one or more vertical ridges; they often resemble a thickened pillar, are much congested, and liable to repeated inflammation.

4. Hard and sclerosed bodies, often gristly in consistence, not of large size, but somewhat spherical in shape, they probably do not functionate, but create many irritative symptoms varying with the individual, especially cough. With these may be classed the healed but ragged stumps residuary to a former incomplete guillotine operation.

The punch forceps, as we now know it, is made in two chief patterns—one cutting vertically and the other horizontally. Each of these, again, can be had with the distal part of the shanks straight, or bent at a right angle close to the cutting blades; but, as a matter of fact, this angle is not any particular gain, and I personally much prefer the shanks beyond the joint to be long and straight, in which case the blades can be worked either vertically or in an antero-posterior direction. The former is the better direction to operate in, because, being parallel with the pillars, the latter are thus easily avoided. Other desiderata are lightness and simplicity, and moderate-sized blades, those of a circular shape answering very well. All these qualities are well exemplified in the nasal conchotomes of Hartmann

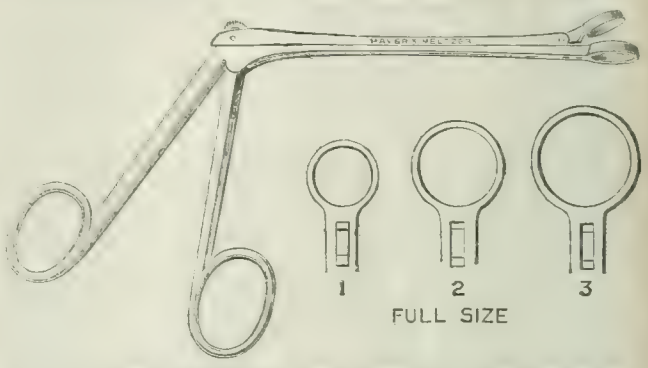



Fig. 2.—Hartmann's conchotome (half natural size). Blade to be had in three diameters, Nos. 2 and 3 being the most useful.

(Fig. 2); being presumably already in the cabinet of the rhinologist, these forceps obviate the necessity of procuring the special instruments, which can withal claim no very marked advantage over them that I am aware of.

The operation is very simple in detail: The patient is seated in front of the surgeon, and the tonsils are anæsthetised by swabbing over with a solution of cocaine on cotton-wool, 10 to 20 per cent., but varying with the age and sensibilities of the patient. Unless the tongue is a refractory one (in which case it may be depressed by the patient or an assistant) the surgeon seizes the most conspicuous portion of the tonsil with the selected forceps, while with the fingers of his disengaged hand he presses the wall of the pharynx from without, behind the angle of the jaw. To operate on the left tonsil in this way the surgeon must be ambidextrous, failing which the right hand must operate while an assistant presses in; this process is repeated as often as required. In large flat tonsils a piece may be punched out of the middle of the gland, advantage being taken of the gap thus formed to detach the masses remaining above and below. Hartmann's instruments work with so much delicacy and precision that I cannot say I have ever found it necessary to dissect adherent tonsils from the pillars as a preliminary measure, though I am none the less alive to the fact that these folds must be protected from injury. In tonsils affected with chronic lacunar disease a blunt probe must be used to explore the crypts and pockets, and ascertain the direction they take and all about them, before the punch forceps can be successfully applied. It is in these cases only that one sometimes has occasion to supplement the conchotome with tenaculum forceps and curved scissors. To get completely rid of the cheesy extrusions, every vestige of this morbidly-secreting tissue must be eradicated. If a vessel in the bottom of the hollow persistently bleeds, it is better to seize and clamp it with Spencer Wells artery forceps at once. *Morcellement* can often be concluded at one sitting, or one tonsil can be attacked at a time; it is not advisable to tire the patient by doing too much. In cases of doubt, time should be given for the parts to heal and contract, as an untidy-looking wound often looks surprisingly well after an interval, when any trimming that remains to be done can be much more easily effected.

## A CASE OF MASTOID ANTRAL AND TWO CASES OF FRONTAL SINUS SUPPURATION.

By HERBERT TILLEY, M.D., F.R.C.S.,
Surgeon Golden Square Throat Hospital.

SUPPURATION IN THE MASTOID ANTRUM COMPLICATED BY AURAL EXOSTOSIS.

CASE 1.—Patient was a female, aged 65, who had suffered from a constantly recurring otorrhœa in the right ear for forty years. Its original cause was unknown, although the late Peter Allen had told her thirty-five

years ago that the drum was perforated and the passage getting narrow. For twenty years she had been accustomed to probe the passage daily with the blunt end of a needle. The ear has always been moist, the discharge being occasionally free and blood-stained, but there had never been any pain. On March 4th, 1900, I saw her in consultation on account of severe earache which had lasted three or four days, and was especially severe at night. The temperature varied from 100° to 101°. There was pain on pressing over the base of the mastoid and commencing weakness of the lower right side of the face. The meatus was so constricted by a hard bony growth that it was impossible to pass the finest probe beyond the obstruction. It being late in the day it was decided to operate next morning, and during the night the facial paralysis became complete. March 5th the patient was anæsthetised and I performed the complete post-aural mastoid operation. The bony meatus was occluded by a large broad-based exostosis occupying the posterior wall. The canal of the facial nerve above the foramen ovale was exposed and the antrum contained pus and unhealthy granulation tissue. The exostosis was removed by mallet and chisel and a large portion of the concha and posterior meatal wall removed in order to prevent subsequent atresia of the meatus—it was quite easy to pass the index finger through the enlarged meatus. The patient recovered without a bad symptom, but was much distressed at the "large size of the hole into her ear."

In spite of this large opening, cicatricial narrowing of the meatus has occurred to such a degree that only an ordinary probe can be passed through the constriction. Ballance has suggested that in such cases the atresia may be prevented by skin-grafting, so that the epithelium of the meatus joins with that of the graft lining the mastoid cavity. It was advised in this case, but the patient being an acute sufferer from angina pectoris it was deemed advisable to avoid another anæsthetic if possible. The facial paralysis is gradually improving, though for four months after the operation it showed no sign of change.

It need scarcely be said that post-operative meatal atresia need only be feared in cases where it exists previous to the operation.

Case II.—Double Frontal Sinus Empyema with Unusual Features: Operation: Recovery.

Patient a female, age 49, complained of severe frontal headaches, and a purulent nasal discharge which was unrelieved by any intranasal measures, for example, removal of anterior ends of the middle turbinals. It was ascertained that the maxillary antra were free from discharge. On opening the right sinus pus immediately escaped into the wound, and the walls of the cavity were found to be lined by unhealthy granulations. Examinations by means of a probe showed that the septum was deficient, and that the fronto-nasal canal was very narrow, so that only a fine probe would pass into the nose. By means of a triangular skin flap I was enabled to remove a considerable portion of the front wall of the right sinus, and also to get well into the left cavity on account of a large perforation of the sinus septum. Owing to the smallness of the parts and the narrowness of the right fronto-nasal canal I hoped by free curetting of the sinuses followed by disinfection of the same, to obtain a cure without making a large opening into the nose on the right side. Recurrence of suppuration quickly followed owing to infection from the nose by the fronto-nasal canals, and the following week I opened the left sinus, made a large opening in the nose, cleansed the parts again, and packed the sinuses with gauze, and renewed these dressings every second or third day for a fortnight. When the lining of the sinuses seemed to be composed of healthy granulation tissue, the soft parts were allowed to fall in and obliterate the cavities. The patient is now quite well, and there is very little scarring. The headaches have entirely ceased.

The case would seem to teach us

1. That it is impossible to thoroughly deal with both frontal sinuses through an opening (however large) in one of them.

2. That however small the fronto-nasal canal may be, it would be wiser to enlarge it slightly and to curette it, in order to prevent reinfection of the corresponding sinus.

3. That suppuration following the primary operation need not preclude an ultimately successful result if the case be diligently watched and suitably cared for.

Case III.—Empyemata of both Frontal, Sphenoidal, and Maxillary Sinuses, together with Suppurating Ear Lesions (Mastoid Antrum).

Patient is a female, aged 22, who for ten years had suffered from a purulent nasal discharge, repeated periods of nasal obstruction, and a feeling of weight and tension over the forehead, which precluded her from joining in outdoor games or intellectual pursuits. During the periods stated temporary freedom of breathing has been many times secured by the removal of nasal polypi. Examination of the nasal cavities showed them to be full of nasal polypi bathed in pus. A large mass of postnasal growths was also present. The antra contained pus, and were dark on transillumination. The sphenoidal sinuses could be easily explored, and contained pus. On injecting warm boracic lotion into the right frontal sinus the liquid returned from the left nostril, showing a communication between the sinus cavities. The frontal sinuses are very large ones. A large polypus was present in the right aural meatus, and suppuration in the left attic tympani was easily demonstrable. Under general anæsthesia some carious teeth were removed from both upper jaws, the alveoli perforated, and antral drainage tubes inserted, the aural polypi were removed and the carious ossicles ablated. The adenoids were cleared away and the ethmoidal regions curetted. During the next three weeks the treatment consisted of bi-daily irrigation of the antra and nasal cavities with an alkaline antiseptic, while three times a week I irrigated the frontal sinuses with boracic lotion, followed by hydrogen peroxide and iodoform emulsion. The suppurating ethmoidal cells which escaped the curette during the general anæsthetic were also dealt with. The patient has since been to the seaside and has returned immensely better, the nasal discharge has much diminished, and the patient uses two instead of five or six handkerchiefs a day.

Unfortunately, this treatment will not cure the diseased mucous membranes which line the accessory nasal cavities, and only thorough curettement and cleansing will do so. The patient is a young lady and of fair complexion, and one hesitates to advise an operation which will inevitably leave a slight scar under each eyebrow, although these would be almost unnoticeable. Then, again, two or three prolonged operations will be necessary. The case is shown to illustrate the great improvement which may result from intranasal treatment alone, and to solicit opinions as to whether any further treatment of the kind can be suggested before proceeding to more radical measures.

Dr. Scanes Spicer had operated on both frontal sinuses through a median incision and a single central trephine opening. He cleared out polypi and passed rubber tubes into both nostrils, and the patient had remained cured for several years. He did not recommend the method in women on account of the scar. He thought many suppurating frontal sinuses could be cured by intranasal treatment.

Dr. Robert Woods thought the chisel and mallet should not be used for exostosis of the meatus. The great density of the tissue increased the difficulty of using them accurately. It was different in the mastoid, where the bone was softer. For meatal exostosis he preferred a small trephine with a drill in the centre, worked by an electro-motor. By this instrument the exostosis was tunnelled concentrically by the drill in the centre and the trephine outside. Between the two a hollow cylinder of bone was left. This cylinder was of great value in enabling the operator to determine when the point of the instrument approached the opposite pole of the exostosis. He could thus avoid injuring the membrane. The nearer the tunnel to the opposite side of the growth, the greater the mobility of the cylinder when tested by a probe or forceps. The method was much superior to the chisel and mallet or dental drill. He did not know to whom the credit of this device belonged. It was not usually to be found in the catalogues, and was not as well known as it deserved to be.

Reply.

Dr. Herbert Tilley, in reply, said that he had no difficulty in defining the limits of the exostosis. He agreed with Dr. Woods that the chisel and mallet were not suitable for operating through the meatus, but thought that they were perfectly safe when used in the post-aural operation. Dr. Spicer's plan of treating both frontal sinuses through a central opening might, he thought, be possible in some cases, but he was certain that treatment could not be thoroughly conducted in the majority of cases through such an opening. A drainage tube served no good purpose in the frontal sinus, and was liable to cause septic infection.

## CASES OF AURAL DISEASE.

By G. P. Field, M.R.C.S.,

Consulting Aural Surgeon to St. Mary's Hospital.

[Abstract.]

Case I.—Lieutenant L., wounded in the Boer war by a splinter of shell, which had passed through the antrum and palate, had sustained from the same cause injury to the right membrana tympani. Cure of otorrhœa and healing of the membrane resulted in restoration of hearing.

Case II.—Trooper G., a New Zealander, came to me suffering from double perforation, due to combined starvation and exposure at nights during the Boer war. Cured by application of a 10 per cent. solution of trichloracetic acid.

Case III.—A. H., another sufferer from the war, kicked on the right side of the head by a stampeding horse. Result: Incurable deafness of the left ear, probably from damage to the labyrinth.

Case IV.—Major C., deafness from concussion of heavy guns. Treatment: Rest to the ear, counter-irritation over

mastoids, and potassium iodide internally. Result: Nearly complete recovery.

CASES V and VI.—Messrs. T. and E. G. M., instances of chronic non-suppurative catarrh and polypus respectively, from a prolonged exposure to cold rainy weather in Zululand. Successful treatment after the lapse of three years.

CASE VII.—X., suffered from absolute deafness with tinnitus and giddiness developed about nine months after contraction of syphilis. Treatment: Hypodermic injection of ⅓ gr. doses of pilocarpin. Result: Negative at first, but eventually complete restoration of hearing of the left ear, and general improvement in health.

CASES VIII-XII.—Aural exostoses. These, in the author's experience, are best treated by making a small opening with the dentist's drill.

A sequence of cases affords confirmation of the author's original opinion as to the frequent causation of exostoses by persistent sea bathing. In one instance, at least, double exostoses appear to have originated in irritation due to the use of the binaural stethoscope. Case X affords an example of the risk of the formation of abscess attendant on delay in operation. Case XII is an instance of the comparatively soft and bony exostoses met with chiefly in women. A main feature in all these cases is the good results accruing from the drilling of an opening of small calibre through the apices of the ivory exostoses.

Dr. CHARLES WARDEN inquired how Mr. Field explained the supposed influence of sea bathing in causing exostoses of the meatus. He had found that the deafness in such cases was generally due to accumulation of cerumen, which could be softened by alkaline drops and removed.

Dr. SCANES SPICER asked Mr. Field what he considered the indications for the use of pilocarpin. His own success with that remedy had not been great.

REPLY.

Mr. FIELD, in reply, said he had first noticed the association of sea bathing with exostoses many years ago in three men who were all enthusiastic sea bathers and all suffered from exostoses. The case in which pilocarpin gave such a striking result was one of old syphilitic deafness, in which the tuning fork on the mastoid was not heard in either ear.

## SOME DETAILS IN EUSTACHIAN CATHETERISATION.

By J. DUNDAS GRANT, M.D., F.R.C.S.,

Surgeon Central London Throat and Ear Hospital and to the West End Hospital for Nervous Disease.

IT is not merely flattering to the vanity, but favourable to the interests of the practitioner to succeed in passing the Eustachian catheter up a nostril through which others have been unable to do it. I have no doubt that every aurist of experience has some dodges of his own which help him through difficulties into which others have fallen. No doubt in some cases in which I have failed others have succeeded, but in some, if only a few, the converse has been the case.

In most cases the difficulty which has baffled the operator has been the steering of the catheter past some deformity of the septum, whether a deflection or a thickening. In most cases the obstruction has been a ridge of some sort running obliquely upwards and backwards, but sometimes a so-called scoliosis bulging low down in front so as to come close up to the outer wall of the nose and almost obliterate the visible opening of the cavity. In many of these cases discomfort and disappointment have resulted from the operator not having made a preliminary rhinoscopic inspection of the nares, and I would lay down as a rule that the Eustachian catheter should never be employed without such an examination having been made. As a rule the application of a weak solution of cocaine either by a spray or brush facilitates the catheterisation by diminishing the patient's sensitiveness and reducing the vascular turgescence of the mucous membrane. In most cases the passage of the catheter through the nose is greatly facilitated if the nasal speculum is used at the same time, the sense of touch being greatly assisted by the sense of sight. In some instances this help must be dispensed with for reasons which will be given later on.

In the case of an oblique ascending ridge on the side of the septum it may be taken as a general rule that the catheter should be introduced with its beak pointing towards the septum and underneath the ridge; that when it is in this way pushed back as far as it will go the point should be turned downwards and outwards underneath the inferior turbinated body, and upwards into its hollow; in other words, upwards and outwards into the vault of the inferior meatus. It is sometimes necessary to withdraw the catheter slightly before engaging its point under the inferior turbinal. The instrument is then pushed steadily backwards until it is felt to be free in the naso-pharynx, when it can be turned downwards and hooked over the back of the soft palate. In some cases, where the septal ridge diminishes rapidly and considerably towards its posterior part, the beak of the catheter need not be turned under the turbinal at all, but kept pointing upwards under the septal crest until the naso-pharynx is reached. This proceeding is greatly facilitated if the point of the nose is pressed forcibly upwards.

When the inferior turbinal projects considerably and the septal spur is not very great, it is sometimes advantageous to pass the catheter above the turbinal till its tip (pointing downwards) reaches the naso-pharynx, when by a little steady pressure the stem of the catheter may be forced down between the turbinal and the crest on to the floor of the meatus. When the septal projection extends outwards so far in the inferior meatus as nearly to occlude the orifice, the nasal speculum must be removed, so that the tip of the nose may be forcibly pressed towards the opposite side of the face. The point of the catheter is then introduced under the septal projection, the stem being directed towards the opposite side of the face, pressing the tip of the nose with it. This will often permit of the catheter, lying, as it were, on its side on the floor of the nose, being pushed in till its angle approaches the middle part of the inferior meatus where the passage widens out considerably. By a little gentle *tâtonnement* the operator will find whether the point of the instrument should be turned upwards or downwards so as to be coaxed through into the naso-pharynx with the least difficulty. In another class of case there is a projection from the septum at the junction of its posterior and middle third presenting a somewhat arched shape on inspection. When this is present the passage of a sufficiently curved catheter is quite impossible as long as the usual rule is followed of turning the beak downwards, and pushing it along the floor of the nose. The catheter must, on the other hand, be placed with the back of its beak on the floor of the nose after the manner of the head of a golf club. To allow this position to be maintained while the catheter is pushed sufficiently far back for its tip to get in the arch-like projection, it is necessary for the tip of the nose to be tilted upwards and to the opposite side. In this case also the nasal speculum must be removed.

I am convinced that by carrying out these rules I have obtained success in passing the catheter in cases in which I did not expect it, and I doubt not that when others have had the same results it has been by following them intentionally or unwittingly. In any case I would strongly commend them to the consideration of those who think their success in Eustachian catheterisation still leaves something to be desired.

I have made no reference here to the usual rules for the passage of the Eustachian catheter, or for its use through the opposite nostril in case the nostril of the affected side is obstructed, and which are or ought to be familiar to all who use the instrument. Ardent nasal operators recommend that when an obstruction exists such as prevents the introduction of a Eustachian catheter, this fact is sufficient to justify the removal of the said obstruction, but we must reflect that the passage of the Eustachian catheter may be impeded by an obstruction which merely produces a tortuosity rather than a stenosis of the passage, and which may permit of the free admission of air to the naso-pharynx and Eustachian tube, although it interferes with vision and with the passage of a Eustachian catheter. The obstructions as seen through the rhinoscope are thus, so far as aëration is concerned, often more apparent than real. I make bold to say that an applica-

tion of the rules I have laid down will greatly diminish the number of cases in which the passage of the Eustachian catheter is impossible, apart, however, from the question of the injurious influence of this obstruction on the organs behind it.

I have not touched the question of the indications for the use of the catheter rather than the Politzer bag, but I will assume that all are convinced that in many cases such indications exist.

I need hardly remind my hearers of the occasional occurrence of complete congenital or acquired occlusion of one or, it may be, both posterior nares, which is sometimes only detected when an attempt is made to pass the Eustachian catheter. In all my cases of this anomaly I have found the nasal cavity of the affected side filled up with a white glutinous secretion resembling the starchy paste used by the laundress.

I may be reproached for dwelling with unnecessary insistence upon what are mere minor details, possibly beneath the consideration of such an assemblage as the present; but I may call to mind that it has been said that "he who would command success must not only be industrious but he must have an almost ignominious love of detail." Of no one, I believe, is this more true than of him who would wish to succeed as an aural specialist.

## EXPLANATION OF APPEARANCES IN SOME CASES OF ACUTE LACUNAR TONSILLITIS WHICH SIMULATE EXCAVATING ULCERS.

By Dundas Grant, M.D., F.R.C.S.
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Occasionally the medical attendant and friends of patients affected with acute tonsillitis are considerably alarmed by the appearance on the upper and posterior part of the tonsil of what seems to be a deep excavated ulcer of oval shape, the floor of which is covered with a white slough-like membrane. Such cases are often described by the observers, and a very typical one came under my notice recently.

Mrs. Y. came under my observation on July 4th complaining of intense sore throat. At the upper part of the right tonsil was a large excavation, the walls of which were covered with a white detachable exudate. A probe was introduced into this, and it could be seen that the exudation came from the mouths of small lacunæ in the tonsil tissue situated above and behind and below and in front of the opening. The appearance at the time was extremely alarming, but the lacunæ on the rest of the surface of the right tonsil as well as of the left one presented the appearance typical of lacunar tonsillitis. I looked upon the excavation as being formed by the furrow which normally exists in the tonsil in its postero-superior part, though probably in this particular instance rather larger than usual. The case was treated as one of simple lacunar tonsillitis—namely, by the administration of sodium salicylate corrected by the addition of potassium bromide. In a week's time every vestige of exudation had disappeared, and the patient was perfectly well.

This represents in an interesting way some points brought out by Killian in vol. vii of the *Archiv für Laryngologie*. He points out that in the newborn child the tonsil consists of three masses of tonsil tissue, between which are two furrows; the uppermost mass and the furrow next to it are the most persistent; the lower furrow gradually disappears, and the tissue which forms the bulk of the adult's tonsil is covered to a considerable extent by a triangular fold of membrane running downwards and backwards from the anterior pillar of the fauces. In the case above described the upper furrow was unusually patent.

Killian recommends for the better examination of the tonsil that the head should be turned towards the affected side, the tongue pulled out towards that side, and the opposite angle of the mouth retracted while the patient utters the sound "hay." In this position the tonsil is looked at more nearly from the middle lide, so that the furrow and the marginal cushion (*Randwülst*) above and behind it can be readily recognised. This furrow is quite distinct from the supratonsillar fossa, the opening of which is above the anterior portion of the tonsil and between its apex, and the uppermost part of the anterior pillar of the fauces. I have generally found it necessary to use a tongue depressor to enable me to see the tonsil satisfactorily by Killian's method.

I am not prepared to state that the cases of combined ulcerative tonsillitis described by Sendziak or the chancriform tonsillar ulcers described by Moure consist simply of the natural excavation to which I am referring, but I think it extremely probable that the furrow has been frequently mistaken for excavating ulcers by others as I believe they have by myself.

## HYPERTROPHY OF THE ANTERIOR LIP OF THE HIATUS SEMILUNARIS.

By Dundas Grant, M.D., F.R.C.S.,
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When the anterior part of the middle turbinated body is not very highly developed and still more if, as the result of atrophic rhinitis, it is diminished in bulk, the groove of the hiatus semilunaris is often very plainly visible. More often it is concealed from view by its own anterior lip which may form a fairly sharp ridge shelving gradually towards the observer—this ridge, which is really the membrane covering the unciform process of the ethmoid, is sometimes the seat of considerable hyperplasia, and it very frequently comes in contact with the middle turbinated body, so that what is normally a groove is thereby converted into what is practically a tube leading more or less directly from the ostium of the maxillary sinus up to the frontal infundibulum. In extreme cases this hyperplasia is very considerable, and it may enlarge so as to form a rounded bolster-shaped swelling on the outer wall of the middle meatus, curving from above downwards and backwards and simulating an extra turbinated body. It is sometimes so rounded and so large that it may overgrow and actually conceal the real middle turbinal and present an appearance so like that body that it may be very readily mistaken for it, and indeed may be indistinguishable from it by its ocular appearance, except in so far as the typical neck of the middle turbinal may seem to be wanting. By the use of the probe, however, that difficulty is removed, as it is then found impossible to pass this between the swelling and the side wall, as one could do with the middle turbinated body.

It is impossible to examine any very large number of noses without coming across this condition, but unless the singularity of the appearance and the nature of the swelling are kept before the mind it is very apt to be overlooked. Hence in studying the topography of the parts in any given nose it is essential to check the ocular appearances by means of the probe. The swelling I refer to is to be distinguished from the soft boggy bulging described by Kaufmann as a "lateral swelling," and which is usually associated with rarefying osteitis of the uncinate process such as occurs in some cases of suppuration in the maxillary antrum. This is probably an effort on the part of the disease to make a wide exit for the pus into the nasal fossæ. In cases of ethmoiditis with the formation of multiple polypi, hypertrophy of the anterior lip of the hiatus is frequently present, and I have found that after the removal of as many polypi as possible, even after ablation of the anterior part of the middle turbinal, there are still remaining small polypoid growths showing only a very slight translucent bulging on the outer wall. After removal of the hypertrophy of the anterior lip, I have frequently been able to effect the removal of such polypi which had previously been mechanically impossible. For the best means of removing this hypertrophy I am indebted to the writings of Professor Killian.

The growth consisting of a sessile ridge or lappet, it is naturally difficult to seize either with forceps or snare, but the difficulty is to be met by transfixing it at its middle part with a point of one blade of a pair of scissors, cutting it through and removing the lower and upper halves respectively by means of a snare. Instead of scissors I have sometimes used a sharp knife, as there is not always room for the passage of the unoccupied scissors blade, but it need hardly be said that the patient's head must be securely held, while transfixion is effected so as to prevent the possibility of its being jerked forward on to the point of the instrument, whereby the possible though very unlikely accident of penetration of the orbital cavity may be avoided.

## A NOTE ON THE MORBID CONDITIONS SIMULATING ADENOIDS.

By WYATT WINGRAVE, M.D.,

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A LARGE number of children come under our observation who, while exhibiting some or all of the classical symptoms of adenoids, are found on examination to be free from that trouble.

These cases increase in number as laymen become more familiar with the existence of this affection and are, consequently, prompt to seek relief with a ready-made diagnosis.

It may happen, even, that the classical signs are present in so striking a degree that a detailed inspection by finger or mirror is considered superfluous by the practitioner himself, and he takes their existence for granted. For this there is much justification, since digital exploration is not always expedient without an anæsthetic in the case of a very sensitive child accompanied by a hypersensitive parent.

Posterior rhinoscopy is proverbially difficult in children, especially those who are the subjects of enlarged faucial tonsils: we have, therefore, practically to depend upon our sense of touch for a positive confirmation, and any other evidence, however conclusive it may appear, is at the best only presumptive.

Still further complete removal of tonsils and adenoids is not infrequently followed by persistence of the symptoms, and we are often unjustly inclined to blame the parents for neglecting the necessary post-operative treatment. Examination of such a case will probably reveal one or more of the conditions to be described.

Excluding those forms of nasal obstruction readily recognised by anterior rhinoscopy, the morbid conditions symptomatic of adenoids may be thus grouped: (1) Diminutive choanæ and nostrils; (2) low vault of naso-pharynx; (3) paresis of soft palate and pharynx; (4) vomerine crest; (5) distortion of vertebral column; (6) retropharyngeal abscess; (7) hypertrophy of palate tuberosities; (8) webs and neoplasms.

1. Diminutive choanæ and nostrils occur frequently. They are commonly associated with low vault of pharynx and imperfect development of the maxillæ, together with an immobile velum palati and a gothic arched palate. Choanal stenosis may be due to the mucous membrane being so thickened as to obstruct the breathway, or the osseous walls themselves may be contracted. In either case the apertures are often reduced to the diameter of a lead pencil. When only the mucous membrane is at fault, the finger-tip will suffice to remove the obstruction, which feels like a web, and may easily be overlooked if the precaution of thoroughly exploring the choanæ with the finger-tip be neglected. The nostrils may be uniformly diminutive, or may themselves be normal in size, while the turbinals are disproportionately large. The former condition seems to be closely associated with the development of the maxillæ, since it is not often found after the sixth year, when those bones with their sinuses undergo a marked enlargement as the eruption of the permanent teeth proceeds. Turbinal disproportion, although it may be found at any age, is especially associated with puberty, and the balance may not be restored for several years. This must not be confused with that form of localised hypertrophy which involves the posterior end of the turbinal only, and belongs chiefly to adult life (varix).

2. Low pharyngeal vault. This condition occurs in ill-nourished and rickety children, often accompanying small choanæ and imperfect development. It was particularly well illustrated in two recent cases (sisters aged 5 and 6), in whom with non-development of the maxillary antra, the pharyngeal vault was only about half an inch above the level of the hard palate, and the nasal fossæ, being also very small, nasal respiration was practically impossible.

3. Paresis of soft palate and pharyngeal muscles. These may be the result of any form of nasal obstruction. They may be due to various forms of paralysis, central and peripheral, or they may be a legacy from tonsils and adenoids already removed when correction of bad breathing habits has been neglected.

4. Prominent crest of the vomer or prolongation backwards into the pharynx of the nasal septum is by no means a rare deformity. It occurs as a deep crescentic ridge extending sagittally across the vault of the naso-pharynx (from which it seems to hang) to the posterior wall, so dividing it into two pockets. It is generally very tough, since it consists in part of a bony extension of the posterior border and alæ of the vomer continued to the vertebral aponeurosis by a tense band of fibrous tissue covered with mucous membrane. Probably it is due to a persistence and exaggeration of the ethmo-vomerine plate, from which the nasal septum is developed. Although *per se* it can scarcely be the cause of much obstruction, it is, often associated with any of the other abnormalities included in this list, and the "pockets" may contain adenoids which are easily missed when operating. The appended illustration was kindly drawn for me from typical cases and an old museum model by Dr. J. Stewart Mackintosh.



Sagittal section of nose and naso-pharynx showing vomerine crest in vault of naso-pharynx.

5. Forward projection of the vertebral column. In this deformity the arch of the atlas is the chief offender, but the second and even third cervical bodies with their discs may also be involved, encroaching upon the naso-pharynx to such an extent as to barely admit the finger tip behind the nasal septum.

6. Retropharyngeal abscess. In addition to the classical varieties of this condition which we meet with in our own practice there is one deserving special attention. I refer to the retropharyngeal lymphatic gland, which lies in the cellular tissue and is supposed to be only present in early life. This gland may be the seat of acute or chronic inflammation and so give rise to swellings which may seriously encroach upon the upper breathway. Infection from adenoids or from operations is by no means improbable, and I have seen two cases in which a retropharyngeal abscess in this situation immediately followed the removal of the adenoids. Infection from middle-ear disease has also been suggested.

7. Undue prominence of the soft parts covering the internal pterygoid plate (its hamular process) and the tuberosity of the palate, forms a by no means rare encroachment upon the post-nasal space. It may be alone or it may accompany the other deformities; it is always associated with general thickening of the mucous membrane of the part, and it may also materially interfere with tonsillotomy unless a narrow guillotine be employed.

8. Finally the post-nasal space may be obstructed by webs and by neoplasms whose decription is beyond the limits of this short note, which includes the commonest only of those morbid conditions that simulate or are responsible for the existence and persistence of "adenoid" symptoms.

NOTE.—The purely functional illustration of the subject is ably discussed by Dr. Marcel Natier in the June number of *La Parole* under the title of Faux Adénoidisme.

## ON THE REMOVAL OF TONSILS IN ADULTS.

By H. LAMBERT LACK, M.D.Lond., F.R.C.S.Eng.,

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THE removal of tonsils in adults is by no means the simple matter that it is in children in that it is much more liable to

be followed by certain ill-effects. It is my purpose briefly to discuss these sequelæ, and the means by which they may be prevented.

Besides the dangers attending all open wounds, tonsillotomy in the adult may have two special consequences which are so common as to merit serious attention.

The first is the danger of hæmorrhage, which may be severe enough to exhaust the patient or to seriously menace life itself. Although not unknown in childhood, it is certainly much more common in patients over 15 years of age, and the tendency to it seems to increase with every year of life. Further, the larger the tonsil and the longer it has been enlarged the greater the danger becomes. In the large fibrous pear-shaped tonsils sometimes met with, the walls of the vessels in the neck of the tonsil will be found to be much thickened and embedded in fibrous tissue, and they neither retract nor contract when cut across. I do not think it is by any means too high an estimate to say that with such tonsils in patients over 20 years of age, severe hæmorrhage will occur in one out of every three or four cases if cutting instruments be used, and by severe hæmorrhage I mean such as is sufficient to endanger life. With small tonsils the danger is much less.

The other risk attending the operation is the effect sometimes produced on the voice. Singers sometimes entirely lose their singing voice, and public speakers, teachers, etc., find that they are unable to speak so well or so long as before the operation, and that the use of the voice causes them a hitherto unknown aching feeling in the throat. This consequence of tonsillotomy in adults I have repeatedly met with, and I do not think it is generally sufficiently considered. The greater the enlargement, and the longer it has persisted, that is, the more the patient has accommodated himself to the condition, the greater is the risk. A medical friend of mine had his tonsils removed a few years ago, and not only did he have most alarming hæmorrhage, lasting nearly twelve hours, and ending only on faintness, but at the same time he entirely lost his singing voice.

The methods of removal may be grouped as follows:

1. Removal by means of caustics, including puncture with the electric cautery, the so-called ignipuncture.
2. Removal by cutting instruments, such as the tonsil guillotine or bistoury.
3. Removal with galvano-cautery snare or cautery knives.
4. Removal with the cold wire snare.
5. Enucleation or complete removal.

(1) The method of ignipuncture with the electric cautery may be employed to reduce enlarged tonsils. Under cocaine anæsthesia three or four punctures are made into each tonsil at one sitting, and the operation repeated on three or four occasions, with about a week's interval between each. It gives rise to but slight pain at the time, and to little subsequent disturbance. After a few sittings the tonsils will be found considerably reduced in size, but subsequently shrinking takes place much more slowly, and the method is by no means to be recommended where complete removal of the tonsil is desired. It is suitable for cases of much-enlarged tonsils, where removal is not necessitated by recurring tonsillitis, and complete removal is undesirable for fear of injury to the voice. In such cases a few sittings will probably do all that is required without any bad effects.

(2) Tonsillotomy should never be performed in adults with very large tonsils because of the danger of hæmorrhage. In certain cases, however, where the patient suffers from repeatedly-recurring attacks of tonsillitis, the tonsils although too small to be snared can often be pressed well through the blade of the guillotine. In such cases the danger of hæmorrhage is not great, and enough tissue may often be removed to prevent recurrence of the tonsillitis. Moreover, in many of these cases the only alternative is enucleation, and this has its own disadvantages. The choice of operation must depend partly on the features of the individual case and partly on the wishes of the patient.

(3) Removal with the cautery snare, etc., leaves a large charred wound in the throat with increased danger of infection, and of secondary hæmorrhage when the sloughs separate. It arrests all bleeding at the time, but there are other methods which secure this result quite as effectively, and are in other ways preferable.

(4) Removal with the cold wire snare. This method is only applicable to cases of much enlarged tonsils, but in these it seems to me to possess great advantages over all other means. The wire loop when tightened round the neck of the tonsil tends to slip over the outer convex surface of the tonsil, and thus almost enucleates it in many instances. Further, if the wire be tightened quite slowly, all immediate bleeding is prevented, and, as the raw surface left soon heals, there is slight danger of secondary hæmorrhage. The operation, although more painful than cutting, is usually easily borne under cocaine anæsthesia, and, requiring no elaborate apparatus, can be carried out anywhere. The one thing requisite is a snare, which permits of the wire loop, when once placed in position, being rapidly drawn tight, which can then be screwed up slowly and with irresistible force. A snare I have had made seems to fulfil the above requirements, and I have repeatedly used it with success.[1]

(5) Lastly, enucleation. An incision is made through the mucous membrane between the anterior pillar of the fauces and the anterior border of the tonsil, through which the finger or a blunt instrument is introduced, and the tonsil shelled out of its bed. This little operation is not at all difficult to perform if care be taken to keep outside the tonsil capsule, this being but loosely attached to the surrounding areolar tissue. It takes, however, a few minutes to complete, and a general anæsthetic is advisable. The advantages of this method are obvious:

1. There is no risk of hæmorrhage, the vessels being torn across outside the tonsil where they are healthy.
2. The tonsil is completely removed—a point of importance in cases of frequently recurring tonsillitis. When a tonsil is removed with the guillotine or with the snare, the tonsil crypts will be found open on the cut surface—that is, part of them has been left behind. Thus the danger of tonsillitis is not entirely removed, although, of course, greatly reduced.
3. In some cases of flat tonsils there is no other practicable method.

In conclusion, I would urge that no one routine method should exclusively be employed in dealing with tonsils in adults. Much-enlarged tonsils may be reduced in size by the galvano-cautery or removed with the cold wire snare; small flat tonsils may be removed with the guillotine or enucleated. Each case should be judged separately on its merits. The galvano-cautery has been so excessively praised by some, and the guillotine, from its ease and rapidity, so entirely used by others, that I have ventured to call attention to other methods which after repeated trials I consider to be safer and more thorough in a large number of cases. In this paper I am treating entirely of adults. In children the guillotine is generally sufficient, although in rare cases other methods may be used with advantage. Thus I have used the snare successfully in cases where I have had special reason to fear hæmorrhage. It may be objected that I have exaggerated the frequency and danger of hæmorrhage, and that there are reliable means of arresting it. I venture to think however that in this instance prevention is better than cure.

REFERENCE.
1 BRITISH MEDICAL JOURNAL, 1898, vol. i, p. 893.

## SOME PRACTICAL POINTS IN CONNECTION WITH THE TECHNIQUE OF SKIN GRAFTING IN MASTOID OPERATIONS.

By WILLIAM MILLIGAN, M.D.,
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In order to have a satisfactory and permanent cure after the performance of a radical mastoid operation, it is necessary to secure the complete lining of the antro-tympanic cavity with a layer of healthy epidermis. That this is fraught with difficulty will, I think, be admitted by all surgeons who have had much experience in the performance of radical operations.

One of the main practical difficulties is the making certain that all disease has been removed. At first sight it would appear a fairly easy matter to say whether or not all carious

foci had been efficiently scraped and cleared away, but practically such is not the case. The most careful operator will, I think, admit that at times his judgment upon this particular point has been found wrong, and that the subsequent behaviour of the wound has shown that foci of disease have been left which caused a continuance of suppuration and an incomplete healing of the bone wound.

In the performance of extensive mastoid operations a good light is essential, and will be found to show up small foci of disease which without its aid might be easily passed over. The thorough smoothing down of the bony walls of the cavity by means of burrs or osteotribes is also useful in helping to ultimately decide whether all disease has been removed or not. Especially is this the case when dealing with cholesteatomatous masses within the mastoid, when it is essential that all *débris* and all traces of the so-called lining membrane should be cleared out. Formerly the surgeon had to trust to the flaps made from the cartilaginous walls of the meatus for the growth of epithelial cells which was ultimately to cover over the parietes of the antro-tympanic cavity. In many cases he was not disappointed in his expectation, for after some months of careful treatment by means of packing and the application of caustics to any exuberant granulation tissue, he found the cavity papered by a layer of shining and highly refractive epithelium which formed a healthy barrier of tissue between the cavity of the ear and the cavity of the cranium.

Frequently, however, this desirable result was not obtained. Much of the cavity, it is true, might be found covered, but such vulnerable parts as the inner tympanic wall and the receding antro-tympanic angle refused to epithelialise, and remained a weeping and granular surface ready to be reinfected and to be the starting point of fresh disease.

In whatever way flaps were formed from the soft parts, this incomplete epithelialising might result, and hence an element of uncertainty was bound to exist in the mind of the surgeon as to whether or not his operation would secure a complete arrest of suppuration.

The method of grafting the operative cavity proposed by Siebenmann was undoubtedly a step in the right direction, and the still more recent technique advocated by C. A. Ballance has placed the certainty of cure upon a very much more secure basis, and has, I think, done much to revolutionise the mastoid operation for chronic disease.

In both hospital and private practice I have had many opportunities of trying Ballance's operation, and the object of this short communication is to lay before this meeting certain points which appear to me to have some practical importance, and to glean from the *confrères* here assembled the results of their experiences, their difficulties, and their successes.

One of the main difficulties which I have experienced has been the constant oozing of blood from the walls of the operative cavity, when that cavity has been reopened for the performance of the second or grafting operation. In order to arrest this oozing I have tried filling the cavity with warm normal saline solution, painting its walls with solutions of cocaine or of suprarenal extract, etc. These plans are at times useful, but a more efficacious plan is, I think, to open the original incision the day before the second or grafting operation, and to allow any oozing to take place into superficial dressings placed over the ear. In a few hours all oozing will have ceased, and by the next morning at the time of operation the weeping surfaces will be found dry and glazed. The incision may be opened without an anæsthetic, the skin being simply frozen with Bengue's chloride of ethyl.

The proper adjusting of the graft requires great care and considerable dexterity. An assistant accustomed to the performance of these operations will be found invaluable, as he knows how and where to place the needles used for fixing the graft. To float the graft into position is a method worthy of trial. The antro-tympanic cavity is filled quite full with warm normal saline solution. The graft is now floated upon this fluid. The fluid is then rapidly sucked out by means of a pipette passed through the external auditory meatus, and as it is drawn off the graft sinks with it until it lies close down upon the walls of the cavity it is desired to cover. If it can be arranged, a dentist's salivary pump may be fitted up, and will be found very efficacious for this purpose.

I have had some difficulty with the metal stoppers as used by Ballance for pressing home the gold leaf on account of a certain tendency there is for the gold leaf to cling to the metal ends and to tear. I have, accordingly, had glass stoppers made which appear to me to be useful, and free from the objection named.

The concha flap, I think, it highly desirable to graft. If not grafted, suppuration from its surface is almost certain, and may result in the neighbouring parts of the graft becoming undermined with pus and floated off.

In several cases I have found that that portion of graft which is stretched over the remains of the posterior meatal wall has become broken probably due to over-stretching over a comparatively sharp edge of bone. This may be obviated by very carefully smoothing the bone and rounding it well off by means of a burr, giving this wall a very sloping surface.

The tendency of the external ear after operation is to fall slightly downwards and forwards, and to assume a somewhat lower level than its fellow. To obviate this (a somewhat unsightly deformity) I am in the habit of slinging the auricle up with tapes soaked in collodion, and attached upon the anterior and posterior surfaces of the auricle and to the top of the head.

My general experience of the grafting operation has been satisfactory, and it is with the view of hearing from others what their experience has been that I venture to make these few suggestions.

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## ON SO-CALLED SCLEROSIS OF THE MIDDLE EAR, ITS CAUSATION AND TREATMENT.

By MAYO COLLIER, M.S.Lond., F.R.C.S.,

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THE object of this communication is to submit to your judgment a conclusion I have arrived at that a very large percentage of cases of so-called sclerosis or adhesive disease of the middle ear are a concomitant and direct result of ordinary nasal catarrh from simple mechanical obstruction to the Eustachian tube, and that the early recognition and treatment of these cases by restoring this condition and by daily manipulations and movements of the drumhead often results in a satisfactory and permanent restoration of hearing.

Both the tympanic cavity and the other cavities leading from the nose are anatomically parts of and extensions from the nose cavity proper, and any alterations in the physical condition of the contents of the nose cavity will be communicated to and affect the patent extensions from this cavity. The tympanic cavity is anatomically and developmentally simply an extension of the nose cavity, and normally the contents of each cavity have a free intercommunication. The tubo-tympanic cavity is a part of the upper air passages as much as the antrum or any of the accessory cavities of the nose. It is lined with an extension of the same membrane that lines the nose, and is covered with the same sort of ciliated epithelium but differs in this one respect—that it partakes of the character of, and virtually is, a periosteum. This difference in the constitution of the lining of the tubo-tympanic cavity greatly increases its importance both physiologically and pathologically.

Embryology shows us that the Eustachian tube and tympanum, with its extensions upwards to the attic or epitympanic space and backwards to the antrum or post-tympanic space, are one complex and slowly-developing extension from the oro-nasal cavity, and are completely separate, and separated developmentally and anatomically, from the internal ear or ear proper.

I desire to emphasise the fact that the tympanic cavity is part of the nose cavity, and is only accidentally related to the ear proper or internal ear. It is necessary when studying the anatomy, physiology, and pathology of the tubo-tympanic cavity to look upon it as part of the nose cavity, and as sympathising with and sharing in the variations in the conditions of the contents and diseases of the nasal cavities.

The same remarks apply most assuredly to the other extensions from the nasal atrium. The antrum, the frontal spaces, as well as the ethmoid and sphenoid sinuses, partake of and sympathise with most of the conditions and affections of the

nasal atrium. This being the case, when we hear it asserted by authorities of large experience that diseases of this or that accessory space are in a very large percentage of cases associated with, if not the direct result of, disease in the main nasal atrium we must not be surprised. Then, again, disease in or narrowing of the nasal atrium should suggest possible or probable implication of one or more of these accessory spaces.

Chronic non-suppurative disease of the middle ear with deafness and tinnitus is the affection that bears, in my belief, a close relation to the condition of the nasal atrium, and more often depends upon the condition of the nasal atrium than is commouly realised. I do not see the good of following the textbooks in their description of this affection.

The earlier writers were not happy in their nomenclature. Such terms as "chronic catarrh" and "dry catarrh" are either wrong, meaningless, or contradictory. Catarrh is not a disease, but a symptom of disease, and means literally a discharge. In these cases there is no discharge, either internally or externally. The substitution of a meaningless or incorrect term for an explanation is misleading and mischievous. The idea that chronic non-suppurative disease of the middle ear is always due to an extension of a catarrhal or inflammatory process from the nose or naso-pharynx is entirely unwarrantable. The influence exerted by the inflammatory condition of the nose or naso-pharynx is usually purely mechanical.

Again, what is the good of saying that non-suppurative disease of the middle ear may be either hypertrophic or hyperplastic. These are stages of one and the same condition, and it in no way helps us to understand why the tympanic lining with its contents is prone to become thickened, the motions of the drumhead and ossicles impeded, and the hearing gradually and seriously impaired. The terms "hypertrophic" and "hyperplastic" would be very much better discontinued. These terms in their essential meaning stand in relation as cause and effect. Hypertrophy leads to hyperplasia, over-nourishment leads to increased volume of tissue.

Can we offer a rational and reasonable everyday explanation of why it is that anyone may get such a condition of things in his tympanic cavity that his hearing becomes slowly but seriously impaired?

I believe that in the associated conditions of a chronic cold in the head with partial obstruction to nasal respiration, you have every factor requisite to produce what writers are pleased to call hypertrophy and hyperplasia or sclerosis of the middle ear.

Do not forget that the tympanic cavity belongs to the nose, that the tubo-tympanum is an extension of the nose cavity, that it is practically always open and always freely communicating with the nose; that the tension of the air in this cavity is normally the same as in the nose, and the same as the outside air. What is likely to take place if the means of free communication between these spaces is altered or curtailed?

In the event of the free communication being cut off, the air contents of the tympanic cavity would be partly absorbed. The drumhead would be driven in to accommodate the cavity to the lessened contents.

The vessels in the lining membrane of the walls of the tympanum no longer being under normal external pressure, become dilated from unbalanced intravascular pressure. This means swelling of the whole lining membrane and probably serous effusion into this membrane or into the tympanic cavity.

Is not the hypertrophy of the writers thus easily accounted for, and is not this a better explanation than saying that heredity is at the bottom of the mischief, or that gout and rheumatism are the unseen agents that are at work? Gout and rheumatism no doubt play a *post hoc* part.

Now let us look for a moment at the drumhead whilst under these conditions. What is our common experience when deafness occurs after an acute naso-pharyngeal cold? We find this condition of things: Membrane very depressed with pockets in front of and behind the handle of the malleus. We find that the short process is bursting through the membrane, and that the handle of the malleus is very oblique. The drumhead is angular instead of concave. The colour is normal below in the lower segment, but above in the region of the handle and head of malleus it is red and striated with vessels passing down to the umbo. To produce the hyperplastic or later form of middle ear disease, all that is required is for this condition—or various grades of this condition—to continue for a longer or shorter time.

We then get the membrana tympani permanently stretched and damaged at some parts, and thickened at others, and the whole lining membrane of the tympanum altered, thickened and disarranged. Deposits of calcareous matter may occur when the patient is gouty or rheumatic, or from other causes. The hearing is proportionately damaged, but often more or less according to accidental circumstances. Noises of various descriptions, continuous or intermittent, and varying in character and intensity, are produced by the increased pressure of the stapes on the fluid contents of the cochlea.

This is a perfectly simple and unvarnished description of a condition of things that is most common amongst all classes of society. To anyone who sits in an out-patient room at a throat and ear hospital, this condition is one of the commonest he will meet with. Addressing men as I now am who are mostly attached to general or special hospitals, I ask you, Do you ever find patients who are hard of hearing in the sense I have indicated who are not at the same time suffering from, or who have not suffered for some considerable time from, some chronic catarrhal and obstructive condition of the nose and naso-pharynx?

Now, in studying the etiology of this affection as given us by the various writers on the subject, several well known and acknowledged facts support my contention that chronic non-suppurative disease of the middle ear in the majority of cases is due to the mechanical obstruction of the Eustachian tube, and is secondary to nasal catarrh and obstruction. The ages of the subjects of this affection vary from 5 to 80; but peculiarly enough the most frequent and commonest period of life for this affection to supervene is just that period when catarrh is most common.

Dr. Sam Seaton, of New York City, in his article on this subject in Burnett's *System*, says that most of the cases develop between the ages of 20 and 30, and the next most prolific decade is between 10 and 20. This is not the period of life when degenerative changes take place in the tissues, and is not the most prolific time for gouty and rheumatic deposits to take place in the fibrous tissues of the body. This is the period of life when the functional activity of the body is greatest and when the various vasomotor changes incident to catarrh are most likely to take place.

The next point of interest is the extraordinary frequency of this affection. One-quarter to one-third of all ear diseases are of this nature, and probably a larger proportion, from the fact that only the advanced cases apply for relief.

The absolute frequency as measured by the number of cases in the total population is very great. The majority of people have some involvement of the middle ear, and a majority of these chronic ear diseases (or so-called sclerosis) are of the nature we have indicated above. This would indeed point to some common prevalent causes affecting the majority of those who inhabit the moister and damper portion of the globe and where sudden changes of temperature are marked. Dr. Sam Seaton says:—"Chronic or adhesive inflammation of the tympanum being an affection most prevalent in the damper portions of the temperate zone, and where sudden changes of temperature associated with moisture of the atmosphere, are liable to occur."

We must assign to chronic aural disease a greater frequency and greater relative importance than even our statistics would indicate. The recognition of this fact is of importance, not only from a prognostic but also from a therapeutic point of view, inasmuch as our efforts at treatment are much more satisfactory when the case is still in the early stage and when no great damage of the aural mechanism nor marked impairment of its function yet exists. We know that an acute cold in the head may so far affect the hearing as to render the individual quite deaf.

I submit that all chronic conditions of catarrh of the nose or naso-pharynx, whether associated or not with more solid obstructive conditions of the nasal cavities, slowly but surely affect the tympanic cavity.

The diminished supply of air to the tympanic cavity is quite sufficient to account for all the pathological conditions and symptoms found in this form of middle-ear disease.

### Treatment.

Generally speaking, I have nothing to suggest to you that is new in treatment, except the fact that a great many cases of what I would call latent obstruction to the nose are missed because examined when the patient is up and about, and gravity has reduced the swollen condition of the interior, rendering the nose patent by day, but leaving it obstructed when the individual is in the horizontal position.

I would specially urge upon you the importance of an early recognition of this affection, of a more frequent examination of the hearing of those subject to chronic catarrh of the upper respiratory tract. We are all painfully cognisant of our inability to cure, or even relieve, more than a small proportion of the more advanced cases, and we are equally conscious of the fact that the earlier stages of this affection are more amenable to treatment, and in such cases we are more hopeful of a marked degree of improvement.

Future progress in the treatment of this affection is not to be looked for in punctures and operations on the drumhead, or in cleverly-devised expedients to circumvent the inevitable. It is by the early recognition of this affection, when a nasal wash and Politzer's bag will go a long way in restoring the patient to health and comfort.

## ETHYL CHLORIDE AS A GENERAL ANÆSTHETIC IN NASAL SURGERY.

By John Mackie, L.R.C.P.Edin.,
Nottingham.

In intranasal surgery the question of an anæsthetic is often a pressing one. Cocaine, though invaluable when only the mucous membrane and subjacent parts have to be dealt with, is not so satisfactory when the deeper structures are involved. Gas is unsatisfactory, from the shortness of the anæsthesia, as also from the tendency to struggle under its use. Chloroform and ether, on the other hand, while they introduce an element of dread into the minds of our patients, cannot well be used in the upright position, a matter certainly of inconvenience to the operator.

Some five months ago I had my attention drawn to chloride of ethyl as a general anæsthetic, and at once put it on trial. I have had it in use ever since, and find that it has greatly simplified and facilitated my work in nasal surgery. In operations on the turbinals and sinuses I find that I have used it 27 times, 4 times in adenoids, twice in septal deformity. In addition I have given it for dentists and general surgeons 15 times; making in all 48 administrations. In no case have I had the slightest anxiety or seen one dangerous symptom. In one or two cases, notably in one full-blown alcoholic, I found the administration rather expensive, from the amount of the drug required, while in a few of my earlier cases, I expect from my dread of giving an overdose, the anæsthesia was shorter than was convenient.

The mode of administration which I have found most satisfactory is to press the mask well over the face so as to exclude all air, and to give the drug briskly and continuously, taking care to send the spray right into the gauze in the ball of the inhaler. For a short operation such as the curetting of the anterior ethmoidal cells, I have found from ½ to ¾ of a minute of this brisk administration sufficient. This will give an anæsthesia of from 2 to 3 minutes. For longer operations it may be pushed considerably beyond this. The action of the drug is so energetic that there is some difficulty in being sure as to the extent of the anæsthesia, but by quickly removing the mask and testing the conjunctival reflex I have generally been able to satisfy myself as to this. From the local action of ethyl chloride in the nasal passages, anæmia is produced, and we have practically a bloodless operation. This is a decided advantage. A caution is, however, necessary. The anæmia soon passes off and violent hæmorrhage may ensue, and if you have allowed your patient to leave you without providing for this by plugging, you may meet with unpleasant results.

From my experience of ethyl chloride, or as its purified form is named "kelene," I should say that, while it is certain to find a place in surgery generally, in nasal work it will prove of inestimable advantage, not only as a convenience for the surgeon, but as a safe and almost pleasant means of enabling a patient to undergo what otherwise must be a very trying ordeal.

## DIFFICULTIES AND INSUFFICIENCY OF THE COMMONLY-ACCEPTED THEORY OF ADENOID DEAFNESS.

By David McKeown, M.A., M.D., M.Ch..
Honorary Surgeon, Manchester Eye and Ear Hospital.

Unanimity exists upon two points: first, the baneful influence of adenoids upon the hearing, and, secondly, the beneficial influence of their early removal. Opinion is, however, divided as to the way or ways in which adenoids lead to impairment and operation to improvement. Various theories have been propounded. Some of these we shall consider, and we shall find (1) that the theories are not what they claim to be—complete—but cover only a part of the ground, and (2) that, accepting them as complete, there is a difficulty not only in estimating the value of the different contributory factors but even in naming them.

Most writers of textbooks, in explaining adenoid deafness, confine themselves to changes in the conducting apparatus. In order that the conduction may be properly effected certain conditions must exist:

1. Equilibrium of pressure on the two sides of the tympanic membrane.

2. Undiminished swinging capacity of the membrane. (Alterations of texture, such as thickening or thinning; a change in position, such as depression or elevation—that is, diminution of the concavity: and a change in curvature would be detrimental.)

3. Maintenance of the normal position of the chain of ossicles and of the normal relations of its members to each other. (The abnormal position occurring in depression of the membrane would, by the in-pressure of the stapes at the fenestra ovalis, diminish the range of the movements of the stapes, and consequently the range of the conductivity of the perilymph. Along with the diminished range of the stapes there is a diminished range of movement of the chain of ossicles as a whole. Again, the prolonged abnormal position of the ossicles would tend to anatomical changes and consequent alteration in function in the joints. A question suggests itself here: Is the depression at the fenestra ovalis compensated by a corresponding yielding of the fenestra rotunda, or does the increased pressure of the stapes cause an increase of tension in the labyrinth with a resulting diminution in the sensibility of the auditory epithelium and of the terminations of the auditory fibres?)

4. Unimpaired functional activity of the tympanic muscles—tensor tympani and stapedius. (A prolonged abnormal position of the membrane, and consequently of the ossicles, would be likely to lead to structural change and consequent modification of function in these muscles.)

5. Healthy condition of the mucous membrane lining the tympanic cavity and covering the ossicles. (Thickening might, and generally does, obstruct the movements of the membrane and ossicles.)

Of these factors (whose interdependence and overlapping are to be noted) the equilibrium of pressure is the most important. An abnormality in it is not only the first in order of time, but is also the chief cause of abnormalities in the other elements. As, however, diminution of pressure in the tympanum can be judged of only by its consequences, the position of the membrane acquires prominence. The equilibrium is effected by placing the air in the tympanum in communication by means of the Eustachian tube, with the air in the pharynx, and so with the external air; the occasional opening of the tube during swallowing appears to be sufficient.

*Adenoid Deafness commonly ascribed to Interference with the Ventilating Function of the Eustachian Tube.*—According to the views commonly held, adenoids cause deafness by interfering with this ventilating function of the Eustachian tube. Semon and Williams, who may be taken as their exponents, say in the article contributed by them to Allbutt's *System*: "From the gradual absorption of the air in

the middle ear, which cannot be renewed either in consequence of the Eustachian tubes becoming obstructed by catarrh in the naso-pharynx, or from paresis and interference with the action of the levator palati and salpingo-pharyngeus muscles, the tympanic membranes become so much depressed that on examination we see extreme foreshortening of the handle of the malleus, prominence of the short process and posterior fold, and an ill-defined or absent bright spot. The membrane is often thickened and somewhat opaque and congested." In other words, adenoids lead in succession to a suspension of function of the Eustachian tubes, diminished intratympanic air tension, changes in position, texture, and curvature of the membrane, alterations in the position of the chain of ossicles, and in the relations of its members to each other (with their consequences upon the range of movement of the stapes and the range of conductivity of the perilymph) and to structural changes with consequent modification of function in the intratympanic muscles. Alterations in the lining mucous membrane are also to be remembered.

*Arguments against the Sufficiency of this Theory.*—The changes just indicated would lead to an impairment of hearing, but that they do not afford an explanation of the whole of the impairment found with adenoids is shown by the following considerations. If the theory were complete it would enable us to account for, or at least it would not be inconsistent with, the auditory results which follow removal of the growths. We shall consider three of these results in so far as they bear upon the question under consideration: (*a*) Improvement occurring within a few days after operation; (*b*) improvement found immediately after operation in cases where the membrane is intact; (*c*) improvement occurring immediately after operation in cases where there is a perforation of the membrane.

(*a*) As regards improvement occurring within a few days after operation. It is universally admitted that there is an improvement within a few days after operation. Is the theory in accord with such improvement? Admission of air into the tympanum is, according to the theory, a *sine quâ non* of improvement; this admission necessitates the re-establishment of function of the Eustachian tubes; this re-establishment can be accomplished only by abatement of the catarrhal obstruction or by the recovery of the muscular power, or by both; but these morbid conditions (catarrhal obstruction and paresis) have in most cases been in existence for long periods, and our pathological knowledge does not lead us to expect much recovery within a few days in such conditions: therefore this quick improvement casts doubt upon the theory. Again, assuming that within a few days air does enter the tympanum physiologically, how is the improvement in hearing affected?

1. Is it by a re-establishment of the equilibrium of pressure on the two surfaces of the membrane?

2. Is there a return more or less complete of the membrane to its normal position and condition with recovery of its swinging capacity and a consequent proportional restoration of the normal state of the chain of ossicles and of the tympanic muscles?

3. Is a change effected in the condition of the tympanic mucous membrane?

First, as regards the pressure. When on examining a case of adenoid deafness we refer the observed depression of the membrane to diminished intratympanic air tension we probably do not endeavour to further classify it, but it is evident that the depression would be compatible with either of two states (*a*) a diminished tension existing formerly but not at the time of observation, (*b*) a diminished tension existing at the time of examination. Diminished intratympanic pressure causing the membrane to become depressed, thereby raising the pressure, but was the depression sufficient to restore the equilibrium? If not, then, in addition to the depression of the membrane and its consequences, there is another element—namely, the unbalanced atmospheric pressure on the membrane, which, in addition to interfering with conduction, might lead to disturbance of the central nervous system, and so to a further impairment of hearing. This point appears to have been either not considered or evaded by our authors, but the general teaching favours the view that there may be a difference of pressure on the two sides of the membrane: the equalisation which the depression of the membrane effects by diminishing the cavity has a limit, but is there a corresponding limit to the absorption of the air? In considering this difficult question we have to bear in mind that the air-containing cavity is not the tympanum simply, but that larger cavity consisting of the tympanum, the antrum, and the series of mastoid cells communicating with the latter; and, further, that the capacity of the antrum and mastoid cells varies very much in different cases. A depression of the membrane which would equalise the pressure where the mastoid was sclerosed would be wholly inadequate where the mastoid was pneumatic and the antrum and mastoid cells large; hence in different cases, with apparently the same degree of depression of the membrane, there may be in one case equality, and in another inequality, of pressure on the two surfaces of the membrane, and the degree of inequality may vary within a wide range. The character of the mastoid may thus exercise a marked influence on deafness dependent on obstruction of the Eustachian tube, whether that obstruction be due to adenoids or other pathological conditions.

As to the second question, regarding the return more or less complete of the membrane to its normal position and condition, with recovery of its swinging capacity and a consequent proportionate restoration of the normal state of the chain of ossicles and of the tympanic muscles, it is to be observed that whilst in the production of the pathological condition the ossicles play a more or less passive part following, and up to a certain point offer little resistance to the movements of the membrane in the return to a more normal state, their *rôle* is very important. They now restrain the movements of the membrane, and from what is known of long continued faulty positions of joints in other more accessible parts of the body much improvement could not be expected from the physiological entrance of air; and, indeed, it is doubtful whether in any long-standing case, even after prolonged insufflation, there is a complete restoration to the normal position of the membrane and the ossicles. In the absence of instruments and methods of precision it is not possible to speak with confidence about changes in the position of the membrane, but experience gives ground for believing that there may be, and, in fact is, considerable improvement in hearing without apparent change in the position of a much depressed membrane.

Again such muscular recovery as could take place would be slow.

Thirdly, as to the mucous membrane; only those changes which are dependent on devascularisation could be rapid. The difficulties (which I have enumerated) of explaining by the theory the improvement under consideration suggest that the theory is not complete. They also show that if we accept the theory it is difficult to name the contributory factors. Even as regards the great central element diminished intratympanic tension—we are unable to say whether it exists in a given case.

(*b*) The second auditory result. I have in a paper which I read at the last meeting of the British Medical Association pointed out the fact that in a large number of cases the hearing is found immediately after operation to be much improved, indeed so much so in some instances that the immediate result does not differ greatly from the ultimate. Is the theory consistent with this immediate improvement? In other words does experience warrant us in believing that there may be immediate recovery from the prolonged catarrhal obstruction and from the prolonged paresis of the levator palati and salpingo-pharyngeus with immediate restoration of function of the Eustachian tube accompanied by immediate amelioration of the abnormal conditions resulting from the suspension of the ventilating function, namely, diminished intratympanic air tension, faulty states of the membrane, the ossicles, intratympanic muscles, and mucous membrane? A negative seems the only possible answer, and this is tantamount to a declaration that the theory is at the best imperfect.

(*c*) In the paper to which I have referred I reported a case in which there was a perforation of the membrane of one ear. The ear had been dry for a long time and was not interfered with at the time of operation; its hearing distance was, immediately before operation, 1 foot, and half an hour after operation about 13 feet. (I may add that since the last meeting two similar cases have come under my observation.) So much of

the impairment caused by the adenoids as was thus immediately removed by the operation could not have been dependent upon diminished intratympanic air tension depression of the membrane and consequent depression of the ossicles; owing to the perforation of the membrane these factors would not be affected by the operation and it is evident that another cause is at work.

The foregoing is part of a paper which in addition contained a criticism of the stenosal theory and a statement of considerations which might be useful when seeking an explanation of the difficulties which had been raised.

Mr. JOBSON HORNE said it was still within his recollection, and no doubt within that of others present, that discussion on a similar paper had taken place last year in the section at Ipswich. On that occasion he, together with others, expressed the opinion that the immediate improvement in hearing was in all probability due in a great measure to the sudden local depletion following the operation. It seemed to him that the present discussion had come round to the point where they left off last year, and that no material advance had been made in the elucidation of the problem.

## A SIMPLE AND PORTABLE SPRAY PUMP FOR DISINFECTION.

BY W. LESLIE MACKENZIE, M.A., M.D., D.P.H.,
Medical Inspector to the Local Government Board for Scotland.

MY problem was to find a portable, facile, and inexpensive spray pump. For such a pump the demand has been obvious ever since disinfection by spray became a common method in Britain. By portable, I mean light enough to be carried easily on a bicycle, which is a usual mode of transit for county sanitary inspectors or disinfecting officers. For the town areas portability is not of the same urgency, because several modes of conveyance are usually available; but even in towns, portability means a saving of labour, money, and time. By facile, I mean capable of being worked by a single man without inducing such rapid fatigue as might tempt him to scamp his work. By inexpensive, I mean cheap enough to be within the ordinarily permissible outlays of minor local authorities, or hospital committees, or School Boards, or model lodging-house keepers, or hall owners, or owners of private hospitals, or, generally, of all such as would readily use a simple disinfecting apparatus if they had it.

In the spray pumps shown in the photographs, the three conditions are, I think, reasonably fulfilled. As to portability, the small pump weighs 5 lbs., the larger (the bulb, by the way, is not essential) weighs under 6 lbs.: with crosspiece added the weight does not exceed 5½ lbs. or 6½ lbs. This load any boy can manage. As to facility, either pump can be worked with ease by one hand. To keep the spray nozzle playing requires, in the heavier pump, only some three up strokes and three down strokes per minute, or an equivalent of this in short strokes; in the lighter pump perhaps one or two more strokes are required. In either pump, short—say, 2-inch strokes to the number of some 25 per minute are enough. Twenty-five short strokes or 6 full strokes per minute, that is, 1 every two or 1 every ten seconds approximately, cannot be regarded as hard work. As to inexpensiveness, the prices will be found to fulfil the indications I have mentioned.

How are these conditions secured? By the adaptation of a continuous current garden pump to the particular purposes of spray disinfection of surfaces. The essential pieces are three: a pump with an adjustable stirrup, a tube, partly flexible, partly rigid, and a spray-forming nozzle.

### *The Pump.*

The pump is a strong brass pump, about 1⅛ inch in diameter, about 2 feet in length, provided with a ball-valve inlet at the bottom, a ball-valve piston, a hollow piston-rod, and an outlet near the top. The pump is, in fact, a well-known force pump with an air chamber in the piston rod to keep the flow perfectly continuous over the "dead" points of up and down stroke. Continuity of flow with intermittent stroke could be secured by the elasticity of the flexible tube alone, but the life of such a tube would be shorter, and the tube itself would necessarily be weaker. The continuous current in this pump is independent of the elasticity of the tube, which, consequently, may be made very strong and very inelastic. Further, an intermittent spray could be obtained from an ordinary garden syringe, but the value of the instrument for ordinary disinfecting work would be much less. Continuity of spray, therefore, is essential. In this pump, both upstroke and downstroke yield a current; both on upstroke and on downstroke the air locked in the piston is compressed; both on upstroke and on downstroke the recoil of the air cushion steadies the flow and maintains it in perfect continuity. As the pump inlet is large relatively to the pin-hole outlet of the spray nozzle, the strokes required to keep up the flow are very few, and the liquid can be delivered under very high pressure, the spray being finer when the pressure is high. The pressure, however, required for ordinary work is very little. The spray begins to play with the second stroke. No adjustment of stopcocks, or indeed of anything, is necessary. The pump, once fitted with tube and nozzle, yields its spray. What, however, is essential is that the passages be kept clear, and the piston and piston-rod well oiled. The mechanical knowledge necessary to work the pump should be within the capacity of any man with two hands and a foot.

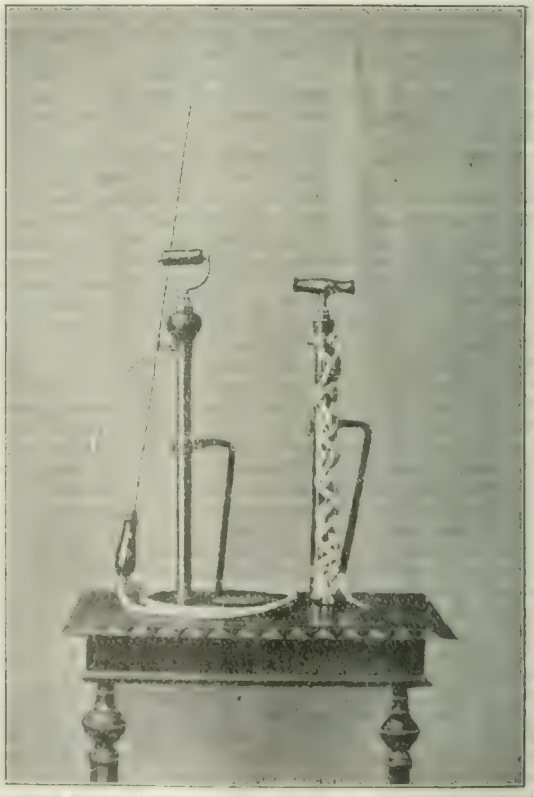


Fig. 1.—Spray pump: left hand figure, with single nozzle: right hand, tube coiled for transit.

### *The Tube.*

The tube is partly flexible, partly rigid. The flexible part is simply a piece of strong bicycle pump (or inflating pump) rubber tubing: rather, I should say it is three pieces jointed to make a length of 7 feet. Needless to add, this tube stands very high pressure; it is light, and it is as flexible as the case requires. Ordinary garden-hose tubing would serve the purpose, if lightness and convenience of packing were no object. The brass part is 3 feet long: it can be unscrewed from the rubber tube, and further unscrewed into two lengths of 18 inches each. This, as shown in Fig 1, is for convenience of packing; the two pieces of the rigid tube are seen inside

the coils of the rubber tube. In Fig. 2, the rubber tube is somewhat thicker, but admits of the same or an equivalent mode of coiling. A thin brass tube, however, is difficult to grasp firmly for any length of time. Accordingly, at the junction of brass and rubber tubes, I have had a thick wooden handpiece adjusted. With this handpiece, the brass tube can be directed with perfect nicety, and the weight of the whole tube—flexible and rigid—even when charged with liquid, is trifling. These points are all-important in practice, the raised arm being very readily fatigued.

On the principle of the sweep's brush, the brass tube can be lengthened by the intercalation of extra 18-inch lengths. For high ceilings this is important. The tube, when thus lengthened to 6 feet—that is, by adding two extra lengths—is still easily manipulated. Few ceilings are more than 13 feet high. If we assume the average man's height to be $5\frac{1}{2}$ feet, and his reach with stretched arm $6\frac{1}{2}$ feet, then, with a 6-foot brass tube he will be able to come within 6 inches of a 13-foot ceiling; but if he come within a foot, that is enough. He can, therefore, without scaffolding of any kind, spray a high ceiling. The pump seems to work rather better with the longer tube than with the shorter. In buildings, such as halls, where ceilings are very high, stronger and longer tubes could be adapted to any reasonable height. The chief labour in spraying such places is due to the provision of scaffolding, shifting of steps, and the like. With the "sweep's-brush handle" tube, all this is avoidable.

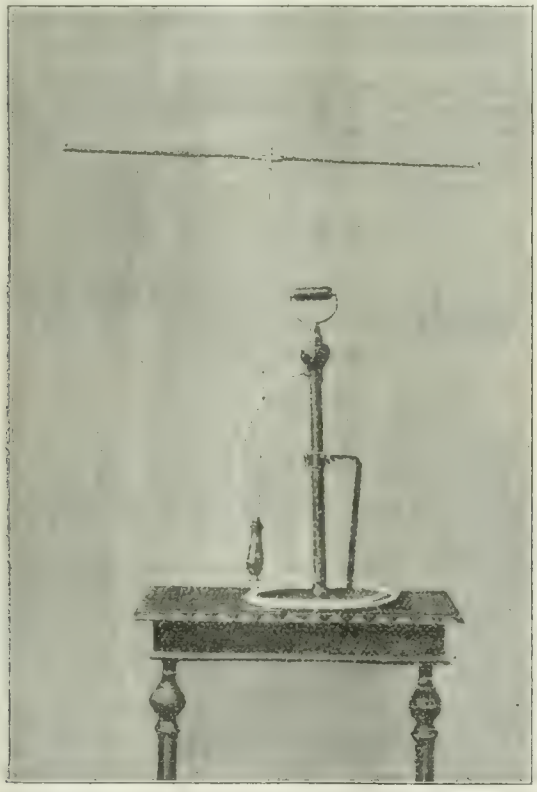


Fig. 2.—Spray pump with 3-nozzle crosspiece.

*The Nozzle.*

The spray-forming nozzle shown in the photograph is one in common use for spraying delicate plants. The pump usually associated with it is a low-pressure air-pump. On attaching the nozzle to the pumps described above, I found that it yielded a copious, delicate, and constant spray. The nozzle itself consists of two parts, which are easily unscrewed for cleaning when necessary. As indicated already, the energy necessary to produce the spray is very small. The nozzle is designed to give a spray of a certain tenuity; but one nozzle can, in a few seconds, be substituted for another and nozzles can be made in various grades—from coarse to fine. For all ordinary purposes the spray produced by the nozzle shown is perfectly satisfactory. The mistake commonly made is to use too fine a spray, in case wall papers or other surfaces may be destroyed. Elsewhere I have shown that this fear is due simply to *a priori* ideas about wetted surfaces. The vast majority of walls—papered, sized, whitewashed, varnished, painted, etc.—can be thoroughly wetted without suffering any damage, provided the wetting proceeds from below upwards, not from above downwards.

*Three-nozzle Crosspiece.*

For ordinary house disinfection a single nozzle is enough: but where wall surfaces are very large, as in hospitals or halls or schools, the labour may be much reduced by the three-nozzle crosspiece shown in Fig. 2. For convenience of packing I have had the crosspiece made in detachable pieces of 18 inches each (like the pieces of the handling tube), and I have had attached three nozzles, one at each extremity and one in the centre. The capacity of the pump, I find, is more than sufficient to make all three nozzles play uniformly. The spray clouds produced just intermix at about 1 foot from the nozzles, and the combination yields a spray that may be made to wet an area of about 6 feet by 3 feet at a time. With a gentle waving motion the area can be much extended. As the amount of liquid discharged is at least three times that discharged by a single nozzle, a large area can be covered very rapidly. A ward wall 48 feet long could be taken in eight vertical sections. The spray could be moved upwards at the rate of, say, one foot a second. A section 13 feet high would thus take thirteen seconds, or say fifteen. Let this be doubled for contingencies, and quadrupled for shifting of plant. Each section would then take a minute. The eight sections would take eight minutes, or say ten. If the opposite wall take other ten minutes, the ends five each, and the ceiling (say 25 feet broad) twenty, the total time would still be only fifty minutes, a small allowance for a ward of 15,600 cubic feet, or approximately 8 beds at 2,000 cubic feet per bed. Where two persons are available a ward could easily be sprayed in this time or less: and where formalin, or other solution of formaldehyde is used, time is not unimportant to the comfort of the operators.

For these and similar reasons the three-nozzle crosspiece, which is still easily manipulated by one hand, should, I think, result in economy of time and labour. The extension of the number of nozzles is limited only by convenience and the capacity of the pump. For habitual use the crosspiece should be fitted with a stronger and heavier handling tube, but for the occasional use of the crosspiece the handling tube shown is sufficiently strong.

*The Stirrup.*

The vessel used for mixing the disinfectant may be an ordinary milkpail or pitcher or basin. A vessel of special capacity could easily be designed, but every house has something that will suit. To keep the pump rigid in the vessel a Z-shaped stirrup has been fitted on the cylinder. The upper arm of the Z is high enough to clear the edge of an ordinary milk pail, and if a higher vessel is used a block under the lower arm of the Z will make this equally suitable. On this lower arm the foot is placed. With the upstroke, foot and hand pull in opposite directions without moving the cylinder.

*Preparation of Disinfectant.*

The disinfecting officer should always be provided with a measure for the disinfectant to be used. A measure for the quantity of water, however, is likely to be clumsy. The pump itself may be used as a substitute—so many full strokes (with nozzle removed) yielding, say, a gallon. There need thus never be any chance work in making up the proper strength of disinfectant.

*Packing.*

The tubes are both detachable; the rubber tube can be coiled round the brass tube, or a case may be made for pump and tubes together. The pump should always be pumped clear before being packed.

*Conclusion.*

The spray pumps shown in the photographs have been made by Messrs. Benton and Stone, brassfounders, Bracebridge Street, Birmingham, who have carried out in a practical model all the suggestions I made to them for the adaptation of their garden sprays to the purposes of wet disinfection. In the *Sanitary Journal* for March, 1897, and in *Public Health* for March and May, 1900, I discussed in considerable detail the method of disinfection by spray. The pump now described will, I think, fulfil all that can be legitimately claimed for spray disinfection, and I say so in the light of five years' experience of the method in the ordinary routine work of a medical officer of health. There are, no doubt, many varieties of spray producer in the market, and experience will continue to suggest improvements. All I claim for the spray pump described is that it is light, easily worked, and cheap.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

### CASE OF STRANGULATED PERINEAL HERNIA.

B. S., aged 44, a native officer of Sikh cavalry, a very tall, stout heavy man, and a noted rider and cyclist, returned quite well to his headquarters (Deoli) on October 16th, 1897, having completed a ride of 109 miles on horseback.

On October 19th he noticed a hard, tender lump the size of a horse bean to the right of the centre of the perineum, and on October 26th he took to his bed and treated the swelling with fomentations.

On October 30th, when I saw him, the whole of the right ischio-rectal fossa was swollen and hard, the swelling implicating the cellular tissue of the perineum generally, and extending to the right buttock. On the same day an incision was made by the right side of the anus. Some dirty thin pus, together with liquid fæces, escaped from the wound, whilst a quantity of black, necrosed, stinking omentum prolapsed. Rectal examination revealed nothing wrong with the lower gut itself, but a hard mass was felt in the pelvis to the right. There was no abdominal swelling, pain, or tenderness. The bowels had been moved regularly every day, and there had been no symptoms indicating strangulation. The temperature was 100.6°, and the pulse 100.

On November 3rd the tongue was brown and furred, and the breath foul. The bowels continued to be opened naturally, though a little liquid fæces still escaped from the wound, indicating leakage from the intestine. The gangrenous omentum was removed with scissors. The parts were cleaner, but still emitted a horrible smell. The temperature was 101°, the pulse 100 and feeble. There was slight delirium at night. Brandy was administered at intervals.

On November 5th more necrosed omentum was removed from the wound, from which, after November 7th, no more liquid fæces escaped. The parts then gradually cleaned. Two deep sinuses remained, one passing backward and upwards between the rectum and the bulb on the right side, the other passing upward for 3 inches behind the rectum. The skin was also undermined for 3 inches forwards in the direction of the symphysis, and this part being laid open on November 27th soon filled up and healed over. The deep sinuses were reserved to be dealt with later, but the patient refused further operative treatment, and went off on leave to his home in the Punjab. I now (March, 1901) hear that he has since continued regularly to perform his duties, riding at the head of his troop, though he has still a small sinus (or fistula) behind the rectum, which he says gives him little inconvenience, and for which he declines any further surgical treatment.

Udaipur. H. R. WOOLBERT, M.B., F.R.C.S.

### THE STAINING OF THE TUBERCLE BACILLUS.

WITH reference to the note by Dr. Macleod in the BRITISH MEDICAL JOURNAL of July 6th, 1901, I should like to point out that the method may be still further shortened by not using a coverglass at all.

So soon as the film has been stained in the ordinary method with the carbol-fuchsin and methylene blue and dried, a drop of cedar-wood oil or castor oil can be put on to the specimen without the intervention of the coverglass and examined with a $\frac{1}{12}$-inch power, giving quite as good results, to say nothing of the time and expense saved. Personally I have used this method for two years.

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### FOREIGN BODY IN THE LEFT NASAL DUCT.

ON June 20th, 1901, a Singalese woman, aged 50, consulted me for a left fistula lachrymalis of fifteen years duration.

I slit the canaliculus and attempted to pass a probe down the nasal duct, but failed. I then thrust a knife down the duct, and kept the stricture open by daily probing until June 26th, when I introduced a style of lead.

On June 28th she again came up to see me as the pain and discharge continued, and the swelling had increased in size. I removed the style, and saw protruding through the canaliculus a fine thread, which looked like a shred of tissue. This I seized with a forceps, and to my surprise pulled out a roll of cloth $\frac{5}{8}$ in. in circumference, $1\frac{1}{4}$ in. long, and $\frac{3}{4}$ in. wide. On questioning my patient about this piece of rag, she said she had no knowledge of its existence there, but said that she had consulted a Bengalese "doctor" a year ago, who opened a swelling in the position of the present fistula, and he might have introduced the rag. No doubt her explanation is correct.

Recovery rapidly took place after this, and on July 1st, the last time I saw her, the fistula had healed and the passage down the nasal duct was free.

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# REPORTS

ON

## MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

### HORTON INFIRMARY, BANBURY.

SPONTANEOUS CURE OF AN UNUSUALLY LARGE INTUSSUSCEPTION.

(Under the care of A. H. BOISSIER, L.R.C.P.)

MRS. R., aged 23 years, was admitted on February 20th, 1901, in a state of semi-collapse, having been sent from a village some seven miles distant.

*History.*—She stated that a month earlier she had suddenly been seized with severe pain over the abdomen generally. She did not remember vomiting at the outset of the pain, but the next day vomited several times a green, slimy, material, but no food or fæcal matter. Attacks of pain and vomiting, each lasting ten minutes or a quarter of an hour, occurred several times daily during the month. She had passed motions nearly every day during the month, but was not clear as to the passage of blood on any occasion. She had been able to take light nourishment during the whole time.

On the morning of admission she had the worst and longest attack of pain, but it immediately ceased on the protrusion of a mass from the anus while straining at stool. She had been married two years, had had one child and no miscarriages. Four or five years earlier she had had an attack lasting three weeks of "gastric" fever for which she was treated in a hospital.

*Condition on Admission.*—She was quite conscious and free from acute pain. The pulse was feeble and thready; the tongue coated, but moist; the lips dry and cracked. The abdomen showed no marked distension, but was somewhat tympanitic generally. In the left ilio-lumbar region was a hard mass slightly longer than a kidney, immovable, painful on pressure, and dull on percussion. The uterus was enlarged and easily felt, suggesting a pregnancy of about three months (amenorrhœa had existed for some weeks, but no definite period could be given). Protruding from the anus was a twisted membranous-looking mass, thickly coated with fæcal matter, which on gentle traction was seen to be continuous with a flat membranous cord suggesting collapsed intestine; further traction on this flat cord brought it away free from the anal orifice without pain. The rectum was digitally explored and found to be full of soft fæcal matter. The uterus could also be felt enlarged and hard. Subsequent vaginal examination confirmed the impression of pregnancy.

*Progress of Case.*—The patient was kept quiet in bed, placed on a milk diet, and enemata administered daily for the following fortnight, by which means the bowels were freely relieved. For three weeks vomiting occurred at intervals of a few days, accompanied by severe pain in the back and loin, corresponding mainly to the position of the tumour noticed in the left ilio-lumbar region; morphine injections relieved these attacks quickly. The patient gradually during this time got back to solid food, and gained strength, and was allowed up in the ward after the first fortnight. On March 15th, the twenty-third day after admission, a slight "show" appeared from the vagina, accompanied by intermittent pain. The following day more hæmorrhagic discharge took place, with increase of pain, terminating at 9 P.M., on March 16th, in a miscarriage of a fœtus of about three to four months growth. The placenta required detachment and removal. The patient made a normal recovery from this complication. She continued to have occasional attacks of pain and vomiting, which yielded to morphine as before, up to the date of her discharge from the hospital, which took place, at her own wish and against all advice, on April 1st.

*Description of Specimen.*—The mass extruded from the anus was found to consist of 4½ feet of small intestine, with a corresponding amount of mesentery. At one end there was a distinct polypus attached to the mucous membrane, which suggested the probable starting point of the intussusception.

Remarks.—The spontaneous cure of an intussusception is of sufficient rarity to warrant the publication of the above case. Its successful termination is rendered more than ordinarily interesting by the extraordinary length of the portion of bowel passed. The symptoms seem to have followed the course given by authorities, but all are agreed as to the extreme rarity of the occurrence. It is difficult to realise how the lumen of the bowel could remain patent under these conditions, but that it did so in this case is shown by the record of the month's symptoms previous to admission. The abortion was an unfortunate and grave complication, but happily only somewhat retarded the convalescence from the intestinal lesion. Under these circumstances, therefore, the patient may be heartily congratulated on her fortunate recovery from an extremely rare and dangerous condition. Whether a like successful result would have been obtained had the state of affairs been more apparent from the first and means adopted for the reduction or resection of the mass forming the intussusception may be a doubtful point to some minds; but, happily for the patient, must ever remain a matter of opinion only. I am indebted for most of the above notes to Mr. W. A. Cox, House-Surgeon, and also for his skilful care and attention to the patient during the time she was in hospital.

# REVIEWS.

## HYGIENE AND PUBLIC HEALTH.

In the *Theory and Practice of Military Hygiene*,[1] by Captain Munson we have a volume which may be said to be one of the results of the recent Spanish-American war, inasmuch as many of the lessons learned by bitter experiences in camp and cantonments by the armies of the United States have suggested to the author the need of a textbook dealing directly with the sanitary problems peculiar to military service. To the English reader since the first appearance of the classic work of Edmund Parkes, more than thirty years ago, many of the points discussed are familiar, but the tendency of the successors of Parkes has been to elaborate works on general hygiene containing much material which, while not without some applicability to the military service, has tended to leave imperfectly noticed a large number of subjects, a knowledge of which is of the highest importance to the military sanitarian. We therefore cordially welcome Captain Munson's effort to supply these deficiencies. His first two chapters are devoted to a consideration of the many important points connected with the selection and development of recruits. This subject is naturally regarded mainly from the American standpoint, but not unduly so, and we have read these pages and those which follow on the hygiene of marching with pleasure and profit. The succeeding sections dealing with water are not up to the same high level. The problems connected with quantity, sources, storage, and supply are commendably considered, but the explanations relating to the examination of water are disappointing, more especially the bacteriological examination, which is dismissed in three pages. The difficulties attending the purification of water under conditions of military life are clearly explained, and we notice that the Waterhouse-Forbes steriliser is well spoken of. This apparatus was favourably reported on at Netley, but we doubt whether our War Office ever gave it a fair trial in the field. We agree with the author when he says that both the Berkefeld and Chamberland filters, if given proper care, serve an excellent purpose in fixed camps or garrisons, but the difficulties attending their liability to clog and systematic periodic sterilisation are such as to render them often a trouble rather than an advantage in the field. The discussion of sterilisation of water by chemical means is unsatisfactory, for we hoped to find that the American army had given these methods an extended trial. The soldier's ration is admirably discussed, and, taken in conjunction with the author's views on tropical dietaries on p. 869 *et seq.* in the chapter on the hygiene of hot and cold climates, is a valuable contribution to the literature of military subsistence. Speaking of the British ration on p. 183, the statement that a grocery ration is provided by a stoppage from the soldier's pay of about 3½d. daily is not quite accurate. This messing allowance of 3⅗d. daily is really in addition to and quite independent of the soldier's actual pay. The difficulties as to emergency rations is well discussed. The various chapters dealing with clothing, accoutrements, barracks, hospitals, sites, camps, and the sanitary administration of camps are thoroughly sound and comprehensive. The management of garbage, refuse, and excreta in camps has evidently been as much a sanitary bugbear with American troops as with our own. We have no experience of either the Bissell incinerator or the Cowley or the Smith camp crematories, but the descriptions given of each are such as to suggest the need of our own War Office giving them a practical trial. The associated subject of sewage disposal in cantonments is thoroughly well treated. The same also must be said of the chapters dealing with military mortality, diseases of soldiers, disinfection, and the habits of the soldier as affecting efficiency. In all, the attention is focussed upon essential facts and features of military life, rendering the chapters remarkably free from diffuse generalities. The whole book is eminently readable and curiously free from attempts to explain the science of the subjects by means of elaborate formulæ. It will not take, nor is it intended to take, the place of works on general hygiene and public health. Dealing exclusively with the hygiene of the soldier, it constitutes a valuable and specialised addition to the already large number of books on sanitation. Though primarily addressed to the American army medical officer, it is written in so catholic a spirit that we commend it to the study of our own military brethren. The great defect of the work is its size; possibly the author may be able to remedy this in future editions.

The *Handbook of Public Health Laboratory Work and Food Inspection*, by Staff Surgeon Andrews,[2] consists of the lectures delivered by him to the surgeons under instruction at the Royal Naval Hospital, Haslar. The subject matter is grouped into three parts. Part I gives in about 60 pages a considerable amount of useful information upon the many points to be observed in the inspection of fish, flesh, and fowl intended for human food. Part II deals with the more important matters relating to the examination of water, air, milk, various food stuffs, wine, etc. The separate indices to Parts I and II are placed at the end of their respective parts, in the body of the volume; this arrangement does not improve the appearance of the book, and it is certainly not more convenient than a general index at the end would be. Part III embraces the main facts connected with the subject of meteorology. The influence of the various atmospheric phenomena on health and disease is discussed. Information on climatology is given which will prove of special value to medical officers of both services. It may be said that this part is, on the whole, the best in the book. It is rare that exception can be taken to the correctness of any of the author's statements, and the one or two instances noted are confined to the subject of water analysis. The method advised for testing for calcium salts will include magnesium if

[1] *The Theory and Practice of Military Hygiene.* By Captain E. L. Munson, Medical Department United States Army. London: Bailliere, Tindall, and Cox, 1901 (Royal 8vo, pp. 948, 8 plates and 400 engravings. 32s.).

[2] *Handbook of Public Health Laboratory Work and Food Inspection.* By O. W. Andrews, M.B., B.S., M.R.C.S., D.P.H., Staff Surgeon Royal Navy, late Assistant Instructor to Surgeons on entering Royal Navy. London: Baillière, Tindall and Cox. 1901. (Demy 8vo, pp. 292. 7s. 6d.)

magnesium salts be also present, and the directions given for detecting the presence of magnesium in water will scarcely give satisfactory results with the small amounts often met with in practice. The author, in stating that nitrates expressed as $N_2O_5$ should not exceed 5.5 parts per 100,000 in a drinking water, gives a figure which would almost invariably indicate animal pollution. Although attention has been drawn to these points, the subject matter generally throughout the book has been dealt with in quite a satisfactory manner, and it is invariably tersely and well expressed. It will doubtless prove a useful handbook to naval medical officers, for whom the material has been expressly prepared: but the treatment of some of the matters dealt with is scarcely full enough to meet the requirements of candidates for diplomas in public health.

Dr. HARRINGTON'S *Manual of Practical Hygiene*[3] is a really important new work dealing with the subject of hygiene on broad and unstereotyped lines. It shows little or no evidence of that copying from textbook to textbook without verification of authorities that we have seen in similar books. On one of the subjects dealt with Dr. Harrington holds views which will scarcely find favour in England. He minimises the risk of eating the flesh of diseased animals, and yet states that it is generally held that the flesh of actinomycotic animals is quite unfit for human food. It is interesting to note that prominence is given to "the careful researches of Professor Theobald Smith and others," showing that the human tubercle bacillus
fails to find in the bovine body the conditions necessary to its multiplication. Whether the bovine bacillus by reason of its higher pathogenic power may pass to the human subject is, according to Smith, a question concerning which we have as yet no definite knowledge.
In dealing with meat and fish poisoning, all the important illustrative cases are well summarised by Dr. Harrington, who also gives us a slight insight into what may be described as the international trade aspects of hygiene. The great rigidity of inspection of foreign meat in Germany is
due very largely to the activity of the agricultural interests in protecting themselves from outside competition, and under the benevolent plea of protecting the health of meat consumers much care and attention are given to the hunt for excuses for excluding American meats which have already been inspected.
An interesting feature of the book is its historical notes. Much is now made of the substitution of other bitters for hops, but in 1530 the use of hops, introduced by the Flemish for beer, was forbidden by Henry VIII. Dr. Harrington is very severe on "sewer gas" etiology of sore throat and more definite diseases. "In the cases which are accepted as proving the causal relation, inference has taken the place of proof." It is unfortunate that he does not enlarge on this text. A chapter on the conditions and possibilities of proof in hygienic investigations would have been most valuable. We are struck with the statement that the usually-cited cases of extreme overcrowding, the Black Hole of Calcutta and the steamship *Londonderry*, are of historical rather than sanitary interest, as the confining of persons in a space from which air is practically excluded can have but one outcome. The whole of the sections on the effects of bad air and the air as a carrier of infection are most interesting, exact references to original authorities being given here, as in every other part of the work. Dr. Harrington appears to us not to do full justice to Ballard's inference as to the relationship between soil temperature and epidemic diarrhœa. He says:
It has been noticed that the upward curve of the disease does not begin until the soil at a given depth has attained somewhere about a given temperature, and from this is inferred a causal relation. But one might go further, and note that at this somewhat advanced stage of the warmer season certain fruits have just appeared in the market, or that the season for others has gone by, or that certain birds of the air have just hatched their first broods, and then with equal right discover causality in any of these coincidences.
This is a scarcely fair presentment of the case. The hands of a clock indicate the different parts of the day, though they have nothing to do with causing them; and a 4-foot temperature above 56° F. is a useful index of the soil conditions favourable to the development of the specific contagium of this disease. Ballard would probably not have claimed more than this. Under water analysis we note an interesting criticism of a well-known experiment of inoculating a pure water with typhoid matter, which a distinguished chemist subsequently failed to detect. Dr. Harrington regards such a test as "unworthy of the slightest consideration, since under natural conditions a water showing a high degree of chemical purity is not likely to be infected with a pure culture of a pathogenic organism, and the submission of a pure water so treated is a mere trap." In dealing with the value of analysis, Dr. Harrington does not lay sufficient stress on the importance of periodical analyses, so that deviations from the normal condition may be easily detected. Pages 541-574, a much too large a space we think, is devoted to the consideration of the American quarantine law, which is the more remarkable considering that the more important internal legislation is omitted. Over 50 pages are devoted to military hygiene, many interesting details of American organisation being given. Chapters on naval and marine hygiene, on the hygiene of occupation, on vital statistics, on personal hygiene, on vaccination, and cremation, complete the book. The chapter on vital statistics is slight and sketchy. The other chapters do not call for special comment. The least satisfactory chapter from an English standpoint is that on house sanitation. In every other respect the work can be highly recommended. It justifies its title of a *Practical Hygiene*, as it embodies full details on laboratory chemical, and physical processes,. Its chief utility will be as a reference book for health officers, embodying, as it does, the best foreign and English original work in all branches of hygiene.

To the second edition of his somewhat elementary *Manual of Hygiene and Sanitation*,[4] Professor EGBERT has added a useful chapter on military hygiene. New matter on this and various other subjects, together with the additional illustrations, has increased the bulk of the present edition to the extent of some 65 pages. The work is a compilation of, for the most part, well-selected material, and authorities are fully recognised. The introductory chapter on the importance of hygiene, its objects and scope, is very good; and, indeed, the treatment of the subject matter of the work is for the most part satisfactory, but exception may be taken to some of the practical details given with reference to the carrying out of a separate system of drainage and sewerage: and on p. 197 the physical and chemical properties of pure, usable, suspicious and dangerous waters are set forth in a very insufficient manner. This is a subject which must be dealt with at some length. In a matter where such trifling variations in chemical quantities often signify so much, we must dissent from the author in his view that it is desirable to devote a chapter to such methods of analysis of water, air, etc., which are not claimed to give absolutely accurate results, but of which it is nevertheless stated that, if carefully carried out, they will not fail to tell "whether the sample of air, water, or food examined is sanitarily pure and safe for use within the accepted limits." The discovery within recent years of the important part played by bacteria in the causation of disease and in the resolution of organic matter makes it desirable that the student should have an intelligent appreciation of the principles of bacteriology, and these are well and clearly set forth.

Dr. MAURICE COSTE, of Marseilles, has published in a small volume[5] the results of a careful study of 811 small-pox cases which came under his care in hospital in the epidemic of 1895-7. The mortality was 19 per cent. A complete history was obtained in 772 cases, and the author arrives at some novel conclusions. The first is that the age of maximum susceptibility to small-pox is 25 to 30 years, and not childhood, as is generally supposed. The second is that hæmorrhagic small-pox is due to a special virus superadded to the specific virus of small-pox; it may occur in the vaccinated as frequently as in the unvaccinated, and ought, he contends, to be classed apart. The author finds that the influence of an early vaccination is not destroyed by lapse of years, but

[3] *A Manual of Practical Hygiene for Students, Physicians, and Medical Officers.* By Charles Harrington, M.D., Assistant Professor of Hygiene in the Medical School of Harvard University. London: H. Kimpton. 1901. Roy. 8vo, pp. 729, 12 plates and 105 engravings, 21s.)

[4] *A Manual of Hygiene and Sanitation.* By Seneca Egbert, A.M., M.D., Professor of Hygiene at the Medico-Chirurgical College of Philadelphia. Second edition. London: Henry Kimpton. 1901. (Demy 8vo, pp. 430; 77 illustrations. 10s. 6d.)

[5] *Contribution à l'Etude de l'Immunité Vaccinale.* Par Dr. Maurice Coste, Médecin des Hôpitaux de Marseille. Paris: J. B. Baillière et Fils. (Roy. 8vo, pp. 90, Frs. 2.50.)

persists to extreme old age. Susceptibility to vaccinal infection—that is, to vaccination—is not, he holds, a guide as to suspectibility to small-pox. The recommendations of Dr. Coste are that in epidemics the whole population should be vaccinated at once, and also that strict isolation should be adopted for all small-pox cases. Otherwise every individual should be vaccinated at least three times—namely, in infancy, at the end of childhood, and in early manhood. The author has made a most painstaking study of the cases under his own care, but it is difficult to understand how he can be sure about the previous history of his patients, many of them seamen, and not necessarily natives of Marseilles. Their own statements are not enough, though often very positively made. We are told that 6 cases had had small-pox previously, 5 were admitted for a second attack, and 1 for a third attack. This statement is too startling to be taken as it stands, for the German military surgeons have declared that second attacks are extremely rare. The inferences regarding the age of maximum susceptibility require greater support, they are based too exclusively on the class of cases admitted to hospital. The fatality in the non-vaccinated was 41 per cent., in the once vaccinated 11 per cent.; but at the age of 55 to 60 years the fatality among the former was as high as 75 per cent. The pamphlet is evidence of honest work, but its conclusions must be received with reserve.

Dr. Blass's little book on *Vaccination and its Practice*[6] is one of a series of practical manuals for the use of medical men, being No. 2 of the *Medicinische Bibliothek für praktische Aerzte*. It is a general summary of the subject, including the history. Amongst the complications we read that impetigo contagiosa gave some trouble in 1885-1887, but about that time stricter regulations were issued and it seems to have ceased in consequence. Glycerine lymph ought to be protected from the light, says the author, or else it loses power. As to anti-vaccinators, the careful official statistics of Germany since 1885 will for the future put an end to all doubts. Appendices give the German laws and regulations.

Dr. Korosy's reports are always worthy of careful study as painstaking and thorough records of the mortality of Buda-Pesth, and his last[7] is no exception. A mere statement of the contents of some of the tables will suffice to show the exactness of detail in which the statistics are given. Table I gives the number of daily male and female deaths for each day of 1891, and the five following tables for each day of the next five years. In the next series of tables the same facts are given for each month of these years. In the next series are given the sex and age at death for every year of life from 0 to 110. Next come statistics as to the religious profession of the deceased; suicides, age, method of suicide, and occupation of suicides; and similar statistics for accidents. Following on these are very full statistics as to causes of natural deaths. We wish that the English Registrar-General would publish similar statistics for each year of life. Even if they failed to do anything beyond indicating the inaccuracy of statement of ages of the deceased and the tendency to grouping about round numbers, they would still be useful, and would tend to the removal of the defect thus displayed.

Dr. Weyl's Handbook of Hygiene,[8] which has been in course of publication since 1893, is approaching its completion. It is intended to include the views of all schools of hygienists, and is written largely by public officials from various parts of Germany. The present instalment on public measures which should be taken against infectious diseases forms rather more than a fourth part of the ninth volume. It discusses first the general precautions against the spread of infection, including inquests, notification, isolation, and the several restrictions on public assemblies which may from time to time be necessary, with a special essay by Dr. Nocht, the Port Sanitary Officer of Hamburg, on quarantine. A discussion follows on the special measures to be taken against individual diseases, principally cholera, with ample quotations from the German official directions in regard to that disease, and separate consideration of the precautions to be taken in regard to railway traffic, coast and river shipping, and surface water. The remainder of the volume is devoted to disinfection, and after a somewhat slight discussion of the general principles, describes in detail some of the principal means adopted for practical purposes, including steam, a limited number of chemical substances, various forms of installations and of apparatus, and official directions for the guidance of attendants. Dr. Schwarz contributes a short appendix on epizootics. The work is well arranged, concisely written, and notably free from descriptions of disinfectant substances in regard to which only imperfect data are available: indeed, its list of disinfectants might with advantage be somewhat longer. References to the literature are given after each section, and will be helpful, though they are not always complete. Such statements as that "Vegetative forms of bacteria are less sensitive to disinfectants than are their spores" (p. 618, presumably a clerical error), and that the surest gaseous disinfectant is oxygen at the combustion point of the object to be disinfected, should have been corrected before publication.

The work on *Food Analysis*[9] by Drs. Leffmann and Beam is designed to furnish a concise summary of analytical methods employed in food analysis, and it must be conceded that the authors have attained their object. A knowledge of the principles of chemistry and of ordinary laboratory manipulations is assumed, but a few valuable hints will be gained by many of those who peruse the introductory remarks dealing with certain matters of chemical procedure. The treatment of the subjects of sugars, fats and oils, milk and milk products, and pepper, is excellent, and the rest of the subjects of food analysis are dealt with satisfactorily. The authors are both recognised authorities upon many branches of analytical chemistry. The Leffmann and Beam method of estimating the fat in milk is a useful and much-employed process in this country, and the works of the senior author (Dr. Leffmann) upon medical chemistry, milk and milk products, and water analysis, have met with general appreciation. The effects of food adulteration and the methods of controlling it have not been dealt with, as it is considered that these topics are not matters of concern to the analyst. Surely the same may be said of the subject of the diseased conditions of meat. Brief notes on this subject are not sufficient, and the following statement is something more than insufficient: Tænia solium "differs from tænia saginata (T. medio canellata) in the important fact that the latter cannot pass through all its stages of development in the same animal, while tænia solium can extend its infection to various organs of the host" (p. 365). One or two indications of a rather hasty revision of proofs (Fig. 12, for instance, is labelled Fig. 23) are to be observed, and the transatlantic nomenclature of certain chemical bodies reads strange in the eyes of British readers: but it may be said that the number of useful chemical works by American authors which we now have occasion to read should have familiarised us with such expressions as carbon disulfid, iodin solution, potassium iodid, etc.

## DISEASES OF THE MOUTH AND NOSE.

Dr. Flatau, of Berlin, has contributed to the *Nobiling-Jankau Handbook of Prophylaxis* an essay on the prophylaxis of diseases of the throat and nose.[10] He deals first with general topics, and in speaking of nasal obstruction emphasises the importance of an exact diagnosis in order to distinguish cases due to general causes such as heart, lung, and kidney disease or to unhealthy habits such as want of exercise, and constipation from cases due to local causes and amenable to local treatment. To prevent the recurrent catarrh and infections

[6] *Die Impfung und Ihre Technick.* Von Hofrath Dr. Med. Conrad Blass, Director of the Leipzig Vaccination Institution, and Public Vaccinator. Leipzig. 2nd edition, Leipzig: C. G. Naumann, 1901. (Fcap. 8vo, pp. 83. M.0.50.)

[7] *Die Sterblickheit der Haupt- und Residenzstadt Buda-Pesth in den Jahren 1891-95 und deren Ursachen.* Von Dr. Josef von Korosy. Berlin. 1901. M.4.

[8] *Oeffentliche Massnahmen gegen ansteckende Krankheiten.* Bearbeitet von Dr. Th. Weyl, mit Beiträgen von Dr. Nocht und Dr. Schwarz; bildend zugleich die 39 Lieferung, und Schluss des neunten Bands nebst General register, des Handbuchs der Hygiene in zehn Bänden. Jena: G. Fischer. (Roy. 8vo, pp. 240, 57 illustrations. M. 6.)

[9] *Select Methods in Food Analysis.* By H. Leffmann, A.M., M.D., and W. Beam, A.M., M.D. Philadelphia: P. Blakistons, Son, and Co.; and London: Rebman Limited. 1901. (Demy 8vo, pp. 384. $2.50.)

[10] *Die Prophylaxe bei Hals 'und Nasenkrankheiten.* Von Dr. Theodore S. Flatau, Berlin. Munich: Seitz and Schauer. 1900. (Demy 8vo, pp. 34.)

which cause most of the diseases of the upper air tract he advises judicious hardening measures and a rational mode of life, especially in children in whom the structures of Waldeyer's lymphatic ring are so frequently affected; and also extreme watchfulness during convalescence from infectious diseases. In discussing vocal defects, Dr. Flatau describes the early signs of fatigue, and insists upon the necessity for rest instead of the continued practising which is so often enjoined by singing masters, with the result that a defect which at first only affected a small part of the register finally affects the whole voice. Even then the author points out that there may be nothing abnormal to be seen in the larynx, and the speaking voice may be good. The second part of the essay is devoted to prophylaxis in special diseases, particularly infectious diseases. Systematic examination of the upper air tracts is the first rule of prevention. If it were done as carefully as in the case of the heart and lungs many who now suffer would, he thinks, escape. The cleansing measures recommended are simple and practicable, and consist chiefly in the use of gargles and sprays of unirritating disinfectants, such as hydrogen peroxide (5 to 10 per cent.), and the careful cleaning of the mouth and teeth. He very wisely deprecates active interference during the acute stages. In tuberculous cases he does not remove tonsils "on suspicion," but only when they are doing obvious harm. After some remarks on the timely recognition of syphilis, the author concludes his very instructive essay with a section on hæmorrhage.

Although the difficulty experienced in cultivating certain mouth organisms has not been fully overcome, yet it is well established that, amongst the bacteria commonly found in the mouth, a number of pathogenic organisms are met with even in healthy individuals. The pneumococcus is pretty common, and streptococci and staphylococci are abundant. These must constantly be swallowed, and, although the gastric juice tends to destroy them, its powers are not unlimited, and it becomes a question of dose and resistance whether harm results or not. In a small volume on *Oral Sepsis*,[11] Dr. WILLIAM HUNTER has collected a number of cases in which there is fair evidence that infection has been carried elsewhere from the mouth, and others have expressed the opinion that the mouth may be the unsuspected source of other septic conditions. He holds that, as might be expected, a septic gastric catarrh is the most common of these sequelæ, but associated with, or even without, its occurrence the absorption of septic products from the mouth may induce a sort of chronic septicæmia, giving rise to pallor, languor, and depression. As he points out, anywhere else than in the mouth we should nowadays certainly not neglect any place which was the constant source of pathogenic organisms; yet here—perhaps because resistance is such that the worst ill-results follow but rarely—we habitually accept their presence. Though they exist in a healthy mouth, their numbers become enormously increased so soon as there is disease of the teeth. Hence he concludes, and with strong show of reason, that in oral asepsis there is a large field for preventive medicine. Experiment has shown that absolute sterility of the mouth is practically not attainable, but by scrupulous care, both in mechanical and chemical cleansing, the number of bacilli can be reduced very low, so low that moderate resistance might be trusted to render them innocuous. So far the evidence of the production of certain forms of gastritis seems to be very strong. It is pretty well established, also, that cases of septic pneumonia from oral infection occur both after operations trivial or severe and independent of them, and there is a growing belief that the origin of some cases of pernicious anæmia and of ulcerative endocarditis may have been oral infection. It is interesting to recall that years ago, before the part played by bacteria in the production of disease was much thought of, the late Mr. Moon (in a chapter on diseases of the teeth in the first edition of Bryant's *Surgery*) wrote that it was little use to send a patient away for change of air if he carried with him a foul mouth constantly reproducing foul products. It is well not to ride a new or comparatively new hypothesis too hard, but *a priori* probability is all in favour of such infection occasionally spreading, and given the undoubted facts of the occurrence of pathogenic organisms in the mouth, and of cases in which symptoms, local visible conditions, and the results of treatment all point to this having been a *vera causa*, scepticism is equally out of place. Dr. Hunter has done good service in calling attention to these cases and emphasising the need of paying attention to the mouth, a matter too often neglected in the nursing of protracted cases of any kind. If thought of at all it is regarded as merely a measure for the preservation of the teeth themselves. But if these views gain ground it will become an essential part of the nurse's duties to see that the mouth is kept, so far as may be, sterile.

Dr. GRÜNWALD'S *Treatise on Nasal Suppuration*, which has been translated into English by Dr. William Lamb,[12] is a perfect gold mine to the studious laryngologist. It has been said that Germany mines the golden metal of science; France mints it: and the English-speaking people put the coin in circulation. Thanks to the labours of Dr. Lamb, this process has in the present instance been abbreviated, and we are able at once to profit by the researches of the well-known Munich laryngologist. It is impossible here to analyse the book. It must necessarily appeal chiefly to specialists, to whom every page is of interest. Doubtless, the fruits of their study will soon be made evident in our own literature, and, meantime, we would point to some of the teaching which may give every practitioner pause. Dr. Grünwald prints in leaded type the following conclusion he has come to: "My own view is that polypi in a majority of all cases are almost as good as pathognomonic of empyemata of the accessory cavities, or focal suppuration in the nasal passages" (page 87). Henceforward no case of nasal polypus should be treated in an off-hand manner, as hardly worth the attention of a seriously-minded practitioner, and much less should it be treated by the antiquated method of blind evulsion which is still recommended in the last edition of one of the best known English manuals of operative surgery. Dr. Grünwald's insistence on the frequency with which headache may be traced to nasal suppuration should also attract the attention of the general physician, while many might ponder over these words: "To call a disease 'nervous' is often only a cloak for ignorance, and we have seen many a poor patient suffering under the moral stigma of malingering, or, at least, considered hysterical or fanciful. Alas! there are far more fanciful doctors than fanciful patients." Under the heading of treatment, we note that Dr. Grünwald approves of the simple method of "sniffing" lotions through the nostrils as the most satisfactory way of cleansing the nasal cavities. He finds it the most physiological, and in practice it is certainly the simplest. Enough has been said to show that every one may gain profit from a study of this treatise. To all who do any nasal surgery at all it is quite indispensable. We are indebted to both translator and publisher for rendering it available to the English-speaking races. The translator has done his work well: his English is free, as may be judged by such phrases as "the cases slumped together," and "the patient looked blooming." Such expressions approach dangerously near slang, but may be forgiven in view of the general excellence.

Dr. GALLOIS[13] looks upon the naso-pharynx as a great centre of infection. It is very frequently the seat of adenoid growths and chronic suppurative processes, and he believes that the various infections which proceed from this centre give rise to the diseases which were formerly considered to be characteristic of the scrofulous diathesis. Scrofula the author regards not as a diathesis, but rather as a clinical group of diseases frequently associated. The infections are effected, not by any specific microbe, but by the ordinary pyogenic organisms or by the tubercle bacillus. Dr. Gallois follows Bazin's classification of the lesions, and divides them into cutaneous, mucous, glandular, osteo-arthritic, and visceral. The condition of the naso-pharynx may open the door to general infection, and give rise to diseases such as rheumatism.

[11] *Oral Sepsis as a Cause of "Septic Gastritis, Toxic Neuritis," and other Septic Conditions.* By William Hunter, M.D., F.R.C.P. London: Cassell and Co. 1901. (Demy 8vo, pp. 30. 3s. 6d.)

[12] *A Treatise on Nasal Suppuration.* By Dr. Ludwig Grünwald, of Munich. Translated from the Second German Edition by William Lamb, M.D. C.M.Edin., M.R.C.P.Lond. (of Birmingham). London: Baillière, Tindall, and Cox. 1900. (Demy 8vo, pp. 350, 8 illustrations, and 2 plates. 10s. 6d.)

[13] *La Scrofule et les Infections Adénoïdiennes.* [Scrofula and Adenoid Infections.] By Paul Gallois. Paris: Société d'Editions Scientifiques. 1900. (Crown 8vo, pp. 526. Frs.8.)

nephritis, endocarditis, pleurisy, etc., and cases are quoted from the author's experience in support of this. The evidence adduced is, it seems to us, insufficient to justify any wide generalisation, although it suggests that persons with chronic suppurative disease of the naso-pharynx are unusually prone to fall victims to various morbid processes which are probably the result of general infection. Dr. Gallois insists upon the importance of "polyetiology"—that is, the fact that a number of etiological factors are frequently at work in causing a disease—the state of the naso-pharynx is often only one factor amongst several. To sum up, the book is stimulating, and suggestive even where it is not convincing.

We welcome the appearance of a second edition of Dr. DE HAVILLAND HALL's handbook of *Diseases of the Nose and Throat*,[14] in the preparation of which Dr. Tilley has been associated with the author of the first edition. It has been increased in size by some 50 pages, several new illustrations have been added, and certain sections such as those on diseases of the accessory sinuses have been rewritten and brought up to date. As a practical manual for the senior student and practitioner the book is excellent. It is concise, clear, and sufficiently dogmatic. Reflecting, as it does, the experience of an accomplished physician and an able surgeon, it forms a thoroughly reliable guide to the subjects of which it treats.

The first part of Dr. GERBER'S *Atlas*[15] of diseases of the nose its accessory cavities, and the naso-pharynx, deserves great commendation. It consists of six plates, each containing from eight to ten coloured figures, but it is not stated in how many parts the entire work is to be completed. The coloured sketches, with the explanatory schematic drawings which accompany them, are most instructive. None will realise this more than those who have endeavoured to make clear to students the interpretation of the composite pictures of the interior of the nose revealed by anterior rhinoscopy. In this respect the author has been most fortunate, and is highly deserving of gratitude. The various forms of deviation of the septum are such as are constantly met with and recognised, though difficult to describe. This work will help greatly in removing the difficulty. In the second part the author gives illustrations of epithelium metaplasia, namely epidermisation and warty degeneration of the nasal mucous membrane, of non-fœtid and fœtid atrophic rhinitis, and of hypertrophic conditions of the various typical forms. The important subject of papillary hypertrophies which simulate papillomata of the turbinals is well illustrated. The author's recommendation to use the hot instead of the cold snare for this will be appreciated by all who have had experience of their vascularity. Hypertrophy of the pharyngeal tonsil is shown in numerous figures. The author dwells on the importance of inspection of the naso-pharynx through the anterior nares, and gives some illustrations showing the appearance of the choanæ from the front. There is a little loss of perspective in some of these drawings, but those who are not familiar with this mode of investigation will find them very instructive. The illustrations of polypi—œdematous fibromata—are extremely good, the varieties in colour, however, being in some instances rather exaggerated. He gives some very striking pictures of retronasal polypi. The schematic key drawings accompanying some of the figures will be found very useful. The fourth fasciculus contains several illustrations of malignant diseases affecting the nasal cavities and the accessory sinuses. It may be thought by the casual reader that the drawings show very little by which the malignant may be distinguished from the simpler neoplasms. To those, however, whose experience is at all considerable this will not be surprising, as the visible characteristics of the early stages of these affections are by no means pronounced. These drawings and the accompanying descriptions will be found, however, extremely helpful and well worthy of study. If subsequent numbers keep up the standard of excellence attained in the first, we can only congratulate the author on the publication of a work which, although not the only one dealing with the subject, has obvious points of merit which are peculiarly its own.

[14] *Diseases of the Nose and Throat.* By F. de Havilland Hall, M.D., F.R.C.P., Physician to the Westminster Hospital; and Herbert Tilley, M.D., B.S., F.R.C.S., Surgeon to the Throat Hospital Golden Square. London: H. K. Lewis. 1901. (Crown 8vo, pp. 605. 10s. 6d.)

[15] *Atlas der Krankheiten der Nase, ihrer Nebenhöhlen und des Nasenrachenraumes.* Von Dr. P. H. Gerber of Königsberg. First Part. Berlin: S. Karger; and London: Williams and Norgate. 1901. (Roy. 8vo, 6 plates, with letterpress. 6s.)

## OTOLOGY.

WE have much pleasure in welcoming a third edition of Dr. BARR'S *Manual of Diseases of the Ear*.[16] The second edition appeared as late as the year 1896, and we took the opportunity in a review of the work to draw attention to its many excellencies. That these have been recognised by students of otology is amply proved by the speedy demand for the present edition. In outward appearance and size the book presents little or no alteration, and, in point of fact, very few of the chapters required rewriting to any extent. The ever-increasing knowledge—or knowledge of ignorance—of the vital questions connected with the complications and results of purulent inflammation of the middle ear afford, however, an exception to this rule, and the present account of these diseases shows that the author has been increasing his experience and studying the experience of others up to the time of publication of the book before us. He considers caseous and cholesteatomatous collections apart from caries and necrosis of the temporal bone, and he lays more stress (p. 280) on the urgency for the performance of the radical mastoid operation when these are present. In regard to intracranial and vascular infection many details have been added. The symptoms of abscess in the brain, for instance, have been rearranged on a somewhat better plan. In the description of the distinctive symptoms in cerebellar abscess (p. 294) we note the absence of reference to paresis of the limbs on the same side as the lesion, which is now considered an important point in the diagnosis between this lesion and abscess in the cerebral hemisphere. Extradural abscess receives fuller notice, but there is no reference to that very characteristic form of the disease in which pus finds its way through the cranial bones, and forms a subperiosteal abscess on the surface. The treatment of intracranial and vascular complications of purulent disease of the middle ear receives much fuller consideration than in the former edition, and the teaching on the subject is brought well up to date. A short but valuable chapter is added on malignant disease of the middle ear. The many excellent features of the book will commend themselves to its readers, and, as a practical and exhaustive work, we most strongly recommend it.

Dr. GORHAM BACON'S *Manual of Otology*[17] has many good points. It is concise and gives in moderate compass a fairly clear and comprehensive account of modern otology, including the major surgical operations required in the treatment of chronic suppurative otitis and its complications. It is evident in every chapter that the author is an aural surgeon of considerable practical experience, and that he speaks of things which he has himself done, of the difficulties he met with and how he overcame them, and of the lessons to be learned. Dr. Bacon is not so enterprising in treatment as some of his countrymen, and his book is all the better on that account. His views are moderate and sensible, and his advice as a rule is sound and reliable. A number of colloquial "Americanisms" enliven Dr. Bacon's style; to a stickler for literary form they would, we suppose, be a grave offence, but we confess to having found them rather entertaining, though it is is surprising to find so many in an author who holds a degree in arts.

The fourth volume of the set of monographs dedicated to General Staff-Surgeon Alwin von Coler is by Professor TRAUTMANN,[18] and contains, in comparatively small space, a good account of all the operations likely to be required in the treatment of diseases of the ear. It commences with the pre-

[16] *Manual of Diseases of the Ear, including those of the Nose and Throat in Relation to the Ear.* For the use of Students and Practitioners of Medicine. By Thomas Barr, M.D. Third Edition. Glasgow: James Maclehose and Sons. 1901. (Demy 8vo, pp. 454; 236 illustrations. 12s. 6d.)

[17] *A Manual of Otology.* By Gorham Bacon, A.B., M.D., Professor of Otology in Cornell University Medical College, New York; Aural Surgeon, New York Eye and Ear Infirmary. Second Edition. London: Henry Kimpton. 1901. (Crown 8vo, pp. 410. 10s. 6d.)

[18] *Leitfaden für Operationen am Gehörorgan.* [Guides to Operation on the Organ of Hearing.] By Von Professor Dr. F. Trautmann. Berlin: A. Hirschwald. 1901. Demy 8vo, pp. 104, 27 illustrations. M.4).

parations for operations according as they are small or great. Then follow descriptions of the operations on the various parts from without inwards. Professor Trautmann does not recommend operation in cases of congenital atresia of the meatus. Before paracentesis of the membrane he insists on endeavours to recognise a possible bulging of the bulb of the jugular vein into the tympanum (page 39). He is not unfavourable to attempts at the removal of the stapes (page 50). In operating on the mastoid antrum he looks for signs of forward bulging of the sigmoid sinus (page 58), and when these are present he makes his way to the antrum through the postero-superior wall of the external meatus. The exploration of the lateral sinus by incision is well described, the value of puncture being considered very slight (page 70). The indications as formulated by Leutert in the *Arch. f. Ohrenheilkunde*, vol. 41, page 233, receive most favour. In addition, lumbar puncture is advocated for the purpose of excluding meningitis (page 68). It is described (page 98) among the operations for serous meningitis, a disease which deserves study and recognition. The indications for ligature of the jugular (page 71) might have been more freely detailed, and the description of the operation itself usefully elaborated. When there is a parietal thrombus of the jugular bulb the ligation may be postponed, but when the thrombus is an occlusive one it must, according to the author, be performed at once below the lowest level of the clot (page 71). In the radical mastoid operation (page 79) he advises keeping the post-aural wound open till the cavity is completely epidermised. He mentions the transplantation of Thiersch's grafts as shortening this process, but gives no details. Cerebral and cerebellar abscesses receive full consideration, and there is a note that the author recommends a knife for exploration, and an iodoform gauze plug instead of a drainage tube after evacuation (pages 91-92). The work, on the whole, is a most acceptable contribution, and contains many points on which other authors have been silent.

A short but interesting work,[19] forming a section of the *Nobiling Jankau Handbook of Prophylaxis*, devoted to prophylaxis in the treatment of diseases of the ear, has been written by Dr. BING. He first discusses the prevention of diseases of the ear as part of the body in general: for instance, in relation to skin disease or to the general causes of catarrh and inflammation: he warns against the dangers of manipulating the ear, stopping it habitually with wadding, diving injudiciously, neglecting ear discharges or earaches, etc. In the second section he deals with the prevention of ear disease in children in the earliest years of life, referring, for instance, to injury to the ear from tight caps or cap strings, the risks of infection of the ear from the shortness and width of the Eustachian tubes, the greater possibility of intracranial infection owing to the presence of the petro-squamous fissure. He advises care in the observation of the hearing power of the child. In the section concerning the external ear he points out the danger of pulling the auricle and introducing a foreign body into the passage, and still more of attempts at its removal by unskilled persons. In regard to affections of the membrana tympani he warns against allowing the entrance of cold air or water, the chances of rupture of the membrane from the entrance of twigs, straw, and indirectly from blows on the ear and side jumps into the water; the sudden rarefaction of the air in the meatus accompanying a kiss in its neighbourhood is also stated to be fraught with danger. Politzer's inflation or the use of the speculum may lead to tearing of an atrophic or cicatricial membrane. Much good advice is given with regard to the affections of the middle ear, including the methods of avoiding catarrh in general, and the removal of abnormalities of the nose and naso-pharynx. It is recommended that the act of blowing the nose should be confined to one nostril at a time, the production of trumpeting noises being avoided. When otitis media is associated with severe pain he strongly advocates the application of cold behind the ear for the prevention of extension of inflammation to the mastoid cavities. Paracentesis of the membrane and the mastoid operation are classed among prophylactic measures of the utmost importance. The conditions inducing chronicity of suppuration in the middle ear are mentioned, so that by appropriate prophylaxis recovery may be brought about. In cases of persistent dry perforations he advises the wearing of cotton wool in bad weather, the avoidance of the entrance of water, discretion in the use of the artificial drum, and the advisability of bringing about the healing, if possible, by means of applications of trichloracetic acid. He points out the injurious effect of cold bathing, cold douches to the head, and gestation. He dwells finally on the affections of the nervous auditory apparatus as in the congenital forms of deafness associated with intermarriage of relations, and alcoholism in parents. In the acquired forms he refers to the dangers attending the infectious diseases, serous meningitis (in which he recommends lumbar puncture), cerebro-spinal meningitis, mumps, etc.; the various well-known causes of nerve deafness, such as anæmia, congestion, syphilis, leucocythæmia, diabetes, nephritis, malaria, injuries to the head, exposure to noises, rheumatism, alternations of heat and cold, onanism, and various toxic agencies, are included. No doubt the major part of this material is to be found in any complete textbook on otology, but there are many who do not read such complete works, and who prefer to relegate the treatment of well-established disease of the ear to those who profess a special knowledge of the subject: they cannot, however, divest themselves of the responsibility of carrying out the necessary prophylaxis, and for them in particular such a work as this is specially valuable. The general practitioner has in his hands the means of preventing much mischief, which, when established, is difficult or impossible to cure, and it is well for the sake of the public and the credit of the profession that the prophylaxis should be studied as a whole in the way that has been so ably done by Dr. Bing.

Dr. BLAU'S *Encyclopædia of Otology*[20] is a useful work of reference. The long list of distinguished names on the cover, including as it does many of the best known, and especially many of the younger German otologists, leads one to expect a high standard of excellence in the various articles. This expectation is not disappointed. We have sampled the book freely from A to Z, and have found the information full and satisfying. It is, of course, difficult to preserve an exact sense of proportion when so many subjects are treated, but upon the whole Dr. Blau has succeeded admirably. There are in all 63 contributors: of these 9 hail from Vienna, 8 from Berlin, 4 each from Frankfort and Breslau, 3 each from Halle and Königsberg, 2 each from Munich and Gratz, while 28 provincial towns furnish each 1 contributor. This scattered distribution illustrates very well the wide diffusion of otological knowledge amongst our German-speaking brethren, and helps to explain the preponderating share they take in the advance of otology. The book is printed in parallel columns on excellent paper, and the type is clear and distinct.

[19] *Nobilling-Jankau Handbuch der Prophylaxe* (Abteilung VIII) Die Prophylaxe in der Ohrenheilkunde [Prophylaxis in the Treatment of Diseases of the Ear]. Von Dr. Albert Bing, *Privat docent* für Ohrenheilkunde an der Universität Wien. Munich: Seitz and Schauer. 1900. (Demy 8vo, pp. 22. M.1.)

[20] *Encyclopædie der Ohrenheilkunde*. Edited by Dr. Louis Blau, Berlin, Leipzig: F. C. W. Vogel. 1900. (Roy. 8vo, pp. 456. M. 20.)

# REPORTS AND ANALYSES
## AND
# DESCRIPTIONS OF NEW INVENTIONS
### IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

## MEDICINAL AND DIETETIC PREPARATIONS.

*The Manhu Diabetic Foods.*—We have received samples of the Manhu diabetic bread, diabetic biscuits, flaked wheat and flaked barley, macaroni, barley flour, and barley cocoa. Of these, we understand, only the first two are recommended as suitable for diabetic patients. The claim put forward for them is that the starch has undergone some modification which renders it more easily assimilated by diabetics. We are told that "the starch is rendered soluble without neces-

sarily turning the plane of polarisation to the right, consequently there is no claim made of converting the starch into dextrine. The change is such that when acted upon by the pancreatic and other intestinal juices it digests easily and assimilates perfectly. This is owing to the processes of manufacture by which the outer envelopes of the starch are ruptured, the granules are broken up and macerated. During this process, and without the use of any chemicals whatever, the amylaceous properties undergo a peculiar change, which by subsequent treatment (still without chemicals) are rendered so soluble that they just suit the diabetic system or any system where the assimilative powers are weakened." We are not able to follow these statements. The bread, biscuits, etc., contain large quantities of starch granules which turn blue with iodine and microscopically appear to have undergone no change except that due to partial cooking. These foods are evidently not suitable for cases where it is desirable to limit strictly the amount of carbohydrates but it is now well known that many cases of diabetes do better upon a reasonable amount of starchy food. The success which is alleged to have followed the use of these and similar kinds of foods is in our opinion due to this circumstance, and it is a misfortune that the opinion should be so widely held that the presence of sugar in the urine necessitates the absolute prohibition of all carbohydrate food. It is well known that that regimen is often very badly tolerated and that patients under such orders constantly disobey them and gladly avail themselves of such articles of food as these now under consideration. It is highly probable that they would have found the ordinary production of the baker quite as useful and a good deal cheaper.

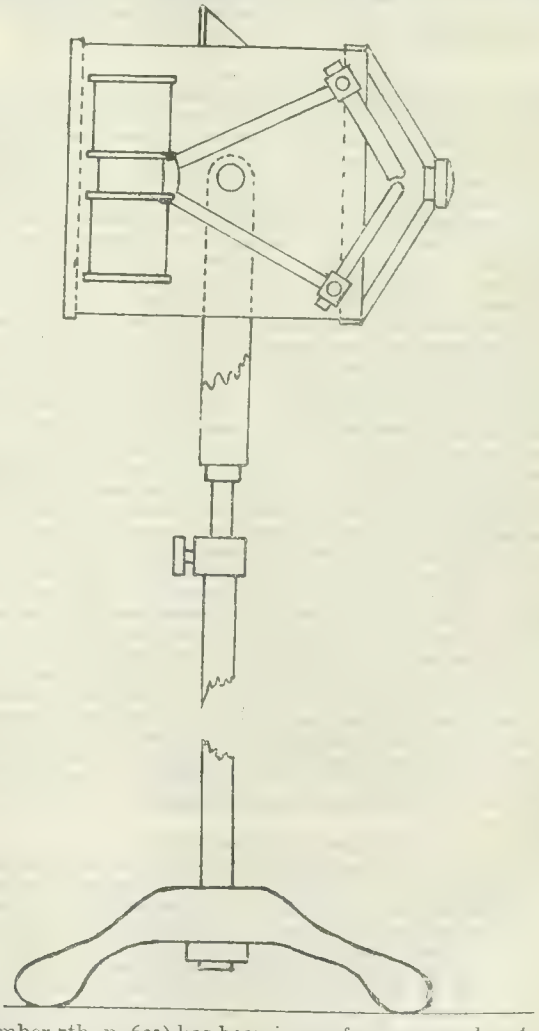
*Oxo.*—The preparation known as Oxo is described as a "new fluid beef," and is manufactured by the Liebig Extract of Meat Company. The results of our analyses of the samples submitted to us show that it is a well-prepared meat extract containing rather over 8 per cent. of meat fibre and a total amount of proteid matter, properly so-called, of 23.4 per cent. It contains 36 per cent. of water and 16.7 per cent. of mineral matter consisting chiefly of salt, and is free from chemical preservatives. It is claimed that the preparation is better than any other fluid beef on the market. While we are not in a position to assert that this claim is justified, the results of our examination enable us to state that the article is a good one of its kind, and that it appears to be offered at a reasonable price.

*Callard's Casoid Bread, Biscuits, etc.*—We have received samples of Messrs. Callard's latest productions in diabetic foods. These are made from milk flour, and it is claimed that they are all absolutely free from any form of carbohydrate. We have examined the casoid bread, some biscuits, and the flour from which they are made. They are all entirely free from any trace of sugar or starch or any material forming a reducing substance after prolonged boiling with mineral acid. These articles of food appear to possess all the qualities claimed; they are excellent in appearance, well made, and palatable, and we have no hesitation in recommending them as calculated to be of great value in the treatment of diabetes.

*Milkine Food and Milkine Food Tablets.*—Milkine is described as a concentrated combination of cow's milk, malted cereals, and beef, manufactured by a new process by means of special machinery. The formula used in the preparation of the article is stated to be the following: Milk 50 per cent., malted barley 22 per cent., glutinous flour 22 per cent., lean beef 5 per cent., calcium hydroxide 0.5 per cent., chloride of sodium 0.5 per cent. The method of preparation is described as consisting in mixing the malt, flour, and meat with water, and holding them at the proper temperature, filtering, adding the milk and calcium hydroxide, and reducing the whole *in vacuo*. The results of our analyses of these preparations show that milkine, which is a light-yellowish granular powder, having a sweet taste, and without marked odour, contains 6.17 per cent. of milk fat, 6.67 per cent. of moisture, and 2.95 per cent. of total mineral matter. The preparation on the addition of water yields a milky fluid having a strong alkaline reaction, due to the added lime which we find to be present in the amount claimed. The substance is practically free from unaltered starchy matter, and our results further indicate that the article has been prepared from the materials mentioned and in the manner described. The tablets consist of the same preparation, but contain less moisture and rather higher amounts of milk fat and total mineral matter (7.22 per cent., and 4.03 per cent. respectively). Milkine is recommended by the manufacturers for the use of children and invalids, and milkine tablets for general use. While we consider that these preparations are well and carefully manufactured, and are put before the public in an honest and straightforward manner, and with full information as to their character and composition, we are not in a position to substantiate the whole of the very strong claims which are made as to the superiority of these articles for all feeding purposes; and in regard to their use for infants and invalids we think that they should be taken under medical direction. The preparations are well worthy of attention and trial.

## MEDICAL AND SURGICAL APPLIANCES.

*A New Lupus Lamp.*—Dr. G. G. Stopford Taylor (Liverpool) writes: A new lupus lamp embracing all the advantages of that described by Dr. Hedley (British Medical Journal, September 7th, p. 621) has been in use for some weeks at the Liverpool Skin Hospital, but it has this advantage over Dr. Hedley's that it is self-feeding. The operator can thus easily control several lamps or work an *x*-ray apparatus at the same time. The apparatus consists of a differentially-wound arc lamp, which turns with an arc of constant length during the life of the carbons. The current is automatically kept constant at 10 ampères and is supplied from the street main. The lamp is mounted in an asbestos-lined iron case, fitted



with a copper water jacket in front and a water-cooled quartz compressor at the apex. The lamp may be raised or lowered or tilted in any direction to suit the position of the patient, and requires absolutely no attention after switching on. The back of the case is fitted with a coloured-glass window, through which the arc may be examined without danger to the eyes.

## THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

[*Continued from page 820*].

THE proceedings of the British Association in Glasgow were continued till Wednesday, September 18th. The membership this year has been only 1,912, which is considerably lower than that of the two previous visits of the Association to Glasgow. This may in part at least be accounted for by the unusually large number of congresses—scientific and other—that have been attracted to Glasgow this summer. However, the interest of the meetings was well sustained, while a very successful series of social functions was carried through, the weather conditions on the whole being very favourable.

### THE MOVEMENTS OF PLANTS.

Mr. FRANCIS DARWIN, F.R.S., of Cambridge, gave an evening lecture in the St. Andrew's Hall on this subject. He said that when he asked the question, what was the difference between a plant and an animal? he had sometimes been met with the counter-question, What was the resemblance between them? But someone might give him the answer, respectable for its antiquity and not for any other reason, that an animal could move, whereas a plant could not move. The answer took its origin in a confusion of thought. A tree or any of the higher plants was stationary, but it was not for that reason motionless. If it appeared motionless, that was simply owing to the poorness of our eyes. By means of the microscope such evidences of life were seen that we almost wondered that we did not hear as well as see the stream of life. However, one did not need to deal with high magnification. The scarlet runner showed plain proof of movement by the way in which it moved its topmost shoot in seach of some support on which to grow. Moreover, a tree could not grow vertically unless it had some power of growth. Again, plants laid horizontally assumed the upright position, and in doing so overshot the mark, but subsequently rectified their position. It was this power of correcting the line of growth as soon as it deviated from the vertical that enabled the pine tree, for example, to grow upright. In experimenting, however, it had been found possible to blind a plant so that it continued to grow in the horizontal instead of the vertical position. It used to be thought that roots grew straight down owing to their own plasticity, but it had now been proved that the power of doing so lay in the tip of the root. If that part were prevented from exercising its function, the root ceased to penetrate the soil vertically. In conclusion Mr. Darwin said he looked forward to the time when these questions of movement would take a definite place in the hierarchy of psychological phenomena. The lecture was illustrated by a very fine series of lantern slides.

### SECTION OF PHYSIOLOGY.

Among the additional papers read in this Section may be mentioned that on Has the Spleen a Hæmopoietic Function? by Drs. NOEL PATON, LOVELL GULLAND, and J. S. FOWLER. The investigations dealt with the question of whether the spleen produced the corpuscles of the blood. From the series of experiments which were described the conclusion was arrived at that there was no evidence that the organ had anything to do with the production of blood corpuscles. Dr. W. BRODIE gave a communication on the Action of Oxalates upon the Relationship of Calcium Salts to Muscle. Dr. C. S. MYERS communicated the results of a series of observations with Galton's whistle made on different races.

### SECTION OF ZOOLOGY.

Major RONALD ROSS, F.R.S., told the story of the malaria parasite. He showed the part which mosquitos played in its dissemination, and said that he was convinced that prevention could be effected only by the extinction of the mosquito. Every town in the tropics should in a few years be freed of the insect pest, or at least have them visibly reduced in numbers. This would be done by simply clearing away every drop of stagnant water through the town and its surroundings by means of a gang of men maintained for the purpose by the local municipality. He described the experiments now being carried on in Sierra Leone by the Liverpool School of Tropical Medicine, assisted with a sum of £2,000 given by a West of Scotland gentleman. The experiments had been in progress for two or three months, and already there was an apparent reduction in the number of mosquitos.

Professor COSSAR EWART gave a lantern demonstration on zebras and zebra hybrids. As to the stripings of the skin he said there could not be any doubt that the variegated coat tended to make the animal invisible at a distance in the forest. The lion was the inveterate enemy of the zebra, which no doubt was assisted to escape because of the uncertain mark for a spring which the stripes caused it to present. Professor Ewart also exhibited in the college quadrangle three hybrid zebras.

### SECTION OF CHEMISTRY.

An interesting discussion took place on the Teaching of Chemistry, the subject being introduced by an address by Professor SAKURAI, of Japan. A paper was also read by Mr. WILLIAM THOMSON (Manchester) on the Detection and Estimation of Arsenic in Beer and Articles of Food, which gave rise to some discussion as to the advisability of using sugar in the manufacture of beer.

### SECTION OF ECONOMIC SCIENCE AND STATISTICS.

Of many interesting papers and discussions in this Section may be mentioned that on the Housing of the People, introduced by Professor SMART (Glasgow), the discussion being taken part in by Lord Provost CHISHOLM, Mr. FYFE (Sanitary Inspector, Glasgow), and others; a paper by Miss M. H. IRWIN on the Present Position of Women as a Worker: and another by Miss M. DENDY on Feebleness of Mind, Pauperism, and Crime.

### SECTION OF BOTANY.

A joint discussion on the Teaching of Botany was taken part in by mambers of the Botanical and Educational Sections. Mr. HAROLD WAGER, in opening the discussion, spoke of the teaching of botany in schools; while Professor Bower dealt with the same subject in its university relations.

## THE PLAGUE.

### PREVALENCE OF THE DISEASE.

#### INDIA.

THE returns for all India during the week ending August 31st show that 5,849 deaths occurred from plague. This is an increase of 435 upon the previous week. In the City of Bombay plague is steadily increasing, 216 deaths having occurred during the week ending August 31st, and 245 during the week ending September 7th. The latter figures show a higher figure than during any single week since the month of May. Deaths from remittent fever and lung diseases are also increasing, as they invariably do, when plague is recrudescent. In the Bombay Presidency also during the week ending August 31st the deaths from plague increased, being 3,243 against 2,914 during the previous week. In the Mysore State 336 deaths from plague were recorded during the week ending August 31st, against 234 during the previous week. In Calcutta during the week in question 21 persons died of plague, and in Bengal 17.

#### MAURITIUS.

During the week ending September 20th, 24 fresh cases of plague occurred in Mauritius, and 17 deaths from the disease.

#### CAPE OF GOOD HOPE.

There were no cases of plague and no deaths from the disease in the Cape Peninsula during the week ending September 14th. During the same period, however, at Port Elizabeth 2 Europeans and 8 natives contracted plague, and 1 native died of the disease. From no other place in South Africa is plague reported to have appeared.

#### HONG KONG.

During the week ending September 21st, 2 fresh cases of plague occurred in Hong Kong, and 2 deaths from the disease.

#### EGYPT.

According to a Reuter's telegram there are now 5 cases of plague in Egypt, 3 of these are at Alexandria, and 2 at Mit Ghamr. The total cases since the outbreak on April 7th, amounts to 101, of which number 79 have proved fatal.

## BRITISH MEDICAL ASSOCIATION.

### SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, SEPTEMBER 28TH, 1901.

## THE UNIVERSITY OF LONDON.

The new *Calendar* of the University of London just issued in three volumes epitomises the illustrious past of the University, surveys in detail the present scope of recognised University instruction in London, and emphasises the magnitude of the change which has been effected by the reconstitution concerning which so much has been promised and from which so much is yet expected.

The first and third volumes are practically the equivalent of the old *Calendar* with which graduates and undergraduates have been long familiar. The second volume is almost entirely the product of the reconstitution; its arrangement and detail reflect credit upon those who have prepared it, and reference to its 526 pages, even at the somewhat excessive cost of 5s., will supply abundant information as to courses of study, recognised teachers, and schools of the University.

We are not surprised that in a recent leader in one of our daily contemporaries satisfaction, if not pride, is expressed in contemplating the wealth of instruction available in London, even without any additional courses provided by the University itself. With or without recognition, there have grown up on the banks of the Thames clusters of schools and colleges which in the universality of the knowledge they are prepared to impart no less than in its academic standard, would realise the ideal Sir Thomas Gresham imagined in the earlier years of the sixteenth century.

In the long struggle which preceded the passing of the University of London Act, 1898, it was frequently urged that the teaching facilities in London were already superabundant, that the lecture-rooms in the colleges were too often occupied by empty benches, and that if the Act passed there was no assurance that there would be any more or any better teaching in London than there was already. A fear was therefore expressed that there was a danger of creating a teachers' rather than a teaching university. We hope such danger may be avoided, and if we are not prepared to take quite so roseate a view of the superabundant facilities for learning in London as that in which our contemporary indulges, we are yet inclined to agree that the comprehensive conspectus which the new *Calendar* for the first time brings together, "will surprise many even among those of the people of London who have taken an exceptional and practical interest in educational affairs," as well as many of those who urged the dearth of teaching in London as an imperative and unanswerable argument for establishing a teaching university.

Scores if not hundreds of metropolitan teachers in various faculties who have hitherto been entirely unconnected with the University of London by graduation or otherwise, now find themselves overshadowed by its ægis, and will doubtless feel their teaching inspired by the afflatus of university recognition.

The medical schools of London constitute the most numerous and by no means the least distinguished group among recognised schools of the University. On pages 182-276 the courses of instruction, the days and the hours, and fees in the various recognised medical schools and institutions are set out. It would appear that in addition to the twelve hospitals which have medical schools attached to them, only three or four other hospitals, for example, the Brompton Hospital for Consumption, the Royal London Ophthalmic Hospital, the National Hospital for the Paralysed and Epileptic, and the Hospital for Sick Children, Great Ormond Street, appear in the list. Possibly the list is provisional, but if not, we incline to the view that similar work is being done at other hospitals than those selected which might as worthily enjoy recognition. If such be excluded from the area of academic privilege, the quality and even the continuance of such work appears to be endangered.

Section 3 of this volume of the *Calendar* is perhaps the most interesting of all, and though as yet one page suffices to dismiss the whole section, it is presumably destined to rapid and vigorous growth It deals with courses of instruction, not merely recognised, but actually provided immediately and directly by the University itself, and imparted within the precincts of the University wing of the Imperial Institute at South Kensington. This "fruit of the lonely furrow"—the first-fruits of a teaching university—consist in their entirety in the lectures (four in number) of the "Brown Animal Sanatory Superintendent," together with instruction in "Practical Chinese" by Mr. Brown, of Kiu Kiang.

The question of "concentration" of preliminary medical studies remains on the knees of the gods, but it is clear that the next step after surveying at large the existing facilities for teaching in London will be to prevent overlapping and waste of energy, and to this question, as well as to that of the matriculation, we understand that the Senate will address itself after the Long Vacation.

## THE PHYSICAL STANDARD OF ARMY CADETS.

Mr. Sandow, in his *Magazine of Physical Culture and British Sport* for September, contributes an article on the Army Medical Examination, by which he means the recent regulations promulgated in Army Orders July, 1901, for the physical and medical examination of candidates for commissions.

The War Office has of late years been sorely troubled by many criticisms of the rules for the medical examination of candidates, and the methods of conducting it, so that some new departure had become inevitable. But we have grave doubts of the value or expediency of the recent

departure, which consists in dividing the examination between two Boards or sets of officers.

The so-called "physical" as distinguished from the "medical" examination is now conducted by a Board of officers consisting of the inspector and assistant-inspector of (military) gymnasia, and takes place previous to the strictly medical examination. While the officers direct, the sergeant instructors, we presume, actually carry out the weighing and measuring of candidates, according to gymnasium methods, but not, of course, with the anatomical and physiological knowledge of medical experts.

Herein lies the defect of the new system as indeed of the regulations applied to the physical measurements of recruits as well as candidates; they are altogether too inelastic and unscientific, based on the assumption that anthropometry is a mechanical method such as might be applied to a log of timber or a cast-iron pillar. Little allowance is made for a living organism, and no regard is paid to the fact that scientific anthropometry can only be properly carried out by scientific experts.

We often notice in gymnastic and other returns what we venture to term the unpractical refinement of chest measurements to a quarter of an inch—a result which can be influenced by the smallest tightening or slackening of the measuring tape—which is of no value in estimating chest capacity, and is absolutely without physiological significance. Mr. Sandow, while recognising a quarter of an inch in chest measurement, seems aware of its inutility and futility, for he advocates measurements with the arms raised and muscles tense so as to obviate compression, instead of arms hanging loose and muscles relaxed. We are glad to see that the War Office in its table of physical equivalents rises superior to the quarter of an inch, and notes nothing less than half an inch in chest measurements.

But yet, does mere chest girth correctly or fully indicate chest capacity? Certainly not; and here we are in accord with Mr. Sandow. What he insists on is proportion, more even than relative bulk, in the human frame. A spare wiry man, a stout fleshy man, a short man, a tall man are entirely different entities from an anthropometric point of view, and to erect a standard for candidates or recruits combining those qualities artificially is absurd. One man may have a square flat chest, another be barrel-like; one may be deep horizontally, another vertically; to suppose that the cubic capacity of each of these varieties can be scientifically arrived at by a tape placed round the inferior angles of the scapulæ behind and the nipples in front is absurd. Nothing but the spirometer will gauge it, and even then much depends upon the mobility of the chest walls. It will usually be found that a well-drilled and set-up soldier of, say, five years' service, has a relatively small chest expansion, but a high minimum; from habit and carriage he walks about with his chest fixed, as it were, at a middle level.

The variety in physical stature which exists at maturity is much greater in boyhood and early manhood; hence the extreme difficulty of laying down hard-and-fast standards for candidates for commissions and for young recruits. This is officially recognised in the case of recruits, and provided for by the class of much-maligned "specials," who are simply youths who do not meet a rigid and artificial standard of correlative development, but will probably develop well in a short time. We have good authority for saying that many of the best soldiers now serving at the front were originally "specials" on enlistment. The marvellous results obtained by Mr. Sandow do in fact show what improvement can be attained by judicious physical training. But the young candidate for a commission gets no "special" to cover deficiencies out of which he may shortly grow. He is ruthlessly "spun" because lacking the weight which a few pounds of superfluous fat might afford, or because having grown slowly he is an inch under regulation height, or because he has prematurely shot up so that his height is out of proportion to his girth.

While a high standard of physical development should be maintained for officers, and while we would not for a moment advocate any relaxation as to strictly medical disabilities, it would seem only reasonable that some allowance should be made for variability in growth. We fear that the defects in the examination will not be remedied but rather accentuated by transference of the physical examination to gymnasium officials.

## AFTER-DINNER SPEECHES.

After-dinner speaking out of the mouths of some few practitioners becomes a science, and nothing can better promote digestion than to sit back "serenely full" and listen to the rounded periods and elaborate impromptus of someone whose natural gifts have been cultivated by art. Genius has been defined, wrongly we think, as the faculty of taking pains, but there is no doubt that whoever wishes to excel in post-prandial oratory must adopt this course, the absence of which caused the failure of the Vicar of Wakefield's family portrait. On minor occasions anyone possessing a fluent tongue, and knowledge and nerve, and a pinch of the Attic salt of humour will probably speak best on the spur of the moment, but trusting to inspiration may sometimes prove a broken reed, and those who have to obey the orders of the toast master when important issues are at stake may be advised to make more or less careful preparation. When the late Sir James Paget had to deliver an important speech he might be met in the Regent's Park pacing round and round, and rehearsing his performance; and Charles Dickens, *facile princeps* with his tongue as with his pen, would walk miles over Hampstead Heath declaiming and gesticulating when he had to take the chair at a public dinner. On the other hand, over-elaboration becomes a positive evil when it leads to the production and infliction of long dreary harangues which must be continued to their bitter end, with scanty regard to the comfort of the long-suffering audience.

The great thing to cultivate is a due sense of proportion which fits the remarks to the mood of the listeners, the framework being so loose and elastic as to permit the inclusion of such topical happy thoughts as may occur to a nimble and receptive mind, and encourage expansion or contraction as circumstances may suggest. This with a clear voice, distinct and deliberate articulation, an unembarrassed look, that brevity which is the soul of other things besides wit, will enable even a novice to avoid failure.

Considering all the difficulties and complications of after-dinner speaking, it seems extraordinary that the promoters of public dinners should not only overload the mental *menu* with twenty or thirty items, but should select those who have to contribute to the feast of reason and the flow of soul with so little reference to their capacity for carrying on the business in hand. The Army and Navy, the Houses of Parliament, the clergy of all denominations, art, science, and literature, the medical profession, the trade and commerce of Little Pedlington, the ladies, and other vested interests must be toasted in succession, and to each solemn response must be made. As strict seniority rules the compilation of the toast-list, the oldest general present, who has probably not smelt a blank cartridge for twenty years, must expatiate at length on the rottenness of our military system and our total unpreparedness for war, whilst some retired "swell of the ocean" who would speedily lose his way amid the intricacies of a modern ironclad, has to assure a listening nation that though we have practically no navy, everything is for the best in the best possible of all worlds. Then follow on the others in wearisome procession, not necessarily because they have anything to say, but because it is thought that they would be offended if they were left out.

The physiological results of all this must be serious. The audience, immersed in bad air and saturated with monotonous food and drink, are depressed and irritated by the dreary drip of talk which interferes with their own, and whilst they are straining their ears to catch the half-formed sentences and purposeless platitudes of the average speaker, their stomachs are vainly struggling to compass the digestion of a gigantic meal, and mutely protesting at the withdrawal of nervous energy which ought to be given to the work of digestion. The speakers too suffer in their own way, for it is a terrible ordeal for a nervous man to have to make an after-dinner speech. If he has had ample warning, amid the distractions and pleasures of ordinary life the grim spectre of what is coming casts its dark shadow before, and each succeeding dish only brings him nearer his fate. The few moments before the sonorous voice behind the chair summons him to rise are full of concentrated anguish, and when he has fully assumed the erect posture he begins to think what a fool he has been ever to drift into such a position. Perhaps, like poor Tenniel, everything evaporates and leaves his mind an empty blank; perhaps he may do better than he expected, but far more commonly he mourns over the forgetfulness of the fine things which, like Thackeray, he thought of in the cab, and he goes home depressed and annoyed with what he thinks has been a failure, and his health must suffer accordingly. All this, however, is the dark side of the picture, and we cheerfully acknowledge the pleasure often to be derived from good after-dinner speaking.

We are always rejoiced to see an American Minister stand up on these occasions, and the sacred fire of oratory has never burnt more brightly and clearly than when it illuminates the finished style of Mr. Choate. Our own profession has produced some admirable orators, and we still have among us Sir James Crichton-Browne, whose brilliant word-painting has hung up many a graphic picture in the memory.

There are indications, too, that the pruning knife is to be applied to the toast list. One of the most successful and agreeable dinners ever held in the cause of charity was that last July in aid of that admirable institution—the Royal Medical Benevolent College. There were only six speeches, and Lord Rosebery was in his very best form, by turns humorous, historical, eloquent, and pathetic; he touched every heart and tapped pockets so effectually that a gift of £1,000 immediately followed the conclusion of his remarks. It was, indeed, a memorable occasion—good food, wholesome wine; crisp, brief, practical oratory; a record subscription list. Could not this excellent example be followed by the promoters of other similar banquets in the expectation that the net result might be equally satisfactory?

## THE MEMOIRS OF SIR JAMES PAGET.

The volume of *Memoirs and Letters of Sir James Paget*,[1] which Mr. Stephen Paget, F.R.C.S., one of his sons has had in preparation for some time, was issued on Wednesday. It is nearly two years since Sir James Paget died, it is five or six since the approach of old age caused him to give up public work and to retire within that home circle which was always so dear to him; but to those who knew him, more especially those who had the privilege of being his pupils, his memory is as vivid as when his voice was the most eloquent and his influence the most weighty in the profession. All of these will turn eagerly to this volume, and we think they will not be disappointed. It is somewhat complex in structure. It consists in the first place of an autobiography which, however, only deals with his early life, ending with 1851, when he retired from the office of Warden of the College of St. Bartholomew's Hospital, and commenced private practice in London. Of this autobiography itself it may be said that it is written in Sir James Paget's own inimitable style. It shows us a studious observant boy growing into a hard-working, intensely conscientious, and truly scientific-minded man. In its description of the long early struggle against poverty and detraction it is characteristically fair to others and free from bitterness. It falls into seven chapters, and to each of these Mr. Stephen Paget has added a commentary giving additional facts. For the second part of the book Mr. Stephen Paget is alone responsible, and it is concerned with the busiest and most important years, most important because the preceding period had been a time of preparation. It records a steady increase of reputation and influence, only broken by serious illnesses which on more than one occasion threatened life. This part of the story is told largely by means of quotations from letters written by Sir James Paget to his brother, the late Sir George Paget, and other members of his family and to friends. Here and there are judicious quotations from published addresses. It is the story of a very full life, full of professional work and of public business; the actual number of hours worked seems almost incredible, sixteen hours a day, he tells us, for many months at a time year after year. The secret of the possibility of it lay in methodical methods of work early acquired and a happy serenity of temperament, which enabled him to approach each task of each day with a mind intent on doing what had to be done as thoroughly and as well as it could be done. This attitude of mind seems to have been his all through his life, but to have

[1] *Memoirs and Letters of Sir James Paget*, edited by Stephen Paget, one of his sons, with portraits and other illustrations. London, New York, and Bombay: Longmans, Green, and Co. 1901. (Large 8vo, pp. 446, 12s. 6d.).

grown stronger as he grew older, until he could meet the oncoming of extreme old age with the half humorous resignation of which instances are given in the last chapter of this book. His son well says, speaking of his many friendships with the best that was in England in his day, "He was very proud of his profession, and proud of his own hard work for it and in it; he never dreamed of being above it, or of going outside the limits of it; and its service was perfect freedom to him. This pride in his calling—this spirit of order, this hearty acceptance of a place—gave intensity and singleness of purpose to his life in society. He was what he was to his friends chiefly because of his love of his own profession and its work." The volume contains five portraits of Sir James Paget; the frontispiece is a photogravure reproduction of the portrait by Mr. George Richmond in 1867, but to those who knew Sir James Paget in later life the photograph of the bust made by Sir Edgar Boehm in 1885 will probably appear the most characteristic.

## FEES FOR CERTIFYING PAUPER LUNATICS.

OWING to the changes brought about by modern legislation and improved Poor-law administration, the number of able-bodied paupers has very greatly diminished, and at the present day Poor-law administration is mainly concerned with the care of children, of the aged, and of those diseased in body or mind. The functions of the Boards of Guardians are therefore increasingly such as bring them into close relation with the medical profession. Among local public authorities they are the principal employers of medical practitioners, and it is much to be regretted that in this capacity their interpretation of their responsibilities should not infrequently be governed by a narrow and parsimonious view of the public interest. One manifestation of this misplaced zeal for economy, on which we have several times had occasion to comment, is the tendency to reduce the fees paid for the important duty of lunacy certification below the rate ordinarily recognised. The latest instance brought under our notice is, we regret to say, that of a metropolitan union. It appears that at a meeting of the Southwark Guardians on September 19th, the Finance and General Purposes Committee reported that they had had under their consideration the question of the amount of the fees paid to their medical officers for the certification of lunatics, and recommended the Board to approach the various justices of the peace who are in the habit of dealing with the lunatics of the Union with a request that they should direct a fee of 10s. 6d., instead of a guinea, to be paid to the medical officers of the Union in future, as that sum seemed, in the opinion of the Committee, to be a reasonable amount for the services rendered, having regard to the fact that the medical officers are paid officials of the Union. The recommendation was unanimously adopted. We must confess ourselves entirely unable to perceive the force in this connection of the phrase in the Finance Committee's report "having regard to the fact that these officers are paid officials of the Union." The Committee, exercising a wise reserve, has preferred not to explain. Of course in reality the circumstance of the practitioner whom a magistrate chooses to call to his assistance in a given case being or not being a medical officer of the Union chargeable with the maintenance of the pauper concerned is purely accidental and irrelevant to the question of fee. The provisions of the law raise no presumption whatever in this respect as to the way in which the magistrate shall exercise his absolute discretion. The only point as to which a presumption may be held to exist is as to the employment wherever practicable of the usual medical attendant of the person to be examined. The Lunacy Act expressly provides in the case of a private patient that one of the two practitioners certifying shall wherever practicable be one having this obviously desirable qualification. All who are familiar with the difficulty and delicacy of diagnosis in these cases will recognise the wisdom of this requirement, and in the case of a pauper lunatic where only one practitioner certifies, the increased responsibility thereby involved enhances the value of a previous acquaintance with the patient. But apart from this point, the work entailed on a practitioner and the responsibility incurred by him in examining and certifying a supposed lunatic are precisely the same whether the patient be a pauper or a millionaire. His liberty is as dear to the one as to the other. Nor does the question whether the medical examiner may or may not chance to hold any public medical appointment affect the position legally or socially. The work of examining such cases cannot possibly be brought under any contract between the guardians and their medical officers, because no one concerned has any right to assume that these particular medical men will be called in in lunacy cases, and we are informed that in Southwark there is not any understanding that the medical officers of the Union shall be called in to certify as a rule. The resolution of the Southwark Guardians is absolutely *ultra vires*, and an improper attempt to interfere with the discretion of the magistrate especially conferred on him by law.

## THE "LACHNANTHES CURE" FOR CONSUMPTION.

IN the *Times* of August 20th Colonel Le Poer Trench made an attack on the General Medical Council, taking the case of Mr. Edwin W. Alabone as an example of abuse of the powers vested in the Council. He further took occasion to suggest a committee of inquiry into the value of the "lachnanthes cure" for consumption. The Colonel is perhaps more interested in the special case than in the wider question of the General Medical Council's alleged shortcomings. The correspondence which followed on the value of lachnanthes in the treatment of consumption is running the usual course of such discussions, and with the usual lack of any practical advantage to the public. A person of some position, but with no medical knowledge, is impressed by one or two instances where patients appear to have been cured by a particular kind of treatment, and thinks he has hit upon a great discovery which he benevolently wishes to make more widely known. So far, there is nothing in Colonel Trench's reference to the "lachnanthes treatment" to distinguish it from the hundreds of letters which are printed in the advertisements of proprietary medicines. But Colonel Trench suggests that this great means of cure has been deliberately suppressed by the medical profession, whose primary duty is to discover and use for the benefit of mankind the best means of combating disease. The charge was probably never intended to be pressed home; it is too absurd. It is introduced incidentally to show how far the profession may be carried by jealousy of the advocate or discoverer of a successful treatment for a disease which has baffled medical men for generations. The persecuted individual is deprived of his diploma for no fault of his own, and his treatment is ignored or "suppressed." The letter ends with an offer of a considerable sum towards investigating the mode of treatment which Mr. Alabone is said to have practised so successfully for many years. Most of the points in Colonel Trench's letter have been answered in the correspondence itself. Sir William Broadbent, who was challenged by Colonel Trench, said that he knew nothing of lachnanthes, and argued from this that it was not likely to be a drug of the value Colonel Trench believed it to possess. This lack of knowledge of the drug, which apparently is used by Mr. Alabone in all his cases, though it is not the only factor in his treatment, was derided by Mr. Alabone's son, and a homœopathic practitioner hastened to assure the public through the *Times* that his school at least knew and used lachnanthes. He pointed out that one of his *confrères* had extolled its efficacy in the treatment of con-

sumption, which called forth a letter from the gentleman in question to the effect that a more extended trial of the drug had caused him to modify his opinion of its value materially. A well-known authority on materia medica gave his evidence as to the inutility of lachnanthes, and quotations from various works showed that the plant lachnanthes tinctoria—red root or spirit weed—had a reputation amongst the Florida Indians, but that its pharmacological action had not been investigated, and that no active principle had been obtained from it. Neither Sir William Broadbent nor any other physician is expected to know all the drugs which have at various times been tested and found wanting. All who have any extended experience in the treatment of consumption know that successful cases could be adduced in demonstration of the efficacy of almost any drug in the *Pharmacopœia*. The treatment of consumption is not a question of any particular drug. In treating consumption, Mr. Alabone, we gather, invariably prescribes a drug—lachnanthes—which is little used by others. If he has been misrepresented he has only himself to blame, for he has certainly let it be understood that, for some years at least, he alone possessed the secret of the treatment he adopted.[1] There are two ways by which a medical man who believes he has found a successful mode of treatment can put it to an extensive trial. He can inform his colleagues in the medical profession of the details of his treatment through the medical societies and journals; there will rarely be any lack of investigators to test his discovery. On the other hand, he may keep the discovery to himself, and notify to the public by various means that he has an "entirely new" mode of treatment for which application must be made to himself. The profession considers the first of these methods the one most likely to benefit the public in the long run: the public often, however, hears more of a mode of treatment brought to its notice by the second device. The *Transactions* of the various medical societies and the medical journals are curiously wanting in any description of Mr. Alabone's "treatment" of consumption; though now, after it has been employed some thirty years, Mr. Alabone's son proposes in one of his letters shortly to submit its details to the medical journals. On the other hand, advertisements in non-medical journals, and a treatise on the cure of consumption "by an entirely new remedy" sent to individuals who made no application for copies, for years informed the public that Mr. Alabone was most successful in treating consumption. If there had been anything in Mr. Alabone's treatment which succeeded beyond other methods, the eagerness with which a cure for consumption has been sought, as well as the fortune which awaited the successful discoverer of such a cure, and all who employed it, would surely have made it impossible that it should have remained secret or little known for so many years. Colonel Le Poer Trench must not be disappointed if he finds that, after all, he has not had the good fortune to bring to light a discovery which would make the year famous in the history of medicine.

[1] "The question may naturally suggest itself to the reader, Why was not this discovery promulgated before?" *The Cure of Consumption (and other Diseases of the Chest) by an Entirely New Remedy.* By Edwin W. Alabone, M.D., M.R.C.S.E., F.R.M.S. Sixth edition. Thirty-fifth thousand. 1880, p. 76.

## THE TEACHING OF VACCINATION STATISTICS.

Dr. Bond, of Gloucester, has recently made a useful suggestion regarding the publication of small-pox statistics during the currency of an epidemic. He argues that the whole of the facts which are necessary to make the statistics valuable should be published and not mere statements of numbers of attacks, and that so many were vaccinated and so many died. Such crude information is not only useless but misleading. "What is needed," he says, "is a prompt publication of statistics showing not only the numbers of those who have been attacked and have died, in two groups of 'vaccinated' and 'unvaccinated,' respectively," but also "a statement of their ages, of the time that has elapsed since their vaccination, and of such evidence as to its efficiency as is afforded by the vaccination scars visible. These are facts which can, in most cases, be obtained without difficulty when the patient is admitted to the hospital; and without them any statistics are calculated to be more or less misleading." Dr. Bond holds that statistics in this form, published, say, weekly, would be very useful in confirming in the public mind belief in the value of vaccination.

## THE *REFEREE* AND THE BONESETTER.

The *Referee* is grievously exercised in its mind about the conduct of the medical practitioners of the Potteries who—at our bidding, as it seems to suppose—recently refused to have a bonesetter thrust upon them as a professional colleague. In this the writer sees trades-unionism, and the incarnation of that trades-unionism he finds in the British Medical Association. We gather that we are "a combination for the manufacture and sustenance of a monopoly," and we are further dealt with "faithfully," as preachers say, as follows: "If it is the object of the Medical Association to save the public from the quacksalver, one can only say that its purpose is not achieved. If its object is to preserve the dignity and consequence of an honourable caste, it succeeds in a very remarkable degree. I would rather believe that it does what it was meant to do than that it fails in its purpose. If it is meant to conserve the social and business status of its members, it fulfils its function to admiration." We must admit that our homilist tempers the bitterness of his criticisms with a certain amount of sweetness. Indeed, we rather wish that more people agreed with him that, in conserving the social and business status of members, the Association fulfils its function to admiration. As the writer lays special stress on the fact that "it is not necessary for a man to have taken a medical diploma before he can understand the trend of a movement of that kind," we presume that he believes himself to know what he is talking about. His politeness to the Association makes us all the more regret to have to say that he is mistaken in that belief. He evidently confuses the Association with the General Medical Council. We ought perhaps to consider it an honour to serve as a whipping post for that august body, but we should prefer that it suffered for its own sins. As the writer had got his ideas a little mixed, we think the most satisfactory clearing up of his meaning is to take the compliment as intended for the Association, and pass on the censure to the General Medical Council. Another slight confusion of mind on matters medical is exhibited by our contemparary, when, by way of showing the superiority of homœopathic practice in the treatment of pneumonia, it cites the fact that "Dr. Hughes Bennett treated 105 cases in the Edinburgh Infirmary without a single death in a period extending over sixteen years!" It is enough to make Hughes Bennett turn in his grave to be quoted as a disciple of Hahnemann. We really should advise the writer in the *Referee* to take the trouble to learn a little about the medical questions on which he seems to have undertaken to enlighten the public. Among other advantages to himself and his readers, this would save him from talking as if he thought a knowledge of veterinary surgery made a man capable of treating human beings. We are not concerned to deny that veterinary surgery might find a suitable sphere of application in many of the patrons of bonesetters; that is a matter for the patient to settle for himself. But to ask the medical profession to accept the casual successes of a bonesetter as illustrations of the possession of a divinely infused faculty of healing is another matter. The *Referee* says its bonesetting *protégé* is "prepared to submit himself to the severest tests." Let him then submit to a test, which should not be

difficult for a Fellow of the College of Veterinary Surgeons. Let him pass the examination required to obtain a medical diploma, and let him then practise regular surgery with the aid of the "certain faculty and experience which have enabled him to effect cures in some cases which had been dismissed as incurable," but without advertisement or mystery; and the medical profession will applaud his success.

## POOR LAW AND POVERTY.

Miss Twining has opportunely reprinted an article on Poor Law and Poverty which she contributed some time ago to the *Economic Review*. It raises several points which deserve the attention of Poor-law administrators, but we do not share Miss Twining's regret at the abolition of the old Poor Law Board. Experience of Poor-law work for many years past has been sufficient to convince us that the Local Government Board, whatever its faults, has done far better work than the old Board. Miss Twining is quite right as to the fact that there has been an enormous change, not only in the number but also in the character of workhouse inmates during the last half-century. The ratio of paupers is less than half what it was fifty years ago, and better still, the ratio of able-bodied paupers has fallen still more rapidly. Miss Twining appears to be afraid that the workhouse infirmaries are in danger of becoming too comfortable, but in thus arguing has she not lost sight of the fact that there has been an enormous rise in the standard of comforts in this country? Account must be taken of this, which is surely not a matter for regret. "New occasions teach new duties," and the sooner we drop the use of the term workhouse, which is synonymous with prison in America, the better, for "workhouse" it certainly is not to-day. Miss Twining appears to object to the admission to Poor-law infirmaries of cases able to pay. This is a large question, but it is contended on the other hand that it is to the real economic interest of the State to cure the working man as quickly as possible, and some classes of cases are no doubt cured more quickly in an institution than in their own homes. In regard to the proposed system of State training for nurses, it must be pointed out that nurses ought not to be sent to unions where no proper provision is made for their comfort. Experience proves that the good Boards which provide adequate accommodation have no trouble. In nursing, as in everything else, a good article must be paid for, and not only must proper remuneration be given, but also good rooms, food, and especially cooking. Miss Twining speaks of the metropolis being, in the matter of nursing, in advance of all other places. We can assure Miss Twining that she is mistaken in this statement. Although much has been done in many metropolitan districts, the metropolis has to-day, as it had forty years ago, much to learn from the provinces. Has Miss Twining forgotten that it was Liverpool that reformed the nursing and Chorlton the buildings of workhouse hospitals?

## A GRATEFUL PATIENT IN ANCIENT EGYPT.

The grateful patient sometimes adopts awkward methods of displaying the fine sentiment which he feels towards his physician. The most common of these is to publish his thanks in the advertisement columns of a local newspaper; sometimes—but this is fortunately rare—his gratitude finds expression in verse of the kind which neither gods, men, nor booksellers can tolerate. We have known a lady novelist make her doctor the hero of a story in which he was quite unintentionally made to figure as a ridiculous charlatan; we have known a book of a highly controversial character dedicated to a practitioner who must have found the honour rather an embarrassing one; we have seen the counterfeit presentment of a surgeon offered to the public gaze on the stage, or to the public eye in illustrated papers, by way of return for services rendered. An influential patient has been known to show his gratitude by thrusting his physician into a position where he was as Saul among the prophets—and very high and mighty prophets too, who made themselves as unpleasant as they could to the intruder. Dr. Jonathan Wright, in a paper on the Ancient History of the Anatomy of Catarrh, recently published in the *New York Medical Journal*, gives what at first sight looks like an early instance of an illustrious patient encumbering a modest professor of the art of healing with his gratitude. It is recorded that about the year B.C. 3500 King Sahura, of the fifth Egyptian dynasty, was grateful to his physician Sekhet'enanch, who had "made his nostrils well." It does not at present concern us to inquire whether this phrase is to be taken to show that rhinology was one of the very numerous specialities of Egyptian medicine, or whether it is a figurative way of expressing that the royal patient had been restored to health. In any case the monarch appears to have testified his sense of the skill of his physician by having the fact inscribed on a tablet which also bore portraits of Sekhet'enanch and his wife. The tablet was found in the king's tomb. But a gratitude which hid itself away in the darkness of a tomb could have been of doubtful benefit to the practitioner whose professional victory it recorded. It might have been expected that the tablet would have been placed on the wall of the physician's house, like the portraits of *prime donne* and royal and "serene" personages which form such suggestive decorations of modern consulting rooms. Where it was placed we do not know, but it is certain that if it was not displayed in a prominent position this was not the fault of the physician. He not only asked the king that his skill should be celebrated in the particular way that has been described, but doubtless from the philanthropic motive that other sufferers should know where to betake themselves for relief, he suggested that the tablet should be placed in the anteroom of the king's palace, where it might be seen of all men. In this instance, therefore, the gratitude of the patient was of that peculiarly royal character which grants a favour when it is asked for. Sekhet'enanch was evidently a man acquainted with courts who had grasped the great truth that the parable of the importunate widow has a special significance for those who serve princes and potentates.

## SCANDINAVIAN MEDICINE.

The editorial staff of the *Nordiskt Medicinskt Arkiv* are to be congratulated on the new departure they have this year made; this valuable periodical now appears with all its articles in German, French, or English, instead of in Norwegian. The *Arkiv* will, as in the past, contain contributions from medical men in the four northern lands (Denmark, Finland, Norway, and Sweden) but it will now be possible for the whole medical world to have easy access to the many important papers appearing in those countries: for, in addition to original articles in one or other of the three widely-spoken languages above mentioned, there will be abstracts in German of all the articles published in the other medical journals of Scandinavia. It cannot be doubted that scientific medicine and surgery, both in the four northern lands and the rest of the world, will thus be the gainers, for it must be confessed that medical men in this country are rare who read fluently either Swedish or Norwegian, while many of the discoveries of Scandinavian workers have in the past been overlooked through their inaccessibility. Another innovation of less striking advantage is the publication of the *Arkiv* in two quarterly parts, one devoted to surgery and the other to medicine. Both departments are under the general editorship of the venerable Professor Axel Key;

but the surgical part is edited specially by Professor Bloch (Copenhagen), Professor J. Berg (Stockholm), Dr. A. Krogius, (Helsingfors), and Dr. J. Nicolaysen (Christiania), while the medical part is managed by Professor Runeberg (Helsingfors), Professor Santesson (Stockholm), Dr. Israel-Rosenthal (Copenhagen), and Dr. Peter F. Holst (Christiania). These eight sub-editors join in a word of acknowledgment and thanks to Professor Axel Key who has for thirty-two years edited the *Arkiv*, and they tender their sympathy to him on account of the serious illness through which he has been passing; everyone will cordially agree with them in their wish thus expressed: "Möge das *Arkiv*, seinen Key'schen Traditionen getreu, fortleben un die Entwickelung unserer medicinischen Wissenschaft kräftig fördern." (May the *Arkiv* live long, true to the tradition of Key, and powerfully further the growth of our medical science.) In the first two parts of the remodelled journal now in our hands there are interesting articles in profusion, twelve in all. It is perhaps a significant fact that of these eleven are in German and one in French! It may be safely concluded that ere long all will be in German. Incidentally it may be noted that the author is not expected to write in one of the three languages (German, French, or English) in which the articles are to appear; two medical men have undertaken the work of translation from Norwegian and Spanish into German. Among the more valuable articles is one on Bright's Disease by Professor Runeberg, and one on Renal Resection in Acute Pyelonephritis by Dr. Lennander of Upsala; but there are also interesting papers on Cæsarean section by means of the fundal incision by Josephson, on the parasite of malaria by Gram, and on epidemic cerebro-spinal meningitis in Norway by Carl Looft. The abstracts from other northern medical journals are good and commendably brief. For all British practitioners who may wish to know what their brethren on the other side of the German Ocean are thinking and doing the *Nordiskt Mediciniskt Arkiv* will in its new form be indispensable, provided they can read German.

## SYPHILIS AND NERVOUS DISORDERS AMONG THE ARABS.

At a recent meeting of the Société de Neurologie of Paris, M. Scherb, of Algiers, gave an account of his observations on syphilis and nervous disorders in the Arab, made during three years' residence in Algiers. Tertiary syphilitic symptoms, both cutaneous and osseous, were more frequent among the Arabs than among the Europeans [of Algiers]. The rarity of cerebral syphilitic accidents and of parasyphilitic manifestations (tabes and general paralysis) is attributed to the fact that syphilis is a disease of comparatively recent importation among the Arabs of Algiers, and that its stress falls with peculiar vehemence in the tertiary period on the cutaneous and osseous structures. It may be added that the people are essentially lazy, taxing their brain and nervous system but little, and that the organ which is thus least taxed is also the least exposed to the injurious effect of syphilis. The absence of a special predisposition produced by syphilitic or other stresses, however, is not one likely to persist, for with the increase of civilisation and of alcoholism the Arab is preparing in himself a neuropathic soil for the future development of both tabes and general paralysis. Scherb records some special cases of interest. The first was that of an Arab woman, a prostitute, given to slight and continued excesses in tobacco and alcohol. She developed hysterical attacks as cerebral syphilis supervened. In a second case of tertiary syphilis of the nervous system the subject was a Turk whose father had been insane, and who himself was addicted to alcohol and haschich. The third case was a workman given to drink. The syphilitic lesions in this instance involved the nose, roof of the mouth, labial commissure, and several of the spinal cord segments (cephalic segments). It is pointed out that other indigenous Semitic races (Jews) present both tabes and general paralysis not infrequently, and they undoubtedly present the neuropathic basis for the development of those affections. In the discussion following the above communication Professor Raymond pointed out that among the Abyssinians syphilis was not uncommon, but it did not produce nervous diseases secondarily.

## ST. PATRICK'S HOSPITAL AND DEAN SWIFT.

We have received pamphlets relating to St. Patrick's Hospital, Dublin, and its comparatively new country premises known as the St. Edmundsbury Branch. This hospital, which was founded and endowed in 1745 by Dean Swift, was the first institution established in Ireland for the treatment of the insane, and for many years was the only institution of its kind in that country. There is good evidence that the witty Dean of St. Patrick had long entertained the idea of founding such an institution before it began to take practical shape. In 1731 he wrote the well-known "Verses on His Own Death" which contained the stanza

> He gave the little wealth he had
> To build a house for fools, or mad,
> And show'd by one satiric touch
> No nation wanted it so much.

In 1732 he was engaged in correspondence with Sir William Fownes, Lord Mayor of Dublin, regarding the wretched state of pauper lunatics in Ireland, for which no provision was then made by Government. In a letter written by Sir William Fownes to him occurs the following passage: "I own to you I was for some time averse to our having a public Bedlam, apprehending we should be overloaded with numbers under the name of mad; nay, I was apprehensive in case we would soon be like that in England, wives and husbands trying who could first get the other to Bedlam." In his will, Dean Swift demised practically the whole of his property, amounting to £11,000, to his executors, to purchase land in any province in Ireland, except Connaught, with the profits of which "to erect and endow an hospital large enough for the reception of as many idiots and lunatics as the income of the said lands, etc., shall be able to maintain," and if sufficient curable cases could not readily be found, "incurables may be taken into the said hospital to supply such deficiency." In 1746, the year after Swift's death, his executors became incorporated as the first body of governors of St. Patrick's Hospital. The structural alterations in the hospital have been so numerous, and the standard of treatment has been kept on so high a level, that, while retaining its historic associations, it has been in every way modernised, and ranks with the best institutions of its kind. Of 90 patients lately in residence 20 were wholly and 23 were in part maintained at the expense of the institution, and 47 contributed a sum varying from two to three guineas a week for their maintenance.

## PREMATURE BURIAL.

Some discussion has recently taken place in the columns of the *Liverpool Courier* on the time-honoured subject of premature burial. It originated in two somewhat alarming letters suggesting the continued possibility of this shocking occurrence. These elicited a closely-reasoned reply from Dr. F. W. Lowndes, which should go far to allay any fears which may have arisen in the matter. He points out that the occurrence of death is not a matter of opinion but of fact, and that where the end is not sudden, but has been expected and carefully watched for, it is virtually inconceivable that all the persons who come into contact with the patient both before and after dissolution should be unanimously mistaken. This is especially the case in Great Britain, where burial does not follow death nearly so speedily as in warm countries; in the vast majority of

instances rigor mortis has passed off and decomposition begun before the body is consigned to the coffin. In the matter of sudden deaths premature burial is hardly, if at all, more likely. Where the end has been violent or unnatural, or the cause undiscovered, a coroner's inquest ought to be, and usually is, held, and a hurried interment is out of the question. There remain the cases, dear to the alarmist, in which death is simulated by a swoon or trance. These are, in medical experience, of the utmost rarity; prolonged trances are indeed not very uncommon, but their subjects do not convey the idea of death to any intelligent person. It is to all intents and purposes impossible for a competent medical man to err in respect of the fact of death, and the question of premature burial is hence one that can ordinarily have no practical interest. In the Wiertz Museum at Brussels, however, there is an awful suggestion of the only conceivable manner in which it might come about. A poor wretch is depicted in the act of endeavouring to force open the coffin in which he has been immured under the suspicion of having died from cholera. In times of popular consternation and alarm panic-stricken and uneducated onlookers might perpetrate so horrible an act; the only safeguard is to insist on permission to inter being obtainable only after the supposed corpse has been submitted to the trained and balanced judgment of a medical man.

## SMALL-POX IN NORFOLK.

We are indebted to Dr. C. E. Gooderson Bateman, M.O.H. Walsingham District of the Walsingham Union, for the information that about the middle of August a boy about 10 years of age went to Thursford with his mother on a visit from Portsmouth Street, Lincoln's Inn Fields, London, and soon after developed confluent small-pox. He had never been vaccinated, and died on the twelfth day of the disease. Soon after his mother and aunt, who had neither of them been vaccinated as children, contracted confluent small-pox, but are now on the road to recovery, which, Dr. Bateman adds, "is in my opinion in a great measure due to the fact that I vaccinated them in the incubation stage as soon as the boy's case was diagnosed. The other three individuals who lived in the cottage had been vaccinated in their youth, and I revaccinated them, and they are still enjoying good health. Thursford is a small village with a railway station situated between Fakenham and Holt. The cottage where the case occurred luckily stands in an isolated spot, and an isolation hospital has been erected, and two trained nurses were at once secured. A great many people have been revaccinated, and up to the present time no further case has occurred. There are some 'conscientious objectors' in the district, so that I cannot rely on having all the inhabitants vaccinated."

## FRESH WATER.

At a recent meeting of the South Shields Town Council Dr. Gibbon drew the attention of the Health Committee to a simple precaution against disease which parents and guardians generally neglect to take. He pointed out that many persons are accustomed to carry water into living rooms, and allow it to stand there uncovered for considerable periods of time, instead of drawing it fresh on each occasion of use. He considers the danger a grave one, and advocates the circulation of a handbill to householders warning them against the risk. It is desirable to educate the general public on the now scientifically recognised powers for evil which dust may possess. We know that it sometimes contains the specific organisms of tuberculosis, zymotic enteritis, and probably enteric fever, and it may fairly be argued that other specific organisms (such as those of scarlet fever and diphtheria) may also be conveyed in dust. If a proper appreciation of these facts could be impressed on the public the very desirable practice of keeping the surfaces of water, milk, butter, meat, etc., carefully protected from the access of dust would doubtless be generally followed. The precaution is an easy and inexpensive one to observe, and we agree with Dr. Gibbon that it is very desirable that the general public should be educated up to its importance.

## LONDON SCHOOL OF TROPICAL MEDICINE.

The opening address of the third winter session of the London School of Tropical Medicine will be delivered by Lord Brassey, on Wednesday, October 16th, at 4 P.M. His lordship will make a formal announcement of the fact that the Committee of Management has accepted the offer made by the Hon. Sir Francis Lovell, C.M.G., lately Surgeon-General of Trinidad, formerly Chief Medical Officer of Mauritius, who has served in tropical colonies in the East and West Indies and West Africa for the last thirty years, to undertake a mission to tropical countries in furtherance of the objects of the School. Sir Francis will start early in October, proceeding, in the first instance, to India, Burmah, Ceylon, Straits Settlements, China, and Japan, and later to the Australian Colonies, Canada, and the West Indies. In the different places which he visits he will bring to the notice of influential and wealthy residents and employers of labour, the aims and objects of the London School of Tropical Medicine, and the advantages they have already derived from its work: he will point out to them individually the marked success with which, up to the present time, the school has met the objects for which it was founded; and prove to them that the time has arrived when the accommodation is too small for wants; that the institution has extended almost beyond expectation; and endeavour to his utmost to obtain their support. Sir Francis is authorised by the Committee of Management to receive, and issue receipts for, donations and subscriptions for the London School of Tropical Medicine.

## THE PHILIPPINE INSULAR BOARD OF HEALTH.

The Philippine Commission has among its labours in other directions not neglected attention to public health. Manila has in a sanitary sense undergone a new birth, and the continuance of the good work already done is provided for, not only for the chief city, but for the islands generally, by the enactment of a law constituting an Insular Board of Health, having full supervision of sanitary matters and vital statistics. The Board is further authorised to disseminate information on sanitary subjects among the people, to draft and recommend suitable laws, including those governing admission to the practice of medicine; it has also authority to prosecute all violators of the sanitary regulations. The Board is composed of the Commissioner of Public Health, who is chairman, a sanitary engineer, a chief health inspector, the superintendent of the Government laboratories (*ex-officio*), and a secretary; all, except the sanitary engineer and the superintendent of laboratories, must be members of the medical profession. The chief surgeons of the Army and Marine Hospital Service, and the President and Vice-President of the Association of Physicians and Pharmacists of the Philippine Islands are also honorary members, but without the right to vote. Another enactment provides for Government biological and chemical laboratories and institutions for the supply of vaccine and serum, to act as adjuncts to the health authorities, as well as for such other purposes—agricultural, economic, etc., as may be required in the development of the country.

## A BERI-BERI EXPEDITION.

We understand that the Christmas Islands Phosphate Company, Billiter Street, E.C., has offered the sum of

£1,000 to the London School of Tropical Medicine towards the expenses of a scientific expedition to the Christmas Islands for the investigation of beri-beri. Sir John Murray has offered to contribute £100 for the same purpose, and there is reason to believe that the Colonial Office will also make a grant in aid of the expedition. The Christmas Islands Phosphate Company has offered a passage to members of the expedition on board a steamer which will leave London on September 30th and Cardiff on October 4th, calling at Port Said fourteen days later. The Committee of the School has not yet finally selected those who are to take part in the expedition.

## THE STUDY OF THE DISEASES OF PREGNANCY.

Dr. Freeland Barbour has given to the Royal Maternity Hospital of Edinburgh a sum of money for the endowment of a bed for the study of the diseases of pregnancy. The money has been accepted by the authorities of the hospital, and a small committee, which includes Dr. Barbour and Dr. Halliday Croom among its members, has been formed to make arrangements for giving effect to the scheme. This may, we hope, be regarded as a first step towards the establishment of a "prematernity institute" on the lines tentatively traced in the British Medical Journal not long ago.

## UNIVERSITY EDUCATION IN IRELAND.

The Royal Commission on University Education in Ireland met for the first time on September 19th in the buildings of the Royal University of Ireland. The members of the Commission are: Lord Robertson (Chairman), Viscount Ridley, the Most Rev. Dr. Healy, Lord Justice Madden, Sir Richard Jebb, Professor Butcher, Professor Ewing, Professor Rhys, Professor J. Lorrain Smith, Dr. Starkie, Mr. Wilfred Ward, and the Rev. R. H. F. Dickey. The work of the Commission is to inquire into the present condition of the higher, general, and technical education available in Ireland outside Trinity College, Dublin, and to report as to what reforms, if any, are desirable in order to render that education adequate to the needs of the Irish people. The Commission is now engaged in taking evidence, among those examined being the Roman Catholic Bishop of Limerick, the President of Queen's College, Belfast, and the President of University College, Dublin.

## THE INTRODUCTION OF MALARIA.

Dr. S. W. Abbott, Secretary to the Massachusetts State Board of Health, is, according to *American Medicine*, reported to have said that during the past ten years every case of malaria investigated in that State had been traced to the presence in the neighbourhood of Italian labourers. The disease has prevailed for some time in Concord and at Billerica, and the Board states that in both cases the evidence tends to show that it was introduced into these towns by the labourers engaged in digging up the streets when constructing the waterworks and sewerage systems.

Dr. Isambard Owen has definitely declined to accept the Principalship of the South Wales and Monmouthshire University College, and the Council has resolved to advertise the appointment, which carries a salary of £1,000 a year.

The new pathological laboratory of the University of Oxford will be opened on Saturday, October 12th, at 3.30 P.M. Sir William Church, Bart., President of the Royal College of Physicians of London, and Dr. Sims Woodhead, Professor of Pathology in the University of Cambridge, are among those who are expected to take part in the proceedings.

## SMALL-POX IN LONDON.

Although there has been no great increase in the number of cases of small-pox notified, the present position of the metropolis is recognised to be sufficiently serious to cause the Local Government Board to draw the attention of borough councils and Boards of Guardians to the measures which can be taken to check the further spread of the disease. The duplication of circulars is an illustration of the division of authority which exists in London with regard to small-pox, a circumstance which greatly increases the difficulty of dealing with the disease. The most disquieting fact in recent returns is the circumstance that cases are occurring in fresh districts.

### Vaccination of School Children.

By a majority of 19 to 15 the London School Board has passed a resolution which ought to have been carried unanimously. The resolution is:

> That facilities be given to the public vaccination officers of the metropolis to enter the Board Schools for the purpose of examining the arms of children and for the purpose of advising the parents to allow their children to be vaccinated.

This determination was come to at a special meeting held on Monday last in consequence of a communication from the Local Government Board with reference to small-pox in St. Pancras and Marylebone. In their communication the Local Government Board pointed out that considerable public risk would be run if children attending Board schools were not at once protected by vaccination. The matter is one to which we called special attention recently.[1] There is good reason to believe that a great part of the difference between the extent of the small-pox epidemics at Gloucester and Leicester was due to the fact that in the former the disease found entrance into one or more elementary schools, while in the latter the schools did not act as centres of infection. No doubt severity of type was also a factor in the infectivity of small-pox in Gloucester, but in London, so far as present indications go, there is reason to expect a severe and not a mild form of small-pox if the epidemic spreads. The London School Board is a public representative body with serious duties to perform, and the fact is ominous that so large a minority of its members supported a motion refusing to accede to an important request made by that department of the central Government which is charged with the protection of the public health. Study of the methods of controlling small-pox epidemics is no part of the duty of a School Board, and its meetings are not the proper place in which to vent amateur views as to how infection is spread and how it can be prevented. It is so far satisfactory that even a small majority of the Board had a sufficient sense of their relation to the matter to support the above motion by Mr. Brooke-Hitchin, and if the procedure indicated is now carried out energetically and thoroughly, the result will be that many a child at present open to small-pox infection will be saved both from attack and death. Unfortunately the effect of the resolution is likely to be seriously diminished by a further resolution, which was carried by 17 to 16, directing a circular to be issued to parents asking them whether they have any objection to the examination of their children, and directing that in case of such objection in any particular case such examination shall not take place. Attached to the circular letter as issued to parents is the following form of declaration for the signature of the parent or guardian:

> I object to my child (or children) being examined by the vaccination officer.

The whole incident is a further indication of the sad want of co-ordination in the means at the disposal of the metropolis for the prevention of variola. The care of the public health is in the hands of the new municipal councils; the provision of hospital accommodation belongs to the Asylums Board; vaccination is taken charge of—or neglected—by Boards of Guardians; the School Board can do as it pleases with such a request as the Local Government Board has lately made; and the London County Council, which should have a supervising and directing interest in everything affecting the physical welfare of the metropolis, is practic-

[1] British Medical Journal, September 14th, p. 727.

ally functionless in so urgent a matter. In the midst of this administrative chaos every medical officer of health and public vaccinator and private practitioner must make it his duty to see that he at least does all that is open to him to assist in preventing a serious epidemic.

### CIRCULARS OF THE LOCAL GOVERNMENT BOARD.

The Local Government Board has issued two circular letters to the Metropolitan Borough Councils and Boards of Guardians respectively, pointing out the steps which should be taken in view of the fact that small-pox has recently undergone some increase in London, and that its extension has involved a considerable number of metropolitan sanitary districts. The circumstance, it is pointed out, is the more noteworthy since at this season of the year small-pox in London is, as a rule, at its lowest ebb. The Board states that it attaches very great importance to the most energetic measures being taken in connection with the cases which are occurring, with the view of preventing the spread of infection, and requests the Councils to specially instruct the medical officer of health in every case which may be notified to him or which may come to his knowledge, immediately to visit the house where the disease has broken out, and at the earliest possible moment to take such measures as may be necessary to secure as far as practicable the isolation of the patient, the vaccination of any persons who may have been exposed to infection, and the disinfection of the premises, and any further action which the circumstances will admit of for the purpose of checking the extension of the disease.

The circular to the Boards of Guardians requests that they should instruct their vaccination officers immediately to take such steps as may be necessary to deal effectively with the arrears of unvaccinated children which may have accumulated in the union or parish, and to ensure that in all further cases of default the measures required by the Vaccination Order, 1898, are promptly taken. The vaccination officers should be instructed in the course of the visits which they, in the execution of the duty above referred to, have to make, to be more than usually diligent in ascertaining, from all available sources of information, whether there are residing in the several localities any other children than those whose names are in their birth lists who are not vaccinated, and they should lose no time in taking the requisite steps to obtain as far as possible the vaccination of such children.

The circular further points out that small-pox, during the present outbreak, has as yet severely affected only a few localities, but the experience of former outbreaks shows that it may speedily be imported into others, until it becomes generally diffused. The extent of mischief, however, which it may do in any locality into which it is imported will, so far as the guardians are concerned, mainly depend (1) on the extent to which the inhabitants of the locality are already protected by vaccination, and (as regards adolescents and adults) by revaccination; and (2) on the promptitude of the measures taken, immediately upon the importation of the disease, to secure the vaccination or revaccination of any who may be unprotected.

The vaccination officer, therefore, on learning of such importation, should immediately make inquiries (if need be from house to house) as to vaccination throughout the locality; and he should, besides his express duty of seeing that all children illegally unvaccinated are vaccinated as soon as possible, impress on parents of unvaccinated children the extreme danger, under the circumstances, of delaying the vaccination, and represent, as far as he has opportunity, to adolescents and adults who have not been successfully revaccinated within the last ten years the importance of revaccination. The Board considers it desirable that arrangements should be made with the medical officers of health and district medical officers whereby the vaccination officer may be informed of any outbreak of small-pox which may occur within their respective districts, and that medical practitioners generally should be invited to give him similar information.

The Board adds that it is prepared to give immediate attention to any proposal which the guardians may make with the view of providing the assistance which in some districts will be required by the public vaccinators and vaccination officers.

A memorandum accompanying the circular letters sets out in detail the steps which can be taken by the borough councils, the guardians, and their officers. It contains the following observations with reference to the precautions which should be taken in dealing with "contacts," and as to the disinfection of houses in which cases have occurred:

After the removal or death of a patient suffering from small-pox, it is desirable that the remaining inmates of the house, and other persons who are known to have come into contact with infection, should be kept under observation during a period of not less than 14 days, in order that, in the event of any of them contracting the disease, it may be recognised at an early stage, and thus prompt measures may be taken for preventing its further spread.

All houses or rooms and things infected with small-pox should be disinfected under skilled direction, and with as little day as possible after the removal, convalescence, or death of the patient, and for this provision is made in Sections LIX to LXV of the Public Health (London) Act, 1891. To secure the disinfection of houses or rooms being properly performed it will be desirable that it should, in as many cases as possible, be done by the servants of the sanitary authority, and to the satisfaction of the medical officer of health. Under Section LX (4) of that Act, temporary shelter or house accommodation is to be provided for the members of any family in which infectious disease has appeared, and who are compelled to leave their dwellings for the purpose of enabling such dwellings to be disinfected by the sanitary authority. The authority is also required by Section LIX to provide proper premises, with the requisite apparatus and attendance for disinfection (preferably by steam) of articles (whether bedding, clothing, or other) which have become infected by any dangerous infectious disease. Often it will be better, instead of disinfecting infected articles (such as bedding and clothing), to destroy them; and the sanitary authority has power, under Sections LX and LXI of the Public Health (London) Act, 1891, to do this, and to make compensation for the articles destroyed.

### ST. PANCRAS.

At the meeting of the St. Pancras Borough Council on September 25th, Dr. Sykes, medical officer of health, presented a report, in which he stated that the hope expressed on August 28th, that the back of the outbreak of small-pox had been broken, had not been fulfilled. This he attributed to two causes: (1) the non-recognition of mild cases, due either to failure to seek medical advice or to a confusion of such cases with chicken-pox, and (2) the large number of persons unprotected by vaccination. In some schools a fourth to a third part of the children had been found unvaccinated. The first two cases of small-pox in the borough were two sisters, but their illness had been preceded, about the middle of July, by the indisposition of another sister, said to have suffered from chicken-pox. Owing to the failure of the managers of public elementary schools to carry out the suggestion he had made to them to exclude children producing no evidence of protection by efficient vaccination, he now advised the sanitary authority to close for specified times such schools as were invaded or surrounded by small-pox. The report referred to the difficulty of dealing with "contacts" who might be the means of spreading the disease in an early stage of their own attack. There were two remedies available to prevent this: one was immediate vaccination or revaccination, and the other was a quarantine of at least 14 days. It had been found effectual to quarantine all the persons in an infected house for at least 14 days, and only to release them upon being vaccinated. There was no legal power to take that course, but in the face of the epidemic prevalence of small-pox it was a matter for serious consideration.

The Chairman of the Public Health Committee (the Rev. C. E. Walters) in the moving the adoption of the report recommended: (*a*) That it be suggested to the guardians to instruct their officers dealing with vaccination, or their assistants, to pay particular attention to suspicious rashes and illnesses, and where no medical practitioner was in attendance to report such to a medical practitioner of experience in small-pox, with a request that he should forthwith visit and certify if necessary; and (*b*) that in each ward a medical man be appointed as medical referee to be called in by the medical attendant in doubtful cases of small-pox or suspicious eruption or symptoms, and to be paid a small fee per case.

The two recommendations were carried, as was also a motion to add chicken-pox to the list of notifiable diseases for a period of six months. A resolution requiring all officials whose duties might bring them into contact with small-pox to be protected by vaccination or revaccination was carried by 42 votes against 13 after a characteristic antivaccination speech by Mr. Bernard Shaw, to which Dr. Paramore made a spirited reply. It was announced that three primary schools had been closed.

## SMALL-POX IN PARIS.

In view of the prevalence of small-pox in London, and the suspicion, if not the probability, that the infection has been derived from Paris, the following communication sent to us by our Paris correspondent, bringing the statistics down to the week ending September 14th, will be of interest:

Small-pox has been more or less prevalent in Paris for the last eighteen months. The accompanying table will show the number of fresh cases notified and the deaths due to this disease in each week from the week beginning June 9th, 1900, to the week ending September 14th, 1901.

| Week. | Fresh Cases. | Deaths. | Week. | Fresh Cases. | Deaths. |
|---|---|---|---|---|---|
| 1900. | | | 1901. | | |
| 24 | 16 | — | 4 | 84 | 12 |
| 25 | 39 | 1 | 5 | 78 | 11 |
| 26 | 14 | 4 | 6 | 72 | 9 |
| 27 | 19 | 4 | 7 | (?) | 8 |
| 28 | 11 | 3 | 8 | 51 | 3 |
| 29 | 30 | 2 | 9 | 63 | 9 |
| 30 | 17 | 2 | 10 | 71 | 7 |
| 31 | 16 | 1 | 11 | 94 | 11 |
| 32 | 16 | 2 | 12 | 83 | 6 |
| 33 | 12 | 3 | 13 | 70 | 12 |
| 34 | 14 | — | 14 | 56 | 10 |
| 35 | 15 | 2 | 15 | 92 | 7 |
| 36 | 41 | 5 | 16 | 92 | 11 |
| 37 | 33 | 12 | 17 | 64 | 20 |
| 38 | 46 | 3 | 18 | 72 | 5 |
| 39 | 38 | 6 | 19 | 96 | 6 |
| 40 | 17 | 7 | 20 | 102 | 15 |
| 41 | 60 | 8 | 21 | 57 | 15 |
| 42 | 57 | 11 | 22 | 75 | 10 |
| 43 | 60 | 9 | 23 | 145 | 24 |
| 44 | 90 | 14 | 24 | 63 | 20 |
| 45 | 75 | 11 | 25 | 64 | 11 |
| 46 | 68 | 15 | 26 | 88 | 10 |
| 47 | 74 | 8 | 27 | 64 | 10 |
| 48 | 109 | 17 | 28 | 60 | 5 |
| 49 | 132 | 14 | 29 | 51 | 9 |
| 50 | 104 | 9 | 30 | 33 | 3 |
| 51 | 105 | 8 | 31 | 57 | 8 |
| 52 | 58 | 14 | 32 | 58 | 14 |
| | | | 33 | 42 | 5 |
| 1901. | | | 34 | 22 | 9 |
| 1 | 86 | 6 | 35 | 25 | 3 |
| 2 | 60 | 11 | 36 | 23 | 7 |
| 3 | 65 | 8 | 37 | 16 | 2 |

It will be seen that there have been two epidemic rises during this period, the first culminating in the forty-ninth week of 1900, when 132 fresh cases were notified and 14 deaths occurred, the second culminating in the twenty-third week of the present year, when 145 fresh cases were notified and 24 deaths occurred. So large a number of deaths from small-pox has not been registered in Paris for nineteen years.

During this lengthy period of sixty-six weeks small-pox has caused 543 deaths; of these, 350 occurred in the first thirty-seven weeks of the present year.

The prevalence of the disease seems at last to be diminishing, as the figures for the last four weeks tend to show. On June 30th 138 patients—64 males, 74 females—were under treatment in the Paris hospitals; the number has steadily decreased, till on September 14th only 38 patients—8 males and 30 females—remained under treatment.

A Permanent International Committee for the Prevention of Tuberculosis.—As an outcome of the Latin American Congress, held at Santiago de Chile in January, 1901, a Permanent International Committee for the Prevention of Tuberculosis has been formed in South America. The President is Dr. Emilio R. Coni, representing the Argentine Republic; the Secretary, Dr. Lucio Cordova, representing Chile. Besides the two countries just mentioned, Mexico, Brazil, Uruguay, Paraguay, Peru, Sucre, Ecuador, Colombia, Caracas, Nicaragua, Guatemala, San Salvador, Costa Rica, and Cuba are represented on the Committee. Among the objects of the Committee are the formation of leagues against tuberculosis in every one of the Latin American States; the formation of insurance societies against the disease; the promotion of the compulsory notification of declared tuberculosis; the creation of sanatoria; the prevention of tuberculosis in animals; the systematic testing of cattle with tuberculin and the establishment of model dairies to supply pasteurised, sterilised, and humanised milk.

## TUBERCULOSIS AND THE POOR LAW.

Among the many important recent contributions to the study of means for the prevention of tuberculosis, not a few of which were communicated to the British Congress of Tuberculosis, the address by Sir John Burdon-Sanderson on Our Duty to the Consumptive Bread-Earner, published in the British Medical Journal of July 6th, 1901, stands out pre-eminent owing to its comprehensiveness, practical character, and thorough grasp of a difficult situation. Financial problems must necessarily arise when we come to consider any scheme which seeks to diminish the ravages of tuberculosis, to ameliorate the condition of its victims, and haply in the future even to exterminate the disease.

While it is a matter for congratulation that our knowledge of how consumption is caused, of its ultimate nature, and of its prophylaxis has been so greatly increased within the last twenty years, yet it must be admitted that practical questions have arisen which are still far from solution. How can we turn to the best account all that science has taught us, and how can we deal effectively with the afflicted persons of the poorer classes in the different stages of their disease? From what source are funds to be drawn? Should the work be undertaken by imperial authority, by county councils and municipalities, or by Boards of Guardians? Lastly, would it be possible to institute some such system of compulsory insurance as exists in Germany, or is the only solution in this country to levy a special poor rate?

This last-named alternative has been prominently brought before the public by a letter in the *Times* of September 13th from that veteran in all sanitary work, Sir John Simon, K.C.B., in which he suggests "that we should charge our rates with the expense of treating tuberculous disease without letting the receipt of this assistance be considered a self-pauperising act, or become any sort of disqualification to those who may avail themselves of it"; and in support of this proposition he adds "that in proportion as the rate fulfilled its purpose of diminishing tuberculous disease, it would very greatly tend to lessen other charges on the rates."

Sir John Simon takes a very broad view of Poor-law work in the concluding portions of his letter, and it is satisfactory to know that the tendency of local government administration of late years has been in the direction indicated in his admirable letter. This is particularly noticeable—

1. In the treatment of the "children actually or practically parentless" whom the State are training up not in barracks but in cottage homes on the system which has been so persistently urged in past years by the British Medical Journal.

2. In the improved condition of the aged and otherwise impotent poor; and

3. In regard to the "suffering sick who need assistance from the public rates," and who now receive better treatment in the State hospitals of England. It may fairly be claimed for the British Medical Journal that it contributed not a little to secure for the sick poor the much-needed improvement in hospital life and nursing which are now characteristic of many of our Poor-law infirmaries, but which have only been secured by years of persistent effort on the part of earnest workers, many of whom were not connected with Poor-law administration.

In order to compare his requirements with the suggestions of Sir John Simon, it may be well to recall two of the practical points in the address by Sir John Burdon-Sanderson, points which he has since enforced in a recent letter to the *Times*. 1. That the provision of sanatoria is an indispensable part of the measures necessary for the diminution of tuberculosis. 2. That to carry out this requirement throughout England would involve an enormous initial outlay and a considerable annual expenditure. Sir John Simon accepts both propositions, but holding that "the time is evidently close at hand when reconsideration of the Poor Law must be undertaken, and when we may hope that some readjustment of its financial burdens will be made," he would throw the burden on the poor rates, and allow the administration of the sanatoria to follow that of the Poor Law. Remembering Sir John Simon's immense experience, and his great success as an administrator, it may appear presumptuous to differ from him, but the question must be asked how far is the machinery of the Poor Law

suitable for dealing with the case of the tuberculous breadearner? It would be unfair to fail to recognise that the spirit of Poor-law administration is changed, and that the change has affected not only the central authority in London, but those by whom the relief is actually administered—that is to say, the guardians. So far have some Boards of Guardians moved in this direction, that in the northern districts of England resolutions have recently been passed to the effect that patients suffering from tuberculous disease should not be treated in Poor-law infirmaries, and sanatoria have been started for the reception of Poor-law cases by Boards in Liverpool, Leeds, and Bradford among other places. A still further indication of the same spirit is afforded by the following resolution passed by some northern Boards recently:

That the Local Government Board be asked to urge on the Government the desirability of introducing legislation to amend the law which prevents persons who are or have been in receipt of medical relief in Poor-law infirmaries from exercising their rights as voters in parliamentary and local elections, other than at elections of members of Boards of Guardians, and that a copy of this resolution be sent to other Boards of Guardians and to the Poor-law Unions Association, in order that concerted effort may be made to effect the desired amendment of the law.

It would help to the appreciation of the exact situation and the part which the Poor Law might play if we could now ascertain, (1) The proportion of consumptives who die in Poor-law infirmaries: (2) what proportions such deaths bear to the general mortality from phthisis; and (3) the stage of the disease in which they are generally admitted.

The Local Government Board could easily obtain this information: but in the meanwhile some instructive statistics given by Dr. Dolan of Halifax in a paper presented at the recent Congress of Tuberculosis on the Incidence of Phthisis in the Halifax Poor-law Union may be quoted. The statistics show the mortality and admissions from pulmonary phthisis in the Union Infirmary and the general mortality from the disease in the town during the ten years ending 1900.

*Pulmonary Phthisis in Halifax, 1891-1900.*

| | Borough Deaths. | Admissions. | Union Infirmary Deaths. | |
|---|---|---|---|---|
| | | | Pulmonary. | Laryngeal. |
| 1891 ... ... ... | 168 | 13 | 8 | — |
| 1892 ... ... ... | 134 | 22 | 6 | 1 |
| 1893 ... ... ... | 135 | 23 | 12 | 4 |
| 1894 ... ... ... | 141 | 31 | 24 | 1 |
| 1895 ... ... ... | 185 | 36 | 13 | 2 |
| 1896 ... ... ... | 161 | 38 | — | 1 |
| 1897 ... ... ... | 124 | 18 | 24 | — |
| 1898 ... ... ... | 139 | 32 | 23 | 4 |
| 1899 ... ... ... | 138 | 19 | 24 | 1 |
| 1900 ... ... ... | 152 | 17 | 15 | — |
| Total ... ... | 1,457 | 249 | 149 | 14 |
| | | | 163 | |

Only 31 of the cases admitted into the Union Infirmary were women.

It would not be safe to apply the deductions from the statistics of a single town to the whole country, but if in other unions the proportion of cases admitted into union infirmaries bears the same relation to the mortality in the municipal areas—and there is no reason to believe that the conditions of Halifax are peculiar in this respect—then it appears to be clearly the duty of municipalities to take action in regard to the provision of sanatoria for their areas.

Sir John Simon refers to the measures taken for the prevention of infectious disease, notably against small-pox, for a precedent. Forty years ago cases of zymotic disease were treated in Poor-law institutions, but the patients who were thus isolated for the benefit of the community, quite as much as for their own, were thereby disfranchised. Some thirty years ago the duty of dealing with infectious disease was transferred to municipalities; and, looking to the results achieved in the large towns, especially to the improvements in hospital provision, nursing and ambulance arrangements, the question arises whether it would not be wiser in place of attempting a reconstruction of the Poor Law and its administration, to hand over to municipalities the duty of dealing with pulmonary tuberculosis, which is now recognised to be an infectious disease. One difficulty would then at any rate be removed, for such a transference would carry with it the preservation of electoral rights.

While it may thankfully be recognised that many Boards of Guardians are influenced by intelligent members anxious to grapple thoroughly with all hospital problems, it cannot be forgotten that reports are constantly occurring proving the incompetence of many Boards, and the narrow spirit in which they interpret their duties.

While we must welcome local efforts of individual Boards which are dealing with the problems of tuberculosis, yet looking at this question from a broad standpoint, it is clear that it is only by a great national effort that we can effectively secure for the consumptive breadearner those conditions which will restore him to health, and prevent him becoming a burden on the community.

The two authorities capable of undertaking this expensive but necessary work are the county councils and the municipal authorities. The county councils are already moving in the matter, and their sanatoria would cover certain areas whilst the municipalities could supply the extra accommodation necessary. The guardians of the poor, while the Poor Law remains unreformed, would be able to secure for their consumptive patients the necessary beds on a fixed scale, and would send their patients to the sanatoria as they now send their lunatics to the county asylums. In order to produce a workable scheme it will be necessary to ascertain the total number of consumptives cases in England requiring treatment, and in the allocation of cases to follow the already existing divisions in the counties, county boroughs, and boroughs.

## GERMAN PUBLIC HEALTH ASSOCIATION.

ROSTOCK, SEPTEMBER 18TH TO 21ST, 1901.

[*From Our Special Correspondent.*]

AGE and diet are generally two concurrent characteristics of the older German towns, and in this way enable the Association to choose for its meeting places cities both interesting to its members and, it is hoped, impressionable by good influences. Last year it was Treves, the most ancient city, and certainly one of the dirtiest, of the German Empire: this year it has been Rostock, a university town dating back to 1160 A.D. Whilst externally a clean little place, Rostock has no proper sewerage system, defective and odoriferous earth closets being general; its streets are very badly paved, and many of the houses are insanitary in construction and situation. Yet it is a well-to-do town, and there are no very poor. The water supply is fair but insufficient; it has been bacteriologically examined daily for the last six years, and the number of bacteria is always below 100. The death-rate has been comparatively high for an affluent population, but this is explained by the existence of the University clinic, which attracts serious cases from a distance.

The University is a small one—about 450 students. In its very early days it had more than this number, but it has been through various phases of misfortune, opposition, and competition.

In getting up a *Festschrift* for their meetings, German associations are liberally assisted by the towns in which they meet, for it is the municipality which generally pays for this as well as for some of the festivities. On this occasion members were presented with a neat octavo volume of over 400 pages, bound in cloth, containing a historical description of the various points of interest in the town, an account of the University, the schools, the hospitals, and the sanitary and public health arrangements and buildings.

The subjects for discussion are fixed by the Committee, and one or two prominent experts are entrusted with the preparation of an address, supposed to last three-quarters of an hour but not infrequently extending considerably beyond that time, on one of each of these subjects. Discussion is not really encouraged because the address is supposed to be mainly historical and exhaustively instructive but not controversial. Obviously it is not always possible to avoid difference of opinion even in the addresses of two referees on the same subject, and in these cases the discussion often becomes length and irrelevant. The subjects chosen for this year were:

I. Local health committees in their relation to State and municipality, and to the official activity of medical officers.
II. The hygiene of dairy products.
III. The progress during the last decennium in the warming and ventilation of houses and public buildings (from one "central" source of heat).
IV. The *rôle* of the hygenically-important metals (aluminium, lead, copper, nickel, tin, and zinc) in the household and foodstuff trades.
V. Paving materials and methods, including their influence on health.

### State and Municipal Hygiene.

The first subject has not much interest for English readers, inasmuch as local health committees are of comparatively old-standing and activity in England, although but newly created this year in Prussia. It is true that in former times in some places sanitary committees existed, but they found more favour with the chief of the police, under whom they were, if they did not than if they did meet and recommend. Consequently, the Secretary of State has intimated that these committees are to meet at least once a month. Apparently, they are only advisory and not administrative. It was maintained in the discussion that public health is more a matter of State than of municipal interest; in fact, that it is often opposed to municipal interest so far as it concerns the pockets of the ratepayers, and, consequently, these committees and the medical officer should have a State rather than a municipal character. It is curious that these theoretical considerations should have already found abundant practical confirmation in this country. On one point all were agreed, namely, that the recommendations of the medical officer should nearly always be accepted, and that grave responsibility would attach to the committee or mayor who refused to receive and act on them. It should be remembered, too, that this was the opinion of laymen and not of medical men only.

### The Hygiene of Milk Products.

The question of the hygiene of milk products was discussed by Professor Loeffler, who devoted some time to an exposition of Koch's views on the non-transmissibility of bovine tuberculosis—views which he holds to be correct. The other points which he emphasised were, that milk should be (*a*) of normal composition, (*b*) free from noxious (poisonous or infectious) products, (*c*) free from preservatives. The first and last conditions were easily observed and ascertained by the aid of the senses and simple chemical tests. The second it was practically impossible to control, since, except for tubercle, no means existed of testing for infectious or poisonous products (for example, foot and mouth disease, scarlatina, etc., or the ingestion of poisonous plants) in the milk. Nor was it possible, considering the number of small cowkeepers and retail dealers, to exercise an efficient inspection, although it was common knowledge that in the smaller cowsheds and dairies cleanliness and other hygienic conditions were most often neglected. The best guarantee for the supply of good milk existed where the cowkeepers formed an association, because it was then in the interest of all to keep the milk as clean and pure as possible, and they could afford to have efficient veterinary and general inspection and to cool and pasteurise the milk. He highly recommended Casse's process, by which the milk was subsequently cooled by the addition of blocks of frozen milk. Professor Loeffler considered pasteurisation essential in the present condition of affairs; absolute sterilisation, although it altered the taste of the milk, was to be preferred. In any case, although all dairies and cowsheds ought to be under medical and veterinary supervision, it was advisable for the consumer to heat the milk up to 85° C. before use, immediately after delivery into the house.

In the ensuing discussion Dr. Müller (Erfurt) mentioned two cases in which butchers, after slaughtering tuberculous cows, had developed cutaneous tuberculosis. Professor C. Fraenkel (Halle) spoke energetically in favour of the registration of all cowkeepers, a proceeding which some speakers had thought an invasion of personal liberty, and for the establishment of such hygienic conditions as to render pasteurisation unnecessary.

### Warming and Ventilation.

The address on heating and ventilation was highly technical and scarcely touched hygienic conditions, yet it met with much opposition. The subject is one of increasing interest to Great Britain, especially to London with its increasing number of flats. The *Referent* was in favour of low pressure steam for heating. He did not touch on the systems which combine warming and ventilation, nor did any of the subsequent speakers.

### Metallic Poisoning.

Professor Lehmann's address on Metals in the Household and in Foodstuffs was listened to with great attention and interest, and it met with no opposition in the discussion. Lead is the most important metal from this point of view, and many interesting cases of lead poisoning were related. Amongst others, one in which the only discoverable source of lead was the coloured border of an official receipt, of which the clerk concerned had to cut a large number, another from cotton dyed with lead chromate, and others by the use of badly-glazed pottery. The last-named class of case occurred not among the makers but the users, and was explained by the fact that the cheap pottery concerned was made in the country with economy of fuel and insufficient heat, so that the glaze was too easily soluble. Professor Lehmann and others had examined a large number of glazed wares, and found that lead was too easily dissolved out from a large percentage. He was glad to be able to say that there were no cases on record of poisoning from children's leaden toys (soldiers, cooking apparatus, etc.). The toxicity of copper, zinc, and tin was small, and had usually been much exaggerated. There were no proved cases of chronic poisoning due to these metals in foods; the recorded acute cases were probably ptomaine poisoning due to decomposed food. Silver, aluminium, iron, and nickel were practically non-poisonous. But in spite of their harmlessness from a toxicological point of view, every endeavour should be made—from the standpoint of hygiene—to prevent their addition to foodstuffs, and the same attitude should be taken towards the metals as towards food preservatives.

### Street Noises.

The notoriously bad condition of the paving of the Rostock streets lent additional interest to the addresses on this subject. One of the *Referents* quoted Schopenhauer on the subject: "A town with beautiful monuments and beautiful buildings, but badly-paved streets, seems to me like a woman with costly jewellery and dirty under linen." Hygiene and municipal government were not quite in agreement on the question of road materials. The latter required the most lasting, the former the more sanitary. Asphalt was to be preferred, if it could be employed throughout a town; otherwise macadam, but not wood, which was dirty and expensive. The second *Referent* treated the subject more from the hygienic standpoint, his chief points being that the street should give off as little dust and be as quiet as possible. Cleaning of the streets should always be preceded by watering; they should not be swept dry.

Professor Fraenkel spoke emphatically on the importance of quiet in those streets in which mental rather than manual labour was carried on, for example, streets where doctors lived, had the right to special pavement. An old by-law said that there might be no smithy in a street where a professor lived. Nowadays, in spite of the greater necessity for such by-laws and regulations, they were diminished in severity, and street noises allowed an hitherto unparallaled freedom.

This discussion brought the meeting to a close, Professor Fraenkel's remarks having been received with much enthusiasm and approval.

## CONTRACT MEDICAL PRACTICE.

### Wanstead.

A member of the Association residing at Wanstead informs us that the post of Surgeon to the Wanstead Foresters is at present vacant, and certain of the local practitioners have been asked to offer themselves as candidates; they have agreed to accept the invitation only on condition that the payment be increased from 4s. to 5s. per annum for each member. The Foresters have declined to accede to this request, stating that 4s. is the payment made by all the Forester clubs in the eastern division of London, and have decided to look further afield for a surgeon.

These facts are here published for the information of any

medical practitioner resident in the neighouring district who may be applied to. It is, we believe, universally recognised, even by many members of the Friendly Societies themselves, that the remuneration now paid by the majority of societies is inadequate, but owing to the attitude assumed by the Friendly Societies the medical profession have no alternative but to do as the practitioners in Wanstead are doing, namely, to act in unison and to inform the Society that the rate of pay considered by them to be the lowest which can be accepted. Under these circumstances it seems hardly necessary to point out to members of the profession resident beyond the district that in their own interest and in the interests of the profession at large this matter should be left to be settled locally, and that they should refrain from playing into the hands of the Society by allowing themselves to be nominated for the vacant post.

## AN AMBULANCE SLEIGH.

IN Fleet-Surgeon KIRKER'S communication on the Treatment of the Wounded in Naval Action in the Navy, Army, and Ambulance Section at Cheltenham (BRITISH MEDICAL JOURNAL, August 24th, p. 453), he referred to his Ambulance

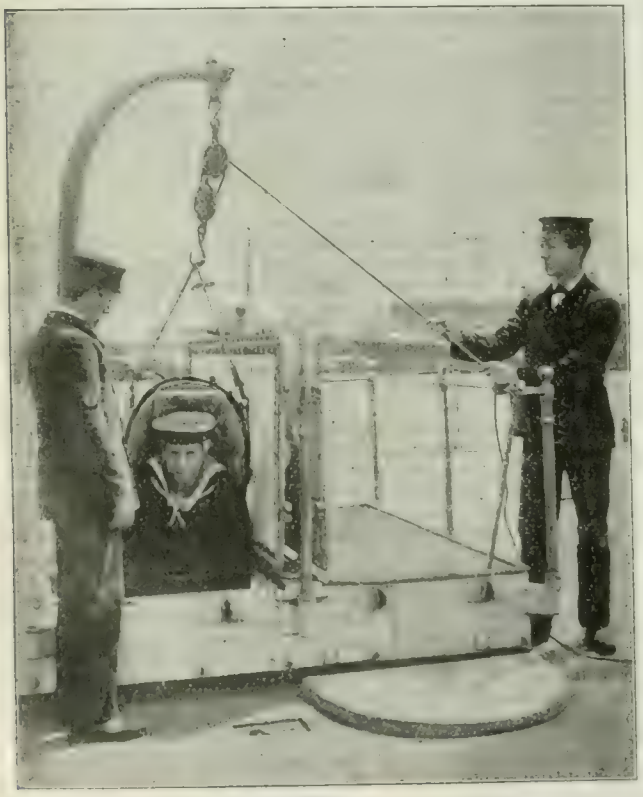


Fig. 1.

Sleigh, designed in 1886, but not adopted by the Naval Medical Department on account of its size and weight. We are now enabled to give illustrations of this ambulance sleigh, which would appear to demonstrate its suitability for all the necessities of the transport of wounded or helpless persons, more especially on board present-day men-of war with fighting tops, narrow passages, and hatchways, and ammunition hoists. It will be seen that it can be slung or suspended, carried as an ordinary stretcher, wheeled barrow fashion on castors at the ends of the carrying handles which are hinged so as to fall back under either end of the cot to permit of its being trundled along the deck or passage ways, slid on its sleigh attachments down ladders or other inclines, or suspended from the head end perpendicularly, for lowering down narrow hatchways, etc., the occupant being



Fig. 2.



Fig. 3.

securely held in the cot by means of the perineal support and three broad belts strapped across body, thighs, and legs respectively. The floor of the cot also slopes down from the head to the perineal support, rises from there for the thighs and falls again from the knees to the feet. The original objection to its weight and size has been to some extent surmounted; it now weighs 35 lbs., measuring 7 feet 2 inches long when carried as a stretcher, and 6 feet 2 inches when the handles are folded back; its breadth is 21 inches at the head, 18 inches at the foot; the weight includes the cushion or mattress lining of cot. Possibly its weight might be further reduced by the use of aluminium in place of steel or iron in the construction of the cot frame, etc., combined with bamboo or rattan work. As stated by the inventor an almost similar ambulance has been adopted in the French and Chilian navies, and it would appear well adapted to many circumstances in civil life, as in mines, collieries, etc.

The illustrations explain the adaptability of this ambulance sleigh for various requirements.

# NOVA ET VETERA.

## DISEASES RESULTING FROM THE CONTACT OF ALIEN RACES.

By Basil Thomson,

Late H.M. Special Commissioner to Tonga.

If it is not possible for epidemic diseases to break out among isolated island races from mere contact with alien and healthy visitors, there is a mass of evidence to be explained away. Throughout the Pacific Islands the natives assert that dysentery and influenza were unknown before the arrival of Europeans. Writing of Tanna, in the New Hebrides, fifty years ago, Dr. Turner said: "Coughs, influenza, dysentery, and some skin diseases the Tannese attribute to their intercourse with white men, and call them 'foreign things.' When a person is said to be ill, the next question is, 'What is the matter? Is it Nahac (witchcraft), or a foreign thing?' We thought at first that it was prejudice and fault-finding, but the reply of the more honest and thoughtful of the natives invariably was, 'It is quite true; formerly here people never died until they were old, but nowadays there is no end of this influenza, coughing, and death.'"[1]

Turner himself, with every member of his mission, was obliged to flee from Tanna because an epidemic of dysentery was ascribed to his presence. A worse fate befell the mission family of Samoans living on the neighbouring island of Futuna for the same reason; others were killed at the Isle of Pines and at Niué, and the teachers at Aneitum were threatened with death.

Of Samoa Turner wrote: "Influenza is a new disease to the natives. They say that the first attack of it ever known was during the Aana war in 1830, just as the missionaries Williams and Barth, with Tahitian teachers, first reached their shores. The natives at once traced the disease to the foreigners and the new religion; the same opinion, spread through these seas, and especially among the islands of the New Hebrides, has proved a serious hindrance to the labours of missionaries and native teachers."

At Niué the natives, whose demeanour earned for them from Cook the designation of "Savage Islanders," persistently repelled strangers who attempted to land among them. "The endeavours we used to bring them to a parley were to no purpose; for they came with the ferocity of wild boars and threw their darts."[2] Turner, who visited Niué in 1848 and 1859, thus explains their hostility: "Natives of other islands who drifted there in distress, whether from Tonga, Samoa, or elsewhere, were invariably killed. Any of their own people who went away in a ship and came back were killed; and all this was occasioned by dread of disease. For years after they began to venture out to our ships they would not immediately use anything obtained, but hung it up in the bush in quarantine for weeks." He had great difficulty in landing a teacher. A native of Niué, whom he had trained in Samoa, could not be left, as armed crowds rushed upon him to kill him. They tried to send back his canoe and chest to the mission ship, saying that the foreign wood would cause disease among them. During his memorable voyage in 1830 John Williams had recruited two Niué lads, whom he subsequently brought back to the island: but, influenza breaking out a short time after their return, they were accused of bringing it from Tahiti. One of them was killed, together with his father, and the other escaped on board a passing whaler.

In 1846 an epidemic broke out in the Island of Lifu, in the Loyalty Group. The teachers who had just arrived were accused of having brought it. "Kill them," said their enemies, "and there will be an end to the sickness."

In New Caledonia, as elsewhere, the natives believe white men to be spirits of the dead, and to bring sickness, and they gave this as a reason for killing them.

The Tahitians accused the Spaniards of bringing a disease like influenza during the visit of a Peruvian ship in 1774. The Tongans have a tradition of a destructive epidemic breaking out shortly after Cook's first visit in 1773. The only symptom now recorded was a severe headache resulting in death after a few days illness, the native name for the disease, Ngangau, being the word used for headache. It does not appear, however, that the Tongans associated this visitation with the arrival of Cook's ships.

The crew of the brig *Chatham*, wrecked on Penrhyn Island in 1853, were the first Europeans to land on the island. About three months after their arrival there broke out among the natives an epidemic accompanied by high fever and intense headache, generally ending fatally. Mr. Rosa, one of the crew, has assured the writer that no one in the ship was suffering from the disease when they arrived, but that afterwards some of them caught it in a mild form from the natives. Besides this fever an epidemic of sores had broken out among the natives shortly after the wreck, but this the Europeans attributed to the unaccustomed animal food which they had obtained from the ship. Speeches were made against the visitors:

> Why had they come to their land? They had never any sickness like this before we came, and if we remained we should be bringing them other complaints to carry them off. Better for us to leave. They would furnish us with canoes, and we must return to our own land.[3]

The natives of the Mortlock Atolls (lat. 4 45 S., long. 156.30 E.) when an epidemic was prevalent on shore, disinfected or disenchanted the crew of the barquantine *Lord of the Isles* while parleying with them at sea. One man in each canoe had a handful of ashes done up in leaves, which he scattered in the air when closing the interview. A similar incident took place in October, 1888, when the present writer, in company with Sir William Macgregor, was exploring Normanby Island, in the d'Entrecasteaux Group. The natives of a bay on the north side of the island would not consent to hold intercourse with the party until an old man had chewed a scented bark and spat it over each of the visitors and his own following.

The people of St. Kilda charge visitors from Scotland with introducing disease, and call their ailment the "stranger's cold" or "boat cough."

But perhaps the most mysterious, as well as the most disastrous, of these epidemics is the "great lila" (wasting sickness) which devastated Fiji at the beginning of the nineteenth century. In 1803—we are able to fix the date from an allusion in the native poem to a comet which must have been that of 1803—an unknown vessel was wrecked upon the Argo Reef, near Oneata Island. The crew were killed, and probably eaten also, at Oneata. "Shortly after their death," wrote John Hunt in 1847, "a dreadful distemper scourged the natives. It appears from the description given of it to have been a very acute dysentery, or a form of cholera. Its progress through the group was fearfully rapid and destructive; in many places it was with the greatest difficulty that persons could be found to bury the dead. Those who were seized died in the most excruciating agonies." The native poem thus describes it:

> The great sickness sits aloft,
> Their voices sound hoarsely,
> They fall and lie helpless and pitiable.
> They fall prone; they fall with the sap still in them.
> Lethargy has seized upon the chiefs,
> How terrible is this sickness!
> We do not live; we do not die,
> Our bodies ache, our heads ache.
> The strangling cord brings death to many,
> Hark to the creak of the strangling cord![4]
> The spirits flow away like running water.

[1] *Nineteen Years in Polynesia.* By the Rev. G. Turner. London: 1861.
[2] *Cook's Voyages*, Book III, chap. i (London. 1779).
[3] *Wild Life in the Pacific Islands.* By H. E. Lamont.
[4] Alluding to the custom of strangling incurables.

Among those who died of the disease was Banuve, the great chief of Bau. It ran the length and breadth of the group, and was certainly not less destructive than the epidemic of measles in 1876, in which 40,000, one-third of the population, perished. "Before white men came," say the oldest of the natives, "no one died of acute diseases: the people who died were emaciated by lingering illnesses. Coughs came with white men, and so did dysentery. This we have always heard from our elders."

So far we have been considering epidemics introduced by visitors, who, if not in perfect health, were at least not known to be ailing, for it is to be noticed that the New Hebrides missionaries dismissed the accusations of the natives as superstitions. Of direct infection the instances are numberless. In 1861 the Rev. G. Gordon and his wife were murdered in Eromanga in consequence of an outbreak of measles introduced by a trading vessel, and, besides the famous epidemic of measles in Fiji, whooping-cough, influenza, and measles have been introduced by infected persons into most of the islands with terrible results. The point is whether the virus of dysentery can be carried in a ship in which there is no person actually suffering from the disease. To those who may contend that tropical dysentery is a malarial disease, and therefore unlikely to be conveyed across a wide stretch of ocean, the case of Mauritius may be cited. Malarial fever was there unknown until the year 1867, when an epidemic of that nature ravaged the island to such an extent that the price of quinine rose from 21s. to £40 the ounce. Malarial fever has remained endemic there ever since. The exact nature of the dysentery virus is uncertain, but it is probably bacterial; indeed a bacterium has quite recently been isolated; and we have evidence enough both in Fiji and Futuna (New Hebrides)—where in February, 1893, a labour ship from Queensland, landed a child suffering from dysentery and caused the death of nearly one-third of the population—to show that dysentery is highly contagious.

It must not be understood that the natives, when they accuse Europeans of introducing disease among them, believe in the theory of infection or contagion. With them all disease is caused by supernatural agency—by the *mana*, or occult influence of another person, exercised either maliciously or unconsciously. Their theory and ours come to much the same in the end, for they both inspire the same preventive measures, though the native methods of quarantine are rougher and readier than ours, and certainly more effective. The *mana* theory, moreover, fits in well with the present belief of the Fijians, gathered from conversation with foolish and thoughtless Europeans, that the white race always brings death to Europeans, a belief that in their own interests they should have kept to themselves, even if it were not conclusively disproved by the cases of India and South Africa. When the Commission on the native decrease was sitting in 1893 I received from a Fijian the following letter, accompanied by a rude sketch of a Fijian grasping a Bible, and retreating before a white man in the habit of a clergyman, from whose body were drawn a number of radiations to indicate the exhalations of his pernicious *mana*.

[Translation.]

"THE DECREASE OF THE NATIVES.

"I wish, Sir, to make a few remarks. There has been much discussion on this matter. There appears to me to be only one reason for the decrease of the natives; it is the white gentlemen who live among us. It is this:

"1. They blight us. They are blighting us, the natives, and we are withering away. It is not possible for a chief to live with his inferiors, to wear the same clothes, to use the same mat, or the same pillow. In a few days the neck or the belly of the lowborn man will swell up, and he will die; his chief has blighted him. It is so with the foreign gentleman, and us, the natives. If we live near them for long, we natives will be completely swept away.

"2. They are great, and we are insignificant. A plant cannot grow under a great ivi tree, for the great tree overshadows it, and the grass or plant beneath withers away. It is thus with the gentlemen from the great lands who live among us. This is the reason why we Fijians are decreasing. 'Let us move gently; we stand in the glare of the light' (Fijian proverb). Let us practise religion.

"JOSEVA SOKOVANGONE."

FEMALE MEDICAL STUDENTS AT VIENNA.—According to the *Lectionscatalog* of the University of Vienna for 1901-2 just issued, the total number of female students registered in the books of the University in the last summer semester was 119. Of these 20 belonged to the medical faculty.

## GENERAL MEDICAL COUNCIL.

### THE APPROACHING ELECTION OF DIRECT REPRESENTATIVES.

WE have received from a Local Executive Committee formed at Highbury with the objects of promoting the candidature of Dr. Glover for re-election as a direct representative on the General Medical Council a notice that a meeting in support of the objects of the Committee will be held at the residence of Dr. White, 1, Highbury Place, N., on Friday next, October 4th, at 8.15 P.M. Dr. Glover will deliver an address, and Sir Thomas Barlow and Dr. Danford Thomas will be amongst those who will take part in the proceedings. The Chairman of the Committee is Dr. Henry J. Stokes, and the Honorary Secretaries are Dr. Alexander Reid, 29, Canonbury Park, N., and Dr. David Keele, 14, Highbury Grove.

## LITERARY NOTES.

THE first section of Dr. J. W. Ballantyne's *Manual of Antenatal Pathology and Hygiene*, will, we understand, be out before Christmas. The author has been at work on it for nearly three years. The book is to be in two sections of over 400 pages each. The first deals with the relations of antenatal pathology to the rest of medicine, and with the diseases and hygiene of the fœtus; the second with the pathology of the embryo (monstrosities) and germ (heredity, etc.). The work, which is to be published by Messrs. William Green and Sons, will be illustrated with coloured plates.

Messrs. Rebman announce the publication of the first three volumes of a *System of Physiological Therapeutics*, a practical exposition of the methods, other than drug-giving, useful in the treatment of the sick and in the prevention of disease by English, American, French, and German authors, and edited by Solomon Solis-Cohen, A.M., M.D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic. The complete *System* will consist of eleven medium octavo volumes, the first three of which are now ready, namely: Vols. I and II, devoted to *Electrotherapy*, and Vol. III, comprising Book I, of a treatise on *Climatology, Health Resorts, and Mineral Springs*. The remaining eight volumes of the series will be published at short intervals. Other announcements of the same firm are: Vol. I of a new work on the *Practice of Medicine*, by Dr. Henry Walter Syers; a new edition of Dr. J. C. Thresh's *Water and Water Supplies*; a translation of Professor Dr. R. Greef's *Guide to the Microscopic Examination of the Eye*, by Dr. Hugh Walker, of Glasgow; Mr. E. Stanmore Bishop's new work on *Uterine Fibromyomata, their Pathology, Diagnosis and Treatment*; the third edition of *The Pocket Formulary for the Treatment of Diseases in Children*, by Dr. L. Freyberger; a work by Drs. Hy. Leffmann and W. Beam on *Select Methods in Food Analysis*; Mr. Macleod Yearsley's translation of Professor A. Broca's monograph on the *Surgical Anatomy and Operative Surgery of the Middle Ear*: the first volume of Professor Hemmetter's new work on *Diseases of the Intestines*: an entirely new edition, rewritten and much enlarged, of Dr. Louis Starr's *Diseases of the Digestive Organs in Children*, and *A Manual of Bacteriology*, by Dr. H. M. Williams of Buffalo.

Dr. Achilles Rose, of New York, whose name is associated with the subject of the adaptation of modern Greek to general scientific expression, has been selected to be one of the philological editors of the sixth edition of Roth's *Klinische Terminologie*. The editor-in-chief of this work is Professor Vierordt of the University of Tübingen, and Professor Heinrich Zimmerer, a distinguished Greek scholar, has charge of the philological portion.

Professor J. Hirschberg, of Berlin, who is not less distinguished as a medical archæologist than as an ophthalmic surgeon, has prepared a catalogue of his library, or at least of that part of it which relates to ophthalmology and optics, and to the history of medicine. The vast scope of the work may be gathered from the fact that it fills no fewer than 434 pages, and that its contents are arranged systematically in no fewer than 606 paragraphs.

M. Clermont-Ganneau the other day exhibited to the Paris Académie des Inscriptions et Belles Lettres a photograph of a gold plate, square in shape, and worked in *repoussé*, which had

just been sent to him by M. Edmond Durighello. It was found near Saida (Sidon), on the site of an ancient Phœnician temple believed to have been consecrated to the god Echmoun. From this temple are supposed to have come certain Phœnician inscriptions, as to the value of which there is still a certain amount of mystery. On the plate are represented three persons, whom M. Clermont-Ganneau identifies as (1) the god of medicine, Æsculapius, seen standing full face, his head girt with a band and surrounded by a circular nimbus; he holds in his right hand the staff, around which is twined the classic serpent; (2) the goddess Hygeia, also shown standing and presented full face, with a nimbus around her head, letting a serpent drink out of a cup; (3) sitting or crouching between the two principal divinities, the little Telesphorus, who, according to the current opinion, presided over convalescence; he is represented in his customary aspect of a young boy, wrapt in a mantle, and with a pointed hood on his head. From the description it may be gathered that the work belongs entirely to Greek art, and has nothing Phœnician about it. If its source were certain, the only connection that could be made out would be the fact that it was found on the site of the temple of Echmoun, a Phœnician god, supposed to have been at some time assimilated to Æsculapius. After showing that the name of that god, though apparently Greek, has no rational meaning, M. Salomon Reinach came to the conclusion that the usual form must be the alteration of a barbarous name, which the Greeks wished to make euphonious. Telesphorus was probably a Thracian divinity who found his way into Greece only after the time of the successors of Alexander the Great, with a costume appropriate to cold climates which artistic convention has given him.

We have received a copy of the first number of the *Journal of Medical Research*, which is a continuation of the *Journal* of the Boston Society of Medical Sciences, intended to cover a wider field, and to ensure the "prompt publication of original investigations." Containing nearly 300 pages of excellent material from papers read at the annual meeting of the American Association of Pathologists and Bacteriologists, and profusely illustrated with photomicrographs, we are informed that succeeding numbers of at least 50 pages will be published as material accumulates, and if the standard of excellence reached in this pioneer number is maintained, we can safely predict for this journal a very prominent position among literature of its kind. In the space at our disposal we can only very briefly touch upon a few of the twenty-seven articles. Dr. Williams's contribution upon the Frequency of Trichinosis in the United States has already been noticed. Dr. Warthin's article upon the Hæmolymph Glands in the Prevertebral Retroperitoneal Tissues is full of suggestive thought for future investigation, and we entirely endorse his conclusions that there is in this direction a vast field of hitherto almost unexplored ground. He is of opinion that they are concerned chiefly in hæmolysis and leucocyte formation, and he points out close relationships in function to the spleen and bone marrow. Dr. Loeb in Transplantation of Tumours gives the result of his own valuable experiments, though, as he himself allows, it is impossible to prove definitely whether these results were due to the transplantation of the original cells or to causative micro-organisms transplanted at the same time. In his article upon Cell Proliferation Dr. Levin discusses Ribberts's "tissue tension" theory, and mentions several experiments of his own in which cells were placed in most favourable positions to proliferate without, except in one instance, producing new growth. Attention is drawn to Ehrlich's theory of the formation of antitoxin as supporting the assumption that an outside irritant may produce a bioplastic cell process, and he concludes that "the moment inciting certain cells to proliferation is one which acts as a direct stimulus on the cells." Dr. Lartigan discusses the variations in virulence of B. tuberculosis, and concludes that the acuteness of the reaction may be taken as an index of virulence. Dr. Richardson contributes an able article entitled Bacteriolysis and Typhoid Immunity, with much experimental evidence, opening up a wide field for research in this and other infections. Among many conclusions, from deductions based upon Ehrlich's theory and his own observations, he points to the theoretical value of normal serum in the treatment of typhoid. Dr. Pearce, in his remarks on Chronic Passive Congestion, demonstrates the increase of elastic tissue as chiefly affecting the finer structures of the lung, and thus accounts for the increased density of lung tissue in these cases. To the editor of the journal, Dr. Ernst, we offer our congratulations upon the appearance of so manifest an addition to medical literature.

The following new editions are announced by Messrs. J. and A. Churchill: A sixth edition of Dr. Frederick Taylor's *Manual of the Practice of Medicine*; a fourth edition of Vol. i of a *Textbook of Medicine*, edited by Dr. Pye Smith; a ninth edition of *Chemistry: Inorganic and Organic*, by John Millar Thomson, Professor of Chemistry in King's College, and Arthur Bloxam; a fifth edition of Dr. Cullingworth's *Short Manual for Monthly Nurses*; a third edition of *A Simple Method of Water Analysis*, by Dr. John C. Thresh; a sixth edition of *The Pharmacopœia of the Throat Hospital*; a second edition of *Dissection Outlines*, for use with Morris's *Treatise on Anatomy*.

How important a part was played by malaria in the life of the Scottish peasantry is shown by the following extract from Graham's *Social Life in Scotland*, quoted by Dr. Best in the lectures on health which he delivered recently in Lagos at the suggestion of the Governor, Sir William MacGregor:

> The one ailment to which they were most liable, and in which dirt had no share, was ague (fever). This was due to the undrained land which retained wet like a sponge, and was full of swamps, bogs, and morasses in which "green grew the rashes." Terribly prevalent and harassing this malady proved to the rural classes, for every year a vast proportion of the people were prostrated by it, so that it was extremely difficult to get the necessary work of the fields performed in many districts. In localities like the "Carse o' Gowrie," which in those days abounded in morasses and deep pools, among whose rushes the lapwings had their haunts, the whole population was every year stricken more or less with the trouble, until the days came when drainage dried the soil, and ague and lapwings disappeared.

Historians tell us that in England James the First died of ague, and Oliver Cromwell also fell a victim to fever in 1658, a year in which malaria was widespread and very deadly.

According to the *Publishers' Circular*, Messrs. Greening and Co. have almost ready for publication a book by Mr. C. Ranger Gull which is described as a denunciation of cigarette smoking. Statistics are quoted to show that during the last six years cigarette smoking has increased 120 per cent., and ample proof is said to exist that many cases of "serious homicidal mania" have been traced to the excessive smoking of cigarettes. Mr. Ranger Gull is said to have recently spent much time with the doctors of various lunatic asylums discussing the scientific aspect of his book as a careful study in "Nicotomania." One is tempted to wonder whether among the matters discussed were the lighter aspects of homicidal mania. The "serious" form having been traced to cigarettes, it would be interesting—of course, purely from the point of view of abstract science—to have some information as to the varieties of homicide that are not serious. We venture to indulge a hope that this little point is cleared up in Mr. Ranger Gull's book, which is entitled *The Cigarette Smoker*.

The *Rivista Pellagrologica Italiana* is the title of a new Italian journal which is to be entirely devoted to matters connected with pellagra. The editors are Signor Perissuti, a member of the Bar; Signor Cantarutti, an engineer; and Dr. Antonini, a physician.

MM. Grandpré and Charmoy, respectively director and assistant naturalist of the Desjardin Museum in Mauritius, we learn from the *Athenæum*, have issued a pamphlet entitled *Les Moustiques; Anatomie et Biologie*. From a study of the *Culicidæ* of the island it appears that four species of the genus *Culex* are represented there, and three species of the genus *Anopheles*, two of which are mentioned as new. Both were found in the more elevated districts of the island. The authors refer to the propriety of instituting an inclusive term for the various manifestations of malarial fever, and suggest that of "fièvre de Laveran," in honour of Dr. Laveran. A chapter is devoted to the etiology of malaria and the consideration of efficacious measures for the prevention and treatment of the disease. The work of the English observers is accorded due prominence.

Now that the Public Vaccinator is for the moment the most important official in London, some of our readers may be interested by a few extracts from a song on him and his office sung by Dr. John Johnston, of Bolton, at the annual meeting of the Bolton Poor-law Officers' Association on February

20th, 1900. John Lancashire was, we are told, a surgeon of credit and renown, who held the post of public vaccinator in a large provincial town.

The duties of his office neither many were nor great,
Till came the Vaccination Act of Eighteen-Ninety-Eight,
Which introduced Calf Lymph and Domiciliary Visitation,
Instead of Vaccine Humanised and the Vaccination Station.

The changes in procedure which this Legislation brought,
With trouble and annoyances of various kinds were fraught:
The popular odium he'd to brave, and the receptions he sometimes got,
Would have melted the heart of his dearest foe with sympathy for his lot.

The conciliatory announcement that he vaccinated "from the calf" brought ridicule on his head.

When asked—"Heaw mony marks d'ye make?"—and he confessed to "four,"
The mother oft with promptitude would show him to the door:
"The vaccination's free," he'd urge, "with lymph of the L.G.B,"
"Aw'st ha' nowt at a' to do," she'd snap, "wi' oather it or thee."

Another would urge postponement "cos th' chilt's noan raley fit," and he had interviews of a highly unpleasant character with ladies of the virago type, and a variety of misadventures, some of which are described in the following touching lines:

He notified a List case once, that lived four miles away,
And started out to visit it upon the appointed day;
After toiling through the mud, across the wilds of Cockey Moor,
He found they'd had the vaccination done the day before.

What weary, weary tramps he had! what trailing up and down!
What homes he had to visit in the slum parts of the town!
Where the air inside the houses with effluvia was thick,
And he'd to hurry through his job for fear of getting "summat wick."

"Taking one consideration with another," as another poet says, the public vaccinator's lot is not always a happy one.

# ASSOCIATION INTELLIGENCE.

## COUNCIL.

### NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 23rd day of October, at 2 o'clock in the afternoon.

Sept. 5th, 1901. FRANCIS FOWKE, *General Secretary.*

### NOTICE OF QUARTERLY MEETING OF COUNCIL FOR 1901.

A MEETING of the Council will be held on October 23rd. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before that meeting—namely, October 2nd.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

## LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

THE Library will be closed for one week commencing Monday, September 30th, for the purposes of cleaning, and will be reopened on Monday, October 7th.

## BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held at the White Hart Hotel, Lewes, on Thursday, October 10th, at 3.30 P.M. Dinner at 5.30; charge, 6s., without wine. Notice of intended communications should be sent before the end of September to J. W. BATTERHAM, M.B., 3, Grand Parade, St. Leonards, Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting of this District will be held at the White Hart Hotel, Reigate, on Thursday, October 10th, at 4 P.M., Dr. S. W. MacIlwaine, of Redhill, in the chair. Agenda: Minutes of Croydon meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. The following papers, etc., have been promised: Dr. Lauriston E. Shaw: The Selection of Cases of Pulmonary Tuberculosis for Sanatorium Treatment. Mr. L. A. Dunn: Difficulties and Treatment of Strangulated Hernia. Dr. George Blacker: Some Remarks on the Pathology and Treatment of Eclampsia. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. Dinner at 6 P.M.; charge, 7s., exclusive of wine. The Honorary Secretary would be much obliged if members would kindly inform him by postcard whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner. By so doing they will very materially facilitate arrangements, and promote the success of the meeting. All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends.—HENRY J. PRANGLEY, Tudor House, Anerley, Honorary Secretary.

SOUTH MIDLAND BRANCH.—The autumnal meeting of this Branch will be held at Eight Bells Hotel, Bletchley, on Thursday, October 3rd, under the presidency of Mr. Kingcombe. The following communications have been promised:—Mr. Evan Harries Jones: The Treatment of Corneal Ulcers with Hypopyon. Mr. Percival: Two Cases of Stone in Females. Dr. T. L. Karnish: A Case of Fracture of the Cervical Vertebræ. Dr. H. T. Wickham: Notes on a Case of Puerperal Septicæmia; Dr. A. C. Hartley will show a specimen. Mr. Evan Harries Jones will be proposed as Honorary Secretary of the Branch in the place of Mr. Evans, resigned. Gentlemen desirous of reading papers or cases, showing specimens, drawings, and other objects of medical interest, are requested to communicate at once with the undersigned. Luncheon will be provided at the hotel at 1.45 P.M. at 2s. 6d. each, exclusive of wine, etc., and gentlemen wishing to be present are requested to intimate their intention to the Secretary not later than September 30th.—CHARLES J. EVANS, Northampton, Honorary Secretary.

NORTH OF IRELAND BRANCH.—The autumn meeting of this Branch will be held on Thursday, October 17th, in Belfast. Notices of communications, of election of new members, and of any other business are to be sent to Dr. WILLIAM CALWELL, Honorary Secretary, 1, College Square North, Belfast.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—The autumn meeting of this Branch will be held at Inverness in the Palace Hotel on Friday evening, October 18th, at 6.30. The President, Dr. Adam, Dingwall, will deliver an address on Medical Diagnosis and Modern Discoveries. Dr. de Watteville, Kingussie, will also give a paper on Some Experiences in the Open-air Treatment of Consumption in the Central Highlands. Members desirous of reading papers or cases are requested to communicate at once with the Honorary Secretary. After the business meeting the members will dine in the Palace Hotel at 8 P.M.—J. MUNRO MOIR, 4, Ardross Terrace, Inverness, Honorary Secretary.

## BORDER COUNTIES BRANCH.

THE autumn meeting of this Branch was held at Jedburgh on September 20th. Dr. BLAIR (President), occupied the chair, and fourteen members and one visitor were present. Several apologies for inability to attend were intimated.

*Confirmation of Minutes.*—The minutes of the last meeting were read, approved, and signed by the President.

*New Members.*—Dr. H. Dodgson (Garlands, Carlisle), and Dr. R. M. Rowe (Cumberland Infirmary, Carlisle), were elected members of the British Medical Association and Border Counties Branch. Dr. A. Rodger (Yetholm), was elected a member of the Branch.

*Communications.*—The PRESIDENT read a paper on the Motor Car in General Practice, in which he related his own experiences with the motor car, and gave valuable suggestions as to the most suitable forms of car for use by practitioners.

*Visits to Places of Interest.*—Members travelling to the meeting *viâ* Hawick had a most enjoyable drive thence to Jedburgh and back. At Jedburgh some time was spent in exploring places of historic interest, including the Abbey and Queen Mary's House. After the meeting the members and their lady friends were most sumptuously entertained by Dr. Blair in a large marquee in the grounds of his residence.

*Vote of Thanks to the President.*—The proceedings closed with a very cordial vote of thanks, moved by Dr. SOMERVILLE (Galashiels), to Dr. Blair for his kindiy hospitality.

Those attending the meeting spent a thoroughly enjoyable afternoon, and the only feeling of regret expressed was that so many of those who had announced their intention of being present had after all been unable to visit Jedburgh.

# SPECIAL CORRESPONDENCE.

## BERLIN.

*The "Virchow-Krankenhaus."—The Celebration of Virchow's Birthday.—The Hygiene of Dairy Products.—The Evils of Street Noises.*

The municipality of Berlin has resolved that the new hospital in course of erection (in the See-strasse) is to bear the name of Rudolf Virchow. It will be called "*Virchow-Krankenhaus*." This is a compliment worthy of the greatly pathologist, full though his cup of honours be; for the new hospital will be by far the largest, finest and best arranged of all the municipal hospitals of Berlin. "The town of the red roofs" it has been popularly called, and truly, seen from a distance, the enormous complex of buildings, in park-like grounds, has the appearance of some city of "model buildings." There will be 1,700 beds for patients, and the medical staff, nurses, household servants, and the members of the nurse-training institute, will bring the number of inmates up to 2,000.

It has now been finally decided that all the festive functions in which Virchow will take part personally are to be held on October 12th, the day before his eightieth birthday, as he wishes to spend the jubilee day itself quietly with his family and closest personal friends. The programme for the 12th then stands as follows:—1 o'clock: Reception in the Pathological Institute (invitations for this reception are sent out by Virchow himself). 6 o'clock: Banquet in the dining-hall of the Prussian Diet (*Abgeordnetenhaus*) at which Virchow's family, the foreign delegates, and personal friends will be present. 8.30: Large official reception in the Parliament Hall of the Prussian Diet, under the presidency of Professor Waldeyer; congratulatory adresses, speeches, etc.; presentation of purses for the "Virchow-Stiftung." Tickets for the official reception can be obtained from Professor Posner, Anhalt Strasse, Berlin, W.

## SYDNEY.

*Epidemic of Influenza and Pneumonia: Vital Statistics: Population Returns.—Professorship of Pathology.—A Suspicious Death.*

Sydney, and in fact the whole State of New South Wales, has been visited during the past few weeks by a severe epidemic of influenza and pneumonia. The winter has been unusually severe and prolonged, and the rainfall very small. The influence of the weather is shown in the report of the Government statistician on the vital statistics of the metropolis for the month of July. The temperature has been only half a degree higher than that of the coldest July in the decennium, and a large increase in the death-rate from respiratory diseases has resulted; 117 deaths were attributed to disease of the respiratory organs, of which 73 were due to acute pneumonia and 30 to bronchitis. The deaths from all causes during the month were 574, or 97 more than the quinquennial average for the month. The returns of the Board of Health show that 32 cases of typhoid fever were notified and 44 cases of diphtheria. In the years 1899 and 1900 the deaths from diphtheria were, respectively, 14 and 19; but in the present year, for a period of seven months, only 45 deaths from this disease have been reported. This is rapidly approaching the high mortality from diphtheria six or seven years ago, when the deaths were between seventy and eighty per annum. Pulmonary phthisis caused 51 deaths and cancer 22.

The returns of estimated population compiled by the Government statistician for the quarter ending June 30th of this year is 1,366,408. The increase by excess of births over deaths was 5,341, and the total increase was 6,871.

The Senate of the University of Sydney has decided to raise the Lectureship in Pathology to a Professorship, and at its last meeting communications were received from Professors Victor Horsley, Cunningham, and Dickinson, stating their willingness to assist the Senate in the selection of a suitable candidate for the new chair. It is expected that the appointment will be made next November or December.

In view of the report of the existence of cases of plague in San Francisco and Honolulu, the health authorities have been very vigilant as to any cases of illness at all resembling plague. A case recently occurred in Sydney which aroused some suspicion for a time, but has fortunately been proved not to have been plague. A man, 28 years of age, a railway labourer, went to a lodging house in a street in which some cases of plague had occurred in the epidemic of last year. He was taken suddenly ill the next day, and in less than twenty-four hours he became unconscious, and died a few hours later without being seen by any medical man. The case was reported to the city coroner, and under his instructions Dr. Sydney Jamieson made a *post-mortem* examination. The body presented a most suspicious appearance. There were enlarged glands in both axillæ, and a number of punctiform hæmorrhages both on the surface of the body and also over the thoracic and abdominal viscera. Careful examination of the blood failed to reveal the presence of any micro-organisms, and subsequent more extended bacteriological investigations, which revealed the presence of an organism, proved conclusively that it was not the organism of pestis. The case was one of virulent septicæmia, but the source of the infection was not discovered.

## BRISTOL.

*The Report of the Medical Officer of Health: Isolation Hospital Accommodation; Birth-rate and Infant Mortality: Vaccination: Zymotic Diseases; Tuberculosis: Port Sanitation.*

The report of the medical officer of health for the year 1900 has been issued recently, and contains matter of more than ordinary interest. Recent changes in the boundaries of the city have required certain rearrangement of districts, and no more than approximate statements can be made as to the population till the census reports are published in full. The district of St. Paul's has still the greatest density of population, 127 acres containing 17,476 persons.

The question of further hospital accommodation for isolation purposes is referred to, and the following facts are gathered from the report. The population of the city is about 329,000, so that on the Local Government Board's recommendation there should be provision for at least 330 patients, whereas only 137 beds are available. Besides the two hospitals now in use there are three more—Clift Home, which the Council undertook to cease to use; the St. Phillip's Marsh Hospital, built of wood, is so old that it is unfit for use: while St. George's Hospital is used for accommodating persons while their dwellings are undergoing disinfection. The erection of temporary buildings is expensive, as it must be paid for directly out of the rates, besides being unsatisfactory for other reasons. The cost of a new extension to Ham Green Hospital for 63 additional beds would be £24,660.

The birth-rate shows the decrease that has been noticed since 1881. Last year it was 27.6 as against 29.4 in the thirty-three great towns, but as the marriage-rate has increased slightly, we may hope for better things this year. The general death-rate was 16.6 per 1,000, for the thirty-three large towns 19.5. The infant mortality-rate was 131.96 per 1,000 births, an improvement on the previous year (157.1), the rate for the thirty-three towns being 172. The zymotic rate was 1.88, this being one of the lowest, and the individual diseases show a corresponding low rate.

The vaccination returns available are those for 1899, the percentage of successful vaccinations being 52.76.

The inspection of cowsheds and farms has been vigorously carried out, and they are reported as 3 in good condition, 22 in fair condition, 2 fair but badly situated, 17 bad condition and unfit for the purpose. The report gives details of the many unfit ones, calling attention to the bad materials the sheds are composed of, while one is described as a mere shanty, and many had a very inadequate water supply. The medical officer of health suggests that the Sanitary Committee might prohibit the use of those reported unfit under the Dairies, etc., Order of 1885, and also calls attention to the great difficulties in inspection.

No cases of small-pox occurred in 1900 in Bristol. Of enteric fever there were 293 cases, of which 44 proved fatal, and a short but very instructive account is given of an outbreak occurring among employees on the Midland Railway, due to an infected water supply at Mangotsfield Station. Bristol suffered rather severely from scarlet fever, 1,971 cases being notified during the year, though the mortality was only

1.9, showing that the disease was of a mild character. In Clifton two outbreaks were traced to infected milk supply. A very instructive one is reported in the city. There were 497 cases of diphtheria and 15 of membranous croup, with a mortality of 96 and 7 respectively, a higher rate than has been previously seen in Bristol, though lower than that of the thirty-three large towns. Bristol has till last year been able to boast of a comparative immunity from diphtheria. The laboratory work in connection with diphtheria continues to increase, 663 cases being examined, involving 1,830 cultures and 2,745 microscopical examinations, while 452 cases were examined by the Widal-Gruber test for enteric.

From phthisis 415 persons died, and Dr. Davies calls attention to a recommendation of his to afford facilities for taking samples of milk and the examination of tuberculous matter.

Bristol being a port, precautions had to be taken against the introduction of plague and cholera, and the methods employed are contained in the report.

The meteorological report shows that the temperature was deficient in the early part of the year and much in excess during the last six months.

## LIVERPOOL.

*Distribution of Prizes in the Medical School.—Medical Institution Dinner.—Special Service for Medical Men.*

THE prizes gained by the students of the Medical Faculty of University College will this year be distributed by Principal Oliver Lodge, of the University of Birmingham, who will deliver the usual introductory address. Dr. Oliver Lodge has many friends and admirers in Liverpool, where he held the position of Professor of Physics from the formation of University College until he was asked to accept the office of Principal of Birmingham University.

On the evening of the same day the biennial dinner of the Liverpool Medical Institution will take place at the Adelphi Hotel, the President, Mr. Edgar Browne, being in the chair. The session of the Medical Institution will open on October 10th, when the President will deliver his inaugural address.

Some months ago the Bishop of Liverpool expressed his willingness to preach before the members of the medical profession in Liverpool, and his offer was accepted by the President of the Medical Institution on behalf of the members. It is hoped that all members of the profession in the neighbourhood will endeavour to take part in the service, which it is proposed should become an annual function. It will take place in St. Luke's Church at 3 P.M. on the Sunday after St. Luke's Day (October 20th), and will last an hour.

## SOUTH WALES AND MONMOUTHSHIRE.

*Opening of a Cottage Hospital at Ebbw Vale.—Prevention of Tuberculosis in Cardiff.*

ON September 21st a cottage hospital at Ebbw Vale, in Monmouthshire, was formally opened. The hospital, consisting of ten beds and one cot, has been erected in part from the funds reserved for medical payments from the wages of the employees of the Ebbw Vale Steel, Iron, and Coal Company, and in part by contributions from the company and others. The total cost of the hospital is about £3,000. In some other matters Ebbw Vale cannot be said to be advanced. The methods of sewage and refuse disposal are very primitive, and the Medical Officer of Health, Dr. Davies, attributes the recent sharp outbreak of typhoid fever to this cause. During July and August last, twenty cases were notified from the North Central Ward alone. In the western portion of this ward large deposits of refuse matter had taken place. According to the report of the Medical Officer of Health this was in a partially decomposing condition, while the sun and drought had caused a considerable amount of infective dust. The water supply during the epidemic had been very deficient. Dr. Davies pointed out in his report that the only effective method of refuse disposal in the district was destruction by fire. The District Council resolved to tip all refuse in future outside the boundaries of the town.

The Mayor of Cardiff has issued invitations to a public meeting to be held in the Town Hall on October 3rd to consider the advisability of establishing a branch of the National Association for the Prevention of Consumption and other forms of tuberculosis for South Wales and Monmouthshire. The matter has been very well received, and a large number of favourable replies and promises of support have been received. The Central Association has promised to send a deputation consisting of Dr. Isambard Owen and Dr. Alfred Hillier, while many of the important local bodies and corporations are sending delegates

# CORRESPONDENCE.

## THE MIDWIVES QUESTION.

SIR,—I must confess to failure in appreciating what are the exact legislative projects of the society of which Mrs. A. Mabel Wallace Bruce is the accredited spokeswoman.

It is quite evident that she objects to the close supervision of the practice of midwives and requires some sort of legislation, the nature of which she does not define, in order to provide women of the poorer classes with ideal attendance at the time of delivery.

I have placed my views on record as to what can be done in the way of supervision, and have suggested the lines upon which legislation can be based, and I now suggest that the accredited spokeswoman of the Association for Promoting Compulsory Registration of Midwives should state plainly how the society proposes to provide the ideal attendance. It is obvious that mere compulsory registration of midwives will not provide it, because the Obstetrical Society since the year 1872 has licensed some five thousand odd women and all sorts of other mills have been at work in addition. If these women, who must now number between ten and fifteen thousand, are not doing the work expected of them, what legislation, I ask, does the society propose which will compel or enable them to do it?

In conclusion, I will ask Mrs. Bruce not to waste your valuable space by rhodomontade, and remind her that your readers require a business statement as to the details of the legislation which her society is introducing.

Mrs. Bruce will, perhaps, excuse me if I do not bring my critical faculties to bear upon her letter to you.—I am, etc.,

Hatfield, Sept. 21st. LOVELL DRAGE.

SIR,—Dr. McCook Weir, in his criticisms of the Medical Guild Scheme for the Protection of Poor Parturient Women has quoted from a private letter of mine on several occasions. As short extracts are liable to give rise to misapprehensions, I shall be glad if you will print it *in extenso*. This letter contains all that I have to say or can say on the matter. If I had to write it again I should not say so positively that his Bill and our scheme are nearly identical, for further consideration of his Bill shows me that it contains a good deal that is non-essential, and even in what may be regarded as the essential parts of it a good deal that is impracticable and even mischievous.

I would ask Dr. Weir if he seriously thinks it likely that a body of over 200 practitioners will conspire together to deprive him of any honour in this matter? If he thinks that I have stolen his property and foisted it on the Guild, well, I can only assert what I state in the enclosed letter, and leave it at that.—I am, etc.,

Ashton-under-Lyne, Sept. 24th. SAMUEL CRAWSHAW, M.B.

*Copy of Letter to Dr. McCook Weir.*

Trafalgar Square, Ashton-under-Lyne,
July 18th, 1901.

DEAR SIR,—Dr. Broadbent, of Manchester, has handed me some correspondence he has had with you relative to a scheme for the protection of poor parturient women that is being brought forward by the Medical Guild. From that correspondence I gather that you are of opinion that the Guild has utilised your "Sick and Obstetric Nurses" Bill without in any way recognising it. This I assure you is not the case. No one will be more ready, I believe, than the members of the Guild to admit that you were first in the field, for your Bill and our scheme are nearly identical. If any one person may claim the scheme as their own, perhaps I have as good a claim as anyone; for although Dr. Broadbent moved the resolution for the appointment of a subcommittee to deal with it (of which I was one), I submitted a complete scheme at its first meeting, and the scheme as at last adopted has only been altered in a very slight degree, and that chiefly by the excision of details. There was one alteration of importance made, and that was to make the guardians the local body charged with the local administration of the scheme. I had sug-

gested that a Special Committee should be elected in each district for this purpose, half from the guardians and half from the District or Town Council.

Now, I assure you that I had never in any way heard of or seen your Bill. I took not the slightest interest in this question before about fifteen months ago, and never read any of the literature; indeed, I have read very little since. I long ago came to the conclusion that poor people had midwives, etc., instead of medical men because they could not afford to pay the latter's fees. These fees could not really be reduced, and the question was,—How could medical men and properly qualified nurses be put within their reach? There are only two possible ways: First, to raise their wages (and Acts of Parliament can't do this); and, second, to give them help from the rates. This I thought possible, and I very quickly reduced my ideas to form, and the result is the Guild scheme. It seems to me so very obvious a solution that I was surprised it had not been thought of before, and yet it appeared new to the subcommittee, to the Council, and to the general body of members, each of whom in turn discussed it. Finally, it was discussed at a meeting, specially convened, of members of the profession resident not only in Manchester but in the surrounding districts. This was presided over by Dr. S. Woodcock, of Old Trafford. Some present criticised it adversely, but not one mentioned your Bill, so that if they had ever seen it, it had quite escaped their memory.

This is the plain account of the origin of the Guild scheme, and will suffice, I hope, to remove from your mind any feeling that we have acted in an unfair manner by you in reference to it. I may say that all our meetings were held previously to Dr. Broadbent receiving copies of your Bill.—Believe me, yours sincerely,

Saml. Crawshaw.

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Sir,—Neither I, nor any man or woman, can get a diploma in midwifery under the present law unless I or they take out a medical and surgical qualification; therefore why should we as a profession try to get midwives registered? Neither we nor the public agitate for the registration of bonesetters, hernia curers, venereal and urinary organ curers, curers of eczema and restorers of manly function, eye specialists, hair specialists, beauty and deformity specialists, etc. The proper course, to my mind, is to oppose all registration of inferiorly qualified practitioners, and to leave the public who engage them to take the consequence.—I am, etc.,

Chelsea, Sept. 22nd. J. Hamilton, M.D.Q.U.I.

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## MEDICAL GRADUATES AND THE SUPPLY OF MEDICINES.

Sir,—"Antishop" seems to miss the point altogether as to the desirability, or otherwise, of practitioners dispensing their own medicines. He wants Boards of Guardians and committees of clubs to make their own contracts with chemists for supply of medicine. Neither guardians nor clubs will pay one farthing more than they can help; if they pay their contracts the medical officer's salary will be proportionately reduced in the former case, and the clubs will cut down their already beggarly pittance of 4s. (average) to 3s. or even less. "Antishop" cannot afford an assistant or dispenser yet he deliberately wishes to still further reduce his income! If the practice is a small one, how are medicines to be obtained when the nearest chemist may be five, or even ten, miles away? I fail to see why we should be ashamed of dispensing our own medicine any more than supplying splints, bandages, and dressings of all kinds. If a man has an extensive practice, involving hours of dispensing, he must surely be able to pay a dispenser, unless he is attending his patients at utterly inadequate fees; if such be the case the remedy is obvious.—am, etc.

September 21st. Anticant.

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## THE DIETARY OF TYPHOID FEVER.

Sir,—I venture to corroborate Mr. Byrne's letter advocating a more varied diet in enteric. Now that the old idea that in the region of the typhoid ulcers the contents of the bowel were solid is found to be erroneous, it seems to be quite unnecessary to tie a patient down to a very dilute liquid diet. When we consider the extreme paucity of iron in milk (0.003 per cent. of the dry solids), it is not surprising that milk-fed typhoids are much handicapped during convalescence by anæmia and its accompanying drawbacks. I feel sure that a more liberal dietary such as the various broths, light custards (as arrowroot), chocolate, blanc-mange, etc., given from the commencement of the treatment, places the patient in a far better way to stand the drain of a long, weakening illness. I have been in the habit of adding to each feeder of milk an alkaline powder as recommended by Burney Yeo. And I can further advise the giving of beer twice a day as a routine method. It is much appreciated by the patient, and helps to keep the mouth clean and pleasant. This last is due, I believe, to the Germans, who have led the way in so many matters of medical treatment.

Judging by what one reads and hears from old practitioners, typhoid cases do not follow the course they took forty or fifty years ago, and it seems only rational that our treatment of them should alter *pari passu* with the alteration of type. To those only accustomed to the old milk treatment I commend a lecture on the Modern Dietetic Treatment of Enteric by Dr. Frederick Smith, delivered I believe at the London Hospital some months ago, and reported in some of the journals.—I am, etc.,

Lancaster, Sept. 21st. W. H. Coupland.

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## STERILISATION OF ENTERIC STOOLS.

Sir,—With reference to the letter on this subject published in your issue of September 21st, 1901, p. 834, I desire to say that I do not consider Lieutenant-Colonel Younge has done justice to my system. Dr. R. W. Dodgson, a skilled bacteriologist employed by Government in South Africa, was satisfied that two minutes was sufficient for sterilisation, whereas Colonel Younge gives half-an-hour.

I wish to state that I also had the bed-pans boiled for ten minutes in a Sawyer's boiler in a solution of izal and water (half-ounce to one gallon). This removed all trace of fæcal matter and sterilised them. The attendant at the disinfecting shed removed the pans after ten minutes boiling and the next orderly who came with a bed-pan, after he had emptied it, placed it in the boiler and took the one already disinfected back to the ward.

I introduced my system in July, 1900, at the No. 1 Model School Hospital, Pretoria, from whence it was adopted by other hospitals, as its advantages and simplicity were at once recognised by Surgeon-General Sir W. D. Wilson, K.C.M.G., Principal Medical Officer of the Army, and Dr. G. Turner, Medical Officer of Health of the Transvaal.

In his report on No. 6 General Hospital, Johannesberg, Professor Watson refers to my system (see British Medical Journal, April 20th, 1901, p. 946).—I am, etc.,

H. A. Cummins, Major R.A.M.C.

Nightingale Place, Woolwich, Sept. 21st.

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## THE URINE IN TUBERCULOUS INFECTION.

Sir,—I have read Messrs. Foulerton and Hillier's paper[1] on the above subject with much interest. The authors have obtained the same results by bacteriological examination as I have obtained by histological methods. In a paper read before the British Congress on Tuberculosis in July last I endeavoured to show that tubercle bacilli are excreted by the kidney without the formation of "tubercle" in the organ.—I am, etc.,

Harley Street, W., Sept. 20th. Hugh Walsham.

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## "THE ANTIMALARIA CAMPAIGN."

Sir,—In the British Medical Journal of September 7th under the above heading you give an extract of Dr. Doty's report on his recent investigations on malaria in Staten Island. During these investigations many tests were made to ascertain the value of different agents in the destruction of mosquito larvæ. Among others, mercury bichloride (1 in 2,000), carbolic acid, and potassium permanganate were experimented with, but in summing up, Dr. Doty thinks "that petroleum oil will surely and promptly destroy mosquito larvæ, and, so far as careful experiments indicate, it is the only agent that can be depended upon for this purpose." It happened that recently I had occasion to try to destroy a quantity of *Culex* larvæ which were swarming in a stone receptacle for rain water. I first used ordinary kerosene oil taken from an oil reading-lamp, and poured some of this on the surface of the water but did not agitate it. A number of larvæ were killed by it gradually when they came in actual contact with it, but numbers avoided it by keeping to the corners of the cistern. Two days later there were no signs of the oil to be seen, and the *Culex* were again evident in apparently undiminished numbers. I then decided to try eucalyptus oil (*B.P.*). I used

[1] British Medical Journal, September 21st, p. 774.

it in the same way as the kerosene. The effect was instantaneous and marked. As the film flowed gently over the surface all the larvæ in its course were noticeably affected, and in a very short time large numbers of them were floating stretched out straight and in groups, all dead. Two days afterwards no more *Culex* larvæ were to be seen in the water. I repeated the experiment on a small scale in a tumbler of water taken from the cistern. The result was the same. In this case there happened to be a mosquito on the water which had but recently come out of its pupal case. As the oil flowed slowly towards it, before it seemed to have touched it, the insect completely collapsed on to the surface of the water and showed no further signs of life. At the time of the experiments the stone cistern contained about 8 gallons of water. About 4 ozs. of kerosene were used and about 2 ozs. of eucalyptus.

It is curious that no mention of the larvicidal action of eucalyptus should have appeared in Dr. Doty's report, nor have I seen it referred to in any other communication. I do not mean by these observations to suggest that eucalyptus oil can replace petroleum on a large scale, for probably its price is at present prohibitive (eucalyptus averaging 3s. 6d. per pound, and petroleum less than twopence per quart), but it appears to me that it is more rapid and deadly in its action than petroleum; moreover as it completes its work so thoroughly on the surface of the water it is unnecessary to agitate it, as Dr. Doty advises in the cases of petroleum, and therefore a smaller quantity of eucalyptus than petroleum will suffice for a similar quantity of water, as all that is needed is a thin film to cover the surface.

I know that a few experiments on a small scale are not sufficient to make important deductions from, so that further investigation is called for. It is also necessary to find out whether eucalyptus or any other larvicide will also kill the eggs of the mosquito. I therefore write this letter in the hope that some of those who have the facilities may be able to make further experiments with eucalyptus oil on a large scale.—I am, etc,,

W. RODNEY BATTYE, M.B., B.S., B.Sc.Lond.,
Gower Street, W.C., Sept. 24th. Captain I.M.S.

## THE MANAGEMENT OF ECZEMA.

SIR,—It may appear to Dr. Waldo that the allegations of injurious constitutional effects arising as a consequence of the cure of certain forms of eczema are relics of the ignorance of the Middle Ages,[1] but I am fairly confident that I shall not stand alone when I venture to support such allegations. Two warnings culled from the memories of early teaching occur to me; (1) Do not cure eczema capitis in a teething infant; (2) Do not stop the serous discharge arising from chronic eczema of the legs in old persons. I am not going to take it upon myself to explain the reasons for such manifestations as I have known to follow the disregard of these warnings, but I imagine that a discussion of the subject would not be devoid of interest.—I am, etc.,

Wantage, Sept. 22nd. GEORGE C. PEACHEY.

## BROMIDES IN SEA-SICKNESS.

SIR,—I have treated many cases of severe sickness where the patient was prostrate for many days and unable to take any nourishment, with the bromides of ammonia and potash combined with aromatic spirits of ammonia and compound tincture of cardamoms, and almost invariably found that the acute symptoms subsided and the patient was able to take some nourishment—a very important point where a patient has been without it for a number of days.

I entirely agree with Dr. Butler Savory in his statement that "the primary cause of sea sickness is due to stimulation of the terminal fibres of the nerve supplying the semicircular canals by the movement of the endolymph contained within them," and considers that the effects produced by the bromides is a proof of the cerebral rather than abdominal origin of the malady. Till I saw Dr. Savory's letter in the BRITISH MEDICAL JOURNAL of September 21st, I was unaware than any other observer had the same opinion as myself, not having seen his article of March 30th, and was about to write to you giving my views on the cerebral causation of sea-sickness.

[1] BRITISH MEDICAL JOURNAL, September 21st, p. 808.

We have an analogous condition in the nausea produced in many persons by high swinging and rapid rotatory movement, in which cases few will deny that the abdominal organs are not concerned.

Dr. Savory's observation of pigeons is most interesting, and is further proof of the origin of this form of nausea.—I am, etc.,

H. NORMAN BARNETT,
Late Medical Officer P. and O. and Orient Services.
September 22nd.

## COLD AS A FACTOR IN THE PRODUCTION OF DISEASE.

SIR,—A "chill" may be defined as a condition arising from the local or general application of cold to the body, usually through the agency of cool air or water, or damp contacts. In this country catarrhs of the respiratory tract are popularly attributed to chills. Frequently have I noted aural catarrh immediately follow the entrance of cool sea water into the outer auditory meatus, and in Egypt a pleurisy to result from exposure of the chest wall to a lowered temperature.

Dr. J. W. Washbourn would ascribe intestinal catarrh in South Africa to chill,[1] and Professor Clifford Allbutt seems justified in bringing chills once more out of the "predisposing" to the "immediate" causes of disease. On the other hand Dr. W. H. Ransom considers that many diseases set down to chill are wrongly attributed.[2] Physiological experiments do not give the clue to the etiological factor of cold. Dr. M. S. Pembrey states that the chief effect of cold in the higher animals, as applied in a cold bath, is to demonstrate the power of heat compensation.[3] Once, however, the heat-regulating mechanism is disordered, as in high fever, cold rapidly lowers temperature.

Abnormal physical (including vasomotor) conditions do in all probability exist which permit cold, bacterial infections (for example, tuberculosis), and other agencies to originate morbid processes.[4]

The nature of these changes the microscope does not so far demonstrate; and chemical and physiological experiment is needed to determine the exact prebacterial and precancerous characteristics of cells, tissues, and fluids. It is clear that the suitable application of cold air or water is of the highest therapeutic value, but, when causing a chill, is frequently the immediate cause of disease.—I am, etc.,

F. BUSHNELL, M.D.,
Honorary Pathologist, South Devon and East Cornwall Hospital; and Medical Officer, the Plymouth Public Dispensary.
Plymouth, Sept. 23rd.

## A CORRECTION.

SIR,—I regret than an error should have crept into my remarks on the *rôle* of cocci in the pathology of the skin (BRITISH MEDICAL JOURNAL, September 21st, 1901, p. 797, column 1). Dr. Nabarro informs me it was pure staphylococcus he cultivated from the early impetigo contagiosa lesion of the face I referred to. He further states that in two other cases of impetigo contagiosa attending Dr. Radcliffe Crocker's department at University College Hospital he found in one pure staphylococcus; and in the other mixed staphylococcus and streptococcus, but most of the former.—Yours, etc.,

Upper Gloucester Place, N.W., Sept. 20th. GEORGE PERNET.

# OBITUARY.

## PROFESSOR ALWIN VON COLER,
Staff Surgeon-General of the Prussian Army.

THE death of Alwin von Coler, on August 26th, robbed the German army of one of its most useful chiefs. Only a few months before the medical world in Prussia was fêting him on the the occasion of the celebration of his 70th birthday, and almost up to the time of his death he had been working energetically with Schjerning on the effects of modern

[1] BRITISH MEDICAL JOURNAL, September 14th, 1901, p. 701.
[2] President's Address, Nottingham Medico-Chirurgical Society, 1887.
[3] *Textbook of Physiology*, Schäfer, vol. i, p. 810.
[4] The Causation of Cancerous and other New Growths, J. G. Adami, BRITISH MEDICAL JOURNAL, March 16th, 1901; also The Pathogenesis of Tumours, *Journal of Pathology and Bacteriology*, June, 1901, C. P. White.

bullet wounds and other subjects connected with military surgery.

V. Coler was born in Gröningen in Saxony on March 15th, 1831. He studied at the Army Medical Academy in Berlin, and in 1856 became Assistant Surgeon in the Dragoon Guards. In the following year he took his "Doctor degree," and in 1863 he was appointed Staff Surgeon. He saw active service in 1864, 1866, 1870, and 1871. In the Austro-Prussian War he so distinguished himself that he was chosen a member of the Prussian Medical Staff, and in the next year he obtained a post in the newly-formed Medical Department of the War Office, through the intermediation of the Surgeon-General of that time—Grimm. The latter was greatly impressed by young Coler's capabilities, and prophesied for him a brilliant future. The reform of the Army Medical Service, which was introduced in 1869, proved itself in the Franco-Prussian war to be a success, for the loss from disease, for the first time in warfare, was smaller than that from wounds. Coler took a very active part in securing this result, interrupting, as he did, his administrative work to take up his post as Divisional Surgeon of the First Division. He was rewarded by the "Iron Cross" for his distinguished service. In 1874 he was promoted to the rank of Surgeon-General, and four years later he began those series of changes which practically reformed the whole of the organisation of the Army Medical Service, and which transformed the military surgeon from a medical soldier into a soldierly scientific surgeon and physician.

In 1885 he was appointed chief of the Medical Department of the War Office, under the Minister of War, von Lauer, and in 1889, Chief of the Army Medical Corps and Surgeon-General to the Prussian Army. In the same year he received the titular distinction of "Geheimer-Ober Medicinalrath" (a distinction to which we have nothing corresponding in England), while in 1891 he was promoted to the rank of Lieutenant-General, with the title of "Excellency," and in 1892 he was created an Honorary Professor of the Berlin University. A few years previously he had been granted the privilege of using the symbol of nobility—"von"—before his name. During the whole of his administrative career he set himself the task of introducing those systems of scientific work which characterise medicine of the latter half of the nineteenth century. He instituted a better preliminary training for the military surgeon, by means of instruction during his period of service. As Director of the Medico-Chirurgical Institute of the Army Medical Academy he organised courses in military surgery, military hygiene, bacteriology, and operative surgery for officers on duty and on furlough, and obtained the co-operation of the first university teachers on each subject. Officers were compelled to attend various courses of clinical instruction at the different universities. He raised the status of the army medical officer, and at the same time improved his condition. By providing a better station, a better field of work, and a better scale of remuneration, he succeeded in obtaining a more valuable type of medical officer. He reorganised the distribution of the surgeons in peace, and at every opportunity secured representative officers to watch foreign wars in the general interest of military hygiene.

Surgeon-General von Coler was responsible for a large number of important and interesting publications, among which the *Von Coler Library*, the publication of which was begun recently under the editorship of Schjerning, may be mentioned as being particularly valuable.

He was a man who understood to the fullest extent the duties of an organiser and reformer, and of an administrator. He combined the qualities of tenacity of purpose, conscientiousness, and consideration for others. Always ready to give advice and help to his subordinates, he was beloved by all who came into contact with him. The best memorial which can be accorded to him he has built himself—the perfecting of the medical organisation of the Prussian Army.

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We regret to learn of the death of Dr. Osborne Johnson, of Bassingham, Lincolnshire, at the age of 74. He was born at Sutton, and received his medical education at the London Hospital, where he become house-surgeon in 1851, in which year he also became M.R.C.S.Eng. and L.S.A. Subsequently he served for some time as surgeon on board the Australian clippers of Messrs. Green, was surgeon to the quarantine establishment at Sydney, New South Wales, and was Surgeon-Superintendent of the Emigration Commission. On the death of his brother he succeeded to his practice at Bassingham, where he resided for over forty years. He was an old member of the British Medical Association, and well known in the Midland Branch, in the affairs of which, as well as of the Association at large, he always took a deep interest. Dr. Johnson was highly esteemed and respected both as a man and as a medical practitioner, and his unostentatious kindness has caused him to be deeply missed by his poorer patients. The respect in which he was held was shown by the large attendance at his funeral, which took place at the parish church, of which he was warden, representatives being present from all the villages around, as well as from Lincoln and Newark. He was made a J.P. of the parts of Kesteven some years ago, and his willing support of various institutions in the village will be much missed. He leaves a daughter and two sons, both members of the medical profession, to mourn his loss. An old friend, in writing to us with reference to him, says: "He was a staunch friend and a true gentleman, and an honour to the profession to which he belonged."

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Dr. James Oughton Bradbury, who died on September 5th, was one of the oldest and best known practitioners in Salford. He was born in 1829, and went to Salford upwards of fifty years ago as an assistant to Mr. Slack. He was a pupil of the Manchester Medical School, and obtained the diploma of M.R.C.S. in 1853 and that of L.F.P.S.G. in 1858. He was for years Resident House-Surgeon to the Salford Royal Hospital and Dispensary. Subsequently he was a member of the honorary staff and Consulting Surgeon. Locally he had a considerable reputation for the treatment of dislocations and fractures. He had a large general practice and will be much missed by the poor. He was a member of the British Medical Association. Some years ago symptoms of diabetes made their appearance, but he bore his affliction with characteristic pluck and cheeriness, and stuck to his work until a few weeks of his death. He is succeeded in his practice by his only son.

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We regret to announce the death of Dr. Pascual Candela, one of the leading physicians of Madrid, and Physician in Chief to the Royal Family of Spain. He was a member of the Spanish Academy of Medicine, and the author of various contributions to medical literature.

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Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are: Dr. Thomas Masters Markoe, Professor of Surgery in the Castleton (Vermont) Medical College, New York, and Surgeon to the New York Hospital, author of a *Treatise on the Bones* (1872), and many other contributions to surgical literature, aged 81; Dr. Alfred Vaucher, Professor of Clinical Obstetrics and Gynæcology in the University of Geneva; Dr. J. Rubio y Giles, Professor of Physiology in the Medical Faculty of Seville; Dr. G. W. Wells, of New York, Editor of the *Medical Examiner and Practitioner*, aged 60; and Dr. G. Péry, formerly Librarian of the Medical Faculty of Bordeaux, and author of numerous papers on medicine and its professors in that city.

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# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## ROYAL ARMY MEDICAL CORPS.

The date of the grant of the local rank of Colonel to Lieutenant-Colonel W. A. May whilst P.M.O. of a Division in South Africa is January 19th, 1900, and not as previously stated.

Lieutenant-Colonel H. H. Stokes, M.B., is placed on retired pay, September 11th. He entered the service as Assistant Surgeon, March 30th, 1872; became Surgeon, March 1st, 1873; Surgeon-Major, March 30th, 1884; was granted the rank of Lieutenant-Colonel, March 30th, 1892; and made Brigade-Surgeon-Lieutenant-Colonel, July 9th, 1896. He served in the Zulu war in 1879 (medal with clasp), and with the Hazara expedition in 1888, for which he was mentioned in despatches, and received the Frontier medal with clasp.

## INDIAN MEDICAL SERVICE.

Lieutenant-Colonel J. Young, M.B., Bengal Establishment, is granted the temporary rank of Colonel while officiating as P.M.O., Presidency District, August 15th.

Lieutenant-Colonel S. T. AVETOOM, Bombay Establishment, is permitted to retire from the service, from October 1st. He joined the Department as Assistant-Surgeon, April 2nd, 1881, becoming Lieutenant-Colonel 20 years thereafter. He served in the Soudan campaign in 1885 (medal with clasp, and Khedive's bronze star), and with the Burmese expedition in 1888-9 (medal with clasp).

The retirement of Lieutenant-Colonel C. ADAMS, M.B., Madras Establishment, has effect from July 8th.

Lieutenant-Colonel F. D. C. HAWKINS, Bengal Establishment, has retired from the service from October 26th. He was appointed Assistant Surgeon, April 2nd, 1881, and made Lieutenant-Colonel, April 2nd, 1901.

Lieutenant-Colonel P. F. O'CONNOR, M.D., Bengal Establishment, is granted the temporary rank of Colonel whilst Principal Medical Officer of the China Field Force.

Lieutenant-Colonel JAMES MORAN, M.D., Bengal Establishment, died at Marylebone on the 20th inst. He was appointed Assistant Surgeon, March 31st, 1875, and became Surgeon-Lieutenant-Colonel, March 31st, 1895. He was in the Afghan war in 1878-9, receiving the medal.

Deputy Surgeon-General CHARLES PALMER, M.D., late Bengal Establishment, died at 11, Oxford Terrace, Hyde park, on the 22nd inst., at the age of 77. He entered the service as Assistant Surgeon, February 20th, 1846: became Surgeon-Major, February 20th, 1866; and retired with the honorary rank of Deputy Surgeon-General, March 31st, 1879.

### ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: HORATIO S. R. SPARROW, Fleet Surgeon, to Pembroke Dockyard, September 18th; WILLIAM R. CENTER, M.B., Surgeon to the *Ramillies*, October 14th; ROWLAND A. KIRBY, M.B., Surgeon to Chatham Hospital, October 14th; HENRY T. COX, Deputy Inspector-General to Malta Hospital, September 23rd.

### LORD STRATHCONA'S CORPS.

TEMPORARY CAPTAIN C. B. KEENAN, M.D., D.S.O., is made Honorary Captain in the Army, with permission to wear his uniform on the disbandment of the Corps, March 16th.

### IMPERIAL YEOMANRY.

CAPTAIN J. A. LEA, M.B., Medical Officer at the Base Depôt, Capetown, is granted the temporary rank of Major, February 3rd.

### THE VOLUNTEERS.

SURGEON-LIEUTENANTS J. D. WRIGHT, M.B., 8th Lancashire Artillery, and H. M. MACNAUGHTON JONES, M.B., 1st Middlesex Engineers, have resigned their commissions, September 21st.

### THE AMERICAN SOLDIERS AND THE CARE OF THE FEET.

A PHILANTHROPIC officer having lately suggested that specialists should be appointed to look after the feet of the soldiers of the United States Army, the Surgeon-General has expressed the opinion that chiropodists are not needed for the purpose. The men selected for military services, says Surgeon-General Sternberg, are not of the lame and decrepit variety, and if anything goes wrong with their feet, it is more likely to be sufficiently serious to require the attention of the regular surgeon.

### THE COMMITTEE ON THE R.A.M.C.

NO RETROGRESSION writes: Many officers of our corps in India are much exercised in their minds as to the manner in which they are to be "attached" to regiments for the first five years of their services. It is deplorable that such a suggestion was ever placed before the Committee, as there is little doubt that it would be most unpopular. But as there is now a danger of its being adopted, it is to be hoped that it will be in the most modified form possible. There is not the least desire to return to a system under which the medical officer was under the command of the regimental commanding officer, was reported upon annually by him, and was, in short, in a subordinate position in the regiment. In these days the position would be as undignified as it would be intolerable. An officer of the Indian Medical Service once remarked to me: "We shall never get on till we are independent of regiments and have station hospitals for native troops." If, however, assuming a modified regimental system is adopted, the R.A.M.C. officer saw the morning sick of the regiment, had the care of them as patients in the station hospital, performed the sanitary duties, as he now does, and possibly moved with the regiment, there would, I think, be no objection, provided the regimental commanding officer had no authority over him whatever, and that his own departmental senior were his commanding officer and he only, as is the case at present. On moving with the regiment (how this would agree with the foreign service roster is hard to conceive), he should again come under the command of the senior R.A.M.C. officer at his new station. Again he should mess at the R.A.M.C. mess where one exists, for, in the event of a retrogression to a regimental system in any way approaching to its old form, we may as well say "good-bye" to our messes, our independence, and our *esprit de corps*. Can anything be done to save us from the possibility of such a disaster before it is too late?

# MEDICO-LEGAL AND MEDICO-ETHICAL.

### PAYMENT FOR ATTENDANCE UPON THE FAMILIES OF MEDICAL MEN.

WITH reference to Dr. John W. Martin's note last week in which he expresses the regret he would feel at any change in the time-honoured custom by which medical men give their services to one another freely and without payment, we should like to say that his feeling is no doubt shared by most members of the profession, including ourselves, but the cases which have been submitted to us are those in which payment has been demanded, and we have been asked to state what is the legal and ethical position of the debtor.

### A CORONER'S INSTRUCTIONS TO THE POLICE.

A CORRESPONDENT sends us a copy of "instructions issued to the police" by the coroner of his district, and asks if they are not somewhat extraordinary.

We quite agree with our correspondent that these instructions are extraordinary and, it is to be hoped, unique. No. 1 is as follows:

In all cases of sudden death not attended by a medical man it is incumbent on the clergyman or parish officers, or both, to institute inquiries in order to ascertain if there is any reason to think the deceased has died from anything but natural causes, and to consider if there is any necessity for an inquest.

It is certainly not incumbent on any clergyman or parish officer to institute such inquiries; that duty devolves on the coroner himself, and should be undertaken by his own officer; it is also the duty of the coroner, and the coroner only, to consider whether an inquest is or is not necessary. Again we read:

The law is clear that an inquest is improper and illegal unless there is reason to think that the deceased has died from other than natural causes. The mere fact of a person dying without being attended by a medical man does not make an inquest necessary or legal.

The law is not clear that an inquest is either improper or illegal unless there is reason to think that death has arisen from other than natural causes; but the law is quite clear that if anyone has died suddenly, and the cause of death is not known, that it is the duty of the coroner to hold an inquest. (*Vide* Coroners Act, 1887, S. 3, Subs. I.) No inquest is illegal which the coroner in the proper exercise of his discretion considers necessary.

Again:

As it is desirable that the death should be registered before burial, you are desired in all cases of sudden death which are brought under your notice to direct one of the relations of the deceased to attend personally on the registrar of deaths without delay.

It is no part of the duty of the police under any circumstances to direct the relations of the deceased to attend personally on the registrar. If this is done by the police it should be a mere suggestion. The relatives are not bound to do anything of the sort, and the police have no authority to order them.

It is not easy to see how the coroner derives lawful authority to issue any instructions to the police, and judging from the above it is undesirable that he should have such power. It is not to be supposed for a moment however that such directions, miscalled instructions, would be approved of by the coroners generally throughout the country.

### EYESIGHT SPECIALISTS.

A CORRESPONDENT sends us an advertising circular issued by a Mr. Hayden, B.O.A., F.S.M.C., eyesight specialist, etc., and desires to have it brought to the notice of the Ethical Committee of the Association.

*** The Ethical Committee only deals with matters relating to the conduct of qualified practitioners, more especially members of the Association. The circular in question is very objectionable, and we have brought it under the notice of the Worshipful Company of Spectacle Makers, specially pointing out the impropriety of the use of the letters after the name, as suggesting medical or surgical qualifications. The company has promised to look into the matter. Our correspondent might bring the circular under the notice of one of the medical defence societies.

### WHAT IS A PHYSICIAN?

EQUITY writes: In connection with the query by "Listerian" I should like to make one or two remarks. I am one of three physicians on the staff of a provincial hospital. The now very old-established rules of the institution ordain that the physicians are to abstain from surgery, midwifery, and pharmacy in their private practice. The private liberty of the surgeons, on the other hand, is left absolutely untrammelled. They may put on their doorplate "physician and surgeon"; they may pose as operating surgeons, specialists in midwifery and diseases of the throat, nose, ear, etc.; and, lastly, in addition, act as consulting physicians. It appears to me absurd at the present time that upon accepting the post of physician to a provincial hospital the practitioner should be bound to forswear surgery, midwifery, and pharmacy in his private practice. One of the consequences is that very often the best men cannot afford to apply for the post of physician, knowing that other practitioners in the town will not hesitate to emphasise the very rule they themselves laugh at as obsolete and absurd. I remember it being once said that under the rule I allude to I had no right to vaccinate; and once a fellow practitioner took exception to the idea of my passing a catheter myself, maintaining that where a patient could afford it a surgeon ought to be called in. And to

give one more instance, a surgeon once gave me his opinion that under this regulation I had no right to perform paracentesis abdominis or thoracis. On the other hand, the provincial surgeon of the day is always on the *qui vive* to explore the abdomen for all sorts of obscure pains and symptoms, and he endeavours to do this when he can without brooking any interference at the hands of the physician. In my opinion, it is high time these out-of-date rules interfering with the outside liberty of the provincial hospital physician should be readjusted.

### ASSISTANTS' HOLIDAYS.

A. wishes to know what would be a reasonable holiday to be expected yearly by an assistant who is off duty very rarely. Also what is usual with regard to payment of salary during absence, and whether it is usual to supply the vacant post.

*** A fortnight would be a reasonable holiday. It is customary for the principal to pay the salary during the holiday, and where necessary to find a substitute to do the work.

### VALUE OF PRACTICE.

R. M. asks what would be the market value of his practice, which he is desirous of selling. He sends details of receipts for the last five years, and expenses.

*** The market value would probably be about one year's purchase, calculated on the average of the last five years; this, according to figures given, would be £410.

### A HOLIDAY DIFFICULTY.

"ANTITOXIN" writes with regard to an answer under this title, published on September 14th, that in the whole course of thirty-seven years' experience in medical practice he has always understood that if he attended a patient for another practitioner when away from home on any cause it was his duty to hand it over immediately on his return, and that according to our dictum, *Nous avons changé tout cela.* "Audi Alteram Partem" also writes to us on the same subject, and gives us his version of the facts of the case, which do not in any material degree differ from those already furnished us.

*** "Antitoxin" has misunderstood the intention of the answer. Speaking generally, it is as much the duty now, as it ever was, of a practitioner to retire from a case, which he has been attending for another during his absence, on the return of the latter. That was not the point in the case submitted to us. It was whether a deputy may continue to treat the case after the return of the other, where the patient insists on his doing so, on the principle of not changing horses while crossing a stream. In the case in question the practitioner consented to his deputy going on with the case, although with some unwillingness, and it would have been improper for him to have withheld his consent; the only result would have been that the patient would have called in a third practitioner.

### ALLEGED COVERING.

A CORRESPONDENT writes for an opinion on the following case: B. an unqualified practitioner in a country village, is attending a confinement, when the patient is taken so ill that it becomes necessary to call in further assistance. C., a qualified practitioner from an adjoining village is therefore called in, and later on notifies the case as one of enteric fever, but leaves the patient in the hands of B. Does this amount to "covering" by C. of an unqualified practitioner?

*** There would seem to be a *primâ facie* case of "covering." Our correspondent might communicate the facts to one of the medical defence societies.

### THE RELATIONS OF MEDICAL OFFICERS OF HEALTH TO THEIR PROFESSIONAL COLLEAGUES.

SPERO writes: A private medical man is attending a case of ringworm. He discovers one day that the case has been visited and inspected and suggestions for preventive treatment given by the lady health visitor of the Sanitary Office without his knowledge and consent. A complaint to the Sanitary Office is met by the medical officer of health asserting that he has a right to deal with these non-notifiable infectious cases irrespective of the medical attendant in the case. The Sanitary Committee absolved the lady visitor from all blame, on the ground that she did not inspect the case because she was requested to do so by the servant in charge of the child. Have the individual rights of a medical practitioner been trespassed upon in this case? If so, would you kindly suggest a line of action?

*** As we understand our correspondent's statement, the Health Committee maintains that the visit of the lady sanitary inspector was not official, while on the other hand the medical officer of health admits that it was, and contends that she was only doing her duty. We cannot agree with the medical officer's view. In any case, it is the duty of the medical officer of health to communicate with the medical practitioner before he visits a case himself or by deputy. Indiscreet action of this sort by medical officers of health is much to be regretted, as it hinders the progress of sanitary reform which these gentlemen have at heart, but which must depend to a large extent upon the cordial co-operation of private practitioners. It is difficult to see what more can be done, but the defence set up by the Health Committee amounts to an admission that their sanitary inspectors have no right to make such visitations.

# UNIVERSITIES AND COLLEGES.

## UNIVERSITY OF DURHAM.

FIRST EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.—The following candidates have satisfied the examiners:

*Chemistry, with Chemical Physics (Old Regulations).*—B. S. Mankar, L.S.A., London Hospital.

*Elementary Anatomy and Biology, Chemistry, and Physics.*—Honours—Second Class: R. I. Douglas, St. Bartholomew's Hospital. Pass List: J. H Cooke, College of Medicine, Newcastle-upon-Tyne; W. Cowden, College of Medicine, Newcastle-upo-Tyne; A. B. Jones, College of Medicine, Newcastle-upon-Tyne; W. E. C. Lunn, College of Medicine, Newcastle-upon-Tyne; R. G. S. Simpson, College of Medicine, Newcastle-upon Tyne.

*Chemistry and Physics.*—R. Bigg, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; J. B Cooke, College of Medicine, Newcastle-upon-Tyne; S. J. Fielding, St. Thomas's Hospital; A. Finlay, London Hospital; J. G. Gibb, St. Bartholomew's Hospital; R. V. Khedkar, Grant College, Bombay; C. C. Lavington, College of Medicine, Newcastle-upon-Tyne; E. L. Markham, College of Medicine, Newcastle-upon-Tyne; F. H. Moxon, College of Medicine, Newcastle-upon-Tyne; R. W. Pearson, M.R.C.S., L.R.C.P., Owens College, Manchester; A. J. Turner, London Hospital; E. Tate, College of Medicine, Newcastle-upon-Tyne; T. Visser, College of Medicine, Newcastle-upon-Tyne.

*Elementary Anatomy and Biology.*—H. B. Cunningham, College of Medicine, Newcastle-upon-Tyne; S. L. McBean, College of Medicine, Newcastle-upon-Tyne; J. C. Norman, College of Medicine, Newcastle-upon-Tyne.

*Elementary Anatomy.*—T. H. Bishop, Edinburgh University.

SECOND EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.—The following candidates have satisfied the examiners:

*Anatomy, Physiology, and Materia Medica.*—Honours—First Class: J. G. O. H. Lane, M.R.C.S., L.R.C.P., Guy's Hospital; T. W. Maddison, College of Medicine, Newcastle-upon-Tyne. Honours—Second Class: G. E. Lloyd, College of Medicine, Newcastle upon-Tyne. Pass List: J. A. Bell, St. Bartholomew's Hospital; L. A. H. Bulkeley, College of Newcastle-upon-Tyne; A. Budd, College of Medicine, Newcastle-upon-Tyne; H. M. Braithwaite, College of Medicine, Newcastle-upon-Tyne; H. Christal, College of Medicine, Newcastle-upon-Tyne; E. F. Edmunds, University College, Sheffield; H. E. Featherstone, College of Medicine, Newcastle-upon-Tyne; A. H. Hogg, College of Medicine, Newcastle-upon-Tyne; N. H. Hume, College of Medicine, Newcastle-upon-Tyne; W. W. Jones, Birmingham University; Sophia Bangham Jackson, University College, Cardiff; F. W. Kemp, College of Medicine, Newcastle-upon-Tyne; A. V. Maybury, Guy's Hospital; C. F. F. McDowall, College of Medicine, Newcastle-upon-Tyne; Constance Charlotte Robertson, College of Medicine, Newcastle-upon-Tyne; L. M. Rosten, St. Bartholomew's Hospital; S. Robson, College of Medicine, Newcastle-upon-Tyne; W. E. Stevenson, College of Medicine, Newcastle-upon-Tyne; W. Seymour, College of Medicine, Newcastle-upon-Tyne; F. R. Snell, St. Thomas's Hospital; A. L. Sheppard, College of Medicine, Newcastle-upon-Tyne; W. T. Sewell, College of Medicine, Newcastle-upon-Tyne; F. J. Strachan, College of Medicine, Newcastle-upon-Tyne; W. L. Tindle, College of Medicine, Newcastle-upon-Tyne; S. G. Webb, Birmingham University.

## SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, September, 1901.—The following candidates passed in:

*Surgery.*—H. Richardson (Sections I and II), Leeds; C. W. Rowntree (Sections I and II), Middlesex Hospital.

*Medicine.*—C. J. E. Edmonds (Sections I and II), St. Thomas's Hospital; R. L. Jones (Sections I and II), Middlesex Hospital; G. J. W. Keigwin (Section II). London Hospital; C. A. Lower (Section I), Guy's Hospital and Bristol; C. W. Rowntree (Sections I and II), Middlesex Hospital.

*Forensic Medicine.*—C. J. E. Edmonds, St. Thomas's Hospital; R. L. Jones, Middlesex Hospital; O. Millauro, Westminster Hospital; C. W. Rowntree, Middlesex Hospital; H. Smith, Birmingham.

*Midwifery.*—C. H. Allan, London Hospital; E. O. Libbey, Leeds; C. W. Rowntree, Middlesex Hospital; W. P. Taylor, Sheffield and Bristol; J. H Williams, London Hospital.

The diploma of the Society was granted to C. J. E. Edmonds, R. L. Jones, G. J. W. Keigwin, C. W. Rowntree, and H. Smith.

# PUBLIC HEALTH
## AND
# POOR-LAW MEDICAL SERVICES.

## INTERPRETATION OF THE VACCINATION ACTS AND ORDER.

THE Local Government Board has issued the following circular to Boards of Guardians:—

Local Government Board, Whitehall, S.W.,
September 17th, 1901.

SIR,—I am directed by the Local Government Board to state that they have had occasion to consult the law officers of the Crown upon certain questions which have recently arisen under the Vaccination Acts, 1867 to 1898, more particularly in connection with proceedings taken with a view to procuring an order for the vaccination of a child under the provisions of Section XXXI of the Vaccination Act, 1867.

The Board think it desirable that Boards of Guardians should be informed of the views which under the advice of the law officers, the Board entertain in respect to the points hereafter mentioned.

If in any case where an application is made to justices for an order for the vaccination of a child under Section XXXI of the Act of 1867, an objection is taken to the proceedings on any ground which may be antagonistic to the views expressed in this letter, and the justices seem inclined to dismiss the summons on that ground, the Board suggest that the justices should be made aware of their opinion on the subject, and of the fact that the opinion is based on the advice of the law officers of the Crown.

*Service of Public Vaccinator's Notice under Section I (3) of the Vaccination Act, 1898.*

It is not necessary that the notice to be given by a public vaccinator of his intention to visit the home of a child in order to offer to vaccinate it should be served personally upon the parent, or other person having the custody of the child, to whom it is given, or that it should be served by the public vaccinator or his deputy in person. It will be sufficient if the notice is served by post by prepaid letter, and the letter need not be registered.

*Service of Notice to Procure a Child's Vaccination under Section XXXI of the Vaccination Act, 1867.*

Neither is it necessary that the notice to procure a child's vaccination, referred to in Section XXXI of the Vaccination Act, 1867, which must be given as a preliminary to any proceedings under that enactment, should be served personally upon the parent, or other person having the custody of the child, to whom it is given, or that it should be served by the vaccination officer or by his deputy in person. It will be sufficient if this notice also is served by post by prepaid letter, and the letter need not be registered.

*Procedure under Section XXXI of the Act of 1867 for an Order for a Child's Vaccination.*

As the foundation for proceedings under Section XXXI of the Act of 1867, it is necessary that an information in writing should be given to a Justice stating (1) that the child with reference to whom the proceedings are taken has not been, or that the vaccination officer has reason to believe that it has not been, successfully vaccinated; (2) that the vaccination officer has given to the parent, or person having the custody of the child, notice to procure its being vaccinated; and (3) that this notice has been disregarded. Care should, of course, be taken by the vaccination officer to see before laying information that the child is still alive, that he has not received in respect of the child a valid certificate of insusceptibility or of conscientious objection on the part of the child's parent, and that he has not received a valid certificate postponing the child's vaccination. Upon this information the Justice may issue a summons to the parent or other custodian of the child; but upon the hearing of the summons the question to be determined is whether the child has or has not been vaccinated, or has already had small-pox.

*Irrelevancy of Section I (3) of the Vaccination Act, 1898, to Proceedings under Section XXXI of the Act of 1867.*

The provisions of Section I (3) of the Vaccination Act, 1898, have no relevancy to proceedings under Section XXXI of the Act of 1867. Consequently, upon hearing of the summons under the last-mentioned enactment for an order for the vaccination of a child, it will not be requisite for the prosecutor to prove, as part of his case, either that the public vaccinator of the district gave notice of his intention to visit the home of the child in order to vaccinate it, or that he did, in fact, visit the child's home and offer to vaccinate it.

*Irrelevancy of Notice to Produce a Child's Vaccination upon hearing of a Summons for an Order for Vaccination.*

Nor is it necessary, upon the hearing of such a summons as above referred to, that the prosecutor should in the first instance prove, as part of his case, that a notice to procure the child's vaccination, as mentioned in Section XXXI of the Act of 1867, was in fact given, and, strictly speaking, no point in regard to this notice can properly be raised.

*Proof of Service and Contents of Notice mentioned in Section XXXI of the Act of 1867, if required by Justices.*

In case, however, the justices before whom the summons is heard, hold, in disregard of the opinion expressed in the last preceding paragraph, that it is incumbent upon the prosecutor, either as part of his original case or by way of reply to a defence that may be raised touching this matter, to prove that a notice to procure the child's vaccination was given to the defendant, or to prove the contents of such a notice, the following points should be borne in mind:

(a) The service of such a notice will be *primâ facie* established by showing that it was sent to the defendant properly addressed, prepaid, and posted.

(b) It is not essential, in order to prove the contents of such a notice, either to give notice to the defendant to produce the actual notice that was given, or to put in evidence an exact or duplicate copy of it.

(c) The contents of such a notice may be sufficiently proved by verbal evidence.

*Advisability of Keeping Accurate Counterfoil of Notice under Section 81 of the Act of 1867.*

It will, at the same time, be desirable in order that there may be no doubt as to the exact terms of the notice in question, that the vaccination officer should, when using for the purposes of Section XXXI of the Act of 1867 one of the printed forms of notice to procure the vaccination of a child with which he has been furnished, either

(1) Fill in upon the counterfoil annexed to the form an accurate copy of the particulars filled in upon the form itself, so that the counterfoil shall, in fact, contain a duplicate of the notice served; or

(2) Make a duplicate with carbon paper on the form now supplied for this purpose by the Local Government Board.

This counterfoil or duplicate should be available at the hearing, and may be referred to by the vaccination officer for the purpose of establishing the contents of the notice actually given.

The Board request that a copy of this circular may be given to each vaccination officer in the Poor-law Union. Copies are enclosed for this purpose.—I am, Sir, your obedient servant,

S. B. PROVIS,
Secretary.

The Clerk to the Guardians.

## HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,269 births and 3,704 deaths were registered during the week ending Saturday last, September 21st. The annual rate of mortality in these towns, which had declined from 21.6 to 18.3 per 1,000 in the four preceding weeks, further decreased last week to 16.8. The rates in the several towns ranged from 11.2 in Bristol, 11.6 in Swansea, 11.8 in Derby, and 12.2 in Birkenhead, to 20.7 in Bolton, 22.7 in Gateshead, 25.2 in Burnley, and 25.6 in Sunderland. In the thirty-two large provincial towns the mean death-rate was 17.7 per 1,000, and exceeded by 2.1 the rate recorded in London, which was 15.6 per 1,000. The zymotic death-rate in the thirty-three towns averaged 3.3 per 1,000; in London this death-rate was equal to 2.6 per 1,000, while it averaged 3.8 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 5.9 in Salford and in Burnley, 6 in West Ham, 6.4 in Sunderland, and 7.6 in Gateshead. Scarlet fever caused a death-rate of 1 in Derby; whooping-cough of 1.1 in Swansea; "fever" of 1 in Plymouth, 1.1 in Nottingham, in Hull, and in Sunderland, 1.6 in Salford, and 2.2 in Huddersfield; and diarrhœal diseases of 3.7 in Hull, 4 in Sheffield, 4.1 in Newcastle, 4.3 in Sunderland, 5.4 in Burnley, and 6.6 in Gateshead. The death-rate from measles did not reach 1 per 1,000 in any of the large towns. The 49 deaths from diphtheria in these towns included 27 in London, 3 in West Ham, 2 in Halifax, 2 in Sheffield, and 2 in Hull. Three fatal cases of small-pox occurred last week in London, but not one in any other of the large towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals, which had been 74, 92, and 137 at the end of the three preceding weeks had further increased to 153 on Saturday last, September 21st; 37 new cases were admitted during the week, against 52, 31, and 62 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 3,098, against 2,294 and 3,064 on the two preceding Saturdays; 427 new cases were admitted during the week, against 303, 346, and 457 in the three preceding weeks.

## HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, September 21st, 899 births and 517 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.8, and 17.5 per 1,000 in the two preceding weeks, further declined last week to 16.2 per 1,000, and was 0.6 per 1,000 below the mean death-rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 7.9 in Perth and 11.3 in Dundee, to 20.9 in Aberdeen, and 21.3 in Greenock. The zymotic death-rate in these towns averaged 2.6 per 1,000, the highest rates being recorded in Paisley and Leith. The 244 deaths registered in Glasgow included 2 from measles, 2 from diphtheria, 7 from whooping-cough, 5 from "fever," and 24 from diarrhœa. Two fatal cases of measles, 3 of whooping-cough, and 10 of diarrhœa were recorded in Edinburgh. Two deaths from whooping-cough, and 4 from diarrhœa occurred in Leith: 6 from diarrhœa in Dundee, 5 in Aberdeen, and 3 in Paisley.

## THE HEALTH STATISTICS OF KIMBERLEY DURING THE SIEGE.

THE annual report for 1900 of Dr. W. W. Stoney, Medical Officer of Health of Kimberley, includes a short report on the health statistics of the town during its siege from October 15th, 1899, to February 15th, 1900, from which we extract the following particulars:—During the first few weeks of "those dreary 124 days" of the siege there was not more sickness than is usual at that time of the year, but from the middle of November onwards sickness rapidly increased, chiefly among the young children and natives of all ages. Thus among the European infants the mortality-rate was almost 500 per 1,000 born, among the coloured races 935 per 1,000. Roughly speaking the infantile mortality was doubled during the siege. During the siege, in December, a census was taken of the European and Cape-coloured population, not including natives; and later the population was estimated from the number of ration permits issued. By means of these indications Dr. Stoney came to the conclusion that there was a population of 18,000 white and 30,000 coloured persons. The number of total deaths in the four months of the siege was 133, 302, 585, and 609 respectively, which gives an annual death-rate of 104.9 per 1,000 persons, 48.5 per 1,000 for Europeans, and 138.8 per 1,000 for coloured races. The total number killed in warfare was 53, for example, not much over 3 per cent. of the total deaths from all causes. Only seven special diseases are enumerated in the statistical tables. These, however, suffice to indicate the main causes of excess of mortality in the four months of the siege. In the following table the corresponding data for four months of the previous years are given.

*Deaths in Kimberley in the Four Months, October 15th to February 15th.*

| Cause of Death. | 1897-8. | 1898-9. | 1899-1900. |
|---|---|---|---|
| Scurvy | 7 | 11 | 483 |
| Infantile diarrhœa and allied diseases | 121 | 106 | 336 |
| Pneumonia | 238 | 140 | 201 |
| Tuberculosis | 78 | 97 | 122 |
| Dysentery | 17 | 29 | 84 |
| Measles | — | 12 | 59 |
| Enteric fever | 11 | 8 | 32 |
| Killed in warfare | — | — | 53 |

The figures for 1897-8 relate to an estimated population of 41,500; for 1898-9 to an estimated population of 42,500, and for 1899-1900 to an estimated population of 48,000.

Scurvy was the most serious disease during the siege. It was almost entirely limited to the native population, only two or three decided cases occurring amongst Europeans. Among the natives the fatality was about 30 per cent. among the known cases. Dr. Storey remarks on the inability to combat this terrible disease owing to the want of proper food or lime-juice and other remedial measures. The juice of prickly pear leaves, Kafir beer, etc., were tried, but without avail. "The natives continued to get ill and to die until our supplies were replenished and they could be properly fed, when there was a sudden diminution in the number of cases."

The excess of diarrhœa shown in the table is not surprising in view of the difficulty in obtaining milk. The best possible use was made of the available supply by centralising the supply of fresh and condensed milk and issuing it only on orders signed by medical men to those who most needed it.

The excessive mortality from measles was undoubtedly favoured by overcrowding and lack of proper food. The subsequent history of relief camps bears on the same point. Measles has commonly increased in malignancy during the conditions prevailing in warfare.

Dysentery caused nearly four times the usual number of deaths during this season of the year, while pneumonia and tuberculosis did not greatly increase.

Enteric fever, unlike scurvy, prevailed chiefly among Europeans, there being 131 cases among them, as against 24 in the coloured. This is about four times the number of notifications usually received during the same time of the year. Of the total cases 75 were of men in the defence forces, which is not surprising, as they were often obliged to obtain water from the nearest well, dam, or other suspicious source. In the townships unusual care was taken regarding the drinking water, and the amount of this disease was not excessive.

The remaining portions of Dr. Stoney's report are most interesting, particularly the account of the difficulties he encountered in preventing the establishment and securing the removal of temporary military hospitals for enteric fever in the vicinity of the waterworks. It would have been well if every town and district within the range of the war in South Africa had possessed a civil or military medical officer equally competent and outspoken, and equally determined that if wrong plans were adopted, responsible authorities should be made fully acquainted with the risks incurred.

## CLAIM ON GUARDIANS BY MEDICAL OFFICER AFTER VOLUNTARY RESIGNATION OF APPOINTMENT.

UNDER this heading in the BRITISH MEDICAL JOURNAL of August 17th, p. 449, in reply to a correspondent it was stated that "A return of contributions paid towards superannuation cannot be claimed after a voluntary resignation"; but by Clause 7 of the Superannuation Act, "the guardians may, if they see fit, return out of the common fund of the union a sum equal to all or part of the contributions under the Act." Some doubt having been expressed as to the correctness of the interpretation here given of Clause 7, we referred the question to a legal authority, who writes:

"In answer to the question which has been raised by a correspondent as to whether a district medical officer who has contributed towards superannuation can, on resignation of his appointment at any time prior to becoming eligible for pension, claim a return of his contributions thereto, it would appear that he cannot make such a claim as of right, and that the guardians have no discretionary power to return to him his contributions. Section VIII of the Superannuation Act, 1896, which relates to those instances where a Poor-law officer can claim a return of the contributions he has made towards superannuation, specially excludes the case of voluntary resignation. Again, Section VII, which empowers 'the guardians, if they see fit, to return to the officer out of the common fund of the union a sum equal to the amount of all or part of his contributions under the Act,' only relates to an officer 'who is dismissed or resigns, or otherwise ceases to hold office in consequence of any offence of a fraudulent character, or of grave misconduct.' This section does not apply to voluntary resignation. Finally, the Local Government Board cannot under the Act, even if they were willing to do so, sanction the return of contributions in the case of voluntary resignation, since the Act gives them no power to that effect. Apart from the strict interpretation of the sections it will be seen that to return as a matter of course the contributions of an officer who voluntarily resigns his office would tend to defeat the very object of the Act."

As the matter is of great importance to many members of the medical profession we submitted the facts, together with the opinion just quoted, to Mr. W. E. Hempson, solicitor to the British Medical Association, who says that in his opinion the Act is perfectly clear and definite upon the point, and it expressly negatives such a power being exercised by the guardians. Mr. Hempson adds that the opinion above quoted correctly interprets the law on the subject.

## MILK AND MEAT FROM TUBERCULOUS ANIMALS.

IN the BRITISH MEDICAL JOURNAL of September 14th we mentioned that some medical officers of health had already taken steps to call attention locally to the recent circular of the Local Government Board with regard to tuberculosis in cattle. We now learn that Dr. Meredith Young, Medical Officer of Health for Stockport, has issued under the authority of the Sanitary Committee a special notice calling the particular attention of butchers and meat dealers to the determination of the Committee "not to relax in any degree the taking of all proper and practical measures for preventing the sale of tuberculous meat and milk." In the case of meat they will, through their officers, carry out the seizure of that from tuberculous animals on the lines laid down by the Royal Commission of 1898, and, in the case of milk from tuberculous animals, proceedings will be taken as heretofore in accordance with the provisions of the Dairies, Cowsheds, and Milkshops Orders 1885 and 1889, and the Stockport Corporation Act, 1899. Butchers and meat dealers are further warned that in cases where the existence or extent of any disease in an animal intended for human food is doubtful, or where there is any uncertainty as to the fitness or otherwise of any meat for human food, they should at once send word to the sanitary office, and obtain the opinion of the medical officer of health, or an inspector of the Sanitary Department. When this is done nothing whatever should be removed from the carcass or meat in question until it has been seen by the Sanitary Department officials, since if anything be dressed or trimmed away or any parts be missing, the officials of the department are instructed to regard such missing parts as having been in the worst condition possible, and to form their opinion as to the remainder of the carcass accordingly. The Sanitary Committee will not take any action against butchers or meat dealers who carry out the suggestion contained in this paragraph in good faith, but they reserve to themselves the right of taking legal proceedings (even though information be sent to them as suggested) should they have the slightest doubt about the perfect good faith of the responsible person.

## GLASGOW FEVER AND SMALL-POX HOSPITALS.

THE report of the City of Glasgow Fever and Small-pox Hospitals recently published shows that during the year ending May 31st, 1900, the cases admitted to the hospitals numbered 6,663, as compared with 5,936 in the previous year. The general mortality for the year was 8.7 per cent. Over 50 per cent. of the cases were cases of scarlet fever, about 17 per cent. cases of measles, about 12 per cent. enteric fever, and about 3 per cent. each of diphtheria and whooping-cough. In 6 cases of typhoid fever abdominal section was performed for perforation (in one of which, however, perforation had not actually occurred), and in all death occurred in from eleven hours to six days. Of 22 cases of typhus fever 11 were certified as enteric fever, 1 as measles, and 10 were correctly certified. During the year 69 cases of small-pox were treated. The first case of the epidemic was a sailor arriving from Bombay, who had never been revaccinated, and whose primary vaccination scar was a very small one (0.12 square inch). He died on the fifteenth day. The cases subsequently admitted were either directly or indirectly associated with this man. Of the 69 cases 6 were unvaccinated and 3 of these died. Three of the 63 vaccinated cases also died. In one there was a very small vaccination cicatrix measuring only 0.07 of a square inch and not foveated; in another a scar only 0.19 of a square inch and not foveated; and the third a scar of 0.12 of a square inch though well foveated. The two latter cases, besides being poorly vaccinated, had probably passed the limit of protection afforded by even thorough primary vaccination.

## THE DIAGNOSIS OF SMALL-POX.

A CORRESPONDENT complained last week that a case which he had notified as "variola discreta much modified by vaccination" was at once returned home as not one of small-pox, and we suggested that the Asylums Board should provide observation wards for doubtful cases, where they could be retained a few days until the variolous or non-variolous nature of the disease had definitely declared itself. In Glasgow and elsewhere when a medical practitioner has a doubtful case he, in many instances, promptly sends a message to the health officer, and the medical officer, or some one on his behalf, with special experience of small-pox, at once meets the notifying attendant so as to consult regarding diagnosis. This saves many a patient being removed needlessly, and solves the difficulty without fuss and disturbance.

## "GRANNY'S VACCINATION."

THE following rather amusing story was reported under the above heading in a contemporary the other day: "A labourer named Day, of Walton-on-Naze, yesterday applied to the magistrates at Thorpe, Essex, for a vaccination exemption certificate on the ground that the child's grandmother had died after vaccination. It was elicited that the grandmother was vaccinated when a baby. The certificate was granted by a majority of the Bench." As a pendant to this we may refer to the engaging candour of one of the speakers at the receat discussion at the London School Board, who said that he had an open mind on the subject of vaccination, because he had had small-pox and had also been vaccinated. Only in reply to a question did he add that he had small-pox before being vaccinated.

## PRESENTATION TO A MEDICAL OFFICER OF HEALTH.

AT the meeting of the Southend-on-Sea Town Council on September 18th, Dr. Avery Clough Waters, J.P., was presented with an illuminated address containing a copy of the following resolution, which was unanimously passed by the Council upon the occasion of Dr. Waters relinquishing his position as medical officer of health for the Borough:

"Resolved unanimously that the Council do place on record their high appreciation of the valuable services rendered to this borough by Dr. Avery Clough Waters, J.P., as Medical Officer of Health during the past six years and a-half, and their gratification at the present satisfactory sanitary condition of the town as the result of his labours, and that a copy of this resolution be suitably engrossed on vellum and presented to him."

Having regard to the fact that Dr. Waters will still continue to practise in Southend and the neighbourhood, the Council have obtained his acceptance of the appointment of Honorary Consulting Medical Officer of Health for the Borough.

## TUBERCULOSIS AND THE CATTLE TRADE.

MR. WILLIAM FIELD, M.P., President of the Irish Cattle Traders' and Stockowners' Association, and a Dublin butcher himself, has written a letter to the President of the Irish Local Government Board, asking him to appoint some professors on the Royal Commission on Tuberculosis who have preserved an open mind on the subject of the communicability of tuberculosis from animals to man. He is of opinion that the various interests involved should each be represented on the Commission; and, having alluded to the current belief that Professors Sims Woodhead, Sidney Martin, and McFadyean are already strongly opposed to the theory put forward by Professor Koch, and that Professor Boyce is regarded in Liverpool as an ultra-alarmist in his condemnation of tuberculous milk, he goes on to suggest for appointment the names of Dr. T. W. Hime of Bradford, Professor E. J. McWeeney of Dublin, and Professor Penberthy. In addition to these, he would have two gentlemen of intelli-

gence, not necessarily professional men, appointed. Mr. Field would no doubt willingly fill one of these latter positions. His contention that an Irishman should have a seat on the Commission is quite a fair one, and Professor McWeeney's name might well be added. But the members of the Commission are quite capable of sifting the evidence they may obtain and truthfully summarising the result.

### STAFF OF AN ISOLATION HOSPITAL.

M.O.H.—In extension of the reply under this head published in the BRITISH MEDICAL JOURNAL of September 14th, p. 751, we may say that in the case of an isolation hospital with 100 beds as described, it appears to be quite obvious that the services of a resident medical officer ought to be engaged.

### RESIDENCE OF PUBLIC VACCINATOR.

DELTA asks whether it is absolutely necessary for a public vaccinator to reside within the limits of the district in which he vaccinates.

*** It is not necessary for a public vaccinator to reside in the district for which he acts in such capacity, but the Local Government Board, before approving his contract with the guardians, make inquiries in regard to his place of residence, and would presumably require some guarantee that his work would not suffer by his living outside his district. A public vaccinator may hold two or more districts, and under different Boards of Guardians, if duly appointed and approved by the central authority.

### MEDICAL QUALIFICATIONS FOR POOR-LAW APPOINTMENTS.

A CORRESPONDENT asks whether a M.R.C.S.Eng. is eligible to hold a Poor-law appointment either as workhouse or district medical officer.

*** This entirely depends upon the date of his diploma. Workhouse or district medical officers are required to "be registered as qualified to practise both medicine and surgery." If the diploma was obtained before the Act of 1886 came into operation he is not fully qualified for Poor-law practice. A medical man registered with one qualification only may be appointed by the guardians, however, if there are very special circumstances which satisfy the Local Government Board that his appointment is desirable; but any diploma issued in accordance with the Act of 1886 qualifies fully for all practice, Poor-law appointments included.

### POOR-LAW OFFICERS AS AFFECTED BY INCOME TAX.

W.S. WRITES to ask what authority there is for the belief that the superannuation allowance of Poor-law officers is not chargeable with income tax.

*** The belief is an error. The clerks of all Boards of Guardians have to make a return to the surveyor of taxes of the district of all pensions paid under the Superannuation Act, and the recipients of these pensions are then assessed by the income-tax officials. The mistake alluded to by our correspondent has probably arisen from the decision which has been announced in reference to the taxation of salaries of Poor-law officers, which is that these salaries are not assessible in full for income tax, but that the amount paid as contribution towards superannuation is to be allowed as a deduction before the salary is assessed for taxation.

## HOSPITAL AND DISPENSARY MANAGEMENT.

### POPLAR AND STEPNEY SICK ASYLUM DISTRICT.

THE report of the managers of the Poplar and Stepney Sick Asylum District for the year ending Lady Day, 1901, bears evidence of a highly praiseworthy activity. A building for the reception of 78 ophthalmic and ringworm cases, erected on the Brunswick Pier at Blackwall, has been opened since the issue of the previous report, and 19 children have been sent to this branch asylum from the Sick Asylum at Bromley. A deputation was appointed to wait on the Local Government Board in order to represent that, in the opinion of a conference of metropolitan Poor-law authorities, the time has come when provision should be made for the open-air treatment of the sick poor of the metropolis suffering from consumption.

### NORTHAMPTON INFIRMARY.

FROM sanitary considerations it has been recognised for some considerable time that radical alterations were necessary in the Northampton General Infirmary. On August 13th the Governors of the hospital adopted a scheme for what will amount to its rebuilding at a cost of £20,000. Towards this amount £15,000 has already been promised as subscriptions.

### A NEW MIDDLESEX ASYLUM.

ON August 20th Mr. E. A. Sandford Fawcett, the Inspector appointed by the Local Government Board, held an inquiry regarding the application of the Middlesex County Council for powers to borrow the sum of a quarter of a million sterling for the purposes of the new lunatic asylum which they propose to erect at Napsbury, St. Albans, Herts. There was no opposition to the scheme. The asylum will be constructed to accommodate 1,150 inmates, and is estimated to cost £350,000. The loan of £250,000 for which consent was asked will be devoted entirely to general building purposes, and not to the payment of the cost of machinery. The site has already been purchased at a cost of about £50,000, and the foundations of the main building are nearly completed. That there is great need for the new asylum is particularly shown by the fact that many lunatics, for whom the Middlesex County Council has to make provision, are boarded out in asylums under the control of other bodies. The Inspector intimated at the close of the inquiry that he should make his report to the Local Government Board without delay, so that the building operations might not be retarded.

## MEDICAL NEWS.

STATE COLONY FOR THE INSANE IN MASSACHUSETTS.—The Massachusetts State Board of Insanity has selected a site for the new State Colony for the Insane authorised by the last Legislature. The site covers an area of 1,500 to 2,000 acres, and has an elevation of 12,000 feet above sea level.

FRENCH UROLOGICAL ASSOCIATION.—The fifth annual meeting of the French Urological Association will be held in Paris on October 24th, 25th, and 26th, under the presidency of Professor Guyon. The subject proposed for discussion is: Movable Kidney: Pathology and Indications for Operation.

PRESENTATION.—Dr. Edward Rice Morgan, of Morriston, Glamorganshire, was presented on September 12th with an illuminated address and a ring, on the occasion of his return from a voyage round the world, in recognition of the many valuable services rendered by him to the community in which he lived.

DRS. MARCHOUX AND SIMOND, of the French Colonial Medical Service, have been nominated by the Minister for the Colonies to be members of the scientific expedition, which, under the direction of the Pasteur Institute, is to investigate yellow fever in Brazil. The expedition will start from Bordeaux on October 4th.

NOTIFICATION OF PHTHISIS IN NEW ZEALAND.—Consumption has been placed on the list of notifiable diseases in New Zealand. One object of the Minister of Health in making the ordinance is to prevent the letting of houses which have been inhabited by persons suffering from consumption without previous thorough disinfection and notice given to incoming tenants.

A GIFT TO A HOSPITAL.—At the London Temperance Hospital on September 22nd a stained glass window was unveiled, which is the work of the donor, and was given as a token of appreciation of the kindness and benefits received by his brother as a patient of the hospital. It is pictorial in design, representing a Biblical subject, with appropriate inscriptions.

ITALIAN OBSTETRICAL CONGRESS.—The Congress of Italian Obstetricians and Gynæcologists will be held in Rome on October 2nd and three following days. Among the questions proposed for discussion are the following: Cystoscopy in gynæcology (to be introduced by Professor L. Mangiagalli); and uncontrollable vomiting in pregnancy (to be introduced by Professor I. Clivio).

THE MEDICAL REGULATION OF MARRIAGE.—A Bill recently introduced in the Colorado House of Representatives provides for a Board of medical examiners whose duty it shall be to decide upon the fitness for marriage of all applicants for marriage licences, which may not be issued unless the Medical Board recommends it. The Board is to sit ten days in every month. A number of diseases and certain defects in family records are declared to be bars to marriage after the passage of the measures.

FEMALE MEDICAL STUDENTS IN SWISS UNIVERSITIES.—The number of women studying medicine in the universities of Switzerland has increased so much during recent years that in some of them there are more female than male students. At Bern, for instance, there are 190 women as against 174 men. At Geneva, though the masculine element still predominates, the female does not come far short of it, there being 168 women to 183 men. The total number of women now studying medicine in the several universities of Switzerland is 511. One lady, Madame Bornstein, who not long ago received the doctor's degree at Berlin, has lately taken the same degree in Switzerland. Among the successful candidates on the occasion was her son.

The General Secretary of the Thirteenth International Congress of Medicine, held in Paris last year, desires it to be known that the printing and forwarding of the general volume, and of the seventeen records of the sections is completed. Any member who has not received the volumes to which he is entitled is requested to communicate with MM. Masson et Cie, 120, Boulevard St. Germains, Paris. It will be impossible to comply with applications received after December 31st, 1901.

Canadian Medical Association.—What is described as the most successful meeting of the Canadian Medical Association ever held was that in Winnipeg, Manitoba, on August 28th to 31st. Much progress was made in the question of Dominion Registration, and a Medical Protective Association formed. The next meeting of the Association will take place in Montreal. The following officers were elected:—President: Dr. Francis J. Shepherd (Montreal). General Secretary: Dr. George Elliott (Toronto). Treasurer: Dr. Henry B. Small (Ottawa).

North India School of Medicine for Women.—We have received an appeal from Lady Macnaghten and Miss E. Brown, M.D., Honorary Secretaries of the North India School of Medicine Fund. The document states that in consequence of inquiries made by women medical missionaries in the Punjab as to the possibility of obtaining the assistance of native Christian girls of good family as fully qualified house surgeons, anæsthetists and nurses, the North India School of Medicine for Women, Ludhiana, Punjab, was established six years ago. The enterprise has proved successful, but as the medical school is not affiliated to any university the students are at present only eligible for the Indian Government examination for Hospital Assistants, the University of Lahore is now willing to affiliate the school as soon as three more members are added to the teaching staff, and good laboratories for anatomy, chemistry, physiology, and bacteriology have been provided. The 100 beds required for clinical teaching are already established. In order to build and furnish the laboratories and an operating theatre and to supply the outfit and passage of the extra members of the staff a sum of £5,000 is needed. Subscriptions may be sent to Lady Macnaghten, 198, Queen's Gate, S.W., or Miss E. Brown, 120, St. James's Road, West Croydon, or to the North India School of Medicine Fund, Union Bank, Tottenham Court Road Branch. Among the members of the committee are Mrs. Percy Fleming, M.D., the Bishop of Calcutta, Dr. W. J. Smyly, and Mr. Pearce Gould, F.R.C.S.

Alfred Bevan Memorial Convalescent Home.—The need for convalescent homes for poor persons recovering from incapacitating diseases or injuries is no less urgent than the need for hospitals themselves, and in view of the crowded state of our general hospitals, and the constant *vis a tergo* such hospitals afford, convalescent homes are fit objects for philanthropy, and if necessary for public assistance. A new convalescent home for men, women, and children was formally opened by Mr. R. W. Perks, M.P., at Sandgate recently. It is to be conducted by the same management as the Morley House Seaside Convalescent Home for Working Men at St. Margaret's Bay, Dover, and on similar lines. The new home, called the Alfred Bevan Memorial, has accommodation for 250 convalescents. It was bought by the Morley House Governors last year as an extension of their work at Dover. The two homes depend largely on the small weekly contributions or annual collections from working men and working women. The City Police contribute every year to the funds, and have had set apart for their use a large dormitory for constables, while the inspectors and other officers have had allotted to them a suite of rooms overlooking the sea. The institution is managed by working men. A special effort is to be made to clear off the debt of £15,000 which exists, and at the opening ceremony some £700 was promised or received, including 100 guineas from Mr. Perks, 250 guineas from the executors of the late Mr. Alfred Bevan, and £250 from Miss Ada Bevan, as a first instalment of £1,000 to be paid within twelve months. The terms on which patients are received are very low, and not only is the locality most suitable from a health point of view, but the place itself is very well arranged.

## MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM: GENERAL HOSPITAL.—Two Assistant House-Physicians. Appointments for three months. Salary at the rate of £50 per annum with residence, board, and washing. Applications to the House Governor by October 3rd.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Resident Surgical Officer. Salary, £100 per annum, with apartments, board, and attendance. Candidates to state if willing to accept appointment of Junior House-Surgeon if present residents be promoted. Applications to the Chairman of the Medical Board by October 12th.

BOURNEMOUTH: ROYAL VICTORIA HOSPITAL.—House Surgeon. Salary, £100 per annum, with board. Applications to the Chairman by October 14th.

BRENTWOOD: ESSEX COUNTY ASYLUM.—Junior Assistant Medical Officer; not over 25 years of age. Salary, £140 per annum. Applications to the Medical Superintendent.

BRIDGNORTH AND SOUTH SHROPSHIRE INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board and lodgings. Applications to the Honorary Secretary by October 16th.

BRIGHTON: ROYAL AND SUSSEX THROAT AND EAR HOSPITAL, Church Street, Brighton.—Non-resident House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £75 per annum. Applications to the Secretary.

BRISTOL GENERAL HOSPITAL.—(1) Physician to the Skin Department. (2) Physician. (3) Assistant Physician. Applications to the Secretary by October 2nd.

BURTON-ON-TRENT INFIRMARY.—House-Surgeon. Salary, £130 for first year, and £140 for second year, with board, furnished rooms, etc. Applications to the Honorary Secretary by October 11th.

CARDIFF INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £75 per annum, with board, washing, and apartments. Applications, endorsed, "Assistant House-Surgeon," to be sent to the Secretary by September 30th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Physician to Out-patients. Applications to the Secretary by October 5th.

CHICHESTER INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by September 30th.

DENBIGH: DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary, £100 per annum to commence, with board, residence, and washing. Applications to the Secretary.

DENBIGH: NORTH WALES COUNTIES LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary, £120 to £160, with board, residence, and washing. Applications to Clerk to the Visiting Committee.

DENTAL HOSPITAL OF LONDON, Leicester Square, W.—(1) Dental Surgeon. (2) Assistant Dental Surgeon. Applications to the Secretary by October 7th.

DERBY COUNTY ASYLUM, Mickleover.—Senior Assistant Medical Officer. Salary, £130, rising to £150 per annum, with furnished apartments, board, washing, and attendance. Applications to the Medical Superintendent.

FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, residence, and laundry. Applications to the Secretary before October 1st.

GRAVESEND HOSPITAL.—House-Surgeon. Salary, £90 per annum, with board and residence. Applications to the Honorary Secretary by October 11th.

HAMPSTEAD HOSPITAL, Parliament Hill, N.W.—Dental Surgeon. Applications to the Honorary Secretary by October 8th.

HAVERSTOCK HILL AND MALDEN ROAD PROVIDENT DISPENSARY, 132, Malden Road, N.W.—Medical Officer. Applications to the Honorary Secretary by October 1st.

HERTFORDSHIRE COUNTY ASYLUM, Hill End, St. Albans.—Junior Assistant Medical Officer, unmarried, and not over 30 years of age. Salary, £160 per annum, with board, furnished apartments, and washing. Applications to the Medical Superintendent.

HOSPITAL FOR WOMEN, Soho Square, W.—Assistant Physician. Applications to the Secretary by October 12th.

KING'S COLLEGE, London.—Demonstrator of General Pathology and Bacteriology. Applications to the Council by October 9th.

LANCASHIRE COUNTY ASYLUM, Winwick, Newtown-le-Willows.—(1) Senior Assistant Medical Officer. Salary, £225 per annum. (2) Second Assistant Medical Officer. Salary, £175 per annum. (3) Assistant Medical Officer. Salary £150 per annum. Board, lodging, and washing provided in each case. Applications to the Medical Superintendent.

LIVERPOOL INFIRMARY FOR CHILDREN.—House-Surgeon. Salary, £85 per annum, with board and lodging. Applications to the Honorary Secretary by September 30th.

LONDON HOSPITAL, Whitechapel, E.—Surgical Registrar. Salary, £140 per annum. Applications to the House-Governor by October 3rd.

LONDON THROAT HOSPITAL, 204, Great Portland Street, W.—Pathologist. Applications to the Honorary Secretary before October 7th.

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury.—Medical Officer for the Dispensary. Salary, £180 per annum. Applications to the Secretary, Children's Dispensary, Gartside Street, Manchester, by October 9th.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon. Salary, £80 per annum, with apartments and board. Applications to Mr. H. Teague, Secretary, 38, Barton Arcade, Manchester, by September 30th.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House-Surgeon. Honorarium at the rate of £50 per annum and board. Applications to Mr. G. W. Fox, 53, Princess Street, Manchester, by October 4th.

MARGATE: ROYAL SEA-BATHING HOSPITAL.—Resident Surgeon. Salary, £120 per annum, with board and residence. Applications to the Secretary at the offices, 30, Charing Cross, London, S.W., by October 5th.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—(1) Female Senior Clinical Assistant for Children's Department. Appointment for two years. (2) Female Clinical Assistants in the Out-patient Department. Applications to the Secretary by October 2nd.

NOTTINGHAM CHILDREN'S HOSPITAL.—House-Surgeon, unmarried. Appointment for six months, but eligible for re-election. Salary at the rate of £100 per annum, with board and residence. Applications to the Secretary, Mr. A. F. Kirby, St. Peter's Church Walk, Nottingham, by September 30th.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—Curator and Librarian. Salary, £120 per annum. Applications to the Secretary by October 10th.

ST. MARK'S HOSPITAL FOR FISTULA, etc., City Road.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary by October 2nd.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Curator of Museum and Assistant Pathologist. Salary, £100 per annum. Applications to the Dean by October 5th.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Marylebone Road, N.W.—(1) Two Anæsthetists. Honorarium, £20 per annum. (2) Physician to the Out-department. Applications to the Secretary by October 1st.

SEAMEN'S HOSPITAL, Greenwich, S.E.—House-Surgeon. Salary, £50 per annum, with board, residence, and washing. Applications to the Secretary by October 5th.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House-Surgeon. Salary, £60 per annum with board, lodging, and washing. Applications to the House-Surgeon by October 10th.

STIRLING DISTRICT ASYLUM, Larbert, N.B.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, etc. Applications to the Medical Superintendent.

STOKE-UPON-TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House Physician. Salary, £100 per annum, increasing £10 yearly at discretion of Committee with furnished apartments, board, and washing. Applications to the Secretary by October 21st.

SUNDERLAND, MONKWEARMOUTH AND SOUTHWICK HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary by September 30th.

TAUNTON: TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House-Surgeon. Appointment for six months. Salary at the rate of £60 per annum, with board, lodging, and laundry. Applications to the Honorary Secretary.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon, unmarried. Salary, £10 per annum, increasing £10 yearly, with board and apartments. Applications to Mr. J. C. R. Crewes, 4, Parsvedras Terrace, Truro.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, S.W.—House-Physician. Appointment for six months. Honorarium, £25, with board and lodging. Applications to the Secretary by October 5th.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Senior House Surgeon, unmarried. Salary, £120 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by October 9th.

WANDSWORTH AND CLAPHAM UNION INFIRMARY, St. John's Hill, S.W.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and washing. Applications to the Medical Superintendent.

## MEDICAL APPOINTMENTS.

ADDENBROOKE, H. H. H., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Solihull Union.

BEESLEY, Robert W., M.D., C.M.Edin., M.R.C.P.Edin., M.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Medical Officer to the Bolton Infirmary and Dispensary.

BRANWELL, C., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Fifth District of the Penzance Union, *vice* J. P. Milton, M.R.C.S., L.R.C.P.Lond., resigned.

BRYCE, William H., M.B., C.M.Edin., appointed Honorary Medical Officer to the Bolton Infirmary and Dispensary.

BYFORD, W. F., M.R.C.S., L.R.C.P.Lond., reappointed Medical Officer of Health to the Ruthin Town Council.

CALTHORP, Gordon, M.B., B.C Camb., appointed Medical Officer of Health for the Wells Urban and Port Sanitary District, *vice* J. S. Mellish, M.R.C.S.Eng., L.R.C.P.Lond., resigned.

DIXON, J. L. B., M.D., B.S.Vict., appointed Assistant Medical Officer of Health of the City of Brisbane, Queensland.

GILMER, H. A. H., M.B., Ch.B.Edin., appointed House-Surgeon to the David Lewis Northern Hospital, Liverpool.

HILL, A. W., M.D., appointed Ophthalmic Surgeon to the Adelaide Hospital.

HOYSTEAD, L. N., M.R.C.S.Eng., L.R.C.P.Lond., appointed Officer of Health for Hampden, Victoria.

HUMPHREY, E. S., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer at Southern Cross, Western Australia.

JOHNSON, H., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the South District of the Lincoln Union.

JOHNSON, William Crosby, M.B., Ch.B.Vict., appointed Junior House-Surgeon to the Salford Royal Hospital.

JUDSON, Joseph Edward, M.R.C.S.Eng., L.R.C.P.Lond., appointed Senior Resident Medical Omcer of the Manchester Workhouse, Crumpsall, *vice* W. B. Anderton, M.B.Lond., M.R.C.S., resigned.

LAUDER, R. E., F.R.C.S., L.R.C.P.Edin., D.P.H., appointed Medical Officer of Health for the Borough and Port of Southampton, *vice* A. Wellesley Harris, M.R.C.S.Eng., D.P.H., resigned.

MACDONNELL, E. R. A., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Lifton District of the Tavistock Union, *vice* W. K. Taylor, L.R.C.S.I., L.M., resigned.

MACKENZIE, F. D. S., M.B., Ch.B.Edin., appointed Assistant House-Surgeon to the David Lewis Northern Hospital, Liverpool.

MATTHEWS, J. F., M.R.C.S.Eng., appointed Officer of Health for Portland E., Victoria.

MAYNE, B. J., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Illogan District of the Redruth Union, *vice* E. D. Duffett, L.R.C.P., L.R.C.S.Edin, resigned.

ROGERS, R. S., M.A., M.D., appointed Honorary Physician to the Adelaide Hospital.

SCOTT, B. C., M.R.C.S.Eng., appointed Assistant Medical Officer to the West Bromwich Union Workhouse.

SHEPHERD, A. E., L.R.C.P., L.R.C.S.Edin., appointed Honorary Surgeon to the Adelaide Hospital.

SLEEMAN, J. H., M.B., appointed Officer of Health for Ballin, E., Victoria.

SNOW, C. B., B.A., B.Sc., M.B., Ch.B.Edin., appointed House-Physician to the David Lewis Northern Hospital, Liverpool.

STEPHENS, G. Arbour, M.D., B.S.Lond., appointed Honorary Physician to the Royal Cambrian Institution for Deaf and Dumb, *vice* J. G. Hall, M.R.C.S.Eng.

STOKES, E. S., M.B., Ch.M.Syd., appointed Assistant Medical Officer of Health for the Sydney Metropolitan Combined Diftrict.

SUGDEN, D'Arcy, L.R.C.P.Lond., M.R.C.S.Eng., appointed District Medical Officer of the Totnes Union, *vice* H. S. Johnson, M.R.C.P.I., L.F.P.S.Glasg., resigned.

WYNNE, E. T., M.D.Camb., L.R.C.P.Lond., M.R.C.S.Eng., appointed to the Hospital at St. George, Queensland.

## DIARY FOR NEXT WEEK.

### WEDNESDAY.

**Obstetrical Society of London,** 20, Hanover Square, W., 8 P.M.—Specimens will be shown by Drs. Lewers, Herbert Spencer, and others. Paper: Dr. Herman: Leucæmia and Pregnancy.

### FRIDAY.

**West London Medico-Chirurgical Society,** West LondonHospital, Hammersmith Road, W., 8.30 P.M.—Inaugural Address by Mr. Alfred Cooper, the President.

**West Kent Medico-Chirurgical Society,** Royal West Kent Dispensary, Greenwich Road, S.E., 8.15 P.M.—Clinical Evening: Cases will be shown by Dr. Toogood, Dr. Scholefield, and Dr. Dockrell.

**Medical Graduates' College and Polyclinic,** 22, Chenics Street, W.C. Lectures and Demonstrations will be given at 4 P.M. as follows: Monday, skin: Tuesday, medical; Wednesday, surgical: Thursday, surgical; Friday, throat.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

CAZALET.—On September 22nd, at "Arlan," Brunswick Road, Sutton, Surrey, the wife of Granville W. Cazalet, L.R.C.P.Lond., M.R.C.S.Eng., of a son.

CHEVES.—September 20th, the wife of Dr. W. R. Cheves, 213, Sheffield Road, Barnsley, of a son.

INCE.—On the 31st August last, at Bloomendal, Mowbray, Capetown, S.A., the wife of John Samuel Ince, only surviving son of Surgeon-Major John Ince, M.D., I.M.S. (retired), of Swanley, Kent, of a son.

### MARRIAGES.

BLOOMER—MARSHALL.—On September 18th, at Parish Church, Long Eaton, by the Rev. J. S. Tucker, M.A., Headmaster Trent College, assisted by the Rev. J. F. Tomlinson, M.A., Frederick William Bloomer, M.R.C.S., L.S.A., of Long Eaton, to Evelyn Annie, eldest daughter of Mr. and Mrs John Marshall, The Beeches, Long Eaton.

CORBEN—OCKENDEN.—On the 17th, at St. George Hanover Square, by the Rev. E. J. Haynes, Charles Corben, M.R.C.S., etc., Caldicot, Chepstow, to Annie Bulmer, widow of the late R. J. Ockenden, and third daughter of the late Major John Godson, Madras Staff Corps.

## LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

### QUERIES.

INSTITUTION FOR YOUTH MENTALLY DEFICIENT.

GUARDIAN desires to hear of an institution where a youth, now in the workhouse and somewhat deficient, could be received. It is felt, our correspondent adds, that his is one of those cases that are now dealt with very successfully in some institutions. The guardians would be willing to contribute a certain amount regularly.

CONSTRUCTION OF SURGERY AND DISPENSARY.

D. writes: I am about to build surgeries consisting of dispensary, two consulting rooms, waiting rooms, operating room, and conveniences below, with a dispenser's house above. I am in doubt on these points: (1) Wood block flooring or ordinary flooring? (2) Heating: hot water, or open fires or gas stoves. (3) How fully to utilise electric supply for lighting purposes in other ways—galvano-cautery, etc., and even for galvanic and faradic work?

INDICATIONS FOR CIRCUMCISION.

W. E. H. writes: What is the generally received opinion as to the efficacy or otherwise of the operation of circumcision in infancy as a preventive of the habit of masturbation later?

*** While there appears to be considerable divergence of opinion as to the benefit which might accrue from circumcision if universally practised in infancy as amongst the Jews, there seems to be no doubt that whenever a long prepuce exists with contracted orifice the operation is indicated to prevent the genital irritation which results from smegma and other secretion apt to accumulate under the prepuce. This may become the exciting cause of masturbation in very early life, and more especially at the period of puberty. The late Dr. Robert Fowler stated (*Lancet*, April 14th, 1860) from his experience in practice amongst the East End Jews that onanism was comparatively rare amongst the youths of that race.

### ANSWERS.

TRUSS AFTER COLOTOMY.

B. writes: In answer to "K. H. H." I would say that the most satisfactory truss that I have seen in operation is one made by White and Wright, 93, Renshaw Street, Liverpool. The special feature of this truss is that it is fitted with a pneumatic plug.

HARVEST BUGS.

DR. F. SEYMOUR JACKSON (Aberdovey) writes: It may interest your readers to hear of a remedy that I have never found to fail, and generally the cure is permanent—that is, solution of phenate of soda (Woolley). The relief to the intense itching is immediate, as I had very striking personal proof only last night.

UTERINE MASSAGE.

G. H.—"Uterine massage" means that the patient, lying on her back with her knees drawn up, the operator introduces one or two fingers into the vagina, and then rubs or kneads the uterus and its appendages with the other hand placed on the abdomen, counter pressure being applied by the fingers in the vagina. This is continued for some ten or twenty minutes at a sitting. There is no good book on the subject in English. It is not looked on with favour by the leading English gynæcologists.

SURGEONS TO PASSENGER VESSELS.

R. N. and H. O. J.—The conditions of appointment as surgeon to passenger vessels running to the East and Australasia vary. Application should in all cases be made to the owners or managers. We are informed that in the case of the Peninsular and Oriental Steam Navigation Company (122, Leadenhall Street, E.C.) and the Orient Steamship Company (Fenchurch Avenue, E.C.) personal application must be made at the head office with testimonials; pay £10 per month, preliminary expenses £20 to £40. In the case of the New Zealand Shipping Company (Messrs. Gray, Dawes, and Co., Craven Place, Northumberland Avenue, W.C.), and the Shaw, Savill, and Albion Co.) 37, Leadenhall

Street, E.C.) personal application must be made, the pay is about £6 per month, and the preliminary expenses are small. For the White Star Line (Leadenhall Street, E.C.) personal application must be made, the pay is about £8 per month. In the case of some other lines the appointment is made for the voyage only, and there is no pay and no uniform.

### Sweating Hands.

Dr. W. H. Brazil (Bolton) writes: If your correspondent, "Distressed," who inquires respecting the treatment of sweating hands, will try the following prescription, I venture to think that both he and his patient will be gratified with the result: ℞ Formalin ℥ss, aq. rosæ ad ℥viij, M. ft. lotio. Sig. To be applied once or twice a day with a piece of lint and allowed to dry.

### Motor Cars.

Dr. S. R. Hunter (High Street, Clapham, S.W.) writes: In the British Medical Journal of September 21st I notice a query regarding motor cars, also your answer to it. I beg to say that I have been using a New Orleans motor car for some time in my practice with the greatest satisfaction and economy. The car is most reliable. I have never been delayed through "breaking down," and it can take any hill likely to be met with; also I have taken the car for a tour through the South of England for three weeks, doing from thirty to sixty miles daily with the greatest comfort. The car makes very little noise and there is no vibration.

### Treatment of Chronic Urticaria.

Dr. Norman Meachen (New Cavendish Street, W.) writes: This chronic form of urticaria is very troublesome, and is often, as in the case quoted, peculiarly resistant to treatment, both external and internal. "W. C. C." might try calcium chloride, as originally suggested by Professor Wright, in doses of 20 grs. three times a day. If that fail, he might adopt the following plan recommended to me by a patient to whom it had given relief, a long-standing case in which the mucous membranes were also affected, and all the usual remedies proved of no avail. An infusion is made from the fully-developed leaves of the common stinging nettle in an ordinary teapot with boiling water, and a teacup full of the resulting liquor is taken hot every four hours. This treatment may savour somewhat of the mediæval times or the modern herbalist, but it is possible that the nettle, which in itself is capable of producing true urticaria by simple contact, may also contain some kind of antitoxin which, when rendered soluble, might possess some antagonistic or curative property. At any rate, the method might be worth a trial.

Mr. J. Scanlan, Surgeon (Haulbowline, Cork Harbour) writes: I was handed over a case of a young girl suffering from this troublesome disease to experiment upon, as, like "W. C. C.," all the usual remedies had been tried. I gave her full doses of citric acid four times a day, put her on milk diet, and told her to eat plenty of lemons. I had the satisfaction of seeing the urticaria vanish, and so far have not heard of a recurrence. I have no means of finding out whether the cure was effected by the treatment or some other factor unknown to me.

Dr. W. H. Hewlett (Wivenhoe, Essex) writes: "W. C. C." should try sodium bicarbonate in doses of gr.xxx to xc, with decoct. aloes co., in small doses every four hours, and employ externally chloral hydrat. ℥j, liq. am. acetatis ℥vj as a lotion, or benzoic acid ℥j to water Oj. The mixture must, of course, be diluted.

Dr. C. H. Geoffrey Ramsbottom (Southampton) writes: Having carefully read "W. C. C.'s" remarks, and noted the numerous remedies he has tried, and his thoroughness and diligence in this case of "urticaria chronica," I venture—knowing the intractability of this affection from experience—to make a few suggestions that occur to me, and shall be indeed happy if they prove of any service to your correspondent.

1. Carefully search for pediculi, bug, or other insect bites.
2. Examine underclothing, to discover if causing irritation, particularly if dyed.
3. Note if any intestinal worms.
4. Has patient menstruated? In anæmic amenorrhœic women such an eruption occasionally occurs.

Having investigated the above, treat appropriately if found.

The following general treatment having been successful with me, I now mention:

1. An alkaline mixture containing sodii bicarb. and magnesii carb. given before a meal.
2. Administration of thyroid gland either in powder or tablet, tabloid or palatinoid after meals, increasing gradually its dose, and watching its effect in the usual way with usual precautions.
3. Alkaline baths, about ℥iv sodii bicarb. to bath, every night.
4. The local application every night after bath of the following lotion: Liq. carbonis detergens ℥ij; acid hydrocyanic dil. ℥j; aq. ad ℥x; every morning, also, if irritable.
5. Mental and bodily rest, so useful in the neurotic form, to which category this probably belongs.
6. Suitable diet and usual hygienic care.
7. After subsidence of most troublesome symptoms, suitable iron preparation, with cod-liver oil, will be beneficial, I think.
8. I would also suggest either electric baths or the electricity applied by means of the brush discharge from a Tesla coil, which has had a marked effect upon some skin affections, and is worth a trial in such an obstinate case, and may be combined with other treatment, such as thyroid, etc.

### Dry Climates in England.

A. H. B. writes: It may interest seekers after a dry climate to know that the rainfall for the nine months of this year, up to date, has only been 15.5 inches in Ilkley-in-Wharfedale. There was no rain at all for thirteen weeks, and this, after a phenomenally mild and sunny winter, has been associated with a remarkably low death-rate and sick-rate. Our average death-rate for the last ten years is under 10 per 1,000, but this year it bids fair to be less, as on more than one occasion the monthly death-rate has been only 4 per 1,000. Needless to say that tuberculous and pulmonary complaints have been greatly benefited in this climate.

## LETTERS, NOTES, Etc.

### Extermination of Household Insects.

Mr. W. R. Beattie (Division of Botany, U.S. Department of Agriculture) has described in *Science* (August 23rd, 1901) a method of using hydrocyanic acid gas for exterminating household insects, which he states to be very effective. It is obvious, of course, that the method must only be used with great care and under skilled supervision. The following is his description of the way of carrying out the method:

The materials employed and the method of procedure are as follows: After ascertaining the cubic contents of the enclosure provide a glass or stoneware (not metal) vessel of two to four gallons capacity for each 5,000 cubic feet of space to be fumigated. Distribute the jars according to the space and run a smooth cord from each jar to a common point near an outside door where they may all be fastened; support the cord above the jar by means of the back of a chair or other convenient object in such a position that when the load of cyanide of potassium is attached it will hang directly over the centre of the jar. Next weigh out upon a piece of soft paper 500 grams (about 17.1 ozs.) of 98 per cent. pure cyanide of potassium, using a large pair of forceps for handling the lumps; wrap up and place in a paper bag and tie to the end of the cord over the jar. After the load for each jar has been similarly provided it is well to test the working of the cords to see that they do not catch or bind. Then remove the jar a short distance from under the load of cyanide and place it in a little more than a quart of water, to which slowly add one and one-half pints of commercial sulphuric acid, stirring freely. The action of the acid will bring the temperature of the combination almost to the boiling point. Replace the jars beneath the bags of cyanide, spreading a large sheet of heavy paper on the floor to catch any acid that may possibly fly over the edge of the jar when the cyanide is dropped, or as a result of the violent chemical action which follows. Close all outside openings and open up the interior of the apartment as much as possible in order that the full strength of the gas may reach the hiding places of the insects. See that all entrances are locked or guarded on the outside to prevent persons entering, then leave the building, releasing the cords as you go. The gas will all be given off in a few minutes, and should remain in the building at least three hours.

When the sulphuric acid comes in contact with the cyanide of potassium the result is the formation of sulphate of potash, which remains in the jar, and the hydrocyanic acid is liberated and escapes into the air. The chemical action is so violent as to cause a sputtering, and frequently particles of the acid are thrown over the sides of the jar; this may be prevented by supporting a sheet of stiff paper over the jar by means of a hole in the centre through which the cord supporting the cyanide of potassium is passed, so that when the cord is released the paper will descend with the cyanide, and remain at rest on the top of the jar, but will not prevent the easy descent of the cyanide into the acid. The weight of this paper will in no way interfere with the escape of the gas.

At the end of the time required for fumigation the windows and doors should be opened from the outside, and the gas allowed to escape before anyone enters the building. A general cleaning should follow, as the insects leave their hiding places and—dying on the floors—are easily swept up and burned. The sulphate of potash remaining in the jars is poisonous, and should be immediately buried, and the jars themselves filled with earth or ashes. No food that has remained during fumigation should be used, and thorough ventilation should be maintained for several hours. After one of our experiments it was noted that ice-water which had remained in a closed cooler had taken up the gas, and had both the odour and taste of cyanide.

For dwellings one fumigation each year would be sufficient, but for storage houses it may be necessary to make an application every three or four months to keep them entirely free from insect pests. The cost of materials for one application is about fifty cents for each 5,000 cubic feet of space to be treated. The cyanide of potassium can be purchased at about thirty-five cents per pound, and the commercial sulphuric acid at about four cents per pound. The strength of the dose may be increased and the time of exposure somewhat shortened, but this increases the cost and does not do the work so thoroughly. In no case, however, should the dose exceed 0.22 gram or remain less than one hour.

*** We are informed by Messrs. Hockin, Wilson, and Company that the wholesale price in this country for potassium cyanide fused about 30 per cent. would be about 9½d. a pound, 40 per cent. 1s. a pound, 50 per cent. 1s. 2d.; commercial sulphuric acid would be about one penny a pound.

### The Third Stage of Labour.

Dr. Alexander Duke, Ex-Assistant Master, Rotunda Hospital, Dublin (Cheltenham) writes: *Apropos* of remarks made by "Opsimathès" in his letter on the above subject in the British Medical Journal of September 21st, I can state I have never found any harm to result from traction on the cord if made in the proper direction and combined with "expression" from above at the same time. Of course I take it for granted that a sufficient interval has been allowed from the birth of the infant to see what Nature will do, the hand of the attendant resting over the uterus all the time. The "auld wife" plan of a pinch of snuff is sometimes useful. If there is no yielding felt when traction is made on the cord combined with expression by the other hand, but a springy sensation experienced like drawing on a rubber cord, it is evident the placenta is retained by morbid adhesions, and must be removed manually.

Dr. A. C. Barron (Dailly, Ayrshire, N.B.) writes: During a practice of ten years I began my first half-dozen cases by waiting patiently and standing on sentry on the uterus, and in the prescribed quarter of an hour taking away the placenta by traction on the cord. Then I read Play fair's recommendation to remove the placenta by expression, and I vowed never again to remove a placenta by traction on the cord, but

my third case, "a great-bellied woman," defied me to do it by expression; but after my hand had acquired experience in its work, I became able to do it in even these ill-to-get-at cases.

Opismathês must take note that such a thing as "undue force" is never necessary. The point to aim at for success is to get the hand to well surround the uterus and then close the hand firmly and, so to speak, squirt the placenta out. It is not by any means always the strongest grip that sends the placenta on to the bed.

Retained membranes I find a constantly occurring grief to many men. I adopt the plan of taking the placenta in my right hand off the bed after it has been expressed, and very gently and slowly draw the membranes out in the direction in which I find they are inclined to come easiest, and they come without any trouble. I have found many women in greater fear of the removal of the placenta than of the bearing of the child, owing to their experience of this "going up" for the placenta.

For the last three years I have made it a point in every case that I must have the placenta removed within five minutes from the moment the child was born. Only once have I exceeded that time and as the sign I will mention later on of the placenta having separated was absent, I after waiting half an hour, went home to breakfast for an hour, and my sign being present on my return the placenta came away on my first grasp of the uterus. I have the placenta more often removed in one and a-half to two minutes from the birth of the child than I have been over two minutes. With even the weakest patient I consider it more necessary to remove the placenta in that brief interval, because the comfort in the relief to these weak ones that everything is finished is a stimulus of no mean power to them to revive.

The appearance of a tiny trickle of blood from the vagina is to me a sign that the placenta is separating, and I look upon it as an indication that the placenta is ready for removal and a call to remove it, and this sign I find appears very early. I obey it, though frequently I find it not necessary to wait its appearance, and I have never had any misfortune in any form from this early removal of the placenta; but on the contrary I am convinced it is in every respect a gain. I am never in fear of *post-partum* hæmorrhage. I very rarely give a dose of ergot. To me the chief charm of this early removal of the placenta is in witnessing the immediate facial expression of relief and comfort that is given by every mother when she is told "now your work is all finished, everything is away." Never having had an "hour-glass contraction" nor a placenta that it was necessary to "go up" for, nor one "growing to the side," whatever that may mean, I cannot share the pleasure that those who experience those worries would have if they adopted this earlier expression of the placenta. One thing I am certain of in this early interference is that the uterus gets no time to play such tricks as contracting like an hour-glass.

DR. WILLIAM LEGGE (Derby) writes: In reply to your correspondent as to the management of the placenta, I may say that during a practice of nearly fifty years I have invariably avoided delay in the removal of the placenta. I fail to see any reason for waiting for "after-pains." On the birth of the head if a little resistance is offered to the too rapid following of the shoulders and body, the uterus is emptied of its whole contents at once; then, if firm pressure is made over the contracting uterus, the placenta, with slight traction on the cord, follows naturally. In my opinion speedy removal of the placenta is the proper and reasonable method. Of course, adherent placenta is a different matter, but I have found young practitioners imagine themselves confronted with this serious complication simply because they have allowed the contracting uterus to grip the after-birth—a result of delay.

G. P. writes: For 13 years I have had a large midwifery practice, reaching at one time over 300 cases in the year. I always use some traction on the cord, and always express. I proceed to remove the placenta as soon as I have placed the baby on one side. I have never lost a case from *post-partum* hæmorrhage. I have not had hour-glass contraction for years, and have never inverted the uterus. After experience I find one can save time, and I think patients, by departing from the orthodox. I do not say this boastfully, as we all know expertness comes with practice. When removing the placenta it is a good plan to place the right hand on the uterus with the arm between the patient's thighs. Twist the cord in and out the fingers of the left hand, coax the uterus to contract; do not knead hard. If there is a soft corner palpate the part gently, and when the organ is hardening equally (slight traction on the cord will stimulate the uterus), give the expression suddenly, and pull more strongly on the cord. Then is just the right moment to tell the patient to bear down, which has to be learnt. Should the effort fail (which it seldom does) wait two or three minutes and try again.

### RIBERI PRIZE.

THE tenth award of the Riberi Prize of £800 (subject to taxation) will be made by the Turin Academy of Medicine to the author of a work, printed or manuscript, composed during the period 1897-1901, or of a discovery made during the same period. The work or discovery must relate to experimental pathology, hygiene, or forensic medicine. Works sent in for competition may be written in Italian, French, or Latin. Printed books must bear a date more recent than 1896, and two copies must be sent to the Academy, post free. Manuscripts must be written legibly; they will remain the property of the Academy, but the author may have copies made at his own expense. If the Academy should award the prize to a work in manuscript, the author will be required to publish it before receiving the amount of the prize, and must undertake to send two copies to the Academy. All books or papers presented for competition must be in the hands of the General Secretary of the Academy, Dr. B. Silva, on or before December 31st, 1901.

### RELAPSING ERYSIPELAS.

DR. D. MCASKIE (London, N.) writes: In the BRITISH MEDICAL JOURNAL of September 21st you criticise Dr. Tom Robinson in his book on eczema for describing "relapsing erysipelas," and you say it is only eczema. A case I have at present, I think, bears out the truth of Dr. Robinson's statements. Eighteen years ago the patient had his first attack, and remained free till last year. Last year with the attack his temperature was 105°, and he had much constitutional disturbance, and was unable to leave his house for some weeks. At present he has another relapse. It began as a red patch extending from the nose on the left side round the eye and down the cheek, being rather circular in outline and having a diameter of about three inches. It felt hot to the touch, and showed an abrupt margin. When stretched it did not turn white, and about the centre of the patch a serous fluid exuded. The red colour was more intense than we usually see in any form of eczema. Next day his temperature was 100°, and to-day (the third day) his temperature is 104°, while the rash has spread to the right side of the face and up the forehead to the roots of the hair. The eye is but little affected. He has not at any time had disease of the nose. That it began as an eczema and then turned to erysipelas we have no proof, for from the first there was the abrupt margin and rise of temperature and the hot feeling. Till you suggest a better name I will, with Dr. Robinson, call it "relapsing erysipelas."

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**LETTERS, COMMUNICATIONS, ETC., have been received from**

**A** Anticant; A. L. C.; Anti-Humbug. **B** Mr. J. Batteson, London; Messrs. Baillière, Tindall and Cox, London; Mr. C. E. Bell, Exeter; Mr. C. Ballard, Oxford; A. C. Barron, M.B., Dailly; Mr. A. W. Bodger, London; Dr. W. H. Brazil, B lton; Dr. F. Bushnell, Plymouth; Dr. A. H. Bampton, Ilkley-in-Wharfedale; Mr. H. N. Barnett, London. **C** Sir W. S. Church, Bart., London; Cutis; C. P. W. N.; Mr. W. H. Coupland, Lancaster; Dr. L. Canney, London; Mrs. Cook, West Hartlepool; C. W. O.; Dr. W. Calwell, Belfast; Mr. P. J. Cammidge, Wakefield; E. M. Corner, M.B., London; S. Crawshaw, M.B., Ashton-under-Lyne: Country M.D. **D** F. W. Dobbin, M.B., Carrigrohane; Mr. W. A. Densham, Middleburg, Transvaal; Dr. A. Duke, Cheltenham; Dr. L. Drage, Hatfield; H. B. Densham, M.B., Stockton; Mr. E. E. Dale, Salisbury; Dr. F. A. Dixey, Oxford. **E** Equity; Mr. T. S. Ellis, Gloucester. **F** F.R.C.S.Eng.; Dr. W. F. Farquharson, Carlisle; F. C. **G** Mr. T. Gurney, London; Mr. H. Gilford, Reading; Mr. A. E. Goddard, London; Mr. H. C. T. Gardner, London; Dr. J. Griffiths, Cambridge; J. Goodall, M.B., Barry; Guardian; G. P. **H** Messrs. Hockin, Wilson and Co., London; Dr. S. R. Hunter, London; Dr. J. P. Henry, London; Mr. G. Hamilton, Bordighera; Mr. W. H. Hall, Tunbridge Wells; Dr. W. H. Hewlett, Wivenhoe; A. C. Houston, M.B., London; Sir C. Hill, London; Dr. J. Hamilton, London; Dr. R. T. Hewlett, London; Dr. G. W. Hill, London; Mr. T. F. Hopgood, Sunderland. **J** Dr. G. P. Johnson, Stoke-on-Trent; Dr. R. Jones, Woodford Bridge; Mrs. Jones, Bristol; Mr. F. S. Jackson, Aberdovey. **K** Mr. B. Kuhn, London; Dr. T. H. Kellock, London; Messrs. Kilner Brothers, London. **L** Lupus; C. F. Lillie, M.B., Folkestone; Layman; Mr. W. Legge, Derby; Dr. A. P. Luff, London. **M** Much Tried; Mr. M. C. Moxham, Boston, Lincs.; A. E. Maylard, M.B., Glasgow; Dr. D. McKenzie, Leyton; Dr. E. Magennis, Dublin; G. N. Meachen, M.B., London; J. W. Milligan, M.B., Abersychan; Mr. P. Murphy, Hove; Dr. McAskie, M.B., London; Mr. E. A. Mossman, St. Leonards-on-Sea; C. H. Milburn, M.B., Hull; Mr. J. McKay, London; Mr. P. Michelli, London; Dr. P. F. Macgregor, London; Mr. H. Marsh, St. Boswells. **N** Mr. H. Norman, London; No Retrogression; Dr. A. T. Nisbet, Newton Abbott. **P** Mr. H. J. Prangley, London; Mr. G. Pernet, London; Mr. G. C. Peachey, Wantage; Mr. Y. J. Pentland, Edinburgh. **R** Dr. J. M. Rhodes, Didsbury; Dr. E. S. Reynolds, Manchester; Dr. J. A. Riviere, Paris; Dr. J. B. Ridley, Bromley, Kent; Dr. C. H. G. Ramsbottom, Southampton; Mr. T. F. Raven, Broadstairs; Reader; Mr. C. S. Redmond, Manchester. **S** Mr. E. Saywell, Nottingham; Spero; Dr. H. Smith, London; Dr. C. O. Stead, Hawkhurst; Mr. K. Schall, London; Dr. H. B. Shaw, London; E. W. Sharp, M.B., Bury; E. A. Saunders, M.B., London; Mr. A. M. Sydney-Turner, Hove; W. R. Speirs, Haltwhistle; Mr. J. J. Scanlan, Haulowline. **T** Tobermory; Mr. J. W. Taylor, Birmingham; A. D. Turner, M.B., Felixstowe; E. H. Thomas, M.D., Dehra Dun. **U** United Breweries Company, Manager of, London. **W** Dr. H. Woods, London; W. E. H.; Dr. H. Walsham, London; Mr. C. H. Warren, London; Dr. D. Walsh, London; etc.

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## BOOKS, ETC., RECEIVED.

Memoirs and Letters of Sir James Paget. Edited by Stephen Paget, one of his sons. London: Longmans, Green and Co. 1901.

Die Ursprung der Syphilis. Von Dr. I. Bloch. Erste Abteilung. Jena: Gustav Fischer. 1901. M.6.

The Scientific Roll. Conducted by A. Ramsay. Bacteria. Vol. i, No. 3. London: R. L. Sharland. 1s.

Dragons of the Air: An Account of Extinct Flying Reptiles. By H. G. Seeley, F.R.S. London: Methuen and Co. 1901. 6s.

Motherhood. By C. J. Glasson, M.D., M.R.C.S., L.R.C.P. London: John Bale, Sons, and Danielsson. 1901. 1s. 6d.

Pocket Handbook for Monthly Nurses. By M. Chenery. London: Simpkin and Co. 1s.

Use-Inheritance illustrated by the Direction of Hair on the Bodies of Animals. By W. Kidd, M.D., F.Z.S. London: A. and C. Black. 1901. 2s. 6d.

Morbus Hungaricus. Von Dr. T. von Györy. Jena: Gustav Fischer. 1901. M.5.

Atlas der Krankheiten der Nase. Von Dr. P. H. Gerber. Lief. 4. London: Williams and Norgate. 1901. 6s.

A Manual of Surgery. By W. Rose, M.B., B.S., F.R.C.S., and A. Carless, M.S., F.R.C.S. Fourth Edition. London: Baillière, Tindall and Cox. 1901. 21s.

Erkrankungen der Gefässe. Von Professor L. v. Schrötter. II Hæfte. Wien: A. Hölder. 1901. M.4.60.

Proceedings for the New York Pathological Society for the Years 1899 and 1900. New York: The Knickerbocker Press. 1901.

A Manual of Determinative Bacteriology. By F. D. Chester: London and New York: Macmillan and Co. 1901. 10s. 6d.

International Directory of Laryngologists and Otologists. Compiled by R. Lake, F.R.C.S. Second Edition: London: Rebman Limited. 1901. 5s.

*** In forwarding books the publishers are requested to state the selling price.

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SIXTY-NINTH ANNUAL MEETING

OF THE

# British Medical Association.

*Held at Cheltenham, July 30th, 31st, August 1st, and 2nd, 1901.*

PROCEEDINGS OF SECTIONS

## SECTION OF OBSTETRIC MEDICINE AND GYNÆCOLOGY.

Professor J. W. Byers, M.A., M.D., M.A.O. (Hon. Causâ). President.

### INTRODUCTORY REMARKS BY THE PRESIDENT ON PUERPERAL FEVER, UTERINE CANCER, AND THE FALLING BIRTH-RATE.

My first duty, as President of the Section of Obstetric Medicine and Gynæcology, is to thank the Council of the Association for the high honour they have done me. No compliment could be more pleasing, and, especially from the circumstance that I succeed those distinguished members of our profession who, from all parts of the United Kingdom, have, in previous years, occupied this position.

This is a historic occasion, inasmuch as it is the first meeting of the British Medical Association held in a new century. It is, therefore, only natural that we should seize upon the present as a suitable time to look backwards, and to ask how have obstetric medicine and gynæcology advanced during the nineteenth century, a period more fertile in the results of scientific research than that of almost all the years that have gone before. It was during the century that has recently come to a close that the great obstetrician, Simpson, discovered the practical application of anæsthesia in labour, and that the methods of antisepsis and asepsis were gradually evolved; and these two all-important aids have really been the causes of the enormous advances in both obstetrics and gynæcology during the past quarter of a century. By their combined help operations (such as Cæsarean section and symphysiotomy) which had formerly been abandoned with regret, owing to their high mortality, have been re-established as recognised safe measures of practice, and many new and improved methods of treatment have been from time to time successfully introduced. Conditions which before were regarded as incurable were treated with marvellous success, and, as a result, both diagnosis and technique have been almost revolutionised, because during these operations the obstetrician or gynæcologist was brought face to face with situations hitherto undescribed, while, as a further result, the morbid specimens removed have given to the science of pathology an enormous impetus by affording an opportunity for the study of interesting material which had not before been described.

In the early part of the nineteenth century Naegele's pamphlet on *The Mechanism of Labour* gave us what Tyler Smith called the "Euclid of Obstetrics:" in more recent years Barbour's *Anatomy of Labour*, as studied in frozen sections, has done much to make our knowledge of that interesting process more correct. While the eighteenth century will always be remarkable for the work done by William Hunter on obstetrical anatomy as investigated by dissection, the nineteenth century has enormously advanced our ideas of the subject by enabling us—thanks to improved methods—to observe it as presented in a series of frozen sections. By a careful study of these sections, taken at successive stages, we have the whole progress of labour placed before our eyes, and we can follow it step by step as we read the pages of a book. Several of the leaves are still wanting in this volume of sectional anatomy, but when it is complete we shall have what I may term a sort of cinematograph representation of the whole progress of labour, which undoubtedly will exercise a most important influence on clinical work. The nineteenth century will always have associated with it the practical application of abdominal palpation, which is such an addition to aseptic midwifery, by limiting the necessity for frequent vaginal examinations.

It was during the century that is gone that the axis-traction forceps were invented, that the management of the third stage of labour was placed on a scientific basis, and that we have learned better how to deal with such complications as the hæmorrhages which may occur both before and after the birth of the child. Almost all our knowledge of the diagnosis and treatment of extrauterine pregnancy and of deciduoma malignum has been gained, and by the perfection of other operative measures, craniotomy on a living child has been, we hope, banished. Some in this room remember when it was thought that all lying-in hospitals must be closed owing to their being hotbeds of puerperal fever; at the close of the century we had to admit that in no place is a parturient woman so safe. Turning to the sister science gynæcology, what rapid and brilliant strides it has made in the last twenty-five years. Diagnosis has been rendered more exact by the bimanual method of examination in the dorsal posture. Proper views have arisen as to uterine displacements, and owing to the success of ovariotomy, not only have thousands of years been added to the sum total of woman's life, but as a result the great triumphs of abdominal and pelvic surgery have followed. Vaginal cœliotomy has been established as a most useful alternative in many cases to abdominal section, and, largely owing to the Trendelenburg position, abdominal hysterectomy for fibroids has become a more and more successful proceeding. Our ideas as to the inflammatory diseases of the appendages and of pelvic hæmatocele have been revolutionised; but with all this enormous progress, there are two subjects about which unfortunately we cannot boast—puerperal fever and uterine cancer. It is indeed a terrible blot on our obstetric art that while within the memory of many of us puerperal fever has been banished from maternities in which formerly it was so prevalent, the same good results have not followed in general practice. I will give statistics from the three kingdoms.

#### Mortality from Puerperal Fever.

*England and Wales.*

In 1847-1856 the mortality from puerperal fever was in England and Wales 1.8 per 1,000. It rose to 2.28 in 1875-1884, and to 2.46 in 1886 1895.

The following figures (which I owe to the kindness of Dr. Boxall, who has taken such an interest in this question) give the most recent available statistics:

| Year. | Deaths from Puerperal Fever. | Death-rate from Puerperal Fever per 1,000 births. |
|---|---|---|
| 1895 | 1,849 | 2.0 |
| 1896 | 2,053 | 2.2 |
| 1897 | 1,836 | 1.9 |
| 1898 | 1,707 | 1.8 |
| 1899 | 1,908 | 2.0 |

Dr. John Tatham, Statistical Superintendent, General Register Office, has kindly supplied me with the following most interesting details:

*Deaths of Women at all Ages from Puerperal Fever and other Accidents of Childbirth per 1,000 Registered Births in England and Wales.*

| | |
|---|---|
| 1871-80 ... ... ... ... | 4.72 |
| 1881-90 ... ... ... ... | 4.73 |
| 1891-99 ... ... ... ... | 5.12 |

*Ireland.*

The following return showing the number of deaths in Ireland tabulated under Parturition (accidents) and Puerperal Fever, I owe to the courtesy of Mr. R. E. Matheson, Registrar-General of Ireland:

| Years. | Total. | Death-rate per 1,000 Births Registered. |
|---|---|---|
| 1895 | 760 | 7.2 |
| 1896 | 670 | 6.3 |
| 1897 | 606 | 5.5 |
| 1898 | 560 | 5.3 |
| 1899 | 601 | 5.8 |

For the same years the deaths from puerperal fever for the whole of Ireland were:

| Year. | Rate per 1,000 Births. |
|---|---|
| 1895 | 3.0 |
| 1896 | 2.3 |
| 1897 | 2.1 |
| 1898 | 1.7 |
| 1899 | 2.0 |

*Scotland.*

I am obliged to the Registrar-General of Scotland for giving me the following

*Table Showing the Death-rate from Puerperal Fever in Scotland during the Five Years, 1895-99.*

| Year. | Number of Deaths. | Proportion in Every 100,000 of Female Population. | Proportion in Every 10,000 Specified Causes of Death. |
|---|---|---|---|
| 1895 | 253 | 12 | 62 |
| 1896 | 220 | 9 | 63 |
| 1897 | 205 | 9 | 52 |
| 1898 | 227 | 10 | 59 |
| 1899 | 214 | 10 | 54 |

Statistics of the Rotunda Hospital.

We may contrast these lamentable statistics with the ollowing returns for the last two years of the practice of the Rotunda Hospital, the largest lying-in charity in the three Kingdôms:

*Mortality at the Rotunda Hospital for the Years 1898-99 and 1899-1900.*

| | 1898-99. | 1899-1900. |
|---|---|---|
| Intern Maternity: | | |
| Total cases | 1,591 | 1,560 |
| Total mortality | 10 | 6 |
| Percentage mortality | 0.62 | 0.38 |
| Mortality from sepsis (2 of these admitted septic) | 5 | 0 |
| Extern Maternity: | | |
| Total cases | 2,163 | 2,109 |
| Total mortality | 8 | 5 |
| Percentage mortality | 0.36 | 0.23 |
| Mortality from sepsis | 2 | 0 |
| Total cases | 3,754 | 3,669 |
| Total percentage | 0.47 | 0.27 |

For two years the total was 7,423 and the percentage 0.39.

These figures should make those of us who are teachers feel how great is our responsibility, and that our efforts should be redoubled in urging upon students the importance of regarding the process of labour as a natural one, and not to be lightly interfered with unless Nature herself should fail, and that if interference becomes necessary they should use exactly the same antiseptic precautions that they see employed in any gynæcological operation. It is by the observation of these two principles—the avoidance of meddlesome interference and the rigid use of antiseptic principles—that we may hope that in the present century the occurrence of puerperal fever will eventually be as rare in private practice as it became in the nineteenth century in lying-in hospitals.

Cancer of the Uterus.

The other subject in regard to which, I am afraid, we cannot congratulate ourselves is cancer of the uterus. How does it originate? Why is it so common? Nay, more, why (at least, this is my experience) is it becoming more prevalent? These questions surely demand solution. I am reluctantly forced to agree with a statement made by a distinguished American *confrère*. Dr. Baldy, in a paper read before the Section of Gynecology, College of Physicians of Philadelphia, February 21st, 1901: "Cancer affecting the cervix uteri is one of the most deadly diseases with which medical men have to deal. By far the largest proportion of these patients eventually die of cancer, be it from the primary lesion or from a recurrence. And this in spite of all that has been done for them either surgically or medically." No doubt some gynæcologists may say the explanation is that operation is not done early enough, but as Dr. Baldy fairly asks, "What is sufficiently early?" Every gynæcologist of experience must admit he or she has met with cases where recurrence took place rapidly in what seemed to be at the time of operation a most promising condition, while, again, women with extensive disease have remained well for years after operation. We have passed through the stages of vaginal and of abdominal hysterectomy for cancer of the cervix, but I ask, have we up to the present made much real progress? It is not the immediate results of the operation we want to know, it is the subsequent history of the patients. At the present time we can unfortunately suggest no other plan of treatment of cancer of the cervix except by operation, but surely we cannot boast much if the statement of Baldy is correct that the most recent statistics, those reported in Cullen's work on *Cancer*, and the review of cases by Winter of Königsberg, show that in reality less than 5 per cent. of all cases applying for treatment of cancer of the uterus are saved by operation. The obvious lesson is that to ensure any real success we must urge on practitioners the enormous importance of early diagnosis, and that the one symptom which should always be regarded with suspicion is abnormal hæmorrhage. Any woman with abnormal hæmorrhage at any age, and especially if she is over 35 years, demands the most careful clinical examination. Let us hope for greater progress in the future.

The Falling Birth-rate.

Having glanced in what, I am afraid, is a very cursory survey at the progress of these subjects which specially concerns us, let me turn to another question of the greatest interest to the State as well as to the medical profession. During the present year the public press has been calling special attention to the falling birth-rate. It would appear that in England and Wales in 1861-71 the birth-rate per 1,000 was 34.8. In 1871-81 it was 34.7; in 1891 it was 31.4 per 1,000: and since then it has steadily gone down until in the last year of the century 1900 it was only 29 per 1,000. In 1875 35 children were born in the United Kingdom for each 1,000 of the population, while in 1900 there were only 29. In other words, this means for our population of 41½ millions we are losing 249,000 children annually, and the birth-rate has fallen by 2.67 in the last ten years. The actual increase of the popula- of England and Wales is due to the fall in the death-rate and the increase of immigration.

We are thus rapidly in England approaching the condit on prevailing for some time in France and America. It is not for me at present to discuss the causes of this declining birth-rate: rather my duty is to ask what remedy can we as doctors suggest to combat a state of matters which, from a national and imperial standpoint, must be regarded as most unsatisfactory. If fewer children are in the future to be born in this country, we must redouble our efforts to lower the high death-rate of infants, which during the first year of life amounts in England to 154 per 1,000, by teaching the people to pay much greater attention to rear their children properly and by urging the public authorities to provide an adequat supply of pure milk. Our American friends are far ahead c us in such matters, and they showed their usual extraordinar enterprise last summer, when they sent pure, non-sterilize milk from various parts of the States (Illinois, New Jerse and New York) to the Paris Exhibition, where it was actuali pronounced better than the average milk sold in the ground Quite recently the Rockefeller Institution for Medic

Research, founded by a gift of £40,000 from the millionaire whose name it bears, has decided that the first investigations to be undertaken by the scientific experts connected with it will be to co-operate with the New York Board of Health in studying the milk supply and the contaminated article as a source of danger. But we may also attack this serious problem in another way by taking greater precautions when a woman is pregnant that she may give birth both to a living and healthy child; in other words, we must take more care to combat those conditions which are so dangerous to the child's life before and during its birth. I am afraid it is still too frequently the practice of the present day, when a patient engages a medical man to attend at her confinement, simply to note the engagement, to give a few general directions, or perchance none at all, and perhaps in some cases, to examine the urine. May I urge that obstetricians should give a much more careful attention to patients who are pregnant, and especially in the case of those looking forward to their first confinement? A pregnant woman, when she engages a doctor to attend her, should be examined as carefully as if she were an applicant for life insurance; in this way he may at an early date detect a flaw in some of her organs (heart, kidneys, lungs, etc.), the knowledge of which may lead him to adopt a judicious prophylactic treatment. We should instruct our pregnant patients on such questions as diet, exercise, and management of the secretions; and a most careful examination should be made of the urine from the fourth month onwards, not merely as to the presence of albumen, but in reference to its total amount and the reduction of urea. In this way a form of toxæmia (eclampsia), so fatal to mother and child, may from its early detection be carefully warded off, for it must be admitted that, in the vast majority of cases, the treatment of eclampsia, like *post-partum* hæmorrhage, is its prevention.

Towards the end of gestation a most careful abdominal examination should be made, so that we may learn the position of the fœtus, the amount of liquor amnii, the presence or not of an abdominal tumour, and, if there is the least suspicion of deformity, the pelvic cavity should be most carefully measured. We must also be on our guard against the dread influence of the syphilitic poison and the injurious effects of anæmia. In the case of multiparæ, an accurate history of previous pregnancies and labours is of the utmost importance. In this way, by a careful and if necessary by a repeated examination of the patient, we may, by an early detection of complications, ward them off or keep them in such abeyance that their danger is minimised; and, if there should be any deformity of the pelvis, we can make up our mind what method of delivery is best suited for each particular case. By all these measures we hope that not only a living but a healthy child may be born, and that by our careful management of the patient during and after her confinement no subsequent gynæcological disease may ensue which so often gives rise either to a permanent sterility or to an early subsequent miscarriage.

## A DISCUSSION ON THE CAUSATION, PREVENTION, AND TREATMENT OF MISCARRIAGE.

### I.—Peter Horrocks, M.D., F.R.C.P.,

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The term "abortion" has often been used to denote expulsion of a non-viable fœtus or embryo. Sometimes the term "miscarriage" is used synonymously and at others to indicate a mishap during the latter months of viability, abortion then being used to indicate an early expulsion such as during the first two or three months of gestation before the complete formation of the placenta. In courts of law and the public press the term "abortion" is nearly always used in criminal cases, and hence the public associate abortion with crime. It is of no consequence from a scientific point of view whatever word we use so long as we understand what is meant.

For the purposes of this debate, therefore, the term "miscarriage" means "the expulsion of the contents of the gravid uterus at any period from conception up to the term of viability, that is, the end of the sixth month of gestation."

The proportion of miscarriages to labour at term has been estimated differently by different authors. Hospital statistics which, in the past at all events, have not been very reliable on a point like this, give about 1 in 80.

In the sixth report of the Guy's Lying-in Charity (*Guy's Hospital Reports*, 1888), the proportion in 25,777 cases was about 1 in 182. Everyone with experience knows that neither of these numbers is correct. The proportion is far greater when all the instances of miscarriage are included.

Some authors give the proportion of 1 in 5, and probably that underestimates it if anything. There can be no doubt that a primipara is less likely to miscarry than a woman who has already had one or more children. This is probably due to the fact that the parts have never been lacerated and otherwise damaged by great distension as in a multipara.

It is generally acknowledged that when a woman conceives her monthly periods cease and although there are exceptions to this rule yet it is true in the majority of cases, so that at the first missed period she is actually pregnant. Coitus may have taken place immediately after the last period, or immediately before the missed one or at any time between. Moreover, it is not known how long it takes for the spermatozoa to reach the ovum, so that even if the successful coitus took place immediately after the last period it may be that many days elapse before the spermatozoa reach the ovum and fertilise it. We do know in the lower animals at all events that spermatozoa have been seen alive in the oviducts of the female many days after coitus, and in all probability the same is true in the human subject; we know that the ovum may be fertilised whilst still in the Fallopian tube (tubal gestation) and indeed probably whilst still in the Graafian follicle (ovarian gestation).

Whether it is usual or even common for the ovum to be fertilised during its progress along the Fallopian tube or whether this occurs after it has reached the uterine cavity we do not know.

But in all probability fertilisation of the ovum occurs sometimes in the Fallopian tube and sometimes in the uterine cavity. The ovum would be more likely to be still in the tube when reached by the spermatozoa if coitus took place soon after the last period, whilst if coitus took place shortly before the first missed period the ovum would very likely have already reached the uterine cavity.

Wherever and whenever the spermatozoa reach and fertilise the ovum, changes at once begin which in a normal case result in the development of the embryo fœtus and child and all their complicated but perfectly adapted accessories.

The ovum goes through the process of division and gets covered with the projecting tentacle-like structures known as chorionic villi, some of which find an anchorage on a portion of the endometrium (decidua). Obviously it is possible for the fertilised ovum to escape or to be expelled from the uterus before this safe anchorage has been found. The villi of the chorion may never be able to gain a footing on the decidua, owing to the latter being unfit to receive it through disease or defect. Under these circumstances, the tiny amount of nutrition in the yelk which serves for the first meal is soon exhausted, and the ovum dies before even an embryo can be detected. In such a case the woman may menstruate at the proper time, and this fertilised ovum is passed in the menstrual discharge, and so there has been an actual conception and pregnancy and a miscarriage without doctor or patient knowing it, because menstruation is not altered in either rhythm or amount or duration. As the ovum is carried away in the menstrual stream such miscarriages might very well be termed menstrual miscarriages. Of course if the patient misses a period and then miscarries a few days or a week or two afterwards, but before the next period is due, there is generally more loss of blood than at an ordinary period because there has been an actual union between the villi and the decidua, and a certain amount of development in the uterus.

Whether menstrual miscarriages ever occur, or, if they do, whether they are frequent must be left for future discovery.

But there is no doubt about the frequency of early miscarriage when only one period has been missed and before another is due. The majority of such cases are criminal. The missing of a period is so constant a feature and so certain a sign of pregnancy that it is welcomed with joy where a

child is desired, but is the cause of fear and alarm when pregnancy is dreaded. Hence the resort to pills and potions and injections, and violence in the shape of jumping downstairs and the like, and, finally to instruments, in order to procure abortion. Naturally such cases, which are by no means uncommon, are in the large majority of instances concealed, and so it is impossible to estimate their number. Most drugs given to accomplish this purpose contain aloes or other purgative, and there can be no doubt that they do sometimes set up uterine contractions as well as intestinal, and so miscarriage results. Ergot, savin, cantharides, and other drugs are very uncertain in their action, as are also vaginal syringing, glycerine in the rectum or vagina, and external applications to the breasts and abdomen.

The introduction of tents into the cervix uteri has been abandoned by practically everyone, although one occasionally reads of some criminal abortionist having used them. The passing of a sound into the uterine cavity as often as may be required generally results in miscarriage, but a very favourite and, it must be admitted, certain plan adopted by criminal abortionists is to pass a curette into the uterus and to scrape the endometrium with it. Bleeding ensues and the ovum may be killed, uterine contractions come on with the result that the process of gestation is interfered with and the desired object, miscarriage, is attained. It is seldom that the induction of miscarriage at so early a period is legitimate, but when it is perhaps these last two methods, namely, the repeated use of a sound or the careful use of a blunt curette carried out aseptically is as good a plan as any. Some, however, would prefer to dilate with bougies and clear out the contents digitally.

The application of a strong caustic to the os uteri and its neighbourhood is believed by some to be efficacious, and, in spite of the pain and danger is occasionally done by criminal abortionists, and nitrate of mercury, strong nitric acid, and other caustics have been used with disastrous effect on the woman. Later on in pregnancy when the amnion has formed and there is a certain amount of liquor amnii, in addition to the methods already mentioned, sharp instruments, such as the stylet of a catheter, are used with the object of piercing the amnion, which is a most effectual and certain means of causing miscarriage. The letting out of the liquor amnii is almost certain to cause expulsive uterine contractions, and it is quite certain to cause the death of the fœtus or embryo and so prevent the continuance of gestation. It is, however, a dangerous practice, and hence is not used in legitimate cases unless the os is dilated.

Anything that disturbs the attachment between the fœtus and the mother may cause miscarriage. Hence overstraining from any cause, such as hard work, lifting, jumping, running, coughing or vomiting, or straining at stool in bad constipation; these causes may operate not only by separating the maternal and fœtal parts of the placenta, and so causing hæmorrhage, which produces uterine contractions, but also the blood may burst into the parts, spoiling the whole mechanism and producing a "carneous mole," and may in the later stages actually rupture the membranes, and so cause an escape of liquor amnii.

Until one studies the beautiful mechanism and the admirable arrangements of the parts whereby the fœtus is protected, one is astonished how seldom a woman miscarries, even after serious injuries, such as broken ribs and limbs.

On the other hand, the least jolt or strain seems to start inevitable miscarriage in some few instances. Shock and fright are well known causes of miscarriage. Probably they act differently in different cases. For example, a woman receives some bad news. Her nervous system receives a shock, and the result is uterine contractions, and, may be, actual death of the fœtus—of course followed by uterine contractions. In another case there is a sudden fright, which causes the patient to jump involuntarily, and the muscles contract so suddenly and violently that there is quick increase in the intra-abdominal pressure, resulting in a rupture of the amnion or separation of placenta from the wall of the uterus.

Even in preaseptic days it was observed that women would pass through operations without miscarrying, and over and over again cases have been recorded where a woman has had major operations, such as ovariotomy and the like, performed during pregnancy, and afterwards gone safely to term. Nevertheless, there is no doubt that operations on the vaginal walls and cervix uteri, and bladder and rectum, and abdominal sections, and even operations in general, must be put down as at all events occasional causes of miscarriage. The extraction of teeth is peculiarly liable to cause miscarriage, probably on account of the increase in the intra-abdominal pressure as the patient holds herself to bear the pain, or possibly to the influence of shock.

The attachment between the placenta and the uterine wall may be disturbed by the presence of neighbouring disease interfering with the normal expansion of the uterus. For example, a fibroid tumour in the wall of the uterus is almost sure to cause a miscarriage. It is true that small fibroids may exist in the wall of the uterus, and large fibroids in the subperitoneal situation, without causing miscarriage. But if they are intramural, and as large or larger than, say, a cocoanut, the chances of going to term are almost *nil*. In such cases the miscarriage nearly always occurs about the same period of gestation, generally about the third or fourth month. Intramural fibroids are one of the commonest causes of repeated miscarriages. The *modus operandi* may be not only a separation of a portion of placenta, but in some cases a fatal damage to the ovum, such as an actual rupture of the amnion or a laceration of placenta, with hæmorrhage into it of fœtal blood.

In the same way miscarriages are caused by parametritis and perimetritis, and diseases of the Fallopian tubes and ovaries, tumours in the pelvis, hæmatocele, tight lacing and great contraction of the pelvis, rectal diseases or abdominal tumours encroaching on the pelvic space.

In the Obstetrical Society's *Transactions* for 1896 will be found a description by myself of a method of bringing on a miscarriage artificially by means of a small india-rubber bag fixed on the end of a perforated bougie or catheter and passed into the lower end of the uterine cavity just beyond the internal os. It is then filled with some aseptic and antiseptic solution of which I have found tr. iodi ℥ij ad Oj to be the most effective. The nerve fibres at and near the internal os uteri are stimulated, and reflex contractions of the uterus result in expulsion of the contents.

This method is very certain and efficacious when the rubber bag does not burst: but unfortunately it is very difficult to keep these bags any length of time as they become rotten and friable. May be it will be possible to find a bag that will meet all requirements and render the operation quick, certain, easy and safe.

### FŒTAL CAUSES.

Syphilis is the most potent and probably the commonest. It is a cause of repeated miscarriages in the same patient. In by far the majority, in fact in nearly every instance, the syphilis is paternal in origin; but this is due to the fact that it is the father and not the mother that has been syphilised before the impregnation in the vast majority of cases. If a syphilised woman becomes pregnant by a non-syphilised man the chances are perhaps the same that a miscarriage would result from syphilis in the fœtus which would in this case be maternal in origin. Of course, if the syphilis in the mother be well treated it can be practically cured and then not only might she not give syphilis to the fœtus, but she might go to term and be delivered of a healthy child.

Many physicians advise a man who has syphilis not to marry for at least two years, and no doubt that is a safe rule. A good deal, however, will depend upon the way the disease affects him and the thoroughness of the treatment. In some cases a man begets a healthy child considerably under two years after acquiring syphilis, and in some instances syphilis is shown in the offspring begotten many years after the syphilis has been apparently cured.

Syphilis may cause miscarriage at any period of gestation but as a rule it is during the later months of non-viability. The actual cause is in many cases a hæmorrhage into the placenta due to degeneration of the structure.

The carneous mole and its formation has been already alluded to, but there is another mole, the vesicular, which, although not so common, results as a rule in death to the embryo, and eventually to miscarriage. This hydatidiform degeneration of the chorionic villi is a myxomatous degeneration, and is interesting from the fact that a purely fœtal

structure continues to grow, deriving its nutrition from the mother after the death of the embryo.

Fatty degeneration of the placenta occasionally occurs, and may be accompanied by calcareous deposits. Miscarriage results through the death of the fœtus. Inflammation of the placenta has been described and given as a cause of miscarriage, but it is very rare. Excessive liquor amnii is not nearly so frequently a cause of miscarriage as scanty liquor amnii, because it does not so often cause death of the fœtus. Malformations of the fœtus may be so great as to result in death, and so miscarriage.

Deciduoma malignum must be considered *sub judice* at present, so far as its fatal and maternal origin is concerned, but it is one of the causes of miscarriage. Low vitality of the fœtus derived from one of the parents, generally the father, so-called imperfect fertility due to extreme youth or age, debauchery, or feebleness, is another.

Affections of the umbilical cord may cause miscarriage in several ways. For instance, it may be too short and so cause pluckings upon the placenta, separation, and hæmorrhage. It may be too long and get round the neck of the fœtus so tightly as to stop circulation through itself. Knots and excessive twists in the cord may do the same though they frequently exist in the cords of children born alive. The fœtus may die from diseases in itself, such as in the kidney, liver, brain, heart, genital organs, etc. Death of the fœtus is followed sooner or later by miscarriage.

### Maternal Causes.

During the discussion of other causes fibroid tumours have already been mentioned. It must here be stated that very often the presence of a fibroid prevents conception altogether, and in some cases, especially small fibroids, or even large ones when subperitoneal, gestation may go on to full term. The mechanical interference of the growth of the uterus causing miscarriage has already been described. According to some it is the endometritis that is often present in cases of fibroid that causes the miscarriage. Syphilis in the mother has been mentioned, and here it may be stated that if a woman conceives and whilst pregnant acquires syphilis the ovum does not get syphilised and the child is born quite healthy. It may, of course, get inoculated during parturition if there be any infective sores about the vulva.

Endometritis is supposed by some to play an important *rôle* in the production of miscarriage. Where the woman interferes with the natural progress of gestation and gets rid of an unwelcome ovum, she is very apt to get a condition of the lining of the uterus that prevents her carrying a child to term subsequently, no matter how much she desires it. Over and over again she becomes pregnant only to repeatedly miscarry; the catarrhal endometritis only differs in that there is a profuse watery discharge (hydrorrhœa gravidarum) often mistaken for liquor amnii.

In this connection may be mentioned conditions set up by methods of preventing conception. No known method is infallible and all are objectionable and some injurious, resulting in inflammations which may produce a miscarriage though more frequently sterility is the result.

Increase of the intra-abdominal pressure may cause miscarriage, especially when sudden, either by disturbing the attachment between placenta and uterus or by rupturing the membranes or by damaging the ovum or by a combination of these.

The further the gestation is advanced, the more likely is this pressure to cause ill-effects, because in the very early stages of pregnancy there is no liquor amnii, and the ovum is so protected that, practically, it receives no appreciable portion of the increased pressure. Later on, say the fourth to the sixth month, when the ovum is large enough to fill the cavity of the uterus, and there is an appreciable quantity of liquor amnii, the pressure acts with greater power on the uterus and its contents. For example, if a woman is a bad sailor it is much more risky for her to take a sea voyage during the second three than during the first three months of gestation.

The morning sickness of early pregnancy added to sea-sickness is more than counterbalanced by the risk above alluded to.

Displacements of the uterus, especially retroflexion, cause miscarriage. In some rare cases the back of the uterus gets adherent to Douglas's pouch, and a pouching of the posterior wall results, causing considerable difficulty in the diagnosis and ending generally in a miscarriage.

Prolapse does not usually cause miscarriage because the uterus can be pushed back so that it grows upwards into the abdomen and so gestation goes on to term. But in some cases it is too low down and there is not sufficient room in the pelvis, and so miscarriage from pressure results. Blood diseases, or diseases gravely affecting the blood, cause miscarriage, not only indirectly by an insufficient supply of nutriment or a supply of noxious materials, but also by causing hæmorrhage in the maternal and so breaking through into the fœtal portion of the placenta. Disease of the heart, lungs, kidneys, or of the liver (especially with jaundice) may act in this way, acute yellow atrophy nearly always ending in a miscarriage before the death of the patient.

Zymotic diseases may act in the same way, and especially small-pox, scarlatina and typhoid, and in addition to the toxæmia and hæmorrhages the pyrexia may cause the death of the fœtus.

Eclampsia does not come on as a rule so early, but if it does, then the violence of the fits may cause a miscarriage just as may also ordinary epileptic convulsions and choreic spasms.

Placenta prævia does not as a rule cause trouble until the child is viable, but in some cases hæmorrhage begins much sooner than the seventh month and may result in miscarriage sometimes by causing the death of the fœtus and sometimes by causing expulsive uterine contractions.

Cancer of the cervix may cause miscarriage especially if far advanced, but fortunately such a condition usually prevents conception. Cancer of the body of the uterus almost always results in miscarriage, but is seldom met with associated with pregnancy. Possibly deciduoma malignum may yet prove to be a maternal and not a fœtal cancer.

Over-suckling is said to be a cause of miscarriage but it seldom acts. If it does it may be through the sympathy existing between the breasts and the uterus resulting in the initiation of uterine contraction, but in all probability there is some other cause at work that has nothing to do with the over-suckling. Deep fissures of the cervix uteri and abnormal patency of the cervical canal cause miscarriage. One can readily understand that where the internal os uteri is abnormally patent or lax the amnion may be driven down into the canal by even ordinary strains, and *a fortiori* by extraordinary ones, and so set up reflex uterine contractions.

Damage to the uterus itself such as blows, pressure, penetrating wounds, may cause miscarriage either by setting up expulsive uterine contraction, or by separating fœtal attachments. Hot sitz baths are sometimes successfully employed by women who wish to miscarry, and although they more frequently fail, still they are a cause sometimes. Alcohol may produce it, especially when taken to excess. This may act indirectly, a drunken pregnant woman being liable to fall, etc. Anæsthetics *per se* seldom cause miscarriage, but occasionally they do so, especially through the violent retching that often follows.

Apoplexy is said to be a cause, but paralysis of the lower half of the body may coexist with pregnancy going to term. Shock, fright, extraction of teeth, and operations have already been dealt with.

Finally, some women are said to have a habit of miscarrying, but in all probability such a habit would be explained by one of the above described conditions such as endometritis, fibroids, syphilis and the like. Starvation has practically no effect upon the development of a *fœtus in utero*. A woman will sometimes wilfully starve herself with an idea of getting rid of the pregnancy. But inasmuch as the ovum, embryo, fœtus, or child can obtain plenty of nutrition for itself from the blood of a woman who is even extremely emaciated from some wasting disease such as phthisis, it is obvious that no voluntary starvation can damage the child.

### Prevention of Miscarriage.

From what has been stated in connection with the causation of miscarriage the methods for preventing them can be easily deduced. Nothing must be done by the patient that would be likely to disturb the connection between placenta and uterine wall, damage the ovum, or rupture the mem-

branes. Hence she must avoid riding, dancing, golfing, tennis, cycling, falls, blows, excessive coitus, lifting, pushing, walking too far, standing too long, and, in fact, everything that causes great and often sudden excess in the intra-abdominal pressure.

Shocks and frights of all kinds must be avoided. If there is any bad news to be communicated, it should be postponed if possible, and if not, it should be communicated so as to cause as little upset as possible. Dogs are dangerous, as they are apt to leap up suddenly, possibly without intending to bite, but the sudden loud barking and jumping towards or on a patient has often led to disastrous results.

The question of performing operations during pregnancy must be decided according to the circumstances of each case. Some operations cannot wait, and others are more frequently performed nowadays during pregnancy than used to be the case, and certainly the proportion of such cases followed by miscarriage is very small.

No instruments should be passed into the uterus, and pessaries should not be worn after the fourth month. Vaginal syringing should be avoided.

With regard to criminal abortion, one need say little, inasmuch as its prevention is in the hands of the State. At the same time, one may use one's influence with those unfortunate women who are anxious to have something done to show them the risks they run and the iniquity of the thing.

With regard to disease in neighbouring parts, it is sometimes possible to push a pelvic tumour—such, for example, as a subperitoneal fibroid—up into the abdomen, and so permit not only of progression to, but also of parturition, at full term. Fortunately, adhesions due to old surrounding inflammations, such as parametritis and perimetritis, often get so soft and œdematous during the course of pregnancy as to permit of easy stretching and so, though as the uterus goes on increasing in size there is often great pain, yet miscarriage is not inevitable, and many cases are able with judicious management to go to term. Of course, where it is known that a patient has such inflammatory products still unabsorbed, she should be treated with the object of getting rid of them as far as possible before she becomes pregnant. Ovarian tumours and subperitoneal fibroid tumours can be removed during pregnancy, often without disturbing the course of gestation. Uterine displacements can be put right in the majority of cases. Retroflexion and retroversion are the commonest met with, and they should be remedied before pregnancy, if discovered; but if pregnancy already exists, the womb should be at once restored in the knee-breast-elbow position, and a suitable pessary should be inserted. The pessary should be removed at the end of the fourth month.

Other displacements, such as prolapse, seldom give trouble, but when severe the uterus should be restored as far as possible to its normal position, and kept there by means of some artificial support as long as is needful.

Tight lacing should be avoided. The bowels should be kept open nicely, but without purgation. Purgatives are really dangerous, especially when they contain aloes. The tenesmus produced often sets up action in the neighbouring uterus, and so results in miscarriage. On the other hand, great constipation, followed by straining at stool, is also dangerous in the manner already explained, and so should be combated by suitable treatment.

Enemata must be given with caution. Such things as glycerine suppositories are rather dangerous to use. If an enema must be used, probably a little oil just to soften the motion, followed by soap and water, is the best. Turpentine should be avoided. The administration of ecbolic drugs such as ergot, savin, digitalis, quinine, etc., should also be avoided.

Whenever syphilis is suspected as the cause, or probable cause, of a miscarriage, the question should be fairly gone into, and the husband or wife, or both, put on antisyphilitic treatment. Where a woman has already had one miscarriage supposed to be due to paternal syphilis, she should be treated for syphilis, whether she has symptoms of it or not, and especially if she fall pregnant again, she ought to take mercury in small quantity daily throughout gestation.

Where either parent is weak from any cause, he or she should be improved in health as far as possible, during which there should be no coitus. When both parents are in good health, a healthy pregnancy going to term is more likely.

Very little can be done for endometritis if a woman is already pregnant, but this condition should be remedied, as far as possible, by curetting and the like, before she be allowed to get pregnant again, and in this way she may succeed in going to term.

Subinvolution is treated in the same way. Any general diseases such as lung, heart, liver, kidney, chorea, and epilepsy must be treated by the methods suitable for each. In those which act by increasing intra-abdominal pressure such as lung (cough), chorea, and epilepsy this must be combated as far possible. Similarly, the zymotic disease, must be treated in the same way as if pregnancy did not exist: many cases go to full term. Over-suckling should be avoided, ten months is quite long enough as a rule. Fissures of the cervix uteri when deep should be remedied by trachelorrhaphy. Alcohol in any form should be avoided altogether if there is any history of excess, and in any case should be taken sparingly. High pyrexia should be prevented by cold baths if need be.

Extraction of teeth should not be done during pregnancy if waiting would not be very detrimental, and if the teeth must be removed then probably an anæsthetic would diminish in some measure the risk of miscarriage. Hot sitz baths should be avoided.

### TREATMENT.

This resolves itself simply into the question of whether the miscarriage is (*a*) avoidable, (*b*) unavoidable, or (*c*) incomplete. The prevention of miscarriage has already been described, but there is a class of cases where a pregnant woman is threatened with a miscarriage. These warnings are usually either a show of blood, or pains, or discharge, such as watery or mucoid. In all such instances it is desirable to make an examination to find out whether it is avoidable or not. If the os uteri is not patent or patulous, if the pains are few and not expulsive in character, which must be estimated by the effect upon the cervix and os uteri, there is a possibility in many cases, by keeping the patient in bed and not allowing her to do anything, not even to get out of bed for defæcation or micturition, and by administering sedatives, of which opium and its derivatives are the best, that the symptoms may pass away and the patient go on to term. By treatment on these lines it is just possible sometimes to succeed even when the os uteri is so far open that the membrane can be felt, though, as a rule, such a condition goes on to miscariage. In some cases ergot, viburnum prunifolium, and such-like drugs are given and may, by promoting uterine contraction, stop bleeding and so prevent miscarriage.

When the hæmorrhage is severe and repeated, it may be a question whether the mother's life may not be jeopardised by trying to save the child. Each case must, of course, be judged by a careful consideration of all the points, but, speaking generally, the best rule to adopt when in doubt is to empty the uterus. For if this be not done, the chances for the fœtus are very poor, and the mother may go on losing to such an extent that at last a fatal syncope results, or the uterus is emptied, and the patient is so weak that she succumbs to one or other of the conditions following upon excessive hæmorrhage.

Similarly, when the os uteri is dilated, and there are expulsive and frequent pains, it is better to empty the uterus either by allowing Nature to take its course, or by assisting it in the best manner suitable for the particular case. For instance, rupturing the membranes is often all that is required, as this is followed by contraction of the uterus which stops further hæmorrhage and promotes stronger expulsive pains. Where the patient is in a serious condition, or where a placenta prævia is suspected, it is better to give an anæsthetic and clear out the uterine contents aseptically with the finger. In the more advanced cases of pregnancy—five and six months—it is better to extract the child piecemeal rather than damage the uterus by lacerating the cervix in the attempt to dilate sufficiently to extract an intact fœtus: and when the fœtus is removed, it is, as a rule, an easy matter to reach to the placenta and peel it off.

Where a miscarriage has already partially taken place, it is as a rule, best to give an anæsthetic and complete it.

### II.—The late A. E. Aust Lawrence, M.D.,

Consulting Physician Bristol General Hospital.

Dr. Aust Lawrence spoke only on the treatment of abortion and principally on the treatment of incomplete abortion. He strongly advocated the full dilatation of the os and cervix uteri, the clearing out of the uterus with the finger, the application of tincture of iodine to the whole of the uterine cavity, and the maintaining of that antiseptic precaution afterwards. The great point in the treatment he insisted on was full dilatation of the cervix and complete drainage of the uterus afterwards.

### III.—Alfred J. Smith, M.B., M.Ch., M.A.O.,

Professor of Midwifery and Diseases of Women, Catholic University; Gynæcologist to St. Vincent's Hospital, Dublin.

Dr. Smith said: The causes of miscarriage include both predisposing and exciting ones, the predisposing being endometritis, anæmia, syphilis, and Bright's disease. The exciting causes only act when any of the above are present. Endometritis, no matter whether its source be displacement, fibroids, or liver diseases, etc., is the chief cause. Anæmia is one of the most important predisposing factors, especially in women who live in town. It is not necessary to enter into the details as to syphilis and Bright's disease; they are already well known. As to treatment: in cases of abortion requiring no active interference, diagnosis is not part of the question: there is hæmorrhage and slight pain, but no dilatation; but if with pain or great hæmorrhage the os be found dilated and the ovum perhaps within reach of the finger something must be done at once. To determine whether the ovum has or has not left the uterus: If the ovum has dilated the internal os and the external os is still contracted, the shape of the cervix on examination will be that of a cone with the apex below and base above. If the ovum be expelled the internal os is contracted and the external dilated and the cervix therefore will be cone-shaped with the base below and apex above; there will also, if any portion of the placenta remains behind, be gushes of hæmorrhage. Cases requiring no active interference should be treated by rest, opium, and 30-minim doses of the liquid extract of hydrastis canadensis. Ergot is not to be recommended, as any dose large enough to be of use would expel the ovum. When interference is required one should remove the ovum by the finger or curette either with or without an anæsthetic. The finger is to be preferred. If the curette be used it should be a blunt one, or if possible a Rheinstadter's spoon. In removing the ovum with the finger a useful device is to separate the ovum with the finger and then instead of hooking it out, withdraw the finger from the womb and apply pressure externally, as in a bimanual examination, when the ovum will be expelled.

### IV.—G. A. Hawkins-Ambler, F.R.C.S.Ed.,

Honorary Surgeon, Samaritan Hospital, Liverpool.

Mr. Hawkins-Ambler thought that recurring miscarriage was due to endometritis oftener than was believed. Their object should be to get active spermatozoa access to the ovum, and to obtain for the latter when fertilised a healthy attachment on the uterine wall. They must therefore remedy cervical catarrh and treat endometritis by curettage, repeated, if necessary, and followed up by other measures Constipation was a very troublesome complication of pregnancy, and was aggravated by confinement to bed, and uterine irritation was induced by the neighbouring loaded rectum or sigmoid. For emptying the uterus, the finger was undoubtedly the best means, but there was this to be said for the curette: that it could be made absolutely aseptic, which was more than could be said for the finger. It also removed decidual and other *débris* more effectually and prevented severe hæmorrhage likely to occur, at the time or subsequently, from the rentention of clot and other material. Packing the uterus served to stimulate and to drain it, and also by entangling clots and so forth helped to clear it out.

### V.—J. A. Lycett, M.D.,

Consulting Gynæcologist, Hospital for Women, Wolverhampton.

Dr. Lycett said: The erect carriage of the *genus homo* with the consequent frequent association of uterine displacement, especially descensus, retroflexion, and retroversion, has not, *per se*, any direct influence in producing miscarriage, such being in the large majority of cases due to some other associated abnormal condition. In support of this statement, time will only allow me to mention the physiological tenacity by which the vital process of uterine gestation is capable of resisting opposing mechanical force. During a lifetime of practice I have met with four or five cases in which the retroverted gravid uterus had become firmly impacted in the pelvis, requiring considerable effort to remedy without miscarriage occurring. Another point is the toxic influence which alcohol undoubtedly has in producing miscarriage. I have known families where the first-born children were healthy and strong, but the parents becoming intemperate, subsequent offspring, with intervening miscarriages, were weakly and bore a marked impress of intrauterine malnutrition. Preventive treatment I must dismiss with only a reference to the respective causes as no good is to be generally derived at the eleventh hour by the administration of some drug. In the management of miscarriage I do not consider that a medical man is to be blamed when a portion of an imperfectly-formed placenta is retained, but grave responsibility might arise from neglecting a recurring hæmorrhage. I have more often than otherwise used the curette in such cases without an anæsthetic, yet it is preferable to seek professional help, place the woman in the lithotomy position, give an anæsthetic and operate *secundum artem*. Simple as curetting is in the hands of an expert, it is not to be undertaken by the untutored, as the recently gravid uterus is very soft and may be readily perforated, an accident I have known to occur several times. In hospital, or in private practice with professional help, rapid dilatation can be carried out, and is the preferable procedure, inasmuch as it offers a better safeguard against sepsis, but when working alone gradual dilatation has to be adopted. To supersede the use of tents with the associated risk of sepsis, Lawson Tait employed solid conical dilators; these I found open to improvement so that, about the year 1882, I invented an apparatus, the mechanism of which I here exhibit and which I described in a paper on miscarriage, published in the *Birmingham Medical Review*. Finally, after-treatment should naturally be directed to the ascertained cause, and embrace such local, general, or systemic measures as may ensure the uterus not remaining in a condition to cause a recurrence of the accident. To promote involution, active uterine medication may be necessary, in addition to therapeutic measures. Some women will require treatment directed to such local, general, and constitutional condition, as may be indicated, so that instead of, or in addition to, ergot, alteratives must be given, such as potassium iodide or mercury perchloride; of the latter drug the ordinary dose is too large for the majority of women, and is apt to cause stomach disorder, colic, or diarrhœa. I have found that about $\frac{1}{30}$ gr. is sufficient, and can be continued for some time without the drawbacks mentioned.

### VI.—William Duncan, M.D., M.R.C.P., F.R.C.S.,

Obstetric Physician and Lecturer on Obstetric Medicine, Middlesex Hospital; Senior Physician, Chelsea Hospital for Women.

Dr. Duncan considered that one of the great causes of miscarriage was endometritis, which should be carefully treated. In other cases heart disease was an important factor, and he mentioned cases in which this was the cause, and the patients had repeated miscarriages until they were made to assume the recumbent posture during the whole term of pregnancy, and to have regular massage during the time. Retroflexion was a common cause; the uterus should be always replaced and kept in position by a well-fitting pessary, which could be removed when the pregnancy had advanced halfway. As regarded treatment, his rule was to give opium if there was pain; but if not, 5 to 10 drops of ext. ergotæ liquid. every hour. When miscarriage was unavoidable the best treatment was to put the patient under an anæsthetic, dilate the cervix with metal dilators, and clear out the uterus thoroughly with the finger, followed by the use of a flushing curette, taking care to remove all the decidua and wash out the uterine cavity with a 1 in 2,000 perchloride of mercury solution.

VII.—J. INGLIS PARSONS, M.D., M.R.C.P.,
Physician to the Chelsea Hospital for Women.

DR. INGLIS PARSONS thought that healthy subjects might do almost anything without abortion occurring. The extraction of teeth under gas was quite safe. A sea voyage had little, if any, effect. Bicycling in moderation did no harm, and one of his patients who was allowed to ride for the first three months went on for four months, and took two prizes in a gymkhana without any ill effect occurring. In regard to delicate women, or where abortion had occurred, they must advise quite differently, prohibit extraction of teeth, bicycling, voyages, and in many cases order complete rest. He had found syphilis to be a very common cause of miscarriage, and that even when there was no evidence of its presence. For instance, one of his patients had a perfectly healthy child soon after marriage, and subsequently repeated miscarriages. Neither the patient nor her husband, nor the first child, had any sign of disease about them, but he ascertained that two years before marriage the husband had an attack of syphilis, and had taken mercury for more than twelve months. Under his advice the husband submitted to a further course, and the wife was also treated with mercury, and was afterwards gratified by a healthy child. Retroflexion was also a common cause and satisfactory to treat. If the uterus was kept up until the fourth month with a properly-fitting Hodge, the pregnancy nearly always went to term. In operations for the removal of the aborted ovum and decidua, he had always used the curette without losing a single case. With care, he thought there was very little risk, especially if antiseptics were freely used. One of the best of such was chinosol, which, according to Klein, was quite as reliable as perchloride of mercury, but was not poisonous; as much as 5 grains could be given by the mouth. Heywood Smith's forceps were also very useful for grasping and removing a loose ovum from the uterine cavity. Viburnum prunifolium in 3-grain doses was very effective as a sedative to the uterus in cases of threatened abortion where there was no obvious cause.

VIII.—Mrs. BOYD, M.D.,
Surgeon to the New Hospital for Women.

MRS. BOYD thought that it was often sufficient, after careful disinfection of the vulva, to plug the vagina only with iodoform gauze, and that this should be tried before dilating the cervix even with gauze. Where dilatation was imperative, injury of the cervix by fixation with sharp instruments should be avoided if possible. She quite agreed that deterioration of the general health might follow the prolonged rest necessary in some cases, and the treatment by massage, combined with rest, referred to by Dr. Duncan, might be very useful in avoiding this danger.

IX.—F. W. N. HAULTAIN, M.D., F.R.C.P.Ed.,
Lecturer on Midwifery and Diseases of Women, Edinburgh School of Medicine.

DR. HAULTAIN thought that Dr. Horrocks had not emphasised the important point of the amount of dilatation necessary for the ready evacuation of the uterus. In a pregnancy of five months the cervix should be opened to the size of a crown piece to allow of the removal of the fœtus. Thus in an abortion at this date, in which the hæmorrhage was severe and the os only admitted one or two fingers, it was better treatment to plug the cervix and vagina and wait rather than at once to attempt to remove the ovum. He had on several occasions been called to remove the fœtal head which had been left in the uterus through energetic attempts to remove it rapidly. This was an extremely difficult procedure. He dissented from Dr. Horrocks's recommendation to remove the fœtus piecemeal through an inefficiently dilated cervix.

X.—Professor J. W. BYERS, M.A., M.D.,
President of the Section.

THE PRESIDENT, in summing up the discussion, said that (1) as to the causation of miscarriage they must all admit the dread and continued influence of the syphilitic poison which so frequently existed in abortions, and especially in recurring early abortions; here the use of mercury was of the greatest value. (2) As to the prevention, this was really a constant effort to deal with the cause, and in all cases of the "habit of abortion" there must be a cause at work. (3) As to treatment in cases of unavoidable abortion, he was in favour of a thorough local treatment of the uterus. He preferred the curette to the finger, when the os was dilated, but if it was not, the use of an iodoform plug to the cervix, with thorough plugging of the vagina, was useful. They must not forget that a neglected or badly-treated abortion often led to subsequent gynæcological disease, and he therefore urged a very thorough local treatment whenever the interruption of pregnancy was inevitable. He thanked Dr. Horrocks, in the name of the large audience, for his complete and admirable paper.

REPLY.

Dr. HORROCKS, in reply, after thanking those present for their cordial reception of his paper, pointed out that the question of diagnosis had been designedly omitted. He considered that plugging the vagina with antiseptic gauze was a very good method of treatment in many cases of threatened and unavoidable miscarriage, and he agreed that it was better not to abrade the parts by trying to push the gauze into an undilated cervix or to use a vulsellum. The finger was by far the best instrument to use for clearing out the uterus, but there were cases where it was better to use a curette, as when it was desirable not to wait for sufficient dilatation for the finger to pass. Whilst agreeing that endometritis was a very common cause of miscarriage, yet if it was alleged that endometritis was always the cause, as, for instance, in cases of uterine displacement, that ought to be proved. What was the microbe? For were not all inflammatory processes the result of a microbe? Again, was it not true that where a uterus was retroflexed and pregnant, it would, if not restored, gradually grow in the pelvis until the pressure became so great as to cause rupture of the membranes? Ergot and other ecbolics were often useful when given in small doses, but the reason for giving them was not a question of pain but of hæmorrhage. If pain were present the ergot increased it, so as to result in a miscarriage; that was probably the best ending to the case. It was not said that pessaries should not be worn during pregnancy, but that they should not be worn after the fourth month. The effect of heart disease in causing miscarriage was undetermined; perhaps some forms had more effect than others. Most women might with impunity cycle, play tennis, and travel, without miscarrying; but when a woman had already miscarried, or when it was of the greatest importance that she should not miscarry, then she should avoid active games, sea voyages and travel. It was true that one ought to have as great a dilatation as possible before emptying the uterus, but it was advisable to avoid lacerations where rapid action was required. Hence when the fœtus was large, as in the fifth or sixth months of gestation, it was better to remove it piecemeal than to dilate sufficiently to remove it intact. Probably repeated early miscarriages, in the absence of other obvious cause, were due to syphilis; certainly when in doubt it was best to give mercury.

## DECIDUOMA MALIGNUM.

By PETER HORROCKS, M.D., F.R.C.P.,
President of the Obstetrical Society of London; Obstetrical Physician to Guy's Hospital.

DR. HORROCKS exhibited a specimen of deciduoma malignum. The following are the notes of the case:—

S. B., aged 48; multipara; miscarriage in 1898, and a doubtful history of another one in October, 1900. Admitted into Guy's Hospital on March 4th, 1901, and uterus removed by vaginal hysterectomy on March 8th. She made a good recovery, and left the hospital in about four months. About two months later she was seized with fresh bleeding and died at home from recurrence, or probably from further and more deeply-seated growth. A *post-mortem* examination could not be obtained.

*Naked-eye Appearances.*—The uterus is considerably enlarged and its walls thickened. In the interior may be seen a rounded area with irregular surface, slightly raised, partially covered with fibrin and blood clot. In the fresh condition (and this was confirmed microscopically) the growth did not extend deeply into the wall in the greater part of its extent. Near the fundus, however, the growth made its way right through the wall and formed a projection beneath the peritoneum, which, however, had not given way.

*Microscopic Appearances.*—The most characteristic feature is the syncytium, which consists of large irregular masses of protoplasm containing many nuclei, but not divided up into

cells. It forms in places an irregular network enclosing red blood corpuscles and cells. Apart from the syncytium the growth is composed of large discrete cells which have been compared to decidual cells. The tendency of the growth to invade vascular spaces and engraft itself on the lining of the walls of the spaces is well marked in the specimen. There is practically no reticulum, nor are there any blood vessels in the growth. The blood cells lie loose in spaces between the cells or occasionally enclosed in the protoplasmic masses.

## CÆSAREAN SECTION:

### WITH NOTES OF THREE SUCCESSFUL CASES.

By John M. Munro Kerr, M.B., C.M., F.F.P.S.G.,

Obstetric Physician to the Glasgow Maternity Hospital; Assistant to the Professor of Midwifery, Glasgow University; Dispensary Physician for Diseases of Women, Western Infirmary.

Among the cases of extreme pelvic deformity which have been under my care in the Glasgow Maternity Hospital during the present year, and since my appointment as Obstetric Physician to that institution, there have been three in which I deemed it advisable to perform Cæsarean section. These cases I venture to bring under your notice to-day.

Before giving a brief summary of the individual cases, let me shortly refer to a few details connected with the operation as it was performed.

In the Glasgow Maternity Hospital, since April, 1888, when Professor Murdoch Cameron performed the first successful Cæsarean section, the operation has been performed somewhere between sixty and seventy times. Of the cases that have proved fatal, with only two or three exceptions, the cause of death has been septicæmia, and, further, the infection in the majority of cases, as far as could be judged, has been from the vagina and cervix, and not through the abdominal opening. This, I think, is a most important point, and one that has not been sufficiently emphasised. The reason for it is evident. On the one hand, the skin is sufficiently cleansed with comparative ease, and that as a matter of routine nowadays; while, on the other hand, the vagina and cervix, if septic, are difficult to disinfect, especially the latter, and attempts at doing it are, as a rule, carried out in a more perfunctory manner.

To get the best results I am quite convinced we must suspect the vagina in all cases of containing pyogenic organisms, and adopt means to remove them. This is especially true of cases that have been handled before admission to hospital, but is also true of some few cases which have never been examined. The investigations by Döderlein, Menge, and others have demonstrated the occasional presence of pyogenic organisms in the healthy vagina and cervix, and all of us have had experience of cases of septic infection in the puerperium where there has never been any examination made either before or during labour. Now, simple douching, the usual routine, I believe is not sufficient; the vagina, especially the vault and the cervix, must be carefully swabbed with some antiseptic solution. In the cases to be related, 15 to 20 oz. of a 1 per cent solution of lysol was used. I would have preferred to use perchloride of mercury, but it constricts the canal to such an extent that it is extremely difficult to swab it out. The skin was cleansed by scrubbing with soap and water, turpentine, alcohol, and carbolic solution, as is so generally done.

No sponges were used—only sterilised absorbent swabs. About thirty are required for each operation, as no one is used twice. One nurse wrings them out of hot sterilised water, another collects and counts those that are soiled.

After opening the abdomen, swabs were placed round the uterus, but the latter was not pulled out through the abdominal opening until after it had been emptied of its contents. The opening into the uterus was always longitudinal and in the middle line, the bleeding in cutting through the wall being controlled by the vulcanite ring recommended by Cameron. It always acted very satisfactorily, and allowed me to cut down on to the membranes without having the wound flooded with blood. After the child was extracted, my assistant grasped the uterus firmly with fresh swabs, and controlled the bleeding. I never used elastic tubing to control the bleeding. In each case the placenta separated immediately after the child was extracted, and it and the membranes were readily removed.

In two cases the uterus was sutured with Hartmann's catgut boiled for half an hour in a Jellett's steriliser. In the other case sterilised silk was used.

Each of the patients was sterilised by tying the Fallopian tubes in two places, and dividing them between the ligatures.

In each of the cases labour was in progress, and in two had advanced considerably, before the operation was commenced.

Case I.—Mrs. L., aged 33, 3-para, was admitted to the Maternity Hospital under my care on March 15th, 1901. In each of her two previous labours craniotomy had to be performed before the child could be extracted. On examination, the os was fully dilated, and the membranes were ruptured. The oblique conjugate was found to be 3¾ inches, and the transverse diameters were slightly under the normal. The presenting head was freely movable above the brim, although labour had been in progress for twenty-four hours. The fœtal heart-sounds were strong, regular, and numbered 140 per minute.

The operation was carried out by making the usual longitudinal incision through the abdominal and anterior uterine walls. The child was easily extracted by the head, but in doing this the lower end of the wound was increased by slight tearing of the lower uterine segment. The child, a female, cried lustily soon after its birth. It weighed 7 lbs., and measured 19 inches. The placenta, which was situated on the posterior wall of the uterus, became immediately separated, and was easily removed along with the membranes. The woman was sterilised by tying and cutting the tubes as described. The uterine wound was closed with silk. The abdominal wound was closed in one layer with silkworm-gut. The puerperium was very satisfactory, and the woman's progress to recovery rapid after the first few days. The temperature never rose above the normal, except the morning after the operation, when it registered 100°. The pulse, however, for the first few days was very rapid and gave cause for considerable anxiety. On the evening of the second day it registered as much as 160, but fell on the third day to 108. This rapid rate was attributed to a very bad bronchitis which developed immediately after the operation, and was caused, I feel sure, by the irritating fumes of chloroform and gas. The stitches were removed on the fourteenth day, at the first dressing, when the wound was found quite dry and healed.

The woman was dismissed on the thirty-fourth day, both she and the child being perfectly well. She began to nurse the child on the tenth day after she had recovered from the bronchitis, and continued doing so until she left the hospital.

The most striking feature in this case was the alarming bronchitis which developed after the operation, and which, I think, was correctly attributed to the irritating fumes of the chlorine set free by the coal gas, the only illuminant we have in the hospital. I have seen the same complication occur once or twice before in cases operated on during the night, but never in such a severe form. The woman was really extremely ill.

Case II.—S. C., primipara, 23 (?), was admitted to the Maternity Hospital under my care on April 19th. On examination the os was found fairly well dilated, and the membranes unruptured. The oblique conjugate measured 3½ inches, and the true conjugate was estimated at 2¾ inches. As the fœtal heart sounds were strong and regular it was decided to do Cæsarean section. There was, unfortunately, some delay in getting the patient ready, so that the operation was not commenced until three hours after her admission. The operation was performed in the usual way, and the child extracted without the least difficulty. The placenta, which was situated on the postero-lateral wall, immediately separated, and was removed along with the membranes. Unfortunately the child, a female, was dead, no trace of a heart beat being appreciable. It weighed 7½ lbs., and measured 22 inches. The uterine wound was closed with catgut, and the abdominal in one layer with silkworm-gut. The woman was sterilised by tying and cutting the tubes as described. The recovery of the patient was most satisfactory. The only feature of special interest about the puerperium was the scantiness of the lochial discharge. At first this rather alarmed me, especially as during the first four days the temperature was never much below the 100°, and on the evening of the fifth day registered 101°, and the pulse was often running as high as 120. However, these slight disturbances in pulse and temperature disappeared by the sixth day. The lochia all through were very scanty. The stitches were removed on the fourteenth day, at the time of the first dressing. The wound was quite dry and healed. The patient was dismissed from hospital on the thirty second day quite recovered.

It is extremely unfortunate that the child was dead in this case, as it was chiefly on its account that Cæsarean section was performed. My colleague, Dr. Jardine, very kindly saw the case along with me, and we both considered it one of those cases where, as regards the mother, the risks from craniotomy and Cæsarean section were about equal—if anything, a little in favour of the latter. The child being alive, however, we decided on Cæsarean section. Unfortunately, I did not listen for the fœtal heart immediately before commencing the operation, as three hours before, at the time of the patient's admission, I heard it quite strong and regular. The child must have died in the interval, and not, I think, during the early stages of the operation.

Case III.—Mrs. B., aged 26, 2-para, was admitted to the Maternity Hospital under my care on April 15th, 1901, for the purpose of being delivered by Cæsarean section. Her pelvis was very markedly deformed in the conjugate diameter, but little affected in the transverse. The oblique conjugate was 2¾ inches, and the true conjugate was estimated to be

2 inches. Her previous pregnancy terminated at full term, the child being delivered with difficulty after craniotomy had been performed. Labour in this second pregnancy began on the 25th. Dilatation of cervix was rapid, so that before the patient was ready for operation the os was fully dilated and the membranes had ruptured. The fœtal heart was heard beating strongly immediately before operation. The operation was performed in the usual way. There was great difficulty, however, in extracting the child, as the uterus grasped it so firmly. It was delivered alive, but in doing this the uterine wound was enlarged by slight tearing of the lower segment. The child, a female, cried immediately after it was born. It weighed 6½ lbs., and measured 21 inches. The placenta was situated on the posterior wall, and separated immediately after extraction of the child. The uterus was closed with catgut sutures, and the tubes were tied and divided as described. The abdominal wound was closed in two layers with catgut and silkworm-gut. The patient's convalescence was very satisfactory until the fourth day, when in the morning the temperature rose to 103.2° and the pulse to 162, the lochia became fœtid, and there was diarrhœa. I at once douched out the vagina and then the uterus with a solution of 1 in 2,000 perchloride of mercury. This had the desired effect, for the same evening the temperature was 100.6°. On the eighteenth day there was again a slight rise of temperature. The stitches were removed on the seventeenth day, when the wound was found quite healed and dry. She was dismissed from hospital on the twenty-eighth day. The only thing that was not quite satisfactory was that she seemed unable to completely empty her bladder, as each time it was catheterised, and this was done several times after she had micturated, there were several ounces withdrawn.

The difficulties in extracting the child were very considerable. This was not due to the small size of the wound, but to the strong uterine contractions. Considerable advance had been made before it was discovered that the patient was in labour. As has been stated, the os was fully dilated, and the membranes were ruptured before the operation was commenced. In this case a slight septic infection occurred, and it was from the vagina or cervix almost certainly.

The cases just described, along with those published this year by Cameron[1] and Sinclair,[2] indicate the comparative safety of the operation of Cæsarean section performed under favourable conditions. Such a state of matters is cause for great satisfaction. It permits obstetricians to recommend the operation with great confidence and under less restricted conditions than formerly prevailed. In cases of pelvic deformity we are now hardly ever justified in destroying a living child by craniotomy or any other destructive operation. The only circumstances, indeed, under which such operative measures are permissible are where fruitless attempts have been made to extract the child with forceps or version from ignorance of or miscalculation of the extent of the pelvic deformity, where the mother's condition is such as to preclude abdominal section, and where the child is the subject of hydrocephalus or some other extreme malformation, or is on the point of dying.

As far as I can see, there is no other position tenable now by those who practise obstetrics as a speciality. That the pregnancy is illegitimate cannot be considered as some would have us do. With such a circumstance we dare not concern ourselves. Nor is the fact that the pregnancy is the first any argument against Cæsarean section if the conditions clearly indicate the impossibility of delivering the child alive *per vias naturales*. The line of practice indicated is very clear and distinct, and by following it we are faced by no subtle ethical problems. The following of it is occasionally prevented, however, by one circumstance—the refusal of the patient to consent to the operation. It rarely happens. If it does, and the woman is in labour, there is no alternative but to do craniotomy, unless that is impossible owing to the extreme degree of pelvic deformity. If the woman is not in labour one can only refuse to have anything to do with the case. Some little time ago a woman came to me far advanced in her fourth pregnancy. In all her three previous labours the child had to be destroyed by craniotomy, and she wished to arrange for the same operation being done for a fourth time. As she refused to submit to Cæsarean section, there was nothing for it but to decline to treat her, which I did. No self-respecting man can go on destroying children indefinitely!

But the good results now following Cæsarean section cause another and very important question to be asked, namely, Should we sterilise the woman after performing the operation? Cameron, in his most recent paper on Cæsarean section, says: "A very important point in favour of Cæsarean section is that the Fallopian tubes can be tied and divided so as to prevent subsequent conception." It has been the custom in Glasgow, following Cameron's teaching, to do this, and in the cases related I have done so also. Such a position now is hardly tenable, however, for the two great arguments in favour of sterilising do not hold good any longer. They are—(1) That the operation of Cæsarean section being so dangerous, and so frequently fatal, it is not desirable to submit a woman to the risks of it a second time; (2) that there is great danger of the sutured uterus rupturing should the woman again become pregnant. I say, with our present-day experience, neither of these arguments holds and sterilisation should not be the routine practice.

In all the cases described the operation was performed after labour was in progress for some time. In the first two that was unavoidable, for the women were in labour when admitted, but in the third case it was done intentionally because it has been the custom in the hospital. To judge by reported cases, however, it is not necessary, and it is undoubtedly much more convenient to fix beforehand the time of operation. One can choose the daytime when there is good light, and one can have all preparations for the operation more leisurely and thoroughly carried out. But, to my mind, much more important than either of these advantages is that the lower uterine segment has not developed, and the actively contractile portion of the uterus has not retracted, consequently one can open into the uterus through the latter part more easily and with a lower incision. In two of the cases just detailed there was some tearing of the lower uterine segment. It is most desirable not to wound that part, and it is not easy to prevent it with the ordinary incision and if the segment is well developed, because the tear is difficult to control, and because the wound is brought down near the cervix and vagina, where any pyogenic organisms, if present, are most likely to be found.

In all the three cases the incision was longitudinal, and only in Case III was there the least difficulty in extracting the child. The only advantage of the fundal incision, "*nach Fritsch*," as far as I can see, is that the wound is removed away from the most probable source of infection. There are weightier objections to it, I fear, on which, however, as I have no experience of the incision, I will not speculate.

In all three cases the placenta was situated on the posterior wall of the uterus. A very striking feature was that the placenta became separated immediately after the birth of the child. Might not the much discussed cause of the separation of the placenta be answered by observing the separation after Cæsarean section?

I also observed that in all three cases there was only about a third of the circumference of the uterus between the tubes in front, and so confirmed Leopold's statement that, with the placenta on the posterior wall, the tubes are closely approximated in front. That the contrary is also true I have not been able to confirm.

In two cases I confirmed Cameron's contention that the back of the child is always towards the opposite wall to which the placenta is attached.

In a small portion of the Fallopian tube excised in one case, I did not find decidual changes in the cells of the mucous membrane.

REFERENCES.
1 *Glasgow Hospital Reports*, vol. iii, 1901. 2 *Lancet*, January 19th, 1901.

Dr. PURSLOW had recently performed a Cæsarean section, and his procedure had differed from Dr. Kerr's. He turned the uterus out of the wound before opening it; the disadvantages of the longer incision were more than counter-balanced by the ease with which hæmorrhage could be controlled by an assistant grasping the broad ligaments. After removing the child he performed a retroperitoneal hysterectomy, and considered that in cases where sterilisation was indicated this method had advantages.

Dr. WILLIAM DUNCAN congratulated Dr. Kerr on his results and agreed with him that no woman should now be delivered by craniotomy, but preferably by Cæsarean section in certain cases followed by hysterectomy. He thought hysterectomy a safer operation than simple Cæsarean section, and notwithstanding the cases recorded in which a woman had had it performed on more than one occasion, did not think it safe to do Cæsarean section without sterilising the patient. He thought that in all cases the abdominal wound was best sewn up in three layers.

Mrs. SCHARLIEB, M.D., said that at the New Hospital for Women they had had three cases of Cæsarean section, all suc-

cessful in their results to mothers and children. In the first instance the operation was done on a woman who had been delivered by her a year before by turning and cephalotripsy of the after-coming head. In the second, there was no question as to method of delivery as the patient, whose true conjugate measured only 1¼ inch, came into her hands when she was five months pregnant. In the third case the true conjugate was estimated at a little less than three inches, and the woman was nearly at full term when first seen. In all these cases the operation was simple and easy. The flattened-out pessary, as described by Murdoch Cameron, was pressed on the anterior uterine wall. In two cases where the child's position was dorso-anterior this pressure rendered the operation virtually bloodless, but in the third, where the child lay dorso-posterior, it appeared quite useless. In all three cases the placenta was attached to the posterior uterine wall and separated spontaneously as soon as the child was delivered, when the uterus contracted normally. The Fallopian tubes were nearer together across the anterior than across the posterior uterine wall. The patients were all sterilised by excising about three-quarters of an inch of each Fallopian tube. In one case hysterectomy had to be performed a year after the Cæsarean section as the patient suffered from subinvolution of the uterus, as shown by pain and severe hæmorrhage and persistent increased size of that organ. The uterus was found adherent to the abdominal wall all along the wound. In these cases, as in all abdominal sections at the New Hospital, the abdominal wall was closed in three layers: (*a*) peritoneum, (*b*) rectal sheath and rectus muscle, (*c*) skin.

Dr. Peter Horrocks thought they were hardly yet in a position to decline to bring on a miscarriage, or induce a premature labour, or perform craniotomy upon a patient where she refused to have a Cæsarean section. It was not fair to compare modern results of Cæsarean section with mortality statistics of craniotomy, etc., in pre-aseptic days. Practically induction of miscarriage and labour and craniotomy were all so safe nowadays as to have no mortality. Hence, it was his practice to explain to the patient if she had Cæsarean section done, that she would be almost sure to have a living child, and the risk to herself would be very little more than that of craniotomy, etc. He had never used a pessary on the uterus in making the incision, and he had long abandoned putting an elasture ligature round the uterus. His method was to make a short abdominal incision, tuck a little gauze within the abdomen all the way round the edges of the wound, incise the uterus and membranes, seize a leg, and deliver. The liquor amnii escaped chiefly outside, and if any got into the abdomen it was aseptic, but as a fact the gauze caught most of it. The uterus immediately contracted and could be easily drawn forwards through the abdominal incision and all hæmorrhage controlled by assistants, and the placenta could be peeled off either before or after drawing the uterus forwards. He considered that hysterectomy after Cæsarean section was unnecessary and that it added to the danger of the operation. Cæsarean section in these days had so low a mortality that it could scarcely be improved upon by hysterectomy, and the woman could be most certainly sterilised by removing half-an-inch of each Fallopian tube in its narrowest part. He had given up the triple suture for the abdominal wall owing to the trouble caused by subsequent suppuration in the wound often months after and the difficulty of extracting the buried sutures.

### Reply.

Dr. Munro Kerr said, in reply, that the time that had been already taken up in discussing the subject precluded him from entering into details regarding the many interesting questions raised by different speakers. In answer to Dr. Duncan, he stated that in practice he sometimes closed the abdominal wound in one layer, and sometimes in three, merely to satisfy himself which was the best method, as there seemed to be such great differences of opinion amongst operators. As regarded the performance of hysterectomy after emptying the uterus, he did not agree with Dr. Duncan that mortality was lower after hysterectomy than when the conservative section was employed, but with Dr. Horrocks. From an examination of a large number of reported cases of Cæsarean section Dr. Kerr had found that the placenta was situated slightly more frequently in the posterior than the anterior wall.

## SHOCK IN ABDOMINAL OPERATIONS.

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Surgical shock has of necessity been a subject of vital interest to surgeons at all times; they have defined it according to their lights in more or less accurate fashion and combated it with all the resources of their art, often, it is to be feared, somewhat empirical in their nature. To us who practise in a department of surgery where shock is more frequently encountered, perhaps, than in any other branch of our art, it is of particular interest, and though we cannot now do more than touch on the salient features of a condition so varied in its manifestation and intensity we may well consider, from a practical standpoint, every degree and variety short of those fatal cases where the nervous system is blasted by some sudden emotion or physical injury that strikes through it at the heart and leaves no time or opportunity for treatment. We are, indeed, but too familiar with the pallor and restlessness, the cold skin, the drawn features, the quick, embarrassed pulse, the shallow, rapid respiration, the loss of muscular tone, extending from the blood vessels to the sphincters, the lethargy, deepening may be into unconsciousness or death itself, that occasionally follow the graver operations of abdominal surgery.

Shock is, for that matter, a more or less near approach to death, often getting perilously near it after staggering blows on the central nervous system that reach it through afferent nerves and affect the circulation, directly through the innervation of the heart, and indirectly by way of increased peripheral resistance, venous stasis, and diminution of blood pressure.

There are as many definitions of shock as there have been writers on the subject, some lucid or suggestive, others more or less fanciful or problematical, according to the knowledge or imagination of the author. Amongst more scientific definitions we have that of Erichsen[1] who regards shock as being "due to a general exhaustion of the nervous centres consequent upon an extremely violent afferent impulse," and I am sorry that time forbids a further extract from his able description. Goltz, quoted by Crile[2] defines it as vasomotor paralysis resulting from mechanical violence, while others discuss contraction of the blood vessels of the brain and other causes.

But though we have hitherto been thrown on more or less fanciful definitions of shock we have to-day the advantage of more precise work in this absorbing field. Shock, instead of remaining as ill-defined as electricity, say, has come within the purview of the man of stains and microscopes, and been brought under the resources of the physiological laboratory. When we can look at shock and handle it, so to speak, we may hope to treat it as successfully as we treat other surgical emergencies and on as precise lines.

And this is the more important, seeing that the abdominal surgeon is so prone to meet with cases of severe shock. Our patients are frequently reduced by loss of blood; by the serious constitutional results of prolonged hæmorrhage; and by their efforts to establish a sort of auto-immunity while harbouring collections of pus—a valuable contribution to their defences against operative sepsis, I believe, but not making for an increase of their shock-resisting powers. The presence of large uterine and other growths must have some effect on the heart, especially when it has been badly nourished in an anæmic patient, the while it has been called upon for more work in driving blood through pathological structures; and alterations in blood pressure cannot be so readily compensated as in the healthy subject.

Dr. T. Wilson[3] has written on this subject with his usual soundness of judgment and thoughtful exposition. It is obvious that the local condition of the circulation in these cases is far from normal: it makes for hæmorrhage, for venous stasis, for incapacity to deal with sudden falls in blood pressure that had been raised by the presence of

growths, and must be considered in dealing with shock as we shall discuss it presently.

Indeed, the subject is so large, so protean in its aspects, that I cannot pretend to do more than indicate points of practical interest to working surgeons and ask for guidance as to treatment.

Sherrington's brilliant work [4] has opened up for us quite a new field in the study of shock. I have more than once before[5] drawn attention to his views, and will not discuss them again in any detail. Roughly, and leaving aside important changes in blood cells, we find operative interference in a healthy animal to be followed by a certain degree of apoplasmia or drying of the blood. In one instance a young dog, in good condition, had Halsted's operation of intestinal anastomosis performed with full antiseptic precautions and under full anæsthesia. Before operation the specific gravity of the blood was, what it had been for two days previously, 1054. One and-a-quarter hour later, after operation, the specific gravity of the blood had risen to 1062; and it gradually returned in five days to 1055. The specific gravity of the serum was unaltered throughout. The operation was carefully conducted and marked by no untoward event; and it is obvious, as Professor Sherrington points out, that apoplasmia of the blood to this extent must notably increase the friction coefficient of the blood. I have observed a similar rise in specific gravity of the blood in rabbits, sometimes at the close of a twenty minutes operation, which consisted in opening the abdominal cavity and sponging the intestines with saline solution; and indifferently so whether the operation was done under β eucaine or general anæsthesia. The animal on being killed showed no abnormal fluid in the peritoneal cavity, and healthy union of the peritoneal cut surfaces was progressing. That fluid, plasma or serum, does escape into the lymph spaces is tolerably certain; and a corresponding amount of drying takes place in the blood. The degree of apoplasmia depends to some extent on the severity of the lesion, but it is always considerable. It must be taken into our calculations, just as we take hæmorrhage into our estimation of the patient's chances, and provided for in the treatment of the case. With this increase in specific gravity Sherrington also observed an increase in the hæmoglobin content of the blood, an increase in the number of chromocytes per unit volume of blood, the numerical ratio of leucocytes to chromocytes was always increased, and there were alterations in the proportions of other blood cells, following these local inflammations. We cannot study surgical shock without giving great consideration to these views, and it would be difficult to speak too highly of Dr. Sherrington's contribution to the subject.[6]

But we have other tangible evidences of shock in the condition of nerve cells. Crile quotes Hodge's investigations on the microscopical alterations in nerve cells at rest and in fatigue. After electrical stimulation for some hours of the spinal ganglia of dogs and cats, the cells were compared with normal cells and with stimulated cells after a period of rest. He showed that metabolic changes are as easily demonstrated as similar processes in gland cells. "Fatigue is characterised by a decrease in the size of the nucleus; instead of the smooth and rounded contour, an irregular outline obtains, the nucleus taking a darker stain. There is also a slight shrinkage in the size, with vacuolation of the cells of the spinal ganglia and considerable shrinkage of the cells of the cerebrum and cerebellum, with enlargement of the pericellular lymph spaces." This illustrates the theory that repeated afferent stimuli exhaust the bulb, so producing shock with its train of symptoms of damaged vitality. Of course, exhaustion of the bulb means the serious derangement of many centres of vital activity, and shock is probably chiefly seen in derangement of the vasomotor system; though I agree with Mansell Moullin that in probably the majority of cases "all the functions of the nervous system are affected," and not the heart and vessels alone. Hence the complicated manifestations of shock, in which the equilibrium of the nervous system, central and peripheral, is more or less upset.

Further, we must differentiate between shock proper and acute sepsis, which may offer similar symptoms. Durham[7] has pointed out that some cases of apparent "shock," are really cases of acute sepsis, and that if we look in the mediastinal glands as well as in the other channels of septic absorption, we shall find evidences of this that would otherwise be overlooked. Whether the intraperitoneal injection of saline solution or other protective substances would prevent some of these cases of sepsis by producing increased leucocytosis has not, as far as I know, been tried in the human subject. In the rabbit the intraperitoneal injection of 25 c.cm. of saline solution of even 5 per cent. strength does not appear to incommode it, to cause any evident peritoneal irritation twenty-four hours later, or to do anything but raise the specific gravity of the blood two or three degrees for a time.

I propose to discuss very briefly two or three of the factors which cause or aggravate shock, and must for that purpose draw largely on Crile, who is not only amongst the most recent investigators, but whose work is eminently practical and suggestive, taking, as he does, point by point, the different factors associated with shock in experiments carried out on a large number of animals, and recorded with great care. We see, for example, the importance of the time element on the vasomotor mechanism during operative exposure of the peritoneum. There is rapid engorgement with blood, and dilatation of the splanchnic area, a great quantity of blood being thus removed from the general circulation: and we know that a man may bleed to death into his splanchnic veins without a drop of blood leaving the vessels. Add to this the hæmorrhage of the operation, the direct loss of blood from severed vessels, and the exudadation of plasma which is a constant factor, and it is easily realised that the effect on the circulation may be enormous, and that heart and brain may be dangerously deprived of blood in these directions. We are too prone to judge by hæmorrhage alone, and to lose sight of the fact that the circulation may, instead of remaining a river with side streams and rivulets, widen out into lakes which drain main channels. We are not operating in regions like the arm or leg, but in the midst of vasomotor nerves and ganglia which control an immense venous area, the dilatation of which must mean remarkable differences in blood pressure throughout the circulation. If venous pressure drop seriously, the effect on the output of the heart must be immediate and profound.

Bearing these things in mind, what are we to say about treatment? The best, after all, must be preventive. If we look at shock as Groeningen viewed it,[8] as being the result of exhaustion of the medulla due to a long series of influences acting before, during, and after the operation, and all to be taken into account, we shall act wisely and shall treat our patients most successfully. We shall prepare for shock, and minimise it by every resource open to the alert surgeon, from the moment he decides on an operation till the hour when the patient returns home. There can be no doubt that the old-fashioned preparation of patients by a short holiday in the country is an excellent thing in its way, and improves thei chances. The patient can lay in a stock of oxygen that will probably be called upon later. The improvement in genera health, in muscular tone (and Crile found that animals with firm tissues withstood shock much better than delicate, flabb ones) will be an advantage. The blood cells will gain strength to resist sepsis; tranquil days, followed by nigh full of sleep, will improve metabolism, will make for increase resisting power against all the possible adverse contingencie of a grave operation.

But patients must be intelligently selected for this whole some treatment. Some women would develop psychica shock under it, would worry themselves into a state of collapse, and dangerously brood over the approaching ordeal. With such patients it is sometimes impossible to do more than satisfy ourselves of the absence of serious organic affections that bar all but emergencies which override everything else, before operating, and before the development of that extreme nervous tension which is the worst preparation for surgical shock.

I venture to think, too, that we sometimes starve our patients too much before operation. We may purge them too much. We may, with a course of hot baths, drastic purges, and so forth, so reduce them that the addition of fear is all that is necessary to bring them to a state of semi-collapse before they get on the table. A patient left without food from supper overnight till the following afternoon cannot feel very bright; and an empty stomach, desirable as it is in many

ways from the surgeon's standpoint, may be procured at too great a cost. A preliminary injection of saline solution into the rectum before operation, or of a nutrient enema, may add a good deal to the patient's comfort, lessen her natural feeling of apprehension, and improve her chances. Or Mr. Heath's suggestion,[9] that two ounces of brandy with four ounces of hot water be injected well up into the rectum before serious operations might be carried out with great advantage.

As to anæsthetics, I have little to say. In these days of demoralising inquests, it might be better, if the patient is to die from the anæsthetic, that she should die a few days later from ether than from chloroform while on the table. The use of ether, alone or mixed with chloroform, adds an element of safety, if from other points of view it have disadvantages. But any anæsthetic has its lethal element; all will kill if given long enough; and any must be reckoned with as adding to shock if its administration is at all prolonged.

Local anæsthetics have a great future; cocaine is very well in general surgery, possibly; I have not sufficient experience of it to give any useful estimation of its place. I do not use it, because I look on cocaine as a dangerous drug and liable to produce disconcerting symptoms, good as its effect may be on the heart. But β eucaine is a very valuable agency when used as a local anæthetic, and I have been struck with the absence of shock after abdominal section performed under this anæsthetic.

It is a great thing sometimes to eliminate the shock of general anæsthesia; and often of prime importance. In rabbits, the blood apparently dries to the same extent in operations done under eucaine as when general anæsthesia is used. Crile found that he prevented shock by cutting out afferent impulses, blocking the nerves with cocaine. But this is not so easy in abdominal surgery. Here we may cut out impulses passing from the parietal wound, but we get the same exposure of viscera and its consequences; the same drying of peritoneum, and we cannot in this way exclude shock. Practically, however, the use of β eucaine is of great value and should be developed, not only in emergencies where general anæsthesia is dangerous, but in operations like colotomy, gastrostomy, exploratory operations, and so forth. Anything that will tend to cut out afferent impulses that are excessive as to frequency or degree is to be hailed as minimising shock.

The prime element, to my mind, in the causation of operative shock is that of time; and Crile has demonstrated what was, in a sense, a pious opinion with some of us. I largely attributed Tait's remarkable success to the rapidity of his operating and his minimum exposure of parts. With neither antiseptics nor asepsis, as we understand it; with ordinary domestic cleanliness, his results were astonishing. There was little time for the development of shock from exposure; for introducing septic material into a wound, in the majority of his cases; for poisoning, irritation, or depression from the use of antiseptics or from prolonged anæsthesia.

We too often see a patient, starved for twelve or eighteen hours, brought on the table in a not over-warm room; her abdomen and thorax stripped, and covered with cloths wrung out of more or less warm lotion. Then everything is turned out of the abdomen so that the operator can see to the last capillary what he is doing. Let us have complete operations, let our work be thorough, let us avoid showy work for the mere sake of display; but we should avoid dallying over operations merely because patients are insensible to pain. Well-planned operations, preliminary examinations under an anæsthetic, an intelligent routine of procedure, make for the systematic and therefore rapid operating which abdominal surgeons should aim at.

As to the temperature of the operating room, I need say little on a subject so well understood. In a warm room and on a hot water table, like Dr. Duke's, there is naturally less chilling of the surface or of exposed viscera; and without the pretty appliances dear to so many surgeons, we may find, in a good supply of hot towels wrung out of saline solution; in hot sponges frequently changed; in incisions limited to the absolute requirements of the case: great helps to the prevention of shock. We have all observed how respirations are deepened and blood pressure improved by flushing the abdominal cavity with hot saline where there is no septic material present to contraindicate this. I have found it a good plan to flood the peritoneum from time to time with hot saline solution in protracted operations. The condition of the patient usually improves under this treatment. In rabbits, the peritoneal injection of saline may occasion shock. The specific gravity of the blood rising in my observations. But my impression is, that on the whole patients gain by hot saline flushing of the peritoneal cavity—gain immediately from stimulation of the sympathetic, and ultimately from absorption of the saline solution, more than they can lose by a certain amount of peritoneal irritation that may follow. This, too, if it induces increased leucocytosis, may not be altogether bad in itself. The absorptive power of the peritoneum is enormous; as G. Wegner has shown[10] it will absorb 3 per cent. to 8 per cent. of the entire body weight per hour.

And this brings us to my next point; the most difficult, as it is the most promising for discussion. Greig Smith[11] wrote, "Thirst is the first complaint of the patient in almost every operation in which the peritoneal cavity is opened. If we fully understood the explanation of this fact, we should probably be better able to meet it therapeutically." Sherrington has given us the explanation, and with it the key to treatment. If we take inspissation of the blood as the evidence and standard of shock that is most readily demonstrated, the intense thirst following abdominal operations is an indication of shock and the cry of the circulation for fluid—and the vessels are pretty well drained of fluids at this time. Apart from the stimulation of the skin and draining of the bowels that the patient may have undergone in preparation for operation, she has to face apoplasmia caused by local irritation, as well as hæmorrhage from divided vessels, and the continued loss from skin, kidneys, respiration, etc. And this fluid is replaced—how? By starvation for twenty-four or forty-eight hours, according to the practice of the particular surgeon, in the hope that her thirsty tissues may be thereby driven to lap up exudations into the peritoneal cavity that might become septic and induce peritonitis. This practice may very easily be overdone. While it is probable that where intestines have been roughly handled the peritoneal cavity may become infected, or that germs may be admitted during an imperfect operation, there is room to select cases for a mode of treatment that is cruel and exhausting and possibly unscientific. Shock should be met by replacing fluids withdrawn from the circulation, by restoring to the dried blood the more spacious circulatory medium in which its cells may move without increasing the friction coefficient. It is only going half-way to stimulate the centre of the circulation unless we reduce friction at the periphery. This is a prime necessity and must be met in various ways. If there is no vomiting fluids may be given in small quantities by the mouth. Hot water can be sipped, and the very act of slowly sipping has been shown to improve the pulse by antagonising the inhibitory action of the vagus. Minute doses of brandy and water, also sipped at intervals, have a very sedative effect.

Saline injections may be given by the rectum, and, where these cannot be retained, hypodermically in the cellular tissue beneath the mammæ, or below the clavicle. In more urgent cases venous perfusion is still more reliable, and a pint or more of hot normal saline solution introduced into the peritoneal cavity before closing it relieves thirst and lessens shock. Brandy has even been introduced in this way with apparently the best results. It is interesting to observe how patients suffering from shock improve in pulse, respiration and general comfort after every saline injection into the rectum. Mr. Thelwall Thomas's case of cut-throat[12] affords a brilliant example of the use of saline perfusion, and is an object lesson in the treatment of shock.

After all, the difference in effects between shock and hæmorrhage may not be so great. It is largely the difference in the loss of oxygen carriers in the latter case. If the blood is pooled in the splanchnic veins, and this is what happens in severe shock, both plasma and corpuscles are removed from active usefulness. The introduction of saline solution will, I believe, remedy this largely, and its effect on the local and general circulation is of the best. We find dilatation of the splanchnic area, venous stasis in abdominal veins, and reduced blood pressure, since pressure depends so largely on the quantity of blood supplied to the heart. And stasis makes for other

conditions than shock. Large growths cause increase of blood pressure; their presence must also exercise considerable pressure on the veins in their neighbourhood. After removal and the appearance of vasomotor paralysis resulting from great irritation of the nerve centres, we get a sudden reduction of blood pressure and a loitering of the stream in regions where we should prefer it to move more briskly. Does this make for the removal of peritoneal effusions that may become septic? I hardly think so. I suggest that a well-sustained circulation would assist the removal of fluids that might become septic from the influences named, that we may rely a good deal on the peritoneum to prevent this development of septicity, and that we should look round for some means of promoting its resisting powers. The results of starving our patients have been excellent, but we must exercise a shrewd discretion, we must not become hidebound. We must consider the probabilities of sepsis occurring from the nature of the operation and the extent of shock induced. If we can introduce saline solution into the rectum and have it retained there, we shall supply fluid without the risk of unduly irritating the peritoneum, and we must repeat the injections, either as normal saline or as well diluted nutrient enemata. I invite the opinion of members on the use of saline and the best methods of employing it, for though we may disagree as to the best means of utilising this agency, we all, I believe, recognise its value. We must not forget, either, that inspissation of the blood may continue many hours, or days even, after simple operations, and we should not be in too great a hurry to discontinue saline injections.

These are, I believe, the great indications in the prevention and treatment of shock, and come before the use of drugs, which must be secondary. I need not enlarge on the maintenance of body heat by wrapping the patients in wool, etc. These are commonplaces. As to drugs, I have not found the use for atropine that Crile observed as a protection from cardiac inhibition. He writes so strongly in its favour, however, that we should try it thoroughly. Strychnine we all resort to, but, if anything, give it too seldom and in too small doses. A sixtieth to a thirtieth of a grain may be given during operation, and repeated then or after the patient is returned to bed at comparatively short invervals. Digitalin I have found helpful, remarkably so in a patient whose uterus I removed for cancer, and who suffered for some days from heart failure. She also had glycosuria, which had existed for some months previously, and which disappeared, not to return, after operation.

Very valuable, too, is a small dose of morphine with atropine given hypodermically before the patient leaves the table at the close of a severe operation. It prevents restlessness, gets a few hours for the patient in comparative comfort or even sleep, and we must remember, by lessening pain and apprehension, minimises shock. Later on, of course, one does not care to use morphine.

The preservation of asepsis during an operation, the conservation of the patient's strength, the maintenance of bodily heat, stimulation with suitable drugs (Kelly's suggestion[13] of the rectal injection of a nutrient enema containing forty grains of carbonate of ammonia I have found helpful), the prevention of disturbance in dressing the patient and thereby lessening the chances of chills on exposure, all tend to minimise exhaustion of nerve centres and breakdown of the vasomotor mechanism, with that loss of muscular control that is indicated by relaxed muscular tone, and will assist the agencies that maintain a mean blood pressure on which the circulation must depend for efficiency. Most valuable, from the latter point of view, is the custom of raising the foot of the bed twelve or eighteen inches, so assisting the abdominal veins to empty themselves, filling the heart, and ensuring improved blood pressure. Probably, too, heat applied to the abdomen and extremities helps this necessary work, and stimulates the vasomotor nerves. It is better, I think, than the exhibition of nitrites, which may be dangerous under certain conditions of the circulation. Heat, too, is not the least important factor of saline injections, and acts as a nerve stimulus, as well as being the means of refilling emptied vessels. I am not here to exhaust the subject of the treatment of shock or to supply a list, familiar to us all, of the diffusible and other stimulants that have been used from time to time. I will close by repeating the old warning to let stimulation go hand in hand with feeding. Exhausted, ill-nourished organs are not to be bullied without grave risk being incurred.

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## WHEN AND HOW TO OPERATE ON UTERINE FIBROIDS.

By WILLIAM DUNCAN, M.D., M.R.C.P., F.R.C.S.,
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UTERINE fibroids, having within comparatively recent years excited much interest and not a little controversy, it is unnecessary for me to make any apology for bringing the subject before you to-day. I propose in this short paper to discuss, without prejudice or bias, the question "How and when to operate in cases of uterine fibroids?" and I feel sure that those who speak after me will do the same; thus we may hope to be able to settle some disputed points. In the first place, do uterine fibroids endanger a woman's life? One observer, basing his remarks on *post-mortem* examination notes, says that "the mortality, apart from operation, is 3 in 2,160,112," and, he adds, "it seems undeniable that deaths from fibroids, apart from operation, are excessively rare." Against this we have the statement of another who quotes 18 cases reported by various medical men in which death was directly due to the condition.

Whilst, then, there is a divergence of opinion as regards the frequency with which fibroids are the actual cause of death there can, in my opinion, be none as to the frequency with which they make a patient's life more or less that of an invalid by the deleterious effect they have on her health, and this, too, when hæmorrhage has not been a prominent symptom. Fatty heart is by no means uncommonly met with in cases of fibroids and constitutes one of the great dangers after hysterectomy. How often in these cases do we observe the abdominal walls, as well as other parts of the body, loaded with fat?

Then, again, what serious risks a woman who has uterine fibroids runs in the event of her becoming pregnant. Abortion is liable to occur and the prognosis is grave, the mortality is given by Lefour as 36 per cent. Rupture of the uterus during pregnancy is another danger. I was once called to a fatal case of this kind.

As illustrating the degeneration to which the vessels are liable I may mention the case of a patient whom I had under my care in the Middlesex Hospital some years ago: she was pregnant and had multiple fibroids and was waiting until full term should arrive so that I might perform Cæsarean section. One day, however, whilst resting quietly in bed, she was seized with fatal cerebral hæmorrhage. Parturition, when complicated by fibroids, is, as is well known, frequently a matter of difficulty or even of grave danger. Specially is this the case when the fibroid is situated low down in the uterus, in or near the cervix. Of 147 cases collected by Susseroth the forceps were required in 20 with the loss of 8 mothers and 13 children. In 21 cases the placenta required manual removal, and of these 13 died.

Tarnier out of 6 cases delivered by forceps lost 4 mothers and 4 children, and 5 women with fibroids died before delivery. These statistics speak for themselves and show the necessity for warning women possessing fibroids from becoming pregnant. There can be no doubt but that many fibroids cause no trouble and should not be interfered with. At present one of my patients has a large fibroid, and although it causes no trouble whatever except spoiling her figure, she constantly asks me to remove the tumour, but I do not feel justified in operating merely to make her waist several inches smaller.

It seems to me that it would be equally wrong to recommend

(as has been done) that all fibroids, no matter how small, should be operated upon (just as in the case of a small ovarian tumour) as it is to say that uterine fibroids practically never require removal.

Let us now consider the conditions calling for interference. They are, in my opinion, four, namely:

1. When they cause severe hæmorrhage.
2. When they cause pressure symptoms.
3. When they are growing rapidly larger.
4. When they complicate pregnancy.

1. When a woman suffering from menorrhagia or metrorrhagia seeks advice, and it is found that the uterus is enlarged by fibroids, the first thing to do is to dilate the cervical canal and explore the uterine cavity for polypi or submucous fibroids. If mucous polypi be found, a thorough curetting will remove them as well as the hypertrophied endometrium; if there be a fibroid polyp present, it can be removed either by an *écraseur* wire or by the scissors. If a small submucous fibroid (say as big as a walnut) be detected, it can be seized hold of by a pair of volsellum forceps, twisted out of its bed in the uterine wall, and the uterine cavity packed with iodoform gauze for forty-eight hours.

This preliminary exploration of the uterine cavity (when hæmorrhage is the prominent symptom) should always be had recourse to before resorting to more radical measures, otherwise the uterus might be removed unnecessarily. A good many years ago, when removal of the ovaries and tubes for the cure of hæmorrhage due to fibroids was in vogue, I removed the appendages of a patient without any benefit; a few months later she returned as bad as ever, and on dilating the cervical canal—which I ought to have done in the first instance—I removed a fibroid polyp, and the hæmorrhage at once ceased.

This case has always been a lesson to me. If, however, after dilatation of the cervical canal a large submucous fibroid (of several inches diameter, perhaps) be found embedded in the uterine wall, what should be the treatment? Cutting across the capsule, followed by the administration of ergot, in the hope of the fibroid being extruded, is unscientific, uncertain, and not by any means free of danger. Removing the fibroid piecemeal by means of scissors and forceps has been strongly recommended by some operators both in this country and abroad, but I confess that to my mind this operation of *morcellement* seems not only unsurgical but also more dangerous than hysterectomy. The uterine wall has been pierced and fatal peritonitis resulted. Sepsis from sloughing of some of the tumour left behind is not unknown, and cases have occurred in which, some hours after this operation has been performed, the uterus has had to be hurriedly removed in order to arrest the bleeding.

The advantage claimed for *morcellement* is that the uterus is left, but, I ask, Is not that a grave disadvantage? Would not the occurrence of pregnancy in a uterus, from whose wall a large fibroid had been removed expose the patient to great risk of fatal rupture either during the growth of the fœtus or during labour?

Removal of the appendages either to stop hæmorrhage or to arrest the growth of the tumour by bringing on an artificial menopause has nowadays fallen into desuetude, and rightly so, because the mortality from the operation is not less than that after hysterectomy and, in not a few cases, the removal of the appendages has neither arrested the bleeding nor the growth. Also it is much more important for a woman's health to leave the ovaries rather than the uterus. With regard to the use of electricity, according to the method of Apostoli, I regret to say that after giving it a careful trial in ten cases it has (in my hands) proved a complete failure. And this, I imagine, is the experience of most unbiassed observers.

True, it has temporarily relieved the hæmorrhage (just as curetting does) but in not a single instance did it either reduce the size of the growth or cure the bleeding, so that I was reluctantly compelled to discard a method of treatment which I took up enthusiastically and from which I expected great results. Myomectomy, after the abdominal cavity has been opened is the operation, *par excellence*, for subperitoneal myomata when their attachment to the uterus is not extensive. Even when a large myoma is embedded in the uterine wall, but is projecting inwards towards the peritoneal cavity, its capsule can be cut across, the tumour shelled out, and the cavity that is left carefully closed by buried sutures. It has been recommended to perform this operation when several fibroids are seen: but in all probability some small growths would be left behind undetected, and that these would grow and necessitate the removal of the uterus itself at a later date. On this account I prefer to do hysterectomy rather than myomectomy in most cases.

Hysterectomy then is, in my opinion, the best operation to perform in most cases of uterine fibroids which require medical treatment. It is performed in various ways.

Panhysterectomy is the name given to the removal of the whole uterus, either through the vagina (when the tumour is a small one) or after opening the abdomen.

Intraperitoneal hysterectomy is one of the terms used when most of the uterus is removed, leaving a stump consisting of a portion of a cervix. The old operation of fixing the stump to the lower end of the incision in the abdominal wall has only to be mentioned to be condemned. Naturally every operator will have a preference for that method which in his hands gives him the best results, and therefore I hardly like to speak dogmatically. All I will say is that I am perfectly satisfied with the results of intraperitoneal hysterectomy in which the stump is very carefully shut off from the peritoneal cavity by means of peritoneal flaps sewn together after the method of Lembert. Of course, in some cases where the fibroid involves the whole cervix, it is necessary to perform panhysterectomy, but except in those rare cases I fail to see what advantage is gained by removing the whole of the cervix and thus making a free communication between the vagina and peritoneum.

I have never performed vaginal hysterectomy for fibroids, because I am confident that a fibroid which can be got out *per vaginam* can be removed by intraperitoneal hysterectomy quite as safely, and there is the great advantage of seeing whether there be any adhesions of the bowel or omentum to the tumour, or whether the Fallopian tubes contain pus. Up to the present date I have performed intraperitoneal hysterectomy 127 times with four deaths. My last 81 consecutive cases have all been successful. Of the 127 cases 44 were performed at the Middlesex Hospital, 44 at the Chelsea Hospital for Women, and 39 in my private practice. Curiously enough the four deaths occurred in the Middlesex Hospital, one was from pulmonary embolism which occurred suddenly on the eighteenth day when the patient was considered convalescent and about to leave the hospital.

The other three were from heart failure, and those patients I imagine might have been saved if at that time I had adopted the medicinal treatment which I now invariably have carried out. Looking at these statistics it seems to me I am justified in thinking that no other operation for uterine fibroids could give better results. I will speak in more detail of the operation and the medicinal treatment presently.

2. The second class of case requiring operation is that in which the tumour causes pressure either on the bladder, rectum, or the sacral nerves. Here the tumour fills the pelvic cavity, sometimes it can be pushed up above the brim and kept there by a pessary, but in others this is impossible and then nothing but hysterectomy is of use. A few years ago a young lady, who had only been married three months, consulted a medical friend of mine for retention of urine. After emptying the bladder he found a tumour filling the pelvis, so sent the patient to me. She had uterine fibroids and was pregnant. I dilated the cervical canal with a good deal of difficulty and then emptied the uterus hoping that the tumour would diminish in size and cease to cause trouble; as, however, the condition was no better I had to perform hysterectomy three weeks later.

3. When a fibroid tumour takes on rapid growth this is due either to cystic or mucoid degeneration and always calls for hysterectomy without delay.

4. Lastly, when a fibroid complicates pregnancy, the risks a woman runs depend greatly on the position of the growth. If the fibroid be situated in the upper uterine segment, or if it be subperitoneal and not impacted in the pelvis, pregnancy and labour will in many cases proceed naturally and terminate favourably. These kind of cases should in most instances not be interfered with. In November, 1899, a lady consulted me for severe menorrhagia. I found she had a

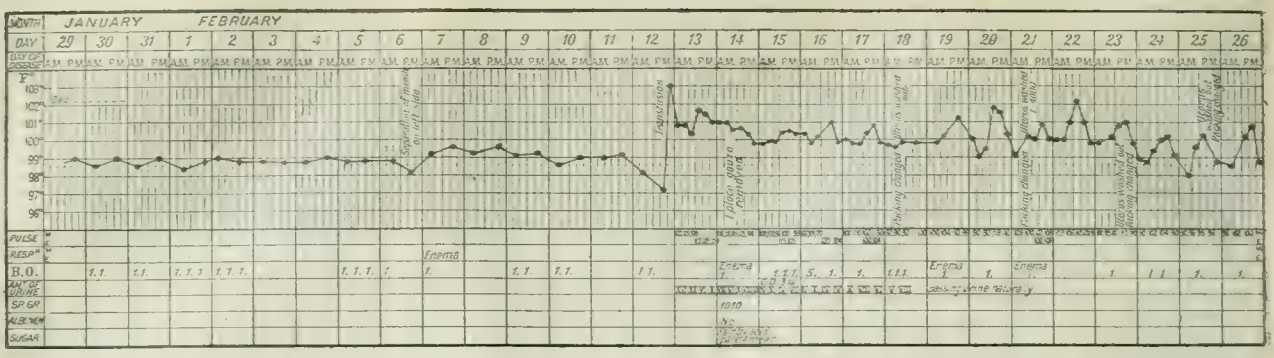



Chart illustrating Dr. Lockyer's Paper on

bulky uterus and a subperitoneal fibroid the size of a tangerine orange in Douglas's pouch. On dilating the cervix I found a small submucous fibroid. This I twisted out, and then thoroughly curetted the endometrium. Four months afterwards she became pregnant and the subperitoneal fibroid grew rapidly until it filled the pelvis and caused retention of urine. Fortunately I was able to push the tumour above the pelvic brim. Pregnancy went on to full term, the labour was easy, and the convalescence uninterrupted. Three months after delivery I again examined the patient and found that the fibroid had become reduced to its original size.

In some cases of fibroids complicating pregnancy the woman suffers intense pain from the rapid increase and an operation is necessary. The choice lies, after opening the abdomen, between hysterectomy and myomectomy. Now although the latter operation has been successfully performed without interfering with the pregnancy, I confess that if the tumour were at all large, I should prefer hysterectomy, fearing that after myomectomy, when labour set in, there would be great danger of rupture of the uterus.

When pregnancy occurs in a uterus, the lower portion of which is occupied by fibroids obstructing the pelvic brim, and perhaps filling the pelvic cavity, there are three courses open, namely:

(*a*) To empty the uterus.

(*b*) To at once perform hysterectomy.

(*c*) To let the case go on to full term, then to save the child by Cæsarean section and to remove the uterus by hysterectomy.

It is difficult to dogmatise in cases of this kind: each must be judged separately, but although sometimes the induction of abortion is difficult and may be followed by severe hæmorrhage or sepsis, I should myself feel disposed to try that measure first, and if that failed (as in the case I have recorded), then to resort to hysterectomy. Before concluding, let me make a few remarks on the operation of intraperitoneal hysterectomy and the subsequent treatment.

There are two chief dangers after hysterectomy, namely, shock with heart failure and tympanites from intestinal paralysis. In order to prevent the occurrence of the first, it has been my invariable rule for some years to administer hypodermically three drops of liquor strychninæ three times a day for a week prior to and a week after the operation.

No food is given by the mouth for the first twenty-four hours, but if there be much sickness or retching, half-a-pint of hot water with half a drachm of sodium bicarbonate dissolved in it usually gives speedy relief.

A nutrient enema (with the addition of ʒss of brandy if the patient be very feeble) is administered every four hours. A soft rectal tube is passed up every four hours and if, within twenty-four hours after operation flatus is not freely escaping, an ounce of spirits of turpentine in a pint of hot water is passed high up the bowel: this usually has an excellent effect, bringing away a large quantity of flatus. If necessary it can be repeated in twelve hours. To the injections of strychnine and the turpentine enemata I attach the greatest value.

As regards the operation itself, it is my custom to tie off the ovarian and uterine arteries (when possible) on both sides before cutting down the peritoneal flaps; in this way the loss of blood is very trifling. After the flaps are reflected down to the level of the tied uterine arteries, the cervix is cut across and the tumour removed. Any oozing points in the cervix are tied with catgut and then the peritoneal flaps are carefully brought together by fine silk in a continuous Lembert suture. In those cases in which the tumours burrow between the layers of the broad ligament a large cavity is left after their removal; instead of draining this, I find that by carefully whipping the sides together from below upwards by a continuous suture (after all oozing has been controlled) the cases do perfectly well.

I always sew up the abdominal walls by three layers of continuous suture, fine silk for the peritoneum, coarser silk for the sheaths of the recti, and still coarser for the skin. By this method I feel sure that the occurrence of ventral hernia later on is prevented. In a few cases suppuration has occurred in the abdominal wall, but in each instance this was clearly proved to be due to imperfect sterilisation of the silk on the part of the instrument maker. The convalescence after intraperitoneal hysterectomy is, in almost all cases, completely uneventful just as after a simple ovariotomy, this is especially so if the ovaries have not been removed with the tumour and they should always be left unless obviously diseased.

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## A CASE OF CYSTIC FIBROMYOMATA IN A SINGLE WOMAN AGED 22 YEARS.

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THE following are the details of the case:

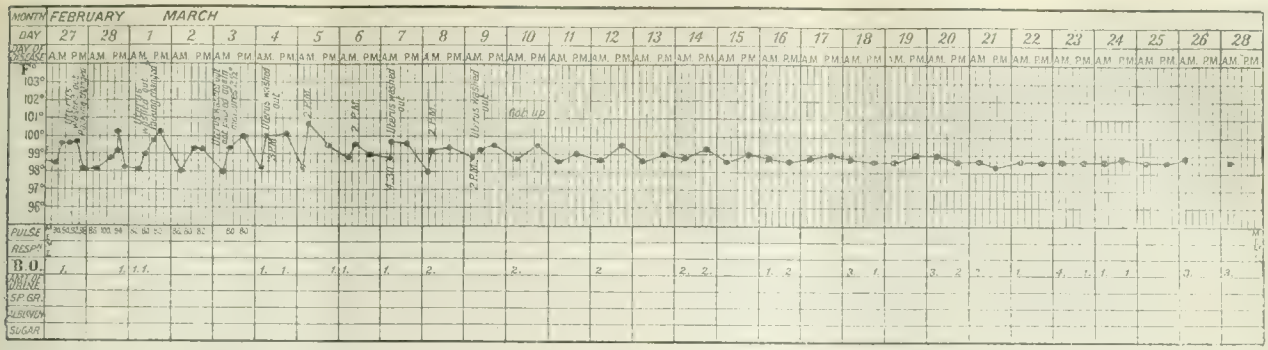
L. L., aged 22 years last birthday, single, multipara, came to the outpatient department of the Samaritan Hospital, London, on January 8th, 1901, complaining of a lump in the abdomen, first noticed seven months previously; also of pain at, and just before each monthly period. Catamenia began at 15, ceased for three months a year later, but had otherwise been quite regular since onset. For seven months preceding her first visit the periods lasted 4 to 5 days, and were very excessive, twenty-four diapers being used at a time; dyspeptic symptoms and some sickness had also intervened during this period. She had never suffered from constipation or other symptoms of deep pelvic pressure. There was no discoloration of the vaginal mucous membrane, and no breast changes; slight leucorrhœa had been noticed from time to time; the possibility of a six months pregnancy was admitted by the patient.

In making a vaginal examination, the os uteri was found to be fully dilated and a tense elastic membrane bulging. The examining finger passed easily between the dilated os and the uterine contents on the right side, and behind as far up as the first interphalangeal joint, that is to say, about two inches, but on the left and in front the presenting membrane adhered to within one inch of the margin of the external os.

*Per Abdomen.*—An elastic tumour was seen and felt to rise up out of the pelvis to just above the umbilical level. It was smooth on the surface, centrally situated, and quite spherical, except for an outlying nodule the size of a hen's egg in the right iliac fossa and attached to the main mass. The tumour was uniformly dull, uterine contractions were distinctly felt, no *ballottement* was obtained. A very marked roaring *souffle* was heard over the lower part, being loudest in the hypogastrium. The external conjugate of the pelvis measured 6½ inches, the true conjugate 2¾ inches. In general appearance the patient was very badly nourished, much undersized, and markedly anæmic.

Examination of the clots passed at the last two periods before operation revealed no solid particles nor shreds.

On February 5th, at the end of a profuse menstruation, my colleague Dr. Hubert Roberts saw this patient with me, and, on passing a Sims's speculum, a lot of very foul mucoid matter escaped from the vagina. The presenting membrane above described was entire, and but for the pre-




Cystic Fibromyomata in a Single Woman.

sence of a discharge, the condition was unaltered from that observed when I first saw her on January 8th. Dr. Roberts agreed with me as to the possibility of a gravid uterus with a dead and decomposing fœtus.

On February 6th Dr. Amand Routh and Dr. McCann concurred in this diagnosis, Dr. Routh regarding the case as one of adherent membranes due to endometritis of the lower zone. Accordingly I attempted to separate the membranes with the finger, but the mass was too firmly adherent in front to give way, although some separation was effected on the left side. Having packed the vagina with iodoform gauze, the patient was put back to bed, and for four days the gauze was changed daily, but nothing further was done for her during this time.

On February 11th an exfoliated piece of membrane was discovered, on passing a Fergusson's speculum, to be hanging from the main presenting mass into the vagina, this was removed and the mass punctured, but only a slight escape of œdematous fluid resulted. The patient was brought into the theatre and, with the assistance of Dr. Hubert Roberts, I removed by *morcellement* a very œdematous fibromyoma, which was extensively cystic in the upper part of its extent, when this part was reached about 30 ounces of yellowish golden-coloured fluid escaped. The solid part of the tumour weighed two pounds after removal. The empty uterine cavity measured 6 inches. The operation took 70 minutes to complete, at the end of which time the patient was extremely collapsed. One-hundredth of a grain of ergotinine was given by deep injection into the buttock, also one-twentieth of a grain of strychnine. The uterus was washed out with 1 in 4,000 perchloride of mercury solution and then uterus and vagina were packed with iodoform gauze. There was remarkably little hæmorrhage. After putting the patient to bed, rectal injections of beef tea, hypodermic injections of strychnine, hot bottles, and elevation were employed to counteract shock, but the patient's condition in the night was a matter of extreme anxiety, her extremities were icy cold and the radial pulse imperceptible. Three pints of Koch's normal saline solution were injected into the right median basilic vein and one-twentieth grain of strychnine ordered to be injected every four hours. After the intravenous injection the temperature at once rose from 97° to 103° and the patient rallied (for further details of temperature see chart). The gauze was removed every other day and the uterus washed out with 1 in 4,000 perchloride of mercury solution. Large doses of iron were given. The uterus involuted rapidly on March 3rd, the sound measurement was 2½ inches, and on March 28th, when the patient left the hospital, the uterus measured two inches only.

I saw the patient on July 2nd. She had been at work as a boxmaker for one month since leaving hospital; felt perfectly well and was about to be married.

The specimen shown in glycerine consists of four pieces of the upper cystic part of the mass sewn together. The microscopic sections will be seen to present the typical structure of a fibromyoma. The section of the cyst wall shows no epithelial lining.

That from the uterus of a single woman of twenty-two years a fibroid should proceed and extend to above the umbilical level and then attempt to deliver itself by fully dilating the cervix uteri leads me to claim that this case is unique and to hope that it would be of interest to the Obstetrical Section of the British Medical Association.

Mr. Alban Doran, in discussing Dr. W. Duncan's paper, thought that small hard fibroids which caused no pressure symptoms and were not associated with hæmorrhage should not be removed. The operation would almost certainly succeed, but the patient would be worse off in many respects than before. But fibroids which were increasing and softening, or which pressed on the bladder, rectum, or important blood vessels, or which caused continuous metrorrhagia should be removed; for when hysterectomy was performed on the most modern principles and with every precaution, the risk was relatively slight. From what he knew of the effects of Apostoli's treatment he could not speak favourably of it. Hysterectomy on a gravid uterus was imperative when a large fibroid lay in the lower segment, especially if posterior. But myomectomy for a pedunculated or interstitial fibroid near the fundus of a pregnant uterus was questionable surgery though smart operating. The myoma came away, hæmorrhage was checked, and the pregnancy went on till term—that was to say, when the operation was successful—but it was doubtful if the tumour would have interfered with labour. Mr. Doran had seen a very large number of fibroids during 1900 and 1901, and had still under observation many which had been under his care for years. In most cases the tumour caused no trouble whatever. Occasionally, however, complications set in rather rapidly, just as in two cases of which Dr. Smyly spoke at the Ipswich meeting. Mr. Doran had very little opinion of drugs and mineral waters, but believed in keeping the patient in good health by judicious dietary and medication. Ergot was useful in bleeding cases between the hæmorrhages. Mr. Doran had operated on twenty-nine bad cases of fibroid of the uterus since January 1st, 1901. In every case the operation was retroperitoneal (which must never be called intraperitoneal) hysterectomy, an operation which he also performed in cases of broad ligament tumours which burrowed deeply in the pelvis and were so closely connected with the uterus that that organ was inevitably much damaged during the removal of the tumour. A clean stump was far less dangerous than a uterus with its posterior aspect ragged and torn and connected with the base of a capsule. Of the twenty-nine retroperitoneal hysterectomies for fibroid all but the first recovered. The cause of death in the first case was evident. The muscular part of the stump, as well as the peritoneal flaps, was transfixed so that sutures were passed through both layers and tied on the peritoneal aspect. Hence there was free communication between the peritoneum and the ligatured structures in the stump, and septic material passed along the track of the sutures into the peritoneum, with fatal results. Since then, in the twenty-eight remaining operations, all successful, Mr. Doran sewed the peritoneal flaps alone over the stump after ligaturing all bleeding vessels. The peritoneum thus covered in stump and ligatures, so that in a few hours the latter were cut off from all communication with the peritoneal cavity. Better parametritic inflammation and discharge of the ligatures through the vagina in a few weeks, as occurred in three of Mr. Doran's cases, than sepsis during the first week. To avoid the risks of ligatures entering the bladder, Mr. Doran made a very large anterior flap so that the edge and the sutures applied to it lay far from the fundus of the bladder. It was best to sew the broad ligament flaps over the stumps of the ligatured ovarian vessels and of the tubes when the ovaries were not removed, as the French and some British operators usually did after removing inflamed tubes through an abdominal wound. That method made all future trouble from that quarter extraperitoneal. Mr. Doran strongly advocated the ligature of the uterine vessels under the peritoneum, without transfixing the serous membrane. On opening up the broad ligament after dividing the round ligament it was usually easy to reach the uterine artery. In bad cases, temporary ligature through the serous coat was sometimes imperative, then when the burrowing mass was enucleated and the uterus amputated, the uterine vessels could readily be tied again without including the peritoneum. When there was doubt about the position of the uterine vessels, it was safest to amputate the uterus and secure these

arteries as they spouted. When ligatures were applied to pedicle needles, which were pushed through the broad ligament near the supposed side of the vessels, the ligatures often failed to secure the arteries, whilst the needles, however blunt, usually damaged the veins. Mr. Doran saved one ovary whenever possible, but did not find that the removal of both was followed, as a rule, by a severe artificial menopause. His opinion on this matter, related at the Ipswich meeting, had been further confirmed by later experience.

Mr. Christopher Martin said: With regard to the question of operation in cases of fibroids, my position is one midway between two extremes. I certainly do not advocate it as a routine treatment for all cases, but I do not agree with those who condemn all operative treatment. Each case must be considered on its own merits. I consider the following as indications for operation: (1) Rapid growth, cystic degeneration, malignant degeneration; (2) pressure symptoms; (3) septic infection of the tumour, sloughing; (4) severe hæmorrhage, not controlled by rest and ergot. But no operation should be done if (1) the tumour be stationary in size; (2) the hæmorrhage be moderate and controlled by rest and ergot; (3) the patient be near the menopause. Given a myoma demanding surgical interference, how must it be dealt with? (A) Vaginal myomectomy. If it be submucous, it should, if possible, be removed *per vaginam*. If the patient be a parous woman a comparatively large fibroid can be removed by enucleation and *morcellement*. In some cases much additional room can be gained by stripping off the bladder (as in the first stage of vaginal hysterectomy) up to the level of the peritoneal reflexion. The cervix and part of the anterior uterine wall is then divided mesially with scissors up to the reflexion. A large submucous fibroid can now easily be enucleated. The uterine and vaginal wounds are then closed with catgut or silk, and the parts thus restored to a practically normal condition. (B) Vaginal hysterectomy is called for in small fibroids which are multiple, or which cannot be enucleated. It avoids an abdominal scar, and is attended with very little shock. It is usually unwise, however, to attempt it if the tumour be large, or fixed by adhesions, or if the patient be nulliparous. (C) Abdominal myomectomy (with conservation of the uterus) is occasionally called for. It is easily performed in subserous fibroids. In a few cases of multiple interstitial fibroids I have enucleated them through the abdomen and sewn up the several uterine incisions. In cases of young women, who desire the prospect of pregnancy, it is of great importance to preserve the uterus, if it can be done. (D) Panhysterectomy is in my opinion the best and safest operation for the majority of cases of big myomata demanding operation. It has both its advantages and its drawbacks. In favour of its performance are the following points: (1) It should be done if the cervix be myomatous or otherwise diseased. (2) It is indicated if there be any suspicion of malignancy, and in my experience sarcomatous degeneration of fibroids is not uncommon. I have seen seven cases in my own practice. (3) It can be done in cases where retroperitoneal hysterectomy is impossible. (4) I have found it quite as easy in performance and as safe as retroperitoneal hysterectomy. Against its performance may be urged: (1) There is some risk of wounding the bladder and ureters. (2) There is sometimes troublesome bleeding from the cut vaginal wall. (3) There is some risk of adhesion of intestine to the vaginal wound (or the iodoform gauze drain filling it) and intestinal obstruction. (4) It opens the vagina and this may lead to infection of the peritoneum. (5) It leads to some subsequent shortening of the vaginal canal. (E) Retroperitoneal hysterectomy. This operation has the following points in its favour. (1) The vagina is quite shut off from the peritoneum, (2) there is no after-shortening of the vagina, (3) there is no raw surface left for the bowel to get adherent to, (4) it is some mental comfort to the patient to be told that only part of the uterus has been removed, (5) there is less risk of wounding the bladder and ureters than in panhysterectomy. Against its performance may be urged: (1) If the tumour be undergoing malignant degeneration it is unsafe to leave part of the uterus behind, (2) I have not found it any easier to perform than panhysterectomy, (3) there are the risks of hæmorrhage from the uterine stump, hæmatoma, and sloughing of the stump, (4) it is unsafe if the cervix be the seat of myoma or otherwise diseased. It must be remembered, in deciding between panhysterectomy and retroperitoneal hysterectomy, that in cases where the latter operation is possible there also it is easy and safe to do the former, whilst there are many cases where it is impossible or dangerous to do the retroperitoneal operation and panhysterectomy alone is feasible. Mortality: The following are the results of my own hysterectomies up to date. I have performed: (1) vaginal hysterectomies for myoma, 33 cases, with 2 deaths (2) panhysterectomy for myoma, 40 cases, with 1 death, (3) retroperitoneal hysterectomies for myoma, 7 cases, with no deaths. In all 80 hysterectomies for myoma with 3 deaths. Prevention of shock after hysterectomy. The most important points in preventing shock are: (1) Avoidance of undue exposure, handling, and chilling of the bowels during the operation. (2) The use of the Trendelenburg position. (3) Avoidance of undue loss of blood. (4) Reasonable rapidity in operating, provided due care be taken to secure all bleeding points and to take every antiseptic precaution. A rapid operation is of little avail if the patient dies of sepsis or hæmorrhage, due to the operator's undue haste. (5) After my hysterectomies I always raise the foot of the bed 12 to 18 inches, and thus maintain the patient for twelve hours in a modified Trendelenburg position. (6) In cases of shock after prolonged operation I inject strychnine hypodermically, and administer saline solution by submammary injection. (7) After all abdominal sections for pelvic disease I give fluids freely—by the mouth if there be no sickness, by the rectum if there be. I have long discarded the old starvation plan of after-treatment.

Mr. Hawkins-Ambler agreed with the views of Dr. Duncan as regarded the indications for operation, but he would like to suggest that if the condition of the heart made these operations more risky, it was to be considered whether the effect on the heart of large uterine growths was not an indication of their removal. As to methods, he thought the retroperitoneal operation much the best, unless contraindicated by the position of the growth. Vaginal hysterectomy was so easy and so safe that it was to be considered favourably in suitable cases. Myomectomy was rather overdone; and he disagreed with the removal of large numbers of fibroids by some modern operators, it being questionable whether all could be removed, and any left being as important as those taken away. The danger of shock was to be obviated in various ways. The Trendelenburg position not only made the operation easier and more rapid, since one could see what one was doing, but it improved blood pressure by filling the heart better and relieving the stasis in abdominal veins. The maintenance of a modified Trendelenburg position after operation, by raising the foot of the bed 12 to 18 inches, was very valuable in relieving the shock. The use of saline solution during and after the operation was also important. It should be given freely, and its use continued for some days and the vessels refilled. He considered these means better than the use of drugs, though strychnine was most useful. Dr. Duncan's preparation of the patient by strychnine was a valuable suggestion. A dose of morphine with atropine given before the patient left the table was sometimes of use but should not be repeated. It relieved restlessness and pain, and so acted in diminishing shock, and he attributed the good effects to the morphine.

Professor Alfred Smith congratulated Dr. Duncan on his excellent paper and said that in operating on fibromyomata each case must be judged on its merits, the mere fact of the presence of a tumour being no indication for operation unless in some way or other it inconvenienced or endangered the patient's life. As a general rule cases of hæmorrhage, pressure, and rapid growth required operation. Tumours should also be removed from governesses or servants where the mere size would be objectionable, but not in the case of the newly married where a child was of great importance. He mentioned an interesting case of a newly-married woman who sought relief for pain and profuse menstruation—examination revealed a multiple fibromyoma the size of a fourth month pregnant uterus. He did not operate but curetted, and this patient gave birth to a full term child the following year. In St. Vincent's Hospital, Dublin, since 1891, 117 laparotomies were performed for fibromyomata, as follows:—8 double oöphorectomies, 6 myomectomies, 2 enucleations, 9 panhysterectomies and 92 retroperitoneal hysterectomies without a death. In the technique of the operation he still followed that given in his report of 100 abdominal sections published

in 1899. After ligation of the ovarian arteries, anterior and posterior flaps were fashioned; then, after primary ligation of uterine arteries, amputation of stump and stitching together of the anterior and posterior flaps with interrupted sutures. Great importance was attached to the preparatory treatment of patients, some advanced cases blanched with hæmorrhage required at least three weeks. They should be well fed, and iron and arsenic administered internally. Shock was obviated by closing the upper portion of the abdominal incision provisionally after the tumour was delivered out of the pelvis by a temporary continuous suture. He advised a rational treatment after laparotomies; he allowed patients to drink weak tea, hot water or whey, as desired if there was no damage to the intestines; in cases of damaged intestines hot water only was allowed.

Dr. John Campbell said: I shall confine my remarks to two points, namely, the use of the dilator and curette in cases of fibroid and the size of the peritoneal flaps in retroperitoneal hysterectomy. I am not sure that I correctly followed Dr. William Duncan's views in regard to the use of the curette, but my impression is that he advised its use rather extensively. There is a certain amount of risk in interfering with many cases of fibroid in this way, and careful consideration should be given to the selection of suitable examples. So long as the uterine cavity is small and simple there can be nothing but good derived from such interference, but when it is large and tortuous it is a different matter. It is then impossible to reach every part of the endometrium with the curette; it is impossible to secure complete drainage, do what you will; and it is impossible to avoid setting up sloughing of the fibroid from injury to its blood supply. On these grounds cases for dilatation and curetting should be carefully selected. As regards the size of the peritoneal flaps, I am of opinion that they should not be too large. In my first five or six cases I noticed that there was a curious and persistent frequency of the pulse, though the temperature remained normal and the patient's general condition was good. I came to the conclusion that this was due to absorption from the retroperitoneal space, in which blood or serum had accumulated and had become contaminated from its proximity to the bowel. In my later cases I have made the flaps just sufficiently large to cover the stump and have thus got rid of the frequent pulse and obtained excellent recoveries.

Mrs. Garrett Anderson said she had no right to be considered an authority on the operative treatment of fibroids, but she had lived long enough to see how many fibroids killed if not operated upon. She had seen several women die of cerebral hæmorrhage soon after 50 years of age from atheromatous or calcified arteries due, as she believed, to the deteriorating effect of prolonged and very excessive hæmorrhage. She also remembered a good many cases in which patients with old fibroids eventually lost their lives from degeneration of the tumour, malignant or suppurative.

Mrs. Scharlieb, M.D., said: It appears to be useless to follow the whole of Dr. Duncan's most interesting and valuable paper inasmuch as one could but repeat less well what he has so admirably said. There are only two points on which I should like to say a few words. First, as to Apostoli's treatment, personally I have found it a failure. I have not seen permanent good results from it, and I have been much hampered in subsequent operations by the adhesions caused by it, secondly, the indications for operations on fibroids are easily laid down, but they are not easy to apply; on the one hand we must certainly not operate on all fibroids but the decision in each case—to operate or not to operate—involves anxious thought. For instance, in the case of a single lady over fifty years of age who consulted me last autumn. She had a fibroid nearly up to the level of the umbilicus, which gave rise to no symptoms. I advised her to wait and to see me again after three months. Late in February she suffered from pleurisy together with severe abdominal pain and tenderness, temperature 103° and more, quick feeble pulse, and general severe illness. After a few days she developed thrombosis of both femoral veins. After a month of severe illness the symptoms abated, and I removed the mass. On cutting into it I found that one part of the tumour had undergone mucoid, and another part necrotic, degeneration. The patient was septic at the time of operation, and after prolonged illness fortunately escaped with her life. Several of my patients have had sarcomatous infiltration of a fibromyoma; several such tumours have sloughed; many have been complicated by pyosalpinx, hydrosalpinx and other diseases of the annexa. Indeed, I have learnt to look on the supposed innocent fibroid as a fiend ready to play any nasty trick. Myomectomy appears suitable for some cases of single myomata, hard or soft, especially where the preservation of the uterus as an effective organ is very desirable as in the case of a young woman.

F. K., aged 15, suffered from severe menorrhagia and metrorrhagia. The tumour, which was a solitary soft myoma the size of a large lemon, lay in the anterior uterine wall. By splitting the uterine tissue over it and then enucleating the growth it was possible to remove it safely. The musculature was completely closed and the continuity of the peritoneum restored as in a Cæsarean section. This left the uterus and appendages intact. The girl made a rapid recovery, and is now in perfect health both general and local.

Mrs. Boyd, M.D., said: While admiring greatly Dr. Duncan's paper—for he seems to have said in a short space nearly all there is to say on the subject—there are one or two points on which I should like to comment with some difference of opinion. And first, as to the question of operating for deformity where the symptoms are not urgent. In many cases it is not merely a question of reducing the size of the waist by a few inches. The mental effect of the deformity, by exposing the patient to suspicion and comment, is often most marked and cannot be overlooked, and constitutes in some cases a sufficient ground—especially in view of the excellent results obtained by Dr. Duncan and others—for operating, just as deformity in other regions is regarded as a legitimate reason for surgical interference. Then as to *morcellement*, for which Dr. Duncan had not much commendation, I have had excellent results from it, and regard it as a suitable means of removing the uterus *per vaginam* where the uterine mass is not larger than a four months pregnancy. It or section of the anterior or posterior wall from the vagina, as already mentioned by Mr. Christopher Martin and previously warmly recommended by Dr. Amand Routh, is an excellent means of removing fibroids in the lower uterine segment and cervical fibroids, of all fibroids the ones which give rise to the most persistent and troublesome hæmorrhage. I hope the excellent results that are now attained in abdominal hysterectomy will not make us too satisfied with that operation, for I feel convinced that we should look to advance along the lines of myomectomy with conservation of the uterus, especially in the young patients. With Dr. Alfred Smith's case before us to illustrate the immense difference it may make to a woman to bear at any rate one living child, it would seem better, even if a second operation should become necessary later, to try to preserve the uterus, unless it should be shown by further experience that rupture of a uterus pregnant after myomectomy is a very real danger. With regard to the peritoneal flaps, while agreeing with Mr. Doran that the bladder should be given a wide margin, it is not desirable in sewing to leave a good deal of slack peritoneum. Dr. Duncan's mention of obliterating such a cavity in the broad ligament by tier suture draws attention to this point. I have more than once seen a hæmatoma form in such a "dead space," and although no suppuration occured, and the cases ran the ordinary course of slow absorption of a hæmatoma in the broad ligament, such a risk is better avoided.

The late Dr. Aust Lawrence agreed with Dr. Duncan in his indications for operation in reference to bleeding, pressure and increase of size, but he did not consider that pregnancy in a fibroid uterus entailed the great danger that some doctors would have them believe. He had attended 8 women with fibroid uteri in 17 confinements with good results to mother and child, and in one case, after the third pregnancy the tumour entirely went away. He had also attended one woman in her confinement from whom he had removed *per vaginam* a large myoma of the anterior wall of the uterus, and she did very well. The point he insisted on was the advantage of the early use of forceps in these cases. The Apostoli treatment after five years good trial he had given up. He drew attention to the fact that when this treatment was started in England in 1887 it was used by a good many men because the surgical treatment of myomata was so fatal, but that now with the successful results of the retroperitoneal operation it need not be considered, indeed he thought that it only did good by causing dilatation of the cervical canal and so promoting uterine drainage, and also by its effect on the

mucous membrane of the uterus curing the endometritis. This effect had been obtained by other means for some years and was of value in that class of cases which medicine did not relieve and from which surgical treatment might not be thought suitable. Dr. Lawrence drew attention to the well known fact that a large number of women had fibroids of the uterus without any definite symptoms. Others had them with distinct bleeding, etc., and when these symptoms could not be relieved by ordinary medical treatment the removal of the uterus was distinctly indicated as the only proper therapeutical measure.

Mr. BOWREMAN JESSETT said: I should be glad to know how Mr. Lockyer's patient is in a year's time as in my experience these cases of fibrocystic tumour often take on sarcomatous action. With respect to the cases that should be operated on I think we are all agreed that we should be guided by hæmorrhage, pain, pressure, or rapid growth. Then in cases of women past the menopause I consider these tumours sometimes diminish in size, but if they do not or commence to grow then I should at once advise the removal of the growth by either panhysterectomy or the subperitoneal operation. Little has been said as to myoma complicating pregnancy. A gentleman stated the other day that he had never seen a myoma diminish in size after the child was born. Now this is not my experience, as I have seen several cases in which after confinement very large tumours become considerably reduced in size, and often after a few months cannot be felt at all. There are cases of pregnancy, complicated by fibromata in which it is necessary to perform hysterectomy early. I have myself published three cases of this kind, in one the patient had been married for some sixteen years and consulted me respecting a large tumour in the abdomen, and after careful examination I had no doubt that pregnancy also existed. I advised her to wait for a few weeks. Later I was asked to see her again. She had had severe shiverings, and a temperature over 104° F. I advised immediate operation, and performed panhysterectomy. The patient made a good recovery. She was about four months pregnant, the fœtus being dead and decomposing. With respect to the operation which should be performed, I think we must be guided by what we find. There can be no doubt that the subperitoneal operation is safer and attended with less shock, but if the tumour involves the cervix, I think panhysterectomy should be performed. With respect to flaps, I do not agree that very long flaps should be made, as there is always a risk of a hæmatocele forming, as I have seen in a few cases. This is certainly an argument in favour of panhysterectomy, as, if any hæmorrhage occur, it is at once demonstrated, whereas in the subperitoneal operation hæmorrhage may go on for some time, and only the pulse points to the loss of blood. I consider all vessels should be tied before being divided, as I consider it very risky to cut through the vessels as suggested by Mr. Doran before ligaturing them, especially the very large veins that are nearly always present. I have done now some six cases by Doyen's method, and certainly consider it a good operation. I can also speak strongly in favour of his abdominal retractors, which gives a capital view of the floor of the pelvis. There can be no doubt that the Trendelenburg posture is of the greatest possible assistance, and I think that shock is considerably reduced by this position, owing to gravitation of blood to the brain. Preparation undoubtedly is of the greatest importance, and I always attend to improving the general health for several days before operation. Vaginal douches and tampons soaked in 1 in 5,000 of hyd. perchlor. are also employd. As to after-treatment, I give nothing but hot water by the mouth for 12 hours, and always give calomel grs. v, and a turpentine enema 24 hours after operation. I never give morphine, as I consider that it is not devoid of danger, and that the stimulation of a little pain is better than giving morphine for the relief of that pain. I may say that when it was the fashion in the subperitoneal operation to ligature and sew up the stump, I have more than once seen the stump slough.

Dr. WARD COUSINS was glad to see that the tendency of the valuable discussion had been to show that fibroid tumours, with very few exceptions, ought to be removed by the abdominal route and not by the posterior vaginal operation. The great indication was to completely shut off the peritoneal sac, to ligature the vessels without cellular tissue, and to avoid injury of veins as mentioned by Mr. Alban Doran. As regarded subperitoneal fibroids associated with pregnancy he had seen many cases in which the tumour rapidly enlarged and then again rapidly subsided after labour. In most cases these tumours could be left alone, especially if situated at the fundus. The diagnosis of fibroids was sometimes rendered difficult by the great thickness of the abdominal wall. He had recently operated on a case of this description which was also obscured by complete stenosis of the vagina. Fortunately the tumour turned out, on opening the abdomen, to be a simple intraligamentous broad ligament cyst.

The PRESIDENT, in closing the very prolonged discussion, said the special advantage of that day's work was that it enabled them to take stock, to see how they stood at present. As to the indications for treatment, it was clear that fibroids were not such simple tumours as was formerly supposed, but were at times liable to degenerate, and that each case must be judged on its own merits, when the question of operative treatment was under discussion. As to technique, the tendency of the discussion was to show that the abdominal route was the better one, and that the retroperitoneal operation, done on purely surgical principles, was the best method. In the after-treatment, starvation was not so necessary or beneficial as used to be thought. On behalf of the large meeting, and his own, he desired to thank Dr. W. Duncan for his most excellent and very practical paper.

### REPLY.

Dr. DUNCAN, in reply, thanked the meeting for the very kind reception his paper had met with and the most excellent discussion which followed. He was glad to find that all the speakers were agreed as to the advisability and necessity of operating on those cases of fibroids which came under the four heads he had mentioned in his paper. There seemed, also, more or less a unanimity of opinion that the operation which he advocated (retroperitoneal hysterectomy) was the best one to adopt, and he was glad to hear that the majority of the speakers thought that vaginal hysterectomy for fibroids was not so safe as the operation by the abdomen. He quite agreed with those who said it was justifiable to remove a fibroid which was causing no symptoms from a single woman if it laid her open to suspicion by its size, or if it prevented her from gaining her living, but he did not feel justified in operating on a married woman merely for the sake of improving her figure. It was gratifying to hear how universal was the condemnation of the treatment of fibroids by electricity and, like several of the speakers, he had found that the worst cases of adhesions to the bowel, etc., were those in which Apostoli's method had been ineffectually tried. He could not agree with one speaker who advocated leaving a fibroid uterus but removing the ovaries when, on opening the abdomen to perform hysterectomy the ovaries, were found to be extensively diseased. He did not think that a woman the subject of fibroids need be prevented from marrying, but she certainly ought not to become pregnant.

## ON A NEW GYNÆCOLOGICAL POSITION.

By F. JAYLE, M.D.,
Paris.

THE "dorsal-sacrée declive" position, known under the name of Trendelenburg, because that surgeon pointed out its advantages, was undoubtedly utilised a long time ago. Scultetus, for example, had recommended and demonstrated it before 1645; and four centuries earlier, in the *Trattato di Chirurgia* of Maestro Rolando (thirteenth century) a drawing appeared showing a patient tied by the foot and having his head downwards during an operation for hernia. The "head downwards" position has been utilised for the gynæcological examination under chloroform by Freund, and in the conscious state (that is, without chloroform) it has been recommended by Mendes de Leon, by Strovnowski, by Beuttner, and by myself. It is not to the ordinary "declive" position that I call your attention to-day, but to one of its derivatives. The position that I recommend has been perhaps already utilised, though I have not found any drawing of it; it certainly was not in use in Paris in 1897, when I first adopted it. It consists in the combination of the ordinary position of the speculum or of the lithotomy position, and of the sacro-dorsal "declive"

position. In order to obtain this position it is necessary to have a balancing table with a system of *épaulières* (shoulder rests); these hold the patient in the declive position without securing the lower members, which remain free. You can use this position either for examination or operations. This declivity has the advantage of throwing back the intestines; of determining, by the entrance of the air, the dilatation of the vagina, which becomes almost vertical, and finally, of stretching the anterior vaginal wall. The consequences are, first, that the exploration of the tubes and the ovaries, and especially of the uterus, is greatly facilitated; secondly, that the introduction of the speculum is very easy; thirdly, that the exploration of the vaginal walls is easy, for it is sufficient to depress the perineum, either with the finger or with a valve speculum, in order to get a good view of the anterior wall always, and of the cervix very frequently. With the aid of the finger or of some instrument, such, for example, as forceps, to raise up the anterior wall, you can easily see the cervix and the posterior vaginal fornix, in the cases when you have not seen them immediately. For operations, you must use the declining position combined with the lithotomy position. If the patient be put only in a half-declivity, vaginal operations, as a rule, become much easier, in my opinion. You operate standing, and the access to the vagina is easy. The anterior wall is stretched out, and with a weight-valve you can depress the perineum, and no assistant is necessary for holding the valves. I have practised in this position all the vaginal operations, and I find in its use great advantages; but I more particularly call your attention to the utility that it presents in the cure of vesico-vaginal fistula.

## A SUCCESSFUL LAPAROTOMY FOR ABDOMINAL PREGNANCY WITH REMOVAL OF THE FŒTUS (FULL TERM), PLACENTA AND GESTATION SAC *EN MASSE*.

By Alfred Smith, M.B., M.Ch., M.A.O.,
Professor of Midwifery and Diseases of Women in the Catholic University; Gynæcologist to St. Vincent's Hospital, Dublin.

I wish to bring under the notice of the members of this Section notes of a successful laparotomy for abdominal pregnancy which I performed last March. The history of the case is as follows:—

The wife of a well-to-do farmer, Mrs. S., aged 26, was sent up to me by Dr. Ryan, Loughrea, Galway, because she was two months over her time, and had become very anxious as to her condition. She had been married five years and had one child, 2½ years old, there was no trouble at the confinement, she nursed her infant for ten months, menstruation returned four months after delivery, and came regularly every month up to April 5th, 1900. She then considered herself pregnant and expected her confinement about January 12th of this year. She said she had enjoyed good health all through her pregnancy, except for a slight affection of her bowels which occurred in the month of May, 1900. Nothing very definite could be elicited as to the nature of this trouble, which necessitated her lying up for a day. Suffice it to say it was not necessary to summon the doctor, and the pain was relieved by ordinary household remedies. During the month of October the fœtal movements were very troublesome, keeping her awake at night. However, in November they were not so bad, and allowed her good rest at nights. Everything went on well up to December 15th or 16th, when she took to her bed for a few days, suffering from pains which she considered were labour pains. She sent for Dr. Ryan who, on examination, found the child presenting in the first position and fœtal heart good; he gave her a sleeping draught which relieved the pains, and she got up the following week. There was no bloody discharge from the vagina, no decidua was passed. The fœtal movements were no longer felt, and she experienced no trouble up to January 25th of this year when a red discharge came on which was identical in character and duration with her ordinary discharge, although possibly slightly more profuse. The menstruation returned again in February was normal in character and free from pain; again in March the change came on, and was just over on March 21st when I first saw her. When palpating her abdomen, I was much impressed with the absence of the rhythmic uterine contractions, and with the distinctness with which the fœtal parts could be made out. The head was in the pelvis and the back of the child to the left of the mother—a typical first position. My first impression was, "an abdominal pregnancy," and to confirm my opinion, I asked Dr. Horne, Master of the National Lying-in Hospital, to see her with me in consultation. She was put under ether, and by the bimanual I could easily separate the uterus. I drew it down with an American forceps, passed a sound, and demonstrated conclusively that the pregnancy was extrauterine. On auscultation no fœtal heart sounds were heard. I operated on March 26th, assisted by Dr. Wm. Dargan and Dr. Reginald White. I placed the patient in the Trendelenburg position, and made an extensive abdominal incision from the symphysis pubis to within three fingerbreadths of the ensiform cartilage, and exposed the cyst, which was intimately adherent to the omentum and small intestines. I determined to remove it *en masse*, and proceeded to separate the adhesions just as one would in the case of an ordinary adherent ovarian tumour. I experienced so much difficulty from the great size of the cyst that I made an incision into the sac and delivered the fœtus; about half a pint of a dark, thick, brown-coloured liquor amnii escaped. I was then able, with one hand inside and the other outside, rapidly to separate the cyst. The omental and intestinal adhesions were easily brushed aside, just a few requiring double ligatures. One section of the placenta seemed very intimately adherent to the pelvic wall, at the brim of the pelvis, close to where the ovarian suspensory ligament came off. I continued the separation until a workable pedicle was formed, and I could feel the pulsation of the vessels supplying the placenta. I then transfixed and tied the pedicle, using stout silk—very little hæmorrhage occurred. As some of the thick, brown-coloured liquor amnii had soiled the peritoneum, I irrigated with hot saline until the fluid returned quite clear and then closed the abdomen. The patient made an uneventful recovery and returned home at the end of the third week in good health.



Photograph by Dr. P. J. Fagan, showing placenta with shrunken gestation sac on the left and fœtus on the right. Note the coils of umbilical cord.

Dr. Dargan reports: The fœtus is a well-developed female, it weighed 10⅝ lbs. and measured 20 inches, in fact the development seemed to have been in advance of the normal. The placenta and membranes present a shrunken appearance due to immersion in too strong a preserving fluid; they are surrounded by a tough fibrous capsule, evidently of localised inflammatory origin, forming a complete sac. At one point, corresponding to about the centre of the placenta, there entered in a kind of hilum 3 or 4 well-developed vessels which divided and ramified from their point of entrance in the substance of the placenta and apparently formed its sole blood supply. The outer surface of the sac was, for the most part, smooth and had many tags of omentum adherent to it. An area of about a couple of square inches at the entrance of the vessels must have been completely adherent. No remnants of ovary or Fallopian tube could be discerned on the surface of the sac by the most careful search. On dissecting off some of the capsules from the outer and attached surface of the placenta in the fresh condition, numerous tiny fibroid threads could be made out penetrating between the cotyledons, indistinguishable from what could be attributed to the remnant of a decidua serotina in a normal placenta. The placenta itself is of normal size and structure; microscopically, however, it had lost its power of nuclear staining and stained diffusely. The insertion of the cord is marginal or of the battledore type. Within the fibrous investment the amniotic sac was free, namely, not closely adherent to the capsule, and contained a chocolate-coloured fluid.

It is not my intention to open up the general question of abdominal pregnancy, but merely to dwell for a moment on some points which have a particular bearing on this case. The diagnosis of the particular variety of the extrauterine pregnancy is always difficult, it was formerly supposed that every extrauterine pregnancy which passed the fifth month was abdominal, but we now know that tubo-abdominal, tubo-ligamentary, subperitoneal, and tubo-ovarian pregnancy may go on to term. I should not be justified in describing this case as a primary abdominal pregnancy, because I believe it to have been originally a tubal one, the fertilised ovum probably escaped from the Fallopian tube in May, at the time the patient suffered from the bowel trouble, and continued to develop in the abdominal cavity. As no trace of either the ovary or Fallopian tube had been found by Dr. Dargan involved in the sac, the case may be placed under the head of secondary abdominal pregnancy.

*Blood Supply.*—As the control of hæmorrhage is one of the

chief points in all procedures for removal of the sac, it is advisable to collect as much definite information as possible with a view to guide us in subsequent operations. As the specimen shows the main blood supply is from one source, most probably from the left ovarian artery, as the placenta was attached to the brim of the pelvis on that side. I should like to point out the fact that the greatest thickness of the placenta corresponds to the entrance of the main blood supply. If future investigations confirm this fact, a great advance will be made in conveying much-needed information to operators, and a greater security will be given to the complete control of hæmorrhage.

The question of laparotomy immediately after the death of the fœtus is by the majority of foreign authors answered in the negative. Some of the older surgeons advocated indefinitely expectant treatment and trusted to the transformation of the fœtus into a lithopædion and to its spontaneous elimination; others give a less absolute rule, but, influenced by the older statistics and fear of hæmorrhage, advise waiting until obliteration of the placental circulation by well-organised thrombi takes place. The time required for this obliteration is uncertain, for while it has been approximately given as two months, alarming hæmorrhage has been known to follow detachment of the placenta at the end of three months.[1] In my case there was no positive evidence as to how long the fœtus was dead. The patient stated she did not feel any movement after December 16th; still, when I delivered the fœtus—and, as you see, it was plump and well developed without any evidence of maceration, peeling or skeletisation—the coils were well marked in the umbilical cord, the bones of the head were not loose, and the pulsation in the vessels supplying the placenta was to be distinctly felt. In fact, this fœtus had all the appearances of being but recently dead, still, the removal of the sac was a matter of much simplicity and the hæmorrhage trifling.

*Total Extirpation of the Sac.*—Undoubtedly the ideal operation is total extirpation of the sac first proposed by Litzman.[2] At first this procedure did not give as good results as that of retention of the sac, but thanks to improved asepsis in later years, the radical operation, as it is called, has given a remarkable series of success, even with a living child, and in several cases where extensive adhesions implicated the intestines. Here, as in all problems of abdominal surgery, the theoretical objections of the timid surgeon fall before the results of a bolder practice characterised by a good technique. Many of the deaths following delayed operations may be attributed to the expectant treatment, since intercurrent septicæmia and peritonitis often fatally complicate the surgical intervention which, a few months previously, could have been undertaken under the most favourable conditions.

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## A CASE OF TWIN PREGNANCY, EXTRAUTERINE AND INTRAUTERINE.

By Mrs. BOYD, M.D.,

Surgeon to the New Hospital for Women.

THE following are the details of the case:

Mrs. S., aged 29 years, was admitted to the New Hospital for Women, March 10th, 1897, under the care of Miss Macdonald, M.B., suffering from metrorrhagia. She had been ten years married and had had two children 10 and 4 years previously; the first labour instrumental, no miscarriage. She last menstruated on January 1st, 1897, when the period was somewhat scanty; she missed her usual period in February, but on February 9th had a slight discharge of "coloured water" which soon passed off, but returned on February 10th. The patient then had pain and felt faint but did not go to bed, and the loss again ceased. On February 21st she was taken very ill with vomiting and diarrhœa, hæmorrhage and pain. She was seen by a doctor and stayed in bed ten days. On March 9th she was seen as an out-patient at the New Hospital and a boggy, tender mass was found in the right fornix and she was sent into the hospital. The patient stated that no clots but a few shreds had come away on syringing.

On examination, the abdomen was flaccid and lax with a marked linea nigra. A mass, the enlarged and softened fundus uteri, measuring, as judged bimanually, some 3½ to 4 inches, filled the hypogastrium and lay somewhat to the left of the mid-line. Douglas's pouch was occupied by a firm, smooth, rounded mass in close relation with the uterus and moving with it. This mass reached quite out to the pelvic wall on the right side but on the left the finger could be passed up between it and the pelvic wall, and here the left ovary was made out.

A diagnosis of pregnancy in the right tube, pushing the uterus forward and to the left was made. I saw the case in consultation with Miss Macdonald, and I could not make up my mind whether a tubal abortion had taken place with a collection of blood in Douglas's pouch and about the right tube, or whether the tube was unruptured but distended with clot.

As the hæmorrhage and pain were benefited by rest in bed, it was decided to watch the patient and see whether the ovum was developing further, or whether it had perished and would remain quiescent. As it was recognised that operation might at any moment become necessary, she was transferred to my care on the surgical side. When first observed, the size of the uterus was not greater than usually accompanies a tubal gestation, but on continued observation the uterus was noted to be increasing in size, while there was some shrinkage of the tumour behind the uterus. The question now arose whether the first diagnosis was correct or whether we had to do with an intrauterine pregnancy where miscarriage was threatening, complicated with a pelvic tumour of some nature other than a pregnant tube, possibly fibroid, possibly an adherent dermoid. At the end of March Dr. Cullingworth kindly saw the case with us. He was strongly of opinion that there was an intrauterine pregnancy, but thought the nature of the pelvic tumour doubtful; on the whole, he inclined to the opinion that it was an unruptured tubal gestation.

It was evident that the pelvic tumour might prove a serious obstacle in the further development of the pregnancy, and it was therefore decided to pass the sound with all due antiseptic precautions, with the view of clearing up the diagnosis and bringing the case to a termination. It went 4½ inches into the abdominal mass, but showed no widening of the cavity, and had evidently entered the right horn of an enlarged uterus; it was found that the uterus could be moved apart from the pelvic tumour. As no result of any kind followed the passage of the sound, abdominal section was performed on April 2nd. The uterus—soft, red, vascular, and probably pregnant—presented in the wound and was handled as little as possible. The dilated right tube, the size of a small orange, was freed from adhesion to the pelvic wall and the right side of the uterus, and was removed with the ovary. The left ovary and tube were healthy and free from adhesions, and were left undisturbed. The abdominal wall was sutured in layers, the operation lasting twenty minutes. The specimen removed consisted of the right tube, dilated by organised clot to the size of a small orange, containing at one side a cyst the size of an almond, but no fœtus or membranes could be seen. The microscopic examination of the clot showed numerous chorionic villi.

The patient began again to lose after the operation and was given opium with a view to averting miscarriage. The loss ceased within twenty-four hours, and the patient made an excellent recovery and was discharged from hospital at the end of three weeks.

The uterus continued to increase in size, and in June fœtal heart sounds were heard. On July 21st, in the sixth month, she had a sudden gush of hæmorrhage which lasted only a short time and subsided with rest in bed. On October 31st she was delivered by Dr. Gertrude Keith of a female child of 7½ lbs. weight. The labour lasted 6½ hours, and was quite uneventful. She has since passed through another normal pregnancy, and was confined in January, 1900, of a healthy male child. She is now perfectly well in every respect.

Cases of combined intrauterine and extrauterine pregnancy, though by no means unknown, are sufficiently uncommon to make it worth while to report them, and I have not been able to find one in all respects parallel to mine; most of those referred to by Dr. Galabin in the *Obstetrical Society's Transactions*, vol. xxiii, and Dr. Gutzwiller, in the *Archiv f. Gyn.*, vol. xliii, in their papers, being of a more advanced development.

The fact that in any extrauterine gestation the uterus enlarges and softens to some extent makes the diagnosis of a combined pregnancy difficult in an early case, but if under careful observation the uterus continues to enlarge to beyond the size that usually accompanies an extrauterine gestation, particularly if there is reason to think the tubal ovum has perished, one may rightly suspect intrauterine pregnancy as well. In this case, the determination of an intrauterine pregnancy was of some importance, because it seemed likely that the pelvic tumour, if not removed, would form an obstacle to delivery later on in the pregnancy, and therefore termination of the pregnancy or removal of the tumour was indicated. As not infrequently happens, the passing of the sound did not effect the first object, although it revealed the length of the uterine cavity to be beyond what might be expected in the enlargement accompanying extrauterine pregnancy, and showed pretty plainly that the pelvic tumour was not directly attached to the uterus.

This seems to have been a case of true twin pregnancy, the tubal ovum perishing at a very early stage in the third or fourth week. Judging from the date of delivery, October 31st, conception occurred towards the end of January, and the first hæmorrhage occurred on February 19th, though blood continued probably to be extravasated into the tube for at least two to three weeks after this date.

It is interesting that the intrauterine pregnancy should have resisted the disturbance arising from the hæmorrhage into the tube and the accompanying hæmorrhage from the uterus, as well as the later passing of the sound up the fundus uteri. Had the uterus emptied itself as the consequence of the latter manœuvre, the tubal tumour might probably have shrunk

and given no further trouble, although, in such a case there is always the risk of secondary changes, but the patient certainly profited and was better off with the abdominal section and removal of the obstructing tumour, and a living child.

Where the diagnosis of an extrauterine accompanying an intrauterine pregnancy is clear, more especially where it is not certain whether the ovum is still developing or not, it is surely in the best interest of the patient to remove what is, at any time, a dangerous complication, and to try to conduct the normal pregnancy to term; in other words, to treat the extrauterine gestation on the ordinary principles. There is, however, just this difference—that, in such a case, one cannot leave in the pelvis a tumour, even if it has become innocuous as far as the danger of rupture and further development is concerned, that will obstruct the delivery of a living child.

## OVARIAN PREGNANCY.

By Hastings Gilford, F.R.C.S.,
Reading.

The first instance on record of impregnation of an ovum within a Graafian follicle is probably that which is mentioned in the work of Bernutz and Goupil.[1] It is there stated that "on opening the abdomen a large quantity of blood was found effused, and that in removing this a male fœtus about 1 inch long was discovered. It was found afterwards that the right ovary was ruptured in its length and that the fœtus had been developed therein." A similar case is recorded just twenty years afterwards by Abbé de la Roque.[2] In this "the right ovary was enlarged to the size of a hen's egg, and lacerated through its whole length. The fœtus was found in the abdominal cavity in the midst of a large quantity of blood."

I cannot find that any other instance was reported after this date until the year 1820, when Dr. Granville gave a fairly full account of a case in the *Philosophical Transactions* (p. 100). The modern history of ovarian pregnancy may be said to date from the appearance of his paper. During the latter half of the 19th century many other cases were described, and the reality of ovarian gestation was believed in by such authorities as Freund, Kiwisch, Coste, Hecker, Churchill, Bandl, Schroeder and Spiegelberg. The last of these, writing in 1876, mentions 13 cases[3] of ectopic pregnancy in which, in his opinion, conception had taken place in the ovary, and formulated the characters whereby this variety of extrauterine pregnancy could be distinguished from others. These defining characters were as follows, namely, "(1) Absence of the ovary in question, (2) presence of well marked ovarian structures in the wall of the fœtal sac, (3) the connection of the latter with the uterus by means of the ovarian ligament, (4) the fact that the oviduct has no share in the forming of the fœtal sac while the topographical relation of the tube is the same as, or similar to, that met with in ovarian cystomata." But as knowledge of the different varieties of ectopic pregnancy increased, it became evident that Spiegelberg's four tests were not sufficient, inasmuch as they did not exclude intraligamentous pregnancies. Cases were published which showed that conception could take place in the tube and the products find their way by a rent in its walls between the layers of the broad ligament, leaving no trace of their original tubal origin. The sac, moreover, as it continued to expand, might so press upon and flatten out the ovary as to cause it to lose its usual relations and to form part of its wall. It consequently became evident that no case could be considered ovarian unless it could be proved that this sequence of events had not taken place. But seeing that in all the cases recorded the pregnancy was either of some months duration or was lacking in some important particular, not one of them would answer to the more stringent tests. From these causes it happened that, not only were they regarded with scepticism, but doubts were thrown on the possibility of ovarian gestation in any case.

Among the chief who took this view was Lawson Tait, though before him Velpeau and Arthur Farre had been of the same opinion. Mr. Tait believed true ovarian pregnancy to be as rare "as a blue lion or a swan with two necks." Mr. Bland Sutton had expressed his opinion that it was impossible. On the other hand, there are others (namely, Dr. Galabin) who have continued to believe that some of the published cases of ovarian gestation were really ovarian. As a rule the view taken by English gynæcologists was probably that held by Mr. Alban Doran, whose well-known analysis of cases of ovarian fœtation[4] conveys the impression that "much might be said on both sides."

But at the end of the last century circumstances were far more favourable to the settlement of this debated question than at any other period. The most important of these circumstances was a better knowledge of the pathology of abdominal and pelvic hæmorrhages and better methods of dealing with them. It was mainly owing to these causes that within the course of eighteen months no fewer than four well-attested cases of ovarian pregnancy were brought forward. The first of these was published by myself[5] among a series of operations for early ectopic pregnancies. The specimen was removed from a patient of Dr. Abram's, and its ovarian origin was recognised by him and by others who saw it and was subsequently verified by Mr. Targett. It was subsequently shown at a meeting of the Obstetrical Society and was referred to a subcommittee for examination but was unaccountably lost. It was fortunate that it had been carefully examined by so good an authority as Mr. Targett, who was himself one of the subcommittee.

Soon after the publication of this case one of far more importance was described by a Dutch lady, Dr. Van Tussenbroek.[6] She describes the uterine appendages which had been removed by operation by Professor Kouwer in March, 1893. Her account of the case, together with the pictures of the microscopical section, leave no room for doubt of its ovarian origin. In November, 1900, Dr. Croft[7] recorded a further instance in which the pregnancy had gone on to the fourth month and the placenta was still *in situ*. Messrs. Anning and Littlewood[8] next described another case which was in all essential particulars like my own. The ovarian origin of both these last cases was confirmed by subcommittees of the Obstetrical Society. These four cases occurred at such short intervals that they established two points. They showed in the first place that there is such a condition as ovarian pregnancy, and in the second that it must not be considered to be of very rare occurrence. They moreover cause us to look upon all those cases which precede them from a different point of view. We can no longer require that every case must be subjected to such severe tests as were necessary before the establishment of the fact of ovarian pregnancy. It must first be proved that the condition is a pregnancy and is not due to a simple blood effusion or to a dermoid tumour. Its true seat of origin will then be established by the observance of the ordinary rules of evidence. To be considered ovarian it must be quite sufficient that the evidence is in favour of the ovarian origin, and is against origin in any other part of the uterine appendages. It would be quite right, for example, to regard the two cases which have been first mentioned as instances of true ovarian pregnancy for the evidence, so far as it goes, is strongly in favour of that view. The same may be said of Dr. Granville's case, for he took pains to exclude the possibility of gestation between the layers of the broad ligament. He dissected away the broad ligament for the express purpose of "ascertaining whether the peritoneal foldings within which the ovarium was placed, rather than the membrane of the ovarium itself, formed the covering of the tumour. The dissection and the drawing is proof that the latter is the case."[9] The Fallopian tube was sound, and its fimbriæ quite free. He gives two life-sized drawings of the specimen removed. Dr. Porter's case[10] will also bear investigation. In it the left ovary was enlarged to the size of a hen's egg while "adherent to its right side were clots of blood. On removing this and making a slight incision a small quantity of water escaped followed by a fœtus of perhaps the sixth or seventh week, its size being that of a honey bee. The Fallopian tube was found floating freely in the cavity of the abdomen, and was pervious to the probe." The catamenia had ceased three or four weeks before.

Professor Walter[11] reports a less convincing case in which the left ovary and tube were normal; the right tube which passed over the surface of the tumour, being vascular, and the fimbriæ quite free and without adhesions. The tumour was 6 inches long by 4 inches wide, and 3 inches thick. In its posterior surface was a cavity 4.3 in. long, 3.9 in. wide, 1.6 in. deep. "The umbilical cord was fixed in the fundus of this

cavity where its vessels parted and formed a placenta in the parenchyma of the ovary." Professor Bidder examined this placenta carefully and had no doubt whatever that it had developed within the original ovary. It is said, however, that of the ovary itself not a trace remained, but that it had entirely passed into the placental structures. Drawings of the specimen are given.

In Dr. Kammerer's case[12] at the *post-mortem* examination "several clots of blood were found within the peritoneal cavity, while on the left ovary a rent, revealing the source of the blood, was seen. On opening the ovary an embryo was discovered about four weeks old."

In Dr. Hildreth's case[13] the left ovary was 2¼ inches long, 1½ inch wide, and 1¼ inch deep; there was a rupture in its surface large enough to admit a small goose-quill. Being enlarged, this opening was found to contain a cyst-like body 3¼ inches in circumference. Its sac was quite firmly attached to the surface of the ovary, and upon being removed presented a velvety appearance externally. When the sac was opened it was found to be filled with a clear watery fluid with a kidney-shaped body about ¾-inch long floating in it. It was examined by the naked eye alone, and Dr. Hildreth says "that the kidney-shaped body which was removed from the surface of the ovary was a fœtus, I have not the slightest doubt; but had it been carefully examined with a glass by an expert and pronounced to be such, this confirmation would make the case a great deal stronger."

In Professor Spiegelberg's case[14] the child was capable of leading a separate existence and lived for three months. Both tubes were normal, and the left ovary was of ordinary size. On the right side was a gestation sac bound down to the uterus by the ligamenta uteri and the ala vespertilionis. The fimbriæ and tube were on the sac, ovarian tissue also formed part of its wall, while the right ovary was absent.

Dr. Patenko's case[15] was pronounced by Mr. Alban Doran to be one of the most authentic. The right ovary was the size of a hen's egg and contained a cyst filled with serum. Inside this was a yellowed-coloured body of the size of a hazel-nut containing bones. These were identified as fœtal, and were not dermoid. The tube was not adherent to the sac, but there were no traces of fimbriæ. Ovarian tissue was found in the wall of the sac.

In Dr. Talbot's[16] case, which comes next, there was a rent of the enlarged left ovary, and a normal tube, its fimbriæ grasping the ovary at its upper and inner border. "Particles of ovarian tissue in close continuity with the cavity containing the ovum were plainly seen." The fœtus was imbedded in the gland and was at its fourth month.

In Professor Leopold's case,[17] to quote Mr. Alban Doran, "the fœtal sac was in the position of the right ovary. The ovarian ligament passed directly to the sac, and if the illustrations are to be trusted, ovarian tissue is spread out over it. The Fallopian tube appears to be quite free." This specimen, however, was removed from a woman *post mortem*, thirty-five years after the pregnancy had occurred. The placenta had disappeared, and nothing but a lithopœdion was left.

Dr. Cargill[18] gives but a meagre account of his case, but says of it that the fœtus was five months old and that the sac was ruptured. "The umbilical cord was attached to a thin placenta embedded in a ruptured cystic ovary. The Fallopian tubes and the rest of the uterine appendages were healthy."

Besides these there are other cases in which, though the evidence is perhaps too weak to admit of their admission among a series of ovarian pregnancies, it is sufficient to suggest that such is their nature. Among these are three instances of twin pregnancy, namely, Ludwig's,[19] in which both children arrived at term, one being in the uterus, and the other apparently in the ovary; Pollard's,[20] in which there appeared to be pregnancy in the Fallopian tube and also in the ovary; and Hertzfeld's, in which the twins were contained, one in the uterus and the other in the ovary.

Other cases of apparent ovarian fœtation are those of Reeves,[21] Benicke,[22] Sänger[23] (lithopœdion) Wyder,[24] Toth,[25] Martin (2 cases)[26 27], Eberhart,[28] Galabin,[29] Geuer[30], and Mackenrodt.[31]

Dr. Paltauf[32] describes a remarkable case which ought to be termed ovarian, seeing that pregnancy took place within an ovarian cyst which communicated on either side with sacculated Fallopian tubes.

We have therefore a total of sixteen cases of ovarian pregnancy, and of twelve probable cases, or twenty-eight altogether. There can be no doubt that many other instances have occurred, but have not been reported, or have gone by such names as ovarian apoplexy, blood cyst, or rupture of ovary. Thus Dr. Hermann quotes a case of Scanzoni's[33] in which 7 lbs. of blood were found in the peritoneal cavity of a girl of 18. This had come from a pocket the size of a hen's egg in an enlarged ovary, in which there was a rent nearly an inch long. What is more likely than that such a hæmorrhage and such a condition of the ovary should have been due to an ovarian pregnancy? Again, Goupil and Bernutz (p. 239) refer to a large hæmotocele, the result of "apoplexy of the ovary," which had occurred on the side opposite to that in which a tubal pregnancy existed. Who can say that this was not an instance of twin ectopic gestation, the one fœtus being in the tube and the other in the opposite ovary? Under such circumstances the ovary would naturally be expected to give way first.

We have finally to ask how such an event as conception within a Graafian follicle can take place. One explanation is that the sperm cell enters through the aperture produced by the bursting of a follicle and impregnates an ovum which has not yet escaped. The opening then heals over and pregnancy goes on in the sealed sac. The other hypothesis is given by Schroeder, who believes that the spermatozoa may possibly penetrate through the coat of the follicle at its most attenuated part. Of these explanations the former seems by far the more probable, though it does not necessarily follow that the rent in the follicle closes. Impregnation may in some cases take place in a follicle which remains open.

Mr. A. S. COOKE (Vice-President), in commenting on the three papers on extrauterine pregnancy, thanked Mrs. Boyd more particularly for her interesting case, as he had a similar case now on hand, and the only one he had ever met with. A young married lady sent for him because of hæmorrhage and severe pain in the abdomen. She was apparently in about the third month of pregnancy; all the symptoms led him to suspect a tubal pregnancy bursting into the broad ligament, and he was prepared to operate if occasion should arise, but the symptoms gradually subsided. A decidua was passed about the tenth day, but the uterus had gradually enlarged and her breast, increased, and she was now in her seventh month of pregnancy, and was looking forward to her confinement.

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## A DISCUSSION ON THE DIAGNOSIS AND TREATMENT OF METRITIS AND ITS RELATIONSHIP TO MALIGNANT DISEASE.

I.—JOHN CAMPBELL, M.A., M.D., M.Ch., M.A.O., F.R.C.S., Surgeon to the Samaritan Hospital for Women; Assistant Surgeon to the Maternity Hospital, Belfast.

INTRODUCTION.

DR. CAMPBELL said: In introducing the discussion on this important subject I conceive it to be my duty to pass in review most of the principal facts with which we are acquainted, dwelling somewhat on those to which I myself attach importance, and leaving the others for whatever

amount of notice the members here present may deem them worthy.

### The Diagnosis of Metritis.

In considering the inflammatory diseases of the uterus, tubes or ovaries, it is essential to bear in mind that all these organs are in the closest relationship, both functionally and physically, and that an affection of any one of them is bound to influence the rest to a greater or less degree. Hence in metritis we have to reckon with a simple uterine condition in only a minority of the cases, the adjacent tissues and organs being in the majority also involved, and the diagnosis of metritis being dependent on the fact that the affection of the uterus is the most pronounced lesion we can detect, any others present being subordinate or secondary to it. A grasp of this elementary principle is essential to an intelligent discussion of the subject, and has an important bearing on the question of diagnosis in particular since errors may arise from the marked prominence of one symptom, which, overshadowing all the others, presents a false picture to the mind.

1. *Pregnancy.*—Ranking foremost among the conditions which may be mistaken for metritis we have early pregnancy. When the metritis has produced considerable enlargement and congestion its resemblance to early pregnancy is a close one. The flattened form of the metritic uterus as compared with the globular shape of the pregnant one forms one of the best distinguishing marks. Equally valuable is the recognition of the relative consistence of cervix and body. In the inflamed uterus there is a comparative sameness in consistence between these two parts, both being relatively firm. In the pregnant womb, on the other hand, we notice that the softening process affects the body much earlier than it does the neck, leaving the former soft and somewhat ill-defined, while the cervix remains firm and definite in outline and, as it were, hinged upon the corpus. If these signs leave any lingering doubt the lapse of time will soon dispel it.

2. *Cancer.*—The character of the discharge in metritis may present a superficial resemblance to cancer, and the appearance of the cervix may also temporarily deceive the observer. The muco-purulent and viscid discharge of metritis contrasts with the red, serous, and foul-smelling flux of cancer. In cases of metritis the edges of the raw surface of the cervix are not hardened, while in cancer they are hard and irregular, and the surface itself presents yellow points. Furthermore the nodular feel of the cervix in metritis can be got rid of by puncture of the Nabothian follicles and glycerine dressings while the nodules of cancer remain in spite of such treatment. Finally the extreme friability of the cancerous tissue forms a marked contrast to the resistance of the products of inflammation and gives us the best guide we have for bedside diagnosis. In malignant cases the sharp curette will remove plugs of tissue even at an early stage, but mere shreds in cases of metritis. The examination of portions removed and prepared for the microscope is of use only as a confirmatory test. It is too cumbrous and uncertain a method for practical clinical use. Whether the disease be in the cervix or body of the uterus the curette gives the most reliable information we can get and leaves all other methods in the position of mere accessories. Both by the profession and the public the question of pain as a diagnostic item in cancer has been given undue importance. True, it is absent or slight in metritis, but then it is only present in the later stages of cancer when the nature of the disease is beyond doubt and when the peritoneum or nerve trunks are becoming involved. Similarly cachexia is of very little use as a sign, as it only appears when cancer is unequivocally advanced. In doubtful cases, however, a certain amount of reliance may be placed upon the fact that the cachexia of metritis soon and permanently disappears under treatment. To sum up: we may say that the diagnosis of uterine cancer from metritis rests in the main upon the evidence furnished by the sharp curette, and that other signs and symptoms while deserving of careful attention have a purely subordinate position.

3. *Incomplete abortion* may simulate metritis and can only be distinguished with certainty from it by curetting and discovering thus the characteristic placental tissue.

4. *Fibroids and intrauterine fibroid polypi* form a class of cases which may often be distinguished from metritis by the irregular feel of the uterus on bimanual examination. At other times dilatation followed by the introduction of the finger into the uterus and careful palpation of the uterine walls between the two hands may be essential to discover small intramural fibroids or intrauterine polypi, and in the case of the latter is much more satisfactory than the use of the uterine sound.

5. *Salpingitis* may cause symptoms like those of metritis, and may coexist with a secondary metritis or be secondary to an endometritis. Careful vaginal and rectal examination will reveal the tubal nature of the case.

6. *Cystitis* may simulate some of the symptoms of metritis or may be conjoined with it.

7. *Proctitis* with tenesmus and the so-called "anal leucorrhœa" and sphincteralgia may be due to metritis, or symptoms of metritis may be due to a rectal polypus or other condition.

8. *Reflex Disturbances.*—Different groups of reflex disturbances may be set up by metritis and may mimic other diseases; thus, cough, shortness of breath, and progressive wasting may simulate pulmonary tuberculosis: or loss of appetite, vomiting, flatulence and dilatation of the stomach may suggest disease of that organ: or anæmia, palpitation, precordial anxiety, and vascular murmurs may arouse fears of heart disease: or pains simulating neuralgiæ may be present: or nervous conditions like hysteria may depend upon the state of the womb. In all cases where the cause of symptoms is obscure the gynæcologist should avoid attaching undue importance to the condition of the uterus and should carefully and repeatedly examine all other accessible organs, but he should always bear in mind that the uterus should be examined in all cases where a woman persistently complains, no matter of what nature that complaint may be: that disease of the uterus and appendages should be treated at the same time that the symptoms are being attended to, and that the uterus and appendages should not be treated unless signs of real disease are present.

### The Treatment of Metritis.

*Prophylaxis.*—The importance of prophylaxis against inflammation of the uterus is so well recognised that it requires no advocacy at the present time, when the necessity for care as to the cleanliness of instruments and hands, as well as of the vaginal and uterine canals, is admitted by all who perform operations, major or minor, on women. The management of cases of labour and abortion, however, still leaves room for improvement. The circumstances under which these cases have frequently to be undertaken, as well as the reluctance of the patient and her medical attendant to regard them as essentially operative, are responsible for this, leading as they do to the neglect of a cardinal principle of uterine surgery, namely, that when you have once entered an aborting uterus you should never leave it until it is thoroughly cleared out. Failure to do so is not infrequent and is partly to be attributed to an antiquated error which has been handed down through the generations by the writers of obstetric textbooks. I refer to the classical description of cleaning out an aborting uterus with the forefinger. Such a feat, is, I believe, impossible, as, even under anæsthesia, the finger cannot reach and scrape every corner of a uterus enlarged by pregnancy, and, without anæsthesia, can only make the most futile attempts to do so.

Those who remove early placentæ in this way as a rule never get beyond the internal os. They are, in fact, removing placentæ which are already in the cervix and do not require removal at all, and are in many cases, mistaking the contracted internal os for the fundus. No man's finger is long enough or supple enough to thoroughly clean out an aborting uterus. Whenever therefore it is necessary to introduce anything into such a uterus, a sharp flushing curette should be used and the whole endometrium carefully scraped. The blunt spoons so often recommended for this purpose are inefficient and appeal to those only who fear the bogey of perforation and fail to realise that a blunt curette may do as much harm as a sharp one and will not remove placental tissue so well. The same objection applies to uterine brushes as to the blunt curette. They run the risk of contaminating the uterine contents and are ineffectual in removing them. The complete removal of all particles of placenta which cling to the uterine walls is absolutely essential whenever a foreign

body has been introduced into the cavity, whether it be finger, brush, or curette.

The patients who suffer from metritis as a result of imperfect evacuation of the uterus at labour or abortion are but a few, though I have mentioned them first on account of the facilities we have for averting their sufferings. For the larger number who owe their disease to indiscretions during menstruation we can do but little in the way of prevention beyond advising mothers to warn their daughters against too active exercises at the periods, especially such as involve much abdominal movement, and insist on the use of some good absorbent pad while the flow continues. To the great army of women who suffer from gonorrhœal metritis we have no preventive to offer. They seek our aid when the uterus is already involved. They are subject to repeated reinfections. So far as prophylaxis goes they are beyond our reach. The prevention of metritis is, therefore, a matter over which we have but a limited, though an important, amount of control. In spite of our best efforts the disease will remain with us, and the question of its treatment will exercise the ingenuity of the profession in the future as it has done in the past.

As regards treatment proper a great many of the time-honoured methods may be mentioned, most of them with a modicum of praise, some of them with unsparing condemnation.

1. *General Treatment.*—There can be no question about the utility of immobilisation of the uterus by an abdominal belt, so far as that is possible; about the avoidance of fatigue and strain; about avoidance of sexual intercourse; about the use of laxatives and dieting, or of glycerine or water enemata or of glycerine suppositories to aid evacuation of the bowels, or about the advantages of general tonics and of the natural medicinal waters, the ferruginous for the anæmic cases, the alkaline for dyspeptic patient, and the indifferent and sodium chloride waters for the neurotic.

2. *Douches* are undoubtedly useful, but require to be used more energetically than they mostly are. The amount of water should not be less than two quarts for each douche; the duration of its application at least twenty minutes; the temperature should be gradually raised from 100° F. to 120° F., the frequency should be at least twice a day; the position of the patient should be dorsal with the hips well raised; and the residue should be carefully evacuated from the vagina after each douche. To gain any real effect from them hot douches need to be continued for months.

3. *Hip Baths* are also of some service, especially when a bath speculum is used, but are inferior to douching properly done.

4. *Tampons.*—The advantages of the tampon have been much over-estimated. Whether they be soaked in plain glycerine, or in solutions of ichthyol, or other medicament in glycerine, appears to be immaterial. In any case to be of use they require to be inserted much more frequently than is customary. In fact a daily application is necessary.

5. *Local Bleeding* is in some cases beneficial, especially where the cervix is chiefly involved. It is best done by puncture followed by warm douching, and needs to be repeated every second day until the congestion had decreased. The application of leeches is quite inferior to puncture.

6. *Intrauterine medication* is of more importance than any of the foregoing methods, and includes (1) the application of antiseptics and (2) the application of caustics to the uterine cavity.

(1) The application of antiseptics may take the form of (*a*) "irrigation" through a double channelled catheter, preceded or not by dilatation. Such treatment is only useful in very mild cases. It has been used in combination with (*b*) "drainage" by means of glass tubes with small holes, gutta-percha drainage tubes or spun-glass bundles, but drainage has not succeeded in winning favourable regard. (*c*) "Plugging" with iodoform gauze is more esteemed, and has been recognised as particularly suitable for gonorrhœal cases. (*d*) "Swabbing" by means of dressed probes dipped in mere antiseptic solutions or by brushes similarly treated is of little value.

(2) The application of caustics to the uterine cavity is much more effective than mere antiseptic applications. The solid pencils of nitrate of silver or of chloride of zinc are things of the past, so likewise are the caustic introducers, the nitrate of silver powders, and the nitrate of silver and chloride of zinc pastes. The liquid caustics, however, still hold their place, though some, such as nitrate of silver solution, acid nitrate of mercury, anhydrous nitric acid and perchloride of iron solution are only occasionally used while others like chloride of zinc solution, carbolic acid, iodised phenol, and tincture of iodine, form the routine applications of many. For applications by the "probe" solid carbolic acid, liquefied by heat and allowed to crystallise on a dressed probe, is probably the best agent. While the probe is the favourite instrument in Great Britain, the introduction of caustics by "Bandl's method" through a uterine speculum has some supporters. Only weak solutions can, however, be used thus, and the method is inferior to that of "intrauterine injections" by means of Braun's syringe, though the latter plan has been somewhat neglected in this country owing to the supposed dangers of it. Injection is the most effective way of applying caustics to the uterus, and is as free from danger as any other plan provided the cervix be sufficiently dilated and the quantity of fluid introduced be proportionate to the size of the cavity.

7. The "galvano-cautery," the "thermo-cautery" and the "actual cautery" deserve no commendation.

8. Neither does "atmokausis," for the application of steam to the endometrium is an unnecessarily severe and dangerous proceeding.

9. *Curetting* is of all the methods of treating metritis admittedly the best. It is, however, not generally recognised by the profession or by the public that the mere scraping of the uterus is not in all cases sufficient to effect a cure or even a marked amelioration of symptoms. The fact that metritis is often a very chronic and intractable complaint is lost sight of, and the patient is encouraged to hope that the operation "will make her right."

Frequently it does not do so and the operation or the operator is discredited. Now the truth is that in most cases of chronic metritis the curetting is merely the first step in a course of treatment which ought to be sufficiently prolonged to materially influence the disease. Curetting therefore requires to be reinforced by one or several of the other methods as well as by the removal of complications if such exist. As at present carried out the operation is preceded by cleansing of the vaginal and uterine cavities by antiseptic lotions and followed by the application of caustics or styptics to the uterus for a comparatively short time according to the views of the operator. My contention is that patients should be taught to expect more prolonged subsequent treatment both general and local, that, in fact, the treatment like the disease should be somewhat chronic. Besides this question there are some others worthy of discussion, as they give scope for some difference of opinion, such as the curette to be used. Opinion as to whether it should be blunt or sharp still varies. The sharp one is, I think, to be preferred. With it, a greater or less effect can be produced according to the amount of force used. The operator has thus a chance of using his discretion, which he has not when the instrument is blunt. The time at which the operation is done, is perhaps, not of much importance. Undoubtedly dilatation is easier immediately after a period, but on the other hand in cases of hæmorrhage or dysmenorrhœa a good deal may be gained by curetting a week or ten days before the period. Certainly the latter time is the best for cases in which sterility is an important factor.

The question of anæsthesia depends on the amount of dilatation needed as well as upon the nervousness of the patient. The dilatation and not the scraping is usually the painful part and some relief can be obtained by cocaine in 10 per cent. solution applied to the cervix and cervical canal for ten or fifteen minutes beforehand.

Preliminary vaginal antiseptics in the form of thorough douching night and morning with 1 in 2,000 sublimate solution or other efficient agent and two fingers in the vagina is essential to safety. This can only be done by a specially trained nurse. Neither the patient herself nor an ordinary trained nurse can give a proper cleansing douche.

The operation may be performed with the patient on her left side, but the advantages of the dorsal position are so great that it should be universally adopted. It renders the operation both easier and safer.

The steps of the operation afford little scope for con-

troversy. When the patient has been placed in position the vagina is scrubbed with soap and water and a tooth brush, green soap which has been sterilised by heat being the best. An antiseptic douche follows this. The speculum is then introduced, the cervix lowered by a vulsellum, and the sound passed to ascertain the direction and size of the uterine cavity. If the canal is wide enough the curette may be used without dilatation. If not, the dilatation is best accomplished by long handled dilators, such as Duncan's, because the length of the handle and the curve enable the instrument to be introduced with less disturbance of the uterus than the shorter ones, like Hegar's, give rise to. Extreme dilatation is unnecessary. Indeed in most cases dilatation beyond No. 16 of Duncan's instruments is accompanied by laceration, and should only be resorted to in cases of uncertain diagnosis where the introduction of the finger is essential. Dilatation is followed by flushing of the cavity with an antiseptic solution, 1 in 2,000 sublimate being the best. The curette is then applied, and with a sharp instrument the force must be modified to suit the state of the case in hand. The *débris* having been washed away through a double channelled uterine catheter, the cavity is dried out with a strip of sterilised gauze and swabbed or injected with perchloride of iron or some preparation of iodine according to the amount of bleeding. Irrigation of the uterus and vagina follows this, and then a vaginal plug of iodoform gauze is inserted and allowed to remain for two or three days, when it is removed and vaginal douches given night and morning for a week. After this further treatment is unnecessary in cases of catarrhal metritis, but in the granular form intrauterine injections of iodine every second day for eight or more times will be needed. Preliminary dilatation by laminaria or other form of tent is quite unnecessary.

The danger of the curette nowadays is very slight, but certain accidents may occur. Perforation appears to be rather frequent. A good many instances have been published and the accident has happened to most men who have performed the operation many times. It is most likely to occur when the exact curve of the uterine cavity is not continually borne in mind during the operation, hence the necessity for carefully passing the sound before commencing to dilate or curette. The accident is practically free from danger when the operator recognises what has occurred and desists from further treatment.

Hæmorrhage seldom follows the operation in cases of metritis. It is more likely to succeed an imperfect curetting than a thorough one. Its importance lies in the fact that the possibility of its occurrence should deter us from being too ready to curette in our consulting rooms. Peritonitis will only occasionally follow the operation when it is done intelligently. It is seldom severe, though fatal cases sometimes occur. It may be the result of perforation, but is due, more often, I think, to curetting performed in an unsuitable case, where there is pus in the tubes or in the pelvic cavity, which which has either not been recognised or has been regarded too lightly. Careful selection of cases and extreme care in handling doubtful cases will make it an infrequent sequela.

10. *Electrolysis* is a tedious method of attaining ends which can be better compassed by other means, and has little to commend it.

11. Among the more recent things which have been used for gonorrhœal metritis and vaginitis the "yeast method" deserves mention. Ten c.cm. to 20 c.cm. of fresh beer yeast mixed with a small quantity of beer is injected every day or every few days into the vaginal fornix, the vagina having been previously cleansed and dried. A tampon is subsequently introduced. Its efficacy depends on the antagonism of certain micro-organisms. It is no improvement on other plans of treatment.

12. In chronic cases, where there is evidence of old venereal disease, the application of mercurial ointment to the uterine cavity may be beneficial. It is applied apparently with advantage to the male urethea in cases of intractable gonorrhœa with small urethral ulcers, and possibly it might be equally serviceable in the uterus.

*Treatment of Complications and Sequelæ.*—The treatment of certain complications and sequelæ of metritis demands a passing notice.

1. Mucous polypi of the cervix may require removal by forceps or curette, with subsequent application of perchloride of iron or of the thermo-cautery.

2. The so-called "ulcerations" of the cervix often require prolonged treatment even after the uterus has been curetted. When they are recent and there is not much thickening of the cervix, they will yield to curetting, followed by solid nitrate of silver for a few times, and subsequently by boric acid dressings. This produces a rapid change in the condition, and is superior to such remedies as tincture of iodine, weak nitric acid, chromic acid, chloride of zinc, acetic acid, pyroligneous acid, etc. On the other hand, for old-standing erosions with much chronic thickening caustics are worse than useless. In such cases the excision of the diseased portion, followed by the union of the vaginal to the uterine mucous membrane is the best treatment (Schroeder's operation).

3. A third set of cases includes those in which there are lacerations as well as erosions. According to the amount of thickening present these will demand repair of the lacerations in the less hypertrophied examples (Emmet's operation), or amputation of the cervix when the enlargement is more pronounced (Schroeder's operation).

### Varieties of Metritis requiring Modified Treatment.

Two varieties of metritis are deserving of special attention as regards treatment, namely, the hæmorrhagic and the chronic painful metritis. For the hæmorrhagic form the recumbent position, hot douches, and the administration of the liquid extract of ergot—or still better, the fresh infusion, or ergotine—are unquestionably useful. Hydrastis canadensis is of doubtful value, and digitalis is effective only in cases complicated by heart disease. Laminaria tents and plugging the vagina for uterine hæmorrhage are obsolete. Of the more active measures the injection of perchloride of iron, or still better curetting, followed by the injection of perchloride of iron, together with the repair of lacerations and removal of other complications, yield the best results. But even such energetic treatment will have but a temporary effect unless it be followed by repeated injections of iodised phenol and the prolonged use of ergotine. In bad cases plugging the uterus with plain sterilised gauze or with iodoform gauze may be required until the patient rallies enough to be able to stand the curetting, or plugging with gauze soaked in 50 per cent. chloride of zinc solution may render curetting unnecessary.

Ligature of the uterine arteries and ovariotomy are too uncertain to be worth adopting, while hysterectomy will be necessary in very few cases, if in any, when persistent treatment of a conservative kind is thoroughly carried out.

Chronic painful metritis is one of the most troublesome forms of the complaint. In it a certain amount of benefit will be derived from scarification and puncture, followed by the use of glycerine and iodine or glycerine and ichthyol tampons. The virtues of ichthyol are, I think, very doubtful. The so-called "columnisation" of the vagina by filling it with cotton wool or clay or sheep's wool has some good effect, especially if sheep's wool soaked in glycerine be the agent used. Hot douches are particularly serviceable in these cases.

Ignipuncture gives no permanent good result. Electricity is uncertain, as is also massage of the uterus. Amongst operative measures amputation or repair of the cervix may be required, but removal of the ovaries or of the uterus, with or without the ovaries, yields poor results owing to the neurotic tendencies of most patients thus affected.

### The Relationship of Metritis to Malignant Disease.

The relationship between metritis and cancer of the cervix has not so far been demonstrated beyond question, but the evidence in favour of its existence is strong. The connection between metritis and cancer of the body of the uterus has been definitely settled.

We know certain facts about cancer which have a bearing on this subject. Cancer is more common in women than in men. This frequency manifests itself between puberty and the menopause, especially between 40 and 50 years of age. The uterus is the organ most often affected. The cancerous tendency is influenced by race, whites being more liable to it; by heredity, though evidence on this point is open to question; by age and by the struggle for existence including want, worry and painful emotions, and everything calculated to depress the general health. About these general considera-

tions there can be no doubt. We are now, however, more concerned with local influences. Cancer of the cervix appears to be predisposed to by lacerations, by cervical metritis, especially of gonorrhœal origin and by frequent parturition—factors which are largely dependent on one another. The proof of their influence is the relative immunity of nulliparæ from cancer of the cervix. We have no direct evidence that the typical glandular proliferation or "simple adenoma" passes into an atypical proliferation or "malignant adenoma," in other words into an epithelioma of the cervix.

Cancer of the body of the uterus, which is a disease both of the parous and nulliparous, has had its connection with metritis more thoroughly worked out. The transformation from endometritis to cancer has been followed step by step at successive curettings:—(1) a slight glandular endometritis, when aggravated becomes (2) a benign adenoma, namely, a typical glandular endometritis, with a single layer of epithelium and normal interglandular tissue which degenerates into (3) malignant adenoma, an atypical growth with a single layer epithelium and the interglandular tissue gone, and this is the first step towards cancer, where the glands form solid cylinders filled with cancer cells. The recent observation that the uterine glands in their deepest ends normally contain solid masses of cells is rather disconcerting, as glands blocked by proliferation of cells can be no longer regarded as evidence of commencing malignant disease. Primary cancer of the "body" is special to women who have passed the menopause, and on that account hæmorrhage in them calls for the immediate use of the curette as a diagnostic instrument. In this connection it is important to remember that epithelioma and chronic metritis may exist in the same uterus. Hence the necessity for examining many pieces of scraping before making the diagnosis.

### II.—Mrs. SCHARLIEB, M.S.Lond.,

Senior Surgeon, New Hospital for Women; Lecturer on Midwifery and Diseases of Women and Children, London School of Medicine for Women.

## THE RELATION OF METRITIS AND ENDOMETRITIS TO MALIGNANT DISEASE OF THE BODY OF THE UTERUS.

MRS. SCHARLIEB said: This subject has scarcely attracted the attention it deserves both from its pathological and its clinical importance. This neglect is probably due in part to the difficulty of following up such cases as those of apparently simple endometritis. The mass of these cases are seen in hospital practice, and while the surgeon may possibly feel an enlightened interest in the subsequent fate of the uterus he has curetted, the patient is but little impressed by her undramatic complaint and convalescence.

Of course the endometrium, like other mucous membranes, is liable to an ordinary inflammation, and, owing to its special functions and to its great liability to injury, it is also liable to a group of complaints usually termed briefly, and inaccurately, endometritis. These troubles may be readily disentangled, and each is found to have not only a name but symptoms and macroscopic and microscopic characters of its own. They may be briefly classed as—glandular endometritis, interstitial endometritis, hypertrophic endometritis, exfoliative endometritis, gonorrhœal endometritis, tuberculous endometritis, and septic endometritis. The first four being named from their histological characters, and the last three from their respective microbial causes. Probably all, except the first two, namely, glandular or adenomatous endometritis and interstitial endometritis, may be set aside so far as any relation to malignant disease is concerned, provided we remember that any long-continued irritation and injury of tissue renders it more liable to invasion by cancer.

In scientific, as in political matters, we usually find prodromata—voices that give utterance to "songs before sunrise"; and it is interesting to find Dr. Matthews Duncan, in his *Clinical Lectures on Diseases of Women*, fourth edition, 1889, writing thus: "The great malignant disease of the cavity of the body of the uterus is adenoma, a glandular growth of the mucous membrane." And again: "Cancer may commence in any part. In the body of the uterus its commencement is mostly in the glands of one part; and it may, but rarely does, form a regular adenoma, or there may be ulceration, and this with little growth of diseased tissue." Dr. Lusk, of New York, says: "Under the microscope primary cancer of the body presents two forms, both of which have their origin in changes which take place in the glandular structure of the endometrium. In the one form the glands push out lateral offshoots which unite with one another and assume a trabecular arrangement with little intervening stroma. The ciliated cylindrical epithelia proliferate, and become large, flat, epidermoidal cells . . . . In the second form the glandular type is in general preserved. The central canal of the normal gland enlarge, and offshoots are pushed from the walls inwards or outwards into the circumjacent connective tissue . . . . In both varieties the retroperitoneal and lumbar glands are early affected." "Typical adenoma malignum of the uterus does not, as a rule, present a well-circumscribed tumour, but a general diffuse thickening of the mucous membrane, which has an an irregular, juicy, velvety appearance. The uterus is generally moderately enlarged in all its dimensions."

I have not seen among these authorities a suggestion that whereas the action of the cancer germ on glandular endometritis produces malignant adenoma, or glandular cancer of the endometrium, so the action of the infective agent on the interstitial form would produce sarcoma. It is possible, and opens an interesting pathological investigation. However, leaving these histological considerations aside, we have to remember that, as Pozzi tells us, "Malignancy is a clinical character, not a pathological entity," and we should ask ourselves whether we have seen undoubted cases of endometritis develop into undoubted malignant disease. I think I have seen such a development.

In 1880 Mrs S., aged 35, no children, complained of severe menorrhagia. I treated her first by the application of electricity—a potter's-clay electrode on her abdomen connected with the positive and a sound-like electrode applied to the endometrium connected with the negative pole. This was done repeatedly, and at first there was a diminution of the hæmorrhage. After a time it recurred, and was worse than before—so bad that the patient became anæmic, and I advised curettage. The scrapings were not abundant, and were pronounced to be those of ordinary simple endometritis. After a few months the profuse loss called for a repetition of curettage, and again the scrapings were scanty and said to be simple. After three scrapings the hæmorrhage was so profuse and the patient's condition so bad that I removed the uterus. The patient made an easy recovery, and has remained well. The endometrium was covered with a soft flat growth, somewhat resembling red velvet. The glands were elaborately branched, forming a tuberculous network from which the stroma had nearly disappeared. They were still lined with one layer only of cells.

The difficulty of investigating this subject is increased by the difficulty of following up the cases. The poor drift from one hospital to another, and there are not many private patients whose faith will survive several curettings and many dosings with drugs. If the general attention of the profession could be enlisted, and both notes and microscope specimens were preserved, something might be done by friendly co-operation among those who are interested in so important a subject.

### III.—HERBERT SNOW, M.D.,

Senior Acting Surgeon, Cancer Hospital, Brompton.

DR. SNOW said: I am sure the Section is greatly indebted to Dr. Campbell for a most exhaustive paper, which might readily have been expanded into a volume. It is difficult to speak on all the interesting points he has raised, and I must needs select only two or three. I will first point out that to talk of "cancer" at large is like talking of "fever." There are a large number of forms of malignant disease, which should be carefully discriminated, as their causes, to say nothing of their clinical career, are essentially different. And until this fallacy is eliminated, the greatest obscurity will prevail. Then Dr. Campbell speaks of the diagnosis of cancer from endometritis as "resting mainly on the curette." Well, I think the diagnosis of cervical carcinoma rarely presents any difficulty; and I presume Dr. Campbell refers to disease of the uterine cavity. Here I must beg to record my emphatic protest against any but the faintest reliance being placed on the microscopic examination of a curetted endometrium. There are many non-malignant conditions of that structure which closely simulate malignancy, and are apt to mislead the most competent pathologist; some of whom, in the absence of

well-settled pathological rules, are more prone to a cancer diagnosis than others. The patient should never be condemned to hysterectomy on microscopic evidence alone. That instrument should only be employed to confirm an opinion based already on other grounds. There are one or two important elements in diagnosis which Dr. Campbell has hardly mentioned, or has dismissed, I think, with insufficient appreciation. One of these is age: most women are past thirty. Pain is another. In cervical cancer, this is nearly always pronounced *ab initio*; though it may long be absent in disease of the cavity. And you nearly always meet with a marked breakdown of general health as soon as any malignancy begins; though, of course, I do not admit the validity of any cachexia. For non-malignant endometritis, I venture to think that the treatment is hardly so complex as one would infer from Dr. Campbell's paper, and might be considerably simplified. The curette should be almost wholly reserved for *post-partum* cases; I have known a fatal result through perforation. A thorough swabbing with liniment of iodine will do all the curette can do in ordinary cases, and without its risks. We should, as a rule, go straight to the point, doing what is needful at one sitting under anæsthesia, and seek to avoid being meddlesome. There can be no doubt that repeated curettings have often caused malignant disease which did not previously exist.

### IV.—The late Dr. A. E. Aust Lawrence,
Bristol.

Dr. Aust Lawrence alluded to the difficulty of diagnosing metritis as a pure and simple condition independent of disease of the tubes—retained products of conception, etc. He advocated full dilatation of the cervix uteri and exploring with the finger before using the curette. He would, in some cases, advise a preliminary dilatation of the cervix uteri with a tangle tent before the use of the ordinary dilators, especially in women who had never had children or had not had one for some time, for rapid dilatation in such women often caused laceration of the cervix uteri; with proper antiseptic precautions there was no danger in using tents.

### V.—J. Inglis Parsons, M.D., M.R.C.P.,
Physician, Chelsea Hospital for Women.

Dr. Inglis Parsons thought they must recognise certain cases of metritis as chronic in spite of all treatment, just as there were patients with chronic gout, dyspepsia, and bronchitis. In many cases a weak constitution was the chief cause, and attention to the general health with fresh air and good food was necessary for improvement. Metritis was probably an antecedent condition in all cases of cancer. That disease in a similar way was found to follow ulcer on the tongue, in the large bowel and in the stomach just as metritis. They would never be able to offer much proof of this, because if they treated the erosion it healed and infection was not likely to occur, whereas when the patient did not come under treatment, they could not produce evidence of the previous condition. They could only infer by analogy that it had existed. He had found the application of the constant current had succeeded in the obstinate cases of endometritis when curetting had failed, but it took so long, he thought it better to curette at once, if all other local treatment had failed. He could not agree with Dr. Snow that there was pain in the early stage of cancer of the cervix, nor did he find any alteration in the general health until ulceration had occurred with discharge and hæmorrhage.

### VI.—F. Bowreman Jessett, F.R.C.S.,
Surgeon, Cancer Hospital, Brompton.

Mr. Bowreman Jessett said: I think we are very much indebted to Dr. Campbell for bringing this subject before us. In my opinion, there are no forms of disease from which women suffer that is more disappointing and intractable than those under discussion. Patients after being treated for some short time, and feeling little improvement, go from one surgeon to another or from one hospital to another. These diseases, metritis and endometritis, are due to several causes—tuberculous, catarrhal, gonorrhœal, flexion, and displacement and laceration. Now it is self-evident that it is useless to attempt to cure endometritis due to flexion by curetting until the uterus is replaced into its proper position. I am sure that many of these cases may be cured by replacing the uterus and applying a properly fitting pessary. In cases of tuberculous and gonorrhœal endometritis I place the patient under anæsthetics, and after dilating, curette the uterus with an instrument devised by myself: it is made of watch springs which lie parallel to the stem, and, after its introduction, by means of a screw in the handle, the spring can be ballooned out, and then by a rotatory motion the whole of the endometrium can be thoroughly cleared. A piece of wool soaked in a solution of carbonate of soda is packed into the vagina to protect the vaginal wall, and, with a piece of cotton wool soaked in fuming nitric acid, the whole uterine cavity is swabbed out. After a few minutes the cavity is syringed out with a weak solution of sodium carbonate to neutralise any superfluous acid. The uterus is then plugged with iodoform gauze, or gauze soaked in glycerine and iodoform. In ordinary catarrhal metritis I have found much good done by hot water douches and a tampon of wool soaked in ichthyol and glycerine ℥j to ℥j applied after the douche high up in the vagina. I think it cannot be too strongly insisted that the patient should be anæsthetised, and the tubes, ovaries, and cavity of uterus thoroughly examined to ascertain that no pyosalpinx is present, as it is worse than useless to curette or attempt to treat the endometrium while any pyosalpinx still exists. Occasionally also a submucous polyp may be found which can be removed, and the symptoms so relieved. With respect to the relationship to malignant diseases with endometritis very little is known, but in women over fifty years of age if we get endometritis, and bleeding follows on passing a sound, I think we can be pretty well certain we have to do with malignant disease of the fundus. In such a case I curette the uterus and have the *débris* examined by a pathologist. If pronounced to be malignant the organ should be removed. I should like to say one word in defence of the pathologist. Some of the speakers have blamed the pathologist, but we must not forget that in curetting the uterus the whole endometrium is curetted, but the carcinomata may be only limited, so that it is quite possible that the specimen sent for examination may not contain any portion of the malignant growth, and hence the apparent mistake. With respect to pain in cancer, my experience is that in the early states there is almost a complete absence of pain, and cachexia is absent also; in fact, a large number of these patients are fat healthy-looking women.

### VII.—E. Purslow, M.D., M.R.C.P.,
Consulting Surgeon, Birmingham Lying-in Charity.

Dr. Purslow wished to confine his remarks to the treatment of hæmorrhage due to metritis. Most of such cases yielded to the lines of treatment laid down by Dr. Campbell, but during twelve years of hospital practice he had met with four cases in which, all other methods having failed, he had, as a last resort, removed the uterus by vaginal hysterectomy. In each of these cases the symptoms dated from an abortion, the shortest period which had elapsed before operation being two years and the longest nine years. The life of each of these patients was becoming endangered by the anæmia due to the hæmorrhage, and in two the bloodless condition was as marked as he had seen in any case of severe hæmorrhage due to fibroid. The uterus in each of these women was enlarged and weighed from 4 to 6 ounces, its walls were much thickened, especially at the fundus, and the organ was free from any sign of new growth, the patients all recovered from the operation and their general condition was much improved. A careful microscopical examination of one of these uteri was made by Dr. Stanley, Pathologist to the Queen's Hospital, and he reported that there was chronic inflammation of the endometrium and of the neighbouring uterine wall, leading to fibrotic degeneration of the uterine tissue, particularly of the walls of the arteries, and this latter condition might account for the difficulty in arresting the hæmorrhage. He would have liked to have heard more of some of the more recently recommended methods of arresting uterine hæmorrhage, namely, atmokausis or the application of superheated steam, and the injection of solutions of gelatine, as he would gladly welcome some less severe method of dealing with such cases as he had described.

VIII.—Mrs. Garrett Anderson, M.D.,
Consulting Physician, New Hospital for Women.

Mrs. Garrett Anderson wished to point out that there was a serious risk of assisting in the diffusion of malignant disease by dilatation of the uterus when it might contain a malignant growth. She had seen a case lately in which the symptoms pointed to malignant disease and the uterus was removed. On opening it a fibroid polypus the size of a small cherry was found, and behind it unmistakable malignant disease. Had dilatation been used the polypus would have been removed and the malignant condition higher up very probably overlooked, and absorption of malignant germs (assisted by the wounding of the mucous membrane and lymphatics) would have been facilitated.

IX.—A. S. Cooke, M.R.C.S.,
Senior Surgeon, Stroud General Hospital; Vice-President of the Section.

Mr. Cooke said that as a general practitioner he had felt a great interest in the discussion, as uterine diseases were so common in general practice; he could not agree with Dr. Lawrence, that it was quite easy to examine the cavity of the uterus by means of the finger. He, although having a long finger, had often found a difficulty. He would like to ask the opinion on rapid dilatation so much used now, thinking it very likely to cause trouble, and he preferred the old-fashioned method by tents, which Dr. Lawrence advocated. He certainly agreed with Dr. Lawrence that the uterus was not more subject to inflammation than any other organ in the male or female, and that the cause was generally to be found elsewhere, and that such cause ought to be found out before attempting to cure the metritis. The application of forms of nitric acid he had not tried, but had used carbolic acid with good effect, and that could be done without causing any pain. He certainly found very great benefit from glycerine plugs, as recommended by Dr. Jessett. Iodine, so generally suggested by most speakers, was more used by him than any other disinfectant. He could not agree with Dr. Snow that the health suffered almost directly whenever any uterine cancer was present,; he had often seen robust women with extensive disease of the cervix as well as the body of the uterus. He offered these few remarks on account of the President wishing to hear the opinions of general practitioners.

X.—Mrs. Boyd, M.D.,
Surgeon, New Hospital for Women.

Mrs. Stanley Boyd said: I understood Dr. Campbell to assume that, before curetting, the absence of disease of the tubes should be assured by careful examination. Recto-vaginal examination is particularly important, and one should always aim at an accurate estimation of the pelvic organs before proceeding to curetting. Diseases of the tubes after such an examination ought not to be overlooked. In dealing with abortions, it was a help to support the uterus by a finger in the rectum, which enabled the length of the finger to be utilised much better than by vaginal examination alone. With regard to the question of gonorrhœal endometritis, many of the relapsing cases referred to by Dr. Parsons were no doubt due to gonorrhœal infection. Dr. Campbell had not alluded to the use of protargol for gonorrhœal cases, which had been reported favourably on by some German workers. In view of Wertheim's work showing the influence of the gonococcus on the columnar cells of the endometrium, it was comprehensible that further work might show a more causal relation between gonorrhœa and malignant disease.

XI.—G. A. Hawkins-Ambler, F.R.C.S.Edin.,
Honorary Surgeon, Samaritan Hospital, Assistant Surgeon, Stanley Hospital, Liverpool.

Mr. Hawkins-Ambler thought that somewhat advanced malignant disease might exist without any marked pain or cachexia. He had opened a man's bladder last year for malignant disease, and six weeks later the man's wife was sent to him with advanced cancer of the cervix and vagina. She had no cachexia or pain, and the only hæmorrhage was the attack which led to her being sent to hospital. In chronic endometritis it was of no use curetting the patient and leaving her. Regular treatment must be continued, disinfecting the uterine cavity with iodised phenol and checking the return of the endometritis, hot douches, ichthyol plugs, and so forth. He had found no difficulty with his own dilators, no better all-round curette was to be had than Simon's spoon, and Mr. Christopher Martin's game skewers were cheap, handy, and aseptic for dressing purposes.

XII.—Montague Handfield-Jones, M.D., F.R.C.P.,
Obstetric Physician and Lecturer on Midwifery and Diseases of Women, St. Mary's Hospital.

Dr. Handfield-Jones considered that the treatment of endometritis depended on the degree and virulence of the infection, whether gonorrhœal or syphilitic. In all cases the disease was at first superficial and easily cured, but as time went on the deeper part of the glands and even the muscular wall of the uterus were involved, and in these cases abrasion by the curette must be repeated, and treatment other than local antisepsis must be resorted to. In some instances the ovaries had become involved and the treatment of ovaritis rather than endometritis was required. The relation of cancer of the body to corporeal endometritis was of great interest; there could be little question that the disease began in many cases as an endometritis, and in these patients if the curette was used and gave evidence of early malignancy, hysterectomy should follow at once, as the injury done to the growth by the curette would often hasten the development and spread of the disease. Reference was often made to the loss of health in the early stages of cancer, and it had been held that the depreciated health was due to the cancerous poison: probably the converse was true and that a disease not yet fully developed was allowed to spring into full activity owing to the patient's lessened powers of resistance.

XIII.—R. J. Ferguson, M.D., M.Ch., M.A.O.,
South Norwood.

Dr. Ferguson said: As a general practitioner, I add my testimony to that of Dr. John Campbell in the use of the curette for the treatment of metritis, but would insist on its more frequent employment as a preventive especially after incomplete abortion, and in cases of sapræmia following parturition.

XIV.—E. Smallwood Savage, F.R.C.S.,
Honorary Surgeon, Birmingham Lying-in Charity, and Wolverhampton Hospital for Women.

Dr. Smallwood Savage wished to join in thanking Dr. John Campbell for his interesting and instructing paper on metritis. On the question of treatment, Dr. Savage said that no one, except Dr. Ferguson, in the discussion, in speaking of the iodoform plug used after the uterus han been curetted, made any distinction between the iodoform gauze being used as a plug and it being used as a drain. He pointed out that whereas in the cases where hæmorrhage was likely to occur the uterus should be plugged with iodoform gauze well packed within it, in the ordinary cases the gauze was best used merely as a drain. Dr. Savage said he felt the discussion had rather tended towards the various ways of treatment than the real pathological conditions which fell under the terms of endometritis and metritis. Dr. Purslow had mentioned in his remarks that he attributed a very great number of cases of endometritis to pregnancy with an inflammatory infection, and several other speakers had shown from their experience the great part that the gonococcus played in a life-long trouble unless otherwise dealt with, and he (Dr. Savage), following Mrs. Scharlieb and Mrs. Boyd, wished to make an appeal for further investigation of the microscopical appearances of inflamed or otherwise diseased tissues of the uterus, for he felt the real causes could only be reached by pathological and histological knowledge. He himself thought that the gonococcus found a very suitable soil in the uterus and adnexa during the *post-partum* period.

XV.—F. W. N. Haultain, M.D., F.R.C.S.Edin.,
Lecturer on Midwifery and Diseases of Women, Edinburgh School of Medicine for Women.

Dr. Haultain said that, having had experience in the use of protargol, he might answer Mrs. Boyd's question regarding it. In a 1 per cent. solution he had used it with

benefit after curetting by douching the uterine cavity and then packing the cavity with gauze soaked in the same solution; the packing to be repeated at least thrice weekly for a fortnight. He had, however, got better results with argonin (1 in 1,000), using it in a similar manner to the protargol; it seemed to penetrate the cells more efficiently where the gonococci were present. Before sitting down he would like to say he could not agree with Mrs. Garrett Anderson that it was justifiable to remove the uterus for bleeding without having previously explored its interior by dilating the cervix. No harm could be done by dilating, as if found malignant the uterus could be removed at once, while if not malignant unnecessary mutilation would be avoided.

XVI.—J. W. Byers, M.A., M.D., M.Ch., M.A.O.,
Professor of Midwifery and Diseases of Women and Children, Queen's College, Belfast; President of the Section.

Professor Byers said that at the end of such an interesting discussion, his duty was to sum up their results and to see what was the present view of gynæcologists on this question. 1. As to diagnosis: In a case of metritis the greatest care should be taken to see, before commencing surgical treatment, that there were no complicating conditions (such as disease of the appendages or uterine polypi, etc.) present. 2. As to causes: Apart from constitutional conditions, in the main the causes were abortion and gonorrhœa. 3. As to treatment, he thought the thorough treatment of all cases of unavoidable or incomplete abortion was of the utmost importance: and he believed the curette in such cases was much better than the finger, first, because being easily sterilised it eliminated risks of sepsis, and, further, because it did the work more thoroughly, and cases of abortion treated in this way were less liable, subsequently, to lapse into chronic endometritis. Coming to the treatment of established metritis, he believed the removal of the diseased germ-infected endometrium was what was required, and the sharp curette he liked best: and he advised it to be followed up with the local application of carbolic acid or with iodine by a Braun's syringe. The gonorrhœal variety of metritis was most intractable: he had found protargol not so good a destroyer of the gonococcus as corrosive sublimate. 4. As to the relationship of metritis to malignant disease, there was ample scope here for further original work. Mrs. Scharlieb's remarks were of the utmost importance on this question. He thought the value of reports on uterine scrapings depended largely on the personal equation of the experience of the microscopist. A man accustomed to examine uterine tissue could, he believed, give them the most valuable assistance; but if specimens were sent by the same gynæcologist to different microscopists without this specialised experience, was it any wonder men lost faith in such reports? He thought in this respect they must try to attain the high perfection of their Continental *confrères*, such as one saw in Martin's clinic at Berlin. He thanked, on their part, most warmly his friend and townsman, Dr. Campbell, for having given them a paper which had provoked such an exhaustive and practical discussion.

Reply.

Dr. Campbell, in reply, said: One of the most important uses of such a discussion as we have had to-day is the fact that it brings out any advances which have been made and, to some extent, disseminates such knowledge over the country. Consequently I have endeavoured to discount all considerations of a too general character and to dwell upon those of practical clinical importance. Dr. Herbert Snow's references to age, to cachexia, and to pain are apt to draw away attention from the main point in the diagnosis of cancer. Anyone will recognise cancer in an advanced case, but what we want is an early diagnosis while the disease is still operable. For this purpose the sharp curette used with a firm hand is the best available means of diagnosis. If it gets plugs of friable tissue there can be little doubt as to the condition being malignant, and the microscope can be used as a confirmatory test. The danger of this procedure is slight, provided that extirpation is performed soon afterwards. In advanced cases the danger is considerable, but in them such examination is not necessary. Dr. Aust Lawrence relies on the finger to clear out the early aborting uterus. That the fundus can be touched by any finger, however short, after an early abortion, is a truism, but merely touching the interior of the uterus is a totally different thing from removing attached particles of placenta. The President has fully explained the great difference, as regards separation, between a placenta at term and one in the early months of pregnancy. The early placenta is so difficult to separate that nothing short of a sharp curette can be depended upon, and the sooner this fact is recognised by the general practitioner the better for the patients under his care. Mr. Jessett's curette is excellent for attacking the anterior and posterior uterine walls, but it fails to reach the cornua properly. This can only be done by a sharp loop or spoon, and it is essential that every part of the endometrium should be dealt with. I have had the same experience as Dr. Purslow in having to remove by vaginal hysterectomy uteri which had continued to bleed in spite of vigorous and persistent treatment. In a small proportion of cases hysterectomy will be required, but my point is that every effort should be made to avoid this operation by active treatment in other ways. Electrolysis has failed with me in metritis. Atmokausis is dangerous; gelatine I have not yet tried. In treating gonorrhœal cases I do not think the kind of antiseptic solution is of much importance, provided that it is strong enough. The great difficulty is that most of these cases are liable to reinfection. Even though we get rid of one attack others are likely to follow. In conclusion, I have to thank the meeting for the way in which my paper has been received.

## FURTHER REPORT ON A NEW OPERATION FOR PROLAPSUS UTERI, WITH NOTES OF FORTY CASES.

By J. Inglis Parsons, M.D., M.R.C.P., etc.,
Physician to the Chelsea Hospital for Women.

Four years have now passed since the first patient was treated by this method. She has since then been earning her living as a cook, and in spite of continued hard work the uterus still keeps up, although when she came to the hospital it was outside the vulva and extensively ulcerated from friction.

The results by this treatment are, on the whole, very good, and better than I expected. Most of the patients have been able to resume work, and have once more become useful members of society.

The operation does not prevent or interfere with pregnancy; cases No. 5 and No. 13 have each had a full term living child since they were treated.

In the consideration of prolapse of the uterus, we have to regard three main factors: (1) the giving way of the pelvic floor either by rupture or relaxation and stretching; (2) relaxation and stretching of the uterine ligaments; (3) increased weight of the uterus.

In many cases after parturition there is slight prolapse, chiefly due to relaxation of both pelvic floor and ligaments. With most of these patients it is sufficient to prescribe rest and astringents, douches, tonics, and perhaps the temporary use of a pessary. If the perineum is ruptured it should be repaired, while the enlarged uterus can sometimes be reduced in size by appropriate treatment.

The restoration of the pelvic floor in many cases of minor prolapse gives the extra assistance required to keep up the uterus. But in severe cases it is very often not enough, a gradual stretching takes place after the operation, and relaxation of the vaginal outlet follows from the continued pressure above of the prolapsed uterus. Of the operations on the pelvic floor that which I find most useful in severe cases is to remove a triangular flap from the posterior wall of the vagina, the edges are then brought together, and the usual flap splitting operation on the perineum follows. I have done a large number of cases like this, and as an adjunct to other treatment for procidentia, it is, in my opinion, the best of the various operations on the pelvic floor.

When all these measures have been carried out, there still remain some cases where the prolapse persists in spite of the various measures taken to combat it.

It may be impossible to restore the tone of the pelvic floor. Although by operation we can restore its shape we cannot

always prevent it from stretching again. Even when the pelvic floor has entirely recovered both shape and tone, the uterus will in many cases still come down.

The fault then lies chiefly in the uterine ligaments. There are very considerable variations in the strength of these ligaments among women, the explanation for which is probably to be found in heredity. For instance, I have seen complete procidentia in a single woman with a perfect pelvic floor and intact hymen. In this patient the pelvic floor was complete but it could not hold up the uterus because the ligaments had given way. In contrast to this we find patients with complete rupture of the pelvic floor lasting for years, and yet the ligaments are so strong that without assistance they are able to hold up the uterus and no prolapse follows.

When operations on the pelvic floor are not enough, ventrifixation may be tried.

In order to form an opinion of the value of hysteropexy for severe prolapse, we must consider the operation entirely apart from retroversion. For the latter condition I am quite satisfied with the operation, but for severe prolapse I am not, and for this reason—to be of any service in prolapse ventrifixation must be done with firm adhesions to the abdominal wall. Before the menopause this leads to complications when pregnancy occurs, and after the menopause the abdominal wall is often so lax that it becomes pouched and is dragged down by the descending uterus. This does not apply to retroversion, because there is much less drag on the abdominal wall, and the uterus being suspended and not fixed can expand if pregnancy occurs.

The treatment which I bring forward is meant to supplement the measures now in vogue, and will be found useful when they fail.

The general idea of the operation is to strengthen the band within the broad ligaments and enable them to hold the uterus. This band, consisting of fibro-muscular and elastic tissue, runs upwards and outwards from the cervix to the walls of the pelvis. It has been more particulary described by Dr. J. C. Webster (*Researches on Female Anatomy*, p. 88), Sir William Turner, Dr. H. Savage (*Anatomical Illustrations of the Surgery of the Female Pelvic Organs*), and others.

We are not attempting to form a new ligament as in ventrifixation, but to strengthen one already existing. The principle of the treatment is very simple, and consists in taking advantage of Nature's reparative powers.

When falling of the womb takes place the process is very gradual and may be going on very slowly for months and even years, before there is much descent. As a consequence there is no stimulus for the formation of the lymph which repairs the ligaments when a joint is dislocated.

After thinking the subject over, I decided to supply this stimulus in the treatment of prolapse of the uterus, and trust to Nature to carry out her part of the work by repairing the over-stretched broad ligaments.

The choice of a reagent to effect this purpose required great consideration. It should be antiseptic; the effect should be entirely local, and if any absorption took place it should be harmless to the general system.

Sulphate of quinine fulfilled as nearly as possible all these conditions. When injected into the cellular tissue of the arm it appears to be precipitated and causes an effusion of lymph which remains for some weeks. It also has the advantage of being strongly antiseptic, and a tonic to the general system if absorption should occur. A solution of this is injected into the cellular tissue of the broad ligaments from the vagina.

The uterine arteries and veins lying on the inner side of the broad ligament are not in the way if the needle is inserted at the right point in the vagina; the same may be said of the ureters; while the outer two-thirds of the lower half of the broad ligament contains no veins or arteries of any size or importance and can be freely laid open from the vagina without having to tie a single vessel. I say this with conviction, because I had the opportunity of examining this space on occasions when doing other operations. It is necessary to lay stress on this point because many of the illustrations in the textbooks give the impression that the space is filled with a plexus of veins.

The operation only takes a few minutes and is free from risk if done with precision, proper care, and antiseptic precautions. There is no rise of temperature as a rule. It is essential that the point of the needle should be within the folds of the ligament and in the cellular tissue.

An anæsthetic is an advantage because it ensures immobility, but it is not a necessity. The patient is placed in the lithotomy position. The vagina, which has been thoroughly douched for some days before, is washed out with a solution of hydrarg. perchlor. 1 in 2,000. The rectum has of course been emptied as well as the bladder. The posterior wall of the vagina is pressed down with a Sims's speculum while the anterior is held up by a retractor. Even then, in some of these severe procidentia cases, such as No. 10 in the list, the extreme dilatation of the vaginal walls will allow them to roll together in folds and block the view of the cervix. Under these circumstances two lateral retractors are required as well as the other two. The injection is now made on each side through the vaginal wall, taking care that the direction of the needle is perpendicular to the base of the broad ligament, and parallel to the long axis of the uterus.

The syringe which I employ has a long, straight, rather thin, but rigid nozzle, so that when it is passed into the vagina the light is not excluded. The needle is about an inch in length and rather thicker than a hypodermic.

Before the injection is made it should always be tested, because the quinine solution is very apt to cause corrosion and it may then snap off short. If the patient has not taken an anæsthetic she will hardly feel the prick of the needle, but as soon as the injection of quinine begins some pain is felt for a few minutes, the severity of which varies in different individuals. Perhaps this might be obviated by an injection of eucaine. The operation is now over and should not take more than a few minutes. Before the patient is lifted into bed the uterus should be well anteverted bimanually. A cup and stem indiarubber vaginal pessary, secured by tapes to a band round the waist, is inserted so as to keep the uterus well up until the effusion of lymph has taken place. It can then be removed, as the uterus at the end of four or five days is held up by the effusion.

The strength of the sulphate of quinine solution is very important. If too strong it will cause suppuration, and if too weak it will not give sufficient stimulus to repair the ligaments. It is of the greatest importance to see that the solution of quinine is accurately made up. The treatment cannot succeed if the solution is not right. For the past twelve months I have used a solution of 1 in 5. The amount of this which is injected will vary of course according to the severity of the case, but the average amount which I use is 30 and 45 minims on each side for injection.

After the operation done under anæsthesia most of the patients have practically no pain. For the first few days there is a slight aching in the pelvis, which then passes off. Nor is there any inflammation. The temperature usually remains normal.

In the consideration of each individual case an estimate must be formed of the amount of strengthening required to hold up the uterus.

For a case of severe prolapse such as we meet in private practice, but which has not reached procidentia, one injection of 30 to 45 minims into each broad ligament ought to be sufficient.

Among the working classes, when we have to deal with a patient who has had chronic procidentia for many years, enlarged uterus, dilated vaginal walls, over-stretched pelvic floor and weak general health, who will have to do hard work and constant standing after the treatment is finished, two, or even three injections may be necessary to produce a satisfactory result. Our opinion will also be influenced by the reaction of the patient to the injection. The healthy, well-nourished woman will effuse and organise more lymph than the thin, anæmic and exhausted mother of a large family.

The most difficult part of the treatment is to estimate the amount required to keep the uterus up permanently. One injection will always do this for a time even in the worst cases.

But it does not follow that one injection is sufficient. The amount of strengthening must be proportioned to the strain in each case, and this will depend on the weight of the uterus

and the condition of the pelvic floor and the duration of the prolapse and the work the patient will have to do. If she has to stand for ten hours a day in a shop or at the wash-tub, or lift heavy weights, she will require more injecting than a lady who never does more in the way of exercise than an hour's ride on horseback. Again, unless the patient is kept at rest until organisation of the exudation has taken place, the operation will fail.

At the end of four days after the injection the pessary can generally be removed as there is usually enough effusion to keep up the uterus. On examination *per vaginam* the effusion can be felt in both fornices. It is firm and resilient, not hard, and feels like a band passing from the uterus to the pelvic wall. The uterus is held up but not fixed and still has mobility.

There can, I think, be no doubt that the sulphate of quinine is deposited. None of these patients have ever had the least sign of cinchonism, although in most instances as much as 12 grains has been injected at a sitting.

When, however, the effusion of lymph has taken place, the next, a very important, point for consideration is this: What treatment shall we adopt to secure organisation and prevent absorption? If an injured joint is kept at rest too long, more fibrous tissue than is necessary for repair of the ligaments is likely to take place, and impairment of movement follows.

On the other hand, if passive moments are practised at an early date and massage is used to increase the circulation through the injured part, this does not occur; repair takes place and the superfluous lymph is absorbed.

If we now apply this lesson to the treatment under consideration, the indications are to keep the uterus at rest as much as possible and restrain the circulation through the pelvis in order to promote organisation and avoid absorption. This is best done by keeping the patient at rest in the recumbent position. It is, however, never possible to keep the uterus completely at rest, owing to the filling and emptying of the bladder, and the movements of the abdomen in respiration, etc. Out of the forty patients, organisation was quite satisfactory in thirty-four, but not as much as I should have liked in the other six.

The benefit derived by these patients with chronic procidentia when the uterus is well held up, although very apparent when they they are allowed to get up, is more marked in most cases at the end of three or four months. The uterus becomes smaller owing to the absence of the chronic congestion to which it was before exposed. This is particularly observed in the mushroom-shaped enlargement of the cervix. In several cases I have seen the cervix diminish to nearly half its previous size. At the same time the large erosions and profuse cervical discharge gradually clear up. An improvement also takes place in the vaginal walls. Being held up by the uterus they have some chance of recovering their tone. The minor cases of cystocele and rectocele appear to get quite well, while the severe cases which at first ballooned out of the vaginal orifice on the least provocation are, to a great extent, kept in place by a ring pessary and contract to a quarter of their former size.

For instance, Case No. 10, who had procidentia for twenty-five years, had at first to wear a ring for cystocele, although the uterus kept up perfectly. In May of last year the vaginal walls had quite recovered, and I was able to remove the pessary altogether.

The treatment does not prevent or interfere with pregnancy. Cases No. 5 and 13 became pregnant a few months after the uterus was restored to its normal position. They were able to do their work for the first seven months, and were delivered of healthy children at full term this year without complications. This was only what I had anticipated, because the treatment does not impair the normal mobility of the uterus. Although these patients had to do hard work there has been no return of the procidentia. The uterus still keeps up, although not so well as before they became pregnant.

Of the forty cases that I have operated on only two have relapsed to their former condition; four cases have been improved, while the other thirty-four patients have remained well and the uterus has been kept in its proper position.

*Table of Cases.*

| No. | Initials. | Age. | | Duration of Prolapse. | Dates of Injection. | Temperature. | Results. |
|---|---|---|---|---|---|---|---|
| 1 | M. H. | 61 | Hospital | 7 years | June, 1897 | slight rise | Very good. Uterus keeps up. Works hard. |
| 2 | E. W. | 37 | Hospital | 10 years | Feb. and July, 1898 | normal | Procidentia recurred. |
| 3 | E. W. | 39 | Hospital | 2 years | February, 1898 | normal | Works in a laundry. Quite well. |
| 4 | E. P. | 44 | Hospital | 15 years | Feb. and Aug., 1898 | normal | Much better. Uterus keeps up. |
| 5 | A. J. | 29 | Hospital | 18 months | March, 1898 | normal | Has had a full-term child, 1899. Very well. |
| 6 | J. B. | 46 | Hospital | 7 years | March, 1898 | normal | Fairly good. Much better. |
| 7 | A. C. | 55 | Hospital | 16 months | March and April, 1898 | normal | Very good. No further trouble. |
| 8 | M. R. | 51 | Hospital | 10 years | March and April, 1898 | normal | Good. Can now do household work. |
| 9 | S. | 66 | Dr. Aikman | 12 years | April, 1898 | normal | Very good. No further trouble. |
| 10 | L. A. | 65 | Hospital | 36 years | April and May, 1898 | slight rise | Very good. Quite well. |
| 11 | D. Y. | 32 | Hospital | 9 years | May and June, 1898; May, 1899. | normal | No procidentia, still some prolapse. |
| 12 | P. H. | 45 | Hospital | 13 years | June and July, 1898 | high temperature | Quite well. |
| 13 | W. B. | 29 | Dr. Whitcombe | 2 years | July, 1898 | normal | Had full-term child, 1899. Uterus keeps up. |
| 14 | A. C. | 50 | Hospital | 10 years | July, 1898 | 100.2° | Good. Is now able to work. |
| 15 | A. H. | 55 | Dr. Whitcombe | 10 years | January, 1899 | normal | Good. |
| 16 | A. W. | 31 | Dr. Jago | 9 years | March, 1899 | normal | Very good. |
| 17 | H. M. | 40 | Hospital | 6 years | March and April, 1899 | normal | Fairly good. Cystocele gives trouble. |
| 18 | C. J. | 36 | Dr. Lauchlan | 4 years | April, 1899 | normal | Very good. |
| 19 | E. W. | 35 | Dr. Chilcott | 1 year | November, 1899 | normal | Good. Not been seen lately. |
| 20 | C. | 64 | Mr. Bland-Sutton | Procidentia 5 months | November, 1899 | normal | Good. |
| 21 | S. L. | 47 | Dr. Brown | 20 years | November, 1899 | normal | Fairly good. |
| 22 | S. G. | 65 | Hospital | 7 years | Jan. and Feb., 1900 | normal | Very good. |
| 23 | S. M. | 62 | Hospital | 4 years | Feb. and March, 1900 | normal | Quite well. Works at wash-tub. |
| 24 | H. C. | 41 | Dr. Fenton | 6 years | Feb. and April, 1900 | normal | Very good. |
| 25 | S. G. | 67 | Dr. Fenton | 23 years | March and April, 1900 | normal | Very good. |
| 26 | N. C. | 35 | Dr. Orr | 9 years | 2 and 26 April, 1900 (two) | normal | Very good. Works the whole day standing. |
| 27 | L. M. | 21 | Hospital | 3 years | April, 1900 (one) | normal | Fairly good. Some prolapse still. |
| 28 | E. W. | 32 | Hospital | 7 years | May, 1900 (one) | normal | Very good. |
| 29 | A. L. | 25 | Hospital | 3 years | April, 1900 (one) | normal | Good. Ovariotomy. Polypus removed. |
| 30 | H. P. | 48 | Dr. Fenton | 4 years | June, 1900 (one) | normal | Fairly good. |
| 31 | M. P. | 47 | Dr. Cowen | 24 years | July, 1900 (two) | normal | Very good. Has recovered use of her eyes. |
| 32 | R. W. | 45 | Dr. Fowler | 8 years | October, 1900 (two) | slight rise for 24 hours | Uterus keeps up. Requires pessary for retroversion. |
| 33 | A. P. | 57 | Hospital | 2 years | October, 1900 (one) | normal | Lost sight of patient. |
| 34 | E. B. | 43 | Dr. R. Duncan | 10 years | October, 1900 (two) | normal | Much better. Can do housework. |
| 35 | C. C. | 40 | Dr. Fenton | 2 years | November, 1900 (two) | normal | Uterus held up. Not seen lately. |
| 36 | L. M. | 43 | Dr. Buckle | 15 years | Oct. and Dec., 1900 | normal | Uterus keeps up. Wears pessary for cystocele. |
| 37 | H. | 62 | Private | 2 years | November, 1900 (one) | normal | Very good. |
| 38 | C. B. | 55 | Mr. Bland-Sutton | 18 years | January, 1901 (two) | normal | Good. |
| 39 | C. T. | 55 | Hospital | 8 months | Jan. and Feb., 1901 | normal | Uterus keeps up. |
| 40 | F. B. | 42 | Dr. Cowen | 19 years | Jan. and Feb., 1901 | normal | Good. |

I might add that in all these forty cases except two, the uterus came outside the vulva.

## EXTIRPATION OF THE UTERUS AND VAGINA IN CASES OF INTRACTABLE PROLAPSE.

By CHRISTOPHER MARTIN, F.R.C.S.,
Surgeon to the Birmingham Hospital for Women.

EVERY gynæcologist who has had much hospital practice must have had cases of severe total prolapse of the uterus and vagina which are intractable to ordinary measures, cases in which no pessary can be retained and in which the ordinary plastic operations fail to give more than temporary relief. It was such a case that led me to perform the operation which I am about to describe, namely, extirpation, not only of the uterus, but of the whole vaginal canal, as a radical cure. It is now over two years since I operated on the patient, and the result is so satisfactory that I have ventured to bring the proceeding to the notice of the profession.

It must not be thought that I am advocating this operation as a routine treatment for prolapse of the uterus. In the great majority of cases all that is required is a well fitting pessary, and for marked procidentia I know of no instrument so satisfactory as Simpson's shelf pessary.

In cases where no pessary can be retained, or where the patient objects to its use, a plastic operation should be performed to support the uterus. In such cases I am in the habit of doing ventrifixation of the uterus, combined with colpo-perineorrhaphy. The results as a rule are very satisfactory. Occasionally, however, it will be found that the uterus breaks away from the abdominal wall or remains attached to it merely by a long thin band of adhesion, the vagina gradually dilates, the perineal scar stretches, and slowly the condition of total prolapse becomes re-established. In such cases vaginal hysterectomy is sometimes performed. But whilst it is obvious that if the uterus be removed, it cannot any longer be prolapsed, the operation does not cure the rectocele and cystocele. In one case in which I performed vaginal hysterectomy for prolapse, the vagina afterwards protruded as a sausage-shaped swelling completely turned inside out.

Permit me now to describe very briefly the history of my own case and the steps of the operation I performed.

Mrs. K., a widow, age 53, past the menopause, was sent to me by Dr. Leech, of Birmingham, suffering from stone in the bladder and complete prolapse of the uterus. She had evidently had the stone for a long time, and the straining which it gave rise to no doubt aggravated the prolapse. I took her into the Women's Hospital at Birmingham and, on July 22nd, 1895, removed a large calculus by the operation of vaginal cystotomy. The incision healed by the first intention. On August 16th, in the same year, I performed the operation of ventrifixation together with perineorrhaphy. The wounds healed well, and the result was satisfactory for about two months. In November, 1895, she began again to have some cystocele, and I inserted a small pessary. Gradually the prolapse of the anterior and posterior vaginal walls recurred, and in spite of pessaries of all shapes and sizes became total. In October, 1896, the vaginal prolapse was so marked that I again took her into the hospital and performed extensive anterior and posterior colporrhaphy, together with perineorrhaphy. As before, the immediate result was satisfactory, but it was only for a time. In January, 1897, the cystocele recurred, and I had again to resort to pessaries. From this time onwards, she attended as an out-patient with steadily increasing prolapse until in 1899 the uterus was once more quite outside the vulva, the vagina turned completely inside out and ulcerated from friction against the clothes. I then decided to perform total extirpation not only of the uterus, but of the whole vagina. I explained to the patient exactly what I proposed to do and she readily consented to have anything done that would afford her relief and enable her to carry on her work, that of a charwoman. The operation was performed on May 11th, 1899, in the following way:—

1. The patient was anæsthetised, and placed in the lithotomy position, and the vulva, cervix, and vagina (which was completely turned inside out) rendered aseptic.

2. The cervix was seized with vulsella and drawn forward and an incision made through the vaginal mucous membrane from the posterior lip of the cervix to the edge of the perineum. From the latter point two curved incisions were carried forward, one on either side at the junction of the vaginal mucous membrane and the skin of the labia, meeting in front about three quarters of an inch behind the meatus urinarius, that is, near the posterior edge of the vestibule. It will be seen that these incisions encircled the ostium vaginæ.

3. The mucous membrane of the posterior vaginal wall was dissected off with scissors and turned forward, but at this stage the mucous membrane of the anterior vaginal wall was not interfered with.

4. The peritoneum of the pouch of Douglas was next opened by a transverse incision, and the uterine fundus exposed and drawn down. The broad ligaments were ligatured and divided from above downwards outside the ovaries and tubes, and the band of adhesion uniting the fundus to the ventral scar snipped through with scissors.

5. The peritoneum between the bladder and uterus was divided transversely and the bladder stripped off the cervix and upper part of the vaginal wall with the finger.

6. The mucous membrane of the anterior vaginal wall was next dissected off the bladder with scissors, and the uterus, ovaries, and tubes, together with the whole of the vaginal mucous membrane, removed in one piece.

7. All bleeding points having been seized and ligatured with fine silk, the peritoneum of the pouch of Douglas was sutured to that on the bladder with a fine silk suture.

8. The fascia at one side of the vagina was next sutured to that on the other side by a fine continuous suture beginning above at the level of the broad ligaments and working gradually downwards to just above the vulva. In this way the bladder was pushed forward and the rectum backwards by a firm column of connective tissue derived from the lateral fasciæ.

9. The vulvar wound was then closed by interrupted silkworm-gut sutures approximating the posterior halves of the labia majora.

10. The wound was dusted with iodoform and a pad of iodoform applied. For some days the patient's urine was drawn off through a catheter. She was kept in bed for three weeks.

After leaving the hospital she continued to improve, and when I saw her again on June 30th she was quite well. Since that date she has been to the out-patient department to report herself from time to time. I examined her in the early part of July this year, and found her condition most satisfactory. She was perfectly comfortable, had complete control of the bladder, and no trace of any protrusion of any kind. The vulva scar was quite painless, and in her own words, "Life was now a pleasure instead of a continual misery."

I therefore feel justified in recommending this operation for intractable cases of prolapse of the uterus and vagina when other measures fail, and the patient's discomfort is great. It is of course to be kept in reserve as a *dernière ressort* and not performed as a routine line of treatment. For obvious reasons it should not be performed in married or marriageable women

## THE TREATMENT OF CHRONIC UTERINE INVERSION BY ABDOMINAL HYSTEROTOMY, WITH A SUCCESSFUL CASE.

By F. W. N. HAULTAIN, M.D., F.R.C.P.Edin.,
Lecturer on Midwifery and Diseases of Women, Edinburgh School of Medicine.

PROBABLY from a more enlightened management of the third stage—particularly perhaps from the absolute discontinuance of funic traction in placental delivery by all who can claim any knowledge of obstetric practice—inversion of the uterus has fortunately become one of those pathological rarities which one reads and hears much about but is particularly fortunate to see. Statistics show it to occur after labour in about 180,000 to 200,000 cases, whilst a very small percentage are caused by intrauterine growths independent of pregnancy. As is well known, the reduction of the displacement may be extremely difficult, and has in many recorded cases been found impracticable. I therefore take the opportunity of bringing before you the record of an example of one of those intractable cases which I was able to reduce by a method of operation which, so far as I know, has not hitherto been described, and by which the most obstinate case can, I believe, be readily cured.

Mrs. W., aged 24, was sent to me by Dr. Leishman, Brechin, suffering from marked inversion of the uterus which she had acquired at the birth of her second child nine months previously, as the result of traction on the cord to remove the placenta which was performed by a midwife. After delivery there was severe hæmorrhage. Dr. Leishman, on being called in, found the patient collapsed and almost moribund. An attempt at reduction was immediately made, but proved futile. Fortunately the bleeding was stopped by the usual hæmostatic methods, and the patient's strength improved, so that in a few days another more energetic attempt at reduction could be made. As this proved quite inefficacious, she was removed in due course to Brechin Hospital, where all the usual methods of reduction were tried but were unavailing. As she was becoming profoundly anæmic and very weak, she was at some risk sent to me at the Deaconess Hospital, Edinburgh. On admission I found her in an extremely collapsed condition and very exsanguine—red blood corpuscles 2,300,000 and hæmoglobin 28 per cent. Locally all the characteristic features of chronic inversion were present, the inverted fundus bleeding copiously after the most gentle examination. The gaping cervix could be felt and the finger easily passed between it and the projecting body; the continuity between them was felt throughout the entire circumference. I made at this time a slight attempt to reduce the displacement, but the bleeding was so copious I felt compelled to desist and plug the vagina as quickly as possible. On account of her enfeebled condition I did not feel justified in making further attempts at reduction from below and decided to attempt replacement from above, as I thought it would be done with a minimum blood loss. On opening the abdomen with the patient in the Trendelenburg posture, the pelvic peritoneum could be seen spreading directly backwards from the anterior abdominal wall to the sacrum, forming a large smooth pouch bulged posteriorly by the rectum, at the bottom of which was a transverse slit about ½ of an inch in length, bounded at the extremities by the ovaries and the pavilions of the

Fallopian tubes (Fig. 2). With considerable difficulty the finger could be pushed into the slit and passed downwards about 1½ inch.

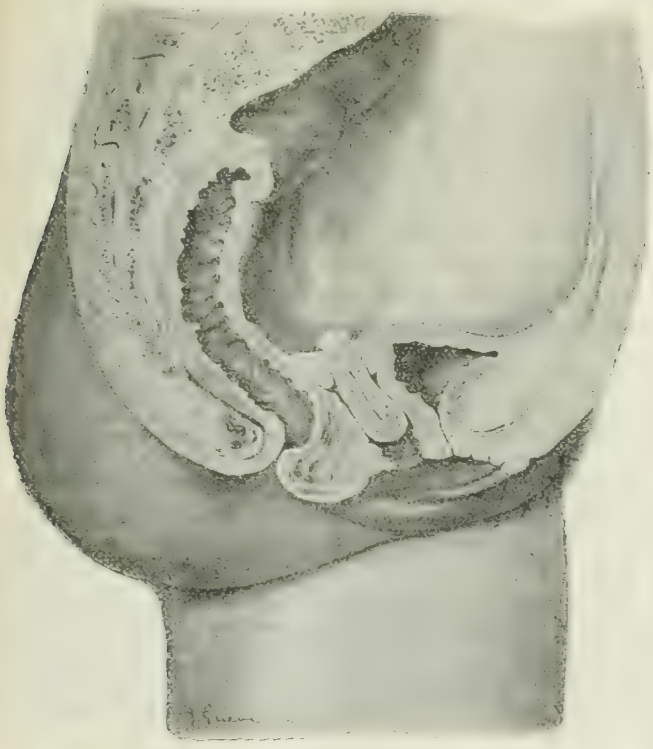


Fig. 1.

An attempt was now made by traction on the tubes and round ligaments to pull the fundus up. This, however, made not the least impression, even though assisted by pressure on the fundus from the vagina. An attempt at dilatation of the slit by means of forceps was equally futile as the edges were quite indistensible; I, therefore, decided to cut through the constricting rim posteriorly with the expectation that a slight incision would suffice to overcome the resistance. In this I was completely mistaken as after the first incision but a small portion of the uterus could be reinverted when pushed up from below. I, therefore, while steady pressure was made from below, continued my incision through the posterior uterine wall as it appeared through the slit till reduction was complete (Fig. 3). The uterus when replaced now presented an incision in the posterior wall 1½ inch in length which extended from within an inch and a-half from the fundus to about ½ inch above the vaginal roof. This

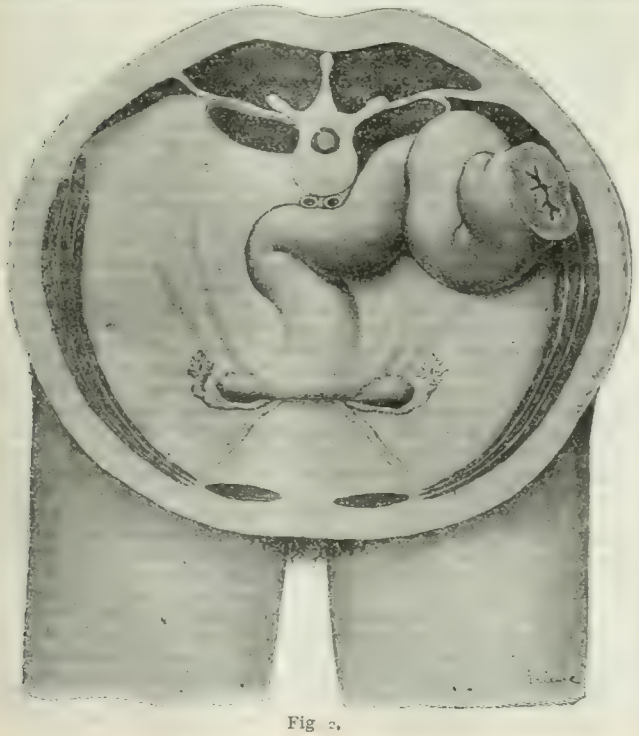


Fig 2.

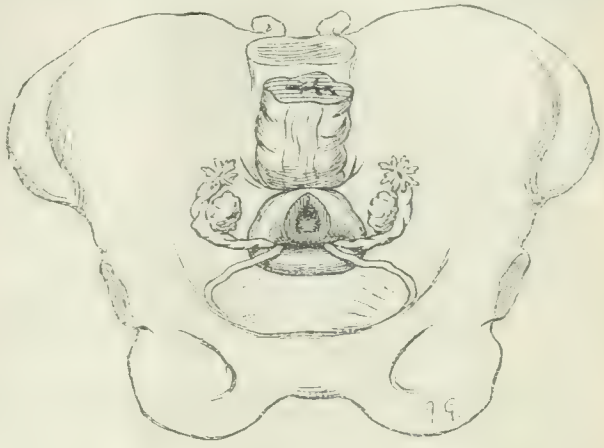


Fig. 3.

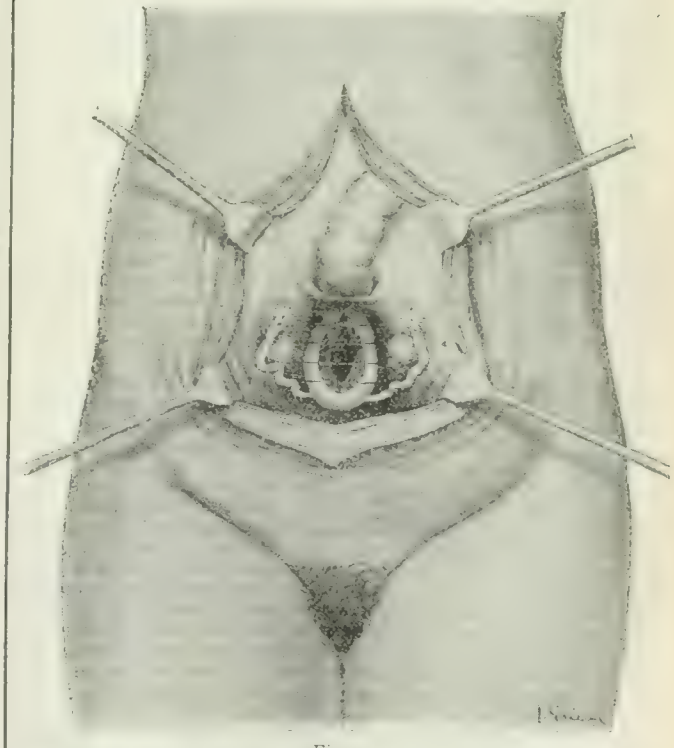


Fig. 4.

was stitched by thick catgut sutures which included the entire thickness of the wall, and superficial Lembert sutures of fine catgut (Fig 4.) The only difficulty which presented itself was bleeding from the stitch holes, which was distinctly smart and could only be controlled by puckering the peritoneum with mattress sutures. The bleeding having been stopped the abdomen was closed in the usual way without drainage. On vaginal examination the cervix could be felt gaping and through it the body of the uterus with its walls closely opposed. The patient made a rapid and uninterrupted recovery, the cervix being found absolutely closed on examination ten days after the operation.

From the exceptional opportunities afforded in this case of observing the displacement of the uterus both from above and below it was evident that the difficulty of reduction was

entirely due to the complete retraction of the uterus, which resulted in a want of elasticity in its walls. From a number of cases recorded it would appear that incarceration may be also due to constriction by the cervix, which, on forcible dilatation or incision, allows of ready reduction, and which may occasionally be so tight as to seriously interfere with the circulation through the uterus and cause sloughing and gangrene. Reduction in this latter class of case must, therefore, be a much more simple process than in the former. When due to retraction one is apt to forget that the uterus is not, as it is so often defined, a hollow organ in the true sense: its cavity is merely potential and depends entirely on the elasticity of its walls. The nearer they approach to rigidity the more must the difficulty of reduction increase, till eventually reinversion must be impossible.

When irreducible by manual means, in most cases replacement may be secured by steady continued pressure upwards of the fundus which gradually overcomes the muscular retraction and stretches the muscle fibres, as recommended by Aveling, but in a few instances this would appear to fail and incision of the uterine wall alone can prove efficacious.

This has been successfully done by Kustner, Piccolli, and Dührssen who, after opening the vaginal roof, incised the uterine wall from fundus to cervix and then reinverted, after which the uterus was pulled into the vagina and the incision stitched.

Abdominal section and replacement from above by stretching the constricting ring and pulling on the round and broad ligaments was successfully performed by Thomas, who, however, failed on another occasion and had to resort to removal of the uterus, a fate which also befell Kelly in a similar attempt. It is probable in Thomas's successful case, the incarceration was due simply to a tight os internum, and while the second case was similar to the conditions in my case where complete retraction of the uterus prevented its reduction.

In my case I first attempted a similar procedure without success and therefore proceeded to posterior incision of the uterine wall as detailed. It was indeed surprising to note with what ease reposition was thus accomplished.

The abdominal route presents, to my mind, three distinct advantages to the vaginal as recommend by Kustner and Piccolli: (1) The uterine incision is reduced to a minimum, the extent being regulated by the organ becoming reduced the moment it is the necessary size, (2) the assistance acquired by being able to pull on the broad and round ligaments as well as by pushing up the fundus, (3) the more efficient control of hæmorrhage which can be acquired by stitching the incision in the uterus with the organ in its normal position, and not in an exaggerated state of anteflexion or retroflexion, when necessarily its circulation must be seriously interfered with.

This last advantage is perhaps the main one and was strongly impressed on me by the case described where the difficulty of controlling the bleeding was considerable. In fact, in some cases cited where operation by the vagina has been performed, it has been found necessary from the serious nature of the bleeding to remove the uterus subsequently.

Reduction by uterine incision or hysterotomy is indicated in most cases only after a fair trial has been given to elastic continued pressure, but when the patient is much reduced by hæmorrhage and other causes, it is open to question whether immediate operative treatment is not preferable, especially when we consider the simplicity of the operation and the small risk which is now run by the modern methods of abdominal surgery.

Forcible replacement, as by White's method, appears to me unjustifiable under any circumstances, while hysterectomy and amputation, except when the organ is gangrenous or otherwise extensively diseased, should be altogether discarded. It is naturally premature to draw conclusions from such a limited experience as afforded by one case, but from the extreme rarity of the condition and the happy result obtained I would myself have little hesitation in resorting to a similar procedure should a like condition present itself.

Professor C. J. WRIGHT (Leeds) much regretted that time did not permit a fuller discussion upon the three last papers, which referred to subjects of the greatest interest. He mentioned a case of intractable prolapse which a ventrifixation and a subsequent colpo-perineorrhaphy had apparently cured: but in which prolapse of the pelvic floor recurred: vaginal removal of the uterus was commenced, but, on finding the abdominal adhesion perfect, a long cervix was removed and the fundus uteri left—the case promised to do well. Mr. Wright hoped to give a trial to Dr. Inglis Parsons's injection method. He congratulated Dr. Haultain upon the success of his operation for inversion, and upon the ingenuity of his descriptive models. He mentioned a case of chronic inversion in which Aveling's repositor was used with success.

## NOTES ON ENTERIC FEVER AT THE IMPERIAL YEOMANRY HOSPITAL, PRETORIA.

By H. D. ROLLESTON, M.D., F.R.C.P.,
Physician and Lecturer on Pathology, St. George's Hospital: late Consulting Physician Imperial Yeomanry Hospital, Pretoria.

A LARGE number of cases (681) of enteric fever have been treated in this hospital, but of these more than half were transferred for change in a condition of convalescence from other hospitals; while a number of patients removed their notes from the hospital when they went. The notes of all the cases in the hospital are therefore not available for examination and analysis.

The following remarks on enteric fever in South Africa are based on observation of the disease in Pretoria during the months of May to September, 1901, and on analysis of 244 cases, the notes of which are available.

The enteric fever met with in South Africa often differs in some respects from the disease as seen in England; but the resemblance in the clinical aspect, morbid anatomy, and bacteriological characters is so close as to leave no shadow of doubt as to their essential identity. There are, indeed, different types of enteric fever in South Africa which resemble or differ from the usual type seen in England.

### ACQUIRED IMMUNITY.

A previous attack of enteric fever in England, India, Egypt, or even in South Africa itself does not necessarily protect the individual against enteric in South Africa. There have been numerous cases in this hospital in which the same patient has had two attacks during the present campaign.

*Example.*—A lieutenant, aged 20 years, inoculated March, 1900, had enteric in May, 1900, and was invalided home. He returned to South Africa, and in May, 1901, had a second and mild attack of enteric fever.

The second attack may be more severe than the first and prove fatal.

The failure of a previous attack of enteric fever to protect the patient may be said to be dependent on the very slight degree of immunity possessed by that patient, but this does not carry us very far. Durham's new theory of relapses in enteric fever[1] offers a more feasible explanation. According to this view, a typical attack of enteric fever is due to an infection with several strains of the B. typhosus; the different strains, say seven in number, are equally represented, and produce antibodies sufficient to protect against further infection by any or all of these strains. But should one or more of the different strains of the B. typhosus be feebly represented there will be a deficiency of the corresponding protecting or antibodies; and in the event of this same strain or strains subsequently gaining a hold on the organism there will be nothing to oppose their growth. In other words, there are varieties in typhoidal infection, just as there are in streptococcus infection, only in a less marked degree, which do not mutually protect against each other. It follows that atypical cases of enteric fever should be more often followed by relapses than the typical straightforward cases. Now, as will be seen later, the general run of enteric cases in South Africa presents features of difference from cases in England, while relapses are more frequent in South Africa.

### ANTITYPHOIDAL VACCINATION.

Though this method of treatment is still on its trial and must be judged by statistics showing the incidence of enteric fever in large bodies of men, inoculated and not inoculated, it may be of interest to refer to the question here. Personally I was, like most medical men, prejudiced in its favour, and

was both disappointed and surprised at the experience of my predecessor here, Dr. Washbourn,[2] that the incidence of enteric fever does not seem to be diminished by inoculation, and that it does not modify the disease.

Among the *personnel* of the hospital (17 medical officers, 50 nursing sisters, and 83 orderlies, etc.—total, 150) there were 22 cases of enteric fever, or an incidence of 14.6 per cent. Of the 150, 35 were inoculated, and of these 6, or 17 per cent., suffered from enteric; while of 115 non-inoculated members of the *personnel* 16, or 13.9 per cent., suffered from enteric fever; the percentage is therefore higher among the inoculated. There were 2 deaths, both in non-inoculated patients. In 100 cases of enteric fever among non-commissioned officers and men, taken mainly from convalescent patients, only 8 had been previously inoculated; there were 3 fatal cases, all among non-inoculated patients.

Among 42 officers who had enteric, no fewer than 19 had been previously inoculated, 6 of these 19 cases were severe in character, but none were fatal; of the 23 non-inoculated cases 7 were severe, and of these 7, 3 ended fatally. The interval between inoculation and the subsequent incidence of enteric fever varied between one and twenty-one months, but in only 4 instances was the interval less than six months. The average interval between inoculation and the onset of enteric fever in these 19 cases was thirty-eight weeks.

As far as these scanty figures go they point to the conclusions (1) that antityphoid inoculation does not absolutely protect against a future attack of enteric fever; (2) that when enteric occurs in an inoculated person there is, as a rule, an interval of at least six months; (3) that inoculation protects against a fatal termination to the disease.

The explanation of the occurrence of enteric fever after inoculation is much the same as that of the occurrence of a relapse or of a second attack of that disease, and may be briefly summarised by supposing that the individual has been rendered immune against some, but not against all the strains of the typhoid bacillus.

### Relapses.

Among 244 cases there were 52 relapses, a percentage of 21. This is a high percentage, and its significance has already been pointed out. In his recent analysis of 829 cases of enteric fever, Osler[3] found the percentage of relapses to be a little more than 10.

### Remarks on Peculiar Features, Symptoms, Complications, and Sequelæ.

In some, though in a considerable minority, of the cases where the onset could be observed there was quite a sudden onset. In a certain number of cases already in the hospital for dysentery, enteric fever developed. In many of these it appeared that dysentery and enteric fever had been contracted at the same time, and that the comparatively long incubation period of enteric fever (eight to twenty-three days) accounts for the fact that the enteric fever appeared a considerable time after the dysentery. In connection with this subject it is interesting to note that observations made on enteric fever during the Spanish-American war of 1898[4] make it probable that when a mixed infection of saprophytic germs and typhoid bacilli attacks the alimentary canal, the diarrhœa which rapidly results may so thoroughly remove the typhoid bacilli that that disease does not develop, and that for the time being at least a certain degree of immunity to typhoid fever may result.

#### *Diarrhœa.*

Diarrhœa was decidedly exceptional, and, as in some epidemics in England, constipation was the rule during the fever. Transient attacks of diarrhœa during convalescence were comparable to the diarrhœa that so commonly attacks newcomers in South Africa.

The temperature of the enteric fever patients was often extremely irregular, extensive and rapid oscillations occurring within twenty-four hours without any manifest cause. Concomitant malaria was, of course, a manifest explanation, but was only proved to be so in a few instances.

#### *Pulse.*

A noticeable feature in many cases was the rapid-pulse-rate during convalescence, becoming more manifest when the patient was first allowed to get up. Very possibly this rapidity of pulse, which often reached 120 without any evidence of dilatation or of organic valvular disease of the heart, was connected with the continued hard work involved in "trekking" previous to the onset of enteric, and is a manifestation of the disordered action of the heart of soldiers. In fact, one could generally guess correctly whether a convalescent enteric patient had or had not been on the "trek" shortly before his illness by the pulse-rate. In patients who had not been marching or undergoing severe exercise for some time before admission for enteric, the pulse was slow in convalescence; it, therefore, seems improbable that the altitude of the hospital (4,000 feet above sea level) had anything to do with increased pulse-rate.[5] In many instances this rapid heart's action was associated with flatulent dyspepsia, and seemed to be aggravated by it, inasmuch as treatment of the dyspepsia was often followed by slowing of the pulse-rate.

The quickened pulse-rate was not accompanied by unpleasant subjective symptoms, and the patients were often unconscious of it.

As regards treatment, a return to bed was usually, but by no means always, followed by a fall in the pulse-rate. Tincture of belladonna, ɱv three times daily, seemed to have a beneficial influence, while the treatment of any concomitant dyspepsia had, as already mentioned, a good effect.

#### *Hæmorrhage.*

Considerable hæmorrhage from the bowels occurred in 21 cases out of 244 cases, or in a percentage of 8.7, which is above the general average. Thus in Osler's 829 cases the percentage was 6.

Of these 21 cases, no fewer than 16, or 76 per cent., were fatal—a very striking mortality. In Osler's cases of hæmorrhage only 10 per cent. were fatal. In some few cases, most, but not all, of which were fatal, there was a purpuric condition of the rose spots.

In patients who had been on "trek," and had not been able to obtain vegetable food for some time, there was often a scorbutic tendency, which showed itself by a spongy or foul condition of the gums, and occasionally by purpuric spots. Such cases were naturally much benefited by lime-juice or lemon-juice.

#### *Perforation.*

Perforation of the intestines was curiously rare, and only occurred in one case. Several cases of undoubted perforation of the intestine in enteric, however, occurred during the same period in the Volks or Civil Hospital, Pretoria, under Dr. Thornton, who is reporting them in the *Lancet*.

#### *Phlebitis.*

Phlebitis was the commonest sequela met with after enteric. I regret that reliable statistics as to its frequency are not available. It not infrequently occurred in both legs, one after the other, and sometimes gave rise to very great pain, which might be due to a direct extension of the inflammation of the coats of the vein to the adjacent nerves. The commonest situations were the deep veins of the leg and the femoral vein. In some instances relapses of the phlebitis took place. A not uncommon event was to get œdema and increased firmness of the legs without pain or tenderness, or evidence of cardiac dilatation during convalescence. This may possibly be the result of thrombosis in the deep veins of the leg, but it certainly differed from the more evident and painful phlebitis usually seen during the fever or very early in convalescence.

It is noteworthy that pulmonary embolism was not seen in many cases; this freedom from an event which might naturally have been expected at any rate in a few of the numerous cases of phlebitis raises the question as to the existence of actual thrombosis, and if so, what its degree? Was there merely a parietal thrombosis not completely excluding the lumen? In favour of this is the frequent absence of œdema of any intensity until the patient got up and the fact that it was usually difficult to feel a distinct cord. As an explanation of the frequency of phlebitis Dr. Washbourn suggested that something in the food—the absence of fresh vegetables or the presence of some ingredients in tinned foods—was the disposing agent. A natural hypothesis is that it depends upon the veins of the legs being a place of least resistance as a result of fatigue consequent upon

trekking. There have been two fatal cases of gangrene of the leg during enteric fever, one due to embolism, the other presumably from arteritis.

*Neuritis.*

Signs of neuritis, though looked for, were seldom seen. The so-called "putty paralysis" that has been described in patients suffering from enteric fever in South Africa, and referred to the pressure of the putties on the peroneal nerve, though expected and looked for, has not been observed. In a few instances tender toes have been met with, but the tenderness may in some of these cases have been due to peeling of the thickened epidermis from the feet. In a man, aged 31, signs of disseminated sclerosis developed after an attack of enteric fever, but diminished, and were passing away before the patient left the hospital.

*Epilepsy.*

A man, aged 22 years, who never had epilepsy previously, had a relapse ushered in by an epileptic fit. During convalescence he had two more epileptic fits, which were accompanied by an epigastric aura. There was no case of hemiplegia following or arising in the course of enteric fever.

*Mental Change.*

Insanity after enteric fever was extremely rare. After severe attacks a certain degree of mental weakness was not uncommon, in the more marked instances the patient was silly, and made mistakes which showed he was not in touch with his environment. In other instances there was depression, or merely loss of will power, the patient changing his plans from day to day.

*Respiratory Complications.*

*Bronchitis*, which is usually such a common accompaniment of enteric fever, was decidedly rare; probably this was due to the usually excellent climatic conditions.

*Pneumonia* occurred during the fever in 4 cases, and was fatal in 2 of the 4.

*Pleurisy*, as a rule of slight degree, was not uncommon. It occurred more often on the right side; in 1 case it was double; in a case of perforation of the vermiform appendix about the twentieth day of enteric, with the subsequent formation of a large abscess on the right side of the abdomen, there was a large empyema on the right side.

*Arthritic Sequelae.*

These fall under two heads:

1. Definite inflammatory changes in the joints—arthritis.
2. Pain without any objective changes in the joints—arthralgia.

Arthritis was much rarer than arthralgia. Occasionally during advanced convalescence synovitis, which might have been other than typhoidal, was met with. In 1 case there was acute athritis of the left hip-joint.

A man aged 20 became ill with dysentery on May 1st, and said that he then passed blood. He had not previously had enteric fever, and had not been inoculated. When admitted to this hospital on May 16th, the symptoms of dysentery had disappeared, and he was manifestly suffering from enteric fever. The temperature touched normal on June 20th, but was unstable for weeks afterwards. On June 25th he had a rigor and a temperature of 105°, and on June 29th there were signs of acute synovitis of the left hip joint, which became immobile. On July 22nd the thigh was put on an extension to prevent fixation in the flexed position. On September 4th he went as a lying-down case in hospital train and hospital ship to England. The thigh was still on a long Liston splint.

*Arthralgia.*

During convalescence pains in the joints, without any objective signs such as swelling, creaking, or limitation of movement, were sometimes met with. This arthralgia was very probably merely the same condition as the chronic rheumatism so commonly seen in South Africa.

*Myositis.*

Myositis after enteric fever is very rarely described. Osler[6] mentions a case of extreme tenderness of the calf muscles without any special swelling as probably one of myositis. Possibly some cases of tender, painful, and swollen legs, without any palpable veins, are due to myositis, and not to thrombo-phlebitis of the deeper veins. The following appeared to be an example of

*Localised Myositis.*—A trooper, I.Y., was admitted into the hospital with tuberculous glands in the groin, and was successfully operated upon. Forty-three days after his admission to the hospital his temperature rose, and he passed through an ordinary attack of enteric fever. During convalescence he developed localised myositis of the exterior brevis digitorum muscle on the right foot; the muscle was swollen, tender, and stood out in relief. It yielded to rest and treatment with glycerine and belladonna.

*Periostitis.*

There was one marked example of periosteal nodes on the right ulna of a man who had a relapse and parotitis. There were two cases of perichondritis of the costal cartilages and one of the thyroid cartilage.

*Parotitis.*

There were three cases of non-suppurative parotitis, in one of these there was orchitis also on the same side.

*Orchitis and Epididymitis.*

There were three cases of enteric fever in which the testes were inflamed. On one the orchitis (left side) occurred in a convalescent patient shortly after parotitis, also on the left side. In the second case both testes were inflamed during the period of fever, but only for a short time—about a week. In the other case—an officer, aged 28 years, of a decidedly gouty history—acute epididymitis and orchitis on the left side occurred during the fever. The urine was highly acid, and contained pus and staphylococci, probably from pyelitis, but no typhoid bacilli. Subsequently a small abscess in the left epididymis discharged externally. There had been no exposure to any venereal infection for three years.

Osler,[7] in his recent analysis of 829 cases of typhoid fever in the Johns Hopkins Hospital from 1889-99, records two cases of combined epididymitis and orchitis, which, like the majority of the examples of this rare typhoidal phenomenon, occurred in convalescence. Of Eshner's[8] 42 cases, 29 occurred in the convalescent period.

*Hepatic Complications and Sequelae.*

In the 244 cases of enteric fever, there was one case of jaundice; it was a mild form, probably of catarrhal origin. No cases of cholecystitis during the course of enteric fever were observed.

Solitary abscess of the liver as a sequela of enteric fever is so rare that it may be worth while to give brief details of such a sequela:

A man, aged 30, inoculated in July, 1899, who had never had dysentery, had typhoid fever for the second time in this country within twelve months, on May, 1901. On July 3rd, when about to leave the hospital, he was attacked with acute lobar pneumonia of the right base with well-marked physical signs. On July 10th there was an imperfect crisis. After this his temperature gradually assumed a hectic type, and dulness remained in the right axilla; there was no displacement of the heart's apex, no downward enlargement of the liver, and no albumose in the urine. He was thought to have developed an empyema, and on July 29th, in the right axilla, resulted in the withdrawal of a pint of sanious pus. The trocar seemed to go through a tough membrane.

On the following day Mr. D. Drew excised part of the sixth rib in the axilla, and found that the abscess cavity was not in the pleural cavity, but under the diaphragm and in the right lobe of the liver near the anterior surface.

The abscess was drained and the patient recovered.

*Multiple Abscesses.*

A man, aged 23, had a severe attack of enteric fever, during which there was incontinence of urine. Probably, as a result of this, the skin became infected, and ten subcutaneous abscesses developed; they were mostly about the buttocks, but there were three on the back and one on the right axilla. After being opened they rapidly healed. This patient had some mental weakness when he left the hospital on his way to England.

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International Congress on Hydrology.—The meeting of the International Congress of Hydrology and Climatology will be held at Grenoble in 1902. Dr. Albert Robin, of Paris, is President of the Central Committee, and Dr. Fernand Berlioz, Professor in the Medical School of Grenoble, is the general secretary.

## A CASE OF BERI-BERI (?) POSSIBLY DUE TO ARSENIC POISONING.

BY

Surg.-Major RONALD ROSS, F.R.C.S., F.R.S., University College, Liverpool, and ERNEST S. REYNOLDS, M.D.Lond., F.R.C.P., Assistant Physician to the Manchester Royal Infirmary.

It may, perhaps, be remembered that one of us (E.S.R.) in the British Medical Journal, 1900, vol. ii, page 1770, referred to the similarity of beri-beri to alcoholic neuritis, and, as much of the so-called alcoholic neuritis was really due to arsenical poisoning, it seemed possible that some of the beri-beri cases might also be caused by arsenic. The cases of arsenical poisoning which occurred at Chester were seen by one of us (R.R.), who was so struck with the likeness of them to cases of beri-beri seen by him in the East, that in the *Lancet*, 1900, vol. ii, page 1677, he also suggested that some beri-beri cases might have an arsenical origin.

Since then we have been on the look-out for a case of beri-beri, and in August, 1901, at Sierra Leone a lady was put in charge of one of us (R.R.) to be taken to England. She was suffering from a peripheral neuritis so similar to beri-beri and to arsenical neuritis that the diagnosis was reserved. On arrival in England she was placed in the Royal Southern Hospital, Liverpool, under the care of Dr. Macalister, and was seen by him and by Dr. Hill Abram, both of whom considered the case to be probably beri-beri, but they could not from the symptoms positively exclude arsenical poisoning.

For permission to see the case and to publish it, and also specially for the following notes we are very greatly indebted to Dr. Macalister.

The patient is a lady, M. H., aged 27, the wife of a missionary. She was born in Scotland and is of light complexion. She went to the West Coast of Africa in November, 1900, and when taken ill was thirty miles north of Bonthe, near Sherboro; she lived largely on canned foods, and especially fruits of American (Californian) origin. She was a total abstainer from alcohol. She had a feverish attack in May, 1901, but this was not a classical malarial attack; it lasted only a short time and was described as "low fever." Shortly after this there was pricking at the ends of the fingers and the legs became so weak that she felt unsafe when walking, especially down steps. At this time the patient was pregnant, and the difficulty of walking was attributed to this at first; but almost at the same time the forearms and hands became weak and wasted. The only alteration of sensation the patient remembers at this time was a feeling of great tiredness, but no actual pain. Her memory is deficient as to details of subsequent events so far as loss of power in the limbs is concerned, except that gradually there was total loss of power in the legs (below the knees), and in the arms and hands. Within about a week of the loss of power being complete she had well-marked œdema of the feet and legs and the hands, but not the arms. On July 7th, 1901, the patient was delivered of a dead child at full term; the paralytic symptoms then became worse and were most marked three weeks later. All this time the patient was still taking canned fruits. About August 18th she was taken to Freetown, and three days later started for England and at once began to improve. Patient states that during her illness the skin became darker in colour (but the pregnancy must be borne in mind), and that afterwards the skin (especially on the abdomen) desquamated. During the voyage there developed a marked erythema on various parts of the body, especially on the arms; this somewhat resembled prickly heat, but if so it was of a very exaggerated form, as small vesicles formed, some of which afterwards became pustular.

On admission to the Royal Southern Hospital, Liverpool, the patient was exhausted and hardly able to sit up from weakness of the trunk muscles. There was great wasting, especially of the limbs; the legs were curled up in bed and she was unable to move them; there was marked dropping of the feet and toes, the ankles and dorsa of the feet were œdematous; anæsthesia over the whole inside of the foot, extending up the inside of the leg, was present, but on the outer side of the feet and legs sensation was only delayed. There was great pain on pressure of the affected muscles. The knee-jerks were absent. The skin of the soles was red and profusely sweating, the nails were thickened with transverse striations on them and so tender that she could not bear to have them cut.

There was marked dropped wrist on both sides with œdema of the back of the hands and fingers; there was much loss of power of the upper arm muscles with wasting, and total loss of power with much atrophy (and pain on pressure) of all muscles below the elbow. There was persistent erythematous staining of the thenar and hypothenar eminences and of the pads of the fingers, but the centre of the hand was pale; sweating of the hands was present. There was slight pigmentation (especially round the hair follicles) on the abdomen with slight desquamation. The heart beats were of the fœtal "tic-tac" character. The urine was normal. So far as could be ascertained there had not been any digestive or respiratory disturbances and no coryza.

Since admission to the Royal Southern Hospital the patient has been taking five minims of liquor strychninæ three times daily, and gradually improvement has set in, although most of the symptoms noted above were present when we saw her on September 12th, but the paralysis was somewhat less marked. She can now feed herself with the right hand with some difficulty, and can sit up; the sweating is less but still marked both in the hands and feet, and the œdema has almost disappeared.

We obtained a lock of her hair and gave it to Professor Dixon Mann who very kindly examined it for us, and he reports that in it he found

not a mere trace but a considerable quantity of arsenic. From 0·3 gram of the hair I got as much $As_2O_3$ as I did from the same weight in the general run of cases at the time of the outbreak [of epidemic arsenical poisoning]. You may accept it that the arenic I found proved that a considerable quantity had been taken into the system of the patient, either by administration as medicine or in some other way.

Clinically the case exactly resembled the cases of arsenical neuritis in the recent epidemic, and was also similar to the paralytic form of beri-beri. Malarial neuritis, pure alcoholic neuritis, and the neuritis of pregnancy could be practically excluded; in fact, considering the large quantity of arsenic in the hair it seems unnecessary to suppose that it was anything but a case of arenical neuritis. Possibly it had no connection with beri-beri, but it exactly resembled the cases thus named which arrive in this country supposed to be cases of beri-beri. The symptoms are not very uncommon amongst those who live on canned foods, but are not common among the natives of West Africa.

The patient herself says that so far as she knows no arsenic was administered to her as a medicine in West Africa, but she had quinine and strychnine. We would suggest that it is possible for the arsenic to be present in the canned foods either in glucose, in preservatives, or in the tin lining of the cans.

As bearing out the possibility of some cases of beri-beri being due to arsenical poisoning, it must be remembered that in the tropics, and especially in the East, very large quantities of tinned foods are consumed not only by Europeans, but also by natives. In some districts—as in Acheen—the Hon. W. C. Brown, M.D., has informed us that arsenic is spread on the rice fields to kill rats. One of us (R. R.) has heard that grain dealers in the East put arsenic into rice to preserve it from weevils. These instances would account for the theory that beri-beri is due to some form of food poisoning, as was supposed to be the case in the Japanese navy. In the *Indian Medical Gazette* for September, 1901, Major Anderson reports two outbreaks of beri-beri on board ship in which mouldy rice, heat, moisture, insanitary conditions, scurvy, and alcoholism could be excluded; but the epidemics were quite certainly traceable to supplies of food obtained from Bombay.

In tin mining districts, as was before pointed out by one of us (E. S. R.), there is more than a probability that arsenic is largely ingested by the beri-beri patients, and this is confirmed by the following statement by S. C. G. Fox, M.R.C.S., L.R.C.P., Acting State Surgeon, in his Perak Medical Report for 1900 (dated March 13th, 1901). He says:

"Attention is being paid to the fact that arsenic may be the cause of the neuritis in beri-beri. Dr. Conolly, District Surgeon, Batu Gajah, writes in his annual report: 'Up to the present, however, a chemical analysis of *a not profound character it is true*,[1] has failed to find arsenic in the urine of beri-beri patients.' In support of the arsenic theory I would point out that 95 per

cent. of beri-beri cases treated are Chinese, and quite 00 per cent. are miners by occupation. When we know that arsenic in combination with other metals is common in the soil where these Chinese have to stand for hours while searching for tin, we may regard the possibility of arsenic as a cause of beri-beri as being something more than problematic."

When we remember how in the early days of the recent arsenical epidemic the presence of the skin eruptions was not noticed by competent observers, it seems doubtful in our opinion whether eruptions are so uncommon in beri-beri patients (who are most usually of dark or yellow complexions) as has been supposed. The pigmentation would, of course, be very easily overlooked, and various erythemata, vesicles, bullæ, and keratoses might easily be attributed to something else.

We are quite aware that a single case is not sufficient to establish a theory, but we have put it on record as it is so suggestive: it is a case from the tropics exactly resembling beri-beri, but in which almost certainly the cause of the neuritis was arsenic. It does not prove that beri-beri is really arsenical poisoning, but it emphasises what we have before stated, namely, that beri-beri cases should be more scrupulously investigated from the arsenical standpoint.

If hair from beri-beri patients is sent to either of us we can arrange for it to be carefully analysed.

NOTE.
[1] Italics not in original.

# MEMORANDA:
## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

### HOUSE FLIES AND DISEASE.

I HAVE asked Dr. Dawson Williams whether it is generally known that the common house fly—just now ubiquitous—"blows" the bodies of infants as bluebottles "blow" meat, and that the children may thus become infested with maggots?

He has replied, "I do not think that the fact you mention is generally known, in fact I find no distinct reference to it in any book which I can consult. I send you an extract from Cobbold's *Parasites*.[1] The first sentence is grammatically incomplete but it is correctly copied.

In like manner a legion of cases in which the maggots of various *Muscidæ* have been noticed, either in, upon, or from the human body. At a meeting of the American Academy in April, 1859, Dr. Leidy showed some larvæ of the bluebottle fly vomited by a child; five larvæ of the flower-fly (*Anthomyia*) from a physician's own person (which had produced choleraic symptoms); and nine examples of *Cuterebra noxialis*. I have myself encountered numerous insect larvæ in medical practice. Amongst others I have obtained the larvæ of *Anthyomia canicularis* in six or eight separate instances. One set of specimens, identified by Wunderlich, was sent to me by Dr. Brandt, of Oporto. Drs. Duffin, W. Fox, and Leared have supplied me with others. The larvæ described in Farre's case, not being setose, must be referred to one or other of the *Muscidæ* proper. Mr. Hope gave nearly forty cases of this kind, referable to eight different species of fly, and, as already implied, I have myself collected a great variety of the maggots of *Muscidæ* passed by the bowel, besides others obtained either from beneath the skin or from open ulcerations.

The flies hitherto noticed as supplying parasitic maggots in man are *Musca domestica*, *M. carnaria*, *M. larvarum*, *M. nigra*, and, perhaps, *M. cibaria*. *M. stabulans*, and *M. Cæsar*. This last, a handsome fly, is the species which proves so troublesome to sheep. The habit which flies have of depositing their eggs in open wounds when the victims are asleep is a fertile source of this kind of parasitism. Some of the instances recorded by Kirby and Spence are revolting in the extreme. They quote the cases which came under Mr. Sell's notice in Jamaica. In one instance the flies were hatched in a neglected blister on the chest: in another from the gums and inside of the cheek; and in a third, from the nostrils of a negro, from whom 235 larvæ were expelled. The case of the Lincolnshire pauper, Page, who was literally eaten up by maggots, is almost incredible. An equally horrible instance, however, is recorded by Cloquet. It is said that in Jamaica cases were all due to the larvæ of the bluebottle fly (*M. vomitoria*). An instance of the same kind has been recorded by Mr Knox (A.M.D.). Sufficiently revolting as these cases are, the horrors attending them are eclipsed by the habits of the larvæ of *Lucilia hominivora*. The best accounts of its habits are those by M. Coquerel, M. Saint-Pair, and M. Vercammer. The insects lay their eggs in the mouth and nostrils, and when the larvæ escape they devour the tissues surrounding the buccal cavity, the pharynx, glottis, frontal and nasal sinuses, even reaching the sockets of the eye. Several Cayenne convicts have perished from the maggots of this fly, which is also prevalent in Mexico. These are, however, the only instances of maggots gaining access to the nasal chambers.

[1] *Parasites: A Treatise on the Entozoa of Man and Animals, including Some Account of the Ectozoa.* By T. Spencer Cobbold, M.D., F.R.S., F.L.S., Honorary Vice-President of the Birmingham Natural History and Microscopical Society. London: 1879, pp. 271, 272.

It is therefore seasonable to record the following case:

On September 9th I was asked to see an infant who was "always crying"; its drum-like belly suggested improper feeding, but an altered diet failed to produce improvement. On my next visit the mother said she was sure there were "maggots coming out of the child;" and certainly there were maggots in superabundance! I found tiny creatures, about one-sixteenth of an inch long, singly and in masses all over its clothes, in the folds of the neck, about its mouth, nose, nates, etc., whilst the curd vomit seemed alive with them. They might easily have escaped observation, however, as it required close attention to see they were really moving. A lens revealed a horrible state of things: almost every crevice in the infant's body was infested with either eggs or larvæ. The mother was sure they were coming out of the infant's skin and with its urine, but this was easily disproved, whilst that the larvæ were those of the common house fly was as easily proved by placing some of the infested curd in a bottle and watching their development. The symptoms in the infant were the constant crying, vomiting, and diarrhœa. Although no larvæ are now vomited it appears to be dying.

I have long waged war against flies, believing that they play a far more important part in the spread of infectious diseases than is generally believed. We are constantly at fault in endeavouring to trace the cause of diphtheria. May not the household fly play a big part?

Saddleworth. COLIN CAMPBELL.

### CASE OF MEMBRANOUS DYSMENORRHŒA IN A MULTIPARA ASSOCIATED WITH MEMBRANOUS COLITIS.

MRS. H., aged 41, presented the following:

*Previous History.*—Menstruation appeared at 14, and reappeared every twenty-eight days. It was scanty, and only lasted twenty-four hours. Pain in the small of the back and both iliac regions was experienced for six days prior to each period. It ceased after the flow had been established about twelve hours. There was anæmia but no vomiting. She was married at 21. Her first child was born two and a-half years afterwards. Labour was normal but convalescence tedious. The dysmenorrhœa became aggravated from this time, and had always been worse for about a year after the birth of a child. It was following upon her first confinement that it was discovered she was suffering from membranous dysmenorrhœa. The condition had continued now for sixteen and a-half years, and a uterine cast more or less complete was shed at every period. It came away about twelve hours after the establishment of the menstruation, which was over, as stated, in about twenty-four hours.

The second child was born two and a-half years after the first, and the third eleven years after the second. The patient stated that some displacement was found after the birth of the first and second children, and she wore a pessary for a long period.

*Present Condition.*—The patient is a plump, healthy-looking woman, but has a dragged appearance and dark lines under the eyes, and a poor pulse when in her attacks of pain from whatever source. She is very introspective and neurotic, and leads the life of a semi-invalid. When I am summoned one of these uterine casts has been saved for my inspection. Floated upon water it does not present a perfect specimen such as I once saw, with a smooth interior, shaggy exterior, and the three openings, which I then mistook for evidence of abortion. It is incomplete, represents about half of the uterine surface, in the longitudinal axis, and is smooth, thin, and semitransparent. This casting off of the endometrium is a regular occurrence, but the portions so shed vary considerably in size. Sometimes there is a complete cast, at others large fragments, and, again, occasionally one could only describe the condition as "shreddy menstruation." Vaginal examination revealed only a copious cervical and vaginal leucorrhœa and cicatrices from the cauterisation of old adenoid proliferation around the os. The sound passed the normal distance and in the proper axis. There was tenderness and some displacement of the left ovary.

*Remarks.*—The case presents two unusual features: (1) The patient is not sterile. The writer in the gynæcological volume of Allbutt's *System* says, "The patients are sterile,

and this state is due to the mucous membrane being so altered pathologically that it does not form a suitable nidus for the ovum." (2) It is associated with membranous colitis. As far back as ten years ago the patient noticed small shreds on the surface of the water in the closet. Subsequently small portions of membrane were observed at different times. In June, 1900, she had a severe attack of indigestion, associated with colicky pains and constipation. She took two doses of castor oil, and passed a watery motion with lumps of scybala, and a thin, transparent, structureless membrane. It was a complete tube 5 inches in length, white in colour, and did not present any markings of valvulæ conniventes. From that time the patient has suffered a great deal. The symptoms have been those of abdominal pain, tenderness in the left iliac region and in the course of the large bowel. Constipation has given trouble; at intervals of two or three days she has been in the habit of taking oil to obtain relief; then has followed discomfort, pain, ineffectual attempts at relief, and finally the expulsion of the motions, with scybala, flatulence, mucus, and more or less membrane. There is generally a summons then on account of a "heart attack," and certainly the pulse is weak and slow, but there is no actual fainting and no organic disease. When this condition is contemporaneous with menstruation the sufferings are severe. On one occasion the patient was in such a state of collapse that she was laid upon a settee for four hours in a stranger's house before the doctor who was summoned would permit removal. In the intervals between the attacks the patient looks fairly well, though her movements and speech are languid, and she cannot walk far owing to fatigue. Under restricted dietary and avoidance of purgatives there is an improvement in the bowel condition. As she will not submit to uterine curettage she is awaiting the menopause in hope of relief. The pathology of membranous dysmenorrhœa and membranous colitis being so different, the association can only be accidental, though undoubtedly interesting.

Sheffield. GODFREY CARTER, M.B., etc.

## CASE OF MYXŒDEMA IN THE MALE.

A. H., commission agent, aged 43, applied for relief to the out-patient department of Westminster Hospital on February 20th, 1901, for swelling of the face and legs, weakness, lassitude, and a dull aching pain at times in the lower dorsal region. He had suffered from these symptoms for rather more than two years, but during the past three months they had become much worse. With the exception of erysipelas, he had never had any previous serious illness. About two years ago he was advised that he was suffering from Bright's disease, for which he was treated without avail.

When first seen by me the skin of the face had a pale greenish hue, was much swollen, and about the eyes hung in folds. The conjunctivæ were pearly. The legs were swollen but did not pit on pressure. The hands also were somewhat swollen, but were well shaped. The hair of the head was quite thick, while the body which, prior to his present illness, had been very hairy, was quite smooth. Examination of the chest and abdomen revealed nothing abnormal. The thyroid could not be felt. The urine contained neither sugar nor albumen.

As the case had been previously diagnosed as Bright's disease he was tested for a week with iron and arsenic. There was no improvement, and the urine as before was normal. I concluded from the general appearance, and from the urine being normal, notwithstanding the absence of many of the classical symptoms, that this was a case of myxœdema, and therefore administered thyroid tablets, at first one, afterwards increased to three, a day. Under this treatment a rapid improvement and alteration in his appearance resulted. The general swelling disappeared, the colour of the face became a healthy brown, the lassitude and weakness passed off, and his general aspect so much altered that many of his friends failed to recognise him.

The scalp hair which when I first saw him was quite thick, became manifestly thinner during the first three months or so of treatment. It is now returning, as is also that on the body. There has never been any affection of speech or memory. He no longer feels cold and chilly as he used to do, and the last time I saw him, June 19th, described himself as the warmest member of his family. During the past six weeks the tablets have been gradually reduced, and at present the patient is taking only two a week.

London, S.W. R. G. HEBB.

## A CASE OF ERYSIPELAS TREATED WITH ANTISTREPTOCOCCUS SERUM.

A MAN, 40 years of age, consulted me on August 4th, for an inflamed bruise over the shin of the right leg. The next day I visited him and found cellulo-cutaneous erysipelas had commenced. Boracic fomentations were used, but he became very weak, with dry tongue. I obtained some antistreptococcus serum and injected 10 c.cm. on August 10th; I also at this time made several small incisions through the skin and applied iodoform gauze. On August 11th the inflammation was less and the temperature was 101°. On August 12th I injected another 10 c.cm.; the temperature was 101°. On August 13th the temperature was normal, but I again injected 10 c.cm. His appetite was now returning. On August 14th the temperature was 101°, and I again injected 10 c.cm.; his appetite was improving, his pulse was 84, and from this time he steadily improved. At each visit after an injection had been given a marked improvement was noticeable both in the local phenomena and the general condition.

Wadebridge, Cornwall. H. W. HAYDON, M.R.C.S., L.R.C.P.

## CASE OF COMPLETE ATRESIA VAGINÆ AND ABSENCE OF UTERUS.

MRS. S., aged 34, married two years, consulted me for a slight dyspeptic attack. She had always enjoyed good health, and been by no means anæmic. Casually I ascertained that she had never menstruated, and that she had "taken gallons of medicine to try to bring on the periods." I suggested a vaginal examination, and thought there was almost complete atresia vaginæ. Next week, under an anæsthetic, I examined her with the intention of operating, and found that the vaginal opening was entirely wanting, and that what I had felt at the first examination was a slightly-dilated urethra. I dilated the urethra with Hegar's dilators, and made a bimanual examination *per rectum* and *per vesicam*, and this revealed that the uterus was also entirely wanting, and only some rudiments of the appendages were present. Any intercourse she had with her husband had been *per urethram*, and had been only very partial and painful.

Mirfield, Yorks. LESLIE J. MILNE, A.M., M.D.Aberd.

## A SUCCESSFUL CASE OF CÆSAREAN SECTION UNDER DIFFICULTIES.

ON August 15th, at 6 P.M., I was called to see Mrs. D., aged 26, in labour. She is a dwarf, 4 ft. 1 in. in height, and very much deformed owing to rickets when young. Upon examining her under chloroform I found the deformity of the pelvis so pronounced, that the passage of even a mutilated fœtus would have been impossible. The conjugate diameter did not exceed 1 inch, there was therefore no alternative but to perform Cæsarean section. Having explained the seriousness of the operation, but at the same time pointing out that there was no other course open, consent was given, and I arranged to operate at 10.30, assisted by Drs. Morris and Nettleship (assistants).

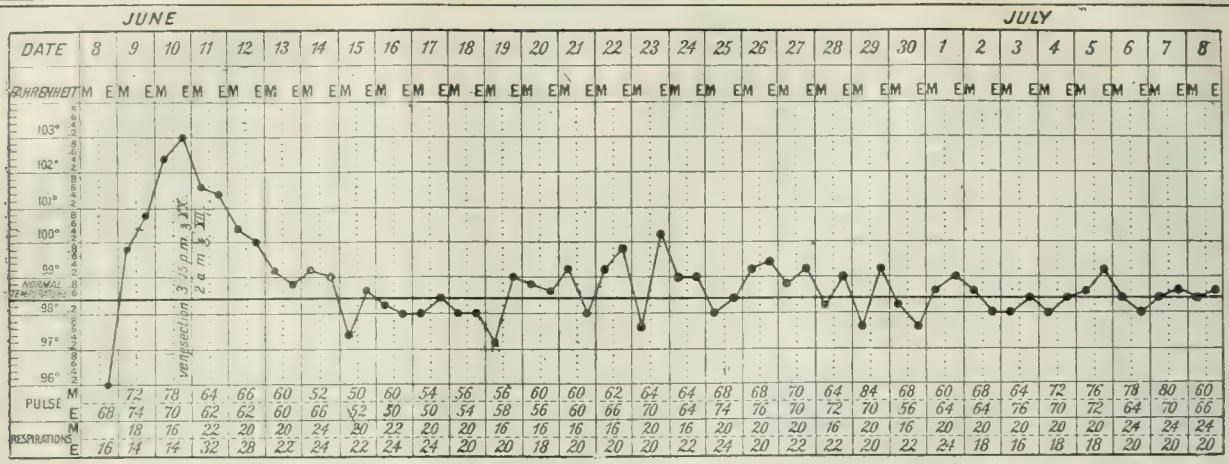
The operation was performed in the usual way with the exception that the membranes were ruptured previously so that the liquor amnii would not escape through the uterine incision into the peritoneal cavity.

Up to the fifth day the temperature remained normal, but on the sixth it rose to 100°. Some abdominal distension was also visible. This soon disappeared on giving an enema of soap and water. Some slight vomiting took place subsequently, which readily yielded to mistura alba. On the seventh day the temperature was normal and the drainage tube removed. The abdominal sutures were taken out on the twelfth day, the patient feeling quite well, and expressed a wish to get from bed.

The patient made an excellent recovery considering that she was in an exhausted condition when I saw her, there were no professional nurses to look after her, and the operation was performed in a workman's cottage.

R. T. E. DAVIES, M.R.C.S., L.R.C.P., L.S.A., etc.

Brooklands, New Tredegar.




Temperature chart of case of fracture of the base of the skull under the care of Mr. Paget.

# REPORTS
ON
# MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

## WEST LONDON HOSPITAL.

### FRACTURE OF THE BASE OF THE SKULL: VENESECTION: RECOVERY.

(Under the care of Mr. PAGET.)

[By JOHN MCKENZIE, M.B., B.Ch.Aberd., House-Surgeon, West London Hospital.]

H. S., a carpenter, was brought into the West London Hospital in an unconscious state at 10 P.M. on the night of June 8th, 1901, having fallen and struck his head upon the pavement. He was admitted under the care of Mr. Paget. The symptoms pointed to fracture of the base. The breathing was stertorous, the pupils unequal, and there was bleeding from the nose and ear. The temperature was 96°. Over the occipital region was a scalp wound one inch long. After admission to the ward the patient vomited quantities of blood-stained fluid.

On the morning of June 9th the patient had recovered consciousness, was quite rational, and complained of severe headache. The temperature at 8.30 A.M. was 99.8°. At 7.30 P.M. he became very restless, resented any interference, and kept his head turned away from the light. He was now irrational and was continually trying to get out of bed. Temperature, 100.8°.

At 8 A.M. on June 10th the temperature had risen to 102.4°. The patient was again unconscious, and the breathing assumed the character of Cheyne-Stokes respiration. The knee-jerks were absent; the lower jaw was in constant motion and the eyes opened with each inspiration. At 3.30 P.M. the temperature had risen to 104°; the face was deeply congested and the pulse of high tension.

At this stage Mr. Paget opened the median basilic vein, and 20 ounces of blood were withdrawn. At 6 P.M. the temperature had fallen to 103°.

June 11th. At 2 A.M. other 12 ounces of blood were withdrawn. At 8 A.M. the temperature was 101.5°. Soon afterwards the breathing became natural. Evening temperature 101.3°.

June 12th. At 8 A.M. the temperature had fallen to 100.4°, and the patient was sleeping comfortably. On the same evening the knee-jerks were found to have returned, and the patient could understand what was said, but was unable to speak.

June 13th. The patient could answer questions; complained of bad headache; evening temperature 98.8°.

June 17th. There began a discharge of blood-stained cerebro-spinal fluid from the right ear; mental condition drowsy and stupid.

June 20th. The mental condition improved, and the patient became quite rational. The discharge of cerebro-spinal fluid continued until July 14th, when it ceased altogether.

Recovery was steady and complete, and the patient was discharged on the 25th.

The point of interest in this case is the immediate beneficial effect of blood-letting. This is strikingly shown by a glance at the temperature chart, and affords one more instance of the utility of venesection in those cases of intracranial hæmorrhage which are associated with a full pulse and high arterial tension.

# REVIEWS.

## OBSTETRICS.

PROFESSOR CLARENCE WEBSTER'S work on *Human Placentation*[1] is a praiseworthy attempt to deal with a difficult subject in the scientific way, that is to say, by means of careful comparison of the results of the researches of competent and and reliable observers. It must be remembered that our knowledge of the development and growth of the human placenta is still most imperfect, consisting for the most part of a fairly complete acquaintance with the structure of the full-term organ, and of a very incomplete acquaintance with its characters in the early months of antenatal life. We have only isolated glimpses, as it were, of the placenta during the great part of its life-history; it is, indeed, senile before it commonly comes into the hands of the histologist *viâ* the obstetrician. For these reasons it is very difficult, even if it were desirable, for anyone, even for one who like Professor Webster has spent much time over the study of individual specimens, to write authoritatively and at the same time securely upon the subject. Any attempt to sketch the origin and growth of the human placenta from the early weeks of intrauterine existence up to the full term must consist largely of a piecing together of the scattered observations of a number of histologists and anatomists who used different methods and employed different nomenclatures. It has rarely if ever fallen to the lot of the same observer to see more than one specimen of a human ovum *in situ* of less than 6 weeks in age. Professor Webster has, therefore, had to do the best he could with such scattered observations, comparing them with one another and with the results of his own investigations. The result is a work of distinct scientific value, with the limitation that it is also a work which further investigations are certain to modify, even if they do not disprove, many of its conclusions. It is not easy reading, being burdened by

[1] *Human Placentation: an Account of the Changes in the Uterine Mucosa and in the Attached Fœtal Structures during Pregnancy.* By J. Clarence Webster, B.A., M.D Edin., F.R.C.P.E., F.R.S.E., Professor of Obstetrics and Gynecology in Rush Medical College (affiliated with the University of Chicago); formerly First Assistant in the Department of Midwifery and Diseases of Women, University of Edinburgh, Scotland. Chicago: W. T. Keener and Co. 1901. (Roy 8vo, pp. 136. 233 Illustrations. $3.75.)

much that is technical. Perhaps the most generally interesting chapter is the last, which deals with the phylogeny of the placenta. There are a large number of drawings of microscopical sections of specimens. These drawings are placed at the end of the volume, and are, therefore, not very easy of reference during the reading of the text. The original part of the work was, the author states in his preface, carried out in the Laboratory of the Royal College of Physicians, Edinburgh, and gained the first research prize of that College in 1896. There is a good bibliography. The index is at the beginning instead of the end of the volume.

Dr. L. Bouchacourt has gathered together a large number of out-of-the-way facts bearing upon the question of the duration of pregnancy and its variations[2]—facts taken from zoology, veterinary science, anthropology, and ancient and modern history. The causes of the variations that are met with are grouped in four divisions, under the headings of (1) general and ill-determined influences, such as civilisation, race, and climate; (2) paternal influences, such as age, hard work, lead poisoning, alcoholism; (3) fœtal influences, such as sex, weight, twinning; and (4) maternal influences. The maternal causes of variation are so numerous that it has been found necessary to subdivide them into ten classes, including heredity, age, morals, sexual excitement, ventilation, the digestive system, temperature and baths, loss of blood, electricity, and traumatism. Under the head of maternal traumatism the author includes hard work for women in the last weeks of pregnancy, and emphasises the advisability, therefore, of rest at that period. This leads him to a discussion of the attempts which have at various times, but more particularly since 1893, been made to establish homes of rest for pregnant working women. This part of the book is original and suggestive, and the *sanatorium de grossesse* recommended by Bouchacourt has many resemblances to the pro-maternity hospital recently advocated in the pages of the British Medical Journal by Dr. Ballantyne, of Edinburgh. It would seem from the author's researches that all over the world the pregnant woman has but scant accommodation offered to her either in general hospitals or in maternities. In some sketch plans of *sanatoria de grossesse* appended we notice that the albuminuric, the tuberculous, and the syphilitic patients have special wards. The work, which contains a great deal of interesting information, has a preface by Professor Budin.

To the *Manuels de Therapeutique Clinique*, edited by Professor Lemoine, of Lille, Professor Gaulard and Dr. Bué have contributed a volume[3] on the management of labour in its varieties, on its complications, and on the diseases which may complicate pregnancy, as well as those of the puerperium. It is written in the terse diction of the lecture room, and adds the attraction of a perspicuous style to the directness and interest which this form of composition affords. Each chapter is practically a *causerie* summarising the main points of the subject under discussion, and illustrating them by the mention of some of the classical cases or others which the authors have observed. While not perhaps strictly scientific, this method gives much personal interest to the narrative, and makes the reading of the volume a pleasant task. The various complications of pregnancy and the puerperium, from toothache to insanity, are rather more fully dealt with than is usual in British textbooks, and the ordinary problems of treatment are adequately treated. The discussion on routine vaginal douching after delivery is summed up in favour of the practice, and prophylactic intrauterine douching is advised on certain indications. The dangers of these operations are not, however, neglected. Sublimate is nominated the most convenient antiseptic, and antistreptococcus serum is advised as an occasional adjuvant to the other treatment in some cases of puerperal infection. In general peritonitis incision and drainage is recommended, but the other operations are also considered. The volume is prefaced by sixteen pages on the theoretical matters underlying some of the complications of pregnancy, and closes with a chapter on the diseases of the infant.

Dr. Krönig's book on the treatment of contracted pelvis[4] consists of three parts: (1) A *précis* of the deliveries of patients with contracted pelvis in the hospital, under the care of Professor Zweifel during the years 1891-99; (2) a discussion of the merits and applicability of the different ways of effecting delivery when the pelvis is contracted; (3) a general summary, embodying rules for practice. The last section is that which will most interest practitioners; and the first and second parts form the basis upon which it is founded. Dr. Krönig has been taught to look at midwifery practice from the point of view of those who teach as the first and soundest principle of obstetric art that "meddlesome midwifery is bad." In the eyes of some the great desideratum, the sacred ideal, is natural delivery; artificial aid is to be used as seldom as possible, and to be postponed until natural delivery is out of the question. This view was beyond all question right at a time when every obstetric operation meant a possibility, and some probability, of septic infection. But since the introduction of antiseptics, the common operations in midwifery are no longer in themselves dangerous; and it is recognised that in labour with contracted pelvis much graver consequences come from postponing aid till too late than from resorting to it without necessity. Hence some modern obstetricians teach that it is the duty of the accoucheur to find out as early as possible the existence of disproportion between pelvis and child, and apply appropriate treatment. Dr. Krönig partly accepts this view. We may briefly summarise the practical points in his teaching. If the size of the pelvis is such that it is possible for a full-term child to pass through it, labour should not be induced, and no operation should be done until prolonged observation of the course of labour has shown that a favourable issue for mother and child is improbable. The indication here for interference when the presentation is normal is, that after rupture of the membranes, in spite of continuance of strong pains, the head does not enter the pelvis. If observation of the course of labour has convinced the accoucheur that the spontaneous birth of a child is impossible, then the choice between symphysiotomy and Cæsarean section arises. Both operations have given results that justify us in offering them for the sake of the child; but if, by waiting, the life of mother or child has become endangered, then these operations are to be discountenanced and perforation preferred to either. If the mother is feverish, the liquor amnii decomposed, or any other sign of microbic infection is present, neither Cæsarean section nor symphysiotomy should be done, but perforation preferred. Symphysiotomy ought not to be preceded by an attempt to deliver with forceps. Some ill-results attributed to symphysiotomy have really been due to preliminary attempts at forceps delivery. Dr. Krönig has not found any great advantage from Walcher's position. After symphysiotomy he thinks delivery is best left to Nature, aid being given only if mother or child is in danger. Forceps or turning after symphysiotomy lead to injuries to the soft parts which are likely to discredit symphysiotomy. This operation should remain a preliminary measure only. Dr. Krönig seems not to have heard of subcutaneous symphysiotomy, for some of his remarks upon the operation apply only to the open method of performing it. In pelves so contracted that the conjugate measures 7 to 7.5 cm. (2¾ inches to 3 inches) Krönig thinks that neither symphysiotomy nor Cæsarean section ought to be performed in first labours, because the knowledge gained by observation of previous labours as to the power of the uterus is not available. In transverse and breech presentations these operations are not to be thought of till by external version a head presentation has been produced. Krönig thinks that neither the induction of labour, prophylactic turning, nor the application of forceps when the head is above the brim, improve the prognosis for mother or child in contracted pelvis. Perforation should be restricted to cases in which either the life of the mother is in danger, or, on account of unfavourable circumstances, symphysiotomy or Cæsarean section is unsuitable. An attempt at forceps delivery before perforation is

[2] *La Grossesse: Etudes sur sa Durée et sur ses Variations. Puériculture Intrautérine.* [Pregnancy: Researches on its Duration and Variations. Intrauterine Puericulture.] Par Dr. L. Bouchacourt. Paris: Georges Carré et C. Naud. 1901. (Cr.8vo, pp. 516, 7 plates. Frs. 5.)

[3] *Accouchements et Maladies des Femmes en Couches* [Labour and Diseases of Women in Childbed]. Par L. Gaulard, Professeur de Clinique Obstétricale à la Faculté de Lille, et V. Bué, Chef de Clinique Obstétricale à la Faculté de Lille. Paris: Vigot Frères. 1901. (Demy 8vo, pp. 602. Frs. 8).

[4] *Die Therapie beim engen Becken.* [The Treatment of Contracted Pelvis.] Von Dr. B. Kronig, Privatdocent in Leipzig. Leipzig: Arthur Georgi. 1901. (Roy. 8vo, pp. 213. M. 5.)

best not made, for it exposes the mother's tissues to unnecessary damage. The difference in the mortality after delivery by perforation and that after symphysiotomy or after Cæsarean section is now so slight that the right of the mother of a living child to choose perforation ought no longer to be recognised. The child has a right to its life. But if the mother's life is in danger, either from fever, from decomposition of liquor amnii, or from lung or heart disease, then perforation is to be preferred in pelves having a conjugate diameter of 6 cm. or more (2½ inches). Krönig rejects, rightly, in our opinion, the advice to perform Cæsarean section in puerperal eclampsia. He thinks the best time at which to perform Cæsarean section is the end of the first stage of labour, before or soon after rupture of the membranes. We must ask what is the advantage of waiting so long? Dr. Krönig's views are always worth consideration, because they are based on observation.

The first edition of Dr. BARTON HIRST'S *Textbook of Obstetrics*[5] appeared in November, 1898, and so great has been the favour with which it was deservedly received that a new edition has already been called for. The author states in his preface to the present edition that no revision has been attempted, and no extensive alterations undertaken. It is therefore practically a reprint of the first edition, and further comment upon it is needless. It is one of the best textbooks of obstetrics in the English language.

With the exception that the author shows an abnormal devotion to nervous influences in pregnancy and labour and treats them too fully, the practical parts of Dr. J. EVANS'S *Manual of Obstetrics*[6] are in fair consonance with customary practice and in particular the descriptions of the ordinary manœuvres and operations are clear and succinct. Of the theoretical parts a much less commendatory opinion must be entertained as it is not altogether accurate in many details and, as in the discussions of the mechanism of labour, decidedly misleading. Leischmann, Hyrtle, and others might hardly recognise their names in these forms, and even the "syncitium" might be surprised to learn that it is so called from its "peculiar phagocytic function." Apart from compactness, clear type, and full index it is not obvious that the volume has any special claims to put before British readers.

We have before us two of a series of hand atlases now being presented on the British market. Both are compiled by Dr. OSKAR SCHAEFFER of Heidelberg, both deal with obstetrics, and they are so intermixed in their scheme and have so many common qualities, good and bad, that they may be considered together. The first, on diagnosis and treatment,[7] is the larger, and on the whole probably the more interesting and useful to the practitioner, the second[8] is perhaps more on the line of the routine study of the mechanism of labour which falls to the lot of the student. As an epitome it is fairly complete, though here and there a little critical selection might have been useful. It is made formidable by the array of personal names which the author is fond of attaching sometimes in series to manœuvres or symptoms. Thus we have "Veit-Smellie's (or more correctly Mauriceau-Lachapelle's) method," "Mauriceau-Veit-Smellie," "Wigand-Martin-von-Winckel." It would sometimes be easier to redescribe the method than to give its name in this fashion. In addition to certain inaccuracies which may be typographic, there are obscurities of phraseology and the use of familiar terms in unusual ways which should be corrected when the next English addition is issued. We have "palpation" used for vaginal touch. We read, that "To assist the delivery of the face, three manipulations are requisite," and find not only that they are alternative, but that the third is "The fingers obtain a hold in the greater fontanel, and the head is drawn around the symphysis," or, again, that "Artificial rupture of the membranes is permissible only ..... for the purpose of determining whether the head has entered the pelvic inlet. In the latter case, a vaginal examination must be made at once." The technique is not always adequate. No one, for example, could perform a symphysiotomy without more direction than the instructions under this heading. Both volumes suffer from similar faults. Under deformities of the pelvis it is to be remembered "that the most scrupulous asepsis is to be observed from the very first examination, even if the accoucheur is convinced beforehand that an operation will probably be necessary." The terms, "the colour of wine-yeast," "Zwieback," "milk-diet" (in eclampsia) might be made more intelligible to British readers. Such statements as "these vigorous contractions make it impossible for the fetus to change its position or even to obey the laws of gravity" do not evince that clearness of thought which is desirable, and both volumes would be improved by the elimination of much doubtful theory, physical and physiological. These demerits are, however, fairly balanced by sections of considerable value, such as those on the uterine muscle and its functions, on the variations in the pelvic inclination, and many others, the general excellence of which, along with the merits of the plates, well warrants the purchase of the volumes.

[5] *A Textbook of Obstetrics.* By Barton Cook Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania. Second edition. London: W. B. Saunders and Co. 1900. (Demy 8vo, pp. 840, 318.)

[6] *Obstetrics: A Manual for Students and Practitioners.* By David James Evans, M.D., Lecturer on Obstetrics and Diseases of Infancy, McGill University, etc. London: Henry Kimpton. 1901. Demy 8vo, pp. 430, 149 illustrations, 7s. 6d.)

[7] *Anatomical Atlas of Obstetrics with Special Reference to Diagnosis and Treatment.* By Dr. Oskar Schaeffer, *Privatdocent* in Obstetrics and Gynæcology in the University of Heidelberg. Authorised translation from the second revised German edition. Edited by J. Clifton Edgar, A.M., M.D., Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College, etc. London and Philadelphia: W. B. Saunders and Co. 1901. (Crown 8vo, pp. 316; 122 figures on 56 lithographic plates; 38 other illustrations. 13s.)

[8] *Atlas and Epitome of Labour and Operative Obstetrics.* By Dr. Oskar Schaeffer. Authorised translation from the fifth revised German edition. Edited by J. C. Edgar, A.M., M.D. London and Philadelphia: W. B. Saunders and Co. 1901. (Crown 8vo, pp. 172; 14 coloured plates; 139 illustrations. 9s.)

## GYNÆCOLOGY.

Dr. STEWART MCKAY, of Sydney, N.S.W., has written a *History of Ancient Gynæcology*,[9] which contains a summary of the contributions to gynæcology from the earliest times down to the age of Paulus Ægineta, and is dedicated to the memory of one whose name must bulk large in any history of gynæcology in later times—Mr Lawson Tait, the author's teacher and friend. On account of his residence in the Antipodes Dr. McKay has been somewhat hindered in his efforts to consult all the literature bearing on the subject of ancient gynæcology; but he was notwithstanding succeeded in gathering together and putting in readable form most of the knowledge which the Egyptians, Hindus, Greeks, and Romans possessed concerning the diseases of women. One of the great difficulties in the way of forming a correct estimate of the amount and value of such ancient knowledge lies in the terminology; for instance, the word for womb signifies sometimes the uterus as we know it and sometimes the vagina simply. There is, therefore, the possible fallacy that when we credit some of the older gynæcologists with the performance of such operations as dilatation of the cervix uteri we ought to think of dilatation of the orifice of the vagina. As illustrating this point the author gives on page 249 a useful list of the various names which signify womb, vagina, and vulva. The most valuable part of the book is Part II which is really a summary of Part I, and contains in condensed form the anatomy of the female genital organs as known to the ancients, the physical examinations of the genitals as made by them, and the diseases of these parts as understood by them. There are some misprints, for example, "Hæsar" for "Haeser" and "Bass" for "Baas"; and there is no index. These, however, are faults perhaps inseparable from the publication of the book on one side of the world with the author residing on the other. The work is a praiseworthy and largely successful attempt to centralise our knowledge of ancient gynæcology.

Professor POLAILLON, in preparing a permanent record of his surgical work, has set a good example, which many gynæcologists in all countries, especially our own, would do well to imitate. The volume before us[10] does not consist of a series

[9] *The History of Ancient Gynæcology.* By W. J. Stewart McKay, M.B., M.Ch., B.Sc., Senior Surgeon to the Lewisham Hospital for Women and Children, Sydney, etc. London: Baillière, Tindall and Cox. 1901. (Demy 8vo, pp. 322. 7s. 6d.)

[10] *Affections Chirurgicales du Tronc.* Mamelles, Organes Genitaux de la Femme (Surgical Diseases of the Trunk, Mammary Glands, Female Organs). Par Dr. Polaillon, Membre de l'Academie de Medecine, etc. Paris: O. Doin. 1901. (Demy 8vo, pp. 748. 71 woodcuts. Frs. 12).

of tables apparently designed to proclaim the author's operative success, but a complete clinical register of a great hospital surgeon's arduous experience between January, 1879, and January, 1899. The tabulation follows the clinical reports, and Professor Polaillon dwells purposely on "ameliorations" as more important than "result of operation." Statistics, he declares, have shown, now that many years have elapsed since uterine appendages were first removed freely for inflammatory disorders, that operative success is not always synonymous with therapeutical success, and that the benignity of operations of this kind is but relative. Even the immediate consequence of the abdominal incision and amputation of the tube and ovary is not rarely death, whilst troublesome after-results from ligatures and adhesions often follow simple cases where there is no pyosalpinx or intimate tough attachments to intestine. Expectant treatment answers well, but the author admits that he has observed 5 cases of fatal acute peritonitis following rupture of suppurating ovaries and tubes. The truth has long been suspected that operations for chronic inflammatory diseases of the appendages are most justifiable when they are most dangerous. The ovariotomies are instructive; just as in other countries it appears that in France a relatively large proportion of malignant and neglected cases of ovarian tumour falls to the share of great metropolitan hospitals and famous teachers. Simple cases, not very mysteriously, come under the treatment of operators less bold and experienced. The records of hysterectomy are instructive, but the operative statistics are not of much value, since many technical improvements have been adopted by the operator himself long after the first years of the series. The reports of breast cases are of special interest to the general surgeon. In 8 partial operations for malignant disease, 4 recurrences occurred; in 37 total amputations, 9 recurrences; in 106 total amputations with clearing of the axilla, 38 recurrences. Thus the more thorough operation shows a proportion of 36 per cent., the recurrences only amounting to 24 per cent. in simple amputation, but as Professor Polaillon notes, the latter were largely performed in early cases where no glandular infection existed. The individual clinical reports which make up this work deserve careful study and are of particular value to the surgical registrar.

Abdominal surgery is so fascinating, that the class of surgical procedures of which Mr. Skene Keith's volume on *Gynæcological Operations*[11] treats are too often classed as "minor operations." The subject, often viewed too lightly by the general surgeon, has also suffered at the hand of many who can speak authoritatively. Intricate diagrams and details of series of clumsily-named variations on one operation are too familiar in manuals on "minor" gynæcology, but Mr. Skene Keith recognises these evils, and aims at giving precise descriptions of those operations which his experience has taught him to be the most fitted for fulfilling their aim. It is satisfactory to find that this work is not a mere series of diagrams of plastic procedures blended with an instrument maker's illustrated catalogue. The author quite rightly devotes a chapter to pelvic abscess, for there is a right and a wrong way to treat that pathological condition, and the only unfavourable criticism that we can pass on this chapter is that it might with advantage have been longer. The author's directions for the removal of intrauterine tumours are exceedingly good, and the chapter on methods, instruments, and appliances is a model of simplicity. Turning to those common plastic operations so intimately associated with the treatment of diseases of the external organs, we find that the author has done his best, but long practical experience and the art of teaching by aid of the resources of literature cannot do much for the beginner. Even witnessing many such operations is not of much avail. Assisting does a little good, but it is only by performing them that they can be learnt. The true groundwork of success in such a field lies in two accomplishments which some naturally possess and some learn, whilst others never acquire them. These are the art of handling tissues gently, and the faculty of tying a suture with sufficient firmness, knowing at the same time its nature and how it will behave as it lies in living tissues. Mr. Keith almost dispenses with illustrations in his chapter on the perineum, and many will agree with him that in so doing he is but rejecting what is superfluous. He wisely gives reason for doubting the overwhelming excellence of Tait's flap-splitting method; others, like Mr. Keith, have come to the conclusion that it makes a good show, but experience has proved that the repaired perineum is weak. Tait's objection to removing any tissue the author considers unsound on the ground that there is usually redundancy of tissue. Mr. Keith states that he once operated successfully on a case where five previous attempts had been made and yet there was plenty of tissue. As might be expected from so accurate a writer, Mr. Keith has taken pains in preparing his description of the right way to remove a labial cyst. Too often the surgeon makes much too light of such a task. The book is one of the best current works of its kind, for it is concise and clear.

Dr. Albert Weil of Paris has written a practical guide to gynæcological electro-therapeutics.[12] It assumes throughout that is desirable that the diseases peculiar to women should be treated by electricity. On that hypothesis the book has been written to teach the reader how to do it. The first 134 pages contain descriptions of apparatus and the mode of using them. In the remainder of the book the various diseases peculiar to women are enumerated, and the way to treat them electrically is described. Ovarian tumours and ectopic pregnancy seem to be almost the only diseases not amenable to electrical treatment. We think that electrical treatment in gynæcology as in other departments of medicine is proper only if it is better than any other treatment. We think also that it is impossible to tell whether any treatment has been beneficial unless we know enough of the natural history of the disease treated to be able to predict what its course would have been without treatment. Neither of these principles appear to have been in the mind of the writer. He assumes that because certain diseases can be treated by electricity they ought to be so treated. He makes no attempt to show that electrical treatment is superior to any other, nor in many instances does he give adequate reasons for thinking that the electrical treatment produces any effect at all. We therefore cannot advise anyone to take the book as a safe guide.

Dr. Phillips's *Outlines of the Diseases of Women*[13] is deservedly popular, as it is portable and compiled in a manner suitable for the student and practitioner. The author continues to lay most stress on the maladies which are the most frequent and on well-received and approved rather than very new researches. Perhaps a little more might have been said on recent experiences relating to decidnoma malignum. The author is cautious in his teaching about extrauterine gestation. He insists that "the majority of ectopic pregnancies, if not all, are primarily tubal—that is they arise from the arrest, in the tube, of the impregnated ovum." He evidently considers that the evidence recently brought forward by Van Tussenbroek, Croft and Anning, and Littledale as to primary ovarian pregnancy is hardly sufficient to satisfy a teacher. Dr. Phillips has revised his chapter on uterine fibroids. He rightly teaches that hysterectomy is the last resource for the patient, and that "Apostoli's treatment" is useless in the majority of cases of fibromyomata. Turning to kraurosis vulvæ, the author now condemns scraping and caustics as useless. The disease is very rare, but the inexperienced practitioner using such methods for any disorder of the vulva that looks like it would probably do even more harm than if he applied them to a true case of kraurosis. A short but useful chapter has been added on the bacteriology of the genital tract.

The third edition of a popular textbook requires no very extended notice. We may refer those who wish fuller infor-

[11] *Gynæcological Operations exclusive of those interfering with the Peritoneal Cavity.* By Skene Keith, M.B., F.R.C.S.Edin. Edinburgh and London: Young J. Pentland. 1900. (Demy 8vo, pp. 130, 44 illustrations. 5s.)

[12] *Guide Pratique d'Electrothérapie Gynécologique.* Par le Dr. Albert Weil, Ancien interne de Saint Lazare, Préparateur adjoint à la Faculté de Médecine de Paris, etc. Paris: J. B. Baillière et Fils. 1900. (Fcap. 8vo, pp. 292, 34 illustrations. Frs.3)

[13] *Outlines of the Diseases of Women.* By John Phillips, M.A., M.D.Cantab., F.R.C.P., Obstetric Physician to King's College Hospital, etc. With two appendages. Third edition, revised and enlarged. London: Charles Griffin and Co. 1901. (Crown 8vo. pp. 158. 120 illustrations. 7s. 6d.)

mation of the scope and character of Dr. GARRIGUES'S *Textbook of Diseases of Women*[14] to the BRITISH MEDICAL JOURNAL of October 6th, 1894, page 760, where the first edition was reviewed. It is enough to say here that it is one of the class of books which approach the subject from a very surgical point of view; that is to say, anatomical detail and surgical technique are more fully and more satisfactorily dealt with than the natural history of disease and the medical treatment of the slighter ailments. The operations described are numerous; too many, indeed, to be described in the fulness of detail which a beginner needs for his guidance. The reader will learn here what has been and may be done upon the female genitalia with knife and scissors. Some may think it were well if those who freely recommend operations could speak with frank precision as to the exact amount of benefit which follows them. The book is concise and clear, and the present edition has been well brought up to date.

Dr. MACNAUGHTON-JONES'S *Points in Practical Interest in Gynæcology*[15] consists of a collection of articles on subjects concerning which the author can speak with authority. The chapter on Pitfalls in Gynæcological Diagnosis is in itself almost worthy of being reproduced separately, and we are not surprised to observe that a second edition of the volume has already been called for. The definition of abdomino-pelvic tumours is a matter of extreme difficulty, and very harassing to those concerned in an individual case. The use of anæsthesia in diagnosis is universally admitted, so all will agree with the author's views on the subject. Whether "most risks of blundering will be avoided" by this practice, however, remains questionable. As the inexperienced may doubtless read these pages it would have been better if the beginner were warned that when the patient is unconscious the risk of rupturing abscesses, dilated tubes, and abnormal fœtal sacs is much increased. The paragraphs on sexual neuroses and insanity are of much interest: the subject is treated very judiciously. Dr. Macnaughton-Jones devotes one chapter to the question of operations for uterine fibroids. That hysterectomy has been made a relatively safe operation there can be no doubt, and many cases may therefore be now undertaken where ten years ago no surgical procedure would have been justified. But over-zealous arguments in favour of hysterectomy are much to be deprecated, and the author himself, though an advocate of operative interference, openly admits that "a tumour in which there is no evidence of any serious degenerative change, which is not complicated by gross changes in the adnexa, which is causing no serious obstruction to the bowel or displacement of the bladder with incontinence or distress, where neither peritoneal or ascitic complications are present, and the rapidity or the size of the growth has not to be considered, will certainly not demand interference." In this opinion the critic who is at the same time authoritative and impartial must concur. This book contains a considerable number of instructive plates.

We have received an American[16] edition of SCHAEFFER'S well-known *Atlas of Gynæcology*. We have already reviewed in October, 1897, a translation published by a firm of publishers in London. The work itself is too familiar to require criticism of its text. In this issue the diagrammatic sketches are, as in the original, hardly of the highest merit for educational purposes, chiefly because they are too small. On the other hand, the coloured plates of morbid conditions of the female organs are remarkably successful in their imitation of Nature. The book is more suited for the expert and the practitioner than for the student.

[14] *A Textbook of the Diseases of Women.* By Henry J. Garrigues, A.M., M.B., Gynæcologist to St. Mark's Hospital in New York City, etc. Third Edition. Philadelphia and London: W. B. Saunders and Co. 1900. (Demy 8vo, pp. 756, 367 illustrations. 18s.)

[15] *Points of Practical Interest in Gynæcology.* By H. Macnaughton-Jones, M.D., M.Ch., Q.U.I. London: Baillière, Tindall and Cox. 1901. (Demy 8vo, pp. 124, 12 plates. 4s. 6d.)

[16] *Atlas and Epitome of Gynæcology.* By Dr. Oskar Schaeffer, Privat Docent of Obstetrics and Gynæcology in the University of Heidelberg. Authorised translation from the second revised and enlarged German edition. Edited by Richard C. Norris, A.M., M.D., Gynæcologist to the Methodist Episcopal Hospital, and to the Philadelphia Hospital, etc. London and Philadelphia: W. B. Saunders and Co. 1900. (Crown 8vo, pp. 272, 90 coloured plates and 62 woodcuts. 15s.)

## GARDENS AND WILDFLOWERS.

NEVER so much as at the present time have people taken an intelligent and personal interest in their gardens, and probably it is on this account that books on gardening are so much in evidence just now. The author of *The Chronicle of a Cornish Garden*[17] is a member of our own profession, in practice at Hayle, in Cornwall, and his is, certainly, a very delightful little book. It is ornamented by illustrations of an ideal garden by Mr. F. L. B. Griggs. These drawings, however, graceful as they are, have no connection whatever with the text, and they have properly no place in it. Mr. ROBERTS'S style of writing is very picturesque and agreeable; he loves his garden, and it is pleasant to listen to him talking about it. But we hope that he will not mind our saying that his writing would be improved if in future editions he would endeavour to suppress a certain personal pronoun. It will probably come as a shock to him, on turning to page 57, to find that, in twenty-two short lines of large print, *I*, *my*, and *me* occur no less than twelve times. And so, though in a lesser degree, throughout the book. But this is the only fault that we can find, and it seems almost ungracious to do that, considering the great amount of pleasure which we have derived from his discourses. Our author has a righteous horror of the gardener who grows for flower shows. "I like to be my own gardener, and I take an interest in my plants as individual living things, as well as bits of beautiful colour and form." "Hardy plants alone possess much interest for me. Plants in pots savour too much of the pet-bird idea." The book is full of delights, and we congratulate Mr. Roberts and Mr. Lane on the pleasant way in which they have produced them.

Professor HENSLOW'S *Story of Wild Flowers*[18] is written from a philosophic standpoint, and is full of interest. It deals with the evolution, classification, and germination of wild flowers, and it has plenty to say in a most attractive way upon such questions as the climbing of wild flowers and of their adaptations for pollination. It explodes once more the pretty story of "mummy wheat," explaining that wheat is particularly short-lived, "from four to twelve years being the maximum period which may be allowed." If this is one of Messrs. Newnes's *Library of Useful Stories*, as it apparently is, its price is 1s., and we have much pleasure in commending it to the disciple of Linnæus as a desirable investment.

Pressure on our columns has prevented us noticing the *Gardening Year Book*[19] earlier. But at least we are in time to say that if the next volume—which will be the forty-fourth—should contain as much valuable information on the various phases of gardening as that now before us, it will be well worth the shilling which is modestly asked for it.

[17] *The Chronicle of a Cornish Garden.* By Harry Roberts. London: John Lane, The Bodley Head. 1901.

[18] The *Story of Wild Flowers.* By Rev. Professor G. Henslow, M.A., F.L.S. London: George Newnes, Southampton Street. 1901.

[19] *The Gardening Year Book*, 1901. The *Gardeners' Magazine* Office, Aldersgate Street, E.C.

HOME FOR INEBRIATES IN NORFOLK.—A home for inebriate women at Terrington, near King's Lynn, recently opened by the Bishop of Ipswich, has been established by the Church of England Temperance Society, with the aid of subscriptions from the dioceses of Lincoln, Ely, Norwich, Oxford, and Peterborough. Accommodation for thirty-three patients is provided. About fifteen acres of ground available for exercise and recreation are attached to it, and in addition there is a garden with glasshouses. All patients are required to stay at least twelve months.

IS MELANCHOLIA INCREASING?—Dr. H. P. Stearns, Superintendent of the Retreat for the Insane in Hartford, Connecticut, is said (as we learn from *American Medicine*) to be of opinion that the character of the forms of insanity is undergoing a change. He thinks that there are now fewer cases of acute mania than formerly, and that the number of cases of depression and melancholia is steadily increasing. He gives statistics of the cases in the Retreat from 1869 to the present year which appears to support his opinion.

# Introductory Addresses

AT

## THE OPENING OF THE MEDICAL SCHOOLS.

### UNIVERSITY COLLEGE, LONDON.

By J. S. Risien Russell, M.D., F.R.C.P.,
Assistant Physican, University College Hospital.

### THE MEDICAL PROFESSION AND SCIENTIFIC RESEARCH.

The introductory address in the Faculty of Medicine was delivered on Tuesday, October 1st, by Professor Risien Russell, M.D., F.R.C.P., who after welcoming the old and new students expressed the hope that none of the latter were entering on their medical studies with the set determination that they were going to be specialists, as such a course was fraught with great danger. Their object should be first to become good all-round men well-versed in every branch of their profession, as no one could become a good specialist who had not fortified himself by a thorough general knowledge of medicine and surgery. After insisting on the importance of anatomy and physiology, he pointed out how essential a knowledge of bacteriology had become to the medical man, and how chemistry, always a most important subject in the medical curriculum, had acquired additional importance since a knowledge of chemical methods had become so necessary to the bacteriologist. Chemistry had also become more important because chemical analyses of the blood, the excreta, and the contents of the stomach were now indispensable in the diagnosis, prognosis, and rational treatment of many diseases. Special attention ought to be paid to chemical pathology, and they might consider themselves fortunate that there was now a clinical laboratory in the new hospital that Sir Blundell Maple's splendid liberality had provided for them, where they would be able to learn how to investigate some of the complex problems of disease by methods that were calculated to make diagnosis less conjectural and treatment less empirical in the future than they had been in the past.

In congratulating the students on the profession they had chosen, he said that it would give them every opportunity of increasing their intellectual powers and of widening their sphere of knowledge even far beyond the limits of the subjects with which they would be directly concerned. It would afford them due scope for the full exercise of all of their faculties, and if they made good use of their time they would in the end have the inestimable satisfaction of knowing not only that they had done good work, but that it had been for the benefit of their fellow beings.

#### Advantages of Entering the Medical Profession at the Present Time.

He next called their attention to the special advantages there were in entering the medical profession at the present time. No other profession could hold out the prospect of so quick a return on the outlay that students were obliged to make. In support of this view he pointed to the fact that during the last seven years there had been a falling off in the number of men entering the medical profession, so that there were now 1,660 fewer men qualified to practise medicine than there would have been had the same number joined the profession each year since as did so in 1893. In the meantime, as the figures of the last census showed, the population of the country had increased to the extent of over three and a-half millions during the last decade. The Colonies had always supplied many good openings for men who had received their medical education in this country, and they might be expected to continue to do so: but to South Africa more especially he felt justified in looking for a large number of openings for young medical men when the development of the country proceeded after the termination of the war. Then, again, the vigorous and laudable action of the General Medical Council, in suppressing unqualified assistants and in stamping out the iniquitous system of "covering," had made many openings for qualified men. The Expert Committee appointed under Mr. Brodrick's presidency had been an earnest of the Government's determination to reform the Army Medical Service, and the Committee's report that had just been published contained provisions that could not fail to increase the popularity of this service. There was ample evidence to show that the Admiralty would have to follow the example of the War Office and institute reforms in that branch of the service. So unpopular had the medical service of the Navy become, that but few candidates could be induced to come forward to fill the vacancies that were being caused by resignations and retirements. A good example of the state of things that obtained was to be found in the fact that 14 vacancies were advertised in August, and only 7 qualified medical men responded to the call. Of these only 4 were available, as 1 was found physically unfit, and 2 failed to satisfy professionally the examiners. Reforms in the medical services of the army and navy would not only provide good openings for young medical men, but as more men were attracted by the services those available for the civil population would be reduced, and the chances that a young man would have of making his way in private practice would thereby be greatly improved. How small was the reserve of young medical men, even at the present time, had been demonstrated by the experiences connected with the South African war, for those required for the army had not been supplied without inconvenience in other quarters. Provincial and other hospitals had had difficulty in securing men to fill posts as house-physicians and house-surgeons: steamship companies had experienced a similar difficulty in getting medical officers; and many medical men in general practice had not found it easy to take a holiday this year either because it had not been possible to find *locum tenentes*, or because the remuneration such substitutes now received was more than many practitioners could afford to give. These various considerations led him to conclude that the medical man who was ready to practise his profession in five or six years' time would be in a most satisfactory position, so that students now commencing their medical studies could look forward to finding openings for the practice of their profession five years hence with a degree of certainty that did not obtain in any other profession.

#### Unsatisfactory Public Status of the Medical Profession.

He complained of the unsatisfactory public status of the medical profession. From the members of no other profession was so great an expenditure of time and labour required, for a man had to devote five years of his life to study before he could become qualified to practise. The time was not too long, as it was to the best interests of the community that a liberal amount of time should be devoted to acquiring knowledge so essential to the well-being of mankind, but a profession whose services to the community were admittedly so important as to need such careful preparation was one that was justified in looking to the State for some better signs of appreciation of its worth than had hitherto been forthcoming. The composition of the House of Lords supplied an example of the small value placed on the medical man, for while this assembly included clergymen, military men, and lawyers, only one medical man had as yet been deemed worthy of a seat there. He submitted that medical men were as much needed in the deliberations of an assembly where matters of the greatest possible moment to general medicine and to sanitation were decided, as bishops, generals, and lawyers, and that there were to be found in the medical profession men as distinguished and as high in the social scale as the members of these other professions. He further contended that the services the medical profession had rendered to the community called for such recognition of its most distinguished members as would raise the public status of the profession to a higher level. While feeling that they had a right to look to the State for better appreciation of their worth, he could not but admit that the unsatisfactory public status of the medical profession was in some measure due to the way in which some of its members deported themselves, even where they occupied high professional positions. Men of the stamp to which he referred created an unfavourable impression on the public mind which was not readily effaced, so that in forming an estimate of the profession from a social standpoint the public remembered them and forgot the many polished gentlemen that there were in its ranks. He accordingly exhorted the

students so to order their lives as not only to sustain but to raise the general tone of the profession.

Another reason why the profession did not rise to its proper level in public estimation was the difficulty the public appeared to have in distinguishing between the medical man of the present day and the apothecary of the past. They appeared to consider that the two were much the same, and this erroneous idea was fostered by the circumstance that so many medical men still dispensed their own medicines. He recognised the difficulties that would have to be contended with in many an out-of-the-way part of the country were doctors not to dispense their own medicines; but such cases were in the minority, and the majority of medical men in private practice could discontinue dispensing medicines with the greatest possible benefit to themselves and to the public. The time now spent in doing druggists' work could be utilised to far greater advantage to themselves and to their patients if devoted to reading, to keep themselves informed of the advances that were constantly being made in every branch of medical science; abolition of the practice would help to educate the public to regard the medical man as something superior to a mere vendor of drugs, and would teach them to value him for his advice instead of for his medicine. The inability to appreciate the difference between the medical man of the present day and the apothecary of the past probably accounted, in part, at any rate, for the frequency with which people consulted chemists, and so far did they fail to understand the difference between a qualified medical man and a druggist that it had been recently reported that a coroner and his jury actually accepted the evidence of a chemist as to the cause of death of a clergyman whom he had been attending.

### THE INFLUENCE OF UNIVERSITY COLLEGE ON MEDICAL TEACHING.

He next spoke of the school to which the students had come to receive their medical education, and said that he could do so more freely than would have been possible for many of his colleagues, as in eulogising University College they would have been lauding themselves, in that their brilliant achievements and the achievements of some of their predecessors had done much to place the College in the proud position it now occupied among the medical schools of the metropolis. The influence that University College had had on medical teaching in London was very great. There was not a medical school in the metropolis that had not numbered among its teachers men who had received their education at the College, and an even more widespread influence had been exerted on the medical teaching in this country, in that at various centres out of London where men assembled to receive a medical education the names of University College men were prominent among those whose duty it was to conduct the teaching. The Universities of Oxford and Cambridge were numbered in the list, and, as most of his audience knew, one of the Scotch Universities had comparatively recently secured, in a former student and professor of the College, a man whose name ranked among the first physiologists of the time. The scientific education received at the College was unsurpassed by anything that could be obtained elsewhere in this country, and the spirit of scientific research that was active had led to brilliant achievements by those who had worked there, and by others who had gone forth to prosecute their researches elsewhere.

### THE VALUE OF SCIENTIFIC RESEARCH.

He begged his hearers to cultivate the spirit of scientific inquiry. Every scientific research, if properly conducted, might be expected to disclose some new fact, and this was the only way in which true progress could be made. The medical man was in a peculiarly enviable position, in that most of his researches when crowned with success tended in a more or less direct way to promote the welfare of mankind, some of them indeed being directly concerned with the relief, and others with the prevention of human suffering. Dr. Ferguson's presidential address at the last annual meeting of the British Medical Association was too fresh in his memory, however, to make him unmindful of the fact that inestimable benefits had been conferred on mankind by the discoveries of men who did not belong to the medical profession. It was to men of science that we owed every real fresh advance in medicine. The so-called practical man could do little more than apply and utilise the discoveries of the scientist. In exhorting them to cultivate the spirit of research he did not in the least wish them to neglect the part of their training that would fit them to become practical physicians and surgeons.

A belief prevalent among some people that a man could not be both scientific and practical, and that the cultivation of the one faculty must of necessity be at the expense of the other, he regarded as a great fallacy. Medicine and surgery could only be expected to be advanced by a proper commingling of the scientific and the practical, so that scientific principles might find practical application in the elucidation and treatment of disease. If they required any stronger incentive to induce them to aim at being able some day to advance the science of medicine by their own investigations, let them read of the horrors of surgery in the days before antiseptics were introduced in the treatment of wounds, and compare that picture with what they saw when the time came for them to take up their duties as dressers in the wards of the hospital connected with the college. He would be surprised if the contrast between the two pictures did not stimulate them to emulate the example of men like Pasteur and Lister, even though they felt mere pigmies compared to to those giants. Well might Lord Lister ignore the vituperations of a gang of agitators who, in the face of such an incalculable benefit as he had conferred on his fellow beings, dared to treat him to some of the abuse that they visited on all those who by their researches sought to mitigate the sum total of human suffering.

He expressed the hope that he was addressing some who had completed their medical studies, and who now wished to take up research work, at any rate for a time. The inducements for men to devote their time to scientific work were few, as the scientific spirit was not yet sufficiently alive in this country. Neither the Ministers who controlled the purse-strings of the country, nor private individuals who possessed fortunes that they were anxious to utilise for the public good, had had the scientific education necessary to make them realise that the true way to promote the welfare of the nation was by endowing research. More research scholarships were needed, and more laboratories, where the atmosphere was saturated with the spirit of research and where the directors received emoluments that were sufficient to allow them to give their whole time to the prosecution of their own researches and to the directing of the investigations of others who worked under their supervision. He was not altogether without hope of aid from the State, for although statesmen had not shown that they in the least understood what an incalculable amount of good might be expected from encouraging men to devote their lives to research, the keen interest that His Majesty the King had always taken in scientific matters, and his gracious recognition of the value of research, at no time more clearly expressed than in connection with the recent Congress of Tuberculosis, would, he trusted, lead Ministers to recognise the importance of this question. Meanwhile, he looked with confidence for help through the munificence of private individuals. He had great hopes that the feelings which prompted Lord Iveagh to found the Jenner Institute of Preventive Medicine, and which induced Mr. Andrew Carnegie to give £2,000,000 to the Universities of Scotland, were not wholly wanting in other wealthy men in this country, and that the wonderful foresight and magnificent liberality of these two men would serve to stimulate others to emulate their excellent example.

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## MIDDLESEX HOSPITAL.

By THOMAS HERBERT KELLOCK, M.A., M.D., F.R.C.S.,
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[ABSTRACT.]

### THE RELATIONS BETWEEN HOSPITALS AND THEIR STUDENTS.

MR. KELLOCK, in welcoming the new students, expressed the opinion that rarely of recent years had the prospect in the medical profession been brighter than at the present time;

various causes, amongst them the addition of a year to the length of the curriculum, the substitution of qualified for unqualified assistants, the war in South Africa, the widening fields in the Colonies, and the prospect of better conditions in the army had all had their share in considerably increasing the value of the services of well qualified men. The advantages to the average man of an education at one of the smaller schools were mentioned, chief among them being the comparative ease of obtaining the resident appointments and the great value and recommendation of these in later life.

The main part of the address was devoted to a consideration of the relations between students and the hospitals during the time of their pupilage and afterwards; passing over briefly the time a student passed in the school before commencing practical work in the wards, and mentioning how important it was for a student to make the best use of that time and to learn well work that he was little likely to go back to, and of his getting into a good habit of work, it was mentioned that in the future it might be that the time when a student began his practical work might mean for all, what it now means for those who come from the universities—a first introduction to the hospital. It was easy to forget what past and present students owed to the hospitals. The enormous sums of money contributed to them had enabled them by years of useful work to build up such a reputation that they had become the resort of the poor directly accident or disease came upon them; they could thus place at the disposal of the student a large mass of clinical material, and under the best conditions for studying it. The hospitals provided the funds for acquiring new and expensive apparatus that the progressive medicine and surgery of to-day rendered necessary, and the students got the advantages of this as well as the patients.

What a student could do for the hospital in return was considered. By carefully performing his duties when acting as clerk or dresser, he could not only help himself in acquiring knowledge, but also help in the work of the hospital; it was one important duty of students at all times to be careful of their behaviour and conversation to and in front of the patients, in the wards, outpatient, and casualty departments. Hospital patients and their friends were not only observant but had a propensity for discussion amongst themselves, and the welfare of an institution gained or suffered very much by the behaviour not only of those who had actually to deal with the patients, but of all those who were present, even if they were only onlookers. To learn how to deal with patients was a not unimportant part of a medical education, and very often a man's success or the reverse when he went into practice depended as much on this as on his professional knowledge. At the start men generally had to deal with patients of a class differing little, if at all, from those they had seen at the hospital; it was most important too that he should have at least some experience in the management of children and of the parents who brought them. All this he could learn at the hospital, and in so learning he could be of use to the institution.

The duty of students to their hospital when outside its walls was obvious. Generations of self-respecting and hard-working men had long since dispelled the idea that medical students were necessarily ill-behaved or rowdy, and those of to-day knew very well that by their behaviour and conversation they could bring credit or the reverse on an institution to which they owed so much.

When a man had become qualified and left the hospital to start on the real work of his life, there might still be a bond of union between them, closer than that which connected him to his school or university. He had probably done with the latter altogether, but at the hospital there was always work going on that was of use and interest to a medical man, and if he wanted to spend a few days or weeks brushing up his knowledge, there was one place above all others to which he should go, and that was his old hospital. Students should always make welcome in all departments of the hospital those who had preceded them and had an equal right with themselves to what was to be learned there. A fact that was not without its lesson was that qualified men were often more interested than the student in the treatment of patients, knowing by experience how important this and the rapidity with which they could get their patients well was in practice. A correct diagnosis was the real scientific foundation, but it would not in itself cure the patient, although it was everything in directing the medical man to what was the correct treatment.

There must be something very wrong with a hospital, its staff, or the medical man himself, if he could not find enough and more than enough there to satisfy him when he paid it a visit, and to prevent his having recourse to post-graduate courses and such like, at any rate for ordinary medicine and surgery.

A very important feature in the relations between medical men and the hospitals was the practice of their patients resorting there for advice and treatment. Statistics showed what a large proportion of the population went to the hospitals at some time or another, and the question as to how many of them were depriving medical men of their fees by so doing was a difficult one to decide. The majority of the outpatients, for example, appeared fairly well-to-do, decently dressed, and sufficiently fed; the very poor and the partially starved were decidedly in the minority. Was this because the population on the whole was well-to-do, or was it also because the very poor could not afford to live and be outpatients, but had to go to the infirmaries if they could not be admitted to the hospitals? The opinion was expressed that the patients, as a rule, made no pretence to be worse off than they really were, and that instances of their dressing in shabby clothes to obtain admission were very rare. The causes that brought such people to the hospital were considered; it could hardly be that they saved money by coming, for often their travelling expenses, to say nothing of their time, must be more than a visit to a doctor would cost them. One of these causes was the great confidence the public had in the hospitals and in the potency of the medicines given them there; they thought their ailment was sure to be recognised and the right medicine given them. Many medical men had not acquired the art of gaining their patient's full confidence, and they came to the hospitals only to see if there was anything more than they had been told the matter with them. Often, too, patients would submit at a hospital to a more thorough examination than they had allowed their medical man; in this respect at a hospital they had an advantage, and were sometimes able to discover the cause of an illness, the symptoms of which had for a considerable time resisted treatment. The ways in which medical men and the hospitals could be of mutual assistance were considered, and if at times the relations between them were strained it must be remembered that there were three factors concerned—the hospitals, the medical men, and the patients—and often the tendency of each of them was to blame the others rather than try to remedy the part of the fault which was their own.

It was the duty of the authorities at the hospitals to keep a very watchful eye on their wards, out-patient and special departments, and prevent the admission to them of unsuitable patients. It was quite possible to decline to treat them in such a way as to leave undisturbed the relations between them and their medical men, especially as they very often applied to the hospitals under quite a misapprehension as to the objects of these institutions.

By working together the hospitals and general practitioners could, and probably did, educate their patients and the public generally in such a way as to keep this abuse of the hospitals within fair limits.

## ST. MARY'S HOSPITAL MEDICAL SCHOOL.

By G. William Hill, B.Sc., M.D.Lond.,
Surgeon for Diseases of the Ear, St. Mary's Hospital.

[Abstract.]

### QUACKERY AND SUPERSTITION.

Dr. William Hill commented on the fact that some 2,000 men and women should every year enter on an expensive and extensive course for the purpose of entering a profession that was already overstocked.

It was doubtless a question with many whether these young persons were wise, whether it was really necessary to go to the trouble and expense of a medical education. The

law hindered no one from practising on the credulity of the public. They lived in an age in which there was not only a survival of superstition and a belief in the occult and in quackery of all descriptions, but in an age in which there had been a positive revival of a hysterical form of occultism, a jumble of pseudo-science and irreligion.

Faith-healing, of which so-called Christian Science was the type, was a money-making concern, and a diploma from a college of psychic healing could be obtained after a course of study not extending beyond three weeks, in some circumstances in three days.

Medicine and religion in remote times grew up side by side, and their exposition was in the hands of the same individual—the priest-doctor; a belief in the occult was therefore a factor in each. Even Hippocrates, who was the first to attempt to put medicine on an improved basis, jumbled fact and fiction and fable in his humoral system of pathology. Every physician claimed to be a miracle worker in a small way on the strength of cures effected through the influence of the mind on the body, that was, by suggestion and expectant attention. The reverence of the Greeks for their dead prevented anatomical investigation. The facts and symptoms of disease, though accurately observed by the Greek and Egyptian physicians, were made to fit in with a fantastic pathology such as that of Hippocrates, or with an absurd philosophy like that of Aristotle, and to each of these was added the tincture of occultism inseparable from priestcraft in all times. This morbid influence, which to some extent declined in the time of Galen, began to luxuriate again in the Dark Ages in association with alchemy, astrology, necromancy, and religious superstition. Faith-healing, touching for king's evil, mesmerism, homœopathy, and clairvoyance kept occultism going from the time of the Stuarts to the end of the eighteenth century, and the nineteenth century was remarkable for the revival of the belief in spiritualism, mental telepathy, and "divine healing." Quackery, as represented by fraudulent institutes for the deaf, the sale of ear-drums, and of panaceas for every ailment under heaven, appeared to prosper as of yore, and would continue to do so whilst the majority of mankind were unthinking in medical matters, and unable to throw off the occultism of the nursery. Unfortunately, the supporters of quackery, Christian Science, occultism, and all forms of medical heterodoxy were found as often in the castle as in the cottage.

Religion and theology had nothing whatever to do with the investigation and treatment of disease, nor was prayer recognised as a therapeutic agent for the treatment of organic lesions by orthodox practitioners.

## CHARING CROSS HOSPITAL MEDICAL SCHOOL.

By J. W. Taylor, M.D., M.Sc., F.R.C.S.,
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[Abstract.]

### LIFE AND CHARACTER.

Professor Taylor referred to life as a journey: "The road winds uphill all the way; yes, to the very end"—to life as a fortune, one which may be squandered or spent wisely; and to life as a business, adopting de Tocqueville's definition "Life is not a pleasure or a sorrow, but a grave business which has been entrusted to our charge, and which we have to carry through to an honourable end."

The introductory address would mark to many of his hearers the acceptance of a special career or destiny—the entry on a life work. The manner of following that career would probably be of far greater importance than the making of the choice. In dealing with this point he said, "It will hereafter be of comparatively little importance whether you are a soldier or a sailor, a clergyman, or doctor, or lawyer; but it will matter very much whether you acted as became a man called to the duties and responsibilities of the life you have chosen."

Professor Taylor then spoke of the necessary requirements for successful service: a healthy and well-trained body, a well-educated mind, and a high moral purpose, being essential. Looking back on his own experience of life he passed these under review, considered their relative value, and the instances he could recall of gain or loss resulting from their presence or their absence. Under the head of bodily health he considered, first, lives in which this had contributed very largely to success; and, afterwards, lives which had been ruined by the want of it; especially dwelling on those which by the incurrence of syphilis and alcoholism had come utterly to grief. Under the head of mental acquirements he considered both the studies involved in mental training and the different types or orders of mind engaged as students in the pursuit of knowledge, reviewing the careers of some who had done well, and of others who had disappointed expectations, or failed of the highest in spite of high intellectual gifts.

Under the head of moral purpose or character he spoke of this as being of greatest value; of the gradual perception of its importance as life went on; and of some of the more important of those good qualities which went to form the ideal physician and surgeon, putting in the first place love of truth, then love of one's kind, and then love of service. "But what if we know that we are wanting?" Then Professor Taylor said it was necessary to insist on the gospel of true education, and especially so in these days, when so much nonsense was scattered broadcast on the subject of heredity. "There is no weakness you cannot grow out of if you set your heart upon it; no strength or goodness you may not aspire to and in some measure attain."

Finally, turning from the influence of character on individual life, Professor Taylor considered the influence of character on national life, briefly describing a recent visit to the South of France, where evidences of Roman occupation, architecture, and life were still plentiful and striking, he considered the reasons for the decline and fall of Roman power, tracing it to the decay of national character, and asked whether there might not be similar dangers in the national character of England to-day. He concluded as follows:

"Gentlemen, we have been passing, and are still passing, through a time of 'sifting,' as every time of war must be. Older, and, as I think, purer ideals are again coming to the front. We begin to realise that the 'battle is to the strong,' and that the real wealth of a nation consists not so much in her material prosperity as in the numbers of healthy, upright, and manly lives who can give themselves to her service, and protect her in the hour of need. Such have not been wanting in our recent struggles, men who

> Never turned their backs but marched breast forward,
> Never doubted clouds would break,
> Never dreamed, though right were worsted, wrong would triumph,
> Held, we fall to rise, are baffled to fight better,
> Sleep to wake.

But we want more of these, and of this faith or spirit which ensures the final victory. You, who will be the doctors and advisers of the future generation may do much by steadily honouring and upholding higher ideals of individual, family, and national life, to infuse a new and healthier spirit into the coming age. For it is in the spirit of Browning's epilogue that the hardest tasks are always accomplished, it is in this spirit that a nation may sometimes be born again."

## LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

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### PERSPECTIVE IN MEDICAL EDUCATION.

Dr. Andrewes said: My first and most pleasant duty is to bid a hearty welcome to the newcomers to this medical school, and I trust that you will gain here not only the adequate training in the profession you have chosen which this school is now more than ever fitted to give you, but also a number of firm friendships and pleasant memories which will remain for your whole lives.

I have next to say something to you—not new, indeed, but I hope true—about the methods of medical education, and especially about the value of a rational perspective in your studies. The enthusiasm for work, which I have found even keener amongst women students than amongst men, entails the risk that you may spend time over things that matter little, leaving insufficient space for more vital matters. It should be the main function of your teachers to direct your

energies into the most important channels. No one can in five, or even in fifty, years learn all that one could wish about disease and its prevention and treatment. You have to go on learning all your lives, and a healthy sense of ignorance is a saving grace. But there are three things which you must learn in your five years of medical study. You have to learn how to learn. Then you have to learn as much as you can of those things which are of immediate and cardinal importance, and which will serve as the groundwork for future learning after you commence practice. Lastly, you have to learn how to set forth what you have learned in such a manner as to persuade a Board of Examiners that you are fit and proper persons to be let loose on the public as qualified medical practitioners.

From books and from lectures you may acquire by rote a mass of useful facts, but this is not living knowledge. What you learn from your own observation and experience you will carry with you with an intensity of conviction far exceeding that gained at second hand from reading or attending lectures. For nearly a thousand years during the Middle Ages medical knowledge stood still because people merely read Hippocrates and Galen, and did not observe and experiment for themselves. Modern medicine and modern science date from the time when reverence for tradition was swept away. Nowadays all that we care about is whether a thing is true; we are ready to take the greatest pains to prove or disprove the truth of any given assertion, but we care not who makes it unless it can be shown to be true. Koch is the greatest living bacteriologist, but when the other day he came to London and asserted that human and bovine tuberculosis were not the same thing, we did not bow down and accept the statement. We began to weigh the evidence, and all over the world experiments were started to see whether what Koch had said was true. The female disposition is perhaps more confiding than that of the male, so that you must especially be on your guard against accepting as final all that you see in print or hear from your lecturers. Your laboratory and hospital work will give you opportunity for checking and testing for yourselves a large part of what you are taught, and you will not find that your teachers are annoyed with you for questioning their teaching. You must cultivate your powers of observation, and you will find that making drawings and writing descriptions from actual things or patients will be a valuable help to you.

What you have to learn is largely determined for you by the regulations of the General Medical Council and the Examining Boards, and the examinations you have to pass appear to shut off your studies into a series of watertight compartments. You must not accept this point of view; every stage in your studies is a necessary preliminary to the rest. The pure sciences, physics, chemistry, and biology afford you valuable mental training, but they form also the absolute basis of physiology. Nevertheless you have time only to acquire what is absolutely necessary; you must not wander into even the most fascinating by-paths of pure science. It is difficult, again, to exaggerate the importance of anatomy; but even here there are degrees of importance. The knowledge of anatomy required of the surgeon is something like the topographical knowledge required of the London cabdriver. No cabman can know every by-way in London: there are innumerable alleys down which no cab can drive. But he knows the main arteries of traffic with absolute precision and trusts to his general knowledge of the lie of the land. And in anatomy you have to master the essential and cardinal facts with precision and gain further what general knowledge of the lie of the land you can acquire. Your teachers will emphasise for you the facts which are essential in medicine and surgery.

Physiology must lie at the root of your medical practice. One of the soundest physicians I ever knew, when asked which was the best textbook on medicine, used to reply, *Foster's Physiology*. If your watch keeps erratic time you take it to a watchmaker who understands the exact function of every part of its mechanism and who can so adjust its different actions as to make it again a good timekeeper. So you must try to learn how the different parts of the complex human clock works and act together for that perfect balance which we call "health." Then you will be in a position to understand what may happen when the works go wrong. You have to learn physiology in order to understand pathology, and it will help you in surgery as well as in medicine.

Amongst your final studies pathology must take a foremost place. Diseases are departures from the normal in every sort of direction and to every possible degree; hardly any two cases are exactly alike, and if you have acquired a sound knowledge of pathology you will be in a position to look at each case on its individual merits. The methods by which pathology is studied are precisely those used in other pure sciences —observation and experiment; and it is this science which is placing medicine and surgery on a scientific basis. It is plain that a sound knowledge of disease is an indispensable preliminary to its reasonable treatment. In medicine and surgery, and their various branches, you will have to apply what you have learned to the treatment of living patients, and here the root of the matter is clinical diagnosis. The secret of successful diagnosis lies in painstaking and accurate observation, and in reasonable deductions from the observed facts. Treatment is likely to be successful in proportion to the accuracy of the diagnosis. You will need a sound knowledge of pharmacology, and you will have to acquire manual dexterity in your surgical work; nor must you overlook the details of nursing.

There are also certain mental and moral faculties which your medical education should cultivate. You will need the training in responsibility and confidence which is given by having to meet medical and surgical emergencies. You must be considerate and tender towards your patients, who come to a hospital primarily to be cured, and not that you may learn from them. Never forget that you are women; the feminine character may have its weaknesses in some directions, but in others it has a strength and helpfulness for which the medical profession offers to women an abundant scope for usefulness.

In conclusion, let me say a word about your examinations. In order to pass them you must know your work; but in addition you must be able to show that you know it, and herein lies the art of passing examinations—an art which can be acquired with practice if you are naturally deficient in it. It is the art of exhibiting your wares in a taking style, so that the examiner can see at a glance what you really know. A neat and clearly-written paper may satisfy him, where, with the same amount of knowledge on your part, an ill-written and confused production may result in a plough. You must therefore cultivate the art of serving up your knowledge tastefully as an important subsidiary matter in your medical studies.

## THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

The sixtieth session of the Pharmaceutical Society of Great Britain was opened on October 1st, when the inaugural sessional address was delivered by Dr. Arthur P. Luff, Physician to St. Mary's Hospital, London, and Lecturer on Forensic Medicine in the Medical School.

### Medicine and Pharmacy.

Dr. Luff spoke as follows:

It is twenty-seven years since it was my good fortune to be a student in this school, and I know of no greater honour and no greater pleasure that can be conferred by one's *Alma Mater* than for one of its *alumni* to be entrusted with the duty of delivering this annual address. The occasion is, moreover, a pleasant and an auspicious one, since this year marks the sixtieth anniversary—the diamond jubilee—of the Pharmaceutical Society. I do not propose this afternoon to attempt any historical survey of the progress of the Society during those sixty years, or to detail the immense amount of work performed by it, and the consequent benefits accruing to pharmacy and to the public during that period. Its history, together with a record of its work, was most ably dealt with ten years ago in the inaugural address then given by that Nestor of the presidents of this Society—Michael Carteighe. During the ten years that have elapsed since the date of that address much good work has been done, and many improvements have been effected in the school. In my opinion the most important reform effected during that period

has been the abandonment of the first or preliminary examination, and the requisition from everyone who desires to enter pharmacy of evidence of an education similar to that which every medical student has to produce. It is impossible to over-estimate the far-reaching beneficial results to which this important step must lead. It will raise the level of pharmacy more than any other reform that has ever been effected by this Society. I also offer my congratulations on two events which have occurred during the past decade. The first is the invitation which the Pharmaceutical Society received from the General Medical Council to co-operate in the revision of the *British Pharmacopœia*, a responsible task which it is peculiarly qualified to perform, and for the carrying out of which the research laboratory of this institution has been very appropriately utilised. The second very satisfactory event which deserves special mention is the recognition of this school by the reconstituted University of London, the professors of the school being now extramural teachers of the University. The founding of the Northway Butt Scholarship for research work in pharmacy, as distinct from chemistry, is another important event for which the Society is indebted to the liberality and foresight of Mr. Butt. I regret that I am not able to place on record the adoption of a compulsory curriculum of study for the minor examination—such a curriculum is, in my opinion, sorely needed, and, I believe it would go far to reduce the very high percentage of rejections in that examination.

Pharmacy is a many-sided calling, and therein undoubtedly lies one of its chief attractions. The scientific part of the work of an educated pharmacist does not consist solely in the dispensing of prescriptions, important as that branch of his calling undoubtedly is. We hold him to be the responsible person for the preparation of drugs in suitable forms, and for the standardisation of those preparations, while the public have to look to him not only as providing means for the restoration of their health, but also have to rely upon him for the safety of their lives. It is but a pessimistic and ignorant view to take that no great amount or skill or of scientific training is required to put together the ingredients of a prescription. Such a view does not recognise, and perhaps the public do not adequately appreciate the great safeguard to them that the educated pharmacist is. It is no very uncommon matter for the medical man when hurriedly writing a prescription to make such a mistake in the dose of an important ingredient that disastrous results to the patient would follow the taking of the medicine if so dispensed; but now, happily, through the far-sighted wisdom primarily of this Society, and subsequently of the Legislature, the public safety is efficiently provided for. The pharmacist detects the error in the prescription and communicates with the medical man. The public are unaware of the means by which their health, and possibly their lives, have been protected; but how many of my professional brethren have to gratefully and thankfully acknowledge the tact, courtesy, and delicacy with which their attention is drawn to their mistakes by their pharmaceutical *confrères*. Again, it is no very uncommon matter for a prescription to contain such incompatible ingredients that perhaps the active and, maybe, poisonous principle of the medicine is wholly precipitated, and so might possibly be entirely taken in the last dose, with results which would probably be disastrous to the patient; but here, again, the skilled pharmacist acts as a guardian of the public safety by detecting and pointing out the error that has been committed.

But unfortunately both medical men and the public are tending to heavily handicap the pharmacist in that important function, and are in great part rendering him impotent to safeguard the public health, for there is a growing practice which is rapidly threatening to undermine to a great extent what I consider to be the skilled and rational employment of therapeutic agents in the treatment of disease. I refer to the too general use of powerful drugs in compressed forms and of proprietary preparations. I do not for one moment wish to suggest that the various forms of compressed drugs have not their proper uses—undoubtedly lamellæ and tabellæ of active principles in the hands of medical men are most convenient and useful for hypodermic and occasionally for other forms of administration—but it is the ready facility with which powerful drugs prepared in this form are obtained by the public which constitutes so grave a danger, a facility which is responsible to a great extent for the increased practice of self-drugging—a state of affairs which I am afraid has been brought about by these preparations being so indiscriminately and so largely prescribed by medical men. To take one instance: it is to the ease with which such preparations can be purchased by the public that, in my opinion, is due in great measure to the prevalence of the comparatively modern and excessively pernicious evil—the cocaine habit. Equally bad is the use of some of the proprietary preparations which are so speciously puffed, with the samples and laudatory advertisements of which the members of my profession are so profusely deluged, tempting them, as they do, to the slovenly and enervating habit of thinking that the writing of an order for such a preparation is the writing of a prescription, and gradually rendering them absolutely impotent to exercise the true art of prescribing. Many of the preparations of that kind are, I believe, productive of infinitely more harm than the quack medicines which to some extent they are replacing, for the former are frequently powerful, and in unskilled hands dangerous, drugs, whilst the latter, though generally worthless, are to a great extent innocuous.

The fact is that the art of prescribing, that is, of ordering suitable remedies in suitable forms for the treatment of morbid conditions, is declining: it shows a fatal tendency to be usurped by the manufacturer. I am bound to confess that the primary cause of this evil is due, not to any imperfections in the training of pharmacists to scientifically compound and dispense medicines, but to the altogether inadequate attention which is given to the teaching of prescribing at so many of our large hospitals and medical schools. I merely refer to this phase of the subject here, as I intend shortly to deal with it in another place, and before those who are more closely interested in the preservation of this important branch of a medical man's duties. What a travesty on the art of prescribing it is for a patient to bring to a pharmacist a so-called prescription which merely orders, say No. 4 mixture (Smith and Jones)! Can anything be more degrading than to compel a scientifically trained pharmacist to be the mere medium for the handing over of such a proprietary article? Can anything be more degrading than the spectacle of a duly qualified medical man lowering himself to be the mere exploiter of a puffed and probably over-vaunted preparation? It appears to me that such so-called prescribing is nearly on a par with the dosing that is carried out on those ships which carry a medicine-chest but have no surgeon on board. The bottles of medicine in the chest are duly numbered, and with them is a book describing the symptoms which require a dose of such and such a numbered mixture. Many of you may remember the tale of the ship's steward who went to the captain stating that a sailor had some symptoms which, according to the book, required a dose of No. 9 mixture, but that No. 9 bottle was empty. "That does not matter," said the captain, who in the emergency almost rose to the level of a modern prescriber, "give him equal parts of No. 4 and No. 5."

In connection with my special department of practice as a physician I am brought in contact with only too many cases of self-drugging by the public, and only too frequently witness the evils arising therefrom. Especially does one see this in connection with the worship of that absurd fetish, the uric acid diathesis, and the consequent pandering to this modern craze by the unscrupulous vaunters of the many puffed remedies which are warranted to sweep away what is but a natural constituent of the human body. That absurd craze is fostered, if not frequently originated, by the specious advertisements of drugs warranted to cure ills ignorantly, if not falsely, attributed to uric acid. The consequence is that it is now no uncommon sight at a dinner party to see neurotic young men dropping their lithia tabellæ into the glass of champagne to counteract what they imagine to be its acidity, lacking as they do in both the gastric vigour to deal with the wine and the moral vigour to abstain from it. I venture to sound a note of warning which I trust may reach beyond these walls to the ear of the public as to the danger incurred in dosing themselves with these powerful drugs—a danger which is in no sense an imaginary one, since we too often see the pernicious effects resulting from their indiscri-

minate use, sometimes, alas! when it is too late to remedy the evil results.

Dr. Luff concluded his address with a few words of welcome, counsel, and encouragement to the new students of the school.

## THE REPRESSION OF CRIME.

The annual report of the Commissioners of Prisons and Directors of Convict Prisons for the year ending March 31st, 1901, contains fresh evidences of a steady decrease in crime throughout the country. How far the enlightened administration of our criminal law and the penal system by which it is enforced in our convict and local prisons may have contributed to these happy results may be matter of opinion, but as to the results themselves there can be no doubt.

### Decrease of Serious Crime.

From a table given on p. 7 of the report it is seen that the number of prisoners committed to prison on indictment has steadily declined since 1880—28.8 per cent. absolutely, and 41.8 per cent. relatively to population, while the number of those committed summarily has decreased 5 per cent. absolutely, and 22.5 per cent. relatively to population. The indictment cases, it will be remembered, mean serious crime, and in this class the improvement is most marked. At the Prison Congress in Brussels in 1900, at which twenty-seven countries were represented, M. Joseph Astor, of the Société Générale des Prisons, in a paper which he contributed, said of England:

> She has the rare good fortune of seeing her crime diminish. She probably owes this happy state of things, on the one hand, to that easy detachment from the native soil which is a distinctive trait of the British character—that is, to the emigration of the turbulent and dangerous individualities; on the other hand, it is largely due no doubt to the marvellous development in the work of the preservation of young waifs and strays by private charitable effort.

### Juvenile Crime and Habitual Criminals.

While allowing some weight to his first point, more may probably be given to his second as a determining factor in the reduction of crime. The views of our own prison authorities, which are reiterated in this report, that crime is best kept in check by looking after the youthful offender, commended themselves to the unanimous sense of the Congress. Too much attention has been lavished hitherto on the reclamation of the professional or habitual criminal, known in France as a *cheval de retour*, who looks on prison as his home, and on whom no penal system that has yet been devised exercises any appreciable deterrent influence. Experience shows that he is but a later development of the youthful offender, whom a succession of short sentences in his earlier years has familiarised with prison life. An interesting analysis of the careers of 50 members of this class, who were lately discharged from convict prisons, is given in the report. Of the 50, 11 were under 15 years of age on first conviction, and 23 under 21, so that no fewer than 34 of them began their criminal career at an age when they might have been rescued from a life of crime. With facts like these before them the Prison Commissioners conclude that it is every day becoming more evident that it is by "concentrating attention and care on those who are young enough to be amenable to good influences" that the great problem of the repression of crime can be satisfactorily solved. This is the keynote of their policy.

Juvenile offenders under 16 are already segregated and treated specially; and, as a further development, it is proposed to set apart a portion of Borstal Convict Prison for special reformatory treatment of prisoners between the ages of 16 and 21, the rules for this class having been recently laid before Parliament. The essential features of the treatment will be careful classification, technical instruction, supervised work with rewards for industry and good conduct, physical drill, and general education, with encouragements to the reading of useful literature.

By these means, coupled with the reformatory and industrial school systems at present in force, it is hoped to check crime in the young, and so cut off the supply of recruits for the habitual criminal class, which is at present the despair of penologists in this and other countries.

### Health of Prisoners.

The general statistics show that the health of prisoners is well studied and the death-rate low—about half what it was twenty years ago. Of 129 convicted prisoners certified insane in local prisons during the year, 91 were insane on reception, and of the remaining 38 the symptoms of insanity appeared in 21 cases within a month of their reception.

### Crime and Mental Deficiency.

It is somewhat singular that a general decrease in crime and in the criminal population should be attended with a relative increase in the numbers of criminals who show signs of mental deficiency. The male convicts in this class already amount, according to the official statistics, to 4 per cent. of the whole, and the number is increasing. This in itself is not an unhealthy sign if we bear in mind that a corresponding amount of the serious crimes committed are due to some mental defect on the part of the offender. The fact, however, that so many weak-minded folk—object lessons for the most part in parental neglect—should gravitate into prison is an unpleasant social feature of our times. From a psychologist's point of view this class is "out of place" in a penal establishment, but as their mental condition is one that falls short of certifiable insanity, and as their criminal ways and habits render them very undesirable inmates for any other institution than an asylum for criminal imbeciles, a class of institution which does not yet exist in this country, imprisonment seems to be the only way of dealing with them. When they are free aid societies cannot help them to employment, their friends for the most part disown them, the police cannot keep them out of trouble, and magistrates have no other course open to them than to commit them to prison. Here they are an unruly class for whom ordinary penal discipline is unsuited. They resent the restraints of confinement, ignore prison rules, detest order and system, quarrel with each other in association, and are generally hard to manage. The Secretary of State has now, under the advice of the Prisons Board, sanctioned new rules for their treatment. These rules include segregation, better supervision under a special staff, suitable work with rewards for industry, milder penalties for breaches of rules, and various privileges to be gained by good conduct.

These regulations, it is hoped, will achieve good results and help to fit them to some extent for freedom. At present they seem a very unpromising section of the prison population, who return time after time, and derive neither warning nor benefit from their sentences.

At the Brussels Conference it seemed to be the general opinion of the delegates that a good penal system is not one which by its severity deters the recidivist from a wish to return, but is so contrived as to prevent the first offender from becoming a recidivist. These are evidently the lines on which our prison authorities are at present so successfully administering their prisons.

## THE PREVENTION OF TUBERCULOSIS.

### Ireland.

The Local Government Board for Ireland has recently issued a memorandum on the subject of tuberculosis to all county borough councils, urban and rural district councils, Boards of Guardians, medical officers of workhouses, and dispensary medical officers. The excessive mortality in Ireland from tuberculosis, half as much again as that from all the zymotic diseases together, emphasises the need for special precautions against the disease. Particular attention is drawn to certain resolutions adopted at the recent Congress, pointing out the influence of overcrowding, defective ventilation, and general insanitation in predisposing to and spreading the disease, the agency of sputum in conveying the virus, and the value of sanatoria in diminishing the extent of the disease.

The Board, considering that the most necessary step to commence with is to educate the people in the best means of guarding against the disease, has issued a leaflet entitled "Information for Consumptive People and Those who Live with Them." This leaflet, after stating that consumption is preventable and curable, details a few simple precautions—what *not* to do—and gives some advice also on what to do to prevent consumption. The matter contained in the leaflet is very

similar to the printed directions issued by most consumption hospitals to out-patients. A large poster setting forth the precautions for preventing the spread of consumption is also issued.

These directions, officially issued by the Local Government Board in Ireland, should carry more weight than if they emanated from some private source, as there can be no doubt that the step taken by the Board is a wise and useful one.

MORPETH.

A useful means of interesting people in the subject of the spread of tuberculosis and of disseminating information on the relation of this disease to the food supply has recently been tried at Morpeth. Councillor G. S. Heatley, M.R.C.V.S., gave a lecture in the Town Hall on Tuberculosis in its relation to the Meat and Milk Supply, at which the Medical Officer of Health, Dr. William Clarkson, presided. The lecturer drew attention to the danger from the weekly cattle market, which in his opinion was a probable cause for the propagation of tuberculosis. He gave authority for refusing to accept Koch's affirmation that human and cattle tuberculosis were not intercommunicable, and urged that diseased meat should be destroyed, and that precautions should be taken to avoid the sale of tuberculous milk.

THE ORIGIN OF THE OPEN-AIR TREATMENT.

The *Morning Post* from time to time devotes a column to discoveries and inventions, in which many interesting new scientific facts are noted. In the issue of September 25th one paragraph in this column commenced as follows: "Open-air sanatoria, now becoming so generally popular in Europe, are said to owe their origin to Miss Florence Nightingale. This notable woman first cured M. Benet, of Mentone, by advising him to pass the better part of his time out of doors, to reject medicines, and to apply himself to a liberal diet." It is more difficult to recognise the well-known name of Dr. Henry Bennet in the French name as given above than it is to believe that Miss Florence Nightingale had some influence in the spread of hygienic knowledge which has led to the sanatorium treatment of consumption.

## ANTIPLAGUE INOCULATION WORK IN INDIA.[1]

THE documents, of which a list is subpended, have been forwarded to us, and as we gave some prominence[2] in February of last year to the preliminary report of the India Plague Commission, which criticised the work with Haffkine's fluid somewhat adversely, it now becomes us to attempt to give a general idea of the contents of the present reports. They are astonishingly bulky. Very few of the writers of reports appear to possess the faculty of presenting a clear summary of their main results, and the task of summarising them here is therefore both difficult and precarious.

THE ATTITUDE OF THE PEOPLE.

It must be confessed that the touches of incident are much more interesting than the statistics, and this being so we turn first to the report of Miss Alice Corthorn, M.B., in which this human element of interest comes more prominently to the surface than in any other report. In some districts great difficulty was experienced in persuading people to be inoculated, but at Gadag and Betigeri they were extraordinarily ready to submit. Eager crowds beset Miss Corthorn's bullock coach, and, on learning her destination, set off at a quick pace to secure a good place at the inoculation table. Large numbers had to be turned away daily "from sheer physical inability on my part to get through them, and day after day I used to recognise faces which I had seen before in like circumstances, battling through the crowds to get up to the inoculation table." On several occasions she had to pack up and depart on account of the dangerous surging of the crowd, unwilling to await their turn. On three occasions she inoculated over 900 a day; one day doing as many as 987. Among the reasons for this exceptional readiness were the facts that plague was fatally prevalent in neighbouring districts in direct communication with Gadag and Betegeri; a large part of the population were engaged in weaving, and would have suffered loss if they had been obliged to leave their homes; whereas freedom from segregation was promised for all twice-inoculated contacts. Not the least important factor was, in Miss Corthorn's opinion, the consideration that "the people of Gadag crowded to be inoculated because they had to pay for it" (2 annas each).

INFLUENCE OF INOCULATION ON SPREAD.

Mr. Anderson, reporting on the Ahmednagar statistics, states that the lesson of the figures is that plague can be effectively stamped out by inoculation; plague seems like a forest fire, it sweeps along destroying dry grass and bushes, and is stayed when it comes to the green. The inoculated are the green bushes; so long as they are few in number some are caught up in the general conflagration, but as soon as the inoculated are in the majority, the fire dies down and splutters out.

Very often statistics on a small scale are more convincing than more bulky statistics. There is an instance of this in Mr. Hudson's report relating to the Ahmednagar statistics. In an American mission station 270 native Christians were inoculated early, and exposed to infection for over a month without any ill-effect, although dead rats and squirrels were found in the compound.

INOCULATION *v.* SANITARY MEASURES.

This subject is discussed in Major Sarkies's report. As regards applicability, he points out that both inoculation and general sanitary measures are more easily applicable under certain conditions, as in a large town during the rainy season. For these reasons he classifies the three measures in order of applicability as (1) general sanitary measures; (2) inoculation; (3) evacuation.

As to the relative importance of these measures, under the heading "Sanitary Measures" are included disinfection and the removal of contacts and of patients, and these are clearly indispensable. Voluntary evacuation occurs to a large extent during an epidemic. Inoculation has been found by Major Sarkies to be more valuable than evacuation, but the illustration of this which he gives is neither clearly stated nor convincing. He makes a comparison between incidence of attack among inoculated and uninoculated, although the inoculation (of 249 persons out of 1,000) in the first outbreak described by him did not begin until a week after the outbreak of the epidemic. Clearly the incidence of attacks and deaths among the inoculated and uninoculated after the date when inoculation was done should be compared. By adopting any other plan, the rule of *non cæteris paribus* is ignored. The disease might have been more infective in the early stages, or only picked men might have submitted to inoculation in the later stages.

INOCULATION INVESTIGATION COMMITTEE.

By a resolution of the Government of Bombay, a Committee of four was appointed in May, 1900, to investigate "the degree to which inoculation can be held to have been instrumental in mitigating the epidemic of plague in each town visited by it." The first difficulty this Committee experienced was as to the accuracy of the statistics. The actual figures of attacks and deaths from plague had been systematically recorded and returned week by week in each place. But considerable difficulty had at times been experienced in determining whether such persons had really been inoculated or not.

The most important source of error was the fact that all persons inoculated more than six months previously had been accounted for as if uninoculated. This administrative measure introduced serious fallacies into the statistics. An uncertain proportion of cases of plague escaped detection, and the relative number of inoculated and uninoculated among them is unknown. The migration of vagrants introduced another fallacy. Allowing for these possible fallacies, the statistics given in this report appear clearly to indicate the value of inoculation in diminishing the proportion of attacks and deaths among the inoculated, and to a less extent diminishing the fatality among those attacked.

In an appendix to this report Mr. Haffkine answers the criticisms to his method of stating statistics advanced by the Indian Plague Commission. This method was discussed in

[1] Report on Antiplague Inoculation Work in the Dharwar District, by Alice M. Corthorn, M.B., Medical Officer on Plague Duty. Statistics of Inoculation round about Nagar, by F. G. H. Anderson, I.C.S. Ahmednagar Inoculation Statistics, by C. Hudson, I.C.S. Statistics of Inoculations with Haffkine's Antiplague Vaccine, 1897-1900, compiled from records in the Plague Department of the Secretariat and the Plague Research Laboratory, Bombay, by Major W. B. Bannerman, M.D., B.Sc. Inoculation Plague Operations in Ahmednagar and District during the Epidemic of 1899, by Major C. J. Sarkies, M.D., C.M. Report of the Dharwar Inoculation Investigation Committee. Report of W. M. Haffkine, C.I.E., to the Secretary to Government.

[2] BRITISH MEDICAL JOURNAL, 1900, vol. i, pp. 461 and 455.

these columns in February of last year, and we need not further discuss it here, except to say that Mr. Haffkine's statement of results, properly understood, is quite legitimate. Thus at Gadag the deaths among uninoculated were 21.03, and among inoculated 1.28 per 1,000 of population. This means that in incidence of deaths from plague the superiority of inoculated over uninoculated was $100-\frac{12.8 \times 100}{21.03} = 93.91$ per cent.

Statistics of Inoculations, 1897-1900.

The most complete account of plague statistics is given by Major W. B. Bannerman, M.D. The following examples will suffice to indicate the general character of the results obtained: Among the Parsee population of Daman, 306 in number, 5 deaths occurred. Had the inoculated who were living in precisely the same social conditions as the uninoculated been affected in the same proportion, they should have had 38 deaths instead of only 1, a difference of 97.4 per cent. In gaol populations strikingly good results were obtained.

## THE GENERAL MEDICAL COUNCIL ELECTION.

### THE APPROACHING ELECTION OF DIRECT REPRESENTATIVES.

Dr. Glover's Address.

Fellow Practitioners of England and Wales,—

In offering myself again for re-election as one of your direct representatives on the General Medical Council I have two duties to discharge.

I have to thank you, as I do most heartily, for a long period of confidence and support on your part, shown in three elections; and I have to explain the principles on which I have endeavoured to act as your representative in the General Council of Medical Education and Registration, and to which I shall adhere in the event of your again electing me.

The recent address which I delivered at Cheltenham, and my action for years in the Council, make it unnecessary for me to do more than very briefly indicate my views.

First, I have endeavoured to the best of my ability, in respect of medical education, to make it, above all things, clinical and practical, basing it on as high a standard of preliminary education as the state of our general education will permit.

Secondly, I have laboured to maintain the purity of the *Register*, and while not lightly using the disciplinary power of the Council, have not hesitated to apply it in the case of those who knowingly and persistently violate those traditions of the profession which are necessary for its honour and for the protection of the public.

Thirdly, in regard to legislation to regulate the work of midwives, I have kept in view the following objects:

(*a*) Stopping the practice of "Sarah Gamps"—as we stop the sale of poisons.

(*b*) Limiting the practice of midwives to simple cases, and placing them under strict compulsion to call for the assistance of regular medical practitioners on the occurrence of any irregularity or abnormality in mother or child.

(*c*) Providing in respect of the training and certification of the work of midwives a Board to do, with the sanction of the law, what is now done without legal authority by the Obstetrical Society of London and by other more or less irregular bodies.

(*d*) As midwives are not medical practitioners, and can only safely work under the supervision of such practitioners, I can only support legislation for recognising them on condition that it secures the above objects by making the Midwives Board to consist chiefly of medical men and subjecting its regulations to the approval of the General Medical Council.

Fourthly, I have consistently supported motions for an increase in the number of direct representatives on the Council, and I should support any reasonable proposals for reducing the size of the Council.

Fifthly, the General Medical Council consists predominantly of the representatives of twenty or more qualified bodies, these bodies having their own functions and responsibilities. It is very creditable to the Council and the bodies that so little friction has hitherto arisen between them and it. At present the best friends of medical education see with concern and regret a sharp difference between the Royal Colleges of England and the Council. I shall only say here that while ready to support the just claims of the Council to the loyal support of the individual bodies, I am in favour of avoiding any course which necessitates a reference to the Privy Council, which by law has the last word in any dispute between the General Medical Council and the individual examining bodies, believing it to be in the interest of the Council and of the profession to settle differences without such reference.

Sixthly, I am strongly in favour of the formation of a Conciliation Board to remove friction between the medical profession and Friendly Societies; to improve the position of the medical officers, and gradually to raise the conception of the value of medical service to the working classes. As acting Chairman of a Committee on these subjects I have been much impressed with the disposition of the leaders of the Friendly Societies to meet the just complaints of the medical profession; and I may add that the same impression has been made on my colleagues in the General Medical Council and on the Committee of the Council of the British Medical Association. It will be a misfortune if the tendency in some quarters to disparage this movement should receive any sanction at the coming election of direct representatives.

Seventhly, the finances of the Council require the consideration of its members, the expenditure of late years having largely exceeded the income. Serious proposals have been made for raising a huge income for the Council by a yearly registration fee. I am strongly opposed to such a suggestion, and believe it to be unnecessary. The difficulty, in my judgment, is to be met rather by reducing the expenditure of the Council in obvious ways than by exacting what would be an annual tax from the profession. Medical politics may seem unimportant to many practitioners. The large abstention of voters in past elections of direct representatives gives some colour to that impression. But medical politics deeply affect the welfare and reputation of the profession and are entitled to the consideration of all who are in any way responsible for the composition of the General Medical Council.

Such are the views on which I have acted as the direct representative of the practitioners of England and Wales in the General Medical Council. Though conscious of many errors and defects, I appeal with some confidence to the broad and generous judgment of the profession, and remain your obedient servant,

James Grey Glover, M.D.

25, Highbury Place, N., Sept. 30th.

### PROPOSED MEETING OF CANDIDATES IN NEWCASTLE.

Dr. Alfred Cox (Cotfield House, Gateshead) writes:

Acting as Secretary *pro tem.*, I beg to inform you that a meeting of the profession in the North is being arranged in connection with the approaching election to the General Medical Council. The County of Durham Medical Union has taken the initiative, and has already been promised the co-operation of the North of England Branch of the British Medical Association, the Northumberland and Newcastle Medical Association, and the Gateshead Medical Association. There is no doubt that the other associations in the district will assist in making the meeting large and representative. In order to save the time of candidates for the Council and to give them an opportunity of easily reaching as large a number as possible of the electors it is proposed to ask every candidate to come to the proposed meeting, which will be arranged for a date in October. This meeting, which will be held in Newcastle, will offer to each candidate an opportunity to state his views and make the personal acquaintance of a section of the electors. The meeting will, we hope, have the effect of increasing the interest in the election and of ensuring a good local vote.

The number of students enrolled in the Medical Institute for Women, St. Petersburg, for the winter session is 257.

## THE FIFTH INTERNATIONAL CONGRESS OF PHYSIOLOGISTS AT TURIN.

On Wednesday, September 18th, a noteworthy tribute of international esteem was paid to Sir Michael Foster, Secretary of the Royal Society, K.C.B., M.P., on the occasion of his resigning the office of President of the Congress of Physiologists to his successor, Professor Angelo Mosso. This consisted in the presentation of a plaque, of which we reproduce the inscription, granting him the unique distinction of Honorary Perpetual President of the Congress.

### Official Business.

At the final general meeting held on September 21st it was unanimously resolved that the next Congress be held in Brussels in 1904 under the Presidency of Professor Heger, one of the original founders of the International Association of Physiologists. Certain changes were also made on the International Committee, which now consists of the following representatives: The President, Bohr (Copenhagen), Bowditch (Boston), Cybulski (Krakow), Foster (Cambridge), Heger (Brussels), Heusen (Kiel), Kessel (Heidelberg), Luciani (Rome), Mislawsky (Kasan), Prevost (Geneva), Richet (Paris). Professor Dastre of Paris was also nominated General Secretary for the French language instead of Professor Fredericq of Liége, who has resigned. For the first time Italian has been added to the official languages of the Congress, which now amount to four, namely, English, French, German, and Italian. Professor Fano of Florence was appointed General Secretary for the Italian language. Professors Sherrington and Grützner remain Secretaries for the English and German languages respectively.

### Control of Recording Apparatus.

An important report was also presented by Professor Marey on behalf of the International Commission for the control of physiological recording apparatus relating to the progress which has been achieved since the first establishment of the Commission three years ago at Cambridge. The Commission has now been taken under the control of the International Association of Academies and, thanks to the liberality of the French Government, has been provided with a separate building in the Parc au Princes, Paris. The question of funds for maintenance has not yet been definitely settled, but it is understood that these will in part also be furnished by the French Government. Other countries will, however, be expected to contribute. Recommendations made to the Commission by Professor Waller concerning the questions of galvanometry and galvanography, and by Professor Kronecker concerning the subject of chronography and the establishment of a museum of scientific apparatus were also laid upon the table.

### Laboratory on Monte Rosa.

It had been announced on the first day of the Congress by the President that a laboratory had been erected on the summit of Monte Rosa for the purpose of studying the physiological influences of living at high altitudes. The expense had been generously borne by Queen Margherita, Dowager Queen of Italy, and telegrams of gratitude had been sent from the Congress to Her Majesty and to the Minister of Public Instruction. It was also proposed that the observatory be made an international one; and, following upon this, on the last day of the Congress, a resolution was passed requesting the International Association of Academies to appoint a Committee to report upon the best method of attaining this result.

Apart from the scientific communications made at the Congress in Turin, of which we hope shortly to give some account, there can be little doubt that, as a result of its deliberations, two important international institutions have been definitely established which promise to have widereaching effects.

*(To be continued.)*

CONVENTUS PHYSIOLOGORUM INTERNATIONALIS QUINTUS HOC DIE VIRUM ILLUSTRISSIMUM SENIOREM

MICHAELEM FOSTER

PRAESIDEM HONORARIUM PERPETUUM CONVENTUUM PHYSIOLOGICORUM INTERNATIONALIUM CREAVIT

CONVENTUS NOSTRI GRAVISSIMI VIRI DOCTI AUCTORITATE EIUSDEMQUE STUDIO STRENUO INTEGRE FLORENT FOSTERO CATALOGUM SCIENTIARUM NATURALIUM QUO NEMO IAM NATURAE INDAGATOR CARERE POTEST DEBEMUS GRATIA SIT HONOSQUE PROPUGNATORI NOSTRO! NOMINE CONVENTUUM PHYSIOLOGICORUM INTERNATIONALIUM CONVENTUS QUINTI PRAESES

ANGELUS MOSSO.

AUGUSTAE TAURINORUM AD XV KAL. OCT. A. MCMI.

The Serum Treatment of Yellow Fever.—According to the *Boston Medical and Surgical Journal*, Dr. Caldas, the Brazilian physician who invented the serum which he asserts is a cure for yellow fever, reached New York from Cuba on September 5th, and inveighed angrily against the United States authorities of Havana, declaring that when he went there he was told that he could treat four persons bitten by infected mosquitos, but that later the arrangement was changed, so that he was able to treat only one. Pauline Alonzo, a patient whom he "immunised" with his serum, was bitten by the same mosquitos which caused the death of Miss Maas and others, but Dr. Caldas contended that the mosquitos did not carry yellow fever to the victims, but a putrid infection which caused their deaths. His patient sickened as did the others, but recovered. "The theory that mosquitos are the only transmitting medium of yellow fever is a scientific brag," he said, "and is not based on any fact proved by experience." Dr. Caldas has been ordered home by his Government to conduct a series of experiments at Rio de Janeiro, and sailed on the steamship *Buffon* on the same day that he reached New York. On the following day word was received from Havana that the Commision, under the presidency of Major Havard, appointed to investigate the Caldas serum had officially reported that the attempt made by Dr. Caldas to immunise an individual against yellow fever by means of the vaccine serum prepared by him had failed, and recommended that further experiments with the serum be discontinued.

Wigan Medical Society.—At a meeting of this Society, held on September 26th, Mr. Wm. Latham, President, in the chair, it was resolved to vote a sum of money for the publication of a catalogue of the medical works in the reference department of the Wigan Free Library, each member to receive a copy. Dr. Arthur J. Wallace, of Liverpool University College, read a paper on Some Lesser Gynæcological Ailments. An interesting discussion followed, in which the President and Messrs. T. M. Angior, Blair Rees, McElliott, White, and Brady took part.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

# British Medical Journal.

SATURDAY, OCTOBER 5TH, 1901.

## THE MEDICAL SERVICE OF THE ARMY.

It would almost appear as though, in choosing the time for making public Mr. Brodrick's scheme for the reorganisation of the army medical services, the War Office had counted on securing a favourable verdict from the general press before the medical journals had time to express an opinion. It may be well, therefore, to remind Mr. Brodrick that this is not a matter in regard to which popular suffrage is of any value. His scheme may be blessed with a universal chorus of praise from the press, but the approval of the whole British public will count for nothing if the scheme fails to find acceptance from the medical profession. We think this reminder of what we should have deemed a sufficiently obvious fact not altogether superfluous, since the *Times* states, with the Podsnapian finality characteristic of it, that medical officers of the army "can hardly expect any further concessions from the State." Our contemporary seems to speak with the responsibility of inspiration; therefore—although in medical matters it is not always happily inspired—it may be worth while to point out that there is not, nor has there ever been, any question of "concessions." The question has all along been as to the conditions under which members of the medical profession would consent to serve in the army, and the whole trouble has arisen from the fact that one Secretary of State after another has misconceived the situation. Misled by their advisers, military and official, they have assumed that these conditions could be dictated by them, whereas the medical profession is in a position to demand its own terms. From this fatal official blindness even the present "heaven-born" Secretary of State was at one time by no means free, as was shown by certain jests, as pondérous as they were impolitic, about the titles of medical officers. That this defect in his mental vision has been thoroughly removed even now we are not prepared to say; but we have much pleasure in acknowledging that he has produced a scheme which, on the whole, shows evidence of an honest desire to meet at once the requirements of the public service and the legitimate demands of the medical profession. That the desire has found imperfect fulfilment is scarcely to be wondered at in view of the complexity of the problem with which Mr. Brodrick had to deal, and the manifold practical difficulties that stand in the way of its satisfactory solution. But the mere fact that the desire to deal with these difficulties in a fair spirit has made itself manifest in official quarters deserves recognition.

The scheme, though a somewhat lengthy document, is in fact little more than a rough ground plan; the details in nearly every direction have yet to be thought out, and until this has been done no final opinion on its merits can be formed. The foundation stone of the structure is the recommendation that "the Royal Army Medical Corps shall be under the supervision" of an Advisory Board consisting of the Director-General, the Deputy Director-General, two officers of the corps possessing special knowledge, one of sanitation, the other of tropical diseases; two civilian physicians, and two civilian surgeons appointed by the Crown on the representation of the Secretary of State: one representative of the War Office, and one of the India Office, with the Matron-in-Chief of the Nursing Service for matters relating to that service. Of this Board the Director-General is to be chairman; in his absence the Deputy Director-General will preside. The Board is to meet once a fortnight, the necessary quorum being three, one of whom must be a civilian: the chairman is to have a casting vote. This arrangement seems to secure for the head of the medical service a just preponderance in the counsels of the Board; while in the persons of the civilian members it provides for an adequate representation of the most advanced medical and surgical thought and experience of the day. The fossilisation of the civilian element is guarded against by the provision that the physicians and surgeons selected should be in touch with one of the great teaching hospitals, and should not have declined too far into the vale of years. The constitution of the Advisory Board from a theoretical point of view could scarcely be improved upon; but if it is to succeed as a piece of administrative machinery the right men must be chosen to work it. In particular much will depend on the civilian element whose function it will mainly be to keep the organisation of the medical services up to the highest standard of professional knowledge. It is a pity therefore that the remuneration of the civilian members of the Board has been fixed at so low a figure as practically to exclude all but London men. It is only fair that Scotland and Ireland, which supply so large a proportion of officers, and the English and Welsh provincial schools, should from time to time be represented on the Board.

We are a little puzzled as to what is to be the exact position of the Board. The Royal Army Medical Corps is to be under its "supervision," and this supervision is to extend over the whole range of the medical administration of the army, from the admission of candidates to the preparations for the care of the sick and wounded in a great war. It is, however, according to the terms of the scheme only an "Advisory" Board: and as far as we can see there is nothing to prevent a masterful Secretary of State from treating its recommendations with the contempt that some of his predecessors have shown for the recommendations of Royal Commissions, and even for Royal Warrants. Is it intended that the Advisory Board shall be something more than a Greek chorus offering opinions on things in general which it has no power to enforce? We have it on the great authority of Lord Wolseley that medical advice is a good thing—when it is

asked for. We presume the Secretary of State means to ask for advice, since he has provided himself with the means of obtaining it; but what guarantee is there that he will take it? And what will happen if he refuses to take it? A Member of Parliament may indeed call upon a Minister for an explanation as Owen Glendower called spirits from the vasty deep; but will he get anything more satisfactory than an official answer?

A weak Board would be as clay in the hands of the Secretary of State, and as the selection of its members mainly rests with him, he could secure a sufficient degree of plasticity. Except such honour as may be supposed to attach to the position, there is no particular inducement to men of the kind needed to join the Board. Just at present army reform is fashionable, but this will soon pass away, and we imagine that Mr. Brodrick will then not find it so easy as may probably be the case now to find capable men willing to discharge an onerous duty to the State practically without reward.

But even with an ideal Advisory Board the fact remains that it has no power of making itself felt. It can "advise" and "supervise," but it cannot enforce. The want of any means of ensuring that the recommendations of the Advisory Board shall at any rate receive the careful consideration of the Secretary of State is a fundamental defect in the scheme. It could easily be remedied, however, by giving the Director-General *ex-officio* a seat on the Army Board, his authority being, of course, limited to medical affairs. Until this is done the Royal Army Medical Corps will never hold the position in the army that should rightfully belong to it, and the good intentions displayed in the Report will remain barren of fruit.

We can only glance here at one or two other points in the scheme which seems to us open to criticism. The full text of the report of the Committee, together with that of the report on Army nursing, is printed in this issue of the BRITISH MEDICAL JOURNAL, and has been so arranged that it can be detached if desired. We trust that it will be studied by those who take an interest in a subject of great importance. We shall be glad to have their opinions on its clauses and on the measure as a whole.

A point that must strike everyone who knows anything of the needs of the service is the absence of any provision for the strengthening of the corps up to its proper standard. It is indeed provided that the Board shall prepare and submit to the Secretary of State a scheme for the expansion of the Service to meet the needs of war or serious epidemics; but that is another matter. We have shown over and over again that the corps on its peace footing is utterly insufficient for the proper discharge of its duties, and that owing to this cause officers cannot get the amount of leave necessary to enable them to refresh their knowledge, or even to keep them in health. There is no recognition of this fact in the report, and it may perhaps be conjectured that the Committee, composed as it was for the most part of civilians, was led to believe that the service is not undermanned. This is a dangerous delusion. The service cannot do its duty satisfactorily with less than 1,200 officers; at present, with all the strain of a protracted war on its resources, its strength is below 1,000. There are no new men coming in, and, although none are at present allowed to leave, as soon as the war is over most of those who can claim their retirement will do so. How is this vast deficit to be made good?

An effort has been made in the scheme to attract candidates. The entrance examination has been modified in such a way that it will no longer be necessary for a candidate who knows his work to go through the hands of a "coach;" and there is some encouragement to men of the house-surgeon class to enter. Both of these are steps in the right direction, but a serious defect in the scheme is the overburdening of officers with examinations after they have entered the Service. Till he reaches a haven of rest in the rank of lieutenant-colonel, the officer of the Royal Army Medical Corps will in future spend almost as large a proportion of his life in being examined as a Chinese mandarin. If by good luck he can gain three years' acceleration in his promotion, on the other hand, with bad luck, he runs several risks of losing his commission. At this time of day the point need not be laboured that it is not the best men who succeed best at the examination table. The long vista of examinations to be passed is enough to deter many a man who would make a first-rate officer from entering what might not inaptly be designated a Medical Mandarin Corps. Is it certain that even with the higher pay now offered a sufficient number of men of the right sort will be found? We doubt it, for the service has, through the perversity of the War Office, and the slanders of notoriety hunters, got such a bad name that the army will still, we fear, have only the second choice.

The only provision for a reserve is an arrangement by which a man who wishes to leave the service at the end of three years may engage for a period of seven years in the reserve of officers, receiving £25 while so serving. This seems a very precarious reserve to depend upon unless it be assumed that a very large proportion of the men who enter will get tired of the service in three years. Such an assumption appears to show that the Committee itself is a little doubtful of the value of its own scheme. Of what should be the backbone of a reserve, the Militia medical officers, nothing is said beyond a vague reference to a scheme to be drawn up by the Director-General in concert with the Advisory Board "for the due provision of medical aid for the auxiliary forces, Militia, Yeomanry, and Volunteers."

A most important point relative to Indian pay is left so obscure that we cannot flatter ourselves that we have accurately caught its drift. It is stated that "the pay of officers of the Royal Army Medical Corps below the rank of Major, while serving in India, shall be increased so as to bear the same ratio to the above rates [that is, the new rates of pay, see p. 1030] for non-Indian service as at present exists." This appears to mean that the Indian pay is merely to be levelled up so as to maintain the same proportion that now exists between Indian and non-Indian pay. This is not at all what is required. What is wanted is that the pay and allowances of medical officers serving in India shall be increased so as to equalise or make them fairly approximate to the scale of pay received by combatant officers in that country. There is not a word in the scheme to show that the rates of charge pay to be granted apply to India. This is one of the many evidences of civilian handiwork which the report bears on its face. We fear that here and elsewhere the innocence

of the civilians has been beguiled. They have had little or no experience of the wiles of officialdom, and throughout the report they show an engaging but unbusiness-like disposition to trust to the good will and good faith of the authorities. The Indian Government, in particular, has shown itself absolutely unworthy of trust in these matters. It has obstinately refused to grant the demands of medical officers in regard to pay in defiance of all promises and pledges of the War Office, and it will doubtless set this scheme at naught as it has set others, unless a warrant is drawn up in terms which cannot be evaded.

It has been impossible here to do more than deal with a few of the principal points in the scheme. Much remains for future consideration, in particular Professor Ogston's memorandum critising the shortcomings of the scheme, more especially in relation to sanitation. Detailed criticism of other points, also, is at present impossible, as in many of the most vital parts of the scheme—for example, the remedy for the undermanned condition of the service, the scope and subjects of the entrance examination, the hospitals and schools where medical officers are to prepare for their examinations, the constitution and organisation of the Military Hospital and Medical Staff College, the establishment of which is recommended—there are as yet no details to criticise. Although, as we have said, we believe that Mr. Brodrick has approached his task in a spirit of conciliation towards the medical profession, his rule is after all only temporary. But the War Office is permanent, and a long experience has taught us a profound distrust of all its works and ways. Till a scheme of reorganisation of the Army Medical Services, complete in every detail, is before us we can only advise young men to think twice, and even three times, before they enter a service in which official promises have, constantly and systematically, been broken, and even Royal Warrants have been treated as dead letters.

## THE OUTLOOK AS TO SMALL-POX.

The tendency to spread in London which small-pox is manifesting at the present time necessarily leads to consideration of the question whether there is reason for anticipating a widespread prevalence of this disease throughout the country. It is now thirty years since an epidemic of small-pox caused in one year in England and Wales more than 23,000 deaths, of which nearly 8,000 deaths occurred in London. In the thirty years antecedent to the year 1871 the greatest number of deaths occurred in 1838, when over 16,000 deaths from small-pox occurred in England and Wales, the population then being approximately 14,000,000, compared with 23,000,000 in 1871. The epidemic at the close of the decennium 1831-40 extended practically over three or four years the number of deaths from small-pox in the last two years of the decennium being in round numbers 9,000 and 10,000 respectively. There is, therefore, reason for thinking that the period may have arrived when small-pox will become more generally prevalent, and that the increased tendency to spread, which is obvious in London at the present time, is due to a quality of disease which recurs after some thirty or more years. Other points in the present prevalence deserving of notice are that a certain proportion of hæmorrhagic cases is being met with, that, in at any rate some of these cases, infection has been received from abroad, and that the outbreak began in the summer, when, as a rule, small-pox does not usually exhibit the same power of diffusion as it does in the early months of the year.

In our last issue we published an interesting table showing that small-pox has been prevalent in Paris during the last eighteen months, the maximum number of cases being notified, and the maximum number of deaths occurring in the twenty-third week of the present year (week ending June 8th),, when there were 145 cases notified and 24 deaths. Last year small-pox caused 448 deaths in New Orleans, 264 in St. Petersburg, 211 in Paris, and 76 in Moscow, and recent weekly returns of the Registrar-General show that deaths are continuing to occur in the two Russian cities, while as many as 68 deaths occurred in New York in the month of August. In England, with the exception of London, the record is more satisfactory, no death from small-pox having been registered in any of the thirty-three large towns other than London since the week ending July 13th. The number of notified cases in recent weeks is, moreover, so far as can be known, but few, although the effects of the recent cases in London may be expected shortly to be seen outside the London area. As yet, however, the vagrant class has not been especially attacked, and, indeed, we understand that cases have only exceptionally occurred among those persons whose migrations usually lead to general diffusion. Whether the experience of the next few weeks will necessitate a different statement time only can show, but we know that a number of cases have occurred among hop-pickers in Sussex. It is probable enough that the infection was derived from the London cases. At the end of last week large numbers of hop-pickers returned to London, where many of them will at once enter the common lodging-houses. If the wanderers who frequent these places of accommodation are largely attacked the disease may be carried to different parts of the country, where sooner or later the effects of their presence will be made evident.

Without knowledge of the age of the persons who have been attacked, and of the condition of these persons in respect of vaccination, it is impossible to draw conclusions from the Paris figures as to the virulence of the disease in that city; but it is interesting to note that in the figures supplied by our correspondent the case-mortality appears to have been about 14 per cent. during the period to which these figures relate. In the Homerton and Stockwell hospitals in London in 1871 the case-mortality was about 19 per cent. The number of cases which have occurred in the metropolis during the last few weeks do not afford a large basis for the calculation of rates, but so far as can be seen at present, the case-mortality in London approaches more closely to that of the Paris cases than the London (hospital) cases of 1871. For the purpose of comparing the case-mortality of the present time with that of an earlier period more precise data are however needed.

In the recent debate at the London School Board a letter from Mr. Wynter Blyth was read giving the results of examination of a number of children attending schools in St. Marylebone, the arms of 678 school children had been examined and it was found that as large a pro-

portion as 387 children were unvaccinated. If this proportion of unvaccinated children were the same in other parts of London, there can be no question that there would be a great risk of considerable loss of life among the younger members of the community should small-pox continue to make progress in London. It is, however, difficult to believe that this is the case, for the proportion of children who during recent years are "unaccounted for" in respect of vaccination, does not lend support to this view, although it is undoubtedly high. The action of the London School Board in giving opportunity for the examination of children in their schools may be expected to do much to lessen the risk which already exists, and the Board are to be congratulated on the wisdom they have shown in the decision at which they have arrived.

If we are correct in thinking that we have now arrived at a time when small-pox may be expected to possess a greater power of diffusion than during recent years, it does not follow that the disease will attain any such prevalence as in 1871 and antecedent years. If we take London as an example we know that one large cause of diffusion, the presence of small-pox hospitals in the midst of the population has been removed, while excellent machinery exists for the speedy removal of recognised cases of small-pox from homes in which the disease appears. Antecedent to the year 1871 cases of small-pox were largely retained in London, either in their own homes or in public institutions, where their influence was no doubt manifested, and, further, there was no system of notification to bring to the knowledge of the authorities those cases which came under the observation of medical practitioners. These differences between the epidemic period of thirty years ago and the present time must be reckoned as important factors in determining the extent which the present prevalence will reach, and while as a set-off against these conditions there is undoubtedly the additions for some years to the unvaccinated juvenile population the balance must be largely on the side of safety. If the action of the London School Board is followed, as we may hope it will be by the greater protection of children against small-pox, this result is more likely to be attained.

In the meantime it is undoubtedly well that every family should consider how far each member is protected by vaccination against possible infection. The system of notification of infectious disease will not suffice to bring to light all the cases of small-pox which occur, and especially is there risk of the milder cases of small-pox being regarded as chicken-pox. Against dangers due to errors of this sort there is only one safeguard, and hence the immunity of a number of people from small-pox during the next few years will depend upon the extent to which they take advantage of the present time and secure that immunity by vaccination.

## MR. BERNARD SHAW ON SMALL-POX PREVENTION.

That there is no more difficult social problem than the housing of the poor is very generally admitted, but if any doubt remains on the point, a consideration of the case of Mr. G. Bernard Shaw, socialist, journalist, and playwright, should go far to dispel it. In a long letter to the *Times* of September 21st, and in a speech to the St. Pancras Board of Guardians, he displays a curious and interesting disturbance of mental equilibrium. On the housing question he feels that the world of London is out of joint, and that, what with the natural difficulties of the subject, a scandalous neglect of duty by the Local Government Board, and the stupidity of the constituencies—apparently including that which he represents—no proper progress is being made in the setting of it right.

The ostensible subject of his letter to the *Times* is small-pox in St. Pancras. In that district there are overcrowded tenements, aboveground and underground, and there is a threatened epidemic of variola. The preventive, according to Mr. Shaw, is simplicity itself. "As a matter of fact, no special precautions are needed. What is needed is simply to carry out the existing law"—the law, that is, regarding the closing and demolition of insanitary houses. This is "the only chance" of preventing a small-pox epidemic. And though the neglect "has been accumulating at compound interest since 1866," the work is to be overtaken "in a single winter," the epidemic meanwhile apparently agreeing to stay its ravages. But Mr. Shaw sees a difficulty in the way. "If the local authority carries out the law it must turn numbers of these poor people into the streets," and "from the popular point of view such a proceeding is so harsh and ruthless that a popularly-elected body simply will not face it. . . . ." Being a member of such a body, and apparently attaching importance to his "popular" election, Mr. Shaw is evidently afraid that these wholesale evictions might have the incidental effect of making him lose his seat, and, having some inkling of the value of his services to the metropolis, he naturally wants to save it from that additional disaster.

It is here especially that he falls foul of the Local Government Board. That is a body which, it seems, neglects its duty so disgracefully that Mr. Shaw admits that in his own case "it is impossible. . . . to speak or write calmly" about its delinquencies. This confession goes some way to account for the incoherences of his anathema, and the publication of the particular grievance which he has at present against the Board completes the explanation. "The problem would be simplified if the Local Government Board would do its duty and leave us no alternative but to carry out the law whether our overcrowded constituents like it or not." In short, though he is not unwilling to "turn numbers of poor people into the streets," he fears that in doing so he and his colleagues would municipally be turned into the street, and to avert that calamity he implores the Local Government Board to compel him and them to carry out these unpopular proceedings, that, he takes it, being "just what the Local Government is for." Of course it is. Anyone who knows the Act of Parliament by which the Board was brought into existence must be aware that it is there set plainly down in so many words that the first and main duty of the Board is to act as cat to any monkey that wants to have chestnuts pulled out of the fire. And the Board won't do it! Oh, cursed spite!

Not only does the Whitehall Board fail miserably in its duty towards Mr. Shaw and his seat, but it actually proposes and even urges a means of small-pox prevention which does not involve any evictions. It wants people to

get vaccinated and revaccinated, and this notwithstanding that Mr. Shaw himself, with certain marks on his arm which certified him vaccinated, took small-pox in 1881. Besides, "vaccination did not prevent the disastrous epidemic of 1871 in St. Pancras." That, Mr. Shaw says, is a "cast-iron fact," which has to be firmly held in view. May we point out to him another fact? Neither turning poor people in crowds into the streets, nor providing sanitary houses for them, prevented the 1871 epidemic. But if by chance he is here able "to speak or write calmly," his reply will no doubt be that crowds were not turned out and houses were not provided. If so, will he retain his calmness long enough to observe that that is exactly the answer which applies to vaccination and revaccination in 1871? His cast-iron fact is a cast-iron fallacy. It was the people who were not vaccinated and revaccinated who died of small-pox in 1871, and now as then small-pox will find its victims among the population who do not accept the protection which is offered to them. Those who merely have marks sufficient "to certify them vaccinated persons," and do not choose to renew their protection, will suffer in their measure, and will add to the numbers who, like Mr. Shaw, have been attacked by and recovered from small-pox, and so are in a position to revile, if they are only foolish enough, the means which probably saved them from death. Those, on the other hand, who straightway make their protection complete by immediate vaccination or revaccination can then defy small-pox either in St. Pancras or elsewhere. They can, for instance, go down to the hospital ships and act as attendants or nurses, and dwell in an atmosphere surcharged with the most virulent variolous poison, and they will live and breathe and eat and sleep there in safety. Like the Hebrew children they will pass back and forward through the fiery furnace, and will emerge without the very smell of fire on their garments. This is what has happened in every epidemic since Jenner taught us how to control the pestilence, and this will happen again in 1901.

With regard to vaccination and revaccination we are indeed in the happy position of being able to prophesy because we know, and because the question will once more be tested by cast-iron facts. Mr. Shaw, on the other hand, is able to prophesy because he does not know, though he does know this, that his theory will not be tested. God forbid that we should decry the value of good house accommodation, but there is no proof that though St. Pancras were built anew to-morrow the small-pox virus would thereby lose or be unable to exercise its infective power. The truth is that Mr. Shaw is making what we cannot but regard as a disingenuous use of the present recrudescence of small-pox. He has in the past failed to bring about by fair means that revolution in house accommodation which is his aim, and he now condescends to means which are not fair. His action is an apt illustration of his own statement that "once the cry is raised of 'something must be done' people become reckless of what the something is."

The argumentative strait to which he is reduced is apparent when he tells the Borough Council that in the health report "they would find that with the appearance of small-pox the death-rate went down." He either means here that small-pox lowers the general death-rate, or he does not. If the latter why does he raise the point? If the former, why does he want to interfere with small-pox? Does he not wish the death-rate to go down? Why should he turn poor people out of their homes in order to destroy a death-diminishing agency? He also goes on to say that they had had fifteen fatal cases of small-pox in St. Pancras, of whom eight were vaccinated and seven were not, and that at the School Board a statement was submitted giving a similar proportion; and then he adds that "vaccination with respect to small-pox made no difference whatever." Needless to say, it is ridiculous to base any conclusion on such meagre facts; but, supposing that nine-tenths of the present population of St. Pancras have been vaccinated and one-tenth not, the fact that the nine-tenths yield only about the same number of fatal cases of small-pox as the one-tenth proves to Mr. Shaw that vaccination makes no difference! This childish incompetence to apprehend the very elements of statistical teaching is comically emphasised by the naive self-appreciation (to put it mildly) which Mr. Shaw shows when he goes on immediately to say that "the question has been much confused by medical men and others who knew nothing whatever about the science of statistics!" Here at least Mr. Shaw is free from blame. As a statistician he is really too futile to be able to confuse the question in any mind but his own.

The motive of his present action is to be found in these words of his letter, "Terrible as epidemics are, they are the golden opportunities of the sanitary reformer." That is so, but such opportunities are to be used, not abused, and it is a serious abuse of the present outbreak either to decry vaccination in the hope of hastening a reform in housing, or to promise that St. Pancras if rehoused will be free from small-pox. With Mr. Shaw as a social reformer we have much sympathy, and his co-operation on right lines will be heartily welcomed, but, unless in so far as it may be mischievous, his present attitude merits no attention excepting as indicating how utterly wrong a good man may go when he begins to use illegitimate and unworthy means to achieve a legitimate and worthy object.

## THE MEDICAL SERVICE OF THE ROYAL NAVY.

In the British Medical Journal of September 7th and 14th, as on former occasions, we drew attention to the great and increasing dissatisfaction existing among the medical officers of the navy, both in the senior and junior ranks, and instanced several causes of the same. The *Times* of September 30th, in its leading article on the new scheme for the reorganisation of the army medical services, remarks: "The majority of the suggestions seem, indeed, to be so excellent that it may be hoped that they will be taken into consideration by the Admiralty, with such modifications as may be necessary for the improvement of the medical service of the navy, and for the removal of difficulties or grievances which have arisen in connection with it." These difficulties and grievances are illustrated by the failure of the naval medical department to recruit a sufficiency of medical candidates, and we have endeavoured to summarise numerous representations which we have received from naval medical officers. The recent notification in the *Gazette* of the appointment by nomination of a surgeon to Haslar Hospital for instruction is an official indication of the failure to secure candidates for the senior service by competition as has

been the rule for more than a quarter of a century past. History once more repeats itself, and reform originates in the army medical service. The senior service must of necessity be "levelled up," the source of candidates being identical for the navy, army, and Indian medical services. Some writers suggest that the naval medical service is boycotted at the medical schools. We have no reason to think such is the case, but qualified medical men contemplating joining the navy, on obtaining from the Admiralty the terms offered, quickly discover that they cannot secure their "market price" in these days, and on inquiry from their acquaintances or friends in the service the information they receive must often help to deter them from entering. There has never been any desire among naval medical officers to obtain executive titles such as admiral or commander, while those of captain or lieutenant would be erroneous, confusing and misunderstood in questions of relative rank with the sister service. Our attention has been drawn to the subject of "medical guards," which permit the medical officer of one ship, when others are in company at an anchorage, to be responsible for attendance on accidents and emergencies in all during the ordinary leave hours of the day, such arrangement being at the option of the senior officer present and not so far an Admiralty regulation. Another point demanding attention is that it would appear that naval, unlike army, medical officers are not considered competent to decide on the physical fitness of men for further service, but an executive officer is associated with them as President of the Board of Survey; some recognise their inability to determine such questions, while others, we are told, take a different view, however absurd this may appear.

## THE CARNEGIE TRUST FOR THE SCOTTISH UNIVERSITIES.

THE Executive Committee of the Carnegie Trust met on September 30th in their Chambers, 2, St. Andrew Square, Edinburgh. Lord Elgin presided, and there were present: Lord Kinnear, Sir Henry E. Roscoe, Mr. Thomas Shaw, K.C., M.P.; the Lord Provost of Edinburgh, Professor Sir William Turner, representing the University of Edinburgh; Professor Matthew Hay, representing the University of Aberdeen; Mr. John Ross, treasurer; and Mr. William S. McCormick, secretary. Apologies for absence were intimated from Lord Balfour of Burleigh (who had been summoned to Balmoral), and from the Lord Provost of Glasgow (who has gone to America). The appointment of Mr. William S. McCormick as secretary was intimated to the meeting. The Treasurer reported that the bonds had now been received from America, and had been lodged in the bank. He also made a statement of income. A Finance Committee was appointed, and standing orders adopted for the regulation of the business of the Committee. The Executive Committee then proceeded to consider a report by a subcommittee on the applications lodged by students for payment of class-fees for the winter session of 1901 to 1902. The various questions emerging from that report were dealt with by the Executive Committee, and subcommittee were instructed to give effect to the decisions arrived at with a view to sending answers to the applicants, and to carrying out the other arrangements for the payment of fees. It had been represented to the Committee that, as this was the first year of the existence of the Trust, there was a possibility that students might not have been made sufficiently aware of the last day of receiving applications as originally fixed for September 14th, therefore the Committee resolved to entertain applications that might be lodged up to Tuesday, October 15th, when the list will be finally closed for the winter session. It is expected that the secretary will be in a position to communicate the decision of the Committee on the applications received in the course of the next two weeks. Applications from various public bodies were reported, but, except so far as these related to the payment of students' fees, the Committee resolved to postpone consideration of them for the present.

## BERI-BERI AND ARSENICAL NEURITIS.

IT will be remembered that at the time when the outbreak of neuritis traced to arsenical contamination of beer was first observed at the end of last year, the similarity of the symptoms in many of the cases to beri-beri was pointed out. Major Ronald Ross and Dr. Ernest Reynolds both suggested at that time that some of the cases diagnosed as beri-beri in the East might have an arsenical origin. The paper by these two observers, published in our columns this week, carries the matter a step further. It shows that chronic arsenical poisoning in the tropics can present symptoms so closely resembling those of beri-beri as to leave experienced physicians in doubt until the diagnosis is established by the discovery of considerable quantities of arsenic in the hair. The causes of peripheral neuritis are numerous; some we know, others can only be guessed at. More especially is there doubt with regard to the many forms of neuritis occurring in the tropics. That some of those which have hitherto been attributed to beri-beri and to malaria are attributable to arsenical poisoning is now seen to be possible. The question then arises what proportion of cases of this class occurring in the tropics are due to chronic arsenical poisoning; and it is one which clearly calls for a thorough examination. We venture to think that an inquiry should be undertaken by the Colonial Office, as its solution is of the highest importance to the tropical colonies of the British Empire; but that beri-beri is always due to arsenical poisoning is another proposition altogether. Such a hypothesis would not explain the seasonal prevalence of epidemic beri-beri: its peculiar limitations to certain houses, ships, or gaols; its introduction into hitherto immune communities; the sudden development of certain cases and their rapidly fatal issue without gastro-intestinal symptoms; the extensive œdema in some epidemics; and a number of other clinical features. The complete, or almost complete, absence of trophic skin lesions in beri-beri has been testified to by so many acute and competent observers enjoying ample opportunities that it must be accepted. If keratosis, pigmentation, and other lesions of the skin were of frequent occurrence in beri-beri, it seems strange that they should not have been remarked long ago in the hospitals of Java, the Malay Peninsula, and Japan, where not hundreds but thousands of cases are annually under close and prolonged observation. Nevertheless, the hint conveyed by the interesting paper of Surgeon-Major Ronald Ross and Dr. Ernest Reynolds will serve a good end, if in attempting to arrive at the cause of cases of tropical neuritis in the future the possibility of arsenical poisoning be kept in view.

## RESIGNATION OF PROFESSOR PURSER, OF DUBLIN UNIVERSITY.

THE announcement will be received alike with surprise and regret that Dr. Purser, King's Professor of the Institutes of Medicine in the School of Physic, Trinity College, Dublin, has decided to retire from the position which he has filled with such conspicuous ability for the past twenty-seven years. Professor Purser's decision has been arrived at not on account of ill health or failing energy, but as we understand in order that with the increased laboratory accommodation which the Board of Trinity College has provided for the teaching of physiology and histology, his successor may have the advantage of equipping the laboratory and organising the work on the more extended basis. It will be remembered that in 1899, on the completion of the twenty-fifth year of his professorship, Dr. Purser's past pupils, "wishing to permanently record their appreciation of him as a teacher, their respect

for him as a scientist and their regard for him as a friend," founded "The John Mallet Purser Medal," which is awarded yearly in the School of Physic to the candidate who obtains the highest marks in physiology and histology at the Half M.B. Examination. The election of his successor rests with the President and Fellows of the Royal College of Physicians of Ireland. This chair carries with it a physiciancy to Sir Patrick Dun's Hospital, so that Dr. Purser's services will be lost to that institution —a serious loss indeed. We understand that Dr. Purser is willing to act as *locum tenens* during the three months which must necessarily elapse before his successor can be appointed. In other words, an election to the vacated post could not take place until the beginning of the new year. It is said that some difficulty may be experienced in securing a physiologist who would also be able to undertake clinical work in Sir Patrick Dun's Hospital, but that difficulty can be overcome by the appointment of a substitute to do the clinical part of the professorial duties.

## THE HOUSES OF THE POOR AS AFFECTING PAUPERISM.

At a recent Poor-law Conference, Dr. J. Lloyd Roberts, of Colwyn Bay, read a suggestive paper on this subject. The poor of whom he speaks are that class of people from which the pauper class is recruited. Assuming that the poor receive a "living wage," and that they are not allowed to be pauperised by that indiscriminating charity which is the nursery of pauperism, their first desideratum is education as to the method of spending their wage to the best advantage. The poor, unfortunately, deal in the dearest market, and education in domestic and social economy is needed to prevent this. The ordinary labourer's house is inimical to both health and morality. Alcoholism is favoured, if not produced, by the depressing and debilitating circumstances of the home life of the poor, and the close connection between phthisis and overcrowding is well known. Dr. Roberts draws a striking contrast between insanity and consumption. In North Wales 708 insane persons are provided and cared for by hospital treatment, while there are 1,748 suffering from consumption who are quite unprovided for in any reasonable way. The remedies consist in education and efficient sanitary administration. In every elementary school elementary hygiene should be taught, and this teaching should include the important problem of how to spend to the best advantage the weekly wage brought home on the Saturday nights. The apportionment between the butcher, the grocer, the milkman, the clothier, the landlord, etc., are matters on which there should be exact teaching, taking examples from different incomes; not forgetting the necessity of an apportionment for the savings bank against the "rainy day." Efficient sanitary administration involves the removal of the difficulties involved in the overlapping of the functions of the sanitary and Poor-law authorities. Apparently the Boards of Guardians can only administer to pauperism, their duty being to ensure that no person shall die of starvation or from want of medical or other attendance. They do not, as a rule, help to prevent pauperism by providing for the treatment of phthisical patients when the breadwinner of the family has not yet "come upon the rates." Clearly co-ordination is required. Either the Boards of Guardians should act, or the task should be handed over to local sanitary authorities, so that prevention and cure of preventable and curable diseases may work hand in hand.

## SCARLET FEVER AND MILK.

The report by Dr. Bryett upon the outbreak of scarlet fever in Shoreditch during April and May of this year shows very clearly some of the dangers and difficulties which arise as to the result of absence of control over our food supplies. On April 30th seven cases of scarlet fever were notified to the Medical Officer of Health. Inquiries made the same afternoon elicited the fact that six of the seven patients lived in houses supplied with the same milk. Further inquiry showed, also, that there had been an unusual number of scarlet fever cases in the adjacent portion of Bethnal Green, and that the houses in which these cases occurred were served by the same milkman. The milk, being suspected, was traced to the wholesale vendor, and hence to the farms from which his supply came; the result was that at one of the farms situated in Staffordshire Dr. Hamer found some cases of throat illness suggestive of scarlet fever. This milk was stopped on May 4th, and on May 11th the number of notifications suddenly fell to one-half. Dr. Bryett gives a series of interesting tables showing the number of cases and the milk supply during the two periods, first, when the infected milk was being consumed, and secondly, when that milk was withdrawn. During the twenty days—April 22nd to May 11th—129 cases out of 170 notified consumed the milk; during the subsequent twenty days 12 cases out of 52 notified drank the milk (now free from the infected milk) from the same vendor. Ten deaths occurred, 8 among those who had been supplied with the infected milk. Dr. Bryett calls attention to the absence of regulations concerning the supply of milk. Quickly as the source of the epidemic was traced, there can be no doubt that many of these cases might have been prevented had retailers known the farms from which their milk was supplied. It would, of course, be most undesirable to make any regulations which would really hamper the milk vendors, but the suggestion that has often been made, that each milk vendor, whether wholesale or retail, should keep an account of the source of each day's supply, could not be considered as an unjustifiable interference with the vendor. Such a regulation would probably be sufficient to enable the medical officers to prevent many cases of infectious disease, and thereby save many lives to the community.

## INFANTILE MORTALITY AT HULL.

The subcommittee appointed by the City Council of Hull to investigate the causes of the diarrhœa amongst the infant population of that city is to be congratulated upon the satisfactory way in which it has discharged its duty. Its report, which is now under the consideration of the Sanitary Committee, bears ample testimony to the thoroughness and ability with which it has marshalled the facts bearing upon the prevalence of the disease, and to the exercise of a very sound judgment in arriving at the recommendations which it brings forward. It is not surprising that the mean death-rate from diarrhœa for the past ten years for the city of Hull should be the fourth highest among the thirty-three great towns, in view of what the Committee has to say with reference to the unwholesome surroundings among which many of the poor exist in that city. Foul air and dirt, leading to the contamination of milk or other food, give rise to diarrhœa (especially when climatic conditions are favourable to the activity of the specific organism), and polluted soil has been shown to play a most important part in promoting the disease. It is not to be wondered at that the disease should be rife in a city with 11,000 houses in which the dejecta have to be carried from a privy at the rear through a living room to the collecting cart; where 24,000 privies exist which do not comply with the by-laws; where many miles of defective drainage and sewerage are allowed to pollute the soil, and where there is a failure to properly attend to the cleansing of the street gullies and to sufficiently scavenge and water the thoroughfares. The recommendations which the subcommittee has made will meet with the approbation of all those who are qualified to criticise them. They include

the gradual abolition of the privies and the substitution of the water carriage system, and it is very properly maintained that as the 11,000 houses in which the excreta have to be carried through the dwelling-room are insanitary, the owner should bear the entire cost of the alteration, but that in other instances the owner should receive some pecuniary assistance out of the city funds—a practice which has been followed in several other cities. The Committee further recommends the systematic flushing of the gullies and the placing of the existing drainage in a sanitary condition. In the poorer districts of all large towns the streets are much used by adults and children for recreation, and the Committee does well to suggest that these should be kept better scavenged and watered. It is safe to predict that the measure will bear good fruit in reducing diarrhœa mortality, for the experience of several towns (more especially that of Leeds) fully justifies the prediction. In order that the public may be in the position of securing milk which may be safely consumed by infants the local authority is also recommended to provide a municipal sterilised milk depôt, on similar lines to those which have already obtained such excellent results in Germany, France, and Denmark, and in this country, notably at St. Helens. The price in preventable mortality which the infants of this country pay for parental ignorance is a heavy one, and more especially to meet this national reproach the Committee favours the appointment of a female sanitary inspector to instruct the poor, and the preparation and distribution of handbills of advice on infant feeding. Dr. Kessen and the members of his Committee have done a great public service in compiling and bringing forward this report, and the Hull City Council will doubtless avail itself of the recommendations, every one of which has already been abundantly proved by actual experience elsewhere to be of real value in lessening the mortality from a disease which is in no small measure preventable. In conclusion, it may be said that the recommendations of the subcommittee relating to the abolition of the privies, the improvement of the drainage, and the better scavenging and watering in the City of Hull would, if adopted, lead not only to a lessening in the mortality from diarrhœa, but must also have the effect of reducing the mortality from many other forms of zymotic disease.

## THE VANISHING ART OF PRESCRIBING.

Dr. Luff, in his address at the opening of the sixtieth session of the Pharmaceutical Society of Great Britain, dealt with the subject of the indiscriminate use of portable pharmaceutical preparations for self-drugging—a matter of increasing importance. Whether there has been any great increase in the habit of taking drugs may be difficult to prove, but there can be no doubt that the kind of drugs now habitually taken by many people on their own responsibility has changed; in place of the simple pills and potions of our grandparents people now habitually keep in their houses, or carry about in their dressing cases, tablets of all sorts of powerful drugs for internal administration, or for use with a hypodermic syringe. The sedative drugs to which the public now so largely resort constitute the chief danger; they are pernicious in two ways. In the first place their temporary effect in relieving pain or discomfort often tends to prevent the sufferer from seeking medical advice until diseased conditions have become thoroughly established; and, in the second place, the pernicious habit of taking narcotic drugs may thus be established. Dr. Luff, indeed, goes so far as to assert that the ease with which compressed drugs can now be purchased by the public is responsible in a great measure for the prevalence of the cocaine habit. He also condemns very strongly the habit of some medical practitioners of prescribing proprietary preparations in place of writing prescriptions containing suitable remedies combined in suitable forms, adapted to each individual case. The decline in the art of prescribing he attributes to the inadequate attention given to the teaching of that art at so many hospitals and medical schools. This we suspect is in part at least due to the overgrown out-patient departments. The number of patients to be seen is so large that to save the time of the physician and dispenser mixtures and pills are prescribed by the title under which they appear in the hospital pharmacopœia. The student soon falls into this habit, carries it with him into private practice, and having no confidence in his own powers to write a palatable prescription of compatible drugs, is apt to welcome somewhat too readily the efforts of the wholesale chemist to supply his deficiencies in this respect. As to this no doubt retail pharmacists have to bear no share of the blame, but with respect to the increased vogue of compressed drugs they cannot be held guiltless. Many of them appear to be very much disposed to push the sale of such preparations to the public on the strength of the instructions on the bottle.

## MEDICAL BULLETINS.

Last Saturday's *Spectator* contained a letter from Sir Dyce Duckworth commenting in rather severe terms upon the communications made to the lay press during the late illness of President McKinley by his medical attendants. Sir Dyce Duckworth expresses the opinion that they were furnished with but slender regard to the decency and respect due to the privacy of the patient, and that many related to matters of treatment which were obviously unfit to be read, much less to be discussed, by the general public. He further speaks of the publication of such bulletins as a new departure and bad example afforded by America. We venture to think that Sir Dyce Duckworth is too severe in his condemnation and historically not quite correct. Everyone must allow that not only was President McKinley, as the Chief Magistrate of the United States, a patient of quite an exceptional position, but its tragic circumstances made the illness of especial interest, while there was an intense and not unnatural desire on the part of the public to be kept accurately informed of the progress of the patient. It is reasonable to make allowances for these circumstances and to recognise that details were justifiable in this case which would ordinarily be withheld. Moreover, is it correct to say that this practice of publishing details of the illnesses of great persons was unknown a few years ago? We possess a letter written in 1891 by an eminent surgeon (now deceased) to Queen Victoria, a man of long experience and ripe judgment, in which, referring to the subject of medical bulletins, he wrote that such statements have always been published by those "who have been in attendance on members of the Royal Family during serious illness. This custom has been observed longer than anyone living can remember, and its maintenance is not dependent on those by whom these bulletins are signed." We have referred to the *Times* for 1830, about the time of the death of George IV, and find that daily bulletins were published and signed by Sir Henry Halford and Sir Matthew Tierney, and that after the King's death fuller details of the illness were given in the obituary notice. While we share the objection to signed medical bulletins, and the appearance in the newspapers of details from the sick rooms of citizens of more or less public importance, we think it must be held that rulers of States and members of reigning families constitute exceptions. It is quite possible that Sir Dyce Duckworth had in his mind particular passages which erred in point of taste, but, speaking generally and from recollection of the official bulletins, we do not think that the physicians and surgeons in attendance upon President McKinley published anything that was unworthy of the medical profession.

## ANTIPLAGUE INOCULATION STATISTICS.

The difficulties of obtaining accurate statistics of the incidence of an epidemic disease, as for instance small-pox among the vaccinated and unvaccinated, are great in this country. It will, therefore, be readily understood that statistics of the incidence of plague among inoculated and uninoculated in India require to be accepted with reserve, although every care has doubtless been exercised in their compilation. This is the initial difficulty we experience in forming a critical opinion on the mass of statistical reports on plague, an attempt to give an idea of which is made on page 994. Very few of these reports summarise their results or set them out in a way conducing to lucidity. The most systematic among them is by Major Bannerman, which gives a fairly complete and clear summary of available statistics from different parts of India. We confess that even this report, doubtless owing to the inherent difficulty of the circumstances of work in India, leaves much to be desired. We should be better contented with a detailed account of half a dozen carefully investigated outbreaks than with a larger mass of undigested or imperfectly digested material. An attempt is made in some of the reports to give the incidence of plague among inoculated and uninoculated at different stages of the epidemic. To enable a true judgment to be reached, this should be done in every possible instance. During the epidemic the number of inoculated is rapidly increasing. As in small-pox outbreaks this introduces a source of error, which can be avoided only by stating the incidence of the disease per 1,000 persons in the inoculated or uninoculated group at different stages of the outbreak. We recognise the almost insuperable difficulties in obtaining in India returns on the lines indicated. The Indian Government might, however, at the least, greatly increase the utility of the reports issued by them by arranging for a summary of each report to be presented along with it, and by securing the compilation of statistics on a uniform plan. The statistics here presented offer valuable evidence of the utility of Haffkine's antiplague vaccine, and we think render it incumbent upon any sanitary authority responsible for the control of an outbreak of plague to avail themselves of this as well as the ordinary measures of prevention and spread of the disease.

## COLONY FOR IMBECILES AND EPILEPTICS.

The Chorlton and Manchester Joint Asylums Committee have purchased a site of 170 acres at Langs, a few miles from Blackburn, upon which to provide for their imbeciles and epileptics. Mr. P. Gordon Smith, the late architect, has been unanimously appointed consulting architect to the Committee, and there is every probability that the buildings will be erected on the colony system, which has been found to work so well in Germany and in America. It is now generally recognised that the provision made for cases of the classes mentioned in this country is insufficient in amount and antiquated in type. The decision of the Chorlton and Manchester Committee therefore is of more than local interest, and the manner in which the plans are worked out will be watched with great interest.

## CANVASSING FOR HOSPITAL APPOINTMENTS.

On many occasions attention has been called to the many inconveniences which attend the system still in vogue at some hospitals, especially in the provinces, of leaving elections to the medical staff to the whole body of governors. This, which has entailed the canvassing of all governors, has led to many regrettable incidents. At Sheffield circumstances have led to a study of the question. We are informed that the authorities at the Royal Infirmary became alive to the inconveniences of the old custom several years ago, and therefore placed the filling up of vacancies as they occurred in the hands of an Elective Committee. Two appointments have already been made through this Committee. It is pleasing to note that the Royal Hospital has just now followed the example set by the infirmary, and it is hoped that both the Jessop Hospital for Women and the Children's Hospital will not be long before they also have similar Elective Committees.

## THE BERI-BERI EXPEDITION

The leadership of the expedition, which, as announced in the British Medical Journal of September 28th, is about to proceed to Christmas Island, there to investigate beri-beri, has been accepted by Mr. H. E. Durham, M.B., F.R.C.S., who will join the ss. *Islander*, belonging to the Christmas Island Phosphate Company, at Port Said on or about October 16th. Mr. Durham will be joined by Mr. P. T. Manson, M.R.C.S., L.R.C.P., son of Dr. Patrick Manson, in two months time. The inquiry will probably extend over a period of twelve months.

## THE DISAPPEARANCE OF THE BIRMINGHAM CONSULTATIVE INSTITUTION.

We are informed that within the last few days the door-plates have been removed from the offices of the Birmingham Consultative Institution, which have remained closed since Dr. Irvine's retirement; and we may hope that this ill-conceived enterprise has been definitely abandoned by its promoters. Something more may be heard of it at the forthcoming meeting of the Hospital Saturday Fund, but any serious attempt to revive it is very improbable. The profession throughout the country has reason to rejoice at the result which has been achieved by the energy and union exhibited by the profession in Birmingham in the face of very powerful opponents.

The Harveian Oration before the Royal College of Physicians will be delivered on St. Luke's Day, October 18th, at 4 P.M., by Dr. Norman Moore.

Lord Brassey's address on the occasion of the opening of the third winter session of the London School of Tropical Medicine will be delivered at the Royal United Service Institution on Wednesday, October 16th, at 4 P.M.

A statue of Pasteur, erected at Arbois, where he spent his childhood and in later years his summer holidays, was, we learn from the *Times*, unveiled on September 29th. M. Decrais, Minister of the Colonies, who delivered a eulogy on Pasteur, stated that MM. Marchoux and Simon, nominated by the Pasteur Institute, and M. Salimbeni, an Italian, were about to be sent to Brazil to study yellow fever.

We regret to learn that Dr. Yellowlees, the physician-superintendent of the Glasgow Royal Asylum, Gartnavel, has resigned that appointment on account of an affection of the eyes. Dr. Yellowlees has been physician-superintendent for twenty-seven years, and in recognition of the valuable services he has rendered to the institution and to the study of insanity the directors have made him an honorary consulting physician.

Annual Medical Service at St. Paul's Cathedral.—The annual medical service at St. Paul's Cathedral will take place on Thursday, October 17th, at 7.30 P.M. As in past years, many members of the medical profession have signified their attention of attending in academical robes. The arrangements of the service this year have been considerably modified, with a view to making it simpler and brighter. The sermon will be preached by the Rev. Canon Gore, and the music rendered by the London Choir Association, the choir being conducted by Dr. H. Walford Davies, Organist of the Temple Church. Admission to the spaces under the dome will be by tickets only.

## OPENING OF THE WINTER SESSION IN THE MEDICAL SCHOOLS.

### ST. BARTHOLOMEW'S HOSPITAL.

OLD STUDENTS' DINNER.

THE annual old students' dinner was held in the great hall of the hospital on Tuesday, October 1st. Mr. W. J. Walsham, surgeon to the hospital, took the chair.

The Chairman proposed "The King and the Royal Family," and in proposing "The Hospital and Medical School" referred to the Act of Parliament allowing the purchase of the City estate of Christ's Hospital, and observed that yet more room would be needed before long. Sir William Church, Bart., replied. The ceremony of presentation of the portrait of Sir Thomas Smith, Bart., to that distinguished surgeon, was joined to the toast in his honour proposed by the Chairman. Sir Thomas Smith returned thanks, and desired that he should be allowed to present the portrait to the hospital, on account of its merits as a work of art from the brush of the Hon. John Collier, whom he toasted. The portrait might then hang in the great hall beside many fine effigies of surgeons and treasurers of the past. Sir Trevor Lawrence, the Treasurer, thanked Sir Thomas Smith for the gift, and Mr. Collier, replying to the toast, expressed his gratification at the honour thus conferred upon him. Mr. Bowlby, C.M.G., proposed "The Army, Navy, and Reserve Forces," coupling with it the names of Sir Henry Norbury, K.C.B., and Colonel Hendley, C.I.E., I.M.S. Sir Lauder Brunton proposed "The Visitors," Professor Clifford Allbutt and Principal Rücker (University of London) replying. Mr. Alfred Willett proposed "The Chairman, who replied. The toast of "The Honorary Secretary," Dr. Herringham, was given by Sir Thomas Smith, and duly acknowledged. The number present, including guests, was 158.

### CHARING CROSS HOSPITAL MEDICAL SCHOOL.

ANNUAL DINNER.

THE annual dinner of the Charing Cross Hospital past and present students took place on October 2nd at the Hotel Cecil with Mr. C. Gibbs in the chair. Professor Taylor, in giving the toast of "The Staff of Charing Cross Hospital and Medical School," added "The Administrative and Nursing Staffs." Mr. J. A. Bloxam, in replying, referred to the increasing number of their students. The toast of "The Visitors" was proposed by Mr. F. C. Wallis, and was acknowledged by Mr. Anthony Bowlby. Dr. Eden gave "The Past and Present Students," Mr. Hopewell Smith answering for the Past, and Mr. G. E. Bellamy for the Present Students.

### ST. GEORGE'S HOSPITAL.

MEDICAL SCHOOL DINNER.

THE annual dinner of the St. George's Hospital Medical School was held at the Whitehall Rooms on October 1st, when 130 guests were present. The chair was occupied by Mr. Haward, Consulting Surgeon to the hospital. The usual loyal toasts, and that of "The Medical School," were proposed by the Chairman. Dr. Isambard Owen, the Dean of the School, responded for the latter. "The Health of Dr. Latham," who had given the introductory address, but was unfortunately prevented from attending the dinner, was proposed by Dr. W. H. Dickinson. Mr. Sheild proposed "The Past and Present Students," the toast being responded to by Dr. F. M. Hawkins and Dr. Ascherson. "The Health of the Governors" was proposed by Mr. Turner, and replied to by Mr. Holmes, the Treasurer of the hospital. The Deputy-Treasurer, Mr. A. W. West, proposed "The Health of the Chairman." The guests included the senior physician and surgeon, Dr. Ewart, and Sir W. H. Bennett, and other members of the acting and consulting staff, together with Surgeon-General Penny, Deputy Inspector-General Woods, M.V.O., Colonel Drake-Brockman, Colonel Wilson, Colonel Street, and Colonel Leuke.

### GUY'S HOSPITAL.

STUDENTS' CLUB DINNER.

THIS, which is usually the initial function of the winter session at Guy's, was served, as in past years, in the dining room of the Students' Club to some ninety guests. In the unavoidable absence of Dr. Pye-Smith, the chair was taken by Dr. F. Taylor, and amongst those present were several members of the staff, and also the Treasurer, Mr. Cosmo Bonsor. An excellent dinner was provided by the club caterer, and the toasts were commendably short. After "The King, Queen, and Royal Family," the Chairman proposed "The Students' Club," and reminded his audience that this was the nineteenth year of its existence. He then proposed "Guy's Hospital," and coupled with it the name of Mr. Cosmo Bonsor, to whom he referred as the nurse of the hospital, for under his fostering care the financial status of Guy's had been brought from a condition of debility to one which augured well for convalescence. Mr. Bonsor in his reply referred to the recent list of South African honours, congratulating Mr. F. E. Denyer on his C.M.G., and Dr. Washbourn and Mr. Freemantle, both of whom were present, on their safe return from duty, and those other Guy's men who had gone forth for their country. Finally he reminded his hearers that the need of Guy's was still great, and that each must endeavour to assist in placing its finances on a firm basis. The Chairman's health was proposed by Dr. French, who succeeds to the post of Medical Registrar. Songs were contributed by Messrs. Claxton, Faulkes, Parrott, and Wacher, and a pleasant and harmonious gathering was brought to a close to the strains of "Auld Lang Syne."

### KING'S COLLEGE HOSPITAL.

AT the Hotel Cecil on October 1st the old students of the Medical Department of King's foregathered to the number of no fewer than 120—a number which more than doubles that of recent years, and is far in excess of any record of the last decade. The chair was taken by Mr. Paul Swain, F.R.C.S., of Plymouth. The evening celebrated the jubilee anniversary of his joining King's, and of those who had been his fellow freshmen fifty years ago there were present to support Messrs. Christopher Heath, Duffin, Propert, Wharton Hood, and Parkinson. The presence of Christopher Heath at the dinner of his old school lent an interest to the message of cordial goodwill to the old students of University College Hospital, who were dining in another hall of the same building under the presidency of Sir Douglas Powell. This was proposed by Sir John Cockburn, M.D., K.C.B. (late Agent-General of South Australia), and a reciprocal greeting was received in the course of the evening and read out by Mr. Heath.

In proposing the toast of the evening, "King's College and King's College Hospital," the Chairman referred to those who laid the foundation of the medical school—Todd, Bowman, Partridge, and Fergusson. The evidence of their teaching was shown in the fact that quite recently the senior surgeons of no fewer than five metropolitan hospitals were all King's men and all old pupils of Fergusson. They were William Rose at King's, Christopher Heath at University College, Lawson at Middlesex, Macnamara at Westminster, and Barrow at the Royal Free. Amongst others who were gone after carrying the reputation of the college to other institutions were Anstie and Alfred Meadows. This reputation of the hospital had been increased and was maintained by the presence amongst them of that great man Lister, and was being furthered by the present distinguished and energetic staff.

In acknowledging the toast, the Principal of the College—the Rev. Dr. Robertson—referred to the great additions which had been made to the efficiency of the school in the past year. The laboratories at the college were now so well equipped that they were attracting students for the Fellowship and other high examinations from many of the metropolitan schools. The dissecting room had been so modernised that a former generation would hardly recognise it. It had been enriched by the gift of the anatomical collection of the late Professor Hughes, who had succumbed to enteric fever contracted while serving his country in South Africa. His widow had not only presented this unique collection, but had endowed its maintenance. It was under the care of Professor Robinson, a teacher of anatomy whom they were fortunate in having attracted. The physiological, pharmacological, and bacteriological laboratories were all that could be desired, and at the head of the latter they welcomed a distinguished old student in Professor Hewlett, who

would carry on the department so worthily inaugurated by Professor Crookshank. The laboratory of pharmacology under Professor Tunnicliffe was one of the few in London, and had been enriched by the establishment of a research scholarship. Turning to the hospital, he pointed out the increased efficiency which had been secured there by placing the *post-mortem* room under Dr. Grünbaum, and the photographic department Mr. Mayhew. Public recognition had lately been made of members of their staff in the nomination of Dr. Still to the Goulstonian Lectureship, and in the appointment of Professor Simpson to sanitary work with the army in South Africa.

The staff were well represented at the dinner, amongst those present being Drs. Duffin, Yeo, Ferrier, Tirard, Dalton, Sir Hugh Beevor, Crawfurd, Messrs. Watson Cheyne, Barrow, Carless, Burghard, Lenthal Cheatle, Pritchard, Cargill, Arthur Cheatle, and Drs. Silk, Halliburton, Ernest White, and StClair Thomson. Old students came from far and near, the representative of the most distant part of the empire being probably the Rev. Dr. London, of British Guiana. Amongst others were Messrs. Bateman (Richmond), Hooper (Ailesbury), Richardson Cross (Bristol), Footner (Tunbridge Wells), Way (Croydon), Percy Lewis (Folkestone), C. B. Childe (Southsea), Lynam (Oxford), Standring (Broadway), Wedgewood (King's Lynn), Atkinson (Hampton Hill), Dent (Cromer), Dent (Woodford), Dimmock (Harrowgate), Prentice, and Captain Vipan, D.S.O.; Hamilton Cartwright, Philip Birch, Valentine Matthews, Stivens, Curtis-Webb, Shuttleworth, Fletcher Beach, Hugh Playfair, Ernest Playfair, H. R. Walker, Tribe, all of London.

The toast list was limited to three items, and the speaking was good and commendably short. Altogether the evening was one of the most enjoyable of the old gatherings for many years past, was full of evidence of the increased vigour and prosperity of the school, and reflected much credit on the honorary secretaries, Drs. Dalton and John Phillips.

## LONDON HOSPITAL MEDICAL COLLEGE.

### Old Students' Dinner.

The 117th session of the London Hospital Medical College was opened on October 1st, when the usual old students' dinner was held in the library of the College. Dr. Frederick Daly was the chairman. One hundred old students sat down to dinner.

Dr. Daly, in congratulating the old students on the prosperity of the hospital and College, called attention to the enormous improvements now taking place, especially the addition of the new pathological block, out-patients' department, isolation block, and operating theatres. He said that a great deal of the work was now complete, and added that it was probably without precedent that such an enormous amount of work should have been carried on without a single bed being closed, so that the study of medicine and the students' career had not been checked for a single hour. He also called attention to the large number of old students who had been out to the front, particularly alluding to the honours that had fallen to the College by Sir Frederick Treves receiving a knighthood and Captain Neville Howse the Victoria Cross. Dr. Brownfield and Dr. Edmunds—old London students who qualified in 1854—said that they, perhaps, could speak with greater authority on the London Hospital and Medical College than anyone else present. Throughout their lives they had felt thankful for the education they had received at their old hospital, and for the enormous experience in practical work that they had there gained. Mr. Openshaw and others who had lately returned from South Africa spoke also of the practical work done by London men at the front. Dr. Hosker, late Mayor of Bournemouth, and other speakers bore tribute to the excellent opportunities afforded by their old Hospital and College.

## MIDDLESEX HOSPITAL.

### Medical School Dinner.

On Tuesday, October 1st, was held at the Trocadero, Piccadilly, the largest and most enthusiastic gathering of the past and present students of this institution hitherto recorded. Of about 200 guests who accepted the invitation of the School Council, 174 were actually present. The chair was taken by Mr. J. Bland-Sutton, F.R.C.S., who was supported by the Lord Howard de Walden, who had distributed the prizes in the afternoon, and Alderman Sir William Treloar.

After the loyal toasts had been honoured, that of "The Services" was responded to by the Lord Howard de Walden, who had taken an active part in the South African campaign, including the relief of Kimberley and subsequent operations. His Lordship spoke in manly terms of the magnificent pluck and stoical endurance of the British soldier and the ever-ready skill and resourcefulness of the Medical Department. In speaking of the Middlesex Hospital and Medical School, the chairman alluded in terms of warm approval to the energy and grasp of modern requirements evinced by the Weekly Board and School Council in the equipment, maintenance, and extension of the Hospital and school. This was emphasised in detail by the replies of Mr. G. B. Hudson, M.P., and the Dean. The former dwelt in his speech upon the recent opening of the new wing for the treatment and investigation of cancer, and the enlargement of the wards in the north-east portion of the hospital. The Dean, though deploring the falling off in the number of students, which affected most, if not all the London Medical Schools, congratulated those present on the quality of the men now turned out, alluding to the greater number attaining the higher degrees and recording the attainment of gold medals in medicine and anatomy at the University of London in the past year. The toast of "The Past and Present Students" was responded to by Mr. John Ackery, President of the Odontological Society of Great Britain, and Mr. T. W. Scott, the senior Broderip Scholar of the year.

"The Health of the Visitors" was proposed by Dr. William Duncan and responded to by Mr. Wilhelm Ganz, who, with the assistance of Signor Guetary and Herr Kolni-Balozky, rendered an exquisite musical programme, which added greatly to the success of the evening.

The proceedings closed with the proposal of the Chairman's health by Dr. Sidney Coupland, who alluded to his attainments in anatomy, morphology, and pathology which had built up his position as an eminent surgeon.

## ST. THOMAS'S HOSPITAL.

### Distribution of Prizes.

Major-General Sir Ian Hamilton, K.C.B., presented the prizes to the successful students at St. Thomas's Hospital on October 2nd, in the Governors' Hall. The chair was taken by the Treasurer, Mr. J. G. Wainwright, and, after the Dean of the Medical School, Dr. Turney, had announced the names of the prize winners, Dr. Acland introduced to Major-General Sir Ian Hamilton the Wainwright prize medallist, Mr. W. M. G. Glanville, Dr. Colman introduced Mr. J. E. H. Sawyer, the Bristowe medallist, Mr. Makins introduced Mr. C. N. Sears, the Treasurer's gold medallist, and Dr. Walter Tate introduced Mr. F. J. Child, who had been awarded the Sutton-Sands prize.

### The Scheme of Army Medical Reorganisation.

Major-General Sir Ian Hamilton then gave an address on the new scheme for the reorganisation of the Royal Army Medical Corps. The corps had only just survived innumerable vicissitudes, and he believed the new scheme would afford opportunities for study, and attract the brightest young intelligences. The four objects of the scheme were: (1) To retain as much of the existing system as was good, and to substitute for that which was bad certain fundamental principles upon which the genius of civil and medical administration could build; (2) to offer to the medical profession itself the power to produce such a system of medical aid in peace and war as would bring to the soldier all the benefits which modern science provided for his civil brother; (3) to offer to the military physician, the military surgeon, and the military sanitarian the fullest opportunities of perfecting themselves in the various crafts; (4) generally the revivification of a corps which in matters purely professional had fallen upon evil times. It was to be recollected that the scheme was but a framework, but he was confident that its scientific possibilities in sympathetic hands

would be understood. There, of course, was the rub. The hands must be sympathetic and kindly, and not only the hands of the War Office but those of the Government of India. The highest ambition of the scientific man was to be able to do something for science, and the scheme afforded opportunities of adding to the store of knowledge. The officers of the corps would be able in the future to take that place in the scientific world open to all comers worthy of it. In regard to the examinations in the scheme, the endeavour had been made to make these tests as little harmful as possible to the brain, character, and physique of the victims. Instead of the present extensive entrance examination in the medical and kindred sciences there was to be a clinical and practical examination, designed to select the best all-round practical men who had profited most from their ward and laboratory work. Such an examination would encourage the experienced and advanced student, and debar the inexperienced, merely bookish person, possessed of a crammed, superficial knowledge. After passing the examination there would be higher pay to start with and higher pay all along the line. Charge pay would be granted for charge of hospitals, as it was little short of a scandal that a young officer should have to spend money out of his own pocket to keep his hospital arrangements properly up to the mark. There would be examinations for each step in rank on the same principle as obtained in other branches of the service. The examination, together with the preliminary courses, would be of such a practical nature that opportunities for distinction by capable, as distinguished from merely clever, men would be obtainable, and these distinctions would not be empty ones. They would carry with them solid advantages of special promotion on a fixed scale. It had also to be noted that provision was made for advancement without examination or for war service. The idea was that responsibility and reward should hereafter be given in proportion commensurate with capability, and not merely with seniority. The authorities were now going to make their officers take study-leave *nolens volens*, but not to study the female form divine in ballrooms, or the grouse disease in Aberdeenshire. The studies would be pursued at centres where supervision and direction would be possible. Lord Roberts, through his staff, would thus know his men, and no more would a bacteriologist be detailed to cut off arms and legs, or brilliant surgeons employed in investigating the marriages and banquets of bacilli. The Royal Army Medical Corps under the new scheme would be no narrow caste, but a body of men passing freely to and fro from the great medical profession to which in the first instance its members belonged.

A cordial vote of thanks, moved by Dr. Sharkey and passed with acclamation, to Major-General Sir Ian Hamilton concluded the proceedings.

### Old Students' Dinner.

The St. Thomas's Hospital Old Students' Dinner was held at the Hôtel Métropole on October 2nd, when 160 old students were present.

Mr. H. H. Clutton, who was in the chair, was supported by the Treasurer (Mr. Wainwright), Sir William MacCormac, Bart., K.C.V.O., General Sir Ian Hamilton, the Sirdar (General Sir Reginald Wingate), Dr. Payne, Dr. Sharkey, and others.

Following the usual loyal toast the Chairman proposed "St. Thomas's Hospital and Medical School," which was responded to by the Treasurer and the Dean, Dr. Turney. This toast was succeeded by that of "The Chairman," proposed by Dr. Sharkey. With the response of Dr. Corner on behalf of the Secretaries the gathering resolved itself into a *conversazione*. This arrangement, combined with the limited toast list, was much appreciated by the old students, as it gave the opportunity of renewing old friendships and for conversation, which was hitherto not possible in the few minutes before the dinner.

## OWENS COLLEGE, MANCHESTER.

### Annual Statement.

The session at Owens College was opened on October 1st in the chemical theatre under the chairmanship of Mr. Alderman Thompson, Treasurer of the College. The annual statement of the total number of students in the several departments showed a substantial increase, the number being arts, science, and law, excluding women students, 555; department for women, 181; medical department, 422; making, after allowing for 48 students entering both as science and medical students, 1,110. Of the students of the department of medicine, 198 were working for the degree examinations of the Victoria University, 35 in the preparation for those of the University of London, and 6 for degree examinations of other examinations; 69 were prepared for the Conjoint Examination of the Royal College of Physicians and Surgeons of England, 8 for the triple qualification of the Scottish Colleges, 53 for dental diplomas, and 14 for Public Health diplomas; 2 women students had entered for a regular course in the medical school. It was hoped that the Whitworth Hall might be formally opened in 1902.

### Address by the Principal.

The Principal, Mr. Alfred Hopkinson, then delivered an address, in the course of which he referred to the progress of the College, which he described as sufficiently rapid to encourage the authorities without overstraining their resources. He expressed the hope that the University Preliminary Examination would become the recognised entrance examination for which the schools of the district would prepare, so that students coming to the College would be ready at once to proceed with work of the real character of higher university study. He was glad to find that the College was drawing more students from a distance, and stated that the halls of residence, Dalton and Ashbourne Hall, were now practically full. The generosity of old friends of the College had in a very short time led to the raising of £91,000 for the fund to commemorate the jubilee of the College. He hoped that the fund would shortly be very considerably increased. The Principal then referred to the loss which the College had sustained by the deaths of Professor Leech and Mr. Tom Jones. He said a great part of their lives were devoted to the service of the medical school, and they still mourned for them. Their friends were desirous that there should be some permanent memorial of those whom he called advisedly great and good men. In the one case the Leech Chair would be endowed by funds received under Dr. Leech's will, and in the other an exhibition in anatomy had been provided, and Mrs. Jones had founded a Scholarship in Surgery. He hoped in the next few days a tablet would be unveiled in the medical school to the memory of Mr. Jones. Mrs. Leech had placed a portrait of the late Professor Leech in the pharmaceutical laboratory.

### Court of Governors.

At the half-yearly meeting of the Court of Governors of the College held on October 1st, a report was presented by the Council in the course of which it was stated that the establishment of a bacteriological institute in connection with the public health investigations carried on by Professor Delépine and his assistants had been approved. For this purpose a house was being fitted up in Stanley Grove. Mr. W. J. Crosley had promised an annual subscription of £50. The Council acknowledged the receipt of £1,000 from the Procter trustees for increasing the endowment of the chair of pathology, and the gift by Mrs. Leech of the medical library and collection of instruments belonging to the late Professor Leech, and of his portrait which had been placed in the pharmaceutical laboratory. It was reported also that the fund subscribed by the friends of the late Professor Jones in his memory had been applied in part to founding an exhibition and in part towards placing in the medical school a medallion of him and a tablet to his memory and to that of Dr. Alfred, Dr. Davies, and Mr. Eames, former students of the College, who died whilst serving in the Welsh Hospital in South Africa. A further sum of £500 for the chair of materia medica and therapeutics in addition to £500 already reported had been received from the Professor Leech Memorial Committee. Reference was also made to the death of Mr. J. H. Nicholson, first Registrar of the College and of the University, who during a period of thirty years, by his wisdom, ability, and zeal, rendered such valuable service to the College in the early and critical stages of its existence. The report was adopted on the motion of the Earl of Derby, seconded by the Dean of Manchester.

## UNIVERSITY COLLEGE, LONDON.

The annual dinner of the past and present students of the Medical Faculty of University College, London, was held at the Hotel Cecil on October 1st, and was presided over by Sir Richard Douglas Powell, Bart., K.C.V.O., M.D., Physician Extraordinary to the King. Covers were laid for over a hundred guests.

Among the toasts proposed was that of King's College Hospital, the old students of which were also holding their annual dinner in an adjacent banqueting room, and entertaining Mr. Christopher Heath, Consulting-Surgeon to University College Hospital, a former student of King's College. Sir Richard Douglas Powell, in proposing the toast of the King, referred to the great interest taken by His Majesty in hospital development and in the advancement of the medical sciences, and eulogised the munificence of Sir Blundell Maple in rebuilding University College Hospital on a scale of completeness of equipment unsurpassed in any other hospital of the United Kingdom.

The toasts were interspersed by songs given by Dr. Frederick T. Roberts, Dr. Beevor, and Dr. Stoddart, and the evening's entertainment was closed by the proposal of a toast to the secretaries of the dinner, Mr. Raymond Johnson and Dr. Batty Shaw, by Sir John Williams, Bart., M.D.

## THE UNIVERSITY OF BIRMINGHAM.

### Opening of the Medical School.

The winter session of the medical school of the University of Birmingham opened on October 1st, when a *conversazione* was given by the Dean and Faculty of Medicine in the evening. The guests to the number of about 400 were received in the Medical Hall by the Dean (Professor Windle) and Professor Saundby (Professor of Medicine). Among those present were the Vice-Chancellor Alderman Beale, the pro-Vice-Chancellor Alderman Clayton, Sir James Sawyer, Professor Sonnenschein, the Dean of the Faculty of Arts, Professors Jordan Lloyd, Priestley Smith, Malins, Whitcombe, Carlier, Leith, Bostock Hill, Morrison, Hillhouse, Lapworth, and MacNeile Dixon; Drs. Rickards, Stacey Wilson, Kauffmann, J. W. Russell, Violet Coghill, Annie Clark; Messrs. Lloyd Owen, Haslam, Marsh, W. E. Bennett, Wright Wilson, Hall-Edwards, W. S. Mann, and many members of the local medical profession; the Rev. J. Dawson, the Rev. J. J. Hunt, and a large number of medical undergraduates, including several ladies. The whole of the rooms of the medical department were thrown open, and special exhibitions were arranged in the various museums. In the large lecture theatre there was a very successful amateur concert, of which the following is the programme: Trio (Edward Bache), Mr. W. E. Bennett (violin), Mr. Montague Pollack (violoncello), and Mr. Lister Smith (pianoforte); song, "The Girl of My Heart" ("Greek Slave"), Dr. R. Sedgwick; song, "Conversazione," Mr. Malcolm Knott; violoncello solos, "Elégie" (Warner) and "Serenade" (Pierné), Mr. Montague Pollack; song, "Loot" (Kipling), Dr. R. Sedgwick; and song, "Thou art my Thou" (Grossmith) Mr. Malcolm Knott. The evening passed off very pleasantly, and justified the belief that such gatherings afford a welcome opportunity to a large number of persons to form some idea of the organisation and equipment of the University Medical School.

## LIVERPOOL UNIVERSITY COLLEGE.

The winter session of the Liverpool Medical School began on October 1st as usual, but the introductory address will be delivered on October 12th.

### New Anatomical Buildings.

The new buildings for the anatomical department have been opened without any ceremony, and constitute a set of rooms for the study of anatomy, which are not surpassed in any school in the United Kingdom in respect of their simplicity, airiness, and light, and the completeness of their equipment. The main block has been erected and equipped at a cost of £10,000, and contains the anatomical museum, with a gallery, on the ground floor, and the dissecting room on the top floor. The latter is 70 feet long by 40 feet wide, and is lofty and well lighted by windows and electricity, the walls being lined with white glazed tiles, while ventilation is insured by a fan worked by electricity. The anatomical museum is 60 feet long by 40 feet wide, and the width of the gallery is 10 feet. It is well supplied with preparations illustrating human and comparative anatomy. Anatomy has always been a strong point in the Liverpool School, which was one of the first to prepare frozen sections of the human body. Many of these, which were prepared under the direction of Sir William Banks nearly twenty years ago, are still in perfect preservation, and have been mounted in the new museum.

The new block has been erected through the generosity of a few leading citizens of Liverpool, including the Earl of Derby, the late Mr. R. W. Henderson, Mr. R. Brocklebank, and Mrs. and Miss Holt.

## SHEFFIELD.

### Introductory Address and Annual Dinner.

It was formerly the custom to open the session at the medical school with an introductory lecture, and from time to time many prominent members of the profession, either from a distance or resident in Sheffield have been selected to deliver the inaugural address. For the last few years, however, since the old medical school became merged in the University College, this time-honoured practice has been discontinued. This year it was thought well to revive the former custom, and Sir Thomas Barlow consented to deliver the address on October 1st. He took as his subject, Individualism in Medical Education. The address was delivered in the hall of University College, and was well attended not only by medical practitioners and students, but by a large number of the laity.

Another event revived this year was the annual dinner. For many years it was the custom for the lecturers associated with the old medical school to dine together on the opening day of the session. In consequence, however, of there being an annual dinner for all departments of University College, no special dinner for the medical department has been held for the last two years. This year, on the occasion of the visit of Sir Thomas Barlow, a dinner was again held. Dr. Dyson, Vice-President of University College, occupied the chair. Sir Thomas Barlow was the guest of the evening, and other visitors included the Lord Mayor and Master Cutler of Sheffield, and several other prominent citizens.

### Changes in the Staff.

A few changes have taken place in the *personnel* of the staffs of the medical department during the past year. Dr. Addison, after occupying the Chair of Anatomy for some years, has taken a similar position at the Charing Cross Hospital; Dr. Patten, formerly Chief Demonstrator under Professor Cunningham at Dublin, has been appointed in his place. Dr. Dyson, who has lectured on Medicine and, more recently, been Professor of Medicine, has resigned, and in his place Dr. Burgess has been appointed. Dr. Dyson's services have been recognised by appointing him Emeritus Professor of Medicine. Dr. Robertson, Professor of Public Health, has arranged, in connection with University College, to give this winter a course of lectures for sanitary inspectors. The only alteration on the staffs of the hospitals is that Mr. Arthur Hallam has resigned the post of Surgeon to the Infirmary and has been appointed Consulting Surgeon. Mr. Arthur Connell has been elected Surgeon in his place.

### Hospital Extensions and Improvements.

During the last few years extensive additions have been effected at all the hospitals in the city. The Royal Infirmary has expended more than £40,000 in providing a nurses' house, ophthalmic block, laundry, and, more recently, an excellently equipped operating theatre, and extensions in the out-patient department, as well as other structural alterations. An old institution has been made into a modern up-to-date infirmary. At the annual meeting of the Royal Hospital it was said that the central block of the new buildings was nearly finished, and it was hoped it would be ready for occupation before Christmas. The completion of this block will enable the last portion of the old insanitary hospital to be demolished. A considerable part of the new buildings have been in use for some time. The Jessop Hospital for Women is now expending £20,000 or more on extensions which will give much-needed extra accommodation in all departments of this hos

pital. The Children's Hospital is now about to commence alterations which will comprise extensions in the out-patient department, house-surgeon's, matron's, and nurses' rooms, kitchens, etc. It is calculated that the cost will approach £9,000.

In addition to these enlargements at the charitable institutions extensions have been made at the infirmary at the Fir Vale Workhouse, and a new hospital has been erected by the Eccleshall Board of Guardians. New buildings are in progress also in connection with the Lodge Moor Fever Hospital.

## ENTRANCE SCHOLARSHIPS.

The following entrance scholarships and certificates have been awarded in connection with the opening of the winter session:

*Guy's Hospital Medical School.*—Senior Science Scholarship for University Students, £50, Mr. A. F. Hertz, Magdalen College, Oxford, and Certificates to Mr. W. M. Mollison, King's College, Cambridge, and Mr. E. C. Hughes, Clare College, Cambridge; Junior Scholarships in Science: Mr. P. B. Mills, Dulwich College, and Mr. W. H. Trethowan, Plymouth Technical School and Guy's Hospital, £105 each; and a Certificate to Mr. C. M. Wenyon, University College, London; Entrance Scholarships in Arts: £100, Mr. C. Mayer, £50, Mr. M. J. Rattray, King's School, Bruton, Somerset, and Certificates to Mr. T. E. A. Carr, Lancing College, Sussex, and Mr. K. J. Saunders, Clifton College.

*London Hospital Medical College.*—Price Scholarship in Science, value £120, Mr. J. Owen; Price Scholarship in Anatomy and Physiology (open to students of Oxford and Cambridge only), £60, Mr. Theo. Thompson; Entrance Science Scholarship, £60, Mr. A. H. Pollard; Entrance Science Scholarship, £35, Mr. E. H. R. Harries; Epsom Scholarship, £126, Mr. S. H. Scott.

*St. Thomas's Hospital Medical School.*—The Entrance Scholarship in National Science, £150, to Harold Beckwith Whitehouse; and the University Scholarship, £50, to George Rammell Footner, B.A., of Pembroke College, Cambridge.

*Charing Cross Hospital Medical School.*—Epsom Scholarship, 121 guineas, Mr. Edward H. Hugo; Mr. W. W. D. Chilcott, 60 guineas; Mr. W. K. Beaman, 55 guineas; Mr. B. W. Cherrett, 40 guineas; Mr. A. C. Bartlett, 30 guineas; Mr. G. W. Rogers, a Universities Exhibition of 30 guineas.

## SMALL-POX IN LONDON.

Small-pox is, speaking generally, becoming slowly more diffused in London. The number of cases notified averages some five or six a day, and the total number of cases in the Asylums Board Hospitals on Tuesday night was 177.

### Small-pox and Hop-pickers.

The great publicity which has been given in the daily press to occurrences of small-pox in London is calculated to produce an erroneous impression as to the extent to which this malady prevails. Small-pox at the present time is important, less on account of the actual number of cases which have occurred, than, as pointed out in a leading article in the present issue, to certain special circumstances in its behaviour. There is, however, we believe, much reason for regarding the present outbreak as of serious import, and the fact that many persons are being led to take stock of the extent to which they are now protected against attack of small-pox is matter for congratulation, for it is impossible to tell at any moment whether they will not be exposed to infection. A useful illustration of the manner in which small-pox may spread is to be found in the recently published statements as to this disease among hop-pickers on a farm in Sussex. How infection reached these people is not as yet precisely known; but, whether received from London or not, there is no doubt that it has constituted a risk to the population of London. That this risk has been minimised is due to the early recognition by Dr. Newman, the Medical Officer of Health of Finsbury, of the facts that small-pox had occurred in certain persons usually resident in his district who had just arrived from the hop fields, and that the hop-pickers as a body were returning that day to London, as well as to his prompt communication of this information to the medical officer of the London County Council. It enabled steps to be taken in which he and the chairman of his Committee, Mr. Evan Jones, participated with the officers of the County Council in examining the hop-pickers who, during the afternoon and evening of Saturday, were pouring into London, and by which Mr. Jones was able to detect among the travellers at Cannon Street five cases of small-pox, who, instead of being allowed to proceed to their homes, where in all probability other persons would have been infected, were promptly removed to the South Wharf. In view of the disadvantage from which London suffers in dealing with infectious disease owing to its division into areas under separate government, and to the number of bodies concerned in the administration for the limitation of infectious disease, the fact that work of so novel a character had to be undertaken at short notice shows how much London is dependent on the power of initiation and the activity of her officers in moments of emergency. The results of the return of the hop-pickers will be awaited with interest, for at an inconvenient moment there has been added to the population of London a large number of very poor persons, some of whom may be incubating small-pox. The addresses of the hop-pickers from the infected farm, have, we understand, been taken by the various medical men who did duty at the railway stations and duly communicated to the medical officers of health in whose districts they are resident, and thus if any should sicken from small-pox their speedy removal will be able to be effected. Under any circumstances, the danger of spread of disease from the Sussex farm has been greatly reduced.

### The Antivaccinationists.

A correspondent who resides in Central London sends us the following leaflet which was placed in his letter-box recently. He assumes that it is being widely circulated, and describes it as disgraceful—rightly, as we think. Certainly the suggestion as to "well-lined purses" is not only disgraceful but absurd. We should be curious to know something more of the "large number of doctors" who are themselves "against vaccination." This is one of the reckless statements habitually put forward by antivaccinators to beguile their dupes. It is, perhaps, worth while to add that the circular is "Printed and Published by Maishman and Co. (T.U.), *St. Pancras Chronicle*, Augustus Street, N.W.," for it is in the borough of St. Pancras that small-pox has so far prevailed more severely than elsewhere in London. The following is the text of the leaflet:

LONDON SCHOOL BOARD'S CHILDREN AND VACCINATION.

Parents, do not allow your children to be inspected by the public vaccinators. There is no law to compel you. Keep the children away from school rather than run the risk of their being poisoned with filth taken from animals, which the doctors call vaccine, the evil effects of which they themselves do not understand.

Parents, will you allow your children to be made ill and liable to take diseases, in order to allow some doctors to have good positions and well-lined purses?

Remember, a large number of the doctors themselves are against vaccination.

Abolish the filthy practice altogether.

When the circular announcing the examination reaches you, send in your notice of objection, so that the authorities may learn how strongly the people object to these measures for forcing vaccination upon them.

## THE ASSOCIATION OF CERTIFYING FACTORY SURGEONS.

In response to a cordial invitation from the local members, the Association of Certifying Factory Surgeons held their annual meeting at Glasgow on September 27th. Excellent accommodation was provided at the Grosvenor Restaurant, within the Exhibition grounds, and a goodly number of visitors from the three kingdoms were present.

An important part of the proceedings was the reading of the annual report of the Honorary Secretary, Dr. W. F. Dearden. Regret was expressed at the death of Dr. J. W. Miller, of Dundee, one of the Association's most ardent supporters. After notifying a gratifying increase in membership, the summary of the annual reports sent in by members was dealt with, and it was shown that the usual experience of the Association with respect to the larger percentage of rejections for medical reasons compared with the Home Office returns still obtained. An account was given of the efforts

made to induce the Home Office to rearrange the scale of fees paid for reporting upon accidents and cases of industrial poisoning, and regret expressed that so far such efforts should have proved unsuccessful. A complete history of the recent campaign in opposition to the notification of accidents clause in the recent Factory Bill was given, and the members congratulated on the satisfactory termination, the clause being withdrawn from the Bill. Mr. George Harwood's endeavour to obtain the insertion of a clause empowering payment of a fee for the annual report had not been so successful, it being held that none but a Minister of the Crown can propose legislation which would involve increased expenditure. It was mentioned that the Consolidated Act comes into force on January 1st, 1902, and under its provisions a factory surgeon will enjoy the following increased powers and privileges: (1) He need not necessarily reside within the district. (2) He may qualify the certificate of fitness by conditions as to the work in which an applicant may be employed (Section 64). (3) He will have the same powers as an inspector for the purpose of examining any process in which a child or young person is proposed to be employed (Section 64). It was also noted that no one seeking work for the first time will be able to be employed half-time under twelve years of age (Section 62), and that the power to make the applicant for a certificate of fitness contribute 3d. towards the fee is repealed. The report concluded with a favourable comment on the almost successful attempt which had been made during the Committee stage to extend the regulations respecting certificates of fitness to workshops, and reasons were given in favour of this reform being carried out.

The Honorary Treasurer's financial statement showed a satisfactory balance on the credit side of £117 3s. 5d.

Dr. Wm. Patrick of Glasgow was elected President for the year; Dr. W. B. Barclay, Honorary Treasurer; Dr. W. F. Dearden, Honorary Secretary; Dr. H. S. Purdon, Dr. H. Rutherford, and Dr. J. H. Keay, Corresponding Secretaries for Ireland, Scotland, and London respectively.

The annual dinner took place at the close of the meeting, Mr. H. M. Robinson, H.M. Inspector for the Glasgow District, being the guest of the evening.

# THE PLAGUE.

## Prevalence of the Disease.

### Naples.

On September 23rd it was reported that 12 persons engaged as labourers at the Punto Franco dock at Naples were suffering from plague. All the men employed at the dock and their families were immediately isolated on board a ship, and kept under observation. The plague patients were taken to the lazaretto on the island of Misida, and the utmost vigilance against the spread of the disease enforced. There is a report that 7 cases of plague occurred in Naples at the end of August last, but were not correctly diagnosed. On September 26th it was stated that 24 cases of the disease had been notified, and of the number 3 had died. Up to September 28th no fresh case of plague had been certified either in Naples or in the neighbourhood since the initial outbreak on September 23rd. Various precautions are being taken. Half a million doses of Haffkine's serum have been obtained from Paris, fishing in the sea opposite the Punto Franco dock is forbidden, cremation has been employed in cases where doubt obtained as to the cause of death, and arrivals by land from Naples have been subjected to medical inspection. As usual in every isolated outbreak it is stated that deaths from plague have been occurring for some time in Naples, but that the nature of the disease was not recognised.

It is satisfactory to know that the people of Naples, usually a turbulent community, are behaving well under the restraint placed upon them. The disease is popularly believed to have been brought to Naples by a ship hailing from the East Indies.

### India.

The plague return for all India for the week ending September 7th show 4,822 deaths, against 3,849 during the week preceding. This large increase is principally due to the virulence of plague in the Bombay Districts, in which 4,132 of the deaths occurred, against 3,243 during the week ending August 31st. In the Kolhapur State and the Dharwar District the disease is particularly virulent. In the city of Bombay 225 persons died of plague during the week ending September 7th, being an increase of 9 deaths as compared with the previous week.

In Calcutta 13 deaths from plague occurred during the week ending September 7th, against 21 during the week ending August 31st: and in the Bengal districts the numbers were 13, against 17 during the same periods.

In the Mysore State they numbered 377, against 336 for the two weeks ended September 7th and August 31st respectively; Mysore city alone accounted for 152 cases. Plague has appeared at Pachora for the first time; up to September 14th 6 cases of plague were reported and 3 deaths from the disease.

### Cape of Good Hope.

During the week ending September 21st there were no fresh cases of plague in South Africa, and but 1 death from the disease at Port Elizabeth.

### Mauritius.

During the week ending September 26th, 33 cases of plague were reported in Mauritius and 23 deaths from the disease.

### Hong Kong.

Three fresh cases of plague occurred in Hong Kong during the week ending September 28th, and 3 deaths from the disease.

### Egypt.

During the week ending September 15th, 11 cases of plague and 6 deaths from the disease were reported from all Egypt; of these, 1 case and 2 deaths occurred at Port Said; at Alexandria, 4 cases and 2 deaths; at Mit Ghamr, 2 fresh cases; and at Benha, 1 fresh case. At Alexandria the patients came from the Moulin Francais. Energetic measures were at once taken; the flooring of the flour stores being in a bad condition was removed, the families of the workmen placed under strict observation, and the houses disinfected. At Benha, where a case of plague occurred, several rats were found infected by plague.

During the week ending September 22nd 10 cases of plague and 7 deaths from the disease were reported throughout Egypt; Port Said, 2 cases and 2 deaths; Alexandria, 3 cases and no deaths; Mit Ghamr, 3 cases and 3 deaths; Benha, 2 cases and 2 deaths. One case and 1 death at Port Said, and 1 case at Alexandria occurred among Europeans; the remaining cases and deaths all occurred amongst natives.

A Reuter telegram, dated Cairo, September 30th, states that there were on that date 5 cases of plague only in Egypt, namely, 3 Europeans and 1 native at Alexandria, and 1 European at Port Said. The total number of cases of plague in Egypt since the outbreak commenced in April amounts to 167.

# ASSOCIATION INTELLIGENCE.

## COUNCIL.

### NOTICE OF MEETING.

A Meeting of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 23rd day of October, at 2 o'clock in the afternoon.

Sept. 5th, 1901. Francis Fowke, *General Secretary*.

### Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary*.

## LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

The Library will be reopened for the use of Members on Monday, October 7th.

## BRANCH MEETINGS TO BE HELD.

South-Western Branch.—The autumn intermediate meetings of this Branch will be held at the Commercial Hotel, Newton Abbot, on Tuesday, October 15th, at 3 P.M., the President, Mr. G. Thom, in the chair. Luncheon will be provided from 1.30 to 2.30 P.M., and tea after the meeting. Gentlemen desirous of joining the Branch are requested to communicate with G. Young Eales, 14, Matlock Terrace, Torquay, Honorary Secretary.

South-Eastern Branch: East Sussex District.—The next meeting of this District will be held at the White Hart Hotel, Lewes, on Thursday, October 10th, at 3 30 P.M. Dinner at 5.30; charge, 6s., without wine. Notice of intended communications should be sent to J. W. Batterham, M.B., 3, Grand Parade, St. Leonards, Honorary Secretary.

South-Eastern Branch: East Surrey District.—The next meeting of this District will be held at the White Hart Hotel, Reigate, on Thursday, October 10th, at 4 P.M., Dr. S. W. MacIlwaine, of Redhill, in the chair. Agenda: Minutes of Croydon meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. The following papers, etc., have been promised: Dr. Lauriston E. Shaw: The Selection of Cases of Pulmonary Tuberculosis for Sanatorium Treatment. Mr. L. A. Dunn: Difficulties and Treat

ment of Strangulated Hernia. Dr. George Blacker: Some Remarks on the Pathology and Treatment of Eclampsia. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. Dinner at 6 P.M.; charge, 7s., exclusive of wine. The Honorary Secretary would be much obliged if members would kindly inform him by postcard whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner. By so doing they will very materially facilitate arrangements, and promote the success of the meeting. All members of the South-Eastern Brach are entitled to attend, and to introduce professional friends.—HENRY J. PRANGLEY, Tudor House, Anerley, Honorary Secretary.

NORTH OF IRELAND BRANCH.—The autumn meeting of this Branch will be held on Thursday, October 17th, in Belfast. Notices of communications, of election of new members, and of any other business are to be sent to Dr. WILLIAM CALWELL, Honorary Secretary, 1, College Square North, Belfast.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—The autumn meeting of this Branch will be held at Inverness in the Palace Hotel on Friday evening, October 18th, at 6.30. The President, Dr. Adam, Dingwall, will deliver an address on Medical Diagnosis and Modern Discoveries. Dr. de Watteville, Kingussie, will also give a paper on Some Experiences in the Open-air Treatment of Consumption in the Central Highlands. Members desirous of reading papers or cases are requested to communicate at once with the Honorary Secretary. After the business meeting the members will dine in the Palace Hotel at 8 P.M.—J. MUNRO MOIR, 4, Ardross Terrace, Inverness, Honorary Secretary.

# SPECIAL CORRESPONDENCE.

## PARIS.

*Small-pox Statistics showing the Number of Cases and Deaths from this Disease since January, 1900: The Comparative Age and Sex Mortality: Distribution of the Disease in Paris: The Number of Patients treated in the Paris Hospitals and the Number of Revaccinations during 1900.*

DURING the week ending September 21st one death from small-pox occurred in Paris, but 30 fresh cases were notified, an increase on the numbers notified during the previous four weeks, which were 22, 25, 23, and 16 respectively.

Although it is considered that the epidemic is now dying out, the outbreak has been a serious one. The following table shows that since the beginning of last year (a period of ninety weeks) 4,068 cases of small-pox have been notified in Paris, causing 566 deaths, showing a case-mortality of 13.9 per cent.

TABLE I.—*Cases Notified and Deaths from Small-pox 1900 and 1901 (38 weeks). Case-Mortality.*

| | Cases Notified. | Deaths. | Mortality Per Cent. |
|---|---|---|---|
| 1900 ... ... | 1,600 | 215 | 13.43 |
| 1901 (38 weeks) ... | 2,468 | 351 | 14.22 |
| Totals ... | 4,068 | 566 | 13.90 |

Table II shows the age and sex distribution of the above 566 deaths. It will be noted that the great majority of deaths occurred in the two age-groups 20 to 39 years and 40 to 59 years, giving 381 deaths for these groups alone.

TABLE II.—*Deaths from Small-pox 1900 and 1901 (38 weeks). Age and Sex Distribution.*

| | Under 1 Year. | | 1-4 Years. | | 5-19 Years. | | 20-39 Years. | | 40-59 Years. | | Over 60 Years. | | Totals. | | Totals—Both Sexes. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | |
| 1900 ... ... | 12 | 15 | 10 | 2 | 9 | 6 | 39 | 57 | 21 | 28 | 10 | 6 | 101 | 114 | 215 |
| 1901 ... (38 weeks) | 22 | 20 | 14 | 12 | 10 | 15 | 47 | 100 | 41 | 48 | 9 | 13 | 143 | 208 | 351 |
| Totals ... | 34 | 35 | 24 | 14 | 19 | 21 | 86 | 157 | 62 | 76 | 19 | 19 | 244 | 322 | 566 |

Table III gives the comparative male and female mortality percentage at all ages, and for each of the six age-groups in Table II.

TABLE III.—*Comparative Male and Female Mortality in various Age-Groups from January, 1900, to September 21st, 1901.*

| | Total Number of Deaths. | Percentage Males. | Percentage Females. |
|---|---|---|---|
| All ages ... ... ... ... | 566 | 43.11 | 56.89 |
| Under 1 year ... ... ... | 69 | 49.3 | 50.7 |
| 1 to 4 years ... ... ... | 38 | 63.15 | 36.85 |
| 5 to 19 years ... ... ... | 40 | 47.5 | 52.5 |
| 20 to 39 years ... ... ... | 243 | 35.4 | 64.6 |
| 40 to 59 years ... ... ... | 138 | 45.0 | 55.0 |
| Over 60 years ... ... ... | 38 | 50.0 | 50.0 |

It will be noted that the disease has proved especially fatal to adult females. At the extremes of life, under 1 year, when both sexes are equally unprotected without vaccination, and over 60 years, when the effects of vaccination and revaccination have worn off, the disease is equally fatal in both sexes. As age advances the disease has been increasingly fatal in Paris for females, till in the age-group 20 to 39 years the female mortality exceeds that of the male by nearly 30 per cent. This is a very interesting point, demonstrating most clearly the value of revaccination. In Paris the average male who follow the usual career, by the time he reaches the age of 30 years, has been vaccinated and revaccinated four times: he is vaccinated at birth, he is revaccinated at school, he is revaccinated when he enters on his military service, and he is again revaccinated if he obtains employment as a clerk or in any other way in one of the State administrations.

The student, too, who enters the university has to show a certificate of recent revaccination before being allowed to matriculate. It is thus seen that the majority of males are well protected by revaccination, while the number of revaccinated females is very small. As a rule, only those are revaccinated after childhood who obtain administrative employment, for example, in the telephone service, etc.

TABLE IV.—*Distribution of Deaths according to the Districts Inhabited by the Deceased since January 1st, 1900, to week ending September 21st, 1901.*

| Arrondissements and Quarters. | 1900. | 1901. | Totals. |
|---|---|---|---|
| 1st Arr. Louvre ... ... ... ... | 1 | 4 | 5 |
| 2nd Arr. Bourse ... ... ... ... | 4 | 4 | 8 |
| 3rd Arr. Temple ... ... ... ... | 13 | 8 | 21 |
| 4th Arr. Hôtel-de-Ville ... ... ... | 9 | 14 | 23 |
| 5th Arr. Panthéon ... ... ... | 4 | 10 | 14 |
| 6th Arr. Luxembourg ... ... ... | 2 | 12 | 14 |
| 7th Arr. Palais Bourbon ... ... | 4 | 9 | 13 |
| 8th Arr. Elysée ... ... ... ... | 5 | 2 | 7 |
| 9th Arr. Opéra ... ... ... ... | 11 | 5 | 16 |
| 10th Arr. St. Laurent ... ... ... | 15 | 19 | 34 |
| 11th Arr. Popincourt ... ... ... | 17 | 16 | 33 |
| 12th Arr. Reuilly ... ... ... ... | 6 | 3 | 9 |
| 13th Arr. Gobelins ... ... ... ... | 7 | 10 | 17 |
| 14th Arr. Observatoire ... ... ... | 13 | 13 | 26 |
| 15th Arr. Vaugirard ... ... ... | 18 | 87 | 105 |
| 16th Arr. Passy ... ... ... ... | 5 | 2 | 7 |
| 17th Arr. Batignolles, Monceaux ... | 7 | 19 | 26 |
| 18th Arr. Montmartre ... ... ... | 34 | 47 | 81 |
| 19th Arr. Buttes Chaumont ... ... | 31 | 50 | 81 |
| 20th Arr. Menilmontant ... ... ... | 9 | 17 | 26 |

Dr. Martin, the Director of the Pasteur Institute Isolation Hospital, where many of the cases have been treated, has informed me that as a matter of fact, on an average about two females have been attacked with small-pox for each male during the present epidemic. He tells me that the disease has been of quite a severe type, showing more hemorrhagic cases than in former years among the more severe cases.

The disease has been prevalent in all parts of Paris, though Table IV shows that the greatest number of deaths occurred in patients from the Vaugirard, Montmartre, and Villette (19th Arr.) quarters.

Table V shows the number of patients treated in the principal civil hospitals in Paris during 1900, with the numbers of those leaving hospital cured and those who died in hospital. The total number of deaths is larger than the Paris total for the year, as a certain number of cases occurring in the Departement de la Seine were treated in the hospitals within the city.

TABLE V.—*Small-pox Patients Treated in Civil Hospitals during 1900.*

| | | Patients left Hospital. | Patients Deceased. | Total Patients Recovered and Deceased. |
|---|---|---|---|---|
| Adults over 15 years | Males ... | 224 | 85 | 309 |
| | Females. | 316 | 75 | 391 |
| Children under 15 years | Males ... | 54 | 26 | 80 |
| | Females. | 35 | 14 | 49 |
| Totals ... ... ... | | 629 | 260 | 829 |

During the epidemic the population has received every opportunity and facility to be revaccinated gratuitously, as in addition to a service for the purpose in each of the civil hospitals, and at the Académie de Médecine, stations were opened at the Bureaux de Bienfaisance, of which one is attached to the Mairie (Town Hall) in each of the 20 arrondissements of Paris.

In Table VI the number of vaccinations and revaccinations in each of these classes of institutions during the year 1900 is given. The number of births in 1900 was 59,755.

TABLE VI.—*Showing the Number of Gratuitous Vaccinations and Revaccinations in Paris during 1900.*

| Vaccination Stations. | Vaccinations. | Revaccinations. |
|---|---|---|
| 1. Hospitals and Hospices (38) ... ... | 14,632 | 81,928 |
| 2. Bureaux de Bienfaisance (20) ... ... | 26,478 | 48,065 |
| 3. Académie de Médecine ... ... ... | 2,009 | 20,033 |
| 4. Inspection générale du service d'assainissement de l'habitation ... ... | 2,488 | 54,976 |
| Totals ... ... ... ... ... | 45,607 | 204,995 |

The above table shows that 204,995 persons availed themselves of the opportunity to be revaccinated gratuitously. Calf lymph alone was used at the above stations.

# CORRESPONDENCE.

## THE COMMITTEE ON THE ARMY MEDICAL SERVICE.

SIR,—I have read carefully the report of Mr. Brodrick's Committee on the Reorganisation of the Army Medical Services, published in the *Times* of September 30th.

Amongst other points the following seem to demand notice:

1. The authority of the Director-General is lowered.

2. His rank, which should have been raised, is unaltered. (But, perhaps, this is to be dealt with separately.)

3. The provisions with regard to civilians imply an expected professional inferiority of the army medical officers.

4. Satisfactory study-leave is not provided for. To require an officer to do his usual work, and at the same time profitably to attend the clinical practice of a recognised civil hospital is not reasonable.

5. The life of the average officer is to be a long struggle with examinations, where failure to pass after nearly twenty years service may mean practically ruin. Between eighteen and twenty years service, it is proposed that "should he fail a second time he will be compulsorily retired on a gratuity of £2,500, or he may, by special permission of the Secretary of State, complete twenty years service and then retire on a pension." He will be a bold man who enters the Service if this proposal is carried into effect. Examinations for senior officers acquired a very sinister significance some years ago.

6. Pay in India, for the junior ranks, is to bear the same ratio to the proposed pay that it now does to the present pay.—I am, etc.,

Exeter. W. GORDON.

## DR. SARAT K. MULLICK AND INDIAN MEDICAL REFORM.

SIR,—Dr. Mullick has again ventured into print in the BRITISH MEDICAL JOURNAL of September 14th, and he is now not so much concerned with Indian medical reform as he is to wriggle out of the untenable position in which he has placed himself. On two previous occasions it fell to my lot to defend a Committee, consisting of the President of Council, the Treasurer, the Chairman of the Parliamentary Bills Committee, Mr. George Eastes, and myself against his abusive attacks. As he has descended from the Committee to the individual, it is now my pleasing duty to defend myself.

He is quite welcome to any consolation he may derive from my opinion as to the defects of the Indian Medical Service, and I hope he will be equally satisfied with Surgeon-General Harvey's communication in your issue of September 14th.

After the Ipswich meeting the Council appointed a committee to investigate his charges against the Indian Medical Service, and not one member of the Committee had any interest whatever in that service. Naturally the Committee thought that a gentleman would not have made grave charges against an important Service at the annual meeting of the Association without having some evidence to support his statement, but this accuser has now to admit that he had no such evidence, and I repeat that he "failed to communicate with the Committee in any way." He would now like to make out that his letters to the General Secretary were communications to the Committee, but such a contention is very wide of the mark. On October 15th "he was collecting evidence from India," evidence which he should have had in his possession when he made the charges, and on January 18th he "had received the information he required from India," but he was careful not to forward it to the Committee until after its report had been issued. The Secretary informs me that he made no mention of three months in his letter of April 30th, but that Dr. Mullick's evidence must be in before the July meeting, and Dr. Mullick reads his JOURNAL sufficiently well to know the dates of the Council meetings at which time the Committee meetings are held.

The report seems to have quickly woke him up, as on July 18th he sent in "his evidence," a letter to the BRITISH MEDICAL JOURNAL, attacking the Committee, and a *fac simile* to the Indian *Lancet*, with two choice addenda in Dr. Mullick's flowery language, which evidently the Editor of the JOURNAL did not think fit to print.[1] When the evidence arrived, it was found to consist of well-worn documents which had been in existence before Dr. Mullick took up this agitation.

I am not accustomed to have my veracity called in question, but to be told by a man whose whole tirade has been merely a coloured imitation of the truth that he does not impugn my veracity is really adding insult to injury. This is not the only Committee which he thought fit to ignore. At the meeting of the Scientific Grants Committee the Secretary announced that he had failed to get any account from Dr. Mullick as to the expenditure of the grant which he had received the previous year.

Dr. Mullick had the effrontery to tell the meeting at Cheltenham that he had collected the evidence, and that "my papers, by all the unwritten codes of honour, should have been regarded as confidential." But what are the facts?

Dr. Mullick belongs to the province of Bengal, and one would have expected him to have collected evidence from his own province, but all "my papers" refer to the Madras Presidency. Of the documents which Dr. Mullick "collected from India," the first comes from Somersetshire, and is not dated. As to privacy, the same writer published a letter to a similar purport in the BRITISH MEDICAL JOURNAL of September 8th, 1900. The second and third documents are dated March 25th, 1897, and were addressed to the South Indian Branch of the British Medical Association, by which they

[1] A proof of Dr. Mullick's letter as published was forwarded to him and returned by him without emendation.—ED. B. M. J.

were considered. Both these documents refer to Dr. Bahádurjee, and to "my friend Dr. Bahadurjee," but Dr. Mullick seems to have been then unknown. The fourth document is from nowhere, and unsigned. Dr. Mullick boldly stated at the annual meeting that it was very fortunate it was unsigned, as he got it from a distinguished member of the Indian Medical Service. Did he? It is very strange that this "distinguished member" did not bring it up to date, as the last entry in this well-worn document is over two years old. As I said before, it seems to consist largely of excerpts from Indian Medical Service papers as to the movements of the staff in the Madras Presidency during the years 1881 to 1899, mixed with some pious opinions of the compiler. The whole of the facts could be easily collated from the Indian medical papers. Like Balaam, this document was intended to curse, but it often blesses; and Dr. Mullick might exclaim, in the language of Balak, "I called thee to curse mine enemies, and, behold, thou hast altogether blessed them." Take, for example, the much despised chair of midwifery. I was told by a gentleman at the annual meeting, who evidently knew nothing about the subject, that he objected to an ophthalmologist being made professor of midwifery.

The next change was caused by the promotion to the administrative ranks of the Medical Service of the Professor of Midwifery (Lieutenant-Colonel A. M. Branfoot, M.B., I.M.S., C.I.E.), who vacated his Chair on April 30th, and thus ended an association with the Medical College of over twenty-one years, an association that was as fortunate for the College as it was distinguished for himself, and during which long period he filled in succession the Chairs of Pathology, Hygiene, and Midwifery. In 1877 he was appointed to act as Professor of Pathology and Resident Surgeon of the General Hospital. In July, 1878, he was elected to fill the newly-appointed Chair of Hygiene, with the associated duty of Assistant Physician to the Hospital; and in June of the following year (1879) he began his long tenure of the appointment as Professor of Midwifery and Superintendent of the Maternity Hospital, which lasted for nineteen years, and which gained for him a reputation so well established that it unnecessary to dilate upon it here.

The whole document in its aged appearance strongly resembles No. 2 and No. 3, and from the internal evidence I strongly suspect that it originally belonged to Dr. Bahadurjee, notwithstanding Dr. Mullick's assertion to the contrary. Like the other three, the whole of the references are to the Madras Presidency, to which Dr. Bahadurjee belonged. I should now like to know what "code of honour," if any, written or unwritten, regulates Dr. Mullick's conduct. I wish to emphasise the fact that Dr. Mullick complains that he was not allowed a complete three months to deliver these documents which he acknowledged were in his possession on January 18th. The postal authorities would have carried them in two hours from New Cavendish Street to the Strand, a feat which took Dr. Mullick six months to accomplish.

Supposing these documents were private, which they are not, and Dr. Mullick knows they are not, of what use would they be to any committee? The accuracy of all statements would have to be tested before a committee could arrive at any conclusion; and that conclusion, if adverse to the Indian Medical Service and adopted by the Association, could only take the form of a recommendation to the Indian Government. As Surgeon-General Harvey says, that Government "is not likely to be influenced by abstract resolutions based on erroneous information and incorrect statements." I would add that such resolutions if adopted would bring the Association into well-merited contempt. One naturally wonders why Dr. Mullick does not go direct to the Indian Government with his propositions. The present Viceroy is credited with the intention of establishing a Military College in India, and I feel confident that if Dr. Mullick can show him that these proposals would be of advantage to "280,000,000 of His Majesty's subjects," and not merely for the benefit of a few imperfectly-educated Indian medical men who had never left their native country, they will be favourably considered.

Dr. Mullick is very pathetic in his reference to "the dangers and expense of a long and perilous sea voyage," and how would an Englishman like to have to study in India in order to qualify for practice in his own country? My answer is that if medical education in India were much superior to that at home, and if it were of advantage to His Majesty's loyal subjects in England that the aspirants for the medical profession should study in India, then they should be obliged to do so, or Indian professors might be brought over here to educate them. Some of our teachers, such as Dr. Patrick Manson and Major Ross, owe their present positions to the fact that they studied to some effect in India and elsewhere.

The Council of the British Medical Association has done a great deal for the Army and Naval Medical Services, and I have no doubt something might be done for the Indian Medical Service, even without the assistance of Dr. Mullick. I believe in reform. I would reform Dr. Mullick if I could without any undue expenditure of energy. I believe that in the Indian Medical Service, especially in the civil appointments, a certain amount of reform is necessary, but any reform should be of an elevating character such as that advocated by men like Major Ross, and not of the levelling-down process, so as to make comfortable berths for a few natives of India. The duty of every Government is to provide the greatest good for the greatest number. They should, and according to Surgeon-General Harvey they do, try to secure the best teachers to educate the native practitioners. They have a very good rule that if a teacher be unsuccessful at the end of five years he is relieved of his duties. If this rule were in force, say, in this country, there would be more frequent changes in the *personnel* of many of the teaching staffs.

It is perhaps unnecessary to confess that I have formed a very unfavourable opinion of Dr. Mullick, but I have no wish to judge him harshly or do him any injustice. I should, therefore, like to present to your readers the other side of the picture, as even his admirers—and I believe he has a few—may not know what a distinguished individual has been recently in our midst. Some time ago a reception was held at Ermin's Hotel, Westminster, "in honour of Dr. Mullick, on which occasion a portrait of the doctor was presented to him." I do not know who got up the testimonial, but I do know at least one gentleman who was invited to the reception, but who certainly did not subscribe to the picture nor write the report of the ceremony which appeared in the *Bengalee*. The report was copied into the *Indian Medical Record*, from which I cull the following:

The portrait was presented to Dr. Mullick by Sir Richard Temple in a speech highly complimentary to Dr. Mullick, and we may add to the Bengalees in general.....As for Dr. Mullick, his career has been unique. Born and bred in India he has carved out for himself a distinguished career in the metropolis of the British Empire, and has secured a position which has won for him the unstinted admiration of Indians and Europeans alike. May he long live to enjoy the honours of his proud position.

This advance puff should secure a warm reception for Dr. Mullick when he soon reaches his native shore, but it is just possible that if it had appeared in the *Daily Telegraph*, in place of the *Bengalee*, it might have attracted the attention of the Ethical Committee of the British Medical Association.—I am, etc.

Liverpool, Sept. 28th. JAMES BARR.

## MALADIES OF EUROPEAN CHILDREN IN HOT CLIMATES.

SIR,—With reference to Dr. Crombie's remarks in the BRITISH MEDICAL JOURNAL, September 14th, 1901, p. 694, on the high case-rate of mortality amongst European soldiers' children in India, I think it will be found that a child is usually "admitted," either because the case is likely to figure later in the column of deaths, or because "extras" are considered necessary. In most cases they are not really admitted at all, but treated in their own quarters. Hence the "case-rate" necessarily becomes high.—I am, etc.,

September 25th. D. S. G.

## INOCULATION AND THE INCUBATION STAGE OF PLAGUE.

SIR,—Colonel King, in the letter published at p. 832 in the BRITISH MEDICAL JOURNAL of September 21st, while agreeing with the general conclusion arrived at in the paper on Inoculation and the Incubation Stage of Plague, published in the JOURNAL of September 14th, contends that in the following particulars the figures quoted do not warrant the deductions drawn from them.

Colonel King contends that:

1. The aborting of plague by injections of vaccine is not possible.

2. The injection is likely to be harmful in the case of those in the incubation stage of the disease.

1. Colonel King argues that though the resistance to plague conferred on persons by an injection increases gradually from

the first to the tenth day, yet abortion of the disease in the incubation stage is not therefore to be assumed. I am not aware that any such argument has ever been stated either by Mr. Haffkine or anyone else. What Haffkine has stated is that whenever an observable community, such as a regiment or the population of a gaol, is dealt with, then the difference between the two groups of inoculated and uninoculated into which they have been divided becomes apparent after the lapse of twenty-four hours. Now, as Colonel King admits that the incubation period of plague is "often of two to five days' duration," how could any effect of inoculation be visible after the lapse of twenty-four hours only, unless some of the persons that should have shown symptoms of plague on the second, third, fourth, and fifth days (that is, who were on the date of inoculation in the incubation stage) had been cured by the injection?

2. That the injection is harmful to those incubating plague, or to persons with initial symptoms on them, is of course a natural inference from *a priori* reasoning, for to inject more toxin into an individual struggling against a similar poison already in his system seems contrary to common sense. But facts are "chiels that winna ding," and the figures quoted in the final column of the table printed on page 671 of the JOURNAL show that at no time does the case-mortality among the inoculated approach that of the uninoculated. If the inoculation were harmful the opposite ought to be the case.

The opinion of Miss Corthorn, that "it is desirable at once to inoculate all who have been exposed to infection" is certainly correct, and hers is the deliberate judgment of one who has had experience of many epidemics of plague in India, and who has specially studied the subject on the spot.

Colonel King states that the "evil effects" of inoculation are shown by the fact that "if injection occurred on the day of development of plague the patient had 8.2 per cent. more chances of dying than if ten days had expired," and asks, "Why should this mortality be ignored?" Now, there has been no desire to ignore this, and I would refer your readers to the last two paragraphs of my paper where the gradual increase of the protection as time goes on is noted. The "evil effect" in this case, however, is the means of reducing the case-mortality from 73.7 per cent. in the uninoculated to 48.8 per cent. in those inoculated on the day of development of plague symptoms. This does not appear to be what most of us would call "sanitarily dangerous," and I for one at least prefer to use Haffkine's vaccine, the effects of which are known by actual experience among human communities, to relying on any serum, the efficacy of which as a preventive has been tried in the laboratory only.

In conclusion, I would protest against the introduction into general literature of the word "Haffkinine" as meaning Haffkine's plague vaccine, and this for the following reasons:

1. It ignores the existence of a similar vaccine for cholera, which is at the present moment largely used in Bengal. If the word was to be used at all it should have been bestowed upon this as the first vaccine elaborated by its distinguished originator.

2. Vaccine is a word having a definite meaning in the scientific world, and when applied to such a substance as anthrax, cholera, or plague vaccine at once conveys a definite meaning to those who hear it. It therefore appears to be preferable to "Haffkinine," the only merit of which is the attention called to the name of the originator: a name, however, not likely to be forgotten without such an unscientific aid to memory.

3. The word is scarcely euphonious, and of doubtful etymology, and is moreover not agreeable to Haffkine himself.—I am, etc.,

W. B. BANNERMAN,
Major I.M.S.

Newtonmore, Inverness-shire, Sept. 24th.

## ENTERIC FEVER IN INDIA.

SIR,—In your interesting article in the BRITISH MEDICAL JOURNAL of September 14th on enteric fever in India, founded on the official report for 1899, conclusions are drawn in practical hygiene for India, so opposed to the conclusions I had myself arrived at from a study of the official reports, and those of the three preceding years, that I venture to offer the following remarks.

It has not yet been shown that Eberth's bacillus is in the soil of cantonments, and recent scientific work is quite opposed to such a conclusion. If, however, such were the case, what effect would such a partial remedy as burning the excreta have in preventing enteric at Agra, Quetta, or other stations in India, seeing that the "perennial question" of the bazaars is to be "left on one side"?

I have shown at Cheltenham that unless all the avenues by water are first excluded, an epidemic cannot be regarded as airborne. Quetta in 1898, which was regarded as the nearest approach to such a case, I have shown can no longer be so regarded. The airborne theory (as a practical issue) has been abolished in Egypt by the evidence I have brought forward, and by the crucial test at Assouan.

Your article reviews (I) "The question of water supplies," and (II) "The evidence on the very important question of infection through dust."

I. "The water supplies," the article states, "we regret to find continued disappointing, results from the great efforts made in this direction.....very discouraging results were obtained from the same measures in Barrackpore, Chakra, Wellington, Jhansi, and other places."

1. *Barrackpore.*—Only 6 cases of enteric occurred here: this can hardly be "very discouraging," considering one or two recorded sanitary defects.

2. *Chakra.*—I presume Chakrata is here referred to. The report states Major Davies considered enteric at Chakrata and Kailana during the last two years due to (amongst other causes) "drinking infected water."

3. *Wellington.*—Here the bacillus typhosus was discovered in the water supply. Report states, "liability of the uncovered wells to contamination by road sweepings, dust, etc., and by the introduction into the well of dirty receptacles.....There is a dual water supply which is always dangerous, as that intended for washing is liable to be drunk sometimes. The question of the water supply is now under consideration."

4. *Jhansi.*—Report states: "No definite cause can be traced. Liability of the uncovered wells to contamination by road sweepings, dust, etc., and by the introduction into the well of dirty receptacles."

In several of these stations, therefore, grave defects exist in the water supply. The bazaars supplying daily the men with enteric were also available. The water supplies cannot be regarded as protected in any of these cases. Hence "the continued disappointing results from the great efforts made in this direction" are only natural.

II. Your article now considers "the evidence on the very important question of infection through dust," and in support the following stations are mentioned.

1. *Jhansi.*—This station has been referred to under "water supplies." There is nothing in the report to substantiate an "airborne" theory, report stating "the epidemic does not appear to lend support to any of the theories as to the manner of propagation of the disease."

2. *Nasirabad.*—Your article states, "the prevalence is put down to the exceptional dryness of the year and frequency of dust storms." I read, also, in the military report, "a large proportion of the cases were probably contracted outside barracks, and possibly in the brothels in the bazaar," and "the dairy is not as clean as it should have been."

3. Article continues, "high winds and dust storms were also noted at Mhow and Rawal Pindi during the height of the enteric season."

At *Mhow*, the 1898 report states: "The prevalence of the disease is again put down to the water supply from Baircha Lake. This water was exposed to great liability of pollution (*a*) at the reservoir, (*b*) at the service reservoir fæcal pollution was proved. ..... Bazaar mineral waters are considered unwholesome and dangerous. Milk and butter supplies derived from the bazaar should be condemned as unfit." The men, therefore, could obtain enteric most freely in the bazaars daily.

At *Rawal Pindi* in 1898 the report states: "Enteric fever is probably contracted principally in the bazaars."

Whether there are "high winds and dust storms" or absolute calm at Mhow and Rawal Pindi, bazaar supplies will prove equally fatal, even if the bacillus is captured after passing through the body and burnt.

4. *Bangalore.*—Report states: "Enteric fever is much more prevalent in the artillery and cavalry barracks..... and always more prevalent in the barracks nearest the horse lines."

Hence it was not surprising to find the epidemic attributed partly to liquid sewage used to irrigate the lucerne grass for the horses. In fact (in 1898) the bacillus was found in a "chatty" used for drinking water in these lines, probably introduced by the men's infected hands.

5. *Ahmednagar.*—The military report on "sanitary conditions" states: "Enteric fever was possibly due to a polluted water supply.....the water supply is unsatisfactory."

6. *Cherat.*—The 1898 report states: "Water supply is liable to pollution," and it is reported in 1899 to be "in the same condition."

7. *Kailana.*—We have seen Major Davies attributed the epidemic in part to "drinking infected water."

The supposed offending latrines were removed, and the sites thoroughly disinfected in May. Enteric reappeared before the monsoon and in September. Research shows the enteric bacillus would have disappeared from the whole cantonment ground not later than twelve days after the first rain or watering, hence the September epidemic can have had

no relation to the disinfected latrines. The subsidence—late in September—was the usual seasonal subsidence.

What was the state of the water supplies whilst the latrines and barracks were being shifted?

Major Davies "found B. coli com. in the Deoban A spring, the bazaar tank and the roadside tank ..... the distribution by means of pakhals is considered objectionable ..... funds for the extension of the water supply to Kailana, an urgent need, are not available."

In the face of these facts, the impossibility of the men escaping liquid enteric with the fact that closing, disinfecting, and removing latrines utterly failed to prevent two later epidemics, are we to be asked to conclude in favour of "air-borne" enteric at Kailana?

In each case cited in favour of the influence of air and dust as media of infection, the infected water avenues have still been available, and until they are closed it is utterly useless to refer these epidemics to "high winds and dust storms," and any system of practical hygiene based on such conclusions will meet with the same "disappointment" in the future.

"Progressive pollution of soil," "saturation of the soil," with enteric bacilli will be found ultimately to be side issues (if issues at all) in the practical question of prevention.

I have shown elsewhere that this can only be accomplished by a powerful Royal Water Corps or organisation on which shall rest the responsibility for the appearance and spread of enteric in armies. Further, to ensure this immunity, all officers in the Army must find it, in the future, difficult to obtain a D.S.O. or other distinction, if the men under their charge are not free from enteric fever, dysentery, and cholera.—I am, etc.,

Belsize Square, N.W., Sept. 28th. LEIGH CANNEY, M.D.Lond.

## THE VALUE OF NEISSER'S STAIN IN THE DIAGNOSIS OF DIPHTHERIA.

SIR,—For some time past I have employed Neisser's stain in the diagnosis of diphtheria, both for films made direct from the swab and for preparations from cultures, and I can fully endorse all that the authors of the paper in the BRITISH MEDICAL JOURNAL of September 21st say in its favour.

The routine adopted in this laboratory is for each swab as soon as it arrives to be inoculated on to a sterile hydrocele fluid slope, and then rubbed over a covered glass. The former is placed in the incubator, and the latter at once stained by Neisser's method. If the Neisser preparation shows diphtheria bacilli a report to that effect is immediately dispatched; but if no bacilli are found, or only one or two are detected in the whole preparation, the report is delayed until the culture has been examined at the end of a six or eight hours' incubation. I have now dealt with nearly 200 specimens in this way, and the results obtained in the last 100 are as follows:

| | |
|---|---|
| Neisser and culture positive ... ... ... ... | 33 |
| Neisser negative, culture positive ... ... ... | 21 |
| Neisser and culture both negative ... ... ... | 46 |

I have not been able to secure a final clinical diagnosis for all of these, but considering 50 consecutive cases in which the medical practitioners in charge have been good enough to supply the details, I may tabulate them thus:

| | |
|---|---|
| Neisser positive, culture positive, diphtheria ... ... | 17 |
| Neisser negative ,, ,, ,, ... ... | 10 |
| ,, culture negative ,, ... ... | 2 |
| ,, ,, ,, not diphtheria ... | 21 |

Comparing these tables with those quoted in the paper, it will be seen that they agree very closely, except that I have not received information of any cases where a positive bacteriological diagnosis was not followed by clinical evidence of diphtheria.

As a result of my experiences, I can therefore quite agree with the authors that a well-marked positive result in a preparation made direct from the swab and stained by Neisser's method is trustworthy; but the first of the above tables shows that a negative result is, in at least 20 per cent. of cases, disproved by culture.

In staining by Neisser's method I find that thirty seconds in Neisser's stain, followed by half to one minute in bismark brown, is all that is required, more prolonged staining having a tendency to confuse the result by producing the appearance of granules in other organisms. Although Loeffler's blood serum is a satisfactory medium for the growth of diphtheria bacilli, I find that hydrocele fluid, prepared after the manner of Dr. Charles Powell White, is less troublesome to make and much superior for rapid diagnostic work, six to eight hours' incubation at 37° C. being quite sufficient for a diagnosis to be made. Although, as a matter of routine, I always re-examine cultures, which give negative results, at the end of eighteen hours, I have not yet had occasion to alter the opinion previously formed.

In suspected diphtheria it is above all important that no time should be lost in coming to a diagnosis; and I think that in Neisser's stain we have a useful and reliable method of quickly forming a positive opinion in a fair proportion of cases. Further, the characteristic appearance produced by the stain in ordinary film preparations from cultures is often very useful in diagnosis, especially with young cultures.—I am, etc.,

P. J. CAMMIDGE,
Bacteriologist to the West Riding County Council.
Public Health Laboratory, County Hall, Wakefield,
Sept. 23rd.

## TOTAL EXTIRPATION OF THE PROSTATE FOR RADICAL CURE OF ENLARGEMENT OF THAT ORGAN.

SIR,—Whether or not any particular operation is new or old, whether it is styled Mr. Adam's or Mr. Freyer's, is of little moment to the general practitioner; but who can perform any given operation with the most skill, and consequently with the best results to the patient, is of most vital importance to those who are interested in the matter at all.

The voluminous correspondence which has followed Mr. Freyer's published lecture may be of assistance to those who have closely followed it, by enabling them to determine for themselves who are the men most capable of dealing successfully with cases committed to their care.

Some of your correspondents tell us that "Total extirpation of the prostate" is either anatomically impossible, or even if possible far too dangerous, to be considered a practicable operation. Some of the old-school surgeons seem to hold before their eyes and ours the hideous spectre of an extensive and complicated plexus of vessels and nerves surrounding the prostate which, should the poor surgeon attempt to approach, he will inevitably be flooded by the hæmorrhages and extravasated urine and what-not else, which will surely entail the loss of the life the operation was intended to prolong: and as surely ensure the sinking into oblivion of the surgeon who had the temerity to perform it. If these are the results obtained by some men, we should hardly blame them, but rather applaud, for seeking to relegate the operation to the obscurity of the past as "tried, proven, and found wanting."

Mr. Freyer, on the other hand, who does not pose as a teacher of anatomy, yet tells us that in his opinion the old-school anatomy of the prostate is all wrong, and backs up his opinion by performing a series of brilliant operations, which seem to entirely justify his conclusions.

In a letter in the BRITISH MEDICAL JOURNAL of September 21st on the subject of prostates, Mr. Buckston Browne in his final paragraph diverges from the subject to that of the relative tolerance of surgical interference in the urinary organs of the natives of India and of Europeans, and at the same time accuses Mr. Freyer of speaking disparagingly of the English bladder. Surely he is beside the mark in his anxiety to pick a hole in any of Mr. Freyer's work or words.

The whole drift of Mr. Freyer's contention seems perfectly clear to others, and the figures he gives prove it—namely, that he does not agree with those who would represent the English bladder as a "stinkpot of iniquity" when compared with the Indian bladder.

That the fine dry climate of many districts of India favours the rapid healing of wounds in the bladder or elsewhere there can be little doubt; just as we have had ample proof that the same influence is beneficial and tends to the rapid healing of wounds in our poor soldiers in South Africa. But that there is any inherent tendency in the tissues of the natives of India to repair more rapidly under equal conditions I do not for a moment believe; neither do I believe there is any marked difference as to toleration of surgical interference in the urinary organs of the natives of the "Sister Isles"; but if I had to make a choice I should be inclined to back the Irish-

man to come off the best in this experiment, as well as in many others.—I am, etc.,

St. Leonard's-on-Sea, Sept. 24th. R. Arthur Mossman.

## THE MIDWIVES QUESTION.

### The Manchester Medical Guild Scheme.

Sir,—This unfortunate baby has been found at last! Its distracted mother first went down to Saddleworth, and was told they had a foundling there some years ago, but it was now a grown-up man. Seeing the mother's distress, a kindly doctor directed her to Salford, where he heard there was an unclaimed infant at the house of a distinguished physician. But when she got there, footsore and exhausted, she was repulsed with a frown, and told to go to the Secretary of the foundling hospital. He told her they had had such a foundling, but it was of premature birth, and was dead long since. The poor woman swooned, and was given in charge of a nurse, who confided to her that she knew a nice doctor in Ardwick Green, who took a special interest in foundlings, and might be able to help her. She was soon at his door, and was admitted at once. The woman was so distracted that she could only rock herself to and fro, and cry, "Oh, my poor baby! Oh, my poor baby!" "Tell me, my poor woman," said the doctor, looking over a long list of foundlings, "the age of your little one." "Six months, sir, to the day, and a dear little thing it was." "Light brown hair and blue eyes, with dimpled cheeks and chin?" "The very same, sir, and a mother's mark on it." "A mother's mark! The very same, no doubt, that a childless friend of mine adopted, and had christened the other day. Here, my good woman, take these papers, and especially this letter, from a Liverpool man, who says it is his, and my friend is sure to repudiate this outrageous claim, and hand you back your baby, or at least engage you as its nurse."

And it happened as the doctor had predicted, and both mother and child are now thriving in the town of Ashton-under-Lyne. And now that I have been deprived of my poor little Bill, and told into the bargain that it was a deformed and rickety thing, and very much given to mischief, I must take a sorrowful farewell of your readers.—I am, etc.,

Liverpool, Sept. 28th. Alex. McCook Weir.

Sir,—Since Mr. Humphreys did me the honour to refer (however erroneously) to my letter of July 6th, I have been patiently waiting for a further notice from him or some of the supporters of the Midwives Registration Bill. It appears, however, that I am doomed to disappointment.

When one of the parties to controversy fails to reply to the other, it is usually from one of two reasons—either the inability to answer, or that the adversary is beneath notice. I should like to know to which class I have been relegated.

The present position appears to be this: A large number of women, seeking for the means of subsistence, have selected the occupation of midwives, and now wish to have that occupation "recognised by law." Why should not every other dabbler in the practice of medicine and surgery be on the same grounds "recognised by law"? The ophthalmic optician, for instance, who styles himself F.S.M.C., B.O.A.

Will no advocate for the registration of midwives deny my proposition that it is occupation for women which is the *crux* of the whole question?—I am, etc.,

Friern Road, S.E., Sept. 30th. Allan MacLean.

Sir,—In my previous letter on this subject I assumed that everyone taking part, as Dr. Lovell Drage has long done, in the midwife controversy, was familiar with the Midwives Registration Bill, which has been before the public in practically its present form for some years, and has been very largely discussed both in Parliament and without.

As, however, Dr. Drage challenges me to state definitely, for the information of himself and other readers of the British Medical Journal, what legislation we propose to introduce, I will simply refer him to the Midwives Bill, 1900 (as amended by the Standing Committee on Law), printed by order of the House of Commons, and to be had from Messrs. Eyre and Spottiswoode, East Harding Street, Fleet Street, for the sum of 1½d. That is the Bill supported by this Association. No one claims (to quote Dr. Drage) that "the ideal attendance" will thereby be secured, but we believe it to be a practicable measure, which will greatly alleviate present evils, and it has a very large amount of support throughout the country.—I am, etc.,

A. Mabel Bruce,
Association for Promoting Compulsory
Airlie Gardens, W., Sept. 30th. Registration of Midwives.

## THE ORIGINAL OBJECT OF THE MIDWIVES BILL.

Sir,—It is important to ascertain the essential differences between the two parties concerned in the midwives question. On the one hand are those who promote and protect the interests of the midwives; on the other those who contend that the only safe method is to carry out the spirit and the letter of the Medical Acts, that only those who are qualified and registered in medicine, surgery, and midwifery shall be legally empowered to practise midwifery independently. That for midwives to be licensed by law to practise upon their own responsibility without direct supervision is a retrograde step, contrary to the Medical Acts and dangerous to the public.

The following extracts from a report of a meeting held under the auspices of the Midwives' Institute at 12, Buckingham Street, Strand, on Thursday, January 10th, 1895, as recorded in the *Manchester Courier* the following day, will no doubt be read with interest just now, as showing what actuated the midwives' supporters at that time:

"The Chairman, General Sir F. Fitz-Wygram, M.P., then read the outline of a scheme which had been drafted by the Council. The object of the Bill was, he said, to secure a better position for those who acted as midwives, and to protect mothers from unqualified and incompetent midwives".....

"The Midwives' Registration Association was formed in 1893 to further the passing of the Bill. This association, composed of medical practitioners throughout the country, had done excellent work in bringing the question more prominently before the medical profession. Notwithstanding this almost unanimous opinion in favour of the principle of the Bill, the General Medical Council, presumably in consequence of a petition from the Lancashire and Cheshire Branch Committee of the British Medical Association, recently resolved:

"'That the Council, being of opinion that certain documents issued by various societies or persons, as diplomas of education and examination in midwivery, are "colourable imitations" of diplomas conferring a legal right to admission to the *Medical Register*, and both contravene the spirit of the Medical Acts, and are calculated to deceive the public, hereby give notice that from the present date the issue of such "colourable imitations" by registered practitioners will be regarded as infamous in a professional respect.'

"This resolution materially affected the present qualified midwife, and through her the public. Accordingly, acting on the assumption that the resolution would have the effect of nullifying the efficacy of the diplomas already granted by the Obstetrical Society and other kindred bodies to duly trained midwives, it was of paramount importance that a Bill should at once be presented to Parliament providing for the examination and registration of midwives."

The above may be summarised as follows:—

1. The moving principle of those present was "to secure a better position for those who acted as midwives" and after "an animated discussion, in which there was a strong preponderance of opinion expressed in favour of endeavouring to obtain an Act of Parliament."

2. That this meeting was a result of the resolution of the General Medical Council condemning "diplomas" to midwives issued by the Obstetrical Society of London and other unauthorised bodies, and that this resolution was a result of the action of the Lancashire and Cheshire Branch of the British Medical Association, and that "this resolution would have the effect of nullifying the diplomas already granted by the Obstetrical Society and other kindred bodies to duly qualified midwives."

3. That a subcommittee was elected on this occasion to draft a Midwives Registration Bill, and that Dr. F. Rowland Humphreys was appointed secretary.

4. It would be interesting to know what is the exact meaning of "This association composed of medical practitioners throughout the country." Probably a very few scattered over a wide area!—I am, etc.,

Ardwick, Manchester, Sept. 28th. G. H. Broadbent.

## PRESCRIBING CHEMISTS.

Sir,—The following glaring instance emphasises the urgent need of strenuous efforts being made to procure legislation for the protection of qualified practitioners from irregular and ignorant competition.

Yesterday afternoon a man came to my consulting room, and stated that he had been to consult a chemist that morning, who examined him and said he had "piles," and sold

him a box of ointment "to ease the pain," and a bottle of medicine, but that he was no easier.

On examination I found an abscess *in perineo*, which I opened! The man further told me that this chemist put him kneeling over a chair back and examined him, just as I had done.

Surely, Sir, it is not a fair law which condones such practices, while condemning often to starvation many hundred useful aids to the general practitioner, well up *practically* in their work, but unfortunately lacking the legal right to practise?—I am, etc.,

Manchester, Sept. 24th. C. Stennett Redmond.

## TUBERCULOSIS AND THE CATTLE TRADE.

Sir,—Your abbreviated yet critical publication of my letter addressed to the Right Hon. W. H. Long, M.P. (not to an Irish official as you stated) contains a statement contrary to my expressed intention. Precisely for the same reasons put forward respecting the composition of the Commission I would not become a member of it, though I still maintain that scientific men with an open mind who have *not* publicly protested their disbelief in Koch's theory ought to be added. Judging from the general suppression of my simple statement of fact by the press, the *audi alteram partem* does not prevail in journalistic circles.—I am, etc.,

Blackrock, Sept. 28th. William Field.

*** Reference to the paragraph in our issue of September 28th relative to Mr. Field's letter will show the gist of his communication to the President of the Local Government Board. With regard to our supposition that Mr. Field would himself no doubt willingly take a seat on the Committee, we have now his assurance that he would not become a member of it. He did not say so in the letter addressed to Mr. Long. As to the "open-mindedness" of the additional representation which he urges, the following is a verbatim quotation from his letter:—

> I am certain the gentlemen appointed will examine the question with skill and honesty, but it is not too much to ask that some professors holding different views from those of the majority of the Commission as at present constituted should be appointed. If I might venture to make a suggestion, Dr. T. W. Hime of Bradford, the author of the *Practical Guide to the Public Health Acts*, and who successfully opposed the views of Professors Woodhead and Delépine in the famous Birkenhead tuberculosis case; Professor McWeeney, an eminent Dublin bacteriologist; Professor Penberthy, and a couple of other gentlemen of intelligence not necessarily professional men, might with advantage be put on the Committee.

We do not understand what Mr. Field means by his charge against the press of the "suppression of his simple statement of fact."

# OBITUARY.

## JAMES POLLARD, C.A.,

Chairman of the Public Health Committee of the Edinburgh Town Council.

We regret to have to report the death, on September 26th, of Mr. James Pollard, C.A., the Chairman of the Public Health Committee of the Town Council of Edinburgh, at the age of 56. In June last Mr. Pollard had a severe attack of pneumonia, from which his recovery was slow, because he was run down by incessant work, mainly in connection with the question of consumption in the City of Edinburgh, and in connection with the New City Hospital for Infectious Diseases at Colinton Mains. Some seven weeks ago he went to Crathie, where he hoped to build up his strength. Unhappily this was not so. He came home on September 19th to take to his death bed. Three days before the end symptoms of congestion of the brain supervened. In his delirium he talked of his work in connection with consumption, and the new City Hospital, which lay nearest his heart. But for his illness the City of Edinburgh would have committed itself to the notification of consumption, and to the duty of providing isolation and a dying place for advanced consumptives among the working and poorer classes. He had been Chairman of the Public Health Committee since 1891, and had done herculean work during these ten years. Edinburgh has never before had such a Chairman of her Public Health Committee. He visited the City Hospital constantly, he knew every patient in it, he exposed himself to risks of infection, he knew no danger, he visited the homes of the relations of patients; he spoke words of comfort, cheer, and encouragement; he knew every nurse and servant in the City Hospital, and had a kindly word for all; his place will not be easily filled. To fitly do his work for the city, he visited hospitals for infectious diseases throughout the country and on the Continent. He was a personal friend of Koch. His report on the duty of the City of Edinburgh towards consumption was a masterly production. It was largely due to him that the splendid hospital for infectious diseases for Edinburgh, now approaching completion, was taken in hand. In addition to his report on consumption, he published in 1898 a paper on "The Care of Public Health and the New Fever Hospital in Edinburgh," and in 1895 a lecture on "Thirty Years' Sanitary Progress in Edinburgh."

Mr. Pollard was an Irishman with a particularly placid temperament, a cheerful disposition, and an endless fund of humour. He was a most lovable man, widely read, and highly cultured. He gave himself to Edinburgh, and his place can hardly be filled. Deep sympathy is being given on all hands to Mrs. Pollard and her three young daughters.

The funeral took place on September 28th, amid signs of profound sympathy. It was the largest funeral Edinburgh had seen for many a day. Of few men could it be more truly said that he went forth to his work and to his labour till the evening, and that he gave his life for his fellow-men.

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Dr. Anderson, a well-known Richmond practitioner, who retired some years ago, died on September 19th somewhat suddenly, at his Scottish seat, Hallyards, Peeblesshire, in his 64th year. He received his general education at the Edinburgh High School and Queen's College, Cork. He studied medicine in Edinburgh, Berlin, and Paris, and graduated M.D. Edin. in 1860, being admitted L.R.C.S.Edin. in the same year. He held the post of House-Physician under Dr. Warburton Begbie, in the old Edinburgh Royal Infirmary, and was later Medical Tutor and Resident Physician at the General Hospital, Birmingham. He also visited Berlin, where he was a pupil of Virchow. In 1865 he joined Dr. Spencer Thomson, of Ashby-de-la-Zouch, in partnership, and contributed to a *Manual of Domestic Medicine* by the latter a valuable chapter on the Management of the Sick Room. In 1867 he took a share in the practice of Dr. Hassell, at Richmond, Surrey; and this practice he held in conjunction with Mr. Fergusson, and later also with Dr. Gardiner, until 1893, when he retired from the more active duties of the profession, subsequently seeing only patients in consultation. Of a genial and benevolent, though retiring, disposition, Dr. Anderson was always ready to serve the community in which he lived, and as founder, and afterwards President, of the Richmond Sanitary Aid Association he actively exerted himself to bring about sanitary reforms which did much to establish the reputation for salubrity that Richmond now possesses. He was the contributor of several papers to the medical journals, was an Extraordinary Member of the Royal Medical Society of Edinburgh, and a member of the Thames Valley Branch of the British Medical Association. His decease, which was unexpected (though he had been suffering from a painful eye affection for some months), is much regretted by a large circle of friends, both professional and others, who held him in high esteem, and sincerely sympathise with his widow and two daughters in their bereavement. The funeral took place at the churchyard of Manor, Peeblesshire, on September 24th.

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Our Hong Kong Correspondent writes: It is with great regret that the death of Mrs. Lawrence Gibbs, more widely known as "Sister Cathrine," must be recorded. The deceased lady received her training as a nurse first in Liverpool, then at the London Hospital. In 1890, being appointed under the Hong Kong Government, she came to the Colony, and devoted herself to the work, resigning in 1899, on her marriage. While nursing plague patients in 1896 she contracted the disease, and on her recovery was invalided home. When on furlough, on the outbreak of plague in India, "Sister Cathrine" volunteered for work there, and was appointed to the Plague Hospital at Poona. Returning to Hong Kong she was again attacked by plague, but recovered,

though two of the Sisters, who were attacked at the same time, died. As nurse she was highly esteemed for her great devotion and self-sacrifice. At the time of her decease Mrs. Gibbs was Honorary Secretary of the Hong Kong Nursing Institution, in which she took a deep interest. Mrs. Gibbs died suddenly, her life being no doubt shortened by the effects produced on the heart by two attacks of plague.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. J. A. Winter, Extraordinary Professor of Medicine and Editor of Schmidt's *Jahrbuch*, aged 85 years: Dr. Garcia Calderon, one of the foremost ophthalmologists of Madrid; Dr. Valenzuela, of Madrid, Physician to the Hospital Provincial of that city, and a physiologist of repute; Dr. Piedro Lechon, Medical Superintendent of the Hospital Provincial of Valencia, librarian of the Royal Academy of Medicine and Surgery of that city: and Dr. Tomas Codina y Llorens, a leading physician of Barcelona.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## HONOURS AND REWARDS FOR THE SOUTH AFRICAN WAR.

What appears to be a final list of honours and rewards for services in South Africa up to the time of Lord Roberts's departure thence for England is published in the *London Gazette* of September 27th, and from it we extract the following:

*15th Battalion Imperial Yeomanry.*

Captain E. Hopkinson, Medical Officer.

*Coldstream Guards.*

To be a Companion of the Order of the Bath.—Surgeon-Lieutenant-Colonel James Magill, M.D.

*Scots Guards.*

To be a Companion of the Order of St. Michael and St. George.—Surgeon-Major W. C. Beevor, M.B.

*Royal Army Medical Corps.*

To be Companions of the Order of the Bath.—Colonel J. A. Clery, M.B., Lieutenant-Colonel A. P. O'Connor, F.R.C.S.I., Major (now Lieutenant-Colonel) T. R. Lucas, M.B., Major (now Lieutenant-Colonel) F. A. B. Daly, M.B., F.R.C.S.I.

To be Companions of the Order of St. Michael and St. George.—Colonels W. H. McNamara, M.D., F.R.C.S.I., C.B., and R. Exham, Lieutenant-Colonel J. C. Dorman, M.B., Major (now Lieutenant-Colonel) H. J. Peard, Majors S. F. Lougheed, M.D., A. F. Russell, M.B., S. Westcott, R. Kirkpatrick, M.D., R. J. S. Simpson, M.B., T. W. O'H. Hamilton, M.B., S. F. Freyer, M.D., N. C. Ferguson, M.B., H. C. Thurston, and O. R. A. Julian.

To be Companions of the Distinguished Service Order.—Majors R. J. Geddes, M.B., and A. A. Sutton, Captains F. Smith, H. J. Parry, M.B., F. J. W. Porter, H. J. M. Buist, M.B., and E. M. Pilcher, M.B., Lieutenant (now Captain) C. J. O'Gorman, Lieutenant (now Captain) R. S. H. Fuhr, Lieutenants G. G. Delap, H. Ensor, M.B., and L. N. Lloyd.

To be Majors.—Captains S. G. Moores and J. H. E. Austin.

*Irish Hospital.*

To be Companions of the Order of St. Michael and St. George.—Drs. G. Stoker, L.R.C.S.I., and J. B. Coleman.

*Langman's Hospital.*

To be a Companion of the Order of St. Michael and St. George.—Dr. H. J. Scharlieb.

*Yeomanry Hospital.*

To be a Companion of the Order of St. Michael and St. George.—Major C. Stonham.

*Welsh Hospital.*

To be a Companion (Civil Division) of the Order of the Bath.—Dr. J. L. Thomas.

To be a Companion of the Order of St. Michael and St. George.—Dr. R. H. Mills-Roberts.

*Edinburgh Hospital.*

To be a Companion of the Order of St. Michael and St. George.—Dr. F. D. Boyd.

*Scottish National Hospital.*

To be a Companion of the Order of St. Michael and St. George.—Deputy-Surgeon-General H. Cayley, Honorary Surgeon to the King (late I.M.S.).

*Portland National Hospital.*

To be a Companion of the Order of St. Michael and St. George.—Dr. J. E. G. Calverley.

*Colonial Forces.*

New South Wales Contingent: To be a Companion of the Order of the Bath.—Major W. L'Estrange Eames (Medical Corps).

To be a Companion of the Distinguished Service Order.—Lieutenant A. H. Horsfall.

To be Companions of the Order of St. Michael and St. George.—Civil urgeons T. H. Openshaw, F.R.C.S., S E. Denyer, and A. Ricketts.

Honours and rewards are also given to a large number of quartermasters and non-commissioned officers and men R.A.M.C., and to nursing sisters and other ladies who have worked in hospitals.

## ROYAL NAVY MEDICAL SERVICE.

Fleet Surgeon J. Lyon, M.D., has been placed on the retired list, at his own request, with the rank of Deputy-Inspector-General, September 14th. His commissions are thus dated:—Surgeon, March 2nd, 1871; Staff Surgeon, March 2nd, 1883; Fleet Surgeon, October 20th, 1891. He was Surgeon of the *Wye* during the Egyptian war of 1882, and has the medal and Khedive's bronze star granted for that campaign.

The following appointments have been made at the Admiralty:—Thomas D. Gimlette, Deputy-Inspector-General, to Plymouth Hospital, September 23rd; Alexander Maclean, M.B., Staff Surgeon, to the *Pembroke*, for three months course of hospital study, October 1st; P. L. Crosbie, Surgeon, to the *Duke of Wellington*, for Haslar Hospital; William G. K. Barnes, M.D., Staff Surgeon, to the *Briton*, October 1st; Edgar R. Dimsey, D.S.O., Staff Surgeon, to the *Resolution*, and to the *Formidable* on commissioning, October 1st; Percy V. Jackson, Staff Surgeon, to the *President* for three months course of hospital study, October 7th; Walter B. Maurice, Surgeon, to the *Colossus*, October 7th; Richard W. Stanistreet, Surgeon, to the *Trafalgar*, October 7th.

## ROYAL ARMY MEDICAL CORPS.

Surgeon-Major (local Lieutenant Colonel) C. E. Kilkelly, M.B., C.B., Grenadier Guards, is granted the local rank of Colonel whilst in charge of the Imperial Yeomanry Hospital at Pretoria, August 1st, 1900.

The undermentioned officers have been discharged to duty from hospital in South Africa: Major M. Kelly, Lieutenants F. Ashe and W. H. Odlum, Lieutenant and Quartermaster W. S. Travis (Cape Volunteer Medical Staff Corps), Civil Surgeon C. J. S. Cahill.

The following are on passage home: Lieutenant-Colonel D. Bruce, Major W. Hallaran, Civil Surgeons S. H. Clarke, G. A. C. Casalis, D. G. MacArthur. Returning invalided: Colonel W. L. Gubbins, Civil Surgeons W. Paull, H. M. Roberts, C. L. Dunne, J. C. Caldwell, J. H. Stuart.

From Pretoria we learn, under date September 29th, that Civil Surgeon John O'Brien is dangerously ill there from enteric fever.

The progress report, September 28th, states that Civil Surgeon Smith shows no change.

Major John Keatly died at Bombay on September 7th. He was appointed Surgeon-Captain, July 28th, 1886, and Major twelve years later. Major Keatly died somewhat suddenly, the cause of death being attributed to ptomaine poisoning.

Lieutenant John Blake Hall died at Harrogate on September 29th. He was a son of the late Dr. Frederick Hall of Leeds, and entered the R.A.M.C. as Lieutenant, June 21st, 1900.

Surgeon-General William Allister Catherwood, M.D., whose death in India is telegraphed from Simla as having taken place from cerebral hæmorrhage, was Principal Medical Officer of the Bengal Command. He joined the Army Medical Staff as Assistant-Surgeon, October 2nd, 1865, became Surgeon March 1st, 1873; Surgeon-Major, October 2nd, 1877; Brigade-Surgeon, April 7th, 1889: Surgeon-Colonel, April 21st, 1894; and Surgeon-General, August 3rd, 1898. He served in the Ashantee war of 1873-74, for which he had the medal with clasp, and in the Egyptian war of 1882, when he was present at the battle of Tel-el-Kebir, and for which campaign he obtained the medal with clasp and the Khedive's star. In 1884 he took part in the Soudan expedition under Sir Gerald Graham as Principal Medical Officer at the base, when he obtained mention in despatches, was awarded a clasp to his Soudan medal, and promoted to be Surgeon-Major with the relative rank of Lieutenant-Colonel.

## INDIAN MEDICAL SERVICE.

The retirement from the service of Major G. H. Fink, Bengal Establishment, and which has been already announced in the British Medical Journal, is to have effect from July 13th.

Lieutenant-Colonel W. C. T. Poole, R.A.M.C., has returned from South Africa, having been in charge of a field hospital throughout the war and present at all the various actions under Sir Redvers Buller. Lieutenant-Colonel Poole has now been selected for duty at Devonport.

## Erratum.

The names of the undermentioned officers, brought to notice for their services in South Africa, and published in the *London Gazette* of September 10th, are as now, and not as previously, stated: Captain P. Davidson, 5th Battalion Imperial Yeomanry; Captain E. Hopkinson, Medical Officer 15th Battalion Imperial Yeomanry.

# MEDICO-LEGAL AND MEDICO-ETHICAL.

## A SPECIAL CIRCULAR.

Lupus writes: For some years I have been practising as an *x*-ray specialist. I have recently purchased a Finsen lamp and D'Arsonval high-tension apparatus. Would there be anything wrong in my sending a private circular to the medical men in the district, who usually bring me patients, informing them of the fact?

*** We do not think that there would be anything improper in addressing such a circular to medical men who are in the habit of taking patients to our correspondent, but it should be strictly confined to them. The circumstance will soon become known, and it is wiser from every point of view to err on the side of reticence.

## MEDICAL ADVERTISING.

A Reader encloses for our information a card which the husband of a patient of his brought to him saying that three such cards had been slipped under his door. The card appears to notify that in consequence of the death of a practitioner patients will now be seen at another address at certain hours which are given, and then follows information

as to the fees charged for consultations and visiting. Our correspondent further informs us that the practitioner in question died as long ago as last April.

*** A certain amount of notification is permissible upon the transfer of a practice, and in a poor neighbourhood we could hardly expect the orthodox lithographed circular to be adopted; nevertheless, there is no justification for continuing to circulate these cards. If continued the matter might be brought under the notice of the licensing bodies from which the advertiser has received his diploma.

### MEDICAL ETIQUETTE.

PROBLEM writes: A. is a medical attendant to a certain family. During his illness his work is taken by several medical men, one of whom, B., is sent for by the family and attends several times. Then A. is ordered away for six months for his health and puts in a new *locum tenens*, C., to take charge of his practice. Should the family in question continue to call in B. or should they send for the new *locum*, C.? Is it not optional on their part to send for whom they prefer till A. returns to his practice?

*** The family is perfectly at liberty to send for whomsoever they may prefer, but if B. is summoned it is his duty to point out that C. is the proper person to take charge of A.'s patients. Should, however, the family after this representation still desire B. to attend, and he is willing to act as A.'s representative, there can be no objection to his doing so provided that he accepts the case as A.'s *locum tenens*, and is prepared to hand over such cases with half the fees to A. on his return.

# UNIVERSITIES AND COLLEGES.

### UNIVERSITY OF LONDON.

*Meeting of Convocation.*—An ordinary meeting of Convocation will be held at the University, South Kensington, on Tuesday next, at 5 P.M. Notice has been given by Dr. J. Wilkie of resolutions to appoint a permanent committee of Convocation to safeguard the civil rights of members of the University and their interests, and expressing the opinion that any professor, teacher, or lecturer in this University, who shall be insolvent, or who shall have his salary attached, or who shall for money provide testimonials or credentials in favour of miscellaneous public companies, shall be, *ipso facto*, discharged from all employment in the University.

### ROYAL UNIVERSITY OF IRELAND.

FIRST EXAMINATION IN MEDICINE.—The undermentioned candidates have passed this examination:

M. J. Black, University College, Dublin; Cecilia F. Daniell, University College and Royal College of Science, Dublin; J. Devane, University College, Dublin; D. H. C. Given, Queen's College, Cork; C. H. Harbinson, Queen's College, Belfast; R. S. Kennedy, Queen's College, Cork; W. J. Leighton, Queen's College, Belfast; W. T. McCutcheon, Queen's College, Galway; W. A. McKee, Queen's College, Belfast; H. Mathewson, Queen's College, Belfast; J. W. Murphy, Queen's College, Cork; J. F. Neary, University College, Dublin; J. F. O'Brien, Queen's College, Cork; T. F. O'Doherty, University College, Dublin; M. A. Power, University College, Dublin; P. Reid, Queen's College, Galway; T. Sheehan, Queen's College, Cork; R. V. Slattery, University College, Dublin; P. Walsh, Queen's College, Galway; J. P. Waters, University College, Dublin.

SECOND EXAMINATION IN MEDICINE.—The following candidates have passed this examination:

*Upper Pass.*—T. Cronin, Catholic University School of Medicine; R. C. S. P. Flood, Catholic University School of Medicine; W. Godfrey, Queen's College, Cork; J. C. Hart, Queen's College, Cork; Eva J. Jellett, Catholic University School of Medicine; G. Madden, Catholic University School of Medicine; Alice Vance, Catholic University School of Medicine; W. J. Wilson, Queen's College, Belfast.

The above candidates may present themselves for the further examination for honours.

*Pass.*—J. A. Boyd, Queen's College, Belfast; A. E. Browne, Queen's College, Belfast; W. Egan, Catholic University School of Medicine; J. Houlihan, Catholic University School of Medicine; G. J. Jones, B.A., Queen's College, Belfast; T. Laverty, Catholic University School of Medicine; J. A. Lowry, Queen's College, Belfast; J. McCloskey, Catholic University School of Medicine; J. McConaghy, Queen's College, Belfast; J. R. Murray, Queen's College, Belfast; W. J. O'Connor, Catholic University School of Medicine; J. J. O. Mahony, B.A., Queen's College, Cork; J. H. Power, B.A., Queen's College, Cork; J. J. Rogers, Catholic University School of Medicine; T. Rouse, Catholic University school of Medicine; M. V. Shanahan, Queen's College, Cork; R. J. Spence, Queen's College, Belfast; G. H. Stevenson, Queen's College, Belfast; J. M. Warnock, Queen's College, Belfast; G. P. White, Catholic University School of Medicine.

### UNIVERSITY OF DURHAM.

THIRD EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.—The following candidates have satisfied the examiners:

*Honours—Second Class.*—Cheila Mary Hankin, London School of Medicine for Women; A. G. Dunn, College of Medicine, Newcastle-upon-Tyne; C. H. Crass, College of Medicine, Newcastle-upon-Tyne.

*Pass List.*—T. E. Amyot, College of Medicine, Newcastle-upon-Tyne; K. S. Brown, College of Medicine, Newcastle-upon-Tyne; Annie Tombleson Brunyate, London School of Medicine for Women; A. H. Bateman, College of Medicine, Newcastle-upon-Tyne; W. M. Emmerson, College of Medicine, Newcastle-upon-Tyne; F. J. Gowans, College of Medicine, Newcastle-upon-Tyne; B. Glendining, Guy's Hospital; J. W. Gibson, College of Medicine, Newcastle-upon-Tyne; D. R. Guns, College of Medicine, Newcastle-upon-Tyne; W. G. T. Hepplewhite, College of Medicine, Newcastle-upon-Tyne; Lizzie Evelyn Kendal, College of Medicine, Newcastle-upon-Tyne; Flora Murray, London School of Medicine for Women; Thomasina Georgina Prosser, College of Medicine, Newcastle-upon-Tyne; B. S. Robson, College of Medicine, Newcastle-upon-Tyne; J. C. Stewart, College of Medicine, Newcastle-upon-Tyne; M. C. Wetherell, Guy's Hospital; A. L. Wilkinson, College of Medicine, Newcastle-upon-Tyne; J. R. Wylie, College of Medicine, Newcastle-upon-Tyne.

# HOSPITAL AND DISPENSARY MANAGEMENT.

### EDINBURGH ROYAL INFIRMARY.

THE following have been appointed Clinical Tutors for the ensuing winter and summer sessions: Dr. G. F. Barbour Simpson, to Professor Simpson (Gynæcological Department); Dr. J. G. Cattanach, Dr. Edward Matthew, and Dr. George Lyon reappointed to the University Medical Wards; Dr. Logan Turner, reappointed to Dr. M'Bride; Dr. H. Torrance Thomson, reappointed to Mr. Cotterill; Dr. A. Scott Skirving, reappointed to Mr. Cathcart; Dr. R. B. Purves, to Professor Annandale's University Surgical Wards; and Dr. J. Jeffrey, reappointed to Mr. Caird.

The following have been appointed for six months from October 1st, 1901: George S. Carmichael, M.B., Ch.B., to Professor Fraser; W. E. Carnegie Dickson, M.B., etc., to Professor Greenfield; R. A. J. Harper, M.B., Ch.B., to Professor Simpson; James G. S. Jameson, M.A., M.B., Ch.B., to Dr. Smart; J. Graham M'Bride, M.B., C.M., to Dr. James: Francis W. Harlin, L.R.C.P. and S.E., to Dr. Berry Hart: F. Norton Menzies, M.B., Ch.B., to Dr. Bramwell; and L. C. Peel Ritchie, M.B., Ch.B., to Dr. Gibson. Resident Surgeons—Robert C. Affleck, M.B., Ch.B., to Professor Annandale: Thomas S. Shepherd, M.B., Ch.B., etc., to Professor Chiene: G. Duncan Whyte, M.B., Ch.B., to Mr. Cotterill: A. Y. de Spiganovitch, M.B., Ch.B., to Mr. Cathcart: and F. C. Matthew, M.A., M.B., etc., to Mr. Caird. Non-resident House-Physician—James A. Raeburn, M.B., Ch.B., to Dr. W. Allan Jamieson. Non-resident House-Surgeons—J. W. Struthers, M.B., etc., to Mr. Hodsdon; and J. D. Lithgow, M.B., C.M., to Dr. M'Bride. Clinical Assistants—J. H. Montgomerie Bell, M.B., Ch.B., to Professor Fraser: Charles J. Hill Aitken, M.B., C.M., to Dr. Philip (Ward 6); William T. Ritchie, M.D., to Dr. Murdoch Brown; Alex. Goodall, M.D., to Dr. Lovell Gulland; John M. Bowie, M.D., to Dr. Graham Brown; and Andrew Hunter, M.B., etc., to Professor Greenfield.

### MONTROSE ROYAL ASYLUM.

OF the 680 patients resident in this asylum during the year ending May, 1901, there were no fewer than 122 private cases, and 9 were admitted as voluntary boarders. The principle of admitting persons at their own request for care and treatment, and the fact that it is by no means uncommon for these patients to continue as boarders when their cure has been completed, must largely help to remove the idea from the public mind that to be in an asylum is "a dreadful thing." One of the strongest evidences of recovery of mental health is thankfulness for the benefits received in institutions for the insane.

The daily average number resident was 661. There were 190 admitted. The number discharged recovered was 67, giving a recovery-rate of 35.26 per cent. calculated upon the admissions. Of the 43 patients discharged "unrecovered," 16 were transferred to other asylums, 13 were removed to lunatic wards of poorhouses, 13 were returned to their friends or boarded out, and 1 escaped. There were 57 deaths, giving a death-rate of 8.62 per cent. on the average number resident. Dr. Havelock comments upon the large number of those admitted who had made suicidal attempts, and referred to the statistics published by Sir John Sibbald, showing that Forfarshire and Kincardineshire, both of which counties send patients to this asylum, has a much larger proportion of suicides to the population than all the rest of Scotland put together. Dr. Havelock has made a further calculation, which shows that the admissions to Montrose Asylum for 1900 and 1901 give 20 per cent. of cases from Forfarshire and 40 per cent. of those from Kincardineshire which had a pronounced suicidal tendency, and he describes this to the fact that "suicidal tendency is strongly hereditary in most cases."

A new villa has been completed, accommodating 60 male patients. It is a substantial stone building of three storeys, with dayrooms, dormitories, and all offices, a complete residence, and "the total cost of the villa with furnishings amounts to less than £115 per bed," a fact which other asylum authorities should note.

# PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

### HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,519 births and 3,676 deaths were registered during the week ending Saturday last, September 28th. The annual rate of mortality in these towns, which had decreased from 21.6 to 16.8 per 1,000 in the five preceding weeks, further declined last week to 16.7. The rates in the several towns ranged from 9.6 in Leicester, 10.5 in Croydon, 12.5 in Bradford, 12.8 in Derby, and 12.9 in Cardiff, to 21.6 in Birmingham, 22.7 in Gateshead, 25.6 in Newcastle, and 27.3 in Sunderland. In the thirty-two large provincial towns the mean death-rate was 17.9 per 1,000, and exceeded by 2.9 the rate recorded in London, which was 15.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.9 per 1,000; in London this death-

rate was equal to 2.1 per 1,000, while it averaged 3.4 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 5.6 in West Ham and in Hull, 5.7 in Oldham, 6.6 in Gateshead, and 7.1 in Sunderland. Measles caused a death-rate of 1.1 in Oldham; whooping-cough of 1.1 in Sunderland; "fever" of 1.1 in Huddersfield, 1.3 in Hull, and 1.4 in Sunderland; and diarrhœal diseases of 3.5 in Hull, 4.2 in Oldham, 4.6 in Sunderland, 5.0 in Wolverhampton, and 5.7 in Gateshead. In none of the thirty-three towns was the death-rate from scarlet fever equal to 1.0 per 1,000. The 82 deaths from diphtheria in these towns included 34 in London, 10 in West Ham, 5 in Bristol, 5 in Liverpool, 5 in Manchester, and 4 in Bolton. Five deaths from small-pox occurred in London, but not one in any of the thirty-two large provincial towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals, which had increased from 11 to 153 at the end of the seven preceding weeks, had further risen to 163 on Saturday, September 28th; 44 new cases were admitted during the week, against 31, 62, and 37 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 3,151, against 2,994, 3,064, and 3,098 on the three preceding Saturdays; 438 new cases were admitted during the week, against 346, 457, and 427 in the three preceding weeks.

### HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, September 28th, 885 births and 509 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.8, 17.5, and 16.2 per 1,000 in the three preceding weeks, further declined last week to 16.0 per 1,000, and was 0.7 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 12.4 in Paisley and 14.1 Leith to 18.3 in Greenock and 18.7 in Dundee. The zymotic death-rates in these towns averaged 2.3 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 232 deaths registered in Glasgow included 11 from measles, 3 from scarlet fever, 3 from whooping-cough, 2 from "fever," and 22 from diarrhœa. Three deaths from whooping-cough and 5 from diarrhœa were registered in Edinburgh; 7 from diarrhœa in Aberdeen, and 4 in Leith: and 3 from "fever" in Paisley.

### THE EPIDEMIC OF ENTERIC FEVER AT COVENTRY.

Dr. Snell, the Medical Officer of Health of Coventry, presented a third report to the Sanitary Committee on September 17th concerning the epidemic of enteric. The total number of cases since August 22nd has been 69, and 3 deaths had occurred. As to the cause of the epidemic there is little new. The well water from Court 4 has been examined by Dr. Bostock Hill, who says that the water is of remarkable purity, and that he sees no reason why it should be considered liable to injure health. Dr. Snell points out that by no means all of the affected people drank the water, and many affected did not drink it; and, further, that out of the 63 affected, 46 received their milk from the same source. It is satisfactory to hear that the Sanitary Committee are sparing no pains to prevent the further spread or subsequent recurrence of the disease in Sherbourne Street.

### BURIAL GROUNDS.

A. L. C. writes: A piece of ground sloping towards and adjoining a stream is about to be added to a graveyard. The stream is not used for drinking purposes. Would the proximity of the ground to the stream condemn it for use as a burial ground from a sanitary point of view?

*** The proximity of the ground to the stream would not necessarily prevent its use as a burial ground, as the stream is not used for drinking purposes; but in the regulations for burial grounds provided under the Burial Acts the side must be under-drained to such a depth as will prevent water remaining in any grave or vault, and it is probable that in the instance mentioned by "A. L. C." the level of ground water would be so high that under the circumstances it might be difficult or impossible to sufficiently lower its level. It would be desirable first to make trial borings in order to see at what height the ground water is actually standing over the low-lying area in question.

### DISINFECTORS.

T. I. M.—Portable steam disinfectors are made at costs varying from £100 to £200. Reck's disinfector, Thresh's disinfector, and the "Equifex" have all been extensively used. Particulars, including a list of the authorities using the different apparatus, can be obtained on application to Dr. Thresh, Chelmsford, Essex; "The Reck Disinfector," agents, 10, Dawson Street, Dublin; and the "Equifex" Disinfector, 147, Houndsditch, London, E.C.

### DUTIES OF M.O.H.

W. R. S. asks if there is a concise work detailing the various duties of a medical officer of health. He asks also whether having been appointed to this office he must resign his seat on the parish council of ———, this being one of the parishes of R.D. Council, the body making the appointment. He presumes that as a private practitioner in the district he would still be permitted to report to himself as M.O.H. and charge for certificates notifying any cases of infectious disease coming under his notice in ordinary practice.

*** There is, so far as we know, no book dealing directly with this subject. Much useful information may be gathered from Willoughby's *Health Officer's Pocket Book* (London: Crosby, Lockwood, and Son, 1893, 7s. 6d.), but probably the chapter by Dr Alfred Ashby upon "The Medical Officer of Health," in Stevenson and Murphy's work[1] will best meet the requirements of "W. R. S." The Secretary of the Local Government Board should be asked for statistical tables for the necessary forms for annual reports. We believe that "W. R. S." should not continue serve as a member on any council which had a voice in appointing hi as medical officer of health, and that, as a matter of fact, he should ha resigned prior to his appointment. As a private practitioner in the district where he is also medical officer of health he may claim a fee for the notification of infectious disease occurring in his private practice.

[1] *A Treatise on Hygiene and Public Health.* Edited by Stevenson and Murphy. Vol. ii. London: J. and A. Churchill. 1893. 32s.

# INDIA AND THE COLONIES.

### SHANGHAI.

Dr. Arthur Stanley, in his annual report of the Health Department of the Shanghai Municipal Council for 1900, states that by receiving the help of men on his staff with special sanitary training, the sanitary work of Shanghai is attaining a greater completeness. During the year 1900 several important measures have been carried out, such as the provision of an isolation hospital for the infectious native sick, the opening up of creeks, and the filling in of stagnant pools; the abolishment of filth receptacles and open graves; licensing of laundries; disinfection after infectious diseases; and several other important public health necessities. The death-rate amongst foreign residents during 1900 amounted to 14.32 per 1,000 as against 18.87 in 1899. Typhoid fever has diminished in frequency during the year. Cholera has not been met with in Shanghai for four consecutive years; plague has been kept entirely at bay. The zymotic death rate was only 1.33, whilst in England during the same period it was 2.19. In the Public Health Laboratory a great deal of useful work has been done, and in every department—bacteriological, analytical, and in the vaccine station—most satisfactory advance has been made. In the Shanghai Pasteur Institute 17 persons were treated, 5 of the number receiving prophylactic injections. Nothing seems neglected in Shanghai from the sanitary standpoint; and it is hoped that as the Chinese see the benefits which accrue from attention to hygienic details, they may come in time to aid, in place of attempting to thwart, the steps the foreigners are taking to improve the public health of this important city.

### MALTA.

General Health Report.—According to the report of the Public Health Department of Malta for 1900, presented recently by Dr. S. L. Pisani, the population on January 1st was estimated at 183,679, being an increase of 2,031 over the preceding year, chiefly due to excess of births over deaths, but partly due to excess of arrivals over departures. The birth-rate for the year was 38.89, and the death-rate 27.51 per 1,000. The increased death-rate was due to debility and bronchitis in children and to cardiac disease among adults. While the drained areas had a death-rate of 24.87, the undrained areas had one of 31.82 per 1,000.

### SOME INDIAN SANITARY REPORTS.

*Bombay.*—The report for 1899, compiled by the Sanitary Commissioner, Lieutenant-Colonel J. W. Clarkson, is mainly statistical. Every page is loaded with tables, figures, and ratios. Seeing that these are of very doubtful accuracy and value, more especially in view of an infirm census basis, it seems a pity that the sanitary condition of the Presidency and what is being done to improve it should be represented solely by arithmetic. The year appears to have been less healthy than 1898; both birth-rates and death-rates were high; the former was 36.42 per mille, against 30.94 in 1898 and a decennial mean of 35.21; the latter 35.72, against 29.16 and 30.85. Plague and famine contributed to swell the death-roll. The number of recorded plague deaths was 96,556, as compared with 86,191 and 46,944 in 1898 and 1897. It is noted that "plague was practically non-existent in the open, well-ventilated relief camps." Only one district was free from plague in 1899. Some towns had very low birth-rates, that of Bombay being only 12.88. This is attributed to "the decrease in population owing to the exodus caused by plague." On the other hand, many towns had very high death-rates owing, it is surmised, to "the influx of famine-stricken immigrants in reduced condition of health." The increased mortality of the year was mainly caused by a rise in registration under the heading "other causes," due, it is thought, to greater accuracy. The Sanitary Commissioner suggests an additional heading of "diseases of the respiratory organs," which, in view of the increase of phthisis in the city of Bombay, is approved by the Government. Separate statistics are given of Europeans and Eurasians numbering 18,486 and 8,519. Their birth-rates are 11.96 and 19.49, and death-rates 12.52 and 21.72 respectively. These figures are recorded without comment. The chapter on sanitary works indicates commendable activity. The work done by the port health officer, Major J. Crimmin, V.C., is favourably noticed by the Bombay Government.

# MEDICAL NEWS.

A course of lectures on the Tuberculosis Congress will be delivered by Dr. E. Symes Thompson, Gresham Professor of Medicine, at Gresham College, Basinghall Street, on October 8th, 9th, 10th, and 11th, at 6 P.M. on each day.

A Home for Inebriates.—The Salvation Army are about to open a home for male inebriates near the farm colony established at Hadleigh some ten years ago by the same organisation. It will be established in an old house containing space for sixty patients, and surrounded by grounds in which they can be occupied in gardening and other outdoor work.

A MEDICAL CONFRATERNITY.—The Confraternity of SS. Cosmas and Damian of Madrid, whose headquarters are the parish church of Nuestra Señora del Carmen in Madrid, celebrated its annual festival on September 27th by attending High Mass. The Confraternity is composed of medical men, as its patron saints are believed to have been. The name of St. Cosmas in its French form of "Côme" is well known in association with the old Brotherhood and College of Surgeons which existed in France for many centuries before the Revolution.

THE Imperial Yeomanry Hospital at Eastwood, Arcadia, Pretoria, was, on September 16th, handed over to the Royal Army Medical Corps. A hospital of 138 beds for the Yeomanry will be maintained at Elandsfontein, some six miles from Johannesburg, and will be in the charge of Colonel Kilkelly, C.M.G., R.A.M.C., who was the military commandant of the Imperial Yeomanry Hospital, Pretoria.

POST-GRADUATE COURSES IN LONDON.—We are asked to state that the winter session of the West London Post-Graduate College will commence on Monday, October 14th, when the new buildings will be opened and an address will be delivered by Sir William MacCormac, Bart., K.C.V.O. The usual demonstrations of cases at the National Hospital for the Paralysed and Epileptic, Queen Square, which were omitted last year owing to the recent difficulties, will begin again on Tuesday, October 8th, at 2.30 P.M. The course of lectures to medical practitioners given in the Hospital for Sick Children, Great Ormond Street, will be resumed on Thursday, October 10th, at 4 P.M.

## MEDICAL VACANCIES.

The following vacancies are announced:

BELFAST: ROYAL VICTORIA HOSPITAL.—Medical Superintendent. Salary commencing at £3 0 per annum, with board and apartments. Applications to the Honorary Secretary by November 1st

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Resident Surgical Officer. Salary, £100 per annum, with apartments, board, and attendance. Candidates to state if willing to accept appointment of Junior House-Surgeon if present residents be promoted. Applications to the Chairman of the Medical Board by October 12th.

BODMIN: CORNWALL COUNTY ASYLUM.—Junior Assistant Medical Officer; unmarried. Salary, £126, rising to £150 per annum, with board, furnished apartments, laundry, etc. Applications to the Medical Superintendent by October 24th.

BOURNEMOUTH: ROYAL VICTORIA HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board. Applications to the Chairman by October 14th.

BRENTWOOD: ESSEX COUNTY ASYLUM.—Junior Assistant Medical Officer; not over 25 years of age. Salary, £140 per annum. Applications to the Medical Superintendent.

BRIDGNORTH AND SOUTH SHROPSHIRE INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board and lodgings. Applications to the Honorary Secretary by October 10th.

BRIGHTON: HOVE AND SUSSEX THROAT AND EAR HOSPITAL, Church Street, Brighton.—Non-resident House-surgeon. Appointment for six months, but renewable. Salary at the rate of £75 per annum. Applications to the Secretary.

BRISTOL GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with board, residence, etc. Applications to the Secretary by October 28th.

BURTON-ON-TRENT INFIRMARY.—House-Surgeon. Salary, £120 for first year, and £140 for second year, with board, furnished rooms, etc. Applications to the Honorary Secretary by October 11th.

CHESHIRE COUNTY ASYLUM, Parkside, Macclesfield.—Junior Assistant Medical Officer. Salary, £140, rising to £160 per annum, with board, furnished apartments, washing, and attendance. Applications to the Medical Superintendent.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Second House-Physician. Appointment for six months. Board, washing, and residence provided, and salary at the rate of £30 per annum. Applications to the Secretary by October 11th.

DENBIGH: DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary, £100 per annum to commence, with board, residence, and washing. Applications to the Secretary.

DENBIGH: NORTH WALES COUNTIES LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary, £120 to £160, with board, residence, and washing. Applications to Clerk to the Visiting Committee.

DENTAL HOSPITAL OF LONDON, Leicester Square, W.—(1) Dental Surgeon. (2) Assistant Dental Surgeon. Applications to the Secretary by October 7th.

DERBY COUNTY ASYLUM, Mickleover.—Senior Assistant Medical Officer. Salary, £130, rising to £150 per annum, with furnished apartments, board, washing, and attendance. Applications to the Medical Superintendent.

GLASGOW ROYAL ASYLUM FOR LUNATICS.—Resident Physician-Superintendent; not under 30 nor over 45 years of age. Salary, £1,000 per annum with house, etc. Applications to the Secretary, 190, West George Street, Glasgow, by October 21st.

GRAVESEND HOSPITAL.—House-Surgeon. Salary, £90 per annum, with board and residence. Applications to the Honorary Secretary by October 11th.

HAMPSTEAD HOSPITAL, Parliament Hill, N.W.—Dental Surgeon. Applications to the Honorary Secretary by October 8th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Surgeon; unmarried. Appointment for six months. Salary, £30, with board, residence, and washing allowance of £2 10s. (2) Surgeon Dentist; must be F.R.C.S.Eng. Applications, on forms provided, to be sent to the Secretary by October 22nd.

HOSPITAL FOR WOMEN, Soho Square, W.—Assistant Physician. Applications to the Secretary by October 12th.

KING'S COLLEGE, London.—Demonstrator of General Pathology and Bacteriology. Applications to the Council by October 9th.

LONDON HOSPITAL MEDICAL COLLEGE, E.—Assistant in the Bacteriological Laboratory. Applications to the Dean.

LONDON THROAT HOSPITAL, 204, Great Portland Street, W.—Pathologist. Applications to the Honorary Secretary before October 7th.

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury.—Medical Officer for the Dispensary. Salary, £180 per annum. Applications to the Secretary, Children's Dispensary, Gartside Street, Manchester, by October 9th.

MIDLOTHIAN DISTRICT ASYLUM.—Assistant Medical Officer. Salary, £270 per annum, with furnished rooms, board, washing, and attendance. Applications to Mr. R. Addison Smith, 19, Heriot Row, Edinburgh, by October 18th.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—Curator and Librarian. Salary, £120 per annum. Applications to the Secretary by Octo [illegible]10th.

ST. MARY'S HOSPITAL, Paddington, W.—Casualty Physician. Salary, £75 per annum Applications to the Secretary by October 19th.

SHANGHAI MUNICIPAL COUNCIL.—Assistant Health Officer; must possess D.P.H., and not be over 35 years of age. Salary, 3,600 taels a year (about £360), with means of locomotion and first-class passage to and from England. Applications to Messrs. J. Pook and Co., 63, Leadenhall Street, E.C., by November 30th.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Senior House-Surgeon. Salary, £100 per annum, with residence, board, and washing. Applications to the Secretary, 74, King Street, South Shields, by October 14th.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House-Surgeon. Salary, £60 per annum, with board, lodging, and washing. Applications to the House-Surgeon by October 10th.

STOKE-UPON-TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House-Physician. Salary, £100 per annum, increasing £10 yearly at discretion of Committee, with furnished apartments, board, and washing. Applications to the Secretary by October 21st.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon: unmarried. Salary for the first year, £160, increasing £10 yearly, with board and apartments. Applications to Mr. J. C. R. Crewes, 4 Parkvedras Terrace Truro.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Senior House-Surgeon, unmarried. Salary, £120 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by October 9th.

## MEDICAL APPOINTMENTS.

ABRAHAM, J. Johnston, Sen. Mod., M.B., B.Ch., B.A.O.Dub., L.M.Rotunda, appointed House-Surgeon to the West London Hospital.

BAILEY, J. C. M., M.B.Lond., M.R.C.S., L.R.C.P.Lond., appointed House-Physician to the West London Hospital.

BLOMFIELD, Edward Eldridge, M.D., B.S.Lond., M.R.C.S., L.R.C.P.Lond., appointed Examiner in Medical Anatomy and Lecturer on Materia Medica at the Otago University, New Zealand.

EATOUGH, Robert, M.D., C.M.Aberd., appointed Medical Officer and Public Vaccinator for the Twelfth District of the Ashton-under-Lyne Union. *vice* Richard Henry Dreaper, L.R.C.S.I., L.M., resigned.

GARSTONG, Walter, M.B., Ch.B.Vict., appointed House-Surgeon to the Royal Lancaster Infirmary.

HARPER, F. L., M.R.C.S.Eng., appointed Certifying Factory Surgeon for the Brixworth Rural District, Northampton.

MCCALL, Miss E. M.B., B.S.Glasg., appointed Resident Assistant Medical Officer of the Birkenhead Union.

MAY, G. E., M.R.C.S.Eng., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Ware District of Hertfordshire.

ROBERTSON, George, L.R.C.P., L.R.C.S.Edin., appointed Certifying Factory Surgeon for the Kirkpatrick Durham District of Kirkcudbrightshire.

RYAN, John, L.R.C.P., L.R.C.S.Irel., appointed Certifying Factory Surgeon for the Northleach District of Gloucestershire.

SHIELDS, O. C. G., M.B., appointed Medical Officer of Health for Yea, Victoria.

SOMERVILLE, E., M.B., Ch.B.Edin., appointed District Medical Officer of the Leek Union.

THORNTON, R. G. C., M.B., B.Ch.R.U.I., appointed District Medical Officer of the Wellington (Salop) Union.

## DIARY FOR NEXT WEEK.

### TUESDAY.

**Society for the Study of Inebriety,** 11, Chandos Street, Cavendish Square, W., 4 P.M.—Mr. Charles Smith (Maidstone): Are Southern Nations Sober as compared with Northern Nations? if so, why? Some omitted factors in the theory of Dr. Archdall Reid. Dr. Martyn Westcott: A Note on Sea Voyages in the Treatment of Inebriety. The President (Dr. Wynn Westcott): A Review of Recent Progress in the Treatment of Inebriates in Reformatories under Public Bodies by authority of the Act of 1898.

### WEDNESDAY.

**Hunterian Society, London Institution,** Finsbury Circus, E.C., 8.30 P.M.—Dr. Mitchell Bruce: On Chest Complications in Abdominal Disease. First Hunterian Lecture.

**Dermatological Society of London,** 11, Chandos Street, Cavendish Square, W., 5.15 P.M.—Demonstration of Cases of Interest.

### THURSDAY.

**British Gynæcological Society,** 20, Hanover Square, W., 8 P.M.—Dr Travers: On a Case of Intestinal Obstruction caused by Unsuspected Uterine Fibromyoma simulating Appendicitis. Specimens will be shown by Dr. H. Macnaughton-Jones.

### FRIDAY.

**Clinical Society of London,** 20, Hanover Square W., 8.30 P.M.—Mr. J. Jackson Clarke: Note on a Painful Condition of the Twelfth Pair of Ribs. Mr. Thomas Bryant: A Case of Displaced Strangulated Femoral Hernia. Mr. Cuthbert Wallace: Wounds of Joints and their Treatment. Mr. C. Mansell Moullin: Omental Fixation for Ascites.

**Medical Graduates' College and Polyclinic,** 22, Chenies Street, W.C.—Lectures and Demonstrations will be given at 4 P.M. as follows: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, ear.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

MADDEN.—On September 19th, at Cairo, the wife of Frank Cole Madden, F.R.C.S., of a son.

RUDOLF.—On September 22nd, at 413, Sherbourne Street, Toronto, Canada, the wife of Robert D. Rudolf, M.D.Edin., M.R.C.P.Lond., of a son.

### MARRIAGES.

GOODFELLOW—ROBERTSON.—On September 25th, at St. Wilfrid's Church, Northenden, Cheshire, by the Ven. Archdeacon Woosnam and the Rev. Canon Ford, Thomas Ashton Goodfellow, M.D.Lond., of Didsbury, to Eleanor Winifred, only daughter of W. J. Robertson, of Northenden.

SAMWAYS—SIM.—On Thursday, September 26th, at Kensington Chapel, Allen Street, W., by the Rev. C. Silvester Horne, M.A., Daniel West Samways, M.D., M.R.C.P., D.Sc., of Montone, to Sarah Sophia, widow of the late Captain A. D. Sim, Argyll and Sutherland Highlanders, and youngest daughter of the late J. C. Bolton, of Carbrook, Argyllshire.

### DEATH.

HEGINBOTHAM.—On August 2nd, at Wymeswold, near Loughborough, Dr. Henry John Heginbotham, only son of the late Henry Heginbotham, J.P., Surgeon, Stockport, aged 42 years. Very deeply regretted

# LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

## QUERIES.

A MEDICAL WOMAN, who purposes spending a few months in Vienna, would be very glad of any information about medical work there.

M. asks whether this sentence, "The science of medicine holds the promise of the future," is, as he believes, the conclusion of an address by Sir J. Burdon-Sanderson, and, if so, where and when it was delivered.

YORK would be obliged if anyone could recommend a free home for an elderly woman who has been a nurse for many years, but is now partially incapacitated by rheumatism. She has practically no means.

ELECTRICIAN would be glad to hear of some simple apparatus, and the method of applying it, for giving a patient electrical baths in her own house.

WILL any member kindly tell C. P. W. N., either in the BRITISH MEDICAL JOURNAL or addressed to 11, London Road, Forest Hill, S.E., the best place (not abroad) for a gentleman (aged 69) and his wife (aged 65) to winter in. Both suffer from chronic sciatica and rheumatism, with a "splash" of gout.

### NURSING HOME FOR LUNATICS.

D. asks for information respecting the registering of a nursing home for lunatic patients, where to apply, the probable cost, and what the regulations are.

*** We take it that a "nursing home for lunatic patients" would legally be a species of "institution for lunatics," and as such cannot be started as a new undertaking, but only by purchase and conversion of an existing institution for lunatics, and with the consent of the licensing authorities of such institution, these varying, of course, with its locality.

### A CASE FOR ADVICE.

CAPTAIN G. H. FROST, I.M.S., 11th British Field Hospital, C. and D. Sections, Field Force, South Africa, writes under date of August 15th to state that whilst shooting a few days before, a cartridge case burst in his gun, and a piece of brass base was blown out through the breech. He believes that it entered the eye as near as possible to the sclero-corneal junction, and apparently ran along the sclerotic at the lower and outer segment, the course being marked by some subconjunctival ecchymosis. He believes it to have lodged somewhere in the outer part of the eye-socket. Since the accident a large patch like a large black spider appears on the field of vision. Our correspondent wishes to have the experience of others as to (1) whether the piece of brass, assuming that it is within the eye socket, but outside the eyeball, is likely to cause trouble in the future; (2) whether the pigment will get absorbed and disappear from the vitreous body in time.

### TREATMENT OF CARDIAC DYSPNŒA.

ANXIOUS writes: I have a married lady, aged 43, under my care who has the usual cardiac evidence of mitral regurgitation. The heart's action is rapid and irregular, and many beats are not transmitted to the radials. She is not having any climacteric symptoms, and the cause is probably rheumatism. The liver is enlarged to the navel, and I take it to be "nutmeg." But she has practically no œdema of legs, and never has had, nor is there any albuminuria or evidence of pulmonary congestion. There is dyspnœa on the slightest exertion. Despite complete bodily and mental rest and the use of trusted heart tonics and diet, the heart still keeps irregular, and dyspnœa is still distressing. Will someone kindly explain to me (1) how, if I am right, a "nutmeg liver" so marked can exist without other evidence of "backward changes"? (2) Why I cannot get the heart steady? There is no trouble with bowels, and gastric symptoms are not very prominent. She will not have another opinion. I should be very grateful for help and suggestions.

## ANSWERS.

OMEGA.—A communication thus signed was received some time ago, but cannot be answered, as our correspondent failed to enclose his name.

A. T. W.—The following works may be mentioned: (1) *Essays in Heart and Lung Disease*, by A. Foxwell, M.A., M.D., F.R.C.P. (London: C. Griffin and Co. 1895. 12s. 6d.). *Diseases of the Hear and Aorta*, by G. A. Gibson M.D. (London: Young J. Pentland. 1898. 24s.). *Principles which Govern Treatment in Diseases and Disorders of the Heart*, by Sir R. Douglas Powell, Bart. M.D. (London: H. K. Lewis. 1898. 6s.). (2) *The Mineral Waters and Health Resorts of Europe*, by Sir Hermann Weber, M.D., and F. Parkes Weber, M.D. (London: Smith, Elder and Co. 1898. 10s. 6d.). *Climate and Health Resorts*, by J. Burney Yeo, M.D. Third edition. (London: Cassell and Co. 1890. 7s. 6d.).

### DEATH CERTIFICATION IN MANITOBA.

DR. HENRY P. ELLIOTT (Morden, Manitoba) draws attention to the evil arising from the fact that in that province medical certification does not necessarily precede burial. This lax state of matters is a serious source of risk to the community. The law ought to be altered so as to make it obligatory on the medical practitioner to send his certificate, not within a month but forthwith after the death of his patient. Details as to the English law on the subject are given in Newsholme's *Vital Statistics*, chap. III, pp. 19-36 (3rd edition. Sonnenschein and Co., 7s. 6d.; and a large amount of international information is contained in the Report of the Select Committee of the House of Commons on Death Certification, 1893 (Eyre and Spottiswoode, 3s. 4d.).

### INSTITUTION FOR YOUTH MENTALLY DEFICIENT.

G. E. S., in answer to "Guardian," writes: The National Association for Promoting the Welfare of the Feebleminded have training homes both for younger and older boys who require special teaching, but are not certifiably imbecile. The cost to guardians is 10s. per week, and particulars may be obtained from the Secretary, Mrs. Peters, 33, Victoria Street, Westminster, S.W. Should the youth be certifiably imbecile, application might be made to the Eastern Counties Asylum, Colchester (Secretary, Mr. J. J. C. Turner), the Western Counties Asylum, Starcross, Devon (Secretary, Mr. Locke), or the Royal Albert Asylum, Lancaster (Secretary, Mr. Diggens), all of which institutions receive a certain number of pauper patients, and have good arrangements for their industrial training. In the London district the Metropolitan Asylums Board provides for such cases.

### CANCER AMONG THE JEWS.

P. B. S. draws our attention to a letter signed "Common Sense," published in a contemporary, in which the writer assumes that cancer occurs rarely among the Jews, and suggests that this may be due to their avoidance of pig's flesh, for "as trichinosis is associated with pork it is not beyond the bounds of probability that" the use of the flesh of so foul-feeding an animal may convey the seeds of all kinds of diseases into the system. As a matter of fact cancer is extremely and increasingly prevalent among the Jews, while trichinosis is virtually unknown. "The bounds of probability" must always depend upon the personal equation of the writer; in the case of the one whose identity is concealed by the pseudonym "Common Sense" they would appear to be very wide.

### SURGEONS TO PASSENGER VESSELS.

EDINBURGH sends the following information in supplement and correction of that published in the BRITISH MEDICAL JOURNAL of September 28th, p. 938. The P. and O. S. N. Co. pay £10 per month (£12 to their senior "commodore" medical officer only), but instruments and outfit come pretty well on to £60 or more. Orient pays £10; Shaw, Savill and Albion Co. pays £10, and the outfit is from £40 to £60. The White Star Line pays £10, British India £8, Anchor Line £6 (Indian route). In all the first-class lines frock coat, mess, and undress uniform is required, along with white duck uniform. Where instruments have to be provided at surgeon's expense, at least £20 is required for good instruments, according to Board of Trade list. Age limit, previous sea experience, and influence are all considered. One wishing such appointment should write the offices, see the conditions, and, if suitable, then procure some introduction to the directorate. Owing to the dearth of medical men at home from the South African war, ships' surgeoncies have been more easily got lately, but again the run after them is beginning, and personal influence to secure appointment above the unrecommended names (available for emergencies) is required. I have been at various times surgeon on several lines, and know the requirements. "No uniform required" scarcely means no expense, as an eastward voyage requires outfit for warm climate; and as the surgeon is one of the crew, and has signed the articles, he should at least possess a reefer blue suit and seafaring cap.

### INDICATIONS FOR CIRCUMCISION.

IN reply to "W. E. H.," who asks in the BRITISH MEDICAL JOURNAL of September 28th, What is the generally received opinion as to the efficacy or otherwise of the operation of circumcision in infancy as a preventive of the habit of masturbation later? "Consultant to a Children's Hospital" writes:

Circumcision as a preventive of masturbation is really only of service when there are clear and definite indications present, as follows: (1) If it is noticed by mother or nurse that the infant has acquired the habit of pulling at the foreskin or of fingering himself; (2) if there is a congenitally tight and long prepuce which causes difficulty in uncovering the glans, or if after having retracted the prepuce there is difficulty in drawing it forward again. Everyone knows that at birth the prepuce is relatively large, and that, with development, the glans grows more, and the prepuce gradually retires, until an appearance of natural circumcision is present normally, or can be produced by drawing back the foreskin. The mere presence of adhesions between the inner surface of the mucous membrane of the prepuce and the glans does not call for circumcision provided the prepuce is loose and can be retracted. All that is necessary is to break down the adhesions, especially around the corona, to remove any collected smegma, and to guard against subsequent adhesions forming. In the absence of such clear and definite indications, to circumcise every boy when an infant to prevent his becoming a masturbator in after-life is pure quackery; women, unfortunately, sometimes develop the habit; are we, therefore, to advise some preventive operation to be done in the case of all female children? The argument that, owing to circumcision, onanism is comparatively rare among Jews (the scientific

accuracy of the rarity of onanism among them is not proven) is on a par with the statement frequently made that, owing to the same cause, cancer of the uterus is comparatively rare amongst Jewish women. It is the fallacy, too common in our profession, of arguing from one instead of taking in all the concomitant circumstances. With our present knowledge of appendicitis an infinitely stronger case could be made out for removing the vermiform appendix in all children (male or female); but in this country surgeons have not yet proposed such a drastic course as a preventive of subsequent appendicitis (a condition in its immediate dangers and remote effects very much more serious than masturbation). Circumcision as a preventive measure of masturbation was several years ago suggested and carried out by certain surgeons: the results were anything but satisfactory, and I believe the practice of this surgical proceeding, in the absence of special local conditions, is a thing of the past. The truth is, in 99 out of 100 cases the habit arises either as the result of some mental deficiency or lowered moral tone, stimulated, to a certain extent, by the onset of puberty. One or two filthy boys will corrupt a whole school. The habit is to be prevented by the avoidance of low companions, by the fostering of a high moral tone at our public schools, by encouraging everything (open-air exercise, unstimulating food and literature) to keep up bodily vigour, and, if necessary, in certain cases by a judicious hint from the parent or teacher as to the laws of physiology. It is by such means, rather than by the absurd idea of circumcising every infant, that the habit of masturbation will be eradicated.

### A MODERN LIBRARY.

RUSTICUS desires to have recommended a list of books on different subjects for the purpose of bringing his medical library up to date.

*** The following might prove suitable for his purpose: *Textbook of Medicine*, by G. A. Gibson, in two volumes (London and Edinburgh: Young J. Pentland, 1901, 25s.); *A Manual of the Practice of Medicine*, by Frederick Taylor, Sixth Edition (London: J. and A. Churchill, 1901, 16s.), or *The Principles and Practice of Medicine*, by W. Osler, Third Edition (Edinburgh and London: Young J. Pentland, 1898, 24s.); *Manual of Midwifery*, by W. E. Fothergill, Second Edition (Edinburgh: W. F. Clay, 1900, 9s.); and *Diseases of Women*, by G. E. Herman, M.B., F.R.C.P., (London: Cassell and Co., 1898, 25s.); *An Introduction to Pathology and Morbid Anatomy*, by T. H. Green, Ninth Edition revised by H. M. Murray (London: Henry Renshaw, 1900, 21s.), or *A Manual of Pathology*, by J. Coats, Fourth Edition, revised by L. R. Sutherland (London: Longmans, Green and Co., 1900, 31s. 6d.); *Guide to the Clinical Examination and Treatment of Sick Children*, by J. Thomson (Edinburgh: W. F. Clay, 1898, 9s.), or *Medical Diseases of Infancy and Childhood*, by D. Williams, M.D. (London: Cassell and Co., 1898, 10s. 6d.); *The Diseases of Children, Medical and Surgical*, by H. Ashby and G. A. Wright, Fourth Edition (London: Longmans, Green and Co., 1899, 25s.); *The Surgical Diseases of Children*, by E. Owen, Third Edition (London: Cassell and Co., 1897, 21s.), or *Surgical Diseases of Children*, by D'A. Power (London: H. K. Lewis, 1895, 10s. 6d.); *Tropical Diseases*, by P. Manson, Second Edition (London: Cassell and Co., 1900, 10s. 6d.); *Textbook of Forensic Medicine and Toxicology*, by A. P. Luff, M.D., in two volumes (London: Longmans, Green, and Co., 1895, 24s.), or *A Treatise on Medical Jurisprudence*, by G. V. Poore, M.D., F.R.C.P. (London: John Murray, 1901, 12s.); *Textbook of Medical Treatment*, by Nestor Tirard (London: J. and A. Churchill, 1900, 15s.), and *A Textbook of Pharmacology and Therapeutics*, by A. R. Cushny, M.A., M.D., Second Edition (London: Rebman Limited, 1901, 17s. 6d.); *An American Textbook of Genito-Urinary Diseases, Syphilis, and Diseases of the Skin*, by L. B. Bangs, M.D., and W. A. Hardaway, A.M., M.D., in two volumes (London: Rebman, Limited, 1898, 42s.); *Diseases of the Ear, Nose, and Throat, and their Accessory Cavities*, by S. S. Bishop, M.D., D.C.L., LL.D., second edition (Philadelphia and London: F. A. Davis Co., 1898, 16s.), or *Diseases of the Nose and Throat*, by F. de Havilland Hall and H. Tilley, second edition (London: H. K. Lewis, 1901, 10s. 6d.), or *Diseases of the Upper Respiratory Tract, the Nose, Pharynx, and Larynx*, by P. W. Williams, fourth edition (Bristol: J. Wright and Co., 1901, 17s. 6d.); *Deformities*, by A. H. Tubby, M.S., F.R.C.S. (London: Macmillan and Co., 1896, 17s.), or *Orthopædic Surgery*, by C. B. Keetley, F.R.C.S. (London: Smith, Elder and Co., 1900, 16s.); *Diseases of the Nervous System*, by H. Oppenheim, M.D., authorised translation from the second German edition by E. E. Mayer (London: J. B. Lippincott Co., 1901, 21s.).

## LETTERS, NOTES, Etc.

ERRATUM.—In the notes on Cyprus fever by Dr. G. A. Williamson (BRITISH MEDICAL JOURNAL, September 14th, p. 686, col. 2, line 32) for "Delhi birl" read "Delhi boil."

### THE LIGHT TREATMENT OF LUPUS: A CORRECTION.

THE remarks of Dr. G. B. Batten on this subject in the BRITISH MEDICAL JOURNAL of September 28th, p. 854, col. 1, last line *et seq.*, should read as follows and not as printed: "One should never use a tube with a blue cloud in front of the anticathode, and seldom one with the blue cloud behind the anticathode. A soft tube gave similar or even quicker results, but was more dangerous, that was, more likely to cause dermatitis than a harder tube."

### MUSIC PRACTICE AND NEUROTIC GIRLS.

F. R. HAMILTON HALL (Fordcombe, Tunbridge Wells) writes: It is difficult to agree with "P. B. G." that an hour's piano practice daily is permissible in the case of a neurotic girl, and it is still more difficult to agree with Dr F. D. Kirby that the strength of the forearm is a factor for consideration. Several years experience of neurotic children results in a very strong opinion that the finger movements of piano practice make a very large and exhausting demand upon the brain energy, whatever that may be. "C. P." would do well to forbid the piano altogether for a protracted interval of time, and if he can get the neurotic manifestations remedied in the interval he will be able to observe their return when the practising is resumed. Singing is infinitely less exacting in this connection, but the neurotic girl can easily have too much of that. In a like case where one hour is required I have it divided into two half hours, and find it evidently causing trouble then.

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LETTERS, COMMUNICATIONS, ETC., have been received from

**A** Another General Practitioner; Absentee; Miss M. B. Andrews, M.B., Kirkwall; Anxious; Dr. F. W. Andrews, London; A.M.S.; Dr. P. Ashworth, Southport; A. T. W.; Antiquack; Antibosh; Dr. T. C. Askin, Woodbridge. **B** Mr. C. E. G. Bateman, Walsingham; Dr. L. T. F. Bryett, London; Mr. L. A. Bidwell, London; Mr. G. H. Broadbent, Manchester; Dr. J. W. Byers, Belfast; Dr. G. B. Batten, London; Mr. L. C. Baker, Southsea; Dr. J. Barr, Liverpool; Mrs. W. Bruce, London; Dr. C. E. Beevor, London. **C** Dr. E. M. Corner, London; C. P. Crouch, M.B., Weston-super-Mare; Captain R.A.M.C. A. Cox, M.B., Gateshead; Mr. W. R. Cooper, Southsea; Dr. H. Campbell, London; Civil Surgeon; Mrs. Crossley, Buckhurst Hill; Mr. A. Cooper, London. **D** D. S. G.; Mr. H. G. F. Dawson, Birkenhead; Dissatisfied; Dr. T. Dutton, London; Mr. W. F. Dearden, Manchester; Distracted. **E** H. P. Elliot, M.B., Morden, Manitoba; Edinburgh; Electrician; J. Erskine, M.B., Glasgow. **F** Mrs. Farquharson, Meigle. **G** Mr. J. W. Gill, Liskeard; Mr. H. C. T. Gardner, London; J. Grimshaw, M.B., Aldershot; Dr. J. G. Glover, London; G. P.; Giedencooft. **H** Mr. R. J. D. Hepple, Harton; Dr. J. B. Hellier, Leeds; Mr. H. N. Hardy, London; Mr. A. B. Hicks, London; Dr. F. J. Hicks, Killadeas; Dr. G. W. Hill, London. **J** Mr. H. O. Jones, London; Dr. G. L. Johnson, London; Justice. **L** J. Lloyd-Roberts, M.B., Colwyn Bay; Mr. C. J. R. Lawday, Dartmouth; London School of Medicine for Women, Secretary of, London; Lupus. **M** Mr. W. J. Midelton, Bournemouth; M.; H. Mason, M.B., Leamington; Dr. R. U. Moffat, C.M.G., Sevenoaks; Mr. J. McKay, London; Mr. T. I. Mills, Easingwold; Mr. A. MacLean, London; Mr. R. A. Mossman, St. Leonard's-on-Sea; Mr. C. D. Marshall, London; Myosin-Albumin Meat Extract Company, Manager of, London M.B.Lond. **N** Miss K. Newell, London. **O** Dr. L. J. H. Oldmeadow, London. **P** Psychic; Mr. C. B. Pasley, Cahir; Mr. E. C. Papillon, London; P. P.; Problem; Pleximeter. **R** Mr. C. S. Redmond, Manchester; Dr. J. S. R. Russell, London; Mr. T. F. Raven, Broadstairs; Dr. E. S. Reynolds, Manchester. **S** Mr. W. H. Snow, Southend-on-Sea; Mr. E. Saywell, Nottingham; Mr. P. Stewart, Dublin; Mr. W. M. Storrar, Belfast; B. Strachan, M.B., Sunderland; Dr. J. H. Swanton, London; Dr. H. Smith, London; Mr. W. Stuart-Low, London; Mr. T. G. Scott, London. **T** Dr. W. J. Tyson, Folkestone; T. S. Tuke, M.B., London; Mr. J. W. Taylor, Birmingham; J. H. Targett, M.B., London; P. E. Turner, M.B., Nagercoil. **V** Vaccina. **W** W. B.; Dr. D. Walsh, London; Mr. R. Walker Clovelly; Dr. G. A. Williamson, Larnaca; Dr. A. McC. Weir, Liverpool; Mr. W. H. Wright, Derby; Wigan Medical Society, Secretary of, Wigan Mr. C. F. Wightman, London; J. R. Wortabet, M.B., Cambridge; Mr. R. Le G. Worsley, London; W. M. H.; Waverley; Dr. W. E. Wynter, London. **Y** York; Dr. M. Young, Stockport; etc.

## BOOKS, Etc., RECEIVED.

Tendencies to Consumption. How to Counteract them. By J. D. E. Mortimer, M.B., F.R.C.S. London: Scientific Press. 2s. 6d.

A Practical Guide to the Administration of Anæsthetics. By R. J. Probyn-Williams, M.D. London: Longmans, Green, and Co. 1901. 4s. 6d.

Hints and Suggestions as to the Planning of Poor-law Buildings. By P. G. Smith. London: Knight and Co. 1901.

A Manual of Minor Surgery and Bandaging. By C. Heath, F.R.C.S., LL.D. Twelfth Edition, revised by B. Pollard, F.R.C.S. London: J. and A. Churchill. 1901. 6s. 6d.

A Textbook of Medicine. Begun by the late C. H. Fagge, M.D., F.R.C.P., completed and revised by P. H. Pye-Smith, M.D., F.R.S. Fourth Edition. Vol. i. London: J. and A. Churchill. 1901. 21s.

Anatomy, Descriptive and Surgical. By Henry Gray, F.R.S. Fifteenth Edition, edited by T. P. Pick, F.R.C.S., and R. Howden, M.A., M.B., C.M. London: Longmans, Green, and Co. 1901. 32s.

The Story of Fish Life. By W. P. Pycraft, F.Z.S. London: George Newnes, Limited. 1901. 1s.

Zoology. By A. E. Shipley, M.A., and E. W. MacBride, M.A., D.Sc. Cambridge: University Press. 1901. 10s. 6d.

Contributions to the Comparative Anatomy of the Mammalian Eye, chiefly based on Ophthalmoscopic Examination. By G. L. Johnson, M.D., F.R.C.S. London: Dulau and Co. 1901. 21s.

The Pocket Gray, or Anatomist's Vade Mecum. By the late E. Cotterell, F.R.C.S. Fifth Edition, edited by C. H. Fagge, M.B., M.S., F.R.C.S. London: Baillière, Tindall, and Cox. 1901. 3s. 6d.

The Diagnosis and Treatment of Diseases of the Rectum. By W. Allingham, F.R.C.S., and H. W. Allingham, F.R.C.S. Seventh Edition. London: Baillière, Tindall, and Cox. 1901. 12s. 6d.

Gonorrhœal Arthritis: its Pathology, Symptoms, and Treatment. By L. V. Jones, M.D. London: H. K. Lewis. 1901. 2s. 6d.

Elements of Practical Medicine. By A. H. Carter, M.D., M.Sc. Eighth Edition. London: H. K. Lewis. 1901. 10s. 6d.

The Mental Functions of the Brain. By B. Hollander, M.D., M.R.C.S., L.R.C.P. London: Grant Richards. 1901. 21s.

*** In forwarding books the publishers are requested to state the selling price.


## SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Post-Office Orders should be made payable to the British Medical Association at the General Post-Office, London. Small amounts may be paid in postage-stamps.

N.B.—It is against the rules of the Post Office to receive letters at *Poste Restante* addressed either in initials or numbers.

# Reorganisation of the Army Medical Services.

## REPORT OF THE COMMITTEE.

We have received from the War Office for publication the report of the Committee appointed by the Secretary of State for War to consider the reorganisation of the Army Medical Services. The Committee was constituted as follows:—Right Hon. St. John Brodrick, Secretary of State for War, Chairman; Colonel Sir Edward Ward, K.C.B., Permanent Under-Secretary, Vice-Chairman. Members: Major-General Sir G. de C. Morton, K.C.I.E., C.B.; Colonel Sir James Willcocks, K.C.M.G., D.S.O.; Sir Frederick Treves, C.B., K.C.V.O.; Sir William Thomson, C.B.; Surgeon-General Hooper, C.S.I., I.M.S.; Lieut.-Colonel A. Keogh, C.B., R.A.M.C.; Mr. G. H. Makins, C.B.; Mr. A. D. Fripp, C.B., C.V.O.; Dr. H. Tooth, C.M.G.; Professor A. Ogston; Dr. E. C. Perry, F.R.C.P. Secretary; Major H. E. R. James, R.A.M.C. The following is the text of the Report:

### SCHEME FOR THE REORGANISATION OF THE ARMY MEDICAL SERVICES.

*Advisory Board.*

1. The Royal Army Medical Corps shall be under the supervision of a Board, to be termed the Advisory Board for Army Medical Services, and constituted as follows:

*Constitution.*

The Director-General, A.M.S., *Chairman.*
The Deputy Director-General, A.M.S., *Vice-Chairman.*
1 Officer, Royal Army Medical Corps, with special knowledge of Sanitation.
1 Officer, Royal Army Medical Corps, with special knowledge of Tropical Diseases.
2 Civilian Physicians
2 Civilian Surgeons
Appointed by the Crown on the recommendation of the Secretary of State.
1 Representative of the War Office appointed by the Secretary of State.
1 Representative of the India Office appointed by the Secretary of State for India.
The Matron-in-Chief, Queen Alexandra's Imperial Military Nursing Service (for Nursing Service only).

*Appointment of Civil Members.*

2. To be eligible for appointment upon the Advisory Board a Civilian Physician or Surgeon shall be required to hold or to have recently held a post on the acting staff of a leading Civil Hospital in England, Wales, Scotland, or Ireland, and to be not more than 55 years of age upon first appointment.

3. A Civilian Physician or Surgeon upon the Advisory Board shall hold office for a period of 3 years, renewable upon expiration of the term of his appointment, but subject to the proviso that he shall vacate his seat on the Board upon attaining the age of 60 years. He shall receive an honorarium of £200 per annum in addition to his out-of-pocket expenses for duties performed beyond a radius of 4 miles from Charing Cross.

*Meetings.*

4. The Advisory Board shall usually meet at fortnightly intervals, and the necessary quorum for the transaction of business shall be the Chairman (or in his absence the Vice-Chairman) and two other members of the Board, of whom one must be a civilian. The Chairman (or in his absence the Vice-Chairman) shall have the right to vote, and, in case of an equality of votes, shall have a casting vote.

*Duties.*

5. The Advisory Board shall report to the Secretary of State upon all matters concerned with medicine, surgery, sanitation, and epidemic diseases as they affect the military services.

6. The Board shall advise the Secretary of State upon the adequate provision of hospitals and upon the equipment of the same in full detail; upon the supply of drugs, appliances, diets, and medical comforts to the patients; and generally upon whatever concerns the well-being of the sick and wounded.

7. The Board shall prepare and submit to the Secretary of State a scheme for the expansion of the Service to meet the needs of war or serious epidemics, such scheme dealing with questions of ambulance and transport, the equipment of all medical units at the base and front and on the lines of communication, the supply of drugs and medical comforts, the employment in the Service of civilian surgeons, nurses, and orderlies, and the utilisation of all voluntary effort for the relief of the sick and wounded.

8. The Board shall have submitted to it, and shall report to the Secretary of State upon, all plans for new hospitals and upon standard plans for barracks and standing camps.

9. It shall be the duty of the Board to draw up a list of civil hospitals recognised as places of study for members of the Royal Army Medical Corps.

10. The Board shall also draw up a list of hospitals and nurse-training schools recognised for the purposes of the Queen Alexandra's Imperial Military Nursing Service.

11. The Board shall arrange, so far as practicable, for the annual inspection of each of the military hospitals by a Subcommittee consisting of at least one military and one civilian member of the Board, such inspection to be usually made without notice.

12. This Subcommittee shall ascertain and report to the

Board whether the treatment of patients and the equipment of hospitals inspected be in accordance with modern medical and surgical requirements.

13. The Board may, with the permission of the Secretary of State, detail specially qualified Officers of the Royal Army Medical Corps or others to visit and report upon the army medical services of foreign countries.

14. The promotion of Officers or their retention in the Service will be referred to the Board for consideration before submission by the Director-General to the Commander-in-Chief.

15. The Board shall supervise the admission of candidates to the Royal Army Medical Corps, and shall arrange for the examination of Officers for promotion, appointing examiners and recommending to the Secretary of State the amount of their remuneration, regard being had as heretofore to the English, Welsh, Scotch, and Irish medical schools. Except as specified in paragraph 25 examinations shall be held every 6 months at dates to be fixed by the Advisory Board. Examiners shall be appointed annually by the Advisory Board, but no examiner shall serve continuously for a longer period than 4 years. A member of the Advisory Board shall not be appointed examiner.

16. The Board shall exercise a general control over the nursing service, and, in consultation with the Nursing Board, shall submit to the Secretary of State a scheme to develop the training of orderlies as attendants upon the sick and wounded.

*Director-General: Appointment.*

17. The Director-General shall be appointed by the Secretary of State on the recommendation of the Commander-in-Chief, acting with the advice of the Advisory Board, and shall hold office for 5 years.

*Duties.*

18. The Director-General shall be responsible for the administration of the Army Medical Service, the Militia Medical Staff Corps, the Militia Reserve trained in medical duties, and the Volunteer Medical Staff Corps. He shall be responsible for the distribution, promotion, discipline, and general organisation of these services.

19. After reference to the Advisory Board as defined in paragraph 14, the Director-General shall bring forward to the Commander-in-Chief the names of officers whom he may judge worthy of promotion.

20. The Director-General, in concert with the Advisory Board, shall draw up a scheme for the due provision of medical aid for the Auxiliary Forces, Militia, Yeomanry, and Volunteers.

*Candidate for Admission as Medical Officer.*

21. A candidate for admission to the Royal Army Medical Corps shall be a British subject of unmixed European blood, not more than 28 years of age, and shall possess a registrable qualification to practise. He shall produce a certificate of birth or other satisfactory proof of age, and shall furnish to the Advisory Board such evidence as may be required regarding character, conduct, professional ability, and fitness to hold a commission in the corps. Special importance shall be attached to a confidential report to be requested by the Board from the Dean or other authority of the school in which the candidate has completed his course as a medical student.

*Candidate: Previous Service.*

22. Subject to such arrangements as may hereafter be made, opportunities will be given for civilian surgeons over age, who have served with troops in the field, to enter the corps. Special marks, on a scale to be fixed by the Advisory Board, shall be granted to candidates who have performed medical duties with troops on active service.

23. A candidate, having fulfilled the above requirements, shall be directed to appear before the Advisory Board, who will decide whether he may be allowed to compete for a commission in His Majesty's Army.

*Candidate: Entrance Examination.*

24. After having been medically examined the candidate shall be submitted to a clinical and practical examination in medicine and surgery, the scope of which shall be defined by the Advisory Board.

*Lieutenant on Probation.*

25. Having gained a place in this Entrance Examination the successful candidate shall be appointed Lieutenant on probation, and shall proceed to Netley (until other arrangements have been made) for a 2 months' course of instruction in hygiene and bacteriology, after which he shall be examined in these subjects. He will then proceed to Aldershot, where he will undergo a 3 months' course of instruction on the following subjects:

Stretcher and ambulance drill.
Interior economy.
Military law and hospital management.

On the completion of the course he shall be examined in these subjects. The marks gained at both these examinations (provided they are not less than the 50 per cent. requisite to qualify), added to those at the entrance examination, shall decide his position on the seniority list of the corps, and he will thereupon be confirmed in his appointment as Lieutenant. The mark ratio of each of these minor examinations to the entrance examination shall be as 1 to 8.

26. A Lieutenant on probation who fails to obtain the qualifying percentage of marks in either of these minor examinations shall be allowed a second trial at the termination of 6 months from entrance to the Service, and should he qualify will be placed at the bottom of the list. If, however, he should again fail in either examination his appointment will not be confirmed, and he will leave the Service.

*Candidate: Re Resident Post in Civil Hospital.*

27. Should a candidate pass the entrance examination to the Royal Army Medical Corps whilst holding a resident appointment in a recognised civil hospital, or be appointed thereto at such a date as will permit him to take up his duties immediately after he has passed the entrance examination for the Royal Army Medical Corps, he shall be seconded for the period of such appointment not exceeding one year, receiving, however, during such period no pay from Army funds, but counting his service towards pension or gratuity.

*Lieutenant: Regimental Duty.*

28. A Lieutenant, on completion of his course of instruction, will be attached for duty to a battalion, regiment, or other unit, but while thus attached will also be detailed for duty in a station hospital; but this provision shall not entitle any unit to claim that a medical officer shall be attached thereto.

*Option for Three Years.*

29. At the end of 3 years from the confirmation of his appointment as Lieutenant he will be permitted to retire, or if, in the opinion of the Advisory Board (based on the reports received from his Principal Medical Officer and the Commanding Officer of the unit to which he has been attached), his service has been satisfactory, he will be allowed by the Secretary of State to adopt one of the following courses:—

(*a.*) To continue in the Service.

(*b.*) To engage for a period of 7 years in the Reserve of Officers receiving the sum of £25 per annum while so serving. An Officer who has been in the Reserve for a period of not less than 1 year or more than 3 years may be permitted by the Secretary of State on the report of the Advisory Board to return to the Active List, and if replaced on the Active List he shall be allowed to count one-third of his service in the Reserve towards promotion, pension, or gratuity.

*Lieutenant: Professional Instruction.*

30. Should the Officer elect to continue in the Service, he shall be attached for a period of 6 months to a recognised hospital in a centre where he has opportunities of gaining further professional knowledge by attendance at a course or courses of instruction in a civil hospital, or otherwise, as may be approved by the Advisory Board.

*Examination for Captain.*

31. At the end of 6 months of such instruction he shall present himself for examination in medicine; surgery; hygiene and sanitation; and bacteriology and tropical diseases. In this examination the relative value of the subjects expressed in marks shall be as follows:

Medicine, 100; surgery, 100; hygiene and sanitation, 70; bacteriology and tropical disease, 50.

The percentage of the total number of marks necessary to obtain distinction shall be as follows:

| | |
|---|---|
| Special certificate of excellence ... ... | 85 per cent. |
| 1st class ... ... ... ... ... | 80 ,, |
| 2nd ,, ... ... ... ... ... | 70 ,, |
| 3rd ,, ... ... ... ... ... | 60 ,, |

The qualifying mark in each subject shall be 40 per cent.

32. On the results of this examination an acceleration of promotion may be granted at the discretion of the Secretary of State, provided that the Officer's conduct has been satisfactory, in accordance with the following scale:

| Class in Examination. | Acceleration of Promotion. |
|---|---|
| Special certificate of excellence ... ... ... | 18 months. |
| 1st class ... ... ... ... ... ... ... | 12 months. |
| 2nd class... ... ... ... ... ... ... | 6 months. |
| 3rd class ... ... ... ... ... ... ... | 3 months. |

33. An Officer who does not reach the qualifying mark in each subject shall be considered as having failed to pass the examination, and shall be placed on a supernumerary list for a period not exceeding 6 months, when he shall be required again to present himself for examination in all subjects, and if he fail a second time he shall be compulsorily retired. Service on the supernumerary list shall not count for pension, increase of pay, or promotion.

*Captain: On Promotion.*

34. When an Officer has passed the examination specified in Paragraph 31 he shall be promoted Captain, and shall undergo a short course of instruction in Field Hospital work, Bearer Company drill, or allied subjects approved by the Advisory Board, and on the conclusion of the course he shall be posted to such station and duty as the Director-General may order.

*Option after Nine Years' Service.*

35. On the completion of 6 years' service as Captain, subject to such acceleration as he may have obtained under Paragraph 32, an Officer shall be allowed by the Secretary of State to adopt one of the following courses:—

(*a.*) To retire with a gratuity of £1,000.

(*b.*) To continue in the Service.

*Examination for Major.*

36. Should he elect to continue in the Service, an Officer, between his ninth and twelfth year of service (subject to such acceleration as he may have obtained under Paragraph 32), shall be attached to a selected hospital at one of the military centres, so as to enable him to attend the practice of a recognised civil hospital for a period of 6 months, at the end of which period he will be required to present himself for examination in the following subjects:—

Medicine; surgery; hygiene and sanitation; bacteriology and tropical diseases; military law, administration and interior economy; and one special subject from the subjoined list of optional subjects, to which additions may from time to time be made by the Advisory Board:

- Bacteriology, including the preparation of antitoxins.
- Dental Surgery.
- Dermatology.
- Fevers.
- Laryngology.
- Midwifery and Gynæcology.
- Operative Surgery (advanced).
- Ophthalmology.
- Otology.
- Pediatrics.
- Psychological Medicine.
- Skiagraphy.

37. In this examination the relative value of the subjects expressed in marks shall be as follows:

Medicine, 100; surgery, 100; hygiene and sanitation, 100; bacteriology and tropical diseases, 100; military law, administration and interior economy, 100; special subject, 100.

The percentage of the total number of marks necessary to obtain distinction shall be as follows:

| | |
|---|---|
| Special certificate of excellence ... | 85 per cent. |
| 1st class ... ... ... ... ... | 80 ,, |
| 2nd class ... ... ... ... ... | 70 ,, |
| 3rd class ... ... ... ... ... | 60 ,, |

The qualifying mark in each subject shall be 40 per cent.

38. On the results of this examination an acceleration of promotion may be granted at the discretion of the Secretary of State, provided that the Officer's conduct has been satisfactory, in accordance with the following scale:

| Class in Examination. | Acceleration of Promotion. |
|---|---|
| Special certificate... ... ... ... ... | 18 months. |
| 1st class ... ... ... ... ... ... | 12 ,, |
| 2nd class ... ... ... ... ... ... | 6 ,, |
| 3rd class ... ... ... ... ... ... | 3 ,, |

39. An Officer who does not reach the qualifying mark in each subject shall be considered as having failed to pass the examination, and shall be placed on a supernumerary list for a period not exceeding 6 months, when he shall be required again to present himself for examination in all subjects, and if he fail a second time he shall be compulsorily retired. Service on the supernumerary list shall not count for pension, increase of pay, or promotion.

*Captain: Provisional Promotion.*

40. An Officer who in the opinion of the Advisory Board has been prevented by the exigencies of the service, or by other very special circumstances, from presenting himself for examination as required in paragraphs 33 and 36, may be provisionally promoted, subject to his passing the prescribed examination at the first available opportunity.

*Captain or Major: Specialist Appointments.*

41. In order to encourage the study of the special subjects enumerated in paragraph 36, appointments shall be made in each Army Corps and in such other places at home and abroad as may be approved of by the Secretary of State, of Officers below the rank of Lieutenant-Colonel who shall receive specialist pay according to the rank given in Appendix. To be qualified for appointment as specialist, an Officer must have gained at least 70 per cent. of the marks in the special subject taken in the examination mentioned in paragraph 36. Specialists may also be appointed in Public Health, if they have first qualified by obtaining a diploma recognised for registration by the General Medical Council.

No Officer shall hold more than one specialist appointment at the same time.

*Special Study-leave.*

42. In case of an Officer desiring to engage in advanced professional study, it shall be open to the Advisory Board to recommend that special leave be granted him for a period of 6 months.

*Major.*

43. An Officer, having completed 12 years' service (subject to such acceleration as he may have obtained under paragraphs 32 and 38), and having passed the necessary examination, shall be promoted Major, and shall continue to serve in that rank under the following conditions:

(*a*) After 3 years' service from the date of his promotion to the rank of Major, he shall be granted a higher rate of pay (*see* Appendix).

(*b*) At the conclusion of 3 years from the date of his advancement to the higher grade (making 6 years in the rank), he shall, if his service has been satisfactory, be allowed by the Secretary of State to adopt one of the following alternatives:

(i) To retire on a gratuity of £2,500 (see Appendix).

(ii) To continue in the service.

*Examination for Lieutenant-Colonel.*

44. Should he elect to continue in the Service, he shall, before he has completed 20 years' service (subject to such acceleration as he may have obtained under paragraphs 32 and 38) be granted 3 months' study leave, and at the end of that time be required to undergo a qualifying examination for promotion to the rank of Lieutenant-Colonel in the following subjects:

(1) Hospital organisation, administration, and equipment in peace and war, including the disposal of the sick and wounded.
(2) Organisation, administration, and equipment in war of all medical units in the field and on the lines of communication.
(3) The sanitation of towns, camps, troop transports, and all places likely to be occupied by troops in peace and war.
(4) Epidemiology and management of epidemics, and the relations of civil law as regards infectious diseases.
(5) The medical history of important modern campaigns.
(6) The administration, command, and discipline of the Royal Army Medical Corps, and of other persons who may come under the jurisdiction of an officer of the corps.
(7) The duties of all ranks in the Royal Army Medical Corps.
(8) Recruiting and Invaliding, including a knowledge of civil law as it affects lunatics in the Service.
(9) The relation of the medical to all other branches of the Army as defined by the various codes of regulations in force.
(10) The Army Medical Services of other Powers.

45. Should an Officer fail to obtain 50 per cent. of the total number of marks, he will be allowed, after an interval of 6 months and before he has completed his 20th year of actual service, to present himself again for examination. Should he fail a second time, he will be compulsorily retired on a gratuity of £2,500, or he may, by special permission of the Secretary of State, complete 20 years' service and then retire on a pension.

*Promotion.*

46. Promotion to the rank of Lieutenant-Colonel will be by selection from among those Officers who have passed the qualifying examination, and who have completed 20 years' service, subject to such acceleration as he may have obtained under paragraphs 32 and 38. If not selected for promotion within twelve months from the completion of twenty years' actual service, an Officer will be permitted to remain on the pay of a Major until he completes twenty-five years' service, subject to acceleration, when he will be compulsorily retired on the pension of his rank (see Article 527, Royal Warrant).

*Lieutenant-Colonel: Special Selection.*

47. During his service as Lieutenant-Colonel an Officer may be selected for a higher rate of pay under Article 362, Royal Warrant for Pay and Promotion, which rate he will retain until promotion to the rank of Colonel.

*Colonel and Surgeon-General.*

48. The promotion to the rank of Colonel and Surgeon-General shall be by selection. Service in India shall not be necessary for promotion to either rank.

*Brevet Promotion.*

49. Medical Officers shall be eligible for brevet promotion in the Royal Army Medical Corps in the same manner as Officers in the other branches of the Service; and such promotion may be given either for distinguished service in the field, or for distinguished service of an exceptional nature other than in the field.

*Medical Officers of Household Brigade.*

50. Junior Medical Officers shall be gazetted directly to the regiments of the Household Brigade, and shall not be attached to them from the Royal Army Medical Corps as at present.

51. By special authority of the Secretary of State Medical Officers of the Household Brigade may be appointed Colonel in the Royal Army Medical Corps if they have complied with the conditions laid down in Article 362, Royal Warrant for Pay and Promotion, or as a reward for exceptional merit on active service.

*Charge Pay.*

52. When an Officer is in charge of a hospital he shall receive charge pay at the rate specified in Appendix.

*Tenure of Appointments.*

53. The appointment to the charge of certain selected station hospitals, to be hereafter specified by the Advisory Board, shall be for a term of not less than 3 years.

54. With the exception of Officers attached to units, appointments to a district shall, unless broken by a tour of foreign service, be for a term of 2 years.

55. Should it be necessary to move an Officer from his station for other than temporary duty at an earlier date, a report of the circumstances shall be forwarded by the Principal Medical Officer of the Army Corps to the Director-General.

*Principal Medical Officer, Army Corps.*

56. The Principal Medical Officer in each Army Corps and in each district shall be the Staff Officer of the General Officer

Commanding for all medical and sanitary services, and shall be responsible to him for the administration of all hospitals and medical stores.

57. The Principal Medical Officer shall deal with all matters in his district, and shall only refer to the Advisory Board in cases of serious doubt or difficulty.

58. Every Army Corps shall have a completely equipped bearer company and field hospital and a proportion of other medical field units at its headquarters, in order that the Officers and men of the Royal Army Medical Corps may receive instruction and gain practical experience in the performance of field duties.

*Convalescence.*

59. With the view of reducing the number of slight cases of illness in hospital, and thus providing accommodation for those of a serious nature, convalescent homes shall be established in each district to which soldiers recovering from severe illness may be sent. These homes, which are intended for men who are so far recovered as to be able to dispense with the services of nurses, shall be visited daily by a Medical Officer.

*Trivial Cases.*

60. Medical Officers in charge of units should be instructed to retain in barracks cases of injury or illness of a trivial character, which are likely only to interfere for a few days with the soldier's performance of his duties.

61. For the reception of such cases a barrack room shall be set aside, when available, in which they will be attended by the Medical Officer in charge of the unit. The Medical Officers will, however, as far as possible, treat light cases of illness as out-patients.

*Hospitals in Small Stations.*

62. In small stations where no military hospitals are available, arrangements may be made with the authorities of the local civil hospital for the admission thereto of cases requiring treatment as in-patients.

*Clerical Work.*

63. With the view of relieving the pressure of clerical work now experienced by the Officers and men of the Royal Army Medical Corps, the Secretary of State has directed that steps shall be taken to simplify the returns rendered by Medical Officers, and the forms of accounts used in hospitals.

*Civilian Consultants.*

64. Consulting Physicians and Surgeons from the acting staff of recognised civil hospitals shall be appointed by the Advisory Board to attend when required at military hospitals at such times as may be desired by the Medical Officers in charge. Members of the Advisory Board shall not be eligible for appointment as consulting physicians or surgeons.

*Concentration of Serious Cases.*

65. In order that opportunities for instruction and special advice may be obtained, serious cases will be concentrated whenever practicable in the larger military hospitals, for example, Woolwich, Millbank.

*Medical Staff College.*

66. The Committee is strongly of opinion that the establishment of a Military Hospital and Medical Staff College for the training of Officers of the Royal Army Medical Corps would very materially conduce to the efficiency of Army Medical Service. It recommends that immediate steps be taken by the Advisory Board to present a detailed scheme for the establishment of such a hospital and staff college for the consideration of the Secretary of State.

ST. JOHN BRODRICK.
E. W. D. WARD.
G. DE C. MORTON, Major-General.
JAMES WILLCOCKS, Colonel.
FREDERICK TREVES.
*WILLIAM THOMSON.
W. R. HOOPER, Surgeon-General.
G. H. MAKINS.
HOWARD TOOTH.
ALFRED D. FRIPP.
ALFRED KEOGH, Lieut.-Colonel, R.A.M.C.
*ALEX. OGSTON.
E. C. PERRY.
H. E. R. JAMES, Major, R.A.M.C., Secretary.

Exceptions by Sir William Thomson, C.B.:

1. Having regard to the important functions and powers of the civilian members of the Advisory Board, as set out in the report, I am strongly of opinion that it should be composed of representatives of the medical schools in the several divisions of the Kingdom.

   The sum proposed to be paid would practically exclude other than London teachers, although 70 per cent. of the Medical Officers come from schools outside England.
2. It is inadvisable to fix an age limit for civilians on appointment.

   This is not done in the case of the other representatives.

   The Secretary of State for War can always protect himself in this regard when making selections.

WILLIAM THOMSON.

Exceptions by Professor A. Ogston:

I consider that the scheme falls short of what is requisite among other things in the following matters, viz.:

1. It does not provide for the formation of a Sanitary Corps, consisting of Officers specially charged wit the duty of carrying out proper sanitary measures in peace and war, and a staff of men trained to ensure the requisite measures being carried into effect.
2. It does not provide such study leave as the advancing state of medical science now demands, and is likely in the future to demand even more, nor such liberal privileges in this direction as have been found necessary in the armies of other great European Powers.
3. It makes no provision for placing at the disposal of the many Medical Officers serving in remote and isolated stations abroad such information as will enable them to familiarise themselves with the advances of medical science, and as is called for in the interests of those who are placed under their care.
4. It fails to provide for Medical Officers being trained by attendance upon civilian patients in all the branches of their profession, so that they may become equally skilful with their civilian brethren, and may avoid the narrowing influences which act so injuriously upon Medical Officers who have to deal only with the treatment of soldiers and military officials.

ALEX. OGSTON.

* Subject to remarks printed below.

# APPENDIX.

## PROPOSED RATES OF PAY, Etc., FOR MEDICAL OFFICERS.

| | Pay Per Annum. | Allowances, Servants', Lodging, Fuel, and Light. | Total |
|---|---|---|---|
| | £ s. d. | £ s. d. | £ s. d. |
| Lieutenant on Probation and Lieutenant ... ... ... ... ... | 250 0 0 | 73 10 0 | 323 10 0 |
| Captain, *i.e.*, after 3 years' service ... ... ... ... ... ... | 287 0 0 | 92 15 2 | 379 15 2 |
| Captain, after 7 years' total service ... ... ... ... ... ... | 307 4 10 | 92 15 2 | 400 0 0 |
| Captain, after 10 years' total service ... ... ... ... ... ... | 385 0 0 | 92 15 2 | 477 15 2 |
| Major, *i.e.*, after 12 years' total service ... ... ... ... ... | 430 0 0 | 157 12 10 | 587 12 10 |
| Major, after 3 years' service as such ... ... ... ... ... ... | 475 0 0 | 157 12 10 | 632 12 10 |
| Lieutenant-Colonel, *i.e.*, after 20 years' service ... ... ... ... | 547 0 0 | 166 15 4 | 713 15 4 |
| Lieutenant-Colonel selected under paragraph 362 of the Royal Warrant (establishment of 50) ... ... ... ... ... ... | 638 0 0 | 166 15 4 | 804 15 4 |
| Colonel... ... ... ... ... ... ... ... ... ... ... | 730 0 0 | 233 10 10 | 953 10 10 |
| Surgeon-General ... ... ... ... ... ... ... ... ... | Consolidated | | 1,500 0 0 |
| Director-General ... ... ... ... ... ... ... ... ... | ... | ... | 2,000 0 0 |

The pay of Officers of the Royal Army Medical Corps below the rank of Major while serving in India shall be increased so as to bear the same ratio to the above rates for non-Indian service as at present exists.

CHARGE PAY (*see* Paragraph 50).

| | s. | d. | |
|---|---|---|---|
| Hospitals of 300 beds or more ... ... | 10 | 0 | per diem. |
| ,, 200 ,, ... ... | 7 | 6 | ,, |
| ,, 100 ,, ... ... | 5 | 0 | ,, |
| ,, 50 ,, ... ... | 2 | 6 | ,, |

SPECIALIST PAY (*see* Paragraph 41).

In Public Health and in any subject mentioned in Paragraph 36, 2s. 6d. per diem.

RETIRED PAY AND GRATUITIES.

As already existing, with the following exceptions (*see* Paragraphs 29 and 35);

Pay on the Reserve, £25 per annum.

Gratuity, after 9 years' service, £1,000; £2,500 after 18 years' service.

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# SCHEME FOR THE REORGANISATION OF THE ARMY AND INDIAN NURSING SERVICE.

THE same Committee has presented the following report on the reorganisation of the Army and Indian Nursing Service:

*Title.*

1. There shall be one Military Nursing Service for His Majesty's Army in the United Kingdom, India, and the Colonies, to be designated "Queen Alexandra's Imperial Military Nursing Service" (Q.A.I.M.N.S.). In this service shall be amalgamated the existing Army Nursing Service and the Indian Nursing Service.

*President.*

2. Her Majesty Queen Alexandra shall be requested graciously to assume the Presidency of this Service.

*Constitution of Nursing Board.*

3. The Nursing Service shall be under the immediate control of Her Majesty Queen Alexandra as President, and of a Nursing Board constituted as follows:

*President.*—Her Majesty Queen Alexandra.

*Chairman.*—The Director-General, Army Medical Service, or an Officer nominated by him.

Two members of the Advisory Board, Army Medical Service, of whom one shall be a civilian.

The Matron-in-Chief, Queen Alexandra's Imperial Military Nursing Service.

Three matrons of large civil hospitals with medical schools.

One representative of the India Office to be appointed by the Secretary of State for India.

Two members to be nominated by Her Majesty the President, and holding office for three years.

*Mode and Term of Appointment of Certain Members of the Nursing Board.*

4. Upon this Nursing Board the civilian members of the Advisory Board, Army Medical Service, and the matrons of civil hospitals shall be appointed by the Crown, on the advice of the Secretary of State, and shall hold office for a period of 3 years, renewable on expiration of the term of appointment.

A matron of a civil hospital shall receive an honorarium of £26 5s. per annum while serving on the Board.

5. The Nursing Board, of which three shall form a quorum,

shall usually meet at fortnightly intervals. The minutes of the proceedings of the Nursing Board shall be laid by the Matron-in-Chief before the Advisory Board. It shall be in the power of the Advisory Board to refer back any point to the Nursing Board for reconsideration, and in case of a divergence of opinion between the Boards, the matter in question shall be referred to the Secretary of State.

*Functions of Nursing Board.*

6. Subject to the general control of the Advisory Board the Nursing Board shall be responsible for—

(1.) Advising the Secretary of State upon the strength of the Nursing Staff of various grades requisite in each military hospital (including the hospitals for women and children attached to military stations), having regard to the character of the cases admitted, and subject to the proviso that as a general rule hospitals containing fewer than 100 beds will not be provided with a regular female nursing staff (*vide* paragraph 14).

(2.) Defining the conditions under which nurses may enter the Service, the terms of their appointment, and the duties to be performed in the several grades of the Nursing Service.

(3.) Dealing with all questions relating to the uniform and clothing of the Nursing Service.

(4.) Receiving and considering reports from Matron-in-Chief and the matrons of the various hospitals.

(5.) Recommending to the Commander-in-Chief, for the approval of the Secretary of State, the appointment, retention, promotion, retirement, dismissal, and distribution of the members of the Nursing Service.

(6.) Arranging for the selection and engagement of additional nurses, the organisation of the requisite nursing staff, and the appointment of Principal Matrons in case of war or epidemic.

(7.) Advising the Secretary of State upon the formation of the Nursing Reserve of the Queen Alexandra's Imperial Military Nursing Service.

(8.) Arranging for the periodical inspection of military hospitals as regards nursing efficiency.

(9.) Submitting to the Secretary of State, through the Advisory Board, a scheme for the organisation and development in India of the Queen Alexandra's Imperial Military Nursing Service, which shall allow for adequate local control, subject to the general authority of the Nursing Board.

*Grades in the Queen Alexandra's Imperial Military Nursing Service.*

7. The Queen Alexandra's Imperial Military Nursing Service shall consist of—

(1.) A Matron-in-Chief and Principal Matrons.
(2.) Matrons.
(3.) Sisters.
(4.) Nurses.

*Badge.*

8. All matrons, sisters, and nurses of the Queen Alexandra's Imperial Military Nursing Service shall be entitled to wear an appropriate badge which, by special permission only of Her Majesty the President, may be retained by the wearer after leaving the Service.

*The Matron-in-Chief.*

9. The Matron-in-Chief shall have a seat on the Advisory Board, acting as a Member of the Board whenever matters concerning the Nursing Service are under discussion, and in her absence a Principal Matron shall take her duties.

10. The Matron-in-Chief shall be the medium of communication between the Director-General and the Queen Alexandra's Imperial Military Nursing Service, in all matters connected with that Service.

11. The Matron-in-Chief shall be responsible for keeping the Service records and confidential reports from the matrons of the various hospitals regarding the character, conduct, and efficiency of the sisters and nurses under their control.

12. The Matron-in-Chief shall keep herself acquainted with the administration of the nursing service in the various military hospitals.

13. She shall submit to the Nursing Board recommendations for the appointment, promotion, retirement, dismissal, and distribution of members of the service.

14. She shall be responsible for maintaining a sufficient staff of special nurses, detailing them for duty in cases of emergency, or for service in smaller hospitals.

15. She shall present every year to the Nursing Board a scheme for the annual leave of matrons and special nurses, and shall report to the Board the arrangements made by matrons for the annual leave of sisters and nurses.

16. Amongst the duties of a matron, to be defined in detail by the Nursing Board, shall be the following:

(1) To recommend suitable candidates for admission to the service in accordance with the prescribed regulations.

(2) In conjunction with the Medical Officer in charge of the hospital to forward to the Matron-in-Chief such confidential reports with regard to the work and conduct of the nursing staff as may be required, and to make recommendations for retention, promotion, retirement, and dismissal.

(3) To be responsible for the general nursing arrangements of the hospital, for the due performance of their duties by the sisters and nurses, and for the maintenance of good conduct, efficiency, and discipline amongst all members of the female nursing staff. In conjunction with the Medical Officer in charge of the hospital to report upon these matters at stated intervals to the Nursing Board through the Matron-in-Chief.

(4) To exercise similar functions as regards the hospital for women and children in a station where such hospital exists.

(5) In urgent cases to provide, where practicable, for the nursing of women and children on the married establishment.

(6) To engage and dismiss the female servants appointed to attend upon the nursing staff, and to be responsible for their discipline, good conduct, and efficiency.

(7) To undertake the daily inspection of the nurses' quarters to ensure that they are clean, well ventilated, and kept in good order.

(8) To be responsible to the Medical Officer in charge of the hospital for sufficient supply, good condition, and cleanliness of the bedding and linen in the nurses' quarters and the wards under her nursing charge.

(9) To see that proper medical and nursing attendance is provided without delay for sick members of the nursing or female domestic staff.

(10) To arrange the annual leave of sisters, nurses, and female domestic staff, reporting thereon to the Matron-in-Chief.

17. A Principal Medical Officer shall report annually to the

Nursing Board, through the General Officer Commanding, upon the conduct and efficiency of the matrons of hospitals within his district.

18. Amongst the duties of a sister in charge of a ward, to be defined in detail by the Nursing Board, shall be the following:

(1) To be responsible for the cleanliness, ventilation, and good order of her ward and its annexes.

(2) To attend the Medical Officers in their visits to the ward, and carefully to carry out their orders with regard to the diet and treatment of patients.

(3) To see that the nurses and orderlies perform their duties punctually and efficiently, reporting any breach of discipline or neglect of duty on the part of a nurse to the Matron, and on the part of an orderly to the Medical Officer in charge of the ward, or in his absence to a warrant or non-commissioned officer of the Royal Army Medical Corps.

(4) To take part in the nursing of all patients seriously ill.

(5) To be responsible to the Matron and Medical Officer of the ward for sufficient supply, good condition, and cleanliness of the bedding and linen, and for the personal cleanliness of the patients.

19. Amongst the conditions under which nurses may enter the Service, and the terms of their appointment (to be defined in detail by the Nursing Board) are the following:

(1) A candidate must be of British parentage, be between 25 and 35 years of age, and possess a certificate of not less than 3 years' training and service in medical and surgical nursing in a Civil Hospital recognised by the Advisory Board. She shall be required to satisfy the Nursing Board that as regards education, character, and social status she is a fit person to be admitted to the Queen Alexandra's Imperial Military Nursing Service.

(2) If provisionally accepted she shall be placed on probation for a period of 3 months, at the end of which time, if her work and conduct are reported to be satisfactory by the matron of the hospital, she may, after having been medically examined, enter into an agreement binding herself to 3 years' service in the Queen Alexandra's Imperial Military Nursing Service, and undertaking to conform to the rules and regulations of the Service. The agreement shall be dated from the time at which the nurse was provisionally accepted, and may, on the recommendation of the Commander-in-Chief, be terminated at any time by 3 months' notice from the Secretary of State, or in case of grave breach of discipline or misconduct, without notice.

(3) On the expiration of her three years' term of service a nurse may be permitted—

(*a*) To retire from the Service.

(*b*) To continue in the Service as a staff nurse, with an agreement terminable at any time by one month's notice on either side.

(*c*) To join the staff of special nurses under the orders of the Matron-in-Chief, with an agreement terminable at any time by one month's notice on either side.

(*d*) To offer herself for promotion to the post of sister, undertaking to serve for at least one year, and afterwards under an agreement terminable at any time by one month's notice on either side.

(*e*) To enter into a fresh agreement for service, as nurse or sister in India or elsewhere abroad, for a period of three or five years, according to climate.

*Conditions applicable to present members of the Army and Indian Nursing Service, and members of the Army Nursing Reserve.*

20. All present members of the Army and Indian Nursing Service, and members of the Army Nursing Reserve who have been in military employment during the war in South Africa, shall be eligible for appointment in the Queen Alexandra's Imperial Military Nursing Service, if recommended by the Nursing Board. Should any question arise as to their status in the Queen Alexandra's Imperial Nursing Service, the Nursing Board shall report thereon to the Advisory Board, and the recommendation of the Advisory Board shall be submitted to the Commander-in-Chief, whose decision shall be final.

21. Any present member of the existing Services who is not retained in the Queen Alexandra's Imperial Military Nursing Service, may be recommended for a gratuity of one month's pay for each year of service, if she is not entitled to a pension; and any member who may decline to accept the new terms of employment shall be allowed to serve upon the terms of her present engagement.

22. Pay.

(*a*) *Nursing Staff*—

Matron-in-Chief, £250 a year, rising by annual increments of £10 to £300, and lodging allowance.

Principal Matron in India, £230 a year, rising by annual increments of £10 to £280, and lodging allowance.

Principal matrons, £110 a year, rising by annual increments of £5 to £160.

Matrons, according to size of hospital, £70 to £100 a year, rising by annual increments of £5 to £120 to £150.

Sisters, £37 10s. a year, rising by annual increments of £2 10s. to £50.

Nurses, £25 a year, rising by annual increments of £2 10s. to £35.

(*b*) *Female Servants.*

£15 a year, rising by annual increments of £1 to £20.

23. Allowances.

(*a*) *Nursing Staff.*

Home station, board and washing, 15s. a week.

Station abroad, board and washing, 21s. a week.

Station abroad, washing, 3s. 6d. a week.

Home station, uniform, £6 per annum.

Station abroad, uniform, £7 per annum.

Home and abroad, cloaks, £2 per annum.

(*b*) *Female Servants.*

Board and washing, 10s. 6d. a week.

24. Allowances at the recognised scale shall be given for Indian and Colonial service.

*Annual Leave.*

25. The regular annual leave of members of the Queen Alexandra's Imperial Military Nursing Service in Home Stations shall be as follows:

Matrons, 6 weeks.
Sisters, 5 weeks.
Nurses, 4 weeks.

Leave at stations abroad shall be granted on the military system.

*Pension.*

26. It is desirable that all members of the Queen Alexandra's Imperial Military Nursing Service should be eligible to apply for a pension at the age of 50 years, and should be retired at the age of 55 years. Rates of Pension shall be according to the scale laid down in Article 1,233, Royal Warrant for Pay and Promotion.

ST. JOHN BRODRICK.
E. W. D. WARD.
G. DE C. MORTON, Major-General.
JAMES WILLCOCKS, Colonel.
FREDERICK TREVES.
WILLIAM THOMSON.
W. R. HOOPER, Surgeon-General.
G. H. MAKINS.
HOWARD H. TOOTH.
ALFRED D. FRIPP.
ALFRED KEOGH, Lieut.-Colonel, R.A.M.C.
ALEX. OGSTON.
E. C. PERRY.
H. E. R. JAMES, Major, R.A.M.C., Secretary.

SIXTY-NINTH ANNUAL MEETING

OF THE

# British Medical Association.

*Held at Cheltenham, July 30th, 31st, August 1st, and 2nd, 1901.*

## PROCEEDINGS OF SECTIONS.

## SECTION OF MEDICINE.

E. T. Wilson, M.B.Oxon., F.R.C.P., President.

### INTRODUCTORY REMARKS BY THE PRESIDENT ON THE VALUE OF RESEARCH IN MEDICINE AND THERAPEUTICS.

Gentlemen,—In offering a few informal remarks by way of preface to the real work of the Section, my first impulse is to express my deep sense of the honour which has been conferred upon me by my professional brethren in electing me to this chair, with which so many names honoured in medicine have been associated; my second is to add a few words to those of the President, bidding a hearty welcome to all who from far or near have come to visit our good town of Cheltenham, wishing them that healthy combination of work and enjoyment which it is the object of these annual meetings to afford. Here we mark time, as it were, and take stock of the work done in our several departments. The experimentalist and the specialist meet with the general practitioner on a common platform with the best results.

The times are favourable to such conferences. Increased facilities for communication and for the interchange of thought have in a sense annihilated space. Science, instead of leading a cramped existence in a few well-known centres, has become free of the world. Men of different nationalities, but with a common groundwork of knowledge, are working out the same problems under very varied conditions. Every discovery is submitted to the most searching criticism, with a wealth of local illustration which, a few years ago, was impossible; and some of the most successful results hail from the most unexpected quarters. The experience of a single year is sufficient to prove the rapidity with which

> The old order changeth,
> Yielding place to the new.

And perhaps no branch of science has embraced the spirit of the times more ardently than that of medical research. Every department of knowledge is being pressed into the service of medicine and surgery. Long-cherished beliefs are being uprooted, and a true etiology of disease resting on observation and experiment is more and more furnishing the basis for accurate diagnosis and rational treatment.

The rapid evolution and general trend of modern medicine is shown by the way in which this Section has of late years outgrown its ancient landmarks, throwing out colonies, as it were, in the Sections of Pathology and Bacteriology, Tropical Diseases, Diseases of Children, and others more specialised, which in some instances threaten to rival the parent in interest.

The subjects also which are to come before us for discussion testify to the large field which is covered, and to the value of the work which is being carried on; but what, it may be asked, is this great and powerful Association doing in its corporate capacity for the furtherance of this work, the promotion of which was among the primary aims of its founders?

The number of its members exceeds 19,000, and its Branches are spreading to every quarter of the civilised world; it has a very considerable revenue which might easily be increased and some £86,000 of invested money; yet £500 a year is considered sufficient to be given in scientific grants, and some £600 to the research scholars of the Association. We, at any rate, cannot be accused of that lack of imagination which Mr. Balfour deplored on a recent occasion. We know full well the advantages of research in all its departments, and the lamentable position which this country holds in respect to it. Shall we not give it a more generous support—one more in keeping with the funds at our disposal, and with the importance of the body to which we belong?

Mention has been made of scholars, why should not fellowships be conferred at these annual meetings *honoris causâ*, and in recognition of work more strictly technical than that rewarded by the Royal Society? Such honours would not only be highly prized but might easily in time take premier rank, and they would without doubt react beneficially on the work of the Sections.

The subjects which are to engage our attention during the next few days have special interest, dealing as they do with questions on which more information is urgently needed. The discussion on joint disease treats of disorders which are probably among the oldest known to humanity, and opens up the whole question of infection by micro-organisms with which some of the papers in this Section also deal. The other subject set down for discussion—Peripheral Neuritis in Beer Drinkers—is essentially modern; and although it is under investigation by a Royal Commission, we shall have the advantage of hearing the views of gentlemen who are thoroughly conversant with the facts. Other papers there are dealing with therapeutics, and among these one on the Cheltenham waters which flow unchanged, though mercilessly stripped of all the accessories appertaining to a spa. They would no doubt prove efficacious as of yore on the old conditions:

> Curæ vacuus hunc adeas locum
> Ut morborum vacuus abire queas.
> Non enim hic curatur qui curat.

A paper on Malaria was hoped for; but the prior claims of the Tropical Section could not be questioned, for, although the tests which finally led to its conviction were applied on the Campagna of Rome, the guilty *Anopheles* was arrested in India, and its prosecution followed up in the equatorial regions of Western Africa. This remarkable investigation is one of the latest contributions which microbiology has given to medicine, and presents a signal example of the rapidity and thoroughness of modern methods.

Activity prevails in every department of medicine and surgery, but in none have so many valuable results been obtained, in none have so many hopes been excited, as in the scientific study of the infective diseases, of the exotic fauna and flora of the human body. The bacteriological diagnosis of certain diseases has become a matter of routine, and there can be little doubt that in the near future a need will arise for laboratories and specialists in every large centre of population, to whom questions insoluble or doubtful in their clinical aspects may be referred, on whom will rest also the responsibility for the supply of such vaccines and serums as may be required in their several districts.

An improved diagnosis, however, is but a small portion of the gain which has been derived from a scientific investigation of the causes of disease. Over a large part of the field of therapeutics a new direction has been given to treatment. We are learning to look beyond the collection of symptoms which were once held to constitute the disease, with the result that, although symptoms will continue to claim our attention, and certainly that of our patients, the true objective of treatment will be the micro-organism itself. We are learning more and more at the hands of a new pathology to regard the human body as a battle ground on which important issues have to be fought out between invading organisms and poisons coming from without, on the one hand, and on the other those forces inherent in the system, of which so little is known as yet, but which may be summed up in the term "resistance," or in one older and better known, the "*vis medicatrix Naturæ*."

Every disease which can be won over for the infective class becomes at once, if only in theory, preventable, and our treatment acquires a tangible and definite aim. In the first line of defence comes the destruction of the parasite before it obtains a lodgment in the body; and this will be divided between the health officer and the medical attendant, for it comprises the whole array of hygienic measures, including the isolation of the infected sick.

Our means of attacking the parasite within the body are at

present limited in extent, but some progress has been made, as, for instance, in the treatment of lupus by sun exposures, of rodent ulcer by the *x* ray, and of tuberculosis of the lung by life in the open air. An additional defence is found in the vaccines, by which immunity, artificial or natural, is secured, such as the Cuban enjoys against yellow fever, or the vaccinated with cow-pox against variola. In serumtherapy we again appeal to powers which cannot at present be explained, whereby for each several toxin produced by an organism in the blood a special antitoxin is forthcoming, and it is the possibility of supplementing this supply by artificial means which has deprived diseases, such as diphtheria and tetanus, of the terror with which they were wont to be regarded.

Lastly, behind all these, we have in reserve the enormous powers residing in the blood cells of offering a successful resistance to the invading organisms, a resistance the vigour of which is easily impaired by unfavourable circumstances, and which it will become more and more the aim of medicine to foster and improve.

The number of the infective diseases is by no means complete, and it becomes almost possible to breathe a word of hope where despair has hitherto prevailed, that medicine may yet find work to do in the treatment, preventive it may be, of the neoplasms which occur with ever-increasing frequency. The cancer which the surgeon now removes with such consummate skill is not the disease; it had its beginnings in an insignificant outgrowth, during which the rapidly proliferating cells, estranged from their accustomed environment, would probably be vulnerable did we know how and where to attack them; and further back still lies the exciting cause, on the exact nature of which medical opinion is divided: there seems, however, good ground for suspecting that here, too, we are confronted with a micro-organism, and an infective disease, the remedies for which, though they may be long in coming, cannot be regarded as beyond the reach of human attainment, for—

> Let that man with better sence advize,
> That of the world least part to us is red;
> And daily how through hardy enterprize
> Many great regions are discovered.
> * * * * *
> Yet all these were when no man did them know,
> Yet have from wisest ages hidden beene,
> And later times things more unknowne shall show;
> Why, then, should witless man so much misweene
> That nothing is but that which he hath seene?

One other subject may be touched upon before I bring these few remarks to a close. I allude to drugs. From a scientific standpoint it would seem that they have been unduly discredited, and some would even cry with Macbeth:

> Throw physic to the dogs;
> I'll none of it.

Among our patients they are unduly extolled.

The once well-known author of *Nature and Art in the Cure of Disease* would have rejoiced to see the hygienic remedies from Nature's own pharmacopœia taking their rightful place in the treatment of disease; but without drugs the physician would stand helpless in the presence of the pains and discomforts of sickness. Most of the older and best known remedies, it is true, are the offspring of a wise empiricism, and, in the hands of men belonging to the older generations, they have done admirable service; they might do so still if the art of prescribing were not on the decline and in danger of being driven out of the field by the administration of tablets and mixtures of unknown composition. Many useful additions have, indeed, been made to the *Pharmacopœia* in recent years, and they have been warmly welcomed by the profession; but what opinion are we to form of the host of mysterious compounds with impossible names, and their accompanying flight of advertisements,

> Thick as autumnal leaves that strow the brooks
> In Vallombrosa,

which find readers or they would not be printed? At present they meet with a ready acceptance, not only from a credulous public but from members of our profession, who do not hesitate to use drugs of which they know neither the composition nor the effects. The evidence as to their value is often worthless; of proof there is none; and in spite of ourselves we are becoming the slaves of an advertising system which is as baneful as it is deluding.

The *post hoc* argument has always been the bane of medicine, and is rampant still, as current literature amply shows. We want, especially as regards drugs, more of the scientific spirit which "proves all things and holds fast to that which is good."

There is doubtless good grain among the chaff, but who is to sift it? Here again it would seem that a signal opportunity presents itself to our Association. The difficulties are great, but they are not insurmountable. No scientific body could approach the important and pressing questions from a higher standpoint or with better prospects of success. No other body possesses the machinery ready to hand for such an investigation. Already there exists a Therapeutic Committee; its powers should be enlarged, and ample funds should be placed at its disposal for a thorough and systematic examination of such drugs as might be selected, but the results of scientific research are untrustworthy and inconclusive without careful observation of the action of the remedies in the human body; and what better organisation could be found than the Branches of this Association for obtaining expert assistance on such a subject as this? In the staffs of hospitals throughout the country would be found a body of men able and willing to take up such an inquiry, and among general practitioners there are many, well known to the Secretaries in their several districts, whose aid would be readily given. It is true that a plan of collective investigation has been tried and failed, but the reasons are not far to seek, and in any future scheme obvious mistakes might be corrected. Curiously enough, at the last meeting of the Association in Cheltenham the results of a collective inquiry into the Influenza epidemic of 1836-37 were presented, and it would be difficult to say even now, after the lapse of sixty-five years, and with a riper experience, that any real addition has been made to the knowledge shown in that report of the cause, the course, or the treatment of the disease. It is an admirable example of what can be done by organised effort, and it is just such an organisation for scientific work which is urgently needed in our Association at the present time.

In the individual Branches excellent work is being done, but, apart from the Journal, there is a conspicuous absence of combination for any scientific purpose, and what a tremendous force is thus allowed to run to waste, a force which, if properly directed, might contribute largely to the advancement of medical knowledge.

Discoveries are never accidental, though they may come when least expected. Science has strange surprises, but they are yielded only to methodical and steady work, and for this Research laboratories are needed in ever-increasing numbers. Shall we stand aloof?

Within the next few days we shall be called upon to decide questions of the greatest moment to this Association and to medicine. Large funds will have to be disposed of. Shall we devote them to political ends or to science, to the mere working machinery of the Association or for the advancement of learning? The whole public health service was a free gift to the nation from the medical profession, and largely from members of this Association, among whom was a distinguished fellow townsman, Henry W. Rumsey, who devoted years of unremunerated work to the cause. Shall we not emulate the examples thus set us and give to scientific research the support which it so much needs, support from our funds as a corporate body—support individually, as each happens to have the ability and the means. In this way we shall be carrying out the objects for which the Association was founded, and which are so admirably laid down by Sir Charles Hastings in the Presidential address of 1833.

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The Intercolonial Medical Congress of Australasia.—The sixth Intercolonial (Inter-State) Medical Congress of Australasia will be held at Hobart, Tasmania, from February 17th to 22nd, 1902. According to the *Australasian Medical Gazette*, one of the most interesting features will be a general discussion on cancer. A motion will also be brought forward for the purpose of forming an Australasian Medical Association with a prominent council. Another matter to be discussed is the title of the Congress, which must be altered to bring it into accord with the accomplishment of Federation. This fact makes the present designation "Intercolonial" no longer appropriate.

# A DISCUSSION ON CHRONIC DISEASES OF JOINTS COMMONLY INCLUDED IN THE TERMS "CHRONIC RHEUMATISM," "OSTEO-ARTHRITIS," AND "RHEUMATIC GOUT."

I.—Archibald E. Garrod, M.D., F.R.C.P.,

Physician, Hospital for Sick Children, Great Ormond Street; Medical Registrar and Demonstrator of Morbid Anatomy, St. Bartholomew's Hospital.

Dr. Garrod said: Whilst I am very conscious of the honour conferred by the invitation to open this discussion, I am at the same time fully alive to the difficulty of the task which I have undertaken.

The joints are for the most part so readily accessible to examination, and so much can be learnt of their condition without any special diagnostic methods, that their diseases very early attracted attention, and some of them figure largely in ancient and mediæval medical writings. In no branch of medical science, indeed, have the older ideas and traditions maintained a stronger hold than in connection with diseases of the joints, and it is very difficult to shake oneself free from their trammels. Yet I believe that it is only by a consideration of the subject *de novo* and apart from preconceptions that any further real advance is to be accomplished. Even after the distinctive characters of certain definite forms of arthritis had become clearly known it was long before they came to be recognised as local manifestations of systemic disorders, some of which implicate many organs and structures besides the joints. For example, acute rheumatism has been successively regarded as a disease of the joints, as an articular disease with visceral complications, and as an infective fever, of which arthritis, endocarditis, and pericarditis are among the local manifestations.

Leaving aside articular gout, the knowledge of which as a distinct malady can be traced back to a remote antiquity, the other clearly differentiated forms of arthritis have only been separated out one by one from a general category of articular lesions. We now know how large a share bacterial infections have in their production. It is only necessary to refer to tuberculous lesions, to acute rheumatism, now generally regarded as an infective disease, to the joint lesions of pyæmia, of gonorrhœa, and of syphilis, and those which are met with in the course of infectious fevers.

In the second group may be placed the arthropathies of locomotor ataxia, of syringomyelia, and of certain other nervous diseases. Nor must I forget to mention the arthritis of hæmophilia and that which follows directly upon injury to the joints. When all these have been eliminated, there still remains a considerable residue of articular lesions, many of which run a chronic course, and it is this residue that we are to-day met together to discuss.

The imperfect state of our knowledge of such conditions is well illustrated by their nomenclature. Many different names of them are in common use in this country, no fewer than three of which have been included by the officers of this Section in the wording of the title of this discussion. Some of these, such as chronic rheumatism and chronic rheumatic arthritis, bear witness to the notion which widely prevails that they stand in an intimate relation to rheumatism, whereas the term rheumatic gout suggests a gouty element, or an admixture of the gouty and rheumatic taints.

The name rheumatoid arthritis suggests a resemblance to, but an essential difference from, true rheumatism, whereas osteo-arthritis is a pathological term the applicability of which to all the conditions commonly so called is at least doubtful.

The name arthritis deformans, so largely employed on the Continent and in America, is perhaps the least open to objection, seeing that it expresses an undoubted fact, and makes no assumption as to the nature of the conditions to which it is applied.

The nature of the conditions under discussion is no mere question of abstract pathology, but has most important bearings upon their treatment. Consider for a moment how greatly their treatment is at present dominated by the prevalent views as to the medical and dietetic treatment of gout. How widespread is the conviction of the lay public that the diet suitable for a gouty patient is equally indicated in other forms of articular disease, and how widespread is the impression even in the medical profession that after all rheumatism, gout, and rheumatoid arthritis are "much of a muchness," and shade almost imperceptibly into each other.

I would venture to suggest as a question worthy of discussion whether the cases commonly grouped under the names of rheumatoid or osteo-arthritis are really examples of a single malady, or whether we are not in the habit of confusing together under such designations cases which in reality have nothing in common.

The general clinical features of the cases so included are familiar to all, and if we turn from clinical observations to the teachings of the *post-mortem* room, we find that a certain set of more or less characteristic structural changes are apt be met with in joints which have been the seats of chronic disease. Among such changes are hypertrophy of the synovial fringes, fibrillation and erosion of cartilages, eburnation and grooving of the articular surfaces of the bones, and the formation of osteophytic outgrowths. These are the changes which are seen in their most typical form in the hip-joint disease of elderly people, and which have usually been regarded as the characteristic lesions of a definite disease, namely, rheumatoid or osteo-arthritis.

When, however, we attempt to superpose the clinical and pathological pictures we encounter grave difficulties. In the first place it is open to question whether the anatomical changes referred to are the results of a single definite morbid process, or whether they are not rather those which are apt to occur in joints which are the seats of long-standing disease of various kinds. Secondly it is, to say the least, doubtful whether such changes are present in all the conditions which are commonly classed together under the name of rheumatoid or osteo-arthritis. Even from a clinical standpoint it is not difficult to see that even among the cases so classed, in which many joints are involved, well-marked differences prevail.

At least two well-defined groups call for special mention. They present some superficial resemblances, it is true, but the differences between them are so conspicuous that one wonders that so little stress has been laid upon them.

We are all familiar with the condition so commonly met with among female patients in early or middle life, and less frequently in men of the same ages. The disease is characterised by the frequent implication of the small joints of the hands and feet, by the symmetrical distribution of the lesions, and by the conspicuous degree of secondary muscular atrophy by which it is accompanied. The large joints suffer as well as the small, and those of the spinal column and the temporo-maxillary articulations are implicated in a large proportion of the cases.

The hands and wrists are often the parts earliest attacked. In the fingers the first row of interphalangeal joints usually suffers most, and the terminal joints usually escape. The affected articulations are the seats of spindle-shaped swellings, effusion into the synovial cavities is common, and also into the bursæ in the neighbourhood of the joints. Arthritic muscular atrophy is early seen, and soon reaches a conspicuous degree, and the wasting of the intervening muscles emphasises the swelling about the joints.

The onset of the disease is apt to follow the action of debilitating causes, among which influenza has of late years occupied a prominent place.

Its progress may be slow or rapid, fresh joints may become involved, apart from any improvement in the condition of those earliest attacked. The disease may become arrested at an early stage, and a large degree of recovery may ensue, or it may ruthlessly advance until almost every joint in the body becomes involved and hopeless crippling results. Febrile disturbance may be slight, or on the other hand there may be regular evening elevations or bouts of high temperature separated by comparatively afebrile intervals.

The general health may be impaired to various extents. The patient may be markedly anæmic, clammy sweating of the hands is common, and pigmentation of the skin either of a smudgy character or in the form of discrete freckles is occasionally observed. Visceral lesions are the exception

rather than the rule, but among such a marked degree of albuminuria may be mentioned as of occasional occurrence.

In the joints the softer structures appear to be chiefly involved, and in the earlier stages at any rate there is no clear evidence of osteophyte formation or of lipping of the bones. The crackling elicited on movement is rather suggestive of affection of the synovial membrane than of removal of the articular cartilages. The large degree of recovery attained in the most favourable cases points in the same direction, as also do the radiographic pictures taken by means of the Roentgen rays.

Our knowledge of the morbid anatomy of this disease is very scanty. It has so little fatal tendency in its earlier stages that opportunities of examining such joints *post mortem* are very rare. In our London hospitals such opportunities are practically wanting, and I believe that we could have no more valuable contribution to this discussion than a careful description of the *post-mortem* appearances in an early stage of this kind of rheumatoid arthritis.

There is a form of disease met with in children in which the articular lesions are very similar, if not identical with, those which I have attempted to describe, and in which a fatal result is by no means uncommon. The appearance of the joints in such cases has been well described by Still, and I have had the opportunity of seeing some of the cases upon which his description is based. Thus much, at least, may be confidently stated, that the lesions present in such cases differ widely from those regarded as characteristic of osteo-arthritis. The cartilages are found to be either intact or merely pitted at their margins from the pressure exerted by hypertrophied synovial fringes.

In the second group of cases upon the distinctive characters of which I desire to lay stress, the sufferers are again for the most part females, the articular lesions tend to be symmetrically distributed, and the small joints of the hands are usually early attacked. The patients are usually more advanced in life, and the character and distribution of the articular lesions exhibit well-marked differences. The terminal joints of the fingers, which in the former disease usually escape, are here specially liable to be attacked, and with peculiar frequency the carpo metacarpal joints of the thumbs are among the earliest articulations to be involved.

Constitutional disturbance is practically absent, pain is often slight, but varies greatly in severity, and beyond the limitation of movement and the disfigurement which the malady produces the patients may have little to complain of. The progress of the disease is usually slow, but as time goes on many joints become involved. In such cases the enlargement of the joints, which may be very conspicuous, is obviously due in the main to bony outgrowth, and the soft parts in their neighbourhood are but little implicated. The firm nodular enlargement is confined to the immediate neighbourhood of the affected articulations and the fusiform swelling is entirely wanting. On movement a fine grating is felt, which differs markedly from the synovial crackling felt in the fusiform cases, and strongly suggests the attrition of bony surfaces deprived of their cartilaginous coverings.

Muscular atrophy occurs in this as in all forms of chronic joint disease, but is usually less conspicuous than in the fusiform cases. The *post-mortem* appearances of the affected joints conform fairly closely to the classical description of the osteo-arthritic changes. Although, as I have mentioned, this disease is usually met with in older patients, it may be confidently stated that it is not merely a more advanced stage of the previously-described condition, nor is it the same malady merely modified by the age of the sufferer.

The disease has its distinctive characters from the outset, and whilst this nodular form is occasionally met with at an unusually early period of life, the fusiform affection, with its characteristic distribution and clinical features, not infrequently develops in persons who have reached a period of life at which the nodular form is rather to be expected.

If it should be eventually established that the conditions described really constitute two distinct diseases the introduction of new names, where too many are already in vogue, might conveniently be avoided by confining the use of the term rheumatoid arthritis to the former, and that of osteo-arthritis to the latter malady, in which the bony changes are so early and conspicuously manifested.

I am far from suggesting that into one or other of the above categories fall all the cases of chronic diseases of many joints usually designated by the names referred to.

For example, there is a group of cases much less commonly met with in which the articular swelling is comparatively slight, but in which the crippling resulting from muscular contracture and ultimate fixation of the joints is extreme. I have the impression that such cases may be recognised even in their early stages, and that they retain their distinctive features throughout their course. Osteophytes are certainly developed in such cases, but they differ in character from those formed in cases of the nodular type, being small and sharp bony prominences felt through the covering skin. On the other hand, the affection of the soft parts is not at all conspicuous.

Absolute immobility of the limbs may be brought about, and that in cases of long standing actual bony ankylosis may result with the formation of bridges of cancellous bone between the denuded articular surfaces, I can testify from the results of a *post-mortem* examination in such a case.

In the affections usually confined to single joints, such as the hip-joint affection of elderly men, the joints exhibit the familiar osteo-arthritic changes, but in the tendency of the disease to remain limited to one or two joints, in the sex of the patients usually attacked, and in other respects these cases exhibit more or less distinctive clinical features.

A second question which calls for discussion is whether or no any of the conditions which I have attempted to differentiate stand in any direct relationship to acute rheumatism on the one hand, or to gout on the other—that such relationships exist has been, and still is, maintained by observers whose opinions are entitled to all respect, and whose views cannot be lightly dismissed.

I take it that no one will contend that the nodular disease of elderly people is rheumatic in its origin, and it is in connexion with the fusiform cases that a relationship to acute rheumatism comes into question.

The articular changes in this form of rheumatoid arthritis are so obviously progressive that one cannot regard the condition as one of simple damage to the joints left behind from a rheumatic attack. However, it is open to us to suppose that the rheumatic process which usually touches the joints so lightly and produces lesions so transitory in their character, and so completely recovered from, may under certain conditions bring about changes of a far more serious nature, which result in permanent damage to the articular structures. It would not be difficult to find an analogy to this amongst the lesions of acute rheumatism, as, for example, the slight and transitory forms of pericarditis and the more severe pericardial lesions often met with in the *post-mortem* room.

An alternative possibility is that the rheumatoid changes may develop upon the top of a rheumatic attack, owing to secondary infection or in some other way, just as tuberculosis is apt to follow upon measles.

However this may be, it will, I think, be granted that in the great majority of cases, although there may be short prodromal periods of pain and stiffness without obvious swelling, rheumatoid arthritis has its characteristic features *ab initio*, and is not preceded by any attack which can be, with good reason, regarded as rheumatic. Nor does one expect the visceral lesions of acute rheumatism, and especially those of the cardiac valves, to be developed in its course. This I regard as a very important point, seeing that if the joint lesions were results of an active rheumatic process we should naturally expect the same process to affect other structures, at least in the case of the younger sufferers. For my own part I must confess to an inability to perceive any sound clinical grounds for believing that in the great majority of cases there is any direct relationship between the two diseases.

On the other hand it is far less easy to assert that true rheumatism plays no part at all in the causation of rheumatoid arthritis. Occasionally a condition indistinguishable from the fusiform disease develops as the direct sequel of a true rheumatic attack, the nature of which has been revealed by implication of the cardiac valves or in some other more or less unmistakable manner.

Such an occasional sequence may be explained either by supposing that the rheumatoid affection supervenes as a

secondary affection in a patient weakened by an attack of acute rheumatism, just as it may follow an attack of influenza, or else that the micro-organisms of acute rheumatism are amongst those which are capable of producing such articular lesions as are here observed, but in the production of which other agencies are more frequently concerned. The fact that a similar sequence of rheumatoid arthritis upon gonorrhœal rheumatism is occasionally observed may be in like manner explained, seeing that gonorrhœal rheumatism is clearly an entirely distinct disease from rheumatic fever.

Statistics have been published which show a high proportion of endocardial lesions in sufferers from rheumatoid arthritis, but those who have had opportunities of watching many cases of this disease, even in its most acute forms, and in young patients, can hardly doubt that the development of endocarditis in its course is not an event to be anticipated.

To the occasional development, in the course of rheumatoid arthritis, of subcutaneous nodules resembling those met with in acute rheumatism, it is easy to attach too much importance. I am not able to speak of the histology of the nodules so developed, but the patients who exhibit them have usually reached a period of life at which true rheumatic nodules are practically unknown. And in the cases which have come under my own observation the nodules themselves have been far less transitory than those which appear in successive crops in children and young adults who are the victims of true rheumatism. Thus, in a case recently seen the patient was a woman, aged 54, and the nodules which were chiefly situated over the Achilles tendons had been present for at least a year. It may be doubted whether the question of the relationship of rheumatoid arthritis to rheumatism will ever be settled by mere clinical observation, and it is quite possible that before very long conclusive evidence will be forthcoming from the bacteriological side: evidence which will either show that the two diseases are essentially different in their pathology, or that we have a fresh example of conditions which differ widely in their clinical features, but may, nevertheless, result from infection by the same micro-organisms. Such bacteriological evidence as is at present available points rather to their being essentially distinct. And in this connection reference may be made to the observations of Bannatyne, Wohlmann and Blaxall in this country, and of Max Schüller and others in Germany on the organisms met with in rheumatoid cases, and to those of Singer, Wassermann and Poynton and Paine on the bacteriology of acute rheumatism.

When we turn to consider the possible relationship of osteo-arthritis to gout we are confronted by a somewhat different problem. If any such relationship exists it is with the nodular or osteophytic form, and it cannot be denied that in some cases of gout changes are observed in the joints which in their clinical aspects at least closely resemble those met with in cases in which there is nothing to suggest a gouty origin. The relationship of the so-called Heberden's nodes to gout is a vexed question, but good observers have maintained the gouty origin of such nodosities, at least in some cases. Moreover the joints of gouty subjects sometimes show *post mortem*, apart from the characteristic uratic deposits, such changes in the bones and cartilages as are usually regarded as characteristic of osteo-arthritis.

Here again the question arises how far these latter changes can be looked upon as the results of a specific morbid process, and not rather as merely dystrophic in their nature. They are seen, as is well known, in joints which are the seats of arthropathies of nervous origin, and they have been described by Bowlby in the joints of bleeders which have been the seats of long-standing disease.

In the majority of cases no evidence is forthcoming of a gouty origin of the changes in question, and I would maintain that the connection of this form of rheumatoid or osteo-arthritis with gout is no closer than that between the other variety and acute rheumatism.

The name rheumatic gout so often applied to the malady in question is a hopeless term, which might with advantage be avoided, for it has the additional disadvantage that for some unknown reason it is nowadays extensively employed, even by members of our profession, as a synonym of true gout.

If it be really the case that under the names of rheumatoid or osteo-arthritis we have been in the habit of confusing together two or more distinct diseases, it is obvious that no single pathological theory will suffice to cover them all. The clinical features of the fusiform cases are quite compatible with an infective origin, and I take it that it was in such cases that the micro-organisms which have been alluded to were found in the articular fluid and joint structures. In the cases occurring in children which so closely resemble the fusiform rheumatoid arthritis of adults, the enlargement of the spleen and lymphatic glands, described by Still and which are so commonly observed, lend some support to such a view of their pathology.

On the other hand, there is little to suggest an infective origin of the nodular or osteo-arthritic lesions of older people. It is in such cases that the changes in the joint structures most nearly resemble those met with in arthropathies of nervous origin, and it is quite possible that in them the articular lesions are dystrophic in their nature.

However, it appears to me that in the present state of our knowledge it is best to maintain an expectant attitude upon these questions, and to wait until a fuller knowledge of the morbid anatomy of the several classes of cases and the results of further bacteriological research afford a surer basis for the erection of theories as to their pathology.

Lastly, it is to be hoped that the treatment of these cases will not be overlooked in our discussion. Undoubtedly all the conditions with which we are dealing are very refractory to treatment, but as regards the fusiform cases, at any rate, the outlook is not so hopeless as is often assumed. I am convinced that much good is often accomplished by the adoption of suitable measures, and am equally convinced that much harm may be done by ill-directed efforts for the relief of the patients.

I will venture to lay before you in general terms what appears to me to be the main principles to be followed in this matter, namely:

That when confronted with a case of this kind we should in the first place endeavour to ascertain whether there is any debilitating influence constantly present, and to endeavour to relieve it. Among such influences profuse menorrhagia has an important place, and when it is present its arrest is a necessary preliminary of further therapeutic measures. Dyspepsia when present also calls for treatment, as it interferes with the due assimilation of the nourishment taken.

That if any unhealthy condition of the mouth or gums be present, it also should be attended to, for it is held by some that infection from unhealthy gums plays an important part in the causation of the disease.

That the diet of the patients should be as nutritious as their condition allows, and meat should by no means be restricted. I am convinced that the placing of such patients upon a low diet, from an idea that what is good for a gouty subject is also indicated for one who suffers from rheumatoid arthritis, is calculated to encourage the progress of the disease and do much more harm than good.

The same applies to the cutting off of stimulants, which in some cases appear to be beneficial rather than otherwise when taken in suitable form and quantity.

That our aim should be to keep up the patient's strength, and to maintain as high a level of general well-being as their condition admits of.

That on the same principle it is desirable to give tonic drugs, such as cod-liver oil, iron, and arsenic, always provided that the drugs given do not upset the digestion. It is only by steady perseverance in the use of such remedies, without expectation of any immediate results, and irrespective of the fact that the disease may continue to progress for a time under their use, that any result is to be expected from medicinal treatment in this disease. If pain be an urgent symptom, anodyne drugs may of course be employed for the more immediate relief of the sufferers.

Fresh air and such amount of exercise as may be taken without damage to the diseased joints are useful adjuvants to other measures. Massage is useful in maintaining the nutrition of the muscles, but I am inclined to think that massage and passive movements of the joints themselves do more harm than good.

As regards bath-place treatment, it seems to me that the character of the water is of less consequence than the method

of its employment, and douche-massage of the kind given at Aix-les-Bains, and also at many of our own spas, is, in my opinion, to be preferred to other modes of administration, and especially to deep-immersion baths.

In some cases, it is true, the disease will steadily progress in spite of anything we do for its relief; in a much larger number it becomes arrested under treatment, and, even if there be no material improvement, fresh joints are not involved, and the condition of those already attacked tends to be ameliorated. In a considerable number of cases the improvement is after a time marked and encouraging, and, if the disease have not already done too much damage to the articular structures, something nearly approaching to complete recovery may be attained.

The nodular or osteo-arthritic cases are decidedly less amenable to treatment, but, on the other hand, the progress of the malady tends to be much slower and the ultimate crippling and deformity are as a rule much less conspicuous. It is clear that the damage done to the joints in such cases is by its nature to a large extent irreparable, and we cannot hope to do more than to delay the progress of the articular changes and relieve pain when this is a prominent symptom. How far treatment avails to bring about the first of these objects is open to question, but we can at least do what is in our power to keep up the general condition of our patients.

In the comparatively few cases which belong to what I may call the crippling or ankylosing type, I cannot say that I have seen any particular benefit result from any form of treatment.

In conclusion I would venture to suggest as points which I think will specially repay discussion:

1. The question whether we are in the habit of grouping together several distinct diseases under such names as osteo or rheumatoid arthritis.

2. Whether or not all or any of the conditions so included are directly related to rheumatism or gout.

3. What are the therapeutic measures which are most profitably employed in the treatment of such cases.

The subject is one well worthy of attention, seeing that the diseases in question are so common, are at present so imperfectly understood, and are so terrible in their results on account of the suffering which they inflict and the extreme degree of incapacity and crippling to which they are apt to give rise.

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### II.—WILLIAM OSLER, M.D., F.R.C.P., F.R.S.,

Professor of Medicine, Johns Hopkins University; Physician-in-Chief, Johns Hopkins Hospital, Baltimore.

PROFESSOR OSLER agreed with Dr. Garrod that it was important to approach the study of this problem with unbiassed minds, which was most difficult, as they had hereditary prejudices in favour of views of the relation of the various forms of arthritis to rheumatism and gout. He would confine his remarks to the affection known as arthritis deformans. He agreed with Dr. Garrod that in adults there were two well-defined varieties and he would accept the form described by Still in children as a third. The division suggested by Dr. Garrod was a good one: (1) An infectious group, comprising the spindle form in adults and the variety in children with enlarged spleen and lymph glands; and (2) the dystrophic variety, in which there were osteophytes, etc. To one point he would like to call special attention, namely, the acute febrile onset of the disease in women, with symptoms resembling acute rheumatic fever. There were relapses, and it might be six or eight months, possibly a year, before the physician awoke to the fact that he had before him a well-marked case of arthritis deformans. An attempt had been made lately in Germany and France to separate as distinct maladies two extraordinary varieties of arthritis deformans: The form of spondylitis described by Betcherew, characterised by rigidity of the spine, nerve root pains, atrophy of the muscles, and rigidity of the thorax without involvement of the joints of the limbs; and that described by Strumpell and Marie with ankylosis of the vertebræ *plus* arthritis of the hips and shoulders—*spondylose rhizometique*, as Marie called it. They were only varieties of arthritis deformans with special localisation in the spine and not separate diseases.

### III.—WILLIAM ARMSTRONG, M.R.C.S.,

Buxton.

MR. ARMSTRONG said he thought it was generally agreed amongst those who had studied the subjects of this discussion that under those names were grouped together cases of varied character. While all presented much the same local joint conditions there was a marked difference in their bases, in their exciting causes, and also in the reflex sources of irritation present.

Many diverse views had been held as to causation, but ever and again from the earliest years of the past century the neural or trophic theory had been promulgated. At the present time two theories seemed to have the field to themselves: (1) The bacterial; (2) the neural or trophic.

The idea of a bacterial origin was at first sight a taking one, and ran with the trend of present-day thought; but many observers had failed to find the bacillus, and those who had done so had not been able to reproduce the disease by inoculation, with the possible exception of one foreign observer whose report was not very definite.

In addition, this theory did not seem to account for the various forms of arthritic joints met with in actual practice; nor did it fit in with clinical experience; but the neural theory, if accepted, brought all those varied conditions into line. The following would seem difficult to account for by the bacterial theory.

1. A young woman, six months ago, had acute rheumatism for the third time. On the first two occasions she made rapid and complete recovery; this time, under conditions of nerve strain, typical arthritis had developed.

2. A gouty man had suffered from that disease in its acute form for years; his last attack coincided with great business anxiety; the result being carpal swelling, increasing debility, and the wearing "toothachy" pain so characteristic of arthritis.

3. A woman with general arthritis following endometritis and menorrhagia; better when the uterine irritation was relieved, worse when it was aggravated.

4. An old woman of 70 with acute arthritis, quick pulse, and raised temperature and rapidly increasing deformity immediately following influenza, without any previous sign of rheumatism and gout.

5. A woman with slowly developing arthritis, with the dry, hard, inelastic skin so common in the tuberculous, with a family history of tuberculosis, a personal history of threatened phthisis in the past, and showing marks of old suppuration in the glands of the neck.

6. An elderly man with a traumatic arthritis of the knee, with much ascending neuritis, followed by extension to other joints.

7. An early senile arthritis of hip simulating simple sciatica in its early stages.

8. An arthritis of knees, wrists, shoulder, and cervical vertebræ following definite symptoms of auto-intoxication of duodenal origin, some of the products of which were known to prejudicially affect the spinal cord.

All these cases presented one common factor; they had all been in lowered health, in most cases due to nerve strain, worry, or anxiety.

Ord had well said that under these circumstances the trophic centres in the cord were more liable to transmit morbid impulses to the joints.

When one looked at the great amount of neuritis present (the peculiar wearing "toothache-like" pain so characteristic of arthritis) at the marked wasting of muscles, and at the tendency of the joint structures to dystrophic changes, he could not shut his eyes to the fact that either primarily or secondarily the trophic centres of the cord were involved. He ventured to suggest:

*a*. That in all cases of arthritis there was more or less interference with the nerve nutrition of the affected joint or joints.

*b*. That in many cases of the rheumatic or gouty forms of arthritis the trophic factor was present in small degree only, and these cases were readily amenable to well directed treatment.

*c*. When the trophic factor predominated the cases proved much more refractory, and taxed the resources of the medical attendant and the patience of the sufferer.

*d*. Treatment should be directed.

1. To deal with the basic cause, such as gout or rheumatism, present in many of these cases.

2. To eliminate every possible source of reflex irritation.

3. To build up the health of the patient, especial attention being given to the nervous system generally, and to the spinal cord particularly; the most valuable agent being the electric bath.

4. To the prescription of a generous dietary, carefully regulated with regard to gout or rheumatism when these factors were present; but always learning towards more butcher's meat, and to the exclusion of the carbohydrates.

The steady and prolonged administration of liq. auri et arsen. bromid. had been a distinct help in many severe cases of arthritis.

IV.—Arthur P. Luff, M.D., F.R.C.P.,

Physician in Charge of Out-patients, Lecturer on Medical Jurisprudence and Toxicology and on Hygiene and Public Health, St. Mary's Hospital.

Dr. Luff said: I propose to limit myself to the consideration of chronic diseases of the joints, and not to deal with the disease—acute rheumatoid arthritis. Although rheumatoid arthritis frequently follows on rheumatism, and is therefore by some observers regarded as a modified or degenerative form of that disease, yet in my opinion it is simply a sequela of that disease, following in the joints the nutrition of which has been impaired. Under the term "rheumatoid arthritis" undoubtedly more than one disease is frequently included, and I shall therefore briefly describe the type of disease that I shall refer to as rheumatoid arthritis. I refer to a case in which accompanying deformities of the joints there are osteophytic outgrowths, lipping of the cartilages, and grating of the ends of the bones on attrition, conditions which are not met with in cases of rheumatism. Rheumatoid arthritis is characterised by its insidious onset, by its usually affecting at first one of the small joints of the hands—most commonly the carpo-metacarpal or the metacarpo-phalyngeal joint of one thumb—and by its subsequent spread to other joints. The mode of onset and the subsequent history of the disease is, to my mind, more suggestive of the disease being microbic in its origin than due to a nervous cause. As against the nervous view of the origin of the disease are the facts that it is a frequent sequela of some infective process, that it does not start in a symmetrical manner, that no reaction of degeneration is to be obtained in the affected muscles, and that no nerve lesion has been discovered. In favour of the nervous view, but not at the same time antagonistic to the microbic view, are the facts that the disease frequently follows shocks to the nervous system, debilitating influences, and occasionally the removal of both ovaries. I consider that the monarticular form of rheumatoid arthritis is entirely distinct from the disease I have been considering. It consists of a slow local degeneration of the cartilages and ends of the bones of a single joint without the sclerosis and tissue proliferation which occur in what I consider to be rheumatoid arthritis. The treatment of rheumatoid arthritis should be very different to that of rheumatism. A generous diet, only limited by the powers of digestion of the patient, should be imposed. In my experience great benefit is derived from the employment of radiant heat baths, the penetrative effect of the light rays of which produces an improvement in the nutrition of the joints probably by increasing the lymph and blood circulation in the tissues of the joints. In addition, I have had many good results from the prolonged administration of potassium iodide and one of the guaiacol preparations.

V.—Wilmot Parker Herringham, M.D., F.R.C.P.,

Assistant Physician, St. Bartholomew's Hospital; Physician, Paddington Green Children's Hospital.

Dr. Herringham said: There are two questions before the meeting (1) the diagnosis of osteo-arthritis from rheumatism, (2) the nature of osteo-arthritis using that word to include all the forms mentioned by Dr. Garrod. (1) There is considerable difficulty in diagnosing between acute rheumatism and acute osteo-arthritis. There is the same fever, the same fugacious arthritis, the same profuse sweating and acid smell, the same erythematous rashes, and the same temporary improvement under sodium salicylate. On the other hand, there are cases of rebellious rheumatism in which the resistance to treatment and the cachexia of the patient lead to a suspicion of osteo-arthritis. In these cases we can only remember the rule that rheumatism is a disease which produces lesions of the heart which are permanent, and lesions of the joints which are not, whereas osteo-arthritis is a disease producing permanent lesion of the joints and none of the heart. (2) Next is osteo-arthritis one or many diseases? Some physicians declare that the osteophytic forms of old age are different from the soft bulbous forms of earlier life, and Dr. Still maintains that we are in children confusing under the name of osteo-arthritis three separate and distinct diseases. I should like with deference to put the other side of the case, the side for the unity of the disease. I would recall in how many points all these cases resemble one another. All are polyarthritic, all are alike in their tendency to affect the peripheral joints before the central, all of them produce very similar deformities, all of them produce general cachexia, and all produce a muscular wasting so peculiar and so severe that it has led to the nervous theory of the disease. Such a general resemblance outweighs the differences. I grant that the disease in the old is osteal, and in earlier life synovial; that in young people it is febrile, in old age hardly, if ever, so; that in some children there is marked glandular and splenic enlargement. But may not these differences be explained? May we not in the first place believe that old tissues are affected differently and in different proportion? We well know that the diseases of youth differ from those of age; that the former is the time for acute epithelial inflammation, the latter the period when fibrous tissue develops. May we not for a moment compare the acute nephritis which is so much commoner before middle life with the synovial form of osteo-arthritis, and the granular kidney with the osteophytic form of later life, the synovial being the higher tissue, and the bone the lower? And secondly may we not believe that in young tissues the morbid poison finds a better pabulum, attains a greater virulence, and in consequence produces a greater reaction? May not the higher fever, the greater wasting, and the splenic and glandular enlargement, be the expression of the greater resistance of the tissues in the young? In regard to climate I may remark that I have seen wonderful improvement occur in one case during a residence in the Grand Canary.

VI.—Charles Oliver Hawthorne, M.D., M.R.C.P.,

Physician, Central London Ophthalmic Hospital; Assistant Physician, Royal Hospital for Children and Women.

Dr. Hawthorne considered that the whole theoretical interest of the debate was centred in the question whether the three terms, "chronic rheumatism," "osteo-arthritis," and "rheumatic gout," were different names for the same condition, or whether their use implied the existence of three distinct and separate diseases. For his own part, he was unable, in the study of chronic joint diseases, to find any well-marked dividing lines on which distinctions could be confidently founded. There were, no doubt, extreme types; but these were connected by a series of gradations, rendering it impossible to make a clear line of division. One of the preliminary necessities of this question was the exclusion of terms which carried with them a suggestion of theory. Hence, he would exclude the phrase "chronic rheumatism," because it implied that the chronic joint conditions were the result of the same agent as that which led to the polyarthritis of acute rheumatism, and that was entirely the question in dispute. But, in saying that, he by no means admitted the doctrine that there was no such thing as chronic rheumatism, or that chronic rheumatism never expressed itself as joint deformity. That was a sweeping assertion which he regarded as going quite in front of their present knowledge. Further, there were clinical facts which warned them against its adoption. The growth of chronic deformity immediately out of an attack of rheumatic fever; the appearance of the same conditions after subacute arthritic pains in early life; the occasional association of cardiac valvular disease with these conditions; and the development with them of subcutaneous tumours essentially similar to the rheumatic nodules of childhood were warning facts. They did not prove that all chronic joint affections were rheumatic, but they did make one hesitate to accept the statement that no such affections were rheumatic. To clear the ground of unproven theories it would be better to drop all terms implying a knowledge of etiology, and perhaps to be content with the phrase "chronic arthritis," adding "osteo-arthritis" or "arthritis deformans" when the clinical conditions warranted it. It was fortunate that the differences of opinion in reference to causation did not extend to the subject of treatment. He agreed generally with the necessity for tonic measures, more especially in those cases where chronic joint affections first developed about middle life.

All he would add was that for the pain and stiffness which were so troublesome in rheumatoid arthritis full doses of sodium salicylate at night often gave great relief. To this extent he could not agree that therapeutic tests disproved the rheumatic theory.

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### VII.—William Calwell, M.D.,

Physician, Royal Victoria Hospital and Throne Consumption Hospital, Belfast.

Dr. Calwell mentioned the fact that osteo-arthritis occurred in animals, and specimens had been found in the bones of extinct animals. Acute rheumatic fever was quite distinct from osteo-arthritis; occasionally they might occur together, as was seen in other diseases, but the general run of evidence supported the dualistic view. The same poison that produced osteo-arthritis was very closely connected with that which appeared in a large majority of cases of muscular rheumatism, such as lumbago, and with that of rheumatic neuritis as seen in many cases of sciatica. Gonorrhœal rheumatism was a septic infection. Arthritis might be, and was, caused by several poisons, and structural changes varied with each. Regarding classification and registration it was necessary to distinguish between these diseases, and make their returns accordingly. Statistics obtained from the Registrar-General of Ireland were divided into two heads —"rheumatic fever and rheumatism of the heart" was one, and "rheumatism" the other. This left them in complete ignorance as to chronic valvular diseases due to acute rheumatic fever, and also as to the comparative frequency of the two diseases and their mortality and complications. If all cardiac affections due to acute rheumatic fever were stated, the mortality from this disease would be found to be enormous; whereas that due to the osteo-arthritis would be very small; it might make life miserable, but seldom terminated it. Regarding the etiology of osteo-arthritis the natural history of the disease pointed strongly to its being due to unhygienic conditions, and so it was essentially a bacterial or septic affection. General observation pointed to cold, damp, and general want of cleanliness. These combined conditions lowered the resistance and favoured the septic growth; among the less thought of channels for the immediate entrance of the poison were insanitary clothing, especially flannel worn too long, as was common amongst the poor, and drinking water. Several phenomena suggested its being a waterborne disease. There was no such disease as rheumatic gout. Osteo-arthritis was exceedingly common in Ireland; gout was exceedingly rare. An interesting point came to light from the Irish Registrar-General's return: 853 cases of death from "acute rheumatism" occurred from 1890 to 1894; 870 from 1895 to 1199; whereas 2,054 of "rheumatism" occurred from 1890 to 1894, and only 1,287 from 1895 to 1890. This pointed to a decrease in osteo-arthritis; but the conclusion was not reliable. The treatment of the acute form of osteo-arthritis, which undoubtedly occured, was rest; but the general treatment of the disease resolved itself into good hygiene, douches and baths, massage, movement of joints, exercise, superalimentation, and a warm climate if possible. No drug seemed to benefit the affection, and potassium iodide lowered the patient and caused anæmia. Dry heat applied to the joints also gave great local relief. Early recognition was of as much importance as in phthisis.

### VIII.—Mrs. Eliza Walker Dunbar, M.D.,

Clifton, Bristol.

Mrs. Dunbar said: While holding strongly the neural origin of chronic arthritis, I think that the nerves may be thrown into a pathological condition by various causes. If such nerves and nerve centres as dominate the joints are pathologically affected we shall find the same symptoms, whether the cause be of neurotic origin or non-neurotic; for example, by overstrain of the nervous system; one of the chief causes in my opinion. Girls and women who are naturally weak are peculiarly liable to the fusiform joint affection and pains in the limbs. Such cases should receive careful attention and physical overstrain should be strictly forbidden to them.

### IX.—Edward John Cave, M.D., M.R.C.P.,

Physician, Royal United Hospital, Bath.

Dr. Cave said: We must all agree that the chronic diseases commonly included in the terms set for our discussion own a manifold causation; and, further, one might reasonably maintain that, excluding traumatism, senile degenerations, and those forms obviously associated with gross nerve lesions, they are the result of many infections. Both morbid anatomy and clinical considerations bear out this view of their manifold nature. The morbid anatomist will describe some half-dozen forms of chronic arthritis, while another classification may be based on etiological considerations, but the two groupings by no means coincide. Indeed, it is well recognised that various anatomical forms may result from the same infective agent, and conversely that various infective agents may produce the same anatomical form. The anatomical characters of some forms of traumatic or gouty or gonococcal arthritis are not to be distinguished from those of the most typical forms of "arthritis deformans." Morbid anatomy, therefore, whilst not denying, certainly does not establish the existence of a specific disease which should be known *par excellence* as "rheumatoid arthritis."

From the clinical side the same thesis may be maintained, namely, that various clinical forms of arthritis may be induced by the same infection; and again conversely, that identical clinical forms may result from varied infections. We need not stay to specify all the very numerous infective agents by which a chronic arthritis may be induced. It will suffice to recall that infection by the gonococcus or by septic organisms or their toxins may certainly precede and apparently produce the most typical forms of rheumatoid arthritis. Cases of progressive polyarthritis preceded by gonococcal infection were described by Sir Alfred Garrod nearly half a century ago, and numerous similar observations have since been put on record. As regards septic infections, we are all of us constantly on the alert in the treatment of these cases for possible primary sources of infection in the buccal cavity and the alimentary tract, for suppurative lesions in the thoracic organs, or in the genital or urinary passages. That a primary ulcerative lesion of this kind may induce the most typical form of rheumatoid arthritis, cases like the following go far to prove. It is well known that a form of chronic arthritis may be associated with rectal ulceration, and a series of cases were described by Mr. Wallis last year.

In my own case not only was the association in time and progress very close, but the joint trouble was absolutely typical of rheumatoid arthritis. Just over a year ago a schoolboy, aged 16, was attacked by an acute febrile illness, which at first suggested enteric fever. The persistent absence of Widal's reaction and the development of rectal irritability led at the end of a fortnight to the diagnosis of an acute ulcerative affection of the large bowel. An anal abscess formed and discharged, and when later an operation was performed for the cure of the resulting fistula, there was disclosed extensive ulceration of the lower part of the rectum.

I need not describe the subsequent course of the rectal trouble, save that various local operations failed to effect a cure, and seven months after the first onset of his symptoms the intestinal contents were diverted by an inguinal colotomy. From this time the rectal ulceration very slowly healed, so that now, six months after the operation, there is no raw surface discoverable. As regards his joints, at the end of the first fortnight of his illness there appeared a node-like swelling of the right third metacarpo-phalangeal joint. A week later a similar painful swelling was noticed in the metacarpo-phalangeal joint of the left forefinger. Subsequently all the metacarpo-phalangeal and phalangeal joints of both hands became involved, most of the joints of the toes, the wrists, elbows, ankles, and knees, and there was painful stiffness without obvious swelling in the shoulders and hips and temporo-maxillary joints. The joint mischief was perpetuated by a series of subacute attacks. The muscles underwent extreme atrophy. The skin, especially of the hands, sweated profusely, and patches of dirty brownish-yellow pigment appeared on the backs of the fingers and elsewhere. The damp, chilly, pigmented hands deflected to the ulnar

side, with flexion of the swollen metacarpo-phalangeal joints and over-extension of the phalanges, surmounted by the thickened wrists with effusion into the tendon sheaths, presented the most typical appearance of rheumatoid arthritis. The joints, which were at their worst at the time of the colotomy, improved almost *pari passu* with the healing of the rectal ulceration. The pigment peeled off, and at the present time there remains only a moderate fusiform enlargement of the phalangeal joints, with some creaking on movement in many of the articulations.

Here we have a quite typical clinical picture of rheumatoid arthritis, so directly associated with an obvious source of infection, presumably septic in nature, as to be reasonably attributable thereto. If, then, we agree that various forms of arthritis may result from the same infection, and that the same form of arthritis—a form which may recall all the features of classical "rheumatoid arthritis"—may result from various infections, there remains this question, When we have eliminated from the heterogeneous collection all those cases which are due to the known infective agents, does there yet remain a group due to a specific infection which, so far as we can tell, manifests itself only in connection with a chronic progressive arthritis?

Most modern authorities would answer this question in the affirmative, but it is certainly safer to hold one's judgment in suspense. It may be that far more cases than we at present suspect are due to the known infective organisms or their toxins, and that many are due to a chronic infection by the pathogenic agent of acute rheumatism. It is in this connection that one naturally turns to the consideration of the organism which was described by Bannatyne, Wohlmann, and Blaxall. It is, however, remarkable how slender up to the present is the confirmation of their results.

Returning, however, to the main question, the inference is obvious that in the elucidation of these various forms of arthritis we must fix our attention on the etiological conditions, we must go back to the very beginning of each case when the source of infection may be presumed to be most in evidence. Later, while the primary source of infection may be removed, the arthritic infection may be self-propagating. Thus only and by the more frequent examination of the morbid structures and effusions during the early stages of the disease can we hope to solve the problem.

I may say in passing that this view of the multiple nature of the infections producing chronic arthritis in no way militates against any opinions we may hold as to the existence of an arthritic diathesis. It may well be that certain individuals or families have naturally a low degree of immunity in relation to arthritic organisms, or that their local defensive mechanisms are imperfect.

One word as regards therapeutics. In the first place we must realise our limitations. To recognise the details of our ignorance is a long step towards knowledge: while we know so little of the infective agent we can do little to destroy it by direct and specific remedies. But in every case, and especially in the early stages, let us search for a possible source of infection. The cavities of the nose and ear and their accessory sinuses, the buccal cavity, the whole extent of the alimentary canal and its diverticula, the skin, the respiratory tract, and those of the genital and urinary organs, should be inquired into, and, if necessary, scrutinised.

But even if we can discover and remove the primary source of infection, it is not always a case of *causa sublata tollitur effectus*. When once the joints are infected not by a toxin but by a living virus, the infection may probably be self-propagating, and it will be only after a prolonged struggle that the natural processes of immunity and reaction serve to eradicate it. Here we can do little but strive blindly and empirically to fortify the organism in its struggle; Nature working within does the rest. Still the infective view of the nature of these disorders gives us the best hope of a successful and rational therapeusis, for all will agree that in the development of serumtherapy in infections lies our great promise for the future. But even now fortunately we are not limited to a combat with active infection. As we have seen that the specimens of the morbid anatomist present rather the charred ruins of a preceding conflagration or combustion, so, too, the clinician has to deal not only with the infective agent but with the damaged tissues that remain when that agent has more or less burnt itself out. Here it is that so much can be effected by the various physical methods of cure. Practising at Bath, where a large number of the chronic results of arthritic infection come yearly under notice, I am struck more and more by the remarkable improvement that may be obtained by remedies of this nature. I speak of the influence of cold and heat whether conveyed by gaseous or liquid media; of forced movements, under anæsthesia, of stiffened or ankylosed articulations, or even of their surgical excision; of the maintenance of the movements thus obtained by passive and active exercises; of the functional restoration of the wasted muscles by massage and electrical contractions—measures such as these comprise the sum of our possibilities in relation to these disorders.

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X.—Samuel West, M.D., F.R.C.P.,

Assistant Physician and Demonstrator of Practical Medicine, St. Bartholomew's Hospital; Senior Physician, Royal Free Hospital.

Dr. West said: I had intended only to speak on this subject, in case views such as those expressed so ably by Dr. Cave had not found voice. I intervene now only to emphasise his remarks. The discussion which has taken place has shown great difference of opinion, as was only to be expected, but this difference must exist until all speakers are agreed upon the basis of classification to be adopted. The classifications are mainly three—pathological, clinical, and etiological. I do not think much is likely to be gained by the pathological: the number of changes in a joint are limited, and though there are certain recognised forms which indicate clinical groups, still the classification of chronic rheumatism upon this basis has not yet produced the result aimed at. Nor has the clinical basis yet. The symptoms in many respects, like the pathological, must of necessity be similar, though the grouping of this symptom may be different and the clinical course may vary. It is the etiological classification that seems to hold out most promise, and in this respect especially that group which is connected with bacterial infection. I do not know that for the moment it is necessary to discuss the question whether the local lesions are the result of the actual presence in the joint of the bacteria themselves, or whether the nutritive changes are due to the action of the toxins produced by bacteria elsewhere. This view has an important practical bearing in respect of treatment, for if a source of infection of this kind be looked for it will in many cases be found, and if treated when found, its cure will often affect the cure of the local joint affection. Attention has already been drawn to some of the sources of the infection—in the nose, mouth, pelvis, and elsewhere. Given the infection, it is, of course, only too probable that when the lesions have lasted a long time the local changes may be themselves incapable of resolution; but even some of these chronic lesions may be greatly and unexpectedly improved. I may give an instance in illustration of this. A lady, the victim of chronic joint trouble called rheumatic, came under my observation because of the failure of all the methods of treatment to give relief. Acting on the principle indicated, I searched carefully for a source of infection. I could only find one, and that was a slight degree of cystitis, which had existed a long time, but not being severe neither the patient nor her doctors had attached importance to what appeared to be so trifling an ailment. The cystitis was treated on general principles, and cured. As the cystitis improved the symptoms became relieved, and with its cure disappeared. The cystitis has not recurred, the rheumatism has remained absent, and the local lesions have to a great extent resolved. There is nothing specially new in this, for if the history of many cases of chronic purulent discharge is followed joint pains are frequently described. Thus, as the result of chronic empyema, obstinate joint pains and joint lesions are described, which disappeared with the cure of the empyema. It was with the desire of adding emphasis to the important part which infection or the absorption of toxin plays in the production of some of the local lesions now under discussion, and to the practical results of treatment based on this view, that I have ventured to take part in this discussion.

XI.—ROBERT SAUNDBY, M.D., F.R.C.P., LL.D.,
Physician, Birmingham General Hospital; Professor of Medicine, University of Birmingham.

PROFESSOR SAUNDBY spoke only to support what had been said by Dr. West in approval of the views expressed by Dr. Cave, whose paper he specially commended to the members of the Section as the most illuminating contribution which had been made to the subject under discussion.

XII.—SARAT K. MULLICK, M.B.,
Assistant Physician, Hospital of St. Francis, London.

DR. MULLICK said: There is considerable diversity of opinion as regards the pathology of the disease. Without trying to discuss it with any bias one must take into account that the nerve element plays a large part in this disease. It is a well-known fact that acute forms often occur in acute myelitis, and the chronic form is seen in actual clinical experience to be associated with sclerosis of the posterior columns as in syringomyelia and tabes. The changes are atrophy and hyperplasia of the bones with thickening of ligaments and effusions. One cannot overlook the fact that in arthritis deformans there are dystrophies of the skin, nails, bones, and muscles, which indicate a neural origin. In the opinion of many observers it is an atrophy which forms a dystrophy, as in progressive muscular atrophy. There have been cases where the lesion was symmetrical. As regards the nervous system there is numbness, tingling, and even severe pains. One must also refer to Garrod's series of cases where in an overwhelming number there was an increase of the reflexes. Pathological changes in the spinal cord have been observed. Triboulet and Thomas have reported a case of a woman with chronic arthritis in whom there was degeneration of the posterior column in the dorsal region, and in the column of Goll in the cervical region with degeneration of the posterior roots. On these grounds I am inclined to believe the neural origin of this disease.

XIII.—PRESTON KING, M.D.,
Physician, Royal Mineral Water Hospital, and Assistant Physician, Royal United Hospital, Bath.

DR. KING drew attention to the vagueness in the nomenclature of the subject. He objected to the use of osteo-arthritis as another name for rheumatoid arthritis as misleading and confusing since so many cases of this disease showed no osteo-arthritic changes. After mentioning a case that seemed to him to be fairly one of rheumatic gout where both diseases seemed to be affecting the same patient, he expressed doubt of the existence of a bacillus of rheumatic arthritis, but suggested that the possible bacillus of rheumatism might be the cause of the disease by developing irregularly in a soil of a peculiar kind.

## CASE OF CEREBRO-SPINAL RHINORRHŒA.

BY
P. WATSON WILLIAMS, M.D.Lond.,
Physician in Charge of Throat Department, Bristol Royal Infirmary.
and
E. GAVED STOCKER, L.R.C.P., M.R.C.S.,
Medical Officer, Clevedon Cottage Hospital.

VERY few cases of cerebro-spinal rhinorrhœa (the term applied by StClair Thomson to spontaneous escape of cerebro-spinal fluid from the nose) have hitherto been recorded, and the true nature of such a case as we show you to-day might readily be overlooked unless this particular condition was present in our minds.

Apart from the dripping of clear fluid from the nose, serious symptoms are usually, though not always, conspicuous by their absence, as in the case now before us. But even when no other symptom is present a correct diagnosis is a matter of considerable importance, because a moment's reflection will make it very clear that the constant dripping of clear limpid fluid from the nose becomes an intolerable nuisance to the patient, and renders him or her unfitted for almost any occupation and for society. Hence, as the patient is prepared to submit to any and even radical treatment to be quit of the affection, a failure to recognise the nature of the trouble may cause us to make needless and futile attempts to cure it by local treatment.

S. C., female, aged 40, up to last March was apparently in good health, when she complained of aching in the limbs, and thought she had contracted a second attack of influenza. The running from the right nostril commenced at the same time, and has continued without intermission ever since, night and day. She went home to bed, and apparently had an ordinary attack of influenza with feverish symptoms and slight headache, etc., but with the rhinorrhœa superadded. She was kept in bed for some time on account of another complaint (gastritis). About six weeks ago, when she began to get up, constant central frontal headache has been more noticeable; before that she had occasional central frontal headache, but only since her illness began. The headache is never severe. She has no attacks of sneezing, but has noticed slight itching of the eyelids. No cause for the disease is discoverable. She bumped her forehead violently in May, 1900, and fainted and had a headache for a short time, but it quite passed off by the following day. She has not had headaches since till recently. It will be noticed that the fluid drips from the right nasal passage only; it flows down the throat when she lies on her back.

The fluid is perfectly clear, like water; it varies in its rate of flow, being most copious after about 5 P.M. to bedtime. About one pint is passed daily, excluding what is lost at night. It does not stiffen the handkerchief on drying. It contains no sediment. It reduces Fehling's solution, is faintly alkaline, with slightly saline taste, and specific gravity is 1004. Cold nitric acid gives a precipitate which disappears on boiling. No precipitate (of mucin) is obtained on adding nitric acid.

These tests, which show that the fluid is cerebro-spinal fluid, and serve to differentiate it from the fluid of nasal hydrorrhœa, have been repeated and confirmed for us by Professor Stanley Kent of Bristol University College.

We wish, however, to mention that the fluid has on several occasions failed to respond to these tests. When first seen by one of us (P. W. W.) the fluid passed at the time failed to reduce Fehling's solution, though it responded to the other tests. Professor Kent received a specimen, and testing it a day later did not obtain reduction of Fehling's solution, and moreover the fluid was opalescent. Again, a week later, the fluid at once reduced Fehling's solution, though it did not do so after a day or two's interval when tested by Professor Kent, nor did the alcoholic extract of the stale fluid yield pyrocatechin crystals. Later still, when the fluid tested by Professor Kent and ourselves reduced Fehling and responded to all the other tests mentioned, it became markedly opalescent in eight hours. Thus it should be borne in mind that the fluid must be tested when quite freshly passed, and that a single failure to obtain reduction of Fehling's solution does not always negative the diagnosis of cerebro-spinal rhinorrhœa.

DR. STCLAIR THOMSON congratulated the authors on having diagnosed what appeared to be an undoubted case of cerebro-spinal rhinorrhœa. It was the second case which had been put on record in the medical literature of this country. As he had published the first case some three years ago, it was to be presumed that the affection was a rare one. Indeed only some 23 undoubted cases were to be found scattered through the literature of the world. Although rare, it was highly important to recognise the disease, since inconsiderate intranasal treatment might lead to dangerous results. There was no doubt a communication between the right nasal fossa and the subarachnoid space, and through this channel infection might reach the meninges. The suggestive symptoms were a one-sided nasal discharge of a limpid, watery fluid, continuous day and night, saltish in taste, of low specific gravity, and not stiffening the handkerchiefs which were soaked with it. This fluid reduced Fehling's solution, but not on account of the presence of sugar (for the fluid did not give the fermentation test), but to pyrocatechin. In this case the discharge was from the right side. In the majority of recorded cases the flux was left-sided. The prognosis was doubtful, but cases were known where the discharge had ceased spontaneously. It should be borne in mind that a not infrequent sequel was the development of eye troubles and even complete blindness.

Professor OSLER remarked that the procedure was so simple that it might be worth while to try the effects of draining the cerebro-spinal meninges by lumbar puncture. If the nasal flow was checked there might be a possibility of closure of the orifice. He would suggest the trial of the method as, at any rate, perfectly harmless.

## THE COMPOSITION AND THERAPEUTIC USES OF THE CHELTENHAM WATERS.

By Arthur P. Luff, M.D., B.Sc., F.R.C.P.Lond.,
Physician in Charge of Out-patients, St. Mary's Hospital.

My reasons for venturing to read this paper are (1) my desire that British practitioners should make a more extensive use of the home spas as compared with the foreign ones, when equally beneficial treatment may be had within our own isles; (2) to draw attention to the special therapeutic uses of the Cheltenham waters; and (3) the hope that some effort may be made by the authorities of Cheltenham to restore the Spa to the former position that it occupied as a health resort.

I do not doubt but that there are many of my medical *confrères* resident in this town who could speak with greater authority than I can lay claim to concerning the merits of this spa, but perhaps it is better that the subject should be dealt with by one who cannot be held to have any direct personal interest in the place.

The mineral springs of Cheltenham were discovered in 1716, and during the latter part of the eighteenth and the early part of the nineteenth centuries this spa was in a flourishing condition. Yet although the waters at the present time remain of precisely the same composition as when analysed over fifty years ago, the spa has gradually been receding in public favour. Still I do not hesitate to say that many cases sent to Carlsbad, Marienbad, Homburg, Kissingen, and Wiesbaden could be as efficiently treated at Cheltenham, provided the spa possessed the proper equipment for the treatment of patients by modern hydrotherapeutic and balneological methods.

The principal reasons why so many of the Continental spas are more frequented than the British ones are that greater attractions are provided in the shape of suitable grounds and buildings for social entertainments, the adoption of modern hydrotherapeutic facilities, and the special attention that is given to diet—a matter greatly neglected at most British spas.

### Composition of the Waters.

The waters are cold, resembling in that and some other respects those of Marienbad.

The Cheltenham waters differ considerably in composition from any other mineral waters found in England. The waters may be divided into two classes: those that contain a comparatively large proportion of magnesium sulphate and those that contain little or none. The latter waters are chiefly characterised by the amount of sodium chloride which they contain. In addition, all the waters contain more or less sodium sulphate. The waters containing magnesium sulphate and sodium sulphate rank among the strongest natural purgative waters in this country, and the presence of the magnesium sulphate—which is not found, for instance, in the waters of Carlsbad and Marienbad—confers a peculiar value on the Cheltenham waters in the treatment of many morbid conditions. Those waters that contain chiefly sodium chloride and sodium sulphate are more useful for their stimulating effects upon the skin and kidneys, and would especially be beneficial when employed in the form of baths. The waters of the four wells mentioned below are those of special therapeutic interest.

*Chadnor Villa Well.*—The water contains 313 grs. of saline matter in the gallon, of which about 118 grs. are magnesium sulphate, and 61 grs. sodium sulphate.

*Cottage Well.*—The water contains 390 grs. of saline matter in the gallon, of which about one-third consists of magnesium sulphate, and about one-fourth of sodium sulphate.

*Lansdown Well.*—The water contains 625 grs. of saline matter in the gallon, more than one-half of which consists of sodium chloride, and about one-fourth of sodium sulphate.

*Pittville Wells.*—The waters contain about 650 grs. of saline matter in the gallon, of which the largest constituent is sodium chloride, about one-sixth sodium sulphate, and about 30 grs. of sodium bicarbonate per gallon.

### Therapeutic Uses of the Waters.

The waters containing magnesium and sodium sulphates are of especial use in cases associated with a congested and torpid condition of the liver, in many cases of gastro-intestinal catarrh and torpor, in cases of chronic constipation due to atony of the large bowel, in many chronic rheumatic conditions, in cases of gall stones, and among those with a tendency to uric acid gravel.

For the treatment of obesity and of some forms of dyspepsia these waters deservedly possess a high reputation. They are not, in my opinion, indicated in cases of articular gout, when the removal of uratic deposits is the main object of treatment. They are, however, likely to be very beneficial in the treatment of many forms of irregular or abarticular gout, such as gout associated with congestion and torpor of the liver, gout connected with gastro-intestinal catarrh and torpor, gouty glycosuria, and gouty kidney affections.

Apart from the direct medicinal uses of the waters, there is no doubt in my mind but that, with the provision of appliances for douche massage, vapour baths, needle baths, galvanic baths, and radiant heat baths, many cases of rheumatoid arthritis, chronic rheumatism, and so-called muscular rheumatism could be very successfully treated here.

It is also essential for the success of a spa that establishments should be provided where any particular diet that might be prescribed would be well served, and I trust that if the resuscitation of this spa is attempted due attention will be given to that important point. For many patients the summer season from the beginning of May to the end of October is probably the best, and although the climate in midsummer may prove relaxing to some persons, a bracing climate is at hand on the hills near, to which I hear that an easy means of access has now been provided. The climate of Cheltenham is, however, suitable throughout the year for cases of rheumatism, rheumatoid arthritis, irregular gout, and for some of the other affections mentioned above, but for the treatment of such it is indispensable that suitable balneological appliances be provided. Sheltered as Cheltenham is from the east winds, but with a free circulation of air between the north and the west, the climate is especially suitable throughout the year for cases of bronchial catarrh with scanty secretion, for persons suffering from degenerative affections of the blood vessels, and to counteract the deleterious effects of residence in hot climates, and the after-effects of malarial fever.

I think it may safely be stated that within the last quarter of a century, the use of natural mineral waters in the treatment of disease has considerably revived, and this revival is probably in great part due to the accessory aids to spa treatment of douches, sprays, massage, radiant heat, and superheated air now provided at so many of the spas. It is to the adequate provision of these aids to treatment that I think must be ascribed in great measure the enhanced reputation that has been achieved of late by such spas as Bath, Harrogate, and Buxton.

I venture to hope that the lethargy which seems to have fallen on the municipal authorities of Cheltenham may pass away, and that the town may not only resume its former position as a health resort but that, by the suitable provision of balneological and other appliances for a well regulated "cure," it may even attain to a higher position among the British spas than that formerly occupied by it. The medicinal value of the Cheltenham waters remains the same as of old, and the present time offers a good opportunity for the town to take the proper steps to recover its position as a health resort.

If those who are working for the resuscitation and development of this spa are in want of a rallying cry, may I suggest the word—*Resurgam?*

Dr. Haddon called attention to the fact that many mineral wells in Great Britain besides those of Cheltenham had fallen into comparative neglect. Whether that was due to increased knowledge of the cause of such chronic ailments as were supposed to be cured by drinking mineral waters he could not say, but there could be no doubt that they were beginning to learn that proper attention to diet and exercise was very efficacious in curing all such diseases as mineral waters were supposed to relieve.

# A DISCUSSION ON PERIPHERAL NEURITIS IN BEER DRINKERS; ITS PRECISE CAUSATION AND DIAGNOSIS.

I.—Ernest Septimus Reynolds, M.D.Lond., F.R.C.P.,
Assistant Physician, Manchester Royal Infirmary; Visiting Physician, Manchester Workhouse Infirmary.

Dr. Reynolds said: The extraordinary epidemic of peripheral neuritis which occurred in the North of England and Midland counties during the last seven months of the year 1900 has given a new interest to that form of peripheral neuritis known as the alcoholic.

Paralysis coming on in partakers of alcohol has been known for many years, having been very accurately described by Lettsom in 1789, by Brühl-Cramer of Moscow in 1819, and by Jackson in America in 1822. Huss in 1852 gave a very careful and detailed account of the symptoms, as also did Wilks in various articles published from 1868 to 1883. In all these instances spirit drinking was given as the cause. Since that date very numerous observations of the condition have been made, not only in this country, but also in France, Germany, and America.

In the Manchester hospitals for many years past there have been a large number of cases of alcoholic neuritis, and we have been specially well acquainted with the symptomatology of the affection, for it was very thoroughly worked at by our physicians—Dr. Dreschfeld in 1884, by the late Dr. Ross in the years 1886 to 1891, and as regards the condition of the heart by Dr. Graham Steell. During the four years 1887 to 1890 I was resident medical officer at the Manchester Royal Infirmary, and during that time admitted as medical in-patients some 5,200 cases, of which 80 were cases of alcoholic paralysis, or about 1.6 per cent. Since 1890 I have been the visiting physician to the Manchester Workhouse Infirmary, which contains some 800 beds for medical patients, and have seen very many more neuritis cases, but unfortunately exact records are not available.

It will be well at the outset to shortly describe what we in Manchester mean by alcoholic neuritis. It is a peripheral neuritis associated with paræsthesia and numbness (very rarely, if ever, complete anæsthesia) in the limbs, atrophic paralysis of the arms, legs, and in severe cases of the trunk muscles, with great pain on pressure of the muscular masses of the limbs; there is hardly ever any paralysis of the cranial nerves or of the bladder and rectum (though there may be incontinence in the late stages, especially if there is marked dementia). In addition there is frequently a dilated left heart with cardiac muscle failure and marked œdema of the trunk and legs, and often albuminuria. In some cases there is an almost characteristic mental condition with total loss of memory for time, and afterwards for place also.

I was always taught, and it was always laid down in books, that alcoholic paralysis occurred practically only in spirit drinkers. But the first case of alcoholic paralysis which I diagnosed I saw in 1884; it occurred in a gentleman who took sixteen glasses (about one gallon) of light table beer daily. He was under constant observation, and most certainly took no spirits. This case will be found fully reported by me in Dr. Dreschfeld's paper in *Brain* for 1886. While at the Manchester Royal Infirmary in 1887-1890 I found that the neuritis cases almost invariably took either beer only or beer in combination with spirits, and that pure spirit drinkers seldom showed neuritic symptoms, but suffered more from delirium, mania, gastric, or hepatic disturbances.

These observations were mentioned by Dr. Ross in his article in the *Medical Chronicle* for 1890. It seemed to me that there was some other factor apart from ethylic alcohol which was causing the neuritis, and I commenced to write a paper on the subject, but did not proceed to do so as I got so little encouragement from other observers in Manchester, and moreover the recorded cases seemed entirely opposed to the view. But I continued to observe cases not only in hospital but in my private work. I was always very searching in my inquiries into alcoholic history, and whenever I saw a case of neuritis there I found that beer had been consumed either alone or with spirits; moreover I saw many cases of pure spirit drinking, even to the extent of a bottle or a bottle and a-half of whisky a-day, but in none of these cases do I remember to have seen neuritis. From conversations with physicians familiar with London and Scotch practice, I found that both alcoholic neuritis and the alcoholic dilated heart were unusually common in Manchester. Sir William Gairdner wrote to me a few months ago stating that previously to about 1886 he had had almost no personal experience of alcoholic neuritis, but in that year Dr. Ross showed him some half-dozen cases which were at that time in the wards of the Manchester Royal Infirmary. He remarked to Dr. Ross: "But if this is alcoholic paralysis, how does it come about that I did not know it well before, and seem scarcely to have seen it in Glasgow where they drink so much whisky?"

Sir William Gairdner continues in his letter, "the few cases I afterwards saw either in hospital or in private practice only convinced me the more of the rare and exceptional character of the disease in Scotland, and that alcohol (although certainly associated with the disease) was not the leading factor in the etiology." On the contrary, Dr. Alex. Bruce thinks the condition is common in Edinburgh, and occurs more in spirit drinkers. Dr. Gordon, of Aberdeen, tells me he has only seen two cases, both of whom took both beer and spirits. Dr. Nathan Raw will give you his own experiences both of Dundee and Liverpool; as regards Dundee, he writes to me that the disease occurred in those who took beer either alone or with spirits, and rarely in those who took spirits alone, though he had seen such cases. Dr. Stockman thinks the disease is not common in Edinburgh or Glasgow, and is very seldom seen in those who took beer only. Dr. Calwell says that in Belfast they look upon alcoholic neuritis as a rare disease, occurring chiefly in those who take spirits.

I now wish to refer shortly to the remarkable epidemic of last year. About May and June I noticed, both at the Manchester Workhouse Infirmary and the Manchester Royal Infirmary, a considerable number of cases presenting unusual skin eruptions of a more or less indefinite character, such as erythemata, keratosis, and pigmentation; many cases had the characteristic signs of erythromelalgia, with great pains in the soles of the feet and palms of the hands: paræsthesiæ, with marked erythema and profuse sweating of these surfaces. Many cases had suffused running eyes, vomiting, and diarrhœa, and at the same time a much greater number than usual of cases of herpes zoster appeared. A few weeks later it was found that there was a veritable epidemic of alcoholic paralysis, and that these cases were also suffering or had suffered from some of the initial symptoms I have just mentioned. Now, apart from the skin lesions, which puzzled everyone, none of the Manchester physicians, who were, I I must again state, only too familiar with alcoholic paralysis, had the slightest idea that these neuritis cases were due to anything but alcohol, for the clinical picture presented differed in no way from that we had been accustomed to recognise for years. But I saw at once the possibility of discovering some new factor which, rightly or wrongly, I had been looking for for fourteen years; and on November 15th the herpes suggested to me the possibility that arsenic was present in the beer, for it must be remembered that everyone of these numerous patients was a beer drinker. This seemed a highly improbable hypothesis, but it explained all the symptoms, the running eyes and nose, the laryngitis and bronchitis, the vomiting and diarrhœa and silvery tongue, the numerous skin lesions (including the pigmentation and keratosis), and the paralysis. On November 17th I obtained some beer commonly taken by these patients, and on November 18th by Reinsch's test I obtained numerous crystals of arsenious oxide in a reduction tube. I mentioned the discovery to Professor Dixon Mann on November 19th, and he (examining a different sample) confirmed the observation on November 20th. On November 20th Professor Delépine, to whom Dr. Dixon Mann had reported the discovery, and who had, unknown to me, been working at the subject, traced the source of the arsenic to certain brewing sugars, glucose and invert sugar, which were manufactured by the action of sulphuric acid on starches and cane sugar respectively; he further found that the sulphuric acid was very highly contaminated with arsenic. Professor Delépine found from $\frac{1}{10}$ to 1 gr. of arsenious oxide per gallon in various beers or stouts manufactured with the artificial sugars; the invert sugar contained about 1 gr. per lb.; the glucose about 4 grs. per lb., and the sulphuric acid over

100 grs. per lb. I may at this point mention that Professor Dixon Mann on November 26th extracted arsenic from the urine of one of his beer-drinking patients, and that since then he has found it not only in the scales coming from the hands and feet, in the nails, and in the hair, but also in many internal parts of the body, including the brain. He has, in fact, clearly shown that instead of arsenic being very soon eliminated from the body it will accumulate in the body to a considerable extent.

I think that all will admit that this epidemic has greatly strengthened the idea that there was something besides pure alcohol which was the cause of alcoholic neuritis. But it did not and has not proved that true alcoholic neuritis does not exist. For there are three possibilities:—First, that the neuritis was entirely caused by the alcohol in the beer, and the new symptoms, namely, the irritations of the mucous membranes and the skin lesions were caused by the arsenic. Secondly, that all cases of so-called alcoholic neuritis have really been caused by arsenic. Thirdly, that the alcohol and arsenic, though each capable of acting alone, have in many cases, and in practically all cases in the present epidemic, really acted in combination.

The first possibility, namely, that the arsenic only produced the skin lesions, etc., and played no part in causing the neuritis, is highly improbable, for arsenical neuritis is already well known and is exactly of the type generally ascribed to alcohol, associated with pain on pressure of the muscles, with cardiac symptoms, and occasionally with the peculiar mental condition of loss of memory of time and place. Moreover, many severe cases of neuritis had taken very little beer, certainly not more than three or four glasses a day.

The second proposition that all cases of neuritis previously ascribed to alcohol have really been due to arsenic is very difficult to prove and sounds highly improbable, but it must be discussed. In favour of the proposition we have the following: Though alcohol is consumed in large quantities in Scotland, Ireland, and London, yet alcoholic neuritis is a rare disease in those areas, and certainly rarer than it has been for years in the Manchester district. The recent epidemic was clearly shown to be due to arsenic poisoning, and during the whole time of the epidemic no patient was seen by me who was suffering from so-called alcoholic neuritis who had not consumed arsenicated beer. And the crucial test is that during the last seven months when beer in the Manchester district has been practically free from arsenic, I know of no case of neuritis except a few remaining over from the time of the epidemic. In fact, alcoholic neuritis seems to have disappeared from this district, which was its former great centre. Inland revenue returns show a slight decrease in the consumption of alcohol during the past six months, but this will not account for the disappearance of neuritis. But during the last month I have seen three cases, one in a man and two in women which I could not at first trace to the arsenical beer, but I finally, after exhaustive inquiries, found that they were only exceptions which proved the rule. The man, who was apparently mentally sound, gave me a definite history of his paralysis having only been present two months and stated he had not been ill before Christmas. But his paralysis struck me as being of a long-standing nature, and I found on more careful questioning that mentally sound as he appeared to be he had complete loss of memory of time, with no trace of other mental disturbance. One of the women was pigmented, the other not, the former being dark haired the other red haired.

Professor Dixon Mann kindly examined the hair of both women and found that both contained arsenic. Moreover, I obtained samples of the beer and stout which one of them had been drinking, and Mr. Scudder, a well-known chemist in Manchester, kindly tested them in my presence last Friday, and found that the beer contained $\frac{1}{10}$ gr. of arsenious oxide per gallon, and the stout $\frac{1}{300}$ gr. per gallon. This was remarkable, for there is no doubt that the brewers have done all in their power to absolutely eliminate arsenic from beer, and yet it is still to be found there. Another strong point in favour of the arsenical theory is that within the last six months it has been found that arsenic is one of the most widely-distributed substances in Nature, especially in connection with food stuffs. Its ultimate sources are mainly two, namely, coal and sulphuric acid (into which it gets from arsenical pyrites). As regards sulphuric acid, one can hardly realise the almost inconceivable number of articles into the manufacture of which it enters, articles so various as drugs, such as soda salts, and boracic acid, dyes, glucose, and manures.

Another point is that the arsenical and so-called alcoholic types of neuritis appear to differ in no way whatever. When we remember that other forms of neuritis, such as that caused by lead, by carbon monoxide, by diphtheria, by enteric fever, and so on, all differ in a characteristic way one from another, it seems strange that two drugs so different as arsenic and alcohol should produce the same motor and sensory phenomena.

The objections to the arsenical theory are very numerous. There seems to be no doubt from records (about which I shall have something to say in a few moments) that neuritis has occurred in people who have only consumed spirits or wines. But anyone who has taken a little trouble will have found out how enormously adulterated alcoholic beverages are and also how extremely difficult it is for those not in the trade to discover these adulterations. For instance, new brandy is said to be aged by the addition of sulphuric acid after distillation, and gin made more fiery by the same means. Wines may and have been known to contain arsenic obtained from various sources, such as artificial manures, spraying the vines with sulphur containing arsenic, the "plastering" of the wines with various sulphates, and the colouring of the wines with various aniline dyes, notably fuchsin, which I am informed may contain much arsenic. But whisky at first sight seems to be free from the possibility of arsenical contamination, and this probably accounts for the comparative rarity of neuritis in Scotland. But I was surprised to find the other day that sulphuric acid was used by certain distillers to destroy certain hydrocarbons in the still: it is said, however, to be impossible for arsenic to volatilise at the temperature of distillation, and so pass over into the receiver. But in one case I have received information from two different sources that a distiller was using crude sulphuric acid and hearing of the arsenical contamination he made an examination of his still and found a considerable quantity of arsenious oxide crystals in his still-head. Remember I am now only mentioning the possibilities of contamination and do not mean to say that whisky often contains arsenic; as a matter of fact, I am not aware that it has ever been found in whisky, though it has been looked for. I only mention these facts to show that because a neuritis case is proved only to have taken spirits or wine it does not necessarily follow that the poison was alcohol only.

I may here also refer to the great probability of arsenic being present in beer independently of having been made from arsenical glucose, and this, indeed, for many years. Indeed, one witness before the Royal Commission said it was highly probable that beer had always contained arsenic. I think it is probable, though I cannot prove it, that arsenical glucose has been used in the Manchester district for years before the marked contamination in 1900 led to its discovery. But apart from glucose, arsenic has been found in hops which have been sprayed or bleached with sulphur containing arsenic, and malt, especially that made with coke, has been shown to contain arsenic to the extent of $\frac{1}{7}$ gr. per lb., sufficient to contaminate beer to the extent of $\frac{1}{2}$ gr. per gallon.

Now a few words as to old records, and even present-day statements as to the previous alcoholic history of neuritis cases. I have already stated that I have always found a history of beer or stout drinking when neuritis was present, even if at first both the doctors and the friends strongly stated that the patients were pure spirit drinkers. In such cases beer is looked upon merely as a temperance beverage, and is ignored; it is not, as has been suggested, that the patients are ashamed of the beer drinking, but that they do not consider it harmful when compared with spirits. Often indeed it is only after long and searching inquiry that the history of beer drinking is obtained, and moreover, if the history can only be obtained from the patient himself, one must allow for the serious loss of memory from which these patients suffer. Again, owing to the old idea that neuritis only occurred in spirit drinkers, questions have been directed almost entirely to obtain a history of spirit drinking, and one has even considered oneself fortunate in some cases to have obtained any

alcoholic history at all without going into details as to the kind.

Another objection is that if alcoholic neuritis has always been due to arsenic, why have we not previously seen the various arsenical skin eruptions in neuritis cases? There are two possible answers to this. One is that it is possible that very minute doses of arsenic taken for long periods may be sufficient to gradually set up a neuritis without necessarily causing irritation of the gastro-intestinal tract or of the epidermis, for, as we have seen, arsenic has now been shown to be a cumulative poison. A similar state of affairs may occur in lead poisoning in which very minute doses taken for long periods will cause lead palsy without any other symptoms, not even a blue line.

The other answer is that it is not at all certain that the skin lesions have not been seen before in alcoholic neuritis cases, but they have certainly not been recognised as possibly arsenical. Even in the present epidemic no one imagined for one moment that the skin lesions were due to arsenical poisoning until I was fortunate enough to surmise it. Moreover, for some years now I have been much struck with the marked pigmentation of the skin occurring in the alcoholic pauper, and could not account for it, except on the idea that it was always due to the irritation of vermin. But during the last six months this pigmentation has almost disappeared at the Manchester Workhouse Hospital, but the lice found on the patients before their initial bath are as active and numerous as before. Dr. Williamson has also told me of at least one old case of alcoholic neuritis with deeply pigmented skin. Keratosis, again, has been for years very common at the Manchester Skin Hospital. Various vasomotor phenomena, such as erythromelalgia, profuse sweating, or in the late stages a dry and scaly epidermis, a glossy skin, elongated, curved, and cracked nails, eczematous and bullous eruptions and purpura (all of which were found not infrequently in the recent arsenical epidemic) are described by Dr. Ross as occurring in alcoholic neuritis; though of course these symptoms might possibly be due to the neuritic changes *per se* independently of the ultimate cause.

Also as regards absence of concomitant signs in old records, we must not forget that during the recent epidemic where arsenical beer had undoubtedly, I think, caused the neuritis, concomitant symptoms were occasionally almost entirely absent. In fair complexioned people there was sometimes no pigmentation whatever, and only a close examination showed the presence of a little keratosis; or there was no rash except herpes, or a bullous or vesicular eruption like scabies, and so on. In others the pigmentation was so slight as to be a mere duskiness or dirtiness of the skin, which previous to the epidemic would have been disregarded.

We now have the third possibility to discuss—namely, that alcohol and arsenic are each capable of producing a neuritis, but that in many cases, and certainly in those occurring during the recent epidemic, the two poisons have acted in combination with especially virulent effect. It is impossible to prove that ethylic alcohol has never produced a neuritis, although I believe it has never done so when given experimentally to animals. Records are certainly in favour of the alcoholic view, and taking it for granted that the cases recorded are strictly accurate and exhaustive, and also that the spirits and wines partaken of contained no arsenic whatever (two points which I have shown to be at least doubtful), then I am compelled to admit that neuritis can be caused by alcohol alone; but if so I am convinced that, considering the amount of pure alcoholic beverages consumed in the world, it is one of the very rarest diseases known. I must confess that I cannot bring myself to believe that every case of alcoholic neuritis recorded has been really caused by arsenic, but I do believe that large numbers have been due to the combined action of alcohol and arsenic, and that arsenic in an alcoholic subject is much more virulent as a producer of neuritis than when taken alone, although in susceptible subjects the mere application of arsenical plasters to the skin will produce the most profound neuritis, as I have myself seen. This combined action of drugs in producing neuritis was studied by Oppenheim in 1891, who pointed out the great susceptibility of metal workers to neuritis if they were also chronic alcoholics. I am convinced that the reason alcoholic neuritis has been so prevalent in the Manchester district for years is that the beer consumed was contaminated to no inconsiderable extent with arsenic which was derived either from malt or malt substitutes.

I regret that I cannot give the "precise causation" of peripheral neuritis in beer drinkers; but at any rate I think the question has been narrowed down, and, moreover, a very important practical rule may be enunciated, and it is this: Whenever a case of alcoholic neuritis occurs, concomitant symptoms—such as pigmentation and keratosis—should be looked for. A very careful and exhaustive inquiry should be made as to the exact kind and amount of alcoholic beverages taken. These should be examined for even minute traces of arsenic; the urine should also be examined, and especially the hair and nails. It is in this way, and in this way only, that the question of alcohol *versus* arsenic can be settled.

I find that the diagnosis of peripheral neuritis in beer drinkers is a part of the title of this discussion, but on this point I shall say but little. Given the definition of the type of neuritis found in beer drinkers it can only be due either to alcohol or arsenic or both. No other producer of peripheral neuritis will cause the same group of symptoms. There is one disease which simulates it, and if present in epidemic form in a beer-drinking country might be confused with it, and that is beri-beri. As is well known this is not essentially a tropical disease, but has occurred in the Richmond Asylum, Dublin, and also in asylums at Alabama, U.S.A; Arkansas, U.S.A.; Suffolk; and at Sainte Gemme-sur-Loire. I am informed that in the tin mines of the Straits Settlements where beri-beri is so prevalent there is great probability that the arsenic present in connection with the tin may very easily be ingested by the coolies, and the Honourable W. C. Brown, M.D., who has had a large experience of beri-beri in Penang, writes me that although there are no tin mines in Acheen, yet "it is, however, possible that arsenic might be got in other ways—it is, for instance, put down in the rice fields to poison rats—and, generally speaking, is handled very recklessly." It is thus possible that some outbreaks of supposed beri-beri may have been due to arsenical poisoning, especially that at Sainte Gemme-sur-Loire, in which, according to Dr. Connolly Norman, "gastro-intestinal troubles were unusually prevalent, and a peculiar form of erythematous eruption was very general." But from the exhaustive inquiries and detailed reports from the Richmond Asylum, and especially after receiving a private letter from Dr. Conolly Norman, it appears to me to be impossible to associate all cases of beri-beri with arsenic, for there are practically no skin lesions, no characteristic mental symptoms, and a much larger proportion of dilated hearts. In tropical districts where arsenic is in evidence I think it is well worth while for further investigations to be made.

Out of evil comes good. Whether true alcoholic neuritis exists or does not, there can be no doubt that last year's epidemic has drawn attention to the wide distribution of arsenic in Nature, and especially to the probable arsenical contamination of food stuffs. Beer is the popular drink in this country, and the effects of alcoholic poisoning are in themselves quite serious enough without adding to them the terrible results of arsenical poisoning. We do not want an Act of Parliament to say that beer should only be made from malt and hops, for such a beer might contain large quantities of arsenic, but we certainly do want a Bill to ensure that when a man asks for a glass of beer, whether made from malt and hops or their substitutes, he should obtain a pleasant, stimulating bitter tonic, and not a substance which, although a valuable remedy for chorea or psoriasis, is capable of causing such dire mischief in a healthy individual.

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11.—JOHN DIXON MANN, M.D., F.R.C.P.,
Professor of Forensic Medicine and Toxicology, Owens College; Physician, Salford Royal Hospital.

PROFESSOR DIXON MANN said: The neuritis seen during the outbreak of arsenical beer poisoning was characterised by its severity and by the tediousness of recovery. Perhaps the most prominent symptom was extreme tenderness of the affected muscles, which was much greater than I had previously seen in cases of alcoholic neuritis. Whether this ex-

cessive tenderness is a special feature of arsenical neuritis or is simply an indication of very rapid nerve degeneration, in other words of a very acute neuritis—more acute than is met with in alcoholic neuritis—is an open question; I am inclined to the latter view. Along with the tenderness, a spastic condition of the muscles was usually present, the legs being flexed on the thighs so rigidly that they could not be straightened. In addition to the skeletal neuritis, the innervation of the heart was profoundly affected, a condition which often led to unexpected death.

In my opinion, the outbreak was entirely due to arsenic; whilst admitting, however, that alcohol probably played the part of a subcausal agent. The types of neuritis respectively attributed to alcohol and to arsenic being fundamentally analogous, there appears to be no reason why the combined action of these two agents may not be more effective than when their action is solitary, the dosage of each substance being in each case equal. I see no reason to doubt that the arsenic present in the beer was in simple combination—probably as arsenious oxide, free or combined. The magnitude of the results has been compared with the smallness of the amount of arsenic stated to have been present in the beer; and, to meet this, the hypothesis has been advanced that the arsenic existed in the beer in organic combination. Of this I have failed to obtain any chemical evidence. Moreover, the Royal Commission now sitting have issued an interim report in which it is stated that the amount of arsenic in the beer ranged from 1½ gr. to 3 grs. per gallon, though commonly ½ gr. only was present. I have all along expressed the opinion that more arsenic was present in the beer than the published analyses stated.

When investigating the elimination of arsenic in these cases of arsenical beer poisoning, I was greatly struck by the large amount of arsenic that was stored up in the keratin tissues of the skin; the horny scales formed by the hyperkeratosis, the nails and the hair; the skin itself did not contain much arsenic. In one case the horny scales yielded 0.013 per cent., and the hair 0.008 per cent. of arsenic. Still more forcible illustration of the affinity of keratin tissues for arsenic is afforded by its presence in minute quantities of these tissues. I obtained from half a grain of nail clippings, and also from the same weight of horny scales, a relatively abundant deposit of arsenic, not merely a trace. This points to something beyond a mere storing up of the arsenic in tissues removed from the circulation; it is distinctly indicative of a strong affinity between keratin tissues and arsenic. In no other tissues of the body have I found anything like the percentage of arsenic as in the keratin tissues. Closely allied to keratin is a substance called neuro-keratin, which enters into the composition of nerves, forming a sheath round the axis cylinder and the white substance of Schwann, besides giving off numerous transverse fibrils. Neuro-keratin also exists in the substance of the brain, the white matter of which contains about ten times as much as the grey matter. This afforded the opportunity of ascertaining whether neuro-keratin has the same affinity for arsenic as keratin possesses. The method adopted by the physiological chemist of separating neuro-keratin from brain substance, by extraction with water and digestion with hydrochloric acid and pepsin, was inapplicable, therefore the following method was adopted with a number of brains from cases of arsenical beer poisoning. Each brain was separately divided into two portions, one consisting chiefly of white matter and the other chiefly of grey matter. Absolute separation of white matter from grey is impracticable. Equal weights of the two portions of each brain were taken and submitted to analysis, with the result that the white matter invariably yielded more arsenic than the grey. For example, 240 grams of white matter from one of these brains contained equal to 0.0008 gram of arsenious oxide, whereas 240 grams of grey matter the same brain yielded merely an unweighable amount. In brains which contained very little arsenic the difference was not so great, but the white matter always yielded more arsenic than the grey.

It is an open question how the arsenic produces the neuritis. It is probable, to say the least of it, that the immediate action of the toxic agent is not limited to the parts of the nerve which are undergoing degeneration. It is more than likely that the trophic centres in the brain are primarily affected, and that the nutrition of the peripheral neurons is thus interfered with. The storing up of arsenic in the neuro-keratin, in close juxtaposition with the nerve elements, will keep them under its influence during the period of elimination as well as of absorption.

Although the neuro-keratin takes up and holds a relatively large amount of the arsenic which is being ingested, as soon as ingestion ceases it is probable that the neuro-keratin tends to part slowly with its store of arsenic during the progress of elimination, which may last for two or more months. All this time arsenic, partly locked up and partly free, would be diffused amidst the brain substance on which it would continue to exercise its influence. The same observation applies to the peripheral nerves. It is not unlikely that this prolonged presence of arsenic in the very substance of the nerve elements has to do with the tedious course of most of the cases of neuritis seen in this outbreak. It was a common observation, that after the drinking of the arsenicated beer had ceased, the neuritis advanced, both in extent and in intensity, for a considerable period, and then remained stationary for a time before regeneration set in.

The precise action of arsenic in causing the neuritis is difficult of explanation. The ultimate result—the occurrence of fatty changes in the nerves—is due to imperfect oxidation. To account for this, Binz and Schultz have formulated the theory that arsenic exists in the organism alternately in the higher and the lower states of oxidation, and thus endow it with a respiratory action like that of hæmoglobin—of giving oxygen to, and taking it from, the tissues. Time forbids a critical discussion of this theory; I therefore content myself with saying that the grounds on which it is founded do not appear to me to be sufficiently clear to establish it. I am disposed to regard the action of arsenic on the cells in the same light that Mott regards the action of phosphorus; that it interferes with their power of taking up oxygen and storing it in their protoplasm. Whether this is due to "lowered vitality" of the cells, or to direct chemical action on the protoplasm is a matter for discussion, although the two propositions resemble starting from separate points in a close ring—they are correlative and merge the one into the other.

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III.—Arthur P. Luff, M.D., F.R.C.P.,
Physician to Out-Patients, and Lecturer on Medical Jurisprudence and Toxicology and on Hygiene and Public Health, St. Mary's Hospital.

Dr. Luff said: In connection with the terrible epidemic of arsenical poisoning that occurred last year in Manchester and the surrounding districts, two names will always stand forward prominently—that of Dr. Reynolds, for the acumen and skill that he displayed in detecting the actual cause of the epidemic, and that of Dr. Dixon Mann, for his very beautiful and accurate analytical and toxicological investigations, the results of which will be of immense importance to toxicologists in the future. Especially of interest is his discovery of the affinity of arsenic for the keratin tissues. With regard to the view so ably put forward by Dr. Reynolds, that possibly cases of alcoholic neuritis might be cases of arsenical neuritis, my personal experience is that the two affections are distinct, and that there are well-marked features of difference between them. Although I have seen in London many cases of what I believe to have been alcoholic neuritis, yet I have never noticed among them the extreme degree of hyperæsthesia of the calf muscles and the marked pigmentation and other skin affections that I noticed among so many of the Manchester cases. Moreover, if in the past all cases of alcoholic neuritis had been due to arsenical poisoning, it is extremely unlikely, considering the facility and accuracy with which minute quantities of arsenic can be detected, that its recognition would have escaped the toxicological examination that must have been made in many of those cases.

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IV.—T. N. Kelynack, M.D., M.R.C.P.,
Late Medical Registrar, Manchester Royal Infirmary; Assistant to the Professor of Medicine, Owens College.

Dr. Kelynack showed a series of lantern slides illustrating the more important cutaneous and nervous manifestations met with in affected cases in Manchester, Salford, and district, and drew attention to some of the more important clinical features of the outbreak. Thanks to the researches of

Professor Dreschfeld, the late Professor Ross, and Dr. Graham Steell, the derangements met with in alcoholics in Manchester had long been well recognised, and for many years subjected to careful investigation. In referring to the frequency of peripheral neuritis in Manchester and district, Dr. Kelynack gave the results of a comparative study, which, through the kindness of medical men in different parts of the country, he had been able to carry out. The chief conclusions were indicated in the following table:

*Table showing the frequency of Peripheral Neuritis in Manchester Royal Infirmary, as compared with Medical Cases in other Hospitals.*

| Hospital. | Years. | Total No. of Cases. | No. of Cases of Peripheral Neuritis. | Percentage. |
|---|---|---|---|---|
| Royal Infirmary (Dundee) ... | 1899-1900 | 9,000 | 9 | 0.10 |
| Addenbrooke's (Cambridge) ... | 1878-1901 | 9,096 | 26 | 0.28 |
| Royal Victoria (Belfast)... ... | 1892-1899 | 7,828 | 23 | 0.29 |
| London Hospital (Whitechapel) | 1890-1899 | 47,118 | 202 | 0.42 |
| St. Thomas's (London) ... ... | 1893-1896 | 7,656 | 37 | 0.48 |
| St. Bartholomew's (London) ... | 1893-1896 | 10,009 | 52 | 0.51 |
| Royal Infirmary (Manchester)... | 1892-1898 | 9,300 | 109 | 1.17 |
| Royal Infirmary (Manchester)... | 1899 | 1,370 | 21 | 1.61 |
| Royal Infirmary (Manchester)... | 1900 | 1,343 | 62 | 4.61 |
| Royal Infirmary (Manchester)... | Nov., 1900 to Jan., 1901 | 336 | 43 | 12.79 |

From a consideration of such data it seemed impossible to get away from the conclusion that much of the so-called alcoholic paralysis met with in Manchester and district during recent years had really arisen from the use of arsenicated beer. With regard to the question of dosage, it would seem that comparison between the amount of arsenic taken in medicinal preparations and that consumed as arsenicated beer was apt to lead one to fallacious conclusions. The effects of the arsenic upon the system in the recent outbreak had been considerably modified by concomitant conditions. Investigations went to show that the peculiar circumstances of the introduction of the poison had led to an increase in the rate of absorption, to exceptional accumulation in the body, and to a retardation in its elimination. The alcohol or other ingredients of the alcoholic beverages taken certainly accentuated the effects of the poison. Many patients who only consumed very moderate quantities of beer yet suffered very severely. Lamentable as the outbreak had been, it was not without its advantages to personal and public health. It had taught them much that was new regarding the pathology of some of the so-called alcoholic affections; it had gone far to correct and amplify toxicological views respecting arsenic; and, above all, it had shown them the paramount necessity of safeguarding all processes connected with the preparation of beverages and food products.

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V.—WILLIAM OSLER, M.D., F.R.C.P., F.R.S.,

Professor of Medicine, Johns Hopkins University; Physician-in-Chief, Johns Hopkins Hospital, Baltimore.

PROFESSOR OSLER congratulated Dr. Reynolds and his colleagues in Manchester on the brilliant piece of clinical work which they had done: it had been appreciated by workers all over the world. In America beer and alcohol were drunk by the better classes now in great moderation, but in excess by the workmen. He had never seen a case of alcoholic neuritis in a person who had taken beer alone. Alcoholic neuritis was rare; he did not see more than two or three cases a year. The other alternative, that the whisky contained arsenic, he would not care to suggest. The clinical features as described by Dr. Reynolds and others differed in an all-important point, the extraordinary diversity of the skin lesions in this epidemic. In the alcoholic neuritis seen in America there were seen the vasomotor paralysis leading to cyanosis of the extremities, a vivid erythema sometimes with pain, and, thirdly, a glossy state of the skin. Pigmentation, keratosis, bullous lesions, and herpes he had never seen, though he had been for many years well acquainted with the skin lesions of chronic arsenical poisoning. The cutaneous and muscular hyperæsthesia varied greatly in different forms of neuritis. Wilks called attention to the extreme muscular sensitiveness in alcoholic neuritis, and Dr. Osler had seen in post-typhoid neuritis muscular and cutaneous sensitiveness of the most extreme grade.

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VI.—NATHAN RAW, M.D., B.S., F.R.C.S.Edin., M.R.C.P.Lond.,

Visiting Medical Superintendent, Mill Road Infirmary, Liverpool.

DR. RAW said: I wish first of all to express my personal thanks to Dr. Reynolds for helping me out of a great difficulty by directing attention to arsenic as the cause of peripheral neuritis during the late epidemic. In June of last year I was puzzled by the great and sudden increase of cases of peripheral neuritis in the Mill Road Infirmary, Liverpool. Careful examination and inquiry showed that the great majority of patients took beer and porter in varying quantity. The total number of cases under observation during the epidemic lasting over eight months was 212, and were divided into two great classes: (1) acute; (2) chronic. The acute cases only appeared late in the epidemic, and were in my opinion due to the sudden increase of the amount of arsenic in the beer, totalling 1½ gr. to the gallon. In my opinion the chronic cases were produced by the slow and gradual ingestion of small doses of arsenic spread over several months. The acute cases were undoubtedly caused by imbibing large quantities of beer having serious contamination by arsenic. The great majority of cases occurred amongst women, and I attribute this to the fact that in Liverpool it is the constant practice of women of the poorer classes to congregate together in each other's houses and drink beer during a great part of the day. The skin lesions of this epidemic have been quite different from those noted before, and they have characterised the epidemic. Professor Osler some years ago noted that if arsenic was given in the presence of brandy it produced peripheral neuritis. This observation has been confirmed by this epidemic, and seems to be the crux of the whole question. I have thought it proper to wait for six or nine months before expressing any definite opinion on the actual cause of alcoholic neuritis. Since the epidemic ceased, and arsenic quite disappeared from the beer, cases of alcoholic neuritis have still occurred, and pretty much in the same ratio as before. I am of opinion that, although the late epidemic was caused almost entirely by arsenic, peripheral neuritis can be produced by alcohol alone, either as whisky, rum, brandy, gin, or beer, but that the cases are not common. The conclusions I come to are that the sensory symptoms predominate in arsenical as compared with alcoholic neuritis, and that, though acute, they soon pass off, and the patients make a good recovery. The motor symptoms also pass off more rapidly and completely in the arsenical cases. Relapse has occurred in two cases, confirming the view that arsenic is a cumulative drug.

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VII. HENRY WALDO, M.D., M.R.C.P.,

Physician and Physician in Charge of Skin Department, Bristol Royal Infirmary.

DR. WALDO considered they were much indebted to the introducer of the subject, who would lead them to believe that the majority of cases of peripheral neuritis depended upon arsenic rather than alcohol. With this view he hesitated to agree; indeed, he was inclined to take the opposite view. He congratulated Professor Osler upon the small number of cases of peripheral neuritis occurring in America. He wished he could say the same in regard to themselves; but during his experience at the Bristol Royal Infirmary during the last twenty-five years he had come across a large number of cases. Now the chief means of differential diagnosis depended upon the presence or absence of pigmentation, keratosis, hyperidrosis, conjunctivitis, and herpes, and in looking back these conditions were exceedingly rarely seen. Another clinical symptom said to occur in arsenical neuritis was extreme muscular hyperæsthesia. He had occasionally seen this sensitiveness amount to extreme pain in alcoholic neuritis, and it was nearly always present in some degree. Then, again, how rarely one saw any sign of peripheral neuritis where arsenic had been taken as a medicine. He had charge of the dermatological department at Bristol, and in suitable cases gave arsenic, and he could say that he had never seen it. As to the cause of peripheral neuritis in arsenic, he

favoured the theory that arsenic had the power of inhibiting the nerve cells, taking up oxygen as phosphorus does.

VIII.—Frank Montague Pope, M.B., M.R.C.P.,
Senior Physician, Leicester Infirmary and Fever House.

Dr. Pope corroborated Dr. Luff's observation that nearly all cases were associated with the taking of beer brewed from the one particular sort of sugar. The cases he saw at Leicester had—whenever the source from which they obtained their beer could be ascertained—all drank beer from one brewery which was known to have used this sugar. He could not quite believe that alcohol alone could cause peripheral neuritis, so long as no valid explanation could be given for the fact that many persons took enormous quantities of spirits and never developed a symptom of peripheral neuritis.

IX.—Fray Ormrod, L.R.C.P.Edin.,
Surgeon, Workington Infirmary.

Mr. Ormrod said: My experience differs from Dr. Reynolds in the mildness of the epidemic occurring at Workington. The first case occurred in July, 1900; the man was a miner and was in the habit of drinking 30 pints of beer a week. Many cases drank six pints a day regularly. All the cases occurred in healthy men, well fed, perspiring freely in their occupation of steel and iron workers, miners, paper makers, and brewers' labourers. No case occurred in women, nor was there any marked cases of pigmentation; such as were observed were characterised by a raw-meat redness of the skin, generally with a tendency in many cases to a lavender hue. The most constant symptoms were a micaceous glistening of the conjunctiva, pain in the feet, with eruptions varying from simple erythema to keratosis—the erythematous eruptions affecting the front of the forearms, the keratosis the soles of the feet and the palms of the hands. The one case of paralysis noted had no skin symptoms whatever.

X.—Richard Caton, M.D., F.R.C.P.,
Physician, Liverpool Royal Infirmary.

Dr. Caton said that some cases of neuritis in beer drinkers were due to the presence of lead, the lead being derived from the lead pipe which connected the beer engine in public-houses with the cask in the cellar. He had definitely traced cases to this source. The beer, if becoming acid, readily dissolved the lead. He was of opinion that lead, like arsenic, was more toxic when combined with arsenic.

XI.—Sir William Tennant Gairdner, K.C.B., LL.D., M.D., F.R.C.P., F.R.S.,
Physician-in-Ordinary to His Majesty the King in Scotland; Consulting Physician, Glasgow Western Infirmary.

Sir William T. Gairdner remarked that almost all he had to say of a positive kind had been anticipated in the very convincing paper of Dr. Reynolds. It might, however, be well, in view of the fact that this discussion was sure to be referred to as an index of the present position of the question, that he should associate himself with Dr. Osler in setting forth what occurred to him as a teacher, who in the department of medicine in its clinical aspects had been obliged to keep his mind open all along the line as to new forms of disease whenever and wherever occurring. Before the date of his interview with the late Dr. Ross (alluded to by Dr. Reynolds as being approximately about 1884) he had only been made aware of one form of paralysis that had been definitely attributed to alcohol—the "alcoholic paraplegia" of Dr. Wilks; and he was by no means satisfied, even then, as to the technical and pathological status of this form. On the other hand, he had been very familiar, from the days of his earliest service in the Edinburgh Royal Infirmary, with the clinical results both of acute and chronic alcoholic excess, and had had charge at various times of the wards allotted to delirium tremens. It was something, therefore, to say that when in 1884, or thereby, he met Dr. Ross casually in Manchester, and having been interested previously in his writings on the subject of "alcoholic paralysis" (as it was then called, for peripheral neuritis had not then come into the question) the 5 or 6 cases which Dr. Ross was able to show him at one time in his own wards in the Manchester Royal Infirmary came home to him (Sir Wm. Gairdner) as quite a new type—something which he could confidently affirm he had never, or very rarely, observed before. These cases had all the characteristics described by Dr. Reynolds as those of arsenical neuritis, including the drop of the foot, the general loss of power in the extremities, and the peculiar sensitiveness on manipulation of the muscles of the calf; only he did not remember having his attention directed to any of the cutaneous changes described: but possibly Dr. Ross was so much of a nerve specialist that he might not have adverted to phenomena of this kind. But the effect on his mind at the time was to make him say to Dr. Ross, an Aberdonian whose premature death they all deplored, "If this is really and truly an alcoholic paralysis, how does it come about that in Scotland, where so much whisky is drunk, we so very rarely see cases of this kind?" Dr. Ross's reply was to the effect that it was very easy to overlook a disease when one was not prepared to see it; and from that time forward he had been carefully on the outlook, both in his clinical work in the Western Infirmary and in private practice, for cases of this peculiar and easily recognised form of disease, but it was safe to say that the cases, if not numbered on the fingers of one hand, would be well within the ten fingers of his two hands, in all these years. Compare this with Dr. Reynolds's statement of 80 cases personally observed in Manchester within five years: and it would be seen that the effect of some kind of localising cause, other than alcohol, was evident: and no doubt arsenic, as clearly proved by so many observers, was the localising cause in the recent epidemic. The careful investigation of the evidence of this fact was one of the triumphs of modern medical research and reflected the greatest credit on all who have been engaged in it.

## THE MEANS OF ARRESTING ACUTE ENDOCARDITIS.

By Richard Caton, M.D., F.R.C.P.,
Physician, Liverpool Royal Infirmary.

During the thirty-four years which I have spent in hospital and private practice few ailments have seemed to me more interesting, more important, more closely related to human welfare and human suffering than those changes in the endocardium which we so often observe in connection with rheumatism. During the past thirty years the advances made towards a more complete etiology of rheumatism have not been rapid, but to-day there are strong hopes that its microbial origin will soon be demonstrated, not improbably in the diplococcus described by Dana in America, by Wasserman in Germany, by Poynton and Paine in England, and by others. The general treatment of rheumatism has been greatly advanced through the work of Maclagan and Stricker, but not much progress has been made in the prevention of those endocardial changes which constitute the most formidable danger of rheumatic disease.

Most physicians have noted with great dissatisfaction the results of what may be termed the expectant treatment of incipient cardiac affections. I personally felt this so strongly that I began, twenty years ago, to experiment with various measures of prevention. These at first were unsuccessful, and I need not waste your time by detailing them. Getting a little more light through these failures, I devised in the year 1885 a method which has proved more successful. The clinical material to which this method has been applied has consisted of about 500 cases of acute rheumatism. These cases, in so far as the acute rheumatism was concerned, were treated in the ordinary manner by salicylates, occasional cholagogues, and a light diet, the patient was kept strictly in bed for several weeks, the whole body excepting the head being clothed in flannel; any lingering pains were dissipated by the use of small blisters locally. Under this general treatment the proportion of cases of valvulitis was comparatively small.

The following signs were considered to indicate the commencement of valvulitis: First, a change in the character of the first sound at the apex, a softening, with loss of clearness, going on to the development of a *bruit*, usually mitral and systolic, but sometimes

presystolic, heard in the axilla, followed by accentuation of the first pulmonary sound. More rarely the disease was indicated by a *bruit* at the aortic cartilage. Slight transitory *bruits* heard only for a day or for a few hours were sometimes met with; but these I disregard, also those heard chiefly at the pulmonary valve, accompanied by *bruit de diable* in the neck or by a cephalic murmur, and frequently by obvious anæmia. These, of course, are regarded as being of hæmic origin. Lastly, there are a few cases in which a weakened and dilated condition of the ventricle gives rise to a *bruit* without there being any real organic disease. These cases are difficult to distinguish in some instances. *Bruits* of all these classes, so far as they can be distinguished, I do not regard as indications of valvulitis.

Those cases in which, on the other hand, one has reason to believe that actual inflammation of the endocardium has commenced, and has been of but brief duration, are treated by the following triple method: First, absolute physiological rest for at least six weeks. The patient lies in bed with the head low, he is not allowed to leave the bed nor to raise himself for any purpose; sleep is encouraged, pain prevented, and all mental excitement avoided; the diet is a light and unstimulating one. The object of this complete rest is of course to reduce the demands made upon the heart to a minimum, to lessen as far as possible the force and velocity of the blood current, to diminish the perilous pressure of the blood upon the softened and weakened valve cusps, and to lengthen the only rest intervals the heart can ever have, namely, the brief periods between its systoles. The importance of rest can scarcely be exaggerated; what would become of the synovial membrane if a rheumatic joint were kept in constant and rapid movement during the acute stage? Here the beneficent influence of pain insures rest. No complete rest is possible for the heart, and hence probably the fact that the rheumatic heart does not recover so readily as do the joints.

This first requirement of rest is by far the most important part of the triple method which I desire to lay before you. In the second place, I am afraid it must be admitted that the salicylates do not accomplish so much for the rheumatic heart as they do for the articular condition. They lessen fever and remove pain and swelling in a marvellous manner from rheumatic joints, but have they any effect in preventing or curing an endocardial affection? I fear there is no evidence to prove that they have. Moreover, the so-called heart tonics—digitalis, strophanthus, caffeine, etc.—are not only useless during the acute stage of endocarditis, they are apparently injurious. Is there any other channel by which we can influence and stimulate the trophic and reparative process in the heart without impairing vitality or increasing functional activity? Can we get any hint from measures which influence rheumatism favourably in other tissues? I think we can. In articular rheumatism, next in value to the salicylates stands, in my belief, the use of small local blisters. If, after many years of daily experience in the treatment of these cases, there is any treatment I absolutely trust in, it is in the effect of small blisters, each about the size of a florin, followed by a poultice applied in the neighbourhood of the affected joint. Anyone who has tried this will also believe in it.

The effect is due entirely to stimulation of vasomotor and trophic nerves in the joint. The question, therefore, next suggests itself if stimulation of the surface skin is so potent in aiding recovery in a rheumatic joint, is it not possible that a like therapeutic effect might be produced in the rheumatic heart if similar stimulation of its related skin areas were practised? It is well known that the first four dorsal nerves are related and co-ordinated in the closest manner with the nerve mechanism of the heart. Those who have seen much of angina and overstrain of the heart are familiar with the association. Although the distance between the thoracic skin and the cardiac nervous centres *viâ* the afferent neuron, the cord, and sympathetic ganglia is greater than that between the surface skin and the joint structure beneath it, there is strong probability that impulses would travel with ease along a route so definitely co-ordinated as the one in question. Can we through this channel excite the trophic centres of the heart to increased efforts in combating the evil effects of the poison of rheumatism? To me it seems quite worth while at any rate to make the attempt, especially as no other channel exists by which there seems to be any likelihood of influencing the nutrition of the heart.

In pursuance of this theory I apply a succession of small blisters—each about the size of a florin—to the wall of the chest between the clavicle and the nipple. Only one blister is used at a time, and each is followed by a small poultice. If the application is made in the proper manner scarcely any pain or inconvenience is complained of by the patient; this is true alike in the case of adults and children. Thirdly, in the brief compass of this paper it has not been possible to describe the structural changes which take place in the valve cusps, the considerable amount of new and imperfectly organised material which is effused into and upon the surface of the inflamed cusp. If complete restoration of function is to take place it is essential that this effused material should be absorbed and removed as soon as possible. It seems, therefore, wise to administer one of those drugs which are believed to absorb effusions, and to remove thickening in fibrous tissues. Of these sodium iodide is probably as effective as and less injurious than any of the others; I consequently always administer it. These three methods are therefore adopted in conjunction, namely, absolute rest, stimulation of trophic centres, and the administration of sodium iodide.

During the past sixteen years I have treated in hospital 92 cases of acute endocarditis by this triple method. In stating the results it is necessary to divide this series of cases into two groups. The first consists of those instances, 61 in number, in which a *bruit* or murmur existed at the time of the patient's admission into hospital, the *bruit* was probably recent, but its exact duration could not be ascertained. Out of these 61 cases 41 left the hospital with apparently sound hearts, while in 20 the signs of valvular disease persisted. In 31 cases on the other hand the *bruit* and other signs of valvulitis came on while the patient was in hospital, of these 28 left the hospital with an apparently sound heart, and 3, I fear, permanent valvular disease.

These results are, so far as I am aware, vastly superior to those obtained if no special effort be made, if the general rheumatism is treated solely and the heart left to itself as was formerly the custom.

Three important points remain to be stated: First, this treatment appears to be of no use unless it be commenced early—say, within the first two or three weeks; the earlier it is commenced, the better is the prognosis. Secondly, if, after apparent recovery, the patient is again attacked within two or three months by acute rheumatism, the valvular mischief is very apt to reappear, and, if reappearing, is more difficult to remove than during the first attack. Thirdly, when apparently recovery has taken place, it is important that the patient refrain from arduous muscular effort, and from everything that puts strain upon the heart for some two or three months.

The treatment, in so far as the prolonged rest is concerned, is undoubtedly somewhat troublesome and involves time and patience, but to secure and retain a sound and vigorous heart is worth almost any amount of trouble and effort.

If I may venture to sum up the conclusions which some years of observation of rheumatic endocarditis have caused me to form, they are the following: If no special treatment is practised in acute rheumatism with respect to the cardiac complication, and the patient when cured of his rheumatism is allowed to return at once to his usual course of life, he will in the great majority of cases find himself the subject of permanent organic heart disease. In all cases of acute and subacute rheumatism, and especially in the often obscurely-marked rheumatism of childhood, it is important to keep a close watch upon the sounds of the heart so as to detect commencing valvulitis; if detected and treated in the manner suggested, in the great majority of cases permanent organic mischief will be averted and the miseries and the disablement of a crippled heart throughout subsequent life will be avoided.

Professor OSLER had tried for several years to carry out Dr. Caton's plan of treatment, but he had not been able to determine whether it had a distinctly beneficial action. The difficulty was to get at the subsequent history of the patients, and he would like to know the cardiac condition in the 69 cases

two or three years subsequent to the treatment. A case might leave the hospital without murmur, and yet several years subsequently there were signs of valvular disease. It was not the vegetations in themselves which were serious, but it was the disturbance of nutrition which was started by their presence, a disturbance leading to slow stenosis of the valve, and to progressive insufficiency. Dr. Caton's method was easily carried out, and it was an attempt in the right direction.

Dr. Haddon had been astonished to find in private practice how short the duration of acute rheumatism, more especially in the young, was compared with hospital practice. He found that heart affection was the first symptom in many cases of acute rheumatism, the joint affection following, and if rheumatism was of microbic origin he had little doubt that it began in and spread from the heart in many if not in all cases. If Dr. Caton's treatment was efficacious in his hospital experience, how much more useful it would be in private practice, where the cases were seen when they began. He had also been astonished to find how loud a murmur might occur after acute rheumatism, and how little it interfered with the activity and even long life of the patient. The worst case he ever had was a girl who was now an active mother of a family, in whom the mitral systolic murmur was still loud.

Dr. C. O. Hawthorne thought that a true means of prevention would be effected if the profession recognised that the responsibility of the practitioner did not terminate with the individual case of rheumatism. It was universally allowed that rheumatism was a disease with a marked family tendency, and that it was prone to occur in an insidious form in childhood. It was also allowed that it was these insidious forms which were especially apt to be complicated with endocarditis. If, then, it became recognised that, on the discovery from any cause of a rheumatic strain in the family, it was the duty of the medical attendant to warn the parents that any child of theirs was in danger of acquiring heart disease during any illness, however slight, there was some chance of securing for these children the early and complete rest which was the best means of preventing endocarditis.

Professor Clifford Allbutt said that it was remarkable how scanty was their knowledge of the continuous history of individuals subsequent to an attack of rheumatic endocarditis. It was much to be desired that physicians should keep and publish notes of such cases, say for periods of ten to twenty years. For his own part, he feared he should but add to the confusion by stating that in his own experience well-marked physical signs of "post-endocarditis" in a substantial minority of cases wholly disappeared. This he had verified from time to time in incidental re-examination of patients who in former years had suffered from endocarditis, and in whom evidences of cardiac injury had disappeared. In other cases a murmur might persist for a long life, yet signify so small a lesion as to be negligible. This at least he would urge, that Dr. Caton's rules of treatment were eminently reasonable, and it behoved them to use all vigilance in these means of prevention. But he would venture to add that not only must means be taken to keep blood pressure down, but also to do what was of no less importance—namely, to diminish the bulk of the blood to be lifted at each stroke, an effort which, although in no direct relation to blood pressure, was in direct relation with the work to be done. To reduce blood mass, the simplest means was to reduce the fluids taken—not unreasonably or painfully, which excess might even do some harm, but moderately.

Sir William T. Gairdner was able, quite unreservedly, to associate himself with all that part of Dr. Caton's paper which referred to the importance of rest in bed, as complete as possible, as a prophylactic and curative agency in rheumatic endocarditis. If he did not adopt, in like manner unreservedly, the rest of Dr. Caton's interesting paper, it was because he had little or no personal experience to offer. But for many years he had considered it of the first importance (as was long ago shown by the late Dr. Francis Sibson) to allow no kind of exertion that could possibly be avoided, in any case of acute or subacute rheumatic disease, until the temperature had been for some time perfectly steady and normal; and not even then unless, in the first carefully controlled efforts to sit up, the pulse, the heart sounds, and the temperature all alike showed no tendency to relapse. It was easy enough to carry out these precautions as long as the patient was suffering from the pains in the extremities; but it was when the arthritic symptoms had wholly subsided, and often for many weeks thereafter, that the need for careful supervision as regarded rest was most required. Often and often very slight exertions, such as sitting up in a chair for a short time, were followed by warning symptoms; and even when there was no auscultatory evidence of cardiac change, there might be reason to presume that the myocardium or endocardium was suffering from the effects of the rheumatic poison, not otherwise recognisable. In children of rheumatic or rheumatoid constitution, even apart from arthritic disease (as Dr. Hawthorne had told them), these precautionary measures were specially valuable, though often, of course, apt to be neglected. Dr. Caton's paper was one of real importance and well worthy of the attention of the medical profession.

Dr. W. Ewart thought that the value of Dr. Caton's treatment lay in the direction of reducing the rate of development of the valvular lesion rather than in curing it—in this sense it was a preventive treatment. Actual prevention by treating, particularly in children, the earliest rheumatic manifestations was for the present the most promising method of dealing with the evil. A more direct form of curative treatment addressed to the cause of the disease might ultimately be evolved, which might be applicable to the insidious form of valvulitis special to rheumatism; although there was perhaps greater likelihood of its successful adoption in the vegetative and malignant varieties of endocarditis.

Sir W. Broadbent did not recognise anything sufficiently new in the treatment recommended by Dr. Caton to warrant the attachment of any name to it, and there was a danger in stereotyping any form of treatment. He had always from the time when he had had the advantage of being house-physician to Dr. Sibson recognised the necessity of rest, of simple feeding tending to reduction of the volume of the blood. As regards the drugs administered they should bear in mind that it was not a disease but a patient which they had to treat, and that what would do good in one case might not be suitable in another. His experience coincided with that of Professor Clifford Allbutt as to the disappearance of murmurs, and as to the fact that a murmur might be consistent with perfect functional efficiency of the heart. If there was a murmur it was better that it should be loud, as that was evidence of strength. With reference to salicylates he thought the routine administration of sodium salicylate did not give the full advantage of the remedy. He had been accustomed to give it in large doses during the first forty-eight hours—15 grs. every hour for six doses on two successive days. Given in this way he thought it exercised an important preventive influence against endocarditis. Once valvulitis was established it did no good, and might do harm by favouring dilatation.

Dr. West drew attention to the unreliability of statistics in respect of rheumatic fever, and stated that the personal opinion of careful observers would probably lead to more trustworthy conclusions. Though it was, of course, true that murmurs might disappear when they had been present, and be found some time after when there had been no previous evidence of disease, yet murmurs might also disappear when organic disease was known to be present, which was proved by subsequent *post-mortem* examination. The importance of rest in the treatment of rheumatic cases could not be exaggerated. The risk of allowing patients to get up too soon was often capable of demonstration, for if the cardiac dulness were marked out before rising, and again a few hours later, a distinct increase in the area of cardiac dulness would often prove to demonstration the weakness of the cardiac muscle and the dilatation that even the slight change from the recumbent to the erect position had caused.

## A CASE OF INDIGOURIA.

BY

A. McPhedran, M.B., Professor of Medicine, University of Toronto. and William Goldie, M.B., Demonstrator in Bacteriology, University of Toronto.

The presence of indigo blue in the freshly-passed urine is of such great rarity, and its significance so little more than that

of potassium indoxyl sulphate that it can only be looked upon as a medical curiosity, and it is as such that attention is called to the following case.

Mr. G. E., aged 24, a fairly nourished man of small build, looking old for his years by reason of his sallowness and falling hair, came complaining of a general weakness, heaviness of limbs, palpitation, dull headaches, and inaptitude for work. He is of sedentary habits, smokes very heavily, appetite is indifferent, but at the same time eating well, irregular as to his meals, and eating with such haste that he really bolts his food. Bowels are regular as a rule.

On examination few or no objective signs were to be found, the stomach while slightly prolapsed had good motive power, and its secretion was normal or slightly hyperacid. In an attempt to empty the stomach after an ordinary meal the tube was blocked with large masses of unmasticated meat.

No disturbance of the genito-urinary tract could be made out, but on passing urine for examination, it at once attracted attention by reason of its turbidity and extremely bluish-green colour. He then stated that some weeks before he had passed urine nearly as blue. This coloration could not be due to a drug, as none had been taken for a considerable length of time, nor was there a possibility of deception.

On examination this sample gave the following results:—

Colour, bluish green; transparency, turbid; reaction, slightly acid to litmus paper; specific gravity, 1029; albumen, none; sugar, none; urates, excessive for the sample, quantity for the day being unknown.

Microscopic Examination.—Amorphous and spherical urates most of which were tinted various shades of green and blue; separate particles of blue pigment in irregular masses and in amorphous form, not soluble on warming.

Bacteria.—A few short bacilli, apparently of the one variety, not staining by Gram's method, no cultures made; among the ordinary deposits of urine no other abnormal constituents could be made out.

The pigment was readily extracted from the urine by chloroform giving a solution which varied from a light green to a bright blue according to concentration. On evaporation of the extract a bright blue pigment remained, which sublimed with a tinted vapour and condensed on the surfaces beyond the typical crystals of indigo blue. The pigment was insoluble in water, ethyl alcohol, dilute acids, but readily soluble in choroform, ether, carbolic acid, and hot methyl alcohol. With strong nitric acid it gave a yellowish coloured solution, while with sulphuric acid at first a greenish solution quickly decolorising.

After twice extracting the urine with ether, it was subjected to hydrochloric acid and potassium chlorate for the presence of the indoxyl sulphate and again extracted with ether. Only the faintest trace of a bluish green colour resulted, and this in all likelihood due to the imperfect primary extractions. As no more of such pigmented urine was passed, a further study of the chemical nature of the pigment had to be given up; that it was indigo blue cannot be doubted, not only because of its reactions, but also for the reason that the patient usually passed yellowish-brown urine strong in indican, a sample of which obtained a few days after the passing of the blue urine gave the following results on examination:—

Colour, yellowish brown; reaction, acid; specific gravity, 1024; transparency, quite clear when passed, but rapidly becoming turbid by the falling out of amorphous urates; urates were found to be excessive for the sample; vigorous shaking after the addition of a few drops of strong hydrochloric acid produced a greenish coloration, the pigment being readily extracted with ether and chloroform; no other abnormality was found by chemical or microscopical examination.

The literature on the subject of indigo pigments occurring in the urine is of much greater volume than one would have expected. From Braconnet's time, and even before, many cases are referred to or recorded of a blue or bluish black pigment occurring in the urine, especially in connection with severe intestinal disorders, such as Asiatic cholera and typhus. Of recent years, however, it has not attracted attention, partly due to the changed treatment of intestinal disorders, and more particularly because the examination of urine does not include the setting aside of urine for sedimentation, thus permitting of advanced decomposition with the accompanying oxidation of the potassium indoxyl sulphate.

The occurrence of the indigo pigments in the urine as passed, however, is a condition seldom referred to or recorded. Ord, Roberts, Prout, Simon, Gilchrist, Kornblume, Dickinson, Robin, Beale, and others mention cases, and all of the one class, that in which decomposition of urine occurred within the bladder as evidenced by the signs and symptoms of cystitis, and the passing of ammoniacal and offensive urine.

The only cases I have been able to find in the literature at my disposal which resemble the case are those reported by Phillips, Wheaton, and Hughes.

That of Phillips was in a young married woman who, during six years observation, had for three periods of two weeks each passed urine of a greenish brown to cobalt blue colour. This colour was found to be due to indigo blue. The general tone of the report would lead one to believe that there was no cystitis or marked decomposition of urine within the bladder, but it is not definitely so stated, nor is there a report of the chemical and the microscopical findings. Wheaton's case is merely the mention of the passing of blue urine for a few hours by a hysterical woman.

The case cited by Hughes can hardly be classed with these cases, as it was assumed that urine passed during the night could not have changed in colour by the morning. I mention this case because the patient, according to the history, was just convalescent after typhoid fever, for it is in connection with such cases as are suffering from typhoid, typhus, Asiatic cholera, and intestinal obstruction, that so many reference as to the occurrence of indigo pigments in the urine are made, and that without stating whether the urine was examined fresh or not.

From the work done on the antecedent of indigo pigment, the potassium indoxyl sulphate, it is found that the absorption of indol, the product of albuminoid putrefaction, leads to indoxyl formation, and this combined in the form of potassium indoxyl sulphate is the antecedent of the indigo pigment. These steps are brought about by oxidation. In the above diseases not only is the indol production frequently great, but the conditions for transmission to the general symptoms are at their best. The indol apparently is transformed principally in the liver to the indoxyl form and then to the potassium indoxyl sulphate, the final stage to the pigment usually occurring during decomposition after passage of the urine. In such diseases it is known that the urine frequently contains large numbers of bacteria, not only of the specific form but bacilli of the colon group, and others. In fact, bacteria are found comparatively frequently in the urine of individuals who are to all appearance in good health. The occurrence of these bacteria does not necessitate any marked decomposition or any appreciable signs or symptoms of irritation throughout the urinary tract. Now it is just possible that certain forms of bacteria, or bacteria under certain conditions, should bring about the oxidation of the potassium indoxyl sulphate to indigo without otherwise causing noticeable changes.

In the present case, if this explanation were accepted, we are at once confronted by the small number of bacilli found, the number being so few that it is hardly conceivable that they had any influence in the process. If they had no such influence we surely must look farther back for the completion of the oxidation—to the portal system and liver, where the greater steps are usually carried out, or even back to the intestine where the indol itself is produced.

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## NEW METHODS AND NEW RESULTS IN THE BACTERIOLOGICAL INVESTIGATION OF FŒTID AND GANGRENOUS SUPPURATION.

By EDWARD RIST, M.D.,

Paris.

I WISH first to express my very sincere thanks to your Association for the permission given me of addressing you. Allow me to consider it as another proof of the well-known British hospitality towards foreigners, and only acknowledge that hospitality by not trespassing on it—I mean by speaking as briefly as the matter will permit.

It would appear that we possess nowadays fairly accurate notions on the microscopic germs producing suppuration in general, and that there only remains to ascertain which particular species are to be found most frequently in different classes of suppurative diseases. And yet the systematic bacteriological examination of pus in various inflammatory

processes often leads to some very striking and apparently paradoxical results, the explanation of which cannot be given by the now current theories. If we investigate, for instance, such frequent and generally severe diseases as appendicitis, mastoiditis, purulent pleurisy, we find sometimes that the same germs which are to be seen on microscopic preparations of the pus will grow on the cultivation media usually employed—gelatine or agar. In such cases, the infective agent is, as a rule, one of the well-known pyogenic microbes, streptococcus pyogenes, pneumococcus, or—less frequently—staphylococcus.

But there are other cases in which there is a wide discrepancy between the results of microscopic examination of the pus and those of cultivation of the same pus on the ordinary media. Let us withdraw, for instance, the pus of an acute appendicitis while under surgical operation. In stained preparations we shall notice an enormous number of various germs. Here are cocci, diplococci, streptococci, staphylococci; there are long, short, thick, thin bacilli; some of them are straight, some are more or less curved; there are vibrios and spirochetes. Some of them remain stained after using Gram's reaction, some are unstained by it. The extreme polymorphism of the germs observed shows that the infection is a very polymicrobic one. And yet cultivation on the ordinary media gives only some colonies of very common germs, such as streptococcus or bacterium coli commune, the streptococcus being not always the pyogenic one. There are even cases where no germs at all will grow on agar or gelatine plates. The result of cultivation therefore does not explain the great number and the polymorphism of the germs seen in the pus. Still it has been generally admitted that streptococcus and bacterium coli commune are the infectious agents of appendicitis.

However, it ought to seem a little extraordinary that these microbes should be the cause of an infection of which the characteristic features are fœtidity, alarming rapidity of evolution, and destruction of tissues by a gangrenous process. But it appears that no sufficient notice has been taken of that incompatibility between what we know of the biology of the said germs and the clinical symptoms of the disease.

The same can be said about acute ear suppurations following chronic otorrhœa. It is generally admitted that abscesses of the mastoid process are caused by the ordinary pyogenic germs—streptococcus, staphylococcus, or pneumococcus. Still one seems to forget that these suppurations are generally fœtid, and are often complicated by gaseous phlegmons of the connective tissue, by offensive abscess of the brain, or still more frequently by disseminated metastatic gangrene of the lungs. All our experimental knowledge of streptococcus or pneumococcus appears contrary to the admission of such lesions being caused by such germs; and, indeed, one can observe in cases of fœtid mastoiditis the same polymorphism of germs in the pus, and the same scarcity and uniformity of colonies on the cultivation media.

The truth is that the methods generally used for bacteriological analysis of pus are, as a rule, very imperfect. Dr. Veillon, head of the bacteriological laboratory at the Hospital for Sick Children in Paris, had been years ago struck by that extraordinary discrepancy between the results of microscopic examination and of cultivation I alluded to above. He attributed it, not to the death of microbes, as some authors had previously done, but to some deficiency in the methods of cultivation employed. Comparing the fœtid and gangrenous processes with the general process of putrefaction, he remembered that Pasteur had proved putrefaction to be caused by anaërobic germs; and cultivating the pus of appendicitis and other fœtid processes in artificial media totally deprived of oxygen, he found that the germs seen in the pus and unable to grow on ordinary agar grew very well on the contrary in agar which had been deprived of air.

His first experiments led him to invent a method of cultivation of anaërobic germs which is at the same time easy and effective. The pus is diluted in several tubes containing to a height of about 4½ inches liquid sugared agar, which is afterwards allowed to get rapidly solid, by plunging the tubes into cold water. The upper part of the agar column only is able to absorb oxygen, whilst the deeper layers are totally deprived of it. The tubes are put into an incubator and the colonies of anaërobic germs appear in the depth of the agar, where they can be withdrawn, by means of aspiration through a clay pipette, without destroying the tubes, and without preventing the later-growing colonies from appearing in their time. Pure cultures of each germ are easily obtained by that system, and each species, once isolated, can afterwards be inoculated on various liquid and solid media. It will be noticed that this method differs from all other methods hitherto employed for the cultivation of anaërobic germs. It avoids the wearisome and cumbersome use of the air-pump, of hydrogen or pyrogallic acid, and enables the bacteriologist to make, in a very short time, a great number of dilutions, which is of course absolutely impossible with the other systems. In short, it has for anaërobic germs exactly the same advantages as Koch's solid plates method has for the cultivation of aërobic microbes.

I have now worked for several years with this method, and my first investigations have been in the field of mastoiditis and otitic septicemia, a class of diseases which is often to be observed in our hospital wards, especially at the Hospital for Sick Children. From a great number of cases studied by me, I draw the following conclusion:

The cases described by classical authors of mastoiditis caused by streptococcus or pneumococcus exist; but they are very rare; the discharge is not fœtid, and the form of the disease is a mild one, where the surgical operation is always successful. In the greater majority of cases, mastoiditis has been preceded by chronic fœtid otorrhœa, and is itself of a very fœtid character. These cases are generally severe, and liable to be complicated by other fœtid and gangrenous suppuration, especially by disseminated metastatic gangrene in the lungs. They are caused by anaërobic germs, which are capable of destroying and mortifying the tissues by a process of putrefaction, as may be proved by inoculation of pure cultures in animals. I have been able to find the same anaërobic microbes in the disseminated gangrene of the lungs caused by otitic septicæmia. My friend Dr. Guillemot has made a special study of pulmonary gangrene in general with the same methods, and has arrived at the conclusion that it is always caused by anaërobic germs, and that the process of gangrene is a real process of putrefaction of the living tissues.

I have investigated further several cases of putrid pleurisy, either primitive or connected with bronchial dilatation, or with abscess of the liver, and I have always found them to be caused by anaërobic germs.

Dr. Veillon has devoted more especially his researches to appendicitis, and, with Dr. Faber, he has been able to show that in 19 cases out of 21 the pus was full of anaërobic germs, sometimes, but not even always, associated with some rare and harmless streptococci or coli bacilli. The same study has been made by Dr. Cotret in connection with peri-urethral suppuration, by Dr. Hallé as regards some cases of uterine inflammatory processes, and by Dr. Tissier in intestinal diseases in infants.

My friends and myself have studied and described in various papers several new species of anaërobic germs, some of which seem to play a very important part in human pathology, being extremely virulent and killing animals when inoculated into the peritoneal cavity or under the skin in a short time, after having caused putrid, gangrenous, and often gaseous inflammations. Some are morphologically very like ordinary pyogenic germs, like staphylococcus, pneumococcus, streptococcus, or gonococcus. But they are quite different biologically. If anaërobic and aërobic cocci exist together in the same pus, one is easily led to mistake the first for the latter, as only aërobic germs grow on ordinary media. A critical revision of many observations published by several authors has convinced me that such mistakes have often been made, and that cases considered by their authors as typical streptococcus otitic septicæmias, for instance, were, as a matter of fact, polymicrobic infections, where the anaërobic germs had been overlooked, and played probably the foremost part.

It would be useless and tedious to attempt here a description of the different species we studied. But I can show you microscopic preparations and cultures of some of them. Bacillus racemosus and bacillus fragilis seem to be the most active agents in appendicitis and pulmonary gangrene. The same are to be found in putrid pleurisy and otitic infections,

together with staphylococcus parvulus and micrococcus fœtidus. But there are many other species which have been described by us. One of the most interesting is a certain bacillus bifidus which has been found by Dr. Tissier in the infant's intestine, where it has been mistaken till now for bacterium coli commune, and which, it seems, ought to be considered as the normal microbe of the infantile intestine.

In many cases there are only anaërobic germs in the pus. I have seen, for instance, a case of mastoiditis, and another one of putrid pleurisy, where not a single colony grew on ordinary agar plates, whilst anaërobic germs grew abundantly in agar deprived of oxygen. Quite recently I have studied a case of fœtid pyosalpinx where the ordinary plates remained equally sterile: the cultivation in anaërobic tubes allowed me to isolate six anaërobic species, among which two different streptococci, which, on a stained preparation, would certainly have been mistaken for streptococcus pyogenes.

Often aërobic germs, such as streptococcus or bacterium coli commune are associated with the anaërobic microbes, but their number is always comparatively very small. If so many authors have seen them growing abundantly in appendicitis, for instance, it is because they still preserve the obsolete practice of inoculating, first, into broth and start with that liquid (where the initial proportions of the germs are liable to alter in a very short time), in inoculating gelatine or agar plates.

Our researches in a great number of cases entitle us to say that whenever there is a fœtid suppuration or an active gangrenous process, anaërobic germs are at the bottom of it. Numerous and various though they are, they must be considered as the specific agents of that kind of process. If we bear in mind how frequently fœtidity is a character of suppuration, especially in all abdominal or urinary inflammations, as well as in abscesses connected with the throat or ears, we may form an idea of the considerable part played by anaërobic germs in human pathology. The importance hitherto given to bacterium coli commune is likely to fade away when pathologists become aware that in all cases where its presence was referred to no account had been taken of the anaërobic germs; and our experience enables us to state that whenever bacillus coli is to be found anaërobic germs will be found also.

Of course it would be premature to draw from these facts therapeutic conclusions. But still, one is entitled to suppose that such antiseptics as potassium permanganate or superoxidated hydrogen, which possess a considerable oxidising power, are to be preferred whenever there exists a fœtid or gangrenous process. I have found these substances to be very successful in some cases of putrid pleurisy in which I have operated.

Clinically, I think that the presence of anaërobic germs in pus points to a severe form of infection, whereas the spontaneously curable forms are generally caused by the ordinary well-known pyogenic germs, such as streptococcus and pneumococcus.

Dr. H. J. CAMPBELL alluded to a case of suppuration in which there was an almost pure culture of Fraenkel's pneumococcus, and inquired whether in such a case the suppurative process was likely to be due to the pneumococcus or to the presence of anaërobic microbes in association.

## ON THE ABORTIVE AND CURATIVE TREATMENT OF ACUTE DISEASES, AND PARTICULARLY ENTERIC FEVER AND APPENDICITIS, BY A JUDICIOUS USE OF CALOMEL, WATER, HEAT, AND QUININE.

By J. A. RIVIÈRE, M.D.,
Paris.

AS THE MICROBE, SO IS MAN,
KILLED BY HIS OWN TOXINS AND REFUSE.

FOURTEEN years ago I called the attention of my medical brethren to the remarkable effects of calomel and castor oil in the treatment of blackwater fever, enteric fever, dysentery, children's diseases, and bilious fever. I had already then come to look upon bile as the true pathogenic poison. My subsequent experience has more and more shown me the importance of what I may call the commissariat and disinfecting departments of the cellular city, which, in my opinion, depend upon the hepatic function. The portal vein carries to the liver the refuse resulting from the work of the stomach, the small intestine and colon, the spleen and pancreas, together with a nutriment which it receives in a gross and impure condition, with nearly all the refuse from the whole body. Placed as an advanced sentry on the ingress of alimentary products provided by the digestive tract, it exerts a selective action on them and only allows entrance to the oxidisable material necessary for nutrition, and eliminates all that is noxious to the living cell. These noxious elements are derived from the food introduced, from its defective elaboration in the digestive tube, from the toxins, from the numerous poisons present in the intestine, and above all from the refuse resulting from the work of the spleen and pancreas.

This work of the hepatic gland is a fundamental one; it regulates nutrition and purifies the liquids brought by the main sewer of the organism, the portal vein. Bile is the product by and through which the liver eliminates noxious materials, and in addition it exerts some antiseptic action on the contents of the bowel below.

When the hepatic excretion is altered or lessened, the intestine becomes infected and pours into the portal vein bacilli and an overdose of toxins, which the liver can no longer retain or destroy, nor can the other emunctory organs supply its place. Then ensue pernicious, infectious, or typhoid symptoms, according to the degree of liver intoxication. The microbes of acute diseases set to work only after auto-intoxication, which depends, I am convinced, directly on hepatic insufficiency. Purgatives sweep away bile, and they have a greater effect when followed by large quantities of hot beef-tea or hot drinks taken in a hot room, the water of the beef-tea immediately takes the place of the serum lost through alvine dejections; *per contra*, cold air, cold drinks, ice on the abdomen, want of drink, stop the purgative action, and this stoppage is immediately followed by a great deal of discomfort.

Enteric fever, dysentery, appendicitis, children's diseases, and acute illnesses in general are speedily cured by judiciously given calomel, which disintoxicates the whole organism and assures intestinal antisepsis. Typhoid and dysenteric lesions are, in my opinion, produced by the same cause, insufficiency and disturbance of the biliary function. Calomel with sodium bicarbonate is always well borne by the most sensitive stomachs. It is never contraindicated. I systematically gave to all my fever patients calomel, sodium bicarbonate, āā 0.25 cg. (4 grams) put directly on the tongue at midnight, followed next morning by castor oil beaten up with hot water or 8 grams of magnesia (for an adult).

The fever always subsides by the next evening, sometimes on the very morning of the aperient draught.

When fever is present I further order at my first visit, a few hours before the calomel, a large dose of sodium salicylate, 2 grams as an antipyretic; this has, as everybody knows, a special elective action on the liver.

To prevent the return of fever I always employed quinine, which favours the biliary function, but which requires the action of purgatives to eliminate the bile.

I cover the patient with warm clothing, and make him take hot drinks in abundance, assuring him at the same time, after a slight examination intended only to divert his attention from the symptoms, that his illness is slight and that his cure will be speedy. I prescribe next morning, after the first stool, warm drinks or weak beef tea—warm drinks to plethoric, and beef tea to weak patients.

The patient treated in this way is so easily cured that he feels sure that such severe treatment has been useless. He escapes tardy convalescence, and feels stronger after the treatment than before the illness.

Calomel is one of the most powerful but harmless diuretics, because it helps the excretory functions of the liver, which in turn promote the renal function of excretion. An English physician to whom I praised calomel told me he had made sure in India that a mysterious remedy used by a native empiric to cure cholera was simply calomel.

Calomel, again, with heat and tepid water enemas, has always assisted me in saving children down with infantile

cholera, and meningitis in children is also relieved or cured if ice is not applied to the head. With this treatment we never see grave symptoms in influenza, eruptive fevers, lung or pleural inflammation, nephritis, and acute diseases.

In *post-partum* infection it powerfully assists intrauterine douches. Its general bactericidal action is helpful in the treatment of all infectious diseases. Its action on yellow fever is as marked as on blackwater fever.

That it should meet so many requirements is not surprising, since it rids the organism of toxins and waste material, exercises a disinfectant action on the digestive tract (principal seat of poisons) and at the same time kills the bacillus within the body.

The physician who judiciously uses calomel, heat, and water is sure to obtain a satisfactory result. Calomel, however, should never be prescribed in larger doses than 30 centigrams for an adult and 15 centigrams for a child. Very small doses produce only discomfort and a few mucous stools. Large doses are harmful, and should be employed in exceptional cases only. It must always be associated with sodium bicarbonate, and followed by castor oil or other mild aperient five hours later. Next morning the patient must stay in bed in winter in a warm room, and he must not take ice or cold drinks under any pretence. It is necessary to wait for the first stool, and then give hot drinks or beef-tea for the rest of the day. Weak tea will speedily restore strength; after five or six stools it is not necessary to go on with hot drinks; cold drinks may be taken in the second half of the day; plenty of water must be given continuously during the course of the disease.

Water ensures by osmotic action the general cleansing of all tissues. It also favours defervescence by evaporation from the surface of the body. Patients, and especially children, often die for want of liquid when it would be easy to administer it through the rectum, even if the power to swallow voluntarily were lost. Washing out the stomach, thermal cures and baths in acute pyrexias owe their virtues to water.

I am accustomed to associate sodium bicarbonate with calomel because I have marked an increase in gastric tolerance with the use of this combination. Calomel, in presence of sodium bicarbonate in the stomach, is, perhaps, transformed into a mercuric compound of such molecular properties that its intracellular penetration is insured with antibacillary, antitoxic, and general antiseptic effects.

Its potent action also proceeds from cholepoiesis and biliary excretion that eliminates the greater part of the noxious residues of the organism.

The liver is, I am convinced, the great defæcator, the function of which is to purify the liquid of the body. The kidneys, in my opinion, only eliminate, in the shape of urea and uric acid, the refuse resulting from the work of the liver. The function of the spleen is to select the waste products arising from hæmatolysis, and to send them back to the great hepatic laboratory. The bile, which results from this work of general purification, ensures antisepsis of the digestive tract.

It is the uniform success of my preventive and curative medication by the association of calomel and purgatives that has led me to my theory of the biliary function, confirmed by philosophical considerations drawn from the biological domain.

It is not true that purgatives weaken the patient, as is said so commonly. The patient soon recovers his lost serum through the liquid he drinks during the purgative action and the subsequent increase of appetite. All other purgatives, by sweeping clean the intestine and thus getting rid of bile, also prevent that auto-intoxication which makes disease serious. They are, nevertheless, less active than calomel, associated with sodium bicarbonate, for these stimulate the defæcating action of the liver, and at the same time possess the mechanical action of other purgatives, and the combination maintains through the whole organism its bactericidal and disinfectant action.

All diseases can be referred to one cause—intoxication, and, above all, auto-intoxication, which, in my opinion, depends directly on the disturbance and deficiency of the hepatic function. The human mechanism, like any other machine, will only work when it has been well cleaned.

### The Treatment of Appendicitis by Calomel, Heat, and Water.

Since this question has been studied I have never ceased to point to the noxious action of morphine and ice. How many times has the vermiform appendix been found diseased or gangrenous in women who have been operated upon for uterine affections? This is not a posthumous proof of an erroneous diagnosis, but a confirmation of the untoward action of ice applied to the abdomen and of opium.

Ice, applied to the abdomen, paralyses peristalsis in the biliary duct and intestine. Fæcal matters stay in the cæcum and become infected there for want of bile. The liver grows torpid, congested and infected in its turn, the whole organism is invaded by the morbific toxins which the liver is unable to retain and expel. Morphine, ice, and dry diet help in stopping fæcal matters in the cæcum and favour decomposition. The appendix, unprotected by the bile and in direct contact with the putrid mass, grows infected. Its reserve forces become exhausted, and after undergoing all the changes of septic inflammation, it ends in unavoidable sphacela, and consequent operation. But the organism will now be deprived of the diverticulum that contains normally the reserve of fluid necessary, to the healthy conservation of excreta retained for a time in the cæcum. My physiological interpretation of biliary function has by inference brought me to the following treatment, which gives perfect curative results.

#### Preventive Treatment.

This consists in a careful watch on alimentary hygiene, and in emptying the digestive tract on the slightest uncomfortableness or when a peculiarly offensive smell of intestinal gases is noticed. The use of opium or morphine should always be accompanied and followed by laxative medicine. Ice must on no account be applied to the stomach.

#### Curative Treatment of Typhlitis and Appendicitis.

Simple typhlitis, as well as that complicated by appendicitis, must be combated by the following means, which I have always found successful when suppuration has not supervened: The patient is placed at once in a tepid bath of constant temperature (36° to 37° C.) for one or two hours in a warm room. When the bath is over he must be dried with hot towels and put in a bed the blankets of which have been previously warmed. Apply to the abdomen ointment of mercury and belladonna and large hot poultices, the borders of which must extend beyond the emollient application. The renewal of poultices must be carefully done to prevent a chill seizing the abdomen.

Against pain I prescribe a small enema with two grams of antipyrin and sometimes five drops of laudanum to ensure its retention. One hour after this medicated enema I prescribe an emollient water enema (decoction of marsh-mallow root), which it is best to retain for some time. To ensure complete disappearance of pain, I prescribe 50 cg. of phenacetin by the mouth, and two hours later a second dose of the same. Half-an-hour after the enema I begin the water diet (hot drinks, mostly barley water) to be continued until the digestive tract is cleansed by my mixture. Calomel, sodium bicarbonate, aā 0.25 cg to be taken three hours after the second dose of phenacetin (or a short time after the bath, when phenacetin has not been taken and the patient has been fasting for at least four hours).

After calomel, I do not give any drinks for one hour, then I begin again with hot drinks. I allow milk in the first twenty-four hours only when the patient asks for food, which is seldom. Five hours after calomel I prescribe a tablespoonful of castor oil mixed in a cup of hot water (castor oil given in this way is suspended in the water; it is easily tolerated and acts speedily). One hour before and two hours after castor oil I forbid all fluid.

After the first stool plentiful hot drinks make purging easy and restore the fluid lost by the organism. I also give weak hot beef-tea to weak patients in order to restore serum to the blood. Weak hot tea is equally convenient for restoring strength rapidly; it may be taken alternately with beef-tea. Cold drinks shall be allowed only on the next day.

When intoxication has lasted several days the intestine is sluggish and expulsion of infective matter slow, but it always comes on after from five to fifteen hours, when helped, if

necessary, by tepid emollient enemata, with castor oil or simply olive oil, that makes it pass with ease. The stronger the intoxication, the harder, the more painful and the more slowly propelled onwards are the stools, but the pain of passing them is as nothing compared with the danger of retaining the poison.

I will quote a typical case:

Four years ago, during my holidays, one of my patients, an old friend of mine, aged 70 years, was attended by my *locum tenens* for appendicitis. The classic treatment as followed in every country was employed. When I returned I found my friend completely poisoned; his extremities were cold and he had not passed urine for twenty-four hours. The few drops I drew from his bladder contained a quantity of albumen. I nevertheless administered 25 centigrams of calomel and 25 centigrams of sodium salicylate, and five hours later a dose of castor oil. I waited fifteen hours, and seeing no results, notwithstanding castor oil and olive oil enemata, I decided to call in Péan. He refused to operate as the patient seemed moribund, and because of the state of the kidneys. One hour later Mr. X passed a quantity of putrid matter in the bed. I injected artificial serum and prescribed plenty of beef tea; the same evening he felt much better and made water easily. On the next day albumen had disappeared, and the patient ate with a fairly good appetite; two days later he considered himself cured. Calomel had evidently performed general disinfection and set to right the renal and hepatic function.

In two other bad cases, when I dreaded intestinal perforation, I successfully prescribed the following pills, so well tested in the treatment of dysentery: Calomel, ipeca. pulv., āā 0.20 cg.; ext. theb., 0.03 cg., for eight pills, one each hour. I obtained, after ten hours, a slow expulsion of putrid matters. Yellow motions appeared on the second day after calomel, pulv. ipeca. op. (Dover's powder), āā 0.25 cg., in a wafer, followed by 5 grams of magnesia four hours after calomel.

Ipecacuanha quickens cholepoiesis as well as does calomel. In appendicitis, as in dysentery, yellow motions indicate complete return of biliary function—that is, cure. Bile reappears in the motious on the second or third day only, and sometimes later; long-standing intoxication of the liver is, indeed, generally attended with acholy, though sometimes with polycholy.

Temperature often rises when bacterial putrefaction products are put in movement, but it falls after they are expelled. I continue intestinal antisepsis for the next few days, with calomel in small doses: Calomel, sodium bicarbonate, āā 0.15 in one dose; a dose on the second evening, another on the third or fourth day, another on the sixth or eighth day, and the same dose every week for a month. I always administer calomel in the evening, three hours at least after meals for small doses, and four hours for doses of 25 and 30 cg. When the patient feels loth to drink, I advise him to take for the first eight days of the illness daily enemas of boiled tepid water. Relapse is avoided by the prophylactic means indicated in the paragraph on preventive treatment.

I remember in my early practice how astonished I was by the easy cure of melæna, vomiting, and hæmoglobinuria by biliary evacuation procured by calomel and sodium bicarbonate. In these cases there are no ulcerative lesions of the mucous membrane, but a transudation of blood profoundly altered by the biliary acids and pigments which are known to be very toxic.

Convinced by the uninterrupted success realised by the above method for fourteen years, I can but say, in spite of accepted ideas upheld by the greatest medical celebrities, that a medical treatment of appendicitis exists, and that it is always easy to prevent or cure this disease—when suppuration has not supervened—by acting on the theory stated above and by giving free play to the excretory power of the bile.

If my views are opposed to certain theories now in vogue, they are based, at any rate, on *bonâ-fide* observations, the correctness of which is, moreover, very easy to determine. I feel sure that experiments will only confirm my views that auto-intoxication is produced by insufficiency and disturbance of biliary function.

## THE TREATMENT OF PHTHISIS BY MEANS OF ELECTRICAL CURRENTS OF HIGH FREQUENCY AND HIGH POTENTIAL.

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THE treatment of pulmonary tuberculosis, among other diseases, by means of "high-frequency" electrical currents has given such striking results in my hands that I have ventured to lay before you an account of 43 cases which were under my personal observation, with the sincere wish that the medical profession will give this method a thorough trial. My cases were all of over a year's duration, and were picked by other medical men for the severity of their symptoms. For the physical side of this subject we are mainly indebted to Tesla for the discovery of currents of high frequency and high potential, also to such men as Elihu Thompson, Faraday, etc. Much original investigation has been carried out by Continental observers, such as D'Arsonval, Bergonié, Oudin, Doumier, Bordier, and others. I am indebted to my colleague Dr. Pepperdene for drawing my attention to this subject, and together we have severely tested the method, and can fully corroborate the remarkable results that have been obtained elsewhere.

The difference between the currents obtained from the ordinary dynamo, or Ruhmkorff coil, and those of Tesla is that the alternations of the latter are infinite and the electromotive force proportionally high; that is to say, the alternations of an ordinary coil are about 200 per second and the electromotive force of from 10,000 to 200,000 volts, while the alternations of the high-frequency currents are millions per second and the electromotive force from 100,000 to a million volts. This, of course, depends on the means employed in their production.

The secondary terminals of the coil, or transformer, are connected to the inner coatings of two Leyden jars, the armature of these jars being so arranged as to form a spark-gap which is traversed by the currents; the outer coatings of the jars are connected by means of a solenoid. This solenoid furnishes the currents of high frequency and high potential which are used for medical treatment. The methods of treatment are of three kinds: By auto-conduction, auto-condensation, and resonator.

1. *Auto-conduction.*—The patient is placed in a large solenoid, and currents are "induced" in the living body, and from which sparks may be drawn; sparking is never needed in actual practice, except for demonstration purposes.

2. *Auto-condensation.*—Patient lying on couch, in or under which is a large sheet of metal which forms one armature of a condenser and the patient by means of suitable handles the other. In this way currents of from 300 to 400 milliampères may be safely passed through the body.

3. *Resonator of Oudin.*—A solenoid one end of which terminates in a metal sphere or other shaped terminal, the other end being carried to the outer coatings of the Leyden jars. From this can be drawn a long brush discharge, or, as it is technically termed, "effluve," similar to the "static breeze," but absolutely painless and of far greater power and intensity. This method can also be used locally by means of suitable electrodes, for more or less localising the current as in lupus and other skin affections.

In treating my tuberculous patients I quickly found that general electrification was better than local, and a combination better still. The effects may be more readily understood if we take the several symptoms, etc., *seriatim*, in a typically severe case of pulmonary tuberculosis.

*Fever.*—We will presume that for many weeks the clinical thermometer has shown the usual evening rise and morning fall of, say, a couple of degrees. After a few applications (generally and locally) the temperature acts to the stimulus, and if the individual sittings be long, so in proportion will be the height of the rise of temperature we can produce. This in a severe case may be to 103° or so; but we find that in from twelve to twenty-four hours it has come down to, as a rule, below the patient's lowest point, and as we persist or desist in the application so does the temperature rise or fall. Later on we reach a stage where even prolonged exposure to the high-frequency currents will produce no rise. When that stage is reached the patient is to all intents and purposes well; and should a relapse occur, it would be easy to resume the treatment for a while.

*Cough* after a few days is relieved, and after a few weeks is greatly lessened; though a dry cough without expectoration may persist for many months.

*Sputum.*—At first the usual muco-purulent expectoration, which may be offensive, loses its offensiveness, usually becoming increased in quantity, and generally in a month or

two becomes also *nil*: it often becomes "rusty," like typical pneumonic sputum, altering in consistency and colour according to the increase or lessening of the application of the currents.

*Tubercle Bacilli.*—The bacilli, which may be few in number, after a week or so greatly increase in numbers: this may go on for weeks, then they gradually decrease, and have a tendency to form "clumps," and later, as the patient improves, get to an extremely small number, and may become somewhat irregular and small in shape and take a stain with extreme facility. Most of my cases have still at times a few bacilli in their sputum, but their general health remains good. The bacilli seem to follow the course described by Drs. Forbes Ross and Norris Wolfenden in their paper on the Effects produced in Cultures of Tubercle Bacilli by Exposure to the Influence of an *X*-ray Tube.[1] They say, in conclusion, "There is not the smallest doubt that *x*-ray stimulation does not kill tubercle bacilli, but stimulates them to excessive overgrowth, and only affects them adversely by attenuation from overgrowth."

My numerous observations point strongly to the view that the high-frequency currents act in a very similar manner on the tubercle bacilli in the patients' lungs.

*Perspiration.*—This soon keeps pace with the temperature, but generally subsides after a few weeks treatment, and then only recurs if the treatment is pushed and the temperature rises unduly. Prolonged influence to the currents will produce sweating in a healthy adult.

The appetite is soon brought to a more normal standard, and the power of digestion greatly increased. The kidneys at first excrete larger quantities of phosphates, but these, however, quickly clear off and the urine becomes normal.

*Body weight*, as a rule, steadily increases with the improved digestion. A pound a week from the start will be scaled; sometimes the patient remains stationary a week or so, and then puts on several pounds as if to make up for lost time. A common occurrence was a gain of 14 lbs. in three months. A loss of a few pounds at the commencement is not rare.

*Diet.*—Light nutritious diet was ordered, and the patients took what their means would allow them, the great majority coming as hospital patients from the most overcrowded and unhealthy parts of London. Practically no drugs were used except an occasional laxative. Cod-liver oil and such like foods were generally allowed after one month's treatment, when one imagined that the digestive powers were in a better condition to absorb them. One patient persisted in taking a cod-liver oil emulsion, and more often than not brought it back with the last meal. After three weeks treatment patient could take 4 ounces a day without unpleasant symptoms, and, I believe, great benefit.

An attempt was made to instil into the majority of the patients' minds the elementary rules regarding ventilation of rooms, etc., but their circumstances in life did not allow of many taking our advice.

*Pulse.*—From a vast number of observations one finds that the pulse-rate is increased twenty or thirty beats during the actual application of the currents, but in a few hours or less it regains its usual rate: that is, in tuberculous subjects; in others the increase is much less marked. In slightly neurotic cases it may be irregular.

*Anæmia.*—The mucous membranes in a few weeks look brighter, and the skin becomes more pink-looking and acts better. Congested capillaries of the cheeks rapidly disappear; perhaps the general lowering of the temperature causes the "hectic flush" to go, or, may be, the increased nutrition of the skin masks it.

*Clubbed fingers* follow the usual course of a phthisical patient when recovering from the disease. The nail edges become more square and the free margins elevated. The fingers between the interphalangeal joints thicken from the deposition of fat.

*Menstruation*, mostly absent, irregular, or pale, and very generally scanty, improved very rapidly under the treatment. I have observed the same phenomenon in cases of severe chlorosis unassociated with phthisis. In one case the menses, which had been absent for over nine months, after six bi-weekly applications became normal in every respect.

*Larynx.*—Tuberculous laryngitis seems particularly amenable to treatment by means of the "effluve" method.

*Breathing*, if short and difficult, quickly becomes longer and easier, the chest capacity soon improving. In one case, although in five weeks the patient only put on 1½ lb., the chest measurement showed an increase of 3½ ins. The rate of breathing is increased during the actual applications of the currents.

In using this form of treatment for consumption the medical man should most carefully watch the temperature chart, and let that direct him regarding the dosage. Some knowledge of electricity is required for its successful application. Generally speaking, in severe cases ten minutes a day is sufficient, but may be quickly increased, providing the fever does not go too high (over 101.4°). I give all cases general electrification, and in addition, to some locally, the "effluve" from a metallic brush. Actual sparking of the chest wall is somewhat painful, and should never be used in phthisis, as in my opinion it is useless. If the "effluve" is of proper consistency, the skin feels as if it was receiving a soft warm breeze, slightly tingling in its nature.

According to Dr. W. Osler, in 95 per cent. of cases seen by physicians the patients are unable to afford any treatment away from their own homes. By this method they can all be treated by their own doctor. The necessary apparatus is costly, but the good results make the initial outlay fade into insignificance. Arrest or cure of tuberculosis is entirely a question of general nutrition, and we have in this high-frequency method a most powerful means of strengthening the body cells to resist the effects of the microbe. I will not weary you with "theories" as to how electricity in this form acts, but leave it to your knowledge and consideration. Its advantages over other forms of treatment may be briefly summarised thus:

*Effectiveness.*—Of 43 cases, 42 put on weight, lost all symptoms except in a few where a slight cough remains and a few bacilli may be found occasionally. Physical signs generally remain long after the patient is at his maximum weight (for height). One case was only treated four weeks, gained 3½ lbs., then in the fourth week had, through his own carelessness, pneumonia; he recovered, but with the loss of his 3½ lbs. Some patients are not amenable to any form of treatment.

*Time* varies with the severity of the symptoms; an average in a severe case would be three months. Thus, the first month applications might have been made daily; second month, every other day; third month, twice a week.

*Expense.*—In several of my male cases their ordinary occupation was resumed after a month or so. To the greater proportion no treatment could have been undertaken away from their homes, as they were not in a position to afford the necessary expense of, say, "open-air treatment," or even a "change of air."

To those practitioners possessing an efficient *x*-ray apparatus the treatment could be readily applied if the necessary additional apparatus be procured.

In conclusion I wish to thank those medical men who have helped me to test this method by sending me cases of phthisis selected for the severity of their symptoms.

REFERENCE.
[1] *Archives of Roentgen Ray*, August, 1900.

Dr. RIVIÈRE (Paris) had employed for five years high-frequency currents in the treatment of pulmonary and local tuberculosis and had communicated a paper on the subject to the Congress of Electro-therapeutics, held in Paris in the year 1900, and later to the Congress on Tuberculosis in London. He had on both occasions described good results. The form of the apparatus employed was described.

## THE TREATMENT OF CARDIO-ARTERIAL DISEASE.

By H. J. CAMPBELL, M.D., F.R.C.P.,
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THE two commonest forms of cardio-arterial disease are those in which there is diffuse arterio-sclerosis and a hypertrophied heart, and those in which the vessels are less involved than the heart. The kidneys are also, in this condition, more or less involved in the majority of cases, there being sometimes

marked sclerosis with contraction, and at others an enlargement of these organs, they being at the same time tough and with adherent capsules. The age of incidence of cardio-arterial disease varies very considerably according to the mode of life, the occupation, and the locality in which the person lives, as also according to whether gout or syphilis have been factors in its causation. The pathological conditions met with also differ widely in different cases; in some the main trouble lies in the heart, whilst in others the vessels are chiefly at fault. In all, however, the demand for treatment will probably first arise when a want of balance is declared between the force of the heart and the resistance to the flow of blood through the vessels. As a considerable portion of the ventricular systole is taken up with the raising of the intraventricular pressure, up to the point when the tension of the blood in the ventricle becomes higher than that in the aorta, it is evident that the greater the tension in the arterial system, the more prolonged will this period be. Further, as hypertrophy of the cardiac muscle occurs as the result of pressure upon it during action, the greater the prolongation of this period, and the more considerable the force required to raise the intraventricular pressure above that in the aorta, the more pronounced will the hypertrophy of the heart become. This is, of course, true, whatever be the cause of the increased blood pressure, whether it be due to over-exertion causing a temporary rise, or to a persistently high pressure due to disease of the vessel walls, or to kidney trouble. If over-exertion is persistently indulged in, as is so frequently the case in hilly districts, by the constant need for mounting inclines, no great harm will result as long as the elasticity of the vessel walls is unimpaired, except slight cardiac hypertrophy; but if, on the other hand, the arteries are beginning to lose their full resiliency, then this repeated raising of the blood pressure will cause sufficient strain upon the heart to induce a post-hypertrophic degeneration of the muscle, and consequently to upset the balance between heart power and vessel resistance. If at the same time there is sclerosis of the kidney, then the case will become still more complicated from the point of view of treatment.

The object of the treatment in all these cases is so to affect either the heart or the vessels, or both, that a normal balance of work to resistance may be restored. To produce this result, each case must be treated according to its own special needs, and no general rules can be laid down that would be applicable to all cases. It is fortunate that alteration in pressure in the systemic arteries produces hardly any effect upon the blood pressure in the pulmonary artery or in the vena cava, so that it is only the action of remedies upon the arterial system that need be considered in deciding what line to follow in any special case. It is also of importance that the total amount of blood in the body has very little influence, and that of a very evanescent nature, upon the arterial pressure. For the purpose of recording the blood pressure, I have found Hill and Barnard's sphygmometer of the greatest value and easy of application. The only cases in which it is difficult to determine the maximum reading are those in which the pressure is very high; in such, however, it is not a matter of much importance, as the mere fact of the great rise, together with the conditions found in the heart, the hypertrophy, the prolonged low note of the first sound at the apex, and the information gained by the feel of the pulse, give all the data that one needs for the purposes of treatment. It is in the early cases where a frequent and careful measurement of the blood pressure is so important, and in these the instrument is of the greatest service.

The first class of case that I would refer to is that in which the arterial condition is chiefly one of slight loss of resiliency, whilst the heart is hypertrophied and its muscle is beginning to fail; here the main indication is undoubtedly to save the work of the heart as much as possible. In these cases the heart beat is rendered irregular, or intermittent, on comparatively slight exertion, or as the result of over-distension of the stomach, the condition being often associated with a sense of oppression, distress, or with acute dyspnœa, and not infrequently with giddiness, and sometimes even with transient loss of power on one side. With regard to treatment the diet should be strictly laid down, very little fluid should be taken at meal times, the necessary liquid being taken when the stomach is empty. The regular administration of small doses of nitroglycerine is in these cases generally beneficial, and at the same time stairs and hills should be avoided, the patient's bedroom being preferably placed on the ground floor. At the commencement of the treatment a few days in bed is often of benefit; but, subsequently, moderate exercise upon the level should be ordered. Baths should, I think, be avoided, their place being taken by sponging with warm water, friction being only moderately indulged in. Massage, resisted movements, and such like treatment are, I consider, strongly contraindicated, as also the use of digitalis, strychnine, or other heart tonics. Attention to the bowels, as in all cases of cardio-arterial disease, is of the first importance.

In the second class, in which the disease has commenced in the vessels, the hypertrophy of the heart having only come on in response to the increased resistance which it has permanently to overcome, the treatment should I think be quite different: here the object is to increase the compensatory hypertrophy of the heart to a limited extent, and at the same time, as far as possible, permanently to lessen the resistance it has to overcome. In these cases the occasional exhibition of strophanthus, with at the same time the regular use of potassium iodide in small doses, often gives considerable relief. If the case is met with early, much help may be afforded by the use of resisted movements, carbonic acid baths and regular exercise slowly taken up gentle gradients. If gout is present then that must of course be also treated.

If sclerosis of the kidney be also present, the blood pressure will naturally be especially high, and in these cases, I have seen much good result from an exclusively milk diet, continued for a long period, together with the administration of small doses of sodium iodide. Under this treatment, I have seen the blood pressure come down from 170 to 110 mm. of mercury with marked general improvement in the bodily health, a great amelioration of the depression and sleeplessness, which are often so difficult to combat. Alcohol, it seems to me, is better either avoided entirely, or at most only allowed in very small quantities, in the form of well diluted whisky; for the lowering of the blood pressure induced by alcohol, even when it does occur, is of such short duration as to be of no value from the point of view of treatment, and its effect upon the vessels themselves is undoubtedly deleterious.

## THE DIAGNOSTIC VALUE OF TUBERCLE BACILLI IN RELATION TO PHTHISIS.

By D. J. A. Chowry-Muthu, M.D.,
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A correct understanding of the relation existing between phthisis and tubercle bacilli is highly important to us medical men in the diagnosis of pulmonary disease. Medical evidence has been accumulating for some years past which goes to show that pulmonary lesions of a non-tuberculous nature produce symptoms simulating those of pulmonary tuberculosis. In bringing before you some of the difficulties that arise from the diagnosis of these diseases and of pulmonary tuberculosis, I shall endeavour to be practical, and approach the subject from a clinical point of view, illustrating with cases that have come under my own observation.

A patient presents himself with a history of emaciation, cough, and muco-purulent expectoration; there is a rise of temperature and night sweats. On examination there is found dulness over a portion of the lung, prolonged expiration, bronchial breathing, crepitant and moist sounds. Are we justified in concluding from these symptoms and physical signs that the patient is suffering from pulmonary tuberculosis? Happily Koch's epoch-making discovery has furnished us in one way the means of finally deciding this point. The presence of tubercle bacilli in the sputum proves conclusively the existence of tuberculous disease; but the difficulty arises when the examination of the sputum of the patient with above symptoms presents no bacilli.

What then? What conclusion shall we arrive at? What is the value of the negative evidence? Is it possible to have symptoms and signs of "consumption" and still find no bacilli in the sputum?

I shall try to answer these questions in the following illustrative cases:

Case I. *Subacute Pneumonia with Late Resolution.*—A. D., aged 35, married, had pneumonia about three months before he came under my observation; complained of loss of flesh, cough and expectoration, fever, and night sweat. Temperature ranged from 97° to 100° F. A few weeks after admission into the sanatorium his temperature became normal. On examination, there was a dulness over the whole of the right lung, front and back; bronchial breathing, fine and medium-sized *râles*, expectoration abundant and muco-purulent. No bacilli in the sputum after repeated examination. After four months stay the patient recovered completely.

Case II. *Syphilitic Phthisis.*—E. F., aged 39, independent gentleman; father died of "consumption." Gave a history of syphilis; has had hæmorrhage, cough with expectoration, shortness of breath; temperature ranged from 97.4° to 99.4°, and going up to 100° once or twice. On examination, there was a dulness over the left upper lobe, bronchial breathing, moist crepitation, abundant muco-purulent expectoration. No bacilli after repeated examination. Was treated with potassium iodide; at the end of three months was convalescent.

Case III. *Chronic Bronchitis with Asthma and Emphysema.*—L. B., aged 34, came with a history of hæmoptysis, wasting, asthma, cough, and expectoration; temperature ranged to 99.2°; pulse 90 to 100. On examination there was loss of resonance over both lungs, more so on the right than on the left, but dulness was not definite except at the bases; moist *râles* all over and fine crackling *râles* over the bases, owing to œdema; expectoration muco-purulent, sometimes frothy; no bacilli in the sputum. Six months after the first examination the patient developed pulmonary tuberculosis.

Case IV. *Empyema rupturing into Bronchi.*—A young man, E. S., aged 20, complained of loss of flesh, cough and expectoration, and shortness of breath. Temperature ranged from 98° to 99.2°. On examination dulness over lower half of left lung at the back; fine crepitation over the same area, and extending over infraspinous region; sputum muco-purulent, and greenish and abundant; no tubercle bacilli. After five months was greatly improved with open air, combined with formalin treatment; little or no expectoration, temperature normal, physical signs practically *nil*.

Case V. *Pneumono-mycosis.*—This is a most interesting and comparatively rare case. I had the privilege of bringing it before the Isle of Wight District of the Southern Branch of the Association two weeks ago. A young woman, aged 28, unmarried, came to me last October complaining of shortness of breath, cough, and expectoration; she had been suffering from bad cough and bringing up phlegm for six months previously and losing flesh all that time; she had attacks of palpitation of the heart and dyspnœa; family history good; rather pale and thin; had paroxysmal cough; short of breath on exertion. On examination there was dulness over the right side, front, and back, but not very marked; expiration prolonged; moist *râles* over the affected area, besides had evidence of emphysema and bronchitis, heart's action too quick, pulse rapid, varying from 100 to 110; temperature ranged from 98.4° to 100°; expectoration large quantity and varied, sometimes it was a clear mucus, at other times frothy and muco-purulent; on a few occasions it was streaked with blood, owing to congestion of the throat; no tubercle bacilli were found on repeated examinations, but the field was covered with mycelial threads of varying thickness with lateral branches, evidently belonging to the order of thrush fungus. For the first two months under my care she showed signs of weakness, loss of appetite, and dyspnœa, bringing up large quantities of expectoration; at the beginning of the third month, however, she began to improve; cough not so frequent, temperature became normal, appetite better, began to put on flesh, expectoration diminished, able to walk better; above all the filaments decreased in number till at the end of the fourth month not a trace of them was left; at the beginning of February she got quite well and went home.

Now, as you observe all these five cases, totally different in their character, were sent as cases of consumption, and presented symptoms and physical signs like those of pulmonary tuberculosis. The lessons I would venture to draw from these cases are:

1. That lesions and symptoms usually associated with "consumption" do no necessarily mean tuberculous disease of the lung.

2. That in every case presenting ordinary symptoms of consumption it is highly important that the sputum should be carefully and periodically examined: this will prevent error and ensure more or less correct diagnosis.

3. The terms "phthisis," "consumption," "pseudo-tuberculosis," etc., are misleading and are loosely applied to denote pulmonary disease. It would save a good deal of confusion if some standard nomenclature were adopted. Dr. Kingston Fowler has well suggested to call all these destructive lesions of the lungs not due to tubercle bacilli "pulmonary phthisis" and reserve the term "pulmonary tuberculosis" when they are associated with the specific organism of Koch.

Failure to find bacilli in the sputum of a case of so-called consumption does not always mean absence of tuberculous disease.

Cases have come to my knowledge where the failure has been due to the faulty methods in (1) the preparation, (2) the staining, and (3) the examination of the sputum. The bacilli are not equally distributed in the sputum. A portion might be examined which does not contain any. I have a patient who, every few days, expectorates a pellet or two of muco-purulent phlegm which contains bacilli, and in the interval brings up frothy mucus which contains none. Sometimes bacilli can only be detected after treating the specimen with caustic potash and examining the sediment after the sputum is put through the centrifugal machine; so that it is only after great care and caution have been exercised in the selection and examination of the sputum that any reliance can be placed in the negative evidence.

Again, failure to find tubercle bacilli in the sputum raises other important questions. Are they to be found in the sputum of every tuberculous patient?

What if there is no expectoration? Does the presence of bacilli mean that the symptoms of early tuberculosis will follow, or does the micro-organism appear after these symptoms have fully developed themselves?

The following cases have a bearing on these questions:—

Case VI. *Acute Miliary Tuberculosis.*—C. B., aged 19 years, railway clerk, great emaciation, temperature ranging from 102° to 103.3°, rapid breathing, sweating, scanty expectoration, dulness over both lungs, fine crepitation all over, no bacilli in sputum.

This case proves the fallacy of von Ziemssen's dictum, "Without bacilli in sputum no tuberculosis."

The next case is very interesting, as I had the privilege of watching it right from the very onset of the disease.

Case VII. *Pulmonary Tuberculosis: Acute Softening.*—A. G., school teacher, aged 20. The school teaching, together with unhealthy environment, had brought her vitality very low, and consequently she had nothing in the bank, as it were, to draw from. She came to me suffering from loss of appetite, a feeling of fatigue, and dry cough. On examination there was impaired resonance over left apex, wavy breathing, prolonged expiration, a bright crackle or two at the end of inspiration over left supra-clavicular region, no expectoration. A month after admission the patient brought up for the first time a little expectoration which contained bacilli. This case ran an acute course. Evidence of acute softening presented itself. At the end of the second month there were abundance of tubercle bacilli with cocci (streptococcus pyogenes and micrococcus tetragenus) in the sputum. At the third month more cocci than tubercle bacilli were present. At the fourth month before her death the cocci covered the whole field and few or no bacilli could be found.

This case illustrates many points of interest:

1. When a patient has overdrawn his account and become bankrupt, even the open-air treatment can be of little avail.

2. After all that has been said to the contrary heredity is still an important factor in the prognosis of the case.

3. While a pure, uncomplicated infection by tubercle bacilli has a tendency to run a chronic course, producing mild symptoms and resolution; mixed infection by cocci, chiefly streptococci and tetracocci, produces acute softening of lung, hectic fever and sweating, the case often ending fatally if the patient's vitality is feeble.

4. In the very late stage the pathogenic cocci may partially or entirely replace the tubercle bacilli in the sputum.

5. The gravity of a case is not to be gauged by the number of bacilli but by their virulence and the intensity of the toxins.

6. This case also shows that the physical signs and symptoms often precede the presence of tubercle bacilli.

With your permission I will briefly sketch out the symptoms of the early or the invasion stage of pulmonary tuberculosis:

The invasion stage can be roughly divided into three periods—early, middle, and late period. In the early period the symptoms are not definite; there are vague signs of ill-health, general *malaise*, feeling of fatigue on exertion, loss of appetite, and perhaps loss of flesh; in women, in addition, symptoms of anæmia. In the middle period symptoms of the early period remain and are accentuated; besides, expiration is prolonged, cog-wheel respiration, a slight evening rise—99° or 99.2°, which is very variable. In the late period, in addition to the above symptoms, there is cough with little or no expectoration, a bright click or two at the end of inspiration, the evening rise is distinctly marked, and the pulse is inclined to be quick. The tubercle bacilli are generally present at the end of the late period of the invasion stage.

There are two more cases to which I wish to draw your attention:

Case VIII. *Cavity of One Lung.*—Philip W., aged 32; clerk; signs of large cavity of left lung; very little expectoration; temperature sub-normal, only twice during an interval of two and three months could any bacilli be found.

Case IX. *Chronic Fibroid Tuberculosis.*—May F. Aged 28; suffered for a long time with cough and expectoration; loss of weight, a little pyrexia; impaired resonance and diminished expansion over the right lung; fine crackling *râles*; creaky sounds; expiration prolonged, shortness of breath; no bacilli during the period of six months.

The last two cases prove that in a late stage of the cavity

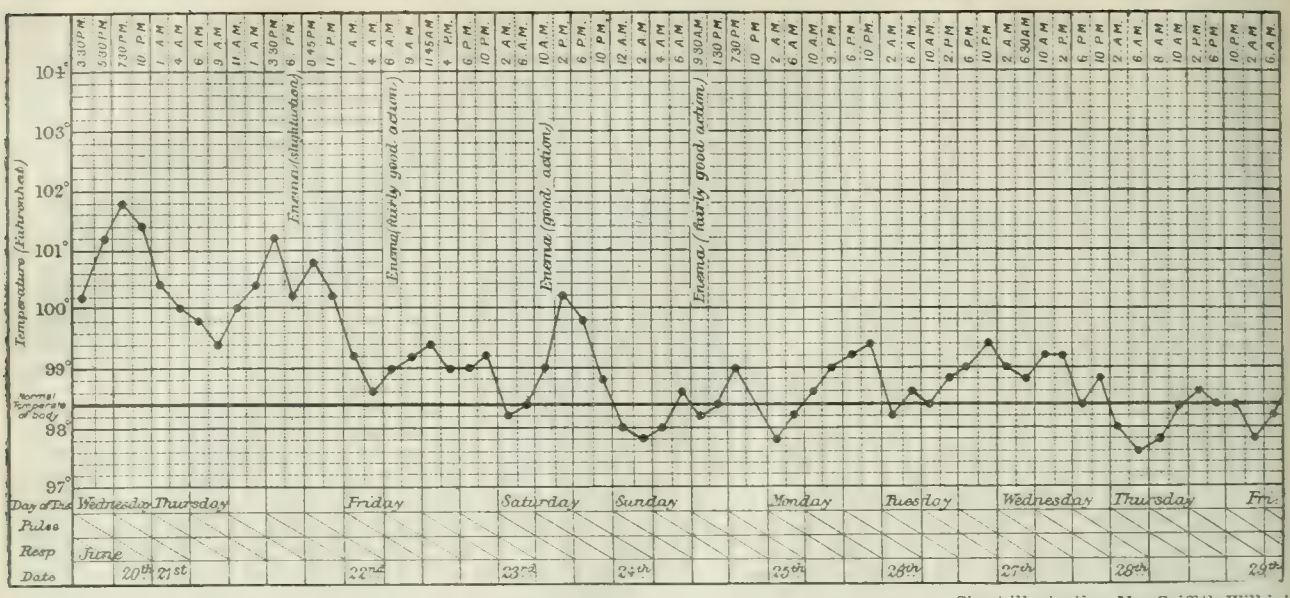



Chart illustrating Mr. Griffith Wilkin's

formation, or when the disease takes a chronic course, the presence of bacilli cannot be always depended upon.

To sum up:

1. The presence of tubercle bacilli in the sputum proves conclusively the existence of pulmonary tuberculosis.

2. There are other agents beside tubercle bacilli that cause destructive disease of the lungs, producing symptoms similar to those of tuberculosis.

3. The absence of bacilli in a case of pulmonary disease does not prove the absence of tuberculous disease.

4. It may be due to: (*a*) To simple phthisis; (*b*) to faulty methods in the examination of sputum; (*c*) to very early tuberculosis of the lung; (*d*) to very late tuberculosis where signs of fibrosis are evident.

5. A correct diagnosis becomes extremely difficult where bacilli cannot be found on several examinations, in which case the history, physical signs, and symptoms should be more relied upon than the negative evidence.

6. In all cases of pulmonary disease a systematic examination of the sputum is of utmost importance both for negative and positive evidence of bacilli.

Dr. ODELL (Torquay) had listened with the greatest interest to Dr. Muthu's paper because of the careful and cautious manner in which he had spoken of the absence of bacilli being by no means an absolute guarantee that the case was not really one of phthisis. When in Berlin, in 1891, Dr. Odell was told by Dr. Gerhardt's assistant, that sometimes as many as sixty examinations of the sputum were made before the presence of bacilli was detected. The question which was present in his mind was this, Whether in some cases patients who were taken into hospitals for incipient phthisis might not sometimes, but possibly very occasionally, acquire tuberculous disease from their environment, although there might be an entire absence of bacilli in the expectoration on admission?

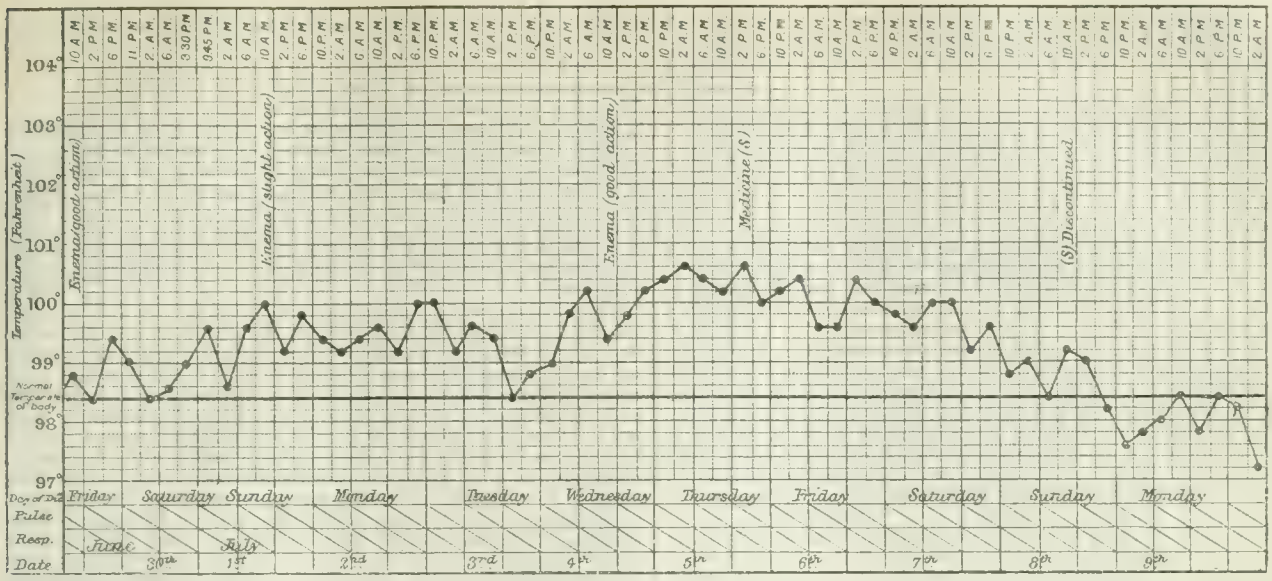
Dr. FORBES ROSS did not think that the number of tubercle bacilli in the sputum was an index in any way of the patient's condition. Mr. Chisholm Williams, in his treatment of phthisis by high-frequency current of extremely high voltage, found the same results as regarded the morphology of tubercle bacilli as Dr. Norris Wolfenden and himself found when growing tubercle under *x* rays. Marmorek and Woodhead found that streptococci were less virulent when vegetating and growing in chains. The *x*-ray tubercle sometimes tended to grow in chains; it was possible to suppose that the short, fat, glassy, non-spotted, tubercle rod of *x*-ray and high-frequency treatment were vegetable tubercle of low toxicity. At any rate, Chisholm Williams's patients improved. The open-air patients put on weight in spite of tubercle. When tubercle bacilli were found in clumps, it was as well to bear in mind that this might be due to the nodules breaking down, and by a process of natural amputation of the focus a cure was in all probability being attempted. Glassy tubercles in sputum in large quantities were indicative of mild toxicity, and perhaps prolonged retention of old sputum in the air passages; the tubercle were tubercle of the sputum, and not of lung tissue. Many patients put on flesh, and went on, according to Theodore Williams, to "arrest," yet at one time were possessed of sputum crowded with bacilli.

## A CASE OF RHEUMATIC ENDOCARDITIS.

By C. GRIFFITH WILKIN, L.R.C.P., F.R.C.S.Edin.,
West Coker, Yeovil.

THE following case I have deemed worthy of recording, both on account of its peculiar commencement and course, and also on account of the marked susceptibility of the patient to three drugs—morphine, nux vomica, and quinine.

The patient, a married lady, aged 65, first called me in, suffering from what appeared to be rheumatic pains affecting the muscles of the arm and shoulders on May 18th, 1899. She expressed a wish to be treated with sodium salicylate, and while she was taking this I kept her in bed. The treatment did not relieve the pains, which became worse, especially at night. On the evening of June 2nd, with the view of obtaining some sleep for her, I gave 2½ minims of a 1 in 12 solution of morphine hypodermically. At about 1 A.M. on June 3rd I was called up to her, the husband telling me she was breathing noisily, and could not be roused. When I saw her she was lying on her back in bed, with stertorous breathing, with very long intervals between each respiration, scarcely more than two complete respirations per minute; her pupils were contracted to a pin's point, and the conjunctiva was insensible. For about two hours I endeavoured to resuscitate life by artificial respiration, etc., but finding I was making no progress, and having no one present on whom I could rely, I sent off to Yeovil for the assistance of my friend, Dr. Marsh. On his arrival injections of atropine, strychnine, and ammonia were made. The induced current was applied to the phrenic nerve, but for many hours with no further result than causing gasping respiration to become a little more frequent whilst the current was passing. At about 8 A.M. the power of maintaining respiration appeared to return, but it was 9 o'clock before we ventured to leave her for a short time. For several days after this the patient went on without any return of rheumatism. On the third day the left lung became affected with pneumonia, which ran an ordinary course. The places where the injections of atropine, ammonia, and strychnine were made broke down; the ammonia caused a slough in a week; the others took about a fortnight to bring about the same result. The sloughs slowly came away leaving unhealthy wounds which very slowly healed. When the patient was thoroughly convalescent from the pneumonia, having sat up in her room for several days and taken change in another room on the same floor, she was allowed to go down. The patient, however, did more than was thought of, and was much worse afterwards. Dr. Marsh met me in consultation many times and Dr. Cave met us both twice. At this time she had a marked systolic *bruit* at the apex, and it was feared that an embolus had lodged in one of the small arteries of the brain. The symptoms then were as follows: The patient remained on her back taking absolutely no notice of anyone, with involuntary micturition, etc.: about this time she




Case of Rheumatic Endocarditis.

appeared to have left hemiplegia. No movement of the left arm or left leg could be obtained. A day or so later the left limbs were freely moved; the right not at all. Quinine was given internally but caused headache, so with a view of trying to rouse the dormant nervous system very small doses of nux vomica were given, to commence with five minims of the tincture three times a day. After taking this for a week or so the head became forcibly retracted. Ice to the head was applied, but while the nux was continued the retraction remained. As soon as it was stopped the spasm ceased. Later on nux was again resumed, with the result that after a little time the retraction again occurred to again disappear when the medicine was left off. Small doses of chloral and bromide were then given, and from that time the patient made steady progress and has now almost quite recovered the activity and energy which distinguished her before the illness. The cardiac symptoms have altered considerably. The murmur which was audible at the apex remained so for two months or so, then gradually disappeared, leaving a *bruit* audible at the base. This basic murmur has remained until lately, but on examining my patient a few days ago I failed to detect it.

In my mind the absence of this murmur by no means signifies recovery of the case, and I have been most careful to impress upon the friends that the care taken up to the present should not be the least abated: the urine was frequently examined, but no albumen was found; once sugar was present, as the chart of the case sent round shows. During the stage of lethargy nutrient suppositories had to be given as the patent could not take food by the mouth. Champagne was given every two hours and continued for a long time.

## MEAT ALBUMIN DIETARY IN THE TREATMENT OF TUBERCULOSIS.

By F. W. Forbes Ross, M.D., D.P.H.,
London.

Success in the treatment of tuberculous conditions, whatever may be the method for the time being which is most generally approved by competent authorities, must necessarily depend in great part on the problem of diet in this disease. Particularly is this so with cases of pulmonary tuberculosis in which defective alimentation is the most troublesome factor of the disease to be dealt with. Defective alimentation may be understood, for all practical purposes, to be governed, on the one hand, by the digestive and assimilative powers of the sufferer; on the other hand, to be dependent on the easy digestibility of the food substances exhibited—that is, calculating the amount and quality of nutriment derived from the particular food by comparison with the amount of digestive effort expended, and its ultimate nutritive value and power of producing stable nutrition when finally assimilated.

The problem presented by the digestive and assimilative powers of consumptive patients is perhaps one of the most complex and difficult which the physician is called upon to face in the daily routine of practical medicine. It is just those very articles of every-day dietary, of tried and proved food value which, owing to the peculiar circumstances of the consumptive, are most difficult and trying for his deranged digestive system to deal with, even in only a partially complete manner. The ingestion of ordinary food such as meat, vegetables, fats, etc., and the effort to extract from them their constituent proteids, carbohydrates, etc., in such a proportion as to derive benefit therefrom, is often beyond the strength of the consumptive's naturally defective powers, and more frequently causes a tax upon his or her energies, which the small amount of nutriment derived is unable to compensate. Almost any rational line of treatment adopted will prove satisfactory and equal to the demands made upon it, provided the digestion of the sufferer be good and remains so. When digestive powers begin to give out, which will almost inevitably happen in the vast majority of cases, then the fight, to make any progress which may be called favourable, begins in grim earnest. The above amply accounts for the successes, failures, and general inequalities of results obtained under any of the well-known methods of treating phthisis. Nothing more exhausting and distressing can be well conceived than a continuous effort to derive nutriment from food unsuitable in quality and quantity, under circumstances of deranged functions and irritative and morbid conditions of the digestive apparatus. Energy is uselessly expended in a stupendous endeavour to extract an amount of benefit miserably incommensurate with the effort, and with a result which would only count as a minimum under more favourable conditions. Comprised in the term "digestive power" is the ability of the nervous mechanism of the pulmonary-gastric chain to resist the mutually reciprocal stimuli which the various processes in the one set of organs excite in the other set and *vice versâ*. Marked additional gastric effort, especially accompanied by diminished digestive power as the result of functional or irritative morbid conditions, made more profoundly disturbing by these very conditions, tends to call into action the pulmonary reflexes, that is, cough, this last, if itself sufficiently aggravated, reacts on the gastric reflex and leads to the manifestation of vomiting, and thus we here have set up a vicious cycle, ending in inability to retain food. As the ultimate result, the general nutrition of the patient rapidly fails, his or her powers of resistance to the disease are gravely diminished, and the disease makes swift and devastating progress towards an unfavourable termination.

As proof of the above contention that the easy excitability is due to loss of power, and that the deranged and irritable reflexes require strengthening, the benefit to be derived from small doses of a nerve stimulant such as strychnine over and above a sedative such as opium is well known and appreciated.

The assimilative powers can be understood to embrace not only the ability to take up and absorb nutriment, but to fix it in the organism, and, having done so, to be able to retain and keep it in that condition of potential stability and fixation.

The stability of the assimilated matter taken up into the organism depends much on the inherent kind and quality of the food exhibited. A good instance of this is shown by the contrast in the behaviour of milk or casein albumin and meat albumin or myosin albumin[1] as articles of diet in consumptive cases. Milk or casein albumin, where the gastronomic peculiarities of casein albumin can be borne, is taken up with very moderate rapidity, and benefit is obvious only after comparatively large quantities have been consumed. On the other hand, the beneficial results of the assimilation of milk albumin are rapidly dissipated under unfavourable conditions.

Meat albumin, on the contrary, quickly and readily manifests its better qualities in the early observable improvement in the sufferer, and the benefit so obtained is not so easily undone as in the case of casein albumin. Whatever the benefits manifested in the young by a milk diet, the circumstances do not altogether hold good for the adult, and especially an adult needing the utmost possible assistance from food specially adapted for the needs of adult life, which is the case with the consumptive. Muscularity is the feature of the adult, therefore the proteid of muscle food is more nearly adapted to the exigencies of that condition of life than the peculiarly-adapted food of the infant in whom muscularity is not the predominant note of development.

The above can be easily proved by anyone taking the trouble to weigh tuberculous patients fed on either diet mainly. Whether this is due to the fact that the casein albumin of milk is an excreted or excretory albumin, and that the albumin of muscle is a fixed and more highly-elaborated and differentiated albumin: or that the marked deficiency of albuminoid iron in the casein albumin accounts for the superiority of the iron-carrying muscle albumin, has not yet been satisfactorily settled. Any benefits accruing from the ingestion of milk albumin can be easily assisted, and their stability enhanced and safeguarded, by the admixture and addition thereto of the albumins of meat with their many and various good qualities.

Further, the resistant and combative forces of the patient to the ravages of the disease seem to be more markedly increased and fortified under a diet of meat albumin, or mixed meat and milk albumin, than under milk alone. Personal practical experience of the results of feeding consumptive patients tends strongly to confirm the experience of others. Meat albumin or myosin albumin can be used either in the raw state as a raw meat juice made from fresh meat and used immediately after preparation. It can be made either by mincing the meat and expressing it; or by the cold extraction process with saline solution.[2] This last can either be used alone as it is, or it can be flavoured with port wine, spices, etc. Commercial raw meat juice preparations on the market possess no advantage over the home-made raw meat extract; and have the additional disadvantage of containing only a small percentage of actual albumin, are most expensive, and must necessarily be highly charged with chemical preservatives of more or less harmful nature. All the above methods of administering raw meat juice, home-made and commercial, run the risk of conveying tubercle bacilli from the meat from which they are made; and the meat juices of foreign origin may also contain the spores of anthrax bacilli if made from meat where the cattle are subject to that disease. On the other hand, meat albumin can be also utilised in a coagulated or cooked condition,[3] and apparently with just as great benefit, judging from practical results. From elaborate experiments made by myself, it can be easily and safely put up in tins, and sterilised ready for use at very small expenditure.

Héricourt and Richet's[4] researches and experiments with raw meat on tuberculous dogs induce them to attach some importance to the rawness of the meat—its action supposedly being due to a somato-antitoxin existing normally in muscle plasma or serum—actually the reason may really be that more albumoid nutriment was forthcoming for less digestive effort.

Perhaps the contention that muscle serum possesses antitoxic influences has some foundation in fact, as persons of well-marked muscular development are known to be less liable to consumption than others not so well developed muscularly. Consumptive patients of good muscular physique do better than those who are not so fortunate.

Finally, in cases of profound tuberculosis, such as the tuberculous infection of a large serous cavity, as the pleura or peritoneum, the patients, however well developed muscularly, seem to lose their muscular tissue at a rate out of all proportion to that occurring in other diseases. This may be that the muscular tissue is used up in a vain attempt at combating the tuberculous poison. Djvorack[5] and Webber[6] speak of and recommend a meat diet strongly in the treatment of phthisis.

At the present time in my wards in hospital is a well-marked case of tubercle of the right apex in a man who began to go down hill rapidly, and to lose weight and become anæmic, with cough and loss of all appetite, under ordinary diet with much milk. He was put upon the albumin made from two pounds of good steak daily, and now after three weeks is so much better that all active subjective and objective symptoms have ceased, and he expresses himself as feeling quite well. His condition is rapidly approaching the stage known as "arrest."[7] About five months ago I withdrew from the right pleural cavity of another man 3½ imperial pints of fluid containing tubercle bacilli (Ziel-Nielssen, Honsell). After paracentesis he was full-fed, and the right chest painted with iodine: but this case became one of dry tuberculous pleurisy, spoken of so unfavourably by Maguire.[8] He rapidly ran down, emaciated, and became weak and anæmic. He was now put on the albumin from one pound of meat daily, was sent into the country, and returned after three months with a gain in weight of two stones, ruddy, feeling well, and, with what was more important, his right pleura apparently well but thickened. This is undoubtedly another case of "arrest" *(loc. cit.)* under meat albumin.

Another case of malaria with a specific taint and beginning tubercle of lung, though doing extremely badly with a most generous diet and appropriate treatment, yet is now, under meat albumin, as he expresses it, "a different man."

Another striking case was one published in the *Lancet* by Dr. Fletcher Little and myself,[9] which did wonderfully with meat albumin and open-air treatment combined. This particular case had done badly in South Africa, whither he had been sent for cure, but returned much worse with tuberculous laryngitis; yet in two months had so far recovered as to become a case of "arrest."

The assimilative powers of a consumptive are in direct ratio to the relative efficiency of the vital functions of his organism, for example, adequate oxygenation of blood leads to increased power of tissue storage and metabolism, with withdrawal of pabulum from the blood stream: this, in its turn leads to renewed demand for nutrient matter to replace that withdrawn, which is met by increased digestive effort of healthier tone.

The success of the open-air or fresh-air treatment of consumption is the fact that digestion being improved and appetite sharpened, the patient is able to partake of just those articles of food which tend to provide him with nourishment best suited to his needs in return for the increased power of dealing with them.

The above factors produced the survival of the "high altitude" treatment, "change of air," and in a less degree, owing to lack of adequate food, the "long sea voyage" on a sailing vessel.

If it be our duty to the consumptive bread-earner[10] to provide him with sanatoria for the open-air treatment of phthisis, it also behoves us to endeavour to furnish him with easily assimilated foods within the reach of his pocket. No matter what method of treatment be found most successful medicinally, the factor of diet will ever remain paramount and essential to that method.

Myosin albumin returns a maximum of nutrient for a minimum of effort, peptonises rapidly, and is promptly absorbed, throwing little or no stress and irritating over-action on the stomach. When combined with fresh milk or stimulant extractives it helps to ensure a highly nutritious food, and leaves additional power and spare energy for such valuable

adjuvants to the dietary as extract of malt, cod-liver oil, bone marrow, hypophosphites, etc.

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## THE TREATMENT OF CHRONIC BRONCHITIS IN THE ELDERLY AND AGED.

By Harry Campbell, M.D., F.R.C.P.,

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*Toxis a Factor in Inflammation.*—Modern pathology tends to show that some chemical irritant is an all but necessary factor in the causation of inflammation. The poison may be ingested, as in the neuritis of alcohol; it may be produced by microbes, as in pneumonia; it may result from tissue metabolism, as in gouty inflammation; or finally from defective digestion, especially in the intestines. I am convinced that this latter is a potent cause of inflammation. I have never known a child with "consumption of the bowels" (enteritis from defective feeding), as manifested by flatulent belly, malodorous, slimy, and perhaps bloody stools, wholly free from bronchial catarrh; and the cough which attends the cutting of a tooth is, I imagine, due to toxæmia resulting from the dyspepsia which this event is so apt to induce. In the bronchitis of the elderly and aged the possibility of intestinal sepsis should always be borne in mind: above all, we should have an eye on the liver.

The toxic factor in gout and Bright's disease is well recognised, and in every case of bronchitis occurring past middle life, the possibility of these diseases being present should be remembered. The tendency of the bronchial mucous membrane to inflame in the gouty may largely be due to an attempt on its part to remove the gouty poisons, which we may conceive as seeking to escape by this channel. In this wise we may explain the curious instances of metastasis observed in the gouty: the elimination of poisons by one route being checked, they seek exit by another, as when gouty arthritis is suddenly replaced by bronchitis.

Among the toxic agents which help to induce inflammation, we must not forget to include alcohol. I either prohibit it altogether or give it very sparingly: only to tide over a dangerous phase of the disease would I allow it in any quantity. Meat also is very apt to augment blood toxicity: the factor of idiosyncrasy here comes into play; some can tolerate meat much better than others, but it is certain that most bronchitics should eat meat very moderately.

Finally, among the irritating agents which induce bronchitis we have to include the inspired air. This should be as pure as possible. The dwelling rooms should be well ventilated, and every advantage taken of a suitable climate; above all nasal breathing, which ensures that the air breathed shall be warmed, moistened, and filtered, should be resorted to. Nasal obstruction is a potent source of bronchitis. Unfortunately the dyspnœa which the chronic bronchitic suffers from frequently induces him to resort to mouth breathing.

It is clear then we should keep in view the toxic factor in the treatment of bronchitis, and by acting on the skin and kidneys, by attention to diet, the breathing of pure air, etc., reduce it to a minimum.

*Diminished Resistance a Factor in Inflammation.*—The resistance of a tissue to inflammatory agents is always lowered by an attack of inflammation, and the longer the attack, the more does the resisting power diminish; the tissues acquire an inflammatory habit; hence the importance of cutting short a bronchial attack.

Anything which lowers vitality lowers the resistance of the body to toxic action, and low vitality also implies a high blood toxicity. Hence if we desire to check a local inflammation, we must seek to strengthen the body generally.

One potent cause of low resistance to inflammation is sluggishness of the circulation. Those with feeble circulation are much more apt to suffer from bronchitis than others, and it should be remembered that bronchitis tends in its turn to cause feebleness of the circulation by interfering with the flow through the pulmonary circuit.

*The Need for Curtailing the Diet in Bronchitis.*—I now ask attention to certain elementary facts of physiology which have been strangely overlooked by the physician. It is generally acknowledged that we can regulate the work done by the kidneys by regulating the amount of nitrogenous food taken; that by increasing the nitrogenous input we increase the nitrogenous output by the kidneys, and *vice versâ*. Hence in nephritis we are careful to limit the former. We are apt to forget, however, that exactly the same line of argument applies to the lungs and their diseases: just as the excretion of N is performed by the kidneys, so is the elimination of C performed by the lungs; the more C we give a patient the greater the amount of $CO_2$ that has to be eliminated by the lungs; but the greater the quantity of $CO_2$ formed the greater is the demand for O; wherefore by increasing the input of C we increase not only the output of $CO_2$ by the lungs, but the absorption by them of O: in short, we augment the respiratory interchanges; now dyspnœa is due to excess of $CO_2$ in the blood and dearth of O; and whenever, therefore, it is present (and it always tends to be in bronchitis), we should reduce the input of C as far as we dare, and this means that we should give the minimum quantity of food consistent with physiological demands.

There are other reasons why we should adopt this plan in the bronchitis of the aged and elderly.

1. By diminishing the food, and thereby the respiratory interchange, we reduce the necessity for a vigorous pulmonary circulation, and thus relieve the work of the right heart: we likewise quiet down the activity of the splanchnic circulation. In these two ways we minimise the work of the heart.

2. The typical elderly bronchitic is stout: he is stout because he is bronchitic, and he is bronchitic because he is stout. When, for instance, an elderly person becomes bronchitic, he does all he can to save his breathing and his heart; he takes little exercise, because exercise causes breathlessness, and this sedentary life promotes stoutness, which is still further favoured by defective oxygenation consequent upon the bronchial trouble and upon the sluggish circulation from which all bronchitics tend to suffer. Hence it is that bronchitis tends to induce obesity, especially when it occurs during the period of elderliness, which is *par excellence* the period of obesity. On the other hand, stoutness, on its part, favours bronchitis: it hampers breathing and interferes with the circulation both by its mechanical action on the heart and by its interference with the respiratory movements, which constitute an important aid to the circulation, and in other ways. As a result we get a sluggish circulation in the bronchial mucous membrane, which, as we have seen, predisposes it to inflammation.

The moral of all this is obvious. In treating the stout bronchitic we must set resolutely to work to reduce the weight. Having first decided what is the normal weight of the patient we must not rest content until we have brought him down to it. This all seems very simple and obvious; but I am constantly seeing cases in which the plan here advocated is not adopted. When the patient is extraordinarily obese no one is likely to overlook the necessity of reducing the fat: but when the weight is not more than one or two stone above the normal the necessity is not so obvious: yet I am sure we cannot too strongly insist upon it, more especially when the heart is weak, as it is so apt to be in the elderly bronchitic.

3. A further advantage of keeping the diet low in chronic bronchitis is that by so doing we tend to keep down the toxicity of the blood; the greater the quantity of food taken the greater is the poisonous waste material: and the greater also the tendency to indigestion and intestinal sepsis.

*Respiratory Exercises.*—Finally, I would direct notice to certain facts in the physiology and pathology of breathing, which afford us valuable hints in treatment.

Bronchitis, especially when it occurs past middle life, tends

to cause dyspnœa. Now chronic dyspnœa sooner or later causes a fixed, expanded chest. Observe the chest of a chronic bronchitic past middle life, and you will always find that it is more or less fixed in the inspiratory position. This compels the patient to rely largely upon his diaphragm in breathing, but in spite of the greater amplitude of diaphragmatic breathing the total respiratory range is, greatly curtailed; and this not only aggravates dyspnœa, but renders expectoration difficult. The patient is incapable of making the vigorous and copious experatory blasts needful for efficient expectoration. This, indeed, constitutes one of the most serious features of chronic bronchitis past middle life, and one that becomes increasingly urgent with advancing years. I desire to lay stress on this point, as I do not find it mentioned in the books.

How it comes about that the chest gets expanded and fixed in chronic bronchitis is a subject of great interest, and one that has been much misunderstood. I will merely observe that in chronic dyspnœa the inspiratory muscles always act more vigorously than the expiratory. Inspiration is ample, expiration incomplete. This leads to fixation of the chest in the inspiratory position by the overacting inspiratory muscles becoming permanently shortened, just as happens in the case of talipes. Now this expansion of the chest is compensatory, amongst other things it facilitates the circulation; but the fixation which follows in its wake is an unmixed evil, inasmuch as it limits the respiratory range and weakens the power of expectoration. For these reasons we should do all we can to combat the tendency to fixity; to which end we warn the patient strenuously to guard against dyspnœa, which incites the inspiratory muscles more than the expiratory, and teach him from an early period of his disease to expirate adequately.[1]

Briefly to sum up the chief points of my paper:

In treating chronic bronchitis in those past middle life the toxicity of the blood should be kept as low as possible.

The air breathed should be pure and nasal breathing insisted on.

The diet should be a bare sufficiency, and alcohol and malt indulged in sparingly, or not at all.

Every ounce of superfluous fat should be got rid of.

The general health should be maintained at the highest possible level.

A vigorous circulation should be maintained.

Every precaution should be taken against breathlessness.

Breathing exercises should be resorted to in order (among other things) to preserve the mobility of the thorax.

NOTE.

[1] I have treated this subject at length in my work on *Respiratory Exercises in the Treatment of Disease.*

# SECTION OF ANATOMY AND PHYSIOLOGY.

A. MACALISTER, M.A., M.D., LL.D., F.R.S., F.S.A., President.

## INTRODUCTORY REMARKS BY THE PRESIDENT ON THE ANATOMY ACT AND THE TEACHING OF ANATOMY.

ONE of the consequences of the specialism characteristic of the modern development of the sciences ancillary to medicine is that many of the more interesting new advances in these branches of knowledge are not of much interest to the practitioner. This is particularly the case as regards anatomy. The growth of that science of late years has been greatest on its morphological side, and it must be confessed that as yet the practical applications of these modern extensions are not obvious on the surface. I do not say that they are quite devoid of practical interest, for it is our experience that the scientific curiosities of one period are germs of the necessities of the next.

Neither do I mean to say that practical anatomy has ceased to be the groundwork of the studies of the medical student. The surgery of the present-day, which boldly adventures into regions of the body whereinto that of our predecessors dared not enter, requires those who practise it to possess an intimate knowledge of parts of the body which a century ago were only regarded as of speculative importance. The knowledge of the minute details of the relational anatomy of the abdominal organs and of cranio-cerebral topography are necessary parts of the education of the modern surgeon; and it is equally essential that the modern physician should be familiar with all that is known of the complex systems of nerve paths and neurone groups. The work of the dissecting room and of the histological laboratory bulk as largely as ever in the curriculum of the twentieth century medical student; and as, with the increased burdens which a wider range of education has made essential, he cannot spend quite as much time as heretofore in anatomical study, it behoves us to see that these departments of our medical schools are as perfectly equipped as possible.

Now it happens, from the nature of the case, that the study of practical anatomy labours under difficulties which do not beset any of the other fundamental sciences. The professors in the other departments can in open market procure the materials for the supply of their laboratories in a way which the anatomist cannot. It is true he can buy bones, models, and casts, but they are only a very small part of his equipment; it is impossible to teach anatomy without an adequate supply of bodies for the dissecting room, and every year the problem of that supply is becoming more acute.

This growing difficulty depends on several conditions, some of which are inseparable from the material and intellectual progress of the age. Better wages and improved education have raised the worker in the community to a higher and more independent and satisfactory position. The proportion of those who are driven by stress of want into the State-provided asylums for the destitute is diminishing. Improved postal and telegraphic communication enable the relatives of any who, from their faults or misfortunes, have become submerged to receive notification of their whereabouts, and in the event of their death increasing facilities of transport enable them to claim the bodies far more easily than was possible half a century ago.

It is not, however, the lack of available material that is as yet the chief difficulty. We are a long way off the condition of social and ethical perfection in which there is no submerged fraction of the population, and while humanity continues as it is, the poor we shall ever have with us; and among them there is little prospect of the disappearance of the class who by their own vices or follies have sundered themselves from their connections, and who find ultimate refuge in the State-aided asylums.

Why, then, should there be the difficulty? How has it come to pass that with no great diminution of the number of unclaimed bodies many of the London medical schools were starved of their needful supply last year? How also does it happen that in the records of the advance of anatomical science this country is distinctly falling behind its Continental neighbours? A foolish piece of insular prejudice has attached a sense of depreciation to the term "made in Germany;" but, as in other sciences, so in anatomy, it is to the article made in Germany we must have recourse if we want to find the most trustworthy and accurate anatomical investigation and the results of the most patient work. It is to German laboratories our men must go if they wish to be trained for research and to find the facilities for original work. It is not that our students are inferior in ability or less zealous in the pursuit of knowledge, but it is largely a question of lack of material, as in our schools nearly all the available material is earmarked for elementary teaching.

The reason why the condition of things is so different in Germany is this: That there the law of the land makes provision for anatomical teaching. The unclaimed bodies of those persons who die in any public institution are *ipso facto* sent off to the university of the district. A similar law exists in Russia, Austria, and France. In this country there is no provision whatever made by law for anatomy. It is left to the Professor of Anatomy to endeavour to obtain what material is wanted. In my recently published *Memoir* of Professor Macartney I have dealt at some length with the subject of anatomical legislation in Great Britain, so I need only indicate one or two of the points in the law which affect the teaching of this subject.

There is one Act of Parliament, c. 75 of the 2 and 3 William IV, passed in 1832 which refers to the practice

of anatomy. This Anatomy Act is simply of a permissive nature, one which neither provides nor even suggests any method whereby bodies can be procured. It only permits any medical man being licensed by the Home Secretary to practise anatomy provided he practises it in a licensed place. It requires that the Home Office must be notified of the receipt of a body within twenty-four hours of its arrival, and that a medical certificate of the cause of death must be sent with the notification. It further requires that the body must be buried with whatever religious rites are usual in the particular denomination to which the deceased belonged, and in a public cemetery: and that the formal burial certificate must be lodged in the Home Office at or before a specified date. If these conditions are complied with a medical man is not liable to prosecution for practical anatomy. Strangely enough, the Act provides no penalties for breaches of it, nor is there any machinery for prosecuting those who infringe it. The Act empowers the Home Secretary to appoint inspectors, but says nothing whatever as to their duties or authority; and, although they are supposed to be endowed with mysterious powers, it is not from the statute that they derive such, if they really possess them.

So far the legislation only restricts the practice of anatomy. Before the Act was passed there was nothing to prevent any man from dissecting a body anywhere, so long as the act was not capable of being construed into a scandal *contra bonos mores*. Its only positive provision is that it declares the right of anyone having legal custody of a body to hand it over to the licensed anatomist not sooner than forty-eight hours after death. It does not define what legal possession means, and, considering that it has been decided by more than one judicial authority that a corpse is not property, and cannot be dealt with or bequeathed by deed or will, it is difficult to see how one can possess what is not property. The permission granted in the Act is no new thing: from the beginning of systematic medical training in England in the thirteenth century the right to dispose of a body by those in whose possession it was has been unquestioned. The Act therefore gives no power which did not exist before.

The result of the Act simply is that the anatomist is made to share with the publican and the pawnbroker this distinction—that he cannot practise his craft except on licensed premises, he himself also being licensed. He is not in any way helped forward towards his supply. He is left to himself to seek out those that have cadavera in custody, and is not aided in his efforts to persuade them to hand them over to him.

In practice it comes to this—that the anatomist seeks the Poor-law guardians and endeavours to obtain his supply from them. Now, Poor-law guardians are periodically elected. The constituency returning them is wide, and the franchise qualification minimal. The office is much desired by a considerable section of the community, and hence the elections are often contested. The Englishman is a sentimental person, and those seeking his vote can gain the interest of the elector in no more sure way than by working on his feelings and sympathies. Experience has shown that there are few ways in which an independent guardian can imperil his seat more certainly than by voting for the sending of unclaimed bodies to the anatomy school. The anatomist in consequence looks forward with anxiety to each periodic election of guardians in any union in which he has succeeded in persuading the majority of the guardians to grant him a supply. Indeed, it seldom happens that a re-election passes without some attempt being made in the interest of sentiment to stop the sending of subjects for dissection.

In a large city, where there is a certain degree of local interest in the local college, and where there are only the local Boards to deal with, this trouble may not be acute; but the professor who tries to carry on an anatomical laboratory in a small town, and who has to seek a supply from districts outside that in which he is domiciled, has not his sorrows to seek. He has to be always ready to answer in person the queries of individual guardians, sometimes to attend at very short notice Board meetings at distant towns. He has to put up with obloquy, libel, vituperation, and even threats of personal violence; he is railed against at mass meetings in the market place, and burned in effigy. I am not overdrawing the picture but merely relating some of my own personal experiences.

I do not enter into these details of reminiscence by way of complaint. Our experience in Cambridge shows that when one is willing to bear whatever comes, and keeps on in all the various phases of the imperative mood exhorting and entreating, it is possible, at least it has hitherto been possible, for a time to overcome the opposition, but only at a sacrifice of valuable time and energy which one wishes could be devoted to the work of the laboratory. There is always hanging over one the uncertainty of the complaisance of the thirty or more Boards of Guardians on whose goodwill we depend; and I wish to impress on you the extremely unsatisfactory state of things that, were all the Boards of Guardians to combine as they might do, and refuse to send unclaimed bodies, all our medical schools would have to close their doors.

I fear that there is no hope of any improved legislation on the subject. The trend of modern measures has been in the direction of local government and decentralisation. The ideal Anatomy Act would be one declaring that all unclaimed bodies are the property of the Crown, and at the disposal of the Home Secretary, who could employ the machinery of the inspector's office for their distribution. But this would doubtless be regarded as a retrograde movement, and would be unpopular with our legislators on both sides of the House.

As, then, we must look forward to making the most of our present inefficient law, the next best course which is open to us is to educate public opinion. It is for this reason that I have brought this matter under your notice. There is no body of men, the clergy not excepted, who have so much influence in moulding and educating public opinion as have the members of our profession. The existence of what has been called the voice of the medical profession has been called in question in a recent issue of our Journal, and it may be true that there is no single utterance to which the name can be applied. Nevertheless the profession can make the lay public feel the force of their convictions, as has been shown in the present tuberculosis crusade, as well as in other matters of preventive medicine; and if, when local agitators raise the cry of a false sentimentality against the anatomist we could depend on the active co-operation of the local members of the profession, it would be an immense aid to us; and we should not be, as we are at present, starved in our material for teaching, hampered in our opportunities of practising surgical operations, limited in our means of prosecuting anatomical research, and discouraged by comparing the liberal protection and aid given to the anatomist in other countries with the grudging and suspicious permission to pursue his science which is all that is accorded to him by the British Government.

## A DISCUSSION ON THE TOPOGRAPHICAL ANATOMY OF THE THORACIC AND ABDOMINAL VISCERA FROM A SYSTEMATIC AND CLINICAL STANDPOINT.

I.—Christopher Addison, M.D., B.S.Lond., F.R.C.S.,

Lecturer on Anatomy, Charing Cross Hospital Medical School; late Professor of Anatomy, University College, Sheffield.

### Surface Marking.

Professor Addison said: In the thorax the ribs, the costal cartilages and the sternum are of much use for the purposes of surface marking In the abdomen, however, we are obliged to adopt certain surface lines for the division of it into convenient regions. These surface lines should as far as possible occupy a constant position in regard to underlying parts and become themselves thereby reliable as landmarks. The system adopted should be simple, and it should be applicable to a body of any size or condition.

There are many objections—which I need not discuss in detail—to the methods of mapping out the abdomen at present in general use; they are chiefly dependent on the fact that the points between which the upper transverse abdominal line is usually drawn are very variable in their level, so that sometimes the two transverse abdominal lines lie near together, and sometimes they are far apart; losing thereby—especially the upper one of them—much of their

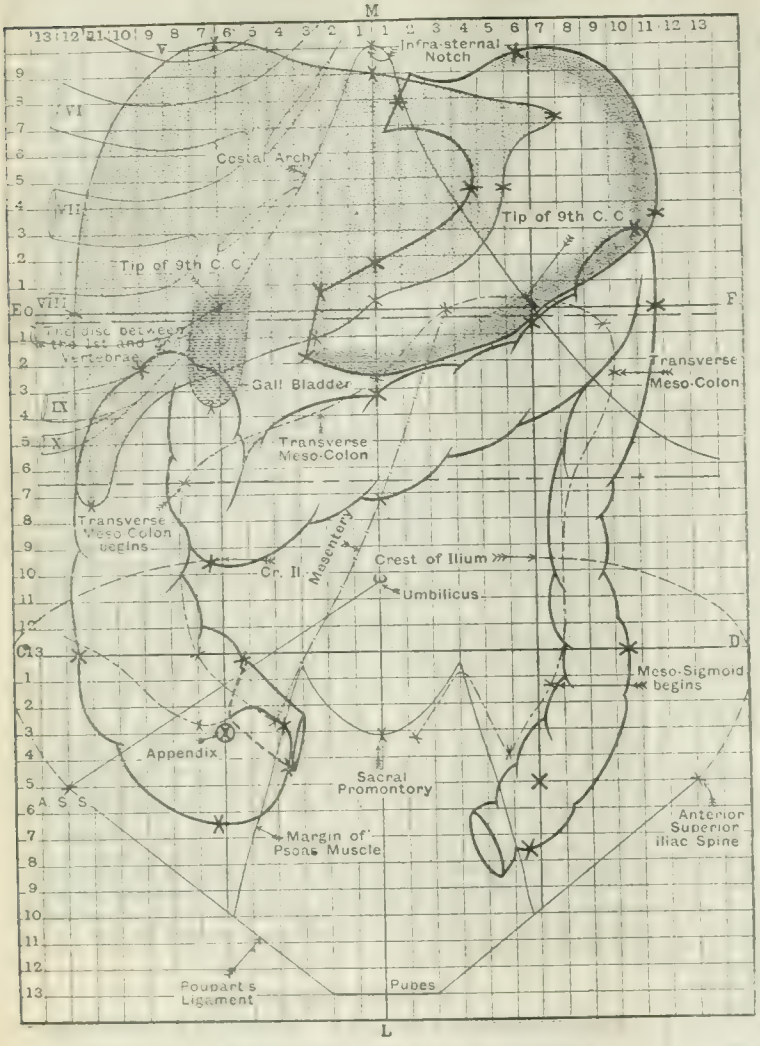



Fig. 1.—Outline of the average position of the abdominal viscera on a centimetre scale, reduced to 0.56 natural size. E F (the upper transverse abdominal line) is drawn across halfway, and C D (the lower transverse abdominal line) a quarter-way from the upper border of the symphysis pubis to the suprasternal notch. The median and lateral lines are also shown. The interrupted lines mark the position of the attachment of the peritoneum to the body wall. The lower border of the stomach and the upper border of the transverse colon in the left lateral line should each have been represented 0.3 cm. lower down.

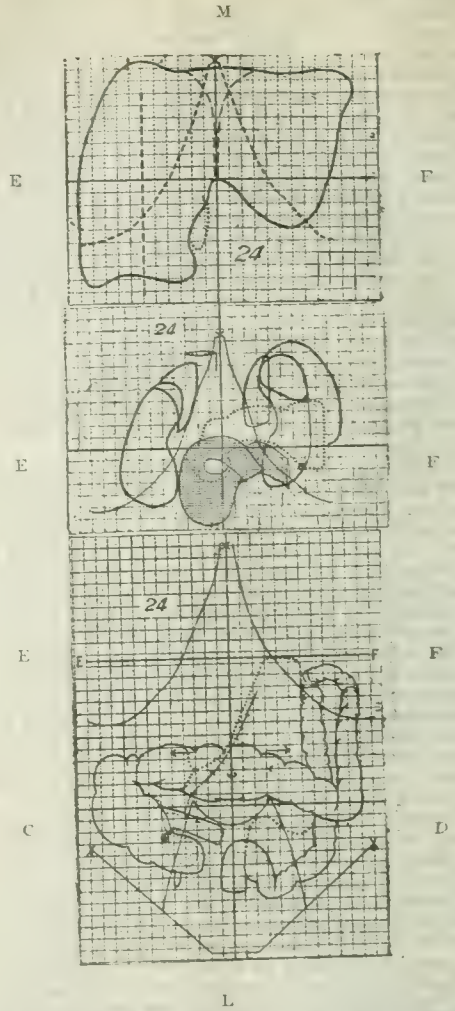



Fig 4.—In this figure the outlines of the viscera from Case 24 on the reduced scale are shown on the same plan as that adopted throughout, and are placed above one another for comparison. In the upper part the liver is shown to extend low down in the abdomen and far across to the left. The middle part shows the pylorus, with the first and second parts of the duodenum displaced downwards and to the left away from the right kidney, which maintains its normal level. In the lower part the large intestine is shown, and it will be seen, on comparing the position in regard to the surface-line E, F, of the lower pole of the right kidney and the upper border of the transverse colon in the middle and lower parts of the figure respectively, that the right kidney in this case derived no support from the large intestine.

value as landmarks.—This is the case unless it is found that the viscera alter their level along with, say, the particular rib cartilages between which the upper transverse line is drawn; and this is not found to be the case.—Moreover, the points between which the upper transverse abdominal line should be drawn often cannot be definitely located.

In some cases we are able to ascertain the general size and position of an organ by superficial examination. But it is of great practical importance that we should know as far as possible from the condition of the parts which we can feel what will be the condition of the neighbouring parts which we cannot feel: in other words, what changes, if any, do alterations in the shape and position of one organ bring about in those in its neighbourhood.

### Proposed Method.

The only way in which we can arrive at a rational and systematic method of surface marking, and also obtain accurate information as to the causes which produce the variations in the relations of the viscera, is by studying and comparing a considerable series of cases in which all the parts are accurately shown both in relation to one another and to the surface of the body on a plan which should, if possible, be uniformly proportioned to the size of the body.

The full details of the research on which the method of surface marking which I propose is founded, and of the other matters which I am to present to you for discussion, have been published elsewhere, and I need not trouble you with them.[1]

The trunk is divided transversely by three lines which are drawn across through points a quarter, a half, and three-quarters of the way from the upper border of the symphysis pubis to the suprasternal notch, and, vertically, by three lines, the middle line and two lateral lines, one on each side, halfway between the anterior superior iliac spine and the

[1] *Journal of Anatomy and Physiology*, vols. xxxiii, xxxiv, and xxxv.

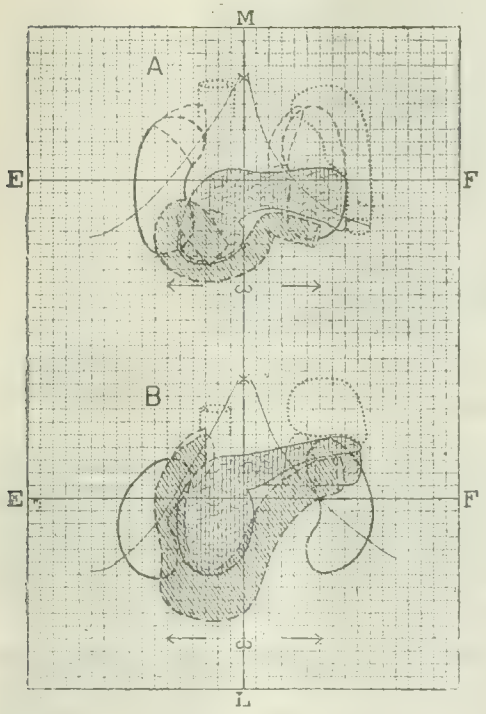



Fig. 3.—Outline A shows the position of the parts behind the stomach from Case 36 as an example of the displacements when the liver and stomach are low down. Outline B shows the same parts when the stomach and liver are high up (from Case 37. The scale represents centimetres. M, L, the middle line. E, F, the upper transverse abdominal line. ω, Umbilicus. ——>, Highest part of the iliac crest.

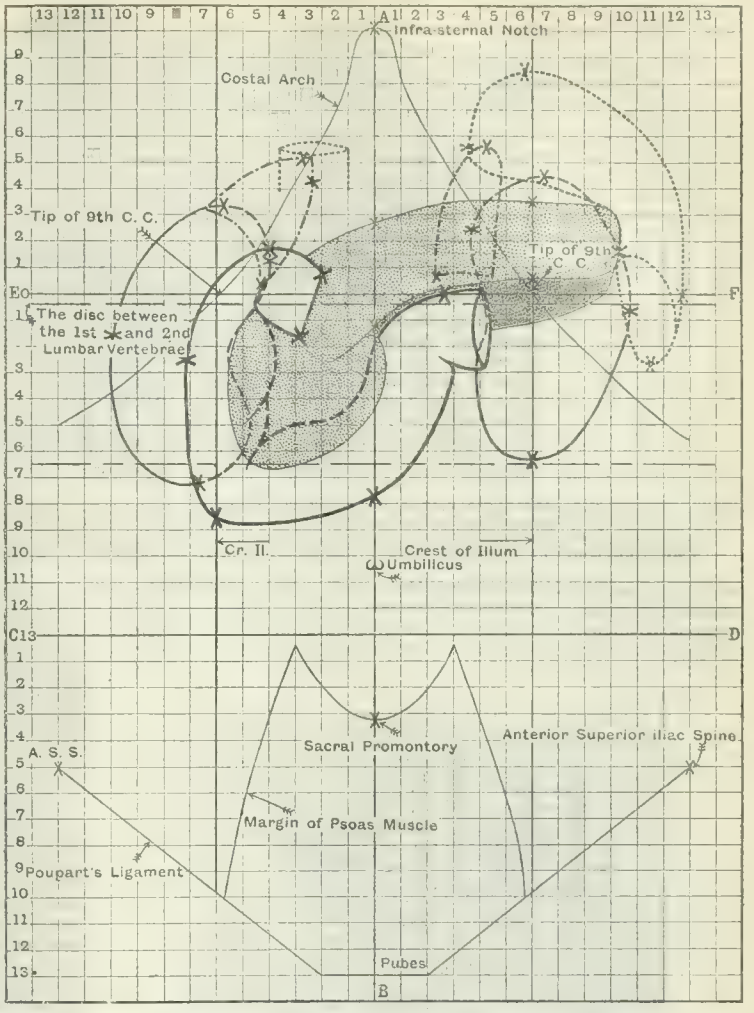



Fig. 2.—Outlines of the deeper abdominal viscera constructed on the same plan as Fig. 1.

middle line. The upper transverse line is thoracic and passes across the sternum opposite the interval between the fourth and fifth costal cartilages. The lower two lines are abdominal, the upper one being also partly thoracic, and the resulting division of the abdomen with the viscera in their average position is shown in the figures 1 and 2.

*The Upper Transverse Abdominal Line.*—The line drawn across the abdomen half-way from the upper border of the pubes and the suprasternal notch was found to vary very little in regard to the bony skeleton. It practically corresponded with the disc between the first and second lumbar vertebræ. In 67.5 per cent. of the cases it was within ¾-inch of the disc, and only in one case was it as much as 1 inch from the disc. It corresponded also in the average with the tip of the ninth costal cartilage, but it did not vary so much in regard to the vertebral column as the tip of the cartilage did. It is to be remembered also that the tip of the cartilage often cannot be definitely located, whilst the surface line can be found in a moment.

*A plane* across the abdomen at this level practically bisects the stomach as it overlies the middle line, and in 72.5 per cent. of the cases it either passed through the pylorus or corresponded with one of its borders. In the right lateral line it marks the place where the gall bladder overlies the duodenum, and, when the liver is not enlarged or displaced downwards, it passes just above the highest point of the hepatic flexure of the colon. Nearly half-way between the middle line and the left lateral line it marks the highest point of the duodeno-jejunal flexure and the upper border of the root of the mesentery. In 85 per cent. of the cases the upper border of the duodeno-jejunal flexure was not situated more than ¾-inch from this level one way or other. It follows from what has been said that this plane almost invariably crosses some part of the head of the pancreas (usually about its upper third), and, moreover, in the left lateral line, in 70 per cent. of the cases, the anterior (lower) border of the pancreas, together with the attached transverse mesocolon, was not more than ¾-inch from it. In the left lateral line also it marks with sufficient accuracy the greater curvature of the stomach and the upper border of the transverse mesocolon, and, further to the left beneath the ribs, the basal surface of the spleen.

*The Lower Transverse Abdominal Line*, namely, that drawn across a quarter of the way from the pubes to the suprasternal notch, is usually situated 2 inches above the anterior superior iliac spine, and about 1½ inch below the highest part of the iliac crest. In 87.5 per cent. of the cases it did not vary ½-inch from its average position in regard to the anterior superior iliac spine. It crosses the upper part of the fifth lumbar vertebra, and practically represents the line that Professor Cunningham uses which is drawn across between the two tubercles on the outer aspects of the iliac crests. A little on each side of the middle line this plane marks the place where the psoas muscles diverge from the lumbo-sacral promontory and, on the left side, passes a little above the attachment of the peritoneum as it is directed downwards into the

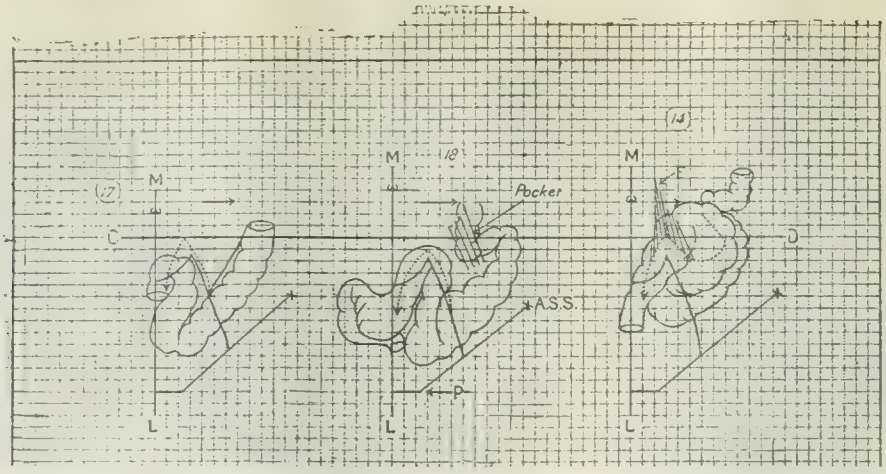



Fig. 6.—Shows the three types of the meso-sigmoid described in the text. In the outline from Case 17, the outer limb of the meso-sigmoid is shown by a line and the rest of its attachment in this figure as in the outlines from Cases 18 and 14 is shown by a dotted line. In Case 18 the commonest abnormality (absence of the outer limb) of the meso-sigmoid is shown, and in Case 14 the suspensory fold is shown. The scale represents centimetres. C, D, the lower transverse abdominal line. M, L, the middle line.

pelvis to become the meso-rectum. In the right lateral line it marks the upper border of the ileo-colic junction, and, as the root of the appendix is usually near the lower border of the ileo-colic junction it may be marked by a spot in

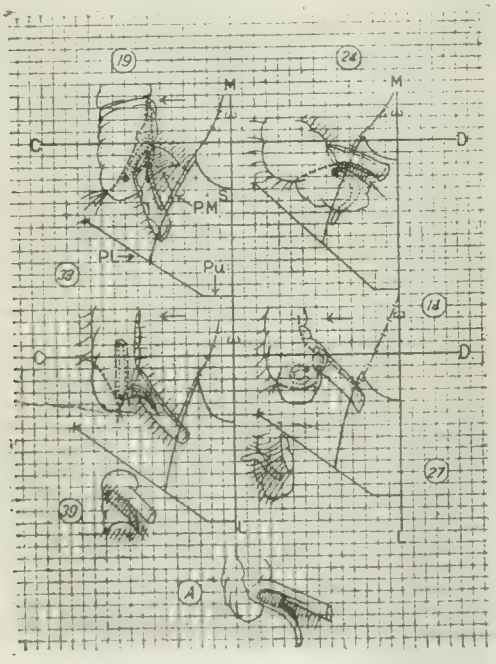



Fig. 5.—Shows the lower end of the ileum, the commencement of the large intestine, the vermiform appendix, and the lines of the peritoneal attachments on the centimetre scale from various cases. M, L, the middle line. C, D, the lower transverse abdominal line. S, sacral promontory. P M, psoas muscle. P L, Poupart's ligament. Pu, pubes. ω, umbilicus. >, highest part of the iliac crest. —l—l—, line of attachment of the mesentery. — — —, attachment of peritoneum behind the large intestine. (The cases are referred to in the text.)

the right lateral line the width of the ileum below this level. This surface point, as Fig. 1 shows, is an inch below McBurney's point; and I have generally found this to be the case. From this level the inner border of the ascending colon passes upwards immediately external to the right lateral line, and the inner border of the descending colon is similarly situated outside the left lateral line. In the left lateral line also a little below this level is the commencement of the meso-sigmoid, which is then directed downwards and inwards to the pelvic brim. The place where the sigmoid flexure of the colon first becomes possessed of a long freely-movable mesentery may be marked in the left lateral line at the level of the anterior superior iliac spine, and it should evidently be a portion of the sigmoid above this level that is opened in colotomy.

*Examples.*—Many of the special points already mentioned are those around which the viscera can be grouped, and it is better that we should have such points clearly in our minds than that we should burden our memories with detailed measurements of individual organs. Two further examples of the proportionate method of surface markings must suffice. The upper transverse abdominal line crosses the right kidney at the junction of its upper with its middle thirds and the left kidney at the junction of its upper two-fifths with its lower three-fifths, and the lateral lines traverse the kidneys vertically about a third of the way from their inner to their outer borders. The duodenum is fairly marked out by a parallelogram (see Fig. 2) having for its sides the middle line internally, the right lateral line externally, the upper transverse abdominal line above, and a line passing, transversely, midway between the two transverse abdominal lines below. The upper, outer, and lower sides of the parallelogram represent, respectively the first, second, and third parts of the duodenum, whilst the fourth part inclines across the inner side of the parallelogram to the left. It is, of course, to be remembered that the duodenum only commences about an inch to the right of the middle line. In the right lateral line the duodenum reaches nearly down to the highest part of the iliac crest.

*Variations in the Position of the Viscera.*—By comparing the cases we find some indications of the forces which help to maintain the viscera in their average position or bring about departures therefrom.

It is important to notice the frequency (22.5 per cent. of the cases) with which the transverse colon passes upwards in front of the stomach, between it and the anterior abdominal wall. The stomach in these cases is almost always small and markedly cylindrical towards its pyloric end.

If we compare the thoracic and abdominal conditions in the very high or very low positions of the cardiac and pyloric orifices, we find that in the case of a low cardiac orifice the chest conditions are very prominent. For instance, the five lowest cases presented[2]: a right pyo-pneumothorax with the liver and stomach pushed down, (2 and 3) large intrathoracic

[2] There were 40 cases examined and recorded in the research.

tumours, (4) very advanced tuberculous consolidation of both lungs, and (5) a specially narrow costal arch, but in which there was no thoracic disease present.[3] Upward displacement of the cardiac orifice on the other hand is specially associated with intestinal distension, especially with a large and often tortuous transverse colon reaching high up. High positions of the pylorus, and of the stomach generally, are usually associated with the liver placed well up beneath the ribs, and often small, together with intestinal distension, especially of the transverse colon. Intestinal distension was, however, sometimes present without a raising up of the stomach.

The cases in which the pylorus was markedly lower than usual or displaced to the left on to the middle line or to the left thereof, were so regular and definite throughout the series that we can fairly say that when we find a liver extending lower than usual in the abdominal cavity and more to the left we may expect the pylorus to have undergone a corresponding displacement downwards and to the left.

A surgical application of this may perhaps be found in the position of the incision in operation for the relief of pyloric obstruction. If the operator prefers pyloroplasty to gastro-enterostomy for any reason, the pylorus will be more accessible through an incision to the right of the middle line when the liver is high up. Whilst one in the middle line which will be convenient enough when the liver is lower and more to the left than usual: and the lower the liver reaches down the lower the incision should be. The liver should in all operations on the stomach be percussed out beforehand.

A stomach apparently may be full, in fact distended, without coming materially lower in the abdominal cavity. Most of the cases in which the stomach (usually of a cylindrical shape, and apparently chronically distended), as a whole, came very low down in the abdomen were associated with a low position, or enlargement downwards, of the liver but not all of them, and in these other cases it is interesting to notice that the pylorus was not materially lower than usual. Apparently distension or displacement of the stomach downwards, apart from a low position of the liver, is not sufficient to produce material downward displacement of the pylorus. This indeed is somewhat to be anticipated when we consider the very firm attachment which the pylorus and the first part of the duodenum have to the under surface of the liver.

The pylorus is commonly found more to the right than usual when the stomach, at its usual level, is well filled or distended, with the liver remaining at its usual level or being higher than ordinary.

The influence of the stomach upon the shape and position of the parts behind it is sufficiently illustrated in Fig. 3, p. 1067. The changes may be summarised as follows:—When the stomach is lowly situated it tends to press down the anterior border of the pancreas, to increase the vertical depth of its gastric surface and to diminish the depth, antero-posteriorly, of its inferior surface; that is, to flatten out the pancreas. This process is accompanied by a pushing down of the pancreas over the face of the left kidney; thus giving the kidney an increased gastric surface. In its descent the pancreas occasionally drags down the left suprarenal body to some extent. Finally, the descent of the stomach is not accompanied by a descent of the left kidney. The reverse of these processes takes place when the stomach is raised up by distended intestines; the depth on a vertical plane of the gastric surface of the pancreas is diminished, whilst that of its inferior surface is increased antero-posteriorly; its anterior border becomes more prominent and the gland, being pushed upwards, tends to obliterate the gastric surface of the left kidney.

The duodenum is subject to considerable variations in level in regard to the vertebral column, and it is evident, on comparing the cases, that lowering or increase in size downwards of the liver is the chief determining agent in depressing the first part of the duodenum, as it is that of the pylorus. The duodenum also varies very much in its relation to the right kidney, being sometimes pushed downwards and to the left, quite off the kidney, by the liver, and it varies as much in its vertebral level as the kidney does.

If we look at the changes in the position of the right kidney and compare them with the corresponding positions of the neighbouring organs the liver and colon, we find, if we take the nine cases in which the upper border of the liver in the right lateral line was lowest down, that the distance in a vertical plane between it and the upper pole of the right kidney averaged 4.9 c.cm., whilst in the nine cases in which the liver was highest up it averaged 8.2 c.cm. The general average was 7 c.cm. Plainly, the liver in its descent moves down in some measure on the anterior surface of the right kidney, diminishing the vertical distance between its upper border and the upper pole of the kidney. What we have just noticed in regard to the displacement of the duodenum from the right kidney confirms this. If, again, we take those cases in which the colon was high up on the kidney, or prolapsed, as it was, in some cases, altogether away from the kidney (24, 36, 2, 7, 15), we find that, whilst there is a general correspondence to some extent in the visceral levels, the kidney is not evidently lower than usual when the support (?) of the ascending colon is removed: indeed, it is apparently very much independent of pressure from the liver above or from the colon below. It is found, however, that the connective tissue passing from the upper pole of the kidney on to the diaphragm is of very direct importance. For instance, in the extreme case—No. 24, Fig. 4, p. 1066—it consisted of a very strong band with a specially thickened cord which passed on to the right crus of the diaphragm. (The cord was carefully dissected, but did not present any appearance of muscle fibre to the naked eye.) The movement of the kidney which can be felt in certain surgical operations with respiration is in accordance with these observations.

Gentlemen, there is still a host of things I should like to speak of, but the time allowed does not permit of it. Let me mention a few general conclusions without examining them.

The duodeno-jejunal flexure is apparently the most stable part of the duodenum, and a distended stomach apart from an enlarged, or downwardly displaced, liver is not sufficient to cause its material downward displacement. The same conditions, of course, favour a prolapsed or low position of the upper end of the root of the mesentery; a condition which, as Mr. Lockwood rightly remarks, is often found along with prolapse of the splenic flexure of the colon. The splenic flexure of the colon may, however, be held up in spite of other adverse circumstances by a strong costo-colic ligament.

The upper jejunal coils of the small intestine have mainly a horizontal direction from right to left, and the lower ileum coils have mainly a vertical direction. Most students are able, with a little practice, to tell which is the upper end of an intestinal loop according to the direction of its mesentery. They are taught to grasp it between the fingers and thumb of the left hand, to pass them down on its mesentery to the vertebral column, the fingers being placed on the upper or right aspect of the loop according to its direction. Reaching the vertebral column they determine either the absence of, or by tracing it with the fingers the presence of, a twist upon the mesentery, and the upper end or direction of the portion of the root of the mesentery with its attached bowel is found, either the part near the thumb or the little finger, as the case may be.

The lower end of the ileum, with a direction generally upwards and outwards, was firmly fixed in the right iliac fossa in 20 per cent. of the cases and in an additional 30 per cent. it had a very limited range of mobility.

When there is an ascending mesocolon or when the peritoneal attachments of the ascending colon are loose, the appendix is often found recurved upwards outside the mesocolon (see Fig. 5, p. 1068).

The frequency with which a sharply-defined retro-colic pouch occurred (20 per cent.) is of importance, and in half of the cases the appendix was recurved upwards into the pouch. A glance at Fig. 5, p 1068 (Case 33) shows quite well how in such a case further absorption of the peritoneum by the colon or a small degree of inflammation causing adhesion of the opposed surface would produce an appendix wholly behind the peritoneum as in Case 14. In 20 per cent. of the cases the

[3] *Apropos* of the displacement of the liver and stomach associated with right pneumothorax in the case first mentioned (No. 7.) reference should be made to the case recently recorded by Stiller in the *Wien. med. Woch.* (May 4th, 1901) in which apparently an acute dislocation of the liver occurred from the sudden production of a right pneumothorax through violent sneezing. (British Medical Journal Epitome, July 20th, 1901.)

appendix was either recurved into a retrocolic pouch, or was firmly fixed behind the peritoneum. It is difficult not to think that an appendix in one of these positions on account of the limitation of its movements would not be more liable to the formation of concretions within its interior and increased risk of inflammation than one whose movements were less restrained.

The varieties of the mesosigmoid are shown on Fig. 6. Both limbs were present in 67.5 per cent. of the cases: the outer limb was absent in 27.5 per cent. of the cases (that is, the upper part of the sigmoid flexure of the colon was firmly fixed over the left psoas muscle without a mesentery), and in 5 per cent. there was a complete descending mesocolon.

The transvere colon in 55 per cent. of the cases presented a well-marked loop downwards from its commencement at the hepatic flexure, such as is shown in Fig. 1, and in many cases the downgoing limb of this hepatic loop was firmly fixed and difficult to undo, being commonly adherent to the adjacent ascending colon. Perhaps the relatively more stable condition of the bowel contents in this loop may favour the formation of these adhesions, and with this also the accumulation of fæces.

May I suggest for discussion also the following subjects, which I have not had time to speak of?

The conditions favouring prolapse of the cæcum and the attached appendix into the pelvic cavity;

The conditions favouring prolapse of the transverse colon and of its attached mesentery;

The conditions favouring laxity of its enveloping connective tissue, and, hence, mobility of the right kidney.

### II.—THOMAS SMITH ELLIS, M.R.C.S.,
Gloucester.

MR. ELLIS commented on the natural tendency to displacement which the assumption of the erect attitude entailed on most organs, and believed that in nearly all instances this was provided against by muscular action. Prolapse of the bowel into a hernial sac might be corrected by practising the muscular effort used as a preliminary to jumping. The mesentery was thereby gathered up, and the speaker had known instances of cure being effected in this simple way. Topographical anatomy should be taught by anatomists on the living body much more largely than at present.

### III.—ALEXANDER MACALISTER, M.D., F.R.S.,
Professor of Anatomy in the University of Cambridge; President of the Section.

PROFESSOR MACALISTER complimented Dr. Addison on the outcome of his laborious research. It had brought them face to face with correlations in the displacements of neighbouring organs, and emphasised the fact that alteration in the position of one implied that of others. Varieties in the shape of the duodenum such as were well known to anatomists were rarely due to the organ itself: in most cases the liver was at fault. In his investigations, Professor Addison had had the advantage of using formalin as a hardening reagent, a circumstance which added greatly to the accuracy of his results. Nevertheless, the position in which a body lay after death considerably affected the shape and position of organs. The President defended teachers of anatomy against the charge of not using the living body for the purpose of teaching topographical relations.

Professor ADDISON replied.

## THE PHYSIOLOGY OF THE LOWER LIMB AND THE MILITARY MARCH.

By T. S. ELLIS, M.R.C.S.,
Consulting Surgeon, Gloucester Infirmary.

MR. ELLIS said: The compensations for inevitable disadvantages which excited the admiration of Sir Thomas Watson are abundantly exemplified in the lower limb. The disposition to deformity, inevitable with elastic yielding to pressure, has its compensation in the exercise of function—in movement. The agency which moves, in moving, supports the structure and corrects the form.

The inward direction of the line of pressure at the knee, has its compensation in movement. Before me is a model made some years ago to demonstrate that the gluteus medius muscle is the great preventor and ought to be utilised as a corrector of knock-knee.

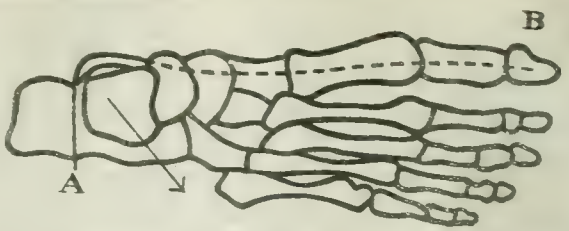



Fig. 1.—Showing influence of flexor longus hallucis (A B) in throwing ankle outwards.

There is an elastic band, representing the internal lateral ligament, strong enough to resist the inward pressure of the femur, but when weights are added a condition of knock-knee ensues. This is immediately corrected by bringing into use an elastic cord in imitation of the gluteus medius muscle.

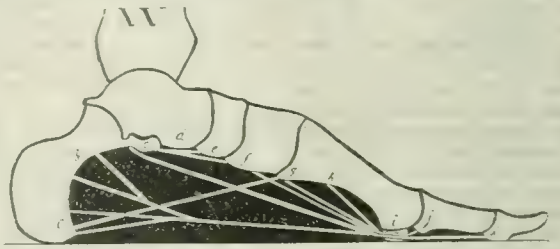


Fig. 2.—Scheme of plantar arch supporting the weight of the body: *w*, with muscles and tendons serving as tie-rods. *a*, *b*, *j*, abductor pollicis and flexor brevis digitorum. *a*, *g*, peroneus longus. *e*, *k*, long flexors. *c*, *e*, *f*, tibialis posticus. *f*, *g*, *i*, flexor brevis and abductor pollicis. *h*, *j*, interossei.

In standing, under normal conditions, the vertical tibiæ are parallel and they remain parallel even to extreme flexion, so that the knee-joints must be horizontal. In knock-knee, it is said that on flexion of the leg, the deformity is effaced. Is not this apparent only? Is it anything more than a folding of the leg into the same plane as the femur, both having been inclined away from the horizontal joints at the knee, at about the same angle? Do the heels really come together as they do in the normal condition? For this inclined joints at the knee would be necessary. Sir George Humphry makes the remarkable statement that in knock-knee the leg, in flexion, "assumes its proper direction, namely, in the same plane with the thigh."[1] But this is not its proper direction.

The inclination inwards at the ankle is corrected in the act of rising to tip-toe, an ordinary exercise of function, by the flexor longus pollicis. Attached to the outside of the leg and passing round the ankle to the inner side of the foot, it is clear that by drawing towards a straight line between its two attachments it must throw the ankle outwards, as shewn in Fig. 1. This well-known movement is said to be due to the form of the joints; but is it not equally true that the form of the joints is largely determined by the direction of the lines of pressure caused by action of muscles?

For more than a quarter of a century I have been insisting on the importance of the muscle mentioned in supporting and in restoring the plantar arch. But this structure requires for the maintenance of its form something more than a bowstring or tie-rod influence. It requires not only tie-rods to prevent its collapse as a whole, but it requires provision against undue uprising at one part, caused by downward pressure at another, at a time when the tightness of the tie-rod prevents expansion at either end. The form could not be maintained by ligaments alone: there is a complex scheme of muscles as indicated in Fig. 2. Here is a wooden model, shown to the Royal Medical and Chirurgical Society in February, 1897,[2] in which only representative muscles are imitated. The flexor longus hallucis as a tie-rod is shown as a strong elastic cord: the tibialis posticus at one end and the flexor brevis adductor hallucis at the other by cords which can be thrown out of action at will. It is seen that if the cords representing the

two last be set free, the arch, so far from falling, becomes exaggerated, and the great toe, no longer flat on the ground, becomes claw-like. Now "hollow-foot" and "claw-foot" (Fig. 3) are convertible terms; they both mean the same thing, and, as I maintain, the two features have a common cause—failure of function in muscles which are attached at one end to the under side of the plantar arch, and at the other to the under side of the first phalanx of the great toe. They fail to fulfil their functions, and, in consequence, the point of attachment at both ends is thrown upwards by unrestrained action of the flexor longus hallucis.



Fig. 3.—Typical example of hollow-foot or claw-foot (from a photograph): uprising at the tarsal and at the digital attachment of the abductor and of the flexor brevis hallucis. Retraction of great toe by unrestrained influence of extensors.

However improbable it may seem to be that muscles so small as the flexor brevis and adductor hallucis could hold down and so prevent undue uprising of the plantar arch, there is the fact that the attachment at each extremity rises at the same time. Hollow-foot and claw-foot, as I have said, go together. Moreover, the uprising of the arch is most marked in the middle line. The peroneous longus holds down the inner margin, and, unrestrained by the muscles attached on the under surface of the tarsus, compresses the cuneiform bones together, driving the middle one upwards.



Fig. 4.—"Outline of flat-foot," showing impression of three smaller toes only. Compare Fig. 6.



Fig. 5.—Great toe packed over the second.



Fig. 6.—Great toe packed under the second.

Fig. 4 indicates the opposite condition; it is taken from a recent book on *Deformities* (Mr. Tubby's) where it is given as an "outline of flat-foot," I have seen a number of others essentially the same; but the real significance is never pointed out. This particular foot became flat because of the condition which is revealed by the impressions of three smaller toes only. I ask you to compare Fig. 6, and you will allow that a law on which I have long been insisting has been unconsciously illustrated. Whenever the great toe has been habitually packed in the median-pointed boot beneath the

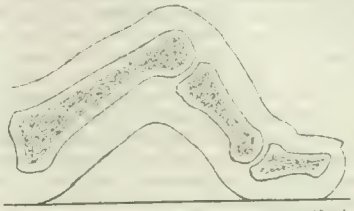


Fig. 7.—Position of a smaller toe in action; same as that of hammer-toe.

second toe there is more interference with the functional activity of the foot and consequent disaster that when, as in Fig. 5, it is packed over the second toe. In the former it cannot move in its natural plane of movement, from rest, when it is inclined upwards and outwards, to activity, in moving downwards and inwards. If it move at all it must be

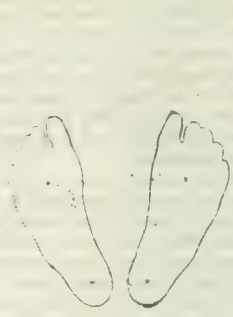


Fig. 8.—Military position for standing.

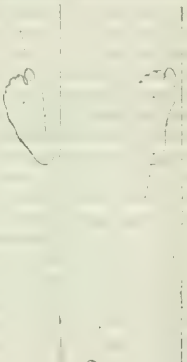




Fig. 9.—Four-square position for prolonged standing.



Fig. 10. Military march.



Fig. 11. Physiological walk.

in a plane for which the metatarso-phalangeal joint is not intended. Hence "hallux flexus," "rigidus" or "dolorosus," functional inactivity and, as you see in the diagram (Fig. 4), flat-foot. In the other case (Fig. 5) the great toe is, after all, only held in its position of rest (which to observe of every part of the body is important for study of its function). Here the second toe, albeit in appearance much deformed, is really held in its position of functional activity as a pressing, not as a grasping organ (Fig. 7), and it may be that no great harm ensues. In contrast to the smaller toes, the great toe, used as a toe, is, or ought to be,

always straight. Artists represent it, when in vigorous action, as flexed; this for no reason whatever, so far as I can discover, than that it is so in the Discobolus of Myron. What would be the effect of a powerful long flexor acting in full force on the mid-phalangeal joint, in a state of flexion? For myself, I would rather not try. The smaller toes, too, when at rest should be perfectly straight. If habitually used, the action of the extensor muscles, acting as tractors on the toes (as fixed points) so balances that of the flexors (acting as pressors), that the position of rest is straight. The functional value of the smaller toes is very much underestimated. He who uses them will not have callosities on the sole, nor will he supply an example of Morton's toe.

But in order that the toes and the foot as a whole be in full functional activity the military march and position for standing must be discarded. We are told that it enlarges the basis of support and gives the security of the tripod. But any enlargement needed laterally can be given by separating the feet. Longitudinally, it can only be given by pressure of the toes on the ground. This, certainly, cannot be done efficiently, when the feet are turned outwards. And, indeed, a triangular or three-cornered position (Fig. 8) not only looks but, on the same area of ground, is less secure than the position for standing which I have shown in the human foot (where the whole subject is discussed at length) as the four-square position. Here central points in the two heels and in the tread of the two feet are about equidistant, forming the angles of a square (Fig. 9). There can be no doubt, I think, that the foot should in walking fall from its position of rest, in which the foot is slightly turned inwards and that, having been in the interval between the two steps in a state of complete relaxation, it should fall into the line over which the body has to move, There should be no foot-placing: foot-fall ought to be something more than a figure of speech.

The act of walking may be regarded as the carrying of a heavy body over two pillars, these being hinged in their bases. Properly, it includes fixation of the toes by the flexor muscles, acting as pressors: traction from the toes, so fixed, on the legs by the extensors acting as tractors; then, by renewed action of the flexor group of muscles, propulsion onwards.

The principal hinge extends from the head of the first across the head of the second to the head of the third metatarsal bone. But if we look at Fig. 10 all is arranged as if the body were intended to move away to the left and then away to the right. Surely, the foot should be directed towards the spot where the next foot is to fall (Fig. 11). With this the principal hinge is in accord, and so is the line of thrust from the great toe up to the very end of the step.

In conclusion let me ask this—What should we think of an engineer who, having to move a heavy body over a hinged base, arranged the hinges obliquely, not transversely, to the line of movement?

*Note.*—Mr. Tubby, in a footnote to his paper (BRITISH MEDICAL JOURNAL, September 7th), takes a different view to mine: he states that the flexor longus pollicis muscle "contributes but slightly to the support of the arch of the foot." On the other hand, Mr. Barwell (*Lancet*, 1897, vol. i, p. 308) wrote: "The real sustentaculum tali is the flexor longus pollicis muscle." Here is one more instance of the many flagrant contradictions in opinions relating to foot physiology.

REFERENCES.
[1] *Jour. Anat. and Phys.*, July, 1890. *Med.-Chir. Trans.*, vol. lxxx.

THE PRESIDENT referred to Mr. Ellis's well-known work on the movement of joints, and pointed out that articular mathematics was a very complicated subject. Models were not always to be implicitly relied upon as representing what actually occurred. As a matter of fact, the knee-joint was what was known as a helicoidal spiral and bent with a bias. He was also somewhat sceptical about the degree of action which Dr. Ellis attributed to the small muscles of the foot in the correction of over-arching at the instep.

## ROTATION OF THE FOREARM.

By RICHARD J. ANDERSON, M.D.,
Professor of Natural History, Queen's College, Galway.

[ABSTRACT.]

PROFESSOR HEIBERG, of Christiania, called attention some years ago to the fact that almost all anatomical manuals described the radius as simply moving round the ulna in rotation of the hand. He made experiments and constructed models to show that the ulna had a very important share in the rotatory movement, and communicated his observations to the International Congress at Copenhagen. Several anatomists have studied this question since Heiberg, and it will be observed that their attention has been mainly directed to the movements at the lower end of the forearm bones. The elbow articulation is introduced into the discussion to explain the ulna movements in pronation and supination. A paper by Professor Lesshaft has been lately printed which, besides referring to several important communications, deals more largely with the general shapes of the articulations, and questions of movement incidentally arise. I had myself constructed a frame to determine the amount of the rotation at different parts of the anterior limb in several animals, but it will be seen how very complex the movement becomes at the elbow joint. The head of the radius (1) rotates, (2) moves forwards or back, and (3) inwards or outwards. The ulna moves (1) forwards and backwards, (2) in or out, and (3) has a movement of translation as well, and all this in the acts of supination and pronation alone. The actual movements associated usually with supination and pronation are even more complex. A mirror attached to the forearm by means of an elastic band can be used to reflect a beam of light coming from a lantern upon a screen, in order to show the movements.

MR. T. E. ELLIS agreed with Professor Anderson that the movement of joints was hopelessly complex. THE PRESIDENT said that in studying the movements of the elbow the chief difficulty lay in the exact measurement of small degrees of motion. Lesshaft's views he regarded as somewhat theoretical, while he could not understand how the old idea with regard to the ulna became so prevalent, namely, that no movement of this bone occurred during rotation of the forearm.

## SOCIA THYMI CERVICALIS.

By N. BISHOP HARMAN, F.R.C.S.
London.

[ABSTRACT.]

IN a full-timed fœtus a left lateral prolongation of the thymus was found to extend into the neck to the angle of the jaw. It was fleshy, and showed the histology usual to the thymus. It had a special blood supply. The occurrence is identical with the normal symmetrical prolongation in birds and lambs, and probably shows the retention of an original connection of the gland mass with its site of origin. The vagus encircled part of the socia, which may represent the relation of the lateral branches of the vagus to the thymic dorsal extension of the gill pouch.

*Thymus Accessorius.*—A case similar to that of Henle was found. Embryologists place the origin of the human thymus from gill pouch III. De Meuron shows that in the passage from lower to higher animals the extent of the origin is diminished, for example, rays use five pouches, sharks four; and sheep two, III and IV; and in the sheep the derivative of IV is a small portion similar to this accessory thymus. The condition in man may indicate a possible origin from pouches III and IV.

*Facial Lachrymal Bones in Man.*—A South African skull (Hottentot) obtained from Bulawayo was shown. The facial and orbital regions exhibited conditions which appeared as enormous facial lachrymals, absence of orbital lachrymals, presence of prefrontal ossicles. The internasal suture is closed, and the capacity and other features of the skull were of a low type. Age under 21 years.

THE PRESIDENT had no doubt that the skull was one of a Hottentot. He was not so certain, however, that the bones were true lachrymal bones: he regarded them rather as portions of the superior maxillaries.

Professor THOMPSON asked if the accessory thymus might not have been an instance of misplaced parathyroid, but Mr. Harman was satisfied that this was not so. Typical corpuscles of Hassal were present.

# EXPERIMENTAL GLYCOSURIA.

By F. W. Pavy, M.D., LL.D., F.R.S.,
Consulting Physician to Guy's Hospital.

Glycosuria may be taken as meaning the presence of sugar in the urine in quantity sufficient to be recognisable by the ordinarily employed rough methods of testing. Strictly speaking, however, normal urine contains a certain amount of sugar which escapes being revealed by rough testing, but which is susceptible of recognition by more delicate methods of procedure. This is not taken into account in connection with the consideration of glycosuria. Under normal circumstances, although carbohydrate matter may enter largely into the food ingested, no glycosuria is observed. It therefore follows that the system has the power of dealing with it in a manner to obviate its escape in an unutilised state as sugar with the urine, and I think it may be said that physiologists now, for the most part, concur with the view that it is placed in a position for utilisation, and its escape as sugar thereby prevented, by the assimilative action of protoplasmic matter. Living protoplasm is endowed with the power as a property throughout nature of taking appropriate matter and incorporating it into itself. In this way absorbed alimentary carbohydrate becomes drawn into the proteid molecules of which protoplasm consists, for the essential constituent of protoplasm is proteid, and subsequently subjected to the influence of conditions resulting in one way or other in utilisation. Assimilation thus stands as a preparatory step to utilisation, and when the absorbed carbohydrate of food is fully assimilated, and afterwards properly turned to account no glycosuria occurs.

Experimentally induced glycosuria carries us over a vast extent of ground. The conditions giving rise to it are multitudinous and diverse. The following list affords testimony of this, and I cannot state that the list is exhaustive of all the conditions that are known. Presumably also other conditions remain to be disclosed.

Conditions leading artificially to the production of glycosuria:—

Bernard's puncture of the floor of the fourth ventricle; extirpation of the superior cervical sympathetic ganglion, of the first thoracic ganglion, and division of the thoracic sympathetic chain (Pavy); extirpation of the cœliac plexus (Klebs and Munck); section of the medulla spinalis on a level with the brachial plexus (Pavy); stimulation of the central end of the cut vagus (Bernard); stimulation of the depressor nerve (Filehne); section and stimulation of the sciatic nerve (Schiff).

The administration of phosphoric acid (Pavy); lactic acid (Goltz); hydrochloric acid (Naunyn); uranium salts (Cartier, Chittenden); potassium cyanide (Frerichs); phosphorus (Araki); chloral and chloralamid (Feltz and Ritter, Manchot); nitrobenzol and nitrotoluol (Ewald, Magnus-Levy); o. nitro-phenyl-propiolic acid (Hoppe-Seyler); phloridzin (v. Mering); thyroid extract (Dale-James); strychnine (Schiff); methyldelphinine (Reshop); morphine (Bernard); caffeine (Jacobi); curara (Bernard); carbon monoxide (B. W. Richardson); nitrous oxide (Lafont); amyl nitrite (F. A. Hoffmann); respiration of oxygen (Pavy); excessive aëration (Pavy); chloroform and ether inhalation; partial mechanical asphyxia (Pavy); partial asphyxia by restricted supply of oxygen; restraint glycosuria of cats (Bohn and Hoffmann) and of frogs (Velich); intravenous and subcutaneous injection of sugar (Bernard); excessive ingestion of sugar (Pavy, Worm-Muller); reabsorption of sugar from mammary gland—lactosuria (Blot); excision of the pancreas (di Dominicis, Minkowski); ligation and fistula of the thoracic duct (Biedl).

With such a chaotic list before us it is difficult to see upon what ground we stand with respect to the manner in which the several conditions act in producing glycosuria. The best way it appears to me of meeting the difficulty will be to look to the sources from which in connexion with the operations of life the eliminated sugar can be derived. Thus viewed the origin of the sugar of glycosuria can be shaped for consideration under four heads and in dealing with the matter in this way a rational generalisation founded upon an intelligible basis can be presented.

1. It may be derived from unassimilated carbohydrate.
2. It may be derived from stored glycogen abnormally passing into sugar which thereafter finds its way into the urine.
3. A third source for the sugar of glycosuria is proteid matter. By an abnormal breaking down process sugar becomes cleaved off and subsequently eliminated in the urine.
4. The question of a fourth source from fat will be discussed. We know that as a normal occurrence in the vegetable kingdom fat is extensively converted into carbohydrate. It is a matter for consideration if under abnormal conditions fat in the animal kingdom can constitute a source of sugar in connection with glycosuria.

## Glycosuria from Unassimilated Carbohydrate.

Under ordinary circumstances carbohydrate is ingested and nothing is seen of it afterwards. After absorption it is assimilated or put into a condition for passing to utilisation, and the latent energy which it contains is given out in one form or other of force. Failing to follow this course it remains in the form of sugar and is eliminated as such with the urine instead of being consumed and yielding energy to the system. Taken to an ordinary extent under healthy conditions observation shows that the urine remains uninfluenced (Breul, *Arch. f. Expér. Path.*, xl, 1898), and the same may practically be said to apply to the systemic blood so that the blood and urine stand in this respect in parallel positions.

By excessive ingestion of carbohydrate, however, a glycosuric state may be induced. I recognised this fact at the outset of my experimental research work. Dogs and rabbits were especially fed with cane sugar and starch in connexion with an investigation on the effect of these principles on the glycogen of the liver. As a collateral result it was noticed that the urine became charged with sugar. The sugar found was in the form of glucose. It did not occur to me to ascertain if any cane sugar was also present.

Since this time others have obtained confirmatory testimony and it may be looked upon as an established fact that glycosuria is producible in the healthy state by an excessive ingestion of carbohydrate matter, which may be taken as meaning that the assimilative power is not unlimited and that it can be overstepped.

As is readily to be understood sugar is more effective in producing glycosuria than starch. The rate of absorption will be very different in the two cases. Naunyn, indeed, is of opinion that in a perfectly healthy subject starchy food may be given to a practically unlimited extent without producing glycosuria, and says that if glycosuria does follow its ingestion it should be considered that the assimilative power is below the normal. In measuring the assimilative power existing it is usual to give the food test in the morning, and, according to Naunyn 100 grams of dextrose given in solution two hours after a breakfast of roll and butter with coffee ought not to cause glycosuria. Larger quantities, however, are known to do so. I may here remark, with reference to my experience with alimentary diabetes, that sugar is not infrequently found two or three hours after the first meal of the day when it is not discoverable at any other time, and when close testing is desired I am in the habit of taking the forenoon urine.

In a communication by Miura, from Kulz's laboratory, on *Alimentary Glycosuria*, published in 1895, the results are given of observations with various carbohydrates on three healthy persons and some dogs. Starch, to the extent of 300 to 400 grms. failed to produce glycosuria whereas glycosuria followed the ingestion of smaller quantities of dextrose, lævulose, maltose, cane sugar, and milk sugar.

Seeing that glycosuria is susceptible of being produced by sugar introduced into the alimentary canal it may naturally be expected to follow intravenous and subcutaneous injections; and upon this point, without entering into particulars regarding the specific differences for the various sugars, I need only say that when administered in this way small quantities suffice to throw sugar into the urine.

Let us now inquire into how the glycosuria that has been referred to is to be accounted for. The elucidation of this question involves a consideration of the manner in which the carbohydrate of the food is normally disposed of. Glycæmia precedes the glycosuria; in other words, as a preparatory step there is an abnormal amount of sugar present in the contents of the general circulation. The state of the urine coincides

with and is determined by that of the blood. Normally there is a certain limited amount of sugar in the systemic blood, and coincidentally a certain small amount of sugar in the urine, no matter what the nature of the food. No material effect upon either the blood or the urine is discernible from the ingestion, within ordinary limits, of the carbohydrate food principles. Means must therefore exist for disposing of carbohydrate matter and obviating its escape with the urine. Utilisation in the economy is its normal destination; and, for this, it requires in the first place to be assimilated or placed in a suitable position for contributing to this end. When fully assimilated it may be considered that the carbohydrate matter is prevented reaching the general circulation, and thence the urine, as sugar. When not thus assimilated it simply passes into the general circulation as sugar which subsequently runs off as unutilised material with the urine.

It can definitely be said that one important direction in which alimentary carbohydrate passes is into the fat. In the fattening of animals, which constitutes an extensive industry, we have an illustration of this application. As I have elsewhere pointed out, I believe this conversion occurs in the villi, which are in continuity with the lacteal system, and in the liver. Both stand in a position to block the passage of sugar into the general circulation.

Another important application of carbohydrate is into the construction of proteid. This I suggested and dilated upon in my *Physiology of the Carbohydrates*, published in 1894. We do not take the proteid of the food we consume in a direct manner into the system but construct our own proteid for ourselves. The food proteid is first broken down by the digestive ferments for absorption to occur, and then by the synthetic power of the protoplasm belonging to the cells of the villi, which during absorption are very actively growing, carbohydrate is incorporated with nitrogenous matter and carried away in the form of proteid. Looking at the large amount of sugar that is seen, as will subsequently be pointed out, to be derivable in the diabetic state from proteid cleavage there must be a large incorporation of it into proteid: and thus incorporated in the large proteid molecule it can be conveyed through the circulation and applied to the purposes of life without the liability of escaping with the urine in the manner that the small molecules of sugar do in passing through the vessels of the kidney.

By conversion into fat and synthesis into proteid carbohydrate is placed in a position to pass to subsequent utilisation in the system instead of finding its way into the urine as sugar does when reaching the circulation in a free state. It is evident, I think it may be said, from the facts before us that the carbohydrate of our food must be appropriated in this way to a far greater extent than has hitherto been supposed. This method of disposal, indeed, seems to have escaped receiving the attention which recent observation shows it deserves.

Failing to be transformed into fat or synthesised into proteid, the carbohydrate will reach the portal system as sugar, and thence be conveyed to the liver. Here transformation into glycogen occurs. By the cells of the liver the sugar is picked out and its molecules dehydrated, and, as it is termed, condensed or converted from the monosaccharid to the polysaccharid state. This must be regarded as the result of protoplasmic action, presumably comparable to that which leads to the deposition of starch, cellulose, etc., in the vegetable organism, and, like starch, glycogen occupies the position of a convenient storage or reserve material.

The amount of glycogen formed will naturally be related to the amount of carbohydrate that has escaped assimilation after absorption from the alimentary canal, and that presents itself as sugar in the portal blood. Great variability exists in the amount found in different livers. It seems particularly to be ingested sugar that is favourably placed for passing as sugar into the portal vein and promoting accumulation of glycogen in the liver. Ordinarily the amount of glycogen present in the liver, looked at in relation to its value as service material, is not of the significance that perhaps is generally supposed, and with tranquil and even conditions prevailing, there does not seem to be any extensive variation occurring. After the supply of food is cut off it is only gradually that the glycogen disappears, and after several days' fasting, even in the carniverous animal, it is well known that a fair amount of glycogen may still be found. Unless, therefore, in the fasting state the formation of glycogen still goes on, the daily removal must be quite insignificant as a factor connected with the production of energy.

The office of the liver is thus supplementary to the assimilative work performed elsewhere. If this latter work is efficiently performed, none is left for the liver to accomplish. It is the sugar that is permitted to reach the portal vein that is taken by the liver, and it may happen that none reaches it. In my *Physiology of the Carbohydrates* I gave a large number of experiments showing the condition of the portal blood at the moment of death under various circumstances. During fasting and after animal food the condition corresponded with that of the systemic blood, whilst after carbohydrate food a varying degree of increased amount of sugar was observed. That carbohydrate may be fully assimilated without the co-operative agency of the liver has been shown by experiments on frogs, which admit of the organ being tied off and excluded from the circulation. Stoppage of the flow of blood through the liver from the portal system has also been effected in dogs (*Schmiedeberg's Archiv*, xxxii, 161, 1893) by establishing a junction between the portal vein and the cava (Eck's fistula) and tying the portal vein above. Animals have survived the operation and lived for a considerable time, and it is recorded that after feeding on bread and milk no sugar was found in their urine.

Protoplasmic assimilative action may further be continued on sugar that may happen to reach the general circulation. It is a property of protoplasm in general to take and appropriate suitable carbohydrate matter to be used in the performance of its living operations. I say suitable carbohydrate matter, for it is well known that it is only certain carbohydrate principles that protoplasm will touch, and if the others are made use of it is only after transformation by enzymic action as a preliminary operation has been effected. One of the points urged in my *Physiology of the Carbohydrates* was this endowment of protoplasm as a general property throughout the animal and vegetable kingdoms.

In connection with the consideration of the assimilation of sugar that may have been permitted to reach the general circulation we are brought into contact with the kidney. Obviously if the assimilation has been accomplished before the general circulation has been reached, the kidney is excluded from having any bearing on the matter. Should free sugar in any way reach the general circulation it will be conveyed to the kidney as well as elsewhere, and by virtue of its diffusibility its presence in the circulation will be revealed through the medium of the urine. Thus the urine serves to indicate what is occurring with respect to the entry of sugar into the circulation. For the urine, it may be said, to fail to be influenced by the entry of sugar into the circulation the existence of a capacity for effecting an immediate disappearance would be wanted. No one, however, contends that such capacity exists. Experiment in the rabbit shows that the intravenous injection of a quarter of a gram of dextrose per kilo body weight—that is, 1-4,000th of the weight of the animal—occasions a surcharge of the blood with sugar discoverable for some little time, and likewise produces a perceptible effect upon the urine.

Cane sugar, lactose and maltose introduced directly into the circulation, and thus escaping the enzymic influence to which they are exposed when introduced into the alimentary canal, resist being assimilated, and thence are thrown out as useless matter with the urine. Dextrose, lævulose, and galactose, on the other hand, give evidence of being susceptible of assimilation through the fact that they do not to a similar extent appear in the urine as a result of introduction into the circulation. What happens under the circumstances with regard to these last is that so long as they escape being disposed of by assimilation they remain in a free state in the blood, and meanwhile, in proportion to the quantity existing, pass into the urine. The cells of the liver, the protoplasm of the colourless corpuscles of the blood and of the tissues generally constitute the agencies by which the assimilation is effected.

We learn then, as regards the point under consideration, that carbohydrate becomes disposed of within the system by the assimilative influence of protoplasm, and that whatever is not so disposed of is met with in the general circulation as

sugar, and thence constitutes a source of glycosuria proportionate in degree to the glycæmia existing.

### Glycosuria from the Abnormal Transformation of Stored Glycogen into Sugar.

I have hitherto been giving attention to glycosuria due to sugar that has not been dealt with by the system. I now pass to glycosuria due to sugar drawn from assimilated carbohydrate. Glycogen is one issue of assimilative action. It consists of the small molecules of which sugar is composed, condensed, or built together into a large-sized molecule, a kind of synthesis in reality with an accompanying setting free of a definite amount of water, and is a product derived from the operations of living protoplasm. By enzymic and other means it is readily broken down and hydrolysed into sugar molecules from which it was constructed, and with the occurrence of this phenomena the sugar of glycosuria may be produced.

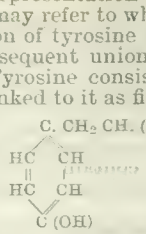
The liver and the muscles are the chief seats of glycogen accumulation. Böhm (*Pflüger's Archiv.* xxiii, 51, 1880) says the muscles may contain as much as 10 per 1,000 or even more of glycogen, and may collectively hold as much as is present in the liver. I have several times met with higher figures than are here named. The highest that I find recorded (Pavy, *Physiology of the Carbohydrates*, p. 216), are in the case of a dog. In this instance the specimen taken from the general muscles of the body contained 16.67, the heart 7.72, and the diaphragm 29.59 per 1,000. In three out of six examinations of the skeletal muscles of the horse the figures were over 15 per 1,000. There may be then a large store of glycogen in muscular tissue, and this may give rise, under abnormal conditions, to sugar in connection with glycosuria.

Much of a definite nature cannot be said about the precise condition in which glycogen exists, further than that it is so circumstanced as to form a store which may be held and utilised as occasion may require. There are grounds for believing that it may remain stored up under some circumstances for a considerable time. Under starvation, after a lapse of many days it may be found that no inconsiderable amount is still recognisable. Inactivity favours accumulation. Forced exercise causes, in the course of a few hours, its virtual disappearance from the liver (Külz, *Pflüger's Arch.* xxiv, 1881; Bendix, *Zt. physiol. Chem.* xxxii, 1901), and its marked reduction in muscles (Manche, *Zt. f. Biol.* xxv, 1889; Bendix, *loc. cit.*), and this without giving rise to any show of the production of sugar.

The fact of glycogen constituting a store material affords evidence that under normal conditions its environment must be such as to provide for its being held till the need arises for its employment. Pflüger (*Pflüger's Archiv*, lxxvi, 554, 1899) has suggested that in the living body it is linked to nitrogenous matter. He considers that the proteid of living protoplasm not only chemically unites with the monosaccharids to form glucoproteids, but also that it has the power of doing so with the polysaccharids, and thus may take on glycogen, which, as needed, may subsequently oxidise off leaving the nitrogenised nucleus intact, just, he says, as the fatty side chains of a benzene ring are preferentially oxidised in the living body, the ring with its greater resisting power to attack remaining hardly, if at all, touched.

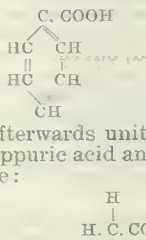
Nerking, Pflüger's chief assistant, has also written (*Pflüger's Archiv*, lxxxi, 38 and 640, 1900) on the position in which glycogen is placed, and what he says agrees with the opinion I expressed as far back as 1881. In the *Proceedings* of the Royal Society for that year, I showed that liver pulp boiled with successive portions of water till no further lactescence from glycogen was given, on being placed aside till the following day, yielded then, on boiling, a renewed lactescent liquid under similar treatment, and so on from day to day afterwards for several days. Finally, on being subjected to the potash process for the extraction of glycogen evidence was given that the major portion of what was originally present had escaped being removed by the water. Upon the strength of my results, I suggested in the summary of the communication that the glycogen existed "in feeble combination with nitrogenous matter." The proposition advanced by Nerking is that only the glycogen that is susceptible of extraction with water is in the free state, and that the rest is in combination, apparently in a glucoside-like body, with proteid.

In illustration of what is here spoken of—and it supplies us with a representation of the modern views of the chemistry of life—I may refer to what is found to occur in the case of the oxidation of tyrosine in the living body to benzoic acid, and the subsequent union of this with glycine to form hippuric acid. Tyrosine consists of a benzene ring with a fatty side chain linked to it as figured below:



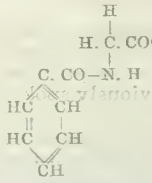
Tyrosine.

By oxidation the elements of the side chain become removed leaving the benzoic acid with the benzene ring intact:



Benzoic acid.

This afterwards uniting with glycine met with in the body forms hippuric acid and water, which become eliminated with the urine:



Hippuric acid.

Extending this line of action to carbohydrate, it is believed that carbohydrate groups exist linked on as side chains to the nitrogenous nucleus, and that these side chains may be oxidised off, or otherwise detached, without disturbing the nucleus itself. I shall have more to say upon this point later on.

Glycogen, as is well known, is most readily transformable into sugar in the presence of a diastatic enzyme, and what takes places in the liver immediately after death shows that there is no lack of enzyme existing or producible. Notwithstanding these circumstances, however, the store of glycogen under natural conditions is maintained without leading to a production of sugar that makes itself perceptible by passage into the urine. But conditions may arise attended with a different issue, and lead to sugar reaching the urine from the occurrence of an improper transformation of glycogen.

After death, for instance, sugar is produced in the liver in a manner that it may be taken could not possibly be occurring during life, and if somatic death is occasioned in such a way as to permit of the circulation being maintained by artificial respiration a glycosuric state follows.

Bernard's puncture of the floor of the fourth ventricle may reasonably be regarded as supplying an instance of glycosuria arising from an improper transformation of glycogen into sugar. The operation fails in the absence of a fair store of glycogen, in this respect differing from the effect of extirpation of the pancreas and phloridzin administration. In the latter case glycosuria follows, notwithstanding starvation may have been carried to an extent to effect the complete removal of glycogen, whilst in the former the result does not come off in the starved animal.

In good conditioned animals the effect of the puncture is immediate and marked. As a collateral phenomenon it has been noticed that hyperæmia of the chylopoietic viscera from vasomotor paralysis occurs. This will give rise to imperfectly de-arterialised blood reaching the liver through the portal vein, and I have long held the view that this altered condition of the blood is at the foundation of the improper passage of glycogen into sugar. Probably also, owing to the altered vascular state of the alimentary canal, there may be an imperfect assimilation of carbohydrate in the villi, leading to sugar being permitted to reach the portal blood to a greater extent than it normally does.

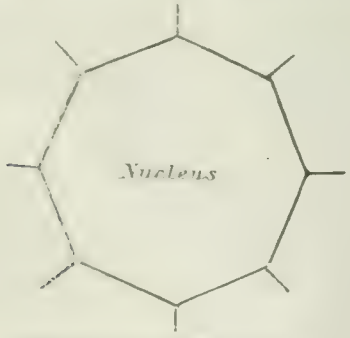
The glycosuria observed after certain operations on the sympathetic is probably produced in the same way as that from Bernard's puncture.

### Glycosuria arising from the Disruption of Proteid with a Liberation of Sugar.

In this form of glycosuria, originating from assimilated carbohydrate, it may be considered that the carbohydrate is not to a similar extent free to pass into sugar as in the form that has been dealt with. When the carbohydrate is bound up in, and thus constitutes an integral part of the proteid molecule, the molecule must, as a preliminary step, be broken down and the carbohydrate liberated before it can present itself to our cognisance as sugar. As long as it is contained within the molecule it is virtually lost to view, and can only become manifest to us again on being set free.

I have said that in the form of glycosuria now under consideration the carbohydrate from which the sugar is derived exists as an integral part of the proteid molecule. In the act of assimilation it has been built into the molecule, and a disruption of the molecule must occur for it to be set free. In the disruption not only is sugar liberated, but the nitrogenous part of the molecule also breaks down and gives rise to an increased nitrogen elimination with the urine. Thus it happens that a sugar and nitrogen elimination occurs as a result of proteid disintegration, and when there is no other source than proteid disintegration for the sugar eliminated, the two are found to hold a definite relation the one to the other.

The relation has been worked out by different observers and is to be looked upon as holding an established position. Before speaking of it, however, there is another point that requires to be considered. I have previously spoken of side chains being linked to a central molecular group. This is known to be an arrangement that is very common in connection with organic chemistry : a central group exists in which the molecules are held together by such strong bonds of union that it requires a powerful disturbing influence to break them apart. To these central groups molecular groupings of various kinds are linked as side chains. The side chains are in union with the central nucleus and thus form a part of the complete molecule but the bonds of union that hold them are of much less strength than those which hold the molecules of the nucleus together. The side chains may be removed without disturbance of the nucleus and may be replaced by others. The molecule of living protoplasm is regarded as constituted in this way. To its central nucleus, into the constitution of which nitrogen enters, molecular groups of various kinds—fat, carbohydrate, etc.—are linked as side chains after the manner diagrammatically figured below:




Proteid molecule with side chains.

Oxidation of the side chains may occur without the nucleus being touched and, if there is a proper food supply, fresh groups take the place of those which have been oxidised off.

Such is the view regarding cell or protoplasmic metabolism that is now held and it permits of force production occurring without the destruction of the essential nitrogenous part of the molecule.

Now, pancreatic and phloridzin diabetes are forms of diabetes which are accompanied with proteid disintegration as a source of the eliminated sugar. They at the same time also clear away as urinary sugar the stored glycogen and the carbohydrate linked as side chains to the proteid molecule. When all this has been effected in the starved animal the nucleus of the molecule next goes and then it is that the definite relation between the eliminated dextrose and nitrogen is observed.

The first effect then in connection with pancreatic and phloridzin diabetes is that looking at the dextrose and nitrogen elimination the former stands in high relation to the latter. This lasts as long as there is a source for dextrose other than the carbohydrate intimately locked up in the proteid molecule. Subsequently in the starved animal the proportion of dextrose falls and ultimately holds a pretty constant relation of a little under three to one of nitrogen. The source of dextrose is now breaking down proteid matter which results in the elimination of both the carbohydrate and nitrogenous component parts. The ratio of eliminated dextrose to nitrogen will thus give an insight into the relation they held in the original proteid, and as proteid contains about 16 per cent. of nitrogen calculation based upon a three to one ratio of elimination gives about 50 per cent., as the amount of carbohydrate contained in the proteid molecule. Some have worked out the amount as standing a little higher; but, whatever the precise amount, it is seen that proteid constitutes an important source of sugar in connection with glycosuria.

The glycosuria and concomitant conditions attending removal of the pancreas stand in accord in all particulars with diabetes as it occurs in the human subject. Glycæmia is an antecedent of the glycosuria, and if the escape of sugar is prevented, as by extirpation of the kidneys or by ligaturing the ureters the sugar may rise to a very large amount in the blood. By one authority, Schabad (*Zeit. f. klin. Med.* xxiv, 1894), it has been stated that as much as 12.9 per 1,000 was found under the circumstances.

Phloridzin glycosuria stands in a strikingly different position. Phloridzin similarly leads to the elimination of sugar by attacking glycogen and proteid, but the results of experimental observation are not reconcilable with the glycosuria being preceded by glycæmia. The kidney seems to be in some way or other concerned in the production of the sugar, and although the close attention of numerous investigators has been given to the subject it cannot yet be said that the comprehension of it has been reached.

### Question of Glycosuria through the Medium of Fat.

We know that fat is producible by both the vegetable and animal organisms from carbohydrate, and that the production takes place upon a large scale in both kingdoms of nature. We know also that, as is shown in the growth of the oily seeds, fat constitutes a source of carbohydrate in the vegetable kingdom. Analogy is, therefore, suggestive that in the animal organism the possibility exists that sugar may be producible from fat. The point has been mooted and discussed, but it must be said that nothing in the shape of tangible evidence has been yet adduced to connect glycosuria with fat as a source. Certainly in the diabetic, instead of fat consumed as food producing an increase of sugar elimination it seems to act beneficially by supplying oxidisable material that may save body-stuff from destruction.

At the beginning I gave a lengthy list of conditions productive of glycosuria. Looked at individually, nothing in common is discernible to account for their action. Indeed, they constitute a most incongruous group, and leave us in a mystified state with regard to them. Viewed, however, by the light of the line of consideration that has been adopted, there is nothing inconsistent with very varied conditions giving rise to a similar result. The position of matters may be expressed in a few words. Wrong metabolism is regarded as the source of glycosuria. Under the right course of events the carbohydrate matter of food is assimilated by protoplasmic action and thus placed in the required position for contributing to utilisation. That which is not assimilated and remains in the free state passes as sugar through the system and escapes as waste material with the urine. That which has been assimilated may, as the result of wrong metabolism, again pass into sugar and constitute a source of glycosuria. We have wrong chemistry to deal with, and very diverse conditions may give rise to the wrong result that occurs.

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II.—W. H. Thompson, M.D., F.R.C.S.,
Dunville Professor of Physiology, Queen's College, Belfast.

Professor Thompson said that it might be taken that sugar was

a necessary content of the circulating blood required for the proper nourishment of the tissue elements and that the sugar so used up was ultimately oxidised or combusted into $CO_2$ and $H_2O$, the former appearing at the lungs, the latter mainly at the kidneys. It might further be accepted that glucose was practically the only form in which sugar occurred in the blood—all forms of carbohydrate, whether starches, gums, or saccharoses were during the processes of digestion and absorption converted into glucose by the time they arrived in the blood. The glucose thus circulating might be disposed of in one or other of the following ways: 1. It might be oxidised or combusted forthwith, that is, used up for tissue nourishment. 2. It might be stored for a time in the muscles to be drawn upon during muscular contraction as one of the chief sources of energy and, at the same time, of heat. 3. It might be stored up in the liver as glycogen, where it formed a reserve available for one or other of the foregoing purposes. 4. It might, if present in considerable excess, lead to the storing up of fat—a form of reserve less easily reached than glycogen, and apparently only resorted to when the demands upon the store of this material were excessive. 5. It might forthwith be expelled from the body in the urine—Glucose in small amount had been shown beyond doubt to form a normal constituent of healthy urine, and it was interesting to note that sugar is always expelled from the blood if its amount in this fluid should rise much beyond 0.2 per cent. It was justifiable, therefore, to infer that while sugar was a necessary constituent of the blood its quantity had to be kept low, usually below 0.1 per cent., and also that anything much beyond this was injurious to the normal metabolism of the body.

Experimental glycosuria might, therefore, be defined as an abnormal amount of sugar—generally dextrose—in the urine, brought about by operative or other experimental conditions applied to the animal body. There were many causes for this, but they could be practically all grouped under three heads:

1. Excessive sugar in the blood, arising from over consumption of saccharine or carbohydrate food, or from deficient oxidation, such as might be supposed to occur in asphyxia, CO poisoning, after the administration of chloroform and other anæsthetics, and from the taking of morphine, etc.

2. Renal glycosuria, which occurred after phloridzin poisoning, and where the quantity of sugar in the blood was not increased.

3. Glycosuria from damaged glycogenic function of the liver.

Under the third head might be ranged the experimental glycosurias which resulted from injury to the nervous system, such as Claude Bernard's *piqure*, etc., where the alteration was chiefly brought about through the agency of the vasomotor system: that from the administration of acids (for example, $H_3PO_4$), either *per os*, or by injection into the veins; that from injection of ether, $CHCl_3$, $NH_3$ into the portal veins; from subcutaneous injection of corrosive sublimate or administration of uranium salts. In all these latter there was direct injury to the liver cells. One other form of experimental glycosuria might also be brought under this head, namely, pancreatic diabetes.

Speaking further, Professor Thompson said: The action of phloridzin had been explained on two grounds—either it increased the sensitiveness of the kidney to sugar circulating through it, and thus rendered its filtration through the organ more effective, or else sugar was split off in the kidney from the phloridzin. Phloridzin, as was known, was a glucoside, and it was possible that its cleavage might be effected in the kidney—indeed, it had been proved beyond doubt that this, to some extent, was so. But a non-glucoside derivative of phloridzin, named phloretin, also when administered, created glycosuria, but to a much smaller degree. This had by some been explained by supposing that phloretin, combined in the circulation, or in one of the organs with a sugar to form into phloridzin again, and that the latter when it arrived at the kidney was once more split up, the sugar escaping at the urine.

But the drugs in question must have also affected the glycogenic function of the liver, otherwise sugar would accumulate in the blood after their administration, when the ureters were tied after and yet this did not happen. Phloridzin diabetes occurred also on a purely flesh diet, and the relation between the sugar and nitrogen excreted under these circumstances was constant, a fact which indicated that the sugar was then derived from a proteid source.

The most important of the experimental forms of diabetes was undoubtedly pancreatic diabetes. A case of this affection in man was published so long ago as 1788 by Cowley, while Bright (1833) and other early observers had also recorded cases. It was only in 1889, however, that Minkowski and Von Mering securely established the connection between certain forms of diabetes and disease of the pancreas by finding that total removal of the organ from dogs was followed inevitabiy by a severe and incurable form of diabetes. The animals succumbed in from four to five weeks at the longest. The glycosuria began 6 to 24 hours after the extirpation and took some days to reach its height. The animals showed all the symptoms of the severe forms of diabetes mellitus in man—with diacetic acid, acetone, and oxytubyric acid in the urine. The glycosuria occurred even when all carbohydrate food was withheld. Indeed, owing to absence of the pancreatic fluid, the digestion of starchy and fatty foods was at all times very defective. A constant relation subsisted here also between the nitrogen and sugar of the urine. Glycogen disappeared rapidly from the liver, and notwithstanding the fact that the sugar content of the blood was considerably increased the organ had lost its power of storing up glycogen. The muscles did not (according to the best authorities) wholly lose their power of consuming glycogen—indeed many believed they retained it to quite as great a degree as in health. Evidently a surplus amount of sugar circulated through the organism with which its tissues were unable fully to deal even by resort to excretion at the kidney. A remarkable effort in this direction had been pointed out by Naunyn, namely, that the liver became infiltrated with fat—another mode of vicariously dealing with the surplus. The cause usually assigned for this glycosuria was that an internal secretion formed by the pancreas and necessary for the metabolism of glucose was lost to the body, and that this secretion in normal conditions was carried to the liver and enabled it to perform its glycogenic function. Another explanation, however, was also offered which Professor Thompson thought had many points in its favour, namely, that owing to the loss of pancreatic juice digestion of proteids went wrong in consequence of which poisonous substances were formed in the intestine which became absorbed and threw the liver metabolism out of gear. In support of this view the following deserved attention:—

1. In pancreatic diabetes a large excretion of aromatic sulphates in the urine always occurred indicating a perverted condition of proteid digestion.

2. In cholera, glycosuria often appeared when the secretion of urine became re-established.

3. The filtrate from an artificial pancreatic digestion mixture, after leucin had been crystallised out and removed, caused glycosuria when injected into animals. The same condition had been caused by the dialysate from the intestinal contents of diabetics.

4. In recent years it had been shown by Kossel and Kutscher that antipeptone, one of the end-products of pancreatic proteolysis, was in reality composed of several crystalline substances, one of which was a base called arginine. In Professor Thompson's hands, out of two experiments in which arginine was administered to dogs with their food, one showed glycosuria to the extent of over 1 per cent. of sugar. In the second experiment this result failed, but the dose employed was considerably smaller than in the first.

5. The fact that the condition takes some time to develop after removal of the organ, and a still longer time to reach its maximum.

6. That some cases of this affection are not improved, but, on the contrary, made worse by the administration of chopped-up pancreas with the food.

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### III.—Vaughan Harley, M.D.,

Professor of Pathological Chemistry, University College, London.

Professor Harley said: The appearance of sugar in the urine of animals can have three distinct causes. First group: The over-production of sugar in the organism, such as was produced by puncture of the fourth ventricle. Vasomotor

changes are produced in the liver, which cause a rapid conversion of glycogen into sugar, and hence, hyperglycæmia. Other nerve lesions, as well as some of the toxic poisons, produced glycosuria in a similar manner. Alimentary glycosuria also fell into this group. Second group: Malassimilation of sugar—sugar not being properly burnt up in the organism, and hyperglycæmia is again produced. This form is represented, by the glycosuria which occurs in dogs after total removal of the pancreas. Third group: An anomalous form of diabetes, produced by the administration of phloridzin. Dr. Harley then related the history of a clinical case in support of his contention that under certain circumstances sugar appeared in the urine simply because it had not been properly used up in body metabolism. The patient was cured by attention to diet and looking after the bowels. As long as sugar did not increase in the urine the quantity of carbohydrates in the diet was increased.

IV.—Sir WILLIAM BROADBENT, Bart., M.D.Lond., F.R.C.P. SIR WILLIAM BROADBENT congratulated Dr. Pavy on his masterly contribution to the subject of glycosuria. The medical profession was under deep obligation to him for his lifelong and untiring investigations. He considered that too much had been made by physiologists of Bernard's discovery of the glycogenic function of the liver. Glycosuria from injection of sugar into the rectum was, he believed, due to the absence of villi from the lower bowel.

Dr. PAVY replied.

## OBSERVATIONS ON THE STATE OF THE VASCULAR SYSTEM IN DEATH BY ASPHYXIA.

By J. A. MACWILLIAM, M.D.,
Professor of Physiology, University of Aberdeen.

[ABSTRACT.]

THOUGH the characteristic distribution of the blood after death by asphyxia has long been known, many discordant opinions are still held as to the causes which determine the distended condition of the right heart and great veins, and the comparative emptiness of the left heart. Among various assigned causes are (1) the greater distensibility of the right heart; (2) the influence of violent respiratory movements and muscular spasms drawing and driving blood into the great veins and right heart; (3) an alleged strong contraction of the pulmonary arterioles opposing the discharge of blood from the right ventricle, and so leading to distension of the right heart and great veins; (4) diminished suction power of the the left ventricle leading to a similar result in the right heart; (5) *post-mortem* changes (rigor, etc.) possibly affected by the great strain which has been thrown on the heart shortly before death by the great (asphyxial) rise of blood pressure against which the heart has had to struggle. State of the heart at the moment of death: Though conflicting statements have been recently made on this point, it is quite certain that at death (caused by ordinary mechanical asphyxia in an anæsthetised animal) the heart stops with all its chambers distended—both auricles and both ventricles. This is demonstrated by inspection of the exposed intact heart, etc., by tying the great vessels, and afterwards evacuating and measuring the blood from the right and left sides respectively. The pressure on the two sides has also been measured at the moment of death by a manometer.

Remarks on alleged causes of characteristic distribution of blood some hours after death:

1. Greater distensibility of right heart. This would not account for empty, or nearly empty conditions of left ventricle; moreover, it should—*cæteris paribus*—should have the same effect in death by syncope as in asphyxia.

2. Influence of violent respiratory movements and muscular spasms, evidently not essential, as is seen when these have been prevented by curare and other causes.

3. Extreme contraction of pulmonary arterioles. Negatived by direct study of heart during asphyxia. (*a*) Blood-flow from pulmonary vein. (*b*) Pressure in left auricle. (*c*) Unusually early onset of rigor mortis in left ventricle is probably explanation of some descriptions given of collapse of left ventricle towards end of asphyxia. (*d*) Study of effects produced by ligature of arteries to the head. (*e*) Comparison of real pulmonary obstruction caused by intravenous injection of lycopodium powder, etc., with what happens in ordinary asphyxia.

Characteristic asphyxial condition of heart seen some hours after death is a *post mortem* development; due to rigor mortis in the heart muscle. Amounts of blood present in the various chambers was determined by weighing the clots obtained from each and also in other ways. Expulsive action of rigor in left ventricle was studied by introducing cannula connected with a mercurial manometer, and recording on a slow drum. Tracings showed that left ventricle going into rigor may get up a pressure of 30 to 35 mm. Hg. The strain usually thrown on the heart shortly before death by the asphyxial rise of blood pressure was unessential.

Why is the right ventricle not emptied by rigor mortis? Right ventricle dies slowly and gradually; rigor is late in appearing and unequal in its development; fibres go into rigor in successive sets, and so little or no expulsive power is present at any time. When rigor is very late there may be increased resistance to the discharge of blood depending on *post-mortem* changes in the blood and the vascular walls. When rigor comes on speedily and strongly, both ventricles may be emptied after death by asphyxia—in various animals. When the heart has been paralysed by chloroform inhalation it may present the asphyxial distribution of blood some time after death, though it was distended with blood in all its chambers at the time of death. The condition of the heart after death by syncope, induced in various ways, had also been examined.

Professor THOMPSON expressed great interest in the valuable results obtained by Professor MacWilliam. They completely cleared up the mystery of the condition of the heart after death from asphyxia.

The PRESIDENT thought these results would necessitate a re-measurement of the size of arteries after death in the human body.

## THE FUNCTIONS OF THE RODS AND CONES OF THE RETINA.

By F. W. EDRIDGE-GREEN, M.D., F.R.C.S.

[ABSTRACT.]

THE hypothesis which I wish to prove is that the rods and cones have entirely different functions. I believe that light acting on the retina liberates the visual purple from the rods and a photograph is formed, the cones and optic nerve fibres conveying the impression to the brain. According to this theory the cones are only sensitive to chemical changes in the visual purple and not to light itself. This view is supported by numerous facts, as, for instance, the fact that a bright light may fall on the fovea without giving rise to any sensation, and the fact that a perceptible interval elapses before we are able to see with the fovea after opening our eyes. It is easy to suppose that the visual impulses, set up by decomposition of the visual purple, differ according to the character of the light. Then in the impulse itself we have the physiological basis of light, and in the quality of the impulse the physiological basis of colour. These respective characters are perceived by different nerve cells in the brain.

## THE HUMAN BODY AS AN ANALYTICAL LABORATORY.*

By ALEXANDER HAIG, M.A., M.D.Oxon., F.R.C.P.,
Physician to the Metropolitan Hospital and the Royal Hospital for Children and Women.

WITH the advent of the asparagus season this year I began to take it several times a week and in more than usual quantity, and I was observing, as I have done for years, my capillary circulation night and morning; but I was not estimating the uric acid in the urine or making any other test of my condition.

A few days after I began to eat the asparagus I felt some arthritic pains in the arms and legs, etc., and these got more marked from day to day; then I got a slight cold, and a few days later a more severe cold, with a tendency to rise of tem-

* Read by the Secretary in the absence of Dr. Haig.

perature, for which I was at length obliged to take drugs. Now I know that I never get this condition of affairs except when I have some uric acid about in excess of the normal quantity, and I therefore began to look for a possible source of such uric acid.

I then looked back at my circulation curves and saw what I had not noted at the time, that a few days after the asparagus was first taken the curves began to make larger excursions like those on the 24th, 27th, and 28th May in the figure, while before the asparagus, they had been smaller, more like that on June 1st. And I knew that this was probably the effect of some introduction of uric acid, for I had seen the same thing in the case of pulses, mushrooms and other substances containing poisons previously investigated; and this, no doubt, showed the circulation condition corresponding with my slight arthritic pains.

Thus, on May 25th, when I had to put on drugs to relieve my cold, I had begun to see that there had been some introduction of uric acid, and that asparagus was the possible cause of this. It was only suspicion, however, and so on the evening of the 25th I took some more asparagus, and this was followed by a distinct increase of the bronchial trouble, till later in the evening the salicylic acid got hold and relieved it. I have given a complete account of a similar bronchial attack in *Uric Acid* (Ed. 5, Fig. 74), and shall not repeat the description of symptoms here.

This brings us to the beginning of the figure of which I shall first give a general, and then a detailed, description point by point.

The highest curve is that of uric acid in the urine, and below it is the corresponding curve of the excretion of urea; and, lowest of all, is the curve of the capillary reflux,[1] measured night and morning—generally at 6.30 A.M. and 10.30 P.M.

With regard to the urine excretion curves, the uric acid and urea of May 26th are the uric acid and urea of the twenty-four hours ending 6.30 A.M. on the 26th. That is to say, they are for the most part the uric acid and urea that passed through the blood on the 25th, and the circulation curve shows on the 25th alterations which are due to this passage of uric acid through the blood, and for a similar fluctuation in the circulation curves in the case of the pulses. (See *Uric Acid*, Fig. 75.)

Salicylic acid was begun on the evening of May 25th, but it is placed opposite the excretion curves of the 26th, which it aided in producing, and the excretion of the 26th, was only a twelve hours' excretion from 6.30 P.M. on the 25th to 6.30 A.M. on the 26th, the results being multiplied by 2 to make them comparable to the other excretion points, which are for twenty-four hours each.

The salicylic acid was continued in the same dose (30 gr.) each day from May 27th to June 3rd. On June 4th, that is, the day ending 6.30 A.M. on 4th, it was replaced by aspirin (45 gr. a day), which was continued till the end of the twenty-four hours ending June 7th, from which time to the end of the figure no drugs were taken.

But potatoes were then increased and fruit diminished, with the object of getting the blood into a good condition of alkalinity to dissolve the uric acid presented to it and hold it in solution till excreted. Asparagus was taken on six days in the figure, and these are marked A at the top. On May 26th and 30th it was taken more or less at random, and without the quantity being measured.

On June 2nd 2 ozs. (the quantity actually eaten) were taken at lunch, and purposely at lunch, so as to give a good time for excretion within the twenty-four hours: on the 6th 4 ozs., on the 12th 3 ozs., and on the 16th 3 ozs. The blood granules were examined as a demonstration for a friend on June 4th, and as the result was interesting, it was recorded, and they were examined intentionally at an evening hour on the 15th, 16th, 19th, 20th, and 21st.

We see, then, in the urinary excretion curves a large rise of uric acid on the 26th to 18.8 grs., my ordinary day's excretion being somewhere about 11 grs., as shown towards the end of the figure.

This was the result of the excretive action of the salicylic acid on the uric acid introduced on 25th and previous days in the asparagus eaten.

On 27th and 28th it falls to about 15 grs. each day, and with this excretion all symptoms, both arthritic and catarrhal had subsided and I was again quite well.

On the 29th there was a little rise, probably one of the fluctuations in excretion that do occur under salicylates according as external forces favour or hinder their excretive effects, namely, their solvent action, (see *Uric Acid*, Fig. 8). On 30th there was a more decided rise as asparagus had again been taken at dinner.

It will be seen that the circulation curves below foreshadow most of the changes found in the excretion, thus the quickening on the evening of the 25th was replaced by a marked slowing beyond even ordinary morning levels, and the morning of 26th was also slower than usual. Then there was again a slowing on the evening of 29th and morning of 30th corresponding with the large excretion of 30th in the urine.

At this point I took the matter in hand experimentally, and I purposely took no more asparagus for two days, allowing the excretion to fall nearly to 11 grs. and I then took at lunch on 1st June 2 oz. of asparagus and watched its effect, everything else in food and drugs being continued exactly as before. The result was a rise in the excretion of uric acid with a fall of urea and an excess of uric acid over its normal relation to urea of more than 3 grs. or 1.5 gr. for each ounce of asparagus. The next day there was a fall, the same drug and diet being continued, the asparagus being absent.

Then the salicyclic acid was replaced by aspirin on 3rd and this apparently acted as a more powerful excretant and swept out a large excretion of uric acid on the 4th (18 grs.) I continued the aspirin, however, in the same dose and it came down the next day to about 13½ grs., and I then again took asparagus 4 oz.

This produced a rise to over 16 grs. followed by a fall to 14 grs. next day. The uric acid on June 6th exceeded the urea by about 5 grs. or 1.3 grs. for each ounce of asparagus eaten, but I am inclined to think that both here and on June 2nd the asparagus increased the excretion on two days to some extent so that the real excretion due to it is, perhaps, larger than 1.5 or 1.3 gr. to the ounce.

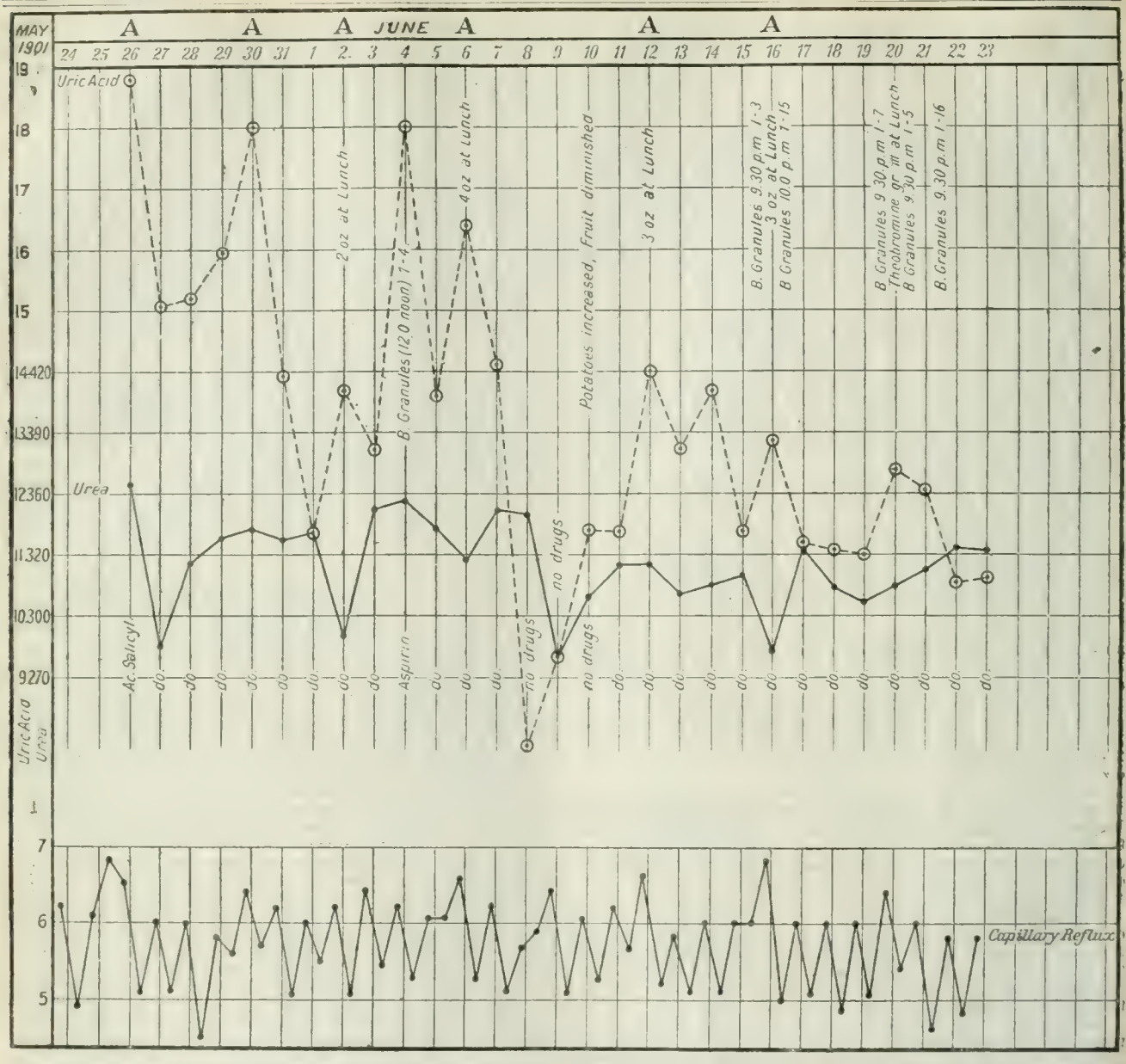
I continued the aspirin for one day after this dose of asparagus and then left it off, and we see on the 8th the usual fall of uric acid, when these powerful solvents are omitted, nearly to 8 grs., so that the range of excretion under salicylate drugs was from 18 grs. to 8 grs. in the day, and I may mention, in passing, that the blood granules always show a corresponding fluctuation, being, with the larger excretion under salicylates, 1 to 2 or even 1 to 1, and with the small excretion after they are left off, falling as low as 1 to 60 or 1 to 70, a difference so obvious that a single glance down the microscope will distinguish the one blood from the other.

I happened to examine my blood on June 4th for purposes of demonstration and found 1 to 4, this being at 12 noon after the large excretion of the 4th had taken place. Had I examined it on the 8th I should no doubt have found about 1 to 60, but I have repeated and recorded this experiment often before.

On the 9th uric acid rose and on 10th it was still higher, and as it did not rise higher on 11th I again took 3 ozs. of asparagus at lunch, and the result was a rise on 12th to 14 grs. and a fall next day below 13 grs. The rise on 12th gave an excess of uric acid over urea of about 3 grs. or only 1 gr. for each ounce of asparagus, but no doubt the potatoes had not yet sufficiently reduced the acidity of the urine (as shown by the presence of red sand in it) or increased the alkalinity of the blood so as to hold all the uric acid in solution, and so no doubt some of the plus excretions of 13th and 14th should also be credited to the asparagus of 12th, the rest of the excess of 13th and 14th being due to the sweeping out on increasing alkali of some of the retention on 8th, which was considerable, say some 3½ grs.

On 14th there was almost no sand in the urine, and on 15th and afterwards none, as the alkalinity of the blood increased further and the acidity of the urine diminished.

As the uric acid fell on the 15th to a little over 11 grs. I again took 3 oz. of asparagus at lunch and this caused on the 16th a rise to nearly 13 grs., and there being now a better supply of alkali than on 12th, there was an excess of uric acid over urea of 3.3 grs. or 1.1 gr. for each ounce of asparagus: but probably even this was not the whole, and I think that the larger quantities on the 2nd and 6th under salicylates are nearer the truth.




Lastly, after an interval of three days, during which the uric acid remained low, I took a known dose (gr. iii) of theobromine for comparative purposes, and just to see how near the truth the machine was working.

The rise of 20th and 21st was the result, and if we take the quantity by which uric acid exceeded urea on these days it comes out almost exactly three grains, and this curve much resembles that with a larger dose of caffeine given in *Uric Acid* (Fig. 29).

As regards the circulation curve below we see that all the great fluctuations in the excretion of uric acid are foreshadowed in its variations.

Thus the very slow capillary redux on the evening of 25th and morning of 26th preceded the large excretion of 26th: the similar absence of evening quickening on 29th and the slowing on the morning of 30th foretold the high rise in excretion of the 30th.

The quickening on evening of 31st and the slight slowing on the morning of 1st June foretold the small excretion found: and the slight slowing on the evening of 1st and greater slowing on the morning of the 2nd foretold the rise on that day.

The more marked slowing on the morning of 3rd, and diminished quickening that evening were connected with the excretion rise of the 4th; in the same way the absence of quickening on the evening of the 4th and the marked slowing on the morning of the 6th foretold the rise of the 6th.

Then the increased quickenings on the evenings of 6th and 7th, and the diminished slowing on the morning of the 8th told of the diminished excretion of 8th, and as the excretion rises again towards 12th we see both evenings and mornings moving from 5 half-seconds towards 6 and 7—that is, getting slower.

A marked slowing on the evening of 15th and morning of 16th, a less marked but similar result before the rise of 20th and the remaining up on 21st is shown chiefly by a failure of the usual evening quickening of 20th; by the morning of 21st most of the uric acid from the theobromine had been excreted, there is no unusual slowing in the morning, and the evening shows a decided quickening foretelling the low excretion found next day.

We can thus to a very considerable extent actually see the uric acid passing through the blood, and by examining the circulation every hour in place of only twice in 24 hours as in the curve in the figure we can tell the actual hours in which most of a given dose passes through the blood: but with examinations only made night and morning we must not expect more than the general indications we get here: but these indications are often quite sufficient to draw attention to the fact that something unusual is occurring: thus at the beginning of the figure on 25th, I had no idea what the uric acid was doing till the evening curve showed slowing in place of the usual quickening. On other occasions where there is only an increased excretion of one or two grains, these may pass through the blood between the morning and evening observations, and so hardly affect the curves at all: then if a uric acid headache comes for a hour or two only it is found that the capillary reflux curve has slowed to 7 or above for that time only, and the blood pressure rises with the slowing of capillary reflux and the high blood pressure is the cause of the headache.

Then, again, the granules in the blood are an absolute guide to the amount of uric acid that is passing in the urine, or rather that will be passing in 30 to 40 minutes as the changes in the blood precede those in the urine by about that time.

Thus in the hope of obtaining some indication I examined the blood on five evenings towards the end of the figure, and on 15th, when the increased excretion of 16th was passing into the urine they were 1 to 3, and on 16th, when the diminished excretion of 17th was passing to 1 to 15. Again on 19th, when the increased excretion of 20th was passing, they were 1 to 7, and on the 20th with a large excretion still passing 1 to 5, and on 21st with an excretion falling again below 11 grs. 1 to 16.

It is, of course, absurd to think that blood drawn at one minute out of 1,440 minutes will tell you the excretion of uric acid for a whole day: but as a matter of fact it will often give us in these cases a useful indication, and, as I have elsewhere pointed out, if the granules are examined every hour, it is possible to map out the corresponding excretion of uric acid in the urine with considerable accuracy.

The same applies to the curves of capillary reflux, and to those of blood pressure which correspond with them: all these things will correspond closely with each other and with the excretion in the urine only if examined at frequent intervals: but, none the less, the circulation curves taken, as is my habit night and morning, give indications which are very decidedly useful, and the fact that the reflux is always slower in the morning and quicker in the evening again corresponds absolutely with the excretion of uric acid.

If the capillary reflux gives a result which is unusual in any way I examine the blood pressure to corroborate it, and then I either collect the urine if it is not being collected or examine the blood granules if the matter is of sufficient interest and importance: and in the case of this figure I should not have so soon suspected the asparagus if my capillary reflux curves had not shown increased fluctuations soon after I began to take it. I have curves showing almost identical changes when I began to eat mushrooms last autumn. (See *Edin. Med. Jour.*, July, 1901, Fig. 4.)

Then we see that swallowing a known dose of theobromine produced alterations in the curve of capillary reflux which quite sufficiently indicated its presence and its excretion, that it altered the blood granules from 1 to 16 or 1 to 18, which is about normal at 9.30 P.M., to 1 to 7 and 1 to 5 respectively, and that the excess of uric acid excreted in the urine in the two days following its ingestion was almost exactly 3 grs.

The quantity of water excreted in the urine measured either from hour to hour or day to day, would also give indications more or less identical with those of the capillary reflux and blood pressure, and the difference between the temperature in the mouth and rectum would do the same, all these things being influenced in the same way as the circulation curves, by the quantity of uric acid present in the blood.

We may conclude then, I think, from these results that asparagus contains a substance probably composed of carbon, hydrogen, nitrogen and oxygen, which is capable of conversion in the human body into $C_5H_4N_4O_3$ (uric acid). That this substance gives the physiological reaction in the circulation of uric acid, and in the blood the chemical reaction of uric acid or xanthin. And that the substance is present in asparagus to an extent which would produce about 1.2 or 1.3 gr. to the ounce or 0.27 to 0.30 per cent. of $C_5H_4H_4O_3$. Then I found in Watt's *Dictionary of Chemistry*[3] a record that 92 grains of asparagine had been obtained from 32 ozs. of the root of a species of scorzonera, and this would be equal to 2.8 grs. to the ounce = 0.65 per cent., or a little more than double the amount of $C_5H_4N_4O_3$ I obtained from asparagus. But the formula for asparagine as given in Watt's *Dictionary* is $C_4H_8N_2O_3$, so that it contains only half the nitrogen that uric acid or xanthin does, hence possibly 0.27 to 0.3 per cent. of $C_5H_4N_4O_3$ found in the urine may be equivalent to 0.54 to 0.6 per cent. of asparagine in the asparagus tops eaten.

We may also take note of the fact that the substances in the xanthin group (which very inventive people have lately been calling by various names, which are highly bewildering to the uninitiated)—I mean specially xanthin, hypoxanthin, theobromine and caffeine, contain nitrogen in just the same quantity as that in uric acid, and these appear to pass out of the body as uric acid, grain for grain as swallowed, as we see in this figure in the case of theobromine, and in my book (*loc. cit.*) we may see the excretion of several of these substances, and may note that the excretion of caffeine is slow and takes two days to come out as does the theobromine here. And there is nothing extraordinary in the suggestion that asparagine may be converted into uric acid, as Dr. Sheridan Lea gives this power of conversion as one of the characters of the xanthin group, and says (*Chemical Basis of the Animal Body*, p. 176): "Many members of this group are both derivable from and convertible into other members of the group by simple chemical processes."

I am also indebted to Mr. F. J. Lloyd, F.C.S., F.I.C., for the information that C. Böhmer (*Landw. Versuchsst.* 1882), found 3.33 per cent. and C. Kranch 5.01 per cent. of asparagine in the dry matter of asparagus, and that as the average amount of dry matter in asparagus is, according to J. König, 6.25 per cent., the percentage of asparagine in the plant as grown would be from 0.2 to 0.3.

This is probably only about the quantity I obtained from the asparagus I ate, but it must be remembered that I took only the tender upper portion of the stalks in which the quantity might be considerably larger than in the stalk as a whole, for asparagine is specially abundant in the young shoots of some plants that contain it, and that, as Mr. Lloyd also says, "There does not appear to be any very certain knowledge as to the quantity of asparagine in asparagus." The same appears to be the case with regard to the pulses and mushrooms which I previously investigated, so that the results of physiological chemistry are at present more accurate and reliable than those of chemistry unassociated with physiology.

The human body is thus seen to be an analytical laboratory, giving not only qualitative results but also quantitative results of very considerable accuracy, and an observation of the capillary reflux night and morning made and recorded in less than three minutes, will give an indication as it did in the case of asparagus that some introduction of uric acid or xanthin is going on, and that further investigation is required to show where it comes from and to estimate its quantity.

With regard to pathology I have no doubt that those diseases which fluctuate with the amount of readily available uric acid, such as migraine, epilepsy, depression, anæmia, insomnia, arthritis, and catarrh, show not only seasonal variations due to changes of temperature and its effects on the solubility of uric acid in the blood, which I have already pointed out, but also more or less marked variations according to the poisonous vegetables that are obtainable.

Thus I recently saw a patient whose blood decimal had fallen some 15 to 20 per cent. as the result of a week or two of asparagus, the diet being otherwise correct; and several other patients in whom one or other of the above troubles had been increased just as in myself. Hence it comes about that in these diseases there can be clearly seen the effects of the asparagus season, quickly followed by the pea and bean season, and this by the mushroom season, but fortunately these seasons are all temporary, and even at worst they cannot dispute the bad pre-eminence of the poisons in flesh and tea, which are taken steadily all the year round and which

produce, as regards the blood and its circulation identical results with those here recorded.

NOTES.

[1] The capillary reflux is the time measured in half-seconds, that the blood and colour take to return into a given area of skin blanched by a known pressure applied for a definite and measured time. See BRITISH MEDICAL JOURNAL, October, 1899, and *Uric Acid*, Edn. v. See also The *Edinburgh Medical Journal*, July, 1901. [2] Blood granules are those precipitated in blood by solution of chloride of ammonium. See *Uric Acid*, Ed. v. p. 91. [3] Appendix issued 1872.

## WAS LUIGI CORNARO RIGHT?

By E. H. VAN SOMEREN, M.R.C.S.,
Venice.

MR. VAN SOMEREN said: Being a young and obscure general practitioner, it is with some trepidation and an apology, that I present myself before this Section. The reasons for my doing so are: First, that I believe that a hitherto unsuspected reflex in deglutition has come to light, which has an important bearing on health, the prevention of disease and on metabolism. Secondly, that any theory whatever based on a possible physiological function claiming to diminish, as this does, the amount of sickness and suffering now existent, should have serious investigation. Thirdly, that I desire to enlist your skilled help in the consideration of theories I have doubtless crudely erected on my premiss.

According to the *Encyclopædia Britannica*, Luigi Cornara (1467 to 1566) was a Venetian nobleman famous for his treatises on a temperate life. Through some dishonesty on the part of his relatives he was deprived of his rank, and induced to retire to Padua, where he acquired the experience in regard to food and regimen which he has detailed in his works. In his youth he lived freely, but after a severe illness at the age of forty, he began, under medical advice, gradually to reduce his diet. For some time he restricted himself to a daily allowance of twelve ounces of solid food and fourteen ounces of wine; later in life he still farther reduced his bill of fare, and he found that he could support his life and strength with no more solid meat that an egg a day. So much habituated did he become to this simple diet, that when he was above seventy years of age the addition by way of experiment of two ounces a day had nearly proved fatal. At the age of eighty-three he wrote his treatise on the "Sure and Certain Method of Attaining a Long and Healthful Life," and this work was followed by three others on the same subject, composed at the ages of eighty-six, ninety-one, and ninety-five respectively. "They are written," said Addison (*Spectator*, No. 195), "with such a spirit of cheerfulness, religion, and good sense, as are the natural concomitants of temperance and sobriety." He died at the age of 98.

Now, was Luigi Cornaro right? Did he make use of a physiological process unknown to us, of the value of which he was not cognisant? To live to an advanced age must we be as temperate as he, reducing the quantity of our food to a minimum required by Nature?

That we all eat more than we can assimilate is unquestionable. How can we determine the right quantity? Instinct should guide us but an abnormal appetite often leads us astray. Nature's plans are perfect if her laws are obeyed. Disease follows disobedience. Wherein do we disobey?

We live not upon what we eat but upon what we digest, then why should undigested food, recognisable as such, be deemed a normal constituent of solid egesta?

Something like the following must be a common experience to general practitioners, especially to those practising on the Continent. The patient comes to see us and volunteers the information that he or she has gout, rheumatic gout, or dyspepsia. Symptoms are asked for, the case is gone into carefully for causation. An appropriate diet and an appropriate bottle of medicine prescribed. As the patient leaves the room, we may, or may not, call attention to the fact that both teeth and saliva are meant to be used. The patient returns, better, unaffected, or worse. If better, he remains so while under treatment and relapses when he returns to ordinary habits. If unaffected, or worse, we try again and again until we despair. Then take or send him to a consultant. Temporary benefit, possibly owing to renewed hope, results, but finally the unfortunate gets used to his suffering and, if he can afford it, is sent to join the innumerable host that wander from one *Bad* to another, all Europe over, trying, praising, and damning each in turn. Their manner of living is of course at fault. Nature never intended that man should be perpetually on a diet and hugging a bottle of medicine, nor did she ordain that he should go wandering over the map of Europe drinking purgative and other waters.

Though early yet to speak with certain voice, it would seem that we are provided with a guard reliance on which protects us from the results of malnutrition. There seems to be placed in the fauces and back of the mouth a monitor to warn us what we ought to swallow and when we ought to swallow it. The good offices of this monitor we have suppressed by habits of too rapid eating, acquired in fancy or youth.

Last November, my attention was called by Mr. Horace Fletcher, an American author, living in Venice, to the discovery in himself of a curious inability to swallow, of a closing of the throat against food unless it had been completely masticated. My informant stated that he noticed this peculiarity after he had begun to excessively insalivate his food, both liquid and solid, until all taste had been removed from it. The tasteless residue in the mouth being refused by the fauces required a forced muscular effort to swallow. He further told me that since adopting this method of eating he had been cured of two maladies, adjudged chronic, the suffering from which rendered him ineligible for life insurance. His weight had been reduced from 205 to 165 pounds. He had practised no abstemiousness, had indulged his appetite, both as to selection and quantity, without restraint, and for the last three years had enjoyed perfect health.

After his cure he was accepted without difficulty, the last examination finding him an unusually healthy subject for his age. Having leisure, he had spent three years in investigating the cause of his cure, had pursued experiments upon others, and had extended his inquiries, both in America and Europe, until our meeting in Venice. He had also published a statement and inquiry in book form, entitled "Glutton or Epicure," which had been favourably reviewed by the *Lancet*.

For nearly a year I also had been experimenting upon myself and others with various diets, and was ready to believe that in the manner of taking food, and not altogether in its varying matter, lay perhaps its protean effect on our systems. I at once adopted the same method of eating. At the end of six weeks I noticed that not only did the fauces refuse to allow of the passage of imperfectly prepared food, but that such food was returned from the back to the front of the mouth by an involuntary, though eventually controllable, muscular effort, taking place in the reverse direction to that occurring at the inception of deglutition.

What actually happens is this: Food as it is masticated, slowly passes to the back of the mouth and collects in the glosso-epiglottidean folds, where it remains in contact with the mucous membrane containing the sensory end-organs of taste. If it be properly reduced by the saliva, it is allowed to pass the fauces, a truly involuntary act of deglutition occurring. Let the food, however, be too rapidly passed back to these folds, that is, before complete reduction takes place, and the reflex muscular movement above referred to, occurs. The process of this reflex is as follows: The tip of the tongue is involuntarily fixed at the backs and bases of the lower central incisor teeth by the anterior fibres of the genio-hyo-glossi muscles. With this fixed point as fulcrum, the lower and middle fibres of these muscles, aided by those of the stylo-hyoid and stylo-glossi muscles raise the hyoid bone, straighten out the glosso-epiglottidean folds, passing their contents forwards by the fauces, the opening of which is closed by approximation of its pillars and contraction of the superior constrictor. The tongue, arched postero-anteriorally by the genio-hyo-glossi, palato, and stylo-glossi muscles, laterally by its own intrinsic muscles, is approximated to the fauces, soft and hard palates in turn, and thus the late contents of the glosso-epiglottidean folds are returned to the front of the mouth for further reduction by the saliva, preparatory to deglutition.

The word reduction is used for the reason that all foods tested are found, without exception, to give an acid reaction to litmus when served at table. The reflex muscular movement occurs in the writer's case from five to ten times during the mastication of each mouthful of food according to its

quantity and its degree of taste: as often as it recurs the returned food continues to give an acid reaction, while food allowed to pass the fauces is alkaline.

Saliva, flowing in response to the stimulation of taste, seems more alkaline than that secreted in answer to mechanical tasteless stimulation. It is found that the removal of taste from any given bolus of food coincides with complete alkaline reduction. The fibre of meat, gristle, connective tissue, the husk of coarse breads and cellulose of vegetables are carefully separated by the tongue and buccal muscles and rejected by the fauces. To swallow any of these necessitates a forced muscular effort, which is abnormal.

Adult man was not originally intended to take his nourishment in a liquid form, consequently all liquids having taste, such as soups, milk, tea, coffee, cocoa, and the various forms of alcohol, must be treated as solids with taste and insalivated by holding them in the mouth, moving the tongue gently with straight up and down masticatory movements until their taste be removed. Water, not having taste, needs no insalivation, and is readily accepted by the fauces.

In explanation of the phenomenon described, the following theory is advanced: The fauces, back of the tongue, epiglottis—in short, those mucous surfaces in which are placed the sensory end-organs of taste and "taste buds" (the distribution of which, by the way, has yet to be explained), that these surfaces, readily becoming accustomed to an alkaline contact by excessive insalivation and consequent complete alkaline reduction of the food, afterwards resent an acid contact and express their resentment by throwing off the cause of offence by the muscles underlying them.

This phenomenon must not be confused with the case of rumination and regurgitation which from time to time are recorded. The food in this case is not swallowed, nor does it pass any point from which it can be regurgitated. Eighty-one individuals of different nationalities and from several classes of society whom we have studied, are now in conscious possession of their reflexes. It seems readily educated back to function by all who seriously and patiently adopt the habit of what seems only at first to be excessive insalivation.

The dictum, "bite your food well," that we so often use has no meaning to those suffering from the results of malnutrition, especially should they have few or no teeth of their own. I make so bold as to state that dyspepsia *et morbi hujus generis omnes*, will cease to exist if such patients be persuaded to bite their food until its taste disappears and is carried away by involuntary deglutition.

The important point of the whole question seems to be this alkaline reduction of acid food before it passes on to meet digestive processes elsewhere which then become alternately acid and alkaline.

In the first few months of infant life, when saliva is not secreted, Nature ordains that mammary secretion be alkaline. With the eruption of teeth comes an abundant flow of saliva and a synchronous infantile capacity for managing other foods. This flow of saliva depends on a thorough demand and use to maintain its generous supply. It is just at this time that children learn to bolt their food, the demand fails, with a consequent detriment to the salivary glands, digestive processes, and the system generally.

A., B., C. and D. were placed on an absolute milk diet. A. drank his milk in the ordinary way, and at the end of three days begged to discontinue the experiment. B., C. and D. insalivated theirs, but to a varying extent—B. the least and D. the most. Though D. took most milk, he excreted least fæces; C. excreted less than B. Can one infer that increased insalivation of a non-starchy food ensures its better digestion and assimilation?

As long ago as the seventeenth century, before the transformation of matter into energy by the animal organism known as metabolism was understood, the fact was recognised that by the lungs, kidneys, skin and intestines substances no longer useful to the organism were eliminated, the retention of which would prove harmful. The nature of these substances was unknown, but it was noted that however much the food was increased the weight of the body remained the same. In other words, a state of complete nutritive equilibrium was maintained. The table (exhibited) contains the summary of two experiments in which a state of complete nutritive equilibrium was maintained by individuals of about the same weight on widely different quantities of food similar in quality. The subjects of experiment were a laboratory assistant of Dr. Snyder, of the United States Department of Agriculture, and the author. The experiment of the former was made primarily to show the relative digestibility of the several articles of diet, potatoes, eggs, milk and cream.

"Considerable importance has been attached to the normal action of bacteria in the intestines, and it has even been supposed that the presence of bacteria is essential to life. Such a view has recently been shown to be erroneous by an elaborate and painstaking research carried out by Nuttall and Thierfelder, who obtained ripe fœtal guinea-pigs by means of Cæsarean section carried out under strict antiseptic precautions. They introduced the animals immediately into an aseptic chamber through which a current of filtered air was aspirated, and fed them hourly on sterilised milk day and night for over eight days."

"The animals lived and throve and increased as much in weight as healthy normal animals subjected to a similar diet for the purpose of controlling the results. Microscopic examination at the end of the experiment showed the alimentary canal contained no bacteria of any kind, nor could cultures of any kind be obtained from it."

"The same authors in a subsequent paper described the extension of their research to vegetable food; this was also digested in the absence of bacteria. Under such conditions cellulose was not attacked. Hence they consider that the chief function of this material is to give bulk and proper consistency to the food, so as to suit the conditions of herbivorous digestion." (*Schäfer's Physiology*, p. 465, vol. i.)

Now inasmuch as bacterial digestion has no place in the animal economy, surely it can only occur at the expense of the organism? Can micro-organic action take place in the intestines without the production of toxins and the consequent absorption of these toxins into the blood?

We know that the metabolism of a cell is determined by the general physical environment of the whole organism, by supplies of oxygen and water on nervous impulses, and, what chiefly concerns this argument, on the nature and amount of the pabulum supplied to it. This pabulum is derived from the alimentary canal. Are not even those of us who may be enjoying seemingly the best of health supplying to our tissues pabulum containing mild toxins, thus causing an increased katabolic action to occur in each individual cell of our bodies? Are not the blood elements floating in a plasma containing such toxins rendered resistant, weaker, less capable of fulfilling their functions as carriers and combatants of disease? Are not their and our lives in consequence shorter and more painful than need be?

When this reflex is restored to its function micro-organisms get no further than the stomach. They are destroyed there by the acid gastric juices stimulated to their full normal secretion by the presence of a sufficiently alkaline substance. Indigestible matter is eliminated and micro-organisms still existing in the lower intestines, deprived of their means of subsistence, decrease and in time may cease to exist. The body no longer absorbs the toxines these produced, and to this fact may be ascribed the increase of mental energy, the general physical betterment, the cessation of morbid cravings for food and drink, and those of a sexual nature which are noticed and experienced. What has just been stated is based not entirely on experimental evidence, but somewhat upon inference. The inference seems justified because the excreta, more especially of the intestines and skin but also of the kidneys, become almost odourless and entirely inoffensive. The solid egesta are voided thickly covered with mucus and leave the end of the bowel dry and clean. The sense of cleanliness can only then be appreciated to the full, for it is internal as well as external. Flatus are no longer produced. The urine is inoffensive and seems to be materially changed in quality as shown by chemical analysis. Uric acid, chlorides, and more markedly, the aromatic sulphates, are reduced in quantity.

Owing to deliberation in eating necessitated by this new habit satiety occurs on the ingestion of considerably less food. By carefully studying one's self I believe it possible to cultivate an instinct which will regulate, not only the quantity but the quality, of food that the body may need. Although there

results enhanced pleasure in the taking of all foods, rich and simple, and especially in the appreciation of good wines, the quantities of these foods and beverages that suffice to fully satisfy the appetite is much smaller than formerly, while there is a marked preference for the simpler kinds of food. The author now can imagine no more pleasureable meal than one consisting of good brown bread, eggs, butter, cheese and cream. These, with fresh vegetables and a very little fruit, form his staple diet. This tendency and preference for simple foods is the general experience among those who have recovered their reflexes of deglutition.

Following on the ingestion of a lessened quantity of food, and on its better assimilation there is less waste, the fæces are voided less frequently, sometimes only once in five to eight days. The lower bowel is not the reservoir it formerly was, hæmorrhoids cease from troubling and constipation cannot exist. For this same reason the body, at the beginning of the practice, commences to approximate to its normal weight, increasing or decreasing as the individual be too thin or too stout. Temperature and exercise have an immediate influence on the new appetite, which can now be relied upon, for it has become instinct.

A few more words only must be said. It has been simple to state the result of experiments and observations; but the acquiring of this new reflex while pursuing daily occupations is not simple and needs more than a little patience and much serious thought. The habits of a lifetime cannot be changed in a few days or weeks. The shortest time in which the reflex has been re-established is four weeks, and this only by avoiding conversation at meal times and concentrating the attention on keeping the food in the mouth until complete alkaline reduction has taken place and taste has disappeared.

The author finds that he is taking so much less food that, while his mind is open as to his arriving at the final diet of Luigi Cornaro, said to have been only an egg a day of solid food, and, presumably, some liquid nourishment as well, yet it is easily conceivable to him that living a similar life of retirement in a placid environment it would be quite possible to do as he did, hence the title of this paper and the queries at its commencement.

Dr. A. LOCKHART GILLESPIE could not see how it was practicable for any but the few to devote such a length of time to the consumption of food as Mr. Van Someren's directions would entail. Nor could he accept the doctrine without qualification that everybody ate too much. He pointed out that the "ruling race" in every instance where conflict between different peoples arose was always a large consumer of flesh meat, nor were the environments which Mr. Van Someren claimed, as necessary adjuncts, at all possible for most people.

Professor W. H. THOMPSON would like to see an exact experiment with analysis of ingesta and egesta carried out on the lines of Mr. Van Someren's paper. He ventured to think, if this were done, that the difference in calories between the diet advocated, and that ordinarily used, would not be very great.

Dr. ERNEST CARTER, Professor R. J. ANDERSON (Galway), Mr. ELLIS and the PRESIDENT also spoke, and

Mr. VAN SOMEREN briefly replied.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

### THE AGGLUTINATION REACTION IN TYPHOID FEVER.

IN the paper on Enteric Fever at the Imperial Yeomanry Hospital, Pretoria, published in the BRITISH MEDICAL JOURNAL, October 5th, p. 976, I omitted to refer to the subject of the value of the agglutination reaction in enteric fever. It should have been stated that this reaction was applied to a number of the cases, but was not employed as a matter of routine. It is noteworthy that a positive reaction was only obtained in 64.5 per cent. of cases clinically regarded as certainly enteric.

This difference between the clinical diagnosis of enteric fever and the agglutination reaction raises in the first place the question of the personal equation as regards the data. But regarding the data as reliable for the sake of argument, it is quite possible to explain this divergence on the supposition that the cultures used in the test contained a different strain of the bacillus typhosus from that with which the patient was infected. Failure to give the agglutination reaction is therefore analogous to the failure of inoculation to protect absolutely against enteric fever in South Africa and of the failure of one attack of enteric fever to protect against a second attack.

As a practical outcome of this hypothesis it follows that inoculation should be made with a mixture of cultures obtained from as many different sources as possible.

London, W. H. D. ROLLESTON.

ERRATUM.—In the paper by Dr. Rolleston in the JOURNAL of October 5th, p. 977, 14 lines from bottom of column 2, for "many" read "any."

### CASE OF HYDATID CYST OF THE SCROTUM CLOSELY SIMULATING HYDROCELE.

ONE of my old teachers at Aberdeen used to impress upon his students the necessity of keeping in mind the possibility of hydatid cysts being the cause of obscure tumours in any part of the body. The peculiarity of the case now to be described serves as an example of the usefulness of this advice:

A. K., a strong young carter, aged 26, presented himself to me on account of "enlarged testicle." On examination there was found a swelling on the left side of the scrotum about the size of a small cocoa-nut, in shape slightly pyriform, with the base downwares; the skin over the swelling was smooth: fluctuation was most distinct, and by the candle-light test the testicle of that side was readily made out lying above and behind the tumour. The history was that eight years before a small tumour was noticed which gradually increased in size. There was never any pain felt, and no violence had ever been sustained at the part.

A diagnosis of hydrocele was made, and I advised the patient to have the tumour tapped, but he did not wish to have this done at once, as he had to make arrangements for his work being carried on while he was laid up. Eventually, three weeks later he again came, stating that while on his way to see me he felt "something come out of the swelling and fall down his leg." This "something" he showed me; it consisted of a small globular mass containing clear contents, and having the feel of an over-ripe gooseberry. The spot where this globe had been expelled was at the most dependent part of the scrotum. On enlarging the minute opening I was able to remove a large number of similar globes, varying in size from a pearl-barley seed to a small pigeon's egg. Many of these globes burst before and during removal. There was no distinct membrane enclosing all the small cysts in one mass, but attached to the greatly hardened and thickened connective tissue of the scrotum and among the cysts were many pieces of broken-down membranous tissue which might have been the remains of an original enveloping membrane: no bleeding occurred during removal.

All 544 cysts were counted after removal. Careful examination of several did not reveal any scolices or hooklets, and the diagnosis was accordingly one of sterile hydatid cyst. The patient made an excellent recovery.

The case is of interest for the following reasons: (1) The scrotum not being mentioned in textbooks as a site for hydatid cysts; (2) the difficulty of differential diagnosis between this and hydrocele of the tunica vaginalis; thus a clear fluid like that of hydrocele would be drawn off, and this would almost certainly be accepted as conclusive evidence of hydrocele; (3) the slow rate of growth; (4) the large number of cysts removed.

Larnaca, Cyprus. GEORGE A. WILLIAMSON, M.A., M.D.

### SPONTANEOUS CURE OF INTUSSUSCEPTION.

DR. BOISSIER'S case of intussusception in the BRITISH MEDICAL JOURNAL of September 28th, p. 900, is very interesting; but such cases of spontaneous cure are not quite so rare as he imagines. Many years ago I remember attending a young patient of about 10 years of age, from whom a good portion of the bowel came away, and who ultimately made a good recovery; and the late Dr. Bowman, whom I took to see the case with me, told me he had had a similar case of a

grown-up person who parted with a much larger portion—also getting well.

Relative to the treatment of the above complaint, I had a little boy of about 3 years of age under my care some six years ago. He was seized suddenly with extreme collapse, pulse almost imperceptible, pallor, vomiting, and the passing of slime and blood, while a small lump about the size of a walnut appeared in the right ileo-cæcal region. I was at once sent for, and began to employ injections, frequently repeated, sending at the same time for a surgeon; but before his arrival the bowels had acted and the lump had disappeared—the child rapidly rallying.

Sunderland. B. Strachan, M.B.

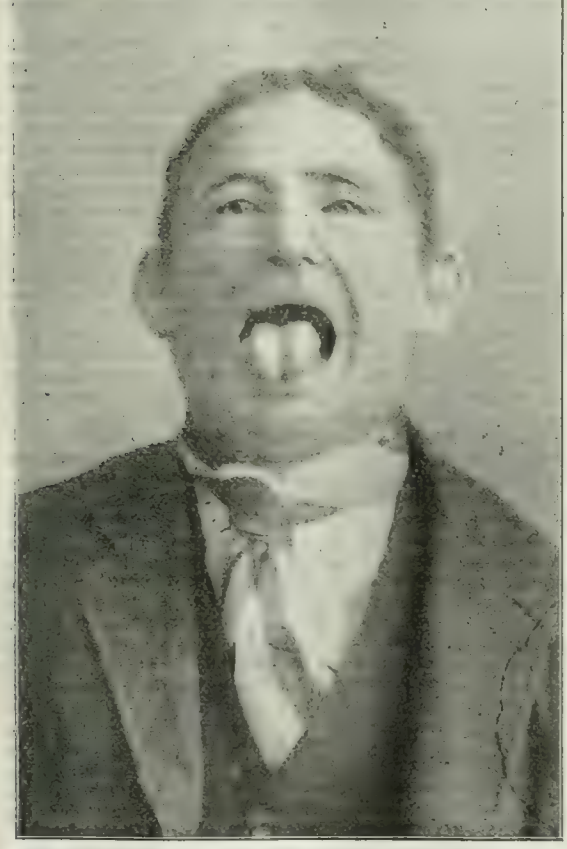
# REPORTS
ON
## MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

### ROYAL INFIRMARY, PRESTON.

CASE OF BIFID TONGUE.

(By H. Haward Bywater, M.B.Viet., Senior House Surgeon to the Infirmary.)

The patient, a corporation labourer, aged 35, came to the Preston Royal Infirmary, suffering from burns to the face. On asking him to put out his tongue I noticed that it was



separated into two parts by a central depression extending backwards for quarter of an inch from the tip. From this depression a median groove (which was deeper near the bifid tip) extended backwards on the dorsum of the tongue and also beneath it. The tongue was of normal size, and healthy in appearance. The frænum linguæ was normal. The patient has had this deformity all his life. This congenital malformation is very rare. I have only found mention of one previous case—that communicated by Brothers to the New York Pathological Society, and quoted by Holt in his book on *Diseases of Children*.

Gould and Pyle (*Anomalies and Curiosities of Medicine*, page 255) refer to cases of supernumerary tongue, and quote that of the Rev. Henry Wharton, Chaplain to Archbishop Sancroft, who in his journal, written in the seventeenth century, says that he was born with two tongues and so passed through life, one, however, gradually atrophying.

# REPORTS OF SOCIETIES.

## OBSTETRICAL SOCIETY OF LONDON.

Peter Horrocks, M.D., F.R.C.P., President, in the Chair.

*Wednesday, October 2nd, 1901.*

Leukæmia in Pregnancy.

Dr. G. E. Herman read a paper on this subject, reporting a case of his own and 12 other cases already published. Critical examination showed that in 5 of these latter cases the evidence of leukæmia was deficient. There were therefore only 8 cases from which to draw conclusions as to the mutual influences of pregnancy and leukæmia. These agreed on the following points: (1) The presence of an enlarged spleen and liver caused patients with leukæmia to suffer more from the abdominal distension of pregnancy than healthy women; (2) the symptoms of leukæmia were aggravated during pregnancy; (3) in pregnancy with leukæmia there was a great tendency to abortion or premature labour; (4) death sometimes quickly followed the termination of pregnancy with leukæmia; (5) if the patient survived the termination of pregnancy great improvement took place. The author concluded from these facts that in pregnancy with leukæmia the induction of premature labour or abortion was indicated as a therapeutic measure.

Dr. Amand Routh remarked that the paper was one of special value. As Dr. Herman had said, the combination was one of a blood dyscrasia with a condition causing pressure from the presence of a large spleen. It was, therefore, different from ordinary blood dyscrasias such as in other specific diseases, and also from conditions causing simple pressure, such as the presence of an ovarian tumour; and these facts imparted a special feature to the condition. He asked for information in regard to the effect of leukæmia on the *fœtus in utero*. A good deal had been written on the transmission of disease to the fœtus: and it appeared that a process of filtration might be effected by a perfect chorionic epithelium, whilst a defective epithelium would allow of the transmission of disease to the fœtus. This was illustrated by cases of twins, in which one fœtus was healthy and the other affected with the same disease as the mother, such as had been shown to obtain in cholera, glanders, malaria, erysipelas, and many of the acute specific fevers. Had any of the children of these leukæmic women had their blood examined after birth? He quite agreed with Dr. Herman's conclusion that premature labour should be induced when symptoms threatened to become urgent, without waiting for serious developments.

Dr. Galabin had met with one instance of the association of pregnancy with a disease as to which he was rather doubtful whether it should be classed as splenic leukæmia, or so-called pseudo-leukæmia. There was a large splenic tumour, reaching as low as the crest of the ilium, with extreme anæmia and tendency to hæmorrhage. But the relative proportion of leucocytes in the blood was only moderately increased, not to that extreme degree which was seen only in leukæmia. He had watched the lady for several years, and under treatment with arsenic and large doses of quinine the tumour somewhat diminished in size and the general condition improved. On one occasion she came for consultation, being about three months pregnant, and reported herself as feeling better. The spleen also seemed to have diminished

in size since the pregnancy. He had had no experience of the effect of pregnancy on such a condition, and feared grave results from the tendency to hæmorrhage; but, in view of the actual improvement, did not advise interference at that time. The patient shortly afterwards went to France, and there it was decided to induce abortion before the child had become viable. He did not know whether the reason was the abdominal distension or the general symptoms. The result was that the patient died undelivered, and, as far as he could learn from the friends, the cause of death was hæmorrhage.

The PRESIDENT was surprised to hear how little hæmorrhage there was from the uterus in cases of miscarriage during leukæmia. Hæmorrhages were common in this disease, and probably that accounted for the miscarriages, the bleedings occurring into the placenta, and so destroying the ovum or fœtus. In some cases hæmorrhages occurred some time before the actual miscarriage, and thus allowed certain changes to take place which prevented flooding. He understood Dr. Herman to advocate the induction of miscarriage or labour as soon as the presence of leukæmia was discovered, without waiting for any bad symptoms, such as pain, etc.

Dr. HERMAN said that the infant was not affected in these cases. He advised induction of premature labour or abortion as a therapeutic measure only in cases in which the symptoms caused suffering and were aggravated after the onset of pregnancy.

SPECIMENS.

The following specimens were exhibited:—Dr. A. L. GALABIN: (1) Subperitoneal fibromyoma; (2) sarcoma of uterus.—Dr. HERBERT SPENCER: Ovarian cyst, which ruptured three days after labour.—Dr. WILLIAM DUNCAN: (1) Fibromyoma of uterus; (2) papillomatous cyst of broad ligament.—Dr. H. R. ANDREWS: (1) Fibromyoma of ovary; (2) melanotic sarcoma of ovary.—Dr. ROBERT WISE: Volsella forceps for friable cervix.—The specimens were discussed by Mr. RUMLEY DAWSON, Mr. ALBAN DORAN, the PRESIDENT, Dr. F. J. MCCANN, Dr. AMAND ROUTH, and Dr. T. G. STEVENS.

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GLASGOW SOUTHERN MEDICAL SOCIETY.—The opening meeting of the session was held on October 3rd, in the rooms of the Southern Medical Club, South Portland Street, Glasgow, Dr. WILLIAM WATSON in the chair. There was a large attendance of members, and after some formal business had been transacted the meeting proceeded to the election of office-bearers, with the following result:—*Honorary President*: Thomas McCall Anderson, M.D., F.F.P.S.G. *President*: John Stewart, M.D. *Vice-Presidents*: Duncan MacGilvray, M.B., C.M., and Thomas Richmond, L.R.C.P., L.F.P.S. *Treasurer*: Andrew S. Tindal, M.D. *Secretary*: John Fraser Orr, M.D. *Editorial Secretary*: Andrew Wauchope, M.B., C.M. *Seal Keeper*: Matthew Dunning, M.B., C.M. *Extra Members of Council*: John Lindsay Steven, M.D., F.F.P.S.G., Hugh Kelly, M.D., and James Hamilton, M.B., C.M., F.F.P.S.G. *Court Medical*: William Watson, M.D., Ebenezer Duncan, M.D., F.F.P.S.G., Robert Pollok, M.B., C.M., F.F.P.S.G., Thomas Kirkpatrick Monro, M.A., M.D., F.F.P.S.G., and Alexander Napier, M.D., F.F.P.S.G. *Representative to Victoria Infirmary*: Charles E. Robertson, M.D.

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TORQUAY MEDICAL SOCIETY.—The new session was opened on October 4th by an address from Dr. T. DYKE ACLAND, Physician to St. Thomas's Hospital, on the Recognition of Certain Intrathoracic Conditions which justify Surgical Treatment. The address, which was illustrated by diagrams, was listened to with intense interest by a representative gathering of the medical men of Torquay and its neighbourhood, the subject chosen being one which specially appealed to the professional instincts of the doctors of a South Coast health resort. Although coming from a physician it was a plea for surgical measures in the treatment of certain conditions of intrathoracic disease after a correct diagnosis had been made, the lecturer admitting, however, that a correct diagnosis was not always possible during life.—In the evening Dr. Acland was entertained at dinner at the Queen's Hotel by the members of the Society, the PRESIDENT, Dr. Wm. Powell, being in the chair, and a most enjoyable evening was spent.

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SUCCESSFUL VACCINATION.—Dr. T. Makin Draper, Public Vaccinator for the Wiggenhall District of the Downham Union, has received the Government grant for successful vaccination.

# REVIEWS.

REPORT OF THE WORK OF THE EDINBURGH AND EAST OF SCOTLAND SOUTH AFRICAN HOSPITAL. Edited by D. WALLACE, C.M.G., F.R.C.S.E., and F. D. BOYD, M.D., F.R.C.P.E. Edinburgh: Oliver and Boyd. 1901. (Demy 8vo, pp. 206. 5s. 6d.)

ONE of the special features of the South African war has been the working of civil hospitals along with the military medical service, and much of the value of reports like this lies in the fact that the record of their difficulties and experiences may serve as guides for the future. Considerable difficulties seem to have been met in the early history of this hospital. Leaving England on March 24th, 1900, its *personnel* and equipment reached Capetown on April 10th; owing to the congested state of the railroads at that time possibilities of the hospital being passed at once to Norval's Pont, where it was intended that it should be erected, were remote. It was accordingly ordered to proceed to Port Elizabeth; there it arrived on April 15th, and by April 24th reached its destination at Norval's Pont. The erection of the hospital was at once commenced, but owing to neglect of many details at home in the selection and preparation of constituent parts, a far greater amount of time and labour had to be expended in this undertaking than had been anticipated. By the end of May the hospital was fairly complete, but previous to this date a certain number of sick had been treated, chiefly as outpatients. Originally planned as a one-hundred-bed hospital it was soon increased to 150 beds, and from this date received a fairly steady supply of patients. It was ultimately handed over to the military medical authorities on October 15th, the staff and *personnel* returning to England. During the five months to which this report relates, 507 cases were admitted to hospital; only 14 deaths occurred, and 13 of these were enterics.

Apart from a historical and general account of its administration this report consists of two parts, one a summary of surgical cases and the other of medical. The surgical section is by Messrs. DAVID WALLACE and GEORGE L CHIENE, and deals with the more important of the total 166 surgical cases admitted. A considerable number of interesting cases are described, but perhaps the most noteworthy is that of Private D., No. 6745, H.L.I., who had his lower jaw carried away by a pom-pom shell ten days prior to admission. This and other cases are extremely well illustrated by good photogravures, and from the half-dozen which demonstrate Private D.'s case it is clear that an extremely creditable result was obtained in an anything but promising case. The majority of the other cases given demand no special mention; the greater number seem to have done very well, but an evident feature of the work of this hospital was the fact that, placed as it was at Norval's Pont at a period when the general advance into Republican territory had taken place, the surgical cases only came under treatment some eight or ten days after initial injury.

For the report of medical cases Dr. BOYD is responsible. These constituted the bulk of the work of the hospital, no fewer than 156 being cases of enteric fever. A very lucid analysis of these is given, which if not offering any new ideas as to the etiology and treatment of this bane of armies in the field, is still worthy of perusal by the student and physician. In fact, we are disposed to think that careful reports and analysis of cases like these are likely to be of far more use to most students than many of the ordinary textbooks of medicine. It is much to the credit of this hospital staff that their percentage of deaths from enteric fever was but 8.3. The book concludes with a number of appendices and statistical tables: we should have liked to have seen the question of sanitation discussed a little more fully.

In Appendix 2 a brief account is given of the disposal of excreta. The system of latrine pits in a permanent camp is strongly condemned, and it is stated that it was abandoned at Norval's Pont; the dejecta were removed in night carts, and discharged in the pits some miles from the camp, the pits being regularly filled in. Stools of enteric patients in the hospital were disinfected by carbolic 1 in 20, and mercury perchloride 1 in 1,000: the efficacy of the disinfection was checked from time to time by bacteriological examination, and found

thoroughly satisfactory. The disinfection of the linen, it is stated, was carried out at a considerable distance outside the hospital grounds; all soiled or infected linen from enteric fever cases was steeped for twenty-four hours in a tank containing a solution of mercury perchloride, 1 in 2,000, or carbolic 1 in 20. After this it was sent to the laundry for washing. With regard to mattresses and bedding, soldiers' kits, and other articles, which could not be subjected to disinfection in this way, they were treated with formaldehyde vapour in the following way:

A small house was built of galvanised iron. It was lined with canvas, and floored with canvas. On the canvas was pasted paper, and the whole was closely painted inside to render it entirely air-tight. Mattresses, etc., were placed in this chamber, and formaldehyde vapour generated from formalin lamps. This disinfection was carefully checked by bacteriological observations. Linen was soiled with enteric stools; it was then exposed to the vapour of formaldehyde gas for twelve hours. Several cultivations were made, and in every case the tubes remained sterile. It was evident, therefore, that disinfection was efficient. The disinfected house was found very useful for the disinfection of the kits and clothing of the patients, a very necessary proceeding in a country where lice are so prevalent.

Water had at first to be fetched from a spring some few miles away in water carts, but afterwards the engineers by boring obtained an inexhaustible supply of water at about 100 feet below the surface. The water used for drinking purposes was all filtered through Pasteur-Chamberland filters. The filters worked automatically, and a pipe conducted the water through the wall of the soda water house, where it was made into aërated or soda water. In each ward a large vessel was kept filled with filtered water for drinking purposes.

The printing, illustrations, and general appearance of this volume are all that could be desired.

## ANATOMY AND EMBRYOLOGY.

Dr. Wolff's paper[1] upon the Mutual Relations between the Form and the Functions of Individual Portions of the Organism was originally communicated to the German Society of Naturalists and Physicians, and he has been well advised to publish it in the form of a monograph, for it contains much that is of importance both to men of science and to practical surgeons. One of the objects of the communication is to furnish further proofs in favour of the hypothesis that "function produces structure and form," but in the course of his argument Dr. Wolff lays stress upon the practical use of a proper knowledge of the basis of this hypothesis in the treatment of deformities. Bones alone are referred to in support of the thesis, and the argument is opened by a description of Cullman's discovery that the lamellæ in the cancellous tissue of bones are arranged according to mathematical laws in a manner best adapted to support pressure and to resist the tension to which the bone is subjected in the performance of its functions. Dr. Wolff then proceeds to show that when a bone has been broken and the ends have united, with more or less displacement, and the limb has again been brought into use, the lamellæ of the cancellous tissue are rearranged in the lines along which the pressure and tension are distributed, in accordance with the new form which the bone has assumed. He points out that two things have to be considered in connection with every fracture: first the union of the segments, and then the transformation which affects the whole structure of the bone; the latter commences as soon as the healed bone is brought into use, and is the result of the pressure and tension to which the bone is subjected—that is, it is the result of the function of the part. He asserts his disbelief of the long-cherished opinion that after the healing of a broken bone the internal callus is removed for the purpose of re-establishing the medullary canal, and that the re-establishment of the canal is an attempt on the part of Nature to reproduce the original form of the bone, and he urges, on the contrary, that the re-establishment of the medullary canal is absolutely unessential, and that Nature is in no way inclined to reproduce the original form, but only the original function of the bone, to which end she produces from the more or less displaced segments that form which is best adapted to subserve the functions under the new conditions. In other words, Dr. Wolff argues that in the case of any deformity of bone, either congenital or produced by disease or injury, as soon as the bone is brought into use, that is as soon as it becomes functional, the internal structure will be adapted to support the pressure and to resist the tension which are brought to bear upon it, and the arrangement of the internal structure will result in the production of a definite external form; this being the case, the generally-recognised treatment of deformities by the application or the removal of pressure in certain directions, or by the operative removal of portions of the deformed tissue is, he considers, based upon erroneous ideas. The proper scientific treatment is to place the deformed part as much as possible in the position of the normal part, and then to allow it to perform its functions, when it will follow, of necessity, that the internal structure of the bones will adapt itself to the functions of the part and the external form will gradually become normal. Certainly no more striking demonstration could be given of the results of treatment based upon this principle than the two photographs which represent the condition of the bones in a case of congenital club-foot when first seen, and nine months after the commencement of treatment.

Alterations in the position of the various portions of the respiratory apparatus are of considerable practical importance, and Professor Mehnert[2] is to be congratulated upon his masterly monograph, in which he deduces from the results of his own elaborate and careful investigations, and from a summary of the work of previous observers, a series of conclusions regarding the changes which occur in the topographical relations of the lower margin of the cricoid cartilage, the bifurcation of the trachea, the lower margins of the lungs, and the upper surface of the diaphragm at different periods of development. Professor Mehnert's general conclusions are that during the whole period of life, from the fœtal condition to old age, there is a continuous descent of all portions of the respiratory system, and that the descent is due partly to loss of the elasticity and tonicity of the structures which attach the respiratory organs to the base of the skull and partly to alteration of the inclination of the base of the skull itself. The descent is so marked that the lower border of the cricoid cartilage, which is at the level of the disc between the second and third cervical vertebræ in the fœtus, is at the level of the first dorsal vertebra in old age, and the bifurcation of the trachea changes from the level of the second to the level of the seventh dorsal vertebra.

With the object of training the student's powers of observation, Mr. Parsons[3] has prepared a series of outline drawings of dissections of the right and left upper and lower extremities, the intention being that the student should fill in the details of each figure from his own part. The series includes excellent outline figures of all the dissections usually made, and there can be no doubt that the student who uses them intelligently will train his powers of observation very considerably. It is to be hoped that the series will ultimately include outline figures of thoracic, abdominal, and pelvic dissections, and that this series of outlines will be more permanently successful than those which were published by other anatomists in the past.

Whilst avoiding the elaboration of detail, and including only so much of comparative embryology as directly elucidates human embryology, Professor Heisler in his *Textbook*

[1] *Ueber die Wechselbeziehungen zwischen der Form und der Function einzelner Gebilde des Organismus.* Von Dr. Julius Wolff. Leipzig: F. C. W. Vogel. 1901. (Demy 8vo, pp. 35, 22 illustrations. M. 1.)

[2] *Ueber topographische Altersveranderungen des Atmungsapparates und ihre mechanischen Verknupfungen an der Leiche und am Lebenden untersucht.* [Upon the Alterations in the Topographical Relations of the Respiratory Apparatus at Different Periods of Life and their Mechanical Associations investigated upon the Dead and Living.] Von Dr. E. Mehnert, a.o. Professor der Anatomie und Prosector am Anatomischen Institut zu Halle. Jena: Gustav Fischer. 1901. (Roy.8vo, pp. 152, 3 plates, 29 illustrations. M. 6.)

[3] *Outlines for Dissectors.* Part I: Upper Extremity—Right, Upper Extremity—Left. Part II: Lower Extremity—Right, Lower Extremity—Left. By F. G. Parsons, F.R.C.S., Lecturer and Senior Demonstrator of Anatomy at St. Thomas's Hospital Medical School; Examiner in Anatomy for the Fellowship of the Royal College of Surgeons of England. London: John Bale, Sons, and Danielsson, Ltd. (Demy 4to. 1s. 6d. each part.)

*of Embryology*[1] has endeavoured to give a complete and intelligible outline of his subject, and his aim has been well and consistently carried out. The illustrations are judiciously chosen, and, although many are old friends, figuring in every textbook, others less familiar are included; some are modified so as to render them clearer, and some semidiagrammatic original figures will be found very useful. Certain words are used which jar upon the English reader, such as "to functionate"; "fetus" for fœtus, though some etymological justification exists for this last; and the use of the word "fundament" (a word, we believe, first introduced, with an apology, by Minot) in the place of germ, rudiment or anlage, seems hardly elegant. But these are very minor matters. The text, with few exceptions, is clear, concise, and accurate, and the short summaries and the tables, such as the chronological table of the principal events in the development of the human embryo, with which many of the chapters conclude, will serve a useful end in enabling the student to review that which he has just read. For particular praise we would single out the account of the pronephros, metanephros, and Wolffian bodies, and their relationship to the permanent kidney and the genital apparatus, which is illustrated by excellent coloured figures. The development of the brain is well told, and a more complete account is given of the pineal gland and of the pineal eye of reptiles than is usually to be found in similar works. While of course much that the book contains may be found elsewhere, for instance in the embryological portions of the last edition of *Quain's Anatomy*, a good deal is included which is only to be found in monographs, and the book, whilst not claiming any great amount of originality, is excellently adapted to its avowed purpose.

In his work on malformations of the palate and their relation to those of the nose, eye, and ear,[2] Dr. Danziger has found an interesting subject for investigation, and has produced a monograph of originality and interest. Taking as a basis the relationship of the interpalatine fissure to the median antero-posterior plane of the body, he shows that according as the fissure lies obliquely to the plane, or is deviated from it, so numerous degrees of asymmetries and abnormalities of the bones of the face and cranium are associated; and in particular he instances defects of the upper and lower jaws and deviated septum nasi. Many cases are given in which such conditions as astigmatism, scoliosis, and defects of the external and internal auditory meatus, are met with in patients in whom the interpalatine fissure is deviated from the right line. The writer appears to have been fascinated by his subject, and to have pursued it with an enthusiasm which has probably led him to overreach himself somewhat, for he gives some cases wherein all the abovementioned abnormalities were associated with idiocy and other forms of mental aberration. The monograph may, however, be read with much pleasure, on account of its originality and freshness.

*The Human Ear*[3] is a very disappointing book; the writer has evidently devoted a great deal of work to its preparation, and has searched out the literature on the subject, but she fails to give to the scientific reader the kind of evidence which is required to carry any sort of conviction, and it is mixed up with Lavater's *Physiognomy*, and equally valueless material of a gossipy kind. Some of this might have been interesting enough had it been in addition to a scientific treatment of the subject, but it cannot be accepted in its place. The writer holds that character may be judged by the ear, even to the extent of influencing the choice of a career, but on this, as well as on the question of the inheritance of forms of the ear, the reader is left in the dark whether her conclusions are drawn from four or five or from a hundred observations, while the publication of the names of the possessors of a good many of the ears figured leads to a suspicion that the writer attaches too much importance to individual instances.

[1] *A Textbook of Embryology for Students of Medicine.* By J. C. Heisler, M.D., Professor of Anatomy in the Medico-Chirurgical College, Philadelphia. Philadelphia and London: W. B. Saunders. 1899. (Demy 8vo, pp. 300, illustrations 104, 26 coloured. 10s. 6d.)

[2] *Die Missbildungen des Gaumens und ihr Zusammenhang mit Nase, Auge, und Ohr.* By Dr. Fritz Danziger, Aurist in Beuthen, O.S. Wiesbaden: J. T. Bergmann and Glasgow: F. Bauermeister. 1900. (Roy. 8vo, pp. 54, 33 illustrations. 3s. 3d.)

[3] *The Human Ear: Its Identification and Physiognomy.* By Miriam Anne Ellis. London: Adam and Charles Black. 1901. (Demy 8vo, pp. 219, 51 illustrations. 3s. 6d.).

## SOME PHYSIOLOGICAL BOOKS.

The system of teaching advocated by Dr. W. Townsend Porter, Associate-Professor of Physiology in the Medical School of Harvard University, has excited a great deal of interest among teachers of physiology, and the laboratory handbook which he has now published, with the title *An Introduction to Physiology*,[1] will be useful as affording a practical illustration of his principle. This is that the student should for himself perform, as far as is practicable, those classical experiments that are the groundwork of the science. It is maintained by the upholders of the system that the student should be "trained" rather than "informed," and that when he is trained he may be trusted to inform himself. Accordingly, in this book, which appears to be practically a description of the system at present in use at Harvard University, the physiology of muscle and nerve is taken as the means whereby those all-important habits of mind may be developed—the habits of exact observation and clear reasoning. The student is first educated in the art of making muscle-nerve preparations and the methods of electrical stimulation, then the experiments on which the knowledge of the physical and vital properties of nerve and muscle is built up are described step by step, and an interesting running commentary is kept up throughout. Such abstruse subjects as the polar stimulation of muscle, polar inhibition by the galvanic current, the specific irritability of muscle and nerve, and the action current of muscle and nerve are made little short of fascinating. In later chapters the mechanics of the circulation and the innervation of the heart and blood vessels are treated in a similarly clear, interesting, and even inspiring fashion. At the end of each chapter a list is given of all the apparatus required for the experiments described, much, if not most, of which may be quite easily made in an ordinary laboratory. There are a number of illustrations chiefly of the arrangement of apparatus, which are all the more useful for being diagrammatic. The book is on the excellent type of Huxley and Martin's *Biology*, but is on a different level of educational evolution. It consists, in short, of a very good example of the objective method of teaching, and it is written in a very interesting way. It illustrates also the amount of work which can be done on a new method of teaching also in force at Harvard of completing one subject of study before another is taken up, a method which presents certain obvious advantages but has also certain drawbacks.

The course of practical physiology[2] published by Professor Dubois and Dr. E. Couvreur is composed of a series of lessons in which is set forth the course of practical instruction followed by the students who study advanced physiology for the science diplomas in the University of Lyons. The course is complete and excellent. The French student can investigate on anæsthetised animals the important functions of the respiratory, circulatory, glandular, and nervous organs, and become at the same time habituated to the practice of surgical operations and the administration of anæsthetics, while the less fortunate English student is compelled to confine his experimental studies to the investigation of frog's muscles and nerves. The book is clearly written and well illustrated, and covers, with the exception of the special senses, the whole field of experimental and chemical methods of physiology; in spite of the fact that it contains nothing very new either in matter or form it will be found useful by physiologists engaged in preparing demonstrations or in research.

Dr. Pappenheim has written one of those laborious monographs[3] on a highly technical subject which it is the special

[1] *An Introduction to Physiology.* By William Townsend Porter, M.D., Associate-Professor of Physiology in the Harvard Medical School. Cambridge, Mass.: University Press. 1901. (Demy 8vo, pp. 314, 57 figures. 2.50 dols.)

[2] *Leçons de Physiologie Expérimentale* (Course of Practical Physiology). Par Professor R. Dubois and Dr. E. Couvreur. Paris: G. Carré et C. Naud, 1900. (Roy. 8vo, pp. 388, 303 illustrations. Frs. 14).

[3] *Grundriss der Farbchemie zum Gebrauch bei mikroskopischen Arbeiten.* (Chemistry of the Dyes used in Histology.) Von Dr. Arthur Pappenheim. Berlin: A. Hirschwald. 1901. (Demy 8vo, pp. 490. M. 11.)

faculty of the German scientist to produce, and which the scientists of all nations use, too often without due acknowledgment, to lighten their labours. A great advance in microscopical method was made when histologists, inspired by Ehrlich's researches on the differentation of white blood corpuscles, began to recognise that staining is a chemical process, and that all dyes, to be such, must have either an acid or basic character. The basic dyes are the salts of dye bases, while the acid dyes are the salts of dye acids. These salts stand in the same relationship to each other as chromium acetate does to potassium chromate. Previously the histologist was content to stain the nucleus and differentiate it from the cell protoplasm. Now, recognising these fundamental facts, he seeks to differentiate by dyes the nuclei of the gland cells before and after secretion, the nature of immature blood corpuscles, young and old ganglion cells, spermatogonia and spermatocytes, etc. It is obvious that as the basis of such investigations there must be an adequate knowledge of the chemical nature of the dyes employed. Dr. Pappenheim gives this abstruse information and sets it forth with a masterly hand, discussing not only the chemical nature of the dyes, but the influence of the different fixatives, which throw down out of the cell protoplasm varying coagulation products, and of the nature and use of mordants. In tissue staining a dissociation of the dye first takes place, and then a new compound is formed between the dye principle and the tissue. In each dye we have to distinguish a central colour-forming nucleus or chromophoric group, and a haptophoric basic or acid side-chain group, which is capable of building salts with one or other tisssue product, and so of linking on the chromophor and producing a stain. Dr. Pappenheim in the first part of the book discusses very fully the general constitution of the dyes, the theory of dye processes, the relations of dyes to the tissues and their histological uses, while in the second or special part he examines in detail the chemical constitution of the dyes. Unfortunately the difficulty of the subject matter renders the reading of the book a formidable task.

## THE GERMAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE AND MEDICINE.

The seventy-third meeting of the Association was held from September 22nd to 28th in Hamburg, a town presenting many features of interest and instruction. There is no university in name, but there are laboratories, hospitals, and museums in which university work is done and university instruction given. These institutions, particularly the laboratories of chemistry, physics, and hygiene, which belong to the municipality, can vie in construction and equipment with the best in this country. The city knows their value, and gives as much as the directors require for their maintenance and supplementary equipment. During the winter lectures on no fewer than eighteen subjects, from theology and music to medicine and astronomy, are given; these are all open and free with the exception of the post-graduate medical courses and the practical work in the chemical laboratories.

No attentive visitor to Germany can fail to observe its obvious and continuous progress—industrial, commercial, and scientific; and there can be no doubt that this is due largely to education, with its introduction of scientific methods and consequent desire to advance. In England we seem to have become languid and unpractical. One of our newer universities wishes to exclude biology from the obligatory subjects for a medical degree. Contrast with this the resolution of the German Association to agitate for a wider teaching of this subject at school.

Nearly 3,500 members, not including 1,200 ladies, attended the meeting, but so excellent were the arrangements that there was hardly a hitch. The dinner, too, at which 1,100 were present, went off quite smoothly, without more delays than those introduced by the Continental custom of giving the toasts between the courses. Of other entertainments there were: a dinner given by the Hamburg-America Line to about 1,000 members on board three of their steamers, a reception at the Rathhaus by the Senate, a concert and ball, and the usual excursions.

In remembrance of the occasion each member was presented by the city with a large octavo volume of 610 pages on "Hamburg from a Scientific and Medical Standpoint." In addition, the medical members were given an octavo book of 118 pages on "The Hospitals and Asylums of Hamburg," by the Hospitals Committee, and a quarto volume of 327 pages on the "Hygienic Conditions of Hamburg" by the Medical Committee. All these were profusely illustrated.

The President for the year was Professor O. Hertwig (Munich), but the holder of this office is not burdened with the duty of giving a presidential address. His duties lie chiefly in presiding at committee and business meetings, in opening and closing general meetings, and in replying to the Mayor's address of welcome. One distinctive feature of the meeting this year was the number of general addresses, which was larger than usual, with a consequent reduction of the sectional work. Another feature was the fact that physical chemistry in its various aspects formed the basis of most of these addresses. While this diminished their practical medical value, it added considerably to their theoretical interest.

### Electric Waves.

The first address was given by Professor Lecher (Prague) on Hertz's discovery of electrical waves and its further development. The fact that Hertz was a native of Hamburg lent an additional interest to this subject. After a historical review, in which the work of Faraday, Maxwell, and J. J. Thomson was duly appreciated, Professor Lecher proceeded to deal with these phenomena concerning which theory and experiment were in accord and confirmatory of the electromagnetic theory of light. But he pointed out that when they passed from the phenomena in ether to those amongst the the atoms and molecules of matter, many difficulties arose. For the present Hertz's discoveries had increased the objections of analogising electrical and optical properties, but in the end they would no doubt prove a blessing in disguise and in the same way that the old light waves formed a brilliant means for recognising the molecular constitution of bodies, Hertz's electrical waves would serve in the future. This portion of their domain was as yet mostly unexplored. Amongst the problems which might serve as an illustration was the abnormal absorption of the electric waves by alcohol, an insulator as regards ordinary electric currents, and the abnormal dispersion by the same substance. The long Hertzian waves were more strongly refracted than those of shorter length. The number of functional relations between light, electricity, and matter was large; larger, it was to be hoped, than we at present knew. But to bring all these relations under one law was the final ideal at which physics aimed, and was the goal to which the leaders in science were striving.

### Fertilisation.

Professor Boveri (Würzburg) addressed the meeting on the problem of impregnation. The question to be answered as formally put was: What did the spermatozoon bring to the ovum to excite its development? The existence of so-called parthenogenesis showed that there was no lack of necessary duality for the production of the individual in the ovum: the spermatozoon only removed some inhibitory influence preventing the commencement of development; and as the foundation of development was cell division, the problem should rather be stated: What did the ovum lack that it could not divide, and what was the new substance brought in by the spermatozoon enabling this division to take place? The speaker and v. Beneden had shown in 1887 that the exciting factor was the centrosome, a portion of the ovum which underwent degeneration before impregnation, and had consequently to be replaced by that of the spermatozoon. All his subsequent investigations had confirmed this view. The object of conjugation was chiefly to effect the union of the properties of two cells in one; sexual fertilisation had for its object division of labour with reciprocal inhibition. The ovum possessed the protoplasm; the sperm having none could not develop independently, but it had the necessary centrosome. Multicellular individuals could not fuse and unite their qualities; this was possible only where the qualities were united in a single cell. The fact that ovum or sperm cell was each incapable of separate development was therefore to be regarded not as a fundamental deficiency, but as a renunciation for the purpose of attaining a fusion of

qualities, because by this means the production of new forms and qualities was possible and necessary for the progress of the organised world.

### PHYSIOLOGICAL CHEMISTRY AND THE ION THEORY.

One of the most interesting series of addresses was that on the ion theory. It was treated of (1) in its development by KAUFMANN (Göttingen), (2) in its relation to physiological chemistry by PAUL (Tübingen), and (3) in its relation to clinical medicine by HIS, jun. The first speaker added but little to what was contained in Professor Lecher's address, and the third speaker but little to what the second had said, so that it will suffice to consider Dr. Paul's address more in detail.

Most of the biological processes, he said, depended on reciprocal action of bodies in solution, since not only the fluid, but also the solid portions of an organism were to be regarded in accordance with the teachings of the new chemistry, as in solution. Although this extension and partial abolition of the atomic theory introduced fresh hypotheses, the theory of ions permitted an explanation to be given to many physiological facts previously inexplicable, and analyses previously impossible to be made. Variations in the composition of the serum had been ascertained by the determinations of alteration of the freezing point. The acidity of the gastric juice could be precisely defined, as the concentration of the hydrogen ions contained therein, and this could be determined by Nernst's method.

An investigation by the speaker and His regarding the solubility of uric acid and its salts from the standpoint of the ion theory had shown, as the theory required, that the separation of a sparingly soluble urate depended not only on the solubility of the salt in question, but on the presence of other salts having an ion in common with it—these could considerably reduce the solubility of the urate. The administration of lithium salts, piperazin, etc., as solvents was theoretically wrong and had failed in its practical results.

The constitution of a solution and its physiological effect stood in close relation. An investigation into the toxicity of various metallic salts showed that it stood in close relation to their electrolytic dissociation. Behring had said that the disinfecting power of mercury salts depended on the quantity of dissolved mercury, whatever the salt might be, but the results the speaker and His had obtained were totally opposed to this. They found the antiseptic properties to be proportionate to the degree of electrolytic dissociation, and consequently not to the quantity of mercury in solution. The toxicity of acids and bases appeared in general to be proportionate to the concentration of hydrogen and hydroxyl ions of the substance concerned without reference to their dissociation.

But caution was necessary in applying these results to physiological processes where there were also other factors present besides the properties of ions and dissociation of salts. The abuse, more particularly in Germany, of using these new theories for the advertisement of drugs, and especially of their curative properties, deserved severe censure and could only bring discredit.

### THE PRESENT STATE OF DARWIN'S THEORY.

This subject was treated by three authorities, DE VRIES (Amsterdam), KOKEN (Tübingen), and ZIEGLER (Jena). The theory did not require slow and steady development or formation of species, which might occur in jerks and were then called mutations. By each mutation a new species was formed. In botany these often occurred, but usually singly. Continuous observation was usually impossible, the mutation being recognised only after the form was complete. But mutation periods must be always occurring, and Vries succeeded in finding one plant (*Œnothera Lamarckiana*) which every year produced quite a number of new types. If periods of constancy and periods of mutation existed—and there appeared no reason against this assumption—there was no contradiction in the theories of evolution and constancy of species, and no opposition between the principles of systemic classification and biology.

The geological periods did not divide off species. Some were often found common to two periods, with a development of the species. Sudden changes were also seen. On the other hand, some species had been preserved from Cambrian times until now, even if the type had altered somewhat. The transition of one order to another had not been shown by geology, for example, no intermediate forms between the *Reptilia* and the *Mammalia* were known.

At the present time there could hardly be any doubt of the general truth of the theory. It could be seen that, apart from fossils, certain groups—for example, birds—now had many species; whilst earlier forms—for example, the crocodile—had only a few. Moreover, some organs were obviously developing, others disappearing. The appearance during development of organs never intended for use (for example, teeth in the whale, which disappeared again before birth) showed clearly that such animals were descended from others in which these organs were once in use.

If the theory of descent was true for the whole animal kingdom it must apply also to man. The nobility of man lay not in his descent but in the height of his development, in his ascent above the level of beasts.

### MEDICINE AND SEAFARING.

Tropical medicine had not been recognised as a separate branch until the last few years in Germany, nor naval hygiene until quite recently, so that Professor H. Curschmann's address on medicine and seafaring was a new departure. In introducing the subject he mentioned that other countries—for example, France, England, and Holland—had already been engaged in the study and practice of tropical medicine for some time. Disease on board ship was largely due to the deficient space, with consequent difficulties in ventilation, cleansing, and disinfection. But there was now a marked difference between past and present, so that, both in the navy and in the mercantile marine, many diseases which were formerly considered as practically occupation diseases of sailors—for example, scurvy, typhoid, and dysentery—were fast disappearing.

But the increase in size and speed of ships was not altogether in favour of decrease of disease. It made the importation of disease from foreign parts much more easy. Moreover, the benefit to the crew had not been so great as to passengers. The latter were probably safer from infectious illness on board ship than on land. But the crew, especially stokers, firemen, etc., still had to live under very unhygienic conditions, and were therefore very liable to diseases of the respiratory system, rheumatism, etc. In fact, phthisis occurred to a larger extent amongst sailors than on land. The observations of Dr. Nocht showed that 38 per cent. of the deaths amongst sailors was due to pulmonary tuberculosis. Similar figures had been obtained in France. The conditions for direct infection were peculiarly favourable on board ship, so that special precautions should be taken to exclude affected individuals from being engaged as sailors.

Heatstroke also took a prominent place in marine disease; 16 per cent. of the deaths in the mercantile marine were due to this cause. It seemed possible to reduce this, even taking into account the small available space in a ship.

Imported infectious diseases, and especially yellow fever, were still very prevalent. Yellow fever accounted for 42 per cent. of deaths. With better knowledge, this would be reduced; in the meantime, every endeavour should be made to keep it out of Europe. To this end quarantine seemed the best measure, but four to six days sufficed.

Contrary to earlier ideas, it appeared that beri-beri was not limited either to coloured races or to warm climates. Infected ships should be carefully disinfected.

The increased knowledge concerning plague, typhoid, and cholera made all these diseases appear less terrible than formerly, and their epidemic spread more easily prevented. Typhoid had nearly disappeared from German boats, although in 1891 there were 147 per 1,000 deaths from typhoid in the French navy. Ships could not be regarded as immune from cholera, as Pettenkofer thought.

Knowledge on these subjects required special study and experience for its useful acquisition and application. Ports which were specially liable to invasion by tropical diseases should possess institutes and hospitals for their study and prevention, and also have an expert in the subject to direct.

### Tuberculosis.

In the sectional meetings there was nothing very sensational or very new.

*Heredity.*—The Tuberculosis Committee held two long meetings in which various points were discussed. Professor Martius (Rostock) occupied ninety minutes in pointing out that heredity, as regards tuberculosis, did not necessarily mean that the tubercle bacillus was present in the spermatozoon or ovum; it meant the transmission of predisposition to tuberculosis, and there was abundant evidence to show that predisposition existed.

*Surgical Tuberculosis.*—Another paper took nearly the same time to recommend that surgical cases of tuberculosis should first be treated surgically in hospital and then sent to the country for open-air treatment. The latter alone was insufficient. If one form of treatment alone were possible, then surgical showed much better results than open air—in surgical cases.

*Liyht Treatment of Lupus.*—Professor Bang showed his new lamp for the treatment of lupus, which he claims possesses several advantages over Finsen's apparatus. Its prime cost is only about one-fifteenth, and its working cost about one-fifth of Finsen's, but it can be used on one case only at a time. It can be comfortably held in the hand, and is so powerful that a three minutes application is sufficient. The chief novelty consists in the use of iron instead of carbon electrodes. Iron gives many more ultra-violet rays than carbon. A series of photographs illustrating many remarkable cures of lupus and one case of epithelioma was shown, and created a deep impression of surprise and admiration.

*Tuberculin and Open Air.*—Professor Petruschky pleaded for a combined and organised treatment of tuberculosis by tuberculin and open air. He had treated now nearly 100 cases successfully with tuberculin, lately in conjunction with open-air treatment. It must be recognised that the cure might take two years or more, and the patients must be made to persevere. It was not necessary that they should come into hospital; they could be treated as out-patients, and in the intervals between the series of tuberculin injections should go to a sanatorium; but the whole treatment could be carried out more advantageously at the sanatorium.

### Russian Famine Breads.

In the Section of Hygiene and Tropical Medicine Professor Erismann read a paper on the famine breads of Russia. In spite of their abnormal composition, most of them were digested and used up to nearly the extent of ordinary bread. In the discussion Dr. Nocht inquired whether a disease of which the most prominent symptom was general œdema, was observed in the famine districts. He had noticed it in underfed sailors, and considered it to be a form of scurvy. Probably it had often been diagnosed as beri-beri, which it was not. Professor Erismann's reply was in the affirmative.

### Bacterial Beds for Sewage.

A somewhat lengthy discussion followed a paper describing two small sewage-disposal installations in which contact beds were used. Apparently in Germany all the work already done in this country is being repeated. From the samples shown it was obvious that the highest possible efficiency was not obtained. Professor Loeffler threw the weight of his authority in the balance against the general possibility of purification by biological systems, but it was not apparent that his opinion was based on experience.

### Light and Roentgen Rays as Therapeutic Agents.

The Section of Dermatology had an interesting demonstration and discussion on the therapeutic value of light and Roentgen rays. Dr. R. Hahn showed a number of cases of various skin diseases—for example, eczema, acne, prurigo, and psoriasis—which had been cured by the Roentgen rays. One case of eczema of seventeen years standing had been healed in quite a few sittings. Other speakers related cases of lupus erythematosus and epithelioma which had been cured. Definite histological alterations could be seen in microscopic sections of the lupus tissue after the action of the Roentgen rays. They were also a most efficient depilatory If the hair grew again, as it did in a few cases, it ceased to do so after a second destruction.

### Resins.

In the Section of Applied Chemistry a paper on Resins was given by Dr. Kronstein (Carlsruhe). The formation of a varnish depended, not as was hitherto thought, on oxidation but on polymerisation. He had been able to prepare synthetically resins which both physically and chemically corresponded to natural resins, and he exhibited a specimen of artificial amber which apparently was identical with natural amber.

### Military Hygiene.

No medical association meeting would now be complete without a Section on Military Hygiene. Dr. Dürns spoke of epileptic conditions as being sometimes the cause of minor or of gross acts of insubordination, for which the soldiers should not, of course, be held responsible. Dr. Herhold, who had been with the East Asiatic Field Force, said the climate had been favourable to the health of the troops, but the filthiness of the Chinese had brought about the insanitary conditions of ground and water which had assisted the spread of typhoid and dysentery.

### Exhibition.

The exhibition of Roentgen-ray instruments and photographs was one of the most complete that has ever been brought together. All the well-known makers exhibited their instruments; there was quite a large number of 25-inch coils and many forms of new tube. It is becoming nearly as difficult to choose a coil and tube as a photographic camera. Of other exhibitions there were surgical, tropical, and optical. Amongst the surgical exhibits was one by the Thermophor Company of various kinds of compresses, food warmers, etc., which remain hot for 4 to 6 hours. The food warmers are in use at the Hamburg-Eppendorf Hospital. They are double lined, the space being filled with some secret composition, probably sodium acetate, which when melted continues to give out heat for a number of hours.

### Next Meeting.

The meeting place fixed for next year is Carlsbad, so that if not so scientific it will be more restful than the very busy and successful meeting of 1901.

## THE FIFTH INTERNATIONAL CONGRESS OF PHYSIOLOGISTS AT TURIN.

*(Continued from page 996.)*

### The Nervous System.

1. *Motor Representation in the Cortex of the Anthropoid Brain.*—Professor C. S. Sherrington, F.R.S., in conjunction with Dr. A. S. Grünbaum, made an important communication on this subject, from which it appeared that current views with regard to the localisation of movements in the "motor area," as well as the extent of the area itself, must be considerably altered.

These investigators were able to record the results of experiments upon ten chimpanzees, one orang, and one gorilla. Both "excitation" and "ablation" experiments were performed. A unipolar method of excitation was employed as being preferable to the older one of applying the points of two electrodes to the cortex. In the unipolar method one of the poles was applied to the animal's fore limb, the other to the spot under investigation. The strength of current was graduated according to the Kronecker scale. By this means it was found, contrary to what has hitherto been believed, that no appreciable difference exists between the excitability of the cortex in the higher and lower monkeys. The same strength of current which was sufficient to excite the cortex of the rhœsus monkey, or even of the cat or dog, was equally able to excite that of the chimpanzee.

It also resulted that no movement whatever was obtained from excitation of the posterior central (ascending parietal) convolution. The motor area was entirely found in front of the sulcus of Rolando, and mainly confined to the anterior central (ascending frontal) convolution. The surface of this convolution, which looked into the fissure of Rolando, was also excitable. The order in which "areas" were ranged from below upwards was (1) face and head, the former extending slightly on to the inferior frontal convolution; (2) neck; (3) shoulder; (4) arm; (5) upper part of trunk; (6) lower

part of trunk: and (7) lower limb. The last-named area was small and confined to the sagittal face of the ascending frontal convolution. The neck area was found at the level of the lower genu of the Rolandic fissure, the trunk area opposite the upper genu. The order corresponded, therefore, exactly with the position of parts of the body, and was somewhat different from that made out by Schäfer and Horsley in the lower monkeys and by Horsley and Beevor in the orang.

The results of extirpation corroborated those of excitation. Removal of the arm or leg area was followed by a well-defined monoplegia which disappeared in about five weeks. Extirpation of portions of the cortex of the ascending parietal convolution, on the other hand, were never followed by paralysis.

The tracts of degeneration which resulted from the above extirpations were also traced out. In addition to marked degeneration in the opposite crossed pyramidal tract, a well-defined direct pyramidal tract was seen on the same side. This showed degeneration only after removal of the arm area, not after that of the leg. The cord of the higher apes, therefore, resembled that of man in the possession of a homolateral pyramidal tract. Degeneration following removal of the arm area extended halfway down the thoracic region; that following removal of the leg area stopped at the upper part of the lumbar enlargement.

With regard to the orang, which had been previously investigated by Horsley and Beevor, Professor Sherrington and Dr. Grünbaum were unable to corroborate the existence of inexcitable zones between the different areas. In this and all other respects, the results they obtained with the orang conformed with those obtained from other anthropoid apes.

*Fig 1*

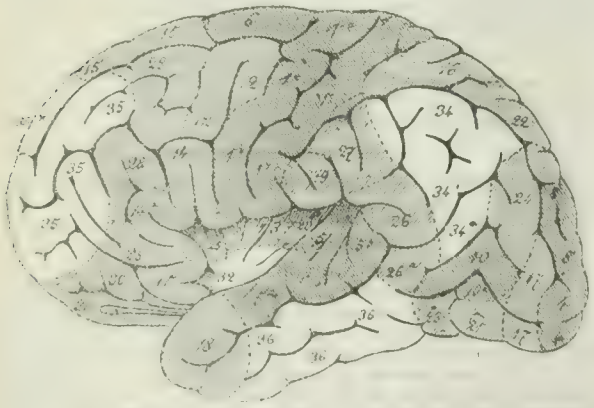


Fig. 1.—Outer surface of human brain showing Flechsig's developmental zones; primary, 1-10; intermediate, 11-31; terminal, 32-36.

*Fig 2*

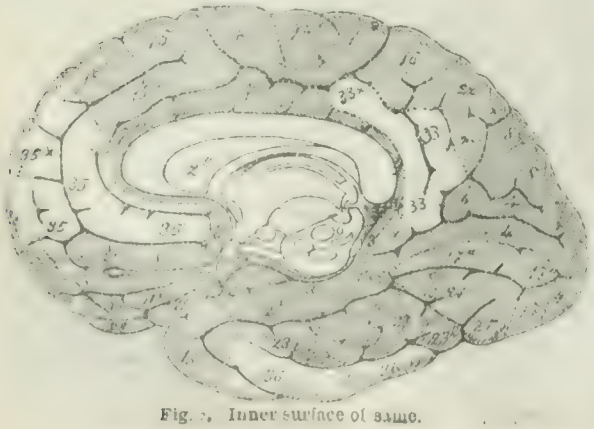


Fig. 2. Inner surface of same.

The research proved to be an exceedingly expensive one, the gorilla alone costing £300, and it is to be hoped that some means will be forthcoming to relieve them of the great expense incurred. There can be no doubt that they have made a valuable contribution to an important subject, and have thrown more light on what may be surmised to exist in man than has hitherto been attained.

2. *Developmental Localisation of the Surface of the Human Brain.*—Professor PAUL FLECHSIG (Leipzig) communicated the results of a research, which led him to believe that it was possible to map out the surface of the human brain into distinct and regular territories by studying the order of myelination of the fibres proceeding from within to the various regions. The method adopted was modification of that which he had applied to the study of the tracts of the medulla and cord. Four stages could be made out in the development of the neurones: (1) Cells without processes; (2) the appearance of simple branches, the axis cylinders developing quickest; (3) the formation of collaterals; (4) the appearance of medullary sheaths. He found that in the cerebral convolutions the fibres became medullated in strictly regular sequence: some convolutions had their fibres almost wholly medullated three months before birth; while in the case of others a large proportion of fibres were non-medullated six months later. A law was formulated to the effect that fibres of equally great importance became medullated at the same time; those of primary importance first, and so on. In this way myelogenetic cortical fields could be mapped out of uniform extent and distribution in different brains. These fields retained their contours for considerable periods; they did not begin from a single point and grow outwards from this as a centre, nor were they conditioned by the size of the fibres within, nor yet by the state of vascularity of the spot in question.

Thirty-six fields in all were definitely made out, and these were divided chronologically into three groups: Primary (Nos. 1-10), intermediate (Nos. 11-31), and terminal (Nos. 31-36) (see Figs. 1 and 2). The primary fields numbered ten, and were those which as a rule were well provided with medullated fibres so that they could be macroscopically recognised as such at birth. Amongst these was a very large proportion of "projection" fibres—that is, fibres leading to and from subcortical centres. The primary fields included the seats of cortical representation of all the senses.

To No. 1 Professor Flechsig assigned cutaneous and muscular sensation, No. 2 represented the sense of smell, and No. 4 that of vision; No. 5 was the cortical field for the sense of hearing, and so on. The functions represented by certain of the primordial zones had, however, not been determined.

The generally-recognised centrifugal tracts all took origin in connection with zones of the first order—the pyramidal tract with No. 1, the inferior fornix with Nos. 2 and 3. The inner bundle of the pes pedunculi sprang from fields Nos. 1*b*, 6, 12, 14, and 15; the origin of the outer bundle of the pes was doubtful. From field No. 4 a tract arose which passed mainly into the middle of the anterior corpus quadrigeminum. The auditory zone, towards which a tract proceeded from the internal corpus geniculatum, sent an outgoing tract into the column of Türk, which passed down to the pons. Whether this latter was motor remained to be determined.

Each primordial sensory zone had a well-defined pair or "couple" of conjugated tracts proceeding to and from it cortico-petal and cortico-fugal. Nowhere was a purely motor or purely sensory field to be seen. It was interesting to note that the cortico-petal or sensory part of the couple connected with field No. 1 passes mainly to the ascending parietal convolution, the cortico-fugal part on the other hand springs mostly from the ascending frontal gyrus.

The terminal, which did not begin to medullate till one month after birth, and the majority of intermediary zones, showed few or no projection fibres. This latter held good not alone for the brain of newborn infants, but also for that of the child of four, five, seven, and eight months after birth. Professor Flechsig therefore concluded that such zones never possessed these fibres. Terminal and intermediary zones, on the other hand, were richest in long association fibres; and here Professor Flechsig vigorously contested the view of Monakow, Déjerine, and others, that the fasciculus longitudinalis infe-

rioris and the cingulum were to be looked upon as long association bundles. They were connected with two of the zones which he named primordial, and were undoubtedly projection fibres according to his view, the former connecting the cortical field of vision with the lateral corpus geniculatum.[1]

With regard to the function of terminal and intermediary zones, little definite was known. Clinical histories had so far only described certain forms of disturbance of speech, such as alexia, optical aphasia, partial amnesia, and so on. The time had not, however, arrived for a correct assignment of function to these regions. The staining method employed was that of Weigert-Pal, and it must be admitted that a very convincing series of the actual slides was projected on the screen in support of the views to which the author gave utterance. Professor Flechsig claimed that his method of localisation was more to be relied upon than any of the so-called experimental or degenerative methods.

*(To be continued.)*

## THE GENERAL MEDICAL COUNCIL ELECTION.

### THE APPROACHING ELECTION OF DIRECT REPRESENTATIVES.

Meeting in Support of the Candidature of Dr. Glover.

Dr. Danford Thomas presided on October 4th over a meeting held at No. 1, Highbury Place, Islington, in support of the candidature of Dr. J. G. Glover as a Direct Representative on the General Medical Council. The Chairman said that they had had experience of Dr. Glover for the last fifteen years, and his work had been for the advantage of the profession.

Dr. J. G. Glover said that the Medical Council was one of the best abused bodies in the profession. It was all the better for a little criticism. If the critics were censorious and unreasonable, it was they that suffered rather than the General Medical Council. As to his own claim to represent them, it was in the very nature of the case that he must speak somewhat egotistically. He had to justify his existence.

*Medical Education.*

First, he would not be worthy to be a direct representative if he did not try to make medical education better. He believed that in its soundness and efficiency the great strength of the profession lay. Within a year or two of his election he tried to show the Council that there were gaps in medical education, and that there were great groups of disease not much seen by the student and in which he was not examined; that hospital practice was not general practice. In this he was fully supported by his then colleagues as direct representatives. The Council, and especially its leading members, gave them a fair hearing. They succeeded in getting the Metropolitan Asylums Board opened to medical students. They secured, what he feared had been little acted on—the recognition of pupilage to a medical practitioner. Sir James Paget wrote to him: "I see what you will do—you will add another year to medical education." That year, of course, had been added, and the direct representatives had a full share of the responsibility, and, as he thought, the credit of the change.

*The Midwives Question.*

He should say only a few words about it. He thought it was a less burning question than in the last two elections, chiefly because everybody saw that it must be settled. He did not himself care how simple the machinery was by which the new midwife was to be governed, nor did he care how simple her training was. He had told the Medical Council, and he repeated, that if they could only secure that all midwives should know the value of clean hands and of puerperal cleanliness generally, they would immensely reduce the mortality of lying-in women attended by them. If, in addition to this, they could secure—as they did in every respectable maternity charity—that the women were to be made to understand the limits of their own functions, and the obligation resting on them to send for a registered medical practitioner whenever the case of the mother or child presented any unusual features they would have done nothing to impair the place of midwifery as a most important branch of medicine, and they would have helped in a movement to increase the safety of lying-in women in childbirth. He had no objection to call this new midwife a midwifery nurse—though he thought the Legislature would insist on the old word. Nurse-midwife would be the best word, for it would indicate the fact which was that the poor women for whom alone this legislation was meant and for whom alone it could be justified—needed a nurse as well as a midwife. He wished to emphasise two points. First, that a Midwives Bill would be of little use if it did not stop the practice of midwifery by all who were not certified or licensed. Until the last Bill it was only attempted to prevent the use of the title midwife. That in his opinion would be useless for the same class of women that made the Sarah Gamps would continue to exist and to attend the cases without calling themselves midwives. The next point was that every district should be required to provide and pay registered medical men to respond to the call of the midwife. If it was fit for the State to provide gratuitous vaccination for children of the poor, it was surely equally reasonable to provide medical help to the mother in the hour of her peril. He succeeded in the Midwives Committee of the Medical Council in carrying this view into a resoluion. But he did not succeed in getting the Council to accept it, and undoubtedly the House of Commons would think twice, especially at the present time, before passing a clause which involved any addition to rates or taxes however slight. But this was a very special case and one that would appeal to all parties. He would not spend more time on the midwives question. He would not have spent so much but for its human importance and the way in which it took up the time and money of the Council. It would not be an exaggerated estimate to say that first and last discussions on this subject had cost £1,500 or £2,000. They had had one special session which cost between £600 and £700 to consider a Bill.

*Proposed Conciliation Board.*

The proposal for the creation of a Conciliation Board for the adjustment of disputes between Medical Aid Associations composed chiefly of Friendly Societies and the medical profession had had and, if he was elected again, would have his warm support. Such a Board must be formed outside of the Council; but it could not be doubted that the support of the proposal by the Council and the great personal interest of the president, Sir William Turner, had greatly facilitated the realisation of such a proposal.

*The Royal Colleges in London and the General Medical Council.*

The dispute between the Royal Colleges of Physicians and Surgeons and the General Medical Council was an unhappy contest that the best friends of the Medical Council would try to bring to a termination within the Council itself and soon. He held no brief for the Royal Colleges. He had always been surprised that the Royal College of Surgeons did not concede the reasonable degree of representation asked for by its Members. Such a refusal seemed to him unreasonable and impolitic. But the matter under dispute at present between the Colleges and Council was one that could only be settled amicably. The Council's lawyers told it that it had not the power to compel the Colleges to submit the institutions whose teaching in science the Colleges accepted to the approval of the Council. The Colleges said that they inspected the institutions carefully. The Council did not pretend that it had any means of doing so. It was not denied that in many of them chemistry, physics, and biology were well taught. His desire and endeavour would be to preserve or restore the good understanding which had hitherto prevailed between the Colleges and the Council.

*Direct Representation.*

In regard to the position and outlook of direct representation he saw little immediate chance of any large increase of it. Parliament was much preoccupied with the war, and if once the war was ended there were other questions that would seriously compete with the demand for any amendment of the Medical Acts. But if direct representation were well used, and if

[1] Professor Flechsig has, however, overlooked the fact that this same view was expressed some time ago by W. H. Thompson in an article which appeared in the *Journal of Anatomy and Physiology*, 1901.

the profession itself exercised the franchise already conceded it might reasonably be hoped that the principle would be extended. Various views were entertained of the work and merit of the General Medical Council. It had improved education, it had raised the tone of professional ethics and of medical practice. It had abolished the unqualified assistant, and by so much had enhanced the value of qualification. It had improved the feeling existing between the individual bodies and their mutual respect. By direct representation it supplied a link between the medical authorities and the Medical Council. In all those ways it had benefited the public. For all those reasons the profession did well to regard it with respect and interest. He must be excused one personal word in closing. As regarded himself he was struck with the attitude of confidence and kindness towards him throughout the profession, even including many who did not agree with him on all points. For one thing whatever happened he should always be grateful and that was the help and support of his neighbours. A man who had not this encouragement had little right to expect success. He had never lacked that support, and he never had more evidences of it than he had on this occasion.

The CHAIRMAN asked if Dr. Glover was satisfied with the way in which the Medical Council had dealt with cases of professional misconduct.

Dr. GLOVER said that on the whole he was quite satisfied. It was the desire of the Council to be entirely fair in regard to any practitioner whose conduct was impugned.

Sir THOMAS BARLOW moved the following resolution:—

That this meeting having heard from Dr. Glover a statement of the work of the General Medical Council and of his views thereon, and having regard to his action in the three periods during which he has been one of the direct representatives of the profession in the Council, hereby expresses its unabated confidence in him, and its determination to do all in its power to ensure his successful re-election.

He said that people shirked medical politics because they did not feel any direct concern in them, and thought that the Medical Council did not affect them. That was a very unworthy attitude to take up, for whatever affected the humblest member of their profession concerned them all. There was a nemesis that would befall them if they put aside the claims of their fellow practitioners. The manly thing to do was to take the trouble to find out about these questions. If they did not address themselves to these questions and get to the bottom of them they would be taken out of their hands either by the Government or by the public, and that would be a misfortune and a calamity. It was a scandal that the midwives question had been so long on the table unsettled. Practical politicians and philanthropists saw that there was a crying need for legislation to protect poor folk. The line the profession had taken on this midwives question was rather like that of the dog in the manger. Dr. Glover had adopted a sane view on the midwives question and had brought the subject into practical politics. In regard to the Friendly Aid Societies, however much they might dislike the subject, some line of action must be taken or the profession would be degraded. It was easy to sneer at the Medical Council, but it was marvellous how rapidly social changes occurred and the position of their poorer brethren might be undermined in many ways right and left. He was anxious that Dr. Glover should be elected to the Medical Council because it was necessary to have a man who knew what the life of a practitioner was and because he would not deal with questions in any spirit of trade-unionism. The great thing was to have these matters dealt with in the interests of the public, because the interests of the profession were the interests of the public, and if the right thing was done for the public it would be good for the profession. When Dr. Glover spoke on behalf of their craft he always bore in mind, not only their interest, but also the public interest. No impartial person could have listened to Dr. Glover without recognising the tone of moderation, of practical politics and of medical common-sense that commended itself to the thoughtful practitioner. Referring to Dr. Glover's remarks about the cost of the General Medical Council, he said that it showed that Dr. Glover was alive to the great waste of money and that he wanted to work at something that was practical and within reasonable limits.

Dr. FORD ANDERSON, in seconding the resolution, said that Dr. Glover had done his work for fifteen years admirably and knew the working of the Medical Council better than any man on it. He had done his duty on the different committees, and it would be almost a calamity to the profession if Dr. Glover's knowledge and experience should be brought to naught. In addition to large experience Dr. Glover possessed a wonderful vigour and brought an almost youthful enthusiasm to his work.

Dr. BATEMAN said that he did not believe there were two men in the whole profession who were mutually agreed as to the right thing to be done in regard to the midwives question. As to the procedure of the General Medical Council the only thing that he thought ought to be done to improve it would be the passing of a Medical Act directed to two points: first of all the Council should have power to subpœna witnesses, and, secondly, it should have power to administer the oath.

The resolution was put and carried unanimously.

Dr. BUCKELL moved the following resolution:

That this meeting, believing that Dr. Glover's re-election will be in the interest of the profession generally, as well as in that of the principle of direct representation, desires to commend his candidature to the heartiest support of all registered medical practitioners in England and Wales who, it is hoped, will in their own interest, as well as that of the public, record a much larger vote at the coming election than on any previous occasion.

He said that Dr. Glover was a general practitioner, and the great charm of the principle of direct representation was that it was the only practicable means available for securing the representation of general practitioners upon medical governing bodies. Considering that the bulk of the profession were general practitioners it was essential that they should be represented by someone who knew at first hand what were the needs of the profession.

Mr. T. JAGO, in seconding the resolution, said that the indifference of the profession in regard to medical politics had arisen because many men who were secure in their positions felt hardly called on to interfere, and therefore trusted to the good sense of the profession generally and let matters slide. This was not right. He deprecated the strong desire which was growing in medical politics to degrade representation into delegation.

Dr. W. A. MALCOLM said that there was no crystallised opinion in the profession on the subject of midwives. Several men had said to him they would not vote for Dr. Glover because he was not "sound" on the Midwives Bill, but he had never been able to find out who or what was considered to be "sound" on this question.

The resolution was carried unanimously.

The following gentlemen were nominated a General Committee for the promotion of the election of Dr. J. G. Glover as a direct representative:

Dr. W. Danford Thomas, Mr. W. H. Kesteven, Dr. L. G. Glover, Dr. C. A. Ironside, Dr. A. Reid, Mr. G. F. Pollard, Mr. G. T. Keele, Dr. Hamilton, Sir Thomas Barlow, M.D., Dr. R. Paramore, Dr. A. G. Bateman, Dr. F. J. Buckell, Dr. Tice F. Budden, Dr. R. Hingston Fox, Mr. Thomas Jago, Mr. T. D. Jago, Dr. Alexander Morison, Mr. T. Hobbs Crampton, Dr. W. A. Malcolm, Dr. Ford Anderson, Dr. R. M. Pooley, Dr. Peter Harper, Dr. Michael J. Bulger.

Dr. A. REID said that promises of support had been received from the following, among others:

James Adams, M.D., Eastbourne; F. H. Alderson, M.D., Bournemouth (formerly of London); Mrs. Garrett Anderson, M.D., London; Robert Barnes, M.D., Consulting Physician to St. George's Hospital; A. George Bateman, M.B., London; R. W. Batten, M.D., Gloucester; J. Gordon Black, M.D., Harrogate; F. Milnes Blumer, M.B., Stafford; W. Percy Blumer, F.R.C.S.Edin., Sunderland; C. Braine-Hartnell, L.R.C.P., Stroud; J. W. Bramwell, M.D., Cheltenham; Edward Buckell, M.R.C.S., etc., Romsey, Hants; J. L. Crisp, L.R.C.P., J.P., South Shields; Joseph Frain, M.D., Newcastle-on-Tyne; R. Ritchie Giddings, M.B., Nottingham; J. Gill, M.D., Clifton; A. Pearce Gould, M.S.Lond., London; James Hardie, M.D., Manchester; F. de Havilland Hall, M.D., London; T. F. Higgs, M.D., J.P., Dudley; Dr. Barratt, Spalding; G. H. Biden, L.R.C.P., Penrith; C. W. Biden, L.R.C.P., Framlingham, Suffolk; G. H. Bishop, M.B., Wimbledon; Hilton Fagge, M.R.C.S., Melton Mowbray; Stephen Mackenzie, M.D., London; R. M. Witham, M.B., Burnley; J. M. Williamson, M.D., Ventnor; A. Hollis, M.D., Freshwater; G. Petgrave Johnson, M.D., Stoke-on-Trent; H. W. Kendall, F.R.C.S.Eng., Clifton; G. W. Longbotham, M.R.C.S., Middlesborough; James Murphy, M.D., Sunderland; William Murray, M.D., Newcastle-on-Tyne; George R. Murray, M.D., Newcastle-on-Tyne; Fredk. Page, M.D., J.P., Newcastle-on-Tyne; R. Paramore, M.D., London; Robert Peart, M.D., North Shields; Lloyd Roberts, M.D., Manchester; E. Markham Skerritt, M.D., Clifton; Rudolph Smith, F.R.C.S.Eng., Stockton-on-Tees; E. Mansel Sympson, M.D., Lincoln; Thomas Rushbrooke, M.A., L.R.C.P., Stamford Hill; B. Thornton, L.R.C.P., Margate; A. Primrose Wells, L.R.C.P., etc., Beckenham; E. M. Wrench, F.R.C.S.Eng., Baslow.

The proceedings terminated by a vote of thanks to the Chairman, moved by Dr. GLOVER, seconded by Dr. KEELE, and carried unanimously.

## BRITISH MEDICAL ASSOCIATION.

### SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, OCTOBER 12TH, 1901.

## THE EYESIGHT OF SCHOOL CHILDREN.

The Circular on Eyesight of Scholars in Schools in Large Towns (No. 456), issued by the Board of Education on October 1st, cannot be described as a satisfactory document to come from a public department. It directs attention to means for "arresting the extension of evils prejudicial to the national welfare in so far as these measures appear to fall within the powers of teachers or managers." The sight of children is held to be injuriously affected by (*a*) errors of refraction, "liable to occasion much strain and difficulty in using the eyes," or "seriously to cripple the future usefulness of the individual:" and (*b*) various forms of disease, some of them highly contagious, which might become of serious import to the school as a whole.

In this circular, which is printed in full at page 1119, as in much popular writing on the subject, the injurious results directly due to refractive error in children in English elementary schools are overestimated, owing to the conclusions being based on statistics which include not only the often temporary causes referred to in section (*b*) of the circular, but also the amblyopia of young children. Many children only develop their full visual acuity when well on in school life; for this reason directions such as those given in the circular for testing the vision of children who cannot read are unnecessary. In children aged 6 years careful testing, repeated so as to exclude all possible errors, and with both eyes used together, has shown that only 40 per cent. at the most have normal acuity ($V = \frac{6}{6}$). The others in most cases have not much ocular defect and in a short time they also attain normal vision. The experience of the Bradford Board Schools, where for years every child in the standards has been tested annually, is that most of those showing low degrees of defect eventually gain normal vision.

The matters referred to in the circular under heading *b* shows some confusion, for common as cases of contagious ophthalmia may be in workhouse or residential schools, in elementary schools they are rare and do not tend to spread. The other diseases referred to in this section of the circular are mostly due to debility from home surroundings, and a predisposition to them is produced by the irritability of conjunctiva and cornea commonly associated with or resulting from rhinitis and adenoids, lesions which are frequently forerunners of the discharging ears also mentioned in the circular. It is strange that this very common condition is not mentioned. It is so easily detected by the mouth-breathing, and sometimes so very harmful in its ultimate results, that every teacher should be made acquainted with the symptoms so as to advise proper medical treatment before irremediable mischief is done.

The directions for teachers "to take such precautions as the circumstances of each case may require" show a want of lucidity. Neither details nor principles are set forth sufficiently. No warning is given against the common practice of allowing children to become asthenopic by wearing eye shades or coloured or smoked glasses, which should not be permitted in school. The advice given with regard to children in whom the teacher presumes that refractive error exists is that "In the great majority of such cases the use of spectacles will remove all difficulty." This statement is not only erroneous as it stands, but also calculated to do harm when unaccompanied by a warning against parents seeking the services of opticians who do more harm than good to most children by prescribing spectacles, generally weak concave glasses.

There are other serious defects of omission in the circular. Visual defects remediable by school hygiene are overlooked—for instance, of children in their twelfth year who complain of eye defect, probably half, possibly more, suffer from spasm of accommodation. They may appear myopic, but are often emmetropic, or even hypermetropic; the children affected are usually neurotic girls. The condition is a frequent precursor of asthenopia, or low-grade myopia; it is the visual disturbance most commonly and directly resulting from school habits, and can be prevented by maintaining a proper eye-working distance. The bad habit is learned under the eyes of the inspectors, in the kindergarten, in sewing, and pricking, in learning to read from a primer or write with a pencil. Children should not be allowed pen or pencil till they can read fluently, and no infant should be taught to sew. The seats and desks of four out of five schools tend to the production of eye spasm, and it is wonderful that so many escape. Of all this there is no mention in the circular.

Some of the doctrines it promulgates are strange. "Parents should be advised to take the child to an ophthalmic hospital." Managers are "to take care that" a child with a contagious affection of the eyes "shall not be readmitted without a medical certificate of fitness," presumably from the hospital surgeon. "A large proportion of cases require special skill for their detection, and hence, unless expert knowledge is brought to bear, it is only too probable that many will be overlooked." The expert knowledge suggested is that of a school visiting nurse provided by voluntary associations; no wonder that "it has been found necessary to give these school nurses some special instruction with regard to eye troubles." It is also possible "to arrange for a child to be taken under the guidance of a local manager, a pupil teacher, or otherwise to the out-patient department of a hospital where expert advice and treatment may be obtained" (for nothing). Without the express permission of the parents such conduct is illegal.

Is it right that after several years of waiting for the result of much work and labour on the part of many medical experts given gratuitously the result should be this circular advocating the provision by voluntary effort

of nurses who will be required to express an opinion as to whether children should be taken, possibly in an illegal manner, to the public hospitals, and taught to receive charity from there, at the expense of the long-suffering medical profession?

The Board of Education have recognised some of the insanitary conditions of school life, let them insist on some hygienic knowledge from every certificated teacher, and do their duty by providing an efficient staff of medical inspectors instead of shirking responsibility by leaving the children of the wealthiest nation in the world to be looked after by voluntary associations and the charity of the hospital doctor.

## SMALL-POX AND THE LONDON SCHOOL BOARD.

In the British Medical Journal of October 5th we discussed the outlook as to small-pox, and gave reasons for regarding the present prevalence as of serious import, although in extent at the present time it is, in proportion to the population of London, relatively small. We regard it as probable that the cases of small-pox which are occurring now are the forerunners of a wider-spread prevalence, and it behoves therefore all persons who have the interests of their fellows at heart to encourage the resort to vaccination as the only certain safeguard against attack by small-pox. Especially does it concern public authorities who have responsibilities above that of individuals to ensure as far as they can that those who are dependent upon them shall be safeguarded against risk of infection, and particularly when circumstances incidental to their administration may cause those under their control to be exposed to risk of infection greater than that of the general public.

The London School Board is a body which primarily concerns itself with the education of children who are obliged, as the result of a Compulsory Education Act, to attend its schools. These children are, as the inevitable result of aggregation in the schools, exposed to the risk of transmission of infection from one child to another in much greater degree than if the children remained in their own homes. Upon the London School Board, therefore, rests a great responsibility. It may reasonably be expected to take every step in its power to prevent the schools becoming a source of danger to the children attending them, and may further be expected to give facilities to other authorities, and to persons appointed under laws which Parliament has made, to exercise their powers to mitigate the risks which result from school attendance.

The London School Board was requested by the Local Government Board to give opportunity for the inspection of children in their schools, with a view to determining whether these children are protected by vaccination against small-pox, and by resolution agreed that this should be done. At the time this resolution was adopted a rider was added, which was also agreed to, giving parents the opportunity of refusing to allow their children to be examined, and providing that, if the parents did object, the child should be exempted from examination. When these conclusions were arrived at we ventured to express regret that this invitation to object, embodied in the rider, had been given. Later events have shown that our apprehensions were too well founded. As soon as the resolution was passed, the London School Board proceeded to address to the parents of every child a communication asking them whether they approved of the examination of the children. To many, such a letter must have acted as a suggestion, and hence children whose parents would probably have taken no action in the matter were in effect encouraged to take exception to the examination. This, however, was not all. Parents whose children had been vaccinated would not in all probability raise any objection to the examination: the parents of children who had neglected to comply with the law were more likely to do so, and hence a mere record of the names and addresses of the children whose parents were unwilling that the state of their children as to vaccination should be learnt promised to be of material value in indicating the direction in which the inquiries of vaccination officers should be directed. The London School Board, however, when it came to its knowledge that the names and addresses of these children were being taken, issued, it is stated, an order forbidding this to be done, and hence much of the value of the work of the officers concerned in the inquiry has been lost, and the danger of school attendance during the prevalence of small-pox will remain. The London School Board, moreover, has shown its hostility to vaccination in even greater degree by refusing to give opportunities for the vaccination in the schools of children whose parents consented to the performance of this operation.

It is difficult to know to what to ascribe this attitude of the London School Board. The Board appears to be unable to recognise that the public interest requires that the several administrative bodies appointed for various purposes in London should work in harmony and give facilities to each other for the proper carrying out of their duties. There has, moreover, been for some time manifest in the proceedings of the London School Board a disregard of public health considerations which has been especially unfortunate seeing how intimately school attendance may affect the diffusion of infectious disease. With respect to diphtheria the attitude of the Board has been most regrettable, with respect to small-pox it has been distinctly obstructive.

While the London School Board is thus obstructing the action of those authorities upon whom devolves the duty of preventing the extension of small-pox, the Metropolitan Asylums Board is hard pressed to provide accommodation for cases of the different diseases which it is its duty to isolate. At a meeting of the managers held on Saturday, October 5th, Sir Edwin Galsworthy called attention to the fact that owing to cases of small-pox occurring in some number at a period of the year when scarlet fever, diphtheria, and enteric fever have their annual prevalence, there were something like 1,000 beds fewer available for fever than would otherwise have been the case. As between leaving persons suffering from fever in their own homes and accommodating more patients in the hospitals than the number for which they are constructed the latter course was thought preferable, and was agreed to by the Board.

In the meantime it is proposed to open the Gore Farm Hospital for convalescents from the small-pox hospital ships, which contain 220 beds for acute cases, or 250 with some inconvenience. It is necessary to provide more ac-

commodation for acute cases, and this will be done if the numbers increase by the erection of temporary buildings on shore in the neighbourhood of the hospital ships. Fortunately there is no immediate demand for accommodation for cases of plague, and hence the Local Government Board has consented to the South Camp at Gore Farm, which had been reserved for plague patients, being used for convalescent small-pox patients.

The difficulty of diagnosis between chicken-pox and small-pox continues, and Mr. Scovell informed the managers that medical practitioners constantly sent cases to the South Wharf which had to be returned. This difficulty emphasises the wisdom of the action of the Borough Council of St. Pancras in requiring the notification of chicken-pox, and arranging for certain practitioners who have had experience of chicken-pox and small-pox to consult with any practitioner who may meet with doubtful cases.

Question has arisen as to whether it is a duty of the medical officer of health to personally assist in the diagnosis of cases presenting difficulties of this sort. In a letter to the *Times* Dr. Roxburgh states that he claimed the services of the Medical Officer of Health of St. Marylebone in connection with the diagnosis of a mild case of small-pox, and that Mr. Wynter Blyth, while requesting Dr. Greenwood to see the patient, pointed out that the diagnosis of cases is no part of the duty of a medical officer of health. Dr. Roxburgh urges that one of the reasons for debarring a medical officer of health from practice is that other medical men may be free to requisition his services without injury to their own practices. We are not prepared to assent to Dr. Roxburgh's view that this is one of the officer's duties. Whatever may be the experience of a particular officer, the question has to be considered in its general application, and the adoption of the system that medical officers of health shall be debarred from private practice deprives them of the very experience which is needed to make their opinion of special value unless they can be given the opportunity of cultivating this branch of knowledge in the same way as those who are associated with fever and small-pox hospitals.

## IS THE PROFESSION OVERSTOCKED?

The question of overstocking or otherwise of the medical profession received incidental notice in two of the introductory addresses. Dr. Hill at St. Mary's Hospital was content to assume, for the purpose of his argument, that the profession is "already seriously overstocked," and this opinion is probably commonly entertained by medical practitioners. Professor Risien Russell, on the other hand, devoted part of his address to a more detailed examination of the subject on the lines of "supply and demand," and both the novelty of his method and the refreshing optimism of his inferences give interest to his observations, which, however, were rather incidental than an attempt at an exhaustive discussion of a most complex problem. So complex, indeed is the problem that a treatise might easily be devoted to its thorough examination by any student of economics. It would, of course be impossible here to attempt any such thorough examination, yet the importance of the matter not only to members of the profession but also to those who have to guide young men in their selection of a career, and indeed to the community in general, is sufficient to induce us to push Dr. Russell's investigation a little further along the lines which he laid down.

Dr. Russell's argument may be summarised briefly as follows: Since 1893 a considerable diminution has been observed in the number of persons annually entering the medical profession. Hence a relative shortness of supply of medical practitioners to-day as compared with, say, five or ten years ago. On the side of demand various causes are assigned—the increase of population, a demand for British trained practitioners in the Colonies, and prospectively, after the war, in South Africa in particular, the deficiency created by suppression of "unqualified assistants," the operation of prospective reform in the Army Medical Service in drawing more men into that service, and finally a similar attraction to the Royal Navy Service when the Admiralty is also compelled to reform. Evidence was cited that these factors have already brought about a dearth of junior practitioners, shown by the difficulty recently experienced in obtaining house-surgeons for provincial and other hospitals, medical officers for steamships, and locum tenants in private practice.

The inferences drawn may be best regarded as two comparisons: (1) Of the present relations of supply and demand in the profession to those existing a few years ago, leading to the opinion that at the present time there are special advantages in entering the profession; (2) a comparison of the medical with other professions at the present time, leading to the conclusion that "no other profession (than the medical) could hold out the prospect of so quick a return on the outlay the student was obliged to make." Of these two conclusions, the former is interesting, and many may be disposed to accept Dr. Russell's evidence; but even here further reflection will suggest important reservations, and in any case this point is not of so much practical importance as the second. That the medical man is, perhaps, better off to-day than ten years ago as regards overcrowding may be admitted without granting that he is well off to-day, or that the time has yet come to cry out energetically for increased supplies. The second inference drawn by Dr. Russell, however, is of great importance, but the facts which he cites do not seem to bear directly on this part of his case, so that we have only his personal impression as an assurance that the medical is outstripping every other profession in "quick return" for outlay.

Most medical practitioners, we imagine, will only be prepared to accept Dr. Russell's view of the present outlook if it is understood that the term "quick return" is to be taken with the proverbial addition of "small profit."

Dr. Risien Russell, as was indeed most appropriate to the occasion, had specially in view the position of the newly-qualified practitioner. Thus he dwelt on the agreeable position of the young practitioner as a locum tenant able to command a remuneration which many general practitioners cannot afford to pay. But men do not always remain young practitioners, and the livelihood of the medical practitioner would be even more precarious than to-day were we all to become locum tenants to one another, like the islanders who lived by taking in one another's washing.

May not the joy of the young practitioner, remunerated as a locum tenant by fees relatively large, be tinged with foreboding as he thinks on the day when he may share the common lot, and find himself a middle-aged man unable to take a holiday because he and his like cannot earn enough to purchase the temporary assistance of a newly-qualified man? Surely the disparity which Dr. Russell thus brings forward between the earnings of juniors and seniors is not entirely a sign of economic health, nor a real inducement to young men to enter the medical profession rather than another. The young man choosing a career, or his friends for him, must see life steadily and see it whole.

## THE EXPEDITIONS OF THE LIVERPOOL SCHOOL OF TROPICAL MEDICINE.

THE energy and enthusiasm displayed by the members of the Liverpool School of Tropical Medicine in spreading a knowledge of the results of recent discoveries of the relation of mosquitos to the prevalence of malaria, and in showing by example how this knowledge may be applied in the most malarious countries, is worthy of all praise. These efforts have been generously seconded by business men in Liverpool, and already a number of expeditions have been sent out to the tropics. Major Ross, Dr. Annett, Mr. Austen, and Drs. Fielding-Ould, Dutton, Elliott, Myers, Durham, and Logan Taylor have all served in these expeditions; some of them have made more than one expedition, and Dr. Logan Taylor is now engaged in carrying on the campaign against mosquitos in Sierra Leone, which was organised by Major Ross during his recent visit.

We now learn that, thanks to the generosity of a philanthropic merchant who desires to keep his name private, and to promises of assistance made to Major Ross by His Excellency Major Nathan, C.M.G., Governor of the Gold Coast, the Liverpool School of Tropical Medicine is immediately sending out Dr. Charles Balfour Stewart to undertake a campaign against malaria in that Colony. He will proceed first to Sierra Leone in order to study the methods now being employed there with much success by Dr. Logan Taylor, and will first attack the disease in the town of Cape Coast Castle, where, according to many reports, there is at present a considerable mortality among Europeans. Dr. Balfour Stewart will have full charge, under Major Ross's general direction, of the operations on the Gold Coast, and will probably be soon furnished with assistants. The line he will probably adopt will be that of drainage of the ground and clearing out broken vessels of water from the houses by means of large gangs of workmen, as has been done in Freetown. He is engaged for one year, but will probably remain as long as his services are needed for the great work which he is called upon to conduct in this rising and already important Colony. He will probably be able to give special attention to the gold mines at an early date, but his movements will be largely determined by the wishes of the Governor.

The nature of the work carried on in Sierra Leone has already been explained in our columns, and further particulars are given in a report despatched from Freetown by Dr. Logan Taylor on September 17th. He states that from the beginning of the work 6,500 houses have been cleared of broken bottles, tins, calabashes, etc., in which *Culex* mosquitos breed. Drainage operations against *Anopheles* mosquitos are also being pushed as much as the rain will allow. He adds, "I think there is no doubt but that the number of *Anopheles* in the streets which we have dealt with is diminished. The people resident in the streets will tell you that at once. The number of pots and tins removed has made a considerable diminution in the *Culex*." Dr. Taylor does not mention the number of cartloads of pots and tins removed, but we are informed that from previous averages it may be put at something like 1,300. Considering that the work had been in progress, at the date of this report, for little over two months and had been much impeded by floods and rain, the results are already very satisfactory. In addition to fifty other men, two men are specially employed to look constantly after the centre of the town, where the offices, warehouses, and European houses are. The Governor, Sir Charles King Harman, is giving every assistance. Dr. C. W. Daniels, of the London School of Tropical Medicine, who has been studying Dr. Taylor's work at Freetown and has now returned to England, while recognising that the work has been undertaken in a difficult place and will involve a great expenditure of time and money, says in a letter to Major Ross, "In my opinion already your efforts have been crowned with a large degree of success, as there has been a noteworthy diminution in the number of the first two genera of mosquitos (*Anopheles* and a kind of *Culex*) found in the houses. The number of breeding grounds has been enormously diminished." Success in Sierra Leone will mean much, for the conditions there are particularly bad.

Practical operations directed against malaria and its insect host will, when Dr. Balfour Stewart begins his work, be in full swing all down the West Coast of Africa from the Gambia to Lagos. The fact that three of the colonies are being dealt with by expeditions from the Liverpool School of Tropical Medicine is proof of the earnestness with which this most important and most difficult practical problem is being attacked. It is satisfactory to note the public-spirited way in which men of business in Liverpool have taken up the matter, showing that they fully recognise the obligations which the great commercial interests of their port in tropical countries place upon them to ensure that the terrible loss of valuable lives, which the commerce has hitherto entailed, should be diminished by every means which science can devise and money provide.

## THE ARMY MEDICAL SERVICE AND THE PROPOSED REORGANISATION.

IT is not surprising to learn that young medical men who may be disposed to turn to the army as a career are bewildered by the report of Mr. Brodrick's Committee, and in doubt as to the exact position of affairs at the present moment. They are, however, in this respect no worse off than others of more experience in the ways of the War Office; indeed, the greater the experience the greater seems to be the uncertainty. All that can be said for the present is that things are as they were before, and that the examinations for admission to the service are suspended. Inquiry at the office of the Director-General of the Army Medical Service shows that absolutely nothing is known there beyond what is contained in the Committee's report, which was published in full in the BRITISH MEDICAL JOURNAL of October 5th, pp. 1025 to 1032. No new scheme

of organisation can take effect until promulgated in a Royal Warrant. There are good points in the scheme, and it may eventually become the basis of a satisfactory warrant, but the serious deficiencies and ambiguities pointed out last week, and those stated at length in the communications from experienced correspondents published at p. 1105, render it certain that it must undergo many modifications before any such warrant can issue. We are informed that a meeting of the Subcommittee of the Parliamentary Bills Committee of the British Medical Association, which presented the provisional report, published in the JOURNAL on May 4th, 1901, will be held shortly, and that it is proposed to draw up a report on the scheme of Mr. Brodrick's Committee for presentation to the Council of the Association at its next meeting.

## VACCINATION STATISTICS.

MR. BERNARD SHAW'S contributions to the never-ending vaccination controversy are interesting as a psychological study, if for no other reason. Having found that the mere calling of names produces no effect, the medical profession being case-hardened in this matter by long experience of antivaccinists, he has dropped his charges of medical witchcraft and superstition and now asserts "that the vaccinists are not only denouncing antivaccinism, ..... but vehemently attacking sanitation," consequently "I am," he says, "forced to fight against vaccination in Council, because if I do not do so all the energy that is wanted to fight the diphtheria and scarlet fever now raging in our insanitary districts, with their cellar dwellings and their illegal overcrowding, will be diverted to vaccination, which does not profess to touch diphtheria." Was ever such a wildly inaccurate statement and such inconsequential reasoning heard before from a sane man not an antivaccinist? For Mr. Shaw is not an antivaccinist, he keeps an open mind and does not believe that "the vaccinist case has been either proved or disproved." He wants it proved to him in his own way on the basis of two propositions which he must be allowed to state in his own terms by a committee of mathematicians whom he names. We can hardly suppose that even the present Government, which has shown itself so weak-kneed about vaccination, will clutch at this suggestion, but it is interesting to remember that one of the mathematicians selected by Mr. Bernard Shaw, Professor Karl Pearson, has already examined by the apparatus of the very latest mathematical methods one problem of the kind. Professor Pearson, in the course of a paper read to the Royal Society in March, 1900, and since published in the *Philosophical Transactions* (vol. 195), discussed the effectiveness of vaccination to protect the life of a person attacked by small-pox by finding "the correlation between strength to resist small-pox and the degree of effective vaccination." He takes the statistics of the Metropolitan Asylums Board for the epidemic of 1893, showing the number of recoveries and deaths from small-pox, and the absence or presence of a definite vaccination cicatrix. Excluding the cases in which there was no evidence, he gets the following table:

| Cicatrix. | Recoveries. | Deaths. | Total. |
|---|---|---|---|
| Present ... ... | 1,[illegible] | 42 | 1,004 |
| Absent ... ... | [illegible]93 | 94 | 477 |
| Total ... ... | 1,945 | 136 | 2,081 |

The result of his analysis of the figures is "that there is quite a large correlation between recovery and the presence of the cicatrix. The two things are about as closely related as a child to its 'mid-parent.' While the correlation is very substantial and indicates the protective character of vaccination, even after small-pox is incurred, it is, perhaps, smaller than some over-ardent supporters of vaccination would have led us to believe." We do not know what statements Professor Pearson had in view in the last sentence, which seems lacking in scientific precision, but it appears that the new mathematical analysis gives a result strikingly in favour of vaccination as did the older and simpler. The case taken by Professor Pearson, of course, only deals with a part of the effectiveness of vaccination against small-pox, for a large part of that effectiveness is due to its protecting persons from contracting small-pox when exposed to infection.

## THE MEDICAL RELATIONS OF LIFE INSURANCE.

AN interesting series of special reports were presented to the second Congress of Insurance Medical Officers held in Amsterdam at the end of last month, upon the conditions under which insurance companies should accept second-class lives—that is, those presenting more or less important morbid conditions. Professor Stokvis, of Amsterdam, passed in review the various causes of extrarenal albuminuria depending upon lesions of the genito-urinary passages only to be distinguished by careful microscopical examination of the urine. In one instance, out of 140 conscripts, 21 had albuminuria, due in 13 (or 60 per cent.) to extrarenal causes; the prognosis of such cases was good, as the deaths from diseases of the prostate or bladder produced only 1.5 per cent. of the general mortality, while six-sevenths of these deaths occurred after the age of 60. Renal albuminuria he divided into organic and functional. He would exclude from insurance all persons affected with renal lesion, but in order to confirm the existence of nephritis the diagnosis must be based upon something more than persistent albuminuria, due attention being paid to the concomitant morbid symptoms. As to functional albuminuria, the gravity of that dependent upon heart disease must depend solely upon the state of the heart. He would not reject persons affected by cyclical albuminuria. Dr. A. Siredey (Paris) argued that all thin diabetics should be refused, as well as all diabetics, even though fat, under 35; after that age, a diabetic of good general appearance, whose organs, especially the lungs, were perfectly healthy, and who did not live in contact with cases of tuberculosis, might be accepted with an increased premium. In cases of nervous diabetes consecutive to emotions, overwork, or injury, however the age and general aspect, were less reliable, and they should always be deferred for six months or a year, and not accepted unless the latter examination was favourable to them. Dr. Poëls (Brussels), while recognising that where heart disease was already of long standing, and perfectly compensated, survival was possible for many years, maintained that when the lesion was recent it was impossible to form any opinion as to the probable duration of life. He would only admit persons whose heart lesion was of at least five years' standing and had remained latent during that period. As a general rule compensation was maintained longer where a valve was insufficient than where it was contracted, aortic lesions were more favourable than those of the mitral and pulmonary orifices, and those of the pericardium than those affecting both endocardium and pericardium. He recommended, however, that cardiac cases over 50 years of age should be rejected. Dr. Poëls and Dr. E. Moritz of St. Petersburg agreed that cases of arterio-sclerosis should only be accepted when the disease was merely "imminent," or at most in the initial period; while Dr. Moritz advised that they should only be accepted for policies terminating at a certain age. Dr. J. Crocq, of Brussels, in a report on reflexes, expressed the opinion that the abolition of the knee-jerk should involve rejection, while its diminution should indicate a more careful examination of the other nervous functions; its exaggeration might depend upon an

organic lesion, when the case should certainly be rejected, or upon a functional neurosis, the prognosis of which would have to be determined in each case. He held also that the abolition or pronounced enfeeblement of pupillary reflexes, the existence of Argyll Robertson's sign, or pupillary inequality demanded rejection. With regard to diseases of the ears, Dr. H. Burger, of Amsterdam, considered that chronic purulent otitis media should involve rejection if complicated with inflammation of the attic or the mastoid antrum, if tuberculous or cholesteatomatous, or if accompanied by lesions of the bone, by facial paralysis, or by vertigo and headache; with these exceptions such cases might be accepted with an additional premium, but cases with external otitis or acute otitis media should be postponed until these were cured. Bilateral deafness, severe auditory vertigo, and even permanent perforation of the tympanum, the consequence of a cured suppuration, involved grave risks and called for increased premium. Dr. W. Salomonsen, of Copenhagen, considered that a syphilitic whose infection was ten years old, without relapse, could be accepted, especially if he had healthy children. Dr. Mahillon, of Brussels, in his report on women thought that a primipara or a woman recently married should be postponed until after the first accouchement, but that a multipara could be accepted if former accouchements had passed off without complications. Dr. Weill-Mantou, of Paris, in a report on appendicitis, maintained that all abnormal sensibility in the appendicular region, as well as any previous attack which had not called for surgical intervention, should involve postponement of the case, but that candidates who had been operated upon might be accepted after a lapse of time longer or shorter according as the operation was performed during an acute attack or in an interval.

## RECENT MEDICAL TERMINOLOGY.

THERE is an old saying—perhaps a rather childish one, but containing its modicum of truth none the less—to the effect that "while sticks and stones may break our bones, names will never hurt us;" but, assuredly, when we glance over Dr. Newman Dorland's list[1] of some of the newer medical words, we begin to have our suspicions that names may not be so thoroughly innocuous as we had thought and had been encouraged to think. Not that the list is a bad list; far from it. It is a very good list and very complete, and the definitions are carefully done and reliable; but with all that it is a list which, coming into the hands of the practitioner, might well give him pause, and might deter the young student from following so hard a calling as scientific medicine seems to be. Many of us no doubt can readily enough guess what is meant by "pseudo-jaundice," "pseudo-ileus," "vasculitis," "intimitis," "meso-neuritis," and "bacillemia;" and such words as "cerebellipetal," "cardioptosis," and "gonoccocide" yield up their secret when properly struggled with; but there are other names which are not so benign. There may be a suspicion that "toxoid" means "a transformation product of a toxin, no longer toxic," but what is to be made of "protoxoid," "syntoxoid," and "epitoxoid?" Then there is "urethremphraxis" (obstruction of the urethra!), "atticotomy" (the surgical opening of the attic of the labyrinth), "brenzkatechinuria" (the presence of brenzkatechin or alkapton in the urine), "erythrocytorrhexis" (a morphological change in red blood corpuscles, consisting in the escape of round, shining granules, and the splitting off of particles), and "hydroparasalpinx" (watery fluid in the accessory tubes of the oviduct). There are, also, other words which seem to be both difficult and unnecessary; surely it is a work of supererogation to coin "metopantralgia," when frontal headache is all that it means; and "epicondylalgia" seems to be equally unrequired. "Gastralgokenosis" and stomach-ache are surely nearly synonymous! New discoveries—or, rather new theories—regarding the action of bacteria on the body cells and fluids are responsible for many of these long names. There are "alexocytes," "ectasin," "anectasin," "antiabrin," "antibodies," "glabrificins," "antilyssins," "bacteriolysis," "lysin," "toxicomucin," and "toxoalexin." Recent work on the fine anatomy of the nervous system has also added not a few, as is seen in "arkyochrome," "axon," "axodendrite," axospongium," "inaxon," "karyochrome," "polyaxon," "stichochrome," and "telodendrion." Cumbrous although many of these names are, they have nevertheless an important part to play; for, while they are neither English nor French nor German, they are yet intelligible to all well-educated Englishmen, Frenchmen, and Germans, being derived from Greek and Latin roots, albeit not always quite correctly put together. Sometimes the absence of some such international name has deprived a writer of the credit of a new mode of treatment. For instance, "cleidotomy," or the division of the fœtal clavicle in cases of difficult labour, was performed in England and described by an English writer, but no name was given to it, and later on it was given back to us from Germany with the term "cleidotomie" appended to it in successful fashion. So there is something in a name after all. Let writers, then, take heart of grace and coin new words if they have any new thing which is by any chance worth remembering; but let them be less polysyllabic than some in Dr. Newman Dorland's list. It is a somewhat curious fact that in this long list there are two names specially associated with one part of the British Isles; they are "emol," an "emollient soapy mineral from Perthshire;" and "avenolith," an "intestinal calculus or enterolith formed around a grain of oats, said to be common in Scotland." Shade of Dr. Johnson!

[1] *International Clinics*, Eleventh Series, vol. ii, p. 286, 1901.

## THE VIRCHOW CELEBRATION.

THE celebration of Professor Virchow's 80th birthday on Saturday, October 12th, will be attended by a large number of distinguished representatives of medicine and the biological sciences. Addresses will be presented by fourteen British bodies. The British delegates will number eight, headed by Lord Lister, who will represent the Royal Society, the British Association (Anthropological Section), the University of London, the University of Edinburgh, the Royal Academy of Medicine of Ireland, and the Edinburgh Medico-Chirurgical Society; the University of Glasgow will be represented by Dr. Muir, Professor of Pathology, and Lord Lister and Professor Muir will jointly represent the Faculty of Physicians and Surgeons of Glasgow; the Royal College of Physicians of London will be represented by Sir Felix Semon; the Royal College of Surgeons of England by Mr. Howard Marsh; the Royal College of Physicians of Edinburgh by Dr. Graham Brown; Trinity College, Dublin, by Dr. O'Sullivan, Professor of Pathology; the Royal Medical and Chirurgical Society by Dr. Rose Bradford; and the Pathological Society of London jointly by Mr. Watson Cheyne and Dr. Bradford. The number of delegates from Great Britain would have been larger but for the fact that during this month it is extremely difficult for those who are connected with the British medical schools to leave their work. Among the representatives of France will be M. Lannelongue and Professor Cornil, and among those from Italy Professor Baccelli and Professor Maragliano; from Austria seven delegates will attend, headed by Professors Toldt and Weichselbaum of Vienna; Holland will be represented by Professor Stokvis of Amsterdam; Denmark by Professor Salomonsen; Norway by Dr. Armauer Hansen; Switzerland by Professor Ernst. All the German Universities will send delegates.

## OVARIAN ORGANOTHERAPY.

THE real value of ovarian organotherapy, which has been asserted by some to give most brilliant results, is ques-

tioned by others who agree with Jacobs that "suggestion" played a large part in some of the reported successes. This conclusion is supported by Krusen in a recent number of the *Johns Hopkins Hospital Bulletin* (July, 1901). Notwithstanding the many brilliant results which Krusen admits as authentic, experience leads him to the following conclusions, based upon the use of the American product upon American women: (1) The employment of ovarian extract is practically harmless, as no untoward effects beyond slight nausea have been noted even when full doses have been administered. (2) In the treatment of amenorrhœa and dysmenorrhœa no good results have been secured; in some cases of the amenorrhœa of obesity remarkable results have been obtained by the use of the thyroid extract. (3) The best results were seen when ovarian extract was prescribed for the relief of symptoms of artificial menopause, when in a few instances the congestive and nervous symptoms were apparently ameliorated. (4) No appreciable result was noticed in the use of ovarine in the natural menopause. (5) No definite or exact reliance can be placed upon the drug, as it often proves absolutely valueless where most positively indicated. (6) Suggestion, as Jacobs insists, probably produced the effects in the successful cases. The neurotic type of individual demanding this treatment will often be relieved by any simple remedy. (7) In those instances where effects are noticed, increase in dosage seemed to have little influence in maintaining the effect of preventing the patient from becoming accustomed to its use. (8) The theory which suggests the use of this extract seems to be at fault, and the administration of ovarine or ovarian extract is based upon a wrong assumption as to the function of the ovary. In organotherapy the best results have been obtained from the use of the thyroid and adrenal glands, and the ovary in function is in no sense analogous to these organs. Its principal function is ovulation, and if any peculiar product is coincidentally manufactured the isolation of this product has not yet been accomplished.

## THE CHAIR OF NATURAL HISTORY. GLASGOW UNIVERSITY.

The graduates of the Glasgow University will learn with regret that Dr. John Young, the Professor of Natural History, has been obliged by the condition of his health to resign his chair after thirty-five years service in the University. Professor Young was educated at the High School and the University of Edinburgh. In 1866 he was appointed to his present post in the Glasgow University, and is the Senior Medical Professor in that University. In 1876 a lectureship in Geology was instituted, and this appointment was also given to Professor Young. He has, in addition for many years acted as Curator of the Hunterian Museum of the University, and has taken an enthusiastic interest in that remarkable collection. It is understood that Professor Young will continue in this office in connection with the Museum. After such a long and faithful service at the University it is the earnest hope of all that he may have health and strength to enjoy his comparative repose and retirement for many years to come.

## THE PREVENTION OF YELLOW FEVER.

The Americans have laboured strenuously to stamp out yellow fever in Cuba ever since it has been in their possession. The epidemic at Santiago in 1899 resulted in a case-mortality of 20 per cent. The result of nearly two years of American rule has been a thorough cleansing of the city. Every house where yellow fever occurred in 1899 was disinfected three times. According to official reports received at the Insular Bureau of the United States War Department, each day 85 miles of streets were swept, and 25,000 cubic yards of sweepings were hauled out of the city during the year. In all 18,000 cubic yards of garbage were removed, in the destruction of which 35,000 gallons of crude petroleum were used. In the same work 4,000 gallons of carbolic acid and 11,000 pounds of chloride of lime were employed. No street excavating was permitted. The result of this work is that there has been no yellow fever in Santiago since December 27th, 1899. Major Walter Reed has sent to the United States War Department a report of his work in Cuba some time ago. He subjected six or seven volunteers to the bite of inoculated mosquitos. His conclusions, which we give on the authority of *American Medicine*, are interesting in the light of recent events in Cuba: (1) The mosquito serves as the intermediate host for the parasite of yellow fever. (2) Yellow fever is transmitted to the non-immune individual by means of the bite of the mosquito that has previously fed on the blood of those sick with this disease. (3) An interval of about twelve days or more after contamination appears to be necessary before the mosquito is capable of conveying the infection. (4) The bite of the mosquito at an earlier period after contamination does not appear to confer any immunity against a subsequent attack. (5) Yellow fever can also be experimentally produced by the subcutaneous injection of blood taken from the general circulation during the first and second days of this disease. (6) An attack of yellow fever produced by the bite of the mosquito confers immunity against the subsequent injection of the blood of an individual suffering from the non-experimental form of this disease. (7) The period of incubation in 13 cases of experimental yellow fever has varied from forty-one hours to five days and seventeen hours. (8) Yellow fever is not conveyed by fomites, and hence disinfection of articles of clothing, bedding, or merchandise, supposed to be contaminated by contact with those sick with this disease, is unnecessary. (9) A house may be said to be infected with yellow fever only when there are present within its walls contaminated mosquitos capable of conveying the parasite of this disease. (10) The spread of yellow fever can be most effectually controlled by measures directed to the destruction of mosquitos and the protection of the sick against the bites of these insects. (11) While the mode of propagation of yellow fever has now been definitely determined, the specific cause of this disease remains to be discovered.

## MOSQUITOS ATTRACTED BY SOUNDS.

Major Ronald Ross writes to us from the School of Tropical Medicine, University College, Liverpool, to say that he has recently received a communication from Mr. Brennan of the Public Works Department, Jamaica, containing the following observation: "You will pardon me for drawing your attention to the fact, if you have not already noticed it, that the mosquitos (I do not know if every variety) will respond to such sounds as a continuous whoop or hum. I have tried the experience lately, and find swarms gather round my head when I make a continuous whoop. There may be, however, some particular note or pitch that would be more attractive to them." So far as we are aware, this observation is new, and would afford an interesting subject for investigation on the lines of Dr. Nuttall's recent research on the colours attractive to mosquitos.

## THE LONDON COUNTY COUNCIL.

The London County Council reassembled last Tuesday after the long vacation. The Chairman, Mr. Torrance, in reviewing the work of the Council during the past year, said that in no way was the essential unity of London impressed more strongly than in the terms of its public health—plague, small-pox, diphtheria, scarlet fever did not respect the boundaries laid down by the Royal Commission; and this essential unity must ever remain the keynote of future administration. Looking forward to the many heavy tasks which lie before the Council, he said: "When we look at London we can become sadly pathetic

over its congested and sorrowful condition. In our despair we worry the sorely-harassed Housing Committee in its determined efforts to solve the heart-breaking problem; or when you know of a Glasgow, a city within itself, sending its beautiful electric cars to every corner of its wide domain, its fine bridges, rationally and sensibly used for the good of the whole community, and when you compare this with a London, with its conflicting chaos of interests, where the toiler is daily at his wits' end to know how to get to or from his work, you may grow indignant at the comparison." In regard to the work of the Public Health Committee, the Chairman said: "The appearance of bubonic plague in Glasgow in the summer of 1900 rendered it necessary to take precautionary measures against the disease in London, and at the suggestion of the Local Government Board the Council undertook to provide accommodation for persons coming in contact with cases of plague. Vacant premises in the Council's possession were made ready for occupation, and preliminary arrangements with contractors were entered into so as to ensure the provision of furniture if required at short notice. The Council also undertook by desire of the Board to deal with suspected cases, but it was arranged later that this duty should be performed by the Metropolitan Asylums Board. The Committee engaged experts to assist in the diagnosis of cases of plague, and circulated to medical practitioners in London a memorandum by one of these experts as to the signs and symptoms of plague. In February the Council approved a scheme under which provision for 1,000 'contacts' would be made, but although further cases of plague occurred in Hull and Cardiff, and several suspected cases in London were investigated by the Public Health Department, London has fortunately been free from the disease during the year to which this report relates. With a view to encouraging the sanitary authorities to employ female sanitary inspectors who, in addition to their other duties, would take opportunities of inculcating habits of cleanliness and the best methods of utilising food, the Council informed the Local Government Board that it was willing to pay half the salary of such inspectors. The health of our people is the primary consideration, and the Committee is to be congratulated on its unceasing efforts to improve and purify our surroundings. The measures taken by it at various times of emergency have been such as have enlisted public confidence in its zeal and judgment."

## WATER SUPPLIES AND RIVER POLLUTION.

The Sanitary Institute will hold a conference on water supplies and river pollution on Wednesday and Thursday next. On the first day Sir Alexander R. Binnie will take the chair at 10 A.M. when the subjects for discussion will be sources of supply and watershed areas, storage, town and village supplies will be discussed. On the second day Mr. W. Whitaker, F.R.S., will take the chair at 10 a.m., when water filtration, purification and sterilisation, distribution appliances (filters, taps, cisterns, etc.), and prevention of river pollution will be discussed. On both occasions a series of papers which have been submitted will be printed and circulated to those who intend to be present at the conference, as it is hoped that in this way more time may be available for actual discussion. The meetings will take place at St. Andrew's Hall, Newman-street, Oxford-street. In connection with the conference an exhibition of models and appliances used in the distribution and purification of water will be arranged in this hall. On Wednesday afternoon a visit will be paid to the New River Water Company's testing shop at Clerkenwell, and also to the East London Waterworks at Lee Bridge, N.E. On Thursday afternoon a visit will be paid to the Staines reservoirs. A large number of sanitary authorities have appointed delegates to the conference. The programme of the subjects is of a thoroughly practical character.

## PROPOSED PORT SANITARY AUTHORITY FOR THE CLYDE.

During last week an important inquiry was held in Glasgow with regard to an application for a Provisional Order for creating the Corporation of Glasgow a port sanitary authority for the river Clyde. The present arrangements for the sanitary supervision of the shipping of the Clyde have long been considered inadequate, but the recent serious epidemics of plague and small-pox in the city of Glasgow have emphasised this fact, and led to the present movement. The necessity for the creation of a port sanitary authority with jurisdiction over all the shipping of the Clyde is undoubted, and the Corporation of the city of Glasgow, which is in this matter the predominant partner, is of the opinion that it will be more satisfactory that it should be the authority instead of there being a joint port sanitary authority. The intention is that the supervision of vessels bound for Greenock and Port Glasgow should be left to the Greenock authorities, but that the rest of the shipping should be controlled from Glasgow, and for this purpose it would be necessary that a boarding station should be established near Greenock. This proposal has raised considerable opposition on the part of the various burghs interested in the matter. They would be called upon to share the cost. Evidence was brought both for the city of Glasgow and on behalf of the opposition, and after a four days' sitting the Commissioner, Sheriff Jameson, said he would make a vizandum and report to the Local Government Board. It is earnestly hoped that a satisfactory solution of this matter will be arranged, so that what has been undoubtedly a weak point in the public health administration of Glasgow and the neighbourhood may be thoroughly corrected.

## SANITATION AND RELIGION.

At a meeting of the Church Sanitary Association at Brighton last week, Dr. Newsholme, Medical Officer of Health for the borough, who presided, gave an address, in the course of which he pointed out that the chief object of the Association was to accentuate the importance of promoting the physical and mental welfare of the people by sanitary improvements. He said that in visiting the dwellings of the poorest of the poor he had repeatedly found sweet and cleanly homes, like oases in a wilderness, and there had been little difficulty in recognising that the fundamental reason for the difference between these and the neighbouring dirty and overcrowded tenements consisted in character rather than in circumstances. In so far therefore as the preachers of the Gospel produced among their hearers the fruits of good living they were the greatest friends of humanity in physical as well as in spiritual matters. He did not feel called upon to decide to what extent bad people made slums or to what extent slums made people bad as well as ill. Both statements would be true. Those imbued with religious principles would by their cleanly habits, although obliged to live in small and insanitary dwellings, minimise the evils caused by these; while those of unstable character, and still more those having no guiding principles in life, would be dragged down, demoralised, and brutalised by the sordid, incommodious, and crowded conditions of their homes. He was confident that complete success in their endeavours to uplift the people would only be secured when the problem was attacked from both its sides. Much good could be done by the clergy by giving, or by arranging for the giving, of instruction in matters of health in schools, at mothers' meetings, and through the numerous other organisations which centred around their work. Such teaching should embrace the elements of domestic economy, of household management and cookery, and of thrift, as well as the more strictly hygienic subjects. Vice, laziness, indifference, and lack of concern for the welfare of others, or even of themselves, were more potent causes of disease

than mere ignorance. It was proposed by Surgeon-General Thornton, C.B., seconded by Dr. Adkins, and resolved that:

It is desirable that preachers and teachers inculcate systematically the Christian obligation of caring "as well for the body as the soul."

## INFECTIOUS TRAVELLERS.

Two instances of reckless disregard of the law and common sense in regard to infectious diseases have been reported during the last few days. In one a young woman, on being informed that her niece, of whom she was in temporary charge at the seaside, was suffering from diphtheria, rushed off to the station, and took the child back to its home by train. In the other case a man, on being informed that he was suffering from scarlet fever, straightway put himself into a train, and travelled from the north of England through London to the South Coast. In this case the Sanitary Department of the northern town communicated with that of the southern, and the man was taken before a court of summary jurisdiction, and fined 40s. and costs for exposing himself in a public place while suffering from scarlet fever. In the other case the prosecution was instituted by the railway company, and the defendant was condemned to pay a fine of 20s. with £4 3s. 6d. costs. The law on the subject is a plain piece of common sense, for it enacts (Public Health Act, 1875, Sect. cxxvi) that a penalty is incurred by "any person who, while suffering from any dangerous infectious disorder, wilfully exposes himself without proper precautions against spreading the said disorder in any street, public place, shop, inn, or public conveyance, or enters any public conveyance without previously notifying to the owner, conductor, or driver thereof that he is so suffering, or, being in charge of any person so suffering, so exposes such sufferer."

## COMPARATIVE CONSUMPTION OF ALCOHOLIC BEVERAGES.

In the report on alcoholic beverages recently issued by the Board of Trade some interesting comparative statistics are given showing the consumption of wine, beer, and spirits in this country, on the Continent (particularly in France and Germany), in the United States, and in the principal British Colonies. In regard to wine, every 100 people in this country consumed on the average about 39 gallons in 1900; in the United States during 1899 every 100 people consumed only 33 gallons; in Germany the consumption amounted to 145 gallons; and in France to 2,540 gallons. Of beer, 100 persons in Great Britain drank 3,170 gallons in the year; in Germany 2,750 gallons; in the United States (in 1899) 1,330 gallons; and in France only 620 gallons. Of spirits, 100 persons in this country consumed, in 1900, 112 gallons; in the United States, in the previous year, an amount only just below that; in Germany, in 1900, 194 gallons; and in France 202 gallons. The total consumption of spirits, estimated as proof spirit, amounts to about 1 gallon a head in Great Britain and in the United States, while it amounts to about 2 gallons a head in Germany and in France. The returns for the year 1898, as was pointed out in our columns last year, showed that the total consumption of alcohol, whether in wine, beer, or spirits, was estimated at 377 ounces a head in Great Britain, 427 ounces in Germany, 295½ ounces in France, and 196 ounces in the United States.

## ENTERIC FEVER IN GERMANY AND RUSSIA.

We learn from our Berlin correspondent that serious outbreaks of enteric fever and dysentery have recently occurred among regiments in various parts of Germany, including the Guard regiments at Spandau. The epidemic in and about Geselkirchen in Westphalia is assuming large proportions; local hospitals have been found inadequate to the great and constant strain thus thrown upon them, but private help has been freely given, and the commanding officer of the garrison at Münster has placed 250 beds at the disposal of the civil hospitals. The number of cases under treatment in this district at the end of the first week of October was 947, an increase of 166 during that week. It is believed that the drinking water is responsible for the outbreak, and it is thought that insanitary conditions in workmen's dwellings are contributing towards its spread. There is also a serious epidemic of enteric fever in St. Petersburg, and the hospital accommodation, which in proportion to the provision made in Paris and London is low, is now proving insufficient. There, again, the water supply is believed to be the main cause of the epidemic, and measures are being taken to provide a supply of boiled water at points easily accessible to the inhabitants of the poorer districts.

## INTERNATIONAL PREVENTION OF TUBERCULOSIS.

In an article in which he discusses the various means employed in European countries to check the spread of tubercle, Dr. S. Bernheim pleads strongly for an international prophylaxis.[1] He points out that although tubercle differs in some points from cholera, yellow fever, and plague, it is nevertheless as important to combat it in the same international manner. Its bacillus is full of vitality, and is often carried across frontiers, and from country to country, in railway trains and ships. No isolated effort by any one nation can, therefore, hope to be successful. Bernheim recommends that the prophylaxis of tuberculosis be made the subject of international sanitary legislation, which could be fixed at some conference in the same way as the measures taken against cholera and the plague were decided upon. He specially refers to the good effects obtained by the tuberculin test in cases of bovine tuberculosis as carried out by Bang in Denmark; in certain parts of that country since the tuberculin test was adopted the percentage of animals that gave the reaction had fallen from 9 per cent. to 4.7 per cent., and even lower.

An address will be given on October 18th at the Queen's Hospital, Birmingham, by Mr. Thomas Bryant, on the occasion of the first distribution of clinical prizes since the University commenced its work.

President Roosevelt has informed Mrs. McKinley that, in pursuance of the intention of the late President McKinley, and in recognition of devoted services, as well as because of eminent fitness, he will appoint Dr. P. M. Rixey, Medical Inspector in the United States navy, to be Surgeon-General of the navy upon the expiration of the term of office of the present occupant of that post. Dr. Rixey was Physician to President McKinley from the time when Dr. Leonard Wood, now General Wood, left Washington as Colonel of the Rough Riders in 1898.

[1] *Belgique Méd.*, Ann. viii, p. 129, August 1st, 1901.

Vaccination in Schools.—The Council of Almoners of Christ's Hospital, acting on the advice of Mr. H. Aldersmith, F.R.C.S., M.B., medical officer, have decided that, in view of the present outbreak of small-pox in London, all boys in the school who have not been vaccinated or revaccinated within the last seven years shall be forthwith revaccinated with calf lymph by the medical officer.

The Use of Homing Pigeons in Country Practice.—According to the New York *Medical Record*, Dr. Gould of Rockland, Maine, possesses a loft of homing pigeons. In the course of his practice it is not infrequently necessary to make tiresome and even hazardous journeys in small boats in order to reach patients on adjacent islands. To obviate the unnecessary repetition of these, he has been accustomed to leave pigeons at the homes of his distant patients with the object of being informed of their daily progress.

# Introductory Addresses

AT

## THE OPENING OF THE MEDICAL SCHOOLS.

### YORKSHIRE COLLEGE, VICTORIA UNIVERSITY, LEEDS.

By Sir William Selby Church, Bart., M.D.,
President of the Royal College of Physicians; Physician, St. Bartholomew's Hospital.

[Abstract.]

#### THE MAKING OF MEDICAL MEN.

After a short review of the history of medical science, Sir William Church said it was difficult for the present generation to bear in mind the changes that had taken place during the last hundred years. Greater progress had, however, taken place in all branches of medical knowledge during the last century than in all which preceded it. The State, moreover, recognising the importance of national health, had taken part in developing a new department of medicine—that of Preventive Medicine and Sanitary Science. Its concluding years had seen the discovery of a new province of Nature and the rise of a new science—bacteriology.

#### The Doctor as Citizen.

It was to be desired that a higher standard of general knowledge could be insisted on in those entering the profession. The professional character was not the only one they had to support but also that of companion, friend, and citizen. Their profession had always claimed to be a liberal and learned one, and in no way could its status be maintained and raised if its members could not hold their own in general society as men of intelligence and culture. In their profession not only the acquirement of knowledge but education was lifelong; they remained students as long as they remained at work. It was one of the great advantages of medical work that it opened out an infinite field for speculation and thought, and ever afforded fresh material for research and experiment. Any real addition to the accumulated store of knowledge was a benefit to mankind, and, however small, possessed more merit than filling the mind from the general heap.

After alluding to the remarkable faith in nostrums held even by many persons of high intelligence and culture, who had not, however, received any scientific training, he asked, Did they not themselves conduce to this credulity on the part of the laity in speaking of "curing" disease? With few exceptions they did not cure the disease any more than they cured a broken leg. They placed the patient in the best circumstances for Nature to restore the health of the ailing person or the bone of the broken leg.

#### The Future of Medicine.

In referring to medical progress during the nineteenth century, he asked, might they not look with some confidence to the present century seeing cholera, plague, malaria, and other forms of fever, if not abolished, rendered comparatively innocuous? How was this goal to be reached but by patient honest work, seeking the truth and not being contented until it could be plainly and palpably demonstrated. By the Roentgen rays foreign bodies could be seen and localised within the body, and more exact information could be obtained of the disease and injuries of joints and the condition of fractures, and it might be hoped that they would before long reveal with greater certainty than at present changes in the tissues of the organs themselves.

#### Moral Effects of Medical Training.

Science was the most ennobling of all pursuits, and medicine shared more highly than any of the other branches in this advantage. The old reproach, "Tres medici duo Athei" was not and never had been true. Among no class was true reverence for the Creator more strongly felt than by the followers of medicine. Unorthodox they had been and perhaps were. The anathemas of the Church, which of old were so often directed against science, arose from the hatred the Church had to the spirit of inquiry, which was one, and perhaps the most potent, cause which still lead men to enter their profession. The errors in the accepted beliefs of the Church soon became apparent to the students of natural science, and led them to regard with suspicion the truth of the dogmas and validity of the creeds promulgated by conferences of theologians, who, however learned, were but fallible men. Without scepticism there could be no progress, but the charge that scientists were godless arose from the intolerance and bigotry of ecclesiastics.

In regard to the calumny that their education blunted their feelings and rendered them callous to the sufferings of men and animals, the experience of the whole world disproved it. The charge, which was never made till recently, sprang from the same spirit of antagonism to inquiry and scientific knowledge. The desire to be useful to their fellow creatures was, next to the spirit of inquiry—if indeed it were second to that—the motive which led many to their ranks. By general consent wherever sickness and suffering were found, and however little might be the pecuniary reward, they were found ready to succour, to the best of their ability, those in need of their aid. The battlefields of their armies and the cholera and plague-stricken districts of their Empire alike bore witness that they were not forgetful of Plato's definition of the duty of man: "Wherever his post is, whether selected by himself or assigned to him by his commander, there it is his duty to stand fast in the hour of danger, recking nothing of death or anything else except dishonour."

## OPENING OF THE WINTER SESSION IN THE MEDICAL SCHOOLS.

### WESTMINSTER HOSPITAL.

#### Annual Dinner.

The annual dinner of the past and present students of the Westminster Hospital Medical School was held at the Hotel Cecil on October 4th, under the chairmanship of Mr. Charles Stonham. Amongst the visitors who accepted invitations were Mr. Christopher Heath, Mr. Pearce Gould, Dr. Phineas Abraham, Dr. Colcott Fox, Dr. Palmer, Colonel Sparks, Colonel the Hon. Pleydell-Bouverie, Lieutenant-Colonel Trewman, R.A.M.C., Captain Butler, Lieutenant-Colonel Hensman, I.M.S., and Dr. Rivers Pollock. The loyal toasts having been duly honoured, the Chairman proposed the toast of the evening, "The Westminster Hospital Students Past and Present." He took as evidence of loyalty to the school from which they hoped so much in the future the large gathering present, and observed that no medical school could achieve any measure of success unless all worked together for the common good, for solidarity spelt success in the long run. Considering its size, the hospital had sent out to South Africa more men than any other hospital in Great Britain, and the success of the field hospital he had had the honour to command was largely due to the Westminster medical students. Mr. J. W. Batterham, in responding, said that of the staff, medical and surgical, of twenty five years back, only two now remained—Dr. Allchin and Dr. de Havilland Hall. Mr. G. L. Bunting also responded. Dr. Allchin, in proposing "The Medical School," said that on January 1st he should have the honour of having been connected with the school for thirty years. Thirty years ago in their histological classes they had no microscopes or slides; this, when compared with the present standard of the histological course, showed what a wide interval divided the present from the past. He also reminded them that in the first list of medical graduates published by the University of London, Westminster secured one place out of the ten or twelve names. He was convinced that it would be absolutely necessary for the smaller schools to throw off a large share of their scientific teaching, and devote themselves chiefly to the clinical portion of the work, in which the future success of the school would rest. The clinical teaching at Westminster was as good as that to be had elsewhere, a fact which was demonstrated by the various successes of the students. Mr. A. H. Tubby (the Dean) responded. Mr. W. G. Spencer proposed "The Visitors," for whom Mr. Christopher Heath replied. The toasts, which concluded with that of "The Chairman" by Dr. Colcott Fox, were interspersed with music, vocal and instrumental.

## ST. MARY'S HOSPITAL.

### Annual Dinner.

The St. Mary's Hospital annual dinner took place on October 3rd, at the Whitehall Rooms, Hôtel Métropole. The guests of the evening were those St. Mary's men (some twenty-four in number) who had recently returned from service in the South African war, and nearly two hundred of the past and present were there to do them honour.

The chair was taken by Brigade-Surgeon-Lieutenant-Colonel A. B. R. Myers, who was supported by Sir William Broadbent, Mr. Edmund Owen, Mr. Herbert Page, Dr. Lees, Mr. Critchett, Mr. E. P. Field, Dr. Handfield-Jones, Mr. Juler, Mr. Ernest Lane, and Dr. Caley.

The toast of "The King," and then of "Queen Alexandra, the Duke and Duchess of Cornwall and York, and the rest of the Royal Family," was proposed by the Chairman in a few well-chosen words, and duly honoured.

Mr. Page, who received a great welcome, then proposed the toast of "The Imperial Forces." He remarked that this was the first occasion on which he had given the greater toast of "The Imperial Forces." Hitherto it had always been "The Navy, Army, and Auxiliary Forces." This signalised a new phase in the expansion of the Empire—the union of men of every country under one King. He referred with approbation to the new scheme for the reform of the Royal Army Medical Corps, and declared that the medical schools must do their part; there must be no more boycotting of the service. St. Mary's, he said, had sent of her best to South Africa, and it was a great pleasure to him to propose this toast.

Fleet-Surgeon T. J. Preston, R.N., replied for the Navy, Colonel G. M. Giles, I.M.S., for the Army, and Mr. H. Stansfield Collier, V.M.S.C., for the Auxiliary Forces.

Brigade-Surgeon-Lieutenant-Colonel Myers then proposed the toast of "Prosperity to St. Mary's Hospital Medical School." He alluded to the honoured names of former members of the hospital staff, and paid a graceful tribute to the exertions of Sir William Broadbent and Mr. George Field on behalf of the school. He complimented the present staff on their success as teachers, and the students of to-day both on their achievements in the examination room and on their prowess in the athletic field.

The Dean (Dr. Caley), responded for the school, and alluding to the effort on foot to complete the Clarence Wing, said that the Hospital Board looked forward with every confidence to an early consummation of their efforts. He also spoke in hopeful terms of the negotiations now in progress to provide a sports ground for the students.

Mr. Edmund Owen, in a characteristic speech, gave the health of those who had served in South Africa, and paid an eloquent tribute to those who had fallen. Thanks were returned by Mr. Wallace Ashdowne, Surgeon to the Imperial Yeomanry Base Hospital, Mr. V. Warren Lowe, civil surgeon, and Mr. E. T. Jenkins, one of the dressers of the Welsh Hospital.

A most successful evening was brought to a close by "The Health of the Chairman," given by Sir William Broadbent, and drunk with great enthusiasm.

## YORKSHIRE COLLEGE, LEEDS.

The winter session of the Medical Department of the Yorkshire College was opened on Wednesday, October 2nd. During the afternoon the new buildings of the Medical School were thrown open for inspection to the public. The address by Sir W. S. Church, Bart., President of the Royal College of Physicians, an abstract of which appears at page 1104, was delivered at 4.30 P.M. The function was unusually well attended, the great majority of the teaching staff of the infirmary and the medical department being present and the whole body of students. A vote of thanks to the lecturer was proposed by Professor Trevelyan and seconded by Mr. H. N. Keeling.

In the evening Sir William Church was entertained at dinner by the practitioners of Leeds, Mr. Charles Richardson being in the chair.

By his will the late Sir Joseph Pulley, Bart., has bequeathed £500 to the Hereford Eye and Ear Hospital, £250 to the Hereford Dispensary, and £100 to the Hereford Infirmary.

## THE REPORT OF THE COMMITTEE ON ARMY MEDICAL REORGANISATION.

We have received a large number of communications with reference to the report, published in the last issue of the British Medical Journal, of the Committee appointed by the Secretary of State for War to consider the reorganisation of the Army Medical Services.

The following memorandum, written by a correspondent of wide experience, states briefly some of the main defects of the scheme, to some of which other correspondents also direct attention:

1. *The Position of the Secretary for War.*

The first point that strikes one is the pity that Mr. Brodrick was himself President of the Committee. It seems to destroy his power of being a judge. He has now rendered it difficult to suggest any better scheme without coming into direct conflict with his own. It is probably without precedent in the history of War Office inquiries of this kind for the Secretary of State for War himself to preside at such Committees.

2. *The Disappearance of the D.G.A.M.S.*

Practically the D.G. A.M.S. as a *personal* factor in the R.A.M.C. disappears. There is a heterogeneous Committee which seems to have power to overrule the man whom the service and the nation holds responsible. The P.M.O. of an Army Corps will be by far a more independent individual than the D.G.A.M.S. Apparently in despair at finding a *man* Mr. Brodrick has flung everything into the hands of a Committee, which can never be either praised, blamed, or kicked! Let us ask ourselves this single question, When in any future war failures occur whom shall the nation hang? The elimination of Lord Roberts from the War Office, although still holding the post of Commander-in-Chief, would be an analogous change on the military side.

3. *Omission of a Sanitary Civilian Adviser on the Advisory Board.*

This is a great omission. The health officer of a great city or borough would be of great use on the Board. This is a fatal omission. The Medical Service is largely a preventive sanitary service, and this side of its work—always the weakest side—is ignored, instead of being greatly strengthened by one or more able civilian authorities.

4. *The Home Pay Rates are a Distinct Improvement.*

The *kernel* of the nut is the better pay—but here there is a distinct omission, namely, no better pay is given to the *Colonel's* rank—that is, the average District P.M.O. always underpaid up to date. He draws far less pay than a colonel on the staff, and infinitely less pay than a colonel on the staff Royal Engineers. Thus:

Medical Colonel on the Staff yearly, £953.
Colonel on the Staff, £980.
Colonel on Staff Royal Engineers, £1,163.
Difference *against* Medical Colonel, £210 per annum.

It is of primary importance that this glaring defect be remedied. It is to be noted as of fundamental importance that the grave problem of Indian pay rates is not dealt with logically and categorically. It is hopeless to hand over the R.A.M.C. to the mercy of the Indian authorities, and the definite mandate of the Imperial Parliament is needed to compel the proposed home pay rate to be made the rule in India *plus* local rank allowances. If this is not done failure to secure contentment will automatically result.

5. *The Examination after Three Years Service.*

The examination proposed is impracticable—the young officers are always on foreign service at this period of their life—and it would be impossible to carry out the suggested scheme. But an examination for promotion to captain confined to medico-military routine questions—the organisation of hospitals, the duties of R.A.M.C. officers, and such like—is quite feasible, and could be held anywhere over the Empire, to the great benefit of the young officers' efficiency as R.A.M.C. *officers* as to their duties as *officers*.

6. *Attachment of Young M.O.'s to Units.*

This is a most doubtful experiment and no real boon to the unit or to the M.O. It is sure to result in any amount of ques-

tions, and is probably impossible to carry out. Questions of mess subscriptions, band subscriptions, duties to be performed by a young officer ignorant of army routine, incidence of foreign service, clashing between unit C.O. and chief of the station hospital all these frictions are sure to result—and what is the gain on the credit side—simply *nil*. For can we deny that the idleness, the unceasing leave of absence, the want of thorough military training amongst many of the young combatant officers, so far from acting as a stimulus on a young medical officer, may, on the contrary, have an injurious effect on a well-paid and, it is to be hoped, the well-worked young medical officer of the future. The combatant side of the army is apparently to be placed in direct touch not with our best and most efficient officers, but with young men just "cutting their teeth" in the army and largely ignorant of its routine.

7. *The Breach with the Indian Medical Service.*

By reducing the Netley training to two months a blow is given to the Netley system, and as young I.M.S. men do not go to Aldershot, a cleavage is made in the training of the R.A.M.C. and the I.M.S. officers. This is a pity, particularly as the I.M.S. officers will not have the examination at 3 years service, and will apparently be sent out into their military world with but two months training of any kind.

8. "*Sic Transit Gloria 'Netley.'*"

The great training school that Sidney Herbert and Florence Nightingale toiled to create is being quietly shelved or allowed to die of inanition. Nothing is said of its reform, and indeed the study time there is reduced to two months. Netley has been allowed to go to grief in the past—to become a "Sleepy Hollow," to be part and parcel in the paralysis and failure of the central administration of the medical service; but all this was and is preventable, and in one year of reorganised and definite government it could again begin to influence the medical service for good—that is, as a training school and depôt in the country for young medical men on joining the army, corresponding to what Chatham is to the Royal Engineers. Thus far Netley can do good work, and thus far only.

What is needed in addition to Netley is a central "staff college" for the higher training and *post-graduate* teaching, not of young men going into the service, but of those who about their eighth year of service and about their fifteenth or sixteenth year require to go through a regular course of instruction of some months duration in the whole range of professional military medical routine in its fullest sense.

The needs and the interests of young men joining a corps like the R.A.M.C. are apart from the needs and interests of the older officers, who after foreign service in distant Colonies and in India need post-graduate and staff-teaching for their greater responsibilities.

London and London only can be utilised for such a centre, where under disciplined teaching as at the Staff College at Camberley senior officers can receive post-graduate teaching under specially paid and specially selected teachers.

9. *Charge Pay for Hospitals.*

This is sure to cause much wire-pulling and discontent, and will be very difficult to carry out. Apparently a sanitary officer who, by his devotion to duty, keeps an army "fit," is to be paid less than a doctor who controls a hospital and treats men who should never have been sick.

A secretary to a P.M.O. or an officer doing responsible staff work is not to get staff pay, but 10s. 6d. per diem is to go to the medical officer of a large hospital.

The reason why the charge of a large military hospital is to-day so onerous is that there is a deficiency of trained subordinates, reliable clerks, and above all an able executive medical officer under the medical officer in charge to relieve him of routine administrative duties. If any official needs extra pay it is that proposed executive officer.

10. *The General Tendency of the Recommendations.*

The general tendency is evidently *mistrust* in the ability to find a personal ruler for the A.M.S., and the taking shelter in a Board. Imagine the wire-pulling—the social influences that are the curse of our army—and the deadlock in all power to promote or retard advancement of individuals whose fate has to be decided by a Board so constituted. If ever a reign of mediocrity is to be the rule it will now be introduced.

The failure to develop the sanitary side, and to throw back all the M.O.'s on surgery and medicine as curative doctors is pitiable. While the South African war has brought into most painful prominence the sanitary shortcomings of our army organisation the whole drift of the recommendations is to drive army medical officers into hospitals to learn to treat men that should never have been sick at all. The hands of the clock have been turned back fifty years by such proposals as those now put forward, and a Committee largely composed of non-sanitarians has produced exactly the report expected from it. This weakness of the report is entirely the result of the composition of the Committee, which did not include any member of the R.A.M.C. of any senior standing or acquainted by his service with the wants of the medical service. No doubt the whole of the recommendations will need large modifications. The pay alone will survive.

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An officer of long Indian experience writes: There are some good things in the scheme: (1) The increase of pay is its best feature, and perhaps if it had rested there it would have provided all the necessary attraction, and other reforms might have been left to administrative evolution; (2) the simplification of the entrance examination and the restriction of it to clinical and practical subjects are excellent steps; (3) the various provisions for hospital study and service are sound, and the closer bond established between the profession and service; (4) the rewards for special study and qualification are good; (5) the partial reversion to the regimental system will probably establish a better feeling between combatant and medical officers; (6) the reduction of clerical labour will be, if realised, a grand reform. But the scheme has some glaring blots: (1) The system of "promotion by marks" is unsound. If marking as a result of examination were a true and thorough test of professional competence and meritorious service, it would still be a source of unrest and of "envy, hatred, malice, and all uncharitableness" in the service; but, as you know, there are merits in the profession and service which no system of examination marks can represent or appraise, and the man who is glib of tongue and ready with pen will pass over the head of the slow and nervous man who may possess in higher degree the instinct, intuition, and skill of the doctor, and be superior in the ward and at the bedside. Promotion is not to depend on work as judged by supervision, as in every other institution and business, but on arithmetical standards applied by examination. This Chinese system will convert the service into an inquisition. (2) Following out the same idea apparently, the education in the army medical school is to consist of crude cramming. "Lieutenants on probation" are to be sent for a two months course of hygiene and bacteriology. Where are they to get instruction in the essence and speciality of their business—namely, military surgery and medicine? They cannot get it in civil schools, and even as regards bacteriology they will only learn the subject *in cyatho*. They will have no responsible charge of patients; and opportunities of learning clinical bacteriology, which for the great majority of them is the sort of bacteriology which they ought to learn, will be denied them. The system set up by this scheme will tend to drive men from the hospital and bedside to the laboratory and library. (3) The uncertain tenure of employment and liability to dismissal at every stage of service will create a feeling of restlessness, and the examinations will be a sword of Damocles, causing perpetual irritation, which cannot fail to hinder and disturb content and calm devotion to duty. The very useful sentiments of *esprit de corps* and harmonious *camaraderie* will be lessened or extinguished by the continual competition which this scheme institutes. (4) The "Advisory Board," though it is highly lauded by the *Times* and some other papers, seems an unwieldy sort of instrument, and will rob the Director-General of responsibility, initiative, and influence. Government by means of a Medical Board was tried in India and found wanting. (5) The whole thing is founded on a principle of distrust rather than trust, and the main idea seems to be to force merit and efficiency by a system of artificial inquisition rather than encourage that spontaneous effort to do well which

the medical profession in itself and of itself may be expected to exercise. On the whole, the scheme does not meet with favour in the profession or service as far as I can judge, and will, I fear diminish rather than increase the attractiveness and efficiency of the Royal Army Medical Corps.

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A senior officer sends us the following criticisms:

*Advisory Board—Duties (Paragraph 8).*

This Board cannot report effectively on plans, etc., of barracks and hospitals, as there will be no sanitary engineer on the Board to discuss matters. An eminent civil sanitary engineer should form part of the Board. The Royal Engineers know little or nothing about such things.

*Director-General A.M.S. Duties (Paragraph 18.)*

As the British Medical Journal has pointed out unless he has a voice and vote on the War Office Board that decides questions, the Director-General will have very little influence, and his exclusion will vitiate the position of every principal medical officer. A general will say, as he now does, why should my principal medical officer expect a different position on my staff to that conceded to the head of his branch at the War Office.

*Lieutenants—Regimental Duty (Paragraph 28).*

To attach a medical officer to a regiment will impair his efficiency, by the example of the idle and stupid officer (*vide* South African war). It will cause two interests to spring up in the medical service, the regimental and departmental; as was the case formerly. It will destroy the doctor's independence as the sanitary adviser of the commanding officer, for if the doctor wants to live at peace and obtain his promotion he must be careful not to put forward a proposal to which the commanding officer objects. He ought to be as independent of the commanding officer as the civil medical officer of health ought to be of slum landlords and jerry-builders. It is doubtful if any combatant officer can report fairly on a doctor, for if the latter does his duty they must often be at loggerheads.

*Principal Medical Officer Army Corps (Paragraph 56).*

The King's regulations should be so worded that a general cannot evade treating his P.M.O. in the same mannor as other officers on his staff. The P.M.O. should perform his duties on the same lines as the representative of the Army Service Corps (A.A.G.B.) now does. This would give the P.M.O. proper executive power under the general's order. As other officers on his staff, he would sign "by order" for all orders of a medical or sanitary nature. It is stated that the Army Service Corps was very successful in South Africa. Why? Because the officers had received a military training, were able to maintain discipline, and had ample executive power on the staff of generals and commanding officers. They issue orders to others "by order." The P.M.O. does not. The orders he ought to issue are issued to all others outside his departments by the A.A.G., A.A.G.(B.), or the C.R.E.

*Charge Pay, etc. (Appendix).*

The pay of a lieutenant-colonel in charge of a corps of 300 beds added to his pay and allowances will be £987 5s. 4d. against the pay and allowances (£953 10s. 10d.) of his commanding officer—a colonel R.A.M.C. This is not just or conducive to discipline and good service.

*General.*

Stress should be laid on the necessity of selecting officers of highly developed military instincts, with a good knowledge of military law and interior economy of troops to act as staff officers of the R.A.M.C. at headquarters, and as officers at the *depôt* and training school, Aldershot. Such officers are available, but they are not always selected for those posts.

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Another correspondent, of junior rank, but of wide practical experience, writes:

The more I read and think over this extraordinary scheme the worse I think it. The only bright features in it are the fact that it simplifies the competitive examination, and that it suggests improved and really adequate rates of pay.

The great blots on the scheme are—the introduction of an Advisory Board, the absurd scheme of repeated examinations, and the failure to cope with the need of an adequate establishment, and burking of the question how so much foreign service as now exists is to be overcome.

The introduction of an Advisory Board is a retrogression to the old Medical Board of the Peninsula to Crimean days—a system which landed us into the disgraceful episodes of the Walcheren and other expeditions of the early years of the last century. It would remove all direct responsibility from the shoulders of the Director-General or Secretary of State or any individual. No one can be broken for mistakes, as the plea will at once be put forward that the Board did it—now we know what Boards are—simply units with no soul to save and no body to kick.

As to the rest of the scheme, its dominant note is "inquisition." Nothing but examination and inducements to men to become mere "muggers" of books and players with test tubes and other experiments *in vitro*, instead of being practical men at the bedside and in the field. The whole scheme breathes distrust of the individual, and imposes a series of inquisitory tests which will result in the evolution of a state worse than the service has ever known even in its blackest times. As an instance of how impractical the scheme is, note the fact that a man after three years' service, if he elects to remain in the corps, is to go to a hospital for six months, etc. Who is going to do foreign duty? Nearly every junior of that standing must be abroad, with a worldwide empire such as ours is. I defy any roster to be kept under such a scheme, and pity the administration having to work it. Moreover, I doubt whether, notwithstanding this pay, young men will commit themselves to a career marred by such "breakers" as are strewn along their future course.

If the Committee had simply confined its attention to the granting of decent pay and the obtaining of an adequate establishment, the rest would have evolved itself. The corps is full of men keen and eager enough to improve their professional knowledge, but simply blocked by want of facilities to do so, owing to so much foreign service and inability to obtain leisure leave.

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Dr. Edward Thompson (Omagh), M.P. for North Monaghan, writes:

The report of the Committee on Army Medical Reform is a very important document, and requires the most careful consideration of the medical profession and intending medical candidates. If it is carefully studied it will be found very defective in many important particulars.

For instance, the method of government—partly military and partly civilian—will seriously injure the reputation of the corps as a department of the army. The addition of the civilian element should not be necessary, neither should the head of the nursing army service have a seat on such a Board.

The Director-General of the medical corps is to have his salary increased, but no mention is made of his future rank, neither is he to have a seat on the Army Board or direct access to the Secretary of State and Commander-in-Chief.

No mention is made of the position the Royal Medical Corps is to hold in the army, as judged by the place it should occupy in the *Army List* next to the other two scientific corps—namely, the Royal Engineers and Royal Artillery. This is really an important matter, because it would once for all solve most of the social troubles which make life in the army for doctors uncomfortable.

Again no mention is made of the actual increase in the number of officers of the corps, nor of the leave to which a medical officer has a right.

The reference to Indian pay and allowances is also unsatisfactory, and that this is one of the most serious of army medical grievances is admitted by everyone.

Another grave defect is the retention of special medical officers for the Guards. On no account should this be permitted: it opens the door to favouritism and creates a corps within a corps.

The regulations as regards examinations seem to me very complicated. As you truly remark, a man may be a first-rate surgeon or physician and no good at all at examinations. I knew a candidate who got first place many years ago for the navy, and he could not diagnose the simplest case or apply most ordinary splints or bandages.

There are many good points in the Committee's report, but certainly many defects which will have to be corrected if the medical service of the army is to be made really popular and attractive to the best men in the junior ranks of the medical profession. I feel sure of Mr. Brodrick's good intentions, but of course he lacks the experience necessary to show him clearly what is the root evil destroying the popularity of the R.A.M.C.; to find this out he and his Committee should have courted the evidence of representative army medical officers. I rather hesitate to take on my own shoulders the responsibility of criticising the Committee's report. I have, however, written to Mr. Brodrick, pointing out many objectionable features in the Committee's report, which if corrected will, I believe, ensure a real and satisfactory reform of the Medical Department of the army. In the meantime, I agree with your views that intending candidates should think once and twice, and even a third time, before they definitely decide on so arranging their affairs that they shall devote the best part of their lives to service in the R.A.M.C.

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Lieutenant-Colonel (Retired) writes:

I have read with pleasure your able leader of October 5th, criticising the reorganisation of the R.A.M.C., every word of which I endorse.

The elaborate scheme of examinations is superfluous. The scheme attacks the quality, whereas the real question is how to obtain the numbers. To use the old adage: If you desire hare soup, "First catch your hare." It is the undermanning of the corps for years that has brought about the present unsatisfactory state, and this has been approved by those in authority for the sake of economy, believing that in case of war civilian medical officers could always be obtained.

In South Africa all went right with the First Army Corps in General Buller's troops, but when a sudden call was made for more troops, who were hustled out anyhow, the necessary medical equipment had also to be hurriedly improvised, whereas if army corps were organised units all the medical equipment would have been forthcoming. R.A.M.C. officers have great responsibility, but no authority, during peace time; consequently, in war time they are stranded. Compare the authority of an officer in a regiment or other corps, or those medical officers who took out private hospitals to South Africa.

The first remedy is to increase the numbers by offering better inducements all round, better pay, balancing home and foreign service, the extension to India of the R.A.M.C., orderlies, and a separate system of supply for food stuffs, transport, and ordnance for equipping hospitals, etc. Until these are acceded to, all medical arrangements fall into insignificance during war when compared with the urgent appeals of the fighting portion of the army.

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## THE PREVENTION OF TUBERCULOSIS.

### The Recent Congress and Health Authorities.

The results of the recent Congress on Tuberculosis are already affecting the public health authorities throughout the country. Many of these authorities were represented at the Congress by delegates who have presented more or less detailed reports. In most of these reports Professor Koch's expression of opinion on the relation of human and bovine tuberculosis receives prominent attention. The memorandum of the Local Government Board will, however, prevent any modification of existing regulations for avoiding the possible communication of tuberculosis from animals until the Royal Commission has considered the subject. In other directions the conclusions promulgated with the authority of the Congress have strengthened the hands of the medical officer of health.

*Manchester* has already taken a leading position amongst the towns which have seriously taken up the question of the prevention of tuberculosis, and guided by Dr. James Niven, the Medical Officer of Health, has for some time adopted important prophylactic regulations. Alderman McDougall and Councillor Dearden, the delegates from the Sanitary Committee of the Corporation of Manchester at the Congress, have recently presented a very full report, which gives an excellent summary of the work and conclusions of the Congress. There is little in the practical recommendations of the Congress which has not already been initiated in Manchester, but it must be some gratification to the Medical Officer of Health and a satisfaction to the Corporation to have the utility and value of the measures they have adopted endorsed by the authority of so important a Congress.

*Halifax* has taken an important step on the recommendation of the medical officer of health (Dr. J. T. Neech). A resolution of the Health Committee was confirmed by the Council on October 2nd to the effect:

That it be, and it is hereby, ordered that phthisis with expectoration shall be deemed to be an infectious disease within and subject to the provisions as to infectious diseases of the Halifax Corporation Act, 1882, and that the Town Clerk be instructed to apply to the Local Government Board for their approval of the said order.

*Exeter.*—The Sanitary Committee has advised that medical men be invited to notify all cases of pulmonary tuberculosis under treatment by them for twelve months and that the same fee be paid as for cases under the Infectious Diseases (Notification) Act. Sanitary inspectors are to visit such cases and offer disinfection.

*Eccles*, also, in consequence of the report of the delegates to the Congress, has decided to have cases of consumption notified, and to arrange for the disinfection of premises where the disease has been known to exist.

*Swansea.*—Dr. Eben Davies, who represented the Swansea Sanitary Committee of the Corporation at the Congress, has presented to the Committee a report embodying the main facts brought forward at the Congress and the recommendations presented in the form of resolutions adopted at its final meeting.

*Glasgow.*—As the result of a public meeting convened by the Lord Provost in March last, a branch of the National Association for the Prevention of Consumption has been formed in this city. The Duke of Argyll has consented to be the Honorary President, and the Lord Provost is President, with the Dukes of Hamilton and Montrose, the Earl of Home, Lords Blythswood, Kelvin, and Inverclyde amongst the Vice Presidents.

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## CONTRACT MEDICAL PRACTICE.

### Rotherham.

We are informed that all the members of the profession in the district have united to form the "Rotherham and District Medical Guild," and have given notice to the clubs that they will not attend club patients after January 1st, 1902, except upon the following conditions: (1) That the fees for adults and juveniles be 5s. a member per annum: (2) that the age for juvenile members to be admitted be 5 years; (3) that all juveniles be re-examined at the age of 16 before being admitted into the adult lodge. The Friendly Societies have decided to start a medical aid association: and, according to the *Sheffield Daily Telegraph*, 3,000 persons have promised to join.

### Wanstead.

Rosin writes: It is a matter for congratulation that there are very few members of our profession who are willing to face social and professional ostracism. I hope the Wanstead doctors are thoroughly organised. Frequent general meetings will accomplish this, besides having the effect of bringing men together so that any possible trifling professional feud may be glossed over. I am a member of a doctor's union, and I can only describe the effect of meetings as marvellous. doctors who for years, owing to some trifling professional misunderstanding, hardly recognised one another, in the common meetings found it easy to once more renew old friendships. There is a living for all of us in the profession, and it only remains for the members of it to be true to its glorious traditions. If the Wanstead doctors communicate the names of any candidates for the Foresters' Society to the Durham Medical Union or the Midland Medical Union, it is highly possible that something may be learnt which would effectually put a stop to further negotiations. The Midland Medical Union will hold its annual meeting this month; why not send a delegate? The experience gained by the officials of these two unions is invaluable, for, to succeed, the utmost care must be exercised. I wish the Wanstead doctors every success.

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## ENTRANCE SCHOLARSHIPS.

The following scholarships have been awarded for 1900:

*King's College and Hospital.*—Medical Entrance Scholarships: P. A. Mansfield, 70 guineas; H. Hart, 60 guineas. Sambrooke Medical Exhibition (Science): F. C. H. Powell, £60. Clothworkers Company Exhibitions (Science): N. G. Langrish, £30 for two years; G. W. N. Rose, £20 for two years. Warneford Medical Scholarships (Arts): H. L. Gauntlet, £25 for three years; C. A. Narlian, £25 for three years. Engineer

Entrance Exhibitions: W. T. Wheeler, £15; R. O. Bosman, £10; A. T. Gosford, £10.

*Westminster Hospital Medical School.*—Epsom Scholarship, value 110 guineas, to J. M. Platt; Arts Scholarship, value £60, to R. S. Statham, of Dover College; Natural Science Scholarship, value £60, to A. C. Bryson; University Scholarship, value £40, to J. H. Hebb, St. John's College, Oxford; Arts Scholarship, value £40, to H. Galloway, from St. Paul's School: and an Arts Scholarship of £30 to C. C. Hickey.

## THE IMLACH CONTROVERSY.

Dr. Imlach is still strenuous in his efforts to get the report of the Liverpool Medical Institution on the practice of the hospital with which he was at one time connected deleted from the records of the Institution. He has circulated an open letter to the President of the Institution in which he sets forth his demand. He states his own case. He adds to it letters from medical men in Liverpool who think him hardly used; from one of the committee itself, who now thinks that the course he took in 1886 was a mistaken one; and from obstetric authorities outside Liverpool—among them Dr. Playfair, Dr. Cullingworth, Dr. Bantock, and Mr. Taylor, of Birmingham—who hold that the views which Dr. Imlach applied in practice in 1886 have been by this time shown to be correct.

It is much pleasanter to compliment than to criticise; to applaud a kind action than to support what may seem a harsh one. We call attention, with the greatest possible pleasure, to the fact that, fifteen years ago, Dr. Imlach, in the face of opposition, carried out the treatment of pelvic hæmatocele which is now generally recognised as the best. If acknowledgment of this were all that Dr. Imlach wishes, we think it possible that he might get it even from the Committee of Inquiry which censured his proceedings in 1886.

But Dr. Imlach wants more than this. He wants the Liverpool Medical Institution to abase itself in dust and ashes, and wipe out the report of its Committee altogether on the grounds that it was a matter into which they had no business to inquire; that they conducted their inquiry unfairly by not letting Dr. Imlach be heard; and that their conclusions were wrong. If these propositions are affirmed a severe censure is passed upon all the persons who were concerned in bringing about and in making the inquiry, and the Liverpool Medical Institution can hardly be expected to accept such condemnation unless it is shown to be deserved. We must therefore look at the case from the point of view of those who oppose Dr. Imlach's request, as well as from that of those who recognise his advanced surgical position.

Now how do they look at the question? Their report was not about the treatment of pelvic hæmatocele; nor did it impeach Dr. Imlach's operative skill or success. They censured him for doing operations without properly explaining to the patients the nature and effects of the operation he was going to do. This is not answered by saying that Dr. Imlach treated pelvic hæmatocele properly. Whether this censure is just or not, how can it be inquired into after the lapse of fifteen years? Without re-inquiry, how can the Committee be expected to acknowledge that their conclusion was wrong?

Then Dr. Imlach says that he was not given an opportunity of defending himself. In their report the Committee deplored that they had not had the assistance from Dr. Imlach that they wished. Here is a direct conflict of testimony. How can this be gone into after fifteen years, when some of the persons concerned have passed away? If Dr. Imlach was not properly heard, why did he wait fifteen years before appealing for a hearing?

Dr. Imlach says that the Liverpool Medical Institution ought not to have made the inquiry, that it was *ultra vires*—outside the province of the Institution. We cannot discuss the rules of the Liverpool Medical Institution; for whether this particular medical body is empowered by its rules to take the course it did is a matter of small importance to the profession generally.

But we think it a mistake and a misfortune for matters involving medical practice and medical ethics to be submitted to the clumsy handling of the ordinary courts of law. Disputes involving medical technicalities are best settled, in the first place, by friendly conference, and, that failing, by the judgment of persons who understand the subject of dispute. Whether acting *ultra vires* or not, the Liverpool Medical Institution was, in the circumstances, about the best tribunal that could be got to investigate allegations made about the practice at a Liverpool hospital, and whether their report was an enlightened one or not, they, at least, deserve credit for having in the public interest given time and trouble to a difficult, tedious, and unpleasant task.

We think that Dr. Imlach will do well to rest content with the acknowledgment of his claims to have been a better gynæcological surgeon than most of his contemporaries, and let the report be forgotten.

Those involved in this dispute do not see eye-to-eye, because they look at the matter with minds prejudiced in different ways. Those who study the criminal law (if the illustration may be pardoned) know that there are two principles upon which it may be administered. One is, that it is better that any number of guilty should escape than that one innocent should suffer. The other is, that it is better that an innocent person should now and then suffer than that a number of guilty should go scot-free. These opposing views often lead to diametrically opposite practice. In surgery, also, there are two different principles which influence the judgment of different people. Some hold fast to the maxim *primum non nocere*, and think it is better for many to remain unrelieved than that one should be injured or robbed of life by an innovation in treatment not certain to do good. Others think that it is better that now and then a mistake should be made than that surgery should stand still and disease at one time incurable always remain so. Persons of tact and judgment can in most cases find a course which will commend itself to almost everyone. But extremists will never agree, and no amount of argument will make them. When this is the case the wisest plan is to drop the subject. This is especially so when that subject is a piece of almost ancient history, having at the present day an importance of sentiment only.

# THE PLAGUE.

### Prevalence of the Disease.

#### India.

During the week ending September 14th there has been a serious increase of plague in India. The mortality figures for plague have risen from 4,822 during the previous week to 6,385 during the week in question. The virulence or the epidemic at present is well exemplified by the fact that the deaths from plague during the same week last year numbered only 1,136. The chief increase is in the Bombay districts. In these districts during the week ending September 14th, 5,668 persons died of plague, against 4,132 in the previous week. The places most affected were the Dharwar district, where 1,500 deaths from plague were returned: Kolhapur State returned 1,455, Belgaum district 1,235, and Satara 856. In Bombay City also plague is increasing, 293 persons having died of plague during the week ending September 14th, against 235 during the preceding week. In Bengal the number of plague cases have increased, and the deaths during the weeks ending September 7th and 14th numbered 13 and 58 respectively. In Calcutta also during the week ending September 14th there was a slight increase, numbering 18 against 13; in Karachi the numbers were 15 against 8 in the same period; but in the Mysore State the plague deaths fell from 377 during the week ending September 7th to 295 during the week ending September 14th. It is satisfactory to note that the City of Madras, with its rigorous inspection rules, has kept plague at bay.

#### Naples.

Plague is not extending in Naples so far as can be ascertained. Only one case has been notified during the week, as a telegram bearing date of Naples, October 7th, testifies: "One case of plague was notified here yesterday, the patient being a girl."

#### Cape of Good Hope.

For the week ending September 28th the report is that 1 case of plague occurred in Cape Colony, the patient being a soldier in the Camp at Port Elizabeth. From Port Elizabeth also 1 death from plague only is reported during the week in question. A later telegram from Port Elizabeth states that on October 5th "the lady superintendent of the lazaretto here has been admitted to hospital suffering from plague."

#### Mauritius.

For the week ending October 3rd, 54 fresh cases of plague were reported in Mauritius, and 36 deaths from the disease.

#### Egypt.

During the week ending September 29th, 4 fresh cases of plague and 1 death from the disease have been reported for all Egypt. Three of the cases occurred among Europeans, and 1 case and 1 death among natives. Three of the cases and 1 death were reported from Alexandria, and 1 case from Port Said. A telegram from Cairo states that on October 7th there were on that date 7 cases of plague in the whole of Egypt: 4 of these were at Alexandria; 1 at Benha; 2 at Mit Ghamr. Since the commencement of the recent outbreak in April, 173 cases of the disease have been reported, of which number 83 have resulted fatally.

# ASSOCIATION INTELLIGENCE.

## COUNCIL.

### NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 23rd day of October, at 2 o'clock in the afternoon.

Sept. 5th, 1901. FRANCIS FOWKE, *General Secretary.*

### ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

## LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

## BRANCH MEETINGS TO BE HELD.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The autumn meeting of this Branch will be held on Friday, October 25th, at 3.15 P.M., in the Royal Hotel, Stirling. Dr. Crawford Renton will read a paper on Abdominal Section for the Relief of Pain. Members desiring to show cases or specimens, and candidates for election, will please communicate with the Honorary Secretary, J. E. MOORHOUSE, Gleve Avenue, Stirling.

YORKSHIRE BRANCH.—The next meeting of this Branch will be held at the Majestic Hotel, Harrogate, on Wednesday, October 23rd, at 3.30 P.M. Members intending to read papers, to propose new members of the Branch or of the Association, or to make any communication, are requested to write to the Secretary at once. The members will dine together at 6.30.—ADOLPH BRONNER, 33, Manor Row, Bradford, Honorary Secretary.

WEST SOMERSET BRANCH.—The next meeting of this Branch will be held at the Taunton and Somerset Hospital on Friday, October 25th, at 4 P.M. The chair will be taken by the President, Mr. J. P. Johnstone. After the usual business, Mr. Charles Stonham, C.M.G., F.R.C.S., Senior Surgeon to the Westminster Hospital, and late Surgeon in Charge of the Imperial Yeomanry Field Hospital in South Africa, will give an address on Some Surgical Experiences at the War. Members wishing to bring any communication before the meeting are requested to send early notice of the same to W. B. WINCKWORTH, Taunton, Honorary Secretary.

DORSET AND WEST HANTS BRANCH.—The next meeting of this Branch will be held at Blandford on Thursday, October 17th. The business meeting will be held at the Crown Hotel at 3.45 P.M. Agenda: Election of new members of the Branch. Election of officers for 1902, namely: President, Vice-Presidents, Honorary Treasurers, and Secretaries. Place of the May Meeting. Dr. Lush to move: "That the Committee on Tuberculosis be reappointed to assist in the founding of a sanatorium or hospital for the counties of Dorset, Devon, and Cornwall." Dr. Lush to move: "That a donation of five guineas be granted to the British Medical Benevolent Fund and a like sum to the Royal Medical Benevolent College." Communications from the Shropshire and Mid Wales Branch. Communication from the Council of the Medical Guild, Manchester. Discussion: Exophthalmic Goitre, to be opened by Dr. Moorhead, one of the Vice-Presidents. Dr. Macdonald: Specimen—Rupture of the Left Ventricle of the Heart. Dinner at the hotel at 6.15 P.M. Charge 6s. each, without wine. Members intending to be present are requested to inform Dr. Lush by Tuesday, October 15th.—WILLIAM VAWDREY LUSH, M.D., Weymouth; C. H. WATTS PARKINSON, Wimborne, Honorary Secretaries.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting of this District will be held at the Royal County Hospital, Guildford, on Thursday, October 24th, at 4 P.M. Dr. L. B. de Jersey, will preside. Agenda: Minutes of Guildford meeting. To decide where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. The following papers have been promised: Dr. H. P. Hawkins (London): Mucous Colitis and Spastic Constipation. Dr. Adamson (Guildford): Pruritus, its Significance and Treatment. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate with the Honorary Secretary at once. Dinner at the White Lion Hotel at 6.15 P.M. Charge 6s., exclusive of wine. The Honorary Secretary would be much obliged if members would kindly inform him whether they intend if possible to be present at the dinner. By so doing they will materially facilitate arrangements and promote the success of the dinner. All members of the South-Eastern Branch are entitled to attend and introduce professional friends.—ALEX. HOPE WALKER, The Common, Cranleigh, Honorary Secretary.

SOUTH-WESTERN BRANCH.—The autumn intermediate meeting of this Branch will be held at the Commercial Hotel, Newton Abbot, on Tuesday, October 15th, at 3 P.M., the President, Mr. G. Thom, in the chair. Luncheon will be provided from 1.30 to 2.30 P.M., and tea after the meeting. Gentlemen desirous of joining the Branch are requested to communicate with G. YOUNG EALES, 1, Matlock Terrace, Torquay, Honorary Secretary.

NORTH OF IRELAND BRANCH.—The autumn meeting of this Branch will be held on Thursday, October 17th, in Belfast. Notices of communications, of election of new members, and of any other business are to be sent to Dr. WILLIAM CALWELL, Honorary Secretary, 1, College Square North, Belfast.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—The autumn meeting of this Branch will be held at Inverness in the Palace Hotel on Friday evening, October 18th, at 6.30. The President, Dr. Adam, Dingwall, will deliver an address on Medical Diagnosis and Modern Discoveries. Dr. de Watteville, Kingussie, will also give a paper on Some Experiences in the Open-air Treatment of Consumption in the Central Highlands. Members desirous of reading papers or cases are requested to communicate at once with the Honorary Secretary. After the business meeting the members will dine in the Palace Hotel at 8 P.M.—J. MUNRO MOIR, 4, Ardross Terrace, Inverness, Honorary Secretary.

## SOUTH MIDLAND BRANCH.

THE autumnal meeting was held at the Eight Bells Hotel, Bletchley, on Thursday, October 3rd, under the presidency of Mr. A. P. KINGCOMBE. Luncheon was provided in the hotel previous to the meeting, when twenty-two members and one visitor sat down.

*Confirmation of Minutes.*—The minutes of the last meeting were read and confirmed.

*New Member.*—Dr. Peverell S. Hichens, of Northampton, was elected a member of the Branch, being already a member of the parent Association.

*Proposed Ethical Section.*—The SECRETARY read a circular from the Council of the Medical Guild, Manchester, pointing out the desirability of holding an Ethical Section at the forthcoming annual meeting of the Association in Manchester and forwarding a memorial to the General Council with that object. The memorial was laid upon the table, but no member signed it.

*Contract Practice.*—A communication was also read from the Shropshire and Mid-Wales Branch on the subject of the inadequate fees paid by clubs. The subject was fully discussed by the members, and the following resolutions were carried. Proposed by Mr. NASH (Bedford), seconded by Dr. HARTLEY (Bedford):

That this meeting of the South Midland Branch desires to place on record its conviction that the present system of contract practice is inadequate, and considers that no medical man residing in the Branch area ought to accept any *new club* at less than 5s. per annum per adult member.

Proposed by Dr. BENSON (Steeple Claydon), and seconded by Dr. KINSEY (Bedford):

That a copy of the resolution be sent to the Secretary of the Shropshire and Mid-Wales Branch, and also to every member of the South Midland Branch.

*Papers and Cases.*—Mr. G. H. PERCIVAL read a paper on two cases of operation for stone in the female, showing the specimens and skiagraphs. Dr. MILLIGAN, Dr. BUSZARD, Dr. HUGHES, and Mr. VEASEY made remarks, and Mr. KINSEY, who also showed a specimen of calculus which he had removed.—Mr. E. HARRIES JONES read a paper on the treatment of corneal ulcers with hypopyon. He explained the real nature of hypopyon and entered into the treatment in some detail. Mr. VEASEY and Dr. BUSZARD made remarks, the latter laying stress on simple treatment and on the value of pressure over the eye with pad and bandage. Mr. JONES replied.—Dr. WICKHAM read notes of a case of puerperal septicæmia with charts,

entering particularly into the causes of the disease, and the treatment by antistreptococcus serum and other means, not expressing a very favourable opinion of the former. Remarks were made by Dr. Buszard (who now occupied the chair), Mr. Percival, and Mr. Evans, and Dr. Wickham replied.

*Vote of Thanks.*—A vote of thanks was passed to the readers of papers, two of which were omitted owing to want of time.

*Election of Honorary Secretary.*—Mr. Evans having resigned the post of Honorary Secretary, Dr. Buszard proposed, and Mr. G. H. Percival seconded, that Mr. E. Harries Jones, of Northampton, be elected to fill the office.—This was carried unanimously; and Mr. Jones replied.

*Presentation to Retiring Secretary.*—At the last annual meeting it was proposed that, in view of the resignation of Mr. Charles J. Evans, after 17 years faithful and untiring devotion to his office, some mark of appreciation should be tendered to him by the Branch. The result was the presentation to him at this meeting of an illuminated address and a large silver salver. Dr. Buszard read the address at the meeting. The terms of the address were as follows:

October 3rd, 1901.

To C. J. Evans, Esq.

Dear Mr. Evans,—We the undersigned members of the South Midland Branch of the British Medical Association desire to express to you the great regret with which we heard of your desire to resign the position of Honorary Secretary of the above-mentioned Branch, and our appreciation of the eminent services you have in that important post so long rendered to us and, we think we may add, to all the members of the medical profession in the districts which the Branch covers.

You leave the South Midland Branch of the Association in an unexampled condition of prosperity as regards its members and influence, and it is to your zealous and untiring exertions as Secretary we unhesitatingly attribute so gratifying a condition.

We part with you as Secretary with feelings of regret and thankfulness, and we trust that though your official connection has ceased we may long have the pleasure and advantage of your presence and advice at our meetings.

We beg your acceptance of the accompanying silver salver, and with every good wish for the future,

We remain, yours very sincerely,

[Here followed the names of 58 members of the Branch.]

# SPECIAL CORRESPONDENCE.

## SOUTH WALES AND MONMOUTHSHIRE.

*Formation of a Branch of the Association for the Prevention of Consumption.—Demonstration at the Public Health Laboratory.—Election of Second Gynæcologist to the Cardiff Infirmary.—Mr. Lynn Thomas, C.B.*

The London Congress on Tuberculosis of July last is already beginning to bear important fruit. Considerable interest was created in Cardiff and in South Wales generally, the matter was taken up in the press, and a conference was suggested as early as August last, but was postponed until October. The Mayor of Cardiff (Mr. Thomas Andrews) issued invitations to a large number of prominent men, including members of the medical profession and others likely to be interested, to a public meeting to consider the advisability of forming a local branch of the National Association for the Prevention of Consumption and other forms of Tuberculosis. The meeting on October 3rd in the Town Hall was crowded, and included representatives from about forty public bodies in South Wales and Monmouthshire. The chief speakers were Dr. Isambard Owen and Dr. Alfred Hillier, who came to Cardiff as representatives from the central Association. The Mayor of Cardiff briefly explained the objects of the meeting, and then Dr. Isambard Owen, in an address of considerable length, explained the nature of the enemy, the methods of its attack, the sources of infection, and the principles necessary to combat it. The whole address, which was remarkable for its lucidity, was listened to with the greatest attention. Dr. Hillier followed up Dr. Owen's arguments with a bright and forcible address emphasising the success already arrived at and the practicability of applying the methods and means advocated. Sir John Llewellyn then moved a resolution to form a branch of the National Association for the Prevention of Consumption and other forms of Tuberculosis for South Wales and Monmouthshire. This was seconded by Dr. C. T. Vachell (Cardiff), and carried unanimously. The meeting then proceeded to elect officers of the Branch. Lord Windsor was asked to become President, a considerable number of influential men in South Wales were elected Vice-Presidents, with Major-General Lee as treasurer, and Dr. Pratt as honorary secretary. A very large Executive Committee, with power to add to their number, was then elected, and after a vote of thanks to the Mayor the proceedings terminated.

After the meeting, a short lantern demonstration of the tubercle bacillus and some of the chief sanatoria was given at the Cardiff and County Public Health Laboratory by Dr. Savage. Those present were also shown over the laboratory, and microscopic preparations of cultures of the tubercle bacillus were exhibited. The representative nature of the meeting and the enthusiastic welcome with which the suggestion of a Branch of the Association was received augurs well for the success of the movement. The Executive Committee was felt by many to be very large, but this fault can be remedied, and possibly will be by the election from it of a smaller working Committee.

On July 18th Dr. Maclean was elected Gynæcologist to the Cardiff Infirmary, but a motion to elect a second gynæcologist was deferred. This was afterwards carried, and on October 2nd Dr. E. Tenison Collins was appointed second honorary gynæcologist to the institution. There were three applicants for the appointment. This adds another medical officer to the rapidly-growing list of the honorary medical staff of the Cardiff Infirmary. In the last year and a-half this staff has been augmented by the appointment of three anæsthetists, an assistant ophthalmic surgeon, an additional surgeon, and now a second gynæcologist, all honorary appointments.

Mr. Lynn Thomas, F.R.C.S., Surgeon to the Cardiff Infirmary, has been made the recipient of the Companionship of the Order of the Bath for his valuable services in South Africa during the present war. Mr. Lynn Thomas had charge of the very successful Welsh Hospital during the latter part of its existence, after the lamented deaths of Mr. Tom Jones and Professor Hughes. He was the subject of special congratulations from the Board of Management of the Cardiff Infirmary, and from the Cardiff Medical Society at the first meeting of the session on October 3rd.

# CORRESPONDENCE.

## THE PHYSICAL STANDARD OF ARMY CADETS.

Sir,—It is to be hoped that the admirable leader on the above subject in the British Medical Journal of September 28th will be taken to heart by those who too rigidly rely on chest girth as a test of physical fitness in general and pulmonary fitness in particular. Some chests of small girth contain exceedingly good lungs, while some of large girth are large by reason of disease. I find on reference to my notes that of a large number of persons whose "vital capacity" I have ascertained by means of the spirometer, the one who heads the list had a chest girth of 35 inches only; while, on the other hand, the largest chests which have come under my observation have often been very poor specimens from the medical point of view. Quite recently a writer in the lay press was congratulating himself upon the improved physique of our race, as shown by the inability of the average individual to wear much of the armour in the Tower of London; and he incidentally mentioned the fact that his own chest girth was 44 inches. Doubtless many of his readers envied him this colossal measurement, although, as a matter of fact, it would be fairly safe to diagnose from this one item of evidence a pronounced degree of obesity coupled with emphysema. The best chests are undoubtedly those of moderate girth; with advancing years the thorax increases in dimensions, the increase being the result of diminishing pulmonary elasticity—a senile change. Again, in all cases of heart disease sufficiently pronounced to cause dyspnœa the chest is expanded. I have now under observation in one ward five children suffering from heart disease, and they have all expanded chests. The mere enlargement of the heart in the small chest of the child necessitates such expansion, as does also the need for reducing to a minimum the pulmonary resistance to the right heart.

It is generally thought that a deep chest is necessarily a good chest, whereas it may, like the large girth which goes with it,

be an indication of disease. All the children just referred to have deep chests. After the first few years of life the normal chest flattens sagittally, so as to keep the centre of gravity of the body vertically above the narrow basis of support afforded by the feet. This flattening enables the individual to take copious thoracic breaths by elevation of the ribs; the deeper the chest the smaller does the range of thoracic breathing tend to be. The normal chest is in fact moderately flattened sagittally and of moderate girth.

In testing a chest it is not safe to place reliance on the difference between the maximum inspiration and minimum expiration measurements. If the measurement could be taken immediately over the ribs, instead of over the muscles, it would be found that this difference is never, except in freaks, more than a few inches. One strong man is credited with a maximum and minimum difference of 15 inches; this indicates a difference in girth as ascertained over the muscles, which some can throw into prominence so as greatly to increase the girth as measured just below the armpits. And this leads me to observe that the professional strong man with enormous thoracic development has by no means correspondingly good lungs. I recently tested a strong man who holds the world's record for a certain feat in weight lifting. When stripped he certainly showed superb muscular development, but on testing him with the spirometer I found that my own "blow" was about half again as much as his, and this in spite of the fact that he was eight years my junior, and but two inches shorter, and in spite of the fact that his maximum and minimum difference was 10 inches, while mine was a little more than 3 inches!

I feel convinced that this craze for securing enormous development of the muscles is a mistaken one, and I earnestly hope that our profession will not lend their countenance to it. No useful purpose can be served by gaining inordinate strength and becoming muscle-bound, while, on the other hand, much harm may come of it. The natural history and organisation of man clearly show that he is not designed for great strength of muscle; in so far as his muscular system differs from that of other animals, it is in being adapted to carry out the dictates of a high intelligence rather than for expending so many foot-pounds of energy. If I desire to see the human form divine in the fulness of its beauty I go neither to the gymnast nor to the "strong man," but rather to the football player, cricket player, and runner. In all schemes of muscular exercise we should aim at securing agility and endurance rather than brute force.

There has been some talk of Government starting a scheme for improving the physical development of School Board children. If they do, it is sincerely to be hoped that it will be drawn up by medical men, and by medical men only. No gymnastic exercise ever devised is so likely to secure an all-round serviceable development of the muscular system in the growing human being as a good game of chivvy (prisoner's base). So far as the lungs are concerned, games which involve running—not continuous, but short, sharp spurts—are greatly superior to any form of gymnastics, which induce indeed an expanded chest, but tend, on the other hand, to lessen its mobility and to diminish the elasticity of the ribs.—I am, etc.,

Wimpole Street, W., Sept. 29th. HARRY CAMPBELL.

## THE MIDWIVES QUESTION.

SIR,—So legislation, very far reaching in its consequences, is to be thrust down the throat of the country on the belief of an Association, composed for the most part of unpractical people, that the Bill embodying it is practicable, will greatly alleviate present evils, and has a very large amount of support throughout the country. Apparently this belief is all that is required to satisfy the mind of no less a personage than the Secretary of State for Scotland, because he has publicly admonished the opponents of this Bill as being merely silly and futile people.

Government in this country is apparently conducted in a manner which it is difficult to comprehend. At one moment we read of an announcement in the House of Commons that neither of the two Ministers who are responsible for the control of the Privy Council has any leisure to acquaint himself with the proceedings of the General Medical Council, which is under its jurisdiction; at another, a Cabinet Minister, who can know nothing from his own knowledge of the merits of a Bill which has been referred by the Privy Council to the General Medical Council, backs it on the strength of a belief only, and denounces opposition on the part of those who are day by day face to face with the conditions with which the Bill is supposed to deal, as foolish and useless.

Mrs. Bruce has already said that the prevention of puerperal fever is not the sole aim of her Society, but that her Society is desirous of promoting the smaller consumption of alcohol by persons engaged at confinements, the larger use of soap and water, and the prevention of every description of unquotable misery. The Society is therefore desirous of improving social conditions which the Bill does not touch.

Mrs. Bruce does not, with proper discretion, refer to the real object of her Society, which is the object mentioned by Dr. Allan MacLean, namely, that of providing occupation for women.

I will now ask Mrs. Bruce to read the words of the late Dr. Braxton Hicks, quoted on page 27 of the BRITISH MEDICAL JOURNAL, July 6th, 1901. Dr. Hicks presents very forcibly my views of the dangers of the Bill of her Association; but I propose to call her attention to a development of affairs of more recent date than that of Dr. Hicks's speech. Very few physicians who are engaged in gynæcology and midwifery will deny that they are too frequently asked to procure abortion for ladies. The crime is now looked on in fashionable circles as no crime at all, and women are not a bit ashamed of asking a physician to commit the crime of fœticide.

Again, coroners are only too painfully aware of the amount of infanticide prevalent. I have even heard it said that one good result of the Midwives Bill will be that we shall not so often be bothered by requests for the criminal operation of abortion. Now I do not intend to convey that some doctors of the lowest class do not procure criminal abortion—of course they do; but I maintain that it is a most dangerous step to place the operation within the reach of a class who are much less educated, and drawn from a much lower stratum of society than even the lowest class of doctors.

I venture to suggest to Mrs. Bruce that her Society should carefully consider the dangers of placing the powers, which a registered class of midwives must possess, and which no regulations of a midwifery Board can control, in the hands of an ignorant and partly-trained class of women. I think, when the advantages of the Bill are carefully weighed in one scale and its disadvantages in the other, that even Mrs. Bruce will agree with me. I am only too well aware that the majority of members of the Committee know nothing of the things which I know, and which they ought to know before they attempt to place any Bill on the Statute Book. Mrs. Bruce no doubt believes that she is carrying out a great work in the cause of suffering humanity. The majority of the medical profession have shown not only by what they have written, but also by their votes cast at elections, that they believe Mrs. Bruce and her Committee are doing the very worst thing possible in the best interests of the women of this country.

The medical profession has therefore discharged its duty—it has made its protest. Upon Mrs. Bruce and her allies must the responsibility rest when some invertebrate Government allows the Bill to be placed on the Statute Book.—I am, etc.,

Hatfield, Oct. 8th. LOVELL DRAGE.

## THE ORIGINAL OBJECT OF THE MIDWIVES BILL.

SIR,—In the BRITISH MEDICAL JOURNAL of October 5th Dr. Broadbent makes a comparison between the motives which actuated the promoters of the Midwives Bill of 1895 and those which moved the opposition. He is inaccurately informed, however, for he concludes that the sole motives of the promoters were "to promote and protect the interests of midwives" by means of an Act of Parliament. He says that the objects of the opponents were "to carry out the spirit and letter of the Medical Acts.....that only those who are qualified and registered in medicine, surgery, and midwifery shall be legally empowered to practise midwifery independently."

But these conclusions of your correspondent depend on a fallacy, that is, that it requires the passage of an Act of Parliament to protect the interests of midwives. On the contrary, the existing common law of England protects them so well that no conviction can be obtained against them unless they are guilty of some deliberate act amounting to manslaughter. They cannot be "recovered from" if they are guilty of malpraxis, as medical men can be; they cannot be required to have any training previous to practising; they are not liable to any penalties whatsoever in respect to their practice. They can perform any operation they think fit, and they cannot be found guilty of any "infamous act" in a medical sense. It is *we* who are restricted not they, for, of course, we are liable in all these respects.

The object of the promoters is to bring midwives under statute law so that they may necessarily be trained, limited in practice, and prevented from practising if they should prove to be unfit to do so in the interests of the public.

That which Dr. Broadbent puts as our moving principle—"to secure a better position for those who acted as midwives"—is a necessary corollary to the principle of legislation. For if the respectable, trained woman registered under the Act *did not* take a better position than the drunken, filthy, disease-promoting Gamp she displaced, she would be promptly *taken* off the register again as unfit to practise. What advantage, too, would such a substitution as this be to the public? Education necessarily leads to a better position, and gives, or should give, that self-respect which makes the educated person "live up to" her station.

But the object, apparently, with which your correspondent brings forth the ancient bit of history which forms the text of his letter is to gain some support to his theory that midwives are being pushed forward with the direct object of displacing medical men in their practice. Even if this were correct—it is preposterous—the women who have passed the Obstetrical Society's examination appear to have very decided views of their own as to their dependence upon medical practitioners, for comparatively few have set up on their own account, the vast majority preferring to work as nurses under the direct supervision of the medical practitioner in attendance upon the case. The attitude suddenly assumed by the General Medical Council towards midwives, reversing in very many respects that previously adopted, made it very important that any attempt on its part to act as the council of a trades-union should at once be counteracted, but whatever had been its position it would have made little difference to the train of events. The Select Committee laid down certain elementary principles for the proposed measure; the Midwives Registration Association—a large medical body mainly composed of general practitioners—had elaborated a scheme based on these principles; and the work of the Midwives Bill Committee, a body which represented as far as possible all the interests affected, lay in drafting a Bill based on the scheme.

This Bill took as its precedents the Medical, Veterinary, and Dentists Acts. More recent Bills have taken the Solicitors Acts as precedents, forbidding practice by any person not on the roll. When this Bill passes, if both of the Houses of Parliament agree to this principle, it will form an invaluable precedent for a Medical Bill based on the same idea. For many years past influential medical bodies have tried to obtain a monopoly of practice for those registered under the Medical Acts, even to the extent of proposing to offer the Government the right to impose a stamp duty of £10 per head annually as a bribe. Yet, these very persons would appear to be posing themselves against a Bill which, if it passed, would give them the precedent they required.

Dr. MacLean seems to think that the whole question has arisen in connection with securing an occupation for women, and I believe that if he applied this to the opposition he would not be far out. For, at the historic meeting of Fellows and Members at the Royal College of Surgeons, when the question of the admission of women to the roll of the College was discussed the most opposed to it were the very men who have led the opposition to the Midwives Bill. I trust that in the near future the decision in question will be reversed.—I am, etc.,

Fellows Road, N.W., Oct. 4th. F. R. Humphreys.

## CURETTE *VERSUS* FINGER.

Sir,—I notice an apparent difference of opinion in Professor Byers's procedure and that of Dr. Horrocks in a matter that I should imagine does not admit of any difference of opinion.

Professor Byers is reported as saying he "prefers the curette to the finger when the os *was* dilated," if not he used a plug.

Dr. Horrocks, in reply, said it was "better to use a curette when it was desirable *not* to wait for dilatation."—I am, etc.,

October 7th. Observans.

## THE PUERPERAL FEVER MORTALITY.

Sir,—May I, as a general practitiener, enter a word of protest against the indictment that Professor Byers in his introductory remarks on puerperal fever brings forward against the general practitioner? He states: "It is, indeed, a terrible blot.....that the same good results have not followed in general practice.....that our efforts should be redoubled in urging upon students.....the same antiseptic precautions, etc."

I will at once admit that an appalling amount of mischief is done by the practitioner who indulges in the practice of applying forceps to save his time, and who often also, as Professor Sinclair aptly puts it, uses more muscle than brains.

I will, however, not admit that the practitioner is careless in the application of antiseptic principles; a very large percentage of practitioners would as little think of going to a "case" without their soloids of hydr. perchlor. as of leaving at home their preparation of ergot.

It will further be allowed that if your fingers are clean and sterile, if an aseptic lubricant is used, if your forceps are aseptic, and you use the douche before and after, the presence of a lacerated cervix, and perhaps a laceration in the vagina, as a result of too much muscle, will not materially endanger the patient. Where then, lies the cause for the 2 per 1,000 mortality that exists?

I am strongly of the opinion that the *fons et origo mali* is to be found under dirty finger nails of the incapable nurses that the large lying-in charities through their honorary staffs are good enough to grant diplomas to.—I am, etc.,

Birkenhead, Oct. 5th. R. T. Hughes.

## THE DOCTOR'S COLD.

Sir,—There is a serious question I desire to submit which, so far as I recollect, has never been discussed, but which seems well worthy of notice. Should a medical man visit patients whilst he is suffering from a common cold or a slight attack of influenza? Catarrh is probably infectious. Influenza is certainly so. Patients with low vitality are specially susceptible of these infections, and many diseases, such as phthisis and diseases of the heart, are aggravated—sometimes fatally—by their invasion. I have personally seen cases of aggravation of disease which I suspected to have been due to this cause.

On the other hand, it may be argued that the infection of catarrh, and even of influenza, when prevalent is so universally diffused that the chance of catching it from the medical attendant is an additional danger of infinitesimal magnitude.

Again, some may be inclined to draw a distinction between the two infections, but the differential diagnosis between the two is so difficult that even if catarrh should be theoretically disregarded it would be practically impossible to do so while taking precautions against influenza.—I am, etc.,

Clovelly, Sept. 26th. Robert Walker.

## THE CAUSE OF PHTHISIS.

Sir,—Prior to Koch's discovery of the tubercle bacillus phthisis was looked upon as a hereditary or blood disease; but, from the fact of its attacking one member after another of the same family and selecting as it were certain houses, strong support is given to Koch's latest view that it is propagated by means of dried tubercle-laden dust. At the same time, distinct opposition is given to the view that it is disseminated by means of milk, for all that the milk-conveyance theory has to support it is the fact that the tubercle bacillus is found both in the human body and also in the udders and

milk of a large proportion of cows. Were milk really the cause, the disease would not limit itself to the extent it does, but would certainly be much more widely spread, and, as I have said before, scarcely a single family would be exempt.—I am, etc.,

Bexhill-on-Sea, Oct. 7th. F. P. ATKINSON.

## TREATMENT OF SEA-SICKNESS.

SIR,—My experience of sea-sickness does not allow me to endorse Drs. Butler Savory's and Norman Barnett's statement that "the primary cause of sea-sickness is due to stimulation of the terminal fibres of the nerve supplying the semicircular canals by the movement of the endolymph contained within them." The treatment by bromides, which is certainly rational if their pathology be correct, I have found useless, and after a fairly lengthened trial I have substituted a purely gastric course of treatment, and with results beyond my expectation.

The drug I now invariably prescribe is peptenzyme, an American preparation consisting of the active principles of the different digestive juices, telling the patient to start taking it three or four days before sailing, and to keep on with it for the first week or ten days. So far, I have not had a failure, although I have tried it with patients who had never before been a voyage without being sick.—I am, etc.,

C. FRANK WIGHTMAN, F.R.C.S.Eng.

Cornwall Gardens, S.W., Sept. 30th.

SIR,—Although we have not found a specific for this distressing malady, there is no doubt that ammonium bromide is by far the most certain drug in the *Pharmacopœia* to alleviate and prevent the symptoms. I am not quite so enthusiastic about the drug as I was when the second edition of my work on *Sea-sickness* was published in 1891. I changed the title of the work in the third edition from "cure" to "prevention" as suggested in a review of the work which appeared in the *Lancet*.

Experience has taught me that we do not exhibit the drug in sufficiently large doses. I have been lately prescribing 20 grs. three times a day two days before going to sea, and the same dose to be continued until the patient gets used to the motion of the vessel. I have taken this treatment myself with excellent results. I enclose a copy of a very successful case treated by my direction, although patients should always consult their medical practitioner before going for a long voyage.

With regard to the cause I believe from much practical experience that there are two distinct causes, one due to the "brain" the other due to the "stomach" being disturbed by the motion. Dr. Butler Savory gives a very intelligent physiological reason for the cause due to the brain, being produced by stimulation of the terminal fibres of the nerve supplying the semicircular canals by the movement of the endolymph contained within them. The treatment I have so long advocated, and the success of the same would point to the truth of Dr. Savory's opinion, for no drug would be better suited to act as a sedative to the terminal nerves than large doses of ammonium bromide (*vide* further cases in the fourth edition of *Sea-sickness* supporting the theory)—I am, etc.,

Manchester Square, W., September 20th. THOMAS DUTTON.

SIR,—I fear I have not in my former note expressed myself as clearly as I should, or Dr. C. Butler Savory would never have assumed that any of my arguments went to favour his assertions. I fail to see how his recent observation on pigeons furthers his contention that sea-sickness is aural in origin. I have never known pigeons take to "tumbling" unless of the tumbler variety, or with a strain of it. I therefore conclude that 75 per cent. of the pigeons which took to "tumbling" on the occasion to which Dr. Savory refers were of the variety tumbler. I have made a number of inquiries of pigeon fanciers, and so far failed to elicit anything contrary to my observations.

This peculiarity in the flight of the tumbler, and I may also mention that of snipe, as well as the rotatory motion of the head in one species of birds, is not likely to produce emesis, as it would then probably be discontinued after a few unpleasant experiences. On the other hand, as tumblers frequently slacken the speed of their flight in order to go through their gyrations, one is led to think that they must enjoy some compensatory pleasure. Many sea birds on being caught and brought on deck vomit. This has been ascribed to sea-sickness, but it is well known that sea fowl not infrequently rest on a buoy or floating wreckage without unpleasant consequences. The highly probable explanation is that these birds vomit because they are in the habit of disgorging the contents of their stomachs to more powerful adversaries, or compelling weaker birds to do so through fear.

Experiments on the auditory apparatus of some of the higher forms of fishes prove that if the nerve supply be cut, the power of equilibration is in no way effected; but, according to Goltz, the semicircular canals are the organs of the sense of equilibration, that is, they help to balance the head, and through that assist in balancing the body. He bases this theory on the ground that in disease of the internal ear giddiness is a prominent symptom. If we consider Menière's disease we notice a degree of resemblance between it and Dr. Butler Savory's description of the symptoms of sea-sickness, with this exception—that in Menière's disease certain ocular symptoms are added. The theories propounded are two, one favouring a lesion of the labyrinth itself, the other that it is due to disturbance of the centres controlling sound and equilibration, and I may add that of vision. On the other hand, one can with equal if not greater force propound the theory that the optic nerve has more to do with equilibration than the auditory, as instanced by some people who are unable to look over the edge of a precipice without losing their sense of equilibrium. This surely cannot be attributed to the disturbance of the endolymph, upon which Dr. Savory considers the whole question of sea-sickness revolves.

In locomotor ataxy we find that equilibration depends upon sight, and the comfort that seasick people derive by fixing their vision upon some distant object, or upon some fixed body at closer range, tend to further the visual theory. One can hardly think that the hearing apparatus, which calls in the assistance of the visual organs for correction or for the localisation of sound—and hence far from perfect—can be called upon to exercise two functions.

If a person goes to sleep soon after setting foot on board ship, the muscular sense may during that period accommodate itself to the new motion, and assist in warding off sea-sickness. The power of retaining one's equilibrium on a bicycle is due to muscular sense. Therefore we must conclude that equilibration depends upon many senses, and is not confined to any apparatus receiving the termini of a single centre. We can safely assume that various senses, such as the muscular, tactile, the visual, and partly that of sound, contribute towards equilibration.

The fact that the vomiting of sea-sickness is not readily controlled by the use of drugs in no way proves that it is cerebral in origin. During gestation, in cases of strangulated herniæ, and even in cases of simple acute gastritis, one may run over the whole gamut of sedatives without much comfort.

I have already stated that sea-sickness may have a cerebral origin; but in my experience the majority of cases depend upon gastric trouble exacerbated by an overloaded gall bladder. If it be cerebral, then, I have given reasons why it should not be wholly attributed to the auditory apparatus. Nor do I wish to ascribe it entirely to the sight, as sea-sickness does occur with the lids closed almost as readily as open.

In reply to Dr. Savory's query as to what causes the giddiness and "land-sickness" on the landing of passengers who have become accustomed to the motion of a ship, I readily ascribe it to a defect of visual accommodation. The rising and falling of the floor and ceiling which they experience must be ascribed to visual accommodation rather than to disturbance of the contents of the semicircular canals. The calibre of the semicircular canals, in the fresh state, is only the hundredth part of an inch, and their contents cannot continue disturbed for long in that space. Nor should I like to attribute the rolling gait that characterises those that have spent any length of time at sea to endolymphal causes. To my mind there is no doubt whatever that sea-sickness is due to excephalic as well as to encephalic causes. But whether it be due to one or several causes, there remains the fact that we are surfeited with the number of theories, and I trust that the society which was to meet in September to dis-

cuss sea-sickness will be able to throw some light on the subject.—I am, etc.,

J. R. Wortabet, M.B., D.P.H., etc.
Late Surgeon R.M.S. *Dunvegan Castle*,

September 30th.

## UNQUALIFIED PRACTICE.

Sir,—Considering the apathy and reluctance to give evidence which is at present displayed by the medical profession towards unqualified practice and unlawful employment of unqualified assistants, would it not be reasonable for the General Medical Council to engage a detective at a good salary in order to bring some of the offenders before the Council with a view to having their names erased from the *Register?* I know of a case at the present time where the unqualified assistant (who does not even pretend to be a medical student) boasts of the number of confinements he attends and of the number of clients who come to consult him on his principal's off-day, which is once a week. This is in a thickly populated district in London and is a sixpenny practice. Thus with an unqualified assistant at a low salary he can cut the prices of his medical neighbours. Why should a man who has spent £800 on his medical education have his place taken by a man who probably was never able to pass a preliminary?—I am, etc.,

October 1st. Waverley.

## QUACKERY.

Sir,—Mr. Andrew Carnegie must know little of the competition there is in the medical profession or he would hesitate before sending more men into an overcrowded profession when there are hundreds of well qualified men in large towns who can scarcely get bread and cheese practising, owing to the laxity of the law in allowing ignorant quacks to impose on the credulity of the public. The enclosed circular is an example of the competition medical men have to contend with in most towns in England.

Would it not be advisable that the Parliamentary Bills Committee of the British Medical Association should formulate a Bill for the Suppression of Quackery, and that the medical men of the United Kingdom should personally ask their respective M.P.s to vote for it on its presentation to the House of Commons? The medical defence societies are powerless against quacks who do not assume medical titles, as they call themselves professors or some other misnomer to mislead the public and practise *ad lib.* It is high time such action should be taken.—I am, etc.,

Sept. 29th. Antiquack.

## THE WORKING OF THE VACCINATION ACT.

Sir,—The Vaccination Act, 1898, is an experimental one, and it has now nearly run through three years of the five of its trial. The provisions of the Act are the essential conditions of the experiment, and if they are not adhered to the final conclusion as to the success, or otherwise, of the Act will be lessened in value.

The Act is certainly not carried out as its framers meant it to be in the populous urban district of which I am the public vaccinator. It is the intention of the Act that the vaccination officer should be, as it were, the mainspring of the working of the Act, yet in this district he does nothing to further the cause of vaccination except more or less regularly to send a list of names on Form H and to prepare his books—with a rush at the last moment—for the visits of the Local Government Board inspector. As up to now there have been few, if any, antivaccinators in the place, a fair proportion respond to my notices and visits by allowing me or the other medical men to vaccinate their children, but of the children who remain unvaccinated on account of the unwillingness of their parents, illness, or any other cause, no notice is taken, and the result is that the number of unprotected children is increasing every week.

I have asked several public vaccinators if the same laxity prevails in their districts. The majority say that their vaccination officers follow up the cases, but a few tell me that their position with regard to the matter is the same as my own.—I am, etc.,

September 26th. Dissatisfied.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## SCIENTIFIC REPORTS BY MEDICAL OFFICERS R.N.

The volume of *Naval Medical Statistics* for 1899 was noticed in the British Medical Journal of May 18th last. Some of the contributions to the appendix by naval medical officers add greatly to the interest of a volume which was until recently a purely statistical report. Our available space will only permit us to refer to the most interesting and professionally valuable, though all will repay perusal.

### The Naval Brigade at Ladysmith.

Surgeon James Grant Fowler furnishes a most interesting and detailed account of "some medical facts" concerning the experiences of the *Powerful's* Naval Brigade during the historic siege of Ladysmith. This naval brigade consisted of 19 officers and 265 petty officers and men, with their famous and effective 12-pounder guns; they arrived at Ladysmith at a most critical time on October 30th, 1899, and checked the Boer forces when rapidly following up the troops, falling back on Ladysmith.

Their first suffering was from parched, swollen, and inflamed lips, which was relieved by applications of vaseline. Diarrhœa followed, due, it was considered, to the "pea-soupy" unfilterable drinking water from the Klip or Mud River, cleared, however, by alum; rain water was collected where possible. As the men became more acclimatised their thirst abated.

In December, cases of enteric fever, dysentery, and simple continued fever occurred. Enteric had been endemic in Ladysmith in the hot season in former years, necessitating a shifting of the camping ground, impossible during the siege, when also there had been an addition of 13,500 troops to this station. Enteric fever consequently now became epidemic; fortunately it was of a mild type and with little mortality, despite the disadvantageous circumstances under which it had to be treated; 42 cases occurred in the naval brigade during the hot season. Surgeon Fowler favours the view of the spread of this fever by flies and dust storms, but admits that the men drank water from condemned wells and streams, in spite of all warnings, as although one of the naval engineers had extemporised a distilling apparatus from locomotive boilers in December, owing to the scarcity of the water carts, they were used for the delivery of both potable and washing water. Syphilised patients succumbed to the fever in greater numbers than others. Dysentery was attributed to the same causes, and the privations consequent on the siege, etc. Quinine was beneficial in the simple fevers, averaging ten days in duration, suggesting a malarial origin. Ten of the brigade were wounded in action, four only fatally. The siege was raised on March 2nd, 1900. The Naval Brigade had then lost 13 per cent. of their number. Surgeon Fowler details carefully the diet available during the different periods of the siege, and his whole paper is most interesting and valuable.

### Yaws.

Surgeon Percy H. Bowden, M.D., contributes a paper on frambœsia or yaws, with special relation to the diagnosis between it and syphilis. The unique interest and importance of this contribution is due to the fact that this officer accidentally inoculated himself with the disease when giving a hypodermic injection to an affected patient. The detailed record of his own case is a most valuable addition to our knowledge of this disease. He maintains that yaws and syphilis are distinct diseases, and furnishes his grounds for this opinion.

### Beri-Beri.

Surgeon Frederick J. A. Dalton here publishes for the first time "Beri-Beri: an Attempt to Discover its Etiology," for which the Stewart Prize was awarded at the annual meeting of the Association at Portsmouth in 1899. His researches were carried out in the Municipal Laboratory at Singapore, where the disease is very prevalent. The statistics of the civil hospitals there indicate that it is steadily increasing. The figures given are: 1894, admissions 1,203, deaths 161; 1895, 1,598—435; 1896, 2,057—730.

The lunatic asylum was the field of Surgeon Dalton's investigations—the food, water, and environment being common to all inmates. He considers beri-beri to be a "place

disease." In the blood of beri-beri patients he found a micro-organism, hitherto undescribed, a large micrococcus highly refractile, floating in the liquor sanguinis, moving rapidly and irregularly about the field with a curious side-to-side movement suggesting that it was provided with cilia. It was found inside the blood corpuscles, and never seemed to enter or leave a blood cell, though they often came to rest either under or on top of a corpuscle; blister serum was crowded with them. The conclusions at which Surgeon Dalton arrives are:

1. That he had got no nearer to the true causation of beri-beri than when he started his researches, an opinion not, however, shared by some of the medical men of Singapore, who proposed to continue the work.

2. That the organism is found in profusion in the blood of beri-beri patients but sparsely in other persons (at Singapore).

3. That some persons seem tolerant of the organism while others are not, though living under identically the same conditions as those affected.

His researches are recorded at considerable length and with requisite details, and appear to be an important contribution to the study of this disease.

This short notice of some of the work of naval medical officers, mainly, of junior rank, as furnished in the Appendix of the Statistical Report of the Health of the Navy, 1899, will afford some indication of its character. These papers are, we trust, an earnest of what may be expected from the encouragement now given to research and observation in this statistical report.

## PRESENTATION OF WAR MEDALS.

Major-General Sir H. Trotter, K.C.V.O., commanding the Home District, will present the medals on Sunday, October 27th, at 1 P.M., in Wellington Barracks, to the officers, non-commissioned officers, and men of the London companies of the Volunteer Medical Staff Corps who have recently returned from active service in South Africa. Five officers and about 80 non-commissioned officers and men volunteered and were sent out with the following units: Royal Army Medical Corps, Yeomanry Field Hospital and Bearer Company, Rhodesian Field Force, and Paget's Horse. Three officers and 18 non-commissioned officers and men are still out there; of this number, 1 man was killed in action and 2 died.

## ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty:—Charles H. Buchanan-Hamilton, Fleet Surgeon, to the *St. Vincent*, September 30th; Edward W. Luther, Fleet Surgeon, to the *Prince George*, September 30th; Hamilton Meikle, Staff Surgeon, to the *Indefatigable*, September 30th; William E. Breton, M.D., Staff Surgeon, to Haulbowline Hospital, October 4th; John Andrews, M.D., Staff Surgeon, to the *Prince George*, October 4th; William Bett, Staff Surgeon, to the *Minerva*, October 5th; Octavius W. Andrews, M.B., Staff Surgeon, and Walter B. Maurice, Surgeon, to the *Resolution*, on commissioning, undated.

## ROYAL ARMY MEDICAL CORPS.

Captain A. E. Milner, Personal Assistant to the Principal Medical Officer Madras Command, is permitted to extend his term of Indian service for another year.

Surgeon-Captain W. S. Kidd, of the Scottish Horse, was severely wounded in the right leg in the action at Moedwill, South Africa, on September 29th. In the same engagement Major T. G. Lowie (?) was slightly wounded in the forearm, but he is able to continue doing duty.

Civil Surgeon Hugh Beaumont Smith died of dysentery at Machadodorp on October 1st.

Captain E. Clementi Smith, 62nd Company Imperial Yeomanry, died at Harrismith, South Africa, on October 4th, from wounds and pneumonia.

For Civil Surgeon John O'Brien, reported in last week's British Medical Journal as dangerously ill at Pretoria from enteric, read Civil Veterinary Surgeon J. O'Brien, he is now progressing favourably.

The following are on passage home from South Africa:—Captain Dessauer Chambers and Dr. H. D. Robertson, of the Imperial Yeomanry Hospital. Returning invalided:—Lieutenant P. S. Lelean, Civil Surgeon J. H. Martin.

## ARMY MEDICAL STAFF.

Surgeon-General William Arthur Thomson, M.D., Honorary Physician to the King, died at Camberley, Surrey, on October 6th, aged 71. He entered the service as Assistant Surgeon October 14th, 1851; became Surgeon, December 31st, 1862; Surgeon-Major, September 4th, 1871; Deputy Surgeon-General, November 2nd, 1879; and Surgeon-Major-General, March 3rd, 1886. He went on retired pay March 10th, 1892. He served successively in Jamaica, with the 1st West India Regiment, at the Bahamas, at Fermoy, in the East Indies with the 27th (Inniskilling) Regiment, at Bellary and Thayetmyo with the 76th Foot, in Bengal, at Mhow with the 3rd Hussars, at Rangoon, Hong Kong, Belfast, Bombay, and Madras. He was appointed Honorary Physician to Queen Victoria in 1875, and Honorary Physician to the King last year. He has no war record in the Army Lists.

## INDIAN MEDICAL SERVICE.

Lieutenant-Colonel W. A. Simmonds, Bengal Establishment, has retired from the service, August 15th. He was appointed Assistant Surgeon, March 31st, 1875, and became Surgeon-Lieutenant-Colonel, March 31st, 1895. He served in the Afghan war of 1878-80, and was present in the engagement at Charasiah on October 6th, 1879, and in the operations around Cabul in December, 1879 (medal with two clasps); with the Burmese expedition in 1885-6 (medal with clasp); with the Isazai expedition in 1892; with the Chitral Relief Force under Sir Robert Low in 1895 (mentioned in despatches, medal with clasp); and in the North-West Frontier of India campaign in 1897-8 with the Tochi Field Force, and with the Tirah Expeditionary Force, including the operations in the Bara Valley in December, 1897 (mentioned in despatches, two clasps).

Lieutenant-Colonel Charles Adams, M.B., Madras Establishment, has also retired from the service from July 1st. He joined the department as Assistant Surgeon April 2nd, 1881, and was made Lieutenant-Colonel twenty years thereafter. He was with the Burmese Expedition in 1885-7, receiving the Frontier medal with clasp.

The date of retirement of Colonel T. J. McGann, Madras Establishment, is to have effect from May 5th, 1901, and not as previously stated.

A proposal for the revision of the establishment of military hospital assistants is before the Government of India. The Principal Medical Officer of His Majesty's forces in India recommends 28 hospital assistants for the 26 detachments of native troops located in the Punjab Command.

The Director-General, Indian Medical Service, has been informed that leave in India under ordinary rules may be granted to an officer of the Indian Medical Service holding an administrative appointment in addition to leave out of India, but that if his aggregate leave during his five years' tenure (leave in and out of India both included) exceeds eight months, his right to the extra pension under Article 1,465 A.R.I., vol. i, Part I, is forfeited.

## IMPERIAL YEOMANRY.

Captain H. W. Whyte, late Medical Officer 18th Battalion Imperial Yeomanry, is appointed Surgeon-Lieutenant in the 3rd County of London (Sharpshooters), October 5th.

## THE VOLUNTEERS.

Surgeon-Lieutenant J. Wayte, M.B., 1st Volunteer Battalion the Queen's (Royal West Surrey Regiment), is promoted to be Surgeon-Captain, October 5th.

Surgeon Captain C. W. Howatson, M.B., 4th (Perthshire) Volunteer Battalion the Black Watch (Royal Highlanders), has resigned his commission, October 5th.

## HONOURS AND REWARDS FOR THE SOUTH AFRICAN WAR.

In the list published last week in the British Medical Journal, p. 1019, the following list of honours conferred on medical officers of the Imperial Yeomanry was accidentally omitted:

To be Companions of the Distinguished Service Order: Captain Percival Davidson, Medical Officer 5th Battalion; Captain William John Naismith, Medical Officer 6th Battalion; and Captain Ernest Hopkinson, Medical Officer 15th Battalion.

## VACCINATION IN THE ARMY.

Within the last fortnight Colonel J. J. Lamprey, R.A.M.C., the Garrison Sanitary Officer, has taken every precaution regarding small-pox at Woolwich, with the view of protecting the troops, officers, warrant officers, and non-commissioned officers and men by vaccination. The work was completed on October 9th by the medical officers of troops and the officers of the auxiliary hospital at Woolwich.

## VOLUNTEEER MEDICAL TRAINING AT ALDERSHOT.

General Sir Redvers Buller, in his report to the Field Marshal Commander-in-Chief upon the volunteer corps trained at Aldershot, makes the following observations with regard to the Volunteer Medical Staff Corps and Volunteer Infantry Brigade Bearer Companies:

"I endeavoured to arrange with the different commanding officers this year for the members of the Volunteer Infantry Brigade Bearer Companies to be trained at the depôt under the supervision of the officers and non-commissioned officers of the Royal Army Medical Corps depôt at Aldershot in technical duties, and tried to encourage them to devote as much of their time as possible to the actual duties which they would have to perform in war. I was also desirous of bringing both officers and men of the Volunteer Medical Staff Corps into contact with the practical working of a military hospital; but I found, to my regret, that this idea was not popular. I was able to train a good many of the Volunteer Brigade Bearer Companies at the depôt, and I am pleased to observe that those bearer companies that submitted to the training are all gratified with the result. The general report from the officers in charge of those units shows a consensus of opinion that the work given to them was most interesting and useful. There was, however, some opposition—for example, in the South Midland Volunteer Brigade bearer company. Although the senior medical officer of the brigade was most anxious it should be trained at the depôt, it was not trained, owing, as I understood, to objections raised by the officer commanding the brigade. It is, I think, of extreme importance that these Volunteer bearer companies should be trained so as to be able to take their places beside their brethren of the Royal Army Medical Corps in the field, and it cannot be denied that a man of a bearer company is not efficient in his work unless he also knows something of hospital duties. At the same time, while we are endeavouring to give the best training possible to the bearer companies, it must not be forgotten that the regimental stretcher bearers are quite distinct from them, and require equally good training. In some corps commanders were apt to consider a bearer company man as interchangeable with the regimental stretcher bearer—in fact, to count the same man over twice. It would be an advantage and would tend, I think, to promote the efficiency of the different bearer companies if officers commanding could arrange that they should all be dressed in the same uniform. This is done with good effect in some brigades, in others the individuals are dressed in the separate uniforms of the corps to which they belong. The Public Schools Provisional Battalion mustered very strongly, and was well commanded by Major H.

F. M. Wilson, 4th Rifle Brigade. The boys took great interest in their work, and the results obtained were good. I should be sorry to say anything which would seem to throw cold water on a valuable movement; but I am inclined to agree with my Principal Medical Officer, who thinks that several of the boys who came were too young for the work they were called on to execute. I would recommend that no boy should be permitted to attend camp until he is 15 years of age."

## MEDICO-LEGAL AND MEDICO-ETHICAL.

### THE RELATIONS OF MEDICAL OFFICERS OF HEALTH TO THEIR PROFESSIONAL COLLEAGUES.

We have received a letter and copies of correspondence between the parties from a gentleman who says he is the medical officer of health referred to in our recent answer (page 932). He complains that the facts were not correctly stated by our original correspondent ("Spero"). We have read all the documents placed before us, and feel unable to decide where the parties disagree as to what was actually said and done by the lady health visitor, but we learn that "Spero" has apologised for having charged her with making an incorrect statement of fact. It seems that these cases are notified to the medical officer of health by the school teachers and school attendance officers, and that it is the practice to send a health visitor to make inquiries. We should regret very much to have been led to express an unjust opinion, or to convey any undeserved censure on the basis of an incorrect statement of facts, but after duly considering all that has been advanced, we are still of opinion that under the system pursued by the medical officer of health there is a risk of undue interference with cases under treatment by private practitioners. We think the first point to be ascertained is whether there is a medical practitioner in attendance, and where this is so the matter should be left in his hands, and any necessary communications from the medical officer of health should be made directly to him. This appears to us to be the general principle, but with regard to any particular locality the conditions under which the medical profession can consent to co-operate with the sanitary authority in the matter of non-notifiable diseases appears to be eminently one for the decision of the local medical society or Branch of the British Medical Association.

### THE PECULIAR PEOPLE.

Another case in which the tenets of the sect known as the "Peculiar People" were concerned was investigated by Dr. Ambrose, coroner, at the Public Offices at Barking on October 7th. The evidence, according to the report in the *Morning Advertiser*, was to the effect that the child, one of twins, prematurely born and not strong, became ill about a fortnight after birth. Subsequently the grandmother, a member of the sect, when washing the child noticed that its right leg was swollen, and that the thigh was inflamed and very red. She informed the parents, but they made up their minds to "trust in the Lord." Mr. Anderson, one of the elders of the sect, was called in, and he annointed the child and prayed for it. A week later the leg burst and a quantity of matter was discharged, and this continued until death. The child, the grandmother considered, was in a great deal of pain, but no medical advice was obtained. Dr. Frederick M'Kee, of Ilford, who made the *post-mortem* examination, said that the body was very emaciated, and the skin dry and shrivelled; the right leg was much ulcerated, and for more than a fortnight the child must have been in very great pain, which could have been alleviated by proper treatment, though he was unable to say that such treatment would have saved its life. The Coroner observed that the "Peculiar People" took a certain view of passages in Scripture, but that the law had been broken. The jury returned a verdict that the deceased died from wilful neglect. After the jury were discharged the foreman said that they had intended the verdict to be one of manslaughter.

### "AMERICAN DENTIST."

Justice writes: Is it legal for a D.D.S. of America without an English qualification, and not on the *Dentists Register*, to style himself on his plate and in the local directory "American Dentist"? If not, what steps can be taken to prevent it?

*** Assuming, as we infer to be the case, that the acts attributed by our correspondent to the American dentist have been committed within the United Kingdom, and also, as is to be gathered, that the dentist in question has taken up permanent residence in the United Kingdom, and is practising under the title which our correspondent quotes, we are advised that the circumstances would bring him within the provisions of the penal sections of the Dentists Act. Our correspondent's best course would be to report the facts to the British Dental Association, 40, Leicester Square, W.C., with the view of the matter being investigated, and such action being taken as the law permits without the informant's name being disclosed.

### CHEMISTS AS TOUTS.

The following letter appears to require no comment:

"An Observer" writes: "I was waiting to have a prescription made up in a chemist's shop the other day, when a sickly-looking youth came in, and, addressing himself to the man behind the counter who was serving me, asked: 'Can you recommend me a good doctor for So-and-so?' 'Oh! yes,' replied the assistant, 'Dr. Such-a one, and Dr. Someone-else, both very good men.' 'Ah! will you write it down?' asked the sickly-looking youth. But, instead of doing so, the chemist went to the back part of the shop, and presently returned with two printed cards, which he handed to the youth, who then inquired, 'Do you know the fee?' 'Well, I am not quite sure,' replied the assistant, 'but I think it is two guineas.' 'Oh, thanks!' and the sickly-looking youth departed with the cards in his possession."

## OBITUARY.

### HERMANN FREIHERR VON WIDERHOFER,

Professor of Diseases of Children in Vienna; Physician to H.M. the Austrian Emperor.

After a prolonged and painful illness, which began by an apoplectic seizure in March of last year and ran an irregular course, Hermann von Widerhofer died on July 28th. Not only his Austrian colleagues and his lay fellow countrymen are bewailing their loss, but also a large section of his medical brethren in other countries. Public bodies and private individuals paid a last token of respect to his memory by covering his bier with an overwhelming mass of wreaths and other beautiful emblems, and in the huge gathering which followed his remains to their resting place one could recognise how widely he was held in esteem.

Born on March 24th, 1832, in Weyer, where his father was a general practitioner, he received his scholastic education at the Monasteries of St. Lambrecht and Marburg, and later he entered the University of Vienna. He passed his examinations for Doctor of Medicine and Surgery in 1856, and served for three years as Assistant at the Institute for Waifs and Strays in Vienna. In 1859 he was selected by Professor F. Mayer as his Assistant in the St. Annen Hospital for Children, and in 1862 he became Demonstrator of the Diseases of Children. In the following year, the death of Mayer having rendered the post vacant, he was elected Physician to the Children's Clinic, and at the same time was chosen Physician to the Austrian Emperor. In 1865 he became Extraordinary Professor of the University of Vienna. In 1875 he received the title of *Hofrath*, and in 1884 he filled the chair of Ordinary or full Professor. In 1895, on the occasion of a Royal wedding, he was created a *Freiherr*, and in the same year was elected a Member of Parliament.

It is difficult to say whether he was more successful as a teacher or as a clinician, but certain it is that in both capacities he proved himself unusually adept. He was a skilful diagnostician, a broad-minded pathologist, and, although truly belonging to the old school, he was ever ready to receive new ideas and accord them a proper place. Although not a practical bacteriologist, he took a great interest in the progress of this science, and required his assistants to carry out the practical work. He was one of the first to adopt the use of antitoxin for diphtheria, and was one of the most ardent supporters of the serumtherapy. He readily gave the operation for intubation a fair trial, and expressed himself well satisfied with its usefulness. He took an especial interest in the improvement of his hospital, and was instrumental in establishing an isolation pavilion for scarlatina and diphtheria, infectious diseases having been previously treated in the general wards, but he did not live to see his pet project realised—namely, the entire remodelling of the old hospital on the lines of modern hygiene.

At the death of Mayer he took over the office of co-editorship of the *Jahrbuch für Kinderheilkunde*, and, of his other literary achievements, his articles in Gerhard's textbook on the Diseases of the Mesenteric Glands, and the Diseases of the Stomach and Intestines, must always take a high place among scientific writings; for, in spite of new theories driving out the older pathological ideas, he described the clinical aspects and morbid anatomy of the various conditions so exactly and realistically that there remains no room for corrections or alterations.

His success as a teacher cannot be better gauged than by the number of his pupils who have become eminent and successful. Not only were young students to be found among the number of his pupils, but also grey-haired men, who, realising his capabilities, his clear methods, the pains he took to instruct individually, and his genial good nature, took the opportunity when it arose, and learned a useful and practical lesson from the great master.

He was kind to rich and poor alike, and always succeeded in securing the entire confidence of his elder patients and their friends, and the love of his smaller charges. With such rare and valuable qualities, it is a matter of little wonder that the roll of those who bemoan his death is so great.

WE regret to announce the death on September 19th of Mr. RICHARD GRAVELY, of Newick, Sussex, at the advanced age of 80. He received his medical education at University College Hospital, and became M.R.C.S.Eng. and L.S.A. in 1846. Three years later he commenced practice in Newick and continued in active work there almost up to the time of his death. He was Medical Officer of Health to the Sanitary Authority and to the Board of Guardians, and Surgeon to the Newick Cottage Hospital, in which institution he took a great interest. Besides carrying on an extensive practice, he had always taken a prominent part in public affairs, particularly in his own parish, and he was ever to the front in all matters which were for the good of the village or of the inhabitants. He was greatly beloved by the poor, and his kindness of heart and genial nature endeared him to all who knew him.

OUR Hong Kong correspondent writes: One of the best known medical men in China has passed away in Dr. J. G. KERR, medical missionary. He was born in Adams County, Ohio, in 1824, educated at Denison University, and graduated from Jefferson Medical College, Philadelphia. After seven years general practice in the United States, he came to China in 1854. For the long period of forty-five years his energies were devoted to medical work among the Chinese. During the last few years of his life he founded and superintended an asylum for the insane—an entirely new departure in China. The asylum was conducted on modern lines, and many cases showed marked improvement. Canton is in the centre of a great "stone" district, and Dr. Kerr was known far and wide as a great and successful operator for urinary calculi. In 1898 he was called to Pekin to operate on the American Minister to China; the operation was entirely successful. Dr. Kerr probably operated on more stone cases than any other man of his time. During his earlier days he preferred lateral lithotomy, but later adopted lithotrity as the better operation. He rarely performed suprapubic lithotomy. His training of students in Western medicine has done much to spread medical knowledge among the Chinese. Dr. Kerr took part in translating many medical works into Chinese for the use of Chinese students. He held very decided opinions as to the harm wrought by opium smoking. His character was strong and upright, and his life-work will ever form part of the history of Canton.

# UNIVERSITIES AND COLLEGES.

## UNIVERSITY OF LONDON.

A MEETING of Convocation was held at the University, South Kensington, on Tuesday, October 8th. It was fully twelve minutes after the usual time of commencing the proceedings before the quorum of fifty members were present.

*The Virchow Celebration.*—Sir E. H. Busk, Chairman of Convocation, presided, and stated that, in his official capacity, he had signed an address of congratulation from the University to Professor Virchow on the completion of 80 years of his life, and he trusted that Convocation would approve of his action. The members present unanimously signified their approval.

*Yale University.*—Sir E. H. Busk further asked the consent of Convocation to his signing another address from the University which it was proposed to send to Yale University on the approaching two hundredth anniversary of the foundation of the Collegiate School of Connecticut. The House unanimously agreed to the proposal.

*Civil Rights of Members.*—Dr. J. Wilkie proposed the following resolution: "That a permanent Committee of Convocation, consisting of five members, be appointed to safeguard the civil rights of members of the University, and their interests." This was duly seconded, but was opposed by several speakers, and on being put to the vote was lost.

*Discipline of Professors.*—Dr. J. Wilkie next moved: "That, in the opinion of this House, earnest representations be made to the Senate that any professor, teacher, or lecturer in this University, who shall be insolvent, or who shall have his salary attached, or who shall for money provide testimonials or credentials in favour of miscellaneous public companies, shall be, *ipso facto*, discharged from all employment in the University." This was formally seconded, but was opposed by various speakers, and rejected by the House, which then adjourned.

## UNIVERSITY OF GLASGOW.

FIRST PROFESSIONAL EXAMINATION FOR THE DEGREES OF M.B. AND CH.B.—The following have passed this examination in the subjects indicated (B., Botany; Z., Zoology; P., Physics; C., Chemistry):

J. A. Aitken (B., Z.), G. A. Allen (B., Z., P., C.), R. Anderson (Z.), J. H. Baird, B.A. (B., P.), E. Barnes (B., P.), G. D. M. Beaton (B.), J. C. Bosworth (C.), D. L. Carmichael (B., P.), J. P. Carmichael (B., C.), C. G. A. Chislett (Z., P.), D. Clark (B., P.), J. A. Cowie, B.A., B.Sc. (B.), A. M. Crawford (B., P.), H. W. Dempster (B., Z., P., C.), R. S. Dewar, M.A. (B.), W. Duffy, M.A. (Z., P.), J. S. Dunn (Z.), E. J. Dyke (B., C.), H. W. Dyke (B., P.), J. Fairley (B., P.), H. P. Fairlie (B., P.), A. B. Ferguson (B., P.), T. H. Forrest (B., P.), J. W. Georgeson (B.), W. Gilbert (B., P.), J. Glaister (C.), A. Graham (Z.), J. I. Greig, (B., Z.), W. Grier (B., P.), R. N. Guthrie (B., P.), C. F. D. Hammond (P., C.), J. Hammond (B., Z.), F. Hauxwell (B., P.), R. M. Hill (C.), L. Hislop (C.), R. Howell (C.), A. Hunter (P.), D. G. Hunter, M.A. (Z.), W. B. Jack (B., P.), A. E. Jones (Z., C.), P. J. Kelly (B., Z.), J. Keys (B., P.), J. D. Kidd (B., P.), J. T. Kirkland (P.), W. L. Kirkwood (B., P.), P. Lowe, M.A., B.Sc. (B., Z.), A. Macaulay (Z., C.), J. D. M'Callum, M.A. (B., Z.), J. M'Cartney (B., Z.), T. M'Cosh (B., Z.), D. MacDonald (B., P.), D. M'Ewan (B., P.), J. Macintyre (B., P.), F. J. Mackay (P., C.), H. MacNaught (B., P.), R. C. Macpherson (Z., P.), P. Maguire (B., Z., P., C.), J. Miller (B., P.), W. Miller (B., P.), H. J. Milligan (B., P.), R. W. Mitchell (B., P.), J. Moffat (Z.), K. Morrison (P., C.), A. G. Paxton (B., P.), T. T. Rankin (B., P.), D. M'K. Reid (B.), J. M. Renton (B., P.), A. Robertson (B., P.), J. H. A. Robertson (B.), W. Rolland (Z., C.), A. C. Russell (B., P.), J. C. Russell, M.A. (B., C.), J. C. D. Simpson (P., C.), R. A. Slater (Z.), T. B. Smith (B., P.), A. A. Stewart (P., C.), D. Stewart (B., P., C.), J. L. Stewart, M.A. (B., Z., P., C.), T. Strain (B., Z., C.), W. A. Stuart (B., P.), J. R. Sutherland (B., P.), W. R. Taylor (B., C.), T. Thom (B., P.), C. S. Thomson (B., P.), R. Todd (B., P.), W. Y. Turner, M.A. (B., Z.), J. K. Welsh (Z.), G. Young (B., P.).

*Women.*—B. S. Alexander (P.), J. T. Clark (B., Z.), A. R. Hird (B., Z.), R. I. Hudson (B., Z.), K. R. M. Lucas (P.), A. M'Phun (C.), E. M. M'Vail (B., Z.), M. W. Millar (P., C.), E. Oversby (B.), V. D. Reis (B., Z.), L. Smellie (P.), M. B. Taylor (B., Z., P.).

SECOND PROFESSIONAL EXAMINATION FOR THE DEGREES OF M.B. AND CH.B.—The following have passed this examination in the subjects indicated (A., Anatomy; P., Physiology; M., Materia Medica and Therapeutics):—

R. Adam (M.), A. Anderson (P.), J. R. S. Anderson (P., M.), T. Bennett, M.A. (M.), A. G. Bisset (A., P.), A. Blair (A.), R. G. Bradford (P., M.), J. Brown (P.), C. H. Browning (A., P., M.), J. M. H. Caldwell (A.), A. Connal (A., P., M.), J. Cross (A.), H. C. Davies (A., M.), D. Dickie (M.), J. Forsyth (A., P., M.), W. M. Gilmour (P., M.), J. Glover (A., P.), G. Gordon (P.), J. Hanson, M.A. (A., P., M.), S. H. Harris (M.), W. Harvey (M.), J. M. Huey (A., P.), M. Hutton, M.A. (A., P., M.), A. Jamieson (P., M.), J. M. Kelly (A.), A. D. Kennedy (A., M.), R. D. Kennedy (P.), A. Leggat (P.), A. Leitch (A.), W. J. Logie (P.), T. W. Love (M.), D. Macaulay (A., P.), J. B. M'Cabe (P., M.), J. F. Macdonald (A., P.), D. D. F. Macintyre (P.), N. A. Macleod (A., P., M.), A. A. M'Whan (P.), A. Matheson, M.A., B.Sc. (M.), J. B. Morton (A., P., M.), G. Muir (A.), J. C. Pairman, M.A. (A., P., M.), D. S. Richmond (P., M.), G. Richmond (A., P., M.), P. H. Robertson (M.), R. T. C. Robertson (M.), C. Ross (A., P.), L. D. Shaw (P.), J. M. Smith (P., M.), J. B. Stevenson (M.), W. D. H. Stevenson, M.A. (M.), J. Stewart (A., M.), N. B. Stewart (A., P.), W. Stewart (M.), P. L. Sutherland (M.), J. Walker, M.A. (M.), A. M. Watson (M.), R. Watson (P.), W. N. W. Watson (M.), G. J. Williams (M.), A. S. Wilson (A.), R. M'N. Wilson (A., P.), E. Wright (A.), H. Young (M.), J. Young, Glasgow, (M.).

*Women.*—J. Auld (M.), A. W. Cameron (M.), M. C. Cameron (M.), J. Campbell (A.), J. G. Duncan (M.), K. Fraser, B.Sc. (M.), J. R. F. Gilmour (M.), M. Hardy (M.), M. L. M'Neill (M.), A. P. Martin (A.), E. J. Miller (M.), I. D. Mitchell (M.), M. H. Smart (M.), J. M. Stewart (M.), J. G. Waddell (M.)

THIRD PROFESSIONAL EXAMINATION FOR THE DEGREES OF M.B. AND CH.B.—The following have passed this in the subjects indicated—(P., Pathology; M., Medical Jurisprudence and Public Health):

W. Armitage (P.), R. J. Arthur (P., M.), R. Bryson (P.), A. Campbell (P., M.), R. H. Campbell (P., M.), A. A. Carruthers (M.), R. P. Cartwright (M.), J. C. Christie, M.A. (P., M.), S. C. Cowan (P., M.), J. Craig (P., M.), J. Dick, M.A. (P., M.), M. I. Dick (M.), D. Douglas, M.A. (M.), W. Dow (M.), W. W. George (P., M.), J. A. Hagerty (M.), J. Kennedy (P.), D. D. M'Dougall, M.A. (M.), A. A. MacFarlane (P., M.), J. M. Mackellar (M.), I. M'Kenzie, M.A., B.Sc. (P., M.), J. R. M'Vail (P., M.), R. H. Manson (P.), R. Menzies (M.), A. J. Mitchell (P., M.), J. M. Reid (M.), N. C. Rogers (M.), J. Russell (P.), F. D. Scott (M.), J. B. Stewart (P., M.), J. K. Thomas (M.), J. F. Weston (M.), J. White, M.A., B.Sc. (P., M.), J. Wilson (P.).

*Women.*—H. S. Baird, B.A. (M.), G. D. Bostock, B.Sc. (P., M.), M. E. Bryson (P., M.), E. MacL. Lochhead (P., M.), E. C. Wallace (P., M.).

## ROYAL UNIVERSITY OF IRELAND.

THIRD EXAMINATION IN MEDICINE.—The following candidates have passed this examination:

*Upper Pass.*—*Lily A. Baker, Catholic University School of Medicine; D. J. Boyle, Catholic University School of Medicine; *P. Dwyer, Catholic University School of Medicine; M. F. Farrell, Catholic University School of Medicine; *D. Gillespie, Queen's College, Belfast; J. M'A. Holmes, Queen's College, Belfast; *T. Lyle, Queen's College, Belfast; *J. C. McPherson, Queen's College, Belfast; *J. N. Meenan, Catholic University and School of Medicine; *J. H. Moore, Queen's College, Belfast.

Those marked with an asterisk may present themselves for the further Examination for Honours.

*Pass.*—A. P. Barry, Catholic University School of Medicine; C. Baylor, Queen's College, Cork; C. J. Boucher, Queen's College, Belfast; M. Cagney, Queen's College, Cork; J. S. Campbell, Queen's College, Belfast; P. T. Crymble, Queen's College, Belfast; Lillie E. Dunn, Queen's College, Belfast; M. FitzGerald, Catholic University School of Medicine; D. Forde, Queen's College, Galway; Marie E. Hayes, Catholic University School of Medicine; J. I. Jaffé, Queen's College, Cork; E. B. Kenny, Catholic University School of Medicine; C. G. Lowry, Queen's College, Belfast; J. F. McDermott, Queen's College, Cork; D. McGrath, Queen's College, Belfast; J. C. MacHugh, Catholic University School of Medicine; R. G. Meredith, Catholic University School of Medicine; W. Minford, B.A., Queen's College, Belfast; J. W. Pitt, Queen's College, Belfast; Jane E. Reynolds, Queen's College, Cork; D. J. Roantree, Catholic University School

of Medicine: F. C. Sampson, Catholic University School of Medicine; Mary E. Simms, Queen's College, Belfast; W. A. Simpson, Queen's College, Galway; J. Thompson, Queen's College, Belfast; C. B. F. Tivy, Queen's College, Cork; D. H. Vickery, Catholic University School of Medicine; T. Walsh, B.A., Queen's College, Galway; J. E. Wilson, Queen's College, Belfast.

M.B., B.Ch., B.A.O. Degree Examination.—The following candidates have passed this examination:

*Upper Pass.*—*J. H. Ferris, Queen's College, Belfast; R. W. Fisher, Queen's College, Belfast; *J. H. Gill, Queen's College, Belfast; P. Heffernan, B.A., Catholic University School of Medicine; *M. J. Laffan, B.A., Catholic University School of Medicine; A. McCloy, Queen's College, Belfast; H. M. McCrae, Queen's College, Belfast; *J. E. MacIlwaine, Queen's College, Belfast; *J. S. F. Weir, Queen's College, Belfast; J. A. Williams, Queen's College, Cork.

Candidates marked with an asterisk may present themselves from the further Examination with Honours.

*Pass.*—J. M. Aherne, Catholic University School of Medicine; W. J. Bannister, Queen's College, Cork; F. C. Bullen, Queen's College, Cork; R. H. Coughey, B.A., Queen's College, Belfast; W. J. B. Fergus, Queen's College, Belfast; F. Garland, Catholic University School of Medicine; J. Knox, Queen's College, Belfast; R. R. McCandless, Queen's College Belfast; D. S. A. O'Keeffe, Queen's College, Cork; H. E. S. Richards, Queen's College, Galway, and Catholic University School of Medicine; W. Rodgers, M.A., Queen's College, Belfast; H. Ross, Queen's College, Cork; W. A. Sandys, Catholic University School of Medicine and Queen's College, Galway; R. A. Stewart, Queen's College, Belfast.

M.D. Degree Examination.—The following candidates have passsd this examination:

W. J. Dargan, M.B., B.Ch., B.A.O., Catholic University School of Medicine; J. Reid, B.A., M.B., B.Ch., B.A.O.

Charles Cooper, M.D., of Queen's College, Cork, and the Catholic University School of Medicine, has passed the examinations for the M.Ch. and M.A.O. degrees.

## UNIVERSITY OF DURHAM.

At the Convocation held on Saturday, September 28th, the following degrees and diplomas were conferred:

*Doctor in Medicine.*—H. E. Davison, M.B., B.S., B.Hy.Durh.; H. G. Harris, M.B., B.S.Durh.; H. D. Johns, M.B., B.S.Durh.; A. E. Neale, M.B., B.S.Durh.; V. Pendred, M.B.Durh., F.R.C.S.; A. Riley, M.B., B.S.Durh. (*in absentiâ*); F. W. Rowland, M.B., B.S.Durh.; A. E. Stevens, M.B.Durh.; R. H. Vincent, M.B., B.S.Durh., M.R.C.P.; L. H. Walsh, M.B., B.S.Durh.

*Doctor in Medicine for Practitioners of Fifteen Years' Standing.*—W. R. Etches, M.R.C.S., L.R.C.P., D.P.H.; C. J. J. Harris, L.S.A., M.R.C.S., L.R.C.P.; J. H. Harris, M.R.C.S., L.S.A., D.P.H.; E. G. Hunt, M.R.C.S., L.R.C.P.; J. T. Neech, L.R.C.P., L.M., L.F.P.S.G., D.P.H.; W. H. Wright, M.R.C.S., L.K.Q.C.P.I., L.S.A.

*Master in Surgery.*—B. C. Stevens, M.D., B.S., F.R.C.S.E., M.R.C.S., L.R.C.P., L.S.A.; G. G. Turner, M.B., B.S.Durh., M.R.C.S., L.R.C.P.

*Bachelor in Medicine (M.B.).*—C. C. Adeniyi-Jones, College of Medicine, Newcastle-upon-Tyne; A. J. S. Brandon, M.R.C.S., L.R.C.P., St. Thomas's Hospital; C. H. Brookes, L.S.A., St. George's Hospital; T. S. Coates, College of Medicine, Newcastle-upon-Tyne; G. E. Froggatt, Middlesex Hospital; P. G. Garrett, M.R.C.S., L.R.C.P., Middlesex Hospital; C. H. Gibson, College of Medicine, Newcastle-upon-Tyne; J. S. Hall, M.R.C.S., L.R.C.P., St. Thomas's Hospital; R. S. Hindmarch, College of Medicine, Newcastle-upon-Tyne; A. E. Hodge, College of Medicine, Newcastle-upon-Tyne; E. G. Klumpp, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; E. E. Norman, College of Medicine, Newcastle-upon-Tyne; A. Parkin, College of Medicine, Newcastle-upon-Tyne; G. W. Procter, M.R.C.S., L.R.C.P., Middlesex Hospital; F. R. Scott, College of Medicine, Newcastle-upon-Tyne; J. E. Sidgwick, College of Medicine, Newcastle-upon-Tyne; R. Thorne-Thorne, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital.

*Bachelor in Surgery (B.S.).*—C. C. Adeniyi-Jones, College of Medicine, Newcastle-upon-Tyne; A. J. S. Brandon, M.R.C.S., L.R.C.P., St. Thomas's Hospital; T. S. Coates, College of Medicine, Newcastle-upon-Tyne; G. E. Froggatt, Middlesex Hospital; P. G. Garrett, M.R.C.S., L.R.C.P., Middlesex Hospital; C. H. Gibson, College of Medicine, Newcastle-upon-Tyne; J. S. Hall, M.R.C.S., L.R.C.P., St. Thomas's Hospital; R. S. Hindmarch, College of Medicine, Newcastle-upon-Tyne; E. G. Klumpp, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; E. E. Norman, College of Medicine, Newcastle-upon-Tyne; A. Parkin, College of Medicine, Newcastle-upon-Tyne; F. R. Scott, College of Medicine, Newcastle-upon-Tyne; J. E. Sidgwick, College of Medicine, Newcastle-upon-Tyne; A. E. Stevens, M.B., St. Thomas's Hospital; R. Thorne-Thorne, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital.

*Bachelor in Hygiene (B.Hy.).*—T. M. Clayton, M.B., B.S.Durh.; T. Yeates, M.B., C.M.Ed.

*Diploma in Public Health (D.P.H.).*—T. M. Clayton, M.B., B.S., B.Hy.Durh.; H. E. Davison, M.B., B.S., B.Hy.Durh.; D. M. Millar, M.B., C.M.Glas., B.Hy.Durh.; E. Mitchell, M.D., B.S., B.Hy.Durh.; T. Yeates, M.B., C.M.Ed., B.Hy.Durh.

## CONJOINT BOARD IN IRELAND.

Preliminary Examination in Arts.—Candidates have passed this examination as undernoted:

*Honours in Order of Merit.*—W. R. M. Orr, C. W. Greene, W. T. M. Browne, J. E. Hogan. (R. A. Barbour and A. C. Taylor equal.)

*Passed Alphabetically.*—F. G. Allan, N. Allaun, D. Anderson, J. J. Begley, E. G. Carroll, L. Clifford, Andrew Cullen, C. M. Donovan, A. J. Faulkner, P. Foran, J. Gleeson, J. Halton, M. D. Healy, A. Hogan, G. M. Loughman, J. Madden, T. N. Massey, W. S. L. Moorhead, Charles Murphy, J. H. McCrea, James O'Brien, T. T. O'Farrell, W. Ogilvy, H. Pentland, W. G. G. Quinn, W. H. Soady, M. Walters, P. I. Wigoder.

## SOCIETY OF APOTHECARIES OF LONDON.

Primary Examination, Part II.—The following candidates passed in:

*Anatomy.*—R. S. Dollard, Royal College of Surgeons of Ireland; G. H. Henry, Belfast; A. C. Jenkins, London Hospital; J. D. Staley, Manchester.

*Physiology.*—H. Bennett, Manchester; R. S. Dollard, Royal College of Surgeons of Ireland; G. H. Henry, Belfast; P. J. Martin, St. Bartholomew's Hospital; J. O. Sergeant, Leeds; J. D. Staley, Manchester; D. A. Stepney, Royal Free Hospital; R. J. S. Verity, Charing Cross Hospital.

Primary Examination, Part I.—The following candidates passed in:

*Biology.*—J. C. Fletcher, Royal Free Hospital.

*Chemistry.*—H. W. Phillips, Manchester.

*Materia Medica and Pharmacy.*—G. C. M. Davies, Charing Cross Hospital; A. B. Gosse, Royal Free Hospital; G. H. Henry, Belfast; P. S. Hopkins, London Hospital.

# PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

## HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,378 births and 3,435 deaths were registered during the week ending Saturday last, October 5th. The annual rate of mortality in these towns, which had been 18.3, 16.8, and 16.7 per 1,000 in the three preceding weeks, further declined last week to 15.6 per 1,000. The rates in the several towns ranged from 10.8 in Bradford, 11.0 in Huddersfield, 11.3 in Derby, and 12.0 in Cardiff, to 19.8 in Gateshead, 20.0 in Liverpool, 21.3 in Newcastle, and 23.1 in Sunderland. In the thirty-two large provincial towns the mean death-rate was 16.2 per 1,000, and exceeded by 1.5 the rate recorded in London, which was 14.7 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.4 per 1,000; in London this death-rate was equal to 1.9 per 1,000, while it averaged 2.7 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 3.9 in Leeds and in Sunderland, 4.5 in Salford, 4.7 in Gateshead, and 7.2 in West Ham. Measles caused a death-rate of 1.1 in Wolverhampton and 1.7 in West Ham; scarlet fever of 1.4 in Preston; whooping-cough of 1.0 in Plymouth and in Newcastle; "fever" of 1.0 in Sheffield and 1.4 in Sunderland; and diarrhœal diseases of 2.5 in Leicester, 2.7 in Burnley, 2.8 in Salford, 3.5 in West Ham, and 4.2 in Gateshead. The 74 deaths from diphtheria in the thirty-three towns included 30 in London, 8 in West Ham, 8 in Liverpool, 5 in Brighton, 5 in Hull, and 4 in Bristol. Three fatal cases of small-pox were registered in London, but not one in any other of the thirty-two large towns. The number of small-pox patients under treatment in the Metropolitan Asylum Hospitals, which had increased from 13 to 163 at the end of the seven preceding weeks, had further risen to 169 on Saturday last; 51 new cases were admitted during the week, against 62, 37, and 44 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 3,157, against 3,064, 3,098, and 3,151 on the three preceding Saturdays; 426 new cases were admitted during the week, against 457, 427, and 460 in the three preceding weeks.

## HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, October 5th, 926 births and 463 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.5, 16.2, and 16 per 1,000 in the three preceding weeks, further declined last week to 14.5 per 1,000, and was 1.1 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 9.1 in Greenock and 9.4 in Leith to 16.2 in Aberdeen and 16.4 in Dundee. The zymotic death-rate in these towns averaged 2.6 per 1,000, the highest rates being recorded in Dundee and Greenock. The 219 deaths registered in Glasgow included 12 from measles, 5 from scarlet fever, 3 from diphtheria, 5 from whooping-cough, 3 from "fever," and 16 from diarrhœa. Three fatal cases of measles and 2 of whooping-cough were recorded in Edinburgh. Nine deaths from diarrhœa occurred in Dundee, 7 in Aberdeen, 4 in Greenock, 3 in Paisley, and 3 in Leith.

## EYESIGHT OF SCHOLARS IN SCHOOLS IN LARGE TOWNS.

The following circular to managers and teachers of urban elementary schools was issued by the Board of Education, Whitehall, London, S.W., on October 1st, 1901:—

Sir,—The Board of Education are anxious to call the attention of the managers and teachers of elementary schools situate in large towns to certain conditions injuriously affecting the eyes and eyesight of the scholars; and they do so in the hope that measures may be generally adopted for arresting the extension of evils prejudicial to the national welfare, in so far as these measures appear to fall within the powers of teachers and managers.

The sight of children is liable to be injuriously affected by two distinct classes of conditions, namely:

(*a*) From what are technically called errors of refraction, that is to say, from faulty shape or proportion of the eyeball, producing the several conditions of myopia or short sight, hypermetropia or flat-eye, and astigmatism; all of them liable to occasion much strain and difficulty in using the eyes, and some of them liable to such an extent of aggravation, during and in connection with school life, as seriously to cripple the future usefulness of the individual.

(*b*) From various forms of disease, such as contagious or non-contagious ophthalmia, eczema affecting the lids, inflammation of the follicles of the eyelashes, pimples or pustules upon the eye surfaces, or inflammation or ulceration of the cornea. Many of these forms of disease are inconspicuous in their origin and might easily escape notice unless special

attention were paid to the possibility of their occurrence. Some of them are highly contagious, and might become of serious import to the school as a whole, as well as to the original sufferers.

In relation to class (*a*) it is desirable that every school should be furnished with a set of printed letters, of proper proportions and of graduated sizes, technically known as "test types" and that by means of these the vision of every child should be tested upon admission, and again at any future time if any suspicion of imperfection should arise concerning it. For children unable to read test sheets are provided exhibiting, as substitutes for letters, figures composed of three sides of a square, the opening being in some above, in others below, in others to the right, in others to the left. The principle of construction is that a natural eye should be able to read a figure of a definite size at a definite distance; and when this cannot be done the vision falls below the accepted normal standard. When it can be done, it remains to be seen whether small type can also be read sufficiently far away, that is, at from 12 to 14 inches from the eyes. As a rule, distant vision will be defective in either short sight or astigmatism; and small print will be brought unduly near in hypermetropia. Sufficient testing for school purposes may be accomplished by a teacher in five minutes; and, whenever vision falls below the normal standard, or whenever small print is instinctively brought very near the eyes, the parents should be advised to take the child to an ophthalmic hospital or to a surgeon. In the great majority of such cases the use of spectacles will remove all difficulty, and will enable the school work to be performed without risk of injury to the sight.

In relation to class (*b*), which manifestly includes affections of very different kinds, some of them comparatively rare, others sadly too common, it is difficult to lay down any other general rule than that it should be the duty of teachers to observe any appearance of unnatural redness or soreness of the eyes, or any tendency on the part of a child to be often rubbing them when at work, and to take such precautions as the circumstances of each case may require. Two especially common forms of disease are the contagious ophthalmia chiefly affecting the insides of the eyelids, and the contagious ophthalmia affecting the lid margins, and tending to destroy the eyelashes at their roots. Both of these are liable to be aggravated by insanitary home conditions, and both are contagious from child to child either directly, by finger contact, or through the medium of slates, towels, sponges, needlework, and so forth. In many cases, treatment, to be effective, must be continued for a long time, and personally undertaken by a trained nurse or a surgeon. The parents often have not time or perseverance to take the suffering child regularly to the local eye hospital; and the records of workhouse infirmaries show that children suffering from either of these forms of disease constantly become "ins and outs," ceasing to attend when the acute symptoms disappear, and returning when the disease is again virulent, having attended school in the interval at great risk of spreading the disease. The effects of both the above-mentioned forms of ophthalmia upon the sight are frequently serious, and, even if the subject should escape with useful though impaired vision, the appearance given to the face, by the deformity of the eyelids and by the loss of eyelashes, is often such as to relegate him to the lowest kinds of employment. Managers and teachers, especially in poor districts, are therefore recommended to be watchful with regard to this matter, to exclude any child that is affected, and to take care that he shall not be readmitted without a medical certificate of fitness. The Board of Education have learnt with pleasure that in a few cases special ophthalmic schools have been established in which children can be kept and educated until a cure is effected. The inflammation of the lid margins is usually rendered manifest by the formation of crusts or scabs at the roots of the eyelashes, but the contagious inflammation affecting the lid linings may not only for a long time remain inconspicuous, but is often difficult to distinguish from non-contagious forms affecting the same locality. If any doubt should arise, medical advice should always be sought for its determination.

In attempting to solve the problems presented by the evils above referred to, school authorities are confronted by a two-fold difficulty. In the first place a large proportion of the cases require special skill for their detection; and hence, unless expert knowledge is brought to bear, it is only too probable that many will be overlooked, to the detriment of children who may be subjected to unjust censure and punishment, as well as to overtaxing and further deterioration of the sight. In the second place, even after the discovery of an abnormality, it is not always easy to bring home to the parent the need for treatment, especially if the latter involve an expenditure of trouble, time, or patience. The Board of Education have learnt with satisfaction that in a few large cities the employment of school visiting nurses is being commenced. They are provided, it is believed, as a rule by voluntary associations to schools applying for them. The nurse attends during school hours, and sees all children who are referred to her by the teachers, the cases being principally eye or skin diseases, discharging ears, sore and dirty heads, gathered fingers and heels, chilblains, etc. It has been found necessary to give these "school nurses" some special instruction with regard to eye troubles, the detection and treatment of which may require exceptional knowledge and skill. The nurse is able to decide what children require medical advice or treatment, and to lessen the risk of contagion by recognising infectious complaints in an early stage. Managers and teachers, as well as H.M. Inspectors, have testified to the value of these nurses in improving the health of the scholars and in increasing the regularity of attendance. Cases must occasionally occur where, through misfortune or otherwise, a parent is unable to take a child to a hospital or otherwise to seek medical advice. In such cases managers are earnestly advised to co-operate with teachers in devising means by which children incapable of profiting by instruction in school may be enabled to receive appropriate treatment.

The lighting of the schools is a matter of great importance. The aspect should admit sunshine freely. Where possible, windows should extend from the ceilings to a distance of 7 ft. from the floor. In schools with open roofs some of the windows should be extended into the roof by dormers. Light falling directly upon the eyes should be particularly avoided, as should also light coming from behind, or, in a less degree, light coming from the right hand only, in which case the scholars can only do their work with strain and discomfort.

The right position and sufficient supply of artificial light are also matters of importance. It is essential in dark weather to supply artificial light of sufficient intensity to replace the daylight, and to have it in such positions as not to dazzle the children. Electric light has the double advantage of consuming no oxygen and of being movable and therefore convenient. If gas must be employed, incandescent illumination is preferable to the ordinary fishtail burner.

The obscure cases of ocular defect offer the greatest trouble to teachers. H.M. Inspectors not infrequently find children described as mentally deficient whose deficiency proceeds from partial blindness or deafness rather than from inferior brain power. The teacher should take steps to exclude any possibility of this nature before presenting a child for admission to a defective class. Likewise any child calling forth frequent censure or punishment should be carefully observed for a similar reason.

There are, however, many cases which are less obscure and which the teacher can help to bring under supervision.

Children of this kind arrange themselves roughly according to the following classification of peculiarities:

(*a*) Bending over reading books, copy books, slates, or needlework. (Short-sightedness or hypermetropia).

(*b*) The writing tends to become unduly small. (Short-sightedness).

(*c*) The eyelids are closed into a horizontal chink when looking at a somewhat distant object, for example, blackboard. (Short-sightedness or myopia).

(*d*) Squinting. (Hypermetropia).

(*e*) The appearance of white or milky spots over any part of the centre of the eye.

(*f*) Red or watery eyelids, rims of the eyelids red or prominent, with or without discharge.

(*g*) Eyelashes matted or partially absent, with or without scabs at their bases.

(*h*) Temporary pain, swelling and inflammation of the lid. (Stye).

In calling attention to these defects the teacher may co-operate efficiently with the school nurse and may thereby facilitate the labour of the latter to a very great extent. If supplied as suggested with a set of test types and instructions he will be able to bring to light many cases of visual defect, class (*a*), which might otherwise escape notice until serious and permanent evil consequences had been produced.

The Board are glad of this opportunity of expressing their high appreciation of the devotion shown by managers and teachers in some of our great centres of population in rendering help to their scholars in this and other directions beyond the scope of their ordinary official duties. It is often possible by such help to arrange for a child to be taken, under the guidance of a local manager, pupil teacher, or otherwise, to the out-patient department of a hospital, where expert advice and treatment can be obtained, such as may be of incalculable benefit to the patient if carefully acted upon and pursued.

The Board confidently expect that it will be found possible, as contemplated in the Code of Regulations for Day Schools, 1901, to organise open-air outdoor lessons by frequent visits to museums, parks, and country places. It is hoped that this will prove beneficial, *inter alia*, to the eyesight of the scholars, both indirectly, by improving the general health, and, directly, by providing what is for many town children a rare opportunity of adjusting their sight to objects smaller and more distant than those which they are accustomed to see in the streets in which their homes lives are almost entirely spent.

I have the honour to be, Sir, your obedient servant,

G. W. KEKEWICH.

## FEES FOR NOTIFICATION.

M. writes: I shall be obliged if you would give me your opinion in the following case. Before leaving home for my holiday I was attending a case of scarlet fever which I notified to the M.O.H. My *locum tenens* saw the case and continued in attendance; he also notified the case to the M.O.H. The *locum tenens* saw another case of scarlet fever during my absence which he notified, and on my return I continued to attend this patient, also notifying it to M.O.H. Am I entitled to a fee of 2s. 6d. for each certificate sent to M.O.H., that is, 10s., or only to 2s. 6d. for each patient notified, that is, 5s.?

*** We would refer our correspondent to the reply published in the BRITISH MEDICAL JOURNAL of September 14th, p. 752. We are advised that taking the strict letter of the Act as it stands, both the principal and the *locum tenens* under the circumstances indicated above, would be required by the terms of the Act, and therefore are legally entitled to notify and to claim the prescribed fees for so notifying. We are further advised, however, that taking into consideration the obvious spirit and intention of the Act, if the *locum tenens* were aware from direct information derived from his principal that the latter had notified the case, then there would be no legal obligation on him to notify, and the same would apply to the converse position in which the principal on returning had direct information from the *locum tenens* that he had notified. This is stated as a common-sense view of the law, but apparently there has not been any authoritative decision by the courts bearing upon it. It is impossible to eliminate from the consideration of the matter the fact that for all practical purposes, and particularly from a pecuniary point of view, the principal and the *locum tenens* are one and the same person, and that direct and deliberate multiple notification would lay an additional burden of expense upon the sanitary authority.

**In the course of some experiments on the dissemination of antimony in the organism reported to the Académie de Médecine on October 1st Professor Pouchet found that the simultaneous administration of potassium bromide with antimony in rabbits greatly modified its toxicity.**

# INDIA AND THE COLONIES.

## INDIA.

*The Central Provinces.*—The population of these provinces underwent a serious reduction of more than half a million in consequence of the famine of 1897. The year 1900 was a healthy one, and 1899, which is the subject of Colonel A. Scott-Reid's interesting report, hardly less so. The year was a dry one, the rainfall being in defect by some 25 inches. There was a recurrence of famine towards the close of it; but the drought caused the usual outbreak of malarious fever to be unusually slight, and the scarcity of food did not raise the death-rate. The birth-rate, 47.25, was the highest known since 1881; the highest also in any province of India except the Punjab and Hyderabad Assigned Districts. The death-rate, 27.05, was somewhat higher than that of 1898, but considerably below the provincial average—also the lowest in India, Madras excepted. There was a substantial excess of births over deaths in all districts, and an increase of population by about a quarter of a million. These gratifying circumstances are put down to the more prosperous and healthy conditions of the year. The death-rate of infants under 1 year was abnormally high, namely, 282.09 per 1,000. The fact is explained by the numerous births and the low census basis. Plague accounted for 584 deaths; the disease was limited to parts of the districts of Nagpur and Wardha. There were only 70 deaths from cholera, and the small-pox mortality was moderate. Suicides were also fewer. A supply of Calmette's antivenene with a suitable syringe have been placed in all dispensaries; but no opportunity seems to have arisen for its employment during the year. Sanitary work was somewhat hindered in these provinces by the famine, but is being resumed. A satisfactory feature in sanitary administration is the care which is taken to test and check the accuracy of registration.

*Hyderabad Assigned Districts.*—1899: The conditions resembled those of the adjoining central province. The year was hot and dry; rainfall being short by 22 inches. Drought, high prices and deficient water supply marked the last half of the year. Relief operations became necessary in view of impending famine. The birth-rate was 50.5, the highest on record. The death-rate was 32.0, against 23.0 in 1891, which was exceptionally healthy. Only two reported cases of plague occurred. There were 541 deaths from cholera and 30.5 from small-pox. The death-rate from "fevers" rose from 11.5 to 17.5. As the mortality was higher in May, it is thought that influenza contributed largely to the increase. The amount of money devoted by municipalities and district Boards to sanitary purposes is considered creditable. The report is compiled by Lieutenant-Colonel C. L. Swaine, M.D., who is thanked for his famine services. 1900: This is the first sanitary report for the great famine year which has reached us. The famine which had arisen towards the close of 1899 became intensified, and continued throughout the year. It resulted in a depressed birth-rate, 31.2, and a greatly enhanced death-rate, 82.7. Only two imported cases of plague occurred, but cholera caused 18,375 deaths, or 6.4 per 1,000 of population. There was also an increase in small-pox mortality from 305 to 830. The fever-rate rose from 17.6 to 29.5. Influenza was prevalent in the early months of the year, and malarious fever broke out severely with the rains. Deaths from dysentery and diarrhœa were trebled, bad food and bad water being the main causes. Sanitary work was impeded by the famine. Permanganate of potash was used with advantage for purifying water sources during the prevalence of cholera. Lieutenant-Colonel Swaine and the civil surgeons are again commended for their devotion during the famine.

*Coorg.*—The statistics of this small province present the habitual anomaly of deaths exceeding births. The reason is that of the population of 173,055 some 50,000 are coolies employed on the coffee estates who come to work for six or seven months unaccompanied by their families. The birth-rate of 1899 was 23.50, or, excluding these, 35.97, and the death-rate 28.00. The former was higher and the latter lower than in the preceding year. The year was a healthy one. The rainfall was short, but the fall amounted to 91 inches. The price of food grains rose towards the close of the year, but this did not cause a rise in the mortality. The province escaped plague, which prevailed severely in the adjoining province of Mysore. Elaborate precautions were adopted to exclude it. There was no case of cholera, and only 26 deaths from small-pox. Deaths from fever and bowel complaints were below the average. The report, which is submitted by Lieutenant-Colonel D. S. E. Bain, also contains information regarding dispensaries and vaccination. There is one hospital and six dispensaries, in which were treated 33,753 patients. The death-rate among indoor patients (18.8 per cent.) was very high. The absurd mistake is made in the tables of totalling the rates of the two institutions in which indoor patients are treated, the resulting ratio of 36.92 being quoted solemnly in the report without comment. Vaccination, which was depressed by the plague scare in 1898, was restored to its usual level, the ratio of successful cases to population being 52.8.

*Burma.*—Registration of vital statistics in this province is very defective, but is held to be improving. In Upper Burma only deaths are registered. The population of the Province is growing, and that renders comparisons on the census basis of 1891 faulty; 1899 was a healthy year, with a normal rainfall. The registered birth-rate was 37.04 and death-rate 27.03—both in excess, but whether from improved registration or other reason is uncertain. In some places a low birth-rate is considered, as in Coorg, to be due to the large number of male coolies resident. Cholera mortality was in excess of 1898, but below that of the quinquennium. Small-pox deaths were twice as numerous as usual. Fever and bowel complaints were about the average. Two cases of plague were imported into Rangoon by steamers, but the disease did not spread. Sanitary effort in Burma is feeble in consequence of lack of money; but the Government is fully alive to the importance of pure water, drainage, and conservancy, and municipalities and district boards are impressed with their responsibilities in these matters. "The Sanitary Board was practically non-existent during the year." The report is written by Colonel Little, M.D., who relieved Colonel Sinclair in October.

**On September 26th busts of Chassaignac and Maisonneuve were presented by the President of a Committee of subscribers to the town of Nantes.**

# MEDICAL NEWS.

We are requested to state that Dr. T. B. Adam has been appointed Assistant Secretary of the British Medical Temperance Association. He will reside with the Honorary Secretary, Dr. Ridge, at Carlton House, Enfield, and will specially work among the medical students in London.

The Rev. S. J. Rowton, M.A., Mus.D., who is retiring from the teaching staff of Epsom College, was on October 2nd presented by the members of the Council of the Epsom College with a silver tea and coffee service in recognition of his devotion to the best interests of the school during thirty years.

The Prince of Wales's Hospital Fund for London.—The Honorary Secretaries of the Prince of Wales's Hospital Fund for London have received the sum of one hundred guineas from the King, who has been pleased to continue the annual subscription which His Majesty—as Prince of Wales—has hitherto contributed to this fund.

Distribution of Sterilised Milk.—We learn from the *Medical News* that at the regular summer depôts of the Nathan Strauss Sterilised Milk Charity in New York City over three-quarters of a million bottles of milk were distributed for the use of infants during the past summer. In addition, one million glasses were drunk in the different booths: these numbered thirteen, and, with the exception of four, will be closed during the winter months.

The "London Hospital" Masonic Lodge, originated by and intended for the convenience of the professional staff of the hospital, has been consecrated with Dr. A. E. Sansom as master; Mr. F. S. Eve, senior warden; Dr. F. J. Smith, junior warden; Dr. S. Luther Martin, treasurer; and Mr. T. H. Openshaw, secretary. It is the fourth lodge in London connected with metropolitan hospitals.

Shorthand for Medical Students and Practitioners.—Among the students who have just commenced their medical studies there are probably some who are acquainted with shorthand, having learnt it at school. The Society of Medical Phonographers desires to invite the attention of such students to its object which is to increase the practical service of shorthand to its members by publishing a monthly periodical and other shorthand medical works. Any medical practitioners who use shorthand and have not yet joined the Society are cordially invited to do so. No skill in shorthand is necessary for membership. The annual subscription for students is 5s., for practitioners 7s. 6d. A detailed prospectus of the Society will be sent on application to the Honorary Secretary, Dr. Fletcher Beach, 79, Wimpole Street, W.

Egyptian Medical Congress.—The first Medical Congress in Egypt will be held in Cairo from December 10th to 14th next. According to the preliminary announcements communications on the following subjects will be made among others: Alcoholism and its progress in Egypt, ankylostoma duodenale, bilharzia hæmatobia, cardiac disease in Egypt, dysentery, the prophylaxis and treatment of epidemic disease in Egypt, malaria, filariasis in Egypt, insanity from haschisch, granular conjunctivitis and purulent ophthalmia in Egypt, plague, myxœdema and tuberculosis in Egypt. The President of the congress is Dr. Ibrahim Pacha Hassan, and the Secretary Dr. Voronoff.

St. Thomas's Hospital: the Cheselden Lodge of Freemasons.—A warrant has been granted by the M.W. Grand Master for the formation of a Lodge to be called "the Cheselden Lodge," No. 2,870, and the ceremony of consecration will be performed on Monday, November 4th, at the Governors' Hall in St. Thomas's Hospital in the presence of the M.W. Grand Master H.R.H. the Duke of Connaught and Strathearn, K.G. (President of St. Thomas's Hospital), who will himself undertake a most important portion of the ceremony. The officers named in the warrant are W. Bro. Thomas Wakley, jun., L.R.C.P. Lond., as Worshipful Master, Bro. H. H. Clutton, F.R.C.S. Eng., as Senior Warden, and W. Bro. G. J. Crawford Thomson, M.D.Durh., as Junior Warden. The name chosen for the lodge is that of the great anatomist and surgeon of St. Thomas's Hospital who introduced the operation for lateral lithotomy. Freemasons connected with the hospital who desire further particulars concerning the lodge can obtain information by applying to Bro. C. R. Box, M.D., 2, Devonshire Place, Portland Place, W.

COUNTRY HOMES FOR CRIPPLED CHILDREN.—A new Cripples' Home was opened at Margate on October 2nd by the Marquis of Northampton, in connection with the Ragged Schools Union and the Shaftesbury Society. It contains thirty beds, and has a covered gymnasium adjoining. The Union has now homes at Southend, Bournemouth, Hove, Bognor, and Brenchley, in addition to that at Margate. During the past summer some 1,500 cripples have had a holiday at the seaside through the agency of the Union.

## MEDICAL VACANCIES.

The following vacancies are announced:

BELFAST: ROYAL VICTORIA HOSPITAL.—Medical Superintendent. Salary commencing at £80 per annum, with board and apartments. Applications to the Honorary Secretary by November 1st.

BIRMINGHAM CITY ASYLUM.—Junior Assistant Medical Officer, not over 30 years of age and unmarried. Salary commences at £150 per annum, with board, apartments, and washing. Applications to the Medical Superintendent.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon; unmarried. Salary, £150 per annum, with £30 per annum allowance for cab hire, and furnished rooms, etc. Applications to the Secretary by October 21st.

BODMIN CORNWALL COUNTY ASYLUM.—Junior Assistant Medical Officer; unmarried. Salary, £102, rising to £115 per annum, with board, furnished apartments, laundry, etc. Applications to the Medical Superintendent by October 24th.

BOURNEMOUTH: ROYAL VICTORIA HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board. Applications to the Chairman by October 15th.

BRENTWOOD: ESSEX COUNTY ASYLUM.—Junior Assistant Medical Officer; not over 25 years of age. Salary, £140 per annum. Applications to the Medical Superintendent.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—House-Physician; unmarried, and under 30 years of age. Salary £80 per annum, with board, residence, and washing. Applications to the Secretary by October 30th.

BRISTOL GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with board, residence, etc. Applications to the Secretary by October 28th.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane Street, S.W.—Honorary Surgeon for the Western District. Applications to the Secretary by October 31st.

CITY ORTHOPAEDIC HOSPITAL, Hatton Garden, E.C.—Assistant Anæsthetist. Applications to the Secretary by October 19th.

DENBIGH: DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary, £100 per annum to commence, with board, residence, and washing. Applications to the Secretary.

GLASGOW ROYAL ASYLUM FOR LUNATICS.—Resident Physician-Superintendent; not under 30 nor over 45 years of age. Salary, £1,000 per annum with house, etc. Applications to the Secretary, 190, West George Street, Glasgow by October 21st.

GUY'S HOSPITAL MEDICAL SCHOOL, S.E.—Gordon Lectureship in Experimental Pathology. Salary and fees approximately amount to £250 per annum. Applications to the Secretary of the Board of Electors of the Gordon Lectureship by November 16th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Surgeon; unmarried. Appointment for six months. Salary, £20, with board, residence, and washing allowance of £2 10s. (2) Surgeon Dentist; must be F.R.C.S.Eng. Applications on forms provided to be sent to the Secretary by October 22nd.

MANCHESTER: MONSALL FEVER HOSPITAL.—First Medical Assistant. Appointment for one year but renewable. Salary £150 per annum, with board and lodgings. Applications endorsed "Appointment of First Medical Assistant," to be sent to the Chairman of the Sanitary Committee, Town Hall, Manchester, by October 25th.

MIDLOTHIAN DISTRICT ASYLUM.—Assistant Medical Officer. Salary, £200 per annum, with furnished rooms, board, washing, and attendance. Applications to Mr. R. Addison Smith, 19, Heriot Row, Edinburgh by October 18th.

MORPETH DISPENSARY.—House-Surgeon; unmarried. Salary, £120 per annum, with furnished rooms, etc. Applications to the Honorary Secretary by October 28th.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—House-Physician. Appointment for six months. Salary at the rate of £80 per annum, with board, residence, and laundry allowance. Applications to the Secretary by October 12th.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—(1) House-Physician; (2) House-Surgeon. Appointment for six months. Salary at the rate of £60 per annum, with board and residence. Applications to the Secretary by October 26th.

PLYMOUTH BOROUGH ASYLUM.—Assistant Medical Officer; unmarried. Salary, £150 per annum rising to £200, with furnished apartments, board, and washing. Applications, endorsed "Assistant Medical Officer," to be sent to Dr. W. H. Bowes, Medical Superintendent, Plymouth Borough Asylum, Blockadon, Ivy Bridge, Devon, by October 22nd.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—(1) Resident House-Physician (female); (2) Resident House-Surgeon (female); (3) House-Physician (male); (4) Casualty House Surgeon (male). Appointments for six months. No salary, but board, etc., provided. Applications to the Secretary by October 28th.

ST. MARY'S HOSPITAL, Paddington, W.—Casualty Physician. Salary, £75 per annum. Applications to the Secretary by October 19th.

SHANGHAI MUNICIPAL COUNCIL.—Assistant Health Officer; must possess D.P.H., and not be over 35 years of age. Salary, 360 taels a year (about £50), with means of locomotion and first-class passage to and from England. Applications to Messrs. J. Pook and Co., 63, Leadenhall Street, E.C., by November 30th.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Senior House-Surgeon. Salary, £100 per annum, with residence, board, and washing. Applications to the Secretary, 74, King Street, South Shields, by October 21st.

STOKE-UPON-TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House Physician. Salary, £100 per annum, increasing £10 yearly at discretion of Committee, with furnished apartments, board, and washing. Applications to the Secretary by October 21st.

STIRLING DISTRICT ASYLUM, Larbert, N.B.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, etc. Applications to the Medical Superintendent.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £70 per annum, with board, lodging, washing, and allowance of £5 yearly in lieu of uniforms. Applications to the House Committee.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon; unmarried. Salary for the first year, £100, increasing £10 yearly, with board and apartments. Applications to Mr. J. C. B. Crewes, 4, Parkvedras Terrace, Truro.

YORK COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by October 22nd.

YORK DISPENSARY.—Resident Medical Officer; unmarried. Salary, £110 per annum, with board, lodging, and attendance. Applications to W. Draper, Esq., De Grey House, York, by October 23rd.

## MEDICAL APPOINTMENTS.

BLIED, Cyril E., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Salop Infirmary, Shrewsbury.

CAVENAGH, G., M.B., B.C.Cantab., appointed District Medical Officer of the Walsingham Union, *vice* J. S. Mellish, M.R.C.S.Eng., L.R.C.P.Lond., resigned.

COLLINS, E. Tenison, M.R.C.S.Eng., appointed Second Gynæcologist at the Cardiff Infirmary.

CUTFIELD, Arthur, B.A.Cantab., M.R.C.S.Eng., appointed Medical Officer of Health the Ross Urban District Council.

ELLIS, William C., L.R.C.P. & S.Edin., etc., appointed Deputy Medical Officer of Health to the County Borough of Brighton, and House-Physician to the Borough Sanatorium.

FINLAYSON, G. A., M.B., Ch.B.Aberd., appointed House-Physician at the Great Northern Central Hospital.

HADLEY, C., M.R.C.S.Eng., L.R.C.P., appointed District Medical Officer of the Foleshill Union, *vice* D. Crowe, M.D.Dub.

HAY, John, M.D.Viet., M.R.C.S., L.R.C.P., reappointed Medical Tutor and Registrar, Royal Infirmary, Liverpool.

HILL, Ernest, L.R.C.P., M.R.C.S., D.P.H., appointed Health Officer for the Colony of Natal.

HOWELL, John, M.B., B.S.Lond., F.R.C.S.Eng., appointed Honorary Surgeon to the General Hospital, Cheltenham, *vice* Dr. J. W. Bramwell, resigned.

KENNA, M. F., L.R.C.P., L.R.C.S.Irel., appointed Coroner for South Kildare, *vice* P. L. O'Neill, L.R.C.S.I., etc., deceased.

LAMB, J. M. A., L.S.A.Lond., appointed District Medical Officer and Public Vaccinator to the Second District of the Poole Union.

MONTGOMERY, Samuel, L.R.C.P., L.R.C.S.Ed., appointed District Medical Officer and Public Vaccinator to the Branksome District of the Poole Union.

MURPHY, Denis, L.R.C.P., L.R.C.S.Edin., appointed Pathologist to the North Charitable Infirmary, Cork.

NOALL, Wm. Paynter, M.B.Lond., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the East London Hospital for Children.

PENNEFATHER, Claud M., M.R.C.S., L.R.C.P., M.B., B.S.Durh., appointed Junior House-Physician to the Great Northern Central Hospital.

PRINGLE, Arthur Y., M.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Medical and Surgical Officer to the East Suffolk and Ipswich Hospital.

SHEBBEN, James, F.R.C.S.Eng., appointed Surgical Registrar to the London Hospital.

SPEIRS, W. R., M.B.Glasg., C.M., appointed Medical Officer of Health for the Haltwhistle Rural District, *vice* R. Rousteed, L.R.C.P., L.R.C.S.Edin., D.P.H., resigned.

WADDINGTON, W. Heywood, M.B., B.Ch.Viet., appointed Medical Officer of Health for the Borough of Scarborough, *vice* T. Herbert Littlejohn, M.B., C.M.Edin., resigned.

WALKER, R. A., B.A., B.C.Cantab, M.R.C.S., L.R.C.P., appointed Junior House-Surgeon to the Great Northern Central Hospital.

WHITEHOUSE, William Henry, M.D.Durh., D.P.H.Edin., appointed Honorary Surgeon to the Birmingham Lying in Charity.

WILLIAMS, Leonard, M.D.Glasg., appointed Assistant Physician to the German Hospital, Dalston, N.

## DIARY FOR NEXT WEEK.

### MONDAY.

**Medical Society of London,** 11, Chandos Street, Cavendish Square, W., 8 P.M. General Meeting. 8.30 P.M.—Ordinary Meeting. Address by the President, Dr. W. H. Allchin, on the Responsibility of the Organism in Disease.

### TUESDAY.

**Pathological Society of London,** 20, Hanover Square, W., 8.30 P.M.—Dr. Wakelin Barratt: A case of Sylvian Aneurysm. Dr F. W. Andrewes: Hæmorrhagic Myositis in Enteric Fever. Mr. C. S. Wallace: Primary Melanotic Sarcoma of Small Intestine. Dr Thursfield: A case of Pleuro œsophageal Fistula. Mr S. Shattock: Prehistoric Calculus. Card Specimens by Dr Finlayson and Dr Thursfield.

**Chelsea Clinical Society,** Jenner Institute of Preventive Medicine, Chelsea Gardens, Grosvenor Road, S.W., 8.30 P.M.—The President, Mr. Charles A. Morris, will deliver his opening address on Some War Sequelæ.

### WEDNESDAY.

**Royal Microscopical Society,** 20, Hanover Square, W., 8 P.M.

**London School of Tropical Medicine** at Royal United Service Institution, Whitehall), 4 P.M.—Opening Address of third Winter Session by the Right Hon. Lord Brassey, K.C.B.

### THURSDAY.

**Harveian Society of London,** Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 P.M.—Mr. Campbell Williams: Hæmaturia in Childhood.

**Ophthalmological Society of the United Kingdom,** 11, Chandos Street, Cavendish Square, W., 8.30 P.M.—Cases will be shown by Mr R. Marcus Gunn and Mr Sydney Stephenson. Papers.—Presidential Address: Some Clinical Experience of Primary Chronic Glaucoma and the Value of Iridectomy. Mr S. Johnson Taylor: Notes of a case of Rodent Ulcer of the Cornea in a Child. Mr. Edward Nettleship: Chronic Serpiginous Ulcer of Cornea (Mowen's Ulcer).

### FRIDAY.

**Royal College of Physicians of London,** 4 P.M.—Harveian Oration: Dr. Norman Moore.

### POST-GRADUATE COURSES and LECTURES.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, Wednesday, 8 P.M.—Introductory Lecture.

Charing Cross Hospital, Thursday, 4 P.M.—Surgical Cases.

Hospital for Sick Children, Great Ormond Street, Thursday, 4 P.M.—Lecture: Diarrhœa in Infants.

London Throat Hospital, 204, Great Portland Street, W., Wednesday, 5 P.M.—Practical Demonstration: Examination of the Ear.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—Demonstrations will be given at 4 P.M. as follows: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday surgical; Friday, eye.

West London Hospital, Hammersmith Road, W., Monday 5 P.M.—Opening Address: Sir William Mac Cormac, Bart., K.C.V.O. Lectures will also be delivered at 5 P.M. on Tuesday: Minor Surgery. Wednesday: Surgical Anatomy. Thursday: Iritis. Friday: Therapeutics.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### MARRIAGE.

PRITCHARD—SILLS.—On October 8th, at Barrowby Church, Grantham, by the Rev. J. C. Ballet Fletcher, M.A., Vicar of Mundham and Rector of Hunstanton, assisted by the Rev. George Rubie, M.A., Rector of Barrowby, and the Rev. Norman Campbell, M.A., Vicar of St. Ann's, Wandsworth, Edward J. Pritchard, M.R.C.S.Eng., L.R.C.P.Lond., of Wandsworth Common, youngest son of Josiah Pritchard, M.R.C.S., of Bristol, to Maud, youngest daughter of George Sills, of Casthorpe, Grantham, barrister-at-law.

### DEATH.

WOOD.—At Kroonstad, Orange River Colony, on October 4th, 1901, Sarah, wife of Lieutenant-Colonel Oswald Gillespie Wood, C.B., R.A.M.C. (By cable.

# LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

## QUERIES.

NORTHERN SCOT, who desires to obtain resident patients, wishes to know whether there is any organisation to which he could apply.

E. H. B. would be glad to know of any hospital, home, or institution where a gentleman suffering from locomotor ataxy could be received. Means limited.

ARAB asks the proper dose of liq. morphinæ to inject hypodermically into his 15.2 h.h. hunter when found in stables starting in colic, and no veterinary surgeon near. May the dose be repeated in an hour? What textbook is chiefly used by veterinary students on medicine?

### MEDICAL BOOK-KEEPING.

LIMESTONE writes: The question of an easy time-saving of medical book-keeping has been often discussed in the BRITISH MEDICAL JOURNAL columns. May I venture to ask through the same for assistance and suggestion from those who have tried one or other of the suggested method?

### A PLANT-EATING CHILD.

KINGSTON writes: A child two years old has been under my care for some time for complete loss of appetite. No cause could be discovered. Lately it has been found out that she picks and eats the leaves of the plant I enclose. She has also been seen eating nasturtium leaves. Can you tell me the name of the plant? I am told it has a yellow flower.

*** The plant is *Santolina chamæcyparissus, L.*, allied to the chamomiles and said to be used in infusion against worms.

### TREATMENT OF PRURITUS VULVÆ.

A. F. D. asks for advice in the treatment of the following case: A lady, aged 60, has suffered for the last two years with pruritus vulvæ and ani. The itching comes on only at night, and causes insomnia. All the usual causes have been eliminated—that is, ascarides, hæmorrhoids, eczema, diabetes, or vaginal discharge. The following local remedies have been tried without avail: Lead, mercury, liquor carbonis detergens, bismuth, cocaine, chloroform emulsion, morphine, menthol, resinol, and boric acid.

### CHRONIC ACID GASTRALGIA.

ASPHODEL writes: I shall be deeply grateful to any member who will give me some help in what seems to me a case of chronic acid gastralgia. I have, indeed, three cases—two men and one woman—all about the same age, complexion, and status in life. I have tried drugs and opium without end, and also change of climate (Switzerland and America). Nothing but bromide seems to have any effect; the agony is sometimes relieved by food, but not always, and cocaine, mercury, arsenic, resorcin, silver nitrate, acids, etc., are worthless. The patient in question is about 53, has four children all healthy, is spare and of sallow complexion, but is without any sign of cancer.

### CARDIAC NEUROSIS?

AU DESESPOIR writes: I should feel extremely indebted for suggestions as to treatment of the following case: A gentleman has recently been appointed to an important vicarage, but shortly afterwards, whilst fighting with a "cold" "strained his chest," as he terms it, and is afraid he must resign because very hopeless of cure. He has been examined by three of our leading London physicians and neither laryngoscopy nor other investigation has revealed the slightest mischief. He finds parochial visits try him more than the services, his sensation being pain in the right præcordia extending downwards to about the cardiac orifice and the voice gradually fails. A voyage to Madeira and other rest of three months has done no good. He is naturally most cheerful and free from neurosis.

## ANSWERS.

SUBSCRIBER, MEMBER B.M.A., STAFF SURGEON R.N.—We cannot take notice of anonymous communications.

PSYCHIC writes: "Enquirer" would find what he wants in *Mental Therapeutics*, by Colville; *Theosophy and Spiritual Dynamics*, by Dr. Wyld; *The Gift of the Spirit*, by Prentice Mulford. Catalogues obtained from Mr. G. Osborn, Scientor House, Devonport, or Messrs. Nicholls and Co., 23, Oxford Street, W.

### ELECTRIC BATHS.

MR. CHISHOLM WILLIAMS (Bedford Square, W.C.) writes: In answer to "Electrician" (BRITISH MEDICAL JOURNAL, October 5th, p. 1023), I beg to state that there is no simple apparatus for giving an electrical bath in a patient's own home. To obtain an electrical bath of sufficient power to do the patient good it must be of necessity a complex apparatus and costly. Full information will be found in *Electro-therapeutics*, by Dr. Hedley, or *Electricity in Medicine*, by Dr. Lewis Jones (Cassell and Co.).

### TREATMENT OF ANAL FISSURE WITHOUT OPERATION.

PHYSICIAN writes: In response to the inquiry of "G. B" in the BRITISH MEDICAL JOURNAL of September 21st on this subject, it may, perhaps, be of service to him to quote the letter of "L.R.C.P." (BRITISH MEDICAL JOURNAL, 1890), which was in the following terms: "Ulcer of the anus and rectum may be speedily and painlessly cured without using the knife or caustics. Let the patient lie in bed during six or seven days, taking a low diet and preventing all evacuation by the bowels. On the seventh day give an aperient dose, say of castor oil, to be followed in a short interval with a softening enema to promote defæcation. This will be quite painless, and by this time all trace of ulceration will be gone." It may be added that a correspondent, "L.S.A." (BRITISH MEDICAL JOURNAL, 1896), recommended strongly, from experience in his own case, the local use of lotio nigra in anal fissure.

## LETTERS, NOTES, Etc.

### A MEDICO-LEGAL SOCIETY.

M.D., D.P.H. (Barrister-at-Law) writes: I venture to suggest the formation of a medico-legal society, the chief object of which should be the discussion of questions of a legal character arising in every branch of medical work. No doubt there are many teachers of medical jurisprudence, medical barristers, and others willing to form such a society, of which the advantages are obvious.

### HARVEST BUGS.

DR. D. WALSH (Grosvenor Street, W.) writes: The interesting note upon harvest bugs contributed by Mr. Arthur Maude in your "Memoranda" of September 14th points to a source of skin irritation that sometimes escapes the vigilance of the dermatologist. In some districts, I believe, this little pest does not disappear before the beginning or even the middle of October. Those who are interested in the subject will find an excellent drawing of the acarus in the *Field* for September 20th, the only illustration of the kind with which I am acquainted.

### MUSIC PRACTICE AND NEUROTIC GIRLS.

DR. E. D. KIRBY (Edgbaston) writes: In reply to Dr. Hamilton Hall, I beg to say that I do not think that that gentleman is a piano player, or he would know that the strain in playing falls on the forearm, wrist, and hand. Fatigue in these parts is certainly physical; but surely Dr. Hall would not argue that, being physical, it is immaterial in a neurotic person. It is, of course, very hard to lay down any general law to apply to an individual case; but I still do not think that two hours piano practice, arranged with proper intervals of rest, and with plenty of fresh air, and assuming the absence of other physical or mental work, should be too much for anyone who is only delicate, and not suffering from actual disease.

### THE THIRD STAGE OF LABOUR.

DR. W. G. DUNWOODY (St. Mary's, Ely, Cambs) writes: The letters of Dr. William Legge and "G. P." in the BRITISH MEDICAL JOURNAL of September 28th, advocating the immediate removal of the placenta, open a subject which is I believe an important and interesting one to the general practitioner. Whether to unduly hurry a placenta or not is a question I have been considering for some time past, and the results of my observations are entirely opposed to those of your two correspondents. I have noticed in many cases that on tying the cord as soon as the child is born, and immediately expressing the placenta, more or less severe hæmorrhage has resulted. Furthermore, I am convinced that early expulsion often causes the placenta to tear, and frequently leads to retained portions of membrane. I have also been struck with the fact that in cases in which the child is born before arrival expression of the placenta is not followed by any degree of hæmorrhage, and the uterus contracts firmly and evenly under the hand. Taken altogether, my own experience (which I admit is not of the same value as either of your correspondents) has taught me to wait a reasonable time, say, 15 minutes, before expelling the placenta, except special circumstances such as severe hæmorrhage following on the birth of the child call for earlier interference.

MR. W. R. COOPER, F.R.C.S., L.R.C.P., L.M. (Southsea), writes: As a practitioner of twenty-four years experience, including a vast number of midwifery cases (without a death), I am of opinion that in almost all cases of labour Nature is first and the medical attendant merely a spectator. Rarely is it necessary for anyone to interfere, and truly "meddlesome midwifery is bad." I read in this week's BRITISH MEDICAL JOURNAL how a medical man left the placenta in the uterus and went home to breakfast! Fortunate for him there was no *post-partum* hæmorrhage. The treatment of the third stage of labour, like all stages, is patience, especially if it has been long and tedious. The woman and the uterus require rest, and a dose of ergot with good nourishment is often all that is required. When the placenta is in the vagina and the insertion of the cord can be distinctly felt, then and then only is it safe to pull on the cord. (I have known good men to pull the cord clean off.) On delivery of the placenta it should be twisted round and round, and the membranes come away like a rope. Most of the midwifery books are untrustworthy and misleading, and should be destroyed. I knew a man who followed the advice of some book, and poured a jug of cold water over a woman's naked abdomen for *post-partum* hæmorrhage. That man was obliged to sell his practice! Another "book man" advises peeling a lemon and introducing it into the uterus in cases of *post-partum* hæmorrhage. By the time they obtained the lemon the hæmorrhage would be serious, and probably when it was peeled the

woman would be dead. I am medical referee to some insurance companies, and I notice with regret how many relatives die in childbirth. I venture to say that most of these women died through men following the treatment recommended in books. A man with clean hands, common sense, and a pair of forceps can attend any stage of labour.

### MEDICAL APPOINTMENTS IN THE HIGHLANDS.

WITH reference to an advertisement which has appeared in the *Glasgow Herald* for a medical officer and public vaccinator for the parish of Strath, in Skye, it appears desirable to warn intending candidates that they should obtain a distinct undertaking with regard to an adequate salary, annual holiday, and free official residence before accepting the appointment. The parish is extensive, and the private practice among a population of about 2,000, referred to in the advertisement, cannot be very remunerative, as the population is scattered and consists, we believe, mainly of crofters. This appointment was, we understand, vacant about a year ago.

### MEDICAL GRADUATES AND THE SUPPLY OF MEDICINES.

A COUNTRY M.D. writes: Dr. Leo. D. Gamble in the BRITISH MEDICAL JOURNAL of September 14th hit a very rotten professional nail on the head when he referred to "the flood of prescriptions with which consultants have covered the country." The great majority of higher class patients nowadays have a number of prescriptions, obtained from some consulting physicians, on which they ring the changes when they or their friends require treatment. A gentleman recently came to me for advice, and after my examination he brought out three such prescriptions from three different consultants, and asked me which I thought he had better take. These prescriptions had all been given some time before, but he was very surprised and rather offended when I told him that if he wanted me to treat him he must allow me to prescribe my own medicine for him.

A lady patient of mine who is extremely fond of physicking her children, has a drawer full of prescriptions in her dressing table, obtained after years of travelling in England and abroad. When one of the children falls ill, she sends one of these prescriptions to the nearest chemist. If that fails she tries another, and finally generally sends for me. When the child is well she takes it away for a change, sees a new consultant or two, and comes back with some more prescriptions to try on the next ailment. The vicar's wife, who also has a few consultants' prescriptions stowed away, and occasionally offers one to a sick parishioner, not long ago asked me what was the matter with Mrs. So-and-So. On my evading the question, the good lady went and offered Mrs. So-and-So a prescription for gastric ulcer. Mrs. So-and-So happened to be convalescing from a miscarriage.

I do not blame the consultants for this state of affairs, but the fact remains that the prescriptions they give are handed on to others, and used again and again for quite different purposes from those they were given for.

I should like to reply to "Antishop," but I have used too much space, but would remark that I do not consider it undignified to select my own preparations of drugs and dispense them myself.

### SYPHILIS WITHOUT A PRIMARY SORE.

MR. C. F. MARSHALL (Finsbury Square) writes: The account of Jullien's cases of syphilis without a primary sore (*Syphilis d'emblée*) reported in the BRITISH MEDICAL JOURNAL of September 21st, p. 827, is interesting, but I beg to point out that such cases are probably more common than is generally supposed. In the *Lancet* of May 20th, 1899, I reported a case of syphilis without a primary sore. In this case there was undoubted secondary syphilis contracted in the usual way, but no chancre on the penis or elsewhere. The patient was under observation from the first by another medical man and myself. He was first treated for gonorrhœa, and fearing syphilis also, came repeatedly for examination, but no chancre was found. On this question Mr. Hutchinson (*Syphilis*, 1899) writes: "We are obliged then to admit that occasionally syphilis may occur without any primary sore having been discovered by careful and even by skilled search." Fournier (*Traité de Syphilis*, 1898) is doubtful as to "*syphilis d'emblée*" being established, but admits that in some cases no chancre can be found. Adami (*Montreal Medical Journal*, June, 1898), on the other hand, is emphatic on the point, and says "it is not even necessary to have any first stage or cutaneous chancre. We know well that in every case of infection the infectious agent must make an entry from without into the tissues, and in a great number of cases we can discover the point or points of entry, and at such point or points we find evidences of primary local infection, whether in the skin or mucous membranes, and this local infection is strictly comparable with the cutaneous syphilitic chancre. But we also come across cases in which there is a complete lack of evidence of such superficial primary infection; we may find, for instance, the cervical or mesenteric lymph glands affected with tuberculosis without a sign of tuberculosis of the pharynx, or tonsils, or intestinal mucosa, cases which usually, though mistakedly, are spoken of as 'cytogenetic.' What occurs in other diseases must at times occur in syphilis."

### LACHNANTHES.

WITH reference to lachnanthes there is an interesting passage in Darwin's *Origin of Species* (6th ed., 1882, p. 9), on the effects of the root of this plant on pigs. The passage is as follows: "From facts collected by Heusinger, it appears that white sheep and pigs are injured by certain plants, whilst dark coloured individuals escape. Professor Wyman has recently communicated to me a good illustration of this fact; on asking some farmers in Virginia how it was that all their pigs were black, they informed him that the pigs ate the paint root (lachnanthes), which coloured their bones pink, and which caused the hoofs of all but the black varieties to drop off, and one of the 'crackers' (that is Virginia squatters) added: 'We select the black members of a litter for raising, as they alone have a good chance of living.'" It may be added that Dammarson says that white sheep fed on green buckwheat suffer from erythema and swelling of the head with formation of bullæ and eschars when exposed to sunlight.

### FEMALE PHARMACISTS.

ACCORDING to *American Medicine*, there are now nearly 4000 female pharmacists in the United States. One of the largest apotheeary establishments in New England employs women almost exclusively, giving them precedence over men. To use the language of the head of the firm: "No big heads, no mistakes, hence no suits for damages as the result of careless reading of prescriptions." Many manufacturing chemists employ women in different capacities.

### A REMARKABLE FAMILY HISTORY.

THE *Medical Examiner* of New York states that a man in excellent health, on presenting himself for examination with a view to insurance of his life, gave the following remarkable family history: "I have had thirty-six brothers and sisters; both my parents are living, as well as two brothers and two sisters, all of whom are in excellent health. The thirty-one who are dead lived from a few minutes to 6 months of age, and died from either infancy or bowel trouble. The mother gave birth to five at one time, one of whom is living; once she had triplets, of whom the applicant is one, and several times there were twins." It is to be noted that the begetters of this multitudinous family are still alive it is possible therefore that the tale may not yet be complete.

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LETTERS, COMMUNICATIONS, ETC., have been received from

**A** H. Aldersmith, M.B., London; Dr. P. Ashworth, Southport; A. F. D.; Au Desespoir Dr. F. P. Atkinson, Bexhill on Sea; Dr. A. W. Allan, Wamfleet; A. G.; Arab; Arctic. **B** J. S. Bell, M.B., Lockerbie; Mr. F. Boxall, Rudgwick; Mr. J. M. Brennan, Stockport; Dr. A. Bronner, Bradford; Dr. F. Bushnell, Plymouth; G. A. Bruce, M.B., Aberdeen; H. C. Barlow, M.B., Farnborough; Mr. T. Bryant, London; Mr. C. Beesley, Exmouth; Mr. L. A. Bidwell, London. **C** Dr. F. L. Collie, London; Civil Surgeon; Mr. H. B. Collins, Kingston-on-Thames; Sir W. S. Church, Bart., London; Dr. C. W. Chapman, London; Dr. E. Cautley, London; Correspondent; Dr. A. E. Cooper, London. **D** Distracted; Mr. T. M. Draper, Watlington; Dr. W. G. Dunwoody, Ely; Mr. F. Dalton, Rottingdean; Mr. H. Dawson, Birkenhead; Dr. A. Duke, Cheltenham; Miss A. N. De Souza, M.D., Tonk; Dyspnœa; Dr. L. Drage, Hatfield; P. Davidson, M.B., Newcastle-on-Tyne. **E** Dr. G. Elliott, Toronto; Dr. J. Edmunds, London; Enquirens; E. H. B.; Dr. G. Elam, London. **F** Mr. L. A. Francis, Uxbridge; Dr. S. Floersheim, New York; Mr. W. Fryer, Lond n; Dr. H. M. Fletcher, London. **G** Dr. J. Galloway, London; Dr. J. Griffiths, Cambridge; R. M. Going, M.B., Littlehampton; Dr. E. B. Gray, Oxford; Miss L. N. Grant, London. **H** H. F. D. S.; Mr. F. R. Humphreys, London; Mr. R. T. Hughes, Birkenhead; F. G. Haworth M.B., Darwen; A. B. Hughes, M.B., Deal. **I** Dr. F. Imlach, Liverpool. **J** Dr. W. M. Jones, Torquay; Dr. R. Jones, Woodford Bridge; Dr. J. Johnston, Bolton; E. H. Jones, M.B., Northampton; J. W. **K** Kingston; Mr. A. E. Kennedy, London; Dr. E. D. Kirby, Birmingham; Dr. W. H. Kelson, London. **L** G. R. Leighton, M.B., Pontrilas; Dr. W. V. Lush, Weymouth. **M** Member B.M.A.; Dr. J. N. Marshall, Rothesay; Medicus; G. B. Muriel, M.B., Whitehaven; Dr. J. E. Moorhouse, Stirling; Dr. H. W. G. Macleod, London; Miles; M.D., D.P.H., Barrister-at-Law. **N** Northern Scot; Mr. H. G. Nicholson, London; Naval Surgeon; Nemo. **O** Mr. A. D. Owen, Enkeldoorn; Observer; One in Doubt; Observans; Obstetrical Society, Secretary of, London. **P** Physician; Dr. T. H. S. Pullin, Sidmouth; Mr. J. Patchett, Great Harwood; Dr. W. R. Parker, Kendal; Mr. T. H. Parke, Buxton; Dr. E. F. Potter, London. **R** Dr. J. A. Riviere, Paris; Mr. E. J. Reid, London; Dr. H. D. Rolleston London; Mr. W. H. Rowthorn, Rotherham; Dr. W. C. Rainsbury, Skegby; Dr. G. Rankin, London. **S** W. T. Scott, M.B., Stalybridge; Sceptic; Stranded and Exiled; Staff Surgeon, R.N.; Mr. J. G. Shea, Chesterfield; Dr. G. Schofield, Bloxham. **T** Dr. E. Thompson, M.P., Omagh. **V** Verdict; Volunteer. **W** Dr. D. Walsh, London; Dr. H. Waldo, Clifton; A. Wauchope, M.B., Glasgow; Mr. W. B. Winckworth, Taunton; Dr. F. Willcocks, London; Mr. J. Wallace, C.E., Bombay; Mr. C. Williams, London; Mr. S. W. Wolfe, St. John's Chapel. **Z** Dr. G. Zanoni, Genera; etc.

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## BOOKS, ETC., RECEIVED.

Experimental Hygiene. By A. T. Simmons, B.Sc., and E. Stenhouse, B.Sc. London: Macmillan and Co. 1901. 2s. 6d.

A Simple Method of Water Analysis. By J. C. Thresh, M.D., D.Sc., D.P.H. Third Edition. London: J. and A. Churchill. 1901. 2s. 6d.

An Introduction to the Bacteriological Examination of Water. By W. H. Horrocks, M.B., B.Sc. London: J. and A. Churchill. 1901. 10s. 6d.

Archæology, Education, Medical and Charitable Institutions of Glasgow. Edited by W. Maclean Glasgow: J. MacLehose and Sons. 1901. 3s. 6d.

The Criminal. By H. Ellis. Third Edition. London: Walter Scott. 1901. 6s.

Outlines of Gynæcological Pathology and Morbid Anatomy. By C. H. Roberts, M.D., F.R.C.S., M.R.C.P. London: J. and A. Churchill. 1901. 21s.

Technik der ersten Verbandes. Von Dr. H. Engel. Berlin: Verlag "Die medicinische Woche." 1901. M. 2.

Phototherapy. By Professor N. R. Finsen. Translated from the German Edition by J. H. Sequeira, M.D., M.R.C.P. London: Edward Arnold. 1901. 4s. 6d.

Das Wirbeltierblut in mikrokristallographischer Hinsicht. Von Dr. H. U. Kobert. Stuttgart: F. Enke. 1901.

Blackpool as a Health Resort. By T. Carr, M.D. Manchester: A. Heywood and Son. 1901. 1s.

*** In forwarding books the publishers are requested to state the selling price.

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## SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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SIXTY-NINTH ANNUAL MEETING
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*Held at Cheltenham, July 30th, 31st, August 1st, and 2nd, 1901.*

PROCEEDINGS OF SECTIONS.

## THE SECTION OF SURGERY.

Reginald Harrison, F.R.C.S., President.

### A DISCUSSION ON RENAL TENSION AND ITS TREATMENT BY SURGICAL MEANS.

I.—Reginald Harrison, F.R.C.S.,
Surgeon, St. Peter's Hospital for Stone and Genito-urinary Diseases; President of the Section.

It may be remembered that in 1896[1] I drew attention to some cases where patients suffering from albuminuria and other renal symptoms, which might have been produced by a stone or other removable cause, had completely recovered after an exploratory operation on the kidney, by puncture or incision, though no calculus or recognisable cause was discovered. It seemed reasonable to infer from these results, as well as from the examination of the parts operated upon, that this satisfactory termination might be ascribed to the relief of tension and congestion, thus allowing the escape of that which caused these conditions and permitting the return of a natural circulation in the organ. Further, I urged that the recognition of tension as a factor in kidney disease had not hitherto received adequate attention, and that its consideration might lead to some revision in our views relative to renal pathology and treatment.

The publication of my paper was followed by many favourable criticisms in the medical press both at home and abroad, and clearly indicated that others shared my views and regarded them as original and worthy of attention. For these reasons it has been thought that this subject, now sufficiently ventilated and further matured, might for the first time in its history as far as I can gather, be submited for discussion, and it is with this object that I have prepared this summary. I propose to deal with it briefly under three headings.

1. What grounds are there for believing that the immediate effects of tension may be, amongst other causes, the starting-point for some of those pathological changes in the kidney which are included under the term of Bright's disease or nephritis?

2. In what class of cases are there reasons for thinking that direct surgical intervention for the relief of tension and its effects is applicable, and how are we to arrive at this conclusion?

3. In what manner should the latter be practised?

In reference to the first point it must be borne in mind that the more recent information we possess about certain pathological states of the kidney has been mainly derived from the actual inspection of the organ during life, and from the impressions conveyed by touching or handling it. When, in 1827, Dr. Bright recognised the association of albuminuria with various disordered conditions of the kidney which still bear his name, our knowledge of some of the latter states was then, and up to a recent date, almost entirely gained, so far as their morbid anatomy was concerned, from *post-mortem* examinations, and under circumstances where the means for recognising degrees of consistence during life were imperfect and unreliable. It is hardly remarkable, therefore, that the effects of tension as a factor in these diseases could not at that time be fully appreciated. Now a living kidney may be seen and explored with ease and safety *in situ*.

In going through descriptions of the pathological states connected with various forms of nephritis, such as may be found in the more recent textbooks, it is difficult to reconcile, on the one hand, the following phrases used by eminent and accurate authors with an entire absence of all reference to tension as a cause of subsequent lesion and disease, and the necessity that may arise for its removal artificially.

If we turn, for instance, to Dr. Delafield's admirable article in the *Twentieth Century* (New York), published so recently as 1895, we shall find numerous references, such as the following, to kidney states in connection with nephritis: "commencing exudation," "commencing transformation of the exudation," "extravasations of blood in the Malpighian bodies, the tubes, and the kidney tissue, and by filling of the tubes with coagulated fibrin," "the tubes are filled with degenerated epithelium, granular matter, and fat globules, or with homogeneous exudation," "if the exudation between the tubes has become organised, we find masses of connective-tissue cells and fibres," and so on.

Still more striking and suggestive is the following passage: "Sometimes, particularly when the attack is the result of a definite exposure to cold, and the subject middle-aged and intemperate, an acute form of nephritis manifests itself, which is characterised by extravagant congestion, even to chocolate or purple, and great and rapid swelling of the gland so that, as I have seen at least in one instance, the kidneys have burst their capsules. Short of this exceptional result the whole organ, but chiefly the cortical tissue, is enormously swollen, the cortex changed to a deep coffee colour, and the cones to purple, whilst the tubes are distended chiefly with epithelium and blood."[2]

It is difficult to understand how, under all these circumstances, repair can be carried through to a successful issue without occasionally requiring some mechanical assistance; on the other hand, it is not always easy to draw a line where the latter is indicated.

The question has been raised, how is it that the tension of acute nephritis never or rarely proceeds to suppuration or gangrene, as happens elsewhere in the body? The answer is obvious. These extremes are anticipated by death.

There is another phase connected with pathological lesions of the kidney which should not be lost sight of. In my Lettsomian Lectures before the Medical Society of London (1888), I showed that it was not uncommon to find, either as a consequence of direct injury or disease, that the lining membrane of the urethra had, at one or more points, lost its power of transmitting urine without some degree of slow leakage or exudation of certain of its constituents in the direction of the periurethral tissues occurring. I attributed this to the destruction of the epithelial coat, which was found to be absent at these points, as shown in the drawing (Fig. 1, p. 1126). This led to lymph barriers being thrown out in the periurethral tissue, which by their subsequent organisation and contraction formed strictures and indurations, and sometimes by their extent involved the perineum.

The same, I believe, may happen in the inflamed kidney as a consequence of tension, and, by the slow exudation of urine, tend in aiding its disorganisation. The fact, I think, is not sufficiently appreciated, that in transmitting a fluid so damaging as healthy urine may prove, Nature specially provides against such a contingency in the construction of the tubes and reservoir employed for this purpose. We recognise this from the very point where the urine is first formed and collected. Thus, as with all of the hypertrophies, these provisions may bring with them their own liabilities.

Apart from evidence to be obtained from ocular and digital exploration of the kidney, which will be referred to later on, there are some important analogies bearing upon internal tensions which must not be passed by unnoticed.

Probably the most striking one is the relation of intra-ocular tension to certain diseases of the eye. The recognition of the true pathology of glaucoma and the adoption of mechanical treatment by iridectomy, or an allied operation for the removal of tension and the prevention of the degenerative changes thus initiated, at once resulted in the saving of a large number of eyes, which previous to this discovery would undoubtedly have been lost. By this means von Graefe converted an incurable disease into a curable one, and at the same time demonstrated the true nature of the disorder. Hence it has been suggested to me that the term "renal glaucoma" is not an inappropriate one.

[1] Presidential Address, Medical Society of London.

[2] Allbutt's *System of Medicine*, vol. iv., Art., Diseases of the Kidney, by Dr. W. Howship Dickinson, p. 354.

Again, in the testicle, when it becomes inflamed, we have not infrequently transient as well as permanent evidence of the damage that inflammation and tension are capable of effecting in an organ which, relative to its secreting and investing structures, is not unlike the kidney. The late Mr. Henry Smith was the first to draw attention to the advantages that followed puncture or limited incision through the capsule in acute forms of orchitis. It was correctly alleged that not only was the pain of tension in a highly-sensitive organ relieved, but structural damage averted. In fact, sterility, so far as this organ was concerned, was by this simple means rendered unlikely to occur.

It is, however, to the ocular and digital examination of the kidney during life that I would attach most importance relative to the subject that is now before us. This is a proceeding which may be regarded as an outcome of the general use of anæsthetics and antiseptics for almost all surgical proceedings. Before these were introduced the living human kidney was only seen on rare occasions in connection with abdominal wounds accidentally inflicted and when the organ involved was in a healthy state. Now, the operating surgeon may be said to be familiar with its appearance and consistence in all states of disease and injury.



Fig. 1.

From my earliest explorations of the kidney I soon learnt to recognise that both in regard to its colour and consistence, apart from its size, there were very important variations to be observed which I had never seen in the organ after death. Later on I observed that in some cases of albuminuria the albumen permanently disappeared from the urine after the kidney had been opened and permitted to drain, and thus the excretion became normal.

The cases I would select in illustration are these:—

CASE I.—In 1882 I cut down on the kidney from the loin in a youth aged 18, expecting to find a suppuration either within or around the organ. The patient was suspected to have had scarlet fever three weeks before this was done, and had since suffered from intense lumbar pain. He had had a slight rash, some desquamation, a sore throat, and albuminous urine with casts. I undertook the operation with some hesitation, and limited my incision so as just to enable me to put my finger on the kidney. It felt so tense that I extended my incision and opened it with confidence, expecting to find matter. This was not the case, and I closed the proceeding with the feeling that I had made an error in diagnosis. There was a full discharge of blood and urine from the wound for some days. The latter was lightly plugged with lint, and in the course of ten days or so healed soundly. After the incision was made the excretion of urine became far more abundant, and the albumen gradually and completely disappeared.

CASE II.—In 1887 I operated upon a man aged 50, who, by nature of his occupation, spent a large amount of his time underground. Occasionally he suffered from hæmaturia in conjunction with colicky pains about the groins, and I came to the conclusion that he was suffering from renal calculus. As, however, the symptoms were neither urgent nor confined to one kidney, the consideration of operation was postponed. In the course of a few months after I first saw him, and whilst he was continuing his work underground, the urine became largely and constantly albuminous, and there was some pain referred to the right loin. I took him into the Royal Infirmary at Liverpool, where I was then residing, and explored the right kidney. The organ was found to be enlarged and tense. An incision of an inch in length was made through the cortex, and the pelvis was explored with the finger, but after careful examination no stone could be found. There was a considerable discharge of blood and urine, which continued for a fortnight or so, a drainage tube being retained in the wound. On the withdrawal of the latter, healing followed, and the urine became quite normal. I heard some time afterwards that the patient remained in excellent health, and was able to resume his ordinary occupation.

CASE III.—This case is one that came under my observation in 1893. It was that of a woman aged 44, who had suffered from slight hæmaturia at times for a year previously; occasionally the urine was albuminous. Shortly after I saw her she had a severe attack of influenza, which was followed by an aggravation of her renal symptoms. She complained of pain on pressure over the left kidney, and the albumen not only increased in quantity, but was constantly present in the urine. As she believed she had passed a small calculus some months previously, I thought it a proper case for exploration, and this was accordingly made. The late Mr. Durham saw the patient in consultation with me. The left kidney was found to be swollen and very tense. It was opened and explored with the finger, but no calculus could be discovered. There was a free drain of urine with some blood which continued for about a fortnight, when the wound closed. The patient is now quite well, and the urine normal.

CASE IV.—The following case appeared to be one of contusion to a kidney passing through—probably with its fellow—a stage of nephritis.

It happened in a man aged 42, of decidedly intemperate habits, whom I saw in 1897 for recurring pain about the right kidney, with albuminuria of four months standing, to my knowledge. The amount of the latter was considerably more than a trace, and the urine contained a sediment of renal epithelium and tube casts. It sometimes showed a trace of blood. The pain was lumbar and not referred. There were indications present which pointed to cardiac hypertrophy and arterial lesion. The patient informed me that he had been rejected for life assurance. I looked upon the case as one of nephritis, and not stone.

Some weeks after I first saw him he told me that he had either fallen or been thrown from a cab during the night, which had considerably increased his pain in the lumbar region. There was a trace of blood in the urine, but I could find no external mark of injury except on the knees. The urine was much scantier than usual, and was very high coloured, but not differing from the account previously given.

As the pain complained of was rendered acute, I opened the right loin a few days after the injury, and explored the kidney. The latter was extremely tense, purple, and patchy, shiny and swollen. I divided the capsule by incision along the convexity to the extent of about 2 inches, and explored for stone, but could find none.

There was some extravasated blood beneath the capsule, and on gently pressing the kidney with my hand there was an exudation through the renal wound of much thin prune-looking fluid, which was probably broken-down clot, urine, and some of the products of the concurrent nephritis. A drainage tube was introduced and retained for ten days, when it was finally removed, and the wound gradually healed.

I lost sight of the patient until a few weeks ago, when he saw me about another matter. He had quite recovered his health, and his urine was found to be normal. He had been so alarmed by the injury and what followed, that he had forsaken alcohol in all forms. I suggested that he should apply to the insurance office for re-examination, but I have not heard whether he has done so or not.

This case certainly appeared to be rapidly drifting in the direction of chronic nephritis, cardiac hypertrophy with arterial tension, and probably general dropsy, until arrested by, so to speak, fortuitous circumstances.

CASE V.—In 1889 I saw a man, aged 30, who six days previously had fallen down the hold of a ship, and struck his right loin with much violence. The part was ecchymosed, swollen, and tender to the touch. The excretion of urine was reduced to 16 ozs. in the twenty-four hours. The temperature had risen, and was variable. Thinking that suppuration was imminent, I made an incision into the loin, and explored the corresponding kidney. From the former I removed some extravasated blood clots. The kidney was found very tense and congested. I punctured it in several places with an exploring trocar, and incised the capsule in one. Apparently only blood and serum escaped. The wound was packed lightly with antiseptic gauze and left to drain. There was a free discharge of blood and urine for some days. It was calculated that over double the amount of the latter was excreted in the twenty-four hours after the incision. The patient made a good and rapid recovery. Here the tendency towards suppression of urine was apparently connected with the intense congestion following the injury, in which probably both organs were involved.

CASE VI.—In March, 1899, I saw a man, aged 31, whose history was as

follows: Two years previously he had an attack of hæmaturia, without pain, which lasted for ten days, and was repeated on two occasions. He had a fourth attack ten days before I saw him, and the urine at the time of my examination was not entirely free from blood. He recently had had attacks of spasmodic pain, not unlike colic, in the region of the right kidney. There was a strong family history of gout, and the patient had passed uric acid crystals, but no stone. He now frequently complained of penile pain at the close of micturition. On deep pressure over the right kidney stabbing pain was also complained of. Some indications were present pointing to cardiac hypertrophy with arterial lesion.

I sounded him under cocaine, but no stone in the bladder was found. As the symptoms, both local and general, were becoming urgent, I advised an exploratory examination of the right kidney.

On his admission to hospital for this purpose (in April, 1899) his condition was noted by Mr. Brodribb, the House-Surgeon, as follows: Urine acid; specific gravity 1011, and containing a trace of pus and albumen. There was some fulness in each lumbar region above the crest of the ilium. Both kidneys were felt to be enlarged, and were tender, the right more than the left, but both were distinctly nodulated and uneven.

The right kidney was explored by an incision through the corresponding loin. As expected it was found cystic, but not presenting any appearance of malignancy or of being involved in a growth. As I thought it possible the pain might be due to a calculus, I made an incision through the cortex which enabled me to enter the kidney pelvis and explore it carefully with my finger for a stone, but none was found. The bleeding was unimportant, and readily controlled.

As there appeared nothing more to be done surgically a drainage tube was introduced within the kidney, and the wound closed to this extent. For some days afterwards a large quantity of urine was discharged by the latter as well as naturally; the temperature remained normal, and on the tenth day the tube was removed. The incision gradually closed, and on the twenty-first day after the operation the patient was able to return home. The cardiac circulation diminished in frequency with less tension, and the patient expressed himself as conscious of considerable relief generally. It was concluded that the nature of the disease was that described by Roberts[3] and others as cystic degeneration of the kidneys. On his return home the wound reopened, and for 13 months it continued to discharge urine, when it finally closed.

I saw him again in February, 1901, nearly two years after the operation. He was in good health, and actively engaged in business, and had been so for twelve months. The urine was examined by Mr. Pardoe, and reported as containing a trace of albumen, but otherwise normal. The condition of the patient compares favourably with what it was at the time of operation. Though both kidneys are still somewhat nodular, their further enlargement and degeneration appear to have been arrested. The prolonged drainage of the kidney, extending over twelve months, though an uncontemplated incident connected with the operation, has apparently proved satisfactory, and checked the course of the disease. I am not aware that opening and draining a kidney undergoing cystic degeneration has ever been tried before. Having regard to the progressive nature of this disorder, and the fact that so little has been done for such cases, I should not hesitate to repeat the process described. I would, however, prefer doing so at an earlier stage, on the ground alleged by Roberts,[4] that this disease has "evident affinities with the granular atrophic forms of Bright's disease." Though by reason of its bilateral nature, as Mr. Henry Morris[5] has pointed out, cystic degeneration may not often come within the scope of certain operations for the removal of a diseased kidney, it seems a reasonable proposal to bring it within the reach of incision and drainage, as in the instance recorded. It is curious to notice, in going over cases where adventitious cysts, such as hydatids, have exercised grave pressure on the kidney, certain effects of the latter relative to the urine are described "as similar to Bright's disease." In a case, for instance, recorded by Dr. Fotheringham,[6] it is stated that the latter symptoms at once disappeared on the removal of the pressure thus exercised.

Looking at four of the cases I have briefly related, I believe that the first was scarlatinal nephritis, the second nephritis from exposure to cold and damp, the third subacute nephritis probably following upon influenza, and the fourth nephritis further complicated with an injury. Amongst other features, all four cases were characterised by the presence of albumen in the urine, which I am inclined to attribute to inflammation or its immediate effects. The fifth and sixth cases represent other phases of renal tension.

I will now pass on to specify, in the second place the class of cases to which direct surgical intervention for the relief of tension may be applicable and how we are to arrive at this conclusion.

Eliminating as they do various materials of disease, which by their quantity or quality are liable to excite congestions and inflammations within the kidneys, it is not remarkable that in this way high degrees of tension are occasionally induced. Of the causes for the latter may be mentioned those irritants derived from various infectious conditions, such as scarlet fever, diphtheria, measles, and the like, from alcohol and food intoxications, and from the excessive use of such drugs as turpentine and cantharides.

I can best put the case before you by taking types representing three states of acute nephritis which not uncommonly come under notice in connection with scarlet fever

[3] *Urinary and Renal Diseases.*
[4] *Urinary and Renal Diseases.*
[5] *Surgical Diseases of the Kidney.*
[6] British Medical Journal, December 6th, 1884.

The RGERY the common type, where there are varying degree[illegible]ver, rash, and desquamation, with nephritis indicated b[illegible]lood in the urine, albumen, casts, and epithelium. The fever may be high and the kidney complication severe, but the tendency in every direction is towards recovery and complete restoration of the organs involved.

Cases included in this large class certainly do not require surgical attention, for recovery is steadily progressive, and after a few weeks interval of illness and convalescence the congested organs return to their normal condition.

The second group of cases, though apparently belonging at the commencement of the attack to the preceding class, does not end in the same way. The previously healthy adult or child passes through the early stage of the disorder much as in the former instance, but convalescence is delayed and the signs of the nephritis, as evidenced by albuminuria and casts in the urine, do not disappear. The disease does not progress towards recovery, but is stationary or trends in the opposite direction.

These are the instances which furnish a considerable proportion of the cases of chronic nephritis or Bright's disease, and a more or less invalid life is the prospect. It is to this class and the following that the relief of tension by a surgical proceeding, which will be discussed later on, may be said to be applicable.

My third illustration is taken from what has been described as the malignant type of scarlatinal nephritis. Here the kidneys appear to be at once overwhelmed in the pathological changes that supervene, suppression of urine occurs, and death rapidly follows from uræmia, with coma and convulsions. After death under these circumstances it is usual to find the kidney intensely congested, the capsule tense and shiny, and over-filled with blood.

However capable of gradual distension the capsule of the kidney may be, there is no doubt that it is very intolerant of any sudden increase of intrarenal tension, and experience gained in operating on that organ teaches that in certain conditions of congestion the capsule is so tightly stretched and its substance exposed to such pressure as quite to explain any interference with its function. The results of operation also tend to show the importance of increased tension, for sometimes after mere incision the quantity of urine excretion is found to have doubled within twenty-four hours.

Here, then, we have two states of nephritis where little can be expected from the medicinal treatment alone which hitherto has been tried, the one being indicated by the persistence or increase of albumen in the urine and further evidences of impending disorganisation at a stage in the disease when recovery should be steadily progressive, and the other where the kidney is, so to speak, suddenly paralysed by the extreme tension to which it is submitted.

There is another indication of tension in connection with renal inflammations and congestions which should not be ignored in determining what may be required to meet the pressing emergencies so occasioned. I allude to the tension which is thus thrown on the heart and the circulatory apparatus generally.

This form of tension is generally recognised in connection with renal disease, though the explanation of it is not, I believe, so universally appreciated. I have often used for demonstration a comparison between the generation of steam as applied for motor purposes and the excretion of urine. In the former case to secure the rapid production of steam a circulatory apparatus is required and a boiler made up of a number of tubes by means of which the water can be quickly heated and transformed. Should a number of the tubes become damaged and inoperative, their temporary loss is provided for by a more rapid circulation of the water through those tubes that remain. This is brought about by a mere mechanism.

In the same way with the kidneys, when their uriniferous tubes become damaged or rendered inoperative by pressure or blockage an increased circulatory force becomes excited. In the human subject this means cardiac hypertrophy and vascular tension throughout. If a certain amount of blood has to be driven through the kidneys in twenty-four hours for the excretory purposes of the body, it stands to reason that the force to effect this must be relative to the resistance offered.

Cardiac effort may, therefore, be regarded as med, w[illegible]oportionate to and determinable by the latter. evide[illegible]o the

If the kidneys were as immediately situated relat[illegible]ap[illegible] heart as the lungs are, no one would question the direct influence of the congestion and blockage of the former in producing cardiac hypertrophy in this way. The increased distance, however, that these organs occupy relative to the circulation rather adds to the probability of this explanation, as well as of the incidence of increased arterial tension generally and of its varied local manifestations and effects.

In relieving kidney tension surgically, I have frequently noted its general effects upon the circulation and the increased urinary excretion that has almost immediately followed. Dr. Dickinson[7] observes: "I have distinctly recognised hypertrophy of the heart as a result of nephritis of not more than six weeks duration."

The following may be regarded as some indications for relieving tension surgically in cases of nephritis, however arising: (1) Progressive signs of kidney deterioration, as shown by the persistence or increase of albumen when it should be diminishing or disappearing from the urine, as in the natural course of inflammatory disorders ending in resolution; (2) suppression of urine or approaching this state; (3) where a marked disturbance of the heart and circulatory apparatus arises in the course of inflammatory renal disorders.

How far the mechanical removal of kidney tension may be utilised in connection with the prevention and treatment of some heart hypertrophies is an aspect of the subject which is not without its own interest.

In the third and last place I will pass on to consider the precise method of giving relief to kidney tension under the conditions referred to. The simplification of all surgical processes by the use of anæsthetics such as gas and ether in preference to chloroform, and the introduction of antiseptics, makes one approach a reference to wound-making for purely therapeutical purposes with very different feelings to those which prevailed before the discovery and application of these agencies.

The operation of exposing and, if necessary, incising a kidney is one attended with but a small degree of risk, and should be entertained where there is a fair prospect of saving a person from imminent death or from the invalid life which is inseparable from a chronic albuminuria arising out of a nephritis. It is a lesser proceeding than those abdominal sections where the peritoneal cavity is opened with so much safety and advantage for exploratory and other purposes.

In a statement, published apparently on good authority, a calculation had been arrived at that out of one million deaths that occurred, scarlet fever was responsible for 48,000, a number considerably in excess of all other causes. Doubtless a large proportion of these were directly occasioned by nephritis.

In my earlier investigations relative to the subject of kidney tension and the application of well-recognised surgical principles to this condition, in several instances I confined myself to puncturing the distended organ in one or more places, and at the suggestion of the late Sir William Roberts, who was deeply interested in the subject, I made use of the term "reni-puncture" as descriptive of what was done. Though this proved sufficient in cases where it was unnecessary to explore the interior of the organ for any other cause of congestion, there were others where a further search rendered a limited incision through the capsule advisable. On the whole, I think that in the majority of cases the latter proceeding is to be preferred. I speak of it as a capsular nephrotomy, indicating by this term the limit I would, as a rule, put upon the proceeding.

The patient being anæsthetised and placed in the position for a lumbar nephrotomy, the kidney is exposed by an oblique incision through the loin about parallel with, and a little lower than, the last rib (Fig 2). The length of the incision varies relative to the consistence of the patient and the individual connections of the kidney to be searched. In spare subjects an incision of 3 inches probably suffices. The various musculo-fascial layers are divided until the suprarenal fat is seen. The connective tissue covering this should be opened up with probe and forceps, when the kidney may be recognised, help being rendered by an assistant pushing up the organ in the direction of the operator. There is seldom much bleeding or even necessity for tying a vessel.

If the organ is to be further explored, as, for instance, for a possible stone, the kidney may be withdrawn through the wound for more thorough examination with the finger. This, however is not necessary where tension alone exists. Sufficient prominence for a limited incision through the capsule so as to relieve tension and secure drainage, or even to puncture the organ, as for reni-puncture, can be given by an assistant in the way already mentioned.

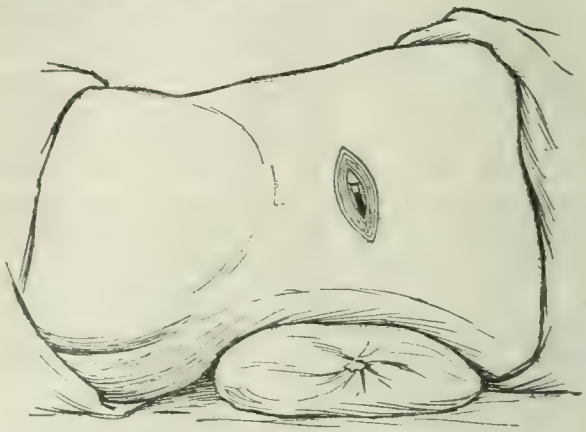


Fig. 2.

In incising the capsule of the kidney for relieving tension I prefer doing so along the convex border. Occasionally the incision may be indicated to one side or other of the free border, as congestions and extravasations of blood are not necessarily evenly disposed throughout. Punctures may be made almost anywhere where the engorgement seems greatest, but it is as well to avoid the pelvis of the organ, either in the case of these or of incision. I have frequently seen, on puncturing the capsule for the purpose of exploring, blood spurt out in jets, as if projected under considerable contractile pressure, and eager to escape.

The desired object being effected, whether it is limited to the partial division of the tense capsule or the more thorough exploration of the organ, as for stone, a drainage tube is carefully inserted so as to remain in contact with the kidney, and the wound is closed round the rubber outlet with silk sutures (Fig. 3). The incision is dressed with gauze antiseptically.

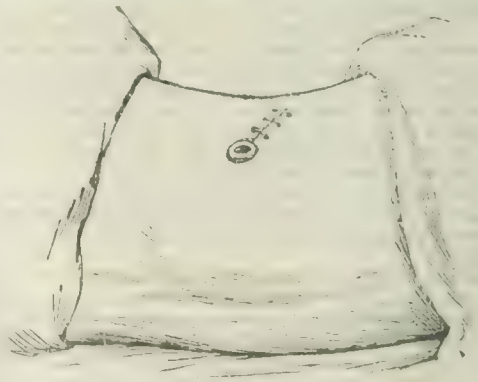


Fig. 3.

As drainage is an essential part of the process and may be continued for some days, or even weeks, before the tube is removed, an ample supply of absorbent dressings should be used and renewed as often as is necessary. The drainage tube usually remains *in situ* from a week to ten days, but this entirely depends upon the nature and degree of the sanguineo-urinary discharge, which is sometimes profuse and continuous. On the removal of the drainage tube the wound

[7] Allbutt's *System of Medicine*, vol. iv.

usually heals rapidly. I have never seen a permanent urinary fistula follow this proceeding.

The question in a case of nephritis sometimes arises as to which organ should be selected for exploration. Unless there is something to indicate it, such as the presence of pain, my experience would lead me to believe that this is not a matter of much importance. Both organs are usually involved in the inflammatory condition, though perhaps it may turn out not to the same degree. In double nephritis the relief of tension in one organ aids the other, and thus, as I have noticed on several occasions, the normal amount and constitution of the urine becomes re-established. Similarly, aid to an injured kidney by the removal of direct pressure caused by the accidental extravasation of blood, either within or around it, has been shown to assist the opposite one, and to restore the balance of the urinary excretion when this has been diminished or entirely suppressed.

In this statement I have endeavoured to give prominence to those points which seem most deserving of consideration, relying mainly upon direct testimony rather than upon inferences drawn from lines of practice which can hardly be said to cover all varieties of this disordered condition.

Nor have I made any attempt to elaborate my argument at this stage from such sidelights as chemistry, physics, or physiology might furnish, but have confined myself chiefly to that which is clinical. Propositions involving changes in well-worn pathologies and practices must be approached with deliberation, and no one is more conscious of this than myself.

"How far," to use the words of a recent writer, "the operation of incision of the kidney can prevent or relieve the effects of congestion time alone can show, but the subject deserves the careful attention of all surgeons."[a] I think enough has been said to show this.

I thank you for your presence, and commend this subject to your candid consideration.

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### II.—W. D. Spanton, F.R.C.S.,

Senior Surgeon, North Staffordshire Infirmary.

Mr. Spanton said: The subject of tension is one which has atttracted much attention from surgeons in various forms, but it was not until Mr. Reginald Harrison pointed out its bearing on certain conditions of the kidney that its importance in relation to that organ became recognised. Now that it has been demonstrated the matter seems simple enough. Reasoning from analogy, we are of course all familiar with the effect of tension on such fibrous covered organs as the testis, the liver, the eye, bone, and so on, and recently attention has been directed more particularly by Mayo Robson to the pancreas in the same connection.

One can quite appreciate, as Mr. Harrison has shown, how impossible it is for a congested kidney to relieve itself in any other way than by leading to hæmorrhage or some destruction of its delicate tissues by compression. Until recently such cases as those of ordinary nephritis, especially the toxic forms, were looked upon as belonging solely to the province of the physician. Now it would appear that in many of them the aid of the surgeon may be sought with advantage to the patient, where the ordinary remedies fail to give relief. Many years ago I was much struck by the immediate relief afforded in cases of acute post-scarlatinal nephritis by free cupping of the loins. In some instances where the kidneys had practically ceased to act, where the minute quantity of urine passed was little else than albumen, a free cupping would act most beneficially. This I have seen where uræmic symptoms of a definite kind had set in. Here we have an illustration of the beneficial effects of rapid relief of tension, based on the same principle which Mr. Harrison advocates in dealing with like conditions. In treating less acute cases, especially where further changes have already set in, we shall find those most suitable for what may be termed direct treatment—that is, relieving tension by division of the dense fibrous investment and diminishing any localised congestion which may exist. I am induced to make these remarks because I have been much impressed by the excellent results in two instances which I will now briefly narrate:

Case I.—E. H., aged 17, was seen in September, 1900. He was apparently a healthy young man, one of a family of four children, the others [illegible]. When 14 years of age he had a chill in driving, and passed [illegible] urine afterwards and coffee-coloured urine at frequent intervals subsequently. Complained of pain in the right loin, and this was [illegible] or less persistent. The right kidney was felt tender on pressure and chiefly so at one spot. Urine: Specific gravity 1020, slightly acuminous, acid, with flocculent deposit containing crystals of oxalate of lime and amorphous urates—no casts, some leucocytes and red blood corpuscles. There were no glandular swellings, the chest was free from disease, and in every other respect he appeared to be in good health. He had, however, been losing flesh, perhaps in consequence of a rigid milk and vegetable diet which had been enjoined for some weeks. It seemed to me a case of renal tension, due possibly to a localised nephritis or perhaps a calculus keeping up irritation, and I advised an exploratory opening. This was done on February 9th, 1901. I found a tense indurated condition of one part of the kidney over which the capsule was much thickened. I incised the convex surface, explored the pelvis thoroughly with the finger; found no calculus, nor could I feel any abnormal condition of the kidney pelvis. On February 22nd albumen and blood had both disappeared from the urine, and on February 23rd the wound was dressed for the last time; the temperature never rose above 99.5° F. In this instance incision and drainage have been followed by complete cure; and the patient is now quite well.

Case II.—E. W., aged 18, pupil teacher, admitted to surgical home, July 6th, 1896. I had seen this patient, who was sent to me by Dr. Bull, on June 4th, 1896. Briefly, his previous history was that until nine months before he had been quite well. After a horizontal-bar exercise he had a dull aching pain followed by hæmaturia, worse after any exercise; the urine was coffee-coloured, but better when quiet. These symptoms were aggravated by a football kick which he received six months before I saw him. His general health appeared feeble; he was overgrown and pale. Dr. Bull had passed a sound, and various remedies were tried, including a support, with negative result. Urine: Specific gravity 1032, acid, containing crystals of oxalate of lime, some free blood corpuscles, and about as much albumen as would be represented by blood; no casts or epithelium. Over the right kidney there was tenderness on pressure; the kidney felt movable, with a sense of weight in the right loin. On July 9th I operated, cutting down upon the right kidney by a loin incision, and made a small incision in the kidney; no calculus found, but the kidney tissues were dense and hard with thickened capsule. I found the kidney very movable and heavy. Catgut sutures were used to close the wound in the kidney, a drainage tube inserted in the loin, and the wound closed with silk sutures. All went well until July 17th, when very free hæmorrhage took place from the wound. This was opened up and plugged with iodoform gauze, and the bleeding did not recur. I attributed this to the cutting through of the kidney sutures. The hæmaturia gradually disappeared, and none was seen after July 30th. Very little urine came through the wound, which was practically healed when the patient left on August 25th. The patient has been seen several times since, and has remained perfectly well.

In both these cases, which closely resemble two related by Mr. Harrison, the procedure adopted was, I think, fully justified by the result. If by such operative measures we can arrest the early stages of such an intractable, almost incurable, disease as chronic nephritis, a little risk is surely justifiable.

Nephrotomy in such cases is the more warranted, inasmuch as it is in itself a comparatively safe operation, and in my own practice I cannot recall a single instance followed by a fatal result.

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### III.—J. Ward Cousins, M.D., F.R.C.S.,

Senior Surgeon, Royal Portsmouth Hospital.

Dr. Ward Cousins said: Renal tension, in whatever way induced, interrupts the function of the kidney, and deficient secretion or complete retention is the result, followed by a state of considerable danger, which often terminates in fatal collapse.

Now in some cases I have seen life saved by the judicious application of remedies without delay, and in even acute cases I have found rapid improvement follow purging and the hot-air bath. There are, however, cases of nephritis which run a very dangerous and uncontrollable course, and it is especially under these serious conditions that the question of surgical interference arises.

The question, then, is this: What are the conditions which render radical measures justifiable? Our chances of success will greatly depend on the actual state of the kidney itself. Has it been fairly normal up to the onset of the disorder, or has it been the seat of chronic structural change?

In acute febrile disturbance and in infective fevers the kidney is roused into extra activity by the loaded condition of the blood, and the intense congestion of the organ is the direct result of the passage of toxins or microbic products into the urine. The very act of elimination appears to cause renal tension and to disturb the vasomotor apparatus. The kidneys before the attack have been fairly adequate and the urine normal; but, during the acute disorder of the system, they have been invaded, infected, and congested by the passage through them of micro-organisms. The kidney is one of the organs by which the microbes of the blood are cast out.

[a] Annotations, *Lancet*, June 15th, 1901.

...REATME...

Now renal tension occurring during acute neph...nfective fever, in which the patient is steadily bec...orse, appears to me the condition especially favour...med, w...r the adoption of surgical measures. ...evid... ...ear

Like many other surgeons I have been astonished at the relief which has followed in many cases simple exploration where nothing definite was discovered, and where nothing actually was accomplished. Severe symptoms have been relieved by incision, and it is my opinion that whenever there has been prolonged suffering, irritability of the urinary tract, scanty secretion and hæmaturia, the operation is certainly indicated. A man of 17 or 18 stones in weight was sent to me after profuse intermittent hæmaturia for years and great right lumbar pain which prevented him from following any occupation. I explored the painful region, but no organ could be found, and strange to say he completely recovered and is now following his employment as engineer.

Similar results have followed the incision of other organs. Acute inflammation of the testicle has been relieved by timely incision. The late Dr. Harley practised puncture of Glisson's capsule to relieve tension in cases of hepatic engorgement. "I do it," he remarks, "on the same principle as the surgeon who punctures the tense and unyielding tunica albuginea to relieve pressure in the secreting structure of the testicle in cases of orchitis, in hepatitis, no matter what its variety may be, when the disease has reached the indurated and over-congested stage." I have found also great improvement to follow puncture in hepatic cases, and in some of deep and recurring jaundice in which I have operated—thinking that there was some form of obstruction and having found none—the abdomen has been closed, after breaking down a few adhesions and making a few punctures, and my patients have made excellent recoveries.

The most favourable cases for surgical measures appear to me to be associated with acute nephritis and infection through the blood. But there are many other forms of renal tension.

Tension is caused in partial or complete retention of urine; from infection caused by the introduction of instruments in old cases of prostatic and urethral disease. The microbes which effect the decomposition of urea change the urine into a septic and irritating fluid. In a large proportion of these cases the kidneys have undergone secondary degeneration: they are deficient in excretory power; and the blood has probably for a long time been only partially freed from excretory products. A sudden shock of any kind will soon be followed by fever, scanty secretion or suppression, vomiting, and, finally, coma. I saw a gentleman aged 70 a few days ago who had lived a catheter life more or less for some years. He unwisely married, and thirty-six hours after total suppression of urine set in, and he rapidly sank.

Another form of renal tension occurs as the result of chronic alcoholism. After some sudden exposure and fatigue the damaged organs suddenly fail to cast out the complex poisons from the blood. This form has long been recognised as associated with disturbance of the nervous system and convulsions. Slowly advancing interstitial changes rapidly terminate in suppression of urine, and this has been attributed to the presence of urea in the blood or to the breaking up of this substance into carbonate of ammonia and water. These urgent symptoms must, however, be caused by the poisonous influence of other materials which the kidney has failed to discharge. Now, in such cases the hope of success by surgical means must be in direct relation to the competency or incompetency of the kidneys themselves.

In conclusion, there can be no question, I think, as to the value of the operation; at the same time it is quite evident that suitable cases for the treatment have yet to be defined. It is not likely to benefit in the tension caused by chronic urethral, vesical, and renal diseases; but rather in those forms which are associated with disorders of the system in which the kidney fails to excrete toxins and microbic products from the blood, and in acute cases of nephritis in which life is seriously threatened. There must be a limit to surgical interference, and we can hope for little success when the heart and other organs as well as the kidneys have undergone degenerative changes and the vitality of the whole system is greatly impaired.

### IV.—Gilbert Barling, F.R.C.S.,

Surgeon, Birmingham General Hospital: Professor of Surgery, University of Birmingham.

Professor Barling said: Everyone who has had experience of operations on the kidneys has met with disappointment in that the conditions anticipated before operation have not been found when the kidney has been explored. Whilst disappointment has been felt by both surgeon and by patient as to the immediate result of operation, yet in some cases the final result has been very satisfactory, the patient being relieved of his symptoms. What is the explanation of the relief given? In some cases doubtless the fixation of the organ from adhesions which follow exploration, in other cases division and separation of nerve filaments may be the cause of relief: and, perhaps, in a third group, relief of renal tension in accordance with the President's idea may be the factor which causes improvement. Unfortunately, every surgeon is liable to meet with the misfortune that sometimes follows the use of a catheter. [Details were given by the speaker of a case of this kind, in which there was the most enormous congestion of both kidneys, with extravasations of blood between the tubules. The condition followed the use of a catheter for the relief of stricture in which death occurred in a little more than twelve hours.] Such cases are, of course, not fit for surgical exploration, and even if they were, which kidney is to be explored, or are both? The treatment in such cases will be by medical means and wet cupping. [Mr. Barling related two cases of unilateral renal hæmorrhage of a profuse nature, and verified by the cystoscope, in which perhaps great congestion of the organ involved was the explanation of the bleeding In one of the cases growth was diagnosed owing to the profuseness of the hæmorrhage, the kidney was explored and eventually freely opened, but no diseased condition whatever was discovered. The organ was therefore closed by sutures and replaced, and since that time, three years ago, there had been no return of the hæmorrhage, and the patient, a lady, was in robust health.] What the explanation may be of such cases is yet uncertain, but possibly renal tension is the cause: if so, what induces a one-sided renal tension? It is to be hoped that Mr. Reginald Harrison will pursue the question he has raised, and submit further evidence of the condition he describes, and of any further experience he may make for its operative relief. That renal tension often exists there can be no doubt, but that it is bilateral as a rule there can be equally no doubt. A limited number of cases of unilateral tension may exist, but they are not yet well defined. Some of this latter class are probably relieved by incision of the organ involved, but the majority of cases of renal tension belongs to the former class, and can only be relieved by medical means and by local treatment applicable to both sides, such as cupping, wet or dry.

### V.—R. C. Chicken, F.R.C.S.,

Surgeon, General Hospital, Nottingham.

Mr. Chicken said: The circulation of the kidney being in close relationship to the circulation of the perirenal tissues, renal tension can be adequately relieved by scarification of the lumbar region. The opening of the kidney capsule for simple relief of high arterial tension is to be deprecated. It is a matter for regret that the term "Bright's disease" is frequently applied to a variety of conditions causing albuminuria rather than confined to the small granular kidney described by Bright. Nervous shock is occasionally accountable for suppression of urine, and the latter in these cases will pass away under rest. In renal disease cantharides should not be used as a vesicant: either dry or moist heat are to be preferred.

## ON CERTAIN POINTS IN THE OPERATIVE TREATMENT OF RENAL CALCULUS.

By J. Hutchinson, Jun., F.R.C.S.,

Surgeon to the London Hospital.

The guiding principle in the extraction of stone from the bladder has been the infliction of the least possible injury to that viscus during the operation. Considering the intricate structure of the kidney, its complicated arrangement of nerves, and its abundant vascular supply, the same principle

in the removal of renal calculus would appear to be even more important. It may be questioned whether it has not sometimes been lost sight of.

Thus, to take one example, Professor Küster,[1] who admits that improved results in renal surgery largely depend on "protecting the kidney tissue against wounds," advises that in extracting calculi "the organ should be split up from its convex surface." Other writers, whilst admitting that this proceeding may be attended with alarming hæmorrhage, state that this can be avoided "if the kidney be exactly bisected," or if the main renal vessels be clamped during the division. It is needless to say that these methods can only be carried out if the organ is separated from all its relations and brought out on to the surface. In fact in a recent description of ordinary nephrolithotomy it is expressly stated that "through an oblique lumbar incision the kidney is isolated, brought out into the wound," etc.[2] This manœuvre is, however, in many cases neither easy nor safe: it is certainly in the majority unnecessary. One has only to remember the shortness of the right renal pedicle to understand that occasionally it has resulted in rupture of an important vein or artery with even fatal results.

The free incision through a thickness of renal tissue amounting to 2 or 3 inches in an adult has sometimes caused most serious hæmorrhage, has led to urinary fistula, and in either case nephrectomy has occasionally become necessary. It will, I think, be admitted that a wound through the whole substance of the kidney is not so well adapted for exploration of the infundibulum and ureter as a direct incision into the pelvis, and can only be justified by the theory—largely erroneous—that the latter will not heal so readily. To practically bisect the kidney after separating it from its normal connections in the search for calculi may, perhaps, be excused if the surgeon is convinced that the latter are present but is in complete ignorance of their number and position. This, however, thanks to the *x* rays, need no longer be the case. It is to be noted that without the help of skiagraphy the risk of leaving stones behind in an extensive exploratory incision is considerable. M. Tuffier, one of the chief authorities on renal surgery, admits that in such operations the stone, if single, is not found, or, if they are multiple, some are left behind in at least 10 per cent.

In 1898 Mr. Henry Morris[3] wrote that "hopes were entertained that the Roentgen rays would be of service in determining the presence or absence of renal calculi, but hitherto they have afforded but little help in this direction."

Improvements in method have entirely altered this view, and the skilled use of the Roentgen rays will now rarely fail to demonstrate both the exact position and the size of any renal stone. The early and positive recognition of the latter not only secure resort to operation before the calculus has led to secondary degeneration of the kidney, but the proof afforded by the Roentgen rays in certain doubtful cases that no stone exists will save the patient from an unnecessary and possibly dangerous exploratory operation. In no department of surgery has the discovery been of more practical use than in that of the kidney. It is especially with regard to the kind and severity of the operation required that the *x* rays are so valuable. They will, for example, in a given case tell the surgeon that there is a single stone 1½ inch long placed transversely three inches from the first lumbar spine and the same distance from the iliac crest. The operation becomes then merely the extraction of a somewhat deeply-placed foreign body. There is no object for an incision longer than is required to give free access, and still less for disturbing the relations of the kidney or forcibly dragging it into the light of day, or for prodding in all directions with needles. As my friend Professor Harris observes, "the policy of pin-pricks becomes needle-less."[4] The stone is extracted with the least degree of instrumentation, and the surgeon knows he has not to hunt in the recesses of all the calices for a possible second stone.

For an extensive division of the kidney is substituted a small clean wound of the pelvis or adjacent cortex which rapidly heals. A drainage tube is inserted down to the perirenal area to guard against temporary leakage, and the muscular and skin wound is sewn up, the whole operation having probably taken less than thirty minutes to perform. Here it should be noted that the prejudice against incising the pelvis or ureter on the ground that the wall is wearing away. From personal experience of several cases I can state positively that such wounds, if only the urine be kept aseptic by urotropine or salol, and if no roughness has been employed in extracting the stone, heal soundly and quickly.

Mr. Henry Morris, in his latest writings, has come round to this view. "I formerly was of opinion that there was less chance of urine escaping and quicker healing of the wound, when the incision involved the parenchyma only. But since employing sutures, which I began to do several years ago, I do not find that wounds in the renal pelvis or ureter heal any the less readily."[5] It must be noted that it is sometimes impracticable to suture this wound, and that it will probably heal equally well without stitches.

In a case of considerable interest I had the opportunity of examining the process of healing of a clean-cut wound into the renal pelvis.

A middle-aged woman came under care for right hydronephrosis—intermittent—attended with severe pain. There was no evidence of stone, and the kidney, though mobile, could hardly be called a floating one. Exploratory incision showed that the pelvis was greatly dilated, but that there was a fair thickness of healthy renal tissue around the cyst, which bulged downwards alongside the ureter. I made a transverse incision of about 1½ inch into the pelvis sufficiently large to allow of digital exploration and let out a quantity of pus and urine. Through this it was ascertained that no stone was within reach, and that the ureteral orifice was not at the lowest point of the pelvis and was somewhat difficult to reach. However, it was possible to pass long bougies down into the bladder and so exclude the presence of a calculus into the ureter. By means of the bougies the ureteral orifice was straightened out and dilated. Nothing more seemed practicable, and the wound was closed with due allowance for drainage (the wound into the pelvis was not sewn up). For a few weeks the case went on well—the lumbar swelling almost disappeared and there was no escape of urine after the first fortnight. Ultimately the tumour re-formed, and the old symptoms of pain and sickness came back again. Lumbar nephrectomy was performed and the patient left the hospital about a month later. She remained well at her home in the country for a few months more, and then a strange thing happened. She was suddenly seized with suppression of urine—which caused death from exhaustion without uræmic symptoms. The suppression lasted six days—was then relieved for three days—and again became complete until her death at the end of another three days. Dr. Francis Scott, of Coleford, Gloucestershire, who attended her, kindly sent me up an account of the necropsy together with the cause of the trouble, a single and very small small rounded calculus which had plugged the left ureter.

In Dr. Scott's words:

I examined her kidney after death, and found the enclosed calculus in the upper part of the ureter, on a level with the lower margin of the kidney, where the ureter seemed to be somewhat narrowed for an inch or so, and I could not press the stone along the canal, but below this the ureter was larger and more elastic. The ureter must be smaller than usual, I should think, not to admit of the passage of such a small stone. There was no other stone in the kidney, which was enormously enlarged, and, beyond being congested, looked quite healthy. There was a little milky urine in the kidney but not more than a teacupful, if so much.

It will be noticed that Dr. Scott found the left ureter to be of small calibre, and this is exactly what had been observed in the right ureter. The suggestion might be made that a calculus had previously existed on this side, and, after irritating the ureter, had passed without ever being noticed by the patient. (In the excised kidney there was no sign of stone.) This is unlikely, and it is possible that some congenital narrowing existed on both sides about the junction of the pelvis and ureter.

Looking at the ending of this case, one regrets that a plastic operation was not attempted on the right ureter and pelvis, though the result of such would have been very doubtful.[6] It might possibly have guarded the patient against the extraordinary sequel of calculous anuria and death. One also regrets, in spite of the complete absence of any symptoms relating to the left kidney, that a thorough *x*-ray examination of that loin had not been made.

The stone which caused the patient's death was very small—not more than a few grains in weight, but it is conceivable that it would have been detected, and, if so, it might have been removed and the patient might have been alive now.

The condition of the pelvis in the excised kidney was as follows:—Its distended wall was considerably thickened and congested in patches. Externally the site of the wound previously made into it could not be detected. Internally a clean scar, one edge of which was in part slightly raised, was seen. The ureteral orifice was above the lowest point of the sac, and the ureter bent upwards before descending. No abnormal renal vessel or other cause of the bend could be found.

Mr. Morris has drawn our attention forcibly to the danger of small renal calculi, and the late Sir William Roberts

recorded three instances under his own observation, where death was directly and solely due to calculi, each of which weighed under 2 grains. It is almost an axiom of renal and vesical surgery that the smaller the stone the greater the suffering produced, and *vice versâ*. A striking instance of this and of the great value of the *x* rays in the treatment of renal calculus was the following case:

A man of about 30 had suffered for sixteen years with attacks of abdominal pain, often brought on by exercise, and attended with sickness. The pain had been "agonising" at times, but in spite of these years of torture, as he himself described them, renal calculus had not been diagnosed with such certainty that he would submit to exploratory operation. My friend Mr. Frank Corner, who sent the patient to me, was strongly of the opinion that there was a stone in the right kidney. The *x* rays proved without the slightest difficulty that there was a single 1-inch long calculus in the right renal pelvis; this was cut down upon and removed. The stone proved to be a beautiful specimen of so-called white oxalate studded all over with long acicular crystals of unusual size and sharpness. The lumbar wound healed in a fortnight, and the man has been completely cured of his pain.

In the case just quoted a slowly-growing stone had existed for at least sixteen years without doing great harm to the kidney. Mr. Henry Morris[7] narrates a striking case in which quiescent renal calculi of at least sixteen years formation had led to a huge perinephritic swelling. Nephrectomy was of extreme difficulty, and proved fatal from shock. These two cases illustrate the slight value of pain as a symptom in renal calculus, as in many other diseases. In both a stone was forming for sixteen years; in one it caused intense suffering, but hardly injured the kidney at all; in the other it was painless, but its effects were surely fatal. In other cases, however, a few years may see the organ completely disorganised or converted into a mere bag of stones and pus. But, apart from this, any long-continued suffering (and no pain can be worse than renal colic) has a most injurious effect upon the human character and general vital functions. A great step in advance was made when medical men learnt that to leave a small ovarian tumour to grow was almost criminal, increasing the mortality of ovariotomy, and causing wholly unnecessary suffering. It is the same with renal calculi; none are so small that they can be neglected, and the *x* rays, by enabling us to surely detect them in an early stage, will also as surely point the way to early operation. The dangers of so-called quiescent renal calculi, those which cause neither pain or colic, have been lately emphasised by Mr. Alban Doran, Mr. Morris, and other surgeons. How many men and women must there be getting through their work somehow year after year with steadily increasing but unsuspected renal calculi! It is probable that such are occasionally passed by insurance offices as first-class lives. Insurance examiners rightly attach the utmost importance to the state of the urine. But a normal urine not infrequently coexists with a stone in the kidney.

In the course of operative surgery on the dead subject, I once asked a student to perform nephrotomy—"as though there was a stone in the pelvis." He did so, and found the kidney packed with oxalate calculi, yet inquiry failed to elicit any history of renal symptoms during life. In another case at the London Hospital the patient died of perforated gastric ulcer; at the *post-mortem* examination a pyonephrosis, due to multiple calculi, was found to be present; it had not been suspected during life.

It is well-known that renal calculi not infrequently occur in both kidneys, the proportion of these cases being estimated at 1 in 15. The *x* rays will, by detecting this condition, prove that if an operation be undertaken it must be performed on both sides.

The information they give as to the position and number of the stones in the kidney will be most important in determining the exact scope of the operation. Fortunately, the ilio-costal interval is very favourably placed for exploration by the *x* rays. If a stone be present the chances are very strong that it lies in the pelvis or upper end of the ureter, even if situated in one of the upper calices (a very rare event for a single stone, though multiple ones may be found in all the branches of the pelvis), it might still be detected by skiagraphy.

A calculus in the lumbar portion of the ureter (that above the iliac crest) will probably be detected by the Roentgen rays with ease, unless the subject is very stout. Theoretically it should be impossible to localise by these means a stone lodged in the pelvic portion of the ureter, but practically this is not so. By taking the photograph obliquely, so as to avoid the shadow of the sacrum and other pelvic bones, it is possible to get a clear outline of a stone fixed in the lower end of the ureter. In a case of this kind, operated on from the perineum with complete success by my colleague, Mr. Hurry Fenwick, a calculus impacted a short distance above the bladder was well localised beforehand by the Roentgen rays. It is, however, impossible to detect a stone when it is fixed directly in front of the iliac bone, but this is a rare position for impaction to occur.

It occasionally happens that whilst a renal calculus has been present on one side the patient has referred his pain to the opposite loin. Some writers have expressed incredulity as to this ever occurring, but nothing could be more conclusive than the case recorded by Mr. Edmund Owen.[8] In this the patient was an adult who stated that "for two years the pain had been entirely confined to the right side." Turpentine and poultices had been frequently applied to this loin, yet on incision a normal kidney was found, and only a later operation on the left kidney removed the cause—a number of stones in a suppurating pelvis.

Mr. Owen remarks: "I am well aware that it is not a very unusual occurrence for a surgeon to operate upon the wrong kidney in his search for a stone." Certainly it was only the evidence of the *x* rays that prevented me making this mistake in one case.

The patient, a boy, was admitted with symptoms strongly pointing to renal calculus, the pain being, according to his statement, much the most severe on the left side. Skiagraphy revealed no stone on this side, but gave two well-marked shadows, one large and the other small, corresponding to different positions in the right renal pelvis. (See Fig. 1, p. 1133.) I cut down upon the latter and extracted one fair-sized oxalate calculus and a number of minute ones. The latter being placed close together had of course given but one shadow. The sequel of this case is most interesting. The boy had been the subject of severe bronchitis in former years, and always looked blue and unhealthy. Two years after my operation he again came under the care of my colleague, Mr. F. S. Eve, with symptoms of renal calculus. The *x* rays showed that this time it was situated in the left kidney, whilst the right side (the one I had operated on) was normal. That this latter calculus had formed since the first operation there is not the slightest doubt, and it is probable, seeing the imperfect action of his lungs, that he will go on forming fresh ones in the future.

It cannot be urged too strongly that surgical aid should be sought as early as possible in every case of sudden suppression of urine. The use of the *x* rays in such a case will, if the cause be impacted calculus, probably localise the exact site of obstruction and determine the safest and shortest route by which to remove it. Of late years calculi have been removed from all parts of the ureter with success: Messrs. Clement Lucas, Henry Morris, Freyer, Hurry Fenwick, and other surgeons have recorded cases.

It was my ill-fortune to have to operate for complete suppression on a patient who was of enormous size, in whom there was only one kidney, the ureter of which became plugged. The stone (a small ovoid one) was reached at the depth of some 8 inches from the skin, but it slipped from the grasp of the longest forceps I could obtain. The suppression was overcome for a few days, but the case ended fatally by the solitary calculus again becoming impacted.

In such very fat subjects the *x* rays will be valueless, and this is almost their only contraindication. It is true that uric acid calculi do not throw such dark shadows as the phosphatic and still more the oxalate ones. Mr. James Swain illustrated this in an admirable paper in 1897.[9] But by varying the time of exposure to the rays any calculus can be detected in an ordinary patient. It has been urged against the successful use of skiagraphy that the mobility of the kidney, and especially the influence of respiratory movements, may prevent a good result being obtained. The reply is that an exposure of fifteen seconds usually suffices, and during this short space of time it is easy for the patient to hold his breath. It will be found that so accurate is the method that the exact size, within one-eighth of an inch, of the calculi can be determined before the operation. This I have done several times, and I feel sure that even in a freely floating kidney a stone could thus be detected. In the following case the two conditions coexisted.

A young woman came under care on account of paroxysmal lumbar pain, etc. The kidney was felt to be very mobile. I cut down upon it and examined by puncture, etc., for a stone; not finding any I fixed the kidney by a series of kangaroo tendon sutures. She left the hospital relieved, and was lost sight of for four years during which the pain returned with increased intensity. At the end of this time she was again




Fig. 1.—Skiagraph showing two shadows due to renal calculi, the upper one (A) corresponding to a single large one, the lower (B) to four small ones placed close together in another part of the renal pelvis. The size of the stones should be compared with that of the shadows.

admitted and the first examination by the *x* rays showed a calculus two-thirds of an inch long to be present. This was removed from the renal pelvis, and at the operation the kidney was found to be perfectly fixed in place. I have little doubt that a small stone was present at the first operation but was overlooked. At that time the *x* rays had not come into use.

There is one fallacy in connection with the use of the *x* rays, namely, that in chronic pyelitis—usually of the tuberculous form—the renal pelvis or ureter may be lined with calcareous matter, which would give a shadow suggesting that of a large stone.

### The Technique of the use of *X* rays in Diagnosing Renal Calculus.

There is a good paper on this subject by Mr. C. L. Leonard in the *Annals of Surgery* for 1900, p. 162. He examined 59 suspected cases, with a negative result in 47. In only one of these was it subsequently proved that a calculus was present, and in this the failure was due to a plate having been used that was too small. Positive indications were given in 12 cases, all of which were confirmed by operation later. It must be understood that an experienced radiographer is required to obtain satisfactory results, and in giving the following notes on the subject by Mr. Ernest H. Harnack I take the opportunity of acknowledging the great assistance that his skill at the London Hospital had been to the surgeons there.

"Renal calculi of the oxalate variety are the most favourable for radiographic diagnosis, the phosphatic next, and uric acid last. The question of the length of exposure to a photographic dry plate must be determined after seeing your subject. For example, when dealing with fairly thin patients (weight not exceeding 10½ st.) I use a fairly 'soft' tube—that is, one that will show the heart shadow and ribs of the thorax on the fluorescent screen clearly defined, but of dark outline. With this type of tube and in this class of subject a short exposure, fifteen to thirty-five seconds, should determine the presence of every variety of renal stone. In dealing with stout subjects, a tube of 'higher' resistance is necessary—4-in. to 5-in. spark gap on a 10-in. or 12-in. coil; and in these cases I usually take three or four exposures, varying from thirty seconds to two minutes, and by this means all varieties should present themselves in the following order: Short exposure, uric acid; medium, phosphatic; whilst oxalate calculi will give a good shadow with all lengths of exposure.

In every instance care should be taken to have med, w[illegible]nt's bowels well opened. The shortest exposure that [illegible]evid[illegible]ver given to obtain a satisfactory radiograph was in[illegible]ay—namely, ten seconds. This is the case that you operated on last year for calculi in the opposite kidney to the side on which the boy had colic. The shortest, in an adult, was also one of your cases—fifteen seconds. These short exposures may be, until further developments occur, considered in comparison with photography as instantaneous. All these results have been got with a nominal 10-in. coil, mercurial interrupted voltage, 18 to 24, and a current varying from 6 to 10 ampères. As a final note, I should like to add that great care should be taken in developing the plates during hot weather by using very cold solutions, as the plates are liable to chemical fogging due to the heat. The pyro-sodo. or pyro-ammonia formulæ are the ones I recommend. The plates should be very thickly coated with the photographic medium."

The difficulties of diagnosis with regard to renal symptoms are only too well known. Mr. Edmund Owen narrates one case in which a former President of the College of Surgeons operated for supposed floating kidney on a patient really suffering from cancer of the colon, and another in which a President of the College of Physicians diagnosed a case of what proved to be renal calculus as one of disease of the intestine. Probably Mr. Owen does not believe that such mistakes are confined to Presidents of the Colleges. Much humbler individuals are apt to make them, and I may here plead guilty to having excised a normal vermiform appendix in a young man for attacks of what I, in common with two physicians, took for appendicitis. Ten days after the operation he passed a small renal calculus. No doubt the anæsthetic assisted its descent, and anyhow he was better without his appendix.

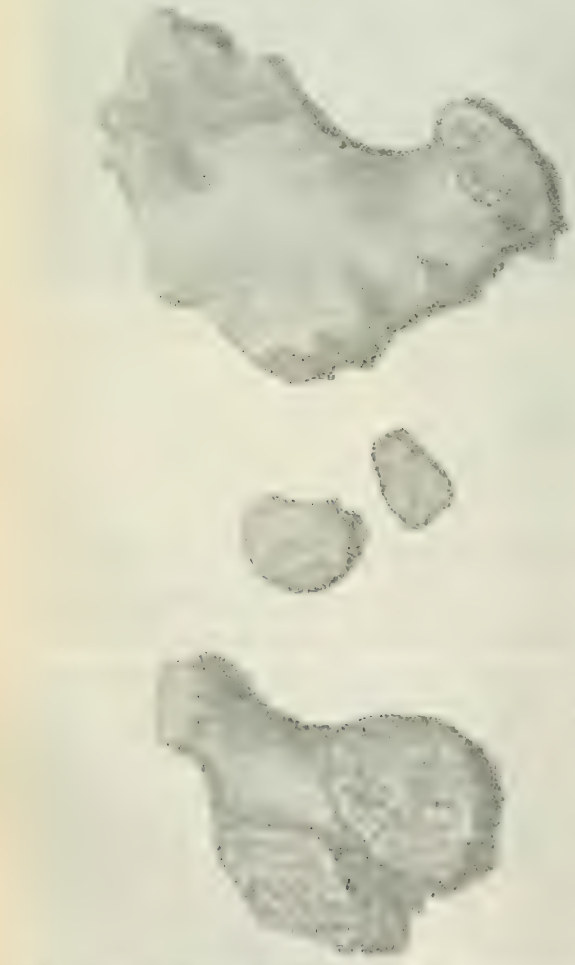


Fig. 2.—Calculi (exact size) removed by nephrolithotomy in December, 1879, by Mr. John Couper at the London Hospital. This was one of the earliest operations of the kind performed.

### Nephrotomy in the Absence of a Stone.

The use of the *x* rays in every suspicious case will greatly lessen the number of cases in which the surgeon performs exploratory nephrotomy in the belief that a stone is present and finds nothing. The question whether such an operation for so-called nephralgia is justifiable when skiagraphy in skilled hands has given a negative result is one of much interest. I would not presume to dogmatise on the subject, but may be allowed to note the following from the examination of a series of records of exploratory nephrotomy under various surgeons:

1. The operation is not wholly without risk, and has sometimes ended in the excision of a healthy kidney.

2. The lumbar pain and other symptoms which have led to the operation *may* be relieved by it permanently, but as a rule they return speedily.



Fig. 3.—Exact size of calculus removed; it was a very hard oxalate one, probably of over five years duration.



Fig. 4.—Skiagraph (reduced rather more than one-half) taken with only 15 seconds exposure, showing single oxalate calculus, removed by operation (see Fig. 3).

3. In a fair proportion of cases the patient is distinctly worse after the nephrotomy than he was before.

4. Amongst the conditions leading to "nephralgia" and suggesting calculus are the following: Pyelitis or nephritis, often localised and following an injury; commencing tuberculous disease of the kidney; an abnormal secretion of uric acid or oxalate crystals causing renal irritation; sometimes biliary calculi or appendicitis (especially when the appendix runs up vertically to the region of the kidney). It is difficult to see what good a nephrotomy can do for any of these conditions.

In many cases of renal calculus the urine secreted by the affected kidney contains pus and bacteria. In order to obtain prompt healing of the wound it is desirable that this septic state of the urine should as far as possible be removed. The

great value of urotropine is generally admitt rest induces, and no drug so efficient for the purpose. It is clai best means of pine, given in long-continued dosage, that deposit of uric acid; but, as with all other dru reason to think it has a true solvent action upon have already formed. One would naturally hope urgeon, Gener be useful in preventing the rapid recurrence calculi and deposits, but I cannot ascertain tha abit of follo proved. unmended

In conclusion, it may be stated that: pid, and

1. The *x* rays (except, perhaps, in stout su he peri r in the case of very small stones) enable an exact diagnosis tha to size, position, and number of renal calculi to be md no

2. They enable the surgeon in performing operation of nephrolithotomy to do so with the least possis injury to the kidney, and to dispense with bringing tha organ on to the surface of the wound.

3. Limited incisions made directly over the calculi through the renal pelvis are to be preferred when practicable. Such wounds of the pelvis heal well.

4. Before the operation it is most important to get the urine into a healthy condition. The administration of urotropine before and afterwards is of much value.

5. Renal calculi, however small, should be operated on as soon as they are positively diagnosed. Their danger to the kidney structure and to the patient's life bears no relation to their size.

Note.—It is twenty-one years since the first successful nephrolithotomy, performed by Mr. Henry Morris on February 11th, 1880. Nearly two months before, on Christmas Day, 1879, Mr. John Couper, at the London Hospital, cut down upon the kidney of a woman and removed several calculi. I happened to be the dresser to this case, and made the rough sketch appended (Fig. 2) showing the exact size of the stones. Unfortunately, the patient was too worn out with suffering to have any real chance of recovery, and she succumbed shortly afterwards.

Notes and References.

[1] Küster, *Proceedings* of the Congress of German Surgeons, April, 1901. [2] *International Textbook of Surgery*, 1900, vol. ii, p. 585. [3] *Hunterian Lectures on Renal Surgery*, p. 53. [4] It is a literal fact that in a work on *Modern Surgery* published in 1900, the surgeon is advised to explore the kidney for calculus with a pin (Da Costa, p. 960). [5] *Lectures on Renal Surg.*, p. 122. [6] Mr. Henry Morris (*Hunterian Lectures*, 1898, p. 24) records a similar case of hydronephrosis in which he performed a plastic operation upon the ureter but was obliged to excise the kidney. [7] *Renal Surgery*, pp. 70 to 72. [8] British Medical Journal, June 8th, 1901. [9] *Bristol Medico-Chirurgical Journal*, 1897, pp. 1 to 13.

The President inquired whether the coloration of a stone by such dyes as indigo or methylene blue would facilitate in any way the taking of a skiagraph.

Mr. Rutherford Morison thought there were two points of great importance raised by Mr. Hutchinson, first, as to the diagnosis of renal calculus, and, secondly, as to the removal of the stone. The diagnosis was from recorded results, made almost certain by the use of Roentgen rays. He had recently advised a patient in the north to consult a London specialist in radiography as to the presence of a calculus in the kidney. The latter had written that he could not find one but that a negative result was not conclusive. Mr. Morrison agreed with Mr. Hutchinson that the removal of the stone was probably best effected by incision through the pelvis, and in demonstrating some cases before the Northumberland and Durham Medical Society, he had used the same arguments for incision by this route as had been used by Mr. Hutchinson.

Mr. N. B. Harman said that the experience of physicists was that the depth of the shadows obtained by the use of the *x* rays depended upon the chemical density only of the object interposed between the cathode and the sensitive plate; the heavy and dense metals and metallic salts were impermeable to the rays, whilst materials of lesser density, irrespective of their colour, were to a greater or less degree permeable. It was not possible to affect the density of calculi by colouring them with the usual dyes.

Mr. J. Hutchinson, in reply, remarked that he considered that if the evidence of radiography was not now conclusive it soon would become so by improvement in methods. It was most important that in these cases an experienced and expert radiographer should be called in.

too large

## CASE OF MOVABLE KIDNEY PRODUCING PYLORIC STENOSIS AND CONSTRICTION OF THE DUODENUM BY PERITONEAL BANDS.

By Herbert Bramwell, M.D., F.R.C.S.Edin.
Cheltenham.

The case I am about to describe is no illustration of the surgical skill of the present age, but rather an example of a failure in affording relief by means of the surgical art. But my reasons for considering it of sufficient interest to bring before a meeting of so important a character as the present are that the clinical features and *post-mortem* appearances do illustrate or actually prove a link in a chain of facts closely bearing upon two important subjects in the surgery of the stomach which are even now somewhat undecided.

In the first place, the history of the case I am about to record, with the results of the *post-mortem* examination, is strong evidence that such a thing as spasmodic stricture of the pylorus does occur during life, and may by its persistent though intermittent action lead to dilatation of the stomach followed in turn by complete atony of its walls.

Secondly, that intermittent spasm and hypertrophy of the pyloric sphincter with secondary stenosis of the orifice may result from the traction of its peritoneal covering, owing to this being dragged upon by a movable kidney, quite independently of any other cause.

And thirdly, that a movable kidney does not form a channel of its own under the peritoneum, as is commonly described, but moves downwards, carrying its peritoneal covering with it, and thus stretches the superior and internal reflections of the peritoneum, which pass upwards over the pylorus and duodenum and inwards over the vena cava and aorta, until, in aggravated cases, distinct firm bands are formed.

In a most interesting paper published in the British Medical Journal of February 3rd, 1900, Sir W. H. Bennett of St. George's Hospital related a series of cases which go to prove that a condition of the pylorus, productive of grave obstruction to the outflow of gastric contents may exist during life, without its being appreciated by manipulation of the exterior of the stomach even when direct palpation through an abdominal incision is practised. And secondly, it is certain that a well-marked induration about the pylorus, which is obvious during life, may disappear and be quite undiscoverable immediately after death. The nature of the pyloric condition under these circumstances must of necessity be somewhat uncertain, but there are strong reasons for assuming that this condition is one of spasm of the pyloric sphincter. Mr. Bennett relates the case of a young married woman who suffered from attacks of great distension, with flatulence and crampy pains to the right of the middle line under the ribs. The distension and pain were relieved by vomiting. Upon examination during one of these attacks, the only abdominal abnormality perceptible was great gastric dilatation, and although the stomach was certainly greatly distended before anæsthesia, it was found on examination after full anæsthesia that the dilatation had completely disappeared, the stomach having gained, so far as percussion could elicit, its normal size. No vomiting had occurred, so that the only means which could have effected the emptying of the organ was the passage of its contents through the pylorus.

Here we have the history of a typical case of intermittent gastric dilatation from pyloric spasm, but wanting proof by *post-mortem* examination. Now, if this patient had died and the stomach had been examined *post mortem* without a record of previous examination under anæsthesia, there would probably have been found gastric dilatation and a fairly patent pylorus, with no organic stricture, and another case of idiopathic dilatation of the stomach without obvious cause would have been added to *post-mortem* records.

The following case, if death had occurred earlier, might have been classified in the *post-mortem* room in exactly the same list as the one just related, for the cause producing the extreme gastric dilatation was purely of a vital nature, and had disappeared to a great extent after death. It was as follows:

Mrs. R. B., aged 49, a widow with two children, the youngest 14 years of

age, was first seen in August, 1895, on account of repeated [illegible]—severe indigestion. Her previous history showed that she had suffered from attacks of acute dyspepsia since the age of about 20, but much [illegible] so during the last ten to fifteen years. She had consulted many [illegible] sicians, including the late Sir Andrew Clark, but with no permanent benefit at any time. She was less troubled with these attacks during pregnancy, and was always quite well during her puerperia. The attacks were always of more or less sudden onset and of an acute character, with pain and uneasiness in the epigastrium and a feeling of great distension, which was not relieved until vomiting had occurred. The cause of the attacks was never very definite, as often when she had felt very well and gone about a little more than usual a severe attack would follow. The most rigid dieting and careful general hygiene failed to prevent their occurrence. The severity and duration of the attacks was distinctly influenced by whether she gave in at once and went to bed, or attempted to get over the attack while going about her daily routine.

When first seen by me in August, 1895, she was very thin, pale, and of sallow complexion. Her tongue was red and irritable looking at the tip and margins, but furred at the back. There was no abdominal distension, and the only perceptible abnormal signs were slight dilatation of the stomach, and an unnatural tenderness over the pylorus. The bowels were kept regular by aperients, and all the other organs appeared normal.

During the following eighteen months I had repeatedly to attend her during such attacks, which were soon relieved by rest in bed, with bismuth and other stomachic sedatives, their only obvious cause being exercise or over-exertion of any kind. In 1897, while she was confined to bed for a more than usually severe attack, I discovered a freely movable kidney on the right side, which on deep inspiration descended so far down that its upper margin could be felt. This was at once considered to be the cause of the peculiarly severe attacks of gastritis, and a suitable pair of stays and pad were procured. Some benefit resulted, as she certainly did not suffer so much during the whole of the following year.

In November, 1899, a severe attack of gastric irritation, accompanied by great distension, epigastric pain, and vomiting, followed immediately on the exertion of one day's packing before she changed her house. This attack was more severe and prolonged than any former ones, and there was greater and more persistent dilatation of the stomach. She was kept completely on her back, with a firm pad and bandage over the right lumbar region. The question of nephropexy was discussed and strongly urged, but the patient and her friends greatly demurred and begged for a longer trial of medicinal and mechanical means of treatment. She did not get over this illness as she had done formerly, and there was persistent uneasiness in the epigastrium with daily recurrent periods of excessive dilatation of the stomach. On January 16th there was a slight attack of hæmoptysis, about one and a-half gill of bloodstained gastric contents being vomited. On no other occasion was there ever any signs of hæmorrhage into the stomach.

In spite of continued rest in bed or on a couch with most careful nursing and dieting, she continued to lose ground. Various medicinal agents were tried to allay the gastric irritation and assist digestion, including the daily lavage of the stomach by means of a siphon tube. About this time some induration was felt in the pylorus, and two irregular ill-defined swellings, which appeared to lie behind it, were also observed.

The stomach continued in a most irritable state and intermittently dilated, so that a balloon-shaped tympanitic swelling was at times present to the left of the middle line. The gastric secretions were repeatedly examined by the Clinical Research Association, but no evidences of malignant disease or want of hydrochloric acid were reported.

The question of an exploratory incision with a view to pyloroplasty or gastro-jejunostomy was discussed at a consultation with two other surgeons, but the presence of the induration round the pylorus and the patient's weak condition were considered sufficient to negative any such procedures.

Towards the end of February an attack of syncope, owing to sudden excessive dilatation of the stomach by gas, ended fatally.

A *post-mortem* examination was obtained, and on opening the abdomen the whole of the left hypochondriac, epigastric, and umbilical regions were found to be occupied by an opalescent sac, reaching down to within two inches of the pubes. It looked exactly like a thin flaccid ovarian cyst. This was found to be an enormously dilated stomach hanging down like a large bag. The cardiac end filled the whole of the left diaphragmatic vault and was as thin as wet paper, tearing with the least traction while being brought to the surface.

The pylorus was distinctly lower than normal and surrounded by thickened and matted peritoneum. It was distinctly thickened and contracted. The swellings felt behind the pylorus during life proved to be the head of the pancreas and lymphatic glands surrounded by thickened fibrous tissue, but in which no malignant disease was present.

The duodenum was much distended, forming a sausage-shaped sac constricted at both ends. Its junction with the jejunum was constricted and firmly held down by a band of thickened peritoneal tissue, which extended downwards towards the right iliac region and then gradually spread out into the mesentery. It appeared to be the right border of the large mesentery.

Extending from the surface of the pylorus downwards and to the right were three distinct cords of thickened peritoneal tissue which gradually spread out over the right kidney. This latter was freely movable up and down for the space of three inches, and with it moved its peritoneal coverings. When the kidney was pulled down to its full extent the three peritoneal bands were very distinct, and clearly dragged upon the pylorus.

Before anything was removed from the abdomen it was distinctly seen how the descent of the kidney tightened and dragged upon the peritoneal covering of the pylorus. Also the natural covering of the kidney moved with it, and its lower margin did not glide under the peritoneum but moved over the peritoneum on the surface of the posterior abdominal wall causing an overlapping of the two peritoneal surfaces.

On opening the stomach the contraction of the pylorus was found to be of a purely muscular nature, from hypertrophy of the sphincter, the mucous membrane covering it being healthy. Microscopic examination of portions of the sphincter and also the thickenings round the pylorus, for appendicitis. [illegible]ERNIA.

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descent, and any[illegible]search Association, proved the absence of any malignant

Nephr[illegible]eatures of this case, clinical and *post mortem*, [illegible]hat:

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[illegible]go-called [illegible]n a pyloric stenosis may be the direct result of inte[illegible]d hands [illegible]raction of a movable kidney.

3. [illegible] I would[illegible]quired movable kidney does not move up and down [illegible]n be allo[illegible]e under the peritoneum, but carries its peritoneal [illegible]eries [illegible] with it, stretching the inferior reflection of the perito[illegible]eons to some extent and gliding over the angle of this reflect[illegible]a[illegible]while at the same time it stretches and drags upon its sup[illegible]r and internal reflections, drawing these into distinct band[illegible]r which directly drag upon the pylorus. And the only true reme[illegible]y for such a condition is to fix the kidney in its normal situ[illegible]ion by means of stitching.

## RADICAL CURE OF FEMORAL HERNIA.

By R. H. PARRY, F.R.C.S.Edin.,

Surgeon, Victoria Infirmary and Royal Hospital for Sick Children, Glasgow.

THE operations for the radical cure of femoral hernia which have been received with most favour by British and Continental surgeons are Watson Cheyne's, Bassini's and Lockwood's. Watson Cheyne raises a flap from the pectineus over the crural ring, and attaches it to Poupart's ligament. Bassini

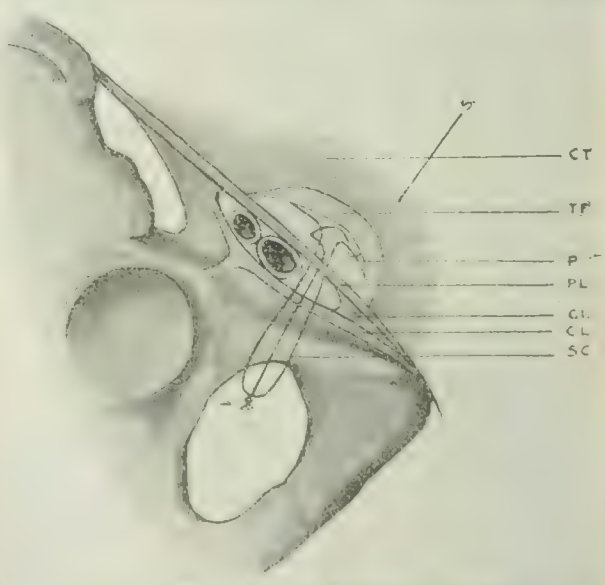



Fig. 1.—Treatment of sac. S, Suture to fix sac beneath conjoint tendon of transversalis fascia; CT, conjoint tendon; TF, transversalis fascia; P, peritoneum; PL, Poupart's ligament; GL, Gimbernat's ligament; CL, Cooper's ligament; SC, sac.

unites the inner end of Poupart's ligament and the falciform process of Burns to the fascia covering the pectineus. Lockwood introduces a needle through the crural ring and joins Hey's ligament to Cooper's ligament. The practice so far then has been to effect the closure of the crural ring from below, but it is open to the following objections:

1. An efficient support cannot be provided by the approximation of structures outside Poupart's ligament.

2. The femoral vein is in danger of being injured or compressed.

3. A depression is left above the crural ring.

The method which I bring before you to-day consists briefly in exposing the crural ring from above, and attaching the conjoint tendon to Cooper's ligament; thus the entrance to the ring is effectually blocked by a structure which can be readily displaced to do this, and can also be adjusted to avoid pressure on the vein.

This plan first occurred to me about four rest induces, and was performing an operation for the radical e best means of hernia by a new method, my object being obliteration of the inguinal canal and t accomplish this it was necessary to remove cord from its normal position, and to find an it. Accordingly the canal was opened and the C

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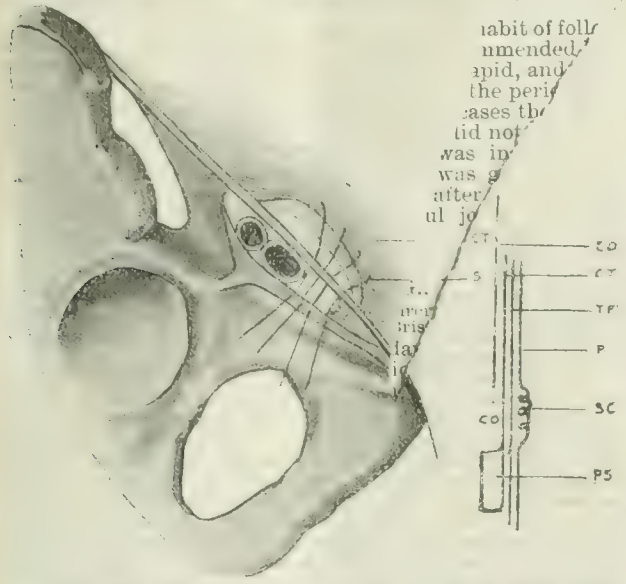



Fig. 2.—Sutures passed through conjoint tendon and transversalis fascia above, and Cooper's ligament below. CT, Conjoint tendon; S, sutures.

Fig. 3.—To show arrangement of structures at crural ring after operation. EO, External oblique; CT, conjoint tendon; TF, transversalis fascia; P, peritoneum; SC, sac; PS, pubes; CO, crural opening.



Fig. 4.—Conjoint tendon drawn over crural ring.

and reduced in bulk by the removal of accessory veins. Poupart's ligament was then divided obliquely just above the crural ring, and the fat and gland in that space removed. Next the lower margin of the conjoint tendon was defined, the transversalis fascia exposed and incised parallel to the

n of Poupart's ligament, and the deep epigastric too large tured and divided.

life cord was now placed behind the conjoint tendon and nsversalis fascia, overlying the femoral vein, and was made emerge at the crural ring. The tendon and fascia were drawn down and fixed to Cooper's ligament—a strong band of fibrous tissue which joins the fascia over the pectineus close to its attachment at the ilio-pectineal line—by strong catgut sutures, thus covering the crural ring and preventing the possibility of a femoral hernia. The rest of the operation consisted in bringing the divided ends of Poupart's ligament together, inserting a row of catgut sutures between the conjoint tendon and the Poupart's ligament along the whole extent of the canal, and finally closing the skin wound. Union took place without a trace of suppuration.

During the following year the patient was examined frequently, and the report at the end of that period was that the wound had remained perfectly sound, and that there was no sign of either an inguinal or a femoral hernia.

This case afforded an exceptionally severe test of the operation, since Poupart's ligament had been divided and the crural ring made to accommodate the cord, and I felt, consequently, that I had discovered a new and satisfactory method of closing the crural ring. Since then 15 cases of femoral hernia have been operated on: of these, 6 were under treatment over three years ago and 5 over two years ago, and so far no sign of weakness at the ring has been discovered in any of them.

*Operation.*

*Skin Incision.*—A curved incision with the convexity downwards is made from a point a little external to the pubic spine to the middle of Poupart's ligament. A flap of skin is raised, the superficial epigastric vessels ligatured and divided, and Poupart's ligament within the wound thoroughly exposed.

*Separation and Opening of Sac.*—The femoral sheath is opened near Poupart's ligament and the sac and fat adherent to it turned out as far as possible by the aid of the finger. By this method the saphenous vein is not disturbed, nor is it as a rule seen in the operation. The sac is now opened and adherent omentum separated or ligatured and removed. When denuded of the fat on its outer surface, the sac is usually much smaller than is the case in inguinal hernia, and the rules applicable to its treatment in the latter cannot be adhered to in all cases of femoral hernia. When it is small and its walls are thin and torn, it should be removed and the opening into the peritoneum carefully closed.

*Exposure of Crural Ring.*—An incision is made through the aponeurosis of the external oblique immediately above and parallel to the inner half of Poupart's ligament, the inguinal canal is opened, and its contents drawn aside in order to define the lower margin of the conjoint tendon. The transversalis fascia is next divided where it passes beneath Poupart's ligament to form the anterior layer of the femoral sheath. The peritoneum is left intact, except when necessary to ligature and remove omentum which cannot be returned through the crural ring. In retracting the parts now, an excellent view is obtained of the upper surface of the ring, the femoral vein, and Cooper's ligament.

*Fixation of Sac.*—A catgut suture is passed through the fundus, where it is tied, and then through the neck close to the parietal peritoneum, and finally carried through the transversalis fascia and conjoint tendon. When the suture is tightened the sac doubles up and disappears beneath the abdominal wall: the suture is then knotted.

*Attachment of Conjoint Tendon to Cooper's Ligament.*—A strong catgut suture is carried by a sharp curved needle on a handle through the conjoint tendon and transversalis fascia, at a point opposite to the outer margin of Gimbernat's ligament, passed horizontally beneath the muscle and fascia for about half inch, and then brought through them. The inner end of the suture is now passed through Gimbernat's ligament, the outer through Cooper's ligament, and both are brought out in the groin. The second suture is applied in the same way, but while the outer end is being passed through Cooper's ligament close to the femoral vein care must be exercised lest the accessory obturator artery be punctured. Traction on the end of the sutures brings down the conjoint tendon and transversalis fascia over the crural ring, and after it has been determined that no undue pressure is made on the vein the sutures are tied. Two or three medium catgut sutures connect the conjoint tendon with Poupart's ligament to assist in keeping down the tendon, and to strengthen the inguinal canal. The rest of the operation is completed in the usual way, two or three silkworm-gut stitches keeping the edges of the skin together, while approximation of the rest of the wound is secured by a continuous horsehair stitch. No drainage of any kind is used.

It will be gathered that the operation is not a severe one, when it is mentioned that five of the patients were suffering from strangulated hernia at the time of the operation. All the cases (fifteen) recovered, union taking place by first intention, and in ten the wounds were examined for the first time in the third week, and no subsequent dressing was applied.

### Strangulated Hernia.

The same procedure has been adopted in cases of strangulated hernia. The sac is opened, and the bowel carefully examined. If found in a fit state to be returned, and the condition of the patient is favourable, the operation as detailed above is performed.

In the last two cases the peritoneum was opened, evidently over the ring, and gentle traction was made on the bowel, assisted by pressure from below, with the result that the hernia was reduced without dividing Gimbernat's ligament. No difficulty, however, would be experienced in dividing the ligament from above, and, in the event of resection of the bowel being necessary, more freedom for work and better control over the parts is obtained than would be the case were the same operation attempted below Poupart's ligament.

Mr. JORDAN LLOYD advocated the general principle of simplicity in the technique of all radical cure operations, and thought that the removal of the sac was preferable to other methods of dealing with it. It should be ligated as high up as possible. He advised the use of sutures of silk rather than catgut; they should be passed between the inner end of Poupart's ligament and the pectineus muscle and fascia, a firm grasp being obtained of the soft tissues.

Mr. MCADAM ECCLES agreed with Mr. Jordan Lloyd that the removal of the sac was really a principle of the radical treatment of hernia. Where, as in the cure of femoral hernia, permanence depended on the reliability of the sutures introduced by the surgeon, he thought aseptic silk by far the best material. In femoral hernia, either the ring itself must be closed or a barrier must be placed above or below it. He thought Mr. Parry had demonstrated a useful method of doing the latter, and he believed that the method of opposing a barrier would prove to be the best. Recurrences after femoral hernia were unfortunately common.

Mr. J. HUTCHINSON, jun., asked what was done to the cord in Mr. Parry's procedure.

Mr. PARRY replied that the cord was simply displaced to define the conjoint tendon. As to the treatment of the sac, to which Mr. McAdam Eccles had referred, he thought the matter might be left to each individual surgeon to do what he liked.

## THE PREVENTION OF SHOCK DURING PROLONGED OPERATIONS.

By W. H. BROWN, F.R.C.S.I.,
Surgeon, Leeds General Infirmary.

THE employment of transfusion as a remedy is of great antiquity, and there are many instances of life saved on record. Transfusion, either by the direct or indirect methods, has of late years given place, and, I think, rightly so, to the injection of saline fluid into the veins. The value of this method of counteracting the baneful effect of loss of blood and of shock have been proved time after time, and no one who has noticed the wonderful change for the better in a seemingly hopeless case can fail to have been impressed. In machinery smashes, after railway accidents, and the like I have repeatedly been witness to the marvellously rapid rally which has taken place after the injection of three or four pints of saline solution, often enabling me to effect an operation which but an hour before seemed absolutely hopeless. It is not, however, with cases of sudden hæmorrhage or shock I desire to deal to-day, the condition is obvious, the remedy to be tried universally accepted, but rather to draw attention to a class of case far removed from the category of accident or emergency, in which the addition of large quantities of saline fluid to the blood in circulation, may, I think, be employed with advantage.

The surgery of to-day covers a vast area of enterprise, and operations are undertaken in conditions which a few years ago would have been looked upon as impossible, aye, and almost criminal. The general advancing recognition of asepsis enables surgeons to do with equanimity that which but a few years ago meant almost certain death to the patient. I think I shall be able to show that the intravenous injections of saline fluid is, in a certain degree, as great an aid to the surgeon in assisting him to deal successfully with desperate cases as is the banishment of the streptococcus from the wounds which he inflicts.

The class of cases I have specially in my mind are those where the patient is suffering from the effects of prolonged bleeding, and where after all palliative measures have failed it has been decided to attempt to save life by means of some major operation. We are all familiar with the patients for appendicitis, small renal calculi, "put off" the surgeon until the vital powers have descent, and any to a vanishing point, and as a last resource they attempt to be made. Take as an example a woman NEPHRO- myoma—one who has been waiting vainly The use of the relief of the menopause to put an end to the lesson the hemorrhage. exploratory resistance will be sufficient to illustrate the point and finds nothing before the meeting. I have on several occasions so-called had upon such cases, making use of the saline fluid hands by the following arrangements: So soon as the patient I would or ether, a competent surgeon opens a selected vein and be allowed to transfuse as the major operation proceeds, so *pari passu* series goes the intravenous injection, the amount injected being governed by the state of the pulse and the loss of blood consequent upon the removal of the tumour. I have used as a rule three or four pints of fluid. The advantages I suggest are, first, that the patient does not at any time during the operation feel any for loss of blood; secondly, nothing is done in panic; the transfusion begins slowly and steadily, and full precautions can be taken as to asepsis and the prevention of the involuntary introduction of air in the vein. When transfusion is suddenly called for, the apparatus, if at hand, is not always above suspicion: but when everything is arranged beforehand, transfusion can be made as perfect in detail as any other planned operation.

My idea, then, is that in dealing with cases worn down by repeated bleeding, when it is decided to attempt to remove the causes, transfusion should be made a part of two attempts, and commenced so soon as the surgeon essays his effort, not hurriedly called for when the failing pulse and the dilated pupil foreshadow catastrophe on the table. It may be asked, Can this be readily done out of hospital? Yes, given a competent assistant other than those engaged in the actual operation, with his own instruments necessary to open the vein, a glass nozzle, and a few feet of sterilised rubber tubing and a glass funnel. Transfusion by gravitation is a simple and safe procedure, but a joint responsibility, a common instrument table; a panic call, and disaster is likely to occur.

From my own experience, both in private and in hospital, I am quite satisfied that hitherto too little use has been made of this means of enabling the exhausted patient to withstand the effects of operations which must otherwise result in death, and looking back I can recall only too many who perished before the value of saline transfusion was recognised. I am not, for one moment, suggesting that transfusion never fails. Such an assertion would be impertinent to your common sense and experience; but I am affirming that, employed in the manner I have described, it will many times enable one to bring to a successful issue cases which otherwise would have succumbed to the extra shock of operation.

Mr. T. R. JESSOP desired to thank Mr. Brown for drawing attention to such a potent means of avoiding or counteracting the effects of shock. For some years he had been in the habit of carrying about with him a supply of normal saline fluid preserved in concentrated form in sealed capsules. Along with strychnine he used saline transfusion prior to or during any operation likely to be attended by, or attended by, dangerous shock. A tenth, or even a fifth, of a grain of strychnine subcutaneously injected, together with the transfusion of 3 to 5 pints of saline solution, constituted means, in his opinion which relieved the surgeon of more than half his fears of surgical shock.

## A DISCUSSION ON GASTRO-JEJUNOSTOMY IN ULCER OF THE STOMACH AND DUODENUM AND IN PYLORIC STENOSIS.

I.—GILBERT BARLING, F.R.C.S., B.S.,
Surgeon, Birmingham General Hospital; Professor of Surgery, University of Birmingham.

PROFESSOR BARLING said: The responsibility which devolves upon me this morning is one, I fear, which I brought upon myself by suggesting the subject for discussion, a responsibility which I would gladly have devolved upon some one else better able to discharge the duty; but I must even do the

best I can in the absence of another willing task.

It is quite impossible in the time at our disposal to consider all the questions that might be raised in the best means of gastric and duodenal ulcer and their sequelæ tions; and, to prevent the discussion becoming propose at once to exclude from discussion P., gastric ulcers, as the lines of treatment for thi Surgeon, General now fairly well settled.

I propose, also, to exclude cancer of the sthabit of follch would require a separate meeting for its due commended.

It is, however, I think advisable to say a fewrapid, and the mortality of ulcer of the stomach—a mortalie the perigly to perforation, to hæmorrhage, to inanition with cases thatercurrent acute illness, and to cancer supervenin: did not cer.

Some French observers have placed this was in ty as high as 50 per cent., and this appears to have thv was gt of Doyen, who quotes it in his book on the stomas after hers in this country and abroad have made a lower estful jo ranging from 50 per cent. down to 20 per cent. From n observation, from information gained in conversati th others, and from medical literature, I have come to conclusion that even 20 per cent. exaggerates the mor y of this disease, and I estimate that a mortality of 10 arer 3risl cent. is nearer to the truth. I am confirmed in this opini by the observations made by my colleague Dr. Russell upc cases treated in the General Hospital which he has traced ime afterwards.

One particular point which French observers seem to me to exaggerate as a cause of the mortality is the supervention of cancer upon simple ulcer. I have never seen a case myself in which this could be conclusively shown, and some search into medical literature convinces me that it is a rare sequence, which accords with what we observe in other similar conditions in the body.

It is important not to exaggerate the mortality of the disease under discussion, for if we do it creates a feeling of mistrust in the minds of physicians and practitioners which defeats the purpose we have in view, namely, that they will earlier seek the assistance of the surgeon in the treatment of ulcer of the stomach. Whilst it is easy to exaggerate the death-rate it is not so easy to over-estimate the enormous amount of disability due to these ulcers.

With the diagnosis of gastric and duodenal ulcers I do not propose to deal at length, nor to differentiate between ulcer in the two situations; I should, however, like to say a very few words upon the question of hæmorrhage in the diagnosis. This seems to be insisted upon as a *sine quâ non* by many physicians before they will accept the diagnosis of ulcer of the stomach, and yet experience shows that there are two possible fallacies.

It is certain that many severe stomach ulcers run their course without external evidence of bleeding, and this not only in the acute perforating variety of the anterior wall but in some of those which are chronic in their course and occupy other parts of the stomach. The converse is also true that we may get severe hæmorrhage from the stomach which is not due to or associated with the lesion recognised as the round ulcer, but the cause of which is not yet absolutely indentified. Attention has been called to cases of this kind, especially by my colleague, Dr. Stacey Wilson, by Dr. Hale White, and by Mr. Mayo Robson.

I propose to divide what I now have to say into two heads:

1. Conditions which may call for operation.

2. The methods by which surgery can hope to relieve and cure.

1. Conditions which may call for operation: (*a*) Fulminating hæmorrhage; (*b*) recurrent hæmorrhage occurring on several occasions; (*c*) ulcer in which hæmorrhage is an unimportant feature, but in which pain, vomiting, loss of weight, and repeated inability to work are common features; (*d*) stenosis of the pylorus as shown by dilatation of the stomach and gastric stasis: (*e*) adhesions interfering with the motility of the stomach or narrowing its outlet.

(*a*) It appears to me at present that there is little to encourage surgeons to operate for severe fulminating hæmorrhages. On two occasions I have been prepared to intervene in such cases, but, whilst waiting during a few hours for some recuperation, both my patients had a return of the hæmorrhage and died. This has been the experience, I find, of , and in some cases where operation has been he source of the hæmorrhage has been undistoo large, and no good has resulted. I incline, therefore, to lipon the known general efficacy of medical measures in cases.

(*b*) For recurrent smaller hæmorrhages surgery has, I believe, more benefit to offer, for immediate operation is not as a rule required, and the diagnosis of ulcer of the stomach as the cause of the hæmorrhage is generally pretty clear. As justification for operation in these cases I may refer to the loss of blood and consequent anæmia, the interference with the patient's occupation, the state of anxiety in which he or she lives, and the diminished resistance to disease.

In contemplating operations in these cases we have different courses before us which we may pursue: we may either perform a gastro-jejunostomy, trusting to the rest from distension of the stomach and from bruising from food, to allow the vessel which is bleeding to close and the ulcer to heal; or the ulcer may be directly attacked by excision or cautery with or without a subsequent gastro jejunostomy. It is yet undecided which course it is best to adopt, and I am certainly not in a position to speak dogmatically, but an experience of my own bearing upon this point is worth quoting. A woman upon whom I had operated some time previously for gall stones was readmitted to the General Hospital in an extremely ill condition. At the first operation some year before, the gall stones which had been diagnosed were not found, but there was much adhesion of the pylorus and adjacent parts, and when these adhesions were separated no explanation of their presence was discovered. The patient was under observation from time to time, and when readmitted was thin and emaciated, suffering great pain and quite cachectic in appearance. For this at first no explanation was forthcoming, but in the first action of the bowels which followed admission to the hospital a large quantity of altered blood was found. On further inquiry it was elicited that though there had been no vomiting of blood, yet similar altered blood had frequently been passed by the rectum. On reopening the abdomen and reseparating adhesions a hard based ulcer was found in the second portion of the duodenum. The patient's condition quite forbade the excision of the ulcer, and gastro-jejunostomy was therefore resorted to. A slow but excellent recovery followed, and there has been no return of the bleeding. It is evident, therefore, that gastro-jejunostomy alone may suffice for the relief of these cases of recurrent hæmorrhage.

(*c*) This includes a very large number of cases in which the utility, or, perhaps I had better say, the advisability of operative interference is not yet definitely recognised. Operation, if resorted to, is required more for repeated disability from work than because of the mortality which the ulcer brings about directly. One of the difficulties in considering these cases is that the diagnosis from mere chronic dyspepsia, especially in neurotic patients, is difficult to make, and perhaps can only be cleared up by an exploratory incision. If undoubted induration or thickening can be detected, then operation is the more called for.

(*d*) Stenosis of the pylorus, with dilatation of the stomach, vomiting of food taken some time before, and powerful peristalsis of the stomach recognisable through the abdominal wall forms altogether a clinical picture which is now readily recognised, and which is the clearest indication we have for surgical interference. We generally have a history of previous gastric ulcer to help in the diagnosis, and the only condition which is likely to be mistaken for pyloric stenosis is atonic dilatation of the stomach with proptosis, due presumably in the main to gastric catarrh and associated with a marked neurotic temperament and general muscular feebleness and malnutrition. It is hardly necessary to state that these latter cases are not to be treated on the same lines as those with pyloric stenosis. For this stenosis three operations offer themselves—pylorodiosis, pyloroplasty, and gastro-jejunostomy. I do not propose at this moment to discuss the merits of these further than to say that the first, in my opinion, should be discarded, and that whether the second or third should be adopted will depend upon the local condition found at the pylorus.

(*e*) I propose only to say a few words as to adhesion interfering with the mobility of the stomach or narrowing the

med, w nt's pylorus. These may exist either in the form of evid ver very much tying down parts of the organs, or as ay— strips constricting and kinking. For the relief of these d on ditions we may either separate the adhesions, taking ch precautions as we can to prevent their recurrence, a sequel not unlikely to occur, and one which is apt to bring about disappointing results. Anyone attempting to divide and separate these adhesions must be prepared if occasion requires to excise the ulcer which lies at the base of them. As an alternative to the mere separation of adhesion, gastro-jejunostomy offers itself, and in some cases is, I think, the operation of election.

2. The methods of relief:

(*a*) Pylorodiosis, or Loreta's operation, was the first operation offered to us apart from pylorectomy, and we shall always feel indebted to Loreta for his pioneer work in this direction. The operation consists in opening the stomach and stretching the strictured pylorus. It has, of course, the disadvantage that stretching of strictured passages has in other parts of the body—the liability to relapse. An experience of my own makes me chary of ever resorting to the operation again, because of the result which followed, which I will briefly relate. I operated upon a patient in the General Hospital under the care of my colleague, Dr. Saundby, with a typical simple stenosis of the pylorus and its accompanying dilatation. The narrowing would only admit a No. 10 catheter, and the stricture was gradually stretched until it admitted the tips of two fingers. The patient straight away went to the bad and died within two days of a septic peritonitis, due to leaking at the back of the pylorus from splitting of its coats. No doubt in my anxiety to prevent recurrence of the narrowing, I had overstretched the tissues, but the surgeon will always be in this dilemma, of doing too little or too much stretching when employing this operation. In my opinion, therefore, Loreta's operation has been displaced by the next which I propose to consider.

(*b*) Pyloroplasty. This is an admirable operation in suitable cases of pyloric stenosis; that is, in stenosis which is not accompanied by any great thickening of the parts, such as occasionally simulates malignant growth: I do not think it a good operation when there is much adhesion over and around the pylorus binding the parts down. In simple uncomplicated stenosis I regard it as the operation of election, less risky, probably, than gastro-jejunostomy, and acting directly on the lesion. It is, however, an operation inapplicable in the conditions described previously under the headings *b*, *c*, and *e*.

(*c*) Gastro-jejunostomy may be considered as follows:

1. Anterior or posterior.
2. Suture or apparatus.
3. Simple approximation or special approximation.

Personally I have always performed anterior gastro-jejunostomy and never the posterior operation, and I am bound to say that I have often been tempted to resort to the posterior because of the frequent anxiety during the first few days following the anterior method, due chiefly to regurgitation into the stomach from the duodenum. No doubt this is to some extent to be controlled by the length of intestine intervening between the commencement of the jejunum and the anastomosis. It is also to be influenced by the position of the patient, but probably it is more dependent upon the condition of the colon as to distension than upon any other factor. I think I shall be tempted in the future to employ the posterior method, but it must always be borne in mind that whether the anterior or the posterior methods shall be employed is not always under the control of the surgeon, who may be compelled by adhesions or fixation to resort to one or the other of these method according to the conditions found.

Whether simple suture or some form of apparatus shall be employed will depend, perhaps, to some extent, upon the experience of the individual surgeon. The tendency at present is to resort to the simpler method of suture rather than to apparatus, but we owe a debt of gratitude to Senn, Murphy, Robson, and others for their efforts in providing means for the operation, which, at all events in the early days, encouraged surgeons to undertake it. Personally, I have generally used Murphy's button without any drawback, such as leaking around it or later ulceration, but in all cases the button has been retained, and this seems to be a general

for appendicitis. small renal calc only rarely is there any ill result from the descent, and any ne fatal case after the use of the button was a and not to any fault of the apparatus, and NEPHR of anastomosis was completed in fifteen

The use of th lesson the num , I have in the past used Halsted's inter- exploratory ne s for sero-muscular union with a continuous d finds not all the coats at the edge of the anastomotic open- so-called ding, and for extra security, but in future I pro hands h ploy the double row of continuous suture with I would interruptions commended by Terrier and Hartm be allo

The series e procedure in approximating the jejunum to the stomach is better in my opinion. If we resort to such a method ratical of Roux, known as the "méthode-en-Y" by implantation the a to the valvular method introduced by Kocher, we hich tedly run an increased risk of septic infection, and y fo me cases an additional risk of leakage afterwards. ion observations do not apply to Doyen's method, and, s s I know, his results are the best attained by the anterior ximation and by his special method of anastomosis, but CU are not better than the results recently described by Mr. H Robson with the posterior method, in which he uses the bobbin which he has devised. Study of the statistics of t operation leave one in as much doubt as ever which metho to adopt. The success attained by one or two individuals is ot the measure of the general usefulness or the safety of any particular operation. These are only to be judged by the results attained by the generality of hospital surgeons, who may be regarded as educated medical men and reasonably competent manipulators. At the same time it would be impossible to overestimate the value of the excellent results attained by Mr. Mayo Robson, who has published a series of 20 successful cases without a death, and by Doyen, who has—I quote from memory only—an exactly similar result. The curious thing is that the two operators who show this success have attained it by different methods—Robson by the posterior method and the use of his bone bobbins; Doyen by his own method of anterior operation.

It seems to me only possible to form the conclusion that one of the great factors in success is the experience of an individual operator in a particular method of operating. This is what has been observed in operative measures for other conditions.

The other great factor in success is the condition of the patients at the time of operation. If they come to us worn with years of pain and indigestion, anæmic, emaciated, with hugely dilated stomachs, how can we expect to perform gastro-jejunostomy with a small mortality when the subjects are often obviously bad ones for any surgical procedure? History repeats itself. The mortality of colotomy twenty-five years ago was appalling, now it is one of the safest of operations, with a mortality of probably not more than 5 per cent. Gastrostomy for stricture of the œsophagus has a similar history. In both cases the greatly diminished mortality is due to the relief given by earlier operations. To what is the mortality of operation for gall stone due? Mainly to delay in submitting the patient to surgical measures. It is the mortality of delay—delay which brings about suppuration in the gall bladder, impaction of stone in the ducts, ulceration into various parts. So it is with gastric ulcer and its complications and sequelæ.

Discouraging as the earlier results of gastro-jejunostomy were, they must not be accepted as representing the present position of the operation. By improved methods of attaining asepsis, and by improvements in the technique of the operation itself, the mean mortality collected from various operators is now about 20 per cent. when gastro-jejunostomy is performed for ulcer and its sequelæ. In the hands of individual surgeons who have had unusual experience of the operation, the mortality is decidedly lower than this, and may be reckoned at something between 5 and 10 per cent. I do not wish to labour this question of the mortality of the operation, but it is after all the prime test now by which it will be judged, for it has been placed beyond all question of doubt that the results in patients who recover are generally excellent; hæmorrhage, pain, and vomiting are brought to an end, nutrition is restored, and with it—most valuable of all to the majority of people—the power to take part in the

## SECTION OF SURGERY.

affairs of life, called, when we are pessi
for existence; at other and more equable
the highest privileges of existence. Th
mortality is, therefore, I submit, the grea
and the main purpose I had in view in sug
for this discussion was that by comparing
ferent surgeons working on different lines
late something more definite for future guic
when, and, secondly, as to how to operate.

To conclude my remarks, I would like to
my own fatalities after gastro-jejunostomy:
number. The chief factor in the death o
think I may fairly say, delay, and this w
shirk the responsibility which falls upo
performs unsuccessful operations throug
the powers of his patient. I show you
these cases.

Case I.—From a woman, aged 62, emaciate
gastric stasis, with a stomach so dilated that
pubes. Operation by anterior gastro-jejunosto
dense pyloric stenosis and adhesions, and d
day from pneumonia. Whilst I think poste
given a better emptying of the stomach, and
patient from the troublesome vomiting of th
ation, yet I have no doubt that the reduced
condition was the chief cause of the pneumo

Case II was a woman of 38, emaciated, and
ing and constant indigestion, with a lar
antrum pylori. The operation was quick
method with a Murphy button, without an
died on the third day from pneumonia.

Case III was a case of duodenal dilatatio
young man whose life had been for years a
and inability to earn a living for himself
ending in the degradation of a bad morphine habit. Operation was by the anterior method and by Halsted's suture; a fair recovery ensued until the fifth day, when a rapid fatality was brought about by rupture of the duodenum and leakage into the peritoneal cavity. Anyone examining the specimen will recognise that the extreme dilatation of the duodenum, with its walls thinned to the tenuity almost of tissue paper, might at any time have brought about this accident, but it was, no doubt, precipitated by the extra obstruction to the emptying of the duodenum which the anastomosis caused.

It is, then, I think, not unfair to say that delay in these three cases, before operation was resorted to, was the main factor in the production of the fatal results—in two from pneumonia, in the third from a local condition.

I trust it will not be thought unreasonable if I appeal to physicians and practitioners to submit their cases earlier to surgical interference, before their vital forces have been so lowered or the local conditions have become so difficult to deal with that what ought to be a reasonably safe procedure is converted into a risky one. The mortality of the early days of these operations as I have mentioned, is not the criterion of the present day. This mortality has been materially reduced, partly by those general measures which have done so much to exclude sepsis, and partly by improvement in the technique of the operation. Further, there is great gain in the improvement which follows the practice of any new procedure, familiarity with the details of which enables a surgeon to undertake it with greater safety to his patient. In making this appeal I do not mean in any way to condemn the conservative action of those to whom I make the appeal, an attitude which we all know is taken up in what is believed to be the interest of the patient, whose safety and advantage should always be—and I am glad to think in English practice is—the dominant consideration. I think, however, that the operations above mentioned are at the present time overshadowed by the dangers of earlier days, and from this it is our duty to endeavour to emancipate them.

### II.—George Heaton, B.Ch., F.R.C.S.,

Surgeon, General Hospital, Birmingham, and the Birmingham and Midland Counties Hospital for Sick Children.

Mr. Heaton said: In making a choice between pyloroplasty and gastro-jejunostomy in non-malignant pyloric stenosis, much will depend upon the condition found on opening the abdomen, and we must be prepared to perform either operation.

When the condition is due to inflammatory thickening in the pyloric wall, or to scarring of its internal coats due to the healing of an ulcer, pyloroplasty seems the ideal operation. The normal orifice is enlarged by it, and there seems but little tendency to recontraction of the opening, besides which,

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d those dependent on him,

astics gathered by Kammerer, it would seem to
ation of less risk than gastro-jejunostomy. But
s not infrequently the case, the pylorus has con-
too large adhesions to neighbouring structures and is bound
life in by thick perigastric bands, gastro-jejunostomy will, in
my opinion, be followed by the best results, and should be
performed. Gastro-jejunostomy as an operation has, in my
opinion, a great future in front of it. The improvement
which takes place in a patient's condition after a successful
operation is frequently marvellous. As regards the operation
I should like to say two words.

First, as to the position for making the artificial opening. By von Haecker's posterior method, it is true that the opening is more dependent whilst the patient is at rest in bed, and the jejunum is not brought round the great omentum and transverse colon. But, on the other hand, it is an operation which involves a much greater exposure of the parts, it needs considerably longer time for its performance, and, if the method of simple suture be employed, it is more difficult to effect a water-tight junction.

Anterior gastro-jejunostomy is a much simpler method, can be performed much more quickly, and in consequence has a lower mortality, and in cases where the stomach is at all fixed and cannot be brought out of the abdomen it is the only method possible.

Mikulicz, after an extensive trial of von Haecker's method, has resorted to the anterior method. In the erect position of the patient I believe the opening can be made as dependent by it as by the posterior method, and in my seven gastro-jejunostomies I have never seen any kinking of the jejunal loop.

As regards the mode of union I have up to the present always employed Murphy's metallic button. It has, I know, disadvantages. The button frequently drops into the stomach. The opening made is necessarily a small one, and it may cause trouble in its passage down the intestine; but on the other hand it is a very rapid, simple, and easy method. There is little or no shock, and there is less liability to contraction of the artificial opening than after simple suture, because portions of both intestinal and gastric walls have been destroyed by the pressure of the two halves of the button. I believe that accidents in its use may be avoided by first of all studiously avoiding the cheap foreign buttons which are constantly offered us, in which the spring is defective: and in, secondly, fixing a considerable length of jejunum to the stomach wall by supporting sutures to prevent kinking of the loop.

Regurgitation of intestinal contents into the stomach is sometimes a troublesome symptom for the first two or three days. This may usually be avoided by position of the patient, who should lie with his shoulders raised on an inclined plane.

I do not at present know of any method of ensuring that the button shall when loose drop into the jejunum rather than the stomach. Fortunately, however, little if any harm results if it falls into the stomach. I have at the present moment three patients, upon whom I have performed the operation, going about with the buttons in their stomachs, one of whom, if it is not yet dissolved by the gastric fluid, has done so now without the slightest inconvenience for three years.

As to the indications for gastro-jejunostomy in cases of gastric ulcer much difference of opinion would seem to exist even among those best calculated to form a definite judgment. In uncomplicated cases, however long the case may have lasted, and however acute the patients' sufferings may be, we have perforce to hesitate before we recommend or urge an operation, the direct mortality of which considerably exceeds the direct mortality of uncomplicated cases of ulcer; but we may advise—nay even urge—a well-timed gastro-jejunostomy in any of the following conditions associated with ulcer:

1. When the healed or healing ulcer is producing pyloric stenosis and symptoms of dilatation of the stomach are beginning to make themselves manifest.
2. When the ulcer, in spite of continued medical treatment, is rendering the patient a confirmed invalid.
3. In cases of severe and repeated attacks of hæmatemesis from an ulcer of long standing.

4. In cases of hour-glass contraction of the stomach, where the cicatricial contraction is near the pyloric orifice, gastro-enterostomy is undoubtedly the operation of choice.

Carcinoma of the pylorus is unfortunately one of the most frequent and evident causes of pyloric stenosis.

The radical operation of pylorectomy is unfortunately rarely performed on the question in the majority of these cases. Before our diagnosis is sufficiently certain to justify operation the disease has usually made such strides, and the lymphatic infection is so advanced that total removal of the mass is impossible. It is only quite recently being recognised what an excellent palliative measure a well-timed and executed gastro-jejunostomy is in such cases. Much of the agony of cancer of the stomach is due to the obstruction which the growth presents to the free exit of the stomach contents through the pylorus, and also to the gastritis set up by the retained food and breaking down portions of the growth. The artificial opening afforded by gastro-jejunostomy is a dependent one when the patient is erect, and effectually drains the stomach. Food is no longer retained in the organ but is carried away early into the jejunum, and the growth itself, if the opening be made well away from the pylorus, is much less irritated by food.

I am sure from personal experience that a well-timed gastro-jejunostomy is in these cases the most effectual means we possess for alleviating our patient's sufferings, and I look forward to the time when it will be the recognised method of treatment in all cases of pyloric cancer not amenable to complete removal.

### III.—LEONARD A. BIDWELL, F.R.C.S.,
Surgeon, West London Hospital.

MR. BIDWELL said: I think that it will be of interest to the Section if I briefly analyse my cases of operation for dilatation of the stomach, the consequence of gastric ulcer. I find that I have operated in 14 such cases, out of which 8 were cases of cicatricial contraction of the pylorus, in 2 the dilatation was due to adhesions, and in the remaining 4 the dilatation was due to spasm of the pylorus from the presence of a gastric ulcer. (See Table, p. 1143.) The operations performed were pyloroplasty three times, gastro-enterostomy four times, Loreta's operation once, dilatation of the pylorus by invagination twice, and separation of adhesions twice. No case died from the effects of the operation, but one patient, who was extremely emaciated and exhausted beforehand, succumbed five weeks after the operation; with this exception all the cases are now alive and well.

The necessity for operation in cases of stenosis of the pylorus from cicatricial contraction does not now admit of discussion, the only point is that it should not be left till too late. I should like, however, to draw your attention to a class of cases in which the dilatation is due to spasm of the pylorus, whether the result of gastric ulcer or not. In all my four cases an ulcer was present, but precisely the same condition may occur independently of ulcer. It is now, I think, generally admitted that the presence of a gastric ulcer, in whatever part of the stomach it may be situated, causes an increase in the amount of free hydrochloric acid in the gastric juice, and that this excess of acid can produce spasm of the pylorus. The continuance of the spasm is sufficient to cause the initial stage of dilatation, and when this has occurred, the inability of the stomach to empty itself causes decomposition of the residual contents with consequent chronic gastritis and further dilatation, which will continue even after the original spasm and its cause have passed off. This will explain those cases of so-called idiopathic dilatation of the stomach, where there is no cicatricial contraction of the pylorus, and where at an operation only a cicatrised ulcer in some remote part of the stomach is found.

Of course it is a difficult matter to decide when an operation should be done in cases of gastric ulcer; much depends upon the surroundings of a patient—if in comfortable circumstances, medical treatment will probably be effectual in the greater number of cases, but amongst hospital patients who cannot lie up, and who are unable to take proper precautions as regards diet, a gastric ulcer is frequently incurable without operation; sometimes, too, it is more easy to persuade a patient to submit to an operation than to undergo two or three weeks starvation and nutrient feeding. The class of case in which I recommend operation is one in which there is constanding dilatation and pain, which is not for appendicitis. [illegible] means, including lavage, and in which an small renal calc[illegible]rochloric acid is found in the stomach condescent, and any[illegible]dially in a case where the symptoms abate [illegible]atment, but recur immediately the patient

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The use of th[illegible] operation rests between gastro-enterostomy, lesson the nu[illegible]id digital dilatation of the pylorus. In cases exploratory ne[illegible]tion is undertaken during actual ulceration, [illegible]d finds noth[illegible]o-enterostomy when the ulcer is situated close to [illegible]so-called [illegible]nd a pylorolasty when the ulcer is situated in a d[illegible]d hands h[illegible] the stomach. When the dilatation has been caused [illegible] I would [illegible] of the pylorus, and is not of long standing, and es[illegible] be allo[illegible]en the contraction of the pylorus is not considerable[illegible]series [illegible]may be effected by dilating the pylorus by invaginat[illegible]geons t[illegible]nterior wall of the stomach through the pylorus wi[illegible]atical[illegible]ger. It is wonderful how small a pylorus can be dilat[illegible]th[illegible]is method. I have done this operation in two cases w[illegible]ar[illegible]hic[illegible]ess. When the stenosis is considerable and the pylor[illegible]y fo[illegible]ctically replaced by cicatricial tissue, I do not think [illegible]sion [illegible]ther digital dilatation or pyloroplasty should be perfor[illegible]but that gastro-enterostomy is the best operation.

Although last [illegible]CU[illegible] I spoke strongly in favour of pyloroplasty, my views h[illegible] been rather modified by seeing a lady who had undergo[illegible]e operation of pyloroplasty a year before, and in whom [illegible]firm[illegible] dilatation of the stomach had recurred. On reopening the a[illegible]tmen, I found that the pylorus had contracted so much th[illegible]o a probe could scarcely pass through it; I accordingly perfo[illegible]med a gastro-enterostomy with a successful result. One alle[illegible]ged objection to pyloroplasty is that valvular folds are formed below the new opening; another, which is a real one, is that in cases of long-standing dilatation the new opening will not be at the lowest point of the stomach, and so the organ will not empty itself.

With regard to the technique of gastro-enterostomy, at first I practised the posterior method, in the belief that the anastomotic opening would be at the lowest point of the stomach; as a matter of fact, however, after an anterior operation, if the opening has been made near to the lower border of the stomach, the anastomosis, being movable, will become the lowest point of the stomach by dragging the anterior wall of the organ downwards; on the other hand, the posterior anastomosis being fixed to the transverse mesocolon, will not be the lowest point of the stomach in the erect position when the organ is distended; I found this point pretty clearly demonstrated in a case in which I performed a second operation. My last eight cases have been done by the anterior method, care being taken to attach the jejunum in a slanting direction to the anterior wall of the stomach and to ensure that the gastric contents shall enter into the efferent portion of the gut; I also encourage the patient to sit up at an early period. In performing the anastomosis, I have used nothing but sutures, employing the method recommended by Halsted; in no case has there been any leakage at the anastomosis. I should like to enter a protest against the use of Murphy's button in gastro-enterostomy, since if the anterior operation be performed, it is almost certain the button will fall back into the stomach, and I have myself seen several subsequent operations undertaken for the removal of the retained button; in a case of active ulceration, it is difficult to imagine anything more likely to irritate the ulcer than a Murphy's button being continually churned against it. Finally, I do not think that the opening left after a button is so large as that left after a Halsted's operation. Results: The mortality after operations in these cases seems to vary between rather wide limits, namely, between 5 and 20 per cent.; in my cases it was about 7 per cent. In comparing the mortality after operation with that of gastric ulcer generally, we must remember that a considerable number of cases, discharged by the physicians, are not cured; thus though in von Leube's statistics the mortality was only 2.4 per cent. still a further 21.6 per cent. of the cases were not cured.

With regard to the subsequent results of these operations I will briefly refer to those cases which have been operated on over a year ago; these are seven in number on six patients. One case of Loreta's operation, performed six years ago, is still quite well, and has had no further dilatation of the stomach, nor any pain. Of the four cases of pyloroplasty

SECTION OF SURGERY.

| No. | Date. | Name. | Age | Operator. | Disease. | Operation. | Result. | Remarks. |
|---|---|---|---|---|---|---|---|---|
| 1 | Jan. 3, 1897 | Mrs. M. | 39 | W. L. H. | Cicatricial | Gastro-enterostomy | R | *Vide* No. 5. |
| 2 | June 5, 1897 | F. | 40 | W. L. H. | Adhesions | Separation of adhesions | C | |
| 3 | Feb. 7, 1895 | Mr. Thos. S. | 54 | W. L. H. | Cicatricial | Loreta's operation | C | |
| 4 | May 19, 1899 | Mrs. E. | 62 | Private | " | Pyloroplasty | C | |
| 5 | Nov. 15, 1899 | Mrs. M. | 42 | W. L. H. | " | " | C | *Vide* No. 1. |
| 6 | Jan. 20, 1900 | Mrs. G. | 56 | W. L. H. | " | " | C | |
| 7 | May 16, 1900 | Mr. A. V. B. | 49 | W. L. H. | Spasm of rapid, and | gastric ulcer | " | C |
| 8 | Oct. 10, 1900 | Mrs. S. S. | 20 | W. L. H. | Cicatricia | the perigm adhesion to gumma of liver | " | C |
| 9 | Dec. 22, 1900 | Mrs. P. W. | 28 | Private | Cicatric | after pyloroplasty | Gastro-enterostomy | C |
| 10 | Feb. 22, 1901 | Mr. B. | — | W. L. H. | Spasm | id ulcer | Dilatation by invagination | C |
| 11 | April 9, 1901 | Miss R. | 26 | Private | Cicatri | tion of pylorus after ulcer | Gastro-enterostomy | R | Died 5 weeks later. |
| 12 | May 6, 1901 | Mrs. C. | 58 | W. L. H. | Large | mach; spasm of pylorus | " " | R | |
| 13 | Dec. 20, 1900 | Mr. D. J. R. | 30 | W. L. H. | Gastr | pasm of pylorus | plasty Dilatation by invagination | C | |
| 14 | Feb. 28, 1901 | Mr. M. | 42 | W. L. H. | Gastr | ion after gastro-enterostomy and pyloro- | Separation of adhesions | C | |

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and the abdominal wall, these w
dissected from the parietal peritoner
raw surface of the stomach: the case

In only one case was gastro-enter
performed previous to 1900, and in
returned after two years good health.

## IV.—Sinclair White, F.R.C.S.,

Surgeon, Sheffield Royal Hospital.

Mr. Sinclair White said: My experience extends to seven cases and eight operations for non-malignant pyloric obstruction. All were chronic cases of many years duration, and two of them had suffered from gastric tetany of an alarming type. Pyloroplasty was performed on two patients in one with complete success and in the other with failure to relieve the symptoms, the cause of failure being a rudimentary duodenum which barely admitted the tip of the finger after the bowel had been slit up for 1¼ inch. Gastro-jejunostomy was resorted to six times, one of the cases being the unsuccessful pyloroplasty. All six recovered from the operation and were greatly benefited. The anterior method of implantation was adopted in every case, and in two patients whose condition was critical and the time element of importance the anastomosis was effected by the aid of a Murphy's button, which was not subsequently recovered in either case. In four cases the anastomosis was made by simple suturing, each operation, in its entirety, occupying one hour, while the button cases were completed in half this time. Where the pylorus is the seat of an annular constriction without much thickening, and where with this condition it is possible to bring the pyloric end of the stomach and the commencement of the duodenum outside the abdominal wound, pyloroplasty is and must remain the ideal operation. On the other hand, experience has shown that it is quite inapplicable to some forms of pyloric obstruction, such as kinking from intractable adhesions and deformed conditions of the duodenum, while in a still larger group it is difficult to perform and liable to be followed by relapse. Gastro-jejunostomy—and it is only with it that pyloroplasty need be compared—is applicable to every case of pyloric obstruction, can always be effected through healthy tissues, with the parts concerned withdrawn from the abdomen and carefully isolated from the general peritoneal cavity by suitably-placed gauze, gives quite good results when successful, has fewer failures and no higher death-rate than pyloroplasty, and for the majority of cases of pyloric obstruction is the better operation.

## V.—C. A. Morton, F.R.C.S.,

Professor of Surgery, University College, Bristol; Surgeon, Bristol General Hospital and Bristol Royal Hospital for Sick Children and Women.

Mr. Morton said that although he had only one case of gastric ulcer to bring forward in connection with the discussion, the benefit from gastro-jejunostomy had been so striking that he thought it was worth recording. For seven years a man, aged 42, had suffered from symptoms of gastric ulcer. Months of gastric pain and vomiting had alternated with months in which only a little pain had been present. Hæmatemesis first occurred five years ago, and twice since. The patient had been greatly emaciated and quite unable to carry on his business. He had had the best possible treatment short of operation, for he had been under the care of a physician in a large hospital. Mr. Morton found an ulcer involving the lesser curvature and posterior aspect of the stomach, too large to resect, and did posterior gastro-jejunostomy with Murphy's button. The patient made a good recovery from the operation, and now, eighteen months after the operation, had had no return of his gastric symptoms.

## VI.—Rutherford Morison, F.R.C.S.,

Surgeon, Newcastle Infirmary.

Mr. Rutherford Morison said that Mr. Gilbert Barling's views were so entirely his own that little had been left for him to say. In stating the causes of death in gastric lesions, Mr. Barling had omitted mention of sudden heart failure. Dr. Bramwell's case related the previous day died suddenly. Mr. Morison had performed pyloroplasty 22 times before any death occurred from the operation; but 2 of his patients, so far as could be judged in no way worse than many others, suddenly died the day before that fixed for operation—a fortunate experience.

The question of when and how to operate in gastric hæmorrhage was a difficult one. In any ordinary septic wound, such as a gastric ulcer might be, if bleeding occurred a serious state of matters was suggested. If bleeding recurred a radical attempt for its arrest was demanded. That rule did not appear to apply to gastric hæmorrhage, but why it did not was difficult to say.

Mr. Angus, his colleague, who had operated with success, concluded that if after vomiting a quantity of bright red blood (showing lesion of a large vessel), as soon as the patient was recovering from shock more bleeding took place, the stomach should be opened without delay, and the bleeding area, if possible, dealt with by ligature. This was the only useful suggestion he had heard of, but it was not always easy to effect. In such a case he had opened the stomach freely, and failing to find the bleeding point had done pyloroplasty. The patient did well for two days, then died of perforation peritonitis. *Post-mortem* examination showed two small ulcers the size of threepenny-pieces, one of which had perforated; both were in the posterior wall of the stomach, near the cardiac orifice, and they were practically inaccessible.

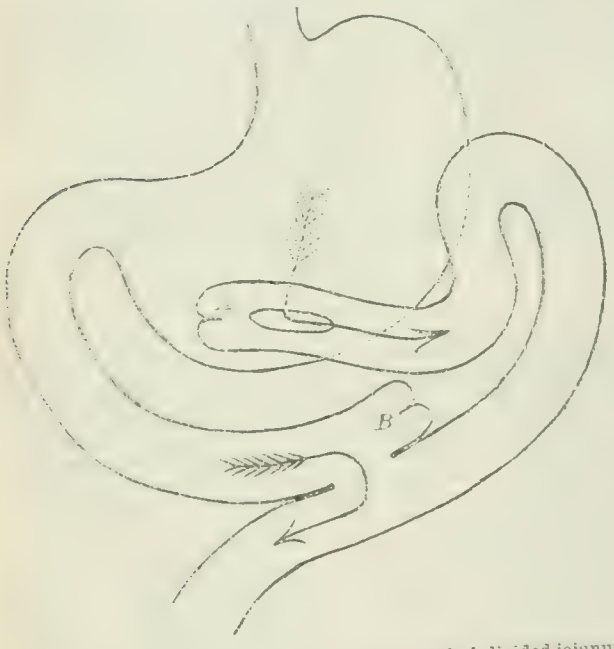
Everyone, he thought, would accept the conditions laid down as calling for operation.

He was interested to hear from Mr. Barling of the case in which a diagnosis of gall stones had been made so definitely that operation was undertaken, for he had met with similar mistakes. He thought from examination during operation that patients with these symptoms had an active ulcer at the pyloric orifice which was sufficiently obstructed to produce hypertrophy of the stomach walls and contraction rather than dilatation of its cavity.

With regard to adhesions as a cause of sympt[om]med, w[e]nt's evid[e]ver tirely agreed with Mr. Barling that operations for th[e] ar[e]y— were likely to be disappointing. Some cause for [re]d on usually gall stones or gastric ulcer—should be looked [f]ch and when found dealt with, otherwise the operation shou[ld] be regarded as incomplete.

With regard to dilatation of the pylorus he agreed with Mr. Barling that the operation from within had served a useful purpose, but was now obsolete. If any operation was required the stomach should be opened to allow of examination of its interior, and the propriety of pyloroplasty or gastro-jejunostomy should then be determined upon.

With regard to the choice of an operation his feeling was even more in favour of pyloroplasty than that expressed by Mr. Barling, for the special danger of gastro-enterostomy, regurgitation of intestinal contents into the stomach, with some form of toxæmia, made him chary of performing it unless this was unavoidable. So strongly had this factor, which made the result independent of the operator, impressed him that he had invented an operation to overcome it. This




A. Distal end of divided jejunum; B, proximal end of divided jejunum

had been successful so far as regurgitation was concerned, but was followed by a high mortality from shock (8 cases, 4 deaths). He had not found that either anterior or posterior operations escaped regurgitation, and it had occurred to him after the use of buttons, plates, and sutures, so that he avoided gastro-jejunostomy when he could. His preference was for sutures, and he thought the most simple and sure was of his own invention - namely, a continuous suture through all the coats inside and an interrupted row of Lembert sutures outside, both of catgut.

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VII.—J. PAUL BUSH, C.M.G., M.R.C.S.,

Surgeon, Bristol Royal Infirmary.

MR. BUSH expressed the opinion that the operation of simply stretching the pylorus would gradually be less frequently performed. In the cases of gastro-jejunostomy which he had performed he had chosen the posterior operation, although it took considerably more time than the anterior. He did not advocate the use of Murphy's button in cases where there was ulceration of the stomach. He attached great importance to early operation.

for appendicitis. [—] R. H. PARRY, F.R.C.S.Edin.,
small renal calc[—]on, Victoria Infirmary, Glasgow.
descent, and any[—] the histories of two cases of gastric dilata-
[—]pyloric stenosis, and treated by pylorectomy.
NEPHR[—]es the matting of the pylorus, gall bladder,
The use of th[—]endered it necessary to remove the whole of
lesson the nu[—]. Both cases made an excellent recovery. Mr.
exploratory ne[—] that a modified pylorectomy should find a
[—]nd finds noth[—]loroplasty and gastro-jejunostomy.
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## AN[—]ON FOR PERFORATED GASTRIC ULCER:

[—] I would [—]
[—] be allo[—]s t[—]
series G[—]ACCOUNT OF THREE SIMILAR CASES IN
w[—]geons [—]ER GLOUCESTERSHIRE.
[—]gratic[—]n.

By [—]n th[—] BAGOT FERGUSON, M.D., B.Ch.,

Surgeon, Chelt[—]hic[—]eneral Hospital; President of the Association.

ON Good Friday fo[—] about 3 P.M., I was sent for to see a parlourmaid, E[—]ion [—]aged 25, whom I had seen a few times previously, suffe[—]rom pains in the stomach. On Good Friday these amo[—]to agony. She had vomited, and was lying writhing at[—]CU[—]baning, with the pale cheeks, sunk eyes, and dark lips. H[—] collapse. Realising the probability of gastric perforation [—] her into the hospital at once. There we ascertained that [—]rn[—]pain was mostly epigastric, but passing to the right side [—]well; that the abdomen was as hard as a board, and that [—]ver dulness had vanished.

My colleagues, Drs. [—]ilson and J. W. Bramwell and Mr. Buckell, coinciding with my view of the case, an operation was undertaken about three hours after the perforation.

A mesial incision was made, beginning just below the ensiform cartilage. The liver and stomach came quickly into view, air and fluid bubbled out, and it was evident that some of the contents of the stomach had passed into the general cavity of the abdomen. The perforation was speedily found on the posterior surface, to the right of the œsophagus, and about 2 inches below the lesser curvature. The lesser omentum was adherent and perforated, and no difficulty was experienced in getting to the back of the stomach. The circular hole was about half an inch in diameter in the centre of an induration, of the size of a florin.

The question of excision or suture at once arose, and the latter was decided on in consequence of the collapse of the patient. The suturing was not difficult with a small curved needle and simple holder. Lembert sutures of silk were employed, emerging and re-entering quite close to the hole. About ½ inch was so inverted. Then another and bolder row, also of Lembert suturing, about 2½ inches long, enclosed the first, and what omentum could be reached was tacked outside of all. No general washing out was practised, though the chymous fluid was carefully wiped away as far as practicable. The parietal wound was closed by a single row of silkworm-gut stitches and no drainage was attempted. The operation took about half an hour. The dressings were of cyanide gauze and wool, and were left untouched for a week, when the wound was found well healed. She vomited at intervals for a few days after the operation, rejecting a bilious fluid, otherwise her recovery was uneventful. For fourteen days she was nourished by enemata alone, 5 ounces of beef tea and 1 ounce of brandy alternating with 6 ounces of peptonised milk. These were injected alternately every two hours during the day and every four hours during the night. A saline injection was given occasionally for thirst, and the rectum was washed out once in every twenty-four hours. After fourteen days she was allowed, in addition to the injections which were gradually discontinued, 8 ounces of arrowroot and milk daily by the mouth, and later rusks and milk and beef tea. She owes her recovery very largely to the unremitting care of the house-surgeon, Mr. R. Armitage, and of the sister of the ward.

This case, the second of the kind done in Cheltenham, has been the first to recover. The credit of first performing this kind of operation in Cheltenham must be given to our Honorary Local Secretary, Mr. G. A. Cardew, who all but saved his case, the daughter of one of the most esteemed members of our Branch, in fact, only lost her on the ninth day, to the great sorrow of a large and expectant circle. His operation was done seven hours after the accident. But the credit of correctly diagnosing perforation and of first performing the operation in Gloucestershire must be given to Mr. A. B. Davies, of Stroud. His operation was done between two and three years ago. His advice of an immediate operation was declined, though it was uselessly desired and performed twelve hours later when the patient was moribund. The one other success, so far, in Gloucestershire, goes to that able abdominal surgeon, Mr. Washbourn, of Gloucester. His operation was done last year, eight hours after the perforation. The opening of the ulcer was on the anterior surface. Two rows of Lembert sutures were used, and the abdominal cavity was cleansed with several gallons of hot water. Mr. Washbourn's patient was fed by enemata, 4 ozs of peptonised milk every three hours for nineteen days. We may thus claim in Gloucestershire 4 cases and 2 successes.

The great difficulty is to get the operation d[illegible]h rest induces, and The accident is often rapidly fatal, and sever[illegible] the best means of been called in to find the patients dying or[illegible] quite a common accident, though I feel sure t[illegible] promptitude and decision many lives might ha[illegible] S., and many will be hereafter.

The operation cannot be said to be properly[illegible], Surgeon, General yet, though it is high time that it should be.

Medical Journal contained no cases of the k[illegible] habit of folloid only two by Mr. Robert Jones, of Liverpool, [illegible]ommended [illegible] of these, done three hours after the accident, rapid, and [illegible]ful; the other, done fourteen hours afterwards, [illegible]e the perio[illegible]essful. The whole of 1900 supplied only 4 cases to th[illegible] cases the[illegible], three of them by Mr. Lace, of Bath, and all happ[illegible] did not [illegible]ful. No doubt there have been many other cases t[illegible] was in fever been published, and in fact I know of at least a[illegible]y was gy Taking the surgery of the whole world for 1897, as de[illegible]s after t *Hildebrand's Year Book*, I find only 18 cases, 12 successful jo[illegible]and 6 deaths. The most remarkable of this series are t[illegible]ee cases of Le Dentu, who finding twice that his sti[illegible] would not hold contented himself with simple tamponi[illegible]G.. [illegible]d draining, and saved both his patients, losing in fact [illegible]urer[illegible]e only where the stitches did hold, and in which he c[illegible] Bristquently closed the wound. This tallies with analogous [illegible]day[illegible]ences of my own, where meeting with pus and intestinal [illegible]tion[illegible]foration I have kept a large wound open, and have been m[illegible]ho[illegible] than once rewarded by perfect, if slow, recovery. There [illegible]ms to be a common idea that gastric perforation is specia[illegible] common behind. The truth is that ulceration is specially c[illegible]mon behind, but not perforation. According to Brinton [illegible] per cent. of the perforating ulcers are in front, 21 per cent. near the lesser curvature, and only 9 per cent. behind. It will be conceded that ulceration of the stomach is very common. Von Leube[1] writes that he has seen 1,000 cases in the last ten years, and twice as many women with it as men. These figures agree with those of Brinton, though Crisp gives the proportion of women as three to one, and Willigk as six to one. The mortality of von Leube's cases was slightly over 2 per cent., rather under 1 per cent. from bleeding, and rather over 1 per cent. from perforation. Willigk gives the mortality as 3 per cent. (308 cases), and Dr. Walter Broadbent[2] at 6 per cent. (also from 308 cases). We may say, therefore, that the mortality of gastric ulcer varies from 2 to 6 per cent., the latter being a formidable figure.

Certainly perforation cases are quite numerous and the object of this paper is to urge that not one of these should be allowed to sink without an effort being made to save it. In my presidential address to our local branch not long ago I wrote, "We must not, if we can help it, allow any more of our patients to die of perforated gastric ulcer," and it is a matter of great happiness to me to think that I was not long afterwards permitted to practise my own precept.

In case of doubt a careful incision can do no harm and will probably relieve pain, even if no perforation is found, and I have twice known such a diagnostic incision made and no harm was done, though unperforated ulcers were located in both instances.

If an operation is done the patient's chances are really excellent. Summing up all the cases and tables known to me they yield no fewer than 41 recoveries in 110 cases, or rather less than 2 in 5. If we in Gloucestershire have operated on 4 cases in between two and three years and saved 2 of them, we may feel very sure that there are many more cases occurring every year, than the Journal gives us any cognisance of, which are either unrecognised or left to take their chance, through the mistaken fear that the operation is difficult or dangerous. Only delay is dangerous and simple incision and gauze packing, if nothing more can be effected, would save many a life, and it is in the hope that our recent experience in Gloucestershire may encourage country members to go and do likewise that I have contributed this short paper.

Since writing the preceding I have been at pains to inquire as to the date of the first successful operations of the kind, and here I would wish at once to express my obligation to one of our vice presidents, Mr. Gilbert Barling, and to the librarians of two of our great medical societies for their assistance in this inquiry. The earliest operations mentioned by Mr. Barling in his admirable Ingleby lectures are those of Parsons[3] and of Kriege,[4] the last being the earliest successful Barling's list. There can be little doubt that too large[illegible]2 there were very few successes to report,[5] though life matter of fact Mikulicz, of Breslau,[6] had actually [illegible]ined one success as early as 1885. This then is the result [illegible]my inquiry that the first success must be credited to [illegible]ikulicz in 1885, and the second about seven years afterwards to Kriege in 1892. Since then successful cases have been fairly frequent. Among the earliest of these were the cases of Gilford, Morse, Bennett, Maclaren, Nicholson, and Towers in 1894, and of Lundie, Paul, Dunn, and Silcock in 1895.

References.

1 *Archiv für klinische Chirurgie*, Bd. lv, Heft 1. 2 British Medical Journal, October 30th, 1897. 3 *Dublin Journ. of Med. Sci.*, 1892. 4 *Berl. klin. Woch.*, December, 1892. 5 *See* Terrier and Hartmann's *Chirurgie de l'Estomac*, 1899, p. 361. 6 *Volkmann's Sammlung*, No. 262, 1886.

Mr. Murphy thought that statistics showed that the results in such cases depended to a very large extent on how soon after the accident the operation was done. He mentioned one successful case of his own operated on within three hours after the perforation and two unsuccessful cases in which there had been considerable delay.

Mr. D'Arcy Power had reason to think that this class of case was more common now than a few years ago.

Mr. Barling congratulated Dr. Ferguson on the success of his operation. He thought that the procedure carried out was now recognised as the best—that was, suture of the ulcer, sponging of the peritoneum in preference to flushing, and closing of the abdomen.

## THE TREATMENT OF CANCER OF THE BREAST BY OÖPHORECTOMY AND THYROID EXTRACT.

By George Thos. Beatson, B.A.Cantab., M.D.Edin.,
Surgeon Glasgow Western Infirmary and Glasgow Cancer Hospital.

It was in May, 1896, that I brought before the Medico-Chirurgical Society of Edinburgh some cases of inoperable carcinoma of the female mamma which, for reasons fully given at the time, I had treated by removal of the uterine appendages, combined with the administration of thyroid extract, and in which I obtained some results of an interesting and encouraging nature. Being responsible for the introduction of this treatment, I have felt I should like to offer some remarks upon it in view of the experience that has been gained both by myself and others during the five years that have elapsed since it was first adopted, experience which, I am glad to say, has been in the main confirmatory of what was noted in my first cases. What the effects are that have been observed to follow this procedure will, I think, be best illustrated by briefly narrating a case.

On October 8th, 1900, I saw in consultation with her medical attendant a lady, aged 44, for a swelling and hardness of the right breast which had existed for a year and a-half.

An examination of the right mamma showed the local conditions to be most unfavourable. The breast was very much enlarged, and stood out from the chest wall with a fixed immobile look. It had a tense and glazed appearance, while the skin all over it was of a dusky-red bluish colour, and seemed as if it was on the point of ulcerating. The projection of the nipple was gone. To the feel the mamma was dense and firm, with a certain amount of elasticity in the tissue, but it could still be slightly moved on the chest wall. Enlarged glands could be felt in the right axilla, above the right clavicle, and as far up as the posterior border of the right sterno-mastoid muscle. In the left mamma there was a suspicious mass, and an enlarged gland was present in the left axilla. With such extensive local disease and glandular implication I was prepared to find evidence of visceral mischief, especially in the liver, which experience has shown me, is most commonly and, indeed, sometimes very early attacked in carcinoma of the right breast, owing to the lymphatic distribution connected with it. Careful physical examination, however, could detect no hepatic or pulmonary invasion, and the patient's general condition seemed in every way satisfactory as regards the digestive, circulatory, and respiratory systems. Her medical attendant reported that the urine was free from albumen and sugar, and that the patient was still menstruating regularly.

The diagnosis of the case seemed clear. The clinical history and symptoms pointed to carcinoma of the breast, and of a type that was progressing with some rapidity. I was of opinion that local removal of the disease was out of the question, but I regarded the case as one favourable for the treatment by oöphorectomy and thyroid extract, looking to the patient's age and the absence of any apparent visceral complications. After full consideration of the matter by the patient and her immediate relatives, and a clear explanation of the exact position of the treatment proposed, it was decided by her to undergo the operation, which was done on October 28th, immediately after a menstrual period. Both ovaries were found to be cystic.

At the operation a small portion of the breast tumour was removed, with evidence of an actively-growing carcinoma. The patient made a good recovery from the operation, and after November 7th she commenced to take thyroid extract beginning with 5 grs. daily, and increasing it afterwards to 15 grs. She remained under the care of her own medical man, who reported to me from time to time the progress of the case. It is unnecessary to give these reports in detail. They continued to be favourable, and they indicated changes in the carcinomatous tissue similar to what had been noted in previous cases so treated. These consisted in diminution of the vascularity of the growth, shrinkage in the size of the tumour, and disappearance of the glandular swellings. It was observed that these changes showed themselves soon after the operation. The general health, too, was reported as good. On April 28th, six months after the operation, I visited the patient with her medical man, and I then found locally a very interesting and indeed remarkable state of matters. The large and tense mamma that was previously covered with dusky skin, and that seemed on the verge of ulceration, had practically disappeared, and its place was taken by a small, dense, flattened, cicatricial mass, which lay on the thoracic wall with the nipple in its centre. Close round it were still a few pea-like hard nodules, but the skin generally on the adjoining thoracic wall was free from disease, and what struck me as most remarkable was the entire disappearance of the glandular enlargements previously noted. The suspicious mass in the left mamma was scarcely to be felt, and there was no longer any enlarged gland in the left axilla. I noticed that the atrophy of the left breast was not in proportion to that of the right one. No evidence of any visceral disease could be detected, but complaint was made of pain in the back, which, of course, may be of serious import. In other respects the patient's general health was good, and she had been able to take a good deal of active exercise.

Altogether the condition of matters was very satisfactory as regards the progress of the mammary carcinoma, and what had happened was contrary to one's general experience of that disease. So much impressed was the medical man with the series of changes observed, that in one of his letters to me he made use of the expression "this seems like a romance," and he fully recognised the importance of the step I took, namely, of securing a bit of the tissue of the affected breast for microscopical examination. Had I not done so many would have called in question the correctness of the diagnosis of mammary carcinoma.

That I am not alone in obtaining such results the published work of other surgeons shows. As illustration of this I cannot do better than briefly refer to the case published by Dr. Herman in the *Lancet* of June 11th, 1898.

It was that of a lady, aged 46, suffering from recurrent and inoperable carcinoma of the breast. In January, 1897, Sir Frederick (then Mr.) Treves did a tentative operation. He found masses of cancer surrounding the axillary vessels, and a mass also, the size of a cherry, above the clavicle close to the subclavian vein. These masses were so extensive that their removal would only have been possible by amputation of the whole upper extremity with the pectoralis major, in which also there were nodules. This was not done because it was not certain that even this would have made it possible to remove the disease. On March 1st of the same year (1897) oöphorectomy was done by Dr. Herman, and subsequently the administration of thyroid extract was carried out. On September 28th, about seven months later, the patient was examined by Sir Frederick Treves and Dr. Herman, when the cancer masses in the axilla and above the clavicle were found to be gone, and all that remained was a nodule in the skin about the size of a pea, and which was probably a neuroma. The patient had also gained 8½ lbs. in weight. I think that Dr. Herman was justified in the expression that he used in his letter to me about the case when he said, "the result has been wonderful." This patient, I understand, still continues well.

Did time permit I should like to refer to the confirmatory experience of other surgeons, but I cannot do so, and I must content myself with a mere reference to such men as Mr. Watson Cheyne, Mr. Stanley Boyd, Mr. Lockwood, Mr. Eve, and Dr. Herman, all of whom have so kindly interested themselves in the procedure, and have given it a fair and impartial trial. To Mr. Stanley Boyd especially I feel indebted for the earnest advocacy and conscientious consideration he has brought to bear on the matter.

Taking it then for granted that it has now been satisfactorily established by independent evidence that the course of carcinoma of the female breast is in some cases affected by oöphorectomy and the administration of thyroid extract in a manner that is, as Mr. Watson Cheyne puts it, very "striking," there is at once raised the very important question, What do these cases teach us? What is the explanation of this apparent control of the proliferation of the cancer cells in a way that heretofore no medicinal measures have been able to accomplish? To discuss this point fully would require a separate paper, as the subject is one of wide extent, for it is quite clear that, apart from their therapeutic interest, these cases bear materially on the etiology of carcinoma, certainly of the female mamma, if not of female carcinoma generally. Thus they seem to me not only to bear strongly against the parasitic theory of the disease, but, on the other hand, to

## TREATMENT OF RENAL CALCUL

for appendicitis, [illegible] small renal calc[illegible] in the direction of the explanation that I descent, and any [illegible] forward in May, 1896, when I read my first [illegible] subject. This was that in the process of NEPHRO[illegible] ed specialisation of the ordinary cells of the The use of th[illegible]s do not lose the reproductive or proliferat- lesson the nu[illegible] early embryonic life, but that it is kept exploratory ne[illegible] control of the healthy ovaries. Should this [illegible]d finds noth[illegible]ny way interfered with by changes in the [illegible] so-called [illegible]d to altered secretion on their part, or possibly to t[illegible] hands h[illegible] of ovarian cells, then any part of the body affec[illegible] I would [illegible]cial conditions of altered nutrition or physi[illegible]be allo[illegible]trophy and decay coming under these ovarian [illegible]series [illegible]es might resume that early reproductive power th[illegible]geons t[illegible]ely in abeyance, and thus come to display that proli[illegible]rativ[illegible]ndency which is not only characteristic of germinal ep[illegible]ar thic[illegible] but is also the distinguishing feature of carcinoma. [illegible]y fo[illegible]ing on this point there is the experiment of Mr. H. Lau[illegible]ork which was published in the *Journal of Pathology a[illegible]*[illegible]*terio*logy for August, 1899, which has attracted much [illegible]tion. Regarding the epithelial cells of cancer as themse[illegible]he sole infective agents in the disease, and that this canc[illegible]ithelium was practically normal epithelium only out o[illegible]. He[illegible]e in that from its very commencement it was growing in [illegible]ymph spaces, Mr. Lack thought that if normal epitheli[illegible] by some accidental means should obtain entrance int[illegible]e lymph spaces it would find no barrier to its contin[illegible] growth, and would produce all the phenomena of cancer[illegible] To test this view he obtained an emulsion of the epithe[illegible] cells from the healthy ovary of a healthy rabbit and pla[illegible]d them in the animal's peritoneum. When the animal died, fourteen months later, masses of growth were found in the abdominal and thoracic cavities, having the characteristic features of typical ovarian cancer.

Such a result is exceedingly interesting, but I think it is unfortunate that Mr. Lack should have used ovarian epithelium when he holds the views he does about ordinary epithelium. It differs so materially from the ordinary variety that we cannot argue generally from it; and, indeed, I regard the result obtained by Mr. Lack as confirmatory, if anything, of the view that I have put forward of the importance of ovarian influence in the etiology of carcinoma. We must, however, await further experiments to confirm both Mr. Lack's result and my own theory, founded as yet only on clinical observation.

Meanwhile, what has been observed after oöphorectomy in inoperable mammary cancer throws, also, in my opinion, some light on those so-called "spontaneous cures" of carcinoma which are from time to time recorded, and which are well worthy of close inquiry. A very illustrative case of this class was shown by Mr. Pearce Gould at one of the London societies in November, 1896. She was at that time apparently quite well, but in the previous March she seemed to be near death from recurrent mammary carcinoma, with glandular implication and secondary deposits in lung. In her case the menopause came during 1895, and the subsequent history showed that for three years afterwards she kept free of the disease.

I pass round the photograph of a case of mammary carcinoma in a woman the clinical course of which has been very remarkable (Fig. 1, p. 1147). Anyone looking at it would say that the breast had been removed by the surgeon's knife. This is not so. She has had no treatment whatever, so that under influences that are not apparent the mamma has disappeared, as has also some glandular enlargement in the axilla. During the six years she has been under my observation the case has seemed on the road to a natural cure, although recently there has been some fresh manifestations of the disease, owing, I think, to an injudicious application she was persuaded to apply to it. In her case the menopause occurred at 44, and the growth appeared at 48, so that during a period of sixteen years it has shown varying phases of activity, not easy, I admit, of explanation, but due possibly as also in Mr. Gould's case, to some changing condition of the ovarian secretion and its activity in the body. If this be so, it is a fact of great interest and importance.

Before stating the conditions under which I think oöphorectomy and thyroid extract are called for, I should like to say a few words upon the use of the latter drug. There

has been a difference of opinion as to its e
favour it, others regard it as deleter
ich rest induces, and
the best means of

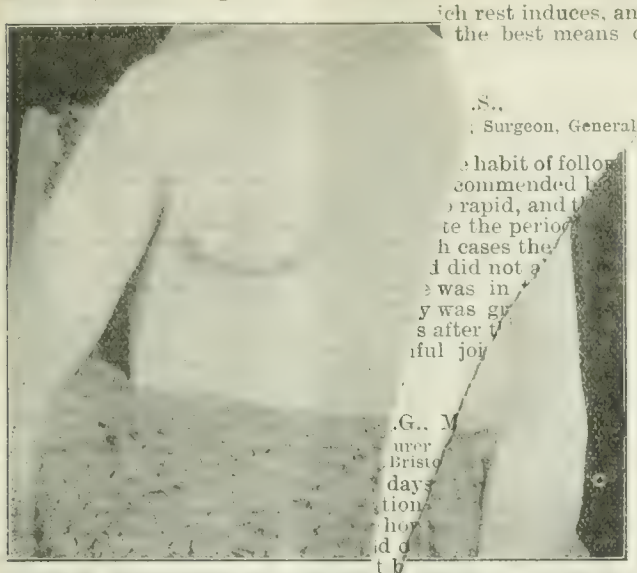


Fig. 1.—Case of mammary cancer. (Mrs. M., aged 64.)

administration is founded on theoretical grounds, but clinically I think the evidence is in favour of it, and I believe I have seen its value in cases where it was given without oöphorectomy having been done. Everyone cannot take it, but in the large number where it is well borne it powerfully affects the metabolism generally of the body cells, raising their tone and improving their vigour, while it acts favourably on the lymphatic system, lessening the chances of dissemination by it. I have tried it in doses as large as 250 grs. daily, but I have not observed any special benefit from such large quantities, and I prefer to give it in small doses, gradually increased, until 15 grs. are taken daily.

I now come to the very important question as to what class of cases of mammary carcinoma are benefited by oöphorectomy and thyroid, for the experience of five years has shown that while in some patients very decided improvement and benefit have followed, in a good many others little or no effect has been produced. From what I have seen in my own work and from the cases of others I am quite sure that the ultimate result depends on the existence or non-existence at the time of the operation of secondary organic metastatic deposits. If lungs, liver, or any other organ have become the seat of a secondary growth, I do not think that oöphorectomy and thyroid will influence the progress of that secondary deposit. Sooner or later its harmful effects will be felt and eventually to such an extent as to completely overshadow any beneficial effects of the oöphorectomy on the local disease. One rule, then, that I think should be laid down is that the operation of oöphorectomy is not advisable in cases where secondary organic deposits are present or suspected. It may be said that this limitation in operating is a serious drawback, as it may be impossible to detect secondary deposits in a very early stage. I grant that, but the same objection may be urged against the ordinary recognised operation of primary removal of the mamma. Who can foretell with certainty beforehand what cases are free from early secondary organic mischief, let the local conditions be as favourable as could be wished? Every surgeon will admit that this is the unknown factor with which he has to contend, and that controls the ultimate success of much of his operative work. As regards, then, the chances of permanent cure, oöphorectomy and the ordinary operation for local removal are very much on the same footing. At the same time, aware though the surgeon may be of the possible danger of early secondary infection, if careful examination does not reveal its existence, he very properly gives his patient the benefit of that extensive local removal that is the leading principle of the operative treatment of mammary cancer in the present

...is area of operative measures is widen-
... year, so that at the present moment Hal-
too large a recent operation for following up and com-
life; eradicating mammary carcinoma occupies several
s. This shows that he has not been satisfied with the
sults of his previously recommended procedure; and it is
ery generally admitted that, while the cases so treated have
been marked by an absence of local recurrence, they have
also been distinguished by a heavy mortality from subsequent
visceral complications. No doubt this extension of the field
of operation is the logical outcome of our improved surgical
technique, and is also founded on the teaching very properly
laid down by Banks in 1882, that, if carcinoma is a local dis-
ease, the only hope of success in mammary cancer lies in a
"clean sweep," not only of the mamma, but of the adjacent
axillary glands, whether distinctly enlarged or not. I am not
going to take up the debatable question as to whether
surgery is or is not a cure for cancer. All of us
will admit, I think, that our chief difficulty in an operation is
to get beyond the disease, and that our main anxiety is about
the existence of secondary deposits, for we are utterly
ignorant in every case as to whether or not cells have hived off
even in the very earliest stage of the growth to declare their
existence afterwards when everything else is promising well.
Another anxiety, too, that I have, is whether or not our opera-
tive measures in any way favour cell dissemination by the
opened lymphatic spaces and severed blood vessels that must
necessarily exist in the wound, and by the increased vascula-
rity and cell activity that must take place in the reparative
process. This latter possible source of danger is not present
in the treatment by oöphorectomy.

Before closing this communication, I am anxious to ask from you an expression of opinion on what I consider a very crucial point. From what I have told you of my own experience and that of others of the ability of oöphorectomy and thyroid to remove carcinomatous tissue in the mamma, in the skin, and in the lymphatic glands—an experience now confirmed by a considerable number of cases—do you consider that sufficient evidence has been furnished to justify the adoption of this procedure as a primary method of treatment in the early stages of mammary carcinoma, either by itself or in conjunction with the present recognised operation? Personally I think the time has come to raise this question. Up to the present I have loyally carried out the teaching of the profession, and have only adopted the oöphorectomy and thyroid plan in inoperable cases. Even in these, as has been shown you, it has accomplished some remarkable results. Is it unfair to argue that in more favourable cases it would do still more? I feel the responsibility of deciding a matter in which I may naturally be regarded as having a bias, and hence my appeal to your independent judgments on a point that intimately concerns the interests of a large class of sufferers.

Mr. GILBERT BARLING said that he had not yet performed this operation. He did not think that the time had come when it could be legitimately substituted for the ordinary operative procedure. It did not seem to him proved that the ovaries had any special influence on carcinoma of the breast, and that favourable results were probably attributable to a general increase of tissue resistance following in some unexplained way their removal.

Mr. R. C. CHICKEN strongly upheld the value of the procedure in some cases of mammary cancer. He narrated instances in which he had observed its success. He suggested that the experience gained up to the present was sufficient to justify a recommendation of removal of the ovaries coincidently with the primary growth, and that oöphorectomy need not, as hitherto, be confined to those cases considered otherwise inoperable.

Mr. MCADAM ECCLES thought that there were two principal conditions in which the operation should be proposed; first, in cases of inoperable primary carcinoma mammæ; and, secondly, where there were secondary but as yet local growths. He asked whether in Dr. Beatson's opinion it was likely to be beneficial in cases where there was glandular infection within the thorax. He did not think there was any certainty of result in any given case, but undoubted cases of cure were on record, and the public were becoming aware of

the occurrence of these. He thought that oöphorectomy performed, what's more likely to be of benefit before than after the evidence. However In his own cases he had not found any microscopical discovery—of significance in the ovaries removed.

Mr. Harold Stiles desired to thank Dr. Beatson for the very fair and temperate manner in which he had placed the results before the profession. He considered that the further results related by Dr. Beatson and others were sufficiently encouraging to warrant surgeons in recommending oöphorectomy as a method of recognised value in inoperable cases of mammary cancer, especially before the menopause. He had had the privilege of seeing a microscopic section from the case narrated by Dr. Beatson and of its carcinomatous nature there was no doubt. The further history of the case would aid in answering the question as to whether or not the time had come to recommend oöphorectomy *plus* the ordinary operation in the early stages of the disease. It was impossible to say in any case whether the disease had already extended beyond the reach of the knife, and if oöphorectomy influenced secondary growths in the glands and internal parts, it ought to be recommended in both operable and inoperable cases, so called.

Mr. Rutherford Morison related the histories of two cases which he thought were evidence against Dr. Beatson's theory. He had operated on a patient for cancer of the breast who, twenty-five years before, had had an operation performed by Mr. Teale in Leeds for "ovarian tumours." Previous to this she had had children, but since the operation she had had no more children nor had she menstruated. A second patient on whom he had done double ovariotomy for tumour of both ovaries five years previously died of cancer of the breast. Along with Dr. George Murray he had recently had a case which strongly supported Dr. Beatson's practice, and he thought that surgeons should be guided in this matter by Dr. Beatson's advice.

Dr. Beatson, in reply, quite agreed with the remarks of the Vice-President (Mr. Barling) and of Mr. Stiles on the value of tissue resistance in cancer, and it was with the view of encouraging that that he advocated the administration of thyroid extract, a substance which undoubtedly affects the metabolism of the tissues, and gave tone to the body cells. The value, in his opinion, of these undoubted cases of mammary cancer that had been benefited in so striking a manner by oöphorectomy and thyroid extract lay in the bearing they had on the etiology of the disease. They seemed to point to ovarian influence as a cause of carcinoma in the female. The cases quoted by Mr. Morison were not, in his opinion, reliable evidence against this view. The first one was very indefinite and incomplete. In the other, the occurrence of mammary cancer six years after removal of diseased ovaries might simply have been a secondary manifestation of primary malignant disease existing in those organs but not recognised. As regarded disappearance of malignant disease in the mediastinal glands, to which Mr. Eccles referred, he had seen one case in which that seemed to have taken place, and as it could happen in the axillary and other organs, there seemed no reason why it should not also happen there. He had only had a limited experience of oöphorectomy in cases after the menopause, and no marked beneficial effects had been observed in the cases so treated. He was glad to have such a decided expression of opinion from Mr. Chicken, Mr. Stiles, and others to the effect that there was sufficient clinical evidence to justify a primary combined operation of local removal and oöphorectomy in mammary carcinoma.

## AMPUTATION OF LEG FOR SENILE GANGRENE.

By James Rankin, L.F.P.S.G., L.M.,
Kilmarnock.

I wish to record a case of amputation of the right leg at the knee for senile gangrene in a patient 72 years of age. The operation was completely successful, and the patient recovered without a single unfavourable symptom.

A. R., aged 72 years, pattern maker, a man of thin, spare habit, consulted me in December, 1900, for what he considered an in-growing toenail of the right foot. I examined it several times, but could see nothing particular about the part to cause so much pain as the patient complained of.

In the beginning of January a spot appeared on the top of the toe, of a somewhat bluish, suspicious-looking appearance. Appropriate treatment was administered, and attention was paid to the general state of the body for appendicitis. [illegible] somewhat run down. The patient had up to that small renal calc[illegible] work, but the foot became so painful in the toe that descent, and any[illegible] fered with: by the end of January he was com- work. The bluish condition of the toe began to [illegible] the whole toe was involved both anteriorly and became considerably swollen, and later the toe next olved. From February to March the gangrene made withstanding every effort which was made to stop of the disease a consultation was held with Dr. , and we talked over the advisability of some active orm of an operation. At first we considered to ampu- night have been sufficiently far from the seat of the nd that the disease was making rapid advances, so sidered if anything was to be done it would require reach of the disease.

[illegible] friends were consulted, and the matter was ultimately [illegible] be alloe[illegible] kinds of the medical advisers. Attention was then turned [illegible] series G[illegible] old effort to build up the wasted state of the man's body, which geons [illegible] it of sleep, want of food, and severe suffering from the pain of [illegible] vi[illegible] of the parts, as by this time the disease was nearly spread over [illegible] the foot. A consultation was again held, and an operation was [illegible] n for April 7th. Final arrangements were entered upon, and the [illegible] and friends then warned as to the very serious operation of a [illegible] on at the right knee-joint by Stephen Smith's operation of dis[illegible] ion [illegible] on at the knee by lateral flaps. I was assisted by Dr. William M[illegible] at the operation, and Dr. John Laurie acted as chloroformist. I [illegible] so acknowledge the very excellent assistance both at the time [illegible] operation, and subsequently all through the dressing, and after[illegible] two of the Queen's nurses—Miss Paton and Miss Miller—who w[illegible] eedingly attentive to the patient.

The operation con[illegible]. H[illegible]n disarticulating the joint: the flaps were hooded over the con[illegible] of the femur, and meeting so as to have the cicatrix lying between [illegible] prominences of the condyles and out of the way of pressure.

The only variation w[illegible] had to be made was subcutaneous section of the patella tendon on [illegible] int of retraction of the muscles causing a pulling up of the hood ov[illegible]e condyles.

Silkworm-gut sutures [illegible] used; the dressing was of dry boric acid and sterilised gauze, [illegible] the stump was exposed on a pillow. The dressing was changed in fo[illegible]-eight hours to remove the caked boric acid, and at the end of a week [illegible] the removal of epidermal scales which had gathered round the edge of the wound. The most wonderful thing was that hardly any trace of pus was observable, as everything was absorbed by the constant appliance of boracic acid. A third and last change was made at the end of the second week, when the sutures were removed and the wound was found completely healed. Meanwhile, the old man's health began to improve; his appetite was increased; sleep became more natural; during the whole time, both at the operation and subsequently, the temperature ranged from 99° to normal; at the end of a month, May 6th, the stump had healed up completely, and the patient was able to be up, sitting at the fireside nearly the whole day; the result of the operation is a very good stump, both in form and appearance, and one the patient is able to support his weight upon. The old man being a practical mechanic, is busying himself making a pin leg for himself, feeling satisfied that he can bear his own weight upon it as soon as he can get it ready.

The salient points in the case may be summed up as follows:

1. The usually fatal result of senile gangrene and the ill-success of attempts at a cure or even palliative treatment.

2. The age. When the operation was attempted the man was in his 72nd year and not possessed of the usual recuperative powers which might be expected in a person of younger years.

3. The result: An excellent stump. The prospect of the man going back to his work, and, according to his own testimony, that he has not been so well for at least ten years as he now is.

4. The value of antiseptic treatment: hardly a drop of pus was present through the whole treatment, consequently there was very little loss of tissue or of strength in the patient.

## NOTES ON THE AFTER-HISTORY OF A SERIES OF CASES OF PYLOROPLASTY FOR PYLORIC STRICTURE AND ULCER.

By Rutherford Morison, F.R.C.S.,
Surgeon, Newcastle Infirmary.

Pyloroplasty has, in my experience, been the most satisfactory operation in abdominal surgery. Taking into consideration the feeble condition of the patients, the mortality of the operation has been less than that of any other, and the results, immediate and remote, are equally successful.

Careful inquiry has been made as to the present condition of my first 20 cases operated upon. The first was done six years and eight months and the last two years ago. These inquiries show that 14 of the patients are in good health and take ordinary food: 1 cannot be found, but was well when last heard of; 2 are dead; and 3, though much improved, still have occasional stomach troubles.

*Summary of the Results of Twenty Consecu* ...hich rest induces, and ...e the best means of ... too large ... *varying from Six Years and Eight Months to* ... life; ...

...di- pub- *Lancet*, ..., 1898.

| No. | Published Reference. | Summary of Condition of Patient before Operation. Sex and Age. | General. | Local. | Weight. | Due habit of follow... commended b... o rapid, and t... ...te the period ...ch cases the ...d did not a... ...s was in f... ...y was gr... ...s after t... ...ful join... | Summary of Conditions in June, 1901. General. | Weight. | Time since Operation. | General. | Weight. | Gain since Operation. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | st. lbs | | | st. lbs | | | st. lbs | st. lbs | |
| 1 | *Lancet*, Feb. 26, 1898 (Case 1) | F., 48 | Very thin and ill; frequent vomiting; much pain | Stomach much dilated; lump at pylorus | 5 1 | | Perfect health | 10 7 | 6 years, 8 months | Good, none of old symptoms; takes ordinary food | 10 7 | 5 6 | Patient says: "Never better in my life than I have been since operation." |
| 2 | .. (Case 2) | F., 37 | Thin; frequent vomiting; pain | Stomach dilated | 8 12 | Oct. 17, 1895 | Good health and digestion | 9 11 | 5 years, 8 months | Fairly good: none of old symptoms; takes ordinary food | 9 4 | 0 6 | — |
| 3 | .. (Case 3) | M., 31 | Thin; frequent vomiting; pain | Stomach much dilated; indefinite mass at pylorus | 7 ... | Jan. 3, 1896 | Good health; no stomach trouble | 10 0 | 5 years, 5 months | Good; none of old symptoms; takes ordinary food | 10 7 | 3 1 | Dr. Sutherland reports: "Patient looks well and is in good health; he says that in the way of food 'nothing ever comes wrong to him.'" |
| 4* | .. (Case 4) | F., 50 | Very thin; vomiting and pain | Enormous distension of stomach; tumour at pylorus | ... | April 12, 1896 | — | — | — | — | — | — | Died October 20th, 1896, of cancer of the stomach. |
| 5 | .. (Case 6) | M., 32 | Very thin; vomiting frequently; severe pain | Stomach dilated; small nodule felt | 2 years | Aug. 11, 1896 | Perfect health; can eat anything | 11 0 | 4 years, 10 months | Good; none of old symptoms; takes ordinary food | 9 5 | 3 1 | Has gone through the South African campaign without any trouble. |
| 6† | ,, (Case 7) | M., 25 | Very thin; vomiting frequent; severe pain | Stomach dilated | 1 12 years | Oct. 10, 1896 | Everything agrees with him; his general health is excellent; has been at work for 5 mths | 9 0 | 4 years, 8 months | Good; none of old symptoms; takes ordinary food | 9 0 | 2 13 | |
| 7 | ,, (Case 8) | M., 56 | Thin; severe pain after meals, with full, heavy feeling; vomited twice | Stomach dilated; indefinite nodules | 8 7 | 15 years | Dec. 3, 1896 | Enjoys good health and strength; has no trouble with digestion | 11 0 | — | Died of phthisis in April, 1899 | — | — | Dr. Tiplady reports: "Up to the time he developed phthisis he increased in health and strength. He took ordinary food and had no stomach symptoms up to his death. There was no necropsy." |
| 8 | ,, (Case 9) | M., 42 | Thin; frequent vomiting; dull heavy feeling after food | Stomach dilated | 10 5 | 9 years | Mar. 27, 1897 | Is in good health; is careful as to diet; digests and sleeps well; stomach still somewhat large | 11 7 | 4 years, 3 months | Good; at times has old symptoms; has to be careful with his diet | 11 3 | 0 12 | Patient looks very well; he is able to go about and do his ordinary work. (At the operation no lesion of the pylorus was found. It was supposed to have been spasmodically contracted.) |
| 9‡ | .. (Case 5) | M., 38 | Very thin; frequent vomiting; pain severe | Stomach dilated | 7 3 | 6 years | March 3, 1897 | Could eat and digest anything; working regularly as stoneman in the pit | 11 8 | 4 years and 3 months | Good; takes ordinary food; working as a miner. | 10 1 | 2 10 | In April, 1901, had a stomach attack, with vomiting after medicine; he was well in two weeks; has been perfectly well since. |
| 10 | .. (Case 10) | F., 56 | Thin; constant uneasy pain; severe after food; vomiting | Stomach dilated | 8 6 | 12 mths. | Sept. 3, 1897 | Can eat and digest anything; is getting fat | 10 12 | 3 years and 9 months | Good health; none of old symptoms; takes ordinary food. | 10 0 | 1 8 | — |
| 11 | .. (Case 11) | F., 39 | Very thin; frequent vomiting; much pain | Stomach dilated | 8(?)0 | 8 years | Sept. 13, 1897 | No trouble whatever gained with the stomach | Has gained 1 st. | 3 years and 9 months | — | — | — | — |
| 12 | Not published | F., 46 | Thin; frequent vomiting; pain | Stomach dilated | Not noted | 2 years | Nov. 24, 1897 | — | — | 3 years and 7 months | Good health; none of old symptoms. | 7 4 | 1 12 | Patient says: "The operation has been quite a success; I am quite able to do my household duties." |
| 13 | ,, | M., 23 | Very thin; frequent vomiting; pain | Stomach dilated | 7 5 | 6 years | June, 1898 | — | — | 3 years | Good health; none of old symptoms; takes ordinary food. | 8 12 | 1 7 | — |
| 14 | ,, | M., 41 | Very thin; intense pain | No marked dilatation; no tumour | Not noted | 9 years | July 13, 1898 | — | — | 2 years and 11 months | Good health; none of old symptoms; takes ordinary food. | — | 3 0 | — |

* In this case the age was wrongly stated in the *Lancet*, February 26th, 1898, as "50."
† In this case the date of the operation was wrongly stated in *Lancet* as "March 3rd, 1896."
‡ In this case the age was wrongly stated in the *Lancet*, February 26th, 1898, as "30."

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Case v.—A single woman, aged 46, who had eighteen months and had never been pregnant, left breast in June, 1899. During the last six mo larger, and the patient had had much pain. Th the left breast, covering an area of about the size It was fixed to the structures below and involv reddened. Around it were some small outlyin The glands in the left axilla were enlarged.

Mr. Jonathan Hutchinson, jun., was of opinion carcinoma, and that its removal by operation was in

On June 22nd, 1900, Dr. Herman performed o Recovery was uneventful. A week after the operati to take thyroid extract, but she continued it for a fo

November 20th, 1900: The patient attended, and induration in the breast can now be covered by a six part of this there is a red spot on the skin half the piece, its surface smooth and not discharging. Wh hospital she weighed 6 st. 9 lbs. She now weighs 7

July 10th, 1901: The patient's condition is much last note was made. The red spot on the skin is about half the size of a threepenny bit; it advance cardiac pulsations. No other disease discoverably

Case vi.—A patient, aged 53, single, nullipara, breast in June, 1899. It was removed by a Lond 1899. Growth recurred, and a second operation same surgeon in June, 1900. After this, rec The patient had only menstruated twice since J ation having been in June, 1900.

On September 22nd, 1900, Dr. Herman remov small and atrophic. The uterus contained fib between the pubes and the umbilicus.

The patient died on April 7th, 1901. Dr. Ri her medical attendant, has supplied the fo cancer went on steadily increasing; the o great. A fortnight before death she devel expectoration. The thyroid extract was give

Result: No benefit.

Case vii.—An unmarried nullipara, born it b 2, noticed in 1896 a lump in her left breast about the size of a pe masseuse who was attending her, and the mas it to the doctor, but she omitted to do so. anyone about the lump, and paid little att especially when she menstruated. In the more painful, and in March, 1900, the patie and that there were lumps in the left armp of March, for the first time consulted a sur 1900, the left breast and the glands in the

Five weeks after the operation the patien noticed some nodules in the skin near the scar. Growth recurred in the axilla and above the clavicle: the arm became swollen with solid œdema and very painful, and the patient got thinner.

On November 26th, 1901, the patient having until then menstruated regularly, Dr. Herman removed both ovaries. One of them contained a nodule of cancer the size of a pea. The immediate result of the operation was that some lumps in the skin and above the clavicle disappeared. The solid œdema of the arm did not alter, and it prevented ascertainment of the state of the axilla. The patient had less pain and ceased to waste. This relative improvement continued for about three months, then growths began to reappear, and the patient again to waste.

At present (July 19th, 1901) besides the œdema of the arm and growths on the front of the chest and above the clavicle, there is a hard mass rising out of the pelvis.

Although in this case nothing that can be called a cure has been achieved, yet it is my opinion, and that of the patient herself, and of some medical men who have seen her, that the progress of the disease was arrested for a few months.

Case viii.—A patient, aged 49, had had pain in the left breast for about a year, and for about the same time had been losing flesh. She had had four children, the last twelve years ago. For three or four years menstruation had been irregular; she last menstruated in September, 1900. Her left breast was enlarged by a hard, ill-defined growth, measuring 5 inches vertically through the nipple, and 5½ inches transversely. It was adherent to the parts beneath, and the skin was adherent over nearly its whole extent, and puckered. There were large, hard glands in the left axilla.

Mr. Jonathan Hutchinson, jun., was of opinion that the disease was cancer, and that it was too advanced for removal.

February 23rd, 1901: Double oöphorectomy was performed by Dr. Herman. The ovaries were small and atrophic. Recovery uneventful. Thyroid extract was given from February 27th onward.

March 11th: Patient was sent home to Wales, where she lived. She said that her pain was less, and that she could use her arm better, and it was thought that the lump in the breast was softer and smaller, although the change was not enough to be exactly defined. The distance at which the patient lived prevented the subsequent course of the case from being watched. The patient died in June, 1901.

Dr. W. E. Williams, of Ty Clyd, Govilon, Abergavenny, has favoured Dr. Herman with the following information.

She "died of obstruction of the bowels, the locality of which I could not clearly define. Persistent vomiting was a prominent symptom throughout her illness, and it is difficult to say whether the obstruction was due to malignant deposit or not. The effect of the operation upon the cancerous breast was to cause shrinking and atrophy of the cancerous mass to such an extent as to leave but slight evidence of its existence."

I may add that there seems to me another possible cause for the obstruction—namely, adhesion of the bowel to the ovarian stumps.

## A DISCUSSION ON TO JOINTS, WITH SPECIAL REFERENCE TO THEIR IMMEDIATE AND REMOTE TREATMENT BY MASSAGE AND MOVEMENT.

### I.—Howard Marsh, F.R.C.S.

Surgeon and Lecturer on Surgery, St. Bartholomew's Hospital.

Mr. Howard Marsh said: Both massage and exercises have long been known and employed in English surgery; but they have lately come into much more general use. Both, undoubtedly, are valuable remedies, and are often required; but, if employed by rule of thumb, or as a matter of routine, and before a careful diagnosis has been made, they may do great harm. They are both forms of surgical treatment, and as such they should be employed only under adequate surgical supervision in respect to the skill and experience of those to whom they are entrusted, the duration of each sitting, the effect they are producing, and the assurance that the case in hand is undergoing no change which should interdict their continuance. When these precautions are neglected pain may be rendered severe and persistent, muscles may become irritable and spasmodic, or jaded and weak, sometimes considerably wasted joints may become painful and over-sensitive, or there may be considerable synovial effusion. In one case a sharp attack of gout, following massage of the knee, was overlooked for some days; massage was continued "to order," and the pain the patient suffered can readily be imagined. In several cases overlooked joint tuberculosis has been rendered more active; in one instance massage and exercises were used for nine weeks in a case of overlooked rupture of the tendo Achillis. In another a patient was handed over to a masseuse for the treatment of a hysterical knee. After massage had been persevered in for six weeks some swelling was observed about the internal condyle of the femur, which proved to be due to sarcoma, for which the limb was amputated a few days later. It must be remembered that such occurrences can be avoided only if the surgeon keeps a close eye on what is going on.

*Physiology of Massage.*—It is necessary to have clear ideas as to what has been termed the physiology of massage—as to the different ways, that is, in which it acts on the structures to which it is applied.

1. It enlarges the amount of blood circulating through the part concerned. This is obviously apparent in the skin, which instead of remaining cold and pale becomes warm and more or less red. The same result was experimentally demonstrated in regard to the muscles by Brunton and Tunnicliffe, who showed that the amount of blood passing through them, both during massage and after its cessation, was increased. This increase of blood is in every way advantageous. It maintains or improves the nutrition of all the various tissues; it promotes the restoration of the functional activity of injured muscles, and it plays an important part in the absorption of lymph and extravasated blood.

2. Its action is mechanical. By kneading and percussion extravasated blood and lymph which have been coagulated in the tissues and have led to brawny œdema are broken up and dislodged, while by stroking from below upwards they are swept onwards, and brought within the reach of healthy lymphatics and a normal venous circulation, so that they can more readily be absorbed.

3. It is an efficient stimulant to damaged muscles through its influence on the nervous system. In such minor injuries as sprains and contusions probably the small nerves ramifying in the injured part are seldom torn across, for they are tough rather than brittle; they are well protected in the subcutaneous tissue and the deeper structures; and their course is tortuous so that they are not easily put on the stretch. Nevertheless they are not infrequently so far injured that their functions for the time being are more or less suspended, and massage is then a very useful agent in their restoration. It probably acts in a similar manner on the vaso-motor nerves which preside over the arterial system of the part.

4. No one who has watched its sedative effect when applied in cases of recent injury can doubt the influence of massage

in reducing muscular spasm and relieving pain. In some instances it must be used very gently, and be limited to evidently soothing and light friction, for short periods three or four times a day.

5. Probably massage promotes the absorption of recently formed adhesions, provided they are not too extensive or too firm. This is a matter of considerable interest. Just as provisional callus, formed in the repair of fractures is absorbed, so is much of the new connective tissue which is developed after injury of the soft parts. Perhaps the most obvious instance of this is met with in the case of adhesions following peritonitis. Even extensive adhesions gradually, yet completely, disappear, probably as the result of constant disturbance and traction during peristalsis. Much the same result is produced by what may be termed the interstitial disturbance and traction which take place during the different movements employed in massage.

As to *movements*, it is necessary to allude to the sense in which this term is used. Three forms of movements present themselves for notice—movements of joints under an anæsthetic, passive movements, and movements performed by the patient often against resistance, that is, when the patient, for instance, tries to flex his knee, while the masseur, with appropriate force, resists his doing so. As to movements under an anæsthetic, they can be safely applied only after a very careful diagnosis has been made. If he uses them haphazard a surgeon may do as much harm as a bonesetter. It must be remembered that their direct influence for good upon the joints themselves is comparatively limited. They break down slight synovial adhesions, reduce displaced semilunar cartilages, and alter the angle at which a joint has become fixed. If these good results are to be obtained, however, the joints concerned must be practically healthy. In joints which have, as a result of disease such as tuberculosis, gout, or septicæmia, or such degenerative conditions as Charcot's disease, or some forms of osteo-arthritis, undergone material structural changes, forcible movements are as a very general rule inappropriate or mischievous. The cases in which forcible movements are able to effect very important and striking results are those in which a joint—for instance, the shoulder—which is in itself structurally normal, is hampered by adhesions in the parts around. It is a fact, which is often overlooked in practice, that it is useless and mischievous to employ forcible movements to diseased joints, except to remove or diminish deformity, and that therefore accurate diagnosis must invariably precede their use. Recalling cases in which forcible movements have failed, I should say not that the general estimate of their true value in appropriate cases is an exaggerated one, but that their results are often disappointing, or even positively unfavourable, because they are used with too little discrimination.

Passive movements are useful after adhesions have been broken down, or in removing or preventing stiffness of healthy joints which are temporarily disused—for instance, in cases of fracture of a limb or disease of one of the other joints.

Voluntary movements, especially when performed against resistance, and assisted by appropriate apparatus, are very valuable in combination with massage—often, indeed, they are of much more value than massage itself, for as forms of vital activity they are the best agents in promoting nutrition and in restoring normal function. All this is well known in the treatment of scoliosis.

*Diagnosis.*—Diagnosis is of very essential importance. Exact diagnosis is often not to be attained, but in every instance before massage and exercises are employed diagnosis must at least be carried far enough to indicate (*a*) that the case belongs to the general class in which these agents are useful; (*b*) that no element is present in the case which renders them unsuitable.

The chief conditions for which massage and exercises are suitable are the following:

Sprains and contusions of previously healthy joints, unattended with any material complication—in which, that is, there is no subluxation, no fracture, no displacement of tendons, and no pre-existent affection, such especially as tubercle or gout, or hæmophilia. Care must be taken, needless to say, not to overlook Colles's fracture of the radius, or Potts's fracture at the ankle. It must not be forgotten that the symptoms produced by some fractures may be so slight

for appendicitis. [illegible] the injury is easily overlooked. I have small renal calc[illegible] walk nearly half a mile, although he had a descent, and any [illegible]'s patella. Impacted fracture of the neck [illegible] fracture that may be overlooked, is an [illegible] more familiar with.

The use of the [illegible]ost therefore repeat his examination when lesson the num[illegible]ded, and if possible procure a skiagraph in exploratory ne[illegible], yet always remembering that these shadow [illegible]d finds noth[illegible] deceptive and therefore must be used with [illegible] so-called [illegible] importance of going over the ground again—[illegible]d hands h[illegible]g the diagnosis originally made—cannot be exa[illegible] I would [illegible] sprains of the knee, again, one of the semilunar [illegible]e alloe[illegible]ay be displaced and require immediate reduc[illegible]eries [illegible] met with instances in which one of these cartila[illegible]geons [illegible]t displaced and unnoticed for upwards of six week[illegible]atic[illegible]it was readily reduced when the joint was manipula[illegible]n th[illegible]n anæsthetic, an operation which at once relieved th[illegible]ic[illegible] of all his symptoms. Subluxation of the bones of th[illegible]y fo[illegible]nd of the tarsus is undoubtedly rare, yet it may be p[illegible]ion [illegible] I have seen it at the mediotarsal joint in the foot and [illegible]een the scaphoid and the internal cuneiform bone as w[illegible]n the bones of the carpus.

Muscles may [illegible]CU[illegible]ptured or their tendons ruptured or displaced as part [illegible]. H[illegible]uries which are loosely spoken of as sprains. The te[illegible]-chillis may be ruptured, part of the quadriceps exten[illegible]cruris may be torn where it is muscular, or its tendon may [illegible]t ruptured close to, or an inch or more above, the patella. [illegible]he adductor longus an inch or two below its origin from [illegible]os pubis. Tendons may undoubtedly be displaced—for in[illegible]ce, the peroneus longus or the long tendon of the biceps [illegible]et my own experience would lead me to believe that displa[illegible]ment of tendons is much less often met with than is gen[illegible]ally supposed. Bonesetters tell their patients that a tendon [illegible] out of its groove, or that the deltoid has slipped round to the front; but, setting this jargon aside, slipping of tendons is [illegible]stinctly a rare occurrence.

The after-treatment [illegible] recent dislocations has undergone a radical and highly advantageous change in the last twenty years. Formerly, after a dislocation of the shoulder had been reduced, the arm was bandaged to the side for three weeks. Nothing could well have been worse treatment. At present after reduction the arm is kept in a sling for a day or two, until pain has subsided. Then daily passive movements, gradually increasing in range, are employed, together with massage. I have seen a patient treated thus who three weeks after the original accident was able to move his arm in every direction to the full normal range, and who felt no ill-effects of the injury beyond some muscular weakness of the limb. I have also seen a patient three weeks after the reduction of a dislocation at the hip walk without a trace of lameness, though the limb felt weak, and he was unable to run.

As to the remote treatment of injuries of the joints—that is, the treatment of injuries of some standing. In such cases—as in recent injuries—before any treatment is decided on, it is necessary to make as accurate a diagnosis as possible. It must be remembered that the great majority of simple injuries of the joints of moderate severity—that is, in which there is no fracture or dislocation, no extensive laceration of important structures, and no diathetic condition, such as tuberculosis or gout—tend to speedy or more gradual recovery, so that the mere fact that recovery from what at the time appeared a simple strain or wrench has not taken place, makes it essential to find out by what condition recovery has been prevented. In a large number of cases adhesions are formed; these limit movement, and cause pain, as in the cases mentioned above. When once the surgeon can convince himself that this is the nature of the case before him, he has, in movement under an anæsthetic, massage and passive, and later, active movements against resistance, to which hot douching may be added, efficient means of treatment which will soon lead to recovery. These are some of the most satisfactory cases in the whole range of minor surgery; but in many instances of delayed recovery after injuries of the joints, other conditions, either local or general, put, so to say, another complexion on the case, and render mere movement and massage insufficient or even definitely wrong.

Tuberculosis may follow an ordinary sprain. Thus a boy of 10 or 15 falls and wrenches his elbow: the joint, at first stiff,

painful, and swollen, remains for five
and a little enlarged, while it is now
muscles are wasting and the surface re
Here tuberculosis has probably followe
very quickly) on an injury; or, in older
may follow injury, especially in the shoi
there may be a substratum of gout. Ther
conditions to be mentioned; both are r
said, very rare; yet both must be kept i
mistakes are sometimes to be made—I
ease and hæmophilia. More than once
follow in a few weeks a wrench of
Whether, or in what manner, this is rea
do not know, and mere speculation
place. Often, no doubt, it is a mere
main point is that the possibility of
growth after an injury should not be f

I have seen three cases in which
swelling, which really depended c
hæmophilia, were attributed to chr
matic origin.

These observations, which could
suffice to show that in old-standi
must precede active treatment. It
and the surgeon, who acts with tion
gance, may be termed scientific d
plications of the kind I have bri
cluded, when, that is, the conditi
recovery consist of adhesions,
lymphatic obstruction, torpid m
or neurotic behaviour of the patie
are not only useful, but they ar
means of treatment at present kn
massage and movements must be
is in many cases futile to suppo
under an anæsthetic of a disable
next day, by passive and activ
employed every day, care and goo
determining the proper limit as to the time for each sitting and
all other details. Some surgeons I have noticed, having de-
termined upon a course of massage and movement, prescribe
the treatment four times a week. To be useful, however, it
must usually be employed regularly for a fortnight or three
weeks once every day.

The chief symptoms which suggest the movement of a joint
under an anæsthetic are stiffness and pain. Yet before move-
ment is employed, the cause on which these symptoms
depend in any particular case must be very carefully esti-
mated. It must be ascertained whether they are due to con-
ditions (*a*) in, or (*b*) around the joint, and for this purpose a
very careful examination may be necessary. Take the
shoulder: The movements of the arm may be almost entirely
lost, there may be muscular wasting, and the patient may
complain of severe pain, worse at night, and increased if he
tries to lie on the affected side. Is this a case of disease of
the joint itself or of adhesions outside? I believe there is
only one test which can be relied on to settle this question.
The surgeon must ascertain whether the joint is as stiff as it
at first sight appears to be; or whether it is only wide move-
ments that are restricted or lost, while movements within a
limited range are still present. In a shoulder which at first
seems quite stiff, it may be found that within a very limited
range the humerus rotates with absolute freedom and smooth-
ness in the glenoid cavity, and that the elbow can be moved
forwards and backwards, within a limited range, as freely as
in a sound limb. If these smooth and normal movements—
limited though they be—are present, the fact is a very strong
indication that the trouble is not within the joint but in the
parts around.

2. As to pain: It is very important to bear in mind that,
taken alone, pain affords no reliable evidence as to whether the
trouble is inside or around the joint, for on the one hand the
pain produced by many joint diseases is slight, while, on the
other hand, the pain produced by adhesions outside a joint
which is itself perfectly healthy, may be so severe that at
night the patient can get but little sleep; while if the limb
is suddenly moved pain is increased to agony. In shoulder
may be still further deceptive, because, although
too large fo entirely on external adhesions, it is referred to the
life; later the arm just as it is when the joint itself is diseased.

Ap word on muscular wasting. This is always an impor-
fac symptom. Of course, it is invariably present when a
joint itself is involved, and it is proportionate to the severity
of the disease, that is, in early and slight disease it is but
little marked, while in severe or advanced disease it grows
much more considerable. Yet in cases of mere adhesions—
the joint being perfectly healthy—wasting, though never
extreme, is often very well marked. It is in presence of the
facts that (*a*) adhesions around a perfectly healthy joint may
be attended with very severe pain, and (*b*) by muscular wast-
ing, which may be considerable, that the test I have
mentioned as to the existence of perfectly free smooth move-
ments within a limited range becomes of the utmost im-
portance. A lady, aged 54, who had severe pain in her
shoulder, was unable to move her arm, and had marked
wasting of the deltoid and scapular muscles, was told she
had osteo-arthritis of the joint. On using the test just
described, however, it was found that within a limited range
movements were perfectly smooth and free. The joint was
moved under an anæsthetic, numerous adhesions gave way,
and with passive movements and massage complete recovery
followed.

Sometimes a patient complains that his ankle or some other
joint, after a slight injury, remains painful on exercise, and a
little stiff, and even slightly swollen. On examination, how-
ever, nothing definite can be made out. In these cases if on
very careful investigation such conditions as tubercle, rheu-
matism, gout, etc., which would contraindicate forcible move-
ment can be excluded, the joint should be moved under an
anæsthetic; for these symptoms may very likely depend on a
slight adhesion, and when this is broken down they at once
disappear.

Some years ago on two or three occasions I found that cases
which there seemed no reason to suppose would be benefited
by manipulation were cured by bonesetters. Since that time
I have often taken the line I have mentioned above, and on
moving the joints under gas have found—sometimes being
conscious that a slight adhesion had given way, sometimes
noticing nothing—that the symptoms forthwith disappeared.
The following was a good example: A man who had wrenched
his ankle three months before came to the hospital because
the joint remained stiff, swollen, and painful. Adhesions
were broken down under gas, and he went out a day or two
later, free from pain and able to walk. A year later, having
been in the interval quite sound, he returned saying that his
old symptoms had recently returned, and that he was again
lame and in pain. I found movement apparently free, and,
seeing no reason for manipulating the joint, advised him to
rest it for a few days and offered him a liniment. He
urgently begged me to "do what cured him before." I then
gave him gas and moved the joint. I was not conscious that
any adhesion gave way, but he said on recovering that he
could now walk freely. I have seen him since and he has re-
mained quite well. Such cases are a trap. The adhesions
are so slight that they produce no objective symptoms, and
there may appear no reason for using movement. But the bone-
setter who always finds that a little bone is out or that a ten-
don has slipped, and who manipulates everything, manipu-
lates these cases with the rest, and cures them to the lasting
gratification of the patient and the equally enduring surprise
and chagrin of the surgeon who has thus been found off his
guard.

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### II.—Henry Anglin Whitelocke, M.B., F.R.C.S.Eng.,
Surgeon, Radcliffe Infirmary, Oxford.

Mr. Whitelocke said that Mr. Marsh had covered the ground so thoroughly that he would confine his remarks to the treatment of the injuries of healthy joints in young athletes. At Oxford he had ample opportunities of meeting with and having the treatment of sprains and dislocations. His method was first of all to make an accurate diagnosis of the exact state of affairs, with the aid of an anæsthetic if necessary; then the joint was thoroughly taken through all its normal movements to replace torn cap-sule, etc. If there was no fracture he applied elastic pressure

med, w[illegible]nt's by means of a very thick layer of absorbent cotton, evid[illegible]over which a strong webbing or domette bandage was [illegible]ar[illegible]y—applied, the principle of elastic pressure being no[illegible]d on limit further effusion taking place within and aroun[illegible]ich joint, but to support the vessels and tissues and to aid [illegible]e absorption of the fluids which have already taken place. The advantage of this use of elastic pressure might well be exemplified by its use in such a contusion as a black eye. Within twelve hours the pressure was removed, the joint passively moved by himself and then reapplied. Passive movement and gentle massage were carried out daily for the first week, and the elastic pressure kept up until the effusion was apparently gone, which was usually by the seventh day. During all this time the patient was kept in bed or upon the sofa, and no active movement was allowed. In from ten to fourteen days time the patient was allowed to begin gentle active exercise; by this time there should be little or no pain. The joint was all this time supported with a domette or other bandage, which was removed twice daily to allow of massage and passive movements. In twenty one days the patient ought to have complete use of the joint, and be able even to engage in his usual athletic exercises, such as football and running. The speaker never used a fixed apparatus in the shape of a splint. The elastic apparatus was quite enough support. For the first week or two, after the patient resumed athletic exercises, the joint should be supported by a suitable bandage while thus engaged, and removed afterwards. He maintained that in the treatment of injured healthy joints fixed apparatus should be discarded, and early passive moment practised. The custom of using plaster splints or other fixed apparatus was not only unnecessary, but likely to result in adhesions taking place and a painful and weakened joint resulting. In old cases, anæsthetising the patient, breaking down all adhesions, and carrying out the various movements of the joint at the time, and subsequently treating as in a recent injury, would generally be successful. Some old cases were in rheumatic patients, and the exhibition of the salicylates for three or four days would often remove the pain like a charm. He had had experience of several such cases where the pain was caused by rheumatism. In complicated cases, especially where there had been much blood effused into the joint, the prognosis was not so good; still the same principles of treatment were applicable.

### III.—F. F. BURGHARD, M.S., F.R.C.S.,

Surgeon, King's College Hospital and Paddington Green Children's Hospital.

MR. BURGHARD dealt with the treatment of dislocations of the shoulder by early movement and massage instead of by an attempt to immobilise the limb for fear of recurrence of the dislocation. He pointed out the great risk of adhesions occurring in the shoulder-joints of elderly subjects, and the difficulty of overcoming them, and the good results obtained by massage and passive movement employed from the first. He also dealt with the question of the frequency of application of massage and movements, and advocated daily massage with most careful and gradual movement under gas once a week if necessary. He insisted on the importance of proceeding gradually in breaking down adhesions. He remarked that recently he had been inclined to use more massage and less elastic pressure than formerly.

### IV.—J. WARD COUSINS, M.D., F.R.C.S.,

Senior Surgeon, Royal Portsmouth Hospital.

DR. WARD COUSINS said: In subcutaneous injuries of joints with unbroken skin there is pain from the injury of nerves and from the tension caused by extravasation. Rest and position tend to reduce swelling and relieve pain. Tissues which have been injured are very sensitive to infective agents, therefore it is always well to thoroughly disinfect the skin, even when there is no apparent lesion, as suppurative inflammation can be easily excited. Early massage, when there is no serious injury to the deeper structures and no infection, will hasten absorption and prove especially useful in the neighbourhood of joints. The thorough disinfection of the skin is always indicated when external injuries of joints are complicated with extensive damage to the soft parts, and care in this direction will greatly aid complete recovery.

But there is another matter in connection with slight in- for appendicitis. [illegible]t small renal calc[illegible]ll importance, and that is their liability descent, and any [illegible]o[illegible]stitutional tendencies and to excite [illegible]th. Slight contusions will sometimes NEPHR[illegible]b nation, and serious tuberculous disease The use of th[illegible]ced to local injury. lesson the nu[illegible] the effusion and thickening are very exploratory ne[illegible] joint inflammation very severe. When [illegible]d finds noth[illegible]s on tuberculous trouble, sometimes the ex[illegible]so-called [illegible]hief in other centres can be detected, and the[illegible]d hands h[illegible]tient makes the diagnosis easy. Constitu[illegible] I would [illegible]es will always delay early and free movem[illegible]be allo[illegible]s t[illegible]ge.

Injuri[illegible]series [illegible]on which the normal range of movement is exceed[illegible]geons t[illegible]ove very painful and troublesome. Ligamento[illegible]ratic[illegible]ular structures are ruptured, synovial fringes con[illegible]n th[illegible]even small fragments of bone broken off, attended[illegible]hic[illegible]sion in both the joint and tendon-sheaths. Seve[illegible]y fo[illegible] often make very dissatisfied patients. Severe cases sh[illegible]ion [illegible] rest for a few days, followed by early movement and m[illegible]; and I have often given an anæsthetic with great success[illegible]mes the rupture of ligamentous structures is followed b[illegible]CU[illegible]mal mobility or displacement; it is then desirable to s[illegible]. H[illegible] the limb in a splint. As soon, however, as the pain an[illegible]rm[illegible]ing subside, the muscles should be stimulated by daily [illegible]ge. It is my plan in contusions and sprains, especial[illegible]e injuries of the ankle-joint, to begin friction and massage o[illegible] muscles and tendon-sheaths long before the joints them[illegible]s have sufficiently recovered to bear manipulation.

In all wounds of joints [illegible]e principles of treatment are complete disinfection of the [illegible]ole limb, aseptic dressing, splint, support, and pressure. [illegible]e joint wound must be carefully closed. If the wound is [illegible]tensive, drainage may be necessary. If after all suppu[illegible]on follows, the articulation must be incised and drained [illegible]h intermittent irrigation or antiseptic baths. The limb [illegible]ust not be soddened. Of course troublesome stiffness and [illegible]ore or less ankylosis is generally the result. I use my ex[illegible]ion splint in knee wounds as it permits complete examin[illegible]on of every part of the joint and the adoption of every p[illegible]caution. Severe injuries of this joint which require operation, are generally too extensive to allow successful excision.

The treatment of injured joints by manipulation and massage has now, I trust, passed from the hands of irregular practitioners into the practice of surgeons. It is now a recognised principle that joints disabled by disease or injury can often be completely restored by judicious handling. Rest is often an essential part of treatment, but in a large number of cases it is possible to have too much of it. It leads to the formation of adhesions around and within the joint, and the exudation of more or less plastic fluid in the tendon sheaths and surrounding tissues, followed by consolidation and contraction, the glueing together of structures which normally move freely, and the condensation of intermuscular and subcutaneous connective tissue.

How marked are the changes in any joint which has been inflamed, or injured, or long restrained from motion. The movements are limited, and every effort to exceed these limits is accompanied with pain. The joint is more or less swollen, the skin covering it is congested and glossy, and the whole limb exhibits some muscular wasting. It is often possible to discover by pressure some tender spot.

The treatment of partial ankylosis in well-selected cases is very satisfactory, but there are still many practitioners who very imperfectly carry it out. The mere extension of adhesions always gives pain. The complete rupture is always followed by immediate relief. The patient should be placed under an anæsthetic, not only to prevent pain, but to overcome the resistance of opposing muscles. The operation requires care, and the complete range of mobility can often be restored in a few minutes. When the joint has been successfully manipulated it should be taken into use directly, and there ought to be no return to splints or bandages.

Prevention is, however, better than cure, and in the treatment of all kinds of injury we must not omit the means by which this after-suffering may be prevented. Too much rest is still too commonly employed; movement and manipulation must be employed as early as possible. In cases of fracture into joints enforced rest is necessary. We

must not, however, forget the results which rest induces, and that massage and passive movements are the best means of promoting rapid recovery.

V.—Gilbert Barling, F.R.C.S.,

Professor of Surgery, University of Birmingham; Surgeon, General Hospital, Birmingham.

Professor Barling said he had been in the habit of following out the same line of treatment as that recommended by Mr. Whitelocke but had not found recovery so rapid, and thought that care should be taken not to understate the period of convalescence. He had found that in such cases the muscular system was usually out of condition, and did not allow active exercise early. In Colles's fracture he was in the habit of discarding splints unless the deformity was great: he commenced passive movements two days after the injury. He thought that in many cases of painful joints after injury there was some diathetic cause.

VI.—J. Paul Bush, C.M.G., M.R.C.S.,

Surgeon, Bristol Royal Infirmary; Lecturer on Operative Surgery, University College, Bristol.

Mr. Bush thought that twenty-one days was often too short a period to expect complete restoration of the functions of a big joint in cases of severe injury, however perfect the treatment by massage had been carried out. During the war in South Africa he had seen the great benefit of this treatment, which had without doubt greatly shortened the period of stay in hospital. Mr. Bush thought that the movement under the first anæsthetic should be complete, and not partial as advocated by some speakers.

VII.—J. Rutherford Morison, F.R.C.S.,

Surgeon, Newcastle Royal Infirmary.

Mr. Rutherford Morison thought that in considering treatment pathology should not be forgotten. It seemed incredible that a severe laceration of joint structures was best, and most properly treated by immediate passive movements and massage. Injuries to muscles and tendons were more likely to be benefited by such. Organic stiffness of joints was probably due to inflammation following injury, and a certain amount of rest at first seemed to him essential. Many joint pains were merely joint neuroses.

## THE TREATMENT (NON-OPERATIVE AND OPERATIVE) OF CONGENITAL DISLOCATION OF THE HIP.

By F. F. Burghard, M.S.Lond., F.R.C.S.,

Surgeon, King's College Hospital and the Children's Hospital, Paddington Green.

My only excuse for bringing forward this subject is the uncertainty that surrounded it when first I began to be interested in these cases. Certain surgeons advocated particular methods: on the one hand, the bloodless method was practised exclusively by some in every type of case: others denied that anything short of severe operative interference was likely to succeed even in the simplest cases; whilst others, again, held that little permanent good was likely to result from either plan and the patients were condemned to wear some form of apparatus. A careful examination of the cases that have come under my notice has convinced me that certain of them are more suited for one method and certain for others, and that success in treatment is most calculated to follow a careful discrimination between the different classes.

Before going further, it will be well to mention the more important anatomical peculiarities that are met with in these cases.

Although dislocation on to the dorsum ilii is most frequent, it is not invariable. In younger children the head of the bone is often simply displaced directly upwards beneath the anterior superior iliac spine (the so-called "supra-cotyloid" form). Later on, the body weight and muscular action convert this dislocation into the true dorsal form. In very early life the chief change is in the acetabulum, which is shallow and triangular, with its apex directed upwards. The outline of the head of the femur, which is always relatively too large for the acetabulum, undergoes few changes in early life; later on, it alters considerably.

Apart from these changes, there are certain anatomical factors which have a most important bearing on treatment. Foremost amongst these is the increase in the angle made by the long axis of the femoral neck with the transverse axis of the condyles: in the normal femur this angle varies from 25° to 35°, but in every case of congenital dislocation this angle is markedly increased, and in some it may be as great as 100° to 150°.[1] This twisting of the femoral neck generally takes place forwards, so that the lower limb is rotated inwards when the head is properly in the acetabulum. It is said that in adults this alteration may be so severe that nothing but an osteotomy will remedy it. I have only found it marked in two cases, and in them the deformity readily yielded to well-applied traction and movements.

The second important anatomical point is the diminution in the angle formed by the neck with the shaft of the femur. In normal cases this usually measures about 120°, varying from 110° to 140°. In congenital dislocation, however, it may measure as little as 90°. The diminution is extremely slight before the child begins to walk, and its degree is to a certain extent proportionate to the length of time that has elapsed since walking has commenced.

The third point is the arrangement of the joint capsule, and to this I would draw special attention, as it does not seem to have attracted its due amount of notice. It serves to explain the large number of cases in which reposition without operation, although apparently successful at the time, fails eventually. An examination of museum specimens, confirmed by observations on the cases upon which I have operated, have strengthened me in the view enunciated by Hoffa, and recently confirmed by Bradford,[2] that it plays a most important part in the treatment. The following account from Hoffa puts the matter concisely:

> The capsule rapidly undergoes alterations in shape, and assumes a somewhat hour-glass form. Starting from the posterior edge of the acetabulum, it passes over the head of the bone, over which it is accurately applied, so that the outline of the head can be seen clearly beneath it. It then runs forwards and downwards, and becomes firmly adherent to the acetabulum, so as to make with this flattened cavity a narrow pouch—the so-called "acetabular pocket" (of Lorenz—from which the ligamentum teres, when present, emerges to reach its insertion into the head. This lower portion of the capsule thus forms a sort of diverticulum, which only communicates with the upper spacious capsular cavity in which lies the head of the bone by an isthmus—the so-called *rétrécissement* of Bouvier. This narrowing is really caused by the passage of the ilio-psoas tendon across the capsule at this spot. It is not only in its form that the capsule undergoes changes, but also in consistence. The entire anterior and inferior portion becomes abnormally thickened, so that the portion lying like a lid over the acetabulum becomes exceedingly dense and unyielding. In this the various capsular bands, more especially the Y-ligament, play an important part.

*Treatment by Apparatus.*—No really efficient apparatus has yet been constructed. Hoffa has a pelvic band for the unilateral form of dislocation and a special corset for the bilateral one, but neither is satisfactory. The only forms to which special reference need be made are the Hoffa-Mikulicz apparatus for young children and that of Schede for older patients. The Hoffa-Mikulicz apparatus is designed for children under two years of age and keeps the limbs extended, abducted, and rotated as a preliminary to further treatment. It is worn by night and for some hours during the day, while the reminder of the time the child is taught to walk and has massage and passive movement. Schede's apparatus consists essentially of a boot fitted with lateral irons which terminate above in an oblique pelvic ring similar to that of Thomas's knee splint, through which the weight of the body is transmitted. The apparatus is connected with a pelvic band fitted with a perineal strap on the sound side, and is so arranged that any requisite amount of abduction can be kept up.

*The Bloodless Method of Reduction.*—The elaboration of the bloodless method is due to the work of Paci and Schede, amplified and improved by Lorenz. Paci's method is very similar to that of Lorenz, except that the former attempted merely to form a stable joint beneath the anterior superior iliac spine, whilst Lorenz aims at true re-position. Schede employs direct screw traction in place of the more scientific manipulations of Paci and Lorenz. It will be sufficient to describe the latter's method in detail.

*Lorenz's Bloodless Method.*—Powerful extension is applied until the trochanter reaches Nélaton's line. This may need

more than one sitting, during which any tense muscles, such as the adductors or hamstrings, are firmly kneaded and stretched or, if necessary, subcutaneously divided. It is inadvisable to attempt re-position until the head is got down sufficiently. In order to replace the head in the acetabulum the entrance to the latter must be freely opened up, and this is done by relaxing the extension, strongly flexing the thigh, rotating it inwards, and then fully abducting the limb in this position through at least 90 degrees. This makes the head cross the posterior lip of the acetabulum and enter the joint cavity, an event marked by a loud click or a definite sensation that cannot be mistaken. The head of the bone is driven still further into the acetabulum, and the tight anterior inferior part of the capsule is still further stretched by outwardly rotating the fully abducted and flexed limb, and pressing it firmly backwards towards the table, whilst the assistant fixes the pelvis. As long as this position is maintained the head usually remains in place; directly the abduction is diminished it slips out.

A firm plaster spica, taking in the slightly flexed knee, is then applied to the limb in the above position, and is kept on for three months so as to allow the lax structures on the posterior and outer aspect of the capsule to shrink, whilst those on the anterior and inner are stretched. The plaster is then taken off, the abduction is diminished as far as is consistent with the head of the bone remaining in place, and a fresh spica is applied, the knee this time being extended. This plaster is kept on for another three months, and finally a third spica is applied, which does not take in the knee. This makes an immobilisation of nine months in all, during the last three of which the patient walks about in the splint with the limb slightly abducted. From the ninth to the twelfth month the patient walks without any apparatus except a thick sole on the sound side, and has massage and passive movements, especially abduction. The aim of the treatment is to deepen the acetabulum by the pressure of the head against it in walking, and it is essential for success that the child should be able to get about.

*Results.*—In the majority of cases reduction of the dislocation, as shown by sound, sensation, and the *x* rays, is fairly easy. In the vast majority, however, the head leaves the acetabulum afterwards, travels upwards and forwards beneath the anterior superior iliac spine, where it finds a firm resting place. In reality Lorenz's operation is only a true reposition in a few cases. In the majority it is a mere transposition, and is only an improved form of Paci's and Schede's methods. It is, however, a distinct advance on all other non-operative methods in its functional results, but in no sense is it a cure, even in the hands of its author, except in a few isolated cases.

*Re-position by Operation.*—The operation at present in vogue is that known as the Hoffa-Lorenz method and is done as follows: Full extension is made until the trochanter is nearly on a level with Nélaton's line. Whilst this is kept up, an incision is made from the upper angle of the great trochanter a quarter of an inch in front of and parallel with its anterior margin, the gluteus medius and minimus are retracted and the capsule of the hip is opened up by cutting down upon the neck of the bone whilst the assistant, who keeps up the extension, rotates the limb outwards for the purpose. The capsule is slit up over the front of the neck right up to its insertion into the rim of the acetabulum, and if this does not allow the head to come well up into the wound the incision is made "T"-shaped by cutting parallel to the anterior intertrochanteric line. The finger is introduced into the acetabulum, which is then deepened with a sharp spoon. Hoffa lays stress on the new acetabulum being made circular with deep and overhanging edges, especially above. The head is then replaced in the acetabulum, and, if necessary, is trimmed to make it fit. The wound is left open and is packed with gauze, outside which a plaster spica is applied whilst the assistant keeps up extension and fixes the limb in a position of abduction and slight inward rotation. The child is then put in a Phelps's box. The limb is kept in plaster for three or four weeks, at the end of which time the child has daily electrical treatment and gymnastic exercises with a special regard to abduction.

*Lane's Method.*—Lane's operation is founded on the presumption that it is impossible to actually replace the head of the bone in the acetabulum, and its object is to form a secure joint beneath the anterior inferior spine of the ilium in front of the transverse axis of pelvic rotation. It is done as follows:—

An incision is made backwards from the anterior inferior spinous process along the upper limit of the femur. The structures superficial to the capsular ligaments are cut through, and the front of the ilio-femoral ligament is freely exposed, and its limits and attachments clearly defined. This ligament is then divided at its attachment to the innominate bone, being left as a long strong plane in connection with the femur. The ligamentum teres is cut away from the head of the femur.

The soft parts are cut through till it is possible to rotate the articular surface of the femur outwards, and bring it forwards to the same horizontal plane as the anterior inferior spine. The upper end is so shaped with a chisel and file as to form a blunt cone.

A cavity is cut by means of a gouge in and beneath the anterior inferior spinous process, and the newly constructed head is placed in it. It is retained there by sewing the anterior ligament to the bone and the rectus tendon, and to the soft parts in the vicinity, wire being usually used for the purpose. This is done very thoroughly and carefully, so that the fibres of the ligament will be directed to the best advantage. If the head cannot be securely retained in this manner, as is occasionally the case, a thick silver wire is passed through the trochanter, neck and head of the femur, and through the floor of the concavity cut in the ilium, and so fixed as to allow of free movement of the bones on one another around the wire as an axis. The wire is removed subsequently after the joint has reached a satisfactory state in its evolution. Wire is rarely required, for the reason that the anterior ligament affords in the large majority of cases a means by which the head can be retained securely in position.

Concerning this operation, I have only to remark that I have tried it in five cases, and have been invariably disappointed with the results. The space available for the formation of a new acetabulum is extremely small, and in order to get a stable joint it is necessary to so whittle down the head of the bone that it becomes a mere point and firm ankylosis is likely to result. If not, the joint becomes gradually unstable, and the final condition of the patient is no better than before operation. The operation is a severe and prolonged one, and, although the lordosis is lost, the limb is in a very ugly position of full external rotation which it is difficult to overcome. The operation is said to be most suited for cases of bilateral dislocation. In the only case in which I have tried it under these circumstances I was most disappointed with the functional result.

*The Author's Experience.*—Up to the present date I have notes of 20 cases in all, of which 15 occurred within about the last two years. Up to two years ago I had tried Hoffa's, Lane's, and Paci's methods with indifferent success. It is only during the last two years, since *x*-ray photography has enabled one to ascertain clearly the results produced, that I have been seriously attempting to secure a permanent cure. From the cases treated previous to this period, however, one has been able, owing to the time that has elapsed since the operations, to gain information as to the permanence of the results.

*Experience of Bloodless Methods.*—Of Schede's method I have no experience, nor am I inclined to try it. The traction is too great for young children; it is unscientific, and I cannot feel that the results obtained are likely to be permanent. Of Paci's method I have had two cases under my own care, and have seen two more under the care of my colleagues. The immediate results were not at all bad, as the limp almost disappeared, whilst the lordosis was markedly improved. These cases occurred some four years ago—that is, immediately after the appearance of Paci's paper in 1896, and I have therefore been able to watch the after-results, which have afforded a valuable lesson. Both children are distinctly worse now than they were immediately after the operation. One, who was a girl of 10, is now almost as bad as before. The other was a girl of 5, and, although she has not relapsed to her original condition, she is distinctly retrograding. I can hardly think, in the face of Lorenz's more scientific method, that there is any future before this one.

The important question at present seems to be the value of Lorenz's method as opposed to operative treatment. Lorenz's plan is undoubtedly an ingenious and scientific attempt to actually reduce the luxation, and of its correctness any one who has operated for this affection can at once convince himself. I have found that his manipulation is nearly always the easiest by which to reduce the dislocation after the capsule has been opened, and occasionally I have found it the only possible one. I have been able to demonstrate to bystanders that Lorenz's position is the only one in which some of these cases will remain after operation without the application of external pressure. But when we come to

consider the results of the operation, a clear demarcation has to be made between the cases in which it actually cures and those in which it merely produces improved functional results. Of my own cases, which amount to 15 in number, 9, representing 10 hips in all, were treated by Lorenz's method, and out of these only 1 succeeded in the sense that the dislocation was absolutely and permanently cured. In 5 others the functional result was distinctly good, whilst in two others, and in the single bilateral case in which it was tried it failed utterly. The only case cured by this method was the first in which I adopted it, and even this did not succeed at first, as a skiagraph taken at the end of three weeks showed the head of the bone out of place, and the manipulation was therefore again carried out, this time with permanent success. The child discarded all apparatus at the end of nine months, and now, more than eighteen months after the operation, is absolutely well, and a skiagraph shows no difference in the joints on the two sides. As a result of this case I persevered with all the other cases, but there was no other true cure, and I am very doubtful, from the experience I have gained of the after-results of Paci's method, whether relapse will not occur in the functionally-improved cases as the children grow older, and more weight is thrown upon the limb. All my cases were treated in the same way. For the first three months the limb was kept in Lorenz's position, with the knee flexed and included in the bandage. In the second three months the abduction was diminished to some extent, and the knee was extended but included in the plaster, whilst in the last three months the abduction was still more diminished, and the plaster only carried down as low as the lower third of the thigh, the patient being encouraged to walk.

That this method does actually succeed in getting the head of the bone partially or entirely into the acetabulum in many cases cannot be doubted by anyone who has tried it carefully. Its retention in position and the formation of a normal acetabulum afterwards are, however, quite a different matter. With every care and every improvement in technique, it seems impossible in the majority of cases to keep the head of the bone permanently in position. If the results are checked by the *x* rays it will be found that, although the head of the bone may be in position immediately after the operation, it gradually slips upwards above the upper edge of the acetabulum, and it seems a mere chance if the head really slips into the acetabular cavity at all, and one that it is impossible to gauge the probability of beforehand. There is little doubt in my mind from the experience gained from the open operation that in many cases the head of the bone must lie over the acetabulum with a portion of the capsule or even the ligamentum teres interposed between it and the bone—a position of most unstable equilibrium. In 3 out of the 6 cases on which I have operated it was impossible, even after opening the capsule, to force the head of the bone through the narrow constriction between the upper and lower parts of the capsule already alluded to, so as to get the head of the bone into the acetabulum without enlarging this orifice of communication. If the head really enters the capsule of the joint the resulting position should be much more stable and true success should be much more frequent, as it is clear from experience of the open operation that when once the head of the bone has been got properly into the acetabulum it is in a very stable position indeed, so long as the capsule is not slit up too widely.

The cases most obviously suited for Lorenz's method are those of young children from 2 to 3 years of age who have learned to walk, in whom there is little or no change in the bones, in whom the dislocation is not on to the dorsum ilii, and in whom the changes in the anterior part of the capsule above referred to are not very marked. On the other hand, the cases in which there is much difficulty in getting the head of the bone down into position are obviously unsuited for it, and it may roughly be said that no case after the age of 6 is likely to be cured.

On the other hand, the manipulation can be performed at an early age without any of the risks incidental to an open wound, and, as it is possible that it may be completely successful, I would be inclined to recommend that a preliminary trial should be made of it in all cases except those obviously unsuited for it.

*Experience of Operative Measures.*—I have already dealt with my experience of Lane's operation as exemplified in the five cases in which I have tried it. Hoffa's operation I have only performed once, but I have seen several in the practice of others. In my own case there was very considerable stiffness, which practically amounted to ankylosis, and did not encourage me to pursue the operation further. In the practice of others I have seen either stiffness follow the operation or gradual recurrence of the dislocation.

In the beginning of last year, as the result of a prolonged and unsuccessful trial of Lorenz's method in a child of 6, I cut down upon the joint in the following manner, which I have since employed in five other cases: At a preliminary sitting all tight structures, such as the adductors and hamstrings, were either divided subcutaneously or stretched sufficiently to enable the trochanter to be got down to Nélaton's line, and for abduction to be carried out to at least 90 degrees without difficulty. An incision was then made from just outside the anterior superior spine of the ilium downwards and slightly forwards for about four inches, parallel to and in front of the anterior margin of the tensor vaginæ femoris. The upper end of this incision was curved somewhat backwards for three-quarters of an inch along the crest of the ilium, and the deep fascia and the tensor vaginæ femoris were separated from their attachment to the pelvis. The muscle was retracted, the limb rotated outwards, and the capsule of the joint incised parallel to and a quarter of an inch internal to the anterior intertrochanteric line. This incision was carried freely through the whole front of the capsule above and below, and the head of the bone was protruded. The tendon of the ilio-psoas was next detached from the lesser trochanter and the finger was slipped into the acetabulum. The reason for the failure of Lorenz's method was at once obvious, as in order to pass into the shallow acetabulum the head of the bone had to go through a narrow slit-like opening which was insufficient to admit it. With a rugine the attachment of the capsule to the front of the acetabulum, together with the rectus tendon, were detached from the bone for a sufficient extent to enable the head to pass into the acetabulum. On manipulating the limb by Lorenz's method this at once occurred, and the limb assumed spontaneously the abducted, outwardly rotated, and slightly flexed position; as long as it remained in this position there was no tendency to recurrence of the dislocation. Two points were thus made obvious: first, that there was no need to deepen the acetabulum according to Hoffa's method; and, secondly, the position of maximum stability was that associated with Lorenz's method, and not, as in the case of Hoffa's operation, that of slight abduction with inward rotation. All that now remained was to excise an elliptical portion of the redundant anterior part of the capsule, so as to bring the edges of the incision into apposition and tighten up the front part of the capsule, which was tightly sutured by catgut. The joint then was perfectly stable, and did not require any artificial aid in maintaining its position. The deep tissues were brought together by one or two catgut stitches, the wound closed with a continuous silk suture, and the usual dressings applied.

To maintain this position satisfactorily, and at the same time to provide for inspection of the wound, a form of Croft's plaster splint was adapted, consisting of a posterior portion embracing the buttocks and posterior two-thirds of the pelvis above and the posterior two-thirds of the thigh and leg below, whilst a second half similarly embraced the anterior portion; the front half could be taken off like a lid for the inspection of the wound. The knee in the flexed position was included in the plaster. The after-progress was uneventful. The stitches were taken out on the fourteenth day, when the wound was found healed and the splint reapplied. At the end of a month, when the parts had become fairly firm, an anæsthetic was given and a large plaster spica was substituted, the abduction being slightly diminished; at the same time an *x*-ray photograph was taken which showed the head of the bone in perfect position. The remainder of the treatment was exactly the same as for the bloodless method. On February 1st of this year, six months after operation, all apparatus was discarded and the child was allowed to walk wearing a thick sole on the sound side. The child is now perfectly cured and the head of the bone is in place.

Since then I have operated on four other cases, one being a case of bilateral dislocation, and I have been surprised at the facility with which the dislocation is reduced and the position maintained. In no case has the acetabulum required deepening or the head of the bone altering in size or shape. In two cases the reduction was easily accomplished without the necessity of detaching the capsule from the rim of the acetabulum, and it may be presumed that in these cases Lorenz's method theoretically should have succeeded. In the other three cases it was necessary to enlarge the constriction between the upper and lower portions of the capsule before the head would go into place. In all these cases, with the exception of one, a child of 6 years in whom there was great difficulty in drawing the head of the bone down opposite the acetabulum, Lorenz's method had been previously tried and had failed, to the extent, that is to say, that the head of the bone could not be retained in position. All these cases were under 7 years of age.

The points I would emphasise in conclusion are these: In the first place, experience has abundantly shown that true cure can only be expected in suitably-selected cases, and it is to the early recognition of the affection and the selection of these cases that future improvement must be looked for. Personally I should refuse to treat any case over 6 years of age unless it was possible to draw the trochanter down to Nélaton's line with the application of very slight force. I am aware that Hoffa and Lorenz treat cases both by the bloodless and by operative measures up to the age of 14 and even 16, but the few cases I have had beyond the age I have mentioned do not induce me to advocate any active treatment; they are best treated by some form of Schede's apparatus, preceded if necessary by extension on Schede's or Paci's lines. If this judicious selection of cases is made, I believe that we should have in future a more painstaking and thorough trial of the methods and more satisfactory results. It is common to hear dissatisfaction expressed with the results obtained, when really the cases are beyond the age at which good results are likely to be got.

A point of some weight is the slight operative interference that is necessary. The operation I have described entails little or no loss of blood or shock, and is quite safe even in children of 3 years of age. Another point that is equally satisfactory is the readiness with which I have always found reductions can be accomplished in children under 7 years of age. Perhaps the most satisfactory point is the ease with which the reduction has been maintained, and this may be attributed to the following causes: First, all shortened tendons are thoroughly stretched or divided beforehand; the separation of the ilio-psoas from its insertion is always, I believe, a valuable adjunct. Secondly, the limb is put up in the position of greatest stability—a point that is easily ascertained upon the operating table—and is kept there until repair has fairly taken place. Lastly, the capsule is so altered as to make it fit tightly and to offer a mechanical obstacle to recurrence of dislocation. The portion through which the sutures are passed is extremely stout, and is capable of standing a great strain, and this portion, which acts as a hindrance to reduction in the bloodless method, is used as a factor to prevent the dislocation, and is not slit up freely as is the case in Hoffa's operation.

With regard to the classification of the cases suitable for the various methods of treatment, I should be inclined to divide them into the following groups:

1. In children under 2 who have not learned to walk, and in whom perfect control over bladder and rectum has not been gained, no active treatment should be carried out. Massage and passive movements, especially in the direction of extension and abduction, should be practised frequently during the day, whilst at night either weight extension or the ingenious apparatus of Hoffa and Mikulicz may be employed: on the whole, perhaps weight extension is better, as any apparatus is liable to be soiled. The application of a plaster-of-paris bandage, such as is required by Lorenz's method, is out of the question, as the child under those circumstances rapidly becomes dirty and excoriated, and the plaster has to be given up.

2. Between the ages of 2 and 5 an attempt should be made to secure a permanent result by Lorenz's method. This should always be checked by the *x* rays, and the surgeon should not be satisfied unless the head of the bone is, and remains, in position. The manipulations may be repeated at short intervals—two or three times if necessary—so that the surgeon can convince himself as to whether or not it is likely to succeed. Should it fail, the joint should be at once cut down upon without further waste of time, and replaced according to the method described above.

3. Cases at about the ages of 5 or 6 should be operated on at once by the open method, at any rate unless a single trial of Lorenz's method shows that the bloodless reposition is likely to succeed. These children stand the operation so perfectly well—there is so little risk of sepsis, so little pain afterwards, and so little difficulty in establishing and maintaining the reposition—that it is mere waste of time to employ any other method.

4. After the age of 7 at the outside, except in some of the rare cases where the head of the bone can be easily drawn down opposite the acetabulum, no active interference should be undertaken, and some form of apparatus modelled upon Schede's should be worn so as to diminish the unsightly waddle. In patients who are anxious to have some active treatment, Schede's extension, followed by short immobilisation in plaster and then the use of Schede's apparatus may be tried.

References.

[1] E. H. Nichols and E. R. Bradford, *Amer. Journ. of Med. Sci.*, 1900, p. 629.

[2] E. R. Bradford, Congenital Dislocation of the Hip, *Boston Medical and Surgical Journal*, October, 1900, p. 415.

Mr. Howard Marsh congratulated Mr. Burghard on his paper. He thought that the cases requiring operation were those in which there was a great deal of displacement upwards and backwards, and where there was a sliding condition of the false joint.

## REDUCTION OF LONG-STANDING DISLOCATIONS.

By Eliza Walker Dunbar, M.D.,
Bristol.

The interest that I hope attaches to my two cases of long-standing dislocation is, in the first place, that after the dislocations had existed five and six years there was no obstacle to reduction, which was effected easily and completely under anæsthesia; and, in the second place, that the subsequent history of the cases shows that the reductions may be called durable.

The after-treatment carried out is also a contribution to the subject set down for discussion to-day.

The one case is that of a lady, Miss B., aged 31 years, a missionary sent home from China on account of pain in the right hip-joint, which pain unfitted her for work.

The history of the affection dated in its commencement from a certain day five years previously, when Miss B., who was then a lady help, had been romping with one of her charges, and in the course of the romp as she lay on her left hip on the floor, the child came with some force and seated herself on the highest part of the right hip. The first great immediate pain subsided somewhat, when, on rising with great difficulty and making a few steps, something seemed to right itself. The remaining discomfort Miss B. bore without even consulting a doctor for six months. She declined even then treatment, not being willing to give up the time.

Subsequently she trained as a missionary, and she stated that she pointed out that one leg was longer than another, and that her right hip protruded so as to require special cut in her skirts.

When I saw her she suffered from a feeling of insecurity in standing and walking and was obliged to use a stick always. With its help she could walk for miles, as far as nine miles she said at times. She had difficulty in going up and downstairs. She could not run downstairs or up. After exertion she had always pain. The increase of suffering which had necessitated her leaving China she attributed to the very severe cold in winter.

I found the symptoms of a partial dislocation outwards and downwards of the right femur. The right foot could not be everted; the great trochanter was further removed from the spina ossis ilei on the right and was nearer the posterior middle line than on the left.

A skiagraph was taken at University College, Bristol—it was in the earlier days of the Roentgen rays—the exposure was rather long and the skiagraph is not as clear as it might be. Still it can be made out that the head of the right femur is out of position, the right great trochanter is lower than the left and more prominent and further from the middle line, and the right femur is at a more acute angle than the left.

Under anæsthesia (gas and ether) the femur was easily replaced by rotation upwards, inwards, and then outwards, and all movements could henceforth be effected.

The patient was kept in bed for fourteen days, but the limb was not bandaged. After the first day, passive and active movements were made, standing and walking, each succeeding day for a longer time. Massage was given by a skilled masseuse, especially over the joint and about it, with a view to tighten and strengthen the stretched soft parts around the joint. Treatment was discontinued after a month. The patient could

walk with security, could run up and downstairs, and could carry out all normal movements of the femur.

Some months afterwards Miss B. was threatened with a relapse while kneeling and strapping a trunk. Pain in the joint warned her to desist and she did. Though the pain disappeared within a day or two, and the movement was reported to be right, I thought it was best to see her, and I found all in order, and for a week watched the case and saw that the joint worked freely, normally, and without pain.

I learn that since then the joint has on three or four occasions given trouble with impeded movement, and once becoming so insecure as to cause Miss B. to drop down, but each time passive movements, that she had been instructed to ask any friend to make with the leg, had remedied matters, and for the past year movement had been untroubled.

That the joint should sometimes ache will not surprise any observer who has had to treat joint affections. Miss B. expresses herself very grateful for the relief afforded her.

The other case was a partial dislocation of the right sacro-iliac joint.

Miss M., aged 32 years, had six years previously to consulting me (May, 1893), while lifting a very heavy scuttleful of coal, felt a great pain in the back on the right side, and could not stand upright all day. She had suffered pain ever since. Once it was much aggravated after attempting to lift another scuttle. After that occasion she was obliged to be in bed a week. Careful examination showed a difference between the right and left sacro-iliac joints, and I diagnosed a dislocation to which the history clearly pointed.

The pain was greatest in rising from sitting. It was least painful in sitting and lying down, but there was great pain turning in bed. Pain was always in same spot.

Although Miss M. came to me in January she insisted that she could not get leave of absence until June, and as she pleaded that she might lose her situation there was nothing to be done but wait.

June 10th, 1899, a skiagraph of the pelvis was taken at University College, Bristol, which as anyone may see, shows a distortion of the pelvic cavity and tilting forwards of the right iliac bone, and no doubt there was strain on the symphysis pubis as well as discomfort in the sacro-iliac joint. On June 12th, under an anæsthetic given by Dr. Marian Horwood, in the absence of my colleague, Dr. Emily Eberle, I replaced the right os innominatum, feeling the bone move under my hand and raising it upwards towards me, then tilting it backwards and outwards, following the reverse order of its dislocation. Before reducing, I measured the distance of the right and left spina superior cristæ ossis ilei from the symphysis pubis and found that on the right was nearer by half an inch. After reduction the distance was equal on both sides. Another skiagraph was taken which is also here, and shows that reduction had been accomplished satisfactorily. No bandage was applied, and the patient was encouraged to move gently from the first. She was dismissed in ten days. After five weeks she returned, saying she had no pain at all and felt quite well.

On making inquiry lately as to the further subsequent history of the case, I learnt that for fifteen months there was no relapse. That then Miss M. felt the joint give way as she thought, but had no pain for fourteen days, when the old trouble set in again. As to the cause, she thinks she may have lifted a heavy basket of linen. Again she thought she might not ask for leave of absence, though urged to come to me by a friend, and had it not been for my inquiry, would have postponed treatment until her annual holiday. Knowing that I could now replace the joint easily I succeeded in persuading her to give me the opportunity to do so, and one afternoon readjusted the joint under anæsthesia, which I administered myself. Miss M. returned the same evening to her situation. This time the dislocation was less extensive, only ½ inch difference in the respective distance of the spinæ superiores from the symphysis pubis.

Miss M. has since reported herself as quite free from pain. I have directed her not to lift any heavy weights, and not to stoop down without care and deliberation.

Mr. W. R. Buckell thought that the comparative ease with which these dislocations had been reduced was due to the fact that the writer of the paper had in each case to deal with a subluxation only.

## CASE OF HYDATID CYST IN THE RIGHT PLEURA TREATED SUCCESSFULLY BY OPERATION.

By R. H. Anglin Whitelocke, M.B.Edin., F.R.C.S.Eng.,
Honorary Surgeon, Radcliffe Infirmary, Oxford.

The case is that of a young woman, aged 28, a native of Abingdon, who has at no time been out of England.

She was admitted into the Radcliffe Infirmary on July 10th, 1900, with the history that during the previous March "she began to feel weak after the least exertion, was somewhat breathless, and felt generally unwell. Soon a pain was felt in the right side of her back, which was more or less constant. This pain appeared to start in the back, passed around the right side of the chest, and forward to the pit of the stomach." As the pain continued to increase, she consulted Dr. Paulin Martin, of Abingdon, who treated her for localised pleurisy. Dr. Martin, under whose care she was before admission into the hospital, has kindly furnished me with the following brief notes:

"I first visited the patient on May 31st. She was then complaining of a sharp pain in her right side, and had a temperature of 102.4° F., with a quick pulse and furred tongue. There was tenderness over the lower intercostal spaces on the right side: no friction sound could be detected, no cough or expectoration present. It was, however, believed that pleurisy was the cause of the pain in deep breathing and on pressure. In a few days time, the pain continuing severe all the while, dulness on percussion over an area corresponding to the pain was observed, the respiratory sounds were obscure, and vocal fremitus was absent over the whole area. It was therefore concluded that there was effusion into the pleural cavity."

Towards the end of June an enlargement appeared over the intercostal space where the pain had been first felt. This, at first small, very gradually increased in size, and as it grew the pain was much intensified, and sometimes accompanied by a sensation of pins and needles. It was then proposed by Dr. Martin that the exploring needle should be used, but she asked that she might be sent to the Radcliffe Infirmary. On admission a swelling about the size of an average orange was to be seen over the posterior and lateral portions of the eighth right intercostal space. This fluctuated, was tender to the touch, but showed no redness.

Percussion elicited dulness over an area corresponding with the lower third of the right pleural space: there was loss of vocal fremitus, and the breath sounds were inaudible. These physical characteristics were apparently unaltered by change of posture. As the temperature was 100.2° F., it was thought that probably a pulmonary empyema existed. Accordingly next morning an anæsthetic (chloroform) was administered, and the operation of thoracic section performed.



Portions of the ribs immediately above and below the swelling were excised, the pleura freely exposed and laid open. Nearly a pint of a turbid, straw-coloured fluid escaped, and with it many small but well-defined and distinct cysts. The cavity was then carefully explored with the finger and other cysts, some as large as a dove's egg, were abstracted. When all the discharge had been removed a careful examination was made to ascertain whether perchance there was a communication from the cavity through the diaphragm with a similar one in the liver, and also as to its limitations upwards towards the lungs. No communication could be found, and the liver was not enlarged, as elicited by palpation and percussion.

The base of the lung was markedly indented and the cyst had evidently been dome-shaped and had encroached considerably upon the area of its lowest lobe. The internal surface of the greatest part of the cyst wall was smooth and polished, but there was a small roughened patch corresponding with its diaphragmatic surface. The case was regarded as one of primary infection of the right pleura by a hydatid which was single. When the cavity had been thoroughly irrigated with a warm solution of boracic acid an attempt was made to remove the cyst wall. By grasping with forceps and pulling upon portions which came into view a certain amount of the mother cyst was removed, but the manœuvre cannot be said to have been attended with any marked degree of success, for it was firmly adherent to the pleura. The cavity was then packed with sterilised gauze, the edges of the wound for the greater part being left open.

At first the wound was dressed daily in a similar manner and the discharge was considerable, but as the lung began to expand less and less dressing was used, and the discharge diminished. On the eighth day

after the operation a few more daughter cysts escaped much to our surprise, and for some time after this date an occasional one was to be found on the dressings. The lung gradually expanded until only a small cavity remained with a narrow sinus leading to it. It would not heal, however, and as the patient refused to allow of any further operative procedures she was dismissed on September 12th, eight weeks after the operation. She was then free from pain, had increased 2½ lbs. in weight, and suffered from no inconvenience other than the discharging sinus.

She then returned to the care of Dr. Martin, who looked after her until she was completely cured; and to his care and skill much if not most of the success of the after-treatment is attributable. She reported herself at the hospital from time to time when I urged upon her the necessity of further operation, but she would not allow of it, and so the sinus continued to discharge. At last one day in December Dr. Martin, when dressing the wound, was able to see a portion of the mother cyst. This he seized with forceps upon which he wound it, and with a good deal of coaxing and some traction it came away apparently entire—measuring when floated out about five inches in diameter. From this date no more bladders escaped, the lung expanded more fully, and the sinus gradually closed, the patient being completely well by the first week in February.

The features of the case which lend themselves most to comment are the rarity of cases of hydatid disease in persons who have always resided in England, the still greater rarity of pulmonary hydatid, and, rarer still, those affecting primarily the pleura.

Thus, Neisser[1] in his analysis of 900 cases occurring in man says the liver was affected in 50 per cent. of cases, the lungs only in 7.04 per cent., and the pleura in 1.9 per cent. He also states that the right pleura is more frequently affected than the left, in the proportion of 25 to 11, and the lower lobe than the upper.

It has been stated that it is almost impossible to distinguish between a primary affection of the pleura and a superficially placed cyst in the lung invading the pleural cavity secondarily.

The belief that this was a case of primary affection is based on the absence of any communication having been found at the time of the operation with either the liver below or the lung above after a very diligent search; from the fact that the liver was at no time increased in size, as ascertained by careful physical examination; nor were there at any time any of the usual pulmonary symptoms, such as cough, expectoration of blood, or cysts, etc., complained of.

There was nothing in the subsequent history of the case to alter this opinion. There seems to have been a very unusual amount of pain from the very outset of the symptoms until the section was made; the distribution was clearly that of the intercostal nerve, but such severe pain is unusual in ordinary cases of pulmonary empyema coming to the surface, or in abscesses arising from tuberculous ribs in similar location. The patient's health was fair, as seems to be usual in these cases, and the symptoms were those of a localised effusion into the pleura. Another point of interest was the marked persistency in the production of daughter cysts even after the cavity had been laid open and the mother cyst roughly handled, both at the time of operation and almost daily subsequently. The great difficulty, also, of removing the parent cyst was an important feature.

It would seem that the treatment of similar cases by the operation of thoracic section, with resection of adjacent ribs and free opening and draining of the cyst, is a sound, and one might say almost the obvious one. If left to itself the cyst is just as likely to burst into a bronchus, with all its serious, consequences as to point externally. There are many fatal cases of pulmonary hydatid on record; besides if, as this case shows, it is such a difficult matter to kill and eradicate the cyst even when it is freely laid open and stuffed, how much more so must it be when it is emptied by way of a bronchus or other indirect channel? That aspiration for this reason is also likely to be unsuccessful seems probable. In addition to this it must be borne in mind that a peculiar train of symptoms, even fatal in their consequences, has followed upon the simple tapping of those cysts in other organs.

On the positive side of the question we possess the record of a case reported by Dr. T. Smith, of Walkertown, Ontario, of a girl, aged 20, who had a running sore in the eighth left intercostal space. This was freely opened, and in the discharge which flowed were a number of echinococcus cysts of various sizes. The patient recovered.[2]

In the summary of operations performed for hydatid disease at the Adelaide Hospital from 1888 to 1894 there is a record of 9 cases with no deaths after the operation of thoracic section had been performed for infection of the pleura, and 12 cases with only 1 death where the lung was affected.[3] It has occurred to me that in a similar case where thoracic section is performed, giving the patient an iodine bath two or three times a week, as is done in cases of pulmonary empyema, may be of some service in more readily destroying the cyst and allowing of its more speedy discharge.

REFERENCES.

[1] *Die Echinococcen Krankheit*, Berlin, 1877. [2] Osler, *Principles and Practice of Medicine*, Third Edition. [3] Drs. J. C. Vergo and E. C. Stirling, Allbutt's *System of Medicine*.

Dr. J. MICHIE quoted a case of pleural hydatid occurring in Adelaide Children's Hospital, evidently originating in the pleural cavity. It was of importance to diagnose hydatids in this locality before aspirating, and this could readily be done by careful auscultation. The indiscriminate use of the aspirator, more particularly where there was a hydatid in the lung, might lead to disaster.

## A CASE OF SUPRAPUBIC LITHOTOMY FOR A VESICAL CALCULUS WEIGHING 200 GRAINS IN A BOY AGED 11 YEARS.

By E. MANSEL SYMPSON, M.A., M.D., B.C.Cantab., M.R.C.S.,
Surgeon, Lincoln County Hospital; Vice-President of the Section.

THE following are the details of the case:

W. E., a lad aged 11, was admitted into the Lincoln County Hospital under my care on October 22nd, 1900. He had suffered from severe and increasing pain in micturition on and off for five years; he has been passing water more frequently, and has to pass it often at night.

On October 25th he was sounded while under the influence of chloroform, and a stone was felt particularly in the right anterior portion of the bladder. It was estimated as being about an inch and a half long. There seemed very little room in the bladder.

On October 30th he was put under chloroform, and suprapubic lithotomy was performed. A stone was extracted, composed of uric acid coated with phosphates, measuring 2 inches by 1⅛ inch and weighing 200 grains. The bladder was sewn up with fine silk sutures (as the bladder was so small this seemed to be preferable to leaving the cut unstitched), and the skin wound with silkworm gut, leaving the lower end of the skin wound open with a gauze drain.

October 31st. He was much relieved; no pain on micturition, though he was not able to hold his water. Pulse and temperature were both good.

The after-history of the case was uneventful, and he was discharged cured on December 3rd, 1900.

The stone was exhibited to the meeting.

## A CASE OF PARTIAL EXCISION OF THE PANCREAS FOR MULTILOCULAR CYSTIC TUMOUR.

By GEORGE HEATON, M.B., F.R.C.S.,
Surgeon, General Hospital, Birmingham and the Birmingham and Midland Counties Hospital for Sick Children.

I. D., a single woman, aged 27, was transferred to my care at the General Hospital, Birmingham, by my colleague, Dr. E. Malins, suffering from an abdominal tumour and pain. The history she gave was as follows:

Since the age of 8 or 10 years she had never been able to run about as other girls of her age owing to pain in the back, which any violent exercise invariably brought on. During the past five or six months she had noticed that her abdomen was increasing in size, especially on the left side. The abdominal and lumbar pain had been getting worse during this time, and latterly she had been unable to do work of any kind owing to the pain which it brought on.

*Previous History.*—She has always been a woman of spare habit. She has had two attacks of scarlet fever—one at the age of six years and a second at the age of 14. After each attack of fever she was laid up for some months with pain in the back. She has had chorea twice—once when 14½ years old and again when 17 years old. During the last two years the pains in the back had been worse than formerly, and had frequently prevented her doing any kind of work.

*Condition on Admission.*—She is a thin spare woman of medium height. Complexion sallow.

*Eyes.*—She has a soft cataract in the left eye.

*Appetite, etc.*—Her appetite whilst under observation was good. She had no pain after food and her powers of digestion were apparently very fair. The bowels were somewhat constipated. The motions were examined on several occasions, but showed no excess of undigested fatty food. She was in no way despondent or melancholic, but on the reverse of a somewhat cheerful temperament.

*Chest.*—There was nothing abnormal to be discovered in the chest. Pulse 72.

*Abdomen.*—The abdomen moves freely on respiration; there is a distinct prominence to be seen a little above and to the left of the umbilicus. There is no abdominal pain while the patient lies at rest in bed. On palpating the abdomen the visible swelling was found to be part of a much larger mass which occupied the left hypochondriac and part of the epigastric region. The tumour was dull on percussion in its most pro-

minent part; it lay below the stomach, which, during distension, partly obscured the tumour. It seemed fixed posteriorly, did not move with the respiratory movements, and could be readily felt projecting backwards into the left loin. No notch could be felt in the swelling, and the normal splenic dulness could be made out in the left side separated by an area of resonance from it. Intestine covered part of the anterior surface of the tumour, but no definite fixed line of resonance could be made out such as might be due to the colon. The front part of the tumour was smooth on the surface and evidently cystic. Whilst she remained in bed under observation the swelling apparently altered considerably in size from time to time. It was considerably larger and tenser on some days than on others.

*Urinary System.*—Micturition painless and natural. Urine: Specific gravity 1015, acid, no blood, no sugar. There was always a faint haze of albumen in it. The quantity passed daily varied from 20 to 36 ounces, and the daily excretion of urea from 250 to 350 grams per diem. On November 6th the bladder was examined by means of Kelly's cystoscope, and the orifices of both ureters were found to be patent. A catheter was passed about 1½ inch into the left urethral orifice. On withdrawing it a jet of urine was seen to spurt from the orifice.

*Genital System.*—Menstruation commenced at the age of 14, and has always been regular. A vaginal examination detected nothing abnormal in the pelvic viscera.

*Diagnosis.*—A left-sided abdominal cyst was diagnosed, and from the fact that it was fixed behind, that it projected markedly on the left groin, and that it varied perceptibly from day to day in size, it was thought to be a hydronephrosis in connection with the left kidney. It was decided after consultation to explore the swelling from the loin, and that if the swelling proved to be a hydronephrosis dependent upon any abnormal condition of the left ureter, to attempt by some plastic operation to remedy it.

*Operation.*—November 9th, 1900. The patient was anæsthetised, and a long oblique incision made in the left side. The left kidney was exposed, and, after being separated from its surroundings, except at the hilum, was brought out through the wound. Except for a few small cysts upon its surface it appeared to be quite normal. The organ was replaced and the lumbar wound closed. Through the lumbar wound the tumour could be distinctly felt projecting at the back of the abdomen, but was quite distinct from the kidney, in front of which it lay. A vertical incision was then made in the left linea semilunaris and the tumour exposed. The prominent portion of it proved to be a cyst of the pancreas, and lay projecting below the stomach. The stomach and transverse colon were turned upwards and, after tearing through the great omentum and the peritoneum behind it which covered the anterior surface of the cyst, the cyst itself was aspirated and brought up into the wound with the idea of stitching the cut edges to the abdominal wound. The cyst itself was thin-walled and contained a pint and a-half of fluid. The fluid was of a greenish-brown colour, alkaline in reaction, and contained a large quantity of albumen: it possessed no amylolytic or proteolytic properties. On further examination the emptied cyst was found to be a part of a lobulated swelling passing horizontally across the spine, and covered with a layer of peritoneum continuous with that lining the sides and back of the abdominal cavity. The serous layers covering the anterior surface of the tumour were freely divided, and the swelling dissected out from its bed. This was done with comparative ease, considering its size and depth, but required careful dissection, as the splenic vessels and their branches lay immediately above the tumour, the duodenum and superior mesenteric artery below, while the tumour itself lay on the vena cava and abdominal aorta. When the neck of the pancreas was reached it was decided to cut through the tumour, and leave the head *in situ*. The cystic changes, though present in the head of the pancreas, were not so marked, and an entire removal of the organ was deemed impracticable. A number of interlocking silk ligatures were, therefore, inserted through the neck of the pancreas and tied tightly, and the tumour cut through beyond the ligature. To remove the whole tumour it was necessary to prolong the vertical incision both upwards and downwards and also to make a horizontal incision through the left rectus muscle. After sponging the abdominal cavity dry and removing all sponges, the wound was closed in the usual manner with interrupted silkworm gut sutures and the patient removed to bed. The operation lasted in all about two hours, the separation of the pancreas from its connections being a somewhat delicate and tedious process. At its close the patient showed marked signs of shock, and for this reason the abdominal suturing was somewhat hurriedly performed. November 10th. The patient was still somewhat collapsed. Vomiting and hiccough were troublesome, and nutriment was administered entirely by rectum. Towards the evening the pulse improved in volume and tone, and the temperature rose to 100°. On November 14th the wound was dressed, and a few stitches which had been drawn too tightly were removed; the remainder were removed on November 16th. Three days later, on November 19th, the dressings were again removed as the patient complained of some discomfort. It was found that the vertical portion of the abdominal wound had completely reopened, and had allowed the intestines to prolapse into the dressings where they lay covered with recent lymph. The patient was at once anæsthetised, and, after carefully cleansing them, the prolapsed intestines were returned into the abdominal cavity and the wound again closed. From this time the patient made an uninterrupted recovery. She left the hospital early in January, and has remained in good health since.

The appetite is good, her digestive powers are excellent, and there is no excess of undigested fats in the excreta. The urine has been repeatedly examined for traces of sugar, but none has been detected on any occasion. The enlarged head of the pancreas can still be felt as an indistinct, deeply-seated swelling, situated a little to the right of the middle line above the umbilicus. It is fixed, painless, and only slightly tender, and remains at present stationary in size. The tumour measured after removal 10 inches by 7 inches. The mass is composed in the main of a number of cysts, varying in size and separated from one another by septa of fibrous tissue and a varying amount of apparently normal pancreatic tissue. The cysts are rather larger at the tail end of the organ than towards the head. At the lower part of the tail of the organ may be seen the anterior projecting portion of a large cyst, which passes deeply into the substance of the mass, and which held some pint and a-half of fluid. The fluid in this cyst was of a dark brown colour, and contained some altered blood. It had no digestive powers. The fluid contained in the smaller cysts is light-coloured, and in some of them colourless and watery. On the posterior surface of the tumour, nearest its upper border, there is a portion of a large thin-walled vein, and near it a large thick-walled arterial vessel. These were the two main blood vessels of the mass.

The microscopic section shows in places fairly normal pancreatic tissue, the acini being separated by rather thicker bands of fibrous tissue than is usually found. In the main parts of the tumour the microscopic appearances are very different. Scattered throughout a connective tissue framework, which is in places dense and thick, are masses of small epithelial cells. These cell masses have in most cases an irregular lumen towards the centre. In some of the larger masses the most central cells are seen enlarged and undergoing vacuolation. In this way apparently small cysts lined by several layers of irregularly-shaped cells are formed. The larger cysts have a lining of several layers of similar cells, though somewhat flattened. The microscopic appearance in no way resembles that of normal pancreatic tissue.

### Remarks.

The case is of some interest both pathologically and clinically. The cystic change has taken place throughout the entire organ though least marked towards the head, and had evidently been in slow progress for a number of years. One could not help being struck with the marked resemblance between the mass after removal and the enormous multilocular cystic tumours one occasionally meets in connection with the kidneys both in infants and occasionally in adults.

I am inclined to regard the tumour as a multilocular cystoma of the pancreas—congenital in all probability in its origin, but one in which the actual growth did not begin for several years after birth.

In support of this view is the fact that the fluid contents of the cysts have no active digestive properties, and that the microscopic appearances of the small cysts during formation are quite unlike that of normal pancreas. In fact the normal pancreatic tissue, though scattered throughout the mass, seems quite separated from it. Such cases have been reported by Hartmann and Gilbert[1] and by Salzer,[2] though apparently extremely rare.

Whatever the exact nature of this cystic change, whether it be a cystic new growth, or a cystic degeneration, it closely resembles the more common congenital cystic disease occasionally found in the kidneys, and has been found *post mortem* in conjunction with similar polycystic changes in the liver and kidneys.

Clinically, the case is of interest as showing what advanced morbid changes may exist in the pancreas without necessarily producing grave clinical symptoms. The patient's appetite and digestive powers were and still remain good. Neither before nor after the operation was any excess of undigested fat noticed in the stools. The urine was repeatedly examined for sugar, but no trace has ever been detected.

But in this connection we must remember that though complete extirpation of the pancreas in animals appears invariably to be followed by a fatal form of diabetes, yet that partial excisions or mere blocking of the pancreatic duct do not always produce it.

Williamson[3] has shown that in diabetes in the human subject morbid changes are frequently found in the pancreas. But, on the other hand, pancreatic disease in an advanced form may exist without glycosuria.

The explanation in the above case, I think, is twofold: First, though the cystic change was very marked yet there existed in the tumour sufficient pancreatic tissue still functional to secrete a certain amount of pancreatic juice, and to stave off glycosuria; in the same way that kidneys are occasionally found converted into or replaced by huge multilocular cystic tumours without albuminuria having been noticed; and, secondly, that the operation did not suddenly deprive the patient of a perfectly healthy gland in full functional activity, but of the major portion of one which had been undergoing a slowly progressive morbid change for many years.

### References.

1 Congrès Franc. de Chir., *Proc.-Verb.*, 1891, p. 618. 2 *Zeit. f. Heilk.*, 1886, viii, p. 10. 3 *Med. Chron.*, xv, p. 367.

The University of Harvard, by new regulations now coming into force, requires that all candidates for admission to its medical school should possess a degree of Bachelor of Arts or have passed an equivalent examination.

# SECTION OF OPHTHALMOLOGY.

W. H. H. Jessop, M.B., F.R.C.S., President.

## DISCUSSION ON THE DIAGNOSIS, PROGNOSIS, AND TREATMENT OF PERNICIOUS MYOPIA.

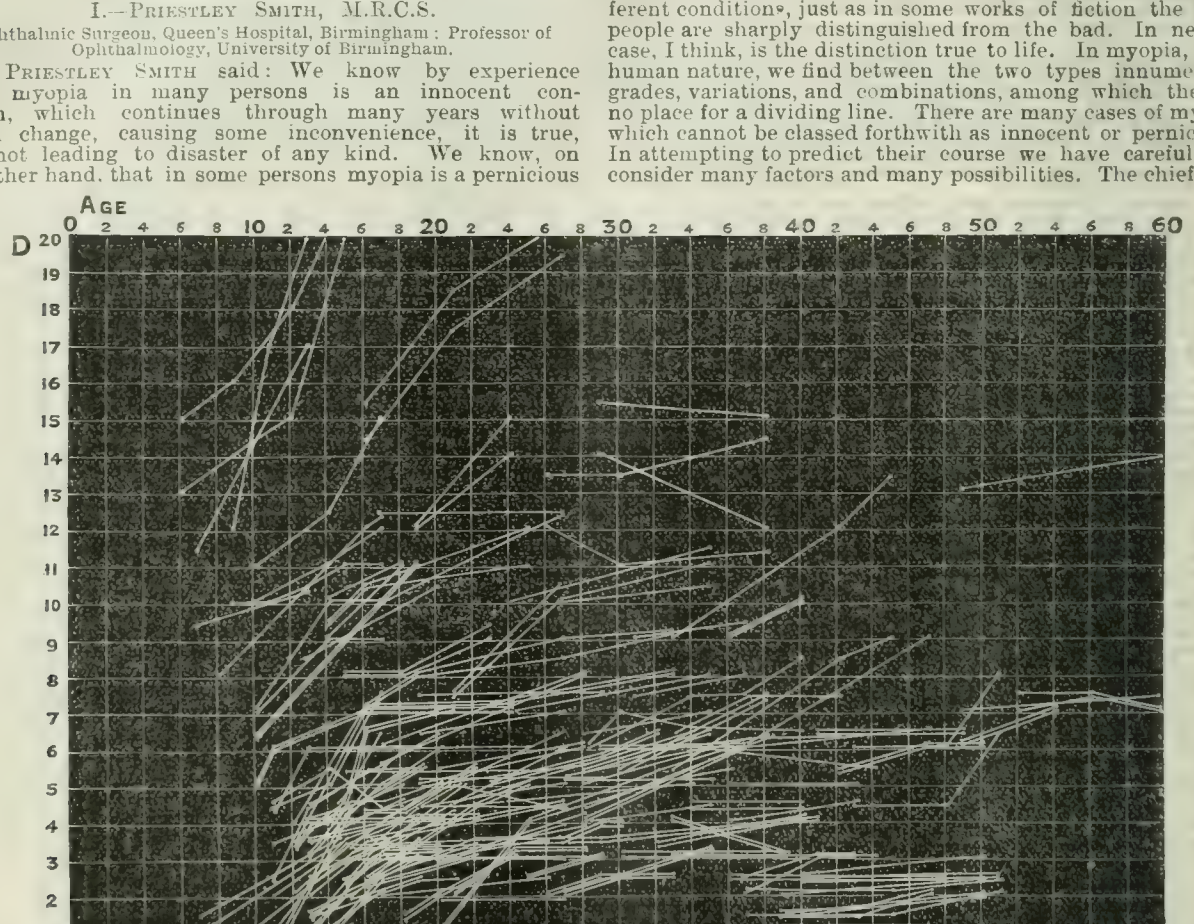
### I.—Priestley Smith, M.R.C.S.

Ophthalmic Surgeon, Queen's Hospital, Birmingham: Professor of Ophthalmology, University of Birmingham.

Mr. Priestley Smith said: We know by experience that myopia in many persons is an innocent condition, which continues through many years without much change, causing some inconvenience, it is true, but not leading to disaster of any kind. We know, on the other hand, that in some persons myopia is a pernicious condition which reaches a higher and higher degree as time goes on, is accompanied by damage to the tunics of the eye, and leads sooner or later to serious impairment or loss of sight. By what means and to what extent can we distinguish between these different forms of the disorder in their early stages? What can we do to arrest or hinder the progress of a pernicious myopia? These are the practical questions which we have been invited to discuss.

The chart of which copies are in your hands demonstrates several important points, and I will ask your attention to it at once. It shows the changes of refraction which occurred during periods of five years and longer in 100 cases of myopia observed by myself. The cases were taken consecutively from my private casebooks, and were not selected in any way beyond this: only those cases were used which had a myopia of at least 1 D, were free from disease of cornea, iris, and lens, and had been examined at least twice with an interval of five years; many of the cases covered much longer periods. The refraction was determined by the shadow test and Snellen's letters, usually without atropine. Errors due to spasm of accommodation are present, no doubt, to some extent, but are probably small, for in my experience the results given by the shadow test in myopia are seldom much altered by using atropine. Where there was astigmatism the mean refraction is taken as the grade of the myopia. Both eyes were myopic in every case, so the chart represents 200 eyes. It shows in each case the age of the patient and the grade of the myopia at each examination.

By some authorities innocent and pernicious myopia are sharply distinguished from each other as two essentially different conditions, just as in some works of fiction the good people are sharply distinguished from the bad. In neither case, I think, is the distinction true to life. In myopia, as in human nature, we find between the two types innumerable grades, variations, and combinations, among which there is no place for a dividing line. There are many cases of myopia which cannot be classed forthwith as innocent or pernicious. In attempting to predict their course we have carefully to consider many factors and many possibilities. The chief data




on which any forecast must be based are, I think, the following:

1. The age of the patient.
2. The grade of the myopia.
3. The condition of the choroid and retina.
4. The constitutional condition.
5. The evidence relating to heredity.
6. The occupation of the patient.

I propose to deal briefly with each point, and must speak dogmatically, for time will not permit of cautious arguments and reservations. I hope by so doing to provoke the more discussion.

1. *Age.*—Other things being equal, the younger the patient the more likely is the myopia to increase in degree. In childhood and early youth myopia is rarely stationary. It usually increases during the period of bodily growth, and the rate of increase diminishes with the approach of adult life. In a large number of cases, perhaps in a majority, it comes to a standstill between the ages of 15 and 25. Age, alone, however, justifies no inference.

2. *Degree of the Myopia.*—Other things being equal, the

gher the myopia the more likely is it to increase. For example, if fifty children, all of one age, have various degrees myopia, the future increase of their myopia will, on the hole, be greater among those who are more myopic than nong those who are less myopic. The same rule holds in dult life, but for all degrees of myopia the probable future ncrease is less than in early life. It follows that a high yopia in a child is of very evil augury. A child who has D when he is 10 years old is likely to have 20 D when he is . Fortunately, such cases are rare. But in adults we can rm no forecast, even from the grade of the myopia and the ge taken together, unless we take also into account the actual ate of the choroid and retina.

3. *Condition of the Choroid and Retina.*—The average vision myopes sinks as the grade of the myopia rises. Richardson ross has given striking statistics on this point.[1] The higher rades are to be feared far less for the error of refraction hich glasses can correct than for the loss of vision due to oroidal and retinal changes for which there is no remedy. n general these changes vary in gravity with the grade of the yopia, but they bear no fixed proportion to it. With equal rades of myopia they are more extensive in the older persons an in the younger. A child with a myopia of 8 D may have ttle or no choroidal change, but we must not regard him as ermanently exempt; it is likely to develop later. An adult ith 8 D will generally show considerable choroidal change; ould he exceptionally show none, he is safe; at any rate, uch safer than the child.

What is the essential nature of these changes? They are, n their usual order of occurrence, first, the typical myopic rescent, then the more diffuse and patchy thinning of the horoid in the adjacent region, then pigmentary and hæmorrhagic changes in the retina at or near the macula, and in ome cases detachment of the retina. The nature of the crescent is beyond dispute: it is due to stretching and displacement of the choroid in relation to the disc, brought about by ielding and extension of the sclera. Weiss, and lately Heine, have demonstrated the fact of this displacement by raction in the clearest manner. The more diffuse changes hich occur later appear to be due to further stretching ccompanied by vascular and degenerative changes in the amaged membranes.

But this statement does not cover the whole ground. n certain cases myopia develops rapidly in connection with obvious inflammation of the choroid, as in ome cases of syphilitic choroiditis. Here the choroiditis seems to be the primary disorder, the yielding of he sclera the consequence. Further, in the region of the posterior staphyloma, we find, on dissection, that the choroid nd sclera are abnormally adherent to each other. Here is vidence of sclero choroiditis. Is myopia, then, in general, a esult of an insidious choroiditis? Apparently not, for in he earlier stages there is usually no discoverable inflammation, and there is no retinal damage such as we should expect f the underlying membrane were inflamed. On the other and, it is clear that congestion and inflammation do play an mportant part in certain stages and certain forms of the disrder, and chiefly in the pernicious forms. To what extent he yielding of the sclera and the vascular and degenerative hanges in the choroid and retina depend on constitutional auses, rather than on the mechanical effects of muscular ction, dragging on the optic nerve, pressure of the orbital ontents, and so forth, is an important question.

4. *Constitutional Condition of the Patient.*—We all see cases n which a rapidly progressive myopia is associated with malutrition from one cause or another. Nettleship, speaking of myopia, says: "General enfeeblement of health, as after evere illness or prolonged suckling, seriously increases the isk of its progress, even after middle life."[2] Wray found in everal cases that where one member of a family had a high myopia while the brothers and sisters had none, the myope ad suffered from protracted infantile marasmus, the others ot.[3] Schwabe, from extensive observations in Leipzig, concludes that men and women acquire high myopia with equal requency, but at all ages the reduction of vision is greater in the women than in the men. The complications of high myopia, he says, are twice as common in women, and begin to appear in the lower grades, 6 to 10 D, while in men they are uncommon under 10 D. He attributes the difference to the greater liability to illness in women, their lack of exercise in the open air, and especially, as regards the graver complications, to the climacteric.[4] I may here repeat a suggestion made at one of our annual meetings eleven years ago, that the yielding and deformation of the sclera in some forms of myopia is analogous to the yielding and deformation of the bones in rickets. Special attention to the question has been given by Batten.[5] He has advanced evidence to show that the development of myopia is frequently connected with chronic constitutional disturbance, and especially with high arterial tension. But of his observations I will leave him to speak. It is clear that constitutional disease may be a factor in any case of myopia. It may account for the abnormal yielding of the sclera; it certainly often aggravates the morbid changes in the choroid and retina.

5. *Evidence Relating to Heredity.*—The tendency to myopia is very frequently hereditary. Some observers hold that inherited myopia is commonly an innocent disorder, while the non-hereditary forms are usually pernicious. Have we statistics in proof of this? It would be difficult to obtain them, for we cannot exclude heredity merely by examining the father and the mother. Moreover, at the time of life when the complications of high myopia chiefly occur the patient is not likely to bring his parents with him. They are probably inaccessible. Hereditary or family myopia, even of high degree, is sometimes of remarkably innocent type. Maclehose has published a striking instance of this.[6] But heredity confers no immunity from pernicious complications. I know a family where the father has myopia of 10 and 6 D, and two daughters have each lost the use of one eye through complications of high myopia which occurred during adult life. The other sons and daughters are all, or nearly all, free from eye trouble. No doubt it is better to have a myopia inherited from one's parents and an otherwise sound organism, than a myopia acquired for oneself by reason of debility or disease, but we must not pronounce a myope to be safe simply because his parents were myopic before him.

6. *Occupation.*—The future of many myopic eyes depends on the way in which they are used. Prolonged and habitual close work does harm. We see the effect in overworked schoolchildren, clerks, schoolmistresses, literary men, seamstresses, jewellers, typesetters, and others. We see it not only in the greater prevalence of complications among such persons, but in individual cases. Excessive close work in early life is often accompanied by rapid increase of refraction: in later life it often aggravates the graver complications. Patients who must, or will, continue such work in excess, especially those whose working distance is already too short, and who decline to lengthen it by the aid of glasses, are encouraging their myopia to run a pernicious course. The amount of risk must be estimated from the grade of the myopia, the age of the patient, and the amount of choroidal change already present. To give a bad prognosis by way of warning is sometimes the best or only way to prevent its fulfilment.

Time forbids me to enter upon the question of the treatment, and I have no desire to do so, for I had my say on that subject at the annual meeting of our Association held in Birmingham in 1890,[7] and have little to add at the present time. I will only repeat one leading principle, namely, to suspect every myopia, and especially every youthful myopia, of a tendency to increase, until time has proved it to be stationary: to be doubly suspicious in presence of congestion or atrophy: and to re-examine at intervals of six months, twelve months, or longer, according to the nature of the case. Only in this way can we decide on the rational measures of precaution which are needed in each case and which are the essence of treatment. We can do far more important service to our short-sighted patients, if they will let us do it, by helping them to avoid a pernicious development of their disorder, than by any attempt at remedial treatment after the fact.

[1] Richardson Cross, British Medical Journal, 1896, vol. ii, p. 633, and *Nagel's Yearbook*, 1896, p. 424.
[2] Nettleship, *Diseases of the Eye*.
[3] Wray, *Ophth. Rev.*, 1897, p. 359.
[4] Schwabe, *Nagel's Yearbook*, 1894, p. 147.
[5] Batten, *Ophth. Rev.*, 1892, p. 1.
[6] Maclehose, *Ophth. Rev.*, 1897, p. 207.
[7] *Ophth. Rev.*, 1890, pp. 313 and 345.

II.—ARCHIBALD STANLEY PERCIVAL, M.A., M.B., B.C., M.R.C.S.,

Senior Surgeon, Northumberland and Durham Eye Infirmary.

MR. PERCIVAL, after entering into an account of the action of the oblique muscles, contended that when the eyes were converged and depressed as in ordinary reading, together with the internal recti, the superior obliques were chiefly called into play, and to a much smaller extent the inferior recti, in order to overcome the slight residual torsional action of the superior obliques. This, he considered, had an important bearing on the development of posterior staphyloma and perhaps of retinal detachment, as the two obliques would exert a lateral pressure on the eyeball and would tend to squeeze the eye into the shape of a lemon; and it would be the uveal posterior pole which would give way first. He stated that he was in the habit of cautioning his myopic patients against depressing their eyes, and he advised them to read in an armchair, so that the book could be conveniently held at the level of the head by resting their elbows on the arms of the chair. By these and similar methods he had been able to arrest the myopia, notably in 4 bad cases.

III.—HENRY POWER, M.B., F.R.C.S.,

Consulting Ophthalmic Surgeon, St. Bartholomew's Hospital; Consulting Surgeon, Royal Westminster Ophthalmic Hospital.

MR. HENRY POWER warmly complemented Mr. Priestley Smith on his interesting paper. He could only approach the subject from a purely practical point of view. In the case of a myopic child, he was very particular that he should be seated in a position near a window from which good light would fall upon the book. Secondly, great attention should be paid to prevent the patient from acquiring the habit of holding the head too near the book, and, thirdly, the utmost care should be taken to ensure that the diet was full and sufficient, and particularly that no work should be done before breakfast. The diet as a rule in schools he was satisfied was insufficient.

IV.—A. DARIER, M.D.,

President de la Société d'Ophtalmologie, Paris.

DR. DARIER said that after the excellent paper by Mr. Priestley Smith, there was but little to add except to point out the benefit which sometimes followed massage of the globe in myopia. Judging from cases of traumatic myopia in which a blow considerably increased the myopia present, one would expect that massage would do more good in cases of hypermetropia or presbyopia. This was also found to be true, but at the same time cases of low myopia were greatly benefited by it, difficult as it might be to explain. He had seen boys and girls after massage able to see as well without as with their former glasses of − 1.0 D or − 1.50 D, and in higher cases the vision with glasses could be much improved by massage. He considered that this was caused by its strengthening the ciliary muscle, increasing the nutrition of the membranes, and lessening the tension.

V.—ARTHUR HUGH THOMPSON, M.A., M.D.,

Assistant Surgeon, Western Ophthalmic Hospital.

MR. THOMPSON said that Mr. Priestley Smith's chart was especially valuable, and confirmed what had been said that no hard-and-fast line could be drawn between cases of stationary and progressive myopia. With regard to choroiditis, a useful distinction could be made between cases with a well-defined crescent, whether single, double, or even treble, and those with some changes beyond the crescent. The former cases, if they saw well, might safely be ordered full correction for general use if the myopia did not exceed − 6 or − 8 D. Hereditary cases even as high as − 12 D or more were often seen without any crescent, and monocular cases often belonged to this class.

VI.—HENRY EALES, M.R.C.S.,

Senior Honorary Surgeon, Birmingham and Midland Eye Hospital.

MR. EALES agreed in the general views laid down by Mr. Priestley Smith. He found it convenient to classify the cases into two classes—first, those whose power of accommodation was good or excessive; and secondly, those whose accommodation was feeble. In the former cases he always ordered full correction for all purposes, even in high degrees of myopia, reserving weaker glasses for reading purposes, etc., for the latter only. He attached considerable importance to the presence of exophoria so often seen in myopes, and for these the addition of prisms often gave relief not previously obtained. Another point of great importance was the correct centreing of the lenses, especially in higher degrees, and by attention to those conditions much discomfort was frequently avoided.

VII.—ERNEST DYKES BOWER, F.R.C.S.,

Surgeon and Ophthalmic Surgeon, Gloucester General Infirmary.

MR. E. DYKES BOWER said that being a myope himself he was much interested in the discussion. He considered that reading with insufficient light was a most important factor in developing myopia. Nearly all myopes liked and required plenty of light, and the photophobia experienced by emmetropes and hypermetropes was very seldom seen in cases of myopia. He strongly disapproved of myopes indulging in gymnastic exercises which involved holding the head downwards. Among the many circumstances which combined to increase myopia he looked upon reading with insufficient light and holding the book too close to the eyes, whether using glasses or not, as two of the most important. No doubt in all cases theoretically glasses should be worn habitually, but practically the majority of those whose myopia was less than 3 D would not require them for near work. To read without glasses in moderate or high degrees of myopia led to its increase, and probably to weakening and wasting of the ciliary muscle. He drew attention to the fact that Mr. Priestley Smith had said nothing about the prognostic significance of muscæ volitantes. Were they of evil moment? Was detachment of the retina more frequent in such cases, and did such eyes as had them require special care and attention?

VIII.—ERNEST E. MADDOX, M.D., F.R.C.S.Ed.,

Ophthalmic Surgeon, Royal Victoria Hospital, Bournemouth.

MR. E. E. MADDOX thought that the increase of myopia was due more to fatigue and working under bad conditions than either to accommodation or convergence. The chief evil of convergence was the stooping it generally involved. When patients looked obliquely through their glasses to enable them to see better, the muscular strain involved was bad and the refraction should be carefully corrected. He considered that one great reason for the increase of myopia of high degree was the large area exposed to the liquid pressure proportional to the number of unit areas, which was very great in an eye of abnormally large size.

IX.—ADOLPH BRONNER, M.D.,

Senior Surgeon, Bradford Eye and Ear Hospital; Laryngologist, Bradford Royal Infirmary.

DR. BRONNER had found fundus changes much more common in women than in men, and this, he thought, was due to menstrual vasomotor disturbances. In men choroidal changes were more common if they had suffered from syphilis. If a myope removed to a more sunny and brighter climate, an increase was very likely to take place, due to retinal congestion. Monocular myopia was more liable to increase if a correcting glass was not worn, and this spoke in favour of correcting all cases of myopia.

X.—RAYNER D. BATTEN, M.D., B.S., M.R.C.S.,

Surgeon, Western Ophthalmic Hospital.

DR. RAYNER BATTEN said that he considered all acquired myopia as liable to progress under any unfavourable circumstance. In addition to the points mentioned by Mr. Priestley Smith, as regards the condition of the fundus, he laid special stress on the distortion and stretching of the retinal vessels as giving the earliest and most certain evidence of the occurrence, position, and progress of a staphyloma, and of the tilting of the optic disc, accompanied by œdema of one side of the disc, as an indication of progressive myopia. He considered that the treatment depended on the cause, and held this was usually due to deficient tone and supporting power in the muscles of the eye. This lack of tone was frequently due to constitu-

tional conditions. He advocated the systematic education of the intraocular and extraocular muscles, and this he considered was best promoted by full correction glasses. He also advised systematic muscular exercises practised daily, combined sometimes, in the first place, with massage of the face and neck.

XI.—John Tatham Thompson, M.B., C.M.,
Ophthalmic Surgeon, Cardiff Infirmary.

Mr. Tatham Thompson said that unfortunately in the earliest stages myopia was seldom seen, and frequently not until difficulties at school brought it under notice. He believed that it was of the utmost importance to correct myopes as early and as fully as possible, thus giving every encouragement to the holding of books at a proper distance. Having once developed a habit of holding objects too near the eyes, it should be combated in every possible way.

Reply.

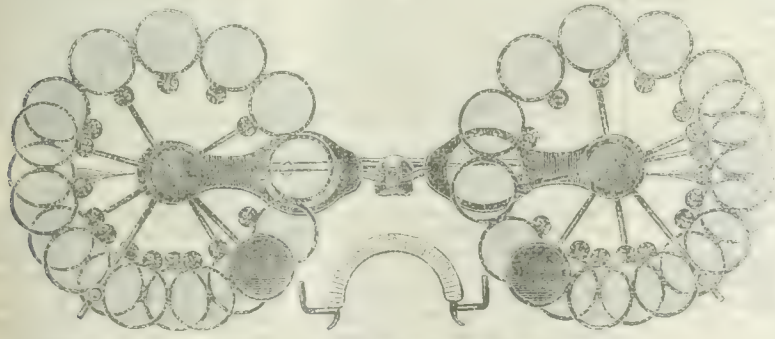
Mr. Priestley Smith, in reply, remarked on the very unanimous opinion expressed by the different speakers. With regard to muscæ, he considered them of no importance if it were the patient only who saw them, but should floating opacities be observable with the ophthalmoscope, then they really indicated a degenerative change. Jewellers, as a rule, used both eyes, and were subject to myopia, but watchmakers, who used only one with a magnifying glass, were not especially liable to develop myopia.

## A NEW REFRACTOMETER.

Designed by Charles S. Blair, F.R.C.S.,
Assistant Surgeon, Western Ophthalmic Hospital.

This instrument has been designed for the purpose of facilitating the estimation of errors of refraction. It consists of a reversible frame, which is placed on the patient's face like an ordinary spectacle frame, and carries a series of revolving lenses, so arranged that ninety-four different powers can be placed before each eye. These + and − spheres range by quarter-dioptres up to 6 D, and above this by half-dioptres up to 17.5 D.

It is useful (1) in retinoscopy; (2) in subjective testing before test types in hypermetropia, myopia, and presbyopia, and also in astigmatism, by the addition of ordinary trial-case cylinders, placed in the graduated cell and rotated in the ordinary way.



*Details of Instrument.*—There is a primary wheel and a secondary sector of a wheel before each eye, carrying convex lenses on one side and concave on the other, so that by reversing, either the *plus* or *minus* side can be brought before either eye. Arrangement is, however, also made to get the same result without reversing by means of superimposing, and thus to obtain binocular correction. Correct centreing is easy by means of a sliding adjustment at the centre of each wheel. The graduated cell for cylinders is removable. The instrument is light, weighing only 5 ozs., and is small enough with its case to be carried in the pocket. The lenses are ¾ inch in diameter. There is no necessary superimposing of lenses for errors of refraction not exceeding + or − 6 D sph. The refractometer is made by Messrs. Curry and Paxton, 195, Great Portland Street.

## SUPERFICIAL PUNCTATE KERATITIS IN BOMBAY.

By H. Herbert, F.R.C.S., Major I.M.S.

[Abstract.]

A form of superficial punctate keratitis has been found very prevalent here since the close of the last rainy season, especially so in the cold and early hot weather. The spots are minute and only slightly opaque, and need to be stained with fluorescin to be clarly seen. They appear slightly raised, but some of them are really depressions in the epithelium, more than filled up with lachrymal fluid. They often collect towards the centre of the cornea in the later stages, and may there form a ring flattened from above downwards. Fluorescin-staining lines or small patches may be found in the terminal stage. Occasionally there are a few spots on the limbus; the same, or a streak or patch, on the upper tarsal conjunctiva. The duration of a case is generally two to three weeks, and no corneal opacity is left. There is usually slight ciliary injection or conjunctivitis, though these may be almost absent; the latter tends to the formation of very small follicles on the upper tarsal membrane. There is generally some thickening of limbus, which aids in the detection of cases. The disease is seen in young adults chiefly. Almost invariably one eye only attacked.

*Bacteriology.*—Scrapings of affected epithelium contain collections of encapsuled bacilli, numerous and closely packed. The bacilli are rather short, with rounded ends; they have feeble staining properties, and do not colour by Gram's method.[1] The groups of organisms are sparsely scattered and troublesome to find except in cases where the corneal spots are numerous. The cultural peculiarities of the microbe cannot yet be given, owing to a confusion with the bacillus pyocyaneus, which was grown from a considerable number of affected corneas. Scrapings of affected epithelium introduced into the healthy conjunctivæ of the patient's fellow eye on several occasions produced no result. Inoculation of a normal conjunctiva with an agar culture of bacillus pyocyaneus led to the formation of two small deep pustules on the upper tarsal membrane, besides a moderate diffuse conjunctivitis. More than a month later a few fluorescin-staining spots developed on the limbus and neighbouring cornea of this eye.

Note.

[1] This statement may require qualification. Some incompletely decolorised bits of tissue show the organism, and more especially the capsule, well stained. For a more definite statement on this point specimens will have to be stained as opportunity offers.

Mr. Devereux Marshall stated that much confusion resulted from the term "keratitis punctata" being used for so many different conditions, and he did not think that the organism found by Major Herbert was proved conclusively to be the one causing the disease.

Mr. C Blair thought the condition resembled Fuchs's keratitis.

The President did not feel at all sure about the organism shown. He also thought that the term keratitis punctata, which was applied to the dots sometimes seen on Descemet's membrane, should be abolished.

## A CASE OF SYMMETRICAL BULLOUS KERATITIS.

By J. Tatham Thompson, M.B., C.M.,
Ophthalmic Surgeon, Cardiff Infirmary.

A case came under my notice in September last which appeared to me to be of sufficient interest and rarity to justify my bringing a brief record before this meeting.

The patient was a male, aged 22, employed in the goods department of the London and North-Western Railway. He complained of intense photophobia which had been present for about three weeks. He stated that his general health was good, and that he had never previously suffered from any eye trouble. The present condition had commenced in both eyes simultaneously with a sensation as of dust, burning pain, and then photophobia and lachrymation on the

second day. No sticking of the lids. He had been using some lotion obtained from a chemist.

The photophobia was so intense that I could make no examination until cocaine had been freely used. Then I found that there was slight general congestion of conjunctivæ, and that on both corneæ was a ring of oval bullæ radiating from about midway between the centre of the cornea and its periphery, about 12 or 14 in number and oval, a pale pearly colour. The central corneal tissue was quite clear. V. about $\frac{1}{12}$ R. and L., and he read Jaeger No. 1.

On pricking one of these apparent bullæ it seemed as if little fluid escaped, as the spot still remained elevated and apparently little less in size. I employed in turn warm solution of boric acid and mercury perchloride, boric acid, and alum, etc., but with no improvement; then I used sol. formol. $\frac{1}{3000}$, and cocaine and atropine. Under this treatment the photophobia gradually subsided, and he was able to resume work about four months from the onset. I saw him last three months ago; there had been no return of the photophobia. V. = $\frac{6}{6}$ J.1, there was a ring of semi-opaque spots exactly corresponding with the bullæ in each eye.

During the earlier part of his trouble there had been a good deal of frontal neuralgia, which suggests a possible herpetic origin, otherwise I am entirely at a loss to account for it.

## AN UNUSUAL FORM OF KERATITIS ASSOCIATED WITH A GENERAL SKIN ERUPTION.

By CHARLES S. BLAIR, F.R.C.S.,
Assistant Surgeon, Western Ophthalmic Hospital.

THE patient, a young man of 18, shows on the inner and outer side of each cornea a markedly raised, vascular, opaque, and firm swelling, more marked on the outer than the inner side, involving the limbus and the adjacent part of the cornea. On the outer side it is so much raised and defined as to be suggestive of a new growth. It is, however, stationary, not having apparently increased for the last two years, and is symmetrical. There has been no ulceration, and the rest of the cornea has remained all through quite clear, and is free from any signs of former keratitis. There have been no signs of any lesion of the palpebral conjunctiva. There has also been no iritis or cyclitis, and the vision has remained throughout perfect in each eye. The course has been marked by exacerbations, which have occurred at irregular intervals when the eyes have become painful, and the swellings larger and more injected.

At the same time as these exacerbations have taken place the face, and to a less extent the whole body, has become covered with a papular and pustular eruption, causing the patient such irritation as quite to prevent sleep. This has lasted as a rule for a few weeks and then subsided, to again recur after an indefinite period, about two such attacks occurring each year. These recurrences of skin eruption have always been coincident with the exacerbations of the eye lesions, and this has been so marked as to make it quite clear that they were in intimate connection.

In some respects these growths on the limbus resemble those described as occurring occasionally in the affection clinically known as "spring catarrh," but differ from this description in the entire absence of the characteristic condition of the palpebral conjunctiva, in the exacerbations not occurring only or even generally in the warm weather, and in its close connection with a general eruption.

I consider that this eye lesion, whether related to spring catarrh or not, is a part of the general skin affection, and that both are the result of a common cause, some constitutional dyscrasia or trophic disturbance.

Mr. DEVEREUX MARSHALL thought the appearance of the case as depicted by the drawing suggested that the lesion might be of a tuberculous nature.

Mr. BLAIR, in reply, thought that this was possible, although during the four years he had watched it little or no change had taken place.

QUADRUPLETS.—M. Etchecoin recently reported before the Société d'Obstétrique, de Gynécologie et de Pédiatrie de Paris a case of quadruplets. The mother had borne her first child nineteen months before she was delivered prematurely at the fifth month of four infants, two males and two females. There were four placentas adherent in pairs.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

### THE PIGMENT OF AN IRIS ALTERED BY OPERATION.

C. C., aged 49 years, skilled labourer in a royal dockyard, received a blow from a crowbar over the left eyebrow nine years ago. It caused a scalp wound (scar still present), for which he was on the hurt list for one month. A year afterwards the sight of the left eye began to fail, and gradually got worse, until he could only distinguish between day and night. Five years after the accident an operation was performed in a civil hospital—presumably the removal of a cataract by the modified linear peripheral method. Both eyes were of a hazel colour before the operation; of this he is quite certain. I verified this fact by going to his home and questioning his wife. His present condition is:

*Right Eye*=1. Vision=normal.
2. Iris=hazel colour.

*Left Eye* = 1. Vision=$\frac{6}{60}$ D, with a test type of 5 dioptres.
2. Iris=light blue in colour, like the eye of a wax doll.
3. Iris does not react to accommodation or light.
4. Shape of iris is very irregular, and prolapse had taken place into the ends of the operation wound.
5. In the neighbourhood of the capsule of the lens there were two scars like white fibrous tissue, the results, I think, of a needling operation.
6. The blood vessels of the fundus could be made out, running towards a very ill-defined optic papilla.

The change in colour of the iris, the result of the operation and disease, is, I should think, a very rare occurrence. It is met with now and then in healthy eyes, as a brown patch in a blue iris or the reverse, and, in the case of the "witch of Prague," the irides were of a different colour.

I had this man under treatment for a contusion of the right shoulder, and not for his eyes.

ROBERT J. MACKEOWN, M.B., D.P.H.,
Surgeon, R.N.

### PARALYSIS FOLLOWING INFLUENZA IN YOUNG CHILDREN.

THIS year many children have been attacked by influenza in this district. The cases seem to have run the usual course, but in 5 of these I have noticed that in periods varying from ten to twenty-one days paralysis has set in. In 3 the legs only were affected, while in the other 2 cases both the legs and arms were involved. There was muscular wasting and inability to move the limbs. One child was sent to the seaside; the parents became alarmed, and consulted a specialist, who told them the child had got anterior poliomyelitis, and would probably be paralysed for life. This case, however, followed exactly the same course as the others. In about two months all the cases got well and the paralysis entirely disappeared. The treatment employed was tonics and massage.

CATHERINE SMITH, M.B., Ch.B.
North Collingham, near Newark.

### HYSTERICAL HIP.

THE following case is of interest as showing an exaggerated instance of hysterical hip, and of the value of the negative evidence at times afforded by the Roentgen rays. The patient was sent to me by Dr. F. E. Fenton, of Ealing, in order to have a radiograph taken of the hip. She was then wearing a high-heeled shoe, and walked lamely, but the Roentgen photograph showed a perfectly normal hip-joint. Further examination showed that the shortening was apparent only, and there was no pain or tenderness in the joint: no prominence of the trochanter, and no flattening or widening of the buttock. It appears that two years previously to consulting Dr. Fenton she felt pain at times in the right side from the hip downwards as far as the knee. She went to a medical man, who treated her for hip-joint disease. She had the heel of her boot built up from time to time to compensate for the supposed shortening. On coming under Dr. Fenton's care he failed to find the usual signs of hip-joint disease, and the true nature of the condition was confirmed by the radiograph. The patient came of a markedly phthisical family, and was of a neurotic temperament.

London, W. D. WALSH, M.D.

# REPORTS
ON
# MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

## ROYAL EYE HOSPITAL.

### CYST OF THE IRIS.

(Under the care of Dr. W. J. Collins, M.S.Lond., F.R.C.S.)

[Notes by Mr. Bergin, House-Surgeon.]

E. B., aged 16, was admitted into the Royal Eye Hospital on July 9th, 1901, with the history that six months previously she had been hit in the left eye with a fist. Since that time, but especially during the last four months there had been lachrymation and photophobia and some pain, and the vision had been getting worse.

On admission a small black punctum was to be seen at the upper and inner part of the left cornea about 2 mm. from the limbus, apparently a leucoma adherens (myocephalon). Below this, and occupying the inner quadrant of the anterior chamber, and rather more, was a translucent bluish cyst overlying a sector of the iris, and encroaching upon the pupil; there was some indication of a constriction at its lower part, as if bilocular. On June 17th, under cocaine, Dr. Collins made a corneal section with a bent broad needle, at the same time puncturing the cyst wall. The cyst collapsed, and the portion of iris with which it appeared to be connected was removed by iridectomy. Healing was uncomplicated. A careful microscopic section of the excised portion of iris, made by Mr. Henderson, showed a cavity in the iris lined with pigment cells, and containing some collections of unpigmented cells.



Note by Dr. Collins.—Although there was a history of traumatism in this case, there is no ground for thinking there was a penetrating wound. It is possible that inflammatory conditions consecutive to the injury may have caused a perforating ulcer and a leucoma adherens as a sequel. The history, appearances, and microscopical section of the excised iris are opposed to the explanation of this case as one of epithelial implantation cyst. Iritis, possibly of traumatic origin, and adhesion of the iris to the cornea in a girl aged 16 may have contributed to a cystic separation of the pigment layers or the distension of a closured cleft of the iris. In 1889, when examining with Professor Brown the corpora nigra of horses, he informed me that though these iritic excrescences are congenital they are apt to increase with inflammatory conditions of the eye, even to the extent of covering the pupil.

## NORTHAMPTON GENERAL INFIRMARY.

### A CASE OF FUNCTIONAL BRACHIAL MONOPLEGIA AND PARAPLEGIA.

(By Bertram Watson, M.B.Lond., M.R.C.S.Eng., late House-Physician to the Infirmary.)

A female patient, aged 38 years, single, who was admitted to the Northampton General Infirmary on August 24th, 1901, gave the following history:—

Up to the age of 17 years she enjoyed good health; but about that time, while in domestic service, began to suffer from numbness in the legs with occasional loss of power. These symptoms becoming severe, she left her situation, and went home, remaining in bed for a period of six months. At the end of this time, was able to recommence her duties, and continued to discharge them, with occasional intervals of helplessness, up to the age of 21. During these four years (1880-1884), on many occasions "her legs gave way beneath her in the street," and she had to be carried home. When 21 years of age, the weakness in the legs increased to such an extent, that the patient left her employment, went home, and took to her bed, from which time (1884) up to the date of admission here she has been completely bedridden. From 1884 to 1898 she remained at home, but in 1898 was removed to the Wellingborough Union, from which place after three years residence, she was removed to this infirmary.

The affection of the left arm, shortly to be described, is only of five years standing, and occurred after a period of "unconsciousness." At this time the patient says she was "unconscious" for five days, and on recovery discovered that she had lost the use of the left arm, which she has not been able to use since.

Her nurse at the Wellingborough Union informs me that during her stay of three years at that institution, there were five or six attacks of "unconsciousness," each lasting for about three days. During the attacks she lay with her eyes closed, neither answering questions nor taking notice of surrounding objects, but not refusing nourishment. While at the Union, the patient made no attempt to move either the lower limbs or the left arm. There was complete incontinence of urine for the entire period at the Union, and occasional loss of control of the sphincter ani.

On admission to this infirmary on August 24th, 1901, the patient, who was a well nourished female, lay in bed in the dorsal decubitus, with the lower extremities fully extended. She complained of no actual pain but numbness in the left arm and legs. Her memory was good; there was no alteration in speech, and she answered questions intelligently.

Motor: The patient was unable to move either of the lower limbs, or the left arm. She sat up in bed with difficulty, pushing herself up with her left arm. The left hand was kept in the position of *main-en-griffe*. There was no tremor or wasting of the muscles of the left arm or forearm, but they were flabby and toneless. The right arm, which she moved freely, showed no signs of incoordination. The muscles of the lower extremities were flabby, but no definite wasting could be observed, and the feet were dropped. Sensory: There was complete anæsthesia and analgesia of the left hand, partial of the left forearm and arm. Anæsthesia and analgesia were also present in the lower limbs, extending upwards on the trunk to the level supplied by the eleventh or twelfth dorsal nerves. Reflexes: Superficial reflexes normal, knee-jerks much exaggerated, suprapatellar reflex present; ankle clonus very marked, particularly on the left side. Sphincters: While an in-patient here the sphincters were not affected. Eye: Pupillary reflexes normal, no nystagmus, no strabismus, no fundus change. Electrical reactions normal, there being no reaction of degeneration. Cranial nerves, *nil*.

Treatment was commenced immediately, and consisted in massage of the paralysed parts, with the use of the faradic and galvanic currents. On August 28th her condition had so greatly improved that the movements of flexion and extension could be performed at the knee-joint, and power had returned to the left arm. The right arm being put out of court by means of bandaging, she was compelled to take her food with the affected arm, which task she soon accomplished with ease. On August 29th, with the aid of stimulation by the constant current, and gentle, but firm, persuasion, she stood on her feet for the first time for 17 years and took a few steps forward. On the following day, the patient perambulated the ward, more to her own surprise than to that of the onlookers. After a fortnight's treatment she was able to walk by herself without any difficulty; the reflexes are normal and the sensory disturbances have disappeared.

Remarks.—The chief interest in this case lies in the extraordinarily rapid recovery of the use of the arm and legs after a period of paralysis, extending over such a long period as 17 years. (The history is well authenticated). The diagnosis was not difficult in that disseminated sclerosis could be easily excluded. Of course it is more than likely that the patient will have further relapses. In conclusion, I may say that I think the miracle worker of Lourdes or the Christian Scientist of America would gladly welcome such a case to his fold.

I am indebted to the courtesy of Dr. Frank Buszard, senior honorary physician to the Northampton General Infirmary, for permission to publish this case.

# REPORTS OF SOCIETIES.

## CLINICAL SOCIETY OF LONDON.

Arthur E. J. Barker, F.R.C.S., Vice-President, in the Chair.

*Friday, October 11th, 1901.*

New Volume of "Transactions."

The Chairman exhibited the volume about to be distributed to the members.

Painful Condition of the Twelfth Pair of Ribs.

Mr. J. Jackson Clarke read notes of this case. The patient was a nursemaid, who came for treatment on account of a forward bend of the spine (kyphosis) accompanied by a painful backward projection of the tips of both twelfth ribs. The former was corrected by the use of an antero-posterior support, but the condition of the twelfth ribs remained unchanged, any forward pressure upon them causing great and deeply-seated pain which Mr. Clarke referred to rheumatoid inflammation of the costo-vertebral joints. So long as the spinal support was worn it sufficiently protected the ribs from pressure; when, however, the time came for leaving off the support the patient found that she could not bear the pressure of her dress upon the ribs. An attempt was made to palliate the condition by making apertures in the patient's stays, but this did not succeed. The patient was therefore advised to undergo an operation for the removal of as much of each twelfth rib as could be taken away without incising the erector spinæ. The operation consisted of cutting down on each bone in turn, and removing one inch, including the cap of cartilage, with the periosteum. The deep parts were carefully drawn together by fine silk sutures before the skin wounds were closed. Rapid healing ensued. There was no subsequent bulging at the site of the operations, and the pain was at once relieved, and had not since returned. Mr. Clarke mentioned another case in which one of the twelfth ribs was the seat of occasional swelling, accompanied by great pain. The patient was a lady, aged 40, and the swelling was due to inflammation about the junction of the cartilage and bone. In this case relief was obtained by an abdominal belt made with a recess to receive the tip of the rib.

Dr. Ewart was glad surgeons had attacked this disease, but surprised that they had removed the offending rib. He had ventured to call a somewhat similar pain at the tip of the rib acrochondralgia, and it was easily remedied. The pain was sometimes due to the wearing of stays, and if the bone therein was broken the patient obtained relief. Had Mr. Clarke evidence of the osteo-arthritic character of his case? He would be surprised if it were relieved by the removal of a piece of rib. How much was removed?

Mr. Clarke, in reply, said his patient was not tight-laced. He removed about half an inch of bone. The cases mentioned by Dr. Ewart were not parallel with that which he had described. He referred to another case, that of a lady with acutely painful tip of the tenth rib occurring occasionally, which was relieved by a suitable support. The tip of the rib was swollen during an attack.

Displaced Strangulated Femoral Hernia.

Mr. Thomas Bryant read notes of the case of a married woman, aged 32, who had been troubled with a femoral rupture for about five years and had not worn a truss. She had often used force in reducing the rupture, and particularly two days before her present illness. She began to vomit, and after three days the vomited matter had become stercoraceous. She was then in an extreme state of collapse, and it was clear that life could not be saved. Her abdomen was distended, but not tense, and there was no swelling in the right femoral region, which was given as the seat of the hernia, although pressure with the pulp of the index finger over the right femoral canal elicited pain. No enlargement of the thigh was noticed in the region into which the hernia was subsequently traced. An exploratory operation in the femoral region was, however, determined upon, based upon the good old practice of first examining, in every case of intestinal obstruction associated with a hernia, the region in which the hernia existed. The operation was carried out in the usual way. The crural sheath, which did not seem to be expanded, was opened, when a small piece of tissue which looked like omentum was seen, but no bowel; the femoral ring was quite clear, and upon passing a director it was slightly enlarged upwards and inwards; as a result of this action a piece of pale intestine which before had been collapsed and had not been seen, suddenly on its distention arched forwards in the femoral canal, and was lost downwards through a narrow opening at the apex of the femoral sheath, an inch or an inch and a-half below the femoral ring. At this point the bowel was strongly held and strangulated; this ring being divided, Mr. Bryant was enabled to draw out of a space situated below and to the inner side of the opening in the femoral sheath at least 4 or 5 inches of highly-congested intestine, and reduced it easily into the abdominal cavity. The operation was thus completed, but the patient sank as expected and died a few hours later. A partial *post-mortem* examination could alone be obtained, but the specimen mounted by Mr. Shattock was now in the museum of the Royal College of Surgeons of England, Preparation 2977A. The sac of the femoral hernia had been forced through a rupture of the femoral sheath at its lowest part into the connective tissue of the thigh on the inner side of Scarpa's triangle, and the seat of strangulation was at the orifice of the femoral sheath through which the hernial sac had been forced. Mr. Bryant had never seen or read of a femoral hernia being displaced as this must have been into the fatty connective tissue of the inner side of the thigh, with the seat of strangulation an inch and a-half below the femoral ring, its usual seat, and situated at the mouth of the opening in the femoral canal. Had there not been a distinct history of an old femoral hernia in this case there would not have been any local indication to lead the surgeon to suspect that the intestinal obstruction which the symptoms suggested was due to such a cause, for there was a total absence of all swelling, and the sign of pain on pressure over the femoral canal stood alone. Under these circumstances an abdominal operation might have been undertaken, but would have been useless, for the seat of strangulation was outside the abdominal cavity, and could not by such a measure have been relieved. The cause of the displacement of the femoral hernia must doubtless have been mechanical, and was probably due to the forcible attempt by the patient at reduction of the hernial tumour after its descent. This was therefore an example of a third variety of displaced femoral hernia. The first was the well-recognised form in which the small strangulated femoral hernia with its sac might be pressed out of sight and reduced, still strangulated, behind the abdominal parietes, "reduction *en masse*." The second was where a large femoral hernia by some rupture of its sac, showed itself as a tumour in the subcutaneous connective tissue above or below Poupart's ligament; and the third as a displaced hernia following the course of the case described. In the many varieties of "displaced inguinal" hernia which had been described, and particularly by Mr. J. Birkett and the reporter of this case in his *Practice of Surgery*, the injurious effects of misapplied force had been fully recognised; indeed, it seemed probable that in all the varieties of displaced inguinal hernia it should be regarded as their probable cause. In the case now under consideration of femoral hernia, as in its other varieties, the same conclusion had to be drawn, and the truth of the following aphorism enforced: "That as in the treatment of every variety of obstructed or strangulated hernia, forcible taxis is the direct cause of all cases of displacements of the inguinal or femoral varieties, as well as of rupture of the sac or sac's contents, so forcible taxis ought strictly to be avoided."

The Chairman had never met with this variety of hernia. The paper advocated tender dealing with strangulated hernia, and he doubted if taxis should ever be applied in a case of strangulation. Surgeons might do great service by as far as possible discountenancing taxis in such cases. He believed that all cases of displaced hernia were due to taxis.

Mr. Golding-Bird remarked that the case was called a femoral hernia, but the crural canal was free and empty. Was the title, therefore, correct? A parallel case was quoted by Macready, in which the intestine came down behind Poupart's ligament, but did not enter the crural canal. He endorsed the Chairman's remarks as to the inadvisability of employing taxis in strangulated hernia.

Mr. Bryant, in reply, explained that it was a femoral hernia, and that the intestine therein became visible when the division of the femoral ring enabled flatus to pass and fill the intestine. He agreed with the Chairman as to the harmfulness of taxis in strangulated femoral hernia, and he never applied it in any form of strangulated rupture, except when the patient was anæsthetised, and then only with gentle pressure. But, with regard to scrotal hernia, the bowel was less liable to be injured than in femoral hernia. Anything like violent taxis, however, in any hernia was inadmissible.

### Treatment of Wounded Joints.

Dr. Cuthbert S. Wallace said that wounds of joints fell into three groups: (1) Those in which the joint injury was complicated by compound fracture, and in which the wounded joint was the lesser injury. The treatment of such a case depended more upon the complicating wounds than on the wound of the joint. (2) Wounds or probable wounds of joints. (3) Doubtful wounds of joints, such as perforating or punctured wounds. The notes of three cases of the second group were read, one of which ended fatally, one recovered with a stiff knee, and the other with a movable joint. The treatment of such injuries was discussed, and it was maintained that the cleansing of the wound must be mechanical, and, therefore, that all dirty tissue should be cut away with knife or scissors. A douche was only beneficial because it removed fragments of dirt or soiled tissue, it was, therefore sufficient to employ sterilised saline fluid; antiseptic solutions were unnecessary. A search for a wound into the joint was not recommended, as if found it was unlikely that much good could be done, and if an opening was accidentally made into the capsule serious harm might result. If the opening into the joint was obvious, it was recommended to close the capsule without irrigation of the joint and await developments. The notes of five cases of punctured wounds of joints with resulting infection were then read. In four instances practically full movement was obtained, and in the fifth movement was limited to about one-quarter of that normally present. It was thought that the best treatment of such cases was arthrotomy with sterilised saline solution and suture of the joint cavity. This process could be repeated once or twice if the condition required it. After this, if the temperature remained high, the incision into the joint could be left open, and lavage practised daily. If the infection reached the periarticular tissue the surgeon could do but little save by opening any abscess that might form, or by ablation of the limb. Drainage by means of tubes through the joint or continuous irrigation were likely to do more harm than good.

The Chairman agreed that in these cases antiseptics were not only useless but often positively injurious. For years he had employed irrigations of normal saline solution, whereby his results had improved. When a joint had suppurated it was not enough to irrigate it from one side to the other; the jet must be carried into the recesses to expel the matter. With this treatment he had obtained good movement even in severe cases—gonorrhœal arthritis, for instance. But once a joint was infected it could not be disinfected.

Mr. Wallis observed that it would be an advantage to have some definite plan of treatment laid down for these cases. The author's cases resembled those he had brought before the Society in 1898. In one case the joint was ankylosed, in another there was fair movement, and in a third the movements were free. Perforating wounds of joints, if they became at all inflamed, might be treated by fairly free opening and drainage, a plan which had given him excellent results. In one case the knee-joint was exposed for six weeks, yet movement, though limited, was good. The introduction of drainage tubes into the interior of the joint and the use of antiseptics was likely to bring about absolute ankylosis with protracted recovery.

Mr. Abbott remarked on the analogy between joint wounds and wounds of the peritoneum. It was long the practice in suppurative peritonitis to make a small opening and to irrigate the cavity, and that treatment proved to be of the most hopeless kind. Only recently had they made large incisions and turned out the intestines so as to enable them to cleanse the entire cavity, and they had thereby got improved results. As to the treatment of adhesions in joints, he asked whether forcible movements were likely to be of more benefit than could be obtained by simple massage.

Mr. Wallace, in reply, thought that where there was a large outer wound and a small wound into the joint, it was worth while giving the joint a chance. He insisted on the fact that cleansing the joint was a purely mechanical procedure, and it was no good trusting to antiseptics. He did not think forcible movements could do any good.

### Ascites Dependent upon Cirrhosis of the Liver.

Mr. Mansell Moullin read the notes of five cases in which he had sutured the omentum to the anterior abdominal wall, with the view of establishing a collateral circulation after a Drummond-Morison method. Two cases died, one four weeks after the operation from pleurisy; the other, one week after from exhaustion. In both of these the operation had been performed too late. The disease was too far advanced, and there was no time for the development of a collateral circulation. The three other cases were discharged from hospital relieved. One could not be traced. The two others were alive and at work at the present time, two years after the operation. Mr. Mansell Moullin pointed out that so far as ascites was of mechanical origin there could be no question the operation was capable of giving relief. If the cases were properly selected, it was not one that was attended by any serious degree of risk. It was true that the mortality, as judged by statistics, had been very high up to the present; but with better selection and earlier operation there was no reason why the mortality should be appreciably higher than that of exploratory laparotomy. A median incision above the umbilicus was the most convenient, and gave least trouble afterwards. Through it the whole of the upper surface of the liver could be reached, and the omentum could be fixed to the abdominal wall by sutures passed from its peritoneal surface. Drainage was unnecessary, and might be dangerous, as offering additional risk of sepsis. The fluid always collected again, but it collected in the lowest part of the abdomen, and did not interfere with the formation of the adhesions. If it became excessive at any time it could be drawn off again; and this, as shown by the history of the cases which recovered, might have to be done many times in the course of the first few months, until the anastomotic channels became sufficiently enlarged.

Dr. Campbell Thompson drew a distinction between the cases in which the ascites was directly due to the cirrhosis of the liver and those in which it was caused by peritonitis resulting from the cirrhosis. The latter were the cases in which operation was likely to prove beneficial, as proved by *post-mortem* investigations. The former class usually proved rapidly fatal. The cure, when it took place, was presumably due to obliteration of the peritoneal cavity by the formation of adhesions, just as pleurisy was cured by the adhesion of the layers of the pleura.

Dr. Sansom did not think that clinically it was possible to distinguish between the cases of pure cirrhosis, and those associated with peritonitis. Cirrhosis was a very complex condition, and he was not disposed to accept the previous speaker's conclusions in regard to the cases which recovered and those which did not. Therapeutically, it was necessary to modify the balance of circulation, and he thought surgical measures constituted a better way of effecting this than the old-fashioned plan of tapping with copious diaphoresis.

Dr. Norman Dalton agreed with the author that a great deal depended upon the condition of the other organs. Certainly if there was marked œdema of the feet the results were not likely to be as good as when there was only ascites. He thought that the higher the incision was made the better in order to guard against the occurrences of ventral hernia, which so often proved fatal later on.

Mr. Mansell Moullin, in reply, agreed with the last speaker in respect of the best site for the incision. He had operated after one or two tappings, that was, somewhat early in the history of the ascites.

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Hull Medical Society.—The thirteenth annual meeting was held in the Library Room of the Society on October 11th, Mr. Evans, President, in the chair.—After some formal business had been transacted the meeting proceeded to the election of office-bearers, with the following result:—

*President:* R. H. B. Nicholson. *Vice-Presidents:* T. M. Evans and Edward Harrison, M.D. *Secretary:* James McNidder, M.B. *Librarian:* Robert Grieve, M.D. *Members of Council:* Thomas Cameron, M.B., A. G. Francis, M.B., Ed. M. Hainworth, M.D., Edmund H. Howlett, David Lowson, M.D., Alfred Parkin, M.D., James L. Waters, M.B., and John Wyllie, M.D.

## PATHOLOGICAL SOCIETY OF LONDON.

W. Watson Cheyne, F.R.S., President, in the Chair.

*Tuesday, October 15th, 1901.*

### Sylvian Aneurysm.

Dr. W. Barratt and Dr. R. M. Ralph described this case, which concerned a lunatic female, aged 38. Death occurred from dysentery, but before death speech was affected, and she suffered a slight right-sided seizure. After death the aneurysm was found to lie opposite the ascending parietal convolution. The authors considered the symptoms were due not to compression of nervous tissue, but to interference with its blood supply in consequence of the presence of the aneurysm, although no actual softening was discovered. There was no evidence of syphilis, and the cause of the aneurysm was not determined.

### Hæmorrhagic Myositis in Enteric Fever.

Dr. F. W. Andrewes recorded the above unusual complication of typhoid fever. The subject was a young man who had suffered from double chronic otorrhœa, and died in a relapse on the fifty-second day of typhoid. A day or two before death he complained of pain when turned over; and a swelling was discovered in the left thigh, and diagnosed as being hæmorrhagic. At the necropsy there was found no endocarditis, and no thrombosis of the veins of the thigh. The vastus externus was especially the seat of hæmorrhage, but there was no rupture of the muscular tissue. The fibres showed, many of them, Zenker's degeneration, and large numbers of streptococci were present. The cultivation of the organism showed it to be the streptococcus pyogenes. There was no aggregation of leucocytes. The author thought such a complication of typhoid unusual, though the older writers spoke as though it was not so. He regarded the streptococcus infection as responsible for the hæmorrhage, and thought that the "waxy" degeneration was as likely due to the microscopic rupture of muscle fibre as the converse. Unfortunately no other muscles were examined to test this view.

Dr. W. Cayley observed that in typhus hæmorrhage into muscle occurred not rarely. In the later stages of phthisis this same degeneration of muscle occurred. He thought the change inflammatory, and probably associated with the presence of micro-organisms.

Dr. H. M. Fletcher observed that as the muscles of the body were not systematically examined in cases of typhoid, it was not possible to say whether hæmorrhage was rare or frequent.

Dr. N. Dalton regarded the absence of leucocytic infiltration as a serious reason against thinking that the streptococci were responsible for the changes; possibly the streptococci found a nidus in which to grow at this particular spot; they were present in other organs as well.

Dr. W. Bulloch pointed to the fact that the ligature of arteries in the frog's tongue caused Zenker's degeneration as showing that it was not necessarily of an inflammatory origin.

### Pleuro-œsophageal Fistula.

Dr. J. H. Thursfield reported the case of a boy who had suffered from bronchitis. Six weeks before admission an abscess had formed on the right side of the chest; this was incised. A ragged sinus remained below the nipple, through which a probe passed into the pleural cavity. Portion of a rib was excised, but the discharge continued. Portions of other ribs were resected for freer drainage, after which liquid food would appear at the wound. After death the lung was found compressed and carnified; the right pleura was a large abscess cavity, and from this a ragged communication existed with the œsophagus. There was no tubercle in any part: and no foreign body in the œsophagus. The author thought that the perforation of the œsophagus had taken place from the pleura. A similar case had been recorded by Dr. Osler and another by Dr. Voelcker.

Dr. A. F. Voelcker suggested that, as in his case, the perforation arose from tuberculous disease of a lymphatic gland, this being followed by softening. The softening and perforation of trachea or œsophagus from such a cause was well known: in the case observed by himself he found a caseous gland above the perforation.

Dr. E. Cautley cited the case of a child in whom enlargement of mediastinal glands was diagnosed: empyema resulted, and this he thought arose from the glandular disease.

### Imperforate Pharynx.

Mr. S. G. Shattock described an example of this in an agnathous lamb. Although imperforate rectum was so common in the human subject apart from accompanying grosser defects, it was remarkable that the persistence of the primitive condition (in which the gut terminated blindly at either end) was one of the rarest of malformations affecting the upper part of the alimentary canal, and had never been met with except in conjunction with ill-development or absence of mandible or highly pronounced arrests in the craniofacial axis—synotia, cyclocephalus, nanocephalus. Congenital atresia of the œsophagus was fairly frequent, but this had nothing in common with imperforate pharynx, and was in no sense the homologue of imperforation of the rectum. As the author had pointed out, atresia of the œsophagus was invariably situated opposite the lower end of the trachea and was a condition acquired during fœtal life, and probably in some way connected with the voluminous growth of the lungs and lower part of the trachea as a diverticulum from this spot of the anterior wall of the œsophagus. In imperforate pharynx the disposition corresponded with what would arise from the abnormal persistence of a normal phase of development. His's researches had shown that the stomodeum produced scarcely any of the buccal cavity; that the entire tongue was formed from the floor of the blind pharynx; and all this was shown in the specimen exhibited; the lower jaw was wanting, but the stomodeum was represented in part by an area of mucous membrane covering the under side of the exposed palate, and in part by the nasal cavity; there was no communication, however, between these parts and the post-jacent pharynx, from the floor of which a well-developed tongue projected.

### Dissecting Aneurysm.

Dr. H. M. Fletcher showed the heart and aorta of a man aged 31. The aorta was enormously dilated for its whole extent, and its upper part was the seat of a dissecting aneurysm. During life the swelling nearly filled the left side of the abdomen, but there was no expansile pulsation, and the diagnosis of renal sarcoma was made. Blood was present in the urine, and hæmoptysis eventually occurred.

### Hydatids of the Gall Bladder (?)

Dr. L. H. MacGavin showed what he thought was an example of the above. The specimen was a thick-walled cyst, removed during life from the portal fissure, in a woman in whom an abdominal swelling had been noticed. The cyst was full of hydatids. Hydatid disease of the gall bladder, apart from hydatid disease of the liver, was rare, only three cases being on record. The liver and abdomen were carefully examined at the operation, and no evidence of hydatid disease found.

Dr. Norman Dalton had seen the case and observed that the position suggested the gall bladder.

Mr. S. G. Shattock had been unable to discover any trace of cystic duct on dissection, but the microscopic sections of the cyst wall which he had made and studied led him to believe that the cyst was not the gall bladder. There were appearances strongly suggestive of compressed hepatic tissue on the inner aspect; but on further consideration he regarded them as due to muscle cells greatly distorted from early calcification.

## MEDICAL SOCIETY OF LONDON.

W. H. Allchin, M.D., F.R.C.P., President, in the Chair.

*Monday, October 14th, 1901.*

### The Responsibility of the Organism in Disease.

The President, commencing by a reference to the widespread inclination on the part of the human mind to seek for a cause for such phenomena as came under observation,

proceeded to show that, in accordance with the prevailing conceptions of life on a physico-chemical basis, there were two factors inseparably involved—namely, the organism and its environment—upon the interactions of which depended vital manifestations, whether they were those of health or of disease. It was with the former—the organism, the individual itself—that he was proposing to concern himself, more especially since he had reason to think that recently, owing in great measure to the extension of our knowledge by the discovery of the microbic origin of many diseases, the personal factor was being very considerably neglected and lost sight of. Admitting to the full the far-reaching importance of the recognition of the bacillus tuberculosis as the essential cause of consumption, he none the less ventured to think it would be long before those who had any extensive acquaintance with the ravages of the disease would see in the micro-organism the sole thing to be kept in view as the causation, prevention, and treatment of the malady. From the earliest times to the present opinions had fluctuated as to the relative importance of intrinsic and extrinsic causes in the determination of the numerous forms of disease that occurred. Probably those which ascribed to the organism itself the source of the malady had the greater prevalence; whether this was to be sought in an improper mixture of the several "humours" of the body or in some disturbances of a vital spirit, the relation of the organism to the environment and of function to structure being present-day conceptions, in agreement with which both the individual and his surroundings were regarded as jointly responsible for the living, whether this were normal or morbid. Although dealing mainly with the individual, it was necessary briefly to refer to the external conditions to which he was subjected; and it must be remembered that these were to be considered not only in their effect upon the body *en masse*, but also in their influence upon the component cells and tissues and the bioplasm itself. Several groups of these environmental factors might be mentioned: (1) Violent contact, represented by blows, injuries, lacerations of internal structures by calculi, etc. It must not be overlooked that in an infinitely less degree only was mere contact a normal excitant of those metabolic changes which found expression in contraction and movement; corresponding in this respect with those substances known as explosives, which, on being thrown into vibration, decomposed with liberation of much energy. (2) Natural agents, such as heat, light, electricity, barometric pressure, gravity, and the various conditions comprised in "weather." The effect of some of these upon the body as a whole was well known; in others the effect was only vaguely recognised; but there was a large body of experimental evidence bearing on their action on the unicellular organisms. (3) Poisons of whatever source and including those denominated autogenetic. These acted by causing decomposition of the protoplasm or by substituting certain of the elements therein by others. Speaking generally the toxic properties of each substance closely corresponded with the complexity and instability of its composition. Besides, however, such obviously external agents, the inter-relationship of the cells and tissues to each other constituted in part the environment to any given bioplasmic unit in the constitution of the higher organisms. In this way was to be regarded the effect of what were know as internal secretions, and those peculiar forms of nervous stimuli known as "trophic." This extended view of the nature of the environment led to the real comprehension of the so-called complications and sequelæ of disease. Acting upon the profoundly complex and unstable substance bioplasm, these various agencies produced their effects by altering its molecular structure and constitution, and so affecting its functional capacity. The bioplasm, however, was far from uniform in composition even in different cells or in the same cell at different times, and evidence of this was seen in the effect of staining reagents, and in the selective action of poisons. A tolerance of most, if not all, of these untoward external agents might, however, be either artificially established or naturally acquired. Inasmuch, however, as the ultimate effect was to modify the tissue metabolism—a term that expressed the intervention of the organism and its environment—and this in part depended upon the character of the protoplasm itself, it followed that the effect of the environment was in part determined by the organism which to that extent was responsible. This was to be seen in the various effects of the same prejudicial circumstance upon different individuals, in the variations exhibited among different persons as regards immunity, and still more as regards idiosyncracy. Whilst it was possible to investigate the phenomena of the environment apart from the individual, as was done in chemistry, physics, astronomy, etc., it was impossible to consider the organism separately from the external conditions to which it was subject, and whilst the latter were largely responsible for diseases as they were for the manifestations of healthy life, it remained to be seen how far the organism itself was primarily responsible for morbid action or even for the normal. It would seem that there were two directions in which an essentially intrinsic disease might originate, either as the result of inheritance, or as self-developed after birth, and with that was the inquiry as to the ability of the material through which life was manifested to transmit acquired modifications such as disease was. One remarkable characteristic of living matter had here to be considered, and that was its essentially transient character, for though the form was continuous and the functional capacity was continuous the actual material constitution was perpetually changing. The nerve cell or muscle fibre of to-day was not identically the same as that of to-morrow, although the characteristic shapes remained and the capabilities of each were the same. The full appreciation of such a complex must suggest the directions in which the organism itself might develop perverted function which we term disease. The substantial identity of life under the greatest diversity of environment gave further support to the same contention. A brief account of heredity was then given, with special reference to the views of Weismann and the theory of pangenesis, together with a summary of the morbid states which were generally looked upon as heritarily transmitted. As further illustrating the responsibility of the organism itself, the influence of age and sex and the process of recovery from illness were alluded to. A claim was made for consistency in the use of such expressions as "constitution," "diathesis," and "temperament," which the acceptance of the heritable character of certain morbid predispositions appeared to render necessary. In conclusion, reference was made to the neovitalistic views that were being put forward in a certain quarter and the support that such hypothesis gave to the responsibility of the organism. In the course of his address the speaker expressed the hope that the Medical Society could see its way to undertake a collective investigation of some of the many undetermined points in clinical medicine, for which the Society appeared to be particularly fitted, and reminded the Fellows that nearly a century ago a similar work was taken up by the Society in respect to influenza.

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West Kent Medico-Chirurgical Society.—The first meeting of the forty-sixth session was held at the Royal Kent Dispensary, Greenwich, on October 4th, Dr. Herschell (Vice-President) in the chair.—The Treasurer's accounts and the annual report having been read and adopted, and several new members elected, the following were chosen as officers and council for the ensuing year:—*President:* Thomas C. Meggison, M.D., C.M. *Vice-Presidents:* George Herschell, M.D., M.R.C.S., and Robert E. Scholefield, M.A., M.B., B.Ch. *Council:* F. Septimus Barnett, M.R.C.S., L.R.C.P., Leonard A. Bidwell, F.R.C.S., Charles J. Heath, F.R.C.S., Arthur E. Joscelyne, M.R.C.S., L.R.C.P., William Henry Payne, M.R.C.S., L.R.C.P., G. Chisholm Williams, F.R.C.S.E., and H. Bowen Williams, M.D., M.R.C.S., L.R.C.P. *Treasurer:* John P. Purvis, M.R.C.S., L.S.A. *Secretary:* John P. Henry, B.A., M.D., B.Ch. *Librarian:* F. S. Toogood, M.D., M.R.C.S., D.P.H.—Dr. Toogood showed the following cases from Lewisham Infirmary: (1) A case of syringomyelia; (2) a case of paralysis agitans; (3) a case of removal of right kidney for hydronephrosis.—Dr. Scholefield showed the following cases: (1) A case of lupus treated by the *x* rays; (2) a case of pigmented symmetrical dermatitis on both cheeks; (3) a case of cerebral tumour.—Dr. Joscelyne showed a case of rupia with a negative history of syphilis.

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Manchester Medical Society.—At the opening meeting on Wednesday, October 2nd, the President (Professor

Young) gave an account of the structure of the ovum, and described in detail the phenomena of the karyokinetic division of cells. The different phases were illustrated as they occurred in the equal division of the ovum which followed fertilisation and constituted the process of segmentation. They were also illustrated by the process of unequal division of the ovum which occurred during its maturation, and resulted in the formation of the polar bodies. The phenomena observable during maturation, fertilisation, and segmentation were further illustrated, as they occurred in *Echinus esculentus*, by a series of lantern slides, for which Professor Young expressed his indebtedness to Dr. T. Bryce, of Glasgow.

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British Orthopædic Society.—A meeting was held at the Royal Orthopædic Hospital on October 12th. Mr. H. A. Reeves, who was in the chair, showed the following: (1) Case of congenital absence of both fibulæ; (2) skiagraphs of similar deformity in a baby with fusion of great and first toe, in relation to their phalanges; (3) photographs and skiagraphs of case of woman, aged 42, with lateral deviation outwards of all fingers at the first interphalangeal joints, cause unknown; (4) case of girl, aged 14 years, with extreme valgus of both feet and great wasting of leg muscles, with partial dislocation of both patellæ; (5) photographs of contractions of all fingers both hands (like Dupuytren's) in a baby.—Mr. Noble Smith showed: (1) Photographs and skiagraphs of a child of 6 years with great attentuation of muscles and bones of legs, with well marked anterior curves; (2) photographs and skiagraphs of a rachitic case, aged 6 years, with peculiar formation of lower ends of femora; (3) engravings of carcinoma of spine, secondary to carcinoma of left femur.—Mr. Muirhead Little read an interesting paper on the treatment of lateral curvature of the spine. A discussion followed in which the following members took part: Messrs. H. A. Reeves, C. B. Keetley, Percy Lewis, Noble Smith, and Chisholm Williams.

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York Medical Society.—The inaugural meeting of the ensuing session of this Society was held on Wednesday, October 9th, when an address was delivered to an audience of about 300 ladies and gentlemen by Dr. Savage, of Guy's Hospital, London. The subject of the address, which created the very greatest interest, was the influence of surroundings in the production of mental disorder. The annual dinner of the Society took place the same evening, when 44 members and friends were present, including the Lord Mayor, and the Dean of York, Dr. Savage, Colonel Fielden, Colonel Mapleton, R.A.M.C., and Colonel Haynes, Professor Trevelyan, Mr. Lawford Knaggs, and Dr. C. Powell White (Leeds), and Dr. Rabagliati (Bradford). Dr. J. H. Buchanan, J.P. (Thirsk), President of the Society, occupied the chair. Dr. Bedford Pierce, Ex-President, proposed the toast of the evening, "The Orator," which was humorously responded to by Dr. Savage. The office-bearers of the Society for the ensuing session have been recently elected as follows:—*President:* Dr. Buchanan. *Hon. Librarian:* Dr. Ramsay. *Hon. Curator:* Dr. Long. *Hon. Secretaries:* Dr. Edmund M. Smith and Dr. Auden. *Other Members of the Council:* Dr. Pierce, Mr. Draper, Mr. Jalland, Mr. H. C. Shann, and Mr. J. H. Gostling.

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West London Medico-Chirurgical Society.—The opening meeting of the session was held on October 4th in the new building of the West London Hospital Post-graduate College. Mr. Alfred Cooper, F.R.C.S., delivered the Presidential Address on the Treatment of Inoperable Cancer. A vote of thanks was proposed by Mr. Keetley and seconded by Dr. Ball. Mr. Swinford Edwards suggested that a special evening during the session might be devoted by the Society to the discussion of the interesting subject of the treatment of inoperable cancer. Mr. McAdam Eccles seconded the suggestion, and added that it might form an appropriate subject for the Society's discussion on February 4th, the subject for which he believed to be still unfixed. The President, in reply, stated that this suggestion would be considered by the Council at their next meeting.

# REVIEWS.

## SURGERY OF THE KIDNEY AND URINARY PASSAGES.

### Kidney and Ureter.

The two volumes of Mr. Henry Morris's *Surgical Diseases of Kidney and Ureter*[1] give a full and almost exhaustive account (1) of the regional anatomy, the malformations and misplacements, and the injuries and surgical diseases of the kidney and ureter; (2) of the affections of the perinephric and perureteral tissue; and (3) of the modern surgical treatment of these several conditions. Those acquainted with the previous work of Mr. Henry Morris—and who is not?—will hardly need to be told that for accuracy, wide information, lucid exposition, and literary skill the present volumes will take a foremost place in contemporary surgical literature. There has been much confusion of epithets in describing the various types of single kidney. Mr. Morris classifies them thus: (*a*) Unsymmetrical kidney, that is, entire absence of one kidney; (*b*) solitary kidney, that is, fusion of the two kidneys into one mass; (*c*) atrophy, including congenital rudimentary kidney or congenital atrophy. The surgical importance of a single kidney is obvious. It is computed that congenital absence of one kidney is to be looked for once in 2,650 cases. Among the methods of examination of the kidney the author gives little space to the *x* rays. The statement of C. Lester Leonard that an absolute positive and an absolute negative diagnosis of stone can be made is not accepted. The author says "the results are most unreliable, shadows having been found when no calculus was present, and no shadow obtained when a calculus existed." In discussing injuries of the kidney, evidence is brought forward to show that healing of even deep ruptures of its surface may be rapid and sound. The importance of conservation is emphasised, and the teaching of Küster as to gauze packing, stitching, and so forth is commended. Doubtless many kidneys have been removed which, with the fuller knowledge gleaned from this book, might now be saved. Urinary fever—the febrile disturbance which follows any manipulation which entails a distinct impression being made on the urethra or bladder is of all kidney troubles that which the surgeon has most reason to fear. It has been attributed to "nervous" causes or to "septic" absorption, and the partisans of each theory have been emphatic in their declarations. Mr. Morris sums up: "It is probable that, on the whole, a large number of these cases do depend upon infection; others, however, cannot at present be clearly attributed to this cause, and it is most likely that in many of them the nervous element plays the chief part." Of tuberculosis of the kidney an adequate and succinct account is given. The propriety of a partial nephrectomy for localised tuberculosis has been disputed by König, Otto Ramsay, and others. The operation is, however, sanctioned by Mr. Morris, who quotes the case of a female patient, one of whose kidneys was removed in Canada for tuberculous disease. One-third of the remaining kidney was excised for a local tuberculous deposit. Five years afterwards the patient was in good health and earning her living as a working housekeeper. In 3 of 7 cases operated upon complete nephrectomy had to be performed later. The author holds that "partial nephrectomy is the operation which gives most promise for the future, if only operations are undertaken at an early period when the disease is limited and localised." The account of renal calculus leaves nothing unsaid that is worth the saying. The necessity for exploring the kidney, and by a separate incision in the pelvis sounding the ureter from the kidney to the bladder in all cases is fully emphasised. For the inefficient needle-puncturing is to be substituted in all cases a free incision into the kidney. Wounds so made bleed but little, are easily controlled, and heal rapidly. Rather more than half the second volume is devoted to the surgical diseases of the ureter, an allotment of space which shows the immensely-increased importance of the subject. Of catheterisation of

[1] *Surgical Diseases of the Kidney and Ureter, including Injuries, Malformations, and Misplacements.* By Henry Morris, M.A., M.B.Lond., F.R.C.S. Vice-President and Chairman of the Court of Examiners Royal College of Surgeons; Senior Surgeon to the Middlesex Hospital etc. In two volumes. London: Cassell and Co., Limited. 1901. (Demy 8vo, pp. 1,372, two coloured plates, 202 figures. 32s.)

the ureters Mr. Morris says in the great majority of cases "the clinical and physical conditions and the history of the cases give us sufficient information of the fact as to whether or not a second kidney exists and what is its capacity for secreting." That ureteral catheterism has been recklessly advocated there can be little doubt, and that harm has frequently resulted from it is unquestioned. Mr. Morris writes: "I desire to protest in no uncertain manner against the routine employment of these instruments for diagnostic purposes." Transplantation of the ureters into the larger intestine is sanctioned by two facts: first, that in all fowls except the ostrich Nature has provided a common cloaca; and secondly, in cases in which fæces have escaped into the bladder as a result of disease no ascending ureteritis has developed. Of the success of transplantation in the human being Maydl's cases give ample proof. We have touched upon a few only of the subjects dealt with in this work. But wherever the reader turns he is assured of meeting with the soundest and most authoritative teaching expressed in the clearest and brightest phrasing. Few books of equal merit have ever been published in our language, and British surgery may justly pride itself on having produced so admirable and worthy a treatise.

### Tumours of the Bladder.

Mr. Hurry Fenwick's *Operative and Inoperative Tumours of the Urinary Bladder*[2] is a contribution to the literature of an important branch of modern surgery, which, though certainly not trifling or incomplete, as is modestly suggested in the preface, may yet, we fear, not meet with so much attention as it deserves. The author in dealing with the subject of vesical growths has a great deal of original and useful information to impart. His pages supply the results of an exceptional experience of a most interesting class of diseases, and also of much conscientious study, but the matter is too concentrated for agreeable as well as instructive reading, and the arrangement of the different parts of his subject is wanting in system. The author has much to say as to the use of the cystoscope, and the amount of direct and practical knowledge to be derived from the book will be in direct ratio to the reader's capacity for making use of that difficult instrument. The first chapter gives some valuable hints on cystoscopic technique in cases of vesical tumour and should lead to the desirable result of stimulating a wider recognition of the importance of this means of clinical research. Mr. Fenwick's classification of tumours of the bladder is based to a great extent on clinical and cystoscopic characters, and very little seems to have been done to remove the obscurity that still hangs about the pathology of these growths. Our uncertainty and confusion with regard to many points in connection with the nature of such growths is confirmed rather than relieved by Mr. Fenwick's teaching, especially when we learn from so experienced and accurate an observer that a benign papilloma is capable of undergoing malignant change, and also may coexist with carcinoma either of the bladder or kidney. The book concludes with some interesting remarks on the guiding lines of operative interference, and in the technique of operation for the removal of tumours from the bladder. This description is full of original and valuable hints. Mr. Fenwick rejects some details of technique generally held to be almost essential to the proper performance and success of such operations and he describes at length the advantages to be derived from the use of a large speculum or so-called caisson in accurate bladder surgery.

### Urethra and Prostate.

Mr. Freyer has republished in a volume a series of post-graduate lectures on *Stricture of the Urethra and Enlargement of the Prostate*[3] delivered last year. As might be expected in a work of this kind, the author avoids any lengthy discussion of disputed questions and aims simply, we think with much success, at "a clear, concise, and practical summary of our present knowledge of the subjects with which he deals." Much in this book is of course an abstract of textbook matter, but on questions of treatment the author's teaching is based on the results of a wide personal experience. In the chapter on the operative treatment of urethral stricture which presents a good review of the different methods of dealing surgically with this affection, a statement is made which, coming from one with less experience and authority than the author, might be regarded as unduly optimistic. His reply to the question whether stricture be capable of permanent cure is emphatically in the affirmative; the stock phrase of "once a stricture always a stricture" having, it is reported, ceased to hold good since the adoption of improved methods of internal urethrotomy and a wide recognition of the teaching of Otis with regard to the normal capacity of the urethral canal. In the concluding portion of the book, which deals with hypertrophy of the prostate, there is not much of special interest beyond a brief but instructive estimate of the operative methods devised for the radical cure and for the relief of this affection. The opinions here expressed on the results of castration and vasectomy decidedly tend to confirm the general idea amongst practical surgeons that these operations will soon be generally discarded.

Dr. Desnos in a short review of the modern treatment of prostatic hypertrophy[4] describes numerous methods of giving relief and attempting radical cure. As might be anticipated, he devotes most of the small space at his disposal in the first place to the indirect means, such, for instance, as castration and vasectomy, of causing atrophy of the prostate. In a subsequent chapter he describes numerous direct operations practised in the course of the last ten years. Removal of the testes and resection of the vasa are regarded as uncertain and by no means safe operations, and Bottini's method is considered less efficient and more dangerous than suprapubic prostatectomy which is regarded by Dr. Desnos as being in suitable cases the operation of election.

## SURGERY.

The *Manual of Surgical Treatment*[5] by Professor Watson Cheyne and Mr. Burghard maintains in its Part V a high standard of excellence as a review of advanced surgical treatment. In this, as in the earlier parts, there is a sufficient amount of clinical and pathological information to serve as a basis for full and clear instruction on therapeutical methods, and these methods, both medical and operative, are described, not so much in accordance with the published views of others as with the results of the author's personal experiences. Most of the illustrations are original, and with regard to the few that have done service elsewhere scrupulous care has been taken to acknowledge their source. The chief feature in this part is an able and important contribution by Dr. Lambert Lack on the intrinsic diseases of the nose, ear and larynx. The chapters relating to these subjects have been grouped together and this contribution, which is a lengthy one, taking up nearly half the volume, includes a good chapter on the anatomy of the nose and useful instruction on the methods of examination of the nasal and other cavities. Some portions of the subjects with which Dr. Lack has been entrusted are also discussed in other parts of the book. This, it is clear, could not have been easily avoided in the case of mastoid disease, but the whole subject of malignant disease of the larynx might well have been left to Dr. Lack. Both authors are opposed to nibbling methods of treatment, and, in Dr. Lack's opinion, intralaryngeal methods of removal may be at once condemned as inefficient in the treatment of carcinoma. Dr. Lack's judgment of intubation in cases of acute laryngeal stenosis is decidedly favourable. This method, it is stated,

[2] *Operative and Inoperative Tumours of the Urinary Bladder.* A Clinical and Operative Study Based on Five Hundred Cases. By E. Hurry Fenwick, F.R.C.S., Surgeon to the London Hospital, Surgeon and Pathologist to St. Peter's Hospital for Urinary Diseases. London: J. and A. Churchill. 1901. (Demy 8vo, pp. 115, 39 illustrations. 5s.)

[3] *Clinical Lectures on Stricture of the Urethra and Enlargement of the Prostate.* By P. J. Freyer, M.A., M.D., M.Ch., Surgeon to St. Peter's Hospital for Stone, Lieutenant-Colonel Indian Medical Service (ret.). London: Bailliere, Tindall, and Cox. 1901. (Demy 8vo, pp. 115, 40 illustrations. 5s.)

[4] *Traitements Modernes de l'Hypertrophie de la Prostate.* Par le Dr. E. Desnos, Ancien Interne des Hôpitaux. No. 27 de *L'Œuvre Medico-Chirurgical.* Paris; Masson et Cie. 1901. (Demy 8vo, pp. 39. Fr. 1.25.)

[5] *A Manual of Surgical Treatment.* By W. Watson Cheyne, C.B., M.B. F.R.C.S., F.R.S., Professor of Surgery in King's College, London; Surgeon to King's College Hospital and the Children's Hospital. Paddington Green; and F. F. Burghard, M.D., and M.S. (London), F.R.C.S., Teacher of Practical Surgery in King's College, London; Surgeon to King's College Hospital and the Children's Hospital, Paddington Green. Part V. London: Longmans, Green and Co., 1901 (Royal 8vo. pp. 470, 145 illustrations, 18s.)

has some disadvantages, but gives much better results than does tracheotomy in children under five. The other portions of this volume deal with the treatment of the surgical affections of the head and face. The reader will find much that is not only new but also, we believe, sound and of practical value in the sections devoted to cranial and intracranial injuries, and in the chapter on the treatment of intracranial suppuration he will obtain much help and guidance in dealing with the complex sequelæ of middle-ear disease. A small but interesting addition to the many branches of surgical therapeutics discussed in this part is a contribution by Dr. Arthur Whitfield on the employment of electrolysis for the removal of superfluous hairs from the upper lip.

As scarcely twelve months have elapsed since the issue of the third edition of the well-known *Manual of Surgery* by Professor ROSE and Mr. CARLESS,[6] it has not been found necessary to make any alterations in the text or the illustrations, and thus, the authors state, the fourth edition is practically a reprint. The first edition appeared only a little more than three years ago, and this fact alone is sufficient proof that the book is admirably adapted to meet the wants of students and members of the profession who desire a textbook of moderate size and thoroughly up to date.

Mr. JAMES BERRY has long been known as one of the chief authorities in England upon the surgical aspects of thyroid diseases, his book on *Diseases of the Thyroid Gland and their Surgical Treatment*[7] will confirm and establish him in that position. It is based upon the Jacksonian Prize essay of the Royal College of Surgeons of 1886, and upon the Hunterian Lectures of 1891. The anatomy, congenital malformations, the conditions of atrophy and hypertrophy are considered adequately but succinctly. Goître is described as simple, malignant, and exophthalmic. The following forms of simple goitre are recognised: parenchymatous, cystic, adenomatous and fibrous; parenchymatous goître is caused by a general enlargement of the gland resulting partly from the accumulation of colloid material and partly from the increase in the solid elements of the gland; parenchymatous goitre forms the preliminary stage to nearly all other forms of enlargement. A cystic goître may arise either by distension and fusion of adjacent vesicles or by the breaking down and liquefaction of adenomata. The latter is the more frequent, and the transformation of the solid tumour into a cyst is rendered clear by several photographs. The adenomatous goitre results from the development of definite encapsuled masses of a typical thyroid tissue and is of two forms, the fœtal, in which masses of cells are present representing undeveloped thyroid vesicles; and cystic, consisting chiefly of vesicles. In fibrous goître the tumour consists chiefly of thickened interstitial connective tissue. The mingling of these various forms of goitre is not seldom seen in the same enlarged thyroid. Malignant goitre is found as both sarcoma and carcinoma and may occur in previously healthy or in enlarged thyroids. The early diagnosis of such cases is enforced if surgery is to afford any relief. The widespread indiscriminate infiltration demands so free a removal that the operation mortality is necessarily high. A brief account of exophthalmic goître is given and operative treatment is discouraged because of the high mortality and the doubtful benefit. The surgical treatment of goître is very fully set forth. The author expresses a preference for Kocher's operation of "resection and extirpation" for parenchymatous goître. Enucleation or "resection enucleation" is advocated for cysts and adenomata. The important points in all thyroid operations are the necessity for the complete arrest of hæmorrhage and the observance of rigid asepsis. A record of the last 100 cases operated upon by Mr. Berry is given: in these there was one death. The first 26 cases are, for some reason which is not apparent, omitted. The book contains the fullest and best account of thyroid diseases from the surgical standpoint that exists in the English language. It is well and honestly written and merits the careful study of all surgeons.

Of Mr. A. H. TUBBY'S *Clinical Lectures on the Various Forms of Intra-Abdominal Suppuration*[8] originally delivered to the students of Westminster Hospital Medical School, four are devoted to appendicitis. Except for the inclusion of one or two statements which we think need some qualification, as, for instance, that the appendix is often the site of new growths, and that appendicitis is very frequent indeed in childhood, the account given is very satisfactory, especially that part which deals with the signs and symptoms of the disease. An interesting account of subdiaphragmatic abscess occupies Lecture V, which presents within a small compass the points of most importance in this difficult subject. Then follow sections on pelvic suppuration, and on tuberculous and general peritonitis. Their consideration has suffered from a compression which under the circumstances was, we suppose, inevitable. The book is likely to prove useful to those who wish for a concise clinical account of these various forms of intra-abdominal suppuration, and the author is to be congratulated on an interesting addition to surgical light literature.

We have received the first of two volumes of a work in which Messrs. GOODSALL and ERNEST MILES propose to deal with the *Diseases of the Anus and Rectum*.[9] It contains preliminary chapters on anatomy and general diagnosis, but for the most part deals with the subjects of abscess and its results, fissure, and hæmorrhoids. The authors have evidently spared no efforts to render the treatise reliable and comprehensive. It is, they assure us, the outcome of considerable personal experience and, moreover, is based also on a wide knowledge of what has been done in this special subject by others. The practitioner will find it a good guide on most questions relating to diagnosis and treatment, and gain much help in his study of its pages from the excellent though in some respects rather too realistic illustrations, most of which are original, and taken from cases under the authors' care. In this branch of the work, however, as indeed throughout the volume, there is, we think, a tendency to do too much. The first part is decidedly too diffuse, and at the same time uneven, the treatment of some subjects being over-elaborated whilst other points of importance are too briefly discussed. The chapter on anatomy contains some instructive paragraphs on points of surgical interest, but is too long and in many parts too elementary for a book of this kind. Too much importance is attached, we think, to a new method of mapping out the anal region, devised by the authors, and the alphabetical classification of internal piles based on this method does not seem likely to be widely adopted by practical surgeons. Too much space is occupied by "cases," and the most interesting and illustrative of these might well have been compressed. The remarks on the treatment of both fistula and fissure are full and very instructive, but the criticism of the relative merits of the recognised methods of dealing with internal hæmorrhoids by surgical operation might have been made more adequate. The chapter on general diagnosis serves as a very useful introduction to the main portion of the work, and is the more welcome as being an unusual feature in English books on special subjects of this kind. It is a thoroughly practical description of the varying indications of pain, bleeding, and other symptoms of rectal disease. In the paragraph on the method of examination there is but slight reference to the use of the speculum. In these days of scrupulous attention to asepticism some hints as to the best means of protecting, and subsequently of cleansing, the surgeon's fingers would have been a useful addition to the remarks on examination of the rectum.

[6] *A Manual of Surgery.* By Professor William Rose, M.B., B.S., F.R.C.S., and Albert Carless, M.S.Lond., F.R.C.S. Fourth edition. London: Bailliere, Tindall and Cox. 1901. (Demy 8vo pp. 1182, 406 illustrations. 21s.)

[7] *Diseases of the Thyroid Gland and their Surgical Treatment.* By James Berry, B.S.Lond., F.R.C.S., Surgeon to the Royal Free Hospital and Lecturer on Surgery at the London School of Medicine for Women. London: J. and A. Churchill. 1901 (Demy, 8vo. pp. 367, figs. 121. 14s.)

[8] *Clinical Lectures on the Various Forms of Intra-Abdominal Suppuration.* By A. H. Tubby, M.S., F.R.C.S. London: The Medical Publishing Company. 1901. (Crown 8vo, pp. 91. 3s. 6d.)

[9] *Diseases of the Anus and Rectum.* By D. H. Goodsall, F.R.C.S.Eng., Senior Surgeon (late house surgeon) to St. Mark's Hospital for Fistula and other Diseases of the Rectum; Senior Surgeon to the Metropolitan Hospital; and W. Ernest Miles, F.R.C.S.Eng., Surgeon (out-patient) to the Gordon Hospital for Diseases of the Rectum; Assistant-Surgeon to the Cancer Hospital, Brompton, etc. In two Parts. Part I. London: Longmans, Green and Co. 1900. (Demy 8vo, pp. 238; 91 illustrations. 7s. 6d.)

### APPENDICITIS.

Mr. Lockwood has based his work on *Appendicitis, its Pathology and Surgery*,[10] upon the examination of eighty-three specimens of diseased appendices. In relating the cases the clinical history and the morbid anatomy and histology are given, and comments are made upon the distinguishing or noteworthy features of each. This method, as the author acknowledges, is tedious, involves frequent repetition, and makes continuous reading wearisome. The method, however, is a necessary one, and a sound one, if our clinical knowledge is to tally with the pathological showing, and if appropriate therapeutic measures are to result from that knowledge. The anatomy of the appendix and its surroundings is described in a manner not wholly satisfactory. The teachings of anatomy and surgery are confused, rather than correlated. The terms "sub-cæcal" and "post-cæcal" as applied to a certain fossa are incorrect, and in recent anatomical writings are replaced by "retro-colic." Mr. Mansell Moullin's case of retro-peritoneal hernia is incorrectly labelled. The origin of the meso-appendix is described as "from the cæcum, the cæcum and colon, the ileum, the mesentery, or the iliac fossa"—a statement requiring elucidation. The varying degrees of pathological processes are described as "appendicitis with ulceration of the mucosa," "appendicitis with ulceration of the mucosa and bacterial invasion," "appendicitis with ulceration of the mucosa, and with fæcal concretions—foreign bodies and their complications"; "appendicitis with stenosis and its complications—cysts, mucocele, empyema, ulceration, and bacterial invasion"; "appendicitis with sclerosis and obliteration of the lumen"; "appendicitis with lymphangitis and lymphadenitis"; "tuberculous appendicitis and actinomycotic appendicitis"; "appendicitis complicating malignant and other diseases." The "fæcal concretion" is shown to be the result of the inspissation of bacterial masses. In discussing the clinical symptoms of appendicitis, Mr. Lockwood makes what we take to be his most important point. The symptoms usually described—pain in the iliac fossa, constipation, vomiting, etc.—are said to belong to the "second phase," the "first phase" being characterised by obscure abdominal pains, settling at last in the iliac fossa, indigestion, flatulence, disorder of the bowels, constipation or diarrhœa, capricious appetite, inability to eat fruit or vegetables, unpleasant tastes in the mouth, odours in the nostrils, slight variations in the temperature, tenderness on pressure in the iliac fossa, slight muscular rigidity and tenderness in Douglas's pouch. Perityphlitis is not an essential feature of the disease but a preventable complication, in fact, a complication that ought never to be allowed to supervene. In studying the details of not a few of the cases, the reader will be struck by the fact that though the clinical history was indefinite and the symptoms so little aggressive and so obscure that many surgeons might have hesitated to operate, yet the pathological findings were always pronounced, and of a severity justifying the removal of the appendix. The pathological descriptions are the fullest, the most accurate and complete that have yet been published, and the whole volume bears added testimony to the honesty and high value of Mr. Lockwood's work.

Mr. Mansell Moullin has published a small volume with the title *When to Operate in Inflammation of the Appendix*,[11] a series of lectures in which he considers the various clinical types of appendicitis, and states clearly and reasonably the circumstances that in each should determine operation. In the fourth lecture the individual symptoms—pain, vomiting, meteorism, and so forth—are described, and their relative importance in the prognosis considered. The author is an advocate of operative measures whenever a second attack has occurred, and of early interference whenever possible. He states his cases in a forcible and luminous manner.

The operative treatment of appendicitis during the acute attack is the point chiefly considered by Professor Rosenberger in the essay[12] before us. He advises then a small incision 1 to 2 inches in length and the introduction of a drainage tube down to the appendix for the purpose of giving exit to pus, or earlier inflammatory exudation. If after recovery a recurrence of the inflammation is observed the quiescent interval is awaited and the appendix is then removed. The author sums up the conclusions he has formed from his cases as follows: "The greater number of cases of perityphlitis recover without operation and remain, most probably, free from recurrence. The operative treatment is an indication of progress, for many cases which would otherwise die are saved." Of twenty cases operated upon four died, a clear enough proof of delay in adopting surgical measures.

[10] *Appendicitis, its Pathology and Surgery.* By Charles Barrett Lockwood, F.R.C.S., Assistant Surgeon and Lecturer on Descriptive and Surgical Anatomy in St. Bartholomew's Hospital, etc. London: Macmillan and Co. 1901. (Demy 8vo, pp. 287, illustrations 52. 10s.)

[11] *When to Operate in Inflammation of the Appendix.* Clinical Lectures by C. Mansell Moullin, M.D. (Oxon.), F.R.C.S., Surgeon and Lecturer on Surgery at the London Hospital; late Examiner in Surgery at the University of Oxford. Second edition. London: J. Bale, Sons, and Danielsson, Limited. 1901. (Demy 8vo. pp. 39. 2s. 6d.)

[12] *Ueber chirurgische Eingriffe bei Bauchtyphlitis.* (Würzburger Abhandlungen aus dem Gesamtgebiet der praktischen Medizin) Von Professor Dr. J. A. Rosenberger. Würzburg: C. Kabitzsch. 1901. (Royal 8vo. p. 28. M.1.)

## NOTES ON BOOKS.

### REPORTS AND TRANSACTIONS.

#### Reports of Hospitals.

The fifty-fourth volume of *Guy's Hospital Reports* (London: J. and A. Churchill. 1900. Demy 8vo, pp. 384. 10s. 6d.) contains several very interesting contributions, but perhaps the most useful is one on diseases of the pancreas by Dr. Hale White. It comprises an analysis of the experience gained in the *post-mortem* room of Guy's Hospital during fourteen consecutive years in regard to diseases and injuries of the pancreas. Allusion is made to 142 of such cases, being 2 per cent. of all the cases dying in the hospital. References to cases of pancreatic disease recorded in British and foreign literature are amply used, so that a valuable, if short, monograph is the result. Other particularly interesting communications are on Splenomegalic Cirrhosis of the Liver by Dr. Frederick Taylor; on Surgical Interference in Gastric Ulcer before and after Perforation into the Peritoneal Sac, by Mr. A. R. Thompson; and on the Production of Gas-containing Cavities in the Internal Organs of the Body, by Dr. J. H. Bryant and Mr. W. C. C. Pakes.

The thirty-sixth volume of *St. Bartholomew's Hospital Reports* (London: Smith, Elder, and Co. 1901. Demy 8vo, pp. 618) contains the biographical notice of the late Sir James Paget by Mr. Howard Marsh, which has already been referred to in the British Medical Journal. A well-known photograph of Sir James Paget forms the frontispiece of the volume. There is also an obituary notice of the late Sir Richard Thorne Thorne. Perhaps the most interesting of its scientific communications is that by Dr. Claye Shaw on the Expression of Emotion, in which he combats from the psychological side the view of Professor William James that emotion is subsequent to the associated bodily change which has been combated from the experimental side by Professor Sherrington, and was referred to in the British Medical Journal of July 14th, 1900, p. 110. There are articles on neurological subjects of value, and others on plague, rheumatoid arthritis, and membranous colitis.

The twenty-seventh volume of the new series of the *St. Thomas's Hospital Reports* is mainly taken up with the reports of the medical and surgical registrars, and with reports from the special departments. Among the more noteworthy of the original communications are one by Dr. C. R. Box on 8 cases of Addison's Disease, some of which were treated by the administration of suprarenal substance; a paper on some cases of Automatic Wandering by Dr. W. S. Colman, and one on a case of Hysterical Sleep Talking by Dr. Hector Mackenzie. A communication on Æsculapius and his Sanctuary, also by Dr. Colman, contains, as far as we have observed but little of importance that has not appeared in the columns of the British Medical Journal during the last two years. Dr. J. J. Perkins contributes an interesting paper on some pulmonary complications of new growths of the œsophagus.

The *Report of the Middlesex Hospital* for the year 1899 refers to the setting aside of beds in the Convalescent Home at Clacton-on-Sea for the "open-air" treatment of phthisical patients; to the completion of the new cancer wing of the hos-

pital at a cost of close upon £20,000; and to the inauguration of laboratory arrangements for the investigation of cancer at an initial outlay on the research laboratories of about £465, and an estimated charge for the yearly maintenance of £650.

According to the *Report* of the same hospital for 1900 (London: Mitchell and Hughes. 1901. Demy 8vo, pp. 160) the Cancer Research Laboratories have been in working order since March, 1900. The Board have authorised the publication of special Cancer Laboratory Reports, in which the progress made will be recorded, and in which the results obtained in the laboratories will be detailed, and thus rendered available for the use of medical men in general. The first of these reports is expected to be issued in the current year.

*The Annual Report of the Great Northern Central Hospital* for 1899 shows that 1,923 persons were admitted as in-patients, or 222 more than during the previous year, 669 cases being medical and 1,254 surgical. The average mortality of the medical cases during the year was 15.69 per cent., and of the surgical cases 9.58 per cent. The number of out-patients treated during the year was 31,189.

The sixth volume of the *Edinburgh Hospital Reports* (Edinburgh: Oliver and Boyd. 1900. Roy. 8vo, pp. 416. 12s. 6d.) contains among other important contributions one on a Fatal case of Post-diphtherial Paralysis and the Microscopical Appearances of the Nervous System by Dr. John Playfair and Dr. Rainy: a paper on Acute Heart Softening by Dr. G. A. Gibson; a case of Aortic Aneurysm in a Child by Dr. T. Burn Murdoch and Dr. D. A. Welsh; two papers by the late Mr. John Duncan—one on Electrolysis in Aneurysm and the other on Angioma: and a paper on the Pathology of the Germinal Period of Antenatal Life by Dr. J. W. Ballantyne. The volume also contains statistical tables of the cases treated in the various hospitals in Edinburgh and Leith.

The tenth series of the *Medical and Surgical Reports of the Boston City Hospital* (Boston, Mass.: Published by the Trustees. 1899. Demy 8vo, pp. 231) includes a valuable paper on the Weight of the Normal Heart in Adults in 216 Cases by Dr. Horace Arnold; an instructive report of a Severe Case of Cantharides Poisoning by Dr. Ralph Stevens; and a paper on Coincident Malaria and Typhoid Infections as seen among our Retired Soldiers from the Cuban War, by Dr. Whittington: while Dr. Bullard's paper on Syringomyelia Treated by Laminectomy is well worthy of attention.

The eleventh series (Boston: Published by the Trustees. 1890. Demy 8vo, pp. 266) also contains several papers of great value. To one of these—that by Dr. Henry Jackson on an Analysis of 59 cases of Ulcerative Endocarditis—reference has already been made in the British Medical Journal of January 5th, 1901, p. 42; and among others of real importance is one by Dr. J. J. Thomas on Fracture Dislocation of the Spine; one by Dr. F. B. Lund on Acute Hæmorrhagic Pancreatitis; one by Dr. J. T. Bottomley on 28 cases of Tuberculous Peritonitis, with reference to the results of operative treatment; and one by Dr. H. C. Low on the Bacteriology of 100 cases of Appendicitis. There are other papers well worth special mention, and the volume as a whole is one of quite unusual interest.

*The Reports of the Medical, Surgical, and Pathological Registrars of the Liverpool Royal Infirmary for 1898*, by A. G. Gullam, J. P. Nixon, and P. Nelson (Liverpool: Rockliff Brothers, Limited. 1899. Pp. 155), contain, among other interesting matter, a record of the cases of appendicitis treated during the year. Twenty-five cases were admitted, and of these 8 recovered without operative interference, but in all it was a first attack. In 6 cases of recurrent appendicitis the appendix was removed. In 8 cases of suppurative appendicitis the abscess cavity was opened and drained; in only 1 was the appendix also removed; in that instance it was perforated and also separated from the cæcum. The remaining 3 cases, 2 of which were classed as "fulminating" and 1 being almost moribund on admission, died.

The somewhat belated *Reports of the Surgical Registrars of University College Hospital* for 1891 and 1897 (London: H. K. Lewis. 1898. Demy 8vo, pp. 374 and 155. 3s. each) consist of a vast mass of elaborately tabulated clinical and pathological facts classified in a readily-available form, which will doubtless prove a valuable mine of information for future research.

*The Statistical Tables of the Patients under Treatment in the Wards of St. Bartholomew's Hospital* during 1899 (London: C. Skipper and East. 1900. Demy 8vo, pp. 238), compiled by the Medical and Surgical Registrars, are based on the system of classification introduced in 1895. It is indeed a *magnum opus*, and we can only hope that its compilers will "catch the far-off interest" of their labours.

## THE IMLACH CONTROVERSY.

We have received the following for publication:

"88, Rodney Street, Liverpool,
"October 12th, 1901.

"Sir,—In the sincere hope that the Inquiry Committee might do something to remove the stigma unintentionally placed upon Dr. Imlach's professional character, I have waited patiently since the special meeting on March 4th, when I proposed that the matter in question should be submitted to the Council of the British Medical Association for arbitration. As you know, this proposal was not only refused, but the Liverpool Medical Institution was induced by the Inquiry Committee to affirm (*a*) their right to hold such inquisitorial inquiries, and (*b*) that their report of 1886 was right, just, and moderate. The attitude taken at the time by the British Medical Journal will be found (December 18th, 1886, p. 1224; January 15th, 1887, p. 117; February 12th, 1887, p. 339) to be uniformly in Dr. Imlach's favour, and its pronouncement on the Committee's report was summed up (British Medical Journal, December 18th, 1886, p. 1225, column 2, line 5 from the bottom) in the following words: 'What right have general hospital surgeons to stamp with the stigma of incompetence men outside their own circle.' Every fact disclosed since then has gone to show the correctness of Dr. Imlach's surgery, but the Inquiry Committee and the Institution—who have not, as your columns to-day so kindly suggest they have, acknowledged his worthiness to gynæcological eminence—continue their old policy of refusing to grant him a hearing.

"The following letter received to-day from the Secretary of the Journal Committee of the Liverpool Medical Institution will show better than any words of mine how oblivious are the Inquiry Committee and the Council of the Institution to the claims of fair play. The letter is as follows:

It was decided not to publish in the *Transactions* of the Medical Institution any report of the special meeting to which you refer. In this decision the Journal Committee has followed the precedent laid down by the Council in reference to the former special meeting *re* the Imlach matter.

"As they refuse to publish in the *Transactions* my appeal delivered on March 4th, I ask you kindly to do so. It is the only way I can see to obtain that fair hearing which is the birthright of every Englishman and the glory of this nation. It is true that England expects every man to do his duty, but she also expects that every man shall at least be heard in self-defence.

"As the Council of the Medical Institution have on every occasion refused Dr. Imlach a hearing—and that is why so many years have elapsed—I have now no alternative but to make my appeal on his behalf to the medical profession. May I say that it is not now simply a question of Dr. Imlach? There is a deeper significance. The Inquiry Committee claim the right to investigate the professional conduct of a professional brother, and to do so without giving the party implicated a hearing, and this right has been affirmed by the Medical Institution; the exact words are, 'will have to act just as their predecessors did.' I cannot believe that outside of Liverpool there is to be found a medical man who would give his assent to so monstrous a claim.—Yours obediently,

"Thomas H. Bickerton."

### A Speech Delivered at the Special Meeting of the Liverpool Medical Institution on March 4th, 1901, by Mr. Thomas H. Bickerton.

Mr. President, Ladies, and Gentlemen,—On July 9th last a resolution was proposed by me in the following terms:

That this meeting of the Medical Institution, having reconsidered the Report of the Inquiry Committee upon Abdominal Section, adopted at a Special General Meeting, December 3rd, 1886, and believing that the Inquiry was irregularly constituted and held, now resolves that this report be forthwith deleted from the minutes of the Institution.

But an amendment was subsequently proposed:

That this meeting be adjourned *sine die*,

and this being put to the vote was carried by a majority of 13, the numbers voting being 64 to 51.

In the first place I would point out that the amendment did not dispose of the question at issue; in the next place, that certain correspondence in the British Medical Journal and other letters addressed to Dr. Imlach show that this question is too serious to be shelved in this way; and, lastly, that an influential number of the members of the Institution see in the proposal which I have the honour to bring before you to-night a way out of the difficulty which besets us on this question, a way which is at once an honourable way, and a means of finally putting the matter at rest.

Drs. Nevins and Alexander make the statement that the writers in the British Medical Journal "have no true knowledge of the real facts of this case," and they make the suggestion that the gentlemen writing these letters in that Journal were inspired to write them as testimonials for Dr. Imlach. While I do not believe this last suggestion—it is a course which I should not have lent myself to for a moment—I leave the members present to judge whether the writers in the Journal are as ignorant of the merits and facts of this case as you are asked to believe. Are those writers, whose names are household words, capable of expressing any opinion which could be due to the influence of Dr. Imlach? The pamphlet by Drs. Nevins and Alexander was, like the "Defence" pamphlet on the previous occasion, issued too late to make any previous systematic reply, but I did take the trouble on Saturday night to write Dr. Taylor, of Birmingham, whether his letters and views had been inspired, and his telegraphic reply is:

Birmingham, 10 A.M.

My action in writing to Journal entirely spontaneous. Nobody asked me to do this. Editorial began correspondence. Taylor.

Why can we not approach this question without unworthy insinuations of this kind?

Just one word as regards the resolution of July 9th. I have been told by various members of the Institution that that resolution would have been carried without question if it had been confined simply to a statement that the action of our Institution in appointing and holding the Imlach inquiry, and in publishing the report of the Committee, was *ultra vires*. I have been told that the resolution was lost because, in addition to this proposition, which I understand is accepted by the large majority of those present, the resolution was coupled with a proposal that the minutes, *ultra vires* though they were, should be deleted. That—so said a number of you gentlemen—is a reflection on our Council and on the individual members of the Committee, and we must back up our Institution even if they were wrong; in any event, and even if the resolution was *ultra vires*, we must not remove from our minutes the record of this unfortunate mistake which we made.

Well, gentlemen, my proposal was beaten, although this argument did not and does not appeal to me. I should have thought that if we admitted we had made a mistake—if at any time we were satisfied we had done wrong—the first thing we should think of was the best and quickest way to set that wrong right, and to remove as far as possible every trace of it from our records.

But I do not set up my opinion against those of you who object to "deletion," and, consequently, I was ready to look about after our last meeting on the subject to see if some other means could not be found which were acceptable to you all, and which provided a means for the settlement once for all of this question. Gentlemen, a means for the settlement of this question is offered you to-night. Arbitration is a business-like, sensible, and recognised method of ending disputes between gentlemen, and, with Dr. Imlach's approval and at his request, I have the honour to propose:

"That this meeting consents to submit the whole question of the propriety and justice of the action of the Liverpool Medical Institution with reference to the 'Imlach' Inquiry, and of the Committee's report and publication of same, to arbitration, all parties agreeing to be bound by such opinion."

On this proposition I should like to say a few words. I would have you notice that in Saturday's pamphlet the Inquiry Committee attempt to gain your sympathies and ride off upon this question of deletion. They say that "obviously the question to be submitted to arbitration is the deletion of the report." Gentlemen, it is no such thing. The question to be submitted to arbitration is that which is mentioned in my notice of motion, and is the larger question affecting the Institution as well as Dr. Imlach, and which goes to the root of that, to us, important issue, whether the action of the Institution in the Imlach Inquiry was or was not *ultra vires*. Now, the pamphlet by Mr. R. Jones, Dr. Barr, and myself issued in July, 1900, sets out very fully the argument of Dr. Imlach's supporters. This pamphlet is probably in the hands of all present, and I trust has been carefully perused by them, for I do not think it necessary to detain you to recapitulate the argument on this occasion. It will suffice to remind you that the question between us and other honourable members of this Institution is one which can be summed up in a few words. We say that in 1886 this Institution, without any power in the rules enabling them to do so, appointed a Committee of Inquiry into the conduct of one of your members—Dr. Imlach. This Committee, composed of gentlemen whose *bona fides* we have never questioned, but whose appointment was clearly invalid, entered upon their inquiry, and took certain steps in the course of the proceedings with which you are familiar, but some of which were, in our opinion at least, injudicious; whilst all were unauthorised. The appointment of that Committee was improper or *ultra vires*, its constitution was improper, it held its meetings without allowing Dr. Imlach—the party implicated—to attend, it kept no minutes, or at all events its minutes were irregular, it presumed to take evidence which we say was no evidence and it culminated its existence, which ought never to have commenced, with a report most nearly affecting the honour of one of your members—namely, Dr. Imlach—and not content with this the report was subsequently advertised by this Institution in medical journals—it also appeared in daily papers—to put the last nail in Dr. Imlach's coffin, and get rid of him and his practice for ever and a day.

Gentlemen, this is our view of what was done, and we know that there are some of you who do not agree with us, although as the facts of this case get more and more known, the members who disagree with us become fewer and fewer. But whether we are right or wrong, the effect of the inquiry was as I have hinted. It achieved a result which you may say was not intended, but which was the result nevertheless, however else we disagree, and which we all must deplore. Cast out from his hospital, denied the means of providing a livelihood, held up to opprobrium by his colleagues and fellow-creatures in his native town, this gentleman has been allowed to suffer the effects of this inquiry and the report for upwards of fourteen years. Even as late as Saturday, and in the face of what we have learnt from the various authorities on this particular subject through their correspondence in the British Medical Journal and other journals, the Inquiry Committee, with a persistence which is worthy of a better cause, assert in their own words that their "report was a true, just, and moderate one." Dr. Imlach thinks otherwise: we think otherwise, and some of the leading gynæcologists are of our opinion. Are we to continue for ever expressing these contrary views? May we not submit this point with the others to the decision of an unbiassed arbitrator and so end the matter? The Inquiry Committee for the first time suggests that Dr. Imlach was not dismissed from his hospital because of his operations or the report, but because his proceedings were reckless and because he refused to consult. If there was any evidence that Dr. Imlach operated recklessly (the word was used for the first time in Saturday's pamphlet) we have never heard of any, and its existence is denied, and my friend, Dr. Robert Jones, will conclusively prove what I could do if I had more time, that Dr. Imlach did not lose his hospital appointment because he refused to consult. We can show conclusively that Dr. Imlach had agreed in writing to consult before he lost his appointment. And yet this "defence" pamphlet of Saturday, which was intended to be the last word, and which is issued on the authority of statements by Mr. Lancaster and Mr. Guthrie is based on absolutely incorrect assumption in this respect. No, gentlemen, let us face the results of that report fairly. It was the report and nothing else which ensured his downfall. Is it not the fact that the Inquiry Committee in

both their "Defence" pamphlets have sought to evade the real issue as regards the appointment of their committee? They say they were compelled to take the subject up! They say that the public considered that the operation was being performed unnecessarily, but there is no evidence that the public were aware of -far less that they were discussing—the question! They say that letters were published in the newspapers, and yet there was no single letter published until after the Inquiry Committee was appointed! They actually invite you, if you entertain any doubt on this point, to consult the file of newspapers, and they say you will there see the public had come to the belief that patients at the Shaw Street Hospital were being wrongfully experimented on. Gentlemen, I have consulted the file, and there is not a single letter dealing with the subject before the Committee of Inquiry was appointed. The first reference to the matter in the papers was an anonymous and offensive note of the appointment of the Committee; the second a similarly anonymous notification; and the third, nearly a month later, was an inspired communication quoting from the *Lancet*. Were the Inquiry Committee *compelled* to take the matter up? A further reason is given in the "Defence" pamphlet for this compulsion! It is said that the subscribers of the hospital were uneasy, and yet it is a fact that seven days before the Committee was appointed the annual meeting of the Hospital for Women had been held, with the Mayor presiding, at which no reference was made to this question, but congratulatory speeches were made thanking the medical officers for their skill and self-devotion, and taking credit for the increased amount of the annual subscriptions, which included £500 from the patients. As the Mayor on that occasion said, "it showed a very great amount of appreciation on the part of the patients, and the fact that the annual subscriptions amounted to £600 was also evidence that the hospital was very popular amongst the citizens of Liverpool. They were carrying on a great and good work." And yet you are asked to believe that the feelings of the subscribers to the hospital and the letters in the newspapers—which did not exist—are evidence, in the words of the Inquiry Committee, "that the matter became a positive scandal," which compelled the Institution to take it up: and, further, that "the agitation"—as to which there is not a tittle of evidence outside the Medical Institution—"seriously imperilled the welfare of the Women's Hospital, so that many subscribers were threatening to resign." Gentlemen, it was within these walls and among his own colleagues that there was distrust and agitation, and this distrust and agitation led to the appointment of the Committee, and everything which followed; and this is the question which we ask you to keep before your minds, and to allow an unbiassed arbitrator to dispose of. The string of arguments which the Inquiry Committee labels as "history," and which figure as "in short," "at length," and "at last," were not *causes* at all, but *consequences*. Here are the documents, gentlemen, which prove what we say; where are theirs?

You have decided that you will not delete from your books the resolution appointing the Inquiry Committee. Are you now going to refuse to allow some third party without bias to arbitrate on the rights and wrongs of this question? There is, heaven knows, enough material for dispute. May we not end the matter in this suggested way with honour to ourselves, or shall we remain, as we are at present, objects of wonder to our medical *confrères* of other towns?

The interests of this Institution transcend the interests of any one man or any body of men. This Institution is at the head and front of the profession in Liverpool, its influence has an even wider field, its censure spells ruin, and it is just because it has so high a character in professional and public estimation that the principles of justice and equity, upon which this and every other English institution is founded, must be minutely observed. Has the quality of mercy been strained in the present case? Let us not attempt to disguise facts. A survey shows that from beginning to end these high principles have been conspicuous by their absence. It has, indeed, been said that the machinery of the Institution has been utilised to crush the individual. Our action has been likened (*vide* Liverpool daily papers, February 4th, 1887) to that of the old drumhead court-martial, "in which no notice was given, no oath administered, and no written record kept.' It has even been likened to the infamous Star Chamber of the Stuarts, which proceeded on mere "rumour" and "common talk," dispensed with the principles of Common Law, and left the victim without the ghost of a chance of self-defence. And wherein does it differ? The attack without notice, the committee arranged for and wholly nominated by personal assailant, secret meetings, secret examination of patients, secret correspondence with doctors, the report forced through by suspension of freedom of speech, publication of incriminatory report to the world, and persistent refusal to give the party implicated a hearing. Do not forget that by your refusal to delete the motion appointing the Imlach Inquiry Committee you have, so to speak, endorsed the assumed right of the Institution to hold such an inquiry. This is no idle supposition. In their last publication received only on Saturday, the Inquiry Committee defend their assumed right to institute inquiries into members' conduct and threaten to do it again should they at any time think fit—to quote the exact words, "will have to act just as their predecessors did." Which of us will be the next victim? I most earnestly beg that you will think seriously before deciding to vote against the resolution. The medical profession is supposed to be a learned profession. What possible chance of progress can there be, if individual members before putting into practice their theories, have to wait until the majority of their fellows see eye to eye with them? There is already more free thinking outside the profession than in it. What will the condition of stagnation be when every young man feels the threat of inquisitorial inquiry hanging over him? The propriety and justice of the action of the Medical Institution is still in question. It is not a technical quibble as to the possible interpretation of a law, as Drs. Nevins and Alexander state. It is a simple question and a most important one to our association whether these inquiries should be held.

I cannot believe that there is a single member of this Institution who does not sympathise with Dr. Imlach, and who, without implying censure on others, will not gladly assist in removing the stigma which has so long attached to him. Was that stigma deserved? I am no gynæcologist, but the letters and opinions I have read and heard of distinguished scientists on this subject have at all events convinced me to the contrary. But whether deserved or no I have not the slightest doubt that we as an Institution had no power or right to cast such a stigma on our member, and should, perchance, success not be attained to-day, the fault will not be mine. No man ever had or ever will have a better case, no good cause had, perhaps, a worse advocate, but if I fail to enlist your favourable decision this evening, there will be no personal regret at defeat, simply increased regret for the unfortunate gentleman who, gifted with brilliant abilities, entered the medical arena at an unfortunate time.

I have done my best, but I have done no more for Dr. Imlach than I would have done for the greatest stranger to me in this association, in a cause the justice of which had convinced me. It is true I am now occasionally and satirically told that he is my friend. I am glad to hear it—why should he not be? But if by this is meant that it is impossible to be a friend unless one can see eye to eye to all matters, I must dissent. I have understood that one of the brightest ornaments of the English character, and especially of English debate, is the privilege of friends to disagree *in toto* on matters of opinion, without implying or imputing personal motives to one's opponents.

I may have made mistakes in the conduct of this case: but can anyone point to a single paragraph, a line, or even a word of mine or others acting with me that the most censorious can fairly take exception to? It is true I have quoted from the lips of one of our most distinguished judges a strong condemnation of certain procedure, similar to that adopted by the Inquiry Committee in their case; but I am sure none of the distinguished and respected members comprising the Inquiry Committee would take exception if I could bring equally strong condemnation by an equally distinguished judge against Dr. Imlach's procedure and in favour of theirs. To attribute the reopening of the case to motives other than the true one is a mistake. Had motives of prudence or interest governed the actions of my friends, we should scarcely have engaged in a controversy in which the best friends of our medical life were in opposition. I take

leave to doubt that if such suggestions are again made they will find acceptance and support. I question, indeed, if we can be held mainly responsible for the course matters have taken. What was our action at the very commencement of this matter, when, after several months close labour, we were convinced that there was an overwhelming case? I then wrote to members of the late Inquiry Committee, inviting their consideration and co-operation, and I here quote my letter to Sir William Banks as a sample of my friendly overtures:

88, Rodney Street, Liverpool,
May 6th, 1900.

My Dear Sir William Banks,—I should very much like to come in and have a chat *re* the Imlach Inquiry question, but knowing you are a very busy man, should be glad to know when you can spare me a little time. I have gone into the question very closely with the wish to get at the real merits of the case, and have come to the positive conclusion that something should be done for the poor fellow who is ruined and is leaving Liverpool. I have heard it stated that I wish to throw discredit on the Institution. The idea is absurd, in the first place I could not do it if I had the inclination—which I have not—and in the second, I count the majority of the members of the Inquiry Committee among the best friends I have ever had or ever shall have. I, however, now believe that the report was a mistake—an unintentional one—and as I myself voted twice against Imlach at that time, I intend in a straightforward way to do all I can to bring my fellow members to a similar conclusion, with the object of re-establishing Imlach's professional character. If something can be fixed upon that will meet with general concurrence, and at the same time attain that object, no one will be better pleased than

Yours sincerely,
(Signed) Thomas H. Bickerton.

Does not arbitration afford us a satisfactory means to that end?

That my friends of the Inquiry Committee have not been able to see the matter from our point of view is a misfortune, but it is scarcely our fault. I still hope they may do so; it is even now not too late, and I believe this meeting would welcome their acceptance of this resolution, as I know those watching the controversy from the outside would; but whether they do or not, it in nowise alters my feelings of personal respect and friendship for them. It is their point of view which I think mistaken, not themselves, and I hope that the kindly feelings previously existing may survive this encounter for many a long year to come. And if they find fault with my obstinacy in fighting this matter to a finish, and in declining to accept an adjournment *sine die* as an adequate solution of the question, I would offer as an excuse that in the process of imparting to me the rudiments of anatomy and physiology, and the principles and practice of medicine and surgery—for without exception every member of the Inquiry Committee has been my teacher—they have also instilled some degree of that determination and doggedness which is so characteristic of themselves and of their success. Of the abilities of the members of the Inquiry Committee no one here has a higher opinion than I, but perhaps the best doctors are not under all circumstances the best committee-men or the best judges.

Gentlemen, your vote to-night will be a crucial one, and have far-reaching results. I am well aware that an active canvass has been made to secure a negative vote. We have made no canvass, but members will make a great mistake if in voting against arbitration they think they are upholding the honour of the Select Committee or of this Institution. Members will be oblivious to the real issues if they imagine that Dr. Imlach's honour is alone concerned in to-night's proceedings. It is the credit of the Institution which is at stake; it is the honour of the Institution which you have in your hands.

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Sir,—In your editorial comment upon my open letter to the President of the Liverpool Medical Institution you have omitted to mention my protest against the recent reaffirmation of the unjust report of 1886, and its publication in your columns last March; and you have also omitted to mention my protest against the pamphlets recently issued by the Inquiry Committee. The report, as you show, censured my proceedings, and the censure was the cause of the loss of my hospital appointment and my livelihood. Fifteen years ago the British Medical Journal protested vigorously against the manner in which the inquiry was held and against the report that was so widely published, and I also protested on every available occasion. Now that a considerable proportion of the members of the Medical Institution desire to delete the report, it cannot be expected that I should tamely submit to its readoption. You express the opinion that it would be a mistake and a misfortune for matters involving medical practice and medical ethics to be submitted to the clumsy handling of the ordinary courts of law. I cordially agree with you, but you cannot mean that I must look for no redress. As regards my medical practice, I am quite content with the letters from experts which you have printed with your editoral confirmation; but, as you remark, there are also questions of ethics on which the experts' letters have no bearing.

My professional character was publicly assailed in 1886, and has again been assailed in 1901. Against this I mean to protest in every way in my power, and I trust to have the sympathy and support of my medical brethren. I have no wish that the "Liverpool Medical Institution should abase itself in dust and ashes." What I have suggested is that the Inquiry Committee, to save the Institution, should accept individual and personal responsibility for the inquiry and for the pamphlets and go to arbitration, before the Chairman of the Liverpool Royal Infirmary (or some other independent and impartial arbitrator) upon the three following questions:

1. Was the inquiry of 1886 conducted in a fair, just, and impartial manner?
2. Are the pamphlets of 1900 and 1901 fair, just, and true in substance?
3. Was the inquiry and were the pamphlets calculated to injure my professional reputation?

You very properly reproduce the arguments of the opposition—for example, that the witnesses are dead. I cannot ask for space to refute those arguments in your columns. The arbitrator will appreciate them at their true worth.—I am, etc.,

Liverpool, Oct. 12th. Francis Imlach

## MEDICAL SICKNESS AND ACCIDENT SOCIETY.

The monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on September 27th. There were present Dr. de Havilland Hall (in the chair), Dr. G. E. Herman, Dr. J. B. Ball, Dr. Walter Smith, Mr. H. P. Symonds, Dr. M. Greenwood, Mr. J. Brindley James, Dr. St. Clair B. Shadwell, Mr. F. S. Edwards, Dr. F. J. Allan, Dr. J. W. Hunt, Dr. Alfred S. Gubb, and Dr. Frederick S. Palmer.

It was reported that the sickness experience of the Society during the summer months had been satisfactory, but the current claim list was rather long, containing a considerable number of cases arising from bicycle accidents. Of these, however, none had been very serious, and they had therefore caused only a moderate draft on the funds of the Society. The business of the Society is now in its eighteenth year, and the average age of the members is still growing. This, with the influx of new members, makes the expected amount of sickness larger in each year, and it must continue to grow for some years longer. On the other hand, the reserves of the Society are growing at a greater rate. These funds now amount to £150,000. Nearly twenty members are on what is called the chronic list, and will in all probability draw their sick allowance (usually one hundred guineas a year) until age 65 or previous death. To secure such benefits a considerable reserve is necessary, and at each valuation of the Society's business a sum is set aside for this purpose.

Prospectuses and all particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

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The Spitting Nuisance.—There seems to be some difficulty in enforcing the laws which exist in certain of the United States against spitting. We learn from the *Boston Medical and Surgical Journal* that 56 men were recently summoned to appear at the Charleston District Court, charged with expectorating on the floors of elevated cars and stations. Only one answered to the summons, and he was fined 20 dollars. The judge, in imposing sentence, said he intended to stop the nuisance, and would hereafter impose the full penalty of 100 dollars. What happened in the case of the other 55 does not appear.

# THE CELEBRATION OF Rudolph Virchow's 80th Birthday.

## A PERSONAL IMPRESSION.

By Sir Felix Semon.

Berlin, October 13th, 1901.

"Common admiration for great and good men draws nations together, and common pursuit of noble and scientific objects makes a brotherhood of intellectual interest." These warm-hearted words from Dr. Pye-Smith's contribution towards the international "Virchow Number" of the *Berliner klinische Wochenschrift* may fitly be taken as giving the keynote to the days through which we are living at the present moment. Unique as the man, in whose honour we are assembled here, are the celebrations on the occasion of his eightieth birthday, which a kind fate has permitted him to see in full and undimmed vigour of mind and body. From almost every European country, from America, from Japan, have representatives of all the manifold interests with which Virchow's name has been and for ever will be connected, hurried to Berlin to "lay their wreaths at the great pathologist's feet," foremost amongst them, it need hardly be said, members of that profession which, without difference of nationality, looks upon him as its brightest, proudest ornament. It would be impossible for me, not having the official list of guests at my command, to enumerate all the distinguished guests and delegates who have flocked to Berlin. Suffice it to say that, besides representatives of all the German universities, societies, learned bodies, municipal corporations, Great Britain and Ireland are represented by Lord Lister (Royal Society and numerous other institutions), Sir Felix Semon (Royal College of Physicians), Mr. Howard Marsh (Royal College of Surgeons), Dr. Rose Bradford (Royal Medical and Chirurgical Society), Mr. Watson Cheyne (Pathological Society), Professor Muir (University of Glasgow), and Dr. Graham Brown (Royal College of Physicians of Edinburgh); France by Professor Cornil; Italy by His Excellency Professor Baccelli, Minister of Agriculture, and by Professor Maragliano; the Netherlands by Professor Stokvis; Austria by Professors Toldt, Weichselbaum, and various other delegates; Denmark by Professor Salomonsen; Norway by Professor Armauer Hansen; Switzerland by Professor Ruge; Russia by Professor von Raptschewski and several other men of science. In fact, there is hardly a single country which has not sent one or several representatives.

The festivities were ushered in by a dinner on Friday evening, given by Professor Posner, one of the editors of the *Berliner klinische Wochenschrift*, which was of an absolutely international character. The hostess sat between Lord Lister and Professor Baccelli, next to whom in turn were placed Virchow himself and Professor Von Leyden, whilst opposite were the Rector of Berlin University and Professor Gerhardt. Then followed, harmoniously mixed, a profusion of medical talent of all countries. The host, in a polyglot speech, drank to the health of all his guests, and Professor Baccelli most felicitously replied: "To the Queen of the Banquet, to the Emperor of Pathology, to the Senate of Science." Lord Lister toasted host and hostess, and the Rector of Berlin University, Professor Hartnack, the absent Mrs. Virchow. This brought Virchow himself to his feet, and we enjoyed the somewhat unusual pleasure of his proposing the health of a dignity of the Church. (Professor Hartnack is a Professor of Theology.) It was late before the company separated, soon to assemble again at the Hotel Bristol, where at an informal meeting under Professor Waldeyer's presidency all arrangements were made for the official celebration.

The latter from beginning to end was so extraordinary of its kind, that as yet but three things stand out prominently from the kaleidoscopic impressions which overwhelmed us yesterday: the conviction that surely never before had a richer life been lived than Virchow's, the joy and gladness that on the evening of such a life the achievements of this unique man are universally acknowledged without a single dissentient voice being heard, the thankfulness that such a man should have been spared to the world in such astonishing vigour of mind and body as this "Grand Old Man of Science." For to begin with the last-named fact, surely it was astonishing that in the morning this octogenarian should have on the eve of his eightieth birthday treated the audience, which he had invited to his pathological museum, the pride and the joy of his old age, to a wonderful retrospect of the past, and a sketch of the future of pathology, made in a speech of one and a-half hour's duration, a speech made without notes, should have sat through and have made at a two hours' dinner in the evening one of the most felicitous and humorous dinner speeches ever heard, and should after this have listened and replied—standing almost the whole time—to speech-making, which lasted from 9.30 to 12 30 P.M. without any interruption, saying a kind word or two to almost everybody who had come to do him honour.

But to remain in order and do my duty as faithful chronicler of events. At noon yesterday (Saturday) a most distinguished audience thronged, on the "Jubilar's" own invitation, the amphitheatre of his museum. Secretaries of State, representatives of the German Army Medical Service, all his professorial colleagues, delegates from every civilised country, former assistants, now great men themselves, and pupils galore sat, as of old, at the master's feet and listened spellbound to his broad-minded, philosophical statements concerning the meaning of the word "pathology," to his historical description of the development of his science, to his spirited defence of the views which he has unwaveringly held throughout his long life, to the sketch of the aims which he hopes will be steadfastly followed in his "Institut," even when his strong hand—*absit omen*—should no longer guide it. It was a wonderful feat, and we all felt we had been privileged to be present at a historical occasion.

At the end of Virchow's oration, Surgeon-General Schäfer, the head of the Charité Hospital, with which the Pathological Institute is connected, expressed to him in warm, well-chosen words the thanks of the authorities of the hospital, and in conclusion our great teacher gave a demonstration of a series of beautiful photomicrographs of animal and vegetable parasites thrown upon a screen. After this the audience dispersed to admire the treasures of the museum, brought together and arranged with never-resting industry mainly by himself.

But if the morning was most interesting it was surpassed by the evening. At 6 P.M. a company of 200, including Virchow's family, sat down to dinner in the "Festraum" of the beautiful new abode of the Prussian House of Commons. From amongst the numerous speeches made I single out for special mention the heartfelt words of three hale and hearty contemporaries of Virchow's, Drs. Körte, Langerhaus, and Meyer, who told us of their recollections of "young" Virchow, who testified to the influence he had exercised upon their development, who praised him as a husband, a father, a lover of his domestic pets. And most interesting in the same connection was the speech made by Privy Councillor Althoff, who had unearthed from the archives of the Cultus-Ministerium, Virchow's application for matriculation, dated Easter, 1839, the German essay he wrote on this occasion, entitled, "A Life full of Work and Labour is no Burden but an Enjoyment," and the report he received after examination. The latter, Dr. Althoff stated, was "somewhat monotonous," there being no other terms in it than "excellent," "very good," "most satisfactory." Even in "singing" he had satisfied his masters! It was a charming idea of the speaker's to have had the two first-named documents reprinted, adorned by a portrait of the "Jubilar" at the age of 6 (!), which already foreshadows the massive forehead and the penetrating eyes of the future man (although the nose, he humorously observed, had since been improving), and to distribute the whole under the title "Little Virchow" amongst the company.

After dinner we all adjourned to the imposing meeting room of the Prussian House of Commons, where meanwhile a large and distinguished company, including many ladies in brilliant toilettes, had assembled, and now the ceremony proper of the occasion began. It was a never-to-be-forgotten picture. The whole scientific world had assembled it seemed

to do honour to one man. A never-ending stream of bearers of the most illustrious names, decked with glittering stars and decorations, clad in the picturesque uniforms of many nations, bearing addresses, medals, pictures executed in Virchow's honour, passed our dear old master, who for once in his life had donned his own high decorations, and who stood there erect, modestly listening to every word said in his praise, a tower of intellectual strength, and yet with a kind smile on his lips, a warm word, a firm shake of his hand for everybody who had come to congratulate him. It was a marvellous, an unforgettable sight! How much must this man, long though his life has been, have done, that the whole world should thus have united to do him honour! That thought, I believe, must have impressed itself with ever-increasing force, upon every witness of this imposing ceremony; that thought prevented it, in spite of its length, from ever becoming tedious; that thought filled us all with ever-growing respect and admiration for this unique man, as deputation after deputation passed and testified to what Virchow had been to them, what he had done for them. Never before had it become so clear to me what a giant we had come to do honour to. Politics, art, science, medicine, public health, municipal interests, hospital management, anthropology, geography, archæology, palæontology, natural sciences—all these various great interests, in each of which an ordinary mind would feel ample scope in employing all its time and talents, have been embraced by this master mind; on each of them has he impressed the stamp of his personality upon its development; in each of them his name is mentioned with respect and admiration. It was a pageant of a unique kind that passed before us last night. First a most gracious autograph letter from the German Emperor recording all that Virchow had done for Germany's greatness and bestowing the Great Gold Medal for Science upon him — a spontaneous act of appreciation, which was most warmly welcomed by all. After this, deputations from the Prussian Ministry for Public Instruction, headed by the Secretory of State himself, from the Scientific Deputation for Medical Affairs, from the governing body of the Royal Museums, from the Prussian Ministry of War, from the Italian Government, from the Prussian Houses of Parliament, from the Berlin Academy of Sciences, from the University of Berlin, from the Medical Faculties of all German Universities, from the general practitioners of Germany, from the municipal authorities of Berlin, from his native town Schivelhein, from the village Virchow, from all the Berlin and many other German Medical Societies, from Anthropological and Natural Science Societies in all parts of Germany, from the German Society for Pisciculture—formed the first part of the procession.

After a short interval the foreign deputations paid their reverence to the master. Need I say that nobody was more warmly acclaimed than our own revered leader, Lord Lister, who most warmly testified to the feelings of veneration, gratitude, and esteem in which Virchow is held in Great Britain and Ireland. Addresses from Virchow's past and present assistants, and presentations of works specially written in honour of the occasion, brought this wonderful celebration at last to an end; but not before the last speaker, Professor B. Fraenkel, had drawn attention to the fact that it was no longer the eve of Virchow's 80th birthday, but the 80th birthday itself which had dawned, for it was half an hour after midnight when the last speech had been made A most enthusiastic "*Hoch!*" in which the whole assembly joined upstanding, and the never-to-be-forgotten official celebration was at an end. To-day Professor Waldeyer has invited a number of the foreign delegates to luncheon, and Virchow himself will unite his family and a few friends round him at dinner; but this is to be of a strictly private character, and the chronicler's pleasing duty ends here with heartfelt wish that our "Jubilar" may long be spared in equal vigour of mind and body to his family, to his friends, to his country, and to the whole world, which loves and admires him.

## TRIBUTES FROM FOREIGN COUNTRIES.

The special number of the *Berliner klinische Wochenschrift* to which Sir Felix Semon refers is dated October 14th. It opens with an address in elegant Latin by Guido Baccelli, "in Regio Romano Archiathenæo Clinices Medicæ Professor." Next comes a paper, the joint production of Professors Weichselbaum and Zuckerkandl of Vienna on Virchow's Influence on the Development of Pathological Anatomy, Public Health, and Anthropology in Austria; then follows a short note, *Souvenirs d'Autrefois*, by Professor Cornil of Paris, recalling the time which he spent working under Virchow in 1862; then the paper by Dr. Pye-Smith on The Influence of Virchow on Pathology in England, from which Sir Felix Semon quotes; then a paper on Virchow and Medicine in the Netherlands, by Professor Stokvis of Amsterdam; next one on Rudolf Virchow and Russian Medicine, by Professor W. Schervinsky of Moscow; next on Rudolf Virchow and Swedish Pathology, by Professor Carl Sundberg of Stockholm; next on Rudolf Virchow and Danish Medicine, by Professor C. J. Salomonsen of Copenhagen; then a short note by Professor Georg Karamitzas of Athens, on Rudolf Virchow and Greek Medicine; then an article by Professor A. Jacoby of New York on Rudolf Virchow and American Medicine; and, finally, a description of the Pathological Museum of the University of Berlin by Professor O. Israel.

## THE ORDER OF THE CEREMONIES.

*(From our Special Correspondent in Berlin.)*

The great day of the Virchow celebration has come and gone, an "Indian summer" day of brilliant sunshine, the first after a long spell of rain and storms. To give an account of all the festive functions, which filled the day from forenoon to long past midnight, with only a short interval during the afternoon, would be impossible within the limits of a short letter. This may be said at once: Never yet has homage so wide, so general, and so deeply felt been paid to any private individual before. And this too: In that illustrious assemblage, the "fine flower" of medical science throughout the world, no personality was more interesting, more characteristic than the unbent, spare and wiry little figure of the octogenarian, with his keen but passionless face, his level voice and sober demeanour, as he stood for hours in his Pathological Museum, and again for hours at night in the Abgeordueten-haus, without a trace of excitement or fatigue, up to the very last moment. The day itself had its prologue, a dinner in honour of Virchow and the foreign delegates, given by Professor Posner (who was secretary and chief moving spirit of the Berlin Virchow Committee), on Friday evening, October 11th.

### Virchow's Address.

On October 12th the offical proceedings began at 11.30 in the Pathological Museum. Here Virchow received the Prussian "Cultus-Minister," Dr. Studt; the Cabinet Ministers, Count Posadawsky, von Thielen, and Möller, with several of their heads of department and "Geheimrathe"; von Leuthold, Army Surgeon in Chief, with the General Army Surgeons Schjerning, Stahl, and Schaper, Oberbürgemeister Kirschner, and other official personages. Dr. Studt made a speech, presenting a marble bust of Virchow, which is to remain in the museum. Then a move was made to the Lecture Hall, which meanwhile had entirely filled, all the foreign delegates and the whole medical world of Berlin being present. Needless to say, that a tremendous reception was accorded to Virchow as he stepped up to his laurel-wreathed lecturer's desk. He began by words of thanks and welcome, and then led up to the subject of his address: The History of Pathology. For more than an hour he spoke, touching upon malformations, upon trichinosis, tuberculosis, etc., and upon the enlightenment to be gained on all these subjects by the collections of the Pathological Museum. After the address a large number of microscopic preparations were thrown on the screen, and finally General-Arzt Schaper rose to speak as the representative of the Charité Hospital, of which the Pathological Museum forms a part. For fifty-seven years, he said, the Charité had been the scene of Virchow's incomparable labours. Might he live to see the completion of the entire Pathological Institute so admirably planned by him.

A stand-up lunch and inspection of the treasures of the five-storeyed museum under Virchow's leadership closed the morning's proceedings at about half-past three. It may be interesting to note here that no fewer than 20,885 objects are

arranged on view in the museum, while upwards of 2,000 more have still to be placed there.

### The Banquet.

At half-past six a "small and intimate" banquet of 220 covers united the Virchow family with the foreign delegates, and chief personages of the Virchow celebration. Lord Lister and Baccelli, the Italian pathologist and Cabinet Minister, were perhaps the most remarked amongst the guests.

Count Posadowsky gave the German Emperor's health; Geheimrath Körte, Virchow's oldest friend, gave the toast of the day; and other after-dinner speeches, affecting and jocular by turns, followed. Direktor Althoff, of the Cultus-Ministerium, made an agreeable and unexpected diversion by presenting Virchow with a pamphlet, *Der kleine Virchow*, containing a portrait of the 7-year old child and the schoolboy's matriculation essay on the motto: "A Life full of Work and Labour is no Burden, but a Boon."

### Addresses of Delegates.

Meantime the guests, who were to witness the great official function of the evening, had assembled in the Parliament Hall, the ladies in the galleries and boxes above. The banqueters from the dining hall slipped in in groups and took their places, and at a quarter to nine (true to the Akademische Viertelstünde) a flourish of trumpets announced and welcomed the entrance of Virchow. And then began a series of addresses and presentations from all quarters of the globe, the mere enumeration of which would fill pages—in truth, a grand and universal homage to intellectual achievement! As the hours passed, medals, pictures, caskets, and rolls of addresses accumulated on the chairs and tables around Virchow, until at last he stood—for he stood through it all, the wonderful youth of 80!—fairly surrounded by them.

Professor Waldeyer gave the opening address—a fine and spirited speech, at the close of which he presented a document setting forth the gift of 50,000 marks (£2,500), collected by colleagues near and far, as a contribution to the "Virchow Stiftung" for the assistance of scientific research.

The Cultus-Minister Studt read aloud a letter from the German Emperor, words of congratulation and grateful appreciation of Virchow's great lifework, with the bestowal of the Great Gold Medal for Science.

A congratulatory telegram from the Imperial Chancellor, Count von Bülow, was also read.

Loud applause greeted Baccelli, who in the name of the Italian Government presented a picture (the heads of Morgagni and Virchow side by side, with the hexameter motto, "Ut quos corda fovent præsentes lumina spectent"), and read a beautiful and enthusiastic address written in Latin.

Among the speeches that followed—their name is legion—a few stand out in one's recollection. Harnack, rector of the Berlin University, was eloquent in claiming Virchow as the University's "very own"; Oberbürgermeister Kirschner presented a contribution of 100,000 marks (£5,000) to the Virchow Stiftung, and asked Virchow to stand sponsor to the new municipal hospital. Dr. Langerhaus, President of the Town Council, read an address full of gratitude for Virchow's labours for the weal of the City of Berlin; Professor von Bergmann—as delegate of the Berlin Medical Society—quoted from the minutes to prove that Virchow had read no fewer than 107 papers at its meetings, and had taken part in its discussions 587 times.

Professor Cornil, the French delegate, was much applauded.

Enthusiastic calls greeted Lord Lister, who said: Revered master, I am here as a delegate of the Royal Society of London, of which you are an honoured member, and on behalf of which I have to present to you a loyal address. I have been also requested to hand you addresses from six other societies which greatly regret that it has been impossible for them to send special delegates. They are as follows: (1) The Anthropological Section of the British Association for the Advancement of Science; (2) the University of London; (3) the University of Edinburgh; (4) the Faculty of Physicians and Surgeons of Glasgow; (5) the Medico-Chirurgical Society of Edinburgh; (6) the Royal Academy of Medicine in Ireland. All these bodies join in recognition of your gigantic intellectual powers, in gratitude for the great benefits that you have conferred upon humanity, and in admiration of your personal character, your absolute uprightness, the courage which has enabled you always to advocate what you believed to be the cause of truth, liberty, and justice, and the genial nature which has won for you the love of all who know you. The astonishing vigour which you displayed in the address to which we listened to-day justifies the hope that, when many of us your juniors shall have been removed from this scene of labour, it may be granted to you to celebrate your 90th birthday not only in health and honour, but in continued activity in the service of mankind."

A graceful and modest speech was Sir Felix Semon's, who said that he had been selected to convey the sincere congratulations of the Royal College of Physicians of London first because the College considered that it would be agreeable to Virchow to receive its good wishes from the mouth of an old and faithful pupil, and secondly because by selecting a native of Germany the College wished to emphasise the old scientific brotherhood which had so long united German and British science, and to express its sincere gratitude for the beneficial influence that Virchow had exercised no less upon English than upon German science.

It was long past past midnight when Virchow's former and present assistants, headed by Professors Liebreich (Berlin) and von Recklinghausen (Strassburg) came up at last to offer their homage and congratulations.

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## THE VIRCHOW KRANKENHAUS IN BERLIN.

*(From our Special Correspondent in Berlin.)*

The new Berlin Municipal Hospital, which is to bear the name "Virchow Krankenhaus," when completed will be by far the finest hospital in Berlin, nay probably there will be few to rival it anywhere in the world.

### The Site and General Plan.

An enormous plot of ground of irregular shape has been most sagaciously planned and laid out; the hospital pavilions have been kept as much as possible in the centre, away from street noises, whilst the administration, the stables, machine houses, store houses, etc., in fact all departments communicating with the outer world are so arranged that they can be entered and left without approach to the hospital proper. The æsthetic effect, too, is most happy. Sixty-two buildings cover the ground without being crowded, and at every turn the eye finds garden parterres, shrubberies, and trees to rest on.

The chief axis—from east to west—is 2,000 feet long. It runs through the large three-storeyed front building (containing the reception department, general administration, and residences for the chief physicians and surgeons, etc.) through a wide double avenue of trees about 1,300 feet in length to the chapel, which is close to the boundary at the other end. Flanked right and left by the twenty-one pavilions for internal and for surgical cases, this avenue, at about a third of its length, is cut by a line of buildings, which separate the pavilions for men from those of women, and which stretch out northwards and southwards to form the second vertical axis of the great complex. Thus, the operation building, which forms the centre of this second axis, is situated in line with and between the male surgical pavilions on the one side and the female surgical pavilions on the other, and is connected with these buildings by a covered way. Next to it—on the vertical axis is the drug and dispensary house, then (continuing northward) the medical baths building—(separating the male pavilions for medical cases from the female pavilions for medical cases) the water tower, central kitchen, bakehouse, boiler and machinery house, etc. To the south of the operation house, on the same vertical axis, are arranged the five pavilions for infectious cases for twenty-four and thirty beds each (four pavilions for diphtheria alone). The pavilions for venereal cases stand at some distance right and left of the great front building, while far away towards the other end, behind shrubberies, stands the pavilion with twenty beds for noisy or restless patients. Then there are other buildings, large and small—washhouse, disinfecting establishment, nurse-training institute, mortuary, stable for experiment-animals, two pavilions for gynæcological and lying-in cases, cottage houses for the officials, lodges, etc.

### The Pavilions.

Each of the large pavilions is a unit arranged on the system shown in the accompanying rough sketch. A is two-storeyed, and contains on the ground floor kitchen, linen room, day room, etc., and on the upper floor bedrooms for nurses, medical assistant, etc.; B, B′ are one-storey wards for twenty-two beds each: C, C′, also one-storeyed, contain two rooms each, one with two beds, one with one bed. There are two bathrooms at each end, with waterclosets, sinks, etc., and two rooms for sorting and disinfecting soiled linen, with separate exits. Each large ward has a transportable bath. The pavilions are entered by staircases and also by a gently-inclined plane (1 to 50). The air space in the wards is a little more than 50 cubic metres a head (about 1,800 cubic feet); the distance from pavilion to pavilion, 22 metres (about 72 feet) between the wards; 17 metres (about 56 feet) between the central buildings.




### Ventilation and Heating.

The ventilation is by electro-motor propulsion and suction, the air being first filtered through wood-wool or coke and warmed. Hot-water heating apparatus is provided in the wards, and steam-heating apparatus in the offices. Each pavilion has an isolation room for observation of possibly infectious cases. The pavilions for infectious and those for venereal cases have special arrangements for the removal and disinfection of soiled linen. All the corridors and landings are ventilated by windows. The excreta and sewage go direct into the radial drainage system, ending on the Berlin sewage farms.

### Medical Staff.

The medical staff is entirely resident, and comprises four directors, that is, the Chief Physician, the Chief Surgeon, the Chief Gynæcologist, and the Chief Administrator. Each large pavilion has its own head medical officer and "Volontär-arzt" (unpaid assistant medical officer). The hospital is arranged for 1,650 patients, but can contain 1,900 at time of pressure. The staff numbers 550 in all, but room is provided for 600 if necessary. The nurse-training institute is planned for 75 pupils.

### Laboratories, Etc.

There are separate anatomical, histological, and bacteriological laboratories, and each infectious and venereal pavilion is furnished with a laboratory of its own. The extent to which the hospital is to be used for clinical investigation and the instruction of students has not been finally decided yet, but it is settled that the infectious departments are to furnish investigation material for the Koch Institute for Infectious Diseases, which is situated near by.

## SMALL-POX IN LONDON.

### The Cases among Hop-pickers.

Small-pox continues in London, cases occurring in a larger number of districts but not in greater proportion. Small-pox is also appearing in the suburban districts surrounding London, but, so far as is known, not giving rise to any general prevalence. We hear of resort to vaccination by numerous persons, and the publicity which has been given by the press to recent small-pox occurrences is therefore leading to the protection of many against attack from this disease.

The report of Dr. Newman, Medical Officer of Health of Finsbury, contains interesting information concerning the manner in which the hop-pickers at Bodiam were housed at the time small-pox appeared among them. The total number of hop-pickers on the farm was upwards of 60, and they were accommodated in twelve huts constructed partly of wood and partly of brick, and covered with corrugated iron. The floors were of earth. There was a door to each hut but no windows. These twelve huts were situated in two groups of six, the groups being separated from each other by cookhouses. Each set of six was arranged on the back-to-back principle, that is, in each group three huts were back-to-back with another three. The huts had a capacity of from 800 to 900 cubic feet, from 4 to 10 or more adults and children apparently being accommodated within them. The infected huts were three in number, and were those on one side of the same group. Into the middle hut of these three a girl from Finsbury was received on September 1st. On September 10th she was unwell, and on September 13th a rash appeared in the form of "spots" on her face. She was sent back that day to London, and on September 16th and 17th she was seen by a medical man who, she says, stated she was suffering from chicken-pox. On September 18th, Dr. Newman received a notification certificate that a woman living in the same house with her was suffering from small-pox. There is, therefore, the greatest probability that the girl's illness was small-pox, that she contracted it in London before visiting the farm, and that she exposed other people in the farm to infection. On September 23rd a baby in the next hut was attacked with what was thought locally to be chicken-pox, and a young brother was also taken ill. They returned to town on September 27th with their mother and aunt, and in London both the children and the aunt were found to be suffering from small-pox, and two days later the father of these children was certified to be suffering from the same disease. He had visited the farm from September 14th to 18th. On September 28th 5 persons from the other two huts had been found at Cannon Street Station on their way home to be suffering from small-pox, and on the following day a sister of one of these persons who had been with them at Bodiam was found in Finsbury to be similarly suffering. Subsequent to this 3 other cases occurred among those who had been in contact with the hop-pickers who suffered from small-pox. It is probable that the series is at an end, or nearly at an end, and that so far as the Bodiam farm cases are concerned, no further trouble will arise.

### The London School Board and Vaccination.

The subject of vaccination or revaccination of school children has again been discussed by the London School Board, and Mr. Graham Wallas, as Chairman of the School Management Committee, using the statistics of small-pox in London during the last 11 years, suggested the conclusion that there had been no greater incidence of attack upon the unvaccinated than upon the vaccinated. Upon this point he did not escape criticism, for Sir Charles Elliott was able to show that the figures available taught a very different lesson. Mr. Graham Wallas endeavoured to shelter himself by saying that his own figures were quoted after consultation with the medical officer of the Board. Mr. Wallas, however, not only quoted figures, but he drew inferences from them, and we should not be surprised to hear that he has not done justice to the Board's medical officer. That he did not carry the Board with him in his contention is evident from the fact that he had to take back his report recommending that a letter containing contentious matter should be addressed to the Local Government Board, which had pointed out the grave responsibility the School Board was incurring in the course it was adopting in reference to the examination of children in the schools. Mr. Wallas appears to have presented his statistics before the report of his Committee was read, and a not unnatural conclusion is that they were intended to influence the Board on the question whether the Committee's report should be adopted. The London School Board has, for its credit's sake, not yet finally committed itself to the reply to the Local Government Board which was proposed, but its attitude towards vaccination at the present time is distinctly unfortunate, and calculated to raise questions concerning London government which may widely affect the future administration of the metropolis.

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The *Index Animalium*, to the preparation of which Mr. C. Davies Sherborn has devoted many years, is intended to provide zoologists with a complete list of all generic and specific names given by authors to animals both recent and fossil since January 1st, 1758, the date of the 10th edition of Linnæus's *Systema Naturæ*. With each name is given an exact date and a reference. Financial support has been given by the British Association, the Royal Society, and the Zoological Society, while the authorities of the British Museum have afforded continual assistance. The Syndics of the Cambridge University Press have now undertaken the publication of the first part, which covers the period from 1758 to 1800, and consists of 61,600 entries.

# Introductory Addresses

AT

## THE OPENING OF THE MEDICAL SCHOOLS.

[Continued from page 1105].

### ST. VINCENT'S HOSPITAL, DUBLIN.

By MICHAEL FRANCIS COX, M.D., F.R.C.P.I.,
Physician and Lecturer on Medicine, St. Vincent's Hospital.

[ABSTRACT.]

### NURSING IN IRISH POOR-LAW HOSPITALS.

THE Poor-law system of Ireland has been a subject of almost constant abuse from its foundation. Modelled on the English Poor-law system—perhaps wrongly modelled—it was a subject of bitter attack from the beginning. Its introduction, urged by the great Dr. Doyle, was bitterly opposed by O'Connell and by the House of Lords; and yet, assuredly, some measure of relief was necessary for the teeming misery of Ireland in the early part of the nineteenth century. The condition of appalling misery and degradation which existed in the eighteenth century excited the pity of Arthur Young and the savage scorn and fierce indignation of Swift. With a greatly increased population the misery of Ireland in the first half of the nineteenth century was still greater. It was estimated long before the great famine that for the greater part of every year the enormous number of 2,385,000 people suffered distress and required relief in Ireland. This was the estimate of the commissioners appointed to inquire into the condition of the poorer classes in Ireland in 1833, who issued their report in July, 1835—the year in which our hospital was founded. In their third report, issued in 1836, they thus described the condition of the bulk of the people:

> Their habitations are wretched hovels, several of a family sleep together upon straw, or upon the bare ground, sometimes with a blanket, sometimes even without so much to cover them. Their food consists of dry potatoes, and with these they are at times so scantily supplied as to be obliged to stint themselves to one spare meal in the day. There are even instances of persons being driven by hunger to seek sustenance in wild herbs. They sometimes get a herring or a little milk, but they never get meat except at Christmas, Easter, and Shrovetide.

In March, 1831, Dr. Doyle published a pamphlet on a *Legal Provision for the Irish Poor, and on the Origin, Nature, and Destination of Church Property*. In this powerful plea he insisted on the right of the poor to be relieved by rates assessed on property, and urged the appropriation of tithes to the purposes for which they had been originally intended—the education and relief of the poor.

The Irish Poor-Law Bill, after much opposition—especially in the House of Lords—passed, and received Royal assent on July 31st, 1837. It was not long, however, before the system was destined to be put to an awful test. It is not too much to say that in the world's history no nation has ever been subjected to a more dreadful visitation than Ireland was in the famine and pestilence which raged with slight intermission from 1846 to 1851. Words utterly fail to describe the horrors of that fearful time. Myriads died of famine, the dead and dying lay by the roadside, preyed on by birds and beasts, and in some instances, as after the Elizabethan wars, by one another. Famine and pestilence swept over the country like the breath of a destroying angel, and smitten by famine and fever the people fled the country in thousands, too often carrying with them disease.

Power has passed from the landed gentry into the hands of the people. It is no exaggeration to say that never since the Norman Conquest was so much power in the hands of the people as there is at the present time. The people are on their trial as to their capacity for self-government, and the lesson which I would inculcate on them to-day is their duty to the poor and the afflicted. "Salus populi, suprema lex"—the health of the people is their first duty and highest law.

For the care of the sick poor throughout the country the Irish Poor-law system is responsible; it has been much condemned, and not altogether without cause; that it failed in the baleful plight of the famine is not a matter of wonder. The condition of the workhouses of Ireland until recent years was a disgrace to civilisation and to humanity. Human refuse was stocked in them; they afforded the means of getting rid of it, and of hiding it out of sight. What they are now to become rests with three bodies: the people, who now control them; the Local Government Board, who control the controllers; and the nursing system. To-day I put the last first.

Modern nursing differs from the nursing of the past as modern surgery differs from that of the past. For the religious sisterhoods, who with such devotion and self-sacrifice take care of the sick and suffering in town and country, I have nothing but praise and admiration. The Sisters of Charity have made this hospital what it is, and I cannot better indicate the relations which exist between them and the staff than by saying that for twenty years during which I have worked with them I have known nothing but the most perfect harmony and cordial co-operation. They are ever ready to recognise the need for improvement and reform. I look to the religious sisterhoods largely to transform the workhouse hospitals of Ireland. I desire, therefore, that their training should be as complete and perfect as possible, as thorough as it is sought to be made here and in the other hospitals around us. The higher and more severe the standard, the better for the nurses and for the medical profession. Before a probationer is accepted here she has to satisfy the superioress and the lady superintendent of the hospital. After a month's trial she signs an indenture to serve for four years, two in the hospital and two in the private nursing if thought fit. In her year of probation she serves in the various wards under different sisters, and in the theatre under the eye of the lady superintendent. She attends lectures by the lady superintendent, and is examined by her periodically. In the wards she is expected to be an attentive listener to the special instructions given to junior students. A systematic course of lectures is delivered by the physicians and surgeons, extending over the entire year. At the end of the year examinations of a searching character, oral and written, are held, and whoever fails to obtain 50 per cent. is rejected. Truly it is a searching ordeal. It seems to me that such a system of selection and of teaching and examination is as perfect and complete as can be devised or desired. I know we find it to work satisfactorily; it trains the hands and eyes and brains in the varied methods of different men. Such a system is, I think, likely to produce better results than could be obtained throughout the country in the infirmaries or workhouse hospitals, where the material is not usually so varied, and where, as a rule, the services of a skilled lady superintendent cannot be retained, and the medical and surgical staff is limited to one member, although I know the claim has been put forward on behalf of some of the hospitals throughout the country to train nurses by men of highest ability and attainments such as Dr. Laffan, of Cashel, and Dr. Thompson, M.P., of Omagh. I think the Local Government Board has shown a wise reserve in requiring that a trained nurse having charge of a hospital must be one who has resided for not less than two years in a general clinical or other hospital recognised by it, who, after examination, has obtained from such hospital a certificate of proficiency in nursing; whilst as unqualified nurse or assistant it recognises any person who after examination has obtained a certificate from any public general hospital or workhouse infirmary, fever hospital, or nursing institution recognised by it as an efficient school for medical and surgical nurses.

The workhouse hospital system still needs reforms and reformers; and I should be glad to see some of the work done by the capable hands of those whom we have trained. I fear, however, until the sphere of these duties is made somewhat more attractive that there will be a difficulty in obtaining the services of this class of nurses. A lady unless she has a very special mission does not like—or rather hitherto did not like, for the system is now changed and she is only answerable to the medical officer and to the Board of Guardians—to subject herself to the control of an inferior officer, and to isolate and separate herself from companionship with her equals, besides Boards of Guardians, like other people, are not always ideally perfect, and are apt, perhaps, to consider that the nurses are having too fine a time of it, and may be giving themselves airs. In this respect, and in many others, lady guardians will be, and are, of the greatest service.

The Irish Poor-law system will not be satisfactory until:

1. The nursing of the sick poor is completely separated from the so-called workhouses. Most of the infirmaries are now part of the workhouses, and so badly constructed and saturated with the material of the disease as to be unfit for hospital work.

2. Every dispensary district should have its district nurses and cottage hospital, from which, if necessary, cases might be forwarded to a county hospital.

3. District or cottage hospitals should be manned with a proper staff like our town hospitals, so as to secure healthy rivalry and emulation, and to promote devotion to work.

4. Properly qualified midwifery nurses should be everywhere obtainable. It has recently been alleged that a great sacrifice of the lives of infants and mothers takes place in remote country districts for want of proper nurses.

Lastly, so far as possible consumptive cases should be kept apart from other patients. The Local Government Board, I am glad to see, has recently issued leaflets on this point to the medical officers and other authorities and to the district and other councils, and has sent posters supplying information with regard to the prevention of consumption to the people at large. It is thus best fulfilling its functions in safeguarding the public health, and at the same time acting as an educational body. It should be the wish of all of us that it may continue to spread the light in this and in other respects, and so earn the respect and confidence of the people with whom and for whom it has to work. It comes, however, to this, that the authority resides in and springs from the people; and on them rests the responsibilities from which they cannot escape, by properly providing for and watching over the sick poor, who are their own kith and kin, by subordinating personal and class interests to the public weal, by their deriving fitness and capacity for the responsible duties conferred on them, by trying to realise in this important matter the great old Roman tradition of the time, "When none were for a party but all were for the State."

## UNIVERSITY COLLEGE, LIVERPOOL.

The formal opening of the session of the Faculty of Medicine in Liverpool University College took place on October 12th in the Arts Theatre in the presence of a large gathering of students and others.

### The Present Condition of the Medical Faculty.

Professor Paterson, Dean of the Faculty, gave an account of the present condition of his department, which was on the whole satisfactory. Victoria University, yielding to the pressure exercised by the General Medical Council, had abolished the entrance examination in arts, and had established a uniform preliminary examination, including history and mechanics as compulsory subjects for medical and dental students, in addition to Latin, mathematics, Greek, or a modern language, recommended or demanded by the General Medical Council. The result of all this disturbance was that inequalities in the standard of preliminary examinations in Great Britain and Ireland were as obvious as they were before, and that in this district they were working in possession of the most severe of the preliminary examinations in the country. Both in their own University and in outside examinations Liverpool students had passed with credit. The results of examinations for diplomas in dentistry and public health aptly illustrated the effect of improved organisation and equipment. The faculty hailed with satisfaction the report of the changes made in the army medical organisation. The support given to the School of Tropical Medicine was most gratifying, and the Committee had been thus enabled to devote large sums to expeditions and research. Four expeditions had been organised during the year. The department of sanitary science continued to maintain its attractiveness for medical men and the general public.

### Address by Principal Oliver Lodge.

Principal Lodge, of the University of Birmingham, said it was unnecessary to recapitulate the advantages of having a local university. At one time educational institutions could have been spoken of as "each sailing on its own way in the vast ocean of these tumultuating times, and holding out not so much as a light to each other." That could not be said of the English colleges now. The times were as tumultuating as ever, but the colleges of the country did not fail to act as beacons, each shedding an illuminating light or a warning glare on many sides. If he were asked whence came the illumination, he could reply, from nearly all of them, in so far as they had adequate funds; and whence came the warning glare?—it came chiefly from those institutions which were crippled and hampered and struggling to do their best work with hopelessly insufficient means. It had not been always so, he supposed, in the history of the past. He could imagine an institution with more money than brains, but he did not find it among the university colleges. Their brains and energy and power of development were at present far in excess of their material resources. A most wholesome condition of things doubtless, but it would be good economy for the country to utilise this latent energy of development, this locked-up or potential metabolism, and to liberate it for the benefit of the whole national organism.

### *Municipal Control of Universities.*

Though endowment was necessary he would retain a large margin of dependence on the living generation. He would encourage the leading men of the community to take a living and personal interest in college government and he would give them plenty of real power. They should welcome civil control; they ought to keep in close touch with the life and activity around them, and in every department carry their community with them.

But how were they to get annual contributions from the living? Students' fees were one source. He hoped these would not be abolished either in Scotland or elsewhere. It seemed to him eminently appropriate that those who utilised an institution should contribute something to its maintainence. Abolishing fees would mean cutting off a most proper, wholesome, and reasonable source of revenue, and substituting something far less natural and genuinely permanent.

The best form of sustentation fund would be a city rate or an equivalent grant from the municipality. The end of his first message was: "Cultivate civic interest and go for a city grant."

The influence of topography on development was very marked, and a city grant would have been easier to get if this College had been initially placed in a more central position; but it had been placed there for a definite reason—namely, in order to suit the Medical School and the Infirmary. Hence it was natural that those two institutions should have progressed with great rapidity since the College started. The Infirmary had been wholly rebuilt, the Medical School was rebuilding, and already in several of its departments—he hoped that before long the same could be said for all—it was able to show a lead to the whole country. It must have struck everyone connected with a college how much more thorough and complete the system of medical training was than the training thought sufficient in some other branches of practical learning. If it were like other departments, there would be one professor of the subject, aided by two or three demonstrators, and there would be a two or three years course for students. The one professor would attempt to give or superintend instruction in anatomy, physiology, and pathology; in medicine and in surgery; in forensic medicine, materia medica, and all other branches now dealt with by an entire faculty. Fortunately the public realised that it would be unsafe for their bodies to limit the training of their future medical practitioners to a short course under one man and a few assistants. The vital importance of medical training to the community was realised, and accordingly it was entered upon in a thorough and whole-hearted way, with an adequate staff, plenty of subdivision, and exact attention to detail.

### *Multiplication of Universities.*

Why, he asked, should the multiplication of universities be considered bad? In other countries no one for a moment imagined it to be bad. No one even here seemed to object to the multiplication of churches or of schools, nor even of colleges, but about universities it seemed to be thought there was something dangerous. He supposed this to be due to the long period during which those altogether exceptional institutions, Oxford and Cambridge, reigned supreme in this country, and to the corresponding superstition which came

to envelop a degree as with a kind of halo. Nowadays the halo did not fit. Every grade of degree existed already: the same degree was conferred upon a poll man who just scraped through with a minimum of attainment, and upon the first-class classic or the high wrangler; and the public already knew quite sufficiently well how to discriminate. Any university in the future which let its degrees down would speedily suffer. His second message was: "Multiply worthy universities."

*Preliminary Examination in Arts.*

With regard to the technical and scientific schools of the modern university he trusted that no illiterate technical graduate would ever be turned out. He would like to see the preliminary examination, or entrance in arts, rendered more attractive. There were many medical and other professional men to whom literature was a solace, who cultivated a fine taste for it in later life. Surely they must feel grateful for having had a reasonable and happy preliminary-in-arts training, and for the compulsion which made them take it at some period of their course. But the minutiæ of grammar, and the technicalities of subjects in which they were never going to be anything but amateurs, were wearisome.

It was necessary to discriminate between the studies which a man was going to profess and those of which he must needs have only a smattering, or a leaven. When he heard talk about the General Medical Council raising the standard of the preliminary examination he got a little nervous. Improving the standard was all right, but raising it sounded dangerous. Very likely the recent pamphlet issued by that body was all on the right lines: he was not criticising it: so far as he remembered it was on right lines, and did suggest real improvement; but he did beg reformers to bear in mind the desirability of limiting the treatment of non-professional subjects to the main features and principles and outlines, to the things really worthy to be known and permanently known, and of seeing that these were known as thoroughly and pleasantly as possible, so that taste might be cultivated as well as memory, and a liking for subjects of general interest implanted—a wish to go further into them so soon as leisure permitted. His third message, then, was to keep in touch with the schools, to leave their teachers a judicious amount of freedom, to let their control over school teaching be wise and cautious, and to make the entrance or preliminary in arts attractive as well as compulsory.

*Improvement of Knowledge.*

He was not enamoured of the term "research" as applied to the work of beginners. He preferred the term "improvement of knowledge." The bringing down of fresh knowledge to the race was given to few: it was given only to those who strove early and late to improve the knowledge of which they were already the custodians. An atmosphere of constant effort toward the improvement of knowledge, with the accompanying stimulus of potential discovery, this was the atmosphere that should enfold every earnest student who entered the portal of a modern university.

## CONTRACT MEDICAL PRACTICE.

WE learn from the *Nottinghamshire Free Press* that a difficulty has arisen between the Teversal Colliery Clubs and their surgeon at Stanton Hill (Dr. Rainsbury), and that "the Workmen's Committee dispensed with the medical gentleman's services." The appointment was thereupon offered to a medical practitioner in a neighbouring district, who had previously attended workmen residing in it, but he has declined it, and our contemporary adds: "That the indignation of all local professional men has been aroused is evident from the fact that one and all have declined the Stanton Hill appointment." The Workmen's Committee has also dispensed with the services of the practitioner who had previously attended the cases outside the chief district. We are informed that this difficulty has arisen in consequence of Dr. Rainsbury, acting on the advice of the Midland Medical Union, of which he is a member, intimating that his fee for midwifery cases would be one guinea and not half a guinea. We understand that midwifery was not included in his contract, but that the workmen desired to so include it. The Midland Medical Union consider that one guinea ought to be the lowest fee that should be accepted, and this, we think, will be the general opinion of the medical profession, though we regret to learn that it is stated that a young practitioner has been induced to accept the post. We hope that this may prove to be an error, as we cannot but feel that it is a grave mistake for any young practitioner to go into a district and accept fees below those which the medical men practising in that district consider to be the minimum. There can, we apprehend, be no two opinions on the moderate and reasonable nature of the fees demanded in this instance.

STOCKTON-ON-TEES.

Dr. Fred. G. Smith (Joint Secretary, 2, Norton Road, Stockton-on-Tees) writes: I am instructed by the Stockton, Thornaby, and District Medical Association to lay before you the following facts: Some months ago this Association unanimously passed a resolution that no member would accept or hold any appointment to a friendly, trade, or yearly society at less than an annual fee of 4s. for adults and 3s. for juveniles. The societies in question agreed to this, but now an amalgamation has taken place between certain of them, and they are attempting to obtain the services of an outside medical man at a lower rate of remuneration. The members of the Association have pledged themselves to hold no professional relations with any medical man who may accept the post. By making these facts known in your JOURNAL you will oblige, and at the same time may prevent any medical man applying for a post the remuneration for which is inadequate and its disadvantages necessarily very great.

# THE PLAGUE.

## PREVALENCE OF THE DISEASE.

INDIA.

THE plague returns for all India for the week ending September 21st show 5,612 deaths from the disease, against 6,386 in the week preceding. The decrease in mortality, amounting to some 774, is the more satisfactory, as it occurs at a period of the year when ever since 1896 the death-rate from plague has continuously increased. In the city of Bombay the mortality has decreased from 293 during the week ending September 14th to 230 during the week ending September 21st. During the same periods in the Bombay Districts the numbers are 5,668 and 4,844 respectively, a decided decrease of 824.

In Calcutta also 18 and 13 are the numbers for the weeks in question. An increase in plague deaths is reported from Bengal, where during the week ending September 21st they amounted to 72, against 58 in the previous week; in the Mysore State the plague has also increased, the deaths amounting to 295 and 342 for the weeks ending September 14th and 21st respectively; and in the North-West Provinces 18 deaths are reported, against 9 in the preceding week.

The City of Madras has been fortunate in hitherto warding off plague. This cannot be due to the sanitary state of the city, for at the present moment, if we are to accept the statements of the press, the death-rate has been such that "during the past few weeks we may say that Madras has been the most deadly city in the world." During the weeks ending August 21st and 28th, and September 4th and 11th, the death-rates were 110.8, 114.3, 105.3, and 110.2 per 1,000 of the population respectively. The nature of the ailments, apart from cholera, causing the mortality, is not stated.

CAPE OF GOOD HOPE.

In the Cape Peninsula 2 natives developed plague, and one native died of the disease during the week ending October 5th. At Port Elizabeth 2 Europeans contracted plague during the week ending October 5th, and 1 Chinaman and 2 natives died of the disease.

EGYPT.

According to a Reuter's telegram dated Cairo, October 14th, the number of cases of plague existing throughout Egypt on that date was 8, comprising 5 Europeans at Alexandria, 1 native at Benha, and 2 natives at Mit Ghamr.

NAPLES.

A telegram dated Naples, October 10th, states that 2 of the plague patients at the Nisicca Lazaretto died on the previous day. So far no fresh cases have been reported either in the City of Naples or elsewhere in the province.

## ENTRANCE SCHOLARSHIPS.

THE following scholarships have been awarded for 1901:

*St. Mary's Hospital Medical School.*—Open Scholarship in Natural Science, value £145, W. L. Holyoak (Wyggeston Schools, Leicester); Open Scholarship in Natural Science, value £78 15s., F. C. H. Bennett; Open Scholarship in Natural Science, £78 15s., L. Colebrook; Open Scholarship in Natural Science, £52 10s., E. Balthasar. University Scholarships, £63 each, W. E. Paramore (St. John's College, Cambridge), and H. E. Kitchen (Sidney Sussex College, Cambridge). Epsom Scholarship (by nomination), A. J. May (Epsom College).

## BRITISH MEDICAL ASSOCIATION.

### SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, OCTOBER 19TH, 1901.

## DIET IN PREGNANCY.

The question of diet in pregnancy has two aspects—the popular and the scientific. Up to the present time it must be admitted that the former has overshadowed the latter, that it has to a large extent covered it as with a mantle of fog, through which some few scientifically ascertained and confirmed facts loomed forth dimly to be discerned. Of late, however, there have been signs of lifting of the fog curtain, and here and there some things are coming into sight, and others are losing that unnatural magnitude which fog-shrouded objects often show. There is a freshening breeze of scientific investigation, and the mists are rolling away.

Let us glance for a few moments at the popular aspect of the subject, at what we have called the fog-bank hanging over the subject. It will be profitable to look only at two parts of it. There is, first, the dictum that a pregnant women must eat enough for two—the popular advice as to quantity; and there is, secondly, the notion that if the pregnant woman does not get whatever article of diet she longs for, the unborn infant will suffer from the maternal non-satisfaction—the popular belief as to quality. With regard to the former a certain faraway physiological truth underlies it, for there can be no doubt that a special strain is put upon the maternal resources in pregnancy: but as generally and confidently interpreted by the public to eat enough for two simply means to eat double the usual amount, and thereby to eat too much. Further, even supposing for a moment that the dietetic difficulties of pregnancy could thus be got over in this arithmetical fashion, to be logical the popular advice ought to be "eat enough for one and a varying fraction of one"; at about the mid-term of gestation the woman ought therefore to eat enough for one and $\frac{1}{12}$, and at the full term enough for one and $\frac{1}{2}$. Since, however, most healthy persons habitually eat more than enough for one, it may reasonably be concluded that the pregnant woman who eats heartily consumes quite sufficient food to supply the wants of herself and her fraction. With regard to the popular belief as to the quality of the food taken in pregnancy, little need be said. Although it may be claimed that clinical observation has shown that underlying the "longings" of pregnant women for certain articles of food (sometimes neither nutritious nor nice) there is a true physiological need which thus finds expression (a sort of inarticulate crying out of the tissues for acids or alkalies), yet in the great majority of cases it would be readily admitted that no such dietetic necessity lies patent or latent in the "longings" of gestation. Further, there is no valid scientific evidence that the refusal of "longed-for" snacks consisting of peppercorns and raw oatmeal or other dietetic eccentricities will result disastrously to the unborn infant. Monstrosities cannot be thus expeditiously made; the pregnant woman is not a teratogenic thaumaturgist of this kind.

Let us now turn (and with relief) to the scientific aspects of diet in pregnancy. Let us see if here and there we cannot find a turned-up corner, so to speak, of the fog-mantle which, as we have said, hangs pall-like over the whole subject. In the first place, there is enough scientific evidence to show that in the later months of pregnancy at any rate the fœto-maternal metabolism is of a most intricate kind and that the placenta is far from being the simple transmitter of particles (nutritious or excrementitious) as has in the past been believed. There is sufficient proof forthcoming of the selective powers of the placental epithelium to enable us to state that the transplacental interchanges are not governed solely by the laws of osmosis as they are understood by the physicist. It is during the later months of pregnancy that iron and potash pass in large quantity from mother to fœtus, so that there is produced a state of maternal hyposiderosis and fœtal hypersiderosis; this is a phenomena explainable by no simple physical law. Then, again, there is the question of the interchanges by way of the liquor amnii, a subject which has scarcely at all been studied in the light of recently discovered facts regarding osmosis and the ionic action and the testing of body-fluids by kryoscopy; but undoubtedly a matter with a direct bearing upon fœtal nutrition.

There is the curious fact, if fact indeed it be, that more white blood corpuscles travel to the fœtus from the placenta in the umbilical vein than pass back again in the umbilical arteries; perhaps the matrifugal ones carry foodstuffs to the fœtus, while the diminished matripetal stream conveys the effete materials; perhaps—but let us beware of the guesser's darkening of knowledge! Again, there is evidence, not simply guesswork in this instance, that the fœtus has a metabolism which is to some extent independent of that of the mother, that its tissues are assimilating and functioning at a different rate, and perhaps even in different ways from the homologous tissues in the mother. To put it in somewhat more popular language, the unborn infant may have a better or a worse digestion than his mother. We know next to nothing about the function of the fœtal thyroid, but it must be admitted that its secretion cannot be quite the same as that in the mother, for in the fœtal body no iodine is to be found, and consequently none can be present in the fœtal thyroid.

Taking all these observations together—and their number might be very considerably increased—it is clear that the question of fœtal nutrition is very obscure, and that its relation to the diet of the pregnant woman cannot be simple. We cannot by overfeeding a mother make sure that she will give birth to a large, fat child; possibly if we tried we might produce a very different result by upsetting the maternal digestive processes at the same

time every thinking physician must feel that there is a relation between maternal and fœtal nutrition, that the state of the maternal health must have an influence, determined by laws albeit undiscovered laws, upon the size and development of the fœtus.

Now, the question arises if this be the unsatisfactory state of our knowledge of the laws which govern the interrelation of maternal and fœtal nutrition, Must we suspend all attempts to influence the development of the unborn infant by modifying the maternal diet? Assuredly not! This has never been the manner in which medicine has overcome the difficulties she has found in her way. If we had waited for a full explanation of all the modes in which microbes and their toxins and alexins act upon the tissues —a knowledge we do not even now possess—where would the triumphs of antiseptic and aseptic surgery have been? Consequently Prochownick,[1] of Hamburg, is to be commended for the efforts he has been making ever since 1889 to engage the attention of the profession regarding the possibility of influencing the character of the confinement, of the puerperium, and of lactation, as well as the state of development of the fœtus by altering the diet of the pregnant woman. From the cases which have come under his own notice and care he claims to have shown that by putting fat women, who have had difficult and instrumental labours on account of defective action of the abdominal and uterine muscles, upon a special dietary, he has enabled them to have more easy confinements, with normal puerperia, and to nurse their children. Again, with regard to anæmic and chlorotic pregnant women, he believes that a different dietary has been the means of giving more normal obstetric experiences to this class. Finally, in cases of pelvic contraction between $3\frac{1}{2}$ and 4 inches, he maintains that he has proved by means of a series of 48 cases, including 62 confinements, that maternal diet can so influence the size, weight, and osseous development of the fœtus, as to make it possible for it to be born normally at the full term, whereas in previous pregnancies instrumental means or the induction of premature labour were necessary. The cases include 17 of Prochownick's own and 31 under the care of Haspels, Swiecicki, Reijenga, and others. Obstetricians will do well to look carefully into these diet charts of Prochownick and his followers, for assuredly the results are sufficiently striking to call for consideration and imitation. It ought perhaps to be stated at once that the treatment adopted is quite wrongly called the starvation cure; it is not that.

It the meantime, the clinical work which has been done ought to stimulate the scientist to a more careful investigation of the physiology of antenatal life. It will scarcely be credited, but it is true, that it is only within recent months that chemical analyses of the placenta have begun to be made. Even the composition of the liquor amnii at the various months of gestation can hardly be looked upon as satisfactorily determined. These and many other matters might all be so thoroughly investigated in maternity hospitals; but the truth of Prochownick's statements could only be adequately ascertained in such an institution as the pro-maternity (or more correctly pre-maternity) hospital may yet turn out to be. Meanwhile, however, we may claim that there has been some slight but perfectly perceptible lifting of the fog curtain hanging over the whole matter, for which some small amount of rejoicing in the scientific mind is surely permissible. Nevertheless, the scientific observer will do well to hasten slowly: with such a fog and that continual lee-shore of the unknown physiological reaction of the fœtus so close at hand, it will be wise if his theories carry very little sail. A fog-bound lee-shore is proverbially and sometimes audibly dangerous.

[1] Prochownick, L., Ueber Ernährungscuren in der Schwangerschaft. *Therapeutische Monatshefte*, Hft. 8 and 9, 1901.

## THE TRANSPLANTATION OF TUMOURS.

IN the first number of the *Journal of Medical Research* (formerly the *Journal of the Boston Society of Medical Science*) are two papers in which are recorded experimental researches bearing on the pathogenesis of new growths. In the first Loeb describes a series of successful consecutive transplantations of a sarcoma. The original growth occurred in the thyroid gland of a white rat, and during a period of fifteen months a large number of animals were successfully inoculated by transplantation in series from this. Pieces were placed in the subcutaneous tissue and the peritoneal cavity; they were examined at various periods, and the usual result was that the central parts of the nodule became necrotic, but the peripheral parts continued to grow, and there ultimately resulted a mass of new growth of a cystic character similar to the original tumour. Local metastases were common, and frequently appeared to depend on the separation of small tumour nests from the main mass by the encroachment of the surrounding tissue reacting to irritation. In some cases where the transplanted pieces did not grow, or where a growth which had started ceased, observation yielded interesting results; for instance, in one case a tumour in the back of a rat ceased to extend, half the growth was cut away, and transplanted into the other side of the back of the same animal: both soon began to grow at a rapid rate. A point of much importance in these observations is that it was found impossible to propagate the growth in animals of other species; guinea-pigs, white mice, and hens were tried unsuccessfully; two transplantations into a hybrid between a white and a wild gray rat were, however, successful.

In the second paper Isaac Levin records experiments undertaken to test the theory of Ribbert. The latter believes that the indefinite cell proliferation which is characteristic of new growths results from the removal of certain influences by which, under ordinary circumstances, the assumed natural tendency of the cell to proliferate is restrained. Mr. Levin attempted in a variety of ways to liberate cells of various types from the restraining influence of the organism. Particularly interesting are his experiments with ovarian cells; he grafted scrapings from and small pieces of the ovary on the peritoneal surface of rabbits, injected ovarian cells into the lungs, cut flaps from the ovary and stitched them to the surface of the peritoneum, and also placed small pieces of the organ in celloidin bags in the peritoneal cavity. The results were negative in every case. It will be noticed that there has

been here repeated the well-known experiment of Lack, who implanted scrapings from the ovary on the peritoneum, and at death about a year after found growths of a carcinomatous structure and metastases in other organs. It must be remarked, however, that the longest period after operation at which Levin examined the animals was four months.

Similar attempts were made to obtain growth by planting small pieces of different fœtal organs, of liver tissue, of the iris and of skin. In the case of the last, small solid nodes containing loose connective tissue in the centre and a layer of epithelial cells on the periphery were found *post mortem*; the other transplanted pieces were all absorbed. Failure, therefore, attended all these attempts to obtain new growth from transplanted tissue, although the cells were freed from the restraining influence of the organism under conditions most favourable for their propagation.

A review of the numerous transplantation experiments which have been carried out shows that no success has attended those in which normal tissue cells of whatever kind have been used. In no case, with the possible exception of Lack's observation, has new growth resulted. Ribbert's assumption that all cells are naturally prone to proliferate indefinitely has thus received no support but rather the contrary. On the other hand, the observations of Loeb, of Bellingham Smith and Washbourn[1] and others, have shown that cells which are abnormally possessed of this property of indefinite proliferation may after transplantation continue to exhibit it under certain limitations. The limitations are, in the first place, that in no case has a growth from one species been propagated into another; in the second place, that a local metastasis only has been obtained. From the point of view of further experimental work these limitations are of much importance, and, as a criticism on current theories, their negative evidence is of considerable moment.

## THE UNITY OF LONDON FROM A PUBLIC HEALTH POINT OF VIEW.

The approach of the ninth of November with its consecrated associations of mayoralty and Bumbledom will serve to remind Londoners that for the past year they have enjoyed the advantages and amenities which proceed from the beneficial influences of having no fewer than twenty-nine mayors and corporations exercising their sway within the County of London. The London Government Act of 1899, which was to make provision for the better government of the metropolis, and was the chief legislative production of its year, has now been in operation for a twelvemonth. The London ratepayer has suffered so many things from vestrydom on the one hand, and from legislative neglect on the other, that he has become inured alike to too much and to too little concern for his municipal enjoyments.

There were those who, on the passing of the Act of 1899, which established metropolitan borough councils upon the ruins of the old vestries and district Boards, prophesied that we should merely see old friends with new faces, and that the half-yearly demand on the ratepayer's purse would inevitably be augmented without any proportionate advantage to the ratepayer's welfare. We are afraid these Cassandras will find as the result of the first year's working of the new councils much to confirm their gloomy anticipations.

We have heard, it is true, of maces and chains of office, and of varied devices of the sartorial art to clothe suitably the aldermen who are now to be encountered with a frequency which must tend seriously to detract from the august respect with which those worthies have in the past habitually been regarded. We learn also that in several of the metropolitan boroughs the rates this half-year are 1d., 2d., and even 3d. in the pound higher than they were in the corresponding period a twelvemonth ago.

We do not wish prematurely to condemn those who have devoted themselves to the discharge of such limited civic duties as have been placed in their hands; but we are inclined to ask now, as we did when the Bill was before Parliament, whether the principle underlying the measure, of cutting up the metropolis into twenty-eight or twenty-nine more or less artificial and autonomous areas, is a sound one in the interests of public health administration and sanitary organisation. With 3,231 cases of scarlet fever, 1,513 of diphtheria, 311 of typhoid fever, and 171 of smallpox, filling, almost to repletion, the accommodation at the disposal of the Metropolitan Asylums Board, we feel bound to ask once again whether in matters of public health, at any rate, our legislators should not frankly recognise that London is really one for many purposes, and, whether in particular the sanitary duties now variously discharged by the County Council, the City Corporation, the Asylums Board, and the Borough Councils, and the Poor-law Guardians ought not to be unified and correlated under one central health department for the metropolis.

Epidemic disease laughs at the geographical niceties which subdivide London into the areas presided over by the 29 mayors and corporations, dangerous delay ensues from the division and subdivision of authority which exists to a degree that weakens responsibility and paralyses effective action. If next session Parliament is to deal with domestic problems we suggest that this question of simplifying and unifying the central health administration of London is worthy the attention of the "November Cabinets."

## THE APPROACHING ELECTION OF DIRECT REPRESENTATIVES.

The difficulty in which Mr. Victor Horsley has been placed with regard to his intended resignation of his seat as one of the direct representatives of England and Wales on the General Medical Council is a curious example of the unexpected results which may flow from an error in the drafting of an Act of Parliament. Mr. Horsley was elected at a by-election in 1897, and at that time, and on many occasions since, has expressed his intention to resign this year, in order that the election of all three representatives should take place at the expiration of the quinquennial period when the other two representatives of England and Wales go out of office. Indeed, it was at a meeting at Rotherham, which it had been arranged that he should address last Tuesday in support of his candidature at this election, that he was compelled to make the announcement that the Medical Act of 1886 was so curiously drawn that it was impossible for him to resign and become a candidate as he had intended. The Medical Act, 1886, Sec-

[1] British Medical Journal, 1898, vol. ii, p. 1807.

tion VIII, enacts that the direct representatives "shall themselves be registered medical practitioners; they shall be elected to hold office for the term of five years, and shall be capable of re-election; and any of them may at any time resign his office by letter addressed to the President of the General Medical Council, and, upon the death or resignation of any one of them, some other person shall be elected in his place." Mr. Horsley told the meeting at Rotherham that he had been legally advised that the effect of this was that, were he to resign now, he would be ineligible for re-election. Under these circumstances, it is clear that Mr. Horsley has no alternative but to retain his seat until the expiration of the term of five years for which he was elected in 1897, when, of course, he will be eligible for re-election. Mr. Horsley explained the circumstances in the speech which is reported at p. 1200.

## SIR WILLIAM MAC CORMAC ON ARMY MEDICAL REORGANISATION.

Sir William Mac Cormac opened the new buildings of the Post-graduate College at the West London Hospital on October 14th. In his address he said that since medicine was a progressive science those who practised it must not stand still. They must ever continue to learn or be hopelessly left behind, and it was in an institution like the West London Post-graduate College that the opportunity to learn was given, a feature in this school being that it was reserved exclusively for qualified medical men; the wards and hospital practice were open to all the post-graduates, and special clinical lectures were given. These arrangements had been proved to be of great service to a large number of general practitioners. Many officers of the navy and army had availed themselves of the opportunities afforded. Nearly all had managed to attend while doing their ordinary duty, and had come up three or four times a week from Aldershot, Chatham, and Woolwich. Medical officers of the Royal Navy had managed to attend. Admirable work of a similar kind was being done elsewhere, but the West London Hospital was the only one reserved for the benefit of qualified men alone. There was small doubt that the need for post-graduate teaching would be more and more recognised, not only in the public medical services, for whom study leave in the near future would it was hoped be a recognised institution, but for civil practitioners as well. When the medical history of the war came to be written justice would be done to the medical officer. He had accomplished much and in an admirable manner, under restrictions and difficulties which it was very hard adequately to appreciate, and the results would bear a most favourable comparison with those of any other war or any expedition, and as had recently been seen in China by the medical services of other nations. The war had done one most excellent thing, it had caused the generals and commanding officers to see what medical officers did, while a greater sympathy and appreciation had been shown by the combatant ranks of the work of their medical brethren. Doubtless there were many things capable of improvement, but it should be remembered that much of the distress of which they had heard was inevitable—it depended not only on the state of war, but on the conditions under which the war was carried out in South Africa, the immense area of the field of operations, the long and difficult transport, and the undermanned condition of the medical service itself. The changes proposed by the Secretary of State should have the effect of drawing young men of good quality and promise in sufficient numbers into the service. Some means should be devised for removing the Army Medical School from its isolated position at Netley, whereby its staff and its students could be brought to London, where it would be possible for them to benefit by the unrivalled teaching and clinical opportunities which the great city afforded. If a great military hospital and school of the most modern and complete type were established in London and a body of teachers similar to that of the Kaiser Wilhelm Institute in Berlin were appointed in connection with it, a more wide-reaching influence would be exerted for the improvement and advancement of the medical department of the army than any other single measure could accomplish. It would enable a considerable proportion of the army medical officers to keep in touch with the scientific work of the London schools, because a number of officers could be attached for duty to such an institution and would yet have time to pursue special study. Cases of interest and importance might be sent to this hospital from military centres in all parts of the country, just as patients were at present drafted into civilian hospitals in the metropolis, and Netley Hospital could still be used for the reception of invalids from abroad, who numbered in ordinary times about 3,000 annually. Of course, this or any other suggested improvement in the Army Medical Service altogether depended on the ability of the authorities to fill up the vacancies in the department, and to create a medical corps of sufficient number. If this scheme could be carried out a considerable number of medical officers would be able to pass in succession through the central establishment, and reap the advantage of what would in effect be a post-graduate course of instruction. Lastly, and of great importance, this scheme would probably be the means of bringing about a closer relation between the military and civilian members of the profession.

## THE DUTY OF SCHOOL BOARDS TOWARDS NEGLECTED CHILDREN.

The Scotch Education Department has, under date October 10th, 1901, issued a circular to School Boards as to the difficulties in enforcing the attendance at school of a certain class of neglected children. The special class consists "of those who, either by disease, uncleanness, want of clothing, or other results of neglect and unwholesome conditions, are rendered unfit to sit in school with other scholars. Such children, it is to be feared, are too often allowed to remain away from school for long periods, and even to grow up without the benefit of any education at all, with consequences not only harmful to the children themselves, but dangerous to society." The circular points out that while such children may be refused admittance to the schools, yet the Boards are responsible for their education, and should use every possible means so to ameliorate their condition that they may attend school. The resources available to this end are first the individual effort and personal influence of the school managers themselves, which should be systematically put forth. Where children are unfit to attend school by conditions due to filthy and insanitary homes, it is of great importance that the School Board should act in concert with the local sanitary authority, using the powers given under various Acts. By such action the number of children of the class in question might be largely reduced. There would remain cases of confirmed disease beyond the scope of such action, cases either more or less infectious, or most repugnant to other children. Even these might be removed or mitigated by proper dressing. Philanthropic agencies and the numerous medical charities might be called in to aid to this end. The circular is sent to School Boards alongside a copy of a circular relating mainly to the same subject, which is being issued by the Local Government Board to local sanitary authorities. It bears the title "Co-operation of Local Authorities and School Boards." It urges the natural advantages of co-operation with the School Boards, and very much covers the same ground as the circular of the Scotch Education Department summarised above. It goes into detail as to how the persons and clothing of children ought to be cleansed. It points out how officers of School Boards may be of great service

to the local authorities in observing and reporting "nuisances" and insanitary conditions. The assistance of such officers should always be cordially welcomed.

## THE POLICY OF TINKER.

We very much regret to learn from the *Western Morning News* that the Plymouth Court of Guardians has rejected the proposal for building a new infirmary brought forward by Dr. Lindsey, and approved of a scheme by means of which the existing workhouse should be patched for a time so as to provide a slight increase of accommodation. As the voting was 14 for and 20 against Dr. Lindsey's motion, and 18 for and 13 against the other scheme, we may still hope the court will again consider the question, and in place of wasting a large sum of money on alterations proceed at once to the erection of a new hospital. Apart altogether from economical considerations it is the duty of the guardians to consider the best interests of the sick poor, and the guardians, as hospital administrators, should know by this time that the sick poor ought to have all the advantages which modern medical science and philanthrophy dictate as essential. It is no longer an axiom that the sick poor ought not to enter a workhouse. All over the country Boards of Guardians have erected and are still erecting infirmaries on a separate foundation, where proper hospital principles are adopted. It is in the first place essential that the buildings should be properly planned and constructed on sound sanitary principles, with all the conveniences demanded by modern hospital experience. In the second place adequate nursing arrangements should be provided, and this will necessarily include a nursing home under a skilled head. In the third place the supreme control of the hospital should be placed in the hands of a medical superintendent, or where there is only a visiting surgeon under a trained hospital steward. Guardians will find the truest economy in working on these modern lines. The sick (for the Poor-law system includes in its programme the cure of disease) will be more speedily restored to health, and diminution in sickness means a lessened poor-rate. The workhouse master, excellent in his own province, is not trained as a hospital administrator, and owing to this there is apt to be friction between nursing superintendents and nurses themselves, for the trained expert is unwilling to be dictated to in matters of nursing by an untrained official. The attempt to combine in a workhouse the able-bodied, the sick acute and chronic. the aged and infirm, the lame, the halt, and the blind, children, and parturient women has been tried, and has admittedly been a failure. It seems that at Plymouth there are all the old conditions, not only as regards the class of patients, but the defective buildings which are characteristic of so many workhouses carried on under the old *régime*. Hospital wards must be constructed on definite lines as regards air, light, ventilation, warmth, cubic space, and on such lines only can the nursing be effectually carried out, and the greatest benefit be secured to the patients. The workhouse at Plymouth might still usefully serve the purpose suggested by Dr. Lindsey—the classification of the inmates, as is now done at many other institutions of the same kind. Plymouth is a rich and prosperous town, and we trust that the Court of Guardians will adopt a more progressive policy, courageously face the situation, and in place of tinkering up their old establishment erect an infirmary which will be worthy of their town.

## THE SANITARY CONDITION OF THE LEICESTER INFIRMARY.

In the *Leicester Daily Post* of October 9th appears a report of a meeting of the Quarterly Board of Governors of the above institution held on the previous day. The Chairman of the Weekly Board of Management, Mr. T. Fielding Johnson, made a statement to the effect that there had been outbreaks of diphtheria among the nurses and patients, and it was doubtful whether these were to be attributed to defective drainage or to importation from the town where that disease was at present epidemic. The architect, Mr. Pick, had about twelve months ago furnished a report on the sanitary conditions, and as a result of that many alterations had been made. Owing to recurrence of the epidemic the medical staff had recommended a further examination, and the Weekly Board assented to this. The examination was conducted by Professor Corfield, who made a comprehensive report, "which was not entirely condemnatory of the drainage of the institution." "All the work required to be done in the infirmary had been done." He considered that to carry out the recommendations of the medical staff £50,000 would be required. He should hesitate to recommend the Board to undertake the responsibility of such a scheme. In reply, Dr. Reginald Pratt, one of the Physicians to the infirmary, said that the outbreak of diphtheria was not the only indication that the sanitation of the building was unsatisfactory. There had been septic throats and other forms of sepsis and also erysipelas. He could not agree with the Chairman that Professor Corfield's report was not condemnatory of the sanitary conditions of the infirmary, and read the following passage from it: "The whole of the present drainage arrangements must be condemned. They must be removed entirely, and new drains laid on concrete as far as practicable outside the building." Dr. Pope said that while the whole scheme recommended by Professor Corfield would cost the amount named by the chairman, a great deal of it referred to new isolation and out-patient blocks and nurses' quarters, and the part most urgently recommended by the medical staff—namely, what was directly concerned with drainage—would be a much less expensive matter. Finally, it was agreed to refer the whole question to a committee, on which the Weekly Board and medical staff should be equally represented. Judging from these and other speeches made at the meeting there appeared to be a disposition among some of the members of the Board to believe that there was an antagonism between the members of the medical staff and themselves. We fail to see any reasons for such a feeling. It is impossible to believe that a body of scientific men, such as the medical staff of the Leicester Infirmary, would suggest large and expensive alterations in the drainage system of that institution without having good grounds for their action, and this was explicitly stated by Dr. Pope, the senior physician. The infirmary was founded about 1771, and part of the original building is still in use as hospital wards. We fancy that lay Boards of Management sometimes forget that a hospital is a complicated machine whose fabric requires renewing at intervals, and that they fail to carry out a principle which as business men they would never neglect in their private concerns, that of setting aside annually a certain sum against depreciation. It is evident that without thorough periodical overhauling such an old building as the Leicester Infirmary cannot be kept up to modern requirements, and without expressing any opinion at present on the points at issue, which are being investigated by the joint committee of Board of Management and medical staff, we venture to hope that the subscribers and managers of that institution will take a broad and enlightened view as to the requirements of a modern hospital, and do their best to maintain the reputation of an institution which has for so long been favourably known to the medical profession of the country.

## THE ADMINISTRATIVE CONTROL OF MILK SUPPLIES IN RELATION TO TUBERCULOSIS.

Among the many interesting points dealt with by Dr. Kaye in his report for the year 1900 to the West Riding County Council his remarks on milk clauses in private Bills possess an exceptional interest. It will be remem-

bered that a large number of towns obtained the special powers embodied in the "model clauses," which were agreed upon at a conference held between representatives of the Local Government Board, the Board of Agriculture, and the various corporations seeking these special powers. These model clauses gave power (after obtaining a justice's order to this effect) to the urban authorities possessing them to inspect and take samples of milk from cows in cowsheds outside their own districts. The County Council of the West Riding in 1899 successfully opposed the Leeds Corporation in their attempt to obtain the model clauses, securing the insertion of restrictive clauses, in virtue of which permission to act outside their own jurisdiction could only be obtained by an order of two justices in the outside district in question, sitting in petty sessions; and such permission could only be given when it was certified that "the local authority of the said district has not already dealt with the case or having power to deal with the case has been requested by the Corporation to deal with it, and has neglected or declined to do so." Dr. Kaye now notes that in the Parliamentary session of 1900 Sheffield, which was seeking the powers of the model clauses, refused the restriction already imposed on Leeds. The matter was fought out in the Parliamentary Committee, with the result that the limitation clause was disallowed, but a power of appeal was given against any order of the Corporation. To complete the story, we should add that during the session of 1901 Leeds succeeded in getting rid of the restrictive clauses imposed in 1899. During 1900 a conference of local authorities in the West Riding was held, and resolutions were adopted in favour of more uniform and adequate legislation by a general Act, or, failing that, by a special Act applicable to the whole of the West Riding. It is understood that the legal advisers of the authorities represented at the conference will draft a Bill for the West Riding dealing with this matter. It is sincerely to be trusted, in the interests of uniform and efficient administration, that this intention will be carried out. It may be hoped, also, that at the same time the model clauses will have added to them some further powers giving local authorities control over the disposal of cows in which tuberculosis has been discovered. At present there is practically nothing to prevent such cows being sold and used for the supply of milk in another district.

## HOSPITAL ACCOMMODATION FOR THE PREGNANT WOMAN.

IN his introductory lecture to the Winter Course of Midwifery Lectures in the Medical College for Women, Edinburgh, on October 15th, Dr. J. W. Ballantyne sketched the history of the evolution of hospital accommodation as now provided for obstetric, gynæcological, and pediatric cases. He pointed out how, in the first instance, a few beds had been set aside for these cases in the general ward of a general hospital; then gradually the patients in labour, the gynæcological patients, and the children came to occupy special wards in a general hospital, and possibly even a special pavilion; and, finally, in some instances at least, there had been developed the maternity hospital, the sick children's hospital, and the special nursing home for gynæcological operations. Thus, gradually provision had been made in one way or another for women in labour and in the puerperium, for infants during the first month of life, for young children, and for women suffering from diseases of the generative organs who were not pregnant. But women who happened to be suffering from some illness, and to be at the same time pregnant, and women who were ill because they were pregnant, had no adequate accommodation provided for them in general hospitals, and there were no special hospitals to make up for this deficiency. There was thus a hiatus in the hospital system; there was the need either for special beds in a general hospital or in a maternity, or for a special ward in such an institution; or it might be that there was the need for a special hospital itself, for a building which might be in name and in reality a pre-maternity hospital. Dr. Ballantyne stated that he had elsewhere[1] put forth a strong plea for some such provision for pregnant women; it was needed both for the sake of the woman and for that of her unborn infant. He did not ask for an asylum or reformatory or "secret maternity" for the illegitimately pregnant; such institutions already existed and doubtless had their function. What was required was a medical institution or part of one, a hospital or part of a hospital, in which the medical wants of the pregnant patient and her unborn child would be considered first. He was glad to know that already, through the liberality of Dr. Freeland Barbour, a sum of money had been provided sufficient to endow one bed in the Edinburgh Maternity Hospital for the treatment of the diseases of pregnancy. Here was a beginning, and a good beginning, and was it not true that "a thing well begun was half done?"

## THE CARNEGIE TRUST.

THE Executive Committee of the Carnegie Trust has addressed a letter to the Secretaries of the Scottish Universities containing information as to the considerations which have guided them in deciding on the claims of applicants for payment of class fees, and have at the same time invited the opinion and co-operation of the universities. A reference is made to the three qualifications demanded of age, Scottish birth, extraction, or education, and preliminary examination, which are now well known. The Committee has resolved that proof of the capacity of applicants must in all cases be forthcoming, and, in the absence of a uniform preliminary examination, the various examinations laid down by the Universities Commission have been recognised. In order to satisfy itself of the conduct and progress of the beneficiaries under the Fund the Committee has decided to require in each case a report or certificate from the teacher of the class as to the satisfactory use of the opportunities afforded. As in some cases application has been made for free admission to a large number of classes by the same applicant at the same time, the Committee has decided not to grant admission to classes obviously in excess of those that can be usefully taken. A Committee of George Heriot's Trust in Edinburgh has recommended that its Trust bursars should be permitted to accept payment from the Carnegie Trust, and it has been suggested that in consequence the Heriot bursaries might be extended to a larger number of students.

## FIFTY YEARS OF MEDICAL LIFE.

MR. CHRISTOPHER HEATH, in delivering an address to the University College Medical Society on October 16th, said that it was exactly fifty years since he became a medical student. In those days there was no preliminary entrance examination, and the medical curriculum extended over three winters and two summers. If a student passed his examinations promptly the amount of instruction he received lasted considerably under three years. Mr. Heath gave a description of "the schedule." This apparently was a card giving the number of lectures students had to attend. There were many men in those days whose souls never soared above the schedule. As to the way in which botany was taught, he said that it was the custom then to go out on botanical excursions, which resolved themselves usually into luncheon parties with a good deal of beer thrown in. The then Professor of Botany at King's College, Professor Lindley,

[1] *Vide* BRITISH MEDICAL JOURNAL, p. 813, April 6th, 1901; *American Journal of Obstetrics*, May, 1901; *International Clinics*, p. 239, August, 1901

used to give lectures at the Physic Garden at 7 in the morning. At the Final Examination at the College of Surgeons the questions asked were of the nature of conundrums, being catch questions to which the candidate did or did not know the exact answer, and he was passed or not accordingly. After giving the details of the introduction of the ophthalmoscope, the laryngoscope, and the endoscope into medical practice, Mr. Heath narrated how a certain physician of the old school always had a stethoscope with him, but used it to carry a flower in. After all, in those days students did manage to learn something, and acquired the art of diagnosis up to a certain point, and a certain amount of experience. Medical men were in a great hurry nowadays to get rich, and there were several nasty short cuts towards wealth which he was sorry to say that men were apt to take from time to time. If, however, a man was going to do good work and be respected and honoured in his later years he must not follow any of these by-ways, for success was not obtainable unless a man was known to be not only learned but respectable. Mr. Heath took most credit to himself for what he had done during his fifty years of medical life in three matters: first, he had brought in an improved method of tying ligatures; secondly, he had changed the description of the fibula from a three-sided into a four-sided bone: and, thirdly, he had shown how to stop hæmorrhage in operations on the tongue. In discussing the question of success, Mr. Heath said, in respect to the leading physicians and surgeons, that it was not known how many years these men had sat behind a brass plate without a patient coming near them; but, if a man was honest and hard working, and had good health, it must be very seldom that he did not succeed to a certain extent. He might not be one of the leaders, like Paget or Jenner, but he would undoubtedly live a happy life, bring up his family in comfort, and leave some money behind him. Mr. Heath concluded by saying that he was sorry Lord Rosebery in his speech had depreciated the reading of books; medical students were not given to reading books, and he thought their reading had gone down to the minimum, but no man could ever be up in his work without steady reading.

## SIR FRANCIS LOVELL'S MISSION TO THE EAST.

The opening address of the third winter session of the London School of Tropical Medicine was delivered at the Royal United Service Institution, Whitehall, on October 16th, by Lord Brassey, who gave particulars of Sir Francis Lovell's proposed mission to the East on behalf of the school. Lord Brassey explained that the demand for instruction at the London School of Tropical Medicine was much greater than was originally anticipated, it had been found necessary to refuse several students on account of want of room. To carry on the work of the school efficiently further funds were required for the enlargement of the buildings, for the endowment of chairs, and for placing of the institution on a sound financial basis. The Seamen's Hospital Society had been so fortunate as to obtain the services of Sir Francis Lovell, formerly Surgeon-General at Trinidad, and he was about to proceed to the tropics to make known the advantages of the school, and to endeavour to raise funds on its behalf: the sum required was £100,000. Lord Brassey said that he was justified in asking for that sum because it was really a small amount for this great empire with so large a stake in the tropics. Dr. Patrick Manson said that the school was doing most useful work, and gave details of the various expeditions sent out under the auspices of the Seamen's Hospital Society. Germany with an insignificant colonial interest spent five times as much money on scientific expeditions as did England. He read a letter from Professor Koch giving a list of the present medical expeditions now at work for the German Government: (1) Professor Frosch and (2) Staff Surgeon Bludau, both in Istria; (3) Staff Surgeon Vagedes in German South-West Africa; (4) Staff Surgeon Dempwolff in New Guinea; (5) Staff Surgeon Ollwig in German East Africa; (6) Dr. Krulle in the Marshall Islands: and expeditions to Togo and Kamerun were planned. The five expeditions first mentioned had for their collective object, in the first place, the investigation of malaria, and formed regular continuations of Koch's malaria expeditions made to Italy, the Dutch Indies, and New Guinea. The expedition to the Marshall Islands had for its object the investigation of syphilis in its different forms in the South Sea Islands group. The members of the European expeditions received £1 a day besides allowances: members of the expeditions beyond Europe were paid £2 a day, with travelling expenses and allowances. Sir Francis Lovell gave details of his preliminary negotiations with the Seamen's Hospital Society concerning his proposed voyage on behalf of the school. His mission was to find funds to enable that Society to put the London School of Tropical Medicine in a more satisfactory financial position. The Society accepted his offer to proceed abroad to secure the support of the English residents in the maintenance of the London School of Tropical Medicine. It was decided that he should go to India, Burmah, Ceylon, the Straits Settlements, China, Japan, New Zealand, Australia, the United States, and Canada. It was his intention to raise funds to enable the Society to put the school on such a footing that would make it worthy of its name as a teaching body in the great City of London. Amongst those present were Mr. P. A. Nairne, the Chairman of the Committee of Management of the Seamen's Hospital Society: Sir William Church, President of the Royal College of Physicians; Sir Charles Gage Brown, Admiral Sir R. More Molyneux, Admiral Sir Richard Tracy, Sir David Palmer Ross, Admiral Sir John Hay, and Inspector-General Turnbull, R.N.

## THE INTERNATIONAL CONGRESS OF NURSES

The Nurses' Congress at Buffalo, U.S.A., was distinctly a success; it was well organised, and included some of the most distinguished women from the old and the new country. The subjects set forth for discussion dealt with hospital administration, the training of nurses, and their future spheres of work, remuneration and control, services under the State, and the duties of nurses as citizens or municipal officers. The discussions showed that the American women are much more apt in the public meeting than their English sisters, and also gave evidence that they are confronted with similar difficulties in organisation. The American nurses are organised in a federation of two groups, "the Associated Alumnæ," and the Society of Superintendents of Training Schools, and they work as one body in all matters of general interest to the profession. Three resolutions were passed as representing the results of the discussions, (*a*) in favour of higher education for nurses, (*b*) in favour of State registration and legislation. (*c*) condemnatory of the practice of sending out as private nurses pupils still in training at their schools. The Congress met with much sympathy and support from the public generally, and judging from the reception given to the nurses at the general meeting they are looked on as valuable workers in the interest of the community.

## ST. BARTHOLOMEW'S HOSPITAL.

A special court of the Governors of St. Bartholomew's Hospital will be held on Thursday next, when a president of the hospital in succession to the King, who held that office when Prince of Wales, will be elected. The King is now Patron of the hospital, and the Duke of Cornwall and York will be proposed for election as President. We understand that at the same court a motion will be brought forward to appoint a committee to report on the probable future as well as the present needs of the hospital with

regard to space. The hospital has compulsory powers to buy a portion of the site now occupied by the buildings of Christ Hospital, but it is thought by some governors that in the not distant future more ground may be required than it has hitherto been proposed to acquire.

## ENTRIES AT THE MEDICAL SCHOOLS.

WE have received returns from the authorities of some of the medical schools, but as others have not replied to our inquiries it is not possible to publish a full list of the number of new students at the several schools. We learn however that the number of new students who have entered for the full curriculum at the schools in London is as follows: St. Bartholomew's, 84; Charing Cross, 14; Guy's 68; King's College, 25; London, 64; St. Mary's, 35; Middlesex, 19; St. Thomas's, 48. With the exception of St. Thomas's which has one student more, and King's College which had the same number last year, these returns in each case show a decline as compared with the corresponding returns made at this time last year. The total for the schools mentioned is for this year 357, as compared with 396 in 1900. The London School of Medicine for Women shows an increase, the number this year being 30, as compared with 22 last year. The returns from the schools in the provinces are also as yet incomplete: the number of students who have entered for the full curriculum is: at the University of Durham College of Medicine 26, as compared with 25 last year; Bristol University College 18, as compared with 13; Owens College, Manchester, 54, as compared with 47; Yorkshire College, Leeds, 27, as compared with 38; University College, Sheffield, 12, as compared with 8; University College of South Wales, Cardiff, 14, as compared with 19. The total for these schools is 151, as compared with 150 last year.

## THE CONTAGIOUSNESS OF LEPROSY.

IN his latest report on leprosy in New South Wales—that for the year 1899—issued early in May, 1901, Dr. Ashburton Thompson gives the details of a fresh case of leprosy in a white colonial born male, the only leper admitted during the year. Dr. Thompson has taken much trouble in collecting all the facts of the case. The patient was an undoubted leper, bacilli having been found in abundance in the serum expressed from the thickened eyebrow and thickened skin over the left elbow, thus confirming the general clinical diagnosis. The man, J. F. D., aged 26, had lived all his life in the Richmond River district, and was the first cousin once removed of a man, P. S., who died of leprosy in that locality in 1887. Dr. Thompson had in 1890 visited the district and examined J. F. D., who was then 14, and found him to be quite healthy. Dr. Thompson had little doubt that J. F. D. had occasionally visited P. S.'s cottage (which in 1890 had been completely destroyed), and after the latter's death continued occasionally to visit P. S.'s more immediate surviving relatives. A further interesting point is the fact that H. R, also a native of the Richmond River district, a neighbour and acquaintance of P. S., was attacked with leprosy in 1888 and admitted to the Leper Coast Hospital in 1890. Moreover, before settling in the district, P. S. had been associated at Shoalhaven, several degrees of latitude south of the Richmond River, with a man, W. J. T., who died in 1873 on the Macleay River, probably of leprosy. Another link is the circumstance that H. J. T., a brother of W. J. T., but who as far as could be learned had not in any way been associated with the latter, was admitted from the Macleay River district to the Leper Coast Hospital in 1894. All this lends support to the view that leprosy is contagious. Dr. Thompson concludes by saying that he has never denied the communicability of lepra from the sick, as seems to be supposed, but has merely pointed out the total absence of direct proof of such communicability. In practice, however, Dr. Thompson goes on segregating lepers in the Little Bay lazaret.

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THE University and extra-mural medical classes in Edinburgh were opened for the winter session on Tuesday last, October 15th.

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IN opening the Class of Surgery at the University of Edinburgh on Tuesday, Professor Chiene gave an address on the life of Sir James Paget.

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THE prizes will be distributed to successful students in the Faculty of Medicine of University College, Bristol, on October 25th, by Sir Frederick Treves, K.C.V.O., C.B., Honorary Sergeant-Surgeon to the King. Sir Frederick Treves will open the new Bacteriological Department at the Royal Infirmary before the ceremony, and after it will preside at the annual dinner of the Medical School.

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THE vacancy in the Chair of Physiology and Histology in the Medical School of Trinity College in the University of Dublin is formally announced, and applications for the post are invited. The election, which rests with the President and Fellows of the Royal College of Physicians of Ireland, has been fixed for January 10th, 1902. Applications must be in the hands of Registrar of the College by the end of November, and from him further information as to duties and emoluments may be obtained.

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WE regret to announce the death of Dr. E. H. Dickinson, Physician to the Northern Hospital, Liverpool, which took place on October 10th at his residence in that city. Dr. Dickinson was for some years a member of the Council of the British Medical Association. We hope to publish an obituary notice in an early number.

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WE regret to have to record the death on October 12th, at the age of 65, of Mr. Vincent Jackson, Surgeon to the Wolverhampton and Staffordshire General Hospital. Mr. Jackson had been somewhat out of health for some time, and was unable to resist an attack of pneumonia which commenced four days before his death. He was one of the founders of the Staffordshire Branch of the British Medical Association, was its Secretary from 1874 to 1882, and had been for many years its representative on the Central Council of the Association. We propose to publish a biographical notice in a future issue.

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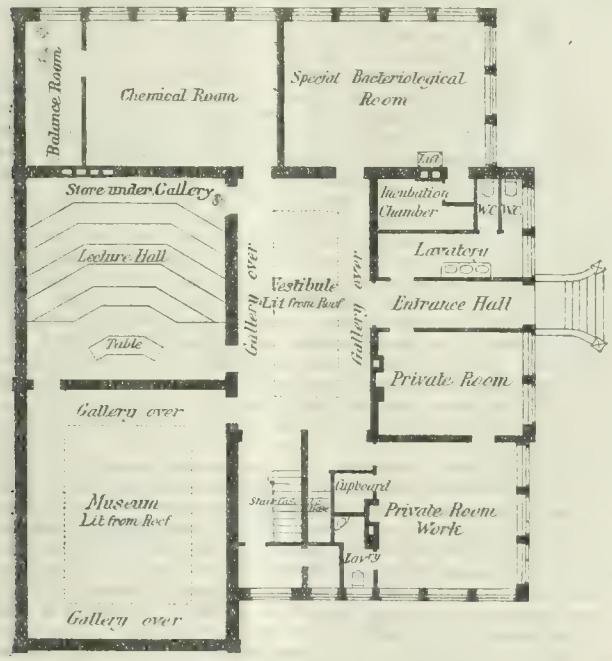
FISKE FUND PRIZE ESSAYS.—The subject for the next award of this prize is Serumtherapy in the Light of the most Recent Investigations. The value of the prize is £50. Essays are to be forwarded to the Secretary of the Trustees, Dr. Halsey De Wolf, 24, Benefit Street, Providence, Rhode Island, U.S.A., before May 1st, 1902. Essays must bear a motto and be accompanied with an envelope having the same motto inscribed on it, and containing the name and address of the author.

POST-GRADUATE LECTURES.—The opening lecture of the winter session at the Brompton Hospital for Consumption and Diseases of the Chest will be given by Dr. Theodore Williams on Wednesday next, at 4 P.M. The subject will be the Prognosis of the Different Forms of Pulmonary Tuberculosis. We are asked to state that the course of lectures is open free to all qualified medical practitioners as well as to students attending the practice of the hospital. The clinical material at this hospital is very large, and affords many examples of the rarer forms of intrathoracic disease, and there can be no doubt that those who have leisure to do so will not regret taking advantage of the opportunities afforded by the periodic course of lectures given there.

## THE NEW PATHOLOGICAL INSTITUTE AT OXFORD.

The new department of pathology in the University of Oxford was formally opened on October 12th at a meeting which took place in the lecture room of the new building, under the presidency of the Vice-Chancellor.

The site for the department is within the grounds of the University Museum. The building occupies a space of 65 ft. by 75 ft., and to the north has a yard 60 ft. by 30 ft. The front elevation, in which is the main entrance, is towards the east, and nearly all the rooms are lighted either from this aspect or the north. The building consists of a partially sunk basement and two floors above. Entering the ground or first floor by the main door access is given to a central hall, from which are the entrances to a lecture room, 25 ft. square and 22 ft. high, and a museum, 21 ft. by 25 ft., and of a similar height. Both run up to occupy also the first floor, and are lit from north and east by roof lights. The ground floor contains also a special bacteriological room for experimental pathology, 25 ft. by 18 ft., and another of similar size,



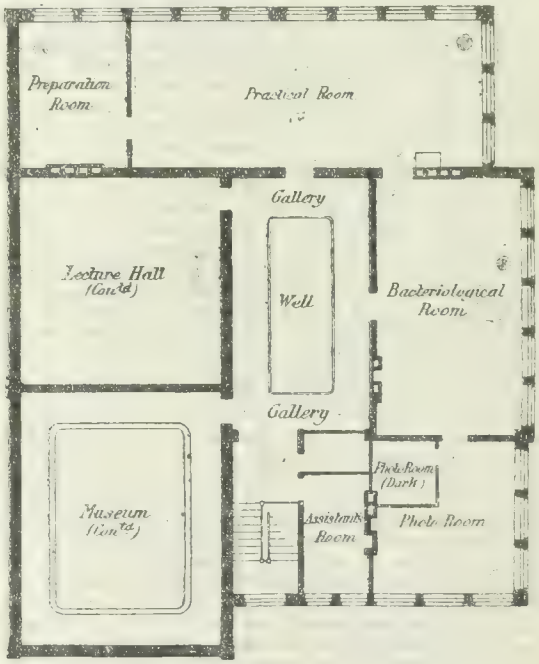

Plan of Ground Floor.



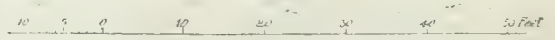

fitted up as a chemical research laboratory. To the former is attached an incubation room, and to the latter a small balance room. On this floor there is also a private room for the head of the department, a private laboratory, and a lavatory. In the central hall is a staircase leading to a gallery, which gives access to the galleries of the museum and lecture room, and also to the rooms on the upper floor. One of these is a large room, 43 ft. by 18 ft., for the teaching of pathological histology, and to this is attached a preparation room. There is also a class room, 31 ft. by 18 ft., for practical bacteriology, a photographic room with oxyhydrogen lamp, and a demonstrator's room. The fittings in all these rooms are plain and simple, but appear very well adapted to their several purposes. In the basement of the department is a private laboratory, a dark laboratory, a large preparation room for the pathological and bacteriological work of the department, storeroom, room for heating apparatus and workshop. The basement will also contain a refrigerating room 10 ft. square and 8 ft. high, kept below zero by a Hall and Co.'s carbon dioxide freezing apparatus. This room will be used especially in blood examinations. The building, which has cost about £10,000, has been erected under the supervision of the architect, Mr. J. Augustus Souttar, of 41, Bishopsgate Street Within, E.C.

The Vice-Chancellor (Dr. D. B. Monro, Provost of Oriel), said that the great development which had taken place in the teaching of the natural sciences in Oxford coincided very nearly with his own academic career. He was very glad to preside at the opening of an Institute which marked a further development in the provision of facilities for such studies.

Dr. James Ritchie, Reader in Pathology, then gave a short account of the new building. He said that the degrees in medicine given by the University of Oxford were intended to be of a high standard, and that the standard of pathology was to be especially high; for this reason alone the University was under an obligation to provide facilities for teaching pathology. Pathology was not a subject which could be taught by didactic lectures alone; it was necessary that students in that subject should have ample opportunities for practical work, and this need had been




Plan of Upper Floor.




kept in mind in planning the building. But in addition to giving those who were seeking degrees opportunities for acquiring the necessary knowledge, it was the duty of the University to provide opportunities for those who wished after graduation to return to Oxford to prosecute researches in pathology, and to this end there had been provided in the Institute a special room for experimental pathology, and in view of the fact that much of the pathological work of the future must be in the direction of the chemical examination of products of disease-processes, a chemical research laboratory had also been provided. Both these rooms had the necessary subsidiary apartments, and there was also a large well-lighted room for the teaching of pathological histology, which must be the foundation of all pathological study. The Institute also contained a museum, and, thanks to the foresight of Sir Henry Aciand, who had not only collected material himself but had purchased the collection of the late Professor Van der Kolk, it already contained a large number of specimens. Owing to an understanding

which had been come to with the authorities of the Radcliffe Infirmary, the Pathological Institute of the University had undertaken to make pathological investigations for the Infirmary, whose patients would benefit by such inquiries, while the progress of pathological research in the Institute would be encouraged. In conclusion, he mentioned that, of the £10,000 voted by the University to defray the cost of the Institute, £5 000 had been given by a member of the University who had only recently graduated, and who, in the course of his own studies, had been struck by the need of such an institute. He regretted that Mr. Ewan Fraser was not present to receive their thanks that day, but duty had called him home to Australia.

Sir William Church, President of the Royal College of Physicians of London, who was then called upon by the Vice-Chancellor, said that he traced the gradual development of the teaching of medical science in Oxford from the time that the University Museum, through the energy and initiative of the late Sir Henry Acland, came into existence, noting the founding of the Chairs of Physiology and of Anatomy, and the building of laboratories for the study of these branches. That day, he said, the 80th anniversary of the birthday of the Nestor of pathological research, Professor Virchow, was being celebrated, and Oxford could not in a more worthy way pay its homage to the veteran scientist. Just at the time that their museum was being erected Professor Virchow gave to the world his memorable work *Die Cellular Pathologie*, which placed pathology on a new foundation, and taught them to regard pathological processes as the perversion of physiological ones, influenced by various disturbing agencies. Pathology could not be studied without physiology, neither could physiology in its completeness be carried on without pathology, and more especially had this become manifest since they had been acquainted with the part played by micro-organisms in the universe, and the influence they had on living structures. A knowledge of both physiology and pathology was indispensable for those who would practise medicine, but to regard pathology as a mere adjunct to medicine was to take a narrow and erroneous view of the processes of Nature. It was on this ground that Sir Henry Acland so persistently advocated the necessity for instituting a department of general and comparative pathology, a view fully shared in by the present Regius Professor of Medicine when he was appointed to the Chair of Physiology. As a physician he could not but regard with extreme satisfaction the addition which had been made to the opportunities afforded to their medical graduates for the acquisition of scientific knowledge, but he was far from looking upon the technical work which would be done in direct connection with medicine as the only, or indeed the main, advantage which would accrue from it. Pathology at the present time was, above all others, that section of medical science which offered the widest promise of progress, and by the original research, which under the guidance of the able head of their pathological department would there be carried on, he trusted that real advances in knowledge might be made which both directly and indirectly might benefit mankind, and that in pathology, as in the other departments of science, Oxford might hold an honourable record. The days of opposition to the study of the natural sciences in the University had, happily, long since passed away, and they were more nearly approaching the ideal the originators of the museum had before them. But yet much remained to be added before the University was equipped for, to use the words of Mr. Ruskin, "The reverent and earnest study of Nature and of man, to the glory of God, to the better teaching of the future, to the benefit of our country, and to the good of all mankind."

Professor Sims Woodhead, in adding his congratulations to those already offered, said that the feelings that prompted his congratulations were not unmixed with envy that his friend Dr. Ritchie had been able to complete so well and so quickly—and he might add so economically—a splendid laboratory in which to carry on the work of his department. It was a matter of no small pride to him that he belonged to a school in which had been trained three men who had been most active in bringing about the erection of this laboratory, Sir John Burdon-Sanderson, Professor Arthur Thomson, and Dr. James Ritchie, all of whom had brought south with them some of the traditions of the Edinburgh school, and he knew that their pride in this work was great, hardly so great, however, as would have been that of the late Regius Professor, Sir Henry Acland, to whom it would have been a source of immense satisfaction to see one of the dreams of his lifetime so abundantly fulfilled. After referring to the fact that the first Chair of Pathology in the United Kingdom was that founded in Edinburgh in 1831, he remarked that it was singularly appropriate that such a laboratory as that just completed should be opened on Virchow's 80th birthday. Not only was Virchow the first to insist that "pathology is merely a branch of biology and that were its purely medical interest to disappear to-morrow it would still remain worthy of keen and assiduous cultivation," but he was also the first to insist that laboratories should be founded in which the study of pathology might be carried on. The work done in these laboratories had given renewed vigour to the study of these subjects, and Virchow with his applications of the cellular theory to pathology had done much to undermine those pessimistic theories of medicine which the Vienna School of morbid anatomists, ignoring the processes and seeing only the results, had maintained. It was with real pride and great pleasure that he read a telegram of congratulation that had been sent by the Vice-Chancellor and those in authority in the University and Medical School to Professor Virchow, congratulating and thanking him on this the celebration of his 80th birthday. No greater tribute to his work could be offered by the Oxford School than the erection of the beautiful laboratories they had seen that afternoon. It was evident from the accommodation provided that they considered that pathology was a many-sided subject—for his own part he considered that it was the most interesting and perhaps the most useful of all branches of biology, as the aspects under which disease manifested itself in the different actions and reactions of the cells and tissues of the body were infinitely interesting and varied. Really good accommodation had been provided for the study of morbid anatomy and morbid histology—subjects which were too frequently decried. It was necessary for the student to pass through the same stages of development as those that pathology itself had undergone, and he must certainly understand that the basis, or, perhaps he should say, the finished products of disease before he could gain an adequate idea of the relation of altered structure to altered function. This necessary training should not be passed over lightly. For experimental pathology, too, which offered them means of controlling some of the factors in disease facilities were offered. It had further been remembered that there were certain factors in disease which at present they were unable to imitate or control, and that however much they might learn from experimental work, it was always necessary to come back to the actual processes of disease as presented in animals or in the hospital. Comparative pathology, therefore, was to receive its due in this laboratory, whilst bacteriology, with all the fascinating questions relating thereto, was to receive its full share of attention. It was only when they came to consider how intimately associated were these various branches of pathology that they appreciated Virchow's epoch-making work. Cellular pathology and bacteriology could no more be dissociated than could morbid anatomy and histology and pathological physiology, whilst even the researches of the last ten years dealing with immunity all depended on the relations of cells to special stimulants. Although the cells economised or distributed their work by means of their secretions, even the new theories of the actions of the toxins and antitoxins were intimately bound up with the reactions of the cells to specific stimulants. He was glad to hear that the Radcliffe Infirmary was so closely associated with the department of pathology in the University. It was now universally recognised that the best medical schools must be associated with the universities; further, no medical school could be complete without a hospital. He did not wish in any degree to magnify or to overestimate the amount and value of the work that could be done in a university medical school to which was attached a small hospital; but he felt that in Cambridge, where they were much in the same position as they were in Oxford, there was work to be done for and by their own men which could be as well, or perhaps better, done than it could be in the large hospital schools. Many of these schools had excellent path-

ological laboratories and were doing splendid pathological work, but he maintained that, although neither Oxford nor Cambridge could offer the magnificent clinical opportunities and the enormous amount of pathological material that was so excellently managed in some of the London schools, the older universities were still able to prepare their men to utilise to the full these opportunities. They could instil into them the principles of pathology, and train them in methods of observation and work perhaps even better than it could be done in the rush of the London schools, where there was so much of clinical interest to the senior student, indeed, such a wealth of material that it might distract the junior student from the minute and careful study of the elements of his work. Would it not be to the advantage of the undergraduates that they should in university laboratories and in the smaller hospitals have a good foundation laid on which they might in larger hospitals build a solid and enduring superstructure? There could be no better place for the encouragement of the various branches of pathology than a university. In Oxford they now had their workshop, but they had something more, they had the men to work in it, men already trained in power of observation, in scientific accuracy, in logical methods of thought, and in those broader philosophical systems which enabled a man to classify his facts and utilise them as material for scientific deduction in his study of pathology and medicine. Thanks to such laboratories as the one in which they were assembled, medicine was passing from the phase of empiric practice to the clearer region of scientific method. Oxford had long had its teachers and its pupils: now she had a workshop in which these men might work, and they might now expect even more and better pathological work from the Oxford School than in the preceding period, during which they had been so active. In concluding, he ventured on behalf of the Cambridge Medical School, and also of those members of the Scottish Universities present, to offer to Oxford their hearty congratulations on what had already been achieved by her great medical teachers, and their best wishes for the extension and development of her active school of pathology.

The Regius Professor of Medicine (Sir J. Burdon-Sanderson), in moving a vote of thanks to the Vice-Chancellor for presiding, said it was a happy augury that the Vice-Chancellor was a lineal descendant of that Dr. Monro to whose teaching the founding of the great medical school of Edinburgh in the middle of the eighteenth century was largely due.

The Master of Lincoln College seconded the motion, and expressed the pleasure with which he and the other members of the University not belonging to the medical faculty had seen this last addition to its resources.

The Vice-Chancellor, in briefly acknowledging the compliment, said that he was glad to find that the memory of his great-great-grandfather was still green.

## NOTES ON THE REORGANISATION OF THE ARMY MEDICAL SERVICE.

By A.M.S.

*Advisory Board.*—There is a looseness in the wording of this paragraph, and it is doubtful if the Committee were aware that surgeon-generals are officers of the Army Medical Service, but not of the Royal Army Medical Corps. It would appear that the two army medical officers who may be appointed to the Advisory Board must not hold a higher rank than that of colonel. Thus Colonel J. L. Notter, late Professor of Hygiene at Netley, would be excluded on attaining his next step of rank now due, while other surgeon-generals, all specially selected and possessing wide knowledge of tropical disease, would likewise be excluded.

*Appointment of Civil Members.*—The civilian physicians and surgeons are required to hold or have recently held a post on the acting staff of a leading civil hospital. It is presumed, therefore, that they are in the enjoyment of lucrative practices. It is apparently expected of them that for £200 a year they will devote much time to the public service of their country. It is not surprising that Sir William Thomson enters a protest. While performing duties beyond a radius of four miles from Charing Cross the civil members will receive, in addition to their salary, out-of-pocket expenses. £1 a day railway and cab fares is the usual rate allowed.

*Duties.*—The nature of the work is defined and embraces practically the consideration of army medical matters in peace and war throughout the Empire. It is not made clear in Paragraph 7 if the Advisory Board is to undertake the duties hitherto performed by the Mobilisation Committee, the Army Sanitary Committee, the Central British Red Cross Committee, and the Medical Promotion Board. All of these have representatives from the medical branch of the War Office. The Advisory Board will consider all plans for new hospitals and upon standard plans for barracks and standing camps which may be submitted. Submitted by whom? By the Inspector-General of Fortifications or Army Sanitary Committee? A report by the Advisory Board is to be submitted to the Secretary of State, but the Secretary of State is not an expert on plans, and naturally he will refer the subject to his advisers. Buildings and sites for camps are matters pertaining to the Quartermaster-General's Department and Fortification Branch, but the Quartermaster-General is also *ex officio* President of the Army Sanitary Committee, and he may already have given approval to the plans submitted. The Quartermaster-General and Inspector-General of Fortifications will therefore act, first, as pleaders, and, secondly, as judges.

The annual inspection of each of the military hospitals by a subcommittee, consisting of at least one military and one civilian member, forms part of the duties. It is well that the civil member should clearly understand what he is about to undertake. In the various military districts in the United Kingdom there are 138 military hospitals, ranging from Colchester and Cork to Inverness. At the annual inspection of hospitals in the North-Western District the Principal Medical Officer used to spend more than half his days on the railway; that record is likely to be beaten by some of the civilian members of the Advisory Board.

It may, no doubt, be advantageous in some instances to obtain the views of eminent civilians on army medical matters, although their previous training and professional knowledge as experts on disease will not help greatly to good administration. The main advantages which the Advisory Board will possess over the Director-General acting alone will be that its opinion as influencing public opinion is not so likely to be disregarded by the War Office in the future as it has been too often the case in the past, when the Director-General's opinion was over-ridden. Against that advantage is the delay that must occur in the performance of the current work of the office. There will be numerous instances when the Director-General will be compelled to act on his own initiative, without awaiting the consent of his colleagues on the Board.

It has long been advocated by the medical profession that the Royal Army Medical Corps should be constituted on the lines of the Royal Engineers. Mr. Brodrick knocks that idea on the head. I wonder what would be said by Royal Engineer officers were the Inspector-General of Fortifications ordered to be associated with an advisory board of eminent civil engineers? Yet if public opinion counts for anything the necessity for such a course is fully as great for the Royal Engineers as it is for the Army Medical Service.

The present war has put an unprecedented strain upon all branches of the Army, but criticism has been directed mainly to the medical side. The evidence given before the South African Hospitals Commission was not wanting in detail, and in the voluminous report published there is not a single instance of maladministration recorded against the late Director-General or the officers associated with him. Any shortcomings were proved to be due to the want of appreciation by the War Office officials of the advice given them. Mr. Brodrick is an adroit politician, and no one knows better the effect of drawing a red herring across the scent.

*Examinations for Promotion.*—As regards the examination for promotion there appears to be a new departure intended. The Board of Examiners, on which the English, Scotch, and Irish schools were represented, were employed at the entrance examination, but not for promotion. For the latter a London physician and a London surgeon examined on their particular subjects, while questions regarding regulations, interior

economy, military law, etc., were framed by experienced Army medical officers.

*Admission to the Service.*—The proposed regulations governing admissions into the service indicate little change, save that importance will be given to a confidential report from the dean or other authority of a medical school. In the large schools, such as the Edinburgh School, such reports are likely to be extremely vague as regards conduct. The giving of commissions to civil surgeons over age who have served with troops in the field is a custom which existed during the Crimean war, and has been exercised in many instances during the Boer war, but without examination. A surgeon who has proved his worth on active service might well have been excused the necessity of an examination and approval of the Advisory Board. The conditions destroy the benefits intended. The power formerly given to the governing bodies of medical schools to nominate candidates has apparently been withdrawn. That power was never exercised save in the case of a dearth of candidates. The nominees have been reported by the Netley professors as quite equal professionally to the average candidate received by open competition, and superior socially. It would perhaps have been more expedient to have awaited the success of the present scheme before cutting off a supply which in the present juncture has proved exceedingly useful.

*Army Medical School.*—The course of instruction at Netley for a surgeon on probation for the Home and for the Indian Service was the same and lasted four months; in future it will be for two months only for the King's service. It remains to be seen whether or not the India Office is prepared to curtail the length of the course at Netley for their candidates, if not the professors will be in placed in the awkward position of having to deliver a complete course of lectures to one set of candidates and a modified course to another. Such an arrangement at best will be exceedingly unsatisfactory and was only had recourse to during this war through the urgent need of *personnel*.

*Home Surgeons and Home Physicians.*—Certain inducements to enter the service are held out to men whilst holding a resident appointment in a recognised civil hospital, but here again, like King Charles's head, the examination appears. House surgeons and physicians have neither the time nor inclination to appear for examinations, and as most of them have been prizemen of their schools a recommendation from their hospitals should be considered as a sufficient guarantee of their worth.

*Attachment to Units.*—The paragraphs having reference to the attachment of lieutenants to units gives no information regarding the period of attachment, nor is it stated whether or not the unit is stationed at home or abroad, but, judging by paragraphs 29 and 30, it would appear that they will remain at home for at least three years and six months. In India and the Colonies there are many medical officers whose tour of foreign service has expired, and who require relief. It has been possible during the last two years by hurrying lieutenants through their training to send them abroad to meet urgent demands. That source of supply will cease. India must get her proportion. Where are they to come from? There is, I fear, little hope of soon being able to spare officers from South Africa, and after the hard work and privation incidental to war it is not probable that many will be physically fit to begin a fresh tour of service in India.

*Reserve.*—It is in accordance with all experience that an officer having once joined the Service intends to make it his future career, and if his services prove satisfactory he will be permitted by the scheme to do so, or be given permission to retire on engaging for a period of seven years in the reserve, receiving £25 a year while so serving. There is nothing to show that he will be permitted to resign his commission voluntarily. That is a condition which I think few will be willing to accept. Liability to recall will exercise a serious effect upon individuals. If they purchase a practice or enter into partnership £25 a year is a small sum to receive for undergoing the risk of the forfeiture of the money invested. During the present war there have been many instances of civil surgeons who, out of a sense of patriotism, volunteered their services, but subsequently begged to cancel their engagements on account of the pecuniary sacrifices they were making. The proposed regulation is likely to prove injurious to the lieutenant and certain to be costly to the State without any compensating advantage whatever. For three years and six months while he is preparing for his examination for promotion his services cannot be utilised generally. He will continue to be practically a probationer, while his seniors will be grilling in the plains of India or trekking in South Africa, without a chance of escape except through sickness. It is presumed, also, that the rules will apply to all lieutenants now serving, many of whom are abroad. If so, they will have to be recalled without the possibility of being relieved by others.

*Examination for Major.*—The examination for promotion to the rank of major will be attended by difficulties whenever the officer happens to be abroad, where facilities do not exist for preparation. If he be rejected twice he will be compulsorily retired, apparently without any gratuity, but it seems he can retire with a gratuity if he prefers to do so without examination.

*India.*—Previous service in India is no longer required for promotion to the rank of colonel and surgeon-general. This is an unfortunate change introduced apparently to benefit the medical officers of the Guards.

*Conclusion.*—From the foregoing, it is manifest that a medical officer's success in life will depend upon the quality of the examination he is capable of passing. The period given him to attend civil hospitals is a boon, but anyone with experience of a system of examinations will condemn it as harassing in the highest degree, moreover it will prove useless for the purpose intended, namely, to make the officer a better practitioner. When a man's future depends upon the successful accomplishment of any particular work, he naturally will turn to the person who can help him the best, and as an aid to pass an examination he will not be found in the hospitals, but with the grinder, besides the capacity to answer questions well is but a poor test of efficiency in a public service.

The scheme as drawn out is crude in the extreme, and almost every paragraph shows the hand of the amateur in administration. The one thing, the most urgent, and upon which every improvement, every reform hangs, is an increase of the *personnel* of the corps, and that is not referred to. Increase of pay will not compensate for a starved service.

## CONFERENCE ON WATER SUPPLIES AND RIVER POLLUTION.

A Conference on Water Supplies and River Pollution, arranged by the Sanitary Institute, was opened at St. Andrew's Hall, London, W., on Wednesday, October 16th, when the chair was taken by Professor H. Robinson, M.Inst.C.E., in the absence of Sir Alexander Binnie, who was unable to be present owing to a domestic bereavement. There was a numerous attendance, including delegates of many sanitary authorities. A series of papers intended to serve as introductions to the discussions had been printed beforehand in a pamphlet, and were taken as read.

### Watershed Areas.

Mr. J. Parry, M.Inst.C.E., contributed a paper on the protection of watersheds, in which he described the two methods of procedure which had been adopted, on the one hand the sanitary regulation of watersheds by statutory by-laws, and on the other the acquisition of the watersheds by the water authorities, and discussed their relative advantages. The conclusion at which he arrived was that if water supplies were to be effectually protected against all the risks of pollution prejudicial to health which modern science had revealed, the sources of supply, including the entire area over which rain was collected, must be owned by the authority responsible for the waterworks, and be managed solely in the interests of the water consumers. With regard to the question how the drainage areas thus acquired could be profitably utilised consistently with the maintenance of the high standard of purity, he expressed the opinion that there were many uses to which such lands could be applied, as, for example, sheep-farming, plantations, and deer parks, that would produce some return for the outlay incurred in the purchase, and at the same time would satisfy every reasonable demand as to purity.

### Protection of Underground Water Supplies.

Dr. E. C. Seaton contributed a paper on the protection of underground sources of public water supply in which he discussed the matter under two heads—(1) protection against waste or abstraction, (2) protection against local contamination. He gave an instance from the county of Surrey, in which it had been shown that all the water naturally belonging to the locality was required within the county, and expressed the opinion that a comprehensive scheme for dealing systematically with the interests involved and for placing limits under certain conditions on the rights of landowners in underground water was required. Such a scheme was contained in the Water Authorities Bill of the County Councils Association which provided for the constitution of representative "water protection authorities," with powers to promote as well as oppose Bills, to levy rates, and generally to protect all sources of water supply from waste (as in the case of colliery proprietors) or from abstraction without the consent of the District Water Authority. With regard to local contamination, he observed that the experiences of Maidstone and Worthing had proved that underground water of the highest purity might become suddenly fouled and would then be more dangerous than water exposed to the constantly purifying agencies of sunlight and fresh air with accompanying natural processes. The precise nature and the extent of risk incurred was peculiarly insusceptible of proof. The wasting cesspit in a water-bearing stratum was a "potential" rather than an "actual" nuisance. It could not, of course, be demonstrated to be a nuisance in the same way, for example, as the foul basement drain of a house. He was himself inclined to think that the term "nuisance dangerous or injurious to the public health" should be so extended as definitely and certainly to include wasting cesspits and other unsafe methods of sewage disposal close to sources of public water supply.

Mr. Clayton Beadle, F.C.S., wrote on the rights of underground pumping in relation to the flow of neighbouring streams, and illustrated his remarks by the river Cray, the flow of which has been seriously diminished by underground pumping.

### Rainfall and Population of England and Wales.

Dr. Hugh Robert Mill, of the British Rainfall Organisation, contributed an elaborate paper on the Rainfall and Population of England and Wales in relation to Water Supplies. He pointed out that the average yearly rainfall of the whole of England and Wales was probably about 33 or 34 inches, figures which would appear to show that the country received rain enough to satisfy all ordinary demands ever likely to be made upon it. Averages were, however, deceitful, since average rainfall years rarely occurred, and it must also be remembered that the demand for water was increasing much more rapidly than the mere increase in population would suggest, and that the increase in population acted by restricting the available areas of uncontaminated gathering grounds as well as by the consumption of a larger amount of water. The question of the possibility of obtaining supplies was not in doubt at all, but in many localities the cost of keeping pace with the requirements would undoubtedly be great, and might in certain circumstances become prohibitive. At present there remained nearly 4,000 square miles of totally uninhabited land in large connected areas in England and Wales, of which 1,400 square miles were found in the mountains of Wales, 1,400 in the higher moorlands of the Pennine Chain, and 300 in the Lake District; all of these were high areas of very heavy rainfall, well adapted for use as gathering grounds. The remainder was partly high land on the chalk and limestone ranges of Southern and Eastern England, partly fen and alluvial land, all rendered useless for gathering grounds on account of permeability or low level, but often forming valuable feeders for springs and deep wells. For the majority of the villages in the dry parts of England, where most of the village population of the country was found, the direct collection of rain would, he believed, solve a pressing problem. It would not be difficult to adapt the roofs of churches also for this purpose, and it might even be worth while to extend slated house roofs over back yards in order to increase the area.

### County Organisation.

Dr. Alfred Greenwood, M.O.H. Crewe, wrote on the desirability of obtaining reports on the water supply of each county, showing the characteristics of the existing supplies and the future requirements, information as to rainfall, character of subsoil, and contour of hills. As it was most important to note at what time the greatest fall occurred it would be necessary to obtain monthly records, since, for example, the greatest rainfall might occur in the early autumn when the ground was absorbent and evaporation high. From these reports it would be possible to obtain clear indications of those districts in which the water supply was deficient, those in which there was special liability to contamination, the available supply, and the sources from which it could be obtained, and the improvements for the protection of the water supply which were required. The reports would also afford materials for conclusions as to the situations in which it would be desirable to sink deep wells.

Dr. W. Williams, M.O.H. Glamorgan County Council, contributed a paper on the rivers of Glamorganshire with remarks on the rivers of adjacent counties, in which he pointed out that the principal causes of the pollution of the rivers in the county were: (*a*) Sewage, excremental and slop sewage; (*b*) small coal, from our many collieries; and (*c*) refuse from tinplate works, consisting of vitriol and sulphate of iron (which was generally used for cleansing the plates in this county). He recommended that the Government should countenance the establishment of health laboratories where sewage effluents, manufacturers' refuse, and other materials discharged into rivers, estuaries, sea, etc., could be thoroughly examined, if and when required, and that these should be under the control of county councils.

### Water Supply of Isolated Houses, Hamlets, and Villages.

Dr. J. C. Thresh (M.O.H. Essex County Council), in a paper on water supply to isolated cottages and small groups of cottages, contended that the Public Health (Water) Act, which had been in force for over twenty years, had failed in its object of ensuring the provision of wholesome water to isolated cottages, groups of cottages, and to all newly-erected houses in districts too thinly populated to permit of a public supply. At the present time an order for closing a well could not be procured unless the medical officer of health could prove that the water was injurious to health, whereas it should be sufficient to prove that it was dangerous to health. Stringent by-laws could be adopted preventing privies or cesspools being placed within so many feet of a well or source of water supply, yet that source might be an improperly constructed well in the centre of a garden, and the privy and cesspool contents might be spread on the ground or dug in right over the well. No by-laws could be made to insist upon a well being properly built or the ground around being protected by being made impervious. Power also was required to enable authorities to sink a well in a central position, and to charge the cost on all owners within a certain radius whose tenants had not a wholesome supply. In all hamlets and villages, too small for a public supply to be laid on to each house, the sanitary authorities should provide wells or protect springs in central positions, and maintain the same at the expense of the parish. This would ensure that every aggregation of houses had within a reasonable distance an available supply of wholesome water.

Miss C. Cochrane, in a paper on village water supplies, gave instances of villages without any water supply, and mentioned one in which the water supply consisted of a single pump filled from a pond in a field usually empty in dry weather. She also drew attention to the defective supply to schools, and suggested that the Education Department should refuse to pay any grants to schools unprovided with wholesome water.

Mr. W. Whittaker, F.R.S., said that for public authorities to buy whole watersheds was a heroic financial measure. He believed that arrangements could be made by which water pollution could be stopped. In the case of a country borough it was necessary that water should be taken from the surrounding country. There should undoubtedly be some authority vested with power to deal with the waste of water. When one water authority derived its water from a particular

source it was not right to allow another authority to poach on it unless the area produced plenty of water for both. Districts should be combined and the water distributed for the benefit of the greatest number of people.

Mr. R. H. WYRILL (Swansea) said that the Swansea authorities had a weekly report of all cases of infective diseases occurring in their watershed.

Mr. J. E. BUSH (Melksham) objected that pumping stations not for the supply of water to the people, but for private profit, should deplete the streams of their usual supply. The supply of water should be in the hands of the county council, so that the output could be regulated and the distribution better managed.

Mr. W. J. BURGESS (Chairman of the Liverpool Water Committee) said that watershed areas could not be regarded as satisfactory until owned or absolutely controlled by the water authority. The position of the London water supply was not only a standing menace to the health of the greatest city in the world, but afforded less important towns an excuse for neglecting their duty. The necessity of preventing pollution would never be satisfactorily met until it was recognised as a matter of sufficient national importance to place the water supply universally under public control. Private monopolies in the supply of the most important of all necessities ought to be terminated at once and forever.

Mr. CASTLE (Garfield) spoke of the depletion of wells through the sinking of shafts, and Mr. SIDDALS (Tiverton) said that county councils should have power given them to deal with the question. At Tiverton they had perhaps water to spare, but the cry was "Dartmoor for Devon," and until their wants had been attended to no one should have the water. The shortage of water in the summer was due in many cases to the persistent draining of the uplands for the last forty years.

Mr. J. FREER (Leicestershire C.C.) said that it was most desirable that the watershed areas should be inspected, but the people in the area should have a right to see that all their water was not taken away.

Mr. F. VERNEY (L.C.C.) said much had been justly and unjustly said against the County Council. It had eight water companies to deal with and enormous vested interests to consider. Any scheme of confiscation would raise hostility impossible to overcome, but the Council had impressed on the Legislature the absolute necessity of supplying London with pure water for thirty or forty years to come. Mr. Bateman in 1863 said that there was no water area sufficient for London anywhere nearer than the mountains of Wales, and that was the belief of a great many now. London had to draw water from an area that was becoming more and more tainted every year. One reason for this was the enormous rate of increase in the population; another was higher farming, entailing the spreading of millions of tons of manure on the water-bearing area, and the filthy water procured had to be filtered. London depended on its daily health upon filtration and nothing else. A pure water supply should be insisted upon, and it should come from an area that was not tainted with millions of tons of manure.

Mr. LYONS WALCOTT (Middlesex C.C.) spoke on the need of the protection of the urban districts surrounding great towns. There was no protection for the poor people against the large water companies sinking deep wells and tapping the sources of the water and leaving the inhabitants without any water.

Dr. H. R. MILL pointed out that the inhabitants of any particular district should not claim all the rain water that fell in their neighbourhood as their own particular property. Many of the people of Devonshire and Wales left those places, and it could not be contended that all the Dartmouth and Welsh water should be exclusively reserved for those who remained.

Dr. HODGSON (Cheshire C.C.) asked whether the County Council were using all the powers that they already possessed. Any parish council could complain to the rural district council that it had not a water supply, and if the rural district council did not provide it the parish council could complain to the county council, and that body had authority to provide it. The parish council had no means of obtaining information, but the county council had power to appoint expert officials, and should direct their medical officer, their surveyor, and their analyst to prepare a record of the rainfall in the county areas.

Mr. P. GRIFFITHS said that the British Association of Waterworks Engineers had decided to collect data concerning the water supply of this country.

Dr. W. WILLIAMS (Glamorgan C.C.) said that Glamorgan had established a public county laboratory, and had recorded the chemical analysis and bacterial examination of all the public water supplies in the county for two and a-half years.

Dr. RIDEAL said that some central authority was necessary to co-ordinate and arrange the statistics.

Dr. THRESH (Essex C.C.) emphasised the necessity for power being given to public bodies to spend money on collecting information concerning the water supplies.

The meeting concluded with the passing of the following resolutions:

1. In the opinion of this Congress the purity of the water supply throughout the country can only be effectively secured by placing such supplies in the hands of representative bodies directly responsible to the consumers.

2. That it is in the interests of the kingdom at large absolutely necessary that county councils shall have large powers of supervision and control in respect of the question of water supply in their respective county areas.

3. That the Council of the Sanitary Institute be asked to urge county councils to investigate the existing condition of the water supply within their district, with especial reference to the quantity and quality of such supply, and to the real or probable contamination of the springs and wells used for potable purposes.

## THE GENERAL MEDICAL COUNCIL ELECTION.

### THE APPROACHING ELECTION OF DIRECT REPRESENTATIVES.

#### ROTHERHAM.

SPEECHES BY MR. VICTOR HORSLEY AND DR. WOODCOCK.

THE Rotherham and District Medical Guild was formed early in the year to protect the interests of medical men as a body. The first matter to which attention was given was the insufficient payments made under the club system. It was unanimously agreed that the annual fee should be raised to 5s. The Guild holds a dinner from time to time, when guests are invited, and in view of the General Medical Council election Dr. Woodcock and Mr. Victor Horsley were the guests of the Secretary, Dr. Judge Baldwin, on Tuesday evening last, October 15th.

Dr. GARRARD, Vice-President of the Guild, was in the chair, and after the toast of "The King" had been duly honoured, proposed "The Health of the Visitors, Dr. Woodcock, of Manchester, and Mr. Victor Horsley, of London." Mr. Victor Horsley was one of the few leaders of the profession who had taken a real interest in the general body of practitioners; all knew also how much Dr. Woodcock had interested himself in the welfare of the medical profession. Mr. Garrard said he would also give "The Health of Dr. Weatherbe," one of their members, who had recently returned from doing eminent service in South Africa. He then called upon Mr. Victor Horsley.

ADDRESS BY MR. VICTOR HORSLEY.

Mr. VICTOR HORSLEY, in responding, said it gave him very great pleasure to accept the invitation to come to that extremely harmonious meeting, the more so because at the present juncture medical politics were in a certain degree of turmoil, and because, also, there was a forthcoming election to the General Medical Council, which should, he thought, be made the occasion of securing, if possible, more reforms than they had been able to obtain during the last three years. It was an astounding thing to him, when they knew the difficulties which surrounded men in practice, how impossible it was to grasp the fact that the public would do nothing for them as a profession. Those of them who had been obliged to go as members of deputations to public offices—to the Home Office and to the law officers of the Crown—during the last five years had had that driven into their minds in the most painful manner. The representatives of the Government accepted the gratuitous work of the profession; they accepted from the medical profession the sanitary work executed by them—which after all was a direct diminution of their revenues, as it were, and yet in return they neglected them; and that neglect, as they had seen recently in the House of

Commons, was occasionally varied by insult. He took it when Sir John Gorst said he never read the minutes of the General Medical Council that was an insult which would be offered to no other profession than theirs. Such a state of things had always been a matter of astonishment to him, but he thought he had found out the reason. The reason was that, as a rule, when medical men were gathered together and when an address was given to them, they were always told that their profession was a noble one—which they would all agree to—but that it was a noble thing to be patient and to suffer. He did not believe in that at all. It seemed to him that they were very much in the position of the extremely moral girl at the tea party, neglected by her elders, who was at last heard to say, "Here am I, asking for nothing and getting nothing." The medical profession was in that position. Its members asked for nothing, and therefore they got nothing.

*A New Medical Act.*

If that were so, naturally the question they had to consider was what ought they to ask for. Well, as regarded the central Government, undoubtedly if they were to remove the difficulties which surrounded them and the grievances which hampered them they must ask for a new Medical Act; and, in order to obtain that, they had got to satisfy the laity that such a thing was necessary.

*Contract Practice and Medical Aid Societies.*

There were innumerable points on which they came into direct contact with the laity, and perhaps the one which had attracted the most attention, and the one on which the General Medical Council was supposed to exercise a beneficial effect, was that of contract practice. There were two questions involved in that: First, the question of remuneration; and the feeling in the profession, of course, was that remuneration should not remain as it had been during the last twenty-five years, but should move in accordance with the greater wealth of the nation. The second subject was medical aid. Two years ago Dr. Bruce bethought himself of a plan which was to smooth over all difficulties. This was called a Conciliation Board, and when that idea was raised there was an arrangement made whereby the officers of the Friendly Societies should consult with the members of the General Medical Council on the subject of remuneration. The discussion between the two parties, however, brought out the fact perfectly clearly that the Friendly Societies would listen to no arguments respecting the wage limit. Under those circumstances it was clear that they were brought face to face with a deadlock, and that until the Friendly Societies altered their attitude on that subject they would be giving themselves away and giving the whole profession away if they entered such a Conciliation Board. He had said that before, and all sorts of epithets had been applied to him for saying it; but the contention that Friendly Societies had adopted that attitude had been proved up to the hilt. He submitted that they could not have a Conciliation Board on medical aid. Medical Aid literally meant nothing more than that the public should exploit the profession, and it was not a question of diminished remuneration, of a diminished sum to be paid per head for patients, but the absolute employment of a professional man as the servant of a company, the company being at liberty to make a profit out of his earnings. As to the degradation to the profession involved in Medical Aid, there was only one opinion; but when they came to ask the General Medical Council to issue an edict that everyone who took a Medical Aid appointment should be guilty of unprofessional conduct, they were asking too much, and for this reason, that the General Medical Council under the Medical Acts had no statutory power to pass edicts of that kind. It was a common impression throughout the profession that the General Medical Council had such a power, but it had not. All the Council could do was to adjudicate upon any case brought before it, and the experience of the last year had shown that if only practitioners would bring concrete cases before the Council, that broke up the whole business at once. He asked them to regard the question of contract price as being distinct from that of Medical Aid. Then a final word with respect to contract practice. He knew the difficulties which had prevailed in the Rotherham district, and he believed the matter had been settled as it had been settled also by by the practitioners of Eastbourne. At Eastbourne, where they were confronted with the same evil practically, the members of the profession united and made their own arrangements. They formed a club for the whole town; persons admitted to the club called in their own medical men, but at the remuneration agreed upon through the medium of the club. The Friendly Societies were entirely ignored; no man took office under them. That was practically the Eastbourne scheme, and in a town like Eastbourne, which was isolated and had not large villages in the neighbourhood, it was easy to carry out a scheme of that sort. At Rotherham they had adopted another plan, and the only possible way in which their combination could be attempted to be upset was by a Medical Aid invasion, for which they had the remedy in their own hands.

*The Approaching Election of Direct Representatives.*

Mr. Horsley said that when he was elected a direct representative on the General Medical Council it was at a by-election. At that time he told the profession in an address he issued that when the quinquennial election came round again he would resign (in his last year of office) in order to save the profession the expense and trouble of another election a year later. He, however, had received legal advice that morning that he could not fulfil his promise. The position was one he must explain fully. The Medical Acts were very queer examples of legislation, but the Act of 1886, which was supposed to be an amending Act, was perhaps the most extraordinary. It arranged, indeed, that if a man was elected at the quinquennial election he should be at liberty to present himself for re-election; but if a man resigned his seat for any reason whatever, legal or otherwise, *ipso facto* he became as though he were dead, and some other person should be elected in his place; so that he was advised that if he did resign now, and supposing he was elected, any successful candidate could bring an action against him to cause him to give up his seat, and he could not resist such action. In other words, if he resigned he would be ineligible, and so he must hold on to the seat until the termination of the period for which he was elected. The position had caused him quite as much chagrin as if he had broken his pledge, and it was annoying to him from another point of view. He had always thought the representation of the Council should be topographical, and that there should be a representive for the North of England, a representative for the South-East, and a representative for the South-West and Wales. In that way they would approach what would be something more resembling Parliamentary representation; and he had hoped, if the three seats had been vacant this year, to have come before them as candidate for the South-East of England. He hoped very much that Dr. Woodcock for the North and Mr. Jackson, of Plymouth, as candidate for the West would be elected. Dr. Woodcock, as Chairman of the Parliamentary Bills Committee of the British Medical Association, had an experience of public business which was not shared by any other man in the profession. It would be a pity if the men in the North could not agree upon him. His election would be more productive of reform within the Council than any other they could think of. They had got to reflect what the conditions were to which they sent a man when they elected him to the Council. They put him into a room containing thirty-one men, the vast majority of whom went there to represent the narrow interests of corporate bodies, and, unless they could secure that their direct representative had a knowledge of public business, they would find that everything he said was received with laughter or treated with contempt. That was undoubtedly what had occurred in the past, and he hoped by his election they would find there would be an improvement in the way in which the direct representatives were received and listened to in the General Medical Council. He would say one word with regard to what they were going to require their direct representatives to do at the Council. We would say at once that the great point they should strive for, namely, an amendment of the Medical Acts, could not be got from any General Medical Council if the representatives of the corporate bodies felt that the existence of the institutions they represented was at

stake the moment the reform of the Medical Acts was mentioned. He thought their only hope of immediate improvement was in the British Medical Association. If they could make the Association thoroughly representative of the opinions of its members then it would become an instrument whereby they could compel the Government to listen to them and could compel the General Medical Council to adopt their draft Bill. But he was sure it was useless to think of persuading the General Medical Council to adopt that draft Bill. The members could not or would not reform, and that being so the profession would have to devote its best energies to sending their representatives to the Council, and in reforming the British Medical Association to make it an Association for the benefit of its members. He would ask them to exercise their common sense, and say how were they, except by combination, to obtain anything they wanted. He believed it was Sir Frank Lockwood who once said, "The medical profession, if they would only combine, could do anything with the Government, but as they never do combine the Government don't care *that* for them."

Address by Dr. Woodcock.

Dr. Woodcock said with regard to the General Medical Council it was a body which very much required reforming, but there was this difficulty to meet—that reform should begin at home. The constitution of the Council required reforming very much, and so also did its powers. The Act of 1858, which constituted the General Medical Council, was merely a step in the direction in which they ought to go, and one of its most glaring defects was the viciousness of the principles on which all members of the Council were chosen. But really that was not to be wondered at, as the Council was created as a sort of escape out of a difficulty: it was not representative of the profession, but of the corporations and universities: so that they were in this position—that they had a General Medical Council consisting of some five Crown nominees, 20 gentlemen elected by small coteries, and 5 direct representatives, representing more than 30,000 members of the medical profession. That was not a satisfactory state of things. More than sixty years ago, when the founder of the *Lancet* was agitating for medical reform, he laid down three things that were required. One was some way of dealing with quacks, another was punishment for individuals who practised without qualifications, and the third was the one-portal system. To-day they found quackery as rampant as ever. In the pages of the newspapers they found all sorts of advertisements imposing upon the credulity of the ignorant: unqualified men could still practise, because the present law only took cognisance of the assumption of titles; and there were still twenty gates entering into the avenue of professional life; so that really they had not achieved anything in the way they ought to have done. That was due entirely to the indifference and apathy of the profession. He was glad to see at Rotherham, a comparatively small place, the evident interest taken in those things; but in other places there was not that interest. At the last election of direct representatives on the General Medical Council not more than half the constituency took the trouble to vote. How they were going to get anything like interest excited in the General Medical Council as long as there was no interest on the part of the profession he did not know. There was nothing more requisite than to excite some sort of enthusiasm in the ranks of the profession. Without it neither the General Medical Council nor the Government would come and ask them what they wanted; they would have to knock at the door from outside. What Mr. Horsley had said as to the opinion of the late Sir Frank Lockwood was quite true. He said to him (Dr. Woodcock) in his good-tempered way, "Why don't you fellows agree? If you agreed to any extent whatever there is no Government in the world could stand against you. Don't you see what the artisans have done? Why cannot you agree?" The difficulty at present was to get the profession agreed on any one point. It looked as if they wanted to hold on to their glorious reputation—"See how the doctors differ!" The General Medical Council, though it had no legislative functions, had administrative functions, which might be administered either in a timid or in a courageous manner, and it never exercised its disciplinary powers until they got direct representatives. It never struck the Council till then that it had anything to do with defending or protecting the interests of the profession. Even Sir Samuel Wilks himself said just before the last election, "The General Medical Council has nothing to do with the profession." But the profession ought to have something to do with the General Medical Council. They had to find the funds for the Council, and they had a right to some sort of protection.

*The Proposed Conciliation Board.*

The Friendly Societies would not entertain the question of a wage limit. When that was the case what could the Board do? Besides, one General Conciliation Board could effect very little. The work would have to be done by local organisations, owing to the conditions of practice being so different in the north and south and east and west. In the north the wage earner might have 40s.; in the south 24s.

*The Midwives Question.*

There was another question to which he wished to allude. That was the burning question of the midwives. What was the history of his connection with it? When the first Midwives Bill was introduced into the House of Commons it appeared to him as if it was a direct attempt to create an inferior order of practitioners, and he strongly opposed it. The opponents of the measure achieved a victory, but they did not make a conquest, and there was all the difference between the two. What they had got to do was to make a conquest. Their next step, after they had won, was to appoint a committee to include men on the opposite side, and they then entered into the business in a conciliatory spirit; it was a sort of Conciliation Board. They drafted a Bill and went to London to see members of Parliament. There was then in the Cabinet a gentlemen whom he could call his friend, and he said to him (Dr. Woodcock) "What are you going to do? Some legislation is bound to be effected. Not only are there a great number of legal men in favour of the course proposed, but there are people in distinguished social positions who are aiding and abetting them." His friend further said he did not know it was men in good positions who were opposed to the proposed legislation: he thought it was only a lot of poor men who were opposing it on selfish grounds. Dr. Woodcock said that he had felt that last remark strongly, and he told his friend that their action was in the interest of the public as well as the profession, and that they believed it was a dangerous business. Well, as he had said, a Bill was drafted which was sent to the Branches of the British Medical Association; and a large proportion of the Branches of the Association reported in its favour. Then it came back, and just as things would happen, the Council began to improve it. They improved it in such a way that they (the originators) did not approve of it. The Bill was intended not to initiate legislation, but to be brought up as an alternative scheme, and he still maintained that if it could be passed it would be beneficial. He was in favour of legislation on the lines proposed, which were that a woman should be not only a midwife but a nurse; that her functions should be limited, that she should be obliged to call in medical aid under certain conditions, and that she should be penalised if she did not do so. That, he thought, was as far as the profession could expect to get, and it was as little as would satisfy the public demand. In his opinion the Government ought to appoint a Board responsible for the proper examination and certification of these women. It was no good talking about the creation of an inferior order of practitioners; they had not to be created; they existed. What was necessary was that there should be some general agreement on the question. Then he believed that if the General Medical Council saw that the profession was in any way agreed upon the question, and if they saw there was any sort of enthusiasm behind the direct representatives they would give a more attentive hearing to the demands of the profession. Parliament also would be inclined to listen to the demands of a profession whose members were amongst the most patriotic, unselfish, and useful servants of the King.

The Army Medical Corps in South Africa.

Dr. Wetherbe, who replied to the toast of his health, said they had learned many lessons from the war, and one of the

most important was the disgraceful state of the Army Medical Corps. The men were as good men as they could get anywhere, professionally or socially, but they were underpaid, and the Corps was undermanned. The authorities expected one man to do five men's work. Fortunately the civil surgeons who volunteered for the war had learned the true state of affairs, and when the war was over there would have to be reform in the Army Medical Corps.

LIVERPOOL.

Our Liverpool correspondent writes:—Arrangements have been made that the candidates at the forthcoming election to the General Medical Council shall address the members of the medical profession in Liverpool at the Medical Club, 64, Mount Pleasant. The following are the dates which have been fixed:—

Mr. Victor Horsley, Tuesday, October 22nd.

Mr. George Brown and Mr. George Jackson, Friday, October 25th.

Dr. Woodcock, Tuesday, October 29th.

The chair will be taken each evening at 8.45.

MANCHESTER.

The Council of the Manchester Medical Guild are inviting Mr. Horsley and Dr. Woodcock to attend a meeting at the Palatine Hotel, Manchester, on Wednesday next at an hour to be fixed, and Mr. George Brown and Mr. George Jackson to a meeting on the following day at 4 P.M. Dr. Glover has been asked to attend either meeting as he may prefer. We are asked to state that a meeting may be arranged for Mr. Brown and Mr. Jackson at Ashton-under-Lyne on Thursday.

NOTTINGHAM.

We are informed that at the invitation of the Midland Medical Union, Mr. George Brown and Mr. George Jackson, candidates for election as Direct Representatives, will address a meeting of the members of the Union at the Masonic Hall, Nottingham, on Wednesday next, at 3.30 P.M.

PLYMOUTH.

Mr. George Brown and Mr. George Jackson are also announced to address a meeting at Plymouth this day (October 19th), convened by the Devon and Cornwall Branch of the Incorporated Medical Practitioners' Association.

SCOTLAND.

Our Edinburgh correspondent informs us by telegraph that Dr. Norman Walker has been invited, in the interests of the general practitioners of Scotland, to become a candidate at the election of a direct representative for Scotland on the General Medical Council. The acceptance of this invitation would no doubt entail a contest.

## THE PREVENTION OF TUBERCULOSIS.

YORKSHIRE.

The West Riding County Council has decided to await the report of the Royal Commission before taking any further action for the promotion of legislation to confer upon local authorities further powers for securing the purity of the milk supply. In the meantime they will take up the question of the establishment and maintenance of sanatoria for consumptives by county councils, and the legislation which may be needed to give the necessary powers to the councils to enable them to carry out this object.

THE PERTH CONSUMPTION HOSPITAL.

The generosity of Sir Robert and Lady Pullar in providing, at a cost of £8,000, a hospital or sanatorium for consumptives for Perth was noted in the British Medical Journal some months ago. It was then stated that bazaars would be organised throughout the county to raise £10,000 which is required to endow the hospital. The success of the scheme has been already assured. Bazaars at Crieff and at Comrie each collected £500, and at Doune £900 was raised. On October 3rd Perth held its bazaar in aid of the endowment fund, and added £3,000 to the amounts already collected.

# ASSOCIATION INTELLIGENCE.

## COUNCIL.

### NOTICE OF MEETING.

A Meeting of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 23rd day of October, at 2 o'clock in the afternoon.

The following Committees will also meet:—

*Tuesday, October 22nd.*—2.0 P.M. Premises and Library Committee.—3.0 P.M. Medical Charities Committee.—3.30 P.M. General Practitioners and Ethical Committee.—4.0 P.M. Arrangement Committee. *Wednesday, October 23rd.*—10.0 A.M. Journal and Finance Committee.—5.0 P.M. Parliamentary Bills Committee.

Oct. 15th, 1901. FRANCIS FOWKE, *General Secretary.*

## BRANCH MEETINGS TO BE HELD.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The autumn meeting of this Branch will be held on Friday, October 25th, at 3.15 P.M., in the Royal Hotel, Stirling. Dr. Crawford Renton will read a paper on Abdominal Section for the Relief of Pain. Members desiring to show cases or specimens, and candidates for election, will please communicate with the Honorary Secretary, J. E. MOORHOUSE, Gleve Avenue, Stirling.

YORKSHIRE BRANCH.—The next meeting of this Branch will be held at the Majestic Hotel, Harrogate, on Wednesday, October 23rd, at 3.30 P.M. Members intending to read papers, to propose new members of the Branch or of the Association, or to make any communication, are requested to write to the Secretary at once. The members will dine together at 6.30.—ADOLPH BRONNER, 33, Manor Row, Bradford, Honorary Secretary.

WEST SOMERSET BRANCH.—The next meeting of this Branch will be held at the Taunton and Somerset Hospital on Friday, October 25th, at 4 P.M. The chair will be taken by the President, Mr. J. P. Johnstone. After the usual business, Mr. Charles Stonham, C.M.G., F.R.C.S., Senior Surgeon to the Westminster Hospital, and late Surgeon in Charge of the Imperial Yeomanry Field Hospital in South Africa, will give an address on Some Surgical Experiences at the War. Members wishing to bring any communication before the meeting are requested to send early notice of the same to W. B. WINCKWORTH, Taunton, Honorary Secretary.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting of this District will be held at the Royal County Hospital, Guildford, on Thursday, October 24th, at 4 P.M. Dr. L. B. de Jersey, will preside. Agenda: Minutes of Guildford meeting. To decide where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. The following papers have been promised: Dr. H. P. Hawkins (London): Mucous Colitis and Spastic Constipation. Dr. Adamson (Guildford): Pruritus, its Significance and Treatment. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate with the Honorary Secretary at once. Dinner at the White Lion Hotel at 6.15 P.M. Charge 8s., exclusive of wine. The Honorary Secretary would be much obliged if members would kindly inform him whether they intend if possible to be present at the dinner. By so doing they will materially facilitate arrangements and promote the success of the dinner. All members of the South-Eastern Branch are entitled to attend and introduce professional friends.—ALEX. HOPE WALKER, The Common, Cranleigh, Honorary Secretary.

SHROPSHIRE AND MID-WALES BRANCH.—The annual general meeting of this Branch will be held at the Salop Infirmary on Tuesday, November 5th, at 3 P.M. It has been suggested that the scientific portion of the meeting be devoted as far as possible to tuberculosis in its various aspects. Members who wish to bring forward any business, to read papers, to show cases or specimens, or to propose any new members, are requested to communicate not later than Friday, October 25th, with HAROLD H. B. MACLEOD, College Hill, Shrewsbury, Honorary Secretary.

OXFORD AND DISTRICT BRANCH.—The next meeting of this Branch will be held at the Radcliffe Infirmary on Friday, October 25th, at 3 P.M. Notices of papers, etc., should be sent at once to WILLIAM COLLIER, St. Mary's Entry, Oxford, Honorary Secretary.

STAFFORDSHIRE BRANCH.—The twenty-eighth annual general meeting of this Branch will be held at the Grand Hotel, Hanley, on Thursday, October 31st, at 4 P.M. Business: Presidential Address by Mr. W. H. Folker, report of Council, financial statement, election of officers and Council. Dinner at 6 P.M.—F. MILNES BLUMER, Stafford, Honorary General Secretary.

## SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

A meeting of the East Sussex District of the South-Eastern Branch was held at the White Hart Hotel, Lewes, on October 10th. Dr. Dow (Lewes) presided.

*Minutes.*—The minutes of the Hastings meeting were read and confirmed.

*Next Meeting.*—It was resolved that the next meeting be held at Eastbourne about the end of November.

*Votes of Condolence.*—It was resolved that the Secretary be instructed to write to Mr. Percy Gravely expressing the regret with which the meeting received the news of Mr. Richard Gravely's death, and their sincere sympathy with Mr. P. Gravely and other members of the family in their bereavement. A letter was received from Mr. C. B. Gabb, thanking the members for the vote of sympathy passed at their last meeting.

*Intestinal Calculus.*—Mr. A. H. DODD showed an intestinal calculus, composed chiefly of cholesterine with some bile pigment and phosphates. This concretion, about the size of a plover's egg, had been passed by a woman, aged 82 years, after suffering for a week from symptoms of intestinal obstruction. Intestinal obstruction had occurred two years before, and "jaundice" four years ago.

*Odontome.*—Mr. DODD also showed a composite odontome attached to the roots of the second bicuspid and first molar teeth. It was removed from a boy aged 12 years. During the eight months previous to removal it had given rise to a painless tumour of the lower jaw as large as a pigeon's egg. A skiagraph of the growth *in situ* was also exhibited.

*Hæmorrhage from Choroidal Vessels.*—Dr. WATSON GRIFFIN showed an eyeball removed from a lady of unsound mind, aged 72. The lens and vitreous were absent, and the globe was filled with blood clot which protruded through a hole in the cornea. The case was regarded as one of hæmorrhage from diseased choroidal vessels due to the sudden lowering of intraocular tension following the perforation of a corneal ulcer. The specimen bore a strong superficial resemblance to a fungating melanotic sarcoma, an example of which Dr. Griffin showed for comparison.

*Melanotic Sarcoma of Bladder.*—Dr. BATTERHAM showed a microscopic section of round-celled melanotic sarcoma of the bladder (secondary) removed suprapubically from a woman, aged 61, for the relief of profuse hæmaturia and difficulty of micturition. The growth was polypoid, about the size of a raspberry, and situated at the base of the bladder close to the urethral opening. The symptoms were cured and the patient in good health three months after operation.

*Hip-joint Disease.*—Dr. FAWSSETT showed a child, aged 4 years, suffering from the results of old tuberculous mischief in the right hip-joint. No other symptom had been noticed by the parents than that the child always walked on the right toes.

*Fracture of Femur followed by Sarcoma.*—Dr. DOW related the case of a woman, aged 45, who "jerked her knee" by slipping on the lowest step of a staircase, thereby sustaining a fracture of the lower end of the femur. A skiagraph was taken, and showed the internal condyle separated from the rest of the bone. The inner half of the lower end of the femur was of markedly light tint in the print as compared with rest of the bone. The fracture united readily but recurred at six months on very slight violence. Shortly afterwards the bone at the site of injury was found to be affected by endosteal sarcoma.

### SYDNEY AND NEW SOUTH WALES BRANCH.

THE regular monthly meeting of the Branch was held at the Royal Society's Room on Friday, July 26th, at 8.15 o'clock, Dr. FOREMAN, President, in the chair. There were forty-five members present. Visitors: Drs. Tilley and Boelke.

*Minutes.*—The minutes of the previous meeting were read and confirmed.

*New Members.*—The PRESIDENT announced the election of Drs. McLean, Burge, and P. S. Jones, and the nomination of Drs. Phipps and P. W. R. Boelke.

*Council.*—Dr. Newmarch was appointed a member of the Council.

*Sea-coast Climate of New South Wales.*—Dr. CAMAC WILKINSON read a paper on the climate of the sea-coast of New South Wales in relation to the treatment of pulmonary tuberculosis in the early stages. A discussion ensued, in which Drs. SCOT SKIRVING, JAMIESON, FOREMAN, CHAS. MACLAURIN, and MEGGINSON took part. Dr. WILKINSON replied.

# SPECIAL CORRESPONDENCE.

## PARIS.

*The Continental Anglo-American Medical Society: Annual Meeting and Dinner.—Statistics relating to Small-pox and Typhoid Fever.*

THE annual meeting of the Continental Anglo-American Medical Society was held in Paris at the residence of the Honorary Secretary, Dr. Bull, on October 8th; Dr. Bright (Cannes) being in the chair. The Honorary Secretary, after reading the minutes of the last annual meeting, laid his resignation before the meeting, but on the proposal of Dr. Honourable Alan Herbert he was unanimously asked to continue in the office for another twelve months, when all the members of the Society will be asked to vote in writing for his successor. The Secretary announced that at the present time Dr. Leonard Robinson and Dr. Warden were willing to undertake the duties of the office. Dr. Stuart Tidey (Florence) brought forward a proposal that members practising in Italy should elect their own representative to the Executive Committee. This resolution being contrary to the by-laws of the Society was withdrawn. The Secretary read a letter from Dr. Burton Brown (Rome) forwarding a proposal which had been signed by many of the members of the Society who attended the annual meeting of the British Medical Association in Cheltenham, that an annual luncheon should in future be held during the meeting of the Association. On the motion of Dr. Herbert, seconded by Dr. Brandt, a committee of three—Dr. Samways, Dr. Robinson, and Dr. StClair Thomson—was appointed to consider how far the proposition can be carried out with a prospect of success. Dr. Herbert (of Paris), Drs. Brandt and Luin (of Nice) were elected to the Executive Committee, and five new members were elected. In the evening the annual dinner was held at the Hôtel Ritz, when nearly forty members and guests assembled under the presidency of Sir James Crichton-Browne, who came from London especially for the occasion. The Chairman, in proposing the loyal toasts of "The King and the Presidents of the United States and of the French Republic," referred to the recent losses to their respective nations by the death of Queen Victoria and the assassination of President McKinley. Contrary to the view held by Sir Dyce Duckworth as to the bulletins issued from the sick room of President McKinley, Sir James expressed the opinion that the head of the State is the head of a large family, the members of which have a right to know the exact condition of the sufferer. In proposing "The Health and Prosperity of the Society," the Chairman spoke of the usefulness of such a Society and of the wisdom of holding the annual meeting in Paris. Sir James then reviewed the scientific work of Frenchmen during the last century, dwelling with emphasis on the researches of Pasteur. Referring to the changes within his own memory, Sir James recalled the fact that forty years ago, when as a student he contracted small-pox in Paris, the cases were treated in the general wards of the hospitals, bad confluent cases being isolated by means of a small curtain round the patient's bed. Dr. Stuart Tidey (Florence) replied. Dr. Goodchild (Bordighera) proposed the toast of "Our Guests," among whom were Professor Paul Poirier, surgeon to the Hertford British Hospital, Dr. Landolt, Dr. Löwenberg, and Professor Blatin (Clermont Ferrand). Professor Poirier replied, expressing his high appreciation of the references made by the Chairman to the work of French scientists. Dr. Brandt (Nice) proposed the health of "The New Members," enjoining them to keep constantly in mind the aim and object of the Society. Dr. O'Leary replied. Dr. Herbert proposed the health of "The Chairman." Dr. Bull told some amusing stories with Mr. Dooley's views on the profession, thus bringing to a close very enjoyable and successful meeting.

During the thirty-ninth week 37 fresh cases of small-pox were notified and 8 deaths were registered in Paris. During the fortieth week there were 17 fresh cases and 6 deaths. The number of patients suffering from small-pox under treatment in the hospitals on October 5th was 39, a slight decrease from September 29th, when the total was 42.

Typhoid fever has shown a slight tendency to increase

during the last few weeks, but the disease has not been so prevalent during the present year as it was during that of the International Exhibition. The following table shows the number of fresh cases notified and deaths from this disease from the beginning of July to the end of the fortieth week in each of these years.

| Week. | 1900. | | 1901. | |
|---|---|---|---|---|
| | Cases. | Deaths. | Cases. | Deaths. |
| 27th ... ... | 104 | 15 | 31 | 7 |
| 28th ... ... | 110 | 18 | 33 | 8 |
| 29th ... ... | 123 | 20 | 20 | 3 |
| 30th ... ... | 83 | 24 | 34 | 9 |
| 31st ... ... | 109 | 26 | 37 | 5 |
| 32nd ... ... | 187 | 16 | 52 | 4 |
| 33rd ... ... | 158 | 29 | 50 | 14 |
| 34th ... ... | 168 | 31 | 61 | 16 |
| 35th ... ... | 114 | 20 | 35 | 9 |
| 36th ... ... | 140 | 20 | 43 | 4 |
| 37th ... ... | 132 | 19 | 51 | 8 |
| 38th ... ... | 162 | 36 | 41 | 8 |
| 39th ... ... | 104 | 23 | 42 | 7 |
| 40th ... ... | 99 | 18 | 52 | 4 |

The disease is much more prevalent now than it used to be in former years, as will be seen from the following table, which gives the number of fresh cases and deaths from typhoid fever during the first thirty-nine weeks of each year since 1895:

| Year. | 1895. | 1896. | 1897. | 1898. | 1899. | 1900. | 1901. |
|---|---|---|---|---|---|---|---|
| Cases ... ... | 947 | 953 | 970 | 791 | 3,323 | 4,096 | 1,369 |
| Deaths ... ... | 181 | 211 | 187 | 148 | 570 | 717 | 248 |

## LIVERPOOL.

*Mr. Edgar Browne's Address to the Medical Institution on Progress in the Art of Medicine.—Church Service for the Medical Profession.—Medical Institution Dinner.*

The inaugural meeting of the Liverpool Medical Institution took place on October 10th, when the President, Mr. Edgar Browne, F.R.C.S.Edin., delivered the customary address. His remarks, which were a kind of continuation of his address last year, were delivered without any kind of note, and were listened to with the greatest interest by an exceptionally large assembly of members. He dealt chiefly with the progress of the human race in the past and the future, more especially as regards the science and art of medicine. He pointed out that there was no satisfactory evidence to show that the faculties of the human mind had undergone any appreciable development since the earliest times of which there was any clear record. Men had learned to make a more profitable use of their mental powers, and could get through a greater amount of work, but this did not mean that their powers were any greater; they were more ingenious, more "dodgy" in employing them. He was unable to see why our present civilisation should not share the fate of the civilisations of ancient Egypt and of ancient Greece. It was a painful thought that the knowledge which had been laboriously brought together for ages, and was being daily added to, might at some future time be as though it had never been. Strictly speaking there was no such thing as a science of medicine. Medicine was an art which pressed all the sciences into its service, and it could only progress *pari passu* with the sciences ancillary to it. There was a scientific method but no science. This was an aspect of medicine of which the public were hopelessly ignorant, and were always expecting a cure where, in our present state of knowledge, no such thing was possible or conceivable. Progress required the co-operation of three classes of men—men of genius, men of talent, and mediocrities. It was impossible to define genius. The saying that it was an infinite capacity for taking pains was very wide of the mark, and was much more applicable to men of talent. He would rather describe the man of genius as the man whose mental vision resembled the eye of the cat; he could see just a little further than his fellows into the gloom that surrounded him. But the man of genius was of little value to his age without the man of talent. The mark of talent was the power to recognise and appreciate genius; men of talent attached themselves to a man of genius. It was the mark of mediocrity to fail to recognise genius, and to distrust it when it was found. To enjoy the fruits of genius the mediocrities were dependent on the men of talent who acted as middlemen, and passed on the ideas they had received from the men of genius in such a form and to such an extent as the mediocrities were able to receive them. Such progress, however, presupposed a certain amount of educatiom both of the men of talent and of the mediocrities. If they failed in educating the mediocrities sufficiently for them to receive what the men of talent could convey to them the progress of knowledge was arrested and science failed for want of diffusion. If genius failed, there was little use for the man of talent, there was no one for him to learn from, and no one for him to teach, and science might dwindle down and become lost—a permanent state of dulness like China. They saw that a great discovery might even be made public, but if the public was not sufficiently educated it might not only be useless, but mischievous—for example, there were various points about the discovery of the circulation of the blood connected with the state of knowledge at the time it was made. Why was it not made before? First it needed the establishment by Bacon, the protagonist of scientific thought in this country, of the induction philosophy on the ruins of the ancient authority, especially of Aristotle. Bacon found the physicians great offenders. He had a poor opinion of them. He said they reasoned in a circle, and doubtless he was right. But he changed all that. He said, Look the facts in the face and form your own opinions: never mind the ancients. Till that method was accepted as the working method, the passage of the blood through the arteries was not likely to be investigated because they were supposed to be air passages. And when a thing was believed and was obvious on superficial examination, it took an original mind to look below the surface. Then it was a very unmechanical age, and people did not concern themselves with the body as a machine—it was a vital organism and a marvel, and not to be too rudely examined either. Then the collateral sciences were not ready. Oxygen was not discovered for more than 150 years. Phlogiston was still believed in at the beginning of the last century. Before oxygen was discovered the knowledge of the mere paths of the circulation was no good: so instead of seeing that the central fact about the circulation was its connection with respiration and accounting tentatively for the existence of the pulmonary tract, attention was merely confined to the movement of the blood—the movement and not the reason for the movement, and therefore they bled. Thus the value of a great discovery was not only negatived but perverted. At this point the President, who had held his audience spellbound for nearly an hour, brought his address to a somewhat abrupt conclusion, on the grounds that he thought he had completed his allotted time. The members would certainly have welcomed the further ideas and illustrations which he was obviously prepared to give, and it is hoped that he will see his way to extend his address and to publish it in some permanent form. The members were afterwards entertained by the President at supper, which was followed by a smoking concert.

The President of the Liverpool Medical Institution has issued invitations to all members of the medical profession in Liverpool to be present at the special service to be held in St. Luke's Church on October 20th, the Sunday after St. Luke's Day. Seats will be reserved for members of the medical profession in the central aisle, and their friends will be accommodated at the sides. The service, which will last about an hour, will begin at 3 P.M., and the sermon will be preached by the Lord Bishop of the Diocese (Dr. Chavasse). A collection will be made on behalf of the Medical Benevolent Fund.

The biennial dinner of the Liverpool Medical Institution took place at the Adelphi Hotel on October 12th. The chair was taken by the President, Mr. Edgar Browne, and covers were laid for 120. The visitors included the Bishop of Liverpool, the Lord Mayor, and others.

## BELFAST.

*The Prevalence of Typhoid Fever.—Proposed Inquiry by the Health Committee.*

IN 1897, 3,269 cases of typhoid fever were notified, with 336 deaths; in 1898, 5,136 cases, with 640 deaths. These numbers do not include simple continued fever. During the ensuing two years a great improvement took place: in 1900 there were only 1,777 cases notified, with 261 deaths. This diminution was very welcome, and the decrease in both incidence and mortality lessened alarm; but the incidence is still high when compared with that of most English and Scotch towns, and, with the exception of Dublin, with that of most Irish ones. But during the summer the average notifications have been over 100 per week, and the statistics threaten to be a repetition of 1898.

A special conjoint meeting of the Public Health Committee and of the Water Commissioners was held recently, and it is announced that the latter body is using its utmost endeavours to expedite the purchase of all the farms on the catchment area, and is taking every precaution to prevent the pollution of the reservoirs. The Health Committee has approved a plan, suggested apparently by the executive sanitary officer, of dividing the city into districts, and investigating each with regard to its sanitation and the prevalence of typhoid fever. Five experimental districts have been chosen, and many important points are to be investigated, such as the relation of filled-in ground and typhoid; the relation between an old subsoil saturated with drainage and typhoid in the houses standing on it; the effect of elevation above the sea-level; the effect of defective house drainage; and the effect of the old privy and the ashpit system as compared with the water-closet system.

# CORRESPONDENCE.

## THE SCHEME FOR THE REORGANISATION OF THE ARMY MEDICAL SERVICE.

SIR,—It is to be hoped that all those who believe in the possibility of preventing a large proportion of the diseases which, under present arrangements, are responsible for the majority of deaths in warfare, will unite in endeavouring to promote the formation of a sanitary corps in the army, as advocated by Professor Ogston.

In the "exceptions" to the scheme recorded by Professor Ogston he places the following first:

> It does not provide for a sanitary corps consisting of officers specially charged with the duty of carrying out proper sanitary measures in peace and war, and a staff of men trained to ensure the requisite measures being carried into effect.

The people of this country—both medical and non-medical—are generally under the impression that the sanitary organisation of our army has kept pace with the times, and has developed as our knowledge of scientific and practical hygiene has developed.

The people of this country would do well if they were to inquire carefully into the question whether this is the case or not. Unfortunately, it is no easy matter for the civilian to obtain information with regard to the forces at work, and the *modus operandi* of military routine.

A study of such information as is available reveals the fact that during the last twenty years or more, instead of an advance, a most deplorable and disastrous retrograde movement has taken place so far as organisation in army sanitary work is concerned. Many of the admirable reforms introduced as a result of the stern teachings of the Crimean war have practically been nullified.

The chiefs of the sanitary and the statistical departments and also the sanitary officers of army corps and divisions which were established after that war were abolished nearly twenty years ago. Since that time, apparently, influences have been constantly at work to kill out the sanitary initiative of the medical service, and "to drive army medical officers into hospitals to learn to treat men who should never have been sick at all."

The inevitable consequences of this retrogression are tragically demonstrated in the long list of deaths from disease during the South African campaign. The army was despatched practically without any sanitary staff.

It would be difficult to persuade any civilian experienced in sanitary science that a large proportion of those "deaths from disease" could not have been prevented.

But, let it be clearly understood, with the present sanitary organisation—or rather absence of organisation—a number of deaths from preventable disease, greater than that from bullet and sword, must be expected in all our campaigns.

For the prevention of disease, such as enteric fever, in warfare, a well-organised scheme, careful and well-considered preparation beforehand, and sufficient transport are absolutely necessary; and, above all, an efficient sanitary corps. The creation of a sanitary corps need not involve any innovation. If the old appointments of chief sanitary officer, and sanitary officers of divisions be reinstituted, with expert medical officers to assist where required, and a staff of men trained in the details of sanitary work, the sanitary corps is formed.

A very important section of this corps would be a "water corps," whose sole business should be to search for pure water supplies, to purify the water (if necessary) by boiling or filtering, and to transport and distribute the water to the combatants.

The answer given by military authorities to such a proposal as the above is usually "impossible." It is difficult to realise why it should be impossible. Without a specialised sanitary corps we must always expect a large amount of preventable disease in warfare. The measures necessary for the prevention of disease will absorb all the time and energies of the sanitary corps, and cannot be carried out by the medical officers of a service already undermanned and overworked.

A study of the scheme does not reveal any provision made for securing that when the sanitary officer advises his recommendations shall be recorded and receive due consideration, and that the responsibility of neglecting his recommendation shall be laid upon the proper official.

The proposed instruction in hygiene and bacteriology is quite inadequate. Let it be granted that military surgery and medicine form by far the largest subjects of study for the army medical officer. Yet he must in all cases be more or less a sanitary expert. If his recommendations on hygienic subjects are to be of use and to receive consideration his knowledge of hygiene must have before all things a sound foundation. A sound practical knowledge of the elements of hygiene and bacteriology cannot be obtained with less than six months assiduous study and instruction. This amount should certainly be the minimum required before qualification as a lieutenant, instead of the two months recommended in the scheme.

All sanitarians will regret the conspicuous absence of provisions in the scheme for developing sanitary organisation in the army, and for remedying the glaring defects which at present exist.

Nor does the constitution of the "Advisory Board" give assurance that the all-important and much-needed reforms will be sufficiently advocated, unless the "one officer of the R.A.M.C., with special knowledge of sanitation," be one of high rank, large experience, and great influence, and unless one of the "civilian physicians" be a recognised expert and authority in sanitary science.—I am, etc.,

London, W., Oct. 15th. CHRISTOPHER CHILDS, M.D., D.P.H.

## FREE REVACCINATION.

SIR,—The following letter appears in to-day's issue of the *Hampstead and Highgate Express*:

> Sir,—As revaccination is now engaging the public mind in Hampstead and elsewhere, I venture to make the following suggestions:
>
> 1. That the offer of gratuitous revaccination, if made at all, should be made not through one medical man, but through all the qualified medical men in the neighbourhood. 2. That copies of a printed form, such as that annexed, should be freely distributed amongst all the medical men in the district, and that when filled up and signed by doctor and patient they should be sent in to the local authority in the same way that notification forms of infectious disease are now sent in, and that the fee should be recoverable from the local authority in the same way that notification fees are now recovered.
>
> I venture to suggest that the above arrangement would be more to the interest of the public than the present plan, and would be fairer to the medical profession as a whole. Those patients who could well afford to pay a fee would not care to sign a certificate, and would therefore pay their doctor themselves instead of coming upon the rates, and those doctors who practise amongst the less moneyed classes of the community

would receive a fair share of the public money for performing a public duty.

The revaccination of the whole community would be more rapidly attained than by overworking one medical man and giving him a monopoly of all these fees. The present system leads, for instance, to such an anomaly as the following:—A medical man, we will say, who gives his gratuitous services to a charitable institution containing 100 inmates, if he revaccinates them himself gets no fee, but if he hands them over to the public vaccinator the latter gets a fee of some £33, and the medical man who loses this fee is himself taxed to pay his substitute.

I enclose my card, but not for publication, as I have no desire to advertise myself in the lay press, and may add:—(1) That I am personally friendly to the present public vaccinator and write only in the interests of the public and the profession as a whole. (2) That I have no connection myself with any charitable institution in Hampstead such as I have described. (3) That my practice lies mainly amongst a class of patients who all pay their own doctor for their revaccination, and consequently I should not expect to reap any pecuniary benefit from the proposed change.—Yours, etc.,

October 7th. HAMPSTEAD MEDICAL MAN.

P.S.—To avoid the frittering away of discussion on side issues, I may say that I do not tie myself down to the Form of Certificate, which is merely offered as a rough suggestion. It is open to addition—such as "age of patient," "nature and source of lymph," "number and character of previous marks," "whether revaccinated at patient's residence or at doctor's own house," "success or non-success of the revaccination," etc.—or amendment, such as a statement by the patient, if thought desirable, that he is "unable" or "not in a position" to pay a fee for revaccination—or variety of form, so that in the case of children it would be countersigned, not by the patient, but by the parent or person standing *in loco parentis*. All these are details which do not touch the main issue I wish to raise. It may be objected that the patient's part of the certificate is not required; but I think the doctor in making a claim from the public funds would prefer to be protected by the patient's own statement that he has had his revaccination performed gratuitously.

FORM FOR GRATUITOUS REVACCINATION.

I hereby certify that I[4] ..... of[2] ..... on[3] ..... carefully revaccinated[4] ..... of[5] ..... and have not made and do not intend to make any charge to h[6] for so doing. [7] .....

I hereby certify that I[4] ..... of[5] ..... was revaccinated by[1] ..... of[2] ..... on[3] ..... and that I have not paid and do not intend to pay him any fee for such revaccination. [8] .....

1. Full name of doctor.
2. Full address of doctor.
3. Date.
4. Full name of patient.
5. Full address of patient.
6. Him or her.
7. Signature of doctor.
8. Signature of patient.

As the above suggestions appear to have an application to other places besides Hampstead, and to be worthy the consideration of the profession as a whole, I should feel obliged if you could find room for the letter in the JOURNAL: and in the pages of a professional organ I have no objection to acknowledging its authorship. It is right to add that when I wrote it I had overlooked the appointment of another gentleman as assistant public vaccinator, but the appointment of two gentlemen instead of one does not invalidate the contentions urged in my letter.

The great mass of the educated class, with very few exceptions, are eager and anxious to have revaccination performed, but unfortunately amongst the working classes, with some exceptions, there is a large amount of apathy, ignorance, and prejudice on this subject.

The personal influence of the working man's own doctor, who has seen him again and again at his own home or at a provident dispensary, is more likely to weigh with him than a notice to the effect that gratuitous revaccination can be obtained at such and such a house or "station" at certain hours: but if the public authority expects this influence to be exerted they should put the revaccination into the medical man's own hands and remunerate him with his fair share of the fees now offered only to the public vaccinators. This appears to me to be mere justice and common sense.—I am, etc.,

Hampstead, N.W., Oct. 12th. HENRY SHARMAN, M.D.

## ADDITIONS TO NOTIFIABLE DISEASES UNDER THE NOTIFICATION ACT.

SIR,—Under Section VII of the Infectious Disease (Notification) Act, 1889, sanitary authorities are permitted to add other contagious diseases to those laid down in that enactment, and to bind medical practitioners within their area to notify the same under a penalty. This right has been exercised recently by the Councils of several of the metropolitan boroughs, which have added varicella to the list of notifiable diseases.

Without objecting to the principle that at times it may be necessary to make certain diseases notifiable, the notification of which is not generally necessary, I cannot help thinking that it is a grave defect that this power of notifying the Act has been placed unconditionally in the hands of the district sanitary authorities. It may work all right in the case of sanitary authorities, which include large areas, but if their areas are comparatively small, as in the metropolis, where a medical practitioner may carry on his business in several boroughs, what sanitary benefit is likely to arise from such extra notification? A very complicated duty, too, is thrust upon the notifier. How is he to bear in mind all the intricate boundary lines of the metropolitan boroughs? Wherever cases occurred on the boundaries, as likely as not he would be always making mistakes. I have just received a notice from the borough council of Bethnal Green that for six months I am to notify chicken-pox under a penalty. My residence is on the boundary line betwen two boroughs, and but a short distance from the boundary of three others. It is a little distracting to have to keep the boundaries of these boroughs always in one's mind when called to cases of infectious disease.

Surely the unit for dealing with this section of the Infectious Disease (Notification) Act should be the County Council rather than the district sanitary authority. I think that to gain public good from enactments of this nature, most sanitarians will agree that there must be uniformity over a considerable area. It will strike most people as absurd that a certain disease should be notifiable on one side of a street and not so on the other.—I am, etc.,

Hackney Road, N.E., Oct. 14th. M. GREENWOOD.

## THE PRESENT POSITION OF THE GENERAL PRACTITIONER.

SIR,—I do not think it is much use discussing the position of medical men at the present time, but it may be of interest to the aspiring medical candidate to review the position of the general practitioner as he stands now. The fact is that an enormous change for the better in every way has taken place, to the absolute detriment of the general practitioner and the entire benefit of the public.

First of all, the establishment of the Metropolitan Asylum Board has led to between 4,000 and 5,000 cases always under treatment being withdrawn from the care of the ordinary practitioner. Most of these can well afford to pay fees for attendance, and the loss is simply enormous.

Secondly, the public has lost its fear of general hospitals, and resort to them on every occasion. Medical men having them and their staff and appliances—which they cannot supply singlehanded—at their elbows, aid the influx to hospitals of their poorer cases in difficult and doubtful circumstances, and are thereby losing their gift of prescribing and dealing with serious cases on their own responsibility.

Thirdly, the very right and total abolition of the unqualified assistant has opened up some thousands of situations to qualified men, chiefly in club practices, that can ill afford the salary demanded by their successors—that is, qualified men, who are none too numerous.

The fees asked for by *locum tenens*, and given under stress through illness or the necessity of rest, are simply preposterous, and such as very few of them would earn if they set up for themselves. Worse than that, there are very few that make sufficient to cover their salaries, independent of their keep, in an ordinary everyday practice. People will not see them, and prefer to go to a hospital or hang on till the principal returns.

Under these circumstances it would appear that the general practitioner must go and a new race spring up, in which there will be an intermediary class of men, who will prescribe for slight ailments, and, after attempting to diagnose a case, send the patient to the specialist best known for his supposed complaint. Years ago this scheme was actually proposed to me by a far-sighted manager of one of the great London stores, now no more. The fact is, our ambitious students must become attached to hospitals, as in the past, to become consultants. This requires means and patience. They must become specialists in one or other subject; this requires means and patience also. They must take up State service—such as the navy, the army, or the Indian Medical Service—health officers, vaccination officers,

Colonial officers, prison surgeons, etc., with little means and patience; or else they must stick to lunatic asylums, general practice, and a belief in Providence, without any means at all.—I am, etc.,

Fernhead Road, W., Oct. 15th. GEO. ROBERTSON, M.D., R.N.

## ANTIPLAGUE INOCULATION STATISTICS.

SIR,—The world-wide distribution of plague confers an importance on any methods that may be devised for its prevention, which must be the excuse for my intrusion on your valuable space. The paragraph, Antiplague Inoculation Statistics, published in the BRITISH MEDICAL JOURNAL of October 5th, p. 1005, though concluding with the advice to all sanitary authorities to avail themselves of Haffkine's antiplague vaccine as a preventive of proved utility, yet commences with a statement calculated to throw grave doubt on the reliability of the very figures on which this opinion is founded. This adverse expression of opinion—occurring as it does at the beginning of the article in question—and carrying such weight as an opinion expressed in the JOURNAL necessarily does, is calculated to prejudice the cause of antiplague inoculation with those who may not have the original documents to refer to. I would therefore request you to be kind enough to lay the following before your readers.

The paragraph remarks that the statistics "require to be accepted with reserve," because of the inherent difficulty of collecting accurate figures from large bodies of people, and continues, "we should be better contented with a detailed account of half a dozen carefully investigated outbreaks than with a larger mass of undigested or imperfectly digested material."

In the *Statistics of Inoculation with Haffkine's Antiplague Vaccine, 1897-1900*, published by the Government of Bombay (to be obtained from any of the agents for the sale of Indian official publications in London for the modest price of 6d.) will be found abstracts of all reports which can be considered reasonably accurate, received up to date of publication by that Government. Among the twenty-four epidemics therein detailed the following may be selected as likely to satisfy the requirements of the most exacting, for the outbreaks took place in communities of manageable size, the occurrences were carefully investigated, and the results obtained must be regarded as accurate to a degree not easily understood by those who have not worked under the conditions found in India. The two prisons for instance at Byculla and Umerkhadi (pp. 1 and 2 and 10) are in charge of a commissioned medical officer of the I.M.S., with resident subordinate medical officers for each. Every individual in them is under daily medical observation, and the careful records kept ensure a very high degree of accuracy for these trials of the vaccine. Major Forman's statistics (pp. 8, 9) relating to men of the Army Hospital Corps and their families must also be regarded as accurate, for here again the persons operated on were under daily medical supervision. Similarly the figures got from the railway medical officer for the employees of the Southern Mahratta Railway at Hubli (p. 15) are reliable, for these persons were living in railway barracks, apart from the rest of the townspeople, under the daily observation of a Committee of Europeans who worked along with the medical officer. In Lanowli, two wards of the town with a population of about 800, were chosen for experiment by the local Plague Committee. A census was made and "a daily house-to-house inspection was kept up in these wards for weeks after this" (p. 5), so that the record must be accepted as accurate and reliable.

The conclusive trial at Undhera is described with great detail at p. 11, and is allowed after exhaustive examination by the Indian Plague Commission to be accurate and reliable.

The chawl at Colaba, which contained 61 persons, was fully investigated by Mr. Haffkine and Dr. Hunt, and the detailed information given on pp. 29, 30, 31, and 32 of the "statistics" should satisfy the most exacting of inquirers. In these instances the "detailed account of half a dozen outbreaks," for which a desire is expressed in the paragraph, is given. But it likewise states that "to enable a true judgment to be reached" the "incidence of plague among inoculated and uninoculated at different stages of the epidemic" should be given, for "during the epidemic the number of inoculated is rapidly increasing." This has been done in all possible instances where the inoculations were not actually completed in one day, when, of course, this objection does not exist. The inoculations were all completed in one day in the case of the Byculla and Umerkhadi prisons and at Undhera, while in the chawl at Colaba they were all finished before plague appeared, so that in none of these is it necessary to give particulars of incidence at different periods of the epidemic. In the case of Lanowli and the Railway Barracks at Hubli, the particulars asked for are given day by day so as to enable those interested to study the matter for themselves. In the larger epidemics at Hubli, Dhárwár, Gadag, etc., it is, of course, impossible to attain so high a degree of exactitude, but as their results approximate closely to those of the smaller ones, we may surely conclude that the errors balance one another, and that the results are substantially correct.—I am, etc.,

Edinburgh, Oct. 10th. W. B. BANNERMAN, M.D., Major I.M.S.

*** We are glad to publish Major Bannerman's letter; and the particulars he now gives makes it even clearer than before—though we have already borne testimony to the value of his reports—how valuable is a short digest of the facts dealt with in detailed and elaborate reports. No official document ought, in our opinion, to be issued unaccompanied by such a digest of its contents. The Indian Government has, in our experience, been a chief offender in this respect; masses of undigested or incompletely digested statistics have been sent out at various times. We pointed out in our former comments—what had, indeed, been already in part pointed out in the report of the Dhárwár Inoculation Investigation Committee—the fallacies to which statistics are exposed, collected as are those of plague inoculation. This was done with a view of impressing the necessity for well-organised methods of tabulation of results, not with the intention of throwing any doubt on the excellent work done by Major Bannerman and his colleagues.

## PUERPERAL FEVER: CURETTE *VERSUS* FINGER.

SIR,—In the BRITISH MEDICAL JOURNAL of October 12th Mr. R. T. Hughes writes: "May I, as a general practitioner, enter a word of protest against the indictment that Professor Byers, in his introductory remarks on puerperal fever, brings forward against the general practitioner?" As it is always wise to have the complete context, may I take the liberty of again quoting the words used in my introductory address, as President of the Obstetric Section at Cheltenham, as follows: "It is, indeed, a terrible blot on our obstetric art that, while within the memory of many of us puerperal fever has been banished from maternities in which formerly it was so prevalent, the same good results have not followed in general practice." In proof of this I gave statistics very carefully collected (the official authority for them being noted in each instance) from the three kingdoms, showing the continued high death-rate from puerperal fever, as well as a return demonstrating that at the Rotunda Lying-in Hospital, during the years 1898-99, 1899-1900, out of a total of 7,423 cases, there were only 7 deaths from sepsis (2 of these were admitted septic), and the percentage mortality was only 0.39; and I said, "These figures should make those of us who are teachers feel how great is our responsibility, and that our efforts should be redoubled in urging upon students the importance of regarding the process of labour as a natural one, and not to be lightly interfered with unless Nature herself should fail; and that, if interference became necessary, they should use exactly the same antiseptic precautions that they see employed in any gynæcological operation."

What I wished to convey was that, if at the Rotunda (and the same remark applies to any modern lying-in hospital), where practitioners and midwives are trained, such results could be achieved, it surely should make those of us who are teachers redouble our efforts in teaching students (either midwives or medical students) to adopt the same precautions in their work as have brought about such brilliant results in that institution, so "that we may hope that in the present century the occurrence of puerperal fever will eventually be as rare in private practice as it became in the nineteenth century in lying-in hospitals." I fail to see any indictment such as Mr. Hughes speaks of in these remarks. I simply stated facts

and drew an obvious inference bearing on those of us who are teachers.

As to the question of "Observans" in reference to "curette *versus* finger." In cases of abortion requiring active interference, the line of treatment will depend on the state of the os. If we judge it necessary, owing to the amount of hæmorrhage, to interfere, and the os will not admit either a curette or finger, I believe the best plan is, with full aseptic precautions, to plug the vagina with iodoform gauze for a period of twelve to twenty-four hours. This method is required in really only a very small proportion of cases, and its rationale is to dilate the cervix. If, as occurs in the great majority of cases of abortion, the os is already dilated (and when by the use of the vaginal plug it has become dilated), the finger or curette may be used to clear out the uterus. For my own part I prefer, in such cases, the use of the curette rather than the finger for the following reasons:—(1) The curette can be employed with a smaller degree of dilatation of the cervix than is required if the finger is used. (2) The curette can be more surely sterilised than the finger, and so all risk of sepsis is eliminated. (3) The curette is more effective and thorough in its action than the finger, and (4) I believe cases of abortion treated by the curette from the more thorough way that instrument removes all remnants of placenta, are less liable subsequently to lapse into chronic endometritis, a sequela common in a neglected or improperly-treated case.—I am, etc.,

Belfast, Oct. 14th. JOHN W. BYERS.

## THE MIDWIVES QUESTION.

SIR,—Mr. Humphreys in his letter in the BRITISH MEDICAL JOURNAL of October 12th, p. 1112, states in reference to the position of midwives that "they cannot be 'recovered from' if they are guilty of malpraxis as medical men can be; they are not liable to any penalties whatsoever in respect to their practice." This statement I can only describe as inaccurate and dangerous. As a matter of law no distinction is made between those who are duly qualified practitioners and those who are not, and both the qualified and unqualified are equally liable to actions raised in the civil courts for damages alleged to have been sustained owing to ignorant, negligent, or improper treatment.

All persons whether registered practitioners or not, if they profess to deal with the lives and health of others are bound to have and to employ such knowledge and skill as are "usual and reasonable," and the terms "usual and reasonable" would be judged from the evidence of medical witnesses in the case of the midwife. The existing common law does not protect midwives from such actions as may be raised against them on account of malpraxis or negligence in their treatment of their cases, and it certainly would be a most extraordinary thing if such "protection" as Mr. Humphreys describes were afforded them.

Mr. Humphreys also states "they can perform any operation they think fit," I presume he means with impunity; that this is not so the records of our criminal courts will very easily prove. The convictions of midwives for performing illegal operations have been recorded in the medico-legal columns of the JOURNAL repeatedly.—I am, etc.,

Queen Anne Street, W., Oct. 11th. A. G. BATEMAN.

SIR,—As I expected, the challenge I threw down in the BRITISH MEDICAL JOURNAL of October 5th has not been taken up, and once more I am doomed to disappointment. It is true that Mr. Humphreys in his letter remarks: Dr. MacLean "seems to think" that this agitation has arisen in connection with securing an occupation for women, and then goes on to refer to the opposition that was offered some years ago to the admission of women to the medical profession.

It is pretty evident that I am right in what I "seem to think" if the only reply that the advocates for the registration of midwives can make is a reference to something that took place in the past (an ancient bit of history, to quote Mr. Humphreys), which has absolutely nothing to do with the present question.

"You're another" is a kind of argument which I thought was confined to schoolboys; yet this is all the supporters of the midwives can produce in the way of contradiction to my proposition that occupation for women is the crux of the whole question.—I am, etc.,

Friern Road, S.E., Oct. 15th. A. MACLEAN.

## THE ORIGINAL OBJECT OF THE MIDWIVES BILL.

SIR,—The essentials of Mr. Humphreys's letter can be dealt with in very few words, and I shall be glad if he will reply as briefly. In paragraph 5 he says:

> But the object, apparently, with which your correspondent brings forth the ancient bit of history which forms the text of his letter is to gain some support to his theory that midwives are being pushed forward with the direct object of displacing medical men in their practice.

Will he point out where in my letter I have propounded this "theory" which he designates mine?

In the same paragraph he says that most of "the women who have passed the Obstetrical Society's examination prefer to work as nurses under the direct supervision of the medical practitioner." I shall be glad if he will adduce further evidence of this, as I find in this district that women of this kind are the most anxious to conduct cases themselves, and I have heard of one who distinctly declined to have anything to do with a case she had begun with when a doctor was called in.

At the end of this paragraph, instead of answering my question, he repeats the assertion I quoted, "The Midwives Registration Association—a large medical body mainly composed of general practitioners." Will he tell us how many, and where located?

It is not worth while exposing his fallacious method of dealing with what he terms, in paragraph two, my "fallacy" any further than to say if midwives are given a legal position, legally registered, anyone can see that their position would be greatly enhanced in the public estimation, and especially the undiscerning section, and the midwives know this or they would not clamour for legislation.

As to his first paragraph, I did not say that I was "informed" at all. It is a matter of common knowledge and common observation. To go no further than the whole of Mr. Humphreys's letters, anyone can see that their object is "the promotion and protection of midwives."

As he speaks so highly of those who have passed the examination of the Obstetrical Society of London, will he say whether he does or does not approve of their signing themselves "L.O.S.;" whether it was not adopted as a substitute for the "diploma nullified by the General Medical Council;" and whether it is not calculated to deceive the public and to convey the impression to the uninformed that they are independent practitioners of midwifery?

Mr. Humphreys has carefully avoided denying the starting point of my letter:

> That the Midwives Bill was a result of the resolution of the General Medical Council nullifying the diploma of the Obstetrical Society of London, and that this resolution was the result of the action of the Lancashire and Cheshire Branch of the British Medical Association.

—I am, etc.,

Manchester, Oct. 12th. G. H. BROADBENT.

## DOCTORS AND MIDWIVES.

SIR,—A very painful inquest has lately been held at Swanscombe, near Gravesend, Kent, which sheds a lurid light upon the sad relations subsisting between some medical men and the midwives in their vicinity. The following notes of the evidence are taken from a report published in the *Swanley, Eynsford, and District Times* of October 8th, names being omitted.

On Tuesday morning, October 1st, an uncertificated midwife, who deposed that she had been a midwife for forty-five years without any fatality before the present instance, was called to attend the wife of a labourer in her confinement, and found her suffering from recurrent fits, and as she became worse in the evening she thought she had better send for a doctor. The husband deposed that, at the direction of the midwife, he went for a doctor in the evening and found he was not at home; about 11 o'clock he went again, and informed him through the speaking tube that he wished him to come to attend his wife, but the doctor declined to come because he had not been engaged. The husband then went to another medical practitioner, who also declined to attend for the same reason, as did also a third and for the same reason, and both these, like the first, asked him if he had the fee of a guinea. On returning home he found his wife was dead,

and the midwife told him she expired about a quarter to 4 in the morning.

The first medical man was called as a witness, and said that, not having been engaged, he did not go to attend the deceased: he also stated that he told the husband that he did not follow midwives: that he heard of deceased's death on the following morning; that he had made a *post-mortem* examination, and that death was due to exhaustion from fits arising from an internal disorder. He believed a good many other medical men in the neighbourhood had taken the same position of refusing to go to cases where they had not been engaged beforehand; his only reason for asking the husband if he had the usual guinea was that if he had not the money he would have advised him to have gone to the parish doctor. The jury returned a verdict of death from natural causes, adding a rider that they were of opinion that one of the three doctors called by the husband should have attended.

1. I think it shocking that any medical practitioner—whether in active work or retired—should, when summoned, refuse to attend to any case of serious illness, unless prevented by other urgent duties or by physical unfitness.

2. I think it derogatory to the benevolent principles of our noble calling that mercenary motives should influence him in so refusing.

3. I think it most derogatory that any agreement with others not "to follow midwives" should be offered as a ground for such refusal.

4. Accordingly, I share the general feeling of indignation which this case has excited in this district. Licensed victuallers are, I believe, legally bound to minister to the alimentary wants of those who call upon them; and if such cases as that under notice should become frequent neither you nor I can, I think, doubt that the Legislature will not fail, and promptly, to impose a like obligation upon registered medical practitioners in cases of serious illness.—I am, etc.,

JOHN INCE,
Surgeon-Major I.M.S. (Retired).

Swanley, Kent.

## THE TREATMENT OF PHTHISIS BY MEANS OF ELECTRICAL CURRENTS, ETC.

SIR,—In his paper on the above subject published in the BRITISH MEDICAL JOURNAL of October 12th, Mr. Chisholm Williams makes the interesting observation that "in one case, although in five weeks the patient only put on 1¼ lb., the chest measurement showed an increase of 3½ ins." Such an increase in girth must obviously be due to an enormous increase in lung capacity. Is Mr. Chisholm Williams able to offer any explanation of this increase? Can he explain what were the anatomical conditions which caused the lungs to be so small at the beginning of the term specified, and so large at the end of it?—I am, etc.,

HARRY CAMPBELL.

Wimpole Street, W., Oct. 13th.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## THE UNDERMANNING OF THE ARMY MEDICAL SERVICE.

THE following is the distribution of medical officers on the Active List according to the *Army List* for October, 1901:

*Distribution in October Army List.*

| Ranks. | Home. | South Africa. | Other Foreign Stations. | Not Posted. | Total. | Remarks. Seconded. | Reserve of Officers. |
|---|---|---|---|---|---|---|---|
| Surgeon-Generals ... | 4 | 1 | 3 | — | 8 | — | — |
| Colonels ... ... ... | 9 | 7 | 10 | 1 | 27 | 4 | — |
| Lieutenant-Colonels... | 60 | 63 | 89 | 1 | 213 | 6 | 26 |
| Majors ... ... ... | 40 | 137 | 112 | 2 | 291 | 3 | 4 |
| Captains ... ... ... | 29 | 81 | 117 | 3 | 230 | 7 | 4 |
| Lieutenants ... ... | 37 | 142 | 56 | — | 235 | 2 | — |
| Total... ... ... | 179 | 431 | 387 | 7 | 1,004 | 22 | 34 |

There is an increase in the total numbers of 11, but the distribution is little altered beyond an increase of 13 in South Africa. The unposted are 7 fewer, the seconded 5 more, and 1 more of the reserve of officers is employed. Deducting the unposted (presumably on sick leave) 7, the seconded 22, and the Reserve employed 34, the number of really available officers is reduced to 941. Excluding the Reserve, there are 67 retired officers employed. It will be observed that there are only 8 surgeon-generals (excluding one acting as Director-General), one having died.

### CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

| | From. | To. |
|---|---|---|
| Lieut.-Col. W. J. Macnamara, M.D. ... | Chelsea Hos'l. | South Africa. |
| ,, W. G. A. Bedford, M.B., C.M.G. | Netley ... ... | Gibraltar. |
| Major L. Haywood, M.B. ... ... ... | Portsmouth ... | Portland. |
| ,, B. M. Skinner ... ... ... ... | — | South Africa. |
| ,, A. E. Tate ... ... ... ... | Portsmouth ... | Parkhurst. |
| ,, G. E. Moffet, M.B. ... ... ... | South Africa... | Glasgow. |
| ,, G. G. Adams ... ... ... ... | Jamaica ... | Madras. |
| ,, F. J. W. Stoney ... ... ... ... | Madras... ... | Jamaica. |
| ,, M. T. Yarr ... ... ... ... | South Africa... | Dublin. |
| Captain J. E. Brogden ... ... ... ... | Bombay ... | China. |
| ,, L. A. Mitchell, M.B. ... ... ... | Punjab... ... | ,, |
| ,, G. Dansey-Browning ... ... ... | ,, | ,, |
| ,, E. C. Haves ... ... ... ... | Bengal... ... | ,, |
| ,, W. P. Gwynn ... ... ... ... | Ceylon ... ... | Madras. |
| Lieutenant G. C. Phipps ... ... ... | South Africa... | Cork. |
| ,, R. C. Rodger, M.B. ... ... | ,, | Aldershot. |
| ,, E. McDonnell, M.B. ... ... | ,, | Cork. |
| ,, C. R. Evans ... ... ... | Aldershot ... | Bombay. |
| ,, F. S. Walker ... ... ... | Cork ... ... | Dublin. |
| ,, M. G. Sterling ... ... ... | South Africa... | Aldershot. |
| ,, W. M. Power ... ... ... | ,, | Dublin. |
| ,, H. J. McGrigor, M.B. ... ... | Aldershot ... | Barbadoes. |
| ,, J. H. Brunskill, M.B.... ... | ,, | West Africa. |
| ,, R. N. Hunt, M.B. ... ... | York ... ... | Madras. |
| ,, A. J. W. Wells ... ... ... | Aldershot ... | South Africa. |
| ,, W. F. Sheehan ... ... ... | Dublin ... ... | ,, |
| ,, H. H. Scott, M.B. ... ... | Chatham ... | ,, |
| ,, H. A. Bransbury ... ... | Colchester ... | ,, |
| ,, M. W. Falkner ... ... ... | Aldershot ... | ,, |
| ,, R. W. Woodley ... ... ... | Cork ... ... | ,, |
| ,, E. Ryan ... ... ... ... | ,, | ,, |
| ,, E. E. Parkes, M.B. ... ... | Dover ... ... | ,, |
| ,, J. V. Roche ... ... ... | Cork ... ... | ,, |
| ,, J. Conway... ... ... ... | Devonport ... | ,, |
| ,, H. Barbour, M.B. ... ... | Belfast... ... | ,, |
| ,, F. E. Robinson, M.B. ... ... | Dublin ... ... | ,, |
| ,, S. Mason ... ... ... ... | Aldershot ... | ,, |
| ,, J. S. Bostock, M.B. ... ... | ... | Malta. |
| ,, J. B. Clarke ... ... ... | ... | York. |
| ,, J. Waddell ... ... ... | — | South Africa. |
| ,, P. G. Hyde ... ... ... | ... | Aldershot. |
| ,, A. McMunn ... ... ... | — | South Africa. |
| ,, F. W. Lambelle, M.B. ... ... | — | Aldershot. |
| ,, L. J. S. Cahill, M.B. ... ... | — | Dublin. |
| ,, W. G. Stephenson, M.B. ... ... | — | Aldershot. |
| ,, M. C. Beatty, M.B. ... ... | ... | ,, |
| ,, J. R. Welland, M.B. ... ... | — | Dover. |
| ,, H. W. Long, M.B. ... ... | — | Colchester. |
| ,, T. F. Ritchie, M.B. ... ... | — | Aldershot. |
| ,, A. W. Sampey ... ... ... | ... | Dublin. |
| ,, T. J. Potter ... ... ... | — | Cork. |
| ,, A. J. Williamson, M.B. ... | — | York. |
| ,, E. V. Arlen ... ... ... | — | Chatham. |
| ,, H. Rogers, M.B.... ... ... | — | Cork. |
| ,, W. Davis ... ... ... | ... | Belfast. |
| ,, J. C. Hastings, M.B. ... ... | ... | Salisbury Plain. |
| ,, D. J. F. O'Donoghue ... ... | — | Curragh. |
| ,, A. W. A. Irwin ... ... ... | — | South Africa. |
| ,, G. H. Usmar ... ... ... | — | ,, |

Major W. H. P. Lewis and Captain H. Cotton have been brought on to the establishment from the Reserve and posted, the former to the Home District, the latter to Ipswich.

### ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—JEROME BARRY, Staff Surgeon, to the *President*, for three months hospital study, October 11th; ALFRED J. PICKTHORN, Staff Surgeon, to the *President*, for three months hospital study, October 10th; HENRY W. G. GREEN, Surgeon, to the *Majestic*, October 9th; EDWARD SUTTON, Surgeon, to Plymouth Hospital, October 15th; ROBERT B. SCRIBNER, Surgeon, to the *Shearwater*, October 24th; MATHEW L. M. VAUDIN, M.B., Surgeon to the *Wildfire*, for the *Immortalité* and Naval Barracks, undated; HILARY C. ARATHOON, Surgeon, to the *Virid*, October 21st.

### ROYAL ARMY MEDICAL CORPS.

MAJOR H. J. MCLAUGHLIN, M.B., is promoted to be Lieutenant-Colonel, July 27th. He was appointed Surgeon, February 3rd, 1878, and Surgeon-Major twelve years later. He was in the Boer war of 1881, being present at the defence of Standerton and mentioned in despatches, and with the Nile expedition in 1884-5, for which he received a medal with clasp and the Khedive's bronze star. He was also employed in the Remount

Department in South Africa in 1899-1900, being graded as a Deputy Assistant Adjutant-General.

Lieutenant R. L. Davies has resigned his commission, which was dated December 4th, 1899, from October 12th.

Civil Surgeon Stafford Mary Adye-Curran is appointed Lieutenant, July 26th.

Lieutenant-Colonel B. M. Blennerhassett, C.M.G., who is serving in the Punjab Command, is appointed to officiate as Principal Medical Officer, Rawal Pindi District.

The undermentioned officers, on retired pay, have assumed duty at the stations named: Lieutenant-Colonel H. H. Stokes, M.D., Curragh; Lieutenant-Colonel A. Kirwan, Hounslow; Captain H. Cotton, Ipswich.

Captain Frederick John Gaine died on October 9th, aged 30. He was a son of Charles Gaine, M.R.C.S., of Weston Lea, Bath, and entered the service as Surgeon-Lieutenant, January 28th, 1897, becoming Captain January 28th, 1900.

The undermentioned officers have been discharged to duty from hospital in South Africa: Major J. H. Brannigan, Civil Surgeons P. W. Hampton, J. H. Stuart, P. W. James, Lieutenant and Quartermaster M. G. H. Painton, Civil Surgeon F. R. Featherstone.

The following are on passage home: Lieutenant-Colonel J. G. MacNeece, Captain G. S. McLoughlin, Lieutenant J. W. H. Houghton, Civil Surgeons J. Graham, R. H. Browne, and E. H. Ridley.

### INDIAN MEDICAL SERVICE.

Lieutenant-Colonel W. A. Simmonds, Bengal Establishment, is permitted to retire from the service from August 9th. He was appointed Assistant Surgeon March 31st, 1875, and became Brigade Surgeon-Lieutenant-Colonel March 31st, 1895. He was in the Afghan war in 1878-80, including the action at Charasiah, the occupation of Cabul, and the operations in December, 1879 (medal with two clasps); with the Burmese Expedition in 1885-6 (medal with clasp); with Isazai Expedition in 1892; with the Chitral Relief Force in 1895 (mentioned in despatches, medal with clasp); with the Tochi Force on the North-West Frontier of India in 1897-8 (mentioned in despatches, clasp); and with the Tirah Expeditionary Force in 1897-8 (clasp).

Lieutenant-Colonel J. Young, M.B., Bengal Establishment, is appointed to officiate as P.M.O Presidency District.

Lieutenant-Colonel H. Hamilton, M.D., Bengal Establishment, is is appointed P.M.O. Presidency District, *pro tem.*

### THE VOLUNTEERS.

Mr. Abraham Thomas, M.B., is appointed Surgeon-Lieutenant in the 1st Cardigan Artillery (Western Division Royal Garrison Artillery), September 26th.

Mr. John Griffiths is appointed Surgeon-Lieutenant in the 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers, October 12th.

### VOLUNTEER MEDICAL STAFF CORPS.

Mr. Donald James Mackintosh, M.B., is appointed Surgeon-Lieutenant in the Glasgow Companies, October 12th.

### ROYAL MILITARY COLLEGE, SANDHURST.

The appointment of Assistant Surgeon to the Royal Military College, Sandhurst, will be vacant in December, Lieutenant-Colonel F. Gillespie, M.D., having sent in his resignation.

## MEDICO-LEGAL AND MEDICO-ETHICAL.

### PERSONAL CANVASSING.

Enquirens asks whether a practitioner who made it a habit to call personally on the patients of other practitioners, asking them to join his sick club, could rightly be charged with canvassing.

*** Such conduct might be brought before the General Medical Council if it could be substantiated by reliable evidence. One of the medical defence associations would probably give assistance in such a case.

### DUTIES OF ASSISTANTS.

Nemo asks whether an assistant who is required by his principal to give chloroform for a dentist, or to do other outside work, can claim extra remuneration.

*** Such work is part of his principal's practice, and would have to be done by the latter if he had no assistant. An assistant would be practically useless if he were at liberty to pick and choose what portion of the principal's practice he would assist in.

### THE OBLIGATIONS OF A SUBSTITUTE.

A. W. H., in undertaking to do his neighbour's work, our correspondent accepted obligations from which he cannot honourably escape. It is quite plain that he cannot take over the patient, but he may express his willingness to meet his neighbour in consultation upon her case.

### FEES OF MEDICAL WITNESSES.

A correspondent writes that he was asked a short time ago by the police to give evidence in a case of rape, and to put himself in a position to do so, it was necessary to give a good deal of time to the matter. He wishes to know whether he could legally claim 5 guineas for his work.

*** Our correspondent's fee is a very moderate one under the circumstances he details, and would probably be allowed. It is doubtful, however, whether he could claim it, unless he had had a previous agreement with the police authorities to pay that amount, or it was in accordance with a scale laid down.

### LOCUM TENANTS STARTING IN PRACTICE.

J. W. writes that he has recently employed a locum tenant for a month to look after his practice while he has been away for a holiday. The work was done in a most satisfactory manner, but since his return he has received a letter from the locum tenant stating his intention to start in practice in the neighbourhood, on the ground that he thinks there is room for another practitioner. The locum tenant signed no agreement when he came; but would not such conduct be altogether contrary to medical etiquette?

*** Such conduct would be altogether opposed to the etiquette of the profession; but in the absence of an agreement it is not probable that the late locum tenant could be restrained legally from carrying out his intention.

## PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

### HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,556 births and 3,498 deaths were registered during the week ending Saturday last, October 12th. The annual rate of mortality in these towns, which had declined from 21.6 to 15.6 per 1,000 in the seven preceding weeks, rose again last week to 15.9. The rates in the several towns ranged from 9.3 in Derby, 9.7 in Croydon, 11.6 in Swansea, and 12.0 in Cardiff, to 19.6 in Hull, 20.8 in Manchester, 21.7 in Salford, and 22.5 in Newcastle. In the thirty-two large provincial towns the mean death-rate was 16.5 per 1,000, and exceeded by 1.5 the rate recorded in London, which was 15.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.2 per 1,000; in London this death-rate was equal to 1.9 per 1,000, while it averaged 2.4 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 3.7 in Hull, 4.0 in Sheffield, 4.5 in West Ham, and 5.6 in Salford. Scarlet fever showed a death-rate of 1.0 in Halifax, 1.1 in Swansea, and 2.3 in Preston; whooping-cough of 1.0 in Newcastle; "fever" of 1.0 in West Ham and 1.1 in Portsmouth; and diarrhœal diseases of 2.3 in West Ham and in Sheffield, 2.4 in Gateshead, 2.8 in Wolverhampton, 3.0 in Hull, and 3.3 in Salford. In none of the thirty-three towns was the death-rate from measles equal to 1.0 per 1,000. The 93 deaths from diphtheria in these towns included 54 in London, 5 in West Ham, 5 in Leicester, and 4 in Leicester. Three fatal cases of small-pox were registered in London, but not one in any of the thirty-two large provincial towns. The number of small-pox patients under treatment in the Metropolitan Asylum Hospitals, which had risen from 13 to 169 at the end of the eight preceding weeks, had further increased to 175 on Saturday last, October 12th; 37 new cases were admitted during the week, against 37, 44, and 51 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 3,280, against 3,098, 3,151, and 3,159 on the three preceding Saturdays; 422 new cases were admitted during the week, against 427, 460, and 426 in the three preceding weeks.

### HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, October 12th, 1,032 births and 513 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 17.8 to 14.5 per 1,000 in the five preceding weeks, rose again last week to 16.1 per 1,000, and exceeded by 0.2 the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 6.3 in Perth and 10.4 in Paisley to 17.7 in Dundee and 23.6 in Greenock. The zymotic death-rates in these towns averaged 1.9 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 243 deaths registered in Glasgow included 5 from measles, 2 from scarlet fever, 2 from diphtheria, 4 from "fever," and 18 from diarrhœa. Three deaths from diphtheria, 3 from whooping-cough, and 4 from diarrhœa were recorded in Edinburgh. Three deaths from diarrhœa occurred in Dundee, 3 in Leith, and 2 in Aberdeen; and 4 from scarlet fever in Greenock.

### VITAL STATISTICS OF LONDON DURING THE THIRD QUARTER OF 1901.

[Specially Reported for the British Medical Journal.]

In the accompanying table will be found summarised the vital statistics of the cities and boroughs in the county of London, based upon the Registrar-General's returns for the third, or summer, quarter of the year 1901. The mortality figures relate to the deaths of persons actually belonging to the various metropolitan boroughs, and are the result of a complete system of distribution of deaths occurring in the public institutions of London among the various boroughs in which the deceased had previously resided.

The 32,753 births registered in London during the three months ending September last were equal to an annual rate of 28.9 per 1,000 of the population, provisionally estimated at 4,543,757 persons in the middle of this year; this rate was 0.3 per 1,000 below that recorded in the corresponding period of last year; and was 1.1 below the average rate in the corresponding quarters of the ten preceding years, 1891-1900. The birth-rates in the various boroughs showed the usual wide variations, owing principally to differences in the sex and age distribution of their populations. In Kensington, Chelsea, City of Westminster, St. Marylebone, Hampstead, Stoke Newington, and City of London the rates were considerably below the average; while they showed the largest excess in Fulham, Finsbury, Shoreditch, Bethnal Green, Stepney, Poplar, and Bermondsey.

*Analysis of the Vital Statistics of the Cities and Boroughs in the County of London after Distribution of Deaths occurring in Public Institutions during the Third Quarter of 1901.*

| Cities and Boroughs. | Estimated Population middle of 1901. | Births. | Deaths. | Annual Rate per 1,000 Living. Births. | Deaths. | Principal Zymotic Diseases. | Deaths from Principal Zymotic Diseases. | Small-pox. | Measles. | Scarlet Fever. | Diphtheria. | Whooping-Cough. | Typhus. | Enteric Fever. | Simple and Undefined Fever. | Diarrhœal Diseases. | Phthisis. | Deaths of Children under 1 year of age to 1,000 Births. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COUNTY OF LONDON | 4,543,757 | 32,753 | 18,851 | 28.9 | 16.6 | 4.00 | 4,521 | 35 | 437 | 170 | 348 | 239 | 1 | 153 | 3 | 3,135 | 1,668 | 203 |
| Paddington ... ... | 144,154 | 850 | 468 | 23.7 | 13.0 | 3.17 | 114 | — | — | 2 | 7 | 3 | — | 5 | — | 97 | 27 | 185 |
| Kensington ... ... | 176,787 | 951 | 607 | 21.6 | 13.8 | 2.62 | 115 | — | 3 | 3 | 7 | 6 | — | 3 | — | 93 | 61 | 205 |
| Hammersmith ... ... | 112,619 | 746 | 502 | 26.6 | 17.9 | 4.48 | 126 | 2 | 5 | 3 | 8 | 8 | — | 5 | — | 95 | 41 | 241 |
| Fulham ... ... ... | 138,426 | 1,150 | 569 | 33.3 | 16.5 | 5.33 | 184 | — | 10 | 3 | 6 | 10 | — | 11 | — | 144 | 37 | 227 |
| Chelsea ... ... .. | 73,879 | 376 | 244 | 20.4 | 13.2 | 2.06 | 38 | — | — | 3 | 2 | 1 | — | 2 | — | 30 | 28 | 152 |
| City of Westminster ... | 182,502 | 850 | 620 | 18.7 | 13.6 | 1.98 | 90 | 1 | 18 | 5 | 7 | 4 | — | 5 | — | 50 | 73 | 159 |
| St. Marylebone ... | 133,060 | 960 | 532 | 16.0 | 16.0 | 3.46 | 115 | 4 | 6 | 3 | 10 | 4 | — | 3 | — | 85 | 52 | 135 |
| Hampstead ... ... | 82,287 | 398 | 194 | 19.4 | 9.5 | 1.70 | 35 | 1 | 1 | — | 5 | 6 | — | 4 | — | 18 | 20 | 121 |
| St. Pancras ... ... | 235,297 | 1,590 | 1,060 | 27.1 | 18.1 | 4.37 | 257 | 21 | 19 | 9 | 29 | 9 | — | 7 | — | 163 | 92 | 220 |
| Islington ... ... ... | 335,325 | 2,304 | 1,213 | 27.6 | 14.5 | 3.26 | 273 | 1 | 30 | 12 | 45 | 15 | — | 15 | — | 155 | 106 | 172 |
| Stoke Newington ... | 51,328 | 292 | 154 | 22.8 | 12.0 | 2.44 | 31 | 1 | 2 | 2 | 2 | 1 | — | 2 | — | 21 | 14 | 151 |
| Hackney ... ... ... | 219,780 | 1,637 | 884 | 29.9 | 16.1 | 4.02 | 220 | 1 | 17 | 6 | 30 | 12 | — | 6 | — | 148 | 76 | 207 |
| Holborn ... ... ... | 59,205 | 434 | 275 | 29.4 | 18.6 | 3.60 | 53 | 1 | 9 | 1 | 4 | 2 | — | 5 | — | 31 | 39 | 162 |
| Finsbury ... ... ... | 101,263 | 967 | 517 | 38.3 | 20.5 | 5.54 | 140 | — | 22 | 3 | 13 | 8 | — | 3 | — | 91 | 56 | 166 |
| City of London ... ... | 26,627 | 68 | 118 | 10.2 | 17.8 | 1.50 | 10 | — | — | 1 | 3 | — | — | 1 | — | 5 | 15 | 235 |
| Shoreditch ... ... | 118,554 | 961 | 656 | 32.5 | 22.2 | 6.03 | 178 | — | 31 | 3 | 11 | 5 | — | 4 | — | 124 | 60 | 279 |
| Bethnal Green ... ... | 129,700 | 1,137 | 675 | 35.2 | 20.9 | 4.91 | 159 | — | 20 | 14 | 11 | 7 | — | 5 | 1 | 101 | 67 | 203 |
| Stepney ... ... ... | 298,884 | 2,605 | 1,582 | 35.0 | 21.2 | 5.01 | 374 | — | 65 | 14 | 19 | 30 | 1 | 14 | — | 231 | 147 | 234 |
| Poplar ... ... ... | 168,887 | 1,417 | 868 | 33.7 | 20.6 | 5.63 | 237 | — | 27 | 3 | 27 | 10 | — | 5 | — | 165 | 64 | 246 |
| Southwark ... ... | 206,219 | 1,651 | 1,054 | 32.1 | 20.5 | 4.92 | 253 | 1 | 26 | 19 | 15 | 12 | — | 3 | — | 177 | 100 | 234 |
| Bermondsey ... ... | 130,348 | 1,082 | 640 | 33.3 | 19.7 | 5.07 | 165 | — | 13 | 16 | 14 | 6 | — | 12 | — | 104 | 41 | 240 |
| Lambeth ... ... ... | 302,460 | 2,344 | 1,263 | 31.1 | 16.7 | 4.07 | 306 | 1 | 20 | 11 | 14 | 16 | — | 4 | 2 | 238 | 114 | 191 |
| Battersea ... ... | 169,364 | 1,331 | 740 | 31.5 | 17.5 | 5.63 | 238 | — | 47 | 4 | 4 | 15 | — | 3 | — | 165 | 44 | 245 |
| Wandsworth ... ... | 233,943 | 1,576 | 781 | 27.0 | 13.4 | 2.85 | 166 | — | 15 | 9 | 7 | 7 | — | 4 | — | 124 | 59 | 180 |
| Camberwell ... ... | 259,897 | 1,824 | 986 | 28.1 | 15.2 | 3.81 | 247 | — | 6 | 16 | 27 | 18 | — | 8 | — | 172 | 91 | 195 |
| Deptford ... ... ... | 110,732 | 860 | 427 | 31.2 | 15.5 | 3.87 | 107 | — | 4 | 3 | 7 | 10 | — | 3 | — | 80 | 37 | 181 |
| Greenwich ... ... | 96,188 | 678 | 368 | 28.3 | 15.3 | 3.79 | 91 | — | 8 | 1 | 8 | 4 | — | 3 | — | 67 | 28 | 198 |
| Lewisham ... ... | 128,423 | 801 | 427 | 25.0 | 13.3 | 3.12 | 100 | — | 6 | 1 | 4 | 6 | — | 3 | — | 80 | 28 | 205 |
| Woolwich ... ... | 117,619 | 913 | 427 | 31.1 | 14.6 | 3.38 | 99 | — | 7 | | 2 | 4 | — | 5 | — | 81 | 51 | 185 |

The 18,851 deaths of persons belonging to London, registered during the quarter ending September last, were equal to an annual rate of 16.6 per 1,000, against 19.1, 20.4, and 17.7 per 1,000 in the corresponding periods of the three preceding years: the mean-rate in the ten preceding third quarters was 18.3 per 1,000. The lowest death-rates last quarter in the various metropolitan boroughs were 9.5 in Hampstead, 12.0 in Stoke Newington, 13.0 in Paddington, 13.2 in Chelsea, 13.3 in Lewisham, and 13.4 Wandsworth; and the highest rates 20.5 in Finsbury and in Southwark, 20.6 in Poplar, 20.9 in Bethnal Green, 21.2 in Stepney, and 22.2 in Shoreditch.

During the quarter under notice, 4,521 deaths resulted from the principal zymotic diseases in London; of these, 35 were referred to small-pox, 437 to measles, 170 to scarlet fever, 348 to diphtheria, 239 to whooping-cough, 1 to typhus, 153 to enteric fever, 3 to simple continued fever, and 3,135 to diarrhœal diseases. These 4,521 deaths were equal to an annual rate of 4 per 1,000, against an average of 3.92 in the corresponding periods of the ten preceding years. In the third quarters of the three preceding years the rates were 4.33, 4.61, and 3.78 per 1,000 respectively. The lowest zymotic death-rates last quarter were 1.50 in the City of London, 1.70 in Hampstead, 1.98 in City of Westminster, 2.06 in Chelsea, and 2.44 in Stoke Newington, and the highest rates were 5.01 in Stepney, 5.07 in Bermondsey, 5.33 in Fulham, 5.54 in Finsbury, 5.63 in Poplar and in Battersea, and 6.03 in Shoreditch. Of the 35 fatal cases of small-pox, 21 belonged to St. Pancras, 4 to St. Marylebone, and 2 to Hammersmith; measles showed the highest proportional fatality in Finsbury, Shoreditch, Bethnal Green, Stepney, Poplar, and Battersea; scarlet fever in Bethnal Green, Stepney, Southwark, Bermondsey, and Camberwell; diphtheria in St. Pancras, Islington, Hackney, Finsbury, the City of London, and Poplar; whooping-cough in Fulham, Hampstead, Finsbury, Stepney, Battersea, and Deptford; "fever" in Fulham, Hampstead, Holborn, Stepney, and Bermondsey; and diarrhœal diseases in Fulham, Finsbury, Shoreditch, Poplar, Southwark, and Battersea.

During the third quarter of this year 1,668 deaths from phthisis were registered, equal to an annual rate of 1.47 per 1,000, against 1.52, 1.61, and 1.57 in the corresponding quarters of the three preceding years. Among the various metropolitan boroughs the lowest phthisis death-rates last quarter were recorded in Paddington, Fulham, Hampstead, Stoke Newington, Battersea, Wandsworth, and Lewisham; the highest rates in Holborn, Finsbury, City of London, Shoreditch, Bethnal Green, and Stepney.

Infant mortality, measured by the proportion of deaths under one year of age to registered births, was equal to 203 per 1,000 last quarter, against 250, 277, and 210 in the corresponding quarters of the three preceding years. The rates of infant mortality during the quarter under notice were lowest in Chelsea, City of Westminster, St. Marylebone, Hampstead, Stoke Newington, and Holborn; while the highest rates were recorded in Hammersmith, City of London, Shoreditch, Stepney, Poplar, Southwark, and Battersea.

## PREVENTION OF INFANTILE DIARRHŒA IN MANCHESTER.

According to the weekly return of the Medical Officer of Health for Manchester, issued on October 8th, the deaths from summer diarrhœa, which during the preceding six weeks had averaged 64 a week, fell to 21 in the week ending October 5th, and 01 these 12 were among infants under 12 months old. Printed information relating to the prevention of summer diarrhœa, including a leaflet on "How Infants should be Fed," have been circulated by the police throughout the City of Manchester. In accordance with the instructions of the Sanitary Committee, "diarrhœa medicine" is being supplied to poor people from the police and fire stations and other public buildings between the hours of 9 P.M. and 9 A.M. The precautions urged in the pamphlet include the boiling of milk, the preparation of food for children only as it is needed, the scrupulous cleanliness of children's clothing, in view of the fact that infants are apt to suck their clothing, the rejection of tainted food, the avoidance of overcrowding and the free ventilation of dwelling rooms, the removal of offensive accumulations near houses, the cleansing of yards and the flushing of drains, the emptying of ash tubs and the burning of vegetable refuse, and the reporting of any offensive smell near a house, the cause of which cannot be ascertained and removed, to the sanitary office.

## THE EPIDEMIC OF ENTERIC AT COVENTRY.

The epidemic which during the early part of September appeared as if it were going to become very serious has been checked. During the last week of September and the first week of October only eight additional cases were notified, and of these only two resided in Sherbourne Street. Dr. Snell and the Sanitary Committee, despite the lack of isolation accommodation, have succeeded in preventing what threatened to be a serious epidemic, and Coventry will in future be better equipped to combat any similar epidemic.

## FEVER HOSPITALS AND DOMESTIC HOUSES.

W. R. O. asks: (1) What is a safe distance at which a building for the frequent accommodation of large numbers of people should be from a fever hospital? (2) What is the authority if a decision was come to? (3) Is there any Act or by-laws in use relating to the distance?

*** We know of no authoritative statement as to what the distance should be. The Local Government Board require a space of at least 40 feet between any ward with infectious cases and a boundary wall, which must not be less than 6½ feet high. With reference to a small-pox hospital, there must not be within a quarter of a mile of the site either a general or infectious diseases hospital, or a workhouse or similar institution, or a population of as many as 200 persons, or within half a mile a population of 600 (Memorandum on the Provision of Isolation Hospital Accommodation, issued by the Local Government Board, August, 1900).

## FREE PUBLIC VACCINATION IN BUSINESS ESTABLISHMENTS.

W. writes: The public vaccinator or his representative called upon a large firm in this city a day or two ago and offered to vaccinate the whole establishment free of cost. This offer came a day or two after a

suggestion from myself on the subject as their visiting medical officer. In another case occurring about the same time I had offered to vaccinate the employees of a large firm in the West End for a certain sum. The public vaccinator stepped in, did the whole (600 or 800) for nothing, being paid at the rate of several shillings a head by the authorities and in addition receiving a gratuity from the firm. Does not this amount almost to a scandal?

Another Correspondent, who is a medical officer of an orphanage, writes to inform us that the public vaccinator of the district has written to the Secretary of the Orphanage offering to vaccinate any of the inmates or attendants free of charge, the institution being within his vaccination district. The letter mentions certain other institutions, some of the inmates of which the writer had vaccinated, and adds that the lymph employed is issued by the Local Government Board from calves kept by it. The correspondent, who writes to us on the subject, thinks that the public vaccinator in so acting interfered unduly with the responsibilities of the medical officer of the orphanage, who, as a matter of fact, had already vaccinated all the inmates of the institution requiring vaccination.

*** All public vaccinators should show the utmost discretion in tendering their services to institutions which possess medical officers. The public vaccinator's offer to vaccinate, if made at all, should be made in the first place through the medical officer of the institution, who would be able to inform him as to the necessity for such a course. We think that a similar principle applies to commercial establishments.

# UNIVERSITIES AND COLLEGES.

## UNIVERSITY OF CAMBRIDGE.

*Appointment of Assessor.*—Dr. Laurence Humphry has been appointed Assessor to the Regius Professor of Physic.

*M.B. Examinations.*—The Registrary publishes the following dates with reference to the approaching M.B. Examinations:

| | Names sent in. | Fees and Certificates. | Examination Begins. |
|---|---|---|---|
| First M.B.: | | | |
| Chemistry, etc. ... ... | Nov. 26th | Dec. 4th | Dec. 9th |
| Biology ... ... ... | Nov. 26th | Dec. 6th | Dec. 12th |
| Second M.B.: | | | |
| Pharmacy ... ... ... | Nov. 26th | Dec. 6th | Dec. 12th |
| Anatomy, etc. ... ... ... | Nov. 26th | Dec. 4th | Dec. 9th |
| Third M.B. ... ... ... ... | Nov. 27th | Dec. 5th | Dec. 10th |
| M.C. ... ... ... ... | Dec. 1st | Dec. 13th | Dec. 14th |

*Medical Degrees.*—At the Congregation on October 10th the following medical degrees were conferred:—M.D.: C. S. Myers, Caius; M.B. and B.C.: H. Walker, King's; J. P. L. Mummery, Caius; J. Bradford, Emmanuel.

## UNIVERSITY OF EDINBURGH.

The following candidates have passed the Final Professional Examination for Degrees in Medicine and Surgery:—

*Old Regulations, M.B., C.M.*—C. G. Hey, A. H. McShine, A. C. Peterson, P. W. Shepherd.

*New Regulations, M.B., Ch.B.*—A. J. Brock, A. Brown, J. W. Duffus, J. M. Dupont, L. A. Holcroft, J. Jamieson, E. W. Lewis, H. M'Cloghry, J. B. M'Cutcheon, L. A. MacMunn, K. D. C. Macrae, A. F. G. Masson, R. Murray, P. Pattison, G. A. P. Ross, R. Rutherford, C. W. Somerville, G. W. Smith, W. C. Spooner, G. H. Steven, G. C. Straithairn, J. P. Thorne, N. N. Wade, D. L. Wall, H. E. Wareham, P. Weatherbe.

## ROYAL COLLEGE OF SURGEONS, EDINBURGH.

At the annual meeting on October 16th Dr. John Halliday Croom was elected President for the ensuing year.

*The Victoria Jubilee Lister Prize.*—This prize, of the value of £100, founded by His Excellency the late Dr. Robert Halliday Gunning, of Rio de Janeiro and Edinburgh, for the greatest benefit done to practical surgery by any Fellow or Licentiate of the College during the quadrennial period ending June 20th, 1901, was awarded to Francis Mitchell Caird, F.R.C.S., of Edinburgh.

*Surgical Prize Essay.*—The Surgical Essay Prize of 100 guineas offered by the College for an original unpublished essay on surgery, in any of its branches on anatomy, physiology, therapeutics, or pathology, in their relations to surgery, was awarded to James Veitch Paterson, F.R.C.S.Edin., of Edinburgh, the title of whose essay was The Lymph Flow through the Eyeball.

*Admission of Fellows.*—The following gentlemen having passed the requisite examinations, were admitted Fellows of the College: Francis Cubbon Rogers, L.R.C.S.E., Stockport; James Adam Dick, M.D., New South Wales; Clement Somerton Clark, M.B., Ch.B., Edinburgh; Edwin Zerubabel Davies, M.B., L.R.C.S.E., Edinburgh; William Henry de Silva, M.B., C.M. Colombo; John Robert Foster, M.B., C.M., London, S.E.; Andrew Gibson, M.B., Ch.B., Paisley; Sampson John Rodger Greville, L.R.C.S.E., Edinburgh; David Heron, L.R.C.S.E., Edinburgh; William Llewelyn Jones, M.D., Merthyr Tydfil, South Wales; John Stuart Shepherd Lumsden, M.B., C.M., Indian Medical Service; William John Orr, M.B., C.M., Edinburgh; Ernest John Peill, M.B., Ch.B., Pekin; Bertram Crossfield Stevens, M.D., M.R.C.S.Eng., Leeds; and William Young, M.D., Wellington, New Zealand.

## ROYAL COLLEGE OF SURGEONS IN IRELAND.

Fellowship Examination.—The following candidates having passed the necessary examination have been admitted Fellows of the College: Mr. J. M. Falkiner, Mr. G. A. Gunton, Mr. W. H. Langley, and Mr. J. R. Macnamara.

# HOSPITAL AND DISPENSARY MANAGEMENT.

## EDINBURGH ROYAL INFIRMARY.

The following gentlemen have been reappointed clinical tutors for the ensuing winter and summer sessions: Dr. Lamond Lackie to Dr. D. Berry Hart; Dr. W. B. Drummond to Dr. Bruce's Wards; Dr. David Waterson to Dr. MacGillivray's Wards. The following gentlemen were appointed for six months, as from October 1st, 1901: Resident Physicians—A. C. Begg, M.B., Ch.B., to Professor Wyllie; David L. Williams, L.R.C.P. and S.Ed., to Dr. Bruce. Resident Surgeon—Walter H. Swaffield, M.B., C.M., to Dr. MacGillivray. Non-resident House Surgeons—Charles Forsyth, M.B., Ch.B., to Mr. Berry; R. Ashleigh Glegg, M.B., Ch.B., to Dr. Mackay. Clinical Assistants—W. H. Prentice, M.B., Ch.B., to Professor Simpson; P. Gardiner, M.B., C.M., B.Sc., to Dr. W. Allan Jamieson; A. Murray Wood, M.B., Ch.B., to Dr. MacGillivray; D. W. Maclagan, M.B., Ch.B., to Dr. M'Bride.

# OBITUARY.

Surgeon-General William Arthur Thomson, M.B., K.H.P., who died recently at Camberley, aged 71, studied and graduated at Aberdeen University, and entered the army in 1851. He attained the rank of Surgeon-Major-General (afterwards Surgeon-General) in 1886, and retired in 1892. He was for a period Surgeon-General in India. The older race of army medical officers have very kindly recollections of Surgeon-General Thomson, a most efficient and able officer, an honourable, high-minded, and very amiable man.

# MEDICAL NEWS.

Professor John Chiene, C.B., will take the chair at the autumn dinner of the Edinburgh University Club, London, on Wednesday, November 13th, at the Criterion Restaurant.

Post-graduate teaching has recently been undertaken for the first time in Holland at Groningen, and it is understood that it will also be inaugurated shortly at Leyden.

A conference on the housing of the working classes will be held at the Westminster Palace Hotel on December 3rd, under the chairmanship of Sir Walter Foster, M.P., President of the Land Law Reform Association. Rural housing will be dealt with at a morning meeting, and town housing at an afternoon meeting.

Guy's Hospital.—Sir Joseph Dimsdale, M.P., Lord Mayor-elect, will preside at a meeting to be held at the Mansion House early in January in support of an appeal by Guy's Hospital for £180,000 to meet the cost of works of renovation rendered necessary by the age of the buildings, and of extensions which increasing demands on it are held to render desirable.

Society for Relief of Widows and Orphans of Medical Men.—A Quarterly Court of the Directors was held on October 9th, Mr. Christopher Heath, President, being in the chair. Two new members were elected, and the death of a member reported. There were no fresh applications for grants, the death of a widow was announced who had been in receipt of grants since 1882 and had received £1,084 10s. from the Society, her husband having paid £28 as subscriptions. Applications for renewal of grants were read from 51 widows, 13 orphans, and 5 recipients from the Copeland Fund, and it was resolved that £1,168 be distributed among them at the next Court. It was determined to make a Christmas present to the widows and orphans on the Fund, the amount (£569) to be divided among them, thus disposing of the surplus income. The expenses of the quarter were £66 5s.

## MEDICAL VACANCIES.

The following vacancies are announced:

BELFAST: ROYAL VICTORIA HOSPITAL.—Medical Superintendent. Salary commencing at £300 per annum, with board and apartments. Applications to the Honorary Secretary by November 1st.

BELGRAVE HOSPITAL FOR CHILDREN.—Honorary Dental Surgeon. Applications to the Honorary Secretary, 77 and 79, Gloucester Street, S.W., by November 2nd.

BETHNAL GREEN INFIRMARY.—Third Assistant Medical Officer. Salary, £160 per annum, with furnished apartments, board, and washing. Applications on forms provided to be sent to the Medical Superintendent at the Infirmary, Cambridge Road, N.E., by October 29th.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon: unmarried. Salary, £150 per annum, with £30 per annum allowance for cab hire, and furnished rooms, etc. Applications to the Secretary by October 21st.

BODMIN CORNWALL COUNTY ASYLUM.—Junior Assistant Medical Officer; unmarried. Salary, £120, rising to £150 per annum, with board, furnished apartments, laundry, etc. Applications to the Medical Superintendent by October 24th.

BRADFORD ROYAL INFIRMARY.—(1) House-Surgeon; unmarried. Salary, £110 per annum. (2) Dispensary Surgeon; unmarried. Salary, £100 per annum. Board and residence provided in each case. Applications endorsed "House-Surgeon" or "Dispensary Surgeon" to be sent to the Secretary by October 22nd.

BRENTWOOD: ESSEX COUNTY ASYLUM.—Junior Assistant Medical Officer; not over 25 years of age. Salary, £140 per annum. Applications to the Medical Superintendent.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—House-Physician; unmarried, and under 30 years of age. Salary, £80 per annum, with board, residence, and washing. Applications to the Secretary by October 30th.

BRISTOL GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with board, residence, etc. Applications to the Secretary by October 28th.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane Street, S.W.—Honorary Surgeon for the Western District. Applications to the Secretary by October 31st.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Registrar. Honorarium, 20 guineas per annum. Applications to the Secretary by November 9th.

CHESHIRE COUNTY ASYLUM, Parkside, Macclesfield.—Junior Assistant Medical Officer; unmarried. Salary, £110 per annum, rising to £160, with board, furnished apartments, washing, and attendance. Applications to the Medical Superintendent.

DERBY COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer. Salary, £110, rising to £130 per annum, with furnished apartments, board, washing, and attendance. Applications to the Medical Superintendent.

DUBLIN: TRINITY COLLEGE.—King's Professorship of the Institutes of Medicine (Physiology and Histology). Applications to Dr. J. Craig, Registrar, Royal College of Physicians, Kildare Street, Dublin, by November 30th.

GLASGOW ROYAL ASYLUM FOR LUNATICS.—Resident Physician-Superintendent; not under 30 nor over 45 years of age. Salary, £1,000 per annum, with house, etc. Applications to the Secretary, 190, West George Street, Glasgow, by October 21st.

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Remuneration at the rate of £30 per annum, with board, residence, and washing. Applications to the Secretary by October 30th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, N.—Surgeon. Applications to the Secretary.

HOLLOWAY AND NORTH ISLINGTON DISPENSARY.—Two Honorary Medical Officers. Applications to the Secretary, Palmer Place, Holloway Road, N.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Resident Medical Officer; unmarried and not under 25 years of age. Salary, £200 per annum, with board and residence. Applications to the Secretary by October 30th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Surgeon; unmarried. Appointment for six months. Salary, £20, with board, residence, and washing allowance of £2 10s. (2) Surgeon Dentist; must be F.R.C.S.Eng. Applications, on forms provided, to be sent to the Secretary by October 22nd.

LEICESTER INFIRMARY.—Assistant House-Surgeon. Salary, £80 per annum, with board, apartments, and washing. Applications to the Secretary, 24, Friar Lane, Leicester.

LIVERPOOL: HOSPITAL FOR WOMEN. House-Surgeon. Appointment for six months. Honorarium, £25. Applications to the Honorary Secretary of the Medical Board.

LONDON COUNTY ASYLUM, Hanwell.—Junior Assistant Medical Officer; between 23 and 30 years of age. Salary, £150 per annum, with board, furnished apartments, and washing. Applications on forms provided to be sent to the Clerk of the Asylums Committee, 6, Waterloo Place, London, S.W., by October 26th.

LONDON DISPENSARY, 27, Fournier Street, Spitalfields, E.C.—Assistant Medical Officer; non-resident. Salary, £90 per annum. Applications to the Secretary by October 31st.

MACCLESFIELD GENERAL DISPENSARY.—Junior House-Surgeon. Salary, £70 per annum, with board and residence. Applications to the Chairman of the House Committee by October 30th.

MANCHESTER: MONSALL FEVER HOSPITAL.—First Medical Assistant. Appointment for one year but renewable. Salary, £150 per annum, with board and lodgings. Applications, endorsed "Appointment of First Medical Assistant," to be sent to the Chairman of the Sanitary Committee, Town Hall, Manchester, by October 25th.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House-Surgeon. Honorarium at the rate of £50 per annum, with board. Applications to Mr. G. W. Fox, 53, Princess Street, Manchester, by October 26th.

MARGATE: ROYAL SEA-BATHING HOSPITAL.—Honorary Visiting Surgeon: must be resident in the Isle of Thanet. Applications to the Secretary, 30, Charing Cross, London, S.W., by October 23rd.

MORPETH DISPENSARY.—House-Surgeon: unmarried. Salary, £120 per annum, with furnished rooms, etc. Applications to the Honorary Secretary by October 28th.

NORTH LONDON HOSPITAL FOR CONSUMPTION.—Clinical Assistant at Central Out-patient Department. Appointment for six months. Honorarium at the rate of £35 per annum. Applications to the Secretary, 41, Fitzroy Square, W., by October 31st.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—(1) House-Physician; (2) House-Surgeon. Appointment for six months. Salary at the rate of 50 guineas per annum, with board and residence. Applications to the Secretary by October 26th.

PLYMOUTH BOROUGH ASYLUM.—Assistant Medical Officer; unmarried. Salary, £150 per annum rising to £220, with furnished apartments, board, and washing. Applications, endorsed "Assistant Medical Officer," to be sent to Dr. W. H. Bowes, Medical Superintendent, Plymouth Borough Asylum, Blockadon, Ivy Bridge, Devon, by October 22nd.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—(1) Resident House-Physician (female); (2) Resident House Surgeon (female); (3) House-Physician (male); (4) Casualty House Surgeon (male). Appointments for six months. No salary, but board, etc., provided. Applications to the Secretary by October 26th.

SALISBURY INFIRMARY.—House-Surgeon; unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by November 20th.

SHANGHAI MUNICIPAL COUNCIL.—Assistant Health Officer; must possess D.P.H., and not be over 35 years of age. Salary, 3,600 taels a year (about £360), with means of locomotion and first-class passage to and from England. Applications to Messrs. J. Pook and Co., 63, Leadenhall Street, E.C., by November 30th.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—(1) Surgeon. (2) Assistant Surgeon. Applications to the Secretary by November 5th.

STOKE-UPON-TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill. House Physician. Salary, £100 per annum, increasing £10 yearly at discretion of Committee with furnished apartments, board, and washing. Applications to the Secretary by October 21st.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon; unmarried. Salary for the first year, £100, increasing £10 yearly, with board and apartments. Applications to Mr. J. C. R. Crewes, 1, Parkandras Terrace, Truro.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Resident Medical Officer; unmarried. Salary, £150 per annum, with board and lodging. Applications to the Secretary, 34, Craven Street, Charing Cross, London, W.C.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Honorary Physician. Applications to the Honorary Secretary.

YORK COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by October 22nd.

YORK DISPENSARY.—Resident Medical Officer; unmarried. Salary, £110 per annum, with board, lodging, and attendance. Applications to W. Draper, Esq., De Grey House, York, by October 23rd.

## MEDICAL APPOINTMENTS.

ALEXANDER, D. M., M.B., appointed Assistant Medical Officer of the Nottingham Workhouse Infirmary.

BONNEY, W. F. Victor, M.D., M.S.Lond., F.R.C.S., M.R.C.P., appointed Physician to Out-patients at the Chelsea Hospital for Women, and Physician-Accoucheur to the St. Pancras and Northern Dispensary.

BYGOTT, A. H., L.S.A., appointed Medical Officer and Public Vaccinator for the Bordesley District of the Aston Union, *vice* B. S. Robins, M.R.C.S., resigned.

CORNALL, Annie F. M., L.R.C.P.S.Edin., L.F.P.S.Glasg., appointed Medical Officer to the Lady Kinnaird Memorial Hospital Zenana Medical Mission, Lucknow.

GOWRING, B. W., M.R.C.S., L.R.C.P., appointed District Medical Officer of the Basingstoke Union.

GRIFFITHS, A. F., M.D.Harvard, appointed a Clinical Assistant at the Chelsea Hospital for Women.

HARRISON, A. J., M.B.Lond., appointed Physician in charge of the Skin Department of the Bristol General Hospital.

HODGSON, J. F., M.B., Ch.B.Vict., appointed Resident Medical Officer of the Halifax Union Poor-law Hospital.

MCCARDEL, E. J., M.D., Ch.M., M.R.C.S Eng., appointed a Clinical Assistant at the Chelsea Hospital for Women.

MATHESON, Roderick M., M.D., M.S.Edin., appointed Honorary Assistant Surgeon to Noble's Isle of Man Hospital.

NEILD, Newman, M.B., Ch B.Vict., appointed Assistant Physician to the Bristol General Hospital, *vice* George Parker, M.D.Cantab., resigned.

PARKER, George, B.A.Camb., M.D., appointed Physician to the Bristol General Hospital, *vice* A. J. Harrison, M.B.Lond., resigned.

RODGERS, R. Craig, M.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Medical Officer to the Burnley Victoria Hospital, *vice* James Mackenzie, M.D., C.M., resigned.

STEAVENSON, C. Stanley, M.B., B.Ch., appointed Senior House-Surgeon to the Kent and Canterbury Hospital.

SUTCLIFFE, Wm., M.R.C.S., L.R.C.P., L.S.A., appointed Medical Officer of No. 3 District of the West Bromwich Union, *vice* H. Sutcliffe, M.R.C.S., resigned.

TURNER, A. H., L.S.A., appointed Medical Officer and Public Vaccinator for the Beaconsfield District of the Amersham Union.

VON MURALT, Willy, M.D.Zurich, appointed a Clinical Assistant at the Chelsea Hospital for Women.

WATKINS, D. J. G., M.B., B.C.Cantab., M.R.C.S.Eng., appointed Honorary Surgeon to the Lincoln County Hospital in the place of W. J. Cant, M.R.C.S., resigned.

## DIARY FOR NEXT WEEK.

### TUESDAY.

**Royal Medical and Chirurgical Society,** 20, Hanover Square, W., 8.30 P.M.—Dr. H. Campbell Thomson: Acute Dilatation of the Stomach, with illustrative Cases.

### WEDNESDAY.

**Dermatological Society of Great Britain and Ireland,** 20, Hanover Square, W., 5 P.M.

**Hunterian Society, London Institution,** Finsbury Circus, E.C., 8.30 P.M.—Clinical evening.

### FRIDAY.

**Clinical Society of London.** 20, Hanover Square, W., 8 P.M.—Exhibition of clinical cases followed by discussion. Patients will be in attendance from 8 P.M. to 9 P.M.

### POST-GRADUATE COURSES and LECTURES.

Charing Cross Hospital, Thursday, 4 P.M.—Lecture on Gynæcological Cases.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 P.M.—Clinical Demonstration.

London Throat Hospital, 204, Great Portland Street, W., Wednesday, 5 P.M.—Practical Demonstration: Chronic Glandular Diseases of Naso-pharynx.

London Temperance Hospital, Thursday and Friday, 2 P.M.—Clinical Demonstrations.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—Demonstrations will be given at 4 P.M. as follows: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, throat.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., Tuesday, 3.30 P.M.—Clinical Lecture on Cases in Hospital.

West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 P.M. as follows:—Monday: The Administration of Anæsthetics in Nose, Throat, and Mouth Cases. Tuesday: Minor Surgery. Wednesday: Surgical Anatomy. Thursday: The Examination of the Throat and Nose. Friday: Therapeutics.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

FOULDS.—On October 8th, at Ashlea, Droitwich, the wife of Francis H. Foulds, M.R.C.S.Eng., L.R.C.P.Lond., of a daughter.

HART.—On October 6th, at Measham, Leicestershire, the wife of G. S. Hart, M.D., of a son.

PERSHOUSE.—On October 13th, at Chipchase, Hadley Wood, the wife of Frank Pershouse, M.R.C.S., L.R.C.P., of a son.

RAY.—On October 11th, at 48, The Crescent, Salford, the wife of John Howson Ray, Ch.M., F.R.C.S., of a son.

### MARRIAGES.

FOX-SYMONS—CALVERLEY.—On October 10th, at St. Augustine's Church, Honor Oak, by the Rev. Bryce-Collard, M.A., Vicar, assisted by the Rev. C. S. Nicholl, M.A., Vicar of Christchurch, Streatham, Robert Fox-Symons, Medical Officer of Health, Pretoria, Transvaal, late Civil Surgeon, South African campaign, to Maude Calverley, late Sister Calverley, A.N.R. and of St. Bartholomew's Hospital.

MACDOUGALL—MACDOUGALL.—On October 9th, at Christ Church, Greenwich, by the Rev. S. Bardsley, Alexander J. MacDougall, of MacDougall and Dunolly, Captain Royal Army Medical Corps, eldest son of the late Surgeon-General H. R. MacDougall, of MacDougall, Bombay Medical Service, to Colina, third daughter of A. W. MacDougall, barrister-at-law, of Oakhurst, Blackheath.

MAXWELL—SAUNDERS.—At the Cathedral, Hong Kong, on October 9th, James Laidlaw Maxwell, M.D., B.S.Lond., Medical Missionary (F.P.M.) Formosa, to Millicent Bertha Saunders, daughter of the late Leslie Seymour Saunders, Esq., Bengal Civil Service.

### DEATHS.

DICKINSON.—October 10th, at 2, Grove Park, Liverpool, in his 59th year, Edward Harriman Dickinson, M.D., F.R.C.P.

LIVINGSTONE.—On October 4th, at 17, Hill Street, Wishaw, Lanarkshire, James Livingstone, M.D., L.R.C.S.Edin., J.P., aged 67 years.

# LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

## QUERIES.

H. D., who has a patient suffering from cancer of the jaw, with involvement of the cervical glands, asks whether the Roenigen rays have been found beneficial in such cases.

### Fistula in Ano.

COUNTRY PRACTITIONER asks whether it is the usual thing now to stitch the incision made for fistula in ano or not. Which is the plan most likely to produce a good result?

### Transposition of Viscera.

MILES asks: Would a candidate for commission or cadetship in the army or navy, or for post of purser in the latter be liable to rejection on account of transposition of heart and other viscera, the candidate in other respects being perfectly normal and healthy?

*** Probably not; but it would be as well to mention the peculiarity to the Board.

### Income Tax.

J. T. writes: I am in receipt of about £500 per annum from a colonial Government and from private practice in that colony. This amount is not subject to payment of income tax. In addition I have about £100 per annum from home sources which pays income tax. Can I recover the income tax paid on this latter sum?

*** If our correspondent resides permanently abroad he is entitled to exemption on the income from British sources, and can recover tax paid for the past 3½ years. The Income Tax Repayment Agency, of 6, Chichester Road, will undertake such recovery.

### Treatment of Vesical Tuberculosis with Tuberculin.

T. has a patient suffering from tuberculous disease of the prostate and neck of the bladder. He has been under the tuberculin treatment for about five months; at first two series of gradually increasing doses of tuberculin were used, six injections in each series, with an interval between the two series, and during the last three months 1 mg. has been injected regularly every third day. The patient has certainly improved, the pain has shifted from the perineum to the front of the pelvis, and the frequency of micturition is not quite so great; there is not so much pain on lying down at night, and practically no blood is now passed, whereas it used to be passed very frequently; the patient is also increasing in weight. These symptoms, however, for the last two or three weeks have seemed at a standstill. "T." would be glad to know how long it is advisable in a case of this kind to go on with the injections, and whether after the time that has elapsed since the beginning of the treatment he can hold out a hope of ultimate cure. The patient is a young man, with no disease anywhere else. Any suggestion as to treatment would be greatly esteemed.

## ANSWERS.

OBSERVANT.—(1) We have no special knowledge of the electro-galvanic belt in question, but conclude from the advertisement forwarded that it is like many other articles—"made to sell." If the purchaser believes he has been defrauded he has his legal remedy. (2) We are advised that under the existent state of the law the letters appended to the name of the midwife could not be held to be colourable imitations of medical diplomas, and no action would lie on the ground of deceiving the public.

### Senile Pruritus.

DR. JOHN MACDONALD (Dunedin, N.Z.) writes: I write to recommend the administration of 1-drachm doses of sodium phosphate, dissolved in water, three times a day after meals. There may be nothing novel in this treatment, but it is not mentioned in any work on skin disease or materia medica I have consulted, and has proved successful when other remedies failed. A good lotion for local use is composed of resorcin gr. x—xv, glycerine mx, lime water ʒj. Given in 1-drachm doses every four hours; the phosphate is a capital remedy for urticaria and boils.

### Treatment of Pruritus Vulvæ.

DR. H. OPPENHEIMER (London) writes: "A. F. D." might try the local application of carbolic acid in a 3 to 10 per cent. solution, as recommended by Schroeder. I find it most efficacious if a mixture of one part of alcohol and three parts of water is used as a vehicle. This treatment, as in fact any plan, is greatly assisted by the use of prolonged alkaline baths, prepared by the addition of about half a pound or more of sodium carbonate to the water.

DR. G. NORMAN MEACHEN (New Cavendish Street, W.) writes: In a patient aged 60, suffering from pruritus vulvæ, it is important to exclude the condition described by Breisky as kraurosis, that is, a dryness and irritability of the mucous membrane of the vulval orifice. The epithelium has a glazed, whitish appearance, and is accompanied by atrophic changes in the skin. Should this be present, excision of the affected strip of mucous membrane under anæsthesia has been found to yield the best permanent result. Otherwise "A. F. D." might employ a paint consisting of 5 to 10 grs. of silver nitrate to an ounce of spirits of nitrous ether. This application causes some temporary smarting, but is soon followed by relief. For the pruritus ani, hot sponging, avoidance of food tending to constipation, and the application of a mustard leaf to the lumbar enlargement nightly may be useful.

J. R. J. writes, in answer to "A. F. D.," to recommend the following prescription, which he read many years ago. It has always been of great use, and has rendered excellent service.—R. Sod. biborat 3ij, morph. hydrochlorat. gr. 20, acid hydrocyan. (Scheele) 3j, glycerin ʒj, aquam ad ʒviij. M. ft. lotio. Apply with sponge *bis die* after ablutions.

DR. ARTHUR WATSON (Leamington) writes: I think if "A. F. D.'s" patient will apply R. Boracis ʒj, aquæ ʒiij three or four times daily it will promptly relieve. Should there be any trace of uricacidæmia, sodium salicylate internally would additionally suffice.

F. R. writes: Uterine disease as a possible cause should be borne in mind. Occasional calomel purges, followed by very careful diet both as to quantity and quality of food would probably improve matters. A saturated solution of borax, or an ointment containing hydrocyanic acid are useful locally. Are pediculi present?

DR. WILLIAM S. STEELE (Torquay) writes to advise "A. F. D." to try ung. conii taking care that the ointment is fresh and good.

### Chronic Acid Gastralgia.

DR. H. OPPENHEIMER (London) writes: The short description of the habitus of the patient, as given by "Asphodel," as well as the efficacy of the bromide treatment, renders a neurotic origin very likely, and, in my opinion, invites a course of Weir-Mitchell treatment in preference to any attempts at local therapeutic measures.

P. M. writes: Bismuth oxide in doses of 10 grs. before meals would probably do good in such a case, even if gastric ulcer be present. It should be preceded by a mercurial purge. But very restricted diet is still more important. The quantity of food should be reduced to 16 ozs. in two meals *per diem*, and everything indigestible forbidden. Rest in bed for a week or two with no food but a pint of milk a day would certainly do good.

DR. H. D. O'SULLIVAN (Burton-on-Trent) writes to suggest that "Asphodel" should try the following: ℞Tr. iodi mv, potass. chlorat. gr. x, aquam destil. ad ʒj, t.d.s. a.c.

## LETTERS, NOTES, Etc.

### Erratum.

THE first Egyptian Medical Congress is to be held in December, 1902, and not in 1901, as printed last week at page 1121.

### A Newspaper Notice.

WE have received the following for publication:

"We, the staff of the Eye Infirmary, Newcastle-on-Tyne, have been exceedingly annoyed with the advertisement given to us in the article on the Eye Infirmary, which appeared in the *Newcastle Daily Leader* of October 9th. The publication of our names was made without our permission, and contrary to our desire.

(Signed) "A. S. PERCIVAL.
"October 12th. "H. P. BENNETT."

### The Staining of the Tubercle Bacillus.

DR. HERBERT W. G. MACLEOD (Streatham) writes: In the BRITISH MEDICAL JOURNAL of September 28th Mr. E. M. Saunders refers to my description of a method of staining the B. tuberculosis (BRITISH MEDICAL JOURNAL of July 6th), and states that the process can be further shortened by applying the oil-immersion lens to the drop of cedar wood or castor oil placed directly on the film without the intervention of a cover glass. This method is well known, and is often used in clinical work. Cedar oil is not always applied with advantage to a film, as it may decolorise it. Before permanently mounting in xylol balsam, it is often advisable to apply a drop of water on the cover glass, and to use the oil-immersion lens in the usual way. If satisfactorily stained, the "circle" is removed, the slip thoroughly dried, and the specimen mounted in balsam for preservation. This would apply equally at an examination.

### The M.D. Durham Examination.

M.D. (Durham) writes: Having just passed the practitioners' examination for the M.D. of Durham and it being impossible to answer all correspondents wishing for information, I would briefly state that the examination is a very severe and searching one, and requires at least twelve months preparation, with coaching and hospital practice. I had postal tuition, and was fortunate in getting four of the questions in my papers. I strongly advise postal tuition; it is a means of making a man work and saves many months of hard reading. I shall be pleased to give any further particulars as to the examination, on the understanding that the information will be returned to pass on to others. I ought to add that the examiners are most kind and courteous and give any reasonable time for diagnosing the cases. I got five microscopical specimens and s[illegible]tted them all—not difficult.

### MUSIC PRACTICE AND NEUROTIC GIRLS.

DR. HAMILTON HALL (Fordcombe, Tunbridge Wells) writes: It is difficult to follow Dr. Kirby's argument. He says, "The strain in playing falls on the forearm, wrist, and hand." Previously he limited the statement to the forearm. Now he does not include the brain, which is, perhaps, an oversight on his part. Let us raise the intension somewhat, and differentiate the "strain," and where do we arrive? The muscular strain (for physical strain covers all strain not spiritual) on the forearm, wrist, and hand is, so far as it goes, beneficial. The cerebral "strain" involved in the origination and co-ordination of minute, accurate, and rapid finger movements is pernicious. What is writers' cramp? Muscular fatigue induced by continued exercise, with the production of coarse and quasi-automatic movements, as in walking, is precisely what the neurotic patient badly wants and rarely gets. If it is desired merely to fatigue their forearms, wrists, and hands, let them use Indian clubs or dumb-bells, or oars, or a broom, or a spade, or anything rather than a piano. To say, or in any sort of way to imply, that "physical" fatigue is "immaterial,"—meaning, I apprehend, that muscular fatigue is unimportant, in (that is, to) a neurotic person would appear to be only less distinct a failure to recognise the nature of the neurotic condition, than the implied statement that playing a piano is not mental (meaning, one must suppose, cerebral) work. The plain truth is that muscular work cannot be divorced from cerebral work. But the relative proportions in which the two coexist vary enormously with the nature of the work, and this is precisely where the neurotic patient suffers disaster, for instead of getting the maximum of muscular with the minimum of cerebral work, she commonly gets the precise opposite, as instanced in these girls with their preposterous practising. It may be "very hard to lay down any general law to apply to an individual case," but it is not difficult to think logically on the nature and production of a definite set of actions. To "assume the absence" of other work, "physical or mental," namely, in short, all other work, is to assume an impossibility; and the statement that the neurotic patient "is only delicate, and not suffering from any actual disease," is an appalling instance of words devoid of any sort of meaning. What does it signify whether my own music is produced by the agency of a piano or a steam-band?

### SYPHILIS WITHOUT A PRIMARY SORE.

DR. P. O'CONNELL (Stillorgan Castle) writes: In the note under this heading, in the BRITISH MEDICAL JOURNAL of October 12th, p. 1124, Mr. C. F. Marshall gives some cases, and asserts that *syphilis d'emblée* is more common than is generally believed, and quotes Mr. Hutchinson in support of his contention. That *syphilis d'emblée* does occur I do not doubt. But the case reported by Mr. Marshall in the *Lancet* for May 20th, 1899, cannot be accepted as an undoubted instance in proof. The patient had gonorrhœa, and may have had a chancre, at the same time, in the urethra. I have notes of a case where the chancre was in the urethra an inch and a-half from the meatus. I have notes of cases where the disease was acquired by kissing. And what about those numerous cases where the chancre is situated high up in the vagina? How is careful inspection of the genitals to reveal any lesion in such cases? Failure to detect it must often result.

MR. G. PERNET (London) writes: Mr. C. F. Marshall, in his communication to the BRITISH MEDICAL JOURNAL of October 12th, p. 1124, has missed the point of Jullien's two cases of *syphilis d'emblée*. That syphilis may develop without any discoverable primary sore is well known. That need not detain us here. But the interest of Jullien's cases, as was well brought out in your published account (BRITISH MEDICAL JOURNAL, September 21st, p. 827), lies in the fact that the secondary eruption occurred on the thirtieth day and thirty-third day respectively, after the infliction of the wounds and their inoculation with the syphilitic virus. In both cases the virus was directly introduced into the blood stream.

### THE THIRD STAGE OF LABOUR.

DR. A. C. BARRON (Dailly, N.B.) writes: I observe in the BRITISH MEDICAL JOURNAL of October 12th that Mr. W. R. Cooper is amazed at a sentence in my communication on this subject in the JOURNAL of September 28th. For his comfort let me tell him the conditions of that case, a primipara, muscularly powerful. During the labour the pains occurred at very long intervals, and, when they did come on, the strong contractions of the pelvic muscles impeded the onward progress of the child. After the birth of the child the mother was not a bit exhausted. During half an hour after the birth of the child no uterine contractions occurred, and there was no sign that the placenta had separated. Should I interfere or not interfere? I called my "common sense" into consultation, and we agreed that the placenta has not separated; that the tendency of this woman's womb is to contract at long intervals, and that a considerable time may yet elapse before "pains" come on. Secondly, if contractions do occur, the placenta will not be expelled, owing to the action of her pelvic muscles, but will act as an effective plug if bleeding should occur. Thirdly, the woman being strong, comfortable, and contented, and instructions given to at once send for me if pains came on, and my house being in close proximity to hers, we concluded that I should not interfere, and that it would be quite safe to leave her. I received no call, but I returned in an hour, and found that no contractions of the womb had taken place. Mr. W. R. Cooper says: "Fortunate for him, there was no *post-partum* hæmorrhage!" I have already written *post-partum* hæmorrhage is no terror to me, and from the above he will partly learn why.

By the way, I must take exception to Mr. W. R. Cooper's statement "that in almost all cases of labour Nature is first, and the medical attendant merely a spectator." Nature is certainly first, but the medical attendant should be her intelligent assistant. In the easiest labour intelligent assistance can render labour easier, and, as the easiest labour is acknowledged by women to be enough to endure, it is our duty to render whatever assistance we can rather than be "merely a spectator."

I too have a jug story. A shepherd's wife, alone and far from anyone when her baby was born, had *post-partum* hæmorrhage, and I found her absolutely on her own intuitive pouring jugful after jugful of cold water, carried by one of her children, over her naked abdomen, and I had the effect of stopping the bleeding as she had anticipated, and in particular gave her relief from the awful feelings of impending collapse and revived her.

Likewise the tabooed lemon, with its shape convenient for introduction to the uterus, its juice which, owing to the structure of the lemon, can fortunately be only expressed in small quantity, but in small quantity is capable of accelerating coagulation of blood, and its presence as a foreign body inciting the uterus to contract, has evidently been the recommendation of a man of resource, and not of a "mere bookman," as Mr. W. R. Cooper designates him.

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## BOOKS, ETC., RECEIVED.

Atlas der Krankheiten der Nase. Von Dr. P. H. Gerber. Berlin: S. Karger. London: Williams and Norgate. 1901. 6s.

A Manual of Practical Anatomy. By the late Professor A. W. Hughes, M.B., M.C., F.R.C.S. Edited and compiled by A. Keith, M.D., F.R.C.S. In Three Parts. Part I. London: J. and A. Churchill. 1901. 10s. 6d.

Diseases and Injuries of the Teeth, including Pathology and Treatment. By M. Smale, M.R.C.S., L.S.A., L.D.S.; and J. F. Colyer, L.R.C.P., M.R.C.S., L.D.S. Second Edition. London: Longmans, Green, and Co. 1901. 21s.

A System of Physiologic Therapeutics. Edited by S. S. Cohen, A.M., M.D. Vol. III.: Climatology, Health Resorts, Mineral Springs. By F. P. Weber, M.A., M.D., F.R.C.P., with the Collaboration of G. Hinsdale, A.M., M.D. In Two Books. Book I. London: Rebman, Limited. 1901. 21s. the two books.

The Surgical Anatomy and Operative Surgery of the Middle Ear. By A. Broca. Translated by M. Yearsley, F.R.C.S. London: Rebman, Limited. 1901. 3s. 6d.

The Pocket Formulary for the Treatment of Disease in Children. By L. Freyberger, M.D., M.R.C.P., M.R.C.S. Third Edition. London: Rebman, Limited. 1901. 7s. 6d.

Water and Water Supplies. By J. C. Thresh, D.Sc., M.D., D.P.H. Third Edition. London: Rebman, Limited. 1901. 7s. 6d.

Psychology, Normal, and Morbid. By C. A. Mercier, M.B., M.R.C.P., F.R.C.S. London: Swan Sonnenschein and Co. 1901. 15s.

Practical Histology. By J. N. Langley, M.A., Sc.D., F.R.S. London: Macmillan, and Co. 1901. 6s.

The Play of Man. By K. Groos. Translated by Elizabeth L. Baldwin. London: W. Heinemann. 1901.

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# The Harveian Oration

*Delivered before the Royal College of Physicians of London on October 18th, 1901,*

By NORMAN MOORE, M.D.,

Fellow of the Royal College of Physicians of London: Assistant Physician and Lecturer on the Principles and Practice of Medicine to St. Bartholomew's Hospital.

Mr. President, Fellows of the College, and Gentlemen,—It has long been the custom in the several ancient colleges of our universities to commemorate the founder and the benefactors on some particular day. The members of the College are assembled, the history of the foundation is related with due solemnity, and the names of the benefactors are mentioned with honour and gratitude. Dr. William Harvey—the illustrious man by whose injunction we are assembled to-day—was familiar with this custom, for it was enjoined by the founder of his College at Cambridge, Dr. John Caius, a physician who not only possessed learning, but venerated it, and had considered those ceremonies and decorations which are as appropriate to learned societies as the fine paper, well-formed type, and beautiful bindings in which great scholars and great readers, such as Aldus and Grolier, and Thuanus and our own Bentley, delighted to see good literature clothed. It was Caius who gave us the silver rod which our President carries at every meeting of the College. He desired that we should be ruled with the mildness and clemency which a silver sceptre typifies, while the four serpents which ornament the sceptre are to remind the President that wisdom is to govern his conduct.

Dr. Caius, when in London, lived within the enclosure of St. Bartholomew's Hospital, and the first College feast was held there in 1556, exactly a hundred years before the delivery of the first Harveian Oration. There Dr. Caius died in 1573, a benefactor of the study of medicine, in which he was the first Englishman to write an original description of a disease,[1] to learning in general by the foundation of his College at Cambridge, to the poor of London by a gift to St. Bartholomew's Hospital, and to this College in several ways. In his annals of Caius College a resolution is recorded under the date October 6th, 1531, urging the duty of gratitude and of the remembrance and record of benefactors.

Thus it was early in life, at Caius, that Harvey learned the value of such acts of public gratitude as that which, on his institution, we keep to-day. Sir George Paget, a former fellow of Caius and of this College, Regius Professor of Physic in the University of Cambridge, and an example there of all that a physician should be, has shown that it was probably the teaching of anatomy instituted in his college by Caius which led Harvey to those studies in which his fame is immortal. There, too, he was imbued with the spirit of good fellowship in learning which was then prevalent in the University, and has ever since pervaded its atmosphere. Caius had fostered this spirit in the college he founded, which, robed in the architectural garb of the Renaissance appropriately comes into the view of a visitor to Cambridge immediately after the foundation of King Henry VI, refulgent with the last glorious rays of mediæval learning.

The poets who knew Cambridge have told in verse what every man worthy of a liberal education has felt. Milton, of Christ's, disposed as he was to resist the natural effect of religious art, was nevertheless profoundly affected by great architecture, and has left the world the better by the impression which he received as an undergraduate from the Chapel of King's:

> But let my due feet never fail
> To walk the studious cloisters pale,
> And love the high embowed roof
> With antic pillars massy proof:
> And storied windows richly dight,
> Casting a dim religious light.

Wordsworth, of St. John's, trying to study the depths of his own mind, found himself deeply affected by his surroundings:

> I could not point
> Ground where the grass had yielded to the steps
> Of generations of illustrious men
> Unmoved. I could not always lightly pass
> Through the same gateways, sleep where they had slept,
> Wake where they waked, range that enclosure old,
> That garden of great intellects: undisturbed.

Cowley, of Trinity, a lesser poet than these, seems by the power with which he expressed another of the feelings of university life almost to justify Clarendon's remark that in his time he had in poesy "made a flight beyond all men."

> Ye fields of Cambridge, our dear Cambridge, say
> Have ye not seen us walking every day.
> Was there a tree about which did not know
> The love betwixt us two.

The introduction into the family of great minds, the permanent association with a venerable collegiate home and its usages, the ties of friendship; by all these Harvey had been influenced during his residence at Cambridge from 1593 to 1598. When he migrated to this College in the midst of a busy world,

> Fumum et opes, strepitumque Romæ,

yet no less devoted to one of the highest branches of learning, he was kindly received. Two physicians deserve commemoration for their early kindness to him: one was Dr. Ralph Wilkinson, of Trinity College, Cambridge, in relation to whom he occupied at St. Bartholomew's the position which, Mr. President, I now have the honour, with infinite advantage and satisfaction to myself, to occupy towards you. The other was Dr. Lancelot Browne, of Pembroke College, Cambridge, who had been one of the Proctors in 1573, the year in which Edmund Spenser, of that College, took his degree. Perhaps Browne was one of the learned wits of whom the poet was thinking when he celebrated the Cam in the *Fairie Queen*:

> My mother Cambridge, whom as with a crown
> He doth adorne and is adorned of it,
> With many a gentle muse and many a learned wit.

It was Dr. Browne's daughter Elizabeth whom Harvey married in 1604. His life in our College was one of continued friendship and learned conversation. He was welcomed in his youth, applauded in his discoveries, venerated in his age. When his life ended in 1657 his body was accompanied beyond the walls of the city by the President and the whole College on the way to its last resting place at Hempstead in Essex.

Our College was of about one-tenth its present size when Harvey was admitted, but it was nevertheless a society in which a great variety of learning was to be found, and where a man could spend his days with advantage. His entrance into it was gradual, for those were the days, as Clarendon says, "when men were seen some time before they were known, and well known before they were preferred." Harvey's relations with this College began in the first year of King James. At a meeting on April 21st, 1603, the Fellows had discussed whether they should go out to meet the King at his entry into London, and salute him "solemni oratione." At the next meeting on May 4th, 1603, "Mr. Harvie, doctor of medicine in the University of Padua, attended and presented himself for examination, and when examined answered to all questions sufficiently well." Nevertheless, he was put off to another time "cum conniventia ad Praxin," that is, with informal leave to practise in the interval. He appeared again April 2nd, 1604. "Dr. Harvie was examined for the second time for the degree of candidate, and his answering approved." At his first examination he was the sole candidate, and only the President, Dr. Richard Forster, and three Fellows were present, a small attendance, perhaps due to the plague then prevalent. At the second examination John Craige, the King's physician, newly come with His Majesty from Scotland: Thomas Hearne, an Oxonian, who like Harvey had graduated at Padua; Thomas Lodge, the poet, and Thomas Rawlins, of Clare Hall, Cambridge, were also examined, and all approved but Lodge.

On May 11th, 1604, Harvey was examined and approved for a third time, and had for his companions Rawlins, Hearne, Edward Elwin of Corpus Christi College, Cambridge, afterwards Physician to the King's Household, and three poets, Matthew Gwin, Thomas Lodge, and Raphael Thorius. Of

these poets Gwin was afterwards admitted a Fellow of the College. In our society, where for the most part we think:

> Nobis non licet esse tam disertis,
> Qui musas colimus severiores.

It is remarkable that literature has never been neglected. In the translation of *Plutarch's Lives* edited by Dryden ten Fellows of this College, three of whom afterwards filled the office of President, took part, and to a greater biographical work of the present day, the greatest indeed which has appeared in our literature, you, Sir, have made a contribution as well as our learned Librarian, Dr. Payne, and some other Fellows of the College.

At the present day we have in Robert Bridges a master of verse which is both praised and read. Arbuthnot, steeped in literature, gave a poetic form to thoughts which must constantly occupy the minds of physicians:

> Am I but what I seem, mere flesh and blood,
> A branching channel, with a mazy flood?
> The purple stream that through my vessels glides,
> Dull and unconscious flows like common tides.
> The pipes through which the circling juices stray,
> Are not that thinking I, no more than they.
> This frame compacted with transcendent skill
> Of moving joints obedient to my will,
> Nursed from the fruitful glebe, like yonder tree,
> Waxes and wastes: I call it mine, not me.

Sir Samuel Garth was a popular poet for fifty years, and to this day one couplet in his *Dispensary*:

> To die is landing on some distant shore,
> Where tempests never beat, nor billows roar.

is known to everyone, because it was admired by Cowper and is quoted by him in one of the most affecting poems in our language.[3] Harvey himself is one of the heroes of *The Dispensary*.

> They hasten now to that delightful Plain,
> Where the glad Manes of the Bless'd remain:
> Where Harvey gathers simples, to bestow
> Immortal youth on Heroes' shades below.
> Soon as the bright Hygeia was in view,
> The Venerable Sage her Presence knew.
> Thus he—
> "Hail blooming Goddess, thou propitious power,
> Whose blessings mortals more than life implore.
> With so much lustre your bright looks endear,
> That cottages are courts where those appear.
> Mankind as you vouchsafe to smile or frown
> Finds ease in chains, or anguish in a Crown."[4]

The poets who began the march to fame with Harvey and whose poetic fancies were afterwards so far surpassed in repute by his precise facts, deserve to be mentioned, if only because they were associated with him on an important day of his life.

Matthew Gwin was the first professor of physic at Gresham College, where he lectured from 1598 to 1607. He was an accomplished Latinist and took part in a medical disputation at Oxford for the entertainment of King James I. and his Queen Anne. He had to argue on the question whether the morals of nurses are imbibed by infants with the milk. It was a delicate point, for the King had had a drunken nurse, and was always anxious that he should not be thought to have imbibed her evil nature. The King drank a good deal, yet his most steadfast brain, says Sir Theodore Mayerne,[5] was never disturbed by sea or by wine.

Gwin published a Latin comedy called *Vertumnus*, which was acted at Magdalen College, Oxford, and a Latin tragedy *Nero* based upon Tacitus, Suetonius, Dion Cassius, and Seneca. The epilogue of the comedy where three sibyls hail King James by the several titles of his increasing dominions is sometimes thought to have suggested to Shakespeare the famous salutations of the witches in *Macbeth*. The tragedy displays the reading of its author, but perhaps Dr. Gwin's last lines about Nero the Emperor may be applied to *Nero* the tragedy—

> Restatque de Nerone tam magno nihil
> Nisi quod sepulchrum condat aut ignis cremet.

Gwin had disputed before King James with Sir William Paddy, a benefactor here and at St. John's College, Oxford, as to whether smoking tobacco was conducive to health.

Raphael Thorius, the licentiate who attended to be examined with Gwin and Harvey, treated the same subject in a poem of two books, and in spite of the Royal opinion against tobacco did not veil his own love for the fragrant weed, and begins his Hymnus Tabaci—

> Innocuos calices et amicam vatibus herbam
> Vimque datum folio, et lati miracula fumi
> Aggredior,

and goes on to dedicate it to Sir William Paddy than whom, says Thorius, no one knows better the varied powers of the disease-repelling plant.

Thorius wrote many lesser poems now chiefly interesting as showing his tastes and friendships. Three which have never been printed are addressed to L'Obel the botanist, who was in practice in England as an apothecary, but who is known to few of the many who have the lobelia growing in their gardens. In 1625 Thorius sent his wife and family out of London to preserve them from the plague, and diligently attending to his patients became infected and died.

Thomas Lodge, the third of the poets examined on the same day as Harvey, was a schoolfellow of Sir William Paddy, our President of 1609. He began life as a poet, and ended it in the practice of medicine after a varied career, part of which was spent as he says "as a soldier and a scholler," other part as a sea rover, hardly to be distinguished from a pirate. His story of *Rosalynde*, written at sea "rough as hatchet in the stormes of the ocean and feathered in the surges of many perillous seas,"[6] and published in 1590, will always be memorable in literature for some fine lyric verses, and still more as the source of the plot of Shakespeare's *As You Like it*. Lodge was often unfortunate in letters and in adventure, and was so in his entrance to this College, for he did not receive a licence till 1609. He more often expresses gloom than cheerfulness in his verses, and the feelings exhibited in a stanza of his *Margarite of America*, written amid "bitter and extreme frosts at midsummer," in the straits of Magellan, seem to have been often his:

> From height of throne to abject wretchednesse
> From wondrous skill to servile ignorance,
> From court to cart, from rich to recklesnesse
> The joys of life have no continuance.
> The king, the catiffe wretch, the lay, the learned
> Their crowns, woes, wants and wits with griefe have earned.

On August 7th, 1604, at the house of Dr. Forster, the President, Harvey and Elwin were again examined and approved, and Lodge rejected. On October 5th, 1604, the two former were sworn as candidates.

Of those who had been examined with him and approved, Harvey was the last to be elected a Fellow. At that period the influence of great persons was sometimes brought to bear upon the College in the election of Fellows: Dr. Rawlins had a letter from the Archbishop of Canterbury; Dr. Gwin was recommended by Ellesmere the Lord Chancellor and by Thomas Earl of Dorset, Lord Treasurer and Chancellor of the University of Oxford: and Dr. Elwin by the Earls of Suffolk, Northampton, and Salisbury, and by Lord Stanhope, and they were elected Fellows December 22nd, 1605, and Harvey not till May 16th, 1607. It is just to state that they were all older men. He took the oath and was admitted June 5th, 1607, with two others—Dr. Matthew Lister, an Oxonian, and Dr. William Clement, of Trinity Hall. Lister was afterwards knighted and became physician to the Queen of James I and to King Charles I as well as to Mary Countess of Pembroke, in whose house he spent much time. He must often have talked to Ben Jonson, another frequenter of her house, and was perhaps one of the first to read and admire the epitaph written for the stately tomb which she deserved, but which was never erected in Salisbury Cathedral, her place of burial:

> Underneath this sable hearse
> Lies the subject of all verse
> Sidney's sister, Pembroke's mother;
> Death! ere thou hast slain another,
> Learn'd and fair and good as she
> Time shall throw a dart at thee.

Clement, who like Harvey was a doctor of Padua, afterwards became registrar of our College. Both he and Lister were industrious physicians, but all that has survived of their writings are four Latin verses by Lister and two by Clement, all in honour of the only medical book of Ralph Winterton, Regius Professor of Physic at Cambridge, a work which at its appearance received more praise from the learned than any other book written by a professor of medicine in that university.

It is an edition of the aphorisms of Hippocrates with a translation into Greek verse by Winterton, with also a Latin prose version and a translation into Latin verse. It was lauded in Latin or Greek verse by seventeen Fellows of this College and two who subsequently became Fellows, one of whom was the celebrated Francis Glisson; by members of all the Colleges at Cambridge but one, and of several of the colleges of Oxford, while two university professors and the heads of Peterhouse, Queens', Christ's, and Trinity commended it in Latin prose. What Johnson says of Pembroke College, Oxford, in his own time, "Sir, we are a nest of singing birds," might have been declared of the College of Physicians in the reign of King Charles I.

Dr. Henry Atkins, President, and afterwards a benefactor of the College, was in the chair at the College meeting at which Harvey, with Lister and Clement, was admitted to the Fellowship. He was physician to James I, and is said to have been the first person to whom, in 1611, that monarch offered the new rank of baronet. The first edition of our *Pharmacopœia* was published in 1618 under his auspices. Fourteen other Fellows were present, ten of Harvey's University and four Oxonians,[7] while three of the fourteen were doctors of Padua.[8] The business transacted after the new Fellows took their seats at the table is recorded in the annals:

Dr. Mark Ridley was elected a censor, in the room of Dr. William Dun, deceased. It was resolved that Dr. Edward Elwin should entertain the Fellows at a feast on the first Tuesday in July next. Dr. Lister was to make preparations for the demonstrations in Anatomy. Everyone was to try and learn where a certain Dr. Bonham had practised. Dr. Thomas Davis was elected Lumleian lecturer, in succession to Dr. William Dun. Harvey, it will be remembered, succeeded Davis in this lectureship in 1615.

It would be pleasant to trace Harvey's relations with these and with the Fellows of subsequent elections throughout his time.

> But at my back I always hear
> Time's winged chariot hurrying near.[9]

One of those present at his admission was Dr. John Argent, Peterhouse, who became "amicus suus singularis," and to whom, with the College of which Argent was then President, he dedicated in 1628 his *Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus*. The dedication shows how happy was his association with his contemporaries:

> Since my book alone doth assert the blood to move and circulate by a new route quite different from that held, taught, and explained through so many ages by countless and most illustrious and learned men, I feared that I might be thought presumptuous if I should allow my little book, which had been completed some years back, to be published or sent over sea unless first I had stated it to you and had confirmed it by anatomical demonstration, and had made answer to your doubts and objections, and had received the judicial commendation of our illustrious President.

How plain are the friendly relations between Harvey and the other Fellows. Argent was his senior, as were those friends whom I have before mentioned, Wilkinson and Launcelot Browne, but he had also warm attachments among his juniors, none greater than those which bound him to George Ent and to Charles Scarborough. Ent was not 3 years old when Harvey was admitted a Fellow. They probably met for the first time in Rome in 1636. Ent had gone thither after five years study at Padua which had succeeded his graduation at Sidney Sussex College, Cambridge. Lovers of truth and members of the same university, caring for the same branches of learning, easily become friends, however different their ages, and the natural admiration which youth feels for old experience cements the friendship of generous minds; of this there are few pictures more happy than Ent's account of Harvey in the dedication of the *De Generatione Animalium* to the President and Fellows of the College of Physicians in 1651. His preservation of this interesting treatise, which might have been lost with other manuscripts of Harvey but for him, puts us under a debt of gratitude to Ent, who was President 1670-75 and censor for twenty-two years, and he was also one of our pecuniary benefactors.

Charles II attended one of his anatomy lectures, and knighted him afterwards in the College. Thus it is in every way appropriate that his arms—sable between three hawk bells a chevron or—should form part of the ornament of the censor's room, to which they were brought from the old college in Warwick Lane.

Charles Scarborough, knighted by Charles II in 1669, was younger than Ent. He obtained a Fellowship at Caius College, and, ejected from his Fellowship as a Royalist, entered at Merton College, Oxford, when Harvey was warden, and ever after enjoyed his friendship. Thus what seemed a misfortune, as is so often the case, proved his greatest advantage, and he might have said more truly than Dryden,

> Oxford to him a dearer name shall be
> Than his own mother university.

But this is no reason why a recent learned writer, in his *History of the Study of Mathematics at Cambridge* should speak of him as "a teacher of the mathematics at Cambridge of whom I know nothing more." He was learned in mathematics, had a fine mathematical library, and translated Euclid. He was one of the famous men of his day, and everyone who has read Johnson's *Lives of the Poets* will remember how Waller, when he found his legs grow tumid, "went to Windsor, where Sir Charles Scarborough then attended the King, and requested him, as both a friend and a physician, to tell him what that swelling meant. "Sir," answered Scarborough, "your blood will run no longer." Waller repeated some lines of Virgil and went home to die. Scarborough was physician to three kings in succession, but will always be best remembered as the friend of Harvey, and his successor, at Harvey's request, in the Lumleian lectureship. Harvey left Ent £5 to buy a memorial ring, and of Scarborough in his will says, "I give my velvet gown to my loving friend, Dr. Scarborough, and to Dr. Scarborough all my little silver instruments of surgerie."

These examples show Harvey's feelings towards the men with whom he spent his life. He had known something of what is called the great world. King Charles I seems to have liked Harvey, who probably saw him in his best aspect and in intellectual relations which brought out his mental abilities, and did not lead to the exhibition of those defects of character and of manner which more than the turbulence of his subjects or the ambition of Cromwell brought him to his tragic end. All Harvey's writings show him to have been simple and truthful, so that we may believe that what he had seen of the King had bred in him the admiration expressed in the dedication of his great book, where he compares the heart of animals, the sun of their microcosm to the King in the State, the sun of his microcosm.

Harvey went to Italy in 1636 with Thomas Howard, Earl of Arundel. That nobleman's figure and manner are known to subsequent generations by his portrait in armour by Rubens, and his description in Clarendon's *History*.

> "It cannot be denied," says the statesman, "that he had in his person, in his aspect and countenance the appearance of a great man which he preserved in his gait and motion. He wore and affected a habit very different from that of the time such as men had only beheld in the pictures of the most considerable men, which drew the eyes of most and the reverence of many towards him as the image and representative of the primitive nobility and native gravity of the nobles when they had been most venerable."

Even if he knew only a little about the vast collection of marbles, paintings, and manuscripts which he made abroad, his table must have been one at which the conversation was worth attention. But it was in his own profession and in this College that Harvey found his most congenial society. Here were his happiest associations, and the endowment of the oration was a sort of memorial of his life in the College.

How many men have generously tried, without vanity and in pure goodness of heart, to preserve for future generations some reminiscence precious to them of something in their own lives. What more striking example of this motive of benefaction could there be than the history of two Fellows of our College, Sir John Finch and Sir Thomas Baines? Finch, son of Sir Heneage Finch, Speaker of the House of Commons, graduated at Oxford in 1647. Two years later he went to reside in Christ's College, Cambridge, where he was introduced by Henry More, the Platonist, then tutor, to Thomas Baines of that college. They became friends at once, and the times making life in England uncomfortable for loyal men, both went to Padua, and there graduated M.D. On the King's restoration they came to England, and on February 26th, 1661, were both elected Fellows of this College, a circumstance which it is proper to mention to-day, since our annals declare that the election, which was not to be drawn into a precedent, was on account of all the benefits conferred on the College by the illustrious Dr. Harvey, "nobis nunquam

sine honore nominandi," and by his brother Eliab. Finch's brother, the first Earl of Nottingham, a prominent and incorruptible statesman of Charles II's reign, had married Harvey's niece Elizabeth, the daughter of his brother Daniel, and it is a pleasant example of the honour in which Harvey was held after his death that this connection was the ground of the election. I have seen a letter which shows that Harvey was respectfully remembered at Burley-on-the-Hill. It was written in 1719, and is dated "December 28th, the day on which poor Queen Mary died," and is from his wife to Daniel, second Earl of Nottingham. She is anxious about his health, and advises him to copy from "your father's receipt book, where among some directions of Dr. Harvey's I think there's one how the bone of a stag's heart is to be taken." Her ladyship adds that it may be unnecessary to take so serious a remedy, but that none the less it will be well for her lord to have it by him.

Finch cared for no honour which could not be equally conferred upon Baines, and when the King knighted him for services to the Royal cause performed in Tuscany, his request that his friend might be knighted too was granted. In almost every letter home Finch mentions Baines, and what is not always the case in such friendships, the family of Sir John Finch seem to have shared his attachment as well as his respect for Baines as a physician. "Most dear nephew," says the Ambassador, August 21st, 1680, writing from Pera, "Sir Thomas Baines will write about the indisposition of your daughter," and the nephew, Lord Nottingham, writes to a friend, "the loss of Sir Thomas Baines was very great to me, for I am sure he loved me."

They were soon after incorporated Doctors of Medicine at Cambridge at the same congregation. In 1665 Finch was sent as Minister to the Grand Duke of Tuscany, and in 1672 he succeeded Sir Daniel Harvey, Harvey's nephew, as Ambassador to the Sultan; Baines went to each Court as physician to the Embassy, and it was known, as is told in the life of Sir Dudley North, that if you wanted to obtain any privilege at the Embassy you must convince both Finch, the Ambassador, and Baines, whom the merchants called the chevalier.

Baines died in September, 1682, and Finch resigned his office and returned home with the body. "I need not tell you," says his nephew in a letter which I have seen, "how deplorable a condition my poor uncle was in to lose so good a friend after thirty-six years acquaintance." A few months later he died, not so much of fever and pleurisy as of the loss of Sir Thomas Baines. They founded two Fellowships and two scholarships in remembrance of their own lifelong friendship and in the hope that other such friendships might in after-times be formed. They were both of dark complexion and grave aspect, as may be seen in two singularly fine portraits by Carlo Dolci in the drawing-room of Burley-on-the-Hill. They are buried under one marble canopy in the chapel of Christ's:

> Whom joined in fame, in friendship try'd,
> No chance could sever nor the grave divide.[10]

It was a similar feeling arising from the recollection of past happiness which led Harvey, who had often sat at table with the Fellows of this College, and had enjoyed their conversation and lectured here for nearly forty years, to establish the ceremony in which we take part to-day to commemorate benefactors, to promote kindly feeling, and to remind physicians that it is one of their duties to wrest secrets from Nature for the improvement of medicine and the consequent benefit of mankind.

The oration used, as he had desired, to be in Latin, then the language of learning, of diplomacy, and of the literature which every educated man made his own—the Latin not only of the classics, but of Augustine and Jerome, of Justinian, of Anselm, of Erasmus, of Scaliger, and of Grotius. The sympathy of our College with the revival of classical learning naturally led our orators to use the Latin of the Augustan age, not that living language as it might justly be called, of the Church and the law, so often condemned by scholars, but deserving of our respect as men when we consider how many great minds have thought in it, and how closely it is often associated with the very highest aspirations of mankind. It was, of course, the custom of Fellows of this College to address the learned in their works, and to write in Latin. Few medical books of the highest order were written in English by the Fellows of our College before *The Morbid Anatomy of some of the most Important Parts of the Human Body* of Dr. Matthew Baillie, afterwards a generous benefactor, which appeared in 1793: and the last great book in Latin was the *Commentarii de Morborum Historia et Curatione* of Dr. William Heberden, which was published in 1802, twelve months after his death in his 91st year.

Let no one be led by a veneration for Latin literature to regret that our own language has since 1864 been substituted for Latin at this celebration.

When Harvey gave his first lectures English literature was already rich, for the works of Shakespeare were complete, and Chaucer, Spenser, and Marlowe and Beaumont, and in prose the *Chronicles*, and the English writings of More, Fisher, Latimer, and Hooker, the several fine versions of classical authors, the first collection of Bacon's *Essays*, and many other good books were easily to be obtained; yet men had hardly come to understand with Ben Jonson how far the literature of the ancients had been surpassed.[11]

> I will not seek
> For names; but call forth thund'ring Eschylus,
> Euripides and Sophocles to us,
> Paccuvius, Accius, him of Cordova dead,
> To live again, to hear thy buskin tread,
> And shake a stage; or when thy socks were on,
> Leave thee alone for the comparison
> Of all that insolent Greece, or haughty Rome
> Sent forth, or since did from their ashes come.
> Triumph my Britain, thou hast one to show
> To whom all scenes of Europe homage owe.
> He was not of an age, but for all time,
> And all the Muses still were in their prime,
> When like Apollo he came forth to warm
> Our ears, or like a Mercury to charm.

Since Harvey's day our literature, great as it was even then, has received such excellent and varied additions that it must always live among the noblest literatures of the world. How far do the speeches of Burke, greatest of political philosophers, surpass those of Cicero, and of Demosthenes, in depth of thought and in grandeur of expression; with splendid sentences, yet owing their force not to ornament but to the perfection with which they make clear the lofty argument and profound consideration of the subject. The verses of Dryden and of Milton, of Cowper and of Byron have shown what force metre may give to English, while the prose of Clarendon and Dryden, of Swift and Addison, of Bentley, of Johnson, of Fielding, of Goldsmith, of Blackstone, of Macaulay, and of Newman exhibit the extraordinary variety of excellence possible in the language. Is not Herrick superior to Catullus, and what ancient comedy approaches *She Stoops to Conquer* in the happy combination of the comedy of words with the comedy of action? Will not the letters of Cowper and of Swift and of Gilbert White bear comparison with those of Cicero and of Pliny? What is there in Latin literature which can be compared with the novels of Fielding or of Thackeray? Who would prefer Petronius Arbiter, or even, considering the Latin of later times and to mention one of the few romances which Harvey is likely to have read, who would be well advised to take up the *Argenis* of Barclay when he had within reach the *Vicar of Wakefield*, the *Pickwick Papers* or the happy delineations of English everyday life of Jane Austen?

Great as must always continue our admiration for classical Latin, willingly as we must reverence its dignity, its precision, its grace, deeply as we must feel that we have no authors who are the equals of Virgil and of Horace and of Lucretius in their several kinds, let us never regret its disuse on this day since we have substituted for it the language of our own far greater literature.

Harvey, following the good old custom which he had observed at Cambridge in accordance with the injunctions of Caius, desired us to commemorate our benefactors by name. We are not a rich society, but we have had many benefactors. Some good men have given us land and money, others have given us books, some pictures or busts, while others again—and these are perhaps the greatest benefactors of all—have added to our corporate glory by the fame of their discoveries or of their learning. All these are our benefactors. We are grateful for a charter to the Sovereign who then styled himself "Henry, King of England and France, and Lord of Ireland." He favoured us in his best days, and when in the tenth year of his reign he established our corporate existence

he deserved the commendations of More, who says in a letter to Bishop Fisher: "He is so affable and courteous to all men that each one thinks himself his favourite."

Some of those to whom gratitude is due I have already mentioned, and as I cannot pretend to so terse a style as Thomas Newton, of Cheshire, who praises 215 botanists in 54 lines of Latin verse, I cannot hope to mention all our other benefactors as they deserve.[1] Thomas Linacre, our founder, has impressed upon succeeding generations of physicians in England his own high ideal of what a physician's character and learning should be. His house in Knightrider Street was the first home of our College. He seems to join the ancient and the modern world, for he could remember the printing of the first book in England and learned Greek from Demetrius Chalcondylas, a Greek of Byzantium, who read Homer as we should read Chaucer, conscious that the poems were in our own tongue, whatever differences there might be of vocabulary or of phrase. Our library contains the noble Milan edition of 1499 of the Greek Lexicon of Suidas which was prepared by Linacre's teacher. It has no title page, like many of the early printed books, but begins with a dialogue in Greek between the bookseller and a learned man which ends with an inquiry as to the price. Χρυσῶν τριῶν, three gold pieces, says Bibliopoles. "Take them and give me the book," replies Philomathes. It is easy to imagine with what pleasure our founder must have contemplated such a book. The type is perhaps a reproduction of the Greek hand of Demetrius. Well formed it is, and impressed upon fine paper; yet, as the text extends line after line over the pages, with no interval or break, except the τέλος τοῦ στοιχείου and ἀρχὴ τοῦ στοιχείου of each letter, it brings home to a modern reader how much more perfect is the apparatus of learning in our day. We are sometimes told that so much is known now that there is no longer time to read books through, and that men cannot seek knowledge in more than one direction. A comparison of this Suidas with a modern lexicon would rather suggest that where the means of acquiring it have become so much easier there must be time to learn more than in the days of our founder.

Sir William Paddy, who was well known to Harvey, was a benefactor of St. John's College, Oxford, as well as of this College, where he was President in 1609, 1610, 1611, and 1618. He is addressed by Thorius in words equally applicable to our present President:

Tu qui censu decoratus Equestri
Virtutem titulis, titulos virtutibus ornas.

He was physician to Laud. "Few excellent men," says Clarendon of the Archbishop, "have ever had fewer friends to their persons," but Paddy was one of the few, and a very faithful one. He left his library to St. John's, a fine collection of the scientific books of his time. Chancing to visit that library, I asked if there was a separate list of his books, and whether they could be pointed out in the cases. Receiving a negative reply to both questions, I asked for Gilbert's *De Magnete*, thinking that Paddy would be sure to have a copy of that great work of which the author, one of our benefactors, was President here in 1600, when Paddy was censor. A fine copy was produced, and on the first leaf was written, "Liber Gulielmi Paddy." This clue made it easy to find several others of his books—Turner's new *Herbal* of 1551, Gerard's *Herbal* of 1597, Rondeletius and Guido, Fallopius and Laurentius, and that rare work of our Fellow Edward Wotton, *De Differentibus Animalium*, dedicated to Edward VI. and published in 1552, one of the first printed books on zoology by an Englishman. These required seeking on the shelves, but one book which belonged to Paddy is well known to every visitor to the library, for it is displayed in a table case.

It is a royal copy of the 1615 edition of the Book of Common Prayer, and contains in Paddy's hand an account of the last hours of King James I. As our late librarian Dr. Munk, to whose *Roll* the fame of the College in the world of letters owes a good deal, and who wrote a paper on the death of the King, was unacquainted with Paddy's record: it is perhaps known to few Fellows of the College, and deserves to be read here as a memorial of our former President and benefactor.

Being sent for to Thibautte but two daies before the death of my sovraigne Lord and master King James, I held it my Christian dutie to prepare him telling him that ther was nothing left for me to doe (in the afternoone before his death the next daie at noone) butt to pray for his soule. Whereupon the archbyshop and the Lord Keeper, Byshop of Lincolne demanded iff his majestie would be pleased that they sholde praye with hym. Whereunto he cheerfullie accorded and after short praier these sentences were by the Byshop of Lincolne distinctlie pronounced unto hym who with his eies the gates of his hart lifted up unto heaven att the end of every sentence gave to us all thereby, a godly assurance of those Graces and livelie faith whereunto he apprehended the Merit of our Lord and onlie Saviour Christ Jesus accordinglie as in his godlie life he had often publiquelie professed. Will Paddy.

The forty-one sentences which Bishop Williams recited to the King are written down, ending with the last verse of the *Te Deum: In te Domine speravi: non confundar in æternam.*

Sir William Paddy died in 1634. In that year another benefactor was President and continued so for seven years—Simeon Fox, educated at Eton and at King's College, Cambridge. He was present in the Great Hall at Padua on Thursday, April 25th, 1602, when Harvey took his degree, and saw him receive the insignia and ornaments of the Doctorate, when the books were given to him first shut and then open, a golden ring placed upon his finger, the Doctoral cap put upon his head, and finally the kiss of peace given to him with the blessing of authority. The name of Simeon Fox and those of Anthony Fortescue, Richard Willeby, Mathew Lister, Peter Munsel, and Robert Darcey, Englishmen, are recorded with others in the finely-decorated diploma as witnesses to the ceremony. The only extant work of Fox is a Latin poem of twenty-nine lines addressed to Winterton. He lived in the house which formed part of the College in Amen Corner, and is buried in St. Paul's Cathedral. The bust erected in his honour in the College was unfortunately calcined in the Great Fire of London.

It would be easy if we had but time to-day to find something interesting to tell of each one of our benefactors. I should like to commemorate Assuerus Regemorter, Glisson's fellow worker, by taking the College to the famous private school in Goldsmith's Rents, off Redeross Street, where he was educated by Thomas Farnaby, that industrious editor of Juvenal, and Seneca and Martial, Lucan, Ovid, Terence, and Virgil. How delightful to accompany Dr. Edward Browne, son of Sir Thomas Browne, and our President in 1704, in his travels to Larissa, where he hoped to breathe the atmosphere in which Hippocrates had practised, and to know a little more of the Father of Medicine by contemplating the features of the country in which he had verified or established those aphorisms of medicine, the first of which is to this day placed before each individual Fellow at every meeting of our College. We might listen to Alexander Rhead, lecturing to the surgeons and barbers in Monkwell Street at their hall, good artists as they called themselves, sound practitioners as we should say, differing from their professional descendants of to-day in the fact that instead of thinking, as I find most of my surgical colleagues do, that nearly all diseases, whether internal or external, are curable by the knife, they were inclined to administer medicines with which they were imperfectly acquainted, and which the law forbade them to use.

If we cannot forget the words of Hippocrates and the sceptre of Dr. Caius which are exhibited to us at every meeting, surely we must also remember Dr. John Lawson, of Queens' College, Cambridge, our President in 1694, who gave us in 1683 the handsome mace which is borne before the President. We are quaintly reminded on the Postridie Palmarum of the devotion to our College of Dr. Baldwin Hamey, one of our largest benefactors, when we each receive from his estate half a crown. No one has ever surpassed him in his love for the College and admiration of Harvey, whom he knew in the College for more than twenty years. In 1625 he went to Hastings on his way to Holland. He had supper with the mayor, who dreamed afterwards that Hamey should be detained, and set a guard at his inn. He was thus unable to join the vessel when she sailed: a sudden storm within an hour caused the ship to founder with all on board, and thus the mayor's suspicions, which perhaps arose from the learned character of Hamey's talk at his table, saved his life. He was a loyal man, and gave the King a valuable ring at the Restoration which he had bought at the sale of King Charles I's effects, and in justification of his occasional attendance at the sermons of the Commonwealth it is mentioned that he used to read an Aldine Virgil bound in vellum, or a little Aristophanes bound in red, all the time.

Charles Goodall, President 1708-12, was another man devoted to the College and a zealous defender of its privileged

We who have known the labours and the fidelity of Sir Henry Pitman and Dr. Edward Liveing in the College of our time can have no difficulty in the grateful remembrance of a similar man in the past. He was a friend of Sydenham, who admired both his character and his skill, and dedicated his *Schedula Monitoria* to him.

Sir Hans Sloane, our President 1719 to 1735, was thought worthy to succeed Sir Isaac Newton in 1727 as President of the Royal Society. The μεγαλοπρέπεια of Aristotle, the generous splendour suitable to a great man, was displayed by him through a long life, and the institution of the British Museum was due to the discerning liberality with which he disposed of his vast and valuable collections at his death. Hans Place and Sloane Street appropriately preserve his memory on the estate which he had purchased and where he lived during thirteen years of an intelligent old age.

Two recent benefactors must not be omitted—Sir Hermann Weber, who founded in 1895 a handsome prize in memory of Dr. E. A. Parkes, and Captain Edward Wilmot Williams, who founded a gold medal in memory of Dr. Francis Bisset Hawkins, his kinsman, long the Senior Fellow of this College.

We are assembled in our library and must not forget those who have enriched it. To men who regard the world of books as a region only second to the world of men in its interest, ours is a delightful collection. It is in great part composed of the successive gifts of men who had loved their books and represents the reading of twelve generations of well-read physicians. Linacre, our founder, and Dr. Holsbosch and Gilbert, the discoverer of the magnetism of the earth, and the Marquis of Dorchester, friend of Harvey and of Scarborough; Sir Theodore Mayerne, physician to Henry IV of France, and to James I, Charles I, and Charles II, a man of extraordinary learning and ability; these were some of the earlier benefactors. After them comes Dr. Richard Hale, whose portrait justly occupies a prominent place here. He was of Trinity College, Oxford, and though an enlightened and well-informed physician of his own time, took pleasure in mediæval treatises, and enjoyed the *Flos medicinæ* of the School of Salernum, and walked with pleasure in the garden in which that flower grows beside the Rosa Anglica and the Rosa Gallica, perhaps murmuring as he went—

> Cur moriatur homo cui salvia crescit in horto?
> Contra vim mortis: non est medicamen in hortis.

Later still comes Richard Brocklesby, a schoolfellow of Burke and his friend throughout life. He was a generous giver: to Burke, to Johnson, to his nephew Thomas Young, one of our Fellows, the exponent of hieroglyphics, the originator of the undulatory theory of light, and to our library, and I am sure in many other directions no longer remembered. "What I spent," says the old epitaph, "I had. What I kept, I lost. What I gave, I have." Brocklesby understood its meaning.

Johnson himself gave us a book, and we owe a debt of gratitude to one other of that great literary circle, for Sir Joshua Reynolds went to much trouble for us as to the cleaning of our pictures.

In later days Sir Andrew Clark gave a handsome bookcase filled with books, and Dr. Pye-Smith a fine solid case for the display of some of the treasures of our library. Our present librarian, Dr. Payne, has given several rarities from his own fine library to ours.

There have been endowed in the College at different times five lectureships. The oldest was founded in 1581 by Dr. Richard Caldwell and John Lord Lumley. Caldwell, an Oxonian, was President in 1570. Only one of his writings has survived, a translation of the *Tables of Surgerie* of Horatius Morus of Florence, and his ornate tomb described by Camden, perished with the Church of St. Benet's, Paul's Wharf, in the Great Fire of London, so that the lectureship is the chief memorial of his learning and virtues. John Lord Lumley was not unworthy to be his associate. He was of Queens' College, Cambridge, and had a noble library, parts of which are preserved in the British Museum, in the Bodleian and in the Public Library at Cambridge, and he wrote a translation of the *Institution of a Christian Prince* of Erasmus. The conversation in Lumley Castle must have been interesting, for its Lord, beside his knowledge of books, had taken part in many affairs of State, and his wife, daughter of the twelfth Earl of Arundel, was as learned as her lord. She translated the Iphigenia of Euripides and some orations of Isocrates into English and one oration into Latin. The founder of our lectureship died in 1609 and was buried in the aisle which he added in 1592 to the Church of St. Dunstan at Cheam.[13] The inscription traces on his tomb his descent from the times of King Edward the Confessor, and in its marble ornament with nineteen surrounding shields of arms showed how fully he, whose father was attainted and executed at Tyburn, had restored the ancient wealth and honours of his family.

The next lectureship is that founded in 1632 by Dr. Theodore Goulston, a Fellow of this College, who was educated at Merton College, Oxford. He was a person of much learning, and translated into Latin with commentaries two books of Aristotle and several of the Opuscula of Galen. He lived in the same parish as Harvey, that of St. Martin by Ludgate, and, as he was censor in the year in which Harvey was appointed Lumleian lecturer, while they were censors together in a later year, knew him well. The rector of their parish was Samuel Purchas, editor of *Hackluytus Redivivus, or Purchas his Pilgrims*, and it is easy to imagine that this Johnian, who had been at Cambridge during Harvey's time there, was now and then admitted to the society of Goulston and Harvey, and perhaps amused them with tales from the records of voyages of which he possessed the manuscripts. Goulston's *Opuscula Varia* of Galen was published by his friend, Thomas Gataker, in 1640, after the editor's death. Harvey possessed a handsomely-bound copy, now in the British Museum, in which he has written many notes, especially on the "Exhortatio ad Medicinam et Artes," the "De Sectis ad Tyrones," the "De Cognoscendis et Corrigendis Animi Perturbationibus," and the two other treatises on the mind.

A third lectureship was planned by Dr. William Croune, a Fellow of the College in 1684, and was formally established by his widow in 1706. He had been a Fellow of Emmanuel College, Cambridge, and became Professor of Rhetoric at Gresham College, and read several papers before the Royal Society, of which he was one of the earliest Fellows.

No further lectureship was founded till 1880, when the widow of Dr. William Wood Bradshaw, a member of the College, founded an annual lecture in memory of her husband.

In 1886 Dr. Gavin Milroy, a Fellow of the College, founded a lectureship in State Medicine and Public Hygiene.

These five lectureships are devoted to clinical medicine, pathology, anatomy, physiology, and public health, but neither here nor in any of our Universities are there public lectures on the history of medicine.

The history of medicine may perhaps be divided into three parts. One belongs to the general study of philosophy, the exposition of the theories and the arguments to support them which have been used in past ages. This is chiefly of interest in relation to the study of the human mind. A second part treats of the lives and the work of physicians of past times. This cannot but instruct us, who have the same difficulties and the same objects, in many ways. The third is the study of the cases and epidemics of past times, as they appear not only in medical writers, but in general history. This is perhaps the most useful of all. In the mistaken interpretation of accurately-recorded phenomena in old times we have before us a picture of our own errors in the interpretation of what we discover at the bedside, and a warning against too great deference to prevalent systems of treatment.

To learn anything from the history of medicine in any of these branches it is first necessary to know medicine, and the only valuable writers on the subject have been well-informed physicians like Dr. John Freind, whose history of physic is the most considerable work on the subject in our language, or Dr. Payne, whose devotion to pathology and to clinical medicine is as well known as his lucid exposition of the learning of past centuries. It is fortunate that the opportunity has occurred of establishing such lectures.

The wife of a learned man desires to perpetuate his memory in a way grateful to him by the foundation in this College of a lectureship on the history of medicine. He was a Member of the College, and she wishes that the benefaction shall be considered to come from him and be called after him, as in the case of Dr. Croune, whose wishes as to a lectureship

were carried out by his widow, Lady Sadleir. No occasion seems more appropriate than this to mention to the College this gift of a sum of £2,000 to be invested in the usual way for this purpose on conditions similar to those of our ancient lectureships, which must of course be formally laid before our comitia, and will I do not doubt be accepted there, since, when I lately mentioned them by letter to the Comitia Minora, you informed me that the President and Censors, were prepared to recommend the College to accept the gift.

Dr. Thomas Fitz-Patrick, who must hereafter be mentioned as one of our benefactors, was born in 1832 at Virginia, a little country town standing at the end of a long lake in Cavan. Although one of the least wealthy parts of Ireland, the surrounding district is one of literary fame. In the boyhood of our benefactor the epigrams and other poems of Philip MacBradaigh and his touching lines on his daughter's affection were known to everyone, as well as those of his kinsman Fiachra MacBradaigh, a country schoolmaster of ready wit, who flourished in the reigns of George I and George II. The itinerant fiddlers and pipers who had taken the place of the harpers of more remote times all knew the songs of Cathair MacCaba, who died in 1740, and was a harper as well as a poet, and the friend of O'Carolan, the most famous of all Irish musical composers, who addressed to him a pleasant poem, "Rath do cheirde fein ort" (here is the reward of your own art). The ancient churchyard of Moybologue, in which MacCaba is buried, contains also the mortal remains of Brian O'Clery, a somewhat later poet of the same century, descended from a famous race of hereditary historians whose chronicles are one of the chief sources of information about mediæval Ireland. His poem on spring and other of his verses were often recited, and his early death lamented. John O'Neachtan's poems on the death of Mary of Modena, Queen of James II, and on the Duke of Berwick, and many other compositions of his circulated in the district. John O'Farrelly of Mullagh, a village about four miles from Fitz-Patrick's birthplace, and in which he first practised his profession, wrote the history of the district under the title of *Seanchas an da Bhreifhne*. A romance by Brian O'Reilly entitled *Eachtra Mheic na Mhiochomhairle*, the adventures of the Son of Evil Counsel, was read or repeated by great turf fires in many farmhouses on winter nights, though such, in Fitz-Patrick's youth, was the poverty of the district that even rushlights were rare, and splinter of bog fir or twigs of dry furze thrown into the fire supplied the light by which all these writings were read from manuscripts. It is right to mention these authors and their works, obscure elsewhere, but long well known in that part of Cavan, in order to show how much love of literature there was; and I agree with that great scholar, the late Mr. Henry Bradshaw, in respecting the ill-remunerated scribes who copied these works in manuscript and the authors who composed them without hope of other reward than local fame.

Nor were the literary associations all in the native language, for Henry Brook, author of *The Fool of Quality*, a novel once widely read, lived at Corfada, between Virginia and Mullagh, as did his accomplished daughter, Miss Charlotte Brook, whose *Reliques of Irish Poetry* is a handsome quarto to be seen in most good eighteenth-century libraries. Close to Virginia is Quilca, the home of Dr. Thomas Sheridan, the editor of *Perseus*, where Swift was a frequent guest, and many stories of the famous Dean of St. Patrick's were current in the neighbourhood in Fitz-Patrick's youth, and later.

In the next field to the fragment of wall which is at the present day all that is left of the house of Henry Brook, a small but ancient cairn near a disused well marks the birthplace of a learned person of very ancient times—St. Cilian of Würzburg, in the seventh century, the apostle of Franconia. The varied literary associations of his native district had no doubt a great effect in giving Fitz-Patrick a taste for literature of all kinds. He graduated at Trinity College, Dublin, where he obtained several prizes, and became a Member of this College in 1868. He was a man imbued with learning, well read in Homer and in Lucretius, a student of the text of Don Quixote, and of other Spanish literature, knowing also Italian and French, and German as well as something of Hebrew, of modern Greek, and of Danish. His knowledge of English literature was extensive and his taste good. He had travelled as well as read, and having thus accumulated all the materials for conversation he was a delightful companion. His intellectual attainments were the ornaments of solid virtues, and he deserves to be remembered with honour in this honourable place.

I could mention many more worthy benefactors, and as in private duty bound you, Sir, and the Fellows would sit on till I had ended their praises; but I must remember that we have guests who may exclaim with Macbeth:

> What! will the line stretch out till the crack of doom?

So like an old charter I will end my list with the words *cum multis aliis*. We are grateful to them all, and will always maintain their fame.

As to the last parts of Harvey's exhortation, how can they be better carried out than by considering the examples of the investigation of Nature and the maintenance of friendship, which the College itself affords? Harvey himself first of all, beloved in his time, untiring in his observations, considering them and stating their results in every aspect during all the years from 1616 to 1628, and ending in the certainty that the blood in the animal body is impelled in a circle, and is in a state of ceaseless movement, that this is the action which the heart performs by means of its pulse, and that this is the sole end of the contraction of the heart. Think how the pulse had been studied before, in the thirteen books of Galen, by Rufus of Ephesus, by Philaretus, and by many more, yet never understood because a hypothesis resting on too small a basis of observation prevented men from seeking out the truth of Nature by way of experiment.

Then Francis Glisson, labouring for five years and more at the observation of a disease undescribed before and ending with a perfect pathological and clinical treatise on rickets, the first of its kind to appear in England.

Heberden, whose commentaries, though they contain no single great discovery, yet are so original in every line, though treating of many common things, that they are a continued discovery of all that may be seen at the beside.

Sir George Baker working out the causes and the results of lead poisoning in the cider country, and leaving no step unassured on the way.

Sir William Jenner toiling at the bedside and in the *post-mortem* room, and by the method which Harvey urged, "*αὐτοψια* non mentis agitatio," demonstrating the true character of enteric fever and its distinction from the typhoid fever with which it had so long been confounded.

Many of my predecessors have dwelt at length on the discoveries of Harvey himself. I should like to have done so, too, had I not felt bound to follow his own injunctions and to commemorate our benefactors, a task perhaps easier to perform, for it requires great talents to frame a composition worthy of his fame, and to be so great a master of words as to utter praises equal to his merits, who left us so great a discovery won and earned by his own genius. The lines of Lucretius on Epicurus may justly be used to praise Harvey:

> Quis potis est dignum pollente pectore carmen
> Condere pro rerum majestate hisque repertis?
> Quisve valet verbis tantum, fundere qui laudes
> Pro meritis ejus possit qui talia nobis
> Pectore parta suo quæsitaque præmia liquit?

NOTES AND REFERENCES.

1 *A Boke or Counselagainst the Disease commonly called the Sweate or Sweatyng Sickneese*, made by John Caius, Doctour in Phisiche, 1552. 2 Dr. John Bateman, Aratus (President, 1716-18); Dr. Edward Browne, Themistocles (President, 1704-7), Sertorius; Dr. Walter Charleton, Marcellus (President, 1689-91); Dr. William Crowne, Pyrrhus; Dr. Phineas Fowke, Phocion; Dr. Charles Fraser, Marcus Antonius; Dr. Thomas Fuller, Cicero; Sir Samuel Garth, Otho; Dr. Walter Needham, Agesilaus; Dr. Thomas Short, Philopœmen. 3 Cowper, On the Receipt of My Mother's Picture out of Norfolk: "So thou with sails how swift hast reached the shore, Where tempests never beat nor billows roar." 4 *Dispensary*, Canto VI, line 298. 5 MS. Sloane, 1697 (B. M.), fol. 42. 6 Rosalynde, Euphues Golden Legacie, London, 1590, p. 4, Hunterian Society reprint. 7 Oxonians: Dr. Henry Atkins; Dr. Richard Foster, All Souls; Dr. Edward Jordan; Dr. Thomas Hearn, Brasenose; Dr. Matthew Gwin, St. John's. Cantabrigians: Dr. William Baronsdale, St. John's; Dr. Thomas Friar, Trinity; Dr. George Turner, St. John's; Dr. Ralph Wilkinson, Trinity; Dr. Thomas Moundeford; Dr. Mark Ridley, Clare; Dr. Edward Lister, King's; Dr. John Argent, Peterhouse; Dr. Daniel Selin, Magdalene; Dr. Thomas Rawlins, Clare. 8 Friar, Jordan, Heron. 9 Andrew Marvell. 10 Tickell, to the Right Hon. the Earl of Warwick on the death of Mr. Addison, Dodsley's Poems, I. 29. 11 To the memory of my beloved, Master William Shakespeare, and what he hath left us. 12 Henry Lyte, *A New Herbal*, London, 1619, p. vi. 13 Now detached from the church.

# THE COMMUNICABILITY OF HUMAN TUBERCULOSIS TO CATTLE.

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[PRELIMINARY COMMUNICATION.]

In an address delivered at the International Congress of Hygiene and Demography held in London in 1891, Sir John Burdon-Sanderson[1] affirmed that *the identity of bovine and human tuberculosis is a thing to be accepted as a fundamental proposition.* This view is based on a considerable mass of evidence, beginning with the celebrated experiments published by Villemin in 1865 and Chauveau in 1868. Professor Robert Koch, at the Congress on Tuberculosis held in London last July, stated: "I feel justified in saying that *human tuberculosis differs from bovine and cannot be transmitted to cattle*."[2]

Such a difference of opinion might prove interesting, and even amusing, from an academic point of view, but considering the very important bearings which the question has upon hygiene, administration, and finance, the doubts created by this difference of opinion are intolerable.

Convinced though I was by numerous observations, I took steps for obtaining further evidence immediately after reading Professor Koch's address, with the object of satisfying myself as to the exact value of his statement. The cost of the experiment led me to devise what I thought would be a crucial test, such a test having for *sole object* to determine whether cattle might contract active tuberculosis after being infected with tuberculous products of human origin.

Having in my previous experiments noticed that cultures of tubercle bacilli often lose much of their virulence, and that human tuberculous products are virulent in greatly varying degrees,[3] I felt that a great number of experiments would be necessary to prove or disprove Koch's views if the usual methods were adopted. I therefore determined, at the risk of losing several of my experimental animals, to inoculate them, not with a single sputum or culture at a time, but with *a mixture of several tuberculous sputa, representing several types of human tuberculous sputa.*

By July 28th I had, through the kindness of my friends, obtained from the Manchester Consumption Hospital six tuberculous sputa containing bacilli belonging to the following types: (1) long, slender, showing typical metachromatism: (2) thick, staining almost uniformly: (3) short, in clumps; (4) short, staining badly. Some of the sputa contained an immense number of bacilli, others only a few. Putrid sputa were, of course, entirely excluded. These six samples were then thoroughly mixed together, and it is with the mixture so obtained that I made my four experiments.

Mr. Holburn, the Chief Veterinary Inspector, kindly undertook to buy for me some healthy calves. I determined to run the risk of using calves not previously tested with tuberculin. It would have undoubtedly been satisfactory before beginning the experiments to feel certain that all the calves gave a negative reaction. But admitting that there is a certain amount of truth in the view that tuberculin has a preventive action, it is certainly illogical to inject a calf with tuberculin not long before inoculating it with tuberculous products. It seemed to me more reasonable to rely upon the fact that tuberculosis is extremely rare in the calf, and to reject afterwards any experiment in which the infection could not be clearly traced to the injected matter. I thought also that if the calves were tested twice after inoculation, once two or three weeks after inoculation, and a second time six or eight weeks after inoculation, the absence or slightness of the reaction at the first test might prove a good control for the second test. In some respects my previsions were not entirely justified. One of the calves was found to be affected with generalised tuberculosis, which, however, could not have been easily mistaken for the results of the experimental inoculation.

The cost of the experiment, which I took upon myself to avoid delays, prevented my using more than four calves; one was inoculated direct into the lung, the second was inoculated subcutaneously, the third was inoculated into the peritoneum, and to the fourth was given, in two meals, milk containing ten times as much sputum as the others had received by inoculation. The inoculations and feeding were carried out in presence of Dr. Sidebotham, Dr. Coutts, Dr. A. Sellers, Mr. Holburn, and others. Mr. Holburn tested the calves in my presence on two occasions. The *post-mortem* examinations were made in presence of several gentlemen, among whom were Dr. Sellers, Mr. Holburn, and his assistant. Most of the microscopic examinations were carried out for me by Dr. Sellers, whose willing assistance I am glad to acknowledge here.

Before giving the results of these experiments in detail I may sum them up as follows:

First calf inoculated in the lung with 5 c.cm. of mixed tuberculous sputum. Death on the sixth day. Generalised tuberculosis not due to the inoculation.

Second calf inoculated under the skin of the leg (5 c.cm. of mixed sputa). Death on the sixth day, marked enlargement of a gland at a distance of 5 inches from the seat of inoculation, no other trace of tuberculosis. Living and virulent tubercle bacilli found in the affected gland. As bacilli injected under the skin might have been carried from the seat of inoculation and remained alive without actually producing tuberculosis, this experiment is discarded, although it is in perfect agreement with results obtained in guinea-pigs which have been proved to indicate early tuberculous infection in these animals.

Third calf, given 50 c.cm. of mixed sputa with its food in one day. Death twenty-six days after the ingestion of the tuberculous material. No trace of tuberculosis in any organ except the glands connected with the alimentary canal. Virulent tubercle bacilli found in œsophageal glands.

Fourth calf, 5 c.cm. of mixed sputa injected into the peritoneum. No definite tuberculous reaction twenty-six days after inoculation. Definite tuberculin reaction sixty-eight days after inoculation. *Post-mortem* examination seventy days after inoculation. Marked tuberculosis of peritoneum, extending gradually to pleura and pericardium. No other organ affected with tuberculosis except a few of the lymphatic ganglia connected with the peritoneum.

*Therefore of the four calves experimented upon only two survived long enough to allow definite results to be obtained, and these two calves had contracted tuberculosis as the result of ingestion of or peritoneal infection with human tuberculous sputa.*

## FIRST CALF.

Strawberry roan heifer calf (No. 1,185), 3 weeks old, apparently healthy. On August 1st inoculated with 5 c.cm. of mixed tuberculous sputa; died on August 7th suddenly.

The sputum had been injected direct into the lung tissue through the chest wall. A very limited patch of purulent pneumonia had formed round the track of the needle, which had penetrated at least 1 inch beneath the surface of the pleura. There was also a limited well-localised empyema in the region of the puncture of the pleura. Numerous small tubercles were found scattered through both lungs; these tubercles were apparently recent, and few were caseous. The bronchial glands were not much enlarged, but several irregular, opaque patches, indicating some lymphadenitis (tuberculous) were present. The suprasternal glands were in the same state. There were on both sides some very small patches (the largest not 1 inch in diameter) of thickening of the pleura due to the presence of small fleshy-looking excrescences having the characters of recent tuberculous lesions (young grapes).

The liver was studded all through its substance with small tubercles, the largest not being more than one-eighth of an inch in diameter: most of these tubercles were necrosed in the centre. Tubercle bacilli were present in the liver, lungs, and bronchial glands.

Guinea-pigs (No. 1,191 and 1,192) were inoculated with portions of the bronchial glands and of the liver, and all of them developed in seven weeks extensive tuberculosis.

From the distribution of the tubercles in the liver and lungs, the state of the tubercles in the liver, and the absence of any tubercles recognisable to the naked eye in lymphatic ganglia other than the thoracic ganglia, I concluded that this calf was affected with tuberculosis contracted *in utero* or at birth through the infection of the blood of the umbilical vein by bacilli derived from some tuberculous lesion of the uterus and placenta.

The cause of death was another bacillus present in the sputum, and with which an acute septicæmia could also be produced in guinea-pigs. This experiment was therefore discarded as useless.

It was most unfortunate that out of four calves one should have been the subject of a form of tuberculosis which is very uncommon.

Second Calf.

Roan bull calf (No. 1,187), about 6 weeks old, apparently healthy. On August 1st this animal was inoculated with 5 c.cm. of the mixed tuberculous sputum. The sputum was injected subcutaneously on the inner side of the right femoro-tibial articulation. This animal died on August 7th. The chief lesions observed were, on the side inoculated, an enlargement of the lymphatic ganglia corresponding to the popliteal, superficial and deep inguinal ganglia in man. The corresponding ganglia on the other side were quite normal. Fibrinous peritonitis, enlargement and congestion of the spleen (which was almost black in colour), pulmonary congestion, and a small amount of pleural exudations were also present.

I selected for more minute examination the precrural ganglion which was at a distance of about 5 inches from the seat of inoculation, and which was about twice as large as the corresponding ganglion on the opposite side. After bisection of this ganglion several opaque, whitish, rounded patches situated in the cortical zone were found: these indicated early lymphadenitis. This gland presented appearances similar to those observed in the superficial inguinal glands of guinea-pigs about a week after subcutaneous inoculation at the level of the knee with a small quantity of tuberculous material of ordinary virulence. Tubercle bacilli were found on microscopical examination of this diseased ganglion.

A guinea-pig (No. 1,189) inoculated with a portion of the cortical substance, equal in size to a pea; and killed eight weeks after was found affected with advanced tuberculosis of the lymphatic ganglia below the diaphragm on the side inoculated, the retrohepatic ganglion, and several of the cervical and mesenteric ganglia, as well as the spleen, were also distinctly tuberculous; typical naked-eye lesions were absent from other organs.

In order to control the results obtained by inoculation with the right precrural ganglion of this calf, two other guinea-pigs (No. 1,190) were inoculated (at the same time as No. 1,189) with an equal amount of cortical tissue obtained from the bronchial glands of the same calf: these two guinea-pigs were killed like the first eight weeks after inoculation, and found quite free from tuberculosis, both by naked eye and microscopical examination.

This case might fairly be given as an instance of rapid infection of lymphatic ganglia at a distance of 5 inches from the seat of inoculation. This would be entirely supported by the results which I have obtained in guinea-pigs. The extensive tuberculosis produced in guinea-pig 1,189 is also in favour of this view, which is also supported by the appearances of the precrural gland of the calf.

It cannot, however, be denied that the bacilli found in the precrural gland might have been carried from the seat of inoculation to the gland without multiplying, and that in such a case they might have been still sufficiently active to infect a guinea-pig without necessarily being infective for the calf.

Although I am personally convinced that this second explanation is the more unlikely of the two, I must admit that this second experiment is inconclusive. The cause of death was in this case apparently the same bacillus as that found in the first case.

Third Calf.

Brown and white bull calf (No. 1,188), about 6 weeks old; apparently healthy. On August 1st this calf was given 50 c.cm. of mixed tuberculous sputum thoroughly stirred with two quarts of sterilised milk. Two weeks after the animal began to look ill. On August 22nd fœtid diarrhœa, with much flatulency set in. The animal, however, continued to take its food well. On August 26th it received an injection of tuberculin, but unfortunately died during the night, so that it was impossible to ascertain whether the animal reacted or not. As the animal did not seem to be very ill, and the dose of tuberculin was only 10 minims, there was no reason to expect a fatal termination.

The *post-mortem* examination revealed the following lesions: Peritonitis with fœtid semipurulent exudation in the peritoneum. Enlargement and softening of all the mesenteric glands, more especially of the chain of glands along the intestinal border of the mesentery. In addition to these the following lymphatic ganglia connected with the alimentary canal were enlarged, softened, and more or less congested: pharyngeal glands, long and short œsophageal glands, some of the mesenteric glands at the root of the mesentery, and three lymphatic ganglia in the mesorectum. There was a small patch of hæmorrhagic consolidation at the apex of the right lung; the spleen was apparently normal and the liver mottled owing to early necrotic parenchymatous changes. Among the lymphatic ganglia some presented special appearances in addition to those mentioned above, the left pharyngeal was much congested and presented some necrotic areas. The œsophageal glands were firmer than the others, and also presented rounded patches such as are found in glands affected with early tuberculous lymphadenitis. The rectal glands were in the same state.

All the lymphatic ganglia mentioned above have been examined microscopically, but so far tubercle bacilli have not been discovered in any by that method.

Guinea-pigs (Nos. 1,193, 1,194, 1,195, 1,196) were inoculated with the pharyngeal, œsophageal, ileo-cæcal, and rectal lymphatic ganglia respectively. Of these the one inoculated with the ileo-cæcal gland died rapidly; those inoculated with the pharyngeal and rectal glands do not show yet any external evidence of disease. The guinea-pig inoculated with the œsophageal gland began to show external evidences of tuberculosis before the end of the first month and died forty-six days after inoculation. The *post-mortem* examination showed that all the lymphatic ganglia with the exception of the cubital and right popliteal were tuberculous. The ganglia directly connected with the seat of inoculation being much more diseased than any of the others. The liver and the spleen were of a very large size and their tissue almost entirely replaced by extensive tuberculous lesions. Tubercle bacilli were present in large numbers in the lymphatic glands.

This case is of considerable interest. The calf died 26 days after being fed on milk containing 50 ounces of human tuberculous sputum, no other source of tuberculous infection having been allowed after that feeding. The cause of death was obviously not tuberculous infection; the bacillus which had caused the death of the first two calves was probably the chief cause of the changes found in the lymphatic ganglia connected with the intestine. It must be surmised that the injections of tuberculin brought about the death of the animal by causing a sudden rise of temperature; of this, however, there is no absolute proof, since the animal died during the night less than 8 hours after the injection, and there was no opportunity to take the temperature again before death. The state of the glands made it difficult to discover tubercle bacilli in any of them by microscopical examination; but of the guinea-pigs inoculated with various glands, one died of advanced tuberculosis due to the inoculation. As there was in the calf no evidence of tuberculosis in any other organ than the lymphatic ganglia connected with the alimentary canal, and more especially those connected with the pharynx and œsophagus, and as the age of the lesions indicates a very recent infection, this case creates a strong probability that the tuberculosis of these glands had been caused by the ingestion of the tuberculous sputum.

Fourth Calf.

Strawberry roan heifer (No. 1,186) under 4 weeks of age. On August 1st this animal was inoculated with 5 c.cm. of mixed tuberculous sputa. Sputum injected into the peritoneal cavity. A marked swelling of the right precrural gland (situated about 4 inches from the track of the inoculation needle) was observed three weeks later. The temperature was very irregular, varying from one day to another from 102° to 105° F.; it was usually between 103° and 104° F.

On August 26th, the temperature showing no tendency to become regular, the animal was nevertheless tested with tuberculin; a rise of 1° F. only was observed at the end of twelve hours. As this rise was less than rises observed before and after the injection of tuberculin, it could not

be considered as evidence of even a doubtful reaction. It must, however, be noted that the precrural gland, which was already enlarged, increased considerably in size, and became tender the day after the tuberculin injection. Afterwards it resumed its previous size, and gradually became smaller, but remained still larger than the corresponding gland on the other side of the body. After September 18th the temperature became more regular, oscillating between 103° F. and 103.8° F. On October 2nd it fell still further down, ranging between 102.4° and 102.8°. On October 8th, 15 minims of tuberculin were injected; this was followed by a sharp reaction, the temperature rising to 106.2° F. after eight hours. (It is even possible that the temperature had been higher before that time.) It fell slowly to 103.8° F. in twenty-four hours.

Three days after, I had the animal slaughtered at the Manchester abattoir, where I made the *post-mortem* examination.

The chief lesions found were the following:

*Abdomen.*—The right precrural gland was about twice as large as the left, and more rounded. No typical tubercle was visible. There were several cheesy tuberculous masses in the large omentum near the duodenal end of the stomach. There were numerous tubercles in the pelvic peritoneum; small miliary tubercles in the suspensory ligament of the liver. The parietal peritoneum behind, and the diaphragmatic above, the spleen, also the parietal peritoneum in both iliac regions, was thickened, rough, covered with small fleshy tuberculous-looking nodules and small polypoid masses (young grapes). Parietal and visceral peritoneum generally roughened. Two of the sacro-iliac lymphatic ganglia were very much enlarged, but not necrosed. Several mesenteric ganglia were slightly enlarged and firm, but showing no distinct tuberculous lesions. The retrohepatic ganglion much enlarged, and with several necrotic patches. A few tubercles were present in the capsule of the liver at the insertion of the falciform ligament, and a few miliary tubercles in the peritoneal covering of the spleen.

*Thorax.*—Along the line of attachment of the diaphragm to the thoracic wall the pleura was covered with small fleshy tuberculous masses, causing in some places a considerable thickening of the costal and diaphragmatic pleura; these were most abundant over the spleen, in the neighbourhood of which the peritoneum was also most affected. Rows of small tubercles were also found along the lymphatics in the intercostal spaces up to the sixth or fifth rib; above that level only a few tubercles were found in the pleura. The pulmonary pleura was nearly normal, and the lungs were entirely free from any lesion visible to the naked eye. The pericardium was slightly affected, but round the large vessels at the root of the heart it was almost entirely covered with a layer of small rounded, fleshy tubercles. The bronchial glands were slightly enlarged, but showed no other evidence of tuberculosis. The suprasternal ganglia were enlarged, congested, and more affected than any other thoracic ganglia, but there were only a few slightly opaque patches indicating the probable presence of tuberculous lesions.

*Bacilli.*—Tubercle bacilli were found on microscopical examination in the omental tubercles and the retrohepatic ganglion; none have so far been discovered in the mesenteric, œsophageal, and bronchial ganglia.

*Inoculation of Guinea-pigs.*—Guinea-pigs have been inoculated with several of the lesions. At the end of nine days they all showed evidences of beginning tuberculous infection. This experiment can leave no doubt as to the source of infection. All the lesions are clearly connected with peritoneal infection. They have the same distribution as those found in rabbits and guinea-pigs inoculated intraperitoneally with tuberculous products of human or bovine origin. I have in many hundred experiments obtained practically identical results with bovine and human tuberculous products injected into the peritoneum of guinea-pigs and rabbits, the focalisation of the tuberculous lesion in the pelvic and diaphragmatic regions, the gradual invasion of the pleura through the diaphragmatic lymphatics, the extensive lesions in the omentum and comparative escape of the mesenteric ganglia, are all characteristic features of peritoneal infection. The entire absence of old tuberculous lesions, the incompleteness or absence of tuberculin reaction three weeks after inoculation, replaced by a clear tuberculin reaction six weeks later, clearly connect the lesions observed with the inoculation of human tuberculous sputum on August 1st.

There was no evidence of any tendency to resolution in any of the lesions. They were all young and in a progressive state; Mr. Holburn, the Manchester Chief Veterinary Inspector, who was present and assisted me, was able to satisfy himself that the tuberculous lesions were typical and had exactly the distribution which, previous to exposing the organs, I had mentioned to him as likely to be found on the supposition that the sputum injected had carried tuberculous infection in the calf.

[N.B.—This first set of experiments had only for its object to determine whether human tuberculous products are infectious to cattle or not; further experiments are being arranged for with the view of determining the conditions which influence the virulence of human bacilli for cattle and the proportion of recoveries after such infection. The author takes this opportunity of acknowledging the facilities which have been this month offered to him by the Manchester Sanitary Committee for the prosecution of more extended experiments. Very soon after the beginning of this investigation, Dr. A. Hodgkinson also generously offered to bear the cost of experiments conducted on a farm belonging to him.]

REFERENCES.

[1] *Transactions of the International Congress of Hygiene and Demography*, London, 1891, vol. ii, p. 185. [2] BRITISH MEDICAL JOURNAL, July 27th, 1901, p. 191. [3] *Ibid.*, September 23rd, 1893.

## NOTE ON THE RESULTS OBTAINED BY ANTITYPHOID INOCULATION IN THE CASE OF AN EPIDEMIC OF TYPHOID FEVER

WHICH OCCURRED IN THE RICHMOND ASYLUM, DUBLIN.

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I AM indebted to Dr. H. M. Cullinan of the Richmond Asylum, Dublin, for a detailed account of the outbreak of typhoid fever which occurred in that asylum in the autumn of last year, and for particulars with regard to the results obtained by antityphoid inoculation in connection with that outbreak. From the materials above referred to I have abstracted the following narrative of events.

### *Course of the Epidemic.*

The first case of typhoid fever which occurred in connection with the epidemic here in question came under observation on August 7th, 1900. From that date onwards to the end of December, 54 cases of typhoid fever occurred among the patients and the nursing staff.

The chronological distribution of these cases is exhibited in the following tabular statement:

| | |
|---|---|
| August 7th to September 6th ... ... ... ... | 19 cases* |
| September 7th to October 6th ... ... ... ... | 8 cases† |
| October 7th to November 6th ... ... ... ... | 8 cases |
| November 7th to December 6th ... ... ... | 14 cases‡ |
| December 7th to December 24th (half month) ... | 5 cases.§ |

### *Particulars with Regard to the Antityphoid Inoculations Undertaken.*

Soon after the commencement of the epidemic, Dr. Conolly Norman, the superintendent of the asylum, applied to me for a supply of antityphoid vaccine. This having been placed at his disposal, a first batch of 45 patients was inoculated by Dr. Cullinan on September 6th. When these had recovered from the effects of the inoculation, another batch was taken in hand, until on November 30th, after a series of seventeen sittings a total of 511 persons had been inoculated. The inoculations were carried out exclusively upon insane inmates below the age of 55. No member of the nursing staff underwent the operation. The dose of the particular vaccine administered was in each case 0.75 c.cm., this being the dose

* Eight of these cases occurred among the nursing staff.
† One of these cases occurred among the nursing staff.
‡ Three of these cases occurred among the nursing staff.
§ All these cases occurred among the nursing staff.

which had been fixed upon as appropriate in the case of soldiers proceeding to South Africa.

The symptoms produced by the inoculation are described as follows, by Dr. Cullinan, in a paper published in the *Dublin Journal of Medical Science* in July 1901:

The constitutional disturbance following the inoculation did not prove in any of the cases in my experience to be of great severity. In every case almost the temperature rose within a couple of hours, in some few instances reaching 103° and 104° on the day of operation, while 101° and 102° were common heights for it to attain. It usually fluctuated for a couple of days, coming down gradually from the maximum, and being generally normal on the third day. In every case operated on all the temperature records were kept. Except in the cases already specially mentioned, patients were able to be up and about on the fourth day. The principal symptom was headache, from which 85 suffered, some of them very severely; vomiting or retching occurred in 63 cases; loss of appetite and refusal of food in 33; diarrhœa in 2; rather severe prostration in 3; 4 complained of abdominal pain, while stiffness in the back and soreness over the seat of inoculation occurred in 9 and 22 cases respectively. The last symptom of soreness in the flank, where each patient was vaccinated, was not in any case accompanied by local manifestation, beyond a slight redness of the part and some swelling.

In the light of the constitutional symptoms here described and of certain events to which attention is drawn below, I think that a somewhat smaller dose of vaccine might appropriately have been prescribed by me. It must, however, be noted that the circumstances did not admit of two successive inoculations being undertaken, and no estimate could be formed as to how far the patients would at the time of inoculation be exposed to the risk of infection.

*Particulars with regard to the Number of Susceptible Persons Exposed to Infection.*

Dr. Cullinan estimates that after excluding all patients above 55 years of age as insusceptible, the total number of susceptible persons exposed to infection at the date on which the inoculations were begun may be fixed at 655: 541 of these were insane inmates, the balance of 114 being nurses. Of the former, as we have seen, 511 were ultimately inoculated.

*Number of Cases of Typhoid Fever which occurred in the Inoculated and in the Uninoculated respectively after the Commencement of the Inoculations.*

On and after September 6th 29 and 7 cases of typhoid fever respectively occurred in the uninoculated and the inoculated groups. Before considering the question as to what was the relative incidence of cases in the two groups, the circumstances of each of the seven cases which occurred among the inoculated may be briefly considered.

*Case 1.*—The patient was found to be ill on September 6th. "In this case," says Dr. Cullinan, "owing to an oversight the patient's temperature was not previously taken, but was found to be 101° immediately after the operation, remaining high, and at once assuming the characteristic curve of typhoid fever."

In accordance with the history this case may be transferred from the category of cases which developed in inoculated patients to the category of cases which developed in uninoculated patients.

*Case 2.*—The patient in question was inoculated on September 19th, and developed the disease on September 22nd. "This case," says Dr. Cullinan, "was found to have a normal temperature, and was apparently in good health before inoculation. The temperature rose after the operation, but instead of going down in a few days, persistently remained high and assumed enteric features almost at once.....I think it may be concluded that she would have contracted the disease in any case."

This conclusion that the patient had contracted the infection before inoculation would appear to be justified, inasmuch as the interval of two days usually covered by the febrile reaction produced by inoculation would appear to be much less than would be required for the incubation of the disease. None the less I have in the statistical table given below refrained from formally excluding this case from the category of cases occurring in the inoculated. I have contented myself with distinguishing it by the use of italics, brackets, and a note of interrogation, from the other cases included in that category.

*Case 3.*—"The patient in question was inoculated on September 2nd, and on the 24th was quite well apparently, but on the 28th was found to have a temperature of 100°, and a couple of doubtful spots. On the 30th there was a typical crop of spots. The case from that out *was a severe one*.....I would not" (the quotation is still from Dr. Cullinan's paper) "place this case definitely among those suffering from prodromal signs at the time of inoculation, but.....as the spots began to appear six days after the operation, I think we may fairly refrain from blaming the inoculation."

In view of the possibility that the incubation period may run a shorter course in a patient who has in the meantime been subjected to inoculation, it will be well to retain this case in the category of cases contracted subsequent to inoculation.

*Case 4.*—The patient in question, "a girl, who had been inoculated on October 3rd, having left hospital three days after the operation, was attacked *very severely* on October 18th. She was found on this day to have a crop of spots. *This patient died.*"

*Case 5.*—Inoculation was here performed on September 22nd, and the patient, "who had been quite well in the interval," developed typhoid fever eight weeks subsequently, "and was found to have a profuse crop of spots."

Obviously there can be no doubt as to how the latter of these cases is to be classified.

*Case 6.*—Patient was inoculated on November 12th, and "was very ill after the operation, and continued so with a high temperature. On the 20th she had a crop of spots, having had all the appearances of typhoid in the interval."

Dr. Cullinan feels disposed to regard this as a case in which the patient was sickening for the disease at the time of inoculation. This assumption seems to me justified in view of the short period which elapsed between inoculation and the development of the typhoid spots. The fact that the patient was "very ill after the operation" also points in this direction. None the less it will, as in the case of No. 3 considered above, be preferable for the purposes of our statistical comparison to retain it in the category of cases contracted subsequent to inoculation.

*Case 7.*—The patient, "a woman of about 50 years of age, operated upon on November 5th, and getting over the effects in three days, was found on November 17th with a temperature of 101°, and had a *very severe attack* followed by a *relapse from which she nearly died*. I consider," says Dr. Cullinan, "that on this case the serum"—meaning thereby the typhoid vaccine—"acted detrimentally, and probably accentuated the severity of the attack."

Having in a very recent communication[2] discussed the general issue raised by Dr. Cullinan's comment, I may here leave the italics in the above protocols to speak to the attentive reader, and proceed at once to summarise the results of the above analysis. That analysis has shown that of the inoculated persons attacked by the disease, the *first* had certainly developed the fever before inoculation; the *second* had almost certainly contracted the infection before inoculation; and the *third* and *sixth* had also probably contracted it before inoculation. In the case of the *fourth* and *seventh* patients if the infection was, as would seem probable, contracted subsequent to inoculation, it must have been contracted immediately afterwards while the patients were still suffering from the effects of the operation. Thus the *fifth* patient would appear to have been the only one among the seven inoculated patients attacked who contracted the infection after the clinical symptoms due to the operation had passed off.

Let us, however, for the purposes of our statistical comparison, admit that the last 5, or even the last 6, of the 7 inoculated patients who were attacked may have contracted the disease subsequent to inoculation.

*Manner in which a Comparison can be instituted between the Incidence of Cases in the Inoculated and in the Uninoculated.*

Our task will then be to express in the form of a valid comparison the fact that, out of a body of 655, who consisted in part of inoculated and in part of uninoculated persons, 5—or, if we include Case 2 mentioned above, 6—cases of typhoid fever occurred in the inoculated; while 30—or, if we exclude Case 2 just referred to, 29—cases occurred in the uninoculated.

The first point which comes up for consideration in this connection is the question as to whether the 114 uninoculated nurses, who are included in the total of 655 susceptible persons, were exposed to a greater risk of infection than the insane inmates. If they were not exposed to greater risk they may obviously be included among the "controls." In connection with the risk incurred by the nursing staff Dr. Cullinan writes that "none of the nurses who contracted the disease contracted it by attendance on inmates suffering from enteric. All the nurses attacked were ordinary divisional nurses, who spent their days in the same room as the inmates, and for the most part slept off the dormitories, being in all respects as liable to infection as the inmates, except in the respect that

sane persons have, from the point of view of the risks undergone by them, in my opinion a considerable advantage over the insane."

It may, therefore, be taken that the nurses were at any rate not exposed to greater risks of infection than the patients, and hence the figures relating to these, may equally with the figures relating to the uninoculated insane, be utilised for the purpose of instituting a comparison between the inoculated and the uninoculated.

The complete data which have been furnished to me by Dr. Cullinan, admit of two such comparisons being instituted. The first of these comparisons is a comparison between the number of cases occurring subsequent to the date of the completion of the inoculations, in 504 inoculated persons[3] (insane inmates) and 114 uninoculated persons[1] (nurses). This comparison is as follows:

*Number of Cases occurring in the Uninoculated and Inoculated respectively in the Interval between the Completion of the Inoculations on November 30th and the Development of the last Case of Enteric Fever on December 24th.*

| | Number of Persons under Observation. | Number of Cases. | Number of Deaths. |
|---|---|---|---|
| Uninoculated ... | 114 | 5 | 0 |
| Inoculated ... | 504 | 0 | — |

The comparison in question brings out in a striking manner the comparative immunity of the inoculated: it is, however, robbed of a great deal of its interest by the fact that the period of observation which is covered by the comparison is here a very short one.

A comparison based on the average daily strength of the inoculated and the uninoculated will, therefore, be of greater interest, covering as it does the whole period of three and a-half months from the commencement of the inoculations to the termination of the epidemic.

For the purposes of such a comparison Dr. Cullinan has kindly furnished me with (*a*) the number of patients operated upon by him at each sitting, and the dates of these inoculations; (*b*) a list of nurses and patients attacked with typhoid fever: and (*c*) a list of patients who died from other diseases, or who were admitted or discharged during the period of observation.

The latter document may be left out of account, as it shows that the number of individuals of a susceptible age who were admitted or discharged, or who died from other diseases during the period of observation was so small as to be incapable of exerting any appreciable effect upon the general result.

Having simplified our task in this way, we arrive at the number of the inoculated and uninoculated on each successive day by taking into account (*a*) the alterations in the numbers of the inoculated and uninoculated brought about by the successive inoculations; and (*b*) the alterations in these numbers brought about by the development of typhoid fever in members of each group.

Taking the numbers thus arrived at, we now multiply in each case by the number of days during which that particular strength was maintained. Finally we add together the figures relating to each group and divide in each case by the number of days included within the whole period of observation. In this manner we arrive at a daily average strength of 339 for the inoculated, and of 298 for the uninoculated.

We now institute our comparison by dividing the number of typhoid cases which occurred in the inoculated and uninoculated groups respectively into the average strength of each group.

Before considering the statistical result thus arrived at, it will be well to realise why we are here justified in regarding a result obtained in the manner which has just been indicated as a result which correctly represents the relative incidence of typhoid fever in the inoculated and uninoculated groups.

We shall realise this if we consider what is the assumption to which we are committed by the method of calculation here adopted. That assumption is that the cases of typhoid fever among the inoculated would not have been more numerous if the number of inoculated had stood throughout at 339, instead of standing, as it in reality did, at a lower figure on all dates previous to November 5th, and at a higher figure on all dates subsequent to this particular day. Now this assumption is manifestly justified if the risk of contracting typhoid fever was as great in the period between November 5th and December 24th, when the inoculated numbered more than 339, as in the period between September 6th and November 5th, when the inoculated numbered less than 339.

Dr. Cullinan's list of cases and dates of attack shows that this condition was satisfied and more than satisfied, 16 cases of typhoid fever having occurred in the smaller number of uninoculated exposed to infection in the period subsequent to November 5th, as against 14 cases in the larger number of uninoculated exposed in the earlier period.

In conformity with this it may be confidently assumed that the comparison based on the average daily strength is a comparison which does not here exaggerate in favour of the inoculation procedure.

The comparison in question is as follows:

*Comparative Incidence of Typhoid Fever in Inoculated and Uninoculated calculated upon the Average Strength of the respective Groups during the period intervening between the Commencement of the Inoculations and the Termination of the Epidemic.*

| | Average Strength | No. of Cases. | No. of Deaths. | Percentage of Cases. | Percentage of Deaths. |
|---|---|---|---|---|---|
| Uninoculated ... | 208 | 30 (= 1[4]) | 4 | 10.1 | 1.3 |
| Inoculated ... | 339 | 5 (+ 1[2]) | 1 | 1.5 | 0.3 |

It may be noted, in conclusion, that the result is in conformity with that of all the statistical returns of antityphoid inoculation which have reached me.

NOTES AND REFERENCES.

[1] The reference is to Cases 1, 2 and 6, reported below. [2] *Lancet*, September 14th, 1901. [3] This number is arrived at by subtracting the 7 inoculated patients who developed the disease from the total of 511 who were inoculated. [4] The number of nurses was kept up to 114 by replacing those attacked by the fever.

## PRIMARY CHANCRE OF THE TONSIL.

By W. H. KELSON, M.D., F.R.C.S.,

Assistant Surgeon, London Throat Hospital.

THE case of primary sore of the tonsil, reported by Dr. Abercrombie in the BRITISH MEDICAL JOURNAL of September 21st, p. 809, interested me very much, as I met with a similar instance two years ago—that is to say, there was a history that after tonsillotomy one side never got properly well, and enlarged glands appeared at the angle of the jaw, causing the patient to seek other advice, and in due course he came out in the full bloom of secondary syphilis. Careful searching of other parts of the body by me failed to reveal the presence of a chancre on the genitals or elsewhere.

I suspect that infection occurs in the following ways: Either hereditary syphilis may be overlooked in a child, or if a young adult with largish tonsils and in the very early stage of secondary syphilis seeks advice for what is really an incipient specific throat, two things are very likely to happen, namely, tonsillotomy to be performed, and the syphilitic character of the disease not recognised. Consequently, special notice may not be given to cleansing the tonsillotome, which instrument, with its deep groove, is peculiarly adapted for retaining and inoculating virus. The moral is, of course, as has been pointed out, to make it an invariable rule to see personally that instruments are efficiently sterilised immediately before use. The question arises whether some of the mysterious red rashes which are recorded as appearing after operation on tonsils and adenoids may not be due to other poisons introduced in this way.

SIXTY-NINTH ANNUAL MEETING

OF THE

# British Medical Association.

*Held at Cheltenham, July 30th, 31st, August 1st, and 2nd, 1901.*

PROCEEDINGS OF SECTIONS.

## SECTION OF PSYCHOLOGICAL MEDICINE.

J. Beveridge Spence, M.D., President.

### INTRODUCTORY REMARKS BY THE PRESIDENT ON ASYLUM ADMINISTRATION AND NURSING.

Is is a high honour at any time to be asked to preside over a Section at one of the annual meetings of this great British Medical Association. It is a peculiarly distinguishing privilege to occupy that position in the opening year of a new century, and to me personally the pleasure is immeasurably enhanced by the fact that the invitation to preside here to-day and during this meeting has been given upon the initiative of members of the speciality with which I have been closely associated for 29 years. As your President for the time being I desire to extend to each one present here to-day, whether a member of the Association or an honoured visitor, the most hearty welcome, and to express an earnest hope that when the meeting closes on Friday afternoon I may be able to congratulate you and myself upon much good work happily and harmoniously accomplished.

With that attention to detail in the arrangement of its affairs which has contributed so largely to the success of the British Medical Association, instructions for their guidance were issued some months ago to those responsible for the management of Sections, and in the paragraph referring to the duties of the President he is requested "not to deliver a formal address in opening the Section, as complaints have been made of want of time for sectional work." Well, gentlemen, whatever other criticism you may have to pass upon my conduct of these proceedings, you certainly will not be able to condemn me for imposing a too lengthy inaugural address upon you, as I am quite in harmony with the Association's instructions that these "introductory remarks should not occupy more than fifteen minutes."

It is manifest that no attempt could be successful in such a limited period of time to discourse upon a special subject, or to make any very lengthy remarks of a retrospective nature upon the progress made during the past century in the science and practice of the medical art in connection with the special branch of professional work in which most of those present here to-day are engaged. Dr. Mercier, in his well-known crisp and incisive manner, has in the last number of the British Medical Journal for 1900 given a brief, instructive, and interesting account of the position of affairs in the lunacy world at the commencement of the century, and it would well repay the labour involved and the time occupied if one had the opportunity to enumerate in detail the various discoveries, improvements, and legal enactments which have so advantageously changed the treatment of the mentally afflicted since that period. Not only, however, were the insane subject to very terrible and inhuman treatment at the commencement of last century, but in many other directions also the condition of the people was practically in a state as unsatisfactory. Picture to yourselves the prisons of those days—the dens to which debtors were relegated, the condition of the poor in their own homes, the monstrosities practised in the name of justice, when men were sentenced to death, and not only sentenced but in some instances actually hanged, for offences which in these happier days would be considered as severely punished by a few months, or at the most years, imprisonment in establishments which, when contrasted with the prisons of a century ago, may fairly be said to have made as great an advance as that which has taken place in our asylums or other public hospitals.

For the marvellous progress that has marked the past century and has rendered the Victorian era a golden one we should not rest content with being merely grateful, but should endeavour as far as lies in our power to maintain and promote all means which tend in the direction of useful progress, and so continue the great work which has made the names of Tuke, Conolly, the Browns (father and son), Bucknill, Maudsley, Clouston, and many others honoured and glorious in our speciality. To some of these have been given gifts the exercise of which has enriched the pages of our literature with the result of their researches; to others the more humble but perhaps hardly less useful talents for organisation, for planning suitable accommodation for the various classes of the mentally ailing, and the capacity for paying attention to the numerous small details which in great measure go to make up the sum of human life, and which tend materially to promote the comfort and happiness of the individual and benefit the insane mind by ministering to the bodily wants of those who are so afflicted.

I heard it said not long ago that there was a feeling abroad in favour of lay management of our large asylums. Well, to those of us who have lived long enough this is nothing new. Ideas occur in cycles, and what to the experienced is but the repetition of an oft-exploded theory comes to those who are new to the subject, and who have not given it much consideration, as something which, to put it at its lowest, merits at least a trial. It does appear to me that in few other positions is the combination of the medical man with the good organiser so necessary as at the head of an establishment in which the treatment of the inmates is not purely medical nor purely reformatory nor merely curative, but where many methods must be employed if ultimate success in dealing with the variety of types which come under our care is to be looked for. The day is past for the expression of the cheap sneer involved in the story of the hypothetical superintendent who when asked to see a patient excused himself on the ground that he had just been urgently summoned to the farm where his favourite sow was littering and must be visited at once. If one desired to do so it would be possible to tell an equally good, and in all likelihood an equally untrue, story which might place the scientific side of our work in as false a light, but it is not my wish to decry, even in a joking fashion, good work of any kind, my only desire being to emphasise the point that the argument which has been brought forward in favour of lay government, and which is expressed by the statement that a doctor should stick to his work and leave the management to those who are supposed, often erroneously, to know more about it, is an incorrect one, as the main objects of an asylum—namely, the cure, care, and comfort of the patients, would be thereby frustrated, for all these can only be successfully carried out under the supervision of a man who, to the groundwork of medical training has added the experience which he, being presumably a cultured individual, is at least as capable of acquiring as the man who has merely served in an office or behind a shop counter. It is in this connection that I so regret the establishment of the huge asylums to which unhappily use is accustoming us. In the medium-sized asylum there is just that amount of work which any man who is worthy of his position should be able to supervise with due attention to the various departments into which the establishment must necessarily be divided, and where the one governing mind can so utilise the means of treatment placed at his disposal that whether the individual patient—known to the chief by name, by disposition, in his family relationships, in his special characteristics, and in his necessities—requires medical or moral treatment, the care of the sick room, or the exercise of the garden or farm, the quiet of the cosy ward, or the stimulating effect of the workshop, each can be brought into play without the risk of producing that friction which practical experience has shown to be not infrequently present when more than one controlling influence is in operation. As a question of expense, I have yet to learn that the medium-sized asylum is more costly in its management than the large establishments which, while they excite the wonder of the inexperienced, produce only feelings of regret in the minds of those who

have to govern them. Nor have I had it proved to me that better results have been produced either in the treatment of the insane individual himself with regard to the promotion of his recovery, the increase of his comfort when in fair bodily health, or his treatment when attacked by illness, physical or mental.

The feeling of consternation that is abroad in connection with the necessity for still further provision for the insane will have to be dealt with, and one cannot resist the conviction that the time has come when some change in the classification of our patients might well be attempted. There is ample scope I feel sure for hospitals for the insane to which only paying patients at low rates should be admitted, and there is a large class of demented lunatics and unteachable imbeciles in asylums for whom plain housing and plain dieting might well answer. There are also epileptics and imbeciles in workhouses who should no longer, or only for the short time that is required to provide other abodes for them, be detained in places which, on the showing of many speakers at a recent Poor-law conference, are quite unsuited for the care and treatment of such cases. I know full well that there is a strong feeling against the herding, as it is called, of a number of imbeciles and demented people together. I have heard not so long ago a very forcibly-expressed opinion that it would be an improper thing to remove the demented from our asylums, as the prospect of recovery should never be lost sight of even in the most apparently hopeless cases, but with all respect for the opinion of such a distinguished member of our speciality as Sir James Crichton-Browne, I cannot think that for the sake of the very occasional case of recovery to which he referred in his admirable address to the Asylum Workers Association, we should be deterred from providing good and proper but comparatively inexpensive accommodation for the class of patients to which I allude. It is not my intention for one moment to suggest that the chronic dement in the counties should not receive the same amount of care that is given to the corresponding class for whom the Metropolitan Asylums Board is responsible. What I urge is that some such accommodation and treatment should be provided in the counties as are given in London, thus relieving the acute asylums and enabling them to carry out the work for which they should be, in my opinion, reserved. There is the difficulty for the small counties that an institution common to several would probably be required, owing to the few cases each of these counties would have to provide for. It has been said also that even the individual lowest in the scale of mental degradation can appreciate the bright and comfortable surroundings of the average county asylum. But when all is urged that can be brought forward to support this side of the question, I shall still hold the opinion that while no expense should be spared to provide the necessary appliances and the most favourable environment for the curable, yet in a distinctly appreciable proportion of the incurably insane and the mentally deficient, a kindly, judicious, and truly philanthropic system of treatment might be adopted without loss of benefit to the class in question, and at a much reduced cost to the long-suffering ratepayer.

As to the form in which accommodation should be provided for those suffering from mental disorders of a curable nature, I am delighted to think that the trend of educated opinion in this country is in favour of segregation, and we are all looking forward with interest to the result of the experiment which has been taken in hand by the East Sussex County Council, and by the authorities whose duty it is to provide accommodation for the insane poor of Edinburgh and Aberdeen.

The opening of an experimental psychological department in connection with the well-known pathological laboratory at Claybury is one more evidence of the interest taken in the work of our speciality by that progressive body, the London County Council, and the establishment of central laboratories in connection with our county asylums should open out a wide field for investigators who would be able to devote their entire time and energy to the study of the origin of the various mental disorders met with in practice; so that, while a glance backward reveals how much has already been done in the direction of clearing away some of the doubts which have been from time to time suggested as to the curability of insanity, we may look forward with hope to the century upon which we have so recently entered as a period during which, to put one's anticipations at the very lowest, much may be effected in the direction of prevention, even if the cure of sufferers from chronic mental disorders must remain—as in the case of many who are afflicted with bodily diseases—subjects for that humane care and attention which is the daily, trying, but noble work of very many of those whom I have now the honour to address.

And now, gentlemen, will you bear with me for a moment before I close this brief address while I say one word upon a subject which is very near to my heart, and which has occupied much of my spare time for several years past. I refer to the status and training of our nurses and attendants. I feel strongly that, no matter how great may be the advances made in other directions, comparatively little advantage will accrue to those suffering from mental maladies if this important subject be neglected. I am not concerned to advocate any special form of training. If one man prefers his own methods while another is content to adopt the system which the Medico-Psychological Association has introduced with no little success, provided the education of the individual attendant or nurse is thoroughly carried out, the result which I would aim at is the same. No amount of ability on the part of the leaders will suffice if the rank and file do not know how to carry out their instructions in an intelligent and efficient manner. In order that this may be the case systematic training is absolutely essential, and, while one is grateful for the progress already made, and for the large number of reliable and experienced men and women we have now on the nursing staff of our asylums, there is still much to be done before finality in this direction will have been arrived at.

Those of us who are in positions to advocate measur which would tend to improve the position of the membe of the nursing staff should lose no favourable opportunit of calling attention to the advantage from every point of view of treating our nurses and attendants in a generous manner: it may be by an increase of their pay or emoluments, by a definite assurance that they will not be turned adrift at the close of a reasonable period of faithful service without a moderate but sufficient provision for the suppo of their declining years, by a shortening of their admi tedly long hours of duty, and perhaps by a more prolonged time of rest than they now enjoy from the harassing strai which direct contact with the insane for lengthy periods inevitably produces.

I do not suggest that the asylum employee should be over-educated, nor do I suggest that he should receive preferential treatment over his fellow-workers in allied occupations; but I earnestly desire that no pains should be spared, no means left untried to make his position a satisfactory one to himself and to those who are interested in his welfare, so that when all those who are in daily close contact with the insane, and upon whom we as physicians have to rely for the faithful and efficient carrying out of our orders, are brought to regard themselves, and are treated as fellow-labourers with us in a great and beneficent work, and to look upon the patients entrusted to them as special objects of their skilled care and compassion, we shall have attained a result which must go far toward making nursing in asylums less arduous, more hopeful, and a congenial and attractive career for many intelligent and se respecting men and women.

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## A DISCUSSION ON
## THE RÔLE OF TOXIC ACTION IN THE PATHOGENESIS OF INSANITY.

I.—W. Ford Robertson, M.D.,
Pathologist to the Scottish Asylums.

The question of the extent to which insanity is dependent upon toxic action, which has been selected for discussion in this Section to-day, is one that has been steadily growing in importance during recent years. In the opinion of very many authorities it is at present, indeed, the most important of all the problems in the pathology of insanity. If justification of this statement seems to be required it may easily be

found by reference to recent writings. Thus D'Abundo and Agostini[1] have maintained that in the pathogenesis of nervous diseases in general, infections and intoxications are the most frequent, conspicuous, and active elements, both during intrauterine and extrauterine life; Dr. John Macpherson[2] considers that "the toxic basis of all forms of insanity is a presumption for which there is fairly good foundation, but no direct proof." Dr. Mercier[3] has recently remarked that "toxæmia is the only agent which we certainly know will produce insanity, and it is not at all unlikely that eventually we shall find toxæmia at the bottom of every form of insanity."

In opening a discussion upon this extremely important, vast, intricate, and at the same time most thorny question, I feel very keenly the great difficulty of the task before me, and I could almost wish that it had been undertaken by someone better equipped for it. There are, it seems to me, two entirely different courses I might pursue. On the one hand I might endeavour to present an outline of the various views that have lately been expressed upon the general question by

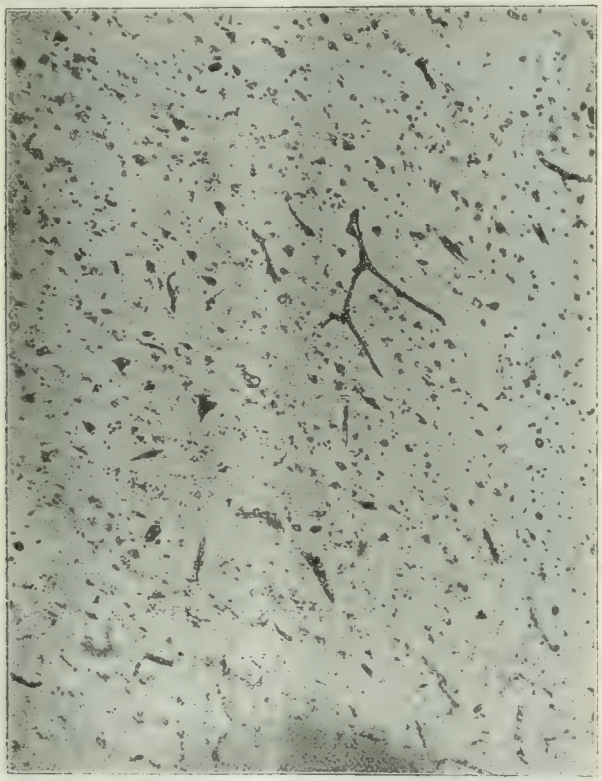


Fig. 1. Normal capillaries of human cerebral cortex. Platinum method. (× about 100.)

the different authorities, and enumerate the more important individual observations that tend to establish a causal relationship of toxic action to certain forms of insanity. On the other hand, I might take it for granted that those who will follow in this discussion are already fully acquainted with all that is of material importance in the literature of the subject, and confine myself entirely to a statement of my own views, based chiefly upon the recorded observations. Contrary to what was my original intention, I have chosen the latter alternative. I propose to set before you, as briefly as is consistent with some measure of clearness, the general conclusions which, in my opinion, may be drawn from the facts that have been ascertained. Whilst I shall endeavour as far as possible to avoid raising discussion upon the subjects of heredity, degeneration, classification, and the "psychical causes" of insanity, I must touch upon them, for it is obvious that the part played by toxic action can only be clearly understood when its relation to other pathogenetic factors is accurately defined. In thus endeavouring to assign to toxic action its exact place, I shall have to cast the subject of the etiology and pathogenesis of insanity in what may perhaps appear to be a somewhat new mould, but it aims at being simply the mould of general pathology.

[1] *Annali di Nevrologia*, 1899, pp. 183 and 350.
[2] *Mental Affections*, 1899, p
[3] *Journ. Ment. Sci.*, 1901, p. 23

### *Factors upon which Normal and Morbid Mental Action Depend.*

Whatever else mind may be, it is in the first place a product of the functional action of certain of the cerebral neurons. For the normal manifestation of this functional action three factors are essential—namely: (1) Integrity of the anatomical elements which form the physical basis of mind (cortical neurons), (2) the maintenance of suitable nutritional conditions for these neurons, and (3) those sensory impulses which, commencing to impress the anatomical elements at an early period of life, gradually endow them with their special functional powers, and of which the almost continual stimulus is required

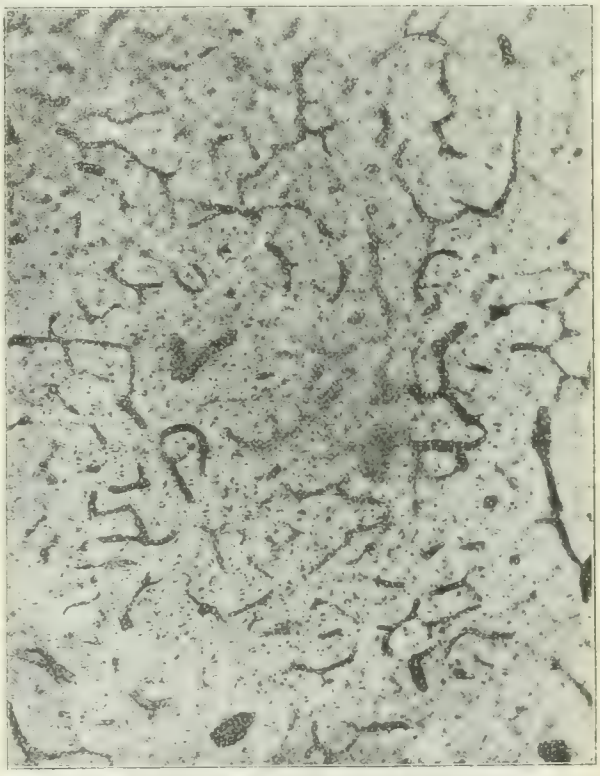


Fig. 2.—Capillaries of cerebral cortex from a case of general paralysis. Platinum method. (× about 100.)

in order to call these functional powers into action. The points I wish to bring out here will perhaps be better understood from two quotations. Leibnitz has said "There can be nothing in the intellect which has not reached it through the senses;" and Foster and Sherrington, in discussing the physiological processes taking place in the cortex, remark, "What would happen in the cortex if, its ordinary nutritive supply remaining as before, it were cut adrift from afferent impulses of all kinds? We can hardly doubt but that volitional and other psychical processes would soon come to a standstill and consciousness vanish."

These three factors may be referred to briefly as normal cortical neurons, suitable nutritional conditions, and sensory impulses. Each of them being essential for the manifestation of normal mental action, it follows that morbid mental action may primarily depend upon a fault on the part of any one of them.

### *Importance of a Fault in the Cortical Neurons.*

Let us look, first, at the importance of a fault in the cor-

tical neurons. If the embryo is normal, and if throughout intrauterine and extrauterine development, maturity, and involution, the individual is provided with a suitable environment—that is to say, one which is favourable to the continuance of life to a natural term—a physiological existence will be maintained, and death will occur, not from disease, but as the result of the physiological process of involution. Given such initial conditions, any morbid state which arises in the organism must primarily depend upon some unsuitable condition of the environment. The same principle is applicable to the cortical neurons. Given originally normal cortical neurons, any functional disturbance that they may manifest must depend upon some pathogenetic force applied from without, and cannot arise from within the cells. Now there are some persons who exhibit mental defects or disturbances which there is good reason to believe can only be attributed to some inherent defect in the original constitution of the brain. As yet we cannot precisely define the limits of this group, but it includes a small proportion of cases of idiocy and imbecility, and those cases, variously classified, in which

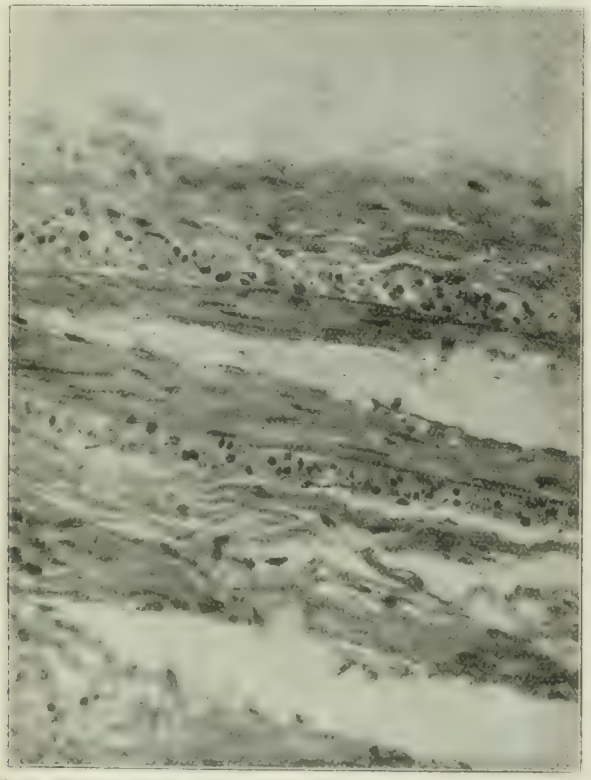


Fig. 3.—Longitudinal section of hepatic arteriole in a case of general paralysis (man, aged 41). Shows thickening of the intima. This condition occurs throughout the arterial system in general paralysis, although only locally developed to a well-marked degree. Hæmatoxylin and eosine. (× about 300.)

insanity manifests itself at a later period of life, purely as the result of individual development. Upon this fact—that certain cases of insanity depend primarily upon an inherent defect of cerebral organisation, whilst others arise from causes external to the neuron—must be based the first great division in any satisfactory classification of insanity from the pathological standpoint. It is to be carefully noted that both classes are subject to the action of other factors in the pathogenesis of insanity. The slighter degrees of such inherent defect of cerebral organisation, which do not in themselves produce insanity, favour the action of some at least of these factors.

The integrity of the anatomical elements may also be affected primarily by the direct action of purely physical agencies, such as heat, cold, electricity, and mechanical force. Certain cases of traumatic insanity probably constitute the only important example of mental disease determined by a purely physical cause. The indirect action of such agencies—as, for example, in general chilling of the body—is of a totally different nature, affecting the nervous system essentially by toxæmia. Lastly, the integrity of the anatomical elements may be affected secondarily by faults on the part of the other factors essential for normal mental activity—that is to say, by unsuitable nutritional conditions and as the result of certain sensory impulses.

*Part played by Sensory Impulses.*

Omitting for the moment the consideration of the nutritional factor, let us look next at the importance to be attached to the effect of sensory impulses.

I would notice in the first place that intense pain has been known to determine an attack of insanity, and that there have been observed cases of mental disease which seemed to depend upon deprivation of the use of one or more of the special senses. That severe disorder of the functional action of the cortical neurons may be determined by such conditions is quite in accord with known laws, but it may, I think, be



Fig. 4.—Normal portal tract. (× about 100.)

safely assumed that in cases of this kind there have always been concurrent etiological factors without which the disorder would not have resulted. Such cases as these, however, are merely rare and comparatively simple examples of the part played by sensory impulses in starting the series of disturbances that manifest themselves in insanity. This part is really a large and important one; its consideration involves the discussion of the so-called psychical and moral causes of insanity. Now, if the pathology of insanity is ever to be brought into harmony with general pathology, the pathologist must be allowed to regard mental phenomena from his own standpoint, which is different from that of the psychologist. To the pathologist they are merely manifestations of the functional activity of certain tissues in response to certain stimuli; they are effects and not causes, and therefore they cannot rank as etiological factors. They depend, just like the functional activities of any other organ, such as the stomach and heart, upon a physical basis, a nutritional state and certain stimuli.

The organ of mind differs from other organs of the body in

respect of the much larger part played by afferent impulses in gradually building up its special functional powers, and in stimulating these powers into activity. The exact functional reaction that a particular sensory stimulus will arouse depends chiefly upon the special characters that have been impressed upon the organ by experience and training. Thus the same series of impressions might be simultaneously received through the auditory nerves of two individuals, and cause profound grief in the one and intense joy in the other; or certain afferent impulses conveyed by the optic nerves, say in reading an announcement in a newspaper, may stir no emotion in one individual, while in another, whom it informs that his whole fortune is virtually lost, it instantly produces a condition of physiological depression, which may develop into melancholia. The moment we pass from the purely sensory impulse to the functional reaction it produces in the brain, we are no longer dealing with a possible cause of disorder of cerebral metabolism, but with an effect which is the product of the combined action of the sensory stimulus, the highly elaborated physical basis and the nutritional state. It will doubtless be objected to this way of looking at the



Fig. 5.—Portal tract in a case of general paralysis. Shows irritative changes which are evidently due to toxins in the portal blood. (× about 100.)

matter that man is not merely a reflex machine, but has a will and intellectual constructive power. I do not think that the position is rendered untenable thereby, but time does not permit of my pursuing the subject further here. My contention simply is that from the standpoint of general pathology all normal and morbid mental phenomena must be regarded merely as the expression of the functional reaction of the organ concerned—that is to say, as effects and not causes.

*Disorders of Nerve-Cell Nutrition.*

I come now to the consideration of the remaining factor, namely, disorder of the nutrition of those neurons which form the physical basis of mind. I would observe here how absolutely dependent the neurons are upon a continuous supply of nutritive materials in order to enable them to exhibit their special functional activities, and how extremely sensitive they are to the action of many chemical agents. These facts are exemplified in the rapidity with which unconsciousness follows failure of the heart's action, and in the effects of the inhalation of chloroform, ether, and nitrous oxide, and of the administration of alcohol, morphine, cocaine, etc.

*Deficiency of Nutritive Materials.*

There are at least two respects in which the chemical substances brought by the blood vessels to the cortical neurons may be unsuitable for their healthy nutrition. There may be a deficiency of certain constituents which are needed for their normal metabolism. Profound anæmia, following profuse hæmorrhage, which occasionally gives rise to mental disorder, may be placed in this category. The thyroid secretion probably contains substances essential for the nutrition of the nerve cells, although the morbid nervous phenomena that arise in the absence of this secretion are certainly to be attributed largely to secondary toxæmia. There are strong grounds for believing that this condition of deficiency of nutritive materials for the nervous elements is not of very much practical importance. Physiologists state that during starvation the nervous system and the heart live at the expense of the other organs. Lugaro and Chiozzi in their experimental observations upon the effects of inanition upon the nerve cells found that these elements were unchanged until shortly before death, when alterations, evidently of

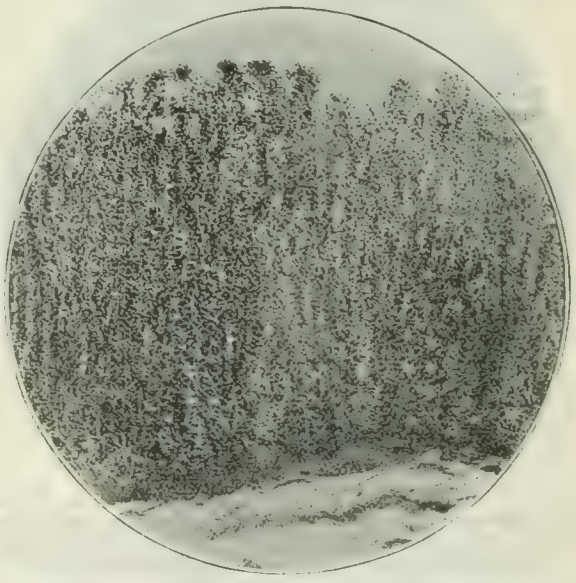


Fig. 6.—Mucous membrane of normal human stomach. (× 55.)

toxic origin, began to develop. Qualitative anæmia, which very commonly precedes the development of insanity, is always associated with toxæmia, which is probably by far the more important factor in the causation of the mental disorder. Interference with the nutritive supply in consequence of vascular disease is not to be included in this category, because in practically every instance the vascular disease is of toxæmic origin, and the resulting disturbances in the nervous elements are therefore really dependent upon toxæmia.

*Toxic Action.*

The other possible respect in which the chemical substances brought by the blood vessels to the cortical nerve cells may be unsuitable for their healthy nutrition, is in the presence of substances which are taken up by the cell and then disorder its metabolism. Such a substance is a toxin for that cell. I propose to use the term only in this wide sense, because any narrower significance that is sometimes attached to it leads at once to distinctions that are false and that only produce confusion. It is to be borne in mind, however, that cells have often a remarkable power of adjustment within certain limits to altered conditions of nutrition, so that a substance which may at first cause some slight

disorder of metabolism may afterwards cease to do so, because the cell has acquired the power of accommodating itself to the altered state of nutrition, and often, it may be, of benefiting by it. The manner in which our nerve cells commonly make their acquaintance with nicotine is, I think, an example in point.

To what extent is such toxic action a cause of insanity? This is the question we have specially before us. I simply state my own conclusions; time does not permit of my giving the evidence upon which they are based or of entering into details upon a subject so extremely wide.

We may define a primary etiological factor in the pathogenesis of insanity as the one first established, irrespective of whether it actually produces disorder of the nerve-cell metabolism or not, and all others as secondary etiological factors. Either a primary or a secondary etiological factor may be the one which determines the onset of the disturbance of nerve-cell metabolism, which expresses itself in the phenomena of the disease. Among the primary non-toxic etiological factors in the pathogenesis of insanity I would include: (1) Inherent defects of cerebral organisation which are inconsistent with the normal development of the mental faculties; (2) physical causes which directly injure the cortical neurons, more

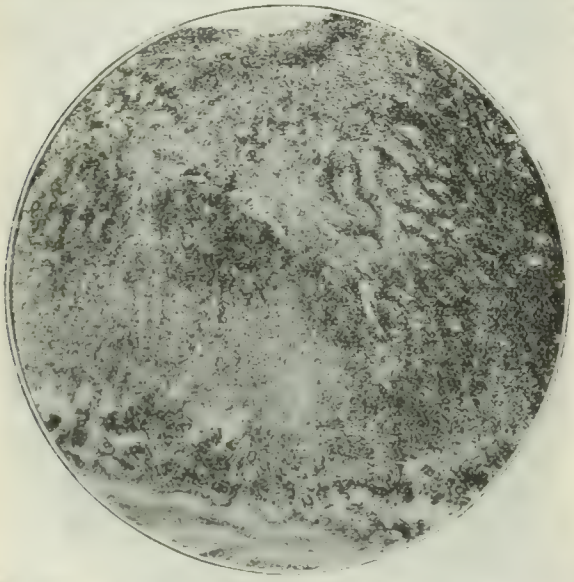


Fig. 7.—Mucous membrane of stomach from a case of general paralysis. (× 35.) Shows severe catarrhal changes. Note especially the thick layer of mucus on surface (loaded with cellular elements), and zone of acute reactive change immediately subjacent.

especially traumatism: (3) deficiency of the materials necessary for nerve-cell metabolism; and (4) sensory impulses, in some instances.

I maintain that in all other cases, and they form by far the larger proportion, the primary etiological factor in the pathogenesis of insanity is toxic action. At the same time in some of these primarily toxic cases the determining factor is a series of sensory impulses. This is a point that is somewhat difficult to make clear. I shall endeavour to explain my meaning by referring again to the supposed case of the man who developed melancholia after reading an announcement which informed him that his fortune was virtually lost. The determining factor was here a series of sensory impulses. The physiological reaction that these produced in the brain depended upon a long series of antecedent stimuli, which built up certain reactive qualities of the organ. All of these stimuli must therefore be regarded as together composing the determining factor, although it was only in consequence of the recent sensory impulses that the antecedent ones attained a pathogenetic value. Now, in the instance cited, the series of sensory impulses which determined the occurrence of melancholia may have been the primary as well as the determining etiological factor. They would constitute the primary factor if there was no previously established general toxic condition of such a nature as to threaten the nerve cells. In such circumstances the transition from physiological depression to pathological depression, or melancholia, must have depended either upon the existence of some inherent defect of cerebral organisation owing to which there was a breakdown under the stress of a stimulus which caused an excessive and prolonged functional reaction, or upon a local and general condition of auto-intoxication produced by the excessive functional reaction. There are, however, good grounds for believing that in many of those cases in which depression or other physiological emotion passes into distinct mental disease, there has been already established a toxic condition which, though not in itself sufficient to disorder cerebral metabolism, became capable of doing so under the conditions of excessive metabolism caused by the sensory stimulus. These considerations apply only to the important initial stages. In all cases in which insanity is determined by sensory impulses, whatever may have been the original conditions, a toxic element is quickly introduced, and becomes chiefly responsible for the continuance of the cerebral disturbance.

*Nature of Predisposition to Insanity.*

It will probably be objected that a large proportion of cases of

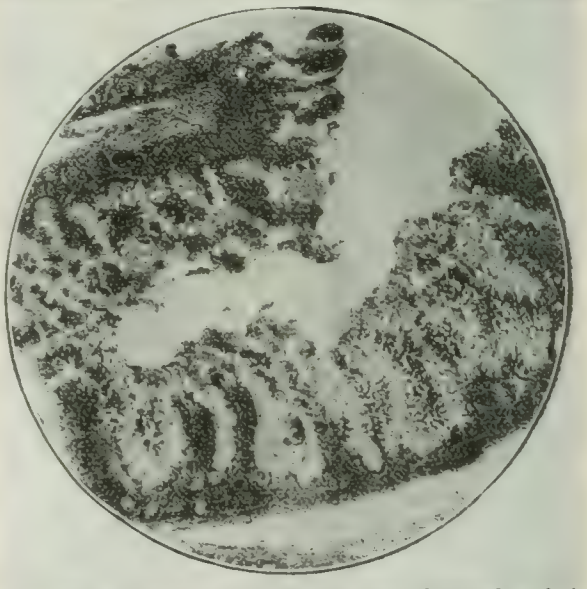


Fig. 8.—Mucous membrane of ileum from a case of general paralysis. (× 50.) Shows severe catarrhal changes. Note especially the excessive secretion of mucus by cells of glands and small cell infiltration of subepithelial tissues.

acquired insanity are clearly dependent upon inherent weaknesses of cerebral organisation, and that in this way of looking at the pathogenesis of insanity these would have to be regarded as primary etiological factors of a non-toxic nature. I would point out that as a basis of this condition of "inherent weakness" there are at least three entirely different conditions which require to be clearly distinguished from each other. In a certain proportion of instances it is really dependent upon structural modifications caused by toxic action during intrauterine or early extrauterine life, and thus it has primarily a toxic cause, and is not an inherent, but an acquired, condition. The others include cases in which there is an imperfection of cerebral organisation purely the product of ontogenetic evolution, and an entirely different class in which the manifestation of weakness depends not upon any defective development, but simply upon characters of nerve-cell reactivity which, like other somatic characters, tend to be handed on from generation to generation. The first of these two conditions is comparable to congenital heart disease, such as patent foramen ovale; the second is of the same nature as those reactive qualities of the tissues composing the coronary arteries, which may result in their undergoing morbid changes in one individual and not in another under the same toxic conditions. By far the larger

proportion of inherent predisposition to insanity depends not upon any condition that can rightly be termed degenerative, but simply upon one extreme of those somewhat wide, though limited, differences which individuals exhibit in the reactive qualities of their nerve cells to various forms of toxic action. Neither such inherent defects of cerebral organisation nor these extremes of nerve-cell reactivity should be allowed to rank as etiological factors in the pathogenesis of insanity; they can never be determining causes of acquired insanity; they are simply comprised in the innumerable conditions which make up the individual reactive characteristics. They are characters impressed upon the individual by his heredity, and could only be regarded as etiological factors if pathology traced morbid processes back into the ancestral germ plasm, which happily it does not yet undertake to do.

This difference of individual reactivity, which is exhibited not only by the nerve cells but by practically every tissue in the body, is of the utmost importance in pathology. There are not only differences of individual reactivity to the same toxins, but also differences of local reactivity in the same person. The former is manifested, for example, in the different effects of a given quantity of alcohol upon a number of individuals, and in the idiosyncrasies often exhibited to certain drugs and foods. Differences of local reactivity in the same person are manifested in the degeneration of some cortical nerve cells and the successful resistance of others under the action of a given toxin, and in the varied power of resistance shown by different parts of the arterial system.

*Direct and Indirect Action of Toxins upon Nerve Cells.*

The action of toxins upon the nerve cells may be direct or indirect. Their direct action is seen in various forms of experimental poisoning, such as that by alcohol, arsenic, and lead salts, and in the human subject in all forms of acute insanity, including the maniacal attacks of general paralytics and epileptics. Their indirect action is manifested chiefly through disease of the nutrient vessels, the alteration in the nerve cells depending mainly upon interference with their nutritive supplies. It occurs especially in senile and paralytic insanity and in general paralysis. I have elsewhere endeavoured to show that the vessels of the central nervous system have a peculiar structure which renders them specially liable to be injured by certain toxins.

The various toxic conditions which tend to affect the nerve cells may result from (1) exogenous toxic agents, (2) infections, and (3) auto-intoxication and auto-infection.

*Exogenous Toxic Agents.*

The exogenous toxic agents that may cause insanity are exemplified in alcohol, opium, arsenic, lead salts, and a poison contained in bad maize (which causes pellagra). Probably all of these may primarily affect the nutrition of the nerve cells, acting directly upon them, but the secondary toxæmias to which they tend to give rise are of very great importance. Thus, in the case of alcohol, important as its primary action upon the nerve cells clearly is, the secondary toxæmias to which it gives origin are still more so. Its long-continued excessive use tends especially to damage the epithelium of the gastro-intestinal tract and to impair the local and general defensive arrangements against bacteria, and thus favours the occurrence of chronic bacterial intoxications from the gastro-intestinal canal. These secondary toxins, together with the alcohol acting directly, tend to disorder the metabolism in various internal organs, and thus to establish a condition of poly-intoxication.

It is very important to bear in mind that these primary and secondary toxæmias may affect the fœtus through the maternal blood, a fact which has been especially insisted upon by D'Abundo and Agostini. It is probable that this intrauterine exogenous toxic action establishes the basis of a large group of diseases of the nervous system, including a considerable proportion of cases of idiocy and imbecility, many other developmental defects, Friedreich's ataxia, and most cases of idiopathic epilepsy.

*Infections.*

Toxic action arising from infections is exemplified in syphilis, influenza, enteric fever, tuberculosis, malaria, and diplococcus and streptococcus infections, all of which, as well as many others that might be mentioned, may cause insanity. Bianchi and Piccinino have made out a strong case in support of their contention that there is a special bacillus which is capable of causing acute delirium, but complete proof is still wanting. The great importance of syphilis as a cause of insanity is now so widely recognised that it is scarcely necessary for me to enter into the subject here.

It is again important to bear in mind that these primary infections may lead to the development of secondary toxæmias, either of an infective or non-infective character. For example, I have examined a case in which acute insanity followed influenza after some weeks, and in which the toxæmia clearly depended upon a severe gastro-intestinal catarrh, probably of bacterial origin. The toxins of infective diseases may also affect the nervous system of the fœtus through the maternal blood.

*Auto-intoxication and Auto-infection.*

Auto-intoxication and auto-infection are so closely connected with each other that they can hardly with advantage be considered apart. Such toxic action may arise at any of the surfaces of the body that normally lodge bacteria, such as the gastro-intestinal tract, the larger respiratory passages, and the skin. Auto-intoxication may further arise from disorder of the functional action of any of the organs and tissues of the body. An example of auto-infection may be seen in many cases of general paralysis in which it can be shown that bacteria, evidently the normal inhabitants of the alimentary tract, have locally obtained a lodgment among the epithelial cells of the gastric or intestinal mucous membrane.

*Auto-intoxication and Auto-infection from the Gastro-intestinal Tract.*

Whilst auto-intoxication and auto-infection from the skin and larger respiratory passages might be shown to have considerable importance in relation to insanity, I wish specially to insist upon the paramount importance of the gastro-intestinal tract in this connection. The gastro-intestinal tract is the chief place of elaboration of those nutritive materials upon which the tissues subsist. For example, bread is of no nutritive value to the tissues; it must first be changed by the action of the gastro-intestinal organs into something that is not bread. The gastro-intestinal tract is also, apart from simple infections and exogenous toxic agents, the great source of the toxins that produce disease. Its normal functional activity is dependent upon the integrity of a very large number of extremely complex arrangements for the conversion of food materials into nutritive substances, and also upon a series of defensive arrangements against bacteria. The alimentary tract inevitably contains a very large variety of micro-organisms, which would there find every encouragement to their multiplication in the prevailing conditions of temperature, moisture, and food supply, were it not for certain defensive arrangements by which they are held in check. Time does not permit of my discussing the nature of these defensive arrangements, but I would say that they consist in far more than the action of the hydrochloric acid of the gastric juice and that of the bile, which are generally regarded as explaining the whole matter. It is to be borne in mind with regard to the subject of absorption of toxins from the alimentary tract that the tissues have in normal conditions a considerable power of destroying toxins and of manufacturing antitoxins. Wherever there are extremely complex physiological arrangements, such as those in the alimentary tract, the integrity of each one of which is essential for the maintenance of normal nutritional conditions, there is the possibility of a great variety of pathological derangements. There may arise derangements of the purely digestive functions, and derangements of the defensive mechanisms against bacteria. When these occur, substances of a toxic nature for the tissues will tend to be formed and absorbed. These subjects are at present urgently in need of further investigation and fuller elucidation. Many new and important possibilities have come into view since the classical works of Bouchard and Albertoni upon auto-intoxication were written. Recent developments of knowledge regarding natural and acquired immunity especially serve to suggest some important probabilities as to the *rôle* of gastro-intestinal auto-intoxication and auto-infection in various forms of disease. One of the

most important of the tasks lying before the bacteriologist at the present day is the complete investigation of the gastro-intestinal flora in health and disease. The pathological anatomist on his part will have to investigate the relationship of alterations in the flora to structural alterations in the gastro-intestinal walls and to alterations in the other tissues. Further, the relationships of such modifications of the intestinal flora to unphysiological alimentation, to changes in the glandular secretions caused by nervous and other influences, to infections, to changes in the general immunity, and to numerous other conditions, will have to be made the subjects of very thorough investigation.

I am strongly inclined to the belief, which is supported by a large amount of evidence I have collected, that various forms of toxæmia of gastro-intestinal origin are the chief factors in the pathogenesis of a large array of acute and chronic diseases, including several forms of mental disease. These diseases include the various manifestations of arteriosclerosis and its consequences, a large proportion of cases of senile insanity, general paralysis, locomotor ataxia, chronic alcoholic insanity, dementia præcox, idiopathic epilepsy (as the determining cause of the fit), and most cases of acute and chronic mania and melancholia and of chronic Bright's disease. There are probably several special types of such gastro-intestinal toxæmia, and their effects would appear to be largely dependent upon other conditions of the body, including the special natural reactive qualities of the tissues, alterations in the factors upon which natural immunity depends, injury of the tissues by other and more especially infective toxæmias, and impairment of the power of the tissues to destroy or eliminate toxins and to form antitoxins.

*Simple Auto-intoxication.*

Auto-intoxication from disorder of internal organs is almost always secondary. It depends upon derangement of functional activity (for example, of the kidneys) by the action of toxins which are either introduced from without, the products of primary or secondary infections, or elaborated in the gastro-intestinal canal. Such auto-intoxication, whether from formation of special toxins, or from defective excretion of effete products, is probably an important factor in the pathogenesis of some forms of insanity, but very little of a definite character is yet known regarding this matter. As already indicated, auto-intoxication may undoubtedly arise in the brain itself. There are, I think, satisfactory grounds for the belief that, when insanity arises as the result of mental overwork, enforced want of sleep, anxiety, and worry, the severe disorder of the nerve-cell metabolism is the result of an induced local and general auto-intoxication. In these cases, however, there is often a pre-existing general toxic condition.

*Conclusion.*

In concluding, I would reiterate my conviction that by far the most important factor in the pathogenesis of insanity is toxic action. I would further say that the large majority of cases of insanity are not primarily diseases of the brain at all, but are dependent upon the action of toxins derived from elsewhere, which affect the functional activity of the cortical nerve cells by disordering their metabolism, and often permanently damaging or even destroying many of them. The common view that the "mental disease" is the primary condition, and that any accompanying "bodily disease" is secondary, is in general founded upon an erroneous conception of what is taking place.

In the expressive words of Dr. Mercier,[4] insanity is "a disease of the whole man, a disease of the whole organism, which can only be properly understood and properly dealt with when so regarded." Not until such views are generally recognised by alienists, and give direction to our investigations into the nature of insanity, shall we make any important further advances towards the great preventive and therapeutic measures that are beyond all question attainable in this department of practical medicine.

II.—J. B. Spence, M.D.,

Physician-Superintendent, Stafford County Asylum, Burntwood; President of Section.

The President, after thanking Dr. Ford Robertson for his contribution, pointed out the importance of the remarks made on auto-intoxication. He suggested that the swing of the pendulum might again be on the turn, and that the treatment of our forefathers, by the giving of blue pill and black draught, might once again re-establish itself. He had great belief that this old treatment, carried on in the light of modern knowledge, would prove of great value in the treatment of the insane.

[4] *Loc. cit.*

III.—Robert Jones, M.D., M.R.C.P., F.R.C.S.,

Medical Superintendent, London County Asylum, Claybury.

Dr. Robert Jones referred to the psychological views enunciated by Dr. Forbes Robertson, but could hardly agree that the time had yet come for regarding mind as a product of matter. Both undoubtedly were connected, and until more definite evidence was brought forward one was justified in regarding the relationship as a parallelism. The important *rôle* attributed by Dr. Robertson to toxic products was in harmony with clinical experience, and he was glad to notice, in his concluding statements, that he looked upon many of the intestinal lesions in general paralysis as a result rather than as a cause of nerve lesions.

IV.—Edwin Goodall, M.D., B.S.,

Medical Superintendent, Joint Counties Asylum, Carmarthen.

Dr. Goodall said that cases in asylum practice might roughly be classed as those with acute somatic disturbance, such as cases of puerperal insanity, acute delirious mania, insanity with specific fevers, running an acute course: and those with slight general disturbance, such as melancholia, mania, and stupor. The former resembled the disorders which they had good reason to believe were due to bacteria, and they might assume that they were due to infection by exogenous organisms. The latter were probably due to auto-intoxication. In point of view of treatment, he considered the former class offered the best prospects; already good results had been obtained in them by the injection of antistreptococcus serum. He had not much faith in attempts at disinfecting the intestinal tract. Even if they could disinfect it, they had to deal with the other factor—the defective resistance of the organism. He found great difficulty in explaining the *modus operandi* in the cases in which a cellulitis, or a severe illness supervening in a case of acute mental disorder, resulted sometimes in cure.

V.—Edwin Stephen Pasmore, M.D., M.R.C.P.,

Assistant Medical Officer, London County Asylum, Banstead.

Dr. Pasmore concurred in the remarks of Dr. Robertson as regards the toxic origin of some cases of insanity, but was doubtful if that theory could be made to include all forms of general paralysis of the insane, though it might explain many.

Reply.

Dr. Robertson, in reply, after thanking the President, said that he was really in agreement with Dr. Jones as to most of the psychological points raised. It was impossible, in dealing with so large a subject as that of toxic agency in insanity, to go into all details, but he emphasised the importance of the fact that individuals varied in their susceptibility to toxic agents, and this served in a large measure to explain why the cortical nerve cells were affected in one person and not in another, in whom presumably the same toxic condition was in operation.

## SOME CONDITIONS OF SUCCESS IN THE TREATMENT OF NEURASTHENIA.

By A. T. Schofield, M.D.,

Physician, Freidenheim Hospital, London.

Experience has mostly to be bought, and often dearly; and if the following points have any value to others in treating this difficult class of case, it is largely because they are the outcome of many painful lessons and failures in working amongst nerve patients for many years.

One may say here at the outset that though in our modern textbooks neurasthenia and hysteria are rightly treated under distinct heads, as we are now speaking of treatment only we will use the former term in a broad sense to embrace functional nerve cases generally.

To make the hints given as clear and as useful as possible, it may be well to crystallise them around four centres.

First, the physician; secondly, the patient; thirdly, methods of treatment; fourthly, various details. In other words—personality, diagnosis, treatment, and details.

To take, then, the doctor first (an order recognised by Dr. Clifford Allbutt in his *System of Medicine*, vol. viii, p. 180) when he says: "Suggestion and the personal ascendency of the physician enter so largely into all methods of treatment (of neurasthenia) that, to speak honestly, we find great difficulty in making much way (when these have failed) with old disillusioned patients."

The first point one would make in connection with the physician (in the teeth of much that has been written, and against the practice of many noted neuropaths) is that one of the first conditions of success is sympathy, and one of the chief causes of failure is the want of it.

I do not say it need be always, or even frequently, shown; but believing as I do in the subconscious mind, and the quick unconscious relation of one mind to another when in harmony, I have no doubt whatever that real sympathy is always felt wherever it exists in the physician for the sufferer, though it be not shown; the proof being that it gives a confidence in his skill, and a restful feeling of being understood—that is no mean factor in the cure.

To feel this sympathy one must believe in the reality of the sufferings of the patient, and dismiss absolutely the blight of suspected malingering. One must grasp the truth of the brilliant dictum of Sir James Paget, who declared that while the patient says she "cannot" and the nurse that she "will not," the truth is that she "cannot will."

Let us remember that *a disease of the imagination is not an imaginary disease*, and that pain, in its last analysis, is a mental rather than a physical fact, for its reality does not in the least depend upon its resting on any definite physical basis.

To tell neurasthenics or hysterics that there is nothing the matter with them because no clear physical basis can be discovered for the symptoms complained of—unless done in exceptional cases, deliberately for a definite purpose—is to confess oneself unfit to deal with functional nerve diseases.

As slowly, very slowly, the enormous powers of the subconscious mind over the body are beginning to be dimly perceived, such crude and false statements are becoming rarer; but they are still common enough amongst those whose opinions are founded solely upon physical diagnosis.

The next qualification in the physician is patience, and this, I think, is different from mere endurance, and really depends upon the first quality—sympathy. It is only those who know the tortures undergone by functional nerve sufferers, the pariahs and outcasts amongst patients and doctors and that feel for their sufferings, that can possibly put up with the trying nature of the sufferer and his multifarious and often apparently incurable troubles.

The lack of this virtue in doctors fills our holiday and health resorts abroad with patients sent there because the doctor could not stand the strain at home, and recognising his resulting impotence, ordered travel as the best way out.

Allied to patience is perseverance. The despondency of the patient, the scepticism of relations, the continued and heavy expense to them over which the physician has no control, and the want of any signs of improvement, it may be for weeks, renders this virtue one of the most difficult to practise. And yet for want of it how many patients go unrelieved, how many incipient cures are nipped in the bud, and how many successful methods are prematurely abandoned as failures. If we have sound grounds for believing our treatment is rational; if we have seen successful results from it in previous cases, and above all if there is the least glimmer of improvement, let us persevere on and on. There is no space here to adduce cases in proof of this, but I have one in mind that, after defying every doctor and every variety of Weir-Mitchell and similar "cures," was at last successfully restored to health mainly by being persistently kept in bed for five months on end by a doctor who would not be beaten.

Closely connected again with this is the question of firmness. Curious as it may seem, it is easy to be too firm, and still easier not to be firm enough. The path of success here undoubtedly lies in the golden mean between the two. Be inflexible as cast-iron in things essential; flexible as steel in all matters non-essential, and never, as is so common, inflexible from mere doggedness, but always intelligently. This gives confidence, brings success, and avoids friction with patients and friends.

Perhaps this question really depends upon the next great virtue, without which neurasthenics cannot be successfully treated, and that is "tact." Tact is the unconscious mental touch, the tactus eruditus, by which one mind feels another, and just as a physician's physical tactile sense is educated to discern much by mere touch, so can mental tact help the nerve doctor immensely along his difficult path. Take for instance the one question of whether to make light of any particular symptom or to treat it quite seriously.

The answer does not in a neurasthenic in the least depend, as the doctor may naturally think, upon the amount of obvious physical bases upon which that symptom may rest, but on the effect on the patient's mind of your levity or gravity; and to ascertain this effect beforehand is the highest outcome of tact.

For it must ever be recognised, and may here be categorically asserted, that hysteria or neuromimesis is distinctly a disease of the subconscious mind, of unconscious suggestion: and it is in this very fact of its unconscious nature that it differs from all forms of malingering, which always imply conscious fraud. Whatever diseased physical conditions may, therefore, coexist require treatment, but the mental condition is undoubtedly the more important, and is the one which in every case requires the greatest judgment and tact. Most medical men, I believe, are inclined to glorify their own particular branch of the profession; but one cannot but see that in pursuing to its recesses and in curing diseases produced by such a mysterious agent as the subconscious mind, one has to employ power and means of a very different nature from the comparatively simple and straightforward processes of purely physical medicine and surgery.

I may, perhaps, just say a word on the value of honesty with these patients; for it is a word by no means limited to its ordinary sordid interpretation. I mean absolute honesty in considering and acting solely in the patient's interests, as distinguished, not from the doctor's, but from the parents, friends, and relatives, and others whose counsels and pleadings so often turn aside the otherwise sound judgment of the physician.

Lastly, success depends upon a power of attention to details that is not always found in minds broad enough to grasp the case as a whole. Minds, as has been pointed out, are generally characterised by observation *or* imagination. The former quality gives accuracy in details, the latter broad and wide views. The combination is rare, and those who possess it are generally masters of their profession, and in nerve diseases this union is of especial value. The doctor who knows and sees that his patient is not disturbed at night after the last massage; who gives exact orders as to her detailed routine throughout the day; who ascertains she is not roused and agitated by the noisy cleaning of grate and room early in the morning, will do much to ensure the general success of his elaborate treatment.

A capacity for taking pains and for arranging details of treatment may turn the scale from failure to success in a doubtful case. So much, then, with extreme brevity for the doctor and his personal powers.

Let us now consider, in the second place, the conditions of success in connection with the patient and the diagnosis. The first point, perhaps, to decide, on which successful treatment may turn is whether mind or body (including in the latter all nerve tissues) plays the chief part in the disease. Briefly and simply it may be said that nerve cases divide themselves into one category or the other.

Cases of true neurasthenia, that is of nerve irritation or exhaustion dependent upon external causes or upon physical lesions within, are clearly physical, the mind conscious or unconscious being either entirely unaffected, or only in a secondary degree, as a result of the nerve condition.

On the other hand, all cases of hysteria or neuromimesis contain a distinct mental element, and that is an affection of the subconscious mind over and above any mere question of

nerve condition, while all other cases of delusions, fixed ideas, true melancholia, and other slight aberrations reveal a primary disturbance, want of balance or unsoundness of the conscious mind or reason, and these are generally recognised as mental cases. Cases of hysteria, however, are not generally regarded as distinctly mental owing to the fact that still, as a rule in England, mind is sought to be limited to consciousness. In France, however, Charcot, quoted by Féré, says, "Hysteria is a psychical malady *par excellence*." Here, however, from the fact of its seat being the subconscious mind which unconsciously produces in the body the symptoms complained of, it occupies an intermediate place between the pure nerve lesions on the one hand and the distinct mental troubles on the other.

The value of this broad distinction between nerve and mental troubles becomes obvious when we consider treatment. For instance, we may say generally that where there is any mental taint, confinement to bed often does as much harm as in cases of disordered nerves it does good. The question of a sound conscious mind must be decided first. This is, of course, not the same as a consciously sound mind. Most mental cases are distinguished, indeed, by the fact that although their conscious reason is distorted, they are themselves unconscious of the fact. This question has, of course, a great bearing on prognosis. No rapid or permanent cure can be safely predicted where the mental balance is destroyed or even unstable, and many forms of nerve treatment are here contraindicated.

The next point is as to whether the case be one of nerves pure and simple, namely, neurasthemia proper or whether it is one of hysteria or neuromimesis, in other words, due to the influence of the subconscious mind over the body.

This is not, as a rule, a difficult part of diagnosis. Symptoms of purely neuromimetic origin generally reveal themselves as such to practical observers as clearly distinct from mere nerve strain.

The real difficulty is to settle the next question which is how far the neuromimetic symptoms complained of may have any obvious physical basis. I say "obvious" because even in disordered nerves the ultimate basis is doubtless physical, though not in the least "obvious."

It is of course more common to mistake neuromimetic in functional disease for physical and organic than *vice versâ*.

But instances are not rare where severe physical lesions masked with "nervous" symptoms have been disastrously mistaken for disordered nerves; as, for instance, when a consulting surgeon recently ordered forced movements in a dislocated limb under the belief that it was hysteria; and only desisted when the *x* rays proved the lesion to be physical.

The difficulty, of course, is caused by the mixture of physical with nervous symptoms, and also the exact way in which the former are simulated by the latter, so that it is always well to bear in mind that functional nerve troubles frequently rest upon a clear, though often small, physical basis.

Proceeding now from mental and hysterical cases to neurasthenia proper, the point to determine is the stage and character of the disease; as to whether the nerve centres are in a state of irritation or of exhaustion or of both.

In neurasthenia as distinguished from hysteria the exciting cause at any rate is generally external and obvious, but the treatment of nerve irritation obviously must differ greatly from that of nerve exhaustion.

Passing from diagnosis we find that success is greatly handicapped if the patient has been already the victim of previous failures. As Dr. Allbutt has pointed out, these always act prejudicially in sapping the confidence and courage of the patient. Personally I have found this a most difficult complication to deal with.

The mechanical routine of a so-called Weir-Mitchell "cure" is now so well known and so absurdly regarded as such a universal panacea, that this or something else has often been tried unsuccessfully before you see the patient, with the result that anything approaching the same methods is already regarded with suspicion; though it may essentially differ, and result in success instead of failure.

Another element of success in the patient is confidence in the doctor and nurse. I add "nurse," because many physicians are not aware how this person can weaken or wholly frustrate all efforts at a cure. A case occurs to me that treated by Weir-Mitchell method twice only resulted each time in failure and actual loss of weight. Secret sapping of the doctor's influence with neglect of orders was the cause in one; and open rupture of the two neutralising all efforts in the other. The case was difficult, but with agreement between the two was eventually successfully treated.

I must not omit here, as distinct from all diagnosis of the disease, and as a great element of success, a close study of the patient's personality and mental calibre.

This so often requires, even in two suffering from the same symptoms, a course of treatment in one case entirely different from that required by another.

The personal factor is so comparatively valueless in ordinary physical diseases such as pneumonia or gout, that one is apt never to consider it, until one finds from disastrous experience that its proper consideration is in its way quite as important as accurate diagnosis.

Lastly, in concluding the study of the patient as a factor of success, we would strongly advise, if the cause of some symptoms still remains obscure, carefully to consider the question of sexual agencies, both physical and mental, natural and unnatural, for the extent to which this latter is a factor is little known to many physicians.

We now come to the methods of cure, and here it is obvious that though success depends largely upon the physician, largely upon the diagnosis, it must depend still more largely upon the use of right and adequate means.

In the first place, then, with neurasthenics, in the greater number of cases "cast-iron systems" of treatment turning out "machine-made" cures, stand condemned in theory and in practice. If one may say a word from practical experience, it is that the chief cause of the failures I have come across has been the ordering of such and such cure by name (involving some fixed routine and surroundings), that failed because not adapted or adaptable to the patient's special needs. Of course, wherever a doctor has any fixed system or wishes to save himself trouble, there ready-made expedients are very tempting; but we must here lay down as an important condition of success, the making a system or treatment to suit the patient, rather than a patient to suit the treatment.

It is far otherwise when dealing with any definite and well-known lesion, such as enteric. Here the more of routine and fixed treatment often the better. We have spoken of the adequacy of the methods used. This adequacy must not be judged by the amount of potent drugs prescribed, or the violence or expense of the agencies employed. They may range from the most elaborate combinations of psycho-physical treatment conducted in a well-appointed home with every possible adjunct, down to a few simple prescriptions, or even short medical talks, or a change of environment or occupation, or mere rest, pure and simple.

No method can be decried as trivial that succeeds in curing the patient; but, on the contrary, that plan is best that arrives at this result with the least time, trouble, and expense.

We may add that, although the treatment adopted may be tentative or experimental, its aspect to the patient should always be fixed, dogmatic, and definite. Whatever balancing of different methods may have passed through the doctor's mind, all should be firm and defined to the patient.

Even when the treatment accords with the patient's own ideas and wishes, it should never be ostensibly adopted for this reason.

Most methods involve the use of nurses or trained attendants, or companions of some sort, and here is a frequent cause of non-success. Doctor, diagnosis, method—all are right, and yet there is no cure because the subordinate agents are inefficient.

It is not here the place to enlarge upon the reason why this is so frequent, based as it is upon the non-recognition of the great need there is for a class between the three years hospital-trained and starched-and-ironed antiseptic nurse of the period, and the depressing mental attendants upon the insane. The neurasthenic nurse is a being yet to be evolved as a definite product, but is sometimes met with as a chance

growth in out-of-the-way places, frequently painfully ignorant, alas! of the simplest hospital routine.

The ordinary nurse dislikes the neurasthenic case largely because she does not understand the reality of the disease in the absence of physical lesions, and partly, also, because in hysterical cases there is not only the appearance of fraud, but often a perverted mental bias that takes pleasure in fault-finding, and setting the nurse against the doctor, and *vice versâ*.

It is well for the doctor to remember this, and even when a nurse has to be changed, to uphold the nurse to the patient whenever possible, even on therapeutic grounds.

*Nascitur non fit* is undoubtedly the distinguishing motto of the mental nurse, though the "fitting" is most necessary and useful also, but until this is recognised and the nurses are to be had what is the doctor to do? Well, of course, he has to cure his patient. At present, for want of adequate help, the cure has often to be effected by his own personal influence and visits to an extent that would not be in the least necessary were our training system more adequate and really efficient helps to be had. This is all very well for patients that can pay, but is naturally very expensive.

The outcome is, therefore, clearly this, that the treatment of all difficult neurasthenic cases is necessarily and from causes quite beyond the doctor's control, far more expensive than that of any other class of disease (excluding, of course, any involving major surgical operations) and far more expensive than it need be, were efficient nurses to be had.

This question of nurses raises that of homes generally. In the first place, neurasthenics cannot, as a rule, be cured in their own homes, for what they one and all need is rest in some form. Now to women home is the sphere of the greater part of their work, to the man only is it (with exceptions) the place of rest. Hence home is obviously not the environment needed for women, and for other reasons men also are cured more certainly and expeditiously away from their own family circles. This necessitates the nursing home as a indispensable adjunct for at any rate part of the cure.

Now it is not too much to say that the quality of this home largely determines the question of success in the treatment. Homes are so frequently unsatisfactory that many physicians have been driven to run their own. This has, of course, its advantages, but it has great and serious drawbacks. Of course I am here not speaking of surgical homes or of any treatment but that of neurasthenics.

Personally, I have never been able to get over the professional feeling that a physician ought to look to his fees, and to his fees alone for payment for his services, and should not directly or indirectly run a boarding house under any name, or share in the profits if derived from his patients.

It may, of course, be urged that a doctor can have his own nursing home, and yet have nothing to do with its management or profits. In this case of course it is hardly his, though his patients may go there; and of course he fails to have the perfectly free hand in dietaries—so all-important—that he has when its pecuniary management is in his hands.

It may not indeed be difficult to show that it is to the patient's own interest that the home should be run by the doctor, and many medical men will see no weight whatever in what I urge against making a profit from board and lodging. One can in this only speak for oneself, and for all others like-minded.

At any rate, whether the home be the doctor's or the matron's, it must be one where the dietary is practically unlimited, where the food can be relied on to be of the best and well cooked, and not least, punctually served with cleanliness and nicety. The room should be quiet and airy, and at any rate, major surgical operations should not be conducted in the home. If possible it should have some private grounds or garden attached to it.

The matron or sister may or may not actively co-operate in the treatment, but should at any rate avoid the slightest adverse comment on any methods she may or may not understand or agree with. She should be prepared to change the nurse at the doctor's request till the patient is suited, and to promptly carry out all his orders.

Finally we must touch on one or two details, which have much to do with success in these cases.

In the first place, as we have seen, the treatment of neurasthenia proper and hysteria is fairly distinct.

In the former, where the whole mental system is sound, and it is the brain that is worn out physically—while rest is good, isolation is not often needed, and overfeeding and massage can frequently be dispensed with. In neurasthenia, moreover, we never fight against the symptoms as we have to do in hysterical cases.

These latter, too, require isolation, nearly always some form of Weir-Mitchell "cure" with massage, and probably a large amount of suggestion, direct or indirect, which neurasthenics do not.

In mental cases rest in bed is by no means a routine matter, for it nearly always aggravates the disease. It is also not often of value as we have seen if the physique is otherwise good and sound, and the nervous system alone is overworked and weakened as in neurasthenia. It is, however, generally needed in cases of malnutrition in diseases of neuromimetic origin, and in doubtful nerve cases, to give time and opportunity fully to determine the diagnosis; also in severe nervous prostration even without other physical lesions; and in all cases coupled with cardiac insufficiency.

Massage is, of course, always needed for digestive purposes where there is entire rest in bed to take the place of active exercise. Besides this it is of special benefit in all disorders of the circulation, in all wasting or weakness of muscles, in all stiffness or weakness of joints, in most cases of pain, in congestions of external organs in many forms of cardiac disease.

The question of friends and relatives is a difficult one and is not answered by the simple rule of complete isolation. This is invaluable in hysterical cases wherever it can be carried out without too much depression or irritation of the patient; but there are many cases where too rigid insistence on it means failure, either from the patient leaving in consequence or from the bad results on the nervous system. Here, as elsewhere, success follows an intelligent combination of flexibility with firmness.

Lastly, a word as to "suggestions." These like nitrogen can seldom be assimilated in a raw state, but are readily taken in combination. Hypnotism, however, is of doubtful benefit in most neurotic cases. Some patients of low mental calibre are benefited by the direct suggestion that they are rapidly getting well: more, however, benefit by the use of means directed to combat the symptoms complained of, such as electricity, massage, drugs, exercises, etc., which besides doing a certain amount of good directly, do still more by the suggestions they convey to the patient's mind, and which afford a rational prelude to an intelligible cure. They appeal to the patient's reason, or at any rate to that which passes under that name, and afford satisfactory food to the mind which finds a gratification in the use of extensive and elaborate means.

Another form of indirect suggestion that can only be administered by a physician who is in the fullest confidence of his patient is that which points out the evil, and the weakness, and the folly of that character of mind that feeds upon itself; and that draws out the mind to altruistic and worthy objects, and thereby alters the flow of the unconscious current of thought, which has been feeding the disease all through; and thus makes the subconscious mind itself undo the mischief it has done.

Other details, important enough to effect success, are the management of dyspepsia, circulation, sleeplessness, constipation, restlessness, depression, and other troublesome symptoms.

Finally, in most nerve cases, to ensure a permanency in the cure, the patient should not return to the surroundings connected with his diseased state. An effort should be made to find out his tastes as regards place, occupation, sport and amusement and the definite directions given (which should never be omitted) as to after-life, for at any rate some months, should as far as possible coincide with the natural bent of the patient's interests.

It may be borne in mind that in cycling and golf we have now two favourite and powerful therapeutic agencies.

For the successful treatment then of neurasthenics of all sorts, we need much that might be taught in the schools, but is not, and much that cannot be taught in any school. I con-

sider that the successful nerve doctor owes less to his teachers and more to his idiosyncracy, experience, and applied common sense than any other variety of medical man.

This is my apology for this brief summary of a few conditions of success in the treatment of these patients, whose sufferings and whose cure as yet receive too scant attention at the hands of our profession.

Dr. Fletcher Beach was of opinion that sympathy was a great factor in the treatment of neurasthenia. Patients had often come under his notice in whom he had said to his colleagues that what they wanted was not so much medicine as sympathy. It was essential that the symptoms should not be scoffed at. To the patient they were very distressing, and if the doctor made light of them he was apt to lose the confidence of the patient; and if he did this, he would in all probability fail in the treatment of the disease. Perseverance and tact were specially necessary, but attention to detail was absolutely important. He was accustomed in the treatment of his patient to plan out his life for him from the time he got up in the morning until he went to bed at night. The time at which his meals should be taken, and the quantity, were important, and as in many of these cases disturbance of the gastro-intestinal tract preceded the disease, improvement of the digestion and a daily evacuation of the bowels should be brought about. As cases of this kind were self-centred, the patient should be advised to employ himself in some way, either by gardening, riding, golf, etc. While the Weir-Mitchell treatment in a nursing home was of use in some cases, many, especially poor cases, could be treated equally well in their own homes. As regarded suggestion, he was doubtful whether hypnotism would be of any use, but he believed that if he could inspire the patient with confidence that he would get well, he would undoubtedly help to cure the disease. He was of opinion that employment in the open air helped recovery by the healthy distraction it afforded.

Dr. Edridge-Green had been struck by the very close association of hysteria and delusional insanity. In hysteria there was often a fixed idea which dominated the patient and controlled her, though she often stated that she did not believe in it.

Dr. Robert Jones asked for the experience of Dr. Schofield as to the administration of stimulants, as in some it appeared positively harmful, and in others it had given rise to an overpowering, habitual, and chronic alcoholic craving.

Dr. Schofield, in replying, urged that medical men should pay more attention to the study of the phenomena of the "subconscious mind" in hysteria and neuromimesis. He agreed that alcohol should only be prescribed with the greatest caution and care, and after careful inquiry into the antecedents and habits of the patient.

## REMARKS UPON THE ANTHROPOLOGICAL EXAMINATION OF ASYLUM PATIENTS, WITH A SCHEME FOR THE SAME,

### AND THE AVERAGE RESULTS OF EXAMINATION OF TWENTY-EIGHT CONTROL CASES.

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[Abstract.]

Dr. Goodall dwelt upon the desirability of systematic anthropological examination of asylum patients, and was of opinion that insufficient attention had been given to this subject. He believed that the best work in this direction was at present done in the United States and Italy. The first requirement was a proper scheme whereby to work. He had elaborated a scheme by which he had been working for more than two years, and this he ventured to submit to the meeting. He would advocate for general use a scheme drawn up by some authoritative body. It was to be hoped that greater interest might be promoted in this question which would lead ultimately to the drawing-up of such a scheme, in which the best of what was of individual origin would probably find a place. The writers to whom he had been especially indebted were E. Schmidt (Leipzig), Giuffrida-Ruggeri (Rome), A. Meyer (Worcester, Mass.), F. Peterson (New York), and Bertillon. In making out a scheme for a general investigation one required to avoid undue elaboration in special directions. In anthropological work one could specialise in various directions; in the case of the insane, for example, the cranium, ear, or palate could be taken; various workers had published methods for these special investigations. The scheme submitted to the meeting omitted, as unnecessary in the present case, various measurements affected by the state of nutrition of the individual and various descriptions which would demand a ready co-operation on the part of the subject, likewise measurements and descriptions intended for the purpose of identification. It might *a priori* be supposed that some of the headings included were superfluous in a scheme applying to the insane, but he contended that they were not yet in position to determine what was and what was not superfluous. The inquiries were all calculated to bring out evidence of degeneration from the normal, and this might occur in the most varied ways. The scheme was worked through in the case of sane persons and the less unruly class of the insane in three sittings, taking rather more than one hour each, or from 3 to 4 hours in all. An assistant was indispensable.

Recognising the need for a normal standard gained from individuals born in the same district as that from which the asylum patients came, the author had measured, with the assistance of Dr. Peers Maclulich, 28 healthy, full-grown adults according to the scheme, and he submitted in illustration of the latter the average results of these measurements. It had proved no easy matter to secure normal subjects from the district willing to submit themselves to examination. It would be very advantageous if results, both for healthy persons and for the insane, were to be collated by workers in asylums drawn from adjoining districts so that a mass of information might accrue. The scheme employed was as follows. It was impossible then to go into details of practical application.

Measurements (Metric System).

Height of the crown of the head above the ground (*a*).
Height of the upper margin of the external auditory meatus above the ground (*b*).
Height of the margin of the chin above the ground (*c*).
Height of the brain-case above the auditory canal by subtracting (*b*) from (*a*).
Height of the head by subtracting (*c*) from (*a*).
Height of the upper margin of the sternum above the ground (*d*).
Height of the centre of the umbilicus above the ground.
Height of the upper margin of the symphysis pubis above the ground (*e*).
Length of the trunk in front by subtracting (*e*) from (*d*).
Length of the upper arm (tip of the acromion to the head of the radius).
Length of the forearm (head of the radius to the tip of the styloid process).
Length of the hand (level of the tip of the styloid process to the tip of the middle finger).
Height of the anterior superior iliac spine above the ground.
Height of the upper margin of the great trochanter above the ground.
Height of the knee-joint above the ground (from the groove between the femur and the tibia).
Height of the tip of the internal malleolus above the ground.
Heighth of the seventh cervical process above the ground.
Breadth of the shoulders (outer edges of the acromion processes).
Reach (from tip to tip of the middle fingers, the face to the wall).
Distance between the anterior superior iliac spines.
Greatest distance between the iliac crests (difficult in stout persons).
Greatest distance between the great trochanters.
Chest circumference at the armpit level (in mid respiratory state).
Depth of chest with callipers at level of nipples.
Circumference of the knee, the ankles, and the wrist (at fixed points).
Length of the thumb (from the metacarpo-phalangeal joint).
Length of the middle finger (from the metacarpo-phalangeal joint).
Distance between the chin-point and the root of the nose.
Breadth of the hand at the knuckles (closed hand).
Length of the foot (to the tip of the great toe).
Greatest breadth of the foot.
Height of the crown of the head from the seat (sitting posture).
Greatest antero-posterior diameter of the skull (from the glabella to the furthest occipital mid-point).
Circumference of the cranium (through the previous two points).
Naso-occipital arc (root of the nose to the lowest point of the external occipital protuberance).
Naso-bregmatic arc (root of the nose to the bregma) (*f*).
Naso-lambdoidal arc (root of the nose to the lambda) (*g*) more often obtainable than the former.
Bregmato-lambdoidal arc (*f* from (*g*).
Binauricular arc (taken at the post-glenoid process temporal bone each side).
Auriculo-bregmatic radius (from the same points to the bregma).
Auriculo-bregmatic arc.
Greatest transverse diameter of the cranium.[1]
Binauricular diameter (from the same points as the arc).

Empirical greatest height of the cranium (from last and binauricular radii).
Lead strip curves of the cranium: antero-posterior (over the glabella and occipital protuberance); horizontal (over the glabella and furthest occipital point); and transverse (corresponding to the greatest diameter; or over the binauricular arc).
Length-breadth index of the cranium.
Greatest breadth across the malar bones.
Greatest breadth between the external margins of the orbits.
Breadth between the external angles of the eyes (*h*).
Breadth between the internal angles of the eyes (*i*).
Sum of the breath of the eyes (*i*) from (*h*).
Breadth of the mouth.
Breadth between the angles of the lower jaw.
Distance from the angle of lower jaw to the chin-point, right, and left.
Distance between the central point of the lower margin of the chin and starting line of hair.
Distance between the chin-point and the angle between the nose and the upper lip.
Distance between the chin-point and the mouth-fissure.
Distance between the external angle of the eye and the angle of the mouth, right and left.
Greatest height of the orbits, right and left.
Distance between the root of the nose and the post-glenoid process of temporal bone, right and left.
Distance between the chin-point and post-glenoid process, right and left.
Distance between the nose-tip and the post-glenoid process, right and left.
Distance between the external angle of the eye and the post-glenoid process, right and left.
Linear measurement from the angle between the nose and the lip and the post-glenoid process, right and left.
Direct measurement between the same points.
Breadth of the nose at the nostril attachment.
Facial angle, right and left.
Breadth between the temporal ridges, just above the external angular process of the frontal bone.

DESCRIPTIONS

(*a*) *Anatomical.*

*General form of cranium* (macrocephalus, micro-, chæmolepto-, scapho-, oxy-, plagio-, trigono-, trochocephalus, etc.). Viewed from above, behind, laterally; any local characteristics of the cranium; asymmetry.
*Forehead.*—Inclination of the frontal line; gradations from receding to prominent or bulging. Prominence of the frontal bosses. Height (measure). Width: gradations from little to great. Degree of prominence of the superciliary arches. Degree of prominence of the frontal sinuses
*Face Generally.*—Shape long and narrow, short and broad, etc., lozenge shaped. Asymmetry (see measurements). Proportions between the forehead and the lower part of the face. Interocular space, abnormally large or small.
*Nose.*—1. Shape: (*a*) concavity of the root, size of; (*b*) general shape of the ridge, concave, rectilinear, convex, cave-sinuous, rectil-sinuous, vex-sinuous (Bertillon); and (*c*) inclination of the lower edge.
2. Dimensions (to eye): (*a*) height (root to the nostril attachment) gradations, little to great; (*b*) projection, same gradations; (*c*) width (between wings); (*d*) depth and (*e*) large or small, in proportion to face.
3. Peculiarities: as tapering, thick, bilobed, shape and formation of the nostrils, deviation of the nose, etc.
*Lips.*—In profile: height of the upper lip, little, medium, great; relative prominence of the lips, thickness of, thin, thick, "blubber," lower pendant, median furrow of upper accentuated, pouting or compressed (permanent or habit).
*Mouth.*—Pinched, gaping, normal; corners elevated, depressed, horizontal.
*Cheek-bones.*—Prominence of.
*Chin* (in profile) Inclination of: receding, medium, projecting. Ball of: absent, medium, large. High, medium, low.
*Eye.*—Palpebral fissure: little or much slit, horizontally, little or much open, vertically; direction of fissure, horizontal, oblique. Mongolian characteristics. Upper lid: covered, uncovered, patient looking forward; drooping. Balls: sunken, protruding. *Eyebrows* (Bertillon): heads near, distant, united; low, high (middle eyebrow to centre of the eyeball); rectilinear, arched; oblique (and direction, if last) or horizontal; short, long, narrow, wide. Hairs; scanty, abundant, long, short, blonde or dark. *Eyelashes:* long, short, abundant, scanty, or absent. *Iris:* general colour of, flecks on, chromatic assymmetry, coloboma, etc. *Eye anomalies:* strabismus, nystagmus, etc. (Refractive errors probably constitute a special study).
*Ear.*—Maximum length and breadth. Length of implantation. Length from the nose-lip angle to the upper and to the lower limit of implantation. Insertion: perpendicular, oblique. Separation from head, in whole or in part. Clinging to head; in whole or in part. Supero-posterior contour; acute, square, round. Helix (regarded in three parts, anterior, superior, and posterior): small, medium, large, absent, flat. Helix: open, intermediate, adherent, regular, rumpled. Fossa of: shallow, deep, broad, narrow. Darwinian nodosity, or tubercle present. Antihelix: convex, concave, intermediate (on vertical sagittal plane); superior division of, accentuated, medium, *nil*, any peculiarity of its branches, fossa of, small, large, deep, shallow. Antitragus (general direction of), horizontal, intermediate, oblique; edge of, rectilinear, projecting, intermediate; everted intermediate, erect; small, medium, large. Tragus: large, medium, small; posterior edge bifurcated. Post-tragical fissure. Concha: small, large, deep, shallow, traversed. Lobule, square, intermediate, gulfed; blending, intermediate, separated; channelled, dimpled; elevated. intermediate; small, medium, large. Mobility of ear (volitional).
*Hard Palate.*—Cast if possible (saving of time to take several different cases at one sitting. The casts can be detached from the moulds and shaped subsequently). General observations *re* shape of vault and of alveolar margin. Note cleft, soft palate, and uvula. Arches of the former symmetrical. Uvula: size, shape, whether bifurcated, and whether deviating to one side when the palate is raised.
*Tongue.*—Any peculiarities in size and form.
*Teeth.*—Large, small, irregular, deformed, misplaced, projecting. Diastema, numerical augmentation of, etc. Note great development of the superior central incisors with lateral incisors (or absent). State of enamel.
*General Contour of the Head.*—Slight (superior) prognathism, naso-prognathic, orthognathic.
*Lower jaw prominent.*
*Fronto-nasal Profile.*—Rectilinear, angular, parallel (or nearly so), semi-lunar.
*Occiput.*—Flat, bulging.
*Skin.*—Anomalies of, such as nævi, pigment spots, fibromata, albinism, coloration of.
*Hair.*—Amount on head, face, trunk, and limbs. Premature greyness; excess of (normal) local growth, coarse, fine, straight, wavy, curly. Glabrous chin and cheeks in men. Growth on unusual parts. Asymmetry in growth at any part. Low growth on forehead. Colour of hair: black, coal-black, dark brown, chestnut, yellow, flaxen, red (auburn).
*Nails.* Abnormalities of.
*Limbs.*—Congenital contractions, paralyses, atrophy, luxations and joint anomalies, abnormalities in size or appearance (as feminine types in men).
Form of hands, feet, and digits, excess of digits.
Note size of great toe and dimensions of space between it and second toe, with unusual mobility of first.
*Body generally.*
Giantism, dwarfism, asymmetry. State of breasts and genitalia. Buttocks asymmetrical. Femininism, masulinism.
Infantile traits. Deviations of spine, chest conformation, etc.

(*b*) *Physiological.*

*Anomalies of Motor Function.*—Tremors, tics, nervous muscular movements, etc.
*Anomalies of Sensory Function.*—Deaf-mutism: in some subjective examination will be possible, as to hyperæsthesia, anæsthesia, neuralgiæ, migraine, etc.
*Anomalies of Speech.*—Stammering and defective speech, character of voice.
*Miscellaneous.*—Incongruity between age and appearance, left-handedness, state of circulation.

(*c*) *Psychical.*

If alienation, nature of, or other abnormality, as eccentricity, moral delinquencies, egoism, imperative ideas, excessive emotionalism, mysticism, hysteria, epilepsy, intellectual or other precocity. Note facial expression. Note evidences of degeneration in history, family, and personal, including evidence of anomalies in sexual life of patient (impotence, sterility, perversion, menstrual anomalies), and dispositions to diseases.

The normal measurements and descriptions are not reproduced here, but it may be of interest to mention certain points which are brought out.

In the first place, when the averages of the 28 cases were made out it was shown that the differences in respect of any given measurement on the two sides did not amount in most cases to more than 2 to 3 mm., in the case with greatest difference to not more than 5 mm., notwithstanding that, as appears below, a considerable proportion of the total number of cases gave unequal results in respect of that measurement.

*Differences in Measurement on the Two Sides in 28 Cases.*—(*a*) *Limbs. Upper arm:* differences in 10 cases out of 28 (from 2 to 6 mm.). *Forearm:* in 10 cases (2 to 6 mm in seven cases, 9 to 11 mm. in three). *Length of hand:* in 11 cases out of 26 (2 to 6 mm.). *Breadth of hand:* in 13 cases (2 to 3 mm.). *Height of ant. sup. iliac spine above ground:* in 17 cases (2 to 6 mm., but 10 to 18 mm. in five). *Height of upper margin great trochanter above ground:* in 17 cases (2 to 7 mm., but 10 to 24 mm. in six). *Circumference of knee-joint:* in 6 cases (2 to 4 mm., 10 mm. in two). *Ditto of ankle:* in 5 cases (2 to 4 mm., 10 mm. in one). *Ditto of wrist:* in 14 cases (2 to 5 mm.). *Height of knee-joint above ground:* in 15 cases (2 to 7 mm. in nine, 10 to 12 mm. in six). *Internal malleolus above ground:* in 5 cases (2 to 3 mm., 7 mm. in one). *Thumb length:* in 7 cases (2 to 4 mm.). *Middle finger length:* in 4 cases (2 to 3 mm.). *Length of foot:* in 11 cases (2 to 6 mm.). *Breadth of foot:* in 13 cases (2 to 4 mm.).
(*b*) *Difference on head and face.*—*Auriculo-bregmatic radius* only two cases show equal measurements on the two sides (differences of 2 to 7 mm., in four of 10 to 14 mm.). *Auriculo-bregmatic arc:* only 6 agree on two sides (differences of 2 to 7 mm., in ten, of 10 to 24 mm.). *Angle of lower jaw to chin-point:* difference in 7 cases (2 to 4 mm.). *External angle of eye to corner of mouth:* in 4 cases (2 mm.). *Height of orbits:* in 5 cases (2 mm.). *Root of nose to post-glenoid process:* in 12 cases (2 to 3 mm.). *Chin-point to ditto:* in 6 cases (2 to 4 mm.). *Nose-tip to ditto:* in 16 cases (2 to 6 mm., in one, 22 mm.). *External angle of eye to ditto:* in 9 cases (2 to 4 mm.). *Nose-lip angle to ditto* (linear): in 21 cases (2 to 6 mm., in one, 14 mm.). *Nose-lip to ditto* (direct): in 15 cases (2 to 5 mm., in one, 1 mm.). *Facial angle:* in 4 cases (1° to 2°). *Greatest length of ear:* in 18 cases (2 to 4 mm.). *Ditto breadth:* in 6 cases (2 to 3 mm.). *Nose-lip angle to upper limit ear implantation:* in 14 cases (3 to 6 mm., in one case 8 mm.). *Do. to lower limit:* in 16 cases (2 to 5 mm.). *Length of implantation:* in 10 cases (2 to 3 mm.).
The following measurements most frequently differ on the two sides: auriculo bregmatic radius (25 cases); ditto, arc (21); nose-lip angle to post-glenoid process (linear) (21); greatest length of ear (18); height of great trochanter (17); ditto of iliac spine (17); nose-tip to post-glenoid process (16); nose-lip angle to ear impiantation, lower limit (16); nose-lip angle to ditto (direct) (15); knee-joint above ground (15); circumference of wrist (14); nose-lip angle to upper limit ear implantation (14); root of nose to post-glenoid (12); length of hand (11).
The greatest differences on the two sides (great differences being the exception) occur with respect to the following measurements, in progressive order, that with greatest difference being first—auriculo bregmatic arc; upper margin of trochanter above the ground; nose-tip to post-glenoid process; iliac spine above ground; auriculo-bregmatic radius; nose lip angle to post-glenoid process (linear); height of knee-

joint above ground; length of forearm; circumference of knee and ankle-joints.

MAIN POINTS OF INTEREST NOTED UNDER "DESCRIPTIONS."

*General Form of the Cranium.*—None of the abnormalities referred to in the scheme were noted, but bulging, or increased curvature (brought out for the lead-strip curves) was observed in the paricto-temporal region, on the left side in 17 cases, on the right in 7. The rest of the cases showed slight asymmetry at different sites.

*Inclination of Forehead.*—Intermediate in 24, perpendicular in 1, receding in 3. *Shape of face:* broad or of medium breadth in great majority, and generally long also—a large face. *Cheek-bones:* prominent in 20, much so in 7 of these. *Chin in profile:* intermediate or slightly projecting in 24; high or of medium height in 25. *Form of ball:* large or medium in 25. *Direction of eye fissure:* only two show this horizontal in both eyes. There is some obliquity, mostly slight, in 23, of which 14 are slightly upwards and outwards, in both eyes, 7 downwards and outwards, both eyes, whilst two give upwards and outward obliquity in one eye, downward and outward in the other. Rarely, one is more oblique than the other. Three are horizontal in one eye, slightly oblique in the other. *Direction of eyebrows:* slightly oblique in 21, of which 17 are downwards and outwards, 4 upwards and outwards. *Flecks on iris:* in one or both eyes in 8 cases only. *Strabismus* in one case only. *Hard palate:* normal in 14 cases; in 14 there was narrowness, in 3 of which an arched condition was also noted. *Soft palate and uvula:* the arches were unsymmetrical in 23. Deviation of the uvula on making subject say "Ah" in 23, to the left in 15, to the right in 8; but only marked in 2.[2] *The ear:* the corresponding parts of the two ears showed symmetry in the great majority of instances, asymmetry appearing in not more than 1 to 4 cases, under the different headings. *Fossa of the helix:* asymmetry in depth in 11 instances. *Lobule:* asymmetry in shape in 8, and in mode of attachment in 7. *Posterior edge of tragus:* asymmetry in 7. *Superior division of antihelix:* in 6, and *fossa* of same, as regards size and depth—6 and 7 respectively. *Antitragus*, general direction of: asymmetry in 6, and ditto as regards contour of its edge in 7. In addition to above asymmetry, a Darwinian tubercle or sometimes nodule was found on both sides in 17, and on one side in 7 cases (24 out of 28). There was slight mobility of both ears in 12 cases, marked of both in 6, moderate in 2: and slight of one side in 2 (22 out of 28). The *teeth* were in good preservation in 16 out of 28, but free from abnormalities in only 5. These chiefly affected the incisors and canines and their intermediate spaces, and were: overlapping of teeth in 11; gaps or diastema, 7; faulty direction, 7; duplicate of lateral upper incisor, 1.

*The General Contour of the Head* (profile).—Naso-prognathic in 6, slightly retrognathic in 5, orthognathic in 3. In the rest, slight "superior" prognathism. *Lower jaw* prominent in 14, receding in 2: in rest, intermediate. *Fronto-nasal profile:* angular in 19, parallel, or nearly so, in 8, towards semilunar in 1. *Skin:* was quite free from blemishes in only 4 cases. Fibromata (fibrous polypi), mostly on trunk, upper part, and neck, in 15 cases; pigment spots in 11: nævi (mostly small and few) in 5: moles, 5; sebaceous cysts, 2. The *growth of the hair:* was sometimes scanty; in 4 cases, on the head; in 7, on the face; in 15, on the trunk and limbs; but only very scanty in the minority of these. *Growth of hair on unusual parts:* occurred in only 8 cases, and was chiefly thin and straggling; about the shoulders, lower part of the nape of neck, clavicle, and between the ribs at the sides. *Limbs:* flat feet in 8; legs much bowed in 2, genu valgum, 1. Unusual concavity over dorsum of fingers on extension in 2. Hands curving to median line, in 1. Diastema of first toe space, both sides in 3; one side in 5. Unusual size of great toe, 3, in one of which also undue length of second toes. *Body generally:* normal, except some lordosis in 4. *Motor function:* irregular contraction of frontal muscle on speaking (non-alcoholic) in 5. Mouth twitchings in 1. *Sensation:* Unusually quick reaction to sensory stimulus (touch) in 4; hyperæsthesia, with brisk knee-jerk in one other. Reaction duller than average in 4.

The author stated as follows the main objects, in his opinion, of a systematic comparative anthropological examination of sane and insane persons. (1) To ascertain what conditions constitute deviations from the normal; this had not been adequately determined. (2) And whether these degenerative signs, and which of them, are more common and more numerous in the insane (not in the degrees of imbecility only). (3) Whether in the insane they occur mainly about the head and face. (4) Whether some stigmata are more common in the more depraved types of insanity and others in the more hopeful (graver and slighter stigmata). (5) Whether there is such a frequent occurrence of particular stigmata in particular forms of mental disorder as to justify a correlation. (6) To ascertain the relationships between the number and nature of the signs and the degree of inheritance of neurotic disorder (Does a person with strong heredity sometimes exhibit very few stigmata and *vice versâ*?). (7) To obtain a measure of guidance in prognosis based upon the number and nature of the stigmata, both in the insane and in those with liability to insanity.

Various instruments employed in anthropological examination were shown.

NOTES.

[1] To obtain the measurements on the skull a deduction is made for the skin and hair (3 to 6 per cent., according to the measurement). Note abundance or reverse of hair. The value of these measurements is diminished by their being taken over hair. A deduction is sometimes made for the latter. [2] Dr. C. L. Dana (New York) found that 13 per cent. of non-neurotic patients showed deviation as against 31 per cent. in the insane.

# THE EVOLUTION OF A PERCEPTIVE CENTRE.

By F. W. EDRIDGE-GREEN, M.D., F.R.C.S.,
Hendon.

THERE are few at the present day who would seriously dispute the doctrine of evolution. In this paper I propose to map out from the facts which we have at our disposal the lines on which the evolution of the perceptive centres have proceeded. By a perceptive centre I mean that portion of the brain which has for its function the perception of a sensation, such for instance as the portion of brain which has for its function the perception of colour. It is evident that the brains of many savage tribes differ from those of civilised man, being more allied to those of the lower animals. It is also a matter of common knowledge that many savages and lower animals have certain perceptions which are far more acute than those of civilised man, whilst others possessed by them are in a more or less rudimentary condition.

Let us first consider the evolution of the colour sense. All the facts which can be gathered from the examination of literature and the study of museums force us to the opinion that the sense of light was developed first, and then the sense of colour. The rays of light which were first distinguished as different were those which present the greatest physical contrast to each other—the red and the violet, red being excited by the largest visible waves and violet by the smallest. Many writers have recognised that violet was seen by the ancients, and those who have adopted the view that red was the first colour seen have endeavoured to reconcile this opinion with the fact that violet was recognised as a colour, by saying that the red in the violet was seen, but there is no more reason for regarding spectral violet as a compound colour than there is for regarding red as such. It is, moreover, much more intelligible to adopt the view that red and violet were first distinguished because they presented the greatest physical contrast to each other, and were on that account first recognised as different. The spectrum or rainbow was, therefore, first seen as grey with a tinge of red at one end and a tinge of violet at the other. This appearance is similar to that degree of the defect just preceding total colour blindness. As the colour sense improved it was not necessary that the rays should be so far apart before a difference was seen, and so the neutral band gradually diminished in size until the two colours met in the centre of the spectrum. A third colour—green—appeared at the junction of the two colours, making three definite points of difference instead of two. As the colour sense improved a fourth colour—yellow—appeared at the fourth point of difference, then blue at the fifth, and then orange at the sixth point of difference. In some exceptionally-gifted individuals a seventh colour is seen, and this occupies the position that we should theoretically expect, namely, the seventh point of difference. I have not yet come across a person who is able to see more than seven definite colours in the spectrum.

It now remains to consider the changes in the brain corresponding to the evolution of the colour sense. The fundamental basis of these changes must be the nervous impulse generated by light. It is obvious that this impulse must contain in itself the physiological basis of both light and colour. Therefore, in the impulse itself, we have the physiological basis of light, and in the quality of the impulse the physiological basis of colour. It will be seen from this basis that there is no reason why we should not see an innumerable series of colours. But this is not the case either with the colour or any other perceptive faculty, so that though in the impulse there is material for unlimited evolution, the actual fact shows that this has not progressed very far. In order to correctly interpret the facts, we have only to assume that the cerebral cell conveys to the mind information concerning the physical stimulus which it receives within the power of perceiving differences possessed by that cell. A simple instance will make clear what I mean. A colour-blind person may see red and yellow correctly as far as light and shade are concerned, but fail to distinguish any difference between them in colour. In this case we have only to assume that the nerve impulses are the same as in the normal sighted, but that the colour-perceiving centre is not able to distinguish between impulses caused by the two kinds of light. Another illustration may be taken from the organ of

hearing. A person possessing what is commonly called a defective musical ear may clearly hear two adjacent notes, but fail to distinguish any difference between them as regards pitch. It is well known that persons differ very much in their ability in this respect. It is obvious that if a certain portion of the visual centre be set apart for the perception of colour, when it was very small and ill-developed it would only be able to perceive differences of considerable magnitude, but as more cells were added to the centre, greater and greater powers of perceiving differences arose. Each nerve cell might at first have been connected with many optic nerve fibres, and the number gradually diminished as evolution proceeded. Then all the degrees of psycho-physical colour blindness were passed through, until the present stage of the development of the colour sense was reached. The same theory applied to the other perceptive centres as, for instance, that for the perception of pitch.

Dr. Lloyd Andriezen said that the primary colours which could be distinguished by man were from four to seven in the spectrum. Personally he could discriminate seven colours. In babies the order of evolution of the colour sense was of a certain type, perhaps "blue" first, and nearly at the same time "red." But at first the child "distinguished" colours only according to the scale of luminosity, the curve for which was given by Frauenhofer. The evolution of a sensory centre always took place in co-operation with a kinæsthetic centre, and this applied to the eye, ear, and skin generally. Dr. Andriezen asked whether cases were known in which, as the result of dissolution of function of the brain the colour sense was abolished *gradatim* in the reverse order to the order of evolution.

Dr. Robert Jones referred to the interesting fact that in racial development the growth of language might throw some light upon the evolution of the various senses. To take the Welsh language, there was only one word, "glas," to describe green, blue, and grey. The grass was "blue" in Welsh, which might point out that the first and most marked visual appreciation of colour was in the blue end of the spectrum. Words were originally invented and used to interpret sensations, and they might infer that, of the spectral colours, that at the blue end gave the most marked mental excitation. He had dressed his children in colour, and thought they preferred their "blue" overalls. Occasionally, however, they knew that there were great and sudden reversals, and Daltonism might have been one of those with a complete misapprehension of red. Dr. Robert Jones referred to the various associations between the senses—hearing, tactile, and motor senses, for instance—and in the evolution of the senses these must be considered in respect to their general utility, and their growth could best be studied, as Dr. Andriezen had stated, in children, which must prove an interesting as well as a necessary study.

Dr. Edridge-Green stated, in reply to Dr. Andriezen, that he found the same development of the colour sense in children, namely, red and violet, being first seen; then green, then yellow, and lastly blue. In reply to Dr. Jones, he stated that in many languages there was or had been only one word for green and blue. In reply to the remarks made by the President, he would observe that the confusion of green and blue was very common. Colour blindness certainly indicated a defective development of a certain centre, but other centres might be in a higher state of development, and would then be compensatory. He had observed in a case of general paralysis the dissolution of the colour sense in the reverse order to that of its evolution.

## THE PHYSICAL BASIS OF MELANCHOLIA.

By John Turner, M.B.,
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I.

In a number of cases of insanity one finds on examining the brain a definite and easily-detected alteration in the pyramidal and giant nerve cells of the cortex. This alteration appears identical with that produced in the hypoglossal and anterior cornual cells of animals by severing their axis cylinders.

Except in traumatic cases, in which the axis cylinder has been separated from the cell (for example, apoplexy), I have only met with this alteration in certain cases of melancholia, or of dementia following melancholia, or in a few cases of dementia of alcoholic origin which rapidly terminate fatally, or finally in some cases of imbecility.

The following case illustrates the effect produced by traumatic injury of the axis cylinders on the cells in the motor regions of the cortex. A woman, aged 59, the subject of chronic mania with grandiose delusions, had a hæmorrhage into the right side of the cerebrum from which she died after fifteen days. The hæmorrhage had in great part destroyed the internal capsule. The giant and pyramidal nerve cells of the motor cortex on the right side were small, pale, and with practically no chromophilic material remaining; the nucleus was shrunken and extremely eccentric; in fact they showed typically the appearances seen in my other cases where the change was advanced, and were identical with the description given of the changes produced in the cells by dividing their axis cylinders. On the other side the cells appeared fairly healthy; they were large, contained abundant chromophilic material, and showed no displacement of the nucleus, affording a striking contrast to the cells of the affected side. Fig. 5 shows a cell from the side of the hæmorrhage and Fig. 4 one from the sound side.

The association of dementia with this form of change in the nerve cells is a striking point, and I originally described it as a "form of dementia associated with an alteration in the nerve cells."[1] But even in this communication allusion was made to the frequency with which melancholia was a precursor in the disease.

It will be pointed out later on that this condition of the nerve cells is capable of being set up in at least two ways: First, by agents having a deleterious action on the axons of the cells in question (traumatism and probably alcohol); and secondly, by agents which do not primarily affect the axons. In this latter class of cases my observations indicate that the melancholic condition almost always met with is an essential factor in setting up the change without the intervention of dementia to account for it.

One of my cases shows this point strikingly. She was a chronic melancholiac of some years duration, always profoundly depressed, and showed great mental distress. She was neat and industrious, and eventually succumbed to an intercurrent bodily affection (diphtheria) without passing into a state of dementia, and the alteration was found affecting almost universally the pyramidal and giant cells of the cortex (see Fig. 6).

The occurrence of this alteration of the cells in melancholia does not rest on the support of my own observations alone. Many years ago Dr. Wiglesworth described identically the same change in similar cases,[2] and quite recently Dr. Adolf Meyer has published several.[3]

I have notes of 23 cases, and the last 6 of these have been diagnosed during life, and the condition verified at the necropsy.

With the exception of traumatic cases, and probably the cases of alcoholic origin, which very likely depend also on a destruction of the axons of the cortical motor cells, I believe that the factor which causes this change is present in all cases of melancholia; that indeed we have here the physical condition necessary for the production of melancholic states.

We do not meet with the alteration in every case of melancholia, because obviously it would only be in states of depression of sufficient persistency and gravity that this factor would be able to bring about a physical alteration in the nerve cells capable of being demonstrated.

Before proceeding to describe in detail the alterations in the nerve cells and the distribution of the change in the nervous system, I will give a short account of a few cases in which it was anticipated during life, and which serve as fairly typical examples of the class of cases in which it may be expected to occur.

The forms of rapid dementia in which it is met with (usually associated with alcohol) have been sufficiently described in my original account in *Brain*.[1]

II.

Case I.—A. E. B., a female, aged 36. Her father had been insane; she was admitted in a state of great depression, from which she had been suffering some months. She kept repeating over and over again that she

was not mad, and in querulous tones ejaculating "I've got my reason I have." She was thin but in fair health, knee-jerks present, pupils equal and reacting normally to light and on accommodation; pulse (sitting) 80; arterial pressure = 130 mm. Hg., palate high, narrow, and V-shaped. She continued very troublesome, at times raving and shouting "Oh, my God, I've got my reason!" but had frequent intervals when she was much better and calmer. A year after admission she permanently deteriorated, and thenceforward had no good intervals; she had to be kept in her room, where she crouched like an animal, with wild aspect, and was filthy in her habits, and most destructive and resistive; she frequently screamed and talked in whining tones, but even then, when she had the aspect and manners of one absolutely demented, she could occasionally answer questions rationally, and displayed a good memory, although in these lucid intervals she frequently interlarded her talk with ejaculations, in a whining tone, that she had her reason and was not mad. She gradually got more and more emaciated, and died after fourteen months residence. At the necropsy no evident changes were noted in the viscera to account for death, the arteries were healthy, the kidneys rather tough; the brain, beyond slight opacity of the meninges, showed no naked-eye changes. The brain only was examined microscopically.

Case II.—E. E., a widow, aged 40. She had been melancholic seven or eight months when admitted, and intemperate in drink for the last few years. On admission she was thin, had an earthy complexion and clammy skin, knee-jerks exaggerated, pupils equal (they only reacted slightly to light), pulse 94, arterial pressure = 140 mm. Hg. She was restless and dismal, with hallucinations of hearing and delusions of persecution; she got worse, and a month later was agitated, constantly rocking herself to and fro and moaning, and knocking her head against the wall; she tried to strangle herself once, and she constantly heard her daughter's voice calling to her from the ward ventilators. She began to refuse food about a month before death, and was on several occasions fed through the nasal tube. Her temperature was always low. The necropsy showed pneumonia and pleurisy of right lung; the aorta was atheromatous and the kidneys granular. Beyond some atrophy about the vertex of the brain and slight dilatation of the lateral ventricles this organ appeared natural. The brain, medulla oblongata, spinal cord, and posterior spinal ganglia were examined microscopically.

Case III.—E. D., a female of intemperate habits, was first admitted when 38 years old, suffering from melancholia with agitation, and requiring forcible feeding. This attack was of only a few months duration, and she was discharged recovered, and readmitted eight years later again suffering from melancholia. She remained in a year and was again discharged recovered. Between this and her last attack, representing an interval of six years, she had two attacks of melancholia with great agitation, from both of which she got better. The final attack only lasted two months. She was when admitted fairly nourished, with exaggerated knee-jerks; equal pupils which reacted normally to light and on accommodation; pulse 116; arterial pressure = 150 mm. Hg. (a similar pressure was registered three years previously). There was considerable rigidity of her limbs. She was acutely depressed, with harassed aspect, and kept uttering in a doleful voice little sentences. She continued a miserable dejected-looking creature, getting very little sleep; became bedridden and lay huddled up and very rigid, groaning when interfered with, and died aged 54. At the necropsy the body was poorly nourished. She had colitis. The other abdominal and thoracic viscera were fairly healthy, and the brain presented a fairly normal appearance. The brain only was examined microscopically.

Case IV.—E. S., female, married seven years, no child or miscarriage. The facts certifying to her insanity stated that she had a wild look and kept jumping out of bed saying she was dead, and wanted to go and rot on the beach. No history of alcohol. On admission she was fairly nourished, knee-jerks only slightly marked; pupils equal and reacting fairly to light and on accommodation; pulse (sitting) 95, irregular; arterial pressure = 160 mm. Hg. Tongue dry and brown down the middle, not tremulous. Mentally she was very depressed, had a perplexed worried aspect; spoke reluctantly and in low muttering tones; said she had no insides, that they (her insides) were all running away from her causing a dreadfully bad smell, and that all the flies came to her in consequence; she was very troublesome for the next two or three months; at first restless, flinging herself about on the floor and there lying; refusing food; then became inanimate and would do nothing voluntarily; would not dress herself; stood about with rigid limbs, and considerable force was needed to make her sit down, and then often she only leaned back against the chair without bending her thighs. She became demented, dirty in habits, and very greedy; was in the asylum twenty months, for the last twelve of which she showed no rigidity of her limbs and gave no trouble beyond that required in attending to her and keeping her clean. She never spoke during this time till the day she died, when she said a few sentences quite rationally. She died rather suddenly, aged 52. At the necropsy the body was fairly nourished; there was nothing special to note about the thoracic and abdominal viscera beyond old adhesions of pleura and œdema of lungs. The veins and sinuses of the dura were engorged, but the brain and its meninges and the vessels appeared normal. In this case the brain, medulla oblongata, spinal cord, and posterior spinal ganglia were examined microscopically.

## III.

I shall now give an account of the changes noted in: (1) The cells of the cortex; (2) of the medulla oblongata; (3) of the cord; (4) of the posterior spinal ganglia; and finally (5) of the degenerations occasionally met with in the tracts of the spinal cord, and briefly refer to the condition of the tangential fibres of the cortex.

As the main tenour of this paper deals with a change found in the cells, no reference will be made to the other tissues of the nervous system beyond mentioning that very generally there is a thickening of the walls of the arterioles of the cortex and cord, and sometimes beyond the mere thickening there is a hyaline degeneration of the walls. This thickening was referred to in my original account[5], and has very frequently been noticed in the later cases. In connection with this it is interesting to compare the frequently high arterial pressure obtained.

Adolf Meyer[3] did not observe this change in the cases he records.

### 1. Cortex.

This was examined, of course, in all the cases, as on the condition of the cells found here the diagnosis of the case rested.

Pieces of tissue were taken from the frontal and occipital regions, and from the topmost part of the ascending frontal convolution. There is no need to enter into elaborate details of the cell changes, as they are probably familiar to most workers in this field. Briefly stated, it appears to begin with swelling of the cell body, so that it fits closely into its pericellular space. The nucleus very early leaves its central position in the cell and takes up a peripheral site, and is at first plump and possibly enlarged (Fig. 1), but later on usually gets smaller and shrivels up, so that its border is puckered, and very frequently at this stage one side of it shows a broad, darkly stained mass of chromophilic material (Fig. 2). Sometimes, however, even in quite late stages it is plump and regular in outline, and not manifestly shrunken (Fig. 3).

In the early stages the chromophilic matter begins to disintegrate in the interior parts of the cell and to break up into fine granules, so that before long the central part of the cell has a pale, blurred, or washed-out appearance, while the peripheral part is still darkly stained owing to the presence of big blocks of chromophilic material (Fig. 7). Later on every particle of this disappears, and the cell now is generally shrunken, of a globose or angular shape, stained of a very pale colour, and very frequently contains a considerable amount of pale yellow pigment: its nucleus no longer with a definite or dark border, sometimes bulges out beyond the normal contour of the cell body (Figs. 3 and 5), or may be situated partially or entirely in the origin of a stout dendrite or up in the apex.

Description of Figures.

Fig. 1.—A giant cell showing early changes, from a case of acute melancholia. The central mass of chromophilic material is broken up into fine granules; the nucleus, large and plump, is considerably displaced. The peripheral Nissl bodies are still well formed. The axis cylinder with its cone of origin is seen running from the lower border of the cell (× 600).

Fig. 2.—More advanced stage of the change. The chromophilic material forms a darkly-stained border to the cell and a broad band at one side of the nucleus. No separate Nissl granules are seen. Both cells shown are considerably encroached upon by invading nuclei. From Case II (× 600).

Figs. 3 and 5.—Two cells showing very advanced stage of the change with practically an entire absence of chromophilic material. In Fig. 3 the nucleus is large and bulges very perceptibly from the side of the cell body, and its capsule seems partially destroyed; in Fig. 5, although much shrunken, it still protrudes from the side of the cell. The pale portion of both cells has a border of light yellow pigment. Fig. 3 is from Case I, and Fig. 5 from the case of cerebral hæmorrhage referred to in the text (× 600).

Fig. 4.—From the sound hemisphere of the same case as Fig. 5, showing a fairly healthy cell as a contrast. Whilst nearly all the large cells on the hæmorrhagic side were similar in appearance to Fig 5, not one of this character was seen on the sound side (× 600).

Fig. 6.—Two cells showing advanced change from a case of prolonged melancholia which terminated through an intercurrent bodily affection without passing into dementia. Practically all the large cells on both sides of the cerebrum in the parts examined were of similar character. Note the very irregular outline of the nucleus in the left-hand cell (× 600).

Fig. 7.—Giant cell in an advanced stage of the change. The nucleus, although not shrivelled in outline, is small in proportion to the size of the cell. Contrast it with that in Fig. 1 (× 600).

Although, as mentioned previously (see page 1244), the cell may arrive at this advanced stage of the change as early as fifteen days after its axon has been destroyed by a hæmorrhage, yet when, as is suggested in this paper, the cause is not due to any direct injury to its axon, then apparently a much longer time must elapse before such advanced changes appear, even years. A few cells are generally to be seen, especially in advanced cases, which show a peculiar whorl-like and very regular arrangement of the chromophilic material: these are termed by Meyer "vortex cells" (Fig. 8).

I have given in my description the alterations as observed in the giant and large pyramidal cells, although the majority, or at any rate a large number, of the pyramidal cells from below the second layer show similar changes. The reason



Fig. 1.



Fig. 2.



Fig. 3.

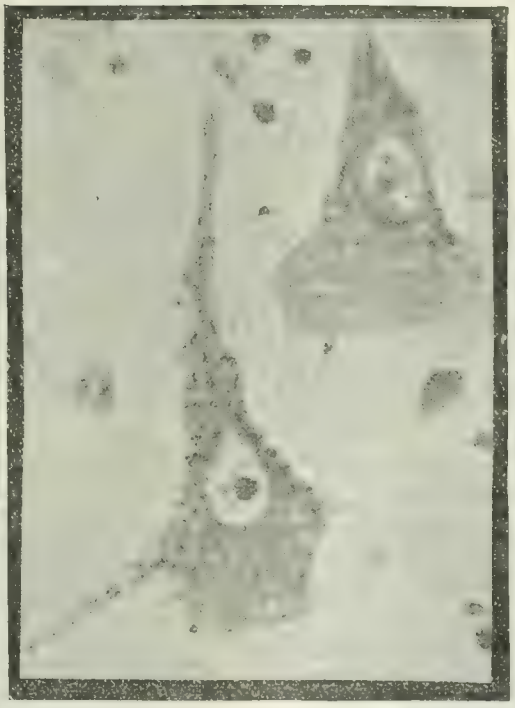


Fig. 4.



Fig. 5.

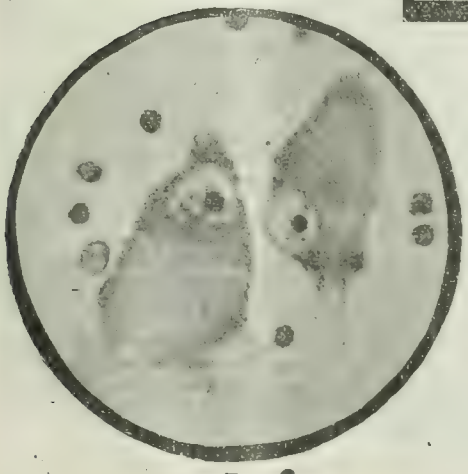


Fig. 6.



Fig. 7.

why I have done this is because the alterations are much more distinctly seen in the larger elements. The changes described have affected all the regions examined, but are most clearly marked, and affect a larger proportion of cells in the ascending frontal: in a few instances the frontal lobes did not decidedly show the change, and the same may be said in regard to the occipital lobes, with the exception that the very large cells met with here were almost always implicated.

### 2. MEDULLA OBLONGATA.

Sections were taken at the level of the middle of the olivary body anteriorly, and just above the calamus scriptorius posteriorly, in 9 of the cases. In all these the cells of the hypoglossal nucleus appeared normal, or, at any rate, showed no appearance similar to that produced by cutting through the axon.

The cells of the vagus, lateral, ambiguous, cuneate, and gracile nuclei in all the 9 cases presented appearances similar to the cells of the cortex. The nucleus was shrunken and displaced, and frequently showed a broad dark band of chromophilic material on one side. The centre of the cell was pale and with a blurred appearance. If any chromophilic material remained, it was at the very periphery of the cell, which in consequence stained deeply.

Although the alteration in these cells is very universal, involving nearly all in the nuclei mentioned, yet I do not intend to lay much stress on the relation it may have to the cortical change, because, in the majority of medullas similarly stained which I have examined, and which include specimens from both acute and chronic forms of insanity, a similar condition has very frequently been met with.

### 3. SPINAL-CORD CELLS.

Seven cases were examined and sections taken from the cervical enlargement, mid-dorsal region, and lumbar enlargement. In a fairly recent case (No. 11) the cells of the anterior horn in the cervical enlargement were mostly normal; a very few—and apparently more on one side than the other—showed the change. In the dorsal region a similar condition was noted, and in the lumbar the cells were all practically normal. As regards Clarke's column, this also appeared healthy, except that a few cells in the region corresponding to this column in the lumbar enlargement showed the change.

In another case a similar condition existed in respect to the anterior horn cells, but in Clarke's column a few showed slight changes.

In a third case (No. 4) the cells of the anterior horn were practically unaffected in all three regions examined; a group in the lateral horn consisting of small cells showed the change and the majority of those of Clarke's column were distinctly affected.

In a fourth case, whose cortical cells were in a fairly early stage of the alteration, there was practically no appearance of the change in the cells of the cord beyond a few in the position of Clarke's column in the cervical and lumbar region and a few in the lateral group in the dorsal region.

In the remaining three cases, all in an advanced stage of the disease, the cells of the anterior horn at all three levels examined were more or less affected. In one of these cases the change was equally marked in the higher and lower levels: in another it was chiefly the cervical region which was affected; and in a third chiefly the dorsal. In all these cases the cells of Clarke's column showed the change in a marked degree, and very few were unaffected. (Fig. 9.)

### 4. POSTERIOR-SPINAL GANGLIA.

My observations on these bodies are too few to carry much weight. I have examined one or two of the ganglia at different levels in seven cases. To speak with any degree of authority in the matter it would be necessary to take sections from many of these bodies, and as their number is large and they are tedious to extract and troublesome to cut, I have rather shirked the job. However, such positive changes as I have noticed I will mention.

In the normal posterior-spinal ganglion two kinds of cell are met with—large and small. The latter are denser, and stain more deeply with toluidin or methylene blue, but present otherwise in the main similar details of structure as the large. The large cells are pale; the chromophilic material is in the form of very fine granules, which, however, near the periphery of the cell are arranged as a darker ring formed of larger flakes. The nucleus is central, round or oval, with a clearly-defined border and with sparsely granular contents, among which is a very deeply-stained, round nucleolus. These characteristics are clearly shown in the large cell of Fig. 11.

I have met with very few large cells showing changes similar to those set up after cutting through the axis cylinder. Amongst the smaller variety a greater number were met with but still only comparatively few. The only notable change found has been the presence of a considerable number of rather small, darkly-stained, shrivelled cells, showing no distinct chromophilic material, and appearing as a mere dark shapeless mass with or without pigment, lying in a relatively large epithelial space. It is difficult to believe that such cells are functionally active. Of course, to some extent the appearances may be produced during the passage of the tissue through the different reagents required by the method; still, as these dark and shrivelled cells lie quite close to large pale, well-formed cells, it is evident that their protoplasm must have undergone some change for it to be so differently affected to that of the neighbouring cells. These dark (pyknomorphic) cells would, I suppose, be regarded according to Nissl's view as being in a state of functional inactivity. The proportion of them was in one early case in the ganglia examined at 30 to 35 per cent. of the total cells. In a case of advanced tabes in which I examined some of the posterior spinal ganglia, they bore an even larger proportion to the total than in the case just mentioned.

It is interesting to note in connection with this alteration in the cells of the posterior spinal ganglia, the very general implication of the cells of Clarke's column already alluded to, for these latter cells in all probability receive their synapses from the former. It does not seems unlikely that the affected cells in the two regions are related and that those of Clarke's column no longer receiving their usual impulses, there is produced on them the same effect as if the posterior roots had been severed (*vide* Warrington's experiments 4).

Not uncommonly a marked degree of pigmentation exists, and this sometimes in place of the usual golden colour is dark brown and with toluidin blue stains nearly black.

DESCRIPTION OF FIGURES.

Fig. 8.—Vortex cell, as described by Meyer. Note the curious whorl-like arrangement of the Nissl bodies and the enormous accumulation of chromophilic material about the nucleus (× 600).

Fig. 9.—Two cells from Clarke's column showing the characteristic change (× 600).

Figs. 10 and 12.—Transverse and longitudinal sections of the crossed pyramidal tract from the mid-dorsal region in an advanced case to show degeneration of the myelin sheath (× 100).

Fig. 11.—Posterior spinal ganglion from Case 11, showing a large pale, apparently normal cell, and darkly-stained, shrunken cells (× 400).

### 5. SPINAL CORD TRACTS.

Transverse and longitudinal sections were examined after staining in a modification of Marchi's method in seven cases. I may say at once that except in cases which showed very advanced and widespread changes in the cortical cells no degeneration of the myelin sheaths could be discovered in any of the tracts of the cord at the level of the mid-dorsal region or the cervical and lumbar enlargements. In the advanced cases degeneration made its appearance in the crossed pyramidal tracts and was generally more pronounced in the lower parts of the cord. This was noticeably so in one case of which figures are given (Figs. 10 and 12) showing the degeneration in the mid-dorsal region in a transverse and a longitudinal section.

In another case not so advanced the degeneration was much less pronounced and appeared most marked in the cervical region. In a third only one or two scattered fibres in the lumbar region had suffered.

Apparently while the cortical cells retain any of their chromophilic material, no degeneration of the myelin sheath appears in their axons, and it is to be observed that this degeneration shows itself chiefly at first in those outlying parts of the cell most removed from the body.

### 6. TANGENTIAL FIBRES.

In six of the cases the tangential system fibres was studied

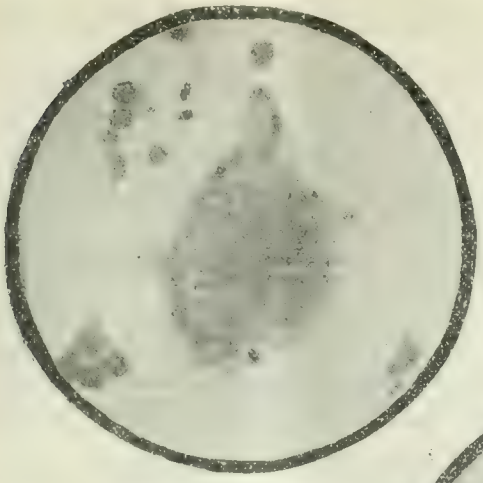


FIG. 8



FIG. 9

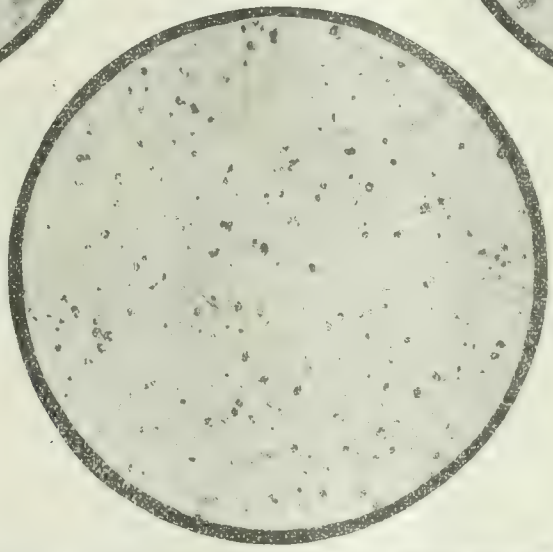


FIG. 10

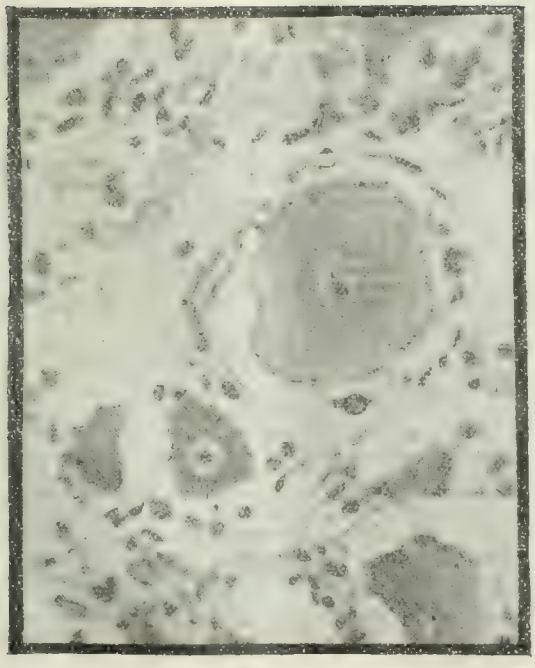


FIG. 11

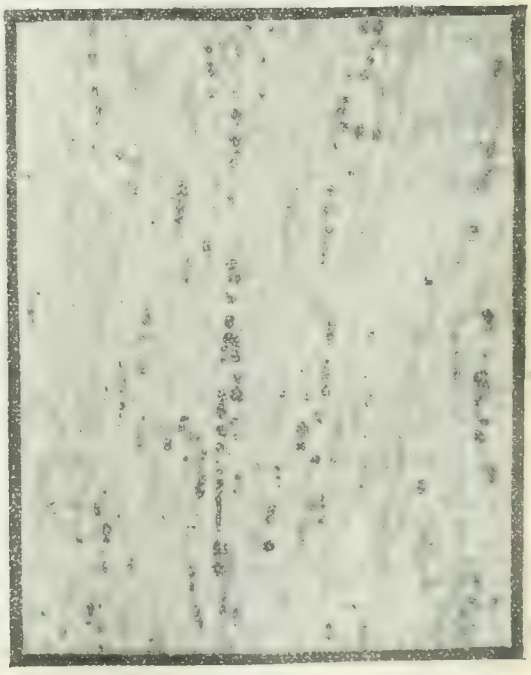


FIG. 12

in surface sections stained in osmic acid. Pieces were taken from the frontal, ascending frontal, and occipital lobes of each side.

This method, which stains the myelin sheath, is not adapted for showing alterations in the number of tangential fibres in the two former regions, because here the majority of these fibres have no myelin sheath.

In the ascending frontal region, however, where they exist normally as a very dense plexus of both coarse and exceedingly fine myelinated fibres, it was found that in all the six cases, although there was very likely some diminution, especially of the finer fibres, yet they still persisted in very considerable number.

### 7. Summary of Pathological Findings.

These observations on the distribution of the change appear to indicate pretty clearly that the cause which brings it about is not a general one operating on all parts of the nervous system—for example, a pernicious state of the blood; otherwise we should expect to find all the cells of a similar type participating equally; but, as has been shown, they do not. The cells of the hypoglossal nuclei were not affected in any of the cases, and the anterior cornual cells only in advanced cases.

Another interesting point brought out is that the change early affects the afferent cells, and notably those of Clarke's column. And, finally, we find that although at first the efferent tracts of the cord are unaffected, that ultimately they begin to degenerate, and apparently this degeneration starts in those outlying parts of the cell furthest removed from its body.

## IV.

Having now given a description of the facts, I pass to the interpretation that I put upon them.

It has previously been mentioned that the changes described are identical with those produced in cells by severance of their axis cylinders. But it has been shown by Warrington[4] that similar changes are capable of being set up in quite another way. If the posterior root of the spinal cord be divided, the cells of Clarke's column take on changes similar to those produced by division of the axis cylinder of a cell. And in this case he assumes that the change is caused by depriving the cells of the stimuli which normally pass to them.

Now it is obvious from what has been said that in the cases I am dealing with a separation of the continuity of the cell and its axis cylinder is out of the question; for, as I have shown, they remain unaffected long after the change is first manifested in the cells; and so, as we know of no third means by which this change can be brought about, I take it that the explanation offered by Warrington to account for the changes in his experimental cases will apply here, and that the condition of the pyramidal and giant cells found in these cases of melancholia is brought about by depriving them of the afferent impulses which normally pass to them.

I have suggested (5, p. 1246) that melancholic states depend upon disorder of the afferent mechanism of the nervous system, resulting in a blocking or annulling of the usual afferent channels—that is, that it is a dissolution affecting the sensory side of the nervous reflex arc; whilst maniacal states, on the other hand, depend on disorder of the highest efferent centres—that is, represent dissolutions affecting the motor side.

And I think that, apart from the theoretical aspect of the question and clinical observation, from both of which sources much can be brought forward in its support, that the observations here recorded yield, when read by the light of Warrington's experiments, evidence also distinctly in favour of this view.

Dr. Adolf Meyer[3] on the strength of certain cases where no melancholic symptoms were noted, but in which a history of alcoholism existed, considers my contention of the relation of melancholia to this alteration in the cells as untenable. But this writer, although he alludes to the results of Warrington and others in producing a similar change without interference with the axons of the cells in question, gives practically no consideration to other means of bringing the alteration about than by destruction of the axons. Now, I contend that the examination of the axons in the spinal cord shows that in my cases they are only secondarily affected, and Dr. Meyer's very failure to obtain evidence of adequate degeneration in the axons in his non-alcoholic cases is an indication here also that the cause was not a primary lesion of this part of the cell.

It seems probable that the cases of alcoholic origin and those following obvious distruction of the axons (as by hæmorrhage) are both due to a similar cause, namely, direct interference with the axon, and must be separated from those cases in which no initial lesion of the axon can be demonstrated.

We know that alcohol exerts a toxic action on the axons of the fore horn cells, and not unlikely under certain conditions it may similarly affect the axons of higher level cells, in which case we should expect it to produce in these cells the alteration which Meyer terms (in some cases erroneously, I think) "axonal reaction."

Meyer out of 200 necropsies collected 8 cases showing this change, and all these, with the exception of 2 of alcoholic origin, were associated on the mental side with melancholia. I have examined I suppose nearly a similar number of cases, and only find, with the exceptions already stated, that it occurs in melancholic states. Wiglesworth's 2 cases were both forms of melancholia.

With so much evidence from different sources it seems only reasonable to assume that there is a definite relation between the mental condition and the cell alteration.

A few words as regards the clinical aspect of the question. The descriptions of the symptoms of melancholia, as drawn by standard writers, from Griesinger to Bevan Lewis, afford numerous instances which show a defect in or blocking of the afferent side of the nervous system. I do not wish to contend that melancholic states are the outcome necessarily of the peripheral sensory defect so often manifested in these conditions, but that these latter and the peripheral defect both depend on a blocking of the nervous channels somewhere between centre and periphery, and probably much more frequently at or near the centre than at the periphery.

Griesinger[6] refers to the cases of transient and persistent anæsthesia sometimes seen in states of melancholia and dementia, and (p. 82) to the mutilations which may occur in melancholia without pain, and (p. 247) he says: "In the more advanced degrees (of melancholia) there generally exists anæsthesia, sometimes partial, sometimes general, of the surface of the skin, and a condition of the higher organs of sense whereby the impressions of sight and of hearing are rendered quite indistinct and confused, and frequently so perceived as if they came from a distance."

He also quotes some descriptions given by patients themselves of their feelings which are highly suggestive: thus (p. 214) a hypochondriac mentions "a diminution of sensibility over the whole surface of my body.....it seems I never actually reach the objects that I touch"; and another (p. 248) says, "My sensations were too feeble to call forth an exercise of will."

Griesinger also makes a statement in accordance with the proposition that maniacal states depend on a dissolution affecting the efferent side of the central nervous system; he says (p. 273): "The fundamental affection in the maniacal states consist chiefly in a derangement of the motory side of the soul life, the effort, and of such a nature, that the latter having become free, unrestrained, and considerably increased, the individual consequently feels impelled to give some manifestation of his powers."

Bevan Lewis[7] refers to the depression of spirits a well-marked phenomenon in suddenly induced deafness. It is true that he instances this depression "as the expression of starvation of the nerve cells deprived of their normal ingoing currents," whilst on my hypothesis it would rather depend on uneasy feelings accompanying activity in nerve cells in which energy is accumulating, but which, owing to lack of sensory stimuli, they cannot get rid of—cells which may be familiarly described as overfed and underworked. He regards the "essence of mental pain" as "pent-up activity"; but further (p. 160) that "all grades of mental pain are dependent on over-action on the impressive and restricted activity on the expressive plane."

In face of the admitted frequency of anæsthesia in melancholia, I am inclined to doubt the over-action on the impressive plane; but with the pent-up activity I am fully in accord.

Apparently Bevan Lewis makes his barrier to the pent-up activity on the far side as it were of the afferent centres, whereas I place it on the near side—somewhere in the afferent channels themselves, and look upon this pent-up activity as the expression of efferent cells deprived of their normal ingoing (discharging) stimuli.

An objection may be raised that this is to endow motor cells—or at any rate, efferent stations—with feeling: so it is in a sense, but I think, in the present very limited state of our knowledge, to discuss the question whether feelings are correlated with action in one or another class of cells or the association tracts between them is an entirely profitless task.

I cannot do better than quote Dr. Mercier[8] on the limits of our knowledge in this matter:

> As on the sensory or ingoing side so on the motor or outgoing side: the mental state does not arise save only when the nervous process is set agoing. When a certain nerve centre discharges it stimulates certain muscles in such a way as to produce a movement of the arm. That is the bodily process. Simultaneously with this discharge of the nerve centre, and with this movement of the arm, an idea of moving the arm arises in the mind. The shadow of the bodily movement is thrown upon the screen of the mind, and we know that we are moving. When the centre energises the idea arises, and that is all we know.

Of late years Dr. Stoddart[9] has drawn attention to the very general occurrence of rigidity in melancholia, which I think can be efficiently explained by supposing that the higher motor cells in this affection are in a highly unstable irritable condition, on account of the lack of ingoing stimuli by which they are normally discharged, these stimuli coming in large measure through the channels of the special senses. In this state they readily respond to any stimulus which can reach them; which, I believe, is supplied in the cases under consideration along with the passive movements made by the observer in evoking the rigidity. The rigidity in these cases would often, I think, more correctly be designated as resistiveness, for it is very frequently only on the application of the stimulus that the muscles contract, and sudden unexpected movements made by the observer on the patient evoke much less resistance than prolonged movements.

In conclusion, the assumption that melancholic states depend on a slighter reduction in the highest nervous centres than maniacal—which is, I believe, the general conception of the physical processes underlying these conditions—does not satisfactorily meet the facts of the case, for although undoubtedly most mental affections begin with depression, yet they are by no means less grave than maniacal conditions. In my experience melancholia more frequently than any other class of mental disorders, with the exception, perhaps, of some cases of general paralysis, tends in comparatively short periods to pass into dementia, and this passage often shows no intervening phase of mania as we should expect if the assumption just referred to was correct.


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## THE MODERN TREATMENT OF THE INSANE.


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I am venturing to bring this paper before you with a very genuine sense of my own shortcomings, but my excuse must be that the whole of my life has been passed in close connection with the well-to-do insane; and if I say little about the public side, and confine myself almost entirely to the private side of our speciality, it is not from want of interest in those truly great and well-organised institutions, the public asylums and registered hospitals of England, but because my whole existence and interests have been bound up in, and are still bound up in, private work. As a representative of a third generation of alienists I am old enough to remember a great many changes, and I have a distinct recollection of my first real sense of responsibility when in the year 1863, at the mature age of 7, I was requested by my father to take care of a quiet gentleman for a few moments in his absence.

First and foremost I would like to impress upon the meeting that anything I may say is in no sense whatever the outcome of any personal feeling, but only directed against certain conditions of things that actually exist. My own lot is cast in pleasant places, and my only wish is to look at facts. My paper is written without reference to any book except the Blue Books of the Commissioners in Lunacy, and I wish to give you two things that will give you a line in my pleadings; these are the two questions, "Are we better than our fathers?" and "Are we working fairly and squarely and doing our best for the insane?" A little occasional truth, as Lord Rosebery said, is an excellent thing.

That wonderful entity, the British Public, is still grossly in darkness and ignorance on many things that concern the insane and the study of insanity. In the first place, it will insist that everybody knows everything about it, and that anyone can recognise and anyone treat a "lunatic," and in the second place there still exist sensation-mongering people who, instead of studying the subject fairly, wilfully misguide and misinform the public, and try and persuade them, because they find it pays, that there is little or no difference between the things that are now and the things that were fifty and more years ago. Nothing seems too unfair, nothing too cruel to put down, and it is only a short time since that I read a story in which a "mad doctor" is described as attempting to drive a beautiful girl mad by putting her into an iron case containing a female chronic maniacal patient and a male "keeper" of gigantic stature, who controlled things, inside the cage, with a whip. That such things, and many like them, should be published is a shameful and a disgraceful scandal, and one that there is no excuse for.

To begin at the beginning. It is a strange anomaly that the Lunacy Acts, over which so much patient care has been exercised, and of which the object is solely the protection, registration, and classification of the insane, seemed to be regarded by a large section of the community with so much mistrust. But such is undoubtedly the case, and a little examination may perhaps reveal the cause. We all know the history of the times which led to the labours of Pinel, Conolly, Gardiner Hill, Tuke, Charlesworth, and those other great and good men, which gave rise to the first Lunacy Acts. These Acts, directed as they were against a scandal, and persons who were undeniably guilty of deeds that it would be lenient to call criminal, and against horrors of the most shameful and degrading kind, were eminently and designedly from the first repressive Acts, and this old leaven of repression still lurks in the modern, most carefully compiled, legal regulations. We who legitimately and lawfully treat the insane are suffering for the sins of those who went before us. Suspicion, the determination to make proceedings as difficult as possible, are still to be traced; and however right it may be to protect by every possible means those who cannot protect themselves, it would seem that the Acts overreach themselves by going too far. In themselves they are excellent, and the administrators are just and upright men, who do their responsible, exacting, and often dangerous duty well, but the fact remains that Lord Chancellor after Lord Chancellor approaches the subject in the same spirit, and refuses to see what is coming. Do not we know and see the results of this? Is not it a fact that things are driven below the surface instead of being remedied? Am I going beyond the truth when I say that there is no legislative enactment that is so coolly evaded, or so wilfully, cheerfully, and knowingly avoided as the Lunacy Act? Are not the words "known to the Commissioners" which appear in the statistics an indication that the registration of the insane in England is far from complete? So much is required that when people are told what is the legal procedure, they say, "Cannot we do anything short of that—is all this quite unavoidable?" and so on, and will do almost anything to keep away from it unless actually forced to.

The horrors reported almost daily in our public prints surely point to the same thing. We see people ready enough to rush in a body to the coroner's court after a tragedy has taken place, to tell what they have noticed long before, but have not had courage enough to face the responsibility of interfering with. I grant that the right moment to interfere is dreadfully difficult to decide, and I have personal reasons for knowing this, but I do think that the unsympathetic condi-

tions under which action is placed are somewhat to blame for many of the dangerous delays that take place with such terrible results. There must be great want of confidence somewhere, and though future legislation seems to promise some improvement, there is still that tendency to increase rather than to lessen the difficulty of dealing with cases of suspected disorder early enough, and what can be the end of it all one cannot quite foresee.

The ideal of our modern legislative method is the registration and supervision of all the insane under five headings, that is, in (1) public asylums, (2) registered hospitals, (3) private asylums (and here there might be greater distinction, especially as regards statistics, made between the so-called private asylums taking pauper patients, and those taking private patients only), (4) single care, (5) Chancery patients, and in this way some 106,000 souls are accounted for, and one cannot but feel satisfied that a great deal is done for the care of the mentally afflicted. The asylums of England will compare with any in the civilised world, both public and private. Carefully governed as they mainly are by capable, energetic, and educated men, with painstaking, willing, and sympathetic subordinates, they point to a magnificent progress in the closing years of a century, such as the great reformers hardly dared to dream of. One wonders what their feelings would be could they revisit the earth and see what has been done.

That it should come to pass that other means are, even at the greatest inconvenience, tried before people avail themselves of them, and that cases are so often not brought to us early enough, is not, I make bold to say, our fault, but the outcome of many different causes, in which prejudice, unfairness, and erroneous report bear their share, but the fact that many acute cases are brought, and that such things are said to us as: "We wish we had sent him before," "we did not know there were such places," "we were advised to try this or that first," is distinctly comforting, and counterbalances the feeling of soreness that comes over us sometimes when some halfpenny print or some haughty politician talks of a "madhouse," or some fifty-years-old story is raked up afresh.

A word on single patients, or patients in single care. The Act of 1891 was in every way framed to encourage this method. The last return (1900) is 441. Personally, under reservation, I think single care an excellent way of arranging for the maintenance of certain of the insane, and I know from many happy examples how contented many of them are, and with what devotion they are cared for; but, Mr. President, I would ask one question, Do the figures 441 anything like represent the number of cases kept virtually under restraint? It is perfectly right that fit and proper persons—and by these I mean persons such as medical men with some knowledge of the subject—should have the charge of certain picked cases; and there can be no doubt as to the propriety of certain of the chronically insane and harmless cases being received by careful laymen, especially if they are under certificates, notified to, and visited by the Commissioners; but there can be no doubt that there are many people maintained in all kinds of places "unknown to the Commissioners"—unknown, therefore, to the law, and unregistered in any way, and under the charge of persons whose qualifications for undertaking this are of the smallest. One sometimes finds oneself wondering why more scandals do not arise, for in the event of any exacerbation of symptoms the small establishment has not the power of at once providing extra assistance, and the element of fear coming in must often lead to the employment of mechanical restraint and coercion, and a recrudescence of what I may perhaps be allowed to call a questionable propriety of method in treating the case. Then, again, the houses may be utterly inadequate; they may be small and inconvenient, in populous neighbourhoods, and provide no proper means of exercise. The people who do these things cannot be expected to care whether the law is complied with or not, nor do statistics trouble them; and it is grievous to have to add that people who ought to know better actually encourage this state of things by offering higher remuneration to such people for the risk they run by setting the law at defiance.

I pass over for the present that interesting problem of modern times, the "uncertifiable patient," and come now to a portion of my subject which requires the most careful and delicate handling, but which cannot be overlooked by anyone who has at heart the welfare of the insane. Briefly stated it is this: Whatever be the cause, there is growing up among us a very grave condition of things which we who loyally submit to the enactments of our Legislature ought to begin to consider. There is a tendency so to gloss over what is in reality actual insanity and unsoundness of mind by calling it by euphemistic epithets that really one sometimes doubts the correctness of one's own diagnosis. The words "borderland," "hystero-mania," and "neurasthenia" are stretched to such an extent that the phenomenon arises of one man using a certain treatment or course of treatment under strict supervision and with a really legal responsibility, and another using almost the identically same treatment and being absolutely free from all restriction if he chooses to take the risk, with no "casebook" to keep, no special reports to make, and no account to give of the remuneration that he receives.

People like to be told—and one cannot but sympathise with them to some extent—that the case of their friend or relative is simply one of nervous disorder, and under this idea they consent to allow what is virtually restraint, which cannot be called legal, to be applied to them. I think this is greatly due to the causes I have mentioned, combined with a reluctance to believe the worst, and I do think that, unless absolute fairness is exercised all round, a danger that is constantly increasing will go on increasing still more.

The last ten or twelve years have brought many changes, and among these not the least noticeable is the increase in the number of medical men who are, as it were, forced by the persuasion of those who are reluctant to believe what they fear, and who have that terrible dread of "certification" before them, to meet and to treat all kinds and varieties of cases in the exercise of their perfectly legitimate and useful speciality of workers in the land of nervous disorder. Let me not be misunderstood. Many of these most eminent men are kind personal friends of my own, and I firmly believe that they honestly and absolutely wish and try to keep the balance between advanced and serious nervous disorder and actual insanity, but there are others, and when one hears of this great array of nursing homes, rest houses, nerve homes, and the other establishments which openly exist for the purpose of someone making a livelihood out of the care of their inmates, when one hears that it is allowable to take patients and forbid them to leave their beds for months together, to keep their relatives away from them, and to cause them to submit themselves to the sway of nurses and companions, one cannot help asking oneself sometimes where the liberty of the subject is considered, and what real difference there is between this and actual asylum treatment, except that in the one case the patient is not known to, or visited by, the proper authorities, and in the other he is. I do not say that there is no "neurasthenia," that there is no "borderland." This is an age of nerves, and I perfectly well recognise that there are cases that can be treated by their own consent, and are successfully treated by commonsense treatment; but I submit that there are cases to which this does not apply; and I have personal knowledge of cases that have been called and treated as "nerve cases" that have been without doubt cases that ought to have been honestly and straightforwardly described as cases of insanity, and certified—that is, registered and notified as such. Our law virtually says that no person of mature age shall be constrained to submit his will and his liberty to anyone else unless he be of unsound mind, and so notified; and the whole aim and object of the lunacy administration is to see that this register is as complete as possible, else what is the use of their attempting to frame statistics? So long as this lack of confidence in the authorities exists, so long as the community considers it better to resist and deceive them instead of accepting their help, so long will this state of things continue. The remedy, of course, largely consists in the increase of the sense of fairness in all concerned, and in the actual experience of those who treat the patients on the outskirts of the line of demarcation. Our work should not be antagonistic, and I sincerely trust that it may never be, nor do I believe it really is, and though I fear my words may be misconstrued, I can only add that I trust that they may not be. I know, none better, the tremendous personal equation that underlies all

diagnosis of insanity. Difficulties there are everywhere in the study of it; there are people who deny that anyone can have more accurate knowledge of it than the ordinary man in the street, and though it can never be an exact science, and though twelve intelligent jurymen often gravely decide upon it, I maintain that experience does teach us a great deal, and I also maintain that on whichever side of the border line a man decides to work he should before starting know not only a little but a good deal about both sides. Calling himself a "neuropath" and starting a "home" is not sufficient.

Gentlemen, in this new century that is upon us there is a great deal to be done, a great deal to be taught, and a great deal to be learned about insanity. I cannot help thinking that we may even live to see many changes, such as additions to the number of the Commissioners, the appointment of trained medical assessors instead of untrained magistrates, the six months probation system, and many alterations in the Lunacy Act which will bring it more into sympathy with the public it is made to benefit. Prophylaxis is in its infancy, but it is a sturdy infant and one that ought to grow up well. Our aim should be to teach the nation that insanity is not the simple thing it seems. The young should be taught plainly that inherent in themselves they have the power of making or marring their own lives by their own folly, and that without redemption if they go too far. Let us preach Dr. Coupland's dictum that Nature never forgives an injury, rather than take up a happy-go-lucky "everybody-does-it" attitude. Above all, I beseech the medical profession generally to place the study of insanity on a higher plane they do at present, so that a clearer comprehension of the beginnings, or, to borrow a phrase from chess, a closer study of the "openings" and a greater readiness to deal with them, may lead to the amelioration in some degree of this most terrible scourge of the human race. I have finished, and have I fear taken up a good deal of your time, but if these crude and imperfect thoughts of mine have made any of you think too, I trust that the patient consideration with which you have treated them, and for which I thank you heartily, will not have been altogether wasted.

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## A DISCUSSION ON FEEBLE-MINDED CHILDREN: DIAGNOSIS AND TREATMENT.

I.—Francis Warner, M.D., F.R.C.P.,
Physician to the London Hospital.

Dr. Warner said: The Elementary Education (Defective and Epileptic Children) Act, 1899, has directed attention in many quarters to the necessity of provision for the care and training of children of defective brain power. The Act is permissive, and follows the lines of the Elementary Education (Blind and Deaf Children) Act, 1893; the children to be provided for are defined as not imbecile, and not merely dull or backward, but defective—that is to say, children who by reason of mental or physical defect are incapable of receiving proper benefit from the instruction in the ordinary public elementary schools, but are not incapable by reason of such defect of receiving benefit from instruction in special classes or schools as are in the Act mentioned, etc. There is great need of a more widely spread, exact, and scientific knowledge of the various classes of defective children, and a demand for careful study of the best means of diagnosis and treatment by which our profession may afford help to parents and teachers.

*Proportion of Feeble-minded in the Population.*

Children of school age—that is, between 3 and 13 years of age—form one-fourth part of the population of England: children feeble-minded are estimated at about 1 per cent. of the school children, and their recognition as a class has been established. We are concerned with the diagnosis of these cases, the best means of improving defective brains, and the prevention and treatment of the causes of mental dulness.

*Diagnosis.*

In making diagnosis of a case said to be feeble-minded we have to look to the presence of signs of brain defect as apart from the fact of mere mental dulness and ignorance, which may be due to many causes other than a pathological condition of the brain. At the same time we want to know, if possible, whether the subnormal brain power is in any particulars such as may reasonably be hoped to be remediable by efficient management and training adapted to promote good modes of co-ordinated action, while faults are replaced by conditions better under control.

As points in making a physical diagnosis we may look to (*a*) developmental and physiognomical signs, (*b*) nerve signs and indications of the general characters of brain action, (*c*) conditions of the body, the organs of special sense and general health. To these will, of course, be added some examination of the status in mental ability.

The most common developmental defects have been catalogued in the report of a Committee published,[1] where 42 signs are defined; all these except "small head" are more frequent among boys, and their association with mental dulness is also higher among boys. The volume and shape of the head are of great importance; many forms of irregularity in ossification and in proportions have been described for use in diagnosis; smallness of the upper maxillary bones, and their palatine processes appears as a defect of importance only secondary to the cranium; this is frequently accompanied by obstructions to breathing and an open mouth. Defective development of the nose and external ears are also significant; while the size of the palpebral fissures, the mouth, and the proportioning of the features generally as normal or subnormal are noteworthy.

Physiognomical defects and malproportioning of the head, features, and body, or deafness, partial blindness and ill-health do not necessarily indicate a defective development and low potentiality of brain power. Mental action is expressed by movement; the motor nerve signs seen in the face, eyes, and hands and the general characters of brain response in action express healthiness or defect. In the face expression may be wanting or fixed and unchangeful; in the frontal region there may be horizontal frowning (frontal muscles), persistent, or uniformly repeated; this may be accompanied by knitting of the eyebrows forming a scowl; about the mouth constant grinning often indicates mental deficiency, while fulness under the eyes with puffiness accompanies exhaustion from any cause. In untrained children we commonly find that there is want of fixation of the eyes and a lack of control of their movements, points which call for careful training as a means of cultivating the faculty of attention most useful in after-instruction. It is useful to describe the special indications of defective brain action in the child that the teacher's attention may be directed to correcting each fault by adapted training. General modes of brain action and response, as apart from the individual signs described, afford much information. Spontaneity of movement is a natural result of brain activity in children; this may be more or less wanting, either from a low condition of general nutrition of the body and illness, or in more permanent form as the outcome of defective brain power. It is frequently found that modes of spontaneous action, as well as repetition and controllability, correspond in motor and mental action; while improvement of the former by training increases intellectual ability. The kinds of movement observed may be classed as (1) uniformly repeated acts, tricks, and habits; (2) increasing area of movement, common in infancy, emotions, in crying and passion; (3) controlled or well co-ordinated movements, occurring under direction of the teacher, or spontaneously as the result of acquired brain training, such as it is the purpose of education to impart to the child.

Defectiveness is often indicated by uniformly repeated frowning and grinning, almost athetoid in character; so, also, by swaying of the body, shrugging the shoulders, protrusion of the tongue, repeated tricks or movements of the hands, etc. Increasing movement indicates spreading brain action, either in harmony with the stimulus or uncontrolled, as in emotion which exhausts greatly; this is excessive in the highly nervous and choreic child. It is the co-ordinated movements seen, first under direction, but later as a self-contained power, that mostly indicates good brain power.

*Treatment.*

Having briefly noticed some of the points that may be of

[1] Report on the Scientific Study of the Mental and Physical Conditions of Childhood. Published at the Parkes Museum.

use in making diagnosis of brain deficiency leading to mental dulness, and in reporting on children mentally defective, we may pass on to the application of such knowledge in methodical training, and the endeavour to correct brain faults and implant good modes of action in certain directions. In commencing the treatment of a feeble-minded child we aim at removing the abnormal nerve signs in detail, and at the same time improving the normal character of spontaneity and controllability, so as to prepare the way for implanting by education those modes of action and response which are essential to social life and self-help. Play, games, general activity, and the prevention of loafing encourage spontaneity and variety in movement, tending also to remove the awkwark habits or repetitive "automatic actions" which are frequent among the children. Imitation of the teacher's movements is most useful in early training. I believe it is far more educative than clay modelling, drawing, and other child occupations, but it can only be practised by the child for a few minutes at a time. Exercises in hand and finger movements cultivate faculty for mental action, appreciation of numbers, also writing as well as useful manipulation. Eye movements need training to bring them under such control as is necessary in acts of attention; they are required in many mental processes such as counting and measuring at sight. I think that the cultivation of muscular sense is often too little employed. Estimation of proportional weights placed in the open hands is a means of giving instruction in comparison; such training is employed when giving a knowledge of the value of money.

All children need training in speech. This is much helped on in difficult cases by previous exercises in imitation of movements seen, and by eye drill. The most useful means of education in clear utterance are carried on by imitation at sight of the teacher's mode of articulation, as well as through the ear. Voice production is assisted by breathing exercises, while the trained faculty of muscular sense aids good intonation and distinctness. The recognition of colours, and the subsequent naming of them, can be taught to most children; this is also a stage towards acquiring a knowledge of money. Time as taught by the face of the clock can often be learnt by practice, but it is a more difficult task to impart a real appreciation of time. Sight should be tested in each child; it is not uncommon to find that increasing myopia and deafness have made the pupil so dull in receiving knowledge that he is thought at school to be mentally deficient. Obstructions in the nose and throat very often call for treatment in defective treatment; their teeth also are very liable to caries.

It is provided in the Act that, "for the purpose of ascertaining whether a child is defective or epileptic within the meaning of this section, a certificate to that effect by a duly qualified practitioner approved by the Education Department shall be required in each case. The certificate shall be in such form as may be prescribed by the Education Department." Any school authority working under this Act will then require assistance from a medical practitioner to certify the children admitted into special classes earning a money grant; doubtless he will also be called on for advice as to training in special difficulties.

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### II.—G. E. SHUTTLEWORTH, M.D.,

Late Medical Examiner, Defective Children, London School Board.

DR. SHUTTLEWORTH said: It is singularly appropriate that Dr. Warner, who moved for the appointment of a Committee to investigate the mental and bodily condition of school children in the Section of Psychology so far back as 1888, should have taken this opportunity of giving us the results of his mature experience; and it is satisfactory that the efforts made under the auspices of this Association should have fructified so as to influence legislation and secure for the previously neglected class of feeble-minded children a recognised place in our national system of education. No one can have listened to his address without being impressed with his masterly grasp of the subject and the indefatigable industry with which he has followed it up.

In my remarks I do not propose to discuss the significance of the physical signs of mental defect which he has so well set forth, except to say by way of caution that we should not attach too much significance to any single sign. Just as in the general practice of medicine he is the best practitioner who does not base his diagnosis on, or direct his treatment to, one symptom alone, so in deciding as to a child's mental condition the judicious examiner will separately observe, but he will estimate in combination, developmental, or, I should rather say, formative and physiognomical peculiarities, nerve signs, defect of nutrition, and last, but not least in my opinion, the manner of response, and the evidence so afforded not only by the teacher, but by personal investigation, of the child's educational status as compared with that of the general run of children of similar age with similar opportunities of instruction.

Having myself had some three years experience as Medical Examiner for the London School Board in the selection of children requiring special instruction—and, I may say, that in June last there were some 2,600 children under special instruction in nearly sixty separate centres—I may, perhaps, be permitted to make a few remarks upon the practical working of the recent Act to which Dr. Warner has alluded. In the first place, it is satisfactory that a medical examination and certificate are required in every case in which either the teacher or the parent is of opinion that the child is not fit by reason of (1) mental or (2) physical defect for the ordinary elementary school curriculum. It is also satisfactory that periodical examinations of all children receiving special instruction should be required to be made by a medical officer (who, I may mention, must have been approved by the Board of Education). But when it comes to the prescribed form of certificate "I, A. B., a duly qualified practitioner, etc., certify that Y. Z., not being imbecile and not being merely dull and backward, is by reason of (1) mental or (2) physical defect incapable of receiving proper benefit from the instruction in an ordinary public elementary school, but is not incapable by reason of such defect of receiving benefit from instruction in a certified special class or school," certain questions present themselves. First, we have to assert that the pupil is not merely dull or backward: and that in practice I have interpreted as meaning that the dulness is not merely the result of unfavourable surroundings or the backwardness due simply to neglect, but that there is an inherent defect, upon which the physical signs, to which Dr. Warner has called our attention, will usually shed serviceable light. On the other hand, we have to assert that the child is not imbecile, and this of course raises the question of the boundary line between imbecility and such mental (or physical) defect as will not preclude from benefit in the special class. I am not going to hazard a definition of imbecility—I will only say that in my view idiocy, imbecility, and "feeble-mindedness" are but three gradations of mental defect (from below upwards) which shade into each other, and have no sharp dividing line, and that for practical purposes the examiner must satisfy himself whether the child's condition is such, not only as regards mental status, but as regards habits and conduct, as to fit him for being instructed consistently with comfort to the other pupils, and with benefit to himself, in a class for special instruction. The question, indeed, resolves itself into one not so much of exact scientific diagnosis as of practical expediency, having due regard to the limitations necessarily existing in what is really a class for instruction rather than an arrangement simply for care and nursing. If, therefore, the latter be what is chiefly needed, the wiser policy will be to certify the case as imbecile, the effect of which will be to exempt the child from school attendance of any kind, and should help to gain his admission to an asylum for imbeciles, where, be it remembered, training suited to the case will still be applied. In some cases a probationary period in the special class may be granted, but experience will soon teach that there are certain classes and grades of mental defect which will merely waste the time and energy of the special instructor. Prognosis, indeed, which varies considerably in the various typical groups of mental defect, will help in the discrimination of cases which will, and which will not, benefit by special instruction. For instance, I got to be very wary of admitting children of the so-called "Mongol" type to the special classes, for in spite of certain imitative faculties their range of attainment is known to be extremely limited. Cases of inherited syphilis proved also as a rule to be unsatisfactory pupils, as they tended to break down; and a most

unsatisfactory class of all was the morally defective type. There was no doubt that the mental obliquity of these last, though often combined with a considerable facility for acquiring knowledge, rendered them undesirable inmates of the ordinary school, but they were still more undesirable inmates of the special school. Some 2 per cent. of the children presented for admission to the special schools were of this type, and certainly these were cases for asylum rather than scholastic care. Two distinct possibilities have to be borne in mind in selecting pupils, (1) that the pupil unfit for the ordinary school in consequence perhaps of some temporary illness or nervous affection—for example, choreic tendencies—might by a period of special instruction, with absence of strain, be restored to the ordinary school level, and (2) that the larger class, those likely to spend their whole school-life under special instruction, should have such training as would help to make them useful in after-life. With regard to the latter class I would take the opportunity of deprecating the expenditure of an undue proportion of time in trying to drive into them the "three R's" for which they have no serviceable capacity, and although not less than six hours a week of manual instruction is sanctioned by the Board of Education, I think much more in the way of industrial training might be profitably introduced into the curriculum of special schools.

As regards the hints on treatment which Dr. Warner has given us, I find but little to criticise. I would plead, however, from the teacher's point of view that imitative movements of the teacher have their limit of usefulness, and fatigue of the teacher as well as of the pupil must be considered, and, from the pupil's point of view, I think the satisfaction of having formed and fashioned something of his own, as in clay modelling, is a matter not to be lost sight of. In my experience the great thing, in the first instance, at any rate, is to make instruction *attractive* to the feeble-minded child in order to enlist his interest and attention: and so I think the aid of music in connection with physical exercises, be they of the fingers or of the limbs, is not to be despised so long as mere musical rhythm is not allowed to take the place of accurate, definite, purposive movement. Eye movements are no doubt important as helping to fix the child's attention, and it is astonishing to find how many mentally-normal children—in towns, at any rate—lack the power of lateral movement of the eyeball merely from want of practice in ranging over a wide field of vision. The exercise of the muscular sense in connection with the perception of weight is carried on in the Brussels special school by means of discrimination of weights of similar size but different densities.

Dr. Warner did not, I think, refer to the extension of school age to 16 in the case of defective children. This is good as far as it goes, but, considering the difference that exists between defective and normal children in development in relation to age, it is a pity the limit is not more elastic. Anyhow, continued training, especially in industrial work, is necessary in most cases after 16: and, personally, I would go even farther, and say that for the majority of cases permanent care in the form of an industrial colony, whereby risks of the reproduction of the unfit would be minimised, would, though costly in initiation, prove in the long run the most economical plan in view of the interests of succeeding generations.

### III.—Frank Montague Pope, M.D., M.R.C.P.,

Senior Physician, Leicester Infirmary and Fever House.

Dr. Pope deprecated allowing too much significance to physical signs and thought five minutes conversation with a child after gaining its confidence worth more than a catalogue of physical defects. He hoped that the advice of Dr. Warner upon the methods of training and hours of work in schools for defective children might be embodied in a set of directions and issued by the Board of Education to school authorities.

### IV.—Fletcher Beach, M.B., F.R.C.P.,

Physician, West-End Hospital for Epilepsy and Paralysis, London.

Dr. Fletcher Beach was of opinion that the arrangements made in London, Leicester, and other provincial towns for the education of feeble-minded children should be extended throughout the country. There were a large number of these children for whom at present nothing was done, and every means should be taken to establish schools for their education throughout the whole of England. As regarded moral imbeciles, they were a very difficult class with which to deal. Dr. Beach had for many years advocated, and so had Dr. Morel, of Belgium, that they should be placed in special institutions. These children were clever, cunning, spiteful, and cruel, and if not placed in these institutions would eventually find their way into a prison, which, he need hardly say, was not the place for them. At present they had to be sent to asylums for the insane, and these were also not institutions for which they were suited. As regards the feeble-minded, he thought that permanent institutions were eminently wanted. Children under the School Board, after the age of education had passed, and children who had spent some years in Earlswood and similar establishments, remained at home, and in many cases reproduced children who were defective and feeble-minded. Institutions into which they could be placed for life were required; such institutions had for some years been in existence in America with great success as regards limitation of these children. With regard to the statement of Dr. Warner that deafness and partial blindness were no sign of defective development and low potentiality of brain power, this Dr. Fletcher Beach thought required qualification. No doubt this was so in cases of children who were only slightly deaf and slightly blind; but in children who were totally deaf and nearly blind he thought there must be defective development of the convolutions of the brain. As regarded imitation of the teacher's movements, this should, of course, be done, but care should be taken that the teacher had no abnormal movements, or the result would be that the child would make these abnormal movements, and this, of course, was not what they wished to produce. As to the means necessary for enabling children who could not speak to do so, the most useful was imitation at sight of the teacher's mode of articulation. In such cases he had employed the services of deaf and dumb teachers, because they had been trained specially as regards articulation, and the result in every case had been successful. As regarded the age at which children should leave the special classes, he thought the age of 16 was too young; he was of opinion that it should be extended to 18 or even 20 years, because even at the latter age they were often mentally equal only to children who were 8 or 10 years old.

### V.—Henry Ashby, M.D., F.R.C.P.,

Physician, Manchester General Hospital for Children; Lecturer on Diseases of Children, Owens College.

Dr. Ashby emphasised the importance, when examining defective children, of testing the child's mental status first by a simple examination, then examining sight and hearing, and finally noting the developmental and nerve signs as points of great interest but of little practical importance. He believed in some quarters a feeling of disappointment existed with the results obtained in the defective classes already established, due to expecting results too soon. He doubted very much the wisdom of admitting children who were imbeciles or on the borderland of imbecility and defectiveness. More good, he thought, could be done by taking the better class of defectives at these classes.

### VI.—W. Lloyd Andriezen, M.D.,

London.

Dr. Andriezen referred to four points in the discussion: (1) The difficulty of diagnosis of feeble-mindedness in an infant of twelve months or less, the chief manifestations being the lack of variety and spontaneity in its movements and inability to imitate; (2) the importance of development of the kinæsthetic life by manual and industrial training, which (as practised at Elmira) seemed to reform very effectually young criminals with defective intellect, and had also proved useful in idiot asylums; (3) the fact that imitation might be the cause of faulty habits and "tics" in children, and that cure could in some cases be effected (as in a case cited by him) by removing the child from the source of imitation—in this case its mother; (4) the necessity of further developing the plan of classification of the lunatic and the degenerate, and especially the need of institutions for moral imbeciles and allied forms of degenerative and impulsive insanity which

were not fit to be at large, and were not quite suitable cases for our ordinary public asylums, provision being needed on the lines advocated especially by Morel of Belgium, and other leading authorities on this subject.

VII.—Edward B. Angell, M.D.,
Rochester, N.Y., U.S.A.

Dr. Angell said: Three years ago I had the pleasure of discussing this subject with Dr. Warner, and was very much impressed with the correctness of his views. It occurred to me that a similar method might be used in the differentiation of the types of defective brain action in adult life, hysteria, neurasthenia, etc. My results tallied very closely with the conclusions he had recorded in his cases of feeble-minded children, and proved of service in establishing the nature of the functional defects in patients under my care. Regarding the value of the stigmata of degeneracy, I take it there are two types of stigmata, the anatomical and the physiological. A single anatomical defect, such as a malformed ear, a highly-arched palate, is of little importance, but the association of such stigmata is highly significant of defective cerebral development, and oftentimes will determine the special cerebral centre to which treatment should be specifically directed. It has been well-established by the work of our Elmira Reformatory, as well as by careful observation in individual cases that the functional exercise of a cerebral centre will directly increase the anatomical area and activity of that convolution or group of convolutions. What can be accomplished with the feeble-minded is wonderfully illustrated by the results at Bicêtre, Paris, in the patient, persistent training of idiots, a class of cases far worse than the feeble-minded. I congratulate you upon securing the enactment of so humane a law, one that must happily modify the wretched condition of those who begin life so strongly handicapped.

## COLITIS OR ASYLUM DYSENTERY?

By Thomas Claye Shaw, M.D., F.R.C.P.,
Late Medical Superintendent, London County Asylum, Banstead.

Owing to a large number of cases of colitis (that is, dysentery with or without ulceration of the colon) at some of their asylums, the London County Council asked Dr. Mott (with whom was associated Dr. Durham) to investigate and report upon the circumstances. The result was embodied in a long report, the summary of which is that "colitis is dysentery of a contagious form, and that it was shown to appear in institutions where there was overcrowding, or where the sanitary conditions were in different, and it was recommended that the overcrowding should be abolished."

On page 14 of the report the authors say "we know nothing more about dysentery than our predecessors in the early part of the century," and again, "although a number of bacterial and protozoal organisms have been described in connection with dysentery in various parts of the world, none of these is sufficiently well established to prove either the identity or non-identity of the cases from which they were obtained." So that we may say, without fear of contradiction, that if a special bacillus exists for dysentery it has not been isolated.

There seems little doubt that the sanitary condition of some of the London asylums was bad, probably owing to defective drainage, and in one of them particularly, in some degree to the system of underground passages and the mode of warming, and it would seem certain that the numerous cases of dysenteric disease noted there were due to these defective arrangements.

It is not the object of this paper to deny this, nor yet to deny that the disease may have been infectious in character. It is also granted that there was overcrowding. But there does not appear to be any evidence that overcrowding was, in itself, the cause of the disease, though doubtless it contributed in more than one way to the spread of it.

It must be remembered that even in overcrowded wards in an asylum there are many hours during the day when the wards are practically empty, and that asylums are, as a rule, so situated that fresh air blows freely around them. In Horton Asylum, where there was no overcrowding, dysentery existed; in the Banstead Asylum, where there was no overcrowding, there was practically no dysentery, only one doubtful case was returned. In a person who had some diarrhœa, Dr. Mott says, "the case comes beyond the limit of ordinary diarrhœa," though he does not say how or why. The patient died sometime afterwards, and on *post-mortem* examination, bowel lesions were conspicuous by their absence. In the Cane Hill Asylum, which was to some extent overcrowded, there were only a few cases of dysentery and very little diarrhœa. In overcrowded London dwellings there is no evidence that dysentery is very common, whilst "ulcerative colitis," when met with in hospitals, is a rare disease (there were six cases in St. Bartholomew's Hospital last year), is considered non-infectious in character (at least it is never thought necessary to isolate the people) and as often as not comes from homes which are the reverse of over crowded.

Ulceration of some parts of the intestines is acknowledged to be by no means an uncommon thing in asylums. I do not think that any asylum exists in which it is not occasionally found, but it quite independent of overcrowding, and I do not think that it depends either on the food, on the sewage farms, on the habits of the patients, or always on the presence of a bacillus of a particular type.

I believe that there is a degeneration of the mucous coats of the intestine due to nerve degeneration, and that as ulcer of the stomach occurs without apparent cause, so we may have ulceration of the intestines without its being septic in origin. It is not disputed that pathogenic organisms, micrococci, and bacilli may be and are generally present in these cases, but no specific germ has been isolated, and it is certain that when once degeneration of tissue has set in, bacterial products are readily found. And this is probably the order of events in the cases to which I am now referring: first, degeneration, owing to lowered vital tone, and then the presence of bacteria due to this katabolic state.

For this assertion one ought to be able to give some cogent reason. Unfortunately, the investigation of the nerve distribution to the intestines is very difficult and tedious, and I cannot adduce any actual observations to prove that there is a nerve degeneration; but, judging from the analogy of the tissues, it is extremely probable that this is the case. One has only to look at the degeneration of all the tissues in chronic insanity—degeneration from which scarcely any organ seems exempt—to make it appear more then strange if the intestinal system was not affected in the same way: and, if so affected, it would certainly take the form of sloughing, ulceration, or large patches of obliteration.

Of course, one does not expect to find degeneration of the mucous coat of the intestine in every case of insanity, any more than we can always expect the rash in true enteric fever: and though in my paper in the *St. Bartholomew's Hospital Reports*, I hinted that this lesion was especially found in general paralysis, I never pretended that it was to be met with in all cases, or in them alone. But I do take up this position, that in well-administered asylums, not overcrowded, placed in good sanitary conditions, there will from time to time occur cases of ulceration of the mucous coat of the intestines that are not proved to be infectious, that occur where there has been neither dysentery nor diarrhœa to have acted as a source of infection, that cannot be traced to any cause in food or hygienic surroundings, and that can only be accounted for on the theory of degeneration. In some of these cases there may be no diarrhœa, slime, blood, or mucus nothing, indeed, to lead us to think there is any lesion present.

I say that these cases occur in an asylum in the patients only, and not in the staff, and, as might be expected, they resist treatment. I have been astonished to find to what an extent rubbish and garbage will be eaten by patients without producing diarrhœa, and in these cases I conclude that the intestinal conditions remain sound; but there are others where the most careful feeding will not prevent diarrhœa, with occasional blood and mucus, and in these we are almost certain to find intestinal degeneration.

In Banstead Asylum we often went for a week at a time without any diarrhœa at all in a population of nearly 2,500 patients, and this I attribute to the fact that the diet being good and regulated, overfeeding is out of the question; but I am quite prepared to expect that at any time ulcerative colitis may occur

in a case even when the asylum is quite free from any dysentery or diarrhœa.

Nay, more, I am prepared to prove that ulceration in the intestine may occur without any diarrhœa or dysentery, and that these latter may be present when there is no ulceration in any part of the intestinal canal.

J. S., male, resident more than eleven years, demented, died from phthisis and gradual exhaustion. Small head and narrow palate. Habits depraved. Showed no intelligence from the time of his admission. Occasionally had fits. Was never troubled with diarrhœa, dysentery, or any apparent bowel lesion.

*Post mortem*, ulcers were found in the cæcum and in about 12 inches of the large intestine.

F. E., female. Died from chronic brain wasting and exhaustion from diarrhœa. She passed blood *per rectum*.

*Post mortem*, neither congestion nor ulceration of intestine in any part.

R. R. (May 22nd, 1896). Demented. Had diarrhœa and rise of temperature. Did not pass blood or mucus.

*Post mortem*, extreme ulceration of mucous membrane of large intestine, single, with well-defined margins; further down the large intestine large patches of mucous membrane were ulcerated.

P. P., male. Inmate for six months. Died from phthisis, consolidation, and cavities in the lungs. Large ulcers in rectum, and large intestine generally. Extensive destruction of mucous membrane. Very little normal mucous membrane left in cæcum. This patient had no diarrhœa or passage of blood or mucus, nor was there anything to lead one to suppose that there was any disease in the intestines.

C. W. Resident thirteen years. Died from phthisis. Lungs quite full of tubercle, large sloughy cavities at both apices. Numerous typical tuberculous ulcers in both large and small intestines. No diarrhœa or other local symptom.

W. F. Resident eleven months. Died from phthisis. Lungs riddled with tubercle. Numerous tuberculous ulcers in cæcum and large intestine, and a few small ones in lower 2 feet of small intestine. No diarrhœa; no blood or mucus. No external sign of intestinal disturbance.

One of the most instructive cases was that of G. B., who died from general paralysis. During life at the close he suffered from trophic sores, but there was no phthisis and no diarrhœa. *Post-mortem* examination revealed in the descending colon and rectum several ulcers with clean-cut edges, about the size of a pea.

W. M. Resident ten months. He had severe diarrhœa five days before death, and on *post mortem* examination it was found that there was extensive ulceration of the mucous membrane of the lower 3 feet of the ileum and the whole of the large intestine, the mucous coat being denuded in large patches and ulceration extending to the muscular layer.

This degenerative process must have taken some time to accomplish, and yet there were no symptoms of it until five days before death. This patient was very demented, and his brain showed marked atrophy of convolutions and dilated ventricles. No history of infection from without could be obtained, and he was all the time on a carefully regulated diet. How can such extensive degeneration of the mucous membrane be explained, in the absence of infection, except by a primary affection due either to nervous or vascular degeneration?

W. M., died from general paralysis in September, 1900. There was nothing special in his symptoms, but about 9 days before death he became affected with troublesome diarrhœa. *Post-mortem* inspection showed scattered hyperæmic patches in the colon and in the cæcum an ulcer the size of a sixpence, deep with sloughy edges and base. No history of possible infection or of lung disease.

F. M., male, maniacal, died September, 1900; no diarrhœa, no dysentery. *Post mortem:* one ulcer in cæcum about 1½ inch long by ½ inch broad, ragged raised edges, deep, sloughy at the base. No phthisis. No way of accounting for it except by primary degeneration.

A. A., male. Demented, died in January, 1901. No diarrhœa or dysentery. *Post mortem:* pneumonia, but no phthisis. Large intestine contained numerous small shallow ulcers and several small congested polypoid growths.

Without multiplying the list of cases, I gather from our *post-mortem* records that where there has not been a diarrhœa or dysentery such conditions are noted as "thinness and transparency or translucency" of the coat of the digestive apparatus in one part or other without other lesion except in the nervous system. It is useless to postulate some undiscovered source of infection, because the cases were sporadic, occurring in places far removed from each other and at odd intervals.

It is very noteworthy how in some of these cases phthisis was present, and the absence of diarrhœa is very important, especially in connection with the possible opinion that the bowel lesion being of a tuberculous nature, there was a constant source of infection present.

I suggest that cases of this nature are to be excluded from Drs. Mott and Durham's category, but they show how careful we have to be in drawing conclusions, and that, because there may be ulceration, it does not result necessarily from overcrowding, or inherent septic conditions.

These cases, however, do serve to bring into prominence the problem of the isolation in asylums of tuberculous cases, one of which has been already entertained in connection with the London asylums, but which was found after deliberation to be impracticable.

In the building of new asylums it would be advisable to make special accommodation for these tuberculous people, and to separate them completely from the others.

The practical result of an inquiry into the true nature of this disease is far-reaching. If colitis is invariably an infective disease, perhaps of the nature of swine fever, brought on by defective hygienic conditions, and of necessity to be treated by isolation, then no words of opprobrium are too strong for its occurrence in an asylum, and it is possible that a legal action for damages might lie against the authorities for neglect of proper precautions—excluding, of course, all cases sent in with the disease upon them. If, however, ulceration of the intestines is found to occur in insane persons of very degraded condition when the institution is practically free from diarrhœa or dysentery, if it is infrequent and found in patients placed at different parts of the building between whom there has been no communication, then it would seem that it is not infective in origin, and is only a part of that condition when a man is insane "to the tips of his fingers."

From other asylums I hear of colitis as a condition prevalent, to which the medical officers are quite accustomed, and from one the physician in charge writes me to say that he thought it "bacterial" in origin.

Though the report has been widely circulated through the country, I have been struck with the small amount of reference that there has been to it. Is this because men have not liked to confess that their asylums came under the ban, or is it because the condition described at some of the London asylums is so clear and exceptional that nothing more need be said about it? I think it is because, though colitis has occurred in other places, it has not been sufficiently recognised that there is more than one form of it.

I quite agree with the recommendations of Drs. Mott and Durham that cases of dysentery should be treated by isolation in large institutions, though it is not the practice when a case of colitis is brought into a general hospital to isolate it, and I am sure that their report is of the greatest value if it succeeds in impressing this treatment on the asylum authorities generally; but I contend that the condition they describe was exceptional, and that degenerative changes in the intestine in the insane are not always due to infection from external sources, that they may occur where no want of hygienic precaution is apparent, and that there is a group of cases of colitis or asylum dysentery (if you please to use such a term) dependent on nerve degeneration or toxic causes set up spontaneously in the individual.

I confess, however, that the symptoms in the two forms are similar, and that a distinction between them is to be made at times only by a very exhaustive analysis of the conditions.

Of course, in an inquiry of this kind great regard must be paid to cases of tuberculous nature, of hæmorrhoids, of conditions where the mucous membranes become impaired from refusal of food, or from overgorging, in all of which blood, slime, and mucus may be passed, but which cannot be classed as cases of "asylum dysentery" proper.

If Drs. Mott and Durham are correct in their deductions, there never ought to be either diarrhœa or dysentery or colitis in asylums, except by misadventure. Here are people supposed to be living under the strictest hygienic conditions, with every facility for seeing that the food is correct and properly served, that the laundry and washing and bathing arrangements are sufficient, that the unclean habits of patients are properly attended to, that the nursing and attendance and opportunities for isolation are complete and properly carried out. The question is, supposing these arrangements to be satisfactory, are we to regard the presence of sporadic cases of diarrhœa or dysentery as evidence that some precaution has been neglected, or, whilst keeping this in view, may we not also conclude that, having found things satisfactory, the "dysentery" or "diarrhœa" is the result of the insanity, is, in fact, a part of it, a symptom without which the clinical history of the case would not be complete? Granting that all diarrhœa is septic, is there not good reason to believe that there is more than one method of introduction of the poison, that there are the ordinary causes of foreign matters introduced by the lungs, skin, and stomach;

and there is another due to the lowered vital tone of the insane showing itself in symptoms from which the non-insane population of the institution is free, and which is a condition that can no more be prevented than can a sequence of the mental symptoms in what is now universally recognised as insanity or dissolution of nerve centres? If this is allowed, then the incidence of a certain amount of diarrhœa or colitis is no opprobrium, it is to be looked for as an element in diagnosis. The blame lies if proper measures for its treatment are neglected.

It may fairly be asked if diarrhœa and dysentery are more common in the insane than in the sane, as should occur if what is above said about the degeneration of tissue in the insane is correct. There appears to be little doubt that in asylums there is more looseness of the bowels with passage of blood among the patients than among the staff, but I am not so sure that ordinary diarrhœa is not more common among the staff than among the patients, and this I attribute to the different conditions of diet in the two classes of persons.

I should certainly say that diarrhœa is, as a rule, more common in the outside world than in asylums (excepting, of course, epidemics in either case), and this is easily accounted for by the carelessness of the outside world in the matter of eating and drinking. To sum up: It appears that there is such a thing as "asylum dysentery or diarrhœa" differing from that indicated by Drs. Mott and Durham in their report. These observers described a condition which was apparently due to insanitary conditions, and they appear to think that this is the only form that does occur, or that as a rule occurs. They evidently think that it is eminently and primarily bacterial, and that it ought never to exist.

If I am right in this estimate of their observations, I challenge the statement; I contend that all cases of colitis, with or without ulceration, are not primarily bacterial in origin. I do not deny that bacteria are secondarily present, and that then the cases may become infectious if the discharges are not properly treated and the nursing is insufficient; but I contend that there will be in asylums and among the insane a condition of degeneration, attended or not by diarrhœa or dysentery, which is liable to occur at any time, especially in the more degraded and chronic types of insanity, which no amount of care, either in nursing, diet, or general hygiene, can prevent.

I would note that under similar conditions the insane suffer differently from the sane: and I call particular attention to the fact that sloughing and ulceration of the skin and tissues resembling mucous membranes are more common in the insane, especially in the very degraded types: and I note especially the liability of the digestive system to degeneration in all forms of nervous impairment, as seen in loss of appetite, refusal of food, and constipation or diarrhœa.

Dr. Howard Tooth has very kindly given me his views on dysentery and diarrhœa, as seen at the Portland Hospital, Bloemfontein, during the present war. He thinks that the dysentery there seen was different from the tropical dysentery ("amœboid" dysentery), in that there was no change in the liver. He is of opinion that it is infectious: and that, though isolation is not necessary for its treatment, the same precautions should be used as in nursing a case of enteric fever. He does not think that overcrowding has anything to do with it, though, of course, holding that overcrowding, by tending to weaken the general condition, is very undesirable. Dr. Tooth holds that the diarrhœa and dysentery seen out there were practically different stages of the same thing, and that, though no special bacillus—no "bug"—has been found, he thinks that one certainly exists, and that in conditions of lowered vitality it asserts its presence by what is recognised as diarrhœa or even ulcerative colitis.

He says (p. 117, *A Civilian War Hospital*): "There is so close a similarity between ulcerative colitis in England and dysentery in South Africa that one hesitates to call them by different names." On p. 115, *op. cit.* he says: "One feels justified in adopting the opinion that dysentery is diarrhœa writ large, that the two have a common origin. Every case of simple diarrhœa must be looked upon as a possible focus for the further dissemination of the disease and persons infected from a slight case may develop dysentery in its severest forms."

Dr. Tooth makes (p. 75, *op. cit.*) some very important remarks as to the connection between diarrhœa and dysentery and enteric fever. He says: "It is quite possible that a gastro-enteritis with multiplication of B. coli and liberation of its toxin, in ordinary circumstances of little moment, may be sufficient to start this process. In fact, we found that many of our patients had been suffering from dysentery for a time before the onset of enteric fever. Is it not possible that the dysenteric attack may have determined the enteric?"

If Dr. Tooth is right, his opinion that enteric fever is, as it were, a condition of lessened bacillary inhibition proceeding from severe diarrhœa and dysentery may account for the sporadic cases of enteric fever that occasionally appear in asylums where there has been a considerable amount of dysentery and for which hitherto there has been a difficulty in accounting. It seems to be the opinion of observers of this school that there is practically in healthy persons always present a bacillus—a "bug" as it is euphemistically termed—which on the least lowering of general vitality, is able to assert itself, but which is usually inhibited by the presence of a healthy state, that insanity being a disease of lowered vitality, this hitherto undiscovered bacillus is very liable to rise into evidence, and that therefore diarrhœa and dysentery in large assemblages of people acquire special importance.

We also recognise that the presence of bacilli does not point to them as being always the cause of a disease: they are common enough, and are a result in degenerative processes, and the fact of a number or bacterial products being found in the intestines may merely show that there has been a lowering of nutrition, of vitality, and that they have under these altered circumstances found a favourable nidus for growth and development.

In the absence of a definite bacillus, it would seem that in a nerve degeneration we have the very conditions required for the growth and development of bacteria, and as insane persons are already in a state of reduction we have to hand a probable reason for the diarrhœa and colitis so often found in asylums. Everyone conversant with the insane recognises the common occurrence of delusions dependent for their *point de repère* on lesions in the organic system, and the lesion that is probably the cause of these organic or systemic delusions is a nervous one. Here, again, comes the difficulty of proving this to be so, because of the imperfect knowledge that we at present have of the alterations in the sympathetic system of nerves.

In the course of a conversation upon this subject, Dr. Tooth, whilst inclining to the theory that all diarrhœa was primarily bacterial, owned that the theory of primary intestinal degeneration was a factor to be considered.

At Banstead we were, during the period of inquiry (August, 1899, to January, 1900), remarkably free from diarrhœa and dysentery, and in such cases as were reported Drs. Mott and Durham were only able to say (page 82) that "if they were of a dysenteric nature, they were harbouring agents that, under favourable conditions, might spread to others." There is much virtue in an "if," and the statement is simply hypothecating the predicate: but there is no reason to think that such diarrhœa as did occur was due to anything of an infective character, and for Banstead Asylum I think that I may fairly claim immunity from the condition which the authors of the report describe at some of the other asylums in the county.

Some recent observations have made it not improbable that recurrent attacks of insanity are due to some recurring condition of blood of a toxic nature. To me it seems quite possible that the intestinal ulceration that undoubtedly does occur in some of the insane may be also due to some toxic condition set up in the individual. If so, how are we to guard against it?

I shall in the future observe, with a view to determining this point, whether diarrhœa and recurrent insanity occur together in any cases where recurrent attacks or "relapses supervene."

The subject seems so important, there is at present so much uncertainty as to the real nature of the above-mentioned bowel lesions in the insane, the consequences of a general dictum (spoken or inferred) that the presence of colitis means bad management or structural imperfection are so important and far-reaching to the directors of asylums, that I have ventured to ventilate the matter before this Section,

in the hope that some light may be thrown by full discussion upon a condition which vitally concerns asylum practice.

The President, after thanking Dr. Claye Shawe for his excellent paper, asked him if he could in any way explain the occurrence of so-called ulcerative colitis in asylums that had only been opened a comparatively few months.

Dr. Edwin Goodall (Carmarthen) stated that it was an important point to remember that the mental disease (especially when chronic) predisposed to the intestinal lesions in some cases, that these lesions were part of the disease. Many of these cases did not agree clinically, pathologically, or therapeutically with cases of dysentery. They also occurred apart from overcrowding, whatever truth there might be in the view that some asylum colitis was dysentery, and due to insanitation. He was disposed to believe that much of it could not be so explained.

Dr. John Havelock (Montrose) said that they had had no experience of epidemics of colitis in Montrose Asylum, although for many years the pauper departments of that institution had been considerably overcrowded. There had been outbreaks of diarrhœa on some occasions which had never assumed serious proportions, and had yielded to the usual methods of treatment. The most common cause of intractable diarrhœa in his opinion was prolonged constipation. Dr. Shaw's observations on the condition of the alimentary tract in the chronic insane were most interesting in view of opinions recently expressed that general paralysis originated in toxins generated in the alimentary canal, and he agreed with Dr. Shaw that these lesions were the result and not the cause of nerve degeneration.

Dr. Lloyd Andriezen (London) said there were two factors concerned in asylum colitis, namely: (1) Infection and (2) trophic degeneration. The first occurred even in healthy (extra-asylum) patients, and the mode of conveyance of the toxin was probably by the fingers of the patient or by contamination of the food. This was the case in true dysentery and colitis. In asylums cases of trophic degeneration of the bowel were met with, and these were probably different, being in nature rather diarrhœal than dysenteric. He strongly urged that every care should be taken to prevent sick patients contaminating their fingers with the mucoid fæcal matters, a thing they were very prone to do by scratching.

Dr. Harry Campbell (London) asked whether the colitis of the insane might not be due to the elimination of toxins so abundantly present in the insane by the bowel. Mercurial ulceration in the intestines and the ulceration of the duodenum occurring as the result of burns probably had such an origin. He asked whether it was advisable to resort to right-sided colotomy in these cases.

Dr. Shaw briefly replied.

## ON MODERN ASYLUM PLANS.

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In the treatment of the sick in hospital, it is a matter of the utmost importance that its construction should be suitable. The advances made during the last few decades in the general plans of those special hospitals for the mentally diseased called asylums have been enormous, and compare favourably with the changes in construction in general hospitals. In the general hospital the linear pavilion type has continued to be the most popular plan since St. Thomas's Hospital was completed in 1871, while in asylums there has been a steady progression, from the old gallery type to the linear pavilion type, and from this latter to the present improved grouping of pavilions, each pavilion being self contained and so arranged that one does not overlook another, and that each affords all the sunlight, fresh air, and view of the surrounding scenery that can be obtained.

It is sometimes a discouragement to workers in our speciality that their labours are little appreciated, because little known by the other members of the profession. The recent researches in the pathology of mental diseases, the more careful clinical study of types of insanity, the more varied treatment—these all seem to be a closed book to many of our medical brethren. It is, therefore, not altogether to be wondered at that marked improvements in asylum architecture do not receive the mead of praise that is undoubtedly their desert. As an example I quote from a recent medical paper—the writer is commenting on the plans of an asylum in course of construction—"To the critic of to-day one of the most discouraging points met with when studying asylum plans is the conviction that the advance lately made has been extremely little; while in their sister institutions, general hospitals, the advance has been extremely great. More than one cause for this could be named, but these causes need not be referred to at present." It is unfortunate that the critic does not give his reasons for his statement, and we may fairly assume that his knowledge of the modern treatment of the mentally afflicted is defective as he expresses the opinion that "an asylum in every way efficient could be built for less than £200 a bed." The consulting architect to the Commissioners in Lunacy in a recent paper places the same figure at not much less than £300 a bed.

Those interested in the construction of asylums have this hopeful sign that like the Athenians of old they are ever seeking out some new thing, and so it happens that the description of the varied plans of asylums in course of construction, or recently opened, is a subject too wide to be attempted on the present occasion. The intention, therefore, is to introduce, for the purposes of discussion, some points upon which there is still marked diversity of opinion.

### *I.—Should an Asylum be Composed of Attached or Detached Buildings?*

There are few asylums in this country which have not some detached buildings used by patients, for example, farmhouse, isolation hospital, and such like. In recent years in Scotland, asylums have been provided with hospitals for the acute and sick cases, and many of these are detached structures; and detached cottages for the chronic cases have been built to cope with the increasing demands for asylum accommodation. But a more marked degree of detachment is seen in the village type of asylum. This plan has been extensively adopted in Germany and America, and is now being introduced into this country in the new district asylum for Edinburgh. The Edinburgh Asylum is being built on an estate of 900 acres, and consists of eight large houses comparatively near each other, composing a "medical section," and a "group of homes" or cottages eight in number dotted over the estate. It is probable that in this case the limits of detachment in asylum construction have been reached, but it can be imagined that a further development of detachment would produce a colony such as is to be seen at Gheel, and if the evolution were carried a stage further the result would be the abolition of the asylum care of the insane—a condition of things similar to that which existed in England in the eighteenth century. So that the question has to be modified for those who are in favour of detached buildings as to the amount of detachment they recommend.

The advocates, however, of the cottage system appear to be increasing in number amongst us, and it cannot be denied that visitors to foreign asylums built on this plan have come away favourably impressed with its suitability for adoption in this country. Nevertheless the advantages of concentration in an asylum are very numerous, and it rests upon those who would decentralise asylums to furnish more solid arguments than have yet been put forward in favour of their system. It has been stated that the objections to the cottage system are mainly of a theoretical nature; to this the reply can be made that the advantages claimed are also theoretical, and mainly sentimental in character. These claimed advantages are not many in number, and may be summarised under the headings of (*a*) greater homeliness of the buildings; and (*b*) the splitting up of the patients into smaller groups with better classification.

The greater homeliness and the arrangement of smaller groups can be obtained, if thought desirable, in a connected asylum by constructing smaller wards. No one will contend that the British workman who lives in one of a row of houses values his home life less than he who lives in a cottage, and if a beneficent corporation were to provide the former with a covered way for going to his work, his occasional recreation, or his church, for use in wet weather, to avoid an occasional drenching, it is doubtful if he would complain that his home

was destroyed by these means. It is sometimes stated that the initial cost of detached buildings is comparatively small, but this financial aspect of the question cannot be appealed to, as the cost of construction depends less on the general plan than on many varying factors, such as the character of the buildings and accessibility and nature of the site. Considering the climate of this country and character of the patients, the amount of attention these require by night as well as by day, the serious view taken of accidents and escapes in English asylums; and the greater difficulty in general administration, the more numerous medical and other staff required, and the hypothetical nature of the advantages to be gained from the cottage plan, it is not probable that this type of asylum will become popular in these islands.

The other questions have mainly to do with the connected type of asylum.

*II.—Should the Chapel be a Detached Building?*

The English Commissioners in Lunacy, who require that all new asylums shall have their chapels detached structures, base their advocacy of this principle on the grounds that such a building is less "institutional" from the patient's point of view, and is more in accordance with his previous habits of "going to church." It cannot be denied that in fine weather it is a pleasant break in the routine for the patient to have a short walk before entering chapel. On the other hand, in wet, cold, and wintry weather, there are many difficulties which have to be contended with. The patient, were he at home, would meet this contingency by donning suitable clothing, or, could he not afford this, he would probably stay at home, but it is impossible to provide waterproofs and umbrellas for each of the many hundreds who attend the asylum chapel. Again, in many parts of the country the evening is the most popular service with the class of the community such as is found in our asylums, but the risk of escape is so great in the dark winter nights that some asylums with detached chapels have been compelled to abolish this service. The physically feeble and the aged, if there is a considerable distance to be traversed, are cut off from the services which they specially delight in. The arguments for a detached chapel apply with equal force in favour of a detached recreation hall, as such a structure is more in accordance with the previous habits of the patients in going to their places of amusement, but it is feared that such a structure would be of much diminished use in the service of the institution. The chapel is used for choir practice, sacred concerts, organ recitals, and other purposes. If detached it will be found that the recreation hall will have to take its place on week days, and the chapel will therefore be only for Sunday use.

*III.—Should there be a Central Dining Hall?*

On this subject, were the previous habits of the patients consulted, all dining halls would be negatived, but those who recommend this system argue that administration is simplified, and that the patients receive their food in a much hotter condition than if served in the ward. To these points it can at once be replied that there is no difficulty in practice in distributing the food to the wards, and that it can also be served in a hot condition. In either plan much, of course, depends on the method of management, and at an asylum with central dining hall recently visited, I found the joints being carved, and the helpings of meat and vegetables being placed on the plates a quarter of an hour before the patients were expected, and it is doubtful if on their arrival they found a very appetising meal. To give a personal opinion, the meals in a large hall are distressingly institutional; the crowds being counted as they enter and leave the hall, the impossibility of individual attention to the patients, and the noise and clatter incidental to such a meal are all disagreeable features in this system.

*IV.—"Airing Courts."*

It is a pity that this word, suggestive of the prison-yard, should still hold sway in our asylums. Dr. Kidd, at the West Sussex Asylum, substitutes what is in most institutions the more accurately descriptive title of "Patients' Gardens." It might be now hoped that the walls surrounding the gardens of the patients should soon become a thing of the past, but it is disappointing to find new asylums still retaining these ugly structures. High iron railings, though affording a better view of the surroundings, are still unnecessary and repulsive, and suggest the cage. The attendants should have some aid to their watchfulness, but if the barrier is a seemingly impossible one to surmount, they are apt to forget the principle that the patients in the gardens require an amount of care and attention equal to that they receive indoors. There has been no case of escape, and only one or two of attempted escape, over the easily vaulted fence at Chichester during the four years it has been in use. The paths of the gardens should be constructed as naturally as possible, and though a suitable walk for use in all weathers cannot be provided, owing to the subsoil, without the use of asphalte, still in many places a gravel path is adequate, and is much less institutional in character.

*V.—Is it Advisable to have a General Bath-room?*

In a modern asylum each ward has its own small bath-room, and in addition to this there is frequently a large general bathroom in a central position to which the patients from the various blocks go on the general bathing days. It has recently been contended that ward bath-rooms should suffice, and I take the liberty of quoting in full from a report for private circulation only the reasons urged in favour of this view. "We think that it is more in accordance with custom, and indeed more comfortable for the patients, that they should not have to traverse long passages to and from the bath; we believe that the working of the wards will be easier if the strength of the staff is not reduced by the removal of one or more of the attendants away from the block at bathing hours; further, we think that centralisation even in this matter will to some extent militate against the idea of division of patients into independent and moderate-sized groups, each with its own charge attendant as the responsible head, knowing all the habits and points of each individual patient." As a matter of fact, it is doubtful if custom is interfered with in the case of patients who have lived in towns, as it is becoming more and more the custom for them to repair to public wash-houses; and as it is the rule for patients from each ward to go in care of their own attendants to the general bathroom the "family" idea does not suffer. There is no doubt that it would be best to have a large bath-room in each block, but the expenses of such a room with its bath-fittings, and sufficient hot water supply to ensure quick service, would not compensate for its few advantages.

Most of the new asylums have two baths provided in each ward, and if general bathing is confined to these it will be a matter of great difficulty to arrange for the supervision of the bathing by a superior officer. This supervision is insisted upon by the English Commissioners in Lunacy, and rightly so, as it ensures due observance of the bath rules, it prevents the concealment of bruises or other injuries, and leads to the detection of commencing disease which, especially on the female side, might have otherwise escaped observation. One bath instead of two is sufficient for the ordinary ward requirements, and the money thus saved would meet the cost of providing a general bath-room.

Other questions will probably arise in the minds of other members, but I fear I have exceeded the time allotted to me. The various points have been raised less for the purpose of ventilating personal opinions than to suggest food for discussion. Where differences of opinion exist the truth is best ascertained by the expression of the views of the many authorities on the subject met with in an Association such as this.

In conclusion, no expenditure of care and thought should be considered too great in planning suitable structures for mental invalids, considering that we aim at providing a haven of rest for the melancholic, a controlling and subduing influence for the maniac, an infirmary for the sick and aged, and a home for the chronically afflicted; and realising that mental is but a form of physical disease, all sufferers from insanity should have a true mental hospital.

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The Barker Anatomical Prize of the Royal College of Surgeons in Ireland, value twenty guineas, open to all medical students of the United Kingdom, has been awarded to Miss Susan Forster Dickson, a student of that College.

# SECTION OF OPHTHALMOLOGY.

W. H. H. Jessop, M.B., F.R.C.S., President.

[Continued from page 1166].

## PERISCOPIC LENSES.

By A. S. Percival, M.B.Camb.,

Surgeon to the Eye Infirmary, Newcastle-on-Tyne.

Periscopic lenses are used to enable the wearer to see more clearly when he moves his eyes from side to side. This is obviously a great advantage to him when he wishes rapidly to see objects on either side of him, especially at outdoor games such as tennis and cricket. With the ordinary bispherical lenses in order to see a lateral object clearly he has to move his head, keeping his eyes fixed opposite the centre of the glass. Aphakic patients and those who require to use strong convex glasses for reading will, if wearing the ordinary biconvex glasses, have to move their head from side to side of the printed page that they are reading. It is to obviate this difficulty that I have calculated the form of lens which shall be approximately periscopic. I find that for powers higher than + or − 10 D it is impossible to grind glasses of such a shape as will allow eccentric vision at 25 degrees to the axis to be as good as direct centric vision; but up to this limit I have solved the problem satisfactorily. I may say that the glasses commonly sold as periscopic are hardly worthy of the name. They are menisci ground to certain standard curvatures which have never been accurately calculated out, and their results are but little better than ordinary bispherical lenses. As far as I know the subject has not been treated except by Dr. F. Ostwalt in *von Graefe's Archiv*, xlvi, 3. This was an excellent paper, but unfortunately there was a slip in the mathematical formula he used, which seriously affected the result he obtained. I wrote to Dr. Ostwalt pointing out the error, and received in reply a most courteous acknowledgment of my correction. In addition to this, the value used by Dr. Ostwalt for the refractive index of glass was 1.5. Now, in England, the glass used by our opticians for making spectacles is always about 1.54, so that Dr. Ostwalt's results will not be applicable to spectacles made in this country.

I do not intend to weary you with the mathematical details involved in the calculation; they will be published shortly in *Knapp's Archives*. I will merely indicate the principle on which I have based my calculations. My object has been to find the form of lens that will enable the wearer to see objects 25 degrees on either side of him with perfect distinctness by merely moving his eyes. I take as the test of perfect distinctness the size of the confusion circle formed on his retina. Now, the radius of a foveal retinal cone is 0.001 mm.; of a cone outside the macula it is 0.003 mm. Obviously, if the confusion circle on the retina is smaller than the sectional area of a foveal cone, this confusion circle will be perceived as a single point. What we have to do, then, is to determine the shape of the glass, that on eccentric vision through it at an angle of 25 degrees will give rise to a confusion circle on the retina of a radius less than 0.001 mm.

It will be noticed that in all periscopic lenses the surface next the eye must be concave, and the question may reasonably be asked—Will not this render the direct and centric vision through the glass indistinct? We all know that the object-glass of a telescope is a plano-convex, placed so that its curved surface faces the incident light, and that a plano-spherical lens always gives the most aberration when so placed that its curved surface is away from the incident parallel rays, and that it is least when the curved surface faces the incident light. The object glass of a telescope is, however, used to form an image with its whole aperture, but with spectacles only a very small part of the total aperture of the glass is available, as the pupil of the eye acts as a very small diaphragm. Let us consider the case of a plano-concave lens of − 20 D used for direct and centric vision in these two positions before the eye, the pupil being of normal diameter 3.2 mm. When the curved surface faces the light, the radius of the circle of confusion on the retina is .000077352 mm.; now when the curved surface faces the eye it is .00031494 mm.; but as the radius of a foveal cone is .001 mm., it is obvious that direct vision will be as distinct one way as the other.

[Mr. Percival then showed a chart of the curvatures required for periscopic lenses from + 20 D to − 20 D in red and black. The red line represented the curvature of the surface facing the eye, while the black line represented the curvature of the surface facing the incident light. The scale was 300 × 1, so that with this chart one could read off the radius required in millimetres by dividing 300 by the number on the scale. Thus for instance, for + 8 D the black line was at the tenth division on the negative side of the origin, the radius for the surface facing the light was therefore $-\frac{300}{10}$, or − 30 mm. whereas the curvature was of course $-\frac{1.0}{300}$, or − .03.

The chart showed that these curves were exceedingly curious. Mr. Percival referred those who were interested in them and in the mathematical conditions to which they were due to his fuller paper in *Knapp's Archives*.]

The table below gives the radii of curvature of the surfaces of lenses between + 20 D and − 20 D. The symbol $r_2$ is the radius of curvature in millimetres of the surface next the eye; the preceding negative sign shows that this surface is always concave towards the eye. On the other hand, $r_1$ is the radius of curvature of the surface facing the light. From the preceding sign it is seen that this surface is convex towards the light (or concave towards the eye) except in 4 cases.

*Table giving the Radii of Curvature for some Periscopic Lenses between + 20 D and − 20 D, when the Refractive Index of the Glass is 1.54.*

| Power. | $r_1$. | $r_2$. |
|---|---|---|
| | mm. | mm. |
| + 20 D | — $17\frac{33}{77}$ | — 50 |
| + 15 | — 20 | — 45 |
| + 12 | — $22\frac{1}{2}$ | — 45 |
| + 10 | — $24\frac{6}{11}$ | — 45 |
| + 8 | — 30 | — 54 |
| + 6.5 | — $37\frac{1}{2}$ | — $68\frac{25}{27}$ |
| + 5 | — 54 | — 108 |
| + 2 | — $64\frac{4}{5}$ | — 84 |
| — 2 | — 102 | — $74\frac{1}{51}$ |
| — 5 | — $174\frac{6}{11}$ | — $66\frac{2}{3}$ |
| — ∥ | — $843\frac{3}{5}$ | — $62\frac{1}{2}$ |
| — 10 | + 1,512 | — 56 |
| — 13 | + 1,512 | — $42\frac{42}{55}$ |
| — 15 | — 612 | — $34\frac{104}{233}$ |
| — 17 | + 1,512 | — $32\frac{104}{233}$ |
| — 20 | + $17\frac{1}{5}$ | — 32 |

Consideration of the periscopic effect will determine how to correct a given case of mixed astigmatism. For instance, suppose that a patient has $\frac{-2.5}{+2.5}$, this can be corrected either by + 2.5 D sph. ⊖ − 5 D cyl ax − 0 degrees, or − 2.5 D sph. + 5 D cyl. ax 180 degrees. Clearly the latter will allow of a greater lateral ranging movement of the eyes provided that the concave surface is next to the eye. If the former correction is used, the vertical ranging movement is increased at the expense of the lateral ranging movement. It is conceivable that in some special cases the vertical field of view may be more important than the horizontal, but this would be certainly unusual. In cases of compound astigmatism it will be necessary in most cases to grind a concave spherical surface on one side, and on the other the requisite toric or compound astigmatic surface which has recently been done successfully by some leading optical firms. This, however, adds very materially to the expense of periscopic glasses, as the process is very difficult, and demands tools specially made for the purpose.

In conclusion, I may say that the glasses of this pattern that I have ordered for patients seem to have given complete satisfaction. Not only can the patient see objects on one side of him without moving his head, but also he has a larger field of view when he keeps his eyes fixed in the central position.

The President thought the subject a very important one. If these glasses could be used after cataract extraction the gain would be immense.

Mr. Maddox thought that possibly a good deal of aberration might be produced by the glasses.

Mr. Batten asked if they could be adopted for high myopes.

Mr. Tatham Thompson thought that difficulty would be experienced in getting the lenses ground, and their expense would probably be great.

Reply.

Mr. Percival, in reply, stated that he had ascertained from Mr. Young of 46, Dean Street, Newcastle-on-Tyne, that he could make these lenses with simple spheres at about half as much again as ordinary bispherical lenses, and that the cost of periscopic toric lenses would not be more than twice that of ordinary sphero-cylinders. He also stated that although lenses of a greater power than + or − 10 D could not be made absolutely periscopic yet his lenses were much more nearly accurate than ordinary bispherical ones.

## A PLEA FOR THE OCCASIONAL PERFORMANCE OF THE OPERATION OF DEPRESSION IN CASES OF CATARACT.

By Henry Power, F.R.C.S.,

Consulting Ophthalmic Surgeon to St. Bartholomew's Hospital.

It is somewhat singular that a mode of dealing with cataract that has been in use from the most remote antiquity, which was recommended and practised by Celsus and Galen, and which is even now almost universally adopted by native operators in the vast continent of India, should have passed into such complete desuetude in this country that I think it quite possible there may be some in this room who have never seen it performed. Various circumstances have contributed to this result, but especially the discovery of chloroform and the employment of solutions of cocaine, which enable the operator to use the knife with far greater precision and success than was possible to his predecessors. The invention of the spring speculum and of the fixing forceps, and the modification of the awkward form of the knife of de Beer into the handy instrument given to operators by von Graefe have had their influence, and finally and above all the introduction of the principles of antisepsis in the operations on the eye—these, each and all have eliminated many causes of failure, and have contributed their share in turning the attention of ophthalmic surgeons from a practice that was once all but universal.

The results that have been obtained by those who have had large experience in the method generally practised of extraction are certainly extraordinarily good. In the Ophthalmic number of the *Indian Medical Gazette*[1] Lieutenant-Colonel T. H. Pope, I.M.S., remarks that it often happens in the Madras Hospital that a run of 300 successful cases occurs, but he adds immediately following this, 4 or 5 cases fail either from suppuration, or severe irido-choroiditis, or some unknown cause, and so the average success at once falls. It must be remembered, however, that the term success is applied to all cases that with correcting glasses have distant vision between $\frac{2}{3}$ and $\frac{6}{9}$, and who can see No. 10 Jaeger with a + 10 D or 12 D lens. It is difficult to say whether the operation of "depression" would under any circumstances give equally good results, because we have but few statistics to hand that deal with large numbers, or that have been undertaken with the same care and precautions as are now adopted in cases of extraction. Yet when depression or reclination was performed by a practised hand the results seem to have been very good. Himly, to take one example only, states in his work published in 1843 that severe inflammation rarely followed reclination, and when it did it often cleared up without leaving any bad consequences. He seems to have been very successful in his cases of reclination, for in 50 cases he only had 2 failures, 1 of which was amaurotic and should not therefore have been operated on.

When the result of depression is fortunate, the operation is certainly exceptionally brilliant. At a stroke vision is restored, and less damage is done to the eye than in any operation with the knife. Surgeon-Major Maynard, I.M.S., observes[2] that in sixteen extractions the other eye had been couched by some quack with varying, though often brilliant, results. This statement is rather suggestive when we reflect on the conditions under which "depression" is performed in India. All the surgeons I have conversed with, and who have seen native practice, state that no antiseptic measures are adopted; that the instrument is a needle, often blunt and rusty, or even a thorn, and that no after-treatment is carried out. Under such conditions, far from obtaining "brilliant" results, one would expect that the operations would invariably fail.

The ill-effects that I find charged against depression are violent vomiting, irido-cyclitis, suppuration of the globe, glaucoma, and sympathetic ophthalmia. My experience of this operation is, of course, very limited as compared with that of the itinerant oculists of India, but I may remark that I saw it performed by the two Guthries, and by Mr. Hancock, and that I operated in this way several times myself in my younger days, without any of these terrible results occurring. The supervention of vomiting was much dreaded, but we, who have gone through the chloroform period, know that, however objectionable, vomiting does not commonly lead to loss of the eye even in cases where extraction has been performed. Yet its occurrence led many Continental surgeons to recommend their patients to forego the advantages of chloroform, in view of the likelihood of the occurrence; and we all rejoiced when the discovery of cocaine enabled us to dispense, in the majority of cases, with chloroform.

As for septic inflammation and suppuration, depression has had no chance, for the proceedings by which comparative immunity from these troubles have been secured had not been evolved by the patient labours of Lord Lister and the bacteriologists.

Irido-cyclitis is a possible result and certainly did occur, but I think chiefly in those cases in which the lens broke up under the pressure used to effect its depression. When that occurs the judicious operator will withdraw the needle and wait. It is far better than to risk the entrance of large fragments into the anterior chamber or the introduction of curettes through an enlargement of the little wound in the endeavour to draw them out. Breaking up of the lens defeats the object of effecting depression. It is better to wait and then act according to circumstances.

Another bad effect mentioned in books—glaucoma—does, I suppose, occasionally follow the operation of depression, but it is surely much less to be dreaded than formerly, since a subacute attack can be controlled with eserine, and an acute attack can be met by an iridectomy. The danger of the chronic form leading to the glaucoma absolutum of von Graefe appears to me to be somewhat exaggerated. These glaucomatous affections have been attributed to the contact of the lens with the retina, but it is notorious that the lens does not soon or readily fall to the lowest point of the globe. We have all of us, I suppose, seen cases of lenses dislocated by violence, and have not always thought it prudent to interfere with the object of removing it, particularly if the vision, with a correcting glass, is good. Such lenses often remain harmless for considerable periods. I have seen several such cases following blows with footballs, cricket balls, and tennis balls, as well as from soda water and champagne corks. It is to be observed, moreover, that years may elapse before chronic glaucoma follows the act of depression, if that is really the cause of it, and if at 75 or 80 years of age a slight operation secures four or five years of good vision, I think we are justified in running the risk, where other circumstances contraindicate the operation of extraction. Lastly, in view of the microbic origin of sympathetic ophthalmia, now very generally entertained, I do not see any more reason for anticipating the advent of that affection, if proper antiseptic precautions are taken in depression, than after extraction.

I do not, of course, advocate any change from the ordinary procedure for the extraction of cataract when the general and local conditions are favourable. Given a wholesome constitution and a healthy eye, and extraction, even at an advanced age, may be successfully performed: and I am well aware that, on the other hand, there are several conditions which either preclude, or at best render extremely doubtful, any attempt to depress the lens, such as, for example, the presence of adhesions between the iris and the capsule and a soft and degenerated lens, since in the former case any drag upon the lens is likely to detach the iris more or less completely from the ciliary zone, leading to haemorrhage and

other complications. and in the later case because the lens is apt to break up and excite iritis and iridocyclitis.

The cases in which I am of opinion it would be advisable to practise depression are:

1. Those in which such combination of difficulties are present as render it doubtful whether any operation at all should be undertaken—as, for example, in those who are greatly enfeebled by age and other infirmities. In this condition the ordinary operation for cataract fails, even where performed by the most expert, simply from non-union of the lips of the wound.

2. Those in which there are physical obstacles to the performance of the operation for extraction, as, for example, where there is an extremely small palpebral fissure, or where the eye is small and very deeply set in the orbit. In such cases, if the surgeon attempt to extract, he is apt to make too small an incision; the opening has to be enlarged with scissors or with the blunt-pointed knife the lens has to be squeezed out; much cortical matter is left behind, and well-known after-troubles arise.

3. In cases in which a troublesome condition of chronic conjunctivitis is present that does not yield to treatment. Here the conditions are favourable to depression, unfavourable to extraction, for the conjunctiva can be cleansed, and so far temporarily rendered antiseptic, and there then is little danger from a small puncture, the wound closing before any infection can occur, whilst it is different with the incision for cataract, for the conjunctival sac, especially if some dacryocystitis be present, cannot after the operation be so scrupulously purified, and hence infection proceeding from the edges of the wound may occur a day or two after the operation.

4. There is yet another complication of cataract deafness, in one case of which I greatly regretted I did not endeavour to depress instead of performing extraction in the usual way. I had known the patient for a long time; she was nearly 80 years of age. The cataracts were hard, and with the failure of sight deafness gradually advanced. I operated in the usual way—von Graefe's knife, upper section, iridectomy. The operation went off well, and for three days no bad symptom arose. One night, weary, I suppose, of the confinement and persistent bandaging, and anxious to know whether the operation had succeeded, she pushed up the bandage with her fingers, opened the wound; severe inflammation followed, and the eye was lost. In that case it appears to me I should have done better to have depressed, kept the patient in bed for one day, and then allowed her to go about as usual.

5. Other classes of cases in which depression would probably give better results than extraction are lunatics, imbeciles, and idiots, in all of whom interference with the bandages is a not unlikely event, and requires, at all events, to be carefully guarded against, whilst with depression the patient need scarcely be kept in bed or on a couch for more than a day, or may be allowed to go free from the moment of operation. Such patients are sometimes so timid that they throw themselves into paroxysms of passion, as was the case with the deaf-mute, James Mitchell, recorded in the *Philosophical Transactions*, for whom Mr. Wardrop constructed a sort of coffin with a hole for his head. Again, I always feel some hesitation in undertaking extraction in old, fat, flabby, and phlegmatic patients, because they are more liable to complications than thin alert persons. The former are often gouty or rheumatic, do not bear confinement well, and require a course of preliminary treatment, the main features of which are purging and exercise. I operated by depression on such a patient about 1860, and the case did well for a year, but standing one cold spring day at a railway station she caught cold, and severe rheumatic inflammation followed, which led to the loss of the eye. Nothing daunted, she submitted the opposite eye to a similar operation, and I had the pleasure of subsequently seeing her reading and working for a period not far short of twenty years, the floating lens being very visible when the eye was turned down.

7. Chronic bronchitis is not an uncommon concomitant of old age, and has been the cause of separation of the lips of the wound, and hæmorrhage or suppuration in many cases of extraction; such dangers would be avoided by the use of the needle instead of the knife.

8. There are some cases of cataract in which the experienced operator dreads the consequences of attempting to extract, or refuses altogether to treat. I mean those in which, from softening or liquefaction of the vitreous, the iris trembles, and the lens easily shifts its place. If a large cut be made, the vitreous flows away with the lens. The latter, indeed, sometimes sinks out of sight, and requires to be fished for with great risk of injury to adjoining parts. Collapse and loss of the eye then follows, though it must be admitted that such eyes sometimes plump up again and become serviceable.

9. Another class of cases in which "depression" may be preferred to "extraction" is where one eye has been unsuccessfully operated on. If the patient has had much pain, whilst he can still see large objects he not infrequently declines to submit to a second extraction; but if the nature of the operation for depression be explained to him he will not demur.

Lastly, though this is extremely rare as a contraindication to "extraction," there is the hæmorrhagic diathesis. Few, I imagine, would care to use the knife in a patient who was known to be the subject of hæmophilia.

These seem to me to be the chief circumstances under which it would be at least allowable, if not advisable, to revert to the ancient method of "depression" for the restoration of light in cases of cataract.

REFERENCES.

[1] *Indian Medical Gazette*, June, 1901, p. 201. [2] *Ibid.*, p. 215.

The PRESIDENT said he was interested in hearing Mr. Power's experience, as he had never performed the operation himself. He asked Mr. Power if he punctured the eye in front or in the sclerotic.

Lieutenant-Colonel POYNDER, I.M.S., said that since learning the principles of ophthalmic work from Mr. Power at St. Bartholomew's Hospital 25 years ago he had had the opportunity of seeing the results of this operation in India. The natives were curious, and frequently removed their bandages within a few hours of the operation, and were, moreover, often in a very low state of health so that operation wounds did not heal well. Certainly the operation of couching would not flourish as it did unless a fair amount of success attended its performance. Surgeons, as a rule, saw only the unsuccessful cases which came for relief, owing to the occurrence of inflammatory mischief, but hundreds of cases were operated on which were never seen, and many of these must have been successful. As a rule, the lens was depressed by natives from a corneal puncture.

Mr. RICHARDSON CROSS said that on two or three occasions he had couched by passing a needle in the corneal limbus and pushing back the lens in cases in which it was partially dislocated with a tremulous iris. No ill results followed, and he had never seen the presence of a lens in the vitreous give rise to any harm or degeneration in the eye.

Mr. E. DYKES BOWER thought that it might be difficult to ensure the needle entering the lens and that unless some form of counter-pressure were exerted it would be much easier to push the lens to one side instead of depressing it to the lower part of the eye. Then, again, in the after-result he asked Mr. Power if he had ever experienced trouble from the lens getting into the anterior chamber in certain positions of the head. The lens, he took it, was floating, and so might get into the axis of vision, and he thought that these facts would constitute rather a serious objection to the operation.

Mr. ROLL said he had accidentally caused reclination of the lens in a simple extraction. The eye remained quiet with useful vision for some time, but subsequently the tension rose and inflammation set in. He then removed the lens and fair vision resulted. He thought that in cases of hæmophilia and in lunatics the operation might be done with advantage, though in other conditions, such as in narrowed palpebral fissures, and in cases in which there was conjunctivitis, etc., he thought it would be safer to confine oneself to extraction.

Mr. TATHAM THOMPSON thought they were all indebted to Mr. Power for upholding the legitimacy of the operation under certain conditions. Some eighteen months ago he had performed the operation on a patient over 70 years of age, very bronchitic and enormously stout, whose right eye was useless from a semicalcareous lens with tremulous iris, but with good projection. The other eye could only see fingers at three feet. Depression was performed anteriorly in the right eye without

any subsequent trouble, and the patient could see with correction about $\frac{5}{6}$ and J 8. He was seen 7 to 8 weeks ago and retained good vision.

Mr. Hartridge had never seen the operation performed, and asked Mr. Power if he took any precaution against wounding and breaking up of the lens.

Mr. Power said that he had on several occasions passed the needle through the sclerotic: he then divided the posterior capsule and thus facilitated the dislocation of the lens. Age by itself was no contraindication to extraction unless the patient was very feeble and flabby. He mentioned another condition in which extraction was undesirable, and that was in epileptics. In a patient subject to this disease, of which he was unaware, he once did an extraction, and during the section the patient had a fit; he did well, but the complication might have been serious.

## THE ESSENTIALS OF A TEST FOR COLOUR BLINDNESS.

By F. W. Edridge-Green, M.D., F.R.C.S.,
Hendon.

My special object in writing this paper is to emphasise the fact that a test, to be efficient, must be based upon the facts of colour blindness and not upon any theory. The tendency at the present time is to regard colour blindness as "chromic myopia," and numerous tests have been constructed on this supposition. This theory is incorrect, as shown by the cases I have recorded. A man may be colour blind and yet be able to see light of all colours at twice the normal distance. That is, he can read letters printed in all colours on a black background, but makes the same mistakes regarding them as he does when they are close to him.

The colour blind may be divided into two classes:

1. Those who, whilst having a spectrum of the normal length, have a diminished number of units; that is to say, they see five, four, three, two, or one colour instead of the normal six.

2. Those who, with or without the normal number of units, have a spectrum shortened at one or both ends.

From a practical point of view we wish to devise a test which will show whether the examinee will be able to distinguish between the standard red, green, and white lights under the conditions in which he is likely to be placed. We do not wish to exclude the five-unit or four-unit colour blind, or persons who have the violet end of the spectrum shortened, or the red end only to a slight degree. These persons are able to distinguish between the coloured lights as easily as a normal-sighted person can, and therefore, though scientifically they are of great interest, for all practical purposes they are normal-sighted. We wish to exclude from the marine and railway services all those individuals who are included in the following three classes:

1. Those who possess a psycho-physical colour perception with three or fewer units.

2. Those who, whilst being able to perceive a greater number of units than three, have the red end of the spectrum shortened to a degree incompatible with their recognition of a red light at a moderate distance.

3. Those who are affected with central scotoma for red or green.

I contend that it is absolutely necessary that in any test for colour blindness colour names be not ignored. If they be ignored then it is certain that a number of normal-sighted people will be rejected through not understanding what is required of them. I predicted that if the Holmgren test were used by the Board of Trade a large number of normal-sighted people would be rejected by it, and this turned out to be the case, as one year over 38 per cent. of those who appealed were found to be normal-sighted, and another year no less than 42 per cent. of those who appealed were found to have been rejected wrongly. It is curious that the fallacies of the arguments against the employment of colour names have not been apparent to every one, but it is extraordinary how difficult it is to disprove anything which has received the sanction of authority. If we do not use words, how are we to express our ideas? The colour-blind person does not guess when told to name a colour, but names it in accordance with his colour perception. A certain colour has been pointed out to him as red, and in naming a red he names it in accordance with his previous ideas of this colour. If we do not clearly make him understand what is meant by colour, he may be influenced by shade, and therefore rejected though normal-sighted. The following shows how this may occur:

A man was sent to me as colour blind. On examining him I found that he was normal-sighted. I then examined him with Holmgren's test, carefully adhering to Holmgren's directions. He put several confusion colours with the test green but no greens. In answer to my inquiry, he said that all were of the same colour. I then said, "Are they all greens?" He replied: "No, they are not: that is a purple brown, that is a grey, that is a yellow. You did not tell me to put only greens with the wool you gave me. You said, 'Pick out all of the same shade or colour.'"

A very simple illustration may help to make my point quite clear. Let it be supposed that I wish a man or a child to separate a roomful of people into men and women. I take him to the room and say: "Now, I want you to separate these persons. I want you to put all that look alike in one class and the remainder in the other." When I return I find that he has put all the big people in one class and all the small people in the other. If I then say: "You have classified them wrongly. I wanted you to put the men in one class and the women in the other." He could reply exactly like the man who was wrongly rejected by Holmgren's test: "Why did you not tell me that you wanted me to separate them into men and women?"

We can often tell to which class of the colour blind a certain person belongs by the way in which he names a colour. For instance, a man belonging to the class of the trichromic may designate a yellow as red-green, or blue as a violet-green. It would be outside the scope of this paper to discuss the tests which I employ, but the lantern, wools, etc., are constructed in accordance with the known facts of colour blindness. The defects of Holmgren's test are now well known. No fewer than six distinct varieties of colour blindness may escape detection by this test. Three of these six varieties are dangerous having regard to those employments in which this defect must be excluded.

Mr. Devereux Marshall said that he quite agreed with Dr. Edridge-Green in his conclusions. He had seen a case himself in which a person could pass Holmgren's test, yet he could not see a dim red light at all which was quite visible to a normal-sighted person. Such a person would be a great source of danger if employed as a look-out on a ship, or as an engine driver on a railway.

## NOTES ON OPHTHALMIC CONDITIONS RESULTING FROM MODERN GUNSHOT WOUNDS.

By Lionel Vernon Cargill, F.R.C.S.,
Surgeon, Royal Eye Hospital, Southwark; Assistant Ophthalmic Surgeon, King's College Hospital; Ophthalmic Surgeon, Seamen's Hospital Society.

When I had the honour of being appointed Ophthalmic Surgeon to the Imperial Yeomanry Hospital in the early part of last year, I took out with me as full an equipment for the department as would enable me to treat or operate on any case of eye injury or disease as completely and efficiently as if I were at home. I certainly had not a Haab's magnet, although I had an ordinary electro-magnet, but as it turned out there was no case in which either would have been of any avail. I came across no case in which a shell had broken up into fragments small enough to lodge in an eye without doing irreparable mischief to the organ, to the surrounding parts, or the patient. Fragments of broken-up bullets did so lodge, but then the electro-magnet was of no use in such cases. I may mention that I found the air-tight tins of sterilised ophthalmic pads and swabs kindly provided by Ferris, of Bristol, and prepared by them at the suggestion of Dr. Chetwood-Aiken, exceedingly useful on account of their portability and readiness at all times and under the conditions in which one was placed, with violent dust storms from time to time.

Being attached to one particular, although the largest, civil hospital, I of course missed seeing a considerable number of cases of great ophthalmic interest: yet credit must be given to the fact that I was allowed to proceed elsewhere if urgently wanted. With this explanation I must throw myself on your indulgence for the incompleteness of the following paper.

The modern rifle bullet, as you all know, consists of a hard nickel or cupro-nickel mantle enclosing a soft lead core. When in full flight it will pass through any part of the human body without deviation. As to whether it can be bent or deformed by impinging against bone, I can only repeat what my friend Mr. Hamilton Ballance remarked to me the other day, namely, that we had seen no such deformed bullet removed at Dee fontein, the nose of which was intact and which had struck the bone fair and square, which might not have been a ricochet. Let me remind you that the Mauser bullet, which was the usual cause of the injuries here alluded to, has a diameter of 0.309 inch and a weight of 215 gr. You are all aware that if the soft core is exposed by filing down the nose it is known as an "expansive" bullet, because the lead "mushrooms" on striking and the bullet flattens out and tends to break into fragments; the injuries thus inflicted are proportionately severe, and "Tommy" often erroneously speaks of it as an "explosive" bullet.

The ophthalmic conditions resulting from modern gunshot wounds are very varied, and I can only hope to touch on and illustrate some of the main points. Not only have we to consider injuries to the orbit, the eyeballs themselves, the optic nerves, the extraocular muscles, and the nerves supplying them, but also injuries in the frontal region leading to blindness and diplopia, injuries in the occipital region causing visual defects, and injuries as low down as the root of the neck causing the ocular effects of sympathetic nerve paralysis.

In but few cases can the eyes be wounded by gunshot injuries without the orbits being implicated, yet this occurred in the following two cases in consequence of the bullet being split and broken up by striking a hard substance, so that the fragments of the leaden core lodged in the eyes in one case without penetration, and in the other case with penetration and loss of the eye.

A sergeant of Yeomanry was sitting on the trail of a Colt gun engaged in firing it when a bullet from a range of about thirty yards struck the side of the gun close to the shield. Small fragments of the bullet were scattered over his face, eyes and hands. Both corneæ were peppered with numerous minute fragments lodged at different levels, but none had perforated.

An officer was crouched behind a boulder engaging four Boers fifteen yards away, similarly sheltered. He had just shot one, when a bullet fired from a Boer to his right front struck the boulder. He felt as though he had received a blow in the face and was blinded and fell over on his back. He could only distinguish light from darkness and lay for about two hours before he was picked up. He began to see objects three hours after the injury, and saw much better next day. When first seen by me, two or three days later, there were some fragments of leaden core embedded in his arms, head, and face, and in the left breast pocket of his tunic he found a piece of the misshapen mantle of a bullet with a little of the core attached. In the right eye there was a small penetrating wound 3 or 4 mm. to the outer side of the cornea, with a minute bead of vitreous entangled in it. Ciliary injection, and very sluggish pupil. T −1. Hæmorrhage and effusion into the vitreous, and a floating, attached mass of lymph, such as might surround a foreign body. Some retinal detachment. Fingers counted at 2 feet in outer part of field. A radiograph taken by Mr. Hall-Edwards showed apparently two foreign bodies. From the left upper eyelid two or three fragments of leaden core were removed, one fragment projecting backwards from the tarsus, under the palpebral conjunctiva near the lid margin. There was a contusion of the ocular conjunctiva with ecchymosis; but this eye was fortunately sound and showed no ophthalmoscopic change.

The indirect rupture of an eyeball by a bullet in full flight without even notching the margin of the orbit must be a rare occurrence, yet it happened in the specimen which I have here to show you: A bullet from an unknown range passed somewhat obliquely to the plane of the face, grooving the right side of a prominent nose, and slightly the right lower lid, just below the external canthus. There was a superficial ocular contusion corresponding to the lid injury, and a subconjunctival rupture of the globe on the opposite side, upwards and inwards, just outside the sclero-corneal junction, with escape of the lens and some of the iris through the rupture. The retina was completely detached, and there was an extensive subretinal and choroidal hæmorrhage, greatest on the side near which the bullet passed. The fellow eye escaped injury.

In the majority of cases in which the eyeballs and their adnexa have been injured by gunshot wounds the orbits have been implicated. The orbital cavities have been traversed by the bullet; or the orbital boundaries have been perforated, fissured, or comminuted; or the orbital margins notched. It is only in exceptional cases that a bullet traverses an orbit without the globe being injured indirectly by vibratory concussion; or directly either by contusion, rupture, or perforation and disorganisation. And if the globe should by chance escape by the bullet passing nearer to the apex of the orbit the optic nerve will almost certainly be injured. In all cases the results as regards vision will usually be very serious. If the immediate blindness which is generally produced does not begin to pass away in a few hours, severe structural damage is probably present, and permanent blindness will probably be the result. On the other hand, there may be some return of vision after the effects of concussion have passed off, and yet injuries may be present which cause permanent visual defects, or later total loss.

If the globe has suffered concussion or contusion there will be hæmorrhage, often copious, into the vitreous, retina, choroid, or even anterior chamber, with choroidal rupture, and possibly retinal detachment; and followed by choroido-retinitis with extensive effusion. If there has been a posterior rupture there will be in addition very low tension or complete flaccidity, with possibly wrinking of the anterior part of the globe. As has been remarked by Nettleship, the subsequent plastic choroido-retinitis unites these two membranes together, and hence the comparitive rarity later of the clinical picture of retinal detachment. If the globe has been ruptured its atrophy will usually quickly follow. Enophthalmos is another later result when a bullet has implicated an orbit.

The optic nerve may suffer indirectly by concussion from the bullet passing close to it, although not touching it; it may be directly contused or bruised from being grazed, or it may be lacerated or completely divided. In the first case the nerve may recover or degenerative changes may ensue, and in the second case serious damage will almost certainly be caused either directly from the injury or from blood effused into the nerve sheath, and atrophy will be the most probable result. Lastly, copious hæmorrhage into the orbit, accompanied by proptosis, may press on the optic nerve and cause only temporary impairment of vision, which may not come on instantly after the injury. If the optic nerve alone, apart from the globe, has suffered from concussion or contusion there will generally be very impaired or absent pupillary light reflex. The fundus at first may show nothing, but neuritis will probably develop, unless the injury is very slight, and be followed by partial or complete atrophy; and if there has been considerable hæmorrhage into the sheath there will be contraction of the retinal arteries, distension of the veins, and scattered hæmorrhages. If the optic nerve has been severed atrophy of the disc will, of course, soon be evident.

As regards injury to the extraocular muscles and their nerves, the former must be the more commonly injured in orbital gunshot wounds, whether it be either by contusion or stretching, or by partial or complete division. I found it, however, sometimes difficult to be quite sure in distinguishing between injury to muscle and nerve. One must carefully consider the path of the bullet in regard to the anatomical relationships of the muscles and nerves, and also in respect to the amount and nature of the interference with function, and the extent of subsequent recovery.

As Makins points out, cases may be classified according as the bullet passes through the orbit vertically, obliquely, or transversely. The last is the most serious direction with regard to eyesight, since both eyes will probably be destroyed

as in a case where a bullet notched the outer margin of the orbit on one side, and passed through the outer part of the upper lid on the other side, perforating and destroying both eyes in its passage. A narrow escape was where a bullet passed from one malar prominence to the other, just under the orbits, without affecting the eyes. Vertical wounds are generally received when lying down firing at the enemy: and horizontal wounds, when standing, kneeling, or advancing.

In one interesting case in which a Mauser bullet entered the outer edge of the left orbit, just behind the external canthus, and emerged by an open septic wound ½ in. in front of the right tragus, and ½ in. above the zygoma, it appeared that the bullet had caused on the right side vibratory concussion of the optic nerve, or, less likely, slight contusion, its path crossing below the nerve towards the apex of the orbit. It had probably, also, only caused concussion of the lower portion of the third nerve, judging by the restoration in movement. On the left side it would seem to have caused contusion of the eyeball behind, without rupture; laceration or division of the optic nerve: hæmorrhage into the orbit: and injury to the extraocular muscles, chiefly the external rectus, the internal apparently almost escaping. I did not meet with any case of arterio-venous aneurysm and pulsating exophthalmos following a gunshot wound of the orbit, nor any case in which there had been injury to the chiasma or to the optic tracts between it and the cortical visual centres.

Gunshot wounds in the frontal region may cause paralysis of the ocular muscles from injury to their nerves, especially the sixth; or they may cause blindness followed later by the signs of optic nerve atrophy. These complications may occur in cases of ploughing of the bone, or perforation, without any evident fracture of the vault, and are probably due to fissuring at the base and across the optic foramen.

Gunshot wounds in the occipital region may, from injury to the cortical visual centres of the cuneate lobes and in the neighbourhood of the calcarine fissure, give rise to altitudinal or homonymous hemianopsia. Such a case was recently reported by Critchett to the Ophthalmological Society,[1] and others are described in Makins's excellent book on *Surgical Experiences in South Africa*. Page also has recently described a case in the *Lancet*. Sometimes attacks of an epileptiform character, with visual aura, resulted.

Of course there may be ophthalmic effects from complications occurring in gunshot wounds, as in a case of cerebral abscess following a bullet wound of the skull in which there was double optic neuritis. I reported the case, which was under the care of Mr. Ballance, in the BRITISH MEDICAL JOURNAL of October 6th, 1900.

I saw two cases of paralysis of the cervical sympathetic resulting from gunshot wounds implicating the brachial plexus, and therefore the ramus communicans of the first—and probably also the second—dorsal root. In both of them the cardinal ocular signs, due to paralysis of unstriped muscular fibres, were present. A narrowed palpebral fissure from slight drooping of the upper lid, slight enophthalmos, and a contracted pupil not dilating in the shade (with loss of the skin reflex), together with diminished secretion of sweat on the same side of the face. The application of cocaine produced by degrees palpebral dilatation and slight temporary dilatation of the pupil.

In both cases the wound was received whilst firing in the prone position; in both there was paralysis of the arm; and in neither was there any evidence of injury to the structures of the carotid sheath. Mr. Hall-Edwards kindly took photographs of one case which was under the care of Mr. Fripp, and has been alluded to in the JOURNAL of May 12th, 1901. The path of the bullet was from half an inch outside the angle of the mouth on the right side to 2 inches to the right of the second dorsal spine on the same side.

Shell wounds having an ophthalmic interest seldom come under treatment, the injuries being often of a fatal character; and when the patient survives the globes, if wounded, are likely to be ruptured and disorganised in association with other more extensive injuries. In rare instances the nasal bridge may suffer but the eye escape; or a small shell fragment, or a piece of rock, stone, or gravel thrown up by the explosion, may wound or contuse an eyeball without utterly destroying the organ.

There were other aspects of my ophthalmic experience in South Africa which I had thought of mentioning, but I should have overstepped my time allowance. In thanking you for listening to this paper I may say that I shall not feel I have wasted your time, gentlemen, if only it acts as an incentive to others to watch and bring forward cases of gunshot wounds of ophthalmic interest, and so help to make our knowledge of the ultimate results of these injuries more perfect.

REFERENCE.

[1] BRITISH MEDICAL JOURNAL, February 9th, 1901.

Lieutenant-Colonel DRAKE-BROCKMAN asked Mr. Cargill if he had made any observations on the tension of the eyeball in which injury to the brachial plexus sympathetic had been received. He asked this as bearing on the comparatively recent operations which had been performed for glaucoma by removing the superior cervical ganglion.

Mr. CARGILL said he had noticed nothing bearing on this.

## TREATMENT OF HYPOPYON ULCERS OF THE CORNEA.

By ROBERT JESSOP HAMILTON, F.R.C.S.Edin.,
Ophthalmic Surgeon, Victoria Central Hospital, and Southport Infirmary.

THE treatment of hypopyon ulcers of the cornea, which we have been invited to discuss at this meeting, cannot be satisfactorily approached without some reference to the pathology of the affection. Professor Leber took as his subject in the Bowman Lecture for 1892 the Present Position of our Knowledge of Inflammation, and there the hypopyon ulcer is presented to us as a type of a septic inflammation. From the various conclusions arrived at and there treated with admirable force and clearness, I may be permitted to quote the following: In speaking of a septic or infected ulcer, he says: "The study of this process shows that the action of the micro-organism extends far beyond the area of its development, so that a sort of distant action must take place. This distant action is explained by assuming that the irritating substance developed by the micro-organism is carried by diffusion to the surrounding parts, and so at a greater distance from the point of infection excites inflammation."

Further on, he gives in detail an experiment showing the origin of the pus cells from the leucocytes, and not, as some observers state, from the proliferation of the corneal corpuscles. Clinically, too, we can support this; for often in the very early stages a hypopyon will appear, when we have in the cornea only a shallow and very superficial ulcer, and, therefore, a deeper-seated inflammation must exist as the *causa causans* of the pus cells. Now, briefly, what is the pathological picture before us?

In the cornea we have necrosis of the tissues within a small infected area, and at a distance, in the vessels of the iris and in the ciliary body a condition of inflammation. That a cyclitis is often a more prominent condition than an iritis, I have no doubt: sometimes only hyperæmia of the iris can be made out, with a moderately sluggish pupil. But one point we may accept as certain: that the appearances will alter with marvellous rapidity in the early stages of an acute case, and directly in proportion to the intensity or amount of septic material absorbed from the corneal ulcer, so that prompt treatment, rather than expectant treatment, is demanded of us. Our first consideration, then, is to arrest this process, and to attack both the point of infection and the deeper-seated inflammation, and, in dealing with the latter first, the treatment I would advocate is subconjunctival blood-letting (peritomy). This, as we should expect, is most beneficial in the early stages—namely, when there is hyperæmia of the iris and ciliary congestion. Not but that this hyperæmia is a marked feature throughout, and will probably have been noted by everyone; for in cutting through the base of the ulcer—in doing what is called a Saemisch's section—when the aqueous escapes, blood often appears in the anterior chamber. This points to an extreme degree of congestion.

Now it is to the relief of this stasis of the blood vessels—the first stage, too, in inflammation—that I consider of first importance in treatment, bleeding from the subconjunctival vessels. These vessels surrounding the cornea—the episcleral branches of the anterior ciliary vessels, are those which we

see engorged in iritis, and it is to secure bleeding from these vessels that I urge subconjunctival section. This can be repeated in about forty-eight hours and is a perfectly safe proceeding. Bleeding by leeches at the external canthus also gives relief.

The next point in treatment to the value of which I wish to bear strong testimony, is the use of the cautery, and this too follows rationally on this view of the pathology. It is mentioned in most of the textbooks, but hardly given sufficient praise. The cautery to use is the ordinary thermo-cautery, and the little knob is heated in the flame of a spirit lamp, and applied when at a dull red heat to the surface of the ulcer itself and to two or three points at the outer edge of the hypopyon, that is, at the sclero-corneal margin. This may be repeated after two days interval, and again on the fourth day, if necessary. Cocaine should be applied before the use of the cautery and the surface carefully dried with absorbent wool. The cocaine though, it is well known, has little or no effect as an anæsthetic, if the conjunctivæ be suffused and inejcted.

The greatest relief from pain follows the scarring and the patient often has the most comfortable night experienced for some time. That this is the direct result of treatment and follows on the destruction and shrinking of the inflamed nerve endings there can be little doubt; but what the action is on the pus cells in the anterior chamber it is harder to say. If I may use the word "thermolysis" in the same sense as that in which electrolysis is used—the destruction by electrical energy of the activity and growth of cell-life—as we see it applied in the treatment of nævus or superfluous hairs, then that perhaps may be an explanation of the action of this particular form of heat. The day following the cauterisation, the ulcer has the appearance of being "scabbed" over, the zone of infiltration is less, and it is sometimes possible to appreciate a difference in size of the hypopyon, but this is unusual and hardly to be expected, as the process of absorption is a slow one. Heat applied in the form of douches and fomentations I do not believe in as routine treatment, and have constantly seen harm follow.

Is atropine to be applied in all cases? It is not possible to dogmatise on the question but as a general statement, if the ulcer be situated at the margin, if it be a deeply excavated one or about to perforate, and finally in old people with a quantity of pus in the anterior chamber atropine is contra-indicated.

No ointment or lotion can have the slightest effect on the hypopyon: nor, indeed, on the infectivity of the little ulcer, for neither can be applied in preparations of a sufficient strength to act as a germicide. The various preparations of vasogen, ichthyol, izal, resorcin, etc., that have been extolled in the treatment of a hypopyon, may have their special virtues as drugs, but my belief in these things is in inverse proportion to the number of ills they are said to cure, and when a preparation is put before us by some enterprising firm of chemists, and testimonials published to show its curative effect on everything, then I think its adaptability to our particular *Pharmacopœia* is doubtful, and need not be carried to the experimental stage. True, we require an emollient antiseptic preparation, and the simpler in form the better. I have found that two or three drops of castor oil placed on the conjunctiva of the lower lid, and then a little finely powdered iodoform dusted on the eye; or in the form of an ointment—10 per cent. strength iodoform in castor oil and lanolin—to be a most satisfactory application after using the cautery; after that a dry pad and light bandage.

In children there is nearly always—and it should always be looked for—an accompanying ulceration of the naso-pharynx, the probable source of origin of the invading micro-organism. Repeated douching with warm alkaline lotions, and a generous application every night to the anterior nares of white precipitate ointment is a most necessary and helpful part of the treatment. In old people blennorhœa of the sac and nasal duct is constantly present, and calls for persistent treatment.

As in all septic conditions the worst cases are those in which a lowered vitality makes a poor resistance to the invasion of the attacking organism, and therefore constitutional treatment in the way of tonics, nourishing diet, and fresh air is always of first importance. In old people small doses of brandy may be given with advantage.

In conclusion, I may say that the recognised treatment and surgical principles that guide us in treating an ordinary abscess, by poultices, fomentations, and as early evacuation as possible, are not the principles to adopt when dealing with pus in the anterior chamber. It is not the purport of a short paper such as this to discuss the relative merits of other forms of treatment, such as Saemisch's section, scraping, subconjunctival injections of corrosive sublimate, etc.; but to set forth what we each have found after some years of hospital experience in all methods to be the treatment which in our hands gives the best results. This is my reason and my apology for a paper that contains nothing perhaps startlingly new, but has the merit of conviction and the greater virtue of being short.

## REMARKS ON THE TREATMENT OF ULCER OF THE CORNEA WITH HYPOPYON.

By Richard Williams, M.R.C.S.,
Senior Surgeon, Liverpool Eye and Ear Infirmary.

Few things have remained more vividly on my mind than the recollection of the manner in which the great majority of cases of ulcer accompanied by hypopyon went from bad to worse, when I first became acquainted with ophthalmic practice, now more than twenty years ago. In the treatment of these cases I at that time followed the practice of my predecessors and colleagues. That treatment consisted chiefly of hot belladonna fomentations, the instillation of atropine, and a wet compress. The only operative procedure I ever saw consisted in the insertion of a broad needle into the collection of pus, and the turning of the instrument on its edge in the hope thus of inducing the matter to escape with the aqueous. I could not help being struck by the futility of these means, especially as regards the opening of the anterior chamber in the way I have just described, and it was painful to see case after case of eyes, otherwise sound, being lost from apparently so small and local a cause. I therefore by degrees came to adopt a totally different plan of treatment, which I have now relied on for the last eighteen years at least, and which I think I can with certainty say has very largely diminished the number of failures that formerly fell to my lot in this class of cases. In the former treatment to which I have just referred, the antiseptic principle had had no place, and the operative procedure was, in my opinion, also wrong in principle and ineffective. Failures, therefore, were the rule.

As I do not pretend in these remarks to review the subject under discussion as I whole, I shall confine myself to describing briefly the plan of treatment which is now a matter of routine at the Liverpool Eye and Ear Infirmary.

Take an ordinary case of ulcer with hypopyon, from whatever cause, in an early stage before the pus in the anterior chamber becomes agglutinated and fibrinous. The patient is ordered a solution of quinine and atropine in the proportion of 4 gs. of the former to the ounce of the pharmacopœial solution of the latter. This drop is instilled into the eye every three or four hours or oftener. A pad and bandage is applied, and in many cases the hypopyon disappears in the course of two or three days, and the ulcer goes on healing. The case must, however, be carefully watched, and if the hypopyon shows signs of increasing the patient is taken in, and the evacuation of the pus becomes a necessity both for the relief of pain and the arrest of the morbid process. The operation is performed in the following manner: Taking a perpendicular line across the cornea through the centre of the pupil, a Graefe's knife is inserted at its lower end just behind the sclero-corneal margin, the edge of the knife looking forward and being at right angles to the corneal surface. It is then thrust into the anterior chamber through the hypopyon until the point is near the lower edge of the pupil, and made to cut its way out rather rapidly through the cornea.

The result is that the aqueous escapes with something of a rush, carrying with it as a rule the whole of the contents of the anterior chamber. Occasionally the mass of hypopyon sticks in the incision where, however, it can be easily picked out with a pair of forceps. It is only when the eyeball has lost its normal tension through extreme attenuation of the cornea and loss of aqueous that the anterior chamber fails to evacuate itself by means of this incision. The evacuation being thus complete, the above-mentioned drops are continued and a pad and bandage applied. In the majority of cases the incision heals by first intention, and there is no further accumulation of pus. In a few of the worst cases where the cornea is greatly damaged, it may be necessary to reopen the incision but these are cases of very doubtful success with any treatment that I know of. Formerly for the direct treatment

of the ulcer itself, I used the actual cautery a good deal in the rapidly sloughing cases, but I must confess it has frequently failed in my hands to arrest the sloughing process, and I do not now employ it so often. Having indicated the two main features of this plan of treatment, namely, the use of quinine drops, and the radial incision as described, it now only remains for me to make one or two further observations.

First, I believe the quinine acts as an antiseptic, both by direct contact with the ulcer and by absorption into the anterior chamber. As far as I know the atropine has no curative influence, but is combined with the quinine because there is generally iritis present. Secondly, my experience of Saemisch's incision is so slight that I have purposely refrained from saying anything about it; but I may be allowed to say that theoretically at least it has always appeared to me inferior to the radial incision which I have described. I believe with Mr. Brudenell Carter that Saemisch's incision has no curative effect other than what is due to the evacuation of the anterior chamber and the relief of tension. If that is so, it seems to me that these objects can be attained more completely by means of the radial incision. Moreover, I cannot help feeling that to open the anterior chamber by cutting through a part of the cornea which is already weakened by ulceration is objectionable, and tends to increase the liability to staphyloma, which we know is one of the deplorable results of extensive ulceration in these cases. At any rate, I may say in conclusion that the advantages I claim for this method of treatment are:

1. A more complete evacuation of the anterior chamber, and union by first intention, so that there is no necessity in the large majority of cases to re-open the incision.

2. The impossibility of producing prolapse of the iris. The moment the knife is removed and the chamber evacuated, the edges of the incision fall together by the natural tension of the globe, and effectually prevent any incarceration of iris: and as the union in the majority of cases is by first intention, and the chamber becomes quickly refilled, the body of the iris soon becomes separated from the edges of the incision, and remains free. In fact, I think the only objection that can be advanced against this incision is the thin linear scar that results. This, however, is of no practical importance, as it is scarcely visible to the naked eye, and in no way interferes with the integrity of the vision.

Numerous cases could be cited in support of this plan of treatment, but it would be taking up your time unnecessarily to report cases the merits of which can only be properly appreciated by the personal observation of each one.

Major H. HERBERT, I.M.S., referred especially to the high tension secondary to irido-cyclitis, which was often clinically evident in advanced ulcus serpens and in some atypical cases of hypopyon keratitis. The condition of the filtration angle in glaucoma secondary to irido-cyclitis, whether due to keratitis or not, was not sufficiently known. Was it usually closed or widely open? If the former, one could understand how atropine alone might not suit such cases. On the other hand, a case was quoted in which atropine relieved the tension. His experience favoured the free use of atropine, together with the use of the knife, for reduction of tension. If the cautery had been used, the simplest measure appeared to be puncture—preferably crucial—through the base of the ulcer. Otherwise a small subconjunctival sclerotomy seemed to be most suited for out-patients.

Mr. TATHAM THOMPSON attributed the frequency of the occurrence of these cases in a colliery district to the infection of trivial corneal injuries by the germ-laden atmosphere of the return airway of a colliery. Formerly he had freely used the cautery, scraping, etc., but latterly he had reserved these things for the worst cases only, owing to the leucoma which these instruments were liable to leave behind. Formalin had greatly lessened his dread of this condition. His routine now was first to cleanse the whole eye thoroughly with formol ($\frac{1}{1000}$), and sometimes to paint the ulcerated surface with formol. The eye was then tied up and douched with warm formol lotion every three hours, with iodoform ointment applied and the pad readjusted. The patient was then encouraged to get fresh air. If the hypopyon increased, he did not hesitate to evacuate it, though it was not often necessary. About the fourth day he substituted a more stimulating ointment for the iodoform.

Mr. H. E. JONES thought that cauterisation often failed to arrest the septic process, and was liable to leave a dense leucoma. He strongly approved of the radial incision, and relied chiefly on antiseptics: iodoform, perchloride of mercury, and quinine.

Dr. DARIER (Paris) thought that when possible the cause and nature of the infection should be ascertained. This, however, was not always possible, and in a severe case energetic action was demanded. The extent of the lesion should be made out with fluorescine, and then the whole surface should be gone carefully over with the electro-cautery. Should the hypopyon persist it should be let out with an incision. Should the infection still be present he would then use a subconjunctival injection of cyanide of mercury. In slighter cases repeated instillations of cyanide of mercury or subconjunctival injections of sodium chloride were sufficient to effect a cure.

Mr. E. DYKES BOWER, while agreeing with Mr. Hamilton, thought that he did not go far enough, and he considered that in all cases it was better to open the anterior chamber by a peripheral incision rather than by Saemisch's section, and to remove all lymph and sloughing tissue, with forceps if necessary. Fluorescine was most valuable for showing up the part to be cauterised, and, lastly, he strongly urged that no dressing should be afterwards applied, so that all discharge might at once escape. This treatment caused cessation of pain, rapid subsidence of the inflammation, and a remarkably small opacity of the cornea. He could not agree with Mr. Tatham Thompson when he said that the application of the cautery was followed by a dense leucoma; certainly that was not his experience. He attached but little value to external application. Atropine, unless it dilated the pupil, appeared to be powerless. Eserine caused pain and did harm, and he preferred frequent bathing with hot water and a hot boracic compress. As cocaine did not act in these cases a general anæsthetic was necessary when operating.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

### THE ACTION OF RESORCIN ON THE KIDNEYS IN YOUNG CHILDREN.

As resorcin is a drug largely used by some physicians in the treatment of intestinal diseases of infants and young children, it is, I think, desirable to record any ill-effects which have followed its use in comparatively small doses.

In August last, while attending a child aged 20 months for considerable disturbance of the alimentary tract, I found it desirable to administer an intestinal antiseptic, and accordingly prescribed resorcin grs.iij to be taken every four hours.

The child improved under treatment, and after three days, during which time she had taken about five doses (each of 3 grs.) every twenty-four hours, I reduced the doses to three a day. On the sixth day from the date of beginning the resorcin she passed the typical greenish urine of carbolic acid poisoning, and the presence of phenol sulphates was confirmed by the Clinical Research Association. The resorcin was discontinued, and the urine resumed its normal colour after some four days.

Now, in some textbooks on children's diseases it states that 6 grs. or more may be given every four hours to a child of 12 months for a period of seven to ten days. In this case I gave 3 grs. every four hours to a child of 20 months, with the result that phenol appeared in the urine. I may say that the kidneys were healthy. As I have hitherto regarded resorcin as a safe remedy in such doses as I have mentioned, and knowing that my belief is shared by other medical men of my acquaintance, I send this account, hoping that my experience may be of use to others when prescribing this drug.

Weston-super-Mare. C. PERCIVAL CROUCH, F.R.C.S., M.B.

## HOUSE FLIES AND DISEASE.

Dr. Colin Campbell's case of an infant infested with maggots naturally suggests fly "blows" as the cause. The following case, however, shows that maggots may infest the human body without the deposition of eggs direct on the skin.

A. H., a widow of 42 years of age, and living in a country town, had been seen by me at intervals for a chronic chest complaint for some years.

Early in the present year the patient came in a great fright, stating she was passing maggots in her urine, and presented me with a phial containing two or three of the creatures. Knowing my patient to be of a hysterical temperament, I was inclined to believe she had placed the maggots in the bottle herself. I endeavoured to convince her that maggots could not possibly live in urine, but all to no purpose. More maggoty urine being brought on the three subsequent visits, I had the patient's bladder and internal genitals thoroughly examined by a surgeon, with a negative result. After this more maggots came, and the patient evidently believed I would never be convinced. I had early insisted on a thorough examination of all the chinks and crannies of the bedroom, especially by the creeping plants by the windows, but the source of the maggots still remained a mystery. At length my patient came with a beaming face and announced that on superintending the changing of her mattress she found some maggots on it, and further examination showed that the wool inside was swarming with them.

Weymouth Street, W. Chas. W. Chapman.

Dr. Colin Campbell's note on this subject (British Medical Journal, October 5th, p. 980) impels me to record a precisely similar case in my own practice. While attending an infant which suffered from vomiting, diarrhœa, and continual crying, my attention was called to some "worms" which had come from it. Upon examination the so-called worms were seen to be maggots, in great numbers, while the smell from the infested clothing was overpowering. They continued to show themselves for about three days, and the child has now recovered, though the nates are still very red and irritable.

Bolton. J. Johnston, M.D.Edin.

## ERYTHEMA NODOSUM COMPLICATED WITH IRITIS.

As many authorities have held, and possibly still hold, the opinion that erythema nodosum is associated with rheumatism, I think the following case worth recording:

I was called to see a farmer's wife, aged 33, on August 13th last. She said she had suffered from pains in the legs and back for about a week, but that she had been able to keep about till two days before, when the pains became much worse, and she noticed some spots on her legs. I found numerous patches of erythema nodosum on both shins and anterior aspects of knees and ankles. The patches on the shins were tense, shiny, and very tender, and the tissues over the joints were puffy and swollen, but there was no swelling of the joints themselves. The temperature was 101°, and was accompanied by the usual febrile symptoms—dryish, coated tongue, etc. There was no sweating or smell of rheumatism, and the heart sounds were normal. I ordered an aperient; sodium salicylate, gr. 10, to be taken every four hours, and hot fomentations to be applied to the legs, to be followed by a dusting powder when the pains were easier.

During the next few days a few fresh crops of nodules appeared on the legs, and the pain was so intense that I ordered an opiate at night and belladonna fomentations constantly to the legs. The febrile symptoms gradually abated, and she was generally better by August 19th. I did not see her on August 20th. On that evening her husband came up and said that for the past twenty-fours she had suffered most severe pains over her eyes and the front of the head. On the following morning I found distinct episcleral zones in both eyes, accompanied by intense supraorbital neuralgia. The temperature was 101°. The patches on the legs were less marked but still tender. I ordered hot boracic fomentations to the eyes, and sent liquor atropinæ to be instilled; but this was not used until I saw her next day, when the right eye was certainly more inflamed. Fortunately, however, no synechiæ formed, and the iritis cleared up in a few days, the erythematous rash dying away with the usual discoloration of the skin during the same period.

I do not think in this case there was any association with rheumatism. She had never had rheumatic fever, and there is no family history of rheumatism. There was no endocarditis or pericarditis. The joints themselves were never enlarged, nor have I ever seen actual swelling of a joint in any of the few cases of erythema nodosum that have come under my observation. The iritis, though slight and bilateral, was undoubted.

I saw the patient a month later. There had been no recurrence of any kind and the heart sounds were normal.

A. W. Allan, M.D.Brux., M.R.C.S., L.R.C.P.,
Wainfleet.

## THE MEANS OF ARRESTING ACUTE ENDOCARDITIS.

With reference to the discussion on this subject, published in British Medical Journal of October 12th, may I be allowed to point out the great advantage to be derived from the combined use of blisters and poultices in the earlier stages of acute endocarditis, pneumonia, pleurisy, etc., where pain is a marked and troublesome symptom?

A blister of the requisite size is first placed over the point where pain is most acute, and is firmly fixed with adhesive plaster. A large linseed meal poultice, as hot as it can possibly be borne, is at once applied above the blister and changed as often as is necessary until the latter has fully risen. The blister is then punctured and dressed in the usual way. When this has been done, a thick layer of cotton wool or spongiopiline should be placed over the entire surface lately covered by the poultices, to prevent any possibility of chill, and allowed to remain *in situ* as long as may be considered desirable.

In recent years poultices have, no doubt, fallen into more or less disuse; but no one who has had personal experience of the immense relief which they give in painful inflammatory disease will fail to use them in suitable cases.

They should, however, be applied at the very commencement of the disease, and be discontinued as soon as the pain has been relieved. Their beneficial action is no doubt due to the fact that they produce a very decided determination of blood to the surface, thereby increasing the exudation of serum and lessening nerve sensibility.

G. H. Younge, F.R.C.S.I.,
Lieutenant-Colonel, R.A.M.C.

## SURGICAL EMPHYSEMA FROM A WOUND OF THE ARM.

Surgical emphysema is, I believe, a rare condition when occurring apart from fractured ribs, fracture of nasal sinuses, or subsequent to tracheotomy. The following may, therefore, be worth reporting:

P. H., a painter by occupation, applied for treatment at the external department of this hospital. He had a punctured wound of the left arm, just over the line of the brachial artery, and about 2 inches above the internal condyle of the humerus. About a quarter of an hour before coming to hospital he was painting a window-sill, when the plank on which he was standing slipped, and to save himself from falling he hung by the left hand. In doing so a nail, projecting from the wall, entered his arm.

On examination well-marked surgical emphysema was present some inches down the forearm, most marked at the flexure of the elbow and extending half-way up the arm. There was free venous hæmorrhage, which was easily controlled.

No ecchymosis appeared subsequently, and the emphysema disappeared in four days. I can only suppose that it was caused by muscular action.

Percy Stewart.
Richmond Hospital, Dublin. House-Surgeon.

The University of Aix-Marseilles has followed the example of the University of Bordeaux in deciding on the establishment of a diploma for colonial medicine.

# REPORTS
ON
# MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

## WEST LONDON HOSPITAL.

### A CASE OF ANEURYSM OF THE ARCH OF THE AORTA; PAROXYSMAL ATTACKS OF DYSPNŒA: TRACHEOTOMY: DEATH.

(Under the care of Dr. Seymour Taylor.)

[Reported by C. E. Last, House-Physician to the Hospital.]

*History and Symptoms.*

W. C., a platelayer, aged 59, was admitted on April 3rd, 1901, for severe dyspnœa. He had been a healthy man all his life until six months before admission when he complained of loss of voice. The aphonia persisted until his death. For three months he had suffered from cough with much expectoration, both of which have been getting worse. For fourteen days before admission he had experienced difficulty in breathing, and during the last four days he had had three attacks of very severe dyspnœa, each of which lasted about fifteen minutes and then passed off leaving him moderately comfortable. No history of syphilis or alcoholic excess was obtainable, and there was no history of hæmoptysis or of sudden strain or effort, though his occupation is a laborious one.

On April 3rd, 1901, at 12.30 P.M., when the patient was examined he was found to be a well-nourished man with a pale face and anxious expression, though somewhat cyanosed. Breathing was stridulous and rapid. He could not lie down in bed but had to be supported with pillows, the slightest exertion aggravating his symptoms. He could only speak in a whisper. His cough was characteristically raucous. His condition did not permit a very lengthy examination but the following signs were made out. Heart: Cardiac impulse not felt, sounds inaudible. Cardiac dulness normal. Radial pulse: Soft, full, collapsing; regular and equal on the two sides. Lungs: Inspiratory and expiratory rhonchi throughout and stridor with diminished entry of air at bases. On percussion an area of dulness was found situated between the scapulæ behind and extending more to the right side than to the left. Elsewhere the percussion note was hyper-resonant. Pupils: Slightly contracted, equal on the two sides and reacting to light and accommodation. Examination with the laryngoscope showed the vocal cords rather reddened, lying in a position midway between abduction and adduction and moving with phonation. There was no laryngeal obstruction and the trachea as far as it could be seen appeared healthy.

At 9.30 P.M. the patient was suddenly seized with a severe attack of dyspnœa with both inspiratory and expiratory difficulty. There was sucking in of the intercostal spaces during inspiration, and all the accessory muscles of respiration were called into play. There was a considerable amount of cyanosis and the surface of the body was covered with a cold clammy sweat. Inhalations of oxygen were given together with amyl nitrite and the attack passed off after lasting about fifteen minutes. 10 P.M. Liquor strychninæ m iv with morphine tartrate gr. ¼ were given hypodermically and the patient subsequently passed a moderately comfortable night.

April 4th, 2.30 P.M. another attack of dyspnœa occurred similar to the last but more severe and lasting twenty minutes. 3 P.M.: Subcutaneous injections of strychnine and morphine were given as before. 6 P.M.: The patient was much easier and it was possible to make a more accurate physical examination when it was found that, in addition to the physical signs already noted, there was a soft diastolic murmur localised over the second right costal cartilage and tracheal tugging was felt.

A diagnosis was made of aneurysm affecting the transverse part of the arch of the aorta. 8 P.M.: The patient had another still more severe attack of dyspnœa and became very deeply cyanosed. Tracheotomy was performed with immediate relief, the cyanosis disappearing a few seconds after the trachea was opened. 11.30 P.M.: The patient had a good colour, was cheerful, and said that he felt comfortable. Stridor was still heard.

April 5th, 6 A.M.: The patient suddenly became collapsed and died.

*Post-mortem Examination.*

A large fusiform aneurysm was found involving the whole of the arch of the aorta. The trachea was pressed upon but not sufficiently so to cause great obstruction to the respiration. There was no ulceration of the trachea. The aorta below the aneurysm showed numerous patches of atheroma. The aneurysmal sac was tough and uniformly thickened without sacculation. The lungs were œdematous and contained much mucus while the other viscera were normal.

*Remarks by Dr. Seymour Taylor.*

The question of diagnosis was one of difficulty at our first visit. The patient had sudden paroxysms of dyspnœa, occurring at varying intervals, with comparative ease and comfort between the attacks.

The cardinal signs that one looks for in aneurysm of the arch are those of a dull pulsating tumour which is attended by thrill and by diastolic shock. Now, although none of these were present and only the doubtful sign of tracheal tugging existed we came to the conclusion that the pressure symptoms from which he suffered were due to aneurysm and not to new growth, or to any other form of tumour. Our data for this diagnosis were as follows, though none of them taken singly would justify it:

(1) The age of the patient, (2) his laborious occupation (3) his rough, guttural cough (leopard's growl), (4) general bronchial catarrh with diminished entry of air into the lungs, (5) the presence of an aortic regurgitant murmur, and (6) the greater frequency of aneurysm as compared with other intrathoracic tumours in a man of his age and class.

But probably the most interesting clinical feature is the immediate relief which was afforded by tracheotomy. The credit of this step is really due to Mr. Last who urged an early operation. But seeing that the cause of the dyspnœa was in the thorax and, therefore, below the site of the tracheotomy wound, I was somewhat reluctant to sanction an operation unless I could convince myself of its good prospects of success.

It would appear, however, from this very instructive case, that an intrathoracic tumour may exert a stimulating as well as a paralytic pressure on the left recurrent laryngeal nerve, and that the paroxysms of dyspnœa were due to waves of impulse imparted to the adductor muscles of the larynx and the glottis was thus closed.

The relief afforded by the insertion of a tube into the trachea was immediate, but if the above view of the case be a correct one I have thought that possibly as much relief might have accrued to the patient if he had been put under chloroform anæsthesia.

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Beri-beri and Leprosy.—In the course of a note on Leprosy in New South Wales (British Medical Journal, vol. i, 1900, p. 659), attention was called to the differential diagnosis of beri-beri and leprosy. It was pointed out that beri-beri had been erroneously diagnosed as leprosy in three Chinese lepers. In his report of the Board of Health of New South Wales for 1898, issued in June, 1900, Dr. Ashburton Thompson, referring to one of these cases, now states that the Chinaman admitted to the Sydney Hospital was suffering both from beri-beri and leprosy, and died soon after from the former disease. The mistake as to beri-beri, however, would appear to hold good in the other two Chinamen, and also Mr. Gimlette's case.

The Prevention of Lead Poisoning.—The arbitration between the Home Office and the pottery manufacturers of Staffordshire in regard to the need for new rules in connection with the use of lead glazes and the compulsory medical examination of male operatives, will be held on November 2nd, at Stoke-on-Trent, with Lord James of Hereford as umpire and Professor Thorpe and Dr. Oliver as scientific experts.

The North London Hospital for Consumption, Hampstead, has received a donation of £1,000 to name a bed in memory of the late Mrs. Henry Claudet, who died at Cannes.

# REPORTS OF SOCIETIES.

## ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

F. W. Pavy, M.D., LL.D., F.R.S., President, in the Chair.

*Tuesday, October 22nd, 1901.*

### Acute Dilatation of the Stomach.

Dr. Campbell Thomson read a paper on this subject describing 4 cases which had come under his own notice. Acute dilatation of the stomach, which was characterised by sudden onset, vomiting of enormous quantities of fluid, and severe general symptoms, was first fully described by Dr. Fagge, who recorded four cases, two of which had come under his own observation. Dr. Campbell Thomson's cases were as follows:

*Case I.—Supervention of Acute Dilatation in a Case of Chronic Dilatation due to Carcinoma of the Pylorus.*

A man, aged 48, was admitted into the Middlesex Hospital with carcinoma of the pylorus. On account of frequent vomiting, his stomach, which was moderately dilated, was washed out, and his symptoms thereby appeared to be relieved. Suddenly, three days after admission, acute symptoms developed, the chief of which were marked dilatation of the stomach, persistent vomiting and anuria; there was so great collapse that it was thought perforation of the stomach had taken place. Death occurred in rather less than three days after the onset of the acute symptoms. At the necropsy the abdominal cavity was found to be almost entirely occupied by an enormously dilated stomach containing dark brown fluid and gas; the pyloric orifice was considerably narrowed by a growth.

*Case II.—Acute Dilatation of the Stomach following Exploration of the Right Kidney by the Extraperitoneal Method.*

The patient was a man aged 26. Vomiting set in a few hours after the operation, and continued incessantly up to the time of death, which took place four days afterwards. At the necropsy the stomach was found enormously distended, the lower end being on a level with the iliac crest; the contents consisted of gas and dark green fluid. No changes were observed in the walls of the stomach. The incision which had recently been made in the right kidney was in process of healing.

*Case III.—Acute Dilatation of the Stomach Complicating a Growth of the Pancreas.*

A female, aged 40, was admitted into hospital with deep jaundice which had come on suddenly with pain a few weeks previously. As the diagnosis between gall stones and malignant disease was uncertain the abdomen was explored, when a growth of the pancreas and a distended gall bladder were found. No dilatation of the stomach was seen at the operation. All went well until four days after, when vomiting commenced and persisted until death. At the necropsy the stomach was found greatly distended with gas and containing a small quantity of greenish fluid. There was a hard tumour in the head of the pancreas which did not, however, appear to have caused any definite obstruction of the pylorus.

*Case IV.—Acute Dilatation of the Stomach Complicating Pleurisy and Pneumonia.*

A woman, aged 24, was admitted into hospital with consolidation of the lower lobe of the right lung and pleurisy. The day after admission the pleurisy spread to the base of the left lung and coincidently with this severe vomiting commenced; the abdomen became distended, and death took place within 36 hours. The necropsy showed the stomach enormously distended with gas and fluid, with extensive pleurisy over the lower lobes of both lungs and red hepatisation of the lower lobe of the right lung. Photographs of the stomach taken after death were shown.

Dr. Campbell Thomson gave a table of 10 cases to show the associated conditions which had been observed, and from this table he divided the cases into the following groups: (*a*) Those in which the dilatation occurred without any apparent cause, and in which after death no other lesion was found; (*b*) those in which some other lesion had been found; (*c*) those in which the dilatation had followed some surgical operation, and in which after death no other lesion had been found. Another group of cases not included in the table was also mentioned in which in debilitated subjects the ingestion of a large quantity of badly-masticated food appeared to have been the exciting cause. A summary of the symptoms and *post-mortem* appearances was given. The immediate cause of the dilatation was ascribed to some disturbance of the nervous system connected with the stomach, which caused paralysis of the stomach walls, and at the same time frequently gave rise to an increased secretion into the stomach cavity. Two processes thus had to be taken into account, namely, the dilatation and the increased secretion, and the relationship between these two had to be considered. Hitherto there appeared to have been an inclination to look upon the increase of secretion as the primary condition, and to regard the dilatation as secondary and immediately dependent upon it. Fagge, in speaking of his first case, said that the stomach was paralysed from over-distension and unable to rid itself of its burden; and Henry Morris, in a case which he recorded, also took this view, and proposed to call the condition "acute gastrorrhœa." While acknowledging the difficulty in establishing the exact relationship between the two conditions, Dr. Campbell Thomson thought the two processes, although often occurring together, were really separate; and that while excessive secretion, when present, added greatly to the gravity of the situation, there did not appear to be any clear proof that excessive secretion acted as the dilating force, unless there was at the same time some paralysis of the stomach walls. The nervous mechanism of the stomach was discussed and the possible influence of anæsthetics as a cause was also considered. Acute dilatation of the stomach was, in the author's opinion, probably closely allied in its nature and causation to the paralytic distension of the intestines which frequently occurred after severe abdominal operation, and also was probably not so rare a condition as had generally been supposed, and that, if looked for, all degrees of severity might be found between the slighter forms of dilatation, and the most severe and fatal cases such as he had described. With regard to treatment the most obvious indication was to relieve the distension of the stomach by means of a tube. All nutrition should be given by the rectum, and the tendency to collapse met by hypodermic injections of strychnine. As some of the more serious symptoms were probably produced by the large quantities of fluid secreted and vomited, this loss should be counteracted by injection of saline solution into the rectum or by transfusion.

Dr. Bradshaw (Liverpool) thought the most obvious explanation of this condition was pyloric obstruction. If nerve disturbance leading to paralysis were the cause, how could the excessive vomiting be explained? If there were no obstruction at the pyloric orifice, it would have been expected that a portion of the gastric contents would have passed into the duodenum. The *post-mortem* examination, moreover, showed the intestines contracted, which also supported the theory of obstruction. A case was referred to of old gastric ulcer in which enormous dilatation of the stomach was present: on three occasions there was sudden dilatation with vomiting, and later sudden relief by the bowel. At one time an attack came on after eating carrot, and within the last year, when only liquid food had been taken, no attack had occurred, suggesting narrowing and obstruction at the pylorus. It was, moreover, suggested that the exciting cause of the dilatation was some kink of the pyloric region of the stomach.

Dr. Herringham could not understand how the excessive secretion could follow the acute active dilatation, as was apparently maintained in the paper, seeing that the organ was under constant outside pressure in the abdominal cavity. It seemed to be a necessary supposition that there must be a distending force. The gas described as being present in the stomach could not have been aspirated into the viscus from the outside.

Dr. Voelcker referred to the case described in the paper in which the dilatation occurred in association with right-sided pleurisy. This, he thought, threw some light on the physical sign seen in left-sided pleurisy of a high stomach resonance. The vomiting of bile-stained fluid seemed to negative the obstruction theory and to favour the paralytic theory.

The President supposed that this dilatation was comparable with that of the bladder in which, with some obstruction at the outlet, a paralytic distension occurred. Atony or paralysis of the muscular wall of the stomach might occur either from pyloric obstruction alone or from paralysis, but an active dilatation of the stomach was inconceivable. Either the secretion of fluid or the formation of gas or the presence of food was necessary for the dilatation. Division of the vagi in dogs led to paralysis of the muscular walls of the lower œsophagus in which food tended to accumulate.

Dr. Campbell Thomson, in reply, said that peristaltic contraction had never been observed in these cases, and there was no *post-mortem* evidence in the cases he had described of any mechanical displacement of the stomach. The heart might undergo primary dilatation without there being necessarily any obstruction at the orifice of the cavity. It was not meant that there was any active dilatation, but that atony was the primary factor, and air [or secretion the secondary factor.

## OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

DAVID LITTLE, M.D., F.R.C.S.E., President, in the Chair.

*Thursday, October 17th, 1901.*

### PRIMARY CHRONIC GLAUCOMA.

THE PRESIDENT took as the subject of his presidential address Some Clinical Experiences of Primary Chronic Glaucoma and the Value of Iridectomy. After paying a tribute to von Graefe for the benefit he had conferred on mankind by introducing iridectomy for the treatment of glaucoma, he stated that we were still following in his steps. Myotics indeed had been introduced since his day and were of considerable use, but their action in his opinion was purely palliative and not curative. Iridectomy was the only known cure for this disease which was so fatal to eyesight. Its pathology had been so much elucidated in late years by the researches of Brailey, Priestley Smith, Nettleship, and Treacher Collins, that a rational idea could not be held as to how iridectomy acted. It was difficult to follow up cases years after operation, but only in this way was it possible to draw accurate conclusions. In the years 1886 and 1894 he had operated on 67 cases. Of these 11 were dead, 19 were not to be found, while 37 had been traced. Of these 10 had become blind—1 from atrophy of the globe, 1 from recurrence of the disease, and 8 from optic atrophy. In all but 1 the tension was normal. In 4 of the remaining atrophy was going on, while in 23 the vision was better than when the operation was performed; in others it was the same and in a few it was a little worse; that was to say, 62 per cent. held their ground from seven to twelve years after the operation, while with one exception the tension was normal. He was therefore of opinion that in the majority of cases iridectomy did reduce tension permanently. In 1887 he operated on the only remaining eye when the vision was $\frac{6}{9}$. A few months ago he had seen the patient, who saw quite well; the fields, however, had undergone contraction to 10 degrees. Another successful case he had followed for nineteen years. In a case he had operated on for acute glaucoma the patient retained good vision for the rest of her life, which was 27 years. He thought that an operation should be done on every case in which the patient was strong enough to stand it, and the earlier it was done the better; but he would never hesitate to operate on an eye even if the field were contracted to fixation, provided there was any vision worth saving. Even in the premonitory stage he advocated operation.

MR. NETTLESHIP, in moving a vote of thanks to the President for his address, said how cordially he agreed with the views he had expressed.

MR. SILCOCK seconded the vote, which was carried.

### RODENT ULCER OF THE CORNEA.

MR. S. JOHNSON TAYLOR read some notes on a case of rodent ulcer of the cornea of a child, a condition rare at any age, but particularly so in children. The patient was aged three years. When first seen the condition resembled and was taken for a phlyctен of the cornea, and was treated with atropine and yellow ointment, and iron was given internally. A little later there was a little discharge, but the palpebral conjunctiva was quite smooth. He then left off the atropine and used yellow ointment, and painted the patch with silver nitrate five grains to the ounce; the strength was increased to ten grains but still the ulcer spread. He then gave an anæsthetic, when the upper third of the cornea was found to be ulcerated and vascular with a grey infiltrated part below. There was no iritis or hypopyon. He scraped the surface and painted it with pure carbolic acid, and used quinine lotion, atropine, and iodoform. It then steadily improved and healed. In all such cases it was necessary to use strong remedies, and the benefit obtained was well illustrated by the ready way in which this ulcer yielded to the treatment when it had successfully resisted milder measures.

MR. LINSDAY JOHNSON said that although the disease was very rare in man, yet he had seen a large number of cases in young bears, in lions, and in rats. In lions and in bears he always applied either pure carbolic acid or solid stick of silver nitrate, and this usually arrested the ulceration. He had always found a micro-organism present, and he asked whether in the case under discussion there had been any contamination with animals.

MR. JOHNSON TAYLOR, in reply, stated that he considered the condition was microbic in origin, and that his patient had certainly not been in contact with wild animals or as far as he knew with rats.

### CARD SPECIMENS.

The following card specimens were shown:

MR. MARCUS GUNN: Persistent double keratitis without tendency to ulceration in which several members of the family were affected; there was no suspicion of syphilis, but a marked history of consanguinity.—MR. LINDSAY JOHNSON: A case of deep-seated infective conjunctivitis.—MR. SYDNEY STEPHENSON: A case of congenital distichiasis.—MR. TREACHER COLLINS: A case of Mooren's ulcer of the cornea six years after the disease had first started.—MR. N. BISHOP HARMAN: (1) Case of paresis of the third nerve in which, on lifting the drooping lid there was coincident drooping of the sound lid: this occurred in a man aged 35, and had been present three months, probably syphilitic in origin. (2) Choroidal angiosclerosis with pigmentary degeneration.—MR. G. W. ROLL: Congenital patch of pigmentation in the fundus oculi.—MR. CARGILL: Sclero-corneal dermoids in both eyes.—MR. SILCOCK: Primary chancre of eyelid in an infant.

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SOCIETY OF ANÆSTHETISTS.—The annual dinner of the Society was held at the Café Monico, on Friday, October 18th. Mr. WALTER TYRRELL, President, was in the chair.—After the usual loyal toasts, Mr. EDMUND OWEN proposed "The Society of Anæsthetists," and took occasion to remark that the anæsthetist owed a duty to the Society. If he had any special method of administration, or had devised any new apparatus, he, of course, brought it to the notice of the Society before rushing into the pages of the medical journals. Surgeons owed a deep debt of gratitude to the anæsthetists generally, but had a tender regard for those who were punctual and had learned "to be silent." He asked them to drink the toast with A. C. E.—Alcohol, Cordiality, and Enthusiasm. Dr. DUDLEY BUXTON responded for the Society, and said that anæsthetists endeavoured to cultivate punctuality, silence, and knowledge of their work. The first of these virtues was almost beyond their attainment when operations lasted far beyond the computed time. The fourth volume of their *Transactions* was just completed, and showed that the Society was doing good work. Anæsthetists never saw each other at work, and could not, therefore, judge of one another's mistakes or excellencies, except by discussing such matters at their meetings.—Mr. EDGAR WILLETT proposed "The Visitors," to which Mr. SIDNEY SPOKES responded.—The toast of "The Chairman" was proposed by Mr. G. H. MAKINS, who alluded to the improvement that had taken place during the last thirty years in the administration of anæsthetics, which had relieved the surgeon of much anxiety. For the last twenty-two years Mr. Tyrrell had been anæsthetist to St. Thomas's Hospital, and they had learnt from him many things. He was a worthy President, a good friend, and a loyal colleague.—Mr. TYRRELL, in responding, remarked that although the annual number of fatalities under anæsthetics had increased during those thirty years, it must be remembered that the number of operations had increased quite fourfold.—The dinner arrangements were made by the Senior Secretary, Dr. Harold Low, and gave great satisfaction.

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NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—The annual meeting, followed by the first ordinary meeting of this Society was held in the Library of the Royal Infirmary, Newcastle-upon-Tyne, on October 10th, Dr. ROBERT SMITH, President, in the chair.—The following officers were elected for the ensuing session: *President:* Robert Smith, M.D. *Vice-Presidents:* J. R. Morison, R. S. Peart, W. Gowans, and J. Adamson. *Honorary Secretaries:* T. Beattie and A. M. Martin. *Committee:* D. Drummond, G. H. Hume, J. Limont, J. Murphy, James Drummond, R. A. Bolam, J. G. Modlin, H. B. Angus, and R. P. R. Lyle.—Dr. V. RUTHERFORD showed a case of rodent ulcer and lupus treated by *x* rays. A man, aged 57, who had been the subject of rodent ulcer at the inner canthus for seven years, had received forty-five exposures, each of a quarter of an hour's duration. The result was a soft and soundly-healed cicatrix. A woman, aged 71, who had been the subject of extensive lupus of doubtful origin, had been almost cured after thirty exposures. A woman,

aged 50, suffering from rodent ulcer of the upper lip was improving after fifteen exposures. The President, Dr. Foggin, Dr. Hume, Mr. Morison, Mr. Wardale, and Dr. Percival took part in the subsequent discussion.—Dr. Beattie showed two cases of primary aortic regurgitation of syphilitic origin. He also showed a large number of specimens illustrating the early and late effects of diffuse specific aortitis. Dr. Bolam exhibited upon the screen a large number of microscopic sections of the aorta from these cases.—Mr. W. G. Richardson brought forward a patient, who for six days previously had suffered from strangulated femoral hernia. Operation revealed the coil of gut to be gangrenous: after division a Paul's tube was tied into each divided end of the bowel. A good recovery ensued, but a large area of skin surrounding the fistulæ became excoriated owing to the digestive action of the discharge. Five weeks later an operation was performed with the object of closing the fistulæ. To avoid infection a flap of skin was turned down well clear of the excoriation and direct laparotomy then proceeded with through muscles, etc. The divided ends of the gut having been closed by suture, a lateral anastomosis was performed. The patient made a good recovery.—Mr. A. M. Martin showed a specimen of a patent Meckel's diverticulum, which he had removed from a child aged 3 months, who made a good recovery. Mr. A. M. Martin also showed a man, aged 54, who exhibited a very extensive nævus involving the lower lip, cheek, tongue, left faucial pillar, and extending into neck.—Mr. Rutherford Morison showed two complicated cases of intussusception. A miner, aged 62, four months previously, had had severe colicky pains. The spasms came on several times a day, but sometimes a week elapsed between the attacks, which were accompanied by noisy rumblings and great constipation. The abdomen became swollen, especially in the right iliac region. During the last months the pains had been very severe, and accompanied by vomiting and sweating. He had lost weight and was very weak. On examination of the abdomen a rounded mass was felt in the cæcal region, and a harder mass above and to the right of umbilicus. Operation revealed a large ileo-cæcal intussusception extending as far as the middle of the transverse colon. After reduction a mass was felt in the lower end of the ileum. This portion of gut was excised, the cut ends being brought together by direct suture. The specimen showed a large polypus in the portion of gut excised; this had produced the intussusception. Microscopically the growth proved to be a myxoma. A boy, aged 5, twenty-four hours before admission into hospital, had been suddenly seized with acute abdominal pain and vomiting. The pain was in paroxysms, and blood was passed *per rectum*. The boy was in good condition, and presented a sausage-shaped swelling in the left iliac region. On operation the intussusception of the lower ileum was found after reduction to have been produced by an inverted Meckel's diverticulum. The diverticulum was removed, and the boy made a good recovery.

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Ipswich Clinical Society.—A meeting was held at the East Suffolk Hospital on October 10th, Mr. J. F. C. Hossack, F.R.C.S.Edin., in the chair.—Dr. Vincent showed a patient who was suffering from intractable veld sores. He had served in South Africa. No treatment appeared to have any effect.—Mr. Bartlett showed (1) a case of gunshot wound of the arm: (2) a case of sarcoma of the mamma.—Mr. A. Y. Pringle showed a case of carcinoma of the mamma with secondary deposits in the liver.—Dr. Brown showed specimens from 2 cases in which the uterus had been removed for carcinoma, and read notes on the cases. He also showed a specimen of "Paget's disease of the nipple," and read notes on the case, commenting upon the rarity of the disease.—Mr. C. K. Mosely showed a specimen of a child's larynx and trachea with a penny embedded at the bifurcation of the bronchi. The child had been brought to him six years before with the story that she had swallowed a penny. Examination failed to detect anything. A skiagraph gave no result. The child had subsequently enjoyed fair health, but had occasional attacks of asthma or bronchitis. At one time she had pain also in the right axilla. She died suddenly from profuse hæmorrhage from the mouth: the penny had ulcerated into a vessel.—Mr. W. W. Sinclair read a very interesting paper upon Local Anæsthesia. He deplored the fact that general practitioners did not make enough use of these useful drugs. He read notes of several cases. Among these he mentioned one of an old fisherman who was too weak to stand a general anæsthetic; beta cocaine and acoine were used. Mr. Sinclair enucleated one eye without any pain. Beta cocaine was a most useful drug, with practically none of the drawbacks of ordinary cocaine. There was a long discussion afterwards, in which several members took part.—It was unanimously resolved that the Honorary Secretary, Dr. Gibb, be asked to take charge of the Pathological Museum.

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Cardiff Medical Society.—The opening meeting of this Society was held at the Society's Rooms on October 3rd. The President (Dr. D. R. Paterson), who was in the chair, showed a case of cervical pachymeningitis.—Mr. William Sheen showed a patient with hypertrophy of one side of the head and face, in which all the structures—bones and soft parts—participated. Two large flaps of skin had been removed with considerable resulting improvement in the patient's appearance. Mr. Sheen also showed a kidney on which nephrotomy had been performed, an abscess being opened. Subsequently the kidney was removed, and a second abscess was found to be present in the cortex, in the wall of which tubercle bacilli were found.—The President read his address on Some Defects in our Medico-Legal System.—One the motion of the President seconded by Dr. T. Wallace, the Society heartily congratulated its Senior Secretary, Mr. Lynn Thomas, on being granted a C.B. for his services with the Welsh Hospital in South Africa.

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Bristol Medico-Chirurgical Society.—The annual meeting of the Society was held in the Medical Library of University College, Bristol, on October 9th, at 8.15 P.M., Dr. S. Davies (and afterwards Dr. Barclay J. Baron) in the chair.—Dr. Barclay J. Barron gave his presidential address on The Progress in the Diagnosis and Treatment of Disease of the Throat, Nose, and Ear during the Past Twenty Years. He drew largely from the lessons that his experience of special professional work had taught him, and he showed that the progress that had taken place in our knowledge of general medicine and surgery had been fully shared by this special branch.—The reports of the Honorary Secretary (Mr. Paul Bush), the Editorial Secretary (Mr. J. Taylor), and the Honorary Librarian (Mr. L. M. Griffiths) were read and adopted.—Mr. G. Munro Smith, M.R.C.S., was elected President-elect; Mr. J. Paul Bush, C.M.G., M.R.C.S., was re-elected Honorary Secretary. The following six members of Committee were elected: J. Michell Clarke, M.A., M.D.; B. Rogers, B.A., M.D.; H. Waldo, M.D.; J. Dacre, M.R.C.S.; J. Taylor, M.R.C.S.; P. Watson Williams, M.D. The following were elected to serve on the Library Committee: L. M. Griffiths, M.R.C.S.; G. Munro Smith, M.R.C.S.; J. Taylor, M.R.C.S.

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British Gynæcological Society.—A meeting of this Society was held on October 10th, Dr. J. A. Mansell Moullin being in the chair. Dr. F. A. Purcell showed a cystic sarcoma of the right ovary removed by abdominal cœliotomy from a single woman aged 52.—Dr. Macnaughton-Jones read notes of 3 cases: (1) Primary tuberculosis of the left Fallopian tube in a young woman otherwise in perfect health, and without any hereditary history of tuberculous disease; (2) hernia following cœliotomy treated by suture; (3) solid tumour weighing 28½ lbs., attached by a broad pedicle to the broad ligament, and by a separate attachment to the uterus. After its removal it was found that the bladder had been opened. The wound was closed by catgut sutures and a catheter retained. Cystitis followed, but had since disappeared.—Dr. Travers read a short communication on a case of a fibroid tumour simulating appendicitis and causing intestinal obstruction.—A discussion took place upon Dr. Travers's communication and the various specimens shown.

# REVIEWS.

## SURGERY.

*(Continued from page 1174.)*

PROFESSOR JOHN B. ROBERTS's small volume *On Disfigurements of the Face*,[1] deals with a very interesting branch of surgery, and one which is always attractive to an ingenious mind. Unfortunately the book is but an abstract of a course of lectures, and suffers considerably from its subject matter being very closely compressed. The first chapter gives a brief review of the development of reparative or plastic surgery, and narrates several striking instances of the substitution of one part of the body for a defect elsewhere, a proceeding which the author calls "implantation therapy." The second chapter gives a rapid survey of the constructive, regional and artistic anatomy of the face, and then the principles of plastic surgery in that region are dealt with. Several pages are occupied by a description of the methods employed in rectifying deformities of the lips and mouth, especially harelip and cleft palate, and the writer quotes Pancoast's expression of opinion that there is scarcely any loss of substance, however hideous, of the mouth and lips which cannot be remedied by modern surgeons. There are, however, always two sides to the question of plastic surgery of the face. The surgeon is often extremely well satisfied with the results he has obtained under circumstances of great difficulty, while the patient is equally dissatisfied because when the original defect is remedied traces of the means employed remain permanently, and these two aspects of facial surgery should not be lost sight of.

The third edition of Professor JOSEPH BRYANT'S *Operative Surgery*[2] is really a new book. The author has spent four years over the revision and incorporated an immense amount of matter collected from the latest works on the subject with which he deals. The first impressions derived from an inspection of these volumes are that modern surgery is a very wide subject, and that the author has spared neither time nor pains to render his textbook thoroughly comprehensive. It is evidently a book for the teacher and practitioner, and suitable rather for reference than for systematic study. Although the author is so well fitted by experience and professional reputation to assume the position of an authoritative teacher of operative surgery the personal element is lacking in these two volumes. We find clear and well illustrated accounts of the different methods of performing the different operations, but very little mention of what Dr. Bryant himself would do or of the influence on the selection of this or that method of the results of his own work and experience. In some respects this may be regarded as one of the best treatises on operative surgery. It is very comprehensive and contains an abundance of illustrations, very few of which, however, are original. The introductory chapters on general considerations, including anæsthesia, antisepsis and asepsis, and the arrangement of the operating room will be found useful.

The small book on *Aseptic Operations*[3] by MM. DELBET and BIGEARD is one of a series. It contains a considerable amount of sound and important information and may be consulted with profit on most practical details. The authors discuss the best means, both physical and chemical, of realising asepsis, the technique of an aseptic operation, the construction and equipment of the operation theatre, the sterilisation of dressings, and the different methods that have been devised and practised for rendering aseptic the hands of the surgeon. It is pointed out that, though the substitution of aseptic for antiseptic practice is a decided progress, it is only by a combination of the two methods that the surgeon can effectually contend against hurtful microbes. The authors, attaching much importance to personal care and correct scientific knowledge, seek to simplify rather than to complicate the apparatus of aseptic surgery. The construction of many operating theatres, they assert, has been marked by useless profusion and mischievous complexity. Between the palace and the hovel there is place, it is stated, for simple and well-arranged installations capable of rendering much service.

Dr. MARTIN'S *Essentials of Surgery*[4] is one of a series giving instruction in the form of question and answer. It has reached its seventh edition, but the real educational value of this kind of work is very doubtful. It is difficult to understand why the limits of a book of this class should be extended by several pages giving prescriptions. This feature, with the numerous illustrations, seems to suggest the probability of its being used by some rather as a single source of information than as a mere accessory to more important handbooks.

A recent addition to the excellent *Manuels de Thérapeutique Clinique*, published under the direction of Professor G. Lemoine, is a handbook on surgical treatment and every-day surgery by Professor PHOCAS, of Lille.[5] It is intended to give a plain and simple review of modern surgical treatment which may be consulted by the general practitioner when called upon to deal with any case requiring operation. The author, though describing at great length those operations which the practitioner is most frequently called upon to perform, does not omit to notice those which by most surgeons would be regarded as exceptional. The book, which is clearly printed and well illustrated, contains within reasonable and convenient limits a vast amount of useful instruction in strict accordance with the latest developments of practical surgery.

Professor SKENE is an enthusiastic supporter of the method which he describes in a volume entitled *Electro-Hæmostasis in Operative Surgery*.[6] The ligature, whatever may be its material, is, he argues, open to manifold objections, especially in abdominal surgery. Abscesses and exudations, after ovariotomy, are not solely due to dirty ligatures, for surgeons and nurses are, as a rule, careful in these days. The ligature is liable to infection long after the operation, especially if near intestine, nor does it invariably become encysted and thenceforward cease to do evil. He distrusts, also, the clamp and cautery. Remembering how electricity was used in heating laundry smoothing irons, he, with the assistance of an electrician, M. Pignolet, devised a complete set of hæmostatic apparatus. The typical instrument in his armamentarium is a forceps where the heat is generated by the passage of an electric current through a resistance wire in a chamber in one of the jaws, it being found that only one jaw needed heating. The author claims good results from this apparatus. The manual treats mainly of gynæcology, but includes operations for hæmorrhoids and fistula, appendicitis, tumours of the breast and new growths of the skin and mucous membrane. The hæmostasis seems to be perfect and the method appears very convenient for fistula, hæmorrhoids and the treatment of the ovarian pedicle. In myomectomy the practice seems logical as it involves less chance of sepsis and oozing than when the ligature is used. In regard to hysterectomy for cancer we should like to have full evidence as to after-histories. The cautery in any form is liable to involve late cicatrisation which may end in obstruction of the ureter. As

[1] *The Surgical Treatment of Congenital and Pathological Disfigurements of the Face.* (An abstract of the Mütter Lectures of the College of Physicians of Philadelphia, 1900.) By John B. Roberts, A.M., M.D., Professor of Surgery in the Philadelphia Polyclinic, etc. Philadelphia: The Medical Publishing Co. 1900. (Crown 8vo, pp. 53; 47 illustrations.)

[2] *Operative Surgery.* By Joseph D. Bryant, M.D., Professor of the Principles and Practice of Surgery, Operative and Clinical Surgery, University and Bellevue Hospital Medical College, Visiting Surgeon to Bellevue and St. Vincent's Hospitals; 2 volumes. London: Henry Kimpton, 1900-01. (Roy. 8vo., pp. 1,302. 1,576 illustrations, 42s.)

[3] *Asepsie Opératoire.* Par MM. Pierre Delbet, Professeur-Agrégé à la Faculté de Paris, et Louis Bigeard, Chef de Clinique Chirurgicale Adjoint à la Faculté de Paris. Suite de *Monographies Cliniques sur les Questions Nouvelles*, No. 25. Paris: Masson et Cie., 1901 (Demy 8vo, pp. 36, Fr. 1.125).

[4] *Essentials of Surgery.* By Edward Martin, A.M., M.D., Clinical Professor of Genito-Urinary Diseases in the University of Pennsylvania. Seventh Edition. London: Henry Kimpton. 1900. (Crown 8vo, pp. 342; 90 illustrations. 4s.)

[5] *Thérapeutique Chirurgicale et Chirurgie Journalière.* Par G. Phocas, Prof.-agrégé à la Faculté de Lille, Chirurgien de l'Hôpital Saint Sauveur, etc. (*Manuels de Thérapeutique Clinique*). Paris: Pigot Frères. 1901. (Demy 8vo, pp. 647; 108 illustrations. Frs. 8.)

[6] *Electro-Hæmostasis in Operative Surgery.* By Alexander J. C. Skene, M.D., LL.D., Professor of Gynecology in the Long Island College Hospital, Brooklyn, etc. London: Henry Kimpton. 1901. (Demy 8vo, pp. 173, 2 plates, 80 illustrations. 10s. 6d.)

in most American works the illustrations are clear and good.

Frankly this work[7] is disappointing. From Professor Senn's former books, and indeed from evidence by no means lacking in this, we are justified in judging him and his work by the highest standard. So judged, this volume is found wanting. The pathological sections, with few exceptions, are of rather more than average merit; those dealing with the surgical treatment are wofully behind the times. Molluscum fibrosum is described as being "sometimes congenital." The author accepts without question the theory that the surface tumours are growths from the peripheral nerve sheaths. There is no mention of the pigmentation, nor of the general nerve thickenings met with in this disease. In discussing malignant disease of the stomach Professor Senn writes: "Surgeons have gone too far in the radical treatment of cancer of the pylorus." To support this it is said, "In 66 cases death occurred soon after the operation in 50." Witzel's method of gastrostomy is said to have "found more favour with the profession than any other." The teaching upon malignant disease of the tongue may be summed up by saying that the Regnoli-Billroth operation is preferred to Kocher's. The work of Kuttner on the lymphatic vessels and glands of the tongue is unknown or ignored. The account of hysterectomy, vaginal or abdominal, is extremely poor and old-fashioned. It is surely no longer necessary to name any individual surgeon as approving of the Trendelenburg position for abdominal operations. But on every page the author introduces the names of surgeons and pathologists with a wholly reckless and unnecessary profusion. We cannot but suspect that the "revision" of this work has been of the briefest—it is certainly altogether trivial.

The success of Dr. Roberts's original effort to publish a treatise giving in condensed form the accepted doctrines and approved procedures of modern surgery, has led him to publish a new and carefully revised edition under the title, *A Manual of Modern Surgery*.[8] It is clearly printed, well illustrated, and has a full index. In some parts there is a tendency to undue compression but, on the whole, we are disposed to regard this as an excellent example of a surgical treatise published under what at the present day may be regarded as the unfavourable conditions of single authorship and a single volume. Dr. Roberts bases his instruction more on the works of others than on the results of his own study and experience, but he has spared no pains to put before his readers the best and latest teaching afforded both by general treatises and by monographs on special subjects.

The second edition of Dr. Costa's *Modern Surgery, General and Operative*,[9] was reviewed in the British Medical Journal of April 8th, 1899. We then expressed our surprise that the book had met with success, and pointed out some of the defects and errors scattered through its pages. This edition has been revised and enlarged, but inaccuracies previously noticed still persist.

The *Manual of Operative Surgery*,[10] written by Drs. Steechi and Gardini for the series published by Hoepli, of Milan, is of a size convenient for the pocket (very much like a small Baedeker), and will no doubt prove useful to the student and junior practitioner, for whom it is chiefly intended. The woodcuts (fourteen in number) which serve to illustrate the text are clear and not too familiar. As a reminder of what has been taught in the class rooms or in the operating theatre, these necessarily brief descriptive manuals serve a useful purpose, and probably the authors do not aim at anything higher; but without the additions of some practical teaching or experience it is difficult to see how books of this condensed character can be of much real service.

In a lengthy preface Dr. Henri Fischer states that his *Vade Mecum*[11] has been written for the purpose of affording general practitioners, particularly those in the country, a guide to the latest methods of operative and other kinds of surgical treatment. Though of very modest proportions, it contains a large amount of useful information, and there is scarcely a single subject relating to practical surgery left undiscussed. It is not a mere abstract of instruction given in textbooks, but presents in a condensed form the acquired knowledge of an experienced surgeon.

The able and original work of Professor Lejars,[12] which made its first appearance in the summer of 1899, is now presented in the form of a revised and much enlarged edition. The issue of three editions within less than two years is a good test of the merits of a work of this kind, and an indication that it has gained a high and secure position in surgical literature. The number of illustrations has been increased by more than one-third since the issue of the original edition. The new edition contains several chapters that are quite new, and, as an instance of the efforts made by Professor Lejars to render his book complete, we would allude to one on spinal cocainisation. The revised and extended chapter on wounds of the heart and pericardium shows that careful attention has been given to the latest instances of surgical intervention in such cases of grave emergency.

[7] *The Pathology and Surgical Treatment of Tumours.* By N. Senn, M.D., Ph.D., LL.D., Professor of Surgery, Rush Medical College, etc. Second Edition. London and Philadelphia: W. B. Saunders and Co. 1900. (Royal 8vo, pp. 718: 478 engravings; 12 full-page plates in colours. 21s.)

[8] *A Manual of Modern Surgery for the Use of Students and Practitioners.* By John B. Roberts, A.M., M.D. Professor of Anatomy and Surgery in the Philadelphia Polyclinic; Mütter Lecturer on Surgical Pathology of the College of Physicians of Philadelphia. London: Rebman, Ltd. (Royal 8vo. pp. 842. 481 illustrations. 21s.)

[9] *Modern Surgery, General and Operative.* By John Chalmers Da Costa, M.D., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia, etc. Third edition. London and Philadelphia: W. B. Saunders and Co. 1900. (Demy 8vo, pp. 1117, 493 illustrations, 21s.)

[10] *Manuale di Chirurgia Operatoria* (Manual of Operative Surgery), dei Dottori R. Steechi e A. Gardini. Milan: Ulrico Hoepli. 1901. (Crown 8vo, pp. 321. Lire 3.)

[11] *Vade Mecum de Thérapeutique Chirurgicale des Médicins-Praticiens.* Par le Docteur Henri Fischer. Paris: L. Boyer. (Crown 8vo, pp. 328. Frs. 4.50.)

[12] *Traité de Chirurgie d'Urgence.* Par Félix Lejars, Prof.-agrégé à la Faculté de Médecine de Paris. Troisième Edition. Paris: Masson et Cie. 1901. (Royal 8vo, pp. 1045; 751 illustrations. Frs. 25.)

# NOTES ON BOOKS.

## REPORTS AND TRANSACTIONS.

### Laboratory Reports.

Dr. Siegenbeck van Heukelon has collected a valuable series of monographs, mostly pathological, from the Boerhave Laboratory (*Recueil de Travaux du Laboratoire Boerhaave, Université de Leide.* [A Collection of Researches from the Boerhave Laboratory, University of Leyden] Publié par D. E. S. van Heukelon. Tome 1st II. Leyden: E. J. Brill. 1899. Roy. 8vo, pp. 1184, 58 illustrations. 29s. 2d.). The series includes highly-important work on hepatic cirrhosis, acute yellow atrophy, and cystic disease of the kidney. In this interesting record of contemporary Dutch science we are struck with the large proportion of essays on subjects relating to obstetrics and gynæcology. The editor, Dr. van Heukelon, contributes papers on bilateral tubal pregnancy, lithopædion, double monsters, disease of the appendages, placentation in the human subject, tumours in the fœtus, and hermaphroditism. A most important contribution is that by Pompey Meerdervoorts on Uterine Mucous Membrane in its Normal State and during Menstruation, a monograph which deserves to be seriously studied by the obstetrician. Dr. Josselyn de Jong's thesis on Cirrhosis of the Liver is also highly valuable. De Jong holds the newer theory that cirrhosis is a symptom of a general condition and the result of an infection usually derived from the intestine.

The seventh volume of *Reports from the Laboratory of the Royal College of Physicians of Edinburgh*, edited by Sir John Batty Tuke and Dr. Noel Paton (Edinburgh: Oliver and Boyd. 1900. Roy. 8vo, pp. 510. 7s. 6d.), unlike its predecessors, consists of the reprints from various journals of the papers published from the laboratory. One or two communications, of which reprints were not obtained, appear in abstract. Forty original papers are included in the volume. Fifteen are on physiological subjects, six are pathological, one is anatomical, and three are pharmacological. One of the papers, on the Intracranial Circulation, which is reprinted from the British Medical Journal, is from the pen of the

late Dr. George Elder, to whom the editors refer as having been one of the ablest and most thoughtful of their workers. The plan adopted, although it results in a volume having an unconventional appearance, has obviously many advantages.

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*Preaching and Healing*,[1] under which title the first annual report of the Church Missionary Society's Medical Mission Auxiliary appears, deals thoroughly with this important section of professional work. The first half of the publication contains a short historical summary together with the annual reports of the Branch, from which it appears that, since its formation in 1891 with the primary object of collecting funds to help the Medical Mission of the Church Missionary Society and to provide various articles required by medical missionaries in their work, the undertaking has prospered so materially as to be able in 1895 to relieve the parent society "of all the upkeep expenses of its medical missions," and at the present time it has so far further increased as to be able to state that in future it will be responsible in addition for the salaries of all its medical missionaries. This exceedingly satisfactory announcement, supported as it is by the details of the Society's finances (which occupy the second half of the report), is abundant proof of the growing interest that is rightly being taken in this branch of medical and missionary work. There are two excellent maps showing the stations of the Society in the Mohammedan lands of the East, and in India, China, and Japan, and from the report of the Committee there is ample evidence of the splendid professional work being done throughout the respective districts, associated in so many instances with the names of men from whose pens original articles and reports of cases frequently appear in the pages of the BRITISH MEDICAL JOURNAL, testifying to the energy with which the scientific as well as the religious side of the work is conducted. Even in China, where past events might reasonably have been expected to have altogether retarded progress, there seem to have been but slight interruptions, though sometimes the hospitals have been temporarily carried on by "Chinese workers." It is certainly a matter for great thankfulness that among all the dangers attendant upon the Boxer movement the Church Missionary Society can report that there has been no loss from that cause among those medical men and women working under their auspices. Now that the Medical Mission Auxiliary so materially relieves the general fund of the Church Missionary Society, it is to be hoped that future reports from this useful branch may continue to show its increasing annual prosperity.

We have received from Mr. E. Saywall, chartered accountant, Brougham Chambers, Wheeler Gate, Nottingham, a copy of ruling for account books, specially prepared by him for the use of medical practitioners. Mr. Saywell's scheme purports to include both the practitioner's private and professional accounts, and is very ingenious. To those who do not mind taking a little trouble to have all their accounts in a strict business-like order we can recommend this system; but it is to be feared that the great majority of medical men prefer a much more rough-and-ready method.

# REPORTS AND ANALYSES
AND
# DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

## MEDICAL AND SURGICAL APPLIANCES.

*The Sterilisation of Gelatine Injections.*—Mr. Hermann C. T. Gardner, M.P.S., Resident Dispenser to the London Hospital, sends a description of an apparatus designed by him after some experience for the preparation of gelatine injections for aortic aneurysm and writes: The method of sterilisation usually employed appears to me to be imperfect; the imperfection arising from the necessity of filtering the solution, during which process it is brought into contact with the air. Even should the injection be reboiled after filtration, its decantation from the flask in which it is boiled into the flask of the apparatus from which it is injected into the body again involves contact of the solution with the air, so destroying its sterility. In order to overcome this difficulty, I have devised an apparatus whereby perfect sterilisation may be obtained, since the injection when filtered may be boiled in it, and retained in it, until it is used. The whole of the apparatus shown in Fig. 1, with the exception of the rubber tube K and the needle H, is freed from grease by rinsing in a weak solution of sodium carbonate, and subsequent washing with water. The flask A, rubber tube D, glass tube C, and test tube G (Fig. 1), are separately placed in

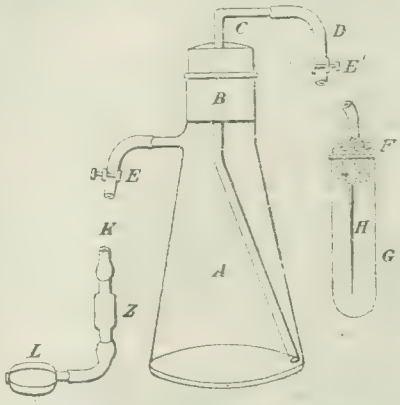



Fig. 1.—A, glass flask: B, caoutchouc stopper; C, glass tube; D, K, rubber tubes; E, E', metal clamps; F, cotton wool; G, test tube; Z, glass bulb containing sterilised wool; L, rubber ball pump.

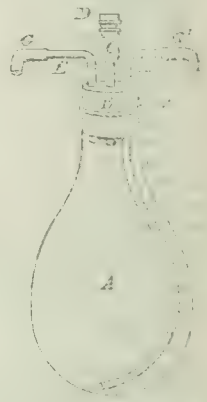



Fig. 2.—A, Glass flask; B, rubber cork; E E', glass tubes; G G', rubber tubes; C, glass tube; D, rubber cork. (The connections are the same as in Fig. 1.)

a clean basin into which flows a continual stream of boiling water. The flask and tubes, together with the caoutchouc stopper B (Fig. 1), are then well rinsed with formalin, being removed from the boiling water temporarily for this purpose. The flask in which the gelatine is dissolved, together with the c.cm. measure and funnel used, is treated in the same manner. It is advisable before handling the cleansed apparatus, after well washing the hands, to dip them into a solution of some antiseptic. In order to obviate the risk of the gelatine burning during its solution, it should be dissolved on a water bath. The needle is sterilised in this manner: It is first cleansed by immersion in absolute alcohol, while a wire is rapidly passed backwards and forwards within it. The test tube G (Fig. 1) is removed from the boiling water and dried, and the needle previously inserted into the rubber tube D is placed within it, being fixed by means of a plug of cotton wool. The tube is then passed through the flame of a Bunsen burner several times, care being taken to stop before any change in colour takes place in the needle. The whole of the tube K, containing the glass bulb Z packed with cotton wool to filter the pumped-in air, is sterilised by dry heat in a proper oven. In order to procure perfect sterilisation the solution, after boiling, should not come into contact with the air. This is accomplished by means of an ovoid flask (A, Fig. 2) of well annealed glass, its shape and make of glass being calculated to offer the most effective resistance to the pressure of the atmosphere, since upon the cooling of its contents after boiling and corking a vacuum is produced. The filtered gelatine solution is boiled in this flask for a little while, sufficient distilled water being added at the onset to allow for evaporation—say, 2 c.cm. for every 100 c.cm. of solution. Immediately on the cessation of heat the rubber stopper D (previously boiled) is placed in the tube C (Fig. 2), and tied on to the rim. The rubber cork B (Fig. 2) and tubes are placed in the flask before boiling the injection, C being left open. The rubber tubes a' G must be clamped close to the ends of the

[1] *Preaching and Healing*, the report of the Church Missionary Society Medical Mission Auxiliary for 1900-01, published at the Church Missionary House, Salisbury Square, E.C.

glass tubes E E' also before boiling. It has been suggested that an ordinary flask be fitted with a stopper and tubes, the centre tube being plugged with cotton wool. The defect in this method is the tendency of the wool to become waterlogged by the steam condensing on boiling if the tube be packed with the wool previously; if not, during the time taken in packing the wool into the tube the wool becomes infected. Moreover, if the flask happen to be tilted over, the gelatine solution, if not set, permeates the wool. There are none of these objections in the form of apparatus previously described, in which quick manipulation and perfect sterilisation can be insured, both important considerations. This apparatus can be obtained of Messrs. Baird and Tatlock, Cross Street, Hatton Garden, E.C.

## MEDICINAL AND DIETETIC PREPARATIONS.

*"Karnoid" Meat Powders.*—We have received from Mr. H. J. Dunn, of 110, Brighton Road, South Croydon, some samples of meat powders to which the names "beef proteid," "chicken proteid," and "turtle proteid" are respectively applied. The preparations consist of dry powders obtained respectively from raw beef, chicken and turtle, by an ingenious method of manufacture which is called by the inventor the "karnoid process." This process, which has been patented, consists essentially in the removal of the greater part of the fat from the flesh, which is then comminuted, and subjected to the drying action of an unreturning current of dry sterilised air, at first cold, and not exceeding 60° F., and finally warm but not exceeding 100° F. It is claimed that by this process the natural flavour of the fresh raw meat is preserved. The results of our analyses of the samples submitted to us are as follows:—Beef proteid: Water 6.43 per cent., total proteids 70.39 per cent., fat 11.6 per cent., and mineral matters 7.46 per cent. Chicken proteid: Water 7.7 per cent., total proteids 80.11 per cent., fat 5.35 per cent., and mineral matters 7.8 per cent. Turtle proteid: Water 7.86 per cent., total proteids 77.56 per cent., fat 1.45 per cent., and mineral matters 13.86 per cent. All the samples were free from chemical preservatives and other foreign substances. When properly employed these preparations should be found to be of considerable value, and the uses to which they may be put are sufficiently obvious. The method of preparation and the results obtained by it are very interesting. It is to be hoped that, should a demand arise for these meat powders, which would justify their manufacture on an extensive scale, adequate steps will be taken to ensure adherence to the original method of preparation, so that the supply may be of uniform quality and free from adulteration; and that the powders will be offered with a permanent guarantee to that effect by the application of scientific control.

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The King, who recently became patron of the Dental Hospital of London, has commanded that in future it shall be known as the Royal Dental Hospital of London. The new hospital on the south side of Leicester Square is now in full working order.

Glucose in Beer.—A notice was published by the Treasury in the *Gazette* of October 15th, prohibiting under Section v of the Customs and Inland Revenue Act, 1888, the use in the manufacture and preparation for sale of beer of any glucose or invert sugar containing arsenic. The penalty imposed by the statute is £50. It will be observed that no standard of the minimum amount of arsenic permitted is mentioned.

Hygienic Rules for Barbers.—According to the *Philadelphia Medical Journal*, the San Francisco Board of Health requires barbers to adhere to a series of regulations. Among others mugs and shaving brushes are to be sterilised by immersion in boiling water after every separate use. Razors are to be wiped with alcohol before and after every use. A separate clean towel shall be used for each person. Barbers shall not blow away with their breath any loose hairs, but must use a towel, or bulb, or hair brush. Alum and other material used to stop the flow of blood shall be so used only in powder form and applied on a towel. The use of powder puff, finger bowls, and sponges is prohibited. No person shall be allowed to use any barber's shop for sleeping in. All barber's instruments must be disinfected after using. It is required also that the printed rules shall be placed in a conspicuous place in the shops of the hairdressers.

## CONFERENCE ON WATER SUPPLIES AND RIVER POLLUTION.

(*Continued from page 1200.*)

This Conference met again on Thursday, October 17th, when the chair was taken by Mr. W. Whitaker, F.R.S.

### The Prevention of Pollution.

Professor Henry Robinson contributed a paper in which he discussed certain practical points with regard to water supply and river pollution. He maintained that flood water might be admitted into reservoirs under proper precautions, and that in considering the application of sewage to land due regard must be had to sanitary, agricultural, and economical considerations.

Mr. A. G. Leigh, in a paper on the control of weirs and dams on streams, urged that there ought to be power to remove existing obstructions, and that a regular staff of river scavengers should be employed under the direction of river authorities.

Mr. Hugh W. Russell (Berkshire C.C.), in a paper on prevention of pollution within the Thames watershed, said that his experience of the working of the Thames Conservancy Act of 1894 had led him to the general conclusion that, when entrusting an authority with powers to prevent river pollution, such authority should undoubtedly have control over the whole watershed, not over the main river only, but also over all its tributaries. Local sanitary authorities might be so constituted that, though imbued with the best intentions, they might find it almost impossible to bring pressure to bear upon local manufacturers, possibly large ratepayers and possessing great influence upon their local representatives. He also thought it advisable that there should be no distinction between the powers relating to the main stream and its tributaries—what constituted an offence in the one should apply equally to the other.

In a further paper on Thames water supply and storage Mr. Russell expressed the opinion that the safest course was to adopt the conclusions of the Royal Commission on the Water Supply of the Metropolis, issued as recently as 1899, which were that in 1941, with an estimated population for water London of a little over 12 millions, the supply required would be 423 million gallons a day, of which the Thames would have to contribute about 300 million gallons, or roughly about one-fourth of its average daily flow. Eighty days storage for this quantity would mean accommodation to be provided for 22 thousand million gallons in excess of that already constructed or in course of being constructed. He believed that there was an ample excess of water at times which could be abstracted with advantage to the river to provide for this quantity, and he was of opinion that if this question were argued solely on its merits, without any reference to any competing scheme, the conclusion arrived at by the general public would be in accordance with the opinion expressed in the report of the recent Royal Commission.

Mr. W. G. Bagnall said that the Staffordshire County Council had received very little assistance from the Local Government Board, and permission to prosecute was refused in one case of pollution of water supply by a manufacturer.

Dr. Ryley (Yarmouth) said that the tendency was to make the water company remove pathogenic germs. In his opinion that was not right. Country sanitation should be reformed, because rural authorities had but one idea, and that was to pour the sewage into the nearest ditch, and no one cared where it went.

Mr. H. W. Russell said that when small rural communities were called on to take sanitary measures beyond their own requirements because they happened to live in the watershed of the London water supply, the Thames Conservancy had great difficulty in dealing with them. Some contribution should be made towards their expenses.

### Chemical Standard of Purity.

Dr. Henry Kenwood, in a note with reference to water standards founded upon a recent experience, maintained (1) that the chlorine standard figure was useless for the purpose of detecting the smaller degrees of dangerous pollution; (2) that before giving an opinion as to the safety of drinking a particular water it was of the greatest importance that a

careful local investigation should be made for all possible contaminating influences, having regard to the source of the water, and that the circumstances which called for the analysis of a particular sample should always be given weight in deciding upon the degree of purity which would justify the acquittal of the water as a possible agency in promoting disease.

The CHAIRMAN said that it was wiser not to rest an opinion on any one standard, and urged the necessity of demanding a full and complete analysis.

Dr. BOSTOCK HILL (M.O.H. Warwickshire C.C.) said that too much must not be expected from bacteriological analysis. It was very useful in showing alterations in the way the filters were working. He protested against local authorities endeavouring to get their water samples examined in a cheap manner. It was this endeavour to treat analytical work as if it were scavengering that led to many of the troubles.

Dr. KENWOOD, in reply, said that a complete analysis of water in cases where the supply was frequently examined was unnecessary, although it was desirable to work out one or two quantities every week. In one or two cases a district council paid 2s. 6d. a sample for its water examination; for that price nothing more than the chlorine figure could be got out.

### PURIFICATION.

Dr. SAMUEL RIDEAL, in a paper summing up the present position of methods of purification of water, expressed the opinion that the bacterial purification in English open sand filtration, as measured by the reduction in the number of organisms, did not apparently represent the true value of this method of filtration, as examination of the species of the organisms present in the water, before and after filtration, seemed to show that an open sand filter, when properly worked, caused a greater percentage reduction of the coli communis group, and therefore presumably of the typhoid bacilli, than of the non-pathogenic organisms. Such filters, therefore, had a selective bacterial action, which again accidentally made their use desirable in efforts towards diminishing the typhoid death-rate. With regard to sterilisation by heat, he expressed the opinion that none of the methods hitherto brought before the public seemed to have been sufficiently practical to warrant general adoption. The methods for insuring the absence of pathogenic organisms in the small quantity of water required for drinking purposes could be divided into heat sterilisation, candle filtration, and chemical treatment. Theoretically it was possible to kill off all organisms by subjecting the water for a sufficiently long period to an adequate temperature. On the regenerative principle this should be capable of being carried out without the loss of any heat or the application of any except the initial energy, but in practical working a slight loss of heat at present seemed inevitable. Difficulties arising from the deposition of lime salts in the tubes of such apparatus required to be overcome, but a preliminary softening in connection with the storage reservoirs would diminish this objection considerably. He believed that the problem of economical and efficient heat sterilisation was one which was well worth the further consideration of water engineers. The use of sodium bisulphate for addition to water containing a large amount of organic matter, as suggested by Dr. Louis Parkes and himself, had been tried on a considerable scale in South Africa, but most investigators favoured the employment of oxidising agents in some form for sterilising waters. The efficiency of oxidisers must obviously be influenced by the amount of organic matter present in the water, and the varying amounts reported as necessary by different observers were due to this cause. Permanganate, for example, seemed, according to recent reports, to have failed as a cholera preventive in Indian wells. In water supplies from which the greater portion of the organic matter had been removed by some preliminary process, the quantity of oxidising agent required was so small that it would have no injurious effect upon the consumer. Ozone had the advantage over all others of being easily obtained everywhere from atmospheric oxygen, and recent progress in ozone generators and electric supply encouraged the belief that this oxidising agent could be economically produced. So much was this the case that ozone had in several directions been tried even for purifying public supplies on a large scale, and might in the near future be used extensively as a "finisher" in the purification of water.

Mr. T. CAINK, City Engineer of Worcester, spoke subject to a considerable amount of interruption. He said that the City of Worcester derived its public water supply from the river Severn, a river by no means free from pollution. Prior to the year 1894 the number of cases of typhoid which annually occurred in the city caused considerable anxiety to the city authorities, and, as suspicion rested upon the water supply owing to the frequent unsatisfactory reports from the City Analyst, the question of abandoning the river for some other source of supply was for a number of years the subject of serious consideration. It was finally resolved to adhere to the Severn and improve the filtering arrangements, chiefly by increasing the filtering area, which was done to the extent of about 70 per cent., and completed in the summer of 1894. The typhoid case-rate up to that time had been about 50 per cent. greater than the average case-rate of the principal towns; the greatest number invariably occurring between the months of September and March. After the completion of the filter bed extension for 1894, the number of cases of typhoid fever (which for the winter half of the four years preceding March, 1894, averaged 52) fell during the half year ending March, 1895, to 6. The question, of course, arose, Was that entirely due to the improvement in the quality of the water, or was it a happy coincidence? The medical officer of the city did not commit himself to any opinion at first, but as the next year showed the same result and the following year the same, he reported that he could no longer resist the evidence that the drop in the figures was entirely due to the improved filtration of the water. This remarkable decline had with slight exception been maintained ever since. The question arose, how did the typhoid case-rate of Worcester, with its water supply from a polluted river but submitted to efficient filtration, compare with that of other towns deriving their water from sources which were considered unimpeachable? It was found that upon tabulating the typhoid statistics from the following amongst others—Birkenhead, Wolverhampton, Southampton, Liverpool, Manchester, Plymouth, London, and Reading, that the typhoid case-rate for Worcester since 1894 was greatly less than any of those towns except Plymouth, which obtained its water from Dartmoor without filtration. In the last quarter of 1900 at Plymouth typhoid cases had occurred in such numbers as to reach the rate of 360 per 100,000. Prior to the year 1894 it was observed that the number of cases in Worcester was invariably greater during the winter half, when the flow of the river was greater than during the summer half; but this relation between floods and typhoid since the extension of the filtering area was no longer apparent.

In consequence of loud and repeated interruptions Mr. Caink was compelled to cease speaking.

Mr. J. PARRY (Liverpool) said that he hoped that it would not go forth to the world that the Congress in any way encouraged the lowering of the standard of purity of the water supply.

Mr. W. J. BURGESS (Liverpool) protested against the exhibition of certain charts in the Congress Hall without any attempt to explain them, the intention evidently being to induce the members of the Conference to think that a river water supply, properly filtered, was better than a natural water supply.

Dr. BOSTOCK HILL (Birmingham) protested against the universal applicability of the statement that the purity of a water supply was to be judged by the typhoid fever death-rate. The Local Government Board had rather laid it down as a rule that typhoid fever epidemics were always waterborne. In two epidemics he had found that the water supply was not in any way at fault. As a medical officer of health, he also protested against the idea in Dr. Rideal's paper of purifying the water after it had been supplied to the consumer. Water should be supplied pure, and should not require further purification at the hands of the householder.

Dr. RIDEAL said that he did not advocate any method of domestic purification. The sterilisers should be put into the houses by the municipality, and water should be purified just before it reached the consumer for drinking purposes. There was no reason for a dual supply if proper methods were adopted.

### The Value of Soft Water.

Mr. Frederick Verney, in a paper on the Value of Soft Water, said that when the water supply of the most populous city in the world was being considered, the financial saving by the use of soft water became an important element in the question; experts, engineers, and practical business men recognised the value of soft water for industrial and commercial purposes, while from a sanitary point of view the cleansing properties of soft water had long been recognised.

Mr. Matthews (Southampton) said that the difficulties of softening water were not so great as imagined, and the cost was very much less than was supposed.

The proceedings terminated with a vote of thanks to the Chairman, proposed by Sir Francis S. Powell, M.P.

## THE FIFTH INTERNATIONAL CONGRESS OF PHYSIOLOGISTS AT TURIN.

### The Nervous System.

*(Continued from page 1093.)*

*Differences in the Physiological Behaviour of the Neurons which Make up the Nervous System.*

As is now well known, Professor Langley, of Cambridge, long ago discovered that the application of a solution of nicotine to a ganglion of the sympathetic trunk prevented the passage of nervous impulses through it, while a similar application to the nerve trunk had no such hindering effect. It was uncertain whether the alkaloid acted directly upon the nerve cells in the ganglion or upon the terminations of preganglionic nerve fibres which arborise round them. Professor Langley now reported that he found, however, that if the preganglionic fibres be cut, and time for degeneration allowed, the application of nicotine to the ganglion produced normal stimulating effects, which must be due to direct action upon the nerve cells. Further, nicotine applied to a ganglion of the sympathetic chain caused a strictly localised erection of hairs in the animal's skin. It followed from this that the alkaloid did not stimulate preganglionic nerve endings, otherwise reflexes would have been set up which should have caused a movement of hairs in the regions supplied by several ganglia. Sympathetic ganglionic nerve cells were, therefore, stimulated by nicotine.

The alkaloid, however, had no stimulating effect on spinal ganglia, nor did it paralyse the nerve cells of these bodies, since the drug was incapable of preventing the passage of impulses through the bipolar ganglionic cells of the skate. On the other hand, nicotine acted as a powerful stimulus to the nerve cells of the spinal cord, producing violent muscular twitchings or even tetanus in the muscles supplied from the region experimented upon. The action was very localised, and after a time the further application of the alkaloid ceased to have effect. At this stage, however, muscular movements could be obtained by excitation of the posterior nerve root or the top of the spinal cord.

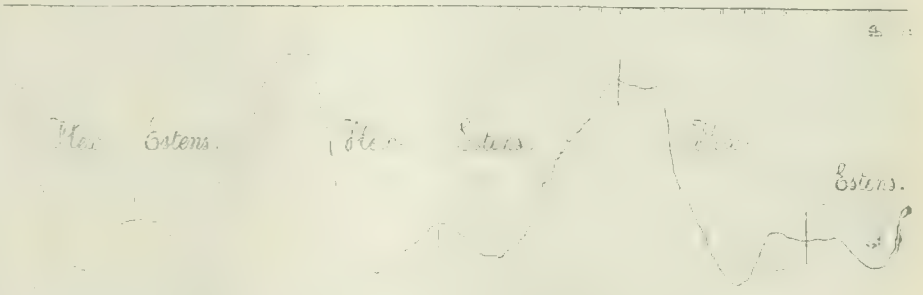
Three different results were therefore obtained from applying one and the same drug to different nerve cells (1) sympathetic nerve cells, excitation and stoppage of the passage of nerve impulses through them; (2) posterior root cells, neither excitation, nor paralysis, nor stoppage of nerve impulses; (3) nerve cells of the spinal cord, strong excitation, but no stoppage of nerve impulses. Mr. Langley, however, admitted that in the last instance an objection might possibly be raised, namely, that the impulses passed directly to the axon of the motor nerve cell and not through its cell body.

Another instance of difference in the behaviour of nerve cells placed under the same circumstances was found in the fact that the pilomotor nerve cells of the spinal cord in the cat, a few minutes after death, sent out impulses which caused strong erection of the hairs. The sympathetic pilomotor nerve cells when separated from the spinal cord remained quiescent, however, under similar conditions.

The observations were the beginning of an attempt to determine the physiological behaviour of the different neurons which made up the nervous system of the body.

*Muscular Tremors in Paralysis Agitans.*

Drs. C. Negro and L. Treves (Turin) communicated the results of their observations upon a phenomenon first described by Dr. Negro, which he claimed to be characteristic of paralysis agitans. This was the occurrence of twitches or tremors, particularly marked in the triceps brachialis muscle, which accompanied the movements of flexion and extension of the elbow, and especially the transition from a condition of moderate extension to that of flexion. The tremors were visible whether the movement was passive or active. Von Kries, Schäfer, and others had recorded simple twitches superposed on the larger contractions of a voluntary effort or voluntary tetanus, as it was called. These were characterised by a want of uniformity in strength, but occurred, as a rule, with a frequency of 10 to 12 a second. They were not much influenced by fatigue, or by resistance opposed to the contraction of the muscles, though heavy weights tended to reduce their rate of occurrence to 8 or 9 per second. The authors investigated those of paralysis agitans by a plethysmographic method; one of the tracings is here reproduced. The large undulations represents variations of volume of the forearm; the smaller correspond to the muscular tremors. These were best marked on the tracings during the stage of extension. They corresponded in every way (except rate of occurrence) with the elementary twitches described by von



Tracing showing muscular tremors in Parkinson's disease.

Kries and Schäfer. Their average frequency in paralysis agitans varied between 5.6 and 6.4 a second. The chief point of interest, however, lay in the fact that Schäfer obtained similar tremors in the records of muscular contractions caused by excitation of the grey cortex, no matter what the rate of stimulation had been. The regulation of their rhythm must therefore be a function of the nerve cell. The tremors could not be due to any fault of the muscle. The alteration of rapidity must hence be attributed to a pathological condition of the nerve cells, which were unable to emit a series of impulses sufficiently rapid to produce a tetanic contraction as smooth as in health. This explanation would also account for the great muscular weakness observed in the affection.

*Extirpation of the Superior Cervical Ganglion of the Sympathetic: Restoration of the Eye Functions of the Nerve.*

Professor Langendorff (Rostock) related two cases in which a re-establishment of the eye functions of the sympathetic followed removal or isolation of the superior cervical ganglion in cats. In one animal the ganglion was isolated by ligatures, in the other case it was wholly cut out. After 105 days in the latter all indications of paralysis had disappeared, but were brought on again in the most obvious manner by dividing the trunk of the sympathetic in the middle of the neck. Electric excitation of the upper segment of the divided nerve also produced the usual effects—namely, marked widening of the pupil, enlargement of the palpebral fissure, and retraction the nictitating membrane. Neither regenera-

tion of the ganglion nor the presence of a middle cervical ganglion could have explained the results. Regenerated fibres from the lower stump must have taken the place of the degenerated post-ganglionic fibres, and made their way to the end organs of the muscles.

*Retention of Pupil Reflex to Light after Intracranial Division of the Optic Nerve.*

Dr. G. MARENGHI (Pavia) said that division of the optic nerve within the orbital cavity was known to be followed amongst other results by (1) mydriasis, (2) suppression of the reaction of the iris to light. It was not possible, however, according to Dr. Marenghi, to avoid injury to other structures than the optic nerve by following this method. He had been able to divide the nerve within the cranial cavity just at its point of departure from the chiasma. Animals thus operated upon rapidly recovered, and the globe of the eye remained healthy. Both immediately after the operation as well as later the iris responded to light. The reaction was slow, and even to powerful light was never obtained to the same degree as before, but it was always present even to weak light. The result could be explained by supposing the existence of a peripheral reflex centre in the case of higher animals, such as is admitted to be present in the lower. Nerve cells first described by the author in the internal molecular layer, whose processes, both protoplasmic and axis cylinder, were distributed within the retina, might possibly form part of the underlying mechanism. But this question would be the subject of further investigation. The reflex was demonstrated to the Congress in a rabbit operated upon by the author.

*The Effects which follow Trephining of the Cranium of Young Animals.*

Dr. JEAN DEMOOR (Brussels) carried out the above operation on dogs 3 to 5 days old at different levels of the cranium. He found in contradistinction to Danilewsky (1) that the animals continued to develop normally during the first few months; (2) in confirmation of this observer, that after five or six months epileptiform crises supervened, preceded by general wasting and ending in death. At the necropsy it was found that the localised lesion of the young cranium caused a widely extended arrest of development of the bone; but neither in the development nor in the final wasting were any characteristic localised conditions to be found. On examining the brains histologically it was seen that the cells of the cortex presented:

1. The moniliform condition of the dendrites which was first described by the author as being peculiar to cells subjected to strong excitation. The excitation in this case was due to the epileptiform attacks in which the animal died. During the period of wasting the dendrites were not moniliform.
2. The cells presented a very marked degree of chromolysis, the neurons being especially devoid of chromalin.
3. Phagocytosis of the neurons was only observed in one animal, which showed symptoms of imbecility, and whose death supervened very slowly.

*On Pyriform Appendices of Cerebral Nerve Cells.*

Mdlle. STEFANOWSKA (Brussels) described the results of recent investigations by which she was enabled to confirm statements published by her in 1897, to the effect that the dendrites of cerebral cells were provided with terminal enlargements for which she now proposed the name of pyriform appendices. These organs, which were never absent from the cells of the normal adult brain, could be demonstrated not alone by methods which involved the use of metallic salts, but also by methylene blue. Whatever might be the mechanism by which nerve cells executed their function, it could not be doubted that these appendices considerably increased the surface of contact of the cells with their environments.

The appendices were not present in the newborn brain, and were the last portion of the nerve cells to be developed. They probably therefore played an important *rôle* in psychical acts. They disappeared under the effects of violent faradic excitation of the cortex and after prolonged anæsthesia, but reappeared again when these conditions had passed off. Their disappearance, however, was only observed during grave disturbance of functions of the brain.

*Attempts to Educate a Pigeon Deprived of its Cerebral Hemispheres.*

Drs. L. TREVES and AGGAZOTTI (Turin) gave an account of their attempts to educate a pigeon deprived of its cerebral hemispheres. At first, as was well known, the animal remained motionless; then, after several days, it commenced from time to time to make spontaneous movements, and still later was able to walk a few steps. If it were now placed on a narrow platform, it fell off on reaching the edge, but afterwards learned to advance with precaution, and succeeded as a rule in remaining on its perch. There was evidently some power of perceiving and remembering sensory impressions arriving in its brain from without. Two pigeons were operated upon by the authors (one to serve as control) and placed on low platforms 20 cm. square, in a laboratory fume chamber which served as a cage. As soon as the birds were able to keep their position on the platforms the education of one was commenced. It was at first let drop within the chamber a few inches away from its perch, and then gently pushed towards it, assistance being given at the same time to mount upon it. In case of failure the animal was replaced upon the platform. Some progress was noted after a fortnight, and then the pigeon was brought outside the chamber, placed on a support of the same height, and gently stimulated or urged to return. At length the animal clearly showed a desire to fly, and soon succeeded in flying back to its cage, afterwards jumping up sometimes spontaneously to its usual platform. The distance was gradually increased 5 cm. at a time to more than a metre; then the pigeon was made to execute two short flights at different heights from a lower to a higher level, before returning to the chamber. At the end of five months it was able to fly back from a distance of eight metres, sometimes deviating from the direct line, and sometimes resting *en route*, but ultimately reaching its cage. It never spontaneously left its support, and up to this time it was impossible to induce it to fly in a direction away from the chamber or from a higher to a lower plane, but these latter powers were acquired later. At Easter it was brought to Modena for a fortnight, and made to learn other exercises. On being brought back to Turin it at once remembered its room, and flew back to its cage, and mounted up on its platform immediately on being liberated. In July it was again brought to Modena, where attempts were made to teach it other exercises of a more complicated nature, such as the discernment of colours, etc., but without any certain result. It gradually, however, became more and more active, more difficult to catch, and more resentful of disturbance. Unfortunately the pigeon died towards the end of August, nine months after the operation. The control pigeon, left entirely to itself, acquired some slight degree of vivacity, but was never able to fly, nor even to return to its perch when placed only a few inches therefrom. Neither pigeons ever showed any desire to drink or peck at food spontaneously.

*On Left-handedness.*

Professor K. OSAWA (Tokio) related his observations on the occurrence of left-handedness or right-handedness in animals. In many a preference for using one hand was distinctly pronounced. Monkeys were for the most part either right-handed or ambidextrous; a few were, however, left-handed. Birds, on the other hand, which held their food with their claws as a rule employed the left. The cause of left-handedness in man must therefore be sought for lower in the animal scale than man himself. The matter was of importance to determine, since it would probably show why one-half of the body was better developed than the other.

*Hypnotisation of Frogs.*

Mdlle. STEFANOWSKA said that frogs kept throughout the winter in a tank—that is, after long starvation—fell at once into a condition of profound hypnosis on being merely placed on their backs. The activity of the organs of sense was suspended; the pupils were contracted, enlarging at once when the animal was awakened; the movements of the heart were slowed, and those of respiration almost imperceptible; sensibility to pain was greatly reduced. This state continued for half an hour or more. If previously kept in a dry place the hypnosis was still more readily induced and more profound when established. Frogs just caught were not hypnotisable in this way, but became so if deprived of food for long periods. The conditions, therefore, which favoured hypnosis were exhaustion, deprivation of food, and partial

desiccation; lowering of external temperature seemed to act in the same way. On the other hand, chloroform, ether, and ammonia vapours awakened the animals immediately. The same held good for increase of temperature, whether quickly or slowly brought about.

*Excitability of the Grey Matter of the Spinal Cord.*

Dr. N. Vitzou (Bucharest) said that it was generally believed that the grey matter of the spinal cord, in contradistinction to that of the cerebral cortex, was inexcitable. In 1882 Birge had maintained the contrary, because, on pricking the grey matter of the cord of the frog with a needle, he was able to produce a tetanus in the limbs which lasted for some seconds after the excitation was removed, an experiment well known to physiologists, the majority of whom had notwithstanding clung to the old idea of Brown-Séquard and Schiff. In recent experiments performed on geese anæsthetised with a mixture of chloroform, ether, and alcohol, Viztou had exposed the rhomboidal sinus, taking special care to avoid much hæmorrhage. One hour afterwards, on touching the grey matter at this site with a blunted needle, repeated contractions were produced in the hinder part of the body, and particularly the tail. Mechanical excitation was open to less objection than electrical, and in order to obtain a result with certainty the two conditions, avoidance of bleeding and waiting for at least an hour after the operations, must be observed. Electrical excitation also produced similar results. Experiments were likewise made on the horse. The spinal cord was exposed at two places, one anterior, the other posterior. The hæmorrhage was considerable, but not excessive. An hour afterwards mechanical excitation gave no result—a circumstance attributed to the loss of blood. Electrical stimulation of the grey matter with currents of moderate strength, however, produced tetanic contractions in the fore limb when the anterior part was stimulated, and in the hind limb when the caudal part was excited. Application of the current to the lateral columns of white matter produced a simple form of contraction (not continued), the limb returning at once to its former position on removal of the stimulus. This was a distinctly marked difference between the results of exciting the grey matter and those stimulating the lateral white columns. The grey matter of the spinal cord, like that of the cortex cerebri, must therefore be considered capable of excitation by artificial means.

## THE WORK OF THE LIVERPOOL SCHOOL OF TROPICAL MEDICINE IN WEST AFRICA.

Major Ronald Ross, F.R.S., Walter Myers Lecturer in the Liverpool School of Tropical Medicine, delivered at Liverpool on October 21st to the West African Trade Sections of the Liverpool Chamber of Commerce and members of the London and Manchester Chambers, an address upon the sanitary work now being done in West Africa by the Liverpool School of Tropical Medicine.

Major Ross expressed the opinion that the organisation of the medical and sanitary services of the West Coast of Africa had hitherto been unsatisfactory. The bad principle of adding sanitary to clinical duties had been adopted, and there was no system of encouraging or enforcing sanitary reforms by the employment of sanitary commissioners as in India, consequently, all sanitary effort was left to local authorities uncontrolled by any higher power. Large marshes had been allowed to exist in the immediate neighbourhood of most important settlements, yet Sir William MacGregor had pointed out to him that the local governments had prisoners who might have been justifiably employed upon this good work for years past instead of wasting their labour on shot drill and other useless labour. His recent tour in West Africa had satisfied him that a complete reform was taking place, and the governors of the coast—Sir George Denton, Sir Charles King Harman, Major Nathan, and Sir William MacGregor—were all men of exceptional ability who would do everything in their power to carry it through. He only omitted mention of Nigeria because he had not yet visited that district. He had no hesitation in attributing the reform now on foot principally to the action of the Liverpool School of Tropical Medicine, which during the past two years had sent out expedition after expedition to investigate, report on, and even carry out sanitary reforms.

Major Ross then referred to the experiments made during his last four years of service in the Indian Medical Service, which had proved that the parasite of malaria developed in mosquitos, had shown the steps of that development so that the parasite could be easily detected in mosquitos and had demonstrated that the parasites entered the body through the proboscis of the insect. He had at once perceived the practical bearing of these discoveries, and the matter had been warmly taken up by Mr. Alfred Jones, Professor Boyce, and other members of the Committee of the Liverpool School of Tropical Medicine. The first expedition, which consisted of Dr. Annett, Mr. Austen, and himself, detected without difficulty the kind of mosquito which carried malarial fever in Sierra Leone, and from a study of the breeding of that mosquito had recommended to the local authorities the measures which should be taken to extirpate it or at least to reduce its numbers. In the second expedition Dr. Fielding-Ould extended the work to Accra and Lagos, and then a third expedition, consisting of Drs. Annett, Dutton, and Elliott was sent to do the same work in Nigeria. The reports of these expeditions containing scientific and practical work of great value had been issued in three large illustrated volumes published by the School. The School had also sent Dr. Myers and Dr. Durham to study yellow fever in America, and the lamented death of Dr. Myers had sealed these efforts by an act of heroism. The subsequent work of Americans had shown that yellow fever also was conveyed by mosquitos. The proper way to eradicate malaria from towns was by drainage of the mosquitos' breeding pools. Less radical measures had been proposed, such as the general use of quinine, the employment of wire-gauze screens for windows, and segregation of Europeans; but while heartily approving of all these measure, he was convinced that for all these practical purposes drainage was, as a rule, the proper way of dealing with malaria in large towns. Owing partly to these partial proposals, partly to the sanitary indifference in Africa, and partly, perhaps, to some defective wording in the recommendations, little was done except in Lagos and partially in Hong Kong. It was therefore resolved to undertake the work with the assistance of private enterprise, and a philanthropic gentleman had at once placed £1,000 at Major Ross's disposal, and had subsequently doubled his gift, which was increased by presents of material from Mr. Alfred Jones, Mr. Holt, Mr. Max Muspratt, and others. The expedition was cordially welcomed at Freetown on July 2nd, 1901, by Sir Charles King Harman, the Governor of Sierra Leone. The work was at once commenced by clearing away empty pots, tubs, tins, calabashes, and clearing out the stagnant pools and puddles in which the mosquitos bred. The work was being continued by Dr. Logan Taylor, and was yielding encouraging results. The experiment had so far only cost £300. The work was not to be confined to Sierra Leone. Dr. Dutton was already making a preliminary survey at Bathurst, and Dr. Balfour Stewart was starting next month for the Gold Coast at the invitation of the Governor. In Lagos the Governor, Sir William MacGregor, and Dr. Strachan might be relied upon to do what was necessary, and the next objective of the School was Nigeria.

It had been asserted in opposition to the scheme that it was impossible to get rid of mosquitos. It was not proposed to destroy every mosquito throughout the whole continent of Africa, but to reduce their numbers in towns by getting rid of their innumerable breeding places in the midst of houses. He felt confident from a six years special study of mosquitos that the measure would have the desired effect. When he compared the life of the thousands of Europeans who lived in comfort and health in the torrid heat of Calcutta with the melancholy and unwholesome existence of their brothers in South Africa, he felt bound to insist upon the fact that in the tropics comfort had a practical bearing on health; where, in the remoter parts of India, Europeans did not possess these comforts they were perpetually in the same unhealthy state as those who lived in Africa. In almost every town in India there was a special centre and a place of recreation and exercise called the gymkhana. In Africa such institutions

existed only in Lagos and Accra, and in modified forms elsewhere, but he was taking steps to start a gymkhana in Sierra Leone, and was assured that if the necessary funds would be forthcoming for its establishment it would be maintained by annual subscriptions. The West African Englishman ought to have opportunities of taking vigorous exercise like his brother in India, and greater attention should be given to providing him with suitable food. Fresh milk, butter, and eggs were very hard to procure on the West Coast. In every principal settlement there should be a "settlement farm," where attempts should be made to grow vegetables and to keep cattle and fowls, so as to provide meat and dairy produce. He believed that if private subscriptions were forthcoming to pay the initial expenses, which would not be large, the Government would meet the enterprise half way. Again, in India a bottle of soda water cost a halfpenny, and ice could be obtained from local machines almost everywhere, while in Africa a bottle of aërated water cost 6d. and ice could not generally be got. He thought the principal business houses should band together in order to arrange for ice and soda-water factories, and he believed that the Government would be a fixed customer for the hospitals and the troops. He had also been struck by the general absence of punkahs. Punkahs and electric fans had been introduced into the house occupied by the expedition in Freetown, and there was no reason why their use should not be extended. It was said that horses would not live in Sierra Leone and some other places, but this was probably due to some preventable parasitic disease, and he thought it astonishing, considering the economic importance of horses, that the Government should not long ago have ordered an investigation into the cause of their mortality. At Sierra Leone there was an excellent site on the hills close to Freetown for a residence for Europeans, and when this was rendered accessible by the tramway shortly to be provided, he hoped that advantage would be taken of it by merchants for the residence of persons employed by them on the coast. The School had two watchwords for the improvement of the health of Europeans on the West Coast: (1) No stagnant water; (2) greater comfort for Europeans.

## THE ANDERSON FUND.

The Committee formed to appeal for aid for the widow and two sons of the late Mr. R. B. Anderson, F.R.C.S., beg to announce the following additional list of subscriptions from July 26th to October 22nd. The total amount now subscribed is 73 guineas.

| | £ | s. | d. | | £ | s. | d. |
|---|---|---|---|---|---|---|---|
| Mr. Edmund Owen ... ... | 2 | 2 | 0 | K. W. M. ... ... ... ... | 1 | 1 | 0 |
| Mr. Rys Gilbert ... | 2 | 0 | 0 | Mr. G. B. Forge ... ... | 1 | 0 | 0 |
| Mr. G. Durnford Thomas ... | 2 | 2 | 0 | Mr. A. H. Dodd ... ... | 1 | 1 | 0 |
| Dr. F. de Havilland Hall ... | 2 | 2 | 0 | Dr. Collier ... ... ... | 2 | 2 | 0 |
| Dr. Connel ... ... ... | 1 | 0 | 0 | Dr. W. J. Branch ... ... | 1 | 0 | 0 |
| H. C. M ... ... | 0 | 5 | 0 | Mr. G. Jackson ... ... | 1 | 1 | 0 |
| Mr. W. R. Burchell ... ... | 1 | 1 | 0 | Mr. R. J. Page Smith ... | 1 | 1 | 0 |
| Dr. Edmund Frost ... ... | 2 | 2 | 0 | Captain W. K. Battye ... | 1 | 1 | 0 |
| Dr. D. B. Balding ... ... | 1 | 1 | 0 | | | | |
| Mr. W. F. Brook ... ... | 1 | 1 | 0 | | 24 | 3 | 0 |

Donations for "the late R. B. Anderson Fund" should be sent and made payable to the Manager, Union Bank of London, Chancery Lane, London.

As it is proposed to close the Fund at an early date, intending subscribers are requested to send in their donations without delay.

The Earl of Stamford is Chairman; Mr. Timothy Holmes, F.R.C.S., Honorary Treasurer; Mr. Walter Moninngton, 7, Fig Tree Court, Temple, E.C., Honorary Secretary.

## AN APPEAL.

Sir,—Kindly permit us through the columns of the British Medical Journal to ask for contributions to a fund we are raising on behalf of the family of the late Mr. W. Kortwright Brock, M.R.C.S., L.S.A. (formerly on the A.M.S., but obliged to leave the service on reduction of the staff), whose untimely death, owing to an accident, left in very straitened circumstances a widow and eight children.

It is specially on behalf of one of these children that we are anxious to collect as soon as possible a sufficient sum to enable him to obtain a living for himself, and eventually help the rest of the family. He has shown a great aptitude for pharmacy, and if the opportunity now offered can be taken advantage of, he will be earning before long a respectable competency.

We appeal with confidence to your readers for contributions, which will be gratefully acknowledged by Mr. B. Jones, Balcarras, Wells Road, Knowle, Bristol, who has consented to act as Honorary Secretary to the Fund. Cheques should be drawn in favour of the Honorary Treasurer, Mr. E. H. C. Pauli, and crossed "Lloyd's Bank, Limited, Temple Gate, Bristol Branch—Brock Fund."—We are, etc.,

George Dunlop,
The Vicarage, Knowle, Bristol.
E. H. C. Pauli, M.R.C.S., L.R.C.P.Lond.,
Alma Villa, Knowle, Bristol.
Charles Steele, M.D., F.R.C.S.Eng.,
Clifton Villa, Clifton.
James Stewart, B.A., F.R.C.P.Edin.,
Dunmurry, Sneyd Park, Clifton.

Bristol, Oct. 15th.

# THE PLAGUE.

## Prevalence of the Disease.

### India.

The improvement recorded during the week ending September 21st was not maintained, for the mortality from plague for all India amounted to 7,279 in the week ending September 28th, against 6,386 and 5,612 during the weeks ending September 14th and 21st respectively. An abatement in the virulence of the disease at this season of the year was scarcely to be looked for, and the hope of a break in the increasing mortality which was recorded in our last issue has been falsified. The increased mortality from plague is confined for the most part to the Bombay districts, where, out of the total number of deaths, 6,499 occurred in these districts alone. In comparison with these figures the plague deaths in other localities are quite insignificant. During the weeks ending September 21st and September 28th respectively, the deaths from plague were: In Bombay city, 236 and 233; in Calcutta, 13 and 16; in Bengal, 72 and 99; in the Punjab, 57 and 00; in the North-West Provinces, 18 and 28; in the Mysore State, 342 and 200. Plague seems to have recurred in the Benares district, as during the week ending September 28th 18 deaths were reported. In the Allahabad district, also, 10 deaths from plague were notified during the same period.

### Cape of Good Hope.

During the week ending October 12th, no fresh case of plague occurred in the Cape Peninsula, nor were any deaths recorded from the disease. At Port Elizabeth 3 fresh cases of plague were notified during the week, and one death from the disease. A telegram dated Cape Colony, October 16th, states that Dr. Kirkton, plague officer at Port Elizabeth, has contracted plague. Additional plague precautions have been proclaimed in the Cape Peninsula and at all ports and coastal towns in Cape Colony.

### Naples.

A telegram dated Rome, October 17th, announces that "an order from the Maritime Health Office states that ten days having elapsed since the isolation of the last patient attacked by plague at Naples, without any fresh cases being reported either at Naples or elsewhere, the order of September 23th, which was directed against arrivals from Naples, has been withdrawn. On October 18th the Naples sanitary authorities ceased the publication of plague bulletins.

### Turkey.

Four cases of plague were reported in the Galata quarter of Constantinople on October 17th. All the patients belonged to a Greek family. At Smyrna on October 17th, a French steamer landed and sent to hospital a sailor suffering from plague. The sanitary authorities were not made acquainted with the fact that the patient was suffering from plague, and there was some disturbance at the action of the ship's captain. The sailor was sent to what is called the French Hospital at Smyrna.

### Egypt.

According to a telegram dated Cairo, October 21st, the total number of cases in all Egypt on that date was 5. Of this number, 2 (Europeans) were reported from Alexandria, and 3 (1 European and 2 natives) at Mit Ghamr. Since the outbreak of April 7th of this year 182 cases of plague have been reported in Egypt, of which 88 terminated fatally, 89 have been cured, and 5 remain under treatment.

A Scientific Food Experiment in Chicago.—According to the *New York Medical Journal*, children of wealthy parents are to be the subjects of scientific food experiments in a splendidly-equipped home known as the Chicago Hospital School for Nervous and Delicate Children. The home can accommodate only fifteen children, and the applications largely exceed the accommodation. An annexe is to be established soon, and the effects of food on the brain and body are to be studied under the direction of Dr. John M. Dodson, Dean of the Rush Medical School, who is the originator of the idea. All conventional ideas of a school are to be disregarded: there will be no desks, and nothing else suggestive of an educational institution. The hospital school is affiliated with Rush College.

## BRITISH MEDICAL ASSOCIATION.

### SUBSCRIPTIONS FOR 1901.

**Subscriptions** to the Association for 1901 became due on January 1st, 1901. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

# British Medical Journal.

SATURDAY, OCTOBER 26TH, 1901.

## SUPPLY AND DEMAND.

The returns which we are enabled to publish in another column showing the number of medical students who have entered at most of the medical schools in England will again draw attention to the question briefly discussed in a recent issue, "Is the profession overstocked?" It is common ground that, since 1893, the number of those who have sought year by year to enter the profession has appreciably diminished, a tendency perceived from the returns now published to be still in operation, and it happens that the effect of this diminution upon the number of freshly registered practitioners has begun to be felt at a time when several independent causes have coincided in bringing about a temporary increase in the demand for young men, and hence has arisen a relative dearth of such practitioners. Now the causes of the diminution in the number of candidates may, without enumeration, be summed up in the broad statement that the medical career, when weighed in the balance against kindred occupations by young men of a certain type and attaining a certain standard of education and capacity (or by their advisers) has been found by an increasing proportion wanting in those elements which might have attracted them to its pursuit. But it is asserted, that simply as a result of the ordinary law of supply and demand the conditions have now so altered that this judgment should be reversed, that the change of ratio between the number of practitioners on the *Register* and of those required to satisfy public needs has in itself not only equalised the advantages of the medical with those of competing occupations, but made them even superior.

We have, therefore, two questions: first, whether in fact the balance of supply and demand has, so far as can be ascertained, really altered, not merely as regards newly-qualified practitioners, but throughout the profession, in the way suggested; secondly, whether, if such a change has taken place, it must necessarily in itself reverse the judgment of such men as for several years have been fighting shy of medical careers.

As to supply, the diminution in the actual number of persons becoming medical students is beyond dispute; and the fifth year, by adding to the length of the curriculum of those who have entered, must have tended temporarily to diminish the number obtaining registrable qualifications in recent years. It is difficult, however, to estimate the amount of the effect produced by this factor, and, whatever its influence, it must now be nearly if not quite spent. As to demand, the factors which may have varied are more numerous. Among them the first place must be given to increase of population, the effect of which, unless neutralised by other influences, must, of course, be to increase the demand.

Recently the abolition of the unqualified assistant has had a great temporary effect in increasing the demand for registered practitioners, though the force of this change also is now probably spent. The colonial demand for British practitioners must, we think, go definitely on the other side of the account, for it is perhaps less now than in the past, and must tend to diminish as colonial medical schools become stronger. It is suggested again that there will be a large demand from South Africa after the war, but against this it is to be remembered that many men who practised in South Africa before the war have been engaged therein as civil surgeons, and will no doubt revert to ordinary practice as soon as possible, while a large number of civil surgeons employed by the War Office in this country will be reabsorbed into the general body. Whether the Army Medical Service will within the next few years attract a large number of men remains to be seen; but unless the scheme of Mr. Brodrick's Committee is very materially modified before it is crystallised into a Royal Warrant, we are not disposed to count upon any great drain on the profession from this source. We note also that the dissatisfaction felt by the Royal Navy Medical Service is at present operating to deter young men from looking to it as a career, and we can see no good grounds for the suggestion that the service will withdraw any large numbers from civil practice within the period for which an attempt at a forecast can have any value. On the balance of the factors so far named, only that due to increase of population appears to be likely to have a serious and continuing influence, and even here, in trying to strike a balance, certain deductions must be made. In the first place, the progress of medicine, including sanitary science, is steadily by its triumphs reducing the amount and duration of disease, and, therefore, the field of activity of the medical man. Secondly, the influence of hospitals and sanatoria for infectious and also for other diseases must be taken into account.

Quite apart from "hospital abuse," the treatment of disease of any kind in institutions instead of in the homes of patients reduces in many ways the amount of time required to give proper attention to a given number of patients, and therefore reduces the aggregate number of practitioners needed. The isolation hospital system in boroughs often involves the transfer of patients from the private attendant to the care of the medical officer of the hospital. In this and in other ways the work of the salaried medical officer is increasing and that of private practitioners decreasing. The general effect must, we conceive, be in the direction of diminishing the total number of practitioners required in proportion to population. This no doubt is a perfectly legitimate economy of labour, and to be sharply distinguished from the illegitimate reduction brought about through hospital abuse, sweating by all forms of medical aid organisation, and through the

false economy practised by those public bodies which underpay their officials whenever possible. The latter evil we fear is increasing, but has not a great effect on numbers, rather injuring the individual practitioners concerned. The grave evils associated with medical aid are, we believe, scotched or killed in a few places, actively flourishing in others, but hardly anywhere increasing. The fierce light brought to bear on these dark places has certainly been beneficial. Hospital abuse likewise, though still a great evil, is probably stationary in amount. It must be borne in mind also that this trouble only affects the larger towns, though, owing to the vastness of London, any element such as this in which the metropolis is specially concerned possesses numerical importance.

In striking the balance of supply and demand it will be seen how indefinite and almost incalculable are many of the elements which require consideration, but we think the result may fairly be stated approximately as follows. If the medical requirements per 10,000 of population had remained stationary throughout the period, the diminishing entries of medical students since 1893 would by now have brought the number of practitioners on the *Register* appreciably nearer to that really required than in 1893, when the entries largely exceeded the needs. But it can hardly be doubted that the needs per 10,000 have been diminished owing to improvement in the public health, to increase in institutions, and possibly to other causes, and these changes must be held to counterbalance that due to the increase of population. The apparent dearth at the moment only relates to young men, and is due to temporary causes specially affecting them—the extra year of study, the abolition of unqualified assistants, and absorption by the war. Thus, on the whole, we believe the more enduring tendencies of the times may be said to be towards, on the one hand, a decrease in the proportion of medical men needed to population; on the other hand to a diminishing supply of medical men owing to unpopularity of the profession among the classes from which it has hitherto been drawn.

Taking the difference of these two it is perhaps probable that the supply is slowly falling behind even the diminished demand, that is to say that there is a real and not merely a temporary and apparent tendency to reduce the present overstocking of the profession. Such a tendency we conceive to be in the long run a wholesome influence, capable of being utilised for the needed improvement of the status of the profession, and therefore for the increase of its popularity.

For overstocking, if the remote cause, is not, we believe, the immediate cause of the diminished attractiveness of the profession, which is due mainly to its unsatisfactory status. Mere reduction in the number of practitioners should not be held a sufficient reason for young men to begin to rush again into the medical ranks. Diminished numbers primarily affect remuneration. Now, men do not enter the medical profession to make fortunes; at least those who do so are not wise.

Motives which impel a man to seek his livelihood in medical practice are, we conceive, a love of science, combined with a preference for a practical career, and in many cases we believe a desire to serve humanity in some direct way. Also as a contributing motive must be admitted a desire for a somewhat dignified pursuit and one commanding at least a certain outward show of public respect. The capacity leading to success in medicine would probably command as high a relative position in such other departments of applied science as mechanical or electrical engineering or commercial chemistry, or in some cases, perhaps, in the law or in ordinary commerce. In all these pursuits the same relative position would mean a better income and a freer and less harassed life than that of the ordinary medical practitioner. But if a man loves medicine for its own sake and loves also the practice of the profession and the conditions of his practice enable him to satisfy his aspirations in both these respects, the compensation is more than adequate to outweigh all other considerations. It is the failure of the medical career to satisfy such honourable and essential requirements which has caused discontent in our ranks and discouraged others from entering, and unless alterations in the balance of supply and demand operate, automatically or by guidance, to correct this defect, no mere reduction in numbers will suffice to make the profession again attractive to a considerable proportion of those otherwise most suitable for its work.

## HUMAN AND BOVINE TUBERCULOSIS.

On the morning after Professor Koch made his announcement at the recent Congress on Tuberculosis the Americans had commenced experiments with the view of testing the soundness of his observations.

Following their example Professor Delépine has not allowed any grass to grow under his feet, and in another column are recorded the results of a series of experiments designed to test some of Professor Koch's statements in regard to the communicability of human tuberculosis to cattle. These experiments are specially interesting from the fact that they were carried out after—though so soon after—Professor Koch's pronouncement had been made, and that they were arranged with the special object of testing one of the most important points raised. They will probably be criticised, because Professor Delépine did not apply the preliminary tuberculin test, but this objection is fairly anticipated, Professor Delépine giving reasons for his action.

He points out that if tuberculin, as is sometimes claimed, becomes a modifying factor in the process of infection, it might have nullified the experiment in those cases in which the susceptibility to tuberculosis of the animal experimented upon was small. It is unfortunate that one of the four animals used should have been suffering from a generalised tuberculosis which Professor Delépine recognises could not have been due to the experimental inoculation; but the general results, in spite of this unforeseen occurrence, are singularly interesting. Of the four calves in which an attempt was made to produce tuberculosis, two survived "long enough to allow definite results to be obtained, and these two calves had contracted tuberculosis as the result of ingestion of or peritoneal infection with human tuberculous sputa."

These experiments will no doubt be repeated, and under conditions that will allow of a thorough examination and testing of the animals with tuberculin before any attempt is made to infect them with tuberculous material; for it

is scarcely conceivable that the objection to the use of tuberculin can apply if sufficient time is allowed to elapse for the effect of the action to disappear, but not for the animal to become tuberculous through infection from extraneous sources. The observance of the most rigid conditions is evidently necessary, and had these experiments been even less successful than they appear to have been, they show how important it is that every source of error should as far as possible be guarded against, as, in the hands of men less competent to form an opinion than Professor Delépine, a third case might possibly have been accepted as being undoubtedly tuberculous as the result of the experimental infection. Of course, where such material as sputum is being utilised as the infecting agent, a certain proportion of cases of septicæmia may always be anticipated, this danger being markedly increased by the mixture of a number of tuberculous sputa; this method, on the other hand, has the very great advantage that it probably multiplies the chances of obtaining experimental tuberculous infection.

The promised results of the further experiments now being carried on in Manchester will be awaited with interest.

## THE PROBLEM OF THE FEEBLE-MINDED.

An interesting address given by the Vice-President and Chairman of Section H., Anthropology, at the recent meeting of the American Association for the Advancement of Science has been published in *Science*. The title was "A Notable Factor of Social Degeneration," and in it Mr. Amos W. Butler discussed the influence exerted upon the community at large by the leaven of feeble-mindedness in its midst. It may be well to explain that this term is used in America "to include all persons, from those with weak minds to the most abject idiot." The United States Census of 1890 returned no fewer than 95,571 individuals of that kind; but the latest census does not furnish any information upon the point—a matter for regret. Statistical information as to the prevalence of mental deficiency in a population is necessarily very imperfect, for only the more obvious cases will be scheduled; but Dr. Fernald has estimated that in the States there are probably two feeble-minded to every thousand persons, and that only about 6 per cent. of these are under appropriate care. It is to be hoped that our own recent census, which provided for the return of "feeble-minded" as well as "imbecile" persons, may be more comprehensive in the information gained than its predecessors. At present we can only infer from the figures gathered in 1881 that the prevalence of mental defect in the United Kingdom is not much, if at all, below that in the United States. The State provision for the care of such cases is less complete here than there: and, consequently, the social problems set forth in the address referred to confront us at least equally in this country. Attention is called to the need of grappling early with the case of feeble-minded children in the public schools; and this, thanks to recent legislation, our School Boards are beginning to do by the establishment of special classes for defective pupils.

But school age ceases at 16, and then follows the perilous period in which the animal passions become those of the adult, whilst the controlling power too often remains that of the child. Without adequate protection, the feeble-minded lad, but especially the feeble-minded girl, easily falls into vicious courses, and one perverted feeble-minded woman is a source of moral contagion to all around. Mr. Butler gave some remarkable statistics, chiefly gathered from the records of the Board of State Charities of Indiana, as to the increasing number of illegitimate children of feeble-minded parents, and as to the inheritance of feeble-mindedness. In 511 families in which there was known to be feeble-mindedness, there were 1,924 persons (an average of 3.76 to a family), 889 males and 1,035 females. Of these 532 males and 717 females were feeble-minded, 21 men and 33 women were insane, 44 others were defective physically, that is, blind, deaf, paralytic, epileptic, etc. In a number of cases there were combinations of forms of defectiveness. Among these families 267 members were known to be illegitimate. In the aggregate 577 only of the 1,924 members of the 511 families were not recognised as defective in some respect.

Such appalling statistics strengthen the case for prohibitive legislation against the possible marriage of defectives, which has already been accepted by some at least of the American State Legislatures; but this will not meet the case of propagation of the unfit by means of illicit unions. The real remedy seems to lie in the early recognition of defectives and their lifelong supervision. Educational efforts alone fall short of what is required to protect society from the taint of feeble-mindedness. They will help to diminish the dependent condition, and it may be hoped also the delinquent tendencies, of the feeble-minded class; but it is only by some scheme of industrial colonies, where defectives will be usefully employed in segregation from the ordinary population, that the maximum of benefit to the community seems likely to be attained, inasmuch as in this way the risks of handing down the infirmity to the next generation will be minimised.

## WAR OFFICE REFORMS.

The Secretary of State for War has issued a memorandum directing the constitution of a War Office Council and a permanent Executive Committee of the War Office, and directing that the Director-General, Army Medical Department, shall be a member of the Army Board. This last reform has been long desired and advocated by the Medical Service. The Director-General will in future be a member of the War Office Council for medical and sanitary questions, and will thus be in the position of a member with a vote, and not merely in that of an adviser. This Council will meet once a week, and will discuss matters referred to it by the Secretary of State, who is to be its President, as well as questions brought before it by individual members. The Deputy-Director-General, Army Medical Department, or an officer selected by the Director-General, is to be a member of the Permanent Executive Committee of the War Office, which will meet twice a week under the chairmanship of the Permanent Under-Secretary, and it will be the duty of the representative of a department in which a subject is initiated, or to which a subject has been referred in its initial stages, to state briefly to the Committee the steps which his department is about to take; it will also be his duty to bring to the notice of the Committee any important development which may arise in a matter in which action has been commenced. The Committee will discuss the course to be pursued, and the representative of each depart-

ment will be responsible for reporting subsequently to the Committee the progress of the action decided on. The same official (Mr. Brade) is to be the Secretary of the War Office Council and of the Permanent Executive Committee, and he will be responsible for the formation of Special Departmental Committees. We believe that the constitution of these bodies and the appointment of the Director-General to the War Office Council and to the Army Board, and of a representative of his department to the Permanent Executive Committee, are proofs that the Secretary of State for War is sincerely desirous that army medical reforms shall be real and not illusory. Such being the case, we earnestly trust that he will be in no hurry to translate into a Royal Warrant the recommendations of the Committee on the reorganisation of the Army Medical Service. There are some good features in their report, but, on the other hand, as has been pointed out in the British Medical Journal, some of the proposals are impracticable, while others are, for various reasons which we have indicated, objectionable. One of them is of itself of such a character as to ensure the failure of the scheme if it were adopted in its present crude form. This is the life-long entanglement of a future army medical officer in a network of examinations, one effect of which would be to deprive him of any feeling of security as to eventually receiving a pension. Men of the class desired cannot be expected to accept such conditions. Many of those who are sincerely desirous of army medical reforms foresee that the great danger of the present moment is the hasty adoption of any scheme which may prove unacceptable to candidates for commissions, and that we may thus once again have a scheme which will fail to fulfil the first and essential condition, which is to attract a sufficient number of men of the kind required for the Army Medical Service.

## THE UNIVERSITY OF LONDON.

A meeting of the Senate, the first after the recess, was held last Wednesday, and received numerous reports from the Academic Council and Council for External Students. The new Principal, Professor Rücker, whose health is happily quite restored, has now got the new and augmented staff under way, and we understand the important questions of the Matriculation Examination and that of arranging separate examinations for the internal and external students respectively will shortly be decided. The Act declared that there should be separate examinations, unless the Senate should specially resolve otherwise. At the present time, of course, only the old system of examination is proceeding, that is to say, only "external examinations" are being held. By a definition in the schedule of the Act internal students are required to matriculate at the University. Whether this precludes candidates who have matriculated and pursued courses in other universities from proceeding to a degree in the University of London, as appears to be contemplated by the statutes, has not, we understand, as yet been determined. Many medical teachers would naturally desire that the medical faculty should have an opportunity of making their views known in regard to the new form of matriculation which has been formulated by the Board specially appointed under the statutes to determine this matter. We sincerely hope that an adequate opportunity for doing so will be afforded them.

## THE VIRCHOW CELEBRATION.

Our Berlin correspondent writes:—The "Virchow day" lengthened out to a "Virchow week," for the series of ovations that began on Saturday, October 12th, did not find their close until Friday, October 18th. On Monday evening, October 14th, the Imperial Chancellor and Countess von Bülow gave a dinner in honour of Virchow, at which many of the foreign delegates and Berlin notabilities were present. On Tuesday evening an imposing public meeting gave evidence of the enthusiasm felt by the Berlin Liberals for Virchow was a politician. Eugen Richter, the great Radical orator, made a flaming speech, in which sharp hits at the present political situation alternated with expressions of deepest gratitude for Virchow's untiring, courageous, and life-long labours in the cause of political freedom. That Virchow's political career has been one of real work and not "talk" merely can be best illustrated by the fact that for twenty-five years he was President of the Parliamentary Audit Committee—no sinecure, as those can tell who know something of the punctiliousness of Prussian finance. On Friday evening the town council and magistrates gave their great Virchow banquet in the city hall. What Virchow has done for public hygiene and town sanitation, is known all over the world. No one could have put into better words the debt our generation owes him than did Virchow himself, when, in returning thanks for the speech in his honour, he said—without mock humility and without vanity either—that if he was proud of any achievements it must be the achievements in the domain of public health, since it was by his efforts, through the establishment of the system of drainage which he had recommended and the sewage farms constructed under his directions that Berlin had become the healthiest city in the world. All the medals, addresses, pieces of statuary, and paintings presented to Professor Virchow by learned societies and public personages are on view in the Central Hall of the Industrial Art Museum.

## THE DISEASES OF UGANDA.

Medical reports on the diseases found in countries newly occupied by Europeans are always of interest, and that by Dr. Moffat, C.M.G., the Principal Medical Officer of the Uganda Protectorate, for 1900, is a model of this class. He explains the conditions under which the information was gained, and leaves no obscurity as to relative reliability of the observations made. He clearly distinguishes between the diseases met with in the aborigines and those in immigrants whether European or negro. As in most parts of tropical Africa malaria, blackwater fever, and dysentery are the important diseases in Europeans, he advocates treatment of blackwater fever by full doses of quinine, but his case mortality of 20.9 per cent. is not, we believe, a low one for that disease, as he assumes. The presence and, what is of equal importance, the absence of various diseases common elsewhere are fully considered. Small-pox, chicken-pox, and mumps are common, whilst enteric fever, cholera, scarlet fever, and diphtheria have not been observed. As enteric fever has been met with both in Zanzibar and Mombasa, it will probably shortly be introduced into the interior. No cases of plague were seen by Dr. Moffat, but the history is related of an epidemic ten years ago of a disease which he considers may have been plague. Leprosy was rarely seen, and beri-beri, though common on the coast, had not been observed in the interior. Pneumonia was the most important of the diseases of the respiratory organs, and is endemic. Phthisis, though common in imported negroes, was not observed by Dr. Moffat in aboriginals. Of animal parasites, ascaris and tænia saginata were frequently observed, but not the ankylostoma; probably this parasite will be found only at the lower altitudes. A so-called "itch" is one of the commonest of the skin diseases, but acarus sarcoptes hominis was never found. The disease is probably the same as "coolie itch" of the West Indies, and the commonest of the many diseases known as "craw-craw" on the West Coast of Africa. Dr. Moffat doubts the existence of bilharzia; but, as he has met with cases of unexplainable bladder hæmorrhage and the parasite is so widely distributed almost all over Africa, it may have been overlooked. He describes a chronic disease known as

"mti," and suggests a resemblance to mycetoma. As "Madura foot" is common at Mombasa, this may very probably turn out to be correct. He concludes with a few suggestions, which include better housing for the Europeans and hospitals for natives, and appends a tabular list of the cases of blackwater fever. The report is well arranged and clearly written. Its present value is great, and its historic value will be greater.

## ACQUIRED INSANITY.

In view of the great increase in the numbers of the insane in England, any contribution which tends to lay bare the causes of lunacy, and in consequence to prepare the way for their removal, deserves earnest attention. Some valuable and, we may add, hopeful lessons are to be drawn from Dr. Savage's recent address on this subject to the York Medical Society. It is no doubt a very comforting creed which holds our parents responsible for all our ailments, but unfortunately retrospective therapeutics do not form a promising field for study. Now, however, Dr. Savage brings forward abundant evidence against the preponderance of the hereditary element in insanity, and it behoves us to recognise that insanity is not always inevitable, and to wage untiring war upon its causes. Beginning with the cases in which a history of heredity could be obtained, Dr. Savage argued that what was transmitted in them was in many cases not merely nervousness, but the effects of the degeneration, the decay, the demoralisation of the parents—that in other words physical disorder might produce mental disorder. Speaking as he did before a mixed audience, male and female, medical and lay, he does not appear to have gone into details with which no one is better acquainted than he, and we need do no more than refer to the facts that congenital syphilis is a powerful predisponent to insanity, and that the ranks both of lunatics and of criminals are largely recruited from the offspring of alcoholic parents. But, after making every allowance, Dr. Savage was able to state that two-thirds of the insane had no trace of insanity in their ancestors or in their immediate blood relationship, and to quote statistics to show that alcoholism was a much more frequent cause of insanity than heredity. Thus it appears that at least two-thirds of the insane acquire and do not inherit their condition, and that more than half of these owe it to the excessive consumption of alcohol. Of other causes syphilis is perhaps paramount; the opinion is gaining ground among alienists that it is the invariable precursor of general paralysis of the insane. Infective diseases, particularly if associated with much nutritional disturbance, are also of importance; patients find that after recovery from enteric fever there is as a rule more or less prolonged loss of judgment and inability for continued mental work. Dr. Savage quoted some interesting examples of even more profound psychical disturbance in convalescents just returned from the war. Among other causes he enumerated the growth of morbid ideas, exciting occupations, such as those connected with the Stock Exchange, the anxiety suffered by farmers in struggling against the inevitable, the physical aspect of worry and want of sleep. He did not believe that overwork was a potent cause as long as a man had more than one iron in the fire; but there was no doubt that monotonous and uncongenial occupations might conduce to insanity. The cramming of intelligent schoolboys between the ages of 11 and 15 was to be condemned; it will be remembered that Dickens has happily depicted the effect of this, as practised by Dr. Blimber in the case of Mr. Toots. Dr. Savage finally said that he held that doubt in religion and love might lead to great disturbance of mental equilibrium, and referred to the influence of religious excitement in the causation of insanity. It will be seen that the vast majority of causes thus enumerated are removable, or at least alleviable. It remains for the medical profession to initiate a serious, and persevering crusade against a growing scourge, which is beyond comparison terrible, but is at the same time unquestionably remediable.

## GLASGOW SOUTHERN MEDICAL SOCIETY.

The annual dinner of the Glasgow Southern Medical Society was held on October 17th. Dr. John Stewart, President of the Society, occupied the chair, and there was a very large attendance of members and friends. Drs. MacGilvray and Richmond acted as croupiers, and in addition to Professor M'Call Anderson, Dr. Bruce of Dingwall, and Dr. A. Cluckie, who were the guests of the Society for the evening, there were also present among others Professors R. Stockman, J. Glaister, J. Lindsay Steven, and Mr. John Lindsay. After the loyal and patriotic toasts had been honoured, the Chairman proposed "Our Society." To Dr. William Watson was entrusted the toast of "Our Honorary President," which was acknowledged by Professor M'Call Anderson. The toast of "The General Medical Council" was proposed by Dr. Charles E. Robertson, who pointed out that this was the first occasion in the history of the Society that such a toast had been put upon the list. Its appearance on the list that night was due to the fact that for the first time the Society had been honoured with the presence as a guest of the representative of the general medical practitioners of Scotland. Dr. Robertson doubted if at the present time the General Medical Council could expect that the toast would be received with the enthusiasm and sincerity which its importance ought to command. Keeping in view the autocratic reception by the General Medical Council of a serious and influential deputation in June last, representing over 400 practitioners in the West of Scotland, he could not conceive how this august body could hope to possess the confidence and respect of the medical profession in the West of Scotland. It was easy to say that theirs was a judicial body, and to imply that the deputation had no right to influence them in a matter which was still *sub judice*; but when they, as a judicial body, framed an indictment so carelessly worded as to encroach on the rights of centuries, surely all whom this indictment covered were entitled at least to be heard in their own defence. He did not wish for a moment to touch a single jarring note in the evening's entertainment, but when one was asked to propose a toast it was only honest that the proposer should express his opinions in a straightforward manner; and he had no hesitation in saying that the constitution of the General Medical Council was unsound from the very foundation. What other parliament—for it was the medical parliament—would the people of the twentieth century allow to be elected on the same basis as this was? What influence, for example, could the general practitioners in Scotland have when they were represented by only one man, and when the bulk of the members were responsible practically only to themselves? It was the general practitioners of the country who were most interested in the work of the General Medical Council, and the majority of the members should, in his opinion, be elected by them. Then assuredly would the Council attend to the wants and desires of practitioners. Then they would have a Council which would be always standing up for the welfare of the profession and exerting all its powers to protect their rights. Session after session, at present, was largely occupied by penal cases until one began almost to forget that they had other duties beyond. Bonesetters advertised daily in the newspapers; quacks distributed their bills in the streets and flourished; chemists prescribed medicine daily and continually in their places of business—all directly trespassing on the rights of medical men. Had these no interest for the General Medical Council? Had powers been asked for

to deal with these cases? Had Parliament been urged incessantly to grant this power; and if not, why not? He did not think that the General Medical Council was in very good grace with many people. Certainly not with Parliament—not with the medical profession—and he did not know that the members of the Council were satisfied even with themselves. And this state would undoubtedly continue until their antiquated method of election was abolished, and until those most interested in its success had the power to return the representatives. But while he made these complaints of the Council as a body, it was quite another matter when he referred to the gentleman whose name was associated with the toast. Dr. Bruce had long been their worthy representative on the Council, and although up to the present year he had been a stranger in this part of the district, yet this was the case no longer. When the trouble over poison-selling overtook them during the past year, Dr. Bruce travelled from Dingwall to be present at their Society's meetings, and he also displayed great courtesy and kindness towards the deputation while in London. He asked them to drink the toast of "The General Medical Council," coupled with the name of Dr. Bruce. Dr. Bruce, in replying, remarked that, in his opinion, the General Medical Council was composed of too many members, and he thought that a change was desirable in its constitution. He expressed himself in favour of altering the Council in such a way as to make one-half of its members the representatives of general medical practitioners. Among other toasts were "The University and Medical School," proposed by Dr. Richmond, and acknowledged by Professor Stockman and Dr. T. K. Monro: "Our Guests," by Professor Lindsay Steven, and replied to by Dr. Cluckie and Mr. John Lindsay; and "The Chairman," by Dr. J. Fraser Orr. The singing of "Auld Lang Syne" by the company brought to a close one of the most pleasant and successful dinners in the history of the Society.

## NEW CHEMICAL LABORATORY AND LECTURE THEATRE AT EPSOM COLLEGE.

For some time past it has been felt both by the teaching staff and the governing body of Epsom College that, in order to keep pace with the educational demands of the day, greater accommodation for practical teaching in scientific subjects had become necessary, and a bequest of £500 left by Mr. Maddock, a late master of the College, afforded the Treasurer, Dr. Holman, the opportunity of suggesting to the Council that this bequest, the distribution of which had been left to their discretion, should be made the nucleus of a fund for the provision of a chemical laboratory and lecture-room. The suggestion was accepted and the new buildings, having been completed, were formally opened on October 19th. The laboratory, which will be under the direction of Mr. H. E. Gardner, B.Sc., is an extension of a previous but smaller building devoted to the same purpose. It is a capacious well-lit and well-ventilated room, with ample bench accommodation for from thirty to thirty-six students, and provided with all necessary apparatus. By an excellent arrangement of fume-closets provision has been amply made for keeping the air of the laboratory pure, a point of no small importance when it is remembered that the workers are to be growing boys. The lecture theatre immediately adjoins and communicates with the laboratory. It has sitting accommodation for 120, and is destined for use, not only in the science but also in the other departmental work of the College. The existing biological and physical laboratories are close to the theatre, which can be conveniently reached from either of them. The whole College has accommodation for upwards of 300 boys, and there are at present 240 in residence. The value of Epsom College as an excellent seat of education and as a school offering valuable privileges to medical men is not sufficiently known to the profession. There is a general impression—no doubt partly begotten by the use of the adjective "benevolent" in the original title of the College—that it is in some sense a charitable institution. This is a misapprehension: Epsom is no more a charity school than Marlborough or Wellington. It offers, it is true, special advantages to the sons of medical men, but it is not a school exclusively devoted to the training of boys for the medical profession any more than Marlborough is exclusively a school for budding clergymen or Wellington for prospective soldiers. At the present moment, indeed, from 15 to 20 per cent. of the boys are not sons of medical men. There are fifty foundation scholars elected by the votes of subscribers to the charitable side of the institution, who are boarded, clothed, and educated free of charge, but they are in every respect made the equals of the others who pay fees, the funds of the benevolent side being devoted to the payment to the general funds of the College of the cost of education and maintenance of the foundationers. To the sons of medical men a concession is granted in the matter of fees, and there are nine scholarships at the teaching hospitals of London each sufficiently valuable to cover the ordinary cost of medical education. In addition there are seven bursaries of from £40 to £60 a year tenable at the Universities, and four annual school exhibitions for boys already in residence. The ceremony on Saturday was attended by a large number of members of Council and others, as well as by the staff of the school, and by the boys, who did not lose the opportunity the occasion offered for a practical demonstration that they were possessed of healthy lungs and abundant animal spirits. Among others present were Sir William S. Church, Bart. (President of the Royal College of Physicians), Mr. Bilton Pollard, Dr. Stamford Felce, Colonel Gordon Watson, Dr. Needham, Mr. Clement Smiles, Dr. Macpherson, Mr. Christopher Heath, Dr. Baines, Dr. Galton, Mr. Kiallmark, Mr. Hugh Vardon, Dr. Holman (the Treasurer), Mr. Crossley (the Bursar), and Mr. Lamb (the Secretary of the College). The Headmaster (the Rev. Hart Smith) welcomed the guests in the large schoolroom, and the company then passed to the new lecture theatre, where, in the absence of Sir Joseph Fayrer, the chair was taken by the Rev. E. W. Northey, who referred to the growing importance of scientific education, and strongly urged the boys to take full advantage of the opportunities which the new laboratory would afford them for gaining practical knowledge in a very important subject. He finally requested the Headmaster to receive the new buildings, which he formally declared open, for the future use of the students of Epsom College. The Headmaster, in accepting charge of the buildings, said that such an extension was much needed, and paid an eloquent tribute to the late Mr. Maddock, whom he had known from his Marlborough days. He felt assured that his bequest could not have been devoted by the Council to a purpose more in accordance with what Mr. Maddock himself would have wished, for though he was a classical scholar he was by no means unfamiliar with the sciences, to more than one of which he had paid considerable attention. Mr. Robinson, Mr. Maddock's executor, also spoke of the interest which that gentleman had always taken in the work of the College, and the proceedings then terminated.

## THE PUBLIC-HOUSE TRUST ASSOCIATION.

The Central Public-house Trust Association is a voluntary body, constituted for the purpose of organising a public-house trust movement, which aims at the promotion of temperance by eliminating as far as possible private interest and profit from the retail sale of intoxicating liquors. It proposes that the control of the liquor trade should be in the hands of limited companies to be administered by them as a trust on behalf of the community;

to this end it proposes to establish in every county a public-house trust company which shall acquire existing public-houses when obtainable on reasonable terms, shall oppose the granting of new licences to private persons, and in every case where the magistrates decide that it is advisable to grant any licence shall ask on public grounds that the licences shall be entrusted to the company. Fourteen public-house trust companies have already been formed—six in England (Northumberland, Durham and North Yorkshire, Hampshire, Kent, Liverpool, and Sussex), six in Scotland (East of Scotland, Glasgow district, Cowdenbeath, Dumfermline, Kirkcaldy, and Renfrewshire), one in Wales (Dinas Powis), and one in Ireland (Ulster). The leading principle on which these companies are constituted, and upon which future companies will be constituted, is that after paying to the shareholders not more than 5 per cent. per annum, and after due provision for a reserve fund, depreciation, etc., all the surplus profit shall be devoted to objects of public benefit, other than those properly chargeable to the rates. The system of management of the houses belonging to the company is that such shall be as far as practicable a house of refreshment rather than a mere drinking bar; tea and coffee and temperance drinks and light refreshment being as easily accessible to customers as beer and spirits, the managers receiving a fixed salary with a percentage of profit on the sale of non-intoxicants and food only. Committees are organising public-house trust companies in Bradford, Cumberland, and Westmorland, Essex, Leeds, Northamptonshire, Nottinghamshire, Surrey, Thornton, Poulton-le-Fylde, and Warwickshire. The formation of such companies is under consideration at Manchester, Preston, and in Glamorganshire. In addition the People's Refreshment House Association, described as the pioneer society in such work, now manages seventeen houses in various parts of England and two in Scotland. The Central Public-house Trust Association has been successful in its opposition to the granting of licences to private persons, in conjunction with other local forces, at Barrow-in-Furness, Bexhill, Eastbourne, Ilford, and Leyton. The Association, it appears, is in want of money; it has spent between £800 and £900 in organising the movement, and it desires to get its organisation to work in all counties before the next Brewster Sessions. Lord Grey, who is the President, sends us an appeal for subscriptions which may be sent to Mr. Oliver Williams, Secretary of the Central Public-house Trust Association, 71, King William Street, London, E.C. The report of the Association to be issued early in November will contain acknowledgments of such subscriptions. It appears that a similar movement has been set on foot in the Transvaal. A South African Alliance was formed at a public meeting in Johannesburg on May 15th, 1901, "with the object of providing for the better administration of the liquor traffic, and based on the central principle that no scheme of reform is adequate which does not eliminate private interest in the trade." The Legislative Assembly of Natal adopted on July 2nd, 1901, after a two days debate, by a practically unanimous vote, there being only two dissentients, a resolution expressing the opinion that it is desirable that legislation should be introduced, by which any borough so desiring may acquire the exclusive right of selling intoxicating liquors by retail within its limits. In South Australia a State Retail Liquor League has already been formed to bring about a State monopoly and control of the retail liquor traffic.

## PRESERVATION OF BODIES BY FORMIC ALDEHYDE.

The opportunity has recently been afforded us of inspecting, at the Examination Hall, Victoria Embankment, a new apparatus for preserving the cadaver by means of the vapour of formic aldehyde, a method which appears to have some great advantages over other methods at present in use. The apparatus, which is the joint work of Dr. G. de Rechter, member of the Sanitary Board of the city of Brussels and his brother Mr. F. de Rechter, Assistant Engineer to the Belgian States Railway, consists essentially of an airtight chamber containing two parts—a chamber in which the body is placed called the disinfecting chamber, and one in which the formic aldehyde is volatilised called the evaporating chamber, with an electric fan, driven by a motor, which is used to circulate the vapour from one chamber to the other. The vapour of formic aldehyde, unlike a solution of the substance, does not, when properly applied, harden the skin or surface of the tissues; hence, as it is alleged, it can penetrate the skin and permeate the tissues of the body, exerting, under the most adverse circumstances ordinarily present, a complete antiseptic action within a term of four weeks; and not only so, but making the tissues for all practical purposes permanently incapable of putrefaction. The chief difficulty to contend against is the presence of bacteria in the stomach or intestine; if these be intact, four weeks may be necessary for complete sterilisation, but, if they be removed, the rest of the body is sterilised in about nine days. The tissues, although sterilised, retain their suppleness, and to a great extent their colour. Underneath the open wire shelf on which the body rests in the sterilising chamber is an ice closet, which is employed in order to inhibit the action of the intestinal bacteria until the vapour begins to produce a distinct effect; the temperature of the chamber should be kept below 50° F. for the first two days. The evaporating chamber contains a series of vertical open cotton wicks, each about 2 feet square, on which the formic aldehyde drops from what are practically ordinary engine oil droppers. These sheets or wicks afford a broad surface for evaporation. To make possible the abstraction of the body without allowing the irritating vapour to escape into the room in any quantity, a copper screen can be made to fall so as to completely shut off the evaporating chamber. Experiments have been made which show that cultures of several kinds of bacilli are killed in six hours when placed in the sterilising chamber; that guinea-pigs which have died from anthrax and glanders are rendered sterile in four days; and, what is of importance medico-legally, that from guinea-pigs poisoned with arsenious acid, morphine, atropine, and strychnine, after treatment for eight days the active substances may be recovered from the viscera. While human cadavera require from two to four weeks for sterilisation, zoological specimens need only one or two days for every needful purpose. The cost of the apparatus is from £80 to £100. Each body disinfected requires about half a galllon of crude formic aldehyde, which costs about 5s. The cost of the refrigerating apparatus in use at the Morgue in Paris is, it is stated, some £1,000, and the daily cost is 2s. 6d. a body (not taking into account salaries of the staff), while the formic aldehyde method costs only 1d. a day for each body. The sterilising chamber is usually made to contain only one body, but some are in use large enough to contain four at one time. Among the purposes to which the apparatus may be applied are for medical schools (the process in no way interfering with injection of the vessels); in criminal cases, particularly in death from violence and in cases of murder by poisoning (in this relation the fact that the presence of clothing on the body does not hinder the process is of importance); in embalming and for use on board ship where there is objection to interment at sea; and for purposes of exposing bodies to public inspection. Among other places in which the apparatus is already in use are the Zoological Laboratory of the University of Brussels, the public mortuaries of Brussels, in some of the Hamburg hospitals, and in Russia. Messrs. Thomas Christy and Co., 4, Old Swan Lane, E.C., are the agents for Great Britain.

## THE SANITATION OF THE CITY OF LONDON.

IN Dr. Collingridge's report to the Sanitary Committee of the City Corporation for the nine weeks ending September 14th there is evidence of a considerable amount of important work. To indicate some of the more important matters which have been dealt with, twelve notices were served on the owners or occupiers in regard to black smoke issuing from chimneys, and in every instance an improvement has been effected or the nuisance has been abated. Owing to certain extensive repairs of certain insanitary properties being required, the owners, finding that the cost of repairs was prohibitory, demolished the premises. Many very necessary improvements have been effected at the sanitary conveniences of the many railway stations within the City limits; and a considerable amount of unsound food, including over 422 tons of meat which was found unfit for human food, has been seized and condemned by the inspectors. This is the largest quantity of meat condemned in the City markets during the corresponding period of any year. The systematic inspection of workshops in the City, so far as this branch of work has been carried up to the present, shows that women only were employed in 39 per cent. of the workshops, while no less than 72 per cent. of the total number of workers employed were women. Having regard to these facts, Dr. Collingridge advises the appointment of female inspectors to supplement the work of the existing staff. It is obvious that there are many questions in connection with the sanitary surrounding of female workers that can best be investigated by one of their own sex, and the test of experience elsewhere justifies Dr. Collingridge in advocating such appointments. It would also be advantageous to employ female inspectors for the purpose of reporting from time to time upon the condition of the sanitary accommodation provided for women in the large number of railway stations and refreshment rooms throughout the City.

## INTRAVENOUS MEDICATION.

PROFESSOR G. BACCELLI, the eminent head of the Medical Clinic at Rome, who is also Minister of Agriculture in the present Italian Government, has long been an advocate of the intravenous injection of drugs in certain cases—notably in the treatment of malignant ague by quinine. By this method some remarkable cures have been effected. Speaking to an agricultural audience at Novara last week Professor Baccelli stated that, acting on his suggestion, some Italian veterinarians had treated aphtha epizootica (foot and mouth disease) by intravenous injections of corrosive sublimate. The results, he said, had far surpassed those of any other method of treatment, and therefore this plan was rapidly spreading. It might be worth the while of our Board of Agriculture to obtain, through our embassy at Rome, such details as would enable English veterinarians to adopt this treatment experimentally. Professor Baccelli did not state the dosage and technique.

## THE NEW DIRECTOR-GENERAL, A.M.S.

THE King has been pleased to approve the appointment of Surgeon-General W. Taylor, M.D., C.B., to be Director-General Army Medical Service. Surgeon-General Taylor entered the service as Assistant-Surgeon in 1864, became Surgeon March 1st, 1873; Surgeon-Major September 30th, 1876; Brigade-Surgeon February 5th, 1890; Surgeon-Colonel March 10th, 1895, and Surgeon-Major-General March 25th, 1896. Soon after joining the department in 1865 he went to Canada. He returned to England in 1869, and in 1870 was gazetted to the Royal Artillery. In 1873 he went out to India, and in 1877 served with the Jowaki Afreedee Expedition, for which he received the medal. After a short service in England he returned to India in 1882 (Bombay Presidency), and in 1885 he was appointed surgeon to Sir Frederick Roberts, who was then Commander-in-Chief in India. In 1885-86 he served on the staff of the Commander-in-Chief in India during the Burmese Expedition, and was mentioned in despatches. He served also with the Hazara Expedition in 1888, and in the Burmese campaign of 1888-89. In 1893 he was appointed to headquarters in London, but in the following year was attached to the headquarters of the Japanese Army during the Japan and China War. In 1895 he was Principal Medical Officer of the Ashanti Expedition under Sir Francis Scott, and for his services on this occasion he was made Surgeon-Major-General. In 1896 he was appointed Professional Assistant to the Director-General, but two years later was appointed Principal Medical Officer to the forces in the Soudan Campaign, under Sir Herbert Kitchener in that year; he was present at the battle of Khartoum, was mentioned in despatches, and received the C.B. with other honours. In 1899 he was appointed Principal Medical Officer to the British Army in India, which appointment he now vacates. Last August he was appointed Honorary Physician to the King. Lieutenant-Colonel A. Keogh, M.D., C.B., will become Deputy-Director-General, with the temporary rank of Surgeon-General on the retirement on December 31st next of Surgeon-General H. Skey Muir, C.B. Lieutenant-Colonel Keogh entered the service in 1880; he was promoted Brigade-Surgeon-Lieutenant-Colonel in 1890. He had charge of a general hospital during the war in South Africa in 1899-1900, was mentioned in despatches, promoted to be Lieutenant-Colonel, and nominated a Commander of the Order of the Bath. He was a member of the committee which recently reported on the Reorganisation of the Army Medical Service.

## THE LEECH MEMORIAL FUND.

THE fund which is being raised to found a memorial to the late Dr. D. J. Leech—for twenty years Professor of Materia Medica and Therapeutics at the Owens College, Manchester—has now reached the sum of £1,230. We are asked to state that, as it is proposed to close the fund very shortly, the Committee will be glad if intending subscribers will kindly forward their contributions to the Secretary, Dr. Brockbank, 3, St. Peter's Square, Manchester. A meeting of subscribers, of which due notice will be given, will be held next month to receive the report of the Committee.

THE prizes to the successful students of St. George's Hospital Medical School will be distributed by the Lord Chief Justice of England on Monday next at 5 P.M.

THE Bradshaw Lecture before the Royal College of Physicians of London will be given on Tuesday, November 5th, at 5 P.M., by Dr. Judson S. Bury, Physician to the Manchester Royal Infirmary, who has taken for his subject, Prognosis in Relation to Disease of the Nervous System.

THE new specimens added to the Museum of Anatomy and Pathology at University College, London, will be on view in the Museum from October 26th to November 2nd. Amongst the more interesting are an instance of a diverticulum of the œsophagus, 5 feet of bowel removed by enterectomy for gangrene from a patient aged 76, recovered; a specimen of syphilitic disease of the knee-joint; a uterus unicornis removed from an adult in a case of absence of the vagina; and a very interesting specimen of imperforate left ureter forming a cystic swelling in the floor of the urethra which burst externally. The installation of the electric light through the whole of the museum has been completed during the long vacation.

## MR. BERNARD SHAW ON SMALL-POX PREVENTION.

We have received the following letter from Mr. Bernard Shaw:

Sir,—You have done me the honour to make me the subject of a long article in the British Medical Journal of October 5th. You base a somewhat severe criticism of me on two documents: one of them a letter written by me to the *Times*, every word of which I stand by, and the other a report, some half dozen lines long, of a ten minutes speech of mine to the Borough Council of St. Pancras. Your quarrel with this report is one which you must settle with the editor of the *Times*. I am not responsible for his reporter's inability to follow a speaker *verbatim*, or for his sub-editor's excisions, whichever may be at fault.

Your comment on the *Times* letter refers to my remark that vaccination did not avert the epidemic of 1871. You dispose of it by saying that the sufferers in that epidemic were the unvaccinated. Have you really reflected on the scope of this retort? I assumed that the epidemic struck a vaccinated population: you declare that it struck an unvaccinated one. Now if I allow you to cry off the vaccination of the population in 1871, you must also cry off all the claims made for vaccination on the strength of the years of comparative immunity before 1871. You cannot fairly point to the non-epidemic years and cry, "What a wonderful result of vaccination!" and then point to a subsequent epidemic year and cry, "What a frightful result of non-vaccination!" Nor can you escape this dilemma by altering vaccination to revaccination, or "thorough vaccination." I will give up 1871 if you will give up all the evidence on which the Act of 1867 was passed. I will entertain the merits of revaccination if you will admit that vaccination failed to redeem its pledges. And I will cheerfully consider the virtues of five good scars if you are prepared for their sake to admit the irrelevance of all the private-practice vaccination of the nineteenth century in the very class that suffered least from small-pox. Are you prepared for these sacrifices?

I am purposely putting these points against your argument as roughly as I can, because the medical profession is at present plunging into one of its periodic losing battles with the common sense of the public, and the scientific opinion of experts in statistics and evidence. By this I mean not that the vaccinists are wholly wrong and the antivaccinists wholly right, but that the vaccinists are relying on data so insufficient, and methods of calculation so crude, that the antivaccinists, by precisely similar data and methods, have been able to score a decisive parliamentary victory over them—a victory which is clearly the beginning of the end as far as compulsion is concerned. These crude methods have led the vaccinists into reckless exaggerations of the protective effect of vaccination and revaccination, and into angry denials of its risks and disadvantages, the inevitable consequence being a strong antivaccinist reaction. They have, in fact, had to abandon one main position after another to their opponents. And yet, instead of abandoning them with a good grace and amending their methods, they redouble their extravagances (see, for example, the end of the *Saturday Review* article, dated October 5th); give back the vituperation of their opponents with interest (my own intervention has earned me such epithets as "ruffian and scoundrel," "rogue and blackguard"); and keep up the blundering battle of amateur statistics until the public becomes as callous to the "proofs" and "refutations" of the excited champions as they are to the equally worthless figures bandied by meat eaters and vegetarians as to the spread of cancer, by trade unionists and employers' federations, Conservative and Liberal electioneerers, faith healers and Mattei disciples, Remington and other typewriter agents, and, in short, all the people who have made the delightful discovery that "figures can be made to prove anything." Turn, for example, from the naïvetés of Dr. Cory's first lecture on Vaccination to Professor Karl Pearson's Mathematical Contributions to the Theory of Evolution (see especially the paper On the Correlation of Characters not Quantitatively Measurable, which refers favourably to the correlation between vaccination scars and recoveries, in *Philosophical Transactions*, Series A, vol. cxcv, pp. 43, 44)! The change of atmosphere is startling. The doctor is so convinced by his home-made statistics, from which he frankly excludes evidence unfavourable to his own belief as "improbable" (he might have excluded it on admissible statistical grounds as exceptional), that he applies epithets to those who disagree with him ("shameless," for example) which would come better from a magistrate lecturing a pickpocket than from a professional man differing on an open question from Dr. Alfred Russell Wallace. The statistician tells you calmly that certain indispensable factors are "not available," and carefully states that "there is quite a large correlation between recovery and the presence of the cicatrix." He adds that "while the correlation is very substantial, and indicates the protective character of vaccination, even after small-pox is incurred, it is, perhaps, smaller than some over-ardent supporters of vaccination would have led us to believe." But if these over-ardent ones are right, Professor Pearson's correlation loses all its relevance, because, according to them, the difference between the people without cicatrices and those with them is not only the difference between the unvaccinated and vaccinated, but also the difference between the children of the ignorant, the reckless, the hysterical, the wrong-headed, the cranks, the ruffians, scoundrels, rogues, blackguards, etc., and the children of the wise, rational, prudent, careful people with healthy minds in healthy bodies. And there would be a correlation between recovery from any disease and the presence of any sign indicating such virtues. That is what comes of fighting about vaccination instead of investigating it.

As to the prevalent belief that it has already been investigated to the bottom, I can only say that since my second letter appeared in the *Times*, asking for an examination of the available data by statistical experts (not medical men), one such expert of unquestionable authority, whose sole published reference to the subject known to me is favourable to vaccination, has informed me that the answer of statistical science is that "Nobody *really* knows." An obvious difficulty is that though the proportion of vaccinated persons among the small-pox cases in the hospitals of the Asylums Board is known, the proportion of vaccinated persons in the whole population of London is not known; and the one figure is, for the main purpose of the controversy, useless without the other. But as we pay for all public vaccinations, and the private-practice vaccinations can at least be estimated, the missing figure is not wholly inaccessible. Imagine, then, the effect of the statement made by Mr. Graham Wallas the other day to the London School Board, that the result of a calculation made for him by the medical officer to the Board was, that during the past eleven years, including the outbreaks of the Nineties, the proportion of small-pox cases occurring among vaccinated patients at the Metropolitan Asylums Board Hospitals was the same as the proportion among the entire population! If this statistic, the latest in the field, can be verified, the statistical case for the preventive effect of vaccination is demolished, unless the whole population is vaccinated, which it certainly is not, as the recent examination of arms in schools show that antivaccinist guardians have succeeded in defeating the compulsory law to a surprising extent. The modifying effect is another matter; but if the citizens of London have been led to believe too much, it will not be easy to induce them to measure the necessary reduction in their confidence with scientific accuracy. Whether a bankrupt be a merchant or a prophylactic the loss of public confidence is seldom exactly proportioned to the number of shillings in the pound left for the dividend.

My speech to the Borough Council of St. Pancras was an unsuccessful plea to leave revaccination to the judgment of their four new inspectors instead of making it a condition of their employment. I of course did not say, as the reporter led you to believe (though you really ought to have known me better), that the fact that the 15 deaths from small-pox tabulated by the Registrar-General included 8 vaccinated persons, proved "that vaccination with respect to small-pox made no difference whatever." I pointed out that it shattered, totally and for ever, the common belief that when vaccinated persons get small-pox they necessarily get it mildly. I pointed out, further, that the reason given by our medical officer of health for the outbreak stealing a march on his department

was that the first cases were so mild that they were diagnosed as chicken-pox, and that this fact (no novel one, as you know, in the history of the disease) proves either that the outbreak began with vaccinated persons or that unvaccinated persons sometimes suffer so mildly from it that it is mistaken for the comparatively trivial disease of chicken-pox. Finally I quoted the figures I have mentioned above as given by Mr. Graham Wallas to the London School Board; and it was these which I described as suggesting that vaccination, as far as liability to attack by small-pox is concerned, makes no difference. But I expressly told the Council that I built nothing on all these figures except the right of every citizen to judge for himself on the conflicting evidence instead of being forced to run an admitted risk, however small, on the assumption that the evidence is all on one side.

Further, I insisted strongly, and shall continue to insist, on the fact that so far, the use of vaccination to prevent small-pox is, scientifically considered, as purely a piece of witch-craft as the use of the divining rod to discover water. By this I do not mean that it is ineffective; but that, as it is only a countryside tradition adopted by the medical profession, and as all efforts to discover the specific agent in vaccine lymph have failed, it can only be tested by statistics. The result will have no more effect on any known pathological theory than the result of tossing up a coin.

I am quite aware that the same thing is true of many other specifics; for unfortunately medical practice has as yet been so lightly touched by the scientific spirit that the average doctor is still, not only in his patient's view but his own, a dealer in cures and preventive charms. But that is an additional reason for bringing to bear on it the criticism of an independent branch of science. A great deal of what is called scientific opinion to-day is nothing but medical opinion; and a great deal of medical opinion is simply energetic trade-unionism, and very superstitious trade-unionism at that.

Personally, I profess neither vaccinism or antivaccinism. I am merely a much-perplexed public man trying to find out how much, if anything, can be saved from the admitted wreck of the largest hopes held out to the human race by Jenner and his disciples. When people ask me whether they should get vaccinated or not, I reply that if they have to choose between getting small-pox from the calf and from their neighbours, they had better get it from the calf; but that a more excellent way is not to get it at all. And I gravely doubt whether at the present stage of the inquiry anybody has a right to go further than that.—I am, etc.,

Fitzroy Square, W., Oct. 14th. G. Bernard Shaw.

*** Our main contention in the article to which the above letter refers was that Mr. Shaw in decrying vaccination and advocating the improvement of house accommodation in St. Pancras during the ensuing winter as the one and only way to prevent a small-pox epidemic next summer was using illegitimate and unworthy means to achieve a legitimate and worthy object, there being no proof that by new dwelling houses the small-pox virus would be robbed of its infective powers or rendered unable to exercise it. In his longer reply to our long article Mr. Shaw entirely avoids this issue, saying not one word about housing, and devoting himself wholly to vaccination. As that subject is of perennial interest and importance, we have no objection to follow him where he seems to think himself controversially strongest. Even here he makes a selection from our article of material for discussion. In his speech to the St. Pancras Borough Council he was reported as saying "they would find that with the appearance of small-pox the death-rate went down," as to which we wrote, "He either means here that small-pox lowers the general death-rate or he does not. If the latter, why does he raise the point? If the former, why does he want to interfere with small-pox? Does he not wish the death-rate to go down? Why should he turn poor people out of their homes in order to destroy a death-diminishing agency?" To these queries he vouchsafes no reply.

Mr. Shaw's first statement is that one of the two documents on which our criticism is based is a *Times* report, some half-a dozen lines long, of a ten minutes speech. He is mistaken. The report is from the *St. Pancras Guardian*, and is ten times as long, and must be rather a full account of so short a speech. Had it seemed worth while we might indeed have quoted more at length from it, where, for example, he said as to vaccination that "he considered it a disgrace to the medical profession that they ever took up what always was only a 'quack's cure,'" though, curiously enough, the last part of his letter seems to indicate that he himself looks on calf lymph as cow small-pox, which was Jenner's theory and working hypothesis from the very beginning. It now appears that something was omitted from the newspaper report to the effect that Mr. Shaw had told the St. Pancras Borough Council that Mr. Graham Wallas had told the London School Board that the medical officer of that Board had made for him a calculation showing that the proportion of vaccinated patients among the small-pox cases in the metropolitan hospitals was the same as in the entire population. But even on this basis all the length Mr. Shaw went was to say that if the figures could be verified they would suggest that, so far as liability to attack is concerned, vaccination makes no difference. He has probably observed that since then Sir Charles Elliott has drawn an opposite conclusion from apparently the same data. But it is at least satisfactory to know that statistics of comparative attack-rates of vaccinated and unvaccinated are regarded by Mr. Shaw as valid evidence where they appear to tell against vaccination, even if the figures have been prepared and submitted "by medical men and others who know nothing whatever about the science of statistics." For even Mr. Shaw can hardly refuse to accept the teaching of such figures where they tell in favour of vaccination. That being so, it is proper to point out to him that the question of relative attack-rates is not raised now for the first time, and that he does not need to depend on what he believes Mr. Graham Wallas told the London School Board that the medical officer had prepared for him. In the Final Report of the Royal Commission, and elsewhere, he will find ample material bearing on this question, and he will get an abundance of figures which do a good deal more than "suggest," that whether in whole communities, or in houses invaded by small-pox, or in the small-pox hospitals of the Asylums Board the percentage of attacks has been very distinctly greater among the unvaccinated than among the vaccinated.

Mr. Shaw is rhetorically willing to barter with us various opinions and contentions regarding vaccination. He will give up 1871 if we will give up the evidence on which the 1867 Act was based, and so forth. Our views are not so loosely held. But if, when he is arguing about vaccination, Mr. Shaw would be good enough to discuss the doctrine as it is held by the medical profession in the present day, he would make controversy more profitable to his readers, though it would no doubt be more burdensome to himself. The conclusions of the Royal Commission are that vaccination diminishes liability to attack, that it renders attack milder; that protection is greatest from recent vaccination, that the power of vaccination to modify small-pox greatly outlasts its power to prevent attack; that revaccination restores protection; that recent revaccination is better than ancient, and that a good area or sufficient number of marks is an important element in protection. In these conclusions Mr. Shaw can easily find an answer to whole bundles of his queries and assertions, while his outrageous comparisons of the statistical evidence for vaccination to that for faith healing and Mattei cures only disparages himself and his controversial methods in a way which cannot but injuriously affect the value of his advocacy of the causes which he has most at heart.

Mr. Shaw introduces into the discussion, as it seems to us rather gratuitously, the name of the late Dr. Cory. We hold no brief for Dr. Cory, whose work can well afford to stand on its own merits; but he was a man who spent a lifetime in the study of vaccination; who sacrificed health and perhaps shortened life in sounding the remotest possibilities of conveyance of disease by humanised lymph; who kept careful day-to-day records of all he saw and learned in his unique experience of vaccinations; and it strikes us as not being in very good taste to describe his published records as "home-made statistics," especially as anyone who differs from his conclusions is provided by Dr. Cory with full material on which to base his own. And it is certainly surprising to be told that in his book Dr. Cory "applies epithets to those who dis-

agree with him ('shameless,' for example) which would come better from a magistrate lecturing a pickpocket." It is true that in one passage Dr. Cory speaks of "shameless agitators." Will Mr. Shaw kindly give a few more instances stating the exact places in the book where the epithets may be found, and the frequency with which they are used? Meanwhile, to save time and give him something to go upon, we absolutely deny the truth of this statement, excepting in the one phrase in which the word "shameless" appears in the above-quoted connection, and we call on him to withdraw his slur on the memory of a dead man.

The way in which Mr. Shaw deals with Professor Karl Pearson's mathematical and statistical support of vaccination is worthy of note. In a letter to the *Times* of October 8th, in reply to Mrs. Garrett Anderson, Mr. Shaw modestly declared that he represents almost every educated person under 40 in London who has considered the question, and that the vaccinist case has neither been proved nor disproved. He therefore wants a new inquiry into the subject. He attaches no weight to the Royal Commission, because its inquiry was therapeutic, and he asks the London University for a "purely statistical investigation." Not only so, but he nominates three or four statisticians for the work, as to whom he says, "I have not the faintest suspicion of what their opinions may be on the subject of vaccination." That must be so as concerns one of the nominees, Professor Karl Pearson, for that statistician has quite recently investigated a very important part of the subject with the result which was to be expected—the same result as had already been arrived at by such despised therapeutists as Lord Herschell and Judge Meadows White, K.C., and Mr. Dugdale, K.C., Sir Edwin Galsworthy, and several M.P.s, not to speak of Sir James Paget, Sir Michael Foster, Sir William Savory, and Mr. Jonathan Hutchinson, and other medical men who (of course) knew nothing about the science of statistics. And now that he has learned that one of his chosen authorities has already dealt with the subject, does Mr. Shaw accept his result? By no means. He straightway rounds on Professor Pearson, and adopts the rather petty expedient of putting his own criticism of that statistician's findings into the mouths of supposititious supporters of vaccination. Not only so, but, in face of the fact that Profesor Pearson gives his decision distinctly in favour of vaccination—that "there is quite a large correlation between recovery and the presence of the cicatrix"—Mr. Shaw makes the really astounding assertion that Professor Pearson "tells you calmly that certain indispensable factors are 'not available.'" Now, two meanings may be taken out of this. Let it be carefully observed, in the first place, that the only words which Mr. Shaw puts into quotation marks are "not available." It is Mr. Shaw and not Professor Pearson who says that the factors in question are indispensable. All that Professor Pearson says is that they are absent. So that in effect, finding his selected authority is against him, Mr. Shaw immediately accuses him of coming to a result in the absence of data which Mr. Shaw regards as indispensable! This seems on a par with boys at a football match appointing a referee and then using him as a substitute for the ball. And we see no reason to suppose that if his statistical commission were appointed to-morrow he would treat them in any better fashion. If, on the other hand, Mr. Shaw means that Professor Pearson regards the factors as indispensable, then he puts his chosen statistician into the really unthinkable position of declaring a finding, and declaring at the same time that a finding is impossible! The simple fact is that Professor Pearson gave the vaccination result as an example of what could be achieved independently of the factors in question, and that to show such results to be possible by his method of inquiry was the very purpose for which his elaborate investigations and calculations were made, as indeed is indicated in the very title, "On the Correlation of Characters not Quantitatively Measurable."

And lest there should be the slightest doubt here, we have written to Professor Pearson, who replies as follows:

"7, Well Road, Hampstead, N.W.,
Oct. 21st, 1901.

"Dear Sir,—Many thanks for your courteous inquiry as to my meaning in illustration 6 of my paper in *Phil. Trans.*, vol. cxcv. The object of that paper is to show that in exhibiting the relationship between two quantities, we can obtain absolutely reliable statistical results from very broad classifications, just as reliable as if we made a most elaborate classification. For example, in finding the correlation between length and breadth of head, we can get practically as good returns by classifying heads into larger and shorter than 190 mm., and broader and less broad than say 140 mm., as if we tabulated the corresponding length and breadth of every head. My friend, Dr. Macdonell, has just done this for 3,000 criminals, and the two methods lead to practically the same result. Certain factors can therefore be dispensed with in perfect safety. Hence I do not know what your correspondent means by saying 'the statistician calmly tells us that certain indispensable factors are not available.' Our methods do not require those factors whether they are available or not. If they are available, so much the better; we can verify the results reached by the new method.

But are they available? Can your correspondent indicate any published work in which a complete scale of effective vaccination is given from the complete absence of cicatrix upwards, and in each class or degree the number of individuals falling into that class stated? I do not believe any such knowledge exists. But such knowledge, whether available or not, can be dispensed with and perfectly accurate results obtained by the general classification—presence and absence of cicatrix. My point is shortly that we can in many cases dispense with a quantitative scale. The opening words of my eighth memoir 'On the Inheritance of Characters not Capable of exact Quantitative Measurement' explain the position: 'A certain number of characters in living forms are capable of easy observation, but they do not admit of quantitative measurement, or only admit of this with very great labour.'—Yours very truly,

"Karl Pearson."

Mr. Shaw declares that he is not an antivaccinist, but we entirely disagree. Notwithstanding that the Leaguers are enraged at the present fear of small-pox, and declare the whole thing to be grossly exaggerated—while Mr. Shaw, on the contrary, commits himself to the prophecy that unless St. Pancras and the rest of London in its measure are rehoused during this winter, there will be an epidemic of small-pox next year—notwithstanding this striking divergence of view, Mr. Shaw's methods are typical of antivaccination, and he is well worthy of any high position that the League may offer him.

## THE PREVENTION OF TUBERCULOSIS.

### Liverpool.

*Delamere Sanatorium for Consumption.*

The new sanatorium in Delamere Forest, which has been established in connection with the Liverpool Hospital for Consumption, was formally opened by the Countess of Derby on October 18th, in the presence of a large gathering representative of the medical profession and the public of Liverpool. The history of the consumption hospital, of which the sanatorium is the latest development, is of some interest. An out-patient dispensary was first established in Crown Street, but in 1883 the institution was removed to its present quarters in Mount Pleasant. These consist of two houses, one containing the men's wards and the other the women's, while the adjacent ground is utilised for an out-patient department. For some years the idea had been gaining strength that such a hospital, situated in a fairly densely populated district of a large city, was not the most desirable for the treatment of phthisical patients, but no definite action towards the erection of a country hospital was taken until about three years ago, when Dr. Nathan Raw in a powerful address brought the whole subject of the treatment of phthisis in sanatoria before the Medical Institution. As the immediate result of his paper, a Committee was appointed by the Medical Institution to consider the matter and to make recommendations. This Committee was strongly in favour of the establishment of sanatoria for patients unable to afford the expense of residence in such places as already existed. The great obstacle in the way of such institutions being established was, of course, the difficulty of finding the funds, but while the Committee was anxiously considering this point

it was announced to them that Lady Willox and Mr. W. P. Hartley were each willing to give a sum of £7,500 to build a sanatorium, on the understanding that its maintenance should be the task of others. Some difficulty was experienced in choosing a site, but finally the Crown Land of Delamere Forest was fixed on as the most desirable for an institution of the kind. Thirty acres were secured on a lease for 99 years at a place called Rough Hill, three and a-half miles from Frodsham, the nearest railway station. The country is picturesque, and the building stands at the top of a wide glade, sloping towards the west, and commands an extensive view of the Clwydian Hills; while it is sheltered by higher ground from the north and east. The site is 500 feet above the sea level.

The sanatorium consists of a large central administrative block for resident officials, flanked on either side by several single bedrooms for patients. The first-storey rooms are provided with an open balcony which runs the whole length of the building. The architect has not adopted the verandah system. The rooms are large and well arranged, and eminently suitable for the treatment of phthisis, being carefully heated at night and during the day when necessary by hot-water pipes and radiators. The windows open directly on to the balcony, so that the patient can practically undergo the open-air treatment when lying in bed. In addition, there are several bungalows distributed in the grounds, each accommodating four patients in single rooms. These might certainly be improved by being heated with hot water at night. The sanatorium accommodates 32 patients, and is capable of extension, which will no doubt soon be required, and is altogether eminently adapted both by its position and construction for the successful treatment of consumption.

### Paisley.

One of the first branches of the Association for the Prevention of Tuberculosis to be formed in Scotland was that of Paisley and District. Its first annual meeting, held on October 16th, was largely attended. The following resolutions, which were passed, indicate the work that is being done:

1. That the Executive Committee acknowledges the liberal response made to its appeal for members, and urges the claims of the Association still further upon the people of Paisley and district.

(The membership of the branch was 440, and there was a balance of nearly £300 in the hands of the Treasurer.)

2. That a Committee be appointed to co-operate if possible with the local authority in ascertaining the amount and distribution of consumption, etc., in Paisley and neighbourhood, and to report.

3. That the Association co-operate with the Nursing Association and other suitable agencies in the distribution of information with regard to the prevention of consumption, etc., in the home.

4. That as soon as the funds of the Association permit, in view of the urgency of the need of such provision for the care of the poorer consumptives, the Association proceed to the erection of a sanatorium.

### Bath.

The Bath Board of Guardians at a recent meeting discussed the report of a Subcommittee appointed some months ago to consider the treatment of consumptive paupers. The main suggestion was that two wards should be set aside for the treatment of consumptive patients, but several of the guardians seemed to consider that there was no urgency, and an amendment to the effect that the Board should wait until they saw what Bristol was going to do was eventually carried by 18 votes to 12.

### Hampshire.

A county conference was held at Portsmouth on October 15th, under the presidency of the Mayor, at which delegates from various parts of the county were present, to consider the provision of a county sanatorium for consumptives. It was resolved that it was desirable for the health authorities in the county to join for the purpose of providing such an institution. A Committee, with Dr. Fraser, Medical Officer of Health for Portsmouth, as Honorary Secretary, was appointed to report on matters of detail.

### Victoria (Australia).

The deaths from tuberculosis in Victoria amount to more than one-tenth of all the deaths, so that preventive measures are as urgently needed as in the mother country. The health authorities in all parts of Australia seem to be fully alive to this requirement. Dr. Richard Jones, the Medical Officer of Health of Eaglehawk, Victoria, has drawn up a useful leaflet on "Tuberculosis: what it is, and its Prevention," which has by order of the Board of Health been posted to each ratepayer. The paper has also been published in the newspapers of Bendigo (population 40,000), which is visited by a large number of consumptives, who take advantage of the mildness of the winter climate there. Thus the effect of this action of the Eaglehawk Board of Heath will be felt beyond the 9,000 persons which represents the population of that place.

## OPENING OF THE WINTER SESSION IN THE MEDICAL SCHOOLS.

### GLASGOW.

The winter session has now begun in the various medical schools in Glasgow, the classes having resumed on October 17th.

At the University the practice of having opening addresses has practically ceased, unless it be on the occasion of the introduction of a new professor, and as this year there is no change in the *personnel* of the Medical Faculty, the medical classes were resumed without any ceremonial.

At St. Mungo's College the session was inaugurated by an address by Professor Malcolm Laurie, Professor of Zoology, in which he discussed the position of the studies of the first-year medical student, and criticised adversely the recent action of the English Conjoint Board in this matter.

At Anderson's College Dr. George A. Gibson, the Lecturer on Practice of Physic at the Edinburgh School of Medicine, delivered the inaugural address. His subject was the freedom of teaching. Sketching shortly the history of the medical schools of Glasgow and Edinburgh, he showed how they had led to the foundation and development of medical education as it existed in those cities. He incidentally referred to the distinguished positions that had been taken by many of the former students of Anderson's College, and expressed the hope that the present generation of students would prove themselves worthy of the labours of those who had gone before.

### BIRMINGHAM.

#### Address by Mr. Bryant.

On October 18th Mr. Thomas Bryant, Surgeon in Ordinary to the King, and Consulting Surgeon to Guy's Hospital, distributed the prizes at the Queen's Hospital, Birmingham. This is the first occasion on which such distribution has taken place since the University of Birmingham has commenced its work.

*Medical Education and Examination.*

Mr. Bryant congratulated the University upon having adopted the high ideals of the venerable universities of the country, while the principles upon which it was founded were broad. The first principle upon which the University was founded, that "all existing knowledge is to be taught," was absolutely correct, though it would make great demands upon the resources; the second principle, "that it is a place where the knowledge which had been acquired is to be tested," was equally sound, though much discretion was required in carrying it out. Too many examinations encouraged cramming and discouraged individual effort, while periodical class testing by teachers might be wise and necessary. All examinations, and particularly oral examinations for degrees and honours, should be conducted by outside professors of experience, in the presence and with the assistance of the University teachers. While by any method of examination good or well-prepared men and badly-prepared men could be recognised with equal facility, in the intermediate and largest class, indifferently-prepared students, the difficulty of decision was great. The teaching examiner might be the more popular, but was it a true subject of congratulation that an imperfectly prepared student should just scrape through his examination? In answering such a question from the University standpoint in the negative he had the support of the Chancellor of the University. From a student's point of view the same conclusion had to be drawn—at any rate, from the point of view of the medical student—for was it not true that many an indifferent student had developed into a good one by some throw-back for six months upon extra study? That which was at the time looked upon as a calamity not only gave an impulse to efforts that had been half-hearted or torpid, but had helped to develop a character of a higher order and had

rendered a successful career in life more certain. When, as an examiner, a student whom he knew to be a good one was rejected in a pass examination, his sympathies were more with the parents than with the pupil himself, who, in spite of his throw-back with its disappointments, had been given one more chance of taking advantage of the opportunities of gaining knowledge and experience of medical matters in his medical school which he was not likely to have again. Experience had certainly proved that from a student point of view a temporary rejection was not always a matter to be lamented, since by it many a feeble man had been made strong, and powers had been developed in him which had proved to be of lasting value. The third principle of the University—that it was to be "a place where knowledge is to be increased, and where the limits of learning are to be extended"—was a noble one, especially when the object was to be sought by uniting the students with their teachers in the work of fresh investigation. Lastly, in the foundation of the University, the principle had been recognised that it was to be a place where the application of knowledge must be indicated and directed, and that theory and practice were to be combined with due regard to the needs of the time and the district, and that to carry out these wisely-conceived and well-considered objects the University might look with confidence to the help of the citizens. Mr. Bryant then referred to the importance of cultivating power of intelligent observation upon which the success of the individual in the University, and later in the practice of his profession, would unquestionably depend. As scholastic conditions existed at present the education of the senses had in school life, unfortunately, been left to chance, and no special means had been introduced into school routine for their education. In university life the introduction of some branch of natural science as a preliminary subject of study had been an educational advance of great importance, not only as an introduction to the knowledge of Nature's works, but as a means of demonstrating the value of modes of investigation which were applicable to every branch of human research. Under all circumstances, however, the education of the special senses should be a leading object of all teachers, and the best way of carrying out this purpose in medical education was by testing the student's capabilities. The bulk of the work must be left to the students themselves, but they could be encouraged, and so materially helped. A medical student might watch with every care an able teacher in his endeavour to unravel the intricacies of a complicated case of disease, but he would not gain much by his observation, for he could not see, hear, or feel with his teacher's senses, and when he had advanced far enough to consider the meaning of a diagnosis he would have discovered that a reliable one could only be the outcome of a correct observation of the facts of the case as brought out by his own observation and the conclusion of sound reasoning upon the facts themselves. To the question how a student was to learn to make the best use of his senses for medical purposes the answer was—by steady and prolonged practice on a proper method. Let the student, as a rule of life and as a matter of routine, habitually begin his investigation of every case by looking well at his patient as a whole and subsequently in detail, and as he progressed in the powers of observation he would be astonished and pleased to have discovered how much might be learnt by a look. In local injuries and diseases let him follow an equally valuable routine practice, and as a matter of habit invariably compare the injured with the corresponding uninjured part, and having noted the facts observed, with the points of difference in the two sides of the body, let him reflect and reason upon the value of the facts—indeed, upon the value of each fact. By such a routine practice a provisional diagnosis might be reached, to be supported or refuted by subsequent inquiries into the history of the case, and any other facts elicited by manipulation and the sense of touch. In all cases let sight lead the way and touch follow, reflection governing the whole. In local injuries or diseases a student was too apt to commence his examination of a case by manual methods, much to the detriment of his patient and his own discomfiture; this natural but inefficient routine ought not to be allowed, for, as a rule, a good inspection of the injured or diseased part, and its comparison with the sound side, would supply suggestions as to the nature of the case, which would only require the gentlest manipulation to confirm, the diagnosis of the case being based upon the facts seen and felt, the history of the case, and the exercise of thought upon the facts. Examiners would greatly help the establishment of this habit of investigation by asking pupils primarily to look at a case and describe what they saw before they were allowed to use their hands. House-surgeons, fellow dressers, and clinical clerks should examine each other in any given case as to what they saw; should argue out the probabilities of the nature of the case upon the points observed; and having done so proceed to their investigation of the affected part by manipulation or other necessary methods. The junior teachers of the schools or university should encourage such efforts. As an examiner he could likewise give strong testimony to the importance of this method of testing knowledge; and he recalled the interest which his old friend and fellow examiner at the Royal College of Surgeons of England, the late Sir George Humphry, took in the proceeding, and how in his enthusiasm he subsequently took it to Cambridge and embodied the value of the method in his well-recognised precept, "Eyes first, hands next, and tongue last."

## ENTRIES AT THE MEDICAL SCHOOLS AND COLLEGES IN ENGLAND AND WALES.

By the courtesy of the Deans, Wardens, or other officers of the various medical schools mentioned below, we are enabled to publish the following particulars in regard to the number of students who have entered in this session the medical schools in England and Wales, both for the whole curriculum and for various special courses.

The number of students who have joined for the full curriculum is shown in the first column (A).

| | A. | B. | C. | D. |
|---|---|---|---|---|
| St. Bartholomew's Hospital | 84 | 44 | — | 12 |
| Charing Cross Hospital | 14 | 25 | 27 | 5 |
| St. George's Hospital | 12 | 6 | — | — |
| Guy's Hospital | 68 | 40 | 43 | 21 |
| King's College | 27 | 146* | — | 12 |
| London Hospital | 64 | 70 | — | 12 |
| St. Mary's Hospital | 35 | 39 | 1 | 9 |
| Middlesex Hospital | 19 | 39 | 20 | — |
| St. Thomas's Hospital | 48 | 12 | — | 9 |
| University College | 31 | 62 | 1 | 30 |
| Westminster Hospital | 17 | 25 | 1 | 7 |
| London School of Medicine for Women | 30 | — | — | 8 |
| Cambridge University | 115 | — | — | — |
| University of Durham College of Medicine | 26 | 31 | 0 | 5† |
| Bristol University College | 18 | 1 | 1 | 13 |
| Owens College, Manchester | 54 | 67 | 32 | 35 |
| University College, Liverpool | 50 | 6† | 14 | 11 |
| Yorkshire College, Leeds | 27 | 15 | 1 | 14 |
| University College, Sheffield | 12 | 1 | 3 | — |
| University College of South Wales, Cardiff | 14 | 4 | 1 | 12 |
| London School of Dental Surgery | 53 | — | 53 | — |
| National Dental Hospital | — | — | 24 | — |
| London School of Tropical Medicine | 19 | 5 | — | — |
| Liverpool School for Study of Tropical Diseases | 3 | 2 | — | — |

A. Number of students who have joined for the full curriculum.
B. Number of students who have joined for special courses.
C. Number of dental students.
D. Number of students who have joined classes for preliminary instruction.
* Including students in Anatomy and Physiology, Bacteriology, and Public Health departments.
† Incomplete.

From the above table it will be seen that the total number of students who have entered for the full curriculum at the metropolitan schools (excluding the London School of Medicine for Women) is 418, as compared with 465 in 1900 and 536 in 1899. The entries for the full curriculum in England and Wales (excluding for purposes of comparison Oxford, Birmingham, the dental schools, and the schools for tropical diseases) is 757, as compared with 792 in 1900 and 926 in 1899.

The Cavendish Lodge (No. 2,620).—The Cavendish Lodge met on October 16th, 1901, at the Royal Palace Hotel, Kensington. The installation ceremony took place of the Senior Warden, Bro. Percy Dunn, as W.M. for the ensuing year. The ceremony was performed by W.Bro. Bidwell, to whom a Past-Master's jewel was then presented.

# THE GENERAL MEDICAL COUNCIL ELECTION.

## THE APPROACHING ELECTION OF DIRECT REPRESENTATIVES.

### MR. GEORGE BROWN'S ADDRESS TO THE REGISTERED PRACTITIONERS OF ENGLAND AND WALES.

FELLOW PRACTITIONERS,

As the term for which you elected Dr. Glover and myself in 1896 to represent you in the General Medical Council will expire on January 1st next, you will shortly be called upon to fill the seats which will thus become vacant.

I beg to inform you that it is my intention to offer myself for re-election, and I venture to hope that my efforts to serve your interests during the four and a-half years I have had the honour to represent you will ensure me a renewal of your confidence.

It will be in the recollection of many of you that at the last election I pledged myself, if successful, to do my utmost to carry out a definite line of action in regard to five questions of great importance as affecting the well-being of the profession. Respecting these it may be convenient if I as briefly as possible report progress.

1. *Amendment of the Medical Acts with a view to the Suppression of Unqualified Practice.*

As yet it has been impossible to persuade the Council to take action in favour thereof, but as some of the most powerful opponents of medical reform have during the last year or two ceased to be members of the Council, and their seats are now occupied by others whose views are more in harmony with those held by the bulk of the profession, I am not without hope that medical reform will be regarded with more favour in the future, although some outside pressure may be necessary before the Council takes any practical steps to promote a Bill to amend the Medical Acts in the direction indicated.

2. *To Prevent Sick Clubs and Dispensaries whose Agents Canvass for Patients from Obtaining the Services of Registered Practitioners.*

It is a great satisfaction to me to know that I have assisted in passing a resolution expressing the disapproval of the Council with those practitioners who associate themselves with clubs whose agents systematically canvass for patients. This resolution is a step in the right direction, but as the expression of a pious opinion it will, I fear, be of little use. The degrading practice can only be suppressed by dealing with it in the same manner as offences which are regarded as infamous in a professional respect. I shall always insist, as I have in the past, that the absence of a wage limit is likely to lead to the abuse of clubs and dispensaries, as well as to friction and contentions among neighbouring practitioners.

3. *To Oppose the Bill for the Registration of Midwives.*

Through the action initiated by me at the May session, 1897, notwithstanding that the Council had previously in very decided language, to use the late Sir Richard Quain's own words, declined to interfere with the proposed legislation respecting the practice of midwives, the Council appointed a special committee to consider the proposed measure. As a result the Lord President of the Privy Council was informed that the Council "would earnestly deprecate its passing into law." Happily, in consequence of the opposition thus raised, the mischievous Bill did not receive the sanction of Parliament, and I have no fear that it ever will become law if the profession as a whole continues to exercise the vigilance and activity in opposing the measure it has hitherto done. Much will depend upon the votes recorded in this election, and you may rely upon me that my opposition to legalising midwives as independent practitioners will be as keen as ever, and I should like both midwives and all unqualified practitioners made legally responsible for any damage they may cause to mother or child or any other person. I am, however, in favour of legislation to ensure the better education and registration of obstetric and other nurses to act under the direct supervision of medical practitioners.

4. *The Raising of the Standard of Medical Education.*

In accordance with my pledges, I have worked in harmony with those members of the Council who are in favour of raising the standard of education, and it is satisfactory to report that during the last year or two regulations have been adopted lengthening the course of professional study and raising the standard of preliminary examinations. It is to be regretted that the Royal College of Physicians and the Royal College of Surgeons of England appear disposed to dispute the authority of the Council in regard to this matter. Although I am a Member of the College of Surgeons I feel that in all questions relating to medical education the fiat of the General Medical Council should be absolute, and as long as I continue to be a member of that body my action will be guided by a sincere wish to support its authority. Unless the Council's authority be maintained, medical education will soon become chaotic.

5. *Increased Direct Representation.*

On two occasions I have proposed motions calling upon the Council to make application to the Privy Council to obtain an additional direct representative for England and Wales, as provided for in the Medical Act of 1886, but I regret to say that on each occasion the proposition was rejected by a large majority. If I continue to represent you on the Council I shall again press this question upon the members, but I fear nothing will be accomplished in that direction unless a direct appeal to Parliament be made. I shall do my utmost, both inside and outside the Council, to assist those who consider that their representatives on it should be elected by the graduates of the Universities and the members of the Corporations, and not solely by the Senates and Councils respectively.

It is a satisfaction to me to report that during my term of office I have taken an active part in bringing about the promulgation of new regulations respecting the employment of unqualified assistants, which have done more to protect the public against unqualified practice and to elevate the profession than any other measure adopted by the Council since the profession has had the privilege of sending direct representatives to the Council.

There are other points I would have desired to mention in this address, but must deal with them at the public meetings. I would therefore conclude by thanking you for the generous consideration shown towards me during my term of office, and by giving you the assurance that should you honour me by re-electing me as one of your representatives I shall, as in the past, do all in my power to serve your interests and to uphold the honour and dignity as well as the interests of our profession.

I remain, Fellow Practitioners,
Your obedient Servant,
GEORGE BROWN.

6, Gibson Square, London, N., October, 1901.

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### MR. GEORGE JACKSON'S ADDRESS TO THE REGISTERED PRACTITIONERS OF ENGLAND AND WALES.

LADIES AND GENTLEMEN,

Having been invited by the Incorporated Medical Practitioners' Association, in conjunction with Mr. George Brown, to become a candidate as a direct representative on the General Medical Council I have acceded to their request, and am encouraged to do so by the fact that I obtained 4,082 votes at the last election although very late in the field.

On the last occasion, omitting a by-election caused by the resignation of Dr. Rentoul, the contest turned principally on the question of the registration of midwives, the votes in favour of it being only 8,443 as against 26,040.

I am now, as then, opposed to the registration of midwives, the creation of an inferior order of practitioners. The only way to settle this vexed question is by the registration of all nurses, who will be obliged to act under the direct control of duly-qualified medical practitioners.

The objects which should engage the attention of the General Medical Council in the immediate future should be in my opinion:

1. The Reform of the Medical Acts, so as to provide for direct representation of the medical profession in every case except the Crown nominees.
2. Raising the standard of the entrance examinations,

and limiting the age of entrance so as not to be under seventeen years.

3. The one-portal system of entrance to be secured by forming a Board of Examiners, composed of delegates from the present examining bodies.

4. Such an alteration of the Acts which will give the Council power to suppress quacks, etc., who practise medicine and surgery under various forms of colourable pretence.

5. A more definite pronouncement against medical men acting as medical advisers to clubs and insurance societies whose agents tout for members.

For the information of those to whom I am unknown personally I may state that I have taken an active part in medical politics for more than twenty years.

In conjunction with Mr. Reginald Harrison I set on foot some twenty years ago a movement which had for its object the voting by voting papers for the election of members of the Council of the Royal College of Surgeons, which was successful.

About fifteen to sixteen years ago I endeavoured to establish locally a medical sick assurance society, and thus helped to prepare the way for the Society which at present exists and does such good work.

In 1895 I was President of the Incorporated Medical Practitioners' Association, and I founded the Devon and Cornwall local branch of the same, which has done good work in checking irregular practice and the like.

Last year I was a delegate of the Plymouth Medical Society to the medical organisation meeting at Manchester, and was appointed a member of the Committee, which has had a great deal to do with the reform of the British Medical Association.

I have assisted in the work of establishing the Three Towns (Plymouth, Devonport, and Stonehouse) Provident Dispensary, in conjunction with the local branch of the Incorporated Medical Practitioners' Association, which works on the principle of a wage limit, the management being in the hands of the members of the staff.

Asking the favour of your vote and interest,

I remain,

Your obedient Servant,

GEORGE JACKSON,

F.R.C.S.Eng., Ex-President and Vice-President of the Incorporated Medical Practitioners' Association and of the Devon and Cornwall Branch of the same, and ex-President of the Plymouth Medical Society.

10, Portland Villas, Plymouth, October, 1901.

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ADDRESS BY MR. VICTOR HORSLEY IN LIVERPOOL.

There was a large attendance of members at the Liverpool Medical Club, Mount Pleasant, Liverpool, on Tuesday evening, October 22nd, to hear an address from Mr. Victor Horsley in connection with the forthcoming election to the General Medical Council. Dr. TISDALL presided, and with very brief prefatory remarks introduced the speaker of the evening.

Mr. VICTOR HORSLEY at the outset said he had very agreeable recollections of meeting the members of the Liverpool Medical Club before, and this circumstance made it very easy for him to accept the kind invitation of the members to be present and speak that night on the occasion of the election campaign. As the medical profession in Liverpool would have seen from the BRITISH MEDICAL JOURNAL, his (the speaker's) wish to stand as a candidate together with other candidates had been frustrated by the peculiar wording of the Medical Act of 1886. He had thought until about ten days before that he would be able to resign, and at the same time offer himself for re-election. He, however, was now advised by the law officers of the Council that, owing to the terms of the Medical Act, which said that when a man resigned his appointment some other person should be elected in his place, he was not eligible for re-election. Under those circumstances, as he still wanted to go on working in the Council, he could not stand, and the profession must, he was sorry to say, be put to the expense of another by-election in the following year. At the same time he was very anxious to take his part in this election, because when they sent him to the Council four years ago they put him in a position which rendered it desirable that now at the quinquennial period of election he should give them some retrospective account of what had been done during those four years—to render an account of his stewardship, so to speak. Then, again, as a matter of fact, in medical politics and in the prospects of the profession this year they had arrived at a new departure in the attempt to remodel the British Medical Association. He felt, looking back on the work of the past four years, that the General Medical Council election and the reform of the British Medical Association were so bound up together that he would be sorry to allow an occasion of that sort to pass without saying a few words on the subject. With regard to the General Medical Council election, he would like to insist first, as he had done at Rotherham, upon the importance of topographical representation. In connection with the quinquennial election five years ago he drew attention to the fact that it was a great hardship to the profession, and still more so to the candidates, that they should have to appeal to the whole of the electorate throughout the country. The remedy for that was to divide the country into topographical divisions. That need was also strongly emphasised by the fact that the practice of the profession in different parts of the country was so different in character. Unless they had a man returned from the North to represent the practice in the North, a man returned from the South to represent the practice in the South, and a man returned from the West to represent the practice in the West, and so on, they did not really get a fair representation of the whole profession on the General Medical Council. Therefore he asked them to consider the election primarily from that point of view. As at the present moment there was only one candidate coming forth from the North and one from the West, he felt that he ought most particularly to advocate their claims. Those present were most particularly interested in the North, and Dr. Woodcock was the only practitioner in the North willing to stand. He had worked hard in the British Medical Association, and above all his (the speaker's) experience of him showed that he was the man who was wanted in the Council, because he was a man who would be heard there. He shared the experience of others who, not members of the Council, had sat in the public gallery of the Council chamber, and had seen their direct representatives browbeaten and bullied by other members of the Council. Now the remedy was in the hands of the electorate. He was practically certain that no one would ever browbeat or bully Dr. Woodcock; at any rate, not more than once. As regards the needs of reform in the profession, and the needs of the profession itself, Dr. Woodcock knew them so intimately that he was quite sure he would represent them as a candidate for the North in a very striking way. Speaking in a retrospective way of the work of the Council during the past four years, he said there was no question but that it had made progress. The attitude of the members of the Council was now very different indeed from what it was four years ago on many questions of professional interest and import; but still, if they examined into the procedure of the Council, they would be quite staggered to find in what condition that procedure was even up to the present moment, and how, owing to the constitution of the Council, that procedure seemed almost in a hopeless condition. He would give them two instances that had occurred during the last four years. Very shortly after he was elected to the Council he knew that the legal work of the Council was exceedingly unsatisfactory, and also that the financial condition of the Council was unstable, and he set to work to examine the documents bearing upon these two points. But much to his surprise, the President of the Council (Sir William Turner) took the unheard-of step of locking up the documents and forbidding him to inspect them. It took him completely by surprise that any official should attempt to interfere with any member of that body in the course of his ordinary duties. Suffice it to say, the matter came under the consideration of the Council at the next session, when both the President and he brought it forward. To his disgust, as well as astonishment, he found he was actually in a minority of one—that, in fact, there was not a single member of the Council who rose in his place and denounced that unconstitutional act of the President; and, as a matter of

fact, Dr. Glover and some other members of the Council had the hardihood to censure him (the speaker) for having asserted the rights of the members of the Council to inspect the documents on which they could alone carry out the business of the Council. That was a point he would never forget: it made such an impression upon him as to the hopeless incapacity of the Council, which, though purporting to conduct the business, nevertheless absolutely allowed the documents to be sealed up by the President. He was glad to say that a thing like that could not survive, and therefore by the time the next session came round the official obstruction collapsed, and now, of course, they had access to the documents as they liked. Certain rules were made, but the first person to break these rules was Dr. Glover himself. That opened his eyes as to the extraordinary character of the procedure of the General Medical Council. As to the finances of the Council, he knew that they were unstable in 1897. When he came to look into the documents and compare them with the published financial sheets, he found that not only were the finances unstable, but the published accounts were absolutely false, although officially printed and laid before the Houses of Parliament. By lying on the table of the House of Commons the accounts were sanctioned at the end of six weeks. To show to what degree these financial statements by Mr. Bryant, the Treasurer, were wrong, there was an error, in the year he took, to the extent of something like £600; but when he drew the attention of the Council to this he was sneered at, and told he knew nothing about finance. Only he proceeded, and ultimately they had to admit that there was an error of £600 in the financial statement. That money had been expended as a matter of fact (useless controversy chiefly) in legal expenses, and owing to some want of care on the part of the late President of the Council it had not been paid. He then went into the matter of income and expenditure, and he found that whereas the former was steadily diminishing, the latter was rising rapidly. He drew attention to that, and pointed out that they were living upon capital—that bankruptcy stared the Council in the face. Again he was sneered at, and told he knew nothing about finance. For the last three years he had been fighting this fight of the financial position of the Council, and a year ago they got thus far, that after two abortive reports of Committees practically composed of the Treasurers, one member of the Council, with a slight yearning to see him (the speaker) turned inside out, proposed that they should get the report of an expert in finance on the question. Of course he agreed to this at once, and an expert (Mr. Frere) of very high standing in London gave a report which was far worse than anything he (Mr. Horsley) had ever stated. But what was most extraordinary was that, without the slightest knowledge of the various attempts which had been made in the way of constructing amendments of the Medical Acts, the expert (Mr. Frere) suggested alterations to those Acts to exactly the same effect as those the British Medical Association had been urging for the last five years. Although Dr. MacAlister and Mr. Bryant had made the grossest misstatements on the subject in open session, and had publicly abused him and his views, when the discussion of Mr. Frere's report came up they then, to evade the exposure of their misstatements, descended to the miserable device of moving the Council into *camera*. He was glad to say that, although there had been these acrimonious discussions they had now got a committee to inquire what amendments of the Medical Act should be made to put the finances on a proper footing. Furthermore they had now got a splendid legal adviser in Mr. Winterbotham of London, a solicitor of eminent standing and repute. As to the fundamental reform of the Council, he said his personal experience inside the Council was rather different to what it was outside. At the last quinquennial election he advocated the return of certain candidates because he thought that they should be chosen for certain points, but he had not then before him what he had now in a very clear fashion—namely, the consciousness that the whole of the difficulty on the Council was what he might call the "corporate feeling." They were all naturally attached to the old corporations—the medical corporations which had granted them diplomas—but it was perfectly impossible for the representatives of those corporations to divest themselves of their responsibility towards the corporations that sent them to the Council. They must take care to send men to the General Medical Council who were not under the influence of medical corporations or official authority, or anything of the kind. They must send to the Council independent men to meet that point. If the recent proposal by the English Colleges were carried it would diminish the effect of the five years curriculum which had been agreed upon by all the corporate bodies together. He did not think he overstated the case when he said that the real danger they had to meet at the present election was this corporate feeling, since each representative of the corporate bodies in the Council felt that he must pull his own way, and the result on medical education was disastrous. Adverting to the medical aid question Mr. Horsley said that only after much agitation the Council passed a resolution indicating that they would regard conduct on the part of professional men as infamous or as resembling infamous conduct if it were associated with the advertising and canvassing which were the necessary basis of medical aid work. The result was that already two such institutions had disappeared. They must not, however, confuse the medical aid system with the great question of "contract practice," which was quite another matter. On the whole, surveying what had been done during the past sessions, they were to-day a long way ahead of what they were four years ago. In dealing with the midwifery question and the Bill before Parliament, Mr. Horsley mentioned the fact that the Council had drawn up ten points which, if embodied in any Bill, would make the measure satisfactory to them, and at the same time would give safety to the public. Although the medical profession, through the General Medical Council, had offered the Government a perfectly fair basis, their views might be crushed out by a certain "backstairs influence" operating upon the Government department. That would happen unless they could influence sufficient members in the House of Commons in their favour. He did not despair of doing that. The Privy Council, or at all events the Duke of Devonshire, had not given them that assistance they would have desired. Upon the question of the relation of the Privy Council to the General Medical Council it was essential that they should return at this election to the General Medical Council men who were not easily cowed. The mention of the office of President of the Privy Council was quite enough to cause some members of the General Medical Council to vote against the interests of the profession. The midwife question was not an isolated instance of the hostile attitude of the Privy Council; the question of establishing reciprocity between England and Italy in regard to medical practice was another illustration. All this emphasised the necessity for sending to the General Medical Council strong men. He suggested that after his hearers had done all they could by returning men to the Council in whom they could trust, they should spend the rest of their leisure in remodelling the British Medical Association, because that would then form an organisation spread all over the country, of which alone the Government would be afraid. It was useless trying to persuade Government officials; they were only to be driven, and the difficulty was how to get hold of the handle of the whip. When the British Medical Association was remodelled and they had a political bureau and could pay someone to go and do work for them in the House of Commons, they would get what they wanted in the shape of a new Medical Act which would sweep away all the anachronisms of the old and introduce a representative system of government which would mean a new General Medical Council.

The Chairman spoke in eulogistic terms of the address of Mr. Horsley, and said they could not be too grateful to him for having for so many years given his time and talents for the benefit of his humbler brethren, who had neither the time nor the ability to protect themselves. Their only hope seemed to lie in a reconstitution of the Council.

Dr. Percy Edwards intimated that Dr. Glover, one of the candidates for the election, had arranged to hold a meeting in that club last Friday, but that arrangement could not be carried out owing to indisposition on the part of Dr. Glover. Dr. Edwards read a letter from Dr. Glover in

which the writer explained that during the last few days he had had a bad eye, in regard to which his medical adviser had insisted upon absolute rest, hence his inability to be present on Friday last. Dr. Edwards also announced that letters of apology for absence had been received from Dr. McFie Campbell and Dr. Nevins.

The Chairman said Dr. Charles Hayward of Liverpool had allowed himself to be nominated as a candidate for the General Medical Council.

In reply to Dr. Briggs, Mr. Horsley said that the Council would not at this moment entertain the registration of a minimum period of education, but would insist upon the total registration of the five years to include the scientific subjects as well as the strictly medical subjects.

Dr. E. T. Davies, Dr. Barendt, and others asked questions, to which Mr. Horsley gave replies.

Dr. McCook Weir expressed the opinion that a Bill should be drafted on behalf of members of the Council embodying the views of the whole medical profession upon the midwifery question, to counteract the Bill now before Parliament.

Mr. Horsley replied that if they wanted to move in this matter they should move through the British Medical Association, and leave the General Medical Council severely and wisely alone.

On the motion of Dr. Briggs, a cordial vote of thanks was passed to Mr. Horsley for his address, and the proceedings terminated.

### The Midwives Question.

Sir,—The issue as to midwives legislation is clearly defined by Mrs. Bruce, and is simply this: Do the members of our profession approve of the broad principles on which the Midwives Registration Bill, 1900 (as amended by the Standing Committee on Law), is based?

To save confusion and much talk I will ask each of the candidates this question; and if they will answer either in the affirmative or the negative in the pages of the British Medical Journal we shall all of us know what to do when the time comes. At the present moment, having read the oratorical efforts of some of the candidates, I must confess to inability so far as understanding what they were intended to convey to the mind of the vulgar.—I am, etc.,

Hatfield, Oct. 20th. Lovell Drage.

### Dr. Glover.

Dr. Glover has lately suffered from an affection of the eye. It is now much improved. We are asked by him to state that he much regrets that, acting under strict medical advice, he is obliged to abstain from attending all public meetings for the present. He feels confident that his constituents will realise with what reluctance he has to decline invitations from various places where it would be a great pleasure for him to meet them for the discussion of current questions. He ventures to hope that the inconvenience to them will be lessened by the fact that his views have been fully stated and reported on several recent occasions.

# ASSOCIATION INTELLIGENCE.

### Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

### LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

### BRANCH MEETINGS TO BE HELD.

Shropshire and Mid-Wales Branch.—The annual general meeting of this Branch will be held at the Salop Infirmary on Tuesday, November 5th, at 3 P.M. It has been suggested that the scientific portion of the meeting be devoted as far as possible to tuberculosis in its various aspects.—Harold H. B. Macleod, College Hill, Shrewsbury, Honorary Secretary.

Staffordshire Branch.—The twenty-eighth annual general meeting of this Branch will be held at the Grand Hotel, Hanley, on Thursday, October 31st, at 4 P.M. Business: Presidential Address by Mr. W. H. Folker, report of Council, financial statement, election of officers and Council. Dinner at 6 P.M.—F. Milnes Blumer, Stafford, Honorary General Secretary.

South-Eastern Branch: West Kent District.—The next meeting of this District will be held at the Kent County Ophthalmic Hospital, Maidstone, on Friday, November 15th, at 3 P.M. Dr. Pye Oliver will preside. A paper (postponed from the previous meeting) will be read on Ophthalmia Neonatorum by Mr. E. H. Cartwright, Surgeon to the Kent County Ophthalmic Hospital, and Mr. Charles Killick will also exhibit some cases of interest. Members wishing to read papers, or to bring any communication before the meeting, are requested to send early notice of the same to Ludford Cooper, M.R.C.S., 19, Victoria Street, Rochester, Honorary Secretary.

Bath and Bristol Branch.—The first ordinary meeting of the session will be held at the Medical Library, University College, Bristol, on Wednesday, October 30th, at 7.30 P.M. Dr. G. C. Tayler, President. The following communications are expected:—From Medical Guild, Manchester: Form of Petition to President and Council, British Medical Association, for signature by those in favour of an Ethical Section at the annual meeting at Manchester. Dr. P. Watson Williams: A Recent Epidemic of German Measles and the Question of Fourth Disease. Dr. Ernest W. Hey Groves: Some New Methods of Intrauterine Medication. Mr. C. A. Morton: Two Successful Cases of Operation for Diffuse Peritonitis from Perforated Appendix. Dr. James Swain: (1) Extensive Intestinal Resection for Malignant Disease. (2) Cup-and-Ball Myofibroma removed from a patient aged 25 years. (3) Vesicular Calculus removed from a patient aged 86 years. Specimens will be shown. Dr. J. Michell Clarke: Remarks on two cases with specimens: (1) Intracranial Aneurysms. (2) Gumma of Frontal Lobe.—J. Michell Clarke, Clifton, and W. M. Beaumont, Bath, Honorary Secretaries.

### BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

The first ordinary meeting of the session was held in the Birmingham Medical Institute on October 10th, the President, Dr. E. Malins, and later, Mr. M. A. Messiter, being in the chair. Fifty-seven members were present.

*Confirmation of Minutes.*—The minutes of the previous ordinary meeting, and of the special meeting held March 28th, 1901, were confirmed.

*Election of Members.*—The following members of the Association were elected members of the Branch—namely, C. Bracey Dale, L.R.C.P., M.R.C.S., nominated by Dr. Saundby; D. R. Rowlands, M.D., F.R.C.S., nominated by Mr. Morrison; H. B. Wilson, L.R.C.P., M.R.C.S., nominated by Dr. Stacey Wilson.

*Club Practice.*—An official letter, containing the following resolution, passed at a meeting held in Shrewsbury on May 28th last, was read—namely

That this meeting of the Shropshire and Mid-Wales Branch, having discussed the whole question of club practice within its area, desires to place on record its conviction that the present system of contract practice is inadequate, and considers that no medical man residing in the Branch area ought to accept less than 5s. per annum per adult member.

*Cases and Specimens.*—Dr. Purslow showed a woman on whom he had successfully performed this operation. The living child was also shown.—Mr. Haslam showed a man, aged 37, from whose right kidney he had removed a stone weighing 489 grs., and from the left one weighing 1,289 grs. Symptoms had been present for seventeen years. A sinus remained over the left kidney through which a small quantity of urine escaped. The incision over the right kidney had healed completely. Mr. Haslam also showed a girl, aged 20, who had been the subject of actinomycosis of the face and lower jaw. The condition at first resembled chronic periostitis. The treatment adopted was incision, scraping, and packing with iodoform gauze, while large doses of iodide of potassium were given internally. Improvement was slow, but finally she was completely cured. Her occupation was to examine newly-made brakes of bicycles, and no contact with straw could be made out.—

Mr. MORRISON showed specimens he had successfully removed in a case of double ovarian cystoma. The patient was a widow, aged 63, who had noticed progressive abdominal distension for two years, during which period she had failed in strength and become emaciated. The girth at the level of the umbilicus was 44 inches; the lines drawn from umbilicus to right iliac spine, left iliac spine, and symphysis pubis respectively measured 11½ inches, 10½ inches, and 10½ inches. A large multilocular cyst, whose wall was firmly adherent to a wide area of parietal peritoneum, having been removed from the right ovary, the region of the left ovary was examined and found to present a thick pedicle which led up to a cyst containing about three pints of fluid, situated in front of the left kidney and quite concealed by the intestines. The left cyst was free from adhesions and was easily removed. The great omentum was carefully adjusted so as to protect the bowels from contact with the raw surface of the abdominal wall. Recovery was uninterrupted and complete. Mr. Morrison drew attention to the importance of examining both ovaries in every case of operation for ovarian cystoma. Mr. Morrison showed a concretion removed from a girl, aged 16, suffering from an abscess due to appendicitis. The wall of the abscess was bounded by omentum, bowel, and perforated appendix, and contained the concretion free in its cavity. The abscess was drained and complete recovery ensued. Projecting from one end of the concretion was a bristle (probably from a tooth-brush) which appeared to be the nucleus of the mass.

*Papers.*—Mr. JORDAN LLOYD read a paper on appendicitis. In the subsequent discussion remarks were made by Mr. MESSITER, Mr. DEANSLEY, Mr. MORRISON, and Mr. LEEDHAM-GREEN; and Mr. JORDAN LLOYD replied.—Dr. PURSLOW read notes of a case of Cæsarean section under the following headings:—Performed for rachitic pelvis; two previous pregnancies terminated by craniotomy; after extraction of child, uterus removed by retroperitoneal hysterectomy; relative advantages of this proceeding compared with those of the conservative (Sänger) Cæsarean section." The paper was discussed by Mr. J. FURNEAUX JORDAN.—Mr. CHRISTOPHER MARTIN read a paper on the prevention and treatment of shock in abdominal operations, dealing with the following points:—"Causes of shock. Prevention; warmth; complete anæsthesia; Trendelenburg position; rapidity of operation; arrest of hæmorrhage; avoidance of lesions of vital organs. After-treatment: Warmth; posture; stimulants; strychnine; saline injections; morphine." The paper was discussed by Mr. VICTOR MILWARD, Mr. JORDAN, and Mr. MORRISON; and Mr. MARTIN replied.

## EAST YORK AND NORTH LINCOLN BRANCH.

THE first winter meeting of the session 1901-2 was held at the Children's Hospital, Hull, on October 18th. The PRESIDENT (Dr. Milburn) took the chair, and thirty members and visitors were present. Tea was provided by the Board of Management.

*Clinical Cases.*—The following clinical cases were shown:—Dr. MILBURN: (1) Two cases of laminectomy after operation: (2) genu valgum: (3) extreme rachitic deformity of the tibiæ; (4) nævus of chest. Dr. PARKIN: (1) Coxa vara contrasted with early hip disease; (2) infantile paralysis; (3) pseudo-hypertrophic paralysis; (4) angioma of neck treated by ligature of the external carotid and excision.—Miss MURDOCH: (1) Congenital heart disease; (2) chronic endopericarditis; (3) endocarditis with anginal attacks.—Dr. GRIEVE: Two cases of Friedreich's ataxia. Dr. LOWSON: Imperforate anus. Dr. HARRISON: Nævus of nose.—Dr. WATERS: Cases of radical cure of inguinal hernia. The cases were discussed, and a vote of thanks passed to the Board of Management of the hospital.

## DORSET AND WEST HANTS BRANCH.

THE autumn meeting was held at Blandford on October 17th, under the presidency of Mr. WILLIAM ERNEST GOOD. There were also present twenty-eight other members and visitors.

*New Members.*—The following were elected: Ernest Kaye Le Fleming, M.B., of Wimborne; Archibald Leishman, of Ringwood; Major Augustus Alexander Pechell, R.A.M.C., of Alton; and Telford Telford-Smith, M.D., of Wimborne.

*Officers for 1902.*—Mr. Arthur George Sulieman Mahomed, of Bournemouth, was elected President; Mr. Hubert Housseman du Bouley, of Weymouth, and Dr. William Hooper Masters, of Parkstone, were elected Vice-Presidents; Dr. William Vawdrey Lush, of Weymouth, and Mr. Charles Henry Watts Parkinson, of Wimborne, were re-elected Joint Honorary Secretaries and Treasurers.

*Congress on Tuberculosis.*—Dr. LUSH gave a short report of his visit to the British Congress on Tuberculosis held in London in July last: and a vote of thanks was accorded to him and to Dr. Snow for their services as delegates.

*May Meeting.*—It was resolved that the May meeting should be held at Wimborne.

*Proposed Sanatorium for Consumption.*—On the motion of Dr. LUSH, seconded by Mr. WILLIAMSON DANIELL, it was resolved:

That the Committee on Tuberculosis be reappointed to assist in the founding of a sanatorium or hospital for the counties of Dorset, Devon, and Cornwall.

*British Medical Benevolent Fund.*—A grant of 5 guineas was made to the British Medical Benevolent Fund, and a like sum to the Royal Medical Benevolent College.

*Discussion.*—Dr. MOORHEAD opened a discussion on Exophthalmic Goitre, which was taken part in by Mr. BOVEY, Dr. LYS, Dr. WHITTINGDALE and Dr. LUSH.

*Specimen.*—Dr. MACDONALD exhibited a specimen of rupture of the left ventricle of the heart which occurred in a patient 88 years of age.

*Dinner.*—The members and visitors, who had been previously hospitably entertained to luncheon by the medical men of the neighbourhood, dined together at the Crown Hotel.

## SOUTH WESTERN BRANCH.

THE autumn intermediate meeting of this Branch was held at the Constitutional Club, Newton Abbot, on Tuesday, October 15th, at 3 P.M. Mr. G. THOM, President, was in the Chair, and 39 other members were present. Letters expressing inability to attend were read from Drs. John Rolston, Hammond, Woodman, and Barnes.

*Confirmation of Minutes.*—The minutes of the last meeting were taken as read and confirmed.

*Resolutions.*—Dr. W. GORDON read a brief paper on preliminary general education, after which he proposed the following resolutions:—

(*a*) That it is undesirable that anyone should be registered as a medical student until he or she has attained the age of 17.

This was seconded by Dr. DEAS and carried.

(*b*) That the standard of the examination in preliminary general education required by the General Medical Council should be suitable to candidates of 17 years of age of average intelligence and reasonable industry.

This was seconded by Dr. DEAS and carried.

(*c*) That the present system of multiple examining boards is most undesirable, and that it is necessary, in order to secure uniformity of standard, that a single examining board should be appointed by the General Medical Council. That the Board should hold its examinations as often as necessary at multiple centres simultaneously.

This was seconded by Dr. JACKSON, and carried.

(*d*) That the examination should include at least Latin, mathematics, English grammar, literature, and essay writing, history, geography, and either French or German.

This was seconded by Dr. WARD, and carried.

(*e*) That the representatives of the Branch on the Council of the Association be requested to bring these resolutions to the notice of the Council, and to ask that a Committee be appointed to consider them and report to the Council.

This was seconded by Dr. DEAS, and carried.—Mr. J. C. WALKER moved the following resolution:

That the interests of the public health in Devon and Cornwall urgently demand the appointment of county medical officers of health for these counties.

This was seconded by Dr. MAKEIG JONES. Dr. W. GORDON proposed an amendment:

That this matter should be referred to the Branch Council, with a request that the Council should consider it, and report to the next meeting.

Seconded by Dr. MACKENZIE, and, on being put to the vote, was lost. The resolution was then put to the vote, and carried.

*Pathological Specimens.*—Dr. Bushnell showed: (1) Diffuse pigmented sarcoma of liver; (2) microscopical sections.

*Report.*—Drs. Norway and Bushnell (delegates to the Tuberculosis Congress) gave an interesting report of the proceedings of the Congress, and received the thanks of the meeting.

*Papers.*—Dr. H. W. Webber read a paper on the treatment of puerperal septicæmia by subcutaneous injection of anti-streptococcus serum, and illustrated his remarks with an analysis of 50 recorded cases.—Dr. Norway read a communication on the treatment of typhoid fever.—Mr. J. C. Walker read notes of 2 cases treated by a uric-acid-free diet.—Mr. J. Delpratt Harris read notes of two cases of intestinal obstruction having unusual features.

# CORRESPONDENCE.

## THE DUTIES OF MEDICAL OFFICERS OF HEALTH AS TO THE DIAGNOSIS OF INFECTIOUS DISEASE.

Sir,—I have read with some astonishment the concluding paragraph of the leading article in the British Medical Journal of October 12th, entitled Small-pox and the London School Board, in which you express the view that the diagnosis of cases of doubtful small-pox is not one of the duties of the medical officer of health.

I was medical officer of health to one of the large English cities for several years, and always considered that one of my most important duties was to assist the general practitioner in the diagnosis of infectious diseases, more especially in the case of those diseases which involve the greatest danger to the public, and in which prompt action is of the utmost importance in preventing a spread of the disease.

If the medical officer of health is not to assist the general practitioner in the diagnosis of doubtful cases of small-pox, whose duty is it? When a medical man has a doubtful case is he to notify it to the medical officer of health without comment, or is he to delay notifying until he can make a certain diagnosis? In the case first supposed should the disease not prove to be small-pox a great deal of needless alarm and inconvenience is caused; while, in the second, irreparable time may be lost.

Surely the common-sense and best practice, and that which I feel sure the vast majority of the medical officers of health would prefer, is for the medical man to intimate as soon as possible the fact of his having a doubtful case, thus giving the medical officer of health an opportunity of seeing it and of adopting those early precautionary measures upon which so much may ultimately depend. I recall with satisfaction the fact that in Sheffield during the years 1893-4, when small-pox was so prevalent throughout the Midlands and North of England, and every medical officer of health was on the alert and doing his utmost to prevent the disease getting a hold in his district, that I received far more requests to visit doubtful than actual cases, and thus, by encouraging the co-operation of the profession and the health authorities, was able to limit the disease in almost every instance to those first attacked.

What applies to small-pox holds good in principle for typhus fever, cholera, and other infectious diseases, and it seems to me very ill advised to suggest that it is no part of the duty of a medical officer of health to do for the general community, in the case of the commoner infectious diseases, what the Local Government Board has shown itself willing and anxious to do for the medical officer of health when he is in difficulty, namely, undertake the diagnosis of those rarer diseases, plague and cholera.

I take it that one of the most important duties a health officer can perform is to limit the spread of infectious disease in his district, more especially such a one as small-pox, and if he can effect this, as I believe he can by encouraging medical practitioners to appeal for his advice and assistance in cases of doubt, I feel confident that there are few who would refuse to render it or consider the request inconsistent with their duty.

In conclusion, I would beg to join issue with your view that medical officers of health are deprived, by reason of their exclusion from private practice, of the experience necessary to give their opinion a special value. This may hold good for London, and perhaps the remark was not intended to have a general application. If so, I can offer no criticism, but if it is intended to apply to the provinces I do not admit the suggestion. In the provincial towns and counties the medical officers of health are in touch with infectious hospitals, and for the most part possess an experience of small-pox, largely cultivated by the procedure I advocate above, which makes their opinion sought after and of the greatest public benefit.—I am, etc.,

Edinburgh, Oct. 15th. Harvey Littlejohn.

*** Dr. Harvey Littlejohn has evidently not attached the same meaning to the word "duty" that we do. The "duties" of a medical officer of health are prescribed by an order of the Local Government Board. The "duty" of diagnosis of infectious disease is not included among them, and, it appears to us, with good reason. In particular instances the medical officer of health may have had special experience of fevers, of small-pox, of cholera, or of all of these diseases. In such cases his opinion would be of value; and, if the size and population of his district permitted, he would undoubtedly be willing, and indeed glad, to have this experience utilised for the benefit of the inhabitants. To impose this upon him as a "duty" would, we contend, not be possible, because it would, under existing circumstances, be impracticable for many medical officers of health to act in this way.

## WHAT IS EFFICIENT REVACCINATION?

Sir,—Owing to the prevalence of small-pox at the present time a satisfactory answer to the question, What are the signs of efficient revaccination? would be welcome.

The result of any vaccination practically depends upon the lymph used, and it seems strange that while the law orders vaccination the manufacture of lymph is in the hands of private individuals, and no steps are taken to compel them to produce a lymph which should, at any rate, attain a certain standard of efficiency: the consequence is that a large number of vaccinations fail to take.

According to the Local Government Board report of vaccination in 1898, 3,232 children were certified as insusceptible to vaccination: assuming that three attempts were made to vaccinate each child, it follows that 9,000 tubes of calf lymph really contained nothing but inert matter.

There is no reason why it should be left to each medical man to test the efficiency of lymph himself: it would prevent much disappointment and dissatisfaction if he could rely upon the activity of lymph supplied him.

Speaking from personal experience of a number of cases of revaccination with lymph supplied by a well-known firm, in a very small percentage have satisfactory vesicles followed; in the great majority there has been some redness and swelling of the vaccinated area, accompanied by more or less itching and occasionally glandular enlargement. Is this to be considered efficient revaccination? and ought one to be satisfied with this state of things?

It is questionable whether any protection is afforded by such lymph. Such cases have been again vaccinated, and for the second vaccination a lymph which is said to be concentrated and reinforced has been used. It is too early yet to quote the results of many of these, but in the first 12 cases well-marked vesicles followed in 11, in 1 only slight reaction. However, in nearly all the cases in which this lymph was used in the first instance for revaccinations well-marked vesicles have followed, and there seems to be no reason to doubt that a similar effect would have been produced in those cases in which the other lymph failed to produce more than very sligh local reaction.

In the first series of cases one was inclined to suppose that the mild result was owing to the protection afforded by previous vaccination; but, after seeing the results in the 12 cases mentioned, one can only suppose that it was really due to the poor quality of the lymph supplied.

I would not have written before being in a position to give a larger number of instances in which vesicles had been obtained in cases where the other lymph had shown only mild reaction, but I am anxious to hear the opinions of medical men of wider experience. It seems to be a question to which an authoritative answer should be given, as the

antivaccinationist cause will receive unmerited impetus if cases of small-pox should occur where insusceptibility has been assumed owing to failure of reaction to revaccination.—I am, etc.,

Upper Richmond Road, S.W., Oct. 21st. S. VERDON-ROE.

## DOCTORS AND MIDWIVES.

SIR,—Like many doctors in this neighbourhood, I have read an account of the death of the woman at Swanscombe, near Gravesend, Kent, at the time of her confinement, and have heard many comments thereon from various people. The principal local newspaper had a conspicuous heading, such as "Sad Death of a Woman at Swanscombe: three Doctors Refuse to Attend."

Surgeon-Major Ince's letter on this case in the BRITISH MEDICAL JOURNAL of October 19th is somewhat severe, but I do not altogether agree with him; consequently I should like to say a few words in defence of these medical men, who appear to be so severely censured.

The Swanscombe doctor said in his evidence, if the newspaper wording is correct:

I did not go because we have had so many cases during the last two years. I have had so many bad cases that have been attended by midwives (the cases are so far gone before we are called to attend them) that I made up my mind two or three months ago that I would not go to another confinement as long as I was here, unless I was engaged previously. You go in and probably find the patient in a most dangerous state. I have had, I think, five or six cases in the last two years in which I had the greatest difficulty in the world in saving the woman. If they were to die the first thing people would say would be, "Who was the doctor?" People do not think what it means. It is my resolve, and I think the other medical gentlemen in the neighbourhood have resolved not to attend unless previously engaged, etc

Although I had nothing to do with this sad case, personally I too am fully determined in the future not to attend any of these stray confinements. On the last occasion I was called to a woman who was very ill and suffering from *post-partum* hæmorrhage, owing to a portion of the placenta having been left behind by the midwife, who had gone away and left her patient. I remained at the house some long time, spoilt my clothes, but succeeded in saving the woman's life. Both she and the husband seemed very grateful for my services, and faithfully promised to pay my fee, but soon afterwards the house was vacated, and I never heard anything more of my patient, nor did I see a vestige of my fee. After this case succeeding on many others, I fully resolved not to attend another unless previously engaged or the people were well known to me. As I am a busy man, I cannot afford to remain up half the night and put myself to much discomfort for nothing at all. My opinion is that such people, if without means, should apply for an order and be attended by the parish doctor, who is employed for this purpose.

Surgeon-Major Ince says it is shocking that any medical practitioner, whether in active work or retired, should when summoned refuse to attend in any case of serious illness unless prevented by other urgent duties or by physical unfitness. And, again, he thinks it most derogatory to the benevolent principles of our noble calling that mercenary motives should influence him in so refusing. I wonder what Surgeon-Major Ince thinks of the following case:—The wife of a tradesman was seized with urgent and serious symptoms arising from a strangulated umbilical hernia, and he was advised by his local family attendant to hasten to London and procure without delay a surgeon to come down and operate. The husband waited on seven or eight well-known men, who all refused to come because he could not afford to pay their fee. At last, after much trouble, he succeeded in finding a junior surgeon who came down, but the patient died very shortly. I suppose Surgeon-Major Ince would say that all these men were mercenary, as a woman's life was in danger. In most parishes there is a maternity society, and every thrifty woman can, if she pleases, subscribe a small sum weekly which will enable her to procure the skilled assistance of a doctor at her confinement.—I am, etc.,

Gravesend, Oct. 20th. R. J. BRYDEN.

SIR,—May I be permitted to submit a case for Surgeon-Major Ince's decision? I am called to A.B.'s wife at her first confinement, and sit all night in the bug-infested dwelling, and, after weary waiting, chloroform and deliver her. Bill sent in, no notice taken of repeated applications for payment. A.B. drinks and squanders his really good wage. In a year or so he again appears about 2 A.M., requests my attendance at the second confinement. I presume Surgeon-Major Ince would immediately respond to the call, but unfortunately my benevolence has sustained such a severe shock that I respectfully decline. The question I submit for decision is as follows—Is the case one for coercion on the part of the Legislature, and to whom should the coercion be applied, A.B. or myself?—I am, etc.,

Falkirk, Oct. 19th. G. C. STEWART.

SIR,—The incident referred to in Surgeon-Major Ince's letter is most regrettable from every point of view, and had the medical men involved had the power of distinguishing between the real and the unreal, or of looking a short distance into the future, no doubt it would never have occurred. That they are deserving of any censure, I for one do not believe, and Surgeon-Major Ince's views seem neither reasonable nor logical, nor is there any real analogy between the cases of licensed victuallers and medical practitioners.

Is a medical man, "whether in active practice or retired," to hurry off *nolens volens* to every case of reported serious illness on the chance of its being a genuine case of needy suffering humanity whom he can relieve, and this notwithstanding that no one can be in practice for even a few years without discovering that hardly one out of every ten cases reported to be "dying" is even seriously ill? And is he to go without being paid, or at least knowing that he will be paid for his services? If he does, he will soon have an extensive practice, and the probability of ending his days in the workhouse.

Where is the licensed victualler who "will minister to the alimentary wants of those who call upon him" without first satisfying himself that he will be paid well for doing so? If any such philanthropist exists I should like to find him. Besides, licensed victuallers form a "trade" which is protected by Government as no other trade or profession is, and that protection is ample reward for the compulsory, though not unpaid, services required of them within certain well-defined hours.

Medical men, on the other hand, though put to great cost to get placed on the *Register*, are in no way protected, but have to compete with quacks and charlatans galore, and now forsooth they would be compelled to attend whenever and by whomever they are sent for, and they must not consider such a paltry thing as a fee, lest they offend some coroner's jury by so doing. Coroners' juries are very fond of venting their opinions about the duties of medical men in such cases, but, let me ask, suppose a beggar goes to one of these jurymen and says he has a wife or child lying at home dying of starvation, how many of them will give him the price of a meal? Most will reply, "I never give to beggars; if your case is as you represent, apply to the Charity Organisation Society or to the relieving officer." That is an analogous case. Surgeon-Major Ince's is not.

Apart from these points, however, there is no doubt that some means ought to be at hand to secure immediate medical attendance on every poor person who is taken suddenly ill, and has not the means to pay for a private medical attendant. I would suggest that one of two things should be done, or both. First, that the machinery required to set the Poor-law medical officers in action ought to be greatly simplified, so that emergency calls could be attended to at once without waiting for an order from the relieving officer. Secondly, that police authorities ought to authorise constables on duty to summon a medical man for any urgent case reported to him, and that such police authority ought to be responsible for the fee.—I am, etc.,

Bradford, Oct. 22nd. WILLIAM MITCHELL, M.B.

SIR,—Surgeon-Major Ince in his letter of last week's issue opens up a question of grave import to medical men regarding their attitude towards midwives. It is this. Are medical men to consider themselves to be at the beck and call of any midwife when she is in difficulties, and bound to attend without any fee or remuneration? I know a midwife who for years used to summon a certain doctor to help her out of any difficulty in her cases, and he always did so purely out of

charity, until at last, he was summoned late one night in a peremptory manner to "come at once as the woman was dying." He dressed and went, arrived twenty-five minutes after being called, just in time to see the woman expire, and the only reward he got was complaints from the relatives at the inquest that "he was a long time coming." He since ascertained that he had got the name of "following Nurse So-and-So," and that patients who engaged her at her fee of 7s. 6d. or so, considered themselves justly entitled to his services if required, and that also she took cases who could well afford a doctor's fee, as proved by the fact that at subsequent confinements they engaged a doctor. It was also hinted that he was not acting fairly to his brother practitioners by covering Nurse So-and-So, and enabling her to take cases that ought to engage a doctor. Under these circumstances he declined to attend any more of this nurse's private cases.

What I contend is this, that a midwife when accepting an engagement should point out that when the services of a doctor are required the patient must be prepared to pay his fee, and of course send for what doctor she preferred, otherwise I consider a midwife is placing herself on the same level as a qualified medical man, and I think if patients entrust themselves in the hands of those clearly incompetent to see them through, they must accept the risks they are liable to incur.—I am, etc.,

Approach Road, N.E., Oct. 19th. H. Gilbert Nicholson.

## "STAFF PAY" IN THE R.A.M.C.

Sir,—If the principle of special pay for special work is to be the rule in the R.A.M.C., then I think a great omission has been made in the proposed scheme by not granting extra pay to medical officers in charge of officers—women and children—such as hold office in our larger garrisons. I have no hesitation whatever in saying that the weak point in our unification system has been the absolute want of sympathy and care exhibited in the way officers have been chosen to carry out these important duties. Not only have officers without special fitness been given these posts, but they have further been expected to do the work without any extra remuneration whatever. A more injurious omission could not have been made, for before everything it was advisable to care for the soldier's wife and child, and the officer and his family. I could not tell all the cases which have come before me where real grievances existed with the persons concerned in these matters, and the urgent necessity that exists for reform. To expect a medical officer to carry out these trying and anxious duties without extra pay was always a mistake, and unless the subject is generously dealt with will always remain to handicap the "unification" idea. The very existence of the R.A.M.C. as an independent body has been threatened far more by hostile criticism "across the walnuts and the wine" of the mess tables of the army on this account than by any friction in actual working of the hospitals. I feel sure that the afternoon tea-table stories and opinions of the officers' wives in a garrison have done more to render the medical service unpopular in the army than most people imagine, and always on this account, namely, the want of efficient medical care of officers and their families.

I would pay the doctors that do this work well. It is they who need the 10s. 6d per diem staff pay, as also a brougham and horses from the State. We need to select our best men, to specialise them for family practice, and to pay them handsomely. This once done we should hear far less than is now the case of the grievances of the officer, his wife and family, and the soldier's wife and family against the existing system.

In India all such posts command good pay (amounting to £10) extra per mensem in the larger garrisons. In England and in the tropical colonies not one penny extra allowance is given, and this grave omission has cost the military officer and his family much money, and with the result that there is a distinct physical basis for the unpopularity of unification, namely, the financial loss it entails on the married people of all ranks in the service.

I trust Mr. Brodrick will see fit to grant to all these appointments a special staff salary varying from 5s. to 10s. 6d. per diem. Never was there a more needed expenditure nor a cheaper economy in the long run.—I am, etc.,

October 15th. Staff Pay for Special Work.

## TOTAL EXTIRPATION OF THE PROSTATE FOR ENLARGEMENT OF THAT ORGAN.

Sir,—In modification of the letter which appeared above my name in the British Medical Journal of August 3rd, I should like to say that, having now read Dr. Eugene Fuller's work on *Diseases of the Genito-Urinary System* (The Macmillan Company, New York, 1900), I am of opinion that in his operation designated the "direct surgical removal of prostatic obstruction" Dr. Fuller had in principle anticipated by some years Mr. P. J. Freyer. I still adhere to the opinion that Mr. P. J. Freyer's clinical lecture is one of vast importance and most valuable, and I feel certain that it will give a new impetus to prostatectomy.—I am, etc.,

Igls, Tirol, Oct. 15th. D. F. Keegan.

## PERSONATION OF MEDICAL MEN NOW IN SOUTH AFRICA.

Sir,—Will you kindly give publicity to the following facts, of which the medical profession and public at large should be warned? It appears that there are some swindlers in London who are trading on the fact that certain medical men are in South Africa by sending begging letters to their friends, and one such has been brought to my notice purporting to come from my son, Dr. Lawrence F. McDowell (who is at present practising in Cape Colony, South Africa), stating he was invalided home, was starving, and asking for money—a statement which is not true. As many medical men have received such letters, you will confer a favour if you will kindly allow space for this contradiction and warning.—I am, etc.,

Killaloe, co. Clare, Oct. 23rd. E. F. McDowell.

# OBITUARY.

## THOMAS VINCENT JACKSON, J.P., F.R.C.S.Edin., M.R.C.S.Eng.,

Surgeon to the Wolverhampton and Staffordshire General Hospital.

Mr. T. Vincent Jackson, whose death on October 12th was briefly announced in the British Medical Journal of October 19th, was the second surviving son of John and Mary Jackson, and was born in London sixty-five years ago. He received his early education privately at Brighton, and at King's College School. He entered as a medical student at University College, London, where he had a distinguished career, becoming President of the College Medical Society. He obtained the diploma of M.R.C.S.Eng. in 1857 and L.S.A. in 1858, acted as House-Surgeon to the late Mr. Richard Quain, and was subsequently his private assistant. As a student he held the office of Prosector of Anatomy at the Royal College of Surgeons. He left London for reasons of health to become assistant to Dr. Charles Quinton, of Willenhall, and was appointed House-Surgeon to the Wolverhampton and Staffordshire General Hospital in 1861. On resigning that appointment to join Dr. Gatis in practice, he was appointed Honorary Surgeon to the Hospital.

For nearly forty years he was engaged in private practice, and from time to time contributed articles to the medical press, chiefly on matters relating to genito-urinary surgery. He was the author of an address entitled an Historical Sketch of the Medical Profession, or Medical Craft in Britain from the earliest period to the Victorian Era, which was published in 1898, and he had previously written an essay on The Medical Profession and Public Life published in 1889. In 1883 he became a Fellow of the Royal College of Surgeons of Edinburgh, and, in addition to the appointment at the Wolverhampton and Staffordshire General Hospital, he was made Consulting Surgeon to the Hospital for Women, and Surgeon to, and Vice-President of the Orphan Asylum at Wolverhampton; he was a member of many medical societies, and a life governor of the Birmingham University.

His interest in the welfare of the British Medical Association was deep and enduring; he was one of the founders of the Staffordshire Branch, of which he was secretary from 1874 to 1888, and President in 1889. He became a member of the old Committee of Council in 1882, and was representative of the Staffordshire Branch upon the Council of the Association at the time of his death. He was a regular attendant at the

Council meetings and took a great interest in the business of the Association.

Mr. Jackson was early associated with the municipal life of Wolverhampton, being elected a Town Councillor in 1876. He served on the Sanitary, Parks, Baths, and Watch Committees, and particularly devoted himself to the Public Works Committee, of which he was Chairman for many years. He became Mayor of Wolverhampton in 1887, the year of Queen Victoria's first Jubilee, and through his exertions the Queen Victoria Nursing Home for Wolverhampton was erected at a cost of £5,000 as a memorial of the Jubilee, the objects of the institution being to provide competent trained nurses for private families, and district nurses to attend the sick poor in their own homes. At his death Mr. Jackson was Chairman of the Committee of Management. He was a Justice of the Peace for the Borough of Wolverhampton, and also for the County of Stafford.

At a meeting of the Wolverhampton Town Council, held on October 14th, the following resolution was adopted on the motion of the Mayor:

That this Council do hereby record their deep regret at the loss which they, and the town generally, have sustained by the loss of Alderman Vincent Jackson, J.P. Mr. Jackson was first returned to this Council in 1876, and was elected to the Mayoralty in November, 1886. In 1887 he was raised to the Aldermanic Bench, and in the same year was elected to the Chairmanship of the Public Works Committee. In the discharge of these honourable and distinguished positions he displayed conspicuous ability and zeal, and at all times evinced a keen desire to promote the welfare of the people among whom he lived. The Council are also mindful of the geniality and unfailing courtesy which he invariably exhibited in the performance of his municipal duties, and they feel that by the death of Mr. Alderman Jackson a gap has been caused which it will be most difficult to fill. That a copy of this resolution, under the Corporate seal, be sent by the Town Clerk to Mrs. Jackson, with the sincere sympathy and condolence of the Council in her great sorrow.

In addition to holding the office of Surgeon to the Wolverhampton and Staffordshire General Hospital, Mr. Jackson was a Vice-President of the hospital, and largely through his exertions in 1896 the operating theatre was remodelled in accordance with modern requirements. At a special meeting of the members of the Medical Committee of the hospital on October 16th a resolution was adopted expressing deep sympathy with Mrs. Jackson in her bereavement, and placing on record "their appreciation of the life-long work, ability, and enthusiasm which their late colleague devoted to the interests of the General Hospital, the high reputation of which is so largely due to his great surgical fame and skill."

Mr. Jackson's death occurred after only a short illness, but for some time his friends had seen with regret that his health was failing. He felt unwell on October 6th, but on the following day he thought it his duty to give evidence at the Willenhall Police Court. On the evening of October 9th Dr. Armitage, whose advice was sought, found him to be in a very serious condition, with symptoms of pneumonia. He was seen in consultation with Dr. Rickards, of Birmingham, but in his enfeebled state the attack was overwhelming, and Mr. Jackson died on the afternoon of October 12th.

The funeral took place on October 17th, at Highgate Cemetery, London, and was attended by Mr. Francis Fowke, General Secretary of the British Medical Association and a fellow townsman of Mr. Jackson's, as a representative of the Association. The first portion of the service had been read at St. Peter's Church, Wolverhampton, on the same morning.

It was attended by the mayor and corporation, by Dr. Carter (President) and Dr. Blumer (Secretary of the Staffordshire Branch of the British Medical Association), by Dr. Morrisson and Mr. Bennett May (representing the Birmingham and Midland Counties Branch of the British Medical Association), by the Chairman and several members of the Board of the Wolverhampton General Hospital, and by Dr. MacMunn (Chairman) and Mr. A. H. Hunt (Honorary Secretary of the Medical Committee), as well as by Mr. Southall (house-surgeon) and Dr. H. F. Parker (house-physician).

Mr. Jackson was twice married: his first wife was the daughter of his early partner, Dr. Gatis; the second, who survives him, is the daughter of Dr. Symonds, of Southampton. Mr. Jackson was a Conservative in politics and a member of the Church of England, and during his mayoralty the Church Congress met in Wolverhampton.

Mr. Jackson was engaged in general family practice, but he was well known as a dexterous operating surgeon, and often showed considerable ingenuity in his work. He liked public life, and took a very active part in the municipal affairs of his town, and he was also a magistrate. He must have given up a considerable amount of his time to his duties as a magistrate and alderman and a member of the Council of the British Medical Association. In the last capacity he was well known to many of our readers, as he had attended the Council with great regularity for nearly twenty years. His health had been gradually giving way for the last twelve months, and his constitution was so undermined that he had not strength to resist the acute illness which proved fatal. He will be long remembered as a diligent and faithful colleague in the many departments of work, both professional and public, which he undertook.

An old member of the Association writes: Vincent Jackson, as he was always called, was a well-known and popular figure in the Midland district. When he came down to Wolverhampton as House-Surgeon to the South Staffordshire Hospital he brought with him a good reputation from his London school, and he well maintained it during a long career. He was fortunate in securing before he was 30 a position on the honorary staff of the hospital, and soon made his name known as a bold and successful operator. He married early the daughter of a respected local practitioner, and, as his partner entered on family practice. This kind of work naturally interfered with his purely surgical studies, and in his case, as in the case of so many others, prevented him attaining the highest success as a provincial surgeon. He always had, and held up to the last, a high position as the leading surgical authority in South Staffordshire, but the proximity of Birmingham, with its medical school and larger hospitals, rendered purely consulting work in Wolverhampton an almost impossible career. Very early he became a member of the British Medical Association, and for some forty years was one of its most active and loyal workers. When about 1866 Sir Walter Foster, in conjunction with the late Mr. T. H. Bartleet, founded the Pathological and Clinical Section of the Birmingham and Midland Counties Branch, Vincent Jackson was chosen to be the co-secretary with the founder. For several years they worked most happily together, and made the Section one of the most popular and interesting societies in the provinces. The happy and novel idea of making each meeting a practical demonstration of clinical cases in medicine and surgery, as well as an exhibition of pathological specimens, drew together crowded meetings; and Vincent Jackson was for some ten years not only a popular officer, but one of the most frequent and valued contributors to the proceedings of the Society. Later he found that there was room for a new Branch of the Association in Staffordshire, and, taking the opportunity presented by the dissolution of a North Staffordshire Society, he founded the Staffordshire Branch. Into this he threw all his characteristic energy, and for a time the Birmingham Branch lost by the gain of Staffordshire. It was this Branch, of which he was justly proud, that he represented so usefully for many years on the Council of the Association. Vincent Jackson was a practitioner of the modern school, which recognises the duty of giving, when possible, time and knowledge to local public work. Convinced of the valuable service which a medical man could give to the Town Council, he entered the Wolverhampton Corporation, and won in a few years the highest mark of public confidence by being elected to the mayoral chair. His business aptitude had always been great, and it was still more developed by his municipal experience. It was the privilege of the writer to be present when Vincent Jackson was entertained at a public dinner on the conclusion of his mayoralty; and it was most gratifying to a brother practitioner to observe the respect and regard he had won from his colleagues and his fellow-citizens of all shades of political opinion. As a surgeon Vincent Jackson was a bold and enterprising operator, a keen observer, quick in his work, but considerate and careful. To those who knew little of him his manner often seemed nervously excitable, not to say fussy; but this was all upon the surface. His old friends and patients found beneath the superficial mannerism, sound judgment, wide knowledge, and generous self-sacrifice, and so learned to prize him as a faithful friend and a devoted doctor.

## JAMES FOULIS, M.D., F.R.C.P.E.,

Edinburgh.

We regret to record the death of Dr. James Foulis of Edinburgh, which took place on October 14th. Dr. Foulis had long suffered from a cardiac ailment, which assumed a more serious form after an attack of influenza last spring. Pulmonary complications began to appear, and for the five weeks prior to his death rapidly increased in severity and wore out his strength.

He was born in New South Wales in 1846, was a son of Dr. John Foulis of Sydney, and a grandson of Sir James Foulis, seventh baronet of Woodhall. His early education was obtained in Australia. He afterwards entered Glasgow University, and studied medicine under Professors Allen Thomson and Joseph Lister. When Lister came to Edinburgh Foulis followed him to continue his studies in the University there. He was a brilliant student, and graduated M.B., C.M. in 1872. In 1875 he received the degree of M.D., and was awarded a gold medal for the excellence of his thesis on Contributions to the Normal and Pathological Anatomy of the Ovary and Parovarium. In the same year he received the Goodsir Memorial Prize of £60, and in that year a paper of his was read by Professor William Turner before the Royal Society of Edinburgh on the Development of the Ova and the Structure of the Ovary in Man and other Mammalia.

He became assistant first to the late Dr. Thomas Keith, and afterwards to Dr. George Keith, and no doubt derived great benefit from his close association with these two distinguished physicians. He lived for ten years in the house of the latter physician, the author of *A Plea for a Simpler Life*, and when George Keith retired from practice his work was taken by Dr. Foulis. He was an excellent physician, and greatly beloved by his patients, who by his death feel that they have lost their best friend. Dr. Foulis gave himself for his patients. He spared no time and no labour if thereby he might help them. He saw to every detail of treatment himself, and would return late at night at great inconvenience to himself to assure himself that everything possible had been done.

Reference has already been made to his work on the ovary. He was deeply interested in all biological studies. To the end of his life he worked at various subjects connected with development. Thus his last paper read before the Edinburgh Medico-Chirurgical Society in 1900 was on the Origin and Development of the Umbilical Cord and its Relation to the Amnion. He had followed up the paper read to the Royal Society in 1875 by another on the same subject in 1879, but "with special reference to the origin and development of the follicular epithelial cells." In 1884 he published a paper on A Case of Patent Ductus Arteriosus with Aneurism of the Pulmonary Artery, and in 1899 Some Observations on the Development of the Testicle. Other minor contributions appear in the *Transactions of the Edinburgh Obstetrical Society*.

In all matters sanitary he was greatly interested. He long ago urged the great danger of the communicability of such diseases as scarlet fever by milk, and this led him to devise a simple apparatus for its domestic sterilisation. In such matters he was an enthusiast, and he had the courage of his convictions. Apart from his professional and scientific attainments he was a man of wide general knowledge, and of fine musical tastes. He could sing well. He was a genial and kindly man, who will be much missed in a circle far larger than that of his medical practice.

He leaves a wife, a son, and two daughters to mourn his loss. A genuine sympathy of wide range will be given to them. His wife is one of three sisters, daughters of Mr. Fraser, of Tornaveen, one of whom is the wife of Lord Robertson, an Appellate Court judge, and the other the wife of Dr. Argyll Robertson, Surgeon-Oculist to the King for Scotland.

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## EDWARD HARRIMAN DICKINSON, M.A., M.D., F.R.C.P.,

Consulting Physician to the Northern Hospital, Liverpool.

Edward Harriman Dickinson, whose death was briefly announced in the last issue of the British Medical Journal, was born 58 years ago in Great George Square, Liverpool. His father was Dr. Joseph Dickinson, F.R.S., a distinguished physician and a botanist of no mean reputation, who was physician to the Liverpool Royal Infirmary and Lecturer on the Practice of Physic in the School of Medicine. His family belonged to Cumberland, where some of its members still reside.

Dr. Dickinson went to the Liverpool Royal Institution School and to Cheltenham College, and later entered Trinity College, Oxford, where he made many valued friendships, some of which lasted to the end of his life; he graduated B.A. in 1867 and M.A. in 1871. His medical studies were pursued at Oxford, Edinburgh, and St. George's. He obtained the diplomas of L.R.C.P. and S.Edin. in 1869, M.R.C.P.Lond. in 1871, and the degree of M.B.Edin. in 1870. After qualifying he was House Physician in St. George's Hospital, and also House Physician to Dr. Haldane in the Edinburgh Royal Infirmary. In 1876 he became M.D. of the University of Edinburgh, his thesis, On the Phenomenon of so-called Direct Paralysis, being awarded a gold medal. He went to Liverpool about the year 1871, and early in 1872 was elected Physician to the Northern Hospital, a position he continued to hold until a few months ago when he was appointed Consulting Physician. He was for some time Lecturer on Comparative Anatomy in the School of Medicine and was succeeded by Professor Herdman, F.R.S. He was Physician to the School for the Blind, and for several years was one of the representatives of the Lancashire and Cheshire Branch on the Council of the British Medical Association, and one of the most regular attendants.

He was a physician of undoubted ability, sound judgment, and acumen, but he never sought practice or popular favour. He made many friends, and it may be confidently asserted that he had not an enemy in the world. He was not a frequent writer, but his address on the Medicine of the Ancients and his paper on Cancer of the Head of the Pancreas indicated what powers he held in reserve. He was elected a Fellow of the Royal College of Physicians in 1880.

Dr. Dickinson was a keen lover of sport, and generally took his holidays on the moors. He always seemed to enjoy excellent health, but of late years symptoms suggesting vascular and renal degeneration had obliged him to seek medical advice, and he underwent a course of treatment at Contrexéville. About a year ago the symptoms became more pronounced, and he became subject to most distressing attacks of spasmodic asthma. More recently aortic regurgitation was recognised, and this was quickly followed by a general cardiac breakdown. His last illness was soothed by the care of his devoted wife, and the assiduous attendance of his friends and former hospital colleagues, Dr. Alexander Davidson and Dr. Macfie Campbell. He was twice married, and leaves a son and a daughter by his first wife, and a son by his second.

He was buried in the family grave in Cumberland, and on the day of his funeral a memorial service was held, at his own desire and the desire of many of his friends, in the chapel of the School for the Blind, where he had for many years been a regular attendant, and at it a large number of his professional brethren were present.

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On October 20th Mr. Henry Duncalfe, of Sutton Coldfield, died suddenly at Droitwich, where he had gone for his health. Mr. Duncalfe, who was 73 years old, had for many years retired from practice. He was some years ago one of the best-known practitioners in the Midlands and lived at West Bromwich, near Birmingham. He afterwards practised at Sutton Coldfield. In 1874 he retired from active practice and lived in retirement at Sutton. Mr. Duncalfe was a man of very benevolent disposition and was highly esteemed by all who knew him. He was one of the last Bailiffs of Sutton before the government of the town was taken over by the Town Council. Mr. Duncalfe received his medical education at Guy's Hospital, and became qualified in 1851. He was twice married, and leaves a widow and one daughter.

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# HOSPITAL AND DISPENSARY MANAGEMENT.

### EDINBURGH ROYAL INFIRMARY.

At the weekly meeting of the Managers on October 21st Dr. J. S. Fowler was reappointed Clinical Tutor to the Extra-mural Medical Wards for the present winter and the ensuing summer season. Dr. H. Grey Brown was appointed Clinical Assistant to the Medical Waiting-room, when under the charge of Dr. Francis D Boyd, for six months from October 1st.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## CIVIL SURGEONS EMPLOYED WITH THE ARMY AT HOME.

WE have received the following memorandum on the grievances of civil surgeons employed with the army at home with regard to the rate of remuneration which they receive:

The following table contains a statement of the rates of pay to lieutenants of the R.A.M.C., of the Veterinary Service, of civil surgeons, and of civil veterinary surgeons, differences between the pay of army veterinary officers as compared with that of the R.A.M.C. officers:

| — | Pay. | Allowances for Lodgings, Fuel, and Servant. | Gratuity. | Total per Annum |
|---|---|---|---|---|
| Army Veterinary Lieutenants | £250 | £73 (excluding horse allowance) | £800 if retires at end of 10 years. (A pension of £200 per annum at end of 20 years) | £403 |
| R.A.M.C. Lieutenants | £200 | £73 | £1,250 if retires at end of 10 years. (£365 per annum pension at end of 20 years) | £398 |
| Civil Veterinary Surgeons | £250 | £73 (excluding horse allowance) | £42 per annum, paid half yearly | £365 |
| Civil Surgeons | £270 | — | — | £270 |

On the whole, the salaries of R.A.M.C. officers and of army veterinary officers are fairly equal. Army veterinary officers receive somewhat larger initial pay, but in the case of the R.A.M.C. officers' promotion (with increased pay) is more rapid, and retired gratuities and pensions are greater.

The pay of civil surgeons is the initial pay of the R.A.M.C. officers; the pay of civil veterinary surgeons is the initial pay of army veterinary surgeons; in each case *minus* the retiring allowance of pension. Were the salaries of civil surgeons and civil veterinary surgeons based upon the average salaries of R.A.M.C. and veterinary officers respectively, calculated over the whole period of twenty years' service, then the civil surgeon would receive more than the civil veterinary surgeon, which would be but equitable considering the comparative importance of their services.

But, in addition to receiving a larger salary than the civil surgeon, the civil veterinary surgeon has been awarded a special yearly gratuity of £42. Thus the civil surgeon receives, and will always receive under existing conditions, £95 less a year than the civil veterinary surgeon. This constitutes a grievance; and this fact has occasioned, and is the present cause of, much irritation and dissatisfaction amongst civil surgeons. The state of affairs described is grossly unfair to the medical man, and derogatory to the profession of which he is a member.

Official application to the War Office on the part of the general body of civil surgeons in Great Britain for increased salary or payment of gratuity has not only failed to secure a promise of increment or gratuity, but has caused the withdrawal from them of a title to the gratuity to which they consider they had a just and legal claim.

Army Order 130, of June, 1901 (Article 601B), directed that: "An officer, whether of the reserve or not, specially taken into employment during a national emergency, shall be entitled to a gratuity of £100, and after the completion of twelve months' service to a further gratuity for each year, or part of a year, for further service at the rate of £50 a year if the service be given at home, and of £100 a year if given abroad, subject to the following conditions:

"1. The officer shall serve for the full period of his engagement, or of the emergency of which he is employed, unless a shorter period is specially approved by the Secretary of State.

"2. The gratuity shall not be given to an officer paid under Article 452 (b)."

"3. The following officers were declared to be eligible: Re-employed retired officers; officers of the embodied militia, except those of the permanent staff; officers of auxiliary forces employed upon army service; ex officers or civilians appointed to military positions in Imperial forces, or officers of Colonial forces to whom the conditions of this article may be held by our Secretary of State to apply."

This article of the Warrant was directed to apply to employment commencing between October 1st, 1899, and such date as might hereafter be fixed.

An Army Order which appeared in the local corps order book, Aldershot, under date July 3rd, 1901, was in the following terms:

"It is notified for information that the Secretary of State for War has decided that civil surgeons employed at home under civil contract are not eligible for the gratuity referred to in Article 601B Pay Warrant as amended by Army Order No. 130 of June, 1901."

As this order has not been included up to the present in Army Orders, civil surgeons may still engage with the War Office, believing they are entitled to the gratuity mentioned in Army Order 130 of June, 1901.

Clearly the gratuity referred to in Army Order 130 of June, 1901, was originally intended to cover the difference involved by failure to participate in pension of civilians occupying temporary posts in the Army, and to stimulate good work and conduct by placing a premium on it. And if civil surgeons realise that their salary is to be relatively depressed by comparison with the proposed exaltation in the salaries of the R.A.M.C. lieutenants, the tone of the men and the degree of their usefulness to the State will not be improved. The importance of this matter is increased by the fact that according to present prospects it is probable that civil surgeons will be required for a very considerable time to come, so that it is advisable to retain the services of those men who are wishful for other reasons than monetary to remain at their present posts. It is surely short-sighted policy of the War Office to offer no inducement to civil surgeons to extend their period of service, for it is evident that the civil surgeon is of more value as a medical officer for the Army when he has grasped the details and become experienced in the routine of Army medical work, and has been proved by trial to be professionally and otherwise worthy of the post he holds. Moreover, judging by the mercantile market standard, increased value should in all fairness meet with increased remuneration.

In our largest military centre the whole of the special work in the camp is conducted by civil surgeons, who have at considerable expense and trouble qualified themselves for the extraordinary duties they have been called upon to perform. One civil surgeon has been deputed by official order to give a series of lectures and demonstrations on *x*-ray work. This tutorial work has not, however, received any recognition from the authorities, although such work can reasonably claim to some special remuneration in the "open market." These statements apply also to other military centres.

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### ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—TIMOTHY J. CROWLEY, M.D., Staff Surgeon, to the *President*, additional, for three months' hospital study, October 22nd; HAROLD P. JONES, Surgeon, to the *Pandora*, November 7th; MURRAY P. JONES, Surgeon, to the *Wildfire*, November 7th.

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### ROYAL ARMY MEDICAL CORPS.

MAJOR J. E. NICHOLSON is promoted to be Lieutenant-Colonel, September 4th. He was appointed Surgeon, March 6th, 1880; became Surgeon-Major, March 6th, 1892; went on retired pay, July 26th, 1898; and was placed on the Reserve of Officers. He was restored to the establishment, January 19th, 1900, and proceeded to South Africa in the following March.

The undermentioned officers are on passage home from South Africa:—Colonel J. L. NOTTER, Major R. G. HANLEY, Civil Surgeons H. H. G. KNAPP, J. A. H. BRINCKER, W. J. MOIR, Professor SIMPSON. Returning invalided:—Lieutenant-Colonel J. MCLAUGHLIN.

Civil Surgeon F. H. ELLIS has been discharged from hospital to duty.

Colonel W. F. STEVENSON, M.B., C.B., is granted the local rank of Surgeon-General in South Africa whilst Principal Medical Officer of the Lines of Communications, November 12th, 1899.

The third Christian name of Major J. J. C. WATSON, M.D., C.I.E., is CURL, and not as previously described.

Captain A. E. MILNER, who is serving in the Punjab Command, has been appointed Personal Assistant to the Principal Medical Officer, Madras Command.

ERRATUM.—In the BRITISH MEDICAL JOURNAL of October 19th it was erroneously stated that Lieutenant-Colonel H. J. McLaughlin, R.A.M.C., had certain war services in South Africa and elsewhere. The services cited pertained only to Major H. J. McLaughlin, an officer retired from the 5th Lancers.

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### INDIAN MEDICAL SERVICE.

WE (*Bombay Gazette*) are glad to learn that most of the recommendations of the Indian Hospital Stores Committee are being carried out. The Government is also considering whether the use of the Roentgen-ray apparatus cannot be made more general, with a view to its larger employment on field service.

Out of the prospective increase of 100 officers to the R.A.M.C., 40 are to be added to the cadre in India.

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### ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANT J. K. TOMORY, M.D., to be Surgeon Captain, October 23rd.

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### THE VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

THE next class for the instruction of volunteer medical officers in the subjects of the proficiency examination will be held at 23, Cambridge Street, W., and will commence on Monday, November 4th, at 5 P.M. Officers who wish to join the same should apply to the Senior Medical Officer, V.A.S.I., at the above address.

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### THE IMPERIAL YEOMANRY

THE notification relative to temporary Captain H. MANDERS, M.D., Medical Officer (Major 1st Volunteer Battalion Princess Charlotte of Wales's Royal Berkshire Regiment), which appeared in the *Gazette* of February 23rd, 1900, is cancelled. [The notice referred to was to the effect that the appointment of Dr. Manders as Medical Officer, Imperial Yeomanry, had been cancelled.] A subsequent announcement in the *Gazette* of Tuesday last says that temporary Captain H. Manders, M.D., Medical Officer, relinquishes his commission, dated July 16th, 1901.

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### THE VOLUNTEERS.

SURGEON-MAJOR E. J. LLOYD, M.D., 1st Cheshire and Carnarvonshire Artillery, is promoted to be Surgeon-Lieutenant-Colonel, October 19th.

Supernumerary Surgeon Lieutenant A. H. MCDOUGALL, 1st Volunteer Battalion the Royal Warwickshire Regiment, is appointed Surgeon-Lieutenant on the establishment, October 19th.

PROMOTION EXAMINATION FOR MAJOR UNDER EXISTING RULES.

CAPTAIN R.A.M.C.—The subjects for this examination are: Medicine, Surgery (including Surgical Anatomy), Hygiene (including Bacteriology, Medical Regulations and Organisation, Military Law. A choice might be made from the following books for the examination: *Manual of the Practice of Medicine*, by Frederick Taylor, M.D., sixth edition (London: J. and A. Churchill, 1901, 16s.), or *Handbook of the Theory and Practice of Medicine*, by F. T. Roberts, M.D., ninth edition (London: H. K. Lewis, 1894, 21s.); *Science and Art of Surgery*, by Sir John Erichsen, tenth edition (London: Longmans, Green, and Co., 1895, 48s.); or *Surgery: its Theory and Practice*, by W. J. Walsham, F.R.C.S., seventh edition (London: J. and A. Churchill, 1900, 15s.); *Surgical Applied Anatomy*, by Sir F. Treves, K.C.V.O., C.B., new edition (London: Cassell and Co., 1901, 9s.); *Wounds in War*, by Surgeon-Colonel W. F. Stevenson, A.M.S. (London: Longmans, Green, and Co., 1897, 18s.); *The Theory and Practice of Hygiene*, by Colonel J. L. Notter, M.D., and Major W. H. Horrocks, B.Sc., F.R.C.S., second edition (London: J. and A. Churchill, 1900, 25s.); *The Theory and Practice of Military Hygiene*, by E. L. Munson, A.M., M.D. (London: Baillière, Tindall, and Co., 1901, 32s.); *An Introduction to the Bacteriological Examination of Water*, by Major W. H. Horrocks, B.Sc., F.R.C.S. (London: J. and A. Churchill, 1901, 10s. 6d.); Reports on Progress of Hygiene as published in the *Report of the Army Medical Department* for 1898 and 1899 (London: Eyre and Spottiswoode, 1900 and 1901, 2s. 7d. and 2s. 9d.); *Regulations for Army Medical Services* (London: Eyre and Spottiswoode, 1900, 9d.); *Manual of Military Law* (London: Eyre and Spottiswoode, 1894, 2s. 6d.).

THE OFFICE OF DIRECTOR-GENERAL, I.M.S.

FORCEPS writes: There is no doubt that a good deal of feeling has been aroused by the orders of the Government of India that the Director-General I.M.S. shall henceforward be drawn from the Bengal Presidency only. I am not a Bengal man, but the shameless jobbery that has filled with disgust and discontent my own Presidency compels my approval of that arrangement. In cases of specific and grievous wrong, it is well for the service to have in Bengal an unbiassed centre of appeal where an officer's record alone is considered, and not the personal antipathies more or less masked of the local authorities. In the serene air of the north, remote from the unworthy intrigues of the jobmasters, an officer has good hope of his claims and his appeals being considered on their merits. If his work is good, local injustice may be rectified, and the Director-General may be expected to stand by a man whom the personal hostility of an individual in a distant Presidency has clearly wronged. No criticism, however, warranted apparently on *a priori* grounds, can touch the present settlement if it is seen to work as a curb on local injustice. If the Director-General is able to move the Government of India to insist in a few cases that fair play and not private prejudice is to govern appointments, local governments will be more careful, and a perpetual Director-General from Bengal be justified.

ARMY MEDICAL SERVICE.

STRANDED AND EXILED writes: What are our prospects under the new scheme? No promotion unless through examinations at every step. Who will consent to serve abroad at risk of health and life for such chance promotion? No pension; the whole magnetism of the Imperial and Colonial Medical Services lies in pensions; make these insecure and the only inducement to serve on is gone.

# MEDICO-LEGAL AND MEDICO-ETHICAL.

MEDICAL CERTIFICATION OF THE DEATH OF A LIVING CHILD.

WE learn from the *Edinburgh Evening Dispatch* that on September 9th a woman falsely stated to the registrar at Glasgow that her child had died at a certain address. She subsequently obtained a medical certificate from a medical practitioner certifying death to be due to "enteric catarrh and convulsions," and on the strength of the erroneous certificates from these two sources obtained the sum of £4, for which amount her child was insured. The child itself was still living. For this offence she was sent to prison for three months, and the medical practitioner who gave the certificate was strongly criticised by the judge "for having granted a certificate of death without having satisfied himself of the fact." No further particulars are in our possession as to whether the medical practitioner in question had been in previous attendance on the child who was stated by its mother to be dead. We presume that he had, and that the statement did not appear improbable in view of what he knew of the child's previous condition. This being so, although the practitioner was guilty of an error of judgment, we cannot consider him blameworthy to the same extent as the judge appears to have done. It was clearly desirable that he should have verified the fact of death before signing a certificate. But the mere fact of his expressing a wish to do this—unless it were made obligatory on him to do so—might have lost him a patient on account of the supposed reflection on his informant's veracity, and the tax on the time of a busy practitioner is not to be disregarded. In order to prevent the recurrence of incidents like the above, a practical remedy would be found in the third recommendation of the Report of the Select Committee on Death Certification (1893), which runs as follows: "That a medical practitioner in attendance should be required, before giving a certificate of death, to personally inspect the body; but if, on the ground of distance or for other sufficient reason, he is unable to make this inspection himself, he should obtain and attach to the certificate of the cause of death a certificate signed by two persons, neighbours of the deceased, verifying the fact of death."

DIFFICULTIES BETWEEN PARTNERS.

A CORRESPONDENT propounds the following query: A. and B. are in a partnership, have been at law with one another, and are at present not on speaking terms. A. feels that in operations it is not to the patient's interest for B. to give an anæsthetic for him, as A. feels nervous, not to speak of a probable scene taking place. Has B. any right to object to A. getting another anæsthetist, and can A. refuse to give an anæsthetic for B.?

*** Such relations between partners are much to be deplored. Under the circumstances it would be better that neither partner should administer an anæsthetic for the other, and under no ordinary partnership deed would this be required.

FEES FOR VACCINATION.

LIGNUM asks if a charge of twice the usual visiting fee for a single vaccination, with a reduction of 25 per cent. where several are vaccinated, this to include the visit of inspection, would be reasonable.

*** Such a scale would on an average be very convenient, but where the visiting fees were low it might be too little, and on the other hand, where they were high, possibly on account of distance to be traversed by the practitioner, they might be somewhat too much.

DOCTORS AND MIDWIVES.

A MEMBER wishes to know if there is any legal authority for the following statement: "Every medical man on being sent for by a midwife is compelled by law to attend."

*** The statement is incorrect. There is no legal obligation whatever.

# UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

EXAMINATION IN SANITARY SCIENCE.—The following candidates have satisfied the Examiners in both parts of the Examination for the Diploma in Public Health:

J. J. Buchan, F. M. Burnett, A. F. Cameron, H. S. Capper, J. M. S. Coutts, J. Crawford, F. Dittmar, J. E. Dowling, D. Forbes, Grace Haxton Giffen, K. W. Goadby, J. D. McCrindle, J. W. Miller, W. P. Rodrigo, P. R. Roy, H. R. D. Spitta, H. J. Starling, J. Stoddart, H. Stuart, A. J. Turner, D. P. Watson, W. Wright.

UNIVERSITY OF EDINBURGH.

GRADUATION CEREMONIAL.

A SPECIAL graduation ceremonial was held in the McEwan Hall on October 19th, the Vice-Chancellor and Principal (Sir William Muir) presiding. There were present Professors Sir William Turner, K.C.B., Patrick, Crum Brown, McGregor, Laurie, Rankine, Chrystal, Simpson, Hume Brown, and Sir Ludovic Grant, Bart. The following degrees were conferred:

*Degrees of M.B. and C.M.*—C. G. Hey, A. H. M'Shine, A. C. Peterson, P. W. Shepherd.

*Degrees of M.B. and Ch.B.*—J. A. Brock, A. Brown, J. W. Duffus, M.A., J. M. Dupont, W. F. L. A. Holcroft, J. Jamieson, E. W. Lewis, Harriet M'Cloghry, J. B. M'Cutcheon, L. A. MacMunn, K. D. C. Macrae, A. F. Gaston, R. Murray, P. Pattison, G. A. P. Ross, R. Rutherford, G. W. Smith, C. W. Somerville, W. C. Spooner, G. H. Steven, G. C. Strathairn, J. P. Thorne, N. N. Wade, E. A. Walker, D. L. Wall, H. E. Wareham, and P. Weatherbe.

The degree of B.Sc. in the Department of Public Health was conferred on John Fleming Goodchild, M.D., and a special University Certificate in Diseases of Tropical Climates was granted to Antoine Felix Gaston Masson, M.B., Ch.B.

At the end of the capping the Dean of the Faculty of Medicine, Professor A. R. Simpson, gave a short address to the graduates.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY Council was held on October 17th, Mr. H. G. Howse, President, in the chair.

THE DEATH OF THE DOWAGER EMPRESS FREDERICK OF GERMANY.

A letter was read from the Secretary of State for Home Affairs, reporting the submission of an address of condolence to His Majesty the King, stating that His Majesty was pleased to receive the same very graciously.

PROFESSOR VIRCHOW'S 80TH BIRTHDAY.

Mr. Howard Marsh, Vice President, reported that in accordance with the wishes of the Council, he had attended the Virchow celebration at Berlin on October 12th, and had presented him, on behalf of the Council, with an address of congratulation.

ANNUAL REPORT OF THE COUNCIL.

This will be laid before the annual meeting of Fellows and Members to be held at the College on Thursday, November 21st, at 3 P.M. Fellows and Members can obtain copies on application to the Secretary, and can, if they so desire, register their names as wishing to receive the report annually.

COMMITTEES.

Sir William MacCormac, Bart., was re-elected on the Committee of Management. Mr. H. T. Butlin was elected a member of the Laboratories Committee in the vacancy occasioned by the retirement of Mr. H. G. Howse.

FOURTEENTH INTERNATIONAL MEDICAL CONGRESS.

The President read a letter from the President and Secretary of the above, announcing that the Congress will be held at Madrid from April 23rd to 30th, 1903. Information in regard to the meeting may be obtained at the College.

### ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

AT the annual stated meeting of the College, held on St. Luke's Day, the following officers were elected for the ensuing year:

*President.*—Sir Christopher J. Nixon, M.D.

*Vice-President.*—Joseph Redmond, M.D.

*Censors.*—Joseph Redmond, M.D., Joseph O'Carroll, M.D., E. H. Tweedy, and W. Langford Symes.

*Additional Examiners* (to take the place of an absent Censor or Examiner).—Medicine: E. E. Lennon. Medical Jurisprudence and Hygiene: S. T. Gordon. Midwifery: H. Jellett, M.D.

*Examiners for the Licence to Practise Midwifery.*—J. H. R. Glenn, M.D., and T. H. Wilson.

*Additional Examiners under the Conjoint Examination Scheme.*—Biology: E. MacDowel Cosgrave, M.D. Chemistry and Physics: H. T. Bewley, M.D., and Professor E. Lapper. Materia Media and Pharmacy: N. Falkiner, M.D., and H. D. Drury, M.D. Physiology: H. C. Earl, M.D. Pathology: A. C. O'Sullivan, M.D. Medicine: J. B. Coleman, M.D., and G. J. Peacocke, M.D. Hygiene and Forensic Medicine: A. Nixon Montgomery.

*R.C.P.I. Examiners for the Conjoint Diploma in Public Health.*—Chemistry: Professor Lapper. Hygiene: H. T. Bewley, M.D. Meteorology: Ninian Falkiner, M.D.

*R.C.P.I. Examiners in Preliminary Education.*—Science: Professor W. E. Thrift, F.T.C.D. Languages: W. Kennedy, F.T.C.D.

*Representative on the General Medical Council.*—Lombe Atthill, M.D.

*Representatives on the Committee of Management.*—J. Magee Finny, M.D., Sir John W. Moore, M.D., and James Craig, M.D.

*Treasurer.*—Lombe Atthill, M.D.

*Registrar.*—James Craig, M.D.

Dr. W. A. Winter was elected a Fellow of the College.

In the evening the annual banquet of the President and Fellows took place in the College Hall.

### CONJOINT BOARD IN IRELAND.

FIRST PROFESSIONAL EXAMINATION.—Candidates have passed this examination as undernoted:

*In all Subjects.*—M. J. Ahern, C. W. N. Anderson, J. B. Dwyer, G. H. Gallagher, D. T. O'Flynn.

*Completed the Examinations.*—Miss H. O'D. M. Beamish, J. W. Bell, C. J. D. Bergin, R. J. Bonis, G. H. Caldwell, R. Calvian, P. M. Carroll, J. Daniels, O. S. Delany, M. J. C. Kennedy, G. H. Kinmonth, C. H. Lambert, B. Martin, P. Mullany, E. C. MacDermot, J. J. McNelis, J. O'Donnell, J. M. J. Rhatigan, F. J. Strahan, W. J. Tobin, N. R. Ussher, C. R. Wallace, T. Young.

SECOND PROFESSIONAL EXAMINATION. OLD REGULATIONS.—Candidates have passed this examination as undernoted:

*In all Subjects.*—M. W. Kelly.

*Completed the Examination.*—T. M. Allen, F. X. Costello, D. E. Crosbie, Miss S. F. Dickson, J. Nash, E. O'Grady, M. O'Keeffe, C. R. Richardson.

### SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, October, 1901.—The following candidates passed in:

*Surgery.*—C. E. C. Child (Section II.), Charing Cross Hospital; G. B. Dixon (Sections I and II), Charing Cross Hospital; P. J. Fitzgerald, Dublin; I. Griffith (Section I), London Hospital; W. B. Harris (Section I), St. Mary's Hospital; D. Morrow ((Sections I and II), Middlesex Hospital; W. Parker (Section I), Manchester.

*Medicine.*—D. E. Lockwood (Section II), Royal Free Hospital; E. E. Naggiar (Sections I and II), St. Mary's Hospital; W. Parker (Sections I and II), Manchester; F. M. Payne (Section II), Royal Free Hospital.

*Forensic Medicine.*—E. C. Curtis, Charing Cross Hospital; R. Gillett, Royal Free Hospital; E. E. Naggiar, St. Mary's Hospital.

*Midwifery.*—T. J. M. Clapperton, King's College Hospital; A. F. Heald, Cambridge; P. S. Hopkins, London Hospital; H. Johnson, Guy's Hospital; G. F. G. De Laubenque, Middlesex Hospital; T. G. Miles, Guy's Hospital; W. Parker, Manchester; H. Richardson, Leeds; C. W. Smith, Sheffield; A. Turner, Charing Cross Hospital.

The diploma of the Society was granted to C. E. C. Child, G. B. Dixon, P. J. Fitzgerald, D. Morrow, E. E. Naggiar, and H. Richardson.

# PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

### SMALL-POX IN CASUAL WARDS AND WORKHOUSES IN LONDON.

THE Local Government Board in England on October 19th issued a circular to guardians in the metropolis drawing attention to the precautions which should be taken with regard to the occurrence of small-pox in workhouses, and especially in casual wards. A copy ought already to be in the hands of every medical officer of a metropolitan workhouse, and ought also to have been supplied to the master of the workhouse, and the superintendents of the casual wards. The circular points out that it is very important that the attention of the medical officer should be at once called to any casual pauper who may complain of illness, or who, in the absence of complaint may present any suspicious symptoms, and advises that there should be a systematic daily medical inspection of casual wards. It is also advised that officers and other persons employed in the casual wards or brought into personal contact with a case of small pox, if they have not recently been revaccinated or had small-pox, should be revaccinated at once, and that in the event of a case of small-pox occurring in the casual wards or in the workhouse—and, indeed, in times of small-pox prevalence generally—it is important that measures should be taken for the vaccination or revaccination of inmates, so far as the medical officer may consider advisable. The circular also requests that the medical officer may be instructed to report to the Local Government Board the occurrence of small-pox or other dangerous infectious disease in the workhouse or in the casual wards, and should state what provisions have been made for preventing the spread of the disease.

### HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,452 births and 3,084 deaths were registered during the week ending Saturday last, October 19th. The annual rate of mortality in these towns, which had been 15.6 and 15.9 per 1,000 in the two preceding weeks, further rose last week to 16.8. The rates in the several towns ranged from 10.3 in Derby, 11.1 in Bristol, 11.2 in Croydon, and 11.5 in Huddersfield, to 21.9 in Salford, 22.0 in Blackburn, 26.0 in Newcastle, and 28.8 in Gateshead. In the thirty-two large provincial towns the mean death-rate was 17.3 per 1,000, and exceeded by 1.3 the rate recorded in London, which was 16.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.1 per 1,000; in London this death-rate was equal to 1.8 per 1,000, while it averaged 2.3 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 3.3 in Norwich, 3.8 in Gateshead, 4.1 in West Ham and in Sheffield, and 5.3 in Blackburn. Measles caused a death-rate of 1.8 in Sheffield, 2.3 in Norwich, and 4.1 in Blackburn; scarlet fever of 1.2 in Salford; and diarrhœal diseases of 1.5 in Newcastle, 1.7 in Hull, 2.7 in West Ham, and 2.8 in Gateshead. The death-rate from whooping-cough and that from "fever" did not equal 1.0 per 1,000 in any of the thirty-three large towns. The 71 deaths from diphtheria in these towns included 33 in London, 6 in Sheffield, 5 in Leicester, 4 in Brighton, 3 in Portsmouth, and 3 in Leeds. Eleven fatal cases of small-pox were registered in London, but not one in any of the thirty-two large provincial towns. The number of small-pox patients under treatment in the Metropolitan Asylum Hospitals, which had increased from 11 to 175 at the end of the ten preceding weeks, had declined again to 172 on Saturday last; 47 new cases were admitted during the week, against 44, 51, and 37 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last, October 19th, was 3,346, against numbers increasing from 2,994 to 3,280 on the six preceding Saturdays; 407 new cases were admitted during the week, against 460, 426, and 422 in the three preceding weeks.

### HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, October 19th, 008 births and 537 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 14.5 and 16.1 per 1,000 in the two preceding weeks, further rose to 16.9 last week, and slightly exceeded the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 11.8 in Aberdeen and 13.4 in Leith, to 18.9 in Perth and 22.9 in Greenock. The zymotic death-rates in these towns averaged 2.5 per 1,000, the highest rates being recorded in Paisley and Greenock. The 267 deaths registered in Glasgow included 14 from measles, 2 from scarlet fever, 7 from diphtheria, 8 from whooping-cough, and 11 from diarrhœa. Three fatal cases of whooping-cough, 3 of "fever," and 4 of diarrhœa were recorded in Edinburgh. Five deaths from diarrhœa occurred in Dundee, 3 in Aberdeen, 3 in Paisley, and 2 in Leith; and 2 from scarlet fever, 2 from diphtheria, and 2 from diarrhœa in Greenock.

### ENGLISH URBAN MORTALITY IN THE THIRD QUARTER OF 1901.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.

THE vital statistics of the thirty-three large towns dealt with in the Registrar-General's weekly returns are summarised in the accompanying table. During the three months ending September last, 83,397 births were registered in the thirty-three towns, equal to an annual rate of 29.2 per 1,000 of their aggregate population, provisionally estimated at 11,463,026 persons in the middle of the year. In the corresponding quarters of the three preceding years the rates had been 30.6, 30.2, and 30.3 per 1,000, respectively. In London the birth-rate last quarter was 28.9 per 1,000, while it averaged 29.4 in the thirty-two large provincial towns, among which the birth-rates ranged from 22.6 in Oldham and Huddersfield, 22.9 in Halifax, 23.5 in Bradford, and 23.6 in Brighton, to 34.0 in Hull, 34.7 in Sunderland, 35.8 in West Ham, and 37.6 in Gateshead.

During the quarter under notice 52,842 deaths were registered in the thirty-three towns, corresponding to an annual rate of 19.2 per 1,000, against 20.5, 22.2, and 19.1 in the third quarters of the three preceding years. In London the rate of mortality was 17.1 per 1,000, while it averaged 20.5 in the thirty-two large provincial towns, and ranged from 12.8 in Bristol, 13.4 in Cardiff, 14.0 in Croydon, 14.4 in Halifax, and 15.2 in Plymouth, to 23.9 in Liverpool, 25.4 in Sunderland, 25.5 in Newcastle, and 27.7 in Gateshead.

The 15,266 deaths referred to the principal zymotic diseases in the thirty-three towns during the quarter under notice included 11,609 which resulted from diarrhœal diseases, 1,055 from measles, 840 from diphtheria, 691 from whooping-cough, 555 from "fever" (principally enteric), 480 from scarlet fever, and 36 from small-pox. Of the 36 fatal cases of small-pox 35 belonged to London, and 1 to Liverpool. The deaths from measles, which had been 631, 1,089, and 1,349 in the three preceding quarters, declined again to 1,055 during the three months ending September last, and were equal to an annual rate of 0.37 per 1,000; in London the death-rate from this disease was 0.30 per 1,000, while it averaged 0.36 in the thirty-two provincial towns, among which measles was proportionately most fatal in West Ham, Birmingham, Birkenhead, Salford, Oldham, Leeds, and Sheffield. The deaths from scarlet fever, which had been 381 and 461 in the two preceding quarters, further rose last quarter to 480, and were equal to an annual rate of 0.17 per 1,000; in London the scarlet fever death-rate was 0.15 per 1,000, while it averaged 0.18 in the thirty-two provincial towns, among which this disease showed the highest proportional fatality in Birmingham, Bolton, Salford, Blackburn, and Preston. The fatal cases of diphtheria, which had been 1,131, 961, and 684 in the three preceding quarters, rose again to to 840 during the three months ending September last, and were equal to an annual

*Analysis of the Vital Statistics of Thirty-three of the Largest English Towns during the Third Quarter of 1901.*

| Towns. | Estimated Population middle of 1901. (Provisional). | Births. | Deaths. | Annual Rate per 1,000 Living. Births. | Deaths. | Principal Zymotic Diseases. | Deaths from Principal Zymotic Diseases. | Small-pox. | Measles. | Scarlet Fever. | Diphtheria. | Whooping-Cough. | Fever. | Diarrhœal Diseases. | Deaths of Children under one year of age to 1,000 Births. | Rate per cent. of Uncertified Deaths. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 Towns | 11,463,026 | 83,397 | 54,842 | 29.2 | 19.2 | 5.33 | 15,266 | 36 | 1,055 | 480 | 840 | 691 | 555 | 11,609 | 248 | 0.9 |
| 32 Provincial Towns | 6,919,269 | 50,644 | 35,436 | 29.4 | 20.5 | 6.20 | 10,705 | 1 | 618 | 310 | 491 | 451 | 384 | 8,450 | 277 | 1.3 |
| London | 4,543,757 | 32,753 | 19,406 | 28.9 | 17.1 | 4.03 | 4,561 | 35 | 437 | 170 | 349 | 240 | 171 | 3,159 | 205 | 0.3 |
| West Ham | 268,868 | 2,401 | 1,464 | 35.8 | 21.8 | 9.34 | 626 | — | 91 | 8 | 47 | 33 | 22 | 425 | 287 | 0.4 |
| Croydon | 134,665 | 905 | 470 | 27.0 | 14.0 | 3.88 | 130 | — | 3 | — | 6 | 2 | 7 | 112 | 234 | — |
| Brighton | 123,668 | 728 | 540 | 23.6 | 17.5 | 3.66 | 113 | — | 1 | — | 17 | 7 | — | 88 | 260 | 0.6 |
| Portsmouth | 189,907 | 1,335 | 1,001 | 28.2 | 21.1 | 6.90 | 327 | — | 6 | 1 | 13 | 5 | 13 | 289 | 325 | 1.1 |
| Plymouth | 107,974 | 727 | 409 | 27.0 | 15.2 | 3.00 | 81 | — | 2 | — | 2 | 7 | 5 | 65 | 177 | 0.5 |
| Bristol | 329,831 | 2,235 | 1,050 | 27.2 | 12.8 | 1.81 | 149 | — | 2 | 7 | 24 | 13 | 14 | 89 | 124 | 0.4 |
| Cardiff | 165,308 | 1,334 | 553 | 32.4 | 13.4 | 2.88 | 102 | — | 3 | 6 | 19 | 13 | 3 | 58 | 145 | 0.2 |
| Swansea | 94,618 | 695 | 383 | 29.5 | 16.2 | 2.11 | 50 | — | 2 | 2 | 1 | 23 | 3 | 19 | 181 | 1.3 |
| Wolverhampton | 94,467 | 762 | 399 | 32.3 | 16.9 | 4.20 | 99 | — | 10 | 3 | 3 | 1 | — | 82 | 202 | 0.3 |
| Birmingham | 523,284 | 4,200 | 2,793 | 32.2 | 21.4 | 6.57 | 858 | — | 09 | 41 | 12 | 43 | 24 | 639 | 266 | 2.1 |
| Norwich | 111,997 | 779 | 489 | 27.9 | 17.5 | 4.55 | 127 | — | — | 2 | 7 | — | 3 | 115 | 236 | 0.6 |
| Leicester | 212,498 | 1,487 | 904 | 28.1 | 17.1 | 5.69 | 301 | — | 2 | 1 | 41 | 20 | 3 | 234 | 270 | 1.8 |
| Nottingham | 240,400 | 1,732 | 1,152 | 28.9 | 19.2 | 6.26 | 375 | — | 28 | 1 | 7 | 8 | 33 | 298 | 281 | 0.4 |
| Derby | 106,076 | 717 | 413 | 27.1 | 15.6 | 4.08 | 108 | — | — | 7 | 9 | 3 | 2 | 87 | 227 | — |
| Birkenhead | 111,203 | 763 | 638 | 27.5 | 23.0 | 6.85 | 190 | — | 29 | — | 4 | 6 | 9 | 142 | 362 | 0.2 |
| Liverpool | 686,332 | 5,336 | 4,098 | 31.2 | 23.9 | 7.53 | 1,291 | 1 | 33 | 47 | 33 | 21 | 47 | 1,109 | 310 | 3.1 |
| Bolton | 168,748 | 1,170 | 838 | 27.8 | 19.9 | 5.97 | 251 | — | 11 | 16 | 7 | 13 | 14 | 190 | 258 | 0.7 |
| Manchester | 544,934 | 3,530 | 3,184 | 26.0 | 23.4 | 7.70 | 1,048 | — | 55 | 37 | 42 | 41 | 14 | 859 | 348 | 0.6 |
| Salford | 221,526 | 1,426 | 1,297 | 25.8 | 23.5 | 8.49 | 469 | — | 47 | 18 | 35 | 13 | 16 | 340 | 351 | 0.7 |
| Oldham | 137,382 | 773 | 669 | 22.6 | 19.5 | 4.29 | 147 | — | 21 | 8 | 1 | 4 | — | 113 | 237 | — |
| Burnley | 97,295 | 699 | 509 | 28.8 | 21.0 | 6.43 | 156 | — | — | 3 | 7 | 6 | 1 | 139 | 320 | 0.6 |
| Blackburn | 127,714 | 844 | 635 | 26.5 | 19.9 | 5.53 | 176 | — | 1 | 21 | 11 | 2 | — | 141 | 262 | 1.4 |
| Preston | 113,117 | 848 | 635 | 30.1 | 22.5 | 7.66 | 216 | — | — | 22 | 5 | 2 | 9 | 178 | 327 | 2.7 |
| Huddersfield | 94,998 | 535 | 406 | 22.6 | 17.1 | 3.75 | 89 | — | — | 4 | 2 | — | 9 | 74 | 215 | 1.0 |
| Halifax | 105,113 | 599 | 378 | 22.9 | 14.4 | 1.87 | 49 | — | 1 | 4 | 6 | — | 1 | 37 | 120 | 2.4 |
| Bradford | 280,161 | 1,639 | 1,184 | 23.5 | 17.0 | 4.03 | 281 | — | 3 | 6 | 2 | 40 | 20 | 210 | 232 | 0.3 |
| Leeds | 430,489 | 3,221 | 2,360 | 30.0 | 22.0 | 6.76 | 725 | — | 65 | 13 | 48 | 40 | 23 | 536 | 321 | 0.6 |
| Sheffield | 382,129 | 3,091 | 2,265 | 32.4 | 23.8 | 9.20 | 876 | — | 60 | 12 | 47 | 12 | 35 | 710 | 334 | 1.8 |
| Hull | 241,622 | 2,048 | 1,256 | 34.0 | 20.8 | 7.31 | 440 | — | 13 | 1 | 10 | 13 | 28 | 375 | 266 | 1.6 |
| Sunderland | 146,937 | 1,271 | 931 | 34.7 | 25.4 | 7.61 | 279 | — | 7 | 6 | 8 | 21 | 17 | 220 | 286 | 1.7 |
| Gateshead | 110,492 | 1,036 | 764 | 37.6 | 27.7 | 9.90 | 273 | — | 10 | 3 | 7 | 8 | 3 | 242 | 343 | 3.1 |
| Newcastle-on-Tyne | 215,516 | 1,778 | 1,369 | 33.1 | 25.5 | 5.04 | 303 | — | 13 | 10 | 8 | 31 | 6 | 235 | 285 | 1.2 |

rate of 0.29 per 1,000; in London the death-rate from this disease was 0.31 per 1,000, while it averaged 0.28 in the thirty-two large provincial towns, among which diphtheria was proportionately most fatal in West Ham, Brighton, Cardiff, Leicester, Salford, and Sheffield. The deaths from whooping-cough, which had been 1,435 and 1,377 in the two preceding quarters, further declined last quarter to 691, and were equal to an annual rate of 0.24 per 1,000; in London the death-rate from whooping-cough was 0.21 per 1,000, while it averaged 0.26 in the thirty-two provincial towns, among which this disease showed the greatest proportional fatality in West Ham, Swansea, Leicester, Bradford, Sunderland, and Newcastle. The deaths referred to different forms of "fever" (including typhus, enteric, and simple and ill-defined forms of continued fever), which had been 830, 436, and 287 in the three preceding quarters, rose again to 555 last quarter, and were equal to an annual rate of 0.19 per 1,000; in London the "fever" death-rate was 0.15 per 1,000, while it averaged 0.22 in the thirty-two provincial towns, among which the highest mortality from these diseases occurred in West Ham, Nottingham, Bolton, Huddersfield, Sheffield, Hull, and Sunderland. The 11,609 deaths from diarrhœal diseases were equal to an annual rate of 4.06 per 1,000; in London this death-rate was equal to 2.79 per 1,000 while it averaged 4.90 in the thirty-two provincial towns, and was highest in West Ham, Liverpool, Manchester, Preston, Sheffield, and Gateshead.

Infant mortality in the thirty-three towns, measured by the proportion of deaths of children under 1 year of age to registered births, was equal to 248 per 1,000 during the three months ending September last, against 275, 303, and 231 in the corresponding quarters of the three preceding years. In London the rate of infant mortality was equal to 205 per 1,000, while it averaged 277 in the thirty-two large provincial towns, and ranged from 120 in Halifax, 124 in Bristol, 145 in Cardiff, and 177 in Plymouth to 334 in Sheffield, 343 in Gateshead, 348 in Manchester, 351 in Salford, and 362 in Birkenhead.

The causes of 510, or 0.9 per cent., of the deaths in the thirty-three towns during the three months ending September last were not certified, either by a registered medical practitioner or by a coroner. The causes of all the deaths during the quarter were duly certified in Croydon, Derby, and Oldham, and only 1 death was uncertified in Cardiff, 1 in Wolverhampton, and 1 in Birkenhead; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Preston, Halifax, and Gateshead.

## THE NORTHWICH GUARDIANS AND SUPERANNUATION.

WE hear that at the last meeting of the Northwich Guardians the Board decided by a majority of 15 votes to 12 to issue a cheque for £42 10s. 4d. as payment of Dr. Moreton's claim for a half-year's superannuation allowance.

## THE BACTERIOLOGICAL EXAMINATION OF WATER.

INTERESTED writes: A public analyst states that he can say without hesitation that a certain pump could not have had anything to do with an outbreak of typhoid fever because he found the water chemically pure, and on bacteriological examination some time afterwards he could not find the typhoid bacillus. I should like to know if it would not be possible for a well to have had something to do with the outbreak and spread of the disease, although on the bacteriological examination of a small sample of the water no typhoid bacillus was discovered? Is it not recognised as a fact that the typhoid bacilli disappear when placed in pure water, and that therefore much importance should not be attached to the bacteriological examination?

*** Experience has proved that it is certainly possible for a water to be concerned in the spread of typhoid fever, although on the bacteriological examination of small quantities of the water the typhoid bacillus was not discovered. The Maidstone outbreak may be quoted as a recent case in instance. It is also a fact that typhoid bacilli disappear when placed in pure water, although the exact period of time necessary for their complete disappearance has not yet been defined, The period would doubtless depend upon the degree of purity of the water, but in drinking water of average purity the period would probably not extend over very many days.

## CLASSIFICATION OF DEATHS.

M.O.H.—(1) The classification of a death certified as due to (*a*) cerebral epilepsy, (*b*) parturition eight days, presents considerable difficulties. Unless further particulars could easily be obtained from the certifying practitioner, probably "M.O.H." would be right in placing the above death in Table IV, issued by the Local Government Board under the head of "Diseases and Accidents of Parturition." (2) "Congenital lues" is a synonym—some may think a euphemism—for congenital syphilis.

## NEGLECT OF PRECAUTIONS TO PREVENT THE CONVEYANCE OF SCARLET FEVER.

M.D. writes: A mother, nursing her boy who is afflicted with scarlet fever, allows her daughter to go to church and to take lessons (music, etc.) at a private house, the teacher being ignorant that her pupil has come from a scarlet fever case, notwithstanding that her medical man has informed her that all her family must isolate themselves and stay at home and not mix with others. Is she not liable to be fined?

*** A penalty not exceeding £5 can be imposed on any person who wilfully exposes himself while suffering from any dangerous infectious

disorder; or who being in charge of any person so suffering exposes such sufferer; or who exposes bedding, clothing, rags, etc., which have been exposed to infection. The last-mentioned kind of exposure is intended to relate to clothing, etc., belonging to the sufferer, and not to the clothing of every person who happens to be under the same roof as the sufferer. Apparently the mother in this case is not liable to a penalty under public health legislation, but an action at common law for damages might be taken by the teacher with some prospect of success, if she suffers any loss from the parent's neglect to take those precautions which are by common knowledge necessary in order to protect others.

### VERIFICATION OF NOTIFICATION ACCOUNTS.

COUNTRY MEMBER writes: As medical officer of health I receive accounts for notifications from medical men in the neighbourhood. Underneath their account follows a printed sentence: "I have examined this account and certify the same to be correct as regards the total number of certificates sent in to me," which I sign, passing on the account for payment to the clerk. On a recent occasion a medical man sent in an account for the second time, having been paid once already. I certified this account again as per above words, and the medical man was paid a second time. This has just been discovered and rectified. Failing any specific instructions, is it part of my duty to check notification accounts as having been presented, or does the above wording of my declaration absolve me from all such responsibility?"

*** It seems to be obvious that our correspondent has no responsibility beyond ascertaining if the items of the account are correct; his duty does not go further than that. The clerk keeps all the records of the accounts having been passed by committee and subsequently by the authority, and of a cheque having been dispatched. Clearly he is the officer who is responsible for any such event as that mentioned by our correspondent.

### COST OF REMOVAL AND TREATMENT OF PATIENTS IN INFECTIOUS HOSPITAL.

ENQUIRER.—The local authority is not under obligation to remove each or any case of infectious disease to hospital, but if it does remove a case it cannot recover the cost unless the person receiving the benefit has come under an obligation to pay for the same. At the same time, having regard to the exceptional expense of transit in this instance, it is for our correspondent to consider whether he might not with propriety discharge the account of the railway company.

### FREE PUBLIC VACCINATION IN BUSINESS ESTABLISHMENTS.

ETHICS writes: In reference to this subject, mentioned by two correspondents in the BRITISH MEDICAL JOURNAL of October 19th, I write to say that the public vaccinator a few weeks since called at a large hotel of which I am the medical officer, and offered to vaccinate all the staff "free" of charge. His offer was accepted, and it was only subsequently, when one of the staff was ill owing to the vaccination with inflammation all down the arm, that I became aware of the fact. I declined to attend the case, and told them to send for the public vaccinator. Surely such proceedings on the part of public vaccinators are unprofessional?

## INDIA AND THE COLONIES.

### HONG KONG.

*The Malarial Parasite.*—The Clinical Report on Malaria in Hong Hong, by Dr. J. Bell, Acting Principal Civil Medical Officer, and Lieutenant S. Stewart, I.M.S., shows a condition of affairs widely differing from that reported from any other malarial country. As disclosed by the blood examinations nearly all patients examined whether suffering from phthisis, liver abscess, plague, alcoholism, injury, or what not, had also parasites of malaria in their blood. The cases of "coma," of which there were five, are said not to have been much affected by quinine. It is surprising to be told that in a moderately-healthy place like Hong Kong these organisms were found more commonly than has been recorded for intensely malarious countries. The observations must therefore be accepted with reserve until confirmed.

## MEDICAL NEWS.

IT is said that at the next session of the Legislature of the State of Arizona an attempt may be made to exclude consumptives from the territory of the State.

PRESENTATION.—The Secretary-General of the recent Congress of Tuberculosis was entertained at the Café Royal on October 18th by all the secretaries of Committees and Sections, and the opportunity was taken to present him with a handsome chiming clock as a token of their regard and of their admiration of the way in which he had organised the successful gathering of last July. In accepting the memento Mr. Malcolm Morris acknowledged that the success of the Congress was in a large degree due to the fact that he had been happy in the various officers selected, and that he had had such confidence in their talents that he had not tried to do too much himself, but had left them to work out their several departments.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.—A meeting of the Northern and Midland Division of the Medico-Psychological Association will be held at the Bootham Asylum, York, on Wednesday, October 30th. Dr. Hitchcock and Dr. Grove will show members round the asylum before the business meeting, which will take place at 4 P.M. Dr. Miller (Hatton Asylum) will report progress in the establishment of a bureau of information on matters of asylum administration, and Dr. Powell (Nottingham) will open a discussion on the question whether the photographing of insane patients is detrimental to them. The dinner will take place at the Station Hotel, York. Further particulars can be obtained from Dr. Hitchcock, Bootham Asylum, York.

MEDICAL SERVICE AT ST. PAUL'S CATHEDRAL.—The annual service in London, under the auspices of the Guild of St. Luke, was held on Thursday, October 17th, in St. Paul's Cathedral. There was a very large congregation, including nearly 1,000 medical practitioners, of whom 300 at least, wearing their gowns, walked in procession from the west-end of the cathedral to the seats allotted to them under the dome. The service was choral throughout. The preacher was Canon Gore, who chose for his text Ecclesiastes ix, 17, "The words of wise men are heard in quiet more than the cry of him that ruleth among fools." The unhealth of man was due, he said, to no law of nature in her fundamental intentions, but was a judgment, according to law, for the systematic violation of nature in bad living, in bad housing, in needlessly insanitary conditions of work, and widespread and incredible carelessness. The very idea and method of science was yet alien to the mass of mankind. There must, therefore, be a priesthood of medicine, and the mass of men must accept, reverence, and trust the physician, "for verily the Lord hath created him." He concluded by stating that in order to prepare himself for that occasion he had read the *Life of Sir James Paget*, "that great surgeon and great Englishman," whose professional practice was inspired by a large and wise and sympathetic love of his fellow men. A collection was made for the Medical Mission Fund of the Guild.

AN AMERICAN YELLOW FEVER INSTITUTE.—Surgeon-General Wyman, of the United States Marine Hospital Service, has determined to establish an Institute for the Study of Yellow Fever. The *personnel* is to be composed of the officers of the United States Marine Hospital Service, and of others specially qualified and appointed. The work will be divided into four departments or sections: (*a*) History and Statistic; (*b*) Etiology; (*c*) Transmission; (*d*) Quarantine and Treatment. An Executive Board will have general charge of the investigations and the publication of reports.

A GERMAN UNIVERSITY CHAIR OFFERED TO AN AMERICAN.—The Prussian Government recently offered to Dr. T. W. Richards, Assistant Professor of Chemistry at Harvard, a full Professorship of Inorganic Chemistry in the University of Göttingen, which he declined. This (says *American Medicine*) is believed to be the first time that a full German professorship of the highest type has been offered to an American.

THE MEDICAL PROFESSION IN NEW YORK.—The *Medical Directory of New York, New Jersey, and Connecticut* for the year 1901, just issued by the New York State Medical Association, contains the names of 12,644 practitioners. Of these, 10,112 are in the State of New York, 1,472 in New Jersey, and 1,060 in Connecticut. Of the 10,112 names in New York, 5,577 are in New York City, and of the latter number 3,991 are in the boroughs of Manhattan and the Bronx (New York County). It is said that after the present year the Association will discontinue this publication.

### MEDICAL VACANCIES.

The following vacancies are announced:

BELFAST: ROYAL VICTORIA HOSPITAL.—Medical Superintendent. Salary commencing at £200 per annum, with board and apartments. Applications to the Honorary Secretary by November 1st.

BELGRAVE HOSPITAL FOR CHILDREN.—Honorary Dental Surgeon. Applications to the Honorary Secretary, 77 and 79, Gloucester Street, S.W. by November 2nd.

BETHNAL GREEN INFIRMARY.—Third Assistant Medical Officer. Salary, £160 per annum, with furnished apartments, board, and washing. Applications on forms provided to be sent to the Medical Superintendent at the Infirmary, Cambridge Road, N.E., by October 29th.

BIRMINGHAM CITY ASYLUM.—Junior Assistant Medical Officer: unmarried, and not over 30 years of age. Salary commencing at £50 per annum, with board, apartments, and washing. Applications to the Medical Superintendent.

BRACEBRIDGE ASYLUM, near Lincoln.—Junior Assistant Medical Officer: unmarried, and not over 30 years of age. Salary, £225 per annum, with furnished apartments, board, attendance, etc. Applications to Mr. W. T. Page jun. Solicitor and Clerk to the Visiting Committee, 5 and 6, Bank Street, Lincoln, by November 27th.

BRENTWOOD: ESSEX COUNTY ASYLUM.—Junior Assistant Medical Officer; not over 25 years of age. Salary, £140 per annum. Applications to the Medical Superintendent.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—House-Physician; unmarried, and under 30 years of age. Salary, £80 per annum, with board, residence, and washing. Applications to the Secretary by October 30th.

BRISTOL GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with board, residence, etc. Applications to the Secretary by October 28th.

CENTRAL LONDON OPHTHALMIC HOSPITAL Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by November 4th.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane Street, S.W.—Honorary Surgeon for the Western District. Applications to the Secretary by October 31st.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Registrar. Honorarium, 20 guineas per annum. Applications to the Secretary by November 9th.

CHESHIRE COUNTY ASYLUM, Parkside, Macclesfield.—Junior Assistant Medical Officer; unmarried. Salary, £145 per annum, rising to £160, with board, furnished apartments, washing, and attendance. Applications to the Medical Superintendent.

DOWNPATRICK: COUNTY DOWN INFIRMARY.—Registrar: unmarried. Salary, 60 guineas per annum, with board, fuel, and washing. Applications to Dr. Tate by October 31st.

DUBLIN: TRINITY COLLEGE.—King's Professorship of the Institutes of Medicine (Physiology and Histology). Applications to Dr. J. Craig, Registrar, Royal College of Physicians, Kildare Street, Dublin, by November 30th.

GLASGOW UNIVERSITY.—Additional Examiners for Degrees in Medicine with special reference to (1) Chemistry, (2) Materia Medica and Therapeutics, (3) Zoology, (4) Practical Medicine, systematic and clinical, (5) Surgery, systematic and clinical. Salary for (1), (2), and (3), £30; and for (4) and (5) £50. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by December 3rd.

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Remuneration at the rate of £3 per annum, with board, residence, and washing. Applications to the Secretary by October 30th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, N.—Surgeon. Applications to the Secretary.

GROVE HALL ASYLUM, Bow.—Junior Assistant Medical Officer (male). Salary, £120 per annum, with board, apartments, attendance, and laundry. Applications to the Medical Superintendent.

HOLLOWAY AND NORTH ISLINGTON DISPENSARY.—Two Honorary Medical Officers. Applications to the Secretary, Palmer Place, Holloway Road, N.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Resident Medical Officer; unmarried and not under 25 years of age. Salary, £200 per annum, with board and residence. Applications to the Secretary by October 30th.

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square, W.—Senior Clinical Assistants. Appointments for six months, but renewable. Applications to the Secretary-Superintendent by November 9th.

LEICESTER INFIRMARY.—Assistant House-Surgeon. Salary, £80 per annum, with board, apartments, and washing. Applications to the Secretary, 24, Friar Lane, Leicester.

LINCOLN COUNTY HOSPITAL.—Senior House-Surgeon: unmarried, and under 30 years of age. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by November 14th.

LIVERPOOL: HOSPITAL FOR WOMEN. House-Surgeon. Appointment for six months. Honorarium, £25. Applications to the Honorary Secretary of the Medical Board.

LONDON DISPENSARY, 27, Fournier Street, Spitalfields, E.C.—Assistant Medical Officer; non-resident. Salary, £90 per annum. Applications to the Secretary by October 31st.

MACCLESFIELD GENERAL DISPENSARY.—Junior House-Surgeon. Salary, £70 per annum, with board and residence. Applications to the Chairman of the House Committee by October 30th.

MARGATE: ROYAL SEA-BATHING HOSPITAL.—(1) Honorary Assistant Visiting Surgeon: (2) Resident Surgeon to act as junior for six months, and six months as senior. Salary at the rate of £80 and £120 per annum respectively, with board and residence. Applications to the Secretary, 30, Charing Cross, London, S.W., for (1) by October 30th, and for (2) by October 31st.

MORPETH DISPENSARY.—House-Surgeon; unmarried. Salary, £120 per annum, with furnished rooms, etc. Applications to the Honorary Secretary by October 28th.

NORTH LONDON HOSPITAL FOR CONSUMPTION.—Clinical Assistant at Central Out-patient Department. Appointment for six months. Honorarium at the rate of £35 per annum. Applications to the Secretary, 41, Fitzroy Square, W., by October 31st.

PRETORIA CIVIL HOSPITAL.—Resident Assistant Medical Officer; unmarried, and under 28 years of age. Appointment for three years. Salary, £300, £350, and £400 for each of the three consecutive years, with board, lodging, and washing. Allowance of £60 on arrival to cover expenses of journey. Must leave England on or about November 15th. Applications to the Private Secretary, Colonial Office, Downing Street, S.W.

ROTHERHAM HOSPITAL.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to Mr. E. S. Baylis, Moorgate Street, Rotherham, by November 5th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—(1) Resident House-Physician (female); (2) Resident House-Surgeon (female); (3) House-Physician (male); (4) Casualty House-Surgeon (male). Appointments for six months. No salary, but board, etc., provided. Applications to the Secretary by October 28th.

SALFORD ROYAL HOSPITAL.—Medical Officer for the Pendleton Branch Dispensary. Salary, £150 per annum. Applications to the Secretary by October 29th.

SALISBURY INFIRMARY.—(1) House-Surgeon; unmarried. Salary, £100 per annum. (2) House-Physician: unmarried, and not exceeding 30 years of age. Salary, £75 per annum. Board, lodging, and washing provided in each case. Applications to the Secretary by November 20th.

SCHOOL BOARD FOR LONDON.—Medical Officer for the Board Truant School, Highbury Grove, N. Salary, £125 per annum. Applications to the Clerk to the Managers, School Board Offices, Victoria Embankment, W.C., by October 31st.

SHANGHAI MUNICIPAL COUNCIL.—Assistant Health Officer; must possess D.P.H., and not be over 35 years of age. Salary, 360 taels a year (about £500), with means of locomotion and first-class passage to and from England. Applications to Messrs. J. Pook and Co., 63, Leadenhall Street, E.C., by November 30th.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—(1) Surgeon. (2) Assistant Surgeon. Applications to the Secretary by November 5th.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House-Surgeon. Salary, £75 per annum, with residence, board, and washing. Applications to the Secretary, 74, King Street, South Shields, by November 4th.

## MEDICAL APPOINTMENTS.

BARROWMAN, T., M.B., C.M.Glas., appointed District Medical Officer of the Grimsby Union.

BENNETTS, A. J., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Medical Superintendent of the Camberwell Infirmary, and Assistant Medical Officer of the Gordon Road Workhouse, *vice* T. Gibson, M.D.Edin., resigned.

BIRD, Arthur Cyril, M.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Surgeon at the Victoria Cottage Hospital, Sidmouth, Devon, *vice* A. Macindoe, M.D.Glasg., resigned.

BYGOTT, Albert Henry, M.B.Lond., appointed District Medical Officer and Public Vaccinator for the Dereland District of the Aston Union, *vice* Flamank Marshall, M.B.Lond., deceased.

BYHAM, W. L., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Staines Union.

COLLINS, E. Treacher, F.R.C.S.Eng., appointed to the newly-created post of Ophthalmic Surgeon to the Charing Cross Hospital and Lecturer on Ophthalmology at the Medical School.

DEACON, Mary Stewart, M.B., B.S.Lond., L.R.C.P. & S.Edin., appointed Medical Officer of Health to the Accra Town Council, West Africa.

FLETCHER, J. L., M.B., C.M.Edin., reappointed Medical Officer of Health for the South Darley Urban District.

FORDYCE, William, M.D.Edin., appointed Assistant Physician to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

HADLEY, C., M.R.C.S.Eng., L.R.C.P., appointed District Medical Officer of the Nuneaton Union.

HIGGENS, Oakley Elford, M.A.Cantab., M.B.Dunelm., M.R.C.S., L.R.C.P., appointed Honorary Medical Officer to the Holloway and N. Islington Dispensary.

JOYCE, Miss M., M.B., B.S.Durh., appointed Assistant Medical Officer to the Camberwell Infirmary, *vice* Miss G. Russell, M.D.Brux., L.R.C.P., L.R.C.S.Edin.

KNOWLING, E. M., M.B.Camb., M.R.C.S.Eng., appointed District Medical Officer of the Pembroke Union.

LANGRAN, W., L.R.C.P., L.R.C.S., appointed Medical Officer of Health for the Axminster Rural District, *vice* G. Evans, M.R.C.S.Eng.

MILLER, A., M.B., B.C.Camb., appointed District Medical Officer of the Grimsby Union.

PARSONS, John Herbert, M.B., B.S., B.Sc., F.R.C.S., appointed Curator and Librarian to the Royal London Ophthalmic Hospital, City Road.

ROBINSON, G. A., M.B., B.S.Lond., M.R.C.S.Eng., appointed Surgeon to the Samaritan Hospital, and Lecturer in University College, Nottingham.

STEPHEN, J. A., M.A., M.B., Ch.B., D.P.H.Aberd., appointed Police Surgeon and Prison Surgeon Elgin County, also Medical Officer of Health for Burgh of Branderburgh and Lossiemouth, *vice* Dr. Grant, resigned.

## DIARY FOR NEXT WEEK.

### MONDAY.

**Medical Society of London,** 11, Chandos Street, Cavendish Square, W., 8.30 P.M.—Drs. A. Elliott and J. W. Washbourn on Typhoid Fever in South Africa.

**Odontological Society of Great Britain,** 20, Hanover Square, W., 8 P.M. Inaugural Address by the President. Communications by Mr. F. C. Wallis, Mr. J. G. Turner, the President, and Mr. Lewin Payne.

### WEDNESDAY.

**British Balneological and Climatological Society,** 20, Hanover Square, W., 8.30 P.M.—Address by the incoming President, Dr. Douglas Kerr. Dr. Houchin on Aix Treatment of Syphilis in London.

### THURSDAY.

**Neurological Society of London,** 11, Chandos Street, Cavendish Square, W., 8.30 P.M.—Cases will be shown by Drs. Ferrier, Hutchison, Head, and Muskens.

### FRIDAY.

**Laryngological Society of London,** 20, Hanover Square, 5 P.M.—Cases will be shown by Mr. Spencer, Dr. Donelan, Dr. StClair Thomson, Dr. Tilley, Mr. Westmacott, Dr St. George Reid, Mr. Lake, and Mr. Waggett.

**West Kent Medico-Chirurgical Society,** Royal Kent Dispensary, Greenwich Road, S.E., 8.45 P.M.—Mr. G. Chisholm Williams on High Frequency Electrical Currents in the Treatment of Certain Diseases.

**West London Medico-Chirurgical Society,** West London Hospital, Hammersmith Road, W., 8.30 P.M.

### POST-GRADUATE COURSES and LECTURES.

Charing Cross Hospital, Thursday, 4 P.M.—Lecture on Surgical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, Wednesday, 4 P.M.—Lecture on Pneumothorax.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 P.M.—Clinical Demonstration.

London Temperance Hospital, Thursday and Friday, 2 P.M.—Clinical Demonstrations.

London Throat Hospital, 204, Great Portland Street, W., Wednesday, 5 P.M.—Practical Demonstration: Impaired Movement of Vocal Cords.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—Demonstrations will be given at 4 P.M. as follows: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, ear.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., Tuesday, 3.30 P.M.—Lecture on Amyotrophic Lateral Sclerosis.

West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 P.M. as follows:—Monday: Examination of the Throat and Nose. Tuesday: Minor Surgery. Wednesday: Surgical Anatomy. Thursday: Operative Treatment of Fractures. Friday: Therapeutics.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTH.

HILL.—On October 16th, at Oakdene, Churchdown, Cheltenham, the wife of Leopold G. Hill, M.R.C.S., L.R.C.P.Lond., of the Church Missionary Society, Pak-hoi, S. China, of a son.

### MARRIAGES.

COOMBE—JOHNSTONE.—On October 22nd at St. Barnabas, Beckenham, by the Rev. A. H. Cooke, M.A., Fellow of King's College, Cambridge, Head Master of Aldenham School, assisted by the Rev. N. M. Morgan Brown, M.A., Minor Canon of St. Paul's, and the Rev. George Griffith, Vicar, Russell Coombe, M.A., M.D.Camb., F.R.C.S.Eng., of Exeter, to Eve Harriot Cartledge, eldest daughter of John Cartledge Hirst Johnstone, J.P., of Beckenham, and formerly of Hardwick Hall, county Durham.

GOING—EDGECOMBE.—On October 16th, at St. Nicholas Church, Blundellsands, by the Rev. C. de B. Winslow, Vicar, Robert Marshal Going, F.R.C.S., of Littlehampton, son of the late Ven. Archdeacon Going, to Fanny Augusta, daughter of the late George Edgecombe, of Blundellsands.

### DEATHS.

APLIN.—On October 21st, at Hill House, Notts County Asylum, Alfred Aplin, M.D., M.R.C.S., L.R.C.P., aged 47, Resident Medical Superintendent of Notts County Asylum.

BENTHAM.—On October 15th, Robert Bentham, M.D., at Ellerslie, Willesden, London, N.W., aged 81 years.

# LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* British Medical Journal *alone, unless the contrary be stated.*

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look at the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any Circumstances be Returned.

In order to avoid delay, it is particularly requested that **ALL letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal, and not at his private house.**

Telegraphic Address.—The telegraphic address of the EDITOR of the British Medical Journal is *Aitiology, London.* The telegraphic address of the MANAGER of the British Medical Journal is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

## QUERIES.

### Treatment of Phlegmasia Alba Dolens.

R. B. wishes to be referred to a monograph on the above subject. He asks: What is the appropriate treatment where œdema and swelling of the foot and leg persists three or four months after the acute symptoms have subsided, and when the patient is wearing an elastic bandage from the foot to the knee? Is there any prophylactic treatment which could be adopted to prevent recurrence?

### "Badminton Elbow."

Badminton asks: Can any of your readers inform me if they have come across cases of "Badminton elbow"—stiffness, weakness, and pain in the joint, with tenderness in parts near it persisting for many weeks after the sudden starting of symptoms while playing the game? If so, what is the pathology and treatment? Is it analogous to "tennis elbow"? Tingling in the fingers would suggest that it is nervous rather than muscular. Pain more marked on extension than on flexion. Hints on treatment would be acceptable.

### Treatment of Diabetes.

P. writes: I have a patient, aged 30, who has suffered from diabetes for thirteen months. She has small doses of codeine along with infusion of senecio Jacobœa, which keeps the sugar away, except when she should have her menses. A short time ago I put her on senecin (B., W., and Co.), but I have not this time got the results I usually obtain from that drug. I shall be glad of further advice as to treatment, being convinced that if the menses were once established she would soon be all right. Sometimes the specific gravity is 1032, but no sugar, only either bile or urates.

### Disinfection of Indiarubber Gloves.

J. T. B. asks: What are the best means to disinfect indiarubber gloves, both before and after use? After using, I presume boiling would be effectual, but what effect has it on the rubber as regards durability? After the manipulation necessary to draw on a glove, it is possible that it may no longer be perfectly aseptic. What is, then, the best method of disinfection, say immediately before making a vaginal examination?

### Treament of Croup.

J. M. W. asks: Is the pathology of croup thoroughly understood? Is it a nervous affection or a vascular change affecting the larynx? I have recently had favourable results from the use of nitroglycerine (trinitrin) in doses of half a minim in a boy aged 14 years. This form of croup is certainly not fully described in books.

### Barium Sulphide as a Depilatory.

Pard will be glad to hear the experience of any who have used barium sulphide for the removal of superfluous hair, especially: (1) The prescription and details of use; (2) the period before growth again occurs; (3) any objections to this method of treatment.

### Works on Public Health.

T. H. asks for information as to: 1. The most useful annotated edition of the Public Health Act and other subordinate Acts for the use and instruction of a medical officer of health. 2. Dealing fully with the question of drainage, disposal of sewage, and water supply in rural districts.

*** *The Practical Guide to the Public Health Acts*, by T. Whiteside Hime, 2nd edition (London: Baillière, Tindall, and Cox. 1901. 15s.), will probably meet the requirements of our correspondent. We are not acquainted with any one book dealing exclusively with the drainage, sewage disposal, and water supply in rural districts: but a great deal of useful information on these matters is given in *Hygiene and Public Health*, by Louis Parkes and Henry Kenwood (Lewis and Co., Gower Street, London); *A Handbook of Hygiene*, by George Wilson (J. and H. Churchill, 11, New Burlington Street); and *Hygiene and Public Health*, by B. A. Whitelegge (Cassell and Co., London); *Rural Hygiene*, by G. V. Poore; *The Drainage of Villages*, by W. Spinks; *Water Supply* (Rural), by A. Greenwell and W. T. Curry; *Sanitary Work in the Smaller Towns and in Villages*, by C. Slagg; *Modern Methods of Sewage Disposal*, by G. E. Waring: *Sewage and the Bacterial Treatment of Sewage*, by S. Rideal, are all works which will be useful.

### The Infectiousness of Typhoid Fever.

Dr. E. Jepson (Durham) asks whether typhoid fever should always be considered infectious, and whether such cases should be admitted to the wards of a general hospital?

*** In *The Theory and Practice of Hygiene* (Notter and Horrocks, 1900) the following opinion is expressed: "Though some doubt exists as to whether the breath of those suffering from enteric fever is infective, there is none as to the infective nature of the excreta. Experience shows that enteric patients can be treated in large general wards side by side with other cases without danger to the latter. With scrupulous cleanliness, especially as regards the nurse's hands, and clothing or bedding soiled by the patient's discharges, there seems little tendency for the infection to spread. The stools and urine are probably infective throughout the whole period of the disease." In *Hygiene and Public Health* (Louis Parkes and Kenwood, 1901), it is said that the virus "is transmitted from the sick to the healthy, chiefly by means of drinking water, but occasionally through fomites and the air. In enteric fever, as in cholera, it would appear probable that at the moment of leaving the body the specific contagion is not possessed of any high degree of virulence, for the reason that the mode of existence of these organisms in the intestine must be from the first practically an anaërobiotic one." It is added that "in hot countries, where the flies abound in enormous numbers, it is probable that enteric fever is very frequently transmitted through their agency, the flies directly conveying the contagion on their feet from infected excreta to some article of food." And further, "that the disease is frequently communicated by personal intercourse is repeatedly demonstrated by its spread to those in attendance on a patient in dwelling houses, and even in hospitals."

## ANSWERS.

Dyspnœa.—The preparation is a secret remedy, and it does not figure in the price lists of any of the wholesale houses.

Enquirer.—The General Medical Council only "recognise" degrees and diplomas which admit to the *Medical Register*. The certificate in midwifery mentioned is not in the schedule of the Medical Act, 1858, and would therefore not be recognised by the Council.

A. G. E. writes: "Arab" will find Gresswell's *Veterinary Pharmacopœia, Materia Medica, and Therapeutics* a most useful book. The hypodermic injection of morphine is made to contain 1 grain of the acetate in 10 minims, and the dose is from 30 to 60 minims.

Vaccinia.—Seeing that the matter was ultimately settled on the lines desired by our correspondent, it seems hardly worth while now to enter on a discussion of it; but if "Vaccinia" and the District Medical Society think otherwise, they could bring the question before the Ethical Committee of the local Branch of the Association, though we doubt very much whether the action complained of could be regarded as unprofessional. Whether or not it was expedient, or convenient for the public welfare is a question on which, without hearing the other side, we can hardly express an opinion, though inclined to agree with "Vaccinia" on the general principle.

W. E. L.—(1) It is not usual for insurance offices to accept health risks without medical examination. (2) Our correspondent's case is evidently exceptional, and we would not advise him to give up his policy. (3) There does not appear to have been a breach of contract. "W. E. L." applied for life assurance, and has been taken as a first-class life; it was within the power of the company to dispense with an examination.

W. L. does not state whether he refers to domestic filtration or to filtration on a large (public) scale. In either event it is impossible to answer his question sufficiently here. He would do well to consult one of the recognised textbooks upon hygiene and public health, and if the information therein is not sufficient for his purpose, to turn to *Water and Water Supplies*, by J. C. Thresh, third edition (London: Rebman, Limited, 1901), or to *Water and its Purification*, by S. Rideal (London: The Sanitary Publishing Company, 1897, 7s. 6d.)

Naval Surgeon.—(1) The appointment of medical inspector under the Local Government Boards is in the hands of the chairmen of the several Boards. (2) Application for an appointment as surgeon to an emigrant ship should be made to the general manager of the line or

lines selected, and should be supported by such verbal or written recommendations from friends or patrons of the firm as may be obtainable. The names and addresses of the principal firms engaged in that trade are as follows:—In London: The Union Castle, 3, Fenchurch Street; Atlantic and Transport, 108, Fenchurch Street; Orient, 5, Fenchurch Avenue; Shaw, Savill, and Albion, 34, Leadenhall Street; the Ducal Line and the New Zealand Steamship Company, both of 138, Leadenhall Street. In Liverpool: The Beaver Line, African House, Water Street; Cunard, 8, Water Street; America, 22, Water Street; Allan Bros., 10, James Street; Dominion, 24, James Street; White Star Line, 30, James Street; and the Pacific Steam Navigation Company, 51, James Street. In Glasgow: The Anchor Line, Union Street; and Messrs. J. and A. Allan, 25, Bothwell Street.

### Treatment of Cardiac Dyspnœa.

Dr. James Edmunds (London, W.) writes: "Anxious" in his queries does not give certain data which are essential for safe prescribing in such a case: (1) What is the net body weight of the patient? (2) How much alcohol does she consume each day on an average, and in what form of beverage?

In general, I would say: If such a patient carry redundant weight no relief can be given until that is got rid of. Every pound of surplus fat upon the body indicates a corresponding weight of fat upon the heart, and so taxes its motorial energy at every beat—night and day—just as a lump of wax upon a tuning fork lowers its pitch, and brings it in rest earlier on account of the undue weight which it has to carry backwards and forwards at each vibration. Surplus fat also taxes the circulating power of the heart by having to be kept alive, pumped for, and scavenged. Body weight as a source of heart failure has never yet, I believe, been adequately considered. Surplus fat is a mechanical drag upon every stroke of the heart; it taxes the vitality of the system as a matter of mere porterage; it taxes the pumping power of the heart by adding to the area of the circulation; it taxes all the scavenging organs of the body in order to eliminate the refuse of its metabolism.

There are two ways of reducing the body-weight. The way generally adopted is to force the system into greater exertion by "constitutional walks," and what is called "exercise." This is the way to kill such patients as that which "Anxious" is puzzled with. This way amounts to exhausting the energy of the body in order to convert it into a food destructor, exhausts the nervous system, wears out the muscular power, and taxes alike the digestive and the eliminative organs. It is pure waste and wrongheadedness. Another way is simply to limit the ingesta, and make the patient live upon at least one ounce each day less than is consumed by the work done in the system. I always say "Reduce at the rate of half a pound per week, weigh every Monday morning, and keep regular note of your weight." Now, one ounce a day means a reduction of 365 ounces in a year. I find practically that this is always a safe amount to reduce, and that this rate of reduction can be carried on as long as is necessary. If the patient at first feels faint or hungry, let him drink a tumblerful of hot water tinctured with a squeeze of fresh lemon juice, and lie down upon the sofa for a time, until recuperation has taken place. Do not let him fill himself up with food, and avoid all preparations of liquid beef, and all such things.

The points of rest and limitation in point of quantity of food being clearly grasped, the nature of the diet does not need much change. The diet must be fastidious and varied to any extent. It should never be monotonous. While rapid reduction is necessary, sugar and pure farinacea and bread stuffs should be cut down. Fresh garden stuffs and fruits (avoiding grapes or other purely saccharine fruits), boiled meats, birds, or fish, are all good if only the quantity be duly limited. It is really wonderful how much relief can be given to these cases on these lines.

As to "heart tonics," they are all poisons, and should be carefully avoided.

As to alcoholic beverages, they do nothing but harm. In certain cases a teaspoonful of whisky or other spirit in a gill of hot water as a medicine is useful now and then.

It takes a week or two of resolute regimen and discipline before such reduction of body weight and elimination of metabolic refuse can be obtained that the patient feels the commencement of relief.

### Tuberculosis in Scotland.

Yorkshireman.—(1) and (2). According to the latest published reports of the Registrar-Generals for England and Scotland respectively (dealing with the year 1898), the figures are as follows:

| | | *England and Wales.* | *Scotland.* |
|---|---|---|---|
| Phthisis | Deaths ... ... | ... 41,335 | 7,090 |
| | Percentage of all deaths | ... 7.5 | 9 |
| | Proportion per million living | ... 1,317 | 1,680 |
| Tuberculosis | Deaths ... ... | ... 60,139 | 10,140 |
| | Percentage of all deaths | ... 10.9 | 13.04 |
| | Proportion per million living | ... 1,916 | 2,400 |

(3) There does not seem to be any reason to suppose that the Scotch race is more prone to tuberculous infection than the English. The difference in the incidence of tuberculous diseases may possibly be due to differences in the hygienic condition of the population.

## LETTERS, NOTES, Etc.

### The Third Stage of Labour.

Dr. George W. Whitley (Downton) writes: Meddlesome midwifery is bad; it is very bad in the third stage of labour. Nature nearly always does her work best unaided; the accoucheur's assistance comes in when she fails. Traction on the cord does no harm provided the placenta is detached; it does harm if not detached. This is easily found out by placing the hand over the uterus. I always tie the cord 1 inch from the vaginal opening, having previously very gently drawn down any loose coils remaining in the passage; then, by watching the length of cord to the ligature, we know if detachment takes place. After the child is born a short period of perfect rest comes as a great relief, so that, unless bleeding is taking place, I leave my patient entirely alone, not interfering with her in any one single way. The expulsion of the afterbirth very much resembles that of the child, contractions and relaxations following in regular order, the latter as necessary as the former, and it is clearly wrong to grip the uterus at once and prevent this. I have sometimes waited for half an hour for this shedding, and this with very little bleeding. Hæmorrhage here is our danger, and if this be excessive the placenta must be removed at once, attached or unattached. A tired-out uterus should ever be supported by the hand. With ordinary antiseptic precautions I have never known any bad results to follow the introduction of the fingers as an aid to the removal of the placenta.

Dr. Hugh Taylor (Wroxham, Norwich) writes: Thirty-seven years of midwifery practice have taught me not to remove the placenta directly after the birth of the infant. Wait a quarter of an hour or more, then press firmly on the uterus in a downward direction, and the placenta will then generally find its way into the vagina, where it can be seen at the orifice of the vagina, and then gently be pulled away. I advise most strongly the rotation of the placenta several times (I always rotate it twenty times). On no account, if possible to avoid it, introduce the fingers or hand into the vagina or uterus after the child is born, for it is then the risk of septic mischief is so great.

Dr. Alexander Duke (Cheltenham) writes: The advice given by Mr. W. Cooper, in your issue of October 12th, p. 1123, I consider erroneous. He states in rather a domineering manner: "On delivery of the placenta it should be twisted round and round, and the membranes come away like a rope." He will find this advice in many of the textbooks, and I quite agree with him so far that any midwifery book containing such advice should be destroyed. He appears to have followed the said advice himself. Now, what happens when the placenta is twisted round and round? When said twisting is carried on till the twist reaches the os and cervix contraction of both takes place, and the membranes are twisted off entirely, leaving a large or small piece in the uterine cavity, giving rise to severe "after-pains" till expelled by uterine action, or worse again, retained *in utero* at immense risk to the patient. On several occasions, while acting as Assistant Physician to the Rotunda Hospital, I found patients on the second or third days after delivery with high temperature and rapid pulse. I at once proceeded to wash out the uterine cavity, and in nearly all cases have been rewarded by the expulsion of a piece of stinking membrane the cause of all the trouble, which had evidently been left behind by following the advice of the textbooks (and Mr. Cooper) to "twist the membranes." A man with soiled hands, no common sense, and no forceps, can unfortunately attend any stage of labour, hence the mortality.

G. P. writes: I am convinced that by removing the placenta as soon as a decent contraction can be started much good is done. I believe there is less hæmorrhage, and certainly, as one correspondent remarks, the moral effect upon the woman is good. It is stated that by early removal you are likely to have more bleeding, or to break the placenta or membranes. I have observed my assistants, who usually come straight from hospital and carry out book teaching, and find their results much like mine in my earlier practice. It is surprising what a large number of adherent placentas and cases of hæmorrhage are encountered by beginners. They are afraid to attend a confinement without taking a douche, and when they use it the water is so hot they lose you your patient and ruin your syringe. On the birth of the child the placenta is separated more or less from the uterine wall. By immediate removal you deal with one set of clots. By waiting, clots that have already formed are likely to be disturbed by the changing shape of the womb, and clotting has to take place a second time. I cannot believe the slight pain necessary for expulsion can cause the uterus to relax, considering the magnitude of pain previously experienced; neither can I understand why the placenta or membranes should be torn unless adherent. You, as Nature does, simply change the shape and size of the of the uterus, and so separate the body.

### Incentives to Youthful Smoking.

Whether or not in any individual person of adult age the smoking of tobacco be good or bad it is generally acknowledged that smoking during the early stages of adolescence is probably wholly bad, and that smoking in declining years to the same extent as in vigorous manhood is in most cases harmful. Having regard to the youthful members of the community, the trade customs of the tobacco manufacturers and tobacco sellers directed to the extension of the sale of their commodity are not entirely free from danger to the public health. The particular class of trade devices to which we refer is that by which in each packet of cigarettes is included one picture of a series of 100, the complete possession of which series entitles the holder to a money prize of say a sovereign. Other variants of the same device are the possession of ten numbers from as many packets of cigarettes entitling their usually juvenile holder to receive some toy of a particular value, or the possession of ten tickets entitles the holder to an eleventh package of cigarettes. It is not, of course, suggested that the youthful collector himself consumes all the cigarettes which have accompanied the 10 or 100 coupons necessary for his purpose, but allowing for those which he does not buy, but either begs, borrows, or barters, it is clear that this particular device directly tending to stimulate juvenile smoking, and especially when it is found that five or even six of these cigarettes can be purchased for the sum of one penny, is to be entirely deprecated.

### Relapsing Erysipelas.

In reply to Dr. D. McAskie (British Medical Journal, September 28th, 1901, p. 940, col. 1), the reviewer desires to point out he was discussing eczema and not erysipelas. Recurrent erythematous eczema of the face and orbits is frequently erroneously diagnosed as erysipelas. It is such cases that should certainly not be designated "relapsing erysipelas," as it only leads to confusion. True erysipelas of the face may of course

occur, and may relapse. But the two conditions should be kept separate and distinct. The constitutional symptoms and other features of Dr. McAskie's case point to erysipelas.

### HEROIN POISONING.

MEDICUS writes: On October 2nd, 1901, I took an overdose of heroin estimated at about 1½ gr., not knowing the amount. Shortly afterwards I began to feel a tingling all over and things appeared a little different to what they should be. I drove home, a distance of three miles, and sat down to dinner, but could not take the food owing to nausea. I felt intense sleepiness coming on, and at once went out and harnessed my horse and commenced to drive countrywards to keep in the open. I reached a farmhouse a mile or two distant, and took a cup of tea and a biscuit, feeling unwell. They also gave me a quarter of a glass of whisky to which I added some warm water. I started to drive again, and at times the sleepiness came so that I almost felt like giving in. Mental effort seemed to shake it off. I vomited once or twice watery material tinged with green. I returned home at the end of two hours and attended to two patients. I did not feel drowsy at this time, but standing erect brought on nausea and sometimes vomiting. I lay down afterwards and was able to keep from drowsiness, and at the end of six hours was able to feel free of all danger of falling asleep. I therefore rested. I do not know whether to ascribe my escape to having little in my stomach that day, but no doubt the repeated vomiting was a useful factor. The ordinary dose is $\frac{1}{14}$ to $\frac{1}{12}$ gr.

### THE NURSING OF CHRONIC PNEUMONIA.

DR. J. W. MARTIN (Holywood, Dumfries) writes that he has recently had under treatment two cases of chronic catarrhal pneumonia in very young children, one aged 3⅔ months, the other 2⅔ years, lasting over several weeks treated with counter-irritation and internal medication, in which he thinks that change into another room had a very beneficial effect. He suggests that this point is worthy of being kept in mind.

### A SULPHUR SPRING.

Dr. ARTHUR WATSON (Leamington Spa) writes: A few months ago, whilst passing a week at Llanfair, nine miles by coach from Welshpool, I heard there were two medicinal springs about a mile upwards from the town, so I went to ascertain. They are situate in a charming and bracing bit of moorland, and have each a primitive pump. The first I tried smelt decidedly sulphurous, the second strongly so. To taste, however, it is apparently a pleasant alkaline water, free of all flavour, yet with so strong an odour I can only suppose that a fair amount of sulphur must be exhibited in the usual pint for the gouty. As few people outside seem to know of this spring, I bring the fact forward as possibly worthy of earnest investigation. It is not every one in the Shrewsbury district who has the time and money to visit Harrogate and Strathpeffer.

### A CASE OF PLACENTA PRÆVIA.

DR. C. J. R. LAWDAY (Dartmouth) writes with reference to the case reported by Dr. J. Holmes in the BRITISH MEDICAL JOURNAL of September 21st, 1901, p. 848, to strongly advise medical men always to make an internal examination when called to any case of uterine hæmorrhage, as otherwise the patient is left in a very grave condition.

### CHANGE IN COLOUR OF IRIS.

DR. E. DONALDSON (Londonderry) writes: In the BRITISH MEDICAL JOURNAL for October 19th there is an account by Dr. Robert J. MacKeown of a man whose left iris became blue after an operation. How is this change to be explained? It is well known that the colour of the iris at birth is very often blue, because the retinal pigment at the back of the iris seen through a thin stroma appears blue. This colour often changes as age advances, when the anterior layer becomes thicker, but should this layer be lost or become thin from any cause the iris would again appear blue. In the *Ophthalmic Record* for August, 1900, Dr. Edward Jackson, of Denver, has recorded, with illustration, a most interesting case, in which the anterior layers of endothelium and condensed pigmented tissue were seen in the act of exfoliation, and the denuded portions of the irides were blue, while the other parts were grey-brown.

### AN APPEAL TO MASONS.

DR. JOSEPH POLLARD, London, desires to thank all those who took an interest in the election of Reginald E. A. Webster to the Royal Masonic Institute for Boys in response to the appeal which was published in the BRITISH MEDICAL JOURNAL some time ago. The boy was elected at the top of the list of twenty candidates with 7,137 votes.

### THE STAINING OF THE TUBERCLE BACILLUS.

DR. HERBERT W. G. MACLEOD (Streatham) writes to point out an error in his communication published in the BRITISH MEDICAL JOURNAL of October 19th, p. 1215. The error is in the words: "It is often advisable to apply a drop of *water* on the coverglass, and to use the *oil*-immersion lens in the ordinary way." The film after staining is temporarily mounted in *water*, a dry coverglass is applied, and on it a drop of *oil* is placed, and the *oil*-immersion lens is used in the ordinary way. If the result is satisfactory, the coverglass is slipped off, the specimen is dried, and mounted finally in balsam.

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LETTERS, COMMUNICATIONS, ETC., have been received

**A** Messrs Arnold and Sons, London. **B** J. W. Batterham, M.B., St. Leonard's-on-Sea; Mr. G. Brown, London; Mr. R. Boyle, London; Mr. G. H. Broadbent, Manchester; C. A. Bentley, M.B., Borjulie; Dr. A. Bronner, Bradford; Mr. J. P. Bush, C.M.G., Clifton; Dr. R. J. A. Berry, Edinburgh; Mr. R. J. Bryden, Gravesend; Mr. C. K. Bond, London; Badminton; Dr. E. M. Brockbank, Manchester; Mr. L. A. Bidwell, London; Mr. C. P. Burd, Shrewsbury. **C** Mr. F. W. Collingwood, London; Mr. P. A. Cooper, Bombay; E. M. Cornor, M.B., London; Civil Surgeon; Dr. E. Cautley, London; Mr. L. Cooper, Rochester; Mr. H. B. Collins, Kingston-on-Thames; Hon. Stephen Coleridge, London. **D** Dr. L. Dobson, London; Dr. L. Drage, Hatfield; Dr. T. O. Dudfield, London; Mr. E. Donaldson, Londonderry; Dr. C. H. Dyer, Cleckheaton; Mr. H. P. Dunn, London. **E** Mr. A. G. Everard, London; Mr. H. W. Ewen, East Cowes; Ethics; Mr. F. P. Elliott, New York. **F** Folkestone Medical Society, The Secretary of the, Folkestone; E. R. Fothergill, M.B., Roche; J. R. Fuller, M.B., London; F.R.C.S. **G** L. D. Graham, M.B., Newbury; Mr. P. B. Giles, Bletchley; J. E. Gemmell, M.B., Liverpool; Dr. W. A. Gibb, Ipswich; Messrs H. Gilbertson and Sons, London. **H** W. Horrocks, M.B., Bradford; How Long; Dr. C. K. Hitchcock, Hull; Dr. E. M. Hainworth, Hull Mr. F. R. Humphreys, London; Mr. H. Hilliard, London; House-Surgeon; Dr. J. P. Henry, London; Dr. H. Head, London; Dr. J. W. Hamill, Manchester. **I** Inquirer: Interested; I.M.S. Officer: India is the Crux. **J** Dr. H. M. Jones, London; Dr. E. Jepson, Durham; T. H. Jackson, M.B., Sanquhar; Mrs. Jones, Bristol; J. T. B.; Mr. S. E. Jones, Wrexham; Mr. R. Jones, Eaglehawk, Australia; Mr. W. Jameson, Pentesbury; Justice. **K** Dr. D. F. Keegan, Leis; Dr. E. D. Kirby, Birmingham; Dr. S. J. J. Kirby, Fressingfield; Dr. J. H. Keay, London. **L** L. S. L.; Dr. G. H. List, Stoke-on-Trent; J. Lloyd-Roberts, M.B., Colwyn Bay; Dr. W. V. Lush, Weymouth; T. W. P. Lawrence, M.B., London. **M** A. M. Martin, M.B., Newcastle-on-Tyne; Dr. N. Moore, London; Dr. H. W. G. Macleod, London; Rev. H. J. Morton, Cricklade; Mr. W. Monnington, London; Dr. J. More, Rothwell. **N** Mr. H. G. Nicholson, London. **O** One of Many. **P** Mr. C. B. Pasley, Cahir; Mr. J. Pollard, London; P.; Mr. V. G. Parr, London; Mr. A. Powell, Bombay; Dr. W. Price, Coonoor; P. B. G.; Professor Karl Pearson, London; W. E. Price, M.B., Ross; Pard; Dr. P. W. Pavy, London. **R** R. B.; Mr. J. Robertson, Edinburgh; Mr. T. F. Raven, Broadstairs; Dr. J. J. Ridge, Enfield; Dr. J. Reynolds, London; Dr. J. J. Reifern, Croydon; Dr. G. Rankin, London; Mr. H. Robinson, West Hartlepool; R. W. O. **S** Mr. J. L. Stretton, Kidderminster; Dr. W. Steen, Cardiff; Dr. C. Steele, Clifton; G. C. Stewart, M.B., Falkirk; Seventeen Years' Service; Surgeon; Dr. G. Steele-Perkins, London; P. J. Scannell, M.B., Selby. **T** F. Taylor, M.B., London. **V** Verax; S. Verdon-Roe, M.B., London; Via Media. **W** W. L.; W. B. L.; W. E. L.; Dr. A. McC. Weir, Liverpool; A. Wauchope, M.B., Glasgow; Mr. G. W. Whiteley, Salisbury; Dr. F. Willcocks, London; W. C. F.; Dr. R. Wise, London; E. B. Waggett, M.B., London. **X** X. Y. Z.; etc.

## BOOKS, ETC., RECEIVED.

Peru: History of Coca, "The Divine Plant of the Incas." By W. G. Mortimer, M.D. New York: J. H. Vail and Co. 1901. 5 dollars.

Liverpool School of Tropical Medicine. Report of the Malaria Expedition to Nigeria. By H. E. Annett, M.D., J. E. Dutton, M.B., and J. H. Elliott, M.D. Part II. Liverpool: University Press. 1901. 7s. 6d.

Public Health and Housing. By J. F. J. Sykes, M.D. London: P. S. King and Son. 1901. 5s.

The Pharmacopœia of the Hospital for Diseases of the Throat, Nose, and Ear Golden Square). Edited by H. L. Lack, M.D., and C. A. Parker, F.R.C.S. Sixth Edition. London: J. and A. Churchill. 1901. 2s. 6d.

A Short Practice of Midwifery. By H. Jellett, B.A., M.D., B.Ch. Third Edition. London: J. and A. Churchill. 1901. 8s. 6d.

Small-pox: Its Prevention, Treatment, and History. London: Florence White. 6d.

The Care and Feeding of Infants. By L. E. Holt, M.D. Second Edition. London: Henry Kimpton. 1901.

Voice Building and Tone Placing. By H. H. Curtis, F.R.P., M.D. London: Henry Kimpton. 1901. 7s. 6d.

Clinical Pathology of the Blood. By J. Ewing, A.M., M.D. London: Henry Kimpton. 1901. 18s.

Diseases of the Intestines. By Dr. I. Boas. Translated by S. Baseh, M.D. London: Henry Kimpton. 1901. 21s.

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# Two Lectures

ON

# SOME THOUGHTS ON THE PRINCIPLES OF LOCAL TREATMENT IN DISEASES OF THE UPPER AIR PASSAGES.

*Delivered at the Medical Graduates' College and Polyclinic on October 2nd and 9th, 1901,*

By Sir FELIX SEMON, M.D., F.R.C.P.

## Lecture I.

Gentlemen,—In the remarkable address on "Friends in Council" recently delivered before the British Medical Association at Cheltenham, and in which both the profession and the public got to hear a number of excellent, though perhaps not exactly palatable, home truths, Dr. Goodhart in speaking of "patients" makes the following statement: "With what impatience do men and women in the present day rush into the not always sufficiently repellent arms of surgery. A little pain unnerves them, and all they know of surgery is its successful side. It is a day of great things, and why should they not have the benefit of these advances? And so with an ache here or a pain there they undergo an operation." And further on he says of "doctors": "I do not doubt, I say, that everyone of us does his best for the man that consults him, but I am not sure that in attending to the exigencies of the immediate present we do sufficiently take heed of the future. And our failings in this respect are closely bound up with those of our patients, for we in our place are so anxious to overlook nothing and to cure disease, so enthusiastic in our belief in our power to accomplish what we wish. First may be put a morbid readiness on our part to detect disease. Engaged as we are in this pursuit, there comes a risk that we too little appreciate the wide range of health, that is, how good a state of health is compatible with numberless slight and even sometimes considerable departures from normal. We tend to make our standard too severe for practical purposes."

It did not require Dr. Goodhart's further specific charge, namely, that "throats and noses suffered terribly from this lust of operation that has beset the public," to convince me that I could not do better than to introduce what I have long intended to say on the question of the principles of local treatment in diseases of the upper air passages, than by quoting the above wise words, for they tersely and accurately describe, in my opinion, the present state of the question. Not that I wish to bring a special charge against my own special branch. Dr. Goodhart's fearless denunciation shows that the "lust of operation" is, indeed, a general characteristic of the present phase of medical development. But coming from the general to the particular, and speaking of such matters only of which I can claim personal cognisance, I am afraid I must fully endorse his statement so far as diseases of the upper air passages are concerned. Not only is local or operative treatment of these parts resorted to in numberless cases, where, to say the least, it is not required; not only do operations of inestimable value in really suitable cases become discredited through being performed wholesale; not only is the old war-cry against specialism, namely, that it engendered narrow-mindedness, heard again, and this time, I am afraid, with greater justification than on previous occasions; but, worst of all, laryngology and rhinology as a whole are being held responsible for the overzeal of one advanced section.

Under these circumstances no apology is needed for a serious protest coming from within against the "lust of operation," and for an attempt to propose some simple principles which might advantageously guide our local activity in diseases of the upper air passages. This is the purpose of my lectures. Before I have gone far, you will have seen, I trust, that declaring against exaggerations does not in the least mean counselling procrastination or giving pusillanimous advice in cases in which prompt and energetic local interference is actually required.

Let me begin, then, by recording my own conviction that it is in the nature of things, when a part of the human body has been made more accessible to eye and hand by the progress of our science, that the treatment of affections of that part should gradually change from the medical to the surgical, or, at any rate, from the general to the topical side. The *rationale* of this change is obvious. Instead of pouring, as it has been satirically described, "drugs of which we know little into a body of which we know less," with the sometimes rather vague hope that some of the constituents of our mixture may reach and favourably influence the affection from which our patient suffers, we, by the substitution of local for general treatment, either modify by topical applications, the effect of which can be accurately watched, the course of the disease, or, in another number of cases, remove it altogether by surgical interference. That such a change, broadly speaking, is almost always of the nature of a distinct therapeutical advance—although, as will be hereafter shown, important exceptions exist to that rule—is conclusively proved by the increase of our healing power during the last fifty years.

The triumphs of cerebral and abdominal surgery admit of no dispute, and, were further proof needed, it is given by the great progress we have made in the treatment of diseases of the upper air passages. Where forty years ago the practitioner treated the symptom "hoarseness" by drugs and climatic changes, often enough in complete ignorance whether that symptom depended upon a simple catarrhal inflammation, upon syphilis, tuberculosis, an innocent growth, malignant disease, or paralysis of the larynx, we are now enabled not merely to accurately differentiate between these contingencies, but also to actually cure by topical applications or operation, if not all, yet certainly the majority, of the diseases named. Where thirty years ago the child who could not breathe through the nose and kept its mouth open was censured by parents and governesses for this "bad habit," and was allowed to grow up with retracted chest, deformed face, crippled in its general development, and living under a constant cloud of ear complications, we now, by the removal of adenoid vegetations, obtain—in really suitable cases, be it said—an equally surprising and pleasing change for the better in all these respects. Where twenty years ago patients suffering from what was at that time called "chronic nasal catarrh," accompanied by frequent frontal headaches and by symptoms referable to the absorption of the poisonous discharge which they constantly swallowed during the night into the digestive organs, were treated with sedatives, stomachics, changes of air, and equally harmless and useless snuffs, we now discover in many such cases the cause of all the trouble in an empyema of one or another of the nasal accessory cavities, and by surgical treatment relieve the patient lastingly.

These illustrations could be easily multiplied, but they will suffice, I think, to show the great and manifold progress made through the introduction of local treatment in a number of equally frequent and troublesome affections of the upper air passages.

Whilst this must be unreservedly, and, indeed, most gratefully, acknowledged, it is a very different question whether the length to which the substitution of local for general treatment has gone has been an unmixed blessing. Unfortunately in almost every sphere of human activity the most useful and desirable innovations are apt to be exaggerated, and, indeed, it would almost seem that this danger is the greater in proportion to the intrinsic value of the original movement. Whilst illustrations of this may be seen almost daily in art, in commerce, in industry, and in science a study of the development of modern medicine in particular, will show that, in spite of many disappointing experiences, almost every progress in our art is apt to become at first disproportionately exaggerated, later on equally disproportionately deprecated, and finally to emerge often enough, if at all, with considerable diminution of its original prestige.

Need I mention the indiscriminate recommendation of many excellent remedies, which, though effectual enough in certain definite diseases, were at one time advocated for every disease under the sun; the boundless, but so soon blighted

hopes after the introduction of tuberculin; the excessive employment in bygone days of electricity as a therapeutical agent; and particularly the hyperactivity which we see so often follow the introduction of new and in themselves excellent operations?

What has always appeared to me most remarkable when reviewing these experiences is that the lessons they teach should be taken so little to heart. Time after time one sees that, nothing daunted by the most recent and unpleasant experiences of a similar kind, exaggerations of a truly astounding nature are again indulged in as soon as a hopeful medical progress is made, and again and over again one witnesses the completion of the cycle of overestimation, underrating, and return to soberness.

The method of local treatment of diseases of the upper air passages has, I am sorry to say, not formed an exception to the course of events just sketched. More than once it has had to pay the penalty of its success, and it still pays it periodically, whenever a promising innovation is being made. There is no better illustration of this than the whole history of modern rhinology. Comparing our present knowledge of diseases of the nose with what it was twenty years ago, there cannot be the least doubt, that much important progress has been made. But no sooner was a hopeful rhinological innovation introduced than it was most grossly exaggerated, and no sooner had the exaggeration been recognised and minds had begun to cool down, than the place of the old idol was taken by a new fetish, which in turn was worshipped with equal enthusiasm.

It suffices to remind you of necrosing ethmoiditis, of the nasal reflex neuroses, of the deflections and spurs of the nasal septum, of the hypertrophies of the posterior ends of the lower turbinated bodies, of the latest fad: the "physiological insufficiency" of nasal breathing, and of all the exaggerated hopes and unnecessary operations in turn connected with these conditions, which during the last twenty years have relieved one another like sentinels on guard, to prove that my description is anything but fantastic. Whether it be increased facility of diagnosis; be it the undeniable triumphs obtained in many affections of the nose and throat, which formerly ranked amongst the incurable; be it an ever-growing conviction on the part both of the profession and the public, that *all* affections of these parts ought to be locally treated; be it the modern teaching that a large number of the most obscure diseases of the human race, even if situated in remote parts of the body, are in reality due to affections of the upper air passages; be it, as it probably is, a combination of all these factors, there can hardly be any doubt, I think, that local, and more particularly operative, treatment of these parts, excellent as it is in really suitable cases, has of late years been considerably overdone, and that there is a marked tendency to further overdo it.

In this connection it is interesting to inquire who have been the greater sinners, the profession or the public? Dr. Goodhart seems to think that the greater share of the blame falls upon the public. He argues, if I understand him correctly, that the modern patient forces his doctor's hands by demanding a certain article from him, and that the latter only errs by yielding to that demand. Undoubtedly there is a good deal of truth in that argument, and nowhere perhaps is this more evident than in the subject now under consideration. The public themselves have become so keenly alive to the great progress made, thanks to the introduction of local treatment in the therapeutics of so many of the affections of the upper air passages, that they have rushed to the conclusion, though very faulty, yet perfectly feasible and pardonable, that *all* diseases of these parts are amenable to local treatment and ought to be treated locally. They therefore consult the doctor, and particularly the specialist, with the set notion that either some local application will be prescribed for them, or that some operation will be performed. How often do I see undisguised disappointment on a face when I have explained to its owner that his case was one for general, not for topical treatment; how often do I hear, when I think I have succeeded in making it quite clear to a patient that his local sensations depended upon disturbances of his general health, which in reality required being attended to, "But won't you give me a gargle?" It very much depends upon the doctor's strength of mind, whether he will under such circumstances insist upon the line which he himself considers to be the right one, or whether he will flatter the patient's whims by giving him an innocent local placebo in addition to the constitutional treatment which is obviously indicated. There is undoubtedly something to be said in favour of the latter alternative. As Dr. Goodhart truly remarks: "There are times when the sick are not reasonable beings, and unless they have a bottle of medicine"—or shall we in our special case say a gargle, or a paint, or an inhalation?—"to anchor their faith to (oh, shifting sands!) they are in a state of unrest that is positively harmful to their progress." That is certainly true. And, further, when with a little knowledge of the world, and with plenty of previous experiences to guide one, one sees that the patient, disappointed at not getting what he wants, thinks: "That doctor does not understand my complaint," and that he is sure to fall into the hands of the topical enthusiast or of somebody worse, who will be equally sure to mulct him in a perfectly unnecessary operation one is confronted by the difficult question whether in the patient's own interest it would not have been better to comply with his wish and to give him something local which, if absolutely useless, would have been at any rate equally harmless, and would have set his mind at rest. I dare not say that this "pia fraus" must never be practised. But against it are three very grave reasons, which I would particularly recommend to your consideration. In the first place, when prescribing some local application, which, of course, has to be repeated at stated intervals, you involuntarily become the patient's accomplice by concentrating his mind on his local sensations, whilst in his own interest you ought by all possible means to divert it from them. Secondly, you lend yourself to supporting the general notion, which you know is neither correct nor desirable, namely that *all* affections of the upper air passages ought to be treated locally. And, thirdly, and most serious of all, by yielding to the temptation you may unconsciously, and with the best intentions of the world, yet very actually, transgress the line between legitimate practice and quackery. Under all circumstances, therefore, the pious deception of which I have just spoken ought to be practised only in the rarest of cases, and the doctor ought to stiffen his back and harden his heart against meekly complying with every unreasonable wish expressed by an unreasonable patient. Better, I think, to lose such a one if he will not listen to well-meant advice than to have to confess to yourself that you have descended to the level of habitually acting against your own better conviction.

But, gentlemen, can we really lay the flattering unction to our souls that in this whole matter the public is the sole tempter, and that our profession merely sins passively by yielding to the temptation? I must confess I do not think that question can honestly be answered in the affirmative. In my opinion and experience the "lust of operation" (including in the word "operation" other forms of local treatment as well) besets not only the public, but also a considerable number of doctors, and I think it cannot be seriously questioned that in the great majority of cases the initial suggestion of operative or local interference comes, not from the patient, but from the medical adviser himself. It will, of course, be said: that is as it ought to be, and I certainly am the last person to dispute that the initiative of any treatment should be taken by the doctor, instead of his hands being forced by the patient. What I maintain is that the frequency with which local interference is advised and practised nowadays is unfortunately far in excess of actual requirements; that operations are performed wholesale where they are not needed, that operative proposals are being made and carried out on an extensive scale on the basis of some unproven theory, and that the operative interference itself, often enough, is unduly severe and protracted in proportion to the smallness of the complaint for which it is undertaken. It will be my duty further on, when we come to details, to substantiate these serious assertions, and I feel confident that I shall be able to do so, but I have again to touch upon that sore question, which formed the starting point of my observations, in the present connection, because I do not think it fair to lay the whole blame of the modern "lust of operation" upon the public alone, and because I honestly believe that the operative Hotspurs amongst ourselves deserve at least an equal share of reprobation.

This, I trust, is neither a rash nor an uncharitable statement. Whilst making it I am fully aware that in questions of treatment there is very often legitimate room for considerable differences of opinion; that the more enthusiastic and therapeutically active section of our profession is actuated by motives as honourable as those of the more sceptical section, and that to the former we are indebted for most of the therapeutical advances of the present day. But when all these reservations have been made and duly considered, there remains no doubt in my mind that there are not a few amongst us who are, as Dr. Goodhart has put it, "so enthusiastic in their belief in their power to accomplish what they wish," that their zeal but too often greatly outruns their discretion. Starting with a "morbid readiness to detect disease," they suspect the cause of all ills to which human flesh is heir to be situated in their own favourite little nook, and, when they detect the smallest deviation from the normal there, they persuade themselves that they have discovered the true source of the patient's complaint, and immediately proceed to demolish it with fire and sword.

Indeed, your "radical localist" is a much more formidable and actively mischievous person than the poor country practitioner who caustics his influential patient's throat because the latter insists that "something should be done" for him! Whilst he of the country succumbs occasionally—*parce qu'il faut vivre*, as the tailor said to Talleyrand—the thorough believer in local disease and local treatment *quand même* slaughters hecatombs of his own free will! In every patient that enters his consulting room he sees a prey to the arrow of his local treatment, and when he writes or speaks of his experiences, you read or hear with astonishment of the dozens or hundreds of cases in which he has found it necessary to perform certain operations and in which he has obtained "excellent results," whilst moreover you, with a not altogether contemptible practice of your own, can recollect but a few cases in which you have considered the operation in question indicated, and whilst you happen to know that the subsequent experiences of some of the patients on whom these operations had been performed by their perfervid advocate do not by any means justify his glowing account!

The funniest part of the whole business—if in such serious matters one may speak of fun at all—is, that almost every one of the stalwart fraternity has some pet operation of his own, to which he apparently resorts under all circumstances. I confess to serious misgivings when I see it stated that Dr. X. opened more than 500 maxillary antra within a comparatively few years; that Dr. Y. finds it necessary to employ the nasal saw "almost daily," and that Dr. Z. discovers "varicose veins" at the base of the tongue or in the pharynx in every third or fourth patient, necessitating, it would appear, in his opinion, the application of the galvano-cautery in a goodly proportion of them. Statements of that kind, which are not at all uncommon nowadays, justify, I am afraid, more than sufficiently the ever growing feeling against local over activity in this territory of medicine, which he who runs cannot help having observed of late—a feeling, let me assure you, which is shared by no one more strongly than by the large moderate section of laryngologists and rhinologists, who from the nature of their calling, have probably more opportunity of seeing what is going on than the profession at large, and who, I repeat, resent it the more keenly, as their whole speciality is held responsible for the excessive activity of its radical section. They see with sincere regret that a revolt is preparing against particular operations and forms of local treatment, which in suitable cases are most useful, but in which the therapeutic zeal of the localist has been most conspicuous and aggressive of late years. They foresee from analogous experiences that the reaction which is brewing may engulf not only the excesses, against which it is directed, but the method itself, excellent though it be in really suitable cases. I feel sure that before this a protest would have been raised from their midst against what they themselves consider as excessive zeal, had not the same easily intelligible personal considerations, which have for a long time prevented me from speaking out, also, with one exception to which I shall further on specially refer, tied their tongues and pens. At last, however, the time appears to have come, when it would seem almost a duty to criticise fearlessly the present state of matters and to try and bring about a greater consensus of opinion than prevails nowadays concerning the principles which ought to guide us in the local treatment of affections of the upper air passages.

That complete unanimity concerning these principles will ever be obtained I do not venture to hope myself. Two circumstances prevent such a happy consummation.

First of all, as I have just endeavoured to show, the personal element enters so largely into all questions of treatment, both so far as the patient's and as the medical adviser's temperaments are concerned, that no universal formula will ever be found applicable to all cases. So long as there shall be differences in education, in intellect, in character—and these differences will of course continue to the end of the chapter—we shall have to shape our treatment in accordance with the peculiarities of each individual patient, and on what this treatment should be the opinions of medical optimists and pessimists will vary equally persistently.

The second point which tells against the laying down and the adoption of any general principles in the treatment of diseases of the upper air passages is the undeniable fact that our views as to whether local or general treatment should be adopted are so liable to be changed by any new discovery, that what seemed essential and indeed indispensable yesterday, may be completely thrown over to-morrow. In the introductory passages of this lecture it has been stated that whilst nowadays the treatment of these affections usually progresses from the general to the topical, we were occasionally met by a movement in the opposite direction. The best illustration of the truth of this statement is afforded by the modern history of the treatment of diphtheria. Whilst, of course, general measures were never neglected by thoughtful physicians in the therapeutics of that formidable disease, the local treatment of its local phenomena developed more and more as time went on. Caustics and astringents, resolvents and antiseptics, heat and cold, varnishes, papaine, peroxide of hydrogen, and a legion of other local applications were recommended and assiduously used to stop the local process. All of a sudden the serum treatment is introduced, and, behold, equally suddenly an end is made of almost all the local therapeutics. True, cleansing remedies and various inhalations are still used, and intubation or tracheotomy may still be required by way of local treatment, but on the whole there can be no question that local has been victoriously superseded by general treatment in this important disease.

What we have witnessed in diphtheria we are likely to see not infrequently repeated, possibly in the near future, in other affections also, if, as may be fairly hoped, further progress should be made with the antitoxin and serum treatment. Whilst unfortunately, there can be hardly any doubt that the tuberculin treatment in its original form was prematurely inaugurated and adopted, it appears to me equally certain that Koch's fundamental idea was a most important move in the right direction, and it may justly be hoped, that, with further perfection of the method, we may some day succeed in killing the tubercle bacillus in the living tissues of the body without damaging the latter. When that goal has been achieved, there will in all probability be an end to, or at any rate, very little further necessity for, the surgical treatment of local manifestations of tuberculosis. Hence all the local measures in, say, tuberculosis of the larynx, such as curetting, lactic acid applications, etc., which we at this moment justly look upon as important advances in the treatment of one of the most cruel complications of pulmonary tuberculosis, may one day all of a sudden come to belong to the curiosities of a bygone age! And unless it be considered too utopian, it may even be hoped that the day will dawn, when, what has been obtained in diphtheria and in syphilis, and what may fairly be looked for in tuberculosis, may also be obtained in that most cruel of all human scourges—cancer.

From the foregoing you will have seen, gentlemen, that I am very far from flattering myself that any principles of local treatment of the upper air passages which may be proposed have any chance of becoming universally adopted or of being eternally followed. But when all has been said and freely admitted enough remains which makes it urgently desirable that in our own day a greater consensus of opinion should be obtained as to what is desirable in the way of local treatment of diseases of the upper air passages, and how it should be

carried out, than exists at the present moment. The future will have to take care of itself.

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In the following it is, of course, not my intention to discuss separately or even indeed to mention every single disease of the upper air passages, to describe every indication for its local treatment, or to enter upon operative technicalities. Quite apart from the fact that the time at my disposal is much too short to allow of such an ambitious scheme, it would frustrate, I am afraid, my very purpose. For I should have to go into such a mass of details that amongst them sight might be lost of the general principles which, in my opinion, ought to govern our actions in this class of affections. It is with these I am mainly concerned. With regard to a few important and frequent diseases only, such as adenoid vegetations and laryngeal tuberculosis, shall I enter into details, because experience has shown that even with regard to such details some general principles of thought and action are required. For the rest, if the ideas which I am going to lay before you should be found worthy of your acceptance, it will not be difficult for you, I believe, to evolve from them a line of guidance in contingencies and affections which I may not happen to mention at all.

For my special purposes the symptoms and objective manifestations arising in pathological conditions of the upper air passages may be subdivided into the following categories:

1. Affections of a purely local character.
2. Local manifestations of general or systemic diseases.
3. Local manifestations in nose and throat dependent upon local diseases in correlated areas.
4. Affections of the upper air passages, supposed to exercise an influence upon other organs and parts of the body. This influence may be: (*a*) of a direct character; (*b*) of a reflex character.
5. Local symptoms and sensations of obscure origin.

(A certain amount of overlapping is inevitable in adopting these subdivisions, but it will be minimised as much as possible.)

In conclusion, I shall have to make some observations on:

6. The necessity of a proper proportion being observed between the gravity of the disease and that of the interference.

### 1. *Affections of the Upper Air Passages of a Purely Local Character.*

It goes without saying that as a rule the question whether local treatment should be adopted or not in a given case will be easiest to decide in the class of diseases now under consideration. Indeed, it may be stated as a general principle that if a disease of the upper air passages be (*a*) purely local, (*b*) causing considerable local discomfort or serious disturbance of the general health, and (*c*) amenable to local treatment—such should be adopted forthwith, without precious time being lost by a policy of mere waiting or by constitutional treatment, the effect of which in almost all such affections is at best extremely doubtful and in most *nil*.

You see, gentlemen, my proposition is, in all conscience, broad and radical enough to satisfy the most thorough-going localist. It embraces acute and chronic inflammations, abscesses, new growths, foreign bodies, hypertrophy of glands, all the various forms of obstruction, and, indeed, any other affections of the nose, naso-pharynx, pharynx, larynx or trachea, the purely local character of which can be ascertained and the nature of which demands active measures. But it limits the indication for active measures to cases in which they are really needed, by stipulating that they should only be adopted if the affection in question causes either considerable local discomfort or seriously disturbs the general health. And in this demand lies the crux of the whole question. No reasonable person will object to the removal of a nasal obstruction which almost entirely abolishes nasal breathing, and in addition causes dry pharyngitis and great liability to laryngeal and bronchial catarrh: to the radical operation of a chronic frontal sinus empyema, which produces violent frontal headache, gastric symptoms, grave disturbances of the general health and makes life altogether unbearable; to the removal of adenoids, which seriously interfere with the little patient's breathing and hearing and gravely jeopardise his chance of growing into a strong and healthy person; or to the removal of a laryngeal papilloma or fibroma which renders the patient aphonic and threatens to choke him. I repeat: In all such, and in a large number of similar cases, it will be the practitioner's obvious duty to at once attack the local disease by energetic local measures, and I am so far from counselling a weak attitude in this class of cases, that on the contrary I wish to avail myself of this opportunity to strongly urge again, as I have done more than once before, greater energy in two classes of affections, in which one sees but too often the lamentable consequences of a policy of ignorance and procrastination. I refer to foreign bodies in the upper air passages, and, particularly, to malignant disease of the larynx.

With regard to foreign bodies it ought to be a fundamental principle: never to allow them to remain impacted, even though at first they may not produce serious symptoms! Disregard of that rule leads, frequently enough, to serious consequences. In the nose small foreign bodies, which at first caused no discomfort whatever, have been often found to have served as nuclei for rhinoliths, which not only were the cause of chronic fœtid discharge, but the ultimate removal of which presented considerable difficulties. From the pharynx pointed foreign bodies, the immediate removal of which was neglected because they caused no urgent symptoms, have found their way into the tissues of the neck or into the thorax, and have caused fatal hæmorrhage by arrosion of large vessels. In the larynx foreign bodies, when left alone, may either cause perichondritis and lasting disablement of the larynx, or may become dislodged and fall into the lower air passages, where they may cause trouble of the most serious description. I have seen examples of almost all these contingencies, all caused by neglect in the first instance.

Equally great, as in the class of affections just named, is the necessity of early and energetic local interference in malignant disease of the larynx. It has been conclusively shown that in a good many of those cases in which the disease begins in the interior of the larynx, more particularly on the vocal cords, it can be lastingly cured by so simple and comparatively non-dangerous an operation as thyrotomy with removal of the affected area and a zone of healthy tissue around it, provided only that the diagnosis be made sufficiently early for the affection to be still limited and circumscribed in character. Unfortunately, however, in spite of all that has been said and written, particularly in this country, as to the trivial character of the initial signs in these cases, which usually are objectively represented by the one symptom: obstinate hoarseness, and though it has been frequently pointed out, over and over again, that obstinate hoarseness in a middle-aged person peremptorily demanded a laryngoscopic examination, not a few cases still come under observation, in which the history of the commencement of the illness points to a favourable chance having once existed, but in which no laryngoscopic examination was made in the earlier stages, and in which so much precious time was lost by useless internal medication, changes of air and similar measures, that when the patient is at last seen by an expert the latter finds that the chance has been either entirely lost, or that a much more formidable and maiming operation was now required than had been originally necessary, in addition to which the probability of recurrence was now infinitely greater than it had been at the beginning of the disease. Such cases are so sad, and the responsibility of those who disregard the small beginnings is so heavy, that I would again earnestly plead, as I have done more than once before, for earlier recognition and adoption of the necessary energetic local measures in suitable cases of malignant disease of the larynx.

It is really time that the profession should shake off the unfortunate fatalistic belief in the incurability of cancer, which still holds the public and paralyses all healthy progress in combating that scourge! As matters stand at present, it is not too much to say that the public actually fight against a more hopeful view, and against the most convincing operative results. If, in a case that had been operated upon, recurrence should unfortunately takes place, one hears at once the chorus: "Of course, cancer always returns." If, however, the patient, in spite of all croaking and dissuading from operation which forms the common characteristic of patients' "friends," remains well ever after, one hears equally frequently: "But was it really cancer?" or even what has,

at any rate, the merit of settling the matter to the speaker's own satisfaction: "It cannot have been cancer." Such being the general attitude, it is, I hold, the duty of the profession to educate the public towards a better understanding; to teach them that not all forms of cancer are equally malignant; that there is an enormous difference regarding the chances of operation in cancers of different parts; and that, if cancers of certain parts be recognised sufficiently early whilst the mischief is still purely local, and if they then be at once thoroughly removed, the chances of a lasting cure are very good indeed.

But whilst thus warmly pleading the cause of local treatment in diseases of the upper air passages where it is really needed, I have no word of defence for the notion which, I am afraid, is very prevalent nowadays, that the discovery, often enough accidental, of the slightest deviation from the normal—or what the observer may be pleased to consider as a deviation from the normal—should be immediately pounced upon as a signal for local interference, and should be visited by some operation or other. Not every little crest or spur of the nasal septum requires the saw, the chisel, or the trephine, not every little puffiness of the mucous membrane over the turbinated bones the galvano-cautery, or the snare. No immediate radical operation is necessarily indicated when a drop of pus is seen in the middle meatus of the nose, nor has the turbinotome to come into play each time the posterior ends of the lower turbinated bones appear a little fuller and more rounded than they usually are. Not every little bunch of adenoid tissue by chance discovered in the vault of the pharynx must needs be removed, nor ought every tonsil to be cut which slightly projects beyond the palatal arches. Not every granulation or every visible vein at the posterior wall of the pharynx demand the application of the galvano-cautery, nor must the uvula inevitably be clipped because to the man who considers it his duty to "do something" it appears to be a little longer than he would like to see it. No long course of astringent applications is peremptorily indicated when the vocal cords appear slightly pinkish in the case of a professional voice user, and not every singer's nodule demands operative treatment.

I know well enough that such views are diametrically opposed to that teaching according to which every abnormality should be set right, lest it should ultimately cause mischief of some kind. But whilst fully admitting that prevention is better than cure, I do not hesitate to say that one may go too far, even in the laudable intention to prevent mischief; that life is quite endurable, nay, even enjoyable, though one should be the possessor of a small spur in the nose, or of some granulations in the throat, and that I honestly believe that local tinkering of the kind just described is equally little in the interest of the patient and in the interest of the good name of our profession. Yet this is what I am afraid is going on at present on a large scale, and of which one not only hears on all sides, but actually sees but too many examples. Let me give you but one illustration which quite recently occurred in my own practice. A young lady, recently married, nervous, excitable, and anæmic, complained of choking sensations in her throat, and of a desire to "swallow empty." She consulted a specialist, who found nothing to account for these sensations, but discovered in the vault of the pharynx a little adenoid tissue which, to his thinking, was larger than it ought to be. On examining her ears, he thought the tympana were somewhat retracted. On the strength of the result of this examination he advised the lady to have the adenoids removed, "as otherwise she might become deaf in both ears in six months." Yet this lady had never been deaf in her life, there was no deafness in her family, and she had never suffered from any symptoms referable to the existence of adenoids. The patient was of course greatly frightened, and a consultation was arranged between the first medical adviser and myself. I did not see the least reason for any operation, as I found no more adenoid tissue than one sees in large numbers of perfectly healthy individuals, and as the lady's hearing power was absolutely normal. The first adviser himself admitted that on that day there was no inward drawing of the drum membranes. As I considered the sensations complained of to be of the nature of simple paræsthesia due to her anæmia, we agreed to send the patient, before any operation was undertaken, abroad to take iron waters and baths. She returned perfectly well.—In the course of the consultation, when the decision had been arrived at that no operation should take place at once, I asked the first adviser in private whether he had expected that the removal of the adenoid tissue would cure the sensations which originally had brought the patient to him. He admitted that he had not thought it would. Here, then, gentlemen, you have a case in which the patient seeks relief for a certain definite complaint. Nothing is suggested to relieve this complaint, but an operation is proposed to avoid an extremely unlikely, not to say imaginary, contingency, and the patient's nerves receive a considerable shock.

I should at this juncture like to make two observations which, though interrupting, perhaps, for a moment my chain of argument, ought not, I think, to be left out of consideration in a lecture of this character. The first refers to a lesson to be learned in connection to the case just narrated. I have the distinct impression, from what I hear and see, that it becomes more and more the fashion to frighten—perhaps unintentionally—patients by informing them of all possible contingencies that might happen if the operative procedure upon which the adviser has set his heart were not undertaken. Now I think that such information should be given very sparingly, not wholesale, and that the adviser should carefully discriminate, where it is in the right place and where not. I am far from condemning the practice altogether. Often enough it is not only the right, but the duty of the practitioner, to warn the patient to beware of the future. Take for instance the case of a middle-aged man who comes to consult you for hoarseness. He makes very light of the complaint. You detect a suspicious-looking growth on one of his vocal cords, but it is quite impossible to make out at once definitely whether it is malignant or not. You tell the patient—without, of course, mentioning anything of your suspicion—that you must see him again in a few weeks. He demurs to this and seems altogether inclined to consider you a little fussy. Well, in such case, in which the question of the diagnosis being established in time is everything, I think it is your duty to hint as delicately as you can, and always avoiding, unless you are driven to it, the dreaded word "cancer," that more serious developments were not impossible, and that in his own interest the patient ought not to let slip his chances. Usually the handling of these cases is extremely difficult, and no general rule can be laid down for them. The quality, which one patient will praise as frankness, and for which he will thank you, will be condemned by the other—more probably perhaps by his friends—as brutality, and, particularly if, after all, your fears should turn to have been unjustified you will for ever be decried by that patient's family and friends as an "alarmist." Still, in such a case, when you see that a patient may lose his only chance from ignorance of possible developments, I hold it is your plain duty not to let him do so.—Or, to give you another example of more frequent occurrence: Suppose a mother brought you a child suffering from well-marked adenoid vegetations with a history of more or less permanent deafness, aggravated periodically during colds and accompanied at such times by violent earache and purulent discharge from the ears. Suppose, further, as so often actually happens, that she began the consultation by expressing a strong hope that you would not recommend an operation. Well, in such a case, it will be simply your duty, I think, when explaining the reasons why, contrary to her wish, an operation should be performed, to emphasise the great danger of lasting and serious impairment of the child's hearing if matters be left alone. But such a warning, I hold, is an altogether different thing from frightening, as in the case just narrated, a patient who comes to you for some quite different complaint, who has never suffered from symptoms traceable to adenoids, particularly not from deafness, and who has long passed the age at which adenoids according to universal experience may exercise unfavourable influences, by the threat of deafness, if by accident you discover an insignificant amount of adenoid tissue in the vault of the pharynx.—Similarly, the threat of deafness seems to me inadmissible, if a patient who never in his life has complained of his nose is found to breathe a little less well through one nostril than through the other, owing to some trifling irregularity in the configuration of his

nose, and, again, I think it is very undesirable to frighten a patient with the threat of brain complications in an ordinary case of ethmoidal suppuration.

In close connection with the point just discussed is the second one to which I wish to draw your attention. Let me advise you not to hurry patients into operations you may have to recommend, unless there be most cogent reasons for hurry. That cases occasionally occur which do not brook a moment's delay I am far from denying. I have a few times had patients in my consulting room with such dyspnœa, that it was touch and go whether tracheotomy might not have to be performed there and then. On more than one occasion have I at a first interview opened retropharyngeal or peritonsillar abscesses, removed foreign bodies from the upper air passages or from the œsophagus, plugged the nostrils in cases of uncontrollable epistaxis, scarified the laryngeal mucous membrane for acute œdema threatening asphyxia, and performed similar urgent operations. In such cases delay, I need not say, would mean dereliction of duty, and further, if the topical application should be of so trivial a character as not to deserve the name of an operation, I see no objection to its being made at once, if at all required, in order to spare the patient a needless repetition of his visit. Thus everybody, I dare say, will apply if necessary the electric current, or the galvanocautery, or an astringent on the occasion of a first consultation. But these cases are altogether different from those in which overzealous operators not merely magnify insignificant affections into most serious diseases and discover reasons for immediate operation which are unfathomable to other observers, but give the frightened patient no time for consideration, and either perform the operation there and then or in one of their surgical homes within a few hours from the first consultation. Several well authenticated instances of that deplorable practice have come under my own notice.

I have left until the end of this division of my subject the discussion of local treatment in an affection which only a few years ago appeared to have been so completely threshed out from all possible points of view that nothing more could be said of it, but which quite recently has been undergoing so curious a development that it becomes an urgent necessity to again enter more fully upon it. I speak of adenoid vegetations in the vault of the pharynx. The history of that affection in England has been very remarkable, and well illustrates the vicissitudes of medical fashion referred to in the introduction to this lecture.

Although Wilhelm Meyer's paper on the subject was read before the Royal Medical and Chirurgical Society as far back as 1870, it is no exaggeration to say that the subject up to about 1880 was practically unknown to the profession at large in this country. I well remember that in 1881 I proposed removal of adenoids in the case of the daughter of a personal friend of mine, and that the father was so startled by the suggestion of so unheard-of an operation, that before consenting he wished for a consultation with one of the leading physicians of that time. I of course agreed, and the consultation was opened by my consultant asking me, "I say, Semon, what are these things?" That was in 1881!—For several years after that date the operation practically remained in the hands of a few specialists, and it was during that time that one frequently heard unkind remarks about the specialists having invented a new disease. The benefits, however, accruing from the performance of the operation in really suitable cases, were too obvious to be overlooked or killed by ridicule. The operation slowly came to be practised in the general hospitals, its originally rather crude technique was much improved by the invention of Gottstein's curette, and by the introduction of anæsthetics into its performance. The original detractors became not merely silent, but not a few were changed into enthusiastic converts, and about 1890 the shortly before despised operation became the rage of the day. Everybody performed it, everybody gave the anæsthetic, the originally limited indications were rapidly extended, particularly when "reflex neuroses"—of which more anon—became fashionable, and ultimately it seemed as if every child required an operation for adenoids. "Have your children already been 'done'?" was—and in some places even now is—the elegant question put by one anxious mother to another at fashionable afternoon teas. When a child caught a little cold, and snored for a night or two, the mother or governess themselves diagnosed adenoids, or, as they preferentially call them, "aneroids." When a boy brought home a bad report from school, the cause must have been adenoids; when a child suffered from asthma, stammering, enuresis, epilepsy, laryngeal papillomata, and what not—adenoids again! In fact, "when in doubt, say adenoids," appeared to become a maxim of contemporaneous pediatrics!

But the hardly-won popularity was not to remain long uncontested. It was about 1891 or 1892 that I first had the question—which nowadays forms one of the stock ingredients of all these consultations—put to me by an anxious mother, whom I advised to have her child's adenoids removed: "But don't they always grow again?" I well remember how surprised I was at that notion, which at that time I considered extremely curious. Gradually, however, the ever-increasing frequency of the question, and the fact that more and more often children were brought to one, whose post-nasal spaces, although they had been only recently operated upon, were as obstructed by adenoids as if nothing had ever been done, taught one, that recurrences now occurred with a frequency never heard of in the old days, and that the parents' questions concerning them were much more justified than had seemed at first. Soon afterwards sinister rumours spread as to fatal results which had in various instances attended the operation. They at first received little credence, but when in 1896 statistics were published showing that between the commencement of 1892 and April, 1895, that is, in two years and a quarter, no fewer than 11 deaths had been actually reported in England alone as having occurred in operations performed under chloroform for adenoids and tonsils, general alarm was felt. Chloroform as an anæsthetic in these cases was considered unsafe by many. Anæsthetics having a shorter lasting effect, such as ether and nitrous oxide, were resorted to, and it became an ambition to perform the operation in the minimum of time. It was boasted that it could be done in forty-five seconds, and as late as 1899 a professional anæsthetist referred in a discussion on the choice of an anæsthetic to operations for adenoids, which occupied "a few seconds, or perhaps half a minute," in their performance. Thus everything gradually combined to damage the prestige of the operation—wholesale performances in cases in which, to say the least, it was not needed; faulty, or at least extremely hypothetical, indications; in but too many instances, technically insufficient execution; a dread of chloroform as an anæsthetic during its performance; and a widespread reputation of recurrences. The natural result of all this was bitter disappointment on the part of many parents who had reluctantly given their consent to the operation on the strength of glowing promises concerning improvement in the general health, and disappearance of all possible troublesome symptoms in remote parts of the child's body which would certainly follow its performance, and who saw none of these promises realised. A paper recently published by a lady in one of the monthly reviews depicts graphically enough what is felt in large lay circles about the whole question.

But already previous to its appearance the unavoidable reaction had occurred in the profession itself. Mr. Arbuthnot Lane took up the cudgels against the massacre of the innocents in two papers published in 1897 and in 1899. In the first he declared that operative procedures were, in his opinion and experience, "quite unnecessary," and that "systematic ventilation of the lungs and naso-pharynx provided us with a means not only of applying to the naso-pharynx such force as is exerted by air being forcibly drawn through it, but by oxygenating the blood more fully and removing more thoroughly the carbonic acid, etc." All these desirable results were to be obtained by systematic "breathing exercises," in poorer cases a printed slip being given to parents containing the following simple instructions: "Put the child on its back three times a day for half an hour at the time, and make it breathe in and out as deeply as possible through the nose, the mouth being kept shut." The second paper brought important modifications of these sweeping statements. Whilst in 1897 the author had declared that operative procedures were "quite unnecessary," and that "unfortunately for the patients, surgeons under the influences of the suggestion of Wilhelm Meyer had considered that the secondary infec-

tion of the so-called pharyngeal tonsil was the primary cause of the obstruction of the naso-pharynx, and had hoped to cure the patients by cutting away a varying portion of the substance," he was good enough to admit in 1899 that after all there was a "very small proportion" of cases in which the operation was required in order to "establish a through way" or to "telescope the duration of treatment." He says in conclusion: "The only circumstances under which I can understand the surgeon being warranted in attacking the pharyngeal tonsil are: (1) When the condition has been so thoroughly neglected that the child is unable to drive air through the naso-pharynx, when development has been long in abeyance until the enlarged pharyngeal tonsil has been effectually removed; (2) when for some reason or another, such as considerable difficulty in forcing air through the nose, ear trouble, important school or other arrangements, peculiar circumstances, etc., it is necessary or desirable to telescope the duration of treatment; and (3) when the child is too young to do what it is told."

I think it is a very great pity indeed that Mr. Arbuthnot Lane should not have stated in his first paper the indications admitted in his second, which "warrant the surgeon" in telescoping the duration of the treatment. Had he done so, it would have been seen, I feel sure, that apart from his absolutely unproven theoretical ideas as to the origin of adenoids, the difference which separated him from the moderate section of his surgical *confrères* was not one of kind, but only of degree. For this moderate section also advises operation in such cases only as he admits as legitimate in the concluding sentences of his second paper, and so far as matters of fact as concerned the only real point of contention between him and them is this, that the cases in which operation should be performed, in his experience, constitute "a very small proportion only" of the whole number, whilst they find that the very circumstances enumerated by him—long-standing neglect, very considerable obstruction, deficient development, ear troubles, important school or other arrangements, "peculiar circumstances," young age of the patients—are met with considerably more frequently than in "a very small proportion only.'

Meanwhile, however, the wholesale condemnation of the operation in his first paper, and particularly the suggestion of the "breathing exercises" had caught on. Society, ever on the outlook for some novel sensation, is as fond of changing its medical fashions as any other. Yesterday it was the bone-setter, the marvellous voice-producer, a new method of dieting, hygienic underclothing of some particular kind, antipyrin, massage, thyroid tabloids, antifat, *et hoc genus omne*, that were the rage of the town; to-day it is some new medical genius—"a perfect wonder, my dear"—just discovered by a leader of society or a prima donna; the Kneipp cure, or its degenerate progeny, the sandal craze; Christian Science, rheumatism rings, a new brand of Moselle, electric light baths, that are in everybody's mouths. What it will be to-morrow nobody knows; it is characteristic of Society's rages that they almost always have a very ephemeral existence. Thus with the adenoid mania: The question, "Have your children already been done?" was really becoming a little stale; fresh fields and pastures new were wanted; the difficulty was only to find something original that would suitably replace the old fashion. At last the revelation came—breathing exercises! "I thank thee for that word" must have been the thought of many a professor of calisthenics, massage, gymnastics, and corpulence curer with a keen eye to business, who perceived that here a new and promising opening offered itself. No sooner said than done: departments for "breathing exercises" were opened, the public flocked to them in their thousands, a roaring trade was and is being done at this moment, and children galore, who otherwise would have been operated upon by the doctors, are now, if reports be true, cured or enormously improved by so simple a means as breathing exercises.

But are they?

Well, gentlemen, I may be an incurable sceptic, but I have no hesitation in telling you that I do not believe for a moment that a single child which has got well-marked adenoids has been, or ever will be, cured by breathing exercises, all reports to the contrary notwithstanding. I mean no disrespect to Mr. Arbuthnot Lane, but I cannot help saying that the whole idea seems to me preposterous. Whether adenoids be secondary to "infection of the nasal mucosa" or not, there can, at any rate, be no doubt that they obstruct in well-marked cases the airway, and thereby most efficiently prevent that ventilation of the lungs which, according to Mr. Lane himself—and, may I add, according to every reasonable observer before him who has worked at the subject—is of such enormous importance. It logically follows that the obstruction, whether primary or secondary, must be got rid of as a first step towards enabling the patient to breathe freely and to ventilate his lungs. This surgeons have hitherto done—and no doubt will continue to do—by "telescoping the treatment," or, in other words, removing the obstruction in the quickest and most complete way—that is, by operation—just as they would do under analogous circumstances in any other part of the body. But, according to Mr. Lane, this is, with a very few exceptions, "unnecessary, imperfect and unscientific," since it deals only with an effect, and not with the primary source of infection. In view of the many thousands of cases, which beyond the shadow of a doubt have been cured by the unnecessary, imperfect, and unscientific treatment—and, mark you, by this treatment alone—which Mr. Lane condemns, it certainly demands some courage to make such a statement. His adversaries, however "unscientific" they may be, certainly have facts on their side. And if it should be called "unscientific" to say plainly that the *rationale* of his treatment was a mystery to them, I for one must plead guilty to that soft impeachment. How a genuine lymphoid hypertrophy can ever be expected to be dispersed by "breathing exercises" completely passes my understanding. Is it by the air being forcibly drawn over it? If that were possible, will Mr. Lane explain how it is that in so many cases of much-developed adenoids there are at the same time much-enlarged tonsils? It would seem to me that if forcible breathing could disperse lymphoid tissue in those cases in which nasal breathing is reduced to a minimum, and in which the patients have thus been compelled to forcibly breathe, not for half an hour three times a day, but all days and all nights for many months or even years, the effect of the forcible passage of air ought certainly to show itself in the disappearance of the enlarged faucial tonsils, which in structure are so very similar to adenoids. But, unfortunately for Mr. Lane's theory, these do not disappear; on the contrary, they flourish!—On what grounds, then, are "breathing exercises" expected to act beneficially in cases of genuine hypertrophy? Are they to do wonders by imparting "force" to the naso-pharynx; or is it thought that half an hour's "oxygenation" of the blood three times a day in twenty-four hours will in such a miraculous way alter the constitution as to make the actual obstruction of the air passages disappear? I fail to discover other arguments in Mr. Lane's papers, and I hope he will not be too indignant with me if I frankly state that his "breathing exercises" appear to me simply in the light of a scientific glorification of the obsolete advice referred to in the introduction of this lecture, and so freely administered to the unfortunate sufferers before Wilhelm Meyer's beneficent discovery, "Keep your mouth shut. Shut your mouth."

Not that I despise breathing exercises in their proper place. On the contrary, for many years before Mr. Lane ever gave public utterance to his ideas I, like, I dare say, most operators, have been in the habit of telling mothers that after the removal of the obstruction, they must insist on the child's learning to breathe through the natural air channel—namely, through the nose, and that if admonition alone failed to cure the habit of mouth breathing, engendered by months' or years' impossibility of breathing through the nose, they must use for some time some simple contrivance which covered the child's mouth completely, and compelled it to breathe through the nose. An apparatus of that sort was recommended many, many years ago by Professor Guye, of Amsterdam, under the name of "contra-respirator." It is nothing else but an anticipation of Mr. Lane's leading idea, the only difference being, in my humble opinion, that it brings in "breathing exercises" in their proper place, whilst Mr. Lane, if he will excuse me for saying so, seems to me to put the cart before the horse.

Now, I shall probably be told that all my theoretical

objections go for very little in view of the fact that the patients were cured by the breathing exercises. But, I repeat, is it a fact? I do not believe it. Not that I doubt the good faith of those who think that they have seen cures, but I feel convinced that in such cases transitory congestion of the lymphoid tissue in the vault of the pharynx has been mistaken for actual hypertrophy. In such cases I can easily enough imagine what has happened. The lymphoid tissue, being very vascular, easily becomes the seat of catarrhal inflammation, when it swells considerably, and *pro tem.* may present all the symptoms of genuine adenoids. Now suppose that a child was taken during such an attack to a medical man because the mother wished him to see the patient "at his worst," a casual examination might easily enough result in the verdict "adenoids," and in the advice "operation." The mother, dreading operation, decides that a trial should first be given to the "breathing exercises" of which she has heard so much of late. The child is put through a course which lasts several weeks, if not months, and all the symptoms disappear. That exactly the same result would have been obtained if the child had simply been taken a little care of, but otherwise been left alone, does not, of course, enter for one moment into the consideration of the happy mother (and how could it?). Lavish praise is heaped upon the breathing exercises to which alone the credit of the recovery is given; and the doctor is severely blamed for having recommended a perfectly unnecessary operation. Considering the frequency of these inflammatory attacks, and the readiness with which nowadays the advice to remove adenoids is given, the number of such cases, in all probability, is very considerable, and it is easily enough intelligible that they should have lent colour to a perfectly honest belief in the efficiency of breathing exercises. But beliefs are not facts, and how little the actual facts agree with Mr. Lane's teaching the following case, which recently occurred in my own practice, will show you.

A little girl had suffered for a long time from well-marked obstruction of the naso pharynx, mouth-breathing, thick voice, snoring at night, commencing pigeon breast, tendency to colds, earache, anæmia, and weak state of general health. At the suggestion of the family doctor she was taken to a distinguished surgeon, who diagnosed, as the family doctor had already done, adenoids, and recommended their removal. The parents being much averse to operation, took the opinion of another authority, who advised breathing exercises. The child was placed under a professor of Swedish gymnastics, who makes, I am told, a speciality of such exercises, and for two months assiduously went through a course. Meanwhile, the parents flattered themselves that they observed considerable improvement in the child's symptoms, whilst the family doctor was unable to perceive it. Whilst still under the treatment the child caught pneumonia and nearly died. During the acute disease her respiratory difficulty was so obviously increased by the impossibility of breathing through the nose that the family adviser insisted that after her convalescence yet another opinion should be taken. I was consulted, and found the naso-pharynx crammed full of adenoids. Remember, this child had been treated for two months with breathing exercises! I, of course, warmly supported the family doctor's and the first consultant's advice; the parents at last consented. The child was operated upon by the surgeon first consulted, who found, he told me afterwards, the naso-pharyngeal cavity, as I had found it, crammed full of genuine adenoids, and who added that he had quite recently received a letter from the father, warmly thanking him for the genuine improvement which since the operation had taken place in the child's local symptoms and general health.

It did not require the lesson taught by this case to convince me of the untenability of Mr. Lane's teaching, but it is valuable as showing that practical experience no less strongly than theoretical consideration militates against what I am afraid I must call an exaggeration in the ultra-conservative direction.

But whilst thus defending Wilhelm Meyer's beneficent discovery against the onslaught of a solitary adversary, I am at least equally anxious to save it from the much more dangerous indiscretion of its injudicious friends. There is not the least doubt in my mind from what comes under my personal observation, that a great amount of over-operation of slipshod nature is going on with regard to adenoids, and if we wish to prevent a good operation from falling into bad repute, it seems to me necessary to come to a much more precise understanding, as to the conditions under which operative interference should be recommended and how it should be carried out, than exists at present.

I would deduce the following principles as helpful:

With regard to the question of operation, adenoids may fitly be subdivided into three classes, according to whether they cause: (*a*) permanent, (*b*) periodical and transitory, (*c*) no symptoms.

The first class, the "typical adenoids," embraces the cases in which respiratory obstruction, open mouth, snoring, thick voice, deafness, are all, or some of them, always present, and in which the altered type of respiration may have already led to the peculiar deformities of the face and chest, and to a general debilitated state of health. In this class—in my experience a very large one—I consider operation absolutely indicated, and I advise it the more strongly the further away the child is from the period of puberty, at which often enough, though by no means always, spontaneous atrophy of the growths occurs. For even if the condition should never become complicated, as it so often is in these cases, by inflammatory ear affections, or by one or another of the febrile diseases of childhood, the mere alteration of the natural type of breathing and the deficient aëration of the lungs will, if unrelieved for years, leave their ineffaceable traces in the physiognomy, physique, and entire mental and bodily development of the patients. Seeing that all these serious consequences of the obstruction of the air-way and hearing channels can be prevented by so simple and comparatively safe an operation as the removal of adenoid vegetations, I hold it to be the practitioner's bounden duty strongly to urge operation in this category of cases. It is the one which has established the well-deserved fair fame of the operation, the result of which under such circumstances is always very gratifying, and often truly astounding.—In exceptional cases this applies also to the removal of adenoids in adults, but such cases are, in my experience, extremely rare.

Much more difficult is the question of operation in the second class, in which free intervals alternate with periods of nasal obstruction and impairment of hearing, or attacks of earache, and even of otitis media. This is the category previously referred to, in which during the free intervals only a very moderate, or hardly any, organised hypertrophy of the lymphoid tissue may be present, but in which on the slightest catarrhal provocation so much congestion and engorgement occurs, that for the time all the symptoms of the first class—the genuine adenoids—are closely simulated. It may well be that opinions with regard to the advisability of operation in one and the same case belonging to this class should diametrically differ according to the period at which the little patient is seen. A. sees him "at his worst," a mouth-breather, snuffling, with thick voice, very deaf, and with some otorrhœa, and strongly advises operation. B. sees him a few weeks later, when the acute attack has passed off and all these symptoms have temporarily disappeared, and cannot understand why A. should have recommended operation.

I may observe here that I am afraid that, owing to our great familiarity with the affection, some of us pay insufficient attention to the—often enough rather emphatic—statements of the parents, governesses, or nurses as to the periodicity of the symptoms. This, however, is a very important point. It is just this class of cases in which the most experienced may make mistakes. Suppose he urges strongly that the operation should be performed as a prophylactic measure, suppose that the advice is not followed, and that nothing serious occurs, he is certain to be put down by the parents as an alarmist and fanatical operator. Should the child meanwhile have gone through a course of "breathing exercises," it is they which get the kudos of the improvement. Suppose, on the other hand, that, guided by the desire to spare the child a possibly unnecessary operation, one votes against operation or, at any rate, in favour of postponement, and that unfortunately shortly afterwards acute ear complications should arise, or an abscess form in one of the lymphatic glands

or pulmonary troubles occur, to which these patients seem rather prone—one is equally severely blamed for not having spoken more strongly in favour of an operation which might have obviated all these deplorable and sometimes lasting consequences. What I would recommend under these circumstances, although no formula will fit all cases, and occasional errors of judgment are almost unavoidable, is this: If a child be brought to you "at his worst," but with a definite statement that these attacks occurred only very rarely, that they lasted but a short time, and that in the intervals the child enjoyed perfect health; if you find some soft swelling of the lymphoid tissue in the vault of the larynx, but no evidence of organic ear disease; and if altogether you gain the impression that the child had been brought much more because the mother was anxious than because there were any really urgent symptoms, express a desire to see the child again under, what would be for it, normal circumstances, and postpone the decision with regard to operation until then. If the symptoms be more grave, particularly if there should be marked deafness, perforation of the tympana, otorrhœa, enlargement of the lymphatic glands in the neck, a tuberculous family history, vote in favour of operation as a preventive of more serious events, which, in view of the circumstances named, might reasonably be expected. If you are in doubt yourself—as in these "half-way house" cases the most experienced observer often enough is—let me recommend you to lay as clear and non-alarming a statement as possible of the actual conditions and of the various possibilities of development before the parents, and let them decide themselves. This course will equally protect you against being called an "alarmist" and "very fond of operations" on the one hand, and against being accused of having "neglected" the case on the other.

Concerning the third class, I have only to repeat what I have said in the earlier part of this lecture, namely, that adenoids which do not cause any symptoms do not, in my opinion, require removal. One often enough in the course of a methodical examination of the upper air passages discovers a not inconsiderable amount of lymphoid tissue in the vault of the pharynx, which evidently has never done any harm, just as one often enough sees somewhat enlarged faucial tonsils which have never given rise to the least inconvenience. Such innocent hypertrophies should, I feel sure, be left alone, particularly in adults, and all the examiner might tell the patient, in order to safeguard himself against an imputation, that he had "overlooked" the condition, is, that there was a slight fulness, but that this, unless it should cause any symptoms, did not require operation.

These are the suggestions which I have to make with regard to the indications for operation. You will probably be surprised that amongst them I have not mentioned, by one single word, the so-called "reflex neuroses" for which they are so frequently undertaken. Well, gentlemen, in my second lecture you will hear that I am a great sceptic with regard to "reflex neuroses" arising from the upper air passages in general, and I will say at once that I am particularly so with regard to reflex neuroses said to be due to adenoids. I am not in the habit of doubting the reports of others, simply because I have had no analogous experiences, and I have already told you, as was my duty, that obscure affections of the most different kinds have been attributed to adenoids, and are stated to have been cured by their removal. Personally, however, I must say that I have never performed any operation for adenoids for the express purpose of curing one of these reflex neuroses, though I need hardly tell you that in the course of the last twenty years plenty of these cases have come under my notice. In such of these cases in which I found an insignificant amount of adenoid tissue and none of the classical symptoms accompanying it, I have not been able to bring myself to the belief that asthma, epilepsy, enuresis, and similar neuroses, which had been ascribed to the adenoids, were really due to them, and I have therefore not seen my way to advise operation. But in cases in which besides the reflex neuroses ascribed to them the adenoids caused actual tangible respiratory and auditory symptoms—and I have seen a good many of such cases too—I have operated, always thoroughly explaining to the parents beforehand, in order to avoid disappointment, that I advised operation only for the sake of removing the obstruction which interfered with breathing, hearing, and general development, and that I could give no promise whatever as to the cure of the reflex neurosis. That caution in my practice has turned out to have been a very judicious one, for in not one single case have I ever seen a so-called reflex neurosis disappear after removal of adenoids in such a manner that I could rightly have spoken of a causal relation between the two. True, in a few cases I heard long afterwards that asthma, enuresis, epilepsy, etc., from which little patients of mine had suffered at the time of the operation had disappeared, or at any rate diminished; but then it is well known that these neuroses often enough improve spontaneously, and in all my cases the interval between the operation and the commencement of the improvement had been much too long to justify me in attributing the improvement to the operation itself, or to its influence upon the general health. On the other hand, I know positively of not a few of my own cases in which, though the general health had been materially improved and the direct symptoms due to the adenoids completely disappeared, the reflex neuroses persisted for many years afterwards with undiminished intensity. Only quite recently I saw a boy of 9, who six years ago was sent to me for most troublesome salivation, said to be due to adenoids. Adenoids there were, certainly, and in such quantities as to seriously interfere with the child's breathing and general development; but why they should cause the salivation was more than I could understand without taking refuge in most artificial theories. I advised and performed the operation for the general reasons just named, but I strongly warned the mother that I could not in the least promise disappearance of the salivation. When I saw my little patient a few weeks ago he had developed into a very fine strong boy, but the ptyalism was just as unpleasantly there as it had been six years ago. Similar things I have seen in connection with asthma, stuttering, stammering, enuresis, epilepsy. Experiences of this kind fully warrant me, I think, in strongly advising you not to be too sanguine with regard to the connection of adenoids and reflex neuroses. To promise positively a cure of the latter if only the adenoids be removed, as I know has been but too often done, I consider simply unwarrantable.

Finally, in this connection let me warn you, as others have already done before me, against too hastily diagnosing adenoids from facial appearance and nasal obstruction alone. Although the "adenoid face" in a fully-developed case is characteristic enough, deformities of the nose itself and of the hard palate, as well as enlargement of the posterior ends of the lower turbinated bones, may closely simulate the symptoms produced by adenoids, and it ought to be an invariable rule, therefore, to decide for operation on the strength of thorough examination only—a rule which, I am afraid, is not always adhered to. As to the examination itself in a good many cases, particularly in elder children and in adults, posterior rhinoscopy will suffice, without the unpleasant investigation by the finger being resorted to. In all cases, however, in which there is the least doubt I strongly advise you to employ digital exploration, which in these cases, I do not hesitate to say, is greatly superior to mere inspection, inasmuch as it gives you much more reliable information about the quantity of growths present than is afforded by the rhinoscopic mirror.

So far as the operation itself is concerned, I would impress you with one principle:—Operate thoroughly!—I have not the least wish to lay down dogmatic rules as to the technique of the operation, although I hold very strong opinions on that point as well. But, whatever method you may employ, operate thoroughly, gentlemen, and never forget that the question is not whether the child is forty-two seconds and a-half or five minutes under the anæsthetic, provided that the latter be administered, as in these cases it always ought to be by a competent anæsthetist, but whether there is to be a recurrence or not.

Next to over-operation, I have no hesitation in saying that nothing has so much damaged the reputation of the operation than the frequency of so-called "recurrences" observed of late years. No doubt, perfectly genuine recurrences will occasionally take place, even after very thorough operations; but such an event is, in my own experience as well as in that of all thorough operators with whom I have discussed that

question, very rare indeed, and I have not the least doubt that what is commonly called a "recurrence" is in the enormous majority of cases in reality "incomplete operation." One must have seen such cases shortly after operation in order to be enabled to judge in what an incredibly slipshod manner the operation is nowadays but too often done and how the cry "recurrence" has come to be raised. A whiff of gas, a little scraping with the finger nail, and behold! the "operation" has been performed, and the parents are left in the belief that all has been done that could be done. A few months, nay, even weeks, after the "operation" the old symptoms come on again; the parents in distress seek another opinion, and, when they are told that the operation has to be performed anew, ask in despair: "But don't they always grow again?"

Against this class of "recurrences" there is only one safeguard, but it is a very efficient one: thoroughness of operation, and this thoroughness must be preached until it is generally practised. I need hardly say that this thoroughness is not equivalent to violence. Unfortunately, whilst one very frequently meets with instances of under-operation, one occasionally comes across sad examples of the other extreme. I have seen cases in which the operator had so proceeded that the ugliest adhesions had formed in the naso-pharyngeal cavity and between the soft palate, the pillars of the fauces and the posterior wall of the pharynx. An aspect, in fact, resembling that of cicatrisation in congenital or tertiary syphilis, and in these cases the articulation of the victims was materially and lastingly impaired. That certainly is not the kind of thoroughness I recommend. But the desirable thoroughness I have in view can only be obtained, so far as I can see, by the operator being in the position of not being hurried unduly by the brief duration of the anæsthesia, nor by the fear of any untoward event during the operation itself.

Personally I have not the least doubt that these conditions are most ideally obtained by (*a*) chloroform being selected as an anæsthetic in these cases; and by (*b*) the patient being operated upon in the recumbent position with his head well bent over the back of the operation table. If chloroform be quietly and slowly administered by a competent anæsthetist, and never pushed to the abolition of the cough reflex, it introduces, to the best of my conviction and experience, no amount of danger into the operation, and it gives the operator time to remove the growths thoroughly. If the recumbent position be adopted, with the head well over the table, there is no danger of blood or a loose fragment of adenoids penetrating into the larynx or lower air passages. These—as I consider them—most essential conditions having been secured, the operator can then at his ease thoroughly remove the growths, by whatever instruments he prefers (personally I almost always use the two models of Gottstein's curette, the curved and the straight one, and Hartmann's laterally-cutting curette, whilst in exceptional cases only I employ Woakes's modification of Loewenberg's forceps). The operation ought not to be considered as finished until the operator, by thorough digital exploration, has convinced himself that not a vestige of lymphoid tissue projecting over the surface of the mucous membrane has been left behind. Should the tonsils have to be removed at the same time, I usually remove the adenoids first and the tonsils afterwards. Only when the tonsils are so large that it is impossible to introduce instruments into the naso-pharyngeal cavity, without impeding respiration, I remove them first. I have heard my method described as "fussy," but it is safe, and it certainly yields infinitely fewer recurrences than that of the lightning operator. No after-treatment of any kind is necessary beyond keeping the patient in bed for twenty-four hours, and in the house for two to three more days, an aperient being given the first evening, if there should be a rise of temperature. I warn especially against any "antiseptic" injections being made through the nose. It is many years since I gave them up completely, and I am glad to be able to state that I never since have had an acute ear complication.

Others may prefer other methods. I have not the least wish to assert that the method I recommend is the best, or the only one by which success may be secured, but from long and ample experience I can honestly state that it answers all reasonable requirements, and if you proceed by it, selecting suitable cases only for operation, you may be confident that you will maintain the prestige of one of the most salutary operations of modern times.

If, in conclusion of this lecture, I were to briefly summarise the advices given in it, I should say this: In all purely local affections of the upper air passages there are certain cases in which all reasonable men will agree that local treatment is required, and others in which the moderate section at any rate will be unanimous that it is not. Between these two classes there is the very large intermediate one in which everything is a question of "degree," and in which opinions may legitimately differ as to whether local treatment should be adopted or not. Far be it from me to assert that occasionally mischief may not be done by doing too little, but if I endeavour to judge impartially the current of opinion at the present moment, I have no hesitation in stating that if at all, we err at the present moment in the opposite direction, and I cannot better sum up the advice which I think should at this juncture be given, than by reminding you of Talleyrand's celebrated counsel to a young diplomatist who for the first time was sent on an independent and responsible mission: "Above all, not too much zeal!"

## A REMARKABLE CASE OF AORTIC ANEURYSM OF SIXTEEN YEARS DURATION: DEATH FROM RUPTURE EXTERNALLY.

By T. R. C. WHIPHAM, M.B., B.Ch.Oxon., M.R.C.P.Lond.
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The patient, a builder's foreman, was born in 1844, and came of a rheumatic stock. He himself had had occasional joint pains, and had suffered at times from "fever and ague," contracted in Mexico in 1866. No history pointing to syphilis could be elicited. In 1884 he began to suffer from an incessant cough and indefinite thoracic pains, accompanied by loss of flesh, but it was not until a week before his first admission to St. George's under Dr. T. T. Whipham in April, 1886, that he noticed a swelling on the right side of the sternum; for two months previously, however, anginal pains had been very severe.

When first seen there was a "rounded, regular, smooth tumour," 3½ inches in diameter, occupying the first and second right interspaces and the adjacent edge of the sternum. It was expansile, but no *bruit* was heard over it, though one was present in the right subclavian and carotid arteries. The aortic second sound was accentuated. The voice was hoarse and the cough suggestive of pressure, and there was also inspiratory stridor. Air entered the right lung much more freely than the left, but there was no dysphagia. The right pulse was slightly the weaker of the two, and the pupils were equal. Pressure on the carotid and subclavian vessels on the right side greatly diminished the pulsation in the tumour, and distal ligature was proposed, but the patient declined operative treatment. During his first three weeks in the hospital the aneurysm increased rapidly in size till it eroded the whole of the upper part of the sternum, measuring 6¼ by 4½ inches. Two eminences made their appearance on the surface, and the skin over it was tense, shiny, and discoloured. The patient at this time was described as being "weak, ill, and hopeless." Treatment consisted of a scruple to half-drachm doses of potassium iodide, with morphine, for the relief of pain, and the fluid part of the diet was restricted to a pint in the twenty-four hours. No further extension took place; on the other hand, the tumour began to steadily decrease in size and seemed to consolidate, while the prominences disappeared. The patient was kept in bed for eight months, at the end of which time the pulsating area measured only 1½ by 1¼ inch. There was no paralysis of the vocal cords, and no *bruit* had at any time been audible over the aneurysm. The patient's condition had much improved, and he experienced no ill-effects from getting up. He was discharged in January, 1887.

A year later he returned to work, and followed his employ

ment, which did not involve manual labour, with intervals of rest until the early part of 1892, when he caught a violent cold and cough, which was followed by shooting pains in the neck and left arm, and a rapid bulging of the aneurysm at the site of the episternal notch. Since his discharge he had had no medical treatment. He was admitted again in May of that year, the tumour being then of the size of a tangerine orange. The pupils and pulses were equal on the two sides, and the vocal cords wanting in tension, though not paralysed. The temperature became elevated, and the patient dyspnœic and dysphagic, so that his condition was regarded as "imminently serious." The iodide treatment was resumed, with the result that the pressure symptoms gradually became less marked, and in three weeks the man was able to take solid food. The prominence at the episternal notch decreased, and after two months rest in bed the patient was allowed up, and a little later discharged. He continued under the care of Dr. T. T. Whipham until February, 1895, when he had an attack of pleurisy and pneumonia, and was laid up in the hospital for a period of six months. From this time the aneurysm became markedly worse.

In February, 1897, he returned, having been at work on and off, and was admitted under Dr. Isambard Owen with an increase in the size of the tumour especially on the right, where it projected for 2½ inches from the normal level of the chest wall. After five months rest he was again discharged improved, and continued at work till the beginning of 1899. In August of that year a swelling as large as a hen's egg appeared in the course of a week on the left of the original tumour. The skin became discoloured, but the protuberance disappeared as rapidly as it came, leaving two leaking areas. In the following month he was again taken in, the prominence on the right being then 1½ inch high, while from the other side there oozed a thin watery discharge. There was still no *bruit* to be heard over the aneurysm, and there were no pressure symptoms beyond slight stridor and a brassy cough. The discharge soon ceased and the patient was sent home after a month.

He was admitted for the last time in February, 1901, the aneurysm having increased during the previous year to the size of a man's closed fist, and presenting three lateral projections. The centre of these was the most prominent, and the skin over it was tense and shiny. Between the middle prominence and that on the left was a small ulcerated surface where pulsation was marked, and from which there oozed a small quantity of blood. Anginal pain had been severe, but not so marked as in 1886, and pressure as shown by the voice, cough, and dyspnœa was more in evidence though no difference in the pulses could be detected. Venesection relieved the symptoms to some extent, and potassium iodide and calcium chloride were given internally. The temperature soon became irregular and the patient had much pain in the neck, possibly caused by ulceration, for occasional hæmoptysis took place. After a month the temperature subsided to normal; the aneurysm became more conical in shape, and the leakage of blood, which had ceased, recommenced. The superficial ulceration gradually extended though without pyrexia until April 8th. On the following day the patient had a rigor, and sixty hours later a large conical mass of laminated fibrin, the whole of the superficial part of the aneurysm, became detached leaving a considerable cavity in the chest in which no definite pulsation could be seen. There was only slight leakage, and the patient continued fairly comfortable with the exception of pain for another nine days. The aneurysm then suddenly burst externally, and the man died in about a quarter of an hour.

At the necropsy the whole of the ascending and transverse portions of the arch were found to be greatly dilated and very atheromatous. From the upper and anterior aspects of the arch there arose a sacculated aneurysm as large as a cocoanut, three parts full of laminated clot, which passed forwards and communicated with the exterior. The trachea was eroded about three-quarters of an inch above its bifurcation, and the lungs showed signs of bronchitis. The heart was slightly dilated, but not obviously hypertrophied, the aortic valves alone being a little thickened. There was no evidence of pressure on any part of the neighbouring structures, and nothing worthy of note in the other thoracic or abdominal viscera.

The remarkable points about the case are (1) the length of time during which the patient was known to have had an aneurysm. For full fifteen years he was kept under observation, and during the whole of that time he had a large external tumour, though the aneurysm had evidently been forming a year, and perhaps more than a year before that. The longest recorded case that I know of is one mentioned by Sir W. Gairdner, which was known to have existed for twelve years, and that under circumstances entailing considerable cardiac strain[1]; (2) the frequent and at times rapid variation in the size of the aneurysm, which on several occasions seemed likely to cause an abrupt termination to the patient's life; (3) the marked benefit which accrued from prolonged periods of complete rest and treatment, both medicinal and dietetic; (4) the recovery from an intercurrent attack of pleurisy and pneumonia; (5) the fact that the entire external portion of the aneurysm sloughed and came away, after which the patient lived for nearly nine days; (6) the termination by rupture externally, which is by no means a common cause of death in these cases, even though such a contingency may appear imminent.

It is only fair to the patient to state that he was a very sensible man and realised the gravity of his condition. He bore his periods of enforced rest cheerfully, and voluntarily restricted his diet both in the hospital and out, the amount of fluid ingested being left largely to his own discretion. To the extension of the aneurysm in a forward instead of a backward direction must be attributed of course in great measure the possibility of such prolongation of life as occurred in the present instance.

REFERENCE.
[1] Allbutt's *System of Medicine*, vol. vi.

## A CASE OF ULCERATIVE ENDOCARDITIS, WITH RECOVERY.

BY
H. E. WHITEHEAD, M.R.C.S., L.R.C.P. and H. W. SYERS, M.A., M.D.Cantab.

It is always satisfactory to be able to report the details of a case in which the symptoms were such as to render it certain that the malady was of a very serious nature, and yet recovery has ensued. And when the disease is one that is admittedly almost invariably fatal, either during the acute stage or shortly afterwards, it is of special importance that a case of recovery be put on record. For when recovery follows, it leads to some modification of our views as to the invariable outcome of the malady, and at the same time causes us to reflect as to the possibility of the happy result being due in any degree to the treatment, either generally or by drugs.

The following case was one of undoubted malignant endocarditis, and the account of the clinical features of the malady is as given below:

The patient, a man aged 35, had always been in good health, and was a total abstainer.

On October 22nd, 1900, he complained of earache, and was treated for this. He was up and about as usual, but on the 25th he suffered from attacks of shivering, and at the same time it was noticed that his urine was dark and thick.

He was seen on October 29th, being then in bed. The urine was of a dark mahogany colour, and contained a granular detritus, but no complete blood corpuscles. The temperature was now 103°, and a distinct systolic murmur was audible over the aortic area. He remained in much the same condition until November 3rd, when marked rigors set in, and the urine became even darker than before.

On November 5th the right parotid gland was observed to be slightly swollen. There was no tenderness over the mastoid region. The *bruit* in the aortic area was now more distinct, but the discoloration of the urine was somewhat less marked. From this time onwards the temperature presented the most characteristic features of septicæmia, very marked evening ascents being followed by extreme falls the following morning. Thus on two occasions an evening rise to 105° was registered, and the next morning the temperature was 97° and 96.2° respectively.

On November 8th his condition was very unsatisfactory; the afternoon temperature was 103.2°, the right parotid region was the seat of a prominent and tender swelling, and there was evidence of œdema of both lung bases, the crepitation being most marked on the left side. The temperature now began to show very marked daily excursions, and the feebleness of pulse and general debility became very severe. On November 12th the size of the parotid swelling diminished somewhat, and a discharge from the mouth, purulent in character, was noticed. From this time onwards the parotid inflammation gave no further trouble, but the general condition of the patient was in no respect more satisfactory at this date. On the contrary, he was distinctly weaker, and lying lower in the bed.

On November 22nd there was marked dulness over the left lung base no doubt due to the presence of pleural effusion. At this time, the pulse was still weaker, and the outlook seemed as bad as possible. The highest temperature recorded on December 5th was 103 4°, and on the 8th it attained 104°. On December 6th it was noticed that the breath had become very offensive, as was also the expectoration, which was thin and muco-purulent. There was loud friction sound in the precordial region, apparently pleuro-pericardial, and at the angle of the left scapula there were some signs of lung destruction over a small area.

During the whole illness, but especially during the last ten days, the patient had been most carefully fed with easily assimilable aliments, and had been freely stimulated with brandy and champagne, but in spite of all that could be done, he appeared to be in a practically hopeless condition.

Beginning from December 18th a distinct improvement was noticeable, the expectoration ceased somewhat suddenly on December 20th, and did not return. His temperature fell and remained normal from January 6th, 1901, and on the 24th of the month he was able to leave London for the seaside. On examination before leaving it was found that there was a loud systolic murmur in the aortic area and dulness and diminished entry of air over the left base.

The treatment adopted was that by salines, quinine, strychnine, and iron, until December 4th. On this day he was ordered sodium sulphocarbolate in 15-grain doses every four hours, and this drug was continued until he became convalescent.

A study of the history of the case and a reference to the course of the temperature render it certain that this patient was the victim of that form of septicæmia which is known as ulcerative (or malignant) endocarditis. Our experience of this disease, in common with that of most observers, is that it is practically almost fatal. Certainly at several stages of the malady it seemed impossible that this patient could recover. That the careful nursing, feeding, and use of stimulants had much to do with the result is, of course, not to be denied, but it is a question if the treatment by drugs had not some influence in this direction. We refer, of course, to the action of sodium sulphocarbolate which was ordered in frequently repeated doses when the patient was at his very worst. It is worthy of notice that not long after the administration of this drug was commenced the patient began to amend, but, of course, to assume that the improvement was the result of the action of the drug would be rash in the extreme.

Nevertheless, it is upon evidence such as this that by far the larger superstructure of therapeutics is founded. Cases have been reported, too, in which the use of antistreptococcus serum in septicæmia has been followed by recovery, and the result claimed as decisive for the virtues of the treatment. We would point out that had the serum been used in this case such a claim would have been equally justified, and yet what a mistake would have been made!

On the whole this case would seem to be more correctly described as one of the extremely rare instances in which this most fatal disease, malignant endocarditis, spontaneously recovered. Without, however, attaching undue importance to the treatment by sodium sulphocarbolate the coincidence, if it be only a coincidence, is worthy of notice, and would certainly emphasise the advisability of the drug being ordered in a similar case.

## REMARKS ON A CASE OF INFANTILE SCURVY.*

By JOHN McCAW, M.D., L.R.C.P.,
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INFANTILE scurvy or scurvy rickets presents such well marked signs and symptoms in the majority of cases that little difficulty is, as a rule, experienced in correctly diagnosing the affection. I have, however, recently seen an example of this disease in which the classical symptoms were all but absent, and an opinion had to be given based upon the presence of one symptom supported by the history of the case.

I was asked to see Baby McG., aged 10 months, on April 3rd, 1901, in consultation with the regular medical attendant of the family.

*History.*

The child had been in his usual good health until a week previously at which time he became ill with what was considered to be a mild gastric attack: the temperature never exceeded 101 5° F. The pulse was good and about 120, and the bowels were inclined to be relaxed. However, a short time before I was called in he vomited a considerable quantity of blood, and this was followed almost immediately by a copious, loose motion, which was undoubtedly largely composed of altered blood.

On examination there was evidence of loss of blood, but I was struck with the strength of the pulse and of the apex beat. I learned on inquiry that the child had been fed from birth upon condensed milk, and later upon a proprietary food and oat flour: that it had never been given any fresh milk or other food of an antiscorbutic kind whatever.

* Read before the Society for the Study of Disease in Children.

*Treatment.*

Infantile scurvy was diagnosed and the treatment modified to meet that condition as follows: One teaspoonful of orange juice to be given every two hours, to have whey and cream at frequent intervals and in small quantities, with one teaspoonful of raw meat juice every four hours. I advised the application of the icebag to the epigastrium for half an hour, the effect to be carefully watched. I saw this child again the following day: he had passed a good night and was much better in every respect, the orange juice was taken with avidity, and the nutrients mentioned were taken and retained, his temperature was 100.2° F., pulse 98 and stronger, no more vomiting had occurred, but one loose motion had been passed which contained altered blood. Eight days afterwards I was asked to see the case again, and it is hardly too much to say that I saw a different child—so marked and striking was the change for the better in every respect. I now advised that he should have a mixture of arsenic and iron (Fowler's solution and vin. ferri cit.) in suitable doses, as well as a small quantity of scraped potato or other fresh vegetable in his soup, and further that he should be taken to the seaside. He made a satisfactory recovery.

*Remarks.*

I think this case is noteworthy for the absence of the more prominent symptoms usually seen in scurvy rickets: no periosteal swelling could be found anywhere at any time though carefully looked for, the gums were quite normal in every respect and two upper and two lower central incisor teeth appeared healthy, there was no proptosis of either eye nor was there any ecchymosis or œdema of either eyelid.

Subcutaneous hæmorrhages never took place, not even petechial spots on the trunk or lower extremities, nor were any bruise-like marks ever seen. The child never made any complaint or evidenced any pain on being handled or lifted, and, with the exception of a slight beading of the ribs, the distinctive signs of rickets were entirely absent. Up to the onset of his illness this child was looked upon as a healthy, vigorous specimen of his age, and though he was anæmic-looking it could not be said that he was fat or flabby or full-tissued. His is another instance of scurvy occuring in a child fed on condensed milk and patent food, and he further exemplifies the curious point that the disease is met with chiefly amongst the children of the better classes, indeed to put it in another way, it would scarcely be too much to say that he was starving in the midst of plenty.

## CONTRACT PRACTICE AND ITS DIFFICULTIES.*

By ARTHUR E. LARKING, M.D.,
Folkestone.

LET me at once set your minds at rest, and assure you that I am not going fully into the question of contract practice. If I were to do so, I should open up such a huge subject that no practical good would come of it; also that I am not going into the question of so-called Medical Aid Societies in which the services of a medical man a farmed out by a lay committee. We all agree as to putting a stop to this. I propose to deal mainly with so-called club practice, and incidentally to touch upon parish appointments and other work done by contract.

"CLUB PRACTICE."

My main object in bringing this matter before you is because it is a question that the British Medical Association will sooner or later have to face. Already negotiations are in progress to form a so-called "Conciliation Board," composed of representatives of our profession and also of the Friendly Societies. Communications have taken place, and all got on fairly well, until the question of a wage limit was broached. Then the Friendly Societies would go no further; they will not hear of such a thing, and thus the matter rests.

There is no doubt whatever that the medical profession of the present day looks upon clubs as a sort of necessary evil. Everyone who has held a club appointment knows it does not repay him pecuniarily for the trouble he gets, and yet he does not quite see his way to giving up clubs. Yet there are numerous instances in which medical men have determined to do without clubs, and have found out afterwards that their fears were groundless, and that they earned just as much money and did about half as much work as beforehand!

Let me give my personal experiences. I practised for nine years in a country town and district of about 9,000 inhabitants. I commenced *de novo*, and at first had no patients at all. Then one came and then another (mostly people who

* Read before the East Kent District of the South-Eastern Branch of the British Medical Association.

owed money to the other doctors in the place). I think I took in cash about 15s. in two months! Then, in an evil hour, I was led astray and seduced into taking clubs. I was so sick of doing nothing and so impatient to make a practice, that I prostituted my professional knowledge, and agreed to attend for a yearly fee of 4s. each. Having once consented to take clubs it was a case of *facilis descensus averni*, and at the end of a few years I had a large club practice as well as a private one. I had plenty of work, night as well as day, and yet pecuniarily I got "no forrarder." I held a parish appointment and was medical officer of health. I had to keep two horses, and my expenses were about as heavy as those of most general practitioners in the country. I found I had enough work for two men and earned only enough to keep one. Since then I have not taken any clubs nor held any appointment. Let me say that during the time I was practising in that neighbourhood I simply did the same as the other doctors of the place, and we got on fairly well together. They took clubs at the same yearly fee, and worked as hard as I did, and were apparently satisfied with it.

Is not this the lot of many general practitioners all over the country? Plenty of work, plenty of patients, plenty of expenses, plenty of apparent prosperity, and yet, if any, a very small balance at the bank. If any of you doubt what I say about the pecuniary position of members of our profession, I recommend them to read the last Educational Number of the British Medical Journal (August 31st, 1901). They will there find a summary of the prospects of a youth joining our profession. It is there stated that an income of £400 to £500 a year should result. Would that it always did! Later on, it says that not 1 per cent. of all practitioners in this country ever become what is called even moderately rich: and, later on, it says that "reasonable provision for old age, after family expenses are met, is too often a practical impossibility." What is the cause of this? I answer unhesitatingly, "contract practice."

The present state of affairs in club practice is that a medical man undertakes to give advice and medicine to all members within a three-mile limit for 2s. 6d., 3s., 4s., 5s., or rarely 6s. a year. Nothing is, as a rule, said about accidents, and if there is a hospital near they all go there. If not, and the medical man treats them at home, he rarely asks for an extra fee, and if he does he rarely gets one!

The standing wages of the working class vary in different localities. In an agricultural district they are 15s. to £1 per week; in a town a labourer earns from 25s., an artisan sometimes as much as 35s. or 45s. a week. Therefore, we are dealing with a class having a yearly income varying from £40 a year (or 15s. a week) to £116 a year (or 45s. a week), and we are asked to attend these at a uniform rate of 2s. 6d. to 6s. a year. That is to say, we accept from the man earning £40 a year, 4s., or one two-hundredth part of his income, for our services; whilst the man who earns £80 a year (30s. a week) we accept at 4s. a year one four-hundredth part of his income; whilst the man who earns more pays a proportionately smaller ratio. Is it not ridiculous when you think about it?

A man can command the services of an educated gentleman for 4s. a year, call him up at night, if necessary, and expect him to supply medicines. How such a state of affairs has been allowed to come about is a mystery, and how it can exist nowadays is still more so. Whilst the wages of the working classes have gone up tremendously, the doctor's fee remains as it was twenty or thirty years ago.

Gentlemen, the time is coming when we must alter this; and it is only by a combination among ourselves, such as the British Medical Association, that we shall succeed. When the proper time comes, all medical men in East Kent must say to their clubs, "We give you six months' notice of our intention to raise our fees," and they must stick to this.

Any waverers must be strengthened and argued with by a properly appointed member of our Association, whose expenses must be defrayed by the Branch. But, before this can be done, a public opinion must be formed among us, and it is with a view of opening the ball that I ventured to bring forward this matter.

Up to the present the general body of practitioners, numbering from 200 to 300, in East Kent have taken no interest in our Branch whatever. It has been carried on by a few and ignored by the many. I can conceive of nothing more calculated to bring us together than a question of this kind.

There are certain members of our profession who say, when a combination against an abuse of this kind is hinted at, "Oh, this is trades-unionism." I am quite at a loss to see why anyone should resent an allusion of this kind. Is there anything derogatory in so-called trades-unionism? I maintain that the principle of trades-unions is highly commendable. It is a union of a class for its own protection, and for the mutual help of its members. It has done more to raise the position of those who have adopted it than anything I know of. I do not mean to say that it has not been abused; but, in my opinion, a man who sneers at a trade-union is quite ignorant of its real aims and objects. Wherefore I say I do not mind at all if anyone says I advocate trades-unionism. One of its aims is to provide funds for sick or disabled members. We might well take a leaf out of that book. How many of us subscribe to the various medical benevolent societies or even to the East Kent Benevolent Society?

### Basis for a Fair Rate of Remuneration.

If we agree that contract practice is unavoidable, what would be a fair amount to fix as a fair sum to be paid annually by club members? At present it varies from 2s. 6d. to 6s. a year. The lower sum is only in vogue in some very populous districts, and I do not believe that there are any in this part of the country under 4s., or 1d. per week. I am certain that even with a large membership it cannot be carried on at that rate without losing money over the transaction.

Just to form some idea of the amount of sickness among members of Friendly Societies, I have obtained a few data on the matter. In the Ancient Order of Foresters the average number of members on the club at one time is 3 per cent.—that is to say, out of every 100 members 3 are ill all the year. Now, 100 members would pay £20 per annum at 4s. each. Therefore for attending one man the whole year, and finding medicines, we obtain £6 13s. 4d., or about 2s. 6d. a week.

Some years ago the Chief Registrar of the Friendly Societies found that the "sick-pay" rate, based upon some millions of members of various societies, worked out at 1.7 week per annum—that is to say, every man in a club has twelve days' sickness per annum. It therefore follows that we get the 4s. for attending for the twelve days! Not very different from the 2s. 6d. a week previously mentioned!

Among the Ancient Order of Foresters, composed of over 900,000 members, the average number of days each member was sick was, in 1899, 12.75 days. In the Juvenile Societies the average days' sickness in a year is only 3.

Another calculation made by a Friendly Society official was that of the total members of a Friendly Society, about 20 per cent. would be ill during the year—that is, 1 out of every 5. Therefore five subscriptions of 4s. pay for the illness of the one man, which works out at £1. If he happens to be ill for a long time, it is of course quite insufficient. And you must remember that many club members come and consult us and take medicine when they are not ill enough to go on the club, and as all these calculations are based on the amount of "sick pay," it follows that the figures would come out still more favourable to our case if this was taken into account.

From these data we can conclude how very inadequate the present sums paid us by clubs are. Who can possibly attend a patient for a week and find medicine for 2s. 6d.? An interesting letter appeared in the British Medical Journal last June (page 1364) from a practitioner which bears on this point:

A West of England G. P. writes: May I offer a small contribution to this discussion? Last year, out of curiosity, I kept a careful account of my attendance on members of my Foresters club; it consists chiefly of adults, who pay me 5s. a head a year, with a few children at 2s. 6d. I understand from your columns that the former rate is considered fair remuneration. I received £39 0s. 6d. from the club during the twelve months ending December 31st, 1900. The amount of sickness was certainly not above the average. I gave 1,305 attendances, either at my own house, the cottage hospital, or the members' homes (some of the latter being nearly three miles distant). This works out at just under 7½d. per attendance, and for this amount I have to supply medicines, surgical dressings, splints, etc.

If a medical man wishes to treat clubs fairly and conscientiously, he could not possibly afford to do it at a less sum than 8s. a year for each member, and even then he would be unable to give the members expensive drugs.

We all know what club practice of the present day means. A list of stock mixtures is kept containing drugs which possess the common virtue of being cheap—magnesium sulphate, ammonium carbonate, potassium bromide, and "sacch. ust." are useful in this particular. Sodium salicylate, bismuth, cinchona, and potassium iodide are seldom used. Then how can a medical man visit 40 or 50 patients a day, many of them very ill, diagnose their ailments, sign their certificates, and give general directions as to diet? How can it be done when perhaps he has to travel three miles in one direction and three miles in another?

I must confess it is done in many cases, and it speaks well for the physical and mental capacity of the club doctor that more calamities do not take place. It also shows what a lucky thing it is for us that Nature's reparative processes are so powerful.

Mr. Labouchere in *Truth* once said that the two great remedies in the hands of our professsion were "Faith and Purgation." With an urbane and confident manner, many club patients are conquered and their faith strengthened—the Epsom salts do the rest!

Many men could not bear the strain of such a life as this. A man who is fond of his professsion because it is constantly presenting problems of the most difficult nature to solve, and who is anxious to investigate disease from a truly scientific standpoint, could not possibly continue at this work. He would become either heartbroken or he would degenerate into a machine, and lose all interest in a profession which, to those who love it for its own sake, well repays the deepest study.

If club fees were raised to at least 8s. a year, the custom for a few medical men to take all the clubs would disappear. More medical men would be willing to take them, and they would consequently be able to give more time to each case. One man would obtain enough remuneration from a small number, and would refuse to take, as now, so many at once. The clubs themselves would also be more independent on account of competition, and, paying more, they would have a higher idea of their doctor than at present. I am certain that the public value our services by what they pay for them, and the knowledge that they now get a doctor for a penny a week lowers us in their eyes and loses us their proper respect.

That I am not speaking foolishly when I advocate this rise to 8s., I will prove to you by reading a letter written by an official connected with the Friendly Societies, when the wage limit was under discussion. Mr. E. W. Brabrook, C.B., Chief Registrar of the Friendly Societies, says:

> The real question is the proper remuneration of the medical man, and the wage limit is only a part of that question, and not, I think, so important a part as both sides seem to consider it.
>
> It has been quite pertinently asked, "Do the Friendly Societies ask for medical relief as a charity? or do they wish to sweat the medical profession? or are they willing to pay a fair price for the services rendered to them by it?" I know them well enough to answer the question without hesitation. They desire to pay a fair price for the services rendered to them. They are neither beggars nor sweaters. How is the fair price to be ascertained? The medical man is to say, taking the society as a whole, for what sum paid by every member, whether sick or well, he is willing to attend those who are sick. He fixes that price, not at the rate at which he attends upon the very poor, nor at the rate at which he attends upon the comparatively rich, but at the reasonable rate which will on the whole pay him for his services. If his remuneration were not collected for him by the Friendly Society, he might in some cases fail to get it at all, for the obvious reason that a man may be able to pay a small yearly sum, but not able to pay a large doctor's bill.
>
> In other words the contract between the medical man and the society is based on an average, and if one patient is above the average, there are others who are below it. If the loss to the medical man is greater than the gain, all he has to do is to revise his terms, not necessarily to exclude from the average any particular cases. It is at that point that the operation of the Conciliation Board would be beneficial.

Mr. Stead, the Secretary of the Ancient Order of Foresters, also stated at the Friendly Society Conference that

> The representatives of the Friendly Societies considered that the proper remedy for complaints of the profession was to raise the contract prices, and he thought that the formation of a Conciliation Board by its moral influence would largely tend to do this. He and those with whom he was associated admitted that in many districts contract prices were disgracefully low, but this state of things was almost universally condemned by the chief Friendly Society organisations.

I firmly believe that they realise that present fees are ridiculous, and will pay us a much higher one. At Leamington there is a provident dispensary, and the weekly sum is 2d., or 8s. a year.

I am not at all enthusiastic over this wage limit, as it is called. A Committee of the British Medical Association mentioned £120 a year as the limit above which no man should be a member of a medical club. The British working man is not, in my experience, a thrifty individual, and I do not find the men earning good wages any better payers—often not so good—as the poorer man with £1 a week; nor is he apparently any better off. The best way would be to have the club fees in each locality fixed at such a sum as would pay the medical man to take in anyone except the obviously well-to-do.

### The Wage Limit.

The great objection the Friendly Societies have to the wage limit is that it assumes club practice to be a charitable affair. We say, "There are many working men who are unable to pay our ordinary fees, therefore we will meet them half way, and from persons of this class we will consent to accept a certain annual sum, but not from others who are in a better position. The Friendly Society says, "Oh no; nothing of the kind. You have stated a certain sum for which you are willing to attend us; that sum is your own fixing, and if not enough you must raise it, but we will not submit to have our private affairs exposed and state what our income is. How would you like it if you doctors had to state your incomes?"

From the attitude taken up at the Friendly Societies Conference, when a resolution was unanimously carried which repudiated any idea of fixing a wage limit, I believe that unless this is dropped we shall not get any satisfactory agreement. In fact, the whole system of contract practice is full of difficulties—the wage limit blocks the road. In my opinion, contract practice ought to be abolished altogether. What is wanted is a system of remuneration by scale for work done. I suggest the scheme of the National Deposit Friendly Society as one to go upon as a basis. That is to say, the names of all the medical men in a locality who are willing to accept remuneration on this scale are given to each club member. The doctor enters his initials and the sum charged at each visit, consultation, or renewal of medicine on a voucher kept by himself and another by the patient. At the end of each month, or quarter, or year, he totals up the amount and is paid by the club.

It may be said—how are we to know how it will work? But what does it matter to us so that we get a fair remuneration for work done? The Friendly Societies are quite capable of taking care of themselves; they know their average sickness-rate and will provide accordingly. We have nothing to do with this; all we care about is that we are not sweated.

### Mode of Selection of Medical Attendant.

There would be no hint of charity in this method, and no medical man need take on this work unless he cares to, and at the same time he would be paid a fair sum for his services. The Friendly Society must adopt a form of insurance against sickness to meet the expenses of medical attendance. They will soon find out how to do it, and it is not our business to meddle in this part of the transaction.

One of the most objectionable features in club practice nowadays is that one medical man is appointed by the club as its doctor, and all members must have him whether they wish to or not. If a member of the club calls in another doctor and pays him as a private practitioner, he must even get his certificate signed by the club doctor. This rule requiring a certificate to be signed by their own club doctor before they can get any pay is a gratuitous insult to the members of our profession.

I consider every member of a club should choose any doctor he wishes to attend him, and who is willing to attend him at club rates. Of course, the main object of the clubs in selecting a few only is to enlist their sympathies on their behalf, and in the number of their members and the aggregate amount of the sums paid to make it worth this particular medical man's while to look after them. It becomes a matter of bread and cheese to this one, and he sticks to his monopoly like a leech, and resents any opposition.

The amount of harm and pecuniary loss suffered by our profession from club practice is enormous. The working man who joins a club is the man who has a greater sense of responsibility to his family, and who has the greatest desire to provide for his future and against unforeseen calamities, such

as accidents or sickness. There are, however, many working men who are not in clubs, and when they are ill they cannot call in the club doctor, so they go to the private practitioner. The result is that his bad debts are numerous. The better class of men have joined a club, although paying a ridiculously small amount annually, when they are the very ones from whom, if they did not belong to these clubs, the private practitioner would derive a good income. It is the thrifty and careful man who joins a club—the very man who would pay our bills! It is neither fair to the club doctor nor to the private practitioner that such a state of affairs should exist. The club doctor should be paid a sufficient amount to enable him to spend more time over each case, and obviate the necessity of taking a huge number of men under his nominal care before he can get any adequate remuneration.

### Private "Clubs."

But outside the Friendly Society there is another form of medical contract practice that is much in vogue. A medical man starts a so-called club of his own. He employs an agent, and this agent goes round from house to house every week and collects the pennies and half-pennies. There are many of these about all over the country, and the harm they do is astonishing. It is all very well to say these men do no touting—but it is impossible for them to avoid it. The whole system is one of touting. Touting among other men's patients, and trying to get them to join the penny-a-week club when up to the present they have paid their own doctor his 2s. 6d. a visit with pleasure. These men decry all the other doctors, and in doing so lower the profession generally. I regard these clubs with much apprehension. I think this practice runs very close to what the General Medical Council calls "infamous in a professional respect," and I earnestly hope that no member of this Association will countenance or support any of them, whether connected with an insurance company or not.

### Parish Appointments.

So-called parish appointments are much sought after because they offer a certain income regularly paid. But my experience was that, if anything, the parish appointment paid worse than clubs. Here there is no three-mile limit. Sometimes the distances are enormous. I had to go six miles in one direction and five miles in one at right angles to it, making a round of upwards of fifteen miles. These appointments always require a horse to be kept, the patients are often very critical, and at the least suspicion of any neglect, or if anything goes wrong, your action is brought before the public in the local press, and you are condemned before you get an opportunity of defending yourself. Many a man's reputation is injured in this way. If the relieving officer wants to curry favour in the district he gives parish orders indiscriminately, and yet when there is a charge of an extra fee for midwifery, he refuses the order! The midwifery fees, too, are 10s. only, except in cases of difficulty. It is quite time the fee in ordinary cases was raised to a guinea. It is the same old story. Competition in the profession is ruining us, and we are much too free in giving our services gratuitously, or at a ridiculously low figure.

### Conclusion.

Such, gentlemen, are my ideas of contract practice. Many of you may think I am talking nonsense, or that my ideals are theoretical and unpractical. An experience of upwards of seventeen years in general practice has convinced me that if we were united among ourselves we could get all I suggest and perhaps more.

The sinners are the younger members of the profession who, like myself, are led into these practices by an interested public. I think that every man on becoming qualified should be warned against the pitfalls that are ready laid for him. It should be pointed out to him that if he will only take an assistantship or a junior partnership for a year or two, and not endeavour to rush into practice and get one either by fair means or otherwise, he will thus gain a knowledge of the one-sided and interested methods of the British public in their dealings with doctors, and he will be convinced, ere it is too late, that contract practice is a fraud and a robbery, and he will be content to do a smaller amount of work, earn as much money, and have more time to spend in the bosom of his family, or in pursuing some intellectual pursuit or hobby. I hope I have not hurt anyone's feelings. Remember, I plead guilty myself to having been a sinner. I have been converted—some of you may have not. Let me urge you to ponder over what I have said, think out whether your contract practice is any good to you, and I have no doubt that when you have arrived at an opinion you will do, as I am doing, something to make the conversion of the whole profession to our views an accomplished fact.

In order to obtain some idea of the opinions of the members on the subject, I beg to move the following resolution:

That the present fees for contract practice are quite inadequate to the amount of work done, and that they ought to be raised or some other system of remuneration adopted.

[The motion was seconded by Dr. Latter, and carried unanimously.]

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## PRELIMINARY GENERAL EDUCATION OF MEDICAL STUDENTS.*

By W. GORDON, M.A., M.D.Cant.,
Physician, Devon and Exeter Hospital.

### The Present Standard.

The present standard of preliminary general education for medicine cannot be more correctly described than in the words of one well qualified to judge of it, who, speaking in the General Medical Council on December 4th, 1899, declared that it was "lamentably and disgracefully low."[1]

Those who had the advantage of listening to the admirable address delivered to this Branch in June of last year[2] by the then Branch President, Mr. Karkeek, will remember the question and answer in which he summed up the situation: "Is the present standard of scholarship a sufficient indication of the candidate having received the education of a gentleman?" . . . "I am strongly of opinion that the question should be answered distinctly in the negative." The "six-penny doctor" and the candidate rejected even by a depleted public service for defective spelling have been already too long among us, and in view of the increasing responsibilities which increasing technical knowledge is imposing on the practitioner of medicine, it behoves us who understand the evils which flow from this educational anachronism to take such steps as shall initiate a reform.

The present condition of preliminary general education has been under the consideration of the General Medical Council for about three years. On December 27th, 1898, the Chairman of its Education Committee addressed a letter to various bodies and persons connected with general and medical education in the United Kingdom, and received forty-four replies from authorities of the greatest consequence—replies which must be regarded as eminently satisfactory.

Having stated that the Council "was desirous of raising considerably the standard of general education," the Chairman of the Committee put the three following questions:[3]

1. Is it practicable within the next few years to require that all intending students of medicine shall have passed an examination equivalent in character and standard to the Senior Local and Higher Grade Examinations?

2. If it is practicable, what is the earliest date at which the higher standard should be enforced?

3. What proportion of students would probably be precluded from entering upon a course of medical study (say, at the age of eighteen years) if the Junior Examinations at present recognised should (say, in 1905) cease to be accepted by the Council for the purpose of registration?

Unfortunately, in putting these questions, the fact was overlooked that there is no uniform standard of "senior" or "junior" examinations. "Senior Local and Higher Grade Examinations" vary very widely in "character and standard," and this oversight has resulted in misinterpretation of replies from different parts of the kingdom.

To properly appreciate the meaning of the answers from England, Scotland, and Ireland, those from each country must be considered separately, with a clear recollection of the

* Read at a meeting of the South-Western Branch of the British Medical Association.

exact meaning conveyed in each country by the questions of the Education Committee.

*England.*

In England the "senior" standard referred to was obviously that of the Oxford or Cambridge Senior Local Examinations. This standard has been somewhat variously stated. The Local Examination authorities said it was intended for[4] candidates of about eighteen, whilst the Secretary of the Headmasters' Conference described the examination as one which "boys of average ability usually take for the first time at the age of seventeen."[5] The boys, however, who are educated at conference schools may perhaps be considered as exceptionally well trained, and, probably we shall not be far wrong in taking the examination at the valuation of the Local Examination authorities themselves, namely, as suitable to candidates of about eighteen.

Yet the majority of replies from the English authorities were in favour of adopting this senior standard. The University Local Examining Bodies themselves declined to give a definite answer, feeling unable to do so; but they said that they fully appreciated the desire of the General Medical Council to raise the standard, and advised the Council to apply for information to the headmasters of schools. The headmasters of schools wrote favourably, some very strongly, on the subject, mostly in favour of the Senior Local as the standard, none being in favour of the Junior Pass Examination. The universities were in favour of the change. Amongst medical schools there were only two who objected to raising the standard. One other thought 1905 was too early a date. University College School, London, thought the senior locals were too high for a boy of seventeen and the headmaster suggested a standard intermediate between the junior and senior pass.

The replies from England, therefore, may be summarised in this way—that the overwhelming majority of authorities were in favour of a standard at least applicable to candidates of seventeen years of age.

*Scotland.*

In Scotland the standard referred to was that of the Higher Grade Leaving Certificates of the Scotch Education Department. How high this standard would be, if applied (as suggested) to all four subjects of the examination, may be gathered from the following authoritative statements: "There is no university course for which a candidate has to take all four subjects on the higher grade."[7] "Even in the Arts Preliminary Examination for the Scottish Universities, as fixed by the recent Commission, the higher standard is not obligatory in every subject. Yet there is probably no more severe preliminary examination in arts in the United Kingdom."[8]

It can scarcely be imagined that the Education Committee were aware how high this standard was, and it is not surprising to find that the answers as to the adoption of such a standard were almost all in the negative. But it was from Scotland that the definite suggestion came, quoted with "cordial approval" by the joint Board of Examiners of the Scottish Universities, that the General Medical Council "should allow no student to go on the *Medical Register* till he is past seventeen years of age."[9]

*Ireland.*

In Ireland the standard referred to was that of the Senior Grade Examination of the Intermediate Education Board, a standard said to be higher than that of the Senior Oxford or Cambridge Local Examinations.[10] It is therefore not surprising that the answers from Ireland were that such a standard was too high. But attention was drawn to the Middle Grade Examination. This examination is open to all students competing for prizes up to the age of seventeen, and for those seeking passes only up to the age of eighteen. Seeing that the Irish authorities were in sympathy with the desire to raise the standard of preliminary general education, and that four out of seven went out of their way to suggest this Middle Grade Examination as a minimum standard, it seems reasonable to conlude that Ireland was also prepared to accept a standard of examination suited to candidates of seventeen years of age.

OPINIONS OF SCHOOLMASTERS.

Those who have not read this important correspondence may gather the strength of the views placed before the General Medical Council from the following extracts:—

The Principal of Cheltenham College wrote that "the percentage of students excluded by the change" (to the standard of the Senior Local Examinations) "would be very small, and that the exclusion of this small percentage would be a gain to the medical profession." "The real effect would be that boys who now qualify for registration at sixteen or thereabouts would remain at school another year and pass the higher standard. They would thus be kept in touch with school discipline just at the time of their lives when it is most formative as initiating in the bearing of responsibility for good order and government; and the effect would, in my judgment, be that they would be more developed and steadier in character when they entered upon hospital work."[11]

Dr. Ogilvie, His Majesty's Chief Inspector of Schools and of Training Colleges in Scotland, said: "My impression is that very few, if any, would be excluded capable of profiting by the course of instruction in medicine."[12]

The Council of the College of Preceptors hoped "in the interests of general education that the General Medical Council may see fit immediately to raise the standard of their requirements, as such action could not fail to influence other public bodies, and would react benefically on the secondary education of the country."[13]

The Principal of the Merchant Venturers' Technical College, Bristol, expressed himself as "strongly in favour of the course advocated by your Education Committee," and added "I believe it will raise still further the status of the medical profession, and, by excluding persons of poor general education, will benefit the public."[14]

Anyone who will take the trouble to carefully read over the letters addressed to the Chairman of the Education Committee, published in the minutes of the General Medical Council, bearing in mind the real meaning of the questions in each separate country, can scarcely come to any other conclusion than that the whole United Kingdom was, in 1899, prepared to adopt, after reasonable notice given, a standard of preliminary general education applicable to candidates of seventeen years of age.

THE EXPERTS' REPORT.

With such a body of evidence before it and with the expressed desire on its part to raise considerably the standard of requirements, it may be wondered why the General Medical Council did not proceed at once to put its desire into execution. It was apparently a side issue which turned it from its purpose.

The Council, as has been seen, had taken for granted that "Senior" and "Higher Grade," "Junior and Lower Grade" were comparable standards all over the United Kingdom. This, it now discovered, was very far from being the case. The present list of accepted examinations forms, in fact, an extraordinary medley in which examinations of all sorts of standard, all sorts of scope, all sorts of method, all sorts of purpose, are jumbled together in magnificent confusion. In the dilemma created by this discovery the Council hesitated to act, and had recourse for advice to three experts on general education.

The report of these experts was presented on December 4th, 1899, and constitutes a very important though inconsequent document. It runs as follows:[15]

"We have considered the question whether the Senior and Higher Grade Examinations shall be substituted for Junior. Taking into account the present state of secondary education in the country we see no possibility of enforcing such a requirement in the near future. A demand of this kind would certainly result in defeating the ends which the General Medical Council have in view. Either it would diminish, to an indefinitely large extent, the number of candidates entering the profession, or it would compel the examiners to a laxity of marking and a depreciation of the standard of questioning which would merely have the effect of lowering the senior papers to the level of the junior papers. The standard of the medical preliminary examination must depend upon the general standard of the secondary education of each country in which the examination is held, and a standard too high for one might be found too low for another. We think, however, that the immediate object of the General Medical Council

would be gained by the gradual raising of the standard of the lower "junior" examinations to the level of those "junior" examinations which, in our opinion rank highest."

### The Action of the General Medical Council.

This conclusion was characterised by the late Sir Richard Thorne-Thorne as "the most staggering he had ever heard,"[16] and probably many people will be found to agree with him. It should be observed that nothing in the preamble justifies the final recommendation. The recommendation to keep to junior examinations is no necessary consequence of the statement (itself too broad and requiring modification) and the senior and higher grade examinations were too high. There is no reason why an intermediate standard might not have been suggested, and, in view of the representative evidence laid before the Education Committee in the letters just referred to, many will consider that such an intermediate standard ought to have been suggested. It will be also noticed that two very startling facts are here brought before us, and by gentlemen who are well qualified to speak of them.

First, that whereas many of us had hitherto regarded the examiners in our general education examinations as being, "like Cæsar's wife," above suspicion, there can actually be such things as standards of examination which are not *bonâ fide*. Secondly, that the standards of general education may be quite different in each of the three kingdoms.

The substance of the resolutions finally adopted by the General Medical Council was as follows: That after January 1st, 1902, no person shall be registered as a medical "or dental student" who is under sixteen, and that the Council shall insist on "improvements in the character and stringency of those 'junior' examinations which can be directly influenced by the Council," and in the case of others shall require "that candidates offering the corresponding certificates have obtained a higher standard than that of a simple pass."[17]

Here the inclusion of dental students is unnecessary and confusing, whilst in view of the immense difficulty of carrying out any effective supervision of a host of standards admittedly unequal, some possibly not *bonâ fide*, and many quite insufficient for candidates just entering a learned profession, the Council may unfortunately be said, at the end of its three years of effort to raise the standard "considerably," to have done nothing of practical consequence except to give its official sanction to the entry of boys and girls on medical studies at an age when they ought to be at school.

### Proposed Reforms.

But at this point the question cannot possibly be allowed to rest. There is, I believe, in the profession and amongst thoughtful people outside it, a consensus of opinion that something must be done to ensure that a medical man shall be, in a modern sense, a "man of education." The complaint of the professors at the Scottish Universities of the scientific subjects taken at the commencement of the medical course, that "they have in their classes too many quite young lads with ill-trained unfilled minds unable to take in the scientific ideas and to respond to the teaching they receive"[18] calls for attention, and when they go on to say that "many of the medical students are mere boys, and boys are not fit recipients of medical education," most people will recognise that the matter is not a trifling one. The telegram in the *Times* of July 19th has a certain home suggestiveness: "The medical students at Heidelberg have sent a petition to the Senate of the University urging that steps should be taken to prevent the overcrowding of lecture rooms by foreign students, many of whom have not received the preliminary training necessary to enable them to profit by the instruction given by the University."[19]

#### *Age of Registration.*

There is one good service which this discussion has rendered. It has shown that the matter must be approached from the standpoint of age. As the Vice-Chancellor of the University of Oxford wrote to the Chairman of the Education Committee: "The question is largely one of age." It seems quite clear that the lowest age to be fixed should be seventeen, and it is scarcely probable that many medical men, or many educated people outside the medical profession would object to seventeen as the minimum age for registration. It is a lower age than many educational authorities were willing to agree to, and than the General Medical Council's Education Committee itself suggested.

#### *Standard of Examination.*

If seventeen be fixed as the minimum age for registration, the standard of examination will naturally be such as is suited to that age, and a large number of examinations will at once be removed from the list. But more than this is necessary.

#### *Scope of Examination.*

The present scope of the requirements is altogether inadequate. An individual whose knowledge of English is restricted to grammar can scarcely be described as "well educated"; English literature and the writing of an English essay should be made compulsory. Again a well educated girl or boy ought to have some knowledge of history and geography and these subjects should be added. With regard to modern languages the list is far too loose; French or German should be part of the requirements.

#### *Uniformity of Standard.*

Even a brief survey of the huge list of accepted examinations will make it obvious that uniformity of standard cannot be established and maintained under existing conditions. The General Medical Council itself was evidently unaware of the disparities which existed. When papers which can be answered by boys of fifteen are grouped with the papers of a tripos, examinations limited to the modest minimum of the General Medical Council's requirements placed side by side with examinations like the London University Matriculation, examinations merely meant to be an introduction to a course of instruction classed with the tests of a completed education, systems of examining and marking altogether diverse equally admitted, how is it possible even to talk of uniformity? To attempt to equalise examinations by requiring honours in this, pass in that, an intermediate standard between pass and honours in a third, would merely make confusion worse confounded.

If we bear in mind the following facts:

(*a*) That the existing examinations differ very greatly in standard, scope, method and purpose;

(*b*) That each of them is advancing along different lines at different rates;

(*c*) That to compare them adequately at any one time involves great labour and expense;

(*d*) That, even when so compared, the General Medical Council has no real means of adjusting inequalities:

(*e*) That even if it had this power, a readjustment would, in a comparatively short time, become again necessary;

(*f*) And that some of the examinations may actually have standards which are not *bonâ fide*,

we shall probably sympathise with Sir Christopher Nixon's remark that "It was quite evident from the recommendations of the Committee that it was impossible to secure any uniformity of standard of preliminary education."[20]

There is, in fact, one way only in which a uniform standard of preliminary general education for medical students can be obtained in the United Kingdom, and that is by the establishment of a single examination, which all candidates must pass before registration. It is devoutly to be hoped that the profession may see its way to insisting on the establishment of such an examination and, as the British Medical Association is the only body which can act effectively for the profession (in bringing the matter again to the notice of the General Medical Council), that the Council of the Association may take the whole question into its immediate consideration.


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SIXTY-NINTH ANNUAL MEETING

OF THE

# British Medical Association.

*Held at Cheltenham, July 30th, 31st, August 1st, and 2nd, 1901.*

## PROCEEDINGS OF SECTIONS.

## SECTION OF OPHTHALMOLOGY.

W. H. H. JESSOP, M.B., F.R.C.S., President.

[*Continued from page 1266*].

## A DISCUSSION ON THE RELATION OF GONORRHŒA TO DISEASE OF THE EYE (EXCLUDING PURULENT OPHTHALMIA).

I.—J. B. LAWFORD, F.R.C.S.,

Ophthalmic Surgeon and Lecturer on Ophthalmology, St. Thomas's Hospital; Surgeon, Royal London Ophthalmic Hospital.

MR. LAWFORD said: The relation of gonorrhœa to disease of the eye is a theme which, in at least one respect, encourages discussion. It is a subject concerning which our knowledge, or, I should, perhaps, say our accurate knowledge, is contained within somewhat narrow limits, and, therefore, any means likely to add to our store of information should be welcome. This limitation of knowledge has also certain disadvantages, for the less we know concerning any subject the greater the temptation to theorise and to advance hypotheses which can be neither proved nor disproved, and discussion of which is usually without profit.

The main question before us, as I understand it, has reference to the causal relationship which exists, or is believed to exist, between gonorrhœa and various pathological conditions of the eye.

To prevent misconception I would definitely give notice that gonorrhœal ophthalmia is to be entirely omitted from the discussion.

I propose in the first instance, and as introductory to the strictly ocular part of our subject, to make a few remarks upon some of the more general pathological relationships of gonorrhœa.

The seriousness of gonorrhœal infection is now universally acknowledged, and due importance is attached to the recognition of lesions in any part of the human economy induced by such infection. It is, however, not very many years since Sir John Simon first drew attention to the now accepted fact that the sequelæ of gonorrhœa are in their results almost as baneful as those of syphilis. A more recent and perhaps not less authoritative statement has been made by Professor Osler in these words: "Gonorrhœa is one of the most widespread of infectious diseases.....As a cause of ill-health and disability the gonococcus occupies a position of the very first rank among its fellows. While the local lesion is too often thought to be trifling, in its singular obstinacy, in the possibility of permanent sexual damage to the individual, and still more in the 'grisly troop' which may follow in its train, gonorrhœal infection does not fall far short of syphilis in importance."

The discovery by Neisser, in 1879, of the specific micro-organism, designated the gonococcus, necessarily led to the abandonment of many pre-existing ideas concerning gonorrhœa and its complications. Some commonly accepted theories became untenable, and it seemed at first as if the microbic nature of the disease offered an easy explanation of all manifestations. Such is not the case, however, and it is nearly as difficult now to adequately explain some of the remote symptoms of gonorrhœa, as it was before Neisser's meritorious discovery.

That the gonococcus is, so far as the genito-urinary tract is concerned, the active agent in the production of the usual lesions of gonorrhœa is an established fact. Its *rôle* in reference to gonorrhœal systemic infection, and the distal or so-called metastatic manifestations of gonorrhœa, has been less fully determined and is more difficult to define.

In a certain number of such cases (that is, systemic infection) the presence of the micro-organisms has been demonstrated in the blood, in the fluid within joints, in exudation around joints, in the endocardium and other tissues. In other cases examination of the fluid from inflamed joints has entirely failed to detect the gonococcus, and in others again there has been evidence of a mixed infection shown by the presence of staphylococci and streptococci. I am not aware that the gonococcus has ever been detected within the eyeball, except in cases of gonorrhœal ophthalmia in which perforation of the globe has occurred.

One of the most frequent manifestations of general infection in cases of gonorrhœa is arthritis. According to Warren it occurs in 2 to 3 per cent. of all cases.

The association of joint disease and gonorrhœa is said to have been first described by Selle and Swediaur in 1781. Brodie in 1818 and Astley Cooper in 1824 wrote upon this subject, and drew attention to the occurrence of iritis in patients suffering from urethritis and inflamed joints. The latter writer reported the case of a man under his care, in whom arthritis and iritis occurred during an attack of gonorrhœa. This patient gave a history of two previous attacks of gonorrhœa during each of which he had suffered from inflamed joints and inflamed eyes.

The frequency of arthritis in patients suffering from gonorrhœa, and the resemblance of this joint affection to ordinary articular rheumatism (evidenced by the commonly-applied term "gonorrhœal rheumatism") has given rise not unnaturally to the supposition that the joint disease stands in some intimate and perhaps causal relation to other less common lesions—for example, iritis and endocarditis.

A more logical view, and one which gains greater acceptance, is that the *materies morbi*, whatever its nature, attacks these various structures independently, and that the simultaneous occurrence of arthritis and endocarditis, or of arthritis and iritis, is in a sense accidental; in other words, that the association is not a necessary one.

The gonorrhœal poison, like that of most infectious diseases, has certain seats of election in the tissues, and it is in no way surprising that evidences of the existence and activity of the poison should appear in several such tissues at or about the same time.

Fournier quotes the case of a man who had four attacks of gonorrhœa in five years. The first was complicated by ocular lesions only, the second and third by ocular and articular inflammation, and the fourth by arthritis alone.

It would, I think, be of little service to us at the present time to enter into any discussion as to the exact nature of gonorrhœal systemic infection. The question is complex and difficult, and for adequate treatment requires an intimate acquaintance with bacteriology and pathological chemistry. Considerable difference of opinion exists among writers on the subject, some maintaining that it is a pure gonococcus infection, others that it is a mixed infection by gonococci and pyogenic micro-organisms, and others again that it is a toxæmia induced by the poisonous products of the gonococcus, manufactured in the tissues primarily attacked.

The ocular affections which are known to occur in association with gonorrhœa (exclusive of the conjunctivitis due to direct inoculation by the gonococcus) are a form of conjunctival inflammation, scleritis and episcleritis iritis, and irido-cyclitis, neuro-retinitis. Suppurative keratitis has been described in cases of a severe pyæmic character. Iritis is probably the best known of these, although conjunctivitis is said to occur with greater frequency.

Like all the remote manifestations of gonorrhœa, the above-mentioned lesions are much more common in the male sex. The frequency of ocular lesions in gonorrhœa is difficult to gauge; there are but few statistics to guide us. Fournier met with ocular troubles 15 times in 39 cases.

Metastatic conjunctivitis is the term usually employed to designate an inflammation of the conjunctiva occurring in association with gonorrhœa, but which differs markedly in its characters from true blenorrhœa of the conjunctiva. The history of the views entertained by medical men as to the nature of this affection is of interest, and well demonstrates

how the progress of knowledge compels thinking minds to alter, or be prepared to alter, their beliefs.

Older observers considered all distant symptoms occurring in the subjects of gonorrhœa as metastases. Their successors, about the time of Mackenzie, while still accepting dubiously the theory of metastasis, recognised two varieties of conjunctivitis in gonorrhœa, one undoubtedly due to inoculation, the other and milder form of less certain origin. The discovery of the gonococcus caused the pendulum of medical thought to swing, and all instances of conjunctivitis were ascribed to direct inoculation.

More recent investigations seem to show that comparatively mild attacks of conjunctival inflammation occur during gonorrhœa which are not due to direct inoculation of the conjunctiva, the micro-organism of gonorrhœa being absent from the conjunctival tissue and discharge. I am inclined to think that there is sufficient evidence to show that such a variety of conjunctivitis does occur, but we shall do well to exercise caution in accepting such evidence as conclusive. There is no reason to doubt that mild attacks of conjunctivitis can be excited by inoculation with the gonorrhœal poison which from various circumstances has become attenuated. Bacteriological examination is essential before making a diagnosis.

There are points of practical value in distinguishing between the two varieties of conjunctivitis in reference to prognosis and treatment which I need not discuss at this time. Whether the retention of the term "metastatic" as applied to this form of conjunctivitis is desirable, and whether—excluding direct inoculation—we can suggest a reasonable explanation of the inflammation, are questions which must also be passed by at present.

The association of iritis and irido-cyclitis with gonorrhœa is a common one, and has been recognised for many years. For much valuable information on this subject we are indebted to Förster's able article in the first edition of the *Graefe-Saemisch Handbuch*. There is no reasonable ground for doubt that the iritis is a manifestation of systemic gonorrhœal infection. The recurrence of iritis in successive attacks of gonorrhœa, and its frequent occurrence simultaneously with other well-known gonorrhœal complications, such as arthritis, furnish sufficient evidence on this point.

Gonorrhœal iritis, in the large majority of cases, occurs concomitantly with arthritis. There seems no doubt, however, that its onset may precede that of joint inflammation, or that iritis may be present in cases in which there are no arthritic complications. Fournier states that in a series of cases observed by him the joints and the eyes were not usually affected simultaneously.

These two manifestations of gonorrhœa not only occur concomitantly in many instances, but also possess certain characteristics in common. They are both prone to relapse, and they leave behind them an apparent vulnerability of tissues which may, and often does, persist for a very long period. An eye which has been attacked by gonorrhœal iritis and a knee-joint which has been the seat of gonorrhœal arthritis are liable to recurrences of inflammation without any fresh gonorrhœal infection. This liability may last for years.

It has been suggested that gonorrhœa may be the cause of iritis developing for the first time long after all local and general signs of gonorrhœa have disappeared.

I have not found sufficient evidence to enable me to form a definite opinion on this question. I am at present very sceptical whether it is justifiable, or indeed reasonable, to consider a long antecedent gonorrhœa as the cause of an attack of iritis in an eye not previously affected.

Scleritis and episcleritis of gonorrhœal origin, or at least associated with gonorrhœa, are much less common than iritis. Like the latter they are usually met with in patients with joint inflammations, and share the clinical features of iritis so far as intractability and liability to relapse are concerned.

Among the less common eye affections attributed to the poison of gonorrhœa are retinitis, apparently of thrombotic character, and neuro retinitis. Galezowski has suggested that the cases of retinitis are instances of thrombosis of retinal arteries due to an obliterating endarteritis, set up by accumulation of gonococci in the vessels.

A few cases of neuro-retinitis following or complicating gonorrhœa have been recorded. Recovery ensued, but in one instance a recrudescence of the gonorrhœa was accompanied by a relapse of the retinitis. These cases are so few in number that it would be rash to generalise from them. They should serve to arouse our attention to the possibility of retinal lesions being caused by the gonorrhœal poison. Bilateral dacryo-adenitis has also been reported in a case of gonorrhœa.

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II.—Robert Jessop Hamilton, F.R.C.S.Edin.,
Assistant Ophthalmic Surgeon, Stanley Hospital, Liverpool.

Mr. Hamilton related a case of gonorrhœa, which at the end of three weeks was followed by severe irido-choroiditis. This was preceded by a rigor which Mr. Hamilton attributed to septic absorption from a urethra previously damaged by strong injections. There was no arthritis or anything to justify the idea that the condition was one of general gonorrhœal infection. He deprecated the use of the word "metastatic," and preferred to look upon it as a pyæmic affection.

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III.—Reginald Arthur Yeld, M.A., M.B.,
London.

Mr. Yeld had recently analysed 159 cases of primary iritis taken from the casebooks at St. Bartholomew's Hospital. He found 56 adult males among these in which there was no evidence of syphilis. Of these no fewer than 28, or 50 per cent., had suffered from gonorrhœa. Of these 28, 26 had a history of arthritis past or present. Finally, in 13 of these 26, the association of gonorrhœa, arthritis, and iritis was so close as to justify the term "gonorrhœal iritis." This was equal to 8 per cent. gonorrhœal cases out of 159 cases of primary iritis. In another investigation of 40 severe cases of gonorrhœal arthritis, there were 8 women presenting no iritis, and 32 men of whom 5 (15.6 per cent.) had iritis as a complication.

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IV.—A. Darier, M.D.,
President de la Société d'Ophtalmologie, Paris.

Dr. Darier said that many cases of iritis he had seen were due to gonorrhœal arthritis: he had frequently seen it follow ophthalmia neonatorum, and he thought that it was due to general infection. Possibly it followed rough treatment of urethritis with rupture of the mucous membrane or epithelium. He thought that some cases of iritis following metritis or endometritis were due to this cause.

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V.—Henry Power, M.B., F.R.C.S.,
Consulting Ophthalmic Surgeon, St. Bartholomew's Hospital.

Mr. Power thought it highly probable that secondary affections of the eye consequent on gonorrhœa might easily result from lesions of the urethra and required such lesions before they would occur. Considering the thousands of cases of gonorrhœa he thought secondary ophthalmic affections must be very rare.

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VI.—Francis Richardson Cross, F.R.C.S.,
Surgeon Bristol Eye Hospital; Consulting Ophthalmic Surgeon, Bristol Royal Infirmary.

Mr. Richardson Cross said that the gonorrhœal origin of iritis was one he always kept in mind, and he frequently found cases of this nature.

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VII.—Edward Forster Drake-Brockman, Lieutenant-Colonel, I.M.S., F.R.C.S.,
London.

Lieutenant-Colonel Drake-Brockman said that he had frequently seen gonorrhœal ophthalmia with accompanying iritis in natives of India. The left eye was most frequently infected and iritis followed in that eye only. The gonorrhœal or gleety discharge was usually present at the time of the ocular

disease, though so little attention was paid to the primary disease that it was unlikely any surgical injury could have been inflicted at that period. He, however, thought that a lesion of the urethra, however produced, was likely to cause absorption and general infection.

VIII.—SYDNEY STEPHENSON, M.B., F.R.C.S.Edin.,
Ophthalmic Surgeon, Evelina and North-Eastern Hospitals for Children, and Queen Charlotte's Hospital.

MR. SYDNEY STEPHENSON mentioned two cases he had recently treated in which arthritis followed gonorrhœal conjunctivitis.

IX.—CHARLES DEVEREUX MARSHALL, F.R.C.S.,
Assistant Surgeon, Royal London Ophthalmic Hospital; Ophthalmic Surgeon, Victoria Hospital for Children, Chelsea.

MR. DEVEREUX MARSHALL drew attention to the transparent exudation which was so often present in the anterior chamber in cases of gonorrhœal iritis. He did not know if the gonococcus was present in it as he had never done a paracentesis in this condition.

X.—LIONEL VERNON CARGILL, F.R.C.S.,
Senior Assistant Surgeon, Royal Ophthalmic Hospital, Southwark; Assistant Ophthalmic Surgeon, King's College Hospital.

MR. L. V. CARGILL said, that in a very large proportion of cases of rheumatic iritis, there was a history of gonorrhœa especially in men, and most of them showed the so-called "lens-like" exudation in the anterior chamber. He considered Dr. Darier's observations very interesting, and thought that we should now be rather between Scylla and Charybdis in scarifying the excessively chemotic conjunctiva of a gonorrhœal ophthalmia.

XI.—GRAHAME WINFIELD ROLL, F.R.C.S.,
Assistant Surgeon, Royal Westminster Ophthalmic Hospital.

MR. ROLL thought there was a marked difference between gonorrhœal and an ordinary rheumatic arthritis. He asked Mr. Lawford if he had found the salicylates of any benefit in gonorrhœal iritis.

REPLY.

MR. LAWFORD, in reply, said he had not seen females affected with gonorrhœal iritis, and he considered the salicylates of some service in these cases.

## ON THE COMPARATIVE VALUE OF THE VARIOUS PREPARATIONS OF SILVER IN OPHTHALMIC WORK.

By GUSTAVUS HARTRIDGE, F.R.C.S.,
Senior Surgeon, Royal Westminster Ophthalmic Hospital; Ophthalmic Surgeon and Lecturer on Ophthalmology, Westminster Hospital.

I WOULD first offer some apology to the members of this Section for the introduction of a paper dealing with therapeutics. I am aware that such a paper cannot be very interesting, because the use of most drugs is surrounded by so many difficulties and fallacies that unless each remedy is applied by one's own hands it is easy to be misled with regard to results, however careful one may be to keep an open mind on the subject. Then in applying remedies to the eye one must bear in mind that many drugs, especially those of an irritating character, produce an almost instant flow of tears, which dilutes the remedy at once, and must very much reduce its action. Still, the object of all our knowledge—bacteriological, pathological, and clinical—is really the treatment and relief of patients, an object which at times we are apt to lose sight of. A distinguished foreigner once said to me, after looking at a number of fundus cases in which we had been discussing the fine changes in the retinal vessels, "Yes, the diagnosis and the prognosis it is wonderful; but the treatment ....." The reproof contained in these words has often been brought home to me. It will be admitted on all hands that within the past few years great progress has been made in the study of diseases of the eye and the accurate correction of its optical defects and muscular disturbances. Can we say that a corresponding advancement has been made in the treatment by drugs?

It is chiefly in diseases of the conjunctiva and lachrymal apparatus that the salts of silver have been found useful.

Inflammation of the conjunctiva is among the commonest of eye affections, but it is only recently that attention has been paid to the different micro-organisms met with in the conjunctival sac and the importance of the part they play in the various forms of inflammation of this mucous membrane fully recognised.

Neisser was the first to draw attention to the presence of the gonococcus in purulent conjunctivitis, and to establish the fact that the virulence of this disease is due to the presence of this particular organism. After this Weeks described a specific bacillus found in cases of acute contagious conjunctivitis, and more recently Morax has discovered a diplobacillus in the secretions from cases of subacute conjunctivitis. In diphtherial conjunctivitis the bacillus of Loeffler is to be found, and trachoma is known to be due to the trachoma coccus. No doubt we shall soon have a scientific classification of the varieties of conjunctivitis based on their bacteriological characters.

It is well known that for the treatment of conjunctivitis we possess no specific, and we could hardly expect to have one when we consider the cause, symptoms, and pathological changes that take place in inflammation of a mucous membrane: hence almost every antiseptic and astringent in the *Pharmacopœia* has been tried at different times. The remedies now most frequently employed are boracic acid, sulphate of zinc, chloride of zinc, sulphate of copper, alum, tannic acid, borax and nitrate of silver.

For many years past the one drug on which reliance has been placed in all severe cases of purulent ophthalmia is nitrate of silver, and for this purpose it has proved invaluable. The efficacy of the drug depends probably chiefly upon its germicidal qualities, supplemented by its powerful astringent effects upon the vessels of the conjunctiva. The germicidal action is due to the base silver.

The employment of nitrate of silver requires great care and experience, and its use is accompanied by certain disadvantages and limitations, which may be summed up as follows:

1. Great pain and irritation.
2. Strong caustic effect.
3. Long-continued use may produce permanent staining of the conjunctiva.
4. The action of the drug is superficial, owing to the ready manner in which it is precipitated by albumen and chlorides.

When a solution of nitrate of silver is used to the conjunctiva it should be very lightly applied to the surface of the everted lids, and should not be allowed to come in contact with the cornea. Hence the drug is only safe in skilled hands.

When the conjunctival surface of the lids are brushed over with a 2 per cent. solution of this salt, a delicate bluish pellicle forms which is in reality a very superficial slough, and is accompanied by an increase in the inflammatory symptoms. This in an hour or two commences to subside, the slough separates gradually, and the condition is one of improvement. After about twenty-four hours the inflammatory symptoms again show signs of increase, and then a second application may be called for. Great experience is required to know exactly when the remedy should be reapplied, and I have often found it difficult to decide this point.

The pain produced by the drug is acute, and may last for some hours even when cocaine is used. The pain is generally less, and lasts a shorter time when there is a profuse purulent secretion, the silver then becomes quickly converted into albuminate of silver, a salt which is unirritating. This chemical change in the drug limits its action, and prevents it penetrating deeply into the tissue, and thus many organisms escape destruction.

The caustic effects of the drug may cause sloughing of the epithelial layer of the conjunctiva, and sometimes even of the deeper layers, and so produce permanent cicatrices.

Solutions of nitrate of silver continued for any length of time may produce permanent staining of the conjunctiva. This staining, which is called argyria, is most disfiguring, and

is caused by the deposit of minute granules of silver in the lymphatic and perilymphatic structures.

On account of these drawbacks, efforts have been made to introduce some salt or compound of silver which may be as efficacious as the nitrate, while free from its disadvantages.

The following compounds have been supplied to us by the manufacturing chemist: Actol, itrol, argonine, argentamine, nargol, largin, and protargol.

I do not propose to weary you by the enumeration of a large number of cases, but intend to briefly sum up the results as they appear to me, in the hope that other members may be induced to state their opinion of a class of remedies, some of which should certainly retain a place among the drugs at our disposal. Nowadays we are flooded with so many new drugs that the tendency is to become over-sceptical, with the result that we may easily miss remedies that are of real value.

*Actol*, argentum lactas, $AgC_3H_5O_3$, is soluble in water, 1 in 15. When a little of this solution is applied to the conjunctiva a good deal of irritation is produced, almost as much as a drop of a 5 per cent. solution of nitrate of silver; actol possesses no advantages for ophthalmic work. It has been used extensively in surgery and dentistry.

*Itrol*, or argentum citras, $Ag_1C_6H_5O_7$, is a white, odourless non-caustic powder possessing powerful germicidal properties; it is soluble only with difficulty in water 1 in 4,000, but it may be used as a powder directly to the conjunctiva. The results I have obtained in a few cases in which I have tried it lead me to think that it is an excellent antiseptic with considerable penetrating power. It has been used chiefly in suppurative conditions of the conjunctiva, the cornea, and the lachrymal apparatus.

*Argonine*, or argentum casein, contains 4 per cent. of silver, readily soluble in warm or albuminous water, but with difficulty in cold water. Solutions are opalescent, and must be freshly prepared, as they do not keep well. I have found this preparation inferior to both protargol and largin.

*Argentamine* contains 2.6 per cent. of silver; it has been used in a large number of cases by Hoor, who has made extensive trials with 5 per cent. solutions; he speaks very highly of this drug, and considers it very penetrating in character, while producing but little irritation. It has the disadvantage of containing a very small amount of silver.

*Nargol* is a chemical compound of silver and nucleic acid containing 10 per cent. of silver; it is readily soluble in water, very stable, and is said to possess most of the properties of protargol; it may be used in a 5 or 10 per cent. solution. Nargol is supplied as a light brown powder, forming in solution a brown fluid, which gradually becomes darker on exposure to light. Solutions of the drug cause no pain when introduced into the conjunctival sac, and is pleasanter to use and less sticky than protargol. In acute contagious ophthalmia I have used 10 per cent. solutions, and have found them efficacious, cutting short the attack and leading to a rapid cure. It also acts well in suppurative conditions of the lachrymal sac. With regard to purulent ophthalmia my experience of the drug is not sufficient to justify me in forming an opinion. The remedy certainly seems worthy of further trial.

*Largin* is a synthetical compound containing 11.8 per cent. of silver combined with protalbin. It is soluble in water 1 in 10, forming a yellowish fluid, which becomes very frothy on shaking. The preparation is more stable than the nitrate of silver, and is not precipitated by albumen and chlorides. It should be protected from the light and must be freshly prepared, as it tends to become thick and sticky if kept for a few weeks. Its chief claim is that it contains a larger amount of silver than any of the other synthetical preparations. If a drop of a saturated solution be instilled into the conjunctival sac, it produces slight pain and irritation which soon pass off. In purulent ophthalmia I have found the drug somewhat uncertain. In a few cases it seemed to have a very marked effect in cutting short the attack and controlling the inflammation; in others the results have been disappointing, and I have arrived at the conclusion that in this disease it is distinctly inferior to protargol. In acute contagious conjunctivitis due to the Weeks bacillus the drug acts very well, cutting short the attack, and leading rapidly to complete recovery. In chronic conjunctivitis the remedy seems to have but little effect, and is certainly inferior to the zinc salts and alum. In trachoma the drug has a distinct beneficial effect in diminishing the amount of secretion and shortening the acute attacks; it may also be usefully employed after the operation of squeezing out the granulation with the roller forceps; in lachrymal cases, where there is regurgitation of pus or muco-pus from the lachrymal sac. After the canaliculus has been slit up, the sac and nasal duct may be syringed out with a 10 per cent. solution. I have had better results in these troublesome cases with this than with any other drug, and for its good effects in these cases alone the remedy is worthy of a permanent place among our list of remedies. It has been claimed for largin that it does not stain the conjunctiva, but this is certainly wrong. I agree with Stephenson that staining easily takes place, and on this account it is unwise to continue the use of this drug longer than two or three weeks at a time.

*Protargol* is a combination of silver with a vegetable albumen not in the form of a metallic salt but as a molecular compound. It contains 8.3 per cent. of silver and is not decomposed by albumen, alkalies, or weak hydrochloric acid; it is very soluble in hot or cold water, but requires protecting from the light and should be freshly prepared, otherwise it is sticky to use and becomes very dark-coloured. Experiments have proved that protargol is a weaker germicide than nitrate of silver. A 10 per cent. solution of protargol equals in its germicidal effects a 2 per cent. solution of nitrate of silver, but it has a much greater penetrating power and can therefore exert its germicidal qualities longer than the nitrate of silver, the action of which soon becomes stopped by the decomposition that takes place. Protargol is pleasant to use, has no caustic action, and causes little or no pain; it may be applied either as drops or brushed over the mucous membrane by means of a camel's hair brush or a cotton wool swab. When I first commenced the use of protargol I began with solutions of 2, 5, and 10 per cent., but I soon found that much better results were obtained with 10, 20, and 30 per cent. solutions; now in cases of purulent conjunctivitis I swab over the conjunctiva twice in twenty-four hours with a 30 per cent. solution, and even when the cornea is implicated this is no contraindication, the secretion quickly diminishes, the swelling of the lids goes down, and the case rapidly gets well. The good effects appear to be due to the double effect of the drug, first and foremost its germicidal action penetrating deeply into the tissue and so exerting its destructive influence on many of the bacilli which would otherwise escape, and secondly its astringent effect upon the conjunctival vessels. In acute contagious epidemic conjunctivitis due to the Weeks bacillus—an affection that was very prevalent last spring—I have found the drug give excellent results, curing the cases quickly. In trachoma, when the drug has been used in strong solution (50 per cent.), the secretion is soon diminished and the duration of the case shortened. In chronic conjunctivitis and blepharitis the drug in my hands has proved inferior to the zinc salts and mercurial ointment commonly used. In suppurative affections of the lachrymal apparatus the drug is especially useful after the canaliculus has been slit up. The sac and nasal duct may be syringed out first with a 5 per cent. solution of protargol, and if this is well borne the strength of the solution should be increased to 10 per cent. I have also used the drug in a few cases of abscess and infected ulcers of the cornea, but I have always found this treatment much less efficacious and more uncertain than the electric cautery.

Dr. Darier (Paris) said he was very interested in hearing Mr. Hartridge's paper, for having tried all the silver preparation he was persuaded that protargol was the one most generally useful. It was exceeedingly useful in slight conjunctivitis, blepharitis, and dacryo-cystitis when properly applied. In purulent ophthalmia it had the great advantage of never doing any harm, which could not be always said of nitrate of silver. Being so much weaker, it must be used more frequently and in much stronger solutions than the nitrate. For four years he had used protargol only, and during that time he had had better results than formerly, and now he never used nitrate of silver at all.

## RECENT THERAPEUTIC DISCOVERIES IN OPHTHALMOLOGY.

By A. DARIER, M.D.,
President de la Société d'Ophtalmologie, Paris.

[ABSTRACT.]

DURING the last few years so many new remedies have been introduced that their mere enumeration would take more time than I have at my disposal. I shall therefore confine myself simply to a description of those I have myself used. Of all the organic salts of silver protargol has shown itself the most reliable and innocuous. It is, however, ten times weaker than nitrate of silver, though its power of penetrating the tissue is greater.

The interesting observations of Bates of New York on suprarenal extract or epinephrine are known to all, and it has been fully confirmed that it is one of the best forms of vaso-constrictors. In operations for glaucoma, etc., it acts well, as it prevents bleeding. Dr. Wesseley, working in Professor Leber's laboratory, has proved that suprarenal extract by its vaso-constrictor action on the ciliary body, diminishes the aqueous humour and lowers intraocular tension. It is useful in phlyctenular and vascular keratitis, in every kind of pannus, also in spring catarrh, glaucoma, and iritis, while after its use a minimum of bleeding occurs during operations on the eye.

One of the great objections to subconjunctival injections is the pain produced thereby, but this has been altogether changed by the use of a preparation called acoïne. The anæsthetic properties of this I was specially pleased to discern, as its inventor denied its having any action on the human eye. Some drops of a 1 per cent. solution added to an irritating drug usually altogether prevents pain. It is an excellent anæsthetic, and its action lasts longer than cocaine or any of its derivatives.

Dionine is a chlorhydrate of ethyl-morphine, which, when applied to the conjunctiva, causes a burning pain, and soon the eye gets red, swollen, and chemotic. This chemosis is very much more marked in lymphatic and scrofulous people, and still more in those affected with gout and heart and kidney diseases. It may thus be used as a mode of diagnosis for constitutional disorders.

Wolffberg, who introduced this drug, thought it would produce the same results as the subconjunctival injection of NaCl, but this is only true to a limited extent, and its action quickly passes off. It aids the action of atropine, and assists in dispersing corneal nebulæ and soft matter left after removal of a lens. It is an antiseptic, and aids the healing of corneal and scleral wounds.

Its most important action is as an analgesic in the deep-seated pain of iritis and glaucoma, scleritis, keratitis, etc., and the pain of these diseases, which can hardly be touched by cocaine, readily yields to this important drug.

There are pathological and physical conditions in some cases which prevent the action of any drugs, but still we are fortunate in having so powerful an analgesic for the relief of cases which are otherwise condemned to permanent suffering.

## REMARKS ON SUPRARENAL GLAND IN OPHTHALMOLOGY.

By JOHN A. BOWER, M.B.,
Honorary Surgeon, Cheltenham Eye, Ear, and Throat Infirmary.

I DO not propose taking up your time by giving full details of what I have been doing during the last five years with various preparations of the suprarenal glands; as applied to ophthalmology, briefly I may state that I have tried solutions made from the various forms of the dried preparations and have found them all to be uncertain and unreliable in action. I therefore turn my attention to the fresh solutions of the gland of those I have tried—preparations of the pig, sheep, and ox. The present remarks will apply to a fresh solution of the gland made from the pig in the proportion of 12 grains of gland substance to 1 drachm. I may here add that I propose in future employing stronger solutions.

CASE I.—Mrs. B., aged 70, complains of photophobia and the eyes sticking together in the morning; three weeks duration. The vessels on the bulb injected. Conjunctiva on upper and lower lids hyperæmic; discharge muco-purulent; ordered suprarenal solution: seen again two days later, much improved, ordered to continue, case completely recovered in four days.

That was a type of case of which I have had a considerable number, and now to take up the class of case of which perhaps it gives its very best results, namely, hay asthma—in this condition I prescribed the preparation in two forms, nasal spray and eye drops.

Mrs. N., aged 54, suffered from hay asthma for twelve years, treatment has been varied and extensive. This year she seems to have suffered most from the eye symptoms; ordered eye drops and nasal spray. Finds that when the eyes begin to get irritable and look injected, a drop or two in each eye gives complete relief in five minutes. I may say that the relief far exceeds that afforded by cocaine in this condition inasmuch as, as soon as the anæsthetic action of the cocaine passes off, the irritation returns, while from the suprarenal relief practically lasts all day.

*Eye Strain.*—Miss B., aged 68, hypermetropic, has suffered for three years from pain in the left eye and black spots floating before it; uses her eyes to an undue extent. I have used various lotions and eye drops such as atropine, cocaine, etc., but without affording material relief to the condition. Last February I put her upon suprarenal eye drops. The result has been to afford relief from the pain without her stopping using her eyes in any way. She still, however, suffers from black spots but says they are less. She informs me that it is the only preparation that she has found gives her real relief, and continues of her own wish the use of it when her eye troubles her. I have also found that the internal administration gives excellent result in a case of idiopathic hæmorrhage into the vitreous of a reccurent character occurring in both eyes, as the administration of it seems to stop the oozing remarkably sharply.

The case has been under observation for five years, and I only tried suprarenal last autumn, when my patient informed me this was the best stuff we had tried so far.

My observations lead me to the conclusion that it is decidedly contraindicated in corneal ulcers, and I have never felt justified in using it in surgical operations. I am much indebted to Messrs. Prockter and Forth of this town for the skill and patience they have shown in making the various solutions for me.

### REMARKS ON THE PAPERS.

Mr. GRANGER (Chester) had used suprarenal capsule solutions for some time, and after the trial of several preparations had only been able so far to find one uniformly active—that was the one made by Dr. Jacquet, of Lyons. Mr. Granger thought that the uncertain action noticed by many surgeons was due to the fact that suprarenal capsule preparations contained two active principles, one a dilator and one a contractor. These principles had now been separated, and could be used in an alkaline solution. The action of the drug was remarkable, and it was undoubtedly a most valuable remedy in congestive and inflammatory conditions. Mr. Granger had also found dionine valuable for diagnostic purposes, and for the relief of pain in old glaucoma cases.

Mr. MADDOX quite agreed with Mr. Granger as to the benefit obtained in using suprarenal extract; in operating on an eye under its influence hardly any hæmorrhage occurred, and in a case of excision of the eyeball he had recently performed not only did the patient feel no pain, but no flash of light was seen when the optic nerve was cut.

Mr. DEVEREUX MARSHALL said he had seen excisions done under both gas and cocaine, and had never known a patient see any flash of light when the optic nerve was divided. He believed the flash so often spoken of never was or never had been seen under these conditions, and that it was altogether imaginary.

The PRESIDENT stated that he had gone most carefully into the question of the supposed flash of light when the optic nerve was divided, and both from experimental and also clinical evidence he was fully convinced that there was no such thing seen.

## A NOTE UPON TUBERCULOSIS OF THE CHOROID.

BY

GEORGE CARPENTER, M.D.Lond., M.R.C.P., Physician, Evelina Hospital for Children.

and

SYDNEY STEPHENSON M.B., F.R.C.S.E., Ophthalmic Surgeon, Evelina and North-Eastern Hospitals for Children, and Queen Charlotte's Hospital.

AN idea seems to be current amongst ophthalmic surgeons that tubercle of the choroid is extremely rare, and almost limited to cases of acute miliary tuberculosis. These views

are so opposed to our own personal experiences that we may be permitted briefly to recount the conclusions that we have reached after examining 50 cases of the kind, many of which have been confirmed pathologically.

Tubercle of the choroid, in our experience, may be met with in any form of tuberculosis, whether acute, chronic, or quiescent. It is, however, far commoner in acute tuberculosis than in the other forms. For example, in 42 unselected cases of acute miliary tuberculosis (and tuberculous meningitis) we found the choroid affected in precisely one-half. With regard to chronic tuberculosis, medical and surgical, we examined 119 cases with the ophthalmoscope, and were surprised to discover choroidal changes in 11—that is to say, in no less than 2.24 per cent. The ages of our patients ranged from 8 months to 16 years, and they suffered from such various ailments as tuberculous glands or joints, spinal caries, lupus, and chronic cerebral tumours of tuberculous nature. Moreover, we have notes of eighteen instances of choroidal lesions found in patients with a family or personal history of tubercle, which had apparently become quiescent. On several occasions the discovery of the ocular changes threw a powerful light upon the question of general diagnosis.

Tuberculosis of the choroid may assume several distinct ophthalmoscopic forms, a fact that should be clearly recognised at the outset. In acute miliary tuberculosis it generally affects one eye, and consists of a single deposit in the so-called "central region" of the fundus oculi, where it forms an oval, round, or reniform spot, of grey, fawn, or paper-white colour. Its edges, so to speak, are often somewhat "moth-eaten," and marked by a narrow zone of darker colour, due to the aggregation and proliferation of the retinal pigmented epithelium. Specks or rings of pigment are now and then present upon the surface of the little nodule, which may even show pink stripes or dots. On several occasions we have found a tubercle to occupy exactly the region of the macula lutea. When the lesions were multiple, the common number was two or three. They were seldom raised appreciably above the level of the retina. The stereotyped textbook description—namely, many small yellowish-white deposits scattered over the fundus—is one that we have not been fortunate enough to see.

Amongst unusual cases we may mention one met with in a little boy aged 2 years 5 months, who suffered from whooping-cough, bronchitis, rickets, and an enlarged spleen. In the macular region of one eye was a somewhat raised quadrangular mass, perhaps eight times the size of the optic disc, having a dirty grey colour and an ill-defined margin. The overlying retinal vessels were blurred, owing, we presume, to œdema of the retina detached by the subjacent tubercle. The patient died from general tuberculosis six weeks after the eyes were examined, and at the necropsy a large grey tubercle was found at the macula lutea.

In chronic tuberculosis the choroidal lesion may be single, multiple, disseminated, or diffused. As the characters of the single and the multiple forms resemble those described above, they need not be gone into again. Disseminated tubercle was found in a stunted lad, aged 12 years, who showed no signs whatever of syphilis, but who had chronically enlarged cervical glands and extensive scrofulodermia in the neck and elsewhere; he had suffered from a relapsing affection of the cornea, almost certainly of eczematous origin. The fundus of both eyes presented an appearance not distinguishable from that of choroiditis disseminata syphilitica. Nevertheless, the evidence (sketched in outline above) was clearly in favour of a tuberculous as opposed to a specific origin. The following remarkable case of diffused tubercle of the choroid is included in our series: A boy, aged 6 years 7 months, came under our notice on April 21st, 1901. His right eye was stated to have been "blind" for about eighteen months, and his right knee to have been swollen for about eight months. Although there was no family history of tubercle, yet there was the important fact that a lodger with consumption had lived in his parent's house before his eye became bad. The fundus of the right eye, when examined with the ophthalmoscope, presented evidences of extensive disease, involving, apparently, both the choroid and the retina. The large areas of detached retina, seen in the upper and outer part of the picture, probably concealed gross masses of tubercle, while the glistening-white patches scattered about the fundus possibly represented tubercle of the deeper layers of the retina. The vitreous humour, it may be added, contained membranous opacities. Now, this lad suffered from tuberculous arthritis of his right knee, as well as from slight but chronic enlargement of his cervical glands. There was no evidence whatever of syphilis or injury. In light of these facts it seems highly probable, to say no more, that the fundus changes were also of tuberculous nature.

Diffused tubercle of the choroid may sometimes assume great dimensions, thus simulating an intraocular neoplasm. The following is a case in point:

A youth, aged 16 years, suffered from apical tuberculosis, and gave, besides, a family history of phthisis. His right eye was painful, with increased tension, and devoid of perception of light. The cornea was hazy, and no reflex could be got from the fundus with the ophthalmoscope. A tumour of tuberculous origin was suspected and the eye accordingly excised. When examined, after hardening, the vitreous chamber was found to be filled with caseous material, staining very imperfectly. It is unfortunate that tubercle bacilli were not sought.

The fact is, of course, well known that tubercle of the lungs or elsewhere may become obsolescent by the onset of various degenerative changes, as caseation, fibrosis, and so forth. There is reason for thinking that the choroid furnishes no exception to this observation. Every ophthalmic surgeon must sometimes have met with cases where a gross choroidal lesion coincided with a family history of tubercle, or with personal evidences of that disease. Under such circumstances it is a fair inference that the choroidal lesion is of tuberculous origin also. We have notes of 18 cases of this kind, and we are of opinion from what we have seen that in some instances the ophthalmoscopic appearances are so characteristic that the nature of the disease may be diagnosed almost literally at a glance. One or two of our more typical cases may be briefly related.

(1) A female, aged 51 years, gave a marked family history of phthisis, and had herself been treated at the Brompton Hospital some thirty years before she came under our notice. Lying near the inner side of the left optic disc was a circular area, half as large again as the papilla. It showed exposed choroidal vessels, and was bordered by pigment. A number of small, fawn-coloured spots were disseminated over the fundus near the main lesion and the optic disc, and these doubtless represented satellite tubercles, which had also become quiescent. A film was present in the vitreous humour, but sight (with a suitable correction) was normal. (2) A boy, aged 4 years, had a family history of phthisis, and suffered from chronically enlarged glands. A quadrangular area, larger than the optic disc, was present in the macular region of one eye. Its colour was lighter than that of the neighbouring fundus. The centre of the area was marked by a small mass of pigment, while the periphery showed some slight pigmentary accumulations. Moreover, a pigmentary ring lay upon the surface of the diseased area. Several retinal vessels, which crossed the patch, manifested no alteration either as regards their level or general appearance. (3) Another lad, aged 4 years, had in the central region of the left eye an oval patch nearly as large as the optic disc. His family history could not be traced, but his cervical glands were markedly swollen. (4) A fourth case was met with recently in a young woman of 23 years, who gave a definite history of phthisis upon the paternal side of the family. She had slight induration of her cervical glands, some thickening about the ascending colon and cæcum, and a floating kidney. In the macular region of her left eye was a quadrangular patch of choroidal change, about twice the size of the optic disc. Its edges showed a faint diffused collection of retinal pigment, while a trace of pigment existed on the surface of the patch itself, along with exposed choroidal vessels and sclera. The patch was not raised, and the retinal vessels crossing it showed no alteration. Upon careful search two or three faint satellites were found close to the outer side of the optic disc. Vision was reduced to the counting of fingers excentrically. The affection had certainly existed for three years.

We have devoted some little time to the description of cases of what we believe to be obsolescent tubercle of the choroid. This we have done because they are much more likely to fall under the notice of the ophthalmic surgeon than are the other forms, in the absence of routine examinations of the fundus in tuberculous diseases by physicians and surgeons. It is therefore important to get, if possible, a clear mental picture of the forms they are likely to assume. The ophthalmoscopic appearances in the foregoing cases obviously present a strong family likeness. Thus, in each the lesion was of notable size, was situated in the neighbourhood of the optic disc or macula lutea, and essentially consisted of a greyish or whitish area of choroidal atrophy, enclosing or being enclosed by pigmentary rings. A highly significant appearance was that of the satellite tubercles—namely, small round or oval spots, which may or may not be slightly pigmented—in the fundus around the primary focus. An

ophthalmoscopic picture of the kind described in a patient with a family or personal history of tubercle, is, we repeat, in our opinion strongly suggestive of the lesion itself being tuberculous.

The PRESIDENT congratulated the authors on their very clear and interesting paper, and described one case in which he had seen a large mass of tubercle of the choroid subside completely.

Remarks were also made by Mr. A. S. PERCIVAL and Mr. DYKES BOWER.

Dr. CARPENTER replied.

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## THE VARIETIES AND TREATMENT OF "AFTER-CATARACT."

By F. RICHARDSON CROSS, F.R.C.S.,

Surgeon, Bristol Eye Hospital; Consulting Ophthalmic Surgeon, Bristol Royal Infirmary.

AFTER the extraction of a lenticular cataract there will always remain some fragments of altered lens or capsule as a record of the operation.

The pupil may be black and clear, and the sight, with the help of the correcting spectacles, practically perfect; or, on the other hand, the pupil may be occcupied by a thick membrane which obstructs the sight to such an extent that the patient appears to have gained nothing by the removal of his lens.

The amount of the obstruction and the degree to which it interferes with the power of vision show wide varieties in different cases. Such opacities, films, membranes, and other complications as result from the removal of the lens, are best designated by the name "*Nachstaar*" or "after-cataract."

The lens is developed from the invagination of the ectoderm, which constitutes the closed embryonic lens sac.

The epithelial cells which line the sac posteriorly rapidly enlarge and develop to form the lens fibres, which grow forward into the cavity of the sac until they practically fill it up and spread out in layers behind the anterior wall.

The anterior layer of the primary lens sac takes little or no part in the production of the lens fibres; it persists throughout life as a continuous row of polygonal cells, which is known as the subcapsular epithelium.

The subcapsular epithelial layer and the transitional cells near the equator of the lens have, no doubt, an important part in the development and organisation of the films and opacities which constitute after-cataract.

After-cataracts present many varieties. They may be characterised as "simple" if only the lens *débris* and the capsule are implicated. They may be "complicated" by entanglement with some of the important structures around—the cornea, the iris, the ciliary body, or the vitreous. More serious cases, where inflammation has followed the cataract extraction, and where the capsular membrane, thickened by the deposit of lymph or morbid products, is adherent to the adjoining structures, have been well classed by Mr. Jessop under the heading "inflammatory."

Whatever be the nature or variety of an after-cataract, we may assume that it results from imperfection of some sort or other in the technique of the operation, or from a faulty healing; and the question arises, Can any special precaution at the time of the extraction of the lens avoid after-effects which continue to obscure the sight?

A peripheral incision of the cornea or a conjunctival flap encourages a rapid healing, and lessens the likelihood of false adhesion between the cornea and the capsule. Bruising of the corneal flap should be carefully avoided to encourage primary union. The method of lacerating the capsule at an extraction for cataract is likely to influence the after-results: a free tearing is advisable in order to leave a large opening afterwards, but care must be taken not to dislocate the lens nor to damage the hyaloid.

Where a distinct capsular membrane exists as an accompaniment of lenticular cataract, it should be certainly removed with the latter. The lens may be extracted in its capsule entire, or the anterior surface of the latter may be included in a circular cut by the cystitome and then extracted by capsule forceps.

In addition to a well-planned corneal incision, and thoughtful dealing with the capsule, the cortical *débris* must be as thoroughly as possible extruded from the eye. Emptying and cleansing of the lens cavity can be made very thorough where an iridectomy is done, but in simple extraction I am strongly of opinion that it is more essential to have a perfect replacement of the iris and pupil than a thorough removal of cortical *débris*. In simple extraction I do all I can to ensure the escape of cortex and soft lens tissue with or directly following upon the delivery of the lens; if, then, other fragments are seen to be left, they are also extruded, but scarcely any further toilette is practised for fear of causing paralysis of the pupil. The iris and pupil are replaced as rapidly as possible.

A pupil apparently clear may be occupied by a very fine, scarcely-recognisable, transparent capsule, perhaps wrinkled, quite free of the iris, and passing down behind it towards the hyaloid, but often thicker in the coloboma, and more or less attached to the extraction wound in the cornea; or the capsule may be studded with distinct opacities of altered lens substance, or it may appear as a definite membrane. Should inflammation occur it obviously complicates the case by iritic synechiæ and other adhesions or thickening of the structures involved, or by healing together of the coloboma.

There is great diversity of opinion as to the risks of interference with opaque capsule after cataract extraction. Some look upon it as a very dangerous procedure; others do the operation in a large percentage of their cases and without much hesitation. Some resort to it only in order to restore sight to an eye that is practically valueless for purposes of vision, others when sight, though good, seems capable of being made still more perfect. It is important to know what was done in the earlier operation and how the eye healed after it. When inflammation, particularly septic inflammation, has occurred, interference should be resorted to only if necessary, and then with the greatest precaution.

Though there may be no special anxiety about an operation for after-cataract, it should be always undertaken with due precautions. The patient's health should have been attended to; the eye and all instruments used should be thoroughly clean and aseptic.

Careful examination of the membrane and its attachments should be made under magnification, and with concentrated light, with the pupil fully dilated, and these aids should also be taken advantage of during the operation itself.

I do not consider any early secondary operation advisable; it is quite uncertain how much *débris* may become absorbed, or to what extent the sight may improve. A very large amount of *débris* may be present after the extraction, particularly if the lens has been immature, or in the case of a young patient; but it is exactly under these latter conditions that natural absorption is most marked; we cannot tell early what change may occur, nor judge where the membrane is absent or thin to guide us in enlarging the opening.

The eye should have thoroughly recovered from the earlier operation before being subjected to another. I rarely operate at a less interval than three months between them.

It is absolutely essential that thorough recovery should have taken place, and that the eye should be quiet after an extraction which has been complicated by iritis or any inflammation. The irritability of the eye is easily re-established, and the *materies morbi* readily made active. If the operation is done too early under these conditions, not only does the opening in the opaque membrane refill and give no good result, but intractable inflammation, destructive cyclitis, or even panophthalmitis may result.

If the primary inflammation has been of a serious character, particularly if the ciliary body has been implicated, a year is not too long a time to wait before a further effort is made to restore the sight; indeed, if the patient has moderately useful vision, and there is an absence of complications that are likely to make matters worse, the eye had better be left alone. Each case must be taken on its merits.

The object of the operation in an after-cataract is to produce a clear aperture for vision, but it should also aim at a correction of anatomical defects and of conditions likely to lead to malnutrition of the organ—such as synechiæ, constricting bands, or a tendency to glaucoma. On the other hand, it should avoid unnecessary damage of the surrounding

structures. Interference should be effectual, but it should be limited in range; it should be delicately but rapidly executed. The thinnest part of the capsule near the pupil is the best point to select for making an opening. Synechiæ of the iris should be divided.

Where it is likely to suffice, a modified Bowman needle is the best instrument to use. It must be made with a long cutting edge, and be used as a knife. Should the capsule not readily divide, but shift with the needle, at once introduce another one on Bowman's method, taking care that both needles penetrate the same opening in the membrane, so as to tear a single hole, and not leave a small band which divides the hole in two.

Lougnon (Moulins), to ensure a single opening, first passes a needle grooved on the side, along which he runs a second cutting needle.

When the membrane is quite thick or much implicated with the original pupil (which is often in its normal position), a somewhat stronger knife is preferable to the knife needle.

A tearing needle can be used in connection with the knife to fix some part of the pupil while the other cuts it. Cutting, not tearing, should always and under all conditions be employed to effect the opening in the capsule. Some operators use a sharp hook in the membrane to make a *point d'appui* against which the knife can cut. Others use a blunt one for the purpose of tearing open the aperture made by a knife, or even for the purpose of withdrawing the edge of the aperture with the adjoining capsule, so as to cut it off with the scissors.

Stilling tears the capsule by means of two sharp harpoon-headed needles. They are introduced in the limbus corneæ on opposite sides.

When the secondary membrane is so thick or complicated that cutting with the knife, or knife and needle, is likely to be ineffectual, capsular or iridotomy scissors must be used. Panas's forceps are passed sideways, one blade in front of the capsule and one behind it, the sac firmly grasped between them, and by small slow movements is gradually withdrawn entire. If adhesions are present they must be specially dealt with, and the proceeding can be modified in details. If successful the operation is complete and final. The reaction is said to be insignificant, and the patient soon well.

There can be no doubt as to the great value of iridotomy with scissors where the capsule is firmly fixed, or where the iris fibres are stretched over the aqueous chamber by adhesion of the iritic pillars or of the pupillary region to the corneal wound. Where a thick capsule lies more or less free, it will be merely dislodged by efforts at discission, but it may be successfully bisected by the scissors.

Such cases of thick movable capsule as result after discission of ill-developed eyes with congenital cataract or in partial absorption after secondary cataract where the lens nucleus and fluid remain in the capsule sac are best dealt with by contraction forceps, which draw out the sac or membrane entire. The ideal extraction of a cataract is that of the whole lenticular body in its capsule. But this is only safe under exceptional circumstances. The total extraction of a secondary cataract or after cataract, which consists mainly of hardened capsule, is also ideal; but it is not devoid of danger. Extraction of the capsule by forceps should be our last resource, but in some cases it is the only one that gives hope of sight.

The President thought that Mr. Richardson Cross had most admirably summed up the conditions which existed in cases of after-cataract. For dividing a thickened capsule, however, he far preferred an old Graefe's knife, which had been ground down very thin, to an ordinary discission needle. He also thought that a simple extraction without iridectomy was far less likely to be followed by secondary cataract than when an iridectomy had been performed.

Dr. Darier (Paris) thought that much unnecessary damage was done to the eye by going deeply into the vitreous when needling. He thought that care should be exercised not to do more than just divide the capsule. He described a curved needle he now used. If too thick to use this he advised the division of the capsule with scissors or its complete extraction.

Mr. Power said that in the course of a long experience he had tried most of the methods mentioned by Mr. Cross, and although in many cases each of these gave excellent results, yet sometimes they ended in disastrous failures. He thought there were individual differences in the toughness of the capsule which might be national. Thin capsules might easily be torn by any procedure but when tough they were difficult to manage. He was of opinion that at least a year should elapse before any secondary operation should be undertaken and then only with hesitation and doubt, and he thought that in most cases if the vision were moderately good the patient should be contented.

Mr. Devereux Marshall was convinced of the danger of needling, and avoided it whenever he could. He was, however, fully persuaded that the earlier a needling were done, if it had to be done, the better on account of the capsule being then thinner and more elastic than later on, when it became tough, and refused to retract when divided. It was usually in these late needlings that disaster occurred. He agreed with Dr. Darier as to the advisability of not passing the needle deeper into the vitreous than was absolutely necessary; the less damage done in this way the better.

Mr. Tatham Thompson had originally been a great advocate of the double-needle discission, but had lately come to prefer a ground-down Graefe's knife. He did not think that puncturing the vitreous added materially to the risk, but he thought that a too superficial puncture of the capsule was the greater danger, as it led to greater dragging on adhesions. He avoided as far as possible the introduction of forceps.

Mr. E. Dykes Bower said that the remarks which had fallen from the President, Mr. Power, and Mr. Devereux Marshall represented entirely his own feelings, which were those of intense anxiety when approaching an operation for secondary cataract, more so than when performing an extraction; and a question which arose was whether the bad results which occasionally followed were really due to sepsis. The instruments were easy to sterilise, the cornea was avascular and the traumatism was not great; although the conjunctiva could not be rendered absolutely aseptic, yet this hardly seemed sufficient cause for suppuration. He thought the general health was responsible for a good deal. He always felt particularly anxious as to dealing with the capsule in cases of needling in high myopia, and he would like to know if other members had a similar dread of this particular class of case.

Mr. A. Hugh Thompson asked Mr. Cross whether he introduced the needle inside the corneal margin or through the conjunctiva. He had learnt to adopt the latter place from Mr. Lang with the object of avoiding an escape of aqueous and diminishing the risk of sepsis.

Mr. Roll said he had found a ground-down Graefe very useful in a recent case where there was increased tension. He divided the membrane freely, and this had the effect of giving good vision and curing the glaucomatous symptoms. He also thought that if the anterior capsule were removed with forceps, far fewer secondary operations would be required.

Mr. L. V. Cargill described a method he had adopted for dividing the capsule. Two bent broad needles were passed, one above through the cornea and pupillary membrane, and the other below through the cornea and iris. A Tyrrell's hook was then passed through the lower incision in cornea and iris, threaded up behind through the upper incision in the membrane, the hook was turned forwards, and the intervening capsule was drawn downwards, and cut off short at the lower incision with iris scissors.

Mr. Hartridge showed his capsulotomy needle.

Mr. Richardson Cross, in reply, said that in simple extraction he thought it far more important to thoroughly replace the iris than to so thoroughly remove the soft matter. He also was of opinion that if no iridectomy were done the liability to glaucoma was far less, and, in fact, he had never seen a case. He did not think that all the cases which did badly were due to sepsis, and he always entered the needle at the periphery in the conjunctiva near the cornea. He thought that all cases should be treated on their own merits, and no fixed rule could be given as to what vision justified interference after a cataract had been extracted. He had no unusual dread in dividing a capsule after the removal of a lens in cases of high myopia; and, in fact, he had never seen complications arise in this particular class of case.

## THE WORKMEN'S COMPENSATION ACT AND THE TESTING OF WORKMEN'S EYESIGHT.

By HUGH E. JONES,
Hon. Surgeon, Liverpool Eye and Ear Infirmary; Ophthalmic and Aural Surgeon, Royal Albert Edward Infirmary, Wigan.

IN this paper I propose to deal with one side only of the subject, namely, the difficulty of obtaining evidence regarding the eyesight of men previous to an accident, and the importance of such evidence in the settlement of claims. I exclude such questions as the greater liability to injury of defective eyes over sound eyes.

Under the Workmen's Compensation Act, 1897, a person whose wage-earning power has been lessened by any injury incurred while at work is entitled to receive from his employer half the amount per week by which his average weekly wage is reduced, or an equivalent capital sum. In estimating the amount of compensation due for any injury, everything turns upon the answer to the question, "To what extent, if any, has the injury reduced the person's wage earning power?"

Let us consider the bearing of this upon injuries to the eye and some of the problems which may have to be solved before the required answer can be found.

1. Assume that before the accident the man saw well with each eye. One eye is seriously injured, the other remains sound. If the man can do the work he is accustomed to with his one sound eye, he receives no compensation. But can he do the same work? He will likely as not say that he cannot, and much depends upon the nature of his work.

2. A sightless or almost sightless eye receives some slight injury; the other and sound eye remains good. The wage-earning power is not reduced, and the man is not entitled to any compensation, but he now, by an effort of memory, assisted by the promptings of his friends, distinctly recollects that he had quite an appreciable amount of sight in that eye. Was the eye altogether useless?

3. One eye was already a more or less defective eye (with or without the knowledge of the claimant), when the other and good eye met with an accident. Was there really a difference between the eyes, and is it the better eye that has been injured?

4. Both eyes have been injured. Was either, or were both eyes good before the accident, and to what extent has the injury lessened the wage-earning power?

These are some of the problems one is called upon to solve.

*The first point* then to be settled for all cases is—"What is the minimum degree of sight which will enable men to do the work which they are respectively engaged in and earn full wages?" It seems to me that this can be ascertained only by testing and recording the vision (each eye separately), of large numbers of men engaged in various kinds of work. Such an inquiry would probably reveal the fact that in many occupations a great many persons were able to do good work with defects in one or both eyes, and it would decide whether, other things being equal, the persons with defective eyesight earned as much as those with perfect sight.

*The second point* to be decided is, how much sight in each eye had the individual whose claim is under consideration, before the accident? This can be settled in one way only—by systematically testing and recording the sight of every workman who comes under the Act.

*The third point is:* How much sight has the claimant after recovery from the accident, and what chances has he of retaining such vision as he possesses?

The last point will always have to be settled by the skill and the knowledge of the ophthalmic expert, but unless reliable information can be obtained on the first and second points, the expert's opinion is not of much assistance in the settlement of the claim.

In order that this information may always be available, I would suggest that in every mine or works coming under the Act a simple record of the sight of each eye of each workman should be appended to the workman's name in the wage-book. An approximation to the truth would be sufficient for practical purposes, so that the examination need not be elaborate, may even be "rough and ready." It must be suited to those who cannot read as well as to those who can; and so long as employers refuse to allow their men to wear glasses at work, it must be a test of the vision of the naked eye; above all, each eye must be tested separately.

Dot counting at 5 or 6 feet distance is a simple test which could be applied by a clerk or manager, and which would suffice to bring out most defects, including errors of refraction. Of course it would be much better to have a thorough and scientific examination, but I am afraid this is not "within the range of practical politics." To prevent any suspicion of unfairness, I would allow any workman to substitute for the employer's record a report of his vision signed by a qualified medical man.

I foresee three objections to the proposal I have made:

1. It may be held by some ophthalmologists that it is always possible to tell by objective examination whether or not there existed any defect in either or both eyes before the alleged accident.

I do not admit this. (*a*) Even where the media are clear it is not always easy to tell whether changes seen in the fundus are due to disease, old injury, or recent injury; (*b*) it is notoriously difficult to estimate the effects of corneal opacities upon the vision without subjective tests of the sight; (*c*) nystagmus, which is so common in miners, may account for all the loss of sight which is attributed by the claimant to some trivial injury, and, on the other hand, one has seen miners' nystagmus with very good vision; (*d*) after serious injury to an eye it might be impossible to say that that eye previous to the accident had been practically useless from a large error of refraction or from amblyopia. It is a matter of common experience that intelligent persons may have a serious defect of sight in one eye without finding it out, and after an injury to such an eye the patient is often prepared to swear in good faith that the eye was perfectly normal before the accident.

2. It may be objected on behalf of the men that the inquiry into the condition of their sight might lead to the dismissal or degradation of large numbers of men.

This is not a likely occurrence; so long as the men are able to get through their work satisfactorily the masters will probably be content, knowing that wholesale dismissals would send up wages, or at least cause strikes. But suppose such a result did follow the application of eye tests, it would probably benefit the men in the long run; for those who were unfit for the work they were doing would find work they could do before their defective sight had caused injuries to themselves or to their fellow workmen; moreover, the higher standard of sight required would entail compensation for injuries which are now considered comparatively trivial, such as partial loss of sight of one eye. Already some firms of ironworkers, I am told, are dismissing one-eyed men, though with amusing inconsistency they do not consider a blind eye *in situ* a disqualification.

3. As injuries to the eye form only a small proportion of all injuries for which compensation is claimed (about 1 in 20), it may be objected, "Why examine the eye and not make a general examination?" I raise no objection to a general examination, but I may point out that it would require to be made by a medical man, and would probably be excluded by employers on the score of expense and by actuaries as being unnecessary. But the test I have proposed for the eyes could be made by any intelligent clerk, and would cost nothing.

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AN EXCEPTIONAL INCREASE OF PLAGUE IN BOMBAY.—The hot weather decrease of the plague has been unusually short-lived in the Bombay Presidency, where very soon after the onset of the rainy season the mortality began once more to rise with unprecedented rapidity for the season of the year, so that during the last week of August there were nearly 3,500 deaths in the whole of Bombay out of a total for the whole of India of but 3,849, and in the first week in September the number had risen to 4,132 out of a total of 4,822. As at the same time last year only 532 deaths a week were returned for the whole of the Western Presidency, the present recrudescence of the disease on the Bombay side is eight times as great as last year—a most disquieting occurrence. Mysore is the only other place which shows any marked increase, the disease causing under 50 deaths a week in Bengal.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

### A CASE OF HERPES ZOSTER ILLUSTRATING A PRESUMPTIVE CAUSE.

I trust that the note of the following case is worthy of record, as it shows (1) operative interference with nerve trunks as the hypothetical cause of the attack, and (2) a comparatively rare if not absolutely unrecorded site for the lesion.

The history is, briefly, that the patient, a young unmarried lady, had an ovarian tumour removed in November of last year. After the operation recovery was uninterrupted except for the occurrence of some swelling and uncomfortable sensations in the left lower extremity—the left ovary having been that involved in the neoplasm. The swelling persisted until March of the present year, when, without any alteration in the patient's sensations, a patch of herpetic vesicles appeared at the level of the third sacral spine, close to the middle line on the left side. This patch covered an area about the size of a pennypiece. Another group of vesicles made its appearance on the inner side of the thigh. Some twenty-four hours after the eruption of the first group of vesicles the left labium majus became studded on both aspects with vesicles. The vesicles on the delicate cutaneous inner aspect of the labium were of very large size, some being fully a quarter of an inch in diameter. The case ran the usual course, leaving a scarred and pitted surface.

There is not the least doubt in my mind but that the operation was the cause of the zoster, as it could not be mere coincidence that the ovary and appendages of the left side were removed, and that then an eruption of herpes took place over the cutaneous distribution of the posterior primary divisions of the last dorsal and first lumbar nerves. These nerves are part of the supply of the appendages, and must have been extensively damaged in the operative procedure. I can find no other case recorded with exactly similar distribution, although herpes as a result of nerve injury is fully recognised.

Neston, Cheshire. John B. Yeoman, M.D., F.R.C.S.Edin.

### HYSTERIA IN A BOY.

In the British Medical Journal of September 7th, p. 617, I notice an interesting letter from Mr. Court on a case of hysteria in a little boy. I recently published in the *Quarterly Medical Journal* (August, 1900) a series of similar cases which had come under my notice during the last few years. I have no doubt there is much more hysteria in boys and youths than is usually believed, and it is as a rule more difficult to diagnose than in the opposite sex. In boys, it is usually found amongst the somewhat spoiled "pets," often the only child. Mr. Court mentions the interesting fact that the hysterical fit followed shortly after the fright of being shut up in a dark cellar; this coincides with my experience that "some slight illness or injury is often the immediate starting point," frequently following on some unhappiness in their surroundings, as the primary cause.

The recurrence of the condition after improvement, or the shifting of symptoms to other organs, as in Mr. Court's case, is also a common occurrence in these cases.

Sheffield. Arthur Hall.

### TRIONAL IN CHOREA.

My principal, Dr. Barclay, having used trional with success in the treatment of delirium tremens and for allaying the sleeplessness and restlessness, was prompted to give it a trial in a case of chorea of the acute or Sydenham type, which has recently come under our care:

Mrs. P., aged 25, married, and six months pregnant for the first time came under our observation on May 22nd, 1901. She had a short time previously accomplished a railway journey from Leith, a distance of about 160 miles. At Leith she was under treatment for a couple of weeks for chorea, and had arsenic and bromides administered without any improvement.

On the evening in question she suffered from severe involuntary contractions of the muscle groups, those of the face and limbs being all markedly involved. Speech was very much in abeyance, and the patient had all the appearances of a severe attack of acute chorea. She received 20 grs. of trional that night, and 15 grs. on the following morning. She did not rest well that night, and the contractions were very severe on May 23rd. The dose at night was increased to 25 grs., the morning dose being 15 grs. Each powder was given in fruit jelly, followed immediately by a hot drink, which is very essential for the rapid absorption of the drug. She had a better night, and a slight improvement was noticeable on May 24th. The same dose was maintained—25 grs. at night and 15 grs. in the morning—until June 1st, when the condition was so far improved that only 12½ grs. were given at night, and none in the morning. The contractions had completely ceased. On June 3rd the patient's speech was normal and she could take her food quite well, carrying the food to her mouth with her own hand. On June 7th the patient had a walk in the open air. The drug was now altogether discontinued; and at present the patient says she enjoys her usual health.

Of course trional is not a new drug, but its use in chorea has not been previously mentioned, as far as we are aware. In this case it seems to have been very prompt in its action. Osler says the average duration of an attack is about eight or ten weeks, and from our experience with arsenic and other drugs we are of the same opinion. Altogether the result obtained from trional in this case is very satisfactory, and the drug deserves further trial.

Banff, N.B. J. Noonan Meade, L.R.C.P.&S.E.

### NOTE ON AN OUTBREAK OF INFLUENZA AMONG GURKHAS.

In April of this year an epidemic of influenza, remarkable for its mild type, the similarity in symptoms, and the proportionately large number of cases, attacked the garrison of Fort Gulistan, one of the posts on the Samana Range on the North-West Frontier of India.

On April 27th three men came to hospital all complaining of fever, severe headache, and backache, and a varying degree of cough, accompanied by laryngeal and nasal catarrh. On April 28th 5, on April 29th 21, and on April 30th 25 cases occurred, while on May 1st and 2nd 13 more came in, making a total of 67 cases.

In every case the temperature on admission was above normal, varying from 99.6° to 104°, the average being 102.4°. The pulse was small and rapid, and 45 out of the 67 cases presented physical signs of a mild degree of bronchitis. On May 28th tents were pitched outside the Fort and a temporary isolation hospital formed, every case as soon as it occurred being promptly removed from the Fort to the hospital tents. Under treatment, which consisted of rest in bed, the administration of calomel followed by magnesium sulphate, Dover's powder at night, and a sedative cough mixture in those cases in which the cough proved troublesome, the temperature rapidly fell, and in most cases it was normal within three days. The other symptoms subsided almost equally rapidly. With the exception of 2 cases in which the bronchial symptoms persisted for upwards of three weeks, all the men were discharged to duty by May 8th.

On investigation as to the origin of the epidemic, it was found that on April 15th a sweeper had arrived from Abbottabad, suffering from similar symptoms, and though not admitted to hospital he had been treated in his own quarters for several days by the native hospital assistant. There can be little doubt that the disease was imported by him, and infection having been conveyed to the men, symptoms appeared among them after an incubation period of ten or twelve days.

Gurkhas suffer to a remarkable extent from diseases of the respiratory system, which may account, in the present instance, for the large percentage of cases—67 out of a garrison of 155 men—and for the rapid spread. It is curious, however, that out of that number in no case did any serious complications occur, nor, with the two exceptions mentioned above, was any man in hospital for a longer period than nine days.

H. M. Mackenzie, M.B., Ch.B.Edin.,
Samana. Lieutenant I.M.S.

# REPORTS
ON
# MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

## LEEDS GENERAL INFIRMARY.

### CÆSAREAN SECTION (CONSERVATIVE METHOD).

(Under the care of Dr. HELLIER, Honorary Obstetric Physician to the Infirmary.)

M. P., aged 25, was sent to the infirmary for Cæsarean section by Mr. Kershaw, of Pudsey, and was admitted August 24th, 1901.

*History.*

She is by trade a weaver, and had one previous labour about a year before, when she was delivered by craniotomy on account of pelvic contraction. At the age of 7 she was under operative treatment in the Sheffield Infirmary for bowed legs. On admission it was noted that she was short of stature (55 inches), thin and spare, and somewhat anæmic, but otherwise of healthy appearance. Heart, lungs, and kidneys were healthy. There was marked curvature in both tibiæ and fibulæ. The pelvis was flat, small, rickety, with external conjugate $5\frac{3}{4}$ inches and oblique conjugate about 3 inches (dist. crist. iliac. dist. A.S.P., each = $8\frac{3}{4}$ inches). The usual signs of pregnancy were present. The head was felt with unusual distinctness above the pelvic brim, the abdomen was prominent. The child was lying in dorso-anterior position; fœtal movements were normal. The patient could not give the date of last menstruation, but seemed to be in the last month of pregnancy. She was anxious to have Cæsarean section, combined with measures for securing future sterility. It was decided to await the onset of labour. The surface of the abdomen was kept in an aseptic condition, and further vaginal examination was avoided.

*Operation.*

On September 6th, in the forenoon, the membranes ruptured spontaneously. Labour pains came on in the afternoon, and Cæsarean section was performed in the evening, operation being fixed for 7.30 P.M. At 7 it was found that the cord was prolapsing, and that there was meconium in the vagina, but there was pulsation in the cord.

Cæsarean section was performed by Dr. Hellier, assisted by Mr. Dobson, R.S.O., and by Mr. H. Wales, Deputy R.O.O. Chloroform was administered by Mr. Morton. The thin abdominal wall was carefully incised, and the uterus opened by scalpel and scissors in the median line for about 5 inches. The back of the child presented, with breech above. It was removed with a little difficulty. Simple digital pressure was used to control hæmorrhage, as this had proved so satisfactory in our last case (BRITISH MEDICAL JOURNAL, January 1st, 1901). The placenta lay posteriorly and was easily delivered. At this point it was found difficult to control the hæmorrhage, and an elastic cord was put round the cervix, the uterus being drawn forwards for suture. The uterine wound was quickly closed by about 10 deep silk sutures, with superficial between them. The deep sutures just avoided the mucosa. Before the lowest were tied the uterus, which was rather flaccid, was washed out with hot water at 115° F.

After removing the elastic cord and squeezing the uterus empty there was little further hæmorrhage. A continuous catgut suture was then carried down, drawing the peritoneal layer over the row of silk sutures, and thus burying them. Before replacing the uterus hot boric lotion was poured over its peritoneal surface. This greatly increased uterine contraction. A portion of each oviduct was then excised. After the peritoneal cavity had been thoroughly cleansed the abdominal wound was closed in the usual manner. During the operation ergotine was administered hypodermically when the child was delivered, and 10 minims of liq. strychninæ were also injected. At the end of the operation, which occupied from 35 to 40 minutes, the pulse was rapid and weak—150 per minute. Three pints of saline solution were injected into the veins, with marked benefit to the patient.

The child was a well-developed male. It made no effort to breathe, and the various methods employed to resuscitate it failed. The head was unsymmetrical, and it is evident that it had made some attempt to enter the pelvis, and probably the prolapsed funis had been compressed sufficiently to prevent resuscitation.

*After-History.*

The patient rallied well from the shock. For two or three days the pulse was rapid and the after-pains troublesome. The mammæ gave no trouble. Flatus was passed freely on the second day. There were no signs of peritonitis or sepsis. The wound healed entirely by first intention, and she made an excellent recovery.

*Remarks.*

The result for the child would have been better if one had operated without waiting for labour to come on. This would have obviated the accidental complication of prolapsed funis, but we were uncertain as to time of full term.

In this case we discovered accidentally, what we might have thought of before, namely, that after suturing the uterus in Cæsarean section uterine contraction can be powerfully stimulated by pouring water at 115° to 120° F. upon its peritoneal surface. Perhaps this simple and practical expedient may be useful to some others to whom it may not have occurred already.

## ROYAL DEVON AND EXETER HOSPITAL.

### INTESTINAL OBSTRUCTION BY MECKEL'S DIVERTICULUM: LAPAROTOMY: RECOVERY.

(Under the care of Mr. CHARLES E. BELL.)

M. B., a boy aged 7 years, was taken with pains in the bowels on March 5th, 1899, and was seen by Dr. Powne, of Crediton. The pain was chiefly complained of in the region of the umbilicus. During the night he was very sick, and nothing having been passed by the bowel he was given an enema which brought away some hard lumps of fæcal matter, but no relief of the pain or sickness followed.

On March 5th I saw the patient in consultation with my friend Mr. Powne, the child's face looked pinched and drawn, the abdomen was distended, but not painful. On examination coils of distended bowel could be felt moving about under the hand, the rectum was quite empty, the tongue somewhat dry and the vomiting continuous. We advised operation, and for this purpose the child was removed into hospital. On admission the child was put under chloroform and the abdomen opened in the middle line, free fluid (peritonitic) escaped somewhat freely; on passing in two fingers a band about the size of a large quill was found passing downwards from the umbilicus and tightly strangulating a loop of intestine, this band was divided between ligatures and the gut released. On further examination the band was found to be the remains of Meckel's diverticulum. As there were signs of commencing peritonitis the abdominal cavity was flushed with warm water before being closed. The child was placed in bed, and being somewhat collapsed, an enema of brandy and beef tea was given.

The after-history was uneventful, the bowels moved on the third day, and he returned to his home three weeks after the operation. He has remained quite well since.

# REPORTS OF SOCIETIES.

## CLINICAL SOCIETY OF LONDON.

CLINICAL EVENING.

HOWARD MARSH, F.R.C.S., President, in the Chair.

*Friday, October 25th, 1901.*

PRESIDENT'S REMARKS.

ON taking the chair for the first time, Mr. HOWARD MARSH thanked the Society for his election to the office of President, and assured the members that his best services would always be at their disposal.

RIGHT-SIDED HEMIPARESIS WITH ATROPHY OF LEPT OPTIC DISC.

DRS. RAYNER BATTEN and LEONARD GUTHRIE exhibited a boy, aged 12, who fractured the left femur in October, 1900,

and whilst laid up had a doubtful attack of acute rheumatism. In February, 1901, he noticed weakness (gradual) of right arm and legs.

On April 30th, 1901, he showed weakness, ataxy, and intention tremors in the right arm. The right leg was wasted, knee-jerk exaggerated, ankle-clonus marked, and typical Rabinski's plantar reflex present. Sensation normal. No facial paralysis. Faint presystolic *bruit* present. Veins of left optic disc engorged, but no swelling of disc. June 28th: Dr. Batten noted: "Left optic disc pale and excavated. Cribriform plate exposed at bottom of excavation. Disc not filled in nor opaque. No blurring of vessels nor of margins of optic disc. Well-marked central scotoma for white (no colour perception). Retina in macular area and up to optic disc showed signs of disturbance and a number of fine white dots. Veins somewhat large, dark, and tense." The right optic disc was normal. No hemianopsia. October 1st: Paresis much improved, but still some intention tremors of arm, and increased reflexes in leg with extensor response in right great toe. Vision: left eye very slightly impaired; discs still pale, and veins rather large. The nature of the case was obscure. The patient might have had thrombosis in the neighbourhood of the left motor tract with retrobulbar neuritis of the left optic nerve, or the condition might be due to early disseminated sclerosis.

This case might be compared with a case shown at the Clinical Society's meeting, October 28th, 1898, vol. xxxii, page 228, in which complete left hemiplegia and white atrophy of right optic disc existed. The condition followed convulsions (*post partum*), and was believed to be due to embolism or thrombosis of right Sylvian artery and of arteria centralis retinæ.

Dr. F. E. Batten recalled another case in which *post mortem* there was found thrombosis of the left and middle cerebral artery with thrombosis of the vessels to the left optic nerve, which was much degenerated. The chief interest of the exhibited case lay in the fact that the boy recovered.

### Glénard's Disease.

Dr. J. P. Parkinson exhibited a married woman, aged 40, who had had five children, but no illnesses except pneumonia two years ago, and had never suffered from indigestion or abdominal pain or discomfort. She came to the hospital for symptoms due to stenosis and regurgitation at the mitral valve and cardiac dilatation.

The abdomen was very large and flabby from relaxation of the muscles of the abdominal wall. When lying on the back the lower limit of the liver could be felt a fingerbreadth below the level of the umbilicus, but in the erect position it fell to a much lower level. It was freely movable. The spleen was enlarged, prolapsed, and movable. The right kidney was below the right limit of the liver, whence it could be pushed back into the loin. The left kidney appeared to be normal in position. The stomach lay below its usual level, and was slightly enlarged. For a week in June she had constant pain in the right loin, and during this period the urine, which previously had contained only a trace of albumen, diminished to half its usual amount, and contained two-fifths of albumen. When the pain ceased the albumen, and for a few days the amount of urine, increased to three or four pints daily. The temporary interference with the functions of the kidney was the only symptom referable to the large amount of visceroptosis present.

### Congenital Absence of Both Clavicles.

Dr. Seymour Taylor exhibited a man, aged 20, a clerk, in whom both clavicles were incompletely developed.

The sternal ends, with the attachments of the sterno-mastoid muscles thereto, could be felt, and there was some attempt at development towards the acromial end. The intervening space was occupied by fibrous structure. The upper limbs were not impeded in their movements; he could throw a ball and play cricket as well as most youths. Both shoulders could be so far approximated to the middle line that the eminences of the deltoid muscles could be made to touch each other. The condition thus approached that of the carnivora.

### Hydrops Articuli in the Knee-joint of an Old Man, the Subject of well-marked Osteo-arthritis.

Mr. F. C. Wallis showed this patient.

The ligamentum patellæ had been ruptured: previous to that the patella had been twice fractured: it could now be felt some distance up the thigh. In spite of this condition the man was able to get about with the aid of a stick. The large fluid swelling in front of the joint had been aspirated three times, and pressure had been applied. This had had no effect in reducing the fluid. The comparative ease with which the man could get about with so disorganised a joint was no doubt helped by this fluid condition of the joint cavity.

### Acute Intussusception.

Mr. F. C. Wallis showed a boy, aged 7 months, upon whom he had successfully operated for intussusception of the ileo-cæcal variety.

When admitted he had obscure symptoms of intestinal obstruction. The operation was performed thirty-three hours after the first onset, through an incision in the upper part of the right semilunar line. The intussusception occupied the hepatic flexure of the colon, was drawn out of the incision, and by gentle traction and pressure was gradually reduced. The intussuscepted gut was 7 inches long, quite collapsed, somewhat congested, and thickened. The abdominal incisions were closed by one row of catgut sutures. The operation lasted twenty minutes. The bowels acted next day. Recovery was uninterrupted.

Mr. Barker suggested that the incision should be as small as possible, and one finger introduced, and the bowel manipulated thereby, according to the method advised by Mr. Jonathan Hutchinson. He had now operated upon 20 cases.

### Leontiasis Ossea (? "Henpuye").

Mr. H. Betham Robinson showed a man, aged 26, with very hard, almost symmetrical, swellings on the nasal bones and adjacent parts of the superior maxillæ; the skin was not involved.

The nasal chambers were almost completely blocked, the turbinates being pushed towards the septum. The swelling first appeared on the left side in 1897, and progressed slowly. There was no pain; no watering of the eyes; no history of syphilis. He had been in South Africa since the lesions appeared.

The remarkable feature of the case was its strong likeness to "henpuye" or "dog-nose" of Cape Coast Colony.

Mr. Charters Symonds had seen a similar case of eight or ten years' duration, with marked nasal obstruction. He chiselled away the bone from the front, and the exposed bony surfaces had since become covered with a kind of mucous membrane, and the patient had improved beyond expectation. In another somewhat similar case much benefit had also followed the operation.

Mr. Bowlby thought that several different conditions were classed together as "leontiasis." He had seen in London cases similar to the one exhibited.

Mr. Keetley had operated on two cases of unilateral disease. Neither had shown any tendency to recur. He found it difficult, however, to determine how much bone to remove after detachment of the soft parts. Neither of his cases was due to syphilis, congenital or acquired.

### Pulsating Tumour of the Sacrum.

Mr. Charters Symonds showed a man, aged 65, who came to Guy's Hospital complaining of pain in the sacrum.

On rectal examination a pulsating tumour could be felt high up, covering the whole width of the sacrum, and reaching rather further to the right. The pulsation was controlled by compression of the aorta. Through the sacrum a loud systolic *bruit* was heard. The patient had also outward displacement of the left eyeball, and this was associated with antral suppuration. It had remained stationary for a long time. The rectal wall was quite smooth, and the edge of the tumour was sharp, not as it would be in a nævus.

It was suggested that the pulsating tumour was a growth secondary to that in the ethmoid, or it might be aneurysmal.

Mr. Wallis suggested that it was nævoid. He asked if the displacement of the eye was increasing.

Mr. Barker inquired if the rectum had been examined with a speculum: suggesting that a nævus would be thereby distinguished, as in the case of a man, aged 40, who died in University College Hospital of uncontrollable hæmorrhage.

### Syphilitic Myositis of the Extensor Cruris.

Mr. Charters Symonds also showed a man already exhibited last session. Doubt was then expressed as to the nature of the case, some thinking the condition to be a new growth. In the interval rapid improvement had taken place, preceded by involvement of the skin. The patient was unable to submit to treatment by rest, and for a time was without medicinal treatment. When he returned there was effusion into the knee and signs of advancing disease, and the skin was broken in several places. Large doses of iodide produced rapid improvement, so that the diagnosis could no longer be regarded as doubtful.

### Arthropathy in a Case of Bronchiectasis.

Mr. H. E. Symes Thompson (for Dr. Percy Kidd) showed a woman, aged 26, single, who since eighteen months had had symptoms of chronic bronchitis, the sputum being offensive from the first.

Twelve months ago the sputum became more offensive and more copious, and about this time the ankle-joints first became affected. Subsequently the wrists and knees were involved. Both wrists were now swollen, stiff, and tender. No creaking. The fingers were also somewhat swollen. Much muscular atrophy. The knees slightly swollen contained a little fluid. Ankles enlarged, but not tender at present. Muscular wasting well marked. The physical signs of bronchiectasis were well marked at the left base. Sputum, formerly very offensive, had now no fœtid odour, and the quantity had greatly diminished.

Mr. Bowlby said the case was interesting as casting a light on some cases of osteo-arthritis which were due to sepsis. The case had improved as the lung trouble had subsided.

Dr. Seymour Taylor recalled a case in which acute synovitis had followed septic ulceration of the rectum. As the latter was cured the septic synovitis disappeared and had not returned. Dr. Rolleston had also published a case of joint trouble accompanying appendicitis.

Mr. Symonds mentioned a case of severe septic throat, followed by acute synovitis. Did the author recommend the drainage of the cavity in the base of the lung?

Mr. H. E. Symes Thompson said that the experience at the Bromptom Hospital was not favourable to that method of treatment.

## MEDICAL SOCIETY OF LONDON.

W. H. Allchin, M.D., F.R.C.P., President, in the Chair.

*Monday, October 28th, 1901.*

### Typhoid Fever in South Africa.

Dr. Elliot and Dr. Washbourn, C.M.G., communicated a paper in which they analysed the records of 262 cases admitted into the Imperial Yeomanry Hospital at Deelfontein and compared these with Dr. Poole's cases at the Emergency Hospital at Maidstone during the epidemic of 1897, and with other statistics from the Metropolitan Asylums Board Hospitals and the Johns Hopkins Hospital. Their object was to ascertain whether the type of fever in South Africa was the same as that occurring in England and America. The mortality of their cases was 13.7 per cent., practically the same as that at the Metropolitan Asylums Board Hospitals during the year 1900 and that of the Worthing epidemic, but almost double that of the Maidstone epidemic and the Johns Hopkins Hospital cases. The incidence of relapse was 11 per cent., practically the same as that of other statistics in England and America. Early removal of the patients and improper feeding on the journey predisposed to relapse. The average interval between the end of the primary attack and the commencement of the relapse was 10.8 days, which appeared to be similar to that of other statistics. The longest interval between the end of the attack and relapse was 31 days. None of their cases which relapsed died. In 12 of their cases there was a history of a previous attack of enteric fever, an incidence of 4.5 per cent. Dr. Crombie had recorded an incidence of 6 per cent. amongst 150 officers who had been invalided from South Africa. The frequency of second attacks was attributed to the frequency of exposure to infection and to privation experienced by the patients. The mortality was 10.7 per cent. in 186 patients who had not been inoculated, while the mortality was 16 per cent. among 25 patients who had been inoculated. Adding together cases recorded at other hospitals, the mortality among 120 cases inoculated was 7.4 per cent., and among 556 cases not inoculated 10.9 per cent. This difference did not point to any marked beneficial influence of inoculation. With regard to the influence of the inoculation on the incidence of the disease, 59 of their staff were inoculated of whom 4 contracted enteric; 25 were not inoculated, and of these 4 also contracted enteric. The 4 cases among the non-inoculated who contracted the disease came from among the dressers, who were younger than the rest of the staff. Adding together various other statistics, they found that of 224 persons inoculated the incidence of attack was 11.4 per cent., and of 157 persons not inoculated the incidence was 14.6 per cent. From these figures they drew the conclusion that inoculation was not of any practical value in preventing the disease. They drew attention to the considerable risk of contracting enteric incurred by persons engaged in attending to the sick, the incidence of attack among them being 12.7 per cent. Hæmorrhage amounting to several ounces of blood occurred in 6.1 per cent. of their cases, the incidence corresponding about to the average. Half of their cases of hæmorrhage died, a much higher percentage than occurred in England or America. Phlebitis occurred in 5.6 per cent., the incidence at Maidstone being 3.8 per cent., in Caiger and Goodall's statistics 3.4 per cent., and in Osler's 1.9 per cent. The latest date of the appearance of phlebitis after the end of the attack was 30 days. Pneumonia occurred in 3.05 per cent. of the cases, the mortality being 50 per cent. Periostitis, perforation, parotitis, occurred in about the usual proportion. There was constipation in 42.7 per cent. of cases. At Maidstone it occurred in 50 per cent. of the cases, at the Johns Hopkins Hospital in 34 per cent., and at the Edinburgh and East of Scotland Hospital in 37 per cent. It thus followed that constipation in typhoid was more common both in South Africa and in England and America than was usually imagined. Rapid pulse was frequently observed in patients who had been previously exposed to fatigue, and there was often cardiac collapse quite out of proportion to the severity of the attack. In two cases of convulsions one was attributed to the administration of strychnine. Abdominal pain, sometimes so acute as to suggest perforation, occurred in several cases. In several cases there was difficulty in micturition at an early stage of the disease. Cases of appendicitis immediately preceding and immediately following enteric fever were recorded. A case of hepatitis was also described. Twenty-one cases associated with dysentery were recorded as arising during the attack or during convalescence and of being a symptom of serious signification, the mortality being 33.3 per cent. Rigors were observed in 11 cases, in two of these they were due to malaria, the parasite having been discovered in the blood. Arthritis was not uncommon during early convalescence. In a limited number of cases it was due to rheumatism. In the others it appeared to be allied to the arthritis occurring in scarlet fever. Other complications, such as tender toes, epistaxis, pericarditis, and eruptions of different kinds were considered. The conclusions drawn by the authors were that the type of disease in South Africa was practically the same as that met with in England and America, and that inoculation was of little practical value.

Dr. Cayley, in regard to the causation of the disease, said that in this country all epidemics had been traced to water, but the paper and other evidences pointed to other means of infection in the tropics, as by dust and flies. It would be of interest to know whether in South Africa, when the poison had been taken into the system by inhalation or even inoculation, the characteristic features of the disease were developed. He congratulated the authors on the low mortality in their cases. In his opinion the evidence in favour of preventive inoculation was sufficiently strong to make it desirable that it should be continued in use as a possible preventive method.

Professor Wright (Netley) remarked on the indiscriminate character of the criticism of the value of inoculation in typhoid in the paper. The adverse conditions in South Africa might possibly counteract the effect of inoculation which might, for example, be good for India. Lapse of time was of importance in estimating the value of the method, and an excessive dose in fact, predisposed to the contraction of the disease. Inoculation did not protect for the whole life. He recommended inoculation twice for each person. Statistics published by himself in favour of the method were referred to in which over 8,600 persons inoculated and 41,000 non-inoculated gave 2½ per cent. of cases in the 8,600, and 5.75 per cent. in the 41,000 cases contracted enteric. A case mortality of 12 per cent. occurred in inoculated, and 21 per cent. in the uninoculated. It was now known that the blood in many cases of typhoid did not protect. In some cases of the disease occurring after inoculation there had been only a slight reaction. Maturer age in South African cases did not seem to afford protection. He thought it would appear that there was a certain advantage from inoculation, and that it was most apparent in those least tried physically.

Surgeon-General Henry Cayley, C.M.G., referred to the fallacies arising from wilfully erroneous statements on the part of soldiers, and to the confusion with ordinary vaccination. Of a staff of 61, 54 were inoculated twice, and not a single one got the disease though much exposed to infection. Of 74, 5 got enteric; of these, 3 had not been inoculated and 1 died, and 2 had been inoculated and 1 died, but this man had not shown a good reaction. Of 35 nurses, 32 were inoculated twice, 2 were not inoculated because they had had enteric lately, and 1 refused it, and this last was the only one of the 35 persons who took the disease. Personally, if he were going out to South Africa again, he would be inoculated twice on the voyage out. He suggested that the cases of arthritis described by the authors might be Malta fever. Referring to another batch of cases, in 2 only the blood gave no Widal reaction, and these had only been inoculated once.

Dr. Tooth had been somewhat surprised by the figures in

the paper. His experience had been rather strongly in favour of inoculation. The more severe the reaction following inoculation, he had found, the less likely was immunisation to have been produced. A severe reaction, indeed, rather suggested reinoculation; also in the few instances which he had met with of second attacks, the previous attack had been very severe. Some people seemed to be constitutionally immune, while other people never seemed to become immune from having the disease, and in such it was probable inoculation would be futile.

Dr. Rolleston had found from his cases that inoculation did not absolutely protect, but that the fatal results did not happen to occur in the inoculated cases; also the duration of immunity (if any) after inoculation was considerably more than six months, and this was of itself valuable. Mr. Durham's theory of relapses was of importance, as secondary attacks were common, and relapses were more common—that several strains of bacilli might produce the disease, and that immunity to one strain did not involve immunity to another. It suggested that the matter for inoculation should come from several sources. He drew a distinction between arthritis and arthralgia. Pleurisy was in his experience commoner on the right side. The frequency of phlebitis in soldiers seemed to depend on the fatigued lower limbs affording diminished resistance. The frequency in which dysentery and enteric were contracted by the same drink, so to speak, was of interest, the dysentery developing in the incubation period of the enteric.

Surgeon-General Muir thought the question of inoculation could only be decided on an examination of thousands of cases, not hundreds. Water was not the only source of infection, but the soldier would not drink pure water when the other was more handy.

Dr. Goodall considered too much influence had been attributed to water infection in this country. Nurses in fever hospitals were apt to catch the disease. The South African campaign had been of service in showing that water supply was not the sole cause of the incidence of the disease. It was desirable in publishing statistics of inoculation that the ages of the patients should be stated.

Professor Wright explained that a small dose gave a temporary immunity, and a large dose a period of increased susceptibility followed by a later and more permanent immunity.

Dr. Washbourn, in reply, stated that the reference to inoculation in the paper was to the severe test under which it had been put by the hard conditions in South Africa, but it was under such conditions that the method was specially needed. The possible confusion of enteric with arthritis and Malta fever was referred to. There was no actual fact to support Mr. Durham's theory in this relation.

## LIVERPOOL MEDICAL INSTITUTION.

Edgar A. Browne, F.R.C.S.Ed., President, in the Chair.

*Thursday, October 24th, 1901.*

### Aneurysmal Varix in Scarpa's Triangle.

Mr. R. C. Dun showed a patient suffering from aneurysmal varix of the femoral artery and vein in the upper part of Scarpa's triangle on the left side resulting from a Mauser bullet wound.

Very severe hæmorrhage had immediately followed the injury. The communication between the artery and vein had apparently developed on the third day after the wound was inflicted, as indicated by the supervention of pulsation and thrill over the vessels. For the past year the patient had been doing full work as a tailor, suffering comparatively little inconvenience. There was no distinct tumour in Scarpa's triangle, merely an ill-defined swelling. Expansive pulsation and marked thrill were present, with a very loud rumbling *bruit* resembling the noise heard when travelling in a train passing through a tunnel. There was no œdema of the limb below or varicosity of veins. The pulsation and thrill gave no inconvenience to the patient after long standing or walking, and the limb was readily tired. It was not considered advisable to attempt any operative interference.

Mr. Rushton Parker referred to a formidable case of the kind operated on by Lister in Edinburgh over twenty years ago. The femoral artery was tied above and below the aperture and the much dilated vein was stitched up with antiseptic catgut and its channel preserved. Though much blood was lost in a prolonged operation, the patient recovered with a useful limb.

### Stricture of Sigmoid Flexure.

Mr. George Hamilton mentioned several cases of ring stricture of the sigmoid flexure, which he had previously brought before the Society, and which were still alive and well. Stress was laid on the fact that carcinoma of the intestine was not really such a malignant disease as carcinoma elsewhere; secondly, that an operation for removal was best conducted in two stages, no attempt being made to unite the divided bowel at the primary operation. A very unusual case was related of a schoolmaster, aged 68, who suffered from a carcinoma of the sigmoid flexure, which had become (owing to a long mesocolon) attached to about the middle of the transverse colon. In order to remove this growth it was found necessary to take away 16 inches of large bowel. The man had made an admirable recovery. Mr. Hamilton made some further remarks on the advisability of recognising these ring strictures before much intestinal obstruction occurred.

Mr. Rushton Parker agreed with Mr. Hamilton that in a case of this kind it was the best practice to tie tubes in the cut ends of the gut and bring them out of the wound, reserving to a further operation any attempt that might be made to reunite the gut.

### The Personal Factor in Tuberculosis.

In a paper on this subject Sir Dyce Duckworth pointed out how at the present time the whole art of medicine and in particular the science of pathology were dominated by bacteriological ideas. Amidst the enthusiasm with which these momentous discoveries in this field had been received, he could not but feel that some important older doctrines had been lost sight of. Respecting the modern views as to the nature of tuberculosis, he felt that too little regard was now paid to the peculiarities of the host, and perhaps too much to those of the infecting parasite. The condition of body which was most prone to become invaded by tuberculosis was that long known as the scrofulous or strumous diathesis. The doctrine of the diathesis received little or no attention in these days, but bacteriology had not done away with these textural conditions, although it had temporarily overshadowed the recognition of them. The modern doctrine was laid down that "scrofula was tuberculosis." This the author absolutely denied, and he maintained that it was possible to be scrofulous throughout life without becoming tuberculous. The essential character of scrofula was a textural vulnerability to irritation of all kinds, and especially to tuberculous invasion. Scrofulous persons reacted badly to all morbid processes, and all inflammatory disorders in them tended to be lingering and rebellious to treatment. Many of the ailments from which they suffered were of a non-tuberculous character. The vulnerability of their lymphatic system, which was a marked feature, did not depend on tuberculosis. The opinions of Simon, Watson, Paget, and others were given in illustration of these contentions, and that of Virchow to the effect that vulnerability was the keynote of scrofula was enforced. The teaching one was now asked to accept was that there was no scrofula without tuberculosis, and that if any individual presented signs of struma he was already tuberculised. This was a vain doctrine and set forth in defiance of obvious clinical observations. Strumous conditions supervened on debility and continued struggles against Nature. The textural frailty with its peculiarities and proclivities powerfully modified the character and progress of any malady which occurred in those thus impressed. It was next shown how persons of gouty predisposition were thereby largely immunised against tuberculosis, the offspring of the gouty manifesting none of the peculiar delicacies of the strumous. Tuberculosis when it occurred in the gouty made little progress as a rule, and tended to obsolescence. What was bad for the gouty was good for the strumous. The course of a tuberculous process when it occurred in the gouty was largely modified, and fibrotic changes were associated with it. In the strumous the lesions tended to soften rapidly and disorganise the affected sites. Hence it was obvious that there were at least two pathogenic factors to be regarded in any case of tuberculosis—(*a*) the host, (*b*) the infecting parasite. The younger pathologists now "reckoned without their host." If both factors were recognised, as clinical medicine required, it became obvious that much of the preventive procedures against

tuberculosis must relate to the personal factor, and that our duty was to fortify the host against invasion, as well as to intercept and destroy the invader. It was probable that the best preventive measures would be found in strenuous efforts to render persons prone to infection as immune as was possible by securing for them appropriate dietary and the best hygienic environment. Lastly, a protest was made against the modern idea of "curing" tuberculosis. All that could be done was to place the patient in conditions favourable to an arrest of the process. No malady was so often arrested as tuberculosis, but none was more ready to relapse at any period within the lifetime of the patient. A better comprehension of the textural proclivities of the individual might enable them to frame a sounder prognosis in respect of liability to relapse after the occurrence of an arrest. More than this could not be done. In any case bacteriology was not the "be all" and "end all" of clinical medicine, as it was so commonly supposed to be.

Dr. T. R. GLYNN considered that Sir Dyce Duckworth's remarks on the importance of recognising the part played by the constitution of the host in the development of tuberculosis fully warranted, owing to the attitude of certain physicians at the present time. He had the opportunity of seeing a number of medical reports on the health of applicants for insurance, and had noted that some medical examiners in cases where there was a history of phthisis in a family made such remarks as this, "Some of the relatives have died of tuberculosis, but this affection is no longer considered hereditary, and it is not necessary to charge an extra." The pathologist in his inoculation experiments studied only one aspect in the etiology of tuberculosis, but he could not understand how the physician could fail to recognise the importance of the other aspect—predisposition, hereditary or acquired. He thought that for the most part what was formerly known as the strumous diathesis would now be recognised as degeneracy.

Dr. WILLAM CARTER agreed that it was as necessary to consider the soil as the seed, but he believed that most if not all medical men took this view. Facts bearing on the importance of the nature of the soil were too patent to be mistaken, such, for example, as tuberculosis ceasing after small-pox, etc.; the different order in which structures were attacked in the young as compared with the aged; the greater degree of susceptibility of the coloured races, etc. In every case it seemed to be a struggle between destructive and defensive forces, for the probability was that there was no absolute immunity in any individual of any race. It seemed probable also that the bacillus tuberculosis could grow on different media and produce different toxins accordingly. The importance not only of diathesis, but of what was termed temperament, was wisely recognised by their forefathers, and a rough but practically useful classification into sanguineous, nervous, lymphatic, etc., persons, the reaction of whose tissues both to disease and remedies varied, was the outcome of their observations. In this kind of knowledge they had probably declined. Cures in an absolute sense must be very rare. A curious fact was perhaps worth mentioning as bearing on the supposed reliance placed by the professional mind on bacilli destroyers as against soil modifiers, namely, that though Koch's demonstration of the cause of tuberculosis was made in 1881, there was scarcely a single important addition made to the official antimicrobic drugs since the *Pharmacopœia* of 1867, which looked as though the professional judgment of the nation relied more on supporting the patient against the attack of the bacillus than on directly destroying the bacillus after its invasion of the organism.

Dr. WARRINGTON recognised the greater vulnerability of some to tuberculous disease, arising either from inherited defects or acquired conditions of lowered vitality. He considered, however, that it must be a very difficult task to point out such specific features in individual physiognomy as would enable an observer to state with reasonable probability which individuals were more liable to tuberculosis. Similarly he considered it would be difficult to predict of several individuals, previously healthy and whose family history was unknown, which individual was, on exposure to cold and fatigue, most liable to rheumatic fever. The pneumonia bacillus inhabiting the mouth of a healthy person might be as virulent as that found in one suffering from the disease. There must therefore, have been some change in the host, but this change could not be recognised. The statement he would emphasise was that the proof of a diathesis was often the proof of a disease.

Drs. HARRIS (Manchester), BUCHANAN, and BARR also spoke, and Sir DYCE DUCKWORTH replied.

## LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

A. G. BARRS, M.D., F.R.C.P, President, in the Chair.

*Friday, October 18th, 1901.*

### PRESIDENT'S ADDRESS.

THE PRESIDENT gave an opening address on Some Points in Medical Practice.

### THE MONTANA SANATORIUM.

Dr. CHRISTY WILSON (Doncaster) read a paper on the Montana Sanatorium in the Rhone Valley, first showing limelight pictures of Nordrach-upon-Mendip and Altadore in County Wicklow. Montana near Sierre was chosen by a number of the leading doctors in Switzerland as the site of a large sanatorium, and the entire control was placed in the hands of Dr. Stephani. The altitude (5,000 feet), the small rainfall, the great amount of sunshine, the almost total absence of fogs, the complete shelter from the north and east by mountain ridges covered with an immense pine forest, the spacious verandahs, the generous diet, the lakes for figure skating, the lovely walks in the park and in the forest, all combined to give patients an excellent prospect of cure. Disinfection of the rooms by scrubbing with sublimate and by formaldehyde vapour under high pressure was systematically carried out. The hope was expressed that before long every case of tuberculosis of the lungs would be notified and isolated in a sanatorium.

The PRESIDENT made some remarks.

### BALLANCE'S OPERATION IN MIDDLE-EAR DISEASE.

Mr. SECKER WALKER read a paper on the advantages of the complete operation as devised by Mr. Ballance for mastoid disease and chronic otorrhœa over the older methods. The operation was described in detail. Its special advantages were as follows: The whole seat of the disease in the cavities of the temporal bone was exposed to clear view and the disease could be entirely removed. Owing to the amount of room secured by the free cutting away of bone it was not difficult to keep away from what might be termed dangerous areas, or they might be better approached with caution. At the end of a fortnight the freshly-cut surface of bone now vascularised was covered with a large epithelial graft which lined the whole cavity and by immediate healing prevented the recurrence of disease. The period of treatment was much less, four to six weeks instead of as many months. The results of the older methods were so uncertain that surgeons hesitated to advise operation for chronic otorrhœa and only operated for obvious mastoid disease. With this operation it was possible to speak with something approaching certainty of success, while the results on the hearing power were distinctly good.

Mr. WHITEHEAD had performed the operation according to Ballance's method a number of times and thoroughly agreed with Mr. Walker as to the great advantages presented by this method over all others. He preferred to use the chisel to enter the antrum and the burr to enlarge the cavity and to smooth down the walls. The importance of securing a healthy condition of the naso-pharynx was mentioned, so as to prevent reinfection through the Eustachian tube. The practical certainty of effecting a cure by this operation was so great that no case of chronic otorrhœa should be allowed to go uncured.

Mr. WARD and Dr. J. KERR also took part in the discussion, and Mr. WALKER replied.

### CASES, PATHOLOGICAL SPECIMENS, ETC.

The following were shown:—Dr. HELLIER: (1) Uterus extirpated for intractable procidentia; (2) double hydrosalpinx; (3) (with Mr. R. SMAILES) dermoid ovarian cyst removed in fifth month of pregnancy; (4) (with Mr. WAINMAN) ruptured tubal gestation treated by abdominal section.—Mr. LITTLEWOOD: (1) Three specimens of ectopic gestation; (2) loose cartilage removed from elbow-joint; (3) implantation cyst from finger.—Dr. BARRS: (1) Specimens from a case of Hodgkin's disease; (2) a case of hysteria in the male.—Mr. B. G. A. MOYNIHAN: (1) A series of specimens from operations for recurrent appendicitis; (2) a vermiform appendix transfixed by a pin, which had been swallowed fourteen days before operation; (3) a part of the ileum, the cæcum, the ascending colon, and a portion of the

transverse colon removed for carcinoma; (4) the sigmoid flexure removed for chronic recurring volvulus; (5) malignant stricture excised from the sigmoid; (6) specimens from cases of excision of the rectum, by Kraske's method.—Dr. Churton: Two cases of nervous disease (myoclonus and disseminated sclerosis) treated by subcutaneous injection of curare.—Mr. A. L. Whitehead: (1) A specimen of rhinolith; (2) a case of microtia.—Mr. Mayo Robson: (1) Multiple tuberculous constrictions in small intestine, enterectomy for intestinal obstruction; (2) almost complete gastrectomy, recovery; (3) two partial gastrectomies, recovery.—Mr. C. M. Chadwick: A case of rheumatoid arthritis in a child.—Mr. Lawford Knaggs: Ectopic gestation.—Dr. Trevelyan: A part of a brain showing multiple gummata.

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Harveian Society of London.—At a meeting held on October 17th, Dr. D. B. Lees, the President, in the chair, Mr. Campbell Williams read a short paper entitled Hæmaturia in Childhood. The various medical ailments, drugs, and parasites which give rise to the condition were enumerated. The surgical aspect was next reviewed. Traumatism of the kidney, ureter, bladder, and generative organs was discussed. In connection with laceration of the ureter mention was made of a case of hydronephrosis resulting from the injury, which necessitated nephrectomy. The effects of calculi in the various portions of the urinary tract were considered. It was remarked that in many proved cases of vesical calculus in young children hæmaturia was absent, and that the only diagnostic signs had been dysuria and infrequent micturition. Frequent urination was more common in infants when the stone was renally situated. The value of skiagraphy in these cases was pointed out. Tubercle of the bladder and kidney was dealt with, and attention drawn to the fact that the first noted symptom of renal tuberculosis might be copious hæmaturia. In connection with phimosis as an exciting cause of vesical hæmorrhage the speaker said he had never met with this condition due to phimosis uncomplicated with some other cause. Reference was made to sarcoma as the type of malignant disease which affected the urinary organs in infancy and childhood, but that the bladder was practically exempt from implication by it in the very early years of life. The fact was also noted that, excluding sarcoma, the bladder was little liable to tumour formation. The rarity of papilloma mucous polypi, and adenoma was pointed out. Caruncle of the urethra in female children was noted as an occasional cause of blood in the urine. Hæmaturia dependent upon scurvy rickets, the result of improper feeding, was discussed, and attention drawn to the fact that sometimes bleeding from the urinary organs might precede the usual osseous or oral manifestations of the disease. It was likewise pointed out that, in hæmophilia, hæmorrhage from the bladder or kidneys might constitute the primary declaration of this dyscrasia in a child.—Dr. Sidney Phillips remarked that hæmaturia arising from tuberculous disease of the urinary organs, especially when the kidney was affected, might be very profuse. He had not seen hæmaturia in scarlet fever except as part of acute nephritis. In a patient suffering from typhoid and scarlet fever at the same time fatal hæmaturia had occurred, shown *post mortem* to have occurred from the bladder wall. In children it was not infrequent to see hæmaturia which seemed attributable to the mechanical action of crystals of oxalates or of uric acid found in the urine. He thought hæmaturia and epistaxis might result from the rheumatic poison.—Mr. Buckston Browne could only think of one source of hæmaturia in children which had not been mentioned, namely, the bursting into the bladder of an abscess connected either with the hip or the spine, and he instanced a case where he had removed part of the body of a vertebra from the bladder into which it had been discharged from a spinal abscess. He mentioned a case of infantile hæmaturia, seen with Sir Thomas Barlow, where the cessation of the use of sterilised milk and the taking of a little orange juice were followed by excellent results, and he asked Mr. Campbell Williams if after (juvenile) suprapubic cystotomy he compelled his patients to assume any particular attitude, some surgeons having insisted upon the prone position, while he preferred to allow the child to lie as it liked.—Dr. G. A. Sutherland agreed that hæmaturia did not occur in uncomplicated rickets. In scurvy, hæmaturia might occur from renal or vesical hæmorrhage, and was directly dependent on the general disease. In some cases, however, he thought a local cause existed in the form of mechanical irritation of the kidneys by uric acid crystals. These were frequently passed in large amount in scurvy, as in most affections characterised by profound anæmia, so that if hæmaturia were the sole evidence of the hæmorrhagic tendency during an attack of scurvy, it was advisable to examine the urine carefully for uric acid.—The Chairman and Mr. Raymond Johnson also took part in the discussion; and Mr. Campbell Williams replied.

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Dermatological Society of Great Britain and Ireland.—At a meeting on October 23rd, Dr. A. J. Harrison, President, in the chair, Dr. P. Abraham showed (1) a case of general progressive sclerodermia in a married woman, aged 49. In the discussion which followed Mr. Campbell Williams spoke of an allied case in a diver, Dr. Eddowes of cases of leucodermic alopecia, Dr. Stowers of a case which he exhibited at the Dermatological Congress in 1881, in which the distal phalanges of the hands were entirely absorbed. He thought the prognosis in these cases was grave. Dr. Abraham said there were several cases of recovery on record. (2) Xanthoma diabeticorum in a woman aged 32. Attention was called to the rarity of this condition in women. Dr. Wilfrid Warde gave a microscopical demonstration of the histology of the papules. (3) Lupus erythematosus in a girl 9 years old. (4) Dermatitis herpetiformis in a young girl. Dr. Wilfrid Warde suggested that this was a case of pemphigus foliaceus.—Dr. Stowers showed a case of Paget's disease of the left breast of fifteen years duration in a patient 82 years of age, and called particular attention to the long duration of the disease without any glandular implication or scirrhus formation.—Dr. G. Norman Meachen showed (1) a case of lichen planus hypertrophicus in a woman. (2) A case of lymphangioma circumscriptum in the left axilla of a woman. Mr. Pernet thought this to be a case of white mole. There was a history of some—probably nævoid—growth having been removed from this region many years previously.—Dr. Graham Little showed (1) a case of lichen scrofulosorum in a girl, (2) two children with parasitic alopecia.—Dr. Eddowes: A case of lupus vulgaris.—Mr. A. Shillitoe: (1) Tertiary syphilitic indurative œdema of the scrotum, lip, and tongue; (2) secondary syphilitic tongue, showing papillomata and condylomata present at the same time.—The proceedings terminated with an address from the President, Dr. A. J. Harrison, on the Accident of Disease Dermatologically considered.

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Society for the Study of Disease in Children.—At a meeting held on October 18th at the Hospital for Sick Children, Great Ormond Street, Dr. D. B. Lees in the chair, Dr. Fennell showed for Dr. Garrod a child, aged 5 years, the subject of spastic paraplegia with atony in which retinitis pigmentosa was considered to be suggestive of a syphilitic origin for the paraplegia. Dr. Poynton, Dr. Hawthorne, Dr. Carr Smith, and Mr. Pernet commented upon the case.—Mr. Stansfield Collier showed a baby, aged 3 months, with congenital deformity of the left shoulder girdle and spine of the type described by Willet and Walsnam. Mr. Collier also showed a case of separation of the epiphyses of the heads of the femoral bones in which the appearances resembled those of congenital dislocation.—The Chairman showed a case of enlargement of the heart following rheumatism. Thrombosis of the brachial veins had been present. Dr. Sansom, Dr Theodore Fisher, and Dr Poynton made remarks.—Dr. Hutchison showed a child, aged 2½ years, which had been affected with double facial paralysis due to ear disease. The cells of both mastoid bones had been cleared out by Mr. Ballance, and recovery from the paralysis quickly followed. The Chairman and Dr. Sansom discussed the case. Dr. Hutchison also showed a boy, aged 4 weeks, exhibiting shortness of all the limbs and supernumerary digits; congenital disease of the heart was also present. A third case shown by Dr. Hutchison presented a diffuse lipomatous nævus with pigmentation, a papilloma of the tongue, and congenital cataract. Dr. G. A. Sutherland commented upon the second case.—Dr. Theodore Fisher showed two specimens of congenital disease of the left side of the heart, mitral stenosis from a child, aged 15 months, and aortic stenosis from a child, aged 4½ months. The Chairman remarked upon the rarity of the conditions represented, and Dr. Sansom and Dr. Sutherland commented

upon them. Dr. NASH also remarked that he had obtained a specimen of mitral stenosis in a child, aged 6 months.—A paper was read by Dr. WAYLAND CHAFFEY upon a case of pernicious anæmia with enlarged spleen in a child, aged 11 months. No leucocytosis was present during life, but after death microscopic sections of the organs showed small-celled infiltration uniformly distributed through the liver and kidneys. These organs turned blue when treated with iron reagents.—Before the meeting closed the CHAIRMAN showed a case of multiple neuritis following the treatment of chorea by large doses of arsenic, and a plaster cast of the scalp of a boy showing very large rheumatic nodules. Dr. SUTHERLAND, Dr HAWTHORNE, and Dr. CHAFFEY discussed the cases.

# REVIEWS.

## THERAPEUTICS AND PHARMACOLOGY.

THE *Handbuch der physikalischen Therapie*,[1] edited by Drs. GOLDSCHEIDER and JACOB, is dedicated to Professor von Leyden for his 70th birthday, and forms a companion volume to the well-known *Handbuch der Ernährungstherapie*, which was edited by von Leyden himself two years ago. In its plan it is equally comprehensive, and equally well-known names appear among the list of contributors. Rubner and Nothnagel have concentrated a great deal of information in their sections on climatotherapeutics, the first in regard to general meteorological considerations and scientific climatology, the second in regard to climatotherapeutics proper and climatic health resorts. In Dr. A. Loewy the subject of the physiological effects of high altitudes finds a most capable exponent; whilst Professor Ehrhorst of Zürich deals with the actual resorts of high altitude. Liebermeister, well known for his writings on fever, etc., describes the thermal effects of baths, and Professor Glax, of Abbazia, the author of one of the most recent works on balneotherapeutics, discusses mineral water resorts, mud baths, sand baths, etc. The portions on sea bathing and sea voyages are characteristic work of Sir Herman Weber of London, the peculiarities of marine climates being sketched by Dr. Hiller of Berlin, who likewise describes and classifies the various seaside sanatoria. Amongst the most interesting and instructive sections are undoubtedly those on hydrotherapeutics by Professor W. Winternitz of Vienna, and his pupil A. Strasser. Hot-air methods and the general subject of thermotherapeutics have been ably treated by Drs. Goldscheider and Friedländer. Amongst other articles those on pneumatotherapy and inhalation treatment are by Professor Lazarus, G. von Liebig, and R. du Bois-Reymond. There are likewise historical introductions to the various sections from the pens of Dr. Pagel and Dr. Marcuse. The question of what physical methods should be selected in each group of cases is reserved for another volume.

*A Syllabus of New Remedies and Therapeutic Measures*[2] is a collection of short paragraphs, or sometimes short articles, on some of the newer remedies and methods of treatment. Certain of those mentioned by Dr. WAINWRIGHT—such as antipyrin, acetanilide, and animal extracts—can scarcely be called recent additions to the materia medica, but the bulk of them may quite properly be so described. Such matters as the *x* rays, cocainisation of the spinal cord, the Nauheim treatment of cardiac disease, and serumtherapy also come in for consideration. The notices are very short and refer almost entirely to special therapeutical points. The book may prove useful to anyone wishing some information about new drugs, which are often only names to us. There are a good many misprints.

The second half of Professor KUNKEL'S work on toxicology[3] is devoted to vegetable substances, snake venom, ptomaines, food poisoning, and auto-intoxication. Although it contains a great deal of valuable matter, it scarcely bears out the promise of the first volume, which was written and compiled with so much more thoroughness and finish that it almost appears as if a feeling of impatience with his task had overtaken the author. The literature and authorities given are much less full than in the first volume, often not quite recent, and very largely confined to German sources, while many matters are dismissed with a mere reference to an original publication instead of being explained in detail. It is still, however, a valuable reference book, especially with regard to the physiological aspects of the actions of poisons.

Dr. OVERTON'S studies on narcosis[4] are written more from the biological than from the medical standpoint, and deal with general theoretical questions rather than those connected with practice. The author first discusses a number of matters in relation to narcotics and anæsthetics, and then proceeds to consider various theories of sleep and narcosis at considerable length. This is followed by a more special part in which ether, chloroform, alcohol, chloral, and many other substances which act specially on the cerebral cortex are taken up in detail. The author gives a number of experiments, chiefly on tadpoles and other comparatively low forms of life, and from these draws a large number of conclusions, the enunciation of which would occupy too much space. He divides narcotics into two groups—the indifferent and the basic—which have the common property of penetrating easily into the substance of the body cells and of chemically combining with certain of their constituents. This alteration determines the narcotic condition.

[1] *Handbuch der physikalischen Therapie* [Handbook of Physical Therapeutics] Herausgegeben von Dr. A. Goldscheider und Dr. P. Jacob. Theil 1, Band 1. Leipzig: G. Thieme. 1901. (Roy. 8vo, pp. 578, 60 illustrations. M. 15.)

[2] *A Syllabus of New Remedies and Therapeutic Measures, with Chemistry, Physical Appearance, and Therapeutic Application.* By J. W. Wainwright, M.D. Chicago: G. P. Engelhard and Co. 1901. (Crown 8vo, pp. 229. \$1.)

[3] *Handbuch der Toxikologie* (Handbook of Toxicology). Von Professor A. J. Kunkel. Zweite Hälfte. Jena: Gustav Fischer. 1901. (Roy. 8vo, pp. [illegible] M. [illegible].)

[4] *Studien ueber die Narkose, zugleich ein Beitrag zur allgemeinen Pharmakologie.* [Studies on Narcosis, a Contribution to General Pharmacology.] Von Dr. E. Overton, Privatdocent der Biologie und Assistent der Botanik an der Universität Zürich. Jena: Gustav Fisher. 1901. (Roy. 8vo, pp. 203, M. 4.50.)

## NOTES ON BOOKS.

### HEALTH RESORTS.

BESIDES an account of the modern resources of Bath and a summary of its history and traditions, Dr. PRESTON KING'S *Bath Waters*[5] contains interesting chapters (illustrated) on rheumatism, gout, rheumatoid arthritis, and the various conditions in which benefit may be derived from the famous English health resort. The last chapters not only refer to the thermal treatment of the diseases, but include useful and suggestive remarks on general management, diet, and etiology, showing that the author has not neglected his special opportunities for observation.

Dr. MACINDOE sings the praises of *Sidmouth as a Health Resort*,[6] and thinks that many persons who leave England in search of a warmer winter climate might do equally well, or better, by remaining in their native land, and passing the cold season at this mild resort. He does not pretend that the place is an Elysium, but claims that prolonged periods of severe cold or of stormy weather are in Sidmouth the exception, and that a mild equable temperature and a calm state of the atmosphere is the rule. Its situation, surroundings, meteorology, drainage, and water supply are all considered, and likewise its chief indications as a health resort. One characteristic claimed for Sidmouth will commend it to many invalids from the metropolis, namely its restfulness, and the absence of the gaudy and noisy attractions which delight the "one day" tripper.

The first edition of Dr. ROBERTS'S little work on *The Harrogate Mineral Waters*[7] was reviewed in the BRITISH MEDICAL JOURNAL of July 4th, 1896. The present edition is revised and partly rewritten. The author rightly urges the importance of proper medical supervision during the course of treatment,

[5] *Bath Waters.* By Preston King, M.D. With a Historical Sketch by S. Baring Gould, M.A. Bristol: J. W. Arrowsmith. (Cr. 8vo, pp. 128, illustrated. 2s. 6d.)

[6] *Sidmouth as a Health Resort and Place of Residence.* By A. Macindoe, M.D., D.P.H. Bristol: J. Wright and Co. 1901. (Cr. 8vo, pp. 62. 1s.)

[7] *The Use and Abuse of the Harrogate Mineral Waters.* By A. Roberts, M.D., M.R.C.S. Third Edition. Harrogate: R. Ackrill. 1901. (Demy 8vo, pp. 49. 6d.)

and this advice may, we think, be equally accepted in regard to other spas, especially as the scope of treatment at many health resorts has become much enlarged by the introduction of various hydrotherapeutic and balneotherapeutic appliances, radiant heat baths, etc. Most readers, we fancy, would prefer having results of the analyses expressed (approximately) in salts to having them in "ions," however more strictly accurate the latter method may be.

The danger in recommending patients "to go to South Africa," as if there were only one kind of South African climate, is, it may be hoped, now generally recognised. Health resorts should be as far as possible differentiated according to their therapeutic possibilities; and Dr. Hardwicke advances the claims of *Bulwer*,[8] a village about 600 feet above sea level, named after Sir Henry Bulwer, the third Governor of Natal. It lies about fifty-four miles to the south-west of Pietermaritzburg, and has the magistracy of the large farming district of Polela.

Dr. Bouchinet, after ten years' practice at Royat, has written a little book[9] addressed to medical men. He describes shortly the health resort itself, its meteorology, mineral springs, and thermal resources, but devotes the greater part of his space to the question of what classes of invalids are most likely to derive benefit from a visit. He agrees with most French authors in regarding anæmia and arthritism as the main indications, but endeavours to enter thoroughly into the question, and to define more exactly the suitable cases. A few hints are added on the use at home of the exported mineral waters. There is likewise an appendix on the walks around Royat.

We have received a copy of a medical causerie on Spa: its Past, Present, and Future,[10] in which the famous Belgian health resort and the uses of its sparkling chalybeate waters are pleasantly discussed. Its early reputation in England caused the name of Spa to be used as a general term for all places resorted to on account of mineral waters. The larger portion of the book is written in the form of a letter to Dr. Wybauw by Dr Scheuer, who has just withdrawn after a long period of practice at Spa. The rest of the work consists of an article by Dr. Wybauw on the external treatment (baths, douches, etc.) of chlorosis, a malady with which medical men at Spa must be very familiar.

The advantages of Helwân[11] as a health resort have probably been known for a longer period than those of any similar locality, but it has been reserved for Dr. Page May to lay down the definite indications for a stay there. This was all the more needed as the great increase in the popularity of Helwân during the last few years has led to the exportation thither of many cases, for example, of advanced lung trouble which would derive at least equal benefit elsewhere, while its exceptional suitability in the treatment of rheumatoid arthritis has not as yet received anything like adequate recognition. The three chief advantages of the place are its climate, its waters, and its accessibility. The climate is fully discussed by Dr Page May on the basis of the elaborate meteorological tables to which we have already referred; summaries of similar statistics relating to London, Denver, Nice, Algiers, and Davos Platz are given for purposes of comparison. The air of Helwân is that of the desert, and almost germ free. The winter sunshine averages eight hours a day; the average winter temperature is 60° F. at 9 A.M. and 9 P.M., 70° F. at 3 P.M. and 50° F. at the coldest time of the night, and the relative humidity from November to April only 30 to 60 per cent. There is not much wind, and the amount of dust is less than in most parts of Egypt, while the average rainfall for four consecutive winters was only three quarters of an inch. The mineral waters of Helwân have been in medicinal request since the time of Amenhotep (1600 B.C.) at least; they are of three kinds—sulphur and saline, plain saline, and chalybeate, of which the former is in chief use. The temperature is 91° F., and the supply enormous. The sulphur and saline springs exert such a powerful chemical action that aluminium pipes have to be employed in their distribution. The new baths which were opened by the Khedive in December, 1899, are very fine. Finally, with regard to accessibility, Helwân is only sixteen miles from Cairo, and there is an hourly train service, the journey averaging half an hour. All this is set forth by Dr. Page May clearly but temperately. His chapter on the suitability of Helwân in special cases cannot fail to be of great value to medical men sending patients to Egypt. The chapters by Professor Sayce and Dr. Schweinfurth on the archæology and flora of the Helwân district respectively will interest the general reader as well, while those relating to the local amusements and recreations will appeal to the intending visitor. The book is enriched by many admirable photographs, mainly by the author.

[8] *Bulwer for Consumptives and Polela as a Health Resort.* By E. A. Hardwicke L.R.C.P. Published by Author. (Demy 8vo, pp. 14.)

[9] *Royat: Médications Thérapeutiques méthodiquement Classées.* [Royat: Therapeutic Indications Classified.] Par Dr. A. Bouchinet. Paris: J. B. Baillière et Fils. 1901. (Crown 8vo, pp. 104. Fr.2.)

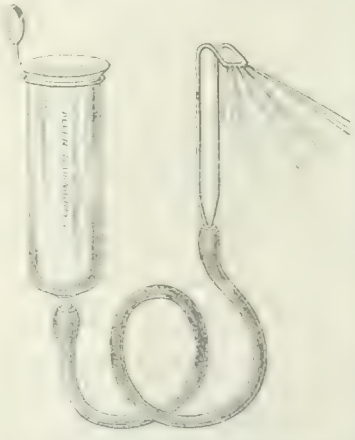
[10] *Spa: Passé. Présent. Avenir. Causerie Médicale.* Par Dr. V. Scheuer et Dr. Wybauw. Brussels: Hayez. 1901. (Demy 8vo, pp. 120.)

[11] *Helwân and the Egyptian Desert.* By W. Page May, M.D., B.Sc., M.R.C.P., Fellow of University College, London, etc., with Articles by Professor A. H. Sayce, LL.D., and Professor G. Schweinfurth. London: George Allen. 1901. (Fcap 8vo, pp. 110, 3 maps, 32 illustrations. 3s.)

# REPORTS AND ANALYSES
AND
# DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

## MEDICAL AND SURGICAL APPLIANCES.

*Safety Eye Irrigator.*—Dr. John Ward Cousins, Senior Surgeon to the Royal Portsmouth Hospital, and the Portsmouth and South Hants Eye and Ear Infirmary, writes: The treatment of contagious disorders of the eye has often proved disastrous to both surgeons and nurses, and many instances have occurred of serious injury and loss of sight. The little contrivance shown in the accompanying diagram has been designed to give protection to the operator, and also to secure rapid and thorough irrigation of the conjunctival sac. It discharges a double current of lotion with sufficient force to completely cleanse the eye without any risk of splashing and scattering the dangerous secretions. The instrument consists of two metal tubes which are bent at an acute angle at one extremity, and united by a short tube, which is perforated with several holes on the convex edge. At the other extremity they are joined together, and form a short tube to which the india-rubber tube of the glass receiver is attached. The irrigator must first be carefully introduced under the upper lid, and then held between the thumb and finger of the left hand and the lid gently elevated; at the same time the right hand raises the glass receiver containing the lotion. The full stream caused by the double current quickly washes out the upper palpebral sinus. The irrigator should then be removed and introduced under the lower lid and the washing repeated. The waste fluid can be conveniently collected in a small bowl placed on the side of the patient's head. In cases of contagious ophthalmia the sound eye must be protected by an aseptic pad during the operation. The instrument has been made for me by Messrs. Allen and Hanburys, Limited, and with it compressed discs of zinc sulphate, silver nitrate, mercury perchloride, boracic acid, and alum sulphate can be obtained ready for immediate use.



## THE CASE OF THE LATE PRESIDENT McKINLEY.

A FULL clinical report of the case of the late President McKinley has been communicated to the American medical journals by the surgeons in attendance, together with an account of the results of the *post-mortem* examination made by Drs. Gaylord and Matzinger. As the case presents many points of surgical and pathological interest, and illustrates one of the less common risks of failure which attend abdominal operations, the following abstract has been prepared from the full report published in *American Medicine*, to which journal we are indebted for advance proofs and for the use of the chart on page 1349.

President William McKinley was shot at the Pan-American Exposition, Buffalo, N.Y., at about 4.7 P.M. on September 6th, 1901. He was at once conveyed by the motor ambulance to the emergency hospital in the Exposition grounds. Here he was undressed, a temporary dressing placed on the wounds, and 0.01 gram morphine and 0.002 gram strychnine administered hypodermically.

Dr. Herman Mynter arrived at the hospital at 4.45, and after inspecting the President's wounds at once set about making preparations for what he saw was the necessary operation. On the arrival of Dr. Matthew D. Mann at 5.10 a short consultation was held between Drs. Mann, Mynter, and Wasdin. The result of this was a decision to operate at once in view of the possibility of continued internal hæmorrhage and of the escape of gastric or intestinal contents into the peritoneal cavity. Moreover daylight was rapidly failing, and the President's pulse was getting weaker.

*Operation.*

The President was anæsthetised with ether by Dr. Wasdin; he took the anæsthetic well, and the operation was commenced by Dr. Mann at 5.29.

Inspection showed two wounds made by the bullet. The upper one was between the second and third ribs, a little to the right of the sternum; the skin here was not penetrated. The second wound was about midway on a line drawn from the nipple to the umbilicus, and about 5 cm. to the left of the median line. A probe introduced into this passed somewhat downwards and outwards through the abdominal walls.

An incision was made from the edge of the ribs downwards, passing through the bullet wound and nearly parallel with the long axis of the body. A deep layer of fat was opened, and followed by incision of the fascia and muscles to the peritoneum. After cutting through the skin, a piece of cloth —undoubtedly a bit of the President's clothing—was removed from the track of the bullet, a short distance below the skin.

On opening the peritoneum, the finger was introduced and the anterior wall of the stomach palpated. An opening was discovered which would not quite admit the index finger. This opening was near the greater curvature of the stomach, and about 2 cm. from the attachment of the omentum; its edges were clean-cut and did not appear to be much injured.

The stomach was drawn up into the operation wound, and the perforation very slightly enlarged. The finger was then introduced and the contents of the stomach palpated. This was done to see if the stomach contained food, and also with the hope that possibly the bullet might be in the stomach. The stomach was found to be half full of liquid food, but no evidence of the ball was discovered. In pulling up the stomach a small amount of liquid contents escaped, together with a good deal of gas. The tissues around the wound were carefully irrigated with hot salt solution and dried with gauze pads. The perforation was then closed with a double row of silk sutures (Czerny-Lembert).

The incision in the abdominal wall was then enlarged to facilitate examination of the posterior wall of the stomach; it now measured 15 cm. The transverse colon and omentum were brought out of the abdomen, the omentum being enormously thickened with fat. The gastro-colic omentum was incised to the extent of 4 inches, and after this had been ligatured the stomach was drawn forwards and the wound in its posterior wall displayed. It was somewhat larger than that in the anterior wall, and had frayed and blood-infiltrated edges. This opening was then closed in the same way as the anterior wound but with much greater difficulty, as it was at the bottom of a deep pocket. Little or no gastric contents appeared around this opening, but after it had been closed the parts were carefully irrigated with hot salt solution. The structures behind the stomach were then palpated but no trace of the bullet or of the further track of the bullet could be found. Before closing the abdominal wound the question of drainage was discussed. Dr Mynter was in favour of a Mikulicz drain being placed down behind the stomach wall, but Dr. Mann, with the concurrence of the other surgeons present, decided against this. After trimming the tissues around the bullet track the sutures were inserted, seven through-and-through silkworm-gut sutures, buried catgut sutures for the superior layer of the fascia of the rectus muscle, and fine catgut stitches for the skin.

*After-History.*

The operation was well borne; it lasted in all an hour and thirty-one minutes. At the beginning the pulse was 84; it increased in rapidity during the operation; at 6.20 it was 102, fair in character; respirations 39. At the completion of the operation the record was—pulse 122, respirations 32. Before removal 0.004 gram of morphine was administered hypodermically; strychnine and brandy were given in the same way during the operation.

The difficulties of the operation were much increased by the size of the abdomen and the amount of fat; the light also was bad, and owing to the haste with which arrangements had to be made instruments which would have been of use were not available. In the course of his remarks on the operation Dr. Mann says:

"My reason for not draining was that there was nothing to drain. There had been no bleeding nor oozing; there was nothing to make any discharge or secretion; the parts were presumably free from infection, and were carefully washed with salt solution. As there was no peritonitis, and the abdomen was found *post mortem* to be sterile, we may safely conclude that no drainage could have been provided which would have accomplished anything. My experience teaches me never to drain unless there is a very decided indication for it, as a drain may do harm as well as good."

During the drive in the ambulance to Mr. Milburn's house a second small dose of morphine was administered, and a third (0.016 gram) soon after arrival. During the evening the patient slept at intervals, and vomited occasionally; there was occasional slight pain. The variations in the pulse, the respirations, and the temperature, are shown on the chart on p. 1349.

September 7th. The patient slept well after midnight, he was free from pain and quite comfortable. At 6 A.M. the temperature was 102°, pulse 110, respirations 24. Morphine 0.01 gram was given during the forenoon; at 1.15 P.M. a saline enema of 500 c.cm. was given, and 0.06 gram of fluid extract of digitalis was given hypodermically. At 6.30 P.M. he complained of intense pain in the pit of the stomach, and morphine was again given; the temperature was then 102.5°, pulse 130. At 11.15 P.M. 240 c.cm. of a greenish-coloured fluid were passed from the bowel containing some particles of fæcal matter. The total amount of urine for twenty-four hours was 270 c.cm. The analysis resulted as follows: Dark amber in colour, strongly acid; contains a trace of albumen, no sugar, a normal quantity of phosphates and chlorides, a very small amount of indican, and 0.028 gram urea per 1 c.cm.

September 8th. The President passed a fairly good night. The stimulation with digitalis and strychnine was continued. The wound was dressed at 8.30 A.M.; it was in a satisfactory condition. At 10.40 A.M., following an enema of Epsom salts, glycerine, and water, a small stool with gas was passed, and another at noon. He slept four or five hours during the day, and was given a small quantity of water by the mouth in the afternoon. The amount of urine passed during the day was 420 c.cm.; in this, as in the previous specimen, there were hyaline and granular casts and renal epithelium, but they were less abundant in the second specimen.

September 9th. The night was somewhat restless. During the day codeine was substituted for morphine, and the digitalis and strychnine were stopped. Nutritive enemata were continued, and hot water was taken freely by the mouth.

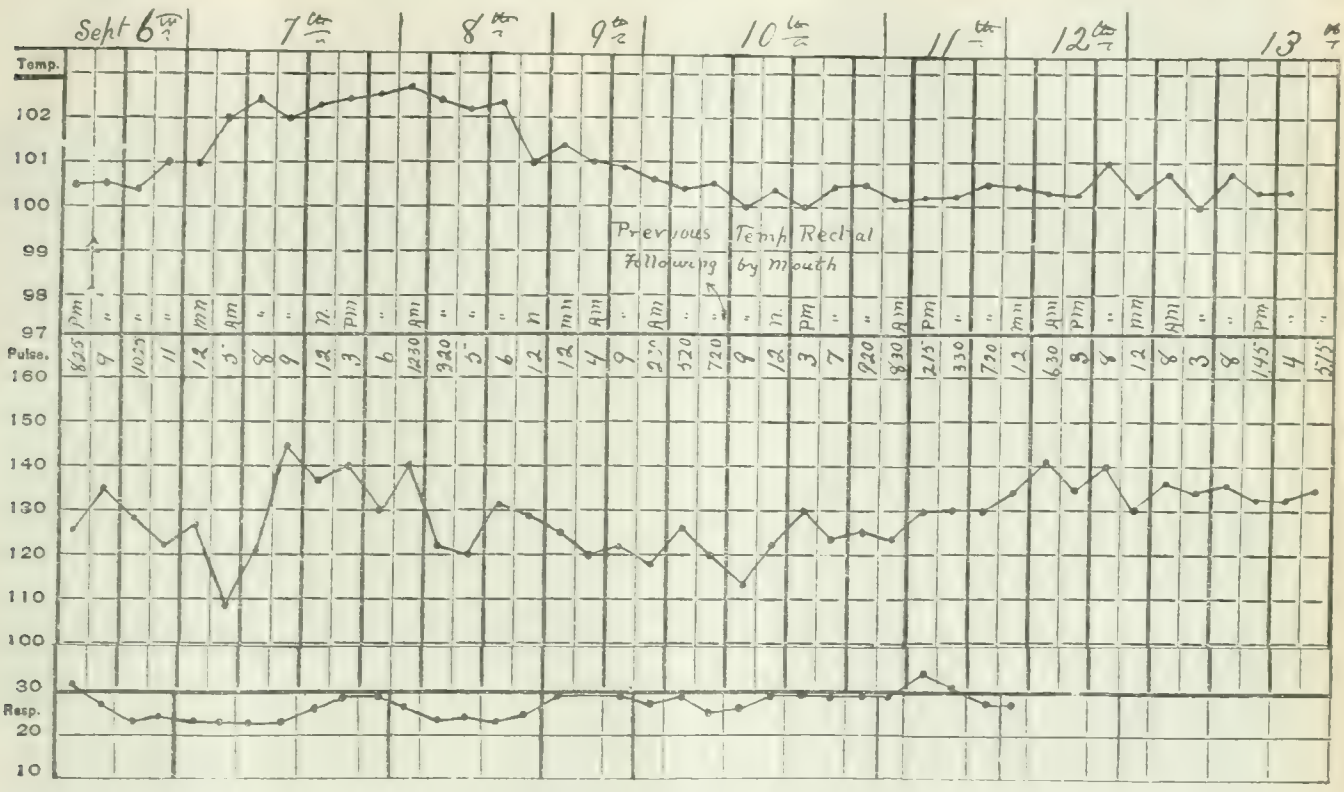



Chart illustrating the case of President McKinley.

At noon a large light-brown, partly-formed stool was passed. The general condition appeared to improve steadily.

September 10th. The night was more restful, and on waking the patient felt comfortable. In the evening the dressings were examined, and as there was considerable staining from the discharge it was thought best to remove four stitches, and separate the edges of the wound. A little slough was observed near the bullet track, covering a space nearly an inch wide, the thickness of the flaps. The separation seemed to extend down to the muscle. The surfaces, except those mentioned, looked healthy, but not granulating. It was supposed that the infection of the wound occurred either from the bullet or from the piece of clothing carried into the wound at the time of the shooting. The parts were thoroughly washed with hydrogen dioxide, and packed lightly with gauze, and held together with adhesive straps.

September 11th. A little after midnight 4 c.cm. of beef juice were given by the mouth, and this was continued every one or two hours during the day. The wound was again dressed, and the remainder of the stitches were removed. The patient slept much during the day, and expressed himself as feeling very comfortable. Urine was passed freely, it contained a large number of uric acid crystals, and indican was abundant.

September 12th. The beef juice was continued and increased, a little chicken broth was added to the dietary, and he also had a little whisky and water. The President now seemed to be making satisfactory progress; the bowels had moved and gas passed freely, the tongue was clean and he seemed able to digest food; the analysis of the urine gave no uneasiness, the albumen was trifling in amount, and the casts no more in number than are found in a large percentage of cases following a long operation under ether. The only symptom to cause uneasiness was the frequency of the pulse. Towards noon this did not seem so good in quality, and the administration of digitalis and strychnine was resumed. Following castor oil and an enema a large dark semifluid stool was passed; this seemed to produce some exhaustion. Towards evening the pulse grew steadily worse, and stimulants, including 420 c.cm. normal salt solution, were given freely.

September 13th. The patient's condition became gradually more serious. A variety of stimulants were given and freely, but the heart did not respond properly. At 6.30 P.M. the last bulletin was issued as follows: "The President's physicians report that his condition is most serious, in spite of vigorous stimulation. The depression continues, and is profound. Unless it can be relieved, the end is only a question of time." Death took place at 2.15 A.M., on September 14th.

*Necropsy.*

On opening the abdominal cavity in the middle line, the peritoneum, parietal, and visceral, was found to be covered with a slight amount of bloody exudation, but was perfectly smooth and not injected. On unfolding the coils of intestine there was no evidence of adhesion until a point just beneath the mesocolon was reached, when a few spoonfuls of greenish-grey, thick fluid escaped on removing a fold of small intestine. The omentum was adherent to the margins of the surgical wound. The anterior wound in the stomach was effectively closed by sutures, but the stomach wall around was discoloured, dark greenish-grey in colour, and easily torn; the posterior wall and the wound around it presented a similar appearance. Beyond the wound in the posterior wall of the stomach was found an opening in the retroperitoneal fat, large enough to admit two fingers, and from this a track extended downwards and backwards as far as the finger could reach. The tissues surrounding the track were necrotic. On removing the descending colon a large, irregular cavity was exposed, the walls of which were covered with grey slimy material; the superior part of the kidney was involved here, and lacerated. Between the spleen and kidney the track continued down and backward, but, although a long search was made, the bullet was not found. The irregular cavity already mentioned involved the pancreas, and there was extensive necrosis of the substance of this organ. The heart showed fatty degeneration and infiltration and brown atrophy: there was slight cloudy swelling of the kidneys.

*Microscopic examination* of the wall of the necrotic cavity showed that this was lined by a membranous deposit partly organised and containing a large number of round cells; beneath this was an area of hæmorrhage, and beneath that again the retroperitoneal fatty tissue. The necrosis of the kidney was also studied microscopically; the structure of the organ was broken up, and in part obliterated and replaced by fibrin containing large numbers of red cells and leucocytes. The right kidney showed areas in which slight parenchymatous degeneration of the epithelium of the uriniferous tubules was to be seen. A fragment of the stomach wall taken from the immediate neighbourhood of the anterior wound exhibited a condition of complete necrosis. No bacteria were discovered in the sections. The slimy necrotic material from the cavity above the transverse mesocolon behind the stomach was also examined, very few microorganisms were found, it was alkaline in reaction, and showed no digestive properties.

*In cultures* from the necrotic tissue behind the stomach a short stumpy bacterium was obtained which apparently belonged to the proteus group, but its classification is not certain and it may have been due to contamination. From the wound in the abdominal parietes, both before and after death the ordinary pus organisms were obtained, also a gas-forming bacillus and another not identified, but apparently one of the proteus group. Cultures from the peritoneal surface of the intestines, from the under surface of the omentum near the colon and from the blood of the right auricle, were all negative. Dr. Matzinger says, "the absence of known pathogenic bacteria, particularly in the necrotic cavity, warrants the conclusion that bacterial infection was not a factor in the production of the conditions found at the necropsy."

In their observations on the conditions found at the examination Drs. Gaylord and Matzinger remark: The necroses surrounding the wounds in the stomach do not seem to be the result of any well-defined cause. It is highly probable that they were practically terminal in their nature, and that the condition developed as a result of lowered vitality. In this connection there is no evidence to indicate that the removal of the omentum from the greater curvature and the close proximity of both of these wounds to this point had any effect in bringing about the necrosis of the gastric wall, although circulatory disturbances may have been a factor. The fact that the necrotic tissue had not been affected by digestion strongly indicates that the necrosis was developed but shortly before death. The excavation in the fat behind the stomach must be largely attributed to the action of the missile. The injury to the pancreas must be attributed to indirect, rather than direct, action of the missile. The fact that the wall of the cavity is lined by fibrin, well advanced in organisation, indicates that the injury to the tissues was produced at the time of the shooting. The absence of bacteria from the tissues indicates that the wound was not infected at the time of the shooting, and that the closure of the posterior gastric wound was effectual. The necrosis of the pancreas seems to us of great importance. The fact that there were no fat necroses in the neighbourhood of this organ indicates that there was no leakage of pancreatic fluid into the surrounding tissues. It is possible that there was a leakage of pancreatic fluid into the cavity behind the stomach, as the contents of this cavity consisted of a thick greyish fluid containing fragments of connective tissue. In this case the wall of fibrin would have been sufficient to prevent the pancreatic fluid from coming in contact with the adjacent fat. The extensive necrosis of the pancreas would seem to be an important factor in the cause of death. The wound in the kidney is of slight importance, except as indicating the direction taken by the missile. The changes in the heart, as shown by the macroscopic inspection and the microscopic examination, indicate that the condition of this organ was an important factor. The extensive brown atrophy and diffuse fatty degeneration of the muscle, but especially the extent to which the pericardial fat had invaded the atrophic muscle fibres of the right ventricular wall, sufficiently explain the rapid pulse and lack of response of this organ to stimulation during life.

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The Queen has consented to become Patroness of the St. Mary's Hospital for Sick Children, Plaistow, E.

# NOVA ET VETERA.

## VACCINATION DIFFICULTIES IN 1812.

It is curious to note how at the beginning of the nineteenth century medical men, anxious to promote the spread of vaccination, were handicapped in very much the same manner as at present; or perhaps it would be more exact to state simply that the difficulties of the vaccinator remain practically the same to-day as a century ago. Dr. Edward Rigby, father of the famous obstetrician, and himself famous in his day, is said to have introduced vaccination into Norwich, where he practised, in the teeth of violent opposition. His principal adversaries were the guardians of the poor, who doubtless disliked him in that he had been one of them as early as 1783, and had then tried to promote the economical administration of the Poor Laws.

In the year 1812 Rigby, at that time a man of 65, writes to Charles Murray, Secretary of the National Vaccine Establishment at 21, Leicester Square, reviewing the state of vaccination in Norwich. His letter, dated from Norwich on January 13th, is as follows:

Vaccination, I trust, may be considered as established in this city among the higher, the educated, and the reflecting classes. All the surgeons have come to practise it with the same regularity they formerly practised variolous inoculation. There are few children which I bring into the world which I do not vaccinate in the course of the year, and I recollect at this time only one of my patients who objects to it. I am now and then applied to to vaccinate poor children, but for some time past I have kept no register of their numbers. I generally vaccinate once a week, can usually supply my country friends with ichor, and have been very rarely without it myself.

In the year 1805 an effort was made to vaccinate the poor generally; the medical men and many respectable inhabitants exerted themselves in promoting it, but it failed. The attempt was unfortunately not countenanced by the Court of Guardians, who have great influence in everything affecting the poor, and I had the mortification of being defeated in several subsequent endeavours to excite their attention to the subject In my application to the same body on Tuesday last, being backed by so strong a fact as 203 deaths having been recently occasioned by the inadvertent admission of a casual small-pox patient into the city, I trust I am more likely to succeed. The workhouse, as you will see by my address, seems to be secured from the disease, every person admitted who has not had the small-pox, or been vaccinated, and every child born in the house, is vaccinated, but the numbers are not great. The surgeon's report is as follows:

| | Vaccinated. |
|---|---|
| In the year 1809 ... ... ... ... ... ... | 28 |
| ,, ,, 1810 ... ... ... ... ... ... | 11 |
| ,, ,, 1811 ... ... ... ... ... ... | 15 |
| | 54 |

The account of small-pox is a melancholy one. Soon after I became Mayor in 1805, I directed the keeper of the weekly bills of mortality to record all deaths which occurred from this disease. It had prevailed for some time, and I had reason to believe that many lives had been lost.

The bills of mortality, showing the fluctuations of the disease, are quoted in full, and from them it appears that from July 17th, 1805, to September, 1806, there occurred in the city 119 deaths, while from January 20th, 1808, to December 20th, 1809, the number of deaths was 203. The second epidemic began in August, 1807, but no deaths occurred till the January following. The population of Norwich in these years was about 37,000. The letter of this able physician and reformer concludes:

Norwich has now been two years free from the small-pox; but if my conjecture respecting the annual number of births in that class of poor who have, hitherto, not profited by vaccination be true, there are at this time about eight hundred children liable to the disease. I shall lament extremely should the Court of Guardians not meet my wishes in an active endeavour to have them vaccinated.

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The tenth course of public lectures of the Childhood Society will be given in the library of the Sanitary Institute, Margaret Street, W., on Thursdays, November 7th and 21st, and December 5th and 12th at 8 P.M. Further particulars can be obtained from the Honorary Secretary, Mr. W. J. Durrie Mulford, at the Sanitary Institute.

# THE GENERAL MEDICAL COUNCIL ELECTION.

## THE APPROACHING ELECTION OF DIRECT REPRESENTATIVES.

### Notice of Election.

Formal notice has been given by Sir William Turner, President of the General Medical Council, as Returning Officer for the approaching election of direct representatives, that an election of two members of the General Council of Education and Registration of the United Kingdom to represent the registered medical practitioners resident in England is about to be held; that every registered medical practitioner is qualified to be nominated as a candidate; that every candidate must be nominated by a separate nomination paper; that every registered medical practitioner resident in England is entitled to take part in nominating two candidates; that every nomination paper must state the name, address, and registered qualification or qualifications of the candidate nominated, and must be signed by not fewer than twelve registered medical practitioners resident in England, who must append their address and registered qualification or qualifications. Every nomination paper, accompanied by a declaration in writing signed by the person nominated consenting to be so nominated, must be delivered by post or otherwise on or before November 21st, 1901, addressed to Henry E. Allen, LL.B., at the General Medical Council Office, 299, Oxford Street, London, W. Notice is given in similar terms that an election of one member of the Council, to represent the registered medical practitioners resident in Scotland, is about to be held. Nominations must be delivered on or before November 21st, 1901, to James Robertson, 54, York Square, Edinburgh. The text of the formal notices will be found in our advertising columns.

### ENGLAND.

#### Dr. Woodcock's Address to the Registered Practitioners of England and Wales.

Ladies and Gentlemen,

At the urgent solicitation of medical brethren in whose judgment I have confidence I beg to offer myself as a candidate for election to the General Medical Council.

I have been in general practice in Manchester thirty-five years, during which period I have held appointments as Poor-law Medical Officer, Public Vaccinator, and Certifying Surgeon to Factories. I am a member of the Central Council and Chairman of the Parliamentary Bills Committee of the British Medical Association, and I am also a member of the Reconstitution Committee of the Association whose preliminary report was approved at the last annual meeting.

I think the time is ripe for an amendment of the Medical Acts, and in my judgment the most pressing requirements are:

1. Reconstitution of the General Medical Council.
2. Increased direct representation.
3. The one-portal system of entrance to the profession.
4. The punishment of practice for gain by unregistered persons.
5. The regulation of Medical Aid Societies.
6. The registration of obstetric nurses.

I am strongly of opinion that the representatives of universities and medical corporations on the General Medical Council should be elected by their respective medical graduates and diplomates or that the number of direct representatives should be largely increased and that a system of district representation should be established.

The fortieth clause of the Medical Act of 1858 requires to be so amended that practice for gain, and not assumption of title only, by unregistered persons, should be made penal.

Increased power should be given to the General Medical Council so that registered persons who accept appointments in Medical Aid Associations, which exploit the public at the expense of the profession by advertisements and touting, could be dealt with rigorously.

I am not in favour of the registration of midwives as independent practitioners. I have always advocated the registration of obstetric nurses whose functions should be strictly limited and upon whom nursing duties should be imposed. I think also that the work of these registered women should be conducted under medical control.

The minimum age at which a medical student can be registered should be 17 years, and a uniform system of entrance examinations, under the authority of the General Medical Council, should be established. The five years curriculum after registration of studentship should be rigidly maintained.

Mr. Victor Horsley is among those of my friends who have strongly urged upon me the duty of offering myself as a candidate at this election, and I much regret that Mr. Horsley is, owing to the wording of the Medical Acts, unable to resign and offer himself for re-election at this time. It would have afforded me pride and pleasure to be associated in the candidature with a man who has rendered such splendid service to the profession.

If you elect me I believe that I shall act in complete harmony and concord with Mr. Horsley and other direct representatives in promoting what I think to be the true interests of the profession—always the true interests of the public—and it shall be my constant endeavour to justify the confidence reposed in me.

Yours faithfully,

Old Trafford, Oct. 28th. S. Woodcock.

#### Dr. Hayward's Candidature.

Sir,—As one who believes it to be essential that the General Medical Council should undergo some radical alterations and improvements, and who trusts that he is to a considerable extent qualified to assist in the proper carrying out of these modifications, I am coming forward as a candidate at the approaching election.

The foundation of my claim is that I believe that the General Medical Council should be essentially concerned with the welfare and interests of the general medical profession and the safety of the public, and not, as at present, only with trying to reconcile the various selfish interests and jealousies of the different corporations and licensing bodies.

The constitution, procedure, and finances of the Council require thorough revision, and the members must directly represent the profession, not the restricted Councils of each corporation.

The present unfair treatment suffered by our direct representatives must be met by sending resolute men who will not flinch from asserting the wishes and interests of the general profession, no matter how bitterly the vested interests oppose, and in some instances this opposition has overstepped the limits of mere bullying, and become absolutely illegal.

It is especially in such circumstances, and also in the necessary amendments to the Medical Act and other legislation, that I hope my qualification of barrister-at law may be of especial service to my fellow practitioners; and as I now am, and have been for over fifteen years, engaged in general medical practice, I trust that the profession will recognise that it would be to their interest to avail themselves of the services which I now place at their disposal.—I am, etc.,

Charles W. Hayward,
Barrister-at-law, M.D., D.P.H., M.R.C.S., L.R.C.P.

Grove Street, Liverpool, Oct. 27th.

#### Mr. Victor Horsley on Medical Reforms.

Mr. Victor Horsley was present at a meeting of Birmingham medical men at the University on Thursday, October 24th, and delivered an address on medical reform. The meeting was under the auspices of the Birmingham and District General Practitioners' Union, and was largely attended.

Mr. Langley Browne, who presided, emphasised the urgent necessity for reform in the medical profession. The immense amount of unqualified practice alone, he said, called for an alteration in the laws. The reason they had not got reform in the past was because they had been isolated units, but now that they were combining things were altering very much for the better.

Mr. Horsley said that the outlook for medical reform at this moment was very bright—much brighter than four years ago, when he was elected to the General Medical Council. The formation of a union of practitioners in Birmingham was an example of what was being done in other large towns of the country. At Rotherham the previous week he was delighted to find that there was not a single member of their

profession in the town and in the large villages around who had not joined the medical organisation. At Eastbourne there was a similar striking instance of what the men in their walk of life really could do The British Medical Association was still lacking in the power of combination for one aim and object. Years ago he recognised that it was essential that their Association should be remodelled, that it must be made diffusely representative throughout the country, and at the same time each locality in which medical men were gathered together should have, as it were, an automatic subdivision. In that way they would be able to push forward the work of the whole Association in a way that no mere Council could ever do. Since the meeting at Cheltenham there had been abundant evidence to show that the remodelling of the British Medical Association would soon be an accomplished fact. Then they would have all the weight and power of that great organisation acting as a lever upon bodies like the General Medical Council, which, although its members wished to do the right thing, yet when they they gathered together they invariably did wrong. Mr. Horsley indicated three directions in which there was need for improvement and reform. In the first place, they were not satisfied with the status of the profession when they compared it with the professions of the Church, the Services, or the Law. As medical men they had not the same power in the State as these other learned professions. Then at the present juncture the relations of the profession to the public were strained, or, at any rate, there were matters of difference. And lastly, it was absolutely essential to bring about a rearrangement of the internal government of the profession.

*The Status of the Profession.*

Discussing the question of status, he affirmed that any member of the profession dissatisfied therewith ought to bear in mind that provided they adhered to the honourable practice of their profession and did all they could to raise the education of its members, they would infallibly, in the ordinary process of evolution, arrive at a social status and power which would ever be above that of any other profession. He was quite confident of that, because the circumstances under which the Church, for example, dominated society were in a measure artificial, and were supported by the educational advantages of the members, but in the future education was to be open to all, and would become wider and wider every year. The medical profession had always kept in view the maintenance of its honourable character, and in this way differed entirely from trades-unionism. It was astonishing how constantly the name of trades union was hurled at them, when they sought to combine for perfectly legitimate purposes, as a term of reproach, justly so when they considered the historical records of trades unions, but most unjustly so when any given question was examined into. Yet he had heard leaders of their profession—like Mr. Teale of Leeds, for instance—speak on the action of the British Medical Association on matters of public interest as a trades union sort of movement. In the House of Commons Mr. Joseph Chamberlain said, in relation to the Irvine case, that the only charge against that gentleman was having infringed what "I will call the trade union rule of the medical profession." That showed how a leading statesman—a man whom they revered for his public services to the country—could misjudge a learned profession because he was misinformed. Where was the trades union which took an evil doer among its members and cast him forth? There was not one. The medical profession had always done it. From the time of Henry VIII the medical profession had always exercised a disciplinary attitude towards evil doers within its walls, and thereby preserved the honourable character of the profession.

*The Public and the Medical Profession.*

Turning to his second point—the relationship of the public to the medical profession—Mr. Horsley said that medical work was a curious mixture of business and philanthropy. The public usually clearly recognised the former element, and naturally thought it was the only feature of the work. They forgot what the medical profession had done and was doing for the nation in a perfectly gratuitous manner, and thought it was simply a question of *quid pro quo*. They thought this monetary interest was the foundation of the work of the medical profession, and naturally the man in the street sought to cheapen what he got. In that way had arisen, chiefly through the operation of Friendly Societies, the great question of Medical Aid. He reminded them that they could not always accept all the financial results of Friendly Societies, and that all arguments adduced to influence their attitude towards Friendly Societies based upon the enormous wealth of such societies ought to be carefully examined. In his speech at Birmingham on Friendly Societies, Mr. Chamberlain naturally praised Friendly Societies as organisations, and as of immense use to the community. Still there was running through his speech the idea that the financial position of Friendly Societies was not all that it might be. Recent facts relative to the action of Friendly Societies towards their members in regard to the war proved the same thing. Although the Friendly Societies were to be admired, yet as dealing with the medical profession on a commercial or business footing they were endeavouring, so far as the Medical Aid branch went, not merely to lower the incomes of medical men, but to make a profit out of their work. The profession felt that this was wrong, and he was glad to say that whereas when he entered the General Medical Council four years ago it did not seem in the least degree likely that the members and the Council would ever grasp the fundamental principles of Medical Aid work, and consequently it did not seem probable that they would ever properly deal with the question, yet by the fortuitous development of events the General Medical Council at this moment was in a very satisfactory state of mind as regards Medical Aid. The Irvine case was a case of that kind. It embodied the objectionable feature of advertising and canvassing in the development of a Medical Aid institution. He wished to take the opportunity of correcting a very grave mistake which Mr. Joseph Chamberlain laboured under when he addressed the House of Commons on this case. They all sympathised with Mr. Chamberlain with reference to the political colour that was sought to be given to the details of what was nothing but a medical disciplinary matter. But it did not justify him in speaking on the point without a full knowledge of the facts. Mr. Horsley added that he would pass over the letter from Mr. Arthur Chamberlain published that morning as merely the expression of a man who had done what was not quite right and had failed. The Irvine case was not only responsible for a great mistake on the part of Mr. Joseph Chamberlain, but it showed a depth of governmental neglect towards the medical profession which had never been equalled. Mr. Chamberlain made his speech evidently under the impression that the only point that the General Medical Council decided upon was that the Birmingham Consultative Institution offered the services of Dr. Irvine at a low fee. Most unfortunately, Sir Walter Foster rose to deal with this question. He said most unfortunately, because Sir Walter Foster must have forgotten what passed in the chamber of the General Medical Council. It was proved by publications in the medical journals that the question of advertising and canvassing constituted in the minds of the General Medical Council the chief unprofessional element in the matter. He was sorry to say that when this case was brought before the House of Commons, instead of the medical members of the House speaking for the profession and standing up for its honour, they sat still with the exception of Sir Walter Foster. He was the only one to speak in the name and for the honour of the profession. And, worse than that, Sir Michael Foster, a medical authority of high standing and member for the University of London, actually voted in favour of the jobbery which made Dr. Irvine a school inspector, and did so knowing perfectly well that there was this misunderstanding throughout the House of Commons. It was, said Mr. Horsley, the most disgraceful transaction in the whole history of their profession that members of it sat still in the House of Commons when the honour of the medical profession was dragged in the dust. His own friends in the House had said to him that there was only only one profession that could be so insulted, and that was the medical profession. He rejoiced, therefore, that the General Medical Council, who in part were either too timid or did not know enough to deal with this Medical Aid question, were now in a stronger state of mind. They had been insulted in the House of Commons, and that had had a wonderfully tonic effect upon them.

*Need for Amendment of the Medical Acts.*

Proceeding to speak on the subject of the suppression of unqualified practice, Mr. Horsley commented on the fact that not only did the Government departments ignore the attempts of the medical profession to protect the public against fraud and quackery, but they actually assumed an attitude of active opposition to the profession in this matter. The Medical Act said in effect that as the students devoted five years of their lives and much money to acquiring a proper knowledge of medical science they should be placed in a position which should protect them from unqualified practice. But the State did not carry out its share of the bargain, and in order to secure that item of reform he was satisfied that the Medical Act must be modified. They must go to the Houses of Parliament and make a fresh bargain, and the bargain must be a better one than their ancestors were able to make in 1858. The amendment of the Medical Act was an immediate and necessary reform, and was most clearly illustrated by the third difficulty to which he had referred—namely, the urgent necessity for the rearrangement of the internal government of their own profession. That was all-important.

*The Internal Government of the Profession.*

The Act of 1858 gave the power of discipline over the whole medical profession to the General Medical Council, but in order to prevent the General Medical Council assuming duties of State importance said, "Whenever you (the Council) wish to alter the Acts of a corporate body, which is carrying on medical education for example, you must come to the Privy Council for their sanction. You may exercise disciplinary authority in your profession, but when you come to deal with vested interests then the higher power is to decide the matter." That of course was a very statesmanlike arrangement, but how did it work out? The medical corporations had charters of far greater antiquity than the Act of 1858, and consequently the General Medical Council was sandwiched between the Privy Council above and the medical corporations below. This had led, and must of necessity lead, to great difficulties. The Act of 1886 was supposed to unite all the medical corporations together, and to bring them all under the General Medical Council. That, however, was a mere supposition, because no Act, unless it clearly stated the fact, could override the powers granted by the State to bodies previous to the Act of 1886, but the Act of 1886 totally failed to put the General Medical Council in the real position of governing the medical corporations, and it had to trust to the honour of these corporations. That honourable obligation among the corporations was faithfully observed until last year, when he regretted to say the English Colleges violated it, and the Irvine case in the House of Commons revealed at one blow the attitude of the Privy Council to the General Medical Council. It must be remembered that all documents of the General Medical Council were sent to the Privy Council for inspection—minutes and everything else. The General Medical Council was in constant correspondence with the Privy Council on matters affecting the whole profession on some of its most tender and delicate sides. And yet in the debate on the Irvine case in the House of Commons Sir John Gorst, Vice-President of the Privy Council, said, "At the time the appointment was made (he was speaking of Dr. Irvine's appointment as inspector of schools) his noble friend the Lord President of the Council and he himself had not heard of this charge against Dr. Irvine. How could they have heard it?" Sir Walter Foster interposed with the remark, "You receive the minutes of the General Medical Council in the Privy Council"; and this was Sir John Gorst's answer: "Neither my noble friend the Lord President of the Council nor myself have sufficient leisure to acquaint ourselves with the proceedings of the General Medical Council." That Mr. Horsley described as infamous conduct. These officials of the Government, supposed to be honourable men, had for years been criticising, been overruling, and these last fifteen months betraying the General Medical Council by their official acts which no one could understand, and yet the official spokesman of the Privy Council told the House of Commons that he had never read a line of the business which he had carried on and transacted himself. If that was not infamous he did not know to what they could apply the word. Quoting the question of midwifery legislation as a further example of the way in which the General Medical Council is treated by the Privy Council, Mr. Horsley proceeded to explain that the General Medical Council was gradually working round from the difficult position in which it was placed by the unfortunate resolution of which Sir Walter Foster, he was sorry to say, was the author, of about ten years ago, and had passed ten definite proposals which should underlie the basis for all medical legislation, and which he himself thought would protect not only the great interests of the public, but also sufficiently safeguard the interests of the medical profession. The Duke of Devonshire said distinctly, in answer to a deputation, that they—the supporters of Lord Balfour's Bill—were to make terms with the General Medical Council, and he advocated the General Medical Council as representing the profession. But within the last fifteen months the Duke of Devonshire had distinctly gone back from that position and had refused to support the most important of the points laid down by the General Medical Council. That Mr. Horsley called a betrayal of the General Medical Council. In other ways the Privy Council had snubbed the General Medical Council, and he instanced the question of so-called reciprocity of practice between this country and Italy. He affirmed that there could be no such reciprocity unless the curriculum throughout Italy was compared with the curriculum throughout the United Kingdom, and made sure that the examinations were so conducted that the Italian practitioner should be equally qualified to have his name entered on the British *Register* as a man educated in the United Kingdom. That, however, would cost thousands of pounds to carry out. It was, in fact, impracticable, and the Government had never for a moment offered to provide the necessary funds for any such comparison, on which alone reciprocity could be legitimately based. The General Medical Council sent to the Privy Council a very reasonable remonstrance on one fundamental point. No answer was received to that latter, but in a short time an intimation was received indirectly that the Privy Council had made an Order in Council establishing reciprocity in practice between this country and Italy. The General Medical Council was wholly and absolutely ignored. The Privy Council had done nothing but shower contempt upon the General Medical Council, and a body that was so despised by the central Government of course lost all its moral force in dealing with matters of public polity. It retained its moral strength within the profession as regarded matters of discipline, but that was a small matter. As regarded its relation to the great mass of the public, its prestige by events of this kind was practically destroyed.

While this injury had been inflicted on the General Medical Council from above precisely the same injury had approached it from below. The same contempt which the Privy Council showed to the General Medical Council was exhibited by the corporate bodies. These bodies remained loyal till last year, when English Colleges—the College of Physicians and the College of Surgeons—took upon themselves to make a point of refusing to carry out the regulations of the General Medical Council. No reason had ever been adduced for this. He reminded them that the College of Physicians was practically a bankrupt institution. It could not meet its expenses at the present time. The College of Surgeons, through the munificence of its Members, could pay its way. These bodies had entirely lost in the progress of ages their *raison d'etre*. They began as mediæval guilds; they exercised the functions of mediæval guilds for many centuries; they carried out disciplinary measures which were now better carried out by the central body, and until recently were consequently able to get along. Now, however, they were not able to get along, and it was a very melancholy thing that they should in any way attempt to support themselves by ruining a system of medical education. Yet that was what it would come to. Dr. Norman Moore, for instance, stated that the College of Physicians considered its interests involved, and that he would see the registration of students ruined rather than that these interests should not be upheld. That, said Mr. Horsley, was a complete violation of the honourable obligation of the Act of 1886. The Irish Colleges saw this at once, with Celtic quickness, and they had written to the General Medical

Council to point out that if the English Colleges were allowed to cut themselves loose they would do what they liked. They had a perfect right to write in that sense, and it was no dishonour to them. These corporate bodies were all struggling against each other. It was a matter of self-existence, but by being in that miserable position medical education suffered. It was a most terrible injury to the profession at the present moment. If they did not succeed by one means or another in taking away all the corporate influence in the General Medical Council, and making that body a really representative body of the profession by the new Medical Act, medical education would receive a setback that it would not recover from for twenty years. Personally, he hoped that the British Medical Association, remodelled, would be the instrument by which this great reform would be effected. The outlook, it seemed to him, was very bright. They were now beginning to see clearly where they were, and as soon as they did that the rest, he thought, would speedily follow.

Dr. WHITCOMBE moved a vote of thanks to Mr. Horsley for his address, and it was seconded by Dr. NEWTON, supported by Dr. HALLWRIGHT, and carried.

In acknowledging, Mr. HORSLEY mentioned, with reference to the election now imminent, that he was not a candidate. As he pointed out in the BRITISH MEDICAL JOURNAL, he could not resign his position; for, owing to the extraordinary wording of the Medical Acts, if he resigned his seat now he would render himself ineligible for re-election. His whole object was to avoid a by-election, with its necessary expense, in order that he might put himself in line with his colleagues.

### MEETING IN MANCHESTER.

On the afternoon of October 24th Mr. GEORGE BROWN (London) and Mr. GEORGE JACKSON (Plymouth) addressed a meeting called by the Manchester Medical Guild. Dr. WAHLTUCH presided. The attendance was not very large. Dr. OWEN (Honorary Secretary of the Medical Guild, Manchester) read letters of apology for non-attendance from Dr. Glover (London) and Mr. Victor Horsley (London).

Dr. Glover wrote:

"It would give me great pleasure to meet the Manchester Medical Guild in accordance with your kind invitation for Wednesday, October 23rd, but unfortunately I have been laid up with a bad eye, and, although much better, I am under strict medical orders not to attend any public meetings in connection with the forthcoming election or otherwise. I very much regret this, of course, and I hope that the Manchester Medical Guild and all my other fellow practitioners will be the less inconvenienced by this as I have lately had several opportunities of expressing my views of current questions of medical interest. On the midwives question I should regard it as a misfortune if the profession lost hold of it, and allowed it to be settled independent of its control. I feel strongly on the question of the Conciliation Board for the friendly settlement of all questions in dispute between the profession and the great Friendly Societies, and though I think the General Medical Council has done its part in this question, we should try to give at the coming election confirmation of Council's sympathy and action in the matter."

Mr. Victor Horsley wrote:

"I think it is absolutely essential if the members of the Guild wish to secure any reforms that they should at once make up their minds to support a candidate from the North; and in my opinion Dr. Woodcock is the only general practitioner coming forward who would influence the Council."

*Address by Mr. George Brown.*

Mr. GEORGE BROWN said it gave him great pleasure to come before them, and in a few words give an account of his stewardship. It was now five years since he had the pleasure of appearing before them as a candidate for election. He then put forward some five points which he considered were requiring immediate reform in order to improve the position of the medical profession, especially the branch to which he had the honour to belong—that was the general practitioner. He believed he went so far as to say that, if he saw no indication that nothing could be accomplished on behalf of the general practitioner within three years after obtaining a seat on the Council, he would resign the position, and trust to Parliament for redress. By the Medical Act of 1886 they succeeded in enacting that no person should be placed on the *Register* until he had passed a full examination in medicine, surgery, and midwifery; but they did not succeed in rectifying the Council so as to have what they ought to have—a very large proportion of direct representation; that there should be at least half of them elected.

The first point to which he called attention was the amendment of the Medical Acts with a view to the suppression of unqualified practice. The state of public business had been such that no Bill could have been brought forward with any hope of passing at the present time. Then, again, there was a lukewarmness still with the Council, for when they had on it so large a proportion of representatives of corporations, whose interests would probably be touched by this Bill and their privileges interfered with, it was not very likely they would take any active part in bringing in a medical reform Bill in the House of Commons, therefore this matter had hung fire somewhat.

His next point was the prevention of sick clubs and dispensaries whose agents canvassed for patients from obtaining the services of registered practitioners. He believed this was still a burning question. He felt that this canvassing for patients was unprofessional, and had brought before the Council the necessity of taking some action. The Council had passed a minute to the effect that the holding of such an appointment was regarded by the Council as not being quite the right thing. They did not go so far as to say that it would be unprofessional and should entail removal from the *Register*, but if the Council had done nothing else but pass this resolution there was justification for sending general practitioners to the General Medical Council. As a matter of fact, they had thus got the thin end of the wedge in, and he thought it very possible, if the general practitioners throughout the country would make a strong representation to the Council, that in a very short time much stronger action would be taken by the Council.

They would remember that when he was last before them he said he would oppose the Bill for the Registration of Midwives. Its supporters confidently anticipated in 1896 that they would be able to pass that Bill into law. Two months after his election the Bill was again introduced into the House, and as their representative, although the Council was not in actual session, he felt it his duty to take some action. The Lord President of the Privy Council had written asking for the opinion of the Council, and he told the President that they ought to have a special session in order to consider the Bill. The then President said he would take no action of the kind, as that Bill had been approved by the General Medical Council. He was, therefore, compelled to wait until the May session, paying considerable attention to the fortunes of the Bill in the House of Commons, and night after night he went to interview members of Parliament, notably Mr. T. P. O'Connor and some of the Lancashire members. The result was that he was able to get up such opposition to the Bill that it did not pass through its stages until the Council meeting in May. It had then, he believed, passed its second reading. In the May session of the General Medical Council he brought the matter forward, and a Committee was appointed. In the end the Bill was not proceeded with further that session. Next year, when it came up again, the Committee of which he was a member presented a report, and it was decided to inform the President of the Privy Council that they would deprecate the passing of the Bill in the form presented. He should continue to oppose the Bill, notwithstanding that at Rotherham his friend Dr. Woodcock had said they must have a Midwives Registration Bill, and it was no use trying to stop it; because, forsooth, although they who opposed the Bill said it would create a new order of medical practitioners, it would not, he said, as the new order already existed. Then, because an illegal class of persons practising illegally were already in existence, they had, according to this dictum, to acknowledge them, give them a licence and legal existence. It was not wanted. What they did want was a better class of nurses, and he hoped they would be able to bring forward a Bill for the proper education of obstetric nurses who would be able to carry out the nursing of these obstetric cases under the supervision of medical practitioners. Some asked what

was to be done for poor people who could not afford to pay a doctor. His reply was that the State should pay. It was its duty to provide for the proper medical attention to persons in the trouble of childbirth and who could not afford to pay for themselves.

He thought a very great deal had been accomplished in the direction of raising the standard of medical education, considering that the course had been raised from four to five years and that the standard of preliminary examination which had been raised would come into operation in January next. This preliminary examination would be raised up to the level almost of a senior Oxford and not be the mere trumpery examination which had existed for years past.

He was sorry to say he had not been able to do anything except agitate for increased direct representation on the General Medical Council, and he very much feared that nothing would be done in this direction until they got an Act of Parliament limiting the power of the present corporations, reducing the number of their members. He thought the time would come when the reorganisation of the British Medical Association was completed, through which it was possible they might be able to get a Bill. Another point he wished to bring forward was with regard to the employment of unqualified assistants. Whilst he had been a member of the Council, in season and out of season, in the Council and outside, he had strenuously urged upon his colleagues that it was absolutely necessary for the protection of the public and the good of the profession that the work of the unqualified assistant should be curtailed to actual surgery work, and he should not be allowed to visit and that kind of thing; and as a result of their endeavours the unqualified assistant had been practically suppressed. He had found that the breeding-ground of the unqualified practitioner was the unqualified assistant. The passing of this measure regarding the employment of unqualified assistants was one of the grandest acts that could have been done in order to improve and elevate the profession.

Dr. Glover at Cheltenham had made a strong personal attack upon him regarding the midwives question and his action on the Council, and also brought a charge against him with regard to the connection of medical men with insurance societies, but all the charges were groundless. As to the proposed Conciliation Boards, he suggested that they could settle the matters between the Friendly Societies much better themselves than by recourse to a Conciliation Board. They knew what they wanted and what they deserved for their services, and he hoped they would have sufficient backbone to compel Friendly Societies, who had said they meant to bring the doctors to their senses, to look at the matter in a proper light. As to the suggestion about a candidate from the North, he agreed that there was something to be said for territorial representation, but unless the country was cut up into three divisions he did not see how they would proceed in the matter. For his part, he represented as near as he could the views of the whole profession. Regarding the North, he believed Mr. Victor Horsley was nominated from Manchester and was a member of the Lancashire and Cheshire Branch of the British Medical Association.

*Address by Mr. George Jackson.*

Mr. George Jackson said that if he was sent to the Council he should work in unison with Mr. George Brown. All the direct representatives should work together, otherwise the votes were neutralised, and it was very difficult for the direct representatives to make any headway against the Crown representatives and representative of the corporations. Probably the Council was blameable in many respects, but it could not use the whip unless it had it. How was that power to be obtained? As they all knew, there were five direct representatives, five Crown nominees, and twenty-two representatives of corporate bodies. The difficulty of the situation was at once apparent. The medical profession must take the matter into its own hands, and he thought the British Medical Association might help them. Let the number of the Council be reduced, so as to have a little less talking and more work. The corporations might be grouped. He would reduce the entire number to twenty-five; fifteen for England, five Scotland, and five Ireland. If it was necessary there might be a Crown nominee. The direct representatives should be elected for electoral districts and the Council should be given more power; power, for instance, to deal with oculists, aurists, Christian Scientists, and the like, who practised medicine and surgery under various forms of colourable pretences.

A very important point was the raising of the standard of the entrance examinations and limiting the age of entrance so as not to be under 17 years. Neither would he accept certificates from so many different bodies. A united examination should be held in different parts of the country, and should embrace English literature and cognate subjects, Latin, mathematics, and one modern language. Let there be a one-portal system of entrance, to be secured by forming a Board of Examiners composed of delegates from the present examining bodies. On the burning subject of midwives it would be well if something could be done.

He quite agreed with Mr. Brown that they should not agree to a Bill to create an independent order of practitioners. There should be a registration of nurses who should be obliged to act under the direct control of qualified medical practitioners.

He was greatly interested in the provident dispensary system as a counteracting action to the clubs which formed Medical Aid Associations to sweat doctors and take in all sorts of people, many of whom were well able to pay. Provident dispensaries worked on proper lines would be very useful. They had been established in various places, and one good thing was that they had a wage limit. If the Council were to carry out this work they must have the means, and he did not think it would be a very great hardship, to charge a small licensing fee, say a guinea a year.

The candidates were accorded a hearty vote of thanks.

## Meeting at Newcastle.

On October 26th a meeting of the medical profession in Newcastle, Gateshead, and the neighbourhood was held at the University of Durham College of Medicine, Newcastle, under the presidency of Mr. Rutherford Morison, President of the Northumberland and Durham Medical Society.

Dr. Cox, Secretary of the Gateshead Medical Association, read a letter from Dr. Glover expressing his regret that owing to an affection of the eye he was obliged by medical order to abstain from attending public meetings. Dr. Cox added that they had only learned from the columns of the British Medical Journal that Dr. Charles Hayward of Liverpool was a candidate; had they been aware of the fact earlier he would have been invited to attend.

The Chairman said that the meeting was summoned to hear addresses from those gentlemen who were candidates for election as direct representatives of the General Medical Council. It had now come to be fully recognised in the North of England that without union the medical profession would in these days be absolutely helpless when shipowners, coalowners, workmen, and every other class bound themselves in great combinations; without combination the profession would have no real voice either with the Government or the public. The members of the profession had come to realise that, in addition to the services they owed the public, they had a duty to themselves, as a profession and individually. Owing largely to the courage and ability with which Mr. Horsley had taken part in the debates in the General Medical Council the profession had come to realise that a reform of that Council was very much needed.

*Speech by Dr. Woodcock.*

Dr. Woodcock (Manchester), who first addressed the meeting, said it was a great pleasure for him to meet the medical men of the North. He was hopeful that, when they began to regard the General Medical Council as a sort of medical Parliament, began to take an interest in the election of the direct representatives to that body, and to examine with more care and interest the work it carried on, they might hope that reform was not a matter of the remote future. There was no doubt there was a great deal of apathy in the profession, and he was therefore delighted to see such a large gathering that day.

The General Medical Council was very much lacking in many of the qualifications which a Council appointed to guard the interests of the public and the profession should possess. Its constitution was such as to make it unlikely

that it would take any action on its own part in the way of reform, and the principle on which it was formed made it in no sense a real representative body. The Medical Act of 1886, which gave a few direct representatives, was a miserably inadequate concession to the demands of the profession. There were 4 men to represent 30,000 practitioners, and 21 to represent the universities and medical corporations. In the first place, the General Medical Council must be induced to make recommendations to the Privy Council to increase the direct representation as far as possible, and he thought it would also be advisable to have a geographical arrangement in the election of representatives, so as to keep representatives in closer touch with their constituents.

On the question of the preliminary examinations he said he doubted whether the General Medical Council had much influence over them. It was of the utmost importance that those entering the profession should have a good sound general education. Indeed, the reason why the members of the medical profession were not held generally in as high respect as they should be by the general public was, he believed, the occasional lapses from the observances of educated men which were sometimes to be met in their ranks. Referring to the resolutions passed on the subject of the preliminary examinations at the Council meeting of the British Medical Association last week, he argued that it was desirable that the age should be raised to 17 years. The resolutions were, in his opinion, admirable, and altogether in the interests of the profession.

One of the weak points of the Medical Acts was that they only reached the registered practitioner, and not the unqualified man who had been driven out as an assistant and had gone into practice. A member of the House of Commons had said that members would never be induced to legislate against prescribing chemists, as they went there themselves for "pick-me-ups."

In discussing the subject of Medical Aid Associations Dr. Woodcock touched in passing on Sir John Gorst's disavowal of the General Medical Council, and mentioned that two members of the Privy Council could veto any action of the General Medical Council. Until they had a combined rising of the profession against this state of things he had little hope of anything being done. They sometimes wondered why their grandfathers were content with the condition of things under which they lived more than half a century ago, yet they had now a condition of things very little better. Yet the President of one of the Royal Colleges, when the British Medical Association was agitating for a reform of the Medical Act, declared that no reform was wanted, that the Act of 1886 was a good and perfect one. He thought they had reason to complain that they spent time and money in equipping themselves for the responsibilities and duties of their profession, and got no further protection from the State than they had now. The General Medical Council had no sort of power to prohibit men accepting situations under these Medical Aid Associations, but if the local medical organisations could get up a concrete case against a man who had been associated with an association which "touted" he could be proceeded against. With regard to the formation of a Conciliation Board, such as Dr. Glover suggested, the experience of a Committee of the British Medical Association had not been favourable, because the representatives of the Friendly Societies would not agree to a wage limit. What was the good of going on to a Conciliation Board when the men were entirely unconciliatory? It was absolutely necessary to have some understanding on the wage limit.

The finances of the General Medical Council, as Mr. Horsley had shown, were in a state far from satisfactory, and if it was to be a really potent instrument, sharp enough to effect the purpose for which it was created, it would need sufficient funds, such as might be secured by an annual fee of £1, which would give £35 000; a smaller fee might suffice. The penal powers of the General Medical Council should be modified, and it should be able to impose other punishments than the capital one of striking a man off the *Register*.

As to the midwives question, he contended that midwifery nurses should be registered, and under medical control.

*Speech by Mr Jackson.*

Mr. GEORGE JACKSON (Plymouth) said that at the last election not more than one-third of the profession voted, and he urged that it was necessary that they should take a greater interest in their own affairs if they expected Parliament to listen to them. To reform the Medical Act, they would have to reform the General Medical Council itself, and to get at that reform they must have more direct representation of the profession, and the members who represented the corporations should also be elected directly by the members of these bodies. He favoured raising the standard of the examinations. They must have a one-portal entrance to the profession. There seemed to be something in the constitution of the English people which was opposed to uniformity. In France, Germany, and other Continental countries there was one State examination; a man could take other degrees afterwards. Unfortunately the examining bodies were strong on the General Medical Council, and were not likely to commit *felo de se*. Fresh legislation was needed to give more power to suppress quacks, oculists, aurists, and so on. The lawyers were a great deal more careful in looking after their own interests, but the General Medical Council could not touch anyone who did not put himself in a position to be attacked by calling himself a physician or surgeon. A more definite pronouncement was wanted against those who acted as medical officers of clubs or insurance societies. At present they could only do so by appealing to the Colleges which granted their diplomas, and in this respect they had the most prompt action from the Irish Colleges. On the question of midwives, he said that it was no argument that because they had always had "Sairey Gamps" with them, they should still keep them, any more than other undesirable people. He condemned the proposal to retain on the roll midwives who had been in practice two years, and pointed out that under the Medical Act of 1856 Parliament was not so tender with medical men, but insisted on a much longer term. He would prefer a Bill under which all nurses would be registered. He disclaimed all faith in Conciliation Boards, and preferred to meet the clubs by provident dispensaries run on proper lines, with a wage limit as a basis of contributions. There was danger in a lay committee, and he cited the example of Coventry, where he said there must be touting, because every sick member joining had to bring two healthy ones with him. He urged, in conclusion, that unless they held together, and brought pressure to bear upon members of Parliament, nothing would be done.

*Speech by Mr. Brown.*

Mr. GEORGE BROWN (London), at the outset, dealt with personal matters between himself and Dr. Glover repeating explanations already given at Liverpool in reply to that gentleman's remarks at Cheltenham as to his inaction on the midwives question, and the granting of certificates by the Obstetrical Society. He proceeded to say that he would most certainly, if he had had his way, impeach Sir John Williams or any other distinguished man who shared in giving these certificates, which were, in his opinion, contrary not only to the letter but to the spirit of the Medical Act. Dr. Glover also charged him with bringing forward resolutions for which he could not get a seconder, as if these were mere matters for ridicule. But the resolution he brought forward on November 2nd, 1900, on the subject of medical clubs, was a direct mandate from many medical associations in different parts of the country, joining Middlesbrough and Wigan in a memorial on that subject, and it was surely not his fault that none of his colleagues thought it advisable to second it. It was not a personal matter. Clubs did not affect him, and had not affected him for the past twenty years. As the direct representatives were only five out of thirty-one, all they could do was to keep pegging away. It had been impossible to get the General Medical Council to take any action towards getting a reform of the Medical Act. That would have to be done through the British Medical Association and the members of Parliament in the country. They had been able to stop unqualified assistants, and the unqualified assistant, he found, was the mill in which unqualified practitioners were turned out, but he disagreed with Dr. Woodcock on the club question, and did not see why they should make it incumbent on medical men to act the part of spies and detectives to secure a prosecution. Nor did he agree with Mr. Jackson's idea as to geographical representation.

They wanted men to represent them, no matter where they lived.

*Speech by Mr. Horsley.*

Mr. Victor Horsley said that he had hoped to be a candidate to save the profession the expense of a by-election, but found he was unable to appear in that guise for another year. He said he did not second Mr. Brown's resolution on the subject of clubs because, so far as regarded the General Medical Council, it was *ultra vires*. That Council had no statutory power to do what Mr. Brown asked it to do. He agreed absolutely on the principle, but the Medical Acts afforded no power to the Council to pass such penal resolutions. The direct representatives had recently affected a change in the attitude of the General Medical Council towards the profession. The Council had been reinforced chiefly by young men whose ideas were more progressive, and the general feeling of the Council was more sympathetic towards the profession at large, and especially towards those in general practice. He touched on the excellent change effected in the appointment of a new legal adviser, and remarked that they were not likely to have the repetition of such a scandal as the Hunter case. He described his efforts to obtain inquiry into the rotten state of the finances of the Council. The money was public money, and yet he showed that in 1900 that the sheets laid before the House of Commons were false, and now he had been fortified by the opinion of an expert. That was an illustration of the way in which the work of the Council had been done in the past, and also showed the way in which they might hope to get reform in the future.

As far as professional character went the decisions of the General Medical Council were absolute, but when they came to matters of State policy the Privy Council intervened. For the last two years those who had followed the acts of the Privy Council in regard to the profession had seen with dismay that something was going on absolutely hostile to the medical profession. Sir William Turner, the President of the General Medical Council, had repeatedly asked the Council to allow him to manage affairs by his personal intervention with the Privy Council. What was the result? On the midwives question the General Medical Council laid down ten points as absolutely essential to any Midwives Bill, and these ten points would absolutely safeguard the interests of the medical profession. They were taken to the Privy Council, and the Duke of Devonshire, President of the Privy Council, had gone back upon them on the most serious of these points, in spite of his statement to the deputation which supported Lord Balfour's Bill. Again, in the matter of reciprocity of practice in this country and Italy, the documents were referred to the General Medical Council, which wrote a letter to the Lord President of the Privy Council in which was embodied a resolution showing the impossibility of establishing reciprocity. Yet the General Medical Council was contemptuously ignored in the matter. The condition of things was far worse in the Irvine case. Sir John Gorst, Vice-President of the Privy Council, said "at the time the appointment was made my noble friend, the Lord President of the Council, had not heard of the charges against Dr. Irvine." That naturally roused Sir Walter Foster in the House to ask if the minutes of the General Medical Council were not before the Privy Council, to which Sir John Gorst replied that neither the Lord President nor himself had sufficient leisure to acquaint themselves with the proceedings of the General Medical Council. Mr. Horsley thought this was a most disgraceful transaction. To get a new Medical Act the British Medical Association must first be remodelled, making it truly representative of all parts of the country. The support of members of Parliament must then be secured to a measure in which they should insist upon the reform of the General Medical Council. Touching on Mr. Chamberlain's remark in the House that Dr. Irvine had infringed their trade-union rules, he said the mistake was that the public looked upon their monetary relations simply in a commercial manner. If they could get the public to understand that the profession considered it a disgraceful thing for a medical man employed by a Medical Aid Society for instance to undertake to attend and treat an impossible number of patients, the public would come into line with the profession. They ought to show that their motives were entirely honourable. On the commercial side it was only reasonable that as the circumstances of medical education and practice became more expensive, the financial remuneration should grow in the same ratio.

On the midwifery question he said the public were under the impression that midwives could practise midwifery, but as a matter of fact that was distinctly abolished by the Act of 1886. A midwife should be penalised if she attempted to do anything in the nature of or resembling an operation. It was certainly in the interest of the public that midwives should be controlled by medical men; but unless the profession watched this matter closely the penalising clauses would be dropped out of the Bill when it came before the House. He happened to know that it was because of the penalising clauses that the Bill was withdrawn from the House on the last occasion.

During the whole time he had sat on the General Medical Council they had not got one whit nearer the essential reform on the question of death certification by unqualified people, and if they could bring it about—he hoped through the British Medical Association—they would have the groundwork of a real campaign against quackery.

Dr. E. Jepson, President of the Durham Medical Union, proposed a vote of thanks to the speakers, and alluded to the services Dr. Cox had rendered in bringing about that gathering.

Dr. Hudson seconded, and the resolution was carried.

Dr. Jepson then proposed:

That this meeting of medical men of the North of England unanimously resolve that the time has arrived when steps should be taken to provide a new Medical Act, (1) to make the General Medical Council more representative of the medical profession; (2) to give greater powers to the General Medical Council to enforce penalties against irregular and unqualified practitioners; (3) to institute a proper registration of deaths.

If Scotland and Ireland were properly represented on the Council by one member each, they in England were entitled to at least six members.

Dr. Cox said he would second the resolution if it stopped short at the demand for a new Medical Act.

Dr. Jepson agreed.

Dr. Armstrong (South Shields) said they wanted the clauses as well, and he moved an amendment to that effect, but upon the suggestion of the Chairman that they were all agreed as to the need for a new Act, but that another meeting would be needed to settle details, Dr. Armstrong withdrew his amendment, and the motion simply affirming the necessity of a new Medical Act was passed.

On the motion of Dr. Murphy a vote of thanks was accorded to the Chairman.

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Meeting at Liverpool.

On October 25th there was a meeting of members of the Liverpool Medical Club convened for the purpose of hearing addresses by Mr. George Brown, of London, and Mr. George Jackson, of Plymouth.

The chair was occupied by Dr. Tisdall, who said that they had heard from Mr. Victor Horsley something about the shortcomings of the Council in the past. That evening they hoped to hear from Mr. Brown and Mr. Jackson something about what would be done for them by the Council in the future.

*Address by Mr. Jackson.*

Mr. Jackson said that in the past the members of the Council had taken a very limited view of their duties. Since that time, however, the Council had been made to appreciate that something more was expected from them. His belief was that if the Council had power it would do more, but at the present time, as the Acts under which it was constituted were drawn, its powers were very much limited. At present the representatives of corporate bodies overwhelmed the direct representatives. It was necessary that the direct representatives should act in perfect unanimity on questions affecting general policy. If they did not they could not expect to do anything in the way of reform. The Medical Acts should be reformed in such a way that there would be more direct representatives. The corporate bodies should be grouped, their representation very much reduced, and their mode of electing representatives very much altered. If these corporations were still to be represented the representatives should be elected by the members of the corporations,

or, in the case of a university, by the members of the university. Another point of great importance was the division of the country into electoral districts. It was not fair to candidates to expect them to travel all over the country for the purpose of an election campaign.

Another point which he considered important was the raising of the standard of the entrance examinations, and limiting the age of entrance so as not to be under 17 years. At present the age was 16 years. The entrance examination should be of a more uniform character. Taking it as a whole, he did not think the medical profession was respected as it should be, and to make it so they must improve the general education, as well as the professional education.

The third point to which he attached great importance was in regard to the "one-portal" system of entrance by forming a Board of Examiners, composed of delegates from the present examining bodies. In France and Germany a State examination was insisted on. Under that system the student could take his medical degrees at any university he liked. He thought in this country they might very well copy that example and insist upon one uniform examination, to be held, of course, in the different centres, such as London, Edinburgh, Dublin, etc. The fourth matter which should be dealt with was the suppression of quacks, etc., who practised medicine and surgery under various forms of colourable pretence. There should be such an alteration of the Acts as would give the Council power to suppress quacks. Lawyers were a very much more business-like people than they were in this matter, and had much more stringent regulations. The General Medical Council had not the power at present, as he understood it, to take any proceedings against any man who chose to call himself an aurist or an oculist, or any other name he liked, which might make the public believe that he had any ability to deal with any particular part of the human body.

His next point was the question of a more definite pronouncement against medical men acting as medical advisers of clubs and insurance societies, whose agents touted for members. In any Bill that might be introduced it would be very desirable that the Council should be given more power in that matter. It was very essential, from every point of view, that the Council should have supreme power in matters relating to education.

He had purposely left to the last the all-important question of the Midwives Bill. All the Bills in Parliament so far were inadequate. He was now as ever opposed to the registration of midwives, on the ground that it would represent the creation of an inferior order of practitioners. He was, however, favourable to the registration of all nurses, who would be obliged to act under the direct control of duly-qualified medical practitioners. When he said "nurses" he did not mean old women who had happened to have a bit of midwifery experience for a few years. The nurses should be registered, and if they did a bit of obstetric work it should be under the direct control of medical men.

Adverting to the question of Medical Aid, he was in favour of provident dispensaries in certain conditions. He had assisted in the work of establishing the Three Towns Provident Dispensary, in conjunction with a branch of the Incorporated Medical Practitioners Association, which worked on the principle of a wage limit, and whose management was entirely in the hands of the members of the staff. He attached supreme importance to the imposition of a wage limit, and also to the necessity for the management being left entirely in the hands of the members of the staff. Medical men should have nothing to do with the clubs unless the latter would adopt the wage limit.

*Speech by Mr. George Brown.*

Mr. George Brown said that on the question of radical reform of the Medical Acts they could not expect that the Council would promote a Bill which would practically snuff them out, and therefore they must look to some other body. He saw no other medical body which could take up the work with any reasonable hope of being able to carry it through but the British Medical Association. It was the duty of that Association to promote a Bill in Parliament and to bring all the influence of its members to bear in order to carry a Bill for reform of the Medical Acts through the House of Commons. It was his intention to support the General Medical Council in their efforts to retain the present regulation as to duration of the period of medical education. If the Council did not have absolute power over medical education that education could only become chaotic.

He would do his best to assist in the movement to prevent sick clubs and dispensaries whose agents canvassed for patients from obtaining the services of registered medical practitioners. It was a great satisfaction to him to know that he had assisted in passing a resolution expressing the disapproval of the Council with those practitioners who associated themselves with clubs whose agents systematically canvassed for patients.

He was strongly opposed to the Bill for the Registration of Midwives. He did not see how the General Medical Council could give their sanction to that Bill unless the points they had laid down were included in it. The Bill as at present drawn should be opposed tooth and nail. The registration of midwives would simply mean the creation of an inferior order of practitioners. They owed a debt of gratitude to Mr. T. P. O'Connor, M.P., for "talking out" the Bill in the House of Commons on several occasions. The Bill would come forward again next year, and if the members of the medical profession did not send men to the General Medical Council who were firm in their opposition to the registration of midwives it might go through and become law, a state of affairs which would be positively deplorable. From the point of view of the public interest they should strenuously oppose the Bill: they could not with safety to the public register midwives as competent to attend midwifery cases without medical supervision. They must get a Bill introduced into the House of Commons to regulate the practice of obstetric nurses, and provision must be made by the State or the municipal authorities to pay the fees of medical men for attending those cases. The women of the poorer classes were as well entitled to have medical attendance in their labours as the highest ladies in the land.

He was strongly in favour of raising the standard of medical education. They had raised the period of medical education from four to five years. In addition to that the preliminary examination had been raised to a very much higher standard. Until they saw the effect of these two measures he did not think they could go much further in that direction. It was to be regretted that the Royal College of Physicians of London and the Royal College of Surgeons of England appeared disposed to dispute the authority of the General Medical Council in regard to this matter.

As to the necessity for increased direct representation, it was useless trying to get any increase in direct representation through any action of the Council. On two occasions he had proposed motions calling upon the Council to make application to the Privy Council to obtain additional direct representation for England and Wales as provided for in the Medical Act of 1886, but on each occasion the proposition was rejected by a large majority. If he continued to represent the profession on the Council he would again press that question upon the members, but he feared nothing would be accomplished in that direction unless a direct appeal to Parliament were made. He would do his utmost to assist those who considered that their representatives on the Council should be elected by the graduates of the universities and the members of the corporations, and not solely by the senates and councils respectively. On more than one occasion he had moved a resolution, but had failed to get a seconder. He one time proposed a resolution condemning appointments by societies whose agents touted for members, but he could not get a seconder for his motion. He appealed to the members of the profession in Liverpool to send him back to the Council to propose that motion again, and also to send Mr. George Jackson along with him as a seconder of the motion. Some people might have thought he was ashamed at not being able to get a seconder for his resolution, but he was not ashamed; he was only sorry that for such a resolution he could not get a seconder.

Adverting to the question of clubs and the constitution of Conciliation Boards, he said if medical men throughout the country would be true to each other they would do without Conciliation Boards. Let them agree amongst themselves as to the rate upon which they would take club practice.

The Chairman said they had all heard with great pleasure

and instruction the remarks both of Mr. Jackson and Mr. Brown.

Dr. Alexander McCook Weir asked some questions and made some remarks relative to the subject of the proposed registration of midwives.

Dr. Stanley Kellett Smith (Liverpool), in the course of some observations, said he could not agree with the opinion of Mr. Jackson as to limiting the age for the entrance examination to 17. Such a limit would, he considered, be unfair and unjust both to students and students' parents. He was a firm believer in getting students to work at as early an age as possible.

Mr. Jackson, replying to the questions submitted by Dr. McCook Weir, said he had some hope that with the altered constitution of the British Medical Association, a Bill dealing with the midwives question might be introduced through it. If the British Medical Association would not introduce a Bill he would be glad to assist the other direct representatives to introduce one, such as they wanted.

Mr. George Brown endorsed the view that the practical way of going to work in regard to the introduction of a Bill on the midwifery question was through the medium of the British Medical Association. It must, however, be a Government measure, because nothing could be done without Government aid; it was useless to hope to ever get it through as a private Bill. He could be no party whatever to the introduction of any Bill to register midwives as such, but he would be very happy to be a party to the preparation of a Bill for the supervision and proper regulation of the practice of obstetrics by nurses.

The proceedings ended with a vote of thanks to Mr. Jackson and Mr. Brown for their addresses, accorded on the initiative of Dr. Larkin, seconded by Dr. Stanley Kellett Smith.

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### Ashton-under-Lyne.

A well-attended meeting of medical practitioners from Ashton-under-Lyne, Stalybridge, Dukinfield, Hurst, and the neighbourhood was held at Ashton-under-Lyne on October 24th, when addresses were delivered by Mr. George Brown (London), and Mr. George Jackson (Plymouth), two of the five candidates.

Dr. Crawshaw, who presided, said, as all were aware, the profession was practically governed by the General Medical Council, composed of 30 members. Only a sixth of that number were elected directly by the profession, the other five-sixths being elected—5 by the Privy Council, and the remainder by the different universities and corporations who granted degrees and took charge of medical education. It was a matter of considerable importance to the profession that they should have a larger number of direct representatives, and the first thing to secure that in his mind was for the profession generally to take more interest in the election. If the members did not vote better than they had done in past elections it was very probable that they would be a long time before they had one-sixth of the General Medical Council elected by them. Mr. Brown was at the present time one of the direct representatives, and had been so for the last 4½ years. Mr. Jackson was a candidate at the last election. The present representatives of England were Mr. Victor Horsley, Mr. Brown, and Dr. Glover, of London. There was one representative for Scotland, Dr. Bruce, and there was a representative for Ireland, Sir W. Thomson.

Mr. Brown then explained his views on different questions. He should offer himself as a candidate for re-election, and would ask them also to support the candidature of Mr. Jackson, who secured 4,082 votes at the last election. Dr. Glover, on various occasions during the 4½ years which he had had the honour to sit on the Council, had voted in opposition to Mr. Horsley and himself on numerous occasions. He had a list of something like a dozen important cases when the names of members were taken down in the voting, and Dr. Glover voted in opposition to them on several important occasions, the consequence being that they were put in a small minority; in fact his vote neutralised one of theirs, and instead of having 3 direct representatives working together they only had 2 on the one side and 1 on the other. They ought really to have 3 representatives to work together if they were to have any effect whatever in the Council. At the last election he pledged himself to work to carry out five points, and he stated at Manchester that if he found that the General Medical Council were so immovable that they would not vote some of the measures which they were anxious to see carried out within three years, he should feel it his duty to resign his seat as being no longer of any service there. He was happy to say that the occasion for sending in his resignation had not occurred, for although during the ten previous years nothing was done by the Council practically to carry out the views of the general practitioner in regard to the raising of the standard of medical education and the suppression of the unqualified assistant, within the three years they had found that the Council had agreed to carry out some of the views that were advocated. He regarded with special approval the resolution passed preventing the employment of unqualified assistants to visit and prescribe for patients and conduct branch practices as they had been in the habit of doing for several years. Another thing on which they had come to a resolution which he was sure everyone having the good of the profession at heart would hail with delight was that the standard of medical education had been very materially raised. Another thing which had been done which was a step in the right direction but which had not gone quite so far as he wished was the decision of the General Medical Council upon the association of medical men with Medical Aid societies and clubs who employed canvassers. The Council had passed a resolution, but he was sorry to say this expression of opinion merely amounted to a pious opinion, and it was not stated that it would be regarded by the Council as infamous conduct in a professional respect which might mean removal from the *Medical Register*. He thought it was most desirable that there should be no uncertainty upon that point. The General Medical Council should declare that it regarded touting as infamous in a medical respect. As to the proposal for a Conciliation Board, Mr. Brown said that the General Medical Council had no power to interfere with a medical man's practice, between him and his patients. It could exercise a sort of benevolent neutrality in the matter, and say that if the profession would like to have a Conciliation Board it would do what it could to support it. But as a matter of fact it was *ultra vires;* and he thought it was best for each medical man to be his own Conciliation Board. For his own part, he had always found that it was far better not to take any club practice. It might be necessary in some working-class districts, but the pay was so small and the services exacted were so great that he did not think the remuneration adequate to be connected with club practice. It had been stated that some change ought to be made in their present representation, not because of unfitness but because he happened not to reside in a particular district of England. It was on the face of it a desirable thing that every district should be represented by a candidate. Unfortunately they had three representing them in London. That was the fault of the constituency as a whole. The electors resided in all parts of England and evidently thought that it was not a matter of where a man lived but whether he was likely to carry out the objects in view. With regard to the Midwives Bill, he held that the profession must say, "We will not recognise anyone to practise any branch of medicine, either midwifery or any other branch unless they have gone through a regular medical curriculum."

Mr. George Jackson said that practically he agreed in all Mr. Brown had said. Unless the direct representatives stood together against the mass of the representatives of the corporations, they could not expect that much would be done. Mr. Jackson then dealt *seriatim* with the five points mentioned in his printed address, and said that he could not see why the British Medical Association could not run two or more members of Parliament who would be devoted to their interests. The National Union of Teachers did so, and the General Medical Council had decreed that five years should be the proper curriculum; the Colleges in London would allow one of the five years to be passed in a higher grade school, not in a medical school. At present the General Medical Council had not power to insist that its views should prevail, it could only recommend. The number of representatives might be reduced very fairly to 25—say 15 for England and Wales, 5 for Ireland, and 5 for

Scotland. Then the country might be cut up into electoral districts. The Council should have more power to deal with various forms of quackery. At present, if a man did not call himself a registered surgeon or physician, the Council could not touch him; he could call himself an aurist or anything he liked to give a colour of pretence that he was a medical man. There should be a uniform preliminary examination under the auspices of the General Medical Council held in different parts of the country. A resolution to that effect had been passed at the meeting of the South-Western Branch of the British Medical Association. He was in favour of such subjects as physics and chemistry being included, but it was thought that it would be best to defer the study of these subjects to a later period.

Dr. CORNS (Ashton) proposed:

That this meeting of medical men of Ashton-under-Lyne and district pledges itself to support the candidature of Mr. Brown and Mr. Jackson.

Dr. PARK (Dukinfield) seconded, and said that the medical men of this country were themselves to blame if they had not a better representation than they had. He hoped the time was coming when they would have far more influence, not only on the General Medical Council, but on the great council of the nation—Parliament.

The resolution on being put to the meeting was carried unanimously, and the proceedings closed with a vote of thanks to the Chairman.

### MEETING AT STRATFORD, E.

THE East Suburban Medical Protection and Medico-Ethical Society has arranged to hold a meeting of practitioners residing in the East and North-East Metropolitan Districts, at the Town Hall, Stratford, on Friday, November 8th, at 3 P.M., to discuss the forthcoming election of direct representatives on the General Medical Council. We are informed that all the candidates have promised to attend if possible and to address the meeting. All practitioners will be welcome, and the Society is anxious that as many medical practitioners resident in the districts indicated as possible should take advantage of this opportunity of coming into personal contact with those who are candidates for the honour of representing them on the General Medical Council, and of hearing their views on the past work of that body and of the tasks which await it in the future.

We venture to express the hope that this expectation may be fulfilled. One of the arguments used by those who are opposed to any alteration in the constitution of the General Medical Council is the small amount of interest shown by the profession in previous elections. It cannot be denied that this argument has a good deal of force with many.

At the first election for direct representatives in 1886, the number of abstentions amounted to something under 30 per cent. (probably not more than 26 per cent,) of those entitled to vote; in 1891 the abstentions had increased to 38.7; and in 1896 to 40.3 per cent.; at the by-election in 1897, when Mr. Victor Horsley was elected, the absentions sank to 35.71 per cent., but this is still a very large proportion. It is from every point of view desirable that at the approaching election a very full vote should be given, for it is a reproach to the profession that a third or more of its members should fail to take the small amount of trouble necessary to express an opinion upon so important a matter as the choice of their direct representatives on the General Medical Council.

It is hoped that the place of meeting will not be so out of the way as to prevent a large attendance; it is fixed merely by the circumstances of the Society under whose auspices the meeting is held. It can be reached by train from Liverpool Street, or Fenchurch Street, or by tramway from Aldgate.

## SCOTLAND.

### CANDIDATURE OF DR. CHARLES E. ROBERTSON OF GLASGOW.

THE following letter, signed by over one hundred registered medical practitioners resident in Glasgow and the district, has been addressed to Dr. Charles E. Robertson of Glasgow:

Sir,—We, the undersigned registered medical practitioners, having in view the approaching election of a direct representative of the medical practitioners of Scotland to the General Medical Council, and with the knowledge of the deep interest which you have always taken in the general welfare of practitioners, desire respectfully to ask you to allow your name to go forward for nomination.

In soliciting your services as a candidate we are quite conscious of the work and difficulty which the acceptance of such a position must entail upon you. The widespread dissatisfaction, however, among medical men regarding certain recent proceedings of the General Medical Council, and your ever active co-operation with us in these matters, make us hope and believe that you will still further deny yourself by becoming a candidate, and actively promote our common interests.

Being a general medical practitioner yourself, we feel that in you we have one who is fully conversant with our wants, and who has repeatedly expressed himself in favour of our views. The enthusiastic and ungrudging services which you recently rendered in connection with the sale of drugs and poisons has made your name familiar in the West of Scotland, and we feel sure that your candidature would be very popular with medical practitioners throughout the whole country. Your successful record as a member of the Board of Governors of the Victoria Infirmary gives us further confidence in the belief that your nomination for a seat on a still more important administrative body would meet with general and hearty approval.

Those who have come into close personal contact with you have recognised your ripe experience and sound judgment, and are satisfied that your powers of persuasion and strong personality—exerted on behalf of general practitioners—would soon make your influence felt. We believe that as our representative you will take a conspicuous part in defence of our ancient rights, and assist at the same time in bringing the constitution of the General Medical Council more into harmony with the spirit of the age.

Should you take this requisition into your favourable consideration, you may rest assured that no effort will be spared on our part to bring your candidature to a successful issue.—We are, Sir, yours faithfully.

[Here follow the signatures.]

Dr. Robertson has, in accordance with this request, signified his intention to be a candidate.

The Honorary Secretary of the Committee formed to promote the return of Dr. Robertson is Dr. Andrew Wauchope, 190, Crown Street, Glasgow.

## LITERARY NOTES.

MR. STEPHEN PAGET is, we understand, preparing *Selected Lectures, Essays, and Addresses by Sir James Paget*, for publication, and hopes to get them out before Christmas.

Messrs. J. and A. Churchill, of 7, Great Marlborough Street, W., have asked us to warn the readers of the BRITISH MEDICAL JOURNAL of the approaching publication of the *Medical Directory* for 1902. As the accuracy of this work depends on the latest information being supplied by the profession and the various secretaries of medical institutions, and as it is about to be made up for press, any alterations or additions should be posted to the publishers at once.

Messrs. Charles Griffin and Co. have ready for publication *The Work of the Digestive Glands*, by Professor Pawlow, of St. Petersburg, translated into English by Professor W. H. Thompson, M.D., of Belfast. The publishers (through the translator) have arranged with the distinguished author for the publication of the English edition of these important lectures, embodying the results of Professor Pawlow's researches, which were recently awarded the Nobel Prize of £11,000. This edition will include the later volume, entitled "The Experiment," etc., together with the notes of the most recent researches of Professor Pawlow, and will constitute the sole authorised edition for England and America for this important work.

The new number of the *Quarterly Review* contains a comprehensive article on the plague. It is chiefly valuable for the historical summaries of early and recent prevalences of the disease. The writer fails to discuss some of the problems connected with it which stand most in need of solution. For example, after describing the Great Plague in London in 1665, and its disappearance within a few years from London, and even earlier from other parts of England, he says, "The cause of its disappearance cannot here be discussed." Yet if we could get any light at all on these causes we might obtain valuable hints as to measures which might now be taken. Had the great fire really anything to do with it by causing a second exodus of the population? It is indeed recognised in this article that evacuation and complete disinfection of dwellings are amongst the most valuable means of checking the spread of plague, but that "to be efficient these measures should be extended to a certain area around the infected house." Due credit is given to the admirable work done at Bombay under the direction of the Port Medical Officer, Major Crimmin, I.M.S. "It must," it is said, "be chiefly due to these precautions that no more serious importation of plague into Europe or any intermediate country has taken place."

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

# British Medical Journal.

SATURDAY, NOVEMBER 2ND, 1901.

## CONTRACT PRACTICE.

The paper read recently by Dr. Larking before the East Kent District of the South-Eastern Branch of the British Medical Association, and published at p. 1324, is an interesting contribution to a question which is of vital importance to the medical profession. It is a question which is sometimes treated as though it concerned only part of the profession. In fact, it affects the whole profession—consultants and specialists, and general practitioners of all degrees of success. It affects consultants not only directly, as was clearly enough shown by the recent determined attempt to establish a contract "Consultative" Institution in Birmingham, but indirectly because a system which has a depressing effect on the interests of one part of the profession cannot fail to react injuriously on the whole.

The subject of contract practice and its difficulties is discussed by Dr. Larking as an economic problem, and this is undoubtedly the basis upon which such a question must be considered. Either the system of club practice involves an act of charity on the part of the medical profession, or such practice should afford a reasonable remuneration to the medical men who engage in it. The suggestion that any element of charity enters into it is hotly repudiated by the Friendly Societies, and, as Dr. Larking shows, Mr. Brabrook, the Chief Registrar of Friendly Societies, has asserted that those societies "desire to pay a fair price for the services rendered to them—they are neither beggars nor sweaters." Dr. Larking argues that club practice, as at present conducted, is not remunerative, taking the rate of 4s. a year or 1d. a week as a basis. A very elementary calculation based on the facts which Dr. Larking supplies will indeed show that contract work under existing conditions is degrading to the practitioner; that the man who has a large contract practice cannot earn an adequate income without doing an amount of routine work which makes it impossible for him to do his duty by his patients or to add to the stock of medical knowledge.

Much has been said in condemnation of the 6d. dispensary, yet from one calculation given by Dr. Larking it is seen that contract practice at 4s. a head per annum works out at about 6d. for each attendance. It is impossible for a medical man on such a system both to do his work in a way consistent with self-respect, and to earn thereby an income at all commensurate with that earned in other pursuits by his equals in education and ability. We shall be disposed to believe that the profession has recovered from its overstocked condition when we find all practitioners possessed of sufficient independence to refuse contract practice on terms which must impair their usefulness both to their patients and to medical science.

It is to be regretted that so much misconception should exist, both among the public and even among some members of the medical profession, in reference to the study of economic questions affecting the profession, and the efforts which can be made to combat existing economic evils. Thus the whole recent movement of awakening in the profession is often spoken of, even by medical men of great ability, who are ignorant of the real facts, in terms similar to those in which the organs of the lay press have spoken of that part of the general movement which specially affected the Army Medical Service. The *Times*, as we have previously pointed out, speaks of the scheme propounded by Mr. Brodrick's Committee as a "concession to the medical profession," showing an utter want of grasp of the true position. The medical profession has not asked for any concession, does not need any concession: knowing from experience, and being the only persons who can know from experience, the conditions under which the medical service of the army must be placed if the medical officers are to be free to acquit themselves adequately of their responsibilities, it has pointed out what reforms are required. At length the scandal has grown so great that medical practitioners, being free agents, have declined by joining the service to make themselves party to such a system. The reforms now proposed are not concessions to medical men, but to the proper requirements of the service.

Similarly with civil life. The movement for medical reform, medical defence, medical union, is not in any proper sense of the terms either self-seeking or sordid; not self-seeking, because any personal benefit accruing to existing members of the profession must be remote and small; not sordid, because not pecuniary benefits but conditions of practice permitting good and honourable service are the objects in view. The object, surely, is that the medical practitioner of the future may be more favourably placed for doing his duty than his fellows in the past, and that thus the medical profession may become, as we all feel it should become, that to which young men of the greatest capacity, of the highest ideals, of the most generous aims, are irresistibly drawn. This surely is not in any special sense our interest. It is the public interest. The medical man is essentially the servant of the community.

When we learn from his chief subordinate that a statesman of the rank of the Lord President of the Council does not consider that portion of his official duties which relates to the supervision of medical affairs of sufficient importance to receive his personal attention, or when at the other extreme we find Friendly Societies endeavouring to deprive the private practitioner of the right to say whom he will attend and on what terms, in either case the blow eventually falls not upon individuals merely, but on the service of the State. If the public will not allow medical practice to be carried on under proper conditions men of character will shun medical practice, and the medical pro-

fession in general will be depleted in precisely the same manner as the medical service of the army has been depleted. Fortunately the remedy is largely in the hands of the profession. Let the economic conditions and requirements of medical practice be carefully and systematically studied—and Dr. Larking has made a contribution of great practical value to this study—let the principles ascertained be unflinchingly pressed upon the notice of the public by the voice and act of a united profession, and the elevation of our work to the position it should rightly take in a civilised community will be our just and sufficient reward.

## THE ALLEGED INCREASE OF CANCER IN MASSACHUSETTS.

THE Shattuck Lecture delivered by Dr. William F. Whitney at the annual meeting of the Massachusetts Medical Society consists of an interesting study of this subject. Accurate statistics exist for the State of Massachusetts since 1847, if crude death-rates for persons at all ages or death-rates for persons over 30 years of age, such as are given by Dr. Whitney can be strictly said to come within this category. In a recent article it was shown that cancer is markedly a function of age, and that in order to secure comparable statistics it is requisite to reduce death-rates for this disease to those relating to a "standard population," that is, a population of known and uniform age and sex distribution. If this point be borne in mind, Dr. Whitney's statistics, in which this method of correction was impracticable, are very instructive; and it is suggestive that as the result of his inquiry he has arrived at the conclusion that "the (registered) increase is probably due to better diagnosis and registration . . . . and it is not (yet) justifiable to speak of the increase as inherent in the disease itself." This conclusion is reached notwithstanding the fact that the registered death-rate from cancer in persons over 30 years of age was four times as high in 1895 as it was in 1850.

Dr. Whitney appeals from the vital statistics of the State of Massachusetts to the statistics of great hospitals, in order to ascertain what is the true proportionate mortality from cancer which is not fully stated in the vital statistics. In the former, diagnosis has been verified by necropsies; in the latter, most commonly not. Thus in the K. K. Allgemeiner Krankenhaus, Vienna, Nothnagel found that in the year 1865 of 1,512 necropsies the number in which cancer was found was 8 per cent.; in 1870-81 (20,480 necropsies) cancer formed 7.2 per cent.; and in 1882-93 (20,358 necropsies) cancer formed 10.9 per cent. In the Charité Hospital, Berlin, of 8,968 necropsies made in the eleven years 1875-85, 6.4 per cent. were cancer. Taking the total 49,806 necropsies made at the above hospitals in Berlin and Vienna, the proportion of cancer is 8.3 per cent. The age of the patients at these hospitals is not given, but the greater number of patients are adults, and Dr. Whitney considers that the above ratios are fairly comparable with the ratio derived from the Massachusetts statistics for persons over 30 years of age. But in Massachusetts, according to the diagnoses registered in the vital statistics of the State, the proportion of cancer deaths to total deaths is at the present time more than 2 per cent. lower than it was thirty years ago among adults dying in the above European hospitals, where necropsies were carefully performed. He therefore concludes that, "until the death ratio over 30 years reaches more than 8 per cent., and then begins to show a decided increase, it is not justifiable to speak of it as due to anything except better diagnosis and more careful registration and classification."

Now, if this method of statistical argument is sound, Dr. Whitney has supplied a most valuable contribution to this vexed subject, and has furnished an additional reason beyond those urged by Messrs. Newsholme and King in the paper to which he refers, in favour of suspending judgment, and of refraining from the alarmist views of those who maintain that the rapid registered increase of cancer mortality is chiefly real. That cancer is a cause of enormous mortality, and that this mortality is not completely stated by our national statistics, are facts which must be accepted by all who have made a study of the subject; but hastily to assume that it is a rapidly-increasing or even a slowly-increasing cause of mortality among equal numbers living at a given age is another and a much less defensible conclusion.

Hospital statistics were adduced both by Drs. Payne and Newsholme in the discussion on this subject at a recent meeting of the Institute of Actuaries.[1] Dr. Payne brought forward statistics from the *St. Thomas's Hospital Reports*, showing how the proportion of cancer of the digestive organs to total cancer had increased, from which he inferred that cancer of the digestive organs was increasing. Against this conclusion Dr. Newsholme urged that two fallacies lurked in such statistics. First, special cancer hospitals had sprung up which diverted a large proportion of operable cancers, and thus increased the proportion of cancer of the digestive organs in the general hospitals: and secondly, a much larger number of cases of operable cancer were now operated on at home or in private institutions. On the other hand he showed, quoting Sir William Gairdner, that in a lunatic asylum for which accurate pathological records had been kept for a long series of years, the number of deaths from cancer was almost exactly identical in the first and second halves of this period.

The question as to whether the Vienna and Berlin hospital statistics can be trusted as furnishing a true sample of the vital statistics of these cities cannot be definitively settled without more detailed information than we now possess. Are there special cancer hospitals in these cities? Were most of the patients adults or are a large number of children also included? Furthermore, is cancer a disease which would secure admission to these hospitals more readily than, say, bronchitis or phthisis, which are even more fatal? These are some of the questions which suggest themselves, and cause one to hesitate in completely accepting Dr. Whitney's conclusion; though he may be right.

There is the further general objection to the use of what he calls "death ratios." Such ratios are useful in telling us the share which a given cause of mortality, for example cancer, bears to the total mortality. It is clear, however, that this share might vary from two causes, an alteration in the number of deaths from cancer or in the number of deaths

[1] BRITISH MEDICAL JOURNAL, June 29th, 1901, p. 1631.

from other causes. Thus a tremendous epidemic of influenza would lower the cancer ratio, while the failure, owing to a wet summer, of epidemic diarrhœa to appear would increase the cancer ratio, but the cancer death-rate in both years might be identical. We do not wish, however, to be pedantic in this respect. The use of death ratios is amply justified under certain circumstances. We should not hesitate to argue from them if death-rates were unobtainable, though the imperfection of the data would necessitate that inferences should not be drawn when differences of death ratios were but small. The fallacies inherent in "death ratios" furthermore render it imperative that the avoidable causes of error, those involved in differences of age and sex of the persons dying in the groups under comparison, should be entirely eliminated. We are not clear that this has been done for the hospital statistics quoted by Dr. Whitney. He has, however, drawn attention to an excellent line of inquiry, and we hope that his efforts will stimulate others to supply similar and more detailed statistics on the same subject.

## THE IMPROVEMENT OF THE RACE.

The way in which at certain epochs different minds starting from very different points work towards the same conclusion is a remarkable phenomenon. It has given rise to many charges of plagiarism and some bitter controversies as to priority. Apologists of rival claimants try to account for the phenomenon by saying that certain ideas are "in the air," a metaphor which does not help us very much, or that it is a part of the *Zeitgeist* which is not explanatory. An instance of the phenomenon is afforded by the interest just now shown in the possibilities of puericulture. French philosophers, whether sociologists or physicians, have been driven to a study of the subject by the hard facts of vital statistics, which show that the population of France has become practically stationary owing to a great decline in the birth-rate.

Dr. Ballantyne and other leaders of the Edinburgh school of obstetricians have been brought to the subject by a consideration of the needs of pregnant women for better treatment during the time they are with child. Sanitarians have been led to consider similar questions from an observation of the lamentable results on the offspring of women's labour during the latter months of pregnancy. Now we have Mr. Francis Galton bringing his analytical methods to bear on the question in the ingenious and suggestive Huxley Memorial Lecture which he delivered before the Anthropological Institute of Great Britain and Ireland on October 29th. The aim of the lecture was to give a scientific basis to the problem of race improvement under existing conditions of civilisation and sentiment. As dogs differ in inborn dispositions and faculties, so do men in respect to the qualities which go towards forming "civic worth," a term which Mr. Galton would apply to that blending of many alternative qualities, mental and physical, which in its higher forms includes a high level of character, intellect, energy, and physique. Assuming that the different grades of civic worth are distributed in accord with the mathematical normal law of frequency, there must be a certain standard of civic worth which is the average for all male adults, and the probable numbers above and below the average may be calculated in classes. On comparing the results of these calculations with the classification and enumeration in Mr. Charles Booth's *Labour and Life of the People of London*, the two sets of figures were found to be in close accord.

All parents in each class will have a certain average number of children. Of these children some will, in respect of their civic worth, prove to belong to the same class as their parents—some to a lower, some to a higher. If the class just above the average be called R and the classes above it be designated S, T, U, V, and so on, then Mr. Galton calculates that of 34 or 35 V-class sons 6 will come from 35 V-class parents, 10 from 180 U-class parents, 10 from 672 T-class parents, 5 from 1,614 S-class parents, and 3 from 2,500 R-class parents, so that the V-class parents are three times richer than U in producing V offspring, 11½ times richer than T, 55 times richer than S, and 145 times richer than R. Again, 35 marriages of two persons each of class V will produce 5 adult sons and 5 adult daughters of the V class, 10 of each sex of the U class, and 12 of the T class.

Mr. Galton himself admits that there is a fallacy in the hypothesis upon which his figures are founded, because performance in mature life often falls short of youthful promise, and he urges that educational authorities ought to investigate this correlation, by the closeness of which the value of the examination system can alone be judged; but he has sufficient confidence in his calculations to urge that the most economical feasible means for improving the human breed is to be found in encouraging the intermarriage of persons of the classes highest in his classifications, and the marriage of girls of that class at an early age. As girls shrink from early marriage from prudential reasons, he would have dowries given where necessary, and help in emergencies, and would take care to provide healthy homes, so as to diminish the mortality amongst children. He thinks that wealthy people might be induced to find the money necessary, and that it might "easily become an avowed object of noble families to gather fine specimens of humanity around them, as it is to produce fine breeds of cattle and so forth, which are costly in money, but repay in satisfaction." He thinks, also, that as there are building societies that have higher ends than mere investments, and have been endowed with princely generosity, so a settlement of selected persons might conceivably be maintained, the members of which by their own merits, energy, intelligence, and civic worth might attract desirable candidates for admission.

Mr. Galton himself describes his schemes, if they can be considered definite enough to be so-called, as Utopian; and so they may be in some respects, but we cannot help feeling that he is also a little pessimistic or fatalistic, and that he fails to attach sufficient importance to the great results which may be obtained by placing the mothers of all classes under better hygienic conditions, in childhood as well as during the child-bearing period. Under better hygienic conditions should be included not only the healthier homes to which he refers, but better systems of training the body and mind during the period of growth, and better opportunities for recreation, mental and bodily; better conditions of work, healthier work rooms, wiser

habits in dress and in diet, purer air, and more light and sunshine than can now be obtained in the needlessly dirty and noisy cities of to-day.

## THE GENERAL MEDICAL COUNCIL ELECTION.

The nominations of candidates for the seats on the General Medical Council, which will become vacant at the end of this year, must be received by the registrars in London and Edinburgh not later than November 21st next. For the two seats vacant in England there are at present five candidates. The two retiring members are Dr. J. G. Glover, who has been a representative since the Act of 1886 created direct representatives on the Council, and Mr. George Brown, who was elected at the last quinquennial election in 1896; both offer themselves for re-election. The other candidates are Dr. S. Woodcock, one of the representatives of the Lancashire and Cheshire Branch on the Central Council of the British Medical Association, Chairman of the Parliamentary Bills Committee, and was a member of the Committee on the Reorganisation of the Association: Mr. George Jackson, Honorary Surgeon to the Plymouth Public Dispensary, and Devon and Cornwall Ear and Throat Hospital; and Dr. Charles Hayward, who is described in the *Medical Directory* as Honorary Surgeon and Laryngologist and Aural Surgeon to the Hahnemann Hospital, Liverpool: we do not observe that Dr. Hayward makes any reference to his views as to homœopathy in the letter published at page 1351. In Scotland the candidates for the seat whose names have so far been announced are the retiring member, Dr. Bruce, of Dingwall; Dr. Charles Robertson, of Glasgow; and Dr. Norman Walker, Assistant Physician to the Skin Department of the Edinburgh Royal Infirmary.

## GRADUATION AS YOU PLEASE.

A characteristic letter, a column long, appeared in the *Times* of Saturday last over the signature of Professor Henry E. Armstrong. He confesses to "devilish discontent" at the slow progress which London University is making in remodelling higher teaching and examining in this country. Dr. Armstrong is full of wind and fury. He declares, in grotesque metaphors, that "the Senate has fiddled while Rome has been burning," and that he "will bear the red flag at the barricades," and is "not prepared even to contemplate surrender." We are getting a little accustomed to these periodic explosions, and regret that his anger is so genuine and apparent as to render his meaning somewhat unintelligible and obscure. He apparently sees some dark relationship between the statutes of the University of London and affairs at the Cape, for he says, "Since they (the statutes) were promulgated the war in South Africa has set in." We do not deny that the South African complications have beguiled exalted persons into injudicious writing as well as into injudicious speaking, but we are bewildered in our endeavours to extract from Dr. Armstrong's earlier or later writings any proximate relation between Magersfontein and the matriculation, or Stormberg and the statutes, or even Colenso and Convocation. Dr. Armstrong appears, in the melancholic intervals of his wrath, to foresee the University producing "desk-ridden emasculates who have lost all power of helping themselves." To avoid this approaching catastrophe Dr. Armstrong has discovered a specific which we extract from the body of his epistle. It is to the effect that the University should "admit the matriculated students of the Central Technical College as matriculated students of the University on their payment of a registration fee," and that the same latitude should be accorded to all schools of the University; such matriculation, it is suggested, is to be "done without the assistance of external examiners." That results so mighty should arise from so small a matter, that Imperial safety should hang upon every school being its own matriculator, wrings from us a confession that we have failed in the past to view this question in proper perspective. It is a matter for regret that a warrior so bold, a statesman so versed in scientific method as Dr. Armstrong, has not found a place among the Immortals at the Imperial Institute. Views so original and so novel ought certainly not to go unrepresented on the body over which Sir Henry Roscoe presides. For we gather that Dr. Armstrong's reforming zeal would not stop short at matriculation, though the proper scope of that examination is destined to shake the empire. We turn to Dr. Armstrong's evidence before the Royal Commission on March 10th, 1893, and there we find a further statement of his whole case. We there learn that a man once admitted to the University should be permitted to work "as long as he chooses." A "few good sinecures" should be provided. A chemist as made in Germany need undergo no examination, or perhaps an oral one only. A scientific atmosphere is the desideratum. Severe examinations are only suitable for outsiders, not for those about whom the professors, who have taught them, know everything. Englishmen are taught to play, not taught to work, and of all men the medical men are educated on the worst possible principles. These are a few of Dr. Armstrong's *obiter dicta*, which we have unearthed from their repose in the Blue Book of the Royal Commission. In all seriousness the University Senate has a hard task before it; its federal composition makes the clashing of interests inevitable. It is a cruel kindness to encourage students to embark in a medical curriculum without a good sound knowledge of arts, and at least some effort at literary and scientific culture. Nor do we think the external examiner can be wisely dispensed with. To require a man to pluck his own pupil is to condemn his own teaching. In medical degrees, which have a professional value, a man should not audit his own accounts.

## THE MONEY VALUE OF THE HEALTH OFFICER'S ANNUAL REPORT.

The phlegmatic indifference with which the average councillor is wont to regard the medical officer of health's annual report has received a rude shock by the discovery that a county court judge regards the effort necessary to its production as one capable of expression in terms of the coin of the realm. This startling view has been pressed forcibly upon the combined wisdom of the Rural District Council of Guildford by the determination with which Dr. H. Beale Collins has pressed home his demand for some approximately adequate recompense for the toil and labour of working up for them the report required by the Local Government Board. The case was one not altogether free from complications, and it seems not unlikely that certain respectable, and in many ways worthy, members of the Board thought, when Dr. Collins asked them if they wished him to deal in his report with the whole year, for a part of which only he had been their appointed officer, that they were actually conferring a favour upon him by allowing him to luxuriate in the fair fields of Surrey death returns without let or hindrance. Be this as it may, certain it is that when Dr. Collins inquired if they wished him to deal with the health statistics of the whole year, and not merely of the part during which he had been their accredited though temporary officer, he received unhesitatingly instructions for the larger and more onerous work. But, as came out in the evidence, the idea of paying for his extra trouble does not seem to have occurred to them. They were apparently willing to let him do as much work as he would for them for nothing. Possibly the alacrity with which so many members of our profession seize the opportunity of doing any useful public work, without thought or hope of remuneration, lulled their apathetic souls into forgetfulness that the

labourer was worthy of his hire. Had it been a solicitor who had asked if he was to investigate the title of a new park they were about to purchase, they would at once have made some inquiry if he were about to undertake that philanthropic duty without fee or reward; but a doctor ——! The circumstances rendering necessary an appeal to the law were briefly as follows: Early in 1900 Dr. Lake, the Medical Officer of Health to the Rural Council, wishing to go to South Africa, obtained from the Council leave of absence on condition of providing someone to carry on his work. This Dr. Collins willingly undertook, understanding, of course, that his locum tenancy implied only the performance of such of the duties of his friend as admitted of no postponement. Unfortunately, instead of returning as was anticipated in a few months, Dr. Lake returned no more, and on his death, on July 16th, his widow requested Dr. Collins to continue his kindness to the end of that month. On August 1st the Council appointed Dr. Collins as medical officer *pro tem.*, and the rest of the year he was, though but for a time, the fully-appointed and paid officer of the Council. When the task of preparing the annual report came up, he was willing, as part of the work for which he was paid, to make out such report from August 1st to the close of the year. Seeing, however, the lessened value of any such incomplete report, he applied to the Council for instructions as to whether he should make his report cover the other seven months, during three of which Dr. Lake had been at home, and during nearly four of which he had acted as emergency man for that gentleman during his absence. He was told to make the report a complete one for the whole year; but when he sent in his bill for the extra work involved in dealing with the seven months before he became the official servant of the Council, payment was refused. With a pluck for which he deserves the thanks of the profession, he brought his action for £32 11s. before the county court, and Judge Russell, on October 17th, awarded him the full amount of his claim and the costs of the action. We congratulate Dr. Beale Collins on his having thus successfully established the position that even medical work done at the request of a public body must be properly and adequately paid for.

## THE DOOM OF THE GREAT CITY.

Numerous have been the efforts to grapple with the London fog, but the experience of the last few weeks reminds us of the complete failure of such efforts. Its causes—to be found in the combination of a saturated atmosphere, a calm, a fall of temperature, together with the presence of fine aërial dust—have been worked at by Dr. W. J. Russell and other eminent chemists and physicists. A less ambitious attempt is now before the public. If prevention be impossible, prevision may be attainable. To be forewarned is to be forearmed, and many industries—notably the railways and the lighting authorities—and the public generally would be thankful for so small a mercy as this. The London County Council has approved a scheme whereby the Meteorological Office will supervise and the police and firemen carry out a series of systematic observations as to the distribution and occurrence of fog in and around London. The aim is a modest one in its scope; but it may, by the accurate recording of facts, lead to a better comprehension of the predisposing causes of the baneful atmospheric conditions which make London intolerable to many in the winter months.

## HUMAN AND BOVINE TUBERCULOSIS.

We have recently received by the courtesy of Mr. E. M. Crookshank, Emeritus Professor of Comparative Pathology and Bacteriology in King's College, London, the full text of the introductory address which he delivered at the commencement of the present session of the Royal Veterinary College, Camden Town. In this address he discussed the subject of human and bovine tuberculosis in connection with the views put forward by Professor Koch in his much-canvassed address to the Congress of Tuberculosis last July. While expressing his full agreement with Professor Koch's opinion that if infection of man by the milk and meat of tuberculous cattle occurred at all it was very rare, he added that he entirely disagreed with Professor Koch's further statement that human tuberculosis could not be inoculated in cattle. In this connection Mr. Crookshank referred to an experiment which he had made for the Board of Agriculture in 1888, and published the following year in the report of that department: "A perfectly healthy calf was inoculated intraperitoneally with very virulent human tuberculous sputum, and the result was extensive tuberculous deposit at the point of inoculation with hundreds of tuberculous new growths extending from it. The calf died of blood poisoning forty-two days after inoculation, and sufficient time had elapsed for the most pronounced infection of the peritoneal cavity. On microscopical examination extremely minute tubercles were found disseminated throughout the lungs and liver. Long and beaded bacilli of the human type were found in these organs and in the peritoneal deposits." The intention at the time had been to repeat the experiment; the first was, however, considered to be so conclusive that the Board of Agriculture deemed it unnecessary to ask for a repetition, but Mr. Crookshank added that other investigators in England and America had published reports of similar experiments with a like result. Thus, Dr. Sidney Martin in experiments made for the first Royal Commission on Tuberculosis had infected cattle with human tuberculous virus. In one of Dr. Martin's experiments four calves received with their food sputum from two cases of pulmonary tuberculosis in man; in three there was intestinal tuberculosis. In another experiment two calves received tuberculous sputum at one feeding; one of the animals, killed eight weeks later, showed tuberculosis of the small intestine and of the mesenteric glands, while the other, killed in about nineteen weeks, showed no disease. Dr. Ravenel of the Veterinary Department of the University of Pennsylvania had more recently made experiments on four calves by the intraperitoneal injection of tuberculous sputum. In one case the result was negative, while in the other three *post-mortem* examination showed that all had become infected with tuberculosis, the lesions in two being quite extensive. On the other hand, the calves fed by him on human tuberculous sputum showed no trace of the disease when they were killed for examination. These results, which were in apparent contradiction with Professor Koch's, might be explained, Mr. Crookshank considered, on the view that human and bovine tuberculosis were distinct varieties of the same disease. Man was not the natural soil of bovine tuberculosis, although cases occurred in which bovine bacilli directly inoculated invaded the human tissues, as was seen in cooks, grooms, or butchers who might suffer from tuberculous nodules in the skin containing tubercle bacilli. Such nodules, however, underwent caseation and disappeared. Mr. Crookshank said that he could not accept the theory that abdominal tuberculosis in children was due to infection from tuberculous milk. If tuberculosis in children was the result of infection of the digestive tract, there were plenty of opportunities for self-infection when there was concurrent disease of the lung, and there were many ways also by which the child might be infected by the mouth with the bacilli from a human source. He considered that a better inspection of dairies was necessary, and that any risks which existed of transmission of tuberculosis from the cow to man might be met by adopting the precaution in both private and public dairies of destroying "wasters" or "piners," and removing all cows suffering from any disease of the udder.

## THE GORDON LECTURESHIP IN EXPERIMENTAL PATHOLOGY.

In 1897, when His Majesty the King was Prince of Wales, he opened, in his capacity of President of Guy's Hospital, the new physiological laboratories of that institution, and, referring to the question of medical education and research, made use of the following words: "The medical staff have expended as much as they safely can, and it is to men of wealth and philanthropic aspirations that we confidently look for further assistance. Let such men once realise that money given for the purposes of medical education directly benefits humanity, and I cannot doubt that that spirit which has prompted the British people to provide by voluntary effo t what in other countries is provided by the State will prove effective in the present need." In the following year also Mr. Arthur Balfour, after distributing the prizes to the students at Guy's, made an earnest appeal on behalf of scientific research. In response to these appeals Mr. Robert Gordon, a governor of the hospital, endowed a lectureship, which has been named the Gordon Lectureship in Experimental Pathology, the sole object of which is to further medical education and research. As the post is shortly to be filled, the following particulars may prove of service: The money received from the trust funds is to be used for the remuneration of a lecturer on experimental pathology, and in providing him with apparatus for pursuing research. The electors are the physicians and surgeons of the hospital staff, and the lecturer appointed must not engage in private practice nor hold any office or appointment of any kind which in the opinion of the Board would prevent him from devoting himself to the duties of the lectureship and the prosecution of medical research. He will receive about £230 per annum as salary, and a grant of £50 per annum for apparatus. A laboratory also will be provided in the Pathological Department of the hospital for the sole use of the Gordon Lecturer. He is to commence his duties on January 1st, 1902; and the appointment is to be made in the first instance for five years, but may be renewed from time to time if the Board so recommend; but if the Board considers that the lecturer is not fulfilling the duties of his office it will be declared vacant. The lecturer will be required to deliver every year no fewer than twelve lectures upon general pathology, the syllabus of such lectures being subject to the previously expressed approval of the teachers of the medical school. During six months in every year, also, he will be required on one day in every week to make *post-mortem* examinations in the hospital. Applications for the post are to be made on or before November 16th, 1901, to the Secretary, Board of Electors of the Gordon Lectureship, Guy's Hospital, London, S.E.

## THE PROGRESS OF DENTISTRY.

Dr. Vivian Poore, in the course of an address delivered at the prize-giving to the students of the National Dental Hospital College on October 24th, pointed out that the student of dentistry was expected to have a knowledge not only of the science underlying his professional work, but also a knowledge of the more mechanical parts. Dr. Poore carried his audience with him when he said that dentistry was an absolutely necessary speciality which could be amply defended and perfectly justified. The surgeon was gradually evolved from the barber, and in like manner dentistry remained a handicraft down to comparatively recent time. It was but a short time ago that the barber shaved, bled, and drew teeth. Every profession had had to wait a little for the progress of collateral professions and handicrafts before it could advance itself, and it was not until the advance of chemistry and metallurgy that it was possible for dentistry to take its proper place. It had been asserted that in Egyptian mummies evidences had been found of artificial teeth, but it was a matter for doubt if the dentures found in Egypt were quite as practically useful as the dentistry of the present day. In the present day, thanks to indiarubber and vulcanite, the work of the dentist was not only for ornament but also for use. Dr. Poore related how an old gentleman had declared that though his legs were gouty, it was satisfactory to know that he could use two good arms above the table even though he had two gouty feet beneath it. But that gentleman would have been badly off without the wherewithal to deal with his food, and the dental profession certainly made advancing years less of a trial. There was many a sexagenarian who ought by right to be edentulous but who now not only enjoyed his dinner, but sat by his fireside and cracked nuts with as much fervour and satisfaction as did his ancestors in the Zoological Gardens. The medical profession at large was under a great obligation to the dental branch of it because it was being recognised day by day that for the general health the sanitation of the mouth was all-important. Amongst the measures of preventive medicine, or rather amongst the officers of preventive medicine, the members of the dental profession were recognised as taking a high place; they had laid medicine and surgery under a deep obligation in the matter of anæsthetics. The dentist had had to wait until the chemist had provided him with anæsthetics, but it was the enterprising dentist who first dared to use them, and probably those who first utilised them more than sixty years ago little thought that it would be a daily and comparatively easy matter to keep a person under the influence of an anæsthetic for an hour and a-half or longer if necessary, while the most delicate operation were in the course of performance. Anæsthetics again had helped to advance the dental side of surgery, and what he had said tended to show how the profession was one great co-operative body, and how the advance of one section meant the advance of another. Dr. Poore concluded his remarks by observing that the students of the National Dental Hospital had chosen a most valuable side of medicine for their profession, but a most harassing and trying one. It was very important for tha dentist, whose profession was rather a monotonous one, to have some pursuit to relieve the burden of his professional life—some scientific study or occupation which would take him out of doors and refresh his mind and give him health at the same time.

## FRAUD ON THE BENEVOLENT.

The career of Robert Wilson, who, under the names of various medical practitioners in South Africa, has been obtaining money by false pretences from medical men and others residing in England, has been closed at any rate for some time, as he was sentenced at the Central Criminal Court on October 21st to three years imprisonment. The *modus operandi* adopted by him was to write letters to registered practitioners in the country stating that he was a former fellow student, and that he had for years been practising in the Transvaal, but that on the outbreak of the war he was given the alternative by the Boers of either fighting for them or being cleared out of the country penniless. He stated that for patriotic reasons he declined to serve the enemy and was accordingly compelled to leave, his property being confiscated by the Boers. He further declared that he was stranded for want of funds, having a sick wife and four children starving. He addressed his letters from Brighton, giving as his residence a place which afterwards was found to be a stationer's shop at which letters could be received on payment of 1d. each. His artfully-written begging letters brought many answers in the shape of cheques, and in court it was mentioned that he had succeeded in duping the Medical Benevolent Society and the *Lancet* Fund, in addition to receiving sums from many former "fellow students." In one case Dr. Churchill, of Chesham, was defrauded of £10, and

on his sending a cheque Wilson endorsed it with the name of Dr. Haw, for whom it was intended. Dr. Churchill had received a letter purporting to come from Dr. Haw, a former student at Charing Cross, couched in most distressing language, detailing the story mentioned above. Dr. Churchill, knowing that Dr. Haw was at one time practising at Barberton, in the Transvaal, after making some inquiries and believing the sad story to be true, sent the money, but in a short time after had another application from the same address asking for more on the ground of the sudden death of the applicant's wife. This application caused him to take certain steps, and the result was that he placed the matter in the hands of the Medical Defence Union. Wilson in the meantime absconded, and could not immediately be traced. Other complaints having been made to the police, a warrant was issued, and he was caught in the hop-fields in Kent. He was then charged with attempting to obtain money by fraud, and later was further indicted for forging an endorsement to a cheque by Dr. Churchill, the Medical Defence Union prosecuting on behalf of their member. He was committed for trial, and on being brought before the learned Recorder at the Old Bailey on October 21st pleaded guilty, and, as already said, was sentenced. Detective-Sergeant Harris, C.I.D., who had charge of the case, stated that Wilson had formerly been a postman in the employ of the General Post Office in London, but that he had been retired on a gratuity on account of ill-health about fifteen years ago. It was given in evidence that since he left the Post Office he had done no work, but had been writing begging letters under various aliases. He had at one time actually started practice as "Dr. Wilson," living in the house of a respectable tradesman whose daughter he took away with him, and with whom he was living at the time of his arrest. The Recorder, in passing sentence, commented upon the disgraceful nature of his frauds by which he traded upon the benevolence of the medical profession by a story which, by reason of the war in South Africa, was plausible and gained ready credence. We congratulate the Medical Defence Union and Dr. Churchill upon the result of the successful prosecution of a man who, had those who were swindled previously come forward and prosecuted, would have been laid by the heels long since.

## THE EXTERMINATION OF THE MOSQUITO.

The sanitary war cry of the day is *Delenda est musca*. The mosquito is doomed—if our scientific forces can get at him. The problem seems simple enough, on paper; but in the field all the slimness of Botha, De Wet, and the other Boer leaders put together is as nothing compared with that of the mosquito. Among the plans devised for the extermination of this troublesome insect one of the latest is one attributed by an American newspaper to Dr. Conolly, bacteriologist to the Board of Health, New Jersey. By the microscopic study of sick mosquitos and comparing them with healthy ones he hopes to recognise and isolate the specific germ of some disease which may be utilised as a means of propagating an epidemic among mosquitos. Having found his germ and multiplied it by cultures, Dr. Conolly intends to capture a large number of mosquitos, expose them to infection by the others, and when the disease thus communicated has reached the communicable stage turn them loose to spread a devastating epidemic among the *Culex* family. The method is ingenious, but strikes us as being about as practicable as the plan of catching birds by sprinkling salt on their tails. Our American cousins, however, appear to be very much in earnest in their determination to suppress the mosquito. It is announced that the women of certain towns are forming clubs—or as we should rather say, cohorts—for the destruction of the *Anopheles*. At Richmond Hill, near New York, as we learn from an American contemporary, they got a scientist to explain the value of kerosene oil as an exterminator of the young of the mosquitos. They explored the country around their town with boys provided with oil cans, and wherever there was a puddle, ditch, pond, or marsh, they poured oil generously on its surface. The result has been, we are told, that the residents of Richmond Hill enjoyed sitting out on their porches last summer, having almost complete immunity from mosquitos.

## MOSQUITOS ATTRACTED BY SOUNDS.

Three weeks ago Major Ronald Ross sent us for publication a note which he had received from Mr. Brennan, of the Public Works Department, Jamaica, stating that mosquitos were attracted by a note of a certain pitch. Sir Hiram Maxim has now placed on record a curious observation made by him nearly a quarter of a century ago, which confirms and amplifies Mr. Brennan's observations, and suggests a very interesting explanation. A set of large electric lamps driven each by a dynamo had been set up at Saratoga Springs, New York, and one lamp gave out a musical note, working something like a telephone. One evening, while examining the lamp, he observed that everything in the immediate vicinity was covered with small insects. They did not appear to be attempting to get into the globe, but rather into the box that was giving off the musical note. The insects were all the same kind—all mosquitos, and all male mosquitos. Although there were, he thinks, certainly 200 times as many female mosquitos in the grounds as males, not a single female mosquito was observed to be attracted in the least by the sound. When the lamps were started in the beginning of the evening every male mosquito would at once turn in the direction of the lamp, and, as it were, face the music, and then fly off in the direction from which the sounds proceeded. "It then occurred to me," Sir Hiram Maxim writes, "that the two little feathers on the head of the male mosquito acted as ears, that they vibrated in unison with the music of the lamp, and as the pitch of the note was almost identical with the buzzing of the female mosquito, the male took the music to be the buzzing of the female." He suggests that a very interesting experiment may be easily made in the following manner: "Obtain a tuning fork which gives a musical note as much like the hum of the female mosquito as possible. If you strike this fork within 20 feet of a male mosquito he will at once turn about, face the music, and erect the two little feathers on his head, something after the manner of a cockatoo." How the mosquito produces its hum or ping does not seem to have been exactly ascertained, but according to a recent investigation it is due to an apparatus attached to the head. The ping of *Culex* and *Anopheles* is of a different pitch.

## CARCINOMA AND MALARIA.

The idea of the incompatibility of certain diseases is one that has been held from the earliest periods of medical science. Hippocrates, for instance, taught that persons who suffered from quartan fevers were not liable to be attacked by epilepsy, and it has long been supposed that carcinoma and tuberculosis were to some extent mutually antagonistic. In the course of an investigation into the history of malaria, Professor Loeffler[1] has come upon a remarkable statement in a work on intermittent fevers by Trnka de Krzowitz published in 1775. The author, who was Professor of Anatomy at the University of Tyrnava, in Hungary, states that a woman underwent amputation of the left breast for a scirrhous cancer which subsequently affected the right breast, and was treated with mercury externally as well as internally. The treatment proved useless, but the tumour disappeared when the patient contracted a double tertian fever. Professor Loeffler sees no

[1] *Deut. med. Woch.*, October 17th, 1901.

reason to doubt the accuracy of Trnka's observation, and is of opinion that the experiment of inoculating someone who is suffering from carcinoma with a mild form of malaria is well worth trying. He points out that inoculation through the agency of mosquitos is easy, and that the subsequent cure of the fever is also simple. He is supported in the idea that there may be some antagonism between the diseases by the experience of Dr. Pagel, who resided for nearly ten years in North Borneo, and who does not remember to have seen a single case of carcinoma there. The whole matter requires investigation, and Professor Loeffler appeals to medical men in the tropics to record their experiences as to the spread of carcinoma in malarious districts in order that as much light as possible may be thrown on an interesting question.

## THE FOURTEENTH INTERNATIONAL MEDICAL CONGRESS.

WE have received the general regulations relating to the fourteenth International Medical Congress, which is to be held at Madrid from April 23rd to 30th, 1903. The Congress will be composed of doctors, pharmacists, veterinary surgeons, and other persons practising any one of the different branches of medical science. The fee for registration is 30 pesetas. This sum may be transmitted at any time up to the opening of the Congress to the Secretary-General (Faculty of Medicine, Madrid), who will remit a card of identification which will entitle its holder to all the privileges of the Congress. The respective National and Visitors' Committees will receive registrations up to March 20th, 1903, after which date all applications should be addressed directly to the Secretary-General of the Congress. Each member of the Congress should at the time of registration send to the Secretary-General, either directly or through his respective committee, a note in which his full name is clearly written, with his description and titles, also his address and a copy of his photograph. The members of the Congress who have fulfilled these conditions will have the right to take part in all its proceedings, to make verbal or written communications, to join in the discussions, to give their vote in all matters subject to voting, and to participate in all the advantages reserved for members of the Congress. They will have the right to receive a general review of the work of the Congress and a copy of the complete transactions of the work of the Section to which they are respectively attached at a price which will not exceed the cost of printing. Those who make contributions to the several Sections will receive the proceedings without payment. The official languages of the Congress will be Spanish, French, English, and German. The Honorary Secretaries for this country, as we have already stated, are Dr. P. Horton-Smith, of 15, Upper Brook Street, W., and Mr D'Arcy Power, F.R.C.S., of 10A, Chandos Street, Cavendish Square, W.

## THE BIRMINGHAM CONSULTATIVE INSTITUTION.

THE *Birmingham Daily Mail*, which appears to be the official mouthpiece of the promoters of this unlucky institution, is responsible for the statement that while there is nothing at the present time to suggest the removal of the deadlock in its affairs, the promoters do not intend to allow the institution to become defunct, and steps will in all probability be taken to fill the appointments, although when this will be done has not yet been decided. As the rooms occupied by the Consultative Institution have been given up and let to a fresh tenant, it is probable that this very cautiously-worded statement is merely intended to cover the failure of the enterprise. Still, should a fresh attempt be made, we do not doubt that the profession will continue to show itself as solidly opposed as it has hitherto been to any attempt to establish or to revive the undertaking.

## THE EDUCATIONAL INFLUENCE OF CONSUMPTIVE SANATORIA.

DR. STERN, of Bad Reinerz, in a paper entitled The Four Weeks Cure for Lung Cases,[1] argues that although a four weeks course of treatment at a sanatorium or health resort is discredited for cases of consumption there is much to be said in its favour. It is, he thinks, beside the question to argue that, though a month's "cure" at health resorts like Carlsbad and Kissingen may be sufficient for such complaints as are treated in these places, so short a course is unsuitable in the cure of phthisis, for in some cases it is not the nature of the disease but the duration of the ordinary holiday which limits the patient's stay. Time and money affect the question of what is possible. Though cure cannot be expected in four or five weeks, yet many consumptives will gain much in even so short a stay in a health resort or sanatorium. The improvement obtained at the institution may be maintained at home under the more hygienic mode of life learned at the sanatorium. Hygienic rules carried out at home might not alone produce the improvement in health, but the curative processes initiated by the short stay in the sanatorium may be continued. Although the most suitable locality must be selected for this short cure, so that the patient may get the greatest advantage in the time, the season of the year at which the course is taken is of little importance. Patients with active mischief and high fever do not expect improvement from such a short course, but even in such cases some benefit may, Dr. Stern thinks, sometimes be received.

## EFFECT OF FEEDING IN PREGNANCY.

DR. NOEL PATON has recently made a series of preliminary experiments on the effect upon the young of underfeeding the mother animal in pregnancy. The experiments were carried out in the Laboratory of the Royal College of Physicians, Edinburgh, and Dr. Noel Paton made a preliminary statement of the results last week. There were two well-fed pregnant guinea-pigs, and the result of the experiment showed that in one of them each gram of mother's weight produced 0.35 gram of young, while in the other each gram produced 0.4 gram of young. In the case of a medium fed guinea-pig each gram of mother animal produced 0 33 gram of young. Finally, in the case of an under-fed animal each gram of mother only produced 0 22 gram of young. The experiments are being continued, but the results, so far as they go, seem to confirm Prochownick's contention that by diet it is possible to affect the weight of the fœtus *in utero*.

THE next session of the General Medical Council will commence on Tuesday, November 26th.

WE have reason to believe that there is not one word of truth in certain statements which have recently appeared in some newspapers with regard to the King's health.

AT the last meeting for the municipal year of the Liverpool City Council it was unanimously resolved to make application to Parliament for powers to enable the Council to contribute money from the rates towards the formation and maintenance of a University in the city.

DURING the present week there has been a considerable increase in the number of cases of small-pox admitted into the hospitals from London districts. There were 180 under treatment at midnight on Saturday, 21 cases were admitted on Sunday, 28 on Monday, and 30 on Tuesday. At midnight on Tuesday there were 242 cases under treatment. The districts which have supplied the largest proportion of cases have been Bermondsey, Holborn, and the Strand.

[1] *Therapeutische Monatshefte*, Heft 10, October, 1901, p. 509.

# OPENING OF THE WINTER SESSION IN THE MEDICAL SCHOOLS.

## ST. GEORGE'S HOSPITAL.

### Address by the Lord Chief Justice.

On Monday, October 28th, Lord Alverstone, the Lord Chief Justice of England, distributed the prizes at St. George's Hospital Medical School. There was a large attendance to witness the ceremony, which took place in the Board room of the hospital. The Brackenbury Prize in Medicine was gained by Arthur John Jex-Blake, B.A.; the Webb Prize in Bacteriology by Thomas Crisp English; an Entrance Scholarship in Arts of the value of £150 by Herman Francis Stanley Collier; and an Entrance Scholarship in Science of the value of £85 by Theodore Drysdale, B.A.

The Lord Chief Justice, after having distributed the prizes and certificates addressed the students and in the course of his remarks said that he had for many years taken a great interest in the medical profession. Nearly twenty years ago a friend of his who died left to his discretion a sum of money with which to found scholarships for either science or medicine in either the University of London or Cambridge, and the result of this was the foundation of the John Lucas Walker Studentship of Pathology in the University of Cambridge, which, initiated as it was under the energetic auspices of Professor Roy, had done useful work. He therefore felt that he had the claim of one who desired to do everything that an outsider could do to advance medical education and to assist those who were entering that profession. It was a matter of the greatest congratulation to feel that education in the medical profession was approached altogether from a different standpoint to that of some fifty or sixty years ago, and he thought it might also be said that a great deal more was expected from those who entered it. Any layman who made himself even superficially acquainted with the advances that had been made would be struck by the different methods in which such terrible diseases as tuberculosis, diphtheria, and malaria were now treated, and it was only necessary to read the records of operations which had taken place in the war or in the professions or trades in which serious accidents were specially liable to occur to notice the enormous strides which had been made by surgery and by pharmacy. It had always seemed to him that in the medical profession as much, if not more, than in any of the other professions, the rule of scientific investigation which had been enforced by that great professor and philosopher, Faraday, should apply. He remembered attending one of Faraday's lectures in which he referred to the necessity in scientific research not only of keeping the mind fixed upon the main object of the research but also of noting, so to speak by the way, the side-lights and incidental facts which required further investigation and of returning to them afterwards and thereby enlarging the sphere of knowledge. He had had occasion in connection with his professional work to conduct cases which required very close scientific inquiry, and he had been struck with the want of intercommunication between the various hospitals and schools of medicine, and the various leading scientific men in the medical profession. He hoped and believed that more was now done to bring the scientific work of the various hospitals and medical institutions in London and the provinces into touch with one another, so that there might be comparison of results and greater opportunity of using knowledge which had been acquired in one or other schools. Rivalry, of course, there should be, but not jealousy; there should be largeness of mind and liberality in the dispensation of knowledge, and a wish that anything discovered should be placed at the disposal of others. To conduct such work successfully it was absolutely essential that the students should be in the best physical health; they must, therefore, be foremost, as so many of their predecessors had been, in advocating healthy recreative amusement and those physical exercises which, if practised in moderation, were so essential to everybody's health. They must keep themselves as fit as possible, both physically and mentally, and bring to bear on their work those principles of honourable conduct and straightforward dealings which had characterised the great leaders of the medical profession for centuries. Then they would be worthy followers of their predecessors, and would have this reflection, whether lucky or unlucky, whether they attained distinction or not, that at any rate they had employed their best skill and knowledge upon their work.

## ROYAL VICTORIA HOSPITAL, BELFAST.

The winter session was opened on October 15th, when an address was delivered in the theatre by Mr. Robert Campbell, F.R.C.S.Eng. There was a large attendance of the staff and many visitors, including Professor Symington, Professor Thompson, Dr. Lynass, and Dr. Davison.

Mr. Campbell dealt with the intrinsic difficulties of all opening addresses, the difficulty of finding anything new; of instructing without wearying; of giving advice which should and would be taken, a function more properly of the aged; of avoiding giving offence, and yet of the duty of speaking out one's mind. He deplored the frequent changes in university education in Ireland, and congratulated both staff and students on the approaching completion of the new hospital buildings, where opportunities of clinical study and original scientific research would be enormously increased. Dealing with the position of the surgeon of the present day, he claimed for him that he must be a thinker as well as a worker; he must not be content to be "the mere carpenter and plumber of the human frame"; but that the problems of tubercle, of cancer, and of septicæmia, which continually faced the surgeon, demanded the highest quality of brain as well as the most delicate manipulative skill of hand. The recrudescence of tubercle elsewhere in the body, after a successful excision or amputation; the return of the cancerous nodule, despite the wide removal of the original growth, and its entailed disfigurement; the treatment of a generalised blood poisoning, all suggested questions which as yet the surgeon was unable to answer. On behalf of the staff he wished the students a successful winter session.

The various classes opened in the college in the afternoon and were well attended, although the number of first year students has fallen off.

## MEATH HOSPITAL, DUBLIN.

### Address by Mr. William Taylor, F.R.C.S.I.

Mr. William Taylor in describing advances in surgical therapeutics first referred to the surgery of the brain and spinal cord, especially to the surgical treatment of tumours, abscesses, and fracture-dislocation of the spine. After a short reference to advances in thoracic surgery he discussed at some length the recent progress in abdominal surgery—including operations on the stomach, intestine, kidney, gall bladder and liver. Allusion was then made to the importance of conservatism in surgery and the need for pains being taken to establish habits of correct diagnosis. The lecturer urged on his hearers the paramount need for diligence and perseverance in their student days as bearing on the usefulness of their future career. While the immediate prospects of those entering the profession were never surpassed the ultimate goal of the medical man was still to die in harness. They might fail to acquire wealth, but with perseverance they could not fail to acquire proficiency in their profession. In enumerating the fields open after graduation he expressed the opinion that Poor-law medical appointments were the worst paid and involved the hardest work in the world, while the manner of election to them was iniquitous. The demands for energy and perseverance on their part reacted on their teachers. He who did not advance went backward. Enthusiasm begot enthusiasm, and so a teacher influenced for good or the reverse each member of his class.

# THE PREVENTION OF TUBERCULOSIS.

## Liverpool.

*Sanatorium for Pauper Consumptives.*

Mr. Walter Long, President of the Local Government Board, laid the foundation stone of the new sanatorium for the treatment of paupers in Liverpool on October 25th last at Heswall.

This institution, which is the first of its kind in England, owes its origin to Dr. Nathan Raw, who in 1898 presented a

report to the West Derby Guardians showing the great number of pauper consumptives in the union and the unsatisfactory methods of treatment then in force.

The Board at once took the matter into consideration, and by way of making a comprehensive scheme, invited the other Boards of Guardians in the city to co-operate with them. This was readily agreed to, with the result that the Local Government Board granted an Order to the conjoint Boards, empowering them to borrow the necessary money and to support the hospital at the expense of the rates. The site of the hospital is excellent, and it commands a magnificent view over the estuary of the River Dee, with the Welsh hills in the distance. The sanatorium is arranged for future extension if necessary. The President of the Local Government Board spoke of the great pleasure it afforded him to lay the stone, and characterised the action of the guardians as wise and humane. He sincerely hoped that further efforts would be made to deal with this disease amongst the very poor throughout the county, and earnestly hoped the results in this sanatorium would be beneficial to the inmates.

SHEFFIELD.

The Health Committee of the Sheffield Corporation considered at its meeting on October 24th a report from the Medical Officer of Health, Dr. John Robertson, on the various resolutions passed at the recent British Congress on Tuberculosis. Almost all the practical recommendations of the Congress, including notification, are already carried out in Sheffield, There has, as yet, been no special regulation against indiscriminate spitting, which forms the subject of the first resolution passed at the Congress. Dr. Robertson, however, recommends that notices be posted up in the municipal tramcars, in omnibuses, and near some of the seats in the public parks, and that the various public-houses in the City be asked to post up notices against spitting on the floor. Also that a copy of the above resolution should be sent to the various railway companies running into Sheffield, with a letter asking that such notices should be put up in smoking carriages and in railway stations. The Committee authorised the Medical Officer to carry out as far as possible the recommendations contained in his report.

LEAMINGTON.

The Medical Officer of Health, Dr. Samuel Browne, presented a special report on tuberculosis to the town council, making certain suggestions, which were approved by the Council. It was decided to try for two years voluntary notification of phthisis with the usual fee. Householders will be required to report any death from phthisis and the removal of a patient from one house to another, so that disinfection may be carried out. Cards would be put on railway stations, in tramcars, and in similar places, warning the public against the habit of indiscriminate spitting, and leaflets on the subject would be distributed.

SOUTH WALES.

The Executive Committee of the South Wales and Monmouthshire Branch of the National Association for the Prevention of Consumption met on October 18th at the Town Hall, Cardiff, under the presidency of the Mayor. It was agreed to adopt the principle of subdivisions of the Branch, and to form a branch at Swansea. Subcommittees were formed to carry on the work of the Branch under the following heads: Finance and General Purposes; Parliamentary; Educational. It was decided to send out circulars to clerks of county and district councils and Boards of Guardians setting out the needs of establishing sanatoria, with the object of finding out what support might be expected.

# THE PLAGUE.

## PREVALENCE OF THE DISEASE.

LIVERPOOL.

Our Liverpool correspondent telegraphs: Two children in Liverpool have succumbed during the last few days to a disease which has been proved bacteriologically to have been plague, and three other cases of the disease are at present isolated in hospital. About three weeks ago a lady and her two daughters returned to their home in Everton from Glasgow, where they had been staying. The mother and the daughter shortly afterwards died, and the other daughter became ill, and is now in hospital. A few other deaths occurred among people who were in contact with these cases, and they were attributed to influenza. Since the existence of plague has been recognised, all persons who have been in contact with the cases or with cases which may have been plague have been isolated and are under observation, and the patients who are still suffering from the disease are all doing well. Dr. Hope, the Medical Officer of Health for Liverpool, wishes to assure the public that they need not have any apprehension of any extension of the disease. The health authorities are doing their very utmost in the matter.

INDIA.

The total deaths from plague for all India during the week ending October 5th numbered 7,043 against 7,279 during the previous week. In the city of Bombay the death-rate from plague has diminished somewhat, but remittent fever and lung affections are more prevalent than formerly. The cold weather may account for the change in the type of ailments, but it is significant that lung affections and plague have varied inversely for several years now. The health establishments of the city of Bombay, which until lately have been two in number, charged respectively with general hygiene and with the treatment of plague, are to be amalgamated. In Bombay the new cases of plague on October 2nd, 3rd, 4th, 5th, 6th, 7th, and 8th were 17, 32, 25, 22, 16, 34, and 18 respectively, and the deaths on the same dates amounted to 18, 20, 24, 19, 30, 29, and 25. In Benares considerable anxiety has been caused by the occurrence of plague in the family of a Mussulman in that city. In Madras the high death-rate is causing anxiety. The suggestion that the disease was plague has been denied.

EGYPT.

The report of the Director-General, Sanitary Department, for the week ending October 20th, announces that throughout all Egypt but 3 cases of plague were reported and 2 deaths from the disease.

In Alexandria there was during the week in question 1 case of plague and 1 death from the disease, at Mit Ghamr 1 case, and Zeftah 1 case and 1 death. All cases and deaths during the last week have occurred among Europeans of Greek nationality.

CAPE OF GOOD HOPE.

For the week ending October 19th 1 case of plague (European) occurred in the Cape Peninsula, and 1 (European) at Port Elizabeth. A Chinaman at Uitenhage also developed plague. Three deaths from the disease were reported, 1 European in the Cape Peninsula, 1 Chinaman at Port Elizabeth, and 1 Chinaman at Uitenhage. At the Greenpoint Camp, Capetown, a private of the 1st Battalion Royal Scots, employed as a cook, developed plague during the week in question.

MAURITIUS.

For the weeks ending October 17th and 24th respectively the number of fresh cases of plague in Mauritius were 57 and 71, and the number of deaths from the disease 36 and 37.

# CONTRACT MEDICAL PRACTICE.

A SLIDING SCALE.

A PROVINCIAL PRACTITIONER asks what would be the usual charge to make per member in a case where the owner of a large general store, employing over a hundred hands, wishes to make a club for his employees on the lines of a slate club He resides about a mile from the store in question, and says that although some of the employees are workmen, others hold a superior position and are paid better wages.

*** The contributions of the employees should be in proportion to the wages they receive, the lowest being about twopence a week. Midwifery and surgical operations of any magnitude should be extra. A sliding scale of this kind is in use in some colliery districts.

MEDICAL AID COMPANIES.

MEDICUS sends us one of the cards of the National Medical Aid Company, Limited, and asks if it is a breach of professional etiquette to become the doctor to such a club.

*** The National Medical Aid Company was one of the earliest of the Medical Aid Societies to which objection has been taken by the profession. In its early days it was a Medical Aid pure and simple, but we believe it has since worked with some insurance society which caters for the working classes and makes membership of the latter a condition precedent to obtaining its benefits. We understand that a good deal of "touting" is done by the agents of this Society, and that it makes what profit it can for its shareholders out of the work of the doctor, to whom is paid only a portion of the subscriptions of members for medical attendance. In our opinion a medical practitioner ought not to hold office in such an institution.

MR. CHARLES E. CASSAL, F.I.C., Mr. C. Howard Cribb, F.I.C., and Mr. P. A. E. Richards, F.I.C., have been appointed public analysts for the City of Westminster.

# ASSOCIATION INTELLIGENCE.

## PROCEEDINGS OF COUNCIL.

At a meeting of the Council held in the Council Room of the Association, 429 Strand, W.C., on Wednesday, October 23rd, 1901.

*Present:*

Dr. John Roberts Thomson, President of the Council, in the Chair.

Dr. George Bagot Ferguson, President.

Mr. Walter Whitehead, President-elect.

Mr. Andrew Clark, Treasurer.

Dr. Edgar G. Barnes, Eye.
Dr. James Barr, Liverpool.
Dr. Rayner W. Batten, Gloucester.
Dr. Thomas Beattie, Newcastle-on-Tyne.
Dr. Michael Beverley, Norwich.
Dr. J. Brassey Brierley, Old Trafford.
Mr. Langley Browne, West Bromwich.
Dr. R. C. Buist, Dundee.
Professor John William Byers, Belfast.
Mr. Colin Campbell, Saddleworth.
Mr. James Cantlie, London.
Dr. Edward J. Cave, Bath.
Mr. Thomas H. Cheatle, Burford.
Dr. W. Chisholm, London.
Mr. John Ward Cousins, Portsmouth.
Dr. H. Radcliffe Crocker, London.
Dr. George W. Crowe, Worcester.
Dr. P. Maury Deas, Exeter.
Brigade-Surgeon-Lieut.-Col. E. F. Drake-Brockman, F.R.C.S., London (South Indian and Madras Branch).
Dr. William Dyson, Sheffield.
Mr. George Eastes, M.B., London.
Dr. William Alfred Elliston, Ipswich.
Dr. Freeland Fergus, Glasgow.
Dr. Edward Lawrence Fox, Plymouth.
Dr. John H. Galton, Upper Norwood.
Dr. Alfred Godson, Cheadle.
Dr. Bruce Goff, Bothwell.
Dr. C. G. Gooding, London.
Dr. Major Greenwood, London.
Dr. Joseph Groves, Carisbrooke.
Dr. Henry Handford, Nottingham.
Dr. W. Morton Harman, Winchester.
Mr. John D. Harries, Shrewsbury.
Mr. W. F. Haslam, Birmingham.
Dr. T. Arthur Helme, Manchester.
Dr. Holman, London.
Mr. Victor Horsley, F.R.S., London.
Mr. T. R. Jessop, Leeds.
Mr. Evan Jones, Aberdare.
Mr. R. H. Kinsey, Bedford.
Dr. W. A. Mackintosh, Stirling.
Dr. Roderick Maclaren, Carlisle.
Dr. C. H. Milburn, Hull.
Sir John William Moore, M.D., Dublin.
Mr. W. Jones Morris, Portmadoc.
Dr. James Murphy, Sunderland.
Dr. James Murray, Inverness.
Mr. C. H. Watts Parkinson, Wimborne.
Dr. H. H. Phillips-Conn, Reading.
Dr. Frank M. Pope, Leicester.
Dr. A. Brown Ritchie, Hulme.
Mr. H. Betham Robinson, M.S., London.
Dr. Alfred Sheen, Cardiff.
Dr. G. E. Shuttleworth, Richmond Hill.
Dr. R. Somerville, Galashiels.
Mr. Henry Stear, Saffron Walden.
Dr Robert Stirling, Perth.
Mr. C. S. Tomes, F.R.S., London.
Mr. T. Jenner Verrall, Brighton.
Dr. Norman Walker, Edinburgh.
Mr. E. B. Whitcombe, Birmingham.
Dr. S. Woodcock, Old Trafford.

The minutes of the last meeting having been printed and circulated, were taken as read and signed as correct.

Read letters of apology for non-attendance from Sir George Hare Philipson, Dr. Henry Barnes, Dr Bridgwater, Professor Finlay, Dr. Morier, Surgeon-General O'Dwyer, Dr. C. Parsons, Dr. R. W. Philip, Dr. Saundby, and Dr. Markham Skerritt.

Dr. Norman Walker introduced Dr. Stirling as the Representative of the Perthshire Branch.

The President of Council introduced Dr. Chisholm as the Representative of the Sydney Branch.

The President of Council reported the death of Dr. J. W. Miller, Dr. E. H. Dickinson, and Mr. T. Vincent Jackson.

Resolved: That the Council desires to express its deep regret at the death of Dr. James William Miller, of Dundee. It recalls the regular, faithful, and valuable services which he rendered to the Association during the six years he was on the Council. It would convey to his sorrowing relations its sympathy with them in their bereavement.

Resolved: That the Council desires to express its deep regret at the death of Dr. E. H. Dickinson, who for six years, from 1892 to 1898, represented the Lancashire and Cheshire Branch on the Council. His known good qualities and the interest which he took in the affairs of the Association made it a matter of regret to his colleagues when he ceased to be a member of the Council. The Council records its sense of the loss which the profession in Lancashire has sustained, and would convey to his bereaved relations its sympathy with them in their sorrow.

Resolved: That the Council has heard with much distress of the untimely death of Mr. Vincent Jackson, by which a vacancy has been made in the ranks of the Council which it will be very difficult to fill. For many years he had taken a very deep interest and a very active part in the deliberations of the Council, and his mature judgment and business aptitude led to his opinions being much valued and carrying great weight. The Council desires to place on record its sense of the great services he rendered to the Association during all these years, both by his work on the Council and his identification with the local interests of the Association in his Branch, and its personal sorrow at the loss of so amiable a colleague. It desires, also, to express its sympathy with his sorrowing widow and relatives.

The President of Council reported that an address to the King had been passed at the annual general meeting held at Cheltenham (British Medical Journal, August 3rd, p. 296).

Resolved: That the address be enclosed in an oxydised silver casket, and forwarded to His Majesty.

The President of Council reported that the following communication had been forwarded to the Home Secretary by the President of the Association on the death of the Empress Frederick:

August 7th, 1901.

Sir,—On the part of the British Medical Association I beg to express the deep sorrow that the death of the Empress Frederick has caused its members, as also their profound and most respectful sympathy with His Majesty the King and with all the Royal Family in their renewed and inexpressible sorrow.—I remain, your obedient servant,

George Bagot Ferguson, M.D.
(Of Cheltenham),
President of the British Medical Association.

And that the following reply of the Home Secretary had been received:

Home Office, Whitehall, 2nd October, 1901.

Sir,—I have had the honour to lay before the King the loyal and dutiful message of the British Medical Association expressing condolence with His Majesty and the Royal Family on the death of Her Imperial Majesty the Dowager Empress Frederick of Germany; and I have to inform you that His Majesty was pleased to receive the same very graciously.—I am, Sir, your obedient servant,

Chas. T. Ritchie.

George Bagot Ferguson, Esq., M.D., Cheltenham.

Resolved: That the same be received and entered on the minutes.

Read letter from the Right Hon. Walter Hume Long, M.P., acknowledging the resolution passed at the annual meeting, thanking him for his strenuous efforts to stamp out hydrophobia:

Local Government Board,
Whitehall,
August 14th, 1901.

Sir,—I have the honour to acknowledge the receipt of your letter conveying to me the resolution passed at the meeting of your Association at Cheltenham. I desire to express my high appreciation of the compliment which has been paid me, and I beg you will be so good as to convey my thanks to the members of your Association.—Faithfully yours,

Walter H. Long.

G. Elliston, Esq.

Resolved: That the same be received and entered on the minutes.

The minutes of the Journal and Finance Committee were then considered.

Resolved: That the minutes of the Journal and Finance Committee be received.

Resolved: That the accounts for the quarter ending September 30th last, amounting to £9,588 5s. 1d., be received and approved, and that the Treasurer be empowered to pay those remaining unpaid, amounting to £2,679 5s. 7d.

Resolved: That an honorarium of 25 guineas be presented to Mr. Guy Elliston in consideration of his services in connection with the annual meeting at Cheltenham in Mr. Fowke's absence.

Resolved: That sanction be given for the purchase of the reversion of the lease of the late Mr. Dobbs, of 2 and 3, Agar Street, at a cost of £250.

Resolved: That the minutes of the Premises and Library Committee be received.

Resolved: That the accounts, amounting to £19 17s., be approved, and the Treasurer be empowered to pay them.

Resolved: That Messrs. Norris and Hadley's offer be accepted subject to the approval of the Solicitor as to any deeds and agreements which may exist.

Resolved: That it be referred to the President of Council and Treasurer to authorise such structural alterations as may be required for the purposes of the Association at 2 and 3, Agar Street, as soon as the Association has legal possession.

Resolved: That the minutes of the Medical Charities Committee be received.

Resolved: That the minutes of the General Practitioners and Ethical Committee be received.

Resolved: That the complaint of Dr. Vanderstraaten be referred to the Ceylon Branch, with a request for information.

Resolved: That the minutes of the Arrangement Committee be received.

Resolved: That the date of the meeting be fixed for July 29th, 30th, 31st, and August 1st, 1902.

Resolved: That the recommendations of the Arrangements Committee with certain slight changes and additions be approved and carried into effect:

Resolved: That the President of Council and the President-elect be empowered to fill up any vacancies in the Sections which may occur.

Resolved: That the following be appointed the representatives of the Association on the Joint Committee on Fees to Medical Witnesses: Mr. Andrew Clark, Dr. James Barr, and Dr. T. M. Dolan.

Resolved: That the West African Medical Service Committee be reappointed under the name of the "Crown Colonies and Protectorates Medical Service Committee," and that Dr. C. W. Daniels be added to the Committee.

Resolved: That the 89 candidates whose names appear on the circular convening the meeting (together with 7 provisionally elected at the annual meeting) be and they are hereby elected members of the British Medical Association.

The resolutions passed in the State Medicine Section at the annual meeting at Cheltenham were then considered

(See p. 1373.)

Resolved: That the resolutions passed in the State Medicine Section be referred to the Parliamentary Bills Committee.

The following resolutions passed in the Tropical Diseases Section at the Annual Meeting at Cheltenham were then considered:

SECTION OF TROPICAL DISEASES.

*Tropical Diseases.*—1. That in the opinion of this Association there is a large amount of grave disease produced by filaria nocturna in Barbadoes.

2. That these diseases can be got rid of by a simple and inexpensive means.

3. That success in exterminating a mosquito-produced disease in any place would be a valuable object lesson and an encouragement for other places to adopt similar measures.

4. That His Majesty's Secretary of State for the Colonies be requested to favour and encourage the institution and carrying out of the measures indicated in Dr. George Thin's paper.

5. That His Majesty's Secretary of State for the Colonies be requested to impress on the Government of Barbadoes that the suppression of filarial diseases would be a measure of great economic value to the colony.

Resolved: That the resolutions passed in the Tropical Diseases Section, with the exception of No. 5, be referred to the Barbadoes Branch.

Read resolution passed in the Ophthalmology Section at the annual meeting at Cheltenham, of which the following is a copy:

SECTION OF OPHTHALMOLOGY.

*Workmen's Compensation Act and Injury to Eyesight.*—That it is of opinion that prompt and friendly settlement of claims for injury to the eyes under the Workmen's Compensation Act, 1897, would be greatly facilitated by a knowledge of the condition of the eyesight of the injured person before the accident, and recommends that employers should adopt some simple plan whereby a record of the sight of each eye should be entered against the name of each workman in the wage books, and that the matter be referred to a Committee to consider and report to the Council of the Association, the Committee to consist of Mr. T. H. Bickerton (Liverpool), Mr. Simeon Snell (Sheffield), Dr. J. Tatham Thompson (Sheffield), Mr. Stephenson (London), and Mr. Hugh E. Jones, who be appointed Secretary to the Committee.

Resolved: That the resolutions passed in the Ophthalmology Section at the annual meeting be referred to the Parliamentary Bills Committee.

Read letter from Messrs. Broadbent, of Manchester, forwarding communication signed by fourteen members of the Association, calling the attention of the Council to the insertion of advertisements in the Manchester newspapers, inviting persons to attend their names as midwives.

[illegible] the members of the Manchester Maternity [illegible] Medical Association has been repeatedly drawn to the nature of the advertisements used by [illegible] stitution of the staff of which you are a member. Council desires to point out to you that the advertisements in question are open to misunderstanding on the part of the public, and that they are exhibited in the newspapers in association with other advertisements of a highly disreputable character.

The Council feels that the issue of such advertisements under such circumstances indirectly reflects upon the honour of the Medical Staff of such institution and the profession to which they belong.

The Council therefore requests you to examine the advertisements complained of, and to use your influence to obtain the cessation of their appearance.

The copy of the newspaper in which the advertisements appear is the *Manchester Evening News*, and the issue before the Council is dated September 21st, 1901.

Resolved: That a Committee of the Council be appointed, consisting of Dr. Maury Deas, Mr. Haslam, Mr. Victor Horsley, Dr. Milburn, and Mr. Jones Morris, to consider the whole subject of preliminary general education, and that the resolutions from the South-Western Branch be referred to that Committee, namely:

1. That it is undesirable that any one should be registered as a medical student until he or she has attained the age of 17.

2. That the standard of the examination in preliminary general education required by the General Medical Council should be suitable to candidates of 17 years of age, of average intelligence and reasonable industry.

3. That the present system of multiple Examining Boards is most undesirable, and that it is necessary, in order to secure uniformity of standard that a single Examining Board should be appointed by the General Medical Council. That this Board should hold its examinations as often as necessary at multiple centres simultaneously.

4. That the examination should include at least Latin, mathematics, English grammar, literature and essay writing, history, geography, and either French or German.

## PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee was held at the office of the Association, 429, Strand, W.C., on Wednesday, October 23rd, 1901.

*Present:*

Dr. S. WOODCOCK, Chairman, in the Chair.
Dr. G. B. FERGUSON, President.
Dr. J. ROBERTS THOMSON, President of Council.
Mr. ANDREW CLARK, Treasurer.

Mr. S. H. AGAR, Henley-in-Arden.
Dr. JAMES BARR, Liverpool.
Dr. A. G. BATEMAN, London.
Dr. R. W. BATTEN, Gloucester.
Dr. T. R. BRADSHAW, Liverpool.
Dr. R. C. BUIST, Dundee.
Mr. JAMES CANTLIE, London.
Dr. ALFRED COX, Gateshead.
Dr. P. M. DEAS, Exeter.
Dr. W. DOUGLAS, London.
Brig.-Surg.-Lieut.-Col. E. F. DRAKE-BROCKMAN, London.
Mr GEORGE EASTES, London.
Dr. E. L. FOX, Plymouth.
Dr. BRUCE GOFF, Bothwell.
Dr. MAJOR GREENWOOD, London.
Dr. J. GROVES, Carisbrooke.
Mr. J. D. HARRIES, Shrewsbury.
Dr. HOLMAN, London.
Mr. EVAN JONES, Aberdare.
Dr. W. A. Mackintosh, Stirling.
Dr. C. W. MARRIOTT, Reading.
Dr. C. H. MILBURN, Hull.
Sir JOHN WM. MOORE, M.D., Dublin.
Mr. W. JONES MORRIS, Portmadoc.
Dr. J. MURPHY, Sunderland.
Dr. J. MURRAY, Inverness.
Dr. W. NEWMAN, Stamford.
Mr. D. A. O'SULLIVAN, London.
Mr. C. H. W. PARKINSON, Wimborne Minster.
Dr. A. BROWN RITCHIE, Hulme.
Dr. SHUTTLEWORTH, Richmond.
Dr. R. SOMERVILLE, Galashiels.
Dr. R. STIRLING, Perth.
Mr. C. R. STRATON, Wilton.
Insp.-Gen. A. TURNBULL, London.
Dr. NORMAN WALKER, Edinburgh.
Dr. MARTINDALE WARD, Twickenham.
Dr. DAWSON WILLIAMS, London.

ELECTION OF CHAIRMAN.

On the motion of Dr. ROBERTS THOMSON, seconded by Dr. HOLMAN, Dr. S. Woodcock was re-elected Chairman.

The resolution of the Council appointing the Committee was taken as read. The minutes of the last meeting, having been circulated, were taken as read, and adopted.

Letters of apology for non-attendance were read from Mr. George Brown, Dr. Carline, Dr. A. J. Harrison, Mr. Victor Horsley, Brigade-Surgeon Moriarty, Surgeon-General O'Dwyer, and Dr. Thresh.

THE FACTORY AND WORKSHOPS BILL.

A letter was read from Dr. W. F. Dearden, Honorary Secretary of the Association of Certifying Factory Surgeons, thanking the Committee and the Council of the Association for supporting the efforts put forth in opposition to the notification of accidents clause in the Bill recently before Parliament, and also for the assistance rendered in endeavouring to obtain the insertion of a clause in the Bill which would provide for the payment of a fee for the certifying surgeon's annual report. The notification of accidents clause was withdrawn by the Government, while the proposed new clause as to the fee for annual report was ruled out of order, as only a Minister of the Crown could bring forward a proposal involving additional expenditure.

### Reappointment of Subcommittees.

The Subcommittees were reappointed as follows:

*Subcommittee to consider the Medical Acts Amendment Bill and the Midwifery Nurses Bill.*—Dr. A. G. Bateman, Mr. George Brown, Dr. Major Greenwood, Mr. Victor Horsley, F.R.S., Dr. C. H. Milburn, Dr. A. Brown Ritchie, Mr. C. R. Straton, and Dr. S. Woodcock.

*Representatives of the British Medical Association on the Joint Committee of the British Medical Association and Medico-Psychological Association on Incipient Insanity.*—Dr. James Barr, Dr. P. Maury Deas, Dr. W. Douglas, Mr. George Eastes, Dr. W. J. Mickle, Dr. G. E. Shuttleworth, and Dr. A. R. Urquhart.

*Public Health and Vaccination Subcommittee.*—The Public Health and Vaccination Committees were merged into one with the above title, consisting of the following members: Dr. R. W. Batten, Mr. George Brown, Dr. J. S. Cameron, Mr. Colin Campbell, Dr. A. E. Cope, Dr. Major Greenwood, Dr. Groves, Dr. McVail, Mr. Jones Morris, Dr. James Murray, Mr. C. H. W. Parkinson, and Dr. J. C. Thresh.

*Reorganisation of the Medical Services Subcommittee.*—Mr. Andrew Clark, Mr. J. Cantlie, Dr. T. F. S. Caverhill, Dr. R. H. Coombs, Deputy-Surgeon-General W. G. Don, Brigade-Surgeon-Lieutenant-Colonel E. F. Drake-Brockman, Mr. George Eastes, Brigade-Surgeon-Lieutenant-Colonel G. S. Elliston, Dr. R. Farquharson, M.P., Dr. J. Groves, Surgeon-General J. B. Hamilton, Surgeon-Major Hepburn, Mr. N. C. Macnamara, Dr. C. H. Milburn, Dr. J. E. Squire, Dr. Roberts Thomson, and Sir Frederick Treves, K.C.V.O., C.B.

*Subcommittee on the Amendment of the Coroners Act.*—Mr. D. B. Balding, Dr. Bateman, Mr. Braxton Hicks, Dr. Milburn, Mr. C. H. Watts Parkinson, Dr. Danford Thomas, and Dr. Martindale Ward.

### Resolutions from Annual Meeting.

The General Secretary reported that the following resolutions passed in the Section of State Medicine at the annual meeting at Cheltenham had been referred by the Council to the Committee:

(1) *Tenure of Office of Sanitary Officers.*—Having regard to the paramount importance to the interests of the public health of security of tenure of office of sanitary officers, the State Medicine Section begs to express its approval of the action of the Council in promoting a Bill in Parliament to that end, and their thanks for the same.

(2) *Plague on Ships.*—That, as it appears desirable in the interest of the public health to minimise opportunities for the introduction of diseases by shipborne rats, it is of importance that regulations made for this purpose should be so framed as not injuriously to affect the trade and commerce of the country.

This Section therefore recommends that the captains of vessels loading at plague-infected ports should be ordered to destroy rats on board ship before loading cargo, and to take precautions for preventing rats getting on board during the time cargo is being loaded, and that British consuls' certificates should be issued to captains obeying such orders.

(3) *Factory and Workshops Bill.*—That this Section expresses its satisfaction with the provisions in the Factory and Workshops Bill now before Parliament which require the medical officer of health of every district council in his annual report to them to report specifically on the administration of the Factory Workshops Act and to send a copy of his report to the Secretary of State for the Home Department.

That inasmuch as notice has been given of amendments of the provisions referred to, the effect of the amendment being to put this duty on other officers than the medical officer of health, and inasmuch as such reports will deal with questions affecting the health of the workers, the Section recommends the Association to adopt the above resolution and to communicate it to the Secretary of State for the Home Department.

With reference to (1) it was proposed by Dr. Groves, seconded by Mr. C. R. Straton, and resolved:

That the Bill for the fixity of tenure of sanitary officers be reintroduced into Parliament at the proper time.

The second resolution from the State Medicine Section having reference to plague on ships was referred to the Public Health and Vaccination Committee.

With reference to the resolution on the Factory and Workshops Bill, the Chairman said he thought the whole question had been dealt with, and until there was another Factory Bill before Parliament it was no use sending these matters up.

The following resolution, passed in the Section of Ophthalmology at the Cheltenham meeting, had also been referred by the Council to the Committee:

*Workmen's Compensation Act and Injury to Eyesight.*—That this Section is of opinion that the just and friendly settlement of claims for injury to the eyes under the Workmen's Compensation Act, 1897, would be greatly facilitated by a knowledge of the condition of the eyesight of the injured person before the accident, and recommends that employers should adopt some simple plan whereby a record of the sight of each eye should be appended to the name of each workman in the wage-books, and that the matter be referred to a Committee to consider and report to the Council of the Association, the Committee to consist of Mr. T. H. Bickerton (Liverpool), Mr. Simeon Snell (Sheffield), Dr. J. Tatham Thompson (Cardiff), Mr. Sydney Stephenson (London), and Mr. Hugh E. Jones (Liverpool) be appointed Secretary to the Committee.

It was agreed that this matter should be referred back to the Council, as it was not within the power of the Committee to appoint a Subcommittee consisting wholly of members who were not members of the Committee.

### The Notification Act.

Dr. Major Greenwood drew attention to the working of the Notification of Infectious Diseases Act, and said that lately in London several boroughs had added chicken-pox to the list of notifiable diseases for a certain time. It seemed to him that unless notification of that kind went over a large area it was practically useless. He suggested that the county councils should be the units in ordering additions to be made to the list of notifiable diseases.

## BRANCH MEETINGS TO BE HELD.

Metropolitan Counties Branch: North London District.—A meeting of this District will be held in the Board Room of the London Temperance Hospital, Hampstead Road, N.W., on Wednesday, November 13th, at 4.30 P.M., Dr. Hooper May, Vice-President, in the chair. Mr. H. W. Carson will read a paper on the Diagnosis and Treatment of Mastoid Disease. The following members of the staff will show some interesting cases in the hospital: Dr. Collins, Dr. Soltau Fenwick, Dr. Addinsell, Dr. Porter Parkinson. Dr. Stowers (North-West London Hospital) will exhibit cases of diseases of the skin.—J. Dysart McCaw, M.D., Coolard Lodge, East Finchley, N., Honorary Secretary.

South-Eastern Branch: West Kent District.—The next meeting of this District will be held at the Kent County Ophthalmic Hospital, Maidstone, on Friday, November 15th, at 3 P.M. Dr. Pye Oliver will preside. A paper (postponed from the previous meeting) will be read on Ophthalmia Neonatorum by Mr. E. H. Cartwright, Surgeon to the Kent County Ophthalmic Hospital, and Mr. Charles Killick will also exhibit some cases of interest. Mr. Charles Stonham, C.M.G., F.R.C.S., Senior Surgeon to Westminster Hospital, and late Surgeon-in-Charge of the Imperial Yeomanry Field Hospital in South Africa, will give an address on Surgical Work with a Field Hospital in South Africa. Members wishing to bring any communication before the meeting are requested to send early notice of the same to Ludford Cooper, 19, Victoria Street, Rochester, Honorary Secretary

Shropshire and Mid-Wales Branch.—The twenty-sixth annual general meeting will be held at the Salop Infirmary on Tuesday, November 5th, at 3 P.M. The President, Mr. George Whitwell, will take the chair. The Annual dinner will be held at the Music Hall at 6 P.M. Dinner tickets (exclusive of wine) 6s. each. Morning dress. Members have the privilege of introducing friends to the dinner. The following members have been nominated to fill the undermentioned offices:—*President*: George Graves Whitwell, M.B. *Vice-President*: Ernest Tredinnick. *President-elect*: G. H. Keyworth, M.B. *Honorary Secretary and Treasurer*: H. H. B. MacLeod. *Assistant Honorary Secretary*: Lecnard J. Godson. *Branch Representative on the Council of the Association and Branch Representative on the Parliamentary Bills Committee*: J. D. Harries. *Chairman of Clinical and Pathological Section*: T. Law Webb. *Branch Council*: E. Burd, M.D., E. Cureton, M.D. (Auditor), W. B. Davies, W. Eddowes, H. Nelson Edwards, T. Law Webb, R. W. O. Withers, S. T. Gwynne, M.D., J. D. Harries, G. H. Keyworth, M.B., J. McCarthy, M.D., W. H. Packer, M.D. *Ethical Committee*: E. Cureton, J. D. Harries, G. H. Keyworth, J. D. Lloyd, S. T. Gwynne, J. McCarthy, and the President (*ex officio*). Agenda: To read minutes of previous meeting. To receive report and financial statement from Branch Council. The election of officers for ensuing year. The following gentlemen will be proposed for election as members of the Branch: L. T. McClintock, Salop Infirmary; J. Morgan Evans, Llandrindod Wells. The President will deliver an address on Tuberculosis. Mr. Stawell will read a short note on a Case of Acute Intestinal Obstruction caused by a Gall Stone, and also show the specimen. Dr. T. Law Webb will read a short note on the Bacillus Tuberculosis and its Detection in Sputum and Urine; the prognostic value of its presence or absence, and will also show microscopic preparations of the blood in a case of myelogenic leukæmia.—Harold H. B. MacLeod, College Hill, Shrewsbury, Honorary Secretary.

South-Eastern Branch: East Sussex District.—The next meeting of this District will be held at the Grand Hotel, Eastbourne, on November 29th, at 4 P.M., Dr. A. Harper in the chair. Dinner at 6 P.M.; charge, 6s. without wine. Notice of intended communications should be sent to J. W. Batterham, M.B., Honorary District Secretary, 3, Grand Parade, St. Leonard's.

## SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

The 160th meeting of this District was held at the Victoria Hospital, Folkestone, on September 19th, at 2.45 P.M., Dr. Tyson in the chair. There were forty-two members and visitors present.

*Confirmation of Minutes.*—The minutes of the last meeting (annual), held at Canterbury in May, were read and confirmed.

*Chairman of the November Meeting.*—Dr. Whitehead Reid moved, and Mr. Brian Rigden seconded, a resolution that Dr. Kessick Bowes of Herne Bay be appointed chairman of the meeting to be held at Canterbury in November. This was carried.

*Varieties of Rickets.*—Mr. Moon (Broadstairs) read a paper on Varieties of Rickets and their Treatment. Having alluded to the symptoms of early rickets, the later deformities were described, and a distinction was drawn between ordinary scurvy and scurvy occurring in a rickety child. Rickets in-

fluenced by syphilis, and late rickets were also alluded to. The effects of mal-assimilation in inducing the disease, and the various methods of preparing milk to meet the requirements of various rickety children, were dwelt upon. In the matter of treatment, stress was laid upon the advantages of sunlight and sea air, drugs being, in the author's opinion, of quite secondary importance. With regard to surgical treatment of rickety deformities—which in the long run did not appear to be particularly successful—it was necessary to follow up surgical interference with prolonged rest before any permanent advantage could be expected. Nor should surgical operations be undertaken until all signs of active rickets had disappeared.

*Contract Practice.*—Dr. Larking (Folkestone) read the paper entitled Contract Practice and its Difficulties, which is published at page 1324.

*Clinical Demonstrations.*—Some interesting cases and clinical specimens were shown at the hospital.

## STIRLING, KINROSS, AND CLACKMANNAN BRANCH.

A general meeting of this Branch was held at Stirling on October 25th, under the Presidency of Dr. Joss.

*Financial Report.*—The Treasurer presented a report of the finances of the Branch, which showed a balance of £18 4s. 5d.

*Treasurer.*—Dr. Ronald tendered his resignation as Treasurer of the Branch. On the motion of the President, a cordial vote of thanks was given to Dr. Ronald for his services as Treasurer during the preceding two years, and Dr. Ferguson was appointed to the office.

*Address.*—Dr. Crawford Renton delivered an address on Abdominal Section for the Relief of Pain. Reference was made to the symptoms of disease and the indications for operation in affections of the peritoneum, stomach, liver, intestines, and ovaries. Dr. Renton went into special detail in describing the operations for tuberculous peritonitis, perforated gastric ulcer, acute obstruction, and appendicitis. He illustrated his remarks by references to particular cases from the experience of which he had evolved the methods of treatment which he advocated. On the motion of Dr. Strachan, the hearty thanks of the meeting were given to Dr. Renton for his address.

## NORTH OF IRELAND BRANCH.

The autumn meeting of this Branch was held at Belfast on October 17th, Professor J. W. Byers (and subsequently Dr. J. Singleton Darling), President, in the chair; forty-three members were present.

*Confirmation of Minutes.*—The minutes of the spring meeting were read and confirmed.

*New Members.*—The Council reported that John Sidney Cargin, M.B.R.U.I., and James Barkley, L.R.C.P. & S.Ed., both of Belfast, had been elected members.

*Introduction of New President.*—Dr. Byers then resigned the chair, and introduced the President for 1901-02, Dr. J. Singleton Darling (Lurgan).

*Vote of Thanks to Retiring President.*—Dr. St. George (Lisburn) proposed and Dr. Martin (Portrush) seconded a vote of thanks to Dr. Byers for his services in the chair for the past year; Dr. Byers replied.

*President's Address.*—The President read his address, which dealt with the proposed changes in the constitution of the Association, and with the dangers of delay in surgical practice.—Dr. Lindsay (Belfast) proposed and Dr. Stuart (Ballymena) seconded a vote of thanks to the President for his address; Dr. Darling replied.

*Communications.*—Dr. Brownrigg (Moira) read short notes of a case of hyperpyrexia in typhoid fever, which was discussed by Drs. Martin, Lindsay, Byers, Calwell, Robb, Hadden, and the President.—Dr. Calwell read for Dr. Rankin, who was absent from illness, a short note on four cases of enlarged spleen, which was discussed by Drs. McIlesh, St. George, and Houston.

## WEST SOMERSET BRANCH.

The autumn meeting of this Branch was held at the Taunton and Somerset Hospital on October 25th. The chair was taken by the President, Mr. J. P. Johnstone (Langport), and seventeen members and three visitors were present.

*Confirmation of Minutes.*—The minutes of the last meeting were read and confirmed.

*Address.*—An address was delivered by Mr. Charles Stonham, C.M.G., Senior Surgeon to the Westminster Hospital, and late Surgeon in charge of the Imperial Yeomanry Field Hospital in South Africa on Some Surgical Experiences at the War.

*Vote of Thanks.*—On the motion of Mr. Rigden (Taunton), seconded by Mr. Sydenham (Dulverton), a vote of thanks to Mr. Stonham for his address was passed with enthusiasm.

*Dinner.*—In the evening the second annual West Somerset medical dinner was held at the London Hotel, Taunton, to which twenty-two local medical men and nine guests sat down. After dinner Mr. Stonham entertained the company with an account of some incidents on his march in South Africa, illustrated by some eighty limelight views.

## SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.

The eightieth quarterly meeting of this Branch was held at Sandown on October 18th; Dr. Cowper, President, in the chair.

*Confirmation of Minutes.*—The minutes of the last meeting were read and confirmed.

*The late Brigade Surgeon-Lieutenant-Colonel Thomas.*—A vote of sympathy and condolence was passed with the widow of the late Secretary, Brigade-Surgeon-Lieutenant-Colonel J. B. Thomas.

*New Members.*—Two new members were elected.

*Paper.*—Dr. Castle (Newport, I.W.) read a paper on mastoiditis following scarlet fever. A discussion ensued, in which all the members present took part.

## BRITISH GUIANA BRANCH.

A special meeting of this Branch was held at the Public Hospital, Georgetown, on August 25th, Dr. F. H. Edmonds, President, in the chair. Fourteen members and several guests attended.

*Recent Researches on Malaria.*—The meeting was especially convened to hear a paper by Dr. G. C. Low, of the London School of Tropical Medicine, on Some Points on the Recent Researches on Malarial Fever, and he fully described the recent discoveries on that subject. The President proposed a vote of thanks to Dr. Low for his most interesting paper, which, being seconded by Dr. J. E. Godfrey, Acting Surgeon-General, was enthusiastically passed.

The meeting then terminated, but it is intended to publish Dr. Low's paper for the benefit of those members who were unable to be present.

# SPECIAL CORRESPONDENCE.

## PARIS.

*Académie des Sciences: Simultaneous Occurrence of First Cases of Malaria with Appearance of Anopheles.—Académie de Médecine: A Case of Blackwater Fever in Algeria.—Parliamentary Report by Public Health Commission on Measures to Arrest the Progress of Tuberculosis.—Analysis of the Air of the Metropolitan Railway.—Small-Pox Statistics.*

At a recent meeting of the Académie des Sciences M. Billet made an interesting communication on the simultaneous appearance of the *Anopheles* and the first cases of malaria in the district of Constantine in Algeria. Following the indications given by M. Laveran, M. Billet carefully watched for the appearance of the first mosquitos in a certain number of localities, which were notoriously malarial, in the neighbourhood. He began to collect and receive specimens of the *Anopheles* from June 15th to 21st, and from June 26th to July 10th soldiers stationed in these very districts were admitted into the military hospital at Constantine suffering from malaria. These different cases were, without exception, patients affected with their first attack of malaria, being young soldiers fresh from France, joining the corps in November, 1900. Moreover, in all of them the examination

of the blood showed the presence of forms of hæmatozoa special to first invasion cases, that is, the small annular form and crescentic bodies.

M. Vallin recently brought before the Académie de Médecine, on behalf of Dr. Brault, Professor in the Medical School of Algiers, an interesting case of blackwater fever—*fièvre bilieuse hémoglobinurique*—observed in a man who had never lived out of the country. The disease is extremely rare in Algeria; MM. Kelsch and Laveran, during many years of residence, have recorded but one case each. The patient had only taken 1 single gram (15 grs) of quinine sulphate during the days or weeks preceding the attack, and the moderate use of quinine would appear to have contributed to the cure of the disease. Moreover, Dr. Brault found in the patient's blood the spherical bodies of the hæmatozoon of Laveran, and at the same time a marked lymphocytosis with large mononucleated cells, the horseshoe-shaped nucleus containing pigment, which seemed to confirm the malarial nature of the hæmoglobinuric fever.

In the name of the Parliamentary Public Health Commission, M. Amodru has recently drawn up an interesting report on the measures to be adopted to arrest the progress of tuberculosis. The following are its conclusions:

The Chamber of Deputies invites the Government to order the application in all aggregations under State control of the following prophylactic measures proposed by the Extra parliamentary Commission on Tuberculosis, and adopted by the Public Health Commission. Consequently the Chamber asks:

1. That the State shall order to be posted up in all its buildings a notice forbidding spitting on the ground, with the warning that whoever shall disobey this rule shall be made to leave the building.

2. That the State shall cause to be placed in all its buildings hygienic spittoons, at the height of one metre above the ground level, over each being the notice, "Hygienic Spittoon. It is expressly forbidden to spit on the ground."

3. That the State shall forbid dry dusting in any of its buildings, and that that this shall be replaced by compulsory dusting with a moistened duster.

4. That each person in State employ shall have his own individual health record kept in a separate book.

5. That the State shall draw up annual statistics, in categories, for each of its aggregations of the liability to disease and the mortality.

6. That the communes shall institute antituberculous dispensaries.

7. That the State and its various aggregations shall favour the institution of mutual assurance against disease among their employees, and shall encourage them to join companies of assurance against disease, especially against tuberculosis.

8. That the State shall create State sanatoria for the cure of its employees affected with tuberculosis.

9. That the State shall by all possible means (pamphlets, lectures, societies to aid the tuberculous) favour the propaganda of prophylaxis against tuberculosis; that it shall in particular create a permanent technical antituberculosis commission.

At the request of the Prefect of Police, M. Lépine, 100 analyses of the air in the carriages and in the tunnel of the Metropolitan Railway have just been made by M. Gréhaut, an expert chemist, which show that the air is excellent. In his report M. Gréhaut states:

The air in the second-class carriages, which are sometimes so crowded that the public are literally *tête-à-tête*, has never shown more than 1 per cent. of carbonic acid, and a loss of 1 per cent. of oxygen—that is, 19.8 instead of 20.8; the air taken outside the carriages or at the entrance of the tunnels does not contain a quantity of carbonic acid measurable by the method of analysis I employ, which enables me to recognise $\frac{1}{200}$th of this gas. The diminution in the normal quantity of oxygen in air is scarcely perceptible. I conclude from this comparison that the vitiation of the air in the Metropolitan is due solely to the respiration of the travellers, while the frequent and rapid transit of trains in opposite directions constitutes the most powerful ventilator in my knowledge, determining an active propulsion of air by the entrances and exits of the railway system, or an active indrawing of the outer air which is shown by the violent draughts remarked by everybody.

During the forty-first week 35 fresh cases of small-pox were notified in Paris, and 3 deaths were registered from this disease. During the forty-second week the figures were 33 fresh cases and 5 deaths. On October 6th 39 cases (13 males and 26 females), on October 19th 48 cases (17 males and 31 females) were under treatment for this disease in the Paris hospitals.

## BERLIN.

*The New Medical Court of Honour.—Hygienic Overzeal.—Rejection of Proposal for a Committee on New Drugs.—News.*

The latest issue of the *Ministerial Journal for Matters Connected with Medicine and Medical Instruction* publishes three decisions pronounced by the New Medical Court of Honour in cases of puffing self-advertisement. In each case a penalty was inflicted.

The German Society for Popular Hygiene proposes to establish hygiene inquiry bureaux in different districts of Berlin, where advice is to be given gratis to needy persons on subjects such as the feeding and clothing of infants, food, ventilation of bedrooms, the advantages and dangers of athletic sports, protection against infection, etc. This sounds admirable in theory; in practice it seems hardly likely that the inquiry bureaux will be able to give advice really suited to individual needs, and thus harm may be done instead of good in many cases. And the seeking of advice will only too often be a cloak for nothing but begging.

In the course of the late Congress of Medical Men and Naturalists in Hamburg, Professors Kobert and His brought on their long prepared proposal for establishing a standing committee to examine and pass judgment on all new drugs. A sharp discussion ensued, the opposition being led by Professor O. Liebreich (Berlin), who declared that the proposal, if carried out, would gag and cripple not only the chemical trade but scientific research as well. How could any committee take it upon itself to pass judgment on the value of a new drug when that was a question which often required years of practice to determine? Professor von Bergmann warmly supported Liebreich's objections, and finally the movers of the resolution themselves decided to withdraw it.

Professor Hirschberg, the eminent ophthalmologist, has determined to present his valuable library of books on (1) ophthalmology, (2) optics, and (3) history of medicine to the Berlin Medical Society. The value of the gift is enhanced by an admirable catalogue, comprising no fewer than 606 divisions.

The degree of Doctor (*honoris causâ*) was conferred on Professor Waldeyer, who represented the Berlin University at the Yale University jubilee celebration.

Professor Virchow has received the Russian Order of the White Eagle, and the presentation was accompanied by an expression of the good wishes and congratulations of the Czar.

## BRISTOL.

*Opening of the Bacteriological Laboratory at the Royal Infirmary.—Distribution of Prizes to Students of University College: Address by Sir Frederick Treves.—Medical School Dinner.*

The bacteriological laboratory at the Royal Infirmary was opened by Sir Frederick Treves on Friday, October 25th, in the presence of a large number of medical men and subscribers. After an inspection of the room, which contains all the most modern requirements of a laboratory devoted to bacteriology, Sir Frederick addressed a few words to the audience, congratulating the infirmary on the acquisition of such a useful addition to its already well-equipped institution, and pointed out how necessary it was at the present time to have a bacteriological department to assist in the diagnosis and cure of disease.

The prizes to the successful students of Bristol University College were presented to them by Sir Frederick Treves, in the large hall. The chair was taken by Mr. P. J. Worseley, and on the platform were the Bishop of Bristol, Dr. Skerritt (Dean of the Faculty of Medicine), the Principal of University College (Professor Lloyd Morgan, F.R.S.), and others. A large number of medical men were present, many being in academic dress, and the hall was well filled with the students and their friends. After the Dean had read the report Sir Frederick distributed the prizes, and congratulated the students who had won distinctions and also on the fact that they were joining the medical profession, which held a position at the present time it had never held before, either in its scientific teaching or in its possibilities for healing. The medical man had now become a factor in the State, controlling enormous issues and being weighted with grave responsibilities. His opinion was sought in matters of food and water supply; in the control and handling of epidemics. He was no mere creature of patronage; no puppet of an autocratic guild, for he stood entirely upon his own merits and made his way by his own ability. There was no need for him to be under the *ægis* of a great corporation; it gave him a diploma, but after that concerned itself but little with him. Neither need the medical man be

under the guiding hand of a senior member of his own calling. Pupilage and apprenticeship had been abolished, he believed with advantage. Sir Frederick then compared the career of a medical man with the ancient City of Bristol, which though it started with great natural advantages had kept pace with the times by its own energies and efforts. He advised all students to study the recently-published book *The Memoirs of Sir James Paget*, for from that book they would learn how a man without friends or money and with great disadvantages could overcome every difficulty and rise to the head of the medical profession. No one, Sir Frederick supposed, had done more for the honour of his calling outside his mere professional work than Sir James Paget. The medical profession, too, was one of consummate interest; it was indeed the profession of romance, for in it there was nothing dull. It was bound up with the most primitive hopes and craving of man—with the most elementary of sentiments. It was to the man of medicine that the people turned with the cry, O king live for ever! and the king could not, though the oldest monuments and tombs in Egypt showed this yearning for immortality. At one time the profession had been allied with the astrologer, the man who claimed he could control the future; later on with the alchemist, and then all that was serious in medicine depended on the man of the crucible. The doctor was a mere giver of doses, while the alchemist sought the giving of life—the elixir which would confer immortality to the body, and the philosopher's stone, the use of which turned base metals to gold. These two cries—for wealth and life were little more than the highwayman's demand—"Your money or your life." Bristol once contained an alchemist who claimed to have discovered both of the sought-for goals, but he died young and in poverty, so that the profession at that time seemed to have been a little bit open to the question. Men no longer vainly concerned themselves with these nowadays, but were bent on the actual deliberate and determined analysis of death. The very symbol of death was altered from the crowned skeleton with a scythe in its hand to a mere speck emerging out of the unutterable gloom of the unknown, increasing by millions, invading the body, spreading over the world like a mist, drowning like the sea, and destroying life by hundreds of thousands—the micro-organism. Here was the battle of Armageddon—the fight between millions on the one hand and millions on the other, for sanity and health of the human body. Was there no romance in this? Sir Frederick drew attention to the many advances made in medicine. Now tuberculosis had been followed up, investigated, driven to the last point, detected, and actually found. The same had been done with malaria, myxœdema, tetanus, and many more. Was there not more romance in the hunting down of these diseases than in the discovery of new lands? What fields, too, there were still untouched. Some day would come the discovery of the cure for cancer. In conclusion, he wished all the students success in life, warning them that the profession of medicine was something more than a help for the race for wealth, and a medical man was one of the few who could say, "I may not get gold of this coinage or of that, but I know something of this wealth which, in a very proper sense, is beyond the dream of avarice."

The Bishop of Bristol proposed, and Mr. N. C. Dobson seconded, a hearty vote of thanks, which was carried with acclamation.

On the same evening Sir Frederick Treves was the guest at the Medical School dinner, the Dean of the Faculty being in the chair. About 150 sat down to dinner, and an exceedingly pleasant evening was spent.

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By the death of Dr. Hugh Fisher of Belfast a promising career has been cut short. He took the M.B. of the Royal University of Ireland in 1893, and, after the customary voyage, he settled down in Belfast, and was steadily gathering a large practice. His character was marked by honesty of purpose, absence of guile, genial spirits, and close attention to work. Some weeks ago he was attacked by typhoid fever, but had weathered the storm, and was convalescent, when sudden heart weakness supervened, which ended fatally. Dr. Fisher was married to Dr. Elizabeth G. Bell (Belfast), and much sympathy is felt with Mrs. Fisher and her infant son and the family.

# CORRESPONDENCE.

## THE REORGANISATION OF THE ARMY MEDICAL SERVICES.

SIR,—The report of Mr. Brodrick's Committee for the Reorganisation of the Army Medical Services has called forth a great amount of criticism. Much of this criticism is appreciative and generous, and much of it that is hostile is full of valuable suggestions for amendment. Among those, however, who condemn the scheme with such a thoroughness as marked the cursing of the jackdaw of Rheims are some who have evidently imbibed the principle that the Army Medical Service can do nothing but evil all the days of its life, and must, even in its attempts at reform, be influenced by a kind of original sin.

There are others who condemn the report *in toto* because they disapprove of certain matters of detail contained therein, or base their condemnation upon the omission of details with which the Committee could have, in a general report, no possible concern.

There has been indeed a disposition in many quarters to appraise the scheme upon a consideration of isolated particulars which, although important in themselves, are insignificant when compared with the general principles upon which the plan suggested in the report is founded. These general principles have been by many critics totally disregarded, and have been by others made subservient to matters of secondary import.

I should be glad to be allowed to draw attention to the main bases upon which the scheme is founded, lest they be lost sight of in the numerous side issues which are being raised.

In the first place, it may be pointed out that the subject is a very vast one, and that the report provides no more than a framework upon which it is hoped that a system of reconstruction may be based. It has no pretence to be a scheme complete in all details.

I think my civilian colleagues on the Committee will agree with me that the attitude of the Secretary of State in presenting the scheme was not that of a Minister granting concessions under pressure, but that of a Minister who was earnestly desirous of establishing an Army Medical Service which should attract candidates of the best type, which should offer them every inducement to remain in the service, and at the same time to make advance in the work of their profession, and fit themselves for the increasing responsibilities of their office. Above all was the desire that the Medical Department should be made absolutely efficient, should be made worthy of the great army with which it is associated, and should aim at becoming the best medical service of which any country could boast.

The principal features of the scheme are as follows:

1. The R.A.M.C. is to be under the supervision of an Advisory or Consulting Board, composed of six army officers and four civilians. The Director-General, however, remains "responsible for the administration of the Army Medical Services," and is "responsible for the distribution, promotion, discipline, and general organisation of these services."

2. A very substantial increase in the *personnel* of the R.A.M.C. is rendered necessary.

3. The pay is increased, and is raised to a standard more in accord with the pecuniary prospects of a medical man in civil practice at the present time.

4. Liberal opportunities for study are given, while the increase in the corps will obviously give each officer a less share of foreign service.

5. Advancement in the service is by professional merit in distinction to the plan of advancement by seniority. The most speedy promotion falls to the best medical officer.

6. Charge pay is granted, and an increased rate of pay is given to those officers who qualify and are employed in certain special branches of medicine and surgery.

7. The establishment of a military hospital and medical staff college for the training of officers of the R.A.M.C. is strongly urged.

The most vigorous objections to the plan laid down in the report are directed to three matters: (1) The Advisory Board; (2) the system of examinations; and (3) certain questions of pay.

I.

The utility of the Advisory Board has called forth great diversity of opinion. Those who think the institution of such a Board most admirable are equal in numbers to those who condemn it absolutely. Considering the very wide range of subjects which must come within the purview of those who are responsible for the administration of the medical services of the army it would seem that an Advisory Board is almost a necessity. It is an Advisory Board and not an Executive Board. The Executive rests with the Director-General. There is nothing in the report to justify the comment of one critic that under the new scheme "the Director-General as a personal factor in the R.A.M.C. practically disappears," nor is there any basis for the suggestion that the Board is the outcome of a mistrust in the Executive. It would not be difficult to show that an Advisory Board such as is suggested would greatly strengthen the hands of those who are charged with the varied responsibilities of administration. Those who condemn the Board under the impression that promotions are made by it should read paragraphs 14, 18, and 19 of the report, in which it is clearly laid down that the Director-General is "responsible for promotion."

II.

The system of examinations has led to much adverse comment. It is the purpose of these examinations to make promotion in the Service dependent upon professional ability and to grant the fullest advantages to the officer who does his best to keep his medical and surgical knowledge abreast of the times, and who has taken the pains to master some speciality in practice. After receiving his commission, an officer under the new scheme undergoes three examinations in the place of two which formerly existed, one of which has sunk into abeyance. So great an alteration has been made in the entrance examination that it has ceased to be the vexatious and irritating test it was. All the examinations are intended to be practical and as far as possible by *viva voce*.

The system of testing proficiency by examination is—and always has been—open to considerable question. This applies not only to these particular tests but to all medical examinations. The powers that be have, however, not yet devised any method other than that of examination whereby the entrance of a candidate into the profession can be determined or his fitness for the higher degrees decided. In many hospitals the selection even of house surgeons is by examination.

Indeed at present no other means presents itself which could be regarded as just and adequate except the testing by examination, and it is noteworthy that those who object to such testing in the case of the Army Medical Service have suggested no substitute measure. No one has recommended that promotion should depend upon "confidential reports," and I imagine that no one could be found who would defend that unjust and objectionable system.

It must be remembered that while mere promotion is by an examination which tests the officer's capabilities as a professional man, the selection of officers for special appointments rests with the Director-General, who will no doubt be influenced by evidence of special fitness in those eligible for such appointments.

The examination which has excited most comment is that for promotion to the rank of Lieutenant-Colonel. This must be passed before the officer has completed twenty years' service and as a preparation for it a period of three months' study is granted.

The examination does not deal with medicine or surgery, or with any allied science. It is concerned solely with the very administrative work which the officer will—if promoted—be called upon to carry out. Among the subjects are the following: Hospital organisation, administration, and equipment in peace and war; the sanitation of towns, camps, troop transports, etc.; epidemiology and the management of epidemics; the duties of all ranks in the R.A.M.C. (It is probable that no great stress would be placed upon two of the subjects, namely, the medical history of important campaigns, and the army medical services of other Powers).

The candidate is required to obtain 50 per cent. of the total number of marks. If he fails he is allowed to present himself for a second examination at the end of six months. If he again fails to obtain 50 per cent. of marks he is "compulsorily retired on a gratuity of £2,500, or he may, by special permission of the Secretary of State, complete twenty years service and then retire on a pension."

While every possible consideration should be shown to any officer who has been in the service for nearly twenty years, it can scarcely be considered a hardship if, before he is raised to a position involving very responsible duties, he should be asked to give evidence of a minimal knowledge of the matters appertaining to those duties. Moreover, should it become evident—after two trials—that he does *not* possess that knowledge, it would hardly be right to promote him to a post in the qualifications for which he has shown himself hopelessly lacking.

No man competent to undertake the duties of the higher rank could object to the examination. The incompetent man naturally would object to it.

III.

On the subject of pay I am not competent to speak. I would only say that from a comparison of the proposed rate with that now in vogue it would appear that the increase is substantial and generous. It is possible that the scale will need amendment in certain directions, and it is possible also that the much cherished "right" to retire after twenty years service on £1 a day has not been so entirely overlooked as some who have written on this subject suppose.—I am, etc.,

Wimpole Street, W., Oct. 30th. FREDERICK TREVES.

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## DOCTORS AND MIDWIVES.

SIR,—The case detailed by Major Ince in the BRITISH MEDICAL JOURNAL of October 19th, of a woman dying of puerperal convulsions attended by a midwife, who sent in vain to three medical men for help, is pathetic and painful from whatever point of view we look at it. I have no wish nor right to judge the medical men who refused to give their assistance, and whose reasons for doing so are not without force. But the case seems to me to bring the whole midwives question into a very acute form. Without discussing other points, I should like, as one who has given some attention to this complicated question, to make two remarks:

1. The principle upon which these three gentlemen acted is a new one in the history of the profession—namely, refusal to "follow midwives." This refusal may be right or wrong: but it is new in principle, and I submit that, if it is to be acted upon, due notice should be given by the medical profession. Perhaps the medical men in question had already given due notice to midwives not to expect their assistance in emergencies. At any rate, it seems to me that such a great change in the action of the profession can only be justified by a long and clear notice before the occurrence of emergencies.

2. I may be allowed to say that the case is a striking illustration of the reasonableness of my proposal in the General Medical Council, that in any Midwives Bill it should be enacted that in every sanitary district the local authority shall be required to provide and pay medical men who are summoned by the midwives sanctioned under such legislation in cases of emergency. If I am not mistaken such a principle is already recognised by the London County Council. It would be easy to provide for the local authority recouping itself in cases where the patients were able to afford the fee paid.

It is all very well for juries and the public in general to say that the doctor—however exhausted or engaged—should be compelled to obey every call on the score of humanity. It is very cheap and easy for the public to do its humanity at the cost of the medical profession, but it is clearly alike shabby and unjust to do so.

We are all unwilling to add to the ever-increasing taxation of the country, but the case of poor lying-in women in exceptional peril is one altogether pitiable and unique, and calls for benevolent provision on the part of the State, as does the case of the unvaccinated children of the poor, or that of persons injured in the street.—I am, etc.,

Highbury, N., Oct. 28th. JAMES GREY GLOVER.

SIR,—In the North of England we are overrun with midwives; in fact, many general practitioners but rarely get a case. Young medical men are seriously hampered in building up a practice, as this method of getting a family practice is now in the hands of midwives. My experience will be confirmed by others: that we are called in by the midwife when the case is difficult and dangerous—this, too, in some cases without fee or reward. It is unqualified practice. If we were to respond to the call of a quack to act as "cover," we should be guilty of infamous conduct and be liable to be struck off the *Register*. Not so if sent for by a midwife who is practising one of the most responsible branches of medicine. It is most important that something should be done by the State in regard to midwifery and other serious and sudden forms of illness, so that a qualified person can be at the command of the poorest person in the State. The two suggestions by Dr. Mitchell in the BRITISH MEDICAL JOURNAL of October 26th, p. 1300, are excellent.—I am, etc.,

Bacup, Oct. 29th. JNO. BROWN, M.D.Vict.

SIR,—Surgeon-Major Ince can scarcely have expected that his strictures upon the doctors concerned in the Swanscombe case would go unchallenged by the profession. Had such a letter emanated from a layman one might have lamented the ignorance which dictated it, but when such opinions are expressed by a member of the medical profession they cannot fail to arouse indignation among a large number of the profession.

If Surgeon-Major Ince has any experience of the conditions of general practice among the poorer classes which prevail at the present day, he shows a lamentable want of appreciation of and sympathy with its difficulties. I have been long enough in practice to know that if conducted, as he suggests, according to "the benevolent principles of our noble profession," the result would be, as one of your correspondents points out, very likely an extensive practice, but with the workhouse at the end of it. There is opportunity enough, Heaven knows! for charity in our profession without making ourselves the gratuitous drudges of an exacting and not overthankful public.—I am, etc.,

Bristol, Oct. 20th. E. H. WARNER, M.D. & C.M.Edin.

SIR,—Surgeon-Major Ince has done a great public benefit by publishing the facts contained in his letter (page 1209), which is one of the soundest arguments in favour of the Guild scheme that I have heard of. It is quite evident, on reading the account, that there is considerable friction between the doctors and midwives in that district; and it is not the only one. Medical men are awakening throughout the country on this question. Midwives must take their own responsibility for meddling with the work of those who, for the safety of the public, have been educated, examined, and registered by the State.

I take it the Guild scheme is intended to abolish this friction and this unsafety. The practitioners in a district willing to visit, at least once, cases of midwifery (and the sooner after labour begins the better) will accept a ticket from the sanitary authority, which will imply an undertaking to attend. Obstetric nurses will be provided adequately trained, and be under the direct supervision of practitioners, who will be paid, of course, for this visit by the sanitary authority. Thus, I take it, things will be put on a definite basis, and friction removed. I think it a practicable idea, and should like to see it tried. One cannot help regarding this as a public health matter, which ought in time to be carried out by public sanitary authorities. Poor-law medical officers are paid to attend the poor in their confinements, but many have fallen into the hands of midwives and others sent into the workhouse.

Why not abolish all this, and let the money be spent by the former to carry out the scheme referred to? Why should not the Poor Law be reformed in this respect so long as so much public benefit hangs upon it—the lives and welfare of so many mothers and children—and as it is so likely to abolish the state of affairs referred to by Surgeon-Major Ince? Surely such a scheme, if thoroughly understood and grasped by him, will have his sympathy and support, by means of which the mother will have her choice of the doctors agreeable to take tickets.

In conclusion, permit me, Sir, to thank the surgeon-major for his valuable communication at this juncture, and I cannot help saying that I think the discussions in the medical press upon this subject are bearing fruit, and I trust that very soon something will be done in a sound direction, as indicated above.

Whatever legislation there may be it will be useless if it do not have the sympathy and cordial support, in the carrying out, of general practitioners, upon whom so much depends in their various localities with respect to the health and well-being of parturient women and their children.—I am, etc.,

October 19th. VERAX.

SIR,—Surgeon-Major Ince can have had no experience of general practice by writing in the strain he has done. When I first came to this district I went to anything and everything that I was called to, and the result was that in nine cases out of ten I could not get a penny piece for my services, so I wisely declined to go to any case unless I had previously been engaged or the fee tendered before I left the house. Those who have not got the fee I refer to the parish doctor. I believe this is the invariable custom of the profession among the working classes, who I am sorry to say, with but few exceptions, have no sense of honour or principle; their wages, which are very high in this district, are spent in betting, gambling, and drinking, and if anything unforeseen turns up they trust to the charity of others. Any deserving case I willingly go to without fee or reward as no doubt others do. As for the Legislature imposing or attempting to impose obligations on medical men—the very idea is absurd; there is no comparison whatever between a medical man and a licensed victualler.—I am, etc.,

October 21st. W. C. F.

SIR,—Surgeon-Major Ince expresses a righteous indignation about the Swanscombe case, but falls into error in drawing hasty conclusions from the particular to the general. In this particular instance the duty of the doctor called was simple; he should have attended the case and passed it over to the parish doctor in the morning if the fee was doubtful. But as a benevolent profession we cannot forget that we must live. In the majority of working-class neighbourhoods there are maternity clubs and so called provident dispensaries, efficiently worked by the clergy and visiting ladies who have easy access to the houses, as well as being advertised and getting an occasional word from the pulpit. These as a rule are served by practitioners in the wealthier outskirts; in cases of emergency, however, the resident doctor is called in, and should he neglect to make certain of his fee he will very soon find his life a burden and himself a benevolent fool.

It will generally, too, be found that the outcry against low fees or any struggling effort comes loudest from those who benefit by the 10s. 6d. confinements and ½d. (halfpenny) a week dispensaries—such is the benevolence of the profession.—I am, etc.,

Lower Sydenham, Oct. 22nd. FRANK TAYLOR, M.A., M.B.

SIR,—After reading Surgeon-Major Ince's letter, I cannot help thinking that if the whole of the medical practitioners in Great Britain at once ceased "following midwives," it would quickly settle the "midwives question."—I am, etc.,

Manchester, Oct. 22nd. G. H. BROADBENT.

## THE MIDWIVES QUESTION.

SIR,—I bow to Dr. Bateman's authority as to the liability of midwives and other medically unqualified persons to damages for malpraxis, etc.; but by the practice of the courts and the directions of the judges midwives have so continuously been exempted from penalties, principally on the score of ignorance, that for all practical purposes they are exempt from penalties. There is no legal standard to which appeal can be made as to what should be the acquirements of a midwife, unlike the medical practitioner, and consequently they get off scot free where a medical practitioner would not have a chance. In proof of this I need only appeal to the columns of the daily press and of the medical press. Perhaps your correspondent can correct me, but I do not think that there has been a single case in recent years in which a midwife has

been cast in damages for negligence or malpraxis in respect other work as a midwife.

I do not think that Dr. Bateman quite meets my contention that midwives are as legally free to perform operations, if they think fit to do so, as are qualified medical practitioners, for, in reply, he quotes a special class of cases—illegal operations—forbidden to everybody. There is no legal power in force to prevent a midwife from doing craniotomy, putting on the forceps, or turning, for example, in cases of contracted pelvis; nor does she in practice render herself liable to any penalty if she elects to carry on a case however serious, provided she makes no pretence of being a medical practitioner and attends it to the best of her knowledge.

The point of my letter was to controvert a statement by a previous correspondent that medical practitioners enjoyed a real or implied monopoly under the provision of the Medical Acts. For the Medical Act, 1858, opens with the words: "Whereas it is expedient that persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioners: Be it therefore enacted, etc."; and that of 1886 commences: "This Act may be cited as the Medical Act, 1886, and shall be construed as one with the Medical Acts." This abolishes, I think, any contention that the latter Act contemplated a monopoly, or as your previous correspondent (Dr. Broadbent) said: "That only those who are qualified and registered in medicine, surgery, and midwifery shall be legally empowered to practise midwifery independently." If I am not greatly mistaken, Dr. Bateman was instrumental in getting the monopoly question tested in the law courts, or at any rate in the magistrate's court, and did not take the case further.

My contention is that so long as the midwife is not under a special Act of Parliament for that purpose she is, by the present practice of the Courts, really exempted from damages or other of the disqualifications which meet a medical practitioner at every hand's turn.

I am sorry to disappoint Dr. MacLean in not replying formally to some of his remarks, but so many side issues are continually being raised by opponents of the Midwives Bill that I avoid them as far as possible. He may, of course, consider those very side issues to be the crux of the whole question, but the constant repetition of the same arguments by a succession of correspondents in the last few years has marked out a fairly clear course to pursue, as being most to the point.

Dr. Broadbent can hardly be serious when he states that "the Midwives Bill was a result of the General Medical Council nullifying the diploma of the Obstetrical Society of London." This action of the Council only occurred within the last few years, some years after the Select Committee of the House of Commons (1892-3) gave its fiat, and that was only after several Bills had been introduced into Parliament. The question of the value of the Obstetrical Society's certificate has nothing to do with the necessity for legislation, and is a side issue into which I decline to be drawn.—I am, etc.,

Fellows Road, N.W., Oct. 19th. F. R. Humphreys.

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Sir,—Just a line to inform Mr. MacLean that "occupation for women" alone is not the *raison d'être* of midwife registration. Paramountly, it is to render midwives independent of medical men—"the mere male"—to use a modern phrase. There is also a smack of mock modesty mixed up in the question. A lady of high degree once told me that it was a disgusting sight to see a man hanging about a lying-in woman! It is a matter of taste! Registration was once advocated in favour of "the poor woman," but this doctrine has been quietly dropped as it has been proven that "the poor woman" has to pay a nurse to wait on the midwife, "who comes and goes like a doctor." The only argument, therefore, is the substitution of the "she" for the "he." It would be unreasonable to limit a registered midwife to "the poor," who pay the "Gamp" 5s. or even less. The rule is for the certificated midwife to attend for 10s. those formerly attended by medical men at a guinea and upwards. At 5s. per case the trained midwife must attend 300 cases per annum in order to earn £75; at 10s. per case, 150. And where nursing associations employ certified midwives they are paid a salary of from £60 to £80 per annum, about a fourth of which is paid in instalments by the women, and the rest is raised by voluntary subscriptions, donations, and grants by public bodies. I fancy in the end it will be found to the certified midwife's advantage to "follow" the doctor as a nurse at a fixed salary, but just at present the fashion is the other way. The letter of Surgeon-Major Ince in the British Medical Journal of October 19th proves that the "mere male" is still master of the situation. When the medical profession abandons its sham philanthropy and learns to sink petty personal differences for the common good, it will be a power in the land, and not before. Is the Government of the day philanthropic towards "the noble" profession? Is the tradesman? And is the public at large? There is such a thing as "justice;" indeed, there is nothing else, says Carlyle, and that too in spite of Surgeon-Major Ince's opinion to the contrary.—I am, etc.,

Liverpool, Oct. 19th. Alex. McCook Weir.

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## THE "FOURTH DISEASE."

Sir,—It was with much regret that I was unable to be present at the meeting of the British Medical Association at Cheltenham, so that I might have joined in the discussion on the "early diagnosis of infectious diseases."

I have only to-day read in the British Medical Journal the drift of the discussion, and from it it is evident that, in my paper in the *Lancet* of July 14th, 1900, I did not make myself clear concerning the "fourth disease" I there described. I therefore solicit your kind indulgence by allowing me a short space in the Journal to endeavour to do so now.

*I.—Measles (Morbilli).*

In the case of measles only occasionally difficulties occur.

*II.—Scarlet Fever (Scarlatina).*

In this illness also, while many cases cannot be diagnosed with certainty until the fourth day, serious difficulties do not arise when the disease is considered as a whole, and reliance is not centred on the eruption alone. The experience of large fever hospitals cannot but be one-sided, inasmuch as the slight cases—the difficult ones to diagnose—do not generally find their way there; and as a matter of fact a large proportion of such cases are never seen by a doctor at all.

*III.—Epidemic Rose Rash: German Measles (Rubella).*

Here we have a disease which entails endless trouble on account of its vagaries:

1. The majority of these cases commence and terminate with an eruption which resembles English measles in its main features.

2. But there is another set of cases where the eruption, while commencing like measles, finishes in patches resembling scarlet fever, owing to the coalescence of the spots.

(1) For instance, take a patch of eruption at one stage on a certain region of the body, and conceal the remainder of the skin from view, and even the most skilled observer, basing his diagnosis on the skin alone, would assert that it was a characteristic measles eruption.

(2) Treat another large surface patch in the same manner at another stage, and the same observer would at once say that it was scarlet fever. It is not, however, such cases to which the name of the "fourth disease" is applied.

*IV.—The "Fourth Disease."*

This resembles scarlet fever in its eruption from the onset in being a diffuse eruption. The characters of this disease I need not here recount, as they are dealt with fully in the paper referred to, and which is now in the hands of the printer.[1]

But I must press the fact home that many of these cases find their way to fever hospitals, though sometimes they are are not admitted on account of not being scarlet fever. In fact, in the spring of this year Dr. R. C. Gowan, in writing to me on this subject, informed me that "quite recently some 28 cases were sent back from one of the metropolitan fever hospitals as having been incorrectly certified as scarlet fever."

At other times they are received into scarlet fever wards of hospitals, and there become attacked by scarlet fever, and give the "fourth disease" to the scarlet fever patients already

[1] Publishers: Messrs. Churchill, Great Marlborough Street, W.

in the ward. (I conclude that it has been under such circumstances that what have been termed "second attacks," or relapses, have been diagnosed.)

Now these are facts, call the disease what we will. I contend that it is a distinct and definite disease, which I have provisionally named the "fourth disease." But it is with some diffidence that I still urge this. For one speaker at the Cheltenham meeting regarded my recorded cases as rubella; and another was persuaded that they were scarlet fever. Well! they cannot be both. And when we come to practical politics the above-mentioned confusion is not what we, as physicians, can desire for those who place themselves in our trust.—I am, etc,

Rugby, Oct. 21st. CLEMENT DUKES.

## THE ANGLO-AMERICAN CONTINENTAL MEDICAL SOCIETY.

SIR,—In the Paris correspondence of the BRITISH MEDICAL JOURNAL of October 19th, there is a brief notice of my resolution advocating elective representation of the Italian Section of the Anglo-American Continental Medical Society on the Committee of that Association. My resolution was supported in writing by two-thirds of the whole number of members constituting the section, and since the meeting I have received notice of further adhesions.

It was rejected in accordance with a by-law of the Society, whereby two months' notice must be given of any proposed alteration of the constitution of the Society.

This result was anticipated by me and by several members of the Italian Section who wrote to me on the subject. The object of my resolution was the expression of uneasiness on the part of the Italian members in general at their position in relation to a Society of which they form so large a proportion, and the suggestion of a remedy.

The object was attained in both aspects and in a manner much more comprehensive than that suggested in the original resolution—namely, by admitting the principle of voting *in absentiâ* for members of committee.

This principle was conveyed in a resolution proposed by Dr. the Hon. Alan Herbert and seconded by Dr. H. Danvers, as follows:

It was decided that in future when voting papers were sent there should be a mention of the retiring members of the Committee, and that each member (of the Association) should be requested to state in writing the names of members he wished to replace them.

It remains for any tolerably strong section of the Society to vote solid in order to ensure representation of their views and interests on the Committee.

A letter from a member of the Italian Section of the Anglo-American Continental Medical Society asking the explanation of the report of the rejection of my resolution, has induced me to solicit the medium of your columns in order to report the incident more fully and to indicate its significance.—I am, etc.,

Florence, Oct. 23rd. STUART TIDEY.

## REGULATIONS AS TO PRACTICE IN THE UNITED STATES.

SIR,—A few errors have crept into your statement of the laws regulating the practice of medicine in the United States, as printed on page 569 of the BRITISH MEDICAL JOURNAL for August 31st (the Medical Educational Number). This is not to be wondered at, as it is more correct than most statements published in our own journals. Oddly enough, the errors for the most part are not in the recent changes in the laws.

Delaware, the district of Columbia, Texas (a recent change), and Missouri (a recent change) should be transferred from Class B to Class A. Ohio should be transferred from Class C to Class A.

Michigan should be transferred from Class C to Class B, Nebraska from Class B to Class C.

Indian Territory and Vermont occupy anomalous positions. The laws of Indian Territory are for the members of the nations that is, the Indians (either by birth or adoption); all others live within the boundaries of the territory on sufferance only. In Vermont the law recognises three "schools" of medicine, and the three licensing bodies are not uniform in their requirements. For such as are likely to read the BRITISH MEDICAL JOURNAL a State examination would be required.

The Medical Educational Number of the *Bulletin of the American Academy of Medicine* (June, 1901) gives the requirements of the various States more fully than you have space to give, if any of your readers wish to know more particularly about our methods of licensure.—I am, etc.,

CHARLES MCINTIRE.

American Academy of Medicine,
104, N. Fourth Street, Easton, Pa.,
Oct. 2nd.

## WHAT IS EFFICIENT REVACCINATION?

SIR,—Dr. S. Verdon-Roe has struck at the root of the matter. My experience of the lymph "supplied by a well-known firm" has been like his. At first I was inclined to attribute failure to causes other than barrenness of the lymph. This was, however, definitely settled by the fact that, my supply running short, I obtained a quantity from another source, and with this new lymph I vaccinated 41 persons; of this number only 4 failed to show good vesicles. A renewed supply coming now from the "well-known firm," failures began immediately with the first tube, and have not been relieved by one success since—50 failures out of 55. This includes only those examined up to this date; many more awaiting inspection, which I dread to look at. The efficacy of vaccination is once more on its trial at the bar of public opinion. The State is once again invaded by small-pox, and we medical men pose as the defending army. What shall be the degree of our humiliation when it shall be brought home to us that our weapons are dummies and our preparedness a sham?—I am, etc.,

Bexley, Oct. 29th. GEORGE F. EDWARDS, M.D.

## THE TREATMENT OF PHTHISIS BY MEANS OF HIGH FREQUENCY ELECTRICAL CURRENTS, ETC.

SIR,—In answer to Dr. Harry Campbell's question in the BRITISH MEDICAL JOURNAL of October 19th, as to whether I can offer any explanation of the enormous increase in chest measurement of "3½ inches in five weeks," I am sorry to say I cannot; all I can do is to state the facts in this very exceptional case.

The patient stooped excessively, the front of the chest being practically flat, movements extremely shallow, rate of breathing 10 per minute, so weak that the patient had to be carried and undressed and dressed by a nurse. There was a fairly large cavity at upper part of right lung and a small one in left. Fair number of tubercle bacilli in sputum (Clinical Research Association).

I must apologise for quoting an exceptional case and not giving the notes of it fully.—I am, etc.,

Bedford Square, W.C., Oct. 27th. CHISHOLM WILLIAMS.

# OBITUARY.

THE death of Dr. ROBERT B. MCCLELLAND, of Banbridge, took place in Banbridge on October 16th. Dr. McClelland had been ailing for some time past, and unable to attend to his professional duties, but the end came somewhat suddenly. He was one of the seniors of the profession in the North of Ireland, having taken the M.D.Glasgow with Honours in 1849. He was a J.P. for county Down, and a member of several of the local Boards. Whether as a member of the profession, as a magistrate, or as a prominent member of the community, Dr. McClelland was highly respected, and his advice much valued. Much sympathy is felt with the family in their bereavement.

Dr. ALFRED APLIN, Medical Superintendent of the Notts County Asylum, died on October 21st from heart disease, at the age of 47. He was elected Assistant Medical Officer to the Notts County Asylum in the year 1876. Dr. Aplin worked steadily at that institution until 1881, when on the death of Dr. Phillimore he succeeded to the post of Medical Superintendent, so that nearly the whole of his professional life was spent in the service of that Asylum. He became M.R.C.S.Eng. in 1875 and L.R.C.P.Lond. in 1877. Dr. Aplin was a distinguished student of University College and took

the medal in hygiene and in public health. He at one time held the appointment of Lecturer on Physiology at the Nottingham University College and to the science classes at the Nottingham Mechanics Institution. Dr. Aplin was a good Mason, a past pr vincial grand officer, and a generous benefactor of the exce lent charitable institutions connected with that philanthropic body.

It is with sincere regret that the profession in Ulster saw the announcement of the death of Dr. W. H. Caldwell, of Coleraine. Dr. Caldwell was a comparatively young man, and took the M.D. of the Royal University of Ireland in 1880. He was the Coroner for the county Londonderry, and Consulting Medical Officer of Health for Coleraine, and a member of the Coleraine Board of Guardians. He was alike respected for his professional ability and his impartial discharge of his judicial functions. He was seized with hemiplegia in July, and died on October 25th. Much sympathy is felt for his widow and family.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Alfred Patterson, Fleet Surgeon, to the *President*, for three months hospital study, October 28th; A. La T. Darley, Surgeon, to the *Duke of Wellington*, for disposal, temporary, October 23rd; Oswald Rees, M.D., Surgeon, to Cape Hospital, October 23rd; William J. Codrington, M.B., Surgeon, to the *Gibraltar*, October 23rd; Harry Spicer, M.B., Surgeon, to the *St. George*, October 23rd; Ernest S. Tuck, Surgeon, to the *Duke of Wellington*, October 23rd.

## ROYAL ARMY MEDICAL CORPS.

Captain J. T. Clapham is placed on temporary half-pay on account of ill-health, October 21st. He was appointed to the department January 31st, 1891. He served with the Nile expedition in 1898, and has the British and Egyptian medals therefor.

Lieutenant-Colonel G. H. Youngе, F.R.C.S.I., retires on retired pay on account of ill-health, October 30th. His commissions bear date: Surgeon, July 30th, 1881; Surgeon-Major, July 30th, 1893; Lieutenant-Colonel, July 30th, 1901. *Hart's Army List* states that during the present war in South Africa he was at the battles of Colenso, Spion Kop, Vaal Krantz, and Pieter's Hill, and at the relief of Ladysmith (twice mentioned in despatches); afterwards in Orange River Colony and at the occupation of Potchefstroom and various minor engagements (medal with five clasps). According to the *Monthly Army List*, he was still in South Africa at the beginning of October.

Captain F. J. W. Porter is seconded for service with the South African Constabulary, July 1st, 1901.

The undermentioned officers have been discharged to duty from hospital in South Africa: Major N. C. Ferguson, Civil Surgeons W. E. Smith, D. Macaulay, C. E. Thwaites, A. J. Campbell.

Civil Surgeon W. M. Mackay is on passage home.

Civil Surgeon C. M. Robertson, 25th Mounted Infantry, was killed in action near Brugspruit, South Africa, on October 25th.

## ARMY MEDICAL RESERVE.

Surgeon-Lieutenant A. Hilton, 3rd Volunteer Battalion the Manchester Regiment, to be Surgeon-Lieutenant, October 30th.

## VOLUNTEER MEDICAL STAFF CORPS.

Mr. C. S. Singer is appointed Quartermaster in the Glasgow Companies, October 26th.

## IMPERIAL YEOMANRY.

Temporary Major J. E. Martin, M.B., Medical Officer 17th Battalion, relinquishes his commission, October 21st.

## VOLUNTEER MEDICAL STAFF CORPS (LONDON COMPANIES).

*Presentation of Medals.*—The London companies, Volunteer Medical Staff Corps, under the command of Surgeon-Lieutenant-Colonel J. E. Squire, M.D., V.D., paraded in good numbers at their headquarters at 10.30 A.M. on October 27th, and marched to the church of St. Bartholomew the Great, Smithfield, for a special thanksgiving service for the safe return of members of the corps from South Africa. The Rev. Sir Borradaile Savory, Bart., the Acting Chaplain to the corps, officiated, and preached a sermon from the text "Thy son liveth." After service the corps marched to Wellington Barracks, where a large company had assembled to witness the presentation of South African war medals to about forty-five members of the corps, amongst whom were Surgeon-Captain T. H. Openshaw, C.M.G., and Surgeon-Lieutenant A. Granville. Major-General Sir Henry Trotter, K.C.V.O., Commanding the Home District, presented the medals and then addressed the corps. He said that, though that was the first time the corps had assembled to receive medals, he was well aware that it was not the first time they had volunteered for active service. In 1884 they had offered to send a bearer company with the force which went to the Soudan, and in 1898 about 70 men volunteered for the expedition to Khartoum. Again they offered their services for the Transvaal war and were accepted. The men from the corps had done splendid work, which deserved the commendation not only of the corps to which they belonged, but of the country which they had had the honour to serve. Out of their number, which at the commencement of the war was little over 400, they had sent a detachment of 85, or 20 per cent. Among all the volunteers, whether they came from the Colonies or from this country, no corps had done greater service to their King and country than those he saw before him. No men deserved higher commendation because, though they were not called on to fight in the front ranks against the enemy, they had, perhaps, more important duties to perform. They had to attend to the sick and dying, who valued such services more than any words of his could express. He congratulated the corps sincerely, and hoped it would long continue to maintain the high standard of efficiency which it had attained. Surgeon-Lieutenant-Colonel Squire then addressed the men, and called for three cheers for the men who had so efficiently represented the corps in South Africa. The proceedings were brought to a close by the band playing the National Anthem. Amongst the guests present were Surgeon-General Preston, Acting Director-General A.M.S., Colonel Sir Thomas Gallwey, K.C.M.G., P.M.O., Home District, and several past officers of the corps.

## FEES FOR EXAMINING RECRUITS.

A.M.R.—There would seem to be no reason against claiming fees for examining recruits or reservists unless these have been included in the numbers for which contract rates have been paid.

## THE WELSH HOSPITAL.

Viscountess Parker, President of the Ladies' Committee of the Welsh Hospital, distributed war medals to the staff of the hospital who had served in South Africa, at the Mansion House, London, on October 29th. Sir John Williams, the Chairman of the General Committee, presided. Sir David Evans, the Treasurer, stated that there was a cash balance in hand of £4,192; of this, £300 was to be reserved to meet outstanding liabilities, £250 was to be sent to the officers commanding the three Welsh regiments now in South Africa to provide extra clothing or comforts for their men, and the remainder was to be utilised in making grants to wounded and incapacitated soldiers of the Welsh regiments, Welsh Militia, Volunteers, and Yeomanry, and in providing for widows and orphans, whether they were on the establishment or not. Lady Parker then presented a piece of plate to Mr. Arthur Hughes, the Acting Honorary Secretary, in recognition of his able and unselfish labours on behalf of the hospital.

# MEDICO-LEGAL AND MEDICO-ETHICAL.

## MEDICAL ETIQUETTE.

What should be the conduct of a specialist when consulted by a patient under the care of a general practitioner who has not been informed of the patient's intention to seek further advice?

A correspondent writes as follows:

A patient of mine suffering from bladder trouble with ammoniacal urine whom I was treating with urotropine tabloids and bromide mixture was advised by her friends to consult a "specialist." She did so without telling me. A few days later I was sent for, told the whole story, and shown the great man's prescription for urotropine and potassium bromide. The condition of the patient was unchanged. I naturally declined to attend further. Having ascertained that the specialist knew a doctor was attending, I should like to know whether there is one etiquette for general practitioners and another for specialists?

In reply to an inquiry as to what he would have liked the specialist to do, our correspondent wrote:

From an ideal point of view I think the specialist should have pointed out to my patient that ethically she sinned in not acquainting me with her wish to have another opinion, and that practically it would have been to her advantage had she been accompanied by a letter stating what treatment had been tried. Many patients only require this to be pointed out to see it. If this plan is more than we can expect, I think the specialist should write to the doctor, tell him of his patient's visit, say what he has prescribed, and volunteer his willingness to further advise on hearing from him. That would end the consultation. If this was an understood rule and acted on invariably, patients would soon learn the desirability of acting straightforwardly, and would assuredly conduce to a better feeling between the general practitioner and the specialist.

This case was submitted to a representative general practitioner, who consulted a number of his friends, and has expressed the following opinions, in which he says he finds very general agreement:

"Where a patient is actually under treatment by a general practitioner for some particular complaint for which he desires to consult a specialist: (1) The medical attendant has a right to expect that his patient will inform him before going to a specialist.

"(2) The patient's medical adviser is justified in declining further attendance, but he would not always be acting wisely in doing so; very often a protest would suffice, but it would depend upon the special circumstances of the case; the patient may have erred through ignorance.

"(3) It is not the duty of the specialist to inquire if the patient is under the care of another medical man; but if it comes to his knowledge that such is the case then he should refuse to advise without the permission of the said medical man (emergencies excepted) having been first obtained.

"(4) It would be sufficient for the specialist to write to the medical attendant, explaining the opinion he had formed of the case, and the treatment he considered it desirable to carry out, leaving it to the medical attendant to convey the opinion to the patient.

"(5) It is undoubtedly the bounden duty of every medical attendant to consent to his patient seeking special advice.

"Of course if a patient is not at the time actually under treatment for the particular complaint for which he wishes to go to a specialist he is free to do as he likes. In the particular case cited, it appears to me that the patient did wrong in consulting a specialist without informing her doctor, and that the doctor was justified in declining to attend further; but I very much doubt whether he acted wisely in doing so. He does not say in what way he ascertained that the specialist knew a doctor was attending, and I think this is an important point: because if he learnt this only from the patient, it would hardly be reliable without some confirmatory evidence, and I should hope that it is quite possible the specialist was not aware that the patient was actually under treatment. I should lay it down as a fundamental rule that no medical man may treat a patient who is already actually under treatment for the same complaint by another medical man, except after consultation or in emergencies."

We have also endeavoured to obtain the views of representative consultants, and we find a general agreement with the view that the usual medical attendant has a right to expect that his patient will inform him before going to a specialist. The most important question from their point of view is how to satisfy the requirements of the medical attendant and the patient when the patient comes to a consultant under these circumstances. It seems to be generally felt that the consultant's conduct must not rest upon such an accidental circumstance as whether he knows or does not know that another medical man is in attendance; this can be easily ascertained by questioning the patient, and if it is agreed that a letter should be written, this can always be done. The only difficulty is that the patient may absolutely refuse to allow a letter to be written, and then it is felt that the consultant has no right to disregard his wishes. Apart from this, these consultants would be perfectly willing to accept the rule that a letter should be written to the medical attendant in every case where the patient is already under the care of another medical man, for even as a matter of business it seems to be generally felt that it is to the interests of the consultant or specialist to communicate with the general practitioner, as a general practitioner may be a much more valuable client than an individual patient.

These views have received the assent of the general practitioner whose opinion is quoted above, except that he makes the condition that the consultant "leave it to the doctor to convey the opinion to the patient, and does not do it himself;" such a prohibition appears to be regarded by consultants as impracticable, and they hold that, so long as the consultant expresses the same opinion verbally to the patient and in writing to the practitioner, he does all that can be reasonably expected.

If we may take these opinions as fairly representative of the two classes, there appears to be no serious disagreement as to what ought to be done where a patient comes to a consultant without having previously informed his own medical attendant. The rule that the consultant should under these circumstances (with the patient's consent) write to the medical attendant is a good one, and we would not complicate it by making any exception as to whether he does or does not know that the patient is under the care of another practitioner, for it would be his duty to inquire and to obtain the practitioner's name. We believe that the consultants would be very glad to follow this rule if assured that by this means all ground for friction would be avoided.

## THE FEES OF A HERBALIST AND A BONESETTER.

A somewhat novel case was heard last week at the county court of Kirkby Lonsdale. According to the reports in a local newspaper it appears that Dr. W. T. Wearing, of Clapham, Lancaster, sued James Nash, a railway porter of Ingleton, for £4 12s. for professional attendance upon the defendant's son. Dr. Wearing had been called in during February, 1900, and had diagnosed the case as one of hip disease. The case was treated in the usual way for about two months, but an abscess forming the father was advised to take the boy to the infirmary at Lancaster or Leeds. This was not done, and Dr. Mackenzie, of Ingleton, was called in, and approved the treatment that had been carried out. The parents, however, in spite of advice, took the boy to an unqualified man at Lancaster, who, according to the evidence, stated he was a herbalist. He told the parents that the hip was "out of place, and that there was no disease," and he "swained"—that is, "dissolved"—the lump away by rubbing. He also advised that the patient should be taken to a bonesetter to put the joint in its place. For this treatment and advice the "herbalist" received £2, and the bonesetter for his operation charged £10 10s. The treatment by Dr. Wearing was approved both by Dr. Mackenzie and Dr. Barling of Lancaster, and the Judge gave judgment for the plaintiff for the amount claimed, and also for the fees for medical witnesses, stating that his experience told him that the three doctors were right and the herbalist wrong. We congratulate Dr. Wearing upon the excellent professional spirit he has shown in bringing the case into court.

## AN ACTION FOR FEES.

From a report in the *Wigan Examiner* of October 19th we note a case which illustrates the necessity of first making sure as to the liability of the person whom it it is de-ired to sue for fees. In this case a medical man sought to recover in the county court the sum of £18 for professional attendance and medicines applied to the wife of the defendant. Neither the attendance nor the supply of the medicines was disputed, but the defence raised was that under the circumstances the wife had no authority to pledge the credit of the husband, and that the latter was not liable. From the evidence it appeared that for domestic reasons the wife stayed with her mother during the illness which ultimately ended in her death. The contention of the defendant was that he was quite willing for his "own doctor" to attend his wife, but that his mother in-law objected, and stated that she would not permit any doctor other than the plaintiff to enter the house. Under these circumstances he claimed that, not having acquiesced in the plaintiff's attendance, he was not liable for the payment thereof. It also appeared that the plaintiff had "hooked" the attendance to the mother of the patient. The Judge decided that it could not be held that in law there was any authority to pledge the husband's credit in this particular instance, and non-suited the plaintiff. This judgment no doubt is excellent law, but it is hard upon the medical practitioner who attended.

## LIABILITY OF EMPLOYERS FOR ATTENDANCE UPON SERVANTS.

A case was tried at the North Walsham County Court before Judge Willis in which the plaintiff, Dr. Williams, sued to recover fees (£2 2s. 6d.) for medical attendance upon, and medicine supplied to, a domestic servant in the employment of the defendant. From the evidence it was clearly established that the defendant had requested the plaintiff to come and see the servant, but on sending in the account the liability was repudiated. An action was raised in the county court against the servant, but judgment being given in her favour, the present action was brought against her employer. His Honour gave judgment for the plaintiff and stated that if the defendant had not intended to pay for the attendance he should have made it clear to Dr. Williams when he called him in.

## A CORONER ON MIDWIVES.

At an inquest held in Bristol a midwife, according to a report in the *Bristol Mercury*, was censured by the deputy coroner for failing to send for medical assistance in a case which she was attending. From the evidence it appeared that the husband of the patient requested the midwife to send for a doctor early in the confinement, but that both the midwife and the patient did not see the necessity for so doing. When medical assistance was sought it was too late to save life, and the deceased died from heart failure and exhaustion. Dr. Hedley Hill, in giving evidence, stated that had the woman been properly examined both she and the child might have been saved. The Deputy Coroner condemned the state of things under which any person could rush into cases of this sort and accept responsibility without qualification, and then when there was an abnormal case call in a doctor when it was too late.

## UNQUALIFIED ASSISTANTS: FEES DISALLOWED.

A case bearing upon the employment of unqualified assistants was held at the county court in Shoreditch recently. Dr. Haddens, according to the report in the *Morning Post*, sued a tradesman for £3 3s. for medical attendance. The defence successfully raised was that as some portion of the attendance charged for was made by an unqualified assistant the amount in full could not be recovered. As Dr. Haddens was unable to rebut this evidence, his Honour Judge French only allowed him £1 1s. "for that portion of the account" that referred to his own attendance, and pointed out that the law on the subject was that an unqualified assistant's attendances cannot be recovered in court.

## SCHOOL ATTENDANCE AND MEDICAL CERTIFICATES.

Country Practitioner writes: In the case of a child unfitted by illness to attend school, is it the duty of the parents or guardians to obtain a medical certificate for the School Board authorities, or does the duty devolve upon the School Board inspector—for example, in the case of penniless parents, upon which party does the payment of the doctor's fee fall?

*** This subject has already been referred to in the British Medical Journal of March 16th, 1901, p. 684. Legally it is not the duty of parents or guardians to furnish any medical certificate, nor is it the duty of the School Board inspector to obtain one. The Board will not, in the case of penniless parents, pay a doctor's fee. It is the duty of parents to cause their children to attend school unless there is some reasonable excuse, illness being held to be such. The responsibility of

enforcing the law lies with the school attendance authority, who in illness or other causes decide on the evidence before them; they may not require a medical certificate, though they usually but not necessarily accept one without further question. If the case comes into court the certificate is of no legal value, and if a medical man gives evidence for the defendant, although the school attendance authorities may lose the case on the evidence, they cannot be made to pay the medical witness. There is no getting away from the fact that the Acts controlling education lay the whole onus and cost of proving the reasonable excuse or illness on the parent or guardian, and in the case of the penniless parent the onus falls indirectly on the doctor. If a medical certificate be asked for, the proper way in any case of illness would be to say that the child was too ill for school attendance, but willing to be examined by any medical man deputed by the school attendance authority, who would of course pay him. If this were done systematically by the profession it would bring about an improvement in the indirect taxation by medical certificates to which many at present unwillingly submit.

### FEE OF MIDWIFERY NURSE.

A PATIENT engages a nurse to attend her in her confinement. She miscarries at an early period and sends for the nurse, who is unable to come, so that she is compelled to provide herself with another nurse. Later on the first nurse sends in a claim for her fee. Is she entitled to it?

*** We do not think that the nurse is entitled to a fee under the circumstances.

### MEDICAL ETIQUETTE.

F. I. F. is medical officer to a workhouse where he has a case of small-pox under treatment. He complains that A., a medical neighbour, went to the workhouse and saw the patient without obtaining permission from either the workhouse master or himself. A. excuses himself for not seeing the master by stating that he asked for him but heard that he was ill in bed, and, according to our correspondent, claims the right as a ratepayer to see any case in the workhouse.

*** No ratepayer, merely as such, has the right to go to the workhouse infirmary to see an inmate suffering from small-pox; but, even if he had, it would be discourteous and a breach of etiquette for a medical practitioner to visit a case under the care of another without asking his permission or the permission of some person in authority. Assuming the facts to be as stated, the incident illustrates what is often said, that medical etiquette is no more than a set of rules dictated by good taste and good feeling. The dispute is especially to be deplored as the parties were previously on friendly terms, and it is to be hoped—supposing, of course, that the facts have been fully and correctly stated—that A. will express regret for his action.

MEDICUS complains that B. was called to one of A.'s patients taken suddenly ill during A.'s absence in the country. B., suspecting that the symptoms were due to a drug, and knowing that A. had his medicines dispensed by a local chemist, called on the chemist, and ascertained the medicine the patient was taking without asking A.'s permission.

*** It would be improper for B. under ordinary circumstances to inquire from the chemist what drug had been given by A. to his patient, but, in a case of suspected accidental poisoning, it would be reasonable that in A.'s supposed absence B. should go straight to the chemist to get such information as would enable him to deal properly with the emergency.

### PATIENTS IN SINGLE CHARGE.

SURGEON can take one mental case as a resident patient after he and others concerned have taken all the steps and observances required by law as preliminaries. There are also numerous other subsequent requirements which, together with those already referred to, would take far too much space to describe. "Surgeon," therefore, had better address the Commissioners in Lunacy, 66, Victoria Street, London, S.W., on the subject, asking for a copy of instructions relevant to the matter.

# UNIVERSITIES AND COLLEGES.

### UNIVERSITY OF EDINBURGH.

GENERAL COUNCIL.

*The Carnegie Bequest.*

THE statutory half yearly meeting of the General Council of the University of Edinburgh was held in the Examination Hall on October 25th, Principal Sir William Muir presiding. The attendance was unusually large. Mr. F. Grant Ogilvy, Director of the Museum of Science and Art, and Mr. J. Campbell Lorimer, Advocate, were elected Assessors to represent the Council in the University Court for the next four years.

Mr. J. C. Lorimer submitted the joint report of the Business and Finance Committee on the Carnegie Trust. The income of Mr. Carnegie's gift of £2,000,000—£100,000 a year—was to be divided between the increase of teaching power and facilities and the payment of class fees. Under the first head the Joint Committee recommended the General Council to represent to the University Court that the following were clamant needs of the University: (1) The development of the work of the University in connection with the teaching of modern languages; (2) the strengthening of the teaching staff in the Medical Faculty, so that subjects which had recently become of increased importance should be adequately represented; (3) the provision of suitably equipped laboratories for the instruction of students in all graduation subjects for which practical work was required; (4) the establishment of laboratories providing facilities for research in the main lines of scientific work; (5) the improvement of the library. In regard to the payment of university class fees, reference was made to the letter written by Mr. Carnegie to the Chairman of the Trust, the Earl of Elgin, explaining that all students otherwise qualified who applied would have their fees paid without inquiry as to their pecuniary circumstances, there being, however, an honourable understanding that only those should apply who needed the assistance. It was pointed out that other rightful objects of help from the Trust were extramural colleges and technical institutions doing work on a university level, the establishment of University Extension lecturers, and the institution of evening classes.

In submitting this report, Mr. Lorimer proposed the following resolution which had been drawn up by the Business Committee:

"The General Council tenders its cordial thanks to Mr. Andrew Carnegie, LL.D., of New York and Skibo, a noble-minded Scotsman, for his munificent gift of £2,000,000 to the Universities of Scotland, and trusts that he will ere long witness the wise application of the funds under the direction of his trustees, and the expansion and development of University instruction and research in Scotland."

In addition, Mr. Lorimer moved that the Council approve of the part of the report referring to the Carnegie Trust, and endorse the recommendations referred to.

Dr. Ireland seconded, and that part of the report was adopted.

Mr. Buchan moved the adoption of the second section of the joint report, that relating to the causes of the decrease in the number of students, with suggestions for meeting it, among which were the endowment of a number of post-graduate scholarships for research to keep within the University its most distinguished graduates, and the delegation of the teaching of the earlier subjects of the curriculum, such as physics, chemistry, zoology, and botany, to the secondary schools.

Mr. James Oliphant seconded the adoption of the report, which was agreed to.

Dr. R. J. Berry then moved:

That this Council requests the University Court to inquire into the feasibility of reorganising the medical curriculum on the lines suggested by the Pathological Club of Edinburgh.

Dr. Norman Walker, in seconding, said the object of the motion was to facilitate the working of the medical curriculum and to give the teachers a little more time than they had at present for original research, and also to prevent that overlapping of teaching which was one of the principal troubles in the curriculum.

On the suggestion of Mr. Buchan, it was agreed to remit the motion to the standing committees of the General Council for consideration.

### CONJOINT BOARD IN SCOTLAND.

AT the quarterly examinations of the above Board, held recently in Edinburgh, the following candidates satisfied the Examiners:

*First Examination, Four Years Course.*—J. S. Cooper, W. P. Timmon, J. E. Mullan, and J. J. Bell.

*First Examination, Five Years Course.*—T. Owens, A. Brown, G. T. N. Darling, R. P. Hosford, W. M. Chambers, L. Patchett, and V. Brown.

One passed in Physics, 2 in Elementary Biology, and 3 in Chemistry.

*Second Examination, Four Years Course.*—N. P. Fairlax, J. J. Anthony-Pillay, J. Gilmour, C. V. Crasier, and E. R. Harriott.

One passed in Physiology, and 1 in Materia Medica.

*Second Examination, Five Years Course.*—W. L. Hodge (with distinction), A. B. H. Pearce, I. Campbell, D. Cameron (with distinction), G. M. A. Thomas, W. Fleming, D. C. Callaghan (with distinction), H. Armstrong, J. D. Jones, C. R. Whittaker, J. J. Egan, J. Watson, and R. Baranov.

Three passed in Anatomy, and 2 in Physiology.

*Third Examination, Five Years Course.*—Lilian Gertrude Simpson, S. M. Hodiwalla, D. Banerji, E. W. Kemp, J. W. Dougall, Mary L. Lytle, T. Bragg (with distinction), S. J. Graham, J. Brydon, W. J. O'Sullivan, J. Macarthur, P. F. Doorly, D. Ahern, and R. S. MacKintosh.

Two passed in Materia Medica.

*Final Examination.*—K. C. Edwards, P. C. Leslie, H. D. Matthews, H. B. Wyman, W. C. Marsden, A. Fox, G. D. Bateman, T. E. Harty, P. J. Kerwin, W. S. Cowin, R. Culbertson, W. F. Waugh, M. H. Downey, D. Riordan, A. F. Fleming, N. N. Blanchard, K. L. Bell, N. E. Gibbs, H. Macfarlayne, W. G. Rose, A. C. Zeitz, J. R. Smith, A. Lyons, A. C. Balfour, H. F. Wilkin, E. Sexton, N. S. Monnier, A. Macqueen, J. C. Curtis, H. A. Knight, W. J. O'Sullivan, D. Roberts, C. S. Ratnum, S. P. Mistri, V. P. Gonsalves, A. W. McDonald, A. G. Jackson, J. M. Maclean, and W. O. Prichard.

Eight passed in Medicine and Therapeutics, 2 in Surgery and Surgical Anatomy, 3 in Midwifery, and 3 in Medical Jurisprudence.

# HOSPITAL AND DISPENSARY MANAGEMENT.

### THE CORONATION AND THE LONDON HOSPITALS.

IN connection with the Coronation a vigorous effort is to be made through the Prince of Wales's Hospital Fund to place the metropolitan hospitals on a sound financial basis. It is intended that an appeal should be made to the working-men and women within the district supplied by these hospitals to contribute 1d. for each pound of their weekly wage for a definite period of three, six, or twelve months. It is calculated that if this be undertaken as an obligation throughout the entire area it will result in

freeing the hospitals from all pecuniary embarrassment. At the present time there are 450 beds in the hospitals of London unoccupied by patients on account of an insufficiency of funds, and 250 of these might be at once taken into use if the means of supporting them were forthcoming. It is especially in order to reopen these that the present appeal is being made. In 1880 the average number of days a patient remained in hospital, it is stated, was 38; in 1890 it had sunk to 23·87, and in 1899 it sank to fewer than 20 days. This, of course, implies a great saving of wage-earning time both to the individual and to the State. While the Hospital Saturday and Sunday collections in London realised £10 for each thousand persons, in Wolverhampton they realised some £36. It is estimated that only about one-half of the annual income requisite for hospital purposes in London has so far been secured, and it is felt that no more appropriate Coronation gift to His Majesty could be imagined than to provide the means of fulfilling his own beneficent idea.

# PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

## ZYMOTIC MORTALITY IN LONDON.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

THE accompanying diagram shows the prevalence of the principal zymotic diseases in London during the third, or summer, quarter of this year. The fluctuations of each disease, and its relative fatality as compared with that recorded in the corresponding periods of recent years, can thus be readily seen.

*Small-pox.*—The fatal cases of small-pox in London last quarter amounted to 35, the corrected average number in the corresponding periods of the ten preceding years being 13. Of these 35 deaths, 20 belonged to the borough of St. Pancras, 4 to St Marylebone, 2 to Hammersmith, and 2 to Islington. The number of small-pox patients admitted into the Metropolitan Asylums Hospitals during the quarter was 286, against 5 and 6 in the two preceding quarters; the number remaining under treatment at the end of September was 163, while at the end of June only 5 small-pox patients were under treatment in these hospitals.

*Measles.*—The deaths referred to measles, which had been 243, 434, and 545 in the three preceding quarters, declined again to 437 during the three months ending September last, and were 18 below the corrected average number. Among the various metropolitan boroughs measles showed the highest proportional fatality in Finsbury, Shoreditch, Bethnal Green, Stepney, Poplar, and Battersea.

*Scarlet Fever.*—The fatal cases of this disease, which had been 91 and 163 in the two preceding quarters, further rose to 170 during the three months under notice, but were 51 below the average number in the third quarters of the ten preceding years. Among the various metropolitan boroughs scarlet fever was proportionally most fatal in Bethnal Green, Stepney, Southwark, Bermondsey, and Camberwell. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 2,460, 1,533, and 2,752 at the end of the three preceding quarters, had further risen to 3,096 on the 28th ultimo. The number of new cases admitted into these hospitals during the quarter was 4,572 against 2,012 and 3,781 in the two preceding quarters.

*Diphtheria.*—The deaths referred to diphtheria in London, which had been 406, 308, and 234 in the three preceding quarters, rose again to 349 during the three months ending September last, but were 186 below the corrected average number. This disease showed the highest proportional fatality in St. Pancras, Islington, Hackney, Finsbury, City of London, and Poplar. The number of diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of last quarter was 1,499, against 1,343, 1,084, and 1,169 at the end of the three preceding quarters; 2,744 new cases were admitted during the three months under notice, against 1,726 and 1,969 in the two preceding quarters.

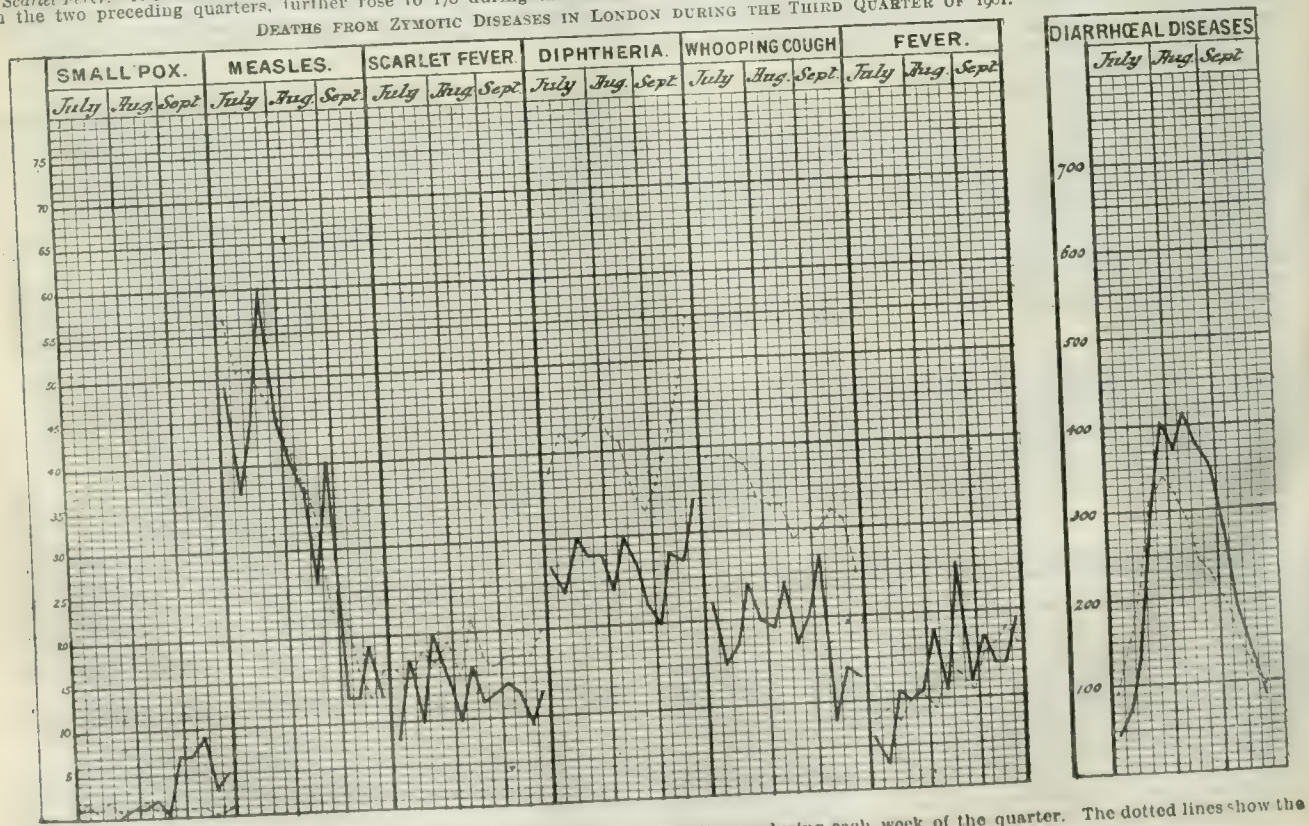
*Whooping-cough.*—The fatal cases of this disease, which had been 594 and 609 in the two preceding quarters, declined again to 240 during the three months ending September last, and were 191 below the average number in the corresponding periods of the ten preceding years. Among the various metropolitan boroughs, whooping-cough was proportionally most fatal in Fulham, Hampstead, Finsbury, Stepney, Battersea, and Deptford.

*"Fever."*—Under this heading are included deaths from typhus, from enteric fever, and from simple and ill-defined forms of continued fever. The deaths referred to these different forms of "fever," which had been 274, 146, and 74 in the three preceding quarters, rose again to 171 during the quarter under notice, and were slightly in excess of the corrected average number. Of these 171 deaths, 1 resulted from typhus and 3 from simple continued fever. The "fever" death-rate was highest in Fulham, Hampstead, Holborn, Stepney, and Bermondsey. The Metropolitan Asylums Hospitals contained 292 enteric fever patients at the end of September last, against 403, 162 and 125 at the end of the three preceding quarters: 514 new cases were admitted during the quarter, against 403, 329, and 233 in the three preceding quarters.

*Diarrhœal Diseases.*—The 3,159 deaths from diarrhœal diseases registered in London during the three months ending September last showed an excess of 419 over the corrected average number in the corresponding periods of the ten preceding years. Among the various metropolitan boroughs these diseases were proportionately most fatal in Fulham, Finsbury, Shoreditch, Poplar, Southwark, and Battersea.

In conclusion it may be stated that the 4,561 deaths referred to the principal zymotic diseases in London last quarter almost corresponded with the corrected average number in the third quarters of the ten preceding years, 1891-1900. The lowest zymotic death-rates in the several metro-

DEATHS FROM ZYMOTIC DISEASES IN LONDON DURING THE THIRD QUARTER OF 1901.




NOTE.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding weeks of the ten preceding years, 1891-1900.

politan boroughs were recorded in Kensington, Chelsea, City of Westminster, Hampstead, Stoke Newington, and City of London: and the highest rates in Fulham, Finsbury, Shoreditch, Stepney, Poplar, Bermondsey, and Battersea.

## THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

[Specially Reported for the British Medical Journal.]

The Registrar-General has just issued his return relating to the births and deaths registered in the third quarter of 1901, and to the marriages during the three months ending June last. The marriage-rate was equal to 17 7 per 1,000, and was 1.1 per 1,000 above the average rate in the corresponding quarters of the ten preceding years.

The births registered in England and Wales during the quarter ending September last numbered 234,932, and were equal to an annual rate of 28.6 per 1,000 of the population, estimated by the Registrar-General at more than thirty-two and a-half millions in the middle of this year. This rate was 1.1 per 1.000 below the mean rate in the corresponding quarters of the ten preceding years. The birth-rates in the several counties ranged from 22.9 in Sussex and in Westmorland, 23.0 in Dorsetshire, 23.2 in Rutlandshire, and 23.9 in Suffolk to 32.5 in Staffordshire and in Nottinghamshire, 32.8 in South Wales, 34 3 in Northumberland, 35.2 in Monmouthshire, and 36.8 in Durham. In thirty-three of the largest English towns, including London, the birth-rate last quarter averaged 29.2 per 1,000, and exceeded by 0.6 the general English birth-rate. In London the rate was 28.9 per 1,000, while it averaged 29 4 in the thirty-two large provincial towns, among which it ranged from 22.6 in Oldham and in Huddersfield, 22.9 in Halifax, 23.5 in Bradford, and 23 6 in Brighton to 34.0 in Hull, 34.7 in Sunderland, 35.8 in West Ham, and 37.6 in Gateshead.

The births registered in England and Wales during the three months under notice exceeded the deaths by 95,649; this represents the natural increase of the population during that period. From returns issued by the Board of Trade it appears that 100,211 emigrants embarked during last quarter for places outside Europe, from the various ports of the United Kingdom at which emigration officers are stationed. Of these 100,211 emigrants, 39,571 were English, 9,436 Scotch, and 11,957 Irish, while 39,247 others were of foreign origin. Compared with the averages in the corresponding quarters of the three preceding years the proportions of English and of Scotch emigrants showed an increase of 13.4 per cent. and 29.2 per cent. respectively, while that of Irish emigrants decreased by 1.9 per cent.

During the third quarter of this year the deaths of 139,283 persons were registered in England and Wales, equal to an annual rate of 16.9 per 1,000, which was also the average rate in the third quarters of the ten preceding years. The lowest county death-rates last quarter were 10.7 in Westmorland, 11.2 in Huntingdonshire and Dorsetshire, 11.8 in Wiltshire, and 11.9 in Somersetshire; and the highest rates were 19.2 in the West Riding of Yorkshire, 20.5 in Lancashire, 23 9 in Durham, and 24.0 in Northumberland. In the urban parts of England and Wales, with a population estimated at about 22½ millions, the rate of mortality during the quarter under notice was 18.2 per 1,000: while in the remaining, and chiefly rural, areas with a population of about 10 millions, the rate was 14.2 per 1,000; these urban and rural rates were 0.2 above and 0.6 below the respective averages. Among thirty-three of the largest English towns the mean death-rate was 19.2 per 1,000, or 2.3 in excess of the general English death-rate during the same period. In London the death-rate was 17 1 per 1,000, while it averaged 20.5 in the thirty-two large provincial towns, among which the rates of mortality ranged from 12.8 in Bristol, 13.4 in Cardiff, 14 0 in Croydon, and 14 4 in Halifax, to 23.9 in Liverpool, 25.4 in Sunderland, 25.5 in Newcastle, and 27 7 in Gateshead. In sixty-seven other large towns, with an estimated aggregate population of more than four millions, the mean death-rate was 17.9 per 1,000, or 1.3 below the mean rate in the thirty-three great towns.

The 139,283 deaths registered in England and Wales during the three months ending September last included 23,041 which were referred to diarrhœal diseases, 1,991 to diphtheria, 1,015 to whooping-cough, 1,847 to measles, 1,540 to "fever" (principally enteric), 1,030 to scarlet fever, and 44 to small-pox. The mortality from diphtheria and from diarrhœal diseases exceeded the average in the corresponding quarters of the ten preceding years, while that from each of the other principal zymotic diseases showed a decline. Of the 44 deaths from small-pox, 35 were persons belonging to London.

The rate of infant mortality in England and Wales last quarter, or the proportion of deaths under 1 year of age to registered births, was equal to 208 per 1,000, or 18 per 1,000 above the average. In thirty-three of the largest English towns, including London, the rate of infant mortality was 248 per 1,000; in London the rate was 205, while it averaged 277 in the thirty-two large provincial towns, among which it ranged from 120 in Halifax, 124 in Bristol, 145 in Cardiff, and 177 in Plymouth, to 343 in Gateshead, 348 in Manchester, 351 in Salford, and 362 in Birkenhead.

The mortality in England and Wales last quarter among persons aged between 1 and 60 years was equal to 7.8 per 1,000 of the estimated population at this group of ages, and was 0.4 per 1,000 below the mean rate in the ten preceding third quarters. In the thirty-three great towns the mortality at this age-group averaged 9 3 per 1,000, and ranged from 5.1 in Croydon, 6.2 in Derby, 6.5 in Bristol, and 6.6 in Cardiff to 12.2 in Salford and in Sunderland, 12.7 in Gateshead, and 12.9 in Newcastle.

Among persons aged 60 years and upwards the death-rate in England and Wales last quarter was equal to 53.1 per 1.000 of the population estimated to be living at this group of ages, and was slightly below the mean rate in the corresponding quarters of the ten preceding years. In the thirty-three great towns this death-rate averaged 57.8 per 1.000, and ranged from 43.0 in Croydon, 44 0 in Plymouth, 46.3 in Wolverhampton; and 48 8 in Leicester to 76.6 in Sunderland, 80.1 in Bolton, 80.6 in Oldham, and 81.0 in Newcastle.

The mean temperature of the air at the Royal Observatory, Greenwich, was 61.7°, which was 1.9° above the average in the third quarters of 130 years; the excess averaged 3.0° in July, 1.3° in August, and 13.0° in September. The rainfall during the quarter measured 5.10 inches, and was 2.07 inches below the average.

## HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,767 births and 3,663 deaths were registered during the week ending Saturday last, October 26th. The annual rate of mortality in these towns, which had been 15.6, 15.9, and 16.8 per 1,000 in the three preceding weeks, declined again last week to 16.7 per 1.000. The rates in the several towns ranged from 9.9 in Wolverhampton, 10.6 in Leicester, 10.8 in Croydon, and 11.4 in Brighton and in Halifax to 21.2 in Plymouth, 22.3 in Manchester, 22.5 in Blackburn, and 25.2 in Newcastle. In the thirty-two provincial towns the mean death-rate was 17.0 per 1,000, and exceeded by 0.9 the rate recorded in London, which was 16.1 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.8 per 1,000; in London this death-rate was equal to 1.4 per 1,000, while it averaged 2.1 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 3.2 in Cardiff, 3.5 in West Ham, 4.2 in Norwich, and 7.3 in Blackburn. Measles caused a death-rate of 1.0 in Sheffield, 1.2 in Manchester, 3.7 in Norwich, and 4 1 in Blackburn; scarlet fever of 1 2 in Blackburn; whooping-cough of 1.2 in Newcastle; "fever" of 1.1 in Huddersfield; and diarrhœal diseases of 1.1 in Swansea and in Liverpool, 1.4 in Sunderland, and 1.6 in West Ham and in Blackburn. The 64 deaths from diphtheria in the thirty-three towns included 26 in London, 6 in Cardiff, 6 in Leeds, 5 in West Ham, 4 in Portsmouth, 3 in Sheffield, and 3 in Hull. Six fatal cases of small-pox occurred in London, and 1 in Liverpool, but not one in any other of the thirty three towns. There were 180 small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, against 163, 169, 175, and 172 at the end of the four preceding weeks; 57 new cases were admitted during the week, against 51, 37 and 47 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had risen from 2,994 to 3,334 at the end of the seven preceding weeks, had further increased to 3,343 on Saturday, October 26th; 400 new cases were admitted during the week, against 426, 422, and 407 in the three preceding weeks.

## HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, October 26th, 895 births and 616 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 14.5, 16.1, and 16.0 per 1,000 in the three preceding weeks, further rose last week to 19.3 per 1,000, and showed an excess of 2.6 per 1,000 over the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13 7 in Paisley and 14.7 in Leith, to 23.6 in Aberdeen and 29.0 in Greenock. The zymotic death-rates in these towns averaged 2.2 per 1,000, the highest rates being recorded in Glasgow and Aberdeen. The 294 deaths registered in Glasgow included 10 from measles, 6 from whooping-cough, 11 from "fever," and 12 from diarrhœa. Three fatal cases of diphtheria, 2 of whooping-cough, and 3 of diarrhœa were recorded in Edinburgh. Two deaths from measles occurred in Dundee, and 7 from diarrhœa in Aberdeen, 2 in Leith, and 2 in Greenock.

## THE NORTHWICH GUARDIANS AND SUPERANNUATION.

In the British Medical Journal of October 26th, p. 1307, it was briefly noted that the Northwich Guardians had at their last meeting admitted the legality of Dr. Moreton's claim for superannuation, and had directed a cheque to be issued as payment.

This case, which has been under consideration for some months past, was fully described at p. 664 of the Journal of September 7th, 1901. We then expressed the opinion that the Northwich Guardians had no defence to Dr. Moreton's claim, and that if he should find it necessary to take legal proceedings to establish it, a decision in his favour would necessarily follow. We understand that since that time the guardians have again, more than once, had Dr. Moreton's claim before them, and that notwithstanding the warnings they had previously had, they persistently refused to pay, the reasons assigned for this refusal being of a frivolous and vexatious character.

The question, however, seems to have been brought to a crisis at the meeting of the Board held on October 18th when a letter was read from Dr. Moreton's solicitor requesting payment of his client's claim, followed by a statement that unless he received a cheque for the amount "his instructions were to proceed." The Clerk again expressed his opinion that if proceedings should be taken there would be no defence to the action, and asked what he was to do if a writ should be issued.

This question seems to have brought some of the members of the Board to their proper senses, as after a long discussion and further opposition to payment by several guardians a division on the main question was taken, and a cheque for the full amount of Dr. Moreton's claim ordered to be drawn.

We most sincerely congratulate Dr. Moreton. It is not easy to understand why this opposition to his claim for superannuation after forty years service should have met with such persistent opposition by so many members of the Board. We should have thought that after an emphatic statement by the clerk (himself a solicitor) that the claim made was a legal one, and could not be defended with any chance of success, all opposition would have ceased; such, however, was not the case, as even at the last as many as eleven guardians voted for non-payment, on what grounds they themselves best know. It is some satisfaction to find that any further opposition is now beyond their power. The action of this section of the Northwich Board of Guardians appears to have been so unreasonable as to suggest the question, Can such men be regarded as proper persons to be entrusted with the duty of acting as guardians of the poor?

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

# MEDICAL NEWS.

THE second annual dinner of the Otological Society of the United Kingdom will take place at the Café Monico, London, on December 2nd.

ST LUKE'S DAY SERVICE IN LIVERPOOL.—The special service for members of the medical profession in Liverpool and the district took place on October 20th, the Sunday after St. Luke's Day. About 300 medical men were present, and an interesting sermon was preached by the Bishop of the diocese. The collection, which was in aid of the Medical Benevolent Fund, amounted to £28. Satisfaction with the service and the arrangements for it has been very widely expressed, and it is hoped that it will be repeated in future years.

THE report of the fourth year of the Nurses' Hostel Company Limited, presented to the annual meeting on October 25th, stated that the new building rendered necessary by the increasing demands upon the accommodation provided by the hostel was approaching completion, and would be ready for occupation early in 1902. The expenses in connection with the purchase of the site and the erection of the building had rendered it necessary to increase the capital of the company from £10,000 to £20,000, but the success of the enterprise was such that the directors were able to declare a dividend of 4 per cent., and to place £200 to the reserve fund.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—The first meeting of the session took place on October 4th, when the President (Dr Dun) delivered an address on blood-letting in the treatment of disease. He gave a historical survey of the subject, and showed by quotations from various classical works how much blood letting had been abused. He maintained that the pendulum had now swung too far in the opposite direction, and indicated the advantages of the use of blood letting in conditions where there was sudden engorgement of the systemic veins, pulmonary artery, and especially of the right side of the heart.

READING PATHOLOGICAL SOCIETY.—The sixtieth annual meeting of the Reading Pathological Society was held at the Royal Berkshire Hospital on October 24th, when Dr. Dawson Williams the Editor of the BRITISH MEDICAL JOURNAL, gave an oration on Therapeutic Institutions. He reviewed the various institutions which are rapidly appearing in this and other countries for the treatment of special diseases, and discussed their effect on medical practice. The members and visitors afterwards dined together. The hope was expressed that the oration would appear *in extenso* in the medical papers. Among the visitors were Mr. R. Clement Lucas, Dr. Drysdale, Dr T. J. Horder, and Mr. Walter Edmunds of London.

SOUTHPORT MEDICAL SOCIETY.—The annual meeting was held on October 9th at the Temperance Institute, Dr. Harris in the chair. Twenty-nine members were present. The annual report and balance-sheet, showing a balance in hand of £32 3s. 11d., was adopted, and the following officers elected for the ensuing session:—*President:* Dr. Pinkerton. *President elect:* Dr. F. J. Baildon. *Vice-President:* Dr. J. C. Russell. *Committee:* Drs. Anderson, Ashworth, Baines, Barrett, Harris, and Walker. *Honorary Treasurer:* Dr. Melvburn Brown. *Honorary Secretary:* Dr. R. M. Littler.—Dr. Pinkerton gave an inaugural address on movable kidney. Numerous illustrative cases were quoted.

## MEDICAL VACANCIES.

The following vacancies are announced:

BARROW UPON SOAR, BIRSTALL, BRAY, GRETTON, HALLATON, HINCKLEY, LUTTERWORTH, MONK'S KIRBY, OADBY, AND WIGSTON AND SYSTON RURAL DISTRICTS, and the URBAN DISTRICTS of THURMASTON and WIGSTON-MAGNA.—Medical Officer of Health. Salary £650 per annum. Applications to the Clerk to the Joint Committee, Lutterworth, by November 18th.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum with board, resi dence, and laundry. Applications to Mr. E. H. Illige, Honorary Secretary, 52, Grosvenor Road, Birkenhead, by November 14th.

BRACEBRIDGE ASYLUM, near Lincoln.—Junior Assistant Medical Officer: unmarried, and not over 30 years of age. Salary, £175 per annum, with furnished apartments, board, attendance, etc. Applications to Mr. W. F. Pago jun. Solicitor and Clerk to the Visiting Committee 5 and 6, Bank Street, Lincoln, by November 27th.

BRENTWOOD: ESSEX COUNTY ASYLUM.—Junior Assistant Medical Officer; not over 25 years of age. Salary, £140 per annum. Applications to the Medical Superintendent.

CENTRAL LONDON OPHTHALMIC HOSPITAL Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by November 4th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Registrar. Honorarium, 20 guineas per annum. Applications to the Secretary by November 9th.

DERBY COUNTY ASYLUM, Mickleover.—(1) Senior Assistant Medical Officer (male). Salary, £18, rising to £150 per annum. (2) Junior Assistant Medical Officer. Salary, £110, rising to £130 per annum. Furnished apartments board washing, and attendance provided in each case. Applications to the Medical Superintendent.

DOVER HOSPITAL.—House-Surgeon; unmarried. Salary, £100 per annum, increasing after twelve months service, with board, lodging, and washing. Applications on forms provided to be sent to the Honorary Secretary.

DUBLIN: TRINITY COLLEGE.—King's Professorship of the Institutes of Medicine (Physiology and Histology). Applications to Dr. J. Craig, Registrar, Royal College of Physicians, Kildare Street, Dublin, by November 30th.

GLASGOW UNIVERSITY.—Additional Examiners for Degrees in Medicine with special reference to (1) Chemistry, (2) Materia Medica and Therapeutics, (3) Zoology, (4) Practical Medicine systematic and clinical, (5) Surgery systematic and clinical. Salary for (1), (2), and (3), £30, and for (4) and (5) £5. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by December 3rd.

GLOUCESTER: BARNWOOD HOUSE HOSPITAL FOR THE INSANE.—Junior Assistant Medical Officer. Salary, £150 per annum, rising to £170 after expiration of first year. Applications to the Medical Superintendent.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by November 19th.

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square, W.—Senior Clinical Assistants. Appointments for six months, but renewable. Applications to the Secretary-Superintendent by November 9th.

ITALIAN HOSPITAL Queen Square, W.C.—Honorary Surgeon. Applications to the Secretary by December 2nd.

LANCASTER COUNTY ASYLUM.—Assistant Medical Officer: unmarried, and not over 30 years of age. Salary commencing at £150 per annum, increasing to £200, and on promotion to £250 with furnished apartments, board, washing, and attendance. Applications to the Medical Superintendent.

LINCOLN COUNTY HOSPITAL.—Senior House-Surgeon: unmarried, and under 30 years of age. Salary £100 per annum with board, lodging, and washing. Applications to the Secretary by November 11th.

LIVERPOOL: HOSPITAL FOR WOMEN. House-Surgeon. Appointment for six months. Honorarium, £25. Applications to the Honorary Secretary of the Medical Board.

LONDON HOSPITAL, Whitechapel, E.—Aural Surgeon; must be F.R.C.S.Eng. Applications to the House Governor by November 15th.

LONDON TEMPERANCE HOSPITAL, N.W.—Assistant Resident Medical Officer.—Appointment for six months. Honorarium at the rate of 50 guineas per annum, with board, residence and washing. Applications to the Secretary by November 7th.

MANCHESTER COUNTY ASYLUM, Prestwich.—Junior Assistant Medical Officer unmarried, and under 35 years of age. Salary, £150, increasing to £250, with board, furnished apartments and washing. Applications to the Medical Superintendent.

MANCHESTER: ST. MARY'S HOSPITAL, Quay Street.—House-Surgeon and Resident Obstetric Assistant Surgeon. Appointment for one year, but eligible for re-election. Salary, £100 per annum, with board and residence. Applications to the Secretary by December 5th.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary, £150 for first year and £180 afterwards. Applications, on forms obtainable at the Resident Medical Officer, to be sent to the Honorary Secretary, Mr. Joseph Carr, 41, Mosley Street, Newcastle-on-Tyne by November 19th.

SALISBURY INFIRMARY.—(1) House-Surgeon; unmarried. Salary, £100 per annum. (2) House-Physician; unmarried, and not exceeding 30 years of age. Salary, £75 per annum. Board lodging, and washing provided in each case. Applications to the Secretary by November 20th.

SHANGHAI MUNICIPAL COUNCIL.—Assistant Health Officer; must possess D.P.H., and not be over 35 years of age. Salary, 360 taels a year (about £500), with means of locomotion and first-class passage to and from England. Applications to Messrs. J. Pook and Co. 63 Leadenhall Street, E.C. by November 30th.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—(1) Surgeon. (2) Assistant Surgeon. Applications to the Secretary by November 9th.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House-surgeon Salary, £75 per annum, with residence, board, and washing. Applications to the Secretary, 74, King Street, South Shields, by November 4th.

STIRLING DISTRICT ASYLUM, Larbert, N.B.—Assistant Medical Officer (male). Salary, £75 per annum, with board, laundry, etc. Applications to the Medical Superintendent.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing, and £6 per annum in lieu of stimulants. Applications to the House Committee.

## MEDICAL APPOINTMENTS.

ADAMS, D. V. M., M.B., B.S.Edin., appointed Assistant Medical Officer to the Birmingham Parish Infirmary, *vice* Dr. Stratton resigned.

ARMOUR, T. R. W., M.B., appointed House-Surgeon to the Hospital for Women, Liverpool, *vice* W. J. Jones, M.B., M.R.C.S., resigned.

BROCKWELL, J. B. C., M.R.C.S.Eng., L.R.C.P.Lond., appointed Second Assistant Medical Officer to the Poplar and Stepney Sick Asylum District, *vice* W. J. McCoy, M.R.C.S., L.R.C.P.Lond., resigned.

BROWN, K. L., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Health Officer for the Fern Tree Gully Shire, Victoria.

CALTHORP, Gordon, M.B., B.C.Cantab., appointed Certifying Factory Surgeon for the Wells District of Norfolk.

COLES, Charles, M.D., appointed Medical Officer of Health for the Bicester, Chipping Norton, Henley, Thame, Witney and Woodstock Rural and Urban Districts, Hambledon, Headington, and Long Crendon Rural District, and Wheatley Urban District, *vice* W. D. Wood, L.R.C.P., L.R.C.S.Edin.

CRAWFORD, C. R. H., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of the Workhouse of the Tonbridge Union *vice* W. Walden, M.B.Camb., resigned.

CUMMING, William, M.D., appointed Health and Medical Officer at Cairns, Queensland.

CUTTRISS, A. R., M.B.Lond., M.R.C.S.Eng., appointed District Medical Officer of the Ross Union, *vice* E. M. Knapp, L.R.C.P.Edin., M.R.C.S.Eng., resigned.

FORSTER, Arthur, B.S., M.B.Melb., appointed Medical Superintendent at the Kyneton Hospital, Victoria.

GIBSON, C. G., M.B., C.M.Edin., reappointed Medical Officer of Health for the Broadwoodwidger and Launces on Rural Districts.

HADLEY, C., L.R.C.P.I., M.R.C.S.Eng., appointed District Medical Officer of the Nuneaton Union, *vice* D. Crowe, M.B., B.Ch.Dub., resigned.

HARE, Francis, W. B., M.D.Durh., appointed Medical Superintendent of the Diamantina Hospital for Chronic Diseases, Queensland.

HAWTHORNE, C. O., M.D., M.R.C.P., appointed Assistant Physician to the North-West London Hospital.

HENRY, A. G., M.B., M.Ch.Syd., appointed Medical Superintendent at the Coast Hospital, Little Bay, New South Wales.

HUGHES E. B. H., L.R.C.P., L.R.C.S. Edin., appointed Assistant Medical Officer to the Swansea Union Workhouse and Infirmary, *vice* J. M. Schaub, M.B. Lond., resigned.

LANCASHIRE.—George H., M.R.C.S. Eng., L.R.C.P. Lond., M.D. Brux., appointed Assistant Physician to the Manchester and Salford Hospital for Skin Diseases.

MARSHALL, J., M.B., C.M. Glasg., appointed District Medical Officer of the Halifax Union, *vice* J. H. Muncaster, M.B. Lond., resigned.

MATHEW, C. P., L.R.C.P. Lond., M.R.C.S. Eng., appointed District Medical Officer of the Beaminster Union, *vice* R. Storrs, L.R.C.P., L.R.C.S. Edin., resigned.

MOORE, E. J. P., M.R.C.S. Eng., L.R.C.P. Lond., appointed Medical Officer to the West Street Workhouse, Hackney.

SAVERY, W. H., L.S.A., appointed District Medical Officer of the Grimsby Union.

SPENCE, John W. L., L.R.C.P., L.R.C.S. Edin. & Glasg., appointed Clinical Assistant to the Electrical Department of the Royal Infirmary, Edinburgh.

TERREY, Hedley, M.B., appointed Government Medical Officer and Vaccinator at Kiama, New South Wales.

TURNER, A. H., L.S.A., appointed Medical Officer of Health for the Beaconsfield Urban District, *vice* W. W. Kennedy, M.B. Lond., resigned.

## DIARY FOR NEXT WEEK.

### TUESDAY.

**Pathological Society of London,** Jenner Institute of Preventive Medicine, 8 P.M.—Laboratory Meeting.

**Royal College of Physicians of London,** 5 P.M.—Dr. Judson S. Bury: The Bradshaw Lecture on Prognosis in Relation to Diseases of the Nervous System.

### WEDNESDAY.

**Obstetrical Society of London,** 20, Hanover Square, W., 8 P.M.—Specimens will be shown by the President, Mr. Bland-Sutton, Dr. Handley, Dr. Lewers, Mr. Doran, and Dr. Galabin. Paper, Mr. Alban Doran and Dr. Cuthbert Lockyer: Sloughing Fibroid of the Left Uterine Cornu; Abnormal Relations.

### THURSDAY.

**Harveian Society of London,** Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 P.M.—Mr. Buckston Browne: Twenty-five Years Experience of Urinary Surgery in Children, Harveian Lecture I.

**North-East London Clinical Society,** Tottenham Hospital, 4 P.M.—Clinical Cases will be shown by Dr. Tresilian, Dr. Willoughby, Dr. Whiting, and others.

**Roentgen Society,** 20, Hanover Square, W., 8.30 P.M.—Presidential Address by Mr. Herbert Jackson.

### FRIDAY.

**British Laryngological, Rhinological, and Otological Association,** 11, Chandos Street, W., 4 P.M.—Annual General Meeting. Communications will be read, and Cases shown by the President, Mr. Lennox Browne, Dr. Abercrombie, and Mr. Nourse. 5 P.M.—Address by Dr. John Macintyre (Glasgow), the President-elect, on the Application of Physical Science to the Surgery of Diseases of the Throat and Nose.

**Clinical Society of London,** 20, Hanover Square, W., 8.30 P.M.—Mr. B. G. Moynihan: The Operative Treatment of Cancer of the Pyloric Portion of the Stomach. Mr. Thomas H. Morse: Case of Intracranial Section of the Second and Third Divisions of the Trigeminal Nerve for Severe Neuralgia. Mr. Warrington Haward: A Case of Fragilitas Ossium.

**Ophthalmological Society of the United Kingdom,** 20, Hanover Square, W., 8.30 P.M.—Dr. A. Hugh Thompson: Section of Orbital Tumour. Mr. E. Nettleship: Chronic Serpiginous Ulcer of Cornea (Mooren's Ulcer). Dr. W. Ernest Thomson: Three Cases of Keratitis in the Newborn Occurring after Instrumental Delivery, and Resulting in Each Case in an Almost Identical Rare Form of Opacity. Dr. C. O. Hawthorne: On Intracranial Thrombosis as the Cause of Double Optic Neuritis in Cases of Chlorosis.

### POST-GRADUATE COURSES and LECTURES.

Charing Cross Hospital, Thursday, 4 P.M.—Cases in the Wards.

Hospital for Consumption and Diseases of the Chest, Brompton, Wednesday, 4 P.M.—Lecture on the Early Diagnosis of Pulmonary Tubercul sis.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 P.M.—Clinical Demonstration.

London Throat Hospital, 204, Great Portland Street, W., Wednesday, 5 P.M.—Practical Demonstration: Diseases of Accessory Sinuses.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—Demonstrations will be given at 4 P.M. as follows: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday surgical; Friday, eye.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Lectures: Tuesday 3.30 P.M.: Locomotor Ataxia. Friday, 3.30 P.M.: Myasthenia Gravis.

West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 P.M. as follows:—Monday: Electric Examination of the Bladder and Urethra. Tuesday: Minor Surgery. Wednesday: Surgical Anatomy. Thursday: Electric Examination of the Rectum. Friday: Therapeutics.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

ATKINSON.—On October 26th, at Camberwell New Road, S.E., the wife of Surgeon-Captain W. Alexander Atkinson, M.D., 1st Surrey Rifles of a son.

WOODHEAD.—On October 27th, at Chisholme, Sale, Cheshire, to Dr. and Mrs. H. Miall Woodhead, a daughter.

### MARRIAGES.

ANDERSON—RICHARDSON.—At Holy Trinity Church, Pitlochry, on October 23rd, by the Very Rev. the Dean of Brechin, assisted by the Rev. Canon Bowstead, Kilmaveonaig, John Anderson, M.B., C.M. Edin., to Catherine Mary, only daughter of Captain and Mrs. Richardson, Castle Beigh. No cards.

HALL—LOCKE.—At Nether Kirkton, Newlston, on October 25th, by the Rev. William Clark, M.A., W. Thompson Hall, M.B., C.M., Newcastle-on-Tyne, eldest son of W. Thompson Hall of Ironchend, Northumberland, to Jessie, youngest daughter of the late Hugh Locke of West Arthurlie, Barrhead. At home December 10th, 11th, and 12th, at 174, Portland Road, Newcastle-on-Tyne.

LAING—CARSTAIRS.—At Elie, Fifeshire, N.B., on October 23rd, by the Rev. R. B. Begg, D.D., Abbotshall, and the Rev. R. H. Dunlop, Elie, Henry W. Laing, L.R.C.S.E., Kirkcaldy, to Jenny, daughter of the late James Leslie Carstairs, C.E.

O'GORMAN—SCOTT.—On October 28th, at St. Andrew's Church, West Kensington, Charles O'Gorman, M.D., M.Ch. (late of Knysna, Cape Colony), to Elizabeth (widow of the late Edwin Scott).

### DEATHS.

NEWBOLT.—October 28th, at 42, Catherine Street, Liverpool, in her 37th year, Mary Jane, wife of George Newbolt, M.B., F.R.C.S.

WOOD.—At Kroonstad, Orange River Colony, South Africa, on October 4th, Sarah Wood, (née Ireland), Royal Red Cross, wife of Lieutenant-Colonel Oswald G. Wood, M.D., C.S., Royal Army Medical Corps.

## LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

### QUERIES.

ARBOR VITÆ asks for experience as to the treatment of tuberculous glands at Salies-de-Béarn. He particularly desires to know if a course there would be likely to benefit (1) a case of enlargement without suppuration; (2) a case in which suppuration has occurred. Is there any possibility of the baths doing harm?

#### CAN MALARIAL FEVER BE ERADICATED?

J. S. writes: I have at the present a patient under treatment who suffered for the first time from a severe attack of this fever four years ago while living in South Africa. Numerous relapses have troubled him since, which are generally slight, the temperature not being over 100° or 101°. I am now giving a weekly dose of 9 grs. of quinine bisulphate as a prophylactic. Can any more effectual method of treatment be suggested?

#### MICROBES IN SEWER AIR.

DR. EDMUND M. SMITH (Medical Officer of Health, York) writes: At the recent discussion on enteric fever at the Cheltenham meeting of the British Medical Association I questioned that our present knowledge regarding the dangers of sewer air was satisfactory. The point was not discussed. Such investigations as have been made upon sewer air go to show that there are few, if any, microbes in it, and that there are few, if any, microbes to be found in the sewer gases escaping from sewer ventilators. But I question whether these facts, whilst they may be true of freely-running sewers, are true of sewers with very slight gradient, nearly level, dependent upon very little more than rainwaters for any flow at all, and found to have a third of their calibre taken up by fermenting deposits. Such a sewer in dry periods of the year is not by any means perfectly moist; fermentation of the deposits is going on actively; gases of putrefaction are being evolved from such deposits and minute solid particles thrown off also. Amongst these latter are surely microbes. Why not also the bacillus typhosus? I should like to hear of some reliable investigations upon this point, which appears to me to have been overlooked, and which I am convinced is an important one as regards the origin of typhoid fever in some districts.

### ANSWERS.

RUSTICUS.—Kelene is a name given to chloride of ethyl. Used locally it acts by producing intense cold in the area upon which it is allowed to impinge. As a general anæsthetic it is certainly more liable to produce unpleasant effects than nitrous oxide gas. Its physiological action is similar to that of chloroform.

P. B. G. writes: In reply to "Arab," the dose of morphine hypodermically for a horse is from 3 to 8 grains, and is best combined with atropine, and should only be given in colic when the attack continues for some hours. The common colic of horses is best treated by giving diffuse stimulants by the mouth and large enemas containing turpentine or assafœtida *per rectum*. Gruel given at hotels to hunters after a long day's work is a frequent cause of colic. It is much better just to give five or six swallows of cold or tepid water than gruel, and, if there is great exhaustion, a dose of whisky or gin and a quart of beer.

#### SENILE PRURITUS.

DR. G. PARKER (Clifton) writes: It has been pointed out that the skin in these patients is often exceedingly dry and somewhat atrophic. I should suggest the trial of small doses of pilocarpin—say, 1/6 gr. twice or three times a day—such as Dr. Nestor Tirard and other writers advise in chronic Bright's disease. Under this treatment the state of the skin may be so much improved that little else may be needed. However, I give in addition a liniment containing a solution of menthol and salicylic acid in lanolin and olive oil to afford temporary ease. I have seen remarkable benefit follow the combined remedies.

#### TREATMENT OF PRURITUS VULVÆ.

DR. T. GERALD GARRY (Florence) writes: In answer to "A. F. D.," I would recommend the following simple remedy. Some four years ago a lady was under my care suffering from this distressing condition. All the usual remedies were tried but in vain, so the patient went to London and consulted a specialist there who ordered an injection of salt solution (one tablespoonful to a pint of tepid water) twice daily.

The remedy acted like magic and the patient has remained free from the pruritus since then. There was no local or pelvic condition to account for the trouble.

BARIUM SULPHIDE AS A DEPILATORY.

DR. R. H BLAIKIE (Edinburgh), in answer to "Pard," writes: (1) R Barii sulphidi 3vj, zinci oxidi 3vj. M. Make into a paste with cold water and apply to the part for ten to fifteen minutes; then wash off. (2) The time varies according to strength and growth of the hair. (3) There is no objection except that it must be repeated at intervals. Barium sulphide has no permanent effect as a depilatory. Electrolysis gives good results in some cases, not in all.

TREATMENT OF CARDIAC DYSPNŒA.

DR. N. E. YORKE-DAVIES (Harley Street, W.) writes: While agreeing with Dr. James Edmunds in every word that he says in regard to the dangers of excessive fatness—and one might point out many more that he does not give—will you allow me as one who has dieted very many thousands of people for the reduction of weight to disagree with him in some other points? For instance, he speaks of half a pound reduction of weight per week as being sufficient. From my experience I do not consider this as anything like sufficient, and I consider that a patient of from two to three stone or more over the normal weight should lose at least 12 lbs. or more in the first month, and a corresponding reduction afterwards until normal weight or something very near it is attained. My experience teaches me that there is no danger whatever in doing this at any age. I have reduced a person of over 60 years of age 95 lbs. in a year, and the result has been an absolute return in the individual of the energy and activity of youth. She has since become a proficient bicyclist. I could instance, indeed, numbers of such cases who have been under my care even to a far greater loss of weight than this. I have dieted persons for this purpose even up to the age of 80 years, and always with the most satisfactory results. Indeed, I find the benefit greater in old age in some respects. I also disagree with Dr. James Edmunds in his remark that the amount of food should be to a certain extent restricted. I adapt the dietary to each case, allowing plenty of strengthening food, and insist on a weekly visit or letter from the patient, so as to be satisfied that all is going on as it should. I give plenty of food, but cut off all those foods that are fattening. I also allow stimulants in moderation, and when the patient has come to a proper weight I give what I consider to be a stationary dietary, and I watch the result of this for some time, making the patient report once a week or fortnight as the case may be. I always forbid violent exercise—it does harm—but recommend exercise short of fatigue. I forbid drugs and purgatives (beyond a little aperient if desired occasionally). The same remark applies to Turkish baths. The injury that I see done by quack medicine is incalculable. This has been the system that I have adopted for very many years, and I find that in cases where obesity is complicated with Bright's disease, gout, rheumatism, and other such ailments, enormous benefit arises from a course of dieting.

ERRATUM.—In Dr. Edmunds's letter on the Treatment of Cardiac Dyspnœa in the BRITISH MEDICAL JOURNAL of October 26th, p. 1211, para. 4, in the phrase "boiled meats, birds, or fish," the word "boiled" should have been "broiled."

## LETTERS, NOTES, Etc.

OPHTHALMOLOGICAL SOCIETY.

IN the abstract of the address delivered before the Ophthalmological Society of the United Kingdom by the President, Dr. David Little, and published in the BRITISH MEDICAL JOURNAL of October 26th, p. 1270, the following corrections should be made: In the thirteenth line, instead of "rational idea could *not*," read "could *now*." Further on, for "1837," read "1877."

ASEPTIC MIDWIFERY.

DR. W. J. MIDELTON (Bournemouth) writes: It has occurred to me recently that shaving the pubes before labour should be made a routine practice in hospital and out. I know the idea is not new, but as far as I know teachers do not strongly advocate it, and the textbooks either do not mention it at all, or merely casually mention it.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

THE next award of this prize, which is of the value of £36, will be made on July 14th, 1902, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered. Essays intended for competition must not have been previously published. They may be on any subject in medicine, and must be received by the secretary of the College on or before May 1st, 1902. Each essay must bear a motto, and be accompanied by an envelope having on its outside the same motto and inside the name and address of the author. The successful essay is to remain in the possession of the College, other essays will be returned on application within three months of the award.

THE THIRD STAGE OF LABOUR.

T. C. B. writes: After twenty years one can still learn. Once the presentation and the state of the os have been ascertained by a clean and lubricated hand and finger, in ordinary cases, no further interference *per vaginam* is needed; and is, as Dr. Duke suggests, calculated to interfere with rather than promote the third stage (as of other stages). For some years I have waited till the placenta is expelled, and a little longer, before tying or severing the cord, so that the child may get all the blood it possibly can, as "a start in life." As to the general management of the third stage, I agree with every word of Dr. Whiteley, the prevention of undue hæmorrhage being the chief aim. In those rare cases where the placenta is really adherent, I have waited an hour before introducing the hand, and without ill-effects, trying first "expression," ergot, and rest. I am convinced it is on the *vis a tergo* we must rely; and to trifle with the cord in the "os," while expecting the uterus to contract, is like pulling at a horse's mouth and spurring it at the same moment. After the placenta and membranes are expelled, it is then the uterus, tired with its final effort, requires support, and this I give myself with the left hand, or instruct the nurse to do it, for a quarter of an hour or so, meanwhile cutting the cord and examining the placenta, as to its being intact, etc. I find with these little observances one can rely on the milk appearing in due time, and on the child being able to subsist on a little water until it does. Departure from them often upsets matters, interfering with suckling, robbing the child of its due, and playing generally into the hands of the gynæcologist *re* the mother.

LETTERS, COMMUNICATIONS, ETC., have been received

A Ajax; A. M. R.; Automobile; Antipodes; Arbor Vitæ; Aorist. B Dr. J. B. Brierley, Manchester; Mr. G. H. Broadbent, Manchester; Dr. C. R. Box, London; Messrs Baillière, Tindall, and Cox, London; Dr E. Blacker, Farnborough; Mr. L. M. Breton, Southampton; Dr R. J. A. Berry, Edinburgh; Mr. H. N. Barnett, Nottingham; Dr. J. Brown, Bacup; E. F. Bashford, M.B., Edinburgh; Dr. R. H. Blaikie, Edinburgh; Mr. L. A. Bidwell, London; Dr. F. G. Bushnell, Plymouth. C Dr. J. M. Clarke, Clifton; Mr. A. H. Cheatle, London; Dr. E. W. Collins, London; Dr. W. J. Collins, London; Dr. W. Cotton Bristol; Messrs A. Clicquot and Co., London; Mr. T. S. Chapman, London; A. Cox, M.B., G teshead-on-Tyne; C. P.; Mr. L. Cooper, Rochester; Mr. A. R. Cook, London; Mr G. E. Creighton, Salford. D Dr. C. Dukes, Rugby; Disowned; Mr J. Davies, Newtown, M n.; Dr. T. Dutton, London; Dr. H Dutch, London; Mr. M. G. Davies, Pen-y-groes; Director-General of the Medical Department of the Admiralty, London; Mr. H. Davison, London; J. W. Downie, M.B., Glasgow; Dombey. E Dr. J. Edmunds, London; Mr J. F. Elliott, Tongaat; Messrs. W. H. Everett and Son, London; Dr. G. F. Edwards, Bexley. F W. E. St L. Finny, M.B., Kingston Hill; Mr. F. I. Flower, Warminster; Dr. G. Flux, London; Dr. T. Fisher, Clifton; Dr. C. Fenwick, London; F. T. M. C.; J. G. Forbes, M.B., Clevedon. G Dr. J. G. Glover, London; Mr. P. J. Gleaton, London; J. E. Gemmell, M.B., Liverpool; Dr. T. G. Garry, Florence; Messrs. C. Griffin and Co., London; S. D. Graham, M.B., Newbury; General Practitioner. H Mr. W. Huey, Tanworth-in-Arden; Dr. H. Head, London; Dr. C. F. Harford-Battersby, London; Mr. J. R. Hill, London; Dr. C. W. Hayward, Liverpool Dr. J. Hackney, Hythe; J. B. Hall, M.B., Bradford. I I.M.S.; Dr. J. Ince Swanley. J J. S.; J. T. F.; Dr. R. Jones, Woodford Bridge; Mr. R. A. Johnston, Belper. K Dr. J. Kerr, Bradford; Dr. J. H. Keay, London; Dr. H. A. Kelly, Baltimore. L Dr. D. Lawson Banchory; Mr. R. M. Littler, Southport; Rev. F. Lawrence, York; Dr. H Law, London; F. H. Low, M.B., London; Dr. D. Little, Manchester. M H. McLaren, M.B., Glasgow; W. Mitchell, M.B., Bradford; Mr. E. F. MacDowell, Killaloe; Mr. M. L. Margrave, Newton Abbot; Member of B.M.A., Northern Counties Branch; Mr T. Martland, Walsall; Mr. W. H. Martindale, London; H. C. Mactier, M.B., Wolverhampton; Dr. J. E. Moorhouse, Stirling; D. McNicol, M.B., Glasgow; Dr. T. Morton, London; G. F. Murrell, M.B., Reading. N B. H. Nicholson, M.B., Colchester; Norwalian; T. D. Newbiggin, M.B., Abington; Mr. W. J. C. Nourse, London. O Odouless Retentive Disinfecting Cloth Company, Manager of, London. P L. D. Parsons, M.B., Nassau, W. Indies; J. E. Purdy, M.B., Hutt, N.Z.; Dr. G. Parker, Clifton; Mr. A. H. Palmer, Burton-on-Trent; T. W. Parry, M.R., Youlgreave. R Dr. J. Reid, Bristol; Mr. E. J. Reid, London; R.A.M.C.; Mr. J. Robertson, Edinburgh; Rusticus; Dr. E. R. Rentoul, Liverpool. S Scot; Mr. J. F. Somerville, Bedford; Dr. S. Sunderland, London; Dr. E. M. Smith, York; Mr. J. J. Serres, Swadlincote; Mr. R. E. Sleman, London; Sir J. Sawyer, Birmingham; Dr. F. J. Smith, London; A. Shillitoe M.B., London; D. C. Sethna, M.B., Bombay; Sacrosanct; Mr. W. R. H. Stewart, London; Messrs. Squire and Sons, London; S. Stephenson, M.B., London. T Dr. E. F. Trevelyan, Leeds; T. C. B. U Union Medical Officer. W Mr. W. J. H. Wood, Boston, Lincs; Mr. F. F. White, Coventry; Dr. F. Ward, Ipswich; G. B. Wood, M.B., Sandown I. of W.; Mr. W. B. Winckworth, Taunton; W. T. Wearing, M.B., Clapham; Mr. C. Williams, London; Dr. F. Willcocks, London; Dr. J. Wallace, Greenock; Dr. T. J. Wood, Bradford; A. Wauchope, M.B., Glasgow; Dr. E. H. Warner, Bristol. Y Mr. N. B. Yorke Davis, London, etc.

## BOOKS, ETC., RECEIVED.

Die Nachbehandlung der Kriegsinvaliden und Unfallverletzten an Badeorten. Von O. Ziemsen. Leipzig: Georg Thieme. 1901.

Surgeons and their Wonderful Discoveries. By F. M. Holmes. London: S. W. Partridge and Co. 1s. 6d.

Clinica Clinica. Por Dr. R. Supino. Milan: Ulrico Hoepli. 1902. L. 2.

L'Epilessia. Per Dr P. Pini. Milan: Ulrico Hoepli. 1901. L. 2.50.

Mitteilungen ueber die Luft in Versammlungssälen, Schulen und in Räumen für öffentliche Erholung und Belehrung. Von T. Oehmcke. Munich: R. Oldenbourg. 1901. M. 2.50.

The Protozoa. By G. N. Calkins, Ph.D. London and New York: Macmillan and Co. 1901. 12s. 6d.

The Principles and Practice of Medicine. By W. Osler, M.D. London: Henry Kimpton. 1901. 18s.

Pharmacopœia: A Commentary on the British Pharmacopœia, 1898. By E. White, B.Sc., F.I.C., and J. Humphrey. London: Henry Kimpton. 1901. 14s.

Die Mischgeschwülste. Von Dr. M. Wilms. Heft IV. Berlin und Leipzig: A. Georgi. 1902. M. 5.

The Principles of Hygiene. By D. H. Bergey, A.M., M.D. London and Philadelphia: W. B. Saunders and Co. 1901. 12s.

Elementary Practical Hygiene (Section II). By W. S. Furneaux. London: Longmans Green, and Co. 1901. 2s. 6d.

Handbook of Public Health. By J. Orr, M.D. Edinburgh: E. and S. Livingstone. 1902. 4s.

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# The Bradshaw Lecture

ON

# PROGNOSIS IN RELATION TO DISEASE OF THE NERVOUS SYSTEM.

*Delivered before the Royal College of Physicians of London, November, 5th, 1901.*

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Mr. President,—Allow me to thank you for the great honour you have conferred upon me by asking me to deliver the Bradshaw Lecture this year, and to express a wish that the value of my lecture were in any degree equal to my appreciation of the honour.

When we first enter upon the practice of medicine we are, perhaps, too apt to separate diseases from a prognostic point of view into the curable and the incurable, that is, to recognise one class of diseases in which complete recovery is the rule, and another class in which the tendency is to a fatal issue or to only partial recovery. With increasing experience of the course and terminations of morbid processes, we find ourselves less able to draw sharp distinctions between the ultimate results of different diseases. We meet with formidable disease which appears to have been caused by some simple ailment that we had regarded as being completely cured. For example, we attend an adult suffering from influenza. In a fortnight he appears to be quite well, but a year later he consults us for headache, nervousness, incapacity for work, and other symptoms which constitute the condition known as neurasthenia, and he says that he has never been the same man since the attack of influenza. On the other hand, if we study diseases that are regarded as incurable, we are surprised to find that every now and then such a disease is apparently completely cured. Thus we occasionally see cases which present the classical symptoms of brain tumour in which, after a time of anxiety, a stationary stage is reached; the prognosis becomes more hopeful, and, as regards the prospect of mere existence, it may be very good. More rarely we see a child recover from symptoms which, rightly or wrongly, we regarded as indications of tuberculous meningitis.

Such experiences tend to make us more cautious regarding the prognosis of ailments which usually recover, more open-minded in respect to those which, as a rule, pursue a downward path. We begin to believe (1) that illness, however slight, may leave behind it some weak spot which, after months or even years, may be attacked by a noxious agent and become the starting point of chronic progressive disease; and (2) that severe organic disease is not always fatal; that sometimes the morbid process is arrested, and, in exceptional cases, even completely cured. A full consideration of the subject, indeed, shows us that an accurate prognosis of disease is well nigh impossible, and that even an approximate forecast presents great difficulties which are perhaps more prominent in relation to diseases of the nervous system than to diseases affecting other parts of the body.

The problem before us may be stated as follows: A part of the nervous system—say, a nerve cell—is attacked by a poison. The effect will depend partly upon the nature, the virulence, and the duration of the action of the poison, and partly upon the resistance offered by the cell. Both factors present infinite variations. If we think only of the resistance of the cell which depends on its condition at the time of attack, we see that this condition is the result of all the influences that have been brought to bear on the cell during its birth, development, and existence—that is, of its inherited qualities, and its environment past and present. Moreover, its resistance may be helped by agencies outside it; for example, the development of antitoxins. It may be lowered, owing to the cell being cut off, in consequence of its altered condition, from the full benefit of the sensory and other impulses which it normally receives from adjacent neurons. The resistance, too, may be modified by influences which the lesion has itself induced in other parts of the nervous system; as, for example, the inhibition of the functions of other centres. Furthermore, the direct effect of the changed condition of the cell on its surroundings, as on its axon or on the arborisations of neighbouring neurons, has to be taken into account before we can attempt to grasp the pathology of the situation. The results of such cell disturbance are manifested to our senses by what we call symptoms, and very often they are the only elements of the disease with which we are acquainted. Thus the condition known as hysteria is a mere collection of symptoms, which may give us information as to the site, but none as to the nature, of the lesion. In other cases we know something of the attacking agent—as, for example, syphilis—and of the changes it produces in nerve tissue, and then we can form a more complete diagnosis. But even in these cases it is usually far easier to make a regional than a pathological diagnosis; and this will continue to be the case until our knowledge of the causes of the disease has attained a firmer basis. It is, then, our ignorance of etiology and of general pathology in its broadest meaning which makes our diagnosis and our prognosis so often imperfect or erroneous. In the meantime, it may be profitable to review our knowledge of some of the elements which, as I have indicated, are essential factors in the framing of a prognosis.

## Prognosis in Relation to the Attacking Agent.

Our knowledge of the various agents that may set up disease is too limited to help us much in making a forecast of particular ailments. A clot in a cerebral vessel will rob a portion of brain of its blood supply, and thus lead to impairment or loss of functions, but from the symptoms presented to us we cannot determine whether the obstruction will be temporary or permanent. A blow on the head, insufficient in force to cause fracture of the skull or other gross lesion, may produce symptoms of concussion from which the patient slowly recovers, but we are unable to say that a cure is established, for a train of symptoms may begin to develop some time after the accident, symptoms which in some cases indicate a more or less permanent damage to cortical cells; while in other cases they point to the presence of a brain tumour.

There is good evidence that irritation of sensory nerve fibres may lead to muscular atrophy. Thus articular lesions are often quickly followed by wasting of the muscles that move the affected joint, and especially of its extensor muscles. In some cases the atrophy is persistent, and it may spread to other muscles of the limb. I believe that sometimes the progressive muscular atrophy is initiated in a similar manner. For example, a policeman in a severe struggle with a maniac patient strained some of the muscles of the right arm. Two or three weeks later he noticed that the limb was getting thin and weak, and in a few months the case was clearly one of chronic anterior poliomyelitis.

An absence of the secretion of the thyroid gland appears to be the cause of the impaired brain functions met with in cretinism and in myxœdema, while absence of the parathyroid secretion has probably something to do with the origin of exophthalmic goitre; still we know but little regarding the resulting chemical changes which lead up to these diseases, nor can we say how far symptoms in other nervous maladies may depend on modifications in the quantity or the quality of gland secretions which enter the circulation. As to poisons which may be regarded as the commonest causes of nervous disease we are daily acquiring more knowledge. We know a good deal regarding the course of diseases produced by alcohol, lead, arsenic, and other poisons which are introduced into the body, and something of the effects caused by poisons which are the products of bacteria, and which are produced within the body, such as the toxins of syphilis and tubercle. By analogy rather than by actual demonstration the nervous sequelæ of specific infectious diseases are attributed to the effects of the toxins of special micro-organisms. In the case of disseminated sclerosis, infantile paralysis, myelitis, and many other nervous affections, we assume that they, too, may be set up by poisons, some of which might be derived from the products of over-fatigue or of abnormal digestion in the alimentary

canal, or from the perverted function of some other organ or tissue.

Two striking features may be noted regarding the effects of poisons—namely, their selective action and the immunity which is the direct result of their action. Immunity, however, is not known to occur in the case of poisons which are not of bacterial origin, with the exception of opium and tobacco. In the case of toxins both selective action and immunity play an important part in the prognosis of disease, and may now be briefly illustrated by reference to the nervous diseases produced by syphilis. The poison of syphilis shows a preference for the vascular structures at the base of the brain, for branches of the cerebral and spinal vessels, for the afferent conducting paths of the spinal cord, and for the cortical cells in the anterior part of the brain.

Now it is often stated that organic affections of the nervous system run a more favourable course when due to syphilis than when they are started by other agencies. The statement, if true, must be taken with considerable qualifications. When brain tissue is destroyed by the blocking of an artery it matters not whether the clot be of syphilitic or other origin; the result is permanent impairment of function. If brain tissue is damaged but not destroyed, then as much recovery may take place when the arterial obstruction is due to embolism from heart disease as when it is due to thrombosis from syphilitic endarteritis. But if there is only a narrowing of vessels there is reason to believe that the thickening is more amenable to treatment if syphilitic than if due to other forms of arterial sclerosis.

Exudation from syphilitic vessels may be removed by treatment, but it is impossible to say to what extent this will occur in any individual case. Moreover, there can be no doubt that absorption of exudations occurs in other specific infections, as, for example, in connection with the inflammatory products which sometimes occur in the brain as a result of influenza, or in the cord in cases of myelitis of unknown toxic origin, for it is certain that occasionally well-marked symptoms of myelitis not due to syphilis entirely pass away. Two marked instances of such recovery have recently been under my care.

Even if it be admitted that syphilitic exudations are more readily removed than those which are not syphilitic, the admission is not opposed to a further statement—namely, that the prognosis of syphilis in relation to nervous diseases may, in respect to the final outcome, be worse than that of any other poison. One thing at least is certain—the germs of syphilis once introduced into the body are difficult to destroy. A syphilitic patient recovering from an attack of right hemiplegia may be seized with left hemiplegia. A syphilitic myelitis may develop some years after symptoms of cerebral syphilis, or a patient suffering from syphilitic meningomyelitis may make a partial or complete recovery, and be adequately treated for a long time afterwards, and yet subsequently may have another serious breakdown in some part of his nervous system. In this respect syphilis presents a contrast to the acute specific fevers. For example, if the poison of measles sets up a disseminated myelitis and the patient recovers, we are pretty confident that no subsequent nervous affection will develop as a result of the original infection. In syphilis, on the contrary, there appears to be an infinite capacity for future developments of its toxins. Some authorities have stated that if a person who has contracted syphilis is placed under proper treatment for a couple of years he may in the majority of cases be regarded as completely cured. My experience is opposed to such an opinion. It may be true that some persons are cured, but we cannot anticipate such a result. It does not follow because a person presents no symptoms for many years that he is cured. The germs of syphilis may lie hidden in his body, giving not the slightest indication of their deadly presence; and then, after a period of ten or even twenty years, may suddenly revive, shatter his nervous system, and put an end to his life, after a few years of insanity or of a painful miserable existence. If this be the outlook for the future condition of the nervous system in the subjects of acquired syphilis, what is to be said of the prognosis when the poison is inherited? Here the outlook is equally uncertain, and if possible even more gloomy, for the type of nervous syphilis in the child is a diffuse sclerosis of the cerebral cortex which arrests its growth, paralyses its highest functions, and slowly but surely leads to chronic progressive dementia.

Now, if we have to speak so cautiously about the course of diseases produced by a poison, the effects of which have been so carefully studied as those of syphilis, how much more caution is necessary in speaking of the action of poisons whose effects are so little known as those which we assume to be the exciting agents of disseminated sclerosis, of Landry's paralysis, and of many other forms of nervous disease?

At the outset I alluded to influences, inhibitory or otherwise, which tend to modify the resistance of the part first attacked by an injurious agent. A consideration of such influences is of great interest, but I must pass them by in order to have time to make some remarks on the relation of prognosis to the changes which are the result of these counteracting forces, and to their outward expression by means of symptoms.

## Prognosis in Relation to Morbid Anatomy.

To what extent is the course of a nervous disease modified by the size, situation, and nature of the lesion present?

### *Size of Lesion.*

The mere size of a lesion appears to have but little influence on the progress of disease. A slowly-growing tumour in certain regions of the brain may reach a large size without giving rise to much disturbance of function; moreover, its development may be arrested, all the symptoms produced by it may pass away, and occasionally a partial recovery is established. On the other hand, a person who presents the group of symptoms which constitute Landry's paralysis, or the condition known as myasthenia gravis, may die within a few weeks or months and no changes be found in the nervous system after the most careful microscopical examination. The terms "functional" and "organic" have been somewhat unfortunately used to separate diseases according to the presence or absence of visible changes. Now, visibility is a relative term; it depends on our eyesight and the powers of our microscopes, and, as regards nervous structures, to some extent on staining reagents, and, let it not be forgotten, on the thoroughness of our search. Hence with improved methods of investigating nerve tissue, we may expect that the group of functional disorders will get smaller and smaller. If on grounds of convenience these terms be retained, two points should be clearly recognised, namely: (1) The term "functional" ought to mean, not the absence of morbid changes, but only the absence of detectable changes; and (2) it ought not to be taken for granted that a disorder which has no known structural changes will run a more favourable course than one in which such changes are apparent.

The lesions underlying paralysis agitans, exophthalmic goitre, epilepsy, and spasmodic torticollis are unknown to us, yet we cannot regard these diseases as curable. Death may result from a profound chemical disturbance of the atoms and molecules of nerve tissue which leaves no visible trace, and between such minute changes and a large lesion there must be every gradation in size.

### *Situation.*

When the bulbar neurons which preside over the functions of respiration and deglutition are involved, life is seriously endangered. When other cells and fibres are implicated, the question of loss of function has to be considered rather than that of any immediate danger to life. It may be accepted as a general law that, other things being equal, lesions of the peripheral nerves are more quickly and completely recovered from than lesions of the central nervous system, and that lesions of the brain, at least as regards the degree to which function is impaired, are less serious than those of the cord. Thus the brain may be the seat of relatively large lesions without any definite symptoms being produced, while, owing to the small space transversely occupied by the centres and conducting paths in the cord, a comparatively slight lesion may injure it irretrievably.

The situation of the lesion influences the degree to which impaired or lost function may be compensated for by the action of healthy parts of the nervous system, and, therefore, it has a definite relation to prognosis. For example, in hemi-

plegia the the motor power of the leg is more readily restored than that of the arm, because the motor neurons of the legs are more intimately connected by association fibres in the cerebral and spinal commissural tracts than are those of the arm. In infantile paralysis the functions of the cells in the anterior horns, which are destroyed at a certain level, may be taken up by healthy cells at a higher or lower level. The principle of compensation also may be seen in cases of muscular atrophy, where a muscle may hypertrophy in fulfilling the function of its atrophic neighbour. It explains also to some extent the more favourable prognosis in affections of the sensory, as compared with those of the motor, mechanism, for, as is well known, the conduction of motor impulses is much more restricted to definite tracts than is that of sensory impulses.

As regards the central nervous system then, restoration of function may be said to be due either to the recovery of nerve tissue which is only partially damaged, or to the taking up by adjacent or distant structures of the functions that are lost, for there is no satisfactory evidence, and I have Dr. Mott's authority in support of the statement, that nerve cells or fibres in the brain or cord which are completely destroyed can ever be replaced by new cells or fibres. Dr. Mott informs me that he has frequently in degenerating tissue seen attempts at mitosis of the nucleus of a cell, but he has never seen this proceed to the development of a new cell.

With regard to the pathological significance of lesions in different parts of a nerve cell the observations of Marinesco, Lugaro, and other investigators are of great interest. Lugaro[1] states that "lesions of the chromatic part are the first to appear in all cases in which the harmful action does not act suddenly and with such energy as to paralyse function; that they are in every case reparable, even when very grave, provided that the other parts of the cell have not suffered serious damage. It is very doubtful, however, if lesions of the achromatic part can be repaired, more especially since they very often appear contemporaneously with lesions of the nucleus, the integrity of which is indispensable for the conservation of the cell. He points out that there is no exact and constant relation between lesions of the chromatic part and functional disturbance, that the functional activity of the cell can continue even when the chromatic part is injured, and that this part does not possess structural arrangements necessary for the fulfilment of its function, which depends therefore upon chemical composition and not upon morphological disposition. Within certain limits of structural alteration function can remain intact, and will not exhibit disturbance with certainty except in cases of grave alteration, when the nutritive alteration is also grave. On the other hand, function will be entirely suppressed when the structural dispositions of the achromatic part, which seem more strictly related to the nervous conduction, are altered, or when they are suddenly affected by energetic chemical action."

*The Nature of the Lesion.*

If we could see the changes which occur at the onset of a morbid process, are they different in different diseases?

Take a well-marked case of neurasthenia where a man in the prime of life begins to lose his mental capacity: his memory fails, he loses interest in everything: he cannot bring himself to do simple things, such as the writing of a letter. We assume that his cortical cells are deranged. In what way are they altered? Is the kind of change different to that which constitutes the initial stage, say, of general paralysis? In both diseases we have reason to believe that the cause is a toxin; in general paralysis this is usually of syphilitic origin; in neurasthenia its origin is not known. If the very earliest changes in the cortical cells of the two diseases were visible, would they be like or unlike? If like, we must assume that different poisons may at first produce the same results; and then, if the changes in the one case are progressive, and lead to degeneration of the cells, which is represented by the symptoms of general paralysis, while in the case of neurasthenia they are more or less stationary, we should be at a loss for an explanation. Probably, if we found similar identity in the initial morbid changes of other diseases, we should be disposed to believe that variations in progress might be due to variations in the dose of poisons; that a case of neurasthenia, for example, which had remained stationary for some time, might, if the dose of its poison were increased, develop into one of general paralysis; in other words, that one disease might pass into another. This is a fascinating speculation, and is to some extent supported by the transitional clinical forms that are met with between well-marked types of different diseases. But, for my own part, I prefer to believe that each poison has its own point of attack, and that the earliest change of each disease has its own peculiarities, minute enough, no doubt, and still invisible to our present methods, but which, if visible and thoroughly recognised, would enable us to diagnose the condition and to foretell its probable developments.

This view receives support from the investigations of Lugaro, whom I have already quoted. He says:[2] "The study of subacute intoxications has shown us that, while the primary lesions of the nerve cells have common features, there are not wanting in them particular characters by which we can more or less completely distinguish one intoxication from another. The alterations that result from chronic intoxications present, according to Nissl, a remarkable uniformity, both as a whole and individually. This fact, I believe may be explained by the circumstance that the toxic action is complicated by autotoxic actions resulting from secondary disturbances of metabolism, and from alterations of the other viscera that reciprocally exercise an influence on the brain. These secondary disturbances, relatively uniform, must tend to mask the primary action, cancelling the original diversity of the picture produced by the various agents. The action of general and local infections of the nervous system has a very great analogy to that of the intoxications. This we can easily understand if we consider the greater importance of the indirect and general action exercised by the micro-organisms through their toxins in comparison with their direct and local action."

Are there any changes which immediately precede the minute ones in nerve cells which I have assumed to constitute the histological basis of the earliest symptoms in nervous diseases? The toxic material passes in the blood along the walls of a vessel: does it attack the nerve cell only, or does it first attack the delicate and active endothelial cells lining the vessel?

It is possible that some toxins may first attack the nerve cell and have their action limited to it, at least for a time, but histological evidence speaks strongly in favour of a previous, or at any rate of an associated, vascular lesion. Undoubtedly the prevalence of vascular lesions is the most striking thing in the morbid anatomy of cord and brain diseases. In all forms of myelitis, in disseminated sclerosis, and in poliomyelitis the spots of disease are closely related to the distribution of blood vessels, which may contain thrombi, have their coats thickened and their perivascular lymph sheaths crowded with round cells. These changes strongly suggest the action of some irritant on the endothelial lining of the vessel, which leads to an increased flow of lymph and leucocytes into the perivascular tissues, and thus initiates the earliest nerve lesions. Apart, too, from visible vascular lesions, an irritant may set up spasm of muscle in the wall of an artery, for it seems probable that vasomotor spasms may play an important part in the symptomatology not only of organic disease, but also of hysteria, neurasthenia, headache, and many other functional affections.

Prognosis in Relation to Symptoms.

We have seen that the influences at work in the production of disease and its effects are manifold, for in addition to the morbid changes which occur in the part attacked, which present infinite variations owing to variations in the nature and strength of the attack and of the resistance offered to it, we have to consider the changes which may be set up at a distance from the lesion, changes which whether temporary or permanent may cause certain inhibitory or accelerating influences to be exerted on the functions of various parts of the nervous system. If, then, the influences at work and their effects are so complicated, how shall we adequately interpret the results? The only manifestations to us are symptoms, and these depend not on all, but only on some of the results of the disease. Our difficulties are still further increased by the fact that symptoms vary in different persons quite apart from the severity, distribution, and nature of the

lesion. For example, with the same amount of irritation of sensory fibres the perception of pain in one person is extreme, in another very slight. Thus one has watched the course of painless intrathoracic aneurysms and of pyloric cancers, and has felt convinced that the mere locality of the lesion was not sufficient in itself to account for the absence of pain. Again, one has seen cases of cerebral tumour in which headache was but slight, and certainly far from constant.

Without stopping to find reasons for such idiosyncrasy one may bear it in mind as a partial explanation of variations in other symptoms, objective as well as subjective; thus I do not think that morbid anatomy always explains why paralysis is profound in one person, moderate or only slight in degree in another, or why the degree of muscular spasm varies so much in affections of the upper neuron.

As an example of want of correlation between symptoms and morbid anatomy the following case of glioma of the cord is worthy of record:

A man, aged 24, was admitted under my care at the Manchester Royal Infirmary last June, complaining of weakness of the right arm. He stated that he first noticed the weakness on waking one morning, about three months before admission, and that during the last four weeks his neck had felt stiff and sore. On examination, all the muscles of the right arm were weak and wasted; he could feebly flex the wrist and fingers, and feebly supinate and pronate the hand, but he was unable to extend the wrist, or to perform any movements at the elbow or shoulder. The power of the left arm was good, with the exception of flexion of the hand and fingers, which was feeble. As regards cutaneous sensibility he could feel the slightest touch, and everywhere could distinguish between the head and the point of a pin. Sometimes the pain produced by a pin-prick seemed to last longer than normal, and sometimes he multiplied the number of points of contact: occasionally he appeared unable to distinguish between a hot and a cold test tube when applied to the right arm. The head was inclined towards the left shoulder; he was unable to move it back beyond the vertical position. He could turn his chin better towards the left than the right side; this was due to pain in the neck rather than to muscular weakness. The fifth and sixth cervical spines were tender to pressure, but only to a slight degree; and the skin of the right side of the neck was a little more tender to pressure than that of the left side. There was no hyperæsthesia elsewhere. Both knee-jerks were present; the right was feebler than normal. On June 22nd patient was shown at a meeting of the Neurological Society held in Manchester, and various opinions were expressed as to the nature of the lesion. At this time sensation was practically normal, and the neck tenderness was very slight there was indeed no evidence that any of the cervical roots were involved. Most of those who examined the case regarded it as one [anterior poliomyelitis: one or two members of the Society suggested the possibility of a new growth involving the cord. At the end of June weakness of the left arm became more marked, and the first dorsal interosseous muscle was distinctly wasted. A blister formed on the palmar surface of the third finger, and a little later another developed on the dorsal aspect of the middle finger. After two or three consultations with Mr. Thorburn it was decided that a growth could not be excluded, and on July 9th Mr. Thorburn performed laminectomy. No growth was found outside the dura, nor was there any indication of bone disease. On opening the dura a great deal of spinal fluid escaped, but no lesion was discovered. After the operation patient was quite comfortable and his breathing natural. He was unable to pass water, which had to be withdrawn by the catheter. The evening temperature was 100°. His condition remained favourable till the following evening, when his temperature rose to 103°, and his breathing became hurried and distressed. The left arm was now much weaker than before the operation. The retention of urine continued. On July 11th patient was decidedly worse, and almost completely paralysed. His face was flushed, and his breathing was entirely, or almost entirely, diaphragmatic. Both arms were completely paralysed; the legs could be slightly moved by a voluntary effort, but such movement amounted to little more than a twitch. A most careful examination failed to indicate any trace of anæsthesia or of hyperæsthesia. The knee-jerks were absent. The breathing became more and more embarrassed, and he died in the afternoon.

For the following pathological report I am indebted to Dr. Moore:—Body that of a tall, well-nourished, muscular man. Marked atrophy of the muscles of the right arm. The intrathoracic and abdominal organs were apparently normal. The brain also presented a healthy appearance. The cervical portion of the spinal cord was greatly enlarged in its whole extent. On section this was found to be due to the presence of an elongated ovoid mass of new growth, which extended from the second segment to the commencement of the dorsal cord (Fig. 1). At the upper and lower ends the mass of new growth gradually became thinner, and terminated in a bent cone. To the naked eye the cut surface of the tumour presented a uniform greyish, semitranslucent appearance: peripherally it was invested by a thin layer of white matter. A section through the middle region of the tumour showed under the microscope that the new-formed tissue occupied the greater portion of the transverse area; it was completely invested by a narrow zone, varying in thickness, of nerve tissue. The growth approached nearer to the anterior than the posterior surface of the cord, and nearer to the right than the left side. In structure it consisted of a matrix of interlacing fine fibres containing a considerable number of cells, many of which were large and multinuclear; others were small, and obviously belonged to the neuroglia. There were some scattered capillary vessels. The new growth was apparently a neuroglioma, and had probably originated in the tissue round the central canal. The periphery of the tumour was well defined and sharply delimited from the investing nerve tissues. On the left side the cornua—anterior and posterior—of grey matter were drawn out antero-posteriorly and compressed laterally (Fig. 2, p. 1393). In structure they appeared quite normal, the large ganglion cells being unchanged. The left lateral column of white matter was compressed, but its area was probably not diminished in size and its component fibres were unaltered. The left posterior column, also altered in shape, was not much diminished in area and was not degenerated. The anterior column was greatly attenuated, and was represented by a narrow zone of fibres compressed between the bulging tumour and the pia arachnoid. On the right side of the tumour the grey matter was represented by a few scattered ganglion cells, which were situated in the outer zone of the tumour. These few cells were normal in appearance. The lateral and posterior columns, though deformed, were apparently but little altered; probably, however, there was some destruction of their fibres owing to the encroachment of the tumour.

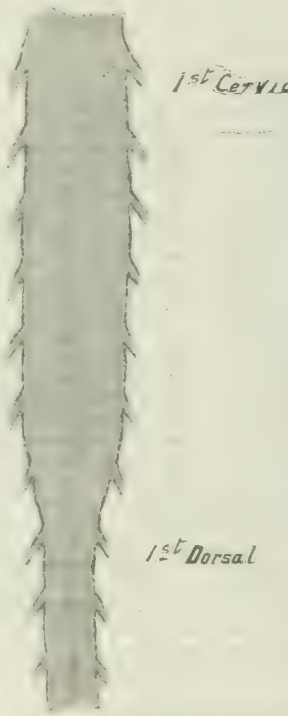


Fig. 1.—Outline of cervical cord; half natural size.

In the next place we must remember what Dr. Hughlings Jackson has so justly emphasised — namely, that symptoms are due as much to normal physiological functional activity imperfectly applied as to the actual loss of function occasioned by the lesion; in other words, that symptoms result not only from the changes at the seat of the lesion, but also from the normal or perverted action of healthy neurons, as an indirect effect of the lesion. Thus the foot deformities met with in infantile paralysis are partly due to the unopposed action of healthy muscles, while the exaggerated movements of a tabetic patient depend to some extent on lowered tonus of the muscles through a cutting off of sensory impulses from the motor neurons. An analogous phenomenon is the muscular atrophy which follows articular inflammation, or that which occasionally attacks a hemiplegic limb. These effects probably result from inhibition of the functions of nerve cells. As another instance of inhibition may be mentioned cases of granular kidney unattended by dropsy, in which, when an attack of hemiplegia occurs, the paralysed leg becomes œdematous.

Furthermore, we may observe that symptoms represent both active and passive or arrested phases of disease. For example, we see two cases of what are called birth palsies. The patients have reached the same age, and both exhibit spastic limbs and a certain degree of dementia. In one case the condition has been stationary for many years; in the

other convulsive attacks have occurred every week or every month since infancy, and the mental functions have gradually deteriorated. In both cases there is permanent damage to cortical cells: in the first case this is all, and the physical health and the duration of life are not seriously imperilled; certain functions are lost by the cutting off of a part of the brain, as the functions of a limb are lost by its amputation. But in the second case living cortical cells are disordered, and the manifestations of the disorder indicate the probability of a downward course.

It is then the symptoms which testify to active phases of disease which, for purposes of prognosis, require to be carefully studied. They have a natural history of their own which calls for independent investigation, and which is not as yet adequately explained by morbid anatomy. Very often, indeed, a group of symptoms is the only part of the disease known to us. To this we give a name, and are said to have made a diagnosis. Thus to one group of symptoms we give the name of tetany, to another paralysis agitans, to a third epilepsy. In epilepsy we assume that the cells of the cerebral cortex are at fault, but in tetany and paralysis agitans we know neither the site nor the nature of the lesion. In such cases as these, accuracy of prognosis will vary with accuracy of observation in regard to symptoms. We require to have a thorough acquaintance first with types, and, secondly, with aberrant forms. In short, we ought to know the natural history of the disease as revealed to us by its symptomatology.

In these days, when the chemistry of nerve tissue and the pathology of the neuron are so keenly investigated, we may ask, Is the same ardour evinced by clinicians in the study of symptoms? Do we accurately note day by day the variations in the symptoms of cases, say, of myelitis or of locomotor ataxy? When we have done so we have been astonished to find how frequently slight variations may be detected even when the case is to all appearances a chronic one. We talk of the influence of the mind on the body and of the body on the mind as if their mutual relationships were well understood, but do we understand the meaning of the trophic lesions so often met with in the insane, or the temporary improvements which sometimes occur in the subjects of organic disease who visit such places as Lourdes and Holywell. In one case of transverse myelitis known to me, a man who was unable to walk bathed at Holywell. After the dip he was able to walk, and the next day he walked without crutches. The improvement lasted for ten days and then the paralysis returned, when he came under the care of Dr. Dreschfeld at the Manchester Royal Infirmary. Such improvement is not more wonderful than the temporary improvement in insanity which follows the application of a blister to the neck. On the other hand, can we distinguish between the mental phenomena of visceral disease—for example, can we speak accurately regarding the various states of mental depression seen in stomach affections, or differentiate the psychical symptoms which occur in the later phases of lung and heart diseases.

The more closely we study symptomatology the more we are struck by its complexity and by the necessity for greater care in making our observations and in forming our judgments. As already indicated, diseases of the nervous system may be divided into two groups, according to the presence or absence of visible morbid changes. A disease belonging to the group which is represented to us by symptoms only may have its course foretold as well as one of which the morbid anatomy is well known. A correct prognosis of any particular case of paralysis agitans is neither more difficult nor more easy to make than one of disseminated sclerosis. Prognosis depends less on our knowledge of pathology than on the accuracy of our experience with regard to symptomatology. But sometimes we observe a group of symptoms or a single symptom which, although it may give us a clue as to the part of the nervous system affected does not enable us to make a diagnosis in any acceptation of the word.




Fig. 2.—Section of cervical cord. A, posterior fissure; B, ganglion cells of anterior cornu; C, anterior fissure; D, new growth; E, central canal; F, anterior cornu. × 4

Of isolated symptoms, numbness is one of the most common. This subjective sensation may or may not be associated with slight anæsthesia. What is its significance?

A married lady consulted me four years ago for numbness of the left arm and hand. On examination, I found slight tenderness over the fifth cervical spine and slight relative anæsthesia down the outer side of the arm. There was no hyperæsthesia, and there were no other symptoms whatever. She was not hysterical, and there was no evidence of gout, dyspepsia, or any other possible cause. She came again to see me the other day; the symptoms were unaltered, and she said that, in spite of massage and other treatment, the numbness had been present every day during the four years; in other respects she was quite well.

I have seen several cases of numbness and slight anæsthesia, often of root distribution, sometimes in connection with dyspepsia—as in one case where the distribution was along the inner aspects of both arms, in which the symptoms passed away after a few weeks. In the case just related there is no reason to suspect serious disease, but we cannot exclude it, we cannot deny the possibility that the agent at work is a pernicious one, which in another person might have led to a disseminated myelitis or other serious disease, instead of its action being checked as in the above case. The persistence of the numbness, especially as it is a sensory symptom, is remarkable, but perhaps not more so than the persistence of some cases of neurasthenia and of other so-called functional affections.

In contrast to the above case the following is of much interest:

In December, 1893, a young lady consulted me for numbness of the feet and the left side of the face. Her manner was somewhat hysterical, and I was unable to find any objective signs of disease. The numbness passed off in two or three weeks. Eighteen months later she consulted me again; she complained of much weakness, and looked ill and thin, but the only definite evidence of disease was a distinct exaggeration of the wrist-jerks and knee-jerks. This symptom made me suspect the onset of disseminated sclerosis, and the other well-marked symptoms of this malady gradually developed, and she died three years later.

In this case is the numbness to be regarded as an early symptom of the disease which ultimately declared itself in an unmistakable manner? Was it the result of exudations in the sensory path set up by the toxin of sclerosis, or was it the result of some other cause? I am inclined to take the former view, although, speaking generally, I do not think that numbness *per se* is a symptom which is commonly of much significance, for nerve tissue is often so unstable that a very slight alteration in the quantity or the quality of its blood supply may lead to interference with sensory conduction. At the same time numbness does indicate a disorder of the sensory path, and therefore its presence suggests the necessity of making repeated careful examinations of the patient who suffers from it.

The first case of persistent numbness shows that a definite lesion of the fifth cervical root has existed for four years. Obviously the lesion is a very slight one; it may be the result of the constant action of some poison which shows a preference for that particular region, for of the curious ways in which poisons locate themselves there appears to be no end; while owing to our imperfect methods of producing elimination, the local toxic effects may persist indefinitely. Indeed, it seems reasonable to suppose that almost any variety of cell or fibre may be selected by a poison as its seat of attack. Thus the poison of tetanus selects the motor nucleus of the fifth cranial nerve, nicotine picks out the optic nerves, lead some of the branches of the musculo-spinal nerves, while the toxin of influenza may attack almost any part of the nervous system. Reference to our knowledge of influenza would alone justify the assumption I have made regarding the unlimited modes of selection exhibited by poisons in different cases.

Paralysis of some of the eye muscles may be mentioned as another isolated symptom that is often difficult to understand. Some cases are met with apart from syphilis or influenza, or other ascertainable cause.

Last February, a man, aged 37, consulted me for double vision and general debility. He said the symptom, "seeing double," was first noticed on getting up one morning, about a week ago; it was preceded by numbness of the fingers for two or three days. I found complete paralysis of the right external rectus, partial paralysis of the left internal rectus, and slight impairment of the movements of the right facial muscles; no other symptoms were present. The man was a clerk, and had felt over-tired for some time. No other morbid antecedent than overwork could be discovered. I saw him again in March and in April, and on each occasion the symptoms were less marked. In May, that is three months from the onset of his disability, no paralysis could be detected. The treatment consisted in the administration of strychnine and potassium iodide, and in rest from work.

The significance of a numbness or a limited paralysis is hard to determine, and a cautious prognosis must of necessity be given. Even if we knew the exact nature of the toxin we could not foretell the issue with certainty. Probably in a large number of what are called functional paralyses the minute lesions are quite different from those which constitute the initial stage of a serious disease such as disseminated sclerosis; but we must not regard complete recovery as a differential test; surely it is reasonable to believe that the minute initial changes of a serious disease may be removed and that no future developments will take place. I think that evidence in support of such a belief is afforded as we shall presently mention by a study of the course of serious organic disease. I would contend that the constant use of the term "functional" has hindered the advance of knowledge. Its implication that the changes at present invisible to us are of different nature to those at the onset of serious disease has alone sufficed to limit our view and to prevent our thoughts taking the direction just indicated. Similar remarks might be made regarding the use of the word "hysteria"; a discussion on this subject, however, is somewhat outside my present topic. It must suffice to remind you of the investigations of Buzzard, Bastian, and others, which have done so much to narrow the boundaries of hysteria; and to state my belief that increasing knowledge of pathology will tend to reduce its limits still further. Prolonged vascular spasm or some other lesion must underlie a profound anæsthesia or a contraction of the visual fields. What is meant by calling these phenomena hysterical? In some cases they persist for years, even throughout life, and when they disappear have we adequate knowledge of the subsequent nervous history of the patient? With regard to motor phenomena, such an authority as Charcot has stated that persistent hysterical contractures, after lasting for many years, may be attended with structural changes in the spinal cord; in one case he found a lateral sclerosis, which apparently he regards as a direct outcome of changes started by the hysterical contracture. I find it much easier to believe that from the very first there were minute definite changes to which any hysterical or psychical manifestations were secondary. Commonly enough, such manifestations are met with in association with and frequently overshadowing symptoms indicating organic disease. They are often misleading, and tend to make us overlook the significance of a definite objective sign such as paralysis of a group of muscles. In my experience it is rare to meet with psychical paralysis, and when it occurs it is weakness of a complicated movement rather than of individual muscles. Thus the power to stand or walk may be lost when the movements of the legs in bed are normally performed. We are told that such a patient is not shamming, but is suffering from a genuine disease, hysteria; it is always difficult, however, to exclude the absence of real effort on the part of the patient.

I will now briefly relate the clinical histories of three remarkable cases of recovery from symptoms which indicated serious disease. In the first case hysterical manifestations were present, in the other cases they were absent.

The first patient, a girl, aged 22, was under my care at the Manchester Royal Infirmary from October, 1893, to May, 1894. There was a history of headache, of impaired vision, and of occasional partial losses of consciousness. On admission she was dull, apathetic, and hysterical. There was partial paralysis of the right arm and leg, and at times of the right side of the face. Optic neuritis was well marked; she suffered from constant headache, and pain was caused by pressing on the occiput and neck. At first cutaneous sensibility was normal, but at a later period there was partial anæsthesia down the left side; then paralysis of the right external rectus was noticed. Subsequently the hemianæsthesia disappeared and the left limbs became weak, but they were not so paralysed as the right limbs, which at one time seemed to be deprived of all power of voluntary movement. Optic atrophy succeeded the neuritis, and the girl became absolutely blind with the left eye and partially blind with the right eye. During this time the right knee-jerk was exaggerated and the left one very feeble; there was no ankle clonus. In December, that is three months after admission, double ptosis developed. In January the ptosis had disappeared as well as the paralysis of the right external rectus. In February she passed every night in a semiconscious, delirious state. In March she was able to walk with assistance in a feeble manner. On leaving the hospital in May she went to stay with friends in London. Towards the end of 1894 Dr. Beevor wrote to me saying that she was an inmate of the National Hospital in Queen Square. In reply to his inquiries I gave him the history of the case, and said that if it had not been for the optic neuritis and the affection of the right sixth nerve I should have been inclined to regard the case as a so-called functional one. A few months later he wrote again, saying that her symptoms had become worse; vomiting and headache were severe, there was marked staggering in walking, double ptosis was present, and there was anæsthesia down the right side.

Dr. Beevor thought there was a tumour in the neighbourhood of the left occipital lobe, and, after a consultation with Mr. Ballance, it was decided to trephine. Mr. Ballance operated, and found nothing abnormal. The patient made a good recovery from the operation; the headache and vomiting ceased; the ptosis, however, and a loss of conjugate movement of both eyes to the left persisted, as also did the right hemianæsthesia. A few weeks later she became maniacal. But what was most interesting, wrote Dr. Beevor, her ptosis, conjugate paralysis, and hemianæsthesia all disappeared, and her sight returned, so that she could read small print. "I am now inclined to agree with you that, except for the optic neuritis followed by atrophy, the case looks very like a functional one." The girl was sent to Bethlem Hospital. Some eighteen months later I was surprised to receive a well-written letter from her, in which she stated that she was quite well with one exception, namely, that her eyes became painful after reading a few words.

Time will not permit me to comment on this remarkable case, but I would repeat that definite objective signs of brain disease were observed both in Manchester and in London, that they entirely passed away, and that the patient regained her health, and was able to resume her occupation.

The second case, which I saw with Dr. Robinson, of Dunsear, in February, 1897, was one of spastic paralysis in a young woman, aged 22. She had suffered from numbness and weakness in the legs for three months before I saw her. Her gait was feeble and spastic in character. The flexor movements at hip, knee, and ankle were weaker than normal; the extensor movements were fairly strong. The legs were very rigid; the knee-jerk was much exaggerated, and there was well-marked ankle clonus. The right abdominal reflexes were present, the left could not be obtained; the plantar reflex was absent. The cutaneous sensibility was unimpaired; micturition was somewhat delayed.

After a full consideration of the case, I concluded that it was not one of hysteria, and that the diagnosis rested between a dorsal myelitis and disseminated sclerosis, the latter being by far the most likely. The patient made a good recovery, and Dr. Robinson informed me the other day that she is still quite well.

Is this an instance of mistaken diagnosis or one of recovery from serious disease? Let me insist on the character of the ankle clonus. It was well marked, and quite different from the feeble, loose variety met with in hysterical subjects, and, with experience of other similar cases, I am convinced that paralysis with a true foot clonus, apart from hysterical contracture, is occasionally recovered from. Dr. Buzzard has recorded cases in which apparent recovery from disseminated sclerosis has lasted four or five years; hence, it is not impossible that the patient referred to, who has been free from symptoms for nearly four years, is not entirely out of danger. As to the absence of the plantar reflex, I have observed its occurrence in other cases of disseminated sclerosis. In one case which I reported some years ago the reflex was absent till towards the termination of the disease, and, although I recognise the importance of the extensor response as an indication of affections of the upper neuron, I do not regard it as a pathognomonic sign.

The third case was one of atrophic paralysis affecting a girl aged 9, whom I examined in October, 1895. Both feet were dropped, and all the muscles on the front of the legs were paralysed and wasted. The knee-jerks were absent; sensation was normal; there was no affection of the bladder or the rectum. A careful examination of the spine revealed nothing abnormal. The diagnosis seemed to rest between acute anterior poliomyelitis and a motor type of multiple neuritis. I considered the former diagnosis the more probable of the two, and gave a cautious prognosis, and prescribed massage and other local stimulating treatment. In a year's time the muscles had almost completely recovered their normal bulk and power. In response to a letter she came to see me last August, just six years from the onset of the disease. The girl had a robust appearance, and her legs were quite healthy and strong. She told me that occasionally she walked rather clumsily, and that she was subject to cold feet. The right knee-jerk was normal, the left was a little exaggerated.

These symptoms seemed to support the original diagnosis, and I am inclined to regard the case as an instance of recovery from acute anterior poliomyelitis.

I will now leave cases of doubtful nature in order to have time to consider the course of diseases in which the diagnosis is certain, and where there can be no doubt that the symptoms are associated with obvious structural changes.

Some time ago I saw a child, aged 4 years, in the later stages of tuberculous meningitis, who suddenly passed from a state of deep coma to apparent convalescence; for a few hours he was bright, spoke to his mother, and played with his toys, and then relapsed into fatal unconsciousness. Such fallacious improvement in this disease is well known, and would not deceive the skilled observer. It is worth noting, because it seems to indicate that the freely circulating toxin which produces the coma may have its effects temporarily arrested by an antitoxin, or in some other way, and taken in conjunction with exceptional cases of recovery from tuberculous meningitis, it gives rise to a hope that some day an antitoxin may be discovered which will counteract the effects of the poison.

The next case I would refer to was seen by Drs. Dreschfeld and Little, and was diagnosed acute disseminated myelitis after measles.

The patient was a young lady, aged 18, who, the day after taking a cold bath, broke out with the rash of measles. Whilst recovering from the attack of measles she complained of intense headache, of weakness of the legs, and of pain in the back. It was found that she had optic neuritis, and in a few days she became totally blind. The blindness was followed by paralysis, first of the legs and then of the arms; their cutaneous sensibility was also markedly impaired. There was retention of urine, with occasional incontinence. Within a month from the onset of measles all four limbs were completely paralysed. A fortnight later motor power began to return, and in about four months the girl was quite well.

A study of the course of chronic nervous diseases such as disseminated sclerosis, locomotor ataxy, general paralysis, and myelitis is also full of interest in connection with our present subject. It teaches us that the downward progress, which unfortunately characterises the majority of cases, is by no means made by a constant succession of regular steps. On the contrary, it presents a most irregular course, of which the variations are infinite both in kind and in time of succession. Arrest of a chronic disease may occur at any stage; and while, as a rule, it is only temporary, it may be permanent. We are impressed not only with the rare complete recoveries which may occur, but with the stationary periods, with the periods of marked improvement, and with the disappearance of individual symptoms, and their replacement sooner or later by others of the same or different kind. These points have been so ably illustrated by Dr. Buzzard in his studies on disseminated sclerosis, that I need not further refer to that disease except to state that I could give examples from cases of my own of the various phases he describes, and of the risks to diagnosis from the presence of hysterical manifestations to which he draws such just attention.

The clinical histories of locomotor ataxy and general paralysis are prolific in instances of arrested progress and of alternating periods of improvement and breakdowns. Sometimes, as in the following case, prolonged improvement or apparent recovery may be followed by symptoms almost malignant in their severity and rapidity of progress.

The case was that of a gentleman, aged 27, who consulted me in August, 1891, and was subsequently seen by Sir Thomas Barlow. When first seen he had definite ataxia, shooting pains in the legs, delayed sensation, delayed micturition, and the knee-jerk was absent. Some of these symptoms subsided, especially the bladder disturbance. He went to Aix-la-Chapelle, and was much benefited by the treatment. In September, 1892, he paid a second visit to Aix, and there was still further improvement. He was married in December, and continued to steadily improve. In May, 1893, that is nearly two years after I first saw him, he wrote as follows: "I have regained my power of work, and no longer experience extreme fatigue or distressing symptoms of any kind. My gait in walking is practically normal, and I can daily walk any distance with as little exertion as before the complaint overtook me. The only remaining symptoms I notice are anæsthesia in the toes and some clumsiness in running movements, which, however, is much less when the muscles are fresh than when they are tired. The knee-jerk is still absent."

A few months later, however, fresh symptoms developed—namely, œdema of the ankles and some small perforating ulcers. He was sent to undergo Erb's treatment at Heidelberg. This did not answer at all; he had a succession of bad arthropathies affecting the hips, knees, and shoulders. A little later symptoms of general paralysis set in rather abruptly, and he was sent to an asylum.

Additional interest is attached to this case, owing to its etiology. It is certain that the patient had not acquired yphilis in the ordinary way; he had a protracted illness after vaccination in infancy, which the medical man who vaccinated him regarded as due to inoculated syphilis.

Similar varying phases characterise the progress of general paralysis.

Thus a medical man suffered from well-marked symptoms of this disease, and his friends were advised to sell his practice. They did so. Subsequently he recovered to such an extent that he appeared to be quite well. He married, and remained in what seemed to be good health for about a year; then he suddenly broke down with aggravated symptoms of general paralysis, and died shortly after.

What is the pathology of these variations in progress? I would submit that they support the view of a general toxic condition rather than that which has recently been so ably advocated by Dr. Mott—namely, that in tabes and general paralysis the syphilitic poison has so lowered the vitality of nerve elements that they undergo a primary and progressive decay. Let me again observe that the course of these diseases is not steadily progressive, that a subsidence of symptoms is followed by fresh outbursts, and that apparent recovery is often suddenly interrupted by the development

of acute symptoms in various parts of the body. Such fluctuations remind one in a way of the temperature chart of a prolonged case of enteric fever, in which at irregular intervals a series of high temperatures alternates with a series of low ones, the high curve corresponding to a fresh development of toxins, the low curve corresponding to abatement of their action. It is difficult to understand how the ups and downs, which are such marked features in the clinical history of chronic nervous diseases, can be explained on the hypothesis of primary progressive degeneration of neurons owing to exhaustion of their specific vital energy, and apart from the direct action of toxins circulating in the blood.

### Prognosis in Relation to Treatment.

If I am right in assuming that a poison is the most common exciting cause of diseases of the nervous system, prognosis will vary with knowledge of the proper treatment for elimination of the poison, and of the effects produced by it. But in most cases we know neither the nature of the poison nor the manner in which it enters the circulation, hence treatment is purely empirical and often fails. When we do know what the poison is, and how it is introduced into the blood, as in the case of lead, we can stop any further introduction of the poison, and then try to eliminate what is already present. Our methods of elimination, however, are still too crude for the purpose. We may employ massage and baths, administer purgatives and alteratives, and place the patient under the best hygienic conditions, often without producing any immediate result, witness the persistance of some cases of peripheral neuritis or of neuræsthesia in spite of the most energetic treatment, and our inability to stop the progress of an early myelitis.

In addition to remedies for the elimination of poisons we want others to aid us in counteracting their effects, and here we must hope for fresh discoveries regarding the effects of glandular extracts and the nature of toxins and their antitoxins.

In this connection the influence of one disease upon another is worthy of renewed investigation. Two examples may be mentioned:—A boy with whooping-cough was attacked with most severe urticaria; the whooping-cough quickly subsided. A man, whilst suffering from severe neuralgia on the right side of the neck, had an attack of bronchitis. Its onset was associated with a sudden disappearance of the neuralgia.

The possibility that a second attack of the same disease may have a beneficial effect on the symptoms left by a first attack is suggested by a case which was recently under the care of Dr. Dreschfeld. A man whilst suffering from influenza began to show symptoms of grave mental disturbance. He talked incoherently, was dull and apathetic, and passed his excreta into the bed. In a few weeks he was sufficiently recovered to take a holiday. Two months later he resumed his business, but his mental vigour was much less than before his illness. Six months after the first attack he had another attack of influenza, and was very much afraid that his former symptoms would return; but to the astonishment of himself, his friends, and his doctor, he made a rapid recovery, lost all his old symptoms, and regained complete health both mental and physical.

We have, further, to study the influence of one part of the nervous system upon another part. Thus, a knowledge of the value of sensory impulses in maintaining the proper nutrition of motor neurons affords an explanation of the beneficial effects of massage, passive movements, and galvanism as stimulants to the regeneration of damaged nerve tissue. We also recognise the important influence that cheerful surroundings, sunlight, and other psychical stimulants may have upon morbid processes, and we admit the possibility that a powerful emotion may initiate a change for the better, either by stimulating the metabolism of diseased tissue or by opening up fresh paths for the transmission of motor or sensory impulses. As Dr. Mott points out: "Consciously and unconsciously, a continuous stream of impulses is pouring into the nervous system from without by the sensory channels, which are the avenues of experience and intelligence, and our bodily and psychical life depends upon the existence of such stimuli."

A consideration of these and of other facts which, as I have indicated, may be derived from a study of pathology and of the history of symptoms, gives us hope for the future. It suggests that further investigations—clinical, pathological, and chemical—will do much to lighten the gloom which at present surrounds the prognosis of so many disorders of the nervous system.

References.

[1] E. Lugaro, *Riv. di Patol. Nerv. e Ment.*, 1899, quoted by Ford Robertson in his *Textbook of Pathology in Relation to Mental Diseases.* [2] *Loc. cit.*

# Two Lectures

on

# SOME THOUGHTS ON THE PRINCIPLES OF LOCAL TREATMENT IN DISEASES OF THE UPPER AIR PASSAGES.

*Delivered at the Medical Graduates' College and Polyclinic on October 2nd and 9th, 1901,*

By Sir FELIX SEMON, M.D., F.R.C.P.

## Lecture II.

### 2. Local Manifestations of General Systemic Diseases.

Of the systemic diseases in which throat and nose complication occur, and which may require local treatment, tuberculosis, syphilis, and affections of the central nervous system are the most important. True, there are many other systemic affections in which the upper air passages may participate. Thus pharynx, larynx, and nose may be severely affected in lupus and leprosy; dry pharyngitis may be a very unpleasant symptom in diabetes; granular pharyngitis is very often found in general anæmia and chlorosis; laryngeal œdema may occasionally be observed in Bright's disease; ulceration and perichondritis of the larynx may occur in typhoid and other acute fevers; influenza may lead to empyema of any of the accessory cavities of the nose, to laryngeal paralysis and to many other complications affecting the upper air passages; gout, rheumatism, urticaria, pemphigus, actinomycosis, and small-pox may implicate nose, pharynx, and larynx; and this list could easily be extended. But the throat and nose complications in many of the affections just named are rare, and some require no local treatment whatever, except an occasional palliative; while in other instances—as in laryngeal stenosis, or in empyema of the antrum due to any of the affections named—they must be treated exactly as if the affection were purely local. Thus there is no need for me to enter specially upon them. Matters, however, are somewhat different in systemic affections belonging to the first group. Here experience has furnished us with certain valuable principles, which, in addition to the individual requirements of each case, ought always to be considered, when the question of local treatment of throat and nose complications arises.

#### *Tuberculosis.*

This applies particularly to tuberculosis. I need not speak of the frequency and importance of its laryngeal complications, which but too often, in the complex of symptoms, unfortunately play the *rôle* of the predominant partner, and urgently require relief. A patient suffering from laryngeal tuberculosis, who cannot eat and drink on account of the difficulty and pain accompanying the act of swallowing, will, of course, go more rapidly downhill than he otherwise would do because he is prevented from assimilating the amount of nourishment indispensable to combat the inroad of the general disease. To tell such an unfortunate person, as was generally done twenty years ago, and as is done, I am afraid, but too frequently now: "Take care of your general health and let your larynx take care of itself" is to my mind not much better than a cruel mockery, though it is, of course, not intended as such. Unfortunately he who gives that cheap advice altogether forgets to instruct the patient how he is to take care of his general health when he cannot swallow. Here it is obviously the duty of medical art to step in and help, and the only question is whether this help should be of a purely palliative, or, if possible, of an actively curative character.

Now this question, simple as it seems, is extremely difficult to answer, and nothing could better illustrate what I have said in my first lecture as to the frequently shifting character of modern therapeutic views than the various answers given to it in the course of the last twenty years.

As recently as 1881 the late Professor Krishaber, of Paris, stated verbatim in the discussion on the pathology of laryngeal phthisis which took place at the International Medical Congress of London, as the result of his long and extensive experience: "I will not say that tuberculous laryngitis is incurable. I maintain only that the local therapeutic means in use are ineffective, and that they are damaging rather than useful." Although most of the other speakers on that occasion did not take so gloomy a view, yet the general opinion was anything but cheerful with regard to the influence of local measures upon laryngeal tuberculosis. Shortly afterwards, however, Professor Krause, of Berlin, introduced the lactic acid treatment, and this in turn was quickly followed by its combination with scraping of laryngeal tuberculous ulcers. The most enthusiastic advocate of this method was Dr. Heryng, of Warsaw, who for a good many years never tired of extolling its virtues, and demonstrating at medical gatherings patients with "cured" laryngeal tuberculosis, and instructive specimens of completely cicatrised laryngeal ulcers from patients who later on had succumbed to the ravages of the pulmonary disease. The pendulum of public opinion now swung in the exaggeratedly hopeful direction. Any number of "cures" of laryngeal tuberculosis were reported, and more and more energetic surgical measures for its treatment were recommended: deep scarification of the swollen epiglottis and aryteno-epiglottic folds; removal of diseased arytenoid cartilages; thyrotomy and scraping of the whole laryngeal mucous membrane; nay, even removal of the whole larynx, each found its enthusiastic advocates.

In the midst of all this progressively radical surgical treatment the introduction of tuberculin for a short time threatened to supersede it altogether. No better field for observation of the effects of the magic fluid could be desired than the larynx. We all injected, and waited in breathless silence for the healing and the cicatrisation of the laryngeal ulcers. But, alas! our hopes were doomed to disappointment; beyond the fact that the ulcers assumed a somewhat cleaner aspect no curative effect was observed, and within a very few months from the introduction of the treatment, the man, whose eightieth birthday the whole medical world prepares to celebrate this week with great rejoicings, my venerated great teacher, Professor Virchow, added to the countless obligations under which he had laid our science, by showing beyond doubt the dangers of the new method. As a result of his demonstration it was, except by a very few faithful adherents, thrown over as suddenly as it had come into fashion, and we all returned to combating the local effects of the disease by local means. But somehow the enthusiasm had cooled down, and during the last few years very little has been heard of the local treatment of laryngeal tuberculosis in comparison with the panegyrics of some ten years ago. On the most recent occasion when the question was discussed—namely, at this year's meeting of the British Medical Association—many speakers related their views and experiences concerning the indications, forms, and results of the local treatment of laryngeal tuberculosis, but no new facts were elicited; and Dr. StClair Thomson—rightly, I think—stated that practically no progress had been made during the the last six or seven years, and that the subject was in a very unsatisfactory condition.

The views I have myself formed from personal experience on the question of local treatment in laryngeal tuberculosis are the following:—

In the first place, I think we should as much as possible avoid the word "cure" when speaking of the chances of such treatment, for it is distinctly misleading in this connection. We have to deal with local manifestations of systemic disease, not with a purely local process: and even if we succeed in arresting the particular local manifestations against which our efforts are directed, we cannot, unfortunately, promise our patient that the arrest will be a permanent one, nor that, even if the exact spot in which we have been working should lastingly remain free, quite similar manifestations, causing similar painful symptoms, may not within a very short time after the end of a really successful treatment break out in the immediate vicinity of that spot. The disappointment under such circumstances is always cruel. Nevertheless, seeing that it is our first duty to give relief if we possibly can, and that there is, at any rate, a fair chance of the result being permanent, we must, of course, have recourse to proper local treatment in suitable cases; but, in view of the uncertainty just named, it will be wise, and may spare the patient and his friends bitter disillusion, not to talk of a "cure," but of relief which we trusted would be more than passing, although that could not be definitely promised.

Secondly, in no disease perhaps is there greater need for individualisation and for treating each case on its own merits than in laryngeal tuberculosis. Simply to identify, as I am afraid is done very often, the presence of that complication with the idea that it must be actively treated with lactic acid, and possibly by curetting, would be a mistake similar to identifying the diagnosis of laryngeal cancer with the idea that thyrotomy must be performed. In both instances routine practice would ultimately and inevitably lead to valuable methods becoming discredited. When deciding whether any and if so what form of local treatment should be adopted in laryngeal tuberculosis, everything—the form, the situation, and the extent of the local manifestation has to be carefully considered. So long as there is merely infiltration with un broken surface, be this infiltration of a pseudo-œdematous or of an indurative form, I strongly advise in principle to leave matters alone. I know that some authorities recommend submucous injections of guaiacol, creosote, or perchloride of mercury, etc., and others removal of the tumefied parts by means of curettes, forceps, snares, followed by energetic applications of lactic acid. Of the submucous injections I have no personal experience. Of the surgical measures named, I admit that in some cases the dysphagia is so great that energetic procedures may have to be resorted to. In a case of my own in which, so far as could be judged, the epiglottis alone was the seat of an enormous tuberculous infiltration, which rendered swallowing practically impossible, whilst there was no evidence of pulmonary disease at all, the whole of the epiglottis was removed after subhyoid pharyngotomy with temporarily very satisfactory, though unfortunately but transitory, results. A year after the operation both lungs were found to be extensively diseased, and ulceration had occurred in the stump of the epiglottis and in the neighbouring parts of the cicatrix.—But, unless the dysphagia renders drastic measures imperative, I feel sure it is much better in cases of tumefaction without ulceration not artificially to produce a breach of the surface, and I think that the correctness of that advice is being gradually and more generally followed. If the tumefaction be so considerable as to produce serious laryngeal stenosis, tracheotomy may be indispensable to prevent suffocation, and a few cases have been reported in which the rest given by that operation to the diseased organ appeared to have an actually curative effect upon the laryngeal infiltration. But this is a result which certainly cannot be expected to follow regularly, and on the whole it will be much better to reserve the operation for urgent cases only.

Should there be already ulceration when the patient comes under observation, the questions of its situation and its extent are of paramount importance. If there be one ulcer or a few not too large and well-circumscribed, the chances of arresting the local mischief by appropriate local treatment are by no means bad, particularly when the ulcers are situated on the vocal cords, the ventricular bands, or in the interarytenoid fold. Ulcers of the epiglottis, the mucous membrane over the arytenoid cartilages, the aryteno-epiglottidean folds, or in the subglottic cavity are not nearly so easily accessible to local treatment. Should the ulceration be almost universal and be accompanied by caries and necrosis of the cartilaginous framework of the larynx or of large parts of it, the curative chances of local treatment are very small indeed.

The local treatment will accordingly have to vary greatly under these different circumstances. In cases belonging to the first category, energetic lactic acid treatment, if necessary, combined with scraping or removal by double curette or cutting forceps of the tuberculous deposits, will sometimes

yield very gratifying results. I now look back upon a number of cases of my own thus treated, not large, it is true, but still gratifying enough, in which treatment of this kind has resulted in lasting arrest of the laryngeal mischief. One ought even not to be discouraged if, either in the scar of the hardly-healed ulcer or in its neighbourhood, fresh ulceration should occur. In a few of my own cases repetition of the treatment—which occasionally had to be resumed several times at longer or shorter intervals—ultimately led to lasting cicatrisation and freedom from pain and dysphagia. But no general rule can, I think, be laid down about such repetitions of the treatment, and I cannot sufficiently emphasise that in this large category every case must be treated according to its individual features.

In cases belonging to the second class the technical difficulties are much greater; the affected parts recede under the touch of instruments, and as a rule the results are less satisfactory than those obtained in the interior proper of the larynx. Still, so long as there is a reasonable chance of arresting the process, I consider it not merely legitimate, but clearly indicated, to try and do so, as it is just in these cases of commencing ulceration of the epiglottis, the mucous membrane over the arytenoids, or the aryteno-epiglottic folds, in which the concomitant pulmonary process may not be at all much advanced, that the patient's chances are most jeopardised by the dysphagia depending upon the laryngeal complication. Should intralaryngeal measures fail and the dysphagia be excessive, or should a subglottic ulceration spread to the posterior wall of the larynx, external operations may be considered. In a few cases of that kind thyrotomy, followed by thorough scraping and application of pure lactic acid to the seat of the former ulcer, has yielded satisfactory results. In a case of my own thus treated the patient has now, I am glad to say, remained quite well for four years. But the external wound in these cases is very apt to become infected during the operation, and a second extensive operation may be necessary to remove the infected tissues. This occurred in my own case and in various others that have been reported. Hence operations of this kind should not be lightly undertaken, and should be reserved for exceptional cases. They may of course be absolutely required if laryngeal tuberculosis should manifest itself, as it occasionally, though rarely, does in the form of a distinct tumour, which cannot be removed intralaryngeally.

In the third category, in which the whole, or nearly the whole, of the mucous membrane of the larynx is one mass of ulceration, and in which there is often in addition evidence of perichondritis and chondritis or even of caries, necrosis, and exfoliation of one or several of the laryngeal cartilages, curative local measures are, in my experience and belief, practically out of the question. Very heroic procedures, I know, are sometimes undertaken even in this class of cases, necrotic arytenoids are removed *in toto* with their swollen and ulcerated mucous coverings, and pure lactic acid or very strong solutions of that drug are forcibly rubbed in all over the larynx. I am not aware that such measures have ever acted beneficially, whilst they may intensify the violence of the local process, and they are certain, in spite of previous cocainisation and subsequent orthoform insufflation, to increase for a time the patient's sufferings. To remove a tuberculous larynx deliberately I consider hardly justifiable. Palliative local measures alone are, in my opinion, suitable in the great majority of this class of cases, and nothing has so well served me to soothe pain and render swallowing possible as insufflation of orthoform. Its effects last much longer than those of cocaine, menthol, or morphine, and its dose has not to be rapidly increased like that of the drugs just named. Nor are general toxic symptoms ever observed. It has been accused of producing sloughing; I have never seen it cause such an undesirable effect.

Thirdly, in cases of laryngeal tuberculosis the patient's general health and pulmonary condition have always to be taken into consideration when deciding upon the question of local treatment. It must not be thought that even somewhat advanced lung disease or slight habitual feverishness necessarily contraindicate local treatment of the larynx. I have often enough seen general beneficial results even under such conditions from arresting the laryngeal complication. But when practically the final stage of pulmonary phthisis has been reached, with marked hectic fever and cachexia, or when the tuberculous process is of the miliary type, I consider local treatment of the larynx other than palliative distinctly contraindicated, and I would strongly warn against unduly exalting the laryngeal complication under such circumstances at the expense, as it were, of the pulmonary disease.

Fourthly and finally, it is most important when local treatment has been decided upon in a case of laryngeal tuberculosis, that it should be efficiently carried out. This would seem to be almost a truism, but indeed it is not, and I think some plain speaking here is necessary.

Within my own knowledge often enough when energetic lactic acid and curetting treatment has been recommended, that advice has been only partially carried out, and in such a half-hearted way as to make it practically ineffective. Whilst the *rationale* of the treatment consists in the removal of the tuberculous ulcer and in the production of a healthy cicatrix, which purposes can only be obtained by thoroughly scraping the diseased area, or even removing parts of it with cutting forceps or double curette, and by subsequently energetically rubbing into the raw surface left behind a strong solution of lactic acid, carried to the part on a strong, stiff, properly-bent instrument, such as Krause's wool-carrier—all this, be it remembered, under the guidance of the laryngeal mirror—I find that the first part of the treatment, namely, the removal of the tuberculous tissue, is often omitted altogether, and that the rubbing in of the strong lactic acid solution is replaced by the application "somewhere" in the throat of a weak solution by means of a camel-hair brush, or by the substitution of a "weak spray of lactic acid." The result is of course *nil*, and the patient, who had been encouraged to hope for relief, is greatly disappointed. I venture to say that this is hardly fair, either to the patient, the method, or to the original adviser. I certainly consider it much less—if at all—derogatory for a medical man to frankly tell his patient that the suggested treatment to be effective demanded an amount of special technical skill which he did not possess, and that he therefore would advise him to put himself in practised hands to have it properly carried out, than that he should spoil fair chances by ineffective execution. The simple truth of the matter is that this treatment should as much remain in the hands of experts as, say, the intralaryngeal removal of intralaryngeal growths. However, I may add that seeing the frequency of laryngeal complications in pulmonary tuberculosis, and the encouraging results of the sanatorium treatment of the latter, every physician attached to a sanatorium should, I think, make himself enough of an expert to effectively carry out during the patient's stay at the sanatorium the local treatment of laryngeal complications if required.

I know full well that what I have said about the principles of local treatment in laryngeal tuberculosis does not nearly exhaust the subject. Thus, I have not so much as mentioned the necessity of combining in all cases a rational general with the local treatment. But this I hope I may take as self-understood, and I trust that my remarks, incomplete as they are from pressure of time, may help you to decide in doubtful cases whether any, and if so what, form of local treatment should be adopted. I have only to add that in pharyngeal tuberculosis, which fortunately is very rare, the energetic application of strong lactic acid solutions has been at least temporarily beneficial in the very few not hyperacute cases I have seen, whilst in the very acute form I consider that only palliatives are desirable.—In nasal tuberculosis, which also is rare, the tuberculous deposits and ulcers should be thoroughly removed and cleaned by scraping, followed by lactic acid applications. Unfortunately, however, there is a great tendency towards recurrence in this form, no matter how thoroughly the local treatment may have been carried out.

*Syphilis.*

Of the next disease on our list, syphilis, I need only say that I have for many years ceased to include local treatment as a routine measure in the treatment of specific affections of the upper air passages. This, of course, does not mean that I oppose local treatment in this class of cases if actually required. On the contrary; in cases, for example, of caries and necrosis of the bones in tertiary syphilis of the nose, of

extensive adhesions in the pharynx as a result of tertiary ulceration of that part, of fibroid stenosis or advanced perichondritis of the larynx of syphilitic origin, local treatment, and this of the most energetic kind, may have to come into play. But what I mean is that in my experience no daily applications of sulphate of copper or nitrate of silver to the ulcerating surfaces are required in addition to proper constitutional treatment. I served my specialistic apprenticeship in a school in which such applications were considered most important, but, as I have already stated on a previous occasion, since I have gradually discontinued them and relied upon constitutional treatment only, I have not found that improvement has taken place more slowly than in former days.

*Central Nervous Disease.*

We next come to affections of the upper air passages, due to diseases of the central nervous system, which may require local treatment. Two questions here particularly demand consideration: the electric treatment of functional aphonia and the indication for tracheotomy in bilateral paralysis of the abductors of the vocal cords due to tabes.

With regard to the first of these two points, you know that countless methods have been recommended for the treatment of functional paralysis of the adductors: massage of the neck, compression of the alæ of the thyroid cartilage, hypnotism and suggestion, methodical exercises of articulation, cold douches, pulling forward of the tongue, deep narcosis, on awaking from which the patient is engaged in conversation, etc. Without doubting the efficiency of other measures, I personally adhere to the use of electricity as the quickest means of restoring the voice. But I urgently advise you to proceed energetically in these cases, and to employ at once intralaryngeal faradisation, as I have but too often found that previous timid or gentle external application of electricity greatly deadens the patient's response to the electric stimulus, which otherwise, in my experience, usually has an almost miraculous effect even in long-standing cases. I think that every experienced laryngologist will support this statement.

Concerning the second question, namely, when tracheotomy is indicated in bilateral paralysis of the abductors of the vocal cords in tabes, I hardly venture to give an apodictic advice.

More than twenty years ago I proposed that in every case of bilateral, well-developed paralysis of the abductors in which it was impossible to bring about by suitable treatment a greater widening of the glottic space, prophylactic tracheotomy should be performed in order to secure the patient from the ever-present danger of suffocation. That advice, I think, has been very generally acted upon, and it certainly offers the best chances to the patient. But since then we have learned that in cases of tabes sometimes, though by no means always, paralysis of the internal tensors and of the interarytenoid muscle supervenes years afterwards upon the original paralysis of the posterior crico-arytenoid muscles, and results in a wider opening of the glottis, and a diminution of the danger of sudden suffocation. A considerable dilemma has thus arisen. If one sees, as I have actually seen, quite a number of tabic patients who have lived with an extremely narrow glottis for a number of years without apparently suffering much inconvenience, and without ever having had a really serious attack of choking; and if one remembers in addition that the condition, as just stated, may actually improve slightly of its own accord, one fears to be accused of "lust of operation," if one, nevertheless, insists on prophylactic tracheotomy. If, on the other hand, we bear in mind that these patients live under a constant cloud of being killed, before medical aid can be called in, by a simple intercurrent laryngeal catarrh; that some of them have actually died from sudden asphyxia; that others have only been saved by a hair's breadth by means of hurried tracheotomy; and, finally, that after such hurried tracheotomies performed for chronic obstruction, unpleasant pulmonary complications are anything but rare, the possible consequences of postponing the operation must seriously weigh upon our mind. The best policy under these circumstances would seem to be fully to explain the situation to the patient's general medical adviser, or, failing him, to the patient himself or to his family, and not to bear the responsibility alone.

3. Local Manifestations in Nose and Throat, dependent upon Local Disease of Correlated Areas.

That not only systemic diseases, but also local affections in areas anatomically or otherwise connected with the upper air passages may engender trouble in these parts is a well-known fact. I need only remind you of laryngeal paralysis due to compression of the vagus or recurrent laryngeal nerves by aneurysm of the aorta, cancer of the œsophagus, enlarged mediastinal or cervical lymphatic glands, or of tracheal stenosis due to pressure from a fibroid or malignant goître as examples of such contingencies. You know equally well that in such cases, whilst symptomatic treatment may be required locally, it must be our aim to remove, if possible, the original source of the trouble. All this is so self-evident that I should not even have mentioned it, were it not that the sound principle just referred to, namely, that if possible the original cause should be removed, instead of the secondary result merely being symptomatically treated, has of late unfortunately been exaggerated in this connection to such a degree that it seems time to seriously protest against this exaggeration.

I refer to the influence which is nowadays believed by some to be always exercised by the state of the nose upon inflammatory conditions of the pharynx and larynx. That such an influence exists within certain bounds, and provided that there is actual chronic stenosis of the nasal passages is, of course, undeniable, and has been directly admitted by me in my first lecture. One of the most important functions of the nose is to moisten, to warm, and to purify the inspired air. If that function is abolished or greatly diminished in consequence of permanent obstruction, it goes without saying that inflammatory conditions in the pharynx, larynx, and lower air passages will be more likely to occur, and less likely to be remedied by topical treatment of the inflamed parts, than if the nose were fulfilling its normal functions. Under such circumstances it will, therefore, be just as much the practitioner's duty to remove the chronic obstruction of the nose, be it due to polypi, deviations of the septum, enlargement of the turbinated bodies, or whatever else, and not to be satisfied with mere symptomatic treatment of the pharyngeal or laryngeal inflammation, as it would be, not merely to relieve the dyspnœa caused by a hard goître by tracheotomy, but to remove the goître itself. But this legitimate and rational position has unfortunately not satisfied the ambition of that section of modern rhinologists for whom the nose is the centre of the pathological universe. Gradually the equally deplorable and ridiculous doctrine has been developed that such a thing as a primary inflammatory process in the air passages below the nose did not exist at all, and that when inflammations occurred in these parts one had always to look for their starting point in the nose. This sounds almost incredible, but nevertheless is perfectly true. Some time ago a case of laryngeal perichondritis was shown at a society of specialists. Opinions were divided as to whether tuberculosis, syphilis, or malignant disease was the cause, when one gentleman rose and asked the demonstrator in all seriousness whether he had observed that the patient had got a spur in his left nostril?—

The worst of it all is that these views are not merely held theoretically, but that they are actually carried into practice! Let me give you a few very characteristic illustrations from my own experience. Some time ago I saw a patient suffering from laryngeal cancer, which appeared in the form of a general infiltration of the mucous membrane of one-half of the larynx. Before the patient came to me he had been treated by another specialist with nasal inhalations for the hoarseness which was the initial symptom of the disease!—Another patient, a well-known actor, had just produced a new play, the success of which almost entirely depended upon his own performance, and which promised to be very successful, when he was prostrated by influenza. The run of the piece had to be interrupted, and the patient in despair returned to his work before the acute stage was over. He became hoarse the first night, and quite aphonic the third. He then consulted a staunch believer in the omnipotent influence of the nose, who declared that a somewhat biggish operation in that organ, about the nature of which the patient could not give particulars, was indispensable for the restoration of the vocal powers. As the patient had never in his life had

the least trouble from his nose, he asked his usual medical adviser whether he should submit to the operation, and that gentleman suggested that he should consult me first. I found nothing whatever in the nose that in my opinion required operation, but there were marked congestion and swelling of the vocal cords, such as was natural enough after an attack of influenza and premature forced use of the voice. A few days complete vocal rest and applications of astringents to the larynx effected a lasting cure.—In the third case the patient, a stockbroker, had got chronic laryngeal catarrh from habitual overuse of his voice in the Stock Exchange. Before he came to me he had been treated for fully six months by removals of crests from the nasal septum and by chemical and galvanic cauterisations of the mucous membrane covering the turbinated bones, although he had never had the least discomfort in his nose. And so strongly convinced was his medical attendant evidently that it must be the nose which caused the laryngeal trouble, that it never occurred to him to treat the really affected part—that is, the larynx. The same treatment as that adopted in the previous case effected a complete cure within a few weeks.

But the most drastic example I have ever seen of "nasal prejudice," if I may so call it, was afforded to me only a few months ago. An extremely neurotic gentleman had when a student at Oxford twenty years ago frequently suffered from severe abdominal pain, for which he several times consulted one of our most painstaking physicians, who, however, never discovered any organic cause of this neuralgia. Later on the patient emigrated to one of the colonies, made a position for himself, and entered public life. Having on some occasion been compelled to make a series of public speeches, although he was already hoarse when he started, his vocal powers in the end failed him, and he felt a good deal of pain in his throat when speaking. He consulted a local specialist, who told him that he had not only chronic laryngitis, but also swelling of the turbinals. Previous to this the patient had never been conscious that there was anything amiss with his nose. Nevertheless, he was treated for several months with a series of cutting operations in his nose, after one of which secondary hæmorrhages so serious and repeated occurred that the nose had to be plugged repeatedly, and that the worst was feared for a time. At the end of it all the patient became thoroughly neurasthenic, and his doctor advised him to return to Europe, and to see the physician who had treated him for his abdominal pains. That gentleman sent him on to me, as he could discover no organic mischief anywhere. The patient, a tall, well-built man, when entering my consulting room, told me in a perfectly natural sonorous voice, that he had come to consult me about his throat. The next sentence was spoken in a absolutely toneless whisper. He begged me to let him whisper, as it "hurt" his throat when he spoke in his natural voice. Examination showed that the larynx, with the exception of very slight congestion of the vocal cords, was perfectly normal. Nothing abnormal could be detected in his nose, nor in the rest of his air passages. In short, it was a case of true "phonophobia." A consultation was held with his London physician and his colonial adviser, who happened to be in town, and it was decided to let him undergo a rest cure. I have just heard that his throat and voice are all right now, but that he still complains of occasional pains in his abdomen and hands, and that he thinks of trying hypnotism for these complaints.

Here, then, are four cases, gentlemen, which have the common characteristic that the cause of the patients' complaints was sought for in the nose, although they had never suffered the least inconvenience in that organ, and although there was—in the first three cases, at any rate—a fully sufficient explanation of their complaints to be found in the actual condition of the larynx and in the previous history. One of them escaped—fortunately for him—what would have been an absolutely uncalled-for operation in the nose; in the three other cases the nasal treatment was a dismal failure. These cases, therefore, show the actuality of a movement which I am convinced runs equally counter to the interest of the public and to the esteem in which I wish rhinology to be held by the profession, and they fully justify, I think, my warning that it is high time to drop the fanatic and narrow-minded notion that in all inflammatory affections of the pharynx and larynx the cause must be sought for in the nose. By all means make it a practice to examine that organ carefully in all cases of inflammatory or obscure disease of the air passages, and when you detect a degree of nasal obstruction which gives legitimate reason for concluding that without its relief the affection lower down would either remain obdurate or speedily recur, remove it, or treat it otherwise appropriately; but when there are such obvious and sufficient explanations of the patients' complaints, as in the cases just narrated, do not blind yourself and run the risk of serious misunderstanding of your motives by assuming that some ridiculously small deviation from the normal, which you may happen to detect in the nose, must be the cause of all the trouble.

### 4. Affections of the Upper Air Passages supposed to Exercise an Influence upon other Organs and Parts of the Body.

In a sense this division is a direct continuation of the preceding one, inasmuch as we shall in it again witness the regrettable spectacle of an originally sound principle being hunted to death through being ludicrously exaggerated. This applies to both forms in which an influence may be exercised by affections of the upper air-passages upon other parts of the body, the direct and the reflex. Let us first consider the former.

#### *A. Direct Influence.*

It goes without saying that such an influence exists, and that often enough it is most marked. When an acute or chronic catarrh or inflammation spreads from the nose through the naso-pharynx and the Eustachian tubes to the middle ear, and effects corresponding changes in that organ; when owing to the mechanical obstruction caused by adenoid hypertrophy the type of the face alters, deafness is produced, and pigeon-breast is formed; when chronic septic poisoning is being produced by the constant absorption of purulent nasal discharges into the system; when in chronic stenosis of the larynx or trachea, pulmonary troubles, emphysema and chronic bronchial catarrh, cardiac dilatation, renal stasis and its sequels arise through impeded interchange of gases in the lungs—the relationship of cause and effect is at once obvious, and in all these cases, when the question of treatment is discussed, the grave consequences which may result for other organs or for the general health, if the affection of the upper air-passages be allowed to continue unhindered, will have to be taken into serious consideration.

But here, again, zeal has too often, unfortunately, greatly outrun discretion. That *enfant terrible* of modern medicine—the nose—is, in the opinion of some of its more stubborn devotees, the source of most, if not of all, our woes, and even lesser degree of so-called "nasal inadequacy" possess, to listen to them, an importance which I, for one, do not admit. Their frequency I will not contest. In fact, I verily believe that if the severe standard of nasal patency which some rhinologists apparently demand were compulsorily introduced tomorrow, a very large proportion of mankind would have to be subjected to a series of "patefying" operations (if I may coin that word). Now, if people who are inconvenienced by the fact that they cannot breathe as well through one of their nostrils as through the other chose to undergo an operation for an improvement of this condition, that is their own business, and concerns nobody else; but matters seem to me rather different if such operations are proposed and undertaken, as they nowadays frequently are, because dire consequences are apprehended and predicted for the general well-being, and more particularly for the auditory functions of the patient, on account of lesser degrees of nasal insufficiency, or because a patient who suffers from sclerotic middle-ear or labyrinthine disease at the same time has got a spur or a deviation of the septum or some swelling of the nasal mucous membrane. I do not pretend to be an aurist, but I hope I possess an average quantity of common sense, and I must freely confess that it is perfectly unintelligible to me how a slight degree of obstruction of the nose proper, particularly when it is one-sided, can be believed to exercise that disastrous influence upon the ventilation of the middle ears which I so often see ascribed to it. Pray do not misunderstand me here. I speak, of course, of stenosis of the nasal chambers proper only, not of actual occlusion or obstruction of the Eustachian tubes. The very great and

important difference between these two conditions is, it seems to me, hardly taken sufficiently into account at the present moment. That total obliteration or any serious diminution of the lumen of the Eustachian tubes—be it induced by a disease primarily situated in the naso-pharynx, or directly propagated from the nose to the tubes through the naso-pharynx—must entail a far-reaching influence upon the ventilation of the middle ears, and thus upon the whole auditory apparatus, goes without saying. But the matter is very different, indeed, if the stenosis is limited to the nose proper and if the naso-pharynx itself remains free. Under such circumstances—that is, when the naso-pharynx is ventilated through the mouth—the atmospheric pressure in it surely remains exactly the same as if it were ventilated through the nostrils, and I see not the least reason why any disturbance in the ventilation of the middle ears should result. If I should be asked here—Why, then, transitory slight deafness should so often accompany an ordinary "cold in the head," I should answer: Because in such cases the swelling and congestion is not limited to the mucous membrane lining the interior of the nose, but actually extends through the naso-pharynx into the Eustachian tubes. When, however, the naso-pharynx itself remains free, the obstruction in the nose may be very considerable or even absolute, and yet no deafness nor any other symptoms on the part of the ears need follow.

This is no theory; it is a stern fact. If mere partial obstruction of the nose proper could exercise that great influence upon the auditory apparatus which is claimed for it, surely ear complications ought to be regularly present in a class of cases in which nasal breathing is entirely or nearly entirely abolished—namely, in cases of multiple nasal polypi. Now, for many years, I have paid special attention to that question, which seems to me to be of great importance in the consideration of the point under discussion, and I am able to state, on the basis of a large material, that even in cases of complete obstruction of both nostrils by multiple polypi, ear complications of any kind have been extremely rare in my practice. And if further evidence were needed, it is afforded by the fact that even in cases of complete bilateral congenital occlusion of the choanæ by bony or membranous diaphragms, perfect hearing power and absence of any other aural symptoms has been observed by others as well as by myself.

You will understand, then, that I profess myself to be rather sceptical concerning the asserted great influence of nasal stenosis without concomitant chronic catarrh upon all possible ear troubles, and that I look upon an endeavour to improve labyrinthine disease by removing a crest from the nasal septum with feelings much akin to those which animate me when I see primary inflammations of the larynx treated by way of the nose. In connection with this, I was very glad to see that in the discussion which took place at Ipswich last year on the question whether, since the introduction of modern rhinological methods, direct and considerable progress had been made in the treatment of ear affections associated with simple nasal stenosis, the general verdict was much less enthusiastic than would appear from some individual utterances and publications.

*B. Reflex Influence.*

Here we come to the subject of "nasal reflex-neuroses," in my humble opinion one of the most unsatisfactory in modern medicine. I have only recently treated that subject in a special lecture, and have since then seen no reason to modify, or to add to, the views I expressed on that occasion. Permit me, therefore, freely to quote from my lecture what I consider its salient points, and to answer an objection that has been raised against my statements by Dr. Dundas Grant.

In 1884 the late Professor Hack of Freiburg stated that conditions of nervous hyper-excitability in the most various parts of the human body could and did take their origin from a sudden and transitory swelling of the cavernous tissue covering the anterior ends of the lower turbinated bodies. The reflex irritability of the nasal mucous membrane was, according to him, dependent upon the expansibility of certain "erectile organs" ("*Schwell-Organe*") situated within them. The latter being irritated at first, the cavernous spaces themselves were filled with blood. The congested condition of the nasal mucous membrane appeared to act as a stimulus for excitation of the nerve-end apparatus, and then reflexes, most frequently secretion of tears and of serous fluid from the nose; later on sneezing, occurred. From this hypothetical reasoning, Hack further concluded that the nasal erectile organs formed a sort of link between various forms of nerve irritation. On the one hand, he considered it quite possible that a reflex irritation could produce congestion of the cavernous tissue. On the other hand, he thought that nervous symptoms manifesting themselves in different parts of the body could originate from the congested state of the cavernous tissue of the nose. Starting from this hypothesis, he reasoned that if one eliminated by operation the supposed connecting link, namely, the erectile organs situated in the nasal mucous membrane, one might succeed in curing many of the obscure neuroses which, in his opinion, had their origin in the nose, and which, so far, had obstinately resisted all possible methods of treatment.

Hack's original list of these was large enough in all conscience, including as it did spasm of the glottis, nightmare, asthma, attacks of spasmodic cough, megrim, supra-orbital and other neuralgias, amblyopia and amaurosis, erythema or pseudo-erysipelas of the nose, giddiness, epileptiform attacks, secretory neuroses, ciliary scotoma, headache, hay fever, etc.; but this list sinks into insignificance when compared with the additions which his followers soon made: Graves's disease, diabetes, irregularity of the heart's action, tachycardia, stenocardia, angina pectoris, cardialgia, diseases of the stomach, dysmenorrhœa, chorea, enuresis nocturna, melancholia, neurasthenia, catarrhal affections of the air-passages, epiphora, hyperæmia and œdema of the conjunctiva and the eyelids, blepharospasm, strabismus, pupillary changes, errors of accommodation, asthenopia, narrowing of the field of vision, anomalies of the ears and of the genital sphere, spasm of the facial and other motor nerves, muscular pains, stiffness of the neck, exudations in the joints, changes of the skin, etc.—all these were added, and as Professor Jurasz has truly remarked: "One was almost induced to believe that a great part of general pathology was dominated by morbid reflexes from the nose.'

Nor did the current of opinion remain within the limits of theory. Whenever anybody suffering from an obscure neurosis had the misfortune to fall into the hands of a rhinological enthusiast, particularly within the first few years after Hack's publication, the cause of his ailment was detected in his nose, and treated accordingly. Hack's followers were not satisfied with the original discoverer's limitation of the zone of reflex irritability to the anterior ends of the lower turbinate bones. In rapid succession it was found out that such zones also existed in the posterior ends of the lower and in the middle turbinate bones (this addition was made by Hack himself), and in the septum (Baratoux and Heryng); and the matter reached its climax when it was stated that excitation of certain parts of the nasal mucous membrane was responsible for certain forms of reflex neurosis. Forstensson (Pan-American Congress, 1892), according to Jurasz, stated that he had discovered the specific point of excitability in no fewer than four hundred cases of asthma in the upper part of the septum. Fliess, according to the same authority, found a corresponding point for nervous cardialgia of nasal origin in the anterior third of the middle turbinate bone, for the abdominal pains of dysmenorrhœa in the lower turbinate bodies, and for the pains in the small of the back observed in the same affection in the tuberculum septi! Cough for some time seemed to have no other origin than in the nose. I vividly remember how, in 1885, a patient was sent to me with a letter by a German *confrère*, who requested me to finish the intranasal treatment of the patient's cough, which he had started, he thought, with marked effect—a view from which I regret to say the patient's own opinion differed. When I found that the latter besides various constitutional signs of pulmonary tubercle, showed evidences of consolidation of both apices, and a temperature of over 100° at 6 P.M., I did not feel quite justified in finishing the intranasal treatment!

Above all other affections, however, asthma was declared to be most frequently of nasal origin, and to demand energetic treatment applied to the nose. Who can count the number of luckless asthmatics whose noses have been burned between 1882 and the present day? Personally, I was not at all

over-sceptical, or prejudicially inclined against the new doctrine. On the contrary, having previous to Hack's publication, observed a few cases myself which seemed to lend colour to it, I was quite prepared to look upon Hack's statements as opening up a new era for rhinology. But when, in quick succession, in a number of cases of asthma, megrim and neuralgia of the fifth nerve, which I had most carefully selected according to the principles laid down by Hack himself, the effect of the treatment remained perfectly negative, I became more sceptical, and I regret to have to say that this scepticism, to which I gave expression in 1884 in the German edition of Mackenzie's textbook, has not been changed by my subsequent experience.

Not that I wish to be understood as if I altogether denied the possibility of reflex-neuroses taking their origin in conditions of abnormal excitability of the nasal membrane. Such a position of absolute negation, in my opinion, would be as unjustifiable as the excessive enthusiasm even now displayed by some adherents of Hack's doctrine. It cannot be denied, and shall not be denied, that in some cases in which an acquired or hereditary predisposition to nervous ailments goes hand in hand with a local hyper-irritability of the nasal mucous membrane and of the nerve-end apparatus expanded in it, occasionally reflex-symptoms, and of a severe type too, may be produced in other spheres. I have myself successfully treated a few cases of asthma of nasal origin: I have in an isolated case been able to produce with mathematical regularity an attack of most violent spasmodic cough as soon as I touched with the probe a small spot in the middle third of the septum nasi on the left side, and I have observed a case in which night terrors, spasmodic sneezing, and asthma disappeared in proportion to the reduction of morbid conditions in the patient's nose. After such and similar experiences, it would be folly to condemn the whole doctrine of nasal reflex-neuroses as fallacious and misleading; but I am deeply convinced (1) that the frequency and importance of the influence of the nasal mucous membrane upon nervous phenomena at distant parts has been grossly exaggerated by the adherents of the doctrine; (2) that we have no real understanding as yet of the mechanism of these reflex processes; (3) that it is most difficult to determine whether a neurosis really is of nasal origin or not; and (4) that it is equally difficult, whether, in cases in which a nasal origin seems to be likely, treatment directed to the nose will benefit the patient.

All we can say is that in a certain number of cases physiological reflexes are produced from the nose, just as a reflex cough is sometimes produced from the external auditory meatus, and that what is true of the physiological sphere, equally applies to the pathological. The affection which I think may practically serve as a type of nasal reflex neuroses is hay fever. Here, indeed, we see that in a number of cases in which the mucous membrane is in a pathological condition, judicious treatment of that part just previous to the periodical complex of symptoms (sneezing, rhinorrhœa, conjunctivitis, epiphora, asthma) which constitute a complete attack of hay fever, in a considerable proportion of cases either stops the attack completely, or at any rate curtails its duration and diminishes its violence. This is a fact which I have often enough observed myself in the course of the last twenty years. Similar beneficial effects, although without anything like a similar frequency, may be observed in cases of genuine bronchial asthma, complicated by the existence of nasal polypi. Thorough removal of the latter in a number of these gives the patient lasting or temporary freedom from his asthma without any other treatment being employed. The relationship of cause and effect in some of these cases is very striking, inasmuch as on the return of the polypi the asthma occurs again, to disappear anew when the nasal disease has again been successfully treated.

Far be it also from me to doubt the possibility that other nervous affections may be beneficially influenced by the treatment of morbid conditions of the nose. Considering the intimate relationship of the fifth nerve to so many of the other cranial nerves, particularly the pneumogastric, and also to the sympathetic system, it is quite conceivable that a centripetal irritation having been caused by disease in the periphery of the fifth, and having found its way to the cerebral centres, and thence to distant nerve territories, may be arrested by elimination of the original irritation.

Hack's doctrine could never have attained so much popularity as it did if there had not been something rational in these hypotheses. The great mistake, however, which his enthusiasm led him to make originally, and which I believe his adherents are still making, was that he generalised too quickly from a number of neurotic patients in whom this local treatment may have had a temporary effect, either in the manner of a suggestion or of a pure counter-irritation. He took this effect to be an assured and a lasting one, and thereby was induced to regard as well-ascertained facts results which later and calmer observation has shown to be of an exceedingly doubtful and frequently unstable character.

And the worst of the whole matter, as already stated, is that, so far as I can speak myself, we are not in a position to say beforehand in the great majority of cases whether a neurosis is due to reflex influences from the nose or not. This fact of course renders the position not only of the diagnostician, but of the therapeutist, extremely difficult; inasmuch as there are not, so far as I know, in spite of all the various directions that have been given, any really reliable indications from which one is enabled to give a trustworthy prognosis with regard to the effect of nasal treatment in these cases.

*Asthma.*

Take, for instance, 3 cases of genuine bronchial asthma, which are sent to a rhinologist because, after careful exclusion of all other causes (affections of the heart, kidney, lung, stomach, etc.), nothing seems left but to ascribe the troublesome disease to nasal obstruction, from which all 3 cases have suffered for many years. Let the pathological conditions observed be in all 3 cases exactly the same, namely, very considerable swelling of the anterior parts of the lower turbinated bones, interfering even under ordinary conditions with nasal respiration, and obviously aggravating the respiratory difficulties during the asthmatic attack. The similarity of the local conditions in the nose in all 3 cases may be such that if the patients' faces be covered, it would be impossible to distinguish them from one another. Yet, if they all be treated exactly alike, namely, by galvano-caustic reduction of the swollen parts, absolutely different results may be obtained; in the one case a complete cure of the asthma, in the second case temporary disappearance, or at any rate improvement of all the troublesome symptoms; in the third no effect whatsoever. Yet, I repeat, the local conditions in all three were perfectly indistinguishable from one another. And the worst of it is that the proportion of the really successful cases in my experience is very small compared with those which are only temporarily benefited, and even much more so in proportion to the absolutely unsuccessful ones.

The correctness of this statement will probably not be admitted by ardent rhinologists. They will tell you that they obtain a much larger percentage of cures, and of long-lasting improvements. Whilst I am preparing this lecture, I read in an American journal a paper, whose author begins as follows: "The frequency of asthma as a result of a diseased nasal condition has so often been brought to my notice that I feel hopeful of effecting a cure in every (!) case of this distressing malady that consults me. Unfortunately, I am occasionally disappointed, but only in a small minority of my cases." Well, gentlemen, I can only say it must be a very lucky man who has penned these lines. Otherwise I am not able to understand his own and similar statements. If in an operation in which great technical skill and large experience are of the utmost importance, the results of individual operators vary greatly—that is intelligible enough. But if in a question, like the one under consideration, in which the technique is of the simplest, one man speaks like our American friend, and the other as I am unfortunately compelled to do, the only possible explanation seems that the former has had unheard-of luck in the nature and selection of his cases, whilst the latter has been phenomenally unlucky.

This brings me to the curious interpretation which Dr. Dundas Grant has recently given in his address on Traps and Pitfalls in Medicine of my inability to join the chorus of the apostles of the nasal cure of asthma. He says: "Asthma is another disease in the treatment of which general medicine owes much to the specialist, and every practitioner in diseases of the nose must have before his mind cases in which the treatment of the nasal cavity has resulted in long and

even permanent relief from the suffering depending upon this disease. Sir Felix Semon has indeed said that only a small percentage of the large number of cases of asthma which were at one time brought to him by physicians were traceable to nasal disease or relieved by nasal treatment. His experience, however, has been exceptional, for a reason not far to seek. At the time when attention was first drawn to the dependence of asthma in a certain number of cases, at least, upon nasal disease, Sir Felix Semon already had in so high a degree the confidence of physicians at large that cases of asthma were brought to him in large numbers, on the supposition that he was to find nasal disease in them all. He was naturally disappointed at the inevitable result in a considerable proportion of the cases. At the present time physicians make a rational search for nasal symptoms, and when such are present or suspected, then only are the patients brought before the notice of the rhinologist, and under such circumstances the percentage of beneficial results is by no means a contemptible one."

That is, indeed, a curious explanation. In the first place, what Dr. Grant states in it as to the manner in which my views have been formed are not facts, and he certainly cannot have derived his statements from my own writings, for I have never said anything that could possibly justify his purely theoretical description. Secondly, I feel sure that he wished to express his dissent from my views in the most courteous fashion, but I am afraid he has overlooked that the form chosen pays but a poor compliment both to my intellect and to my honesty, for he makes it appear as if I had, when the whole question was new, operated "by order" upon numerous cases without using my own judgment, and as if I had later on obstinately stuck to opinions arrived at through indiscriminately operating in the first instance. I can assure Dr. Grant that he is entirely mistaken in both respects. If he had read what I have written on the question since 1884, he would have found that from the first I have used my own discretion in selecting my cases for nasal treatment, and I need hardly say that if subsequent experience had corrected my first impressions. I should have considered it my plain duty to publicly correct erroneous views to which I had given currency in good faith.

However, these are personal matters which are of little interest to the public. What is of much greater importance is Dr. Grant's assertion that my experience was "exceptional." This really is an astounding statement. On May 5th, 1899, a discussion took place in the Laryngological Society of London on "Asthma in its Relation to Diseases of the Upper Air Passages." Of this discussion my friend, Mr. Ernest Waggett, has made a careful abstract in tabular form, which he has kindly permitted me to use. Seventeen speakers took part in this discussion and reported their personal experiences, which are summarised in his table (printed in the next column).

As a net result of this discussion, then, which was carried on, I repeat, by seventeen British physicians and specialists of long and extensive experience, we find that actual cures or considerable improvement were reported in nine—say nine—cases, in three of which adenoids, and in four of which polypi, were present, a truly magnificent proportion if one remembers how many hundreds of cases of asthma have been treated in this country alone by intranasal interference since 1884. And even so far as expressions of mere "opinions" are concerned, it will be seen from these tables that out of seventeen speakers only seven expressed themselves in anything like a hopeful strain, whilst the other ten held either very reserved or directly unfavourable opinions.

After this it is unintelligible to me how Dr. Dundas Grant can speak of my experience as "exceptional." I hold, not exceptional, but moderate views, which are shared. I am glad to say, by many of my fellow-specialists, and to these views I adhere. I always painfully feel when I see cases of this sort that by dissuading the patient from undergoing the treatment, if there be an actual morbid condition of the nose to which the asthma could be rationally ascribed, one might possibly deprive the patient of his only chance of getting rid of his troublesome disease. To counsel him, on the other hand, to undergo a treatment which, though not painful, certainly is anything but pleasant, and may be very tedious, whilst one is convinced that in a very small proportion of such cases only real and lasting benefit is obtained, will be always very unsympathetic to a man whose turn of mind does not naturally enrol him amongst therapeutic enthusiasts.

Under these circumstances I always think it best in cases of that sort to speak, when one has to do with educated patients, as frankly as possible, and explain as far as one can the present state of the whole matter, without either urging or dissuading from intranasal treatment. This attitude, I think, does justice to both the patient and the practitioner.

It is devoutly to be hoped that more reliable indications may soon be laid down for our procedure in such cases. At the present time, whilst in some cases very pleasing and, in a few patients, altogether unexpected results are obtained, I regret to say that in my experience our knowledge with regard to diagnosis, and our results with regard to the treatment of nasal reflex neuroses are still extremely unsatisfactory.

*Personal Experiences as to Asthma and Nasal Operations.*

| | Reports of Actual Cases. | Opinions Expressed. |
|---|---|---|
| Percy Kidd | 2 polypi; "manifest relief" | "Frequency of association much exaggerated." "Improvement in most cases temporary and incomplete." |
| McBride | 1 cure, adenoids | "Reasonable to expect benefit from removal of polypi." "Mentioned several cases" in which benefit occurred. |
| Thorowgood | 1 case, adenoids, almost free | "Quite right not to promise the patient cure from asthma." |
| Waggett | 1 case, spur and bridges | Since date of meeting asthma returned, though nose practically normal. |
| McIntyre | — | "Could recall a few cases of cure," but these were a very small minority. |
| Tilley | — | None except questionable case with adenoids. |
| Scanes Spicer | — | "A few patients ready to maintain" they were cured. Majority got great relief. |
| Watson Williams | 1 case of practical cure (general treatment given also) | Very large proportion of a more or less prolonged amelioration or cessation. |
| Theodore Williams | 1 case, polypi | — |
| Permewan | — | Majority "great relief" until necessity arose for further intranasal operation. |
| D. Grant | 1 cure, polypi | Fair proportion completely cured. |
| C. Beale | 1 case relieved for a time by repeated operation | "Thought that unless some definite evidence could be obtained that the source of irritation was in the nose; any operation, except for relief of obstruction, was hardly justified." |
| Hill | — | In over 50 per cent., where nasal disease present, relief might be expected. |
| Semon | — | Lasting success in exceedingly small percentage. In his experience most frequently no results obtained at all. |
| StClair Thomson | — | Had met cases which had been "considerably damaged" by intranasal treatment. |
| Lack | 1 case, adenoids | — |
| De H. Hall | 1 case, polypi | Very fair proportion of considerable and permanent relief. |

5. Local Symptoms and Sensations of Obscure Origin.

At the head of this division I would place the principle: not to try and at any price to find the explanation of every symptom and every sensation experienced in the upper air passages in trivial or even imaginary deviations from the normal existing in these parts.

But here again I wish to guard against misunderstandings. Undoubtedly, when a patient consults us, complaining about his nose and throat, our first duty will be carefully to examine these parts. If we find in them a rational explanation of the symptoms complained of so much the better. The case, then, will belong to the first category I discussed—to the affections of purely local character—and in that class, as I have tried to show, much may be expected from appropriate local treatment.

But the case is very different indeed if the actual changes met with are of so trivial a character as not to account for the symptoms present, or if they are of such a nature that to ordinary common sense a relationship of cause and effect is practically excluded. Take, for instance, a case of hoarseness due to

paralysis of the left vocal cord. It may as yet be impossible to make out the cause of the paralysis when the patient consults the doctor, but the latter would, in my humble opinion at least, act extremely unwisely if he were to accuse an accidentally concomitant elongated uvula as the cause of the hoarseness, and to remove that structure. Yet I have known cases in which this has actually been done, and in which the real cause of the hoarseness ultimately turned out to be aneurysm of the aorta!—Or, to take another example: A patient comes complaining of some difficulty in swallowing. The doctor diagnoses, as was the fashion a few years ago, "varicose veins" at the base of the tongue, or at the posterior wall of the pharynx, and destroys them by the galvano-cautery. The patient is not relieved and consults another doctor, who finds that the real cause of the dysphagia is commencing bulbar paralysis! This, again, is not a fantastic example; I have seen an instance of that kind myself.—Or, as in the case mentioned in the last division: A patient suffers from violent cough; the cause is declared to be a spur of the septum, which touches the opposite turbinal; operative treatment in the nose is resorted to without avail; the patient sees another medical man, who finds that pulmonary tuberculosis is the real cause of the cough.

Few things, gentlemen, will damage the reputation of a medical man so seriously as mistakes of this kind: few things will lend so much colour, as they do, to the accusation of narrow-mindedness which is so apt to be brought against specialists.

I have deliberately selected elongation of the uvula, varicose veins at the base of the tongue and at the back of the pharynx, and spurs of the septum as representative "scapegoats" for the explanation of all possible symptoms in nose and throat. In children, of course, adenoids may be added, and in adults granular pharyngitis, enlargement of the lingual tonsil, and hypertrophic rhinitis run them very close. But the three first named were until very recently, in my experience at any rate, but too commonly held responsible for all the ills to which nose and throat are heir to. Of these the oldest offender is undoubtedly "elongation of the uvula." Though matters, I think, are better now than they were twenty years ago with regard to this topic it is still apparently believed in some quarters that cutting the uvula is a sort of "panacea" for all possible forms of throat disease, whilst in others it is looked upon as a "last resort" after the failure of other measures. Now, the operation itself is, of course, a very small matter, but the after-pain is, as I can assure you from personal experience, sometimes very great indeed, and when a patient has suffered acutely for several days without obtaining any benefit with respect to his original symptoms, it is not exactly likely that his love for the operator will be increased thereby. In my opinion the operation is extremely rarely required, and should only be undertaken if it can be ascertained beyond doubt that elongation of the uvula is at the root of the symptoms complained of.—The second "scapegoat," namely, "varicose veins" at the base of the tongue and at the back of the pharynx, or "piles" in the throat, as they were elegantly called, at one time raged with the fury of a regular epidemic, and were held responsible not only for all conceivable throat symptoms, but can you believe it, gentlemen, for such affections as "spasmodic torticollis" and "paresis of an upper limb"? When, however, Dr. Herbert Tilley courageously pricked that bubble in 1896 it utterly collapsed and wonderfully little is nowadays heard, thank goodness, of "lingual varix." *Requiescat in tenebris!*—The third poor sinner, however, the spur on the septum, so far as my observations go, still flourishes, and though it may not even touch the opposite turbinal, is held responsible in some quarters for all possible nose, throat and ear symptoms. It is devoutly to be hoped that it may soon share the fate of the "varicose veins!"

But, gentlemen, seriously speaking, this whole movement, this "morbid readiness to discover disease," this desperate trying to find in every case and at any price a local explanation which, I am sorry to say, has been again in the ascendant during the last few years, after having been victoriously combated in the early Eighties, is, I firmly believe unsound, retrogressive, and greatly to be deprecated. I certainly do not wish to make myself the advocate of such expedients, as to refer every local sensation in the upper air passages to the question of "general health," or to rest satisfied with giving it a high-sounding name such as "paræsthesia" or "neuralgia." Such expedients are, I know well enough, but too often the "refuge of the destitute!" Personally I am much more pleased if I find well-marked granular pharyngitis, which can be cured by a few galvano-caustic applications, in explanation of dryness and soreness of the throat, than an apparently normal mucous membrane when such sensations are complained of. But there can be no doubt, on the other hand, that many local symptoms and sensations actually do depend upon the general health, upon diseases in remote parts, upon purely functional nervous diseases, and that to disregard these possibilities; not to look further than to the tip of the nose or to the lower end of the trachea; and to treat every tiny abnormality by chance existing in these parts as the real cause of the patient's symptoms, is as little calculated to do good to the patient as to reflect credit upon the medical attendant!

### 6. The Necessity of a Proper Proportion being Observed between the Gravity of the Disease and that of the Interference.

You all, remember, no doubt, that delightful song in the *Mikado*, gentlemen, in which that enlightened potentate thus states the summit of his ambition:

> My object all sublime
> I shall achieve in time
> To make the punishment fit the crime,
> The punishment fit the crime.

Would, gentlemen, that that sound principle, "To make the punishment fit the crime," were elevated to front rank in the considerations which ought to guide us when adopting local treatment in affections of the upper air passages! But, alas, this is by no means the universal rule! In previous divisions of these lectures I have had repeatedly to complain—as in the paragraphs dealing with adenoids, with laryngeal tuberculosis, with functional aphonia—that local treatment was by no means always efficiently carried out. In this—concluding—part it will, on the contrary, be my duty to warn against adopting measures the severity of which is quite out of proportion to the exigencies of the case. I shall give you three instances, which will show you that such a warning is much-needed. I will illustrate how excessive local treatment may err in various degrees from mere superfluity, through unnecessarily severe and dangerous procedures, and finally, through resorting to what I consider to be positively unpardonable measures.

Before, however, embarking upon this not very pleasant task, I feel I ought to say a few words concerning the new radical operation for nasal polypi introduced by Dr. Lambert Lack, lest my silence be misunderstood. Dr. Lack being convinced from his investigations that the primary element in the formation of nasal polypi is a rarefying osteitis of the ethmoid bone, proposes in all cases in which there is extensive bone disease with numerous polypi, in which frequent recurrences take place after operations, and in which there is suppuration from the ethmoidal cells or from the accessory sinuses, to remove radically the whole of the diseased bone under a general anæsthetic. Seeing the extreme obstinacy and tediousness of such cases, I fully agree that if it should turn out that the proceeding recommended is both safe and efficient, it would represent an enormous progress over our present methods. But it remains as yet to be seen whether these two demands, safety and efficiency, will be fulfilled by the radical method, and until we are in possession of larger experience concerning them I refrain from expressing an opinion. I already have knowledge and details of a case in which death from acute meningitis occurred some three to four days after the operation in a patient who had, except for nasal polypi, been in good health. As Dr. Lack himself warns us: The lamina cribrosa is not a part to take liberties with.

Coming now to affections in which I believe that but too often the severity of the interference is out of proportion to that of the disease, I select as an illustration of that class in which energetic and prolonged local treatment is, in my opinion, absolutely superfluous, the affection described as leptothrix-mycosis, or as keratosis of the tonsils, base of the tongue, and pharynx. Aside from the question whether the

leptothrix or the cornification of the epithelium prevails, in both instances white, rather hard, firmly-adherent projections are seen to protrude from the crypts of the palatal and lingual tonsils, and, more rarely, from follicles on the posterior wall of the pharynx and the palatal arches. As a rule they produce no symptoms whatever, and, in my experience, are usually detected by the patients themselves on a chance inspection of their throats. The patients are then apt to be much frightened by the strange appearance and consult a doctor for what they call an "ulcerated" throat. Occasionally they complain of various unpleasant sensations, which, however, I am loth to attribute to the tonsillar affection, as I have almost always found this mycosis or keratosis in people whose general health has been low for some reason or other, and who often enough complain of such sensations without any tonsillar complication being present at all. The harmlessness of the affection is only rivalled by its obstinacy to local treatment. Whatever method be used—and the name of the remedies and operative measures recommended in these cases really is legion—no sooner have the protuberances been removed than they reappear. Some time ago it was stated in a discussion that a case of this sort had been treated for three months with the galvano-cautery without success. Even when with great patience and endurance complete removal appears to have been effected, recurrence is extremely apt to take place.

Now what I wish to emphasise is that no local treatment whatever is required in these cases. Speaking from large experience I can confidently state that if the patients be assured that there is nothing serious the matter, and if they be ordered change of air, tonics, rest, open-air exercise, etc., they will get well without local treatment of any kind. Indeed, I believe that many of these cases are never seen by a doctor because the affection arises and disappears without causing any symptoms.

Whilst in the category just discussed local treatment in my opinion is simply superfluous, it may do a good deal of harm, both immediate and remote, if indiscriminately and excessively employed in the class of cases to which I now invite your attention, namely, in enlargement of the posterior ends of the lower turbinals, be this enlargement of a merely congestive or a truly hypertrophic character ("moriform hypertrophy"). Undoubtedly in a certain number of such cases the obstruction to breathing caused by the swelling of those bodies is so great, that it must be removed. Until recently this was technically no easy matter, as it is often extremely difficult to pass a snare over the posterior ends of the lower turbinals, however much enlarged they may be, and as other procedures such as the application of the galvano-cautery or submucous incisions are both tedious and uncertain in their effects. With the invention of Carmalt Jones's "spokeshave" all this was suddenly changed. A single forward draw of the ring knife, previously applied over the posterior ends of the lower turbinal, and out came the whole body! Nothing could be more simple, and nothing apparently for a time delighted the heart of the thorough-going rhinologist more, than to thus punish these rebellious structures. It was a common saying—malicious, I trust—not many years ago, that in a certain institution lower turbinals had to be swept up with a broom on operation days. But the proceeding, though simple, is not quite so harmless as was at first stated by enthusiastic apostles of the method. In not a few cases severe secondary hæmorrhage follows the operation. A leading London practitioner told me a little while ago that within a comparatively short time he had been called to no fewer than four of his patients, who, unknown to him, had undergone this operation, and had begun to bleed some hours or even days afterwards. In one case the hæmorrhage was so severe that he had to sit up the whole night with the patient. I have already narrated a similar case in a previous chapter. Another and very serious, because lasting, possible sequel to ablation of the whole turbinal is, that by removal of so large a surface of mucous membrane which has to accomplish, as already mentioned, the important functions of warming, moistening, and purifying the inspired air, a condition is produced very similar to atrophic rhinitis, with the result that very troublesome dry pharyngitis, with a tendency to formation of crusts and liability to laryngeal catarrh, follow. This is not, I beg emphatically to say, a theoretical apprehension. I, as well as others, have actually seen examples of such a serious and irremediable a result after these operations. Fortunately, the initial enthusiasm has been quickly enough followed by a return to greater sobriety. I was delighted to see that at the recent meeting of the British Medical Association a firm stand was taken by many of the speakers in the discussion on the treatment of nasal obstruction against complete turbinectomy, which as Dr. Brown-Kelly truly remarked, "had not redounded to the credit of British rhinology," and I think that, with very few exceptions, there is now a general agreement that even in cases in which removal of the posterior ends of the turbinals is indicated, the operation ought to be limited to these posterior ends, and not include, except in the rarest of instances, the entire body. In this connection I wish particularly to warn you against the notion which found expression on that occasion, that it did not much matter whether one removed a "useless" turbinate in its entirety or not. What is a "useless" turbinate?—We should do well to remember, I think, our similar experiences in the case of goitre. The occurrence of myxœdema in cases in which goitrous thyroid glands had been removed as "useless," taught us that they could, after all, not have been quite so useless as had been supposed, and the occurrence of pharyngitis sicca in cases in which the entire lower turbinals have been removed under a similar belief should, I venture to believe, teach us a similar lesson.

But the worst exaggeration that has ever to my knowledge been perpetrated in connection with affections of the upper air passages was committed last year when Dr. John Mackenzie, of Baltimore, read before the American Laryngological Association a paper bearing the significant title, "A Plea for Early Naked-Eye Diagnosis, and Removal of the Entire Organ with the Neighbouring Area of possible Lymphatic Infection in Cancer of the Larynx." One hardly trusted one's eyes when reading that title, but on perusing the paper itself one sees that the author has, at any rate, the courage of his convictions. In all earnestness, he considers the naked-eye diagnosis a "comparatively speaking neglected method," emphatically rejects the removal of a piece for microscopic examination, and demands—however early the diagnosis may have been made, however limited the disease may be—not only "early total extirpation of the entire organ," but even of its "tributary lymphatics and glands, whether the latter are apparently diseased or not" as "the only possible safeguard against local recurrence or metastasis."

After these astounding performances one would like to give Dr. Mackenzie the benefit of the doubt and assume that, Rip-van-Winkle-like, he must have slept throughout the whole modern development of our knowledge of laryngeal cancer, particularly as he declares that "thyrotomy with curettement or removal of all apparent (visible) disease is not up-to-date surgery, is in direct defiance of the rules that should govern us in the treatment of cancer, and is a reversion to and a resurrection of a method of procedure that was discredited and abandoned over half a century ago" were it not that such a plea is unfortunately inadmissible. Dr. Mackenzie was not only over here in 1895, when a long and instructive discussion on the treatment of laryngeal cancer took place in the Laryngological Section of the London meeting of the British Medical Association, but he himself took a leading part in it. He not only learned the views of his British colleagues on the question he now treats so passionately, but he also heard of the results they had obtained by the method which he now endeavours to disqualify as "not up-to-date surgery." These results he deliberately ignores. That is unpardonable. Mr. Ernest Waggett, in "the interests of American surgeons, and still more of American patients," has taken upon himself the very meritorious task of correcting in the same journal in which Dr. Mackenzie's paper was published his misleading statements, and of showing by facts and numbers the value of the method against which that author inveighs. Personally, however, I find it very difficult to take Dr. Mackenzie seriously, and I must confess that when I read his advice to condemn to a very serious and mutilating operation patients whom we have learned lastingly to cure by infinitely milder methods, I was irresistibly reminded of a certain Dr. Eisen-

bart, who is supposed to have flourished at the time of Frederick the Great, and who, in a well-known German students' ditty, gives a frightful account of his heroic exploits, of which the following—in very free translation, I am afraid—may give you an idea:

> At Potsdam I trepanned, just hear,
> Great Fred'rick's cook, to him so dear.
> I poleaxed his devoted head:
> No wonder that the cook is dead.

I certainly prefer the Mikado's principle, and I hope that Dr. Eisenbart is not likely to find many emulators amongst contemporary surgeons!—

With the expression of this hope, gentlemen, I conclude my lectures. Nobody can be more conscious than I am that I have brought forward nothing new, and that I have repeated in almost identical words much that I have said on previous occasions. But I honestly believe that such repetitions sometimes are required and may do good. Cato may have been, and probably was, a terrible bore with his eternal *Cæterum censeo*, but after all he thereby advanced his cause and ultimately obtained his purpose.

If I could venture to hope that by my warnings against excessive zeal and over-operating on the one hand, by my insisting on effectively operating on the other, I had advanced the good cause I have at heart, I should be perfectly willing to enrol myself on Cato's side.

## ON SOME SYMPTOMS PRODUCED BY TUMOURS OF THE OPTIC THALAMUS WITH A CASE.

By J. MICHELL CLARKE, M.A., M.D., CANTAB., F.R.C.P.LOND.,

Professor of Pathology, University College, Bristol, and Physician to the Bristol General Hospital.

IN some cases of tumour of the optic thalamus a group of symptoms occurs which is of value in diagnosis. These symptoms were present in the case now reported and in one published in the BRITISH MEDICAL JOURNAL in 1891. In both cases, occurring fairly early and lasting for some time, there were (1) a sensation of heat or burning in the opposite upper extremity, (2) a marked intentional tremor in the same limb, absent during rest, and exactly resembling during movement the tremor of disseminate sclerosis, (3) hemiplegia of the opposite side of gradual onset, affecting the upper extremity only for a considerable time and predominating in this limb throughout. These symptoms must, of course, be taken in conjunction with the others present in making the diagnosis. The predominating paralysis of the opposite upper extremity is mentioned in 8 and movements of this limb in 6 out of 10 reported cases in which the lesion was fairly confined to the thalamus.[1]

Instead of an intentional tremor there may be movements of a choreiform type or like those of post-hemiplegic chorea. In the subsequent progress of the case the paresis extends to the leg of the same side, and later this limb may also be affected with tremor, later still the paralysis develops into definite hemiplegia with the limbs in the ordinary hemiplegic position; spasmodic rigidity is generally marked, and as this becomes pronounced it abolishes the tremor of the earlier stages. Hemianæsthesia may also be present but is by no means constant or absolute in degree.

With regard to the intention-tremor, this is also met with in tumours in two other situations in the brain, namely, in the cerebellum, and in the corpora quadrigemina. In tumours of the cerebellum the tremor does not seem to be so frequent as the results of experiment would lead one to expect; in this case, also, it especially affects the upper limb.[2] In any case, therefore, in which this symptom is present the differential diagnosis between a tumour of the optic thalamus, corpora quadrigemina, or cerebellum has to be made; but in most cases this could be done from the accompanying symptoms, as the signs—which I need not go into here—of a tumour in each of these situations are sufficiently distinctive.

In addition to the symptoms given above, another, said to be characteristic of lesions of the thalamus, but apparently not invariably present, is a loss of the emotional movements of the face, whilst the voluntary are preserved. In the present case the want of expression in the features was very marked. Early loss of control over the sphincters does not seem to be, as has been stated, a frequent symptom in tumours of the thalamus. When the growth extends backwards the nuclei of the third nerve will be involved. Mental dulness or slowness, present in the later stages, or even early in the illness, is probably connected with the great distension of the lateral ventricles which occurs.

In the case now reported it is remarkable that the three cardinal symptoms of intracranial tumour—severe headache, vomiting, and optic neuritis—were absent from first to last.

In the early stages the absence of these cardinal symptoms, with the patient's age, and the marked intentional tremor, made the case resemble an irregular one of disseminated sclerosis, and at first this was considered to be the most probable diagnosis.

The notes of the case are as follows:

The patient, a painter, aged 29, was first seen on October 25th, 1899. He had had no previous illness, and there was no sign of plumbism.

*History.*

The present illness began with diplopia twelve months previously, followed by deviation outwards of left eye eight months later, burning pain in left arm and hand a month afterwards, and impairment of fine movements of left hand and fingers; for example, in picking up a pin, but not of coarse movements—for example, lifting a heavy weight.

*Condition on Admission.*

He was well-nourished, intelligent. There was a marked absence of facial expression. The abdominal and thoracic viscera, and the urine were healthy. No headache, no vomiting, no giddiness; no affection of special senses, nor of organic reflexes. Speech slow and deliberate, but distinct. Gait normal; walked well with eyes open or shut.

*Eyes.*—There was right ptosis and right external strabismus; movement of both eyes upwards very defective, and the left eyeball hardly moved at all downwards. There was slight horizontal nystagmus when the eyes moved into either canthus. The right pupil was somewhat larger than the left; both reacted sluggishly to light and to accommodation, and the consensual reaction was absent. The optic discs and fundi were healthy. There was slight loss of sensation to touch but not to pain (pin-prick) over left side of head, neck, trunk, left upper extremity, and left leg. Muscular power good, but muscular sense in left hand impaired. He could not distinguish between different weights, which were easily recognised by the right hand. Dynamometer right hand, 56 kilos; left hand, 45. Knee-jerks equal and normal; no ankle clonus; superficial reflexes normal.

*After-History.*

Shortly after this date the left arm began to show marked intention tremor and lack of co-ordination on movement, which steadily increased.

*Condition in July, 1900.*—No headache or vomiting, cramping pains in left arm.

*Eyes.*—Fine horizontal nystagmus. Pupils dilated, equal, react badly to light and accommodation. Paralysis of right third nerve; partial paralysis of left third. No optic neuritis; outer half of each disc pale; moderate concentric contraction of visual fields.

*Sensation.*—Partial left hemianæsthesia.

*Motion.*—Left hemiplegia; the arm being most affected; marked intention-tremor, entirely ceasing during rest, of this limb; some ataxy of the left leg in walking.

*Reflexes.*—Left knee-jerk increased; left plantar gave extension of toes; other reflexes normal. Intelligence good; speech slow, words slurred, and often indistinct.

*October, 1900.*—In addition to above, paralysis of both third nerves and (?) of both fourth nerves. Both knee-jerks exaggerated; left ankle-clonus; drowsiness and giddiness.

*January, 1901.*—Very drowsy, but intelligent, though slow in answering; speech slow, slurred; occasional incontinence of urine. Left anæsthesia complete; left arm and leg completely paralysed, contracted and rigid, with movements in arm like athetosis. Some numbness and slight tremor in right arm; double ankle clonus. From this time he was helpless, constantly asleep, with incontinence of urine and fæces, albumin appeared in the urine and there was knee and ankle clonus in both legs; the other symptoms remained as above. He died on March 4th.

*Necropsy.*

On removing the brain the only sign of disease externally was a swelling of the right crus. Vertical sections of the brain were made from before backwards and hardened in formalin. A tumour was found occupying the right optic thalamus, and extending downwards and backwards into the subthalamic region where it invaded the opposite side and pressed on the right internal capsule and crura cerebri, especially the right crus. It did not extend into the pons. The anterior end of the tumour was at about the level of the middle commissure in the mesial nucleus of the optic thalamus; passing backwards it occupied nearly the whole of the thalamus except its outer layer, and its posterior end (pulvinar) which were not involved. The third ventricle (posterior end) was pushed over to the left. The growth then passed downwards, involving the subthalamic region, red nucleus, and pressing on internal capsule on right side, and a little further back extended also into the left subthalamic region, invaded and partly destroyed the crusta on the right side, and pressed upon it on the left; the nucleus ruber on the left and partly on the right side, and the grey matter of origin of the third nerves were replaced by the growth, which also compressed the aqueduct of Sylvius. The corpora quadrigemina were flattened and displaced upwards by the tumour. The tumour was well defined, and marked off from the surrounding brain structures by a definite margin; it was firm in consistence, and measured in its largest part, which was situate just behind posterior

commissure for about half-an-inch antero-posteriorly, 1¾ inch in both the vertical and transvere diameters. It was a round-celled sarcoma. The lateral ventricles were much distended with clear fluid owing to the pressure on the aqueduct.

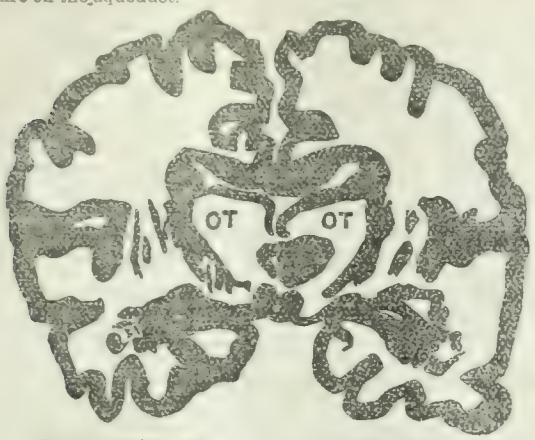



Fig. 1. From anterior part of tumour, section passing through middle commissure

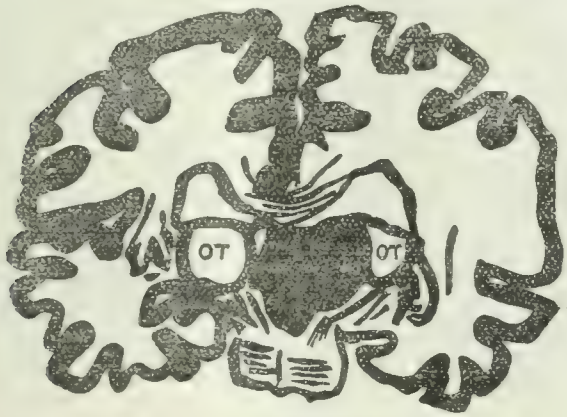



Fig. 2. Section through largest part of tumour.

Figs. 1 and 2 indicate the position of the growth.

Sections of the pons, medulla, and upper cervical cord showed degeneration of the pyramidal tracts, by far most marked in the tract from the right hemisphere. In sections stained by Marchi's method there was a well marked and definitely limited degeneration in the left cerebellar peduncle. This degeneration could not be traced on the right side.

This finding is of interest as showing the presence of fibres in the peduncle passing towards the cerebellum, and also in connection with the marked intention tremor in the left arm and to a less degree in the leg.

With regard to the causation of this tremor or of choreiform movements in the cases under consideration there is first the fact that of all cases of intracranial tumour they are pre-eminently found in tumours of the optic thalamus, corpora quadrigemina, and of the cerebellum. Of the explanations hitherto advanced Professor Ferrier in writing of tumours of the corpora quadrigemina,[3] states, "in all cases in which tremors were observed the lesion was not confined to the corpora quadrigemina, but implicated also the optic thalamus, tegmentum cruris or frontis, or superior cerebellar peduncles. . . . In this connection it is worthy of note that Turner and I have described similar tremors as resulting from section of the superior cerebellar peduncles in monkeys. . . . If the tremors observed in clinical cases are in reality due to lesion of the superior peduncles, one might explain the crossed tremor in unilateral lesion by affection of the cerebellar peduncle above its decussation."

The other explanation of the tremors is that given by Dr. Sharkey, that they are due to pressure upon the pyramidal tract.[4] The symptoms certainly follow the sequence given by Dr. Sharkey, namely, tremors, paralysis, rigid contracture, and, as in a tumour of any size in these regions, the pyramidal tract would be affected, it is difficult to speak with certainty. But I think that, seeing that these tremors specially occur in tumours of optic thalamus, corpora quadrigemina, and, to a less degree, of cerebellum, the balance of evidence is in favour of their being due to implication of the superior cerebellar peduncle, the course of events being that the tumour first affects the peduncle, and later in the course of growth presses upon and more or less destroys the pyramidal tract in the internal capsule, crus, or pons, and that thus the tremor appears first, but later disappears owing to the supervention of more complete paralysis and of spasmodic contracture. Further investigation is required as to the implication of what especial fibres of the superior cerebellar peduncle the tremor is due.

References.

[1] *Brain*, 1898, p. 311; [2] Ferrier, Allbutt's *System of Medicine*, vol. viii, p. 372; [3] *Loc. cit.*, p. 340; [4] Spasm in Chronic Nerve Disease, Goulstonian Lectures, 1886.

## ENTERIC FEVER COMMENCING WITH AND COMPLICATED BY AN ATTACK OF INFLUENZA.

By J. COUBRO POTTER, M.D.,
London.

Enteric fever in the early stages is often difficult to diagnose in consequence of its insidious onset and the different disorders the early symptoms simulate. The following case is an example, where the early enteric symptoms were entirely masked and the disease not recognisable until about the eleventh or twelfth day of the illness. It is very uncommon and also a difficult thing to prove that two fevers can occur at the same time in a patient: but in this case the attack of influenza modified the course of the temperature usually met with in ordinary enteric cases, it being intermittent and remittent for the first ten days, and then the typical typhoid temperature continued. No doubt the high temperature, and the intermittent and remittent character lasting for ten days, was due to the two fevers acting together, and that it was only when the influenza poison was exhausted that the true typhoidal character was revealed. When I first visited the patient she complained of shivering and feeling feverish, pains in her head, back, and limbs, a tendency to sickness. These symptoms had come on suddenly; she stated that for the last week or ten days she had not been feeling very well. On examination no physical signs were to be detected in the chest: all the other organs were normal. The above symptoms continued for the next few days. Bowels were constipated; slight tenderness on palpation over the stomach. Patient had repeated rigors, and profuse perspiration was observed with each fall of temperature. On the seventh day a rash appeared on the abdomen, and this continued to come out in crops. The abdomen was swollen and tympanitic. On the eleventh day diarrhœa set in, the stools being pea-soupy and very offensive. The blood was examined and was distinctly of enteric character. On the seventeenth day great pain in the head was complained of; this gradually got worse, the temperature going up. The patient showed signs of acute meningitis, became delirious, and died on the nineteenth day. Temperature 107.6°.

The following should be noted: Previous to the illness the patient had been visiting in a house where influenza was present. There was an entire absence of physical signs in the chest, but marked gastric symptoms from the commencement, common to both complaints. The absence of any symptoms pointing to internal suppuration, which might have accounted for the early temperature. The peculiar intermittent and remittent temperature for the first ten days, this form of temperature not being typical of either disease, but probably caused by a combined action of both fevers. On the twelfth day a typical typhoidal temperature began to be registered, starting at 103.2°, which temperature in an ordinary case of enteric would probably be registered about the twelfth day of the disease. The present attack was now at the twelfth day.

The above facts distinctly point to the conclusion that both fevers commenced to attack the patient about the same time, and were acting for a time together, producing the abnormal temperature which was observed at the commencement, and which made the early diagnosis of enteric fever impossible.

## A CASE OF RECURRENCE OF LARYNGEAL PAPILLOMATA IN A CHILD AFTER TRACHEOTOMY.

BY E. MANSEL SYMPSON, M.D., B.C.CANTAB., M.R.C.S.
Surgeon to the Lincoln County Hospital.

DR. G. HUNTER MACKENZIE has the following interesting passage in his paper on the Treatment of Laryngeal Growths in Children, published in the BRITISH MEDICAL JOURNAL, p. 884, on September 28th, 1901:—

The sole reference to recurrence after tracheotomy only which I have been able to find is by Simpson, who, in the course of a discussion at the Carlisle meeting of the Association in 1896, on a paper read by me on this subject in the Section of Diseases of Children, said he had seen a case in which the growths recurred after tracheotomy. No details were given of this most unusual occurrence, nor has it been confirmed by any other observer, and I am therefore disinclined to accept it as a record of an actual fact.

As I did attend the Carlisle meeting and joined in the discussion on Dr. Mackenzie's paper by relating the case he quoted (of which I should have been perfectly ready to supply details if wanted), in spite of the somewhat discourteous and inaccurate reference (in Edinburgh surely one is bound to spell my name with an "i"), I presume the allusion is to me. Having fitted on the cap, I may proceed to show cause why it is not an extinguisher, and help to remove Dr. Hunter Mackenzie's disinclination to accept my case as a record of actual fact. For permission to publish the latter portion of the following notes I have to thank Mr. Butlin, under whose care the patient was at St. Bartholomew's Hospital, and Mr. H. J. Waring, Surgical-Registrar of that hospital.

The patient was a little girl, aged 7 years, who had been suffering about two and a-half years from laryngeal obstruction due to multiple papillomata. On April 10th, 1890, I performed tracheotomy. For some time she was able to breathe fairly freely and to whisper, when the tube was removed and a finger laid on the opening, but the obstruction returned and the larynx became choked with papillomata. After a year and three months, as her condition in no way got better and the tube was indispensable, I sent her up to Mr. Butlin at St. Bartholomew's Hospital.

The notes of her condition on admission and of the case generally follow:

Present condition.—Wears a tube; quite unable to speak or to respire through larynx. The laryngoscope shows the rima glottidis blocked, except for a small chink near right arytenoid, by a pink warty mass.

August 20th.—Mr. Butlin attempted to remove some growth under cocaine, but without success.

September 8th.—Patient was put under chloroform. Mr. Butlin then made an incision in middle line of neck extending from hyoid bone to about third ring in trachea. There was already a tracheotomy tube in the trachea, but it was above the cricoid cartilage (crico-thyroid space), so another was put in below. After the incision was made the larynx was dissected down to, and all bleeding points carefully stopped; then the larynx was opened, trachea above tube was plugged with cotton wool, and the vocal cords were seen to be covered with papillomata, which were completely scraped away with a sharp spoon. The two thyroid cartilages were then sutured together with one silver suture, and care was taken that the suture did not go inside the larynx. Patient did perfectly well and went out with wound healed. Voice: Can make laryngeal sounds.

She is in excellent health and voice now.

I hope that this case may long continue to be unique in the interests of all sufferers from laryngeal papillomata in the future.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

### TREATMENT OF INTUSSUSCEPTION BY INFLATION AND SUCCUSSION.

THE reports of cases of intussusception recently appearing in the BRITISH MEDICAL JOURNAL has suggested my sending you a note on the treatment of two cases which were under my care some time since.

The earlier case was a child presenting all the usual signs of the malady—vomiting, tenesmus, with blood and mucus passing from the anus—and was the sequel to an attack of diarrhœa. No fæces had passed for a good many hours. The child's condition seemed very precarious. The treatment consisted of distension of the bowel with air, gradual inversion, and gentle succussion. The rubber portion of an ether spray apparatus was attached to a No. 12 gum-elastic catheter: the point of the catheter was passed through the anus, and air steadily forced into the rectum. With the gradual distension of the bowel the catheter was slid higher and higher, air being still forced in. The abdomen became visibly distended, and soon reached a point beyond which it seemed unwise to go. The child was then gradually inverted, and gentle succussion practised. Almost before the inversion was complete there was a forcible escape of air and fæces; the condition of the child suddenly altered, and all unpleasant symptoms vanished. The relief was complete, and further treatment unnecessary.

The later case was similar to the earlier one, and yielded in an equally satisfactory manner to the same treatment.

Farnborough, Hants. E. BLACKER, M.D.

### VESICAL CALCULUS IN A WOMAN AGED 75 YEARS: OPERATION: RECOVERY.

A. W., aged 75 years, has frequently been to consult me during the last year or two for difficulties in micturition. A little simple medicine has generally given her relief, but during the past summer her symptoms became more troublesome, and she thought her sufferings arose from a falling of the womb. On examination the womb was found to be quite without fault; but the urine was full of mucus and blood shreds. I then suspected stone, which diagnosis, on passing a silver catheter, proved correct. I suggested an immediate operation, and the patient willingly consented.

Mr. Arthur Drew, of Oxford, operated on August 25th. The stones, four or five in number, with detritus were extracted by the urethra; some slight febrile disturbance ensued, and lasted three or four days. Some incontinence of urine (from laceration of the urethra) lasted ten or twelve days. The calculi must have been in the bladder for years, and the constant irritation of the mucous coat, had produced an effusion of mucus almost pustular in appearance mixed with blood. In three weeks (so much vitality and recuperative powder did this old lady possess) she was quite well, the urine had become normal, the incontinence was almost gone, and sleep and appetite were restored.

Oxford. C. BALLARD, M.R.C.S

### INVERSION OF UTERUS FOLLOWING LABOUR: DEATH: NECROPSY.

THE rarity of inversion of the uterus, I think, renders a case worthy of record.

At 12.30 A.M., on October 3rd, I was called to the case by the midwife who had been privately engaged by the patient to attend her in her confinement. I found her blanched and collapsed, and death occurred five minutes after my arrival. The following is the statement made by the midwife at the inquest: She delivered the patient at 6.30 P.M., October 2nd (that is, six hours before death) of a full term, well-developed child. She expressed the placenta into the vagina, and then picked it out with her hand, "but had some trouble with the membranes." She did not use any excessive traction on the cord or vagina. She gave ʒij of ergot, and left her at 7 o'clock with the uterus well contracted and a good pulse. She was summoned again at 11.30; found the patient collapsed: there had been considerable hæmorrhage, but the uterus was still contracted. She administered stimulants with no avail, and death occurred as reported.

The patient was a fine, well-developed woman. It was her fourth confinement, the previous ones being quite normal. She had suffered with vomiting and fainting attacks whilst carrying. I made a *post-mortem* examination 21 hours after death. The uterus was quite inverted, so much that the fundus was lying close on to the os. There was a long piece of membrane attached to the placental surface of the uterus, and the whole of interior of the organ was dotted with fine blood clots; otherwise it was quite healthy. All the organs were quite normal, but very pallid, and the heart was quite empty and contracted.

The midwife stated she had no idea of what had occurred. I think the reduction in size of the uterus, owing to the inversion, might have been easily mistaken for a contracted organ. The cause of the inversion on the above evidence is, of course, obscure.

H. Gilbert Nicholson, M.R.C.S., etc.,
District Surgeon to the City of London Lying-In Hospital.

### THE COMPARATIVE FREQUENCY OF SYPHILIS AMONG THE CIRCUMCISED AND THE UNCIRCUMCISED.

Having practised for thirteen years among a mixed Hindu and Mohammedan population, I formed a very definite impression that syphilis was much more common among the latter—uncircumcised—than among the former—circumcised—class. In a general practice statistics on this point may not be reliable, as a surgeon may be more popular or of greater repute in the treatment of different diseases among different sections of the community. My belief in the protective influence of circumcision is held by most surgeons. Mr. Hutchinson, in the *Polyclinic*, September, 1900, notes the immunity of Jews as compared with Christians.

The Bombay police are a mixed force in which the authorities aim at keeping the ratio of Hindus and Mussulmans in the proportion of 3 to 1. With very slight fluctuations this proportion is maintained. In the past nine years there have been admitted to the police hospital 209 cases of primary syphilis from an average strength of 1,570 Hindus, and 105 cases from an average strength of 523 Mussulmans. Had the incidence been the same the Mussulmans should have had only 70 cases.

So far as these numbers go instead of protection in equal populations we should have more than 150 cases of syphilis among the circumcised for 100 among the uncircumcised. These figures are quite opposed to one's preconceived opinion, and it would be of interest if the medical officers of other mixed forces would quote their experience.

The proportion of married men is much the same in both sections. The comparative sexual morality of the two classes is a negligible quantity.

Arthur Powell, B.A., M.Ch.,
Surgeon to the Police Hospital, Bombay.

# REPORTS
ON
## MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

### COVENTRY AND NORTH WARWICKSHIRE HOSPITAL.

SUPPURATIVE OTITIS, WITH SMALL PERFORATION OF MEMBRANE, TREATED BY EXCISION AND IRRIGATION.

(Under the care of Mr. Faulder White.)

G. W., aged 14, was admitted on September 23rd suffering from an offensive discharge from both ears. A minute hole was present in each membrane. On September 24th a considerable portion of the right membrana tympani was removed under chloroform. Irrigation of the ear with a solution of silico-fluoride was ordered every six hours with occasional use of the Politzer bag. On September 27th a portion of the left membrane with the malleus was removed, under chloroform. The after-treatment was similar to that ordered above.

There was an entire absence of pain or other reaction after each operation. On October 22nd the ears were found to be sweet. The discharge had ceased. Curiously enough there had been more restoration of the membrane on the left side where the malleus had been removed than on the right. The hearing had much improved. On the right side it was quite acute, practically normal, and the left ear could hear a feebly ticking watch at six inches.

Remarks by Mr. White.—I have thought well that this case should be reported, as though perhaps exceptionally satisfactory in regard to the improvement in the hearing, it is fairly typical of a number of cases in which I have performed this simple operation on the membrane. If a sufficient portion of the membrane be removed, and irrigation with politzeration be persevered with, we shall in the majority of cases be able to cure a suppurating ear even in those cases in which restoration of the membrane takes place very rapidly. As regards the risks of the operation, I believe them to be very slight in these chronic cases; and I have been surprised to find an almost complete absence of reaction in all my patients. I think that in all cases where we have suppuration behind a membrane which has only a small perforation we should remove the greater part of the membrane, and then treat the disease by irrigation. Of course men who have not seen the results of irrigation in these cases may not see the advantage of this operation, but I trust the pernicious treatment of infected ears by alcohol and strong astringents before disinfection will be given up.

# REPORTS OF SOCIETIES.

## LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

A. G. Barrs, M.D., F.R.C.P., President, in the Chair.

*Friday, November 1st, 1901.*

A Possible Factor in the Causation of Cancer.

Dr. Braithwaite read a paper in which he stated his belief that probably an excess of salt in the diet, along with either an unnecessary amount of food, and espec ally meat, or non-use of the nutrient supplied to the tissues, as in old age, and in organs such as the womb and breast, was the cause of cancer. The excess of salt, however, was the necessary factor. This was illustrated by the comparative exemption of certain people and animals. Haviland's map of cancer in England was explained by the diet of the people, which varied with the kind of farming, and the farming with the geology. Cancer houses were also explainable on this hypothesis, which the writer thought was contradicted by no known facts about the disease. At the same time he did not consider the theory proved. It was merely a matter for consideration and experiment.

Dr. Trevelyan said that Dr. Braithwaite had brought forward no satisfactory evidence to show that salt was in any sense even a contributory factor in the causation of cancer. On the other hand, he thought that more systematised efforts should be made in order to throw light on the etiology of this ever-increasing disease. Such an object would in his opinion be best promoted by the establishment of a league against cancer which should collect evidence respecting all aspects of the question, indicate the more profitable lines of research, and perhaps provide the necessary means to young workers in this pressing field of investigation.

The President, Mr. P. J. Cammidge, Dr. T. Churton, Mr. Draper, and Dr. Young also made remarks; and Dr. Braithwaite replied.

Inflammation of Bone.

Mr. Lawford Knaggs read a paper on inflammation of growing bone arising from cartilage. Special attention was directed to the predisposing influence of ligament strain and tendon pull, and of injury at the juxta-epiphyseal line up to complete separation. The consequences were one of the following: (1) Acute periosteal abscess, (2) acute osteo-myelitis, (3) necrosis, (4) acute septic arthritis, (5) separation of an epiphysis, (6) acute deep-seated abscess. Each of these subjects received separate notice, and nearly all the points were illustrated by lantern slides from specimens. It was suggested that otorrhœa and mastoid abscess not infrequently resulted from this disease in infants less than 1 year old, before which time the temporo-squamosal suture was occupied by a disc of cartilage which was to all intents and purposes a conjugal cartilage. The immunity of bones developed in membrane was attributed to the absence of the epiphyseal cartilage and the juxta-epiphyseal area.

Mr. Littlewood mentioned a case in which the path along which infection had spread to the joint was the tendon of the popliteus muscle.

Mr. Teale also took part in the discussion; and Mr. Knaggs replied.

Cases, Pathological Specimens, etc.

The following were shown: Mr. A. L. Whitehead: A successful case of temporo-sphenoidal abscess.—Mr. J. Holmes: A hunting emergency case.—Dr. Bronner (Bradford): (*a*) Recent cases of extraction of senile cataract without iridectomy; (*b*) apparatus for the treatment of dry catarrh of the middle ear by suction.—Dr. T. Wardrop Griffith: (*a*) Traction diverticulum of œsophagus; (*b*) two examples of specific ulceration of the palate in children.—Dr. E. O. Croft: Specimen of primary cancer of labium (growth and microscopic section).—Mr. Ward: A tuberculous testis.—Mr. Littlewood: (*a*) Osteoma of upper jaw; (*b*) two specimens of epithelioma of upper jaw; (*c*) ovarian tumour with twisted pedicle removed from a patient 7 months pregnant.—Mr. Mayo Robson: A case of well-marked Charcot's disease of the knee.—Dr. Hellier: Cystic myoma uteri removed by abdominal hysterectomy.—Mr. B. G. A. Moynihan: Two cases of spina bifida, one cervical and the other lumbar, treated by excision of the sac.—Mr. W. H. Brown: Ossification of M. pyramidalis after suprapubic cystotomy.—Dr. Trevelyan: A case of Raynaud's disease with marked trophic changes in the finger ends.

## MIDLAND MEDICAL SOCIETY.

Annual Meeting.

The annual meeting was held on Wednesday, October 16th, 1901, at the Birmingham Medical Institute, Jordan Lloyd, F.R.C.S., President, in the Chair. The following officers were elected for the ensuing session: *President:* Mr. Arthur Oakes. *Treasurer:* Mr. John Garner. *Secretaries:* Mr. Christopher Martin and Dr. Jas. W. Russell. *Members of Council:* Messrs. Haslam, Newton, E. P. Whitcombe, and Wood White.

First Ordinary Meeting.

The first ordinary meeting was held on October 30th, 1901, at the Birmingham Medical Institute, the President, Mr. Oakes, in the chair.

Gastrostomy.

Mr. Barling showed a man, aged 48, on whom he had performed Albert's gastrostomy 5½ years previously, for what was then believed to be malignant disease of the œsophagus.

The obstruction was situated 14½ inches from the teeth, and in the absence of any history of injury, tubercle, or specific mischief, was regarded as malignant. At the time of the operation the patient had lost 32 lbs. in weight, only fluids and occasionally a little bread could be swallowed and nothing could be passed through the stricture. Since the operation, and at the present time, the man had been able to follow his occupation as an edge toolmaker. He looked fairly well and vigorous, though he was not so stout as he was before the difficulty in swallowing arose. He wore in the gastrostomy opening a tube ⅝-inch diameter through which he was able to introduce foods of all kinds if finely divided, and there was practically no leaking at all. There was a hernia through the weakened abdominal wall where the stomach was brought through the left rectus, but this caused no inconvenience.

The lapse of time having shown that the stricture was not malignant, it was proposed to make an attempt to dilate the stricture from below, and if this succeeded to close the gastric opening.

Oöphorectomy for Inoperable Recurrent Cancer of the Breast.

Dr. Edge showed a patient upon whom he had performed oöphorectomy for recurrent inoperable cancer of the breast.

The left breast was amputated on April 10th, 1900. The axilla was not dissected out, as the glands were not enlarged, and the cancer was small, quite free, and in the periphery of the breast. The nature of the growth was not quite certain until determined by microscopic examination. On October 17th, 1900, the pectoral muscles were divided and glands found to be shotty above the clavicle and on the vessels at the root of the neck. In February, 1901, the right breast and right axillary glands became involved. On March 10th, 1901, oöphorectomy was performed *per vaginam*. On October 30th, 1901, the glands and breast lumps were quite soft and had practically cleared up. The weight increased 2 st., and the general well being was much improved.

Thyroid extract had not hitherto been given, but Dr. Edge now intended to make use of it.

Thoracic Aneurysm.

Dr. Emanuel showed a case of saccular aneurysm arising from the transverse part of the arch of the aorta. The specimen was from a soldier who had contracted syphilis in India three years before the symptoms of aneurysm developed. He died fifteen months after his first symptom from pressure on the trachea, and the *post-mortem* examination revealed advanced lardaceous disease of kidney, spleen, and liver, with numerous small gummata in the liver and one gumma in the spleen. There was no sign of tuberculosis or of suppuration. The heart was of normal size.

Pathological Society of London.—At a laboratory meeting held at the Jenner Institute of Preventive Medicine on Tuesday, November 5th, W. Watson Cheyne, F.R.S., President, in the chair, the following communications were made: Dr. A. MacFadyen and Mr. S. Rowland: (1) Investigations on intracellular constituents, (2) demonstration of methods of obtaining intracellular constituents. (3) some results already obtained as regards the typhoid bacillus; Dr. G. F. Petrie: The hæmolysis of bacillus pyocyaneus; Dr. A. Harden: Isotonic culture media; Dr. S. G. Hedin: Proteolytic enzyme in fibrin; Dr. J. B. Leathes: (1) On the so-called mucous casts of mucous colitis, (2) digestion of proteids by enzyme of spleen; Dr. A. Mackenzie: Beta-hydroxybutyric acid of urine; Dr. A. Moore: The isolation of the typhoid bacillus.

Society of Medical Officers of Health.—At a meeting on October 25th Mr. A. Wynter Blyth delivered a presidential address on ventilation. Defining ventilation as the continuous replacement of foul by pure air he remarked that it was easy to maintain a supply of 3,000 cubic feet per head per hour in spacious rooms, but extremely difficult in the dwellings of the poor. It was indeed often impossible to keep the total $CO_2$ at 6 parts per 10,000, since that amount might easily be present in the external air, and a more rational standard would be "less than 2 parts per 10,000 in excess of that of the atmosphere." The practical solution would be greatly facilitated by the introduction of electricity as a motor force, no less than as an illuminant, into private houses. The elaborate experiments of the Commission of the Sanitary Institute on Cowls and Terminals had confirmed his conviction that mechanical appliances were more effective and generally applicable than natural forces, as differences of barometric pressure or of temperature, which might be insignificant, and were always impeded by friction and resistance. Cowls and terminals, though necessary to counteract deflected currents, rain, etc., might themselves present additional obstacles, but, as the experiments of the Commission showed, they might be made to increase the delivery by 50 per cent. Shafts, the action of which was greatly dependent on the force of the wind, were consequently least effective when most needed. In warm weather open windows were the best means of ventilation, but all so-called window ventilators, as Hinckes-Bird's, created intolerable draughts, and were inadmissible in living rooms or workshops; and chimney ventilators, on Neil-Arnott's plan, could not be depended on. Fans alone were available and effective under all conceivable conditions. They were already very widely used in factories for ventilation and removal of irritating dust and noxious vapours, and there was no reason why they should not be in private houses wherever electric energy was available, while elsewhere petrol might be used for the motors. The "Sunlight Company's" ventilators could, it was said, remove 180,000 cubic feet per hour, and those of Dr. Glover Lyon and Mr. Burdett, combining impulsion with extraction and controlling screens, caused no draught, even in spaces of only 300 cubic feet. Mr. Aldous's experiments on the ventilation of sewers at West Ham by mechanical means were very encouraging, though all attempts at natural ventilation had hitherto been unsatisfactory. The Central London Railway presented an imperfect because undesigned system of mechanical ventilation: the trains fitting the tubes within a foot caused differences of pressure before and behind, and an average movement of the air of four miles per hour. There was no special apparatus, except in the substation at Notting Hill Gate. The absence of sulphur made the air appear purer than it was, for he had found the $CO_2$ to be from 9 or 10 parts in 10,000 on the platforms, to 10.3 in the tunnel and 11 in the carriages, the proportion in the Metropolitan Railway being but 11 to 12. With electric lighting and mechanical ventilation there was no reason why offices, or even dwelling rooms, should not be as healthy underground as above. The ventilation of houses with warmed pure air exclusively was successful but unpleasing. It was better to retain open windows in warm weather and open fires in cold, warm air being supplied to stairs and passages, and each room ventilated by an exhaust fan. Schools and churches could not be adequately venti-

lated by any natural means, but were better adapted for mechanical methods than many-roomed dwellings. In the discussion, which at the President's special request was allowed to follow his address, Dr. McVail, agreeing with Mr. Wynter Blyth as to the impracticable character of Dr. Parkes's standard of purity, maintained that when the room and its occupants were clean, much larger proportions of $CO_2$ might be present without any perceptible odour as he had observed even in an overcrowded fever hospital. Dr. Glover Lyon said that the cost of the first installation of his apparatus, together with the size of the fans and shafts, had deterred hotel proprietors from adopting it, but that smaller fans were either wholly insufficient, or required to be rotated with such a velocity as to give rise to an intolerable noise. Dr. Kenwood doubted the use of forcing air into sewers, which, he held, should be ventilated by exhaustion only. Dr. Willoughby referred to the memorial church at Berlin the ventilation of which by Professor G. Fischer seemed a complete success, a temperature of 60° F. being maintained all the year round. The essential principle was the progressively increasing temperature of the dome reaching 80° F. at its summit, obtained by systems of steam coils, whereby the foul air instead of being chilled in the roof and sinking again, passed out at the lantern in a continuous stream.

Sheffield Medico-Chirurgical Society.—The first meeting of the session was held on October 10th, when Dr. C. H. Willey, the President delivered an address on the Etiology of Some Forms of Gastric Dilatation.—At the second meeting held on October 24th, the President in the chair, Mr. R. J. Pye-Smith showed a case of unilateral congenital dislocation of the hip, which he had shown last February, to illustrate the results of treatment. The displacement had been reduced by Lorenz's method under an anæsthetic, and the hip had been kept for four months in a plaster-of-paris case. The deformity and limp had now disappeared, and a second skiagraph showed practical symmetry.—Mr. E. Skinner showed specimens from a case of cancer of the lung.—Mr. E. J. Scorah exhibited microscopic specimens of bronchial gland, liver, spleen, and kidney from a case of lymphadenoma shown last session.—Dr. A. J. Hall showed the following cases: (1) Primary spastic paraplegia in a man aged 39; (2) two cases of trade eczema in women who worked as "scratch brushers"; the irritant appeared to be the "sour beer" with which they brushed the silver goods; (3) lupus vulgaris and lupus erythematosus in the same patient, a girl aged 20; lupus began at the side of the nose eight years ago shortly after she had been nursing a case of consumption; there was some destruction of alæ nasi, and the upper gum was affected; lupus erythemato-us appeared much later, and had twice disappeared and recurred; at the present time it had an extensive "butterfly" distribution.—Dr. S. White showed: (1) A post-rectal dermoid containing bone; (2) an unruptured tubal gestation; (3) a dilated vermiform appendix removed from the sac of an inguinal hernia.—Dr. S. Riseley showed a case of double dislocation of the lens.—Mr. S. Snell showed a case of (?) vascular growth of the lower and inner wall of the orbit. There was marked proptosis, and the surface of the sclerotic below the tumour was covered by a nævoid condition of vessels.—Mr. R. J. Pye-Smith read a paper entitled Four cases of Perforated Gastic Ulcer in which operation was performed, together with one case not operated on, two cases operated on by others, and three cases of exploration for suspected perforation.

Glasgow Southern Medical Society.—At a meeting held on October 31st, Dr. John Stewart delivered a presidential address, in which he referred briefly to the present position of medical science, and dwelt on the necessity of the general medical practitioner keeping himself well abreast of the times. The general practitioner stood between the patient on the one hand and the consulting specialist on the other; and the successful carrying out of the latter's recommendations depended greatly on the general practitioner. The idea now somewhat prevalent, that the general practitioner must give way in time to the specialist was due, he thought, to the greater elaboration of the art as distinguished from the science. Comparing the general practitioner of to-day with what he was twenty years ago, he contended that he had progressed proportionately with the science and art of medicine. With reference to the objects of the Society of which he had the honour to be President, he referred in particular to the mutual improvement in professional knowledge accruing to the members, and to the corresponding advantages obtained in their work as practitioners. Touching on another great object of the Society, namely, the promotion of amicable relationships between the members, he showed how this friendship could also help the cause of medical science through the rendering of mutual assistance in family practice. In conclusion he expressed the hope that the future development of medical practice would not tend too much in the direction of a greater subdivision of labour, nor to an increase of the number of practitioners devoted solely to one particular branch. Rather did he hope for the production of a highly specialised general practitioner, the very existence of whom would ensure that consultants and specialists would be men of outstanding merit in their respective departments.—On the motion of Dr. James Hamilton a very cordial vote of thanks was awarded Dr. Stewart for his address.

North of England Obstetrical and Gynæcological Society.—At a meeting held at Liverpool on October 18th, Dr. T. B. Grimsdale (President) in the chair, Dr. W. Japp Sinclair (Manchester) exhibited an improved portable apparatus for continual irrigation with fluid at a constant temperature, and explained its use.—Dr. Grimsdale (Liverpool) showed a specimen of cancer of the cervix in a uterus with 3½ months pregnancy. The symptoms of bleeding and discharge had first declared themselves with the commencement of pregnancy. The uterus was removed successfully by vaginal hysterectomy.—Dr. J. E. Gemmell (Liverpool) showed a uterus with 4½ months pregnancy and extensive cancer of the cervix, which he had removed by vaginal hysterectomy. Owing to the size of the uterus it had been found necessary, after separating the bladder, to slit up the anterior wall of the cervix and uterus as far as the peritoneal fold, and through this opening to empty the cavity. The subsequent steps of the operation were easy, and the patient recovered and was reported well twelve months later.—The cases were discussed by Drs. Lloyd Roberts, Briggs, Garner, and Davies.—Dr. Lloyd Roberts (Manchester) showed a pair of large ovarian cysts with papillomatous degeneration removed by abdominal section. None of the cysts had burst and the peritoneum had not become infected with the growths. There was no ascites, the abscess being probably associated with the fact of non-infection of the peritoneum. The patient had made a good recovery.—Dr. W. Japp Sinclair (Manchester) related a case of Cæsarean section performed for the second time in the same patient. The uterine wound was so intimately adherent to the abdominal wound that the new incision was carried directly through into the uterus without opening the peritoneal cavity. The child was delivered through this opening. The patient was not sterilised by ligature of the tubes or otherwise. Both mother and child recovered.—A discussion followed on the dangers of subsequent pregnancy after Cæsarean section had been performed, and on the question of sterilising operations under such circumstances. Dr. Grimsdale (President), Drs. Lloyd Roberts, Davies, Croft, Briggs, and Lea took part; and Dr. Sinclair replied.

Newport Medical Society.—At the annual meeting of this Society recently held at the board room of the Newport and County Hospital the retiring President, Dr. Basset, in vacating the chair, introduced the new President, Dr. T. G. Macormack, who presided at the meeting. The Honorary Secretary reported that the membership had increased during the last session from 27 to 33. There had been a further net increase this session of 4 members, making a total of 37 members. The funds of the Society showed a balance in hand of £28 11s. 3d. It was announced that at the next meeting on Friday, November 29th, Mr. Stoniam, C.M.G., who was recently in charge of the Langham Field Hospital (Yeomanry Hospital) in the South African war, would read a paper on the Surgery of the Boer War. The Honorary Secretary referred to the proposal for joint rooms

for the meetings and the libraries of the legal, architectural and medical societies of the district, and an earnest wish was expressed that the scheme might soon be successfully launched.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—The inaugural meeting of the session was held on October 15th, Dr. R. HONEYBURNE, President, in the chair.—After some introductory remarks the PRESIDENT read a paper on the diagnosis and treatment of diphtheria. The assertion was made that the only certain method of diagnosing diphtheria early was the bacteriological one, and illustrative cases were given showing how fallacies had arisen by acting merely on a clinical diagnosis, and disaster in some of the cases had followed. It was advisable to make a second culture if no growth resulted from the first inoculation, as for various reasons it was possible to miss the specific organisms, although they might be present. Cases of mixed infection with staphylococci and streptococci were accompanied by a higher death-rate than in cases where there was nearly a pure cultivation of the diphtheria bacillus, and the disease showed a greater power of resistance to the serum treatment. The seasonal incidence, and the ages at which the disease was most prevalent were discussed, and the opinion was expressed that the aggregation of children in schools was not a very important factor in spreading the disease, as the age of 4 to 5, at which the disease was most prevalent, was below the age-limit of compulsory school attendance. Nothing was known regarding the life-history of the bacillus outside the body (if it had such a separate existence). The only known factors relating to the spread of the disease were the age of the patient and the season of the year. It was probable that the infection was often conveyed by apparently healthy persons who yet harboured virulent bacilli in their mucous membranes. Under the heading of treatment the question of immunity was discussed, and its bearing upon the serum treatment of disease pointed out. The most efficient way of obtaining artificial immunity was by the inoculation of an animal with increasing doses of toxin, and the blood serum of such an animal was found to have acquired the power, when injected into another animal, of rendering it immune to that particular toxin. Further, the serum could exert its protective influence on an animal. Even when symptoms of the disease were already present, that is, it was a curative as well as protective agent. The details of the immunisation of horses and the preparation and standardisation of antitoxin serum were then described. A number of tables were submitted showing the striking reduction of the mortality in diphtheria ensuing upon the introduction of the antitoxin treatment. The cardinal rules of treatment were (1) inject, and (2) inject an efficient dose. The erythematous rashes and articular pains sometimes seen after the use of antitoxin appeared to be due to the injection of the serum without any relation to its antitoxic properties. They usually disappeared without giving much trouble. The ordinary local and constitutional treatment by means of antiseptics to the throat, etc., should not be neglected, and great care must be exercised in keeping the patient at rest to avoid cardiac failure. In laryngeal cases where tracheotomy had been performed the discharge of membrane is very greatly helped by the use of antitoxin. The use of antitoxin as a prophylactic was only of very limited application, but might be used perhaps with advantage in schools to prevent the immediate spread of an outbreak, as it would confer immunity for something like three weeks. The paper was followed by a general discussion, in which several members took part.

The following cases and specimens were shown:—Dr. ARNOLD EVANS: A number of photographs of pathological specimens.—Dr. BRONNER: A case of recurrent tonsillitis with pharyngeal spasm.—Mr. J. B. HALL: (1) Case of transplantation of tendon of palmaris longus into the divided middle finger tendon; (2) specimens of cancer of tongue and papilloma of ovary.—Dr. JAMES KEIR: (1) A case of hernia cerebri in middle ear, supervening on operation for cholesteatoma a year previously; (2) Hardy's ophthalmometer; (3) electro-motor for mastoid surgery.—Mr. WILLIAM MORROCKS: Specimens of vesical calculi and cancer of cæcum.

FOLKESTONE MEDICAL SOCIETY.—A meeting was held on October 4th, at the Queen's Hotel, by invitation of Mr. H. A. Powell. Dr. T. EASTES read a paper on clinical errors. He drew attention to various difficulties and mistakes he had met with in practice, such as cases of polypus uteri mistaken for pregnancy; distended bladder where the normal amount of urine appeared to have been passed; pancreatic cysts simulating abscess in the abdominal wall: pregnancy diagnosed where it did not exist, and being unexpectedly discovered where it had not been diagnosed. He insisted upon the importance of bearing in mind the possibility of pregnancy in all kinds of obscure abdominal swellings in women, especially when an abdominal section was contemplated, as otherwise serious consequences might arise. Various kinds of injuries were mentioned, especially those about the hip and shoulder, as being sources of many errors and difficulties. Two cases of impacted fracture of the neck of the femur, which had become loosened after two or three days, served to illustrate the importance of not speaking too positively about the prognosis or diagnosis in such cases until a certain interval had elapsed. Stress was laid upon the use of Bryant's line for diagnosis. The help given by skiagraphy was mentioned, also the danger from the public being misled by it. The difficulties met with in cases of rash were recognised, also the uncertainty of diagnosis at the commencement of a case of enteric fever. Laryngismus stridulus and whooping-cough had been confused. The dangers arising from the similarity of diphtheria and follicular tonsillitis and the help derived from bacteriology were considered. Some cases of poisoning from drugs were described, the list including morphine, digitalis, Easton's syrup, carbolic acid and phosphorus, belladonna (severe symptoms from the use of a plaster $7\frac{1}{2}$ by 4 inches for a few hours), cocaine, turpentine, aconite, iodoform, copaiba, bromides, salicin, thyroid extract, and acetate of lead. In operating in breast cases incision of the tumour was strongly advised where there was any possible doubt as to the malignancy of the swelling. Two cases of injury to the uterus during forcible dilatation were mentioned, but in neither did any bad result seem to follow. Dr. Eastes concluded by saying that tales against another doctor's reputation coming from a patient who had just left that doctor should be discredited. Probably the patient was still in that doctor's debt and had been requested to settle up, and instead had called in a fresh doctor, to do the same again later on.

MANCHESTER CLINICAL SOCIETY.—The first meeting of the seventieth session was held on October 14th, at the Palatine Hotel. The PRESIDENT (Herbert Lund, M.B., F.R.C.S.) occupied the chair, and in his introductory address, entitled Along the Urinary Tract, related numerous cases of surgical interest which had occurred in his practice. The liability to overlook the presence of vesical calculus in children suffering from phimosis, the tendency to neglect the lacuna magna in cases of recurrent gonorrhœa which resisted the ordinary treatment by injections were referred to and examples cited. Suprapubic cystotomy in preference to lithotrity in patients the subjects of vesical calculus, in whom the prostate was enlarged, was strongly recommended; and the danger of getting a troublesome urinary fistula from the retention of a drainage tube for any lengthened period was clearly demonstrated. That the bladder might be the seat of tertiary syphilitic ulceration was shown by two cases, in one of which the bladder had been opened for supposed malignant disease and a large ulcerated surface was found. Under specified treatment the patient made a good recovery. Other cases of interest in renal surgery concluded the address, for which a hearty vote of thanks, moved by Dr. HOLGATE OWEN and seconded by Mr. STANMORE BISHOP, was accorded to Mr. Lund. The following is the list of office-bearers for 1901-2:—*President:* Herbert Lund, M.B. *Vice-Presidents:* E. T. Milner, M.B., J. E. Platt, M.S. *Honorary Treasurer:* C. F. H. Kitchen. *Honorary Librarian:* J. W. Hamill, M.D. *Committee:* S. Bagley, G. H. Broadbent, A. Brown, M.D., J. Gray Clegg, M.D., J. W. Crawshaw, M.B., J. Daniel, M.D., W. E. Fothergill, M.D., A. B. Fulton, M.B., J. Holmes, M.D., David Macmillan, M.D., F. Craven Moore, M.D., David Owen, R. T. Parkinson, M.D., E. J. Walker, M.D., F. H. Westmacott. *Honorary Auditors:* A. Fraser, M.D., W. K. Walls, M.B. *Honorary Secretary:* J. Howson Ray, Ch.M.

THE two first ladies who have obtained the licence to practise medicine in Germany, Miss Doctor Klausner and Miss V. d. Leyen, have established themselves in Berlin.

# REVIEWS.

## DISEASES OF THE HEART.

In the preparation of his work on *Diseases of the Heart*,[1] Dr. Colbeck has kept steadily in view the object which he had set himself to attain and the resulting volume fully justifies the title given to it as a "clinical textbook." To the author of a "treatise" on any given subject, it is permitted to be more or less discursive. He teaches, perhaps, as much by discussion and argument as by simple assertion. The textbook writer, however, must be dogmatic in assertion, and clear and definite in his method of presenting each branch of his subject. In these qualities Dr. Colbeck will not be found wanting, and although in dealing with heart diseases there must of necessity be difference of opinion as to the interpretation of physical signs, and as to the causation of varying symptoms, still it is of manifest advantage to have a clear and definite knowledge of all those points upon which leading clinicians are approximately agreed, without the introduction of any controversial matter. The earlier chapters dealing with anatomy, physiology, and a general descriptive summary of methods of diagnosis are short and to the point. Chapters on the pulse and the cardiograph follow, both being well illustrated by typical tracings of the more ordinary morbid cardiac changes. In dealing with the physical signs and their interpretation, the necessity for definite assertion sometimes leads to a positiveness which is open to criticism. The invariable association, for instance, of an accentuated aortic second sound with dilatation or aneurysm, the almost invariably fatal import of Cheyne-Stokes breathing in certain cases, and a few other sweeping statements of the kind, might with advantage have been modified. Hard facts must occasionally outweigh high authority, and in the clinical study of heart diseases there are but few factors which can safely be dubbed "invariable." Dr. Colbeck wisely lays stress on the view that the first sound of the heart is made up of several combined elements, and he shows how the predominance or failure of any of these may be recognised and utilised in interpreting morbid sounds. The morbid conditions of the heart and pericardium are systematically described, and the indications for treatment are short and simple. The use of a needle, however, for tapping the pericardium is hardly a practice to be commended at the present day. That the pericardium can be safely and simply opened under antiseptic precautions has been abundantly proved, whereas the introduction of a sharp-pointed needle blindly into the sac is a relic of a bygone era of surgery. In dealing with ulcerative or infective endocarditis Dr. Colbeck makes but slight mention of its treatment by antistreptococcus serum, and in the matter of treatment in general his information is somewhat telegraphic in its brevity. An interesting feature in the chapters relating to valvular disease is a classified estimate of the degree to which each valve is affected either by narrowing or incompetence. Many small diagnostic points are here brought out which in practice, as in many other textbooks, are often overlooked. Diseases of the myocardium, angina pectoris, and functional disorders of the heart occupy the final chapters of a work which we can cordially commend as a well-arranged, well-written, and trustworthy textbook, suitable alike as a work of reference to the busy practitioner and to the advanced student.

Professor von Basch[2] has for many years maintained the value of observations on arterial blood pressure as a means of clinical diagnosis. His sphygmomanometer, improved from time to time by himself and others, has not perhaps received the same amount of attention in this country as on the Continent, but the evidence of many distinguished clinicians who have employed it sufficiently attests its value as a recording instrument of fair if not absolute accuracy. In the large work which he has issued recently he lays down his views with clearness and precision in a long introduction, and then proceeds to record the results of actual observations on different classes of cases, leaving the judgment upon them to his readers, aided by explanations and comments. Although professedly dealing with the relation of heart disease to arterial change, much of the material here recorded has relation to the earlier changes in the finer vessels which he prefers to describe as angio-sclerosis. He shows how these may, presumably, be the cause of increased arterial pressure in very early stages, and how their early recognition by this means may be of the greatest value in treatment. According as these changes are temporary, persistent, or obvious he classifies the condition as pseudo-sclerosis, latent sclerosis, and manifest angio-sclerosis. A pressure of 150mm. Hg. is taken as the highest normal point, and anything ranging above it is regarded as evidence of increased pressure. The cause of such pressure has next to be determined from other indications. The work is too large for us to attempt to follow out the close reasoning of the many points that arise. The relation between increased pressure and heart disease comes in for a fair share of consideration, but the book contains more than its title indicates, and may be commended to all interested in the clinical significance of pressure changes as a full and skilled treatise founded on actual observation and not on theory alone.

Much care and thought have evidently been expended by Dr. Vorstädter on his synoptical tables,[3] designed to render the diagnostic difficulties of cardiac valve disease as simple as possible. As far as it is possible to do so in a textbook he may be said to have succeeded in his object, and he makes but the modest claim in his preface that his book may prove "of the smallest use." For the further enlightenment of those who may require ocular demonstration he has prepared many elaborate diagrams to illustrate in the clearest manner the exact points where the different murmurs should be expected and the exact valvular defects and alterations that are believed to give rise to them. Some of these appear almost infantine in their simplicity, and it is not easy to imagine that any but the most elementary learners would derive additional information from them. In the written description the information is sound and trustworthy and there is much in it to prove that the work is no mere compilation but reflects the mature opinions of a man of wide experience of heart disease. A feature not commonly found in works of the kind is a table of pulse tracings illustrating all the different forms of variation from the normal together with explanatory notes of the causation of each. The work as a whole forms a concise handbook, clearly expressed and well arranged, and as such it will be found useful as a work of reference, but the diagrams will not be of much value as clinical guides to the elucidation of cases where valvular disease is multiple and complicated by important changes in the muscular structure of the heart.

Dr. August Hoffmann may fairly claim for his book on paroxysmal tachycardia[4] that it contains an analysis and a classification, both of which are carried out with a thoroughness characteristically German of most, if not all, of the cases of the affection on record. His study of this even yet imperfectly understood condition, otherwise known as heart-galop, paroxysmal hurry of the heart, recurrent palpitation, and cardiac epilepsy, is based on 137 cases, 5 of which are from his personal observation, and in a sense form the text of his essay. Most of the cases are used to illustrate the etiological factors of the symptom-complex, but after the clinical account of each is appended a note of the particular line of treatment adopted. The etiological influences are grouped under the heading of heredity, neuroses, anger and fright, injury and organic disease of the central nervous system.

[1] *Diseases of the Heart.* A Clinical Textbook for the Use of Students and Practitioners of Medicine. By Edmund Henry Colbeck, M.A., M.D.Cantab., M.R.C.P Lond., D.P.H., Physician to Out-Patients at the City of London Hospital for Diseases of the Chest, Victoria Park. London: Methuen and Co. 1901. (Demy 8vo, pp. 356; 43 illustrations 128.)

[2] *Die Herzkrankheiten bei Arteriosclerose.* [The Heart Diseases associated with Arterio-sclerosis.] Von Professor Dr. S. von Basch. Berlin: A. Hirschwald. 1901. (Demy 8vo, pp. 343. M.9.)

[3] *Synoptische Tafeln zur Diagnostik der Herzklappenfehler nebst anatomisch-physiologische Schemata des Circulations-Apparates* (Synoptical Tables for the Diagnosis of Valvular Diseases of the Heart, with Anatomico-Physiological Diagrams of the Circulatory Apparatus). Von Dr. L. Vorstädter. Berlin: A. Hirschwald. 1901. (Crown 8vo, pp. 121. M 8.)

[4] *Die paroxysmale Tachycardia: Anfälle von Herzjagen* [Paroxysmal Tachycardia: Attacks of Heart-Galop]. Von Dr. August Hoffmann. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1900. (Royal 8vo, pp. 200. 4s.)

poisoning (as by alcohol), and infectious diseases, diseases of the abdominal organs, over-exertion, association with structural heart disease, and unknown causes. The latter half of the book is occupied with chapters on the symptomatology, pathology, diagnosis, progress, and treatment of the disease. There is a copious bibliography: but some of the author's names have in English eyes a rather odd appearance. The book does not carry the subject beyond its former high-water mark, but in addition to describing some new examples of the condition, it has methodised and brought into a shape more easy of apprehension what was already existent in fragments scattered throughout medical literature, and for this service alone the author deserves the thanks of practitioners of medicine.

## NOTES ON BOOKS.

### CLINICAL HANDBOOKS.

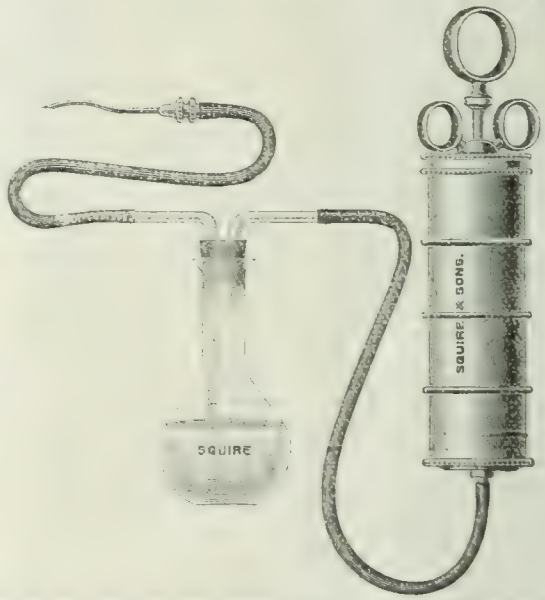
THE *Index of Symptoms as a Clue to Diagnosis*,[1] compiled by Dr. R. W. LEFTWICH, is intended, not for the satisfaction of the medical student who seeks a short cut to knowledge, but to help the practitioner who, puzzled by the occurrence of a special symptom, wants to know its possible causes. Dr. Leftwich has certainly succeeded admirably in his intention, and the proof of his success is the publication of a second edition. No mention seems to be made of alcoholism as a cause of excessive hypersensitiveness to touch, etc., nor of rickets as a common cause of the same increased sensibility. Though Murchison taught that herpes was generally absent in typhoid fever, cases have been met with in which this sign was present. Pyorrhœa alveolaris, or Rigg's disease, should certainly be mentioned as a cause of loosening of the teeth. With these few exceptions we have nothing but praise for the very complete way in which the author has carried out his task, and can strongly recommend the book.

Dr. SAMUEL WEST's practical guide for the use of students, *How to Examine the Chest*,[2] is already well known. Dr. West has had a large experience of the requirements of students. The arrangement of the matter is clear and methodical, and the diagrams are numerous and helpful. There is a good index, and advantage has been taken of a new edition to make additions both in the text and diagrams. This excellent manual thoroughly justifies the appreciation in which it is already held by both students and practitioners alike.

## REPORTS AND ANALYSES
AND
## DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

### MEDICAL AND SURGICAL APPLIANCES.

*Preparations of Sterile Gelatine Injections.*— Messrs. Squire and Sons write: We notice in the BRITISH MEDICAL JOURNAL of October 26th, p. 1274, a description of an apparatus which in many respects closely resembles one which we introduced about eighteen months ago. We have supplied it to some of the metropolitan hospitals, and also in increasing demand to medical men in all parts of the country. The apparatus was made from the designs of Dr. Robert Maguire, who showed it at the Medical Society of London during its last session. In order to obtain the all-important asepsis of gelatine solution for injection into the muscular or subcutaneous tissue, it is highly desirable that the instruments used should be as simple as possible. The principle employed is simply that of the ordinary washbottle of the chemical laboratory, and the liquefied gelatine is forced through the tubes by a current of air from a large syringe previously sterilised by carbolic acid. The liquefied gelatine preparation, in whatever strength required, is poured through a funnel into a flask of suitable capacity, the fluid funnel and flask having been previously sterilised. The flask is then closed by sterilised wool and a sterilised india-rubber stopper, through both of which pass two bent glass tubes (previously sterilised), one reaching to the bottom of the flask, the other to a little distance beyond the wool. The whole is now kept for a sufficient length of time at a sterilising temperature, and while still exposed to this the outer end of the longer tube is rapidly sealed, that of the smaller tube having been previously plugged with sterilised wool. Afterwards the stopper and upper part of the flask are covered with melted paraffin, and the whole allowed to cool. It is then ready to forward to the physician. At the time of using the flask is warmed till the whole of the gelatine is liquefied, the sealed end of the longer tube is filed through, and the cotton-wool plug removed from the shorter tube. Very rapidly a sterilised indiarubber tube which is attached to the syringe (the piston of which should be withdrawn) is fitted to the shorter glass tube; a similar sterilised indiarubber tube ending in a sterilised large-bore curved needle is fitted to the filed end of the larger glass tube. All the indiarubber connections should be firmly tied. A small




quantity of the liquefied gelatine is now forced through the apparatus to fill the ejection tube and needle. The needle is then plunged through the skin, preferably that of the buttock, the skin having previously been made aseptic and frozen with ethyl-chloride spray. By forcing down the piston of the syringe the gelatine is driven into the tissues very rapidly, the speed being an important matter in the operation, and the size of the syringe is such that one filling of it is enough to empty the flask. The injection must be stopped before the inner end of the longer glass tube is uncovered by the gelatine, so that air shall not be driven into the tissues. It will be observed that while the exposed end of the tube which dips into the gelatine is sealed, that of the tube which ends above the surface of the gelatine is securely plugged with sterilised wool. This is to allow of the expansion and contraction of the air contained in the flask during its variations of temperature. Dr. Maguire has frequently used the apparatus, and informs us that it has always been satisfactory when used as above described, and the operation gives rise to little, if any, pain if the site of injection be properly chosen. He has in every instance injected 100 c.cm. of this prepared gelatine, for which we provide a 4-ounce flask. For greater quantities a larger flask would be required. The small amount of gelatine which remains behind in the flask naturally affords an excellent cultivation medium for any germs which may have been admitted; but we have been surprised at the length of time during which this small quantity of gelatine remains sterile after the apparatus has been used and set aside.

[1] *Index of Symptoms as a Clue to Diagnosis.* By Ralph Winnington Leftwich, M.D. Second Edition. London: Smith Elder and Co. 1901. (Cr. 8vo, pp. 284. 6s.)
[2] *How to Examine the Chest.* By Samuel West, M.D., F.R.C.P. Third Edition. London: J. and A. Churchill. 1900. (Fcap. 8vo, pp. 206. 5s.)

# THE FIFTH INTERNATIONAL CONGRESS OF PHYSIOLOGISTS AT TURIN.

(Continued from page 1279.)

## The Digestive System.

### *The Movements of the Stomach in Different Animals.*

Professor Paul Grützner (Tubingen) described experiments which he had made in conjunction with Herr Heyde, to determine the nature of stomach movements. Series of animals were fed on the same diets and killed at different stages of digestion. The stomachs were rapidly excised, both orifices having been closed beforehand, and at once frozen. Serial sections were then made both in the transverse and longitudinal directions. With the food a pigment was administered, obtained from the juice of the bilberry (vaccinium myrtilus), which served as an indicator. In the alkaline condition the dye was bluish green, but turned red on acidification. The pyloric funnel proved to be always filled with acid and well-digested food: the fundus showed acidification only at the surface, not at all in the interior of its contents. In rabbits it was known that the stomach was rarely, if ever, found empty. If after a long period of fasting fluid food were given, this was immediately brought into contact with the inner surface, moved onwards towards the pylorus, became digested, and entered the intestine. Solid or half-solid food, on the contrary, passed into the middle of the cavity, and only exceptionally came at once into contact with the mucous membrane. The authors concluded that in the ordinary course of events fresh food found its way into the centre of any contents already in the organ, that it slowly gained its way to the surface, was there mixed with gastric juice, and moved along towards the pyloric funnel. This latter admitted only well-digested and acidified food. Peculiar localised constrictions were detected which might have aided in propelling the contents onwards, or possibly have served to produce rolling stomach movements, such as were believed to take part in the formation of "balls."

### *Sense of Taste in the Larynx.*

Dr. F. Kiesow (Turin) stated that he was able to confirm the observations of Michelson and Langendorff, which went to show that the posterior surface of the epiglottis gave a positive taste reaction to solutions of saccharine and quinine, and also to the electric current. He further discovered that all the four recognised sensations of taste (acid, saline, sweet, bitter) were perceived with certain modifications here also. Kiesow himself confused acid with saline. The intensity of the sensations was always much less than in other gustatory regions. In one experiment on himself he found that the inner surface of the larynx was also sensitive, but neither acids nor the electric current were tested. The epiglottis in this experiment was treated with solutions of cocaine and gymnemic acid. These sensations probably served to augment the force of the laryngeal reflex when substances gained entry into it. The experiments were carried out with a laryngeal sound and laryngoscope. Dr. Hahn had kindly assisted.

### *The Influence of Fatigue on the Secretion of Gastric Juice.*

MM. Levi and Lolli (Modena) stated that previous investigations had been made on this point, but they had all been based on the method of Hayem and Winter, which several observers (Sansoni, Sorel, Biernacki, etc.) had shown to be attended by many errors. After testing several colorimetric methods and rejecting them, Levi and Lolli adopted the procedure of Mörner and Sjogvist, which proved to be undoubtedly the most reliable. The experiments were carried out on a dog with a gastric fistula, and fatigue was induced by racing on a track, care being taken to avoid the possible influence of training. The total quantity of juice, its acidity (both hydrochloric and lactic acid) and digestive power were studied. The following is a summary of the results:

1. *Quantity.*—After exercise less juice in the proportion of 5 to 6 was secreted as compared with rest. On trebling the distance performed the reduction in quantity of juice was doubled.

2. *Acidity.*—Both total acidity and that due to hydrochloric acid were reduced. The reduction was in fact almost wholly due to diminution of the hydrochloric acid (two-thirds that of rest), and little, if at all, to decrease of organic acids. The figures obtained both for rest and exercise were considerably less than those yielded by Hayem and Winter's method.

3. *Digestive Power.*—But the influence was most seen on digestive power. Minute cubes of albumin (1 gram), which required two and a-half to three and a-half hours for digestion with juice secreted during repose, were only digested in eight to eleven hours with juice secreted after exercise. If the exercise taken had been in the ratios of 1, 2, 3, the times requisite for digestion were as 1 to 1.25 and 1 70 respectively.

### *Has the Spleen an Influence on Pancreatic Digestion?*

MM. Delezenne and A. Frouin (Paris) said that the theory of Schiff that a substance necessary for pancreatic digestion of proteids was formed in the spleen, though contradicted by many observers, had in recent times received support from the experiments of Herzen and Gachet and Pachon, who had found reason to believe that a substance was produced in the organ which played the part of transforming the proferment of the pancreas (trypsinogen) into the ferment (trypsin). Dastre, on the other hand, had showed that removal of the spleen in no way altered the health of the animal or prevented the full development of young animals, but Delezenne and Frouin considered that this experiment did not satisfactorily settle the question at issue. They accordingly isolated the stomach in dogs by suturing the lower end of the œsophagus to the top of the duodenum, taking care not to injure the vagi nerves. Both ends of the stomach cavity were closed, and a small fistulous orifice made into it through the abdominal wall. The glands of the stomach continued to secrete normal gastric juice, which was drawn off every twenty-four hours. When the animals recovered from this operation the spleen was removed. In other experiments the stomach was wholly excised, to begin with, and afterwards the spleen. Digestion in such animals was entirely performed by the pancreas, and yet removal of the spleen produced no trouble whatever; the dogs continued to live and thrive, enjoying the best of health. One of these animals was shown to the Congress six months after the second operation, and certainly bore out the statements of the authors on the point of health. On the other hand, the secretion of the stomach continued normal; no change whatever, either in quantity or quality of the juice, could be observed after the removal of the spleen. The part, therefore, which this organ played in pancreatic digestion was quite inappreciable, and counted little in comparison with the action of the enterokinase of Pawlow.

### *The Origin of the Pepsin found in Urine.*

MM. Delezenne and A. Frouin presented a paper on this subject also. They pointed out that Brücke and others had found the presence of pepsin to be almost constant in the urine. It appeared most abundantly in that secreted during the night (morning urine) and that passed between meals. This indicated that urinary pepsin was the same which had served for gastric digestion, and which was afterwards absorbed from the alimentary tube and eliminated with the urine. This hypothesis was tested by the authors as follows: (1) Pepsin was sought for over the whole twenty-four hours urinary secretion of a dog deprived of its stomach, and fed on different kinds of food. No trace of proteolytic ferment was at any time found. (2) The ferment was likewise sought for in the urine of a dog whose stomach had been isolated in the manner described in the previous contribution, the conditions with regard to diet, etc., being the same. Pepsin was always found in this case. Two conclusions were therefore justifiable: (*a*) That urinary pepsin had its origin in the stomach; (*b*) that it could be absorbed from the cavity of this organ. To determine whether it was not likewise absorbed from other parts of the alimentary canal, gastric juice was administered to an animal without a stomach, but the ferment was never found in the urine. It appeared therefore only to be absorbed from the organ in which it was produced, and in all probability was destroyed or transformed when it reached the intestine.

### *The Action of Succus Entericus upon Pancreatic Juice.*

Dr. A. Walther (St. Petersburg) demonstrated (by means of a fibrin digest) the augmenting effect which a ferment of the succus entericus (enterokinase of Pawlow) exerted upon the proteolytic power of pancreatic juice. Only fresh juice had its digestive power thus increased, and only those samples which contained a considerable portion of trypsin in the form of zymogen. The effect of the kinase was due to a rapid transformation of the

zymogen into trypsin. This alteration was not a process of oxidation, because, on the one hand, the enterokinase gave no reaction with oxidative ferments: on the other hand, it was not possible to artificially increase the activity of pancreatic juice containing zymogen by means of oxidising reagents. The zymogen of the juice must therefore be different from Heidenhain's zymogen of the gland substance. It was possible to precipitate a proteid body in considerable quantity from fresh pancreatic juice by means of 0.5 per cent. HCl, which had neither the properties of trypsin nor was it rendered active by means of kinase. Zymogen and trypsin were, however, freely present in the filtrate. If this filtrate were submitted to dialysis all the zymogen was transformed into trypsin after a few hours. The tryptic activity of the filtrate was thus markedly increased, and could not be further augmented by kinase. The dialysis, therefore, had a similar action to the kinase, from which it might be inferred that the influence of the latter depended upon a hydrolytic change. Even ordinary zymogen holding pancreatic juice had its digestive power increased by dialysis. On dialysing the filtrate obtained after precipitation with HCl, a proteid body (globulin?) frequently separated out. This body possessed very strong tryptic powers, but hardly any amylolytic. The fluid from which it formed, however, digested starch and proteid with great ease. The process of dialysis, therefore, afforded a means of separating the proteolytic from the amylolytic ferment.

*The Elimination of Bile on Various Diets, and after the Subcutaneous Injection of certain Nutritive Substances.*

Dr. BARBERA (Bologna) communicated the results of his observations on the elimination of bile after various diets and after the subcutaneous injection of certain alimentary substances. The experiments were performed on dogs with complete and permanent biliary fistulæ. The following is a summary of the results: The quantity of bile was augmented (1) to a most marked degree and for a considerable period after the ingestion of proteids; (2) to a considerable extent but for a greater length of time after an equal quantity of fats; (3) to only a very slight degree and for a very short period after the same amount of carbohydrates; (4) a like ration of a mixed diet also augmented for a certain length of time, the degree of increase and duration of flow being dependent on the preponderance of one or other of the foregoing ingredients which it contained. The elimination was uninfluenced by the drinking or subcutaneous injection of water. The time which elapsed before the influence of the various food stuffs made itself apparent was variable—shortest (20 to 30 minutes) after meals of proteid, carbohydrate and mixed food stuffs; longest (50 to 60 minutes) after those of fats. The maximum rate of secretion was attained 2 to 3 hours after a meal of carbohydrates, 3 to 4 after one of proteids, and 5 to 7 after one of fats. After mixed meals the maximum occurred at some period intermediate to the above dependent upon the amount of each component. After subcutaneous injections of 10 per cent. solutions of glucose the elimination was increased to a slight and transient degree, to a greater extent and for a more lengthened period when somatose solutions of the same strength were employed. It was unaffected by injections of olive oil.

*The Transformation of Proteids in the Intestinal Wall.*

Dr. OTTO COHNHEIM (Heidelberg) contested the generally accepted view that peptones were restored to the condition of albumins in passing through the abdominal wall. He had found reason to believe that these substances underwent cleavage into crystallisable products through the agency of a ferment produced by the intestinal mucous membrane. This ferment, to which he had given the name erepsin, produced no effect on unaltered albumin. Most of the listeners were, however, of the opinion that the question was one which required further investigation.

*The Absorption of Monosaccharides and Disaccharides from the Alimentary Canal.*

Professor F. RÖHMANN (Breslau) communicated the results of experiments carried out by Dr. Nagano Kioto on dogs with a Vella's fistula leading into the intestine. (1) Similar quantities of solutions of hexoses (glucose, galactose, mannose, and fructose), and of pentoses (arabinose and xylose) of the same strength were introduced into the intestine. After one hour the quantity of each which had disappeared was determined. It resulted that of the several stero-isomeric sugars different quantities were absorbed; hence absorption in the alimentary canal was dependent not alone on the osmotic pressure in solution, but also on other properties of the substance, in the foregoing instance probably on the configuration of the molecule in question. (2) The absorption of disaccharides (saccharose, maltose, lactose) was also studied. Before being taken up, these bodies were, as a rule, cleft into monosaccharides; but a greater or less quantity of the disaccharides was absorbed unchanged, the activity of the intestinal ferment not being sufficiently great to have effected their cleavage soon enough. It was only in the substance of the mucous membrane that these portions underwent cleavage. Treatment of the mucous membrane yielded extracts capable of accomplishing this change.

*The Absorption of Solutions of Certain Sugars considered in Relation to their Osmotic Tension.*

Professor ALBERTONI (Bologna) likewise gave a communication on the rate of absorption of sugars in relation to the osmotic pressure of their solutions. He found that of glucose, saccharose, and lactose in solutions of the same osmotic tension the amount absorbed of the two former was greater than that of the latter. The same difference was also maintained even when the lactose solutions were of unlike (greater or less) osmotic tension. The absolute quantity absorbed was always found to be greater from hypertonic solutions than from isotonic or hypotonic. Further, if hypertonic solutions of the sugars had been administered by the stomach, and the liquid in its cavity examined an hour afterwards, the osmotic tension was found to be reduced, though always greater than that of the blood. If, on the other hand, isotonic or hypotonic solutions were employed, no diminution—but, on the contrary, an increase—of osmotic tension occurred. The fact was also remarkable that normally in the intestine a liquid of higher osmotic tension than that of the blood was always found, a tension which was almost constant, ranging about 0.75°. He had found that the osmotic tension of the blood underwent slight alterations during absorption; as a rule, it was slightly raised when hypertonic solutions were introduced into the bowel. Professor Albertoni concluded that the laws of osmotic pressure certainly played a part in the question of absorption; above all, from the stomach; but were not sufficient of themselves to explain the whole process. According to experiments which he hoped to publish shortly the colloidal properties of the blood had a much greater importance.

*Contribution to the Question of Fat Formation in the Animal Body.*

Dr. H. BORÜTTAU (Göttingen) gave an account of experiments which he had carried out on rats, and which went to show that little or none of the fat formed in the body during the effects of chronic phosphorus poisoning could have arisen from proteids, as was generally assumed. Four series of animals were taken. In No. 1 series the mean fat content (reckoned on the total weight, not dried substance, of the body) was determined. No. 2 series were taken in normal condition, and chronically poisoned with phosphorus, the animals being allowed to eat at will. No. 3 series were either deprived of food or placed on very reduced diet for a considerable period before receiving the phosphorus, the low diet being maintained afterwards. No. 4 series were placed on starvation diet for the same period without any phosphorus. In Series 2 and 3 the average quantity of fat was less than in the normal animal; while the quantity in Series 3 was exactly equal to that in the animal simply starved. The internal organs—liver, kidney, etc.—of the phosphorus-poisoned, but normally-fed, animals presented the typical appearance of marked fat infiltration; those of the starved and phosphorus-poisoned that of acute fatty degeneration. In simple hunger the atrophied organs also showed plenty of fat when microscopically examined. Dr. Borüttau considered that these experiments were strongly against the belief that any considerable quantity of fat was formed out of proteid during the effects of chronic phosphorus poisoning. The investigation was still in progress.

*The Influence of Sodium Chloride in Prolonging Life During Starvation.*

Dr. A. Pugliese (Bologna) related experiments in which he had found that when dogs during starvation were given a certain quantity of salt in their drinking water they lost considerably less in weight, and altogether presented a greater resistance to starvation than those given water only. They also passed less water in their urine. Dogs as near as possible of the same age, weight, and condition of nourishment had been selected. The quantity of water given bore a fixed relation to the body weight. At a certain stage of starvation (the same in each series) some of the animals were killed by bleeding, when it was found that the tissues of those given salt solution were always richer in water than those given water alone. This applied chiefly to the brain, the heart, and the blood. Dr. Pugliese concluded that this was of itself sufficient to account for the results. There was undoubtedly a relationship between function of an organ and its content of water. The sodium chloride prevented the impoverishment of their tissues of water and maintained the organs longer in functional condition. The research was still in progress.

## MIDLAND MEDICAL UNION.

The annual meeting of the Midland Medical Union was held at the Albert Hall, Nottingham, on October 23rd, Dr. J. G. Shea, F.R.C.S.I., J.P., President, in the chair, and amongst those present were the following: Messrs. R. G. Allen, C. J. Palmer, G. G. Macdonald, W. B. A. Smith, E. V. Eames, W. C. Rainsbury, R. Nesbitt, F. K. Tweedie, C. H. Harcourt, H. E. Haycock, A. Court, E. B. Ffennell, H. J. Neilson, T. Gerarty, M. W. Oldham, F. R. Mutch, T. Corkery, A. Chawner, J. H. Cox, W. B. Croskery, W. Duncan, B. J. Lee, E. H. Houlton, J. W. Noble, W. E. M. Wright, and A. Fulton. Letters expressing inability to attend were received from Dr. W. B. Ransom and Dr. F. Cassidi (Derby).

The President, in a short address, referred to the increase in the work of the Union, and alluded in detail to matters which had been dealt with during the past year, and spoke particularly upon the purpose and scope of the Union.

Dr. F. R. Mutch (Honorary Treasurer) presented his report, which showed the funds of the Union to be satisfactory.

### Secretaries' Report.

Dr. Houlton (Honorary Secretary), of Shirebrook, presented the following report of the work done during the past year:

In this the first annual report it is necessary to review the origin of our association.

In January, 1900, a letter appeared in the British Medical Journal from a "Colliery Surgeon" in the Midlands, setting forth that the present remuneration for colliery surgeons' work was inadequate, and suggesting that the profession in the district should combine to raise these fees. Several practitioners wrote under cover of the British Medical Journal to "Colliery Surgeon," and letters were written to many of the medical practitioners in the counties of Nottingham and Derby. The replies to these letters showed that there was a general feeling in favour of uniting together as had been done in the county of Durham.

A meeting was called by invitation at the Station Hotel, Chesterfield, on March 31st, 1900, and about twenty medical men were present. Dr. J. G. Shea presided, and it was decided to form a union under the name of the Midland Medical Union, membership to be restricted to practitioners who resided in or about the counties of Nottingham and Derby. A subcommittee was formed to draw up rules and specify the objects of the association. This was done, and the Secretary directed to circularise the medical practitioners in the two counties asking them to become members. The replies to these circulars were considered very satisfactory.

A meeting of local practitioners was called at Mansfield, and it was decided to form a branch for that district.

The Nottingham and District Medical Union were next approached, and asked if they would combine with the Midland Medical Union. This being agreed to it was decided to hold a general meeting to inaugurate the society, elect officers and confirm rules. This meeting was held in Nottingham in October, 1901, the rules as submitted were adopted with some slight alteration. Dr. J. G. Shea was elected President, Dr. Geraty Vice-President, Mr. Mutch Treasurer, and Drs. Houlton and Palmer Honorary Secretaries. A Council was also elected.

Dr. E. Jepson of Durham had consented to deliver an address, but was unfortunately prevented from being present. His address was afterwards printed and circulated amongst the members.

### Report of the Year's Work.

The first efforts made were (1) to try to establish a minimum fee for midwifery cases of one guinea: (2) to establish a minimum rate for Friendly Societies of 5s. per member per annum, adults and juveniles.

In regard to the midwifery question, we may say we have met with conspicuous success, for, with the exception of a district in and about Eastwood, Notts, and a few cases involving contract midwifery, the guinea fee is now universal throughout our two counties, and the only reason the particular district mentioned is exempt is that one of the practitioners, whilst not attending cases for less than this fee himself, allows his assistants to do so.

In regard to the contract midwifery question, the Union agreed to support any member who cared to apply for the increased rate of payment for these particular cases. Dr. Rainsbury, of Skegby, who held a colliery appointment to the Teversal Colliery Club, commenced to charge the increased midwifery fee, and in consequence was threatened with dismissal from his appointment. A deputation waited upon the Club Committee to point out the reasonableness of the fee, and asking them to give the matter their careful consideration. However, they sent Dr. Rainsbury an agreement to sign, in which he should bind himself to charge a sum of 10s. 6d. for members' wives attended by him in their confinements. This he refused to do, and in consequence was served with three months notice. The Colliery Club then advertised for a surgeon; the Union advertised warning men from accepting the post, and through the courtesy of the editors of the medical papers no more advertisements were inserted from the Colliery Club. The club, however, managed to secure a medical man who agreed to accept the appointment; but from knowledge which came to the Club Committee, a letter was sent to him asking him to come at once, and enclosing him three months notice; in consequence of this he never came to take up his appointment. The result was that after Dr. Rainsbury's notice expired on June 25th, 1901, the club were without a medical officer. This state of affairs has continued up to the present. Dr. Rainsbury has been attending the club members, their wives, and children at private rates. We have been informed that the club have secured another medical practitioner, who insisted upon being given the appointment of a neighbouring practitioner as well as Dr. Rainsbury under the same Club Committee, a practitioner who had been asked to accept Dr. Rainsbury's appointment and had refused. This practitioner had received three months notice from the club, but up to date no medical man has arrived to take up his duties.

In regard to the Friendly Society question, no very great result can be recorded up to date. The resolution suggesting a minimum of 5s. per member per annum has been rescinded, except in regard to new clubs or clubs changing medical officers, and a sum of 4s. substituted. But before enforcing this, the Chesterfield Branch chose delegates to meet delegates from the Chesterfield and District General Friendly Societies Council to see if affairs could be arranged amicably.

Up to date the Friendly Societies Council have offered a sum of 4s. for adult members and 2s 6d. for juveniles, but this has not been accepted by the Union, and the matter is still under discussion.

In regard to other questions which have been dealt with by the Union may be mentioned the Butterley Company and the surgeons. In this case the company sought to reduce their surgeons' fees, but on a firm front being shown by the surgeons, through the Union, the question of reduction was dropped. Several cases of difficulty between clubs and their surgeons have also been settled satisfactorily.

Mention might be made of many other questions which the Union have dealt with or which are still under discussion: but in summarising the result of the first year's work of this

Union we may state that the most pleasing result is the fact that medical men have been brought together in the meetings of the various branches, and that in the discussion and interchange of opinion many old difficulties and misunderstandings have been removed, and a more cordial professional feeling between neighbouring practitioners has been established. At the commencement we found a sense of distrust amongst medical men almost universal, but we are glad to state that this is being gradually dissipated, and if no other tangible advantage had been derived, the founders of this Union might feel themselves amply repaid for their trouble and work in the fact that they had raised the feeling of *esprit de corps* of the profession in this district.

On the proposition of Dr. CROSKERY (Eckington), seconded by Dr. DUNCAN (Clayeross), the report was adopted.

ELECTION OF OFFICERS.

On the proposition of Dr. NESBITT (Sutton-in-Ashfield), seconded by Dr. RAINSBURY (Skegby), the following officers were elected: Dr. J. G. Shea, President; Dr. T. Geraty, Vice-President; Dr. F. R. Mutch, Hon. Treasurer; and Drs. Houfton and Palmer, Hon. Secretaries.—On the proposition of Dr. GERATY, seconded by Dr. ALLEN (Belper), Mr. G. S. O'Rorke, M.A., solicitor, was appointed General Secretary.—On the proposition of Dr. HOUFTON, seconded by Dr. PALMER, the following gentlemen were (subject to their consent) elected as the Council: Messrs. Heelis, Handford (Nottingham), Tait (Mansfield), Nesbitt (Sutton-in-Ashfield), Macdonald (Crich), Allan (Belper), Duncan (Clayeross), Croskery (Eckington).

On the proposition of Dr. SHEA, seconded by Dr. MUTCH, it was resolved that the following rule be substituted in place of Rule 4.

The annual subscription for each member be 10s., payable in advance on October 1st.

On the proposition of Dr. MUTCH, seconded by Dr. W. E. M. WRIGHT, and after hearing observations from Dr. DUNCAN (Clayeross), Dr. NEILSON (Bulwell), and Dr. A. ALLEN (Belper), the following resolution was carried as an alteration of the rules:

*a.* Members are asked to guarantee a sum of five guineas, or multiple of five guineas, so that in the event of indemnity being required the money may be called up in the proportion promised.

*b.* Subscription to this fund is not compulsory.

*c.* In case any member should apply to be indemnified from this fund who is not a subscriber to it, the granting of relief to such member shall be left with the President and Vice-President to decide whether there are special circumstances entitling the member to such relief.

*d.* The control of this fund shall be left with the Council of the Union.

GENERAL MEDICAL COUNCIL ELECTION.

Addresses were then delivered by Drs. BROWN and JACKSON, candidates for membership of the General Medical Council.

On the proposition of Dr. SHEA, seconded by Dr. RAINSBURY, and supported by Dr. COX and Dr. NOBLE, votes of thanks were accorded to the speakers.

A vote of thanks to the Chairman terminated the proceedings of the meeting.

## THE RATES OF MORTALITY IN THE CONCENTRATION CAMPS IN SOUTH AFRICA.

PARLIAMENTARY returns of the number of persons and the number of deaths among persons in the concentration camps in South Africa are now available for the four months June to September inclusive. We have prepared an analysis of these figures, which will enable our readers to study with ease the death-rates in these camps. For the sake of convenience, in the following tables the figures for white persons are alone given those for the coloured inhabitants of the camps being left for later consideration if necessary.

There are camps in each of the four colonies, Natal, Cape Colony, Orange River Colony, and the Transvaal. The returns give no statement of the number of camps or of the maximum number in any one camp. Table I, however, shows that the number as well as the size of the camps in Cape Colony must be very small. The only further clue to the number of camps is conveyed in the footnotes to the returns for July and August. In the former it is stated that 'the mortality among the children in the Orange River Colony is mainly due to a severe epidemic of measles at Kroonstad, Springfontein, Kimberley, Aliwal, and Bloemfontein, and to pneumonia supervening during excessively cold weather;" and in the latter we are informed "a severe epidemic of measles was prevalent in the larger camps."

TABLE I.—*Natal (White Population).*

| | Number of | | | Deaths of | | | Death-rate. | | |
|---|---|---|---|---|---|---|---|---|---|
| | Men. | Women. | Children. | Men. | Women. | Children. | Men. | Women. | Children. |
| June ... | 901 | 1,902 | 5,037 | 5 | 15 | 84 | 1 in 180 | 1 in 127 | 1 in 60 |
| July | 310 | 907 | 1,515 | — | — | 6 | *Nil* | *Nil* | 1 in 252 |
| August ... | 342 | 928 | 1,570 | — | 3 | 21 | *Nil* | 1 in 309 | 1 in 75 |
| Sept. ... | 372 | 1,593 | 2,405 | 1 | 10 | 65 | 1 in 372 | 1 in 159 | 1 in 37 |
| | 1,925 | 5,330 | 10,527 | 6 | 28 | 176 | 1 in 321 | 1 in 190 | 1 in 60 |

TABLE II.—*Cape Colony (White Population).*

| | Number of | | | Deaths of | | | Death-rate. | | |
|---|---|---|---|---|---|---|---|---|---|
| | Men. | Women. | Children. | Men. | Women. | Children. | Men. | Women. | Children. |
| June ... | 31 | 85 | 274 | — | — | — | *Nil* | *Nil* | *Nil* |
| July ... | 33 | 83 | 257 | — | — | 1 | *Nil* | *Nil* | 1 in 257 |
| August ... | 31 | 82 | 257 | — | 1 | — | *Nil* | 1 in 82 | *Nil* |
| Sept. ... | 28 | 63 | 204 | — | — | — | *Nil* | *Nil* | *Nil* |
| | 123 | 313 | 992 | — | 1 | 1 | *Nil* | 1 in 313 | 1 in 992 |

TABLE III.—*Orange River Colony (White Population.)*

| | Number of | | | Deaths of | | | Death-rate. | | |
|---|---|---|---|---|---|---|---|---|---|
| | Men. | Women. | Children. | Men. | Women. | Children. | Men. | Women. | Children. |
| June ..... | 5,116 | 9,646 | 17,953 | 32 | 75 | 182 | 1 in 160 | 1 in 129 | 1 in 93 |
| July ..... | 5,351 | 11,213 | 20,132 | 50 | 69 | 369 | 1 in 107 | 1 in 163 | 1 in 54 |
| August ... | 5,826 | 13,381 | 24,415 | 30 | 82 | 510 | 1 in 194 | 1 in 163 | 1 in 48 |
| Sept. ..... | 6,089 | 14,140 | 25,118 | 43 | 153 | 885 | 1 in 142 | 1 in 92 | 1 in 28 |
| | 22,382 | 48,380 | 87,618 | 155 | 379 | 1,946 | 1 in 144 | 1 in 128 | 1 in 45 |

TABLE IV.—*Transvaal (White Population).*

| | Number of | | | Deaths of | | | Death-rate. | | |
|---|---|---|---|---|---|---|---|---|---|
| | Men. | Women. | Children. | Men. | Women. | Children. | Men. | Women. | Children. |
| June ..... | 8,576 | 16,078 | 19,811 | 26 | 48 | 310 | 1 in 329 | 1 in 355 | 1 in 64 |
| July ..... | 9,665 | 20,012 | 24,462 | 51 | 118 | 748 | 1 in 189 | 1 in 169 | 1 in 33 |
| August ... | 10,496 | 22,036 | 25,083 | 32 | 185 | 1,014 | 1 in 328 | 1 in 113 | 1 in 25 |
| Sept. ..... | 10,581 | 22,226 | 26,599 | 75 | 165 | 1,014 | 1 in 141 | 1 in 135 | 1 in 26 |
| | 39,318 | 80,352 | 96,855 | 184 | 516 | 3,086 | 1 in 213 | 1 in 156 | 1 in 31 |

In order to bring these statistics into manageable compass, the experience of all the camps in the Transvaal, Orange River Colony, and Natal for the four months in question has been combined in the following table, and placed in contrast with that of the small camp or camps in Cape Colony:—

*Summary Table.*

| Camps in: | Number of | | | Deaths of | | | Death-rate. | | |
|---|---|---|---|---|---|---|---|---|---|
| | Men. | Women. | Children. | Men. | Women. | Children. | Men. | Women. | Children. |
| A. Transvaal, O. R. Colony, and Natal ... | 63,625 | 134,662 | 194,080 | 345 | 923 | 5,200 | 1 in 184 | 1 in 145 | 1 in 37 |
| B. Cape Colony | 117 | 313 | 992 | — | 1 | 1 | *Nil* | 1 in 313 | 1 in 992 |

It is not assumed that the total number of inhabitants in the concentration camps is the number given in the first three columns of the above table. It must be clearly understood that we are dealing with statistics for four consecutive months. The Government returns do not state whether the population of each monthly return consists in part of the population of the preceding month and in part of newcomers, though this may be assumed to be the case. We have added together the stated populations in each monthly return to obtain the average ratio of deaths to population. Thus, in Table III it will be noted that the ratio of deaths in the Orange River Colony camps among men was 1 in 160 in June, 1 in 107 in July, 1 in 194 in August, and 1 in 142 in September: while the average was 1 in 144.

These ratios have been given in preference to the annual death-rate per 1,000, as they represent a statement of actual facts and not an inference based on the assumption that the same experience would continue during twelve months. The calamitous experience did, however, continue, and became progressively worse during four months; and it is, therefore, justifiable now to proceed on the assumption that it might go on for several months longer, if not for an entire year, and to contrast the above experience with the experience of England and Wales for an entire year. Later on we shall attempt comparison with special communities smitten with measles.

An initial difficulty arises in contrasting the experience of the camps with that for England and Wales. The three groups in the returns are "men," "women," and children," no clue being given as to the definition of child, or the proportion of infants, of children aged 1 to 5, and of children over 5, though these data are essential in order to arrive at satisfactory statistics. In the absence of these data we must have recourse to certain assumptions. We will assume that all the children were under 5 years of age. Probably a very considerable proportion were children aged 5 to 15 years. Inasmuch as the normal death-rate at ages under 5 in England is 14 times as high as at ages 5 to 10, and 25 times as high as at ages 10 to 15, this assumption probably shows the experience of the camps in a too favourable light.

*Annual Death-rate.*

| | Per 1,000 Children. | One Death to *x* Inhabitants. |
|---|---|---|
| In the Transvaal, Orange River, and Natal Camps, based on four months' experience ... | 322 | 1 in 3.1 |
| In England and Wales, based on the experience of 1899, for children under 5 ... ... | 55.5 | 1 in 18.0 |

When dealing with the death-rates among men and women in the camps a similar though not so great a difficulty arises. The death-rate per 1,000 among persons in England and Wales ranges from 3.4 at ages 15-20 to 33.2 at ages 55-65 and 65.2 at ages 65-75. Without attempting any exact comparison, it is clear that among men the conditions of health varied greatly, the deaths varying from 1 in 321 in the Natal camps to 1 in 213 in the Transvaal camps and 1 in 144 in the Orange River camps.

Women, who normally have a much lower death-rate than men, suffered excessively, the proportion of deaths varying in the camps of excessive mortality from 1 in 190 in the Natal and 1 in 156 in the Transvaal camps to 1 in 128 in the Orange River camps. Amongst the 313 women in the Cape Colony camps only one died.

### Fatality of Measles.

The question arises whether the epidemic of measles furnishes a sufficient explanation for the calamitous death-rate shown above. Exact statistics as to the severity (case fatality) of measles are somewhat scanty. We append the following from two reports by Dr. T. Thomson, issued by the Local Government Board, dealing with urban districts in which cases of measles were compulsorily notifiable.

*Fatality of Measles per 100 Attacked at each Age.*

| Ages. | A. Unnamed District. | B. Burton-on-Trent. |
|---|---|---|
| All ages ... ... ... | 6.1 | 4.4 |
| 0—1 ... ... ... | 9.6 | 4.0 |
| 1—2 ... ... ... | 19.7 | 5.0 |
| 2—3 ... ... ... | 10.2 | 5.5 |
| 3—4 ... ... ... | 4.9 | 6.3 |
| 4—5 ... ... ... | 1.5 | 6.3 |
| 5—10 ... ... ... | 1.1 | 0.1 |

Assuming that notification was equally complete in the two above districts, it is clear that the fatality of measles varies greatly in different epidemics. There is the strongest reason for believing that measles, like some other zymotic diseases, undergoes changes in virulence due to unknown conditions. If we assume this to have been the case in the present epidemic, would it reasonably account for the deaths of children in a proportion which, if continued for a year, would have killed 1 out of every 3.1? In District A above, the highest fatality was during the second year of life, when approximately 1 out of every 5 attacked succumbed; but it is unreasonable to suppose that all the Boer children were of this age, and it must be inferred that unless the measles in the camps displayed a virulence hitherto almost unknown other factors must have been at work.

### Historical Epidemics of Measles.

Certain historical epidemics described by Hirsch[1] throw light on the problem. The most often quoted is the Fiji epidemic of 1874, which carried off from one fourth to one-fifth of the whole population of the Fiji group. It would be interesting to discuss how far the virulence of this epidemic was caused by the fact that the Fijians, among whom this was a new disease, afforded a new and virgin soil for its virulent development, and how far the lack of proper treatment and the exposure of patients to the most unfavourable conditions of food and housing were responsible for the result. Possibly both sets of factors were at work. We have no facts bearing on the question whether among the Boers who have been brought into these concentration camps measles had previously prevailed. It is quite possible that in their scattered homesteads measles may have long been absent, and that the camps thus furnished a most combustible material when the spark of infection was introduced.

It does not seem, however, that absence of previous measles can account completely for the high fatality of the present epidemic. For analogous conditions we must look rather to the experience of the Confederate troops during the American Civil war, and in Paris during the siege of 1871, than to Fiji. Among the Confederate troops in 1866 measles caused 1,900 deaths out of 38,000 cases of sickness, or a fatality of 20 per cent. In Paris, out of 215 of the Garde Mobile who took measles, 86, or 40 per cent., died. Clearly, therefore, under certain conditions, among which are overcrowding, defective sanitation, and the influence of unsuitable and, possibly scanty,

[1] *Geographical Pathology*, vol. i, p. 107.

food, and depressing mental conditions, measles sometimes assumes a virulence which is phenomenal.

### CAUSES.

What are the causes which are likely to have been productive of the present excessive mortality in the concentration camps?

1. Almost certainly measles and complicating pneumonia are not entirely the cause. When the story is completely told, it will most probably be found that diarrhœa and enteric fever have also been prevalent.

2. Some importance must be attached to the fact that a large proportion of the Boer children have probably never been previously exposed to measles, and have now been exposed under conditions which ensure concentration of the poison of this disease. The conditions are analogous to those of a workhouse into the babies' ward of which measles is accidentally introduced. Those who have experienced how fatal measles is under such circumstances will have little difficulty in partially realising the state of matters in the Boer camps.

3. The Boers are stated to be dirty in their personal habits and difficult to control in regard to the elementary rules of sanitation necessary to maintain a large camp in a wholesome condition. Probably this is true. It is one of the strongest reasons for not permitting dense aggregations of people possessed of habits which are only safe in detached and lonely houses.

4. Possibly unsuitable food and deficient clothing, although every effort has doubtless been made to remedy these defects, greatly aided in producing the result.

5. In view of the excessive mortality from enteric fever among our own troops to which we have repeatedly drawn attention, we are bound to suspect that the same unreadiness to make provision for probable contingencies has characterised the action of the responsible Army authorities in this as in other health matters. The sanitary control of the large camps, whether for soldiers or for Boers, has been most unsatisfactory. One of the most important recommendations of the recent South African Hospitals Commission was as to the necessity for appointing special sanitary officers whose duty it would be to organise and control the sanitary arrangements of all large camps. The sanitary, as distinguished from the medical organisation of the South African Army, has been attended by calamities for which the War Office must be held responsible.

### REMEDIES.

What remedies are practicable?

1. The immediate organisation of sanitary control of the camps on a scale sufficient to meet all requirements.

2. Splitting up of the camps into a much larger number of units, each having a separate organisation; visits from camp to camp being strictly prohibited. The experience of the children's hospitals in Paris gives abundant testimony to the dangers of accumulating a large number of measles patients. These are graphically described by Dr. Grancher,[2] who quoted Dr. Archambault as saying: "Our patients die of the disease which they catch, not of the disease for which they are admitted." This is particularly true of measles. Uncomplicated measles needs to be treated in a separate building from measles associated with broncho-pneumonia; and if disinfection is not required for measles, it is desirable for its complications. By antiseptic and aseptic methods the results of treatment of measles in the Paris hospitals for children have become much more favourable. Such methods may not be practicable under the conditions of camp life. The alternative is that no considerable number of susceptible children must be grouped together. The camps must be split up and to some extent scattered. This point is clearly brought out by Sir Walter Foster in a letter to the *Times*, and he also lays stress on the importance of placing the camps on non-polluted soils. His words, which represent the minimum requirements of the case, may be quoted in conclusion:

> There are two plans for diminishing the evil which, I think, should be tried at once, if they have not already been adopted, namely—(1) The larger camps should be broken up into separated small camps, so as to make the number of persons smaller on each area; and (2) the sites on which the camps are placed should be regularly changed, as fouled soil is a prolific cause of disease, and a potent factor in increasing its virulence.

[2] *Un Service Antiseptique de Médecine.* Par M. le Prof. J. Grancher. Congrès de Méd. de Paris, 1900.

## CONTRACT MEDICAL PRACTICE.

### HOW TO DEAL WITH THE DIFFICULTIES OF CONTRACT MEDICAL PRACTICE.

OPTIMIST writes: No doubt most readers will agree that Dr. Larking's paper on Contract Practice is one of the most valuable contributions that have been made on this difficult subject. Neither is Dr. Larking, in my opinion, too optimistic: the solution of the question is in our own hands; and the time is most opportune for action. There is, however, just one statement which ought not to pass unmodified. It is essential that we should all join heartily in the enterprise: therefore it will be well to confess that, practically, we all are, or have been, miserable sinners. Dr. Larking says: "The sinners are the younger members of the profession, who, like myself, are led into these practices by an interested public."

Now, it is notorious that in some districts a very large amount of unremunerative contract practice is done by senior members of old-established firms—men who often hold high positions in our Association—by means of junior partners or assistants. I point this out in no spirit of recrimination, but to further the movement Dr. Larking so well advocates. Dr. Larking's assertion makes it appear that the duty of beginning rests entirely with the "younger members," because they alone sin. This is not so; on the contrary, the junior sinners may well look to their elders for an example. Professional and financial considerations make such a step much easier on the part of the old-established members. I believe in most places the younger men would be only too glad to follow a good lead.

### WARNING TO YOUNG PRACTITIONERS.

SIR,—I read with much interest in the BRITISH MEDICAL JOURNAL of October 19th your very excellent advice to a young practitioner, and only trust that no one will sell his services at such a low price to any body of working men who preach the doctrine of unionism when their own interests are threatened.

Surely at the present day, when we hear of a decreasing number of entries into the profession, and a marked increase in the time required for study necessary to obtain a degree or diploma, not mentioning the expenses to parents or guardians, would it not be well for all young registered practitioners and others who are seeking districts to settle in, not to accept any appointments under Colliery, Friendly Society, or Medical Aid Clubs, without first making searching inquiries as to terms and the reason why their previous medical officer resigned or ceased to act for them? Many practitioners who accept such appointments for perhaps what looks like a tempting offer, find out before long that they are slaves to a committee who only study their own interests, and further that they are without friends among their professional brethren, owing to an omission which might have been easily avoided by a little forethought. Let us stand together and be loyal to each other, upholding the traditions handed down to us, which is the only way to gain public confidence.

I am glad to notice that in many districts doctors are waking up to the importance of combining, which is a sure means of protecting themselves.—I am, etc.,

October 30th. A GENERAL PRACTITIONER.

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THE Royal Free Hospital has received from Mr. George Courtauld the sum of £1,000 to endow a bed in memory of his daughter, the late Miss Louise Courtauld.

AT the opening of the Glasgow Veterinary College for the present session Principal McCall gave an address, in which he referred to the unsatisfactory position in which the Scottish veterinary colleges were placed. There were three such colleges but they were all private institutions, and received no Government recognition or support. The Government had instituted a veterinary college in Dublin and given a "grant in aid"; and Mr. McCall urged that the Scottish colleges should be affiliated, and their management organised in such a way that they might be able to earn a grant from the Scotch Education Department.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, NOVEMBER 9TH, 1901.

## A PROTEST AGAINST OPERATIVE INTEMPERANCE.

It is now one of the commonplaces of presidential addresses and other periodical records of advance in the healing art that progress during the last quarter of a century has to a large extent consisted in the gradual annexation by surgery of territory which used to belong to medicine. In this way have been gained most of the splendid victories over diseases before which our fathers could only fold their arms in a futile "meditation on death." A policy of "blood and iron" was needed for the expansion of our medical empire, and the gratitude of all mankind is due to the bold pioneers who, sometimes at the risk of their professional lives, have cut their way through difficulties and dangers which would have dismayed weaker men. This kind of work can be done only by enthusiasts; and enthusiasm, like other good qualities, tends to run into excess. Hence a pioneer in surgery is sometimes too apt to see a vision in the sky telling him to conquer in the sign of the knife. Others naturally see like visions, and the result is often a kind of rivalry in operative enterprise which might lead an ignorant onlooker to suppose that the competitors were striving which should put to the largest use the privileges that, according to the satirist, are granted them by the law *perçandi, taillandi, coupandi, brulandi et*—shall we say? *mutilandi.*

More than twenty years ago Verneuil denounced the *furor secandi* in general surgery which was then only in its incipient stage; three or four years ago Sir William Priestley raised his voice in solemn condemnation of over-operating in the field of gynæcology, and quite recently Sir Felix Semon in two lectures delivered at the London Polyclinic and published in the British Medical Journal of November 2nd and 9th, has thought it necessary to make a strong protest against excess of operative zeal in the sphere of diseases of the throat, nose and ear. That some plain speaking on the subject was required has been known for years to those behind the scenes of those particular branches of special practice; but the matter is a delicate one to touch. Outside criticism might not unreasonably be disregarded by those interested as being based on insufficient knowledge; and inside criticism is open to the charge of being inspired by the *invidia medicorum*, which according to the proverb, is the worst form of that ignoble vice. A man was needed who could speak with the authority of a scientific leader, and whose position in the profession placed him high above the suspicion of any personal motive. Such a man we fortunately have in Sir Felix Semon, and the thanks of the whole profession are due to him for having come forward to discharge what must have been a most unpleasant task. Though he speaks only of the abuses of local treatment in affections of the upper air passages, his words are capable of a much wider application, and may profitably be read, marked, and inwardly digested by operative specialists of all categories, and also by general surgeons.

We cannot follow Sir Felix Semon through all the heads of his important deliverance; we need only call attention to one or two of the chief points on which he insists. At the outset he is careful to make his position in regard to local treatment quite clear. No reasonable person, he says, can object to the removal of a nasal obstruction which almost entirely prevents breathing through the nose, and causes dry pharyngitis, with great liability to laryngeal and bronchial catarrh; to radical operative treatment of a chronic frontal sinus empyema, which produces violent frontal headache, gastric symptoms, and grave disturbances of the general health, making life unbearable; to the removal of adenoid vegetations, which seriously interfere with a child's breathing and hearing, and gravely impair his chance of growing into a strong and healthy man; or to the removal of a laryngeal papilloma or fibroma which makes the patient voiceless, and places him in imminent danger of suffocation. But he emphatically declares that not every little crust or spur of the nasal septum requires the saw, the chisel, or the trephine; not every little puffiness of the mucous membrane over the turbinated bones, the cautery or the snare; not every little bunch of adenoid tissue nor every tonsil which slightly projects needs removal; not every granulation or visible vein on the posterior wall of the pharynx requires the cautery, nor does every uvula that seems rather longer than it should be need to be curtailed.

With regard to adenoids, Sir Felix Semon relates a curious chapter of medical history, which has a moral applicable to many things of wider importance. Wilhelm Meyer's discovery, though announced to the profession in this country in 1870, attracted no notice whatever. Sir Felix Semon tells us that in 1881 a leading physician asked him what adenoids were; and we may add, that about the same time Sir William Jenner, with the frankness which was one of his finest characteristics, bluntly stated on a diagnosis of postnasal growths being suggested to him that he had never heard of them. If this were the case in the green tree we may conjecture what it was in the dry. At a later date even specialists of note denied—sometimes with curses—the existence of adenoids. Gradually, however, the truth prevailed, and soon the little masses of lymphoid tissue came to be, like the world, "too much with us." They were held accountable not only for their own misdeeds, but for a countless brood of reflex neuroses—asthma, epilepsy, and what not—with which they had no more to do than the Goodwin Sands with Tenterden Steeple. The removal of adenoids, real or supposed, became the fashionable cure for most of the ills that childish flesh is heir to. When everybody operates there must needs be some bungling; and

soon whispers of deaths were heard which found voice in a statistical statement published in 1896, showing that in a period of two years and a quarter eleven deaths had been reported in England alone. For this result the anæsthetic was blamed by some, and rapidity of execution became the aim of the operator. Recurrence, which at one time was almost unknown, became painfully frequent, and the operation lost the favour which it formerly enjoyed with the public, and was in some danger of being discredited in the eyes of the profession. An eminent surgeon publicly anathematised it, and maintained that all that was necessary could be done by "breathing exercises," though we confess to sharing Sir Felix Semon's perplexity as to how a mechanical obstruction to the passage of air through the nose can be removed by respiratory gymnastics. Summing up the question of adenoids, Sir Felix says that cases in which the growths cause definite symptoms they should be removed; when they give rise to no symptoms they should be left alone. In a third class of cases the lymphoid tissue is liable to a periodical swelling, which causes trouble till it subsides; here it is often difficult to know whether or not to operate, and the practitioner may be justified in temporising. As to reflex neuroses, Sir Felix Semon is utterly sceptical; such disorders may coexist with adenoids, but the removal of the latter has, in his experience, no effect in relieving the former.

It is in the interior of the nose, however, that operative fanaticism finds fullest scope. As Indian philosophers strive to solve the riddle of the universe by the contemplation of their own navels, so some rhinologists seem to hope to find the secret of all diseases by fixing their attention on the nose. To them that feature is, in a pathological sense, the "centre of our sinful earth." In their eyes it is like a slumbering volcano, which may on the slightest provocation burst into devastating activity. Sir Felix Semon gives a formidable list of morbid reflex phenomena that have been attributed to some supposed centre of mischief within the nasal fossæ. There is no organ, scarcely even a point, in the body that may not, in the opinion of some "advanced" rhinologists, be the seat of pathological manifestations radiating from the nose. In the light of this theory its devotees are necessarily suspicious of the slightest deviation from normal conditions, and accordingly they think it right to attack the root of the evil, as it were, with fire and sword. If the nose were really the source of such disturbance in the human economy, the shortest way would surely be to remove it; and, indeed, as far as the interior is concerned, that consummation has almost been reached in certain quarters.

Sir Felix Semon has opportunely come to the rescue, and we trust his remarks will have the effect of saving the nose from meddlesome surgery and from the artistic zeal of enthusiasts who apparently think it their mission to shape ends which have only been rough-hewn by the divinity. The late Bishop of London in a sermon delivered to the St. Luke's Guild some years ago referred to the "marvellous prospect open to the medical man" by the doctrine of the resurrection. The marks of the surgeon's skill would, he said, be stamped on certain human frames, to be carried by them into eternity. His lordship thought this view would give the surgeon a higher sense of responsibility. It is undoubtedly a consideration likely, as Touchstone says, to make a man stagger in the attempt to cure all diseases with the "spokeshave." The possibility of their own handiwork rising up in judgment against them at the last day may perhaps stay the hand of some too eager operators.

We do not wish to be understood as wishing in the slightest degree to depreciate the excellent work done in laryngology, rhinology, and otology of late years, and we are proud of the share taken by our countrymen in the progress that has been achieved in those branches. If there has been some excess of zeal, this is the defect of a quality. It is largely a matter of temperament. If we may follow Sir Felix Semon's example, and quote Gilbert, we would remind him that

> Ev'ry boy and ev'ry gal
> That's born into the world alive,
> Is either a little Liberal
> Or else a little Conservative

The "little Liberal," if he takes to surgery, will be bold in the active reform of whatever appears to him to be wrong in the nose or elsewhere; the "little Conservative" will conserve. But, just as the reformer may be too active, so, on the other hand, the Conservative may be too inactive. The true rule of practice lies between. This homely and yet far-reaching truth is abundantly illustrated and trenchantly enforced by Sir Felix Semon, whose lectures we recommend to the serious attention of all our readers.

## THE PROGNOSIS OF NERVOUS DISEASES.

THE Bradshaw Lecture, delivered before the Royal College of Physicians by Dr. Judson S. Bury, of Manchester, on Prognosis in Relation to Diseases of the Nervous System, is printed in full at page 1389, and will well repay careful reading. It is alike honourable to the College, the lecturer, and the Manchester School of Medicine, where, in emulation of the labours of the late Dr. Ross, and stimulated by his great example, a younger school of neurologists has arisen in which the whole country may well feel pride.

It is on all hands admitted that the prognosis of disease or the forecasting of what will be its ultimate result is the most difficult of all the problems which the physician is called upon to solve, and Dr. Bury shows himself to be fully alive to the special obstacles to success in attempting to foretell the course of affections of the nervous system. Yet at the outset he utters a much-needed note of warning against the current division of disease into curable and incurable. He points out that many so-called curable diseases—for example, the acute infective processes may, and often do, leave behind them organic changes and alterations, with persistent or permanent impairment of health, while others currently regarded as incurable may be arrested or become apparently completely cured. In fact, he almost denies the possibility of the accurate prognosis of disease, and maintains that even approximate forecasting presents the greatest difficulty.

This is especially true of the prognosis which we attempt to deduce from our pathological knowledge, that is to say, from our knowledge of the seat of the morbid processes, its nature and extent, such knowledge being, of course, attained by what we call diagnosis. The common classification of diseases of the nervous system into functional and organic by no means coincides with the division into

curable and incurable. Functional diseases are after all only those in which no structural changes have hitherto been discovered and are constantly, with the progress of means of investigation, being reduced in number. Yet many of these which have so far resisted all attempts to detect their secret are as hopelessly incurable as those associated with coarse structural change. Nor will Dr. Bury admit without considerable limitations the often repeated statement that syphilitic diseases of the nervous system are more amenable to treatment than those not so initiated, for, as he points out, the nerve tissue is not the less destroyed or more capable of being repaired because the destroying agent is syphilitic, while, on the other hand, affections of the nervous system due to syphilis are much more likely to relapse, or to reappear, or to make a fresh appearance in other parts than those depending upon the toxins of other diseases.

It would, seem, therefore, that the time has not yet come for formulating prognostic rules based upon diagnosis and pathology, and the lecturer directs our attention for the present to the greater value of symptoms, and to the need for a more careful clinical study of them as guides to the progress of nervous diseases. He especially lays stress on the value of symptoms which testify to active phases of the disease, and thereby indicate the probability of a downward course. Prognosis, he tells us, depends less upon our knowledge of pathology than upon the accuracy of our experience with regard to symptomatology, and he discusses the significance of certain symptoms, such as numbness and limited paralysis. He alludes to the extraordinary periods of arrest, or even of apparent improvement which many chronic nervous diseases present, and to the difficulty created by the length of time during which they continue stationary, and the accuracy of the original prognosis remains in doubt. Examples of this are especially frequent in the course of disseminated sclerosis and general paralysis.

The lecture cannot be said to do anything to dispel the general impression of the gloomy prognosis of nervous diseases or to inspire us with any confidence in our power to read aright their signs and manifestations: yet this conclusion by no means imputes blame to the lecturer, who has furnished us with a valuable and thoughtful summation of existing factors for the solution of the problems concerned. He has clearly laid down the direction from which more light may come, and has emphasised the desirability of closer clinical investigation, a lesson which perhaps never needed more reiteration than in the present day.

Improved methods of treatment will undoubtedly bring with them if not better methods of prognosis at least a better prognostic outlook, but, as Dr. Bury says, this must vary with our knowledge of the proper treatment for the elimination of the poisons and of the effects produced by them. At present, unhappily, we know neither the nature of the poisons nor the manner in which they enter the circulation; hence treatment is purely empirical and often useless. When we know what they are we may be able to stop their further introduction, to counteract their effects, or to eliminate those which have entered into the body, but our means for this purpose are at present crude and imperfect. Fresh discoveries regarding the effects of glandular extracts and the nature of toxins and their antitoxins may perhaps be looked for in the near future, and from such discoveries it may be hoped that our therapeutic armament may be greatly increased and made more effective. Dr. Bury illustrates the possible curative effects of certain toxins by quoting the case of a boy with whooping-cough who recovered rapidly after being attacked with most severe urticaria, and that of a patient suffering from distinct loss of mental vigour following influenza, who was attacked a second time by the same disease, made rapid recovery, lost all his old symptoms, and regained complete health, both mental and physical. In the words of the lecturer, a consideration of these and of other effects which may be derived from the study of pathology and of the history of symptoms gives us hope for the future and, we may add, should afford a stimulus to the rising generation of physicians to continue those labours in the department of diseases of the nervous system which have made the latter half of the nineteenth century so fruitful in results.

## THE CONCENTRATION CAMPS IN SOUTH AFRICA.

We have no sympathy with those who would make political capital out of the high death-rate in the concentration camps. The camps appeared to be a military necessity, and it was doubtless regarded as more humane thus to mass the women and children than to leave them to starve on their half-ruined homesteads. The results, however, have been calamitous. On page 1418 is given a full abstract of the statistics for the four months of this year up to the end of September. The difficulties in drawing conclusions from these statistics are there stated, but if we assume that all the children in the camps are under 5 years of age, that is, belong to the ages of highest normal mortality—which is a highly improbable assumption—it is impossible to regard with complacency the consideration that if the present conditions prevailed for three consecutive years all the Boer children now in the camps would be annihilated, while it would take twenty years of exposure of children in England to the English conditions of life to produce a similar result The contrast, however, is almost certainly even greater than is indicated by these figures.

The conditions of life in these camps are doubtless responsible for the greater part of the evil. Dysentery and diarrhœa, enteric fever, and pneumonia, as well as measles probably prevail in them. The habits of the Boers probably make matters worse. But this is simply a further reason for not permitting the continuance of the concentration of persons under such unsatisfactory conditions. We do not question for a moment that money has been freely spent or that every effort has been made to supply food and medical comforts to the patients. But we have serious doubts as to the efficiency of the sanitary control of the camps. It is due to inefficient sanitary control that a large share of the dysentery and enteric fever in the military camps has occurred, and the statistics give ground for suspecting that similar inefficiency has characterised the control of the concentration camps. Until the recommendations of the Hospital Commission as to the appointment of special sanitary officials are carried into

operation, and these sanitary officials are so placed that, subject only to the most urgent military considerations, their word shall be law, there is little hope of improvement.

Mr. Brodrick, in a letter written on November 5th to the Bishop of Rochester, states that the commission of ladies has visited twenty-one of the camps, and that their recommendations "have all been adopted where possible under the circumstances." He also promises to distribute in a few days a large volume of reports from other quarters on these camps. But the whole matter is really one of sanitary administration, and we should like to have an assurance that the direction of these camps has been placed in the hands of experienced sanitary administrators with authority and power to carry out the changes necessitated by the proved facts as to the unhealthy condition of the people detained in the camps. The important point for the moment is, what can be done immediately? The one essential thing is to split up the camps into a number of much smaller camps on new and unpolluted soils. Large numbers of cases of measles cannot safely be treated together unless under the most favourable hygienic conditions. Failing these conditions, the aggregation of patients must be stopped. The conscience of the public is very properly touched on this subject; the statistics warrant the uneasiness of the public mind; and it may be hoped that prompt measures will be taken in the direction indicated.

## MISCHIEVOUS GOSSIP.

WE venture to think that a protest ought to be made against the way in which a certain small section of the press panders to morbid curiosity with regard to the illness, real or supposed, of distinguished people. We have recently seen that this tendency may lead to the circulation of circumstantial statements founded upon ill-informed conjecture, and of such a nature as to be calculated to cause much distress and anxiety to a great number of people. Rumours to the effect that the King was suffering from a serious malady have been current since his accession. They appear to have originated on the other side of the Atlantic, how we cannot pretend to say, and to have been encouraged by persons who claimed, without, of course, the smallest tittle of reason, to speak with some sort of personal knowledge. We have seen a long illustrated article in an American newspaper purporting to give, on the authority of an American specialist, a detailed account of a malady from which the King has suffered, with particulars of the operations already performed, and of others which might become necessary. Other articles, almost equally circumstantial, have been published in American newspapers, and have been quoted in the Continental press. We think it is to the honour of British journalism that these mischievous stories have been generally ignored; recently, however, a few British papers have reproduced, with an air of authority, gossip which a little inquiry, to say nothing of common sense, might have convinced them was foolish as well as discourteous. The fact that the King has been going about as usual, participating in the ordinary work and recreations of the country with that frank and simple dignity which has helped so largely to endear him to his people, might have made any rational person sceptical of such stories. As a matter of fact, the whole of the gossip, as we have already stated, is absolutely unfounded and untrue from beginning to end. It seems to us that this sort of thing is not, to use a phrase popularised by Mr. Kipling, playing the game. It is the business of a newspaper to gather and publish news. Probably few people who take up their daily paper realise how much pains is taken by responsible journalists to verify statements which come to them as news. But unverified gossip is not news. If a story of this kind is not contradicted the gossip-mongers argue that as it has been published and has not been contradicted therefore it is true. But if one rumour be corrected to-day (this particular rumour was corrected in America many months ago) another may be set on foot to-morrow. Is it fair to expect every piece of idle gossip of this kind to be formally contradicted? Yet such rumours may do a great deal of injury. This particular rumour, it is said, has had a most injurious effect upon trade, and we are informed that some firms have found it necessary to discharge employees in consequence of the feeling of uncertainty thus created. Personal details about his own health are surely matters which any man, whether prince or peasant, may make public at his own time, if at all. In saying this, we are of course well aware that by established custom particulars are published as to the health of the ruler of a State which could not properly be given in respect of an ordinary patient, and we would not be understood as criticising the action of those members of the medical profession who, when occasion unhappily arises, authorise or subscribe, with a full sense of the responsibility of their position, statements for publication as to the health, or as to the cause of the death, of kings or other rulers. But in such cases the statements made are put forth with the consent of the ruler and of his advisers, or the immediate members of his family and household. Apart from other considerations, which need hardly be taken into account at the present day, the interest which peoples feel in all that concerns the welfare of the Head of the State will doubtless always require that reasonable information as to illness threatening life should be made public. But this circumstance should render the press all the more indisposed to give circulation to unverified rumours, which, as in this instance, can only have originated from the foolish gossip of fussy busybodies.

## THE DEPARTMENTS OF THE WAR OFFICE.

AN Order in Council was made on November 4th defining the duties of the principal officers charged with the administration of the departments of the army under the Secretary of State for War. The new order is substituted for that of March 7th, 1899. The Commander-in-Chief exercises general command over military forces at home and abroad, issues army orders, and holds periodical inspection of the troops. He has under his immediate control (1) the department of the Adjutant-General, which is charged with discipline, military education, and training, the allocation of troops, the patterns of clothing and necessaries, and enlistment and discharge; (2) that of the Director-General of Mobilisation and Military Intelligence; and (3) the Military Secretary, who deals with appointments, promotions and retirements, and the educational qualifications of candidates for commissions, including the charge of the administration of the educational establishments. The second great department is the Quartermaster-General's, charged with supplying the army with food, forage, fuel, light and quarters, with land and water transport, the conveyance of stores, and the provision of remounts; with the movement of troops and the distribution of their barrack stores and equipment, and with administering the Army Service Corps, the Pay Department, and the Veterinary Department. The third great department is that of the Inspector-General of Fortifications, who is charged among other duties with the selection of sites for barracks and their construction and maintenance. The fourth great department is that of Director-General of Ordnance, who has to do with supplying the army with warlike stores, and administering the Army Ordnance Department, and the Army Ordnance Corps. The fifth great department is

that of the Director-General Army Medical Department, who "shall, under the supervision of the Commander-in-Chief, be charged with the administration of the medical establishments of the army and of the Royal Army Medical Corps, with dealing with sanitary questions relating to the army, with the preparation of medical and sanitary statistical returns, and with the supply of medical stores to the army. He shall advise the Secretary of State as to the general distribution of the Royal Army Medical Corps, as to the appointment of officers to or their removal from responsible positions therein, and on all other matters connected with his department. He shall make such inspections as may be necessary to ensure the efficiency of the services under his control, and shall submit proposals for the annual estimates for the medical services." The sixth great department is that of the Financial Secretary, charged with the duty of reviewing the expenditure and compiling estimates for submission to Parliament, the reviewing of any proposals for new expenditure or for redistribution of sums allotted, of seeing that accounts of all expenditure of cash or stores are punctually rendered, auditing all such expenditure, and with issuing warrants for payment of money and also with the financial control of the manufacturing departments of the army, and for all contracts for army service.

## THE LONDON WATER QUESTION.

Last Tuesday the London County Council decided once again to introduce a Bill to authorise the purchase of the Metropolitan Water Companies' undertakings in the next session of Parliament. A hostile amendment was defeated by 82 votes to 29. This amendment was to the effect that having regard to the promises of Mr. Long, the President of the Local Government Board, that the Government would probably deal with this question in the session of 1902, there was no occasion for the London County Council to take any steps in that direction. We are not surprised that the amendment received but scanty support, nor that the Council which enjoyed a fresh mandate from the London electors so recently as last March should feel bound to deal, in the only way open to them, with a great question like that of London water supply, a question which certainly played an important part at the general election in the spring. The promises of Mr. Long were, moreover, of rather a nebulous character, and the time at the disposal of the Government for home legislation is, judging from the present state of affairs and the experience of last session, not likely to be superabundant. The meagre manner in which the Government dealt with the housing question in the session of 1900 is fresh in memory; and a reform accorded considerable prominence in Her late Majesty's Speech from the Throne was whittled down to the insignificant proportions of an amendment of Part III of the Housing Act, 1890. Mr. Long, in reply to a deputation in the earlier part of this year, promised to take the opinion of his colleagues in the Cabinet, and hoped to see his way to introduce legislation on the lines of Lord Llandaff's Commission's report. But Mr. Long is not the first President of the Local Government Board whom the London water question has lured into expressions of hope. The influence of his immediate predecessor, Mr. Chaplin, with his colleagues in the Cabinet is now a part of the history of the country; and the President now in office may fail to carry with him his colleagues in the Cabinet, as did the previous occupant of the Presidential chair. That the central metropolitan authority, with the people of London behind it, should ask to put an end to the supply of water by profit-making companies, and become itself the water authority for London, is from the public health point of view an unassailable position. The precedents of Glasgow, Manchester, Birmingham, and of a dozen other large towns fortify the claim and justify the demand. To leave the question to the Government on the strength of the promises as yet forthcoming would be to divest the responsible body of a duty which is reasonably expected of it. To say that the introduction of a Water Purchase Bill by the County Council even alongside a Government measure is "wasting the ratepayers' money" is misleading in view of the rise in value of water stock at the very rumour of their purchase being contemplated on the terms previously advocated by the Government. We do not in these columns adopt party arguments or condescend to imputations of bad faith against those pecuniarily interested in these huge virtual monopolies, but we do urge action without delay, and we maintain without fear of contradiction that a communal necessity such as water, in a town of five million souls, is safest in the hands of a public representative body charged with the supervision of the health and comfort of the people concerned.

## THE STUDY OF MEDICAL HISTORY.

The Royal College of Physicians of London has accepted the gift of £2,000 given by Mrs. FitzPatrick to found a lectureship on the history of medicine. The benefaction is intended to perpetuate the memory of Dr. FitzPatrick, her husband, a distinguished Member of the College, who was born at Virginia in Cavan, Ireland, in the year 1832. The gift is of good omen for the study of medical history in this country, and brings us into line with recent advances on the Continent of Europe and in the United States of America. It was determined in Germany at the beginning of the year that more attention should in future be paid to legal medicine and the history of medicine, and that candidates should be questioned on these subjects at the "*Staatsexamen*," which is compulsory on every candidate before he receives a licence to practise. In like manner the French Government has shown a tendency to make the history of medicine an obligatory subject in every course of university instruction. Our contemporary, *Janus*, in commenting on these announcements, says that in the United States lecturers and professors of the history of medicine have already been appointed at several centres. But the best work, perhaps, is done by the Johns Hopkins Hospital Historical Club, where the subject of medical antiquities is carefully fostered, and whence emanate a number of interesting and valuable papers published in the pages of the *Johns Hopkins Hospital Bulletin*. The history of medicine has received but scant attention in these islands of late years, and the general attitude of the "practical" man in the profession is one of contempt tempered by indifference. To so low an ebb has the history of British medicine fallen that it appears to be omitted entirely from the great *History of Medicine* which is now being published by Fischer at Jena, whilst the United Kingdom is hardly sufficiently represented in the International Society for the Study of the History of Medicine and Medical Geography, which is now in course of formation. It is a great pity that this should be so, for ours is a goodly heritage alike on the medical, surgical, and obstetrical side. Harvey, Willis, Hunter, Lister, Young, Waller, Bowerman, Huxley, Stokes, Simpson, and Spencer Wells, are known throughout the world, and the lustre of their names does not grow dim with the lapse of years. But there is more than a sentimental value attaching to the study of the history of medicine. A writer in the *Electrical Review* has recently pointed out that a man who knows a great deal about electricity and nothing about anything else is not nearly so valuable and is much less likely to succeed than one who knows half as much about electricity, but has a good general education and the degree of culture that goes with it. "In the United States," the article concludes, "we need at present two kinds of electrical men—skilled and thoroughly trained artisans, and men of high scientific attainments combined with wide general culture. From the first class we may expect prac-

tical work of the utmost value, and from the second we may look for discovery and invention, research and calculation, that will form the basis for the labours of ensuing generations of artisans. For the half-educated electrical engineer there is practically no place at all." If this is true of electrical engineering, it is not less true of the profession of medicine, which still has vast fields waiting to be cultivated, and whose triumphs are out of all proportion to those of engineering, for they deal not with the comfort but with the very life of mankind. A knowledge of the history of medicine is an indispensable aid to these triumphs. It helped Harvey to his great discovery of the circulation of the blood. The want of it alone prevented John Hunter from being his equal, for Hunter often wasted his time in rediscovering what was already known. And every hour of such a life was precious, for, as he used to say of himself, "When I am dead you will not soon meet with another John Hunter."

## DIPHTHERIA IN EDINBURGH.

In his annual report for the year 1900 Sir Henry Littlejohn said: "The number of cases of diphtheria reported last year exceeds that of any year since 1879 by considerably more than 100, although, on the other hand, the case-mortality was remarkably low, 52 deaths having occurred, giving a death-rate per cent. of only 10.8. The disease was chiefly prevalent from June onwards to the end of the year. The sudden increase of cases in June was due to a definite cause, namely, infected milk, but from August onwards, notwithstanding every effort to trace the source of infection, nothing of a definite character, sufficient to account for the unusual number of cases, could be discovered." The total number of cases notified during 1900 was 483. In the preceding 20 years the next highest number reported was in 1894, when there were 362 cases, with a percentage of deaths to cases of 23 7. In 1890 there were 361 cases, with 23.5 as the percentage of deaths: in 1889, 354 cases with 27.1. The smallest number of cases notified was in 1885, when there were 149, but with the percentage of death to cases of 28.8, the highest death-rate in the twenty-one years. From the figures for the current year—1901—it would appear that the evil record of 1900 is likely to be surpassed, and that the fact must be faced that so far as Edinburgh is concerned diphtheria is to bulk much more largely in the zymotic group of diseases than heretofore Up to October 19th 453 cases had been reported to the authorities, only 30 short of the total number in 1900. It is reassuring to find that the percentage of deaths to cases still keeps low—11.25, being 1.25 higher than in the years 1899 and 1900. The lower death-rate of the last three years is no doubt due to the earlier and more certain bacteriological diagnosis of the cases, and also to the beneficial effect of antitoxin. All the cases admitted to the City Hospital are freely treated with antitoxin, that is to say, 3,000 and 4,000 units are most frequently exhibited. Of the 453 cases notified, 299 were removed to hospital, leaving 154 to be treated outside. Of the total 51 deaths, 23 occurred in the City Hospital, and 28 outside. In other words, the percentage of deaths to cases treated in the City Hospital was 7.69, while in the cases treated outside it was 18.1, a somewhat startling difference. The difference, too, must be regarded as greater when one remembers that cases are often moved to the City Hospital only when and because they have become serious. Apparently, therefore, the conditions afforded by a special hospital and by specially trained nurses increase the prospect of recovery. As regards the prevalence of diphtheria throughout the present year we find 179 cases with 25 deaths in the first quarter (thirteen weeks) of the year, 102 with 13 deaths in the second quarter, and 133 with 7 deaths in the third quarter. Sir Henry Littlejohn, in his report, said: "We were unable to account for the abnormal prevalence of the disease at this time," that is, in the months of August, September, October, November, and December, 1900. And he concludes that any special acting cause had disappeared, "and that the disease has returned again to its normal prevalence." Apparently diphtheria in Scotland, as elsewhere, is tending more and more to become an urban disease, and less and less to be a rural disease as formerly. The experience in Edinburgh confirms that of other towns, which is that it is now more amenable to treatment.

## THE ENLARGEMENT OF ST. BARTHOLOMEW'S HOSPITAL.

It has long been plain to every student of St. Bartholomew's Hospital that the charity had outgrown its premises, and that some means of expansion must be found if the hospital and its large medical school were to continue prosperous. The changes associated with the projected removal of the Bluecoat School into Sussex have been looked forward to as giving the necessary opportunity for enlargement, but when the time arrived well-wishers of the hospital heard with regret that the Treasurer and Almoners only proposed to buy an acre and a-half of the ground, a quantity insufficient for the pressing needs of to-day, and allowing no room for future enlargement. The staff of the hospital dissented most strenuously from so narrow a view of the debt owing to posterity, and urged strongly upon the governing body the necessity of inquiring into the possibility of obtaining the whole site. Sir Henry Knight, Sir Sidney Waterlow, and many governors of enlarged views and approved business capacity adopted the views of the medical staff, and by their endeavours a special Committee was appointed at the last quarterly Court of Governors. The Committee was instructed to make careful inquiry into the resources and financial position of the hospital, and to obtain such information as will enable them to report to the governors to consider and decide as to the purchase of the site of Christ's Hospital, or any part thereof, "with any suggestions and plans they may think it expedient to submit on the whole matter referred to them, and that they be authorised to require the services of all the officers of the hospital, and to confer with the medical staff and others to enable them to report to the governors fully and authoritatively." Such a reference to a strong committee is most welcome, and should be of the utmost value to the hospital. At present there are very few persons who know both the financial position of the hospital and the actual structural alterations which are needed. There are fewer still who can calculate the amount of space which can be put to the best use immediately, and in the best manner; whilst it requires men of trained business capacity to conduct so large a scheme to a speedy and safe issue. It may be found as a result of inquiry that the whole site is too costly to buy, or that the speculation is too risky for a charitable institution to embark upon, or there may be only so much risk as may be fairly met, and the hospital will then be secure from molestation and encroachment for the future. In either event the governors will feel that the matter has received the most careful consideration of those best qualified to judge, and their successors will have the satisfaction of knowing that everything possible was done for the welfare of the hospital at this crisis in its history.

## REPORT OF THE INSPECTOR UNDER THE INEBRIATES ACTS

The report of Dr. R. Welsh Branthwaite, the Inspector under the Inebriate Acts, has recently been issued by the Home Office. It comprises the twenty-first report on retreats and the second report on reformatories for criminal inebriates. In regard to retreats there has been marked progress during the year 1900. The number of

these institutions has increased; at the close of the year 20 retreats had been licensed in accordance with the provisions of the Acts, and during the current year 2 other retreats have been added to the list, giving a total of 22 institutions in full working order. At the end of 1899 there were 276 beds available, while at the end of 1900 this number had been increased to 357. Among the later additions to the list are some retreats which had previously been conducted as unlicensed houses. Another satisfactory development is that the management of institutions has been undertaken by philanthropic bodies, and associations no individual member of which receives any financial benefit therefrom. These, it is felt, are especially likely to secure the fullest public confidence. An encouraging feature of the newer phases of the system is the provision of institution treatment for persons of both sexes of very limited means, a condition apt to be associated with the state which makes treatment desirable. Advance is also recorded in the provision of such treatment for absolutely destitute persons. The first local authority which has moved in this matter is the Worcestershire County Council, which has contributed £100 towards the establishment of Congreaves Hall Retreat. At the present time, however, there are only 8 beds in the kingdom available for women having no means at all, and there is no accommodation whatever for males who are destitute. The value of occupation, both mental and physical, in the successful treatment of inebriety is insisted on in the report, and it is pointed out that an increasing number of retreats, especially those established for the reception of patients at low rates, are obtaining power for the enforcement of labour. At the same time, the importance of conducting such institutions with as little evidence as possible of hard-and-fast rule is emphasised. During the year 219 persons have been admitted as signed patients to retreats (or 16 more than in the previous year); and 203 as private patients (or 31 less than in the previous year). In regard to reformatories 5 containing 416 beds have been in occupation during the year, as compared with 4 containing 227 during the previous year. During the current year, moreover, up to August last, an additional reformatory has been certified, and about 100 more cases have been committed from the courts. During 1900, 144 cases were admitted, including 128 females: and at the end of the year there were 182 persons under detention and 30 on licence or otherwise absent. The general result in the matter of reformatories is progress in every particular. Increased experience, the removal of obstacles to progress, and the determination to make the best of provisions already at disposal are felt to be influences which are steadily increasing the usefulness, and must ultimately result in the successful development of the reformatory movement.

## THE SCHOOL BOARD FOR LONDON AND ITS MEDICAL OFFICER.

The recent resignation by Professor W. R. Smith of the post which he has held for more than eleven years as Medical Officer to the School Board for London, brings into prominence the necessity for a good and a clear understanding between those who appoint to such offices and those who hold them. In the British Medical Journal of March 15th, 1890, we find it recorded that: "At a meeting of the School Board for London on March 6th, Dr. W. R. Smith, F.R.S.Edin., Professor of Forensic Medicine, King's College, London, was, on the recommendation of the Committee, appointed Medical Officer of Health to the School Board for London, at a salary of £400 per annum. It was stated that there were 144 candidates for the post. The medical officer will be required to give his whole time to the Board, and to report on candidates for permanent offices, and generally to advise the Board on any medical matters on which he may be consulted." Yet it would appear from a statement which has been forwarded to us by the editor of the *Journal of State Medicine*, that during the first twelve months of the tenure of his office the Board virtually conceded that the phrase "whole time" merely implied that the Medical Officer of Health was debarred from the ordinary practice of his profession, and would not be allowed to hold any appointment which interfered with the proper performance of his duties to the Board. On this understanding, it is stated, Dr. Smith's appointment was confirmed at the end of twelve months, when his salary was increased from £400 to £600. So things went on until the end of 1899, when the General Purposes Committee offered to increase Dr. Smith's salary from £600 to £800, on the condition that he relinquished the appointment of Medical Officer of Health to Woolwich, which he had previously held with the consent of the Board. This condition Dr. Smith accepted, but he was surprised to find that the salary was to be raised to £800 only on his undertaking to relinquish all appointments held by him outside the School Board work, with the exception of his Professorship at King's College. Finally, in spite of the Medical Subcommittee having expressed its satisfaction with an assurance from the Medical Officer that he did not hold any appointment, nor do any work, for any person or public body which interfered with or encroached upon the time during which he was bound to be engaged upon the Board's duties, the Board confirmed the resolution of the General Purposes Committee, and Dr. Smith's resignation followed. It seems to us that Dr. Smith has been the victim of a series of misunderstandings which should be impossible in the appointment of an important officer by a public body like the School Board. The conditions advertised as attaching to a vacancy should be strictly adhered to, without mental reservation on either side; for any other course is obviously unfair to well-qualified candidates who might be forthcoming were it known that deterrently stringent conditions would in a few months be relaxed. On the other hand, it seems hard on the holder of an office, the conditions of which have been modified in practice, to be told, after nearly a dozen years tenure, that the conditions originally advertised must be reverted to, and in this respect we think there is reason for sympathy with Dr. Smith. Considering the magnitude of the operations of the London School Board and the multiplicity of matters that must call for the consideration of their medical officer, there can be little doubt that the undivided attention of a competent medical adviser is urgently called for in the interests of the elementary school population of London, and the services of such an officer can only be secured by the offer of reasonable remuneration; and in this connection it may be observed that the clerk of the Board receives £1,400 a year, the solicitor £2,250 (to include office expenses), and the architect £1,200. Further, in addition to a proper salary, the medical officer ought to be able to feel that confidence is reposed in his judgment and integrity by the Board which he serves.

## PROLONGED PREGNANCY.

An essay on prolonged pregnancy, of considerable value, written by Taussig, of St. Louis, Missouri, was published in the September number of the *American Journal of Obstetrics*. Issmer, who wrote on the duration of pregnancy in 1889, found that its average length in 912 strong women was 278.6 days: in 288 weak subjects, on the other hand, the duration was 276.8 days, or nearly two days shorter. The duration of gestation tends naturally to increase with each child until the ninth, then comes decrease. Every pregnancy up to the thirty-fifth year of the mother's life is four to five days longer than that immediately preceding it. Active occupation shortens the average duration of pregnancy, and it is important in these days to remember that

women explored through the vagina are confined on an average 5.2 days sooner than those who are left alone, a difference greater than that between the averages of strong and weak women. Above all, rest prolongs pregnancy more than any other agency. Taussig's own patient was a fat, indolent young housewife, aged 27. After having five children and one abortion her period ceased once more after December 7th, 1897. A male child was born on October 26th, 1898, weighing over 11 lbs. and measuring nearly 22 inches in length. The extraction of the shoulder proved difficult. The pregnancy lasted 323 days. There were other features of interest, and the patient became pregnant again, was delivered of a large female child 285 days after the last-mentioned period, and died suddenly one hour later. In his statistics of prolonged pregnancy Taussig rejects cases in which the child was not born living, or not recently dead, in which the child weighed under 8¾ lbs,, and those in which the pregnancy was not prolonged over 300 days, and in which the data were insufficient for various reasons. He reports 17 cases of true physiological prolonged pregnancy, where the duration exceeded 310 days and the child's weight attained or exceeded 4,500 grams (nearly 10 lbs.). Thus the duration varied between 311 days (Martin, Rigler, Rosenfeld) to 339 days (Weihl), and the average weight of the children was over 12 lbs.; 44 less extreme cases are made by Taussig into a second group, including 27 from Von Winckel's well-known series. The average duration of pregnancy in this group was 311 days, varying between 300 and 348 (Puppe). This case of Puppe's was the longest on record, but the child had not developed in proportion, weighing but 8½ lbs. and measuring 20 inches in length. The average weight of the child in the second group was 9½ lbs. Thus Taussig has supplied medical literature with 61 reliable cases of *partus serotinus* or prolonged pregnancy. Even the most conservative obstetrician, such as Kleinwächter, must acknowledge, says Taussig in conclusion, that this condition occurs in the human race just as it has long been proved to occur in animals. The subject is of some medico-legal importance.

## THE CZOLGOSZ TRIAL.

WHENEVER in a civilised and well-governed State some unnatural and horrible crime is committed, it is a common —too common—assumption that the act must be the outcome of a diseased mind. The confounding of erroneous opinion with the delusions of the insane, lies at the bottom of this misconception, which has at times brought forth hysterical appeals for the pardon, on the ground of insanity, of perfectly responsible criminals. The case of Czolgosz differs from that of the majority of regicides and assassins of those in high places in that no evidence of mental weakness or instability was adduced by the counsel for the defence. Of Polish extraction and obscure birth, only an insufficient history of the prisoner could be obtained, but his former temperate habits and industry, and the results of the physical and mental examination by the five eminent alienists who had him under observation previous to the trial, entirely precluded any doubts as to his sanity. Not one tittle of evidence was forthcoming at the trial of the prisoner's insanity, and a simple statement that the experts had found him sane, which was unchallenged by the defending counsel, formed the only reference to his mental condition. It is thus somewhat unsatisfactory to note that, according to an editorial in the *Philadelphia Medical Journal* of October 5th, a statement after the trial by the counsel for the assassin that they believed him to be insane was published by several newspapers. It is not stated that these several newspapers were responsible organs, and we prefer to believe that the eminent counsel would not be so unwise as to give expression after the trial to views which, not being based on medical testimony, could only amount to individual opinion, inadmissible as evidence.

## LONG SERVICE AND THE HEALTH OF BRITISH TROOPS IN INDIA.

IN commenting on the annual report of the Sanitary Commissioner with the Government of India, we pointed out the significance of the fact that, as a result of the war, the number of men arriving in India at an age peculiarly susceptible to enteric fever had fallen from 16,911 to 3,369, and that the incidence of the disease during the year under review had fallen from 2.57 per cent. to 1.79, in consequence, no doubt, of the rise in the average age of the men serving. These conditions have continued in force since that time, and it is calculated that there are nearly 25,000 men now in India whose time is up and whose places have not yet been taken by younger men. Owing, no doubt, to the difficulty of getting men in sufficient numbers, and for military reasons, an attempt is being made by means of bounties and other inducements to get men who have put in their colour service to re-engage for a further term. The wisdom of this step cannot be doubted; it is well known that as regards most tropical diseases, and markedly as regards enteric fever, age and acclimatisation are most important factors. The men who have got through six or seven years service in India are certainly very much less likely to contract maladies than boys fresh out from home, and, other things being equal, are of greater value from the military point of view. It is a matter of common observation in other armies that it is the new drafts that swell the disease returns. A recent return of the Austrian army shows that in the first year of service the incidence of tuberculosis is more than double what it is in the third year. Among first year men the figure was 1,074, in the second year 900, and in the third 507; while among men serving for longer periods, re-engaged men and the like, it was only 136. The same thing has been found to be the case in the French army, where in an average year no fewer than 2,000 men are found to be tuberculous at the end of the first few months service in the ranks. The question of a long service army for India is one which has to be looked at from many points of view, but one of the chief arguments in its favour is the relatively better health of the acclimatised soldier. The added inducement of leave home for a change to men who re-engage is a wise one, as there is no doubt the change will place a man in a much better position for facing a second turn of foreign service. It remains to be seen what proportion of men do re-engage on the terms offered. If the conclusions drawn from the statistics of the last few years are correct, it would seem that the greater the number the better will be the health of the army in India.

FORMAL confirmation of the conference of the honour of knighthood by the Duke of Cornwall and York upon James Graham, M.D., member of the Legislative Assembly of New South Wales and Mayor of the City of Sydney, was contained in the *London Gazette* for October 31st.

ON Tuesday next, at 3 P.M., Dr. Leigh Canney will give a lecture at the Royal United Service Institution, Whitehall, on Typhoid, the Destroyer of Armies, and its Abolition. The chair will be taken by Sir William Broadbent, Bart., and the lecture will be followed by a discussion, in which it is hoped that the subject will be also specially considered in its bearing on transport and the responsibility of officers generally.

A DISCUSSION on small-pox and vaccination will take place at the meeting of the Hunterian Society at the London Institution on Wednesday next at 8.30 P.M. Dr. Major Greenwood will read a paper on the present position of small-pox and vaccination, and Dr. MacCombie will speak on the differential diagnosis of small-pox, with remarks on prodromal rashes and vaccination. Dr. Bond will also take part in the discussion. Members of the profession are invited to attend.

# THE GENERAL MEDICAL COUNCIL ELECTION.

## THE APPROACHING ELECTION OF DIRECT REPRESENTATIVES.

### Retirement of Dr. Glover.

Fellow Practitioners of England and Wales,—You are, perhaps, aware, from announcements in the medical journals, that I have been forbidden, at what seems a most inopportune moment, by my medical advisers to take part in public meetings. They do not go so far as to advise me to abandon my candidature, but they counsel some diminution of work. I am in the enjoyment of my usual health, and my eye is almost itself again; still I am bound to respect advice given me by my truest friends, whose names would command the respect of the profession.

The relinquishment of practice would be distasteful to me, and altogether beyond the necessities of the case. The only other way in which I can relieve myself of work is by retiring from my candidature for the honourable office of representing you in the General Medical Council. I can do so now without putting the Council to the inconvenience and expense of a separate election.

These circumstances determine me to withdraw from the present contest. I cannot tell you with what reluctance I do so, especially at a moment when questions of great interest to the public and the profession are before the Council, in which I have, as I believe, taken a part representing the general judgment of my fellow practitioners. Nor can I say how grateful I feel to the profession for its kindness and confidence during the last fifteen years, and of the continuance of which I have ample testimony on the present occasion. I ask you to accept my best thanks.

The office of a direct representative on the General Medical Council, with a constituency of over 23,000, is not an easy one. Many questions present themselves at the Council Board in a very different light from that in which they appear when viewed from a purely professional standpoint, and the direct representative has to act accordingly. I ask you to believe that on all such questions I have tried to remember the interests of the profession as well as those of the public, and to harmonise the two.

I have endeavoured to advance medical education, to maintain the standards of professional conduct, and to keep the *Register* pure. That I have erred often goes without saying, but I am sure you will be more blind than critical towards my faults, and will give me credit for having tried to maintain the cause of direct representation on the General Medical Council, which, after all, even its critics must admit is the great Council of the profession.

With deepest thanks,
I am, Fellow Practitioners,
Your obedient servant,
James Grey Glover.

Highbury Place, N., Nov. 4th.

## LIVERPOOL.

### Address by Dr. Woodcock.

Dr. Woodcock addressed a meeting of members of the Liverpool Medical Club on October 29th, Dr. Robertson Dunn in the chair.

The Chairman, in his introductory remarks, said he did not think there had been any gentleman for a good many years better known in the profession in that part of the North of England than Dr. Woodcock, who had been a very ardent worker, and had done all that he could for the profession.

Dr. Woodcock said that what appeared to him to be the most serious matter for consideration was the apathy on the part of the medical profession. He did not see how it could be hoped to get an increase in the number of direct representatives so long as so few members of the profession were prepared to exercise the rights they had at present. He would not have been a candidate at this election but for the personal influence of Mr. Victor Horsley. Five years ago he (Dr. Woodcock) had been an unsuccessful candidate; he had come very near winning, but did not actually succeed. Mr. Horsley, however, had urged upon him the duty of accepting the position of a candidate on this occasion with such force that he felt it impossible to refuse. He hoped whoever might be elected to the General Medical Council that they would be elected by such a large number of votes that they would not at all events be subject to the sort of reproach that was levelled against them at the last election when so comparatively few voted.

What appeared to him to be the burning questions were not altogether questions in which the profession had hitherto taken a very deep interest.

*Preliminary Examinations.*

Upon the question of raising the standard of the entrance examinations and limiting the age of entrance so as not to be under 17 years, he said that there was at present a struggle between the Council and the Royal Colleges of Physicians and Surgeons as to the registration of medical students. He did not believe that the General Medical Council had any strong legal position in this matter, that by statute it had any very great control over preliminary education, but he thought it of the utmost importance that the Council should have that control. He thought with regard to preliminary education that there ought to be a one-portal system.

Dr. Woodcock then quoted the resolutions adopted by the Council of the British Medical Association at its last meeting, published in the British Medical Journal of November 2nd, p. 1372. If he were a member of the General Medical Council it would be his business to submit such a series of resolutions. It was absolutely necessary that they should have something like a uniform standard of examination, and that they should not have, as at present, all sorts of examinations carried on by different institutions applying very varying tests.

*The Constitution of the Council.*

The contest between the Royal Colleges and the General Medical Council was only illustrative of the fact that the principles on which the members of the General Medical Council was chosen was so vicious that it altogether defeated the objects and purpose which he thought the Council should serve. After referring to the history of the constitution of the General Medical Council, and deploring the smallness of the direct representation, Dr. Woodcock said that Mr. Horsley had done yeoman service for the profession; any man of less ability and determination would not have effected what he had done in regard to matters of the utmost importance to the profession. The proportion of direct representatives on the Council was an absurd one.

*The Financial Position of the Council.*

Dr. Woodcock said that the financial position of the General Medical Council was a matter which required very serious consideration, and something would have to be done to make the financial condition of the Council more satisfactory.

*Medical Aid Associations.*

Dr. Woodcock said that he did not believe that it was in the power of the Council to issue any general edict which should prohibit men from accepting positions in connection with the Medical Aid Societies, but he believed that the Council had this power, that if a local organisation could bring a concrete case before the Council, and demonstrate beyond the possibility of doubt that a medical man was connected with an institution which was exploiting the profession by advertising and touting, then the Council would have the power of dealing with him. At the present time the most satisfactory way of dealing with this matter was for local organisations to undertake the kind of inquiry indicated, and having obtained evidence to bring the case before the Council.

*The Proposed Conciliation Board.*

Dr. Woodcock said that while he would not object to the profession, through its representatives, going into a Conciliation Board with the representatives of the Friendly Societies, if the Friendly Society representatives would go on that Board in anything like a conciliatory spirit, he did object to send men as representing the medical profession to sit on a Board with men who said at the outset, "We will have no wage limit." He believed that from the point of view of the medical profession the whole thing hinged on the wage limit. His own view was that to enter upon the consideration of the

question of a Conciliation Board with these men, who refused absolutely to entertain the question of a wage limit, would be to give away the profession and to adopt a course which would not be likely to lead to any satisfactory conclusion.

*The Midwives Question.*

Dr. Woodcock alluded to the Draft Bill for the registration of "midwifery nurses," prepared by the Subcommittee of the Parliamentary Bills Committee of the British Medical Association. The Subcommittee thought it had laid down in that Bill a few principles which could not be gainsaid. The first principle was that these women should be called "nurses," and that they should be limited in their functions—that they should have nursing functions imposed upon them. A schedule was drawn up which very distinctly and decidedly indicated the actual conditions in which they (the "midwifery nurses") should send for medical aid. He did not suppose they had come to the ultimate condition of things yet in this question. He still thought it was absolutely necessary for the profession to be in some way and to some extent agreed upon this matter, and if that Bill, which had been drafted under the auspices of the British Medical Association, did not represent the views of the profession, and did not protect the interests of the profession to the extent considered desirable, well they must try again. If there were something better than that Bill which could be proposed, let the Bill be abandoned and let them have that "something better," whatever it was. There was some talk about the registration of all nurses; that was a matter which appeared to him to be fraught with no little danger. He was not entirely enamoured of the highly-trained nurse in general practice. Recently another scheme was brought forward; it had been affiliated by the Manchester Medical Guild, although it was said to be foundling. That scheme, which was simply a suggestion, was as follows:

That in view of the fact that a large share of the mortality and morbidity amongst the parturient women and the newly born of the poorer classes is undoubtedly due to their being attended by ignorant and untrained women, and their not having the services of fully-qualified medical practitioners, the Guild is of opinion that legislation is urgently required with the sole object of putting within the reach of the poorer classes the assistance both of a trained nurse and of a qualified medical practitioner and recommends the adoption of the following scheme as a basis for future legislation:

1. That all obstetric nurses be adequately trained in hospital, examined, and registered.

2. That the guardians or the local sanitary authority be the authority for the local administration of the scheme.

3. That the local authority shall engage one or more registered obstetric nurses, at such salary as may be practicable, whose services shall be placed, free of all charges to the patient, at the disposal of any woman living in the district, and whose circumstances shall justify it, to nurse her in her confinement and during the puerperal period.

4. That each local authority shall issue to each suitable applicant for the nurse's services a note requisitioning the services of a registered medical practitioner. This note must be taken or sent by the woman to such practitioner as she may select who is willing to undertake the work. The acceptance by him of a note shall constitute an engagement on his part to render to her such assistance in her confinement as the nature of the case may demand.

5. That the notes which the practitioner receives from the patients shall be redeemed by the local authority at such a rate as may be hereafter fixed.

6. That the question of the suitability of applicants be left to the local authority.

That scheme was simply a suggestion, and it was one thing to make a suggestion and another thing to draw up a Bill. He feared that the times were not propitious for an appeal to the Government to increase the rates levied by local authorities. If the Manchester Medical Guild liked to send that outline of their suggestions up to the representative meeting of the British Medical Association, he would be very glad indeed for it to be referred either to the Parliamentary Bills Committee or to any other committee which might be appointed. If it could be proved that a Bill drafted on the lines indicated in the scheme was likely to meet with any sort of sympathy or acceptance from the British Parliament he would be prepared to support that scheme. The time had come when the profession should no longer stand by and maintain an attitude which warranted the public in saying, "These fellows are simply standing in the way of legislation because it interferes with their pockets." The profession must take into consideration the fact that there was a disgraceful and unsatisfactory condition of things existing in this country which did not exist elsewhere. Something should be done to safeguard the health and welfare of the parturient poor. He hoped they would be able to come to some sort of general agreement with regard to some scheme that might hereafter be adopted, that the medical profession might have some influence in controlling legislation on the subject, and that they would not delay doing this until too late. He was not indissolubly wedded to the scheme in the draft Bill prepared for the British Medical Association, and if some other scheme could be introduced which was likely to meet with the assent of Parliament, he would be very glad to give it what support he could. Passing on to the

*General Medical Council and the Privy Council,*

Dr. Woodcock said that recent events had disclosed a most unsatisfactory condition of things. It had always been known that the General Medical Council was a subordinate body to the Privy Council, and had very little power beyond that of making recommendations, but it had always been supposed that it was regarded as a sort of medical adviser to the Privy Council. What had recently happened, however, in regard to the case at Birmingham showed that the Council was not quite regarded as it ought to be by the Privy Council, or, at all events, by Sir John Gorst and the Duke of Devonshire. Something would have to be done in that matter, and it could only be done by union on the part of the members of the profession, and through the influence of a great organisation like the British Medical Association.

He hoped this election would prove that the general body of the profession was interested in the questions to which he had alluded—that there would not be less than 50 per cent. of the members of the profession voting, but that there would be an indication that more interest was being taken in the medico-political affairs of the Council, for he believed that if the Council and Parliament saw that, it would not be to the remote future that medical reform would be relegated.

The CHAIRMAN said it was only by such men as Dr. Woodcock going on the Council that any reform could be got for the profession.

Dr. PERCY EDWARDS, honorary secretary of the Liverpool Medical Club, said that he had refrained from asking any of the other candidates the question he would like to put now. They had heard a good deal about the General Medical Council and the corporate bodies by which it was dominated. There was, however, another corporate body not far from there which dictated to some of them—he referred to the Liverpool Corporation. There were in Liverpool certain hospitals for infectious diseases maintained and belonging to the ratepayers, attached to which were certain medical men as salaried visiting medical officers. When the first of those appointments was made many years ago the Corporation of Liverpool excluded all but graduates or Members of the College of Physicians. Since that time the same antiquated advertisement had appeared in the local press when there were appointments to make. That club took the matter up, and sent a protest to the Corporation—a logical, moderate, and dignified remonstrance. The answer that they got was that the Corporation would do nothing. The question he would like to ask was: Would Dr. Woodcock, if by the good fortune he deserved, he were elected, and requested so to do by the Liverpool Medical Club, suggest to the General Medical Council that they admonish the Liverpool Corporation, and tell them that the same course of instruction in infectious diseases was compulsory alike to all students, that the conferring of a degree did not imply a special knowledge of infectious disease like the diploma of public health a knowledge of sanitary science, and to insist most firmly on the equality of all medical men when once their names were placed on the *Register*? He (Dr. Edwards) admitted at once the General Medical Council had no control whatever over the Corporation; but, nevertheless, it was the duty of the Council to do something to maintain their rights.

Dr. NATHAN RAW (Liverpool) was sorry to hear that the British Medical Association had agreed that the age of 17 should be fixed as a minimum for a youth to be allowed to be registered as a medical student. He did not think there

should be any restriction of that kind. Considering that they had now a five years' course it would be rather hard to compel a young man to wait until he was 17 years old before he should be admitted into the study of his profession. He was strongly in favour of one uniform universal entrance examination. He would like to know if Dr. Woodcock would advocate a State examination for the granting of a diploma after students had passed their five years' course. He would also like to know if Dr. Woodcock were in favour of abolishing the invidious position of some practitioners being called "Dr." and some "Mr."? He thought the General Medical Council should be able to say that when any man had passed an ordinary State examination which entitled him to practise that he should have the title of "Dr."

Dr Barr endorsed the view of Dr. Woodcock as to the age at which young men should be allowed to be registered as medical students. He said that in voting for Dr. Woodcock at this election they would be voting for a man who would properly represent the general practitioners of the country.

Dr. Barendt, Dr. E. T. Davies, Dr. Tisdall, and Dr. Walker joined in the debate.

Dr. Woodcock, in replying, said that whilst he was certainly not in favour of the registration of midwives, he was in favour of the registration of obstetric nurses. In respect of Dr. Percy Edwards's question, he was sorry to say that if he made such a proposal it would be pronounced *ultra vires*. The Council had no power or authority over a city corporation. The only way, as far as he could see, of dealing with this question would be through the medical officer of health. He was the man generally responsible for such restrictions as those which Dr. Edwards had mentioned, and he was the man who advised the corporation in regard to these matters. He did not think the General Medical Council would issue an edict as to the use of the title "Mr." or "Dr.," to which Dr. Raw had referred, but the medical corporations might do something. These were things which could only be remedied by an Act of Parliament, and an Act of Parliament must, in the first place, deal with the general constitution of the General Medical Council. The whole thing resolved itself into the question of a Medical Act. Without a Medical Act very few things could be done. The Council would not reform itself, and would not help them to get a new Medical Act. The only means by which that could be done was by pressure from without and in order to secure that the profession must be united and clamorous.

On the motion of Dr. Fleetwood, seconded by Dr. Raw, a vote of thanks was passed to Dr. Woodcock for his address, and the proceedings terminated.

## MANCHESTER.

A meeting of the medical profession was convened by the Medico-Ethical Society of Manchester and the Manchester Medical Guild on October 31st at the Palatine Hotel, Manchester, to hear addresses from Dr. Woodcock of Manchester and Mr. Victor Horsley.

### *Speech by Dr. Woodcock.*

Dr. Woodcock dealt with the midwives question. He said he was convinced of the absolute necessity of having some alternative plan to that proposed by the Midwives Registration Committee. At the request of the Parliamentary Bills Committee of the British Medical Association the subcomittee appointed to consider the question of the new Medical Act was requested to draft a Bill. The Committee drafted a Bill which they thought would be acceptable to the medical profession and at the same time safeguard the interests of the public. The Committee made it clear in their Bill that the function of the proposed midwifery nurses should be strictly limited, and that they should have imposed upon them nursing duties. An appendix was added which laid down in a very distinct manner the conditions under which these midwifery nurses should be compelled to call in medical aid. The Committee had been told that they had in their Bill violated the spirit and the letter of the Medical Act. If that were so it was unintentional, and if it were true the Committee would have to make another attempt, and produce a more satisfactory Bill. Though Dr. Woodcock supported the proposed Bill, he did not therefore infer that it was a perfect one. There was, of course, a possibility that some alternative scheme might be better, but up till then he had not seen such a scheme. Quoting from the *Medical Times* and *Hospital Gazette*, with which he connected the names of Dr. Bedford Fenwick and Mr. George Brown, the speaker read the following excerpt concerning a scheme dealing with the subject:

> It appears to us that the consequence would be that many medical men would gladly employ nurses so efficiently trained for attendance upon their poor and parish patients, knowing that such parturient women would therefore receive every care and attention, and that in the event of any abnormality showing itself medical assistance would be immediately summoned.

Therefore, Dr. Woodcock said, according to Dr. Bedford Fenwick and Mr. George Brown, any abnormality was to be diagnosed by the nurse. It was the nurse who was to determine when a doctor was to be called in, and it seemed to him (Dr. Woodcock) that that was nothing more than the reintroduction of the unqualified assistant in petticoats. It was a scheme which, in his opinion, was little likely to commend itself to the judgment of medical men. Dr Woodcock then proceeded to read to the meeting the scheme for the protection of parturient women and their offspring which had been published by the Manchester Medical Guild. He considered that it contained very humane, and on the whole very necessary suggestions in the interests of the poor. So far as the medical profession was concerned it was a perfectly ideal scheme. The scheme involved some increase of taxation, and whether the time was quite propitious for approaching the Chancellor of the Exchequer, he would leave it to them to decide, but he certainly did not wish them to understand that he considered that an insuperable difficulty. He would give the scheme his most earnest support if it were sent to the British Medical Association, which was the organisation through which they would have to work in the future to exert pressure on the public and on Parliament. He would like to see midwifery practice entirely under the control of medical practitioners, and when he said that he was prepared to abandon the Bill proposed by the Committee of the British Medical Association, he meant that he was not absolutely wedded to the provisions of that Bill, which was no more his than it was Mr. George Brown's or Mr. Horsley's; the latter was chairman of the Committee and the former was a member of it, and he did not remember that Mr. Brown ever protested against the report being issued in the terms in which it was published. He hoped he had been sufficiently explicit in explaining his position, though he did not wish to speak of his conduct which he had pursued in any apologetic manner. All he wanted to do was to explain the circumstances which led him step by step in the course he had followed.

### *Speech by Mr. Horsley.*

Mr. Victor Horsley pointed out there was before the medical profession a distinct series of points dealing with the midwifery legislation, which the General Medical Council had adopted. These points were published in the Minutes of the Council, and embodied the principle upon which he considered all safe legislation should be founded. The Bill referred to by Dr. Woodcock, which was drafted by the Subcommittee of the Parliamentary Bills Committee, was circulated to the Branches of the British Medical Association, and was confirmed by them. There was no question whatever that the British Medical Association was thereby pledged to legislation of some kind. Manchester was the place chosen for the meeting of the Association next year, and it ought to be the record meeting, because the representative meeting of the Association would be then inaugurated, and it would be the first occasion on which the various classes of medical practice of the whole country would be represented in a combined manner. He would not accept anything as the final voice of the profession on the midwifery question until it had found expression in a resolution passed at a really representative meeting such as he had described. When the Subcommittee sent out their Bill to the different Branches, they invited criticism, and though they received favourable opinions from a majority of the Branches, the criticisms that were furnished were, to say the least of it, not very strong. The reason of that was that there was no means of hearing the opinions of men representing the medical profession in the different parts of the country. They should all clearly understand that the legislation which had been drafted by the British Medical Association had been drafted for the

purpose of counteracting the midwifery legislation which had been introduced into the House of Commons, and to which all were opposed. At the next meeting of the British Medical Association, there was reason to believe that they would obtain the real views of the profession in this matter. For the purpose of reform in medical matters, therefore, the first and most fundamental point was that they must use every effort to come to the statutory meetings in London to discuss and pass the articles and by-laws for carrying out the scheme of reform of the British Medical Association adopted at Cheltenham.

Mr. Horsley said that his experience of the General Medical Council proved to him that they might demand more direct representatives, and they might get them; but that of itself would not reform the General Medical Council. Under the Act they were only entitled to one more direct representative, and what was one more vote—what was 6 votes in place of 5—when they had 25 against them? The only way of getting at the root of the evil was to have an absolutely new Medical Act. He did not believe in the idea that it was folly to expect any Government to favour a new Medical Act if the General Medical Council was opposed to it, because the Government at the present time regarded the General Medical Council with absolute contempt and indifference, and he had pointed out in his reports to his constituents that the Privy Council had betrayed the General Medical Council on the midwifery question and in the matter of the so-called reciprocity with Italy. It would be ridiculous, therefore, to assume that the Government would resist a Medical Act to reform the General Medical Council if that Council opposed the Bill. The Government would support any Bill if it thought that the medical profession as a body was going to move against it, and that was what they ought to seek to persuade the Government to think would take place if it failed to help them in passing a new Medical Act. It would not be necessary, in his opinion, to use any threats at all, nor to work the British Medical Association on those lines, because they could secure what they wanted as a matter of bargain. He pointed out that it was possible to frame a new Medical Act so as to provide a good bargain for them, and to arrange that the General Medical Council shall be really representative of the whole medical profession. It was essential that it should be recognised that they could not get along without the General Medical Council; properly organised and directed, it was a very useful body; but it was not worked in a proper manner, and was in the hands of the corporations, who were now nothing but mere coteries of a few leading men in the profession, and certainly did not express the sense of the profession. The corporations thought only of their own interests, and it was necessary to secure a new Medical Act to bring about any reform. There was a chance of ameliorating their position in the General Medical Council to a slight but certain degree, and that was by the practitioners in the North of England, where practice was different to that in the South, sending a representative to the Council who would express the wishes of perhaps the strongest and most powerful branch of the profession. They would thereby gain power, because they would then find that instead of the remarks of a direct representative being received with contempt and derision, they would be received with respect. It was very easy for them to vote for him (Mr. Horsley) and to send him to the General Medical Council, but if when he rose to speak on some question on which they were all agreed he was followed by one of his colleagues who was absolutely browbeaten by the President, what did they suppose was the real effect on the question under discussion? It simply resulted in the prestige of direct representation being hopelessly damaged in the minds of many members of the Council, who otherwise would have given fair consideration to the subject. He explained that this resulted to a large extent from all the three direct representatives for England and Wales living in London. If they returned Dr. Woodcock as representing the North they would have advanced one step, and a very important step, towards the furtherance of the interests of the profession in the General Medical Council.

After the address had been delivered Dr. WOODCOCK and Mr. HORSLEY answered questions put to them by the audience, at the termination of which Dr. MCFIE, in moving a vote of thanks, said that Dr. Woodcock's explanation was so clear and explicit that no one would go away from the meeting without the conviction that he was the man to support.

## WIGAN.

MR. VICTOR HORSLEY, speaking at the annual dinner held by the Wigan and District Medical Guild at Wigan on October 31st, discussed the relations of the General Medical Council towards the public as well as towards the profession. He said that the General Medical Council was a body constructed not only to protect the interests of the public, but also to watch over the interests and regulate the education of medical men. The Council was instituted by the State, so that the public might recognise who was a properly-qualified medical practitioner and who was not. It was quite true that the State also undertook to protect the practice of registered medical men, but he regretted to say that the State had not carried out its share in the bargain. The Council had, however, done an inestimable service to the public generally by purifying the medical profession. Four or five years ago he had shown that the number of men entering the profession had begun to steadily diminish, and they could not say that overstocking of the profession was the cause of the trouble with the Medical Aid Associations and Friendly Societies. That was partly a socio-political question and partly a financial question. The Friendly Societies wanted to buy their medical attendance in the cheapest market, and could not recognise that they were not buying what they thought they were purchasing or that they were not getting a fair return for what they considered a proper expenditure. In actual fact they did not secure medical attendance in the proper sense of the word. The General Medical Council itself failed to understand the question in the same way as the general public were unable to appreciate the conditions. When he entered the Council four years ago, it was quite evident that the members did not understand the conditions under which a medical man who joined a Medical Aid Society carried on his work. But at the present time they were delighted to see the Council adopt the attitude they did in the case of Dr. Irvine, and pass a resolution dealing with Medical Aid Societies. He did not think that the public understood the bearing of what was called unprofessional conduct. They did not understand that medical etiquette was a system calculated to preserve that due respect for the responsibility of life which every medical practitioner took upon himself when he became a qualified medical man. They must have that system of etiquette in order to place responsibility on some one person and to keep it there. He wanted to emphasise the fact that from the point of view of the public as well as from the point of view of the medical profession the interests of both were identical It was to the interest of medical men to see that the members of their profession did their work honourably, and it was in the interests of the public to support them in endeavouring to carry that out. As soon as the public recognised the motives of the profession it was perfectly certain that the public, knowing that medical men were working for the safeguarding of the health of the community, would support them in exactly the same as it gradually had come to do in regard to sanitary matters. The public gradually learnt that the medical profession in endeavouring to gain sanitary reform was acting honourably in the interests of the country and he believed that it would be the same in regard to the work of the Friendly Societies and the questions connected with them.

Dr. WOODCOCK was also announced to be one of the speakers, but though he was called on to deliver his remarks as soon as possible, the exigencies of the railway service between Wigan and Manchester prevented him from doing justice to the subjects he was obliged to discuss in a few words.

## LETTERS.

MR. G. BROWN (Gibson Square, N.) writes: In your abstract of my speech at Newcastle-on-Tyne on October 26th (BRITISH MEDICAL JOURNAL, November 2nd, p. 1356) you report me as having stated that I am opposed to Mr. Jackson's views in regard to dividing England and Wales into electoral districts, with a member for each. In case of a new Medical Act, I should certainly support the proposal for dividing Eng-

and and Wales into districts. My remarks were intended to refer to Mr. Horsley's suggestion made at the Rotherham meeting, that the electors should vote for Mr. Jackson and Dr. Woodcock in preference to other candidates, because (among other reasons) they happen to reside in widely-separated parts of the country. Under the present system Mr. Horsley's suggestion has no force whatever. The only sound advice that can be given is to impress on each elector the imperative duty of voting for candidates whose views as regards medical discipline and medical reform are most in accord with his own, quite irrespective of where they happen to reside.

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SIR,—The Rotherham and District Medical Guild must feel gratified at your generosity in according to it such an imposing notice of its banquet. The speeches of the guests were interesting. Mr. Horsley is quite right in his belief that we must look to the British Medical Association to bring about reform of the General Council of Medical Education and Registration, and indeed most of the reforms so urgently needed in the profession of medicine. This being his view, it is singular that he should suggest that the best way to bring about improvement would be to elect Dr. Woodcock as a direct representative on the General Medical Council. This gentleman has been for years on the Parliamentary Bills Committee and also on the Council of the Association; he was elected by the Lancashire and Cheshire Branch during a wave of reform entirely because of his avowed opposition to the registration of midwives. Now he has kicked down the ladder he climbed up to his present exalted position, and declares himself a registrationist. But excuses himself and proceeds to "explain" that "an inferior order of medical practitioners is not to be created—it exists." I deny that there is any similarity at all between the work of the existing midwife and the "practice" of the proposed legally—not medically—qualified obstetrician. These agitators are determined to have a class of women who will be "practitioners" in midwifery, and will claim by law all the privileges of duly-qualified medical men and women, and will demand the help of any practitioner in consultation.

Dr. Woodcock's mysterious friend, the Cabinet Minister, seems to have had great influence over his attitude! We all of us know that some legal men are in favour of these women, and we know also that these same lawyers are antivaccinators; a few persons also high up in the social scale favour this ill-timed legislation; but we believe them to be wrong, and we expect every man accepting a responsible office to help to convince these people of the grave danger which would attach to such proposals were they to become laws, especially to the poorer women of this country.

It is singular that Mr. Victor Horsley, with his keen, legal mind, did not discover until just before the guests assembled that he could not become a candidate. His position was announced in one journal some time past. The accident was a fortunate one for Dr. Woodcock; had it not happened he might have been deprived of the valuable suggestions Mr. Horsley offered to the electors.

But Mr. Horsley seems more concerned about securing Dr. Woodcock as a colleague than about his own misfortune, for he gave him another valuable testimonial at the Liverpool meeting, and in a letter to the convener of Messrs. Brown and Jackson's meeting in Manchester again expressed a very pronounced opinion in his favour. The electors here, at any rate, will decline, I think, to accept Mr. Horsley's *ipse dixit*: and very properly so.

The issue, as before, will be on the vexed midwives question, and to be consistent the electors will be forced to vote for Dr. Glover and Dr. Woodcock, the pronounced registrationists, or Mr. George Brown and Mr. Jackson, both of whom emphatically decline to disgrace the honourable name of medicine by countenancing as practitioners the aspirants to a legal status in our ranks without qualification.

We quite agree that district representation is the best, but the first condition is a suitable candidate. We want keen reformers, no matter where they reside—men like Mr. Horsley, himself above the petty flatteries of humanity: fearless of opposition, and with courage to lead minorities.—I am, etc.,

Old Trafford, Oct. 29th. JAS. BRASSEY BRIERLEY.

SIR,—I have just received a very remarkable circular from the Incorporated Medical Practitioners Association. I may say that I have a most profound respect for any association which is likely to promote the best interests of the medical profession, but I do not believe in the promiscuous mixing up of a bad debt collecting office with the important affairs connected with the election of direct representatives on the General Medical Council. We are all most anxious to promote anything which will in any way tend to band together the medical profession into one harmonious and powerful body; but it is difficult to see the connection of such good aspirations with the insurance of one's life and house against accidents, fire, and burglary!

The "man in the street" will scarcely think that the chances of the two candidates for the General Medical Council will be much enhanced by their intimate connection with the Medical Practitioners Association.

I will, in conclusion, express a hope that some more candidates will come forward for this important election. The great metropolis is surely not lacking in men of Mr. Victor Horsley's type.—I am, etc.,

Cardiff, Nov. 3rd. T. GARRETT HORDER.

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## SCOTLAND.

A COMMITTEE has been formed to promote the candidature of Dr. Norman Walker, of Edinburgh, for election as the direct representative for Scotland on the General Medical Council. Dr. George Giles is Chairman and Dr. R. J. A. Berry, 4, Howard Place, and Dr. F. D. Boyd, C.M.G., 6, Atholl Place, Edinburgh, are Secretaries.

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## SMALL-POX IN LONDON.

### NUMBER OF CASES AND HOSPITAL PROVISION.

SMALL-POX continues to make progress in London, and in one week the number of cases notified has exceeded 100. The disease has, we understand, now made its appearance in the vagrant class, and hence the risks of wider diffusion are considerable. We hear of a woman infected with small-pox wandering about the streets and giving opportunities for the infection of the poor who inhabit the common lodginghouses of Holborn and St. Marylebone. The Metropolitan Asylums Board last Saturday had 274 cases of small-pox under treatment, 205 cases having been admitted in a fortnight. At midnight on Tuesday the number under treatment had risen to 303 (91 on the hospital ships, 37 at the South Wharf Shelters, and 175 at Gore Farm Hospital). At the Joyce Green Hospital accommodation is being provided for 436 patients, and further accommodation for 504 patients could be made on the site, but only the foundations and the drainage of the ten blocks in which the latter number could be housed have been constructed. The managers thought that the whole of the Joyce Green Hospital should be completed, and gave instructions to their Works Committee to advise the Board as to the steps which should be taken for the purpose. London would then have 941 beds at Joyce Green, with the Gore Farm Upper Hospital 1,940 beds, or with the Lower Hospital with 2,140 beds—a number which, it was pointed out, was 20 per cent. less than the Royal Commission of 1882 thought to be necessary for a population 600,000 less than at the present time. This, of course, does not include the provision at the hospital ships, which the managers would be glad to abandon.

### VACCINE LYMPH.

Among the pressing wants of the moment appears to be an adequate supply of reliable lymph. The lymph supplied by the National Vaccine Establishment is for the use of public vaccinators. The whole community has a right to the services of these officials, but most well-to-do people at least desire to be vaccinated by their own medical advisers, and private practitioners have to purchase the lymph they can obtain from trading firms. Our columns this week and for some weeks past have contained letters complaining of the unreliability of much of the lymph which is now being sold; and Mrs. Garrett Anderson properly points out the damage which may be done to vaccination by its use, while Dr. Edwards and Dr. Verdon-Roe sound a like note.

If persons who have recently been vaccinated with inert lymph and who believe they have been protected against small pox are attacked with this disease, vaccination will be discredited. Mrs. Garrett Anderson suggests a method by which practitioners should be provided with the means of distinguishing between those who sell reliable and those who sell unreliable lymph. An alternative would be that the supplies of the Animal Vaccine Establishment should be made adequate for all wants, and, although it is not easy for Government departments to expand rapidly, this would be the surest way of securing that the lymph used was of proper quality. That very unsatisfactory results are now being obtained recent correspondence makes evident. In cases of revaccination, when the operation properly performed leads only to local irritation, there must often be doubt whether this is due to immunity of the patient or to fault in the lymph. When the operation is repeated and vesicles result, the matter is beyond doubt, and this is the story of which our correspondents tell. The subject is sufficiently serious to demand the attention of the Local Government Board.

### Statistics.

It is not unnatural that there should be demands for information concerning the condition as to vaccination of patients admitted into the hospital ships. Mr. Sydney Buxton asks precise questions on the subject, and we are informed that at a meeting of the Executive Committee of the Jenner Society held at Gloucester on November 1st, 1901, it was resolved unanimously:

That it is desirable in the interests of the public health, as well as for the fuller appreciation of the truth concerning vaccination, that in every outbreak of small-pox the authority responsible for the isolation of infected persons should, at as early a date as possible, and from time to time during the outbreak, issue, for the information and assurance of the public, returns of all cases of small-pox under their observation, in a form showing the vaccinal condition of all persons attacked who are alleged to have been vaccinated in regard to (1) their ages; (2) the time when vaccination was done; (3) the evidence, so far as may be discoverable from scars or other sources, of the character of their vaccination; (4) the type of the attack; and (5) its result (so soon as this can be done).

We hope that, as soon as it may be practicable to do so, all the facts may be fully laid before the public. It is, of course, necessary that the figures which are used for the purpose of conclusions should be sufficiently large for the purpose. The number of deaths in London has as yet not been great. In the nine weeks ending November 2nd there have been 23 deaths among the vaccinated, 22 among the unvaccinated, and 8 concerning which there was no statement as to vaccination. The smaller unvaccinated population has therefore contributed in much greater proportion than the larger vaccinated population to the deaths which have been registered in this period. Of children under 5 years of age, 2 deaths have been registered among the vaccinated, and 7 among the unvaccinated.

We shall learn with interest the particulars of the deaths of the 2 vaccinated children, which we trust will be forthcoming when the information which Mr. Sydney Buxton seeks is supplied. The Metropolitan Asylums Board had at their meeting on November 2nd to deal with the applications for information from a gentleman who, the Clerk to the Board was informed, was the member of an antivaccination society. The applicant desired to visit the hospital ships to examine the register, and was properly told he could only do so on satisfying the medical officer in charge that he was adequately protected against small-pox. We may admire this gentleman for his willingness to act up to his convictions, but he obviously could not be allowed to take a step which would imperil his own safety, and perhaps that of others who might later be associated with him. It was decided to inform him that the Board would at the earliest possible moment issue tabulated statistics as to vaccination in relation to the present outbreak.

### Precautions in the City.

Dr. Collingridge, M.O.H. for the City of London, in his report for the four weeks ending October 12th, states that in view of the occurrence of small-pox in every part of the metropolis, he had visited the whole of the ward schools, parochial schools, and infant schools in the City, and inspected the children. The attention of the governing bodies was called to the case of any children found to be unprotected by vaccination, and they were asked to endeavour to obtain the consent of the parents to vaccination, a copy of the roll at the same time being sent to the vaccination officer. In only one instance did any difficulty occur, and that in the case of a private school, the proprietor of which was a pronounced antivaccinationist. In all, 1,809 children were examined, of whom 302, or 16.6 per cent., were found to be unprotected.

# THE PLAGUE.

### Glasgow.

Almost simultaneously with its outbreak in Liverpool, plague has again made its appearance in Glasgow. It was officially announced on October 31st that 4 cases of bubonic plague had occurred amongst the servants in the Central Station Hotel. The first illness occurred on Saturday, October 19th; the second on the following day; and a third on Monday, October 21st. The cases were reported to the Sanitary Department on October 23rd, when the patients were conveyed to Belvidere Fever Hospital. The clinical symptoms suggested plague, and a bacteriological investigation was at once undertaken and fully confirmed the suspicions of the medical officer, Dr. Chalmers. A fourth case was removed to Belvidere on October 31st, also from the Central Hotel, and a fifth case occurred on November 1st, this patient being a barmaid in the service of the Caledonian Railway at Airdrie Station, who returned to the city every evening and slept in the Central Hotel. Unfortunately one of the patients has died. All the patients were employed or resided in the basement of the hotel, and it is regarded as probable that rats have got into the building, and that the illness has been so contracted. In this connection it may be pointed out that operations already going on in connection with the extension of the Central Station of the Caledonian Railway Company have resulted in the demolition of a number of old tenements, and the inference is that the dislodged rats have found their way into other buildings in the neighbourhood, including the Central Hotel. Dr. Chalmers is so impressed with the importance of the part which rats may play in the spread of the disease that he has issued a memorandum urging the citizens to use all possible efforts to exclude rats from their dwellings and from their places of business. He also insists on the importance of supervising the railway and shipping traffic, with a view to the destruction of rats in connection with that traffic.

This unfortunate outbreak of plague has not produced any alarm in the city, the greatest confidence being felt in the vigilance of the sanitary and health department, and in their ability to grapple with the situation. Of course the Central Hotel was at once closed; the visitors left as soon as possible, while the employees, to the number of about 200, have remained in the hotel under medical supervision. Twelve of their number, however, who were more immediately connected with the work in the basement, and thus with the patients, have been removed for special supervision to one of the Corporation reception houses. It is hoped that no further cases will occur, and that the outbreak will be limited, as at present, to the one focus. The outlook on this occasion is certainly much better than it was at the time of the outbreak last summer, when the disease occurred in a very congested and insanitary part of the city, and had a more serious hold before it was recognised. Unfortunately, however, it will be sure to lead to a good deal of disturbance to certain kinds of trade, and this is already being felt in regard to the shipping. Such an early recurrence of plague at such an important shipping centre as Glasgow will serve to emphasise the absolute necessity for the setting up of a port sanitary authority for the Clyde, which was recently applied for, and which was frequently commented on in the Journal last summer.

Our Glasgow correspondent, telegraphing on November 7th, states that no fresh cases have occurred, and the patients are reported to be progressing favourably. Rats caught at the hotel have been found on bacteriological examination to be infected with plague.

### Liverpool.

No fresh cases of plague have been recognised in Liverpool since October 25th, and it is believed that all danger of an extension of the disease is over. The three cases which have been under treatment in hospital are convalescent. It is not possible to state with certainty how the disease was introduced into Liverpool, but it has been suggested with some plausibility that the original source of infection was a body in the mortuary at the Prince's Dock, and that the first victim was a policeman who was employed in the mortuary.

### India

A general statement has appeared in the Indian papers to the effect that plague has increased during the week ending October 12th.

In Bombay, during the week ending October 12th, the total number of fresh cases of plague amounted to 163, and the number of deaths from the disease during the same period was 189.

In Poona plague is slowly increasing in virulence. Since the recrudescence in August up to October 12th there have been 112 cases and 87 deaths from the disease. The sanitary authorities are advising inoculation, and have opened a health camp.

Plague is reported to be prevalent in Sangli and Miraj in the Southern Mahratta country. A large number of people have left Miraj owing to the increasing death-rate.

In Karachi, during the week ending October 12th, 23 fresh cases of plague occurred, and 11 deaths from the disease.

The chief increase of plague reported is from Belgaum and Dharwar. There is also a slight increase in the plague returns from the Punjab.

### Cape of Good Hope.

For the week ending October 26th 6 cases of plague were reported in the Cape; of these, 2 cases (Europeans) occurred in the Cape Peninsula and 4 cases at Port Elizabeth (1 Malay, 3 natives). The total deaths from plague amounted to 2, both Europeans. Naval and military cases of plague numbered 2, one a private in the 3rd Lancashire Regiment at Green Point Camp, the other a private in the 3rd Battalion Buffs at Simonstown.

### Mauritius.

In Mauritius, in the week ending October 24th, 71 fresh cases of plague and 37 deaths from the disease occurred; in the week ending October 31st there were 77 cases and 47 deaths.

# ASSOCIATION INTELLIGENCE.

### Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

## LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

## BRANCH MEETINGS TO BE HELD.

Southern Branch: South-East Hants District.—The autumn half-yearly meeting of this District will be held at the Portsmouth Medical Library, 5, Pembroke Road, Portsmouth, on Tuesday, November 19th, at 3.30 P.M. Notice of intended communications should be sent at once to the Honorary Secretary, J. G. Blackman, Poplar House, Kingston Crescent, Portsmouth.

Metropolitan Counties Branch: North London District.—A meeting of this District will be held in the Board Room of the London Temperance Hospital, Hampstead Road, N.W., on Wednesday, November 13th, at 4.30 P.M., Dr. Hooper May, Vice-President, in the chair. Mr. H. W. Carson will read a paper on the Diagnosis and Treatment of Mastoid Disease. The following members of the staff will show some interesting cases in the hospital: Dr. Collins, Dr. Soltau Fenwick, Dr. Addinsell, Dr. Porter Parkinson. Dr. Stowers (North-West London Hospital) will exhibit cases of diseases of the skin.—J. Dysart McCaw, M.D., Coolard Lodge, East Finchley, N., Honorary Secretary.

South-Eastern Branch: West Kent District.—The next meeting of this District will be held at the Kent County Ophthalmic Hospital, Maidstone, on Friday, November 15th, at 3 P.M. Dr. Pye Oliver will preside. A paper (postponed from the previous meeting) will be read on Ophthalmia Neonatorum by Mr. E. H. Cartwright, Surgeon to the Kent County Ophthalmic Hospital, and Mr. Charles Killick will also exhibit some cases of interest. Mr. Charles Stonham, C.M.G., F.R.C.S., Senior Surgeon to Westminster Hospital, and late Surgeon-in-Charge of the Imperial Yeomanry Field Hospital in South Africa, will give an address on Surgical Work with a Field Hospital in South Africa.—Ludford Cooper, 19, Victoria Street, Rochester, Honorary Secretary.

South-Eastern Branch: East Sussex District.—The next meeting of this District will be held at the Grand Hotel, Eastbourne, on November 20th, at 4 P.M., Dr. A. Harper in the chair. Dinner at 6 P.M.; charge, 6s. without wine. Notice of intended communications should be sent to J. W. Batterham, M.B., Honorary District Secretary, 3, Grand Parade, St. Leonards.

## BATH AND BRISTOL BRANCH.

A meeting of this Branch was held at the medical library, University College, Bristol, on October 30th, Dr. G. C. Tayler, President, in the chair, when 51 members and 1 visitor were present.

*The late Dr. Aust Lawrence.*—In moving a vote of condolence with the widow and family of the late Dr. A. E. Aust Lawrence, President-Elect, the President feelingly expressed the great loss which the Branch had sustained by Dr. Lawrence's death.

*President-Elect.*—Dr. Henry Waldo was unanimously elected President-Elect.

*Communications.*—Dr. H. S. Ballance showed a perfect specimen of tænia medio-canellata.—Dr. Watson Williams read a paper on the diagnosis of German measles, scarlet fever, and the question of a "fourth disease." He said the question turned on whether there were two types of rubella, namely, R. morbillosa and R. scarlatinosa, or whether they were distinct diseases. There were all grades between these diseases which shaded off into scarlet fever and rubella. In a recent epidemic of rubella, out of 32 cases in a school two were of the scarlatiniform type, and although allowed to mix with the other boys there was no instance of secondary infection. He was doubtful about the existence of a "fourth disease." In some cases of rubella the rash consisted of discrete papules surrounded by a bright red ring. Dr. Carey Coombs emphasised the difficulty of diagnosis, and Dr. A. J. Harrison said that the rash alone was not to be depended on in diagnosis. He did not quite believe in a "fourth disease," and mentioned the similarity to scarlet fever of some cases of erythema and of drug eruptions. Dr. Shingleton Smith did not think sufficient evidence had been adduced for a "fourth disease." Dr. Cave pointed out that mere fact of desquamation occurring in large flakes did not necessarily mean scarlet fever, though very strong presumptive evidence of it. Dr. Elliott agreed with the last speaker, and laid great stress in diagnosis on length of incubation period. Dr. Markham Skerritt said that arguments based on absence of spreading in scarlet fever were not of great value, because the disease was not very infectious. Dr. Flemming asked for more information as to the positive symptoms in the so called "fourth disease" as the signs given seemed chiefly negative. Mr. Ewens, Drs. Waldo and Stocker, and Mr. Carter also took part in the discussion. Dr. D. S. Davies said that so far as his experience went it was not necessary to formulate a fourth disease. Great variation in symptoms were to be expected in outbreaks of scarlet fever due to milk, especially in mildness of symptoms. He could not call to mind any series of cases with symptoms of "fourth disease" which bred true. Dr. Watson Williams replied.—Dr. E. W. Hey Groves showed two new apparatus for intrauterine medication, (1) gelatine-coated laminaria tents, the gelatine containing the medicament it was desired to use; the tents were sterile and inimical to micro-organisms; (2) a very ingenious intrauterine three-bladed volsella forceps: two blades hooked on to uterus, and the third was hollow, and could be attached to any apparatus for washing out the uterine cavity. Dr. W. C. Swayne thought intrauterine medication required to be used with great caution, and he had been led to give up such treatment except with strict antiseptic precautions.—Mr. Morton read notes of two successful cases of operation for diffuse peritonitis from perforated appendix. He called those cases diffuse in which the peritonitis was not general, but beyond the limits of ordinary appendicitis. The difficulty of diagnosis made him think

that an operation should be done in all severe cases of appendicitis. In his second case the pelvis was full of pus, and the operation was done fourteen hours after the onset of severe symptoms. Mr. P. BUSH and Mr. CARWARDINE discussed the cases.—Dr. JAMES SWAIN showed specimens which he had removed (1) extensive intestinal resection for malignant disease; (2) cup and ball myofibroma removed from a patient, aged 25, by panhystero-myomectomy; (3) large myofibroma removed by retroperitoneal hystero-myomectomy (supravaginal); (4) vesical calculus, removed from a patient aged 36 years. He also showed a pair of O'Hara's forceps, which he had found useful in uniting portions of gut.—Dr. J. MICHELL CLARKE showed a specimen of intracranial aneurysms from a man who died suddenly from rupture of aneurysm. There were two aneurysms present, the largest the size of a large pea, at the junction of the middle cerebral artery with the posterior communicating on the right side, and a smaller in the same situation on the left side. He also showed a specimen of gumma of the frontal lobe. The patient died from pneumonia, and the liver contained numerous scars from old syphilitic lesions.

## SOUTH OF IRELAND BRANCH.

THE annual meeting of this Branch was held at Cork on November 2nd; Dr. P. J. CREMIN, President, in the chair.

*Confirmation of Minutes.*—The minutes of the last annual meeting were read and signed. The minutes of the general meetings since held were read and signed.

*Letter from the King.*—A letter conveying the thanks of His Majesty for address of sympathy on the occasion of the lamented death of Her late Majesty Queen Victoria, and congratulations on His Majesty's accession to the Throne was read.

*An Ethical Section at the Annual Meeting.*—A memorial from the Manchester Medical Guild was read, asking for signatures to the request that the British Medical Association Council would favourably consider the advisability of holding an Ethical Section at the forthcoming annual meeting at Manchester. It was decided to obtain as many signatures as possible of members of the Branch.

*Letter from the Shropshire and Mid-Wales Branch.*—A letter was read from the Shropshire and Mid-Wales Branch.

*Election of Officers.*—The following were elected officers for 1901-1902:—*President:* P. J. Macnamara, M.D., F.R.C.S.I. Kilmallock. *President-elect:* Professor W. E. Ashley Cummins, M.D., Cork. *Vice-President:* P. J. Cremin, M.D., Cork. *Council:* T. G. Atkins, M.D., Cork; Professor Corby, M.D., Cork; Professor W. E. Ashley Cummins, Cork; J. J. Curran, M.D., Killagh; J. Giusani, M.D., Cork; T. B. Moriarty, M.D., Cork; A. W. Sandford, M.D., Cork; H. R. Townsend, M.D., Cork; O. T. Woods, M.D., Cork; W. Henry Hobart, M.B., Cork; D. J. O'Connor, M.B., Cork. *Representative on Council of British Medical Association and Representative on Parliamentary Bills Committee:* Brigade-Surgeon T. B. Moriarty, M.D., Cork. *Hon. Secretary and Treasurer:* Philip G. Lee, Esq., 25, Patrick's Hill, Cork.

*A Personal Complaint.*—Dr. CREMIN mentioned attacks being constantly made on a respected member of the Branch by a practitioner in a neighbouring district. The Branch instructed Dr. Cremin to inform the member that it would be desirable for him to lay a statement before a special meeting. After some further discussion the meeting adjourned.

## NORTHERN COUNTIES OF SCOTLAND BRANCH.

A MEETING of this Branch was held at Inverness on October 18th, Dr. ADAM (Dingwall), President, in the chair.

*New Members.*—The following were elected members of the Branch: Drs. Macrae (Alness), Falconer (Foyers), Duncan (Strathpeffer), Johnson (Fort Augustus), Grant (Inverness), MacFadyen (Inverness), Simpson (Golspie), Brodie (Munlochy).

*Next Meeting.*—It was resolved to hold the summer meeting at Elgin jointly with the Aberdeen, Banff, and Kincardine Branch, when it was hoped there would be a good attendance.

*Parochial Medical Officers.*—A letter was read from Dr. Murchison (Uig), calling attention to the disadvantages medical men holding parochial appointments in the Western Highlands and Islands suffered compared to their brethren in the landward parishes: and Dr. Murchison hoped that the Branch would do all in its power to enable these medical officers in the outlying districts to appeal to the Local Government Board against dismissal by parish councils, a fair salary in proportion to the amount of work performed, and a residence.—Dr. BRUCE, M.O.H. for Ross-shire, spoke from his experience of the Western Isles, and mentioned that the medical officers of these districts were labouring under serious disadvantages, and suggested that an appeal be made to the Local Government Board.—Dr. OGILVIE GRANT, M.O.H. for Inverness-shire, corroborated Dr. Bruce's remarks, and hoped at an early date these medical men would be placed in a better position both as regards salary and fixity of tenure of their appointments.

*Cases.*—Dr. MACKAY (Inverness) showed several interesting cases.

*President's Address.*—Dr. ADAM delivered an interesting address on Medical Diagnosis and Modern Discoveries, which will be published. Dr. Adam was cordially thanked for his address.

*Open-air Treatment of Consumption.*—Dr. DE WATTEVILLE read a paper on Notes on Open-air Treatment of Consumption in the Central Highlands of Scotland. Villemin was the first to establish the infectious nature of phthisis, but did not succeed in isolating the contagious factor. This was reserved to Koch. Various specifics had been used to counteract the tuberculous poison, but these could only be adjuncts, as lethal doses would have to be introduced into the organism to be a sufficiently strong antidote. It was the human organism itself which must fight the battle against the tuberculous poison, and they must assist it to do so by helping the patient to attain that degree of physical strength and well-being which would render the presence of the bacillus harmless, and finally get rid of it. This was what the open-air treatment attempted to do. The three main features were: (1) Constant sojourn in the fresh air: (2) plentiful nutritious food: (3) careful regulation of rest and exercise. Under these the patient put on flesh; there was soon an increase in strength and sense of well-being; night sweats disappeared, and the circulation improved. Later, if the case was not a very advanced one, cough and expectoration gradually diminished: concurrently with this moist sounds disappeared, and in many cases cavities dried up and became innocuous. The prognosis depended more upon the extent than the pathological stage of the lesion. A short sketch of the history of the open-air movement was given. Next, the author described the Grampian Sanatorium, near Kingussie, with which he was connected, and shortly sketched the life led by the patients. Great stress was laid upon rest before and after meals. The nitrogenous element predominated in the diet. Milk (tuberculin-tested) was largely used. Exercise was regulated according to the patient's condition. Medicines were sparingly used, and stimulants only in special cases. Open fires were used for heating purposes, and the establishment was lighted throughout by electricity, generated by water power. The principal disinfectant used was formalin, generally a 4 per cent. solution. In concluding, the speaker urged how important it was that strict open-air treatment should be begun whenever tuberculosis was diagnosed. He also pointed out, that if success was to be attained, rules must be strictly adhered to, and mutual trust and confidence must exist between the patient on the one hand, and the medical and nursing staff on the other.—A discussion followed, Drs. FORTESCUE FOX, T. R. MACDONALD, BRUCE, OGILVIE GRANT, CAMERON (Nairn), MURRAY, FORSYTH and MOIR all adding their testimony to the excellence of Dr. de Watterville's paper, and expressing the hope that good results would follow the establishment of such a well-conducted sanatorium in the Central Highlands of Scotland.

*Dinner.*—The members dined together in the Palace Hotel after the business meeting.

## STAFFORDSHIRE BRANCH.

THE twenty-eighth annual general meeting of this Branch was held at Hanley on October 31st. Thirty-one members were present.

*Confirmation of Minutes.*—The minutes of the last annual general meeting were read, approved, and signed.

*Introduction of New President.*—Dr. ALFRED H. CARTER in-

troduced his successor, Mr. W. H. Folker, of Hanley. This is the second time Mr. Folker has been elected President, he having filled the office twenty-one years ago.

*Vote of Thanks to Retiring President.*—On the motion of the President, seconded by Dr. T. Ridley Bailey, a hearty vote of thanks was accorded to Dr. Carter for his services as President during the past year.

*New Member.*—Mr. Richard McKim Wilkin, L.R.C.P., L.R.C.S.E. (Willenhall), was elected a member of the Branch.

*Death of Mr. T. Vincent Jackson.*—On the proposal of the President, seconded by Dr. Carter, and supported by Mr. F. M. Blumer, it was unanimously resolved:

That the members of the Staffordshire Branch of the British Medical Association desire to record their deep sense of the loss which the Branch has sustained by the death of Mr. T. Vincent Jackson, who not only took a prominent part in the formation of the Branch in 1874, but ably filled the office of Honorary Secretary from that time until his nomination as President in 1888. The members of the Branch hereby convey to Mrs. Vincent Jackson their sincere sympathy with her in her bereavement, together with an expression of their grateful appreciation of her husband's long and active service on behalf of the Branch.

*Presidential Address.*—Mr. Folker delivered a most interesting address on reminiscences of fifty years of surgery, for which, on the motion of Dr. W. G. Lowe, seconded by Mr. McAldowie, he was given a cordial vote of thanks.

*Reports and Financial Statement.*—The reports of the Council and Ethical Committee were adopted, as was also the financial statement, which showed a balance in hand of £24 13s. 7d.

*Donation to Epsom College.*—On the proposal of Mr. Spanton, seconded by Mr. H. H. Folker, it was resolved that a donation of ten guineas be voted to Epsom College.

*Next Annual Meeting.*—It was decided to hold the next annual meeting at Stoke.

*Election of Officers.*—The following were elected officers for the ensuing year:—*President-elect:* Dr. Wheelton Hind, Stoke. *Vice-Presidents:* Dr. J. B. Spence, Dr. Alfred H. Carter. *General Secretary:* Dr. G. Petgrave Johnson, Stoke. *Financial Secretary:* Mr. J. Clare, Hanley. *Auditor:* Mr. W. H. Folker. *Council:* Dr. S. King Alcock, Burslem; Mr. F. M. Blumer, Stafford; Dr. E. Deanesly, Wolverhampton; Dr. F. Edge, Wolverhampton; Mr. Hartley, Stone; Dr. Halton, Newcastle; Dr. W. G. Lowe, Burton; Dr. Malet, Wolverhampton; Dr. M. Aldowie, Stoke; Mr. G. A. Phillips, Walsall; Dr. C. Reid, Stafford; Dr. Geo. Reid, Stafford. *Representative on the Council of the Association:* Mr. W. D Spanton, Hanley. *Representative on the Parliamentary Bills Committee:* Dr. T. Ridley Bailey, Bilston.

*Vote of Thanks to Retiring Secretary.*—On the motion of Dr. Carter, seconded by Dr. S. King Alcock, a hearty vote of thanks was unanimously accorded to Mr. F. M. Blumer for the services he had rendered as General Secretary to the Branch during a period of six years.

*Dinner.*—The members afterwards dined together at the Grand Hotel. Mr. Folker presided, and the Town Clerk of Hanley and the Reverend E. Spink, Vicar of St. Jude's, Stoke, were present as guests.

## SOUTH WALES AND MONMOUTHSHIRE BRANCH.

The medico-ethical meeting of the session was held at the Swansea Hospital on October 25th; the President (Dr. A. P. Fiddian, Cardiff) being in the chair. There were present twenty-one members of the Branch and two visitors.

*Contract Pay.*—Mr. A. Lloyd Jones (The Mumbles) read a paper upon the subject of the readjustment of contract pay throughout the district, and after some general discussion the two following resolutions were unanimously passed:

1. That, in the opinion of this meeting, the time is ripe for the readjustment of contract pay throughout this district, in view of the higher wages of the working classes and the greater expenses of the medical profession.

2. That a Subcommittee be struck, with power to add to their number, to ascertain the feeling of the profession throughout the district, and to obtain information upon the subject in general, this Subcommittee to lay their report before the spring meeting of the Branch, to be held at Bridgend in April, 1902.

*A Section of Medical Politics.*—Dr. H. A. Latimer (Swansea) submitted a resolution which called for the establishment at the annual meeting of the British Medical Association of a Section of Medical Politics. Defining politics as "the science and art of government, or the science whose subject is the regulation of men," he remarked that every thinking man engaged in two lines of political thought—as a member of the community at large, and as a member of the special calling he was engaged in. In the Section which was called for establishment at the annual meetings of the British Medical Association, it would be the specialised matters connected with medical life which would be considered and discussed. He drew the attention of his fellow members of the Association to the fact that the annual meeting of that body was entirely engaged with the discussion of scientific subjects, and with the enjoyment of social entertainments. The business side or professional side, he said, was completely ignored at the meetings. As a natural result of this neglect of practical affairs, no authoritative voice on matters connected with medical men in relation to public affairs emanated from the profession of medicine, and many abuses which called for remedies prevailed, to the detriment of the medical body politic. He pointed out that, should the Government of the day desire to ascertain the views of medical men on subjects connected with their calling, no constituted body, clothed with any authority, existed for the purpose of considering the same; and he remarked that, as a natural result of this want of organisation, medical appointments in the State were, in many cases, held under insecure tenures, and in almost all under unsatisfactory rates of remuneration. To whom, he asked, could Governments turn for information; and by whom could pressure be brought upon Governments for the due recognition and payment of medical officials in the employment of the State? Certainly not by the General Medical Council, for this body was concerned only with the internal government of the profession and would be acting *ultra vires* by meddling with affairs outside of its province. He instanced, as subjects which should engage the attention of a Section of Medical Politics, this very matter of the General Medical Council; pointing out that as presently constituted it did not really represent the profession at large, as its members were for the most part elected by the senates and councils of the universities and colleges, and not by the graduates and Fellows of those educational bodies. He advocated a reform in this matter, stating that, as things stood now, the members of the General Medical Council who represented such corporate bodies could not be regarded as representing more than small inner circles in the same. As instances of matters to be discussed and dealt with he cited the insecure tenure of office of medical officers of health, the payment of the directors-general of the navy and army and of the medical advisers of the Privy Council, the practice of medicine by unqualified persons (such as those who stated that they possessed the "M.D., U.S.A."), the rates of payment from Friendly Societies, and the questions relating to the granting to midwives of titles having a colourable imitation of diplomas, such as the L.O.S., in which matter, he held, the General Medical Council had shown itself to be supine and neglectful of the interests of the profession. He concluded by remarking that, if the proposed Section was presided over by a chairman who carried out the well-known rules of debate, and, if the subjects under discussion were of broad, general interest, and care were taken to confine them to the same, with a refusal to allow of the introduction of polemics between man and man—as in an Ethical Section where the manners or morals between individuals would be under consideration—he did not doubt but that great benefit would accrue to the profession at large by the inclusion of this business meeting amongst the other issues of an annual medical parliament.—The following resolution was passed unanimously:

That it is desirable that a Section on Medical Politics should be held at the annual meetings of the British Medical Association (Medical Politics being defined as the principles and operation of the internal government of the profession of medicine).

*Professional Articles in the Lay Press.*—Dr. J. A. Rawlings (Swansea) drew attention to certain communications of a professional character which had recently appeared in the lay press of South Wales, and, the matter having been discussed by several members, the following resolution was unanimously agreed to:

That in the opinion of this meeting it is highly inexpedient that signed articles discussing questions of professional treatment should appear in the lay press.

*Professional Secrecy.*—Dr. E. LE CRONIER LANCASTER (Swansea) related the history of a case showing how the obligation of professional secrecy may come into serious conflict with duty to the State.

# SPECIAL CORRESPONDENCE.

## BERLIN.

*Professor Virchow at the Berlin Medical Society.—Professor Ehrlich's Cancer Research.—Heredity of Feeble Children.—A Therapeutic Burlesque.*

"VIRCHOW und kein Ende!" (Virchow celebrations without end!). The Berlin Medical Society opened its winter season on October 30th by a homage to its Honorary President, Rudolf Virchow. His chair and table were wreathed in flowers, and when he entered the hall he was greeted with acclamations as spontaneous and full-toned as any heard during the Virchow week. Professor von Bergmann addressed Virchow as the guiding spirit of the Berlin Medical Society, to whom it owed its outward form and its intrinsic value. His name was the banner round which all branches of medical science rallied in unity; and all colleagues were one in the wish that when the proposed "Virchow House" became a reality—100,000 marks (£5,000) were already available for the purpose—Virchow would be its pulsating heart. In returning thanks, Virchow said he hoped to be able to continue working with and amongst his Berlin colleagues as heretofore..

A Vienna paper spread the report that the German Emperor had commissioned Professor Paul Ehrlich, Director of the Bacteriologicai Institute in Frankfort-on-the-Maine to devote himself entirely to the study of cancer, and that the institute had already been rearranged and modified in accordance with the Imperial command. This, I hear from a good source, is untrue. The real fact is, that partly by bequest and partly by generous gifts of wealthy Frankfort citizens, a fund of 150,000 marks (£7,500) has been placed at the disposal of Professor Ehrlich in order to enable him to extend his researches on cancer. The sum is to be distributed over three years.

Dr. H. Neumann, one of the committee for the care and protection of orphans after their dismissal from school, publishes some interesting statistics bearing upon heredity. Of 156 sickly children whom he examined, 55 had lost either father or mother from consumption, and here it should be remembered that there must be many cases in which the cause of death is not made known. Of the children, 70 were scrofulous, 18 tuberculous (12 of the latter consumptive, or strongly suspected to be consumptive). Next in number to consumption came parents' deaths from nervous diseases, and from cardiac and kidney affections, probably in most cases connected with habitual drinking: and among their children 4 were found to be dull-witted, 4 hysterical and neurotic, 2 morally irresponsible, 2 epileptic, and 1 insane. Curvature of the spine was frequent among the children. After the enumeration of these sad facts it is a relief to learn that Dr. Neumann's committee does not leave the poor sick children to struggle on alone, but that suitable country homes are provided for those unable to support themselves, whilst the stronger are assisted to learn a trade or enter service, as far as possible under healthy and hygienic conditions.

Even the wisest of us are taken in occasionally. It is on record that once an Egyptian mummy, "3,000 years old," was found, when carefully unwrapped, to contain as stuffing a copy of the *Times* of a few months earlier, and many other similar mystifications of museum big-wigs are well-known. But that a medical April joke, a satirical skit, clearly marked as such by the extravagance of its "facts" and the signatures of its authors, should be taken in earnest and seriously criticised, is strange. In the *Zeitschrift für klinische Medizin*, edited by Professors von Leyden and Klemperer, Dr. Speck publishes an article reviewing and criticising modern therapeutic fads, such as the "light treatment," etc. In the course of his article he comes to the new "darkness treatment" recommended by Drs. Rile and Herz in their paper in the *Davoser Blätter*. And he quotes the details of their "cure," namely, a sanatorium for consumptives in the catacombs of Syracuse, 150 metres below the surface of the earth, where the patients are kept for months without the light of day, with the astonishing result of 83 per cent. cures and 17 per cent. decided improvements. And further he quotes (though with indignation) the scientific explanation of this treatment that is offered, namely, the increased blood pressure and the fact that the mole is notoriously free from tuberculosis. Unhappily Dr. Speck failed to notice that the article in the *Davoser Blätter* was signed "Dr. A. P. Rile and Dr. S. C. Herz (*Scherz*, German for joke)," and that it was dated from Villa Fanfaronnata!

## GLASGOW.

*University Extension.—Light Cure for the Western Infirmary.—Glasgow and District Branch of National Association for Prevention of Tuberculosis.*

SCHEMES for the better equipment and extension of the Scottish universities are being advocated in all the University towns. In this matter Glasgow holds a most prominent position, and it is largely due to the energy of Principal Story that so much progress has already been made there and elsewhere. It might be thought that the Carnegie Trust would solve all the financial difficulties of the Scottish universities, but the natural effect of that benefaction will be to increase the number of the students, and so render all the more imperative the extension and increased equipment that is now being asked for, and cannot possibly be altogether derived from the Trust funds. Last week in Glasgow, and under the auspices of the Lord Provost and Corporation, a very influential meeting of citizens was held to consider and approve of the scheme already referred to, which relates especially to the departments of medical and physical science. Principal Story, in his statement, mentioned that of the sum of £100,000 at present aimed at, over £57,000 had already been received. Amongst the speakers to the various resolutions, which were confirmed by the meeting, were Lord Elgin, the Chairman of the Carnegie Trust, the Right Hon. James A. Campbell, M.P., Lord Reay, the Duke of Argyll, and the Solicitor-General for Scotland. It is confidently hoped that this meeting will give a fresh impetus to the movement, which was also the subject of discussion at the meeting of the General Council of the University last week.

An important addition will be made to the equipment of the Western Infirmary by the gift which has just been announced of an electric installation for the treatment of skin diseases. This gift comes from the Exhibitors' Club at the Glasgow Exhibition, and is provided from the surplus that has been made in the working of that club. This will be the first installation of the kind in Scotland, and the Western Infirmary is specially adapted for its introduction, being supplied already with electric machinery. It was also fitting that this gift from the exhibition should go to this infirmary, as owing to its proximity any accidents occurring at the exhibition had always been attended to at the Western Infirmary.

The recently-formed Glasgow and District Branch of the National Association for the Prevention of Tuberculosis has now begun work and is enrolling members. An influential list of office-bearers is published, with the Duke of Argyll as Hon. President, and the Lord Provost as President. It is hoped that medical practitioners generally will heartily co-operate with the Council in promoting the interests of the Association. The Health Committee of the Corporation have taken an active part in the establishment of this Branch, and recently recommended that a grant of £500 be given by the Corporation.

PROFESSOR RAY LANKESTER will read a paper on *Okapia*, a new genus of *Giraffidæ* from Central Africa, at the scientific meeting of the Zoological Society of London, on Tuesday November 19th, at 8.30 P.M., at 3, Hanover Square. On the same occasion Mr. Oldfield Thomas will read a paper "On the Giraffe discovered by Sir Harry Johnston near Mount Elgon, Central Africa."

# CORRESPONDENCE.

## TREATMENT OF CARCINOMA OF THE FEMALE MAMMA BY OOPHORECTOMY AND THYROID EXTRACT.

SIR,—I was much interested in the paper by Dr. Beatson on the above subject (British Medical Journal, October 19th, p. 1145), and I note that he quotes very fully a case which he operated on last year for me. Dr. Beatson seems to regard this case as a very striking result of his treatment, and also as bearing out his views as to the etiology and treatment of this terrible disease. Whether that is so or not I do not know, but the patient died exactly eleven months and two days after the operation. It is very necessary that the sequel should be known, because many of your readers may have formed strong opinions of the value of this case which I do not think are at all warranted.

My opinion now is that a medical man should be very chary indeed about advising a patient to undergo this treatment. Before doing so he should go carefully through the 49 cases published in the Journal of October 20th, 1900, as I did. I picked out 4 cases which seemed on all fours with mine, where the results seemed to indicate considerable prolongation of life, and then I decided to advise my patient to undergo the treatment. I have no hesitation now in saying that I regretted that decision very bitterly at the end of seven months, and so did the patient and her friends. I am certain it did not prolong life.

The last date mentioned by Dr. Beatson in his paper, namely, April 28th, 1901, only six months after operation, was practically the beginning of the end. From that date till September 30th, 1901 (the day of her death), her existence was simply a long drawn out, painful, and living death.

Dr. Beatson may be on the right track to the finding of a cure for mammary cancer, but it is quite certain he has not yet found it.

I now turn to speak of what I actually observed, and marvelled greatly about at the time of the operation. Within seven days I detected changes in the colour of the skin and in the consistency of the mass. The blackness began to get dusky red, and the dense hardness felt a little softer, and the mass was perceptibly less both to me and to the patient herself. From that time onwards, week by week, that great hard scirrhous mass, along with the little masses in the axilla and enlarged glands above the clavicle and along the posterior border of the sterno-mastoid, and a hard mass in the centre of the opposite breast, steadily disappeared until there was little more than skin left with the nipple (rosy pink) in the centre. I could not detect the vestige of an enlarged gland in the axilla, nor any nodules in the adjacent skin of the thoracic wall; but the supraclavicular glands, along with those in the neck, were still perceptibly enlarged, although very much less than at the operation. The breast mass was the size of a full-time and full-sized fœtal head before the operation.

It was wonderful, and I am reported as having used the phrase: "This seems like a romance." That expresses exactly what I felt at that time. But alas! our joy was short lived; before the end of the seventh month the tide had turned, and all the good "influence," as I call it, came to a dead stop, and slowly but steadily and surely all the cancerous material reappeared in the same places, and the patient went rapidly down the hill. I have often thought if Dr. Beatson could only have kept that "influence" which he called into action by his operation going for another six months my patient might have been cured. Why did it stop? Another important thing to note in this case was the secondary growths. Before the operation not a single symptom warned us of any possible involvement of any organ. Eleven months later liver dulness was 3 inches below the costal margin, the stomach became troublesome, the mediastinum was involved, and the left hip joint and the spinal column (lumbar region) gave her severe, and occasionally agonising, pain; lastly, the left pleura became affected too. Pleuritic attacks accompanied by some fluid on the right side occurred within the last fortnight of her life. Thus anyone can see that her end was one of misery and suffering.

On reading over the published cases along with my own case it has occurred to me that it is the inoperable cases of mammary cancer that I would exclude from Dr. Beatson's method. What is the good of it? It is not a cure in any sense of the word. It is the early cases of cancer that should get a chance of this method. The "influence" might last long enough to cure them, although it failed in a hopeless inoperable case.

Great credit is due to Dr. Beatson, and let us hope that he will some day be able to advance his method towards the neighbourhood of permanent benefit. I do not think the use of thyroid extract had anything to do with the results got. I detected all the changes in progress before she began to take thyroid. Moreover, we all know how horribly depressing this substance is, and how thoroughly ill it can make a patient who is strong and robust, even in small doses; therefore its use in cancer is not indicated very strongly to my way of thinking.—I am, etc.,

Glasgow, Oct. 26th. DANIEL MCNICOL, M.D.

## INOCULATION AND THE INCUBATION STAGE OF PLAGUE.

SIR,—In his letter on the above subject in the British Medical Journal of October 5th, Major Bannerman states:

> Colonel King argues that though resistance to plague conferred on persons by an injection increases gradually from the first to the tenth day, yet abortion of the disease in the incubation stage is not therefore to be assumed. I am not aware that any such argument has ever been stated by Haffkine or anyone else.

Equally, I have certainly seen no published statement that would lead me to believe Haffkine, or anyone else, holds the theory advanced by Major Bannerman as to the abortive power of haffkinine. Haffkine had little reason to believe, at the time he gathered the Byculla Gaol statistics, that inoculation on the day of development of plague symptoms was to the advantage of his subjects, seeing that all (3 cases) so treated died, whilst his opinion that influence for good was apparent "after the lapse of twenty-four hours" when comparing the attack-rate of the inoculated and uninoculated has always seemed to me compatible solely with the information gained by Calmette and the German Commission as to the gradual appearance of protective power.

Again, Major Bannerman states:

> Now as Colonel King admits that the incubation period of plague is often of "two to five days' duration," how could any effect of inoculation be visible after the lapse of twenty-four hours only, unless some of the persons that should have shown symptoms of plague on the second, third, fourth, and fifth day (that is, who were on the day of inoculation in the incubation state of plague) *had been cured?* [Italics not in the original.]

I trust Major Bannerman will see that his method of argument is inapplicable. Unless populations be experimentally infected, and the date of acquirement of infection be therefore certain, there is apparent—allowing the margin of twenty-four hours—a sufficient cause of diminution of the number of attacks in the inoculated, by reason of their offering a better grade of resistance to infection subsequent to date of inoculation. The theory of Miss Corthorn as to "modification" of the disease in those attacked subsequent to inoculation is compatible with certain relations of the date of infection, and possibly its manner, and the rate of acquisition and grade of resistance in individuals; but this theory cannot be offered as a proof of Major Bannerman's claim for *abortive* and *curative* powers.

I have suggested that the statistical evidence offered by Major Bannerman "does not exclude the probability" of the conjunction of inoculation with development of symptoms of plague being detrimental to the patient. In reply, he refers me to the total average case-mortality of the uninoculated, as against that of the inoculated on the day of exhibition of plague. The question at issue, however, is not as to inoculation as against no inoculation, but as to whether ordinary discretion would not dictate, in view of Major Bannerman's own statistics, a more appropriate method of inoculation than the use of toxins at the special period referred to, it being, I hope, understood that I am a firm believer in the utility of haffkinine when judiciously employed. The truth, I stated, would most likely be revealed by a comparison of the rapidity of death within the first forty-eight hours of the inoculated on the date of development of plague, and of the uninoculated, respectively; although were it not that Major Bannerman affects the belief that statistics as to human beings are more valua

ble than laboratory experiments conducted upon animals, it is obvious a few results so secured would be infinitely more convincing. However, as he considers the statistics already given are sufficient, it may be permitted me to point to certain of their obvious defects. In the first place, case-mortality statistics are difficult of verification; in an Indian population this is remarkably, and notoriously, the case. In these statistics, I venture to say, the difference in result brought about by locality is so great that the whole of the figures are of no value whatsoever, except to prove the broad fact—already amply acknowledged by the profession—that the inoculated have a great advantage as to case-mortality when compared with the uninoculated.

But, imperfect as they are, if Major Bannerman's events in his grand total column be divided into three equal groups, so as to allow of the influence of time being evident from the first to the tenth day, it will be seen that the case-mortality in the first group (161 cases) is 54, in the second (119 cases) 44, and in the third (644 cases) 41 per cent. In short, so far as Major Bannerman's own statistics go, they prove the correctness of the suggestion made in my letter in your issue of September 21st that, whilst the withdrawal of haffkinine during an epidemic would not be justifiable, "discretion would dictate, in special instances where history shows actual infection is highly probable, that the Calmette-Yersin serum should be employed as a temporary expedient, haffkinine being reserved for use as soon as the period of possible incubation has passed, so as to secure the best available grade of prolonged protection."

Major Bannerman fails to see in what manner his views are "sanitarily dangerous." He must, however, be fully aware that the logical outcome of their acceptance would be to allow the entrance into an unaffected population, without surveillance, of "suspects" upon their undergoing a disinfection of the system by means of haffkinine. Indeed, I have had to officially oppose this dangerous—because unproved—theory.

Major Bannerman's objections to the word "haffkinine" discussed by him under the heads of science, etymology, and euphony, I am well acquainted with. My reason for using the word, in view of the haphazard terminology usually employed is detailed in my letter, which will be found in the JOURNAL of December 15th 1900, p. 1750. Of the ten different terms mentioned in the first paragraph of that letter, not less than nine were culled from a single short document written by Major Bannerman. In regard to his statement that the term "is not agreeable to Haffkine himself," I have to refer him to the fact that M. Haffkine was formally approached by me on the subject, and that after he had consulted the President, Medical Board, India Office, he notified to me his approval of its use. I can only presume, under these circumstances, that Major Bannerman is labouring under a misapprehension in believing that after this formal act M. Haffkine has assured him, or others, that the term is "not agreeable" to him, whilst failing to communicate with me direct on the subject.—I am, etc.,

W. G. KING,
Lieutenant-Colonel, I.M.S.

London, October 14th.

## THE REAL "CRUX" OF THE R.A.M.C.

SIR,—As no evidence was called by the recent Commission on the R.A.M.C., and no senior member of that service was on the Committee, it behoves medical officers to bring such points to notice in your columns as were omitted to be fully dealt with by the Commission. I desire to say that, in my opinion, the crux of the R.A.M.C. is "India," and I desire to impress this on Mr. Brodrick. India breaks down our health, weakens our technical efficiency, and greatly handicaps the financial solvency of the R.A.M.C.

*Other Army Staff Departments and India.*

The English Commissariat Service (now the Army Service Corps) does not serve in India, neither does the Army Ordnance Department, neither does the Army Pay Department, nor yet the Chaplains Department. Hence these various English staff corps escape the killing grind which is ruining our R.A.M.C. service, namely, excessive, trying, and underpaid service in India. We are thus a truly imperial corps, serving everywhere throughout the whole empire *plus* India, while other army staff corps escape India, and the local Indian Service does not take imperial service out of India. We are thus practically under a dual control, and suffer greatly in consequence.

*The "Burden of Empire."*

Because of this excessive burden of duty, no ripple of war or sickness anywhere in the Empire, including especially India, but weighs us down, exhausts our strength, keeps back our professional efficiency, and greatly impoverishes us by unceasing and expensive moves and under-payment. We need the most considerate and sympathetic government to compensate for such services, and such consideration we never receive; but especially, and above all other places in India, where our position is lamentably bad, and entirely from preventable reasons, which any strong English War Minister who cared and knew could stop.

*The Bias and Prejudice of Indian Administrators.*

We are medical men hired by the English War Office on a distinct contract or engagement for pay, allowances, and pension. The English War Office in its dealings with the R.A.M.C., so far as India is concerned, is a mere "Sergeant Kite, all ribbons and lies"—a misleading recruiting sergeant. We are invited on certain terms into the service, and then, like the hireling soldiers of some German princeling in the last century, we are handed over, bound hand and foot, to the local Indian governing body to deal with as they choose during our unceasing Indian service. This is the real crux.

The War Minister of England, who acted as our recruiting sergeant in England, practically disowns us, takes no real interest in our just and lawful claims on the Indian Government, uses no Imperial influence to get justice done us while in India, and this treatment and this injustice to a greater extent than any other grievance whatsoever accounts for our paucity in recruits and our generally unsatisfactory state. By our Indian service our health is undermined and our efficiency is handicapped, but in addition we are deprived in all ranks of the service of the English pay equivalent promised us by the English War Minister.

The reason why we, alone of all English army staff corps, serve in India is that we went there in olden days, when we were regimental officers with our regiments. Up to the Mutiny time we had only some 20,000 English troops in India; now we have 75,000, and we are shipped off to India to care for these men, to the number of nearly 400 officers, and while there we are denied actual justice in our pay and prospects. This is the point to be dealt with by Mr. Brodrick. If to-morrow, by a new and liberal warrant, Mr. Brodrick gets recruits for the R.A.M.C., in three years again the supply will cease—not from any great inherent drawback to the service, but because, with practically half our corps serving in India, we while there are paid at the pay rates of 1858, ignoring all the many warrants issued in 1861-66, 1873, 1879, and 1901.

*The "Crawford Convention."*

When unification, with its large reduction of medical officers, was introduced into India in the early Eighties, the management of that introduction was in the hands of the late Sir Thomas Crawford, then P.M.O. in India. He reduced the establishment, sacrificed the horse allowance, greatly increased the work of each individual medical officer, greatly minimised the chance of leave, broke down in consequence the physical health of the medical officers, later on increased their stay in India to six years instead of five, and assuredly ruined in a marked degree the Medical Corps. While all the Indian departments draw staff pay and special emoluments for technical work as departmental officers, the R.A.M.C. were and are kept on regimental pay, have no staff salary, and are heavily overburdened by anxiety, overwork, and loss of leave. The "burden of empire" rests in a killing degree on the R.A.M.C. in India, and largely through Dr. Crawford's settlement when P.M.O. in India.

*The Indian Medical Service.*

If the R.A.M.C. did not exist and India had to enlist her 75,000 English soldiers in the English labour market, she would have to pay far better wages to these soldiers, and give far better terms to her doctors, who after five years in India

would come home on furlough to recoup their health, to get rest, to improve their professional efficiency by visiting post-graduate and foreign schools, and not as we do, to begin next day after landing, the grind of home duty in English garrisons. This, then, is our grievance. We are "sweated" in India, underpaid, get little or no leave, and when tired, ague stricken, and exhausted are flung out of India to begin work at once in England, and in two years again to be sent back to the Indian treadmill to have health and hope killed in us, and the War Minister of England is to blame. These facts are indisputable, but we have had no statesman-doctor since Muir died to achieve justice for us. Years ago in India he told me, when the twelve years time promotion for surgeons-major became the rule, that "India did not pay her fair share of the cost of the medical service of the British troops." I entirely agree, and since Muir's day things have got worse and not better owing to the masses of young soldiers now in India, and the ravages of typhoid and the unceasing wars.

While the R.A.M.C. is thus decimated in India, the Indian Medical Service is absolutely unsympathetic towards us—spends its time in doctoring Sepoy soldiers who are rarely ill, or in civil appointments comfortable, well paid, and leading up to just pensions and rewards. We have an anxious time with that English soldier on whose bayonet point English rule in India still exists, and that soldier and ourselves are underpaid and unsympathetically treated by the Indian governing class.

Until some statesman sees this clearly, not only will the R.A.M.C. be discontented and enfeebled, but that English army to which the R.A.M.C. officer belongs will also be difficult to recruit, largely on account of that excessive foreign service India entails.

The burden of empire lies heavily on our shoulders. We must accompany our comrade soldiers wherever they serve, but it should be on just terms that we serve in India and not as now on unjust ones. We belong to a politically powerless profession, and hence largely our inability to move the governing parties. Had we political power, in a year or two all our grievances would be redressed.—I am, etc.,

October 22nd. INDIA IS THE CRUX.

## WHAT IS EFFICIENT REVACCINATION?

SIR,—Nothing will do the credit of vaccination so much harm as the employment, in the course of an epidemic of small-pox, of inert or feeble lymph. Complaints as to the quality of the commercial lymph which ordinary practitioners have to obtain are very general, and it is not easy to see why the organisation of the Government supply of vaccine lymph should not be enlarged so as to meet the demands of all practitioners, but till this is done other methods of improving the supply of active lymph may be considered. I venture to suggest two such methods:

1. The British Medical Association spends money annually in scientific research. Could not some of this money be employed upon inspectors of the commercial vaccine lymph manufactories? The inspectors would, of course, have to be familiar with the best methods employed in the Government laboratories and in Germany; they would pay frequent and surprise visits to the manufactories, and they would report at short intervals in the medical papers, grading the various manufactories according to the excellence of the methods employed.

2. Reports as to the actual value of the various commercial lymphs, as tested by experience, might be published once a month in the medical papers, the name of the firm that supplied the lymph being given with each report.

If a large number of general practitioners would take the trouble to send to the *Lancet* and BRITISH MEDICAL JOURNAL month by month a record of all their vaccinations and re-vaccinations, mentioning for each case the source of the lymph used and the number of vesicles produced, the inducement to sell only active lymph would be materially increased. If Germany can efficiently revaccinate a population of 55 millions, it ought not to be impossible to produce in England enough active lymph for our much smaller numbers.—I am, etc.,

E. GARRETT ANDERSON, M.D.

Upper Berkeley-street, Nov. 2nd.

SIR,—The subject of efficient revaccination, which Dr. Verdon-Roe has raised, is undoubtedly a most important one, and one to which in the presence of the small-pox outbreak in London too careful attention cannot be paid.

The failure of lymph, presumably but not really efficient, to produce local reaction even after three trials may very naturally lull both vaccinator and vaccinated into a false sense of security.

The immunity which the vaccinated are thus supposed to enjoy will in face of an epidemic prove to be non-existent; and, what is after all of secondary importance, the supporters of antivaccination will claim a triumph for their cause at the cost of those who have in reality not been successfully vaccinated.

In this connection my own limited experience of the use of inefficient lymph may prove of interest. In my position as civil surgeon a few months ago to a regiment stationed in London it was my duty to vaccinate all recently joined recruits, and also children in the married quarters. The lymph used was supplied by the Army Vaccine Establishment in Aldershot. In the case of the recruits revaccination, for the first time in most cases since childhood, produced in only a small percentage perfect vesicles; in a slightly larger percentage the results were modified; in the great majority, however, no reaction at all followed, and one was therefore obliged to presume that these men were immune. At this time and with the same brand of lymph I also vaccinated three babies, but without success.

I then wrote to the vaccine supply at Aldershot giving my results. Fresh lymph was sent, and the children were vaccinated a second time, again without success. A third attempt was equally unsuccessful.

On my writing a second time to the supply, other lymph was again sent; at the same time I obtained lymph from an independent establishment. Vaccinating these children for the fourth time, I inoculated each in two places with the fresh Government lymph, and in two places with the lymph obtained from an independent source. The results were most striking, for in all three cases the Government lymph did not "take" at all, while the other produced most perfect vesicles.

This clearly proved the inefficiency of the material previously used, and also left me in considerable doubt as to the extent to which the recruits who had not reacted were really immune. Subsequent revaccination of those men who had previously not taken was followed in the majority of cases by good results, from the use of en orced lymph obtained from Aldershot. It appears highly probable that many of those who are revaccinated and do not "take" are in no sense protected against small-pox, a fact which is certainly alarming when barrack life in London is taken into consideration, and the ready opportunities an epidemic has of spreading under such conditions. The need of lymph that is reliable and of standard strength is an urgent one.—I am, etc.,

Clevedon, Somerset, Oct. 28th. J. GRAHAM FORBES.

SIR,—A very sensible and timely letter appeared in the BRITISH MEDICAL JOURNAL of October 26th on the above subject by Dr. Verdon-Roe. I have been in the habit of buying calf lymph privately, that being less trouble than sending for it to the Local Government Board. Lately, however, I have found that lymph I can buy in this way is very unreliable, a large proportion of cases vaccinated not "taking."

These considerations induced me a fortnight ago to write to the Local Government Board to ask them to send me a few tubes of calf lymph, and in reply I received a circular informing me that:

> The glycerinated calf lymph (in which form only is lymph distributed by the establishment) is supplied solely on the direct application—on the official form—of a public vaccinator and for public vaccination.

Now, sir, I ask you is this fair to the general practitioner? Is it fair to the public, who wish to be protected from small-pox? Is it surprising if the results of private vaccinators are not as good as those of the public vaccinators?

A few years ago the Board insisted, and rightly so, that the public vaccinators should be well paid for their work, but why should it at the same time make a rule to decline to supply other practitioners with pure lymph?

I feel that at the present time this is a very important question. A large number of practitioners in the poorer

districts of London are obliged to do their vaccinations for very small fees, much below what is paid to the public vaccinator, and the question of paying for lymph must be a consideration to them; and surely it is not to be expected that they will send their patients to the public vaccinators, who are in practice in opposition to themselves.—I am, etc.,

November 4th. JUSTITIA.

## DOCTORS AND MIDWIVES.

SIR,—Customs must have changed since Surgeon-Major Ince was in practice, and to insinuate that medical men refuse to attend cases of serious illness because there is no fee forthcoming is a libel on the profession, and specially uncalled for, coming from one who has been a brother practitioner.

Every general practitioner knows that these unqualified midwives take cases frequently that could well afford to pay a guinea to a doctor, and if they cannot afford this, let them have a qualified midwife or apply to the parish doctor for an order.

There is no accounting for individual tastes, but it is doubtful whether the bulk of the medical profession and Surgeon-Major Ince's brother officers will consider it a very high honour to be compared with publicans.—I am, etc.,

October 22nd. F.R.C.S.

SIR,—The letter from Surgeon-Major Ince, which appears in the BRITISH MEDICAL JOURNAL of October 19th, draws attention to a very unsatisfactory state of things.

The writer has put the case *versus* the general practitioner very ably and strongly, but there is another side to the question. No one but he who has experienced it knows how general practitioners are worried with "urgent" messages from people of the more ignorant classes, nor how general is the idea amongst them that a doctor is obliged to turn out at any hour of the day or night, totally irrespective of any ability on the part of the patient's friends to pay his fee.

It is often extremely difficult to find out from a messenger whether there is real urgency or not, and it is a very serious tax on a medical man's health and strength to go out night after night: he is quite justified in endeavouring to find some guarantee that his fee will be paid.

Personally, I agree with Major Ince that medical men have a duty towards the public, but surely if this be so the public has a duty towards the medical man, and there ought to be some definite means of obtaining payment from the State or the municipal authority in cases where the fee cannot be obtained from the patient's friends.

Major Ince's comparison between the medical practitioner and the licensed victualler is not, I think, a happy one; the publican is not obliged, legally or morally, to supply refreshment without any prospect of payment; moreover, he knows, when entering on his work, that it is under State control, and that he is obliged to conform to the laws which regulate it. I know of no law which compels doctors to attend any person, either with or without payment, except under the Poor Law.—I am, etc.,

October 22nd. JUSTICE.

SIR,—Will you allow me to reply on behalf of that section of medical men who have to make a living by their profession to the letter published from the pen of Surgeon-Major Ince, I.M.S.?

The Surgeon-Major, while he has a real grievance in the matter of "doctors not following midwives," allows indignation to get the better of common sense. He evidently has seen no general practice, or he would recognise in the action of the midwife in summoning a medical man at the eleventh hour a suspicion that the case was hopeless, and that she intended thereby to avert an inquest.

The contention that a medical man should be compelled to turn out of his bed whenever called to a case of serious illness is absurd, for who is to decide the question of urgency? Surgeon-Major Ince is evidently unaware that nine-tenths of all the messages we receive are called urgent, "Come at once!" the usual formula.

Mercenary matters must necessarily enter somewhat into any calling. There is no reason why the man over the way who owes us us a bill and could pay it should be able to claim our future services as a matter of right!

If our books were examined there would generally be found a fair balance to the account of charity without making that grace compulsory. But surely the Surgeon-Major would not have us work for nothing; the licensed victualler to whom he so beautifully compares us receives his pay or he detains our trunks as hostages. In a case of midwifery where no fee was forthcoming, would he suggest that we retain the baby?

If the Legislature came to his assistance would he suggest it pay our fees? But surely the Legislature has its hands full at present in the reformation of the Army Medical Service. On the main question that doctors should not decline to follow midwives *per se*, I agree with the Surgeon-Major, but surely some sympathy should be accorded the unfortunate medical man summoned to mend the muddles made by meddling midwives. Let your correspondent take over all such cases in his neighbourhood for a few months, and let him then tell us his views on the subject.—I am, etc.,

October 22nd. ONE OF MANY.

SIR,—The Swanscombe case has focussed a most discreditable state of things—discreditable alike to the profession and the public: to the profession because of its apathy, to the public because of its ignorance and its feeling of safety in a selfish security. Common humanity demands that we attend any case and every case in which we can alleviate suffering, and I doubt not that we are all of us willing and anxious to do this. The labourer is, however, worthy of his hire; then why should a medical man be made a victim? Here it seems that this appeal to one's higher feelings has reached its limit. I have attended a woman on four occasions, three confinements and one miscarriage, and up to date my receipts are represented by a cipher. Shall I also be censured if I refuse to attend on the next occasion?

Dr. Glover tells us that this is a new departure. I agree with him, and am thankful for it. It is sad though that it should be ushered in by so melancholy an event. We need new departures, and many of them too if ever the profession intends to raise itself out of the wretched state into which it is gradually sinking. The condition of things generally all over the country is a scandal and a disgrace, and requires much alteration. Now is the time for action. Every man should be up and doing. Let us combine if necessary, and we at once possess the remedy for all our woes, but until that remedy is perfected let us all obey the dictates of our nobler nature, and without thought of gain do what we can for these unfortunate women.

As a remedy I would suggest:

1. That all Gamps be done away with; they are grossly ignorant and those employing them are equally ignorant of the dangers they run in seeking their services.

2. No woman shall be allowed to attend a case without having first obtained a certificate of proficiency; this means she can detect danger and so send for help at once.

As regards remuneration, a medical man must be spared all anxiety as to the payment of his fee; then how is this fee to be obtained? I should say let the Board of Guardians come to the rescue. As the law now stands the relieving officer has the power to give an order for medical attendance in every case of urgent illness, no matter what the position of the applicant may be. This being so, when summoned let any man attend, whether he be the district medical officer or not (for these cases admit of no delay). Then let him forward his claims to the guardians, who will sanction payment and afterwards investigate matters, and recoup themselves or not according to the financial circumstances of the applicant.

The Local Government Board gives grants for efficient vaccination; why then, if further funds be needed, should they not give grants for cases of this nature?—I am, etc.,

Downton, Nov. 4th. GEORGE W. WHITELEY, M.R.C.S.

SIR,—If legislation on the so-called "midwives question" be unavoidable, I would suggest to our direct representatives on the General Medical Council that the term "midwifery nurse" be insisted on, and, further, that the parturient woman herself should select the doctor she wishes to call in; the "midwifery nurse" should not be consulted in the choice.

These two points should be clearly and definitely stated in any draft parliamentary Bill.—I am, etc.,

Prestwich, Nov. 4th. E. T. Larkam.

## THE MIDWIVES QUESTION.

Sir,—I am obliged to Mr. Humphreys for his letter in the British Medical Journal of November 2nd. I am not aware of any case in which a midwife has been prosecuted for attending midwifery. I have never "tested the monopoly question" as he imagines. Under the existing state of the law any person can practise midwifery "at his peril" provided reasonable care and skill is exercised, but where gross ignorance is shown criminal prosecution can follow, or an action for damages will lie. The distinction between actionable and criminal negligence cannot be defined, according to Glynn, except so far as to say that to constitute the latter there must be such a degree of complete negligence as is meant in law by the word "felonious." Many midwives have been prosecuted criminally and sentenced under an indictment for felony due to gross negligence; but, as I stated before, both the qualified and the unqualified are equal in the eyes of the law in this respect.—I am, etc.,

Queen Anne Street, W., Nov. 4th. A. G. Bateman.

## THE ORIGINAL OBJECT OF THE MIDWIVES BILL.

Sir,—Dr. F. R. Humphreys, instead of dealing with the main issues of my letter, prefers to give Dr. Bateman fifty lines, Dr. MacLean nine, and myself only ten, and declines, like his predecessors, to say whether he does or does not approve of these women signing themselves "L.O.S.," under the excuse that it was a side issue, whereas the real issue is, Have not these women presumed as far as they can to pass as doctors, and to sign themselves as L.O.S., and had diplomas until they were abolished by the General Medical Council; and is not the Midwives Bill intended for their promotion and to increase their importance?

The words he quotes were contained in my letter in the British Medical Journal of October 5th, p. 1017, when the Chairman, General Sir F. Fitz-Wygram, spoke as follows:

> This resolution materially affected the present qualified midwife, and through her the public. Accordingly, acting on the assumption that the resolution would have the effect of nullifying the efficacy of the diplomas already granted by the Obstetrical Society and other kindred bodies to duly-trained midwives, it was of paramount importance that a Bill should at once be presented to Parliament providing for the examination and registration of midwives.

Dr. Humphreys concludes by saying:

> The question of the value of the Obstetrical Society's certificate has nothing to do with the necessity for legislation, and is a side issue into which I decline to be drawn.

This section of the discussion began upon my letter, p. 1017, which to a great extent deals with the Society's then "diploma." Dr. Humphreys lectures to, and has lectured to, women to enable them to obtain the "L.O.S.," and now he dare not tell us in plain English whether he does or does not approve of their using this title which is "calculated to deceive the public"!—I am, etc.,

Manchester, Nov. 2nd. G. H. Broadbent.

## PUERPERAL FEVER AND GENERAL PRACTITIONERS.

Sir,—The only statistical definition of "puerperal fever" of which I know is that of the Registrar-General of Births and Deaths, and which is as follows:

> Whenever childbirth has occurred within one month before death the fact should invariably be certified, even though it may be believed that the childbirth has no connection whatever with the cause of death.

How many of Dr. Byers's maternity hospitals carry out this rule? Not one! He refers to the statistics of the Rotunda. When, some years ago, I inquired into these statistics I found that the majority referred to women who had been confined within the week; that is the statistics related to seven days, and not to thirty days, as in the above regulations. Again, I then found that if a puerperal fever patient had to be removed from the Rotunda to some other hospital and died there, no statistical record of this was made in the Rotunda statistics. Again, when giving evidence before a Select Committee of the House of Commons, I referred to a hospital where no less than 66 per cent. of these women who died within the thirty days was absolutely unnoticed in the official returns.

I am fully aware that the training of students in practical obstetrics is not what it should be. For this reason I advocated the opening of the Poor-law infirmaries for the use of senior medical students; and succeeded in inducing the General Medical Council to increase the requirements upon the subject. This, however, has nothing now to do with Dr. Byers's allegations.—I am, etc.,

Liverpool, Oct. 18th. Robert R. Rentoul.

## THE PHYSICAL STANDARD OF ARMY CADETS.

Sir,—Your editorial of September 28th and the thoughtful letter of Dr. H. Campbell in the British Medical Journal of October 12th might with advantage initiate an all-round discussion on our methods of physical training, the standards we ought to observe, and the ideals at which we should aim.

It is now some years since my ideas on the value of the ordinary gymnastic training were very rudely disturbed by an able monograph on the subject by a French physician, Dr. Caminade. Till then I had entertained the same favourable notion of its merits as the majority of those who look with mingled awe and wonder at the feats the proficient can perform on the rings and parallel bars; but Caminade's arguments convinced me that the whole system was faulty from the practical as well as the scientific aspect, and that mere bulk of muscle acquired without proper balance and an equivalent respiratory efficiency was of very doubtful advantage.

By comparing the human skeleton with a martin's (a flying bird) and an ostrich's (a running bird), Caminade shows how much more it resembles the latter than the former. A man's shoulder girdle is loosely strung together, and designed for mobility; his pelvis, being intended for immobility and resistance to the powerful muscles of progression, is soldered together. Now, the ordinary training of a gymnasium ignores all this, and tasks the mechanical dispositions of the skeleton with feats for which they are not designed. Its methods are unphysiological, and the results must be vicious.

The ordinary feats of difficulty to which the gymnast aspires—the short and straight arm balance on the parallel bars, swinging by the arms, climbing ladders and ropes in constrained and uncomfortable positions—mean a forcible fixation of the joints of the shoulder girdle and thorax, constriction of the glottis, and a great strain on the vascular system. Such a training is purely acrobatic, and should be reserved for a few professionals whose performances could be witnessed at a circus by those interested in them. Nature intended man to walk on his feet—not on his hands; and if occasionally he requires to go hand-over-hand up a rope, he had better do it with his feet hanging down than sticking out at right angles to his body!

In addition to the evils mentioned above, Caminade points to the typical heavy-shouldered and thick pectoral (gynæcomastic) development of the practised gymnast, which, with the slight permanent flexion of the arms, makes up an ugly picture of one-sided development—a result gained, too, at the expense of lung elasticity and thoracic mobility. These last two he rightly considers of the first importance in bodily training, and he points out that in order to develop these to the best advantage we must have recourse to the massive musculature attached to the pelvis. Running in the open, for example, is the best training for the lungs of youth, as well as the best test of the "wind."

It would be well if we would realise that a great bulk of muscle acquired by special and highly artificial exercise is of little benefit to its possessor. Probably each of us has his optimum muscular development to be acquired under favouring circumstances of fresh air, good food, good health, and a due attention to the various outdoor exercises and games commonly in favour, while any extra muscular development obtained by special means is apt to melt away unless the exercise which produced it is constantly kept up.

For the young who are weakly and deformed systematised gymnastics may be of advantage; but they should not be of the kind in which rings, parallel bars, and trapeze play the principal part. These minor fetishes of our educational system should be abolished in the routine training of the young, whether sound or unsound; and, if "gymnastics" are required at all, they should be based on an appreciation of the prime importance of respiratory efficiency, of the

"kinetic" function of the shoulder-girdle, and the relegation of "static" feats to the part of the frame which Nature designed to undertake them.—I am, etc.,

Cheltenham, Oct. 14th. ERNEST C. CARTER.

## THE DUTIES OF THE M.O.H. AS TO THE DIAGNOSIS OF INFECTIOUS DISEASES.

SIR,—There can be no doubt that your opinion is right, namely, that it is no part of the duties of a medical officer of health, as set forth by an order of the Local Government Board. It is only reasonable, however, to expect any medical officer of health who has had experience of the diagnosis of infectious diseases to be ever ready and most willing to place his experience at the disposal of any medical man who may seek it and also in the vital interests of the public health. Some forms of modified small-pox are easily mistaken. As a medical officer of health for over twenty years I have always been ready to assist any medical man in a doubtful case. In regard to small-pox I have saved the public from a small-pox scare. In my opinion whole-time appointments as medical officers of health should only be given to men who have had considerable experience in the diagnosis of infectious disease and who could command the confidence of medical men.—I am, etc.,

Bacup, Oct. 29th. JOHN BROWN, M.O.H., M.D.Vict.

# OBITUARY.

## ALEXANDER HUGHES BENNETT, M.D., F.R.C.P.LOND.,

Consulting Physician to the Hospital for Epilepsy and Paralysis; formerly Physician to the Westminster Hospital.

DR. A. HUGHES BENNETT died at his residence in Bayswater on November 1st, at the age of 53. He was the only son of the late Professor John Hughes Bennett of Edinburgh, and received his education at the University of Edinburgh, where he graduated M.B. and C.M. in 1869. He studied also in London and Paris, and in 1872, when he took the degree of M.D., he received the gold medal for a thesis on the Physiological Actions of Theine, Caffeine, Guaranine, Cocaine, and Theobromine. After spending two years in the service of the Peninsular and Oriental Steamship Company he settled in London, and became a Member of the Royal College of Physicians in 1876. He devoted himself particularly to the study of diseases of the nervous system, was Physician to the Hospital for Epilepsy and Paralysis, Regent's Park, and one of the original members of the Neurological Society. To *Brain*, the journal issued by that Society, most of his more important contributions to medicine were made; its earliest volume contains a paper by him on Metalloscopy and Metallotherapy, in which he crossed swords with the Charcot school. He had already written upon the same subject in the BRITISH MEDICAL JOURNAL. For some years afterwards almost every volume of *Brain* contained articles by him. In the fifth volume (1882-83) there was a paper entitled Practical Observations on Electro-Diagnosis in Paralysis, and in 1882 he published a *Practical Treatise on Electro-Diagnosis in Diseases of the Nervous System*, together with another volume of *Illustrations of the Superficial Nerves and Muscles with their Motor Points*. In 1884 he published a work entitled *A Statistical Inquiry into the Nature and Treatment of Epilepsy*. A paper on Muscular Hypertonicity, published in *Brain* (Vol. x, 1887-88) was subsequently reprinted in a work entitled *Muscular Hypertonicity in Paralysis*.

He had been appointed Medical Registrar to the Westminster Hospital in January, 1876, and Assistant Physician in June, 1877. In 1885 he was elected a Fellow of the Royal College of Physicians, but the successful and useful career which seemed to be opening before him was brought to an end by the disabling effects of a most painful nervous disorder, and the way in which this wrecked his life is described below by the sympathetic pen of one of his oldest friends. In 1893 he resigned his appointment at the Westminster Hospital, and subsequently lived a secluded life, retaining his keen interest in all medical matters, never losing the affection of friends whom he had formed in happier days, and winning the esteem of all with whom he was thrown into contact.

He was present last July at the opening of the Hughes-Bennett Laboratory of Experimental Physiology given by his sister, Mrs. Cox, to the University of Edinburgh, and was cheered by the thought that his father's work would thus be permanently commemorated in the University which he served so long.

We are indebted to an old and intimate friend of his for the following note: I knew him intimately from the time when he first came to London in 1874 or 1875 and counted him among my most valued friends. After a brilliant career as a student at Edinburgh University he was chosen President of the Royal Medical Society there, a post which I believe has been always regarded as one of exceptional honour. He had in a great degree the trenchant intellect and the forensic talents of his famous father, and I have often been told how ably he conducted the proceedings and joined in the debates of the society during his presidency. On coming to London he at first had everything in his favour, and gave high promise of a successful or even brilliant career. He was greatly interested in the physiology and pathology of the nervous system, and by persistent and laborious study soon made himself master of all the most important European literature of the subject. He had prepared before long a mass of well-thought-out and admirably-ordered material for future possible lectures or for a treatise; much of this manuscript I read at the time with great interest and advantage to myself in my own subsequent work of teaching. But almost at the outset of the active career he had marked out for himself in London he began to suffer from an affection of his own nervous system, which in the course of several years, and after hard and courageous struggling with increased pains and disabilities, at last obliged him to abandon all hope of following his profession either as a scientific worker or as a practising physician. His malady was, as far as I know, never definitely diagnosed either by himself or any of the numerous eminent men in England and the Continent from whom he from time to time sought advice or possible relief Its main symptomatic characters were crises of pain like those which so often signalise tabes dorsalis, but almost, if not quite, to the end of his life there was an absence of all overt evidence of the disease other than these attacks of pain. For more than twenty years he thus suffered and struggled, often during the intervals of pain, rarely as long as a few weeks in duration, doing zealous and active work. In the earlier part of this period he made considerable advance in private practice which would have inevitably proceeded to good success had his malady not surely tended to become worse as time went on. It was very long before he lost heart; for years he looked forward for better times as no new symptoms developed. Only his intimate friends, I think, realised the full extent of his sufferings, and the bravery with which he combated and at last endured the pain which so wrecked his life. He was a man of strong intellect, strict integrity, the kindest disposition, an honest antagonist when need was in matters medical, and a true comrade always. His friends, while recognising that his life was but a long disease, and feeling too a sad satisfaction that he suffers no longer, cannot fail to miss the bright and interesting companionship with him which up to almost the last was from time to time to be enjoyed.

## HENRY SPENCER SMITH, F.R.C.S.,

Consulting Surgeon to St. Mary's Hospital, London.

EARLY in the morning of October 29th, Henry Spencer Smith passed peacefully away at his home in Oxford Terrace, Paddington, in his 89th year. He was the last of the 150 Fellows who were chosen in 1843, at the time of the original constitution of the Fellowship of the Royal College of Surgeons. In 1867 he was elected a member of the Council of the College; but on the expiration of his term of office, in 1875, when he stood for election for the second and last time, he took only the fourth place on the poll, and so failed to retain his position, the successful candidates being Messrs. Prescott Hewett, Cooper Forster, and John Birkett. In 1872 he was elected a member of the Court of Examiners to the College.

The chief part of his professional education was obtained

at St. Bartholomew's Hospital, where he entered as a pupil of Mr. Skey in 1832. He became a Member of the College in 1837, and after six months study in the Paris hospitals he returned to London and became House-Surgeon at his Alma Mater. On the completion of his term of office as House-Surgeon he worked (1839-41) at German and at Science in Berlin. Subsequently, he undertook the translation of Schwann's *Microscopic Researches into the Accordance in the Structure and Growth of Animals and Plants*, his book having the well-merited honour of being published by the Sydenham Society. In 1851, when St. Mary's Hospital was established, Spencer Smith was appointed the senior of its three Assistant Surgeons, his juniors being Haynes Walton and James Lane, and his seniors on the surgical staff being William Coulson, Samuel Lane, and Alexander Ure. Three years later the Medical School of St. Mary's Hospital was instituted, and Spencer Smith was chosen by his colleagues to fill the important post of Dean. For six years he worked heart and soul in the interest of the young medical school, closely superintending its construction, and bringing together and looking after its earliest students. The duties of the Deanship he carried out with unflagging devotion and complete success, and on his handing them over to his friend and successor, George Gascoyen, his colleagues marked their sense of approval and gratitude by presenting him with an illuminated address.

For a period of about seventeen years Spencer Smith was one of the Lecturers on Surgery in the young medical school, but, at least in the later part of that time, the delivery of his lectures became somewhat irksome to him, and his best efforts at a punctual fulfilment of the duties of the lectureship were apt to be unattended with success.

Having a few lines above mentioned the names of his first colleagues on the surgical staff, it might be well to say who were appointed at the same time on the medical side—they were, then, Alderson, King Chambers, Sibson, Handfield-Jones, Sieveking, and Markham, with Tyler Smith, Toynbee, and White Cooper in other departments of the hospital work. Looking back one cannot but feel that this was a strong staff, and that much of the success that the medical school of St. Mary's Hospital has since enjoyed must be ascribed to the excellence of the selection of its first teachers, and to the wisdom, industry, and perseverance of their first Dean. For half a century he continued to take a keen interest in the steady progress of the school, and in the growth of the hospital to which for twenty five years he had been Consulting Surgeon.

In addition to holding the appointments already mentioned, Spencer Smith was for six or seven years Surgeon to the Aldersgate Street General Dispensary, and Lecturer in Surgery at Samuel Lane's School of Medicine in Grosvenor Place. He was a member of the Commission appointed by Government to inquire into the question of venereal disease as affecting the army and navy, and to this Commission he acted also as Secretary. He was for four and a-half years Secretary to the Royal Medical and Chirurgical Society, becoming shortly afterwards one of its Vice-Presidents. Moreover, he spent a great deal of time and energy in the interests of that excellent and deserving institution, the Royal Sea Bathing Hospital at Margate.

Thus, it is evident that the subject of this notice was by no means an inactive member of the medical profession; nevertheless it cannot be said that he was an enthusiastic worker in either the science or the practice of surgery. He never laid himself out for consulting work, and being happily placed outside the need of obtaining private patients, he found himself the freer for indulging in more congenial occupations. Not only was he a diligent student of literature all his life, but, before everything, he was a book-lover and a book-collector. He had a great knowledge of the authors of the eighteenth and early nineteenth centuries, and he was a specialist in the matters of the various editions of Izaak Walton and of Thomas à Kempis, the two authors whom he most loved. To say who were his favourite writers is almost to say what manner of man Spencer Smith was: he led a quiet, contemplative life, doing numberless kind acts in an unobtrusive way. He was sensitive and gentle to the last degree. He could never have done a shabby action or have said what was not true: to describe him in the fewest words, one would say that he was an old-fashioned English gentleman. He had plenty of prejudices—strong likes and dislikes—and he was apt to express himself bitterly and incisively with regard to persons and acts which he took to be mean, unworthy or dishonest. Having a great knowledge of men and of things, his advice was often sought by those in temporary need of guidance, and no one ever gave more willing or able counsel. Those of his old students who hold him in affectionate remembrance—and they are many—who may, by chance, read this notice of their deceased friend, will probably agree with the writer in thinking that it falls far short of expressing what might be said of "Old Spencer." But had it been penned with a warmth of language adequate to the subject, it might possibly have appeared to the general reader as overdone and exaggerated. But those who knew him as friend or teacher, or both, will for themselves readily supply the deficiencies and join in saying *sit levis terra!*

Spencer Smith has left a widow, and a son and a daughter by his first wife. The son is a retired colonel in the Indian Medical Service and the daughter is married to a colonel of the Royal Engineers.

E. O.

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## HENRY DUNCALFE, M.R.C.S., L.S.A.,

Sutton Coldfield.

An old personal friend of the late Mr. Henry Duncalfe, to whose recent death reference was made in the British Medical Journal of October 26th, 1901, p. 1303, has furnished us with further particulars of his interesting personality. He writes: "He was in many respects a remarkable man, and one of those members of our profession who, like the late Vincent Jackson...threw himself into public life to the benefit of the public and the credit of the profession." He was born at Walsall in 1828, and educated at the Grammar School of that town. After serving an apprenticeship to one of its leading practitioners he entered at Guy's Hospital. He took the diplomas of M.R.C.S. and L.S.A. in 1851, and at once entered on general practice in West Bromwich. Through his professional ability, conjoined with a kindly and sympathetic manner, he quickly secured a large practice. It was at one time so large that he had three partners. While at West Bromwich, during a term of twenty-three years, Mr. Duncalfe devoted himself entirely to his profession, but on retiring in 1874 he went to reside in Sutton Coldfield, and began to take an active interest in public affairs. In 1876 he became a member of the Old Society—the prototype of the Town Council—dating from the reign of Henry VIII; in 1881 he was elected Warden or Chief Magistrate of the royal town, and he was re-elected until 1885, when the old corporation was dissolved and Sutton Coldfield received a new charter and became a borough. He took a great interest in education, being for twelve years one of the Governors of the Grammar School, and for several years its Chairman. He was also Chairman for a considerable period of the Municipal Charity Trustees. He was largely instrumental in establishing the Art School in the borough and in founding the Vesey Club. He was one of the first to be placed on the Commission of the Peace for the borough, and he also served as a county magistrate on the Birmingham Grand Jury. It has been said of him that he was endowed with a generosity known perhaps only to his friends, and that he took a pleasure in doing good. By his courtesy and integrity of purpose he won for himself the regard and esteem of everybody with whom he was associated in the public life of the town.

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Professor Marcell Nencki, of the St. Petersburg Institute of Experimental Medicine, one of the first biological chemists of the day, died after a short illness at the age of 54, on October 1st. He was born and received his early education in Piotkrow. At the age of 17 he entered the University of Cracow as a student of philosophy, and he studied afterwards at Jena and in Berlin. In 1867 he turned his attention to the natural sciences and to medicine. He worked at organic chemistry with Baeyer, but was especially attracted in association with Frerichs's clinic to the subject of medical chemistry. For a time he acted as Assistant to Frerichs, Naunyn, and Schultze. In 1870 he obtained the degree of Doctor of

Medicine from the University of Berlin. In 1872 he became Assistant in the Pathological Department of the University of Berne. Before long he became *Privat-docent* in Medical Chemistry; a little later he was appointed Honorary Professor, and eventually ordinary Professor and Superintendent of the University Department of Medical Chemistry. He continued his work in Berne for twenty years. His laboratories were occupied by a succession of distinguished workers. In 1891 he entered on his duties in St. Petersburg at the Institute for Experimental Medicine. His best known work issued from there was on the alkaloids of putrefaction, on the ptomaines of the alimentary tract, and in general on the chemical aspects of bacteriology. He also did important work on rinderpest and its prophylactic vaccination.

We regret to report the death, at Edinburgh, on Thursday, October 24th, of Dr. WILLIAM JOHNSTONE MARSHALL, who for more than forty years carried out the duties of a large practice at Greenock, from which he retired on account of failing health some three or four years ago. A native of Greenock, he was educated in the old Grammar School of that town, and afterwards in the Arts Faculty of Glasgow University. From this he proceeded to the study of medicine in the University of Edinburgh, where he graduated M.D. in 1855, taking at the same time the Licence of the Royal College of Surgeons. While yet a student he acted as House Surgeon for a year at Greenock Infirmary, and after graduation he studied for six months in Paris. After settling down to practice in his native town he became one of the Physicians to the hospital, a District Surgeon under the Parochial Board, one of the founders of the Greenock Philosophical Society, and later its President; a member of Committee and President of the Greenock Library, a member of the School Board, and a worker in every philanthropic agency, such as the Working Boys' Society and the House of Refuge. He had a large practice; was a skilful, careful, and successful physician; had the confidence and affection of his patients, the respect and admiration of his professional brethren, and of all with whom he came in contact. He was a widely-read man in general literature. When he retired from Greenock his fellow practitioners presented him with an address expressive of their esteem and of their great regret at his departure.

The news of the death of Dr. CHARLES MOIR ROBERTSON, of Airlie Bank, Dundee, who was killed in action at Whitbank on October 25th, was sent home by his brother, Captain James Huntly Robertson, of the Bushveldt Carabineers. Dr. Robertson was born in Dundee, and was only 26 years of age at the time of his death. He was educated at the Dundee High School, Dundee University College, and the University of Edinburgh, from which he received the degrees of M.B. and Ch.B. in 1899. He held resident hospital appointments in Liverpool and Oldham, and subsequently in the small-pox department of the Metropolitan Fever Hospital. He relinquished this appointment to join the forces at the front, and left for South Africa on August 31st last. The penultimate information received of him was that he was engaged at the No. 2 Hospital, Pretoria. Much sympathy is felt with the family in their bereavement.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## ROYAL NAVY MEDICAL SERVICE.

SURGEON ROBERT HILL is promoted to be Staff Surgeon on the occasion of the return of their Royal Highnesses the Duke and Duchess of Cornwall and York in the *Ophir* from the royal visit to the Colonies, November 7th.

The following appointments have been made at the Admiralty: WALTER H. S. STALKARTT and ALFRED W. WOOLLCOMBE, Surgeons, to the *Amphitrite*, for the voyage home, undated; CHARLES S. BENNETTS, Surgeon, to the *Fearless*, November 26th; WILLIAM W. KEIR, Surgeon, to the *Lion*, November 26th; WILLIAM H. POPE, Surgeon, to the *Rinaldo*, November 27th; GEORGE ROSS, Surgeon, to the *Juno*, November 27th; SIDNEY T. REID, Surgeon, to the *Talbot*, November 28th; GERALD M. EASTMENT, Surgeon, to the *Glance*, November 25th; JOHN C. ROWAN, Surgeon, to the *Mutine*, November 28th; CHARLES STRICKLAND, Staff Surgeon, and ROBERT J. MACKEOWN and JOHN H. JONES, Surgeons, to the *Amphitrite*, November 2nd; RICHARD A. FITCH, Surgeon, to the *Juno*, November 2nd; THOMAS C. MEIKLE, Surgeon, to the *Excellent*, November 2nd; RICHARD R. HORLEY, Surgeon, to the *Britannia*, for the *Racer*, lent, November 2nd; JOHN D. HUGHES, Staff Surgeon, to the *Amphitrite*, November 4th.

## ROYAL ARMY MEDICAL CORPS.

SURGEON-GENERAL A. F. PRESTON, temporarily Director-General Army Medical Service, is appointed an Honorary Physician to the King, *vice* Surgeon-General W. A. Thomson, retired pay, deceased. Surgeon-General Preston's commissions are thus dated: Assistant Surgeon, September 30th, 1863; Surgeon, March 1st, 1873; Surgeon-Major, April 28th, 1876; Brigade-Surgeon, November 30th, 1886; Surgeon-Colonel, March 28th, 1892; and Surgeon-Major-General, March 30th, 1896. He was in medical charge of the 66th Regiment in the Afghan war in 1880, and was in the actions at Girishk and Maiwand, where he was dangerously wounded, and throughout the defence of Kandahar; he was mentioned in despatches, promoted to be Surgeon-Major with relative rank of Lieutenant-Colonel, and received the Afghan medal. He is in receipt of a reward for distinguished service, granted him in June last.

Lieutenant-Colonel H. J. M'LAUGHLIN, M.B., retires on retired pay, November 6th. He was appointed Surgeon, February 3rd, 1878; Surgeon-Major, February 3rd, 1890; and Lieutenant-Colonel, July 27th, 1901.

Captain R. E. G. PHILLIPS is seconded for service with the South African Constabulary, March 17th.

Captain D. D. SHANAHAN sustained a gunshot wound in the right hip during the fighting near Kleifontein, South Africa, on October 24th.

The undermentioned officers have been discharged to duty from hospital in South Africa: Major R. J. GEDDES, Lieutenant A. O. B. WROUGHTON, Civil Surgeons T. W. MCGEORGE, S. ADYE CURRAN.

Major R. HOLYOAKE left Natal for Bombay in the *Armenian* on November 3rd, in attendance on Boer prisoners.

The following are on passage home: Colonel J. L. NOTTER, Lieutenant-Colonel S. H. CARTER, Major R. G. HANLEY, Lieutenant J. W. LEAKE, Civil Surgeons J. MCMURRAY, R. C. MACDONALD, H. H. G. KNAPP, J. A. H. BRINCKER, W. J. MOIR, C. V. B. STANLEY, W. POMEROY, J. E. SANDILANDS, C. W. HOWE. Returning invalided: Colonel H. GRIER, Surgeon-Major R. C. PERKINS (Kitchener's Fighting Scouts), Civil Surgeon H. H. HARTLEY (Lrrd Lovat's Corps).

## INDIAN MEDICAL SERVICE.

LIEUTENANT COLONEL J. M. ZORAB, M.B., Bengal Establishment, is permitted to retire from the service from October 9th. He was appointed Assistant-Surgeon, March 30th, 1872, and became Surgeon-Lieutenant-Colonel, March 30th, 1892.

The undermentioned Majors, having completed twenty years' full-pay service, are promoted to be Lieutenant-Colonels from October 1st:—*Bengal*: J. B. GIBBONS, D. ST.J. D. GRANT, M.B., D. G. CRAWFORD, M.B. *Madras*: R. B. ROE, J. SMYTH, M.D., H. GREAMY, M.D., E. P. YOUNGERMAN, M.B. Of these, Lieutenant-Colonel Grant was in the Akha Expedition in 1883-4; Lieutenant-Colonel Smyth was in the Soudan campaign in 1885, including the actions at Hasheen and Toireck and the destruction of Temai, where he was wounded (medal with two clasps, and Khedive's bronze star); Lieutenant-Colonel Youngerman was in the Burmese Expedition in 1885-6 (medal with clasp). The other officers cited have no war record in the *Army Lists*.

The following Captains, having completed twelve years full-pay service, are promoted to be Majors:—*Bengal*: H. B. MELVILLE, M.B., J. C. S. VAUGHAN, M.B., A. L. DUKE, M.B., J. CHAYTOR-WHITE, M.D., H. W. ELPHICK, M.B., C. H. BEDFORD, M.D. *Madras*: C. L. WILLIAMS, M.D., W. C. VICKERS, M.B. *Bombay*: J. B. SMITH, M.B., H. F. CLEVELAND. Major Melville was engaged in the operations in Lushai in 1890; Major Vaughan was with the two Miranzai expeditions in 1891 (medal, with clasp); Major Chaytor-White was with the Chitral relief force in 1895 (medal with clasp); Major Elphick with the Manipur expedition in 1891 (medal with clasp); Major Williams in the operations on the North-East Frontier of Burma in 1891-2. The other officers mentioned have no war record.

The promotion to be Captains of the undermentioned Lieutenants, which has already appeared in the BRITISH MEDICAL JOURNAL, has received the approval of the King: T. HUNTER, M.B., W. R. BAITYB, H. B. MEAKIN, M.D., G. HUTCHESON, W. G. LISTON, M.B., H. BOULTON, R. W. ANTHONY, M.B., E. F. G. TUCKER, G. E. STEWART, M.B., F. S. C. THOMPSON, M.B., T. S. NOVIS, J. W. WATSON, M.B., H. J. R. TWIGG, M.B.

The retirement from the service of Lieutenant-Colonel S. THADDEUS AVETOOM, Bombay Establishment, which also has previously appeared in our columns, has likewise received the King's sanction.

## MILITIA MEDICAL STAFF CORPS.

MR. MONTAGUE A. CHOLMELEY is appointed Surgeon-Lieutenant, November 2nd.

## IMPERIAL YEOMANRY.

MR. F. E. FREMANTLE, M.B., is appointed Surgeon-Lieutenant in the Herts Yeomanry, November 2nd.

## THE VOLUNTEERS.

SURGEON LIEUTENANT L. L. HANHAM, 2nd Devon Artillery (Western Division Royal Garrison Artillery), is promoted to be Surgeon-Captain, November 2nd.

Surgeon-Lieutenant-Colonel R. F. COOK, M.B., 1st Newcastle-on-Tyne Royal Engineers (Volunteers), retires under Paragraph 111 Volunteer Regulations, retaining his rank and uniform, November 2nd.

Mr. W. M. Stevens, M.D., is appointed Surgeon-Lieutenant in the Submarine Miners (Severn Division) Volunteer Engineers, October 26th.

Surgeon-Lieutenant F. NORMAN, 4th Volunteer Battalion the Queen's (Royal West Surrey Regiment), is promoted to be Surgeon-Captain, October 26th.

Mr. J. G. MARTIN, M.B., is appointed Surgeon-Lieutenant in the 2nd Volunteer Battalion the King's (Liverpool Regiment), October 26th.

## VOLUNTEER MEDICAL STAFF CORPS.

CAPTAIN H. D. MASON, Royal Army Medical Corps, is appointed Adjutant to the Manchester Companies, on the increase of the establishment, October 11th.

### RETIREMENT OF SURGEON-GENERAL O'DWYER.

THE following order was recently issued by Surgeon-General O'Dwyer, who is about to retire from the army after a service of 37 years :

"Surgeon-General O'Dwyer being about to retire from the army after having officiated as Principal Medical Officer, and in command of the Royal Army Medical Corps in the Aldershot District for more than five years, desires to thank all the officers, warrant and non-commissioned officers and men of the corps, also those of the Militia Medical Staff Corps, volunteer and civil surgeons, now serving, or who have served under his command, for the cordial support and assistance they have always given him in carrying on the medical and sanitary duties of the command. The responsibilities at Aldershot are never small, and have been much increased by the war still in progress in South Africa, and it reflects credit on the Medical Service that with a very reduced establishment it has been possible to carry on the duties in such a satisfactory manner."

On October 25th Surgeon-General O'Dwyer was entertained at a complimentary luncheon by the members of the District Council on which he has served for some years. The toast of Surgeon-General O'Dwyer's health was given by the Chairman of the Council, and Surgeon-General O'Dwyer in reply said that since he had been a member of the Council a medical officer and a surveyor had been appointed to devote themselves solely to the duties of these offices. He was much indebted to the medical officer for the help given in preventing the spread of the disease to the camp. He was of opinion that both these officers should be paid good salaries, and he did not consider that they were yet paid in accordance with the work done.

### HONOURS IN CHINA.

SOME comment has been excited by the fact that the Principal Medical Officer of the North China British Field Force engaged in the relief of the Pekin Legations, during which there was severe fighting and many casualties, should have received the C.I.E., which is generally understood to be reserved for services within the Indian Empire. It is felt that this officer might properly have received the C.B., an honour which was liberally given to the forces which served during the later operations.

### INDIAN MEDICAL SERVICE.

L.M.S. writes to express the opinion that one of the causes of the present discontent prevalent in the Indian Medical Service is that medical officers are appointed to regiments in a haphazard way; he thinks that regard should be had to seniority in selections for these appointments.

## MEDICO-LEGAL AND MEDICO-ETHICAL.

### A BEGGING-LETTER IMPOSTOR.

A PERSON calling himself Bruno von Kohnfeldt, described as a German doctor of medicine, was recently convicted before Mr. Denman at the Marlborough Street Police-court for endeavouring to obtain charitable contributions by false pretences. The prisoner had written a begging letter in the name of the Senior Wrangler of the year to which the gentleman he addressed belonged. The prisoner was sentenced to twelve months imprisonment with hard labour.

### AN AURAL QUACK.

ACCORDING to *Truth* the John Henry Nicholson who was recently convicted of fraud by means of certain ornithological competitions, and sentenced to eighteen months hard labour, is the same person as the "Dr." J. H. Nicholson, who at one time described himself as an aural surgeon, and who under various trading names has been advertising an aural institute or an artificial ear drum for many years past.

### CHARGE OF MANSLAUGHTER: VERDICT OF ACQUITTAL.

AT the last session of the Central Criminal Court, Absolom William Head, aged 53, described as a medical assistant, was indicted for manslaughter. From the evidence it appeared that Head started practice at Silvertown, posing as a M.R.C.S., surgeon, dentist, and accoucheur, and upon these representations attended Michael Guiry, a labourer, diagnosing his case to be phthisis and dysentery. Head was unqualified, and later a qualified practitioner was summoned, but not in sufficient time to prevent death, which took place within a few hours. The actual cause of death was peritonitis resulting from a perinephric abscess, and it was contended by the prosecution that Head was responsible for the death owing to his want of reasonable care and skill. Medical evidence, including that of Dr. Arthur Luff, F.R.C.P., was called by the Treasury, who prosecuted.

The Recorder, in addressing the jury, said that the mere fact that the prisoner was not a qualified medical man was not sufficient of itself to convict him upon the charge, particularly if the prisoner was only guilty of an error of judgment. The jury acquitted the prisoner, but made a presentment to the Court that no efforts should be spared to make it impossible for unqualified medical men to jeopardise the health of the public by indiscriminate treatment.

The Recorder pointed out that the prisoner might still be prosecuted, and probably would be, for acting as a medical man when he was not duly qualified, and said that under the Medical Acts the accused was liable to a fine of £20. The prisoner was accordingly discharged.

### PROSECUTION FOR ISSUING A FALSE CERTIFICATE.

WE learn from the *Pendleton Reporter* of October 26th that Charles Allen Threadgale, 121, Upper Brook Street, Manchester, was summoned under the Births and Deaths Registration Act for issuing a false certificate of death, he not being a properly-qualified medical practitioner. The defendant did not appear. Mr. F. Townson said he was Superintendent Registrar of the Salford Union, and the circumstances of this case had been reported to the Registrar-General, who authorised him to proceed. The defendant had attended a Mrs. Brown as her medical man. She died, and he had issued a certificate of death. The stipendiary said he would grant a warrant for the defendant's arrest.

### MEDICAL ETIQUETTE IN CERTAIN COLONIES.

A MEMBER residing in a small British colony where there is no Medical Act or Medical Board, and therefore no registration of medical men or any provision for examination into charges against them of unprofessional conduct, and where even no system of death certification exists, writes to say that he met in consultation a local practitioner claiming to be M.D. of an American university whom he subsequently discovered was regarded with disfavour by other medical men in the colony on the ground that on his first coming he had advertised in the local papers. He wishes to know whether a graduate of a British university is justified in consulting with any practitioner who has not a qualification or degree which is registrable in the United Kingdom?

*** It would be impossible to apply such a rule in many British colonies where medical men possessing all sorts of foreign medical diplomas are allowed to practise. In those colonies where no Medical Boards exist, the resident medital practitioners should form associations having for their object to make all local members of the medical profession conform to an ethical standard under the penalty of being refused professional recognition.

### MEDICAL ETIQUETTE.

W. J. M. (New Zealand) has submitted the following case to us: A. and B. are two medical men practising in the same town, and C is a patient who is progressively becoming worse (malignant disease of liver). A. had attended C. for several months, sometimes at her own house, and sometimes in his consulting-room. A. had occasion to leave home for a few days, but, as he had two partners, left ample provision for C.'s care. C.'s family being very anxious about her, she and they took advantage of the absence of A. to get another opinion, and so consulted B., who, without any communication with A., sent her to hospital. Here it fell to the lot of W. J. M. to determine whose patient she was. He decided according to the principles laid down on fol. 25 of *Medical Etiquette* by "L.R.C.P.," that B. committed a breach of medical ethics by acting as he did and sending the patient to hospital in the absence of A.; that he ought either to have proposed a consultation with A. on his return, or have sent the patient back with a written statement of his opinion; and that C. was, correctly speaking, A.'s patient. He asks us to say whether he was right in his decision.

*** Upon the facts as stated above we are of opinion that our correspondent decided correctly.

### LICENCES FOR CARRIAGES AND GROOM.

DOMBEY writes that he has recently purchased a practice and has taken over his predecessor's driving stock, two carriages, and continues to employ the same groom. Although his predecessor took out the proper licences for the year, which hold good till January next, a claim has been made by the Post Office on our correspondent for fresh licences for the current year. Is he liable?

*** It is to be feared that our correspondent will have to pay, such licences not being transferable.

### AGREEMENTS FOR SALE OF PRACTICE.

J. D., who has recently sold his practice by private arrangement, desires to know how he can obtain a "form of agreement," and what the cost would be.

*** No such agreements can be obtained. If our correspondent is wise he will have a proper deed drawn up by his solicitor, setting out all the conditions of sale.

## UNIVERSITIES AND COLLEGES.

### ROYAL COLLEGE OF PHYSICIANS.

AN ordinary Comitia was held on Thursday, October 31st, the President, Sir William S. Church, M.D., Bart., in the chair.

*Admission of Members.*

The following gentlemen, having passed the required examination, were admitted Members of the College:—Robert Hamilton Bell, M.A., M.B. Camb., L.R.C.P.; Leonard Stanley Dudgeon, L.R.C.P.; Charles Henry Fennell, B.A., M.B.Oxford, L.R.C.P.; David Nunes Nabarro, M.D.Lond., L.R.C.P.; Frank Charles Shrubsall, M.A., M.B.Camb., L.R.C.P.; William Mitchell Stevens, M.D.Lond., L.R.C.P.; Septimus Sunderland, M.D.Brussels, L.R.C.P.; Eustace Talbot, M.A., M.B.Camb., L.R.C.P.

*Licences.*

The licence was granted to 106 gentlemen; of these, 11 were under regulations dated October 1st, 1884.

*Congresses.*

Invitations to send delegates to a Congress on Medicine to be held in Cairo in December, 1902, and to the Fourteenth International Congress on Medicine to be held at Madrid in April, 1903, were accepted, and the President was requested to nominate delegates.

*Endowment Fund.*

A communication was received from the executors of the late Dr. John Cavafy announcing his bequest of £500 to the Endowment Fund of the College, and enclosing a draft for the amount. Upon the motion of the President, it was resolved that the thanks of the College should be expressed to the executors and members of the family of Dr. John Cavafy for this generous bequest.

*Lectureship on the History of Medicine.*

A letter was read from Dr. Norman Moore, conveying a proposal from Mrs. FitzPatrick to found a Lectureship at the College On the History of Medicine, in memory of her late husband, a Member of the College, and

enclosing a draft for £2,000. Upon the motion of Dr. Norman Moore, seconded by the Harveian Librarian, a resolution was passed gratefully accepting this munificent gift, and conveying to Mrs. FitzPatrick the cordial thanks of the President and Fellows.

*Other Communications.*

Letters were received from: (1) The Secretary of the College of Surgeons, reporting the proceedings of the Council of that College on August 1st and October 18th last; from (2) the Registrar of the General Medical Council, inquiring if the College had any objection to make to the withdrawal of his name from the *Medical Register* by a Licentiate: from (3) a Member of the College resigning his Membership, and returning his diploma; and from (4) the late Dr. Thudichum, forwarding a copy of a diploma granted him by the University of Giessen as an academic distinction, commemorating the 50th anniversary of his graduation.

*Reports.*

Reports were received from Dr. C. Theodore Williams, the delegate of the College at the recent Congress on Tuberculosis; and from Sir Felix Semon, appointed to convey the congratulations of the College to Professor Virchow on his 80th birthday.

*Recognition of Schools.*

A report from the Committee of Management, dated October 7th was received and adopted. It recommended that the following schools, which have been visited by a member of the Committee and reported on as fulfilling entirely the requirements of the Board, should be added to the list of institutions recognised by the Examining Board in England for instruction in Chemistry, Physics, and Practical Chemistry: Blaenau Festiniog County School and Southend Technical School.

*Laboratories.*

A report from the Laboratories Committee dated October 4th was also received and adopted. (1) The Superintendent of the Bacteriological Department reported that during the last four months 10,675 doses of diphtheria antitoxin, each containing 3,000 units, had been supplied to the hospitals of the Metropolitan Asylums Board, making a total of 32,625,000 units. It was also reported that (2) under the grant from the Goldsmiths' Company 387 doses of antitoxin, each containing 3,000 units, have been supplied to the General and Children's Hospitals in or near London since March 8th. The grant has now been expended; and the distribution of antitoxin under this fund will cease from this date unless the Goldsmiths' Company see fit to make a further grant for the same purpose. (3) During the quarter further batches of antitoxin supplied by Messrs. Parke, Davis, and Co. have been tested in the laboratory, and a certificate granted showing its strength, sterility, and freedom from excess of antiseptic.

*Committees.*

Dr. Frederick Taylor and Dr. Pye-Smith were re-elected members respectively of the Managing Committee and of the Laboratories Committee. The quarterly reports of the Finance Committee and of the Examiners for the Licence were received and adopted.

*Amendment of By-laws.*

The Registrar, in accordance with a resolution of the College of July 25th last, moved that By-law lxvi be amended by the addition of the words in italics below, and re-enacted for the first time as follows: "The Council shall consist of the President, Censors, and Treasurer of the College, of the representative of the College in the General Council of Medical Education, *of one of the representatives of the College on the Senate of the University of London*, and of twelve other Fellows of the College." Also that the following Regulation be appended to the By-law: "*Each University representative shall serve alternately as a Member of Council for a term of two years, or for such shorter term as he may remain a representative.*"

## UNIVERSITY OF OXFORD.

*M.B. Examinations.*—The first and second examinations for the degree of M.B. will commence on Wednesday, December 4th, 1901. Forms of entry, with certificate forms, can be obtained on application to the Secretary to the Board of Faculties, and notice of intention to sit at the examination must be given not later than the morning of Wednesday, November 20th.

## UNIVERSITY OF CAMBRIDGE.

*The University Lectureship in Medicine.*—Dr. D. MacAlister is resigning his University Lectureship in Medicine, but retains the Linacre Readership. An appointment to the vacant office will be made this term.

*Degrees.*—At the Congregation on October 24th, G. F. McCleary, Trinity Hall, was admitted to the M.D. degree, and J. A. Glover, St. John's, to the M.B. degree.

*Examiners.*—The following examiners for medical degrees have been appointed: *Chemistry*, Mr. Adie, Mr. Morrell; *Physics*, Mr. Wilson, Mr. Skinner; *Biology*, Mr. Bateson, Mr. Blackman; *Pharmaceutical Chemistry*, Mr. Ivatt, Mr. Purvis; *Anatomy*, Professor Macalister, Professor Birmingham; *Physiology*, Mr. Tuckett, Mr. Waymouth Reid.

## UNIVERSITY OF EDINBURGH.

### GENERAL COUNCIL.

With reference to the report published last week of the half-yearly meeting of the General Council of the University of Edinburgh on October 25th we are informed that the following notice of motion appeared on that part of the business marked on the programme sent out by the Secretary under paragraph 5:

"V.—To be moved by Ernest Greville, M.B., C.M.

That returns be made showing—

(*a*) The number of hours spent by each professor in teaching his practical classes.

(*b*) The number of hours so spent by the assistants

(*c*) The amount paid by the students for such practical classes.

Voting to be by ballot."

We are further informed that this business was moved and seconded and discussed, that it was lost by 21 votes to 33, but that the chairman declined to permit voting by ballot or to put to the meeting the question whether the voting should be by ballot.

We do not receive programmes of the business of these meetings.

## ROYAL UNIVERSITY OF IRELAND.

### DEGREES IN MEDICINE.

Honours and exhibitions have been awarded as follows:

*First Examination in Medicine.*—W. A. M'Kee, Queen's College, Belfast, honours in botany and chemistry and experimental physics, and exhibition of £20; W. J. Leighton, Queen's College, Belfast, honours in experimental physics, and exhibition of £10; and R. V. Slattery, University College, Dublin, honours in experimental physics.

*Second Examination in Medicine.*—W. J. Wilson, Queen's College, Belfast, first class honours and exhibition of £25.

*Third Examination in Medicine.*—T. Lyle, Queen's College, Belfast, first class honours and exhibition of £30; J. N. Meenan, Catholic University School of Medicine, second class honours and exhibition of £20; and J. C. M'Pherson, Queen's College, Belfast, second class honours.

*M.B., B.Ch., B.A.O. Degrees Examination.*—J. E. MacIlwaine, Queen's College, Belfast, first class honours and exhibition of £40; and M. J. Laffan, B.A., Catholic University School of Medicine, second class honours and exhibition of £25.

*M.D. Degree Examination.*—*W. J. Dargan, M.B., Catholic University School of Medicine, and J. Reed, B.A., M.B., have passed this examination.

*M.Ch., M.A.O. Degrees Examinations.*—C. Cooper, M.D., Queen's College, Cork, and Catholic University School of Medicine has passed these examinations.

*Scholarships.*—W. M'Carthy, M.B., Catholic University School of Medicine, has been awarded the Travelling Medical Scholarship, and W. J. Wilson, Queen's College, Belfast, the Stewart Scholarship in Medicine.

* Gold medal.

## CONJOINT BOARD IN IRELAND.

Candidates have passed the autumn examinations (1901) as undernoted:

*Second Professional (Part II).*—Honours: J. Parker. All subjects—pass: R. G. Allen. Completed examination. E. C. Byrne, M.A., D. P. Maher, T. S. Reeves, J. W. Rutherford.

*Third Professional Examination.*—All subjects: W. J. Greeny, J. B. Logan, Miss M. E. M. Logan, J. J. Moore, M. J. Pierce (four years). Completed the examination: C. H. Browne, H. M. Clarke, S. H. Curry, W. F. Delany, G. H. Enright, D. Jones (four years), A. T. Mulhall, J. Murphy, M. A. A. O'Brien, G. C. Robinson, J. P. Ryan, J. H. White

*Supplemental Preliminary Examination.*—Honours in order of merit: N. T. Stewart, J. B. Hobson, R. H. McGillicuddy, M. Kennedy. Pass alphabetically: F. J. Adams, W. Anderson, S. Black, A. L. Clarke, M. Cohen, Miss K. Dillon, J. J. Dwyer, P. Ferguson, R. H. Ford, J. C. Healy, J. Humphreys, D. Johnston, J. B. Leahy, F. J. Morris, R. H. MacCrea, S. R. Macnamara, T. O'Brien, R. B. M. Sullivan, J. Walker, C. L. Waters, J. Walsh, C. H. Wilson.

Twenty-six candidates passed, twenty-seven candidates were rejected, and two candidates were absent.

# PUBLIC HEALTH
## AND
# POOR-LAW MEDICAL SERVICES.

## AN INSANITARY AUTHORITY.

A correspondent writes: Most of the accounts of the Royal procession mention that the Westminster City Council had erected two stands within the railings of the Green Park, opposite Devonshire House; but they do not mention that these stands were erected over the two public conveniences (male and female) which exist at that spot, necessitating the closing of these important sanitary appliances for two whole days. The guests of the Westminster City Council were probable unaware of the dishonour done them in asking them to occupy seats in or over a urinal; but the officials of the Council must have known perfectly well that by their selfish action they were inflicting great inconvenience, and possibly suffering, upon hundreds of their fellow townsmen and women. It happens that there are no other public urinals nearer than Hyde Park Corner in one direction and Piccadilly Circus in the other, for a small iron urinal at the corner of Bruton Mews and Hay Hill is practically unknown, and hence the populace will have had to relieve its wants in the open park. It may be urged by the Westminster City Council that the entrances would not have been available because of the crowd in Piccadilly; but that is not the fact, for entrance can be had from the Green Park as well. We should like to know whether the medical officer of the Council was consulted in the matter.

## HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 7,003 births and 3,859 deaths were registered during the week ending Saturday

last, November 2nd. The annual rate of mortality in these towns, which had been 16.8 and 16.7 per 1,000 in the two preceding weeks, rose again last week to 17.6 per 1,000. The rates in the several towns ranged from 8.1 in Croydon, 10.5 in Swansea, 11.0 in Cardiff, and 11.5 in Leicester to 21.5 in Liverpool and in Newcastle, 22.0 in Burnley, 22.1 in Preston and in Salford, and 23.7 in Blackburn. In the thirty-two large provincial towns the mean death-rate was 17.7 per 1,000, and exceeded by 0.3 the rate recorded in London, which was 17.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.7 per 1,000; in London this death-rate was equal to 1.5 per 1,000, while it averaged 1.8 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 2.9 in West Ham, 3.3 in Sheffield, 4.6 in Sunderland, and 4.9 in Blackburn. Measles caused a death-rate of 1.0 in Halifax, 1.1 in Huddersfield, 1.2 in Sheffield, 1.9 in Norwich, and 3.3 in Blackburn; whooping-cough of 1.4 in Sunderland; "fever" of 1.0 in Halifax, and 1.4 in Salford; and diarrhœal diseases of 1.1 in Burnley and in Huddersfield, 1.2 in West Ham, and 1.4 in Preston and in Sunderland. The mortality from scarlet fever showed no marked excess in any of the thirty-three towns. The 71 deaths from diphtheria in these towns included 36 in London, 6 in Liverpool, 4 in West Ham, 4 in Sheffield, and 3 in Bristol. Six fatal cases of small-pox were registered in London, and 1 in Plymouth, but not one in any other of the thirty-three large towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals, which had been 175, 172, and 180 at the end of the three preceding weeks, had further risen to 284 on Saturday last, November 2nd; 169 new cases were admitted during the week, against 37, 47, and 57 in the three preceding weeks. The number of cases of scarlet fever in these hospitals and in the London Fever Hospital at the end of the week was 3,391, against numbers increasing from 2,904 to 3,353 on the eight preceding Saturdays; 425 new cases were admitted during the week, against 422, 404, and 400 in the three preceding weeks.

### HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, November 2nd, 916 births and 634 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 14.5 to 19.3 per 1,000 in the four preceding weeks, further rose last week to 19.9 per 1,000, and showed an excess of 2.3 per 1,000 over the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14.4 in Paisley and 14.5 in Greenock to 22.1 in Leith and 22.2 in Dundee. The zymotic death-rates in these towns averaged 2.4 per 1,000, the highest rates being recorded in Glasgow and Paisley. The 316 deaths registered in Glasgow included 13 13 from measles, 4 scarlet fever, 4 from diphtheria, 2 from whooping-cough, 10 from "fever" (including one from bubonic plague), and 15 from diarrhœa. Three fatal cases of diphtheria, 2 of "fever," and 2 of diarrhœa were recorded in Edinburgh. Two deaths from diarrhœa and 2 from "fever" occurred in Paisley; 5 from diarrhœa in Dundee, 4 in Aberdeen, 2 in Leith, and 2 in Greenock.

### LOCAL GOVERNMENT BOARD INSPECTION OF WORKHOUSES.

Union Medical Officer, who has held a workhouse appointment for many years, writes to ask for an opinion in reference to the following cases: Nine months ago a patient, aged 54, was admitted to the workhouse with complete paraplegia, congestion of lungs, weak heart, dropsical legs, and threatened bedsores. The usual precautions were taken, and water and air beds used. Notwithstanding this a sore formed on the sacrum, and at this stage of the case a Poor-law inspector visited the house, accompanied by a medical man, who was evidently of opinion that the bedsore might have been prevented. Our correspondent says he contested this point with the inspector, as he considered that in this particular case, even with all reasonable attention, it was impossible to prevent the formation of the sore. The inspector subsequently noted that a case of gonorrhœal ophthalmia in an infant had not been reported to the Local Government Board. Our correspondent further states that the inspection was not conducted in a courteous manner.

*** As the patient in question was suffering from paraplegia and dropsy of the legs on his admission to the workhouse, it is not surprising that a bedsore formed on the sacrum, and we are inclined to think that even with every possible attention it could hardly have been prevented. Under such unfortunate circumstances the inspector would, we consider, have shown a wise discretion in not saying much about it. That he should hold that it was the duty of the medical officer to report a case of infantile gonorrhœal ophthalmia is new to us. If any order to this effect has ever been issued, it has certainly never been brought into general operation, and its neglect must have been tacitly sanctioned. We should advise our correspondent to take no notice whatever of this unsatisfactory inspection unless he receives a written reproof from the Local Government Board. In such a case he should communicate at once with the Poor-law Medical Officers' Association, whose office is 9, Copthall Avenue, London Wall, E.C.

## HOSPITAL AND DISPENSARY MANAGEMENT.

### THE ROSS MEMORIAL HOSPITAL, DINGWALL.

A correspondent draws our attention to lengthy reports in the Ross-shire press of a stormy meeting of the contributors to the Ross Memorial Hospital, Dingwall, with reference to the division of beds among the three medical attendants of that institution, Drs. Bruce, Adam, and Smith. It appears that the beds—medical, surgical, and fever—are equally divided among the three medical attendants, but apparently an arrangement was come to between Drs. Bruce and Smith with reference to their beds, to which Dr. Adam strongly objected. We agree with our correspondent that it is unfortunate that the question in dispute could not have been amicably arranged between Drs. Bruce and Adam without appealing to the contributors. Prominence is also given in the press to another dispute between Drs. Bruce and Adam in connection with an outbreak of diphtheria in the burgh of Dingwall, of which burgh Dr. Bruce is medical officer of health.

## MEDICAL NEWS.

An ophthalmic department has been opened at Charing Cross Hospital, and patients will in future be seen on Wednesdays and Saturdays at 9 A.M.

The Committee of the Temperance Male Nurses Co-operation Limited has opened a branch at 176, Oxford Street, Manchester, where a resident staff of male nurses will be retained.

Dr. Henry Dutch has been elected representative of the Grosvenor Ward on the Council of the City of Westminster in the vacancy caused by the resignation of Colonel the Hon. Heneage Legge, M.P.

Sir William Dalby, the President of the Otological Society, will take the chair at the second annual dinner of the Society, which, as already announced, will take place on Monday, December 2nd, at the Café Monico, W., at 7.30 P.M. Amongst those who have accepted invitations to be present are Sir William MacCormac, Sir Thomas Barlow, Sir Michael Foster, K.C.B., M.P., Sir James Crichton-Browne, Sir Felix Semon, and Sir Alexander Mackenzie.

R.A.M.C. South Africa Fund.—At a meeting of the Royal Army Medical Corps South Africa Fund, over which Her Royal Highness Princess Christian presided, Mr. Charters Symonds presented the report of the Secretary and Treasurer. It appeared that there was a balance of £170 in hand, and on the motion of Surgeon-General Muir it was resolved that this should be handed over to the Field Force Fund, Lady Bective and Lady C. Bentinck having given an assurance that the Royal Army Medical Corps would be included in the distribution of that Fund.

Royal Dental Hospital of London.—The annual dinner of the staff and past and present students will be held on Saturday, November 23rd, at the Hotel Métropole (Whitehall Rooms), under the presidency of Mr. W. H. Woodruff. Gentlemen either now or formerly connected with the hospital or medical school who may through inadvertence not have received special notice, and who desire to be present, are requested to communicate with the Dean at the Royal Dental Hospital, 32, Leicester Square, London.

Munificent Bequests.—The late Mr. Matthew Whiting of Wandsworth has left by his will the residue of his property, about £120,000, in trust in equal shares for St. Thomas's Hospital, St. George's Hospital, Guy's Hospital, King's College Hospital, the Westminster Hospital, the Middlesex Hospital, the London Hospital, the Royal Free Hospital, St. Mary's Hospital, the Great Northern Hospital, the Brompton Hospital for Consumption and Diseases of the Chest, and the New Hospital for Women, Euston Road.—Mr. Thomas Kincaid Hardie has by his will bequeathed £2,000 to the Cancer Hospital, Brompton; £1,000 each to the Leith Hospital, the Ayr County Hospital, St. Mary's Hospital, Paddington; Hospital for Consumption and Diseases of the Chest, Brompton, the Middlesex Hospital; and £500 each to the Greenock Hospital, the Edinburgh Royal Infirmary, and the Accident Hospital, Rothesay.

The Government of India recently asked for an increase of 52 men for the Indian Medical Service in order to lessen the chronic undermanning which has resulted in frequent stoppage of all leave. It is now stated that the Secretary of State has only sanctioned 26 more men. In view of the steady continuance of the plague, the likelihood of native troops being kept in China, the disturbed state of Waziristan, the recent additions to the native army, and especially if the now generally admitted excessive number of medical officers sent with the troops to China is to be repeated in future expeditions the small increase now sanctioned will prove quite inadequate to the requirements of the near future.

DR. CALMETTE, director of the Pasteur Institute, Lille, was some weeks ago bitten on the right hand by a snake, the venom of which he was studying. It was a cobra belonging to one of the most dangerous species, whose bite is almost certainly fatal. He immediately treated himself with injections of his own antivenene which saved his life. Complications, however, occurred and the right ring finger has been amputated.

THE WAR AGAINST MOSQUITOS IN AMERICA.—The campaign undertaken for the extermination of mosquitos in New Orleans was partially successful during the summer. The oiling of cisterns was opposed by many people. Preparations are being made for a vigorous campaign in the coming year. Circulars are being sent to all medical practitioners inviting their co-operation in the work, and suggesting that they should actively aid in educating the people. The First Branch City Council of Baltimore recently passed an ordinance appropriating £3,000 to be used by the Health Commissioner to defray the expense incident to the extermination of mosquitos. The plan proposed is to keep all cesspools covered with kerosene from early spring to late summer, and to enforce rigidly all existing laws compelling the drainage of stagnant pools.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on October 25th. There were present Dr. de Havilland Hall in the chair, Dr. J. B. Ball, Dr. Frederick S. Palmer, Dr. M. Greenwood, Dr. St. Clair B. Shadwell, Dr. W. Knowsley Sibley, Dr. J. Brindley James, Dr. J. W. Hunt, and Dr. Alfred S. Gubb. The accounts showed that the favourable sickness experience of the early part of the year had continued. The claims had been rather less numerous than usual, and of decidedly less average duration. One of the original members of the Society who had under the old rules secured an annuity at the age of 65, died in October. Prospectuses and all particulars on application to Mr. F. Addiscott, Secretary Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

THE ANGLO-AMERICAN NURSING HOME AT ROME.—The Anglo-American Nursing Home at Rome was founded two years ago for the purpose of receiving English-speaking patients, of sending out trained nurses, and of providing two free beds for the use of the many poorer English residents in Rome, such as teachers and students, who are not able to afford the expenses of illness in their own homes or lodgings. The Home has already proved of great value to many English or American travellers who have been overtaken by sickness in Italy. Nurses are sent from the Home to other parts of the country, and have already gone as far afield as Florence, Naples, and Sicily. There are 12 nurses now upon the staff, but a large number of applications on behalf of invalids requiring nurses have been perforce refused. The Home was founded by a number of English, American, and Italian residents, and is managed by an English matron under the control of a General and House Committee of well-known persons. It is hoped that in time the Home may become self-supporting, and that it may not only supply a hospital for the sick, but also a convalescent home for invalids in Rome, and that the nursing staff may be enlarged to meet the great demand now made upon its services.

## MEDICAL VACANCIES.

The following vacancies are announced:

BARROW-UPON-SOAR, BILLESDON, BLABY, GRETTON, HALLATON, HINCKLEY, LUTTERWORTH, MONK'S KIRBY, OAKHAM AND EPPINGHAM RURAL DISTRICTS, and the URBAN DISTRICTS of THURMASTON and WIGSTON-MAGNA.—Medical Officer of Health. Salary, £550 per annum. Applications to the Clerk to the Joint Committee, Lutterworth, by November 16th.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum with board, residence, and laundry. Applications to Mr. E. H. Tilney, Honorary Secretary, 52, Grosvenor Road, Birkenhead, by November 14th.

BIRMINGHAM GENERAL HOSPITAL.—Two House Surgeons. Appointments for six months. No salary, but residence, board, and washing provided. Applications to the House Governor by November 30th.

BRACEBRIDGE ASYLUM, near Lincoln.—Junior Assistant Medical Officer: unmarried, and not over 30 years of age. Salary, £125 per annum, with furnished apartments, board, attendance, etc. Applications to Mr. W. T. Page, jun., Solicitor and Clerk to the Visiting Committee 5 and 6, Bank Street, Lincoln, by November 27th.

BRENTFORD UNION.—Assistant Medical Superintendent of the Infirmary and Assistant Medical Officer of the Workhouse and Schools; unmarried. Salary, £100 per annum, with furnished apartments, rations, washing etc. Applications on forms provided to be sent to the Clerk to the Guardians by November 19th.

BRENTWOOD: ESSEX COUNTY ASYLUM.—Junior Assistant Medical Officer; not over 25 years of age. Salary, £140 per annum. Applications to the Medical Superintendent.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by December 9th.

CLUTTON UNION.—Medical Officer and Public Vaccinator for the Harptree District. Salary, £49 per annum and vaccination fees. Applications to the Clerk, Clutton Union, Temple Cloud, near Bristol, by November 20th.

DERBY COUNTY ASYLUM, Mickleover.—(1) Senior Assistant Medical Officer (male). Salary, £130, rising to £150 per annum. (2) Junior Assistant Medical Officer. Salary, £110, rising to £130 per annum. Furnished apartments, board, washing, and attendance provided in each case. Applications to the Medical Superintendent.

DUBLIN: TRINITY COLLEGE.—King's Professorship of the Institutes of Medicine (Physiology and Histology). Applications to Dr. J. Craig, Registrar, Royal College of Physicians, Kildare Street, Dublin, by November 30th.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Junior Assistant House-Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the House-surgeon by November 20th.

GREAT NORTHERN CENTRAL HOSPITAL.—Surgeon; must be F.R.C.S Eng. Applications to the Secretary by November 18th.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Fifth Assistant Medical Officer; unmarried and not over 30 years of age. Salary, £170 per annum, with board, lodging, and washing. Applications to the Medical Superintendent by November 20th.

GLASGOW UNIVERSITY.—Additional Examiners for Degrees in Medicine with special reference to (1) Chemistry, (2) Materia Medica and Therapeutics, (3) Zoology, (4) Practical Medicine, systematic and clinical, (5) Surgery systematic and clinical. Salary for (1), (2), and (3), £30, and for (4) and (5), £50. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by December 3rd.

GLOUCESTER: BARNWOOD HOUSE HOSPITAL FOR THE INSANE.—Junior Assistant Medical Officer. Salary, £150 per annum, rising to £170 after expiration of first year. Applications to the Medical Superintendent.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by November 19th.

ITALIAN HOSPITAL, Queen Square, W.C.—Honorary Surgeon. Applications to the Secretary by December 2nd.

LANCASTER COUNTY ASYLUM.—Assistant Medical Officer; unmarried, and not over 30 years of age. Salary commencing at £150 per annum, increasing to £200, and on promotion to £250, with furnished apartments, board, washing, and attendance. Applications to the Medical Superintendent.

LINCOLN COUNTY HOSPITAL.—Senior House-Surgeon; unmarried, and under 30 years of age. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by November 15th.

LONDON HOSPITAL, Whitechapel, E.—Aural Surgeon; must be F.R.C.S.Eng. Applications to the House Governor by November 15th.

LONDON HOSPITAL MEDICAL COLLEGE.—Assistant to the Bacteriologist and Lecturer on Bacteriology. Applications to the Warden by November 16th.

MANCHESTER COUNTY ASYLUM, Prestwich.—Junior Assistant Medical Officer; unmarried, and under 35 years of age. Salary, £150, increasing to £250, with board, furnished apartments and washing. Applications to the Medical Superintendent.

MANCHESTER EAR HOSPITAL.—Clinical Clerkship. Appointment for six months. Honorarium, 10 guineas. Applications to the Secretary by November 18th.

MANCHESTER: MONSALL FEVER HOSPITAL.—First Medical Assistant. Salary, £180 per annum, with board and lodging. Applications, endorsed "Appointment of First Medical Assistant" to be sent to the Chairman of the Sanitary Committee, Public Health Office, Town Hall, Manchester, by November 16th.

MANCHESTER: ST. MARY'S HOSPITAL, Quay Street.—House-Surgeon and Resident Obstetric Assistant Surgeon. Appointment for one year, but eligible for re-election. Salary, £100 per annum, with board and residence. Applications to the Secretary by December 5th.

MARGATE: ROYAL SEA-BATHING HOSPITAL.—Resident Surgeon to act as Junior for six months and then as Senior for a like period. Salary, £80 and £120 per annum respectively, with board and residence. Applications to the Secretary, at the Offices, 30, Charing Cross, S.W., by November 16th.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary, £160 for first year, and £180 afterwards. Applications, on forms obtainable at the Resident Medical Officer, to be sent to the Honorary Secretary, Mr. Joseph Carr, 41, Mosley Street, Newcastle-on-Tyne by November 19th.

ROYAL DENTAL HOSPITAL AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square.—Lecturer on Dental Surgery and Pathology. Applications to the Dean by November 25th.

ST. MARY'S HOSPITAL FOR CHILDREN, Plaistow, E.—Assistant Resident Medical Officer. Appointments for six months. Salary at the rate of £80 per annum, with board, residence, laundry, etc. Applications to the Secretary by November 22nd.

SALISBURY INFIRMARY.—(1) House-Surgeon; unmarried. Salary, £100 per annum. (2) House-Physician: unmarried, and not exceeding 30 years of age. Salary, £75 per annum. Board, lodging, and washing provided in each case. Applications to the Secretary by November 20th.

SANITARY INSPECTORS' EXAMINATION BOARD.—Examiner; must be a Medical Officer of Health. Applications to Mr. W. R. E. Coles, Hon. Sec., 1, Adelaide Buildings, London Bridge, E.C., by November 20th.

SHANGHAI MUNICIPAL COUNCIL.—Assistant Health Officer; must possess D.P.H., and not be over 35 years of age. Salary, 3 600 taels a year (about £500), with means of locomotion and first-class passage to and from England. Applications to Messrs. J. Pook and Co., 63, Leadenhall Street, E.C., by November 30th.

SHEFFIELD ROYAL INFIRMARY.—Casualty Officer. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by November 30th.

SOMERSET AND BATH LUNATIC ASYLUM, Colford, Taunton.—Assistant Medical Officer; not over 30 years of age and unmarried. Salary, £150 per annum, with furnished apartments, board, fuel, lighting, and washing. Applications to the Medical Superintendent by November 21st.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House-Surgeon. Salary, £75 per annum with residence, board, and washing. Applications to the Secretary by November 18th.

WESTMINSTER GENERAL DISPENSARY.—Honorary Physician. Applications to the Secretary, 9, Gerrard Street, W., by November 25th.

WORCESTER COUNTY AND CITY ASYLUM.—Junior Assistant Medical Officer, not over 30 years of age. Salary, £120 per annum, rising to £150, with board furnished apartments, and washing. Applications to the Medical Superintendent, by November 26th.

## MEDICAL APPOINTMENTS.

ANDERSON, Edmund L., M.B., Ch.B Vict., L.S.A.Lond., appointed Honorary Assistant-Surgeon to the Hospital for Cancer and Skin Diseases, Liverpool.

BATTERSBY, J. H., M.D., C.M.Edin., appointed Honorary Surgeon to the Doncaster Infirmary and Dispensary, *vice* H. A. Lowndes, L.R.C.P., L.R.C.S.Edin., resigned.

BREWERTON, Elmore, F.R.C.S.Eng., appointed Assistant-Surgeon to the Royal Westminster Ophthalmic Hospital.

BRINTON, Arthur G., M.R.C.S., L.R.C.P., appointed Resident Surgical Officer to Birmingham and Midland Eye Hospital, *vice* G. M. Scott, M.D., resigned.

BROWN, J. Walter, M.B., B.Ch.R.U.I., appointed House-Surgeon to the Royal Victoria Hospital, Bournemouth.

HALL, J. Basil, M.C.Cantab., appointed Honorary Surgeon to the Bradford Royal Infirmary, *vice* W. L. Roberts, M.R.C.S., deceased.

HOGG, John A., L.R.C.P., M.R.C.S., appointed Medical Officer of Health to Castle Donington Rural District Council.

HUNT, E. L., L.R.C.S., L.R.C.P.Irel., appointed Certifying Factory Surgeon for the Sherston District of Wilts.

MORRIS, T. H. P., M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Halesworth District of Suffolk.

MURRELL, Christine M., M.B., B.S.Lond., appointed Assistant House-Physician to the Royal Free Hospital, London.

O'MEARA, W. P., L.R.C.P. L.R.C.S.Edin., appointed Medical Officer for the No. 1 District of the Southampton Union.

ROSS, Marion J., M.D.Glasg., appointed House-Surgeon to the Morpeth Dispensary.

SYKES, Walter, L.R.C.P.and S.Edin., L.F.P.S.Glasg., appointed Junior House-Surgeon to the Birmingham and Midland Eye Hospital.

TROTTER, Alexander, M.B., Ch.B.Edin., appointed Senior House-Surgeon to the Birmingham and Midland Eye Hospital.

WHITINGTON, C. E., M.R.C.S.Eng., L.S.A., appointed Certifying Factory Surgeon for the Tuxford District of Notts.

WILLEY, Florence Elizabeth, M.B., B.Sc.Lond., appointed Assistant House-Surgeon to the Royal Free Hospital Gray's Inn Road.

WILSON, James Mitchell, M.D., C.M.Glasg., appointed Medical Officer of Health to the East Riding County Council.

## DIARY FOR NEXT WEEK.

### MONDAY.

**Medical Society of London,** 11, Chandos Street, Cavendish Square, W., 8.30 P.M. Clinical Evening. Mr. A. Pearce Gould: Two Cases of Actinomycosis. Mr. Monier-Williams: (1) Case of Ulcerative Colitis treated by Colotomy; (2) Paralysis of Eleventh and Twelfth Cranial Nerves. Mr. T. H. Kellock: Case of Bilateral Disease of Ankle-joints in a Child. Mr. C. Mansell Moullin: Case of Spina Bifida Occulta. Mr. A. Carless: Case of Amputation of Entire Upper Extremity for Chondro Sarcoma, with specimen. Mr. J. Lynn Thomas, C.B.: (1) Photograph of a large Occipital Meningocele cured by Operation; (2) a New Reel for Multiple Ligatures.

### TUESDAY.

**Royal Medical and Chirurgical Society,** 20, Hanover Square, W., 8.30 P.M.—Mr. C. B. Keetley: Ulceration of the Œsophagus and Stomach due to Swallowing Strong Hydrochloric Acid: Lessons of Treatment Deduced from Three Cases.

### WEDNESDAY.

**Dermatological Society of London,** 11, Chandos Street, Cavendish Square, W., 5.15 P.M.—Demonstration of Cases of Interest.

**Hunterian Society, London Institution,** Finsbury Circus, E.C., 8.30 P.M.—Discussion on Small-pox and Vaccination.

### THURSDAY.

**British Gynæcological Society,** 20, Hanover Square, W., 8 P.M.—Dr. Herbert Snow on Prophylaxis in Gynæcology. Specimens will be shown by Dr. H. Macnaughton-Jones, Mr. R. O'Callaghan, and others.

**Harveian Society of London,** Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 P.M.—Mr. Buckston Browne: Twenty-five Years Experience of Urinary Surgery in England, Harveian Lecture II.

### FRIDAY.

**Epidemiological Society,** 11, Chandos Street, Cavendish Square, W., 8.30 P.M.—The President, Dr. Patrick Manson: Inaugural Address on the Etiology of Beri-beri.

**Society for the Study of Disease in Children,** 11, Chandos Street, Cavendish Square, W., 5.30 P.M.—Cases and Specimens will be shown by Dr. A. E. Tubby, Dr. D. Walsh, Mr. Sydney Stephenson, Dr. E. Cautley, and Dr. W. Gifford Nash. Papers: Dr. E. Cautley: Observations on the Etiology and Morbid Anatomy of Tuberculous Meningitis. Mr. G. Pernet: A Family Epidemic of Impetigo Contagiosa Bullosa.

### POST-GRADUATE COURSES and LECTURES.

Charing Cross Hospital, Thursday, 4 P.M.—Demonstration of Surgical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, Wednesday, 4 P.M.—Lecture on Aortic Regurgitation (with cases).

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 P.M.—Abscess in connection with Spinal Caries and its Treatment.

London Throat Hospital, 204, Great Portland Street, W., Wednesday, 5 P.M.—Practical Demonstration: Selected Cases.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—Demonstrations will be given at 4 P.M. as follows: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, throat.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Lectures: Tuesday, 3.30 P.M.: Cases in Hospital. Friday, 3.30 P.M.: Paraplegia.

West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 P.M. as follows:—Monday: Diagnosis of Pain in the Teeth. Tuesday: Medical Anatomy. Wednesday: Minor Surgery. Thursday: Unreduced Dislocations. Friday: Ocular Symptoms.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

BELFRAGE.—On October 30th, at 2, Montague Place, W., the wife of S. Henning Belfrage, M.D., of a son.

ELKINS.—On October 30th, at Leavesden, Herts, the wife of Frank Ashby Elkins, M.D., of a daughter (Mary).

GURNEY.—On November 1st, at 5, Gildredge Road, Eastbourne, the wife of Alexander C. Gurney, of a daughter.

### MARRIAGES.

BRYANT—WATTS.—On October 31st, at St. Paul's Church, Cambridge, by the Rev. Dr. Stokes, LL.D., Vicar, assisted by the Rev. L. B. Laurence, M.A., Charles Hilary, M.D., F.R.C.S., third son of E. Ross Bryant, of Newcastle-on-Tyne, to Theodora Harvard Watts, fifth daughter of the late Thomas F. Watts and Mrs. Watts, of Bracondale, Cambridge.

CARSBERG—FASTNEDGE.—On October 31st, at St. George's Church, Stamford, Alfred Ernest Carsberg, M.A., M.B.Cantab., youngest son of George N. Carsberg, Esq., of Hornsey Lane, N., to Mabelle Ruth, youngest daughter of Richard B. Fastnedge, Esq.

GORDON WILSON—RISCH.—On November 2nd, at St. John's, Blackheath, by the Rev. Thomas Turner, Vicar of St. Saviour's, Fitzroy Square, Alexander Gordon-Wilson, M.D.Lond., F.R.C.S.Eng., of Lyell House, Folkestone, to Louisa Mary Friedericke Risch.

SAVILL—BLACKADDER.—At St. Mary Magdalene's Church, Dundee, on November 2nd, Thomas O. Savill, M.D.Lond. to Agnes F. Blackadder, M.A.St.And., M.D.Glasg., by the Rev. Francis Burdon, Rector of St. Mary Magdalene's.

### DEATHS.

REVIE.—At Nagpur, C.P. India, on October 18th, Margaret McCallum, aged 1 year and 7 days, daughter of the Rev. Dugald Revie, M.B., C.M., Medical Missionary, Wardha, C.P. India.

PRESTON.—October 31st, at Laurel Bank, Saltash, Cornwall, Margaret, the wife of George Preston, M.R.C.S., L.R.C.P., D.P.H., etc.

## LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

### QUERIES.

AORIST desires to hear of a good appliance for round shoulders in adults

RUSTICUS asks to be recommended a medicine chest (not for tablets suitable for keeping in a carriage in a country practice.

TENERIFE desires to know whether there is any medical defence or protection society which accepts as members British practitioners practising abroad.

ECZEMA OF THE SOLE.

PUZZLED writes: I should be glad to receive suggestions for treatment of a case of eczema of the sole of the foot. The patient is a robust male, aged 35. The trouble has been going on for several years. On the sole of the foot is a patch about the size of a five-shilling piece, the epidermis is thickened, slightly scaly on the surface, and one or two fissures extending through this thickening. There is no exudation. The itching is intolerable, and especially so towards night. The treatment has comprised all the usual ointments, also a strong solution of mercury perchloride after the thickening of the epidermis has been reduced by pancreatic emulsion. A rigorous dieting has been enforced for over six months, namely, no alcohol, and starchy food and sugar reduced to a minimum, and a healthy action of the skin and bowels maintained. Internally the patient has had courses of alkalies, iodides, and arsenic. Treatment up to the present has been of no avail.

COMPULSORY SCHOOL ATTENDANCE IN GERMANY AND THE UNITED STATES)

ULTIMA THULE asks: What is the compulsory attendance at school in Germany and United States required each year?

*** We have referred this question to Dr. G. E. Shuttleworth, who writes: From returns kindly shown me by the Librarian, Board of Education, I am able to reply to the query as follows:—(1) In the German Empire the age of compulsory attendance at the elementary schools is for the most part from 6 to 14 (in Bavaria 6 to 13), and in many districts attendance at evening continuation schools is required for two years longer. The hours per week in elementary schools vary from twenty to thirty according to age. In some districts of Prussia economic conditions render the "half-day" school a necessity: usually regular whole-day attendance is required. (2) In the United States the age of compulsory attendance varies in different States, and only in Massachusetts is attendance every time the school is open enforced. In the case of all other States attendance for a limited period—of varying duration—suffices to comply with the legal requirement. In Massachusetts and Illinois the school age is from 7 to 14; in Ohio and California from 8 to 14; in New York, Pennsylvania, and Connecticut from 8 to 16. In the last three, however, compulsion is not applicable to children over 14, if regularly employed. The hours of school attendance vary with age, but twenty-five hours per week is about the average for older pupils.

### ANSWERS.

ANTI-HUMBUG.—The practitioner whose name is quoted in the pamphlet is not, we are informed, a member of the British Medical Association.

DR. J. REID.—A discussion on diseases of the periodontal membrane including the subject of general periodontitis will be found in the second edition of Morton Smale and Colyer's *Diseases and Injuries of the Teeth* (London: Longmans. 1901), where it occupies many pages.

ANTITOXIN TREATMENT OF DIPHTHERIA.

J. W. P.—We may refer our correspondent to a similar question and an answer published in the BRITISH MEDICAL JOURNAL of January 19th, 1901, p. 191, and to remarks of correspondents in the JOURNAL of February 2nd, 1901, p. 319, and March 2nd, p. 560; also to an article on Antitoxin in the JOURNAL of February 9th, 1901, p. 352; also to the article on Professor Woodhead's report on the metropolitan cases of 1895-96, published in the JOURNAL of September 21st, 1901, p. 815. In the monthly summary of notification returns for October, by Dr. E. C

Seaton, Medical Officer to the Surrey County Council, we notice the following statement:—"At Woking, which has suffered most severely from diphtheria incidence, Dr. Pierce, in his special report, is able to show not only that everything possible has been done to limit spread, but that, owing to prompt use of antitoxin, there have been hitherto no fatal cases."

PROCHOWNICK'S DIETARIES.

R. A. J.—For the purpose of reducing the bulk of the fœtus in the case of a contracted pelvis so as to permit of natural delivery at the full term, Prochownick recommends (*Therapeutische Monatshefte*, Heft 8 and 9, 1901) that the mother take for two or three months before the full term of her pregnancy the following diet: For breakfast, a small cup of coffee (100 c cm.), about 25 grams of biscuit or bread with some butter. For dinner, any kind of meat, an egg, fish with a little sauce, green vegetables prepared in fat, salad, cheese. Supper, the same as for dinner, with 40 to 50 grams of bread and butter at pleasure. Water, soups, potatoes, puddings, sugar, and beer are quite forbidden; from 300 to 400 c cm of red wine or moselle is to be drunk. Prochownick permits slight alterations to suit individual tastes, such as the substitution of small quantities of milk and water for the alcohol, along with fresh fruit. Further, a small cup of tea or coffee may be taken in the afternoon, with 15 to 20 grams of bread or one egg. The total daily quantity of fluid is not to exceed 500 c.cm.

MICROBES IN SEWER AIR.

DR. J. T. C. NASH (Medical Officer of Health, Southend-on-Sea, late Demonstrator in Bacteriology, King's College, London), writes: In reply to Dr Edmund M. Smith, may I say that a paper of mine on the Purification of Sewer Air, especially from a Bacteriological Point of View, has been accepted for publication in an early issue of *Public Health*? I may say here that my own investigations on the bacteriology of sewer air do not bear out the generally-received opinion that there are few, if any, microbes in it, especially in the neighbourhood of sewer ventilators. Having carefully read the work of Carnelly and Haldane on the Air of Sewers (*Proc. Roy. Soc.*, vol. xliii) I find that I draw different conclusions from some of their facts and results. I deal with these in the paper I refer to, which will, I trust, be shortly published.

## LETTERS, NOTES, Etc.

THE BROCK APPEAL FUND.

MR. B. JONES (Balcarras, Wells Road, Knowle, Bristol) the Honorary Secretary of the Brock Appeal Fund, on behalf of the family of the late Mr. W. Kortwright Brock, M.R.C.S., L.S.A., writes to say that he has received the following donations:

| | £ | s. | d. | | £ | s. | d. |
|---|---|---|---|---|---|---|---|
| J. Stewart, M.D. ... ... | 1 | 1 | 0 | Soldier Surgeon ... ... | 1 | 1 | 0 |
| D. H. J. ... ... ... | 0 | 10 | 0 | William Kelly, M.D. ... | 1 | 1 | 0 |
| A. E. Wynter, M.D. ... | 5 | 5 | 0 | An Old Fellow Student ... | 1 | 1 | 0 |
| Surgeon-Major H. de Tatham, M.D. ... ... | 3 | 3 | 0 | | 13 | 2 | 0 |

The object of the fund of which full particulars were published in the BRITISH MEDICAL JOURNAL of October 26th, 1901, p. 1280, is to place one of the children in a position to earn a living for himself. The sum required by the Committee is at the very lowest £25.

THE FOURTH DISEASE.

ATHOLE writes to refer Dr. Dukes to Prince Morrow's *System of Dermatology, etc.* (page 103, vol. iii, Part 1), where a disease is described as erythema scarlatiniforme, characterised by a (1) scarlatina rash, (2) pyrexia (it may be absent), and (3) desquamation. The throat is a little redder than usual; strawberry tongue is absent, and desquamation begins about the third day.

SUPERFLUOUS HAIRS AND THE ROENTGEN RAYS.

DR. ALFRED T. SCHOFIELD (London, W.) writes: As the value of the x rays in removing superfluous hair is still under dispute, I should like to say that what little experience I have is adverse to it. By my advice, based on cases reported from Vienna, I had a patient treated in this country with great skill and care, with the result that a few weeks after the last application every hair disappeared (perhaps 1,500 or more). In another month, however, the growth had all reappeared undoubtedly thicker and stronger. I induced my patient to have a few more applications without definite result, and since the growth is certainly worse. The skin is thickened and hardened, and the hairs are stronger and appear more numerous. I find an assistant at one of our hospitals, whose hands are scarred with over-exposure to the rays, has nevertheless a thick growth of hair on them.

MR. BERNARD SHAW ON SMALL-POX PREVENTION.

C. P. writes: In criticising Mr. Bernard Shaw's extraordinary letter in the BRITISH MEDICAL JOURNAL of October 26th I was surprised to notice that you omit specific reference to what is the most pregnant paragraph of the whole effusion, namely:

"Further, I insisted strongly, and shall continue to insist, on the fact that, so far, the use of vaccination to prevent small-pox is, scientifically considered, as pure a piece of witchcraft as the use of the divining rod to discover water. By this I do not mean that it is ineffective, but that, as it is only a countryside tradition adopted by the medical profession, and as all efforts to discover the specific agent in vaccine lymph have failed, it can only be tested by statistics. The result will have no more effect on any known pathological theory than the result of tossing up a coin."

From this it is evident that Mr. Shaw has no knowledge whatever on pathological matters, and is quite incompetent to speak on the subject of vaccination. When Mr Shaw has acquired a rough working knowledge of modern theories, which, judging from his recent exhibitions, will take a year or two of close study in the pathological laboratory to effect, he will perceive that the efficacy of vaccination rests on a good scientific hypothesis, about which he apparently knows nothing, in addition to that sound statistical basis which he appears to doubt. There is no solid foundation of either kind to support the pretensions of the "divining rod."

TRIONAL AND ARSENIC IN CHOREA.

DR. GEO. MCCOULL (Stocksfield-on-Tyne) writes: If Dr. Meade will give Fowler's solution a trial, in doses of 15 to 20 minims three times daily, in cases of chorea, I think he will very often find his patients cured at the end of a week or ten days. I have found this plan of treatment (which was advocated by Dr. Wm. Murray, of Newcastle-on-Tyne, in a paper published by him some years ago) entirely satisfactory.

LETTERS, COMMUNICATIONS, ETC., have been received

**A** Anti-Humbug; Mrs E. Garrett Anderson, M.D., London; Adipose; Athole; Dr. D. Anderson-Berry, Reigate. **B** Dr. J. R. Bradford, London; J. W. Batterham, M.B., St. Leonards-on-Sea; Mr. G. Brown, London; Dr. F. Bushnell, Plymouth. Dr. R. J. Boyd, Stewartstown. Dr. M. T. Brennan, Montreal; Dr. G. F. Bodington, Montreux; Dr. J. S. Bury, Manchester; Mr. H. N. Baron, Orford; Mr. G. B. Browne, London; Messrs. Burroughs, Wellcome and Co., London; Mr. G. H. Broadbent, Manchester; Sir W. H. Bennett, K.C.V.O., London; A. G. Bateman, M.B., London; F. M. Blumer, M.B., Stafford; Dr. F. T. Bond, Gloucester; Mr. L. A. Bidwell, London. **C** Mr. A. Clarke, London; Mr. H. W. Carson, London; C. P. W.; Calmon Asbestos and Rubber Works, Manager of, London; Mr. A. H. Cheatle, London; Dr. E. O. Croft, Leeds; Dr. N. H. Choksy, Bombay; Dr. F. F. Caiger, London; Dr. H. Campbell, London; Dr. J. M. Clarke, Clifton; Mr. G. A. Clarkson, Leicester; Messrs. A. Chapman and Co., London; D. A. Callender, M.B., Leith; Dr. L. Canney, London; Dr. J. A. Codd, Wolverhampton; Dr. W. Calwell, Belfast. **D** Dr. A. Duke, Cheltenham; Dr. J. T. H. Davies, Leicester; Despondent. **E** Dr. J. Edmunds, London; E. F. **F** Fairplay; Far Off. **G** Mr. M. D. Gold, London; Mr. E. E. Greville, Edinburgh; Dr. C. B. Gunn Peebles; G. Govan, M.B., Cockermouth; H. Galt, M.B., Glasgow; Mr. P. B. Giles, London; Dr. J. G. Glover, London; Dr. J. Galloway London; Mr T. W. H. Garstang, Altrincham. **H** Mr. J. D. Harris, Exeter; J. B. Hall, M.B., Bradford; Mr. T. G. Horder, Cardiff; Mr. C. Heath, London; A. B. Hughes, M.B., Deal; Dr. C. W. Hayward, Liverpool; L. Harman, M.B., Kingston-on-Thames; Dr. J. Howard-Jones, Newport, Mon.; Dr. J. Hamilton, London; Dr. W. D. Haslam, Wallington. **I** Dr. J. Ince, Swanley; Ignoramus. **J** Justice; "Journal of State Medicine," Editor of, London; J. H.; J. A. C.; Mr B. Jones, Bristol; Dr. R. Jones, Woodford Bridge. **K** Mr. A. E. Kessen, Hull; Dr. L. Knuthsen, Shifnal; Prestwich; Dr. J. H. Keay, London. **L** E. Le C. Lancaster, M.B., Swansea; Dr. E. T. Larkham, Dr. D. Laing, Arbroath. **M** Mr. J. McKay, London; Mr. C. Morris, Ramsgate; Dr. J. M. Moir, Inverness; M.D. Lond.; Mr. L. H. McGavin, London; Dr. E. Mackey, Hove; Dr J. D. McCaw, London, Member B.M.A.; Dr. W. Murrell, London Massage; Dr. T. Martland, Walsall; Dr. D. McNicol, Glasgow; Mr. G. J. McCoull, Stocksfield-on-Tyne. **N** Mr W. J. C. Nourse, London; Mr. J. T. C. Nash, Southend; Mr. H. Norman, London. **O** Mr. G. S. O'Rorke, Nottingham; E. Owen, M.B., London; Optimist; Dr. J. Oliver, London. **P** Puzzled; Mr. C. B. Pasley, Cahir; Mr. G. Pernet, London; Petros; Mr. J. F. Pink, London; Dr. E. Phillips, Coventry, Dr. J. W. Paton, Rock Ferry; Mr C. C. Preston, London; Miss G. M. Payne, Portsmouth; Mr. Y. J. Pentland, Edinburgh. **R** Rusticus; G. A. Rorie, M.B., Dorchester; Mr. F. G. Rebman, London; D. J. Reynolds, London. **S** Mr. C. W. Smeeton, Rovingham; Sheffield Medico-Chirurgical Society, Secretary of, Sheffield; Dr. A. T. Schofield, London; Mr. M. Smale, London; Messrs. W. B. Saunders and Co., London; Mr W. Summerskill, London; Dr. T. W. Shore, London; Dr. E. M. Sympson, Lincoln; Dr. J. Scott, Manchester; Mr. J. W. Smith, Doncaster; S. Stephenson, M.B., London; Dr. J. H. Swanton, London. **T** Teneriffe; Dr. C. Turner, Butte, Mont., U.S.A.; Mr. B. Thomson, Northampton; Dr. E. F. Trevelyan, Leeds; Dr. E. C. Thompson, M.P., Omagh. **V** Volunteer Medical Officer. **W** Mr. E. Wheal, Oxford; Dr. F. Willcocks, London; Dr. A. McC. Weir, Liverpool; Dr. P. W. Williams, Clifton; Mr. G. W. Whiteley, Salisbury; A. Wauchope, M.B., Glasgow.

## BOOKS, ETC., RECEIVED.

Kimpton's Pocket Formulary for 1901. By E. Z. Thornton, M.D. Third Edition. London: Henry Kimpton. 1901.

Scientific Research: a View from Within. By Stephen Smith, M.R.C.S. London: Elliot Stock. 2s.

Transactions of the Clinical Society of London. Vol. xxxiv. London: Longmans, Green, and Co. 1901.

Lehrbuch der Gynäkologie. Von M. Runge. Berlin: Julius Springer. 1902. M.10.

Transactions of the Dermatological Society of Great Britain and Ireland. Vol. vii. London: H. K. Lewis. 3s.

Manual of the Diseases of Children. By J. M. Taylor, A.M., M.D., and W. H. Wells, M.D. Second Edition. London: Henry Kimpton. 1901. 21s.

Introduction to the Differential Diagnosis of the Separate Forms of Gallstone Disease. By Professor H. Kehr. Translated by W. W. Seymour, A.B., M.D. London: Henry Kimpton. 1901. 9s.

The Principles and Practice of Medicine. By W. Osler, M.D., LL.D., F.R.S., F.R.C.P. Fourth Edition. Edinburgh and London: Young J. Pentland. 1901.

Textbook of Pharmacology and Therapeutics. Edited by W. Hale White, M.D., F.R.C.P. Edinburgh and London: Young J. Pentland. 1901.

Hausa Notes. By W. R. Miller, M.R.C.S., L.R.C.P. London: Henry Frowde. 1901. 3s. 6d.

Beiträge zur pathologischen Anatomie der graviden Tube. Von Dr. A. Petersen. Berlin: S. Karger; and London: Williams and Norgate. 1902. 3s.

Experimentelle und kritische Beiträge zur Hände-desinfectionsfrage. Von Dr. R. Schaeffer. Berlin: S. Karger; and London: Williams and Norgate. 1902. 3s. 6d.

Maladies du Cuir Chevelu: Les Maladies Séborrhéiques—Séborrhée, Acnés, Calvitie. Par Dr. R. Sabouraud. Paris: Masson et Cie. 1902. Frs. 10.

Ueber Lebensprognosen. Von Dr. E. Moritz. St. Petersburg: Buchdruckereider Kaiserlichen Akademie der Wissenschaften. 1901.

Technik und Klinik der Oesophagoskopie. Von Dr. G. Gottstein. Jena: Gustav Fischer. 1901. M.14.

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# A Clinical Lecture
ON
# IDIOPATHIC DILATATION OF THE ŒSOPHAGUS.

*Delivered at the Bristol Royal Infirmary,*

By JAMES SWAIN, M.S., M.D.Lond., F.R.C.S.Eng.,
Professor of Surgery, University College, Bristol; Assistant-Surgeon, Bristol Royal Infirmary.

Idiopathic dilatation of the œsophagus—by which I mean a dilatation which exists without any obvious mechanical obstruction—is a rare condition, but its recognition as one of the causes of dysphagia is a matter of importance.

The cause of this spindle-shaped dilatation of the œsophagus is not generally known, but in a few cases—as in the example below—the occurrence of an injury appears to be a definite etiological factor.

Apart from the small traction diverticula which exist in the lower part of the œsophagus, and which are of pathological interest only, it is now generally recognised that large-sized diverticula can occur in this part of the œsophagus similar to those with which we are more familiar in the upper third of the œsophagus.

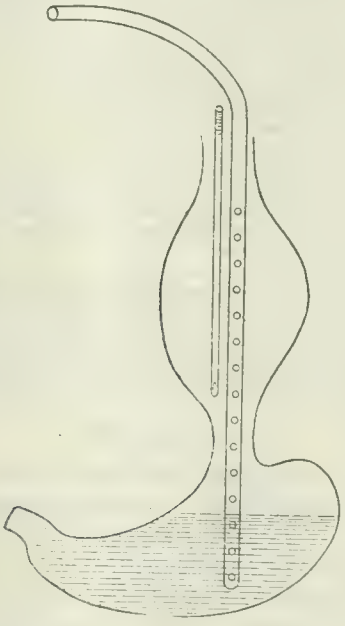


Fig. 1.

It is from such diverticula that idiopathic dilatation of the œsophagus must be differentiated.

Of the various means of diagnosis one of the most valuable is that suggested by Rumpel: A tube with numerous perforations in its lower third is passed down the œsophagus into the stomach, and another tube with a single perforation near the end is passed into the œsophagus above the cardia, resting in the pouch or dilatation. If a measured quantity of water be now poured into the œsophageal tube by means of a funnel it will flow through the perforated tube into the stomach if a dilatation exists, so that the fluid can be recovered from the stomach, but not from the dilatation (Fig. 1). On the other hand, if a diverticulum exists this will be filled first by the water and only the overflow will enter the stomach, so that part of the fluid can be recovered from the stomach and part of it from the diverticulum (Fig. 2). The latter quantity can be measured and will give us some idea of the capacity of the pouch.

Another test is furnished by the "coffee experiment," suggested by Max Einhorn, which resembles a method of using two differently coloured fluids previously described by Mermod. The "coffee experiment" is carried out as follows: The patient drinks a cupful of black coffee one hour before the examination, and is instructed to try and force the coffee down by taking deep inspirations and compressing his thorax, thus mechanically forcing the fluid from the œsophagus into the stomach. An hour later the patient drinks a glassful of water. The tube is now inserted into the œsophagus, the water appears quite clear, and is regained in almost the same amount as taken by the patient. Thereupon the tube is pushed in a little further into the stomach, and now some coffee will appear without the admixture of the water. This experiment shows that the water has remained above the stomach in the dilated œsophagus, not mixing with the coffee. Apart from the different colour in these two fluids it is evident that the water obtained from the œsophagus will show a neutral reaction, while the coffee gained from the stomach will show the characteristics of gastric juice, presence of hydrochloric acids and ferments.

The Roentgen rays, gastrodiaphany, and œsophagoscopy have all been used as means of diagnosis. The administration of bismuth subnitrate may help to render the broadening of the œsophagus more evident when using the *x* rays; and in the case below a bullet-shaped piece of metal when swallowed was found to occupy *different* positions—on either side of the spinal column—at different times.

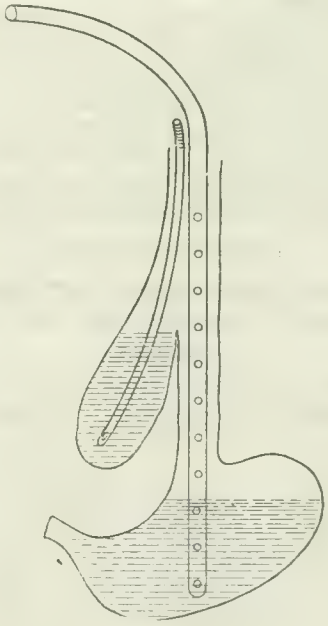


Fig. 2.

The symptoms of this distressing malady are sufficiently indicated by the following case:—

C. E. F., aged 26, complained of difficulty in swallowing and a sensation of choking followed by vomiting especially at night.

*History.*—She was always strong and healthy until Christmas, 1897, when she fell downstairs and remained unconscious for about two hours. The right kidney was found to be loosened, and she was confined to bed for about five weeks. Towards the end of this period she complained of difficulty in swallowing and had pains in the chest which were attributed to dyspepsia. On taking a meal she frequently got pain in the centre of the chest which was relieved by vomiting. In addition to these attacks she would wake up suddenly in the night with cough and choking sensations of a distressing character and culminating in vomiting undigested food mixed with frothy matter.

After about nine months she began to feed herself with a stomach tube, and this she continued to use for a considerable period. Attacks of pain and vomiting continued in association with the dysphagia and choking sensation, but were somewhat relieved by washing out the œsophagus. An œsophageal tube was found to pass easily into the stomach. After washing out the stomach through the tube and then withdrawing the tube about 8 or 10 inches undigested food could be washed out of the œsophagus. The washings from the stomach were acid, those from the œsophagus were neutral. No difficulty was experienced at any time in passing the tube into the stomach—18 to 20 inches from the teeth. Skiagraphs of the chest after the patient had swallowed a bullet-shaped metal body showed that the latter lodged about the level of the sixth

dorsal vertebra, sometimes on the right and sometimes on the left of the spinal column. Repeated experiments with two tubes—one in the stomach (perforated) and one in the œsophagus—as described above, showed that the fluid wholly escaped from the œsophagus into the stomach, and this was corroborated by the "coffee experiment." The capacity of the dilated œsophagus appeared to be about half a pint. No swallowing sound could be heard at the end of the sternum or in a corresponding position over the spinal column. The temperature was generally slightly elevated (99° to 100° F).

The diagnosis of œsophageal dilatation was formed on the following grounds: (1) The ease with which the tube could be passed into the stomach: (2) that in order to empty the second "cavity" it was merely necessary to withdraw the tube some inches from the stomach; (3) the positive result obtained by the "two tube test" and "coffee experiment"; (4) the absence of the swallowing sound.

The only other conditions which could give rise to difficulty in the diagnosis would be malignant disease and diverticulum of the œsophagus. Malignant disease could easily be excluded by the duration of the case and the absence of stricture, for a malignant growth which has not caused definite stenosis never gives rise to dilatation of the œsophagus. Diverticulum of the œsophagus could also be excluded by the various tests which have already been mentioned, by the ease with which a tube could invariably be passed into the stomach, by the absence of the swallowing sound, and by the fact that the œsophagus could be emptied by merely withdrawing the tube some distance from the stomach without pushing it on again into a definite pouch.

The treatment has not proved very satisfactory. Feeding with the stomach tube has failed after repeated trials before the patient came under observation. Electricity (one rheophore being placed in the œsophagus) and tonics—with a view to overcoming the atony of the muscular tissue—have given no relief. A comparative degree of comfort only has been obtained by the ingestion of soft foods and the systematic lavage of the dilated œsophagus.

The question of gastrostomy has been considered but has not been thought desirable so long as the patient is keeping up her nutrition.

## SUCCESSFUL OPERATION FOR PERFORATED INTESTINAL ULCERATION IN TYPHOID FEVER.

By FRANCIS T. HEUSTON, M.D., F.R.C.S.I.,

Senior Surgeon, Adelaide Hospital, Dublin; Consulting Surgeon, Coombe Hospital.

WHEN the number of deaths which occur annually as the result of perforation of intestinal ulceration in connection with typhoid fever is taken into consideration, and the absolutely hopeless result of medical treatment in such cases, any method whereby this fearful mortality, amounting to from 90 to 95 per cent. (Murchison), can be lessened must be received with gratitude by the profession. From the results already obtained by surgical treatment of those cases many valuable lives have been saved, and I believe we are justified in considering that another has been added to the many recognised abdominal operations.

On September 6th, 1900, I was requested by my colleague, Dr. Wallace Beatty, to see a married lady, aged 34 years, who had been under his care for typhoid fever, which had run its course without any special characteristics, the temperature falling to normal on September 2nd, when she was considered convalescent.

On the morning of September 6th there was nothing to indicate the imminence of any complication, but about noon she was seized by sudden severe pain in the abdomen, followed by rigors and evidence of collapse, her pulse rapidly rising to 160 and her temperature to 104°. The abdomen became somewhat distended, but was soft and not increased in tension; a tympanitic percussion note was obtained over the hepatic area.

Perforation was diagnosed, and at 4.30 P.M., assisted by Mr. Gordon, I made a median incision between the umbilicus and pubes. On opening the peritoneal cavity a quantity of dark brown-coloured fluid, evidently due to extravasation of the intestinal contents, exuded, and as the intestines were raised from the pelvis, this region was found to be filled with a similar fluid, in which the intestines floated. The small intestine was now examined from its termination at the cæcum, when it was seen to be very congested and vascular. As the ileum was traced upwards it was found covered by lymph, about 8 inches above the cæcum, on the removal of which a pin-hole opening was discovered, from which the intestinal contents were oozing. This was marked, and as the amount of extravasation appeared very large to come from so small an opening, within the five hours which had elapsed since the symptoms pointing to perforation had occurred, the rest of the ileum was rapidly examined, when, although another portion of the intestine, about a foot above this, was also covered by lymph, and presented evidence of a large ulcer, no perforation could be found, and as above this the congestion and vascularisation of the intestine gradually ceased until it presented a normal appearance, it became evident no other perforation existed.

The seat of perforation was then dealt with, a continuous silk suture passing through all the coats of the intestine, except the mucous, being applied and the edges of the perforation and ulcer inverted. Over this sufficient Halsted sutures of catgut were applied to enclose the thickened area corresponding to the ulcer, thus including it within the inverted portion of the intestine. The peritoneal cavity was then thoroughly flushed out by normal saline solution to remove the extravasated intestinal contents, when the abdominal wound was closed, no drainage being employed.

During the night after the operation, the temperature fell from 104.2° F. to 98° F., and the pulse from 160 to 118. The following day the temperature gradually rose to 101.4° F. and the pulse to 142, and towards the evening a movement of the bowels occurred, after which the temperature gradually fell, becoming normal on the following evening, when the pulse had also fallen to 82. The subsequent history of the case was uneventful, no complication arising. When I recently heard of the patient six months after the operation, she was in perfect health.

Hare in his work on *Complications of Typhoid Fever*, published in 1899, records 103 cases in which operation had been undertaken for perforation in typhoid fever; of those 21 recovered, giving a percentage of 20.38, which must be considered favourable, when compared with the pre-existing rate of mortality, as, although we cannot look on this as a true record, many unsuccessful cases, I am certain, not having been published, still, we must place on the other side the fact that many of the earlier cases operated on were such as would not have been operated on had the circumstances under which successful result was to be expected been as well understood as it is now.

It has been shown that a most important factor in the result to be obtained in this variety of perforation, as in every other, is that of the time which has elaped between the perforation and the operation. Of the cases operated on after an interval of twenty-four hours had elapsed from the perforation practically all were unsuccessful (one recovered twenty-six hours after and two between the second and third day), while of the cases operated on within twelve hours a percentage of 26.7 recoveries were obtained; and of those operated on between twelve and twenty-four hours 30 per cent. of recoveries resulted.

In the United Kingdom this operation does not appear to have obtained the recognition it deserves, as I have only been able to find about 20 cases recorded, with, however, the satisfactory result of four recoveries, and believe it is only necessary that physicians should be aware of the success to be expected to submit their cases more frequently to operation, when I confidently look to 50 per cent. of the cases being successful.

## TWO CASES OF POST-OPERATIVE THROMBOSIS OF THE MESENTERIC VESSELS FOLLOWED BY DEATH.

By A. ERNEST MAYLARD, M.B., B.S.LOND.,

Surgeon, Victoria Infirmary, Glasgow.

As a sequel to operation, thrombosis of some venous trunk more or less remote from the sphere of treatment is not uncommon; and is perhaps more frequently met with in the external iliac or common femoral than in any other. I do not recall having previously encountered in my own experience a case where, after operation, the mesenteric vessels became thrombosed. Yet strangely enough, in that peculiarly inexplicable order of things, not unfamiliar in the practice of most men, where rare and interesting cases sometimes come in runs, it was my lot to see two deaths from this particular complication within four days of each other.

In the first case a fatal result ensued four days after the performance of gastro-jejunostomy for pyloric obstruction; and in the other, three days after removal of the left half of the thyroid gland for exophthalmic goitre. Both cases presented striking features of similarity; so much so that in the second case, Dr. John Duncan, my resident infirmary assistant, who was cognisant of the facts associated with the first, rightly interpreted the symptoms connected with the second. Aside, therefore, from the pathological interest attached to the direct causes of death it seemed to me that

the cases were sufficiently instructive from a purely clinical aspect to make them worthy of being recorded.

I will relate the history of the two cases before discussing the subject further and indicating the special features of interest associated with them.

Case I. *Gastro-jejunostomy for Symptoms of Pyloric Obstruction; Death on the fourth day from Thrombosis of the Mesenteric Vessels.*—Miss X, aged 26, was a patient of Dr. Shiels, Glasgow, by whom I was asked to see her.

*History.*—Her symptoms, dating back for 2½ years, were mostly gastric in character and pointed unmistakably to some obstruction at the pylorus. There was a ventricular systolic murmur with a well marked *bruit-de diable* in the veins of the neck. Her pulse was invariably rapid and frequently registered 120. She was anxious that something operative should be undertaken to relieve her of the incessant vomiting which always followed after taking solid food.

*Operation.*—On July 4th, 1901, in St. Elizabeth's Private Nursing Home, with the assistance of Dr. Grant Andrew and Dr. Russell, with Dr. Holm Henderson as anæsthetist, I performed gastro-jejunostomy without any difficulties. Anastomosis was effected by stitching. The patient took the anæsthetic well and the operation, which included a preliminary exploration of the stomach, was completed in fifty minutes.

*After-History.*—After the operation the patient was somewhat restless with rapid pulse, otherwise she seemed well. On the second day flatus was passed *per rectum*. On the third all seemed to be going on well till the afternoon when she became extremely restless, tossing herself about so violently that she had to be forcibly held in bed. The nurses in charge thought the patient was hysterical in her behaviour. On the fourth morning pain was complained of in the lower part of the abdomen where there was also tenderness on pressure. The injection of nutrient enemata caused great pain and were immediately expelled. There was no abdominal distension and no parietal rigidity. Wind was occasionally belched up, but there was no marked vomiting. There was continued great restlessness accompanied with considerable breathlessness. The pulse was very rapid and weak. Features much sunken in aspect. The patient died from increasing exhaustion.

*Post-mortem Examination.*—As no permission was obtained for a general *post-mortem* examination Dr. John Duncan made an examination of the abdominal contents through the original parietal incision. The substance of his report was as follows: Everything connected with the operated-upon parts of the stomach and intestine were in a perfectly sound and healthy condition, there was not the slightest evidence of peritonitis anywhere. On tracing the small intestine downwards it was found perfectly healthy until the last 3 feet of the ileum were reached. These 3 feet were of a dark purple colour. The involved gut itself was empty and collapsed. The mesenteric vessels in connection with it were found to be thrombosed as far up as they could be seen and felt in the mesentery. The great bowel, appendix, rectum, uterus, Fallopian tubes, ovaries and bladder, were examinated but presented no abnormality.

Case II. *Excision of the Left Half of the Thyroid Gland: Death three days after the Operation from Thrombosis of the Mesenteric Vessels.*—The patient, Mary Y., aged 28, a governess, was under the care of my colleague, Dr. Ebenezer Duncan, in the Victoria Infirmary.

*History.*—She was being treated for exophthalmic goitre accompanied with the usual symptoms. The following remarks are abstracted from the report of her case when admitted into the medical ward. "A distinct thrill is felt over the vessels of the neck. On auscultation a roaring ventricular systolic murmur is heard. A fainter ventricular systolic is heard over the tumour. Ventricular systolic heard down the sternum (getting fainter) and over the whole cardiac area. Second sound rather wanting in sharpness. Pulse is very weak and soft and numbered 126 per minute."

*Operation.*—On July 9th, 1901, at the request of Dr. E. Duncan, and with the assistance of Dr. Grant Andrew, Dr. Russell and Dr. John Duncan I excised the left half of the gland. The removal was effected with very little loss of blood, and the patient rallied well and rapidly from the operation.

*After-History.*—During the night of the operation she became very restless and excitable, but this was attributed by the nurse to the excessive heat of the season.

July 10th.—During the morning the bowels became very loose and fluid motions were passed, one of which was noted to be distinctly tarry in colour and believed to contain blood. The succeeding motions were of a greenish colour. In the afternoon she began to complain of pain at the lower part of the abdomen, unaccompanied with tenderness on palpation or with any distension or rigidity of the parietes. She was not troubled with vomiting, and nourishment in the form of milk was taken freely. Her most marked symptoms were increasing restlessness and excitability; so much so that those in charge considered she was simply hysterical. Her temperature, which the day before had risen to 100.8°, now began to fall; and the pulse, always more or less rapid, became increasingly so and more feeble. These symptoms continued until the next morning (12th), when the patient died at 4.30 in a collapsed condition. Nourishment was well taken up till death. Towards the end the abdomen showed some signs of distension.

*Necropsy.*—The necropsy made by the pathologist, Dr. Anderson, revealed the following conditions: The ileum from about its commencement to the cæcum was of a dark purple colour, almost black at parts, and here and there showed evidences of sloughing. General distension, with a smooth, shiny appearance of the serous coat, was, however, the most marked condition of the gut. On opening the ileum, its contents were found to be fluid blood and undigested food. The mesenteric veins were thrombosed, and numerous hæmorrhages were visible beneath the peritoneum. The heart was small, soft, and pale; no valvular lesions. The lungs were congested and full of œdema; the bronchi were markedly injected. The liver was soft and anæmic, with small superficial hæmorrhages. The spleen was passively congested. The kidneys were small, but pale on the cortices.

In reviewing these two cases together the following points of similarity appear in connection with the clinical symptoms. Both patients were females, and of about the same age—one 26 years, and the other 28 years. In both there was a ventricular systolic murmur; in both there was rapidity of the pulse as a symptom prior to operation, and a continuance, with increased rapidity, after operation. In both there was excessive excitability occurring on the second and third days after the operation, which, although the patients were in different institutions and under different capable nurses, were considered by these as symptomatic of hysteria. In both the pain at the lower part of the abdomen suggested commencing peritonitis, but in neither were there other symptoms typically suggestive of it. In both cases death occurred at pretty much the same interval of time after operation; and in both the mesenteric vessels connected with the ileum were the ones found thrombosed. In both the wounds connected with the operations were perfectly healthy.

The following were the points of dissimilarity: In the pyloric case, although flatus was passed, there was no passage of fluid motions containing blood, as in the exophthalmic. A marked feature in the pyloric case was the great pain caused by any attempt to inject, *per rectum*, nutrient enemata. Immediate expulsion followed the effort. A marked difference existed in the extent and degree of involvement of the bowel; in the pyloric case only about three feet of ileum were congested, the bowel was collapsed, and did not contain blood; in the exophthalmic case the whole ileum was implicated, densely congested, ecchymosed, distended, and in places showed signs of sloughing, and in its interior contained fluid blood.

It will thus be seen that the points of similarity were more in evidence than those of dissimilarity, but whether these former can be taken as merely coincidental, and not particularly associated with or dependent upon the one common lesion found must remain doubtful. It was unfortunate that we were unable to obtain a complete *post-mortem* examination in the pyloric case so that the condition of the heart and lungs might have been ascertained. It is quite fair to assume that some of the most distressing symptoms in both cases were more dependent upon cardiac and pulmonary conditions than upon the bowel lesion; indeed, one might go further and say that the thrombotic condition of the mesenteric vessels was a sequel to, rather than a percursor of, pathological processes taking place elsewhere. That, however, we had symptoms unmistakably pointing to bowel trouble is, I venture to think, sufficient justification for regarding the cases of distinct interest from such a point of view. And, further, knowing as we do that thrombosis is not an uncommon sequel to operation, it is reasonable to bear in mind that, however difficult it may be to explain, even the mesenteric vessels, either in their main trunks or in their radicles, may, in some instances, be the vessels to become primarily involved.

In the reports of cases which have from time to time been given, whether of embolism of the arteries or thrombosis of the veins, there is considerable variation in the symptoms met with. This, doubtless, arises from the different degrees of the lesion found: thus, an embolus plugging the main trunk of the inferior or superior mesenteric artery will produce symptoms of a much acuter and more distinct character than those arising from a plug of only a branch of these vessels. Again, a limited thrombosis of the venous radicles will produce symptoms of a comparatively mild and indefinite character as compared with a plugging of the main venous trunks. In most cases where there has been involvment of main trunks the patients have been past middle life, with atheromatous vessels and with probably cardiac valvular disease. And further, associated with the embolic or thrombotic condition of the mesenteric vessels, there have been found infarctions in other organs of the body.

Post-operative thrombosis in comparatively young patients finds its origin, however, in other causes than those associated with grave pathological lesions of either the heart or blood vessels. Upon the general subject, however, of thrombosis I have no intention to enter. I am merely recording these two cases as special illustrations, I believe, of this particular kind of thrombosis affecting the mesenteric vessels; and to illustrate further a series of symptoms which may be taken as indicative of the onset of such a complication when arising in a patient upon whom some operation has been performed.

Believing that these two cases were instances of thrombosis

of the mesenteric veins. I have looked up the records of such cases as have been published and find that while there is much variation in the severity of the symptoms as they appear at the onset and throughout the course of the disease there are not wanting those which seem to be more or less characteristic. Thus (1) intra-abdominal pain is invariably present, sometimes commencing acutely, at other times gradually and with no more discomfort than is manifested by a sense of uneasiness. In not a few instances the pain has been colicky in character, sometimes located in the region of the umbilicus, at other times low down in the abdomen. (2) The passage of loose stools sometimes containing blood. This symptom is an uncertain one and seems to depend upon the extent of bowel involved, and the degree of its congestion. It is, however, when present an unquestionably valuable diagnostic sign. (3) Vomiting is also a very inconstant symptom and seems in like manner to be dependent upon the degree and extent to which the bowel is thrown out of action by its impaired vascular supply. It is the presence of this symptom which so frequently causes these cases to be taken as instances of acute intestinal obstruction, and which to a certain extent they are, although a wrong cause is usually ascribed to them. (4) The general condition of the abdomen is as a rule negative; there is neither rigidity, tenderness, nor distension although towards the close of the case the latter may become more or less manifest. (5) The pulse, which has sometimes remained more or less normal in power and speed, is in most cases weakened and increased in rapidity. (6) The temperature presents no certain character, although in the severe cases it is usually reduced. (7) A symptom which has been noted in not a few instances, has been great excitability of the nervous system. In my own two cases it was present to a remarkable extent and suggested, as already stated, that the patients were hysterical. It is possible that the symptom has only a very indirect connection with the disease, and is merely an accident, which arises from a constant sense of pain and discomfort acting upon a naturally over-excitable nervous system.

In conclusion, I am disposed to think that the following symptoms when occurring within a few days after an operation may be taken as suggesting post-operative thrombosis of the mesenteric vessels; and more particularly so when the operation was not one involving the intestines:—

1. The onset of intra-abdominal pain, gradual or acute, but more or less constant, and possibly of a colicky character.
2. Neither tenderness on palpation of the abdomen, nor distension nor rigidity of the parietes in the earlier stages.
3. Possibly diarrhœa with or without blood.
4. Possibly vomiting, but not of the usually acute obstructive character.
5. Rapidity of pulse.
6. Undue and inexplicable restlessness and excitability.
7. Any pre-existing symptoms of cardiac or vascular disease may be considered to attach additional weight to the significance of the other symptoms.

In searching for references of thrombosis of mesenteric veins I have been unable to find any record of a case following upon, or dependent upon operation. Those given below are limited to such as were of a more or less uncomplicated character, that is to say cases, which manifested very definite symptoms the result of the thrombosis.

*Recorded Cases of Thrombosis of the Mesenteric Veins.*

Payne, *Path. Soc. Trans. Lond.*, vol. xxi, p. 228. Fagge, *ibid.*, vol. xxvii, p. 124. Taylor, *ibid.*, vol. xxxii, p. 61. McWeeney, *Dubl. Jour. of the Med. Sci.*, 1894, vol. xcvii, p. 169. Delatour, *Annals of Surgery*, 1895, vol. xxi, p. 24. Bradford, *Clin. Soc. Trans. Lond.*, 1898, p. 203. Johnson, *ibid.*, 1898, vol. xxxi, p. 212. Köster, *Deut. med. Woch.*, 1898, p. 329. Ballance, *Lancet*, 1899, vol. ii, p. 85. Welch, Allbutt's *System of Medicine*, 1899, vol. v, p. 218. Johst, *Inaug. Dissert*, Königsberg, 1894. Johst also gives abstracts of the following recorded cases:—Choquet, *Bull. de la Soc. Anat.*, 1878, s. 124; Pilliet, *Prog. Méd.*, 1890, No. 25; Eisenlohr, *Jahrb. der Hamburger Staats Krankenanstalten*, 1890, ii, 2, p. 76.: Dreyfous, *Bull. de la Soc. Anat.*, 1885, p. 274.

A GENERAL meeting of the Medico-Psychological Association of Great Britain and Ireland will be held at 11, Chandos Street, London, W., on Thursday next at 3 P.M., under the presidency of Dr. Oscar Woods, when Sir T. Lauder Brunton will read a paper on Fairies, Apparitions, Visions, and Hallucinations; and Dr. E. D. O'Neill, District Asylum, Limerick, will move a resolution with regard to pensions for Irish asylums officials.

## ON THE REMOVAL OF GREAT LENGTHS OF INTESTINE.*

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THE preparation of this paper has arisen out of my having been very kindly entrusted by Mr. Hayes, Senior Surgeon, Mater Misericordiæ Hospital, with the publication of a case in which he performed with perfect success a very extensive resection of the small intestine in a boy aged 10. The operation was done for a crush of the intestine with extensive laceration of the mesentery. The notes of the case are briefly as follows:

*History and State on Examination.*—A boy, P. B., aged 10, was admitted to the Mater Misericordiæ Hospital on August 3rd, 1900, with the history that he had been run over by a heavy waggon while in the prone position. The waggon, weighted with a ton and a half of grain, passed across his lumbar region. He was taken up and immediately brought to hospital, where he was found to be suffering from shock; his face was pale, his pulse about 90, and the temperature slightly subnormal. Examination of his abdomen and back showed considerable bruising in the lumbar region and on the front of the left thigh. A small hæmatoma was present on the front of the abdomen about midway between the umbilicus and pubes and over the right Poupart's ligament was an elongated irregular wound about 5 inches long. The abdomen was slightly rigid and tender to the touch. He did not make much complaint of pain. There had been no vomiting. On passing a catheter about three or four ounces of perfectly clear urine came away. There was thus no very clear indication for surgical interference beyond dealing with the wound on his right side and combating the shock which was present. The skin around the wound was cleansed and the edges brought together over a length of gauze. For the shock he was given a hypodermic injection of 4 min. of liq. strychninæ and external heat was applied in the form of hot jars. No food was given by the mouth. A careful watch was kept for the further development of symptoms. Strange to say, in view of the grave lesions subsequently found to be present, he passed a fairly good night, sleeping well with some intervals of wakefulness and slight restlessness. In the morning, however, he began to vomit, and the vomiting was repeated two or three times, greenish bile being brought up each time. His condition had now much altered for the worse. He became very restless and complained of much pain and great thirst. His pulse was found to be very rapid, 92 to the half minute. His abdomen was swollen, tense, and tender, especially over the epigastric region, tympanitic to percussion but without loss of hepatic dulness. The temperature was 101.5°. It was evident that a grave abdominal lesion had occurred and laparotomy was at once proceeded with, the provisional diagnosis of ruptured intestine having been made.

*Operation.*—After the preliminary cleansing of the skin, the patient being under the influence of ether, a median opening was made in the usual situation between umbilicus and pubes. On reaching the abdominal cavity some liquid blood mixed with clots came away and swollen intestine tended to protrude. The distended coil was drawn out and there followed it more blood which was dried up with sponges. On examining now a long transverse rent was discovered in the mesentery about 3 inches from the intestine, cutting off the blood supply of a huge coil of intestine, while above this again was another portion of intestine which was so crushed that its vitality was evidently gone. At this place the intestine was somewhat twisted on itself so that its lumen was interrupted: above this was healthy but distended intestine. No actual perforation was present in any part of the intestine. It was at once determined to remove the whole damaged segment, which was done after tying off and dividing the mesentery which intervened between the rent and that connected with healthy intestine. The upper margin of the rent in the mesentery was not ligatured, hæmorrhage from the vessels having already ceased. Long pressure forceps were then placed on the intestine at the upper and lower limits of the portion to be removed, the latter being about 5 inches from the ileo cæcal valve. Above and below this the lumen was blocked by lightly tying a piece of rubber tubing passed through a hole in the mesentery about 3 inches away from each clamping forceps. The gut was now cut through close to each forceps, and the segment thus freed removed. The ends were then brought together by a Murphy button, and over the line of union a few Lembert sutures were inserted. No attempt was made to suture the gap in the mesentery, as the patient's condition did not admit of delay. The wound was now closed, about a pint of normal saline solution having been left in the abdomen; the usual antiseptic dressing was applied and the patient sent back to bed. He had borne the operation fairly well considering its extensive character, but for two or three days his condition was such as to cause the gravest anxiety.

*Progress.*—His pulse-rate continued for some time to fluctuate between 140 and 160, and his face presented an extremely anxious and haggard appearance. His temperature, which on the night of the operation was 100° F., rose to 102° the next morning. The evening after the operation it had fallen to 98°, next morning it was 98.8° rising to 99.6° on the second evening, since which time it remained normal or within a few points above it. The treatment during the earlier days was as follows, strychnine (m. 4 of the liquor) was given hypodermically every sixth hour. On the night of the operation he was given a zymin ised suppository and this was repeated every fourth hour. In addition nutritive enemata containing a beaten up egg with some brandy and milk was given every night and morning. Nothing was given by the mouth for the first three days, but sips of hot water and a teaspoonful of brandy every hour. On the third day milk diluted with an equal quantity of water was given to him, and panopeptone, a teaspoonful every second hour. This treatment with the

*Read before the Royal Academy of Medicine in Ireland.

rectal feeding was continued for three days, when gradually the diet was increased by the addition of arrowroot, bread and milk, and finally a little beef, the enemata being stopped. His bowels moved spontaneously on the third night after the operation, on the fourth day there was again a motion, followed by two during the night after this; they then moved regularly once a day till the twelfth day when an attack of diarrhœa set in, the patient having six motions in the twenty-four hours. Subsequently there was a great tendency to looseness of the bowels—a condition which lasted for more than seven weeks. This tendency, however, gradually disappeared, so that his bowels acted pretty regularly once a day, and occasionally twice. To all appearance the fæces passed were normal. His appetite was, however, abnormally great for one of his years, notwithstanding which his weight when leaving hospital was only 3st. 9lbs. A later examination made on December 6th, 1900, showed that this fairly satisfactory condition had not been maintained. His appetite still continued to be abnormally great and since leaving hospital he had had attacks of vomiting. This occurred every day for some time then disappeared for a few days again to recur. He suffered, too, occasionally from abdominal pains. The tendency to looseness of the bowels had reappeared, his bowels moving sometimes three or four times in the twenty-four hours. As a rule, they moved twice. The fæces passed were solid, and looked fairly normal, but no chemical analysis was made. The boy, too, was suffering from chorea, a condition which was not present when leaving hospital about five weeks before. He had distinctly lost weight, and might be described as markedly emaciated. These changes, with the exception of the chorea, were attributed to the alteration from hospital to home diet.

A still later examination, April 20th, 1901, showed that his condition was much improved. He had increased in weight and the vomiting had quite ceased. His appetite was still abnormally great and his bowels moved usually twice a day, the stools being frequently offensive.

The operation wound had healed by first intention so that the stitches were removed by the twelfth day, but the wound he had received when run over suppurated and healed tediously by granulation. The date of the Murphy's button being passed cannot be fixed, as unfortunately it was thrown away without having been noticed. That it was passed, however, is quite certain as two or three skiagraphs have been taken revealing all the details of the pelvis and spine, but having no shadow corresponding to the button.

The intestine removed, inasmuch as its lower limit extended to within about five inches from the ileo-cæcal valve, consisted entirely of ileum. When measured after removal it was found to be 8ft. 4½in. in length (255 cm.) and even now, when somewhat shrunken in formalin, measures 8ft. 2in. When after the first few days succeeding the operation it was seen that the boy was likely to survive the immediate effects of the resection the question arose as to what would be his state thus deprived of such a large amount of actively absorbing surface; a question interesting to the surgeon, and even more so to the physiologist.

In the elucidation of this problem two methods are open to us—the clinical, that is, the study of recorded cases in which considerable lengths of intestine have been removed, and the experimental, animals being submitted to operation in which they are deprived of large portions of their gut. This latter method has been pursued by Senn, Trzebicky and Bonari. Senn, who was the first to undertake the work, used as his material cats and dogs on which animals he performed extensive resections of the small intestine in seven cases. Of these, however, only two were available subsequently for the purposes of the experiment. In both of these intense long-continued and eventually fatal marasmus with diarrhœa and increased appetite was the sequel of the resection. As a result of these experiments, Senn came to the conclusion that the excision of more than one-third of the whole length of the small intestine was an operation dangerous to life, productive of marasmus and in this way eventually fatal. He directed attention to a compensatory hypertrophy of the intestinal wall which he found to be present in those cases which had survived for a considerable time. The conclusions of Trzebicky as a result of twenty-eight extensive resections of the small intestine performed on animals were as follows:—Resections of half the small intestine were tolerated quite well. Resections of two-thirds and upwards of the jejunum and ileum made such an inroad on the chemical and mechanical processes of digestion that the prolongation of life became impossible. There was incessant diarrhœa, followed at a later stage by vomiting: food was voided for the most part undigested and, in spite of a craving appetite, the animals perished with symptoms of complete inanition. Trzebicky also observed that the effects of the resection of the beginning of the jejunum were more serious than those of resection nearer the ileo-caecal valve—a result to be expected considering the wider, thicker and more vascular condition of the jejunum. Transferring his results to the human subject and taking 560 cm. (18ft. 5in.) as the minimum length of the small intestine, he declared that resection of one-half of it, that is, 280 cm. (9ft. 2½in.) was quite permissible, provided no further complications were present. Monari goes even a step further. He believes he has proved by his experiments on dogs, that seven-eighths of the intestine can be removed without the production of important interference with metabolism. He asserts that at least one-half of the small intestine may be removed in men without the person's metabolism being very much influenced for the worse. Like Senn, he found hypertrophy and hyperplasia of the gastro-intestinal tract in the dogs which had been operated upon and where the operation was well borne. The mucous membrane was thicker and more richly covered with villi. In those dogs which had died he found the intestine left behind had become atrophic, the atrophy showing itself in wasting of the villi and desquamation of epithelium. We thus see that these observers are not agreed among themselves as to how much intestine may be safely removed from dogs, while in their inferences in applying the results of their experiments to man two agree that removal of one-half is feasible without producing any grave disturbance in assimilation, while Senn would assign one-third as the extreme maximum limit.

I need hardly say in conclusion of this part of my subject that extreme caution is always to be observed in applying the results of experiments on animals to man.

Coming now to the second method of investigation—the clinical—one or two considerations arise which call for some comment before giving the results which may be arrived at by the study of recorded cases. In the first instance, the results obtained cannot be compared merely on the ground of the actual lengths of intestine removed. The excision of a large portion of the jejunum will have much more serious consequences than that of an equal length of ileum, while in a similar manner the loss of ileum will be more felt than that of large intestine, the difference in physiological importance between these being even greater than between ileum and jejunum. Again, as Dreesmann has pointed out, the amount of intestine removed is not of so much importance with regard to the ultimate result of the operation as the amount of intestine which remains behind, and with regard to this latter point in a successful case we must always remain more or less in the dark. No doubt we may subtract the amount removed from the average length of intestine which Treves (as a result of the examination of 100 bodies) places at 22 ft. 5 in. But for the small intestine the variability of the actual lengths is very great thus in Treves's cases there was a difference of more than 16 ft. between the extreme cases which measured 31 ft. 10 in. and 15 ft. 6 in. respectively. Other observers have found equally great variability. The difficulty in making the calculation in Mr. Hayes's case is still further increased by the fact that his patient was a child aged 10. In trying to elucidate the question of the relative length of the intestine in the child and the adult I have been assisted by Professor A. Birmingham, who kindly lent me some books by the authorities on the subject but the conclusions I arrived at are not very illuminating. Briefly there is no proportion between growth in length of the intestine and the age of the patient, growth being in some very rapid in childhood, in others comparatively slow. The intestine, however, does, as a rule, keep growing till adult life is reached so that in Mr. Hayes's case 20 ft. is probably a high estimate. Thus in his case very considerably more than one-third of the intestines had been removed. Dreesmann in 1899 was able to collect 26 cases (including one of his own) in which more than one metre (3 ft. 3 in.) had been removed. To these I am able to add seven more, including Mr. Hayes's case, this bringing the number up to 33.

Placing them in the order of the length of intestine removed there are as follows:

1. *Hahn:* 80 cm. (32 in.); ileum 20 cm. (8 in.); colon, male, 38 years: recovery, without disturbance of nutrition.
2. *Canthorn* (*New York Medical Journal*, 1895): Resected 109 cm. (43 in.) of small intestine from a man aged 49, for sarcoma of the mesentery, ends united by Murphy's button. Patient recovered from operation, but died four months later from obstruction brought about by Murphy's button.
3. *R. Budberg-Boeninghausen and W. Koch:* Male, aged 68, very robust, 110 cm. (43⅓ in.) flexure; death on third day from peritonitis, which existed at time of operation.
4. *Do.*, male, 33 years, 110 cm. (43⅓ in.) ileum; for gangrene after incarceration, femoral hernia; recovery.
5. *Trombetta* in 1884 resected 110 cm. (43⅓ in) of small intestine in a woman aged 40. Recovery (quoted by Ruggi).
6. *Budberg-Boeninghausen and Koch:* Male, 42 years, 112 cm. (44 in.); flexure, gangrene after twisting; recovery.

7. *Marston* resected 112 cm. (44 in.) for sarcoma of mesentry. Death five months afterwards from perioration due to Murphy's button.

8. *Billroth:* Female, 52 years, 113 cm. (45 in.) small intestine, on account of fixation by the extirpation of a fibroma size of child's head. Death from collapse.

9. *Troje:* 115 c.m. (46 in.), female, 25 years, for four ring-like tuberculous strictures. Result, fistula.

10. *Elliot* (*Annals of Surgery*, January, 1895) resected 124 cm. (4 ft. ¾ in.) in a man aged 25, for infarction due to thrombosis of the superior mesenteric veins. Patient was in good health two years after.

11. *Roux* (*Semaine Médicale*, 1892) resected 124 cm. (4 ft. ¾ in.) of intestines for a lipoma. Recovery.

12. *Budberg-Boeninghausen and Koch*, 125 cm. (4 ft. 1 in.) flexure. Death from already existing peritonitis on the same day.

13. *Do.*, 125 cm. (4 ft. 1 in.) ileum; death on day of operation from already existing peritonitis.

14. *Obalinski:* 126 cm. (4 ft. 2 in.), ileum, for gangrene. Death in twenty-four hours.

15. *Studsgard:* 128 cm. (4 ft. 3 in.) jejunum for invagination. Death five days after from peritonitis.

16. *Schlange:* 135 cm. (4 ft. 6 in.) ileum, gangrene. Recovery without disturbance.

17. *Braun:* 137 cm. (4 ft. 7 in.). Small intestine, on account of circumscribed peritonitis. The woman recovered in the beginning, but soon the appetite began to fail and the wasting continued to increase; œdema of the lower extremities set in, and four months after the operation death took place. *Post-mortem* report: shrinking of kidney, but otherwise nothing abnormal.

18. *Kosinski:* 143 cm. (4 ft. 9 in.) ileum, gangrene from hernia, death from collapse.

19. *Muller:* 12 years old boy, 150 cm. (5 ft.) ileum, cæcum, and colon for invagination: for 7 days normal, then rise of temperature and pulse rate, vomiting, diarrhœa, death. Cause of death, according to Professor Ziegler's view, filling of the intestine with air and fluid.

20. *Kocher:* 160 cm. (5 ft. 4 in.) ileum, gangrene. Recovery without disturbance.

21. *Budberg-Boeninghausen and Koch:* 175 cm. (5 ft. 10 in.) ileum, cæcum with appendix and ascending colon: artificial anus formed; closed 2½ months after operation. Recovery without disturbance.

22. *Wullstein:* 175 cm. (5 ft. 10 in.) ileum for strangulation, recovery without disturbance.

23. *Schwalbach:* 183 cm. (6 ft. 1 in.) ileum, recovery.

24. *Hinterstoisser:* 186 cm. (6 ft. 2 in.) ileum and part of jejunum for incarceration, recovery without disturbance.

25. *Schlatter* resected 192 cm. (6 ft. 4 in.) of ileum for gangrene due to the intestine protruded through an abdominal wound being grasped tightly by the skin. Recovery from the operation was uneventful save for an attack of urticaria which appeared on the fifth day, disappearing on the tenth. This was probably owing to the interference with the assimilatory area due to the operation. His weight increased in the second month after the operation from 140 to 165 pounds. He was then (two months after the operation) feeling perfectly well there being no tendency to diarrhœa. An examination of his ingesta and ejecta for ten consecutive days showed, however, that his appetite was abnormally great, that whereas the amount of undigested albuminous material in the fæces was slightly above the normal percentage, the amount of fat similarly lost was very much more than normal. The subsequent history showed that the man was not fit for heavy work, and that he required much more nutritious food than the working people of his own class doing their full work. Other food caused abdominal pains.

26. *Koeberlé:* 205 cm. (6 ft. 10 in.) small intestine for four strictures, artificial anus closed after six weeks. Recovery without disturbance.

27. *Kocher:* 208 cm. (6 ft. 11 in.) for tearing of small intestine. Recovery, but subject to diarrhœa if not very careful of diet.

28. *Dreesmann:* 215 cm. (7 ft. 2 in.) ileum for gangrene. Recovery, but slight diarrhœa.

29. *Shepherd:* Man, aged 28, 234 cm. (7 ft. 9 in.) ileum. After operation thin stools, but increased 40 lbs.

30. *Hayes* resected 255 cm. (8 ft. 4½ in.) ileum for laceration of mesentery with crush of intestine in a boy, aged 10. During recovery there was a great tendency to diarrhœa which lasted for eight weeks. At a later period a tendency to diarrhœa recurred. There was also occasional vomiting, and the patient suffered from chorea.

31. *Fantino:* In a woman, aged 60, 310 cm. (10 ft. 4 in.) ileum, for gangrene from incarceration, healing by first intention. The further study of the nutrition in the intestinal canal showed that the same was not complete. Substances introduced appeared rapidly in the stools which were also frequent and rich in nitrogen, fats and water. Nevertheless, in the beginning increase of weight, also after a year no wasting since the loss was compensated for by increase of nutritive materials.

32. *Ruggi:* Boy, aged 8, 330 cm. (11 ft.) small intestine for circumscribed peritonitis. Recovery and good health one year after.

33. *Obalinski:* 365 cm. (12 ft. 2 in.) practically the whole. Death in 22 hours.

In analysing these cases we find that death quickly followed the operation in 9 cases. Three survived the operation for about four months. As regards the site of intestine removed in the 21 cases which recovered in two it consisted partly of colon, so that it is not to be wondered at that ill-effects were absent in these subsequent to the operation. In one ileum with a portion of jejunum (how much is not stated) was removed, the total amount being 186 cm. In this case no ill-results followed. In the remaining cases it is, as a rule, expressly stated that it was ileum which was removed, so that, generally speaking, in analysing these results we should remember that it is resections of the ileum with which we are principally dealing.

One of the most striking features in the subsequent history of those who survived is that whereas some showed symptoms of intestinal disturbance chiefly in the form of a tendency to diarrhœa, these have been absent in Ruggi's case in which the greatest length of intestine (330 cm. = 11 ft.) has been successfully removed. Leaving for a moment this case aside we find with regard to the others that if we take a length of 200 c.m. (6 ft. 6½ in.) as a dividing line they pretty nearly fall into two classes. Thus, in the 7 cases which showed subsequent disturbance the length of the intestine removed was over 200 c.m. with two exceptions. In one of these (Braun) the length of intestine removed was only 137 cm. (4 ft. 6 in.) but here there was the complication of contracted kidney so that much weight cannot be laid on it. In the other (Schlatter) the amount removed fell short of 200 by only 8 cm. (3 in.) and in that case, too, it is distinctly stated, that the intestine was measured after it had considerably shrunken. The 14 cases which showed no untoward symptoms had lost less than 200 cm. with one exception, and in this case (Koeberlé) the amount removed exceeded the standard by only 5 cm. (2 in.). The teaching of clinical experience in adults would thus seem in cases uncomplicated by other lesions to point towards 200 cm. as being the limit about which the danger line fluctuates. In adults when the intestine removed is less than this intestinal disturbance will probably be absent and when greater present. Children must apparently be placed in a different category, for in a child, aged 8, 330 cm. (11 ft.) have been removed without interference with nutrition or intestinal disturbance. The explanation seems to lie in the circumstance pointed out by Monari that in those animals which showed no intestinal trouble after operation a marked hypertrophy of the intestine was found to have taken place. It is easy to understand that such a hypertrophy will occur much more readily in a child than in an adult, and in this probably lies the key to the mystery that in the most extensive resection ever successfully done no disturbance of digestion followed, or possibly Ruggi's case had an abnormally long intestine. Another very remarkable fact is also brought to light, namely, that even in those cases where diarrhœa occurred nutrition could still be kept up to a good level by giving an abundance of nutritious food. If, now, we accept Treves's measurement of 22 ft. 5 in. (683 cm.) for the small intestine as approximately accurate, and take 200 cm. (6 ft. 6½ in.) as the limit beyond which we cannot safely go in the removal of portions of the intestine, we see that the latter is considerably less than one-third of the total length. Thus Senn is the most accurate of the experimenters as regards his deduction in reference to man, for he it was who asserted that resections of over one-third of the small intestine are likely to be accompanied by grave digestive disturbance probably terminating in death.

In conclusion, I would point out that although the interest of the subject is considerable the question of exactly how much intestine may be removed without damage to nutrition concerns more the physiologist than the surgeon. The latter in these cases is confronted with a problem which admits of but one answer. His patient is in imminent danger of death and the surgeon's first duty is to save his life. If he is dealing with gangrenous intestines, as is most commonly the case, he must remove the whole of it; whether it measures a few inches more or less than 200 cm. he will not stop to inquire: the leaving behind of the smallest portion of gangrenous gut means death, its complete removal may mean life. When he has got his patient safely back to bed after the operation he may in his leisure moments measure the intestine removed and assist his prognosis as to the ultimate result by remembering the points which I have here endeavoured to bring forward.

## A CASE OF INTUSSUSCEPTION IN A PATIENT AGED 72: LAPAROTOMY: RECOVERY.

By C. CLEMENT STEAD, M.B., B.C.Cantab.,
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In the British Medical Journal of September 7th, there is in Mr. Bernard Pitts's paper a list given of all cases of intussusception treated at St. Thomas's Hospital from 1875 to 1900 inclusive. Amongst these 115 cases in the list there is

no record of any case in which the patient had attained the age of 50 years. The following notes may, therefore, be of interest:

The patient, a rather feeble lady, aged 72, had suffered from chronic constipation and had had several attacks of extreme flatulence, during which she suffered a considerable amount of colicky pain, and the distension was such that the abdomen—abnormally flaccid as a rule—became so distended that the skin was shiny and the percussion note very hyperresonant, and one might almost describe her at such times as a "living drum." In three attacks of this kind which I saw, an ordinary soft stomach tube was passed *per rectum*, with the result that enormous quantities of flatus escaped, all pain vanished, and the abdomen again became supple.

On the evening of March 29th she took a cascara tabloid, which failed to act until 9.15 P.M. on the following night. She then went to stool, having felt perfectly well all day, and after some minutes, although she did not strain in the least (on this she was emphatic), she felt that "something wrong" was happening, and found a lump protruding from the anus. The condition on examination was as follows: A mass some 8 inches long and about the same in circumference was protruding *per anum*; its long axis was curved, and between it and the sphincter the finger could be passed its full length without reaching the top of the *cul de sac*. The external surface of the mass was obviously everted mucous membrane of the large bowel. The pulse was of good quality, but rapid. There was no pain, but the patient wore an anxious expression.

I tried to reduce the mass by means of moderate taxis, in the hope that if it could be returned within the anal sphincter, injection might be sufficient to complete reduction of the intussusception. As taxis failed, I gave a hypodermic injection of morphine with atropine, and made arrangements for the performance of cœliotomy.

The operation was begun 6½ hours after the appearance of the intussusception, and lasted about an hour. A lipoma about 4 inches in diameter being situate in the middle line between the umbilicus and pubes, the left semilunar line was chosen for the site of the incision, which was 6 inches in length. Directly the peritoneum was opened several distended coils of both large and small intestine shot out, and could not be kept back; they were kept in towels wrung out of a hot solution of lysol. The right hand was introduced, and with the uterus as guide, the position of the intussusception—which was composed entirely of large bowel—was ascertained.

Moderate traction on the bowel above the neck of the intussusception proved that the greatest obstacle to reduction was at the sphincter ani, which was accordingly divided. With the left hand externally, taxis was applied to the bowel simultaneously with traction on the neck by the right hand internally. This manœuvre took time, as great care had to be exercised so that the intussusception should be as little damaged as possible. Bit by bit, however, the mass was gradually passed back into the abdomen, an inch or so returning at a time with a little jerk. This want of smoothness in the return of the bowel I attributed to the unequal thickness of its substance in various parts.

As soon as the external mass had been reduced, the reduction of the last few inches was quite easy. The peritoneal surface of the now disinvaginated bowel was found to be shiny and of good colour, though congested. The coils, which had been kept in lysol towels, were returned into the abdomen, and the wound was closed with a row of 7 deep fishing-gut sutures, through all the layers of the parietes, and a superficial continuous suture of horse hair. Immediately before drawing together the deep sutures, a "tell-tale sponge" was passed down to the bottom of the pelvis. It returned practically unstained. It may be well to state that the word "sponge" is misleading, as during the whole operation nothing was used to do the work of swabs or sponges except a roll of sterile gauze about 4 inches wide, which was kept under the edge of one of the enveloping towels. The end of the gauze roll was used for "sponging" the wound, and also for keeping back the intestines. When any portion became soiled it was cut off and immediately thrown away. By this method, suggested first, I believe, by Dr. Peter Horrocks, all danger of leaving swabs or sponges in the abdominal cavity is avoided.

Convalescence was slow but uninterrupted, except for a small stitch abscess. The temperature, which for five days was subnormal, rose to 100.2° F. only on one occasion, and this was clearly attributable to the stitch abscess. The patient made a good recovery, and continues in her usual health.

It is a great pleasure to acknowledge the kindly help of Dr. Joyce (of Cranbrook), who saw the patient with me in consultation before and helped at the operation, and that of Dr. Colls, of Benenden, and Miss Fendick, who also rendered valuable assistance.

## AFTER-CARE OF CASES WHICH HAVE BEEN OPERATED UPON FOR PERFORATION OF THE STOMACH.

By HASTINGS GILFORD, F.R.C.S.Eng.
Reading.

On glancing through the records of those cases of gastric ulcer which have undergone treatment by operation during the last ten years one is struck with the fact that while every detail of the operation is entered into again and again with almost painful minuteness, very little is said on the important subjects of feeding and general treatment. It has, therefore, come to pass that while every step of the operation is carried out systematically and intelligently the same can hardly be said of the after-treatment. This is too often apparently based on mere routine, and has but little regard to the requirements of physiology. Perforations of the stomach should rank with strangulated herniæ and with bleeding as cases which any surgeon may at any time be called upon to undertake. It is, therefore, of importance that the principles of treatment should be clear in his mind, especially if he have had no experience of these accidents. It is not now necessary to say anything about those details of treatment which are applicable to abdominal injuries in general. All that we are concerned with are those special points which apply to the after-care of the particular cases with which we are now dealing. These are, in the main, questions of food, of the position occupied by the patient, and of aperients.

*Food.*

In regard to the nature of that which is to be put into the stomach it must be, almost of necessity, liquid; and either previously digested, or of such a character as to require no gastric digestion. We have to remember that in the normal condition the stomach serves both as a reservoir and as a digestive organ; and it must therefore be our object to supply such material as will pass straight through it, without bringing either of these functions into play. If the indications are favourable, nothing but water, or water containing some substance which is not food, should be given during the first 24 hours. If the operation has been severe, or if there is reason to suppose that the stomach will not tolerate liquids, it is best to inject a pint of warm water into the rectum to begin with. This may be done so soon as the patient has become conscious and may, if desirable, be repeated every four hours. The quantity must vary according to the tolerance shown by the patient and the degree of thirst. In the great majority of cases hot water may first be given by the mouth about four hours after the operation. To begin with only a teaspoonful at a time should be allowed, and care should be taken that it is really hot. Sometimes a little chloroform water is of use in allaying nausea, and now and again I have found dill water or peppermint water most acceptable. They tend to allay the irritability of the stomach and are also, of course, of some slight value as antiseptics. Nothing, perhaps, is more grateful to the patient at this time than a little tea. This should contain neither sugar nor milk, and should be made by pouring water on tea leaves and immediately pouring it off again. It is, in reality, little more than sterilised water, flavoured and coloured with tea. It need hardly be said that, at first, fluids should be given in the smallest quantities and with the greatest caution. They should be stopped as soon as nausea is felt, and should not be given again until after the lapse of an hour or more, according to circumstances. When

it is found that no nausea or sickness is produced a little food may be introduced with advantage. In most cases I find that milk is chosen to begin with. Now, of all foods which are given to invalids, this is probably one of the worst. Many adults cannot take milk; it disagrees and causes vomiting. Moreover, it contains proteids and therefore undergoes digestion in the stomach. This objection holds good whether it is given alone, as buttermilk or koumiss, or is combined, as it often is, with lime water, with one of the aërated waters, or si aërated by means of a gasogene or sparklet. There is a further objection to aërated liquids. One sometimes wonders whether it is possible for the gas liberated from them to find its way between the edges of an unhealed ulcer into the peritoneal cavity. In one of my earlier cases a perforation occurred in a stomach which was affected with hour-glass contraction. For four weeks the ulcer refused to heal and a fistula existed through which many little observations could be made as to the functions of the stomach. It was then noticed that when air was blown into it by the mouth through a tube, the patient was only able to resist a very slight pressure and could not, in spite of all her efforts, prevent the air from gurgling up through the œsophagus. But though this seems to show that there is very little occasion to fear that the gas from aërated drinks can do harm, it is best to be on the safe side and to give no gas-laden fluids. It is possible that other patients may have more control over their gullets than this patient had. The objections to milk are sometimes partially overcome by peptonising it. But it has been shown that peptones are decidedly irritating. Unfortunately too, peptonised milk is not palatable, and it is of the utmost importance that only that food should be given which is acceptable to the stomach. While food should not be unpalatable, it must not, on the other hand, be too sapid or stimulating. There is an objection on this score to beef tea and other watery extracts of meat. Some of these are almost pure stimulants, for they contain practically no food, and are therefore hardly suitable in any case. If their stimulating action is required they are best given in rectal injections. Some of them contain small quantities of albumen, and are therefore calculated to excite the secretion of the gastric juice, not only by mere stimulation, but because they require digestion. Others contain irritating peptones. There is a similar objection to the use of alcoholic drinks, such as whisky and champagne, whose stimulating action entirely overshadows their nutrient value, whatever that may be. They should be considered rather as drugs than as foods. Perhaps the most undesirable of all substances which are given in the early days after gastric operations are combinations of alcoholic drinks with eggs, though they are advocated by some writers.

It may now be asked, if there are objections to these various articles of invalid diet, what can we find which shall best fulfil all the requirements? In my opinion one of the best of these foods is grape sugar. Grape sugar by itself is too nauseous, but combined with a flavour, such as that of raisins, it is nearly always palatable. I find in fact, that it is as a rule preferred to nearly all other forms of liquid diet, and patients will often by preference continue taking their "raisin-tea" long after they have become tired of milk and slops. It is made by pouring boiling water on to half its bulk of chopped raisins. This is stewed for about two hours and then filtered. The filtrate may be given either with water or without, and either hot or cold, according to the wishes of the patient. Though it doubtless contains other substances than grape sugar, these are apparently present in such small quantities that they may be neglected. Given at first in small doses and afterwards more freely, it is undoubtedly of value. When one remembers the important place which sugar takes among the foods[1] it seems strange that it should not be more utilised as an article of sick diet. This applies with peculiar force to grape sugar, seeing that it requires no digestion. It is probably of far more value than any of the variously named meat extracts which are now so much in favour.

Next to raisin-tea I have found a decoction of malt of service. This is made in a similar way, ground malt being substituted for raisins. It is, as a rule, not considered so palatable as the raisin-tea, though, where it is liked, it is useful as an alternative. If given too freely it may, I fancy, cause a little diarrhœa. I have noticed that the bowels have become loose under such circumstances; it is possible, however, that this was a mere coincidence. After raisin and malt have been given for from one to three days, a mixture of cream and water is added to the list. This consists at first of one part of cream to twelve of water, but it is gradually made stronger until it is double this strength. Cream is chosen because it undergoes digestion in the small intestine; and, if given at first well diluted, is a fat which is very readily borne by the stomach.

The three preparations which have now been mentioned may be continued until the end of the first week or longer. But generally after the cream has been given for a day, I begin to mix it with some starchy food. This must contain no more than a trace of proteid. Arrowroot, corn flour, or pure starch, made into a thin gruel with cream and water and sweetened with grape sugar is a useful and palatable food. The patient, as a rule, improves on this diet, and there is no occasion to add to it until one is sure that the lesion in the stomach is safely sealed up. It is probable that fresh wounds of the stomach heal as quickly as do those of the face, but it is best not to assume that union is complete until the end of the first week.

The *post-mortem* examination of some of those cases which have died proves that healing does not always take place by first intention; part or the whole of an ulcer may remain open for days, and the only barrier to the escape of the contents of the stomach will then consist of the peritoneal adhesions on its external surface. These must, at first, be very weak, and were the movements of the stomach so vigorous as was at one time supposed, it would be most unsafe to give solid food until a fortnight or more after the perforation had been sewn up. But, fortunately, as I have seen in my case of gastric fistula, peristalsis is very feeble and is not likely to tear apart any adhesions after they have been formed a week. More danger is to be apprehended from vomiting; but, in this event also, the stomach is too passive and the pressure within it too slight for the act of vomiting to be attended with any great danger after the second or third day. At the end of a week, if the patient has done well, solid food may be commenced. This may consist of biscuit, such as "lunch," "captain," or "breakfast." These are crisp, and must be well chewed in order to be swallowed. They are, as a rule, more acceptable if spread with butter, and I have found that nothing is better liked or agrees better than the scrapings of the fat of cold salt breakfast pork, sandwiched between thin slices of "hovis" or ordinary bread. The fat of this part of the pig seems to differ from other fats in being tolerated even by those with whom fats generally disagree. After two or three days more have elapsed the diet may be still further varied, but, for another fortnight or more, it will be wise to select those foods which undergo intestinal rather than stomach digestion. In deciding the length of these different periods and the time for the commencement of solid foods, the aspect of the patient and the condition of the pulse in regard to frequency and character must be considered of far more importance than fever. At the same time repeated rises of temperatures and continued tenderness over the region of the stomach must be regarded as indications for caution in feeding. The appetite then becomes the safest criterion, for the patient, as a rule, requires no solid food until the symptoms subside or an abscess bursts.

*Position of the Patient.*

This ought to be regulated by physiological requirements and the position of the ulcer. The ordinary supine position is not a good one. It is, in the first place, not natural, for probably in nine cases out of ten the position which is chosen for sleeping is more or less on the right side. Dr. Louis Robinson has shown that this is the position which is instinctively assumed by the young of mankind and by the anthropoid apes. The pylorus is also at the right end of the stomach and fluids probably do not so readily pass through into the intestine in the supine and left lateral positions. Mr. Clinton Dent thinks that it is of importance that the head and shoulders should be well raised, and this, I believe, is by far the best attitude in most instances. In the case of ulcers on the posterior surface the patient should first be placed well over on to the right side, and should afterwards

assume the sitting-up position, or a compromise may be effected by raising the shoulders and turning the patient slightly over to the right. This position is good for all ulcers except those which are low down on the anterior wall, and it may then perhaps be best for the patient to be lying on his back. In the case of ulcers of the lesser curvature the higher the patient can sit up with comfort the better. But while one or other position may be of advantage in any particular instance it should never be continued until it becomes irksome. It must not be forgotten that while the passage of foods over an unhealed wound or ulcer cannot be desirable the same is not true of liquids other than foods. It may be of distinct advantage sometimes to turn the patient into such a position that what is swallowed shall pass over the wound. Plain hot water, peppermint water, or even well diluted carbolic solution (containing no more than 3 or 4 drops of phenol) may be given.

*Aperients.*

It is, of course, of the utmost importance that the natural flow of intestinal contents should begin as early as possible after an operation. Nothing, perhaps, requires more judgment than the use of aperients. Treatment after operations on the stomach differs from treatment after other abdominal operations in that sickness is even more to be dreaded and, therefore, must be the more carefully guarded against. In those instances of perforation in which the escape of gastric contents has been limited to the neighbourhood of the stomach, and peritonitis has become localised in the same area, it is best, to refrain if possible from irritating that organ by aperients. I suppose it is true that the higher up in the abdominal cavity the peritonitis exists, the more likely is vomiting to be an early and inveterate symptom.

In one of my cases the patient, I believe, lost her life owing to the injudicious use of magnesium sulphate. There had been obstinate constipation which could not be overcome by the use of injections; and wind was being pumped up freeely by the mouth, though none escaped through the anus. Small quantities of decoctions of raisins and of malt were being given occasionally and were retained, though there was occasional nausea. The patient was weak and her expression anxious. The pulse was about 130 to the minute; but though the abdomen was distended, the lower part of it was free from pain or tenderness. It was the fourth day and she was so desperately ill that I feared that unless natural action of the bowels was secured she would soon die. I therefore ordered teaspoonful doses of white mixture to be repeated every quarter of an hour. After four doses had been given vomiting set in and continued until the patient's death about ten hours afterwards. At the *post-mortem* examination nothing further was found than septic areas round about the stomach wound. In this, as in other cases, the enemata consisted of four ounces of glycerine mixed with half-ounce of turpentine. These I begin, as a rule, twenty-four hours after operation, though the time varies according to the amount of distention and eructation of gas. Soap and water, with turpentine may also be given to the amount of a quart. Either of these may be repeated every four hours until decided relief is obtained.

In some cases of perforation the freedom of the stomach area from peritonitis and the involvement of the lower parts of the abdomen must lead to some modification in the course of treatment. Aperient enemata should be given at first, but if they are not successful and ileus is threatened it is imperative that we should make use of drugs. Of these magnesium sulphate and calomel are probably the best. After giving one dose of calomel followed by magnesium sulphate in frequently-repeated doses for four hours a large glycerine or soap-and-water injection should be given, and this course of treatment should be continued until the bowels act. If there is sickness it is sometimes a good plan to give a drachm or more of Epsom salts immediately after each attack of vomiting.

Although perforated gastric ulcer is the lesion to which the above remarks are especially directed, they will also apply to all injuries of the stomach and, in principle, to cases of unperforated gastric ulcer as well.

REFERENCE.

See paper by Dr. Vaughan Harley, British Medical Journal, November 23rd 1895, vol. ii, p. 1283.

## AN IMPROVED INCISION IN LAPAROTOMY FOR THE PREVENTION OF POST-OPERATIVE HERNIA.

By ARTHUR H. BUCK, F.R.C.S.Edin.,

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There can be no doubt that post-operative hernia is still far from uncommon. It does not, however, occur so frequently as was at one time the case. Formerly a hard-and-fast rule was followed that no muscle fibre should be involved. Latterly it has been the rule to separate muscles, whenever practicable, in the direction of their fibres. This is probably one of the reasons why hernia is now less common. But to carry out this rule involves, except in the case of the rectus abdominis, division of several strata of muscles in different directions. The union of such divisions produces scars, which cross one another in their several planes. One would, perhaps, expect that the cicatrices themselves would be scarcely perceptible, since, the muscles being cut longitudinally and not transversely, there is nothing to prevent close contact. This is not the case when circular ligatures are used to unite the approximate bundles of muscle fibre.

Quite recently, in dissecting out a scar, resulting from this method employed twelve months before, I had reason to notice how broad was the area of cicatricial tissue which had formed. (The case was one of appendicitis, the appendix not having been removed at the first operation.) The reason of this was first clearly brought to my mind by my friend Dr. Willoughby Furner. When parallel bundles of muscle fibres are united by tightly-drawn sutures, three or four to the inch, degeneration occurs of the individual highly-organised fibres involved. Absorption follows, and cicatricial tissue fills the gap.

Why, then, is post-operative hernia less common after division of muscles in their length? Because the resulting cicatrices are supported on one or both sides by uninjured muscle or aponeurosis. In the case of a division of the fibres of the rectus this support would be absent. In order to do as little damage as possible to delicate muscular and aponeurotic structures, mattress sutures with the finest silk and curved intestinal needles should be employed.

A second cause of the less frequent occurrence of post-operative hernia is the fact that we now recognise the importance of avoiding the division of the nerves supplying the muscles. To take the case of the rectus abdominis: The motor nerve supply is derived from the terminal branches of the abdominal intercostal and ilio-hypogastric nerves. These branches enter the muscle through the outer part of its sheath at intervals from above downwards. If an incision be made through the rectus, those fibres lying to the inner side of such incision will become paralysed and atrophied. If the incision through the linea semilunaris be used, the effect will be still more disastrous, since the whole thickness and breadth of muscle corresponding to the area of injury will be cut off from its motor and nutritive nerve supply. Paralysis and atrophy must ensue.

The whole questions of incisions in the abdominal parietes, with special reference to nerve supply, has been recently and ably discussed by Dr. Brindley Eads.[1]

The conclusions I form are:

1. That division of aponeurosis without supporting muscle is bad, as is evidenced by the frequency of ventral hernia occurring after such a procedure.

2. That division of muscle in the direction of the fibres cannot be satisfactory if it entails division of motor nerve fibres.

3. Nor can such division be satisfactory unless supported by other uninjured muscle or aponeurosis.

A consideration of these points led me to adopt the method which I will now describe, to which none of the above objections apply:

1. *Incision through Skin, Superficial Fascia, and Fat.*—An incision is made of the required length down to the anterior layers of the sheath of the rectus, an inch more or less, according to the size of the patient, either to the right or left of the middle line, as may be desired.

2. *Division of Sheath (Anterior).*—The anterior layers of the sheath are divided with the point of the knife, an inch, more or less, from the inner edge of the muscle, upwards and downwards to the same extent as the skin incision. Care is taken not to injure the muscle fibres.

3. *Enucleation of Muscle from its Sheath Outwards.*—The inner divided edge of the sheath is picked up with dissecting forceps, and, by means of the handle of the knife and the forefinger, the inner part of the muscle is readily enucleated from its attachments to the sheath anteriorly, internally, and posteriorly. Care must be taken that, at the level of the fold of Douglas, posteriorly and for an inch or so above, the deep epigastric vessels be carried outwards on the under surface of the muscle. In the separation anteriorly it will be found necessary, should the incision include in its length any of the transverse fibrous intersections, to use the point of the blade of the knife to free the sheath from these—a perfectly simple performance. The intersections do not penetrate to the posterior surface of the muscle.

4. *Division of Sheath (Posterior), together with Transversalis Fascia, Subperitoneal Fat and Peritoneum.*—The enucleated portion of the rectus being retracted outwards and the inner part of the anterior sheath inwards, the abdomen is opened in the same vertical plane as the previous incisions. As soon as the peritoneum has been incised a director or the forefinger is introduced, and the following structures divided, up and down, as far as necessary: in the whole length of the incision the transversalis fascia, subperitoneal fat and peritoneum, and above the level of the fold of Douglas the posterior layers of the muscle sheath.

5. *Suturing of Sheath (Posterior), together with Transversalis Fascia, Subperitoneal Fat and Peritoneum.*—To close the abdomen the above structures can be readily united by a continuous suture, the necessary parts being retracted to help the operator. A curved intestinal needle, a needle holder that will not allow the same to turn, and fine silk being used. Care must be taken to accurately adjust the divided edges of the semilunar fold of Douglas, which is easily recognised an inch or so below the umbilicus.

6. *Suture of Sheath (Anterior).*—The rectus, after the posterior structures have been united, is allowed to slide back into its natural position, thereby completely covering the line of suture. The anterior layers of the sheath are united by a similar continuous suture.

7. *Suture of Skin and Fat.*—This is performed in the ordinary way. Although this description may seem somewhat long and tedious, the actual performance, so far as the opening of the abdomen goes, will be found to be extremely simple, and to take little, if any, longer than any other method. The incision can readily be extended, if necessary, by slitting the anterior sheath with the extreme point of the knife, enucleating the muscle with the finger, and dividing the posterior structures with scissors. As regards closing the abdomen the parts come together so accurately and readily, and it is so easy to see what one wants to do, that the continuous suturing can be completed with great rapidity.

Directly the patient regains consciousness and begins to vomit the advantages of this method become apparent, for whereas the rectus under the influence of the anæsthetic has been flaccid, it now regains its normal tone and resumes its functions, unimpaired either by a row of sutures or by loss of nerve supply. In the act of vomiting it stands out, one may almost say, involuntarily, firm, and stiff, and so guards in the most efficient way possible the very area which has been injured. With every subsequent strain to which the abdominal wall is liable, whether in expelling the contents of the abdomen or pelvis, in coughing, or in other physical effort, the action of this muscle will be the surest preventive of hernia, forming at such times a tough and more or less rigid band, tending to approximate itself to its fellow of the opposite side, and so holding itself securely in its sheath, and more particularly into that part of it from which it has been separated. It must at the same time be remembered that the disturbed area presents for the formation of adhesions in the process of healing wide opposing surfaces some 2½ inches broad (1 inch anteriorly between sheath and rectus, the same posteriorly *plus* the breadth of muscle internally). On several occasions I have opened the abdomen in this way *post mortem*, from pubes to ensiform cartilage, to right and left of the middle line, and closed it as described. To all appearances it was perfectly satisfactory. This was particularly noticeable when, on putting the hand into the abdomen from above through the diaphragm, pressure was exerted from behind the line of suture forwards. The thickness of the rectus could then be plainly felt in front of the fingers giving a sense of perfect security and strength to the area in question.

I used the method on the living subject for the first time on February 7th of this year, the case being one of semi-solid dermoid tumour of the ovary about the size of a fœtal head. The patient was a small, thin woman, and the result so far has been entirely satisfactory; nor, although it is early days, do I see how she can develop a hernia through the scar in the future.

The operation was followed by vomiting, and one could see and feel the recti standing out equally right and left, with the skin incision over the left muscle. The patient was on a couch on the tenth, and allowed to walk on the twenty-first, day after the operation. Palpation of the parts now, five weeks from that date, when the recti are acting, assures one of the security which exists.

In looking up the subject after I had performed the operation, I found that the late Mr. Greig Smith, in his admirable book on abdominal surgery, advocates a somewhat similar procedure, but it is to take the place of incision in the semilunar line; and he recommends that the rectus be turned inwards, thereby injuring the motor nerve supply, which I particularly avoid. The sutures, also, are apparently put through the muscle substance.[2]

To sum up the advantages of this method, they appear to me to be:

1. Extreme simplicity.
2. Division of aponeurotic structures only, such being afterwards supported by a strong muscle entirely free from injury by sutures or division of nerves.
3. Extreme improbability of hernia.
4. Great reduction in time of the length of period at present necessary for convalescence after simple cases of laparotomy.

References.

[1] *Annals of Surgery*, vol. xxxiii, No. 1, 1901. [2] *Abdominal Surgery*, vol. i, p. 109, 5th edition. Greig Smith.

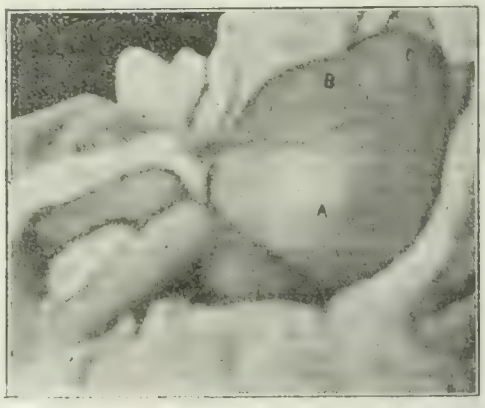
## CASE OF CONGENITAL HYDRONEPHROSIS: NEPHROTOMY AND DRAINAGE: RECOVERY.

By JOHN THOMSON SHIRLAW, M.B., C.M.,

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As cases of congenital hydronephrosis are somewhat rare, I venture to put this on record.

*History and State on Examination.*—On April 11th, 1900, I was called to see a male child, 6 weeks old, on account of a swelling of the abdomen, which had been present at birth, and been getting slowly larger. The child had been brought into the world by a midwife, who declared that the swollen abdomen had impeded the labour after the birth of the head. The child, when I saw it, was weakly and wasted, and had irregular attacks of diarrhœa. The abdomen presented the appearances of an abdomen with a large ovarian cyst; it was greatly distended, the distension being greater




on the left side; the skin was thin and tightly stretched, and large veins ramified over its surface. Palpation and percussion revealed a tumour exactly the shape of a kidney occupying the left lumbar, iliac, and hypochondriac regions, and left half of the umbilical region. It was dull all over, right up to the lumbar spine, and gave the vibratile thrill. It had a smooth surface and edge all round, except at the inner side, where a distinct notch could be felt. As time went on the child grew thinner, although it took nourishment greedily, and the tumour increased until it occupied the entire umbilical region, and entered the hypogastric region as well, so that the abdomen projected on to the thighs. The tumour seemed to have rotated somewhat to the right at its lower end, so that the notched inner surface lay at a slight angle to the median line. The bowels were crushed up under the liver, and lay between the tumour and that organ; one or two coils lay over the surface of the swelling. The descending colon could be felt and percussed at first over the surface of the tumour, but eventually slipped round and lay quite close to the lumbar spines. The tumour was most prominent and nearest the skin about one inch above the umbilicus, and half an inch to the left side; and into this point I inserted a hypodermic needle, and drew off some fluid, which was clear, non-albuminous, and showed nothing under the microscope beyond an occasional epithelial cell.

*Operation.*—The diagnosis having been made, I strongly advised operation, in the hope of establishing a fistula, and with a possible chance of complete cure. On May 2nd, accordingly, when the child was 9 weeks old, nephrotomy was done, with the assistance of my partner. There being no room for extraperitoneal drainage on account of the youth of the child and the position of the colon, but still desiring to have the drainage as far back as possible, I made a 2-inch incision midway between

the iliac crest and the last rib and parallel to the latter. I entered the psritoneum rather suddenly, being only aware of the fact when a coil of small intestine presented. To get more room the incision was carried forward another 2 inches. The sac was easily found, brought to the surface by two pairs of artery forceps, a nick made in the posterior peritoneum, and a small trocar and cannula inserted. The quantity of fluid was not measured, but there was fully a pint and a-half. It was at first watery, then mucilaginous and soapy, and streaked with white towards the end. The sac wall was exceedingly thin. A well-fitting drainage tube was then inserted, the tube invaginating a portion of the sac wall, and then fixed with a suture through the skin. A drain was also inserted into the peritoneum. The child was very collapsed after the operation, with a very slow and intermittent pulse, but it was wrapped in wool and given brandy and strychnine.

*Progress.*—After six hours the child was recovering from the shock, and had a pulse-rate of 170. From that time on the child did well The temperature never rose beyond 100.5° until the fifth day, when the sinus became foul, and caused a temperature of 102°. For the first week the dressings were soaked through and through, but the drainage gradually lessened, and by October 13th, five months and a half after the operation, the sinus closed, there being no further drainage The cavity was well washed out daily with weak carbolic lotion. Three weeks after the operation, the drainage tube was removed altogether, as a permanent fistula seemed to have been established: about this time, also, the child began to waste rapidly, and was given cod-liver oil inunctions and small doses of an oil emulsion internally. This had the desired effect.

There seems to be some confusion as to the true meaning of the word "congenital" as applied to hydronephrosis. According to Morris[1], congenital hydronephrosis is "hydronephrosis in the fœtus and newborn, not hydronephrosis which occurs some time after birth, and is due to a congenital cause." Bland-Sutton,[2] however, has reported a case of congenital hydronephrosis in a woman, aged 44. I think there can be little doubt that my case was a true congenital one. The cause of the obstruction was not sought for. The operation had to be done hurriedly on account of the weak state of the little patient. There were no other congenital deformities or malformations, with which the condition is sometimes associated.

As regards treatment, in my case aspiration was not tried. Mr. Thornton[3] thinks the chance of cure by such means very slight, but that there is a good chance of cure by nephrotomy. In my case the kidney was reached through the peritoneum for the simple reason that it was much easier, and the fluid in the sac aseptic.

The cure, in my opinion, was due to the fact that the sac had reached the utmost limit of distension, and that thereby the secreting structure had been destroyed, or almost entirely destroyed. Would aspiration, then, alone have been quite as effectual? I hardly think so, considering the very free escape of fluid for some time after the operation, followed by the discharge of purulent fluid, which meant granulation of tissue and the disintegration of the few remaining more highly-developed secreting cells.

REFERENCES.
[1] *Surgical Diseases of the Kidney.* [2] *Lancet*, vol. i, 1896. [3] *Ibid.* vol. ii, 1889.

## BILOCULAR INTRAPELVIC AND SCROTAL HYDROCELE.

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A HYDROCELE may have an hour-glass shape, constituting what the French term a hydrocele *en bissac*, either because a localised inflammatory thickening of the tunica vaginalis renders one part more unyielding than the rest, or because the tunica becomes pouched at some part from local weakness. Curling pointed out that such a pouch might form in the digital fossa between the epididymis and the back of the testicle, and might push its way towards the opposite side of the scrotum. Similarly pouches may form on the front or sides of the tunica vaginalis, and the pouches may, by reason of the relative weakness of their walls, become larger than the tunica vaginalis itself. Such a pouch may bulge far into the opposite side of the scrotum and cause a single hydrocele to resemble superficially a double one. These varieties of bilocular hydrocele are contained in the scrotum. The case of bilocular hydrocele described below is of the rarer form in which one loculus is in the scrotum and the other within the abdomen, and the orifice or channel of communication between the two lies in the inguinal canal.

W. L., a labourer, aged 20, came to the out-patient department of the Bristol General Hospital in October, 1899, complaining chiefly of a swelling in the left side of the scrotum, but also of a swelling of the prepuce and of a discharge from the penis. The latter was due to a chancre which in due course proved to be syphilitic. On questioning him closely, it was ascertained that he had had some degree of swelling in the left side of the scrotum as long as he could remember, though it had given him no serious trouble until about a month previously. Further, his father had told him that when an infant he had had a swelling there, and had been turned head downwards on two or three different occasions in order to reduce the swelling when it had become tense. The swelling always became smaller when he lay down. About a month before coming to the hospital he had had a blow with a plank on the lower part of the scrotum, and the effects had kept him in bed a fortnight, during which time a black bruise mark formed where he had been struck. At the end of the fortnight he returned to work and had to carry heavy sacks of cement.

After three days he had to give up work again, owing to pain in the left groin and scrotum. The swelling at this time was of the same size as it had been before the accident. It was then tapped by a practitioner, and a bowl of fluid, said to be like urine, was drawn off. The swelling soon came back when he returned to work, and it was again tapped in the hospital casualty room. It was after this second tapping that he came under my care. No active treatment was given to the hydrocele until March 20th, nearly five months later. By that time the scrotal swelling had increased in size, and was painful whenever he attempted to work, and these facts induced him to come into the hospital and submit to an operation. The following note of the patient's condition was made on March 3rd: As the patient lies upon his back in bed, the left side of the scrotum is seen to be enlarged to the size of a big lemon. When he coughs or strains the swelling immediately expands, returning again to its former size as soon as the cough ceases. It is very translucent. It feels like a rather flaccid sac of fluid. The testicle is felt lying in the posterior part of the swelling, and is very sensitive, so that examination of it is hardly possible. The globus minor and body of the epididymis feel indurated and nodular. The swelling can be almost entirely reduced through the inguinal canal, but quickly returns again when the pressure is relaxed. When the scrotal swelling is suddenly and smartly pressed upon, a slight bulging of the abdominal wall in the left iliac region is produced, and on laying one hand on that region and the other on the scrotum fluctuation is readily perceived. Similarly a thrill is transmitted by gently tapping either part. The area of the abdominal parietes through which fluctuation can be felt is roughly pyriform in shape. The inner border is the middle line, and extends 5 inches above the symphysis pubis and to within an inch of the umbilicus; the outer edge is at Poupart's ligament, and extends to a point 2 inches from the anterior superior iliac spine, and the upper border is a curved line, with its convexity upwards, joining the distal ends of the two borders mentioned.

A sudden tap made upon any part of the abdominal wall, even in the right hypochondriac region, immediately produces a visible expansion of the scrotal swelling. There is no visible prominence of the abdominal wall in the fluctuating area either when the patient is lying or standing. Both flanks are resonant in all positions, showing the absence of ascites. A rectal examination was made, and an attempt to obtain fluctuation between the examining finger and the other hand placed over the iliac fossa or in the scrotum, but without success. This examination was very unsatisfactory, owing to the patient's intolerance. The patient had a small and very flaccid hydrocele of the right tunica vaginalis.

*Operation.*—On March 20th an incision was made over the external abdominal ring and inner part of the inguinal canal, and after a little dissection the wall of the hydrocele sac was exposed and incised. Ordinary-looking hydrocele fluid flowed freely away. Through the opening and through the neck of the sac the forefinger was easily passed backwards into a large cystic cavity lying in the iliac fossa. The neck of the sac and inguinal canal would easily have allowed two fingers to pass. The intra-abdominal part of the hydrocele sac was extraperitoneal. The scrotal portion, which contained the testicle, was separated from the spermatic cord a short distance above that organ and cut across there, and the lower part closed by a few points of suture, so as to form a tunica vaginalis for the testicle. The rest of the scrotal sac was freed from the structures of the spermatic cord which lay behind it, and from other structures up to the inguinal canal, just as a hernial sac is separated in the operation for the radical cure of hernia. Gentle traction was made upon the free portion, and the remaining portion of the sac, the intra-abdominal portion, gradually came down, and was separated easily from the surrounding structures, until in a very short time it was found, rather to my surprise, that the whole of it had been removed, and the cavity where it had been had become simultaneously obliterated. The inguinal canal was closed after Macewen's method. The dressing was removed for the first time eight days after the operation. The testicle then felt enlarged and soft, and it was clear that some fluid had collected in the newly-formed tunica vaginalis. A week later, at the second dressing, the wound had healed by first intention except in a minute area at the upper end. The hydrocele was the same as at the last dressing, and extending from its upper end to the external abdominal ring the spermatic cord was felt considerably thickened and indurated. Also the hydrocele on the right side was as before. In November these hydroceles remained, the left one being the size of a hen's egg, and tense and irreducible, but giving no trouble. There was no inguinal weakness manifest.

The existence of this type of bilocular hydrocele with an intrapelvic and a scrotal sac probably depends upon a faulty obliteration of the funiculo-vaginal process of the peritoneum. In the infantile form of hydrocele, not uncommonly seen in infants and young children, its obliteration has taken place near the external abdominal ring, and the whole of the rest of the process below that level, including the tunica vaginalis, has become distended with fluid. In bilocular hydrocele there is a sac of fluid in the scrotum and inguinal region like that in the infantile form, and in addition an intra-abdominal

sac continuous with the other, and suggesting that a higher unobliterated portion of the funiculo-vaginal process has become distended with fluid. Jacobson[1] says that in these cases the funiculo-vaginal process has probably become obliterated high up at the internal ring, and the rest of the process below has become distended with fluid which has ascended in the inguinal canal and formed an upper sac, and that the relative size of the upper and lower sacs depends upon the resistance met with from the surrounding parts. Macewen[2] admits the possibility of great distension of such a sac obliterated at the internal ring, causing some intrusion towards the peritoneum, though, owing to the abdominal pressure, this would be much resisted, but he does not consider the formation of such a hydrocele outside the internal ring sufficient to explain the formation of intrapelvic and scrotal hydroceles. He suggests that these latter are due to the funiculo-vaginal portion of the peritoneum existing as a sheath lying along the anterior aspect of the pelvic portion of the cord beyond the internal ring, and becoming shut off from the general peritoneal cavity at the deepest part of the pelvic portion of the cord, so that the process is continuous and patent from the testicle to the deepest part of the vas deferens. If such a tube became distended with fluid a bilocular hydrocele would form, with a constriction where it passed through the abdominal muscles.

Macewen further suggests, in order to explain the sudden appearance of the scrotal swelling in some of the cases, that a slight adhesion might have existed in the funicular process where it passed through the abdominal muscles, and that the pelvic cyst having formed first, a sudden strain has broken through the adhesions and allowed the fluid to pass down into the scrotum. In both the cases he reports the patients ascribed their trouble to the sudden strain of lifting a weight, and the scrotal swellings appeared shortly after the strain. On the other hand, the scrotal hydrocele might form slowly if it merely received the overflow from the pelvic sac.

The relation of the intra-abdominal cyst to the peritoneum is interesting, and the descriptions of it vary. Bazy believes that the abdominal sac, as it enlarges, passes backwards and downwards, following the constituents of the cord into the iliac fossa, and that it raises the peritoneum in front of it. If that is the case, an incision through the abdominal wall would have to divide the peritoneum twice before it exposed the sac of the hydrocele. Tillmanns is quoted by Jacobson as having expressly stated that in his case the cyst lay between the parietes and the peritoneum. It would appear that the abdominal cysts are not in exactly the same position in all cases—for example, in Macewen's cases they partly occupied the true pelvis, but in my case did not extend below the brim of the pelvis.

B. G. A. Moynihan,[3] in his recent Arris and Gale Lectures, drew attention to the close relationship which seems to exist between properitoneal and interstitial herniæ on the one hand and bilocular hydroceles on the other. He suggests including these herniæ under the title of bilocular herniæ. The anatomical arrangement of the sacs in these herniæ and hydroceles appears to be practically the same in many cases, with the exception that communication with the peritoneal cavity is persistent in the herniæ, but has become shut off in the hydroceles. He points out that in properitoneal herniæ the upper of the two sacs may pass either (1) upwards and outwards or (2) directly backwards, occupying the inner part of the iliac fossa near the brim of the pelvis, or (3) downwards and inwards into the true pelvis, lying by the side of or near the bladder. If the upper sac of a bilocular hydrocele may also take any one of these positions, then the varying accounts of the relationship of the parietal peritoneum to the hydrocele sac in different cases may be explained.

Moynihan regards the congenital peritoneal pouches met with in the inguinal region near the internal abdominal ring, and described many years ago by Rokitansky, as an important cause of the development of properitoneal hernia, and suggests that these pouches may result from an aberrant attachment of the gubernaculum to the peritoneum. This suggestion is based upon Lockwood's explanation of the origin of infantile herniæ. In a similar way the gubernaculum may be concerned in the development of bilocular hydroceles.

The relative size of the two sacs in these hydroceles varies. In Bazy's cases, for instance, the upper sac extended above the umbilicus and formed a conspicuous swelling when the abdomen was inspected, whereas in one of Kocher's two cases the upper sac was only the size of a nut. Similarly, the scrotal sac may vary in size, and probably in some cases will not reach so low as to communicate with the tunica vaginalis of the testicle, and will then constitute a bilocular hydrocele of the cord only.

The chief signs and symptoms of bilocular hydrocele have been sufficiently indicated in the notes of the case. In some cases the abdominal cyst has pressed upon the bladder and caused frequency of micturition, but this symptom was not present in my case. Whether or not the upper sac will produce a swelling of the abdomen visible on examination will naturally depend upon the size and tension of the cyst, and the thickness of the abdominal wall. In my case the only visible sign of the presence of an abdominal cyst was the wave-like movement of the parietes over the cyst produced when pressure on the scrotal swelling was suddenly made. Reference to the literature of the subject shows that 18 cases were collected by Villeneuve in 1890, all of them foreign, and that additional cases have been described by Lister, Syme, Humphry, Macewen (2 cases), and 1 reported by F. von Winiwarter is mentioned by Moynihan, making, with my example, a total of 25 cases. Doubtless others have been observed, and it appears likely that many have been mistaken for ordinary hydroceles. In the following case a hydrocele of the cord was of the bilocular type.

CASE II.—W. B., aged 11, was admitted to the Bristol General Hospital complaining of a swelling in the left groin, which had been present seven or eight months, and which a truss had failed to keep back. The swelling was situated over and just below the external abdominal ring, and was not larger than a medium-sized plum. It was very readily and completely reducible, but as easily came down again. It was a soft and ill-defined swelling. At an operation this swelling was exposed by an incision over the external abdominal ring. It was found that it could be forced down so as to present in the wound by dipping the fingers deeply into the iliac fossa, close above Poupart's ligament. On opening the sac clear fluid escaped. The finger was easily passed through the wall of the sac into the iliac fossa, and was momentarily thought to have passed into the peritoneal cavity because the intestines in front, and the brim of the pelvis and the iliac vessels behind were felt with such extreme distinctness. In reality the finger had passed into an intra-abdominal sac continuous with that of the hydrocele which had been exposed externally, where it lay in front of the spermatic cord. The ready reducibility of the swelling before operation was obviously due to the fact that the fluid could be displaced from the external portion of the sac into the internal portion. Both portions of the sac were easily removed without incising the external ring or inguinal canal. Lower in the cord a second small encysted hydrocele was found and removed. The pillars of the external ring were approximated with sutures. Primary union followed and complete cure.

The analogy between this case and the last and the bearing of anomalies in the mode of closure of the funicular process are obvious.

REFERENCES.
[1] Jacobson, *Diseases of the Generative Organs*, p. 112. [2] *Practitioner*, August, 1896, p. 132. [3] *Lancet*, February, 1900, p. 515.

## A CASE OF EXCISION OF THE VESICULÆ SEMINALES FOR PRIMARY TUBERCULOUS DISEASE.

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THE following case is of some interest on account of the rarity of primary tuberculous disease of the vesiculæ seminales, and also because the operation of excision for that condition has not, as far as I can make out, been recorded before.

Ullmann, of Vienna, extirpated the seminal vesicle and the vas deferens on the right side of a boy, aged 19. Some weeks before he had removed the right testicle for tuberculous disease. In this case the operation was performed to prevent the infection of the healthy genital organs on the left side. His patient made a good recovery.[1] His method of operating was similar to that followed in this case.

The patient (H. H.) was admitted into the Oldham Infirmary on January 14th, 1901, under the care of Dr. Robertson, to whom I am indebted for permission to publish these notes. He was aged 32, married, and by occupation a painter. He sought relief for frequent and painful micturition.

*History.*

As near as the patient can remember, his troubles commenced three years before. Up to that time he had ailed nothing of any consequence. His first and most prominent symptom was a frequent desire to micturate

On an average, he micturated at half-hourly intervals, day and night. Just previous to his admission here this interval was reduced to five minutes. This act was always productive of a varying amount of pain and straining. The pain always preceded micturition, and increased in intensity as his desire to micturate increased. This pain, which was cutting in character, always shot from his perineum to the end of his penis. He had had retention of urine several times. There was no history of gonorrhœa, or evidence of tuberculosis in any other organ, or in his relatives.

Dr. Robertson has seen him at odd times during this period; he never discovered anything that would lead him to suspect tuberculous disease of the testicles.

The patient has been married seven years, and his only child was born five years ago. Sexual excitement or coitus made no difference as regards his pain. Up to a year ago he had a more than usual number of erections. His urine used to be "thick and gravelly," but for the last twelve months —up to his admission here—it has been "clear." He has never seen any blood-stained semen, but on three occasions his urine has been blood stained.

Exposure to cold has, so the patient thinks, brought on these attacks. It has certainly aggravated them.

*Condition on Admission.*

The patient looked neurotic: at any rate he took a morbid delight in detailing his symptoms. He complained chiefly of pains in the perineum. At times these were constant, and lasted for two or three days; again they might be mere shooting pains. The pain was aggravated by micturition, and sometimes by defæcation, when violent rectal tenesmus followed. If the pain lasted long it was dull and boring, with shooting pains at intervals. He was obliged to micturate every half-hour. He had pain in the lumbar region, shooting down the outer side of the right leg. The right testicle was very slightly larger than the left; the enlargement was general. This, the patient said, had its origin in a kick on the testicle when a boy. The patient was very tender to a rectal examination. By this means an irregular nodular mass, firm to the touch, and hardly the size of the little finger, could be detected on the right side of the base of the bladder. The swelling commenced immediately above the prostate and extended upwards, backwards, and slightly outwards, keeping close to the bladder. The prostate was normal in size. The passage of a sound produced great spasm, and free bleeding after its use. The urine was blood-stained for three days. No evidence of stone in the bladder or kidneys could be detected. On microscopical examination the urine revealed pus cells, crystals of triple phosphates, and tubercle bacilli. The lungs were healthy. The patient was kept under observation for some time. There was no improvement in his condition, and as far as could be ascertained the disease had not infected any other part of the genital apparatus. It was then decided to excise the seminal vesicles.

*Operation.*

On March 21st, 1901, the patient was chloroformed and fixed in the lithotomy position. A sound was introduced into the bladder and the sphincter of the anus stretched. A semilunar incision, 3 inches in length, with its concavity forwards, was made across the perineum, an inch in front of the anus. The soft parts were retracted, and the dissection down to the vesiculæ seminales was mainly done with a blunt dissector and scissors. All the bleeding points were twisted. Both vesiculæ seminales were seen to be enlarged. The soft tissues around them receded so readily that some difficulty was experienced in getting a firm hold of them, in spite of the help given by the sound in the bladder and two fingers in the rectum. Ligatures were placed and both vesiculæ removed in their capsule. There was some oozing deep down in the wound; this was stopped by plugging with iodoform gauze. The edges of the skin incision were brought together with silkworm sutures, one being omitted to allow of a piece of the iodoform gauze to come through and act as a drain. A rubber tube was placed in the rectum to prevent any tension there, due to the accumulation of flatus.

March 22nd. The patient had passed a good night. The urine came naturally, and was deeply blood-stained. He complained of slight pain in the region of his bladder. A portion of the gauze was pulled out and the rectal tube removed.

March 23rd. The patient is quite easy. More of the packing was removed. The urine contains abundant stringy mucus, and a slight amount of pus.

March 24th. He has still a little hypogastric pain. On removing a further portion of the packing about 2 drachms of serous fluid escaped. The wound is healthy. He now retains his urine for from two to three hours.

March 25th. The patient is very well. The whole of the packing was removed, 2 ounces of serous fluid escaping. A small rubber drainage tube was inserted.

March 26th. The drainage tube was removed. There is scarcely any discharge. A probe cannot be passed into the wound. Some of the outer stitches were removed. A simple enema was given which cleared the bowels.

March 28th.—The remaining stitches were causing slight irritation, so they were removed. Urine is passed every three or four hours. He is not inconvenienced any way, and has no pain.

April 2nd. A rectal examination was made; it was not painful. The vesiculæ seminales could not be detected.

April 7th. The patient was discharged. Wound soundly healed. There was perfect relief of all his symptoms. From the operation onwards his temperature has been normal.

*Microscopical Examination.*

The specimen was sent to the Pathological Department, Owens College. The following is the microscopical report: "The lesion is tuberculous. The following changes are to be seen in sections. The mucosa is in a condition of catarrhal inflammation, the submucosa is the seat of scattered early tubercles, the wall is much thickened, and in the lymphatics there are scattered tubercles, even in the peripheral part—that is, the subserous connective tissue."

The patient has reported himself on several occasions since his discharge. He says he never enjoyed better health. He looks well, and has put on flesh. He passes urine every four or six hours during the daytime, and has not to get up at night.

On June 26th the right epididymis was found to be slightly enlarged. This would seem to be further proof that the lesion was primarily one of the vesiculæ seminales, for certainly this has only developed after the operation.

References.

[1] *Lancet*, vol. ii, 1889, p. 1151; British Medical Journal, vol. i, 1890, p. 1509.

# THE USE OF A BAG PERVIOUS TO AIR IN ETHER ANÆSTHESIA.

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The apparatus invented by Clover, and variously modified since, for the administration of ether is such an admirable one, that I do not know that one need ask for a better as a medium for ether giving save in one particular, and that a most important one, namely, the rubber bag. Although obviously possessed of some objectionable features, the rubber bag has been accepted as part and parcel of the necessity of things, and remains as an unclean but indispensable adjunct to the administration of ether in this country. Without doubt the open method of giving ether on a mask or cone is too slow in its effect to be of real practical use, and it is this slowness which has necessitated the use of the bag in question. The argument is, that to produce and maintain ether anæsthesia you must have the asphyxial element present; to this end you must exclude air and hence the rubber bag. I believe this to be a wrong and mistaken conclusion, as I shall afterwards show.

The objections I would make to the rubber bag are, first, that it is apt to produce more of the asphyxial element than is desirable—namely, cyanosis; and, secondly, that it is unclean. As regards the first, considering that the object of the rubber bag is to introduce the asphyxial element, it is not quite fair to charge it with producing a lividity which is so far intended; but it often does more. Even in the best of hands it occasionally produces cyanosis to a degree that cannot be otherwise than a strain on the right ventricle, and certainly begets a frothy condition, which is undesirable even if it do not lead to further trouble. If it were possible to remove this reproach of cyanosis and its consequent troubles from ether anæsthesia, nearly all the objections to it would be groundless, and this can be done by using, instead of the rubber bag, one made of linen, or other pervious fabric, such as I have devised and describe below. The second objection, that of uncleanness, has doubtless presented itself to every anæsthetist who ever thought of the condition of his rubber bag, and yet I know of no way of avoiding it. It is no mere sentimental objection that the last patient who breathed into the bag was the subject of intestinal obstruction and had a foul fæcal odour in his breath, or was a sufferer from carcinoma of the œsophagus or tonsils.

For the last two or three years I have been in the habit of meeting these objections by rinsing out the bag well with water, some antiseptic occasionally being added, after each operation, thus ensuring as much cleanliness as possible, and, so far as the avoiding of cyanosis is concerned, I have dispensed with the bag when I could, allowing the patient to breathe through the open inhaler, resorting only to it when this proved insufficient. On the whole, these means met the case fairly well, but, while modifying the objections, they did not entirely remove them.

In America, where ether is the anæsthetic mostly in use, a towel folded cone-shaped, and covered or not by a thin waterproof, is employed, and apparently does well, although it finds little favour in this country. This method has not, however, appealed to me, as it has seemed lacking in precision after having been used to measuring the ether given through a Clover apparatus. It occurred to me, however, to substitute a linen bag for the rubber one, and this has proved itself to be so well adapted for the purpose, and so completely meets the objections to the ordinary rubber bag that I should like to call the attention of the profession to it. I have tried it now in a sufficient number and variety of cases to enable me to pronounce it a success.

The bag is made of a fine linen known as "holland" and i

shaped somewhat like the ordinary bag, the body of the bag I have had made of three pieces accurately sewn together, a collar of the same material with a tape attached to be slipped over the ordinary Clover bag-mount and tied there.

As may be guessed this bag does not fill and empty as does the rubber one to the breathing of the patient, it is simply put on in a "bunched-out" condition and only a slight rise and fall tells of the expiration and inspiration. My experience with it is that the patient goes under very quietly, I may say with almost suspicious quietness, there is none of the usual noisy breathing, hardly any salivation and absolutely no lividity, abdominal heaving is less marked, the anæsthesia is as quiet as with chloroform. The time occupied to produce anæsthesia is of course longer than with the rubber bag, varying from seven to twelve minutes. The corneal reflex seems to be lost disproportionately soon. The amount of ether consumed is also considerably more—during the first fifteen minutes about twice as much being used—but in a prolonged anæsthesia the disproportion is not so great as will be seen in a note of the appended cases. There is another very great advantage in the use of the linen bag, in that the anæsthetist holds a trump card, so to speak, in the shape of his chloroform drop bottle; should the patient prove hard to anæsthetise or threaten to come round, he can sprinkle a little chloroform on the bag, selecting by preference the place where the linen shows the most marked rise and fall of the breathing. A freshly-washed and starched bag is used for each case; it can be slipped on to the ordinary Clover mount and tied in position in half a minute.

In practice I turn the Clover gradually, but, compared to the old mode, rapidly on to full, and keep it there or thereabout till sufficient anæsthesia is produced; later on a less concentrated vapour will be found enough. Perhaps one is usually inclined to over-value one's own discovery, but in this case I do not think that I make too much of it in saying that it ought to supersede the rubber bag completely. A fresh clean aseptic bag for each patient is a thing to be desired when it can be had at the cost of washing. The entire absence of even lividity will commend it to every anæsthetist, and the possible resort to chloroform in addition without change is a happy incident.

I may say that the bag has been used by several other men here with the same good results. The bags can be had from Messrs. Reynolds and Branson and Mr. Rauschke of this city. I might add that for further asepsis the Clover chamber can be boiled or immersed previous to operation in a 1 in 20 hot carbolic solution. The mask I have had made of thin nickelled brass, with a detachable red rubber facepad, so that the whole can be rendered as sterile as the operator's instruments.

The following is a summary of some of the cases in which the method has been employed:

*Extract of Cases.*

| Date. | Name. | Operation. | Amount of Ether. | Time of Administration. | Average Time per Ounce. |
|---|---|---|---|---|---|
| July 1st. | Mrs. T. | Choledochotomy, etc. | 11 ozs. | 1hr. 40min. | 1 oz. in 9 min. |
| July 1st. | Mrs. F. | Nephrotomy | 5 ozs. | 45 min. | 1 oz. in 9 min. |
| July 2nd | Mr. D. | Appendectomy | 4 ozs. | 40 min. | 1 oz. in 10 min. |
| July 3rd. | Mrs. B. | Ovariotomy | 7 ozs. | 48 min. | 1 oz. in 7 min. |
| July 6th. | Miss M. | Gastro-enterostomy | 4 ozs. | 40 min, | 1 oz. in 10 min. |
| July 10th | Mr. W. | Exploratory and colotomy | 4 ozs. | 35 min. | 1 oz. in 8 min. |
| July 10th | Mrs. A. | Breast amputation | 4 ozs. | 45 min. | 1 oz. in 11 min. |

I have had in all some 100 cases similar to the above; the average time to produce anæsthesia being 10 minutes, and the average amount of ether being 1 oz. per 8 minutes.

AT the Court of Assistants of the Worshipful Company of Dyers of the City of London on Wednesday, November 6th, Dr. George Flux and Sir Edward Montague Nelson, K.C.M.G., took their seats as Prime Warden and Renter Warden respectively, they having been previously elected at the last General Court held on October 9th.

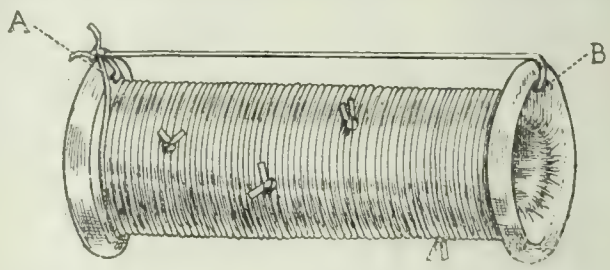
## METHOD OF PREPARING STERILISED CATGUT.

BY C. ARTHUR BALL, M.B.,
House-Surgeon, Sir Patrick Dun's Hospital, Dublin.

THE impossibility of sterilising any except the finest catgut with reasonable certainty has led to the abandonment of this valuable form of suture and ligature material by a number of surgeons.

To render the inner layers of thick catgut sterile, it is necessary to subject it to heat, as an antiseptic cannot be relied on to act on more than the outer surface. Before starting to prepare any catgut it is advisable to test its strength, as occasionally a strand is found which looks all right, but is quite weak and useless for any method of preparation.

The following method of preparation has been employed with success for the last eight months on catgut up to No. 4




(Droncke). A glass reel is used, 1 inch in diameter and 3 in length, with a flange at each end, each flange being pierced with a hole (A and B). A reel of lignum vitæ or any wood that sinks in water answers the purpose equally well. One end of the gut is tied through the hole A, and the gut is wound firmly and evenly on the reel in a single layer; the other end is then passed through the hole B, and tied to the free end at A. The winding can easily be done with an ordinary bandage roller by placing a perforated cork in each end of the reel. The knots joining two strands together must be very carefully tied, else they will slip when boiled, and such an accident destroys the whole reel of gut by allowing it to untwist. The reel is now placed in a 5 per cent. solution of formalin, and left for about 24 hours; it is then thoroughly washed in cold water. It is next dropped into boiling water and left boiling for from 5 to 10 minutes, according to the thickness of the gut. Lastly, it is placed in the following solution:

| | | | |
|---|---|---|---|
| Mercury perchloride | ... | ... | 1 part |
| Boiled glycerine | ... | ... | 250 parts |
| Methylated spirit | ... | ... | 1,000 parts |

The gut is now ready, and receives no handling after sterilisation until it is used.

The glycerine and spirit dehydrate the gut, the former rendering it pliable. The mercury perchloride impregnates the gut swollen by boiling with an antiseptic, and hardens it sufficiently to prevent it twisting when moistened by the tissues during the process of stitching, a difficulty with gut dehydrated by alcohol alone.

Catgut prepared in this way is undiminished in strength, and keeps well; it is pliable and knots nicely; it is absorbable (No. 0 is absorbed in about 6 days); and lastly, it is sterile.

MEDICAL STUDENTS IN AUSTRIA.—Statistics recently collected by the Vienna Medical Council show that the numbers of medical students in the Austrian universities during the last ten years were as follows: 1891-92, 5,275; 1892-93, 4,193; 1893-94, 4,985; 1894-95, 4,686; 1895-96, 4,297; 1896-97, 3,954; 1897-98 3,604; 1898-99, 3,207; 1899-1900, 2,793; 1900-1901, 2,555, showing that in the ten years the number has fallen by 2,720, or 48 per cent. The number of degrees of Doctor given during the same years was as follows: 721, 716, 764, 857, 801, 724, 732, 675, 714, 603. Therefore the number of graduations has not fallen off very materially.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

### FATAL CASE OF VIPER BITE.

On June 8th J. H., aged 4 years and 8 months, and his little sister were out chasing butterflies in a field near a streamlet, about 300 yards from home. Walking through a patch of bog myrtle and heather the lad said "a little frog jumped up and bit him on the leg through his stocking." The sister says "he immediately ran home screaming all the way." This was between 11 and 12 A.M. The father said the boy's face upon reaching the house was a picture of terror, and from the children's story the conclusion was drawn that he had been bitten by a viper. Two small punctures were to be seen when the stocking was removed. The only treatment was to apply some carbolic lotion they had in the house, and then cover the place with tar. The father had to walk about five miles to the nearest post-office to telegraph for me. I had to drive about eight miles, and then walk two miles over the fell to the house, which is on the moor, so that it was nearly 5 P.M. before I reached the house.

I found the lad curled up on two chairs, his face hidden under his arm and away from the light (he would have his cap over his eyes, I was told; he seemed in such terror of seeing something). He appeared dull, had been violently sick about a dozen times, beginning soon after entering the house, and had had his bowels open once. The temperature was normal, the pulse slightly quickened (about 100), and the heart sounds normal; the pupils were normal. He did not complain of any pain, but was thirsty. I found a small blue round mark about the size of a shilling situated at the middle and lower thirds of the leg, with a well-marked puncture in it. I did not notice two; the other might have been obliterated by the tar which was difficult to clean off. The leg as far as the knee was intensely swollen, being twice the size of the other, was boggy to touch, a dull white colour, with here and there dark bluish patches under the skin, very hot, but not tender.

I injected hypodermically into the wound and in several places from the ankle to the knee at varying depths a solution of potassium permanganate (5 grs. to ℥j), and kept the leg constantly bathed with the same solution. I administered liq. strych. hydrochlor., *B.P.*, ♏iij. hypodermically, and ordered brandy to be given in as large quantities as possible. The lad was put to bed, and as the telegram informed me what the injury was I had with me a mixture containing ammon. carb. grs. iv., tr. digitalis, ♏ijss, which he took every four hours.

On June 9th the boy had a restless night and was half comatose, but could be roused by shouting. He had been severely purged, and passed motions and urine in bed unconsciously. He was still thirsty. The temperature was normal; pulse, 110. The swelling had increased up the limb to the groin, but not as much in proportion as was the leg the previous day. Hypodermic injections of the same solution were given all over the thigh, which was the same colour as the leg and very hot. Bright red and blue lines like injected vessels were well-marked at the base of the toes. The pupils were sluggish; the corneal reflex present. The same treatment, strychnine injections, medicine and stimulants, etc., was carried out.

On June 10th the boy passed a restless night, but was quieter, occasionally throwing his arms about. He lay on his right side, with knees and hip slightly flexed, the head slightly flexed upon the back, the mouth open, the eyes half-closed. The breathing was rather quicker, the temperature normal, the pulse feeble and very quick; the heart sounds were faint, the eyes were fixed, the pupils, slightly dilated, did not react, the corneal reflex was slightly marked occasionally. There had been no purging, but he had passed urine in the bed, was taking no nourishment, and was distinctly moribund. The limb was decidedly improved; the swelling had gone down considerably, and there was no heat. Strychnine and brandy were given frequently hypodermically and everything possible done, but with no effect. The boy died at 2 A.M. the following morning.

The chances against recovery were the age of the patient, the length of time before I could see the case, the celerity with which the poison was absorbed, and the great shock to the nervous system. Had the parents had the presence of mind to suck the wound or to apply the actual cautery, or even to excise the wound, the boy might have had a better chance of recovery.

Potassium permanganate being suggested as a specific for snake bites, I used it freely, and certainly it appeared to have a good effect. Could I have seen the boy sooner, I think the effects of the drug would have shown itself in a still more satisfactory way. This case, I think, shows how exceedingly poisonous the bite of a viper is, and how quickly its symptoms are developed. The boy was a strong, sturdy little fellow.

Ravenglass. E. Eden Cass, M.B., B.S.

# REPORTS

ON

## MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

### PAISLEY INFECTIOUS DISEASES HOSPITAL.

#### NOTES ON THREE CASES OF TRACHEOTOMY.

(By Philip C. Walker, M.D., D.P.H., Assistant Medical Officer of Health, Paisley.)

Three cases of tracheotomy which I recently performed suggest to my mind that certain precautions are necessary as regards the time allowed to intervene between the administration of antitoxin and the performance of the operation:

Janet A., a well-nourished child, aged 2 years, was admitted to hospital at 4 P.M. on January 19th, 1901. The breathing was laboured and croupy, and there was a good deal of retraction of the sternum and intercostal spaces during inspiration. I injected 2,000 units of antitoxin at 4.30 P.M. At 8.0 P.M. ($3\frac{1}{2}$ hours after antitoxin had been injected) I decided to perform tracheotomy, as the breathing was becoming more laboured and the child much exhausted.

The operation was completed without any unusual difficulty, except for a little hæmorrhage which occurred when the trachea was opened, although the wound was perfectly dry before that; this, however, was of short duration. The tube was inserted, the child recovered well from the anæsthetic, and continued to breathe regularly through the tube for about five minutes; respiration through the tube then suddenly ceased, the child became cyanosed, and the breathing was of exactly the same character as it had been prior to the operation. The child became weak and inclined to collapse. I passed a feather down the tube, and on withdrawing it a little air was inspired, but no expiration through the tube followed. I immediately removed the tube, and discovered that when performing the operation the scalpel, instead of cutting through the membrane, had detached it from the anterior wall of the trachea and pushed it backwards, the tube being inserted between it and the anterior tracheal wall. As long as the child remained with her head back the membrane lay close to the posterior aspect of the trachea, but as soon as the child raised her head it came forwards, covering and closing the lower end of the tube. I inserted the tip of my little finger and removed a large piece of membrane, an exact hollow cast of the trachea. This was followed by hæmorrhage of a dark viscid nature; and although the wound was kept open by means of dilators and artificial respiration resorted to for some time, the child never rallied. It did not appear to me that she died from hæmorrhage, but rather from not having strength enough to expel this thick blood from the trachea and large bronchi.

There were two questions which immediately occurred to me: First, why did the membrane get pushed backwards by the point of a sharp scalpel instead of remaining fixed to the anterior wall of the trachea and allowing the knife to pass through it, as was the case in several tracheotomies which I had performed before the days of antitoxin? and, secondly, why was the removal of the membrane followed by this dark hæmorrhage? To my mind there is only one answer to both

these questions. The antitoxin had the effect of loosening the membrane but had not been administered long enough for it to be completely separated, so that at the time I operated the membrane was not attached firmly enough to the anterior wall of the trachea to be cut through along with it and not separated enough to allow of its removal without leaving a bleeding surface behind.

After considering the matter I determined never to operate again within so short an interval from the administration of antitoxin, but either to wait till there was time for the lower part of the membrane to be completely separated or to operate at once and give antitoxin immediately afterwards, deciding which of these courses to adopt by the condition of the patient on admission. I have now had the opportunity of trying both these alternatives with success and briefly give notes of the cases.

Case I.—Helen M., aged 2 years, admitted January 23rd, at 6 P.M. Patient was fairly strong, and of a good colour, but croupy, and the breathing laboured, retraction of sternum and intercostal spaces during inspiration. I injected 2,000 units of antitoxin immediately and 2,000 units more at 9.30 P.M. At 12.30 (6½ hours after the first injection) as the child was getting very weak I decided to operate, and on opening the trachea the membrane protruded and was easily removed by the forceps, no hæmorrhage following, the tube was inserted, and the child made a good recovery.

Case II.—Polly W., aged 2 years, was admitted to hospital at 2.45 P.M. on April 7th in a very exhausted condition, the face dusky and the sternum retracting nearly to the vertebræ during inspiration. I considered that in her condition she could not live very long, so operated at once. The membrane was firmly attached to the trachea all round and was cut through while still adhering to the anterior wall, I inserted the tube without trouble and injected 4,000 units of antitoxin while the patient was still under the influence of the anæsthetic; 2,000 more being given on the following morning. The patient made a good recovery, the only trouble being large pieces of membrane coming up the tube for a day or two after the operation. I removed the tube on the eighth day and the wound healed almost immediately.

# REPORTS OF SOCIETIES.

## ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

J. Warrington Haward, F.R.C.S., Treasurer, in the Chair.

*Tuesday, November 12th, 1901.*

### Treatment of Ulceration of the Œsophagus and Stomach due to Swallowing Strong Hydrochloric Acid.

Mr. C. B. Keetley communicated a paper on this subject. An account of three cases was given and the main conclusion drawn from them and from a general consideration of the subject was that it was a mistake to postpone resort to surgery until there was no alternative except that of letting the patient die from inanition. The region most severely injured was the pyloric part of the stomach, where the acid lodged. But infection of the air passages usually occurred, probably from ulceration of the pharynx or of the œsophagus, and sometimes by direct injury to the glottis itself. At the same time, the physical strength and mental and moral state of such patients (generally suicidal) were extremely lowered. The following rules of treatment were laid down: (1) The patient should receive no food (either liquid or solid) by the mouth for several weeks—that is, he should not be fed by the mouth as soon as he could swallow with little or no pain; but complete healing of the injuries should be waited for. (2) When the injuries were serious (and they generally were so), an operation should be performed within a few days of the date of the poisoning, the sooner the better. The indications of such cases would most likely be best met by combining a gastrectomy with a gastro-enterostomy, and carrying the feeding tube through the gastro-enterostomy wound for some distance down the efferent loop of the jejunum. This was practically the method recommended by Witzel for an ordinary gastro-enterostomy except that, in cases of poisoning by corrosive acids, something more was desirable, namely, an arrangement for washing out and draining the stomach through the gastrostomy wound. For this purpose, passing a long narrow gastro-jejunal tube through a short, comparatively wide gastric tube, might be recommended. If, in spite of treatment, pyloric contraction should take place (as it usually did), this plan provided a gastro-enterostomy ready made. The gastrostomy wound should be closed or kept open according to the final condition of the œsophagus. This treatment would reduce greatly the danger of infection of the air passages, the usual cause of death in these cases. In the after-treatment feeding by the gastro-jejunal tube should be commenced at once. Local treatment should be given to the mouth and nose, the pharynx and œsophagus, and the stomach. The mouth should be frequently washed out, the teeth cleaned, and if unsound disinfected or extracted. The nasal passages, if unhealthy, should be attended to. The pharynx should be frequently sprayed with warm boracic lotion and occasionally dusted with iodoform. As soon as swallowing became painless, hot water, or hot neutral saline solution, should be allowed *ad libitum*. After each meal given by the gastro-jejunal tube, the stomach should be washed out with hot water through the gastric tube. The author believed that the application in some such way of the principles of surgery to this distressing class of cases would greatly reduce their mortality and lessen the permanent injury in those who more or less recovered.

Mr. Percy Paton referred to a case which had been under his care, a woman, aged 30, and a suicidal case, in whom the chief injury seemed to be to the œsophagus; but an œsophageal tube was fairly easily passed and she improved for a time. A few days later, however, great distension of the stomach supervened. An incision was then made into the stomach, and the first part of the duodenum was so ulcerated that gentle pressure with the finger through the pylorus caused rupture of its wall. The patient died in forty-eight hours. A gastro-enterostomy might have given rather more chance of recovery.

Mr. Clinton Dent thought that in a fairly large proportion of these cases the injury was almost entirely at the pyloric end of the stomach, and ulceration was very protracted. Any operation performed in the dark, as Loreta's operation, was unsatisfactory. A pyloroplasty was, in his opinion, much more satisfactory. Where there was dilatation of the stomach a gastro-enterostomy was not a good method, and with a Murphy button still more unsuitable. The avoiding of feeding by the mouth for a long time was questionable. A broad rule after gastric operations was to feed by the stomach as soon as possible, providing the food were hot. Suicidal cases, it had seemed to him, did just as well as non-suicidal cases.

The Chairman believed it was rare for the œsophagus to be so injured in these cases that a tube could not be passed; the difficulty in swallowing arose from spasm and painfulness. For stricture of the pylorus pyloroplasty seemed to be the best method, and a Murphy button was contraindicated on account of the great probability of its falling back into the stomach. The use of a bone plate was preferable. The healing of any part of the body depended on the general body nutrition, and feeding by the mouth more greatly helped this as compared with feeding by other channels.

Mr. Keetley replied.

## EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

A. G. Miller, M.D., F.R.C.S.E., President, in the Chair.

*Wednesday, November 6th, 1901.*

### The Motor Localisation in the Lumbo-sacral Region of the Spinal Cord.

Dr. Alexander Bruce read a paper on the motor centres in the lumbo-sacral portion of the spinal cord. He showed that the muscles for the foot and those which arose from the bones of the leg had their centres in the postero-lateral and post-postero-lateral groups below the fourth lumbar segment, and adduced evidence from a case of Van Gehuchten and one of his pupils that the intrinsic muscles of the foot were innervated from the post-postero-lateral groups. From another case he showed that the psoas iliacus and pectineus were innervated from the lateral groups in the second and third lumbar segments, while the centres for the obturator

internus, pyriformis, and gemelli lay in the antero-lateral groups of the first and second sacral segments. The centres for the striped muscle supplied by the internal pudic nerve were the mesial groups in the third and fourth sacral segments. These results were compared with those obtained by Sano, Van Gehuchten, and his friends, and a scheme of the motor centres in the cord was drawn up.

Drs. Byrom Bramwell, Noël Paton, and David Waterston discussed the paper, the last-named gentleman stating that in certain cetacea in which the posterior limbs were almost entirely absent the lateral groups were equally defective, while a highly-developed mesial group at the lower end of the sacral region corresponded to a strong system of anal muscles.

### President's Valedictory Address.

The President in his valedictory address thanked the Society for the honour they had done him in placing him in the chair. He urged regular attendance at the meetings. During last year 39 new members joined the Society, which now had a membership of 450. The death-roll was a very heavy one. One honorary member, Sir James Paget, Bart., and two foreign corresponding members, Professor Max von Pettenkofer, of Munich, and Professor Ollier, of Lyons, had died during his tenure of office. Of ordinary members no fewer than twelve had left them the venerable and respected Sir Douglas Maclagan; Dr. W. H. Lowe, of Wimbledon; His Excellency Dr. Robert H. Gunning; Sir William O. Priestley, M.P.; Dr. John Henderson, of Leith, and Dr. William Husband (the two oldest members of the Society) had died quite recently, as had Deputy Surgeon-General Fleming; Professor A. W. Hughes, of London, on his return from South Africa: Dr. Connel, of Peebles, only the other day; Dr. George Elder: Dr. James Foulis, who "always added zest to the discussions in which he took part," and was a hard worker and devoted student of science. Lastly there rose up the memory of a fine manly presence, one who attracted attention, and who always had something to say that was worth hearing. No one could demonstrate a case, bringing out the salient points, and, without wearisome detail, painting the patient in bold and easily recognised outline like Sir Thomas Grainger Stewart. They missed Sir Thomas from their midst, and they respected his memory as a great clinical teacher, and as one who did much to make the meetings of the Society both valuable and interesting. The President then rapidly reviewed the work of the Society during the past two sessions. Of 90 cases shown, 56 were medical (half suffering from nervous disease) and 34 surgical (half were abdominal); 70 pathological specimens had been shown. There had been 29 papers and discussions—10 medical, 10 surgical, 3 on insanity, and the rest various. A few of the more outstanding papers were referred to. Two evenings were given up to South Africa, an evening to heredity, an evening to gastric hæmorrhage and its surgical treatment, an evening to general paralysis, and an evening to alcohol. The President concluded his address by pointing out some of the medical, social, moral, and religious aspects of the use and abuse of alcohol.

The President was thanked for his address.

#### Cases.

Dr. Melville Dunlop showed a case of chloroma.—Dr. Norman Walker 3 cases of lupus.—Mr. H. J. Stiles a girl after operation for plexiform angioma of the scalp; and a child after operation for tuberculous disease of the frontal bone.

#### Specimens.

Mr. Alexis Thomson showed a sarcoma of the small intestine causing incomplete obstruction treated by enterectomy.—Mr. H. J. Stiles showed: (1) The calvaria of a child who suffered from multiple tuberculous osteomyelitis of the cranium; (2) the hernial sac and strangulated testicle removed from a child during operation for irreducible inguinal hernia; (3) the sac of a hydrocele with constriction corresponding to external abdominal ring; (4) a bodkin removed from a child's abdomen.—Dr. Harvey Littlejohn showed: (1) Extraperitoneal rupture of the bladder, the result of a kick on the abdomen; (2) dilatation of the pulmonary artery.

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We are informed that Dr. T. W. Shore, Lecturer on Comparative Anatomy and Biology to, and late Warden of, St. Bartholomew's Medical College, is a candidate for the Principalship of the University College of South Wales and Monmouthshire, Cardiff.

## MEDICAL SOCIETY OF LONDON.

### Clinical Evening.

W. H. Allchin, M.D., F.R.C.P., President, in the Chair.

*Monday, November 11th, 1901.*

### Colitis with Paralysis of Eleventh and Twelfth Nerves.

Mr. M. S. Monier-Williams showed this case:

A man, aged 56, unmarried, enjoyed good health until May, 1897, when the motions became excessively offensive, semifluid in character, and contained besides blood and mucus and occasionally a very little pus. There was griping pain with the motions, which varied in number from five to fifteen in twenty-four hours. There was no rise of temperature, no vomiting, no tenderness or other abnormality of the abdomen. Drugs by the mouth had little or no effect. Rectal injections of a solution of silver nitrate (gr. x. ad O. j) and of boracic acid held the complaint in check for a time, and a course of sulphur waters benefited him for a little, but on the whole he got steadily worse until in December, 1900, he was having ten to twenty hæmorrhagic stools daily, extremely emaciated, and had lost control of sphincter ani. Dr. Hale-White, in consultation, agreed that right-sided colotomy offered the best chance of saving the patient's life, and Mr. George Turner did the inguinal operation. As soon as the wound was healed, and the artificial anus fitted with a plug, he rapidly improved. Twice or three times weekly the colon was irrigated with boric acid solution. He occasionally passed a little blood and mucus *per rectum*, and sometimes a little normal fæcal matter. He had recovered control of the sphincter ani. He was in good health and led his ordinary life without inconvenience. A special plug was described.

On January 4th, 1899, the patient had suddenly become hoarse, and noticed that his tongue was protruded to the right side. It was found that the right vocal cord was paralysed, the tongue deflected to the right side and the right side of the palate partially paralysed. Dr. Rose Bradford in consultation considered that there was a vascular lesion, probably thrombotic, affecting the nuclei of the hypoglossal and spinal accessory nerves on the right side. The patient has an apical systolic cardiac murmur. Subsequently the upper part of the right trapezius muscle showed signs of wasting, and there was now complete wasting of the right side of the tongue. The patient had recovered his voice, but the right vocal cord remained as before.

Mr. George Turner explained the conditions under which the colotomy was done. The possibility of thrombosis of the mesenteric vessels was suggested.

The President asked why thrombosis was diagnosed as the cause of the brain lesion, in view of the mitral disease, rather than embolism. The case seemed to be one of ulcerative colitis.

Dr. Bowles referred to a somewhat similar case of ulcerative colitis with nervous symptoms.

Mr. Bidwell suggested that an anastomosis between the ileum and the sigmoid was probably a better procedure than an inguinal colotomy.

Dr. Hale White described the difficulties of such a course, which was, however, undoubtedly the best plan, one being the presence of the disease in the sigmoid, another that the gut did not hold well. Reference was made to certain rare cases in which nerve diseases seemed to influence the gut. The lesions in thrombotic cases were much more severe than in the present case. Washing out of the colon from the wound to the anus did not seem of itself to hasten recovery. The question of closure was alluded to. The operation was not one to be undertaken lightly.

#### Cases.

Mr. T. H. Kellock showed a little girl, aged 3 years and 4 months, with a family history of tuberculosis and rheumatism, who a year before had developed swelling of the ankles. When admitted to hospital the joints were enlarged and pulpy, without pain or much tenderness. There were several superficial ulcers round both. These had almost healed under quite simple treatment. There was fusiform swelling, neither painful nor tender, on the back of the left carpus. There was no evidence of visceral tuberculosis, and the case was probably one of osteo-arthritis. The ulceration about the ankles was not in communication with the joints, and was probably traumatic.

Mr. W. H. Battle showed a boy, aged 4, in whom fracture of the thigh had been followed in three weeks by a large, hard fusiform swelling at the point of union. Mr. Turner thought the tumour was probably callus, but Mr. Battle said that he had only seen a corresponding development of callus in fractures in tabetic patients never in a child.

Mr. Pearce Gould showed a case of actinomycosis of the mamma in a girl, aged 10. An abscess was opened and the mycelium of actinomyces was found in the pus. There was evidence of thickening of the pleura.—Mr. Albert Carless described the case of a woman, aged 54, in whom the whole upper extremity was removed by Berger's method for chondrosarcoma of the neck of the scapula.—Mr. J. Lynn Thomas, C.B., described a case of large occipital meningocele cured by operation, and showed a photograph of the patient. After its removal the patient became able to move its head about, and had seemed much more intelligent. He also

showed a new reel for multiple ligatures.—Mr. W. H. BATTLE showed a case of closure of artificial anus after operation for chronic obstruction, notes of which were read by the SECRETARY.

## CLINICAL SOCIETY OF LONDON.

HOWARD MARSH, F.R.C.S., President, in the Chair.

*Friday, November 8th, 1901.*

### THE OPERATIVE TREATMENT OF CANCER OF THE PYLORIC PORTION OF THE STOMACH.

MR. B. G. MOYNIHAN (Leeds) read a paper in which he remarked that an examination into the records of cases of recurrence of malignant disease of the stomach after operation showed that the return of the growth was almost always local, in the stomach wall at or near the line of section, or in the glands or lymphatic vessels which drained the affected area. It had been estimated by Hemmeter that recurrence occurred in 99 per cent. of cases submitted to operation. In order to perform an operation which should prevent recurrence, they must base such operation upon a knowledge (*a*) of the mode of invasion of the stomach by the primary growth, and (*b*) of the lymphatic distribution in the stomach, and of the position of the glands into which the vessels drained. The researches of Borrmann and Cunéo had shown that the most common point of origin of carcinoma in the stomach was 2 to 4 cm. from the pylorus, on or near the lesser curvature. From this point the disease spread gradually, but more rapidly and to greater extent towards the body of the stomach than towards the duodenum. On the stomach side the growth was not equal in all directions; there was a pronounced tendency for the induration to spread towards the curvatures. Towards the duodenum the spreading was slower and invariably less extensive. If sections were made at the edge of a malignant neoplasm and the slides examined, the following condition would be found:—The edge of induration corresponded to the limit of growth in the mucosa. In the submucosa the growth extended much further in a solid unbroken mass, beyond the edge of this mass isolated nodular deposits of growth extended, becoming smaller as their distance from the tumour increased. The subserous and serous coats were implicated approximately to the same extent as the mucosa. The lymphatic glands of the stomach were situated chiefly along the vessels. (1) The coronary group lay along the lesser curvature. The glands were continuous at the origin of the coronary artery with those along the upper border of the pancreas. (2) The hepatic group lay along the hepatic artery, and some of its members lay along the pyloric artery. The glands of the greater curvature lay along the right gastro-epiploic artery. At the pylorus they were numerous and close together, and passed behind the stomach to the head of the pancreas. The lymphatic vessels draining into these glands passed very obliquely in the walls of the stomach. Three chief lymphatic areas of the stomach might be described: An area along the lesser curvature; an area along the greater curvature; an area comprising the greater tuberosity of the stomach, extending up to the œsophagus and on the greater curvature as far as the limit of supply of the left gastro-epiploic artery (as far as the gastro-splenic omentum). In cases of malignant disease of the pyloric portion of the stomach the growth extended in the direction of the curvatures, and the glands of the first two groups were affected, and the glands of the third group and the area which they drained escaped. This latter area might be looked upon as an area apart, as one into which extension very rarely occurred, and as one, therefore, whose lymphatic vessels and glands remained healthy. The term "isolated area" might well be employed to describe it. Upon the following facts an operation should be based: (1) Malignant disease of the stomach commenced most often near the pylorus, just below the lesser curvature. (2) From its point of origin it spread most widely in the submucosa, and chiefly towards the cardiac end of the stomach. (3) On the duodenal side it spread tardily and never extensively. (4) The drift of the growth was towards the curvatures. (5) The lymphatics draining the affected area passed to glands lying along the coronary and pyloric arteries above, and the right gastro-epiploic and gastro-duodenal arteries below. (6) The greater tuberosity of the stomach (the "isolated area") was very rarely involved. In order to ensure complete removal of the primary growth of the infiltrated lymphatic vessels, and of the glands into which those vessels drained, it would be necessary to remove the stomach as far up on the lesser curvature as the point of abutment of the coronary artery, and on the greater curvature as far as the gastro-splenic omentum, and to remove the first portion of the duodenum. In order to make the operation simpler and quicker, a preliminary ligature of the coronary, the pyloric, the gastro duodenal, and the left gastro-epiploic was performed. After removal of the portion of the stomach, the anastomosis between the "isolated area" and the small intestine might be made by end-to-end approximation, Kocher's method, or suture of the cut ends, and the performance of a separate gastro-enterostomy. The coronary artery was ligatured first, and was found as it lay in the "ligament of Huschke," the falx coronaria, whose folds enclosed it. The position of the artery could be defined by lifting up the liver and pulling the stomach downwards and outwards until a ridge was raised up in the peritoneum by the underlying vessel. The pyloric and gastro-duodenal were best ligatured as they left the hepatic artery. The hepatic could be found just above the pylorus, and was made cleaner by dragging the pylorus downwards and to the right.

DR. PYE-SMITH remarked that the smaller curvature was far more frequently the seat of cancer than was the larger curvature; and very rarely did carcinoma of the pylorus spread into the duodenum, though it often spread in the opposite direction. He considered that the surgeon was usually called in too late, and that the physician should have recourse to his colleague's assistance at as early a stage as possible. Short-circuiting was the next best thing to pylorectomy; it relieved the most urgent symptoms, especially when they were due to mechanical obstruction. Moreover, this operation improved the patient's condition, so that pylorectomy might be subsequently performed with far greater chance of success.

DR. NORMAN MOORE remarked that the secondary growths in cancer of the stomach were rarely of wide distribution, which was a point in favour of operation. During nine years work in the *post-mortem* room at St. Bartholomew's Hospital he had not seen a case of cancer of the pylorus extending into the duodenum. In 11 out of 30 cases he had found the whole wall of the stomach involved. Cancer of the stomach might be classified in three groups: (1) Those in which the growth was at the pylorus: (2) those with infiltration of the whole gastric wall; and (3) cases in which the cardiac end was primarily involved. Cancer occasionally developed, too, on the site of an old ulcer. In 14 of his 30 cases the liver contained growths, often small and imperceptible during life; occasionally the diaphragm contained secondary growths on its under side, and in about a third of the cases the lumbar glands were enlarged. The duration of life in cancer of the stomach in half the cases was between nine and eighteen months. It was to be expected that secondary growths were already in existence at the end of five months, and therefore if operation were to be curative it was clear that it must be performed very early.

MR. CHARTERS SYMONDS had met with disappointment in operations of this kind, so far as effecting a cure was concerned. Out of about 20 cases of cancer of the pylorus there was only 1 in which he had felt justified in attempting pylorectomy, and even then he was unable to remove all the disease. In many of these cases no tumour was perceptible clinically. He had found it impossible to make an end-to-end junction, and the disease must be very limited for this to be possible. In none of his cases were there secondary growths in the liver. Surgeons wanted an earlier diagnosis.

MR. A. E. J. BARKER doubted if it would ever be possible to arrive at an earlier diagnosis, and in any case they had no guarantee against recurrence. He did not believe that the duration of life was materially increased by pylorectomy.

DR. HABERSHON divided these cases into two groups—those which produced obstruction with the classic symptoms, and the cases which simulated gastric ulcer, due to malignant disease in the neighbourhood of the pylorus, not causing obstruction, yet giving rise to extreme dilatation of the stomach by setting up spasm.

MR. BALLANCE compared the excellent results he had seen in Germany from these operations with the results obtained

in this country, and asked why it was that the latter were inferior. In England it was too often impossible to attempt a radical operation on account of the extent of the disease. It was impossible to rest satisfied with the results of the present methods of treatment of carcinoma of the stomach. There was a lack of knowledge which prevented a diagnosis being made early enough to admit of successful intervention. He suggested that physicians, instead of waiting for the production of a definite tumour, should get the surgeon to make an exploratory incision which would show what was wrong.

Mr. Makins observed that the feeling of late was against the removal of pyloric growths. He referred to the case of a young woman with a limited growth of the pylorus, which he removed with about a third of the stomach. She did splendidly for three months, when dilatation recurred, and she died seven months later. He regretted that in this case he had not done gastro-jejunostomy. He questioned the desirability of removing many intestinal growths, which it was at present the practice to remove, and he doubted if these patients lived longer than those who had been merely short-circuited.

Mr. Moynihan, in reply, pointed out that in 70 per cent. of the cases the growth was in a part of the stomach which admitted of its removal. With respect to diagnosis, he said that with a patient under medical treatment for gastric trouble at an age when cancer of the stomach might be expected, and when there was an absence of hydrochloric acid—a very important point—whatever the physical signs and clinical condition might be, it was the practice of himself and his colleagues to advise an exploratory incision. This had permitted them to obtain cases at an earlier date than elsewhere. Even in the early stage, however, the radical operation might not be permissible, because the disease might already have got beyond the limits of successful removal. He joined issue with Mr. Barker in respect of his view that life after gastro-enterostomy was at all comparable with life after partial gastrotomy or pylorectomy. Statistics showed at least one year clear gain in favour of the latter. The improvement after gastro-enterostomy was great and immediate, but was quite ephemeral. He suggested that the attitude of surgeons towards these operations was their attitude of some years since towards operation for cancer of the breast. Gradually they had extended the limits of that operation, and no doubt, as knowledge increased, the same would happen in regard to operations for cancer of the stomach. He believed that, if attacked early by an operation on the lines he had described, they might hope in the future to obtain far better results than had been the case hitherto.

## HUNTERIAN SOCIETY.

Dundas Grant, M.D., President, in the Chair.

*Wednesday, October 23rd, 1901.*

### Clinical Evening.

#### Congenital Pulmonary Systolic Bruit.

Dr. Fred J. Smith showed a case.

The patient was a man, aged 38, who from babyhood upwards was known to have had something wrong with his heart. On examination, he presented no, or very little, cyanosis, but his fingers were very clubbed. There was a typical rough loud systolic *bruit* to be heard over the pulmonary area conducted upwards; there were also very evident signs of tubercle of the lungs with bacilli in the sputum.

Dr. Smith remarked that the diagnosis scarcely admitted of doubt, and only drew attention to the comparatively late period at which the tuberculosis had supervened.

#### Enlarged Cervical Glands.

Dr. Smith also showed a case of enlarged glands of the neck.

The patient was a man, aged 50, who for the last four years had noticed that the glands of his neck were gradually becoming larger and larger, and he himself was getting weaker and weaker; he had no specific complaint of pain or local illness to make, simply of *malaise* and weakness. On examination, it was found that the glands in both cervical triangles in both axillæ and on the front of the chest were much increased in evidence, that was, much larger, harder, and apparently increased in number, those of the groin were quite natural. The individual glands could easily be felt; there was no periadenitis with matting of the structures. His other organs were found to be perfectly normal so far as physical examination could show, and the urine was quite natural. The blood showed under the microscope no pathological changes beyond a reduction in hæmoglobin percentage, the change of simple anæmia.

Dr. Smith, in discussing the diagnosis, excluded: (1) Leucocythæmia by the quality of the blood; (2) Hodgkin's disease by the fact that neither liver nor spleen were to be felt; (3) malignant deposits of a secondary type or sarcoma of glands by the duration of the case; (4) tuberculosis by the isolation with non-breaking down of the glands; and finally decided by exclusion it was a case of simple hypertrophy, and drew attention to the peculiar distribution of the affection, confined entirely to the glands above the diaphragm. Dr. Smith had had a gland removed, and was waiting for microscopical report.

#### Multiple Attacks of Ascites.

Dr. Smith also showed this case.

The patient was a man aged 29, who was healthy enough till about 6 years of age; then he had an attack of stomach trouble in which as far as could be ascertained the abdomen swelled in precisely the same way as during the later attacks. After a few weeks in bed he recovered. He remained well for some three or four years when he was again attacked, and again recovered in a few weeks. The attacks and recoveries, each about six or eight in number, had been repeated pretty regularly every few years down to 1901; his recoveries had been so complete that he had done a lot of hard exercise, being particularly fond of rowing. In the spring of 1901 the present attack began, but as it did not disappear within the customary period, he was admitted under Dr. Smith's care. His thoracic organs were found to be apparently perfectly healthy, as was also his nervous system; the abdomen was noted to be very large, and examination showed that this was due to ascites, and fluid was present to such an extent that no precise examination of individual organs was possible; the legs were slightly œdematous but the urine was perfectly natural in quantity and quality. An exploratory laparotomy was advised and consented to, but owing to various circumstances there was some weeks delay, and by the time there was a chance of having it done the condition was found to be improving so much that the patient was discharged without anything being done and apparently nearly restored to health.

When exhibited (some six weeks after discharge) the patient was seen to be a particularly healthy man, the abdomen showed that there was still some fluid, but it could be so far explored as to enable one to say that neither liver nor spleen was enlarged, and that there were no lumps to be felt anywhere though there was a general doughy feel about the abdomen—the veins of the parietes were not visibly enlarged but the skin over them was a little œdematous as were also the legs. In speaking of the diagnosis Dr. Smith said that he had never seen a case at all similar, as he knew of no cause for ascites which could give the curious relapses here presented, but taking all things into consideration he was inclined to believe that the case was probably at bottom of a tuberculous nature—either tuberculous peritonitis or old tuberculous glands, causing some relapsing obstruction. He regretted the absence of a specimen of the fluid, as he thought it might possibly be of a chylous nature. Should the patient have another definite attack he should advise laparotomy at once with a view to clearing up the diagnosis and probably curing the patient.

#### Rodent Ulcer.

Dr. Sequeira showed an unusual case of rodent ulcer in a woman, aged 52.

The disease began twelve years previously with the formation of a small nodule on the left cheek near the lower eyelid. Ulceration followed and spread over the upper part of the cheek and on to the forehead and scalp. Later, the root of the nose was involved and the disease spread on to the right side of the forehead and the upper part of the right cheek. The contents of the left orbit had almost entirely disappeared and the inner canthus of the right eye was now involved.

The interest of the case lay in the large area affected, the superficial character of the lesion in its greater part, and the fact that quite two-thirds of the parts involved had undergone spontaneous healing, leaving a fine white scar. The left side of the forehead and the root of the nose were still ulcerated, but were rapidly improving under the *x* rays. The margin everywhere showed the raised beaded edge characteristic of rodent ulcer. In many respects the case resembled one figured by Dr. Radcliffe Crocker in his *Atlas* (Plate LXXVI, Fig. 3).

#### Specimen and Case.

Dr. David Ross showed some milky ascitic fluid taken from a patient who had since died of cancer of the pancreas; also a patient who had been operated upon for myeloid sarcoma of the fibula.—Drs. Sequeira, Glover Lyon, Hingston Fox, David Ross, J. H. Targett, and the President discussed the cases.

## OBSTETRICAL SOCIETY OF LONDON.

PETER HORROCKS, M.D., President, in the Chair.

*Wednesday, November 6th, 1901.*

### SLOUGHING FIBROID OF THE LEFT UTERINE CORNU, SHOWING ABNORMAL RELATIONS.

MR. ALBAN DORAN and Dr. CUTHBERT LOCKYER read a paper on this subject.

The patient from whom the fibroid was removed was a single woman, aged 30, subject for a month to symptoms of pelvic inflammation with fever. There was an irregular movable mass in the left fornix, rising into the left iliac fossa, and connected with a small anteflexed uterus. Mr Doran performed supravaginal hysterectomy, removing the uterus and tumour with the left appendages; the right tube and ovary were spared. The patient recovered. The tumour, 5 inches long in diameter, was much larger than the uterus, projecting outwards rather than upwards from that organ. It was a true fibromyoma in a necrotic condition, and adhered to intestine and omentum at its blood-pointed outer extremity. This degenerative change apparently accounted for the febrile symptoms. At first sight the tumour simulated a fibroid in an undeveloped uterine cornu, but the Fallopian tube and ovarian ligament arose posteriorly, and not externally, and were attached to a deep groove between the uterus and the tumour. The left round ligament arose from the under surface of the tumour somewhat posteriorly, passing under it and forwards to the inguinal canal.

A tumour with somewhat similar relations to a uterus much smaller than itself had recently been figured without any clinical history by Doederlein in Kü-tner's *Kurzes Lehrbuch der Gynäkologie* (Fig. 146) This outward growth of a fibroid of the cornu without outward displacement of the corresponding tube and ovary was very unusual. The sloughy state of the tumour demanded its removal, and the uterus could not possibly be separated from a growth of this kind, so that it was also removed.

After some remarks by the PRESIDENT,

Dr. A. H. N. LEWERS said that among other points of interest the case described in the paper had an important bearing on the question of the mortality to be expected in cases of fibroid tumours of the uterus. Statistics had been published, according to which the mortality of fibroids, apart from operation, appeared to be 0 000138 per cent., or about 3 in 2 000 000 cases. Now, in such a case as Mr. Doran's, one of sloughing subperitoneal fibroid, which had already set up symptoms of pelvic inflammation with fever, it could not be doubted that, apart from operation, the case must have ended fatally. Leaving out of the question the other possible causes of death in cases of fibroids, was sloughing such a very rare thing? He had himself seen two cases comparatively recently. One had been already published. The other was one of the last cases in which he had removed the appendages for uterine fibroid. In that case tying the vessels in the pedicles appeared to have in some way cut off the vascular supply of a fibroid near the fundus, and caused it to slough. At all events no evidences of sloughing—fever, fœtid discharge, etc.—were present till after the operation. The patient died within a week, and at the *post-mortem* examination one of the fibroids near the fundus was found to have sloughed. Dr. Lewers called attention to the frequency with which mucoid degeneration was met with in fibroids, and he would be glad to know Mr. Doran's views as to the relation, if any, between mucoid degeneration and sloughing.

After Dr. G. F. BLACKER had joined in the discussion,

Dr. CUTHBERT LOCKYER drew attention to the fact that the term "suppurating" fibroid hardly conveyed the correct idea of the condition of the tumour at the time of removal, inasmuch as suppuration implied the presence of pus and of pyogenic organisms, and such were not present in the tumour. In reply to a question by Dr. Blacker as to the causation of the febrile condition of the patient, Dr. Lockyer thought that it was possible for a pyrexic state to result from the absorption of necrotic products in which no organisms could be found, and mentioned that this had been proved in the case of blood clot.

In reply, Mr. ALBAN DORAN regretted that none of the Fellows of the Society could offer any explanation of the abnormal relations. The tumour was certainly in the left cornu, and the displacement of the left round ligament was very unusual, and seemed to indicate some malformation of the cornu. The term "sloughing" had been used for convenience in the title of this communication, though there was not the typical moist, fœtid gangrene seen in Dr. Lewers's case, where the tumour was in close relation with the uterine cavity. In the present case the tumour and the cavity were far apart. The necrotic change probably came on because the shape of the tumour made its blood supply liable to interruption. He believed that mucoid degeneration arose from similar causes, assisted by feeble circulation. This seemed certainly the case in two instances of uterine fibroid in his own practice where menorrhagia was severe and the tumour caused pain, rare in fibroid disease. Mr. Doran removed the uterus, without the ovaries, with great benefit to the patients.

#### PAPERS.

Short communications were read by: Mr. J. BLAND-SUTTON, on a case of gonorrhœal peritonitis; discussed by Dr. DRUMMOND ROBINSON.—Dr. W. S. HANDLEY, on a case of tubal mole with encysted hæmatocele. Discussed by Mr. ALBAN DORAN, Dr. HERBERT SPENCER, Dr. W. S. A. GRIFFITH, Dr. LEWERS, Mr. BLAND-SUTTON, and Dr. LOCKYER.

#### SPECIMENS.

The following specimens were shown:—The PRESIDENT: Drawings of a case of deciduoma malignum.—Mr. ALBAN DORAN: Fibroid of the broad ligament associated with an ovarian cyst.—Dr. A. H. N. LEWERS: Carcinomatous uterus with pyometra. Patient well six years after the vaginal hysterectomy.—Dr. A. L. GALABIN: Papillomatous cyst of (?) an accessory ovary.—Mr T. W. EDEN: Cyclops arrhynchus.—Dr. W. W. H. TATE: Fibromyoma of uterus complicated with double salpingitis and carcinoma of cervix removed by vaginal-abdominal hysterectomy.—The specimens were discussed by the PRESIDENT, Dr. GRIFFITH, Dr. LEWERS, Dr. LOCKYER, Dr. SPENCER, and Dr. TARGETT.

## OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

DAVID LITTLE, M.D., F.R.C.S.E., President, in the Chair.

*Friday, November 8th, 1901.*

### CHRONIC SERPIGINOUS ULCER OF THE CORNEA (MOOREN'S ULCER).

MR. NETTLESHIP read this paper. He said: The terms "chronic serpiginous ulcer," or "Mooren's ulcer," are preferable to "ulcus rodens," which is another name for rodent epithelioma. The paper is based upon an examination of 71 cases, 12 of which are my own. Bowman was the first to describe a case in detail (1849), but Mooren rightly has the credit of discovering the disease as a clinically distinct species in 1867. The ordinary characters and course of the disease are described. Its usual duration is from four to twelve months, and no cases are included that lasted less than two months, though certain cases running a less chronic course may perhaps be of the same nature. The subjects are adults from 23 to 71, rather less than a quarter were under 40, just half between 40 and 60, rather more than a quarter over 60. A decided majority were males. In a large majority the attack in both sexes begins in the winter half of the year, and degenerative changes, perhaps merely senile, lowered surface temperature, and perhaps some congenital defect of quality of the corneal tissue in certain persons are suggested as predisposing causes. The course of the disease strongly suggests infection, but no special micro-organism has as yet been found. In more than one-fourth of the cases both eyes suffer, sometimes with an interval of years, and the disease is often exactly symmetrical in the two eyes. The prognosis is always grave, and is far worse when both eyes are attacked, only one in four of the double cases being arrested short of total leucoma; whilst of the single cases more than half recover with some untouched cornea. The deeper parts of the eye remain healthy, and vision is determined by the final state of the cornea and pupil. Treatment should begin with cutting away the overhanging and half dead edge of the ulcer, and applying an escharotic or strong germicide to the advancing border thus exposed; the galvanocautery is the best, pure carbolic acid and strong tincture of iodine probably come next; transplantation of conjunctiva over the ulcer appears useful occasionally. Though some cases are published as cured which would probably relapse, and though others go to universal leucoma in spite of all possible treatment, the results have been much better since the introduction of the cautery than before. Several old patients have done well, and several young ones very badly. Allusion is made to the "marginal atrophy" of cornea recently described by Fuchs and to several other allied conditions of the cornea.

Mr. TREACHER COLLINS asked if there was any relation between the age of the patient and the rate of progress of the disease. In two cases he had seen the ulceration of the cornea was most extensive, and yet the remaining opacity

was not dense, and remarkably good vision remained. In one case the patient developed a crop of vesicles on the cornea and some patches of infiltration, all of which cleared up upon his doing paracentesis and iridectomy.

Mr. Lawford related the case of a woman, aged 69, with no very definite specific history. In the right eye more than half the cornea was attacked; there was severe iritis but not much pain, and the temperature was normal. He cauterised the advancing edge, and after a second application it healed. Shortly afterwards it broke out again, and he then applied nitric acid without much good resulting. He then used liq. iodi. daily, but it caused pain and did not do much good. Then the left eye became congested. An ulcer developed, which he burnt with the cautery. The right eye had no unattacked cornea, and it was vascular and cicatrised. The left was again cauterised, and strong perchloride of mercury applied. After freely cutting away the edge and applying the galvano-cautery, it healed, but again broke down and was cauterised. This was repeated, and the patient still remained under treatment. In another case, that of a man aged 46, healing was obtained after one application of the galvano-cautery.

Mr. Lang, on one occasion after failure with the cautery, did an iridectomy, when the ulcer healed and the case did well. Since then he had treated others in the same way with good results in all but one case.

Mr. Bronner thought that there were two distinct classes of cases, one in which the ulceration was superficial and one in which it was deep.

Mr. Sydney Stephenson had published a case which occurred in a lady, aged 60, where the ulcer healed after two applications or the cautery. He then looked upon it as malignant, but this view he did not now hold. This disease seemed to occur about once in 17,000 cases, though more appeared to occur in some countries than in others. He thought the term "Mooren's ulcer" was a better term than serpiginous. Gifford had published a case in which the conjunctiva and sclera were involved in the ulcerative process, and last year an Italian observer isolated a bacillus which caused a disease when inoculated into the conjunctiva of rabbits.

The President stated that he had only seen a few cases, and he described one which occurred in a lady in which he advised an iridectomy, as it had when he first saw it resisted all kinds of treatment. The patient refused to have the operation done, and he subsequently transplanted a corneal flap with good result. The disease followed influenza.

Mr. Bickerton asked if there was evidence of dacryocystitis in Mr. Nettleship's cases.

Mr. Nettleship replied that lachrymal sac trouble was very uncommon in these cases. With regard to age and prognosis he had not worked it out, but he did not think that there was anything striking in this respect. He had never noticed vesicles on the cornea, neither had he found that the inhabitants of some countries were more liable to the disease than others. The cases cited by Mr. Lawford and the President certainly made the prognosis look bad, but he was sure that it was much better since the introduction of the cautery.

### Keratitis in the Newborn.

Dr. W. Ernest Thomson (Glasgow) read a paper on keratitis in the newborn, occurring after instrumental delivery, and resulting in each case in an almost identical rare form of opacity. All the mothers had contracted pelves, and in one with a conjugate of only 2¾ inches the delivery had been extremely difficult. Dr. Thomson saw two of these children very soon after birth, at which time three corneæ out of the four presented opacities in the anterior layers with dulling of the surface but no vascularity. There was in all some bruising of the lids and conjunctivæ. The subsequent result was peculiar, for while one cornea became progressively more infiltrated, and that uniformly, the other two quickly improved; but the opacities, instead of remaining as central nebulæ, developed into a white vertical linear scar with an adjacent area of much fainter haze. The third case had come under the care of Dr. Andrew Wilson at the fifth week. All signs of active keratitis had passed away, but an obliquely-placed linear scar remained precisely similar in character to those in the other children. Dr. Wilson suggested that the cornea became buckled by the pressure of the forceps squeezing the eye against the nasal wall of the orbit. Dr. Thomson pointed out that such cases if seen late might be diagnosed as congenital corneal opacity of intrauterine origin.

### Card Specimens.

The following were shown:—Mr. A. Hugh Thompson: Sections of an orbital tumour (? endothelioma, ? adeno-sarcoma).—Mr. Doyne: Tumour growing apparently from the optic disc.—Mr. Adams Frost: Some eye instruments used by native oculists in India which had been presented to the Society by Major Drake-Brockman.—Mr. Maclehose: Rodent ulcer of upper eyelid.

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British Balneological and Climatological Society.—A meeting was held on October 30th, Dr. Frederic Bagshawe (St. Leonards) in the chair. After some business had been transacted the chair was taken by the incoming President, Dr. J. G. Douglas Kerr (Bath). A vote of thanks was accorded to Dr. Bagshawe for his services as President during the past session, to which he replied. The usual votes of thanks to the Council and officers were passed.—Dr. Douglas Kerr then gave a short address, referring to the great improvements made in bathing establishments at the different British spas during the past twenty years, and to the impetus which had been given by the Royal Medical and Chirurgical Society to the study of balneology and climatology within the last six or seven years, specially mentioning the first part of their report published in book form by that Society, and the fact that the second part of the report would be shortly issued. He stated that it was satisfactory that subjects of wide and general interest had been dealt with at the various meetings of the British Balneological and Climatological Society, and that no one could say that the meetings had degenerated into laudation of localities or individuals. There was a possibility that a tour through the British health resorts might be arranged by the Society during the ensuing session, and facilities offered to the Fellows and other medical men for the inspection of various health resorts.—Dr. King Houchin read a paper on the treatment of syphilis by inunction. He said the main purpose of his paper was to show that at most of the British spas the treatment of syphilis as practised at Aix-la-Chapelle could be and was carried out, and that even in London results were obtained which were equally satisfactory and reliable. He had discovered this after some five years practical experience in London. During treatment great care of the teeth should be taken, and the patient should use a mouth wash of chlorate of potash, with or without some mild astringent, night and morning and after meals. The patient should soak for twenty minutes or half an hour in a hot bath, preferably mineral; the temperature of the bath should be 98° to 100° F. This rendered the skin receptive. The preparation commonly used for inunction was the unguentum hydrargyrii (*B. P.*). After the bath a portion of the body was selected for the inunction. The method he usually followed was to divide up the body into five sections, so that in five days the whole of the body surface had been subjected to inunction. This should be repeated on consecutive days, if possible, until some twenty-five to thirty applications had been made. This constituted "a course," which should be repeated in six months time, two or three courses usually being sufficient for all ordinary purposes, and the patient might be considered cured. The inunction should be carried out by a glass rubber. The treatment was of special advantage to patients quite unable, and others for whom it was not desirable, to leave their homes. The other advantages were: (1) The system could be saturated to toleration; (2) digestion remained uninterfered with: (3) a much larger dose of mercury could be tolerated by the skin; (4) mercurial cachexia was seldom seen under this method of treatment; (5) on the contrary, the patient usually gained weight, colour, and nutrition. It was useful in all stages, and results were most satisfactory in primary lesions, secondary eruptions and affected mucous membranes; eye affections where a speedy effect was essential; pregnant women who had aborted in consequence of syphilis: tertiary affections, as gumma, or gummatous exudation, whether cerebral, spinal, or intermuscular; syphilides, disease of arteries, old syphilitic ulceration, nervous diseases, and congenital syphilis. He considered the great success of the treatment consisted in the fact of a large body surface being utilised for the inunction after the hot bath, the employment of a glass

rubber, and the time employed in the rubbing. Dr. Fortescue Fox (Strathpeffer) suggested that it might be possible to promote the absorption of mercury by connecting the rubber with the pole of a battery. There were other chronic disorders (not syphilitic) that derived benefit from mercurial inunction—for example, some forms of dyspepsia and malnutrition. Dr. Sansom (London) said that from personal experience of cases thus treated he considered that the institution managed by Dr. Houchin in London on the lines of Aix-la-Chapelle and of Wiesbaden had supplied a distinct want. He would include in the list of cases to be thus treated those of syphilitic disease of the cerebral arteries—a very important category. The careful treatment of the mouth should be persevered with throughout the whole of the inunction treatment. As to the mode of inunction, he favoured the use of a slab of glass or a flat 4-ounce thick glass bottle. Dr. Leon (Sidmouth) agreed with Dr. Houchin in attaching no special importance to the sulphur waters, but a hot bath was requisite before inunction. Dr. J. Gordon Black (Harrogate) said that at Harrogate the unprotected hand had been successfully used for several years without untoward results, but of late a glass disc similar to that shown had been employed as being cleaner and more delicate. Patients who had previously visited Aix were apt to prefer the hand as used there. After remarks by Dr. Blaker, Dr. Harry Campbell, and Dr. Sunderland, the President said that at Aix-la-Chapelle and at Bath a very large number of applications were found necessary in some tertiary cases, many more than advised by Dr. Houchin. At Aix-la-Chapelle the temperature of the bath was never allowed to exceed 95° F. Artificial rubbers had been tried but had been discarded. The discipline entailed by residence at a spa was a great factor in assisting the cure. Dr. Houchin replied.

British Laryngological, Rhinological, and Otological Association.—The annual general meeting was held on November 8th, Mr. Mayo Collier, President, in the chair.—Mr. Lennox Browne showed the Nernst electric lamp as one giving a far whiter light than any in present use.—The President showed: (1) A case of inoperable malignant disease of the pharyngeal wall. It was proposed to submit the patient to electrical treatment by Dr. Macintyre, of Glasgow. (2) A case of abscess of the maxillary antrum, associated with facial paralysis, which had subsided promptly after surgical treatment. (3) A case, in the person of an army surgeon, who was present and spoke on his own case, in which asthma had been relieved after the removal of nasal polypi.—Mr. Chichele Nourse showed a case in which a laryngeal growth had disappeared after the removal of nasal polypi. Mr. Lennox Browne said, with regard to the last two cases that, although they were by no means unique, it was useful to record them. Dr. Bark, while accepting these cases as reported, reminded the Fellows that not all were cured.—Dr. P. H. Abercrombie showed a case of black tongue, from which Dr. Wyatt Wingrave had prepared microscopical slides and furnished a bacteriological report.—Mr. Lennox Browne made a short communication on the preliminary and after-treatment of operations on the mouth and fauces, insisting on (1) preliminary antiseptic washes, (2) sterile instruments, (3) complete rest of the parts and of the body generally after operation, (4) the use of mouth washes, by means of the throat syringe, instead of gargles, and (5) the non-administration of internal drugs, such as the bromides, which might cause skin eruptions liable to be mistaken for symptoms of septic infection. Remarks were made by Dr. Haslam, Dr. Wyatt Wingrave, and the President.—Dr. Macintyre then delivered his presidential address on the Application of Physical Science to the Surgery of Diseases of the Throat and Nose. This was illustrated by the exhibition of many instruments, and by lantern photographs.—The following office-bearers were elected at this meeting: *President:* Dr. John Macintyre, of Glasgow. *Vice-Presidents:* Dr. Greville Macdonald, London; Dr. Walton Browne, Belfast; Dr. Hillis, Dublin. *Council:* Mr. Mayo Collier, Dr. Culver James, Mr. Claud Woakes, Mr. Atwood Thorne, Dr. Scatliff, Brighton; Dr. Woods, Dublin; Dr. Kelson. *Treasurer:* Mr. Lennox Browne. *Secretaries:* Mr. Chichele Nourse and Dr. P. H. Abercrombie.

# REVIEWS.

## PERNICIOUS ANÆMIA.

For a somewhat late notice of Dr. William Hunter's remarkable book on *Pernicious Anæmia*,[1] we need not offer an apology, as it is of no ephemeral interest. We had almost called it a masterly book, and if we withhold this appreciation it is only because the main design which begot and animated the author's investigations is scarcely achieved; the secret of Addison's Anæmia is not wholly and finally made manifest. As this disease was the object of the author throughout his research, there is a certain fitness in his title of "Pernicious Anæmia"; on the other hand, the paucity of cases of the disease has hampered him in the clinical application of the results of his preliminary scientific investigations. These investigations, strenuously pursued for fifteen years, have probably brought him close to the full discovery of the etiology of the malady; but however near this end may be, he himself admits that he has not entirely compassed it. Nevertheless we believe that he has demonstrated the main lines of the process, and that when he shall have obtained cases enough for the completion of the clinical side of his work, his provisional conclusions will prove to be substantially sound.

The first section of Dr. Hunter's work is concerned with the history of the observation and interpretation of pernicious anæmia from the date of its discovery by Addison to the present day. In this survey the author seems to us perhaps to err on the side of generosity to Biermer. No doubt Biermer drew attention to the gastro-intestinal symptoms, unnoted by Addison; but in other respects Biermer's conception of the disease falls short of that of his great predecessor. The claim that some share in the discovery of pernicious anæmia shall be granted to Biermer took its rise in the inveterate and still prevalent ignorance of English work on the part of Continental physicians. Were Dr. Hunter an elderly man he would not be disposed to think that in Addison's own country his description had at any time fallen into oblivion. In 1860, at St. George's Hospital, the present writer well remembers the keen interest taken in the disease by Bence-Jones, and his incisive comments upon a certain severe case of it in his wards. In 1862, in the Hôtel Dieu, under the direction of Trousseau, who knew better than to neglect English work, he studied Addison's Anæmia again, in one case at least. Nor from that time onwards has he found the disease unknown to competent English physicians, or forgotten by them. The reviewer is not quite disposed to call the disease a very rare one: infrequent it is, and no doubt the actual number is apt to be multiplied, in so far as patients suffering from a long and incurable disease are wont to seek help in many quarters. In any case we hope, now that his book is published, that Dr. Hunter will find no lack of cases for the completion of his clinical proofs; hitherto he seems to have found access to very few.

Dr. Hunter's pursuit of the pathology of the malady before us, a pursuit begun during his tenure of the John Lucas Walker studentship at Cambridge, and pushed forward for the fifteen subsequent years, seems to us besides the importance of the results to offer a signal example of dogged perseverance and sagacious method; and in all or most of these investigations the author has not only gone far to interpret the grave distemper before him, but has also illuminated incidentally many other morbid processes, and has added more than one valuable chapter to general pathology. As from time to time Dr. Hunter has published parts of his research it is not necessary to repeat in any detail their earlier course. Suffice it to say that on beginning to study the appearance and disappearance of iron and of pigment in the liver and elsewhere, he was led to discern more accurately the generic differences between anæmias by defect of blood formation and anæmias by excess of hæmatolysis; and thus farther to discern in pernicious anæmia a process of hæmatolysis of great but very irregular activity. He also verified the anticipations of Addison that this dis-

[1] *Pernicious Anæmia: its Pathology, Septic Origin, Symptoms, Diagnosis, and Treatment.* By William Hunter, M.D., F.R.C.P., F.R.S.E. London: C. Griffin and Co. 1901. (Demy 8vo, pp. 480. 24s.).

ease would turn out to be what the author calls not very happily a morbid "entity," that is to say, a fairly constant series of symptoms and processes. How both clinically and pathologically pernicious anæmia, or again hæmoglobinuria, differs in origin from other profound anæmias, such as those of ankylostoma, of chlorosis, or of bloodletting, he clearly explains. That the process, as are those of hæmoglobinuria and of malaria, is one of hæmatolysis is the conclusion of his clinical observations, of his experiments upon animals, and of his chemical investigations; for full instruction in which last method he submitted with characteristic pertinacity to a special training. The formation of crystals in the blood of pernicious anæmia, the presence of the corpuscles of Eichhorst, the extraordinary poverty in red cells, severally, however, rich in hæmoglobin, a condition which no loss of blood by experimental bleeding will produce, suggest hæmatolysis; this process is indeed to be imitated artificially with chemical agents of diverse hæmatolytic properties. This mode of hæmatolysis is also thus discriminated from, let us say, that of hæmoglobinuria; as was demonstrated by an ingenious method. In the disease of hæmoglobinuria the urine is heavily charged with hæmoglobin; in pernicious anæmia, dark as the urine is, the symptom of hæmoglobinuria is virtually unknown. In the kidneys themselves some explanation of this diversity was apparent; in these organs there appeared no evidence of percolation of hæmoglobin by the glomeruli, but, on the other hand, much evidence of the different process of removal of pigment by the cells of the convoluted tubes. Again, on pursuing the research into the liver, the absence of hæmoglobin from the glomerular filtrate was found to consist with its absence from the hepatic capillaries also; while, on the other hand, blood pigment was abundant in the hepatic cells—a cardinal observation verified by later observers. These hepatic phenomena point to blood destruction, not in the general circulation, but in the portal area. In pursuit of this clue Dr. Hunter anticipated that the liver would prove to be the seat of the hæmatolysis; but by a patient and impartial tracking out of blood construction and destruction, normal and abnormal, partly by experiments upon animals, partly by necropsy in man—not in pernicious anæmia only, but also in other disorders of the blood—he was led to a different order of notions concerning the functions of the liver, spleen, and gastro-intestinal lymphatic system respectively: contrary to his expectations it was the spleen which appeared to play the chief part in hæmatolysis. For the record of this cautious and ingenious inquiry, and the neat way in which facts new and old fell into line, the reader is referred to the book itself: but in passing we may touch on one of the processes thus traced out, namely, on the mode of escape of hæmoglobin from the red corpuscle itself. In malaria, in hæmoglobinuria, and in the case of certain hæmatolytic drugs which attack the corpuscle in the general circulation, its pigment is washed into the current ("laked"), and is picked up by scavenger cells for elimination. In pernicious anæmia, on the other hand, as we have seen, this is not the case; in this disorder the pigment is not liberated in this simple form, but in some proteid combination, under which protection it escapes its fate for a time. In Eichhorst's corpuscles Dr. Hunter believes he recognises fragments of this proteid compound of hæmoglobin; and he thinks that in this more persistent combination with the stroma—approximately an albuminate—escaping in this penultimate stage from the corpuscle, the hæmoglobin is so intimately identified with the plasma of the ruptured corpuscle as to elude direct tests—as sulphur, for example, eludes direct tests when in combination in sulphuric acid. Thus in part he explains the peculiarity of the katabolic events as seen in the urine and otherwise; the several issues of what, both in hæmoglobinuria and in pernicious anæmia, is a hæmoglobinæmia. The diversity is not a mere fluctuation in the quantity of hæmoglobin discharged in a unit of time; it depends upon the seat of the access of the hæmatolytic influence to the blood, in the general circulation or in the portal system respectively. On the characters of the pigment in the dark coloured but light gravity urine of pernicious anæmia, and on the kind of urobilin found therein, we must again refer to the book itself, where the somewhat conflicting opinions of the author, of Dr. MacMunn, and of Dr. Hopkins are compared. Estimations of the aromatic sulphates in the urine turned out not to be a cardinal part of the subject, decidedly as their behaviour points incidentally to portal perversions. The agent which, finding its way into the portal area there exercises its hæmatolytic influence—a hæmatolysis which, as we have seen, differs from that of malaria, of hæmoglobinuria, and of certain drugs, such as pyrogallic acid and glycerine—has hitherto eluded separation; but the kind of it is suggested by certain of the clinical phenomena, such as fever and gastro-intestinal irritation, which, if not constant, are frequent and characteristic. Even in the course of the same case the gastro-intestinal symptoms fluctuate widely, as if perversion of this area were not always openly betrayed, or were counteracted by variable resistances. The author therefore endeavoured, as far as possible, for his cases were few, to ascertain the state of the alimentary tract in these patients. In the vomit he discovered streptococci abundantly, in zooglœa masses, and in the mucous glands; he discovered also signs of local septic gastritis. Moreover, in the earlier history of some cases he obtained a history of a notable inflammation of the tongue and mouth, whence he suspected oral sepsis—often of alveolar origin—to be a predominant if not the invariable condition of the mischief; and that in long-continued poisoning from this source the antidotal reactions of the stomach are sometimes overborne, so that its coats become the seat of an active pathogenetic microbiosis. That the specific microbes concerned are streptococci he does not feel assured; he is disposed rather to seek the efficient factor in some other organism not as yet identified. Dr. Hunter points out that this hypothesis of oral sepsis, or at any rate of gastric sepsis, is consistent with cases in which cancer of the stomach or glandular atrophy of its coats has been found in genuine cases of pernicious anæmia; and finds support in the septic fever which haunts these patients more or less obscurely. That oral sepsis is common while pernicious anæmia is rare; and, again, that even in some cases recently examined oral sepsis has not been discovered, are difficulties which beset this point of view, difficulties which are candidly considered in the text. Here no doubt the chain of proof is defective, a defect which, were the cases more frequent, would soon be supplied or explained.

In a very fragmentary way we have essayed to indicate the kind of work on which Dr. Hunter has been engaged, but it is only by perusal of the book itself that the merits of his system of attack upon the problem, of the skilful approaches from all sides of it, of the ingenuity of the inferences, and of the degrees of his confidence and of his hesitation, according to the strength of his proofs, can be recognised. If it be true that as yet the secret is not laid bare, that which remains to be revealed is a small part of the body of proof now brought together. Indeed, as we have already hinted, this work in its first edition points the old grammarians' distinction between purport and purpose. If the purpose is hardly compassed, the purport is weighty enough. Among the many important sides of pathology upon which the author's researches have thrown light, we may refer to those on blood formation and destruction in health, in disease, and under the influence of certain drugs, some of which act on the blood in the general circulation "laking the blood," others, such as toluendiamin, acting after the fashion of the morbid influence in pernicious anæmia; to transfusion, and the deductions therefrom as to the life of red corpuscles; to the perversion of the blood as a tissue, in contrast with incidental and fugitive washes of contamination; to the defective excretion of iron in the urine of chlorosis, its excess in pernicious anæmia, and its independence of the administration of iron; to the nature of urobilin products; to the initiation of toxic lesions of the nervous system; to the surmise that some obscure perturbations of health may be connected with irregularities of hæmatolysis; to the distinction of the lesions which seem to be essential to pernicious anæmia from those, such as atrophy and cancer, which may be in indirect relation with it; and so on. In conclusion, we would point the moral that, however dispensable a thorough and prolonged scientific training may be in the technical training of the student who aims only to be a capable and intelligent practitioner, such a training is indispensable for those students whose ambition it is to extend our knowledge of the nature and causes of disease.

# NOVA ET VETERA.

## LITHONTRIPTICS.

We have received an interesting letter from Mr. Perry-Coste, which exemplifies the statement made many years ago by Sir Henry Thompson that all secret remedies employed from time immemorial to the present day for the solution of calculi within the body are solutions of either lime, soda, or potash, alone or combined. All the plants after combustion which have been used for this purpose furnish alike only one and the same active agent, namely, potash. All shells, whether of eggs or of marine and land animals, furnish alike only one and the same active agent, namely, lime. Lastly, the medicinal remedies employed by the faculty everywhere at the present day are potassium hydrate in the form of liquor potassæ, potassium bicarbonate, citrate, acetate, and tartrate. After them, and less generally employed, are soda and lithia in different forms. The following is the text of Mr. Perry-Coste's communication:

I have to appeal to the courtesy of the editors of the medical journals to allow me a little space for a letter which—if any reliance can be placed upon the emphatic testimony of many sufferers—contains information that should be made known to all medical men.

About 125 years ago my grandfather, Sampson Perry, who was a London surgeon with a large and lucrative practice, discovered a specific solvent for the cure of stone and gravel, which, according to his own evidence, he applied with extraordinary success, and from the sale of which he seems at one time to have derived a large income. He wrote a work on the stone, which ran through seven editions in a few years, but is now extremely scarce. There are copies of one or two editions in the British Museum, of another in the College of Surgeons and of another in Guy's Hospital library; but of three or four editions I have never been able to obtain a sight, which I the more regret since considerable alterations were made in successive editions. From this book it is demonstrably clear that Perry had a large and fashionable practice, and his solvent a great vogue among the titled and influential classes—the Duke of Norfolk, Lord Sackville, and his namesake, Edward Perry, the Speaker, are a few among the names of his patients that occur to me—and that, whether his cures were real or imagined by his patients, he at any rate was not regarded as a quack.[1]

When nearly 70 years of age Perry married again, and he died in 1823, a few months before the birth of his youngest child—my mother. The formula of his solvent was left as a precious family secret to his young widow, who continued to sell the solvent, and about 1850 put the business part of the work into the hands of my late uncle, Charles Perry, who reprinted his father's book, and attempted to work up a large sale for the solvent. On my grandmother's death in 1868 the secret passed into my mother's hands; she died in 1875; and during the last fortnight I myself have for the first time read the formula for preparing the solvent. For many years it has been on my conscience that there was in my family the secret for the preparation of a cure which—rightly or wrongly—was firmly believed to be of immense value; and years ago I resolved that, whenever the secret should pass into my own possession, I would make it public at once, and wash my hands of all responsibility for retaining knowledge which—according to the family tradition—is of great value to mankind. I therefore subjoin the directions for preparing the solvent, and beg you to allow this letter to appear in your columns. The constituents of the solvent are so harmless that there can be no risk in trying its effect upon any patient; and I have known of such striking instances within my own circle of acquaintances in which the administration of the solvent has been followed by such undoubted relief that I can scarcely believe the whole affair to be a quackery or a delusion, although the composition of the solvent has astonished me. It may be, of course, that Perry was merely deceived by his own enthusiasm and ambition, and that the solvent—in spite of all testimony to its value—is useless; and it may be that, granting its value, the solvent has long since been analysed and imitated, or its preparation independently discovered by others, and that only my own ignorance of medicine leads me to suppose that I am making known anything not already familiar to physicians; but it will, I hope, be understood that, from my standpoint, I am simply clearing my conscience of a responsibility that would otherwise lie heavy upon it, and discharging what—possibly through ignorance—I am bound to consider a duty to mankind.

I need not say that I shall be most interested to hear the results of any trials of the solvent made by competent physicians; but since, not being a medical man, I do not ordinarily see the medical papers, may I ask that if any one of your readers should contribute his experiences to your columns, he will do me the courtesy of sending me a postcard referring me to the issue in which his letter appears?

The formula for the solvent is as follows:

*Constituents.*—4 gallons strong clear limewater.
2 pounds potassic nitrate.
1½ pound "purified potash" (? potassic dicarbonate).
½ pound Epsom salts.
2 ounces laudanum.

*Preparation.*—The nitre, potash, and Epsom salts are to be dissolved separately in the minimum quantity of water, and the solution poured into the lime water while hot; when the mixture is cold add the laudanum, and allow it to stand twenty-four hours before bottling. The solvent should be brought to the colour of brown brandy by the addition of 4 ounces of burnt sugar. On no account must the solvent be put into any earthenware vessel. (The dose is not stated.[2])

Note.—The proportions vary slightly in different copies of the formula, and in several copies the Epsom salts are omitted. A copy in my grandmother's writing includes also 9 or 10 ounces of gum-arabic, and in place of laudanum prescribes 1 or 2 ounces of "solid opium," for the treatment of which directions are given. This undated copy is evidently the earliest extant copy of the formula; another copy, also in my grandmother's writing, and dated September 1st, 1862, omits the gum-arabic and Epsom salts (possibly the latter by accident), and replaces the opium by *one* ounce of laudanum. I have followed a copy labelled "corrected formula."—I am, Sir, yours faithfully,

F. H. Perry-Coste.

Polperro, R.S.O. Cornwall. Nov. 7th, 1901.

P.S.—I ought to add that in her will my grandmother directed that, in the event of my mother dying without issue, the secret of the solvent was to be published for the benefit of mankind. I have purposely refrained from all comments upon the *chemistry* of this ancient formula.

F. H. P.-C.

There is but little now to be found about Mr. Sampson Perry beyond what is recorded by his descendant. He was a surgeon living in Argyle Street three doors on the right hand from Oxford Street, and Wadd tells us that he was a surgeon to the Middlesex Militia, and that a portrait of him was engraved. Perry sold his solvent in bottles of 5s 6d., 10s. 6d., and one guinea wholesale and retail, and he appointed agents in various towns in England, at Dublin, and in Edinburgh. The solvent had so great a reputation, especially in the north of England, that counterfeit bottles had been sold, but the genuine article was known as "Adams's specific solvent for the stone and gravel." Mr. Perry vaunted his cure in a little 2s. pamphlet, of which the fifth edition was published in 1787 under the title "A Disquisition of the Stone and Gravel and other Diseases of the Kidneys and Bladder, etc.," which is dedicated to the Royal College of Physicians, London. The persistence of secret remedies as an acknowledged part of a practitioner's stock-in-trade so late as 1777 is interesting, though it is by no means surprising, to those who know the state of medicine in England during the eighteenth and early part of the nineteenth century.

The solution of calculi by the ingestion or injection of lithontriptics was a very favourite problem throughout the eighteenth century both in England and in France. In 1739 the English Parliament, after a formal inquiry, purchased the secret of Mrs. Joanna Stephens for the sum of £5 000. The remedy consisted of a powder, a decoction, and pills. The powder consisted of egg shells and snails, both calcined. The decoction was made by boiling herbs (together with a ball which consisted of soap, swine's cresses burnt to blackness, and honey) in water. The pills were made of snails calcined, wild carrot seeds, burdock seeds, ashen keyes, hips and hawes (all burnt to blackness), soap, and honey. The dose was a drachm of the powder three times a day mixed in cider or other liquor, and followed by half a pint of the decoction. If the decoction disagreed with the stomach the pills were to be substituted. Such a pecuniary success stimulated a host of inventors of means to dissolve stones, and the case of Horace Walpole marked the newest method in 1748, when he began to take a course consisting of 1 oz. of alicant soap in 3 pints of lime water daily. This regimen he continued until the beginning of the year 1757, when it was calculated that he had consumed no fewer than 180 pounds weight of soap and 1,200 gallons of lime water. Yet when a necropsy was made by Mr. Serjeant-Surgeon Ranby and Mr. Hawkins three stones were found in his bladder. The belief in lithontriptics is by no means dead at the present day, though it has almost sunk to the rank of folk medicine. Every village contains some family who possesses a secret remedy for the stone, which is more or less at the disposal of neighbours. And even amongst the educated classes and medical men there is, perhaps, an inclination to place too implicit a faith in urotropine as a specific for every calculus in every part of the urinary tract.

[1] His book was dedicated to the President and Fellows of the College of Physicians.

## THE PASTEUR INSTITUTE OF INDIA.

As is well known, a Pasteur Institute was established at Kasauli a little more than a year ago. A Central Committee for a Pasteur Institute had existed at Simla for some time before this, and possessed invested funds to the extent of 70,000 Rs. privately subscribed for that object, but it had not been found possible to establish an institute.

[2] See Perry's book, which I have not by me. I believe that the dose is about one tablespoonful daily.

Officers and men of the Indian army bitten by rabid animals were sent to Paris for treatment, but this plan inevitably caused great delay which might defeat the objects of the treatment, and the annual cost to the Government of India was 27,000 Rs. With the view of saving this expense, and especially obviating the delay by bringing the benefits of the treatment within easy reach, Surgeon-General W. Taylor, M.D., C.B., Principal Medical Officer in India, succeeded in starting on a modest scale a Pasteur Institute at Kasauli in August, 1900. It was intended only for the treatment of soldiers in danger of hydrophobia, and was to be supported by diverting the funds annually spent in journeys to Paris. It was warmly sanctioned and supported by the Government of India and the Commander-in-Chief, the late Sir William Lockhart.

There was opportunely added at this time to the ranks of the Royal Army Medical Corps in India Major D. Semple, M.D., who had studied at the Pasteur Institutes in Paris and Lille. This able officer was placed in charge of the small hospital secured at Kasauli, and at once proceeded to equip it.

At this stage the Central Committee claimed and took control of the establishment on the ground, which could not be disputed, that the Government of India had promised not to set up any rival scheme to their own, and thus succeeded to an institute already practically made to their hands. The income from the invested funds in the hands of the Committee was augmented by a yearly grant of 9,500 Rs. from Government.

The institute rapidly assumed dimensions and functions beyond those at first contemplated. The anticipated native prejudices against the treatment were not encountered, and now natives as well as Europeans readily take advantage of the benefits it confers.

The success of the institute under the able control of Major Semple during the first eleven months is shown in the following account, which has been placed at our disposal:

*Work done in the Pasteur Institute, Kasauli.*

By Major D. Semple, R.A.M.C.

Four and a-half months after receipt of the Government Order sanctioning the establishment of a Pasteur Institute in Kasauli, all arrangements for providing the requisite buildings, apparatus, etc., were completed, and on August 10th, 1900, the institute was opened for the treatment of all classes in India bitten by rabid animals.

On the opening day 10 patients presented themselves for treatment, namely, 8 British soldiers, 1 officer, and 1 native civilian.

During the first week, 28 patients came for treatment, made up from the following classes:

| | |
|---|---|
| British officers | 2 |
| British soldiers | 17 |
| Native soldiers | 2 |
| European civilians | 2 |
| Native civilians | 5 |
| Total first week | 28 |

During the second week, 2 patients came for treatment, namely:

| | |
|---|---|
| British soldiers | 1 |
| European civilians | 1 |
| Total second week | 2 |

During the third week 4 patients came for treatment, namely:

| | |
|---|---|
| British soldiers | 1 |
| Native officers | 1 |
| Native civilians | 1 |
| European civilians | 1 |
| Total third week | 4 |

During the fourth week, 7 patients came for treatment, namely:

| | |
|---|---|
| British soldiers | 1 |
| Native civilians | 6 |
| Total fourth week | 7 |

This makes a total of 41 patients for the first month, and made up from the following classes:

| | |
|---|---|
| British officers | 2 |
| British soldiers | 20 |
| Native officers | 1 |
| Native soldiers | 2 |
| European civilians | 4 |
| Native civilians | 12 |
| Total first month | 41 |

Or,

| | |
|---|---|
| Military patients | 23 |
| European civilians | 4 |
| Native civilians | 12 |

Up to July 9th, 1901 (eleven months from date of opening), a total of 271 patients presented themselves for treatment, which gives on an average 25 new patients every month.

The 271 patients are made up from the following classes:

| | |
|---|---|
| British officers | 10 |
| Officers' wives | 3 |
| Officers' children | 3 |
| Warrant officers | 1 |
| British soldiers | 57 |
| Soldiers' wives | 1 |
| Soldiers' children | 7 |
| Native officers | [illegible] |
| European civilians | 44 |
| Native civilians | 134 |
| Total for first eleven months | 271 |

Or,

| | |
|---|---|
| Military patients | 73 |
| European civilians | 44 |
| Native civilians | 134 |

Of the European civilians and native civilians, about a quarter of each class were Government servants.

The native patients are represented by all classes of the population—Hindus and Mohammedans in about equal proportions. Many of them have been high-caste natives, educated and intelligent. In order to overcome class prejudice, opportunity was always taken of showing and explaining the methods and principles of treatment to intelligent native patients. Without exception these people have stated that there is nothing connected with the treatment to interfere with the religious sentiments or caste of any native. No doubt on returning to their villages they have helped to overcome class prejudice considerably, and it is known for a fact that many of them have written to the native papers to enlighten their brethren on the subject.

In several instances one and two patients have come for treatment from villages where five or six people were bitten by the same rabid dog or jackal, and have returned to their villages and remained quite well, while those who did not come have died of hydrophobia. The results of the treatment so far are quite as good as at the Paris Institute or at similar institutes in other parts of the world.

The general bacteriological work which is done at the Institute over and beyond anti-rabic treatment comprises:

1. The preparation of antityphoid vaccine.
2. Serum diagnosis of typhoid and Malta fevers.
3. Diagnosis of malarial fevers, tubercle, leprosy, and many other diseases met with in India.
4. In addition several medical officers of both services have attended for instruction in bacteriology, and are allowed to work in the laboratory.

As regards Nos. 2 and 3, a diagnosis has been given in some 250 cases during the past eleven months.

The institute is capable of producing the various antitoxins, including antivenene, and only requires funds, stables, and horses to effect this.

## LUNACY IN IRELAND.

The fiftieth report of the Inspectors of Lunatics (Ireland) for the year ending December 31st, 1900, published recently, shows that the number and distribution of the insane in establishments on January 1st, 1901, was as follows:

| | Total. |
|---|---|
| In district asylums | 16,404 |
| In Central Asylum, Dundrum | 162 |
| In private asylums | 709 |
| In workhouses | 3,805 |
| Single Chancery patients in unlicensed houses | 89 |
| | 21,169 |

These numbers show a total increase of 306 during the year, as against 559 for the previous year, and an average of 492 for the past ten years. No returns, however, are available of pauper lunatics wandering at large or residing with relatives.

### Admissions and Deaths.

There are now 23 district asylums in Ireland, and the number of patients resident therein, as given above, shows an increase of 495 during the year 1900. The total admissions during the year were 3,546, and the number of patients discharged as recovered was 1,288, while 485 were removed by friends or sent to workhouses. The deaths amounted to 1,274; the highest death-rate was 15.2 per cent. in Limerick, and the

lowest 4.7 per cent. in Letterkenny Asylum. In 327 cases a *post-mortem* examination was made. As regards the cause of death, out of the total number 349 died from consumption, 40 from general paralysis, and 43 from dysentery or colitis and diarrhœa. Out of a total of 11,464 deaths during the past ten years, 3,223 died from consumption. Seven deaths occurred under the heading of suicide and misadventure—namely, 2 from suicide, 3 from misadventure, and 2 from homicide.

### Insanitary Conditions and Zymotic Disease.

It is stated that the Ballinasloe Asylum is in an unsatisfactory sanitary condition, the zymotic record being: dysentery 28 cases (1 fatal), erysipelas 21 (4 fatal), diarrhœa 3 (2 fatal), febricula 22, enteric 9, measles 3, and influenza 7. In Belfast and Carlow there were 3 and 2 cases respectively of erysipelas. Clonmel had 90 cases of influenza in the month of January. In Cork Asylum there were 27 cases of dysentery, with 9 deaths, and 12 cases of influenza. Downpatrick had 21 cases of dysentery (2 fatal), and 59 cases of influenza. Ennis recorded 2 cases of erysipelas. Enniscorthy had 35 cases of influenza (5 fatal). Kilkenny had no zymotic disease except influenza (11 cases.) Killarney had 3 cases of erysipelas. Letterkenny continues to improve, 3 cases of enteric, 4 of erysipelas and 6 of influenza (2 fatal) being recorded. In Limerick there were 16 cases of enteric (1 fatal), 1 fatal case of dysentery, and 79 cases of influenza. Londonderry had 1 case of enteric (fatal). In Maryborough there was 1 fatal case of dysentery and 4 cases each of erysipelas and influenza. In Monaghan 10 cases of erysipelas occurred. Mullingar had 5 cases of erysipelas and 120 of influenza. Omagh has a high death-rate, but only 3 cases of erysipelas and 9 of influenza (1 fatal). The Richmond Asylum (Dublin) records dysentery 24 cases (4 fatal), diarrhœa 42, erysipelas 8, scarlatina 3, influenza 8, enteric 60 (7 fatal), and beri-beri 4 (the cases of enteric and beri-beri occurred among the females). Sligo shows enteric 4 and "continued" fever 11, as against 15 and 5 respectively for the previous year. Of the cases of "continued" fever 2 proved fatal in 1899 and 4 in 1900. Erysipelas (4 cases) and measles (1) were also recorded. Waterford records enteric 2 cases and influenza 87. No cases of zymotic disease occurred in Antrim, Armagh, or Castlebar Asylums.

### Cost of Maintenance.

To maintain the daily average of 16,283 lunatics in the district asylums, £532,127 was expended. To this the local rates contributed £300,000: the Government capitation grant amounted to £160,282; £7,405 was paid by relatives or out of the patients' property; and extras produced £10,035. The gross amount spent on the actual maintenance of the patients was, however, £435,503, the remainder of the total being represented by loan repayments for building works, purchase of land, etc.

There was an increase on the preceding year of the cost per patient of £2 3s. 10d. a head, which is attributed to a general advance in price of most necessaries.

### Accommodation and Staff.

The necessity for further accommodation for the insane is urged, and more particularly the want of an institution for the care and training of idiot and imbecile children, is dwelt upon. As a rule the profits derived from the farms is shown to be very meagre when compared with the outlay. The committees of management do not appear in some cases to fully realise how necessary it is to appoint as attendants on the insane persons of intelligence and humane feeling. The night nursing continues to be improved, but is still deficient as a general rule.

### The State Criminal Lunatic Asylum.

The criminal asylum at Dundrum maintained 162 patients, at a cost of £6,166 to the Government, and £242 profit, estimated on the farm, was spent in addition. The average cost a head for the year was £38 3s. 6d., as compared with £47 4s. 5d., the average cost for the preceding five years.

### Insane in Irish Workhouses.

The number of pauper lunatics resident in workhouses on January 1st, 1901, was 3,805, being a decrease of 184 on the year 1900, and 234 on 1899.

The state of the insane in these institutions is deplorable, and very little progress is recorded as to their condition. It remains a dark blot on the humanity of the Irish people; indeed, the picture produced by the details given causes one to turn with horror from its contemplation.

### Private Lunatic Asylums.

In Ireland accommodation for the insane who are able to contribute towards their maintenance is provided:

1. In licensed houses, of which there are 12.
2. In lunatic hospitals, which are not kept for profit, and were originally endowed by private individuals. These are Bloomfield, St. Patrick's Hospital (including St. Edmundsbury), St. Vincent's, and the Stewart Institution.
3. A certain number of private patients, who are able to contribute only small sums towards their maintenance, are received into district asylums.

In the licensed houses and lunatic hospitals there were 709 patients in residence on January 1st, 1901. The general improvement of the accommodation provided in these institutions continues. The percentage of recoveries on admission during the year was 33, while the death-rate on the average number resident was 8.8 per cent. As compared with these figures the percentage of recoveries on admission to the district asylums was 36.3, and the deaths 7.9.

### Probable Causes of Insanity in Ireland.

Of the 3,546 admissions to district asylums the following causes and numbers, among others, are given, and the parallel column refers to the 709 admissions into the private asylums.

Table I.—*Moral Causes.*

| | District Asylums | Private Asylums |
|---|---|---|
| Domestic trouble ... ... ... | 89 | 25 |
| Adverse circumstances ... ... | 29 | 9 |
| Mental anxiety and worry ... | 66 | 43 |
| Religious excitement ... ... | 39 | 16 |
| Love affairs ... ... ... | 15 | 9 |
| Fright and nervous shock ... | 52 | 15 |

Table II.—*Physical Causes.*

| | District Asylums. | Private Asylums. |
|---|---|---|
| Intemperance in drink ... ... | 372 | 50 |
| ,, sexual ... ... | 3 | 1 |
| Venereal disease ... ... ... | 15 | 2 |
| Self-abuse (sexual)... ... ... | 33 | 5 |
| Change of life ... ... ... | 56 | 7 |
| Sunstroke ... ... ... ... | 24 | 4 |
| Accident ... ... ... ... | 31 | 8 |
| Parturition ... ... ... | 51 | 4 |
| Fevers ... ... ... ... | 26 | 5 |
| Old age ... ... ... ... | 106 | 15 |
| Hereditary influences ... ... | 810 | 143 |
| Congenital defects ... ... | 108 | 115 |

## THE PREVENTION OF ENTERIC FEVER IN ARMIES.

At a meeting of the Royal United Service Institution held on Tuesday last, under the chairmanship of Sir William Broadbent, Dr. Leigh Canney read a paper entitled "Typhoid, the Destroyer of Armies, and its Abolition."

Dr. Canney, after some general observations, referred to the occurrence of enteric fever in the army in South Africa, and dwelt upon the paralysis of an army which may be produced by waterborne disease, giving, among other instances, the French experience in Madagascar and the Bloemfontein and Ladysmith epidemics. With reference to the Bloemfontein epidemic, he said that to maintain an effective force of 35,000 men it was necessary to carry 5 tons of transport daily, while some 10,000 men in addition were in hospital *hors de combat* from waterborne disease; if 12 tons more transport had been taken there need have been no epidemic, and the effective force would have been 45,000 men. For the prevention of waterborne disease in an army in the field he advocated the method of boiling or heat sterilisation, and

gave the following description of an apparatus which he proposed for the purpose.

It consists of a cylindrical copper boiler with large heating surface below, arranged in wedge-shaped pockets which can be easily cleaned. It holds 50 pints (6¼ gallons) of water. An iron stand is provided under which a petroleum lamp is placed, with rapid and complete combustion under air pressure. The whole weighs 38½ lbs., and measures 33 inches in height by 17 inches in diameter. The apparatus is constructed to very readily allow repairing if shot through, and would be accompanied by duplicate parts, etc. Cloths would be used to strain mud from the water, but no other filtration of water would be desirable. This boiler and lamp can raise 50 pints (6¼ gallons) of water from 54° F. to the boiling point in eleven minutes, consuming ¾ pint of petroleum. Cooling is effected by covering the pint tins with cloth damped in the fluid, in six minutes.

It may here be mentioned that the most practicable steriliser hitherto found of any use on service is the Waterhouse-Forbes, which weighs 29 lbs., and sterilises only 5 gallons of water per hour. There is also a later heavier variety.

The apparatus proposed sterilises about the same quantity of water as the best previously known in one-sixth of the time, with less consumption of fuel, and is about half the weight of the latter instrument.

One mule (carrying easily 200 lbs. weight) would transport the following supplies for the unit of 100 men :

| | lbs. |
|---|---|
| 2 machines, in cases with lamps and stands ... | 90 |
| 42 pints of petroleum (sufficing for 4 pints of boiled water daily for each of 100 men for 7 days) and case ... ... ... ... ... | 45 |
| Sugar, tea, meat extract, vegetable powder ... | 40 |
| Saddle, 2 collapsible buckets and ropes ... ... | 25 |
| Total ... ... ... ... ... | 200 |

In cases of urgency the men of the water section would only raise the water to 180° F. This would be reached in nine minutes, and cooled sufficiently to drink as soup or meat extract in two minutes. To obviate delay, the time required could in most instances of urgency be arranged for, by allowing the water section to advance half a mile in front of the troops, but a mile and a-half behind the scouts, so that tea or soup should be ready on the arrival of the troops. The morning and evening meals would always be welcome as hot tea or soup, and probably the mid-day meal. The water bottles and carts would be filled over-night with boiled water.

The machines and fuel would be used for no other purpose than supplying fluids for the army. All water carts and utensils used to convey water to the firing line must be under the control and care of the water section. Mules have been chosen as transport to prevent separation of the water section from the men in difficult country. The advantage to the men of being able to obtain rapidly tea, soup, etc., with their dry biscuits when the transport is often miles behind is something which, if once established, the men would never give up.

For an army of 200,000 men, to give every man 4 pints of boiled water daily would require 547,500 gallons of petroleum for the year. This would cost about £16,000 and weigh about 1,833 tons. The general transport required for this army daily is 2,000 tons. This fuel would add daily about 5 tons to this 2,000 tons, or an increase of $\frac{1}{400}$. Further, to ensure continuity of action, the transport of this water section must be made very independent of the general transport, and must march with the regiment or unit. The transport of reserve fuel required by the water section, minute as it is in regard to the total transport, must take precedence of all transport except one day's ammunition.

In order that the scheme might work automatically it would be necessary to teach the men that the scheme was a sound one, and that they must fear "unapproved" water not only for their own sakes but for that of their comrades. Officers should be trained and examined in the elements of sanitary science as it concerns the management of camps, disposal of excreta, provision of approved water, selection of camp sites, etc., and must be held directly responsible for the successful working of the water section in the troops under their command, and for the ordinary sanitation of their camps. He recognised that all officers of the R.A.M.C. must be, as at present, trained in military hygiene, but he thought that a special number of such officers, who had either distinguished themselves in this branch of the army, or had been passed into the army on this account, should be appointed sanitary officers in the proportion of perhaps one to a division ; their duties would specially be :

1. The education of all officers placed under their care in the methods regarded by the Sanitary Department of the R.A.M.C. as the best to be adopted at the time. This information they should give by printed instructions, lectures, or demonstrations, in such a manner as to enable officers to qualify in this subject either on admission to the army or at the subsequent examinations required at present for promotion.

2. The education, certification, and re-examination of the men of the water section.

3. The education of the men on the disasters resulting from insanitary conditions of camps or water supply, and the encouragement of the men in a feeling of comradeship in prevention of waterborne disease—their worst foe in war or peace.

On active service sanitary officers would best be employed in the immediate separation of any suspicious cases of these three diseases, and in assisting general officers in the selection of camp sites. In addition to the sanitary officers of divisions, there must be a sanitary officer, ranking with the P.M.O. on the staff of every army corps, and on the headquarter staff of every expedition or war. There must also be a director-general of sanitation or chief sanitary officer of the army, who shall be on the Medical Advisory Board, on the Army Board, and on the War Office Council. Sanitary officers shall only deal with questions of preventive medicine. Sanitary officers are not officers of the water section, except when the men of the water section are being trained by them.

The water section should be specially recruited in the proportion of 2 per cent. of strength, and recognised as men technically trained to provide their corps or unit with approved water. They should be trained by the sanitary officers of the R.A.M.C., who should also train a reserve not exceeding another 2 per cent. of strength. He considered that the advantages which the scheme presented were :

1. Total immunity from waterborne disease, which amounts to four-fifths of the mortality and invaliding of armies.
2. Absence of discomfort and inefficiency on the march from minor illness.
3. Diminished thirst and discomfort by accessible tea, meat extract, soup, etc., several times a day, in place of foul water, a biscuit, and late transport.
4. Enormous reduction of transport.
5. Great increase in effective strength.
6. Liberation of the R.A.M.C. officers and men for care of the wounded, by emptying the typhoid and dysentery hospitals.
7. Acceleration of the war and saving of enormous expense.
8. The placing of responsibility in the proper quarter for the future, making such subterfuges as "Hospital Commissions" or inquiries an impossibility.

The Chairman said that all were agreed as to the destructive influence of typhoid fever, especially on active service. They were bound to admit the insufficiency of the existing means of prevention. That was not altogether from ignorance, but they had almost confessed their impotence to deal with this fatal disease. Dr. Canney in his paper proceeded on the assumption that the main channel through which typhoid spread was water. Other channels had been suggested, such as dust and flies, but the degree to which they contributed to the spread of typhoid was still very much subject to discussion. Whatever importance might attach to dust and flies, they were subsidiary to the infection by water. With regard to the efficiency of the method proposed by Dr. Canney, he thought that, if it could be secured that no soldier drank anything but boiled water, they would get the upper hand entirely of typhoid. The whole question turned upon the practicability of the scheme, which had been well thought out, and was not brought forward in a nebulous condition. Although, of course, they must bear in mind that after a long march, or after the excitement and exertion of a fight, a soldier could not be prevented from drinking the first water he came across, yet if he started with his bottle full of pure water, and the water carts contained nothing but pure water, whilst only pure water was drunk in the camps, an enormous gain would have been secured. In peace it was important to enlist the sympathy of the men in carrying out the instructions which were for their own benefit and for that of their comrades.

Major Firth, R.A.M.C., Professor of Military Hygiene at Netley, said no intelligent man in the service could help being struck with the wastage from disease which was largely preventable. If the loading up of the military hospitals could be checked not only would the effectiveness of a force be increased but also its mobility and its efficiency, while at the same time the cost would be reduced. There were two main points to consider: first, that the greater part of disease in armies was essentially preventable, and secondly that this preventable disease was chiefly waterborne. He thought it would be difficult to dissociate Dr. Canney's scheme from sanitary organisation in the army. He expressed great sympathy with the proposed scheme and emphasised the fact that the fundamental point that underlay it was that sanitary arrangements for the army must be put on the broadest base possible. Sanitary officers should undergo a special training and they must be supplied with properly instructed men to carry on the work. Those men must be kept apart and used only for the water service. These men should be taught not only the sterilising of approved water by boiling but by every means known to science.

Major General Lord Dundonald said his experience in South Africa led him to the belief that it was impossible to make water safe for drinking purposes by filtration only. It could only be done in his opinion by boiling. With that object in view on his return to this country he devised a means of carrying water in vessels which could be used for boiling purposes. What he devised, no doubt, was not perfect, but

it had been perfected since. If those in power attended to advice, they would save thousands in future wars. A long-continued diet of bully beef and biscuit rendered men susceptible to the easy assimilation of the germs of disease. The site of a standing camp covered with bell tents could not be maintained in a sanitary condition for any length of time. The floor spaces in standing camps should be asphalted, and all unused spaces should be enclosed by wire fencing. Interest in sanitary matters must be forced upon the attention of officers by those in authority.

Dr. WASHBOURN, C.M.G., said that he had had eighteen months experience in South Africa, and had travelled over a large part of the district concerned, and was well acquainted with the conditions under which the soldiers were placed. In considering how the terrible loss of life and the serious loss of the effective strength from enteric fever was to be prevented, the mode in which enteric was conveyed must be understood. It was by the swallowing of food or of drink polluted with human excreta, and it was to be remembered that in certain cases infection might be conveyed by the excreta of persons who were apparently healthy. Water was certainly the main channel by which enteric fever was spread, but at Maidstone, after the contaminated water which caused the epidemic had been shut off from the supply, cases of enteric continued to arise. The disease was also conveyed by flies and dust. The enormous number of flies round the latrines and cook houses showed at once that this was a cause of the spread of enteric fever. Anyone who had been in a dust storm in South Africa knew the enormous quantity ingested with the food, and recognised that it was an important means of conveying disease. To prevent the spread of enteric fever in armies in the field, pure water must be supplied and the sewage must be properly disposed of. Dr. Canney had shown how it was possible to provide pure water, and he, Dr. Washbourn, thought it was not difficult also to provide for the proper disposal of excreta.

Dr. RIDEAL considered that Dr. Canney's kettle was a very crude method of effecting the sterilisation of water. There were three methods of sterilising water—boiling, filtration, and chemical means; the latter two, from the point of view of transport, were better than boiling. By using sodium bisulphate water could be sterilised in fifteen minutes. By means of the Pasteur-Chamberland filter water could also be efficiently sterilised.

Dr. BLACK gave particulars as to the reduction of typhoid in Capetown by the introduction of a pure water supply.

Dr. A. CONAN DOYLE suggested that Dr. Canney should be sent out at once to South Africa with his boiling apparatus and attached to a column, and the results observed. Dr. Rideal, who had put forward the claims of chemicals and filters, should also be sent out and attached to another column, and the results compared. There was no time for academic discussion when the house was actually on fire; what was wanted was a practical method to put it out.

Brigade-Surgeon-Lieutenant Colonel MYERS asked what would happen to the water sections if the enemy came upon them in the position assigned to the sections by Dr. Canney behind the scouts.

Major H. A. CUMMINS, R.A.M.C., referred to the Ashanti expedition when the water was boiled and cooled for drinking purposes. The result was that enteric fever was kept down to a large extent. He asked how it was proposed to supply "approved water" to the outposts on the hills and away from the columns.

The CHAIRMAN pointed out the desirability of educating men in the time of peace on the water question, so that in war they would be prepared to carry out regulations.

Major SCOTT MONCRIEFF urged that on every march out soldiers should be taught the importance of the subject by an opportunity being afforded of going through the whole performance of sterilising water and teaching the men to wait till it was cool I ready to drink.

Captain WALKER, R.E., considered that the sanitary arrangements should be the sole responsibility of the regimental officers acting under proper advice.

Surgeon-General DE RENZY did not think that dust and flies were of importance in spreading enteric fever.

Captain DANCE, R.E., Chief Surveyor Metropolitan Fever Hospitals, complained that the pioneers in the army received little or no instruction upon even the rudiments of sanitation. The Metropolitan Asylums Board had come to the conclusion that boiling was the best "deterrent" against enteric fever.

Dr. CANNEY, in his reply, mentioned that his apparatus was made in sections, so that small bodies such as outposts could have a proper supply of approved water. He did not think that the chemical and filtration methods were clearly established, because there was still some discussion as to their efficiency.

Colonel LONSDALE HALE, in the absence of Sir William Broadbent, ended the discussion. He said that officers and men did not observe the necessary and proper precautions against typhoid fever.

The proceedings then terminated.

## CONTRACT MEDICAL PRACTICE.

### ROTHERHAM.

IT appears that the Rotherham and District Friendly Societies Medical Aid Association is advertising or is about to advertise for a medical officer. We would advise medical men before responding to this advertisement to communicate with the Honorary Secretary of the Rotherham and District Medical Guild, Dr. F. B. Judge Baldwin, Cawdor House, Rotherham.

### DOCTORS AND COLLIERY CLUBS.

UNDER the above heading, the *Nottinghamshire Free Press* comments on the recent dismissal of Drs. Rainsbury and Mitchell from their posts of surgeons to the Teversal Collieries Workmen's Provident Fund. Our contemporary says: "The transgression of one of those gentlemen appears to be in the fact of his connection with the Midland Medical Union, and his endeavour to maintain what in other circles would be termed a 'living wage.' The gravity of the situation has been greatly accentuated by the introduction into the district of a non-union doctor to carry on the work which has been taken from the hands of the gentleman named." It then reports the result of an interview with each of the doctors, from which it appears that after endeavouring for some time to reduce Dr. Rainsbury's fees and to alter his charges for confinements without success, the Committee of the Teversal Collieries Workmen's Club dismissed that gentleman from his post of surgeon to the Stanton Hill section, and tried to induce Dr. Mitchell to take the appointment in the place of the former. This he refused to do, and it was resolved to introduce another medical man into the district. After some little trouble one was found, but the newcomer, it is stated, informed the Committee that the Stanton Hill district was not enough for him, and that he should require also the Sutton and Skegby district, to which Dr. Mitchell was the surgeon. A meeting of the workmen was called and this proposal submitted to them, and it was finally decided that notice should be sent to Dr. Mitchell to terminate his engagement, although no dispute had arisen between that gentleman and the workmen, his only offence being that he had become a member of the Midland Medical Union. It is to be hoped that our Midland brethren will stand shoulder to shoulder against such aggressive action on the part of the collieries and other large industrial associations.

### THE ECONOMICS AND ETHICS OF CONTRACT PRACTICE.

SIR,—A feeling of deep gratitude to Dr. Larking for his outspoken address on the difficulties of contract practice in the BRITISH MEDICAL JOURNAL of November 2nd, and to you for the prominence given the matter by your editorial thereupon, would have kept me silent were it not that it seems undesirable to let the subject, though so ably dealt with, drop without some effort to obtain unanimity among the profession generally upon it.

In your editorial you say that the principles involved are economic ones; and I do not doubt that a correct solution of the economic problem would do away with the evils attending contract practice by destroying the practice itself. The economic principle at present proceeded upon is, indeed, palpably erroneous; and no readjustment of the scale of payments will make what is manifestly wrong in principle work out well in practice. The working classes, with a true instinct,

have adopted the method of insurance to obtain sick pay and medical attendance during illness; but while the risks connected with the former fall upon the Societies, the latter risk is now almost universally borne by the medical attendant, who should never have been invited to bear it or have consented to do so. The principle is a wrong one, I repeat, and the practical results of it cannot be good. Even if we admit philanthropic motives as a ground for assuming risks otherwise undesirable, charity clearly becomes superfluous the moment it is shown that the working men's societies are well able themselves to bear the risk now thrown upon their doctors. But on this point there can be no doubt whatever. The successful operation of the National Deposit Friendly Society proves it; and if more proof were needed, we might point to the flourishing existence of many Societies where no medical attendance is provided, since the ability of the individual members to pay their doctor's fees shows that they could collectively do so.

If the principle now laid down be accepted, it is evident that its assertion—its enforcement, in fact—on the working-class combinations, involves combination on the part of the medical profession. Medical men are continually being found to combine locally to bring pressure on the clubs, with the object of obtaining a higher rate of remuneration. How is it that we do not hear of such united action, with the object of throwing upon the clubs the risk of payment for medical attendance, as they already accept the risks attaching to sick pay? Why, in his otherwise candid address, did Dr. Larking fail to be consistent, and omit to advise all honest men among his hearers to wash their hands of the whole business, as he himself has done?

It is at this point that the question of contract practice ceases to be a purely economical, and becomes a moral or ethical one. The club doctor is found willing to do an admittedly inferior class of work for the sake of the small assured income which the limited monopoly affords. He admits that if no contract work were undertaken, the profession and the public would be better off, but he dreads the possible loss of income to himself. It is here he puts himself in the wrong. With Dr. Larking, I do not believe that his income would fall off—most certainly not, if his action in the matter were not isolated, but undertaken in conjunction with the medical men of his district. Yet let me appeal to reasons which, in a profession like ours, surely should outweigh the slight possible monetary loss which at most could be involved.

Let us ask ourselves:

1. Is it right, in a matter involving health or life itself, to give one's best work to a private patient and one's second best to a club member? Is it not in every sense infamous to substitute drugs which have "the common virtue of being cheap"[1] for the more expensive remedies which may be indicated by the patients' condition? Will doubling, or even trebling, the rate of club payments really secure that treatment shall be prompt and thorough in proportion simply to the gravity of the illness, irrespective of whether the patient belong to a club or do not?

2. Is it not essential to the existence of any club or society, whether public or private, that canvassing for members should be practised, and are we right in countenancing this by accepting such work?

3. Are we willing to advise our own patients, or such of them as belong to the artisan class, to join our clubs, and, if not, are we justified in accepting other men's patients?

4. Does the acceptance of a penny or two a week salary, and the clamour for more, tend to secure public respect for our profession?

5. Does club practice deprive us of the leisure necessary for study and reflection if our work is to be beneficial to our patients? Are we becoming wiser and more conscientious practitioners, or merely mechanical ones?

Such considerations as these have induced me personally to refuse contract work. They may not be convincing to all. Sure I am, however, that they deserve the earnest consideration of all; and I am bold enough to invite the attention of our Association to the entire question. I would suggest, as the best means open to us, that each Branch should meet specially on one or if possible two evenings during the winter, for the discussion of the subject of contract practice; that to these meetings all the practitioners of the district, whether members of the Association or not, should receive invitations through the honorary secretaries; and that some such resolution as the following should be voted upon at the second meeting:

That this meeting disapproves the principle of a fixed scale of payment for an indefinite amount of work, and strongly recommends to the attention of all clubs or societies and their medical attendants the method of payments successfully adopted by the National Deposit Friendly Society.

Having thus broken ground, a similar resolution might be moved at the next annual meeting of the Association.

As you, sir, have well maintained in your editorial article upon the subject, there is no more pressing or vital question to the profession as a whole than this of contract practice, and its importance must be my apology for the unusual length of this communication.—I am, etc.,

Bristol, Nov. 9th. A. Baillie McKee, M.B.

[1] British Medical Journal, p. 1326, three lines from top.

## A Club Member's View.

J. H. J. writes: I am sure that all medical men who are in any way connected with contract practice must have felt in reading Dr. Larking's excellent paper the force of his home-truths, and have longed for the time when we shall put in force his remedies—a desideratum which even our club friends consider us "mere children" not to bring about. Out of curiosity last Sunday I handed the British Medical Journal to a lay friend of mine who has had some considerable experience in club management, and requested him to read Dr. Larking's article. Quite spontaneously he sent me in a few days the enclosed letter. I should like to say that my correspondent left school at the age of 7, and has by his careful industry raised himself at 35 to a position of comfort and responsibility, and is, I may add, one of the very few club members I have ever known insist on paying his doctor extra remuneration adequate to services rendered.

(Copy.)

My Dear Doctor,—I have read the paper and article on Contract Medical Practice in the British Medical Journal with a very great amount of interest.

The impression left on my mind is that in the art of looking after Number 1 the members of the profession are mere children; the man in the street could easily give them points and a beating. I suppose that in a quiet sort of way doctors are very jealous of one another, and look upon the term "trade union" with horror, or why don't you combine and strike for better pay?

To expect Friendly Societies to voluntarily offer better pay is ridiculous. Nobody gives 8s. for what he can get for 4s., and the average member thinks doctors are keen upon getting the work because the money is sure, and promptly paid.

Personally, I should always oppose the wage limit remedy. I went into a club when I could not afford to pay doctor's bills, and circumstances might arise when I could not afford to do so again. What about the value to me of the insurance against them?

The remedy would certainly offend the very men who could pay for medical attention to their wives and families, and club doctors generally get that work at their own price.

I don't agree that Friendly Societies are not sweaters. I think that is just what they are; but it arises from ignorance—sheer ignorance. A body of laymen, I think, would see some advantage in the contract system, but they would combine, appoint an agitator to explain their views to the societies, strike if necessary for a living wage—and get it.

Yours faithfully,

## Friendly Societies and Medical Aid Associations.

Dr. James W. Smith (Doncaster) writes: I have read Dr. Larking's paper published in the British Medical Journal of November 2nd on Contract Practice and its Difficulties, also your leading article on the subject. With the main conclusions advocated I fully agree, but I think some exception may reasonably be taken to the suggestion that all club fees should be raised to 8s. a head. While some clubs consisting of men only, and these generally picked and healthy men, might be fairly taken at 4s. a head with a proper wage limit, others of a mixed character, the members of which resided over a large area, might be unremunerative at 8s. I am of opinion, however, that if we could eliminate some of the other evils of club practice, the remuneration would not be such a difficult question to settle.

In the matter of clubs and contract practice I think we should resolutely maintain that the system involves, to some extent at least, an act of charity. If we forego this fundamental principle and accept the view of the Friendly Societies we at once introduce a trade element into the practice of the profession which is

entirely repugnant to its best traditions, and, what is more, would in the long run prove very disastrous both to the profession and to the public. If the view of the Friendly Societies is recognised and sanctioned, I see no reason why all medical attendance, that on the rich as well as on the poor, should not be so organised with the result that, in the end, we might have large trusts or associations dispensing medical relief, and, following the usages of some trades, promoting their ends by giving tea or other commodities with each attendance. Those who are conversant with medical practice as it is carried on in our towns, especially club and contract practice, must recognise that the trend of things is towards the principle advocated by the Friendly Societies. This principle has been introduced and fostered by the establishment of Medical Aid and Industrial Assurance Societies, and many members of the profession have not been slow to constitute their practices on the same lines by the creation of private clubs, and the adoption of the tactics of these associations in the way of canvassing and touting and disregard of a wage limit, with their attendant evils. These private clubs, as Dr. Larking remarks, are productive of an immense amount of injury to the medical profession. I daresay the medical men who are connected with them would repudiate any cognisance of canvassing; as Dr. Larking remarks, however, it is all very well to say that the agents or collectors do no touting, but it is impossible for them to avoid it. They tout among other men's patients, and decry all the other doctors. Believing, then, that this trade principle is wrong: that it is, as I have stated, injurious and derogatory to the profession, and that it must have for its ultimate effect the exclusion of men of education and intelligence from our ranks: that it would consequently be injurious in the end to the public by depriving them of satisfactory advisers, and in finally reducing remedial measures to what Mr. Labouchere in *Truth* terms "Faith and Purgation"—believing this, I would add my voice to that of others in calling upon the General Medical Council to exercise its powers in restraint of such a growing evil. The General Medical Council has already passed a resolution strongly disapproving of medical practitioners associating themselves with Medical Aid Associations which systematically canvass, but it has been content with this expression of a pious opinion. We require something more, and with it a condemnation of touting in connection with private clubs, for, as Dr. Larking remarks, "this practice runs very close to what the General Medical Council calls 'infamous in a professional respect.'"

In conclusion, I would ask, What is to be the bearing and conduct of medical men who repudiate these trade methods, and try to conduct their work in accordance with the honourable traditions of the profession, in relation to their *confrères* who adopt these questionable principles of practice? To me it seems that this condition of things will result in the development of a line of cleavage in our ranks which, unless remedial legislation is instituted by the General Medical Council, will become more and more pronounced as time goes on.

### Friendly Societies and the Wage Limit.

Dr. Frank Taylor (Lower Sydenham) writes: In 1894, after a severe illness and consequent absence from home which I could ill afford, I looked through my work, and found, as others have done, that:

(1) I was doing too much for nothing;
(2) I got paid for scarcely half that I did, and
(3) I was underpaid in the bargain.

I then set myself the following low standard, that a 2s. 6d. fee and the Friendly Society rate, which was then fixed at 1s. a quarter, should be the minimum. I cared not how much the maximum, and have always been ready to work with others to raise this. There are, of course, exceptions which prove a rule. I have still, of course, done much for nothing, and have never cared to examine a fee when offered with grace. I then wrote a letter to the British Medical Journal and gave up all work under that standard, though, by the way, there were others willing to step in.

Shortly after this the Friendly Society rate came to be questioned, and glad as I should be to see it raised, and rightly too, I have always looked upon it as a case of "urging the willing horse." I likewise have much sympathy with the refusal to accede to the wage limit. Those who have watched with intelligent interest the working classes have no doubt seen the labourer grow into the small master and the assistant become a shopkeeper. These thrifty and decent men are, and I always hope will be, the backbone of these societies. Why should they be taxed for their decency and honest effort? I am indeed inclined to look at this matter broadly as a crying evil of the present day for which we are much indebted to the clergy. There appears to be a thorough hatred of anything respectable, as much as to say—be lazy, be a rogue and a vagabond, and we will assist you to all in our power: but be respectable and strive to live rightly and we will help you in no way, but will rather tax you for such conduct. There would seem to be no higher ideal set up in charity as in legislation than the increase of the inland revenue. Let us not readily be led into this error. Tax wealth to any extent but not respectability.

It would save many years of bitter experience, not to mention pecuniary loss, if a few lectures were given at hospital on the amenities of private practice, especially as the apprenticeship system has been done entirely away with.

### Are Friendly Societies Charities?

Country G. P. writes: The Friendly Societies profess to object to a wage limit, on the ground that it gives an appearance of charity. This seems rather inconsistent with the fact that in my district the treasurer of the Oddfellows Branch, which is in a flourishing condition, has lately written to well-to-do visitors in the neighbourhood asking for donations to the funds.

## REPORT OF THE INDIAN PLAGUE COMMISSION.

[Second Notice.]

The report of the Indian Plague Commission,[1] which was appointed in 1898, has just been issued in a Blue Book of a size sufficient to glut the appetite of the most ardent student of such literature. With the text, appendices, maps, and summary, it makes up 540 folio pages of solid print bristling with statistics. This is the fifth volume that has been published by the Commission.

It may be recalled that the Commission consisted of Professor T. R. Fraser, of Edinburgh, who was the President, and of Mr. J. P. Hewett, I.C.S., Secretary to the Government of India in the Home Department: Professor A. E. Wright, of Netley: Mr. A. Cumine, I.C.S., a Senior Collector in the in the Bombay Presidency; and Dr. M. A. Ruffer, President of the Sanitary, Maritime, and Quarantine Council of Egypt: with Mr. C. T. Hallifax, I.C.S., as Secretary. The Commission was appointed to conduct an investigation of a scientific character into the following questions:—

1. The origin of the different outbreaks of plague.
2. The manner in which the disease is communicated.
3. The effects of curative serum.
4. The effects of preventive inoculation.

The Commissioners arrived at Bombay on November 26th, 1898, and commenced to take evidence there on November 29th. They afterwards visited Dharwar, Hubli, Bangalore, Guntakal, Hyderabad, Wardha in the Central Provinces, Calcutta, Agra, Lahore, Karachi, Cutch Mandvi, Ahmedabad, Baroda, Surat, Daman, Poona, Satara, Belgaum, Bijapur, Sholapur, Ahmednagar, and Nasik. They left Bombay on their homeward journey on March 25th, 1899. During the inquiry in India they held seventy sittings for taking evidence, and examined 260 witnesses, of whom 31 were recalled once and 6 were under examination three times. Two sittings were also held for the reception of evidence in London. Bacteriological investigations were carried out in India by members of the Commission, and on its behalf by Lieutenant Liston, I.M.S., and a special investigation as to the presence of endemic plague in the hill country of Kumaun and Garhwal was made in accordance with its instructions by Captain H. J. Walton, I.M.S., and Lieutenant Stewart Douglas, I.M.S.

### The Origin of the Epidemic.

To the first question in the terms of reference the Commissioners have not been able to supply a definite answer. The manner in which plague was introduced into Bombay in 1896 is, they say, "very obscure, and defies elucidation."

[1] To be purchased, either directly or through any bookseller, from Eyre and Spottiswoode, East Harding Street, Fleet Street, E.C., and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin.

When first detected the disease was found to have obtained a hold on the Mandvi quarter of the city, and it remained confined to that quarter for some time. This quarter is that of the docks and of the warehouses, in which imported merchandise and grain for export are stored. The fact that plague broke out there seems to the Commissioners to favour the theory that the infection was imported by sea. They found it impossible, however, to procure any evidence showing from what place it was brought.

### Effect of Plague on Mortality-rates.

A detailed account of the course of the present epidemic in India is given, with full statistics. These show that the mortality from plague in the thirty-six months from September, 1896, to September, 1899, amounted to over 376,000 in the Bombay Presidency, and to about 54,450 in the rest of India, giving a total of about 430 500 deaths for the whole of India. As a means of estimating the effect of plague on the mortality of the whole of India, the Commissioners point out that the total population may, without taking account of any increase that may have occurred since the census of 1891, be taken as over 287 millions. A calculation on this of the computed number of deaths up to September, 1899, shows that only 0.15 per cent. of that population has during three years died of plague, giving a death-rate that is equal to an average mortality of 0.05 per annum. The Commissioners point out that a comparison of these figures with the vital statistics compiled for India during recent years shows that the mortality from plague has not yet attained to any considerable proportion of the total mortality of the country, and that plague has not in three years been able to take hold of the country in such a way as seriously to affect the death-rate. The total plague mortality recorded in India is not in fact high in comparison with the total mortality from "fevers" and cholera.

### Mode of Communication.

With regard to the second question the Commissioners, after dealing fully with the bacteriology, incubation period, and clinical features, pass to the infectivity of the disease. They have come to the conclusion that the risk of direct infection from patients is slight. Primary pneumonic plague, however, constitutes an exception to the general rule, and this type of the disease is highly infective. The same may be said as to those exceptional cases of plague in which specific rashes of a bullous or pustular nature appear on the skin. In the ordinary bubonic plague, which is by far the most common form of the disease, the infective material is not thrown off from the skin, or to any considerable extent from the lungs, but appears only in the excretions, and this only in the last stages of the disease. What holds good with regard to the escape of infective material from the human patient applies also to plague-stricken rats. Houses in which human beings or rats have died of plague, and clothes and other effects which have been soiled by their excretions, are infective. All these when once contaminated may remain infective for very considerable periods. The danger which accrues to those who live in infected houses would appear to be much greater than that which accrues to those who merely come in contact with plague patients. The full measure of the infectivity of plague has not, the Commissioners think, been fully disclosed in India, inasmuch as in the overwhelming majority of cases measures have been taken either to extinguish the infection in contaminated houses, or to remove the people from them. The infection is conveyed from one place to another mainly by human agency, that is by infected persons or clothing, etc.: it is probable also that it may be conveyed by infected rats from one village to another situated at no great distance from it.

### Prophylactic and Therapeutic Serums.

A full abstract of the part of the report dealing with preventive inoculation has already appeared in the British Medical Journal (February 24th, 1900, p. 455). Chapter V is devoted to a consideration of the value of curative serums (Yersin, Lustig), which the Commissioners have proved to a certain extent useful.

### Sanitary Measures.

In two concluding chapters the Commissioners give an account of the measures that have been employed for the suppression of the plague in India, and make recommendations regarding the organisation of the Sanitary Department in India. As to some of these there was a difference of opinion between the medical and the civilian members of the Commission. The recommendations are too detailed to be summarised; they will be fully discussed later.

# THE PLAGUE.

### Prevalence of the Disease.

#### Glasgow.

No further cases of plague were reported in Glasgow down to November 14th, and it is believed that the city, but for the risk of spread by vermin, may be considered free.

#### Liverpool.

No fresh cases of plague were reported in Liverpool during the week ending November 9th. A case of plague in a boy in Liverpool in the early part of October shows how insidiously plague occurs. The lad was admitted to the Liverpool Workhouse Hospital suffering from enlarged glands in the groin and some fever believed to be due to an injury at football. As the cause was obscure the fluid from the glands was examined, and found to contain plague bacilli. The source of the disease in the boy was unknown, nor had any other person contracted the disease from him.

#### India.

The plague returns of all India for the weeks ending October 12th and 19th showed the number of deaths to have been 8,551 and 8,372 respectively. Although the latter week shows a slight decrease, the figures represent a very serious epidemic. During the corresponding week of 1900 the mortality from plague amounted to 2,525, or more than one-third less than at present.

In the Bombay districts the plague deaths during the two weeks ending October 12th and 19th were 7,567 and 7,372 respectively. In the district of Belgaum 2,000 cases of plague were reported during the week ending October 10th. In Poona, during the third week of October, the daily average number of fresh plague cases in the city and in the cantonments was 10, and deaths from the disease 13.

In the City of Bombay, although the general death-rate continues high, the mortality from plague remains well-nigh stationary. During the weeks ending October 12th and 19th the number of plague deaths were 160 and 180 respectively.

In Calcutta for the two weeks in question the plague deaths numbered 12 and 15; in Bengal, 88 and 76; in the North-West Provinces and Oudh, 53 and 44; in the Madras Presidency, 27 and 21.

In the Mysore State the plague mortality continues high, being during the weeks ending October 12th and 19th 350 and 392.

The Punjab has also had a heavy plague mortality of 244 and 248 during the same period.

Benares seems to be keeping wonderfully free of plague, for only 2 deaths were reported there during the week ending October 19th.

#### Egypt.

The Director-General, Sanitary Department, reports that during the week ending October 27th only 2 cases were known to exist in all Egypt. During the week ending November 3rd 2 fresh cases of plague were reported in Egypt, 1 at Alexandria, and 1 in Mit Ghamr. Of the 3 deaths from plague during the week, 1 occurred at Alexandria, 1 at Mit Ghamur, and 1 at Zeftah.

#### Cape of Good Hope.

According to the report for the week ending November 2nd, only 1 fresh case of plague occurred throughout all the Cape districts. The case was reported from Port Elizabeth, where 3 deaths occurred from the disease.

#### Mauritius.

For the week ending November 7th 85 fresh cases of plague occurred in the island, and 50 deaths from the disease.

## ARBITRATION BETWEEN THE HOME OFFICE AND THE POTTERY MANUFACTURERS.

The arbitration between the Home Office and the pottery manufacturers upon the proposed special rules commenced at Stoke-on-Trent on November 7th.

The arbitration was the outcome of a report presented by Professor Thorpe of the Government Laboratory, and Dr. Oliver of Newcastle-upon-Tyne, to the Secretary of State in response to a request from the Home Secretary that they were to inquire as to the possibility of diminishing or removing lead poisoning from the manufacture of pottery. To some of the conclusions announced in the Thorpe-Oliver report the manufacturers raised objections many months ago, and particularly to the recommendation that after July, 1902, no glaze shall be used which exhibits a solubility of more than 2 per cent. of lead, calculated as lead oxide, in a 0.25 per cent. of hydrochloric acid. The manufacturers have all along maintained that such a test is too severe, and that the recommendation is impracticable. A similar attitude has also been assumed in regard to the use of leadless glazes. By the male

operatives there was lodged an objection to the arbitrary powers sought to give certifying surgeons to suspend workmen on their exhibiting signs of plumbism. In the court there was a goodly array of legal talent.

Lord James of Hereford acted as umpire, and was accompanied by Mr. Chester Jones, arbitrator for the Home Office, and Mr. Llewelyn, arbitrator for the manufacturers. The Home Office was represented by Mr. Cripps, K.C., M.P., and by Mr. H. Sutton. Mr. Fletcher Moulton, K.C., M.P., represented the manufacturers, and Mr. Colefax the operatives. As the Home Office was considered to be in the position of a respondent, Mr. Cripps was called upon and described the rules suggested by the Home Office bearing upon the questions of the fritting of lead compounds, standing solubility, and leadless glazes, and the monthly medical inspection of male operatives.

Professor Thorpe, the first witness called, was subjected to a long and severe cross-examination. Before the Thorpe-Oliver inquiry was undertaken, it should be remembered that in 1898 special rules had been issued by the Home Office, and as a consequence of these there had been a marked declension in the number of cases of lead poisoning in the Staffordshire Potteries; the cases this year number only one-fourth of what they were three years ago. It is this very satisfactory result that was pleaded by the manufacturers as an argument for further reducing plumbism rather by still improving upon their methods of ventilation and the means for removing dust, along with greater facilities for washing, than by the compulsory adoption of fritted lead compounds of a standard solubility. Professor Thorpe contended that leadless glazes had already passed beyond the experimental stage. Ware dipped in such was in the market, excellent examples of which he submitted to the umpire and arbitrators for inspection. If fritted lead compounds were more largely used there would be less plumbism, always provided that the fritting was carefully performed. The fritting of lead compounds made the glaze slightly more expensive, but it was not this the manufacturers objected to, but that the ware dipped in fritted lead glaze was less brilliant and transparent and more likely to craze than ware dipped in raw lead.

The substitution of leadless for lead glazes was the main point put forward by Mr. Wilton Rix in his evidence, while the great safeness of fritted lead over the use of raw lead in glazes found strong advocates in Mr. Alström, a large manufacturer from Stockholm, and Dr. Wilkin, the director of large potteries in Dresden.

Dr. Oliver acknowledged the great improvement that had taken place in the health of potters within the last few years, and admitted that the declension in the amount of lead poisoning was largely due to the operation of the special rules of 1898, but he was still of the opinion that the fritting of lead compounds would give additional security. He regarded the hydrochloric acid test as a suitable one and not too rigorous, since the 0·25 per cent solution used was exactly the same in amount as the acid present in the gastric juice, and to the action of which the solution of lead dust when swallowed was principally due. Like Professor Thorpe, he was of opinion that in many of the Continental factories the structural conditions and the methods adopted for removing dust were better than in most of the Staffordshire works. Questioned as to the character of the ware produced at Limoges and Sèvres in France he stated that it was not altogether comparable with that produced in Staffordshire, although that produced at Montereau and Choisy-le-Roi exactly compared, and since the introduction of fritted lead at Choisy-le-Roi ten years ago there had not been one case of plumbism, while previously under the use of raw lead there were as many as three or four cases of plumbism in the works every year. He gave his opinion, he admitted, not as a practical potter and with most of his experience of plumbism gained from white lead workers.

A male dipper, who had asked to be examined, stated that he came to the Court to lodge an objection, on behalf of himself and fifty men, to the monthly medical examination of male operatives working in dangerous processes. Witness was a healthy looking man who had worked in the dipping department for twenty years without ever having had a day's illness. He claimed the right to work in the dangerous processes without being subjected to medical inspection even if he were to die from lead. His comrades and he knew the risks of the trade and they took them.

Dr. T. M. Legge, of the Home Office, gave statistics of lead poisoning in the various Blue Books. Dust was the enemy of the potter. The remarkable decrease in the amount of plumbism within the last three years was largely due to the more prevalent use of fans, better buildings, and greater facilities for washing. Medical examination of male workers without power to suspend was of little use, but Dr. Legge thought that in a locality such as Staffordshire, where there was only one staple industry, suspension of workmen should not be rashly undertaken, and that after the age of 15 there should be no permanent suspension on account of the difficulty of finding other employment.

Mr. Edwards, of the Overmen's Society, did not object to the Home Office rules, provided the employers joined the men in forming a mutual insurance fund. If there was no such fund he thought the application of the rules would be a hardship.

Miss Anderson, of the Home Office, spoke of the "minor" illnesses that pottery workers suffered from, and for which they never consulted a doctor, and which yet prevented them following their employment.

Mr. Moulton, in opening the case for the manufacturers, said that he would reserve his own remarks, and called Mr. Wm. H. Grindley, manufacturer, Tunstall, an employer of nearly 1,100 persons, who stated that his factory was a modern one, and had all the latest improvements, including baths. Since the 1898 rules came into operation, there had been in his factory in 1899 7 cases of lead poisoning, 4 in 1900, and none during the present year. He considered the 1898 rules valueable and sufficient. Fritted lead he had tried but was obliged to relinquish it, as its use incurred a financial loss of nearly £500 in four weeks. Like many other of the Staffordshire potters, he had returned to the use of raw lead.

Objections to the use of fritted lead compounds were raised by other manufacturers, one of whom, Mr. Henry Johnson, admitted that when men who had given up work on account of lead poisoning presented themselves at the pottery without having fully regained health, the employers had no option left but to allow these men to return to work in the dangerous processes.

Professor Thorpe, in answer to fresh questions raised upon the percentage of soluble lead, stated that the presence of less than 1 per cent. of soluble lead in glazes would be comparatively safe for the workpeople.

While admitting that the use of fritted lead in pottery manufacture was safer than raw lead, and that it was possible to glaze earthenware satisfactorily with it, all the manufacturers examined stated that while at one time they thought it possible to work with a 5 per cent. of soluble lead in their glazes, experience had shown them that they required from 10 to 20 per cent. The financial losses incurred by Messrs. Grindley and Johnson of upwards of £500 in their trade in a few weeks was a startling indication to Lord James of the danger and hardships the pottery industry might be put to if the hard-and-fast lines of the Home Office were insisted upon.

Lord James decided that the 1898 special rules were to be amended, while the consideration of the proposed rules dealing with fritting, solubility, and the examination and suspension of adult males was postponed for eighteen months. The umpire expressed the hope that in the meantime manufacturers and operatives would co-operate in trying to diminish risk to health as much as possible, to introduce safe processes, and to join in establishing a mutual assurance fund for those who had been affected by lead.

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PROFESSOR GUSTAV VEESENMEYER, who has just died at Ulm at the age of 86, had a diversified career. He first studied theology and Oriental languages under the famous scholar, Gesenius, at Halle. After completing his studies he became tutor to a young man whom he accompanied to the University of Heidelberg. There he studied medicine and took his doctor's degree in 1842. He practised his profession first in Germany and afterwards in Russia, on the Kirgis Steppes and at Kasan. In 1853 he returned to Germany and became Professor in the High School of Ulm. In 1865 he was appointed Librarian to the Public Library of that city.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, NOVEMBER 16TH, 1901.

## THE NEXT SESSION OF THE GENERAL MEDICAL COUNCIL.

Inasmuch as the agenda of the General Medical Council are not issued, even to the members of the Council, until very shortly before that body meets, it is only possible to forecast the probable nature of its business by a search in the published Minutes for matter which has not been completely disposed of during the preceding meeting. In this way we learn that the Education Committee has been asked to report whether the subjects of physics, biology, and chemistry should not be relegated to a preliminary examination, and if this be done, whether the subsequent purely medical curriculum should not be reduced to four years. This proposition is the natural outcome of the conflict between the Council and the English Colleges of Physicians and Surgeons, and just as that sprang out of a motion emanating from Ireland, so does this question in its present stage arise on motions brought forward by Scotch and Irish members of the Council, which, however, met with much support from English members. The attitude originally taken up was that the two Colleges had, unless a boy at school attending chemistry lectures fulfils the true conception of a medical student, practically abolished the five-years curriculum. The present suggestion is that, this having been in effect done, and the Council not having the power to remedy it, it is better to call things what they really are, and put these subjects into the position of being indispensable antecedents to, but themselves no part of, the study of medicine. The form in which the reference was finally made to the Education Committee, after a complicated series of motions withdrawn, amendments, and the like, was such that the Council stands committed to no opinion. The logical outcome of the adoption of any such principle, however, would seem to be that the examination in these subjects could no longer be confined to the licensing bodies, as heretofore. It would be premature to discuss the question now at any length, as we shall have to recur to it, but it may be remarked that it has been contended that the knowledge of physics or chemistry now required is not sufficiently extensive to include the special applications of these subjects to medicine, and that these subjects, therefore, however indispensable to the medical student, are in truth a part of his preliminary education.

The Committee appointed to consider the financial relations between the Council and its branches must have found some knotty points to deal with, and it is open to doubt whether, considering that the holidays have intervened between the last and the forthcoming session, it will have had time to frame an adequate report. The Committee appointed to devise measures for the prevention of personation has brought up its report and had it shelved over and over again; on the last occasion it was alleged that its report contained a mixture of clauses establishing certain principles with others which carried principles into effect, and the Committee was requested to frame a complete series of regulations as pendants to its recommendations. When this is done it will, we trust, be impossible for the Council further to postpone the consideration of the matter. The fact to which we have already drawn attention—that personation is not in itself an offence known to the law of England—is an additional reason why obstacles should be planted in the path of the would-be personator.

The Executive Committee has been asked to revise standing orders relative to the judicial procedure of the Council. As the discussion of the cases takes place *in camerâ*, we are not aware in what respect these are found wanting, but we have been informed that the meaning of the reference is that in some respects the rules regulating procedure have in practice been found to be inconvenient; and that although it is perfectly proper that procedure should be regulated by very precise rules, those now existing might be improved.

Amongst the incompleted business of the Council we also notice the draft Bill to amend the Medical Acts in respect of the removal and replacement of names for disciplinary reasons. This short Bill remedies what are, for the most part, oversights and unforeseen contingencies in the original Acts, and could hardly meet with any serious opposition unless at the hands of those who would attack the principles of the original Acts. Yet, although it has been under discussion a long time, it has never got so far as to be introduced into the House of Commons. We gather from what has appeared from time to time that, after its adoption by the Council, all further steps have been left in the hands of the President alone. This seems to be an undesirable mode of procedure, for although we fully recognise the difficulty of securing the attention of the Government or the Legislature to such matters, and whilst we further recognise that some things can be better effected by an individual than by cumbrous processes of deputation and so on, yet it is difficult to raise any question under such circumstances as to whether the matter has been pushed on in the best way, and as fast as it could have been, without an implied censure on an individual. But no such difficulty would stand in the way had a small committee been appointed for the purpose which would take the responsibility. Such a committee might, and very likely would, find it convenient to entrust the actual interviewing of the right people to some one or two of their number, but the steps which they had taken would be more open to inquiry and criticism. Similarly the Bill dealing with medical companies, which was once in an advanced condition, seems to have dropped out of sight, and we should be glad to learn when and how it will be revived. It seems a strange thing that the General Medical Council, which is

by statute placed in relation with the Privy Council, should be unable to secure Government support for measures of obvious utility, but should have to fall back upon private members and the chances of the ballot in order to get a hearing. It illustrates only too forcibly the small influence which the medical profession, probably owing to its want of cohesion and corporate activity, is able to exercise in political matters.

## OPERATIONS FOR GASTRIC CANCER.

In carrying out the operative treatment of malignant disease there has been some inconsistency among surgeons, made manifest in the lack of the invariable adoption of certain principles of operation which, if the question were tersely put, are acknowledged by surgeons as essential.

Twenty years ago, and even more recently, it was considered, in operating upon the breast, for example, that the whole malignant growth should be removed, the incision being made at a short distance from the margin of the tumour, in supposedly healthy tissue. The researches of Heidenhain, Stiles, and Rotter, and the operation of Halsted founded upon them, have entirely revolutionised that procedure. It is now accepted that, however small the primary growth may be, it is essential that the whole breast, the lymphatic vessels draining the breast, the chains of glands into which the vessels pour, should all be taken away. So the modern and the ancient operations may be contrasted. In the latter the tumour itself was excised, and as an extreme measure, the glands, if felt to be enlarged, were removed through a separate incision; in the former the tumour, the whole of the breast in which it lies, the whole of the lymphatic system, vessels and glands accessible, are mercilessly cleared away by patient dissection. Of the improved results that have followed this wide removal all surgeons are, we believe, convinced.

A similar experience has been achieved in connection with the surgery of lingual cancer. The older methods removed the tongue or a portion of it by cheek-splitting or intrabuccal operations, and the glands were excised only when enlarged, and then only to the extent of their enlargement. The researches of Küttner have shown us the intricacies of the lymphatic system of the tongue, and surgeons now remove the tongue, the lymphatic vessels and glands of the anterior triangle, either by a single operation or by two operations at a brief interval. The vital essential principle underlying the operation of Halsted on the breast, and the operation known (perhaps improperly) as Kocher's on the tongue, and the operation of Werder on the uterus is that the tumour, the area into which, whether by extension or lymphatic infiltration, the tumour tends to spread, and the whole of the lymphatic system devoted to that area, so far as it is accessible, shall be ruthlessly cut away. With our present knowledge of cancer and the malignant processes in general such extensive removal represents the highest possible surgical achievement. To obtain good results, to be able to prevent recurrence by forestalling it, this method is the only one defensible.

Is this principle applied to the surgery of malignant disease of the stomach? To name the word "pylorectomy" is almost a sufficient answer. Malignant disease of the stomach begins at or near the pylorus in the majority of cases, and the operation for its local removal is "pylorectomy." Though analogy in surgery is proverbially unsafe, it will suffice for this occasion, and permit us to compare on terms of strict equality a pylorectomy with the old operation of the excision of a malignant nodule from the breast. The analogy is made more plausible when we are reminded that in a very large proportion of cases a recurrence after pylorectomy is a local recurrence. Now, the return of a malignant growth at or very close to the site of an operation wound shows that removal has been incomplete; that either outstanding islands of growth or deposits in lymphatic vessels or glands have been left behind. Our first desire, therefore, must be to discover the lines of increase of the growth and the place, direction, and termination of the lymphatic vessels and glands. In the case of the stomach these have now been ascertained, and therefore an ideal operation may be based upon them. Such an operation will remove, as in the breast, the primary growth, the area into which, whether by extension or lymphatic infiltration, the tumour tends to spread, and the whole of the lymphatic system devoted to that area so far as it is accessible.

In a paper read before the Clinical Society, an abstract of which is published at p. 1470, Mr. Moynihan indicates the lines of such an operation in the case of growths in the pyloric portion of the stomach. His advocacy of the method he describes tends to emphasise the fact that, so far as our present knowledge and methods go, the successful surgery of cancer implies and necessitates a sound knowledge of the anatomy of the lymphatic system. That some reconsideration of the methods in general use for removal of malignant growths in the stomach was necessary is shown by Hemmeter's statement that in 90 per cent. of cases a recurrence after operation has proved fatal. A sense of helplessness in the presence of malignant disease of the pylorus inspired the teaching of Czerny and Rindfleisch that when a tumour of the stomach can be discovered the case no longer permits of a radical operation.

The discussion which followed the reading of the paper at the Clinical Society touched upon many of those points which have yet to be rendered clearer. The one supreme difficulty in the surgery of malignant disease of the stomach is the difficulty of early diagnosis. There is no test, there are no signs, there are no symptoms which, singly or in association, can help us positively to make an early diagnosis. It would seem, as several speakers suggested, that the only means of establishing a certain and early diagnosis lies in the actual inspection of the stomach through an exploratory incision. The risks of such an operation in the absence of malignant disease must be slight: and if malignant disease be found the risk of early removal is indubitably less than that of late removal, and very probably less than that of late gastro-enterostomy. To await until the diagnosis of cancer is certain is to delay in many cases until reasonable hope of success in operation is destroyed. If the cases can be obtained early, and if an operation such as that described is performed, the future of the surgery of gastric carcinoma may be full of promise.

## INERT LYMPH AND REVACCINATION.

The correspondence columns of the Journal have in the last three issues contained complaints of most serious import regarding the inertness of lymph supplied from more than one source for revaccination in London and elsewhere. Dr. Verdon-Roe began the discussion by stating that "lymph supplied by a well-known firm" had given, when used by him, a very small percentage of satisfactory vesicles, that in the great majority there were no vesicles, and that when the cases were again vaccinated with "a lymph which is said to be concentrated and reinforced," eleven out of twelve had well-marked vesicles as a result. Another correspondent wrote to confirm Dr. Verdon-Roe's experience. He also failed with lymph apparently from the same firm (though it is not clear how he identified the source, and we certainly cannot); then he succeeded in 41 out of 45 cases with other lymph; then, returning to the "well-known firm," he had 50 failures out of 55. A third correspondent tells us that three successive supplies of lymph from the Army Vaccine Institute at Aldershot proved unsatisfactory in his hands, and that when he got a fourth supply he took the trouble to make on the arms of three children two insertions with this Aldershot lymph, and two others with lymph from an independent source, and that in all three cases the Aldershot lymph entirely failed, "while the other produced most perfect vesicles."

It seems to us that, especially with small-pox threatening as at present, these complaints, publicly made by medical men who append their names, demand instant and searching official investigation. That the business of glycerinated calf-lymph production and sale should be carried on by any individual or group of individuals who choose to embark on it, without licence and without inspection, is surely a very doubtfully defensible fact. The medical profession is endeavouring to impress on the public of London that immediate and successful vaccination or revaccination will enable them safely to encounter the risk of exposure to small-pox, no matter how rapidly the present prevalence may develop into an epidemic. And now there is suggested considerable reason to fear that an unknown number of persons who have followed the advice of the medical profession, and have submitted to what they and their medical advisers believed to be vaccination, have been operated on with matter wanting in the principle of vaccine lymph in an active and effective condition. The situation is utterly intolerable, and the public interest demands that the matter be forthwith sifted to the very bottom. Of this we are certain, that nowhere can there be greater anxiety that in the Medical Department of the Local Government Board to make sure beyond all doubt that the material which is being issued for vaccination, whether from that department itself (which, so far as we know, is not in question here), or from the Institute at Aldershot, or from the vendors on whom private practitioners have to rely, is in all cases absolutely trustworthy.

We should have the most perfect confidence in inquiry by that department, but in any case the matter is obviously one to be undertaken by the Government for the welfare of the public. Once begun, such an inquiry must be pushed to its legitimate issues. One of our correspondents, who points out that at present the Local Government Board furnishes lymph only to public vaccinators for public vaccination, asks the pertinent question whether the system could not be extended to private vaccinators. That, no doubt, would mean additional accommodation and additional staff. But in a matter of life and health the relatively small expenditure which this would entail ought not to be allowed to stand in the way. The present position, as we have said, is intolerable, and it is not made more tolerable by the publication in several London newspapers of a circular purporting to be issued by the organising Secretary of the Association of Public Vaccinators. This circular points out that every person in England and Wales is entitled to demand revaccination at his own house, free of charge, at the hands of the public vaccinator, provided that he has not been vaccinated or revaccinated within the ten preceding years, and that the public vaccinators are the only medical men who are compelled to use the safeguards prescribed by the regulations of the Local Government Board, and the only persons who can obtain the pure glycerinated calf lymph prepared in the laboratories of the Local Government Board. It seems to us impossible that a system, under which one section of the medical profession practically advertises the superiority of its own means and methods against the rest of the profession, can continue. The extension of the Government Vaccine Laboratory so as to provide calf lymph free to all medical practitioners might possibly involve some hardships to existing interests, but if the unofficial preparation of lymph for sale is to continue, the question remains, how is such work to be supervised so that, no matter what the pressure may be, only active and reliable material shall be sent out for vaccination?

Meanwhile we are very willing to believe and hope, in the first place, that the occurrences reported in our columns are most exceptional, and in the second place, that the publicity given to them will be sufficient to put a sudden stop to anything savouring in the least degree either of carelessness or worse. No vendor of lymph who has a reputation to lose can afford to issue a single tube as to whose reliability he has the slightest doubt. There are one or two other considerations to which it seems desirable to call attention in connection with this important matter. It is perhaps too often assumed that failure to produce a local vesicular result from revaccination is to be interpreted as indicating that the individual is insusceptible. That is not so. Vaccination, even primary, is not so easy to accomplish, or so regular in its results, in the adult as in the child. No medical man should be prevented by one unsuccessful effort from making at least a second and, if necessary, a third attempt, and, independently of the present anxiety about inertness of lymph, it is best to take lymph from a different source for each repetition of the operation. If a first attempt produce only a much modified result that may, indeed, be due to previous incomplete susceptibility owing to earlier vaccination, and if such earlier vaccination has been comparatively recent in time and typical in result, quite possibly the modified vesicle may represent all that remains of susceptibility, and may, so to speak, fill up to the brim the measure of protection.

If, however, a much modified result is all that follows in

a person who has not been successfully vaccinated for a long time previously, then it is a wise precaution to repeat the attempt, freely inserting on a sufficient area lymph from a different stock, which in other cases, as in children, is proving itself effective. If such lymph entirely fail, there is then reasonable presumption that its failure is due to protection already acquired from the previous vaccination or vaccinations. Typically successful vaccination has the immediate effect of protecting against itself, but it is not to be assumed that failure to obtain a perfect result, or any result, in an adult is due to previous protection; and, as has just been said, a second, and if necessary a third, insertion of lymph should be made if failure takes place in individuals whose earlier vaccination is of old date, or was, when performed, too limited in area or imperfect in local result.

## BIRTHDAY HONOURS.

The list of birthday honours is not a long one, and contains the names of but few members of the medical profession. The honour of knighthood is conferred upon Mr. George Anderson Critchett, who is well known to the profession as Ophthalmic Surgeon to St. Mary's Hospital, and as recently President of the Ophthalmological Society of the United Kingdom. Sir Anderson Critchett was appointed Honorary Surgeon-Oculist to the King on the constitution of the Royal Household at the beginning of the new reign, and the honour now conferred upon him will be a source of much gratification to his numerous friends. Good work in Western Africa is recognised by the nomination of Dr. William Robert Henderson, Principal Medical Officer of the Gold Coast, and of Dr. Robert Allman, Principal Medical Officer of Southern Nigeria to be Companions of the Order of St. Michael and St. George. The Companionship of the Indian Empire, given to Lieutenant-Colonel G. H. D. Gimlette, M.D., I.M.S., Residency Surgeon, Indore, is understood to be in recognition of good service in the political department; while a like honour conferred upon Honorary Major T. H. Hill, lately Senior Assistant Surgeon, Indian Subordinate Medical Department, recognises long and very meritorious service in the office of the Surgeon-General, British Forces, and good work on the Hospital Equipment Commission. The Kaiser-i-Hind Gold Medal is conferred upon Major H. Edward Deane, R.A.M.C., who has done much plague duty in Hyderabad and elsewhere; Major Thomas Edward Dyson, M.B., I.M.S., who has rendered conspicuous service in the sanitary department and in plague work; Lieutenant-Colonel James McCloghry, F.R.C.S., I.M.S., who has done much excellent work in connection with the plague at Karachi; and Captain Edmund Wilkinson, F.R.C.S., I.M.S., who has been Deputy Sanitary Commissioner of the Punjab.

## A CORONATION GIFT TO HIS MAJESTY.

The Prince of Wales's Hospital Fund starts afresh under the auspices of a new Prince of Wales. We take the opportunity of laying our respectful homage of duty and congratulation before the Heir Apparent, and of expressing to him the best wishes of the medical profession, which is hope that he may follow in the footsteps of his illustrious father in his active exertions to promote the health of the people and the success of our medical charities. We are glad to see that the Prince of Wales has taken the first necessary step in this direction, and has succeeded his father as President of the Fund. We may claim for the British Medical Journal the merit of having constantly supported and striven to assist the noble work commenced by his present Majesty as Prince of Wales; and in the Journal of November 2nd we called attention to the present appeal; but the change in the style and title of the Duke of Cornwall and York, and the fact that he has assumed the Presidency of the Fund, lay on us the duty of referring to the matter again. The Prince of Wales's Fund has done a great work, the nature of which will be apparent to anyone who will read its published statement. But there is one respect in which it had not hitherto been successful. It has not succeeded in obtaining small subscriptions from those who do not now contribute to any hospital funds. This defect the present movement is intended to remedy. It is hoped that a large sum may be collected, chiefly in small donations or subscriptions from persons of all classes who as a rule have not hitherto supported the hospitals. The first object of this collection is to free the various hospitals from debt so that they may be enabled to open the beds which are now closed for want of money, amounting, according to the statement issued by the Executive of the Fund, to more than 200. But we may with some confidence look forward to a larger sum than will be thus expended, and we are most happy to see that the statement deals with the cases of other hospitals (of which Guy's, the Westminster, St. George's, and the London are mentioned), which, though they may not have closed any of their beds, yet have expended great sums in necessary alterations and repairs, and in doing so have trenched to a formidable extent on their capital. The object of this "Coronation gift" is loosely spoken of as being to put the hospitals in a position of financial security. This could only be done by providing them with a fixed income equal to their expenditure, and that is neither possible nor in truth desirable. It is only right, and is wholesome for the community, that each generation should bear the burden of the charities of its own day. But if the excellent plan of the Fund (and we may perhaps infer of its Royal patron) is realised, a great step will have been taken to relieve the hospitals of London from the load under which they now stagger, and the liberality of our successors may safely be trusted for the rest.

## THE GROWTH OF A MYTH.

It used to be said by well-informed Frenchmen that in order to learn what was passing in their own country they had to read the English newspapers. It would seem, however, that there is at least one editor in France who is ambitious to "lift the cup"—to use a phrase to which recent events have given currency—from English journalism by supplying information as to events in this country which is not to be obtained here. We have recently had occasion to call attention to certain absolutely false and baseless rumours which have been current about the health of the King. These rumours—at least, in the definite shape which they finally assumed—have been traced to an article in an American "yellow journal" purporting to be written by Dr. Leffingwell Hatch, of New York. Dr. Hatch, who describes himself as a laryngologist, there states that having been presented to the King on the occasion of the Tuberculosis Congress held in London last summer, as one of the delegates of the United States, he made observations on the King's voice which satisfied his trained sense that His Majesty was suffering from papilloma of the larynx. We have already denied on the best authority that there is anything the matter with the King's throat, and we only refer to Dr. Hatch's statement to say that his name does not appear in the official list of foreign delegates to the Congress presented to the King on July 25th. In the *Gazette Médicale de Paris* of November 9th we find the lie repeated with additional circumstances. The statements emanating from the American source just referred to are corrected with an air of authority which might easily impose on those who do not know what *Gallia mendax audet in historiâ*. We are told that it is not

the fact that the King has already been operated on three times, but we are assured with every appearance of precise accuracy that he is suffering from a tumour of the larynx, the first symptoms of which manifested themselves at the beginning of September. The date here given with such positiveness makes the diagnosis *in absentiâ* made by Dr. Hatch in July all the more remarkable. The French oracle proceeds to state that in the early days of October the King had a very painful attack, presumably of dyspnœa, at Balmoral. Sir Francis Laking had to recall by telegraph Sir James Reid, then holiday making in the distant city of Aberdeen. The two physicians agreed as to the gravity of the situation. Knowing the inefficacy of the remedies at present available, Sir James accepted the proposal of a scientific friend who believed that he had found a means of curing the disease by electricity. The name of this friend in need is not revealed, but we are the less inclined to grieve on that account since it is added that trials of his method have been made in different hospitals in London without success, and even, it is hinted, with some disastrous results. We congratulate our French contemporary on the possession of an imagination that with proper cultivation should raise him to the highest place among writers of fiction; he has managed to compress into the compass of a few lines as many inventions as Mr. Kipling scatters through a volume. Inventiveness, however, on the subject of our gracious Sovereign is not confined to France. A Frankfort paper states positively that the second physician of a sanatorium at Falkenstein, Dr. Besold, who is a specialist in diseases of the larynx, has come to London with the Countess Cook, who was undergoing treatment at Falkenstein. The Countess—whose name by the way does not suggest that she is an ornament of the English peerage—is said to be on terms of intimacy with the Royal family, and it is suggested that owing to her influence Dr. Besold has been summoned to give his opinion on the King's health. It is remarkable that the name of Dr. Besold as a laryngologist is as little familiar to us as that of Dr. Leffingwell Hatch, who, it is also hinted, was asked "unofficially" to give his opinion of the case. We have no hope that the most authoritative denial will now stop a lie that has had so good a start. We take leave, however, to assure our contemporaries—American, French, and German—that if the King of England should at any time need skilled advice on the subject of his throat, or anything else, it is not likely that unknown foreign specialists will be called to his aid. We appeal to them in the interest, not only of public decency, but of their own reputation, to cease publishing falsehoods which, though foolish, are none the less mischievous.

## THE COMMISSION ON ENTERIC FEVER AND DYSENTERY IN SOUTH AFRICA.

Colonel Notter, R.A.M.C., Lieutenant-Colonel D. Bruce, R.A.M.C., and Professor W. J. Simpson, who were appointed in August, 1900, to proceed to South Africa to inquire into the nature, causation, pathology, and mode of prevention (more particularly as affecting armies in the field) of dysentery and its connection, if any, with enteric fever, have now all returned to this country, and we understand that the report of the Commission will probably be presented within a few weeks. The mode of propagation and the prevention of enteric fever is a matter of great importance to the army in South Africa, and a good deal of disappointment has been felt at the delay which has taken place in the presentation of the report. The inquiry, however, involved the consideration of a great number of separate observations which had to be made in various camps and towns over a wide range of country, and the labours of the Commission were to some extent interrupted by the outbreak of plague in Capetown. The report of the Commission will, no doubt, deal with the part which has been played by the pollution of water and soil, by dust, and by flies in the dissemination of enteric fever, and it is to be hoped that it will contain definite information as to the relative importance of these agencies in the conditions which have prevailed in South Africa.

## THE GENERAL MEDICAL COUNCIL ELECTION.

According to the regulations made by the General Medical Council under the Medical Act of 1886, a precept for the election must be issued to each Branch Council by the returning officer before the last day for sending in nomination papers, which on this occasion has been fixed for November 21st. The election must take place within twenty-one days after the receipt of the precept. The date by which voting papers must be returned is fixed by the Branch Council, and voting papers must on this occasion be issued to all registered practitioners, resident in England or Scotland respectively, seven days at least before this. As will be seen by a notice in our advertisement pages, officers of the Royal Navy Medical Service, of the Army Medical Service, or of the Indian Medical Service, who may be resident in the United Kingdom, should make application by post, on or before November 23rd, to the Registrar in England or Scotland respectively (for England, Mr. Henry E Allen, LL.B, General Medical Council Office, 299, Oxford Street, London, W.: for Scotland, Mr. James Robertson, 54, George Square, Edinburgh).

## MEDICINE IN THE TIME OF ÆSCULAPIUS.

In an interesting paper read at the Pan-Hellenic Medical Congress recently held at Athens, Mr. P. Kavadias, Inspector-General of Antiquities in Greece, combated the view commonly held that the temples of Æsculapius at Epidaurus, in Asia Minor, in Crete, and at Rome, were schools of medicine as well as shrines. In opposition to all writers, archæological and medical, who have dealt with the subject, he maintained that the Asclepieia were not hospitals, and the priests were not in any sense physicians. By the records of cures inscribed on the walls of the Temple of Epidaurus he disproved the statements of Strabo and of Pliny that Hippocrates founded his teaching partly on cures wrought in the Temple of Æsculapius at Cos, and even copied all the therapeutic formulæ among the inscriptions in that temple. M. Kavadias contended that the Epidaurus inscriptions themselves conclusively show that no medical art was practised in the temples of Æsculapius in the time of Hippocrates. He argued that medicine was originally a folk-lore, the development of which was altogether independent of religion. The first physicians were called Asclepiadæ; but, so far from being priests in the temples of Æsculapius, they were empiric practitioners who learnt their art by tradition, secrets of healing being handed down in the family. In the time of the Roman dominion, however, and especially after the beginning of the Christian era, a great change took place. The temples of Æsculapius, while preserving their religious character, gradually became transformed into sanatoria in which sufferers were treated by the priests, but in the light of such medical science as was available. Patients were persuaded by various artifices that the god Æsculapius himself prescribed the treatment, to which they were expected to submit with religious faithfulness. The sick folk slept in the temples, and their dreams were interpreted for them in an appropriate manner by the priests. The hierophantic part of the procedure was the use of what would nowadays be called suggestion, whereby the patients were induced to believe that the treatment was dictated by the god himself under symbols and images. The case was then dealt with by the recognised rules of medical practice. The system had evidently the great

advantage of making the patient submissive, and modern practitioners might sometimes be tempted to envy the "metaphysical aid" which the priest-physicians of Epidaurus in its later days could call to their aid.

## PRAYER HEALING IN GERMANY.

THE latest fashionable form of quackery in Berlin is said to be prayer healing. This has for some time prevailed in aristocratic circles in Berlin and Potsdam, and it has also invaded the ranks of the financial aristocracy. A pharmacopœia of prayers to be used against special forms of disease has been prepared. However beneficial to patients this new method of spiritual therapeutics may be, it does not appear to be likely to enrich its professors. The practitioner of prayer healing most in vogue is a lady doctor whose fees are at the rate of 2 marks an hour.

## THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH.

A NUMBER of persons engaged in various lines of medical research are now working in various parts of the United States under the direction of the Rockefeller Institute for Medical Research, an account of which was given in the BRITISH MEDICAL JOURNAL not long ago. A tentative working plan has been adopted by the officers of the institute. The directors have discussed the following suggestions for activity on the part of the institute: To expend 20,000 dollars a year, divided so as to provide for forty scholarships; to make appointments for one year: to have candidates recommended by heads of various laboratories to the Board of Directors; to choose only persons pursuing or about to pursue investigations on some important subject in pathology, bacteriology, or hygiene. The Board of Directors of the institute comprises Dr. William H. Welch, Professor of Pathology, Johns Hopkins University, President; Dr. T. Mitchell Prudden, Professor of Pathology, Columbia University, Vice-President; Dr. L. Emmett Holt, Clinical Professor of Diseases of Children, Columbia University, Secretary; Dr. C. A. Herter, Professor of Pathological Chemistry, University and Bellevue Hospital Medical College, Treasurer; Dr. Theobald Smith, Professor of Comparative Pathology, Harvard University; Dr. Simon Flexner, Professor of Pathology, University of Pennsylvania; and Dr. H. M. Biggs, Director of the Laboratories of the Board of Health.

## THE NEW ISLINGTON INFIRMARY.

THE new infirmary of St. Mary's, which has been erected for the poor of Islington on the southern slope of Highgate Hill, just within the borough, has been taken into use under the superintendence of Dr. A. H. Robinson, the resident medical superintendent, during the last few months. When the furnishing and fittings are completed it will contain 800 beds, and already over 600 are occupied. The site occupied by the infirmary once belonged to the small-pox hospital, and a brick building used at that time has been converted into the administrative block of the infirmary. It affords accommodation for the medical superintendent and the two assistant medical officers, and also for the nursing staff. The number of nurses which will be required when the infirmary is in full working order is about 110, and it is intended that nurses should be trained in the hospital, part of the instruction being given by the resident medical staff. The infirmary proper consists of four blocks arranged in two sets, the axis in each set being roughly north and south. Owing to the slope of the hill, the four northern blocks contain three storeys of long wards, while the four southern blocks contain four storeys of such wards. Externally the blocks are what may perhaps be most politely called "severely simple" in architectural treatment, but the wards are well-lighted, floored with polished wood blocks, furnished with iron spring beds, heated by steam coils and open fireplaces, and altogether present a cheerful and comfortable appearance hardly to be surpassed by any hospital with which we are acquainted. At one end of the ward there are two sanitary towers, the one containing urinals and waterclosets, the other the bathroom. At the open end of each ward, that is to say, the northern end of the northern blocks and the southern end of the southern blocks there is a glazed balcony which the patients can use by day, and in which beds can be wheeled from the ward if desired. The southern balconies will command a fine view over London on the rare occasions when the air is clear. At the opposite end of the ward there is a large kitchen and serving room with pantry, and also a small ward with two beds for cases which it is thought desirable not to place in the large wards. The cubic space in the large wards is calculated to amount to 1,000 feet to each bed. The infirmary has a large kitchen in the basement, fitted with excellent appliances for cooking on a large scale, and there is also an electrical installation for supplying the electrical energy with which the buildings are lighted throughout; the infirmary will have its own laundry in the grounds. The blocks are connected with each other by open galleries and by a tunnel with a separate block which contains a mortuary and a large *post-mortem* room with attached rooms for clinical investigations and the preservation of specimens. We understand that the site cost £52,000 and the buildings £220,000, but that some additional expenditure is still necessary to complete the establishment. The impression left by an inspection of this new building is that a wise liberality has been shown in its construction and furnishing, but the medical visitor cannot help regretting that in this, as in other metropolitan infirmaries, the opportunities afforded by so large an aggregation of patients, under such favourable conditions, are not better utilised for the instruction of students and for the advancement of medicine. It is, we believe, the universal experience that so far from resenting the presence of clinical clerks and dressers, patients are gratified by the increased attention to their condition which the presence of senior students involves. A well-considered scheme for the admission of students as dressers and clinical clerks would be not only greatly to the advantage of the students who held such appointments, but also to that of the patients themselves.

## LEPROSY IN THE HAWAIIAN ISLANDS.

ACCORDING to Dr. Reynolds, Superintendent of the Leper Settlement on the Island of Molokai, leprosy is slowly but surely being eradicated in the Hawaiian Islands. Five years ago there were over 1,300 inmates at the settlement, but when the annual visit was made recently there were barely 900. This is said to be due not so much to any scientific treatment of the disease as to the gradual extinction of the native race, which alone, in the opinion of Dr. Reynolds, will bring about the complete eradication of leprosy. Last year 100 lepers were sent to the island, while only 50 have been sent during the first nine months of the present year. In the biennial period ending December, 1900, directly after the islands were annexed, over 500 were taken to the settlement. This was due, not to any increase in the disease, but to the fact that the question was taken out of the hands of the party previously in control, and many afflicted persons who had remained in Honolulu through political influence were transported to the place of segregation. The disease is thought to have been brought to the islands thirty years ago by a Chinaman, and as soon as it reached the natives it spread with great rapidity. The Hawaiians are much given to an outward display of affection, especially kissing and embracing. They smoke the same pipe, eat from the same dish, and have other habits which lead to a direct inoculation of the disease. The same reasons are given by the medical practitioners

for the great increase in tuberculosis among the natives. Every accommodation is provided for the lepers at Molokai. They have their own homes, a school for boys and one for girls, and seven churches for the little town of 900 people. Besides the lepers there are about 100 persons at the settlement—teachers, ministers, and nurses. Of the 900 lepers on the island, all but fifty are native Hawaiians. There are only 15 whites and 30 Chinese. Medical men who have made a life-long study of leprosy in Japan, France, and China have been studying the conditions, but have found no suitable remedy for the disease. The local government has given up experiments, and there is (says the *New York Medical Journal*) a general feeling that the United States should now take up the study, with the object of effecting a permanent cure.

## THE CLASSIFICATION AND DISPOSAL OF ALLEGED LUNATICS.

The Glasgow Parish Council possesses a "Certifying Physician in Lunacy," which may be taken to mean that to this official falls the duty of seeing, examining, and certifying as insane or not, according to his judgment and belief, all the applications made to the inspectors of the poor on behalf of persons supposed to be of unsound mind. The annual report of Dr. Carswell, the official in question, is clear and valuable. During the year 1901, 849 applications were made to the inspectors of the poor with regard to persons supposed to be insane, with the result that 535 were so certified and 314 were not. No fewer than 281 cases were disposed of without recourse to asylum care. Of these, 167 were treated successfully in observation wards, 10 died, and 7 continued under treatment. Of the 97 remaining, some were boarded out, some treated at home, some were suitably cared for in the ordinary wards of the poor-house hospitals, and several could not be certified insane. The increased number of the cases is partly accounted for by increased provision made for idiot and imbecile children, and, as Dr. Carswell also hints, by the indication that the parishes in and around Glasgow are getting more than their proper share of occurring insanity, owing to the want of increased provision in the Glasgow Royal Asylum.

## NOMA PUDENDI: AN EPIDEMIC.

Sloughing of the labia in female children during febrile diseases is a complication which has long been known, but fortunately it became almost extinct in civilised Europe and America during the latter part of the nineteenth century. Even the less uncommon cancrum oris is not common, probably much less frequent than in 1850. Drs. Blumer and MacFarlane publish in the November number of the *American Journal of the Medical Sciences*, a report of an epidemic of noma. In April, 1900, measles broke out at the Albany Orphan Asylum. Out of 173 cases 32 had complications, 12 had pneumonia, 5 pneumonia and gangrene, 11 noma without other complication, and 4 suspected or incipient noma checked by cauterisation under chloroform; 2 of the 12 cases of pneumonia died, all 5 with pneumonia and gangrene, and 2 of the 11 cases of noma without any other complication, so that the mortality of a once very deadly disease was low in this case. Of the 16 cases of noma, 4 were pure cancrum oris; in 3 cancrum oris was complicated by noma of the ear or vulva. In 2 children the vulva alone was attacked, in 7 it was the seat of noma as well as other parts. The rectum alone became gangrenous in 3 children, and in 5 it suffered with other parts. Three cases of noma pudendi are described in full. The first patient was 3 years old, gangrenous ulcers were found on the labia majora several days after the disappearance of the measles rash. The use of the Paquelin cautery checked the disease completely, then the burns healed. In the second patient, aged 6, an ulcer with a surrounding hard infiltration developed in the posterior part of the vulva a week after the disappearance of the rash, and extended to the rectum, all the parts involved sloughed away, and then the wound healed rapidly. One year later the parts were much contracted, and there was a constant discharge of fæces through the vagina. The third patient was 7 years old. The attack of measles was mild, and six days after the disappearance of the rash a putrid odour was detected. It was found to come from a gangrenous ulcer on the vulva. The process rapidly extended to the rectum, and there was complete sloughing of all the intervening and surrounding tissue. The temperature did not exceed 100°. The patient recovered: one year later the parts were found much contracted, as might be expected. These cases show that noma pudendi is not extinct, that it may follow a mild attack of measles, and that it is not necessarily fatal.

## ST. LUKE'S HOSPITAL.

We are informed that the Committee of St. Luke's Hospital has arranged to utilise the institution for the clinical teaching of insanity, and that this will be a great boon to the students of St. Bartholomew's Hospital, who have hitherto had to go to one of the London County asylums situated at an inconvenient distance. The liberal action of the authorities of St. Luke's in bringing the hospital into touch with a large teaching school is a further evidence of the advance that has of late become conspicuous in matters relating to the study of lunacy. It cannot fail also to have results advantageous to the patients, who, as is proved by experience of other teaching institutions, appreciate the extra attention that is of necessity drawn to their condition. In making this new departure the Committee were strongly supported by Mr. Alfred Willett, the consulting surgeon to the hospital, and by Dr. Rawes, the medical superintendent.

## THE TREATMENT OF DIABETIC COMA.

In a clinical lecture published in a recent number of the *Semaine Médicale*, Professor Lépine, of Lyons, draws attention to a suggestion made by Schwarz, of Prague, to give gluconic acid instead of glucose in the treatment of diabetic coma. Gluconic acid is formed from dextrose by oxidation with bromine water. It is not a commercial article, but no doubt would be supplied should a demand arise. Lépine has no clinical experience of his own to add to that of Schwarz, which was based upon one case of some interest, for the patient recovered twice from attacks of diabetic coma under treatment by gluconic acid, combined with the use of sodium bicarbonate, whereas he succumbed to the third attack, when, there being no gluconic acid available, the sodium bicarbonate treatment was employed alone. The gluconic acid was used in doses of from 50 to 70 grams, in alkalinised water and sodium bicarbonate was at the same time freely administered (140 grams) by the mouth and bowel.

## THE BIOLOGICAL TEST AS AN AID IN THE INSPECTION OF MEAT.

A method devised by Uhlenhuth for recognising the different kinds of mammalian blood especially applicable to the detection of human blood in medico-legal inquiries was described in the Journal of March 30th, 1901, p. 788. The method consisted in making repeated injections of the defibrinated blood of such an animal as man, into the peritoneal cavity of a rabbit from which a serum is obtained, which when dropped into a clear solution of human blood, gives a precipitate, but fails to do so with the blood of other species. The same observer has lately published[1] a modification of this method, by which he claims that it is possible to recognise the different kinds of meat, for

[1] *Deut. med. Woch.*, [illegible]

example, beef, mutton, pork, and to detect the fraudulent substitution of horse, ass, dog, cat, etc. A small portion of the meat is scraped and left to soak in water or normal salt solution, the process of solution being hastened by adding a few drops of chloroform; the extract is cleared by filtering through filter paper or a Berkefeld filter. A precipitate is formed in this clear fluid when a few minims of serum, prepared as above described with the blood of the same species of animal, are dropped into it. Dr. Uhlenhuth desires to call the attention of inspectors of meat to this test; where meat is sold as is usual in this country, in large joints, it is easy to recognise the different kinds by simply inspection, but where meat is sold in such small pieces that it is impossible to say from what animal it comes, as in Japan and as in the smaller stalls of the poorer markets in Europe, such a test may be found useful. Uhlenhuth points out also that the test is capable of application to minced or potted meat, or sausages, so long as these have not been cooked.

## LONDON SCHOOL OF TROPICAL MEDICINE.

The number of students who have entered at the London School of Tropical Medicine for the current term is 25. Among them are several officers of the Colonial Service, missionaries, and private students. As showing the variety of the fields of active life from which the school draws its students it may be stated that in the list we note the names of a deputy-inspector-general of the Royal Navy, a German professor, and a Swedish missionary. The school is to be heartily congratulated on the successful manner in which it is advancing science and helping to promote the interests of the Empire.

## THE NOTIFICATION OF MALARIA IN NEW YORK.

The New York Board of Health at a recent meeting passed resolutions that all public institutions, hospitals, homes, asylums, etc., should be required to report all cases of malarial fever which come under their observation, giving the name, age, sex, occupation, and present address of the patient; and also information whether the attack is a primary infection or a relapse, and the address where the disease was probably contracted. It was further resolved that all medical practitioners in the City of New York be requested to furnish similar information in regard to patients suffering from malarial fever under their care; that the circulars of information of the Department of Health regarding the causation and prevention of malarial fever be sent by post to the addresses at which malarial infection had apparently been contracted, and also to the addresses from which the cases are reported, when these are reported; and that postal cards for furnishing the required data be prepared and forwarded to institutions and practitioners for reporting the cases of malarial fever which come under their observation, as is done in other infectious diseases.

## INCREASE OF LONGEVITY IN THE UNITED STATES.

A bulletin has recently been issued by the United States Census Bureau in which a comparison is made between the death-rates in that country for 1890 and 1900, which shows that there was a falling off of nearly 10 per cent. in the proportion of deaths to population during the last decade of the nineteenth century. The average age at which Americans now die is put at 35.2 years, as against 31.1 in 1890, indicating a gain in longevity of 13 per cent. These figures, however, hold good only for cities of eight thousand inhabitants or more, and it is doubtful if the improvement has been so rapid in the rural regions. The bulletin shows moreover, that "the great white plague," which for so many years claimed more victims than any other malady, no longer stands at the head of the list. The death-rate from consumption was 245.4 in every 10,000 persons in 1890, and only 190.5 in 1900. No other disease shows so great a falling off, although diphtheria and bronchitis, cholera infantum and the diarrhœal disorders of adults, general debility and typhoid fever, closely approach it. The improvement is, of course, partly due to betterment of sanitary conditions, but some share in it must also be attributed to the more efficient manner in which consumption is dealt with, and to the efficacy of antitoxin in checking the ravages of diphtheria. There are, however, a few diseases which show an increased mortality. From pneumonia there were 191.9 deaths among every 10,000 people in 1900, whereas there were only 186.9 in 1890. The difference, though slight, is sufficient to put pneumonia higher in the list of destroyers of human life than consumption. The increased prevalence of pneumonia is doubtless to be ascribed to influenza, the deaths from which, according to the census bulletin, rose from 6.2 in 1890 to 23.9 in 1900. The death-rates of cancer, apoplexy, and disorders of the heart and kidneys have also markedly increased.

We are glad to learn that Dr. Lazarus-Barlow, Pathologist to the Westminster Hospital, who for the last three weeks has been seriously ill owing to the effects of a septic affection contracted at a *post-mortem* examination, is now slowly improving.

We understand that Mr. C. B. Ball, Regius Professor of Surgery in the University of Dublin, and Representative of the Royal College of Surgeons in Ireland on the General Medical Council, has been offered a seat on the Advisory Board proposed to be established under the scheme of Mr. Brodrick's Committee on the reorganisation of the Army Medical Service.

A discussion on Lymphadenoma in its relation to Tuberculosis will be opened at the Pathological Society of London on December 3rd by Mr. H. T. Butlin. It is requested that any gentlemen who wish to take part in the debate or to show specimens bearing on the subject will communicate with the Honorary Secretary of Section A, Pathological Society, 20, Hanover Square, W.

As already announced, the annual meeting of Fellows and Members of the Royal College of Surgeons of England will be held at the College on Thursday next, at 3 P.M., when the report of the Council (an abstract of which is published in another column), will be laid before the meeting. A printed copy of the agenda will be sent to any Fellow or Member who may apply for it on or after November 18th.

In an action at the Bow County Court, in which the Society of Apothecaries of London sought to recover the penalty of £20 from a herbalist in Limehouse, an Act of Henry VIII authorising persons having knowledge of herbs to treat wounds and diseases "according to their cunning, experience, and knowledge," was pleaded as a defence. The case was adjourned, and on November 13th the judge, His Honour Daniel O'Connell French, accepted the defence, and gave judgment for the defendant with costs. We propose to refer to this matter more fully in a subsequent issue.

The Russian Government has decided to establish a Virchow Institute in Moscow.

The Oldest German Scientific Society.—On January 1st 902, the Imperial Leopold Caroline Academy of Sciences which has its headquarters at Halle, will celebrate the one undred and fiftieth anniversary of its foundation. The Academy is the oldest scientific society in Germany.

# THE GENERAL MEDICAL COUNCIL ELECTION.

## THE APPROACHING ELECTION OF DIRECT REPRESENTATIVES.

### ENGLAND.

#### Meeting at Stratford.

Mr. Victor Horsley and the candidates seeking election as direct representatives to the General Medical Council delivered addresses on November 8th at the Stratford Town Hall to a meeting of the medical profession called together by the East Suburban Medical Protection and Medico-Ethical Society.

Dr. F. J. Smith having been voted into the chair, called upon Mr. Horsley to speak first.

*Speech by Mr. Horsley.*

Mr. Victor Horsley said he was anxious to take part in that meeting, not because he was a candidate, for he unfortunately could not resign his seat as he had wished to do until the expiration of his official period, which would occur next autumn, but because he thought these meetings and the election were very critical in the present period of medical reform. He took that opportunity of reporting to them that undoubtedly things were much better in the General Medical Council than they were four years ago. Distinct progress had been made in the Council on many salient points, notably in the so-called midwifery legislation, in matters of medical etiquette, and also to a less degree on the question of preliminary medical education. They had to look back on a term which had been a fairly successful one, from their point of view, in regard to medical reform. As to the future, it seemed to him that unless they could secure a total revolution of the Council they could not hope to carry any measure in the Council itself under the four or five years term of office which their direct representative actually held. It was a critical period, because they were now encouraged by the certain amount of success which they had achieved. But at the same time, unless they effected that revolution in the constitution of the Council they would not get much further. He wished to lay before them the necessity of their working not only to return members to the Council who were ardent reformers, but the necessity of their working to bring proper influence to bear upon the Council from outside. They were all agreed that there must be a new Medical Act. When eighteen months ago the question was raised in the General Medical Council, those members of the Council who were most antagonistic to the interests of the profession at large—for instance, Dr. MacAlister, of Cambridge—stated that reform of the Medical Acts was not to come from within the Council but from outside. That was a very suggestive statement, because at once they would see how they were to accept the situation. But he thought Dr. MacAlister was not only expressing his personal opinion, he was actually stating what he took to be a scientific truth. The Council itself, owing to its present constitution, as he had pointed out elsewhere, was apparently incapable of really influencing the Government, and it was incapable, he thought, of supporting in any way a real Medical Reform Act, because of the inherent defects of its constitution. It remained therefore for them to say where the pressure, from outside, which was to bring about this consummation was to come from? Obviously it was quite clear that societies like the East Suburban could never be brought absolutely into line with similar societies throughout the country. Each society had its local interest to attend to. It might pass resolutions in a general sense, but unless they had some system of intercommunication between those societies it was clear they could not speak with one voice. In fact, there was only one organisation which could do that, and that was the British Medical Association. It was a critical time in the history of medical reform, in other words it was a critical period for the British Medical Association. At Cheltenham the party of reform achieved a very great victory—although he must say against very feeble opposition, —by carrying the proposals of the Constitution Committee to revolutionise the British Medical Association. The whole principle wrapped up in the report of the Constitution Committee was the representative principle, which was exactly what they wanted to see carried out in the case of the General Medical Council. At Cheltenham that representative principle was fully adopted. If that scheme were worked as it was carried at Cheltenham, he thought they had got everything they wanted in the way of instruments by which they were to reform the General Medical Council. But he would impress upon them the fact that unless they attended the statutory meetings which would be held next month—he supposed in Exeter Hall, which was a central place—to approve of the new articles and by-laws, which must of necessity be passed before that scheme could work—unless they attended that meeting in full force there was just a chance that the whole thing might fall to the ground, because the Companies Acts required that a three-fourths majority must be obtained in order to alter articles of association. To obtain a three-fourths majority in an open meeting of medical men was really rather hard work, because from one cause or another, chiefly from the different conditions surrounding medical practice throughout the country, there were many differences of opinion. However, he was sure that as they lived close to the centre his hearers would feel it to be their duty to attend those statutory meetings and to assist in reforming the British Medical Association, and then they would be in a position, through that Association, to bring pressure upon the Government and the General Medical Council to produce the reform which was required.

*Speech by Mr. George Brown.*

Dr. Brown said his views must be known to most of those present. At the last election Mr. Jackson had the support of the South of England and also of Wales. He had been a Poor-law medical officer, was a public vaccinator, and had been in the active practice of his profession at Plymouth; he was therefore an ideal man to represent them on the General Medical Council. If Mr. Jackson was elected, it would mean a tremendous sacrifice of practice. He, Mr. Brown, had found that out by experience, and had been obliged to relinquish a certain class of work which ran into hundreds of pounds, and his income had been very much reduced by representing them on the General Medical Council. He asked them to support Mr. Jackson and himself because they were general practitioners. The Government granted three direct representatives in the Medical Bill of 1886, and it was understood that the direct representatives should be taken from the general practitioners of the country. Unless they sent general practitioners to that Council they would not make progress with medical reform. He valued the services of Mr. Horsley, but his only regret was that he was not a general practitioner. He did not know their personal experiences, their trials, their feelings, and their difficulties, and he had to repeat them second hand. He, Mr. Brown, thought that they would bear that in mind in the future. His, Mr. Brown's, right to claim their suffrages had been contested; first, because he resided in London; that he supposed was his misfortune, for he wished he could live in the country and enjoy fishing and shooting. At present he had to work hard in London as a general practitioner. In 1896 his residence in London was not considered a disqualification; he wanted to know why it was brought forward now as a disqualification for him to represent them. His politics had not changed, and therefore he appealed to them to support him. He considered that if they had too many Londoners as direct representatives let the last one, the one who was elected last, give way. They should not come upon poor George Brown who had fought his seat for fifteen years and turn him out of the Council because he was unfortunately a Londoner. If that was a disqualification he would live anywhere else; but for goodness sake, continued Mr. Brown, they should not throw that up at him and pick him out and take him out of an office which they had put him in. He appreciated the honour, and had tried to serve them to the best of his ability. He admitted his failings; he admitted, as Dr. Glover said at Cheltenham, that sometimes George Brown happened to be in that unfortunate position in which he could not get a seconder. That was said because he had brought forward a resolution for the Council to make it distinctly unprofessional conduct for a man to associate himself with a Medical Aid Association that touted. No one would second his resolution, and he said it was more shame to the direct representa-

tives that they did not second it. Mr. Horsley had said at Newcastle that it was *ultra vires*, but as a matter of fact the resolution was not *ultra vires*, and that was shown by the resolution being printed upon the agenda for the business of the day. It had been discussed at the previous meeting, and there were plenty of those cases. There was the Irvine case, which was practically that of a touting institute, but that concerned a consultant. When it was a case concerning a general practitioner it was pitched out. As it was a consultant, and brought forward by Dr. Saundby of Birmingham, it was carried through; but when he (Mr. Brown) brought forward his case, the Council said, "Out with it," and he could not get a seconder for his resolution. Was that a reason why he should be sent away from the Council? He said no, it was a reason why they should send him back again. If they did send him back again to propose resolutions of that sort, he hoped they would also send someone who would second them. If they returned Mr. Jackson it would never be thrown up against him that he proposed resolutions to the Council of such an impractical character that he could not get a seconder.

*Speech by Mr. Jackson.*

Mr. GEORGE JACKSON (Plymouth) said that he was in general practice, and was a public vaccinator. For many years he had been Poor-law medical officer, and had held the various appointments which medical men filled. He claimed that he very fairly understood where the shoe pinched as far as the general practitioner was concerned. They must have some reform of the Medical Acts, but the first step was to reform the Council itself. The interests of the corporations and the interests of the general practitioners were not identical. The consultants who represented the corporations were not touched by the interests of the general practitioner, and they did not know where their difficulties lay. His scheme of reform for the Council was to limit the numbers of the representatives of the corporations by grouping them together. Thus there would be more room for direct representatives. The direct representatives should be chosen for different districts, so that it would not be necessary for, say, Dr. Woodcock to come from Manchester to address medical practitioners in London. It was scarcely fair to expect them to do so. It was impossible to be in touch with 23,000 medical men, whereas if the country were cut up into divisions the representatives could more easily become acquainted with the different parts of their divisions, and be more in touch with the members residing therein. In Canada there were 18 direct representatives and 16 for corporations, and those 18 represented various districts, they were not elected by the whole mass of the medical men resident in the Colony. Of course, in any reform of the Medical Acts there were other points to which special attention should be paid. One was the extreme importance of making the General Medical Council supreme in matters relating to education. At the present time they were not. They could only recommend; they had no power to compel. At the present time there was a deadlock between the Colleges of Surgeons and Physicians and the Council on that point. The Council said five years was to be the time requisite for anyone to acquire the necessary knowledge to become a medical practitioner. The Colleges acceded, but tried to take away with one hand what was given with the other, by saying that the first year could be passed by a lad at a higher-grade school or technical school. He had been told that the Colleges of Physicians and Surgeons would give way on that point, but there was no law to make them do it. More power was required to deal with touting Medical Aid Associations. At present it seemed doubtful if the Council had power in the matter. It had passed resolutions of disapproval, but had not been able to declare it "infamous in a professional respect." If the Council were to do so it would make it easier for the men who held those appointments to deal with the Associations. They said they wished the Council would declare it "infamous," and then they would talk to the Committees and would prevent them doing anything like the touting they did now. Another thing with which it was necessary to have power to deal was in regard to persons who represented themselves to be medical men by subterfuges, such as a man putting up a brass plate and calling himself an aurist, and, say, another calling himself an oculist. No one could touch him, because he did not claim that he was a physician or a surgeon, he was not on the *Register*, and he did not profess to be, but he deceived the public all the same. The public believed that he was a qualified man if he called himself an oculist. Some said that the police should see to that, but at least the Council should have the power to move the police to deal with cases of that sort. He thought it desirable that the standard of entrance into the medical profession should be raised. It would be far better that, as was suggested in the resolutions passed by the South-Western Branch of the British Medical Association, the General Medical Council itself should institute an examination in preliminary subjects to include, among other things, English literature, one modern language, and, he suggested, such subjects as chemistry and physics. Others, however, thought it would not be well to include those. The proposal was that there should be a uniform examination for entrance into the medical profession, to be held at different centres, at times which might be convenient, and that the age of entrance should be 17. At present it was only 16. At Liverpool some gentlemen had objected that boys would pass the examination at 14 or 15 years of age, and would be wasting their time subsequently. The time could very usefully be employed to keep them at school, where they could go on with their scientific work, such as physics and chemistry, which were taught in all large schools. It was as important to provide that there should be a one-portal system for qualification as that the professional examination should be of a uniform character. It would be open to anyone who wished to obtain degrees or ornamental diplomas afterwards to do so, but let there be one standard examination for the three kingdoms. No doubt that proposal would raise most strenuous opposition on the part of the representatives of corporations on the Council. It was possible that the objection might be met if such Boards were not formed *de novo*, but by delegates or representatives from these corporations. The midwives question was very important to medical men in general practice. It seemed to him a wicked thing to attempt to legalise any old woman to practise who could produce a certificate to say she had attended cases for two years, and he would be strongly against any attempt to register persons of that class. The question was better met by a Bill to register all nurses, who should have at least three years training, and that those who wished to be obstetric nurses might be so, but that their work should be done under the control of medical men. As a Poor-law medical officer he had found very great difficulty in treating to the satisfaction of himself or to the good of the patients very many cases because, although the law insisted upon his being there, it did not insist on there being any nurse. He could not see why the plan might not be made universal all over the country, which he believed was found in Saddleworth, where the guardians provided nurses, and if possible the people paid afterwards, and thus had the nurses on loan. The nurses were strictly under the control of the medical men and did not act independently. He thought it would be a good thing for the British Medical Association to draft a Bill to be introduced into Parliament as a competing Bill with the Midwives Bill. Mr. Jackson concluded by saying as to the question of a wage limit that the large societies if they would not have a wage limit must pay medical men a great deal more. He suggested ten shillings a year and said that then it would not matter whether there was any wage limit.

The PRESIDENT asked Mr. Jackson concerning the refusal of the General Medical Council to register as a student a boy who had actually passed in the first class of the matriculation of the University of London.

Mr. JACKSON replied, after some conversation concerning the point, that the lad in question had not passed in one of the modern languages as required by the General Medical Council.

*Speech by Dr. Woodcock.*

Dr. S. WOODCOCK (Manchester) said that whether a satisfactory amendment to the Medical Acts was to be obtained or not depended very much upon whether the profession agreed in any way and were clamorous enough. Their position was like the girl at the Sunday-school treat

who said, "Here I am asking for nothing and getting nothing." He agreed with Mr. Jackson that the General Medical Council had no legal right to enforce its conditions upon the Royal Colleges. The Royal Colleges voluntarily surrendered on the establishment of the General Medical Council their right to themselves determine what should be regarded as necessary before a student could be registered. Now, however, the Royal Colleges were not having the number of candidates which they thought they ought to have, and they were trying to make arrangements to enable a boy to spend a certain time longer at school before his registration, which should be reckoned in his five years curriculum. He thought that would be a most unfortunate thing to happen. They must hold on to the five years curriculum after registration. He agreed with Dr. Gordon's suggestions contained in the series of resolutions passed by the Council of the British Medical Association. The minimum age for the registration of a student should be 17. A boy of 16 years of age was not experienced enough to make it desirable for him to be living in lodgings by himself in a large town such as London. The General Medical Council should establish some uniform examination which could be held simultaneously at various centres and there should be one portal of entrance to the avenue leading to professional life. In his opinion the students who matriculated in the London University were for the most part over-examined and he thought it was desirable to have an examination capable of clearly indicating a boy's attainments without cramming his head full of fourteen or fifteen subjects. In regard to Medical Aid Associations it appeared to him that the General Medical Council had no power to issue any sort of general edict which would prohibit men from accepting appointments in connection with these Associations. But the Council was prepared to deal with any medical man against whom a local organisation had got up a concrete case and could prove that he was connected with an association guilty of touting or advertising. He remembered when the Irvine case was first brought up at the Council of the British Medical Association that there was a great flutter among the pigeons. Resolutions were proposed that he should be excluded from the Association. That was because he belonged to the class of consultants upon whose corns he was going to tread. Many cases had been brought before the Council of the British Medical Association, where no action had been taken because the men were only general practitioners. Referring to the midwives question, he said he was entirely opposed to the registration of midwives as independent practitioners, and had from the first opposed people who advocated legislation on the lines suggested by what was called the Midwives Committee. He was a member of the subcommittee of the Parliamentary Bills Committee that produced a scheme for dealing with the midwives question. It contained most rigid conditions under which medical aid was to be called in. He now thought that they might go further and secure the attendance of a registered practitioner in all confinement cases. There was a scheme suggested by Dr. Bedford Fenwick when Mr. George Brown was connected with the *Medical Times and Hospital Gazette* imposing the responsibility of diagnosing any abnormality in a confinement case on the woman attending. That was practically the reintroduction of the unqualified assistant in petticoats. Dr. Woodcock then proceeded to read through the scheme put forward by the Medical Guild at Manchester, and stated that it was absolutely necessary that provision should be made for the adequate remuneration of medical men attending confinements. The public rightly looked to the medical profession as being best able to suggest what should be the line upon which satisfactory legislation should proceed. Medical men should look at the matter in a practical way, and have a scheme ready whereby the safety of the public would be insured and the interests of the profession protected. The scheme should be such that it would gain the ear of Parliament, so that the profession should secure some influence in guiding the Legislature on the question of midwives. He was perfectly free to join the ranks of any party willing to address themselves in a reasonable spirit to attain a reasonable solution of that question which had been discussed for so long a time.

The President asked the opinion of the meeting as to whether cheap midwifery paid. By cheap midwifery he meant anything under a guinea.

Dr. Woodcock said that it was an introduction to general practice.

Mr. George Brown said that he had found midwifery in early life a very grand introduction to fairly good class practice. Referring to what Dr. Woodcock had said about the scheme in the *Medical Times and Hospital Gazette*, it did not meet with his approval, and was a means of severing his connection with that paper at a great financial loss.

Dr. Bromley asked Dr. Woodcock to explain how the General Medical Council had no power to pass an edict concerning Medical Aid Societies, and yet had power to pass edicts concerning covering and unqualified assistants.

Dr. Woodcock replied that the General Medical Council was incapable of explanation in all its actions, but in regard to the points in question the Council acted on the advice of their law officers, and if he was elected to the Council he would ask for the reason.

Dr. Tomlin asked Mr. Brown what the duties of the General Medical Council were, to which Mr. Brown replied that the law courts had decided that the sole authority for the discipline of the medical profession was the General Medical Council, which was above all law at present in that respect.

The President mentioned that in his opinion the Royal Colleges were not going to give way as had been said.

The proceedings terminated with the usual votes of thanks.

## Meeting at Liverpool.

*Speech by Dr. Hayward.*

A meeting was held at the Liverpool Medical Club at 9.30 P.M. on Wednesday, November 6th, Dr. J. Tisdall in the chair, to hear Dr. Charles Hayward and to discuss the claims of the four candidates for election to the General Medical Council.

The Honorary Secretary read a letter from Dr. Glover notifying his withdrawal from the contest on the recommendation of his medical advisers; and a resolution was passed thanking Dr. Glover for his past services and expressing regret at the cause of his retirement.

Dr. Charles Hayward said that he supposed that those present, like himself, were thoroughly dissatisfied with the proceedings of the General Medical Council in the past and the necessity for its remodelling. From the wording of the Medical Act of 1858 it appeared to have been distinctly intended that the representatives of the various colleges and universities on the Council should be appointed by the great body of men who were members and held the diplomas and degrees of these corporations. Owing to the unfortunate wording of the Medical Act its letter had been followed while its spirit had been violated. It was not till 1886 that the profession raised the burden of this injustice, when what he considered the ridiculously inadequate number of five representatives were granted. This concession, he considered, was an admission that up till then the interests of the general medical profession had been unrepresented. This was, however, a mere expedient; instead of it the method of electing the representatives of the colleges and universities should have been altered in the spirit of the Act. However, if the present direct representatives were picked and resolute men, much might be done to modify the present unfortunate state of affairs. Large sums of money were annually expended by the Council; they constituted the most unremunerative investment he had ever heard of, though medical men were notoriously unlucky as investors. He would like to know why there was no financial statement in the registers of 1899 and 1900, as had been the custom in previous years; this appeared significant when taken in conjunction with Mr. Horsley's statement that the financial condition of the Council was chaotic. In regard to the Midwives Bill he would oppose all legislation which would give any foundation to a belief in the minds of the public that any body of women were licensed to practise midwifery independent of the direction and supervision of the medical profession. He was in favour of there being one portal for admission to the *Medical Register* in the shape of one uniform series of examinations, and he thought that all men upon the *Register* should be entitled to use the popular title "Dr."; this need not in any way detract from the value and distinction attaching to university degrees. He considered that medical aid as

carried out on the "coupon" system and with any semblance of advertising should be sternly suppressed. He thought that the various corporations and colleges should be more under the control of the general body of their diplomates; if this were so the representatives of these bodies on the General Medical Council would not be such absolute strangers to the interests of the general profession as they were at present. He pointed out that the deliberations of the Council were of a semi-legal character and it was on this ground that he based his chief claim to support; he trusted the profession would accord him sufficient votes to enable him to take a seat on the Council.

In answer to various questions, Dr. Hayward stated that he did not favour the institution of an annual licence for medical men similar to that of solicitors until a new Act had been procured by which it was made possible to prevent medical practice by unqualified persons. He approved generally of Dr. McCook Weir's Bill which would make it penal not to send for a qualified medical man on the part of the registered obstetric nurse in attendance; he believed satisfactory financial arrangements could be made through, probably, local authorities so that poor women could procure the services of any medical man they might prefer, either free or in the nature of a loan. He disapproved of the acceptance of death certificates not signed by a qualified medical man; he thought that a large number of deaths of doubtful cause were passed over by coroners without holding an inquest, and he commented on the local practice of never calling a medical man unless it was absolutely unavoidable.

A resolution was passed thanking Dr. Hayward for his attendance and for the exposition of his views.

The meeting then proceeded to discuss the claims of the candidates. The Chairman remarked that the only difference in the views of the candidates were those which concerned the Midwives Bill. The majority of the speakers expressed the opinion that support should be given only to those candidates who would oppose the present Midwives Bill and all legislation which would constitute a body of women specially licensed to undertake midwifery on their own responsibility.

## SCOTLAND.

### Dr. Norman Walker's Address.

To the Medical Practitioners of Scotland:

Ladies and Gentlemen,—After mature consideration I have decided to offer myself as a candidate for the position of your representative on the General Medical Council.

The duties of the Council are primarily with education, examination and registration.

*Education.*—In this there is much room for improvement. Too much time is devoted to subsidiary subjects, and there is thus less to spare for those of real importance. The subjects of biology, chemistry and physics should be relegated to a preliminary scientific examination, which the student should be required to pass before commencing his medical studies proper. It is, I believe, immaterial whether these subjects are studied at the university or at a secondary school.

Bacteriology is a subject of such immense practical importance that it should certainly occupy some of the space which would thus be provided.

*Examination.*—The examinations are unequal. While in many instances the standard is sufficiently high, in too many it is not, and a more exacting inspection of the examinations should be insisted upon.

*Registration.*—The duties of the Council with regard to registration consist in admitting names to and removing them from the *Register*. The Council registers all those who have passed the examinations under its supervision. The subject either of mutual reciprocity with the Colonies or of an Imperial Register should be considered.

The removal of a name from the *Register* is a serious matter, and must only be carried out when there is absolute proof of an offence in the sense of the Medical Act. It is to be regretted that removal from the *Register* is the only penalty which the Council can legally enforce, but it should be borne in mind that warnings are often efficacious.

As a teacher and an examiner, and one in close touch with the teachers of an important medical school, I believe I am competent to represent your interests in these matters.

In addition to its main duties, the Council has recently given some attention to matters affecting the general practitioner.

The subject which has attracted greatest interest is that of midwives registration. On that subject my views are very clear and decided. Having been for several years Convener of the Committee of the Edinburgh Branch of the British Medical Association on the subject, I am thoroughly familiar with every phrase of the controversy. I hold that no person, male or female, should be registered as an independent practitioner of midwifery, unless duly qualified under the Medical Act. In my opinion the solution of the question lies in the recognition by the Council of those hospitals which have the facilities for training midwifery nurses. These should be allowed to issue certificates of training to their own pupils, and to no other. The issue of certificates of competence by private practitioners should be severely dealt with by the Council.

The next question of interest to the general practitioner is that of contract medical practice. I can see nothing essentially wrong in this. A professor accepts his chair and its duties at a fixed salary. Most remunerated appointments are at a similar fixed salary, and I can see no material difference in the contract of a general practitioner to attend a certain number of patients for a fixed sum per annum. The crux of the matter lies in the amount of remuneration, and I was very much impressed by the attitude of the representatives of the Friendly Societies, who met with a Committee of the Council of the British Medical Association. While declining to agree to any wage limit, they were ready to admit that the general rate of remuneration was too low, and to use all their influence to raise it.

The position of the parochial medical officer in Scotland should be made more certain. The medical officer to a union district in England is appointed by, and is only dismissible by the Local Government Board, and it is only just that the Scottish parochial medical officer should have the same security of tenure.

A good deal of attention has recently been drawn to the question of the dispensing and sale of drugs. On this matter I desire to make my position perfectly clear. In many districts it is absolutely necessary, and in others it is a long-established custom, for medical men to dispense the medicines which they prescribe for their patients. To this no possible objection can it appears to me, be urged. The keeping of open shops for the sale of drugs, and even of patent medicines to all and sundry is on quite a different footing, and should not, in my opinion, be encouraged. What the Council has done is only to uphold the law which provides that poisonous drugs shall not be sold by unqualified persons. With their action I entirely agree.

There are many other matters of general medical interest, such as the suppression of unqualified practice, which, though of great importance, are without the province of the General Medical Council. For dealing with them amendment of the present or a new Medical Act is requisite and desirable. In it there will necessarily be some reform of the Council, and probably some alteration of its composition. The number of direct representatives should be increased; some of the bodies which at present send representatives should cease to do so; and, thirdly, the representatives of all the universities and corporations should be elected by a wider constituency than they are at present.

I think it is only right that I should state, for the information of those to whom I am not personally known, that I have considerable experience of affairs. I have been for several years a member of the Council of the Edinburgh Branch of the British Medical Association. I am now serving my second term as a member of the Central Council of the Association and its Parliamentary Bills Committee, and I am a member of the Finance Committee of the General Council of the University of Edinburgh.

My own personal experience in general practice has taught me the numerous difficulties associated with it, and the fact that I am no longer a general practitioner has not made me any less appreciative of these, any less anxious to see them removed, or I believe any less able to work for their removal.

If the profession in Scotland entrusts its interests to my

care, I shall do my utmost to merit the confidence.—I am, Ladies and Gentlemen, yours obediently,

Norman Walker.

### Dr. C. E. Robertson's Address.

To the registered medical practitioners of Scotland:

Ladies and Gentlemen,—In offering myself as a candidate for the direct representation of medical practitioners in Scotland on the General Medical Council, it is necessary that I should briefly express my views on some of the more important matters before the profession at the present time. This I propose to do as follows:

*Infamous Conduct in connection with the Sale of Scheduled Poisons.*—This is one of the subjects which stands pre-eminent, on account of the action lately taken by the General Medical Council, at the instigation of the Pharmaceutical Society of Great Britain, in accusing medical men of infamous conduct because certain of their unqualified assistants have been convicted in the public courts of the sale of scheduled poisons.

Registered medical practitioners claim exactly the same rights to sell scheduled poisons as do the registered chemists, and they claim no more. These rights are reserved to them by the Pharmacy Acts, and, inasmuch as when the unqualified assistant of a registered chemist is convicted of selling scheduled poison no action has ever been taken against the chemist himself, it reasonably follows that no action ought to have been taken against any doctor in a similar position.

*Increase in Direct Representation on the General Medical Council.*—I think the time is ripe for alteration in the constitution of the General Medical Council, and that that alteration should be made by transferring to the general body of practitioners the power to appoint a majority of the members. Further, I look upon it as an unjust thing that the registered dentists, who pay for their registration as we do, and who are amenable to the General Medical Council for their professional conduct, should have no representation whatever on that Council.

*Finance.*—The present financial difficulties of the General Medical Council are well known. In dealing with them, it seems fair that an effort should be made to induce all the bodies who send representatives to the Council to bear some proportion of the expense before placing a further tax on medical practitioners.

*Midwives Bill.*—My opinions are at one with the present English candidates on this matter, and I would earnestly support them in their endeavours to prevent the importation into the profession of a lower order of legally qualified and independent medical women.

*The One-Portal System.*—I am in favour of the general principle of one-portal system; but the details of the question present many difficulties on account of its interference with the vested interests of the present licensing bodies.

The further consideration of this subject must be subservient to the maintenance of a high standard both in the entrance and qualifying examinations,

*Suppression of Quacks and other Unregistered Persons who Practise Medicine and Surgery for Gain.*—I consider it wrong that the grave and dangerous evil of "counter-prescribing" by chemists and druggists should be allowed to exist; that quacks, bonesetters, etc., should practise medicine and surgery without let or hindrance; and I maintain that the General Medical Council will not have done its duty until it has asked and received from Parliament power to deal with the suppression of these abuses.

In conclusion, I desire to add that, in the event of your returning me as your representative, I shall carefully study the interests of the medical practitioners in every question that may come before the General Medical Council.—I am, yours faithfully,

Glasgow, Nov. 11th. Charles E. Robertson, M.D.

### Meeting at Edinburgh.

Dr. Norman Walker, the Edinburgh candidate for the seat on the General Medical Council as the direct representative of the medical profession in Scotland, addressed a meeting of some sixty or seventy gentlemen in St. George's Hall on November 11th.

Dr. George A. Gibson, who presided, said that there had been a considerable amount of dissatisfaction with the direct representative of the medical profession on the General Medical Council, more particularly, perhaps, during the last few months, in consequence of certain proceedings in the West of Scotland. He was inclined to think that their present representative went a little too far when he protested and dissented against the action of the Council in refusing to receive a deputation in connection with the West of Scotland case, which deputation had gone to try to interfere with the action of the Council in its just rights. As regarded education, it was his opinion that they required some fresh blood in the General Medical Council, and they would find in Dr. Norman Walker one who was conversant with general practice in all its details, who was well know for the interest he took in medical education, and who, in soliciting their suffrages, merited all their confidence.

*Speech by Dr. Norman Walker.*

Dr. Norman Walker disclaimed any desire to attack the General Medical Council from any point of view. He took it that the corporation representatives were elected for the purpose of safeguarding the perfectly legitimate vested interests of these corporations; that the Crown representatives were nominated to see that the general public interests were looked after on the Council; and that the direct representatives of the profession were selected for the purpose of representing the views of the profession as a whole. The first of its duties was with education, and it was primarily on that basis that he appealed to the practitioners of Scotland to return him to the Council. Medical education was always in a state of improvement; there were always changes. As to the relegation of the early scientific subjects to a preliminary scientific examination he cordially agreed with the Royal College of Physicians of London, and he dwelt on the far-reaching effects of that relegation, pointing out that the real object of this was to have four clear years for the study of medicine proper, and not to have students straggling along behind, with the burden of examinations still to pass, around their necks. This, too, would leave space for other subjects which should become of very great importance, and the subject of bacteriology was notably one that should be introduced into the curriculum. On the examination question he suggested a more stringent and real inspection of examinations than the present somewhat formal one, as that would raise the standard, and also be a protection to students. The examinations in the different parts of the country should be levelled up. It would be a good thing if at present the question of Imperial registration were considered as to the removal of names from the *Register;* that, of course, was a judicial matter, and each case had to be judged upon its merits. He thought it was unfortunate that there was only one penalty, but in his opinion the warnings which the Council now issued were very efficacious, and, in his knowledge, there were a great many warnings which went out, and which had an extremely good effect in keeping up the discipline of the profession.

He disapproved entirely of the registration as an independent practitioner of midwifery of any person who was not on the *Medical Register*, and said that the system of giving a course of lectures in the drawing room, and the issuing of a certificate of competency to these women, was a thing which ought to be severely dealt with by the Council. He was in favour of the recognition by the Council of those hospitals which had facilities for the training of nurses, and of the issue by these hospitals of certificates of training.

On the drug question he saw no reason for objecting to those who dispensed their own medicines to their own patients, as the custom was absolutely essential in many parts of the country, and particularly in England. The sale of patent medicines, sponges, and toothbrushes was, however, quite a different thing. The sale of patent medicines in particular was much more unprofessional than the sale of sponges and toothbrushes. As to the sale of scheduled poisons by unqualified assistants of medical men, there were three ways of dealing with that matter. They could accept the position of the Council, they could decline to do so, or they could treat the question diplomatically. Dr. Robertson (Glasgow) openly defied the

Council, and Dr. Bruce, he thought they would agree, had treated it with great diplomacy. On the West of Scotland case, Dr. Norman Walker read the deliverance of the Presiden of the Council, and stated that that was the position which he held.

After various questions had been asked and answered, a motion, proposed by Dr. JAMES RITCHIE and seconded by Dr. ALEXANDER JAMES, that Dr. Norman Walker was a fit and proper person to represent the medical practitioners of Scotland on the General Medical Council, was unanimously carried.

### DR. BRUCE'S CANDIDATURE.

DR. BRUCE telegraphs from Dingwall: "The names of Drs. Cameron, Nairn, and Ogilvie Grant, Inverness, were inadvertently published in the list of my Committee without their sanction."

### LETTERS.

#### *Retirement of Dr. Glover.*

SIR,—On the subject of retirement from my candidature for the office of direct representative, I am receiving a number of letters to which I can give no adequate immediate answer. It will be good if you will allow me through the columns of the BRITISH MEDICAL JOURNAL to ask my friends to excuse me if there should be some delay in my reply to their most kind communications.—I am, etc.,

Highbury Place, N., Nov. 11th. JAMES GREY GLOVER.

#### *Provincial Candidates.*

SIR,—I have been hoping week by week to see in your correspondence columns some expression of what I have reason to believe is a very general opinion concerning the forthcoming election of direct representatives. It will be remembered that in 1886 the profession came to the deliberate conclusion that, of the three direct representatives allotted to England and Wales, justice demanded that at least two should be practitioners resident in the provinces. To this conclusion effect was duly given by the return of Sir Walter Foster and Mr. Wheelhouse; and the same just division of the representation was again accorded in 1891. By a series of accidental circumstances in 1896 and 1897 it fell out that the whole three representatives of the profession were London practitioners—a result which has ever since been felt to be most anomalous, and, indeed, most unfair to our provincial brethren. The retirement of Dr. Glover simplifies the present position immensely; because the great respect so generally felt for him would probably have led to his return if he had again become a candidate, and thus, in some degree, to a continuance of the anomaly and injustice above referred to. Now the ground is clear; and I am sure that I am voicing the opinions of many in suggesting that every practitioner in London should, on the present occasion, make a special point of recording his vote for the two provincial candidates. There is no need to introduce the slightest element of personality into a matter which should only be considered on the basis of justice, fair play, and indisputable principle. It would be, in my humble judgment, a most undeserved disrespect to our provincial brethren were it suggested that they do not possess amongst themselves gentlemen of such high honour and ability as to make admirable representatives of the whole profession. I feel sure that they would scout the idea that it is necessary for them to depend upon men resident in London to obtain fit representatives of their views and wishes. It may, therefore, be safely assumed that every provincial practitioner, without exception, will on this occasion vote for the two provincial candidates; and I would venture to suggest that it would be a kindly and a courteous action if a number of leading practitioners in London would sign a letter for publication in the BRITISH MEDICAL JOURNAL expressing their intention to give their votes and support also to those candidates on the *primâ facie* grounds of justice to which I have alluded.—I am, etc.,

London, Nov. 12th. F.R.C.S.

#### *The Midwives Question.*

SIR, I observe from the BRITISH MEDICAL JOURNAL of November 9th that in his speech at the Palatine Hotel, Manchester, on October 31st, Dr. Woodcock connected my name, together with Dr. Bedford Fenwick's, with an article on the employment of nurses for attendance upon poor and parish patients which he states was published in the *Medical Times and Hospital Gazette*. I will thank you to permit me to state that I resigned my position on the editorial staff of that journal more than two years ago, and disclaim any responsibility for the opinions expressed in its columns.—I am, etc.,

Gibson Square, N., Nov. 13th. GEORGE BROWN.

SIR,—It is remarkable that in the present election no candidate has been wild enough to ask the medical profession to give a vote in favour of midwives registration, as has been the case in previous contests. This is a good sign that we are awakening. But something more is wanted. It should be clearly realised by every voter, by everyone who has at heart the interests of the poor and the ignorant—and they are many—that so long as registered practitioners are allowed by the General Medical Council to teach ignorant women "the science and art" of one of the "three essential branches of medicine," to formally "examine" the women, and issue to them "certificates of competency," so long will the demand for midwives registration continue, and the supply creates the demand. We must not ask from our candidates more than they can accomplish; but I think we might fairly ask each whether he will do his best to induce the General Medical Council to put a stop to the issue of "certificates of competency in midwifery" by the Obstetrical Society of London and its many imitators.—I am, etc.,

Saddleworth, Nov. 12th. COLIN CAMPBELL.

SIR,—I should like to make a few comments on the attitude of the candidates towards the midwives question. So much has been said and written of late on the merits of rival schemes for the settlement of this vexed question, that I considered it my duty to attend the meetings held at the Liverpool Medical Club, to hear Mr. Horsley and Messrs. Brown and Jackson; and to submit some test questions to the candidates. I have not yet had the pleasure of hearing Dr. Woodcock, and must take for granted that his views are correctly expressed in the following extract from his address:

"I have always advocated the registration of obstetric nurses whose functions should be strictly limited, and upon whom nursing duties should be imposed. I think, also, that the work of these registered women should be conducted under medical control."

The questions I put to the candidates in Liverpool were:

1. Will you try and induce the General Medical Council to introduce a Bill embodying the ten points approved by them and submitted to the Government as amendments to the Midwife Registration Bill?
2. If the Council refuse to do so, will you introduce a Bill yourselves, and on what lines?
3. Will you try and induce the General Medical Council to administer any Bill that may be passed into law?

Mr. Horsley's reply to the first question was emphatic namely, "Leave the General Medical Council severely alone." And in reply to the third question he said, "Application has already been made to the Government for a grant to enable the Council to administer the Midwife Registration Act, and has been refused." He did not reply to the second question, but after the close of the meeting I asked Mr. Horsley if he would do his utmost, in conjunction with his colleagues, to introduce a Bill next session embodying the views of the vast majority of the profession with a view of having both Bills referred to a Committee of the House in order that fresh evidence might be taken before any Bill became law, and to this course Mr. Horsley readily assented and cordially promised to do so, and Messrs. Brown and Jackson gave the meeting and myself personally a like promise.

I adopted this course because I am satisfied that the time for protest against midwife registration *per se* is past, and that Parliament must be confronted with a Bill which will show at a glance what the medical profession really want. I am not so ambitious as to suggest that my own "Sick and Obstetric Nurses Bill" (which at present is the only one of the kind before the profession) be the one submitted, but the compound title is a good one, and is adopted by Messrs. Brown and Jackson in their published addresses. As I

pointed out at the meetings I attach the greatest importance to my third question, for to create a Midwives Board by Act of Parliament with a majority favourable to the registered midwife (as it undeniably would be) would give the profession away, and nullify the recommendations of the General Medical Council. It is not sufficient to say that the General Medical Council have not the means to administer the Act. The money must be found, and in any case a grant must be made to the Midwives Board for like purposes, and why not to the General Medical Council, whose business it is to deal with medical education and registration inclusive of midwifery.

If Parliament is so purblind as to refuse a grant, then the money must be raised by an annual tax on the profession of, say, 10s., and if this cannot be done without a new Medical Act (as Mr. Horsley said at the meeting), then provision to that effect must be made in any new Medical Reform Bill.

Let me once more entreat our direct representatives, present and to come, to keep the power in their own hands, and beware of establishing a dangerous rival administrative authority. The day is at hand when the General Medical Council will be reformed, our direct representatives increased, and the voice of the profession heard, both inside and outside Parliament; and why barter away our rights which we may seek in vain to recover?

Of the personal merits of the candidates I have little to say. Mr. Horsley, by general consent, is a host in himself, and he strongly urged Dr. Woodcock's claims on the electorate as "one likely to be listened to" in the Council Chamber. But no one could hear Messrs. Brown and Jackson without coming to the conclusion that in them the profession would have two able and conscientious representatives. It is pathetic to hear Mr. Brown plead for a colleague who will support him in the Council Chamber. And it is equally significant to hear Mr. Horsley plead for Dr. Woodcock, while he tells his audience that he has seen our direct representatives jeered at and shouted down from the gallery of the Council Chamber. The only possible answer to all this is to send men to the Council who will support each other, and for these men my vote will be cast, notwithstanding the claims of powerful rival candidates.

I would like to say, in reply to Dr. Glover's letter in the British Medical Journal of November 2nd, that the principle of refusing "to follow" midwives is by no means "new." I was asked "to follow" the certificated midwife at Mortlake in 1892, and deliberately refused, and never regretted it. Of course, another "follower" was found, and the cases in which he was required sank from 25 per cent. in the first two years to 3 per cent. in the next five. Dr. Glover's second point, as to the payment of "midwife followers," is detailed in my Sick and Obstetric Nurses Bill.—I am, etc.,

Liverpool, Nov. 3rd. ALEX. McCOOK WEIR.

*The Constitution of the Council.*

SIR,—Every candidate advocates an addition to the number of direct representatives, but none has any distinct proposal, or, indeed, any clear ideas on the subject. To multiply the present number and elect them in the lump would be utter foolishness. Hence it has been proposed to divide the country into provinces or electoral areas. First, consider the present composition of the Council. Five Crown members, five direct representatives, and the rest purely representatives of examining bodies. Need these be represented so largely? England sends 8, Scotland 7, and Ireland 5. How if they would each send one? There would then be 13 members, to which 7 or 8 directly elected might be added. These might be representatives of additional subdivisions or electoral provinces, or might be directly elected by the members of the universities or colleges (graduates or licentiates). Further, the Crown need elect but one member for each country, and preferably not medical, but solicitor or barrister, or man of business, especially a member of either House of Parliament. What would this reconstituted Council do more than the present? Nothing whatever unless its powers were enlarged.

It is plain to any observant mind that the General Medical Council is undergoing a process of evolution. It already takes upon itself functions—and rightly—far in excess of the narrow duties laid down for it. But there is wanting authority. The Council should have power to investigate, to draft Bills, or to pass resolutions to lay before Parliament concerning any subject affecting either the profession or the public health. Every Bill introduced into Parliament on these subjects should be remitted to the Council, as a Subcommittee of the Privy Council (or of the Education Department or of the Home Office) between the first and second readings.

It is useless merely to increase the number of representatives without widening greatly its powers. It would be harmful to give increased powers to a body elected—rather, *not* elected—as the present is. What do F R.C.P s know of half-guinea midwifery or of club practice?—I am, etc.,

November 11th. STRUD.

*The Circular of the Incorporated Medical Practitioners' Association.*

SIR,—My attention has been directed to Mr. Garrett Horder's letter in your issue of the 9th inst. The incident he refers to as to the issue of the addresses of two candidates for election as direct representatives is capable of a very simple explanation. It is customary towards the close of each year for the Council of the Incorporated Medical Practitioners' Association to issue a circular to the profession generally in England and Wales, giving details of the advantages of membership to medical men, among which the usual medical agency and insurance business, and the collection of debts for members of the Association, are widely-appreciated features. As the election of direct representatives is about to take place, the Central Council of the Association at their ordinary monthly meeting on October 17th last decided to reprint the election addresses of the two candidates supported by the Association, each of whom has served the office of President of the Association, and to send them out with their annual circular. In this way the Council hope to bring the addresses under the notice of some thousands of medical men who might otherwise not have an opportunity of learning the views of the candidates, and thus to some extent excite additional interest in a periodical event of great importance to the profession, which heretofore has been regarded with regrettable apathy by a very large proportion of the rank and file of the medical profession. As General Secretary to the Incorporated Medical Practitioners' Association, and the executive officer entrusted with the duty of carrying out the clerical and financial business, I accept sole responsibility for the form of the wording of the fourth page of the circular, details of which had been agreed to by my Council, and which has given rise to the letter referred to.—I am, etc.,

JNO. SELL COTMAN,
Chartered Accountant.
General Secretary to the Incorporated Medical Practitioners' Association.

Moorgate Station Chambers, E.C., Nov. 13th.

*The L.S.A. and the Titles of "Physician and Surgeon."*

THE following correspondence has been forwarded for publication by the Honorary Secretary:

[COPY.]
Association of Physicians and Surgeons
(Society of Apothecaries),
453, Strand, W.C.
November 4th, 1901.

Dear Sir,—The members of the above Association have noticed that in your address to the medical practitioners of England and Wales respecting the election of direct representatives on the General Medical Council, no reference is made to your action in acceding to the prosecution of the late Mr. H. Kingsley Hunter for describing himself as a physician and surgeon.

I am, therefore, instructed to ask you:

1. Whether you will kindly give the reason which, in your opinion, justified the course you took?

2. Whether, if re-elected to the General Medical Council, you would recommend or accede to the prosecution of any registered medical practitioner holding the same qualification as that held by the late Mr. H. Kingsley Hunter, for describing himself as a physician and surgeon.

I propose sending a copy of this letter, and of your reply thereto, to the medical journals for publication.

I am, Dear Sir,
Yours faithfully,
GERALD DALTON,
Honorary Secretary.

Jas. Grey Glover, Esq., M.D.

[COPY.]
25, Highbury Place, N.,
November 7th, 1901.

Dear Sir,—I am obliged to you for your letter, and much pleased to answer the question you put to me. My action in the Hunter case was

based upon the view that the use of medical titles is a legal question only to be determined by the decision of the Courts. And, further, I was influenced by the fact, which I was careful to ascertain, that Mr. Hunter himself was a consenting party to the action, which was essentially conducted in a friendly spirit—not at his expense, but at that of the Apothecaries' Society.

It must be obvious that all honourable men will only claim titles with the sanction of law. Though, on medical advice, I am withdrawing from the candidature, I still strongly hold these views.

Believe me, Dear Sir,

Very truly yours,

Gerald Dalton, Esq. JAMES GREY GLOVER.

I have no objection—but on the contrary—to your publishing this letter. It is quite reasonable that the licencees of Apothecaries' Society should ask for a larger title. The Society should be included in the Conjoint Board.

# ASSOCIATION INTELLIGENCE.

## ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

## LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

## BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting of this District will be held in the North-Eastern Hospital for Children, Hackney Road, N.E., on Thursday, November 21st, at 4.30 P.M. The chair will be taken by Mr. H. E. Powell, Vice-President of the District. A Demonstration of Cases will be given by Dr. J. H. Sequeira and members of the staff. Visitors are invited.—C. J. MORTON, 56, Orford Road, Walthamstow, Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of this District will be held at the Kent and Canterbury Hospital on November 28th, at 3 P.M., Dr. C. Kessick Bowes, of Herne Bay, in the chair. Agenda:—Dr. Latter: The Assumption of Medical Knowledge by the Laity and its Tendency.—Dr. Whitehead Reid: Appendicitis.—Mr. Raven: Experiences of Small-pox. All members of the South-Eastern Branch are entitled to attend these meetings and to introduce professional friends.—THOS. F. RAVEN, Barfield House, Broadstairs, Honorary District Secretary.

STAFFORDSHIRE BRANCH.—A meeting of this Branch will be held at the North Stafford Hotel, Stoke-on-Trent, on Thursday, November 28th, the President, Mr. W. H. Folker, will take the chair at 4 P.M. Agenda: Exhibition of Living Cases.—Discussion, The Treatment of the Mother during the Puerperium, to be opened by Dr. Hatton.—Discussion, Lead Poisoning in the Potteries, to be opened by Dr. McAldowie.—Paper, The Condition of the Gums in Leadworkers, Mr. F. Shufflebotham.—Exhibition of Pathological Specimens, etc. Dinner 6.30 P.M., charge 5s.—G. PETGRAVE JOHNSON, Stoke-on-Trent, General Secretary.

DUNDEE AND DISTRICT BRANCH.—This Branch will meet in University College, Dundee, on Thursday, November 21st, at 4 P.M., to hear addresses by the candidates for the General Medical Council. The meeting will be open to all registered practitioners.—R. C. BUIST, M.D., 166, Nethergate, Dundee.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—The autumn half-yearly meeting of this District will be held at the Portsmouth Medical Library, 5, Pembroke Road, Portsmouth, on Tuesday, November 19th, at 3.30 P.M. Notice of intended communications should be sent at once to the Honorary Secretary, J. G. BLACKMAN, Poplar House, Kingston Crescent, Portsmouth.

SOUTH EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held at the Grand Hotel, Eastbourne, on November 29th, at 4 P.M., Dr. A. Harper in the chair. Dinner at 6 P.M.; charge, 6s. without wine. Notice of intended communications should be sent to J. W. BATTERHAM, M.B., Honorary District Secretary, 3, Grand Parade, St. Leonards.

## PERTHSHIRE BRANCH.

THE annual meeting of this Branch was held at Perth on November 8th. The retiring President, Dr. SIMPSON, took the chair, fourteen members being present.

*Confirmation of Minutes.*—The minutes of the previous meeting were read, approved, and signed.

*New Member.*—George Cruikshank Burgess, M.B., Ch.B., Royal Infirmary, Perth, was elected a member.

*Election of Officers.*—The office-bearers for the year were appointed as follows: *President:* Dr. R. Stirling; *Vice-President:* Dr. Liddell: *Secretaries:* Drs. Urquhart and Taylor: *Treasurer:* Dr. Hume; *Council:* Drs. Simpson, MacAulay, Haig, Niven, and Soutar.

*Reports.*—The report of the Council was read and received. The report of the Representative Member was made by Dr. Stirling. The report of the Treasurer showed credit balance of £3 14s. 3d., after payment of unusually heavy expenses during the past year.

*Installation of New President.*—Dr. R. STIRLING, the President for the year, assumed office, and gave an address on Gastric Ulcer: its Differential Diagnosis and Sequelæ. In the course of his remarks he referred to the inconstancy of the classical symptoms, and to the frequent difficulties of diagnosis. He spoke of the diagnostic value of decubitus and localisation of pain. After giving statistics as regards the frequency and mortality, he dealt systematically with the two types of gastric ulcer—acute and chronic. Each had its own special clinical features, which ought to be recognised. In the acute form the two great disasters were perforation and hæmorrhage. Death resulted from hæmatemesis, and the mortality was greater than generally supposed. The results of treatment in acute cases were not satisfactory. Regarding perforation, he pointed out the value of careful pathological research. He showed the urgency of early operative measures, and declared that he was ready to throw aside the conservative medical treatment in favour of early surgical interference. He referred to the occurrence of parotitis as a symptom of perforation in four cases under his care, and gave it as his opinion that this was an index of general sepsis from peritoneal absorption. In treating of the chronic form he dealt with the difficulties of diagnosis, and the amenability of the disease to medical and surgical treatment.—Dr. PARKER STEWART proposed a vote of thanks to Dr. STIRLING, and a discussion followed.

*Sanitary Law and Infectious Diseases.*—Dr. PARKER STEWART read a paper on sanitary law, referring chiefly to the notification of infectious diseases and the wording of the Act. He treated of the various forms of inflammation classed as erysipelas and puerperal fever, and urged the necessity of a proper definition of these terms. There was no doubt that sapræmia, septicæmia, and pyæmia, arising in the puerperium, were notifiable; but in addition to these it was held by many authorities that such conditions as metritis and peritonitis and all cases of acute pelvic inflammation occurring in connection with childbirth were included under the term of puerperal fever. He also drew attention to the part of Section LVI forbidding wakes in infected houses, and remarked that during the recent outbreak of plague in Glasgow particular notice of this part of the Section was given to the citizens. He next referred to the difficulty of interpreting the later part of Section LVII, where it was stated that no child in an infected house can attend school until the house has been disinfected. He gave, for example, a case of typhoid or erysipelas, which is treated and well isolated in a large, well-regulated house where there are one or two children who attend school. Was he correct in forming the opinion that children, although free from the disease, or free from the infection, or free from exposure to infection, could not attend school until the house has been disinfected—a circumstance which could only be done when the patient had recovered? Dr. Stewart also showed to the meeting a new "notification" form which was proposed to place before the medical men of the city, and in which was required reasons for removal of infectious cases. He also referred to the conveyance of infectious cases in public vehicles. It should be settled in law what action was to be taken in cases of extreme urgency where this Section was necessarily contravened. A considerable amount of discussion followed, Drs. BEATTIE, KENNEDY, SIMPSON, HAIG, and STIRLING taking part in it, and it was agreed that the debate should be adjourned till a future meeting.

*General Medical Council Election.*—Reference was made to the election of a direct representative to the General

Medical Council, and the meeting agreed to support Dr. Bruce.

*Next Meeting.*—The next clinical meeting was arranged for a convenient date in February.

*Dinner.*—The members present then dined at the Station Hotel as usual.

# SPECIAL CORRESPONDENCE.

## LIVERPOOL.

*Sir A. L. Jones, K.C.M.G.—The School of Tropical Medicine: Students' Hall of Residence.*

The announcement that His Majesty the King has been pleased to create Mr. Alfred L. Jones, the originator of the School of Tropical Medicine, a Knight Commander of the Order of St. Michael and St. George, has given great satisfaction to his numerous friends, and especially to all who are interested in the School of Tropical Medicine.

In connection with the Liverpool School of Tropical Medicine an important development has recently taken place, consisting in the institution of a hall of residence for students. It owes its existence to a few gentlemen who have been active in promoting the school, among whom may be especially named Sir A. L. Jones, K.C.M.G., Mr. John Holt, and the Hon. R. B. Blaize, a native gentleman of Lagos. The home is at 44, Upper Parliament Street, within easy access of the Medical School on the one hand and of the Royal Southern Hospital on the other, being situated on one of the principal tramway routes. Sir A. L. Jones said that it was hoped that the hall by and by would be able to accommodate 200 students, that the colonists would put forward a number of youths, and that the shipping companies would give them free passages. He believed that the movement would be of enormous value to the world, and he hoped that that day would be a historic one in the development of the tropics. The Bishop of Liverpool in declaring the hall open, said that that new departure would be watched with the greatest interest from many parts of the world, and would, he thought, be fraught with great results. That home was the child of the Liverpool School of Tropical Medicine, which had already made its mark in the world, had its martyr in Dr. Myers, and had recorded a great triumph in the work of Major Ross in West Africa. A wise, statesmanlike, and true Christian spirit had led to the foundation of the hall. It was a home for strangers in a strange country, where they would be cared for without being coddled, and sheltered without being put put into straight waistcoats. They would be under a trained warden who would help and advise them with regard to their studies. The institution was also catholic, making no distinction of race or colour. It was also wonderfully economical, students paying only £1 per week.

## BELFAST.

*Conference of the Irish Workhouse Association on Poor-law Administration in Belfast.—Lunatics, Epileptics, and Vagrants.—Illegitimacy.—Boarding-out.—Nursing in Infirmaries.*

A Conference on Poor-law Administration was held in the Council Chamber of the City Hall on November 7th and 8th by the Irish Workhouse Association. A large number of unions of Ulster were represented, and the attendance was excellent. Lord Monteagle, the President of the Association, acted as Chairman, and Mr. Robb, the Clerk of the Belfast Union, as Honorary Secretary. The Chairman explained that the Association was founded five years ago, and that its special objects were then stated to be (1) the improvement of the condition of the sick, the aged, the children, and other helpless classes embraced by the Poor Law, and (2) the discouragement of vagrancy; and among the methods advocated to advance these objects was the encouragement of Conferences to arrive at a general agreement as to the principles of workhouse administration.

The first discussion was introduced by Alderman J. Milson Rhodes, M.D., President of the Poor-Law Unions Association of England and Wales on the Epileptic and the Insane. The certified insane in asylums had risen from 8,667 in 1880 to close upon 16,000 in 1899, and he advocated their removal to asylums, which should be "hospitals for the treatment of mental disease"; but he considered the State had not risen to its duty in preventing the increase of feeble-mindedness and epilepsy, which were hereditary diseases. The English Parliamentary Committee unanimously approved of the treatment of the epileptic and the insane outside the workhouse walls: they should try to make these unfortunate people useful, and have plenty of land for them to work on; such work, besides being remunerative, was most beneficial. Dr. McLiesh, Surgeon to the Belfast Infirmary, considered that the increase of lunacy was more apparent than real; he detailed the accommodation of the department in the infirmary, and supported the view of establishing a home for sane epileptics.

Mr. William O'Hare, Poor-law Guardian for Belfast, read a paper on Casual and Able-bodied Tramps. The statistics for 1900 in Ireland showed a total of 192,764; this was far above the actual number, as a tramp was counted each time he was relieved; the "vagrant question" was not so formidable in Ireland as generally believed, and Mrs. J. C. Payne, Lady Poor-law Guardian, thought there was considerable improvement in this direction. Mr. Walker said that they had families generation after generation in the Belfast Union. Dr. Rhodes said that, from an investigation of the causes of vagrancy, he found that the bank rate had a great influence upon the increase; when money was tight, the great enterprises of waterworks and railways, the class of work that employed unskilled labour, were not taken up.

On the second day a paper was read by Mr. William Bodden, on Children Born out of Wedlock: the Liability of their Fathers for their Maintenance. The legal remedy for the mother in Ireland was singularly inequitable; it constituted, also, an unjust tax on the ratepayers. For one year, £1,193 was spent in eight of the workhouses of Antrim and Down in affording relief to unmarried mothers and their children, while the putative fathers were allowed to go scot-free. In the Belfast Workhouse, 75 per cent. of the mothers who, with their children, obtained relief during the period stated, were either domestic servants or girls employed in warehouses and mills. The father, mother, or employer of the girl might proceed against the putative father, and, if able to prove loss of services, might obtain damages. The girl might sue the father at stated periods for sums already expended, but only where a promise had been given to contribute to the support. Thus a remedy was practically denied any poor girl. The English law, which allowed a putative father to be summoned to a court of petty sessions on the application of the mother, and the justices were empowered to make an order not exceeding 5s. a week, should be extended to Ireland.

Lady Monteagle said that the utility of boarding-out children was as much endangered by wholesale and indiscriminate advocacy as by wholesale condemnation. Although boarding out gave the child a chance of a home life, with its advantages both as a training in itself and as an avoidance of the dangers of the workhouse, yet cases of cruelty and culpable neglect were not unknown. Lady Monteagle advocated voluntary ladies' boarding-out committees, on which lady guardians should not sit. The most important work of such committees must be thorough and systematic inspection of the children themselves. The child should be visited at the home and at the school, not at the workhouse, and an official lady inspector was also required. A very large number of speakers joined in this debate. The Chairman, in summing up, said that there was a consensus of opinion that it was essentially a woman's question, that all were agreed that the first thing was to get the children out of the workhouse, that all the ladies recognised the great responsibility which rested on them, and that all would welcome the help of a trained lady inspector.

Dr. Robert Hall, Surgeon to the Belfast Union Infirmary, opened a discussion on "Nursing in Infirmaries;" he gave a succinct account of the progress made in the Belfast Infirmary; in 1884 there were 11 nurses to 1,250 patients; now there were 120 to about 1,400; he detailed the method of selection, the training, the lectures, the examination; and compared the present condition with that of twenty years ago when Miss Pirrie, daughter of Dr. Pirrie of Belfast, was appointed Lady Superintendent, and entered upon her most

arduous and trying duties eventually so successfully discharged. Dr. Hall spoke of the feeding, lodging, holidays' and recreation of nurses, and of the necessity and economy of doing everything to preserve the health of a nurse. Dr. Calwell advocated a much more varied diet for the nurse, and emphasised the appeal for better accommodation in the smaller infirmaries. Advertisements offering £50 a year for charge nurses remained unanswered, because there was one room in close proximity to the patient for sleeping, eating, and sitting; if guardians would offer £30, and utilise the other £20 in accommodation, they would have more applicants. He bore testimony to the freshness and cleanliness of many infirmaries he had visited as an examiner and to the high efficiency of the nurses in both the Belfast and Lisburn Infirmaries. He strongly advocated that certain of the better country infirmaries should be recognised as training schools, but of course under stringent restrictions. Dr. McDonnell, Poor-law Guardian, Belfast, detailed many improvements that had been carried out in Belfast; he thought the Local Government Board had exceeded both their powers and the spirit of the law in trying to regulate and control the number of nurses, etc., against the expressed will of the various Boards of Guardians. He gave statistics of the rate of increase of the nurses, and showed that it was really economical, as the poor-rate had been reduced from 1s. 4d. in the £ to 1s. Dr. Thompson, M.P. (Omagh), Dr. St. George (Lisburn), and Dr. Darling (Lurgan), President of the North of Ireland Branch of the British Medical Association, all advocated strongly that the certificate of the better country infirmaries in Ireland should be recognised by the Local Government Board; their nurses were acknowledged in England, Scotland, and the Colonies, but were not, except in private hospitals and institutions, in their native land. Dr. Hall, in reply, said that one nurse to ten patients was a fair average for workhouse infirmaries. The usual votes of thanks brought to a termination a successful and valuable Conference.

# CORRESPONDENCE.

## LOCAL TREATMENT IN DISEASES OF THE UPPER AIR PASSAGES.

SIR,—My attention has been called to a case contained in a lecture by Sir F. Semon, published in the BRITISH MEDICAL JOURNAL, November 2nd, 1901, entitled "Local Treatment in Diseases of the Upper Air Passages." In it he criticises adversely my views on the treatment of adenoids. I do not desire at present to enter into a further discussion upon a subject which must be decided by experience and by that alone. What I do object to is the inaccuracy of the history of the facts of the only case on which he founds his judgment of my practice.

I saw the patient mentioned on p. 1320 with a very distinguished surgeon who was to have operated on the child for the removal of adenoids. For reasons which I cannot enter into here we agreed that the child's respiratory capacity should be increased and the air passed habitually through the nose. I saw the child some time after with the medical attendant, who expressed himself as being much pleased with the result of the treatment. Personally I found little or no improvement, clearly due to failure in the carrying out of instructions. I felt it my duty to write to the father of the child (a personal friend of my own), stating that I could not associate myself with any expression of opinion that the child was better, and pointed out to him that the condition of the patient was due to the failure of the application of the principles involved in the treatment. Some months later the father wrote informing me that Sir F. Semon was to see the child, to which I naturally replied that it was a wise step under the circumstances. I leave it to your readers to judge whether Sir F. Semon is justified in condemning a treatment on such a fallacious basis.—I am, etc.,

Cavendish Square, W., Nov. 8th. W. ARBUTHNOT LANE.

SIR,—I have read with much interest Sir Felix Semon's lecture on the treatment of diseases of the upper air passages, and am much impressed by the very divergent views expressed by two such eminent and experienced surgeons as Sir Felix Semon and Mr. Arbuthnot Lane on the pathology, history, and mode of treatment of so common a condition as adenoids in the naso-pharynx.

Sir Felix Semon does not believe, notwithstanding all reports to the contrary, that a single case of well-marked adenoids has been cured by breathing exercises, and considers such treatment as nothing more than a fashionable craze. I read Mr. Lane's two papers on the subject shortly after their publication in 1897 and 1899, and since that date I have patiently carried out the principles of treatment suggested.

My experience is necessarily limited, as it is only within the range of my own general practice; but my cases have been sufficiently long under my observation, and the results sufficiently striking, to convince me of the truth of Mr. Arbuthnot Lane's views and observations, and I consider his method is a distinct advance on the practice of routine operation.

Since I adopted Mr. Lane's method of treatment, I have only operated on a small proportion of cases; and these were cases in which I had failed to induce the patients and their parents to carry out the whole treatment with sufficient perseverance. The improvement in the child's general mental and bodily development, after a course of breathing exercises, is such, that I now frequently recommend it in cases of weakly and ill-developed children, even when no adenoids are present.—I am, etc.,

ALFRED E. PRICE, M.D., M.S. Lond.

Bromley, Kent, Nov. 9th.

SIR,—Some forty columns of your space have been occupied with two lectures,[1] and to them you have been pleased to accord a laudatory leader. Your opinion that "just as the reformer may be too active, so, on the other hand, the conservative may be too inactive," emboldens me to offer a few remarks from that point of view. It would not serve any useful purpose to take each point occupied by the lecturer to justify his thesis; I propose to consider only his first illustration, that of a charge against Dr. X., who is "stated (to have) opened more than 500 maxillary antra within a comparatively few years." It will be observed at once that the charge is in itself rather vague; the lecturer has "seen it stated," he has no personal knowledge, but "what the policeman says is not evidence." Next, we do not know what is meant by "comparatively few years," but I will assume it is five.

In the fifth edition of my systematic work (page 856) I have been able to quote certain figures illustrating the frequency of maxillary empyema.

1. Gradenigo has published two series of figures in 1891 and 1894 which demonstrated that, as a result of *post-mortem* examination of the maxillary antrum of 203 patients taken without selection as to the cause of death, chronic empyema was found in 45 instances, otherwise in over 22 per cent., or as Lermoyez, quoting these figures, puts it, "one at least of every five hospital patients taken at hazard is the subject of a chronic sinusitis."

2. E. Fränkel of Hamburg, desirous of making some bacteriological researches of the contents of the cavities, performed necropsies on 146 patients who had died in the hospital, and were found to be the subjects of sinusitis. In not a single instance had this condition been recognised during life.

3. Weichselbaum of Vienna, who (1886) was the first to describe bacteria in antral contents, ascertained by necropsy of all the accessory cavities of a large number of patients dead of influenza, that inflammation of one or other antra existed in 90 per cent. of the subjects examined.

4. I have not at hand the gross figures of Ziem, who, however, practising in Dantzig, a town with a population of about 60,000, reports having tapped an antrum without finding pus in 9 per cent. of a series of 47 cases; in an earlier series he had acknowledged to 10 or 12 per cent.;[2] circumstances which suggest that activity in antral surgery is at least as vigorous in the native country of the lecturer as in that of his adoption.

I have not the remotest idea of the identity of the surgeon referred to by the lecturer, but I would ask the question, Is it unreasonable—presuming that he has a hospital appointment for a throat specialist in a city of 5,000,000 (five million) inhabitants with a large provincial extension to have seen annually on the basis of the foregoing facts about 1 in every 50,000 of the population suffering with maxillary empyema which called for operation, in a period of five years?

Mr. Stephen Paget, in the admirable memoirs of his distinguished father, says that patients used to be sent to Paget for diagnosis and to Fergusson for operation, but I never heard that Sir James Paget accused Fergusson of "operative intemperance." I say nothing as to the justification for more

[1] BRITISH MEDICAL JOURNAL, November 2nd and 9th.

[2] *Journal of Laryngology*, vol. IX., 1895, p. 733.

frequent operations nowadays which has resulted from the splendid researches of Lord Lister, but what I do claim is that while we cannot all be either Pagets, Fergussons, or Listers, we should, before we "confess to serious misgivings" of the rectitude of others, "verify our references," and that this duty is the more incumbent on one who is justly credited with high bibliographical erudition, inasmuch as he has been for some twenty years the editor of international archives on the literature of the special regions now under consideration, in the pages of which will most probably be found references to the figures I have quoted or to others equally convincing.—I am, etc.,

Mansfield Street, W., Nov. 12th. LENNOX BROWNE.

P.S.—I have no intention of continuing this correspondence, but lest it should be suggested that I have contravened only one of the lecturer's illustrations of operative intemperance, I desire to say that I have simply taken the first because it was the first, and that in no vague sense I could prove that the motto *ex uno disce omnes* might be fitly applied to the remainder.

## THE TREATMENT OF LARYNGEAL GROWTHS IN CHILDREN.

SIR,—Dr E. Mansel Sympson's paper with the above heading in the BRITISH MEDICAL JOURNAL of November 9th requires a very short notice at my hands. He finds fault with me and accuses me of discourtesy for not accepting his views of the case as stated by him at the Carlisle meeting of the British Medical Association in 1896.

Any doubt I may have had regarding the nature of the case has been fully confirmed by Dr. Sympson's communication. In the first place he states that he performed tracheotomy on April 10th, 1890, that the tube remained in the trachea for fifteen months, and that as no improvement resulted during that time he sent the child to London where thyrotomy was performed. In the next place we have the curious information that at the second operation (thyrotomy) it was found that "there was already a tracheotomy tube in the trachea, but it was above the cricoid cartilage (crico-thyroid space), so another was put in below." Now, how one tube could be in the crico-thyroid membrane and at the same time in the trachea, unless like Sir Thomas Roche's bird it had the faculty of being in two places at once, is beyond my comprehension.

If Dr. Sympson will pardon me, I will now give very briefly my explanation of the nature and course of his case. Having diagnosed the existence of papillomata of the larynx, he started to perform tracheotomy. So far, so good. Instead of entering the trachea, he kept too high and struck the crico-thyroid membrane, and through it made his way into the larynx. What was the result? He placed the tube in close proximity to the vocal cords, and therefore to the growths. Anyone with experience of such cases knows that papillomata appear not only on, but under the vocal cords, and in such a case, especially in a small child, the tube would be in direct contact with them. My surprise is, not that the growths did not disappear, but that on account of the local irritation by the tube they did not develop to a much greater extent than was found to be the case, and manifest themselves around and outside the laryngotomy opening.

I think it is perfectly evident that Dr. Sympson did not perform tracheotomy, but laryngotomy; that as the growths did not disappear, but increased, there was—and could be—no recurrence; and further, that the title of his paper is not in accordance with the facts of the case as narrated by himself, and is therefore erroneous and misleading. Instead of the title being as above, it ought to be, "Case of Increase of Laryngeal Papillomata in a Child after Laryngotomy." This substantiates my views as to the ineffectual results of external laryngeal operations in many of these cases.

If Dr. Sympson had succeeded in carrying out his intention of performing tracheotomy, and had exercised a little patience in the matter of the wearing of the cannula, the probability is very great that he would not have required to send his little patient to London to undergo another operation.—I am, etc.,

Edinburgh, Nov. 11th. G. HUNTER MACKENZIE.

SIR,—In a paper read by Dr. G. Hunter Mackenzie at the recent annual meeting of the British Medical Association on the Treatment of Laryngeal growths in Children, and published in the BRITISH MEDICAL JOURNAL of September 28th, a reference is made to myself. I regret that I only saw Dr. Mackenzie's paper to-day for the first time; but, though thus delayed, I trust you will permit me some remarks thereon.

He is arguing against thyrotomy, and to support his contention he says (page 883): "Walker Downie had a 2-year old child on whom thyrotomy had to be performed six times in one year." That, I think, is an extract from a paper read by me before the Glasgow Medico-Chirurgical Society on April 17th, 1896, and published as part of the proceedings of that Society in the *Glasgow Medical Journal* in October of the same year. The case referred to was one of five children brought before the Society in whom intralaryngeal papillomata had been successfully removed by means of thyrotomy. In the other 4 cases one operation alone was called for, and the result in each case was most satisfactory and has been permanent.

In regard to the fifth case, where the larynx had to be opened six times in one year, the following remarks were appended to the report, namely: "The age of the patient" (one year and eleven months), "the size of many of the growths removed, the extent of the surfaces involved" (the growths affected the whole larynx and the upper part of the trachea), "and the rapidity and frequency of recurrence of the growths make the case a remarkable one," and in my experience it is unique. Dr. Hunter Mackenzie picks out what to me was a most exceptional case, and uses it as a plea against thyrotomy. The patient referred is now nearly 9 years of age, is a tall, strong, healthy boy, attending a Board school regularly. No recurrence of the papillomata has taken place, and no treatment of any kind has been required since a seventh thyrotomy performed on May 12th, 1896.

I have had several cases since those reported in 1896, notes of which I hope at no distant date to place at your disposal.—I am, etc.,

WALKER DOWNIE, M.B.,
Lecturer on Diseases of the Throat and Nose,
October 28th. Glasgow University.

## OOPHORECTOMY IN MAMMARY CARCINOMA.

SIR,—The letter of Dr. McNicol on the above subject in the BRITISH MEDICAL JOURNAL of November 9th requires a reply from me. He refers to a paper of mine on Oöphorectomy in Mammary Cancer read before the Surgical Section at the Cheltenham meeting on July 30th, and published in the JOURNAL of October 19th, in which a case I operated on for him is given in illustration of the effects of the procedure in removing cancer of the breast. Anyone who reads my paper and Dr. McNicol's letter will see that, though he speaks disparagingly of the treatment, we are both in agreement as to the results obtained under it, for there was practically an entire disappearance of the local manifestations of the disease in the mamma and in the adjacent glands, and that in a case of a very widespread character, which was quite beyond the surgeon's knife, and which had as its leading characteristic a breast mass which, to quote Dr. McNicoll, was "the size of a full-time and full-sized fœtal head." In appraising the value of the oöphorectomy treatment, does Dr. McNicol think it fair to omit that this mass was on the point of ulceration, and that he brought the patient for my opinion as to the advisability of excising it, as it would soon have given rise to a sloughing, discharging, and offensive sore, which would have made the patient's condition one of great misery and distress? A perusal of the first part of Dr. McNicol's letter would almost make it appear that he had brought his patient for my opinion as to the advisability of oöphorectomy, whereas he must remember that at our first consultation he admitted that he had never heard of the oöphorectomy treatment of mammary cancer and asked me to explain it. I pointed out to him that while excision of the cancerous breast would be unsurgical and useless, looking to the extent of surrounding skin involved in the malignant growth, I, however, believed that oöphorectomy would in all probability diminish vascularity in the affected tissues, arrest the local action of the disease, and induce atrophy of the mamma, thus minimising and perhaps preventing the sloughing and ulceration he was apprehensive of.

That it accomplished what I said it would Dr. McNicol's

better confirms, and from personal observation of the patient a few days before she died I can say that, although there were some recurrent cancerous nodules round it, the dense flattened cicatricial mass which lay on the thoracic wall and represented the atrophied remains of the once prominent mamma never was the seat of active ulceration or offensive discharge. Seeing, then, that the primary object for which the patient was brought to me was attained, I regret that Dr. McNicol should have made no reference to this point, as any one can see it has an important bearing on the position he now takes up, that, after seven months, he "bitterly regretted" having sanctioned the oöphorectomy. Were these "bitter regrets" due to the fact that his patient was freed from the presence of the sloughing and offensive ulceration that he so much dreaded and was so anxious she should be spared, and to ensure which he came prepared to put forward a hazardous and useless local operation? If so, his present position is a very illogical one, and his view is not shared, I am sure, by the patient's friends.

With such an improved local condition of the disease, it is quite clear that the patient's prospects of prolonged life were very good had there not appeared the liver and pleural infections, which eventually caused death. Dr. McNicol's letter would almost indicate that these were unexpected, whereas he was told by me on October 8th, at our first consultation, that the permanence of any local improvement depended on the presence or absence of visceral deposits, and that with such extensive local disease and glandular implication in connection with the right mamma, that the liver was very likely to be the seat of secondary growths, my experience having confirmed what the lymphatic distribution would lead us to expect that that organ is sometimes very early attacked in carcinoma of the right breast. Dr. McNicol knows that it was only when a very careful physical examination had revealed no apparent affection of the liver or of other organs that the oöphorectomy was done. Does he wish it to be understood that the liver growths that showed themselves subsequently were the result of this operation? It surely must be so, as in no other way can I conceive him "bitterly regretting" it, especially as it had removed the local conditions that had caused him so much apprehension. If this is so—and I see no escape from the conclusion—then Dr. McNicol is taking up a position that has not the slightest evidence to support it, and indirectly he equally condemns the ordinary recognised operation of excision for mammary cancer, for he ought to know that cases occur where, soon after that operation, liver complications show themselves, the existence of which the most careful previous examination failed to detect.

When secondary deposits declare themselves under such circumstances, the surgeon does not attribute them to the operation. He very properly concludes that they were there as small foci when he operated, and he holds himself blameless in the matter. All our knowledge justifies this attitude, and oöphorectomy in mammary cancer is on the same footing and can never on this score give rise to "bitter regrets."

It is, I think, very generally admitted that such secondary growths as Dr. McNicol's patient was attacked by, no matter whether appearing after excision of the mamma or, indeed, where no operation has been done, render a patient's existence one of suffering. Do Dr. McNicol's "bitter regrets" arise from the view that oöphorectomy intensified these sufferings? From his letter he would wish us to believe so. He describes his patient's existence as "simply a long-drawn-out, painful, and living death." I tell him plainly that it was nothing of the kind. During the month of May when I saw her with Dr. McNicol she had a week of very severe pain in her back, to which I make reference in my paper. The possibility of there being secondary spinal disease was discussed, but the pain yielded to treatment, and troubled her again very little, indicating that it was in all probability of the nature of lumbago. When I saw the patient, about ten days before her death, her condition was one of comparative comfort. She had no œdema of the arm, as there were practically no enlarged glands in the axilla; she had no offensive discharge; and she expressed herself as having had comparatively little suffering since the acute attack in May. In fact, I have reason to know that after that month she had no "agonising pain," that she had fairly good nights, and that she was out in the open air for several hours in her wheeling chair every day until about a week before her death. There was gastric irritability and loss of appetite, caused, no doubt, by the hepatic disease, but no distressing symptoms, and her relatives never gave expression to the statement made that they "bitterly regretted" the operation.

One is only too glad to have the after-history of any case, but to paint it in language that is grossly exaggerated and incorrect is neither right nor fair, especially in connection with a line of treatment that is still *sub judice*, and in connection with which everything should be fully recorded. Were it not for the present position of oöphorectomy in mammary cancer I should not have noticed Dr. McNicol's letter, but I am compelled to notice it, seeing that in the only case that has come under his notice its clinical value has been lost on him, and he has further chosen, by giving an outline of it that is, to say the least, misleading, to prejudice the profession against a procedure that in the hands of many others has had the same interesting results as in my own, and of the benefit of which I have received encouraging testimony from several quarters both at home and in America.

Dr. McNicol gives it as his opinion that I have not yet found a "cure" for cancer, as if I had laid claim to such a result in any of the cases I have dealt with. Anyone who chooses to look into what I have written on this subject will find that I have never done anything of the kind. All I have done is to urge, time after time, that the local disappearance of carcinoma of the mamma under oöphorectomy is so striking, and has been observed by so many independent workers, that it is a fact that calls for special enquiry and investigation in connection with the etiology of a disease that has so far completely baffled our efforts to control it locally. Until we know the true cause of cancer we can never deal with it successfully.

For my own part, I see in the results of this organotherapy by oöphorectomy for mammary cancer a clear indication that we must look to the ovary in the female, and in all probability to the testicle in the male, as the *fons et origo mali* in the carcinomatous process. Whether this be through a special secretion, or, as I think more likely, through wandering epithelial cells of a germinal type derived from ovary or testicle, I am not yet prepared to say, as I have no facts in support of such views beyond the oöphorectomy cases. I have had sections made of ovaries removed in oöphorectomy, and search made for cells of the "cancer bodies" type, but so far without results. Neither has chemical investigation of the ovaries revealed anything. At the same time it is in this direction that my inquiries are still being conducted, as I think that the testicles and the ovaries are the organs that need careful investigation in all cases of carcinoma.

Meanwhile I feel I am justified, notwithstanding Dr. McNicol's letter, in urging oöphorectomy even in inoperable cases of mammary carcinoma, provided careful examination reveals no visceral lesions. With regard to operable cases, I also think, as my paper in the Journal for October 19th shows, that the time has come when it may be done in them as a primary operation or in conjunction with excision, and I am strengthened in this opinion by the support given to this view by the members who heard my paper read at the Cheltenham meeting.—I am, etc.,

Glasgow, Nov. 11th. George Thos. Beatson.

## THE "FOURTH DISEASE."

Sir,—In the letter which appeared in the British Medical Journal of November 2nd from Dr. Clement Dukes, wherein he reaffirms his belief in the specifically distinct nature of those cases which he has provisionally termed the "fourth disease," there occur two statements which are so much opposed to what is, I think, the common experience in fever hospitals, that I trust Dr. Dukes will forgive me if I appear to question their validity.

Dr. Dukes, while expressing his conviction that many of these cases find their way to the fever hospitals, states that "sometimes they are not admitted on account of not having scarlet fever." Now, for my part, I find it difficult to believe that such cases would be refused admission at a fever hospital, having regard, not only to the close resemblance which they are said to bear to scarlet fever—so close, indeed, that

Dr. Dukes admits it is sometimes impossible in isolated cases to distinguish between them, but also to the fact, which is, I think, beyond dispute, that the existence of a "fourth disease," however strong its claim, is not as yet very widely accepted by the profession.

In view of the uncertainty which at present exists as to the "fourth disease," but few medical officers, I imagine, would be likely to accept the official responsibility of refusing to admit a case when sent up to them certified as scarlet fever.

The rejection of a series of 28 cases at one of the metropolitan fever hospitals, which Dr. Dukes cites on the authority of Dr. R. G. Gowan, must have been a very exceptional event, so exceptional, indeed, as to make one ask whether these particular cases were really so like scarlet fever, as the diagnosis of "fourth disease" would imply; whether, in other words, the evidence as to their real nature was sufficiently convincing to exclude the possibility of their having been the scarlatinal variety of rubella. It would be interesting in this connection to learn whether the bulk of these cases exhibited the relatively copious peeling which Dr. Dukes holds to be as characteristic of the "fourth disease," as it undoubtedly is of scarlet fever.

Dr. Dukes goes on to say: "At other times they are received into the scarlet fever wards of hospitals, and there become attacked by scarlet fever, and give the 'fourth disease' to the scarlet fever patients already there." Now, a certain number of patients develop scarlet fever after their reception into the scarlet fever wards, it is true; but in such cases, almost without exception, the original attack with which the patient was admitted has been of a negative character, the case having been certified, apparently, on the strength mainly of a sore throat, associated with an ill-defined or fugitive eruption, and little, if any, pyrexia; the kind of case, in fact, which, owing to its negative character, one would have preferred to place in an observation ward, had one been at the time available. The fact of such patient subsequently developing scarlet fever is strong presumptive evidence in favour of his not having had scarlet fever at the time of his admission; but it certainly does not justify an assumption that the affection from which the patient was suffering on admission to the ward was likely to have been "fourth disease," a disorder of which, I gather, a diffuse scarlatiniform rash, rather than an inflamed throat, is likely to be the most prominent feature.

Dr. Dukes's further assertion that after admission these cases give the "fourth disease" to the scarlet fever patients already there, I should also have regarded in the light of an assumption, had it not been that he claims for it the authority of fact. I can only say that my own experience, comprising fourteen years' residence in a large fever hospital, is at complete variance with this statement.

The question at issue here—namely, whether such cases as Dr. Dukes describes, assuming they are incapable of explanation as a variety of rubella, ever do occur in patients who have recently suffered from scarlet fever, is naturally of the highest importance in respect to the establishment of a "fourth disease." For my part, were I to come across even a short connected series of such attacks as would constitute a limited epidemic in a ward inhabited by patients recently convalescent from undoubted scarlet fever—and such outbreaks should be common enough, surely, if Dr. Dukes is right as to its prevalence, infectivity, and the frequency with which it is erroneously admitted into the scarlet fever wards—I would at once be prepared to register my allegiance to the "fourth disease." Such an occurrence, however, I have never yet succeeded in observing, although a careful watch has been kept in the scarlet fever wards of this hospital ever since the publication of Dr. Dukes's interesting and suggestive paper in the *Lancet* of July 14th, 1900.

Occasionally a case will be received into the hospital of which the clinical features are more in accord with Dr. Dukes's description of the "fourth disease" than with typical scarlet fever, but in my experience such cases do not take scarlet fever after admission, nor are they followed by even a limited outbreak of any disease whatever.

Whether the occasional occurrence of what we recognise as a "relapse" of scarlet fever is ever dependent upon the admission into the ward of a case such as I refer to I am unable to decide. Relapses, however, are not very frequent. Dr. Dukes, I gather from his letter, is not a believer in scarlatinal relapse, preferring apparently to regard such cases as evidence of mistake in the diagnosis of the "fourth disease." On this supposition one would, I think, expect to meet with "relapses" more frequently than is actually the case. Their incidence in the hospitals of the Metropolitan Asylums Board during the last ten years was less than 1 per cent. amongst the scarlet fever cases, and, as a matter of fact, during the years 1892 and 1893—years which, I think, Dr. Dukes regarded as characterised by an unusually wide prevalence of "fourth disease"—the number of relapses showed no corresponding increase.—I am, etc.,

F. Foord Caiger.

South-Western Hospital, Stockwell, Nov. 5th.

## UNVACCINATED CHILDREN IN LONDON.

Sir,—I append a few figures to show the appalling number of children in the East-end of London who escape the public vaccinator. The present outbreak of small-pox has, indeed, a very fertile soil for its ravages, at least in this district. We can hardly wonder, then, if the epidemic assumes an alarming character. The reasons given by the parents for not having had their children vaccinated may be classed under three different headings: First, either the mothers or the fathers "do not hold with vaccination"; secondly, that the child was not well enough to be done when the public vaccinator called; and, thirdly, that they have never been troubled by the public vaccinator at all. Do these in the latter group escape because the births have not been registered?

The figures, which were kindly taken for me by our Casualty Officer, are as follows:

| Date. | Vaccinated. | Unvaccinated. |
|---|---|---|
| November 4th ... ... | 101 | 87 |
| November 5th ... ... | 80 | 49 |
| November 6th ... ... | 48 | 33 |
| November 7th ... ... | 44 | 18 |
| November 8th ... ... | 40 | 32 |
| November 9th ... ... | 35 | 15 |

These figures only include the new cases. Out of 25 and 20 new cases, respectively, seen by one of the out-patient physicians on two consecutive afternoons, only 5 on the one day and 1 on the other were vaccinated.—I am, etc.,

Percy S. Blaker,
Resident Medical Officer, East London Hospital for Children, Shadwell, E.

November 11th.

## "WHAT IS EFFICIENT REVACCINATION?"

Sir,—I was very glad to see Dr. S. Verdon-Roe's article on What is Efficient Revaccination? My own experience fairly well coincides with his, over and over again, especially lately. I have found that, using lymph by well-known firms in revaccinations (and these are what I expect most of us have been performing lately), there has been practically no reaction, that is, just some itching, localised redness, and swelling and tenderness in the glands affected, all of which symptoms passed off in a few days without the formation of any vesicles or constitutional disturbance. I venture to say that no sensible person could put this down as efficient vaccination.

Now in these very cases I have within a fortnight after this unsatisfactory result used lymph which is stated to be concentrated and reinforced, and in these persons who have refused to "take" with the former lymph, have with the latter produced typical vesicles on each area vaccinated, accompanied by the other usual local and constitutional symptoms.

Now, how is this to be accounted for? The only conclusion one can come to is that, to say the least of it, there is something radically wrong with the majority of the lymph used.

A person can hardly be insusceptible one week to a certain kind of lymph, and the next have typical vesicles, etc., by using another, unless the first was worthless, exactly the

same precautions and method of performing the vaccination being used in each case.

I think in the majority of cases there is only one thing wrong, and that is the activity of the lymph used, and when that is rectified we shall hear less about the cases of revaccination (say at an interval of fifteen to twenty years) which do not take, and less misleading statements upon which to base our opinion as to the protection conferred by vaccination and revaccination.—I am, etc.,

South Kensington, S.W., Nov. 4th. C. CHICHESTER PRESTON.

## DOCTORS AND MIDWIVES.

SIR,—I think we may take it that there are very few women of the labouring classes who, if left to themselves and not influenced by outsiders, would ever employ a midwife if they could obtain the services of a medical man. If, however, the medical man's fee is more than they can afford, unless they apply to the parish, there is no other resource but to entrust their lives to some woman who will act as a midwife. It is thus evident that the action of medical men who will accept nothing less than their regular fee has rendered the existence of the midwife a necessity.

I have often felt sorry when I have heard the wife of a respectable labouring man tell how she has wandered in search of a doctor who would accept a small fee, and been at last compelled against her will to engage a midwife. The position of the respectable poor as regards midwifery attendance is bad enough, and that of the general practitioner is also unsatisfactory. There are many medical men willing to accept low fees, but they are ignored by the hospital Boards who are sending out midwives, and by the fashionable consultants who are telling their clients who are promoting midwifery Bills that poor women are better attended by midwives than by medical men, who charge less than a guinea. We are compelled, at the risk of public censure, to attend women who have been neglected or maltreated by midwives, and to cancel our own engagements when in daily and close contact with puerperal fever. In addition to these grievances there is perpetually looming before us a Bill that must still further curtail our practice by creating a new and independent body of practitioners.

In the correspondence of the past weeks three remedies have been proposed:

1. Train women to act as midwives and tell them in difficult cases to send for a doctor. This is the course adopted by some of our London hospitals and recommended last week by Dr. Glover in the following words: "In any Midwives Bill it should be enacted that in every sanitary district the local authority shall be required to provide and pay medical men who are summoned by the midwives sanctioned under such legislation in cases of emergency." This is neither more nor less than sanctioning midwives as an independent body of practitioners who may call in a medical man if they think fit.

2. The Guild recommend that obstetric nurses be adequately trained, and under the direct supervision of practitioners who will be paid by the sanitary authority. Does anyone seriously believe that the Exchequer or almost any sanitary authority is at present in a mood to sanction this increased taxation? A Bill to provide free medical attendance, on the same lines as the Free Education Bill, is in the far future, but would be more likely to receive public support than this piecemeal legislation.

3. The remedy which I propose, and which is already adopted in many quarters, is an old-fashioned one which will not commend itself to those who are perpetually reminding us that we must look after our own interests, and do our work in a trading and commercial spirit. Though it may bring with it apparent loss I am convinced it is the only method of solving our difficulties, and will best conduce in the long run to the status and wellbeing of our profession. I hold that every man who accepts a medical diploma, conferring as it does certain advantages, incurs also certain obligations. It is an obligation resting on the medical profession to attend rich and poor in sickness and women in childbirth. After twenty-five years of practice I am as little desirous as anyone to attend midwifery at low fees, but when any respectable woman who cannot afford to pay my regular fee asks me to attend her in confinement, I attend her at what fee she can afford. If she can have food, nursing, and fairly decent sanitary surroundings I never refer her to a relieving officer, nor advise her to call in a midwife. Were this course universally adopted, and did medical men make it clear through the British Medical Association or other representative body that they regarded midwifery as part of their profession, and that no woman need be left unattended by a medical man in childbirth, there would be no trouble about the registration of midwives. Refusal to render assistance to a respectable woman not in receipt of parish relief, who is being attended by a midwife simply because she cannot pay the usual medical fee in the neighbourhood is contrary to all reason, and deserving of the strongest possible censure.

On the other hand, provided it could be shown that the woman had no excuse for entrusting her life to an unskilled person, and that she could have been attended by a medical man if she wished it, medical men would be free from the responsibility incurred by others, and there are few indeed who would entrust their lives to a midwife when they knew that in case of difficulty they need no longer rely on help from a medical man.—I am, etc.,

Greenwich, Nov. 4th. J. H. KEAY.

SIR,—Would it be unprofessional to advertise that one would not follow midwives? If so, how could Dr. Broadbent's idea (BRITISH MEDICAL JOURNAL, November 2nd, 1901, p. 1378) be put in practice? One could not adopt it without due notice. It seems to me it would end the midwives and their Bill.—I am etc.,

Goxhill, Lincs, Nov. 11th. THOS. M. WATT.

## THE MIDWIVES QUESTION.

SIR,—The correspondence in your pages upon the death of a parturient woman at Swanscombe so vividly illustrates a point which I have always thought to be left strangely out of sight in all the proposed legislation for midwives—though it seems to me to be the key of the situation—that I should be glad to be allowed to say a few words upon it.

That vital point is the nexus of the midwife with the profession, not the Midwife—with a big M—by any ingeniously devised representation on Boards or Committees, but the real living relation of individual midwives to the medical men and women practising in the same district. That this relation should be a distinctly ancillary and subordinate one I am convinced, and I believe nine-tenths of the profession more or less vaguely feel the same; but I am not so sure that those who are most active in promoting legislation on the question do feel it. That such a relation might nevertheless be an honourable and helpful one on both sides, and greatly for the benefit of the community, I am equally convinced, but I am afraid there are friends of the midwife who will think it degrading.

What I would propose is as follows: That every midwife should be licensed, say by a county council, to practise in some defined district, and, for the time being, in that district only, and that such licence should only be granted on condition of her application being countersigned by some practitioner or practitioners, who thereby undertake to advise and assist her in all difficult or anxious cases. This would give her a right of recourse to them, and them a means of controlling her. The former is for the interest of all three parties the patient, the midwife, and, lastly, the doctor—who would still see, and be paid for, all the most instructive cases, while relieved of much ill-paid drudgery. The latter is no less truly in the interest of all three. It will of course be said that it puts the midwife too unreservedly under the thumb of the doctor, who can at any time deprive her of her livelihood by refusing any longer to back her papers; but the vast majority of the profession may, I am certain, be trusted not to do this lightly, capriciously, or unfairly, and, in the case of the small minority who cannot, the honest and competent midwife who cannot get on with one medical man or woman, could always fall back upon another, and she who cannot get on with any—the hopeless blunderer or self-sufficient muddler, the woman who hushes up bad symptoms and will not seek advice—has presumably mistaken her vocation and had better leave it. Hard cases might oc-

casionally occur—under what system will they not—but to base our legislation upon them is proverbially bad, and a really ill-used midwife would be borne up by a tide of sympathy and indignation which few men would care to face.

The financial aspect is the crux of this scheme as of most schemes, and it too has been strangely slurred over in the proposed legislation. Who is to pay the doctor? Where the midwife was working for any public body or charitable committee there would of course be no difficulty; nor in the case of the few well-to-do patients who might prefer her services; but, in the case of the very poor class who now resort to her in manufacturing towns or agricultural villages, Boards of Guardians must be empowered to pay a moderate but sufficient fee in cases where the medical man's services were required, reserving to themselves the right subsequently to recover it from the husband if his means should seem sufficient. I believe there is precedent for some such procedure, and Parliament could probably be induced to sanction it.

The attitude of the profession generally towards all the legislation which has been proposed seems to be one of passive resistance, and even its own parents are not enthusiastic over the Bill of the Parliamentary Bills Committee. Is it too late in this long-drawn agitation for the mass of moderate men to unite upon some such scheme as I have sketched, and actively oppose anything less?—I am, etc.,

Kilburn, N.W., Oct. 29th. T. Morton, M.D.

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Sir,—In all the correspondence upon this topic I have seen no reference to the archaic history of registration. It may interest your readers and some of your correspondents to know the following, which is given me by the learned and Venerable Archdeacon of Montgomery, who, besides being a Fellow of the Society of Antiquaries, is highly gifted both in reading and in observation.

From Phillimore's *Ecclesiastical Law*, page 2059, it appears that down to the passing of the Medical Act in 1858 bishops licensed physicians, surgeons, and midwives. This was done partly in the interests of the Faculty to put a stop to impostors and charmers, and especially for spiritual good.

The oath of midwives was very strict, including:

*Item.*—You shall not in any wise use or exercise any manner of witchcraft, charm, or sorcery, invocation, or other prayers, than may stand with God's laws and the King's.

*Item*—You shall not give any counsel or minister any herb, medicine, or potion, or any other thing, to any woman being with child, whereby she should destroy or cast out that she goeth withal before her time.

*Item.*—You shall not consent, agree, give or keep counsel, that any woman be delivered secretly of that which she goeth with, but in the presence of two or three lights ready.

With other regulations as to conduct.

The Archdeacon gives me some notes of physicians and surgeons in this (St. Asaph) diocese so licensed, for example:

1665. *Practicers of Physick.*—None licensed or resident in the diocese: but one

Dr. Turner (Thomas) administers at Llanrwst.
Dr. John Mostyn administers at Wrexham.
— Vaughan, frequently at Denbigh.
All three Papists.

and—

1736. At Abergeley, licence for Surgery granted to Edward Griffith, Gent., by Robt. Wynne, D.D., Vicar-general and official Principal of Isaac ....., Bishop of St. Asaph.

Unfortunately at the time of writing no reference could be found of any midwife so licensed; but the Archdeacon has such a note somewhere.

The Medical Act of 1858 makes no mention of repealing any former Act. Consequently it is a fair inference that the law under which such licences—and accordingly registrations—were effected, is still extant.—I am, etc.,

Colwyn Bay, Oct. 19th. J. Lloyd-Roberts.

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## THE MORTALITY IN THE BOER CONCENTRATION CAMPS.

Sir,—The mortality of the children in the concentration camps in South Africa is large and appalling. But I desire to point out that the method of estimation used in the article on the subject in the British Medical Journal of November 9th, and which is generally employed in the press, is very inaccurate. It is not correct to estimate a yearly mortality by simply multiplying a monthly or weekly rate, unless you have evidence that the population remains stationary in numbers, that is, in the present case, unless the loss by death is compensated by gain from births and new arrivals. As we do not know that this is so, it would be safer, if we want to estimate the effect of a constant rate of mortality for a year, to treat it as operating on a diminishing population—that is, one which decreases each month by the number of deaths in such period. A different result then comes out. Thus, the figures which you have given for the four months, June to September, show a monthly mortality of 26.7 per 1,000 children, or 1 in 37, as stated. This would tell, up not to 12 times 26.7, but to 278.4 per 1,000 in the year. The statement that if the present conditions prevailed for three years all the Boer children now in the camps would be annihilated, hardly needs refuting. A population would never be wholly destroyed by a mortality of the highest rate imaginable (unless it reached the integer), since it operates necessarily on a constantly diminishing number. As a fact, it can easily be shown that, if 1,000 children are taken, the mortality-rate in question would destroy, not the whole 1,000, but 623 of them, in the course of three years.

I think, however, that considering the uncertainty of the numbers in the camps from one month to another, and the influence of temporary epidemic or endemic causes, it would be better to confine ourselves to the statement of a monthly rate of mortality, which can be compared with the English or any other standard, reduced from a yearly to a monthly rate for this purpose. Where the rate is small, as with us, its multiplication or reduction to correspond with differing periods of time is attended with little error. The error is large in the case of high rates such as those prevailing in the camps.

May I add that the death-rate of women, which is in the camps so excessive, is normally somewhat lower than that of men during the greater part of life, but not "much lower" as stated?

I write thus in the plea for statistical accuracy, not at all to detract from the purpose of your article, which justly emphasises the terrible character of the loss now going on, and the need for radical sanitary measures. Probably we are far from the end of the troubles in this respect. The breaking out of scurvy is to be looked for if the conditions are not greatly changed.—I am, etc.,

Finsbury Square, E.C., Nov. 11th. R. Hingston Fox.

*** The contributor of the article on the concentration camps writes:

If Dr. Hingston Fox's contention that annual death-rates based on weekly deaths cannot be correctly estimated holds good, the weekly returns issued by the Registrar-General stand condemned. In truth, however, if it be remembered that they indicate a death-rate based on the facts of a given week, they are not misleading. Much less likely to mislead are death-rates based, like those in the special article, on the mortality statistics for four months. This is a much larger slice of a year than a week, and much more likely to represent the average experience of a year. For the benefit, however, of those holding Dr. Fox's views, monthly death-rates were given which are statistically quite free from possible objection. Dr. Fox's contention that a decreasing population must be assumed is contradicted by the facts for the largest camps, and therefore Dr. Fox's alternative statement of death-rates is erroneous. Dr. Fox is right in his criticism of the statement that an annual death-rate among children of 1 in 3 would cause annihilation in about three years. This does not, however, destroy the significance of the facts that 1 out of 37 children died during a month, that during four months 1 out of 9 children died, and that if this death-rate be continued for a year, 1 out of every 3 will have died. It should further be noted that the statement of proportion between English and concentration camp death-rates among children as 3.1 to 18.0 (which is sufficiently appalling) does not allow for the fact that this assumes that all the children in the camps are less than 5 years old. Were the correct ages given, the excess of mortality among the children in the camps would be seen to be even more excessive than I have shown it to be. Whether the dirty and insanitary habits of the Boers, and especially of the Boer women, be partially responsible for this, or whether it be the civil or military authorities, there is clearly urgent need for the breaking-up of the camps into smaller units under more efficient and stringent sanitary control.

## IS THE PROFESSION OVERSTOCKED? SUPPLY AND DEMAND.

SIR,—Referring to the above, I should say that the overstocking of the profession is well illustrated in the small town which I reside.

When I commenced practice in the Sixties we were four practitioners, employing three horses and one gig. Now, without any increase in the population of the district, there are at least seven active practitioners, employing at least six horses and as many carriages.

We have during recent years a small birth-rate, 23 per 1,000, and much of it is not of a high class. We now treat about 80 per cent. of our scarlet fever cases in hospital in the county town, and about 60 per cent. of all our infectious cases notified under the Notification Act. The population now, as it was in the Sixties, is, roughly speaking, 8,000—that is to say, that while one medical man could look after the medical wants of 2,000 people till recently, now it takes two.

But, further, from a change in the complexion of the population the entire work is very much easier than it used to be. In the Sixties only 3,900 of the people lived in the town, the extent of which is, as it was then, 760 acres, the remaining 4,100 living in the country round about. Now it is quite the reverse, 5,200 of the people living in the town, and 2,800 living in the country.—I am, etc.,

Crieff, N.B., Oct. 30th. JAMES GAIRDNER.

## PERISCOPIC LENSES.

SIR,—As several ophthalmic surgeons have expressed their difficulty in getting periscopic glasses made, or in writing the prescription for them, I venture to send this alternative table for their use. The index of refraction is assumed to be 1.54.

| Power. | Surface Facing the Light. | Surface Facing the Eye. |
|---|---|---|
| +20 D. | +30.75 D. | — 10 75 D. |
| +15 D. | +27 D. | — 12 D. |
| +12 D. | +24 D. | — 12 D. |
| +10 D. | +22.25 D. | — 12.25 D. |
| +8 D. | +18 D. | — 10 D. |
| +6.5 D. | +14.5 D. | — 8 D. |
| +5 D. | +10 D. | — 5 D. |
| +2 D. | +8 D. | — 6 D. |
| — 2 D. | +5.25 D. | — 7.25 D. |
| — 5 D. | +3.25 D. | — 8.25 D. |
| — 8 D. | +1.25 D. | — 9.25 D. |
| — 10 D. | Plane | — 10 D. |
| — 13 D. | — 0.375 D. | — 12.625 D. |
| — 15 D. | +0.75 D. | — 15.75 D. |
| — 16 D. | — 0.5 D. | — 15 5 D. |
| 17 D. | — 0.375 D. | — 16.625 D. |
| — 20 D. | — 3.125 D. | — 16.875 D. |

By this one can see that a +5 D periscopic is a meniscus of which the anterior surface has a convex curvature corresponding to that of a +10 D plano-convex lens, while the posterior surface has a concave curvature corresponding to that of a −5 D. plano-concave lens. Spectacles ordered according to this table will be really periscopic between +10 D. and − 13 D. inclusive. Eccentric vision 25° from the middle line will be as distinct as centric vision. For powers of and greater than +12 D. and −15 D. eccentric vision will not be as good as centric vision, but it will be vastly better than eccentric vision with the ordinary bispherical.—I am, etc.,

Newcastle-on-Tyne, Nov. 9th, A. S. PERCIVAL.

## SOUTH AFRICAN MEDAL.

SIR,—I have been asked by numerous civil surgeons who have served in South Africa during the Boer war whether a public presentation of the war medals and clasps that these medical men are entitled to could not be arranged. There must be a large number of surgeons who are now at home, and who have done most excellent work to whom it would be gratifying to receive such honours, and I should be pleased to try to arrange something if those gentlemen who are concerned would communicate with me.

I take upon myself the liberty of writing to you on this subject, thinking that someone who has already received his war medal could possibly approach the authorities with a better chance of success than one who has not had that honour.

I would suggest that a small committee be nominated by some well-known surgeon in London to go into this matter.—I am, etc.,

Clifton, November 12th. J. PAUL BUSH, C.M.G.

# OBITUARY.

## ROBERT BARBOUR McKELVIE, M.D.GLAS.,

Oban.

By the death, on November 5th, of Dr. McKelvie, a notable figure in the West Highlands of Scotland disappears. He was born in the Island of Arran in 1836, graduated M.D.Glas. in 1858, and, after a short time as an assistant in Ayrshire, was appointed Parochial Medical Officer of Appin and Lismore, and shortly afterwards also of Ardchattan and Muckairn. Although coming young to this arduous charge, he soon established a reputation for care and skill amongst rich and poor. His district was about 18 miles long by 6 or 7 broad, broken up by arms of the sea, so that he had three long ferries to be faced winter or summer. In 1875, after the death of Dr. McGillvray, he moved to Oban, where his position was soon pre-eminent and unique. In addition to the charge of the Lorn Combination Poorhouse, he had the medical care of four parishes, was M.O.H., and was Surgeon to the Police, the Post Office, and Lismore Lighthouse.

Four years ago, after an outbreak of infectious disease which taxed the resources of the local authorities, and involved the relegation of a rich Australian visitor to the Poorhouse Infirmary, Dr. McKelvie presented a small Infectious Hospital to the town, which has become his memorial as the McKelvie Hospital.

As an instance of his modest and retiring nature, it is recorded that on the opening day of *his* hospital, when his fellow townsmen had arranged to present him with a golden key, he was nowhere to be found, and, in fact, was at the utmost end of his district at his daily work.

His life was a very busy one—one day called to Mull, another to Loch Awe, one day to Appin, another to Easdale. Much of his time was passed in trains and boats, and many of his friends consider that he never thoroughly got over the shock of the wreck of the ss. *Mountaineer* twelve years ago while on a journey to Mull.

Any record of his life would be incomplete which did not indicate the peculiar love and admiration which he excited in his friends and patients. Always bright and humorous, sometimes in boisterous high spirits, ever sympathetic, he was a devoted friend, a cheerful companion and an enthusiastic doctor. He was an intensely practical man, and, though he seldom wrote to the medical papers, kept himself well up in the literature of the profession. He was a lover of art, having many artists among his friends, and was an ardent student of Shakespeare and Burns, whose works provided him with many an apt quotation. He was unmarried, and spent much of his spare time, little enough, in reading.

By the poor he will be much missed. They knew him well, his roughness and his tenderness, and that while the voice said "No" to a night call up the glens or across the ferries, the twinkle in the eye meant "Yes," and that immediately. Not only the poor, but the rich also, will sadly miss him, as there were few mansions in Argyllshire where he was not an honoured guest and a valued friend.

His life was a hard, but a happy one. He seldom took a holiday, and he died, as he wished, in harness. At work on Monday, he was stricken with apoplexy on Tuesday morning, and died that evening. On Saturday he was laid to rest by his sorrowing friends in the Oban Churchyard.

The loving personality of R. B. McKelvie will not soon be forgotten in Argyllshire, and never by anyone who had the honour and the privilege of his friendship.

W. M. C.

## ALFRED H. SMEE, M.R.C.S.Eng., J.P.

We regret to have to record the death of Mr. Alfred Hutchison Smee, who was a director and the chief medical officer of the Gresham Life Assurance Society, and well known for his writings on subjects connected with life assurance.

Mr. Smee, who was in his 57th year, was the son of Mr. Alfred Smee, of Finsbury Circus, Surgeon to the Bank of England. Mr. A. H. Smee was educated at Dean Colet's ancient foundation of St. Paul's School, in the days when the number of its scholars was limited to the number of fish in the Apostle's net, and when the school yet stood in St. Paul's Churchyard, and the playground of the boys was viewed by passers-by through iron bars. He received his medical education at St. Bartholomew's Hospital, and became M.R.C.S. Eng. in 1866. He inherited considerable private means, and at first engaged in scientific research, one of the results of which was a paper on the Artificial Formation of Fibrine from Albumin, published in the *Proceedings of the Royal Society*. He was a man of considerable natural ability, but, so far as we are aware, never engaged in practice. He was connected with the Gresham Life Assurance Society during the whole of his professional career. He wrote a work on *Causes of Death* founded upon his experience in connection with it, and very recently issued in a handsome volume a series of tables and diagrams illustrating the comparative death-rates from various causes and in various occupations. His object, as stated in his preface, was to illustrate as clearly as possible the comparative rates of mortality which are experienced by mankind under various conditions. This purpose was admirably accomplished by means of a series of diagrams on a sufficiently large scale to enable differences to be brought out into proper relief, while at the same time saving that prolonged study which the grasping of the same facts would require were they set forth in tabular form. Comparisons were made diagrammatically between the inhabitants of different countries, the inhabitants of the same country during successive decennial periods, persons engaged in various occupations, and persons dying from certain specific diseases. One table contained a very interesting statement of the death-rate at each year of life from 20 to 98 inclusive, among assured lives (healthy males) during the ten years 1881-90 in British, German, and French companies. The German insurance experience is very similar to the British at the younger ages, but shows an increase of from 10 to 20 per cent. over the British rate during the middle and later years of life. Two other plates dealt with the death-rates at certain ages in specified occupations, the standard of comparison being the Institute of Actuaries "Healthy Males" table. First are occupations, as clergymen, agriculturists, having a mortality below that of the standard to the age of 40, and thereafter above; then those with a higher mortality throughout, these being classified according to the degree of the excess. If this classification be borne in mind, the diagrams show the relative position of each occupation in the scale of mortality. The occupational statistics in relation to special causes of death were also dealt with in seventeen diagrams showing the relative share of cancer, phthisis, bronchitis, etc., in the mortality of a large number of occupations. In another diagram the weekly incidence of deaths in London for the years October, 1883, to October, 1884, and October, 1899, to October, 1900, at different age groups, were set out, the first being a typical non-influenza year and the latter a severe influenza year; the weekly number of deaths from plague in Bombay in relation to rainfall and humidity of air were shown in another chart. Tabular statements of the annual death-rates from enteric fever, diarrhœa and enteritis, diphtheria and croup, and from phthisis in a large number of English and foreign towns were also given in this work, which is deserving of careful study, and will be a lasting memorial to the ingenuity and industry of its author.

Mr. Alfred Smee, the father of the subject of this notice, was an enthusiastic gardener, and made for himself a beautiful garden at Hackbridge, near Carshalton, which he described in a charming work entitled *My Garden*. His son built himself a house in this garden, where he resided. He eventually took an active part in county matters, was a J.P. for Surrey, and a member of the County Council.

An old friend sends us the following note: I remember A. H. Smee as a student at St. Bartholomew's Hospital in the early Seventies. He was regarded as a very able but eccentric man, and one who would have made a mark in the world had he been compelled to work for a living. His report on the "Causes of Death" of 1,000 claims presented to the Directors of the Gresham Life Assurance Society in 1868, is a model of what such ought to be. It was only last week that I wrote to thank him for his admirable *Tables and Diagrams illustrating Comparative Rates of Mortality*, which were published in October. He married the Sister Luke of my time. I shall never forget the lavish hospitality at The Grange, Hackbridge, when, not content with providing every kind of entertainment in the afternoon, she would send her guests back to town laden with flowers and fruit from the lovely garden. On these occasions Smee would saunter about the grounds too reserved or shy to take any active part in entertaining his guests, but always ready for a chat with any of his old hospital friends. These pleasant afternoons came too soon to an end owing to Mrs. Smee's death, and since then I have not seen my old friend, the sudden announcement of whose death, coming so soon after the receipt of his last work, was a great shock.

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## JOHN CONNEL, M.A., M.D., F.R.C.P.,

Peebles.

The death of Dr. John Connel, of Peebles, has deprived Scotland of one of her ablest and most cultured country practitioners. After graduating as Master of Arts, with first-class honours, at the University of St. Andrews, he proceeded to the University of Edinburgh, where he received his medical education when Christison, Syme, Simpson, and the two Begbies were in the zenith of their fame, so that when he graduated as M.D. in 1867 he carried with him to Peebles the impress of great teachers, which had an abiding influence for the rest of his life.

He was associated, in the first instance, with the late Dr. Junor, who was in all respects a country Begbie, and who thoroughly appreciated the excellent training and accomplishments of the young man who had come from Edinburgh to assist him. After Dr. Junor's death Dr. Connel succeeded to his practice, and although during the course of his career he received encouragement to settle in Edinburgh, he preferred to remain a country practitioner. He was so much appreciated by his professional brethren that he was elected President of the Edinburgh Obstetrical Society, as also of the Harveian Society, at both of which he delivered addresses which are left in the archives of these Societies as evidence of the cultured man he was. He had also held the office of President of the Border Counties Branch of the British Medical Association.

He was ever working, and, although carrying on a large country practice, he found time to visit Edinburgh and Glasgow in order to study disease of the eye, ear, and throat, and the other branches of surgery which have made such advances in the last twenty years. In addition to keeping himself abreast of the times in his own profession, he studied French, German, and Italian, and made frequent trips to the Continent for relaxation. Latterly his chief study was astronomy, and six weeks before his death he had purchased a new telescope to carry on certain observations.

In all matters connected with the town of Peebles he was willing to give a helping hand. He was Chairman of the School Board, and was one of the foremost in improving the sanitation of the town. The appreciation in which he was held was evidenced on the day of his funeral by the large gathering from the town and country which assembled to show their respect for their late doctor.

Much sympathy is felt for his widow, who is a daughter of Dr. Junor.

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The next dinner of the Glasgow University Club, London, will be held on Thursday, November 28th, at 7 P.M., at the Hotel Cecil. Dr. Heron will preside, and Mr. Norman M. MacLehose, M.B., will be entertained as the guest of the club in recognition of his long and valuable services as one of the honorary secretaries.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## THE UNDERMANNING OF THE ARMY MEDICAL SERVICE.

THE following is the distribution of medical officers employed on the Active or Reserve List according to the *Army List* for November, 1901:

*Distribution in November Army List.*

| Ranks | Home. | South Africa. | Other Foreign Stations. | Not Posted. | Total. | Remarks. Seconded. | Remarks. Reserve of Officers. |
|---|---|---|---|---|---|---|---|
| Surgeon-Generals ... | 4 | 1 | 3 | — | 8 | — | — |
| Colonels ... ... ... | 9 | 6 | 10 | 2 | 27 | 4 | — |
| Lieutenant-Colonels... | 61 | 61 | 88 | 2 | 212 | 3 | 25 |
| Majors ... ... ... | 42 | 135 | 110 | 2 | 289 | 3 | 4 |
| Captains ... ... ... | 30 | 80 | 114 | 4 | 228 | 8 | 4 |
| Lieutenants ... ... | 36 | 139 | 58 | 1 | 234 | 2 | — |
| Total ... ... ... | 182 | 422 | 383 | 11 | 998 | 20 | 33 |

Compared with the October list, there is a diminution of 6 in the total establishment employed. There is a small decrease in the numbers abroad and a slight increase in the numbers at home. Deducting those seconded and the reserve employed, 53, the total available active list is 945. There is still one surgeon-general short of the establishment, the total, including the acting director-general, being 9.

It is interesting to note the present approximate incidence of foreign service in the various ranks:

| | | |
|---|---|---|
| Surgeon-Generals ... ... ... | (about) | 50 per cent. |
| Colonels ... ... ... ... | ,, | 67 ,, |
| Lieutenant-Colonels (not reserve) ... | ,, | 71 ,, |
| Majors ... ... ... ... | ,, | 85 ,, |
| Captains ... ... ... ... | ,, | 86 ,, |
| Lieutenants ... ... ... | ,, | 85 ,, |

From this it appears that about 58 per cent. of the administrative ranks are serving abroad, and no less than 82 per cent. of the executive ranks. Of course the war is accountable for this state of things.

But, looking to normal times, it is easy to see that, if the recommendations of the Committee were fully adopted, by which lieutenants could not well be sent abroad, then the incidence of foreign service on the other executive ranks would be made formidable and disproportionate indeed.

The problem of a workable foreign service roster must be calculated out in any practicable scheme of army medical reconstruction or reform.

## CIVIL SURGEONS EMPLOYED WITH THE ARMY AT HOME.

WITH reference to the memorandum on this subject which appeared in the BRITISH MEDICAL JOURNAL of October 26th, 1901, page 1304, we are informed that a petition is being drawn up for an increase of pay, and that a copy of it will be forwarded to all the principal military hospitals where civil surgeons are stationed for their signature, to be forwarded by arrangement on a given date to the Secretary of State for War, so as to get an answer from him before the time comes round for the civil surgeons to accept a further period of engagement.

ANOTHER civil surgeon, who signs himself "Medicus," writes to express the hope that this movement will receive the loyal support of all those concerned. "Many of us," he writes, "will shortly be asked to engage ourselves for another six months. I think if all civil surgeons would decline to promise to do so until the result of this petition were known, it would at least show that we considered we had a just cause for complaint, and it could but strengthen our *locus standi*. By increasing the pay, the War Office would naturally get better men, as the present rate of pay (£270 per annum) is not sufficient to attract the best men, seeing that the appointment leads to nothing. One might suggest that the pay of all civil surgeons be raised to £300 a year, and that it be further raised to £450 after six months service. It has also been suggested that a man who has held a resident appointment at a large hospital should be paid at the higher rate. This is merely paying for experience, one of the first principles in any economy. This would attract better men, and be a means of keeping them. But whatever is done must be done in union, and if the Government is to be encouraged by a few waverers the cause is at once weakened."

### ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: SYDNEY CRONEEN, Surgeon, to the *Alexandra*, undated; WILLIAM H. THOMSON, Surgeon, to the *Grasshopper*, undated; HENRY E. SOUTH, Staff Surgeon, to the *Rupert*, November 2nd; EDWARD B. PICKTHORN, Staff Surgeon, to the *Boscawen*, November 2nd; SAMUEL CONNER, Surgeon, to the *Iphigenia*, for medical charge on the voyage to East Indies and home, November 8th; HERBERT A. JULIUS, Surgeon, to the *Pembroke*, November 7th; RICHARD R. HORLEY, Surgeon, to the *Wildfire*, for disposal, November 11th.

### ROYAL ARMY MEDICAL CORPS.

THE following officers are on passage home: Lieutenant-Colonel S. H. CARTER, Lieutenant J. W. LEAKE, Civil Surgeons A. S. ARTHUR, R. MOORE MADDEN, J. MCMURRAY, R. C. MACDONALD. Returning invalided: Major M. O'D. BRADDELL, Colonel H. GRIER, Surgeon-Major R. C. PERKINS (Kitchener's Fighting Scouts), Civil Surgeon H. H. HARTLEY (Lord Lovat's Corps).

Colonel R. C. EATON, Principal Medical Officer, Poona District, is appointed to officiate as Principal Medical Officer, Bengal Command, with the temporary rank of Surgeon-General, from October 1st.

Lieutenant-Colonel C. H. SWAYNE, D.S.O., is granted the temporary rank of Colonel while officiating on the administrative staff of the Indian army, from October 3rd.

Civil Surgeon N. E. HARDING, 2nd Brigade Bearer Company, was slightly wounded at Frigardsfontein, South Africa, on November 1st.

Civil Surgeon E. COLLET OSBORN was accidentally slightly injured (fractured clavicle) at Volksrust, November 9th.

### ARMY MEDICAL RESERVE.

SURGEON-CAPTAIN H. C. LAMPORT is promoted to be Surgeon-Major, November 13th.

### IMPERIAL YEOMANRY.

CAPTAIN H. W. WHYTE, late Medical Officer, 18th Battalion, to be Medical Officer, 25th Battalion, with the temporary rank of Captain, November 13th.

### THE VOLUNTEERS.

SURGEON-LIEUTENANT P. WOOD, 3rd Middlesex Artillery, is promoted to be Surgeon-Captain, November 9th.

### THE P.M.O. ALDERSHOT.

WE understand that Colonel J. L. Notter, M.D., who has recently returned from South Africa, where he has served on the Commission of Enteric Fever and Dysentery, has been nominated the Principal Medical Officer at Aldershot, in succession to Surgeon-General O'Dwyer.

### ATTENDANCE ON OFFICERS' AND SOLDIERS' FAMILIES.

A CORRESPONDENT points out how constantly it is cast against army medical officers that they have no special knowledge or fitness for dealing with the diseases of women and children, and that officers are appointed to these duties without due aptitude for them. But what are the opportunities or encouragement for the acquiring of such aptitude? None at all. The truth is medical officers try to avoid such duties as most thankless, worrying, and not even bringing gratitude. Such duties ought to be specially paid. But why should such medical attendance be given gratuitously, while sick soldiers are placed under stoppages? Would it not be better to allow officers and married soldiers to make their own medical arrangements privately?

*** Gratuitous medical attendance is one of the inducements held out to recruits. As for private arrangements, they could not be made at many foreign stations; and as to stoppages, they are made for subsistence in hospital, not medical attendance. We are well aware how thankless and onerous the duties in question are; all gratuitous or semi gratuitous medical attendance, as in clubs, begets much inconsiderate selfishness in the exacting recipients.

# MEDICO-LEGAL AND MEDICO-ETHICAL.

### VACCINATION PROSECUTIONS AND THE COURT OF APPEAL.

ON November 6th in the Court of Appeal, according to the report in the *Times*, Mr. Schultess Young, in the case Bowden *v.* Toll, appealed against an order made by justices sitting at Welwyn, Herts, under Section XXXI of the Vaccination Act of 1867, for the vaccination of a child who was more than 6 months and under 18 months. In February, 1901, action was taken before the same justices under Section XXIX of the Act of 1867, but the summons was dismissed. No further notice was given till the present proceedings, which were instituted after the public vaccinator had visited the child, offering to vaccinate, but without having sent beforehand the statutory notice of his proposed visit.

Mr. Schultess Young argued: (1) That a notice given in December, not in contemplation of proceedings under Section XXXI, but under Section XXIX, was invalid; (2) that proceedings under Section XXXI could not be taken when they had failed under Section XXIX. (3) That failure of the public vaccinator to give the statutory notice of his visit afforded a defence, and that proceedings under Section XXXI, where the child was under 18 months, were not permissible in cases where Section XXIX was applicable.

The Court, without calling for arguments on the other side, dismissed the appeal.

### VALUATION OF PRACTICE.

G. G. and VERITAS ask whether in estimating the price to be paid for a share in a general country practice, it is usual to take an average of three years booking, or three years receipts.

*** In estimating the value of a medical practice, or a share in the same, the actual cash receipts are taken as a basis for calculation.

### LIABILITY FOR FEES.

AUTOMOBILE writes that he was called up at 2 A.M. to see a patient two miles off, and attended him for a week. The patient is of weak intellect, and boarded by his father with a farmer, who sent for me. To whom should he send his bill?

*** The usual custom is to send the bill in to the father, if the son is a minor, through the person having charge of him, in this case the farmer. If the son is not a minor, it would be better to debit the person in charge, who sends for the doctor, leaving it for him to recover the amount from the son, or father. If the patient is not a minor, and has money of his own, then the account should be sent in to him personally.

### VISITS AFTER VACCINATION.

JOLICA.—Our correspondent is clearly justified in charging for the subsequent visits and dressings in a case requiring active treatment, as well as for the vaccinations, and we consider his account a moderate and reasonable one.

# UNIVERSITIES AND COLLEGES.

## UNIVERSITY OF CAMBRIDGE.

DR. J. N. LANGLEY, F.R.S., has been re elected a Manager of the Gerstenberg Studentship in Moral Philosophy.

*Teaching Appointments.*—Dr. Shore and Mr Blackman, St. John's College, have been reappointed University Lecturers in Physiology and Botany respectively. Mr. H. O Jones, Clare College, has been appointed Jacksonian Demonstrator in Chemistry in place of the late Mr. W. T. N. Spivey. The General Board of Studies propose the appointment of a Demonstrator in Surgery to assist the Reader (Dr. J. Griffiths) in practical instruction and in the care of the surgical collections to be placed in the Humphry Museum

*The Diploma in Public Health.*—The State Medicine Syndicate report that in the past year 69 candidates presented themselves for one or both parts of the Examination in Sanitary Science; 43 were successful in obtaining the Diploma in Public Health.

*Degrees.*—At the Congregation on November 7th the following medical and surgical degrees were conferred:—*M.B.:* O. Inchley, St. John's; G. S. Graham-Smith, Pembroke; T. E. Holmes, Caius. *B.C.:* G. S. Graham-Smith, Pembroke.

## UNIVERSITY OF GLASGOW.

THE usual autumn graduation ceremony took place on Thursday, November 7th, in the Bute Hall. Principal Story, the Vice-Chancellor, presided over a large audience, the undergraduates being more than usually boisterous. The medical degrees conferred were as follows:

*Doctors of Medicine (M.D.)*—*D. L. Cairns, M.B., Ch.B. (Thesis—Researches on the Agglutinating and Prophylactic Properties of Blood Serum in Cases of Plague, with Observations on the Hæmatology and Bacteriology of the Disease); †J. Aitken, M.B., Ch.B. (Thesis—Blood Counts in the Newborn); †A. J. Ballantyne, M.B., Ch.B. (Thesis—Affections of the Eye due to Injury by Blunt Objects); †G. Coats, M.B., Ch.B (Thesis—Unilateral Hæmorrhagic Retinitis and Hæmorrhagic Glaucoma); †J. Henderson, M.B., Ch.B (Thesis—Observations on the Maternal Blood at Term and During the Puerperium); †J. D. R. Monro, M.A., M.B., C.M. (Thesis—A Study of Appendicitis in General Practice, with an Analysis of 36 Cases); Agnes Forbes Blackadder, M.A., M.B., Ch.B. (Thesis—Six cases of Acute Dilatation of the Heart occurring in Children); W. B. Brodie, M.B., C.M. (Thesis—The Action of Oxalates upon and the Relation of Calcium Salts to Muscle); W. Cullen, M.B., C.M. (Thesis—Insomnia: Clinical Observations and some Therapeutic Suggestions); R. S. Dickson, M.B., C.M. (Thesis—Observations on a case of Actinomycosis); C. H. Hall, M.B., C.M. (Thesis—The Medical and Allied References in the Writings of Chaucer); J. H. Lyell, M.B., C.M. (Thesis—A Study of some Clinical and Pathological Aspects of Scarlet Fever); Eva M'Call, M.B., Ch.B. (Thesis—Some Account of the recent Epidemic of Beer Poisoning as observed among Patients in the Salford Union Infirmary); R. A. Macleod, M.B., C.M. (Thesis—Acute Encephalitis); E. J. Morris, M.B., C.M. (Thesis—Carbonic Oxide Poisoning in Mines with special reference to the Tylorstown Explosion); W. Roxburgh, M.B., C.M. (Thesis—Organotherapy); A. B. Sloan, M.B., Ch.B. (Thesis—Observations on One Hundred Consecutive Cases of Enteric Fever); H. G. Stewart, M.B., C.M. (Thesis—The Finsen Treatment of Lupus Vulgaris—the Benefits to be derived from it, Comparison between it and other ways of Treating the Disease); E. Watt, M.B., Ch.B. (Thesis—The Prognosis and Treatment in Scarlatina).

* With Honours. † With Commendation.

*Bachelor of Medicine (M.B.) and Master in Surgery (C.M.).*—G. W. Milne.

*Bachelors of Medicine (M.B.) and Bachelors of Surgery (Ch.B.)*—R. W. Auld, J. J. Y. Campbell, E. S. Chapman, G. H. Clark, D. J. Fletcher, T. Forsyth, W. Gemmill, J. D. Gourlay, A. Gow, Janet Bisland Higgins, A. Linn, W. J. M'Feat, W. F. M'Glashan, K. M. Myhre, R. Orr, Mary Emma Potter, A. Reid, Elizabeth Ness MacBean Ross, J. Stewart, M.A., R. R. Swan, R. G. White, M.A., B.Sc., J. Wilson, W. R. Wylie, Henrietta Fraser Young.

## ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

A QUARTERLY meeting of the Royal College of Physicians of Edinburgh was held on Tuesday, November 5th, Dr. Fraser, President, in the chair.

*Death of Her Imperial Majesty the Empress Frederick.*

The President communicated a letter which he had received from the Secretary of State for Scotland in acknowledgment of the message of condolence sent by the College to His Majesty the King on the occasion of the death of H.I.M. the Dowager Empress Frederick, and a similar acknowledgment from Count Metternich, in response to the message sent to H.I.M. the German Emperor.

*The late Dr. John Connel and Dr. James Foulis.*

The President referred in sympathetic terms to the loss which the College had sustained through the death of two Fellows of the College, Dr. John Connel and Dr. James Foulis.

*Introduction of New Fellows.*

Dr. Claude Buchanan Ker and Mr. Douglas Chalmers Watson were introduced and took their seats as Fellows of the College.

*Admission to the Fellowship.*

Dr. David James Graham, M.R.C.P.E., was admitted by ballot to the Fellowship of the College.

*Admission to the Membership.*

On a ballot the following candidates were admitted to the Membership of the College after examination: Harold Sherman Ballantyne, M.B., C.M., Eskbank; David Whiteside Maclagan, M.B., Ch.B., Edinburgh; and Guy Verney Fletcher, L.R.C.P.&S.Edin., Manchester.

*Admission to the Licence.*

The Registrar reported that since the last quarterly meeting thirty-nine persons had obtained the Licence of the College by examination.

*Wood Bursary Award.*

The Wood Bursary, of the value of £60 per annum and tenable for three years, which is in the gift of the College, was awarded after a competitive examination in Latin, Greek, Mathematics, and English, to Mr. Aeneas Rose.

*Expulsion of Licentiate.*

By vote of the College, Richard Wallace was deprived of his licence to practise, as granted by the College, and of all his rights and privileges as Licentiate.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ANNUAL REPORT OF COUNCIL.

THE Council's annual report of the work done by the College in its various departments during the year ending August 1st, 1901, has been issued, and will be placed before the Fellows and Members at the annual meeting to be held at the College in Lincoln's Inn Fields, on Thursday next, November 21st, at 3 P.M. It reports the proceedings of the annual meeting held in November, 1900, and states that the following replies to the four resolutions carried at the meeting were adopted by the Council, namely:

"1. The Council, having fully considered the resolution moved by Dr. Herbert Snow, seconded by Mr. Joseph Smith, and carried *nem. con.*, are of opinion that it would be most undesirable to reopen the question of the representation of Members on the Council.

"2. That the mover and seconder of Resolution No 2, carried at the annual meeting of Fellows and Members, be requested to furnish the Council with information as to the points in regard to which they are of opinion the Medical Acts require amendment.

"3. That the annual report of the Council be sent only to those Fellows and Members who apply for it; but that, to save unnecessary trouble to those who desire to receive the report regularly, any Fellow or Member may on request have his name entered upon a standing list.

"4. That the mover and seconder of Resolution No. 4, carried at the annual meeting of Fellows and Members, be informed that the resolution has been laid before the Council."

Mr George Brown and Dr. Danford Thomas, the mover and seconder of Resolution No. 2, mentioned above, in March last sent a letter to the President and Members of the Council in which they detailed the points in regard to which they considered that the Medical Acts required amendment, and the Council sent an answer, of which the following is one of the chief paragraphs:

"The Council approve the principle that no unregistered person should be allowed to practise medicine or surgery for gain; and, if the General Medical Council should deem it expedient to apply for an alteration of the Medical Acts to that effect, the Council would support their action."

The report describes the regulations of the College respecting the instruction of students during the preliminary scientific year; and alludes to the decrease (amounting to 261) in the number of medical and dental students registered on the several recognised preliminary examinations in England.

The remainder of the report comprises the regulations respecting the various college prizes, the gifts to the College during the year, the lectures, the work of the laboratories of the two Colleges, finance (the income of the College having last year exceeded the expenditure by £2,115), the retirement of Mr. Edward Trimmer from the post of Secretary after forty-two years in the service of the College, the death of Queen Victoria, and the address of the Council to King Edward on that event; paragraphs relating to the museum and the library; returns of the results of the various professional examinations held by the College during the year, and lists of deceased Fellows and Members.

## FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

ANNUAL MEETING.

AT the annual meeting of the Faculty, held on November 4th, Dr. James Finlayson was re-elected President, and Mr. John Burns Visitor. Dr. James D. Maclaren retired from the office of Treasurer, which he has

held for more than a quarter of a century, and his place was filled by Dr. W. L. Reid. For the vacant Examinerships there were several contests, the new Examiners being Thomas Gray, D.Sc., B.Sc.Lond., in Chemistry, and Dr. A. K. Chalmers, M.O.H., Mr. Hugh Gult, and Mr. R. M. Buchanan in various departments of Public Health. In Anatomy, the outgoing Examiner, Dr. Thomas H. Bryce, was re-elected.

### CONJOINT BOARD IN IRELAND.

FINAL PROFESSIONAL EXAMINATION.—Candidates have passed this examination as undernoted:

*In all Subjects.*—J. F. Fitzgerald.

*Completed Examination.*—J. M. Barry, Miss M. E. Bridgford, C. W. Conry, A. D. C. Cummins, S. G. Gordon, W. R. Meredith, S. R. M'Causland, F. G. Sharpe, R. C. Vernon, R. O. White, G. B. Wilkinson, F. W. Woods, T. J. Wright.

DIPLOMA IN PUBLIC HEALTH.—The following candidates have been successful:

Lieutenant-Colonel U. J. Bourke, R.A.M.C., M. J. B. Costello, M.B. & S., R.U.I., H. A. Dougan, M.B., D. P. Ffrench, M.B., R. Fox-Symons, M.R.C.S., L.R.C.P., A. Moore, M.D., J. H. McAuley, L.R.C.P. & S.Irel., O. J. Powell, F.R.C.S.I., C. L. Sansom, F.R.C.S.Edin.

# PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

### CERTIFICATES OF REVACCINATION.

DR. THOMAS F. I. BLAKER, Public Vaccinator, Steyning Union, Sussex, sends a copy of a letter recently received by him from the Local Government Board, which he thinks may be helpful to other public vaccinators:

Ref. Number,
134,403 M., 1901.

Local Government Board,
Whitehall, S.W.,
8th November, 1901.

Sir,—I am directed by the Local Government Board to advert to your letter of the 1st instant, and in reply to state that the Vaccination Acts do not require the public vaccinator to send certificates of successful revaccination to the vaccination officer.

I am, Sir,
Your obedient servant,
(Signed) NOEL T. KERSHAW,
Assistant Secretary.

### VITAL STATISTICS OF IRELAND.

THE Annual Report of the Registrar-General for Ireland of the Marriages, Births, and Deaths registered in Ireland during the year 1900 was issued recently.

The following table gives a general summary of the whole of Ireland:

| | Estimated Population in the Middle of the Year. | Numbers Registered. | | | Number of Emigrants. |
|---|---|---|---|---|---|
| | | Marriages. | Births. | Deaths. | |
| Yearly average, 1890-99 | 4,587,270 | 22,127 | 105,882 | 83,428 | 44,955 |
| 1900 | 4,496,326 | 21,139 | 101,459 | 87,606 | 45,288 |

More particular information is disclosed by the next table, which shows that, while the birth-rate is highest in Ulster, the death-rate is greatest in Leinster.

Annual Rate per 1,000 of the Population represented by

| 1900. | Marriages. | Births. | Deaths. |
|---|---|---|---|
| Ireland | 4.8 | 22.7 | 19.6 |
| Provinces: | | | |
| 1. Leinster | 5.0 | 22.7 | 21.9 |
| 2. Munster | 4.1 | 21.9 | 19.1 |
| 3. Ulster | 5.1 | 24.1 | 20.2 |
| 4. Connaught | 4.7 | 21.2 | 15.5 |

#### BIRTH-RATES AND DEATH-RATES.

Of the total births in Ireland during the year, 52,234 were males and 49,225 females. Comparing the provinces, we find that the percentage of children in Ulster who were illegitimate was 3.6, in Leinster 2.5, in Munster 2.5, and in Connaught 0.5. The highest birth-rates in the counties are Antrim 28.4 per 1,000, Dublin 26.6, Down 26.0, and Kerry 24.1. The lowest are Westmeath 18.5, Meath 18.7, Monaghan 18.9, and Roscommon 18.9.

The total death-rate in Ireland for the year was 19.6 per 1,000, which is 1.4 per 1,000 over the average for the ten preceding years. As regards the counties, those with the highest rate are Dublin 25.3, Antrim 22.3, Armagh 21.4, Monaghan 21.0, and Limerick 20.9; while those with the lowest mortality are Mayo 13.9, Roscommon 15.1, Leitrim 15.9, and Sligo 16.1. Monaghan occupies the unenviable position of appearing among the owest birth-rates and the highest death-rates.

#### CAUSES OF DEATH.

Coming to the causes of death, an excellent coloured diagram depicts the comparative mortality from twenty-two of the principal causes. The total number of deaths was 87,606.

| | Numbers. | Rate per 1,000. | | Numbers. | Rate per 1,000. |
|---|---|---|---|---|---|
| Old age | 16,278 | 3.64 | Apoplexy | 1,456 | 0.33 |
| Tuberculosis | 12,848 | 2.88 | Inflammation of the brain and membranes | 1,064 | 0.24 |
| Bronchitis | 9,655 | 2.16 | Liver diseases | 793 | 0.18 |
| Diseases of circulatory system | 7,042 | 1.56 | Bright's diseases | 793 | 0.18 |
| Influenza | 4,677 | 1.05 | Enteric fever | 769 | 0.17 |
| Pneumonia | 3,824 | 0.86 | Whooping-cough | 689 | 0.15 |
| Cancer | 2,717 | 0.61 | Puerperal fever and childbirth | 650 | 0.15 |
| Diseases of the stomach and intestines | 2,412 | 0.54 | Measles | 640 | 0.14 |
| Convulsions | 2,158 | 0.48 | Premature birth | 510 | 0.11 |
| Diarrhœal diseases | 1,702 | 0.40 | Croup | 362 | 0.08 |
| Hemiplegia (brain paralysis) | 1,513 | 0.34 | Diphtheria | 362 | 0.08 |

The zymotic affections account for 10,163 deaths, or 2.28 per 1,000 of the population. This is an increase of 1,306 over the number for the preceding year, and was mainly due to the prevalence of influenza, which caused 4,677 deaths in 1900, against 1,716 in 1899. There were also 204 deaths from cerebro-spinal fever, as against 45 in 1899. Of the other zymotic affections, enteric fever is the only one which calls for special comment. The deaths (769) from it are less than those of the preceding year by 121, and 109 less than the average for the previous decade. The remarkable features are that 431 of the total number occurred in Ulster, Leinster recorded 192, Munster 102, and Connaught 44. Then, again, 272 of the total deaths occurred in Belfast Union, while in the North Dublin Union there were 63, and in South Dublin Union 73. In other words, 52 per cent. of the deaths from enteric fever in Ireland took place in the Unions of Belfast, Dublin North, and Dublin South.

#### TUBERCULOSIS.

As already shown in the comparative table, after old age tuberculosis stands highest as a cause of mortality, and claimed 12,848 victims during 1900; 10,076 deaths were due to pulmonary tuberculosis, 1,026 to tabes mesenterica, 749 to tuberculous meningitis, and 997 to other forms. The total deaths from tuberculosis represent a rate of 2.88 per 1,000, being 0.03 per 1,000 in excess of the previous year. The rate from pulmonary tuberculosis is 2.26 per 1,000 living.

The phthisical death-rate in the four provinces reads thus: Leinster, 2.59; Munster, 2.32; Ulster, 2.24; and Connaught, 1.62 per 1,000.

The increase of tuberculosis in Ireland is shown by the following returns, which do not confirm the statements that sometimes appear in regard to the decrease of this scourge in Ireland.

| | Rates per 1,000 of Estimated Population. |
|---|---|
| Average for 10 years 1871-80 | 2.6 |
| Average for 10 years 1881-90 | 2.7 |
| Average for 9 years 1891-9 | 2.8 |
| Average for 29 years 1871-99 | 2.7 |
| 1900 | 2.9 |

The want of any accommodation, practically speaking, for advanced consumption other than in the workhouse infirmaries in Ireland accounts for the following results in the unions: In the North Dublin Union the death-rate from tuberculosis was 5.7 per 1,000, in the South Dublin Union it was 5.5, in Belfast 4.4, in Londonderry 2.9, in Waterford 3.6, and in Limerick 3.4.

#### CANCER.

Much credit is due to the Registrar-General both for the clear diagram which shows the comparative frequency of cancer in England, Scotland, and Ireland from 1864 to 1900, and for the shaded map showing the distribution of the mortality from this disease in the various counties in Ireland from 1896 to 1900 inclusive.

The total deaths for the year amounted to 2,717 (1,212 males and 1,505 females), representing a rate of 0.6 per 1,000 of the population of the country, which is a slight increase on the preceding year.

The proportion of deaths from this cause is lowest in Kerry, with an average rate for five years of 2.76 per 10,000. In fact, the western half of Ireland may be said to be much more free from the disease than the eastern half. Armagh stands highest with a rate of 10.09 per 10,000, and Dublin comes second with 8.10. The migration of cancer cases to the Dublin hospitals may probably account for the high figure in the latter county. The rates in Londonderry, 7.93, Carlow 7.32, Tyrone 7.14, and Monaghan 7.08, are all relatively high. As regards the seat of the disease, 622 of the deaths were attributed to the stomach, 274 to cancer of the breast in females, and 184 to that of the uterus.

Whereas in England and Scotland the rate per 10,000 was 3.9 and 4.3 respectively in 1864, in Ireland it was only 2.7, and by a gradual and slightly varying increase the rate stands thus: England (1899) 8.3, Scotland (1898) 8.2; and Ireland (1900) 6.1 per 10,000 living. That is to say, the increase in cancer in the years indicated has been: England 4.4, Scotland 3.9, and Ireland 3.4 per 10,000 of the population.

#### METEOROLOGY.

The report concludes with observations on the weather derived from the returns compiled by Sir J. W. Moore, M.D. The following may be given: Mean height of barometer during the year was 29.801. Mean temperature of the air during the year was 50.3° F. Rain fell on 216 days, and the total rainfall measured 34.338 inches.

### DIPHTHERIA ANTITOXIN.

At a meeting of the Crewe Town Council on November 6th it was resolved, on the recommendation of the medical officer of health, made through the Health Committee, to supply antitoxin free for cases of diphtheria.

### HOW DISEASE IS SPREAD.

At a recent meeting of the Welton (Lincolnshire) District Council, Dr. Harrison, M.O.H., reported that on October 6th a child was taken ill with a sore throat and rash, followed by peeling. On October 20th the child, while still peeling, was sent to chapel and Sunday-school, and the next day resumed her attendance at school; but, as she was found to be peeling, she was sent home after she had been attending school for three days. On October 26th a medical man saw her and notified the disease, at the same time informing the mother of its true nature. Notwithstanding this, the child was taken two days afterwards on a visit to a friend's house two miles away, and remained there for two days. It is not surprising that the attendance at the school dropped from an average of 60 to 18, and that, although many of the absentees were kept at home from fear of infection, no fewer than five homes became infected.

Although we are disposed to give full credit to the charitable sentiments which led the majority of the District Council to decide to write a severe letter of reprimand to the widow mother of the patient who was almost destitute, there could be no doubt that from the point of view of the public interest her carelessness in the first place, and her wilful exposure of the child after being informed of the true nature of the complaint from which it suffered, might have brought upon her some form of punishment which would have been a salutary lesson to others. Such ignorance and carelessness clog the wheels of preventive medicine in this country, even at the present day, to an enormous extent. The only remedy seems to be to promote the right sort of education—the education, that is, which will make the future parents a little more intelligent on the subjects of infant rearing, and as to the precautions which they should take to guard their offspring and their neighbours from the common communicable diseases.

### PUBLIC VACCINATORS AND VACCINATION.

Several correspondents have called our attention to a document purporting to be a letter issued by the Organising Secretary of the Association of Public Vaccinators of England and Wales, which has appeared in certain London newspapers, as follows:

1. That every person in England and Wales is entitled to demand revaccination at his own house, free of charge, at the hands of the public vaccinator of his district, provided that such person has not been vaccinated or revaccinated within ten years preceding the date of his demand.

2. That the name and address of the public vaccinators for each district in England and Wales can be obtained from the clerk to the guardians and from the registrars of births and deaths.

3. That public vaccinators are the only medical men who are compelled to use the safeguards prescribed by the regulations of the Local Government Board, and that they are the only persons who can obtain the pure glycerinated calf lymph prepared in the laboratories of the Local Government Board, and that they are compelled to use that lymph in all cases of vaccination and revaccination in their own districts.

*** We have not seen the original of this document, and are therefore unable to say whether the nakedness of its appeal to the public may not have been qualified to some extent by the context. As it stands the document appears to us to be most injudiciously worded.

### DUTIES OF A DISTRICT MEDICAL OFFICER.

L. H. writes saying he is a district medical officer and was appointed in February last. He has been supplied with a list of three patients who are "entitled to his services at call." He finds that two of these are still attended by his predecessor in office, and asks whether this is proper and whether he ought to take action in reference to it.

*** Our correspondent appears to have but little cause for dissatisfaction, his only complaint being that two persons whom he is paid by contract to attend never apply for his services. We cannot see that he suffers any disadvantage from this, and even if he does, he cannot insist on any alteration. He should, however, fully understand that these said patients are at liberty to apply to him for attendance at any time they may require it, and if they should do so it will be his duty to attend them in the same way as if he had done so from the first.

### HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,554 births and 4,336 deaths were registered during the week ending Saturday last, November 9th. The annual rate of mortality in these towns, which had been 16.7 and 17.6 per 1,000 in the two preceding weeks, further rose last week to 19.7. The death-rates in the several towns ranged from 11.0 in Wolverhampton, 12.6 in Plymouth, 13.8 in Derby, and 14.2 in Leicester to 25.3 in Blackburn, 25.9 in Manchester, 26.1 in Salford, and 26.7 in Sheffield. In the thirty-two large provincial towns the death-rate averaged 20.0 per 1,000, and exceeded by 0.6 the rate recorded in London, which was 19.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.0 per 1,000; in London this death-rate was equal to 1.6 per 1,000, while it averaged 2.3 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 4.1 in Blackburn, 4.6 in Preston, 5.6 in Sheffield, and 5.9 in Burnley. Measles caused a death-rate of 1.9 in West Ham, 2.3 in Oldham, 2.4 in Blackburn, 2.8 in Norwich, and 3.0 in Sheffield; scarlet fever of 1.2 in Bolton and 2.3 in Preston; whooping-cough of 1.0 in Newcastle; "fever" of 1.0 in Derby; and diarrhœal diseases of 1.0 in Plymouth, 1.0 in Liverpool, 1.4 in Preston, 1.9 in Gateshead, and 2.1 in Burnley. The 88 deaths from diphtheria in thirty-three towns included 33 in London, 7 in Sheffield, 6 in Burnley, 5 in Liverpool, 5 in West Ham, 4 in Manchester, and 4 in Leeds. Sixteen fatal cases of small-pox occurred in London, but not one in any of the thirty-two provincial towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals, which had been 172, 180, and 284 on the three preceding weeks, had further increased to 297 on Saturday, the 9th inst.; 62 new cases were admitted during the week, against 47, 57, and 169 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 3,331, against numbers increasing from 2,994 to 3,302 on the nine preceding Saturdays; 380 new cases were admitted during the week, against 404, 400, and 425 in the three preceding weeks.

### HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, November 9th, 874 births and 692 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 16.9, 19.3, and 19.6 per 1,000 in the three preceding weeks, further increased last week to 21.7 per 1,000, and exceeded by 2.0 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns the death-rates ranged from 13.7 in Greenock and 18.1 in Leith to 23.7 in Perth and 24.2 in Glasgow and in Dundee. The zymotic death-rates in these towns averaged 2.8 per 1,000, the highest rates being recorded in Glasgow and Dundee. The 356 deaths registered in Glasgow included 19 from measles, 2 from scarlet fever, 5 from diphtheria, 12 from whooping-cough, 12 from "fever" and 10 from diarrhœa. Two fatal cases of diarrhœa were recorded in Edinburgh. Four deaths from measles, 2 from whooping-cough, and 6 from diarrhœa occurred in Dundee, 3 from diarrhœa in Aberdeen, and 2 from "fever" in Paisley.

# MEDICAL NEWS.

The annual dinner of the Harveian Society will take place on Thursday, November 28th, at 7 P.M., at the Café Monico. The President, Dr. D. B. Lees, will take the chair.

Successful Vaccination.—Mr. Philip E. Hill, Public Vaccinator for the Crickhowell District of the Crickhowell Union, has been awarded the Government grant for efficient vaccination for the twelfth time in succession.

The North Eastern Hospital for Children has received a further instalment of £200 from the editor of *Little Folks* towards the endowment of a ward in the building about to be erected in Hackney Road.

The first ordinary meeting of the Royal Statistical Society for the present session will be held on Tuesday next at 5.30 P.M. at the rooms of the Society of Arts, John Street, Adelphi, when the President, Lord Avebury, will deliver his annual address on Local and Imperial Burdens.

The Odontological Society of Great Britain is prepared to receive applications for grants in aid of the furtherance of scientific research in connection with dentistry. Further particulars can be obtained from the Secretary of the Scientific Research Committee, Odontological Society, 20, Hanover Square, W.

Chicago Pasteur Institute.—The last report of the Chicago Pasteur Institute states that since the establishment of the institution only 7 patients have died of the 1,150 who have been treated, a mortality of little more than half of 1 per cent. Of the total number of patients who applied for treatment 1,040 had been bitten by dogs, 36 by cats, 41 by horses, 12 by skunks, 5 by wolves, 6 by cows, 2 by calves, 6 by human beings, 1 each by a rat, a mule, and a pig. Of those who died, 4 developed hydrophobia soon after reaching the Institute, many days having elapsed since the infliction of the bite.

Presentation to the Matron of Lambeth Infirmary.—The Matron of the Lambeth Infirmary deserved well of her Board and staff, and the opportunity of her resignation after twenty-eight years of work was taken to mark the sense of what was owing to Miss Griffiths. Her appointment was made at the period when nursing under the Poor Law was beginning to emerge out of the mire of past neglect and indifference, and Miss Griffiths has done much to raise the standard in her own infirmary. That her efforts have been so appreciated by those who are best qualified to judge promises well for the continuance of the reform, and we hope that before long Lambeth Infirmary may be welcomed into the foremost rank of the metropolitan infirmaries.

Medical Mayors.—In the list of Mayors who have come into office at the commencement of the municipal year, we notice the following members of the medical profession: Aberavon, Dr. John Henry Williams; Barnsley, Dr. J. F. Horne (re-elected); Bath, Dr. E. E. Phillips; Bootle, Dr. G. S.

Wild; Bournemouth, Dr. G. Henry Frost; Daventry, Dr. James Christopher O'Rafferty; Droitwich, Dr. Harry S. Jones; Falmouth, Dr. W. Banks; Glastonbury, Dr. Maurice J. Doidge; Honiton, Dr. James Campbell Macauley: Kingston, Dr. W. E. St. Lawrence Finny (third year); Montgomery, Dr. N. W. Fairles-Humphreys; Nelson, Dr. W. Jackson; Ruthin, Dr. J. M. Hughes (re-elected, sixth year); Saffron Walden, Dr. J. P. Atkinson (re-elected); Saltash, Alderman R. T. Meadows, M.D.Edin.

THE EPIDIASCOPE.—There is on view at the London depôt of the firm of Carl Zeiss, of Jena, an instrument which has been for some time in use on the Continent for the pictorial illustration of lectures, but which has now for the first time been demonstrated in this country. By means of a series of inclined mirrors enclosed in a cabinet with a lens, the light from the electric arc of a searchlight lamp is projected in a large circular illuminated area on an opaque screen placed in front of the apparatus, as from an ordinary lantern. The special feature is that either opaque or translucent objects may be placed on a stage in the interior of the cabinet, in the course of the beam of light, with the result that an image of them is projected on the screen in high relief in their natural colour and with much detail. Glass jars, preferably with straight sides, containing pathological specimens in spirit, may be placed on the stage, and a picture of most realistic character is thrown on the screen. The magnification varies with the distance between the apparatus and the screen; thus if the interval be about 8 feet, the magnification is about nine times. Dry objects such as bones, or even parts of the living body such as the hand, placed on the stage can be demonstrated equally well to a roomful of people at the same time. Not only objects having bulk, but representations of such plane surfaces as a printed page, or illustrations from a book in their actual colour and with almost perfect detail, are projected and magnified. Transparencies also, such as photographic lantern slides, may by a slight alteration be equally well shown, and by interposing a microscope highly-magnified representations of sections or films, which must, however be deeply stained, may be thrown on the screen. The apparatus is perhaps of less obvious utility in showing microscopic preparations, with high magnification, than in demonstrating macroscopic specimens, as the spectator needs to go close up to the screen to see the minute details. The chief drawback is from the heat generated by the electric arc, but this should be more or less easily obviated by a system of water jackets. The proper focus is obtained by raising or lowering the object stage, and the available field of view is defined by means of blackened diaphragms. The cost of the apparatus is between £50 and £100.

## MEDICAL VACANCIES.

**The following vacancies are announced:**

BEVERLEY DISPENSARY AND HOSPITAL.—Medical Officer and Dispenser. Salary, £160 per annum. Applications to the Clerk by December 2nd

BIRMINGHAM GENERAL HOSPITAL.—Two House Surgeons. Appointments for six months. No salary, but residence, board, and washing provided. Applications to the House Governor by November 30th.

BRACEBRIDGE ASYLUM, near Lincoln.—Junior Assistant Medical Officer: unmarried, and not over 30 years of age. Salary, £125 per annum, with furnished apartments, board, attendance, etc. Applications to Mr. W. T. Page jun., Solicitor and Clerk to the Visiting Committee 5 and 6, Bank Street, Lincoln, by November 27th.

BRENTFORD UNION.—Assistant Medical Superintendent of the Infirmary and Assistant Medical Officer of the Workhouse and Schools; unmarried. Salary, £140 per annum, with furnished apartments, rations, washing, etc. Applications on forms provided to be sent by the Clerk to the Guardians by November 19th.

BRENTWOOD: ESSEX COUNTY ASYLUM.—Junior Assistant Medical Officer; not over 25 years of age. Salary, £140 per annum. Applications to the Medical Superintendent.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—Assistant-Surgeon: must be M. or F.R.C.S.Eng. Applications to the Chairman of the Medical Committee by November 25th.

BUXTON: DEVONSHIRE HOSPITAL.—(1) House Surgeon. Salary, £160 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Furnished apartments, board, and lodging provided in each case. Applications to the Secretary by January 25th, 1902.

CENTRAL LONDON OPHTHALMIC HOSPITAL Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by December 9th.

CHESTER GENERAL INFIRMARY.—House-Physician. Salary, £90 per annum, with residence and maintenance. Applications to the Chairman of the Board of Management 29, Eastgate Row N., Chester, by November 30th.

CLUTTON UNION.—Medical Officer and Public Vaccinator for the Harptree District. Salary, £49 per annum and vaccination fees. Applications to the Clerk, Clutton Union Temple Cloud, near Bristol, by November 24th.

DERBY COUNTY ASYLUM, Mickleover.—(1) Senior Assistant Medical Officer (male). Salary, £150, rising to £180 per annum. (2) Junior Assistant Medical Officer. Salary, £120, rising to £150 per annum. Furnished apartments, board washing, and attendance provided in each case. Applications to the Medical Superintendent.

DUBLIN: TRINITY COLLEGE.—King's Professorship of the Institutes of Medicine (Physiology and Histology). Applications to Dr. J. Craig, Registrar, Royal College of Physicians, Kildare Street, Dublin, by November 30th.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Junior Assistant House-surgeon. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the House-Surgeon by November 23rd.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Fifth Assistant Medical Officer; unmarried and not over 30 years of age. Salary, £170 per annum, with board, lodging, and washing. Applications to the Medical Superintendent by November 30th.

GLASGOW UNIVERSITY.—Additional Examiners for Degrees in Medicine with special reference to (1) Chemistry, (2) Materia Medica and Therapeutics, (3) Zoology, (4) Practical Medicine systematic and clinical, (5) Surgery systematic and clinical. Salary for (1), (2), and (3) £300, and for (4) and (5) £50. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by December 3rd.

GREAT NORTHERN CENTRAL HOSPITAL.—Surgeon; must be F.R.C.S Eng. Applications to the Secretary by November 18th.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by November 19th.

HOLBORN UNION.—Assistant Medical Officer to the Infirmary, Archway Road, N. Salary, £100 per annum, rising to £140. Applications, on forms provided, to be sent to the Clerk to the Guardians, Clerkenwell Road, E.C., by November 19th.

ITALIAN HOSPITAL, Queen Square, W.C.—Honorary Surgeon. Applications to the Secretary by December 2nd.

LANCASTER COUNTY ASYLUM.—Assistant Medical Officer; unmarried, and not over 30 years of age. Salary commencing at £150 per annum, increasing to £200, and on promotion to £250, with furnished apartments, board, washing, and attendance. Applications to the Medical Superintendent.

LEEDS GENERAL INFIRMARY.—Resident Surgical Officer. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary of the Faculty at the Infirmary by November 27th.

MANCHESTER COUNTY ASYLUM, Prestwich.—Junior Assistant Medical Officer; unmarried, and under 35 years of age. Salary, £150, increasing to £200, with board, furnished apartments and washing. Applications to the Medical Superintendent.

MANCHESTER EAR HOSPITAL.—Clinical Clerkship. Appointment for six months. Honorarium, 10 guineas. Applications to the Secretary by November 18th.

MANCHESTER: ST. MARY'S HOSPITAL, Quay Street.—House-Surgeon and Resident Obstetric Assistant Surgeon. Appointment for one year, but eligible for re-election. Salary, £100 per annum, with board and residence. Applications to the Secretary by December 5th.

MIDDLESEX HOSPITAL, W.—Medical Officer and Registrar to the Cancer Department. Salary, £100 per annum, with board and residence in the College. Applications to the Secretary-Superintendent by December 14th.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary, £160 for first year, and £180 afterwards. Applications, on forms obtainable from the Resident Medical Officer, to be sent to the Honorary Secretary, Mr. Joseph Carr, 41, Mosley Street, Newcastle-on-Tyne by November 19th.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead.—Assistant Physician. Applications to the Secretary at the Office, 41, Fitzroy Square, W., by November 30th.

NORTH WEST LONDON HOSPITAL, Kentish Town Road.—(1) Resident Medical Officer. (2) Assistant Resident Medical Officer. Appointments for six months; the junior officer is eligible for the senior post. Salary in each case at the rate of £50 per annum, with board, residence, and washing. Applications to the Secretary by December 2nd.

NOTTINGHAM COUNTY ASYLUM.—Assistant Medical Officer, between 21 and 30 years of age. Salary, 4 guineas per week, with board, lodging, attendance, and washing. Applications to Chairman of Committee, County Asylum, Nottingham.

PLAISTOW: ST. MARY'S HOSPITAL FOR SICK CHILDREN.—Assistant Medical Officer; unmarried. Appointment, in first instance for six months. Salary, £50 per annum with board, residence, laundry, etc. Applications to the Secretary by November 22nd.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House-surgeon. Appointment for six months, but renewable. Salary at the rate of £50 per annum with board and residence. Applications to the Honorary Secretary by November 30th.

ROYAL DENTAL HOSPITAL AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square.—Lecturer on Dental Surgery and Pathology. Applications to the Dean by November 25th.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge Road, S.E.—Resident Medical Officer. Appointment for four months. Salary at the rate of £70 per annum. Applications to the Secretary by November 30th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, Strand, W.C.—Clinical Assistants. Appointments for six months. Applications to the Secretary by November 30th.

ST MARY'S HOSPITAL FOR CHILDREN, Plaistow, E.—Assistant Resident Medical Officer. Appointments for six months. Salary at the rate of £80 per annum, with board residence, laundry, etc. Applications to the Secretary by November 22nd.

SALISBURY INFIRMARY.—(1) House-Surgeon; unmarried. Salary, £100 per annum. (2) House-Physician; unmarried, and not exceeding 30 years of age. Salary, £75 per annum. Board, lodging, and washing provided in each case. Applications to the Secretary by November 20th.

SANITARY INSPECTORS' EXAMINATION BOARD.—Examiner; must be a Medical Officer of Health. Applications to Mr. W. R. E. Coles, Hon. Sec., 1, Adelaide Buildings, London Bridge, E.C., by November 20th.

SHANGHAI MUNICIPAL COUNCIL.—Assistant Health Officer; must possess D.P.H., and not be over 35 years of age. Salary, 3,600 taels a year (about £500), with means of locomotion and first-class passage to and from England. Applications to Messrs. J. Pook and Co., 63, Leadenhall Street, E.C., by November 30th.

SHEFFIELD ROYAL INFIRMARY.—Casualty Officer. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by November 30th.

SOMERSET AND BATH LUNATIC ASYLUM, Colford, Taunton.—Assistant Medical Officer: not over 30 years of age and unmarried. Salary, £150 per annum, with furnished apartments, board, fuel, lighting, and washing. Applications to the Medical Superintendent by November 21st.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House-Surgeon. Salary, £75 per annum with residence, board, and washing. Applications to the Secretary by November 18th.

SOUTHWARK BOROUGH.—Public Analyst, not over 45 years of age. Salary, £100 per annum rising to £250. Applications, on forms provided, to be endorsed "Public Analyst," and sent to the Town Clerk, Southwark Town Hall, Walworth Road, S.E., by November 20th.

STOCKTON-ON-TEES: STOCKTON AND THORNARY HOSPITAL.—House-Surgeon: non resident; not exceeding 30 years of age. Salary, £200 per annum. Applications to the Secretary by November 28th.

WESTMINSTER GENERAL DISPENSARY.—Honorary Physician. Applications to the Secretary, 9, Gerrard street, W., by November 25th.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY.—Junior House Surgeon. Salary, £80 per annum, with rations and apartments. Applications to the General Superintendent by November 27th.

WORCESTER COUNTY AND CITY ASYLUM.—Junior Assistant Medical Officer; not over 30 years of age. Salary, £120 per annum, rising to £150, with board furnished apartments, and washing. Applications to the Medical Superintendent, by November 26th.

## MEDICAL APPOINTMENTS.

BARTON, G. A. H., M.R.C.S., L.R.C.P., appointed an Honorary Anæsthetist to the City Orthopædic Hospital.

CROSS, Ernest W., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the Infant Orphan Asylum, Wanstead, *vice* Ronald Hills, M.R.C.S., resigned.

DEMPSEY, Patrick F., M.R.C.S., L.R.C.P., appointed Surgeon for Disease of the Throat and Nose to the Mater Misericordiæ Hospital.

EADES, A. J., L.R.C.P. & S.I., appointed Senior Assistant Medical Officer at the County Asylum, Winwick.

EALES, Wallace, L.R.C.P., L.R.C.S., appointed Honorary Surgeon to Hulme Dispensary, Manchester.

FALCONER, Donald Gordon, M.B., M.S.Aberd., appointed Certifying Factory Surgeon for the Foyers District of Inverness-shire.

GLENNY, Edmund, L.R.C.P. & S.I., appointed Junior House-Surgeon to the Jervis Street Hospital, Dublin.

HADLEY, Clement, L.R.C.P.I., M.R.C.S.Eng., appointed Certifying Factory Surgeon for the Shilton District of Warwickshire.

HUNT, E. L., L.S.C.P. & S.I., appointed District Medical Officer of the Malmesbury Union, *vice* T. C. Lawson, M.R.C.S.Eng., resigned.

HOWARD, Vincent, M.R.C.S., L.R.C.P., appointed Certifying Factory Surgeon for the Borough and Rural District of Buckingham.

HUNT, Thomas, M.R.C.S.Eng., L.R.C.P.Edin., appointed Resident Medical Officer, St. George's Retreat, Burgess Hill, Sussex.

JOHNSON, H., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Newark Union, *vice* O. Johnson, M.R.C.S.Eng.

JOHNSTONE, J. P., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of the Langport Union Workhouse, *vice* J. Morgan, F.R.C.S.Eng., resigned.

LLEWELLYN, J., M.R.C.S.Eng., appointed Medical Officer for the Sherburn District of the Scarborough Union.

MAGUIRE, Ernest Colwell, M.D., C.M.Aberd., appointed Surgeon to the Brighton Borough Police, *vice* William J. Stephens, L.R.C.P., resigned.

O'CLERY, Lawrence, M.D., M.Ch.R.U.I., appointed Medical Officer for the Clonakilty Workhouse, *vice* Edward Badden, L.R.C.P., L.R.C.S.I., resigned.

OGSTON, Frank, M.D., M.S.Aberd., appointed District Medical Officer for the Southern Half of the South Island of New Zealand.

PARRY, T. W., M.B., B.C.Camb., appointed Certifying Factory Surgeon for the Youlgreave District of Derbyshire.

PRENTICE, R. W., L.S.A., appointed Medical Officer to the Ringwood District Council.

PROWSE, J. S., M.B., B.C.Cantab., appointed Honorary Physician to the Hulme Dispensary, Manchester, *vice* E. Annacker, M.D.Berlin, M.R.C.S., L.R.C.P.Eng., resigned.

SUMPTER, W. J. E., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer of Health for the Sheringham Urban District Council.

THOMPSON, James Arthur, M.B., B.Ch., B.A.O.T.C.D., appointed Senior House Surgeon to the Jervis Street Hospital, Dublin.

WALKER, Miss E. S. M., M.B., B.S.Glasg., appointed Assistant Medical Officer at the Tonteth Park Workhouse, *vice* Miss A. F. Blackadder, M.B., B.S.Glasg., resigned.

## DIARY FOR NEXT WEEK.

### TUESDAY.

**Chelsea Clinical Society,** Jenner Institute of Preventive Medicine, Chelsea Gardens, Grosvenor Road, S.W., 8.30 P.M.—Dr. A. Macfadyen: A Short Bacteriological Demonstration. Dr. A. F. Penny: Errors in Diagnosis, Avoidable and Unavoidable.

**Pathological Society of London,** 20, Hanover Square, W., 8.30 P.M.—Professor John MacFadyean: The Immunisation of Cattle against Bacillus Tuberculosis. Dr. F. W. Andrewes: A Case of Infection by Bacillus Coli Communis with Endocarditis. Dr. Klein: The Relation of Danysz's Bacillus to Gaertner's Bacillus. Dr. David Nabarro: A Case of Gangrene of the Nose, associated with Bacillus Pyocyaneus. Dr. J. W. H. Eyre: A New Centrifuge for Bacteriological Work.

### WEDNESDAY.

**Royal Meteorological Society,** Institute of Civil Engineers, Great George Street, Westminster, S.W., 7.30 P.M.

**Royal Microscopical Society,** 20, Hanover Square, W., 8 P.M.

### THURSDAY.

**Harveian Society of London,** Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 P.M.—Mr. Buckston Browne: Twenty-five Years Experience of Urinary Surgery in England, Harveian Lecture III.

### FRIDAY.

**Clinical Society of London,** 20, Hanover Square, W., 8.30 P.M.—Mr. T. H. Morse: Case of Intracranial Section of the Second and Third Divisions of the Trigeminal Nerve for Severe Neuralgia. Mr. Warrington Haward: A Case of Fragilitas Ossium. Dr. S. H. Habershon: The Association of Movable Kidney on the Right Side with Symptoms of Hepatic Disturbance.

### POST-GRADUATE COURSES and LECTURES.

Charing Cross Hospital, Thursday, 4 P.M.—Demonstration of Medical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, Wednesday, 4 P.M.—Lecture on Mitral Disease.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 P.M.—Lecture on Affections of the Nervous System following the acute specific fevers.

London Temperance Hospital, Thursday and Friday, 2 P.M.—Clinical and Pathological Demonstrations.

London Throat Hospital, 204, Great Portland Street, W., Wednesday, 5 P.M.—Practical Demonstration: Malignant Diseases of Larynx.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—Demonstrations will be given at 4 P.M. as follows: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, ear.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Lectures: Tuesday, 3.30 P.M.: Lecture: Disseminated Sclerosis.

West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 P.M. as follows:—Monday: Ocular Symptoms. Wednesday: Minor Surgery. Thursday: Treatment of Cardiac Failure. Friday: Medical Anatomy.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

BROOKE.—On November 4th, at 11, Darlington Street, Bath, the wife of Dr. Gilbert E. Brooke, M.A., F.R.G.S., Colonial Medical Service, of a daughter.

CRAWFORD.—At Colchester, Essex, the wife of Major F. J. Crawford, M.D., I.M.S., of a son, November 6th.

### DEATHS.

ALLARD.—November 2nd, at Tewkesbury, Joseph Higginson Allard, J.P., M.R.C.S., L.R.C.P.Edin., aged 45 years.

KENDALL, Bernard, Charles.—On Thursday, the 24th ult., at Helston, Cornwall, after a few hours' illness from heart failure, complicated with acute laryngitis and pneumonia.

PARE.—On Sunday, November 10th, at Hampstead, Arthur Henry Esmond Pare, the only son of John William Pare, M.D., L.D.S., of 61, Brook Street, Grosvenor Square, W., and the late Margaret Edmondson Pare.

## LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

### QUERIES.

C. B. G. asks the following questions: 1. To whom must one apply for an appointment as certifying surgeon in Scotland? 2. To whom must one apply for the position of referee under the Employers' Liability Act?

*** 1. To the Secretary for Scotland, Dover House, Whitehall, London. 2. Application should be made to the Chief Inspector of Factories, Home Office, Whitehall, London.

CARACTACUS is very anxious to hear from members acquainted with the subject what would be a good mild climate in Southern France or Italy for a cardiac case of long standing. The person for whom the information is required is a poor gentleman who has a wife and three children dependent on him. His means do not exceed £250 per annum, and a place where living and education are cheap is *a sine qua non*. Shelter from north and east winds desirable. A place with some English society preferred.

URETERAL SPASM?

A. B. writes: I have at present a patient, male, aged 30, a total abstainer, who has suffered for four years from attacks of severe pain, recurring weekly and lasting for several hours. The pain, which is excruciating, commences in the region of the left kidney and passes down in the direction of the ureter; it comes on fairly gradually, and is accompanied by vomiting. In March a diagnostic incision was made over the kidney, and *x* rays also were employed without revealing anything abnormal. The urine is normal at all times. In the interval between the attacks the patient is perfectly well and free from pain. Cupping, blistering, battery, arsenic internally, etc., have all been tried without effect. There is no evidence of stone, and apparently the condition is neuralgic. Can any other treatment be suggested? Morphine hypodermically alone gives relief.

HYSTERICAL RETENTION?

BETA was called at 5.30 P.M. to a young woman who said she could not pass water. He passed a silver female catheter, and failed to draw off any urine. He ordered full doses of tincture of belladonna. At about 9 P.M. he was called again for the same purpose, and passed a No. 12 male *catheter à boule* about half its length into the bladder, but nothing came out. He placed his thumb on the open end, and withdrew about a drachm of water. On his visiting her next morning he was informed that she had passed voluntarily 1½ pint of urine at 11.30 P.M., and was in consequence much eased. She has several other anomalous symptoms that have disappeared. Was this, he asks, hysterical retention?

*** It looks like a case of nervous mimicry of disease.

MEDICAL ATTENDANCE ON SOLDIERS ON FURLOUGH.

AUTOMOBILE asks who is responsible for payment of bill for medical attendance on a soldier on sick furlough returned from South Africa.

*** The King's Regulations refer to this matter in the following paragraph:

"*Medical Attendance on Furlough.*—1945. Soldiers on furlough who require medical aid should apply for it to the officer commanding the nearest military station. When this is impracticable, they may apply to a civil practitioner, to whom they will show their furlough paper, and who will be allowed to charge for attendance, at the rate laid down on Army Form O. 1667; but such charges will only be admitted against the public upon a certificate from the soldier's commanding officer that he is satisfied after perusal of the civil practitioner's certificate on the claim that the illness resulted from causes beyond the soldier's control."

It would seem advisable to send the claim direct to the Secretary of State at the War Office. The scale will be stated on A. F. O. 1667 which "Automobile" may obtain from the War Office or from the P.M.O. of the district in which he lives.

### ANSWERS.

W. B. L. would probably find what he wants in the *The Kindergarten System; or Toy Teaching and Play Learning*. Third Edition (London: Geo.

Philip and Son, 2s. 6d.); or *The Kindergarten at Home: A Practical Handbook for Mothers*, by Emily A. Sherreff, President of the Froebel Society (London: Geo. Philip and Son, 3s. 6d.) *Child Life*, a quarterly magazine (Geo. Philip and Son), would prove interesting.

VOLUNTEER MEDICAL OFFICER will find the information he desires in the *Food Inspector's Handbook*, by F. Vacher, New Edition, 2s. 6d. nett, the Sanitary Publishing Company, Limited, 5, Fetter Lane, London, E.C.

CLANRYE.—It is impossible to answer the question briefly. The information desired is clearly set out in a small book upon *Disinfection*, by John Gay, M.R.C.S., D.P.H.; third edition (London: Allman and Son, 1900. 1d.).

ECZEMA OF THE SOLE.

DR. NORMAN MEACHEN (London, W.) writes: This form of eczema is often remarkable for its obstinate resistance to treatment, being in this respect analogous to eczema of the palms. In fact, the pathology and treatment of eczema in both these regions are practically identical. Epidermic hypertrophy is here manifested in its highest degree, and the liability to fissure formation is only too painfully obvious. "Puzzled" might apply an ointment containing half a drachm of salicylic acid to the ounce of vaseline morning and night. This produces a "keratolytic" action, that is, it causes rapid exfoliation of the horny epidermis, by which the patch is thus prepared for the action of milder remedies. When the thickening has been materially reduced, and the surface has become somewhat sore, an ointment containing half a drachm of liq. carbonis picis, with 10 grs. of ammoniated mercury to the ounce of vaseline, may then be applied.

DR. S. BROWNE (M.O.H. Leamington) writes: I have found that an application of ordinary cobbler's wax has acted like a charm in palmar eczema, and see no reason why plantar eczema may not be treated in the same manner. "Puzzled" will find that cobbler's wax applied on a piece of skin or leather will soften the thickened epidermis and permit the fissures to heal up from below. The patient may walk and wash as usual, so long as the pad adheres. I fancy that a fortnight's application will be quite sufficient to allow new skin to be formed, when washing may be indulged in without the pad, and probably without return of the eczema. Washing, in my opinion, is fatal to a cure before the new skin is perfectly formed.

## LETTERS, NOTES, Etc.

ERRATUM.—In the fourth line of the note by Mr. A. Powell on the Comparative Frequency of Syphilis among the Circumcised and Uncircumcised (BRITISH MEDICAL JOURNAL, November 9th, p. 1409, col. 1) the words "latter" and "former" should be transposed.

WAS LUIGI CORNARO RIGHT?

DR. G. P. BEST (Strawberry Hill), in the course of a note on Mr. Van Someren's paper (BRITISH MEDICAL JOURNAL, October 12th, 1901, p. 1082), writes: It has greatly interested me, partly for the reason that, though I have not exactly spotted the reflex in myself, from some necessity of my nature or of my throat, I have always been, like Mr. Gladstone, a mighty chewer, and have inculcated upon my children the advantage of doing likewise. From the time that they ceased to be babies I have always advised them to chew their meat well, and not to be in a hurry over their food, and though they are not all I could wish in this respect, still to a partial observance of my direction I attribute the fact of their total ignorance of a condition which seems to affect all their companions and acquaintances (coeval with themselves frequently) laying these *hors de combat*, and described to them as "bilious attacks"—an expression which mystified them at first, and for which they sought an explanation from me. To this same cause I attribute the fact that in digestive matters I have myself enjoyed a quite painless existence, and have suffered nothing from physicians.

PUNCTURED WOUND TRAVERSING THE CHEST: RECOVERY.

FIRST LIEUTENANT G. A. ABDUN NUR, M.D., R.A.M.C., sends the following report:

*History of Case.*—A woman, aged about 30, was brought into the hospital on July 17th, 1901, walking on foot a distance of about three miles. She was travelling when she was met by a man, who trying to take her from her parcels by force was unsuccessful. She did not yield to him, so he stabbed her through the right nipple, puncturing the chest from front to back with a spear. The spear was taken out by the patient's own hands. She was brought in seven hours after the accident.

*State on Examination.*—When I saw her she was very weak and could hardly speak. Dyspnœa was present, and the air bubbled in and out on every respiration through the openings; more from the back. The opening in front was [illegible] inch wide, piercing the right mammary gland and passing between the [illegible] fifth ribs into the lung. The opening behind was [illegible] wide, and passed between the ninth and tenth ribs, very near the vertebræ. Blood was coming freely from the back, but not so much in front, as the coagulated blood in the latter seemed to stop bleeding from it.

*Line of Treatment.*—The wound was washed with antiseptic lotions, suture[illegible], and bandaged tightly. This was left till the third day, when the wound healed by first intention, and the woman was feeling easier every day. A little dulness appeared at the lower angle of the scapula, which cleared up after a few days. Her temperature was from 99° to 102° F.; only once 103° F. It came down to normal on the sixteenth day after her admission. A rise of temperature again occurred in the afternoons, but the patient was feeling strong and asked to be discharged. She was kept for a few [illegible] when an abscess in the mammary gland was detected and opened on August 7th. The abscess was drained out and dressed as usual. The temperature gradually came down to normal and she was well.

The patient is a Sudanese from [illegible] and in spite of the dirt and unhygienic circumstances [illegible] was discharged from hospital on September 5th. She eats and walks about now as usual, strong and healthy.

LETTERS, COMMUNICATIONS, ETC., have been received

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# A Lecture
ON
# CHEST COMPLICATIONS IN ABDOMINAL DISEASE
## A STUDY IN DIAGNOSIS.

*Being the first Hunterian Lecture of the Hunterian Society.*

By J. MITCHELL BRUCE, M.A., LL.D., M.D., F.R.C.P.,
Physician to Charing Cross Hospital.

Mr. President and Gentlemen,—I confess that I feel myself quite unworthy of the honour that you have conferred upon me by asking me to deliver the first lecture of the present session, and thus to associate myself with a society which bears the name of my immortal countryman, John Hunter. My single comfort is that what I am about to lay before you is the outcome of honest observation in the field of clinical medicine, and that, however poor it may be, it has been inspired by his example and his teaching: and, unless I am mistaken as to the constitution and objects of the Hunterian Society, my address will not be less favourably received because it is practical in its bearings. To some of you, perhaps, the thought may have occurred, when you read its title, that the subject relates to uncommon or even rare conditions, and that there would be but little for you to carry back with you that might be of real use in daily practice. I hope I may be able to persuade you that this is not so, and that the considerations which we shall reach are of almost daily application in our routine work. In order to ensure this very desirable end, I have been compelled to omit a portion of my subject which would have served as a natural introduction to a study of the clinical aspects of complications within the chest in abdominal disease, namely, the anatomical and physiological relations to each other of the viscera above and below the diaphragm and of the diaphragm itself. This is not a systematic lecture, and I know that I can safely assume that you are familiar with these.

Associated diseases of the abdomen and chest present themselves clinically from either of two sides. More frequently we meet with them as affections of the stomach, bowels, liver, or other of the intraperitoneal viscera, or of the peritoneum itself, complicated with a secondary invasion of the chest; in other instances, we are first introduced to a disease of the lungs, pleura or pericardium, which proves to be secondary to an unrecognised lesion below the diaphragm. It will give more effect to the lessons which I wish to draw from our study of the subject if I discuss it in the same order, that is, first from the one side and then from the other. And in so doing I shall be careful to make my sketches of my most interesting cases so broad as neither to weary you nor to obscure with details the points which I wish to bring into special prominence.

In the course of the investigation of an obscure case of abdominal disease, when we are in difficulty over the diagnosis and hesitating in our treatment, symptoms and signs make their appearance which point to invasion of the chest. These at first add to the complexity of the case; but if they are attentively considered, they prove to be useful guides to the discovery of its nature and to the correct treatment, when treatment is possible. Let me begin with what would now be called a very simple instance.

### I. Subdiaphragmatic Abscess.

A good many years ago I had under my care at Charing Cross Hospital a middle aged, unmarried woman, who gave us a complicated history of chronic disease or disorder of the stomach, ending in an attack of violent abdominal pain, vomiting, and collapse immediately before her admission. The most probable diagnosis was perigastritis from incomplete perforation of the stomach, and as this suggested surgical interference, I availed myself of the advice and assistance of my colleague, Mr. Morgan. Now in those early days we had very little experience of subdiaphragmatic abscess and its surgical treatment to guide us. Had suppuration occurred, and, if so, where did the pus lie and how was it to be reached? An area of fulness and tenderness developed at the outer border of the left rectus abdominis muscle, a little above the umbilical level, as if matter were pointing immediately underneath; but it passed off again, leaving us once more in doubt with respect both to the pathological condition and the proper treatment to pursue. Almost immediately, however, a simple patch of dulness appeared at the posterior base of the left chest. It increased daily in size, and presently it yielded the ordinary signs of pleurisy with effusion. From that moment the diagnosis was easy. There was suppuration, or at any rate active inflammation, under the left wing of the diaphragm; and I may add that pus was found in this situation at the operation which followed. I can understand how the history of this case as I have recounted it may sound very commonplace to you to-night, one, indeed, hardly worthy of record or even reference. We see almost daily in hospitals, and by no means rarely in general practice, cases of a similar kind, or closely related, which are readily diagnosed and unhesitatingly and successfully treated by the surgeon. This, however, is beside the point, which is that at at a time when perforation of the stomach was quite unfamiliar to us as a condition amenable to operation, and very imperfectly understood clinically, the phenomena at the base of the chest revealed its existence, progress, and local development after the abdominal phenomena had failed us. So even now, with all our improved knowledge of perigastric abscess, careful observation of a similar kind will surely be of service.

*Tuberculous Peritonitis.*

Now take another illustrative case. A medical student, aged 24, consulted me for distension and tenderness of the abdomen, accompanied by fever. He had lived in India as a child, and from the age of 6 had suffered from occasional attacks of malarial fever and dysentery. I found considerable abdominal enlargement and the signs of free fluid in the peritoneal cavity; the temperature was 103°. I confess I could not reach a definite diagnosis, but I suspected that along with malarial fever there was chronic hepatitis, the liver not being palpable in consequence of the ascites. For a short time I remained in doubt. Then an event occurred which gave an entirely different complexion to the whole case. It was a simple enough event in itself: the appearance of friction over the base of the left lung, which was quickly followed by the development of crepitations upwards. This was enough. The case was one of tuberculosis, involving first the peritoneum, then the left pleura and lung. In a very few weeks it ended fatally.

*Appendicitis.*

Tuberculous peritonitis is not the only kind of peritonitis that may be associated with acute pleurisy and other complications within the chest. The commonest by far is perityphlitis, originating in appendicitis. I have met with a number of instances, some of which may interest you and certainly deserve record for different features that they presented of diagnostic or therapeutical importance. Consider for a moment the significance of the following case. I was asked to see a man of 40 who was under treatment for appendicitis. The disease had passed through what might be called the ordinary course of an acute attack of moderate severity, and so far everything had gone well—with one exception. This was persistence of fever. The local symptoms and signs had died down, and yet the patient's temperature remained pyrexial. I examined the abdomen carefully, and confirmed the correctness of the account that had been given me. Nor were there any evidences to be discovered of pus tracking upwards or downwards. There was no septicæmia. I was beginning to feel puzzled, when systematic examination of the chest cleared up the difficulty, for at the base of the right lung I found physical signs of a patch of pleuropneumonia. Now, to some of you it may appear remarkable that whilst the lung and pleura were actively involved in what must be regarded as a process of local infection, the source of the infection itself—that is, the primary disease—should have been perfectly quiescent. Unquestionably this is a point that deserves consideration. There can be no question of the facts. Indeed, I will go further and say that the chest is sometimes invaded in perityphlitis

after successful surgical treatment of the primary disease, including removal of the appendix. Some time ago I saw in consultation a young man of 24, who was suffering from acute pleuro-pneumonia at the base of the right chest. Three weeks previously he had been operated on for purulent perityphlitis with excellent result; indeed the local wound was perfectly healed, as the surgeon demonstrated to me. I learned that the fresh development had started only some thirty hours before my visit, with pains in the left hypochondrium, which presently shifted to the right subaxilla. There the pain persisted, quite slight in degree, but aggravated by deep inspiration. With these symptoms the temperature, which was being carefully observed and recorded by the nurse, rose to a moderate height, and the ordinary constitutional phenomena of fever developed. Having confirmed the physical signs of invasion of the right pleural cavity, I searched the abdomen for evidences that might exist of continuity of the processes in the abdomen and chest, but there were none to be found. The whole abdomen was perfectly soft and free from tenderness, nor could any abnormal sign be elicited in the loin. It was resolved to give nothing more than a dose of calomel, followed by a saline. The result was entirely satisfactory. Next day the temperature had returned to normal, and the patient was much better in every respect, although naturally the physical signs in the chest remained. When I saw the patient for the third and last time, six days later, only a small patch of impaired resonance over the lower ribs remained, and he was practically well.

Unfortunately the secondary affection within the chest in appendicitis is not always of that moderate degree and favourable course which these two cases illustrate. In some instances severe inflammation occurs, characterised by a large serous effusion in the right pleural cavity. I found this association, for instance, in a middle-aged man, the subject of purulent perityphlitis, which required immediate operation, the primary disease having commenced fifteen days before, and the pleurisy seven days. Evacuation of the intraperitoneal abscess was sufficient to relieve both conditions. But you must all know that the termination of cases of this class is by no means favourable in every instance, or, if happily favourable, by no means so easy or uneventful.

I have met with a series of instances of purulent invasion of the right chest associated with appendicitis. In some of the cases operation had been neglected, in other cases it had been successfully completed. Such an empyema may extend over months, and gravely compromise the prospects of recovery. Or right pleuro-pneumonia may be found lying over a sub-diaphragmatic abscess which connects it with the diseased area around the appendix. I have known both pleural cavities invaded under similar circumstances—a hopeless complication.

Another form is equally alarming, although fortunately not necessarily fatal. I mean the development of an abscess cavity at the base of the right chest, and rupture of it into the bronchi with discharges of quantities of foul pus. Few conditions of the class which we are now considering could be more distressing or appear more desperate than this. The patient with a recent surgical wound in the right iliac fossa, which is still being drained, is compelled to sit up or to be raised in bed on account of violent paroxysms of cough, accompanied with discharge of mouthfuls of offensive sputum, and followed by alarming dyspnœa and collapse. Yet, as I have said, even from this unpromising condition he may be rescued by perseverance in strict surgical and constitutional treatment. Thus, in a case which I have in my mind as I attempt to describe this grave type of chest disease in appendicitis, which I saw in consultation with Dr. Rushworth, of Hampstead, and in which we had the invaluable surgical assistance of Professor Barker, not only all symptoms but practically all the physical signs of pulmonary abscess disappeared within six weeks. Only a trace of dulness and occasional crackling over the right lower lobe remained to point to the seat of cavernous breathing and bubbling *râles* which accompanied the acute phase of the process. I need hardly remind you, however, that there are other and even more unpromising, indeed quite hopeless, intrathoracic complications of purulent perityphlitis, including septic endocarditis, in which the line of infection can be traced back through the liver (pyæmic abscess) and portal vein (pylephlebitis) to the appendix.

If it may appear to some of you that I have said enough, or more than enough, on the subject of the association of disease within the chest, in one form or other, with perityphlitis, I can but reply that the time which I have devoted to it in this lecture is strictly proportionate to its frequency in my own experience. I should call it by no means an uncommon event, and at the same time one which in routine practice not seldom remains for a time unrecognised, probably because of the considerable distance of the two seats of disease from each other.

*Affections of the Chest Secondary to Hepatic Disease.*

This brings me to speak of a more obvious, because more immediate or continuous as well as familiar, association of abdominal and intrathoracic disease. I refer to secondary affections of the right pleura and lung in abscess of the liver, inflammatory affections of the gall bladder and bile ducts, and other morbid conditions of these viscera. Tropical abscess is by no means a common disease in this country, yet there can be but few of us here this evening who have not met with it in practice, and many of us must have seen at least one instance of hepatic abscess bursting through the lung. It is the right chest that is invaded as a rule; and the physical signs, not only at the base but, occasionally at least, well upwards into the pulmonary region, can be easily traced. Only a few days ago I met with an instance of invasion of the left pleura in this connection. A young man who had suffered from dysentery and hepatitis in Burmah was found to have a large swelling in the epigastrium, and the lower sternal region pitted on pressure. The most urgent condition, however, of quite recent development, was dry pleurisy of the left side, characterised by pain and loud friction sound all over the anterior and lateral base. Two days later a large hepatic abscess was safely evacuated.

I will not dwell longer on this class of cases, which, as I have said, are comparatively common, very obvious and readily recognised. Nor will I do more than make a passing reference to the occasional occurrence of right pleurisy in gall stones and their local effects on the neighbouring parts. This association is met with not only as an acute complication of the presence and passage of gall stones, that is, as acute right pleurisy following on hepatic colic, but also as a chronic process involving the base of the right chest and the right hypochondrium, where the physical signs may be extremely complex and difficult to interpret.

We have now reviewed a sufficient number of cases, belonging to the first of the two classes which I proposed to examine, to justify us in formulating a practical conclusion. I would do so in these terms: In all obscure diseases within the abdomen, particularly diseases of an inflammatory kind, let it be a clinical rule to examine the chest with special care. I fancy I hear some of you saying to yourselves, "Of course this is a clinical rule, recognised, taught, and followed." With all respect I would ask, Do we follow this rule on all occasions, or even as a matter of ordinary clinical routine? I confess I am somewhat doubtful. And now I would go further and give you as a corollary the further counsel: Let such physical examination of the base of the chest in obscure and anxious abdominal cases be repeated as often as examination of the abdomen itself, daily if necessary, for it is an essential feature of the association that it supervenes in the course of the primary disease, and develops under our observation.

II.

The second set of circumstances in which the association of abdominal and thoracic disease presents itself to us clinically, whilst perhaps less frequent than that which I have just reviewed, is quite as important, and in one way even more interesting. It is, as it were, the reverse presentment of the related diseases. In the course of the investigation of a case of disease of the chest, such as a pleurisy or a basic cavity, we discover evidence of disease within the abdomen. This observation appears at first to add to the difficulty of diagnosis, but it serves to simplify it. The disease below the diaphragm proves to be the primary of the two, and the nature and course of the case from first to last, as well as the indica-

tions for treatment, are cleared up. I have met with many instances of this relation of intrathoracic and abdominal disease diagnostically, and I will now relate to you very briefly a few of the most instructive of them.

*Hepatic Disease.*

A single lady, aged 40, who was described as a chronic dyspeptic, consulted her medical attendant for pain in the right hypochondrium. He found the physical signs of a considerable effusion in the pleural cavity, and asked me to see the case with him in consultation with a view to treatment. His diagnosis was easily confirmed. There was dulness over the right base, anteriorly as high as the nipple line, posteriorly above the scapular apex; and the auscultatory signs corresponding were characteristic of fluid. The side was tender, suggesting empyema; but it had been rather freely painted with iodine to promote absorption of the exudation.

Now, I hardly need remind you that we must never rest content with the diagnosis "pleurisy" in any case that may come under our observation and care. "Pleurisy" is nothing more than an anatomical expression—inflammation of the pleura. It is quite incomplete and insufficient as a working diagnosis. By itself it will not carry the weight of any useful prognosis or line of treatment that we might attempt to base upon it. You will agree with me that we can neither say whether a patient will live or will die, nor order treatment for him likely to be of any service, if we diagnose that he has "sore throat," and go no farther. The most inexperienced and the most casual of us takes another step in his inquiry, and determines whether the sore throat be scarlatinal, or diphtherial, or syphilitic, or rheumatic, or gouty, or the result of a recent operation on the tonsils, or whatever else it may be. Is the same proper course of inquiry followed in every case of inflammation of the pleura? Or does not the term "pleurisy" sound so complete and sufficient, based as it is, also, on the result of an elaborate examination of the chest, that the practitioner rests satisfied with it, and thereupon proceeds to plan his treatment? I am afraid this is sometimes done, and no attempt made to determine the nature, kind, or origin of the pleurisy: whether tuberculous, rheumatic, scarlatinal, influenzal, malignant, related to nephritis, septic, or produced by one or other of the micro-organisms which are now known to produce it. Now to return to the case which I was reciting to you. When the diagnosis of right pleurisy with effusion was confirmed, my friend and I tried to connect it with one or other of these causes, but in vain. Our investigation had to be carried further, and naturally it was carried into the abdomen. And there the cause was found at once. The liver was the seat of an extensive growth, quite obviously malignant. The effusion in the right pleural cavity proved to be an insignificant event in the course of a disease which would end fatally in a few weeks.

*Pleurisy and Perigastric Abscess.*

Next let me tell you of a case of what appeared at first to be nothing more than a simple serous pleurisy involving the other side of the chest. A delicate-looking girl of 18, who had been taken with severe pain in the left subaxilla, was found after some days to have dulness over the whole of the corresponding lung, loss of local fremitus, weak bronchial breath sounds, and ægophony. She suffered from severe dyspnœa on movement; and her case being in this respect and otherwise urgent, she was admitted into the Brompton Hospital. The resident medical officer confirmed the diagnosis, found pus by means of a long fine needle, and sent for Mr. Godlee. The rest of the case has been recorded by Mr. Godlee himself. The preliminary exploration made by him revealed the presence of serum, not pus, in the left chest; he diagnosed pus within the abdomen, and, by adopting a carefully-planned method of operation, evacuated a perigastric abscess lying below the diaphragm, and a large serous effusion lying in the pleural cavity above it. The girl recovered, after an unusually eventful history, from what was at first called "simple pleurisy with effusion."

*Pleurisy and Perinephritis.*

Very curiously, I have met with an exact counterpart of this case as regards the possible fallacies, difficulties, and dangers connected with diagnosis; but on the right side of the chest instead of the left. A gentleman of 45 was seized with urgent symptoms of right pleurisy, and the physical signs of fluid in the chest were easily made out. He was exceedingly ill when I saw him in consultation on the third day. Along with the account of pleurisy there was a curious and perplexing history of abdominal pain and of urinary disturbance. Examination of the right lumbar region elicited tenderness, and the urine proved to contain blood and much albumen. Perinephritis and associated pleurisy were diagnosed; and we arranged to get the help of a surgeon. Before doing so, however, my friend wished to confirm the diagnosis, and passed a needle into the lower part of the right side. Pus was found and empyema was diagnosed. Next day an exploratory operation was performed. The right pleural cavity contained abundant fluid, but this was serous, not purulent; and underneath the right wing of the diaphragm in the region of the kidney was a collection of extremely offensive matter. Unfortunately the case did badly.

I could easily multiply descriptions of cases of this kind which I have met with from time to time, and in which the order of discovery has been, first, that of acute disease within the chest, whether pleuritic or pulmonary or both, and thereafter that of abdominal disease, which proved to have been the primary lesion. Thus I have known the diagnosis of hydatid of the liver preceded for months by the discovery of a band of soft crepitus round the base of the right chest, that is, along the line of attachment of the diaphragm, for which we could not account. When the tumour developed with its characteristic signs in the hypochondrium there was no difficulty. But I must pass on to equally instructive experiences of a related but different kind.

*Pleurisy and Peritonitis (Tuberculous).*

The first of these is the case of a man, aged 40, who came of delicate stock, and had himself long been weakly, thin, and anæmic. Quite recently he had become manifestly unwell, and been compelled to give up work, when it was found that he was feverish, and had a patch of pleurisy at the base of the right chest. He grew steadily worse, and had to keep his bed; yet there was nothing of an obvious character to account for this, the basic signs being by no means extensive. His condition was then investigated with particular care, and it was discovered that in addition to the chest disease there was a small quantity of fluid in the peritoneal cavity. The diagnosis now became clear—the man had active tuberculosis; and I may add that he died of this in a few weeks. This case will remind you of that other instance of associated tuberculosis of the abdomen and chest which I related to you in the first part of my lecture. Only the order of discovery and diagnosis is reversed in the two histories. In the one, what was believed to be ascites from hepatic disease was proved to be tuberculous peritonitis by the discovery of associated disease above the diaphragm; in the other, an insignificant-looking affection of the pleura was proved to be tuberculosis by the discovery of associated disease in the abdomen.

*Hydatid of Liver.*

Leaving for a moment physical signs, I need hardly remind you that symptoms connected with the lungs are frequently the first phenomena to direct our attention to the abdomen. How instructive, for example, is the following case: I was consulted by a stout but soft-looking man of middle age for what he called blood spitting and pain under the right breast. It was an easy matter to discover impairment of respiratory movement and of percussion resonance, as well as a few small crepitant sounds, over the right lower lobe, back and front, but I failed to find a satisfactory explanation either of the chronic pleurisy or of the hæmorrhagic sputum. I therefore extended my observations in two directions. I made an ordinary microscopical examination of a specimen of the sputum which the patient coughed up for me, and in it, after a little search, I found a single hydatid hooklet. At the same time physical examination of the hypochondrium readily revealed the presence of hydatid tumour of the liver. This, however, was not the end of the diagnosis of the case, to which I shall return presently to show how it was incomplete after all, and the result correspondingly unsatisfactory, from want of sufficient care of the very symptom, namely, hæmorrhagic expectoration, which had proved so suggestive to me.

Meanwhile, let me say that the sudden discharge of pus, bile, hydatid membranes, and the like, by cough and expectoration, may come under our observation at any time as the first symptom or event that compels the patient to seek advice for disease of the liver or other abdominal organ.

I have now related a sufficient number of this series of cases to make the clinical bearing of them obvious; and I may venture to state it in the form of a second clinical rule for your acceptance, as I did the conclusion at which we arrived from a study of my first series. Let it be a rule of practice in every instance of pleurisy and pulmonary disease, or of difficulty in connection with the interpretation of pulmonary symptoms, particularly at the base of the chest, to complete our examination with a careful inquiry into the condition of the stomach, the liver, the intestines, the other abdominal viscera, and the peritoneum itself, remembering that affections of the chest often originate below the diaphragm. I would particularly ask you to observe that the risk of your failing to follow this second rule is greater than the probability of your neglecting the first. As a matter of fact it is not generally observed. Examination of the abdomen is not a routine procedure when the patient's complaint relates to the chest, especially if the patient be a woman. But as I have already said, there is usually another reason for this oversight when we commit it, namely, that we rest content with the diagnosis "pleurisy," "cavity," "hæmoptysis," or the like, which, however elaborate it may sound, is nothing more than a first step towards a working acquaintance with the case. And as the risk of omission is considerable, so also the discredit that may follow it is serious. It is very unfortunate to call by the name of "pleurisy" a grave abdominal disease like perigastric abscess, or tuberculous peritonitis, or cancer of the liver.

*Pelvic Disease.*

I have spoken so fully on the association of diseases of the abdomen and chest, and raised it to a position of such importance by taking it as the subject of the Hunterian Lecture, that I fear lest I may have gone too far and be responsible for your discovery of it in cases where it does not exist. This is a mistake which is easily made. A good many other conditions simulate very closely that which we have been considering this evening. Let me mention a few of the commonest of them.

In the first place, invasion of the pleura and lung from the abdomen is simulated by secondary affections of the same parts in puerperal septicæmia originating in the pelvis. I need not do more than mention this serious condition, which occasions so much anxiety when it occurs in your midwifery practice. No doubt its pathology varies considerably in different instances, but certainly in cases that I have recently seen the infection reached the chest through the blood stream, not *viâ* the lymphatics of the peritoneum and diaphragm. This reminds me of a mistake that I once made in the diagnosis of a case of pleurisy following a pelvic operation. A single woman of 35 had a papillomatous mass removed from the neighbourhood of the uterus by combined suprapubic and intravaginal operation. All went well for a few days, but then the temperature rose, vomiting set in, and empyema developed in the right side of the chest. In spite of the fact that there was not a trace of peritonitis, I maintained that the relation of operation and empyema was too obvious to be ignored. But I was wrong. The case recovered after incision and drainage; there was no septicæmia; and the empyema was proved to be influenzal, for it turned out that the patient's sister had come to sit by her bedside straight from that of a friend with influenza.

The second error in diagnosis that might be made by one somewhat over-zealous to discover an instance of the connection which we are discussing, consists in interpreting every patch of dulness and crepitus at the base of the chest as significant of invasion of the lung or pleura. We must not forget that in great enlargements of the liver an area yielding these signs may be due to compression and displacement upwards of the lower lobe of the right lung; and that the same parts may be hypostatically congested and œdematous, if the patient has been confined to bed for some time. Nor are the symptoms always so free from possible fallacies that mistakes may not occur unless scrupulous care be exercised in the investigation of them. I promised a few minutes ago to return to this point in connection with the case of hydatid of the liver and hæmorrhagic sputum which I described to you. You will remember that I found a hydatid hooklet in the sputum, and the ordinary physical signs of hydatid of the liver. Now the hydatid of the liver, which was a very large one, was treated surgically but unsuccessfully, for the patient died, and then we discovered that the blood stained sputa had not come from the hydatid in the liver at all, but from a second hydatid in the base of the right lung. If I had examined the blood-stained products more carefully I should have been able to determine that they contained neither bile nor hepatic tissue.

Lastly, it is very often difficult, and sometimes impossible, to make a differential diagnosis of the seat of the primary lesion in the abdomen which has invaded the chest, that is to say, whether it is in or around the stomach, the bowel, the liver, the kidney, or one of the other viscera. But this is a part of the subject into which you will not expect me to enter now.

In conclusion, and, as it were, by way of postscript, let me notice two other points of interest indirectly connected with our present subject. The first is a pathological one. We have had before us to-night many instances of the passage of infective materials from the abdomen into the pleura. May not this be the usual route by which the pleura is invaded by the tubercle bacillus? We all know how extremely common tuberculous pleurisy is, and how, as a rule, it precedes the pulmonary disease by months or by years. In the face of what we have been studying this evening, is it not likely that the bacillus reaches the pleura in the lymphatic stream through the diaphragm from the cavity of the peritoneum with its many visceral relations?

The second point is a strictly practical one. Indeed, so thoroughly practical and important is it that this must serve as my excuse for introducing it into a subject to which it does not strictly belong. I refer to the condition of the abdomen in acute disease within the chest, particularly acute bronchitis and acute pneumonia. Distension of the stomach is a very common condition in these diseases, partly produced by free feeding with fluid diet. Intestinal distension is frequently associated with diarrhœa in acute pneumonia. In both cases the diaphragm is driven and kept forcibly upwards against the lungs and heart; respiration and circulation are grievously handicapped, and the patient may perish in consequence of an adventitious embarrassment which is preventable or remediable. Might I venture, then, to submit to you a third rule of practice? Never neglect to examine with particular care the state of the abdomen with respect to distension and pressure in every case of acute pulmonary disease.

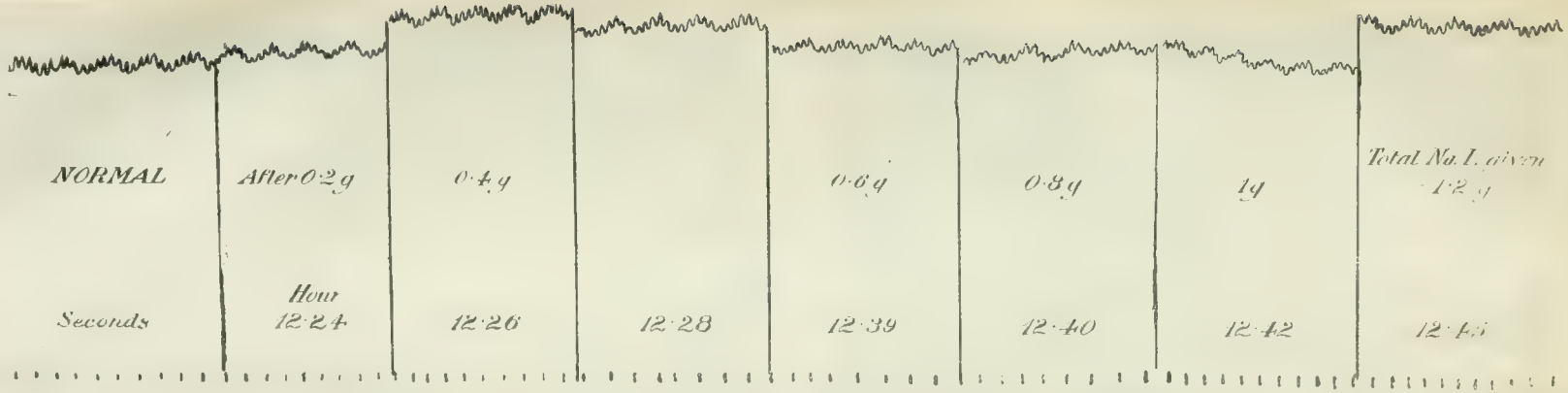
## THE ACTION OF IODIDES ON THE HEART AND CIRCULATION.

BY

RALPH STOCKMAN, M.D., and FRANCIS J. CHARTERIS, M.B.,

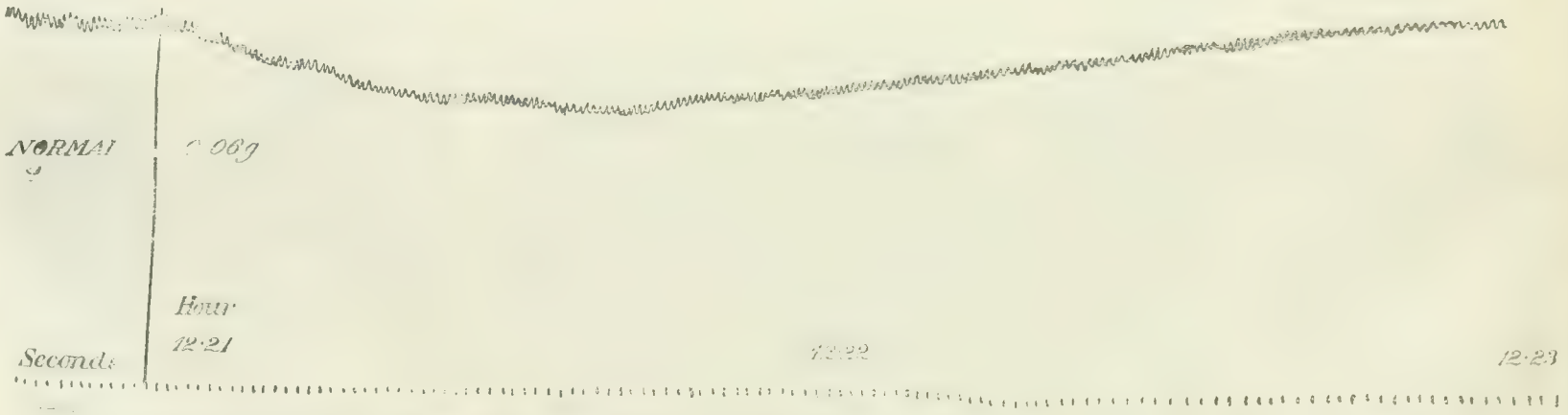
University of Glasgow.

THE action of iodides on the heart and blood vessels, with their consequent effects on blood pressure, has been the subject of much investigation and discussion owing to the interest arising from their extensive use in aneurysm, arterial sclerosis, and degenerative changes of the cardio-vascular apparatus. When iodides are given for the treatment of these conditions no immediate marked action on the circulation is observable, such, for instance, as takes place on giving nitrites, aconite, or digitalis; and whatever curative effect they may exercise is brought about gradually and slowly, so that only after prolonged administration can any distinct improvement be noticed in the morbid condition. In these cases, moreover, the administration of iodides usually forms only a part of a more or less complex system of treatment, and hence their share in the result as compared with rest, diet, and eliminant measures is very difficult to define. Rosenbach, in his large work on diseases of the heart (Berlin, 1893) expresses the opinion that iodides are of no value in the treatment of aneurysm, and that they are even hurtful in




*Rabbit under Ether & Morphine. Sodium Iodide by jugular Vein. 18 grains in all.*

Tracing 1.—Tracing from carotid artery, no fall of blood pressure.




*Rabbit under Ether & Morphine. Potassium Iodide 1 grain by femoral Vein*

Tracing 2.—Tracing from carotid artery, transient fall of blood pressure.

arterio-sclerosis, but the great bulk of medical opinion and experience is directly contrary to this. The immediate or visible results of their administration are often disappointing; but if it is considered that the cardio-vascular diseases in which they are given are always of long-standing, and arise from old age, hard work, kidney disease, gout, lead poisoning, syphilis, and other factors, which at this stage are practically incurable and are continuous in their action, it cannot reasonably be expected that any remedial measures can do more than ameliorate or retard their injurious effects on the heart and blood vessels. That iodides exercise a beneficial action in many of these cases seems to be proved by the experience of their almost universal use in practice; that they are not absolutely curative is quite another matter. In any case their action on the circulatory system is a matter of clinical interest.

As a rule when sodium or potassium iodide is given in ordinary doses the pulse remains quite unchanged to the finger both as regards rate and force, hence it is very unlikely that they produce much alteration in the physical conditions of the circulation due either to weakening of the heart or to dilatation of the arterioles. In spite of this, reference to text-books on pharmacology and therapeutics shows that most authors attribute to the iodides a depressing effect on the circulation and blood pressure, while only a minority hold that there is no adequate proof of this. In special treatises on diseases of the heart and blood vessels their mode of action in aneurysm is frequently explained, but no two authors seem to agree in their explanations. Dr. George Balfour[1] believes their effects to be due to a marked lowering of blood pressure from dilatation of the arterioles with a further possible action on the muscular and fibrous coats of the sac, others hold that iodides tend to favour clotting, either by a direct action on the blood or by weakening the heart beat, while another theory maintains that benefit is seen only in those cases primarily due to a syphilitic taint. Sée and Lapicque assert that it is only the potassium iodide which is useful in heart disease, in asthma, and in arterial disease, and hold that while the potassium stimulates the heart in a manner comparable to digitalis, the iodine exerts a vaso-dilating action, and that it is the combination of these effects which gives value to the drug. Clinical experience with the sodium iodide is, however, totally opposed to their theory, as the latter salt is found to be equally effective in all these conditions. These various views have been based, very largely at least, on the results of experiments on animals, which, as we shall presently show, are scarcely available for comparison, as they have been carried out under entirely different conditions from those involved in giving iodides to man by the mouth, and often without sufficient reference to the action of the base (sodium, potassium, ammonium, strontium) with which the iodine is combined. Further, it is to be borne in mind that in disease the action of the drug extends over weeks or months, in pharmacological experiments over one or two hours only.

### Action in Man.

We have, therefore, made systematic observations on the blood-tension and pulse-rate of numerous patients who, for one reason or another, were taking potassium or sodium iodide. These observations were made with von Basch's sphygmomanometer and Gärtner's tonometer, instruments which detect and record slight changes in arterial tension. It is not necessary to describe them here in detail, but we may explain that the former is applied to the radial artery, and the amount of pressure required to extinguish pulsation is transmitted through an air-pad and recorded on a graduated dial; and that the latter is applied to the finger, the amount of pressure required to obliterate the blood flow through the digital arteries being transmitted to a column of mercury and recorded on a scale.*

Both instruments are now well known, and are regarded as giving accurate results when carefully used. We satisfied ourselves by observations on patients suffering from pneumonia, cardiac disease, renal disease, advanced phthisis, advanced diabetes, etc., and on others taking such drugs as nitroglycerine, aconite, and digitalis, that the instruments recorded accurately, and indicated at once changes in the arterial tension and blood pressure. Observations on ourselves and on students attending the class confirmed this, and showed that the instruments could be depended on to record slight changes—that is, changes not detectable by the finger.

We used only the iodides of sodium and potassium, generally in doses of 15 to 30 or 40 grs. per day, a few patients had up to 180 grs., and one man (suffering from spinal sclerosis) was taking 300 grs. Some of these cases had healthy circulatory systems, and were taking iodide for chronic rheumatism, sciatica, facial paralysis, etc.; others suffered from renal or cardiac disease, aneurysm, arterio-sclerosis, bronchitis, etc. One of them had very severe iodism, others had it slightly. Observations were taken regularly during the iodide administration, but in no case did any fall in the blood pressure occur, or any change in the rate or rhythm of the heart. Even the man who suffered so severely from iodism maintained his arterial tension unimpaired, although he said he felt very depressed and ill. In these cases the depression seems to be due partly to the coryza and partly to an action on the nervous system.

The result of the observations is to show that potassium or sodium iodides, given to men by the mouth in therapeutical doses, do not modify the physical conditions of the circulation, and that therefore they neither directly weaken the heart nor dilate the arterioles. The therapeutical effects must be due to some other mode of action, and this is probably true also of some of the rarely-occurring poisonous effects. It is sometimes observed, for instance, that iodides quicken and weaken the pulse, and this has been specially frequent in goitre; sometimes also their administration is followed by emaciation. There is good reason for believing that in neither case is this a direct effect, but is due to increased formation or alteration of the iodine-containing thyroid secretion, which has a powerful action on the circulation and on metabolism.

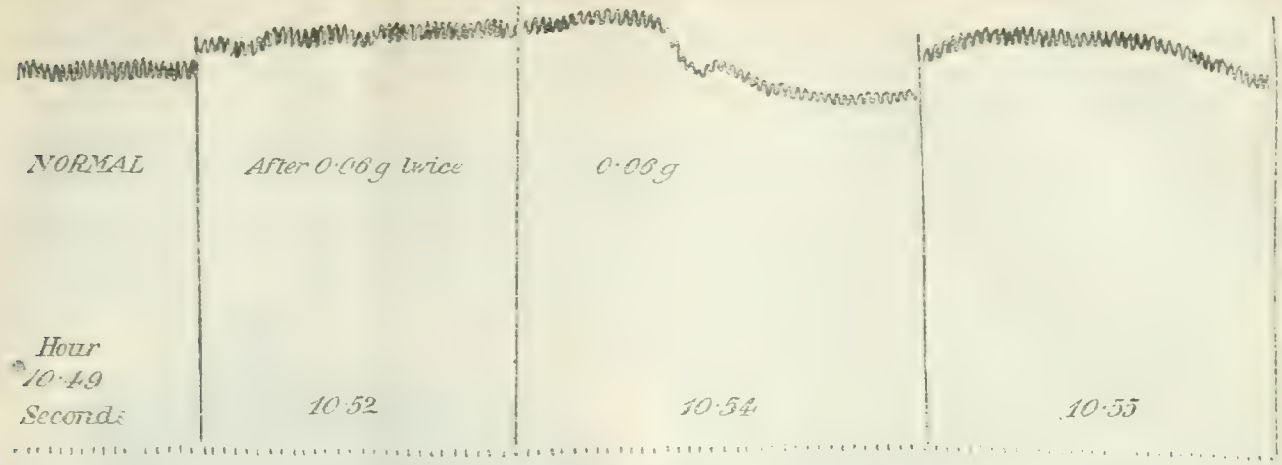
### Action on Animals.

With regard to the action of iodides on the circulation in animals, a considerable amount of experimental work has been done, part of which we have repeated and checked. The total result indicates that iodine or iodides, when given by the mouth, do not alter the dynamical conditions of the circulation. When given intravenously, potassium iodide exerts the marked depressing potassium action on the heart, whereas sodium iodide is practically without this effect.

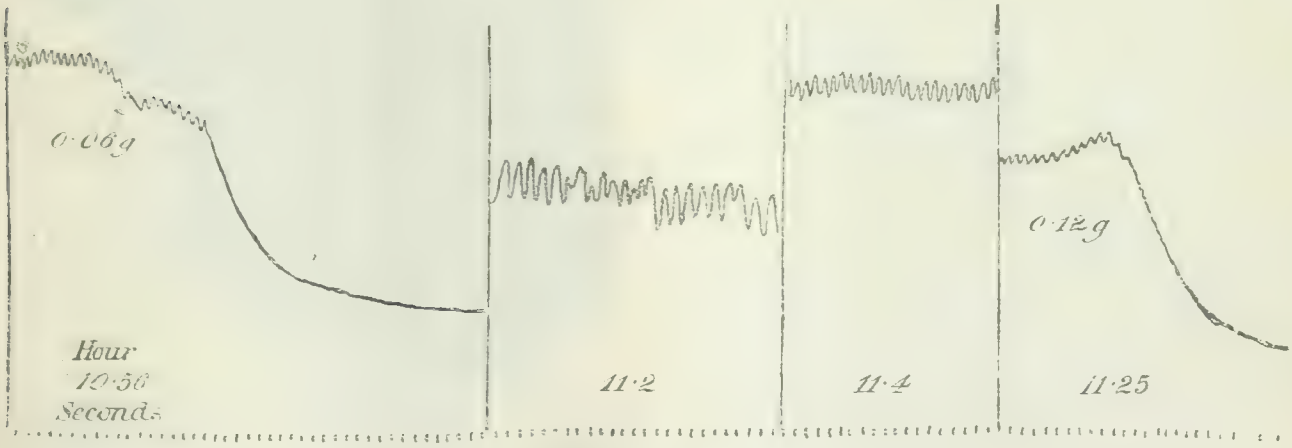
Tracing 1 is taken from the carotid artery of a rabbit to which 18 grs. of sodium iodide dissolved in water was given by the jugular vein in twenty-one minutes, 3 grs. at a time. There was practically no effect on the heart or blood pressure, except what might be due to irritation of the endocardium by the salt, and which was also produced by similar solutions of sodium chloride. A much larger amount—2.7 grams (about 40 grs.)—given in forty-six minutes had a similar effect. Boehm and Berg,[2] giving iodine dissolved in sodium iodide to dogs and rabbits intravenously, could discover no action on the circulation at any period of the experiment, a result which has been confirmed by Henrijean and Corin,[3] and with sodium iodide alone by Prevost and Binet.[4]

When potassium iodide is administered by a vein the result is very different. All observers are agreed that, given in this way, its action as a cardiac depressant is very marked. Small and carefully-graduated doses, however, cause a transient rise of blood pressure, with slowing of the pulse and increased size of wave. When given by the stomach the depressing action on the blood pressure is only observed after enormous doses, and is never very evident in man. It is an effect of potassium, common to all the potassium salts and seems to be due to a large amount of the potassium salt striking the heart at once and in a certain concentration, for, if the solution be very dilute and injected slowly so that it mixes well with the blood, these results are not seen. Although the blood pressure may sink to *nil*, the heart muscle and nerve ganglia may not be killed, but may recover rapidly as the blood washes the poisonous salt out of the heart. This is seen in Tracing 4. The heart, however, may be poisoned past recovery, and death then occurs in asphyxial convulsions.

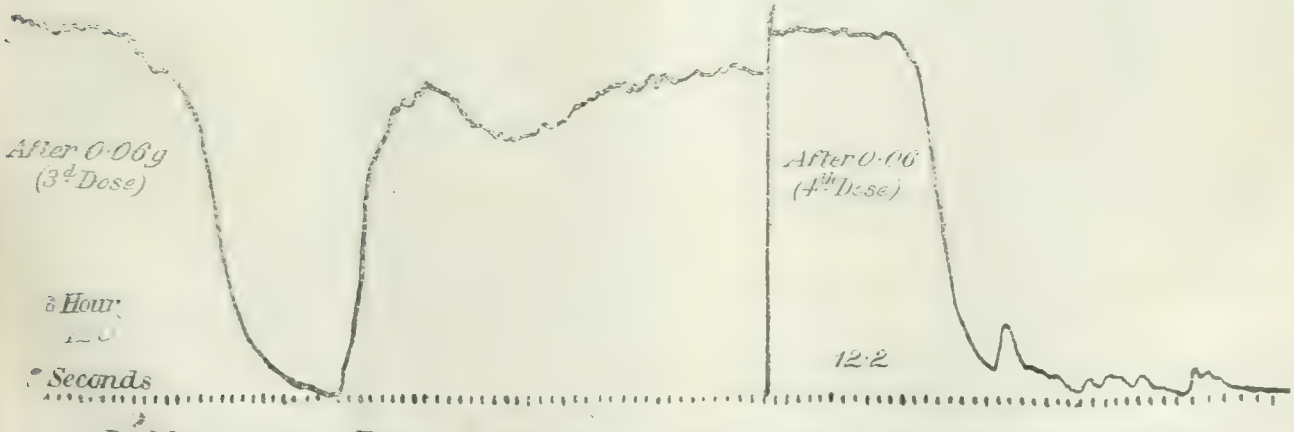
* An account of v Basch's instrument is given in *Zeit. f. klin. Med.*, ii, 1880; *Wien. med. Woch.*, 1883; *Berl. klin. Woch.*, 1887; by S Fränkel in *Deut. Archiv. f klin. Med.*, xlvii, 1890; and by Rosen in *Dorpat pharmak. Arbeiten*, vii, 1891. Gärtner's tonometer is described in *Wien. med. Woch.*, 1899.




Tracing 3.—Rabbit under ether and morphine; potassium iodide by vein; 6 grains in all. Tracing from carotid artery, slight rise of blood pressure with fall after a larger dose, slowing of heart, and more ample pulse wave.




Tracing 3.—*(Continued).*




*Rabbit under Ether & Morphine. Potassium Iodide by jugular Vein.*

Tracing 4. Showing sudden fall of blood pressure with recovery, and paralysis of heart after a further dose.

Tracing 2 shows the transient depressing effect of a single dose soon recovered from. Tracing 3 shows the rise of blood pressure, also the fall after a larger dose, and the slowing of the heart with a larger pulse wave. Tracing 4 shows a rapid fall and rapid recovery of the blood pressure followed after a further dose by paralysis of the heart.

The difference in action between sodium and potassium iodides when given intravenously is therefore very striking, but it depends entirely upon the base, and is not seen when the drugs are given by the mouth.

Sée and Lapicque[5] have stated that with both sodium and potassium iodide there is a late iodine action consisting in a fall of blood pressure from dilatation of the arterioles. This we have never seen, and its occurrence is denied by other observers also. Bogolepoff[6] is frequently quoted also as an authority for the statement that potassium iodide dilates the small vessels, but his conclusions on this special point are largely based on microscopical examination of the capillaries of the frog, a method of no value for determining the question. As a matter of fact, the perfusion of a dilute sodium or potassium iodide solution through the blood vessels of a frog does not cause them either to contract or dilate; it has as little action as normal sodium chloride solution has.

We also made a large number of experiments on the heart of the frog isolated and attached to Williams's apparatus. When iodine was added to the circulating fluid (1 in 3,300 parts, 1 in 1,000, etc.) it acted sometimes rapidly and sometimes slowly as a muscle poison, the beat gradually becoming smaller and the heart stopping in diastole. Sodium iodide was also rather irregular in its rate of action, but the ultimate result was to weaken the heart muscle and finally to poison it. Sometimes peristaltic contractions passed over the heart and there was marked systole such as occurs in the frog heart with digitalis. With weak solutions of potassium iodide (1 in 1,000 or 2,000) the digitalis-like action was very evident and is due to the potassium. The beats become much more ample, and the systole and diastole very complete. Stronger solutions (1 in 400) killed the heart muscle in a few minutes. With ammonium iodide the heart was slowly killed, very much as with the sodium salt.

These experiments on frogs do not, however, throw much light on the action of iodides on the heart and circulation in man and mammals. As we have already shown,[7] iodine and iodides exercise a very poisonous effect on the muscles of the frog, no trace of which can be observed in mammals, and the action on the frog's heart is probably just a phase of this. When large doses of sodium iodide or sodium chloride (40 to 60 grs. or more) are given to a rabbit by a vein, the animal shows no symptoms for some hours and then dies of œdema of the lungs and pleuritic effusion. It is apparently a saline action independent of the iodine. If potassium iodide be given in the same way a few grains produce instant death, this being a potassium action on the heart. Potassium salts, whether iodide, bicarbonate, acetate, or any other, when given by the mouth in ordinary quantities, reach the heart so diluted by the blood that they usually do not show even a trace of this depressing effect.

We may conclude, therefore, that sodium or potassium iodide when given to man by the stomach in ordinary doses has no depressing effect on the action of the heart or on the blood pressure in the arteries.

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[1] *Diseases of the Heart*, 3rd ed., 1898. [2] *Arch. f. exper. Path.*, v, 1876. [3] *Archives de Pharmacodynamie*, ii, 1876. [4] *Revue Méd. Suisse Rom.*, 1890. [5] *Bull. Acad. Méd.*, xxii, 1889. [6] *Revue Sciences Méd.*, x, 1876. [7] *Journal of Physiology*, xxvi, 1901.

## THREE CASES OF RUPTURE OF THE LEFT VENTRICLE.

BY

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THE following are three examples of that very rare pathological condition—rupture of the heart. The first two are of particular interest from the similar features, both clinical and pathological, that they present: in each case there was absolutely no history of any exciting cause, such as excitement or sudden exertion, the patient being in bed in one case, and quietly sitting on a seat in the other. In all three cases the lesion was situated in the wall of the left ventricle.

*Case 1.**

J. B., male, aged 48, was admitted into the Dorset County Asylum in 1861 suffering from mania with delusions. He was then in good bodily health, but no previous history was ascertained. Up to the time of his last illness there was nothing of special interest in the history of this case. Mentally, he became demented.

On September 30th, 1901, he appeared to be rather out of sorts, and was put to bed. On examination no marked symptoms presented themselves.

At 8.10 A.M. on October 2nd he had taken about a pint of milk, and got out of bed for about three minutes; and at 9.30 A.M. he appeared in his usual condition, and told the attendant that he was "all right." At 10.30 the attendant noticed his head fell over on the pillow, and he appeared to be unable to draw breath. The medical officer was at once called, and the patient was found to be moribund, and he died two minutes afterwards.



Fig. 1.—Drawing from original specimen by Mr. G. A. Rorie.

*Necropsy.*—This was made on the next day. On opening the pericardium the cavity was found to be filled with dark-coloured clot covering the anterior surface of the left ventricle, and there was also a considerable quantity of bloody fluid present. The heart was not adherent to the pericardium. The heart was found to be somewhat dilated, was soft and flabby to the touch, and there was a considerable amount of fat on its surface.

In the anterior wall of the left ventricle was a tear running in the line of the muscle fibres. It was 1 inch in length, and was situated about 1 inch from the apex and 1¼ inch, transversely from the interventricular septum; it communicated directly with the cavity of the left ventricle. There was no evidence of localised disease at the point of rupture. On microscopical examination the heart muscle was found to be in an advanced state of fatty degeneration, and also showed fatty infiltration. Beyond this condition of the heart muscle there was no actual disease about the heart. As regards the other organs, the only points of interest were some softening of the brain and primary cancer of the gall bladder and liver.

*Case 2.*

The second case—for the notes of which we are indebted to Dr. Rorie, Dundee—was a female, aged 50, who admitted into the Dundee Royal Lunatic Asylum on June 23rd, 1892, suffering from alcoholic dementia. On admission she was in fair bodily health and condition, and her various systems were healthy, beyond the fact that her pulse was quick and rather weak; her eyes showed signs of old keratitis; she was very deaf, and mentally she was in a condition of dementia.

Her previous history showed that she had been addicted to alcoholic excess for some years, and this had been more marked recently. She had had a family of eight—two sons and six daughters—one son being epileptic, and two children were stillborn.

As regards the progress of this case there is nothing particularly of interest; her bodily health improved somewhat, but mentally she remained demented and degraded in habits.

On May 18th, 1901, she complained of feeling sick at 5 A.M., but got up at the usual hour, went about the daily routine as usual, and took a good breakfast. At 11 A.M., while sitting quietly on a seat outside, she fell off

* The specimen was exhibited by Dr. P. W. MacDonald at the autumn meeting of the Dorset and West Hants Branch of the British Medical Association, October 17th.

the seat "as if in a fit," was at once carried inside and laid on a couch. She was at once seen by the doctor, and found to be dead.

*Necropsy.*—This was performed next day. On opening the pericardium a large amount of clot was found lying in the anterior surface of the heart, and distending the pericardium. The heart was fatty as a whole, and showed two medium-sized milk spots on the left ventricle. At a distance of 1 inch from the apex, on the anterior aspect of the left ventricle, was an area reddish-purple in colour from effused blood, in the centre of which was a small irregular tear about ½ inch in length. On inserting a probe it was found to lead upwards and inwards into the cavity of the left ventricle, about ½ inch from the interventricular septum. Otherwise there was nothing of note, except that the whole heart showed marked fatty change; it weighed 9 ozs. As regards the other organs, there was little of interest; the lungs were emphysematous, the liver and kidneys were somewhat fatty, and the brain showed signs of degeneration.



Fig. 2.—Drawing from a photograph by Mr. G. A. Rorie.

*Case 8.*

J. S., aged 79, was admitted to the Dorset County Asylum in October, 1900, suffering from senile mania. The previous history shows nothing of importance, and he had been in fair bodily health for his age up to the time of his death.

On going to bed on the evening of November 8th, 1901, he had a quarrel with another patient, in the course of which they both rolled back on his bed. On the attendant separating them, the patient got up and walked into another dormitory, discussing the subject of the quarrel with the attendant. He then sat down in bed, asked the attendant not to leave him, and fell back in bed unconscious. He was at once seen by the medical officer, and found to be unconscious, slightly cyanosed about the lips, and pulseless; after one or two shallow respirations he died.

*Necropsy.*—A *post-mortem* examination was performed next day. On opening the pericardium it was found full of bloody fluid, and covering the entire surface of the heart was a thick layer of dark clot. On removing this, a small fissure was found on the posterior aspect of the heart. It was exactly ⅝ inch in length, 1 inch from the auriculo-ventricular septum, 1 inch from the border of the pulmonary artery, and followed the direction of the muscle fibre. It communicated directly with the cavity of the left ventricle. The heart as a whole was very fatty; there was a milk spot on apex of left ventricle; the muscle was soft and friable; the mitral valve was much thickened, and there was some calcification of the cusps of the aortic valve, which, however, was competent. Otherwise there was no other naked-eye pathological change noticeable. The other organs of the body were healthy.

The German Balneological Congress will hold its twenty-third annual meeting at Stuttgart, March 8th to 12th, 1902. All communications should be addressed to the General Secretary, Geh. Sanitatsrath Dr. Brock, Melchiorstrasse, 18, Berlin, S.O.

## ATHEROMATOUS ULCERATION OF THE HEART: PERFORATION: SUDDEN DEATH.

By D. E. ANDERSON, M.D.Paris, M.B., B.A., B.Sc.Lond.,
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As ulcerative perforation of the heart is extremely rare, the following case, which came under my care recently, will probably prove of interest. The notes were taken by Dr. Clark, the house-physician.

C. H., aged 62, a manufacturer's agent, was admitted on September 16th into the Hertford British Hospital, Paris, suffering from "pain in the chest and dyspnœa."

*History.*—He had not been feeling well for five days, and had to lie up on account of pain in the chest running through to the back, the pain being more intense on the left side. As this had increased, notwithstanding the medical advice obtained, he had come to the hospital. He had seen better days, but for the last twelve years had led a very anxious life. There was no history of tubercle or syphilis. About a year ago, he had an acute attack of pleurisy and nearly succumbed; his urine then contained albumen, but it disappeared afterwards.

*Condition on Admission.*—Patient was of medium height, florid, short neck, and stout. Temperature 100.6°; pulse 104; respirations 32. Breathed with difficulty, and lay in a semi-recumbent position. The lungs were emphysematous, with signs of pleurisy over the lower third of back and side of left lung, but none over right lung. The heart's dulness was not made out owing to emphysema of the lungs. The impulse was in the fifth space and in the nipple line. The heart sounds were distant, the first sound prolonged at apex, but no *bruits* were heard anywhere. The pulse at the wrist was quite regular, strong, and compressible. There was pain on palpation of epigastrium. The liver and spleen could not be felt on account of fat in the abdominal wall. Percussion was not attempted, as it distressed the patient. Examination of the kidneys was for the same reason omitted. The urine was acid, specific gravity 1030, of high colour, and contained 0.5 parts per 1,000 of albumen.

*Treatment and Progress.*—Linseed poultices were applied over the front and back of the chest. A cathartic pill and a diuretic mixture, milk, and barley water were given. The next day (in the morning) the patient was better, the pulse normal, and the pain local. In the afternoon, at about three o'clock, pain returned, urine was passed in larger quantity, he perspired profusely, looked very anxious, and said he felt he was dying. Four hours later, whilst the nurse was changing the poultices, the patient suddenly fell back, had twitchings of the hands and face, and died.

*Necropsy* (17 hours after).—The dura mater and pia mater were thickened, with atheromatous patches in several places; the sinuses were gorged with blood. The arteries were atheromatous. No clots or effusion of blood were found in the brain substance. The right lung was emphysematous; the left showed old adhesions to the chest wall; the lower lobe was collapsed (*post mortem*), owing to pressure of the large pericardial effusion. The heart was hypertrophied and dilated, with much fat on its outside. Its muscle was fairly good. The coronary arteries were atheromatous. There was a perforation as big as a small crowquill on the posterior wall of the left ventricle, or about midway from the upper and the lower extremities, and about half an inch from the interventricular septum. This perforation was in the centre of an ecchymosed patch. The pericardial sac, the front of which was adherent to the chest wall, contained about 8 or 10 ozs. of blood clot. On opening the left ventricle of the heart it was found that the perforation corresponded with a ragged, funnel-shaped ulcer, the size of a shilling, which had given way at its apex; and about an inch lower down there was another smaller ulcer which extended as deeply as the visceral layer of the pericardium. The branches of the coronary artery near these ulcers were blocked for about ¾ inch by thrombi of an atheromatous nature. Evidently these had been the cause of the ulceration. The mitral valves showed old vegetations. The aortic were competent but contained small particles of chalky material. The pulmonary and tricuspid valves were not diseased. The aorta was dilated and very atheromatous a short distance from the heart. The liver, spleen, and intestines were normal. The kidneys were granular, with small retention cysts. Their substance was rather hard; the cortex was slightly diminished; the suprarenal capsules normal.

## ACUTE RHEUMATISM: HYPERPYREXIA: POST-FEBRILE MANIA: RECOVERY.

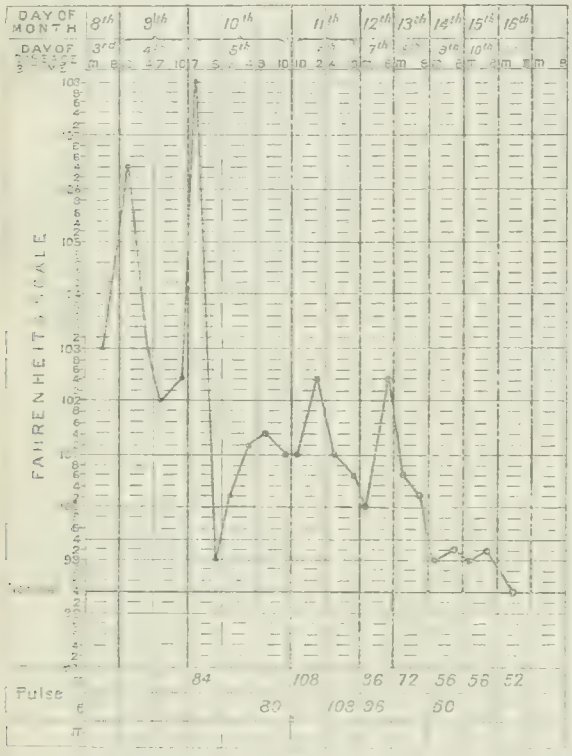
By D. HAMILTON KYLE, M.B., C.M.Glasg.,
St. Andrews.

The condition of hyperpyrexia in acute rheumatism is so uncommon that I have thought it worth while reporting the following case:

W. W., aged 32, married, a gardener, very dark complexion, nervous temperament, intelligence under average.

*History.*—Family history could not be ascertained. His previous health was fairly good; he had suffered from colds and indigestion, but had had no acute illnesses. During the early three months of the year he had felt weak and out of sorts, had had little appetite, and his food had disagreed with him, but prior to the onset of his present illness he had no rheumatic symptoms. He first felt pain in the right wrist, which was swollen, on April 6th. He thought he might have sprained it at his work. Next day he went to work, but by afternoon he had to knock off, as his right knee became affected; by night both knee-joints were so painful that he got no sleep.

*State on Examination and Treatment.*—I saw him first on April 8th, when he complained of pain in both knee-joints and the right ankle, and they were slightly swollen, but not red. He was sweating a little, and his temperature was 103°. I put him on a milk diet, and prescribed 15 grs. of sodium salicylate every hour until its characteristic effects were produced, and thereafter at four-hourly intervals until I saw him again. On April 9th, at 12 noon, I found him delirious and semiconscious, with tremors and a temperature of 106.4°. He had taken eight powders before showing the constitutional effects of the salicylate, and has had three others since. No bath being available, I determined on ice-packing to reduce the temperature, but before I had made the necessary arrangements I found that the fever was declining naturally: at 4 P.M. it was 103°, and by 7 it had dropped to 102°. At this time, except for the deafness and other effects of the salicylate, he was fairly well. He had slept at intervals during the afternoon, and had taken milk well. At 10 P.M. his temperature had risen slightly, and I took the precaution of having plenty of ice at hand in case of necessity.




*Progress.*—April 10th. I was sent for at 7 A.M. by the nurse, who had found his temperature to 108°. He was again semiconscious and delirious, with tremors and twitchings all over his body. I ice-packed him immediately, and in little more than half an hour his mind became quite clear and his temperature came down to 99°. He expressed himself as quite comfortable, and the joint pains seemed to have gone. During the rest of the day he kept well, the temperature varying (see chart). At my evening visit I noted a temperature of 101°, with no delirium and very little pain in the joints. He was taking the salicylate powders every eight hours, and had consequently lost their disagreeable effects.

April 11th. 11 A.M. Temperature 101°, pulse 90, sweating profusely. Had not slept during the night; was somewhat maniacal. The first sound was indistinct at the apex. 2 P.M. Temperature 102.4°, pulse 108. 4.30 P.M. Temperature 100.6°, pulse 108. Was still wandering in mind, did not know he was in bed; was spitting constantly over the bed and room. The sodium salicylate was stopped and a mixture of potassium iodide and bromide with antipyrin was given instead. 9.30 P.M. Had taken one dose only of his medicine and refused food; he imagined he was being poisoned. He was with difficulty kept in bed, into which he was passing his urine. I injected morphine ¼ gr.

April 12th. 11.30 A.M. Had not slept. Would not lie down, talking constantly, but was somewhat more alive to his surroundings. No pain was complained of unless specially asked for. The right knee was still swollen. The first sound of the heart was slightly muffled; there was no friction or murmur. I found him sleeping at the afternoon visit. 9 P.M. Had slept more or less since 2 in the afternoon; was complaining more of pain in the right knee, and had some pain in the cardiac region; his respiration-rate was 24, mind clear, was taking food again.

April 13th. 11 A.M. Mind quite clear, slept all night, taking food well, no chest pain, no murmur, right knee still swollen, no redness, herpetic eruption on lips; sodium salicylate was begun again at eight-hourly intervals. 9.30 P.M. Very comfortable.

April 14th. Has had a good night, very little pain, bowels moved naturally for the first time since the beginning of his illness, and his temperature almost normal.

April 16th. Convalescent.

April 24th. Although otherwise well, the right knee-joint was still swollen and painful on movement. Heart sounds normal; skin desquamating very freely.

### Remarks.

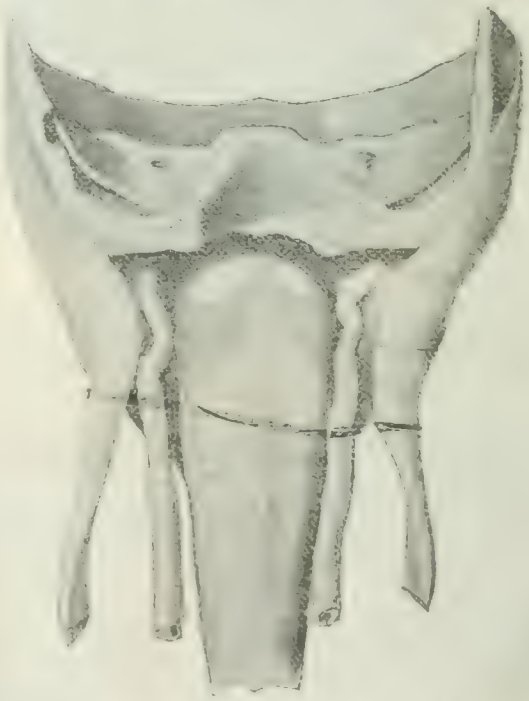
The interest in cases of this character lies chiefly in the question as to whether or not they shed any light upon the causation of hyperpyrexia. I cannot say that there is anything in the facts of this case as I have stated them which does so. It has been noted before that there was an apparent connection between mildness of the arthritic symptoms and this condition, and my case would lend some weight to the observation.

There is a point which does not come out in the report of the case, but may be worth noting. The attack coincided with a marked increase in the number of acute rheumatic cases in this town and district.

## TORTUOSITY OF BOTH INTERNAL CAROTID ARTERIES.

By G. H. EDINGTON, M.D.,
Glasgow.

The condition which forms the subject of the present communication was discovered in the course of preparing a dissection of the constrictors of the pharynx. The anterior portion of the base of the skull, including the temporal bones, was removed, along with the soft parts of the neck in front of the prevertebral muscles. On cleaning the surface of the pharynx the abnormal course of the internal carotid artery on either side was observed. The artery arose in the normal way from the common carotid at the level of the upper border of the thyroid cartilage.



On the right side the vessel ran upwards for a distance of 3.5 c.m. It then turned sharply forward and slightly inwards for a distance of 1.25 cm., after which it suddenly turned upwards and outwards to the lower opening of the carotid canal. This last portion measured 2 cm. in length (see illustration).

On the left side the first portion of the artery measured 3 cm. in length, and coursed vertically upwards. It then turned abruptly forwards and inwards for 1.5 cm., and again sharply upwards and slightly outwards to the base of the skull, a distance of 2.5 cm.

Previous to the dissection the pharynx had been packed

with cotton wool, and the vessels were in consequence somewhat displaced outwards. Before opening the pharynx, a pin was passed through the second bend of the artery and made to project into the pharyngeal cavity.

A median vertical section of the parts showed that the second bend of the vessel was situated external to the posterior pillar of the fauces at the level of the middle point of the tonsil. From here the horizontal portion of the vessel passed backwards on the lateral wall and then turned downwards. The specimen was obtained from a male subject, aged 34, who was certified as having died from chronic Bright's disease. The common and external carotids were normal in size and position, but the condition of the vessels in other parts of the body was not noted. With the exception of the thyrohyoid, the infrahyoid group of muscles on either side was supplied from the trunk of the vagus; the thyrohyoid received its nerve supply from the hypoglossal, as usual.

With regard to the cause of tortuosity I am unable to speak, but it might perhaps be associated with the arteritis of chronic nephritis. The condition has, as a rule, been found in subjects of an age when tortuosity of the vessels is not uncommon, but its occurrence in a young subject might be explained by abnormal persistence of portions of the embryonic arches.

That the condition noted above is of interest clinically will be seen by referring to a paper, by Dr. Brown Kelly, in the *Glasgow Medical Journal* for January, 1898. Dr. Kelly records four cases in which he had observed large pulsating vessels in the pharynx. His first three observations were all in male patients over 70 years of age, and the pulsation was unilateral. His fourth case was a woman, aged 22, and the condition existed on both sides.

I am indebted to his paper for an account of the literature of the subject, from which it would appear that the bulging of the vessel on the pharyngeal wall takes place behind the posterior pillar of the fauces. As Dr. Kelly points out, a tortuous internal carotid may be a source of danger in performing tonsillotomy, or incising a peritonsillar abscess, or in the removal of adenoid vegetations.

## SUPRARENAL EXTRACT AS A HÆMOSTATIC.*

By W. THELWALL THOMAS, F.R.C.S.,
Honorary Assistant Surgeon, Royal Infirmary, Liverpool; Assistant Lecturer in Surgery, University College, Liverpool.

In this country the physiological action of suprarenal extract was investigated by Dr. Oliver and Professor Schäfer, and their results recorded in the *Journal of Physiology*.[1] When an intravenous injection was used in dogs and rabbits, an extreme contraction of the arteries was noticed, demonstrated to be of peripheral origin. The effect soon passed off, but could be kept up by repeated small injections. The action of the suprarenal extract is of great physiological importance in maintaining the tonicity of the muscular tissues in general, and especially of the heart and arteries. Therapeutically an extract has been used in a state of solution to construct the small arteries of the conjunctiva before and during operations on the eye, and in the surgery of the nasopharynx. Schäfer has mentioned its usefulness in epistaxis; Harris, of Chicago,[2] uses it to constrict the blood vessels of the mucous membrane and prevent hæmorrhage from the bladder before cystoscopic examination; and Dr. F. Grünbaum[3] recommends it in hæmorrhage from the alimentary canal, bladder, and possibly the uterus, a sterile solution being non-irritating; but he doubts its usefulness in hæmophilia, assuming this condition to be due to congenital hypoplasia of the muscular coats of the arteries. Two cases recently came under my care in which suprarenal extract had the pleasing effect of arresting hæmorrhage when all the ordinary remedies had proved useless.

Case I. *History.*—The patient was an infant, aged 13 months, who while toddling about a kitchen on November 1st, 1900, stumbled and fell, hitting the upper lip against some heavy furniture, tearing the lip from the upper jaw to the extent of an inch. Bleeding was severe. A medical man attended to it, packing the wound. A few hours later further treatment was necessary, and for the next three days, at periods of twelve hours, the wound had to be cleaned of blood clot and redressed owing to hæmorrhage. Most of the usual applications had been resorted to, still the bleeding recurred.

*State on Examination.*—On November 4th, at 8 P.M., the child was brought to my house by his grandfather, a porter at the infirmary. Blood was trickling out of the mouth; the child's lips were ashy grey, the skin like marble, and the ears almost transparent. He was crying, extremely restless, and profoundly anæmic; a large soft clot protruded from beneath the upper lip. The gauze pack was withdrawn from the wound, and with a good electric light, the patient's head being inverted, an irregular cavity was disclosed, with bleeding walls; two buried catgut sutures checked the hæmorrhage; a gauze pack powdered over with salicylic acid introduced, and a long strip of plaster applied from cheek to cheek, crossing the philtrum of the lip to retain the pack *in situ* and maintain pressure. This seemed satisfactory, and the child was taken home. Early next morning bleeding recurred, and the child was admitted to the Royal Infirmary.

*Treatment.*—The House-Surgeon, Dr. Broad, acting on my instructions, cleaned the cavity and then packed it with gauze impregnated with powdered suprarenal extract, and ordered the administration of 1 gr. of the extract every four hours. No further hæmorrhage occurred. The dressing was changed daily, the general condition of the little patient improved rapidly, and he was sent home on the third day with only a slight granulating line remaining. Two days later the mother brought the child back. A few drops of blood had been seen, but on examination only a few granulation points could be seen, and she was reassured that no harmful bleeding was likely to occur. The child has been quite well since.

Case II. *History.*—A. T., aged 23, had always bled excessively ever since he could remember on receiving any slight wound; the slightest extra pressure or bruising would immediately be followed by a large blood swelling. Eight years ago, for a period of seven days, he had severe hæmaturia, and again five years ago. Three years ago he was admitted to the infirmary under Mr. Rushton Parker, suffering from a very extensive hæmatoma over the right hip and extending to the popliteal space, the result of twisting himself when jumping on to an omnibus (probably rupturing a few muscular fibres). He remained an in-patient for many weeks and was even now lame from the effects of it. He has a brother 14 years of age who is also a bleeder. Six weeks ago, when working at wood carving as an amateur, a chisel slipped and cut him very slightly over the metacarpo-phalangeal joint of the left index finger towards the palmar side. He bled profusely and went at once to a medical man, who dressed the slight wound by placing a pad of lint wrung out of perchloride of iron on it and covering with a firm bandage. The dressing was kept on for a week: on its removal bleeding occurred, and this happened every time the wound was dressed or the tight bandage slackened.

*State on Examination.*—On December 29th, 1900, he was admitted to the infirmary; he had evidently lost a large quantity of blood, being markedly anæmic, and the pulse feeble. On exposing the wound a watery blood oozed out through and around some soft clot. A tourniquet was applied on the forearm, and the wound, which was cleaned with biniodide of mercury solution, was found to be half an inch in diameter and about the same depth, sloping into the palm. The action of the styptics probably accounted for this increase in size of the original cut.

*Treatment.*—Freshly-powdered suprarenal tablets provided the material to fill the wound with, and a piece of cyanide gauze with some extract powdered into its interstices was bandaged on. Five grains of suprarenal extract were given every four hours, and he was kept in bed. The wound was examined next day, some soft clot washed away, and the dressing renewed, which remained undisturbed for four days, when the now shallow granulating cavity was cleaned out, some blistered epithelium in the vicinity cut away, and a little iodoform added to the extract in the dressing.

On January 4th the dressing consisted of cyanide gauze without "extract," and on the 6th he discontinued taking any. The small granulating area took several more days before becoming soundly healed.

On January 14th he pressed his hand on the back of a chair to assist himself rising, and an extravasation of blood took place into the palmar flexor sheath; he was again ordered gr. v of suprarenal extract every four hours. On the 21st he went home and asked for a prescription to obtain the extract. He was an intelligent young man, a music teacher, and keenly aware of his unfortunate diathesis. After the first dressing on December 29th, although the wound was at that time septic, no further hæmorrhage occurred, and he was so convinced of the value of "the powder" that he intends carrying some in a box in his pocket in case of future emergencies.

The immediate action of the remedy on this patient should encourage a resort to it, notwithstanding any theory as to the pathology of hæmophilia. So impressed was the house-surgeon with the hæmostatic action, that having recently excised a tough, enlarged tonsil from a man aged 24, and the bleeding being too free, he mopped the bleeding area with a piece of sponge freely powdered over with suprarenal extract. The hæmorrhage ceased almost immediately.

References.
[1] Vol. xvii, p. 9, 1895. [2] *Annals of Surgery*, July, 1900. [3] British Medical Journal, November, 1900.

* Read before the North Wales Branch of the British Medical Association.

A New Children's Hospital in St. Petersburg.—The foundation of a new children's hospital, intended as a memorial of the Coronation of the Czar and Czarina, has recently been laid in St. Petersburg. The hospital, which is to be built on the pavilion system, will contain 400 beds. The cost, which is estimated at 1,700,000 roubles, will be defrayed by the State.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

### A CASE OF (PRESUMED) ACUTE YELLOW ATROPHY OF THE LIVER IN A PREGNANT WOMAN.

E.B., aged 28, married, came to see me on July 22nd, 1901, complaining of intense drowsiness and disinclination to do anything but sleep. She was pregnant and expected to be confined about the end of August. She had enjoyed perfect health until July 19th, when she noticed a nasty taste in her mouth and saw black specks floating before her eyes. Her appetite was bad, and as her bowels had not been opened the previous day she took a dose of castor oil. She felt a little better after her bowels were opened, but on July 21st her husband noticed her eyes were getting yellow, and she found that although hungry she could not manage to eat more than a few mouthfuls of food at a meal time. At night she was very drowsy but could not sleep. On July 22nd she came to me for advice.

In appearance she was a well-nourished, healthy-looking woman with slightly jaundiced conjunctivæ. Her tongue was coated with brownish fur, her temperature was 102.2°, and her pulse 100 to 104. Her bowels had only been open once since July 19th. I prescribed the following mixture: Sod. bicarb. gr. x, pot. brom. gr. x, sp. menth. pip. ♏v, infus. rhei ℥ij, infus. gent. co. ad. ℥j, to be taken twice daily, and cautioned her as to her diet, telling her to avoid alcohol in any form. She informed me that she was almost a total abstainer.

On July 24th I was called to the house and found she had given birth to a male child during the night of July 23rd. The labour was very rapid indeed, and there was only a midwife in attendance. The waters were very yellow, and stained everything they came in contact with. The patient was in a very drowsy state and "losing" rather more freely than I liked. Her temperature was 100.6°, and her pulse 104 to 108. She said she felt comfortable barring being thirsty, and unable to sleep though feeling very sleepy. I added ℥ss doses of the liquid extract of ergot to her medicine, to be given every four hours.

On July 26th at 3.30 P.M. I was sent for, as she had been asleep since 7 A.M., and those in attendance could not rouse her.

I found her in a state of coma: no response was obtainable on pinching the skin of her arms or legs, her eye was insensible to touch, the pupils did not react to light and were contracted. There was slight movement when I rubbed my knuckles sharply down her ribs on the right side. Her pulse was 120 to 126. Her bowels had been open once since I saw her, and I was informed the motion was very pale and "lumpy." She had passed a quantity of urine under her which stained the bedclothes a dark yellow. The liver dulness was apparently normal; the abdomen was soft and moving with respiration. Jaundice was now well marked.

At 8.30 P.M. the same evening she was in a state of high delirium, tossing about, screaming, and with difficulty kept on the bed. The lochial discharge had entirely ceased. She occasionally retched, but did not vomit. Her pulse was small and too quick for me to count. I administered hypodermically $\frac{1}{265}$ gr. hyoscine, and remained about twenty minutes, by which time she was quieter and her pulse 180 to 190. I had cold applied to her head by ice in wet flannel, and ordered her to be kept perfectly quiet. Before leaving her temperature was 100°, taken in the axilla.

At 12.15 A.M. on July 27th I was again called. She was now vomiting coffee-ground vomit and highly delirious (two people with difficulty keeping her on the bed). I repeated the hyoscine, and on her delirium being less I tried to percuss out her liver, but was unable to obtain or appreciate any liver dulness.

I was called again the same morning at 11 o'clock, and on arrival found she was dead. She had continued to vomit the same kind of vomit up to the time of her death. Her breasts showed no signs of activity. The baby was slightly jaundiced at birth. No *post-mortem* examination was allowed, so whether she really had acute yellow atrophy or not must remain an undecided point.

Commercial Road, E. S. R. DUDLEY, L.S.A.

### ASPHYXIA DUE TO RAPID ENLARGEMENT OF THYROID GLAND: TRACHEOTOMY: PARTIAL THYROIDECTOMY: RECOVERY.

E. M., aged 14 years, had been observed by her parents to have an enlargement of her throat for the past seven years, but as this condition had existed in several other members of the family it was regarded by them as a "family complaint." During damp weather, and after exposure to cold, it was noticed that she had some difficulty in breathing. This never became alarming until the morning of January 29th, 1901.

I found that the patient was suffering from the most urgent dyspnœa, and a greatly enlarged thyroid gland was pressing dangerously upon the trachea. The symptoms were so urgent that I decided to perform tracheotomy at once. My assistant remained with the patient while I left to arrange for an immediate operation. I was gone not more than twenty minutes, and when I re-entered the bedroom it was apparent that death from asphyxia was imminent. This was obvious to everyone present. The face, conjunctiva, lips, and hands were blue. The recession of the lower part of the chest increasing with each attempt at inspiration presented the appearance of some great deformity: the sphincters were relaxed, urine and fæces being voided. The child was apparently unconscious, and had ceased to breathe when I made my skin incision. I had barely time to open the trachea between the lower part of the gland and the top of the sternum, and expected to meet with some difficulty, as there was but little room; fortunately a tube was inserted at once, respiration was established, and consciousness returned.

Four days afterwards I removed the tube, but the dyspnœa returned and the tube was replaced. My assistant administered chloroform (this anæsthetic we had previously decided upon as the safest under the circumstances). I prolonged the wound upwards sufficiently to give plenty of room. The isthmus was separated from the trachea, and a ligature placed round the isthmus at its junction with each lateral lobe; the portion of the gland intervening between each ligature was removed. The left lobe was much larger and firmer than the right, and a portion of it dipped in between the trachea and œsophagus, and downwards behind the sternum: I therefore removed a portion of this lobe: the left recurrent laryngeal nerve was seen to be lying in the substance of the gland.

The patient made an uneventful and excellent recovery. The present condition is most satisfactory; the remaining portion of the gland has atrophied, and the dyspnœa and stridor are entirely gone.

It is worthy of note that the patient told me afterwards that during the first operation of tracheotomy, when we supposed her to be insensible, she remembered everything we did, but refrained from attempting to make the slightest movement, knowing that unless her windpipe were opened she would surely die.

The enlargement of the gland was due to simple hypertrophy throughout.

Bloxham, Oxon. GERALD SCHOFIELD.

### NEW QUANTITATIVE SUGAR TEST.

THE BRITISH MEDICAL JOURNAL of June 20th, 1896, page 1508, gave a report of my rapid thermometric test for urea, albumen, etc. Since that time the method has been extensively used by medical men, *vide Silverlock's Emergency Book* (the last two editions), and elsewhere. One c.cm. of urine is added to 5 c.cm. of reliable chlorinated soda solution in a half-ounce phial, and the heat evolution affords in about half-a-minute the percentage of urea. This may be regarded as affording by a heat evolution the assimilated albuminoids.

If we substitute 4 c.cm. solution of potassium permanganate (3 to 4 per cent.) with 1 c.cm. dilute sulphuric acid for the chlorinated soda, we have an oxidiser whereby we can estimate the percentage of sugar. Indeed, the factor used to multiply the degrees of temperature, to obtain the percentage of sugar, is nearly the same, namely, 0.3. Hence 1 c.cm. urine afforded by this test 10° F., and we conclude, there

fore, that the urine contains 3 per cent. glucose (10° × 0.3). This may be regarded as affording by a heat evolution the carbohydrate waste. This test is one I devised for the estimation of starch and sugar, and I have described it elsewhere as "the carbohydrate test." It is also a most accurate means of estimating organic salts and substances that we are daily interested in, namely, alcohol, glycerine, citrates, tartrates, carbolates, and salicylates. My work in various papers on food stuffs suggests also the view of milk, flour, etc., in expressions of a heat evolution whereby we have a stronger grip, afforded by simple demonstration at the dispensing table, on the conceptions of calories or food units of heat, and this for two out of three specialised food fuels; fat is only slightly oxidised by the method.

One c.cm. of woman's milk gives a total number of heat degrees, referable to the albumens and carbohydrates, by the carbohydrate test. Another c cm. of milk affords by the chlorinated soda the albuminoids only, although a little heat is derived from other sources. Flour and meal are viewed in the same way. Dilution is necessary in these cases.

The dilution in the case of alcohol is very great; 1 c.cm. of absolute alcohol I should dilute with water to 100 c.cm., and use of the dilution only 1 c.cm. for the test. For 1 c.cm. of absolute alcohol would afford us about 500° F. A gram of salicylic acid is capable of affording approximately 1,000° F., carbolic acid about the same. These are important facts to bear in mind whilst applying the carbohydrate test to urine.

By various factors derived from experiments we obtain most precise data of all the various substances. In the case of wine it is quite possible to obtain the percentage of alcohol, and the percentage of oxidisables reckoned as alcohol, by two simple experiments with 2 c.cm. of port wine.

The citrates and tartrates, including solutions of acids and lemon juice, show a slight pause before the elevation of temperature. Hence there is time to read the exact starting point after all the components of the test are *in situ*, so that these estimations are quite accurate.[1]

Dulwich, S.E. J. Barker Smith, L.R.C.P.

## CASE OF TETANUS: USE OF ANTITETANUS SERUM: DEATH.

E. D., aged 21, was first seen by me on September 25th. Six days previously, on September 19th, a nail had penetrated the right foot just below the ball of the little toe, passing through the sole of the boot and the stocking. After the nail was withdrawn the wound closed and gave her very little trouble for the next three days. On the fourth day it was painful enough for her to keep her foot raised, and in the course of the two days following a small red swelling appeared on the dorsum of the foot above the metatarso phalangeal joint.

On the fifth day after the accident she had aching pains in her back and a stiff neck, and when seen on the sixth day she had well marked trismus, tonic spasm of the neck and back muscles, and occasional slight clonic spasms. The temperature was normal, and she took liquid food without much difficulty. Later in the day (about 6.30 P.M.) 10 c.cm. of antitoxin (from the Institut Pasteur) was injected into the skin of the abdomen, the clonic spasms having by this time become much more severe. At 9 P.M. chloroform was administered, and a large area of skin and subcutaneous tissue removed to a depth slightly greater than that of the original puncture of the nail, both the nail wound and the swelling on the dorsum being taken away. She rallied well from the operation, but as the effect of the chloroform passed off, the spasms—both clonic and tonic—returned with much severity.

Another 10 c cm. of antitoxin had been injected during the anæsthesia, and morphine gr. $\frac{1}{3}$ was now given in addition. During the night it was necessary to keep up the administration of chloroform at short intervals (a Junker's inhaler being employed), and towards morning another 10 c.cm. of antitoxin was injected, as well as morphine gr. $\frac{1}{3}$.

At about 9 A.M. there was considerably less spasm in the muscles of the lower jaw, but elsewhere the spasms had increased. The temperature had risen to 104° F., and the patient already showed considerable signs of exhaustion. This increased as the day went on, and she died at about 3 P.M. She became much cyanosed towards the end, and brandy was injected, and oxygen was also inhaled.

I must gratefully acknowledge the invaluable help of Drs. Stone and Thornley in the case.

Denmark Hill, S.E. T. Graham Scott, M.R.C.S., L.R.C.P.

[1] Those of your readers who may have my "ammonia-urea test" sent out by Messrs. Rebman and Co., Shaftesbury Avenue, can be shortly supplied gratis with a new copy of the directions containing the carbohydrates and organic salts by sending their stamped address.

## KAFFIR TREATMENT OF GUNSHOT WOUNDS.

A Kaffir in this district was recently shot by a native scout who mistook him for a Boer. The bullet, a Lee-Metford, entered at the eighth intercostal space in the anterior axillary line on the right side, passing out just beneath the last true rib on the left side 2 inches from the vertebral spines, the bullet thus traversing the liver, and probably also the body of the first lumbar vertebra. The man walked some distance, and was then taken by his friends three miles in a wheelbarrow to a kraal for treatment by a Kaffir doctor as follows:

The small end of a cow's horn, converted into a complete tube by cutting off the point, was inserted into one of the wounds, all foreign matter being presumably expelled at the other hole by vigorous blasts down the horn. The case having been so far satisfactorily proceeded with, cow-dung poultices were next assiduously applied. When I saw the patient four days after the injury the holes were accurately corked up with clay, or some compound resembling it. There was some tenderness over the liver, but his general condition was good and his temperature normal. With some misgivings I altered the treatment of the local practitioner, substituting an antiseptic dressing. Two days later I heard that, no doubt owing to this ill-advised action, one of the wounds was discharging. Four days after this, however, and the tenth day of the injury, I found the man walking about with both wounds perfectly healed.

Wounds in a native are well known to heal remarkably well, and this is certainly a case in point. Cow dung is a valuable commodity in this country, and is put to a variety of uses. It is the chief material used in flooring the kraals, and an excellent surface it makes; it is also mixed with tobacco leaf to form a favourite "blend." I have seen these floors in houses occupied by Europeans, but cow dung is not, I think, likely to come into general use as a poultice or as a flavouring agent in tobacco mixtures.

W. A. Densham, M.R.C.S., L.R.C.P., D.P.H.Camb.,
Medical Officer in Charge, 2nd Battalion, the Rifle Brigade.
Middelburg, Transvaal.

## SYPHILIS *VERSUS* TUBERCULOSIS.

A gentleman, aged 39, contracted syphilis in the summer of 1887. The primary lesion was on the chin, and infection had probably occurred during shaving at a barber's shop. For many years previously he had suffered from phthisis, and had been obliged to winter abroad. The attack of syphilis proved severe, and he was treated by me almost continuously for upwards of two years, and from time to time afterwards. The signs of lung mischief during this time gradually became more marked, with raised temperature in the evening, and various physicians both at home and abroad diagnosed active pulmonary tuberculosis. Bacilli were found in the sputum, and he steadily lost flesh.

In June, 1892, he had profuse hæmoptysis, and was laid up seriously ill for some weeks. After a time he improved, and again went abroad for the winter. In January, 1893, whilst in Italy, he had an attack of partial left hemiplegia, which was diagnosed to be due to syphilitic arterial disease. From this he recovered to a great extent, but in June of the same year, whilst under my care, partial paraplegia, also probably due to vascular thrombosis, came on. From that time he had repeated minor attacks, apparently caused by further blocking of blood vessels of the brain and spinal cord. The paraplegia finally became complete, in spite of antisyphilitic treatment, but, owing to careful nursing and the constant attention of a most devoted wife, he lived on in good health in other respects until acute albuminuria appeared after a chill, and he died comatose in September, 1900, aged 52.

There are many points of interest in connection with the case, but the one to which I now wish to draw attention is that, after the nervous system became affected by syphilis, all the signs of phthisis slowly but steadily subsided. The

patient gradually became stout and ruddy, cough and expectoration ceased, and he had an excellent appetite. Repeated examination of the chest by eminent physicians revealed no sign of any active disease, and for several years before his death, although the winters were passed in England, he never even had a bad cold.

London, W. ARTHUR COOPER.

# REPORTS
ON
## MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

### No. 3 GENERAL HOSPITAL, KROONSTAD, SOUTH AFRICA.

#### FRACTURE OF THE SKULL, WITH EXTRADURAL HÆMORRHAGE FROM THE MIDDLE MENINGEAL AND VIDIAN ARTERIES.

(By FRANK POPE, M.R.C.S., L.R.C.P., Civil Surgeon to H.M. Forces.)

THE patient, a private in the 1st Essex Regiment (Vol. Cor.), was admitted at 1.30 P.M. on July 23rd, 1901, with a note, which stated "Head injury; fall from a waggon." The accident occurred on the morning of the same day.

*Condition on Admission.*—The patient lay curled up on his right side with his legs drawn up, his arms between his knees, and the head thrown back. He could be roused with difficulty by loud shouting; was then very irritable, and answered "no" to every question asked, with one exception, when he correctly gave the name of his regiment. He sullenly resented all examination. Respiration was deep, regular, slow and not stertorous. His pulse was 72 to the minute, very soft and compressible, but quite regular. The pupils were moderately contracted, and reacted to light. The reflexes were normal as far as could be ascertained. There was bleeding from both ears, more especially from the left, but no escape of cerebro-spinal fluid. There was no external injury, but a slight fulness was detected over the fore part of the squamous portion of the left temporal bone. There was no paralysis. At 4 P.M. the nurse reported signs of paralysis of the right arm and leg before complete coma supervened. The patient in changing his position had been seen to move the right arm by the help of the left hand, and the right leg had not been moved at all. He lay upon his back, with limbs extended and quite lax. The knee-jerks were present. Respiration was slow, deep, and stertorous. The pulse was slow and regular, but slightly fuller than before. The right pupil was moderately contracted and slightly sensitive to light. The left pupil was very widely dilated and insensitive. The corneal reflexes were abolished. No action of either bowels or bladder had occurred since admission. The diagnosis was made of "Fracture of the base of the skull, extending to the vault on the left side, with extensive hæmorrhage, probably from the anterior branch of the middle meningeal artery."

*Operation.*—This was performed immediately. An anæsthetic was unnecessary, though there was some movement during the skin incision, and subsequently on introducing the sutures. A semicircular flap was turned down, extending from the anterior inferior angle of the frontal (left side) to a point just in front of and above the external auditory meatus, with a view to exposing the pterion. A fissured fracture was found, extending downwards towards the petrous bone, and upwards and forwards to a point half way between the external auditory meatus and the centre of the coronal suture. This fracture was joined by other fissures in such a manner that a piece of bone was completely separated. This consisted of the anterior inferior angle of the parietal bone, the outermost part of the great wing of the sphenoid, and the foremost portion of the squamous bone. The separated piece measured roughly 2 inches in the horizontal, and 1 inch in the vertical, direction, and was more or less oblong in shape. The loose piece was removed in two portions by means of an elevator, when a large extradural clot at once presented in the gap. The clot was cleared with the finger and was found to extend upwards for about 1 inch, forwards about ½ inch, and both backwards and downwards for a distance further than the left forefinger could reach. The dura mater was intact, lying loosely over the greatly depressed brain surface. Upon the dura was found the anterior branch of the middle meningeal artery bleeding freely. The vessel was secured by means of a silk ligature passed on a curved needle. Expansion of the compressed brain commenced at once, but the cavity was still found to be filled with blood, which welled up from behind and below. It was then thought probable that the further bleeding proceeded from the posterior branch of the middle meningeal. The incision was therefore continued backwards in a curved direction, another flap turned down and an inch trephine applied at a spot 1½ inch above Reid's base line, and just posterior to a line drawn from the external auditory meatus to the parietal eminence. On removing the disc more clot presented, and though blood still welled up from the depths of the cavity the bleeding point could not be discovered. The cavity was freely flushed out with boracic lotion at temperature of about 110° F., and the bleeding was then found to have ceased. The loose pieces of bone removed at first were replaced. The trephine opening was lightly packed with gauze; a small tube was inserted along the base of the flap, projecting posteriorly, and the wound was sutured and dressed. During the flushing and suturing both the right arm and leg were observed to move, and at the end of the operation the pupils were moderately dilated and equal, both being sensitive to light; respiration was still stertorous; the pulse was unaltered. The patient was returned to bed at 5.15 P.M., and during the next hour he became very restless, and was observed to move both arms and both legs repeatedly. At 7.30 P.M. the patient was again completely comatose, and the left pupil was again widely dilated and insensitive, the right pupil being moderately contracted as before. There was very free soaking through the dressings, which were then removed. The flaps were much distended with fresh clot, and the central stitches had slipped. He was immediately removed to the theatre; the wounds were freely opened up; the replaced portions of bone had been lifted up for half an inch owing to the pressure beneath. The clots were then thoroughly cleared out, and it was ascertained that the bleeding point was somewhere towards the base of the skull. The ligature on the middle meningeal was firm. The squamous portion of the temporal bone was freely chipped away with gouged forceps till the level of the petrous portion was nearly reached. A ribbon retractor was passed between the dura mater and the bone, and the temporo-sphenoidal lobe was gently elevated. A fracture was then seen to extend across the base of the skull, taking the form of a fine fissure as it crossed the petrous bone, and gaping somewhat over the basi-sphenoid. From the gaping portion blood spurted up freely, and the hæmorrhage was finally arrested by plugging the fracture with a narrow strip of gauze. All clots were freely washed away, and the brain expanded gradually till the dura mater was in contact with the bone at all points. The loose pieces of bone were replaced as far as possible, and the wound was partially closed. At the end of the operation, 8.30 P.M., the breathing was stertorous and of the Cheyne-Stokes variety. The pulse was 84 and moderately full. The pupils were somewhat dilated, especially the left. All the limbs moved slightly while the sutures were being passed. Complete coma continued, and the Cheyne-Stokes respiration became more pronounced till death occurred at midnight.

*Necropsy.*—There was slight ecchymosis over the left temporo-sphenoidal and lower parietal lobes, otherwise the brain appeared to be perfectly normal. There was neither subdural nor intracerebral hæmorrhage. The dura mater was in no place torn, but on removing this membrane a transverse fissure was found across the middle fossa, reaching as far as the internal auditory meatus on the right side, involving the left internal meatus, and extending upwards through the temporal bone into the parietal and sphenoid. In the basi-sphenoid the fracture was gaping to the extent of about 1 cm., and as far as could be ascertained the hæmorrhage proceeded from the left vidian artery.

REMARKS. Had the hæmorrhage proceeded only from the middle meningeal artery, the patient would have stood a

reasonable chance of recovery. On the other hand, had not all hæmorrhage ceased during the first operation, a ligature round the common or external carotid might have saved the patient's life. At the second operation it was necessary to reopen the cranial cavity, and therefore it was thought worth while to try and find the bleeding point, which was easily stopped by plugging.

## BEVERLEY COTTAGE HOSPITAL.

### A FATAL CASE OF HEAT APOPLEXY.

(By George Savege, M.D., Honorary Surgeon to the Hospital.)

G. R., a labourer, aged 40, was admitted to the hospital at 4.30 P.M. on July 5th, 1901, with the following history:

During the day, which was excessively hot, he had been at work with a gang of labourers shovelling mud from the bottom of an open drain. About 3 o'clock he suddenly ceased working, and, making a remark that he was going home, walked up the side of the bank and went off, but in a wrong direction. Thinking something was amiss, another workman ran after him and found him rambling in his talk, looking very ill, and describes his eyes as "crossed." He led him back to his companions, made him sit down, and helped him off with his wading boots and on with his walking boots, the patient himself lacing one of them. He then vomited freely, became incoherent in speech, and within fifteen minutes of the onset of his illness lay back and became unconscious. He had not complained of the heat during the day, though it was observed that he had drunk water freely and had worked without his hat on.

When seen in the hospital at 4.30 he was in a dying condition. His temperature in the axilla was 107°, and his circulation was rapidly failing, his pulse being about 140, weak, and irregular. His breathing was stertorous, with considerable frothing at the mouth. It was purely thoracic in character, the diaphragm being quite inactive. The pupils were contracted to the size of a pinhead and did not react to light. His face and extremities were livid. Efforts were directed to stimulate the circulation and reduce the temperature but with no effect, and he died at 5.30, two hours and a half after the onset of symptoms, death being preceded by marked general convulsions.

*Necropsy.*—The body was that of a robust, well-nourished man. There was much tumefaction of the scalp, and a considerable amount of extravasated fluid blood was found between it and the skull. The blood was fluid throughout the body: the cerebral meninges were congested, the lungs engorged, the heart empty and contracted, and the bladder empty. The abdominal viscera were all healthy; the muscles were dusky red in colour.

# REPORTS OF SOCIETIES.

## PATHOLOGICAL SOCIETY OF LONDON.

W. Watson Cheyne, F.R.S., President, in the Chair.

*Tuesday, November 19th, 1901.*

### The Relation of Danysz's Bacillus to the Bacillus of Gaertner.

Professor E. Klein read a communication on this subject. Danysz's bacillus had been isolated in an epidemic disease of rats, and was of the coli group. The difference in the source of the two bacilli in question made it probable, the author thought, that they were not identical, but no difference could be made out by the methods in common use; they were alike in morphology and cultural characters, and they both clumped equally well with the immune serum of either bacillus. Moreover, they were mutually protective when tested upon guinea-pigs, whereas control animals, if inoculated with either bacillus, died.

Mr. A. G. R. Foulerton had isolated from white rats dying of chronic disease a bacillus resembling Gaertner's, and he thought that the identity of the two bacilli might be held after Professor Klein's statements. It was not difficult to suppose that the epidemic in rats arose from the ingestion of the bacillus of Gaertner in contaminated water.

### The Immunisation of Cattle against Bacillus Tuberculosis.

Dr. J. MacFadyean recounted in detail the results of four experiments upon the above problem, all of which were checked by controls. A bovine which gave reaction after the tuberculin test was observed after a while to cease to react. Intravenous injections of suspensions of tubercle bacilli in sterilised water were then made into the jugular vein; tuberculin again induced reaction. Other intravenous injections were made use of, and the tuberculin again afterwards. Large intravenous injections were practised upon the heifer in question seven times in all, no fatal result ensuing. On the animal being killed one calcified mesenteric gland was found, without other lesion. The author regarded this gland as the seat of the first disease. Other experiments of similar kind gave similar results, so that the possibility of the first animal having presented some exceptionally high natural immunity was disposed of. The question arose as to whether the resistance was due to the tuberculin or to an interaction of cells with the bacillus. The bacilli used intravenously were not of human source, but nevertheless they were virulent upon rodents. The degree of natural immunity in cattle to tuberculous infection varied much, but it was not sufficient in itself to account for these results.

Dr. D. Nabarro inquired whether Dr. MacFadyean held that the injection of mallein produced any immunity or curative effect in glandered horses.

The President, in recalling his experience of tuberculin in the treatment of human tuberculosis, stated that in no case had he seen evidence that the injections had produced immunity. The manner in which the remedy acted was by the active inflammation it set up at the sites of injection, and if these were small they might undergo removal.

Dr. MacFadyean, in reply, thought that the President's explanation was probably the correct one. He did not regard intravenous injection as so serious as subcutaneous, for the reason that the bacilli in the former were more widely distributed, and at any given spot, therefore, in no great numbers. In regard to glanders, he did not attach any curative effect to mallein. Glanders in the horse was in most cases a mild disease which terminated in natural recovery, and this occurred independently of mallein injection.

### A Case of Endocarditis due to B. Coli.

Dr. F. W. Andrewes reported the above case, which was that of a boy who was four months ill; there was a mitral systolic murmur, and rigors occurred pointing to embolism. At the necropsy no chronic endocarditis was discoverable, the disease being acute only. Coverglass films of the vegetations and splenic infarct, as well as microscopic sections, showed the bacillus coli unmixed; the organism formed a mycelial brushwork in the vegetations. Its cultural characters proved it to be a colon bacillus. A certain number of like cases had been recorded.

Mr. W. C. C. Pakes had observed similar cases and found the bacillus in the secondary lesions.

Mr. S. G. Shattock thought it disappointing that an infection site was not found, and asked whether the intestines had been critically studied, including the vermiform appendix.

Dr. J. MacFadyean pointed out that in swine erysipelas endocarditis was very common, and that though in later stages no intestinal lesions might be observable, in the earlier enteritis was present.

Dr. W. Bulloch was not quite satisfied that the bacillus indicated an *ante-mortem* infection.

Dr. Andrewes, in reply, could only say that nothing had been noticed in the intestine, though he did not deny the possibility of infection arising from this site. Only one micro-organism was present, and he thought it must be, therefore, *ante mortem*.

### A Case of Gangrene of the Nose Associated with B. Pyocyaneus.

Dr. D. Nabarro reported this case. The gangrenous parts were removed, and on examination a streptococcus and B. pyocyaneus were demonstrated in the tissues. The B. pyocyaneus proved highly virulent to guinea-pigs, and the

author thought that it was concerned in the production of the gangrene.

Mr. W. C. C. PAKES and Dr. W. BULLOCH contended that the B. pyocyaneus did not produce death in the guinea-pig by means of its toxins (as the author had stated), but by inducing septicæmia. The fact that the author did not discover the bacillus in the tissues probably arose from the difficulty of demonstrating it under such circumstances.

EXHIBIT.

Dr. J. W. H. EYRE showed a new centrifuge for bacteriological work.

## EDINBURGH OBSTETRICAL SOCIETY.

R. MILNE MURRAY, M.D., F.R.C.P.E., President, in the Chair.

*Wednesday, November 13th, 1901.*

RETIRING PRESIDENT'S VALEDICTORY ADDRESS.

THE PRESIDENT delivered his valedictory address, in which he said that during the past two years the Society had lost two of her Honorary Fellows, Dr. George Apostoli and Sir William Overend Priestley; one Corresponding Fellow, Dr. Thomas Cayzer (Liverpool); and nine Ordinary Fellows, Dr. John Cunningham (New Zealand), Dr. George Elder (Edinburgh), Dr. John Henderson (Leith), Dr. William Husband (Edinburgh), Dr. William Johnston (Stirling), Dr. James Thomson (Jersey), Dr. John D. Williams (Cardiff), Dr. James Foulis (Edinburgh), and Dr. John Connel (Peebles). Among these were numbered the two Senior Fellows of the Society, Dr. Henderson and Dr. Husband; both were elected in 1857. "No one who was present at the last meeting of the Society on July 10th last could have imagined, when James Foulis sat down after having spoken in the discussion on the third stage of labour, with all his characteristic vigour and incisiveness, that we had listened to the last contribution he was ever to make to our debates. Yet even then he spoke in the shadow of death..... No one could fail to admire the beauty of the dissections of the early embryo and its membranes which he demonstrated to us here from time to time..... We who sit round this table will long miss his familiar face and his ready word, but we shall cherish the memory of one whose love of what is good, beautiful, and true, and whose high sense of duty stamped him a man of sterling worth and character." The President then proceeded to make "one or two suggestions towards bringing the results of obstetric practice more into line with the ideals of obstetric science." The results of private practice fell short of those of the best hospital practice, mainly because there was first far too much meddlesome interference with a natural process, and, secondly, even when interference was indicated it was often carried out with a total disregard of those principles which had been the basis of the triumphs of modern surgery in other departments. The wide persistence of these vices of practice must be due to some radical defect in the teaching of obstetrics in our schools. It seemed inconceivable that, if men were thoroughly and properly trained in the great principles of obstetrics, they could err so greatly, as many of them seemed to do, in the very elements of their practice. Until comparatively recently midwifery absorbed almost all our attention. Our knowledge of the diseases of the organs of reproduction in the female was comparatively limited, our means of diagnosis were indefinite and unsatisfactory, and even more restricted was our power of treating or alleviating them. During the last quarter of the last century the great advances in pathological knowledge, and in the department of abdominal surgery, had raised gynæcology to be one of the most important in practical medicine. It was, therefore, becoming daily more plain that some rearrangement of the work required to be overtaken must be made unless both were to suffer. The time was rapidly approaching, when the subjects of obstetrics and gynæcology must be dealt with in different courses. If it was possible, we were told, to overtake the whole of the details of the principles and practice of medicine or surgery in a hundred lectures, then it was absurd that a "limited and restricted subject like midwifery" should occupy the student for the same length of time. Surely, we were told, fifty lectures should suffice. As a matter of fact, most students took two courses in medicine and surgery, and even then found that a large part of their working knowledge had to be obtained from textbooks. In the department of obstetrics the case was materially different. The great majority of cases were natural, normal, and physiological, and were accomplished with only temporary strain. But there was a very considerable minority of cases in which the process became pathological in the highest degree—for example, hæmorrhage (accidental, unavoidable, *post partum*, or that occurring during an abortion), eclampsia, transverse presentation, face presentation, impacted breech cases, rupture of uterus, hydrocephalus, prolapse of cord. How could these be managed on general principles? Each condition must be dealt with as being *sui generis*, and the most junior of practitioners must be prepared to treat these conditions by himself and at once. The practitioner was in obstetrics brought face to face with a larger number of cases dangerous to life, which must be dealt with as they arose, than he would meet in either medicine or surgery. In some districts of the country a surgical case was a rarity, and the practitioner's skill and capacity might be seldom put to the test; but the greater part of the work of the general practitioner was concerned with the ailments of women and children, and the greater part of a woman's troubles were concerned with, or sprang from, her functions of reproduction. Therefore the most important part of the equipment of the general practitioner was a sound knowledge of the principles and practice of obstetrics, and of the elements of gynæcology. Therefore a reasonable part of the medical curriculum should be put aside for the training of the student in this department. In a hundred hours it was quite impossible to deal with the great advance of recent gynæcology. Dr. Milne Murray would confine the ordinary course of midwifery to a careful review of the whole subject of obstetrics, and that of the simpler modes of gynæcological diagnosis and the elementary study of the diseases of women, and transfer the subject of gynæcology outside this, including pelvic and abdominal surgery, to a special course, on the same lines as diseases of the eye usually were dealt with at present. We had to equip the young practitioner with a sound working knowledge of his profession in the first place, and in the second to provide and offer every facility to all who desired to devote themselves to special departments of medicine and surgery. Such a rearrangement meant a new chair, and more money. He did not suggest that this should be met by an appropriation from the regal benefaction of Mr. Carnegie. If all the claims that were being made on it were to be satisfied there would be little left for such a purpose. Whether that gift was to be mainly for good or for evil remained yet to be seen, but it would be wholly evil if, while its institution largely abolished that inducement to self-denial and sacrifice which had been a traditional pride in a large section of the Scottish poor, it should at the same time dry up the fountain of the benevolence of those who had and to spare. It had for many years been a prominent feature of the Scottish universities that they had given an honourable place to the systematic teaching of midwifery, and Dr. Murray believed with the whole heart in the importance of the systematic lecture as an essential part of medical teaching. It took a place which no books could fill. The lecturer placed the subject in a true perspective. He demonstrated by model, specimen, and experiment. Then the influence of the living voice had to be kept in mind. Not less essential was the practical training necessary to enable him to apply with success the results of his systematic knowledge. What was the worth of this training? It was such that his proficiency as an obstetrician was comparable to that of a physician who had listened to a lecture on heart disease but had never listened to the heart. They were both equally incompetent, but the former ten times more dangerous. He had often not seen one of his 12 cases conducted by anyone more competent than himself. He had never been shown how to prepare a patient for examination, far less how to examine or when to examine; he had not even been shown how to wash his hands. And if his twelve cases survived, by the mercy of Providence, he might readily conclude that he was the chosen agent in their recovery. He thus began his course in blundering ignorance, and ended it in fatuous assurance. The

student who followed the practice of the Maternity Hospital made the wiser choice. Dr. Halliday Croom was the first, in this school in 1878, to institute a course of clinical midwifery in the wards of the Maternity Hospital, a debt never adequately recognised. The value of the work done there was of necessity limited. It was impossible in any adequate way to teach the details of the management of labour. It might happen that, during the entire period of three months, no case of labour happened on the day and at the hour of the clinic. Thus the vast majority of Edinburgh students were left without any experience in the proper conduct of labour, normal or abnormal. Very few of them had seen an ordinary labour conducted from start to finish by one competent to demonstrate how little was required on the part of the accoucheur in the management of an ordinary labour, nor had they been shown with what scrupulous care that little had to be done. Not one in ten had seen the forceps applied, and fewer still had seen any of the other obstetric manipulations or operations. This, then, was the best that Edinburgh could offer them. Suppose that the training of the surgical student were on parallel lines, where would surgical practice be? Then the student might conclude that the really important element in surgery was diagnosis and after-treatment, and the conduct of the operation of minor consequence. That might be the reasonable conclusion of any student after attending the maternity course. How was this state of affairs to be remedied? By a reorganisation of the Maternity Hospital to an extent which would enable the student to obtain as sound a practical training in obstetrics there, as they did in practical surgery in the wards of the Royal Infirmary. The first necessity was a students' residence, where they could be available at once when a maternity case was in progress; the second, to provide a competent teacher. The quarterly change of the entire staff made this all but impossible, and probably also accounted for the regrettable fact that the results in the Edinburgh Maternity Hospital were not equal to those of many maternity hospitals elsewhere. A simple solution of the difficulty would be found in the appointment of a permanent resident physician, who would teach the students. A junior resident might act under him, and be responsible for the eight or nine hundred outdoor cases. He would visit as far as possible every case of labour along with the students and contribute to their training.

On the motion of Professor A. R. Simpson, seconded by Dr. David Berry Hart, the retiring President was awarded a vote of thanks for his address.

### The Nature of the Fleshy Mole.

Dr. Berry Hart read a paper on this subject. After a description of the structure of the fleshy mole as seen by the naked eye, the distinctive clinical features and the difficulties arising in diagnosis were considered. The placental structure, so far as it bore on this subject, was next taken up; and the chorio-basal septa, the basal serotina, were discussed. The intervillous circulation was described, and especially the normal plugging of the serotinal veins. This was shown to be in excess in the fleshy mole, and its peculiar structure was stated finally to be due to (1) undue plugging of the serotinal sinuses, leading to engorgement of the maternal placental circulation; (2) tying down of the chorion where the chorio-basal septa were attached, and thus the subchorionic bulgings. The death of the fœtus was secondary to this. Naked-eye and microscopic specimens were shown in proof of these points.

The paper was discussed by Professor Simpson, Drs. Milne Murray, Haultain, and Fordyce; and Dr. Hart replied.

### Election of Officers.

The following have been elected office-bearers for the ensuing session, 1901-1902:—*President:* Dr. James Ritchie. *Vice-Presidents:* (Senior) Dr. Haultain, (Junior) Dr. Haig Ferguson. *Treasurer:* Dr. William Craig. *Secretaries:* Dr. W. Fordyce, Dr. Lamond Lackie. *Librarian:* Dr. Haultain. *Editor of Transactions:* Dr. Lamond Lackie. *Members of Council:* Professor A. R. Simpson, Dr. J. W. Ballantyne, Dr. George P. Boddie, Dr. McVie (Chirnside), Dr. Milne Murray, Dr. Berry Hart, Dr. Brewis, Dr. R. C. Buist (Dundee).

## ULSTER MEDICAL SOCIETY.

*Thursday, November 7th, 1901.*

Professor Whitla, M.D., President, in the Chair.

### President's Address.

The President chose for his subject a biographical sketch of those members of the Society who had died since 1886, when he had previously occupied the chair. Among them were many names of honour. Twenty-nine in all had died. Among them may be mentioned Dr. Thomas Andrews, Professor of Chemistry and Vice-President of the Queen's College, Belfast, who was born in 1813 and died late in 1885. He was a scientific observer of the highest kind and an indefatigable worker. At the age of 15 he made his first contribution to science in the form of a paper in the *Philosophical Magazine* of 1829, entitled On the Action of a Flame Urged by the Blowpipe on other Flames. He was probably best known and his name would ever continue to be associated with the discovery of the continuity of the liquid and gaseous states of matter. This research, published in his first Bakerian lecture in 1869 led the way to the liquefaction of the gases hitherto known as non-condensible. He was at first engaged in the practice of medicine, but on becoming vice-president he abandoned this line of work. Although known most widely for his scientific researches, his unceasing industry carried him into the field of reform. For instance, in 1867 he advocated that no publican should be allowed to keep or sell liquor containing more than 17 per cent. of alcohol. He was a Fellow of the Royal Society, and undoubtedly one of the most brilliant and remarkable figures of Irish science. Dr. Henry MacCormac was born in 1800 and died in 1886. After qualifying in 1824 he travelled extensively in Africa and America. On returning home he was appointed to the old Fever Hospital, which subsequently became the General Hospital; in 1832 he had charge of the Cholera Hospital. It would be quite impossible to give an outline of the extraordinary knowledge and the wide culture of Dr. Mac Cormac: he had a knowledge of twenty languages, and the titles of his works would exceed the length of this notice. Mac Cormac never undertook the laborious and minute research into physics such as have made Andrews's name illustrious; but his efforts as a reformer were untiring. There is a translation into German by Dr. E. Hoffmann in 1858 of his work, *The Nature, Treatment, and Prevention of Consumption*, and the notice in *Virchow's Archiv* (vol. xi, p. 120, and vol. xv, p. 170) spoke with approval of Mac Cormac's observation on the necessity of ventilating the bedroom at night. He was undoubtedly the pioneer of the open-air treatment of consumption. Professor James Gunning was born in 1833 and died in 1899. During the last few years of his life his position was unique among his medical brethren. He was considerably the senior of most of his colleagues, and he was the recognised senior and head of the profession. He was endowed with a marvellous memory, and was a close and acute reasoner. Although an excellent and frequent story-teller, he never seemed to tell the same person a story twice. A polished and ready speaker, a model lecturer, and one of the best-read men of his day, both in English and in modern and ancient languages, he was yet a retiring and even a reserved man. His eminently judicial mind and thoroughly impartial attitude would have admirably suited him for the Bench. He was President of the British Medical Association during the year 1884.

## PATHOLOGICAL SOCIETY OF MANCHESTER.

J. Collier, F.R.C.S., President, in the Chair.

*Wednesday, November 13th, 1901.*

### Enterectomy.

Mr. Southam showed the specimens and mentioned three cases of enterectomy and end-to-end suture of the intestine for the following conditions: (1) fæcal fistula involving the small intestine; (2) carcinoma of the sigmoid flexure of the colon; (3) closure of a colotomy opening, the operation having been performed four years previously for the relief of simple ulceration of the rectum. In each instance, the patient made a good recovery from the operation.

BRAIN TUMOUR.

Dr. R. T. WILLIAMSON reported a case of brain tumour (of the centrum ovale) and showed microscopical specimens of the growth. The chief symptoms were hemiplegia of gradual onset, headache, and occasional vomiting. Optic neuritis and convulsions were absent. The tumour was a glioma rich in large cells (so-called "ganglionic neuroglioma.") The cells presented various forms; large cells with several processes, oval or round cells with one short curved process, large spindle cells, large round cells without any process and small glia cells.

OTHER COMMUNICATIONS.

Dr. WILLIAMSON described a second case of congenital idiopathic dilatation of the colon.—Mr. COLLIER and Dr. MELLAND showed specimens from two cases illustrating tuberculous infiltration of muscle.—Dr. YONGE gave a short communication on some practical points on the pathology of malignant disease of the larynx.

## LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

PATHOLOGICAL MEETING.

A. G. BARRS, M.D., F.R.C.P., in the Chair.

*Friday, November 15th, 1901.*

BACILLUS AËROGENES CAPSULATUS.

DR. HARVEY BAIRD read a paper on a case in which emphysema of the liver developed *post mortem* in a woman of cachectic aspect, aged 71. At the necropsy thirty-six hours after death the liver was noticed to be of a pale, reddish-yellow colour, and of spongy consistence. A few blisters were observed on its surface, and, when cut into, it was seen to be riddled with air spaces of small size, minute bubbles escaping on pressure. The liver had a peculiar offensive pungent odour, which was still present in a portion of the organ embedded in paraffin. On microscopic examination the liver was found to exhibit numerous gas-containing cavities, $\frac{1}{2}$ to 2 mm. in diameter, which pressed aside the liver columns. No leucocytic emigration had occurred, and the liver cells were unaltered beyond exhibiting pigmentary change. Bacilli 3$\mu$ to 6$\mu$ in length, staining by Loeffler's and Gram's methods, were found massed together in very large numbers throughout the liver substance. The capsule of these micro-organisms was not very distinct. They were arranged singly, in pairs, or in chains, and exhibited granular contents. In the remaining viscera no similar condition was recognisable on naked-eye observation. No point of entry of the bacillus was ascertained, but the condition of the alimentary mucous membrane was not examined.

Dr. POWELL WHITE and Mr. CAMMIDGE referred to Dr. Mantle's case in which they found the B. aërogenes capsulatus in the organs. Here there was evidence to show that the infection took place before death.

Dr. TREVELYAN and Dr. GRIFFITH made remarks on *ante-mortem* as against *post-mortem* infection, and Dr. BAIRD replied.

SPECIMENS.

The following were shown:—Dr. T. J. WOOD (Bradford): (*a*) Cast and specimen of bony outgrowth from third cervical vertebra; (*b*) gall stone removed from common bile duct by duodenal incision and slitting up of papilla; (*c*) renal calculi.—Mr. R. A. FORSYTH: Osmic acid preparations from a case of pseudo-hypertrophic paralysis—Mr. WARD (*a*) Malignant stricture of small intestine excised from a woman aged 62; (*b*) hydronephrotic kidney, due to congenital kinking of ureter, removed from a woman aged 34; (*c*) two water-colour drawings of actinomycosis of the face; (*d*) specimen of soft sarcoma of the thigh; (*d*) epithelioma following lupus (with photographs).—Dr. BARRS and Dr. TREVELYAN: A cyst of the cerebellum.—Mr. W. R. WILSON (Doncaster): (*a*) A sarcoma involving the body of the sphenoid, meninges, orbits, and naso-pharynx of two years duration; (*b*) a sarcoma of the tonsil perforating the internal carotid and producing fatal hæmorrhage.—Mr. CAMMIDGE: Specimen of sputum showing enormous numbers of tubercle bacilli; (*b*) preparation of diphtheria bacilli straight from the throat stained by Neisser's method.—Mr. LITTLEWOOD: (*a*) Ectopic gestation with vermiform appendix incorporated in wall of sac; (*b*) inflamed vermiform appendix with concretions removed during the third month of pregnancy.—Mr. LITTLEWOOD and Dr. TREVELYAN: Medulla oblongata and pons from a case of facial cellulitis complicated by a hemiplegia. A pure culture of a staphylococcus was obtained by Dr. Trevelyan from a metastatic abscess in the heart and the same micro-organism was found in the meningeal exudation.—Dr. BRONNER (Bradford): Specimens of (*a*) tuberculous growth of nasal septum; (*b*) of middle turbinated bone; and (*c*) of conjunctive bulbi.—Mr. W. W. BROWN: Sarcoma of kidney.—Dr. CHURTON: (*a*) Sarcoma of brain; (*b*) hour-glass stomach, found *post-mortem*. No symptoms during life.—Dr. HELLIER: (*a*) Uterus from case of puerperal septicæmia (*b*) ovarian dermoid.—Mr. MAYO ROBSON: (*a*) Traumatic aneurysm (brachial) from the patient shown at the last meeting; (*b*) cancerous nephritis with enormous dilatation of the kidney pelvis; (*c*) carcinoma of the stomach (excised); (*d*) cystic fibroma of uterus.

LARYNGOLOGICAL SOCIETY OF LONDON.—At a meeting held on November 1st, Mr. CRESSWELL BABER, President, in the chair, Mr. W. G. SPENCER showed a case of tertiary syphilitic laryngeal stenosis treated by laryngo-fissure without tracheotomy, the result of which had been most satisfactory; there was no dyspnœa, and the patient had quite an audible voice.—Mr. F. WESTMACOTT showed a series of specimens, photographs, and drawings illustrating the inflammatory diseases of the nasal fossæ and accessory cavities.—Dr. HERBERT TILLEY showed two molar teeth in which the crowns were healthy, but evidence of caries in the palatal roots was present; the patients from whom the teeth were extracted both suffered from suppuration of the corresponding maxillary antrum.—Dr. J. DONELAN showed a case of laryngeal syphilis with fixation of the left vocal cord in a man aged 52, and raised the question whether it was not malignant as well as syphilitic.—Dr. STCLAIR THOMSON showed a man aged 33 who had been brought before the Society in April, 1901, with chronic laryngitis, and an ulcer on one vocal cord, and who now presented marked lupus infiltration and ulceration of the epiglottis.—Dr. E. WAGGETT showed a case of (?) congenital fenestration of the anterior pillars of the fauces. Many such cases had been shown at the Society, and much discussion had taken place as to whether they were of congenital origin or the result of scarlet fever. Dr. CLIFFORD BEALE said that since the last case of this sort was shown he had made inquiries at the fever hospitals, and had learned that perforation as the result of scarlet fever was practically unknown.—Mr. ST. GEORGE REID showed a series of living cultures of those bacilli which simulate bacillus tuberculosis by their staining reactions.—Dr. FITZGERALD POWELL showed a case of papilloma of the larynx, which was peculiar in being of almost pure white appearance.—Dr. DUNDAS GRANT showed a case of epithelioma of the epiglottis. The operative treatment of such cases was discussed by Mr. H. T. BUTLIN and Dr. H. L. LACK.—Dr. DUNDAS GRANT also showed a case of nasal stenosis in which the symptoms appeared to be chiefly subjective.—Mr. H. M. RAMSAY showed a case of (?) tuberculous disease of the epiglottis. It was thought to be lupus and suitable for treatment.—Dr. BOND showed a case of swelling of the left ventricular band in a boy aged 14.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on October 23rd, Dr. RISIEN RUSSELL delivered an address on the value of the tendon-jerks and superficial reflexes in diagnosis. He first called attention to the value of the plantar reflex and tendo-Achillis jerk in diagnosis. The former had received a large amount of attention in this country as well as abroad; but very little attention appeared to have been paid in this country to the state of the tendo-Achillis jerk as an aid in diagnosis. After referring to the significance of the alteration of the plantar reflex, known as "Babinski's sign," or the "extensor response," from the presence of which a lesion of the pyramidal system might be inferred, he pointed to certain fallacies that had to be avoided, and in support of the value of the phenomenon quoted three cases from among many in which the "extensor response" had been a great help to him in arriving at a correct diagnosis. The state of the tendo-Achillis jerk had been regarded as of especial value in the diagnosis of early tabes and in the differential diagnosis of real from hysterical sciatica, and he could confirm the statements that had been made by neurologists on the Continent and in America with regard to the significance of alterations of this jerk. It was especially in cases of tabes in which the knee-jerks were still preserved that loss of the tendo-Achillis jerk had proved of service in the diagnosis of this disease. In sciatica the tendo-Achillis jerk was commonly abolished on the affected side, whereas this was not the case in hysterical sciatica. As an illustration of the way in which the tendon-jerks assisted in the separation of one form of organic disease of the nervous system from another, he quoted cases of atrophy of the muscles of the upper limbs in which the state of the tendon-jerks went far to establish a correct diagnosis. This afforded him an opportunity of indicating the significance of the jaw-jerk, and of pointing to its value in the differential diagnosis of cases such as those to which he referred. Finally, he dealt with the help to be obtained from the tendon-jerks and superficial reflexes when attempting to

localise the exact situation of a lesion of the spinal cord. He also referred to the fact that the state of the tendon-jerks of the lower limbs served to indicate the degree of severity of a lesion in the spinal cord above the level of the lumbar enlargement. In incomplete transverse lesions, such as commonly resulted in myelitis, there was ankle clonus and the knee-jerks were exaggerated, whereas with complete transverse lesions, such as were usually caused by fracture dislocation of the spinal column, there was no ankle clonus and the knee jerks were abolished. A satisfactory explanation of why there should be this difference had been supplied by the results of Sherrington's experimental observations, which made it clear that augmentor influences passed from the ponto-cerebellar region to the spinal segments to maintain muscle tonus. Incomplete transverse lesions of the spinal cord, while sufficient to prevent the inhibiting influence of the cerebral centres from reaching the spinal segments, still allowed the augmentor influences to reach them, whereas in complete transverse lesions the augmentor influences were also cut off, and the spinal segments in men did not possess sufficient autonomy to be capable of preserving muscle tonus in the absence of the augmentor influences from above. A case had been recently recorded by Mills in which there was ankle clonus, but the knee-jerks were absent—a rare event, in that the author had only been able to collect ten similar cases from the literature on the subject. This indicated a limited lesion in the lumbar cord, and one of the affections suggested that might possibly have given rise to this combination was disseminated sclerosis; but, highly probable as it seemed, in a large experience of this disease, the reader of the paper had only met with two cases in which the diagnosis seemed likely and in which the knee-jerks were absent. He would always hesitate to diagnose disseminated sclerosis in a case in which the knee-jerks were absent, although such a state of things was, of course, possible. The paper was illustrated by lantern slides of the various morbid conditions to which reference was made.

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North-East London Clinical Society.—At a meeting on November 7th, Dr. F. J. Tresilian, President, in the chair, Dr. E. F. Willoughby read notes on two cases of poisoning (1) by atropine, (2) by morphine.—The President showed (1) a case of subglottic stenosis in a man, aged 40, the result of tertiary syphilis; (2) a case of diabetic retinitis; (3) specimens of inferior turbinals removed by the spokeshave.—Mr. Edmunds showed a girl of 17 who had been operated on for perforated gastric ulcer. A short discussion followed on the early diagnosis and treatment of gastric ulcer.—Dr. Hooper May showed an enterolith removed by enterotomy.—Dr. Whiting showed (1) a case of athetosis, and (2) a case of paralysis following German measles.—Mr. Carson showed (1) a case of pseudo-hermaphroditism; and (2) an ovary and Fallopian tube removed from the sac of a strangulated inguinal hernia.—Dr. Murray Leslie showed a case of aneurysm of the arch of the aorta in a woman, aged 45, who gave evidence of syphilis. A discussion followed on the treatment by the gelatine method.—Dr. Giles showed specimens of (1) carcinoma of cervix removed by vaginal hysterectomy; and (2) two Fallopian tubes removed by abdominal section for pyosalpinx.—Dr. Veitch Clark showed a case of congenital pulmonary stenosis.

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Cardiff Medical Society.—At a meeting on November 7th, Dr. Paterson, President, in the chair, a discussion took place on infant feeding. Dr. Fiddian, who opened the discussion, considered the subject under the heads of (*a*) the feeder—mother or nurse; (*b*) the infant; and (*c*) the food. In regard to (*a*) he held that devotion to duty should take the leading place, affection adding sweetness and acceptability to the discharge of it; he would allow of no arrangements for amusement or ease that would interfere with the infant's needs; he described the qualities of a good nursing woman, and some physical defects that render her inefficient: he mentioned instances of a few women who took alcohol in moderate quantities for the arrest of the lacteal secretion when weaning, and called attention to the need of a scientific inquiry into the effects of moderate amounts of stimulants in the formation of milk: (*b*) The great variations in children were discussed: some failing to thrive in the earlier months—child after child of the same family—while in others there was a tendency to excessive adipose tissue with a minimum of feeding; (*c*) This part of the lecture was rendered instructive by illustrative standards showing the composition of different milks, lent by the Aylesbury Dairy Company and the Friern Manor Dairy Farm, Limited, the former including the milk of the goat, ass, and mare, as well as human and bovine milk. The Gaertner process and other methods of humanising milk were discussed. In regard to sterilisation, his own observations had not supplied him with any instances of scurvy from the use of sterilised milk, but condensed milk had done so.—The President called attention to the Walker-Gordon laboratories in America and in a few English towns, where the food was prepared according to the medical attendant's prescription. In the discussion which followed, the following gentlemen took part: Messrs Euan Maclean, E. Walford, R. Prichard, H. G. Cook, Mitchell Stevens, Eldon Pratt, W. B. C. Treasure, William Sheen, A. E. Taylor, H. H. Tidswell, and G. N. W. Thomas. Dr. Fiddian replied.

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West Kent Medico-Chirurgical Society.—The second meeting of the forty-sixth session was held at the Royal Kent Dispensary, Greenwich Road, S.E., on November 1st, the President, Dr. Thomas C. Meggison, in the chair.—After the election of several new members Mr. G. Chisholm Williams read a paper on high-frequency electrical currents in the treatment of certain diseases. The paper was divided into two parts, one dealing with the method of production from the electric light mains, Wimshurst machine, or accumulators. A complete description of the apparatus required was given, and the various ways of utilising the currents by auto-conduction, auto-condensation, resonator, and the bipolar methods were described and demonstrated. The second part of the paper dealt with the following diseases: Pulmonary tuberculosis, tuberculosis of joints, tuberculous laryngitis, lupus, eczema, psoriasis, rodent ulcer, malnutrition from rickets and dyspepsia, sciatica and neuralgia, diabetes. Cases or notes of the above were shown or read. The President, Drs. Scholefield, Hartt, and Herschell discussed the paper.—A *conversazione* will be held after the meeting on December 6th.

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Rochdale and District Medical Society.—At a meeting held on November 7th Mr. R. Burdett Sellers gave the Presidential address on An Acute Infectious Disease. After referring to the diminished death-rate, notably from zymotic diseases and phthisis, he said that there was one very common disease which showed little reduction in its death-rate—namely, pneumonia. This was an acute infectious disease, caused by the diplococcus pneumoniæ of Fraenkel. There appeared to be rare cases which were not caused by the pneumococcus, and this might have been expected from analogy with other diseases, such as diphtheria and tubercle. On the other hand, the pneumococcus might cause other diseases, as empyema, peritonitis, ulcerative endocarditis, etc., which might be primary or secondary to an attack of pneumonia. The coccus was often present in the saliva of healthy individuals. They had in and about them samples of many diseases, only waiting an opportunity for onslaught. Such opportunity came with impaired vitality due to chill, fatigue, or other cause. Leucocytes were increased in the pyrexial stage of pneumonia, and diminished with the critical fall of temperature. The crisis was probably due to the formation of an antitoxin in the blood (Washbourn). The serum of patients convalescent from pneumonia was said to have protective power. Non-alcoholic cirrhosis of the liver might be due to an antecedent attack of pneumonia, judging from liver changes, during an attack of the disease. With regard to treatment, pneumonia could not be cut short by any known means. The routine saline treatment consisted of the administration of laxatives, with a liquid, unstimulating diet, and complete rest in an airy room at a temperature of above 60° F. with a proper degree of moisture. Death was generally due to heart failure, hence depressing treatment should not be employed. Special circumstances might call for the use of quinine in full doses, or, in cases of low type, tinct. ferri perchlor. It was unwise to reduce the "normal

temperature of pneumonia"—103° or 104° F.—unless delirium or other condition called for interference. In hyperpyrexia the cold bath or similar remedy was the only measure of any use, large doses of quinine being auxiliary. The value of poultices was doubtful, and they restrained respiratory movements. Ice applications might relieve pain. Strychnine and caffeine were most useful to combat cardiac failure. Oxygen was valuable where the respiratory surface was small. Mr. Sellers also described Dr. G. Balfour's chloral treatment.—The President received a hearty vote of thanks for his interesting address, and the discussion which followed was joined in by Mr. G. W. Malim, Mr. W. Stanwell, Dr. D. Richmond, Dr. A. Wallace, Dr. A. B. MacMaster, and Dr. W. Hodgson.

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Birkenhead Medical Society.—At a meeting on November 8th, Dr. Pinkerton, President, in the chair; Dr. Nathan Raw, of Liverpool, read a paper entitled the Diagnosis and Treatment of Tuberculosis, with special reference to the Open Air Method. After referring to the ravages caused by consumption in civilised communities and to the great advance in our knowledge of the disease, brought about by the discovery by Koch of the tubercle bacillus, the author discussed the question of hereditary transmission of the disease. He held that there was little or no evidence to prove that such transmission did occur; but this question was of little importance as compared with infection after birth. In his opinion, there is very little specific tendency in children of tuberculous parents to became infected, except in so far that such children were not so strong as those of healthy parents, and therefore more susceptible to disease of any kind. The commonest means whereby parents become infected, was by the inhalation of tubercle bacilli. He then described the various modes of invasion of the disease; and in referring to the pleuritic forms, stated that he was not by an means convinced that all cases of pleurisy were tuberculous, as was sometimes stated. Dr. Raw next discussed the diagnosis of tuberculosis and treatment. The latter he divided into two heads. (1) Preventive, and (2) Specific. Under preventive treatment, he urged that phthisical patents must be taught not to spit on the ground or floors of rooms, but must carry spittoons, or some receptacle, in which the sputum could be collected and then destroyed, either by treatment with disinfectants, or by burning. The clothing and utensils used by such patients should be disinfected; and rooms which had been used by them should be disinfected, painted, and papered before use by other individuals. An insufficient air supply to the apices of the lungs was a very important agent in inducing phthisis; and all children ought to be taught to breathe properly, so as to expand their lungs thoroughly. In the open-air treatment the main object was to make the patient live out-of-doors as much as possible, and also to improve his nutrition. If the patient could be fattened, the disease might be left to take care of itself. At Nordrach patients were often in the open air for ten hours every day, and this in spite of fog and cold. Excessive cold was not harmful, even in advanced cases, as the results of treatment at Davos showed. The question of rest or exercise for such patients was a very vexed one, some authorities insisting upon absolute rest in the open air, others recommending gradually-extended exercises. Complete rest with regular breathing exercises gave in many cases excellent results. A febrile condition, with a temperature of 100° F. or over, was an absolute bar to exercise. A three to six months course of sanatorium treatment would generally arrest the disease. Pure air, an equable temperature, and a maximum of sunshine, were the desired conditions; given these, cases would do as well in England as abroad. Specific medication had proved useless. Drugs could only be of use by helping to render the tissues more resistant. Dr. Raw mentioned some of the drugs and their combinations, which had in his hands proved themselves of service in the treatment of symptoms, including creosote or guaiacol as routine treatment. He laid great stress on the importance of attending to the feeding up of the patient; but he was not in favour of forced feeding, as practised on the Continent. In conclusion, Dr. Raw said that an organised effort on the part of the medical profession, health authorities, and the public must be made in fighting this disease. Healthy houses must be provided, and insanitary areas must be swept away. He urged voluntary notification of the disease and voluntary removal of patients, municipal sanatoria for curable cases, and isolation hospitals for incurable ones. Drs. Harris, Stansfield, F. Johnston, Vacher, Dalzell, W. R. Floyd, and the President took part in the discussion which followed; and Dr. Raw replied.

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Folkestone Medical Society.—At a meeting on November 1st, Dr. Tyson, President, congratulated Dr. E. J. G. Calverley on being made a C.M.G. in recognition of his services in South Africa.—Mr. A. Murdoch then read notes on a case treated by antistreptococcus serum.

On June 11th he attended a woman, aged 24, suffering from acute septicæmia, the focus of infection being a small operation wound in the right breast. Quinine, cold packs, etc., having failed to reduce the temperature, he tried antistreptococcus serum, injecting it altogether twelve times in ten days, 10 c.cm. at a time, each time with most gratifying results. After this, the patient made a steady and uninterrupted convalescence, with the exception that a rash, no doubt toxic, appeared on the body and limbs eight days after the last injection, and lasted twenty-four hours.

Mr. Murdoch was much struck with the power of the serum in reducing the temperature (more than once an injection of 10 c.cm. produced a steady fall from 105° to normal) and still more by its power of preventing a rise when given whilst the temperature was low. In no case did any ill effects, either local or constitutional, follow an injection. He believed it to be most important to use fresh serum, to take the most scrupulous antiseptic precautions in giving it, to give it often and in good doses, and if it was to be of service to start it early in the disease, and not as a last resource as was so often done. He injected the serum each time into a different part of the body, but he did not think the place mattered much. He, however, preferred the skin on the forearm. He thought the use of ethyl chloride before inserting the somewhat large needle was a good plan. In the subsequent discussion Mr. H. Braund, Dr. T. Eastes, Dr. P. G. Lewis, Dr. C. Latter, Dr. W. F. Chambers, Dr. A. E. Larking, Dr. L. Wainwright, Dr. E. J. G. Calverley, Dr. W. L. Chubb, Mr. A. Randall Davis, Dr. J. Hackney, and the President, Dr. Tyson, took part. Mr. Yunge-Bateman, M.O.H. for Folkestone, read the resolutions of the recent Congress on Tuberculosis, and asked the Society to support him in getting the compulsory notification of tuberculosis adopted by the Town Council. A lengthy discussion ensued, and the matter was adjourned until the next meeting.

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Sheffield Medico-Chirurgical Society.—At a meeting held on November 7th, Dr. Willey, President, in the chair, Dr. J. H. Keeling related two cases of abdominal hysterectomy, and showed specimens.—Dr. D. Burgess showed specimens from (1) a case of Addison's disease in a boy, aged 9 years, and (2) a case of contracted granular kidney in a boy, aged 16 years, a plumber, who had suffered from lead poisoning.—Dr. A. J. Hall demonstrated a simple method for the clinical estimation of hæmoglobin.—Dr. Gwynne read a paper on congenital hypertrophy of the sigmoid flexure, and showed a case.

The patient, a boy aged 6½ years, had been subject from birth to an aggravated form of chronic constipation. Of late the abdomen had been much enlarged, and before admission to the Children's Hospital had been rapidly increasing, until it measured 31 inches in circumference at the umbilicus. As no action of the bowels could be obtained, an iliac colotomy was performed. After the operation the boy improved in general health, and his abdomen gradually became reduced to almost normal dimensions.

—Mr. A. M. Connell showed specimens from the following cases: (1) Abdominal nephrectomy for sarcoma; (2) lumbar nephrectomy for tubercle.

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Glasgow Southern Medical Society.—At a meeting on November 14th, Dr. John Stewart, President, in the chair, Dr. A. Maitland Ramsay gave a series of demonstrations in connection with diseases of the eye. The first consisted of an exhibition of the more common external diseases of the eye and ophthalmoscopic cases, some pathological specimens (microscopic and macroscopic), and a number of very fine stereoscopic photographs, skiagraphs, and lantern slides. Later in the evening a number of optical instruments were displayed, and a demonstration was given of the modern application of electricity in the treatment of eye disease. The

Finsen lamp was also shown, and its application in phototherapy demonstrated. Finally, Dr. Ramsay gave a lecture, accompanied by lantern demonstration, on hypopyon ulcer, including its causation, complications, and treatment.—On the motion of the PRESIDENT a cordial vote of thanks was awarded Dr. Ramsay for his demonstration.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.—The following have been elected office-bearers for 1901-1902:—*President:* Professor T. R. Fraser. *Vice-Presidents:* Drs. James Andrew, Charles Underhill, and James Ritchie. *Councillors:* Drs. J. W Ballantyne, George Kerr, Kenneth Douglas, Noël Paton, William Russell, Logan Turner, and Messrs. A. G. Miller and H. J. Stiles. *Treasurer:* Dr. Harvey Littlejohn. *Secretaries:* Dr. G. H. Melville Dunlop and Mr. Alexis Thomson. *Editor of Transactions:* Dr. William Craig.

# REVIEWS.

## OBSTETRICS AND GYNÆCOLOGY.

THE new edition of Dr. HERMAN'S *Difficult Labour*[1] has been thoroughly revised, but the general character and length of the book are unaffected. Its didactic tone, recognised and justified by the author in the preface to the first edition, is, of course, unaltered, and for this the student and practitioner will be grateful, clear guidance for emergencies being conspicuously wanting in many obstetric works. The general arrangement of the book has already been noticed on the appearance of the first edition; we turn, therefore, to the chapter on Cæsarean section and symphysiotomy, in which important alterations have been made in the present edition. With regard to the former operation, Dr. Herman now advises supravaginal amputation of the uterus whenever sterilisation is indicated no mention being now made of division or removal of the Fallopian tubes for this purpose. The author's reasons are that the danger of Cæsarean section is not increased by removal of the body of the uterus, and that, except for child-bearing, the uterus is useless, while it continues liable to disease, and subjects the patient to the discomforts of menstruation. If osteomalacia is present, the ovaries should, of course, be removed. With regard to symphysiotomy, the chief alteration is in the mode of performing the operation. Dr. Herman now advocates a subcutaneous method of dividing the symphysis, the only instrument required being a tenotomy knife; as described by him the operation appears to be extremely simple and easy, and, as he points out, it ought to be unattended by mortality if performed only in suitable cases.

A TEXTBOOK which runs into three editions in six years is, we may assume, one which commends itself to a considerable class of readers. Drs. GRANDIN and JARMAN have spared no pains to retain the favour with which their *Textbook of Practical Obstetrics*[2] has been received in America. A new section has been introduced dealing with the anatomy of the female generative organs and with the subject of embryology, and this edition no doubt adds to the value and completeness of the book. As we have already pointed out, in reviewing a previous edition, it is characterised by faults which forbid us to commend it to English readers with any degree of confidence, but there is much in it that is good, and the authors have striven to fulfil their intention of producing a practical clinical guide which should not be overweighted with theories, or obscured by the discussion of divergent opinions.

Mr. STANMORE BISHOP'S work on *Uterine Fibromyomata*[3] is practically a plea for the treatment of uterine fibroids by hysterectomy. The author reasons temperately enough; he believes that these tumours are by no means harmless, but expose the patient to great and increasing risk, and that in many cases in which life is not directly threatened the patient is crippled during those years when her powers of enjoyment and usefulness should be greatest. He holds that the surgeon may intervene with relative impunity in pathological conditions which until recently were considered out of the reach of anything but medical treatment. Mr Stanmore Bishop admits that "some cases of fibroids do not require treatment at all" (p. 145), and that "cases which produce no symptoms, which are not obviously enlarging, or in which there is but little hæmorrhage or signs of interference with important functions, are best left alone" (p. 314). He might, perhaps, have added that there is a tendency at present to alarm patients who have fibroids which produce no symptoms. The experienced will agree with Mr. Bishop that fibroids which grow quickly bleed, or press on important structures, are best removed. He discountenances less radical procedures. He collects valuable evidence against the supposed advantages of visits to certain watering places. Prieger admitted in 1854 that he had no reason to believe that the Kreuznach waters, whether employed on the spot or elsewhere, exercised the power of removing undoubted fibroid tumours. West disbelieved in them, and Keith, as late as 1891, spoke against "endless and useless visits to Kreuznach." No doubt it is in cases of fibroids with no symptoms beyond their existence that most "benefit" is experienced by the patient. Mr. Bishop does not speak enthusiastically of electricity even when bleeding is the main symptom. Sufficient prominence is not given to fibroid of the broad ligament as a distinct condition from uterine fibroid and the diagram of the broad ligament, taken from a French work, to illustrate ligature of the uterine artery from above is inaccurate as the anterior layer of peritoneum appears as though it descended as deeply, before turning up again, as the posterior, otherwise the whole section on surgery is excellent, and the diagrams and drawings most instructive. The methods of Landau, Kelly, Doyen, and others are illustrated by good plates and woodcuts. Mr. Bishop practises abdominovaginal panhysterectomy in severe cases. The principles laid down for the treatment of fibroid in pregnancy are sound. He shows that if the tumour be cervical, or so low as to become wedged in the pelvis during uterine development, it may prove an insurmountable barrier to the birth of the child. On the other hand, the statement that "parturition in cases of fibroid tumour is always a matter of difficulty, often of grave danger" (p. 43) is open to question. Quite recently a teacher connected with a large metropolitan school, including a maternity department of about 2,500 cases per annum, stated before the Obstetrical Society of London that he had seen a considerable number of cases of pregnancy and labour complicated with fibroid tumours, but he had never met with a death from the complication, and on only one occasion found himself compelled to perform Cæsarean section and remove the uterus. Many readers will assuredly disagree with some of the author's opinions, but all who study the work will admit that it is a standard treatise on the operative treatment of uterine fibroids.

Mr. ROGER WILLIAMS tells us that he believes that the time has come for monographs, by which he means what is properly understood by that term, works on the whole of one subject, not papers on some matter of detail relating to one subject. He quotes Buckle's complaint that the publications of scientific institutions overflow with minute and countless details, which perplex the judgment, and which no memory can retain. Mr. Roger Williams has produced in *Uterine Tumours: their Pathology and Treatment*,[4] a work which is undoubtedly a good sample of a literary venture based on the principles which he advocates. He has been perhaps remiss in reminding the reader that the study of minute and countless details is absolutely necessary as a basis for scientific knowledge, but he is correct in implying that some classification of vast masses of facts now within our knowledge is demanded, and that our science requires a little flavour of philosophy. His book is, in fact all about uterine tumours from the morphology of cancer down to new instru-

[1] *Difficult Labour.* By G. Ernest Herman, M.B., F.R.C.P. New and revised edition. London: Cassell and Co. 1901. (Cr. 8vo, pp. 470. 12s. 6d.)

[2] *A Textbook of Practical Obstetrics.* By Egbert H. Grandin, M.D., and George W. Jarman, M.D. Third Edition. Philadelphia: F. A. Davis Co. 1900. (Demy 8vo, pp. 525. 4 dols.).

[3] *Uterine Fibromyomata: their Pathology, Diagnosis, and Treatment.* By E. Stanmore Bishop, F.R.C.S., Honorary Surgeon, Ancoats Hospital, Manchester, etc. London: Rebman Limited. 1901. (Demy 8vo, pp. 324. 49 illustrations. 15s.)

[4] *Uterine Tumours: their Pathology and Treatment.* By W. Roger Williams, F.R.C.S. London: Bailliere, Tindall, and Cox. 1901. (Demy 8vo, pp. 359; 58 illustrations. 10s. 6d.).

ments used in hysterectomy, and from the pathogenesis of myoma to the technique of operations on uterine tumour. Pathology, statistics, clinical features, and surgery are all included in this work. The author deprecates the prevalent tendency to give an unfavourable prognosis of a myoma which is causing no symptoms, and lays stress on the extreme rarity of so-called malignant degeneration of fibroids. Above all, he dwells on the extremely low mortality. He admits that hysterectomy for cancer is allowable, provided that the cancerous area is totally removed with the uterus: this complete extirpation of malignant elements can be effected, he insists, by no other operation than abdominal section. It is only by operating above the pubes that not merely the entire uterus can be removed, but also the upper part of the vagina, the Fallopian tubes and ovaries, the parametric connective tissue, so exposed to early malignant infection, the broad ligaments and the round ligaments. These parts should be taken away altogether, their infection with the knife during the operation being avoided as much as possible, and the uterus must be carefully dissected out from the pelvis to the base of the bladder.

The *Textbook of Gynecology*,[5] edited by Dr. CHARLES A. L. REED, of Cincinnati, is really a "system" made up of essays by thirty-one contributors, including Dr. Reed himself. Amongst the authors of this textbook will be found several American specialists well known on this side of the Atlantic, such as COE, Matthew Mann, McMurtry, and Hunter Robb; Canada is represented by ROSS, of Toronto; whilst British talent is recognised by the inclusion of essays by Ballantyne, Murdoch Cameron, Mayo Robson, and Japp Sinclair. The illustrations, largely original, show all the advantage, and some of the defects, of the methods which have almost superseded the woodcut. The microscopical sections come out more clearly than usual, whilst drawings meant to elucidate surgical manipulations are in this work far above the average. The editor's paper on injuries of the pelvic floor, for instance, contains illustrations of perineorrhaphy and of ruptured perineum which are really instructive to the beginner. The chapter on individual infections of the Fallopian tubes, by Reed and Whitacre, is a valuable contribution to the bacteriology of the female organs. The editor seems, on the whole, rather in favour of hysterectomy for cancer, but he shows that statistics by authorities of weight are somewhat gloomy, though a few well-known writers speak of cases of non-recurrence after the lapse of several years. He admits that the adoption of the extended operation has been so recent that ultimate results are not yet determinable. McMurtry's views on the treatment of fibroids agree with those of many European authorities. He insists that the perfected operative treatment of modern surgery has taken the place of drugs and electricity! When the tumour is of small size and unaccompanied by hæmorrhage or other serious symptoms, no treatment whatever, he affirms, will be required. The textbook includes the surgery of the rectum and anus.

The supply of textbooks on diseases of women is beginning to exceed the demand, we mean the demand for a new work, not for a treatise already issued and popular. Hence the need for one more publication on this subject is the first matter for criticism when that publication comes before the reviewer. Dr. MONTGOMERY'S *Practical Gynecology*[6] doubtless suits his pupils past and present, and, taken geographically, will represent Philadelphian teaching. A teacher's treatise must be criticised for the method and character of the teaching. It is too solid, too deep for the student, for its author has not thought good to follow the style of Matthews Duncan or the principles of Herman. Still, Dr. Montgomery has avoided the bad, dull, heavy method of beginning with the vulva and its diseases, and plodding on systematically until the upper extremity of the genital tract is reached. In other words, he is not what some teachers call "unclinical," and as at the same time there is some trace of classification his book is well suited to the practitioner and specialist. The sections—division into chapters is avowedly discarded—treat of diagnosis, pelvic and abdominal examination, therapeutics, medical treatment, local therapeutics, electricity, anatomy, physiology, malformations, inflammation, deviation of the pelvic organs, hæmorrhage and ectopic gestation, and genital tumours. Such classification is at least intelligent. Anatomy is of permanent importance, but the medical public demand technical directions about nursing, and wish to know the use of instruments, and the author satisfies these demands. Some of the original drawings are exceedingly good; we may single out Fig. 331, which represents perfectly anterior and posterior colpocele, as so often seen in the out-patient department of a hospital, and the succeeding illustrations of different varieties of prolapse are highly instructive. In Figs. 41 and 509 the specimen is inverted for no apparent reason. The section (Fig 294), showing parametric exudation in the region of the rectum, is very remarkable.

[5] *A Textbook of Gynecology.* Edited by Charles A. L. Reed, A.M., M.D., Gynecologist and Clinical Lecturer on Surgical Diseases of Women at the Cincinnati Hospital, etc. London: Henry Kimpton. 1901. (Demy 8vo. 1900. 356 illustrations. 25s.)

[6] *Practical Gynecology.* A Comprehensive Textbook for Students and Physicians. By E. E. Montgomery, M.D., Professor of Gynecology, Jefferson Medical College; Gynecologist to the Jefferson Medical and St. Joseph's Hospitals. London: Rebman, Limited. (Roy. 8vo., pp. 830; 527 illustrations. 25s.).

## NOTES ON BOOKS.

### CLINICAL HANDBOOKS.

Dr. CABOT'S *Physical Diagnosis of Diseases of the Chest*,[7] is a somewhat more advanced treatise on the examination of the chest than the usual manual. The writer has relied on his own experience rather than on other textbooks, and whilst correcting some of the fallacies which are repeated in many of the small manuals, has avoided the full discussion of many points which makes some of the correct books too large. Illustrations, of which there are over 140, are used to save long explanations, and a large number of excellent photographs and diagrams form an important feature of the work. The book should take a high place among the textbooks on physical examination and diagnosis.

Dr. C. S. ENGEL has written an excellent little book on blood examination.[8] It is simple and explicit and does not, as is too often the case in books of this kind, contain a bewildering number of different methods, from among which the student is left to make his own selection with little to guide him in his choice. The determination of the specific gravity and the alkalinity are well described. For estimating the hæmoglobin the author describes both Gowers's and Fleischl's hæmoglobinometers, but he does not sufficiently emphasise the superior accuracy of the latter. The second chapter deals with the morphology of the blood and contains full instructions for preparing, fixing, and staining films: a small but not unimportant omission is a reliable method for properly cleaning the coverslips. The relative advantages of fixation by heat (Ehrlich's method) and by fluids such as alcohol or formalin in different conditions are well described, as are the staining methods. The author adopts throughout Ehrlich's classification of the leucocytes, and gives a brief and clear account of their morphology and staining reactions in normal and pathological conditions. This section is profusely illustrated with coloured drawings of blood films, which although somewhat diagrammatic will doubtless be useful to students. The book concludes with a short account of the appearances presented by the blood and bone marrow in different stages of development. The work will prove acceptable to those requiring a small handy volume for laboratory use.

We have received from the Literary Committee of the Intercolonial Medical Congress of Australasia the *Transactions* of its fifth session, held in Brisbane in September, 1899, the whole expense of printing and binding of which has been defrayed by the Queensland Government. The volume contains a copious index which makes reference to the numerous scientific contributions to the *Transactions* unusually easy.

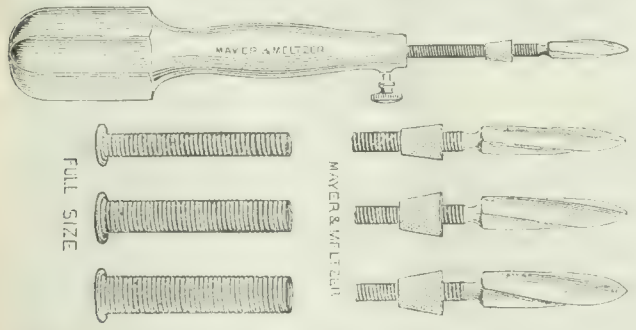
[7] *Physical Diagnosis of Diseases of the Chest.* By R. C. Cabot, M.D. London: Baillière, Tindall, and Cox. 1901. (Demy 8vo, pp. 326. 10s. 6d.)

[8] *Leitfaden zur klinischen Untersuchung des Blutes.* (Guide to the Clinical Examination of the Blood.) Von Dr. C. S. Engel. Berlin: August Hirschwald. Demy 8vo, pp. 60. 3s. 6d.)

# REPORTS AND ANALYSES
AND
# DESCRIPTIONS OF NEW INVENTIONS

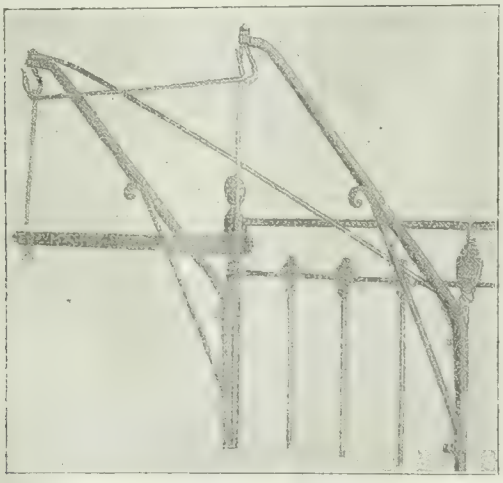
## MEDICAL AND SURGICAL APPLIANCES.

*Screw Antrum Perforator.*—Dr. W. D. Haslam (Wallington) sends a description of an instrument designed to enable the operator to perforate the maxillary antrum by a rotatory movement instead of by forcible pressure. All kinds of trocars, he writes, when used to pierce the hard walls of the antrum, enter the cavity with a dangerous jerk, to the possible detriment of the orbit. Rotatory action is calculated to abolish this dangerous jerk. As a further precaution, the




perforator is fitted with a movable guard which can be adjusted to the requirements of the operator. There are three perforators varying in size; the smallest has a longer shank than the others for piercing the antrum beneath the inferior turbinate body.

*Overhead Bar for Bed.*—Dr. Malcolm Margrave (Newton Abbot) forwards a description of an apparatus devised by a patient of his, Mr. R. H. Froude, to be attached to an ordinary bed to provide an overhead bar by which an invalid may be able to raise himself or shift his position. The two brackets shown in the engrav-



ing are of iron one inch square, thickened at the angle, which is of 135°. The vertical leg of the bracket is cramped to the upright irons of the bed, and the inclined leg is 2 feet 6 inches long. The cords suspending the cross-bar can be adjusted to suit the occupant. It is claimed that the advantage which the apparatus has over a hook screwed to the joists of the ceiling is that it is more easily applied and is moved with the bed, and further that as the cords are shorter the occupant of the bed can get a sideways pull, and thus more easily shift himself naturally in bed.

## THE FIFTH INTERNATIONAL CONGRESS OF PHYSIOLOGISTS AT TURIN.

*(Continued from page 1417.)*

### The Blood and Circulation.

*Enumeration of Blood Platelets: their Relation and that of the Leucocytes to Blood Coagulation.*

Professor G. T. Kemp and Miss H. Calhoun (Illinois) introduced their communication by stating that they agreed with other workers in condemning methods for the enumeration of the platelets which involved the drawing of the blood into a *mélangeur* before mixing it with a fixative fluid. Cooling the pipette with ice as recommended by Van Emden diminished the objection, but involved considerable trouble. The best method was one proposed by Laker, and also independently by Kemp in the same year (1886). A "count" of the red corpuscles was made by one of the standard methods. They themselves employed the hæmatocrit. The skin was then pricked through a drop of fluid which fixed the blood platelets immediately, and their number determined by the ratio to the red corpuscles. The authors found the most satisfactory fixative to be 2½ per cent. formaldehyde in 1 per cent. sodium chloride, tinged either with methyl violet or methyl green. Leucocytes were determined by the Thoma-Zeiss hæmacytometer, using as diluent, 1 per cent. acetic acid coloured with methyl violet. In normal blood the number of platelets per c.mm. taken from a mean of 75 observations on 19 different individuals was found to be 778,000. The maximum was 961,500, and the minimum 730,000. In the dog from 15 observations on 10 different animals the mean was 381,000, the maximum 461,000, and the minimum 349,000 per c.mm. The number bore no definite relation to that of the leucocytes, but the ratio to the number of red corpuscles was fairly constant. The connection of the blood platelets and the leucocytes with coagulation was determined by a method which the authors proposed to name "fractional defibrination." A certain fraction of the calculated blood of an animal was drawn, defibrinated, filtered, and returned to the circulation. This process was repeated until fibrin was no longer formed. At each stage the red corpuscles, the leucocytes, and the platelets were counted. A similar method was used by Bizzozero and by Bizzozero and Sanquirico when studying the regeneration of blood and the effects of its transfusion. The platelets disappeared progressively with each defibrination, and after the blood ceased to be coagulable (from the sixth to the tenth defibrination) they were no longer present. The leucocytes disappeared to some extent, but never completely. Large numbers of these were "filtered out," as shown by examination of the same specimen of defibrinated blood before and after filtration. Mononuclear and polynuclear leucocytes were found at all stages, and also after complete defibrination. The red corpuscles suffered some diminution, but much less than the leucocytes. In leukæmic blood this could be studied to great advantage. In regeneration the leucocytes returned to the normal first, the red corpuscles next, and the platelets last. The authors therefore disagreed with Lilienfeld, who maintained that progressive disintegrative changes in the leucocytes, accompanied the coagulation of normal blood. Lacerated leucocytes and broken leucocytes were often to be seen in whipped blood, and in specimens preserved by drying; hence they believed that any diminution in number was due to physical laceration rather than to chemical disintegration. In frog's blood the fusion and breaking up of the spindle corpuscles suggested a true chemical disintegration, but no such changes were ever observed in the leucocytes of mammals. Further, it was the exception for leucocytes to form nodes in the fibrin network when coagulation occurred, while it was the rule for masses of platelets to do so. In diluted blood, however, or in very thin films, the fibrin was often deposited as needle-shaped crystalloids, totally apart from any corpuscular elements. In agreement with Hayem, the platelets were seen to be biconcave (osmic acid and Hayem's fluid), but they were never found to contain traces of hæmoglobin, and therefore could not be regarded as hæmatoblasts in Hayem's sense. Their microchemical reactions resembled to some extent those of red corpuscles, and also those of the nuclei of leucocytes, but were identical with neither. They resisted the digestive

action of dilute HCl and pepsin, as Lilienfeld had shown, a fact which indicated a rich content of nucleoproteid, but Macallum's reaction for phosphorus in organic combination gave discordant results; a definite opinion as to their composition was therefore reserved. Since it had not been satisfactorily shown that the platelets were related to or derived from any of the better known corpuscular elements of blood, the authors agreed with Bizzozero that they were independent elements. Finally, they were the only elements whose disintegration was to be seen in the coagulation of normal blood.

*Histological Observations on Blood.*

Dr. A. CESARIS DEMEL (Cagliari) stated that he had previously described in the red corpuscles of man and of some animals a substance stainable by neutral red and by methylene blue dissolved in physiological solution of sodium chloride. This substance, which he considered characteristic of young red corpuscles, appeared in various forms, as granules, or filaments, or blotches, and had been supposed by him to represent the remains of the nuclei of the normoblasts of bone marrow. Continuing the observations, and colouring the normal red globules with neutral red dissolved in isotonic solutions of calcium chloride, the following appearances were seen: A homogenous substance devoid of hæmoglobin differentiated at the periphery of the corpuscles, gradually withdrew outwards, and often completely separated from them. This substance carried the chromatic material above mentioned with it, leaving the corpuscle unaltered in shape but more stainable as a whole with neutral red. The same appearances, only more frequent and more marked, were observed in the blood in severe forms of anæmia, and in animals rendered anæmic in various ways, that is to say, in blood containing considerable numbers of immature red corpuscles. Completely developed corpuscles did not show this cortical homogeneous layer. While his observations suggested the existence of a capsule on the young red corpuscle, it was perhaps premature to conclude definitely that this was so. It was quite certain, however, that the blood platelets were distinct from the extruded substance and could not have originated from it.

*Recent Researches on Blood.*

Dr. A. PETRONE (Naples) related results which he had been able to obtain in the study of blood corpuscles by using dilute sulphuric acid as a fixative. In aqueous solution it was of great value for examining with ease, security, and rapidity the number of the white corpuscles, the chief forms of their nuclei, and the coloration of their protoplasmic granules. Altogether it was claimed to have given better results than any other fixative employed. By using it in minimal quantities added to absolute alcohol it also revealed a yellowish-brown iron-containing substance within the primitive nuclei of red globules, which the author claimed did not wholly disappear, and in the nuclei of oviparous and embryonic corpuscles. The alcoholic solution fixed the ferruginous substance *in situ*, and was thus of special value in studying morbid alterations of the corpuscles in chlorosis, etc. The author believed that by its employment he had contributed to the settlement of two very debated problems in hæmatology (1) the independence of the blood platelets as separate elements of the blood, and (2) the persistence of the nuclei of the erythrocytes, which were not lost but hidden by the great development of hæmoglobin, and also transformed in the sense that both in function and reaction they became basic, while in all other nuclei they remained acid. The reagents must be pure, and the author hoped that the method for its own sake would be more widely employed.

*The Hæmolytic Action of Certain Glucosides.*

Professor HEDON (Montpellier) said that certain glucosides (solanine, saponine, cyclamine, and digitaline) manifested a much less degree of toxicity towards blood corpuscles when dissolved in serum than in isotonic saline solutions. Certain constituents of the serum formed non-toxic combinations with the poisons. These constituents were not dialysable, and the property appeared to belong to the extractive united to the proteids. It was not destroyed by a high temperature. Different species of serum had not the same antitoxic power. That of the dog was more effective than that of the ox or rabbit; while that of cold-blooded animals was more powerful than either. Bile also contained antitoxic substances, above all against solanine, probably due to its cholesterine, which Ransom admitted for saponine. The glucosides in question also combined with the cells of different tissues, particularly those of nervous tissue, and thus lost their hæmolytic power. The antitoxic action of serum was also manifested in another way. The glucosides were violently poisonous to small animals swimming in water, such as tadpoles and fish. A small proportion of serum added to the water, protected the tadpoles against the action of saponine and cyclamine, and of bile against saponine. Acids also had a very remarkable protecting action for blood corpuscles against solanine, but against this alone. This had already been indicated by Pohl for acid sodium phosphate, but it applied in a less degree to all acids. The corpuscles "fixed" the acids energetically and retained them tenaciously, thereby becoming impenetrable to the solanine. Alkalies, on the other hand, although equally taken up, made the corpuscles more sensitive to the poisons.

*The Action of Ringer's Fluid and of Dextrose on the Isolated Rabbit's Heart.*

Dr. F. S. LOCKE (London) gave a beautiful demonstration, in which an excised rabbit's heart was kept for hours in vigorous activity, fed solely with Ringer's fluid into which oxygen at atmospheric pressure had been led before entering the coronary vessels. Without the oxygen, the heart's action rapidly became weak, as had been shown by Rusch; and ordinarily a noticeable weakening was observed with the oxygenated fluid after the lapse of about two hours. If 0.1 per cent. dextrose were now added to the fluid the beats became strong again, and the activity was maintained with very little diminution for as long as seven hours as a rule. Removal of the dextrose at any period rapidly induced a recurrence of the weakening, and these effects could be alternately produced many times in succession.

*The Influence of Diet on Restoration of the Asphyxiated Heart.*

Professor PREVOST and Dr. BATELLI (Geneva) stated that recently they had succeeded in the majority of cases in restoring by direct massage and artificial respiration the heart of an asphyxiated dog and preventing the onset of fatal fibrillary contractions. Batelli in former experiments had found, on the contrary, that in these conditions fibrillary contractions appeared during massage, and were only obviated by an electric discharge of suitable strength, or by an alternating current of 240 volts directly sent through the heart. New experiments, however, showed that when the dogs were asphyxiated during digestion, simple massage was often sufficient to restore the organ, but never when they were fasting. This might explain the results of Prus. The effect was most constant after a mixed meal, and of the different food stuffs carbohydrates appeared the most active, then proteids, and, least of all, fats.

*The Pneumogastric considered as a Motor Nerve of the Heart.*

Professor ONIMUS (Monaco) advocated a novel and interesting theory relative to the cardiac functions of the vagus nerve. He had found that when the vagus was excited with a faradic current in which (instead of the ordinary rate) the interruptions per minute approached in frequency the number of the heart beats, the stimulation did not produce inhibition, but, on the contrary, provoked contractions which in the end became isochronous with the excitations of the nerve. In all cases and in every animal examined the frequency of excitation had a much greater influence than the strength of the current, and it was, as he believed, only because a rapid interruption had ordinarily been employed that the function of the nerve had come to be regarded as inhibitory. Thus for arrest 15 to 20 interruptions a second were required in the dog, 20 to 25 in the rabbit, 8 to 10 in the frog, and 5 to 6 in the tortoise. When the animals were in a state of hibernation the number required was considerably less, and the same applied to warm-blooded animals in conditions of debility, however induced. For example, after a severe loss of blood 14 to 8 interruptions a second were sufficient to arrest the heart of the dog. Hence excitation of the vagus only arrested the heart under certain conditions, and to understand how and why this took place it was necessary to consider

the nerve as the motive agency of a rhythmic system. As a simple illustration, he supposed a machine had to elevate a given weight 1 metre high; if this weight were always caused to drop before reaching the required height, the machine never accomplished its function, even though the weight had been raised 99 centimetres, as often and as forcibly as might be. In the same way, if a nerve cell had to provoke the function of an organ, and if a certain period of rest were necessary to enable it to accomplish this, it could never succeed in fulfilling its function, if set into activity before the time necessary for the accumulation of the requisite energy. In all organs a period of rest, long or short, was essential; and if this was too short, the machine became exhausted in proportion to the using up of the materials accumulated by nutrition. In organs of voluntary activity this was regulated by the will, but in those of involuntary function, when the period of repose brought the necessary accumulation of energy, activity occurred spontaneously, and rhythmic function was thus established. If, therefore, in these latter, activity were provoked before the necessary repair had taken place, function could not occur, not because the organs were paralysed, but because the active state was induced too often. Admitting, for example, that the ganglion cells of the heart needed one second of rest to accumulate the required energy for causing a contraction, this could never take place if their activity was called into play every half-second or even every three-quarters of a second. The heart would remain apparently paralysed, arrested in diastole. The greater ease with which the inhibitory (abnormal) function of the nerve was called into play in debilitated conditions of the system pointed to the same conclusion, namely, that the vagus was, like ordinary nerves, one which determined the activity of the organs with which it communicates. It was only accidentally and by the employment of abnormal excitation that it induced arrest of the heart.

*A New Method for Investigating the Effects of Drugs or other Reagents upon the Mammalian Heart.*

Dr. T. G. Brodie (London) demonstrated a method by which the total work performed by the heart of an animal could be determined before and after the administration of a drug. The work was ascertained by recording the total output of the heart, made to discharge into an automatically-working *Stromuhr* under a pressure maintained constant by a second piece of apparatus. The total work was the product of the output multiplied by the mean pressure. Anæsthetics had up till then been chiefly studied. Chloroform markedly depressed the working capacity; ether, on the other hand, had but little effect unless given in very large doses. Ethylene chloride had only a slight action. Suprarenal extract greatly increased the rate of the beat, and largely augmented the work performed. It was an antidote to chloroform. If administered first, the heart withstood much larger doses of the anæsthetic, while a heart greatly depressed by chloroform, recovered completely when suprarenal extract was introduced.

*A Recording "Stromuhr."*

Professor Hürthle (Breslau) demonstrated on a dog the working of a new *Stromuhr*, which recorded on the smoked cylinder the volume of blood passing through it. Lantern slides of curves illustrating the results obtained by it were also shown. The following were the chief of these:

1. Blood pressure and stream volume in the carotid of the dog.
2. Stream volume in the arteries of the thyroid body after clamping the aorta peripheral to their origin.
3. Quickening of the blood stream in the carotid in consequence of (*a*) compression of the opposite carotid, (*b*) division of the vago-sympathetic nerve.
4. Normal blood stream in the crural artery of the dog and after division of the nerves of the hind limb.
5. Blood stream in the gracilis muscle.
6. Slowing of the stream in the crural artery from tetanic contraction of the limb muscles (tetanisation of the nerves).
7. Blood stream in the gracilis muscle during tetanus induced by excitation of the obturator nerve.
8. Pressure and stream volume in the crural artery of the dog, recorded on a rapidly-revolving cylinder in order to investigate the relation between pressure and velocity in the artery.

The *Stromuhr* also recorded the pulsatile undulations of the blood stream, and could therefore be used to study the relations between velocity and pressure during the different phases of a single pulse curve, at intervals as short even as one-fifth of a second. These observations showed that the relation between the velocity of the stream and the height of the blood pressure was not always the same. In proportion, the former increased much more rapidly than the latter, as was illustrated by the following examples obtained from the carotid of a dog during a single pulse-beat, the observations having been made at intervals of one-fifth of a second:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Blood pressure in mm Hg ... | 161 | 145 | 131 | 120 | 110 | 101 | 93 | 87 |
| Volume of stream in c.cm. ... | 1,500 | 1,200 | 1,000 | 850 | 700 | 600 | 500 | 400 |

*Vascular Dilatation from Excitation of Posterior Spinal Nerve Roots.*

Mr. W. M. Bayliss (London) gave a demonstration of the existence of nerve fibres in the posterior spinal nerve roots whose excitation after severance from the spinal cord caused dilatation of the vessels in the hind limb of the same side. Such fibres had previously been stated to exist by Stricker, Morat, and others. Bayliss discovered them in roots of the fifth, sixth, seventh lumbar, and first sacral nerves, and found that while they responded to electrical, mechanical, chemical, and thermal stimuli, mechanical excitation was the most effective. Corresponding vasodilators for the fore limb were found in the posterior roots of the sixth, seventh, eighth cervical, and first thoracic nerves. Their irritability was not abolished by morphine or other anæsthetic, nor by curare, and age of itself had no influence. The fibres passed directly into the lumbo-sacral plexus without entering the abdominal sympathetic. They did not degenerate when cut between the spinal cord and the root ganglion, and hence were not efferent from the cord. Degeneration, however, occurred when the ganglia were extirpated, and therefore their trophic centres lay in the ganglia. In this respect they were identical with ordinary sensory (afferent) root fibres. The name "antidromic" was suggested for the process by which nerve fibres conveyed impulses contrary to the direction assumed by the Magendie law. All the vasodilator fibres to the hind limb degenerated when the root ganglia were removed, and none could be found in the sympathetic chain or anterior nerve root. It followed that all reflex vasodilatation in these limbs must be "antidromic." Further, excitation of the cervical end of the divided vagus or of the depressor nerve in the rabbit produced considerable dilatation of the vessels in the hind limb after extirpation of the abdominal sympathetic chains on both sides, together with excision of nearly all of the viscera. This must have been caused by reflex excitation of vasodilator fibres, and not by inhibition of vasoconstrictors, since these were removed. No similar effects had been obtained in the case of the kidney or intestine. The results of the investigation as a whole must necessitate considerable alterations in the views hitherto held by physiologists on this subject.

*The Origin of the Lymph in the Peripheral Lymphatic Circulation.*

Professor G. Moussu (Alfort) made a contribution to the much-vexed question of lymph formation. From observations on the peripheral lymphatic circulation in large animals during rest, muscular activity, physiological activity of all the tissues during secretion, under the influence of variations of blood pressure, both local (from vasodilatation and vasoconstriction) and general (from intravascular injections and blood-letting), likewise from the effects of the injection of toxins (hypertensive and hypotensive), and also from the effects of ergotine, he had come to the following conclusions:

1. That the lymph in the peripheral lymphatic districts was not a simple product of transudation from blood plasma under the influence of blood pressure.
2. That this transudation was at all times feeble.
3. That the lymph was above all a product of the elaboration of the tissues, and represented blood plasma robbed largely of its nutritive constituents.
4. That its formation was in direct correspondence with the vital activity of the tissues.
5. That the peripheral lymphatic apparatus was in a certain sense an excretory apparatus.

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A new organ, presented by Dr. Robert Charles Brown, ex-President of the Lancashire and Cheshire Branch of the British Medical Association, to the Victoria Royal Infirmary, Preston, was formally opened on October 26th. The beautiful operating theatre in this hospital is also the gift of Dr. Brown.

## CONTRACT MEDICAL PRACTICE.

### The Economics of Club Practice.

Sir,—I have read Dr. Larking's very able address to the Folkestone Society published in the British Medical Journal of November 2nd, and whilst agreeing fully with him on many points, I must join issue with him on some others. In the first place, in my humble opinion it is of the very utmost importance that a medical man should have the power to refuse his services at contract rates to those people whose condition in life is obviously one above the need for such concession. A long and extensive experience of club practice has convinced me that *per se* it is not remunerative, and nowadays, when women and children are included in clubs, it is carried on at a dead loss, and not only ceases to be an introduction to private practice, but is an actual bar to it. A mere increase in the rate of payment will not remedy this evil, though it may at first to a certain extent alleviate it; I say at first, because it is obvious that an increased payment will act as a salve to the conscience of the well-to-do club patient and induce others of his class to join the clubs.

Another matter on which I do not agree with Dr. Larking is his estimate of the amount of sick people the club surgeon will be called upon to treat. I should double it, speaking from my own experience, and that would give the surgeon (according to Dr. Larking's calculations) 1s. 3d. for a week's attendance and medicine (at 4s. per annum), and if that is not charity, the only other thing it can be is folly. I am here speaking from personal experience, as when I held club appointments I can honestly say that a sick club patient got all the attention his case merited, and what is more, a great deal the better of the bargain.

I will give the reasons for some of my conclusions. Some few years ago my practice held club appointments (which included women and children) to the gross amount of a trifle over £300 per annum: in consequence of a dispute, which is now historical, the whole of these clubs left the practice and joined a newly-formed medical institute. From a pecuniary point of view I have never regretted their secession, and were they to offer to come back to me on the old terms I should refuse them point blank, on the ground that I could not afford to take them. Were I to accept them it would mean engaging a qualified assistant, at at least £200 per annum, as things now stand, an extra horse at at least £50 per annum, and surgery expenses, say, at a moderate estimate, £25, leaving me a net profit of £25 apparently, and only apparently, because this would speedily become a *minus* quantity, owing to private patients promptly joining the clubs, which, in the absence of a wage limit, one would be powerless to prevent. Add to this the annoyances inseparable from contract practice, the largely-increased work, the filling up of one's waiting-room with individuals estimable perhaps, but certainly unsavoury, who drive away the home private patients (a very remunerative part of general practice), and the more or less frequent changes of assistants. I think that, taking all these things into consideration from the economic point of view, I have made it clear that I should be justified in refusing to place myself under the old bondage.

That the introduction of wives and families into clubs is simply ruinous to general practice, I think the following experience will prove, especially when such an introduction really robs club practice of whatever profit there was attached to it, because there is no longer the hope of increasing one's private practice through its medium. Some years back the Foresters in this town forced upon their club doctors a Medical Aid Association, which provided medical attendance for the wives and families of the Foresters. The result to my own practice was that this Association swallowed up in its first year private patients of my own, whose account would have totalled £70 (safe money); it paid me £30 for looking after these patients, *plus* another hundred or so women and children, some of whom had been private paying patients of other medical men in the town; so that I lost at least £40 myself, probably robbed my medical friends of a fair sum, and had to do about three times as much work in order to obtain these benefits. Surely this fact speaks for itself as to the unprofitable nature of the introduction of women and children. As each year matters grew worse in this respect, I never had the heart to make any further discouraging revelations as to the actual amount of yearly loss my practice incurred on this account.

Whatever the Friendly Societies may aver to the contrary club practice as at present carried out is charity, and in the absence of a wage limit it is absolutely suicidal folly on the part of the profession to accept it at all. If the general practitioner would only study the economics of the question, we should very soon have such a combination of the profession as would make the Friendly Societies pause in the aggressive attitude they have seen fit of late years to adopt towards the medical profession. These societies it is well known are governed by men of high intellect and good standing who are sufficiently alive to the fact that the very essence of the success of their associations depends almost entirely upon their being able to command the services of educated, conscientious medical men, and this they are apparently able to obtain at the present day at a rate of remuneration which is inadequate and therefore unfair.

The profession has only itself to thank for this state of affairs, for I am convinced that were it to set a proper value on its own services, the Friendly Societies would speedily see the wisdom of paying a fair price and buying in the best market. As matters now stand they are our masters and know it. What is more, in a few years time they will be powerful enough to make such terms as will render general practice unbearable. We have only to look at the state of affairs in Leicester and other towns to see what will come to pass throughout the country unless we make a combined stand against being compelled to attend well-to-do people at forced club rates. The National Deposit Friendly Society, mentioned by Dr. Larking, in the absence of a wage limit, is a real source of danger to the independence of the general practitioner; with a wage limit it would be in every sense of the word an acceptable and profitable society to the profession.—I am, etc.,

Great Yarmouth, Nov. 3rd. Alban H. Moxon.

### Club Appointments and the Value of a Practice.

Sir,—There is one point in reference to the subject of contract medical practice that I have not yet seen mentioned. I suppose that everyone in general practice wishes to make that practice as valuable an asset as possible in case of death or retirement. Now, at the present time, appointments to clubs or Medical Aid Societies undoubtedly enhance the value of practices on the market. The intending purchaser thinks he will have "something to go on with any way." In this particular the men entering on practice hold much of the future of the profession in their hands. Let them refuse to treat for the "unopposed country practice of £800 a year, including appointments of about £250;" and one of the incentives to the "working up" of the private dispensary club will be no more.

In looking over the advertisements of "practices wanted," one seldom sees the words "no clubs." Do all the quondam medical students desire "to scorn delights and live laborious days?"—I am, etc.,

Great Bardfield, Nov. 12th. Edmund E. Goodbody, M.D.

### How to deal with the Difficulties of Contract Medical Practice.

Dr. B. J. E. Wright (Overton, Ellesmere) writes: I am glad that "Optimist" has pointed out the one fault in Mr. Larking's valuable paper on Contract Practice, which appeared in the British Medical Journal of November 2nd. I agree with him that we must look to the "seniors" to set an example, by giving up all clubs under, say, 6s. a head per annum. If the seniors would but unite and refuse to continue their clubs at a lower rate after a certain date agreed on, the club members would then realise that the profession is in earnest, and the battle would be won.

Why cannot this be done? The question must be faced; the sooner the better.

### Contract Practice in Sydney, N.S.W.

N.S.W. writes: In the British Medical Journal of September 7th, Dr. Porter, of New Zealand, speaks of the Manchester Unity of Oddfellows, Sydney as paying 1s. per week per family. As a matter of fact the medical men here are only demanding 10s. per annum, which works out at less than 1d. a week. The Manchester Unity at present are only paying at the rate of ½d. per week per family.

# THE GENERAL MEDICAL COUNCIL ELECTION.

## THE APPROACHING ELECTION OF DIRECT REPRESENTATIVES.

### SCOTLAND.

#### Dr. Bruce's Address.

*To the Registered Medical Practitioners of Scotland.*

Ladies and Gentlemen,—Allow me to thank you most gratefully for your steady support, which has, during the last fifteen years, enabled me, however unworthy, to act as your representative on the General Medical Council. May I respectfully ask for your votes for the next quinquennium?

As long as it is customary for the majority of the representatives of the various licensing bodies, as well as those appointed by the Crown, to retain their seats for practically an indefinite term of years, I venture to say that comparative security of tenure for the direct representatives will add to their dignity and influence in the deliberations of the Council. I may be allowed to add that the provinces are surely entitled to have *one* representative, as against six from Edinburgh and Glasgow, there being already three from each of these cities, with seats on the Council.

As far as Scotland is concerned, there has been only a single question raised of serious importance to the profession. The right of medical practitioners to dispense drugs seemed, from the action of the General Medical Council, to be in danger; and the Council's decision in a particular case caused much feeling in and about Glasgow. But there never was any intention on the part of the Council to interfere with any of the lawful privileges of medical men.

Since the error in the form of indictment was pointed out, the Council has taken care to avoid a similar mistake. As regards prosecutions at the instance of the Pharmaceutical Society, the Council, while feeling bound to intervene in the interests of the public at large, and for the sake of the good name of the profession, is not, I am sure, in the least degree disposed to become the catspaw of the chemists and druggists for their advantage, and to the detriment of members of our own body.

At the same time I am very sorry that the Council, guided by legal advice, refused to hear the representative deputation which went up to London in June last to voice the views of their fellow practitioners in Glasgow. I felt, at the time, that I could only enter my protest against such action. If the Council is to be congratulated on the strictly legal lines on which it has hitherto conducted its penal business, it should also bear in mind that it is merely a domestic tribunal. While steadily guarding itself when proceeding to inflict sentences entailing loss of civil rights to accused persons, the Council, in my opinion, ought, at the same time, to take cognisance of the purely professional aspects of the questions submitted to it, and be ready to listen to every form of deliberate and respectful professional opinion.

With considerable reluctance I have come to the conclusion that there is great need for regulating the duties and improving the education and training of midwives, while retaining their services as necessary in connection with puerperal attendance on the poorer classes.

The subject of Medical Aid Associations has absorbed much time and attention from the Council. Contract practice in this form was complained of as unprofessional, and it was thought incumbent on the Council to take the matter up. Much evidence was laid before a special Committee, of which I was a member, in support of the averments against those bodies and their management. On the other hand, strenuous attempts were made on the opposite side to rebut these charges. The Committee came to the conclusion that much harm had resulted in many cases, both to the patients and their medical attendants, from such a system of "sweating." They were, however, at the same time, forced to the conclusion that the Council could only deal with the mischief complained of by issuing a general warning to all concerned, more especially against touting and advertising in connection with these institutions. At a later stage several meetings took place between the Committee and representatives of the great Friendly Societies, and it was unanimously resolved to form a Conciliation Board which would deal with all questions in dispute between clubs and their doctors. The Societies possess in their records sufficient data, both as to number of cases and periods of sickness, to be able to provide almost mathematically the amount of money necessary to set aside for paying fair fees for medical attendance on their members, if such should be required. The charge would best be framed in the usual way, at so much per visit, or advice at the doctor's rooms. But if it be found to be simpler in working to fix a lump sum per case of illness, much even then would be done towards placing contract practice on a sounder basis. While I hold strongly that such arrangements are fundamentally wrong, knowledge, skill, and attention being in their nature imponderable and not proper subjects for being bought and sold, yet it would be foolish for club doctors not to accept half a loaf rather than no bread. Club practice, in England at least, has acquired too much of a hold to be swept away by outside interference. I hope, by means of the Conciliation Board referred to, better terms will be secured by our brother practitioners.

There is clamant need for amendment of the Medical Acts, more particularly by adding to the number of direct representatives. Scotland should have at least two such, one for the Eastern and another for the Western Division of this part of the kingdom.

With regard to medical education, I am decidedly of opinion that the present curriculum of five years should remain intact, in reality if not in name. By relegating the subjects of physics, chemistry, and biology (including botany), to a course of scientific study and examination in extension of the present medical preliminary examination, a complete term of four years for purely medical and surgical work would thus be ensured.

The last of the four years should be devoted entirely to bedside study and practice, either in hospitals or in connection with public dispensaries. On the other hand, the number of systematic lectures ought to be distinctly diminished, whilst the worrying tests by formal examinations might, in the real interests of the student's education, be considerably curtailed.

I am, Gentlemen,
Your faithful and obedient servant,
William Bruce, M.D., L.R.C.S.E.,
LL.D. (Hon. Aber. Univ.)

Dingwall, Nov. 8th.

#### Letter.

*Highland Medical Officers.*

Sir,—Of the three Scottish candidates for the position of direct representative to the General Medical Council, Dr. Norman Walker alone (in his address) expresses his views regarding the anomalous position of the Scottish parochial medical officers, he being in favour of a more secure tenure of office for these medical officers.

I trust that Dr. Bruce and Dr. Robertson will also give us their views regarding the grievances of the Scottish parochial medical officers, and especially of those in the remote Highlands and islands.

Other things being equal, I should advise all those medical officers in the remote parishes, who signed the memorial recently presented to Parliament, to vote for the candidate who is most in favour of the reforms we desire.—I am, etc.,

James F. D. Macara, M.B., C.M.,
Medical Officer of Durness, Sutherlandshire, N.B.

November 18th.

### ENGLAND.

#### Candidature of Mr. George Brown and Mr. George Jackson.

*Manchester and District Committee.*

We are informed that at a meeting of practitioners held on Friday, November 8th, at the Deansgate Hotel, Dr. John Watson, of Ardwick, in the chair, it was resolved to form a committee to take steps to secure the election of Mr. George Brown and Mr. George Jackson as direct representatives of the profession on the General Council of Medical Education and Registration.

We are further informed that already 50 representative general practitioners have joined the committee, and that large numbers of supporters have pledged themselves to sud-

port Messrs. Brown and Jackson. Dr. James Brassey Brierley is the Chairman, Dr. G. H. Broadbent Treasurer, and Dr. J. Percival Brown, 64, Deansgate Arcade, Manchester, Honorary Secretary.

We are requested to state that through the courtesy of Dr. Neech, M.O.H. Halifax, there will be a meeting in that town on Tuesday, November 26th, at 4.30 P.M., of practitioners in support of the candidature of Mr. George Brown and Mr. George Jackson. Dr. Colin Campbell, Dr. G. H. Broadbent, and Dr. Brassey Brierley have been requested to represent the Manchester and District Committee at the meeting.

### THE MANCHESTER MEDICAL GUILD.

Dr. G. H. BROADBENT (Manchester) informs us that the following circular was adopted at the quarterly meeting of the Medical Guild, Manchester, on November 13th, but adds that as a member of the Guild Council he opposed its issue, and that no notice was on the agenda that such a resolution would be proposed. The notice on the agenda was: "4. The forthcoming G.M.C. election (Dr. Wolstenholme)":

Copy. *The Medical Guild.*

Manchester, November 18th, 1901.

Dear Sir,—At a meeting of the Medical Guild held on Wednesday, November 13th, 1901, a resolution was passed urging members of the Guild to vote at the forthcoming election of representatives on the General Medical Council, and advising them to plump for the local candidate, Dr. Woodcock, who is pledged to the advocacy and support of the registration of midwifery nurses, and the provision by the Government for the payment of the fees for the nurse and medical attendant selected by the patient as outlined in the Guild scheme.—Yours faithfully,

St. Brelades, Irlams-o'th'-Height. DAVID OWEN, Honorary Secretary.

### DR. WOODCOCK'S CANDIDATURE.

THE following are some of those who have nominated Dr. Woodcock, of Manchester, for election as a direct representative. The full list, which is too long for publication, includes many others residing in various parts of the provinces:

Dr. G. B. Ferguson, Cheltenham.
Mr. Whitehead, Manchester.
Dr. Ellis'on, Ipswich.
Dr. Barnes, Carlisle.
Dr. Barendt, Birkenhead.
Dr. James Barr, Liverpool.
Dr. M. Beverley, Norwich.
Mr. Bates, Worcester.
Dr. Brown, Preston.
Mr. Judge Baldwin, Rotherham.
Mr. Berry, Wigan.
Dr. Beattie, Newcastle.
Dr. Bradshaw, Liverpool.
Dr. Wm. Carter, Liverpool.
Dr. Jas. Corns, Oldham.
Dr. McF. Campbell, Liverpool.
Dr. Dreschfeld, Manchester.
Dr. Dyson, Sheffield.
Dr. Drummond, Sunderland.
Dr. Davies, Liverpool.
Dr. Edwards, Cardiff.
Dr. Flitcroft, Bolton.
Dr. Glascott, Manchester.
Dr. Gordon, Exeter.
Dr. Grunbaum, Liverpool.
Dr. T. Harris, Manchester.
Dr. Arthur Helme, Manchester
Dr. Heslop, Manchester.
Mr. H. Jefferies, Bolton.
Dr. Jepson, Durham.
Mr. Evan Jones, Aberdare.
Dr. Little, Manchester.
Dr. Macfie, Bolton.
Dr. Mallett, Bolton.
Mr. R. Morison, Newcastle.
Dr. Mothersole, Bolton.
Dr. Murphy, Sunderland.
Dr. Oliver, Newcastle.
Mr. Edmund Owen, London.
Dr. Patrick, Bolton.
Dr. Nathan Raw, Liverpool.
Dr. E. S. Reynolds, Manchester.
Dr. Russell, Manchester.
Dr. Ritchie, Manchester.
Mr. Southam, Manchester.
Dr. Steell, Manchester.
Mr. Taylor, Chester.
Mr. Thorburn, Manchester.
Mr. Jenner Verrall, Brighton.
Mr. J. S. Whitaker, Great Yarmouth.
Mr. G. A. Wright, Manchester.

### LETTERS.

*The Gallery of the Council Chamber.*

SIR,—Dr. McCook Weir's memory has failed him. I did not say that I had seen any of "our direct representatives jeered at and shouted down from the gallery of the Council chamber." I hope very much that Dr. McCook Weir will visit that gallery, and then he will recognise with me the advisability of returning Dr. Woodcock and Mr. Jackson to the Council.

I am, etc.

Cavendish Square, W., Nov. 16th. VICTOR HORSLEY.

*Midwifery Examinations.*

SIR,—In your issue of Saturday last Dr. Colin Campbell expresses a wish to know whether the several candidates for election as direct representatives will do their best to induce the General Medical Council to put a stop to the issue of "certificates of competency in midwifery" by the Obstetrical Society of London and its many imitators. I have repeatedly expressed my desire to have a stop put to the granting of such certificates by unauthorised persons, and if Dr. Campbell will refer to your report of the proceedings of the General Medical Council, held on November 29th, 1899, he will see that I proposed a motion which was seconded by Mr. Horsley to authorise the Registrar to give public notice that the Council would regard the granting of such certificates by any society or person, or body of persons, unless legally authorised to hold examinations in midwifery, as infamous conduct in a professional respect. The only members who voted for the motion were Sir William Thomson, Sir Christopher Nixon, Dr. Atthill, Dr. Little, and Mr. Tichborne, all Irish members, and three English members, the late Dr. Leech, Mr. Horsley, and myself. Dr. Glover voted against the motion, and Dr. Bruce, the direct representative for Scotland, abstained from voting.—I am, etc.,

Gibson Square, N., Nov. 20th. GEORGE BROWN.

*The Midwives Question.*

SIR,—I would impress upon each voter the necessity of recording his vote either for or against the so-called registration of midwives. In a few weeks some 28,000 practitioners will be given the power, without any expense or travel to record their opinion. I notice that some of the candidates—such as Dr. S. Woodcock—suggest that voters take a middle course, that is that Parliament feels some sort of legislation must take place, and that therefore we should support a scheme of registration, with safeguards to the public and profession. Such a course would be very wrong. I would suggest that voters vote for those candidates who agree to the following points:

1. That present midwives be not interfered with.
2. That no more midwives be created.
3. That the General Medical Council rule it to be infamous conduct in a professional respect whenever any practitioners—other than those empowered by the Medical Act, 1886—grant any document which professes to empower its holder to practise any part or branch of medicine, or surgery, or midwifery.
4. That Parliament be asked to make it illegal for any persons, medical or lay, to grant any document which professes to empower any person to practise any part or branch of medicine, or surgery, or midwifery (the above proviso *re* Medical Act, 1886, being recognised).
5. That each Board of Guardians be requested to put their Order of 1847, relating to Poor-law confinement fees, into operation; that the minimum fee be 21s. 6d., and that any poor woman with a relief note be empowered to engage any local practitioner to conduct her confinement.
6. That each Board of Guardians be requested to put the General Order of the Local Government Board, January, 1892, into operation. This Order empowers guardians to appoint and pay district obstetric nurses to nurse outdoor Poor-law confinement cases.
7. That all medical, surgical, and midwifery nurses be registered, and that these possess power to act only as nurses.

These seven points meet all issues raised by the various proposals made to empower midwives to conduct (even) normal labours upon their sole and undivided responsibility. If voters agree that such an order of midwifery practitioners is necessary, then I take it they will vote for Dr. Woodcock. If they agree to the above seven issues, and especially to 1, 2, 3, and 4, then they will vote for Drs. Jackson and Brown. We have no just right in this election to consider the individuality of candidates. We should vote for candidates who represent our wishes. This is the view the Government is likely to take when our votes are recorded for or against.—I am, etc.,

Liverpool, Nov. 17th. ROBERT R. RENTOUL.

*"Doctors and Midwives."*

SIR,—I have sent the following letter to each of the candidates for the vacant seats on the General Medical Council, and also to Mr. Victor Horsley. The answers are given below. May I ask you to insert them in the next issue of the BRITISH MEDICAL JOURNAL?—I am, etc.,

Fellows Road, N.W., Nov. 19th. F. R. HUMPHREYS.

P.S. Up to the time of writing no reply had been received from Mr. Victor Horsley.

*Re the Election to the General Medical Council.*

Dear Sir,—It has been suggested in the correspondence columns of the BRITISH MEDICAL JOURNAL that, with a view to settling quickly the midwives question, all the medical practitioners of Great Britain should decline to go when summoned to obstetric cases of difficulty or danger when it is known that a midwife is or has been in attendance. This suggestion is already being acted upon.

May I ask whether, in the event of your candidature proving successful you will, in the interests of humanity and of our common profession, dis-

countenance any such action on the part of medical men, whether concerted or otherwise?

As I propose sending your reply to the medical papers, may I trouble you to put it in as concise a form as possible?

Yours very faithfully,
F. R. Humphreys.

P.S.—As the time is very short may I suggest a telegram in reply.
November 16th, 1901.

Dr. Sam. Woodcock telegraphed: "Strongly discountenance such action. Will write." His letter follows: "When speaking at Stratford on the 8th inst., I expressed disapproval of concerted action on the part of medical men such as that to which you allude in your letter. I said that this attitude was not high-minded nor patriotic, neither calculated to gain the ear of Parliament nor the sympathy of the public, but was rather likely to promote legislation that would be unwelcome to the profession."

Dr. Hayward telegraphed: "Heartily condemn such proceedings as unreasoning cruelty. Writing further." In his letter he said: "I cannot imagine any member of an honoured profession wilfully endangering the life of any woman in labour by refusing to assist her in any difficult or dangerous situation simply because a midwife has been in attendance. This shows a want of common sense, in my opinion, as, in blind revenge on midwives in general, the men so refusing endanger the lives of poor women; and I hold that if any man refuses to attend and there is no time or opportunity to get other help, the man is really culpable for any danger which comes to the patient, and if fatal results occur, is morally guilty of manslaughter. While doing all in my power to place obstetric nurses in their proper position—under the direct supervision of some qualified and registered medical man in all cases—I should most heartily condemn anything like systematic cruelty to poor women in danger, as even if its results were what is evidently desired, I consider it would be an unwarrantable cruelty."

Mr. George Brown replies as follows: "I am much surprised that you should deem it necessary to ask such a question as, in your letter of November 16th, you have made yourself the mouthpiece. It has been my invariable custom, since I have had the honour of belonging to the medical profession, if well enough, to go to all cases of midwifery emergency, regardless of the question of payment or who may have been in attendance. After well nigh thirty years of practice I certainly should not say or do anything contrary to my established rule, whether successful or unsuccessful at the forthcoming election." Fearing that Mr. Brown had misread my letter, I wired as follows: "Please reply to my only question, your attitude if re-elected, towards medical practitioners acting as mentioned in my letter." In reply I received a note as follows: "I wrote and posted reply to you about two o'clock this morning. I am overwhelmed with work and find it very difficult to reply to all my correspondents."

Mr. George Jackson answers as follows: "In reply to yours received to day, I may say that I do not approve of the method suggested, and could not countenance it in any way. At the same time, I think a medical man is quite justified in demanding that the midwife should retire from the case before he undertook it, especially if it was known that she habitually exceeded her duties."

*** We have received the following further note from Mr. G. Brown: I feel strongly that such a question should not have been asked of the candidates, and therefore I have not sent Mr. Humphreys a categorical reply. I cannot believe that any considerable section of my professional brethren would be so wanting in common humanity as to act in the way suggested. Some months ago I was a candidate for a seat as a borough councillor, and was inundated with letters from cranks and others asking if I would support this or discountenance that. It is pleasing to state that no one asked whether, if elected, I would discountenance arson, burglary, or any more heinous crime.

*Provincial Candidates.*

Sir,—The letter, p. 1489, of "F.R.C.S." brings very forcibly to one's mind the position of Mr. Horsley, as he is one of the foremost in advocating that provincial representatives be returned at this election. How was it four years ago he, a metropolitan, opposed a "provincial" candidate, Sir Walter Foster, for the vacancy caused by the resignation of a provincial?

When speaking at Bedford in support of Drs. Glover, Drage, and Woodcock, he "dwelt on the advisability of direct representatives being general practitioners;"[1] and then within a year he came forward himself, who is not a "general practitioner."

His prominent advocacy of provincial candidates at this election causes one to conclude that he intends remaining as the London representative, so the obvious inference is that his wish coincides with that of "F.R.C.S."—namely, to oust Mr. George Brown, as expressed so elegantly in the former's letter as "a gracious act!"

Men, however eminent, will use their logic for their own objects, forgetting we have memories, and records of their past sayings and doings. One cannot help thinking of Mr. Edmund Owen's comparison at Cheltenham of Messrs. Horsley and Whitaker *re* martyrdom.

Would it not have been more disinterested and consistent for Mr. Horsley to have resigned now, as he promised, and allowed Messrs. Brown, Jackson, and Woodcock to be elected, and so save "the cost of an election in 1902?"

It was Mr. Horsley himself who increased the number of representatives residing in London from two to three!—I am, etc.,

Manchester, Nov. 15th. G. H. Broadbent.

*** Has our correspondent forgotten that the lawyers held that Mr. Horsley would have been ineligible for re-election had he resigned?

## THE PREVENTION OF TUBERCULOSIS.

Worcestershire.

As a result of the County Conference on Tuberculosis it has been decided to establish a sanatorium for the treatment of consumptives in Worcester. Lord Cobham has offered a suitable site at Romsley, near Clent, and local committees have been appointed to collect subscriptions. A donation of £1,000 for the building fund has been received from Dr. Corbett on behalf of the estate of his brother, the late Mr. John Corbett, of Impney, who had taken great interest in the promotion of the sanatorium.

Bath.

At a recent meeting of the Bath Board of Guardians it was decided to arrange for the treatment of the Bath pauper consumptives locally, and not to join with Bristol in establishing a sanatorium for the reception and treatment of cases of phthisis belonging to the two Boards.

The Metropolitan Hospital Saturday Fund.

Sir J. Crichton-Browne, speaking at the annual meeting of the Hospital Saturday Fund at the Mansion House, advocated the claims of the National Association for the Prevention of Tuberculosis to the support of all who were interested in hospitals. Any success which might attend the work of that Association tended to relieve the pressure on the hospitals, both in the wards and in the out-patient department. He asked that the Hospital Saturday Fund should aid the National Association in respect of the sanatoria for consumptives which were being established as the result of its efforts.

The following resolution, proposed by Mr. R. B. D. Acland, was carried unanimously:

That this meeting of representatives of the Hospital Saturday Fund cordially approves the efforts that are being made by the National Association for the Prevention of Tuberculosis, and offers its hearty co-operation in disseminating among the workshops and places of business in London any information as to the means that may be adopted to prevent the spread of this terrible disease.

[1] British Medical Journal, November 28th, 1896.

A window in memory of the late Dr. William Marsden, founder of the Cancer Hospital, Brompton, was unveiled in the chapel of the hospital on November 16th by the Bishop of London, who in an address said that for a thousand years the hospital governor of every hospital in Europe was the bishop of the diocese, and although it was impossible for that to be the case at the present date, he liked to think that there was a special connection between every hospital and the Church.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## ARMY MEDICAL SERVICE.

### THE ADVISORY BOARD.

THE Secretary of State for War has selected the following as the Chairman, Vice-Chairman, and members of the Advisory Board for the supervision of Army Medical Services:

*Chairman.*—The Director-General Army Medical Service, Surgeon-General William Taylor, C.B., A.M.S., M.D., C.M.

*Vice-Chairman.*—The Deputy Director-General, Surgeon-General (temporary) Alfred Henry Keogh, C.B., A.M.S., M.D.

*Military Members.*—Officer R.A.M.C. (Expert in Sanitation): Major Wm. Grant Macpherson, R.A.M.C., M.A., M.B., C.M., D.P.H.Camb. Officer R.A.M.C. (Expert in Tropical Diseases): Lieutenant-Colonel David Bruce, R.A.M.C., M.D., C.M.

*Civilian Members.*—Charles Bent Ball (Ireland), M.D., F.R.C.S.I. and Eng.: Alfred Downing Fripp, Esq., C.B., C.V.O., F.R.C.S., etc.; James Galloway (Scotland), M.A., M.D., F.R.C.S., F.R.C.P.; Edwin Cooper Perry, M.A., M.D., F.R.C.P.; Sir Frederick Treves, C.B., K.C.V.O., F.R.C.S.

*Representative of the War Office.*—Colonel W. A. Dunne, C.B., Assistant-Quartermaster-General.

*Representative of the India Office.*—To be nominated hereafter.

*The Matron-in-Chief, Q.A.I.M.N.S.*—To be nominated hereafter.

NOTE.—The permanent constitution of the Board will differ from the above in having only four civil members instead of five. The larger number is required at the outset in consequence of the heavy initial work necessitating a larger number of meetings than will be necessary later.

### THE REPORT OF THE WAR OFFICE COMMITTEE.

WE are so inundated with letters—largely from India—on the Report of the Committee of "Experts" that it is difficult to deal with them.

While desiring the fullest criticism—for or against—the proposals of the Committee, which we understand is also desired by the War Office itself, many of the letters we receive are of such inordinate length that we can only give a summary of them.

The tenour of those letters shows that several of the proposals of the Committee have been received with general feelings of regret—almost bordering on dismay.

For the sincere desire of the War Office to rehabilitate the medical service having been recognised, it was hoped that at last some acceptable and practical scheme would be evolved: these hopes have evidently been disappointed and at least deferred.

Delay is implored in translating the recommendations of the Committee into a Warrant, until such time as the voice of the profession at large, and of the medical officers in particular can be heard.

The examination proposals it is believed will repel rather than attract candidates, and until these are secured in sufficient numbers and quality, there can be no rehabilitation of the service.

The apparent interference with pensions after twenty years service is considered a fatal mistake. We cannot believe that it is seriously intended.

The following are extracted from some of the letters:—

HOPE DEFERRED writes: In paragraph 45 of the Report the privilege of retirement after twenty years service on £1 a day is abrogated, and a senior officer of eighteen years service is confronted with an examination on ten subjects, some of which he had already passed when examined for major, others are irrelevant to his prospective administrative duties, and some even are yet without a textbook; should he fail to pass, he is compulsorily retired on a gratuity of £2,500. Think of all that coming on you at from 44 to 50 years of age, ye who contemplate entering the R.A.M.C.! Think, when beyond middle life, with a family to provide for, staking your future on an unnecessary and unreasonable examination! For you can only stay on for pension by "special permission" (why special?), and that in accordance with Art. 527 of the Pay Warrant, 1899, instead of the larger pension now given to the R.A.M.C. according to Art. 557. Feeling the insecurity of health through much foreign service, medical officers regard the optional privilege of retirement on pension of £1 a day after twenty years service in the light of an insurance. But instead a paltry gratuity is proposed! All know that promotion examinations can be made a very sinister lever; and, feeling this, the Camperdown Commission abolished such examinations for senior medical officers; now it is proposed to revive them in an aggravated form. The prospect of such a set of examinations every few years would be appalling and a torture; all that is really needed is examination for major. The Promotion Board would have ample powers for the good of the service and the safety of individuals. Of course the increase of pay and granting of special study leave would be steps in the right direction.

ANOTHER INDIAN CORRESPONDENT expresses the hope that the suggestions of the Committee will not become law until officers in India have time to express their views. The slight increase of pay will not compensate for the loss of pension under Paragraph 43. The report has caused consternation in India.

X. Y. writes: The long vista of examinations is not likely to encourage young medical men to enter what may be called "The Medical Mandarin Corps." The "accelerated promotion" idea seems borrowed from the system at the Royal Naval College, which, based on simultaneous instruction at a given age, is totally different from anything connected with the R.A.M.C. Has the Indian Government agreed to increase the pay?

M.B. writes: Another opportunity of popularising the medical service seems to have been lost. The scheme is not that of men really in touch with the service, although it no doubt aims at rendering it efficient. Perpetual examinations will not recruit the service. The chance of being turned adrift after eighteen years service will itself deter men from choosing the army as a career. The paragraph on Indian pay is very ambiguous.

CAPTAIN R.A.M.C. writes: The new scheme as it stands will prove unworkable. Although no doubt well meant, it is the product of persons ignorant of the inner life and working of the service, and of men who will personally be unaffected by the proposals and penalties. I should never have been in the service but for the prospect of retirement at a minimum pension of £1 a day after twenty years good service. Could those already serving be forced to accept the new conditions of service?

TWENTY YEARS' SERVICE writes: The good intentions of the Committee are not questioned, but there is hopeless divergence from the feelings and desires of the R.A.M.C. Promotion is to depend upon a series of examinations until the officer is greyheaded: where is the genius who can obtain 85 per cent. of marks in an intricate examination? The increase of pay will partly be illusory unless the Indian Government, under whom a large part of the service is spent, consents to a corresponding increase. Those who accept service under the proposed conditions may at the caprice of a War Minister end their days in ill-health and penury.

NO RETROGRESSION writes: A severe blow to the unity and *esprit* of the corps will be dealt by attaching lieutenants to units, and by their future career depending on the confidential reports of the commanding officers of the units, to whom they will naturally look more than to their own chiefs.

ARISTIDES writes: Increase of pay is proposed for all ranks except that of colonel, who would only receive £23 more than a senior lieutenant-colonel in charge of a hospital of 200 beds—thus, colonel, yearly, £963; lieutenant colonel, £804, *plus* £137 charge pay.

JUSTITIA writes: Instead of the Report being a "Magna Charta," as foreshadowed by Dr. Thompson, M.P., it removes or destroys some of the most cherished privileges. At eighteen years service pension may be abrogated and compulsory retirement on gratuity substituted. Such an event would virtually be discharge with ignominy, or at all events with an attached stigma which would form a strange prelude to private practice, to which the officer would be driven. Why in these matters should the R.A.M.C. be differently treated from other branches of the service? Relative Indian pay must be clearly defined.

JUNIOR OFFICER writes: Most of the officer's life will be taken up with examinations, of which there are at least seven; he cannot "specialise" until he has served nine years: is that fair? Those who enter at 26 or 28 cannot pass the D.P.H. until 35 or 37. Will the Government pay the fees for special courses?

TIMEO DANAOS writes: The scheme should be called not the reconstruction but the abolition of the Army Medical Service, for such it would prove if made law. Did its authors seriously discuss its bearings? The practical abolition of the pension of £1 a day after twenty years' service would wholly upset this or other scheme. It is ridiculous to suppose that true efficiency can be secured by examinations. Is the Indian Medical Service inefficient without them? If the General Medical Council were to order a similar series of examinations for middle-aged civil practitioners, would they not be considered only fit for Colney Hatch?

TWENTY YEARS SERVICE writes: The recommendations are at once a surprise and a disappointment. Their authors cannot but know how sick students become of examinations during their curriculum, and how unlikely it is they will submit to a continuance of these for twenty years more! The proposed pay at home is fair and liberal for juniors; but how about Indian pay for them and all executive ranks? Will charge pay be given in India? We in India are most anxious to see the depleted ranks of the R.A.M.C. well filled, but have little hope that the proposed scheme will effect that.

ANOTHER CORRESPONDENT asks: Can those now serving be compelled to submit to the new conditions or be deprived of their existing rights?

TENEZ LE DROIT writes: Could or would the scheme be made retrospective, and my right to retire at twenty years abrogated? I consider I have already qualified for the rank of lieutenant-colonel in passing for major. Is another ordeal to be demanded of me? Is Art. 527 of the Pay Warrant wrongly quoted instead of 557? The former permits retirement on £120 a year after fifteen years service, which is perhaps not so good to a married man as £2,500 down. A Chinese system of examinations is proposed for the future R.A.M.C. The right to retire on £1 a day after twenty years service must be upheld.

REFORM pronounces the scheme unworkable and likely to defeat itself by scaring away candidates.

DELUDED writes: We in India were under the impression that the chief object of the Committee would be to make the R.A.M.C. popular, so as to attract the best class of young medical men to it; and Dr. Thompson, M.P., led us in your columns to believe that was about to be done. But the cat is out of the bag, and our hopes are cast to the ground. Life is to be made intolerable by examination. I know for a fact that excellent men have been deterred from entering owing to the examination for promotion to major, to which they objected. The right to retire after twenty years on pension is about the only thing which makes men face the risks and discomforts of the service. Are we now called upon to pass on ten different subjects, with the risk of having our pensions confiscated? We well remember how the promotion and examination for brigade-surgeons was used. My own son is being educated for the R.A.M.C., but I should be a poor father to allow him to run the risks in this scheme. By all means get rid of incompetent men at twenty years service, but not by defrauding them. How does the Indian Medical Service get on so well without any examination absurdities?

## SOUTH AFRICAN DESPATCHES.

THE *London Gazette* of November 14th contains despatches from Lord Kitchener detailing the operations of the troops under his command in South Africa, in continuation of his former report. The present despatches—dated Pretoria, August 8th and September 8th respectively—deal chiefly with the development of the blockhouse system, and with the operations of the various columns detached to pursue and stamp out the resistance of the Boers.

The first of the despatches ends with a list of officers and men brought to notice for special services during the period covered. From this we extract the following items as of special interest:

*Royal Army Medical Corps.*

Captain F. W. Begbie, at Maatjesspruit, on July 7th, 1901, behaved very gallantly in riding into Boer lines under continuous fire to attend to wounded.

Lieutenant W. H. Odlum, for attending wounded under heavy fire at Draaihoek, Orange River Colony, on July 8th, 1901.

Major H. A. Thompson, near Jamestown, Cape Colony, on June 4th, 1901, went a considerable distance under fire towards the enemy's position to attend to Lieutenant Hogg. Has been conspicuous for good service throughout.

Corporal W. W. Weeden, at Bersefontein, Orange River Colony, on July 24th, 1901, rode some distance under fire to assist a wounded man lying in the open, and stayed with him twenty minutes, being fired at all the time.

*Civil Surgeon.*

J. Prentice, for going under very heavy fire to a wounded man lying in the open, and for continuous good work.

## CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

| | | From. | To. |
|---|---|---|---|
| Lieutenant-Colonel | H. J. Barnes | South Africa | Colchester. |
| Major | W. A. Morris | Bengal | Aldershot. |
| ,, | A. E. Tate | Parkhurst | Bombay. |
| ,, | H. M. Sloggett | Bombay | Dover. |
| ,, | C. C. Reilly | South Africa | ,, |
| ,, | H. D. James | ,, | Dublin. |
| ,, | R. E. Molesworth | ,, | Bengal. |
| ,, | J. F. Burke | Lancaster | Madras. |
| ,, | B. L. Milis, M.D. | South Africa | Portsmouth. |
| ,, | J. B. W. Buchanan, M.B. | Shorncliffe | Bengal. |
| ,, | F. S. Le Quesne, V.C. | Bengal | Punjab. |
| Captain | H. D. Mason | Aldershot | Manchester. |
| ,, | G. B. Stanistreet, M.B. | Punjab | Parkhurst. |
| ,, | G. A. Moore, M.B. | Shorncliffe | South Africa. |
| ,, | H. W. H. O'Reilly, M.B. | Portsmouth | Cork. |
| ,, | N. Marder | South Africa | Dover. |
| ,, | C. H. Hopkins | Bengal | Devonport. |
| Lieutenant | E. B. Knox, M.B. | South Africa | Netley. |
| ,, | P. S. Lelean | ,, | Aldershot. |
| ,, | W. R. P. Goodwin | Curragh | Bombay. |
| ,, | A. W. Gibson | Aldershot | ,, |
| ,, | R. V. Cowey | ,, | Madras. |
| ,, | J. B. Clarke | York | Leeds. |
| ,, | P. G. Hyde | Aldershot | Dublin. |
| ,, | A. J. Williamson, M.B. | York | Newcastle. |
| ,, | C. G. Thomson | ,, | Aldershot. |
| Quartermaster | J. McClay | Netley | Hong Kong. |
| ,, | R. Scott | Aldershot | Netley. |

Lieutenant-Colonels W. Finlay and T. O'Reilly, Reserve and retired pay, have been struck off the establishment; but they continue in medical charge of troops at Jersey and Guernsey respectively.

Lieutenant-Colonels J. S. MacAdam and J. Wilson, retired pay, have relinquished the medical charge of troops in the Southern District and at Aldershot respectively.

## ROYAL NAVY MEDICAL SERVICE.

FLEET SURGEON EDWARD FERGUSON has been placed on the retired list, November 11th. He was appointed Surgeon, September 30th, 1873; Staff Surgeon, September 30th, 1890; and Fleet Surgeon, March 30th, 1899. He was Surgeon of the *Thetis* during the Peruvian and Chilian war in 1879-83, and landed to do duty in the Peruvian Hospital at Lima. For his services he received a medal and the thanks of the Peruvian Government.

Surgeon JOHN E. H. PHILLIPS has been appointed to the Royal Naval Hospital at Chatham, December 3rd.

## ROYAL ARMY MEDICAL CORPS.

THE undermentioned officers have been discharged to duty from hospital in South Africa:—Lieutenant-Colonel C. W. THIELE, Captain B. FORDE, Civil Surgeon D. A. SINCLAIR.

The following are on passage home:—Captain R. S. H. FUHR; Civil Surgeons J. B. DAVEY, E. H. WORTH, J. F. LEES, A. ROBERTSON, W. M. MACKAY, C. V. B. STANLEY, W. POMEROY, J. E. SANDILANDS, C. W. HOWE, WELSFORD, SWANN, E. M. T. ROGERS, and M. F. ELLIS.

## THE VOLUNTEERS.

MR. JOHN M. CHAMBERS is appointed Surgeon-Lieutenant in the 1st Hampshire Artillery (Southern Division Royal Garrison Artillery), November 16th.

Surgeon-Captain E. O. CROFT, M.D., 1st Volunteer Battalion West Yorkshire Regiment, resigns his commission, November 16th.

The resignation of Lieutenant E. M. GRIFFITH, 3rd Volunteer Battalion South Wales Borderers, and his appointment as Surgeon-Lieutenant, announced in the *Gazette* of March 26th, is cancelled.

Surgeon-Captain R. BLAIR, M.D., 1st Volunteer Battalion Yorkshire Light Infantry, has resigned his commission, November 16th; he retains his rank and uniform.

The Volunteer Officers' Decoration has been conferred upon the following Officers: Surgeon-Captain R. L. BATTERBURY, M.D., 2nd Volunteer Battalion the Bedfordshire Regiment; Surgeon-Lieutenant-Colonel DAVID THOMSON, M.D., 3rd Volunteer Battalion the Bedfordshire Regiment; Surgeon-Lieutenant-Colonel THOMAS NEWBY, M.D., 1st Lincolnshire Volunteer Artillery (Western Division Royal Garrison Artillery), retired; Surgeon-Lieutenant-Colonel ALFRED CHAWNER, 2nd Volunteer Battalion the Derbyshire Regiment; Surgeon Lieutenant-Colonel E. J. LLOYD, M.D., 1st Cheshire and Carmarthenshire Volunteer Artillery; Surgeon-Lieutenant-Colonel R. A. S. DALY, 7th Lancashire (the Manchester) Volunteer Artillery; Honorary Assistant Surgeon JAMES WELSH, M.D., 1st Fifeshire Volunteer Artillery.

## VOLUNTEER MEDICAL STAFF CORPS.

MR. JAMES BRUCE, M.B., is appointed Surgeon-Lieutenant in the Glasgow Companies, November 16th.

## GOVERNMENT ALLOWANCE FOR ATTENDANCE BY CIVIL PRACTITIONER.

SURGEON-CAPTAIN only drew the allowance as a civilian practitioner attending a soldier who is not able to get attendance from the R.A.M.C. The allowance is thus paid to the civil practitioner who actually attends the sergeant-major and his family, and the sergeant-major seems quite within his right to employ a medical man in his immediate neighbourhood.

## CIVIL SURGEONS EMPLOYED WITH THE ARMY AT HOME.

CIVIL SURGEON writes: A unanimous petition has been sent in this day (November 20th) by all the civil surgeons on Home service for an increase of pay, and in order that our reasonable demands may be met it is absolutely incumbent on all civil surgeons to refuse to engage for a further period until we have had a reply.

# OBITUARY.

## EDWARD WILLIS WAY, M.B.EDIN. & ADELAIDE, M.R.C.S.ENG., L.R.C.P.LOND.,

Lecturer on Midwifery and the Diseases of Women and Children in the University of Adelaide.

WE deeply regret to have to record the tragically-sudden death of Dr. Edward Willis Way, of Adelaide, which occurred, while operating, on the morning of September 28th last. For some time he had been in failing health, owing to an affection of the heart, and the strain of a large consulting practice made it necessary for him to take several prolonged holidays, the last only a few months previously. He had made efforts to reduce the tax on his strength by withdrawing from social claims, but he had lived for a considerable time in the full knowledge that he might at any moment succumb to his malady.

He was born in 1846, at Exeter, and was the younger son of late Rev. James Way. While a mere child he was taken by his parents to Australia, and he received his schooling at St. Peter's College and elsewhere in Adelaide. When yet in his teens he returned to England and commenced the study of medicine at Guy's Hospital in 1865, and later studied in the University of Edinburgh, where he derived from Lord Lister those surgical principles which contributed so largely to his future success as a surgeon. He obtained in 1870 the qualifications of M.R.C.S Eng. and L.R.C.P Lond., and in 1871 the M.B degree of the University of Edinburgh. He subsequently held the posts of House-Surgeon at the Royal Edinburgh Infirmary, Demonstrator of Anatomy in the University, Resident Surgeon at the Cowgate Dispensary, and Ophthalmic Assistant at the Royal Infirmary. He was also Senior President of the Royal Medical Society of Edinburgh.

Before he was 30 years of age he returned to South Australia and quickly gained a large practice in Adelaide. He was appointed Medical Officer to the Stockade and later Health Officer to the city. He was a member of the Board of Management of the Adelaide Hospital for twenty years, and of the honorary staff for nearly as long. He was one of the founders of the Children's Hospital and for many years one of its honorary staff. He was also associated with the Home for Incurables, and the Convalescent Home. He was a member of the Council of the University of Adelaide, being elected in the first instance as the representative of the graduates, and for many years he had been its Lecturer on Obstetrics and the Diseases of Women and Children.

He leaves a widow and a family of two sons and four daughters. One of his sons, who went to South Africa as a member of the second South Australian Contingent, has since

received a commission in the Royal Artillery. His brother is the Right Honourable Sir Samuel Way, Chief Justice of South Australia.

Dr. Way was exceedingly popular, and the news of his sudden death has come as a painful shock to his hosts of friends and admirers, and while he was one of the foremost gynæcologists of Australia it has been said that the beatitude, "Blessed are the dead whom the poor and the afflicted mourn," applies in a very special way to him.

## JOHN PALMER WAY, M.R.C.S.Eng., L.S.A.Eng.,
Portsmouth.

By the death of Mr. J. P. Way, which took place at his residence, The Limes, North End, Portsmouth, on November 16th, Portsmouth loses one of its best-known practitioners. Born on November 5th, 1838, the son of a local solicitor, Mr. Way was first destined for the legal profession, but subsequently became a pupil of the late Mr. Piercy, a Portsmouth practitioner, under the old apprenticeship system, and during this time he acted as dispenser and junior house-surgeon to the Royal Portsmouth Hospital. Subsequently he entered as a pupil at St. Thomas's Hospital, from which he qualified L.S.A. and M.R.C.S., and in which he held the appointment of Resident Accoucheur. He soon afterwards entered the Royal Navy as Assistant Surgeon, in which capacity he served five years. Leaving the navy in 1867, he assisted his brother, Mr. F. W. Way, for a short time, who survives him; he then entered into practice at Mile End, Portsmouth, where by his kindness of heart and devotion to his patients he rapidly acquired a large practice. For some years he held the appointment of Surgeon to the Royal Portsmouth Hospital.

Mr. Way thoroughly recognised a brother practitioner's honour as his own, and was always ready to assist in absence or in cases of doubt and difficulty, cheerfully turning out of his bed at any hour to assist those who needed his help, which was ungrudging given without stint or hope of fee or reward. Mr. Way did an enormous obstetric practice, and many a poor woman has had cause to bless "little Dr. Way" for all his kindness and goodness; for he never refused to go to a midwifery case, or help any poor woman in the hour of her travail.

For some five years he had suffered from angina pectoris, which curtailed his labours considerably; but he still continued to see his patients, many of them gratuitously. Some two months ago he caught a cold; a severe attack of pneumonia supervened, and in spite of all the care bestowed upon him by his medical friends he quietly sank to rest, literally dying in harness.

Up to the last he retained his interest in his patients, who were cared for by his nephews Drs. Montague and Ford Way, who are in practice at Southsea.

## JOHN STOPFORD-TAYLOR, M.D. & C.M.Aberd., L.R.C.P.Edin., L.S.A.,
Late Medical Officer of Health for Liverpool.

We regret to have to record the death, in his 80th year, of Dr. John Stopford-Taylor, who was Medical Officer of Health for the City and Port of Liverpool for about sixteen years. He was born at Sheffield, where his father was a medical practitioner, went to the Grammar School in that town, and was a student of the medical school and the infirmary, proceeding afterwards to St. Bartholomew's. He obtained the Licence of the Apothecaries' Hall in 1844, and graduated M.D., King's College, Aberdeen, in 1853. He entered upon practice in Liverpool in 1846, and subsequently was appointed Honorary Medical Officer to St. Anne's Dispensary and the Eye and Ear Institution.

He took a great interest in municipal affairs, and in 1864 was elected one of the representatives of St. Anne's Ward on the Corporation, and was re-elected triennially until 1875, when he was made an Alderman. During this time he was in succession Deputy Chairman and Chairman of the Health Committee. In 1875 he resigned his seat on the Corporation, and was elected Assistant Medical Officer to the town at a salary of £800 per annum, and on the resignation of Dr. Trench, two years later, he was appointed Medical Officer to the town at a salary of £900 per annum, and Port Sanitary Authority at £100 per annum. In June, 1893, he relinquished his duties as Port Sanitary Authority, and at the end of the year he retired altogether from the service of the Corporation, being succeeded by Dr. Hope, the present medical officer of health, who had been deputy medical officer of health since 1884.

He was a Fellow of the Royal Geographical Society and of the Sanitary Institute. He was twice married, and leaves a widow, one son, and two daughters.

## JOHN FAURE-MILLER, M.D.,
Paris.

We regret to record the death of Dr. John Faure-Miller, which occurred somewhat suddenly in Paris on October 27th. Dr. Faure-Miller had been ailing during the summer, but returned to Paris, feeling much stronger after a long stay at Les Avants in Switzerland. He resumed his professional duties on October 14th, but three days later he had an attack of gout, which kept him to his room till congestion of the right lung supervened, and he sank rapidly, in spite of the assiduous care and attentions of his physician and of his only surviving son, Dr. Roland Faure-Miller.

The English colony and the profession in Paris thus lose a familiar figure and an old friend, who had ever taken a keen and kindly interest in their welfare during the thirty years he had practised in Paris. The English poor will feel his loss very deeply, as he had been for many years intimately connected with the British Charitable Fund, and for the last fifteen years had been one of the physicians on the staff of the Hertford British Hospital.

Dr. Faure-Miller was one of the founders of the Continental Anglo-American Medical Society; he took a great interest in the Society and at the time of his death was one of the members of the Executive Committee. He was well known also to many of the profession in England, being often present at the annual meetings of the British Medical Association. The last one he attended was in Edinburgh in 1898.

Dr. Faure-Miller was born on May 30th, 1838, at Port of Spain in the Island of Trinidad. He studied medicine in the University of Paris, being *interne* under Drs. Giraldès and Labbé. He took the degree of Doctor in Medicine in the year 1870, presenting a thesis on The Physiological Action and Therapeutic Uses of Chloral Hydrate. He received the ribbon of the Légion d'Honneur in 1874 for his services in conection with ambulances during the Franco-German War, being head of that service in Bordeaux. The French Government also conferred on him the decoration of Officier de l'Instruction Publique. In 1889 and in 1900 he served on the jury in connection with the hygiene section of the International Exhibitions. The funeral took place on Wednesday, October 30th at midday, at the Church of St. Philippe du Roule and was very largely attended.

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Dr. Charles Henry Brown, for many years managing editor of the *Journal of Nervous and Mental Diseases*, the official organ of the American Neurological Association, and the New York, Philadelphia, and Chicago Neurological Societies, died recently in New York. He was born in 1856, and graduated at New York University with the highest honours in 1879. Dr. Brown was connected with the New York Dispensary, the Post-Graduate, and the Presbyterian Hospitals and the outdoor work of Bellevue Hospital. He was a member of the New York Academy of Medicine, the County Medical Society, the American Neurological Society, and the New York Neurological Society.

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Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Enrique Castro, Professor of Therapeutics in the University of Montevideo; Dr. Stellner, formerly head of the Surgical Department of the Municipal Hospital, Dresden, aged 62; Dr. Federico Horstman y Cantos, for forty years Professor of Anatomy in, and for a long time Dean of the Medical Faculty of, the University of Havana; Dr. Julius Grossner, founder and for many years editor of the *Deutsche medizinal Zeitung*, aged 66; and Dr. Friedrich Semeleder, of Cordova, Mexico, formerly Physician to the late Emperor Maximilian, aged 74.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, NOVEMBER 23RD, 1901.

## THE REFORM OF THE ARMY MEDICAL SERVICE.

It is now more than six weeks since the scheme for the reorganisation of the medical services of the army drawn up by Mr. Brodrick's Committee of Experts was made public, and both the army and the profession are still waiting to know what is to happen. The document was, on the face of it, a scheme and nothing more; and one reason given for the choice of the time of its publication was that it might be fully criticised by members of Parliament in their autumnal deliverances to their constituents. As far as we have seen, however, members have treated the matter with profound indifference. The general press has indeed given a perfunctory approval to the scheme, but in well-informed quarters it has been condemned with singular unanimity. As may be seen from the letters of Surgeon-General Hamilton and Dr. Gordon, and the extracts from a mass of correspondence received from India, which are published elsewhere, the more it is looked at the less it is liked. We understand that a meeting of the Committee of Experts was called last week to consider the criticisms which have been made on their work, and the result of their deliberations will be awaited with interest. In the meantime, the situation is somewhat perplexing to the non-official intelligence. No Royal Warrant has been issued; the scheme has not even been formally adopted: it is, therefore, not altogether plain under what dispensation the medical service of the army is now living.

Yet, although the whole plan of reform is still in so nebulous a condition, the Secretary of State for War has already selected the members of the Advisory Board, which itself exists, strictly speaking, only in the condition of a Platonic "archetypal idea." The names of the gentlemen selected will be found at page 1546. Of the personal fitness of the military members there can be no doubt. The civilian members are all men of distinction in their several ways, but it is a curious illustration of the incorrigible unwisdom of the War Office in its handling of medical matters, that there is not among them one who is recognised as an authority on sanitation. When the Secretary of State requires advice on surgical points, on questions of dermatology, or on the management of civil hospitals, he could not possibly have better counsellors than he has chosen. But those matters, important as undoubtedly they are, form after all a very small, and it may be added a very subordinate, part of the work which the Advisory Board will have to do, if it is to be of any use. The most important function of the Army Medical Service not only in peace, but in war, is the prevention of disease among troops. That, much more than the treatment of wounds or of skin diseases, is the most urgent problem in every campaign. We take leave to say that in ignoring this plain fact Mr. Brodrick has been ill-inspired, and this initial mistake is not of happy augury for the success of his plan of reform.

We must repeat that the service and the profession will be glad to know as soon as possible the exact state of affairs. The Royal Army Medical Corps is urgently in need of officers, and till some definite pronouncement is made no candidates will come forward. It must be clear to Mr. Brodrick and his advisers that the scheme in its present form will not do. The Secretary of State for War is understood to be a masterful man, and he may attempt to impose it by *force majeure*. If he does so, we can only warn him that the last state of the service which he wishes to reform will be worse than the first, and he will have added one more to a long record of failures.

## THE ELECTION OF DIRECT REPRESENTATIVES FOR ENGLAND AND WALES.

We feel sure that we only express the feelings of the great body of the profession when we say that the circumstances which have led to Dr. Glover's decision not again to seek re-election to the General Medical Council have been a cause of general regret. All will rejoice to know that the slight failure in health which has induced him to take this step is not of such a character as to render it necessary for him to give up active professional work. Even those who have differed most widely from Dr. Glover on matters of policy or opinion can but acknowledge the energy, the sincerity, and the fervent desire for the good of his fellow practitioners and of the public by which he has at all times been animated in his action on the Council; the pain naturally experienced by him in the relinquishment of so congenial a task must be greatly mitigated by the knowledge that he carries into retirement the sympathy and respect of the members of his profession for fifteen years his constituents.

Apart from such personal considerations, the profession has reason to regret Dr. Glover's withdrawal on more general grounds. Under any representative system, except that known as "delegation," an election not only enables voters to choose the men supposed to be most capable for certain duties, but also to indicate their views on public questions—the familiar antithesis of "men" and "measures." The predominating interest in "measures" may, it is true, be carried to a paradoxical extreme, as in the not infrequent decision of municipal elections on imperial grounds, and such tendency to import issues not strictly germane to the proper objects of the election is, we think, visible in the present contest. Nevertheless, in the absence, under existing conditions, of any authoritative "voice of the profession," this aspect of the election now proceeding is

important, and renders the retirement of Dr. Glover particularly unfortunate, since he undoubtedly represented a section of opinion in the profession definitely more conservative than that represented by any other candidate. His withdrawal from the contest thus greatly diminishes its usefulness as a test of professional opinion: and indeed, taken in conjunction with the marked similarity of views of the three principal candidates remaining in the field, must go far to make the result one of purely personal significance. In speaking of "three principal" candidates, the one excepted is of course Dr. Hayward, a member of the staff of a Hahnemann hospital, and therefore presumably a representative of a minute section of practitioners whose practice, so far as it is distinctive, is contrary to the generally accepted teachings of medical science. Under these circumstances we propose to confine attention in what follows to the formal election addresses of Mr. Brown, the retiring member of the Council, Mr. George Jackson, and Dr. Woodcock.

It was doubtless inevitable that the midwives question should receive a good deal of notice in these addresses, but it is not easy to gather what it is suggested the General Medical Council should do. The Council was requested, it will be remembered, some time ago to express its opinion on the matter for the benefit of the Privy Council, and did so in the famous ten points. Its opinion was at first apparently accepted, but subsequently in practice ignored, by the Government. If, as is expected, the same Bill is reintroduced in the next session of Parliament, it does not seem probable that the Council would do more than again call the attention of the Government to the opinions it has already expressed. Indeed, so far as we have observed, there is no suggestion that it could with dignity do more. If this be so, then any distinction which it may be attempted to draw between the opinions of the candidates for the two vacant seats, as to the form which midwifery legislation should take, cannot have much, if any, bearing on the duties they are seeking to undertake.

We would not appear to underestimate the importance of such legislation; on the contrary, we conceive it to be the duty of the profession to form its opinion carefully thereon, and to press that opinion through the proper channels on the Government and on Parliament. Had a tithe of the energy that has been expended in what Dr. Woodcock, in strong but hardly exaggerated phrase, has called "internecine warfare within the profession," been devoted to a frank and earnest endeavour to bring about harmony among all who cannot regard the proposals of the Midwives Bill Committee as likely to benefit the community; had a determined and combined effort been made thereupon to educate the nation on the subject—there would have been considerably less likelihood there is than at present of the profession as a whole being absolutely disregarded by public opinion, and having to stand by helpless, because disunited, while legislation is carried through Parliament which the majority of practitioners consider dangerous to those parturient women in whose interests it is ostensibly promoted. But however this may be, if any substantial difference of opinion had existed between the candidates, the attempt to make this the issue of the election might still have been justified by the importance on general grounds of ascertaining the wishes of the electorate. But, in point of fact, no such difference appears in their election addresses. All three candidates categorically declare themselves opposed to the "legalising" or registration of midwives as "an inferior order of practitioners," but favourable to the registration of obstetric nurses, who should work under the supervision of medical practitioners. An attempt has, indeed, been made to represent Dr. Woodcock as specially responsible for the form assumed by the Midwives Bill of the British Medical Association. Since Mr. Brown was a member of the same Subcommittee, it is difficult to see what bearing the matter has on a contest between these two gentlemen.

The only difference revealed to us by a careful analysis of the references to this subject in the election addresses is as to the proposal put forward by Mr. Brown and Mr. Jackson for legislation to provide for the registration of all nurses, obstetric or otherwise. As to this proposal practical men will be disposed to fear lest the whips of Mr. Brown and Mr. Jackson may turn out to be, to those of the Midwives Bill Committee, as were the whips of King Rehoboam to those of his father. At all events, a proposal of such far-reaching effect obviously demands, before receiving any formal sanction from the profession, more calm and deliberate attention than can be expected to be given to it in the heat of a contested election; and if Messrs. Brown and Jackson are elected, it is to be hoped that their return will not be construed as implying such a sanction.

Turning to other questions discussed by the candidates we find that all refer to the proposed amendment of the Medical Acts. Here, again, is a subject the practical solution of which must be found rather outside the Council chamber than within it; but if any marked difference of opinion existed among the candidates, the election of one or another would serve as some rough indication of medical opinion. All, however, in recommending new legislation, profess the same objects—suppression of unqualified practice, extension of direct representation, including the election of representatives of universities or corporations by the general body of medical graduates or diplomates, and supremacy of the General Medical Council in all matters of medical education.

As to the question of Medical Aid Associations, we cannot flatter ourselves that we entirely comprehend some of the proposals put forward in the election addresses. Mr. Brown, for instance, speaks of dealing with such offences "in the same manner as offences which are regarded as infamous in a professional respect." We are not quite sure that we understand this phrase. Why should not such offences themselves be so regarded? Are they not in fact now so regarded? The Council with its present powers can issue warnings, and has done so, but cannot act except on a case before it, nor is it easy to see how it could be given power to act in any other way. An individual offender could be dealt with only if proved in a proper and judicial manner to have transgressed. Dr. Woodcock desires that the Council should have greater power than it at present possesses to deal rigorously with the medical officers of touting associations. But is there

anything now to prevent the Council from removing from the *Register* any person who is proved guilty of such an offence, or any reason to suppose that in case of such proof it would not so act? A more useful extension of the powers of the Council would be to enable it, where it thought fit, to inflict a less severe penalty than absolute expulsion on minor offenders. Such a power would undoubtedly render it easier to bring offenders to justice.

The "wage limit" question and that of a Conciliation Board appear to lie outside the province of the Council, and to belong to the sphere of the voluntary associations of the profession, local or central. No useful purpose is served in the long run by attempting to drag the Council into action *ultra vires*.

A general review of the issues appears, then, to show little divergence between the candidates on questions of principle, and therefore to what an extent considerations of a more personal kind must decide the election. Into any comparison of the purely personal merits of the candidates we do not, of course, enter, but a brief reference to the public career of each may not be thought improper.

Of the two new candidates, Mr. Jackson has had very useful experience in local organisation in the West, and the knowledge gained in the course of his many services to his medical brethren in fighting their battles against abuses by clubs and other bodies, must be of great assistance to his colleagues in the General Medical Council should he be elected.

Dr. Woodcock may claim a similar record of experience of local work in connection with the Lancashire and Cheshire Branch of the British Medical Association and other medical organisations in the Manchester district. Dr. Woodcock's valuable work as an elected member of the Council of the British Medical Association, as a member (and now Chairman) of the Parliamentary Bills Committee, and as member of other important Committees of the Association, have specially familiarised him with the matters dealt with by the General Medical Council, and his services on these bodies give his candidature a special claim to the consideration of members of our Association.

It is such local experience as we have referred to as possessed by Mr. Jackson and Dr. Woodcock which constitutes the true ground of the proposal for "topographical" representation, which Mr. Brown appears to have somewhat misunderstood. It is perfectly true, as he observes, that his own qualifications would not now be enhanced were he to reside in Manchester, Durham, or elsewhere, since this could not give him much greater familiarity with the conditions of practice in those districts than he may possess today. It is familiarity with local conditions, not mere residence, that those who attach importance to topographical representation have in mind. Nor has it been suggested, so far as we have observed, that such considerations should be decisive, but that they should be taken into account along with other claims to support. Mr. Brown has recently spoken of this matter as though the argument were one personal to himself. The point, however, was, we believe, raised some months ago, when it was generally anticipated that three metropolitan candidates, namely, the two members retiring by expiration of term of office, and Mr. Horsley, through his intended resignation, would be before the constituency. Through accidental circumstances in the case of Dr. Glover, and in the case of Mr. Horsley through the operation of an exceedingly technical consideration, Mr. Brown is left in the position of being the only London candidate offering himself for election at a time when London is already represented on the Council. We cannot but think that Mr. Brown would find himself on surer ground in frankly resting his claims for support on the grounds of his former services on the Council. Previous experience of the work to be done is in itself an undeniable qualification. If Mr. Brown has been somewhat unfortunate in the past in the matter of proposing resolutions which did not commend themselves sufficiently to the judgment of any of his colleagues for him to find a seconder, this in the eyes of many may be accepted as meritorious evidence of his uncompromising attitude. Others may perhaps take the view that a bird in the hand is worth two in the bush, and that a smaller reform carried into effect by judicious choice of action is more useful to the profession than declarations of policy which never attain a more substantial form. These, however, are distinctly open questions, which each voter must settle according to the guidings of his own experience in public affairs.

## THE NEWSPAPERS AND VACCINATION.

The increasing prevalence of small-pox in London has resulted, as such outbreaks always do, in increased resort to the protection of vaccination, and incidentally, in increased newspaper correspondence on the merits of the Jennerian prophylaxis. To those who really know the subject, and are therefore well aware that vaccination is a most powerful protector against small-pox attack and small-pox death, and that there is no other such protector, it is a thankless task to wade through column after column of fallacy and sophistication which have been replied to a hundred or a thousand times already. In a leading newspaper a week or two ago a well-known antivaccinist who had been called on by the editor to state his views, and had been given a column in which to do so, wrote that the claim for vaccination "had been whittled away till there is nothing left but mitigation." In reply, Dr. Bond, whose unwearying activity in such work is beyond all praise, simply said that the statement is untrue, but he also asked, in effect, What is a newspaper reader, seeking after truth, to do in presence of such statements? The deplorable thing is that it is really inconceivable that the selected antivaccinist is ignorant of the fact that the first of seven conclusions tabulated by the Royal Commission is that vaccination "diminishes the liability to be attacked by the disease." That certainly is something more than mitigation, yet the newspaper writer, instead of taking this official deliverance, based on a seven years' inquiry, picks out a few words from two men whose opinions can obviously not be learned from any such incomplete reference. If a controversialist chosen to represent antivaccination misrepresents in this outrageous fashion the very essentials of the doctrine which he is there to oppose, what possible value can there be in disputation on so false a basis? It is, indeed, not surprising that Dr. Bond concludes his second article

with the pithy declaration that "no disease to which human flesh is heir can ever exhibit the ferocity with which the untamed antivaccinist so recklessly corrupts the fair visage of truth."

The *Times*, also, has given the public several letters on vaccination during the last week or two. "Inquirer" has been arguing that isolation and sanitation are our first and only reliable means of preventing small-pox. But he made the incorrect assertion that Prussia was the best vaccinated country in Europe before the epidemic of 1871-2; whereupon Mrs. Garrett Anderson pointed out that Germany had no compulsory vaccination law until 1874. The fact is that the opponents of vaccination do not stick at such trifles as dates. "Inquirer" has to admit the low small-pox mortality of Germany since 1874, but he asserts that this is due not to the new vaccination era then inaugurated, but to some very strict isolation law passed in 1883. Some regulations on the subject may have been issued, but it is certain that no important law on the subject was then promulgated, or it would have received mention by the German Vaccination Commission of 1884.

The Imperial Board of Health, Berlin, has recently issued the statistics for the year 1899. The total number of small-pox deaths in all Germany, with a population of 54 millions is 28, giving a rate per million of 0.52. In 1898 the rate was 0.28, in 1897 it was 0.09, in 1896, 0.19. The 28 deaths belong to 21 different places in Germany, a striking proof that the population is well protected by the German law which requires not only vaccination in the second year of life, but revaccination during school age. The largest number of deaths in any one locality was only three. Most of the cases occurred near the frontiers of badly-vaccinated countries. The attacks numbered 346, the fatality being 8.1 per cent. Eight children died of small-pox during the first year of life; of these, 6 were not vaccinated, and as to vaccination the facts were unknown in 2 cases. Six children died in the second year, 3 not vaccinated, 3 unknown. Eighteen of the 28 deaths belong to Prussia, mostly near the Russian frontier. No death occurred in any German city of over 50,000 population, and only 4 deaths in the 285 towns of Germany, with a population of 16 millions, giving a rate per million in the towns of 0.3. As a contrast, in 58 Austrian towns with a population of nearly 4 millions the small-pox deaths were 77, giving a rate of 20.0; in 72 Belgian towns (population 2,414,000) the deaths were 126 and rate 52.2; in 33 English towns (population 11,404,400) the deaths were 145, and the rate 12.7; lastly, in 116 French towns with a population of 8,668,000, the deaths were 600, giving a rate per million of 69.2. Thus the English town small-pox mortality in 1899 was 42-fold the German, the Austrian was 67-fold, the Belgian was 174-fold; and the French as much as 231-fold that of German towns.

The extremely low small-pox mortality of Germany is not an occurrence of one year only; it has been low ever since their law of 1874 made the revaccination of all school children compulsory and abolished epidemics of small-pox.

## THE LATEST "CURE" FOR CANCER.

FROM one point of view it is to be deplored that Parliament does not sit all the year round, or at any rate that a continuous supply of stirring events sufficient to furnish matter for the newspapers cannot be ensured. When Dr. Watts uttered his memorable aphorism about the evil spirit always finding mischief for idle hands to do he might almost be supposed to have foreseen the "new journalism." Whenever there is a dearth of news or political oratory, harassed editors regularly turn to medicine as to an unfailing source of "copy." They know that they can fill their columns easily and cheaply with a controversy about vaccination or tuberculosis or the microbes that are supposed to lurk in Harris tweeds; and when the stream of correspondence runs dry, there is the ever-bubbling well of "cures" to draw from. During the silly season a new "cure" for consumption was announced to the world nearly every other day. The wonder is that with so many infallible remedies within reach consumption is not already an extinct disease. Now it seems to be the turn of cancer, which is to be conjured away with an infusion of violet leaves. The remedy has at any rate the merit of simplicity, and no secret is made of its composition. From the moral point of view, therefore, it stands on a higher plane than the nostrums of the quack. In respect of efficacy, however, all that we can say at present is that there is no proof that the long sought specific for cancer has been found in the modest violet. Rational medicine in the domain of therapeutics tries all things, and holds fast to that which it finds good, and the medical profession would be only too glad to learn, from any source, of a cure for the dread disease which, even in these days, too often mocks our art. But proof is necessary, and that is just what is wanting in the case to which such unfortunate publicity has been given. To the lay mind doubtless the facts, the substantial accuracy of which we have no reason to dispute, are in themselves convincing. It is sufficient for it that there was a tumour, which vanished "almost like a miracle" on the application of an infusion of violet leaves. It does not know how fallacious is experience, how difficult is judgment. It is, we understand, true that a portion of the growth removed for the purpose was examined by a well-known histologist and pronounced to be epitheliomatous in character. But without in any way calling in question either the good faith or the competence of the witnesses, we are compelled to say that the evidence is not conclusive. There are pitfalls in microscopic research, notably in the case of malignant growths, which make experienced clinicians wary as to accepting the results of a single examination as final; moreover, there are difficulties arising from the imperfection of our knowledge of the natural life-history of certain growths which have the outward characters of malignancy, but in their evolution present phases of what may be called occultation. A lymphosarcomatous tumour has been known to disappear so completely that the case might have been reported as a cure, but for the awkward fact that the patient died within a few weeks of hæmorrhage from a small ulcer at the original site of disease which he regarded as of no consequence. Professor Osler of Baltimore, in a recent number of the *Canadian Practitioner*, gave some still more remarkable instances of the apparent cure of undoubted cancer. One of the patients was a young woman who consulted him more than four years ago about a lump in her breast. He sent her to Dr. Halsted, who removed a large growth, undoubtedly cancerous in nature. Two years later she returned to Dr. Osler, complaining of pain in the side and loss of vision in one eye. She was found by Dr. De Schweinitz to have a sarcoma of the choroid. She got steadily worse, and, when Dr. Osler saw her some months later, she had secondary tumours in the other breast, nodules in the liver, and loss of power in the legs. As she suffered great pain, morphine was prescribed, but nothing else was done. After some time Dr. Osler saw her again, and to his amazement found that the secondary nodules in the breast had disappeared. The patient had also recovered the power of walking, and was regaining vision in the affected eye. Another case was

that of a young woman whom Dr. Osler some years ago sent to Dr. Tiffany to have a cancerous tumour of the breast removed. About the middle of 1900 she began to suffer from girdle pains; she also complained of pains down the leg and became paraplegic. Her death was expected hourly, but she gradually improved, and although she still has some secondary nodules, a stiff back, and has to take morphine, she is able to be about, and goes to card parties and other entertainments. Dr. Osler, be it observed, does not report these cases as cures, but merely as illustrations of the capricious course which disease undoubtedly cancerous may run. It is clear, however, that had such cases fallen into less scientific hands they might have been reported in perfect good faith as proofs of the curative efficacy of violet leaves, Christian Science, or whatever other method of treatment had been used. Probably many similar cases might be collected, but want of leisure for the careful observation required, and perhaps the fear of being thought credulous, deter medical men from recording them. We should frankly face the fact that we do not yet know nearly all that is to be known about cancer, even in its clinical aspects. The pessimistic attitude of the profession in regard to malignant disease is an obstacle to progress not only in treatment but also in knowledge. Sir James Paget insisted strongly that practitioners should even in the worst cases continue to fight to the end. Despair in the practitioner breeds despair in the patient; and this drives the latter, not unnaturally, into the hands of quacks. It is well, therefore, that such cases as the one now so much talked about should be recorded; and it will doubtless be reported in the proper way and at the proper time to one of the medical societies. But it is nothing less than a public misfortune that they should be reported in a sensational style in cheap newspapers, and put before ignorant readers without any attempt at corrective criticism. The report of a new "cure" makes "good copy"; that is all the new journalist cares about. As for the effect on the reader, he would probably say, "*Caveat emptor!*" The mischief thus done is incalculable. Hopes doomed to disappointment are excited in the minds of sufferers and their friends, and in many cases the time when something could be done is wasted in trying useless remedies. The freedom of the press is unquestionably a safeguard of liberty; but we confess that in regard to medical matters we think some form of censorship would be of considerable advantage to the public—at least in restraining what Lord Beaconsfield called the "babble of irresponsible frivolity."

## THE LONDON SCHOOL BOARD AND VISUAL DEFECTS.

In the reorganisation of the Medical Department under the London School Board it is proposed to have an assistant medical officer with skill as an oculist and aurist to give half his time, and be chiefly employed in connection with schools for the blind and deaf. Two oculists are also to be temporarily employed for one year "for the purpose of testing the eyesight of children in senior departments. Part of their duty will be to correct errors of refraction, and to make arrangements with opticians, similar to those at ophthalmic hospitals, for providing the necessary glasses at hospital rates on payment by the children. A further part of their duty will be to look into all cases of disease or affections of the eyes contagious or otherwise." This is a new departure involving important principles. Probably the School Board would have been better advised if they had proceeded in a less debateable way. To test the visual acuity of every child, to record it for the benefit of the teachers, and when so defective that it influences school work, or threatens further troubles, to notify the existence of the defect to the parent is an intelligible policy. Even in cases where the defect is great, or disease dangerous to the child or others, to exclude the child, and then proceed against the parent for not causing the child to attend school in a fit state, would also be an intelligible though harsh policy. When the defect has been made known it is, so far as any particular child is concerned, the duty of the parent to make arrangements for the treatment of his child; this is beyond the province of the School Board. The general causes leading to defective eyesight in the schools is the field to which remedial operations by the Board should be confined. Some time ago the action of the London School Board led to serious congestion at the voluntary hospitals. Many difficulties requiring consideration also lie in the way of the new proposals. Obviously it is a physical impossibility for the two oculists to do all the work assigned to them. The refraction of children cannot be done satisfactorily without the use of a mydriatic. To fit a child with glasses otherwise is in many cases a wrong to the child. The use of atropine gives rise to temporary inconvenience which in a short time would raise a storm of opposition on the part of the parents and without their consent it constitutes a technical assault. The testing of each child will require ten minutes spread over an hour. Where are they to be tested? A dark room is almost necessary. During the period of testing the teachers will find school work almost disorganised, and when the children have had prescriptions made out probably in not more than one out of ten cases will the parents buy the glasses. The glasses themselves are frequently broken or mislaid and not renewed, and in the case of hypermetropic children they are more often in the pocket than on the nose. If the London School Board seeks the solution of the question in the direction of treating individual children it will possibly soon find the necessity for the provision of several ophthalmic hospitals. But there is in prophylaxis a wide field for action. If the causes which make for relaxed tissues in children are eliminated, if proper eye work is insisted on, and due regard paid to hygienic requirements, not in senior schools only but in infant departments also, the medical officers of the Board would still have plenty of work before them in instructing and superintending teachers and awakening a sense of responsibility in parents which after a time will frequently make the notification of defect by the Board suffice to ensure proper attention.

## MR. LONG ON LONDON WATER.

At a dinner of the National Union of Conservative Associations last Monday evening, Mr. Long, President of the Local Government Board, devoted his speech on London questions mainly to the Bill which the Government have expressed their intention to introduce next session to transfer the undertakings of the eight metropolitan water companies to a public body or trust on a particular day, at a price to be either agreed or settled by arbitration. With much of the earlier portion of Mr. Long's speech most Londoners will find themselves in hearty agreement. He lamented the large and confusing number of local authorities at present endeavouring to minister to the health and comfort of the metropolis. He deplored the apathy which arises from the undue frequency with which elections of various kinds recur, and the consequent difficulty of finding in all cases suitable candidates to fill the numerous offices of greater or less responsibility. He boldly avowed that "if we wanted perfect local government for London we should have to abandon some of the shibboleths to which we had held too long." It is quite true that notwithstanding the Acts of 1888 and 1900, which simplified, and to some extent improved, the local government of London, and abolished the indirectly-elected Metropolitan Board of Works and District Boards, there yet remain no fewer than 400 authorities engaged in public administration in the capital of the empire. From Mr. Long's destructive criticism we turn to see what he proposes to put in the place of the chaos he condemns. From

the imperfect and somewhat conflicting reports of his speech, which we have read in half a dozen papers, we gather that he proposes to add yet another to our already too numerous authorities. That this new authority is to be constituted upon the august model of the corrupt old Metropolitan Board which Lord Herschell's Commission exposed and swept away. To this new body is to be committed the purchase and management of the most important supply—that of water—with which a health authority or a municipality can deal. Mr. Long's twelve months study of the water question has led him to think that the existing companies are worthy of liberal treatment in the matter of the terms of purchase. We cannot, however, acquiesce in this optimism. The failures of some of the companies to maintain constant supplies within their areas have been frequent and notorious. We also recall the case of the Battersea Borough Council against the Southwark and Vauxhall Company this time last year, in which the danger of the polluted source and the disastrous possibilities of a defective filter were fully acknowledged by the Commissioners, and the failures of the companies to exclude flood water were frankly admitted. We cannot help regretting that the tone of Mr. Long's speech fails to convince us that he has successfully avoided the "shibboleths" of the dangers of which he claims to be so fully aware.

## THE WATER FAMINE IN EDINBURGH.

In spite of the recent rainfall the water famine in Edinburgh still continues, and householders who had hoped that the beginning of a new week would bring a welcome change have been woefully disappointed. The various city reservoirs are reported to be steadily but slowly filling—how slowly the poor householder fully appreciates. Edinburgh, at any rate, has paid dearly for the past fine summer. The Water Trust still counsel economy and emphasise their recommendations in a practical manner by continuing to turn off the water in the majority of private dwelling houses from about 7 A.M. to 7 P.M. No doubt they are perfectly right in doing so, and on the whole, the attitude of the inhabitants of Edinburgh on the water question resembles that held by the majority of people about the war, namely, a willingness to make further sacrifices if they are declared to be necessary. The comparison may be made more complete by referring to the strong remarks that have been made in the local press and elsewhere on the want of foresight and extravagance in watering the streets that the late Town Council is alleged to have been guilty of. It has further been suggested, with a view to economy in the future, that the streets should be watered only with salt water pumped up from the Firth of Forth. At present in many houses, for fear of bursting the boilers, no hot water, or at any rate only a very small quantity, is used until after 7 P.M. In some houses, indeed, where the boiler is small no kitchen fire is possible during the day. Where cisterns are small or wanting the precious fluid is stored in many cases in jugs, etc., for use during the prohibited hours. In houses possessing bathrooms a sign of the times is the frequency with which an evening hot bath is substituted for the ordinary morning "cold tub." The dislocation of business is still considerable, and is felt most in such industries as the biscuit trade, where water is required during the daytime and in large amount. The water supply of large towns has certainly become nowadays one of the most important of municipal problems. Edinburgh has had her lesson. It is to be hoped she will profit by it.

## DEATH OF SURGEON-GENERAL MANLEY.

By the death of Surgeon-General William George Nicholas Manley, who passed away in his 70th year at Cheltenham on November 16th, the country has lost a man who was in his day one of the brightest ornaments of the British army. To him might well have been applied Napoleon's description of Ney as "the bravest of the brave." He was the son of a clergyman, and was born in Dublin in 1831. He received his preliminary education at Blackheath Proprietary School, and choosing medicine as his profession, was admitted a Member of the Royal College of Surgeons in 1852. In 1855 he joined the Army Medical Staff, and was attached to the Royal Artillery, with which he served in the Crimea. He was present at the siege and fall of Sebastopol. He next saw active service in the New Zealand war of 1863-6, in which he greatly distinguished himself, and was mentioned in despatches. In that campaign he won the Victoria Cross for, as the *Gazette* states, "his conduct during the assault on the Rebel Pah, near Tauranga, New Zealand, on April 29th last, in most nobly risking his own life, according to the testimony of Commodore Sir William Wiseman, Bart., C.B., in his endeavour to save that of the late Commander Hay, of the Royal Navy, and others. Having volunteered to accompany the storming party into the Pah, he attended on that officer when he was carried away mortally wounded, and then volunteered to return in order to see if he could find any more wounded. It is stated that he was one of the last officers to leave the Pah." Manley was present at the assault and capture of the Okotukou, Putahi, Otapawa, and Waikohou Pahs, and for his services he was again mentioned in despatches and promoted to the rank of Staff Surgeon. At about the same time he received the bronze medal of the Royal Humane Society for rescuing from drowning a gunner of the Royal Artillery, who had fallen overboard in the Waitotara river, New Zealand. When the Franco-German war broke out Manley proceeded with the British Ambulance Corps, and was attached to the 22nd Division of the Prussian Army. He was present at several engagements, and for his services received the German steel war medal, the Bavarian Order of Merit, and, at the request of the Crown Prince, was granted by the Emperor of Germany the Second Class of the Iron Cross, on account of "his devoted and excellent conduct in seeking and caring for the wounded of the 22nd Division in the actions of Chateau Neuf and Bretoncelle on November 18th and 21st, and the battles of Orleans and Cravant on December 10th, 1870." He was also present at the siege of Paris, and for his attention to wounded Frenchmen received the Cross of the French Société de Secours aux Blessés. In the Afghan war of 1878-79 he served with the Quetta Field Force, and was present at the occupation of Kandahar, afterwards receiving the thanks of the Viceroy and Governor of India and the medal. He also served in the Egyptian war of 1882 as Principal Medical Officer of the Second Division under Sir Edward Hamley, and was present at the battle of Tel-el-Kebir. He was again mentioned in despatches, specially promoted to the rank of Deputy Surgeon-General, and rewarded with the medal and clasp, the Third Class of the Osmanieh, and the Khedivial star. He retired from the army in 1884, and ten years later was made a Commander of the Bath. In 1896 he was granted a distinguished service pension. Surgeon-General Manley's record of service was almost unique, and for that reason we have given it in some detail. It is surely, as Carlyle would have said, "significant of much" that a man whom foreign Governments seemed to vie with each other in honouring should have received no decoration from his own till long after he had retired. We have no hesitation in saying that a combatant officer with anything like such a record of service as Surgeon-General Manley's would have been made a K.C.B. long before.

## THE MYSTERY OF THE CONCENTRATION CAMPS.

On Saturday morning last (November 16th) nearly all the morning papers published in London, and some of those published in the provinces announced that a Blue Book

containing a series of reports with respect to the working of the refugee camps in the Transvaal, Orange River Colony, Cape Colony, and Natal had been issued on the previous evening. Some of the papers stated that the Blue Book had been issued by the War Office, others did not seem to know how they had come by it, although they agreed that it was a bulky volume of 400 pages. The British Medical Journal not being among those favoured by the mysterious donor, application was made to the Government printers to obtain a copy by purchase. It was not to be purchased. On Monday, November 18th, the *Times* stated in a second article on the report containing many lengthy extracts that its quotations were made from "a Colonial Office Blue Book." On application to the Colonial Office we were, however, referred to the War Office, and on application to the War Office a verbal reply was returned that the report in the newspapers was false. A second application elicited the reply that "it is anticipated that the Blue Book will be on sale either to-morrow (Thursday) or Friday." We are informed that though the report was "laid on the table" of the House of Commons on Monday last, it had not been issued to members of Parliament, and as late as Wednesday they were unable to obtain a copy. Judging from the extracts printed by the favoured newspapers, the report appears to contain much that is of medical interest, but we prefer to wait until we have the full report before making any comment. Meanwhile, we would observe that the circumstances under which an official report was issued to certain newspapers before it was laid on the table of the House of Commons, and several days at least before it was available for the use of M.P.s or purchasable by the public appears to call for some explanation. Further, we should like to ask who is responsible for the administration of these concentration camps? Is it the War Office or is it the Colonial Office? The camps were formed on grounds of military exigencies, and they are, we believe, guarded by military guards, and commanded by military officers: on the other hand we are assured that the administration of these camps is in the hands of the civil government by whom the medical officers are appointed.

## INFANTILE MORTALITY AND THE MORTALITY OF CHILDREN."

A correspondent draws our attention to the fact that in certain English towns during the third quarter of this year the rate of mortality among infants under 1 year of age was about 350 per 1,000 births; and quotes the following sentence from the *Daily Chronicle* of November 12th: "The mortality among infants in these towns exceeded the mortality among children in the concentration camps in South Africa, which was at the rate annually of 341 deaths per 1,000 children during the same three months." It ought scarcely to be necessary to point out that the above comparison is entirely erroneous. The underlying assumption is that the terms "infants" and "children" refer entirely to persons of the same age. As has been pointed out, the official returns for the concentration camps give no statement of the ages of the children in these camps. It is almost certain that during the last two years the birth-rate has been subnormal, and that the proportion of "infants" among the total children is unusually small. Even if this be not so, there are also a large number of children from 1 to 10 or even 12 years of age: and it is necessary, in order to make a fair comparison, that the death-rate among children at corresponding ages should be compared. The ages of the "children" in the camps not being given, the only plan open in that article was to assume that they were of an age at which an unfavourable death-rate might be expected. Hence it was assumed that all the children were under 5 years of age, and a comparison was made with English death-rates for children under this age. Such a comparison understates the true facts, as it is certain that a large proportion of the children in the camps are more than 5 years old, and ought, therefore, to have a correspondingly lower death-rate. To compare the infantile death-rate in our great towns with the death-rate among children in the camps shows a lamentable ignorance of statistical methods. With reference to a further letter from Dr. Hingston Fox, published in another column, it may be pointed out that a death-rate for a given population cannot be calculated unless it is assumed that the population in question is stationary during the given period, or that arrivals or departures by death or otherwise balance each other. In other words, the population must be the mean population for the period. The official monthly returns for the concentration camps do not state whether the population of the middle of each month is taken, but this may be assumed to be the case. Hence the consideration urged by Dr. Hingston Fox that the population, owing to the high mortality is a decreasing one, ought not to enter into the problem, and does not do so to any material extent if the returns have been made on a proper basis. We agree, however, with Dr. Fox, that it is safer to present the statistics in the form of a monthly death-rate, as was done in our special article. To enable one to appreciate what this would mean if this state of matters continued for a year, it is necessary also to give the annual death-rate; and the latter is naturally based on the same assumption, namely, that we know the mean population for the entire period, and that arrivals and departures balance each other.

## A MILK OUTBREAK OF SCARLET FEVER IN LONDON.

The facts recorded in the report of the Medical Officer to the London County Council on an outbreak of scarlet fever in May last in Shoreditch and from other districts of the metropolis are interesting and instructive. The converging evidence from these districts implicated the milk supplied by Mr. X., and on May 4th, within three days of the time when Dr. Byett, the Medical Officer of Health of Shoreditch, first communicated with Mr. Shirley Murphy, the supply of Mr. X.'s milk from a particular farm was stopped. The difficulties in arriving at a certain conclusion as to the infecting farm were very great. Mr. X. distributed milk in London from 44 farms, and was very imperfectly acquainted with the exact distribution of the churns of this milk in London. He left the matter largely in the hands of a vanman, who did not appear to stick consistently to one particular route of distribution of milk from the different farms. Notwithstanding these difficulties evidence was forthcoming implicating a particular farm, and members of the farmer's family on this farm suffered from scarlet fever simultaneously with the metropolitan cases. The sources from which the milk derived its infection could not be discovered. The difficulties of investigating this outbreak clearly indicate the need for a record of the sources of milk supply, which should be forthcoming at a time of emergency. The retailers supplying infected milk in this particular outbreak do not appear to have made any serious attempt to keep a record of the deliveries by the vanman or of the source of the milk received. It would not be unreasonable for the Legislature to demand that every retailer of milk should keep a daily record of the source or sources of the milk supplied by him, and that every farmer or middleman should similarly be required to keep a record of the retailers to whom he has supplied milk, and the amount supplied to each. Apart from this there is urgent need for expediting the legal machinery provided by Section iv of the Infectious Disease (Prevention) Act, or Section lxxi of

[1] *Scarlet Fever in London.* Report by the Medical Officer to the London County Council as to the recent local prevalences of scarlet fever in London. Price 4d.

the Public Health (London) Act, enabling a local authority to stop an infected milk supply; and attention to this defect ought to be pressed upon the Legislature.

## PRECAUTIONS AGAINST PLAGUE.

A PAMPHLET setting out the precautions to be taken against plague, drawn up by Dr. D. S. Davies, Medical Officer of Health for the City of Bristol, is founded mainly on the work and report of Dr. Ashburton Thompson, of Sydney, and upon observations made in Bristol. Dr. Davies considers the rat, and not man, to be the primary sufferer from plague, and that it is by the rat, and perhaps by the rat alone, that plague is spread. The prevention of epidemic plague is discussed in the pamphlet under the headings of importation, local diffusion, and exportation. As regards importation, Dr. Davies expresses the opinion that plague is "preceded by the epizoötic (amongst rats), and that the real danger to the importing country lies with the plague rats, not with plague-stricken man." The infected rat is mainly distributed through the world by ships, and the obvious remedy is to secure rat-free ships. Local diffusion is but little due to contact with plague-stricken persons, and the only prophylactic measure of much value is destruction of rats and their nests, burrows, and habitual haunts. Experience in Sydney showed that the great majority of people attacked by plague contracted the disease in infected premises—that is, on premises where recently-deceased rats were discovered. To such an extent did this phenomenon obtain that Dr. Ashburton Thompson arrived at the opinion "that the danger of contracting plague stood in relation to the presence of rats in dwellings or enclosed premises." Dr. Davies is of opinion that "the number of rats in non-infected places should be steadily kept down before the actual necessity arises, as even if they cannot be entirely exterminated, diminution in their numbers lessens the mathematical chances of infection.

## EDINBURGH UNIVERSITY RECTORIAL CELEBRATIONS.

THE students' programme in connection with Lord Dufferin's visit was a heavy one, as the following shows:—November 13th: Torchlight procession. November 14th: 2 P.M.—Address by Lord Dufferin in McEwan Hall; 4 P.M.—"At Home" in the University Union; 7 P.M.—"Students' Night" at the Lyceum Theatre. November 15th: Edinburgh University Conservative Association dinner. That the Lord Rector attended every one of these functions, and delivered lengthy addresses at two of them, speaks volumes for his energy, his sense of duty, and above all, for his kindness of heart in determining not to disappoint the students in any particular. The torchlight procession was an unqualified success, many hundreds of students taking part in a most picturesque pageant. They were clad in every imaginable costume, and in many cases elaborate impersonations were successfully attempted. Thus the great Napoleon and the Empress Josephine (the latter smoking cigarettes) were represented, while a Red Indian in full warpaint rode in front of a motor car transformed to represent *Shamrock II.* The procession, which was preceded by a force of 300 police, made the customary halts opposite the houses of the various medical professors. It also stopped opposite the Palace Hotel to give a hearty greeting to the Lord Rector. The most perfect order was maintained throughout. During the hour preceding Lord Dufferin's arrival at the McEwan Hall on Thursday a students' concert was held. The splendid address subsequently delivered by the Lord Rector was unfortunately imperfectly heard. This was mainly due to the difficulty of speaking in so large a building. At the same time it is a matter for profound regret that a certain number of the students allowed the exuberance of their spirits to make them forget the courtesy which was due to their distinguished guest, and the peculiar claims he had upon their consideration The performance in the evening at the Lyceum Theatre was "Floradora." The entire theatre had been previously bought up by the students. As a result of the exceptional nature of the entertainment a house crowded from floor to ceiling rose up to greet Lord and Lady Dufferin on their arrival. An excellent students' concert preceded the play, and during the intervals bouquets were presented to the actresses, and a skull to the funny man of the piece. It is to be regretted that here again much stupid and unnecessary noise completely spoilt the latter part of the performance.

## THE NEW MAMMAL.

AT the meeting of the Zoological Society on November 19th, Professor Ray Lankester, Director of the Natural History Department of the British Museum, presented to the Society his formal report on the new mammal, the okapi (Okapia Johnstonii), discovered through the exertions of Sir Harry Johnston in the Semliki Forest in Central Africa. The report was accompanied by drawings of the animal as mounted in the Museum, and of the cranial bones and teeth. The anatomy of the skull and the specific affinities of the okapi were fully discussed, and it was shown to be a member of the *Giraffidæ* differing from known species, and presenting greater affinities to certain extinct species than other existent members of the family. Sir Harry Johnston gave an interesting account of the circumstances which led to the discovery. His curiosity was first aroused by the statement made by Sir Henry Stanley in 1888 to the effect that the dwarf race which inhabits the forest applied a name to the donkeys of his caravan. Sir Harry Johnston, suspecting they could hardly have seen the animal before, conjectured that the name they had applied to it must in reality belong to some other animal presenting some superficial resemblance to a donkey or mule. The dwarfs asserted that the animal was not uncommon in the forest, but it was only after many inquiries that Sir Harry Johnston was at length put upon the track of the animal by an officer of the Congo Free State, and was enabled to make an expedition into the forest in search of it. The expedition was a failure, but eventually a skin and skull was obtained through Mr. Ericson of the Congo Free State Service, and it was upon this specimen, probably about two-thirds grown, that Professor Lankester's description was founded. It has a giraffe-like neck, but less long than in the typical species, high withers, with a fall of seven or eight inches to the rump, a whitish face and brown back, with horizontal stripings on the hind quarters. The Semliki Forest is as yet very imperfectly explored, and further discoveries probably await the naturalist within its boundaries, for it appears to be a sanctuary for a race of men and for at least one species of mammals driven out by stronger races from more favoured districts. But it is described by Sir Harry Johnston, as by Sir Henry Stanley, as a gloomy, depressing country, probably about the size of Wales, covered with a dense forest, with little undergrowth, where the traveller marches in perpetual gloom in a hot, moist, depressing atmosphere.

## THE NEW "JOURNAL OF OBSTETRICS AND GYNÆCOLOGY."

THE first number of the new *Journal of Obstetrics and Gynæcology of the British Empire* will appear on January 1st, 1902. The undertaking has the support of a large number of members of the medical profession practising obstetrics and gynæcology in London, provincial England, Scotland, and Ireland, including representatives of the London School of Medicine for Women, and of specialists in obstetrics and gynæcology, holding official positions, and practising in the various colonies and dependencies of the Empire. The

promoters consist of the following:—Sir John Williams, Bart., Emeritus Professor of Obstetrics, University College, London; Dr. F. H. Champneys, Obstetric Physician, St. Bartholomew's Hospital, London; Dr. G. E. Herman, Obstetric Physician, London Hospital; Dr. Peter Horrocks, Obstetric Physician, Guy's Hospital, London; Mr. Alban Doran, Surgeon, Samaritan Free Hospital for Women, London; Dr. R. P. Ranken Lyle, Lecturer on Obstetrics and Gynæcology, University of Durham; Dr. W. J. Sinclair, Professor of Obstetrics and Gynæcology, Owens College, Victoria University, Manchester; Dr. Edward Malins, Professor of Obstetrics, University of Birmingham; Dr. Murdoch Cameron, Professor of Midwifery and Diseases of Women, University of Glasgow; Dr. J. A. C. Kynoch, Professor of Midwifery and Diseases of Women, University of St. Andrews; Dr. A. R Simpson, Professor of Midwifery and Diseases of Women, University of Edinburgh; Dr. William Stephenson, Professor of Midwifery and Diseases of Women, University of Aberdeen; Dr. Fred. Wm. Kidd, Professor of Obstetrics and Gynæcology, Royal College of Surgeons of Ireland; Dr. John W. Byers, Professor of Midwifery and Diseases of Women, Queen's College, Belfast. Mr. Alban Doran will undertake the duties of editor-in-chief, and he will be assisted in special portions of the work by Dr. D. Berry Hart, of Edinburgh; Dr. Fred. W. Kidd, of Dublin; and Dr. W. J. Sinclair, of Manchester. A considerable number of colleagues resident in the United Kingdom and in the various centres of medical progress throughout the Empire have promised to assist as collaborators and reporters.

## THE YALE BICENTENARY.

A short time ago the Yale University at New Haven, Connecticut, celebrated the bicentennial anniversary of its foundation with a festival which lasted four days. The President of the United States and a great concourse of official notabilities and prominent citizens took part in the proceedings. England, Continental Europe, and the Far East contributed to do honour to Yale by sending representatives, all of commanding eminence in the walk of academic renown, who marched as delegates in the procession, and participated in the closing functions of the celebration. Among those on whom honorary degrees were conferred were Dr. J. S. Billings, Director of the New York Public Library; Dr. David White Finlay, Professor of the Practice of Medicine in the University of Aberdeen; Dr. William Osler, Professor of Medicine in Johns Hopkins Medical School; and Dr. Wilhelm Waldeyer, Professor of Atomy in the University of Berlin.

## THE BOARD OF AGRICULTURE AND DISEASES OF ANIMALS.

The report of the Veterinary Department of the Board of riculture contains much that is interesting to the pathogist generally, and in the matter of such diseases as anders and rabies, much also that has a distinct bearing on the health of man as well as that of animals. Thus it is cheering to learn from Mr. Cope's report that "for the first time during fifty-one years not a single human being died (in the year 1899) from hydrophobia in England and Wales." The same is said to hold good also for the year 1900. Indeed, it would appear that, except in the district of South Wales, the disease of rabies is practically extinct in Great Britain. The Board of Agriculture is naturally proud of the success which it claims as due to its stamping-out policy by means of slaughter, the muzzle, etc. The returns in respect of glanders are unfortunately less satisfactory. The relative prevalence of the disease in London compared with Glasgow, the report suggests, is due to the fact that in the northern city "the mallein test has been utilised to manifest advantage; in London, where it has also been freely used, it has probably been misapplied or otherwise equally satisfactory results should have been obtained." We understand that in Glasgow horses reacting to mallein are isolated as suspects until they cease to react, and are then allowed to return to work. In London the practice has been to encourage slaughter in all cases of reaction; this would appear to be unnecessary in view of the Glasgow experience, and may tend to discourage the use of mallein as a diagnostic unless large sums of money are to be offered to compensate the owners. Among other epizoötics, foot-and-mouth disease has again appeared, and still baffles inspectors in their search after the mode of its propagation. In regard to swine fever, which the figures show to be less prevalent than it was a few years ago, Major Tennant writes rather ominously in respect of slaughter as a means of suppression. "Experience has shown," he says, "that this policy is neither so easy to carry out nor so well calculated to attain its end as was at first supposed." In the report for the year 1885 the Agricultural Department was for "more stringent measures" and a "stamping-out" crusade, and regretted that local authorities were "not educated up to that point of view."

## THE DATE OF THE ELECTION OF DIRECT REPRESENTATIVES IN ENGLAND.

We are informed that a meeting of the English Branch Council to receive the precept for election was held on November 20th, the last day for nomination being, as already announced, November 21st. The voting papers will be issued between November 22nd and November 26th, and the last day for their return will be December 4th. The counting of votes will take place between December 5th and December 10th, and a meeting of the English Branch Council to certify the result, and to make a declaration of the poll, will be held on December 10th. At this election each voter will have two votes, but not more than one vote can be given to any one candidate.

## THE ASSOCIATION OF PUBLIC VACCINATORS.

We are informed that the Organising Secretary of the Association of Public Vaccinators, who is a layman, acted entirely on his own initiative in communicating to the daily press the notice to which we referred last week (p. 1487 and p. 1513) and that the Executive Committee regrets that it should have been worded as it was. We understand further that a meeting of the Council of the Association of Public Vaccinators is about to be held to consider the matter.

Dr. Goodhart, who will deliver the Purvis Oration before the West Kent Medico-Chirurgical Society on Friday, December 6th, has chosen for his subject, "General Practice and Original Research." The oration will be delivered at 8.45 p.m. at the Royal Kent Dispensary, Greenwich Road.

The Royal Commission on Tuberculosis is now sitting at 1, Chapel Place, Delahay Street, Westminster. The experimental part of its work will be carried out near Stansted, in Essex, on two farms that have been most generously placed at its disposal by Sir James Blyth. The Secretary of the Commission is Mr. Edward J. Steegmann, M.B.

A meeting, over which Professor Woodhead presided, was held in the library of the London Hospital on November 15th, under the auspices of the British Medical Temperance Association, and was attended by about eighty medical students. Dr. J. J. Ridge advocated total abstinence on the ground that it was an absolute and necessary safeguard against the evils of intemperance, and pointed out its physical advantages in athletics and examinations.

## GUY'S HOSPITAL.

RENOVATION AND RE-ENDOWMENT NECESSARY.

THE Treasurer, Mr. Cosmo Bonsor, makes an appeal to the public for a renovation and building fund of £180,000, the special need of which arises from the fact that a great part of the present hospital building is more than 170 years old. Much of the structure consequently requires renovation, and it is equally necessary to provide adjuncts of various kinds, found in every modern hospital, but unknown when Thomas Guy founded this institution in 1724. In those days, for example, about 50 nurses were an ample staff; to day the number of the nursing staff amounts to 230 persons, although some of the beds in the wards are still closed for lack of funds. A nurses' home has long been necessary, and is now in course of erection. The late Mr. Henry Raphael contributed £20,000 towards its cost, and his sons have since made a handsome addition to his generous benefaction. But a considerable amount is still required to complete and adequately furnish the home. A new laundry is also wanted; and one central station, to provide light, heat, and power for the whole building is being provided. The surgery and receiving rooms require extension and renovation, many wards also need renovation, several sanitary blocks must be provided, and the drainage requires partial reconstruction. All these works are already commenced; some, in fact, have been proceeding for several years. Moreover, if the response to the Treasurer's appeal be adequate, other improvements—such as a small ward for the reception of insensible patients until a diagnosis of the cause of their condition can be made, further accommodation in the out-patient departments, and additional operating rooms—can be at once taken in hand. The annual grant of £5,000 from the Prince of Wales's Hospital Fund for London has enabled the governors to open eighty nine more beds. The appeal points out that the increased efficiency of the hospital is shown by the striking fact that the relief or cure of a surgical in-patient, which ten years ago took on an average twenty-five days, is now reduced to nineteen days. As a consequence of this acceleration and of the reopening of beds, the number of in-patients accommodated yearly has risen from 5,908 in 1894 to 7,320 in 1900. For the renovation and building mentioned above, the sum of £180,000 is needed. The appeal further states that the annual maintenance of the hospital requires about £60,000, but has an assured income of £35,000 only, with a conditional support of £11,000, leaving an annual deficiency of £14,000 still to be provided. The appeal which is now being made is primarily for donations to the renovation and building fund; secondly, for donations or bequests to the re-endowment fund; and, lastly, for annual subscriptions or donations to the sustentation fund.

A public meeting in aid of the appeal, at which the Lord Mayor will preside, will be held at the Mansion House on January 15th next. Mr. J. Pierpont Morgan has promised a donation of £5,000 to the renovation and building fund when £100,000 has been reached; this the Governors are anxious to achieve by the date of the meeting. Mr. Bonsor, states that Guy's Hospital, "in spite of the financial battle waged since 1884, is doing to-day a vaster work, and doing it more effectively, than in any previous period of its long and honourable history."

At a recent meeting of the Governors the Treasurer laid before the Court the following copy of a resolution that had been passed at a recent staff meeting, namely:

That the staff of Guy's Hospital having carefully considered the various improvements, repairs, and reconstructions which have been carried out at Guy's Hospital during the last few years, are of opinion that they had become urgently necessary for the successful working of the hospital in the interests of the patients, and they are equally convinced that the additional changes which the Treasurer and the Governors have in view, especially those in connection with the operating theatres and out-patient departments, should in the same interests be as soon as possible completed.

The Treasurer also read the following letter addressed to him by the Senior Physician and Senior Surgeon, namely:

November 7th, 1901.

Dear Mr. Bonsor,—We enclose herewith the copy of the resolution unanimously passed by the staff of Guy's Hospital at a recent meeting.

At the same time it was decided that the staff and teachers should make a collective contribution towards the Building Fund, and for this purpose we have received promises to £1,783.

We shall send you from time to time the sums as they are received by us, and we hope that the above amount will not be the limit of the help offered by the staff.

We remain, yours faithfully,

[Signed] FREDK. TAYLOR,
H. G. HOWSE.

Whereupon it was moved by the Treasurer, seconded by Mr. Robert Gordon, and carried unanimously:

That the Governors desire to place on record their sense of gratitude to the staff for the kind generosity that has prompted the members of the same to assist so liberally in the effort now being made to place the hospital, in its various departments, on an efficient basis.

That an extract be made by the clerk of the above resolution, and forwarded to the Senior Physician and Surgeon for communication to their colleagues on the staff.

# THE PLAGUE.

LONDON.

*Case of Suspected Plague.*

ON November 11th a man presented himself in the out-patient room of the West London Hospital. Mr. Aslett Baldwin, F.R.C.S., under whose observation he came, diagnosed the case as pestis minor, and placed him in an isolated ward, and, after consulting one of his colleagues, Dr. Donald Hood, reported the case to the London County Council Health Department. Mr. Shirley Murphy and Mr. Cantlie at once visited the patient at the West London Hospital, confirmed the suspicion of the disease, and forwarded specimens of the fluid in and around the enlarged gland to Dr. Klein, F.R.S. Dr. Klein reported after a careful investigation that the case was not one of plague. The history and clinical symptoms of this case were as follows:

The patient, a young man aged 24, a lighterman on the Thames, engaged at the time unloading merchandise from the Baltic, went to the West London Hospital for advice concerning lumps in his groin. He gave the history of a fall three weeks previously during which he hurt the lower ribs on the right side, and he ascribed the subsequent swelling in the groin to the fall. By November 4th the patient got much worse, and had to knock off work. When he went to the hospital the signs and symptoms were severe headache, temperature 101° F., a foul, white, dry tongue with red edges, injected conjunctivæ, enlarged spleen, swollen glands in the groins and some enlargement of glands in the axilla and neck. The glands were enlarged in both groins; two or three could be felt on either side, but one gland on each side was much more enlarged than its fellows, attaining the size of a walnut. The skin over the glands was not red or inflamed, but there was exquisite tenderness of the skin in the neighbourhood of both groins. There was no venereal disease or any irritation about the penis, scrotum, perineum, or anus to account for the condition of the glands in the groin. The bacteriological investigation negatived the idea of the case being true plague.

The diagnosis of pestis minor was probably the correct one, the expression pestis minor being understood to mean not a mild case of true plague or pestis ambulans, but a specific form of glandular enlargement which occurs when plague either threatens or is actually about. In cases of pestis minor the bacillus of plague is only occasionally met with, and when it is an involuted form alone obtains, which fails to give the bacteriological tests of the true plague bacillus. The term pestis minor is no doubt unfortunate in some respects, inasmuch as it causes unnecessary alarm; but it is by such cases that true plague gives warning of its advance, and it would be well were all medical practitioners to accept the warning, and to deal as promptly with non-venereal bubos (at the present time, at all events) as did Mr. Baldwin at the West London Hospital.

INDIA.

The plague mortality for all India for the week ending October 26th stood at practically the same figure as during the week ending October 19th, there being only a very slight decrease. During the former week the plague deaths numbered 8,372. In the city of Bombay there has been an increase in the number. During the week ending October 26th, 101 persons died of plague, compared with 171 during the previous week. Although during the week in question the general death-rate of Bombay is lower than it has been for three months plague exists in almost every section of the city. In Poona, on October 29th, 30th, and 31st, the number of fresh plague cases were 19, 24, and 21, and the number of fatal cases 21, 12, and 18 respectively.

CAPE OF GOOD HOPE.

Port Elizabeth was the only town in the Cape Colony affected by plague during the week ending November 9th. At Port Elizabeth 1 European, 1 natives, 1 native in naval and military employ, and 1 native in the Fremount camp developed plague. One European and 2 natives died of plague at Port Elizabeth during the week ending November 9th.

MAURITIUS.

During the week ending November 14th 83 cases of plague were reported in Mauritius, and 56 deaths from the disease.

# ASSOCIATION INTELLIGENCE.

## Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

## LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

## BRANCH MEETINGS TO BE HELD.

Metropolitan Counties Branch: South London District.—The next meeting of this District will be held in the Court Room, at St. Thomas's Hospital, on Thursday, November 28th, at 4.15 P.M. Dr. Box will read a paper on Some Points in Connection with Ulceration of the Stomach and Duodenum. Cases of clinical interest from the wards of the Hospital will be shown by members of the staff.—Maurice Craig, Bethlem Royal Hospital, S.E., Honorary District Secretary.

Bath and Bristol Branch.—A meeting of this Branch will be held at Bath on Wednesday, November 27th, at 7.30 P.M., G. C. Tayler, M.D., President. The following communications are expected:—Mr. G. S. Pollard: The Tuberculin Test in Cattle.—Mr. Charles E. Flemming (specimens): (*a*) Pulmonary Artery Perforated by Needle; (*b*) Cancer of Œsophagus involving left Bronchus; (*c*) Peritoneal Tumour involving Pylorus; (*d*) Gall Bladder impacted with Gall Stones.—Dr. T. Wilson Smith: Some Problems of Medical Treatment.—Mr. W. M. Beaumont: Some Cases of Ptosis.—W. M. Beaumont (Bath), J. Michell Clarke (Clifton), Honorary Secretaries.

South-Eastern Branch: East Kent District.—The next meeting of this District will be held at the Kent and Canterbury Hospital on November 28th, at 3 P.M., Dr. C. Kessick Bowes, of Herne Bay, in the chair. Agenda:—Dr. Latter: The Assumption of Medical Knowledge by the Laity and its Tendency.—Dr. Whitehead Reid: Appendicitis.—Mr. Raven: Experiences of Small-pox. All members of the South-Eastern Branch are entitled to attend these meetings and to introduce professional friends.—Thos. F. Raven, Barfield House, Broadstairs, Honorary District Secretary.

Staffordshire Branch.—A meeting of this Branch will be held at the North Stafford Hotel, Stoke-on-Trent, on Thursday, November 28th, the President, Mr. W. H. Folker, will take the chair at 4 P.M. Agenda: Exhibition of Living Cases.—Discussion, The Treatment of the Mother during the Puerperium, to be opened by Dr. Hatton.—Discussion, Lead Poisoning in the Potteries, to be opened by Dr. McAldowie.—Paper, The Condition of the Gums in Leadworkers. Mr. F. Shufflebotham.—Exhibition of Pathological Specimens, etc. Dinner 6.30 P.M., charge 5s.—G. Petgrave Johnson, Stoke-on-Trent, General Secretary.

South-Eastern Branch: East Sussex District.—The next meeting of this District will be held at the Grand Hotel, Eastbourne, on November 29th, at 4 P.M., Dr. A. Harper in the chair. Dinner at 6 P.M.; charge, 6s. without wine. Notice of intended communications should be sent to J. W. Batterham, M.B., Honorary District Secretary, 3, Grand Parade, St. Leonards.

## BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

The second ordinary meeting of the session was held in the Birmingham Medical Institute, on November 14th, Dr. E. Malins, President, in the chair. Thirty-nine members were present.

*Confirmation of Minutes.*—The minutes of the previous meeting were read, confirmed, and signed.

*The late Mr. Vincent Jackson.*—On the motion of the President, it was resolved:

That this meeting hereby records its sense of the great loss sustained by the Branch in the death of Mr. T. Vincent Jackson, a past President, and for many years a valued member of the Council; and it begs to offer its sincere condolence to Mrs. Vincent Jackson and the other members of Mr. Jackson's family in their bereavement.

*Town Member of Council.*—The President announced the election of Mr. H. Eales as a Town Member of the Council.

*Country Members of Council.*—The following gentlemen were nominated for the two vacancies, namely, Dr. E. Deanesly, Mr. J. F. G. Pietersen, Dr. R. Shiels, and Dr. T. W. Thursfield. Mr. A. Loxton and Mr. Smallwood Savage, were appointed scrutineers, and upon their report of the ballot the President declared that Dr. T. W. Thursfield and Dr. E. Deanesly were duly elected.

*New Member.*—Mr. Alfred Alexander, L.R.C.P., M.R.C.S., Wellesbourne, Warwick, proposed by Mr. Morrison, was elected a member of the Branch.

*Ovarian Cyst.*—Mr. John W. Taylor showed an ovarian cyst, removed by vaginal cœliotomy from a patient who had been in labour for eight hours. The tumour was filling the pelvis, and the head of the child therefore remained above the brim. Immediately after the operation was over delivery was effected by forceps while the patient was still unconscious, and the operation area was cleaned and dressed before the patient was replaced in bed. Both mother and child did well.

*Retroperitoneal Cyst.*—Mr. Taylor also showed a retroperitoneal cyst removed from a single woman, aged 43, who had a history of tumour extending over several years. The tumour was in the position of a distended gall bladder, and was accompanied by occasional attacks of violent pain and vomiting. On abdominal section, it was found that the tumour was behind the peritoneum, and after incising the posterior layer of this membrane, it was dissected and enucleated from its bed with scissors and fingers. It was especially attached to the aorta and vena cava, and part of the dissection had to be carried out under considerable difficulty. The cyst was removed entire, and the patient made a good recovery. As far as could be ascertained after removal, it appeared likely to have started from remains of the mesonephron, and therefore to have been congenital in origin.

*Vermiform Appendices.*—Mr. Jordan Lloyd showed two vermiform appendices illustrating the variation in size of this structure as met with in surgical practice, one being 6 inches long and nearly an inch in diameter, and the other about 1 inch in length with a diameter of a quarter of an inch. Both had been successfully removed by operation from young patients during an interval between attacks. The larger appendix swung free in the peritoneal cavity, was readily found and easily dealt with; the smaller, on the other hand, was buried beneath the peritoneum, and was discovered with difficulty.

*Strangulated Ovarian Cyst.*—Mr. George Heaton showed a large unilocular cyst of the ovary, which had undergone acute strangulation owing to torsion of its pedicle. The cyst and Fallopian tube were intensely engorged, and their tissues full of extravasated blood. The specimen was removed by abdominal section from a little girl, aged 9 years.

There was a history of several previous attacks of abdominal pain, but no tumour had ever been noticed until the present attack. This began five days previous to the operation with abdominal colic, vomiting, and great hypogastric tenderness. The cyst, which grew from the left ovary, lay in the right iliac fossa, and formed a tender tumour resembling an appendical swelling. There was some difficulty at the operation in ligaturing the pedicle—as it sprang from the left side of the pelvis—through an incision in the right side of the abdomen. The child made a rapid and uninterrupted recovery. The pedicle was twisted 4½ times round its own axis.

*Hydronephrotic Kidney.*—Mr. Barling showed a specimen of hydronephrosis removed from a gentleman aged 35, who had in the first instance symptoms suggestive of biliary colic.

The abdomen was explored and the absence of gall stones determined, and it was then found that the right kidney was very movable. Through the lumbar incision the kidney, the pelvis of which was very much dilated, was stitched firmly to the muscles and aponeurosis. A speedy recovery followed, but in a few weeks there was an intense attack of pain in the old region and a very large hydronephrosis followed. As this persisted and entirely disabled the patient for his work nephrectomy was performed.

The ureter was narrow at its attachment to the pelvis of the kidney, and it was so attached that when any considerable amount of urine was contained in the pelvis the ureter was compressed by it; there was also an abnormal renal artery.

*Cystic Kidney.*—Mr. Barling also showed a very large specimen of this condition removed from a middle-aged woman, who had suffered from intense pain in the left lumbar region, from frequent and painful micturition, and who had passed three small calculi some time before. As it appeared that a rapid enlargement of the kidney had taken place, hydronephrosis was diagnosed, probably from calculus plugging the

ureter. There was suspicion that the right kidney was also somewhat enlarged.

When the left kidney was explored through the loin a large hydronephrosis was discovered and a multiple cystic condition involving the kidney, but no calculus was found. As the kidney was obviously doing no work, it was considered wiser to remove it than to leave it. It measured about 13 inches in length by about 5 inches across and through. A very good recovery followed the operation, and the excretion from the other kidney was for ten days much greater than before the operation, for a few days being double in quantity, whilst the specific gravity remained the same.

It was quite evident that the right kidney had increased in size since the patient's admission to hospital.

*Uterine Myoma Removed by Vaginal Hysterectomy.*—Dr. SMALLWOOD SAVAGE showed a specimen which he had removed from a patient, aged 32, in May, 1901.

She had been married eleven years, and had had two children, ten and four years ago. Her history was that for two-and-a-half years she had suffered from profuse hæmorrhage which had produced profound anæmia. On examination a hard tumour was felt to be situated in the anterior uterine wall and displacing the fundus backwards, the tumour being about the size of one's fist. Vaginal hysterectomy was performed, from which the patient made a good recovery.

The tumour was a hard firm myoma situated in the anterior wall of the uterus.

*Council Meeting.*—Several members referred to the business on the agenda paper of a forthcoming meeting of the Council, but no resolution was adopted.

OTHER COMMUNICATIONS.

Mr. ARTHUR LOXTON showed a woman suffering from scleroderma of the abdomen.—A paper on Motor Insufficiency of the Stomach and its Treatment was read by Dr. A. H. CARTER.—Mr. WILLIAM THOMAS had been announced to read a paper on Faulty Ankylosis of the Knee after Excision in Childhood, under the following headings: Excision of the knee in children is usually a very successful proceeding, the patient recovering with a stiff but useful limb. It is, however, frequently followed by steadily-increasing flexion of the knee until a very faulty position is attained. This appears in many cases to be due to abnormal increase in the development of bone anteriorly. Brief histories of four cases bearing out the above. Photographs of cases, and portions of bone removed in correcting the deformity, will be shown. Owing to the length of the previous proceedings, it was resolved, with Mr. Thomas's consent, "That Mr. Thomas be thanked for his paper, and that it be taken as read."

## SYDNEY AND NEW SOUTH WALES BRANCH.

THE regular monthly meeting of the Branch was held at the Royal Society's Room Sydney, on August 30th, Dr. FOREMAN, President, in the chair. There were eighty-five members present.

*Minutes.*—The minutes of the previous meeting were read and confirmed.

*New Members.*—The PRESIDENT announced the election of the following gentlemen as members: Drs. J. H. Phipps and P. R. Boelke, and the nomination of Drs. Nolan and Charles Ayres.

*Manchester Unity Lodge.*—A letter was read from the medical men in Inverell with reference to the Manchester Unity Lodge.—A vote of sympathy and support was carried by acclamation.

*A Question of Privilege.*—Dr. WILKINSON raised a question of privilege, and moved:

That in the opinion of this meeting the editor of the *Australasian Medical Gazette* is in duty bound to publish in the editorial columns a full apology for the gross inaccuracies and unjust and misleading comments contained in the first editorial of August 21st, 1901, dealing with Dr. Wilkinson's paper on the Climate of the Coast of New South Wales in Relation to Pulmonary Tuberculosis.

—Dr. W. E. WARREN seconded the resolution.—The PRESIDENT ruled the motion out of order.—Dr. WILKINSON dissented from the ruling of the chair, and on the motion dissenting from the ruling of the chair being put to the meeting it was defeated.

*The Australasian Medical Gazette.*—Dr. HANKINS moved:

That Dr. G. E. Rennie be the editor of the *Australasian Medical Gazette*.

Dr. BEESTON proposed:

That the election of editor be adjourned until a ballot can be obtained of all the members of the Branch.

—Dr. TODD asked whether Dr. Beeston's motion was in order as it was contrary to the Articles of Association. The CHAIRMAN ruled the resolution out of order. Dr. BEESTON proposed:

That the election of the editor be postponed for two months.

—Dr. WILKINSON seconded. The postponement was agreed to.

*Communications.*—Dr. POCKLEY exhibited for Dr. CRAIG a case of colloid degeneration of both optic discs in a man, aged 37.—Dr. POCKLEY showed a case of injury to the eyeball in a girl.—Dr. HANKINS exhibited a patient on whom he had performed the operation of complete extirpation of the larynx for epithelioma in December last.—Dr. SYDNEY JAMIESON made the following demonstrations:—(1) Demonstration of various pathogenic and saprophytic micro-organisms on potato medium. (2) Microscopic demonstration of Fraenkel's pneumococci in pericardial exudate, and film of same organism grown in blood agar. (3) Demonstration of pathological specimens: (*a*) extensive intussusception of greater portion of ileum through ileo-cæcal valve; (*b*) secondary sarcomata of the lung, showing extensive hæmorrhages into substance of growth; (*c*) kidney from case of sewer-gas poisoning, showing vermilion red discoloration from carbonic oxide hæmoglobin; (*d*) large mucous polypus of naso-pharynx removed by Dr. Brady. All the above preparations were prepared by the formalin soda sulphate process to retain natural colour changes.—Dr. CLELAND exhibited a fœtus with tube and placenta removed by Dr. Foreman.

A SPECIAL general meeting of the Branch was held at the Royal Society's Room, Sydney, on September 20th. Dr. FOREMAN, President, in the chair. There were fifty-three members present, and two visitors. The circular convening the meeting was read by the HON. SECRETARY.

*The Appointment of Editor.*—The PRESIDENT called upon Dr. Beeston to move the resolution.—Dr. BEESTON proposed the following resolution:

The editor of the *Gazette* shall be elected by a ballot of all the members of the Association, etc., the ballot to be taken in the same manner as in the election of officers, as provided in Article 39.

—This was seconded by Dr. GORMLEY.—The resolution was negatived—personal votes for, 11; proxies, 46; total, 57. Against—personal votes, 30; proxies, 64; total, 94.—Dr. HANKINS proposed:

The omission of all the words after the word "be" in line 14, with a view to the insertion of the words "appointed by the Council."

—Dr. TODD seconded the resolution.—Drs. SYDNEY JONES and MILLS supported and Dr. BEESTON opposed the resolution, which was carried.—Dr. BEESTON consented to hand in his proxies in support of the resolution so that the necessary three-fourths majority could be obtained.—The result of the voting was—personal votes for, 36; proxies, 110; total, 146. Against, personal votes, 3.—Dr. HANKINS proposed a vote of thanks to Dr. Beeston, carried by acclamation.

## METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

THE first meeting of this District for the session 1901-2 was held in the London Temperance Hospital on November 13th, Dr. HOOPER MAY, Vice President, in the chair.

*Confirmation of Minutes.*—The minutes of the last meeting were read and approved.

*The Diagnosis and Treatment of Mastoid Disease.*—A paper on this subject was read by Mr. HERBERT CARSON, who gave a short account of the anatomy of the mastoid, with special reference to the antrum and its relations, and then discussed mastoid disease as it occurred secondarily to middle-ear trouble. The comparative frequency of mastoid involvement in middle-ear disease and the necessity for early diagnosis were emphasised. For the purpose of diagnosis mastoid cases were divided into (1) obvious and (2) obscure cases, and the symptoms of a straightforward acute case were given. Four cardinal signs were laid down—(1) pain, (2) mastoid tenderness, (3) rise of temperature, and (4) changes in the meatal wall. With regard to the last, special stress was laid on the importance of differentiating between mastoid disease and furunculosis, and the means of diagnosis pointed out. The signs and symptoms of cerebral and cerebellar abscess, extradural abscess, and lateral sinus thrombosis were given, and certain other complications such as facial paralysis, mastoid fistula, and cholesteatoma were included among the so-called "obvious" cases. The signs and symptoms of obscure cases were given, and the danger in these cases of cerebral complications emphasised. The various forms of mastoid involvement and complications were illustrated by the notes of cases under Mr. Carson's care. Stress was laid on the importance of a thorough examination of the whole body, especially with a view

to differential diagnosis and prognosis, and the main features were summed up under the head of methods of examination. The treatment was considered from the point of view of expediency rather than of operative detail, and a thorough exposure, with drainage of the antrum, was advocated. Taking the complete radical mastoid operation as the present-day ideal, its advantages and disadvantages were considered, the latter being considered from the point of view of subsequent hearing, protracted convalescence, and the risk of injury to the facial nerve, semicircular canal, etc. In the opinion of Mr. Carson, these were counterbalanced by the fact that the whole area of disease could be eradicated, recurrence was well-nigh impossible, and unsuspected complications could be noted and promptly treated. The paper was illustrated by dissections and specimens, and the instruments used in the operation were demonstrated.—A discussion followed, in which Dr. Hooper May, Dr. Porter Parkinson, Dr. Macevoy, Dr. Addinsell, and Dr. Collins took part; and Mr. Herbert Carson replied.

*Demonstrations.*—Some beautiful pathological specimens were exhibited by Dr. Herbert Rhodes, resident medical officer, and the members were conducted over the hospital by Dr. Collins, in whose wards many most interesting cases were seen.—Dr. Parkinson and Dr. Addinsell also showed cases of interest.

*Votes of Thanks.*—A vote of thanks to Mr. Herbert Carson was moved by Dr. Macevoy, seconded by Dr. Norman Meachen, and cordially passed; as well as a hearty vote of thanks to the Staff and the Governors of the hospital for their kind hospitality and courtesy, on the motion of the Chairman, seconded by the Honorary Secretary.

### EAST YORK AND NORTH LINCOLN BRANCH.

The second winter meeting of the Branch was held at the Royal Infirmary, Hull, on November 15th.

*Confirmation of Minutes.*—The minutes of the previous meeting were read and confirmed.

*New Members.*—Messrs. A T. Sissons, M.B., Ch.B.Vict., J. Macnidder, M.B., C.M.Edin., and Miss L. Martindale, M.B., B.S.Lond., were elected members of the Branch.

*Communications.*—Miss Murdoch showed a case of cretinism in a child after ten months treatment with thyroid, with marked improvement.—Dr. Eve showed 3 interesting nervous cases, namely: (1) Amyotrophic lateral sclerosis with optic atrophy; (2) disseminated sclerosis; (3) cerebellar tumour. An extensive discussion on these cases arose, in which Drs. Milburn, Howlett, Nicholson, Lowson, Pigeon, Evans, and Waters took part.—Dr. Lowson showed a specimen of cancer of the body of the uterus.—Mr. Howlett showed a specimen of traumatic sarcoma of the femur.—Dr. Eve showed a specimen of a foreign body 2¼ inches long (a piece of tripe) which had lodged at the bifurcation of the trachea causing sudden death.—Dr. Hainworth showed a large tuberculous sequestrum.—Dr. Waters showed an appendix removed by operation, prior to which it was thought nearly certain that pus was present; the specimen showed intense inflammation almost resulting in gangrene.—Dr. Lowson read a paper on imperforate anus, illustrated by a case in which the rectum opened into the vagina by a fistula, the anus being absent. The operation consisted in making an incision in the situation of the anus, after which the end of the gut was found, the fistula detached from the vagina, and the gut opened and brought down to the normal situation of the anus. Dr. Lowson reviewed the different varieties of the deformity, and concluded by enumerating the various theories which account for the condition. On account of the lateness of the hour the remainder of the agenda was adjourned to the next meeting. Eighteen members were present.

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The autumn dinner of the Irish Medical Schools' and Graduates' Association will take place in the Victoria Hall of the Hotel Cecil on Wednesday, November 27th. We are asked to state that applications for tickets should be made at an early date to Dr. J. H. Swanton, 40, Harley Street, W.

At the dinner of the Glasgow University Club in London, which, as already announced, will be held on Thursday next, at 7 P.M., at the Hotel Cecil, under the chairmanship of Dr. Heron, Sir James Crichton-Browne will reply to the toast of the guests.

# SPECIAL CORRESPONDENCE.

## SOUTH WALES.

*The Prevention of Tuberculosis.—Plague Precautions at Cardiff.*

Since the meeting on October 3rd, when a South Wales Branch of the National Association for the Prevention of Tuberculosis was formed, the time has been mainly occupied with the preliminaries necessary for active work. Several committees have been formed from the executive, and at the first meeting of the General Purposes Committee on November 15th at Bridgend the objects of the branch were more clearly defined. These may be briefly described as those of the central organisation, with a few minor alterations, while the formation of local sub-branches was indicated as desirable and to be advocated. The secretary was empowered to obtain subscriptions, only a few of which have been received; to consider the question of the formation of sub-branches and to receive the reports of the Committees. Dr. Isambard Owen's speech at the Congress at Cardiff on October 3rd has been printed gratuitously by the *Western Mail* newspaper; 100,000 copies are now available for circulation.

The precautions against plague have never been completely relaxed since the last case of that disease in Cardiff in February last. Thus, although Cardiff enjoys a considerable trade with Liverpool and Glasgow, it has not been thought necessary to take any added special precautions. The extermination of rats arriving by ship and those on the quay has been steadily persevered with, and large numbers are thus got rid of. Ships from all plague-infected ports are medically inspected, while at the Flat Holm island there is a small isolation hospital kept specially for cholera or plague cases brought into the port.

## INDIA.

*Rats and Plague in Calcutta.*

The reports of the different district officers in charge of plague work in Calcutta in the last annual report on the subject contain some very interesting facts concerning the connection between rats and plague. Thus in the northern division of the town the most striking feature of the epidemic of 1901 was the marked intensity of the outbreaks in dal and grain godowns, all of which suffered more severely than in the previous year, while coolies working in these apparently carried the infection to other places. Further, in many other affected bustees grain was stored in some part of them, while the grain godowns often showed a rapid sequence of groups of cases unparalleled in other bustees, however filthy. Further, the masonry houses around these grain godowns suffered much more from plague than did similar residences in other parts of this division. In a single lane of grain sheds about 40 yards in length no fewer than 1,000 rats were removed during disinfection operations, over 600 of which were found dead. There was a definite history of rat-mortality before the first case of plague in this instance. An example is also given of a very marked reduction of the plague cases this year in a bustee from the back of which some grain sheds had been removed since last year. Again in the next division of the native town it is recorded that "the causal connection between rat and human plague is more plainly marked than in 1900 even. In every street or bustee in which rats were found to be dying of plague, the rat-mortality preceded the human." Once more, in the southern division—also a native part—in the worst affected locality most of the cases found in the bazaar have been in grain shops, while two other bazaars appear to have been infected from this one. It is also noted that "it is no uncommon occurrence to find a plague patient lying on sacks which are full of grain." This marked association between the disease and grain godowns is of special interest in connection with the extensive disinfection of whole infected groups of huts in the months of sporadic prevalence of the disease between the last two epidemic periods. Although there were a larger number of cases during this year's outbreak than in the previous one, still the disinfection may possibly have had some

effect in preventing a still more severe prevalence of plague. If this is so it is evident that the good effect was limited to the parts at a distance from the grain godowns, as around the latter the disease was worse than in former years, while it is acknowledged that it was found impossible to disinfect these grain stores. The frequent, and in one division invariable, death of rats before the recurrence of human infection points strongly to these animals as the carriers of the disease germs, and the whole of the facts appear to be explicable on the hypothesis that during the quiescent intervals between the epidemic periods the contagium vivum may remain latent among such of the more resistent rats as have survived the previous epidemic prevalence until a sufficient number of generations of strongly susceptible rodents have again appeared to allow of another epidemic arising among them. This will be followed by one among man, those living near the homes of the majority of the rats in grain godowns being most affected, the whole cycle of events occupying somewhere about a year. The failure of the extensive disinfections to lessen the annual epidemic is thus easily explained on account of its not touching the rats. As the experiment of wholesale disinfection is not to be repeated this year, attention might well be directed to cleaning out the grain godowns, in some parts of the town at any rate, and providing for the storing of it in paved and masonry buildings, from which rats could be excluded more easily than under the present conditions.

## SYDNEY.

*The Prevention and Treatment of Consumption.—Death of Dr. H. G. A. Wright.*

THE subject of the prevention and treatment of pulmonary tuberculosis has been prominently before the profession and the public recently. The annual meeting of the subscribers to the Queen Victoria Memorial Homes for Consumptives was held under the presidency of the Mayor, Sir James Graham, M.D. The report of the Executive Committee stated that the work principally carried on during the year had been at the Home at Thirlmere, where there are 40 beds available, of which 13 are for females and 27 for males. During the year 112 patients had been admitted to the Home and 104 had been discharged. Of the latter 74 had been benefited, 29 unrelieved, and 11 had died. Thirty-six patients were remaining in the institution and 14 were awaiting admission. The average cost per bed was £35 11s. 3d. As far as possible discrimination was made amongst the applicants for admission, and only those who were likely to be so much improved as to be able to resume work were selected to fill the vacancies as they arose. A subcommittee had been appointed to visit different parts of the country with a view of securing a suitable site for the erection of a sanatorium. It was agreed to endorse the recommendation of this Committee to purchase the property of Mr. Kelso King at Wentworth Falls on the Blue Mountains, and also to ask the State Government to give a piece of Crown land at Katoomba for the erection of another sanatorium when the funds will allow. It is highly satisfactory that at last definite steps are to be taken to provide the open air treatment for the poor consumptives of this State, as it is now four years since the movement was first started at a public meeting held in the Town Hall under the presidency of Lord Hampden, the Governor of the Colony at that time. Another public meeting has since been held in the Town Hall, the Mayor, Sir James Graham, presiding, for the purpose of impressing upon the State Government the necessity of providing a special hospital for cases of consumption in an advanced stage. The meeting was called at the instance of the staffs of the metropolitan hospitals, who have long recognised the insufficiency of accommodation for the cases of pulmonary tuberculosis which present themselves so often for admission at the ordinary hospitals. At the present time, unless the phthisical patient is suffering from some complication, he is not eligible for admission to the general hospitals, and the only accommodation provided for this class of patient is the consumptive ward at the Asylum for the Destitute at Liverpool, where there are some 90 or 100 cases of pulmonary tuberculosis in all stages of the disease. The meeting was addressed at length by the Mayor, who took occasion to refer with pride to the fact that at the recent Congress on Tuberculosis in London, Professor Brouardel mentioned that at Sydney persons were fined £1 for expectorating in the streets. He also referred to the methods of prevention at present adopted by the sanitary staff of the City Municipal Council under the direction of Dr. W. G. Armstrong, the city health officer. Although that body has no legal powers to enforce its requests, it has nevertheless hitherto been able to enlist the sympathy of most medical men and householders. When a death from tuberculosis is notified to the city health officer the disinfecting staff is sent to the house, and every assistance is rendered to the householder to secure an efficient disinfection of the premises. Drs. Sydney Jones, Jamieson, Mills, and others in addressing the meeting referred to the ways in which the disease is spread, and the danger of infection. Two practical resolutions were carried at the end of the meeting, the first being that a deputation of medical men and laymen be appointed to wait upon the State Premier to urge upon him the necessity of the State providing a suitable hospital for the treatment of cases of tuberculosis in an advanced stage; the other resolution was that an association for the prevention of tuberculosis be formed on the lines of the National Association for that purpose in England. Dr. Gregory O'Neill was appointed interim secretary.

Dr. H. G. A. Wright, one of the oldest medical practitioners in Sydney, died recently at the age of 74 years from angina pectoris. He was in practice almost up to the moment of his death. He was the first to render assistance to the late Duke of Edinburgh when he was shot by a Fenian near Sydney in 1868. Dr. Wright was the first Treasurer of the New South Wales Branch of the British Medical Association, and for many years and up to the time of his death was Treasurer of the Royal Society of New South Wales.

## HONG KONG.

*Report by the Medical Officer of Health on the Epidemic of Bubonic Plague during the Half Year ended June 30th, 1901.—Experiments with Danysz's Virus Contagieux.*

DR. CLARK has published his report on this year's epidemic of bubonic plague, including only cases which occurred down to June 30th. The total number of cases reported was 1,488; Europeans numbered 26, Chinese 1,415, the remaining 47 being other Asiatics. No doubt, however, a larger number of cases developed in the colony, as a large number of Chinese left as soon as they felt at all ill, some of whom showed unmistakable signs of the disease on arrival at Canton and its neighbourhood. The death-rate among Europeans was 34.6 per cent., while among the Chinese it was 97.2 per cent., and among the other Asiatics 68.1 per cent., the average total mortality being 95.2 per cent. This high rate is largely accounted for by the fact that 21.7 per cent. of the Chinese cases were dead bodies found in the streets or in the harbour. The death-rate among the Chinese admitted to hospital was 88.5 per cent. as against the general Chinese mortality of 97.2 per cent. This fact, if properly appreciated by the Chinese, would show them that admission to hospital is for their advantage. The death-rate during each epidemic has been as follows:

| Year ... ... ... ... | 1894. | 1896. | 1898. | 1899. | 1900. | 1901. |
|---|---|---|---|---|---|---|
| Percentage mortality ... | 92.7 | 89.5 | 89.0 | 96.1 | 95.5 | 95.2 |

Dr. Clark remarks that most of the European cases during the present epidemic have been more or less directly associated with the finding of dead rats upon the premises, although it must be admitted that many dead rats have at the same time been found in European offices and dwellings in which the disease has not broken out. Several of the European cases occurred amongst those who came into contact with large numbers of Chinese in the course of their duties. The case of an employee of the Naval Yard, who had been more or less in ill-health since he arrived in the Colony a year previously, is of special interest. A large number of Chinese are employed in the Naval Yard, some of whom had died of the disease, and it is believed that the infection from which he died was contracted from one of them. This man

would appear to have infected the buildings in which he resided, as subsequently 3 other cases occurred there among Europeans, all of whom recovered. On the day following the report of the above case another European employee at the Naval Yard was reported to be suffering from plague, and in the block of buildings in which he resided 4 other Europeans cases subsequently occurred, 1 being the wife of the first patient, and 2 of the others being husband and wife. One European who had resided there, and 1 Asiatic Portuguese who had been employed there, also contracted the disease. There were also 3 Chinese cases in this block of buildings, 1 of which occurred two days previous to the first European case. Of the above 6 European cases only 1 died. Chinese women have suffered much more severely than the males, owing probably to the fact that they remain in their houses much more than the men; among the non-Chinese women there was no great excess of cases over the non-Chinese men. The number of cases among Chinese children under 15 years of age was 373, or 26.4 per cent. of the total Chinese cases, while the proportion of children under this age is only 17.2 per cent., thus showing that children are very liable to contract this disease. The mortality among these children was 97.8 per cent. Of the total cases, 21.7 per cent. were dead bodies of Chinese found in the street or floating in the harbour. The number of such cases occurring yearly without known addresses, coupled with the number of sick persons who leave the Colony in the early stages of the disease, afford a ready explanation of its annual recurrence, for many infected houses must of necessity remain undisinfected, and the only possible remedy is a thorough house-to-house cleansing and disinfection after the epidemic is at an end. The decrease in the number of cases as soon as the mean weekly temperature exceeded 80° F., was noted this year as in former years. A very rapid rise in the rat mortality antedated the epidemic outbreak of bubonic fever by several weeks. Further, the maximum rat mortality was reached on the twentieth and twenty-first weeks, while the number of cases of bubonic fever reached its maximum in the twenty-second week. Of 30 men engaged in collecting rats, 7 died of bubonic fever, while 5 others left the Colony because they were sick, and 2 of these are said to have died. The total number of rats paid for during the half-year was 48,000. Dr. Clark strongly urges house-to-house visitation before the disease becomes epidemic, when only a few sporadic cases are being reported. Disinfection of infected houses has been efficiently carried out by Inspector Reidie, whose work in connection with epidemics of plague deserves the highest praise.

In an appendix to the report an account is given of experiments with Danysz's *virus contagieux*. Of ten rats used in connection with the first experiment, six have died presumably as the result of the infection; while of fifteen rats used in connection with the second experiment, thirteen have died after infection. As a counter experiment several rats have been kept under similar conditions, but not infected by the virus, and these were found to remain healthy. The period which may elapse between the date of infection and death varies from two to twelve or thirteen days, and not infrequently healthy rats will not touch the dead bodies of the infected ones. The proposal is to feed healthy rats on the virus, and then to let them loose again in the hope that they will die of the infection, and that other rats will feed on their dead bodies, and will thus become themselves infected. Dr. Clark, however, does not advise the adoption of the plan on an extensive scale, as no control can be exercised after the infected rats are set loose, and they are likely to cause a nuisance by dying in private houses.

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The Post-Mortem Examination of Czolgosz's Body.—The *post-mortem* examination of the body of the assassin of President McKinley was made by Dr. Carlos F. Macdonald, the expert alienist, and ex-President of the New York State Lunacy Commission; Dr. E. A. Spitzka, of New York; and Dr. Gerin, the physician to Auburn Prison, in which the execution was carried out. After a three hours' careful examination of all the bodily organs, they all agreed that the condition of all the organs, including the brain, was perfectly healthy. They declared that the brain was even slightly above the normal standard.

# CORRESPONDENCE.

## THE REPORT OF MR. BRODRICK'S COMMITTEE.

Sir,—I have hitherto refrained from fully expressing my views on this astonishing document because I hoped that by this time some authoritative statement would have been made by the Committee of the British Medical Association, which has been considering it. Now, however, a letter from abroad convinces me that in the absence of any such statement, and with Sir Frederick Treves's mistaken communication before us, I should do wrong to withhold my opinion. It may be but little that an individual member of the profession can do to help those of his brethren who cannot help themselves, but perhaps the statement of conclusions deliberately arrived at by one who has given considerable attention to the question of army medical reform during the past eight years may not be without effect at the present very serious juncture.

In stating my opinion I shall do so unreservedly, because I believe the occasion calls for frankness, and I cheerfully leave the good sense of the profession to decide whether I speak unfairly or at random.

### *The Scheme is Unworkable.*

The first thing that strikes one about the scheme embodied in this report is the amazing incapacity of which it is the evidence. It is slovenly and incomplete. It reflects no credit on those medical men who signed it without protest, and makes evident the fact of their want of knowledge of the subject. Acquainted only with one aspect of the case, as civilian surgeons at the seat of war, they did not possess the leisure requisite to inquire into essential details, the mastery of which can only be gained by devotion of much time and labour. The two of the civilian members of the Committee who dissented from its provisions were just the two best qualified to speak on the subject. The scheme as it stands is simply unworkable, if indeed one can call it a "scheme" at all. It is a jumble of good, bad, and indifferent, in which trivialities are emphasised and essentials omitted.

But the discredit of such a production does not attach to the medical profession. The scheme was not prepared by the profession; the profession had not even a share in drawing it up. The Committee was appointed to consider a scheme already prepared, and the functions of the medical members of the Committee would appear to have been limited to graceful acquiescence.

The Secretary of State for War had before him ample information on the much-needed reforms compiled by medical men. He appears not to have used it. He was offered the evidence of medical men who have devoted much time and labour to the subject. He refused to receive it. To him therefore attaches the responsibility for this wonderfully bad piece of work. How serious that conclusion is will be generally recognised, but there is another aspect of the question which will probably be considered to be more serious still.

### *The Scheme is not in accordance with the distinct previous Understanding.*

On reading the report, it at once strikes one as curious that so many reforms are advocated which have never been asked for, and that so many changes which have been asked for are not even alluded to, whilst it is absolutely startling that such a provision should have been inserted as that referring to failure in the examination after eighteen years service.

This provision is so extraordinary that one cannot but question the mental attitude of its originator. As it stands, this provision must obviously wreck the whole scheme. That is a matter of common sense. No sane man will enter a service where such unfair possibilities may ruin an honourable and arduous career. If applied to a new generation of army medical officers it will be highly inequitable. If made retrospective it will be absolutely iniquitous. But to a War Office which made a scapegoat of its Director-General for its own shortcomings, all things are possible.

It has been said that this scheme has been drawn up in order to give England a good Army Medical Service. I am sorry to say that I do not believe it. If one reads it on that understanding it is incomprehensible. But there is another

way of regarding it, by which it becomes only too comprehensible. If it is read as a scheme for securing a considerable number of needy incautious men, and, having got them, for keeping them in helpless subjection to the military authorities, then the scheme will be seen to fairly achieve its purpose. Viewed in that way and in no other can its extraordinary peculiarities be explained. There is indeed in this report much food for serious reflection.

*The Medical Profession should draw up its own Scheme.*

The Army Medical Service is in a most unsatisfactory state, and much valuable time has already been squandered over this Committee and its report. It must surely now be evident to medical men that the reform of the Army Medical Service must come from the medical profession itself. No one else understands what is wanted, no one else will put it fairly before the public. I would suggest that a special committee be appointed by the British Medical Association to draw up a scheme which shall meet the necessities of the case, and to lay it before the country. I would further suggest that this should be done without delay. The Association has ample means of information, as well as ample knowledge already acquired, and is perfectly competent to undertake the task. Its last step in this matter—the formation of an Army Medical Corps with military rank and title—has been more than justified by the experience of war. Personally, I think this is a duty which devolves on the Association.

*Meanwhile.*

Meanwhile I would say to those gentlemen who, as I hear, are speculating with the careers of their pupils by advising them to leap in the dark into this wonderful new service. "Instead of making statements which cannot yet be substantiated, hand your students the report of Mr. Brodrick's Committee and let them read the conditions attaching to the examination after 18 years service."—I am, etc.,

Exeter, Nov. 19th. W. GORDON.

SIR,—Numerous criticisms have appeared on the proposals of Mr. Brodrick's Committee, all of them more or less hostile to the scheme, with the exception, of course, of those of Sir Frederick Treves and Dr. Fremantle, both of whom naturally back it up, and practically invite the profession to accept it and trust to the generosity of the War Office to make the crooked paths straight.

*The Composition of the Original Committee.*

This was faulty in the extreme, in that there was not a single member of it with any experience of administrative medical duties. It may of course be pointed out that Surgeon-General Hooper, I.M.S., was a member. Certainly, but then that gentleman never was an administrative officer, but after many years service in India as a civil surgeon retired as a brigade-surgeon, being granted the local rank of surgeon-general to enable him to take up the appointment of President of the India Medical Board. Lieutenant-Colonel Keogh was the only representative of the R.A.M.C.—quite a junior (comparatively) executive officer, who had never done a day's duty in an administrative capacity. Indeed, if he had had any administrative experience he could never have signed the report of the Committee without protest, as I shall proceed to prove later on. I would also point out that a letter was addressed by the President of Council, British Medical Association, to Mr. Brodrick asking him to hear expert evidence, but this proposal was ignored by the Secretary of State.

*The "Advisory Board."*

I wonder if the civilian members who have accepted office on that Board have duly considered what they have let themselves in for? In addition to the fortnightly meeting at the War Office, where, if they do their duty, they should attend regularly and find an immense amount of detail to work at, they will have "as far as practicable"—a most elastic phrase—to visit and inspect each of the military hospitals in the United Kingdom annually. Roughly speaking, each civilian member of the Board will have from 30 to 40 hospitals to visit yearly. I venture to predict either that the duties of this Board (which is certain to be most unpopular so far as inspections by civilian members are concerned) will either be largely modified, or that after a time no civilian of eminence will be found willing to accept the position. One comparatively junior hospital surgeon said in my presence that he would not undertake the work for £1,000 a year, much less for the £200 promised.

One other point, Who is to take the place of the Advisory Board in the Colonies and India? Are the hospitals there to go uninspected? or will a Board be formed from local practitioners to see that the R.A.M.C. are doing their duty, and that the hospitals are properly equipped? and how if the reports of the Board and those of P.M.O.s of districts are at variance? How far is this principle to be extended to the rest of the Army? Are we to see the pay department inspected by a Board of bankers and chartered accountants, the Royal Engineers by a Board of Civil engineers, the clothing department by a Board of tailors, the Army Service Corps by a Board of carriers, butchers, and bakers, and so on? To be consistent, this is what we should look for at an early date.

*Increase of Establishments.*

Sir Frederick Treves says in his letter of October 30th, paragraph 2, "a very substantial increase in the *personnel* of the R.A.M.C. is rendered necessary." Quite so, but where is the provision for this increase, which ought to raise the service to at least 1,200 executive officers?

Sir Frederick Treves in paragraph 3 says, "the pay is increased and is raised to a standard more in accord with the pecuniary prospects of a medical man in civil practice at the present time." I freely admit that the pay of the junior ranks is increased fairly liberally *in this country and the Colonies:* but nothing has been done to raise the pay in India, or even give the allowances, such as charge pay, granted at home, and if I know the Government of India (and I ought to after thirty years experience of it) not one penny increase to the R.A.M.C. will be given unless forced on it by Parliament. Indeed at the late Council meeting at Simla not only was a increase of strength or pay scouted, but I have it on excellent authority that the military member spoke of the medical services in anything but becoming terms.

*Pay Allowances.*

Let this, then, be a *sine qua non* in any new warrant offered to the profession, that the pay and allowances of all ranks of the R.A.M.C. in India be clearly set forth, not only in rupees but in its sterling equivalent, and let no candidate dream of entering the service till this is clearly and indisputably guaranteed.

As regards the "colonels" R.A.M.C., no increase is granted; they continue to draw £2 a day, with allowances. It is stated that surgeon-generals are to receive £1,500 a year consolidated pay, which at first sight seems a liberal increase on £2 15s. a day *plus* allowances. The pay of a surgeon-general *plus* his allowances and advantages—such as soldier-grooms—comes as nearly as possible to £1,480, which would apparently leave a net increase of £20 a year—not extravagant, but something to be thankful for. Under the present arrangement a surgeon-general pays income-tax on, roughly, £1,000 a year, allowances being free from the tax. By the new scheme he will have to pay income-tax on £1,500 a year, or about £30 a year more than now; this leaves the surgeon-generals about £10 a year to the bad.

*Study Leave and Foreign Service.*

In paragraph 4 Sir Frederick Treves alludes to the liberal opportunities for study and the diminished foreign service which the increase in the corps will secure. When we see this increase we shall be able to concur with him, not till then.

*Promotion by Merit.*

Paragraph 5 is probably the most important of Sir F. Treves's letter, as in it he lays down that "advancement in the service is by professional merit, in distinction to the plan of advancement by seniority. The most speedy promotion falls to the best medical officer." How is this excellence to be ascertained? By examination, says the report. Now, here I join issue with Sir Frederick. I admit freely that examinations have their value; but they are not everything that should be considered in the promotion of

a medical, or indeed any, officer. Power of administration, tact, temper, zeal, knowledge of men and how to deal with them, the power of enforcing respect and discipline, equitation, knowledge of hospital routine, military law, and many other things go to form a successful military surgeon.

It does not at all follow that because a man successfully passes the Fellowship examination of the Royal College of Surgeons, he could organise a field hospital or command a bearer company; yet the smart youngster who can score 85 per cent. of marks is to be given eighteen months seniority and will supersede men older and more experienced who may have lost the facility for answering questions in an examination.

The Army Medical Service has been cursed by examinations for years, and the worst of it was there was no finality, and no one ever knew when some new test would not be sprung on him. As an instance, in 1884 an examination for the rank of brigade-surgeon was suddenly brought out. As one of the then senior surgeon-majors, it fell to my lot to be in the first batch to undergo the test. Three of us (the late Surgeon-General Gore, Surgeon-Major H. Scott, and myself) had to sit in the principal medical officer's office in Dublin Castle for two days to answer all kinds of questions on all kinds of subjects, from bilge water in ships to the amount of jam and bacon to be put on board boats going up the Nile, with military law thrown in as a makeweight. The united ages of these three examinees totalled up nearly 150 years, our service came to 76 years, two of the three were grandfathers, and the third had a grown-up son in the medical profession. The moral of the tale has to come. When that examination was held, I was forty-third Surgeon-Major on the list, and in the ordinary course I could not have expected promotion for from one and a-half to two years whereas I received it in eight months. Out of the 43 but 11 were promoted, 32 either having refused the examination or having failed. Now I know that several of those who were not promoted were far better men than some of those who were, but at the age of 50 the examination facility had passed away, and bilge water and bacon presented difficulties they could not grapple with.

*Pension.*

It may be said the new proposed examinations will not include such aged men. Let us see. A considerable number of the officers commissioned during the past two years have been 30 and even 31 years of age, and it is specially stipulated that civil surgeons who have served in the war may be admitted even if over the limit of age. Thus we see 30 + 18 (the time of service for the final examination) = 48, and though this may be the limit, there will be a large proportion of officers of 45 and over. Officers who fail may have a second trial before they complete twenty years service, and mark what follows. *Should he fail a second time he will be compulsorily retired on a gratuity of £2,500*, though by the special permission of the Secretary of State he may be allowed to complete twenty years service and then retire *on a pension*. The amount of pension is not mentioned—it may be £200 or it may be £365 a year—but the fact remains that the *right to retire* on £1 a day after twenty years service is taken away, and the unfortunate officer who fails to pass has to take £2,500, equal to, say, £100 a year, or trust to the mercy of the Secretary of State to grant him a pension that will enable him to live. It is rather amusing to read in Sir Frederick Treves's final remarks that "it is possible also that the much-cherished right to retire after twenty years service on £1 a day has not been so entirely overlooked as some who have written on the subject suppose."

This, in racing parlance, would be called "hedging," but the man who trusts to it will have himself to blame if he finds himself "compulsorily retired" on a gratuity, though he *may* through the mercy of the Secretary of State be granted a pension.

*Charge and Special Pay.*

In paragraph 6, Sir Frederick makes allusion to the grant of "charge pay" and increased pay for special qualifications, both most excellent innovations.

*A Medical Staff College.*

In No. 7 mention is made of the establishment of a "military hospital and medical staff college" for the training of officers of the R.A.M.C., but when will this be carried out? Nearly ten years ago, when Principal Medical Officer of the Home District, in common with many of my predecessors, I urged the necessity for a new Guards Hospital in place of the three old rabbit warrens situated in the back slum called Rochester Row. I believe a new hospital is now being built at Millbank, but when will it be finished and ready for use? If we see the new proposed hospital and staff college this time ten years we shall be lucky, as, when the present excitement dies down, the question will be quietly shelved by the Financial Department.

*Home Service of Junior Officers.*

Before I conclude I wish to draw attention to a most fatal blot in the scheme, namely, the keeping at home of all the junior officers till they complete four years service and pass the examination for the rank of captain. It is actually intended to retain all these junior officers (I have this on the authority of Sir F. Treves) for four years at home, that is after entrance some six months at Netley and Aldershot, then three years attached to a station hospital and a regiment, then a six months course at a civil hospital, in all four years, before the examination for the rank of captain.

The effect of this will be an accumulation of all the lieutenants R.A.M.C. in the United Kingdom, and putting down the entries at fifty per annum as a minimum (probably they will be far more if the schools accept the new warrant, as not only has the "waste" of the service to be made good, but the increase of strength will have also to be considered) there will at the end of four years be an accumulation of at least 200 lieutenants at home.

What is to become of the roster? It is evident that it will be completely dislocated, and as the captains return from foreign service they will have to go abroad again after a few months. Will not this make confusion worse confounded, and intensify the very mischief this scheme is supposed to reform? These lieutenants, it is stated, are to be attached to regiments. Where will the regiments be found even if two or three are attached to each corps at home? Again, this system of dual control will never work. One lieutenant will like his hospital work, and will, where possible, live at the R.A.M.C. mess. Another will prefer a regimental life, and will play the commanding officer off against the principal medical officer for all he is worth. The commanding officer will find it necessary to have "his" medical officer present when going round barracks, visiting the married quarters, etc., and a telephone message will be sent to the officer in charge of the hospital, just before visiting hour, to say Lieutenant Jones is required by the commanding officer in barracks, leaving the patients in his charge to be looked after by some medical officer who knows nothing about them. This may seem a far-fetched statement, but I have seen similar things happen in the old regimental days, and in the Crimea it was a cause of much administrative friction.

*The Dangers of Uncertainty.*

I think I have said enough to show that, though this new scheme has good and liberal points, there are many others that require revision—in fact, the whole thing must be recast before it will be accepted by the medical schools.

The service requires *rest*. It has been worried and harried by reformers, both military, civil, and medical, till the officers composing it know not where to turn or what will happen next. Uncertainty as to a man's future takes all energy out of him, and he only looks forward to the day he can retire on a pension.

*Recommendations.*

Briefly I consider the following points most likely to make the department contented and the schools satisfied.

1. Let the R.A.M.C. be increased to at least 1,200 executive officers, and let this proposed increase be officially notified.

2. On each return of a medical officer from foreign service, let him be granted three months study leave on full pay and allowances, including travelling allowance, the officer being required to give proof that he has honestly utilised the time in post-graduate courses or other special classes.

3. Increase the pay at home and in the Colonies as proposed, but that of colonels and surgeon-generals requires further consideration.

4. Let it be clearly stated (both in rupees and sterling) what the pay of all ranks in India will be, also what

allowances will be given, especially for charge of hospitals, travelling allowance, etc. Let there be no mistake on this point and let the warrant clearly show all details.

5. Let all lieutenants proceed on foreign service as soon as they pass the examinations at Netley and Aldershot. No examination is required, as now proposed, on professional subjects before promotion to captain, but it should be certified that the lieutenant thoroughly understands military law, knows his drill, and is fit for an independent charge.

6. Between the ninth and eleventh years of service each captain should be granted six months special leave to attend a large general hospital, and at the end of that time let him pass an examination, such as that proposed, before being granted the rank of major. Let this include all subjects, professional and departmental, and, if thought advisable, give officers who make high marks and are well reported on, some special promotion. After this let all examinations cease, but let promotion to the rank of lieutenant-colonel be granted only when officers are thoroughly well reported on by principal medical officers and general officers commanding.

7. Let the "right to retire" at twenty years service on £1 a day be made absolute, subject of course to good conduct.

8. Officers not likely to be fit for administrative duties should be retired at twenty years service, and those who are not selected for the special position of one of the fifty senior lieutenant-colonels should be retired at twenty-five years service on the extra pension.—I am, etc.,

J. B. HAMILTON,
Cromwell Mansions, S.W., Nov. 18th. Surgeon-General (retired).

## PUBLIC AND PRIVATE VACCINATION.

SIR,—Your leading article on inert lymph and revaccination leads me to suggest that it is quite time that the medical profession considered its position with regard to the whole matter of vaccination.

The State has rightly or wrongly decided to organise a staff of vaccinators throughout the country who are compelled to vaccinate according to rules prescribed by the Local Government Board and with lymph supplied to them for that purpose.

In ordinary times private practitioners, not in isolated cases by any means, advertise themselves by referring to the fact that public vaccinators vaccinate in four places, whilst they vaccinate according to the wishes of the parents.

It appears to me very desirable that if the public supply of lymph is to be issued to everyone, that all should be liable to prescribed rules and regulations, and that the inspection of results should be general, and not confined to the efforts of the humble public vaccinator. From an experience of about fifteen years, I have no doubt whatever whose efforts would show the worst results.

Having revaccinated a large number of people and having inspected more during the last couple of months, I have come to the conclusion that vaccination has too frequently been performed inefficiently in all classes of society, and I have repeatedly in the last fifteen years been assured by parents that in places where they have previously resided, if they paid a fee they could have their children vaccinated in as many places as they thought fit—one or two, that is to say.

The result of the position, largely adopted by the medical profession, has been to make the public think that, if they can arrange the details of the operation as they think fit, there cannot be much in its efficacy, and in the result there is an enormous mass of unvaccinated and poorly-protected persons in our midst.

Under these circumstances, it is my opinion that the medical profession will be well advised if it considers its own position in this matter, before it throws its stones at a body of men most of whom have been doing their duty and incurring unpopularity for doing so, for many years and for small remuneration —I am, etc.,

Hatfield, Nov. 17th. LOVELL DRAGE.

## INERT LYMPH AND REVACCINATION.

SIR,—In a leader under the above heading in the BRITISH MEDICAL JOURNAL of November 16th you criticise the action of the Local Government Board in refusing to supply the profession generally with calf lymph. I think that this is scarcely justifiable, when one considers that there is a number—and, I am sorry to say, an increasing number—of unscrupulous members of the profession who tacitly enter into collusion with ignorant parents to defeat the Vaccination Acts by "vaccinating" in one very small place, which when it heals leaves no mark.

With regard to revaccination as compared with primary, referred to by you, I beg to express the opinion that there is practically no difference in the results provided the patient has not been recently previously vaccinated.—I am, etc.,

Rye Lane, S.E., Nov. 18th. ROBT. HUGH HODGSON, M.D.

SIR,—Dr. Verdon-Roe, in his recent letter to the BRITISH MEDICAL JOURNAL, has raised a point, especially important at the present time, concerning the signs of efficient revaccination. There appears to be considerable doubt on the matter, and it may be of interest to relate my own experience. Soon after the commencement of the present epidemic I obtained glycerinated calf lymph from a well-known Institute, and continued to do so until October 17th, with uniformly unsatisfactory results. In nearly 300 cases there were less than a dozen in which a properly formed vesicle was obtained, and in the great majority no result occurred till about the tenth day, when the areas inoculated became irritable, and occupied by a slightly raised reddish papule. The papule persisted as such for about a fortnight, and then slowly subsided. In many cases no result whatever was obtained, and even when the papule was most marked there were, as a rule, none of the usual accompanying signs of effective vaccination. I was in considerable doubt at first whether these results were not due to insusceptibility to vaccinia, but the uniformity of the signs in so large a number of cases in my own practice, and in that of others who were using the same lymph, raised serious doubts as to its efficacy, especially as in one primary vaccination with the same lymph precisely similar results were obtained.

On communicating with the Institute, I received a reply that they had recently become aware that the lymph was attenuated. I then proceeded to vaccinate again (with lymph obtained from another source) as many of my patients who were willing to submit to a second operation, and of these secondary cases there has not been one in which I have failed to obtain a perfectly satisfactory vesicle, with the accompanying signs of an areola of redness, slight swelling of the arm, tenderness in the axillary glands, and *malaise*, with slight pyrexia when the process was at its height. The majority of the second vaccinations were performed within three weeks of the first operation, and the influence of the first vaccination apparently made no difference in the length of time which was required for maturation of the vesicles produced by the active lymph.

There are three points worthy of consideration in relation to the above results:

1. Do the positive results obtained by revaccinating with active lymph within twenty-one days of the first vaccination prove that the lymph first used was inert—especially when taken in conjunction with the almost negative results obtained with this lymph? On this point a pertinent passage may be found in Watson's lectures on the *Practice of Physic* (2nd edition, p. 736):

> Of course it is of much moment to determine whether the cow-pox has run its proper course or not, and it is not always easy to say how far the progress of the vesicle may deviate from that which has just been described without failing of its protective influence. A very ingenious test of this, free from all ambiguity, has been devised by Mr. Bryce. His plan is this: He vaccinates the other arm or some other part of the body four or five days after the first vaccination. If the constitution has been properly affected by the first operation, the inflammation of the second vesicle will proceed so much more rapidly than usual that it will be at its height and will decline and disappear as early as that of the first, only the vesicle and its areola will be smaller. In fact, from the time of the formation of the areola the second vesicle is an exact miniature of the first. If the system has not been duly influenced by the first vesicle, the second will run its own course, increasing up to the eighth day, and so on.

According to this authority, then, the efficacy of the first vaccination may be determined by the manner in which the vesicle of a second inoculation made within four or five days catches up and disappears coincidently with that resulting from the first operation.

2. Is it not the proper course to advise immediate revaccination when, in the first instance, a properly formed vesicle has not been obtained?

3. The advisability of the issue of lymph from all sources being placed under State regulation and control. At the present time "Government lymph" is supplied only to public vaccinators; the majority of the public prefer to be vaccinated from other sources, and it will not further the cause of vaccination if distrust in the operation is sown broadcast by failure of proper results. The Government enforces vaccination, apart from the ridiculous conscientious clause, and it would be an altogether sound proceeding if it took measures to ensure that all lymph which is issued, whether public or private, was efficacious.—I am, etc.,

Wimbledon, Nov. 12th. JOHN A. HAYWARD.

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SIR,—In reference to the efficacy of army vaccine lymph (Aldershot), I cannot agree with the opinions expressed. I have recently vaccinated over a hundred of this establishment and only 5 per cent. have failed.—I am, etc.,

Royal Military College, Woolwich, Nov. 18th. J. HICKMAN.

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SIR,—With reference to the above question, another naturally arises, What is efficient vaccine? The other day I vaccinated four babies, all with the same lymph. Result: three of the babies showed well-marked, perfect vesicles, whilst the fourth failed entirely. Query: Was the failure due to the lymph, the baby, or the

November 12th. OPERATOR?

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## SOCIETY OF APOTHECARIES *v.* PURDUE.

SIR,—The attention of the Society of Apothecaries has been drawn to the very misleading reports of this case which have appeared in the daily papers. These reports, which are considerably abbreviated, would seem to leave the impression that the defendant, who described himself as a registered herbalist, and against whom proceedings were taken by the Society under Section XX of the Apothecaries Act, 1815, was protected by the Act of 34 and 35 Henry VIII, c. 8, sometimes, though without authority, referred to as the Herbalists Act, and that the provisions of the latter Act practically ousted those of the Apothecaries Act. This is quite inaccurate. The Act of Henry VIII was certainly discussed in argument, but its application to this case was clearly refuted by the Society's counsel, though he was unable, as is the fact, to show that the Act had been expressly repealed. The learned county court judge, however, in giving judgment for the defendant, in no way purported to base his decision upon the Statute of Henry VIII, but simply held, as a jury (had there been one) might have held, that the evidence adduced did not show that the defendant had practised as an apothecary, that is to say, his judgment was based not upon a question of law but upon one of fact. The case, therefore, can under no circumstances be quoted as a precedent against the Society, nor can the learned judge's decision be considered as ruling that a herbalist, or any other unqualified medical practitioner, by virtue of the Act of Henry VIII to which I have referred, may practise as a qualified medical man. I may also add that a county court judgment, even in courts of co-ordinate jurisdiction, is never recognised as a binding authority and, *a fortiori*, of course not in the higher courts.

In conclusion, I may say that the question of an appeal is being seriously considered by the Society, but in any event the result of the case above referred to will not cause the Society to relax in the slightest degree its efforts to repress unqualified practice.—I am, etc.,

A. MOWBRAY UPTON,
Deputy Clerk.

Blackfriars, London, Nov. 19th.

*** A report of the case is published at p. 1576.

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## SOUTH AFRICAN MEDAL.

SIR,—I have read with interest the letter of Mr. Paul Bush, C.M.G., with regard to the war medal. It is very kind of Mr. Bush to interest himself on our behalf; he himself at least is fortunate in having received his medal, but I doubt very much whether the great bulk of civil surgeons who have returned care an iota whether they receive their medals publicly or otherwise. Many of us have now been home for more than a year, and the honour of an "*arrière pensée*" public presentation is not very apparent.—I am, etc.,

November 19th. C. S.

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## THE PRINCIPLES OF LOCAL TREATMENT IN DISEASES OF THE UPPER AIR PASSAGES.

SIR,—When a man embarks upon what you have very justly called the "most unpleasant task" of denouncing excesses, he must be prepared for all sorts of opposition and abuse. Considering the wide application of the principles I wish to see established, the large amount of ground covered by my criticism, the seriousness of some of my charges, I should not have been surprised if the reality of the evils attacked by me had been roundly denied, if I had been accused of gross exaggeration, and if the disinterestedness of my motives had been called into doubt. The pleasing absence of opposition of that kind emboldens me to hope that the purpose of my lectures has been correctly appreciated. If after two articles which deal with a number of far-reaching questions of principle, no more formidable opposition is forthcoming than a weak fault-finding with some questions of detail, it does not seem too rash, I hope, to conclude that the contentions in the main must have been sound.

An attempt, it is true, is being made by the first and third of your correspondents to argue in exactly the opposite direction. They endeavour to establish that I have committed some inaccuracies in details, and on the strength of these supposed inaccuracies hold me up to the scorn of your readers. We shall presently see whether I have been inaccurate.

I begin with Mr. Arbuthnot Lane's letter. Before entering upon its details I must say that it is most disappointing. Mr. Lane had gone out of his way to denounce a universally accepted operation as "unnecessary, imperfect, and unscientific." His utterances on the question have found their way—I hasten to interpose that I am quite sure without any fault of his—not only into a lay journal, but even into the prospectus of an establishment commercially exploiting his principle. The soundness of this principle has now formally been challenged by me. Surely after that a scientific vindication of his views might have been expected—and, indeed, ought to have been forthcoming—from Mr. Lane's pen. But what do we find? All Mr. Lane has to say on that all-important point is this:

> I do not desire at present to enter into a further discussion upon a subject which must be decided by experience and by that alone.

No doubt that is simple enough, but I am sure others will feel as I do, that it is very unsatisfactory. When a man has constructed a nebulous theory, in the building up of which he has used very harsh language against the universal practice of his colleagues, and when the soundness of his theory is questioned in turn, I think it is, to say the least, very regrettable that he should decline to defend his views on so lame an excuse as that experience alone could decide their correctness.

However, Mr. Lane has chosen to retort to my scientific objections by charging me with inaccuracy with regard to the history of a certain case which I have narrated in connection with that part of my first lecture dealing with "breathing exercises," and to leave it to your readers to judge whether I am justified in condemning a treatment "on such a fallacious basis." I am quite ready to meet him on that ground, though I really fail to see that my scientific objections to his theories would be shaken even if I had in good faith committed some trifling inaccuracy with regard to the history of an illustrative case. But where, I now directly ask Mr. Lane, are the inaccuracies to be found with which he charges me? In his version of the case he adds some details, previously unknown to me, which so far as I can judge are *absolutely irrelevant* to the question at issue, but does not cite *one single one* in which I have committed the imputed accuracy!

I stated:

1. That the child had marked symptoms of adenoids.
2. That the general attendant and a distinguished surgeon had recommended operation.
3. That another authority—Mr. Lane now says that he himself was that authority—advised breathing exercises.
4. That the latter advice was followed, and that the child went through a long course of such exercises.
5. That she got, while engaged in it, pneumonia, and that her chances were greatly impaired by the still existing impossibility of breathing through the nose.
6. That I was consulted and found the naso-pharynx crammed full with adenoids.

7. That this result was corroborated at the operation by the surgeon first consulted.

In which of these or any other details to be found in my description, and bearing upon the question at issue, have I been incorrect? If Mr. Lane, as I anticipate, can name none, I earnestly hope he will see his way to withdraw the imputation of inaccuracy which he has thought fit to raise against me. Such additions of his own as that he had found "little or no improvement" whilst the child was still under treatment by breathing exercises; that this want of success was "clearly due to failure in carrying out instructions," and that he had written to the patient's father in that sense, are all well enough to serve as apologies for the failure, but they neither entitle Mr. Lane to accuse me of inaccuracy, nor do they alter one tittle in the fact that the naso-pharynx of a child which had been treated for two months for the express purpose of dispersing her adenoid vegetations by a professional who puts herself forward as one of the main exponents of Mr. Lane's theories was, after the lapse of that time, found crammed full with adenoids by two independent observers. *Sapienti sat!*

I next come to Dr. A. E. Price's chivalrous letter. I wish to speak of his experience with all possible respect, but I must point out that he has not afforded the shadow of a proof that in his cases actual glandular hyperplasia was present, and that this hyperplasia was cured by breathing exercises. Yet this is the real point of issue. I have neither recommended "routine" treatment of adenoids nor contested the general value of breathing exercises. The very contrary in both respects is stated in my first lecture. But I have pointed out at length the important difference between organised hypertrophy and temporary inflammatory swelling of the adenoid tissue, and have explained the apparent success of the breathing exercises in a certain number of cases by the frequency of such inflammatory attacks. Dr. Price, in speaking of his experience, which he himself says is limited, does not enter upon this most essential point at all, and I must therefore respectfully decline to accept his statements as a proof against my deductions.

Finally, the irrepressible Mr. Lennox Browne appears upon the scene. I confess I could not help smiling when I saw his signature. In my experience of controversies with Mr. Browne—which has been rather considerable—I have invariably found that he is a most dangerous advocate—dangerous, I mean, to the cause which he espouses. He resembles the French legitimists of whom it was said that in their long exile they had "learned nothing and forgotten nothing." Mr. Browne cannot forget, whenever he rushes headlong in a controversy, his old tricks of distorting his adversary's plain meaning, of dragging in matter quite foreign to the subject under discussion, and of obscuring the real issue under a cloud of words, and he has not learnt from bitter and often-repeated experience that by the adoption of these methods he inevitably in the end damages himself and the cause he advocates. His usual tactics again characterise his present letter, and he has made it extremely easy to expose them; but before I approach that not very pleasant task I must say that my aforesaid smile deepened into a broad grin when I came near the end of his communication and there found Mr. Lennox Browne solemnly lecturing me on the necessity of "verifying my references." I wonder whether Mr. Browne has ever heard of the *Gracchos de seditione quaerentes!*

It is hardly seven years, as all readers of the *Glasgow Medical Journal*, of the *Lancet*, and of the *New York Medical Journal* know, since Mr. Browne got into very hot water over certain liberties which he had taken with regard to literary references, and that he of all men should now feel called upon to sally forth in the garb of a preacher of literary ethics is, I am afraid, rather ill-advised. I will show him presently again, as he might have remembered I have done on previous occasions, that I actually have the disagreeable habit of verifying my references.

For this purpose I must be allowed to somewhat reverse the order of procedure and to begin by analysing the second part of his postscript. In this Mr. Browne defends himself against the possible suggestion that he had contravened one only of my illustrations of operative intemperance, and assures us that he had "simply taken the first because it was the first." Very simple, indeed! Almost *too* simple for anybody acquainted with Mr. Browne's methods of warfare not to suspect that after all there may be a particular reason for his most unusual self-restraint. Let us see.

In the incriminated paragraph[1] I had stated that the funniest part of the whole business was that almost every one of the stalwart fraternity had some pet operation of his own to which he apparently resorted under all circumstances, and that I confessed to serious misgivings, when I "saw it stated, that Dr. X. opened more than 500 maxillary antra within a comparatively few years; that Dr. Y. found it necessary to employ the nasal saw 'almost daily'; and that Dr. Z. discovered 'varicose veins' at the base of the tongue or in the pharynx in every third or fourth patient, necessitating, it would appear, in his opinion, the application of the galvano-cautery in a goodly proportion of them."

Mr. Browne finds fault with the "vagueness of these charges"; the lecturer has "seen it stated"; he has no personal knowledge, but "what the policeman says is not evidence." An excellent specimen, this, of Mr. Browne's method of distorting his adversary's plain meaning! I may be "only a poor foreigner," a circumstance of which Mr. Browne, when combating me, rarely omits to remind his audience, but I submit I write a tolerably clear King's English, and I venture to assume, that when I say: "I see it stated," every reader who is not actuated by Mr. Browne's blind animosity against me will interpret this expression in the only natural sense,—namely, that the writer had seen the statements in question *in the writings of the men themselves* against whose tendencies his observations are directed!

And now I will show that this natural interpretation is the correct one, and that I have, indeed, "verified my references." But whilst fully appreciating Mr. Browne's modesty, which prompts him to contravene the first only of my illustrations, he must allow me to be generous and to present him with chapter and verse for *all* the illustrations contained in the sentence over which he makes so merry.

Well, then, the Dr. X. of my sentence stands for Dr. Ziem who practises in my own native town of Danzig, which according to Mr. Browne's information has a population of about 60,000. In his first statistical paper on the subject, published in March, 1886, Ziem spoke of 37 antral operations performed by him so far.[2] In a second communication published in April, 1888,[3] he states that he had opened the antrum in no fewer than 227 cases. From this it follows that he must have operated upon no fewer than 190 cases within two years! Even if, as I believe, the population of Danzig is much nearer 100,000 than 60,000, the proportion is surely astounding, particularly in consideration of the fact, that Dr. Ziem is by no means the only specialist for diseases of the throat and nose in the place. In July, 1895, a paper specially prepared for the occasion by Dr. Ziem was laid before the annual meeting of the British Laryngological, Rhinological, and Otological Association in which the author states *verbatim*:[4]

> ..... My experience is in a large measure confined to suppuration in the maxillary sinus, which cavity I have opened over five hundred times.

The Dr. Y. of my sentence is Dr. Bosworth of New York, who in his *Treatise of Diseases of the Nose and Throat*, 1889, vol. i, p. 303, states *verbatim*:

> When this instrument (namely, the nasal saw invented by him) was first made public,[5] I reported a series of one hundred and sixty-six operations. Since that time I have made almost daily use of it, and regard it as by far the best device we possess for the removal of these obstructions.

The Dr. Z. of my sentence is Mr. Lennox Browne himself. This insignificant circumstance may possibly explain the unusual self-restraint before alluded to in only challenging my first illustration. In the *Liverpool Medico-Chirurgical Journal* of January, 1896, p. 15, after deploring that the statistics of his hospital hardly showed the proper proportion of the frequency of "lingual varix," probably owing to the deficient enthusiasm of some of his colleagues, he continues *verbatim*:

> However that may be, the figures of my own private practice show a much greater frequency. For I find no less than 438 cases of lingual varix in a total number of 1,547 patients suffering from diseases of the throat and nose treated within three years—1893 to 1895 inclusive—a proportion of 28.3 per cent.

[1] BRITISH MEDICAL JOURNAL, p. 1315, first column.
[2] *Monats. f. Ohrenheilk.*, March, 1886, pp. 79, 80.
[3] *Therap. Monats.*, April, 1888, No. 4.
[4] *The Journal of Laryngology*, October, 1895, p. 725.
[5] *New York Medical Record*, January 29th, 1887.

And further on, on p. 25, he says *verbatim*:

For the destruction of the varicose veins I invariably employ the galvano-cautery point, the parts being previously rendered insensitive by means of a 10 per cent. solution of cocaine!

I could not find any direction in the section on "Treatment" as to whether this destruction by means of the galvano-cautery was invariably necessary, and therefore expressed myself reservedly on that point.

After this I venture to hope that I have "verified my references" to Mr. Browne's complete satisfaction.

The only real subject matter, so far as I can see, contained in Mr. Browne's letter is his vindication of the justifiability of frequent operations on the antrum, because pus has been found in that cavity by trustworthy observers in a surprisingly large proportion of *post-mortem* examinations.

The disproportion between the frequency of empyema of the maxillary sinus seen during life and after death is, indeed, striking. Whilst such excellent observers as Chiari of Vienna and Lichtwitz of Bordeaux independently arrive at the same result, namely, that empyema of all the accessory cavities of the nose together formed only about 2 per cent. of their large and exclusively specialistic material, the frequency of these affections has been found on the *post-mortem* table in cases of death from all possible causes by E. Fränkel, Harke, Wertheim, and others to amount to between 30 and 40 per cent., or even more.[6] The logical conclusion to be drawn from this fact is, of course, that our clinical knowledge of these affections is still very imperfect, and Mr. Browne will, no doubt, argue from that fact that a man who opens more than 500 antra within a comparatively few years is a pioneer of better knowledge, which merit, I wish to state emphatically, I am the last to deny to Ziem, to whom we are, indeed, very much indebted for his enthusiastic work in connection with antral empyema, and that he ought to be imitated not attacked. But Mr. Browne, unfortunately for himself, has given away his whole case through one of his own quotations. He tells us that E. Fränkel had performed necropsies on 146 patients who had died in the Hamburg Hospital, and were found to be the subjects of sinusitis:

In not a single instance had their condition been recognised during life.

Now, why had this condition not been recognised during life? Surely our Hamburg *confrères* are as able as any doctors in the world to recognise antral empyema, *if it should cause any troublesome symptoms*: but obviously the fact of the matter was, that in these cases the symptoms *during life* had been either *conspicuous by their absence*, or so slight and so transitory, that *no treatment had been required*.

And this brings us back to the main argument of my lectures, and to the general question: When is operation indicated in these cases? Surely after extolling, as I have done repeatedly, the better recognition and treatment of empyema of the accessory cavities of the nose as one of the most pleasing and important achievements of modern rhinology I shall not be suspected to be a "conservative too inactive" with regard to these affections, and as a matter of fact I recommend these operations annually in I should say about one or two per cent. of my patients on the average. But I fully maintain that "no immediate radical operation is necessarily indicated when a drop of pus is seen in the middle meatus of the nose," and without the least desire to impugn his "rectitude" I confess to serious misgivings as to the indispensability of all his operations, when I read that an enthusiastic surgeon practising in a middle-sized provincial town, has found it necessary to subject within a comparatively few years to one certain operation a number of patients which is simply enormous in proportion to the size of the town in which he lives, and to the number of cases in which the same operation is found indicated by the bulk of his fellow specialists.

The remark just made about the size of the town brings me to Mr. Browne's naïve question whether it was unreasonable—presuming that he had a hospital appointment—for a throat specialist in a city of 5,000,000 (five millions) inhabitants with a large provincial extension to have seen annually, on the basis of Mr. Browne's facts, about 1 in every 50,000 of the population suffering with maxillary empyema which called for operation, in a period of five years? My answer is: Yes, it is unreasonable, for it presumes that every one of the patients living in that city of 5,000,000 (five millions) inhabitants and suffering from maxillary empyema would flock to that one throat specialist. This, I believe, to be a preposterous presumption, even if the specialist held a hospital appointment.

I think I have now fully answered Mr. Browne's letter, for I do not consider that his absolutely uncalled-for dragging into this discussion the honoured names of Lister, Paget, and Fergusson, which is only another specimen of his controversial tactics, deserves a reply.

Mr. Browne assures us in his postcript that he had no intention of continuing this correspondence. I gravely doubt whether he will remain faithful to this laudable intention. Should he after all find it desirable to raise some more objections to my contentions I am quite at his disposal.

Before concluding this letter I hope you will allow me, Sir, to make good a very unintentional omission. In my first lecture I said:

I feel sure that before this a protest would have been raised from their midst (that is from the large moderate section of laryngologists and rhinologists) against what they themselves consider as excessive zeal, had not the same easily intelligible personal considerations, which have for a long time prevented me from speaking out, also, with one exception to which I shall further on specially refer, tied their tongue and hands.

When I penned these lines I confess I only thought of the *direct* protest, raised in a publication, written *ad hoc*, in 1896, by Dr. Herbert Tilley against the abuses connected with the phantasma called "lingual varix." But it has been pointed out to me that I have done scant justice to views, fully analogous to my own, expressed as far back as 1891, in forcible language by my friend, Dr. P. McBride, in his *Textbook on Diseases of the Throat, Nose, and Ear*, and reiterated ever since when a new edition of that excellent work has become necessary. As a sign of my genuine regret for this omission, permit me to quote some of the most important of his statements, and to express my delight at finding myself so fully in accord with one of the most justly respected of British laryngologists and otologists. Dr. McBride says:

While we as rhinologists know what a normal nose ought to be, we are not aware of the exact deviation from the normal which may exist without discomfort in any given case. Thus I venture to say that if a hundred persons who complain of no discomfort referable to the nasal passages were examined, abnormalities would be detected in a very large proportion. More or less hypertrophy of the mucous membrane and irregularities of the septum can, while men are constituted as they are, and not according to what the rhinologist conceives they ought to be, hardly be classed as morbid conditions. My own practice is to consider and treat such conditions only when they produce discomfort.[7]

Rhinology has made rapid strides of late, and operative rhinology has accomplished much for the benefit of humanity. It has, however, added something to the suffering of mankind. As a student of rhinology for more than a decade, with considerable clinical material at command, I know what the ideal normal nose should be. As an aurist, who examines the anterior nares in most cases, I also know full well how far this organ may deviate from health, if a normal nasal mucosa be implied by the use of this term, without occasioning any symptoms referable to the part. I would, therefore, contend that at present we know as the normal an ideal which is not often met with. Indeed, if ten persons, who in answer to leading questions state positively that they are not in any way troubled by symptoms referable to their noses, be examined, the probability is that more than half will show such evidence of disease, for example, spines of the septum, thickening of the mucosa over the turbinated bodies, etc., as would lead to severe operative measures being advised by many rhinologists, if they were to carry out what they advocate. This excessive operative zeal appears to me to be a great danger, threatening as it does the credit of our profession as a whole, and rhinology in particular, etc.[8]

It has generally been the implied teaching of modern otology that any obstructive nasal disease is liable to cause obstruction of the Eustachian tube or exhaustion of air within the tympanum. Now this is to a certain extent true: but if carried through its logical termination to energetic operative procedures in all cases is likely to end in discrediting otology.[9]

I have laid some emphasis upon this point, because it would appear that some aural surgeons and rhinologists are under the impression that fibroid changes in the middle ear can be dissipated by operating on the nasal passages.[10]

—I am, etc.,

Wimpole Street, W. Nov. 18th. FELIX SEMON.

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SIR,—As an interested reader of the correspondence which has followed the lectures of Sir Felix Semon on "Some Thoughts on the Principles of Local Treatment in Diseases of the Upper Air Passages," I would venture, as one desirous of

[6] Considerations of space prevent me from entering more fully upon this important question. Those who wish for fuller information may be referred to the interesting papers by Lichtwitz (*Annales des Maladies de l'Oreille*, No. 11, 1899, and by Wertheim, *Archiv für Laryngologie*, vol. xi. Heft 2, 1900.

[7] *Diseases of the Throat, Nose, and Ear*, 1st ed., 1891, pp. 227-8.

[8] *Ibid.*, pp. 265-6.

[9] *Ibid.*, p. 566.

[10] *Ibid.*, pp. 567-8.

fuller information, to state some of the difficulties and seemingly weak points which appear to be inseparable from Mr. Arbuthnot Lane's theory of breathing exercises regarded as a mode of treatment of adenoid growths of the naso-pharynx. Having carefully read both of Mr. Lane's papers on this subject,[1] it is obvious to me that he considers the vast majority of adenoids are curable by means of breathing exercises which are of so simple a nature that, according to him, in the case of poor patients, a printed slip contains all requisite directions for the carrying out of such exercises. If that be the case, it strikes one as not a little curious that in the case referred to by Sir Felix Semon, Mr. Lane tells us that the treatment failed owing to "failure in the carrying out of instructions," and this even though the parents could afford the luxury of treatment carried out by a professor of calisthenics who (as Sir Felix informs us) makes a speciality of the breathing exercises under discussion.

Without in any way wishing to generalise from a single case, the instance quoted nevertheless suggests a question, the answer to which is of great practical importance—namely, How long have these exercises to be carried out before a cure may be reasonably expected? And again, What proportion of parents would be willing, or in a position, to carry out a very prolonged treatment which is apparently not quite so simple a treatment as at first sight would appear?

Dr. Alfred Price, the second correspondent in your issue of the 16th inst., acknowledges that he has failed to persuade all his cases "to carry out the whole treatment with sufficient perseverance," a fact which can be easily comprehended when we bear in mind (1) that the great proportion of adenoids occurs in children from 3 to 10 years of age who are in the habit of going to school daily, and (2) the difficulty involved in carrying out the following directions, "Put the child on its back three times a day for half-an-hour at a time and make it breathe in and out as deeply as possible through the nose, the mouth being kept shut."

Such a method founded upon what would seem to be an entirely theoretical basis is scarcely likely to oust the operative procedure usually adopted for adenoid growths, a treatment which if carefully and skilfully executed is almost devoid of danger and is productive (as the experience of the last 20 years has shown us) of perfect and very speedy results.

Like many of my co-workers, I should be extremely indebted to Mr. Arbuthnot Lane for any explanation he can give to Sir Felix Semon's pertinent question, as to the manner in which breathing exercises may be supposed to remove lymphoid tissue limited to the naso-pharynx while leaving neighbouring glandular structures uninfluenced.—I am, etc.,

Harley Street, Nov. 20th. HERBERT TILLEY.

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SIR,—In concluding his lectures on the above subject, Sir Felix Semon has compared himself to Cato the Censor.

It appears to me that rhinology has been up to now to Sir Felix exactly what Greek was for the greater part of his life to Cato. It will be remembered that Cato, until his old age, abused, attacked, and persecuted everything Greek, and then turned round, learnt Greek, and became an excellent Greek scholar.

I am not even yet without hope of Sir Felix, for I believe he means well.—I am, etc.,

Welbeck Street, W., Nov. 20th. SCANES SPICER.

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SIR,—Referring to the statement on p. 1318 in the BRITISH MEDICAL JOURNAL for November 2nd, 1901, that "Mr. Arbuthnot Lane took up the cudgels against the massacre of the innocents in two papers published in 1897 and in 1899," it may interest your readers to know that the first paper dealing with this treatment of adenoids by Mr. Arbuthnot Lane was published in a communication to the *Clinical Journal* for July 1st, 1896, entitled Some Experiences in the Surgical Out-patient Room of a Children's Hospital. I am, etc.,

London, W., Nov. 19th. EDITOR *Clinical Journal*.

[1] *Clinical Journal*, 1897; *Edinburgh Medical Journal*, 1899.

## OOPHORECTOMY IN MAMMARY CARCINOMA.

SIR,—Will you allow me a few lines of your valuable space to reply to Dr. Beatson's remarkable and regrettable effusion in the BRITISH MEDICAL JOURNAL of November 16th? The first impression of most people on reading his letter I fancy must have been that Dr. Beatson's case was weak, and that he had done it no good by his latest effort.

That Dr. Beatson feels hurt personally is very evident to anybody, and I at once express regret; nothing was further from my intentions than hurting his feelings. The purpose of my letter is distinctly set forth in the first paragraph, and I really cannot believe that any reasonable man could construe it into a personal attack. It was the "method"—not the man—that I criticised. Still, making due allowance for injured feelings, Dr. Beatson is not justified in charging me with untruthfulness; that is really the burden of his song. I repudiate that entirely, and at the same time would observe that it is perfectly lamentable that a man in his position should stoop to such tactics. Allow me, therefore, to state clearly that I neither withdraw nor modify a single sentence of my letter of November 9th; nay, more, I could amplify and strengthen my attitude and statements if that were necessary, or if it would help the subject under discussion: but I do not think it would.

I had a hope that possibly my letter might bring forth the experiences of other general practitioners of this operation; but I am much afraid I am in a minority on this subject. In any case, the subject is too serious a one to waste time in personalities. Let us find out all we can of this "method," and if a reasonable case can be made out, then surely it is the duty of other surgeons to take this operation into their consideration; but no surgeon I have ever yet spoken to will do it. Therefore I say again to my fellow practitioners, be very chary of advising this "method" until we hear more from pathologists and other surgeons about it, and until we can get a better assurance that it is worth while.

There is one point I have often thought about and asked about, but the only answer I ever got from any surgeon I asked was, "God knows," and that is this: Does this operation tend to lessen or increase the chance of secondary infection? When the cancerous mass begins to break down and get absorbed, will it find its way into the general circulation in the form of "cancer cells" or "cancer elements"? What are the chances of that happening? I wish some of your readers could settle that point satisfactorily. In my case cancerous nodules actually appeared in the cicatrix of the abdominal wound within a few months of the operation. I trust to see the whole subject thoroughly threshed out in the JOURNAL yet, because I am now so much interested in it, and if anything valuable should result then my present and abiding feeling of bitter regret at having advised such an operation may undergo a change. That is really and truly my only feeling on this matter.—I am, etc.,

Jordanhill, Nov. 18th. DANIEL MCNICOL, M.D.

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## PUERPERAL FEVER AND GENERAL PRACTITIONERS.

SIR,—In Dr. Rentoul's letter in the BRITISH MEDICAL JOURNAL of November 9th on the above subject, he makes some statements with regard to the Rotunda Hospital statistics which are misleading. In the first place they cannot be regarded as relating to seven days and not thirty, as required by the Registrar-General, because no woman is discharged from the hospital who is not in perfect health, but is detained there until she either recovers or dies, and in the latter case the death is included in the statistics. It is a mistake to suppose that patients are transferred to other hospitals when suffering from puerperal fever, no case of the kind having been so transferred for many years. Every effort is made to make the reports as accurate as possible, and with this view even cases which had left the institution against the wish of the medical attendants, and had signed a declaration that they did so, are, in case their deaths can be traced, included in the list. As regards the observation that most of the deaths occurred within a week, it is only necessary to point out that since septic infection has become rare the majority of patients who die from the accidents of childbirth do so within a short time after delivery. I think this statement is sufficient to

show that the statistics of the Rotunda Hospital do conform as nearly as possible to the rule laid down by the Registrar-General.—I am, etc.,

W. J. Smyly,
November 16th. Ex-Master Rotunda Hospital

## DOCTORS AND MIDWIVES.

Sir,—I copy the following paragraph from Dr. Keay's letter, "After twenty-five years of practice I am as little desirous as anyone to attend midwifery at low fees, but when any respectable woman who cannot afford to pay my regular fee asks me to attend her in her confinement I attend her at what fee she can afford," and I ask him, in all seriousness, if he really considers that any respectable woman is unable to pay the ordinary fee, one ranging from ten to twenty-one shillings, and if he does will he kindly tell me what is the lowest fee he is willing to take in these cases? What with clubs and dispensaries any woman may obtain medical attendance if she wishes, and I maintain that every respectable woman is able to pay this fee; but to ask what they can pay and attend them for less tends only to pauperise them and make the lot of one's brother practitioners more difficult. The reason why the fee is not forthcoming is usually want of thrift on either the man or woman's part, and it is a good and wholesome lesson to teach them they cannot shirk their responsibilities. The poor were never better cared for or looked after than they are at the present day, and to provide medical attendance for one's wife and family is just as much the duty of the poor man as it is that of the rich.—I am, etc.,

George W. Whiteley, M.R.C.S.
Downton, Salisbury, Nov. 17th.

Sir,—I have only been in practice seven years, and up till this summer have not lost a confinement. This year within six weeks I had the misfortune to be called to two confinements after a midwife—one a placenta prævia, which within a few hours, in spite of extra help, died; the other a shoulder presentation. Labour having continued for over thirty hours before I was called in, I found the arm hanging out of the vulva and ruptured uterus; death ensued. In both cases I have been blamed, and I know for a fact that I have lost two would-be patients as a result. In future, unless properly engaged for a confinement, I shall not follow the midwife.—I am, etc.,

November 7th. Twice Bitten.

Sir,—The thanks of the profession are, I think, due to the three Swanley men for refusing to cover unlicensed practice, and for standing against the popular opinion that doctors are public slaves, bound to attend everyone without choice in the matter and without pay, although Major Ince apparently wishes to degrade the profession to that state.

The Swanley men will do more to raise the profession to an honourable position by far than the men who tout for hospital patients at 1d. a week. The jury no doubt thought the doctors very wrong, but will any of them guarantee the fee in the next similar case? If not, they should be censured equally with the doctors. In this case there was plenty of time to go to the relieving officer for an order if the usual fee could not be paid. The guardians are as bad as the doctors. They will not pay for midwifery unless previously engaged through the relieving officer. Mercenary motives may be derogatory; did Major Ince think so on pay days, or did he inwardly growl because the pay was not better?

The General Medical Council and the Major do not agree about covering unlicensed practice; they hold it to be professional misconduct. Licensed victuallers are not bound to supply any want without cash down, and can refuse to serve anyone whom they consider rightly or wrongly to have had enough. When the Legislature obliges doctors to attend, pay or no pay, they will provide a pension, or oblige butchers, tailors, servants, etc., to work on the same conditions.—I am, etc.,

October 29th. J. H.

Sir,—In such cases as the Swanscombe one, it would be more prudent for the doctor, instead of absolutely refusing to go to the patient, to inform the messenger that he will attend provided that he (the messenger) gets some respectable member of the general public to give or guarantee the fee. He will thus transfer the responsibility to the general public, who will then be taught to look at the matter from a different standpoint. The general practitioner cannot be expected to continue giving his services for an indefinite period.—I am, etc.,

November 2nd. Fairplay.

## STATE-PAID MIDWIFERY.

Sir,—May I be permitted to put another view of the case before Professor Byers, who, in his introductory address before the Obstetric Section at Cheltenham, did, as Mr. R. T. Hughes says in his letter in the British Medical Journal of October 12th, bring an indictment, however unintentional, against the general practitioner, for he implies that the high death-rate in puerperal fever in general practice is due to the mismanagement of the case by the practitioner?

Now, it is quite easy to have antiseptic surroundings in hospital, in those cases attended from a hospital, and in the better class of private practice, and under such conditions anything of a septic nature is rightly regarded as a disgrace. But what of the case, such as a labourer's wife, attended at home, the nurse, her mother, who, because she has had twelve children, considers that nothing can be taught her of the obstetric art, and, moreover, resents advice as to cleanliness, often with considerable vehemence? If the medical man wants hospital asepsis he will be disappointed; anything he requires in that way he must perform himself, often in the face of opposition. Can it be wondered at that sepsis now and then creeps in?

As the doctor gets older he finds his "temperature cases" cease. Why? Because he has given up the poorer work. Hence he begins to say, "Puerperal fever (so-called) is an absolutely preventable disease," which it should be, were the human race perfect, in the same way that all infectious disease is theoretically preventable: nevertheless, it can be reduced to infinitesimal limits by proper care.

The remedy proposed for this is to license and register the midwife, and here I venture to submit we are travelling in the wrong direction; in fact we are going back to very ancient history instead of progressing.

From personal knowledge I assert that the ignorance of many of the midwives, holding licences from bodies, themselves unlicensed, is simply appalling. One instance I will give: A nurse who has obtained a diploma from a certain society carries in her bag some five or six forms of antiseptic, and yet her appearance, her hands, and ablutionary ideas are filthy in the extreme, and she has a very large proportion of septic cases, to whom, when *in extremis*, the general practitioner is called, and the death is attributed to him, as implied in Professor Byers's classification.

The reason for this deplorable state of things is that the midwife is only half taught: she is supposed to learn in nine months what the student takes five years to absorb; I am aware that it is asserted that the midwife will not be a practitioner independent of the doctor, but we general practitioners know how absurd that contention is.

It seems to me that the remedy is "State-paid midwifery" when a person is proved too poor to pay a fee, let us have an organised system whereby medical attendance can be procured free: the present system of attendance by order from the relieving officer is entirely inadequate, and after all it will not be more expensive than free vaccination, to rich and poor alike. Half measures such as those proposed will do infinite harm in the time to come.

Finally, I would ask the specialist—and it is he who is so anxious for the registration of the midwife—if he has ever considered these aspects of the case? for he is, as a rule, in a position so fortunate that he knows little or nothing about them. I personally hope for the extinction of the midwife.—I am, etc.,

Tollington Park, N., Oct. 21st. J. R. Fuller.

## THE MIDWIVES QUESTION.

Sir,—Once again I repeat my challenge to the supporters of the Midwives Registration Bill to deny that "occupation for women is the crux of the whole question." Dr. Humphreys

as usual either cannot or will not reply straightforwardly, but talks about side issues. Perhaps he will be good enough to tell us what the main issue is.—I am, etc.,

Friern Road, S.E., Nov. 11th. A. MacLean.

## LAPAROTOMY FOR PERFORATION IN TYPHOID FEVER.

Sir,—I have read with great interest Mr. Francis Heuston's account of his brilliant and successful operation for perforated intestinal ulceration in typhoid fever: and I heartily congratulate my old school-fellow on his treatment and its results, and Dr. Wallace Beatty on his prompt diagnosis.

I fear, however, that Mr. Heuston is in error in believing that it is only necessary for physicians to be aware of the success to be expected to submit their cases more frequently to operation. The true reason that we do not resort to surgery more often in these cases is the difficulty, or rather the impossibility, of determining in most instances whether perforation has taken place or not. When it occurs the patient has generally been in a state of profound prostration for some days—prostration attributable to prolonged pyrexia and septic absorption, and perhaps aggravated by intestinal hæmorrhage, and its onset is not marked by any special pain or exacerbation of the symptoms. Consequently it seldom happens that the physician is able to diagnose the existence of perforation with sufficient confidence to make him feel justified in advising laparotomy, at any rate until the existence of peritonitis becomes fairly obvious, when the time for successful operation has probably gone by.

For some years I have been on the look-out for perforation in typhoid fever, with a view to operation, but only once has the diagnosis been sufficiently clear to make me feel justified in resorting to it. The perforation was easily found and secured, but death took place probably as soon as it would have done if no operation had been performed. In this case the diagnosis was fairly clear at the time the operation was resolved on, though probably, to be of any use, it ought to have been performed several hours before. The following case shows how a fatal perforation may fail to make itself apparent, even when we are anxiously watching for indications of its existence.

A strong man, aged 39, was admitted to one of my wards in the Liverpool Royal Infirmary on October 30th, having been ill with typhoid fever about three weeks. He was very prostrate, had subsultus tendinum, temperature about 103°, and pulse about 120. He had copious hæmorrhage from the bowels on November 2nd, 3rd and 4th. He gradually got weaker, and died on November 5th. I carefully considered the possibility of perforation having taken place, but decided against it on the ground that there was no special abdominal distension, the liver dulness was normal, there was no particular abdominal pain, and the hæmorrhage seemed sufficient to account for the progressive weakness. Nevertheless the necropsy revealed the existence of a small perforation about 18 inches above the ileo-cæcal valve, which had led to fæcal extravasation and extensive peritonitis. The hæmorrhage had apparently come from another ulcerated patch close to the valve.

I mention these cases to illustrate my contention that a favourable result from operation can only be looked for in cases where perforation can be recognised as soon as it has occurred. These will be cases which are running a comparatively mild course, or cases like Mr. Heuston's, in which perforation takes place after the patient seems to have entered on the stage of convalescence.—I am, etc.

Thos. R. Bradshaw, M.D.,
Physician to the Liverpool Royal Infirmary.

Liverpool, Nov. 16th.

## HUMAN AND BOVINE TUBERCULOSIS.

Sir,—In regard to the question raised by Professor Koch as to the communicability of bovine tuberculosis to human beings, there does appear to be some room for doubt as to whether intestinal tuberculosis is, after all, brought about by milk from tuberculous cattle. It appears that the amount of the intestinal tuberculosis that is met with may be only proportionate to the amount of milk infected, not by cattle, but by other human beings.

In the more vigorous investigation into the subject now brought about by Dr. Koch the following lines of inquiry, pursued by medical practitioners particularly, and in such ways as possible by medical officers of health also, would yield information, whether positive or negative, which would be of value, as to cases of intestinal tuberculosis and of infantile tuberculosis in all its forms:

1. Are these cases situated in houses where there are cases of phthisis with expectoration?
2. Are these cases situated in houses which have been infected recently by phthisis?
3. Are they in houses which are dark, dirty, and dusty?

—I am, etc., Edmund M. Smith, M.D., D.P.H.,
York, Oct. 24th. Medical Officer of Health.

## THE TREATMENT OF PHTHISIS BY MEANS OF HIGH FREQUENCY ELECTRICAL CURRENTS, ETC.

Sir,—I am obliged by Mr. Chisholm Williams's courteous reply to my query regarding the enormous increase in chest girth which took place in one of his patients treated by the above method. Mr. Williams would probably be the first to admit that such an increase must be altogether exceptional. It would rarely, indeed, be desirable. The fact is that in all cases of phthisis sufficiently far advanced to produce dyspnœa the lungs are expanded as much as it is desirable that they should be. In chronic dyspnœa, as I can testify from a careful examination of a large number of cases, the inspiratory muscles act more powerfully than the expiratory, so as to maintain as far as possible, or actually to increase, the mean capacity of the chest. So potent is this expanding force that it may lead to a considerable degree of emphysema in the neighbourhood of the tuberculous areas. It is well to bear in mind, then, that whenever there is dyspnœa, or a tendency to it, as there is in all cases of chronic lung and heart disease, there is no occasion to adopt any special means to increase pulmonary capacity, for the dyspnœa will itself induce all the expansion that is desirable; expansion beyond this can only take place by the induction of emphysema.—I am, etc.,

Wimpole Street, W., Nov. 2nd. Harry Campbell.

## THE PLAGUE.

Sir,—It seems expedient, in view of present knowledge, to admit that recrudescence of plague in a city, with accompanying affection of the rats, means that the disease is probably present as an epizoötic, and that its further spread is independent either of the sanitary condition of the locality where the sporadic human cases have happened to occur, or of the incubation period of plague in the human subject. "Contacts" now mean not those who have been exposed to human plague, but those who may become exposed to rat infection.

If every affected rat has been destroyed the disease will disappear; if not, its future course will probably follow the slow history of all such outbreaks: an apparent cessation for weeks or months, the rat infection spreading meanwhile, then a sporadic human case or cases in some fresh locality where opportunity occurs for rat infection of the occupants of defective premises, and so on.

Destruction of rats as a method of preparation against invasion is obviously indicated in every district, but it is practically impossible to disturb the public apathy until invasion occurs, when it is too late.

Dr. Wynter Blyth suggests a crusade by sanitary authorities directed towards the rectification of defects in basements of premises permitting access of rats. Such a crusade is highly necessary in the case not only of grain warehouses and riverside premises, but of private dwellings, and, setting plague aside, could result in nothing but good in districts adopting the suggestion. I am, etc.,

D. S. Davies, M.D.,
Bristol, Nov. 11th. Medical Officer of Health.

## PRELIMINARY GENERAL EDUCATION.

Sir,—With the general tenour of the paper on preliminary education of medical students[1] most of us I think will agree. It is when we come to think out the details that difficulties occur. The title of the paper offers a difficulty at once in the term "medical students." Indeed, the paper throughout seems to place the education of boys destined to become medical men on a separate footing to that of other professions. Already at the larger schools we have the classic side, and the modern side, and the army class; are we to add to this the medical class with other possible developments in the future, cutting up the scheme of general education into

[1] British Medical Journal, November 2nd, p. 1327.

smaller special classes? It would, I think, be a most unfortunate move, a move backwards instead of forwards. At what age is a boy to be expected to make up his mind that he has a calling to medicine or surgery? Not, I think, at 15 or even 16 years, for there is nothing in our profession proper that appeals to so young a child. Yet a year is no long time to devote to any specialised form of education having a distinct examination in view. But here difficulties do not end, for the London University has separately decided on its own standard for the matriculation examination, and thus from the first we should have two classes of boys preparing for different standards of medical examination.

The day, I believe, has gone by when lads of 14, 15, or 16 were asked to read Celsus or Galen and the like. When that senseless custom was abolished a most important point was gained: for the future medical man was admitted into the forms where he mixed with those he had to mix with when grown up, those boys who are destined to become lawyers, clergymen, sailors, and soldiers. This comradeship and feeling of equality—yes, and perhaps superiority—has done nothing but good, and the feeling of competition amongst the boys in such classes, more numerous than can be the case if boys destined for the medical profession are to be a class of themselves, has been most beneficial on both sides. Therefore I say again to have a specialised medical boy examination is a retrograde step.

What then is to be proposed? It is nowhere suggested that the medical man is to be made out of top boys of their class only, all we contend for is that he is to be equal to the average, and that the average is to be equal to the general knowledge a boy in the upper fourth or fifth class can reasonably be expected to have.

We may, I think, fairly turn to the legal profession and see if we cannot assimilate our needs with theirs. Could this be accomplished a most important and far-reaching step would be gained, for a very large percentage of all boys at school are being trained for these two professions, and thus a very important standard of middle-class education would establish itself—a want strongly felt. Were this successful it would be likely that other professions would bring their examinations into conformity with this, which would be the natural one, being the average knowledge of the mass of boys of the given age.

There would remain, therefore, for settlement the standard, and this must assuredly be done by educationalists with broad minds in the best sense. The particular point I have in my mind is not to say a boy must be able to read Cæsar, or must be able to read Horace or Cicero, or taking Greek, Xenophon, Herodotus, or Greek Testament or Homer, or any one given author. In other words, not that the examiner should decide, but the boy, that is to say, his teachers. This, which at first sight may seem trivial, is not so, for it affects the age at which a boy settles to go in for one particular profession; and if the examiners settle the author, leaving no choice, it brings us back to the medical class again.

Much remains to be said on other subjects of the school curriculum, but enough has been said to illustrate the point I desire to bring forward.

I quite agree as to the multiplication of examining centres within reasonable limits, and think it would do much to facilitate boys entering professions, and Dr. Gordon's conclusions I quite endorse, but I do very greatly desire to place our education on a broader basis, and keep all boys destined for professions competing with each other as long as possible.—I am, etc.,

J. Delpratt Harris,
Exeter School Board Manager and Voluntary School Manager.

November 4th.

## THE MORTALITY IN THE BOER CONCENTRATION CAMPS.

Sir,—I am in full agreement with your contributor[1] in his general conclusions on this subject, and am glad that you have spoken out clearly upon the need for strong and radical measures.

The statistical question—how to deal with these high mortality-rates—has an interest of its own. A low mortality-rate, which influences but little the numbers of the population, may be multiplied or reduced to apply it to differing periods of time with very little error. The Registrar-General does this when he reports a weekly death-rate in terms of an annual one.

But when we have to deal with a high mortality, the error of so treating it becomes apparent. Thus, in the death-rate of 1 in 9—that of the white children in the camps for the period of four months—your contributor states that "if this death-rate be continued for a year, 1 out of every 3 will have died." Is this really so? Now the population will either have diminished during the year, or else it will be maintained by additions from without so as to counterbalance the loss. If the former, the rate operating on a decreasing population will cause the loss of, not 3, but 2.68 units out of the 9. When, however, the death-rate is estimated in the usual manner as the number of deaths divided by the number of the population in the middle of the year, this would bring out 1 in 2.82, or 355 per 1,000 as the annual mortality. Nevertheless, "1 out of 3" will not really have died, since 9 units were concerned and only 2.68 died. If, on the other hand, the population be maintained at 9 units throughout by the addition of units from the outside, 3 units will die, and the death-rate estimated by the usual method will be $\frac{3}{9}$, or 333 per 1,000. Nevertheless, 1 out of 3 will not really have died, since 12 units have been concerned—namely, 9 *plus* 3 added from the outside.

Thus, either way it is clear that a simple multiplication of the death-rate to correspond to the longer period of time does not give an absolutely true result. The error or discrepancy is the consequence of dealing with a high and altogether abnormal death-rate, which greatly alters the area of operation (population), and makes this too unstable to allow of the usual estimation, from a shorter to a longer period.

I still think, therefore, that it is better in the case of a very excessive death-rate to quote only the rate for the period under review, and that if it be multiplied in the usual way to form an annual rate, the result is to exaggerate it.—I am, etc.,

Finsbury Square, E.C., Nov. 16th. R. Hingston Fox.

[1] British Medical Journal, November 16th, p. 1507.

## INOCULATION AND THE INCUBATION STAGE OF PLAGUE.

Sir,—I had not intended to intrude further on your space, or to prolong the discussion on the above subject, but as Colonel King appears to state that Mr. Haffkine does not share my belief in the power of his vaccine to abort plague in the incubation state of the disease, I desire to state that Mr. Haffkine saw and approved of my paper on Inoculation and the Incubation Stage of Plague, published in the British Medical Journal of September 14th, when it was in manuscript.

He also has throughout given it as his opinion—surprising though it may appear—that the plague vaccine does produce abortion of the disease in the incubation stage, and that it is harmless even to those who may be inoculated with the initial plague fever on them. This opinion he stated publicly in his evidence before the Indian Plague Commission, and in reports submitted to Government from time to time. As Colonel King may not have these beside him, however, I would refer him to A Discourse on Preventive Inoculation, delivered by Mr. Haffkine at the Royal Society, London, on June 8th, 1899.[1] Perhaps the following quotation from this discourse may help Colonel King to understand that it is not necessary in order to arrive at a just conclusion in this matter to have populations "experimentally infected." In the analysis of the Byculla Gaol experiment Mr. Haffkine says:

> Did, however, this [the indisposition, pain, and fever caused by the inoculation] make them [the prisoners] more susceptible to the disease than were their non-inoculated fellow inmates? It is certain that the table testified unmistakably to an opposite result. Further, the incubation period in plague appears to be on the average five days, extending, however, not infrequently to ten days. Of the 12 prisoners in the uninoculated group who developed plague during the next few days after the date of inoculation, a large proportion, if not all, must have been already incubating the disease on that day. Seeing the perfect similarity of conditions under which the inoculated and the uninoculated were living, it could safely be inferred that a similar group of individuals incubating plague was present among the inoculated also at the time when the inoculation was performed on them. The inoculation, however, did not aggravate their

[1] British Medical Journal, 1899, vol. ii, p. 11.

condition, as the number of inoculated who developed plague, counting from the first twelve hours of inoculation, was proportionately five times smaller than the corresponding number among the uninoculated, and the two cases that appeared among the inoculated—one on the next morning after inoculation—both ended in recovery.

The same course of events—that is, a sudden decrease after the date of operation, in the proportionate number of cases occurring in the inoculated group, is noted by him in other instances in the same paper—for example, in Undhera. It will be seen, then, that I have Haffkine's support when I urge that in a plague-infected locality the correct course is to employ his vaccine in all cases without distinction, for it is well tried, harmless, and efficient in its action. To substitute for it, even where "history shows actual infection is highly probable" (and who is sufficient for such inquiries in the midst of an epidemic?), the serum of Calmette-Yersin, which has never been tried in a bad epidemic among human beings, and which at present at least is outside the arena of practical politics on account of its expense and scarcity, would, in my opinion, be most unwise.

When I wrote the protest against the use of the word "haffkinine" I was aware that Mr. Haffkine had been consulted in the matter, and had sanctioned its use after consultation with the President, Medical Board, India Office, yet I know from conversation with Mr. Haffkine that the use of the term does not afford him any personal satisfaction. If Colonel King had wished to correct the "haphazard terminology" of the early days of plague inoculation in India, it would surely have been easy to obtain sanction for the use of the proper term (vaccine).—I am, etc.,

W. B. BANNERMAN,
Major I.M.S.

Edinburgh, Nov. 13th.

## THE LONDON LICENTIATES AND MEMBERS SOCIETY.

SIR,—A Society with the above title has been formed with the hope that by combination it might be possible to bring about some improvement in the status, and future prospects of the status, of the Licentiates of the London Royal Colleges. It is a modest society, with no other aim or object in life than the above, and I trust I may claim your sympathy for its objects.

It has hitherto held no meetings, nor does it propose to bother Licentiates with more than are just enough to formulate a line of policy, and possibly to elect a small committee to make an effort to carry such policy into effect.

A meeting has, however, now been arranged to take place at 4.30 P.M. on Friday, November 29th, at the Wimpole Hotel, 63, Wimpole Street, to which are invited all Licentiates of the London Colleges, whether members of the society or not, and at this meeting it is hoped that a plan of action may be determined on.

The one which seems to offer the best possibilities is to appeal by petition to the Royal Colleges to take into consideration the question whether they cannot by arrangement with the New University of London supply the latter with the first body of undergraduates applying to be admitted say to its final examinations (the question was recently raised in the BRITISH MEDICAL JOURNAL, "Where are the undergraduates?"). Some such arrangement would seem to be rendered possible by the statutes of the University, which explicitly state that it may co-operate with the Royal Colleges in promoting the objects for which the new University was established.

If any better scheme occurs to anyone, it is hoped that he will bring it forward at the meeting.

As treasurer of the Society I have promised to take the chair at the meeting, and I hope to be generously supported.—I am, etc.,

FRED. J. SMITH.

Harley Street, W., Nov. 18th.

## A UNIVERSITY DEGREE FOR LONDON DIPLOMATES.

SIR,—The time has arrived when it becomes necessary for the London Conjoint men, who number nearly 8,500, to make a determined effort to bring their reasonable and just claims to be admitted to an M.B. before the notice of the authorities of the new London University.

The necessity for a degree has often been felt by the members of the large body of medical practitioners who have done, and are still doing, good and earnest work in the country. The Birmingham University has recently agreed to admit its Conjoint men to a degree on further examination, and there is no just cause which should prevent the new London University granting a similar privilege.

I will not compare the examinations for the London Conjoint Board with those of the provincial Universities, as the standards are well known, but I strongly denounce the system by which the provincial man possesses so great an advantage over his London colleague when each neglected to qualify for a degree in the early stages of his professional career. One university after another has closed its doors to London diplomates. Even the slight privilege of exemption from elementary biology and anatomy in the curriculum in the Durham University was withdrawn in September last. Practitioners over 40 years of age can now no longer obtain a degree at St. Andrews, and there are rumours that the rules governing the practitioners' M.D. of Durham may be revised. If the latter prove to be true, then every portal to a degree is closed against us in this country.

It may be asked, Why not obtain the London M.B.? The answer is obvious. A man who left school twenty years ago would now find the amount of study necessary to matriculate and pass the preliminary sciences examination an almost insuperable bar. To obtain a provincial degree would probably necessitate a sale of practice in order to allow the diplomate to put in the required period of residence at the University.

In foreign countries the want of a degree weighs even more heavily on the M.R.C.S. and L.R.C.P. than in London, owing to the difficulty of satisfactorily explaining to foreigners that although qualified to practise, the Conjoint man is not an M.D.

When this matter is laid before the authorities of the newly-constituted University of London, I cannot believe that they will refuse to take some steps to remedy what is manifestly an injustice to a large class of medical practitioners.

I appeal to London diplomates to shake off the apathy which they have hitherto shown to this question, and I ask them to use all their energy and influence in trying to remedy the matter, even those of us who do not wish for a further degree will, I trust, be led by loyalty to their fellow Conjoint men to give their full support to the movement, which is to place the possibility of obtaining a degree within the reach of Conjoint men in practice.—I am, etc.,

L.R.C.P.

November 2nd.

## THE DUFFERIN HOSPITALS IN INDIA.

SIR,—I regret that owing to the inevitable delay in correspondence between India and England I was unable to inform you before the publication of my letter of July 17th, in the BRITISH MEDICAL JOURNAL of September 21st that my Committee had at last consented to my urgent request for leave to admit emergency cases without regard to class or creed. This has been rendered possible without any sacrifice of their own principle, that is, that high-caste women will only consent to come into hospitals exclusively reserved for them, by my having been fortunate enough to find a large house suitable for a hospital closely adjacent to the present hospital, though quite apart from it. This annexe has been devoted to the use of native Christians, wards having been set apart for emergency and maternity cases of all descriptions. A similar solution of the difficulty might be found in the case of any hospital which may at any future time adopt a class limitation. Please allow me to correct a slight misapprehension of my previous letter. I believe that so far only two of the Dufferin hospitals have adopted such a limitation, although a tendency to approve of such a limitation is manifest in various quarters. Personally I do not find by experience either of my own patients or of those of other hospitals I have visited, that women make any inquiry as to the class or creed of the other patients so long as their own are respected. The point, however, is that many of the poorest and lowest classes will consent to enter Government hospitals, whereas the strictly purdah woman will only do so in rare cases. The Dufferin Fund is dependent on voluntary contributions, and is therefore not able to bear the whole expense of medical relief for all the women of India, and it is therefore well for all who will consent, even if reluctantly, to enter Government hospitals to be sent there. But my own view and that of all my colleagues, is that all who are seriously ill, and who at the same time

absolutely refuse to go to other hospitals, or are too ill for delay, should be admitted to a special ward of the Dufferin hospitals. This not only satisfies the dicates of humanity, but affords a field of experience to the staff by which the purdah woman herself is eventually the gainer, and without which she will be very inefficiently treated.

I am also very pleased to inform you that my Committee has been, I believe, the first of all Dufferin Committees to summon their medical officer to their meetings. They have also acceded to my request that they should add to their numbers a medical woman unconnected with their Association, who happens to reside in this town. I am perfectly certain that a proper representation of medical women on the governing bodies of the Association, and an increase of the proportion of women of English birth and education is essential to its development and success. Some such plan as Dr. Mildred Staley suggested in the British Medical Journal of giving such well-qualified Englishwomen supervision of various men's Dufferin institutions within a reasonable radius of their own hospital is feasible and desirable, and a similar plan is already in practice among mission hospitals and by civil surgeons in their respective spheres of work.—I am, etc.,

October 16th. M.D.Lond.

## REFORM IN MEDICAL DINNERS.

Sir,—I was present at the dinner of the Edinburgh University Club on Wednesday evening last, and I positively enjoyed myself. As a rule, hospital dinners and medical society dinners are sad and saddening affairs. There is an absurdly long *menu* to be gone through (in the midst of which a poisoned cup containing *punch à la Romaine* is apt to appear), and after dinner comes a long list of speeches which, as a rule, severely tax the patience of those who have dined. On many occasions the night is made still more tedious and prolonged by sandwiching songs and (so called) comic recitations between the speeches. The result is that it is often past 11 o'clock before the chairman has had his health drunk and the meeting can break up. For two hours, more or less, the guests have been breathing the atmosphere of a hot, unventilated room, heavily charged with tobacco smoke. What wonder if next morning one's head feels like a wooden idol's and one's mouth like the bottom of a parrot's cage?

Now, this Edinburgh dinner was splendid. The bill of fare was short and good; there were very few speeches, and they were all over soon after 10 o'clock. There were three songs sung by an old Edinburgh student with a chest measurement of about 48 inches and a voice to match. He charmed every one. I must not say where this dinner was held, or people may take my letter as an advertisement: but if any wants to learn how to make a medical dinner really delightful, let him communicate with John Chiene and George Sutherland.—I am, etc.,

November 16th. Cock-a-Leekie.

P.S.—I did not drink the loving-cup, but I saw it go three times round one table.

## DISEASES OF UGANDA.

Sir,—In your notice of the report of Dr. Moffat on the Diseases of Uganda you raised several points of interest. In the *Journal of Tropical Medicine* for June 1st, 1901, I gave some notes on the diseases of Uganda, based on observations made on 1,500 in-patients and some 40,000 out-patients treated at the Church Missionary Society's Hospital at Mengo, the capital of Uganda. For the most part my experience accorded with Dr. Moffat's, but there a few differences too important to be passed over. The reason of this difference is probably to be found in the fact that most of our patients were Baganda, that is, natives of Uganda proper; while Dr. Moffat saw more of the Soudanese and Nubian soldiers, Swahelis, etc.

*Enteric Fever.*—At the date of the publication of the above article my experience coincided with Dr. Moffat's, but in a letter published in the *Journal of Tropical Medicine* for June 15th I detailed notes of two *post-mortem* examinations in which typical typhoid lesions were found. Indeed, the only reason why we had not been able to assert positively that typhoid was endemic was the extreme difficulty in getting permission to perform necropsies on the natives. Since then we can point to several more typical attacks both in natives and Europeans.

*Malaria.*—Our death-rate from malaria is high. Out of 367 cases of fever admitted to the wards 46 died, a death-rate of over 12 per cent. Of course many of these were admitted in a desperate condition.

*Plague.*—This disease, called by the Baganda *kawumpuli*, though, as Dr. Moffat very justly observes, they often wrongly diagnose it, is yet certainly endemic. We have admitted six cases diagnosed as such into the hospital.

*Influenza.*—Though seeing several thousands of cases of illness amongst Baganda during the summer of 1900 I did not diagnose any as influenza.

*Chorea.*—Of this we have seen several typical cases.

*Phthisis* and tuberculous diseases are very common among Baganda. Of 1,500 in-patients, 58 had this trouble in one form or another. I have operated on several cases of tuberculous joint disease in both knee and elbow.

*Rheumatic Fever.*—Here again I have seen typical cases yielding readily to salicylates.

*Pernicious Anæmia.*—A peculiar and very fatal kind, occurring specially in pregnant women, is common.

*Pyæmia and Tetanus.*—We have had marked cases of the latter. I have only seen 3, 2 occurring in cases of bullet wounds.

*Filaria Sanguinis.*—Dr. Moffat says: "None of the filariæ exist to my knowledge in the Uganda Protectorate. Since the report of this very able officer has been sent home we have taken up this question amongst the Baganda. Filaria sanguinis hominis is very common, and filaria perstans almost equally so. See an excellent paper by my brother, Dr. J. Howard Cook, on Sleeping Sickness in Uganda, with a preface by Dr. Manson published with photographs in the *Journal of Tropical Medicine* for July 15th. All our experience since then has confirmed the view taken in that paper.

The above discrepancies between our experiences and Dr. Moffat's, whose friendship I am proud of possessing, are explained by the fact that we work among different classes of patients.—I am, etc.,

Albert Ruskin Cook, M.B., B.Sc.Lond., B.A.Camb.

St. Bartholomew's Hospital, Oct. 29th.

## THE STUDY OF THE HISTORY OF MEDICINE.

Sir,—Now that the Royal College of Physicians of London has accepted the gift of Mrs. FitzPatrick to found a lectureship on the history of medicine, would it not be a good plan to form a Society for the study of this most fascinating branch of our art? Should such a Society be founded, I think you might find that there are some "practical" men in the profession who do not regard the subject from the point of view of "contempt tempered by indifference." On the contrary, I think many would be only too glad to belong to some Society which would safeguard our past history, and, whilst being its guardian, would diffuse sound knowledge about it.

The great reason why medical history is at so low an ebb is that there is no means of getting at it unless by going to libraries or the British Museum, and so losing much valuable time.

Once make such knowledge fairly accessible, and I believe the professional interest would very soon grow.—I am, etc.,

Northcote Road, S.W., Nov. 11th. M. G. Biggs.

## CHANGES IN THE PIGMENT OF THE IRIS.

Sir,—In the British Medical Journal for October 19th Dr. R. J. MacKeown records a case in which, apparently as the result of operation for cataract, the iris changed in colour from hazel to light blue. This observation, which is interesting and doubtless rare, suggests a question to which it would be desirable to have an answer: Is there normally a tendency for the iris to change with increasing age from brown towards blue?

There is some evidence which may point in this direction. Professor Pfitzner,[1] the well-known anatomist, has lately published the results of the examination of a large number of subjects at the Anatomical Institute at Strassburg, with reference to eye colour at different ages: he finds that from the age of 20 (when eye colour is generally supposed to be fixed) onwards there is a decided decrease of dark eyes with increasing age, a decided increase of mixed eyes, and a slight increase of blue eyes. The interpretation of this fact is not perfectly clear. It may be due (as Pfitzner himself is inclined to think) to "selection by death," mixed-eyed people being perhaps more long-lived. It may, however, be due to pigmentary changes, dark eyes becoming bluer. Your correspondent's observation shows that such a change is not impossible, and I may mention that in my own family I know of a case in which in early life the eyes appear to have been dark (and were described as hazel in an official document), but are now certainly blue.

If ophthalmologists and others would bear in mind that this problem is still unsolved, some light might be thrown on a point of considerable physiological and anthropological interest.—I am, etc.,

Lelant, Cornwall, Nov. 11th. H. Havelock Ellis.

[1] *Zeit. f. Morph.*, Bd. iii, Heft 3, 1901.

## PROPOSED MEDICO-LEGAL SOCIETY.

SIR,—It is proposed to form a medico-legal society for the purpose of affording opportunities for discussing questions arising where medicine and law come into immediate contact.

It is suggested that such a society should include all who are interested in the subject—lawyers as well as medical men; and that the discussions should embrace medico-legal questions of every description, both of every day and of exceptional occurrence.

Half a dozen meetings a year may be considered sufficient, and an annual subscription of half a guinea may be found to be enough to cover all expenses.

A meeting for the purpose of discussing the formation of the society will be held at 20, Hanover Square, W., on Thursday afternoon (5.30 P.M.), December 5th. Those who are willing to assist, but unable to attend the meeting, will kindly communicate with Dr. McCallin, 20, Hanover Square.—We are, etc.,

F. J. SMITH.
W. MCCALLIN.

London, W., Nov. 18th.

## THE TEACHING OF PRESCRIBING AND DISPENSING.

SIR,—Is it too much to expect that some small fraction of the five years curriculum should be devoted to learning the art of prescribing and dispensing?

Owing to sudden illness it has recently been my lot to require a *locum tenens* at short notice. A newly qualified gentleman arrived. His prescriptions were mostly an amazing hotch-potch of incompatibles, his knowledge of dispensing absolutely *nil*. I shudder to think of the reckless waste of expensive drugs. These matters are regarded as almost *infra dig.* at the schools, but after all the vast majority of men sooner or later go into general practice.

My friend remarked that it was an excellent thing that the hospitals did not teach dispensing as "one could always get four or five guineas a week for learning it as a *locum tenens*." Great indeed are the trials of the general practitioner.—I am, etc.,

X. Y. Z.

October 17th.

# UNIVERSITIES AND COLLEGES.

### UNIVERSITY OF CAMBRIDGE.

*Examinations for Medical and Surgical Degrees.*—The First Examination for the degree of M.B. will commence on December 9th, and the Second Examination on December 12th. The names of candidates for these examinations must be sent to the Registrary on or before Tuesday, November 26th. The Third Examination will begin on December 10th, and the Examination for the Degree of M.C. on December 12th. The names of candidates for these examinations must be sent to the Registrary on or before Wednesday, November 27th.

### UNIVERSITY OF BIRMINGHAM.

At the last meeting of the Council the following were appointed the External Examiners in medical subjects for the year 1901-2:—*Anatomy:* Professor A. Macalister, M.D., F.R.S. *Physiology:* Professor McKendrick, M.D., F.R.S. *Chemistry:* Professor McLeod, F.R.S. *Physics:* Professor J. J. Thomson, M.A., F.R.S. *Biology:* S. F. Harmer, Sc.D., F.R.S. *Pathology:* Professor G. Sims Woodhead, M.D. *Medicine:* Donald MacAlister, M.D., F.R.C.P. *Surgery:* Thomas Bryant, F.R.C.S. *Midwifery and Gynæcology:* Berry Hart, M.D. *Forensic Medicine and Toxicology:* Thomas Stevenson, M.D., F.R.C.P. *Public Health:* George Reid, M.D., D.P.H. *Dental Subjects:* Charles Tomes, F.R.S., F.R.C.S.

### ROYAL COLLEGE OF SURGEONS OF ENGLAND.

An ordinary Council was held on November 14th,, H. G. Howse, President, in the chair.

*The late Mr. Henry Spencer Smith.*

The Council expressed their condolence with the widow and family of Mr. Henry Spencer Smith in the loss they have sustained by his death, and recorded their appreciation of the services rendered by Mr. Spencer Smith to the College in the conscientious discharge of the several duties which devolved upon him as a member of the Council and of the Court of Examiners.

*Donations to the Museum.*

The two following donations were accepted by the Council with their best thanks: (1) A complete set of native surgical instruments used in India; by Major Herbert Drake-Brockman, I.M.S. (2) A pocket case of surgical instruments belonging to Mungo Park; by Miss Bartley of Mitcham.

*Cartwright Medal.*

A bronze copy of this was laid before the Council.

*The Bradshaw Lecture.*

This will be delivered on Wednesday, December 11th, at 5 P.M., by Mr. T. R. Jessop. Its subject will be "Personal Experiences in the Surgical Treatment of Certain Diseases."

### ROYAL COLLEGE OF SURGEONS IN IRELAND.

*Dental Examination.*—The following gentlemen, having passed the necessary examination, have been admitted Licentiates in Dental Surgery of the College: Thomas Beaumont, Francis Xavier Costello, Ben Farrar Cowper, and Edward Thomas Patley.

### ROYAL COLLEGE OF SURGEONS, EDINBURGH.

*Annual Dinner.*—The above dinner was held as usual in the hall of the College on November 15th. This being the first year of office of the new President (Mr. Halliday Croom) a large number of Fellows, both resident and from a distance, came to support him in spite of the strong counter attraction afforded by the dinner of the Edinburgh University Conservative Association under the presidency of the Professor of Clinical Surgery (Mr. Annandale) and at which the Lord Rector (the Marquis of Dufferin and Ava) was the principal guest and speaker. Much disappointment was felt at the unavoidable detention in London of the popular commander of the forces in Scotland, Sir Archibald Hunter, K.C.B. In his absence the toast of "The Imperial Forces" was replied to by Colonel Rooney, R.A.M.C. Lord Pearson responded for the College of Justice. The Universities and Sister Corporations were represented by the Dean of the Faculty of Medicine and the President of the College of Physicians of Edinburgh and by the President of the Faculty of Physicians and Surgeons of Glasgow. The President discharged his duties with universal acceptance and much of the success of the evening was due to him.

# MEDICO-LEGAL AND MEDICO-ETHICAL.

### PROSECUTIONS UNDER THE NOTIFICATION ACT.

On Wednesday, November 13th, Dr. Padman appeared at Bow Street Police Court to answer a charge made against him by the Borough of Holborn to the effect that he had failed to notify a case of small-pox.

Dr. Padman was defended by the London and Counties Medical Protection Society. The evidence brought forward by the prosecution showed that Dr. Padman was in doubt as to whether the case was one of small-pox or chicken-pox, and inclined to the belief that it was chicken-pox. Accordingly, no evidence was called on Dr. Padman's behalf, the Counsel for the defence submitting that there was not a particle of evidence to show that any offence had been committed by Dr Padman, who had, as a matter of fact, shown commendable caution in arriving at a diagnosis, and at the same time taken every precaution to check infection. Dr. Padman's precautions, indeed, appeared to be the sole cause for the suspicions entertained against him. The case was dismissed.

Prosecutions such as the above are greatly to be regretted, as tending to interfere with the satisfactory working of the notification regulations.

Notifiable diseases, of late, constitute a regular Scylla and Charybdis to medical practitioners. If they wait a little to make sure of their diagnosis, and at the same time take reasonable precautions, some public authorities prosecute them; while if they jump to the conclusion that the case is a notifiable one, and happen to be wrong, the patient is more than likely to claim damages.

### PROSECUTION UNDER THE APOTHECARIES ACT.

An action was brought in the Bow County Court by the Society of Apothecaries of London against Mr. J. C. Purdue, a herbalist, of Gault Street Limehouse, who described himself as a member of the Society of Herbalists and a member of the National Association of Medical Herbalists of Great Britain. The case, we learn from a report in the *St. James's Gazette*, arose out of an inquest held by the coroner for East London with regard to the death of a child whom the defendant had been treating. The coroner's jury returned a verdict of death from natural causes. At the first hearing before Judge French, evidence was given by the mother of the child showing that the defendant had treated her baby. Mr. Schultess Young, who appeared for the defendant, contended that under an Act of Henry VIII the defendant was within his right in acting as he did.

As the Act is not very long, and is a curious specimen of Tudor legislation and parliamentary phraseology, we think it well to print it here:

ANNIS TRICESIMO QUARTO & TRICESIMO QUINTO

HENRICI VIII. REGIS.

CAP. VIII.

An Act that Persons, being no common Surgeons, may administer outward Medicines.

WHERE in the Parliament holden at *Westminster* in the third Year of the King's most gracious Reign, amongst other Things, for the avoiding of Sorceries, Witchcrafts, and other Inconveniences, it was enacted, that no Person within the City of *London*, nor within Seven Miles of the same, should take upon him to exercise and occupy as Physician or Surgeon, except he be first examined, approved, and admitted by the Bishop of *London* and other, under and upon certain Pains and Penalties in the same Act mentioned; Sithence the making of which said Act, the Company and Fellowship of Surgeons of *London*, minding only their own Lucres, and nothing the Profit or Ease of the Diseased or Patient, have sued, troubled, and vexed divers honest Persons, as well Men as Women, whom God hath endued with the Knowledge of the Nature, Kind, and Operation of certain Herbs, Roots, and Waters, and the using and ministring of them to such as been pained with customable Diseases, as Women's Breasts being sore, a Pin and the Web in the Eye, Uncomes of Hands, Burnings, Scaldings, sore Mouths, the

Abuses of the Act 3 H. 8. c. 11 by the Surgeons of London.

Stone, Strangury, Saucelim, and Morphew, and such other like Diseases and yet the said Persons have not taken anything for their Pains or Cunning, but have ministred the same to poor People only for Neighbourhood and God's Sake, and of Pity and Charity; And it is now well known that the Surgeons admitted will do no Cure to any Person but where they shall know to be rewarded with a greater Sum or Reward than the Cure extendeth unto; for in case they would minister their Cunning unto sore People unrewarded, there should not so many rot and perish to Death for Lack or Help of Surgery as daily do; but the greatest Part of Surgeons admitted been much more to be blamed than those Persons that they troubled, for although the most Part of the Persons of the said Craft of Surgeons have small Cunning yet they will take great Sums of Money, and do little therefore, and by Reason thereof they do oftentimes impair and hurt their Patients, rather than do them good. In consideration whereof, and for the Ease, Comfort, Succour, Help, Relief, and Health of the King's poor Subjects, Inhabitants of this Realm, now pained or diseased, or that hereafter shall be pained or diseased; Be it ordained, established, and enacted, by authority of this present Parliament, That at all Time from henceforth it shall be lawful to every Person being the King's subject, having Knowledge and Experience of the Nature of Herbs, Roots, and Waters, or of the Operation of the same, by Speculation or Practice, within any Part of the Realm of *England*, or within any other the King's Dominions, to practice, use, and minister in and to any outward Sore, Uncome Wound, Apostemations, outward Swelling or Disease, any Herb or Herbs, Ointments, Baths, Pultess, and Emplaisters, according to their Cunning, Experience, and Knowledge in any of the Diseases, Sores, and Maladies beforesaid, and all other like to the same, or Drinks for the Stone, Strangury, or Agues, without Suit, Vexation, Trouble, Penalty, or Loss of their Goods: the foresaid Statute in the foresaid Third Year of the King's most gracious Reign, or any other Act, Ordinance, or Statutes to the contrary heretofore made in anywise, notwithstanding.

Any subject of the King may cure outward Sores notwithstanding the said Act. [*But see* 1 *M. st.* 2. c. 9.]

The Judge adjourned the case until November 13th. Counsel then argued that the Act applied to inward as well as outward disease, and though it expected the practitioner to give his services free it did not stipulate that his ointment or plasters should be gratuitous.

Judge French said that the Act of Henry VIII. had clearly not been repealed. If the defendant had acted in any practical, substantial way as a medical attendant or doctor, he would have been very properly responsible and liable for full penalties. It seemed that the defendant's previous experience had acted as a warning to him, and that in this case he had not brought himself within the Act. When the child was taken to the defendant, he made it clear that he was only a herbalist, and he only did what any man would do in giving it relief when it was almost suffocating. There was no prescribing, and the subsequent visits were to be regarded as being made in a friendly way. If there had been any unfair conduct, any selling at high prices, any trading on the credulity of the public, he (Judge French) would have struck with a strong hand. He accordingly found that the defendant was not liable, and gave judgment in his favour with costs on the scale between £20 and £50.

We publish in another column a letter from the Deputy Clerk of the Society of Apothecaries which states the position of the Society.

### PARTNERSHIP ACCOUNTS.

A. and B. are partners. A., the senior partner, is subpœnaed to attend a law court on a matter connected with the practice. Owing to the law's delay, A. is kept away for four days; he now claims the whole of the fee paid in the case on the plea that the matter arose out of business arising previous to the partnership.

*** If A. absents himself from his present partnership business to give evidence at the law courts, any fees that he may receive properly belongs to the partnership, A.'s own personal expenses being of course defrayed by the partnership.

### FEES FOR VACCINATING PRIVATE PATIENTS.

P. J. asks what would be a correct fee for revaccinating patients who usually pay 5s. for visiting? Should a reduction be made where several members of the family are revaccinated.

*** A fee of half-a-crown in addition to the visiting fee would be a reasonable charge for revaccination, and this fee should be paid for each case.

### MEDICAL ETIQUETTE.

Trinidad.—We think the circumstances mentioned by our correspondent are suitable for adjudication by the local Branch of the British Medical Association.

S.—After carefully considering the statements from A. and B., we are of opinion that A. had no right to claim that the case should be handed over to him, and still less that B. should furnish him with a list of visits and allow him to charge for work done during the whole term of attendance. We do not think B. acted irregularly, but considering the friendly relations between the parties it would have been better if B had made a point of seeing A. upon his return to explain the circumstances. We also think that A. should have tried to see B. before interviewing the patient's husband. We can express no opinion upon what passed between A. and the patient's husband as there is a discrepancy as to what took place.

# PUBLIC HEALTH
AND
# POOR-LAW MEDICAL SERVICES.

### HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,275 births and 4,264 deaths were registered during the week ending Saturday last, November 16th. The annual rate of mortality in these towns, which had been 16.7, 17.6, and 19.7 per 1,000 in the three preceding weeks, declined again last week to 19.4 per 1,000. The rates in the several towns ranged from 11.2 in Croydon, 12.3 in Leicester, 12.4 in Halifax, and 13.2 in Swansea to 22.8 in Salford, 23.9 in Manchester, 27.2 in Preston, and 28.4 in Norwich. In the thirty-two large provincial towns the death-rate averaged 19.0 per 1,000, being 1.0 per 1,000 below the rate recorded in London, which was 20.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London this death-rate was equal to 1.8 per 1,000, while it averaged 2.0 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 3.3 in Wolverhampton, in Salford, and in Leeds, 4.0 in Sheffield, and 8.8 in Norwich. Measles caused a death-rate of 1.1 in Manchester, 1.4 in Preston, 2.3 in Oldham, 2.5 in Sheffield, and 7.4 in Norwich: scarlet fever of 1.2 in Birmingham; and diarrhœal diseases of 1.7 in Wolverhampton. In none of the thirty-three towns did the death-rate either from whooping-cough or from "fever" reach 1.0 per 1,000. The 81 deaths from diphtheria in the thirty-three towns included 35 in London, 6 in West Ham, 6 in Cardiff, 5 in Portsmouth, and 4 in Liverpool. Fourteen fatal cases of small-pox occurred in London, but not one in any other of the thirty-three large towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals, which had been 172, 180, 284, and 297 at the end of the four preceding weeks, had further risen to 368 on Saturday, the 16th inst.; 113 new cases were admitted during the week, against 57, 169, and 62 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 3,353, against 3,392 and 3,331 on the two preceding Saturdays; 376 new cases were admitted during the week, against 400, 425, and 380 in the three preceding weeks.

### HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, November 16th, 824 births and 633 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 14.5 to 21.7 per 1,000 in the six preceding weeks, declined again last week to 19.9 per 1,000, but was 0.5 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 12.6 in Perth and 16.0 in Edinburgh, to 21.6 in Glasgow and 25.9 in Greenock. The zymotic death-rates in these towns averaged 2.3 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 318 deaths registered in Glasgow included 18 from measles, 5 from scarlet fever, 5 from diphtheria, 3 from whooping-cough, 8 from "fever" and 13 from diarrhœa. Three deaths from diphtheria occurred in Edinburgh, 4 from diarrhœa in Dundee, 3 from diarrhœa in Aberdeen, 2 from "fever" in Paisley, and 2 from scarlet fever in Greenock.

### THE SANITARY STAFFS OF METROPOLITAN BOROUGHS.

A report recently issued from the Public Health Department of the London County Council shows the increasing vigilance of sanitary inspection in London. In 1893 there were 188 sanitary inspectors, where there are now 275. Even now in several districts, such as Paddington, Fulham, Stoke Newington, Poplar, Lambeth, and Camberwell there is but one inspector to more than 20,000 persons living in the district. Of course population is by no means the only index to the requirements of sanitary inspection, but there are few, if any, districts in London so free from nuisances, from overcrowding, from defective tenement houses, as not to fully occupy the time of one inspector in attending to the complaints and needs of 10,000 inhabitants. The duties of sanitary inspectors are "extensive and peculiar"; they include duties under the Public Health Act, the Food and Drugs Act, the Metropolis Local Management Act, the Factory and Workshops Acts, the Canal Boat Act, etc. Then there is the scavenging of streets and dustbins to be supervised, a duty all too rarely observed in many parts of the metropolis: there are bakehouses, slaughterhouses, dairies, and milkshops to be visited, and shelters, disinfection arrangements, and mortuaries to be conducted. The salaries of sanitary inspectors range from £120 to £200 a year, and in some districts higher, but, considering the increasingly specialised character of the work, the risks they run, and, lastly, the examination they are now expected to pass, no one would allege that the remuneration is excessive. The value of an intelligent, prompt, tactful, and energetic sanitary inspector to a community may be priceless. They are the nurses of the body politic, the protectors of the public health, their character and their sufficiency are of first importance to a well-conducted municipality.

### DUTY OF DISTRICT MEDICAL OFFICER.

T. writes as follows: A medical man is attending a woman who, on account of poverty, is obliged to apply for parochial relief. He continues to attend, by her request. Is it the law that the parochial medical officer is compelled by the Poor-law authorities to call, and, even if he does not attend, to report on the case?

*** Whenever parochial relief is applied for on the ground of illness, it is usual for the district medical officer to be directed (by medical order issued by the relieving officer) to visit the patient, and to make his report on the case in order to enable the guardians to decide upon the character of the relief which could be rightly given to the applicant at the expense of the ratepayers.

# MEDICAL NEWS.

MEDICAL MAGISTRATE.—The Lord Chancellor has placed the name of Dr. John Horne, of Scarborough, on the Commission of the Peace for the North Riding of Yorkshire.

A MOVEMENT has been set on foot for the establishment by the City of Philadelphia of a sanatorium for the free treatment of poor sufferers from tuberculosis.

A LADY, Dr. N. Sieber-Schumow, has been temporarily appointed to fill the place of the late Professor Nencki as head of the Department of Biological Chemistry in the Imperial Institute of Experimental Medicine, St. Petersburg.

THE Russian Pharmaceutical Society, which has its headquarters in Moscow, has decided to celebrate on December 5th, with appropriate pomp and circumstance the 200th anniversary of the opening of the first free pharmacy in Russia.

CAPTAIN R. J. BLACKHAM, R.A.M.C., Worshipful Master of Lodge "Triune Brotherhood," No. 2,121, was installed Second Principal of Chapter "Umballa" of Royal Arch Masons No. 563, on October 28th, 1901, at Umballa, Punjab.

A COURSE of post-graduate lectures on diseases and injuries to the eye, is now in progress at the Glasgow Ophthalmic Institution on Tuesday evenings, at 8 P.M. Further particulars can be obtained on application to Dr. A. M. Ramsay, at the Institution, 126, West Regent Street, Glasgow.

PRESENTATION.—Mr. James Somer, M.R.C.S., was recently presented by the inhabitants of Broadclyst and the adjoining parishes with a handsome morocco-bound illuminated album containing 700 names of patients and friends, together with a silver jug and a purse of sovereigns, and an illuminated address from the Court "Clyst Vale" of the Ancient Order of Foresters, on the occasion of his retirement after 35 years of practice in the Broadclyst district, and 42 years of work as Poor-law Medical Officer. Sir Thomas Acland, Bart., who made the presentation, said that the subscribers thought of the gifts as a lasting memorial of the admiration, friendship, and gratitude they entertained for Mr. Somer after all that he had done.

THE jubilee dinner of the East Sussex Medico-Chirurgical Society was held at St. Leonards on October 31st, the President, Dr. Batterham, being in the chair. Among others present were Mr. H. G. Howse, President of the Royal College of Surgeons, Mr. Edmund Owen, and Mr. Howard Marsh. Colonel Brookfield, M.P., in responding to the toast of "The Imperial Forces," said that the conduct of the medical services in the present war called for satisfaction and rejoicing. Nothing in the previous experience of this country or of any other country could be compared with the manner in which the troops had been medically provided for in this war. He believed that the services of the medical profession would never be forgotten by the British army, or by the public at large.

## MEDICAL VACANCIES.

The following vacancies are announced:

BEVERLEY DISPENSARY AND HOSPITAL.—Medical Officer and Dispenser. Salary, £160 per annum. Applications to the Clerk by December 2nd.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—(1) Resident Medical Officer. (2) Resident Surgical Officer. Salary, in each case, £60 per annum with board, washing, and attendance. Applications to the Secretary, Children's Hospital Steelhouse Lane, Birmingham by December 4th.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant. Applications to the Secretary by December 5th.

BIRMINGHAM GENERAL HOSPITAL.—Two House Surgeons. Appointments for six months. No salary, but residence, board, and washing provided. Applications to the House Governor by November 30th.

BRACEBRIDGE ASYLUM, near Lincoln.—Junior Assistant Medical Officer: unmarried, and not over 30 years of age. Salary, £125 per annum, with furnished apartments, board, attendance, etc. Applications to Mr. W. T. Pace, jun., Solicitor and Clerk to the Visiting Committee, 5 and 6, Bank Street, Lincoln, by November 27th.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by December 9th.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, unmarried. Salary, £100 per annum with board and residence. Applications, endorsed "Dispensary Surgeon," to be sent to the Secretary by November 26th.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—Assistant-Surgeon; must be M. or F.R.C.S.Eng. Applications to the Chairman of the Medical Committee by November 25th.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Third House Physician, unmarried and under 30 years of of age. Applications to the Secretary by December 11th.

BUXTON: DEVONSHIRE HOSPITAL.—(1) House Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Furnished apartments, board, and lodging provided in each case. Applications to the Secretary by January 25th, 1902.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by December 9th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Resident Medical Officer, unmarried. Salary, £60 per annum. Applications to the Secretary by December 7th.

CHESTER GENERAL INFIRMARY.—House-Physician. Salary, £90 per annum, with residence and maintenance. Applications to the Chairman of the Board of Management, 29, Eastgate Row N., Chester, by November 30th.

CROYDON GENERAL HOSPITAL.—(1) Senior House-Surgeon. Salary, £105 per annum. (2) Junior House-Surgeon. Salary, £60 per annum. Board, laundry and residence provided in each case. Applications, endorsed "Senior" or "Junior," to be sent to the Secretary by December 2nd.

DERBY COUNTY ASYLUM, Mickleover.—(1) Senior Assistant Medical Officer (male). Salary, £150, rising to £180 per annum. (2) Junior Assistant Medical Officer. Salary, £120, rising to £150 per annum. Furnished apartments, board, washing, and attendance provided in each case. Applications to the Medical Superintendent.

DUBLIN: DR. STEEVENS'S HOSPITAL.—House-Surgeon. Salary, £100 per annum, with apartments, fire, and light. Applications to the Governors and Guardians by December 9th.

DUBLIN: TRINITY COLLEGE.—King's Professorship of the Institutes of Medicine (Physiology and Histology). Applications to Dr. J. Craig, Registrar, Royal College of Physicians, Kildare Street, Dublin, by November 30th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Physician. Board, residence, etc., provided and honorarium of £25 at the completion of six months satisfactory service. Applications to the Secretary by December 14th.

GLASGOW UNIVERSITY.—Additional Examiners for Degrees in Medicine, with special reference to (1) Chemistry, (2) Materia Medica and Therapeutics, (3) Zoology, (4) Practical Medicine, systematic and clinical, (5) Surgery systematic and clinical. Salary for (1), (2), and (3), £30, and for (4) and (5), £50. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by December 3rd.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Physician; unmarried. Appointment for six months. Salary, £20; washing allowance, £2 10s., with board and residence. Applications to the Secretary by December 4th.

ITALIAN HOSPITAL, Queen Square, W.C.—Honorary Surgeon. Applications to the Secretary by December 2nd.

KILBURN DISPENSARY, 13, Kilburn Park Road, N.—Member of the Honorary Medical Board. Applications to the Honorary Secretary by November 28th.

KING'S COLLEGE, London.—Demonstrator of General Pathology and Bacteriology. Applications to the Council by December 7th.

LEEDS GENERAL INFIRMARY.—Resident Surgical Officer. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary of the Faculty at the Infirmary by November 27th.

LEWES: EAST SUSSEX COUNTY COUNCIL.—Medical Officer of Health. Salary, £200 per annum, with fees, etc. Applications to the Clerk of the County Council, County Hall, Lewes, by December 19th.

MANCHESTER: OWENS COLLEGE.—Assistant Lecturer in Pathology. Stipend, £150 per annum. Applications to the Registrar by December 4th.

MANCHESTER: ST. MARY'S HOSPITAL, Quay Street.—House-Surgeon and Resident Obstetric Assistant Surgeon. Appointment for one year, but eligible for re-election. Salary, £100 per annum, with board and residence. Applications to the Secretary by December 5th.

MARGATE ROYAL SEA BATHING HOSPITAL.—Resident Surgeon, to act as Junior for six months and then as Senior for the like period. Salary at the rate of £80 and £120 per annum respectively, with board and residence. Applications to the Secretary at the Offices, 30, Charing Cross, London, S.W., by November 23rd.

METROPOLITAN ASYLUMS BOARD.—(1) Assistant Medical Officer at the Fever and Small-pox Hospitals. Salary, £165 for first year, £180 for second, and £200 for third and subsequent years, with board, lodging attendance and washing. (2) Male Assistant at the Asylum, Caterham. Salary, £150 per annum, rising to £170, with rations, lodging, attendance and washing. Candidates must be unmarried and not exceed 35 years of age. Applications on forms provided to be sent to the Office of the Board, Embankment, E.C. for (1) by November 28th and for (2) by November 25th.

MIDDLESEX HOSPITAL, W.—Medical Officer and Registrar to the Cancer Department. Salary, £100 per annum, with board and residence in the College. Applications to the Secretary-Superintendent by December 14th.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—(1) A House Physician. (2) House Surgeon. (3) Clinical Assistant in the Out-patient Department. Must be qualified medical women. Appointment of (1) and (2) for six months. Applications to the Secretary by November 27th.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead.—Assistant Physician. Applications to the Secretary at the Office, 41, Fitzroy Square, W., by November 30th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—House-Surgeon. Salary, £130 per annum, increasing £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by December 5th.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—(1) Resident Medical Officer. (2) Assistant Resident Medical Officer. Appointments for six months; the junior officer is eligible for the senior post. Salary in each case at the rate of £50 per annum, with board, residence, and washing. Applications to the Secretary by December 2nd.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—Honorary Dental Surgeon. Applications to the Secretary by November 30th.

PERTH DISTRICT ASYLUM, Murthly.—Assistant Physician, unmarried and not over 30 years of age. Salary, £110 per annum with furnished apartments, board, attendance, etc. Applications to Dr. Bruce at the Asylum.

POPLAR HOSPITAL FOR ACCIDENTS.—Assistant House-Surgeon. Appointment for six months but renewable. Salary at the rate of £80 per annum with board and residence. Applications to the House Governor by November 29th.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £50 per annum, with board and residence. Applications to the Honorary Secretary by November 30th.

ROYAL DENTAL HOSPITAL AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square.—Lecturer on Dental Surgery and Pathology. Applications to the Dean by November 25th.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge Road, S.E.—Resident Medical Officer. Appointment for four months. Salary at the rate of £70 per annum. Applications to the Secretary by November 30th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, Strand, W.C.—Clinical Assistants. Appointments for six months. Applications to the Secretary by November 28th.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, W.—Resident Medical Officer. Salary, 100 guineas per annum, increasing to 120 guineas, with furnished apartments, attendance, coal and light. Applications to the Secretary by December 9th.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road.—Honorary Physician. Applications to Mr. F. P. Bodkin, Honorary Secretary, 23, Gordon Street, W.C., by December 2nd.

SCHOOL BOARD FOR LONDON.—Medical Officer, must give his whole time. Salary, £300 per annum, rising to £1,000. Applications, on forms provided, to be marked outside "Application for the Post of Medical Officer," to be sent to the Clerk of the Board by January 1st, 1902.

SHANGHAI MUNICIPAL COUNCIL.—Assistant Health Officer; must possess D.P.H., and not be over 35 years of age. Salary, $600 taels a year (about £800), with means of locomotion and first-class passage to and from England. Applications to Messrs. J. Pook and Co., 63, Leadenhall Street, E.C., by November 30th.

SHEFFIELD ROYAL INFIRMARY.—Casualty Officer. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by November 30th.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the House Surgeon by November 27th.

STOCKTON-ON-TEES: STOCKTON AND THORNABY HOSPITAL.—House-Surgeon: non-resident; not exceeding 30 years of age. Salary, £200 per annum. Applications to the Secretary by November 28th.

WEST HAM UNION.—Lady Assistant Medical Officer (Resident) for the Workhouse and and Schools. Salary, £160 per annum with usual residential allowances. Applications on forms provided to be sent to the Clerk, Union Workhouse, Leytonstone, N.E., by November 27th.

WESTMINSTER GENERAL DISPENSARY.—Honorary Physician. Applications to the Secretary, 9, Gerrard Street, W., by November 25th.

WIGAN: ROYAL ALBERT EDWARD INFIRMARY.—Junior House-Surgeon. Salary, £80 per annum, with rations and apartments. Applications to the General Superintendent by November 27th.

WILTS COUNTY ASYLUM.—Assistant Medical Officer: unmarried. Salary, commencing at £130 and rising to £180 per annum, with board, residence, attendance, and washing. Applications to the Medical Superintendent by December 4th.

WINCHESTER: ROYAL HANTS COUNTY HOSPITAL.—House-Physician; unmarried. Salary, £65 per annum, rising to £75, with board, residence, etc. Applications to the Secretary by December 9th.

WINDSOR AND ETON ROYAL DISPENSARY AND INFIRMARY.—House-Surgeon, unmarried. Salary, £120 per annum with residence, board, washing and attendance. Applications to the Secretary, 13, High Street, Windsor, by November 27th.

WORCESTER COUNTY AND CITY ASYLUM.—Junior Assistant Medical Officer; not over 30 years of age. Salary, £120 per annum, rising to £150, with board, furnished apartments, and washing. Applications to the Medical Superintendent, by November 26th.

## MEDICAL APPOINTMENTS.

BARTON, G. A. H., M.R.C.S., L.R.C.P., appointed Honorary Assistant Anæsthetist to the City Orthopædic Hospital (correction).

CORBETT, J. A., M.B., B.Ch., B.A.O.R.U.I., appointed Certifying Factory Surgeon for the Bangor District of County Down.

FORSYTH, A., M.B., C.M., appointed District Medical Officer of the Truro Union.

PADWICK, J. C., M.R.C.S., L.R.C.P. Lond., appointed Certifying Factory Surgeon for the Borough and Rural District of Bridgnorth.

PARRY, Leonard A., F.R.C.S.Eng., B.S., M.D.Lond., appointed Assistant Surgeon to the Sussex Eye Hospital, Brighton.

PATERSON, M. S., M.B., B.S.Durh., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the Hospital for Consumption and Diseases of the Chest, Brompton.

TAYLOR, F. E., M.A., M.B., Ch.B., M.Sc., M.R.C.S., L.R.C.P., late Resident Medical Officer, appointed Registrar to the Chelsea Hospital for Women.

THORNTON, George, M.D., M.S.Edin., M.R.C.P.Lond., M.R.C.S.Eng., D.P.H.Oxford, appointed Medical Superintendent of the Civil Hospital, Pretoria.

ROCHE, Redmond, A.B., M.R.C.S.Eng., L.R.C.P., Lond., L.M., appointed Attending Medical Officer, Western Dispensary, Westminster, *vice* J. E. Sinclair, L.R.C.P., L.R.C.S., Queen Anne's Gate, resigned.

## DIARY FOR NEXT WEEK.

### MONDAY.

**Medical Society of London,** 11, Chandos Street, Cavendish Square, W., 8.30 P.M. Mr. Henry Morris will open a discussion on the Symptoms and Treatment of Floating Kidney.

**Odontological Society of Great Britain,** 20, Hanover Square, W., 8 P.M.—Communications by Mr. E. W. Roughton, Mr. A. S. Underwood, and Mr. W. C. Grayston.

### TUESDAY.

**Royal Medical and Chirurgical Society,** 20, Hanover Square, W., 8.30 P.M. Mr. Thomas Bryant: Case of Intestinal Obstruction due to the Pressure of a Vesical Sacculus upon a Coil of Small Intestine. Dr. A. E. Garrod: About Alkaptonuria.

### WEDNESDAY.

**Hunterian Society, London Institution,** Finsbury Circus, E.C., 8.30 P.M.—Pathological Evening.

**Dermatological Society of Great Britain and Ireland,** 20, Hanover Square, W., 8 P.M.

### POST-GRADUATE COURSES and LECTURES.

Charing Cross Hospital, Thursday, 4 P.M.—Demonstration of Medical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, Wednesday, 4 P.M.—Lecture on Laryngeal Tuberculosis.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 P.M.—Lecture on the Surgical Treatment of Infantile Paralysis.

London Temperance Hospital, Thursday and Friday, 2 P.M.—Clinical Demonstrations.

London Throat Hospital, 204, Great Portland Street, W., Wednesday, 5 P.M.—Practical Demonstration.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—Demonstrations will be given at 4 P.M. as follows: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, eye.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Lectures: Tuesday, 3.30 P.M.: Lecture: Hemiplegia.

West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 P.M. as follows:—Monday: Cancer of the Breast. Tuesday: Skin Cases. Wednesday: Therapeutics. Thursday: Some Points in the Treatment of Bright's Disease. Friday: Medical Anatomy.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

BENSON.—On November 17th, at Broomhill, Sheffield, the wife of Henry Mitchell Benson, M.B., C.M.Edin., of a daughter.

GILBERT.—On October 4th, at Fort Stedman, the wife of Leonard Erskine Gilbert, M.B., I.M.S., of a daughter.

MARSHALL.—At Rawal Pindi, Punjab, India, on the 16th inst., the wife of Major D. C. Marshall, I.M.S., 17th Bengal Lancers, of a son.

OSBORN.—On the 11th inst. at Ennismore House, Dover, the wife of Francis Arthur Osborn, L.R.C.P.Lond., M.R.C.S.Eng., of a daughter.

### DEATHS.

HORROCKS.—November 15th, at Shoreham, Blundellsands, aged 85 years, William Henry Horrocks, M.R.C.S.Eng.

STOPFORD-TAYLOR.—November 11th, at his residence, 6, Grove Park, Liverpool, in his 50th year, John Stopford-Taylor, M.D., formerly Medical Officer of Health for that City.

SUTHERLAND.—On November 19th, at 21, New Cavendish Street, Portland Place, W., Henry Sutherland, M.A., M.D.Oxon., M.R.C.P., second son of the late A. J. Sutherland, M.D., F.R.S., aged 59.

## LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

### QUERIES.

VERAX.—Asks for information as to best place abroad for a child, aged 11, suffering from severe spasmodic asthma, to winter in; the sanitary and hygienic qualities of such place, etc. He also desires to know if any book of moderate size treating on this subject can be recommended?

TINNITUS AFTER MASTOID OPERATION.

H. asks for advice in the treatment of two patients who have undergone operation for mastoid disease. The sole complaint is that they cannot get rid of a "buzzing" noise in their ears. There is no further disease of the bone, no discharge, and medicine has entirely failed to relieve them.

SIMPLE REGULATED MUSCULAR EXERCISES.

A PHYSICIAN asks whether there is any reliable book or pamphlet published giving an account of simple (regulated) muscular exercises with the dumb-bells or otherwise which one may recommend to patients requiring muscular exercises, and who are unable or unwilling to consult the various professors of muscular development.

### ANSWERS.

A MEMBER.—We cannot recommend the institution named. The treatment is good in properly-selected cases, but, like every treatment, is not of universal applicability. It does not, however, belong to any one country, but is practised in every country in Europe.

M. C. K.—There can be no objection to accepting the invitation. The powers of a district council under the Public Health Act are dealt with in the Public Health Act. Our correspondent might consult the Act as annotated by Dr. Hime in his work, *Practical Guide to the Public Health Acts*, second edition, Bailliere, Tindall, and Cox. 1901.

HYPODERMIC.—So far as we are aware the point has not been decided by the General Medical Council. We can only refer our correspondent to the resolution of the General Medical Council adopted on November 23rd, 1897, which has frequently been inserted in our advertisement columns by the Council. The advertisement again appears in the advertisement columns of this week.

OCEANA.—It is to be feared that no advantage could be expected from the insertion of any kind of artificial velum. The improvement of voice and articulation in a case of cleft palate depends not upon any passive effect produced by the velum, but upon its rendering it possible for the muscles to open and close the passage between the mouth and the nose, and it would be useless as a means of remedying weakness of these muscles. (2) It is difficult to predict the best position for the bicycle saddle in a case of weakness of the calf muscles: it can only be found by experiment. Easy hill climbing is mainly a matter of good pedalling, that is to say, of "ankling," so as to keep up effective pressure on the pedals through a larger part of their revolution than a mere thrust can do. It seems probable, *a priori*, that a very forward position of pedal would be bad, as making ankling even more essential by placing the thrust of the extensors of the thigh in a less advantageous direction.

DIABETIC FOOD.

DIABETES.—Our correspondent asks our opinion about certain American foods which he finds on rough examination to contain a large quantity of starch. The foods mentioned are not known to us, and as our correspondent's examination is not satisfactory, he might advise his patient not to use them, but to use one of the foods recommended by competent British authorities on the subject.

ACETIC ACID CLAY.

J. R. H.—By "acetic acid clay," is meant acetate of aluminium in solution. The expression was used in this form, which is a literal translation of the German phrase, as the preparation is not a chemically pure one, but a commercial article, usually employed as a "mordant" in the manufacture of "print" calico. It can be obtained from any manufacturing chemists in the fluid form, as used by Walbaum.

THE INDIAN MEDICAL SERVICE.

X. Y. Z.—We are informed that no change has as yet been made in the subjects of examination for the Indian Medical Service, and candidates should therefore prepare for the examination under the present conditions. The question of any change in the examination may be entertained by the Secretary of State for India, but due notice will be given if any change should be decided on. The examination to be held next February will, it is believed, be conducted under the conditions which obtain at present.

## LETTERS, NOTES, Etc.

### A CORRECTION.

MR. ALBAN DORAN writes: In the report of the communication on sloughing fibroid of the left uterine cornu showing abnormal relations read by Dr Cuthbert Lockyer and myself at the November meeting of the Obstetrical Society of London (BRITISH MEDICAL JOURNAL, November 16th, p. 1472), "its *blood*-pointed outer extremity" should have read "its *blunt*-pointed outer extremity." There was no question of hæmorrhage, old or recent—an important point in a case where the cause of the necrotic change was so obscure. Hence the correction of an error liable to mislead is of importance.

### THE PREVENTION OF ENTERIC FEVER IN ARMIES.

In the report of DR. CANNEY'S paper, published in the BRITISH MEDICAL JOURNAL of November 16th, p. 1478, the amount of transport to be carried daily to Bloemfontein should have been given as 500 tons, and not as there printed. A full report of the lecture and discussion will, we are informed, be published in the *Journal of the Royal United Service Institution* for December.

### THE TREATMENT OF SEA SICKNESS.

DR. PERCY MCDOUGALL (Manchester) writes, calling attention to the treatment of sea-sickness by hypodermic injections of strychnine and atropine (recommended by Skinner in the *New York Medical Journal* for December, 1893.) From an experience of 50 cases he believes that the method will always give relief, if not cure. An injection of gr. $\frac{1}{30}$ strychnine sulphate and gr. $\frac{1}{150}$ atropine sulphate should be given at the first onset of discomfort or even just before embarking. In some cases the strychnine may be increased to gr. $\frac{1}{20}$ with benefit, and the injection may be repeated every 12 hours or less. The same drugs in the same doses may be taken by the mouth, but are less efficient. The symptoms of sea-sickness point to depression of the circulation, and it seems probable that any general stimulant that could be given without irritating the stomach would be of benefit.

MR. H. NORMAN BARNETT, L.R.C.P., L.R.C.S. (Knock, co. Down) writes in support of the endolymph theory of the causation of sea-sickness, and to express the opinion that the good effects of the bromides is proof of cerebral origin. The fact that those who are accustomed to ocean travel without being sea-sick are frequently made so by the motion of a coasting vessel is, he considers, another point in proof, as the endolymph is here subjected to quite a different motion. More harmony in the theories might, he thinks, be attained were greater stress laid on the fact of the movements of the endolymph being the primary cause, "stomach" symptoms, which are no doubt prominent later on, being regarded as secondary.

DR. R. R. P. S. BOWKER (Maesteg) writes against the endolymph theory. He believes that gastric disturbance is alone concerned, as he has found bromides absolutely useless or even harmful in the condition. He trusts to the method of purgation, followed by gastric sedatives such as bismuth and morphine. He writes: During the voyage home from Australia a few months back a lady became very exhausted, and her condition very serious owing to the continual vomiting, and after trying all the usual drugs, I gave her 2-minim doses of ipecacuanha wine every hour, and her condition at once improved, and she suffered no more from sea-sickness during the rest of the voyage. I can scarcely believe that the ipecacuanha wine brought about this improvement in her condition.

### THE "SEA SICKNESS" OF SEA BIRDS.

DR. T. ARCHIBALD DUKES (Croydon) writes, in reference to the fact that sea birds when caught and brought on deck often vomit: The huge albatross need not be accused of "the habit of disgorging ..... to more powerful adversaries." It is caught with a hook and dragged over the surface of the water to the ship. During the process the gull involuntarily swallows much sea-water, which soon produces emesis. If the bird can manage to keep its head above water all the while, as I have noticed, it is not sick. A tumbler of sea-water is an old seaman's cure for sea-sickness: and undoubtedly when a patient can summon sufficient resolution to drink half-a-pint he soon overcomes his trouble.

### NURSING IN INFIRMARIES IN IRELAND.

DR. GEORGE ST. GEORGE (County Antrim Infirmary, Lisburn) writes: In the BRITISH MEDICAL JOURNAL of November 16th *re* nursing in infirmaries, at the meeting of the Poor-law Conference in Belfast, Dr. W. Calwell is reported to have said that he had examined the nurses in the Belfast and Lisburn Infirmaries. It might be supposed, therefore, that the Lisburn Infirmary was a Union one. He meant the co. Antrim Infirmary, Lisburn, as he is one of the examiners for the certificate issued to nurses there after a three years training in the wards. The nurses in the Lisburn Union hospital are not examined, nor do they receive lectures on nursing. I may refer you to the report of your Commissioner *re* Union hospitals in Ireland, where she says that the co. Antrim Infirmary is quite equal to any of the smaller provincial hospitals in England, and recommends the Poor-law Guardians of Lisburn to copy it in their Union hospital. The question of the nurses' training I would rather leave to my medical *confrères*.

LETTERS, COMMUNICATIONS, ETC., have been received

A A. G. P. B Mr J. P. Bush, C.M.G., Clifton; Mr. G. Brown, London; J. P. Brown, M.B., Manchester; Dr. A. J. Boyd, Ware; Mr. R. J. Bland, London; Mr. G. S. Bligg, London; Mr. G. H. Broadbent, Manchester; Dr. F. Bushnell, Plymouth; Mr. D. Biddle, Kingston-on-Thames. Mr L. A. Bidwell, London; Miss C. S. Bremner, Florence; Mr. R. J. M. Buchanan, Liverpool; Mr. A. Baldwin, London; Mr. A. S. Barling, Lancaster; B. H.; Messrs. Barcu and Co., London; Mr. W. M. Beaumont, Bath; Dr J. Braithwaite, Leeds; Dr. W. Bruce Dingwall; Dr. J. B. Brierley, Manchester; E. G. Bull, M.B., Birmingham. C Mr. J. S. Colman, London; Mr. H. W. Carson, London; Civil Surgeon; J. J. Clarke, M.B., London; Dr. E. Cautley, London; W. F. Colclough, M.B., Dublin; Country M.O.H.; Dr. M. Craig, London; Dr. L. Canney, London; D. A. Callender, M.B., Leith; T. Carwardine, M.B., Clifton; Mr. H. A. Collins, Saxmundham; County Palatine; Cotswold; "Clinical Journal," Editor of the, London; C. S. D Dr. D. S. Davies, Bristol; Delta; Mr. J. G. Duncauson, London; Dr. L. Drage, Hatfield; Disheartened One; Disgust; Mr. H. Davis, London; Dr. C. Dukes, Rugby. E Est modus in Rebus; Dr. E. H. Ezard, London; Ethics. F Dr. G. B. Flux, London; Dr. E. H. Fox, London; Fairplay; Dr. W. H. S. Foshery, Reading; Forceps. G J. E. Gemmell, M.B., Liverpool; G.P. and former District Medical Officer; Dr. E. E. Goodbody, Great Bardfield; Dr. G. L. Gulland, Edinburgh; Messrs. C. Griffin and Co., London; Sir W. R. Gowers, London. H H. M.; Dr. J. A. Hayward, London; H. Hodgson, M.B., Illsworth; Dr. T. H. Hunt, Halifax; Dr. E. B. Hazleton, Sheffield; Dr. J. Horne, Scarborough; Mr. V. Horsley, London; Hope Deferred; H. J. Hillstead, M.B., London; Mr. T. J. Henry, Grafton, N.S.W.; Mr. F. W. Howell, London; Hypodermic; R. J. Hughes, M.B., Denbigh; Dr. R. H. Hodgson, London; Mr. F. R. Humphreys, London; G. Halley, M.B., Dundee; Dr. G. A. Heron, London. I Messrs. Ingram and Royle, London. J Dr. R. Jones, Woodford Bridge; J. McG.; Mr. G. S. Jones, Horsham. K E. Kingscote, M.B., London. L G. Leighton, M.B., Grosmont; Layman. M Mr. H. A. H. Moxon, Great Yarmouth; Member; Mr. J. H. Mummery, London; Major R.A.M.C.; Medical Officer; Mr. W. F. McCallin, London; Dr. J. MacCombie, Scooter's Hill; Mr. K. N. Macdonald, Harrogate; Dr. C. F. Moore, Dublin; Mr. J. Marshant, Chatham; Mr. R. H. Manley, Cheltenham; D. McNicol, M.B., Glasgow. N Mr. H. P. Norris, London; Dr. J. T. C. Nash, Southend-on-Sea; N.S.W.; N.M.; T. D. Newbiggin, M.B., Abington. O One who would sooner serve under our present Warrant; One who would give Fair Play to all and no Favour to any. P Puzzled; Psorospermiæ; Dr. J. Pearse, Trowbridge; Mr. E. E. Phillips, Bath; Physician; Mr. C. A. Parker, London; Mr. A. D. Parr-Dudley, Chippenham; T. J. Pritchard, M.B., East Retford; Dr. C. Y. Pearson, Cork; Dr. W. H. Peake, Marden. R Mr. W. Randall Bridgend; Dr. J. Reid, Bristol; E. L. M. Rusby, M.B., London; R.A.M.C.; Dr. N. Raw, Liverpool; Dr. J. J. Ridge, Enfield; Dr. R. R. Rentoul, Liverpool; Mr. E. J. Reid, London. S Sportsman; J. Stewart, M.B., Beith; Dr. J. F. J. Sykes, London; A. Shillitoe, M.B., London; Dr. C. E. Shelly, Hertford; E. G. Sworder, M.B., Folkestone; G. P. Shuter, M.B., London; Mr. J. Somer, Exeter; Dr. E. M. Smith, York; Strefford; Spero Melora; Dr. F. J. Smith, London; Mr. G. St. George, Lisburn; S. Stephenson, M.B., London; Mr P. S. Spokes, London; Dr. J. H. Swanton, London; Dr. W. J. Smyly, Dublin; Mrs. J. Stopford-Taylor, Liverpool. T Mr. W. Tyrrell, London; Tinnitus; Dr. E. F. Trevelyan, Leeds; Mr. B. L. Thurlow, London; T.; Dr. E. Thompson, M.P., Omagh; Dr. H. Tilley, London. U Mr. A. M. Upton, London. V Verax; Mr. P. F. Voe ter, Leeds. W Dr. N. Walker, Edinburgh; Dr. A. McC. Weir, Liverpool; W. L. R.; Dr. A. Whitfield, London; Mr. G. W. Whiteley, Downton; J. Weir, M.B., Glasgow; Mr. W. M. Wilds, Nottingham; Mr. J. D. Windle, London; A. Wauchope, M.B., Glasgow; Dr. F. Willcocks, London; Dr. J. D. Wynne, Clonmel; Dr. J. A. Wilson, Glasgow; Mr. M. H. Way, Southsea; Mr. E. S. Wood, Cambridge; Mr. A. W. Wigmore, London; Mr. J. D. Willis, Manchester; Dr. H. Woods, London. X X.Y. X.Y.Z.

## BOOKS, ETC., RECEIVED.

Impressions of a Doctor in Khaki. By F. E. Fremantle, M.A., M.B., B.Ch., M.R.C.P. London: John Murray. 1901. 10s. 6d.

Studies in Heterogenesis. By H. C. Bastian, M.A., M.D., F.R.S. Part I. London: Williams and Norgate. 1901. 7s. 6d.

The Transactions of the Edinburgh Obstetrical Society. Vol. XXVI. Edinburgh: Oliver and Boyd. 1901.

The Septic System of the Ocean and the Septic Tank System at Exeter. By Circumnavigator. London: "The Public Health Engineer" Office. 1s.

The Care of the Consumptive. By C. F. Gardiner, M.D. London and New York: G. P. Putnam's Sons. 1901.

Internationale Sehprobentafel für Kinder. Von Dr E. Heimann. Berlin: H. Kornfeld. 1902. M.2.

Ferments and their Actions. By C. Oppenheimer, M.D., Ph.D. Translated by C. A. Mitchell, B.A., F.I.C. London: C. Griffin and Co. 1901. 7s. 6d.

Diagnostik der Harnkrankheiten. Von Fr. C. Posner. Dritte Auflage. Berlin: A. Hirschwald. 1902. M.4.

On the Cure of the Morphia Habit without Suffering. By O. Jennings, M.D., M.R.C.S. Second Edition. London: Baillière, Tindall, and Cox. 1901. 3s. 6d.

Receptitaschenbuch für Kinderkrankheiten. Von Dr. O. Seifert. Vierte Auflage. Wiesbaden: J. F. Bergmann and Glasgow: F. Bauermeister. 1901. 3s. 3d.

Menstruation and its Disorders. By A. E. Giles, M.D., B.Sc., F.R.C.S., M.R.C.P. London: Baillière, Tindall, and Cox. 1901. 2s. 6d.

Grundriss der Kinderheilkunde mit besonderer Berücksichtigung der Diätetik. Von Dr O. Hauser. Zweite Auflage. Wiesbaden: J. F. Bergmann and Glasgow: F. Bauermeister. 1901. 8s.

Beiträge zur Kentniss der Lungentuberculose. Herausgegeben von Dr. E. Meissen. Wiesbaden: J. F. Bergmann and Glasgow: F. Bauermeister. 1901. 4s. 9d.

Zur pathologischen Anatomie des kindlichen Alters. Von Dr. A. Steffen. Wiesbaden: J. F. Bergmann and Glasgow: F. Bauermeister. 1901. 8s.

Der Luftdruss des Alkohols auf den Organismus. Von Dr G. Rosenfeld. Wiesbaden: J. F. Bergmann and Glasgow: F. Bauermeister. 1901. 5s. 9d.

Morphologie und Mechanismus der Skoliose. Von Dr. J. Riedinger. Wiesbaden: J. F. Bergmann and Glasgow: F. Bauermeister. 1901. 4s.

Die griechischen Götter und die menschlichen Missgeburten. Von Dr. Schatz. Wiesbaden: J. F. Bergmann and Glasgow: F. Bauermeister. 1901. 2s. 6d.

The Surgical Treatment of Disfigurements and Deformities of the Face. By J. B. Roberts, A.M., M.D. Second Edition. Philadelphia: Philadelphia Medical Publishing Co. 1901.

On Some Aspects of Life. By J. Aikman, M.D. Guernsey: F. Clarke.

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# A Lecture
ON
# A CASE OF SYPHILITIC ARTERIAL DISEASE.

*Delivered at the National Hospital for the Paralysed and Epileptic, October 22nd, 1901.*

By Sir WILLIAM R. GOWERS, M.D., F.R.S.,
Physician to the Hospital; Consulting Physician to University College Hospital.

Gentlemen,—Patients sometimes die when we expect them to live. The discrepancy between our forecast and the fact is, of course, the result of our ignorance. It is occasionally impressed upon us in a special manner when death terminates the reticence of life, and we are permitted to read the record of disease, and yet cannot solve the mystery. Sometimes, however, a careful scrutiny reveals to us the reason for our failure. From such a case we can often gather many lessons. It is to an instance of this that I desire to direct your attention to day. That I am able to do so is largely due to the thorough study of the diseased parts which has been made by our pathologist, Dr. Collier. He will show them to you when I have done, for they need close examination.

A woman, aged 25, a waitress, was admitted, after having suffered for three months from headache, which was severe from the first, and was referred to the front and back of the head. After it had existed for a month, vomiting was added to it, and both symptoms continued. Towards the end of another month she was noticed to become strange in manner, and the mental disturbance increased, so that she is said to have been "always talking nonsense," Soon afterwards, three weeks before admission, some loss of power of the right side was noticed, which was thought to have commenced suddenly, and it subsequently increased. She also had a fit of some kind. The only other fact of importance is that a doctor, who knew something about her but does not seem to have treated her for this illness, stated that she had probably had syphilis. She was an ill-nourished, anæmic girl, very weak, and in a condition of stupor. She did not speak, or do what she was told, although she could evidently see those about her, and resented examination. There was considerable right hemiplegia, weakness of the right side of the face, complete paralysis of the upper arm, although she could move the forearm and hand a little; power in the leg was limited to slight movement of the foot. The left limbs were moved freely. There was also foot-clonus on the right side; sensation was impaired on the right limbs but not abolished; the optic discs were normal. Those are the essential features she presented. Inunctions of mercurial ointment were ordered, a drachm twice a day. For a few days there was distinct improvement: she moved the hand better, and became able to answer questions. It was not, however, greater than we often see from the first influence of the rest and suitable food a patient receives in the ward of a hospital. The improvement soon ceased, and she became duller and feebler. At the end of a week 15 grs. of potassium iodide, three times a day, was added to the mercury. But in a few days more the increase in weakness was so distinct that the inunctions were stopped, the iodide being continued alone. She continued in much the same condition for another fortnight, the stupor indeed increasing, and the movement of the right hand becoming less. She had several slight convulsive attacks, some affecting only the right side. The optic discs continued free from any trace of neuritis. At the end of three weeks after admission paralysis of the left side came on almost suddenly, complete. The stupor deepened to coma, the temperature rose to 104°, and three days later, on the twenty sixth day after admission, she died.

The symptoms suggested a rapid cerebral growth. The prolonged headache, afterwards associated with vomiting, were especially significant of this. The course of the symptoms before admission was that which is met with from an untreated syphilitic tumour. Sudden hemiplegia is occasionally met with in the course of a tumour, especially towards the end, so that this fact did not seem to have much weight against the indications afforded by the other symptoms. Nor was the absence of optic neuritis a negative symptom of much significance. Optic neuritis is an incident in the course of a growth; it may occur at any period, or be absent. It is important to remember the general diagnostic law that the absence of a common symptom has small negative importance compared with the value of the positive indication which its presence affords. At the same time normal discs are unusual in a tumour of such rapid development, and therefore had rather more significance than they would have had with symptoms of more chronic course.

Here was a case in which it was reasonable to anticipate that treatment would have been successful, if the disease were of the nature assumed. Grave as was her state when she came in, it was far from hopeless, and yet the patient died. What solution of the mystery did death afford? The disease was found to be such as it was thought to be, so far as its nature was concerned, but it was not of the character supposed. It was syphilitic, but there was no growth. There was extensive disease of the arteries, such, alike in extent and in degree, as is seldom seen. The disease was most intense at the commencement of each middle cerebral artery, at the place at which the passage of the anterior cerebral from the internal carotid converts the latter into the middle cerebral. Here on each side the disease had entirely surrounded the vessel. The external prominence was very slight, but the thickening of the wall had encroached on the cavity of the artery, even to the point of obliteration. It was especially great on the left side, and on this the anterior cerebral was likewise involved in the disease for some distance and also closed. In each middle cerebral the most intense disease extended, lessening in degree, for about one-half to three-quarters of an inch, but beyond this there were scattered spots of disease, nowhere surrounding the vessel. Similar patches were seen on each posterior cerebral artery. The posterior communicating arteries were almost free. The left anterior cerebral, after it had turned back above the corpus callosum in the inner side of the frontal lobe, was smaller than the other and pale, but perhaps only in consequence of contraction from the lessened blood supply to be presently mentioned. A similar change was found in the small branches which this and the middle cerebral send into the substance of the brain. To this condition I must return.

What effect had this arterial disease produced on the circulation within the vessels? The right middle cerebral was occupied by a recent clot, which extended from the disease at its origin throughout the whole vessel. It had completely closed it in its entire length, and there was commencing necrotic softening in the region of the brain supplied. This thrombus must have been the cause of the final hemiplegia, the palsy on the second side, the left, which came on three days before death, which was its result. The aspect of the clot corresponded to the duration of the paralysis; it was red, uniform, and not adherent. The state of the brain supplied by the vessel was that which we should expect three days after the arrest of the blood supply. The disease at the origin of the artery appeared to have quite closed it, but this may have been partly due to the influence of the agent—formalin—in which it had been at first placed, since some blood must have passed through until the clot formed.

In the other middle cerebral, the left, a remarkable condition was found. There was the intense disease at its origin which I have mentioned, thickening the wall, and projecting into the cavity from every side, so as completely to close it. Similar disease extended along the wall for three-quarters of an inch, gradually diminishing to scattered spots. Against the closure was an old clot, occupying the vessel for about a third of an inch. It was old, decolorised, adherent, its aspect such as would correspond to the period since the first attack of hemiplegia, which you will remember was on the right side, opposite to this vessel, and was incomplete. Beyond this thrombus the artery contained fluid blood, and there was no softening of the region of the brain supplied by it, such as would usually have followed the obstruction of an artery,

and such as we found commencing on the other side, from the recent thrombosis in that artery. The circulation had been maintained in the distal part of the vessel. How had this occurred, and prevented the extension of the clot? The answer is strange. On this side an artery arose from the posterior cerebral and passed forward, entering the fissure of Sylvius, to join the middle cerebral just before its division. It was a vessel of some size, although far smaller than that which it joined. It was free from disease, and had carried enough blood into the middle cerebral to prevent the extension of the thrombus, although of course far less than would have been received by the usual channel. We shall see presently the importance of this last fact.

Still more strange is it that another abnormal vessel had in like manner maintained the circulation in the anterior cerebral. I told you that this artery is involved in the disease which exists where it arises from the internal carotid, the disease at the beginning of the middle cerebral. The anterior cerebral was also completely closed, and adjacent to the closure was an old clot, decolorised and adherent, like that in the other vessel, and extending also along it for about one-third of an inch, just beyond the anterior communicating artery. Further on the vessel contained fluid blood, just as did the middle cerebral beyond the clot in it. The reason was clear. Your anatomical lore should not have been so lessened by time as to make it needful for me to remind you that this anterior communicating artery completes the arterial circle at the base of the brain which you know by the name of our great countryman, Willis. This communicating artery is usually single. Here, however, it is double. A second artery crosses about a third of an inch in front of the ordinary vessel, and equally large. The clot in the anterior cerebral extended beyond the first of these, but not quite so far as the second artery, and through this the blood supply had been maintained in the distal part of the anterior cerebral, just as was the case in the middle cerebral. As in the latter, the amount of blood brought to it thus cannot have been a third of the normal, but it was enough to maintain the movement of the blood and to prevent the extension of the clot, and to prevent necrotic softening.

These facts enable us to understand the symptoms better, and will lead us to a further explanation. The occurrence of the limited clot in the left middle cerebral, adjacent to the occluding disease, must have caused the onset of the right hemiplegia, by the sudden diminution in the blood supply to the motor region, although the abnormal artery from the posterior cerebral carried enough blood to prevent the paralysis being complete. In the same way the clot in the anterior cerebral may be assumed to have caused the onset of the mental symptoms, although its effect was lessened by the supply of blood brought by the second communicating artery. You know how often disease or injury of the anterior lobes, and especially of the left, has caused symptoms of this character.

But this does not enable us to understand the progressive increase in the symptoms, the increasing palsy, the deepening speechlessness and stupor. Farther careful examination discloses to us the apparent cause of this—indeed, I may say the definite cause. Extensive change is to be seen in certain parts of the cerebral substance. You will be able to observe it for yourselves. In most of the region of the cortex supplied by the middle cerebral on the left side, and much of that supplied by the anterior cerebral—the vessels we have just been speaking of—there is a very peculiar alteration. The grey substance is shrunken; it is diminished to not much more than half its normal thickness. Both this and the white substance beneath present a peculiar granular aspect and definite induration. Wherever this exists there is found considerable change in the small arterial twigs, which pass into the brain substance from the branches of the main arteries. The alteration in these arterioles is very definite. They are contracted, small and pale, evidently in consequence of the diminished blood supply, since you know that arteries adapt themselves to their contents. But Dr. Collier finds in them also a process of endarteritis; there are active changes between the internal and middle coats, cell proliferation thickening the middle coat, and still further diminishing the cavity. It is doubtful whether this endarteritis is syphilitic in nature; indeed it probably is not. A similar process has been found to be the mechanism by which the arterioles are obliterated wherever there is a considerable persistent diminution in the supply of blood. But we can be quite sure that this process has been progressive; it has gone on until death, in spite of treatment, apparently as a simple process—the result of the diminished blood supply.

The alteration in the structure of the brain must be ascribed to this change in the arterioles, slowly increasing the effect of the diminished blood supply, since the two coincide in distribution. Both are processes which have gone on of necessity, once set up by a persistent cause.

It should now be clear why the symptoms bore so much resemblance to those of cerebral tumour. The severe persistent headache, afterwards with vomiting, was the result of the morbid process in the vessels, extensive and unchecked. The disease must have commenced some time—certainly several weeks—before the headache began. Pain in the head is an inconstant symptom of such disease, but it often precedes, for a few days or weeks, the occurrence of the thrombosis, which, with the sudden palsy it produces, is the common evidence of the disease. The headache is very rarely attended by vomiting, so conspicuous here. Such suffering almost invariably brings the patient under treatment, and it is seldom that the disease progresses unchecked, but the woman had dosed herself with various things—phenacetin, antipyrin, etc.—in the hope of relieving the pain, and apparently had no friends to secure proper treatment when she became incapable of doing so herself.

The second character by which the symptoms resembled those that would be caused by a growth was their steady progress, the increase in the right-sided weakness, of the inability to speak, and the mental dulness, in spite of her treatment in the hospital. We must ascribe this to the slow changes in the cerebral nutrition due to the causes we have just considered. Both it and the narrowing of the arterioles were secondary effects of the occlusion of the large arteries at their origin. The collateral supply of blood, which saved the patient from the severity of the sudden symptoms, was insufficient for normal nutrition of the arterioles or the brain substance. It was insufficient to prevent the slow development of other symptoms, at last equally severe, and not unlike those that would have been suddenly produced by extensive initial thrombosis, from which she was saved by the abnormal arteries. Such vessels are rare, but not extremely rare. They are, however, most unlikely to be present in any individual case. We can never assume their existence, still less their situation and influence. We cannot allow their possible existence to determine our diagnosis. This we can only base on the probable, and rely on the principles that guide us aright in the majority of cases. Yet our rules are always open to correction and improvement, or at least they should be.

As I have said, the case is a rare one; but no cases can teach us more which is important for common use than those that are rare. They touch the common on every side; they almost compel thorough study, and this involves the perception of their general and wider relations. Let us see what lessons we can gain from this case; if we secure some, we shall learn, unconsciously perhaps, much more. In the attempt to point them out, and especially to be clear, I shall have to repeat myself. I ought not indeed to apologise for this, for as brevity is said to be to wit, so repetition is to instruction.

I will begin with the question of the diagnosis of the disease. You know the saying, "It is easy to be wise after the event;" I may add that it is not easy to be wiser. If we met with a quite similar case we could be accurate in our diagnosis—easily. But Nature is not given to repetition. To be wiser we must learn lessons that we can apply under conditions not the same. We must not rest content with the perception that error was here inevitable, but could henceforward be avoided in identical circumstances. From every case, carefully studied, we should endeavour to learn that which may help to keep us right, whatever be the features of another case of the same nature. The lessons we may gain from the facts of this case are especially instructive, because they afford an instance of the way in which one symptom influences the significance of another, and of the need for comparing them, of weighing them not only alone but together, in order to

discern the resultant of their several forces, whether the mutual effect is increase or diminution.

The first important fact is the unusual duration and severity of the general cerebral symptoms, which must for two months have been the result of the arterial disease alone. It is important to note this, because had the fact been part of our common knowledge—the fact that such disease might have caused these symptoms—it might have caused more weight to be given to the alleged sudden onset of the right hemiplegia. Instead of this being regarded as compatible with a growth, it might have been considered to be suggestive of vascular disease. The second fact is that progressive symptoms of organic disease, uninfluenced by treatment, persisting and increasing in spite of it, may be a secondary effect of such arterial disease. This also is not part of our common knowledge. The conditions which led to it here are, of course, most unusual, but the same result may be met with under conditions less exceptional. The recognition of this fact might have caused more weight to have been placed on the absence of the optic neuritis, which, as I have said, usually attends a growth of such rapid course. It is difficult to say whether these considerations would or should have made the existence of a growth unlikely. We must not be too "wise after the event" even if we strive to be wiser.

There still remains the chief problem, Why did the patient die when it was thought that she would live? To be right or wrong matters little in itself; to prevent death matters everything. Without successful treatment, and except as subordinate to it, accurate diagnosis is as "thistledown without seed." In this case, it is true, the diagnostic error could have had little influence; it concerned only the special form of the disease; its nature was correctly recognised, and the misconception made no difference to the treatment that was right and was employed. But why did proper treatment fail? We can, I think, perceive an answer, and an answer which brings before us considerations of great importance. We know but little of the way in which treatment acts upon such syphilitic formations, acts on them so surely, induces their rapid diminution in size, and their ultimate change into cicatricial fibrous tissue. We must infer from the quick reduction in size of such growths that the formation of the softer cellular elements is arrested; that they undergo a process of disintegration, and the products of this quickly pass away. Those elements that are changing to fibres, or are actually such, are apparently incapable of such destruction. They seem to persist, but to shrink and contract, a change which goes on, as we see in every cicatricial process, so that the ultimate result of a gumma is a firm nodule of fibrous tissue, such as may sometimes be met with in the liver. Note that the contraction of the fibroid elements is, and must be, an essential part of the process.

Such disease of the larger cerebral arteries is generally on the side of the wall only, it does not surround the vessel. Its disappearance under treatment is therefore only attended with a fibroid change on one side of the wall, unimportant unless a branch comes off there which is closed, or the substitution of extensible tissue for the elastic and contractile elements of the wall permits aneurysmal dilatation to take place. You know that the ultimate condition caused by such disease, even with effective treatment, is one great cause of intracranial aneurysm. But, on the other hand, if the disease entirely surrounds the artery, the effect of the contraction of its tissue must be to lessen the calibre of the vessel. It must be an inevitable result, serious in proportion to the degree of disease, to the degree to which the wall is thickened. Fortunately such a condition is rare—that is, disease surrounding the vessel and considerable—but you have a striking example of it in these arteries. The growth entirely encircles each middle cerebral artery and each anterior cerebral; the thickening of the wall is such as apparently to obliterate the cavity of the vessel. On each side—on the left against the old thrombus, on the right where the recent clot commenced—the vessel seems to be closed. In neither can we discern any persistent channel. There must have been one on the right side until the final occlusion occurred, but the opening must have been very small. We have here evidence which seems irresistible that the process which treatment was intended to induce—the process by which the morbid process lessens and ultimately cicatrises—had failed to hinder, if it had not promoted, the contraction of the morbid tissue in the wall of the vessel, as to lessen the already diminished calibre in the right middle cerebral artery, and to induce the formation of the clot which was the cause of death. This is a startling fact, but from it I see no escape. Another indication of the process of contraction is afforded by the slight external prominence of the disease in the larger arteries. Such disease, untreated, always projects considerably from the wall of the vessel. The absence of this prominence we must ascribe to the month's treatment. Contraction in the wall of a tube lessens the exterior at the expense of the interior. Thus we are confronted by the fact that, with disease of this character, so extreme and so placed, the treatment by which it was hoped that life would be saved, and health restored, could not avert, if it did not accelerate, the gravest consequences of the disease.

Thus it is difficult to arrive at any other conclusion than that death in this case was inevitable. The opportunity for effective treatment had passed before the patient came here. We cannot doubt that if she had sought medical help in the early stage of the malady and had received that which was wise and adequate, her life would have been saved. We must, however, remember that in patients of her sex it is often difficult to discern or even suspect the specific nature of such disease. Sometimes it is scarcely possible for any suspicion of this cause to arise. Not long ago I saw a patient in whom a morbid process of this nature seemed quite out of the question, and to no one was it more inconceivable than to a doctor who had known her from childhood. She had certain spinal symptoms, chiefly in the arms, which seemed only to be accounted for by an increase in syringomyelia or "central gliomatosis," such as sometimes occurs soon after adult life is reached. But a very unexpected revelation disclosed to me the possibility of the constitutional influence we are discussing, and made it possible, and even probable, that the symptoms were due to cervical pachymeningitis. The saying that "knowledge is power" received a perfect illustration, for the treatment which the knowledge entailed resulted in the complete removal of the symptoms, and they were of most threatening gravity.

The case was an illustration of another fact which we are sometimes apt to lose sight of: the absolute difference which exists between the improbable and the impossible. Of course there are degrees of probability and improbability. The extremely improbable is very near the impossible; the two may seem almost alike and appear to be on the same level when we look along the surface of things; but between them a deep gulf is fixed, a gulf unbridged. The impossible cannot be; the improbable, however, unlikely, may be. In the course of life you may meet with cases in which it will be useful to remember this.

But I would have you, when you look at these arteries, to ask yourselves, What can be expected in such a condition? You will perceive from them, more forcibly than from words, that no therapeutic measures can alter the clot which has formed in the diseased vessels. A clot in a vessel is one of the most stable, most enduring, of morbid states. Thus closed, the cavity of an artery cannot be restored, nor can the effects of its closure on the brain substance be prevented or materially lessened. The symptoms of such closure, indeed, do commonly lessen, as do those which are produced by the embolic closure of an artery; they diminish because they are at first more extensive than corresponds to the actual destruction of brain tissue. If iodide is given the improvement may be, and often is, ascribed to its influence, although there can be no relation between the two. By suitable means we may support and steady the circulation, and probably increase such collateral supply of blood as may be possible, but the utmost we can effect is very little.

Yet you should give iodide, unquestionably. The absolute necessity for treatment should be clear to you when you look at the vessels. Consider the wide extent of the isolated areas of disease, on the posterior cerebrals as well as the other vessels; hardly one is free. The disease which exists is always more extensive than corresponds to its obtrusive effects. Symptoms seldom bring us face to face with disease of the kind until an artery, or at least a branch of some importance, has been closed by thrombosis.

The effects of this we cannot change by treatment, but we can never tell how much more disease there may be, disease we can remove, nor can we tell how near such disease may be to the closure of a branch or trunk. Such possible effects we may prevent by prompt measures, and I have seen cases in which the gravest results were distinctly obviated. Yet treatment has to be carefully adjusted to the patient's state. In this case the mercury had to be discontinued on account of weakness and the fear of further enfeebling her heart It was wise, and even wiser than was then discerned, because the imminent risk of a fresh thrombosis could not be perceived. On account of this danger it is not well to give in such cases the very large doses of potassium iodide that are sometimes employed. Iodide is credited, as you know, and I think with reason, with the power of promoting coagulation of the blood, and has been employed for this purpose in aneurysm. Hence very large doses may facilitate the formation of a clot in a narrowed vessel. The dose which the patient had—15 grs. three times a day—is large enough, as I have many times seen, to influence such disease as rapidly as is reasonably possible, if the patient has not already been taking it, and is as much as it is wise to give under the circumstances.

But the proviso I have just mentioned is one not to be forgotten. To obtain the full influence of iodide the system must not be accustomed to its presence. I watched a case long ago—indeed it was under my care—which taught me a lesson I have never forgotten. Iodide in moderate doses, 10 grs. three times a day, quickly caused the complete disappearance of all symptoms of a gumma in the brain. It was continued for several months, and then, in spite of it, there developed another gumma in the spinal cord from which the patient died. Its nature was certain. I have since met with other illustrations of the same lesson, regarding moderate doses of mercury as well as iodide. They were not, indeed, in my own practice, but they were clear. Just as Dallinger found that organisms become gradually able to develop at a temperature which at first killed them, if they were gradually inured to it, so it seems to be with the organisms of this disease and the agents which control them. They may become so accustomed to the continued presence of the remedy as to develop in spite of it. The importance of energetic but intermittent treatment is the lesson which should be impressed upon us.

Yet one more fact should be discerned, which is indeed so obvious that it is hardly necessary for me to point it out to you. It is the care which is desirable in giving a prognosis in cases of such disease of the cerebral arteries. There is a tendency to allow the constitutional malady to influence the prognosis without sufficient consideration of the way it has worked, and the process to which the symptoms are directly due. This process, as a matter of fact, is independent of that which is truly syphilitic; it is secondary and in itself simple, not specific. It is even so when the structures are compressed by a gumma. The symptoms are immediately due to the effects of the pressure and irritation, effects which are the same whatever be the nature of their cause. Still more clear must be the purely secondary and simple nature of the *effects* of the vascular disease we have been considering. It is on these that the symptoms depend, and the fact of syphilis could not influence the prognosis; it cannot do so in any case of necrotic softening. The effects of simple pressure would have quickly lessened with their cause, and the constitutional malady might then have been allowed its full weight.

Thus you see that the correctness of the diagnosis, of little importance for treatment, was all important for the forecast. But let me impress on you, not only in reference to such disease, but for all organic diseases, the importance of cultivating your imagination. You have heard of the "scientific imagination" and the part it has played in discovery. Not less important in our practical work is the use of what I may call the "pathological imagination." By this I do not mean a morbid fancy; that springs up only too luxuriantly, unaided. I mean the habit of picturing in your mind that which probably exists, and which you cannot see, considering on what the symptoms depend and its probable course. You can thus often discern more securely the future of the case. I need not dwell upon this in detail. If you consider the character of such disease as we have been dealing with; if you consider the mechanism by which its symptoms are produced; if you can fancy yourself doing this at the bedside of the patient, doing it with the knowledge you now have but could not have had during life, you will realise what I would convey to you.

Let me end by looking back at our starting place. This was the fact that we sometimes fail to save life when we expect to succeed, even when we have reason for our expectation. Such failure is among the sources of the distress which the incidents of our work so often cause, especially to young practitioners. But the facts of the case we have considered should fix in your mind the truth that even the full knowledge, which so seldom is within reach in ordinary practice, may demonstrate that the failure was inevitable, that the end could not have been averted by any means we could have used, or delayed by any effort we could have made. It was so here, and the same is often true when it cannot be ascertained. Therefore, do not let the discrepancy between your early forecast and the later fact cause you to give way to misgivings which may be groundless and regrets that must be vain.

# A Clinical Lecture

ON

## SOME CASES ILLUSTRATING THE NECESSITY FOR ACCURATE OBSERVATION IN THE MANAGEMENT OF SURGICAL CASES.

*Delivered at St. George's Hospital, Tuesday, October 8th, 1901,*

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Gentlemen,—In the practice of surgery, as in other circumstances, things are not always exactly what they seem at first sight; a very important point to bear in mind in connection with many cases with which you will be confronted later on in your career. Speaking generally, you will find, when your experience is rather greater than it probably is now, that first impressions formed as to the nature of a case are, as a rule, good. But first impressions are not infallible, and to be of real value, must always be corroborated by some clear objective evidence.

It is particularly important that you should bear this point in mind just at the present time because it cannot, I think, be denied that there is a growing tendency with latter-day surgeons to minimise the importance of surgical diagnosis in the sense it was formerly understood. In these days it is in many cases so easy by means of an operation, which in itself may not involve material risk, and which may, perhaps, be easy to perform, to make an investigation which, it is hoped, will show to a certainty the nature of a disease, whilst the arriving at a diagnosis by ordinary means without the performance of an operation, although it may be generally possible, is difficult, and perhaps tedious. At the same time, it is obviously always highly desirable, when possible, that a diagnosis of the patient's condition should be made without resort to an operation, especially in private practice, in which operations cannot always be resorted to so easily and so safely as in hospital work. In the majority of diseases, you know as well as I do that there are described in the ordinary books certain definite sets of symptoms or signs, if you care to distinguish between symptoms and signs. Now, in any case it does not matter what the nature of it may be, if during its examination there is found any symptom or sign which is not quite usual, or which is anomalous, your suspicion as to the orthodoxy of the case should immediately be aroused, and throughout the treatment of that case you must be on the alert, lest the general impression which the case conveyed to you at first should be wrong. On the other hand, you will find in the books, too, that in at least many, if not in the majority, of surgical diseases there is one symptom especially relied upon in each as especially important, or perhaps as pathognomonic of the condition, the mere existence of such a symptom or sign being held to be enough in itself to establish the identity

of the disease. Let me beg that you will at once dismiss from your mind any possibility of a single symptom alone being conclusive evidence of any disease.

The object of these introductory remarks is merely to urge upon you the necessity in all cases of keeping your eyes very widely open and all your powers of observation keenly alert, and not to assume, because a case seems at first sight simple, that it is safe to proceed as if it were certainly so without regard to the possible fallacies in diagnosis by which it may be surrounded, although for ordinary purposes its symptoms and signs may appear to be typical and complete.

### The Necessity for Attention to Minute Details of Diagnosis.

Let me now call your attention to some cases which illustrate what I mean:

#### Case I.

The first case is that of a married woman, of middle age, who was admitted some months ago, under my care, with what was said to be strangulated inguinal hernia. Inguinal hernia, as you know, is not the commonest form of hernia occurring in women, the femoral variety being that from which they generally suffer, and strangulated inguinal hernia is rather uncommon in women, a little fact which, in a case like this, should be sufficient to lead you to approach it with a critical mind. Upon examination there was found in the right groin, passing out from the inguinal canal, a rounded tumour, irreducible, and without impulse on coughing. There were at the same time all the signs of intestinal obstruction. The patient had been unable to pass a motion for several days, there had been frequent vomiting, and she complained of pain about the umbilicus and the lower portion of the belly—exactly the symptoms that arise in connection with the strangulation of a hernia. In addition to this there had occurred at the commencement of the case the symptom to which so much importance is attached in strangulated hernia—namely, a rapid or sudden increase in the size of the tumour which had existed previously for years without change.

Taking the case as it was, it seemed a pretty clear example of strangulated inguinal hernia, not, as I have said, a very common thing in women, but one which is from time to time met with in them. Upon examining this tumour, it was quite characteristic of that found in strangulated hernia, excepting that instead of being tense it was softish. The tumour associated with strangulated hernia is almost always tense, so that following the lines of my opening remarks a flabby sac in a case of apparent strangulation should arouse suspicion, the condition being an anomalous one. We here, then, had to deal with a case presenting two features which gave rise to some doubt in my mind. It is true, that the tumours associated with strangulated hernia are sometimes flaccid, and when they are it is, as a rule, because, in consequence of manipulation and taxis, the bowel has given way; in such cases, however, the flaccidity only lasts for a short time; the tension soon returns, as is only natural. In spite of this unorthodox sign there was nothing about the patient which seemed to show that her symptoms depended upon anything else than strangulation of a hernia. You will understand, however, that I approached the treatment of the case with a mind full of suspicion, which, under the circumstances, was the right surgical mood, and it will be seen presently that by doing so I was led to detect a condition of things which I might have missed if I had been less critical.

The patient was operated upon in the ordinary way. The sac was opened, first by a small incision, from which came some black fluid—altered blood, in point of fact—just the sort of material which comes from the sac of a hernia which has been subjected to violent taxis; so that at this stage of the operation there naturally passed through my mind the possibility of the condition I mentioned just now—a ruptured piece of gut in the sac of the hernia, which might have accounted for the condition of the tumour. Upon laying the tumour freely open, however, there was nothing in the sac, which was a peritoneal one, beyond more of this dark fluid, about 6 drachms in all escaping. Between the abdominal cavity and the sac was a communication so small that it admitted with difficulty a small probe. Now, it seemed to me impossible at the time, in the face of the almost flaccid condition of the sac, that the symptoms could depend upon any condition immediately connected with it. At the same time, as I said, there was no other condition apparent to which the symptoms could be attributed, and it is well known that symptoms of strangulation have subsided after operation in some cases in which a peritoneal sac containing fluid has been only found. Therefore, under ordinary circumstances, had I not been suspicious, I should probably have ligatured the neck of this sac, performed an operation for the radical cure, closed the external wound, and sent the patient back to bed. But upon examining the sac very carefully, after clearing away the fluid from the inside, as I was dragging it up I saw coming from the belly, through the small communication which, as I have said, would only admit a fine probe, a little drop of black fluid, precisely similar to that which was found in the sac, I thought at first that this might have been a drop of fluid which I had not removed, but, on clearing it away and holding up the sac again, another drop appeared. We had now obtained the key of the situation. The symptoms were not due to any condition of the sac, which was an accidental association in the case. The partially distended hernial sac was of no consequence in itself; its contents consisting of altered blood which had entered it from the abdomen, by increasing the size of the tumour, had led to attention being concentrated upon it. The symptoms being those of intestinal obstruction, and attention having been called to the rapid increase in the size of this irreducible tumour naturally led the medical man whom the patient consulted to conclude that the case was one of strangulated hernia. Obviously the inside of the belly had to be examined; the communication with the abdomen was consequently enlarged, so that I could pass my finger through it. On entering the belly the finger passed into some jelly-like material, and immediately came upon a tumour about the size of a tennis ball. On withdrawing the finger it had upon it a few pieces of old broken-down blood clot and a little fresh hæmorrhage. On laying the abdomen open freely for the purpose of dealing with this tumour, the pelvis was found to be full of blood clot, which surrounded a blackish tumour with a small hole in it, from which fresh blood was coming freely. The case was, in fact, a very early extra-uterine pregnancy. The tumour was removed in the usual way, and the patient did very well, her progress being rapid and uneventful.

This is an excellent example to show the importance of approaching with suspicion any case presenting symptoms which in the least diverge from the ordinary path. The only two points in the case which aroused suspicion were the comparatively uncommon occurrence of strangulated hernia in women, and the only partly distended sac, and had I been less critical I think it quite possible that I may not have examined the sac sufficiently carefully to have noticed the escape of the drop of fluid from the abdomen which gave me the key of the case, and enabled us to cure the patient, instead perhaps of sending her back to bed with a condition unrelieved, from which she might have died. In this instance very little harm arose from the fact that we did not diagnose the actual condition at first; indeed, I do not know that the exact state of affairs could have been diagnosed; but the moral of the case remains clear, namely, that the patient probably owed her life to a close attention to the diagnostic indications which were present.

#### Case II.

The next example is less grave, and less important, perhaps, from the patient's point of view, but it is even more instructive in showing the necessity for very strict attention to small details in arriving at a diagnosis.

A young married woman was admitted under my care with what was called an inguinal hernia. It was not strangulated, but it caused her some pain, especially at her menstrual times, and as the distress often was enough to interfere with her household work she sought relief. There is a condition in young women which is not very uncommon, although it often attracts no attention because it does not give rise to any trouble, which consists of a congenital patency of the canal of Nuck, the process of peritoneum which corresponds to the funicular process in the male. The tumours resulting from partial or complete filling of these patent processes of peritoneum with fluid are often called

herniæ, and they are operated upon, the sac being obliterated, and a "radical cure" performed in the usual way. In the old times, before operations were so common as they are now, these cases were frequently spoken of with very great confidence as hernia of the ovary, mainly, it appeared, because the tumour tended to become swollen and painful at the catamenial times. But when operations began to be performed more freely, it was found that these cases were practically never herniæ of the ovary; they were simply peritoneal pouches containing fluid, which became a little tense at the menstrual periods in consequence of the general increase of vascular tension at that time, combined with an increase of the fluid contents. In the intervals between the "monthly periods" the patients are comfortable, but in hard-working young women these pouches, when once they become distended, may give rise to all the symptoms of hernia, and, indeed, when greatly distended, have been mistaken for, and operated upon as, strangulated herniæ. It is, moreover, a common thing to find a truss being worn in such cases under the impression that hernia exists. In some of the cases the tumour disappears upon the patient assuming the recumbent position in consequence of the return of the contained fluid into the peritoneal cavity. In some cases, on the other hand, position produces no material effect upon the tumour, either because the communication with the peritoneum has been obliterated spontaneously, or because the fluid cannot return into the peritoneal cavity in consequence of a peculiar valve-like arrangement which sometimes exists at the mouth of the sac.[1]

Such was the nature of the condition from which the young woman in the Drummond Ward was suffering. The tumour jumped a little on coughing, it was tender to the touch, and it caused a good deal of distress. She had been told to wear a truss, and had done so, but only for a short time; in consequence of the tenderness she left off using the instrument, and came for radical treatment. Upon investigation a point which immediately arested attention was that the pain about the belly was very much diffused, being felt especially about the lower part of the rectum, which is very uncommon in hernial pain. Pain in hernial tumours, except of the obturator kind, is generally of the ascending sort, although in the inguinal hernia of men it may pass down to the testicle. Under the impression that this obvious tumour might have been the cause of the patient's trouble we operated, obliterating the sac in the ordinary way. The operation had no effect whatever in abating the symptoms; upon the healing of the wound the symptoms were precisely as they had been before operation; in fact, so far as any relief to the patient was concerned, the operation was an entire failure. She now told us what she had not mentioned before, that she had noticed from time to time a similar tumour on the other side. Upon examining the opposite side, whilst she was in the erect position after the operation wound had healed, an indistinct fulness, which entirely disappeared when the patient lay down, was certainly apparent at the outlet of the inguinal canal. It was clear that the operation already performed had done no good, and she very properly insisted that, as she had come to the hospital to have the complaint cured, she was entitled to relief, and asked what it was proposed to do next—a practical but somewhat embarrassing question. It was suggested that the continuance of the symptoms might have been due to the fact that the ligature about the stump of the sac which I had removed was causing some irritation, as ligatures sometimes will, and that the removal of the ligature offered a reasonable hope of relieving the distress. But taking into consideration the extensive area of the pain, and the fact that the side upon which no operation had been performed was very tender, it did not appear to me that the solution of the difficulty lay in the removal of the ligature around the stump, although it is quite true that some crossed pains like these may be the result of irritation of a ligature around the stump of a cord, or about the pedicle of a kidney; but, as I say, I could not satisfy myself on that point. A consultation was held, and it was decided that a rational measure would be to cut down and see whether there was any evidence of irritation about the ligatured stump, and deal with the condition as the circumstances at the time indicated. At the same time it was suggested that it would be a good thing to operate upon the opposite side, to satisfy the woman, and so produce a moral effect, as seemed likely, seeing that she was so anxious to have something done on that side. The matter was one of some importance; an operation on the other side was either the right or the wrong thing. Had I operated and still failed to relieve the patient, our position would have been worse than before. Upon consideration I came to the conclusion that as my operation had given no relief of any kind, and that the origin of the trouble from which the patient suffered was independent of the condition for which I had operated. So with this conviction fully established, in spite of the conclusion come to at the consultation, before proceeding to further operation, I had the patient again very carefully examined from the obstetric point of view. Finally, it was found that the origin of her trouble was perimetritis. I had, in fact, operated on a condition in the patient which, although it seemed to account for her pain, or at least might have done so, was really quite harmless in that respect.

No fault was committed in performing the first operation, because under any circumstances it is a good surgical rule that when a person suffers from pain or discomfort apparently due to an obvious abnormality or disease, the obvious condition should be dealt with, if it appears to be the predominating factor in the case. But, having dealt with the obvious factor without success, if I had gone on to operate upon the other side in this case I should have been wrong, and should have been undoubtedly guilty of some very bad surgery. Having had my suspicion aroused by the fact that no relief even for a moment occurred from the first operation, I did not proceed to the second, and so saved myself from making a grave blunder. If my first operation had been foliowed by an interval of relief, subsequently followed by the occurrence of pain on the other side, I should probably have concluded that this was caused by a condition on the opposite side, similar to that upon which I had operated, or that it might have been due to the irritation of a stitch or a ligature used in the previous operation. As there was no interval of relief at all, it was clear to my mind that the pain associated with the condition I had dealt with was not dependent upon that condition but upon some deeper cause.

It would be difficult to find more suitable cases than these I have described to impress upon your minds the necessity for attention to minute details in the management of surgical maladies.

### THE DANGER OF TOO MUCH RELIANCE UPON A PREDOMINANT SYMPTOM IN DIAGNOSIS.

A reference to the ordinary educational manuals or treatises will show you that in many diseases one symptom is regarded as of special importance in the diagnosis of the case, and in some cases this predominating symptom is regarded as "pathognomonic," that is, as a certain indication of the nature of the disease. I am sure that any observant person who watches the matter will see that nearly all students and some practitioners are too greatly influenced in the diagnosis of disease by these predominant or pathognomonic symptoms. I am most anxious to impress upon you as strongly as possible the danger which may be incurred in thus valuing too highly these predominant symptoms without giving due weight to corroborating evidence. I do not suppose that anything contributes more to mistakes in diagnosis than the reliance upon certain highly-lauded symptoms as a rapid road to determining the nature of a disease. It is easy to illustrate this fact by examples, of which perhaps the following is as typical a one as could be found.

#### CASE III.

The "pathognomonic" sign in strangulated hernia is, as you well know, the disappearance of impulse in the tumour on coughing: and it is generally said that if, in a case of hernia, there is a free impulse in the tumour on coughing, the question of strangulation is hardly worth a thought—a fallacy which may under some circumstances lead to dire results. I was on one occasion called to a man of middle age who for some days had been suffering apparently from intestinal obstruction; no earlier consultation was possible in consequence of the patient's objection. When I saw him he appeared to be nearing his end; the vomiting was fæcal and his aspect of the typical abdominal type; acute pain was

complained of about the umbilicus; there was not much abdominal distension. The right side of the scrotum was occupied by a large hernia, which the patient declared gave no pain, and in which the impulse upon coughing was quite free and typical of unstrangulated hernia; there was no tenderness of any kind in the tumour, the handling of which, however, seemed in a small degree to increase the intra-abdominal pain. Desperate as the man's condition seemed to be, it was clearly right to attempt to relieve the obstruction by operation, and the important question at once arose as to whether the operation should be abdominal section or herniotomy, as it was manifest that the patient's state would not allow of two operations or of one which was very prolonged; the selection of the right proceeding was, therefore, of unusual moment in this case. In spite of the symptoms being so distinctly abdominal in indication, and in spite of the free impulse in the hernia, I selected herniotomy, because the hernia was an obvious abnormality, and because I knew that, although a hernial tumour may give free impulse on coughing, a strangulation of the gut in the sac may be present. My selection proved to be wise, for the hernia was found to contain in its upper part a large quantity of unstrangulated gut; but at the extreme lower end of the tumour, passing through a little hole in the middle of a diaphragm in the sac, was a small portion of the circumference of a piece of gut (Richter's hernia). Thus, the explanation of free impulse in a hernial tumour containing strangulated gut was easy, as the small strangulated nodule was completely surrounded by unstrangulated intestine, which not only gave free impulse, but entirely concealed the strangled part. This case is an extreme example, and I do not suppose that any surgeon would have been guilty of such a gross error of judgment as to have performed a laparotomy in the circumstances, but the case serves excellently the purpose of emphasising the point now under diecussion.

### Case iv.

The following case illustrates the same point, and also shows the importance of attention to details in arriving at a conclusion with regard to the course of treatment to be adopted:

A man of middle age was admitted into St. George's Hospital under my care after a fall from a high scaffold: in falling he was thrown across a plank. On admission he was collapsed, and semi-conscious only. Upon recovering complete consciousness he complained of acute abdominal pain, and vomited twice. On being summoned to see him I found him pale and weak, with a small pulse. There was much abdominal pain across the hypochondrium. *The liver dulness was quite absent.* The whole abdomen moved in respiration, but the movements were rather stammering in character. There was tenderness along the line of a bruise which crossed the belly about the level of the crests of the ilia. Taking into consideration the history of this case, the collapse, vomiting, and abdominal pain, there was certainly a strong probability of the existence of some grave internal lesion, such, for example, as ruptured intestine and the absence of liver dulness, made the matter practically certain in the minds of some. In spite of the importance which is commonly attached to this sign, I did not in this instance attach much importance to the absence of liver dulness for the following reasons:

First, absence of liver dulness is one of the least reliable of symptoms as evidence of intra-abdominal lesions; and, secondly, I noticed as the patient lay on the bed a constriction just above the level of the iliac crests commonly seen in labourers and others who during hard manual work wear a tight strap or belt around the waist, a common practice with people of that class, and I have come to know from practical experience that in such people the *liver dulness is frequently altogether absent and nearly always diminished*, which led me in this case to elimate the absence of liver dulness as an urgent factor. I therefore waited for a few hours. The patient recovered from the shock, the vomiting ceased, the stammering abdominal movement passed off, and in four days he was convalescent. He finally recovered perfectly but the absence of liver dulness persisted, as it naturally would do in this man since to him it was a normal condition. Had I here been over-impressed with the importance of predominant symptoms I should certainly have opened the abdomen upon the strength of the absence of liver dulness, which would have been a grievous surgical blunder. On one occasion I was induced, somewhat against my judgment, to operate on this account in a case the symptoms of which resembled perforating gastric ulcer, and found nothing wrong inside the abdomen, the disease from which the patient suffered and subsequently died being in a different region altogether. My operation, it is true, had no effect upon the ultimate result of the case, but it was an error in judgment which I have since continually regretted, and one which I am not, I hope, likely to repeat.

### Conclusion.

I could give many more examples to illustrate the point with which I am now dealing, but those already related are sufficient for the time being. My main object, as I have already said, is to impress upon you as much as possible that the necessity for attention to details in surgical diagnosis is as great now as ever it was, and that the constant appeal to exploratory operations for the elucidation of difficult cases is unscientific and harmful until every other means of diagnosis has failed to determine what is necessary. In hospital work and in a certain class of private work operations for investigating purposes can be performed with safety and sometimes with benefit, but in the circumstances in which the majority of practitioners work, the resort to frequent operations for diagnostic purposes is out of the question. In any case, it is in my opinion the duty of the surgeon to spare no pains in diagnosis without appealing to operation. The extreme readiness sometimes shown to operate for merely diagnostic purposes is I think unfortunate for surgery, both from an educational and practical point of view, since it directly tends to minimise the importance of the study of diagnosis as it is commonly understood, and to degrade the practice of surgery to a mere handicraft.

The physician must of necessity cultivate to the extreme his powers of diagnosis, as in the majority of his cases no operation can be, with justification, called to his aid. Judging, therefore, from the present day tendencies, the physician will be a scientific practitioner when the surgeon has ceased to be anything more than a craftsman—a state of affairs happily yet some distance off. Be that as it may, let me beg of you, in conclusion, to cultivate to the utmost extent a methodical habit in diagnosis, to avoid being misled by placing too much reliance upon any single sign or symptom, no matter how great its reputation may be; and, above all, to regard with the most critical suspicion any unusual or anomalous symptom arising in the course of the diagnosis or treatment of a case although this may seem to be of the most simple kind.

### Reference.

[1] See Clinical Lectures on Abdominal Hernia.

# A Clinical Lecture

ON

# ACUTE YELLOW ATROPHY OF THE LIVER.

*Delivered at the Liverpool Royal Infirmary.*

By T. R. BRADSHAW, B.A., M.D., M.R.C.P.,

Physician to the Infirmary; Lecturer on Clinical Medicine in University College, Liverpool.

The disease which is generally known by the name of acute yellow atrophy of the liver, sometimes by that of icterus gravis, is one that is rarely met with; but when it occurs in a pronounced form its features are so characteristic that its recognition presents no great difficulty to the skilled observer. Some authorities regard icterus gravis as distinct from acute yellow atrophy, but the distinction seems to be one of degree rather than of kind, depending on the extent to which the liver is reduced in size, and, so far as our present knowledge goes, I think we are justified in using the terms as synonymous. The most obvious symptoms of the disease are intense gastro-intestinal disturbance, extreme prostration with nervous symptoms, jaundice, and in most cases rapid diminu-

tion in the area of liver dulness. Its exciting cause is unknown, its prognosis is exceedingly grave, and no treatment appears to influence its course.

Last week a fatal case of this disease occurred in one of my wards, and although, owing to the fact that it was admitted late on Saturday night, and died on Sunday, few of you had the opportunity of seeing it during life, many of you were present at the *post-mortem* examination, and I am able to demonstrate to you to-day the condition of the more important organs.

The following is an outline of the clinical history of the case, as far as we have been able to obtain it:

M. R., a married woman aged 24, was admitted to Clarence Ward at 9 P.M. on Saturday, May 11th, having been sent in by Dr. Valentine, of Earlestown, suffering from jaundice, impaired vision, and choreiform movements.

*History.*

She had always enjoyed excellent health, had never had any serious illness, and there was no reason to suspect intemperance. She had been married two years, and had had a healthy child (now living) eleven months ago. Three weeks before her admission she was seriously frightened by a large dog which sprang at her while she was carrying her baby. She was not injured in any way, but was so much alarmed that she fainted at the time.

On Monday, May 6th, she consulted Dr. Valentine at his house. She said she had caught cold, that she had nausea and had been vomiting occasionally for two or three days. There was nothing in her condition to suggest that there was anything seriously the matter. Dr. Valentine did not see her again until the evening of May 8th, when he was sent for and found her slightly delirious; she was throwing her arms about and jerking her head from side to side, the tongue was tremulous, and she could not distinguish the features of people about her. She was also vomiting. The evening temperature was 99°.

On May 9th she was in much the same condition. Dr. Valentine is not sure whether there may not have been a slight icteric tinge this day, but if there were it was very slight. On the 10th jaundice was distinct, and she appeared to be almost blind. On the 11th she complained of feeling cold, though the weather was very mild. About this time there was profuse metrorrhagia.

*Condition on Admission.*

She was admitted to Clarence Ward about 9.30 P.M. on May 11th. The following account of her condition has been supplied to me by the night nurse on duty. Her temperature on admission was 98°, the pulse was rather weak. She was quite sensible, and answered any questions that the nurses asked her. She did not complain of headache or any other pains; once she remarked that she could not see very well. She was very thirsty, and drank about 10 ozs. of milk; later on she drank about 8 ozs. of water. She complained of nausea, but did not vomit; she passed 18 ozs. of urine during the night.

The movements seemed quite like the usual involuntary movements of chorea—not very bad at first, but towards morning they became more violent, especially in the arms and legs, so that the nurses had to tie a sheet across the lower part of the bed to keep her from falling out. She seemed very much disturbed by a noisy alcoholic patient on the opposite side of the ward, but when the latter became quiet she became quiet too.

*After-History.*

At 11.30 P.M. the house physician ordered her 20 grs. of of potassium bromide and 10 grs. of chloral hydrate, but the remedy did not seem to have any effect. It was not noticed that she was jaundiced, but unless jaundice is intense it is not visible by artificial light.

At 6 A.M. she drank 6 ozs. of milk and went to sleep soon afterwards, and she was asleep when the night nurses went off duty at 8.15 A.M.

About 11.30 A.M. on May 12th, while my house physician, Mr. Matthews, was going his rounds, he noticed that the patient had become cyanosed, and then found that she was not breathing. The heart was, however, acting strongly, and so, with great presence of mind, he at once started artificial respiration, which was maintained for upwards of four hours. I was at once telephoned for, but not being at home, it was nearly 2 P.M. when I arrived. I then found that the patient was a well-developed and well-nourished woman. There was moderate jaundice, no œdema, no obvious eruption on the skin. The heart was acting strongly and the capillary circulation was maintained. The air passed freely in and out of the chest with the artificial respiratory movements, but there was not the slightest attempt at automatic breathing. The conjunctiva was absolutely insensitive.

On examining the organs physically I was struck by the fact that there was absolutely no liver dulness to be made out in the usual position in front, the resonance of the right lung being immediately succeeded by that of the intestines. There was, however, no distension of the abdomen, which was rather retracted than otherwise. The absence of liver dulness was all the more noticeable as the splenic dulness was unusually distinct. The tongue was moist, but thickly coated with a brown fur. The right optic disc, which I examined, was normal. The urine contained a moderate amount of bile but was in other respects normal. There was no albumen, the proportion of urea was estimated at 2.6 per cent, and I could find neither leucin nor tyrosin even when I evaporated the fluid to dryness.

*Diagnosis.*—It is obvious that for diagnostic purposes there were but few facts to go upon, but in view of the absence of liver dulness, the presence of jaundice, and the rapid onset of lethal symptoms I felt justified in hazarding the opinion that the case was one of acute yellow atrophy of the liver.

Artificial respiration was continued until 4 P.M. when the heart ceased to beat.

Three hours after death solution of formol was introduced into the stomach to prevent digestion of its coats.

*Necropsy.*

*Post-mortem* examination, made at noon on May 13th, twenty hours after death: Rigor mortis was well marked, there was some *post-mortem* staining, a moderate degree of jaundice, no petechiæ, no œdema. The body was well nourished. On opening the abdomen no part of the liver was visible below the costal arch. The liver weighed 25½ ounces, the capsule was loose and wrinkled as if it were too large for the organ; numerous yellow spots the size of a pea or less showed through it. On section the organ was mostly of a bright cherry red, with patches of yellow here and there. Lobules could hardly be distinguished. The substance was perhaps rather harder than normal. The heart was in a state of rigor mortis and healthy; the kidneys also appeared normal, the spleen was enlarged. The uterus was normal and empty. Brain and other organs healthy.

The microscopical examination of the liver and other organs has been carried out with great care by Dr. Ernest E. Glynn, Holt Fellow in Pathology, who has mounted some very beautiful sections, and has furnished me with a detailed account of the appearances seen.

The portions of the liver which appear yellow to the naked eye consist chiefly of hepatic cells, arranged in lobules or irregular clusters, and showing marks of degeneration in a greater or less degree. These yellow areas are surrounded by areas of red atrophy, consisting of a fine connective tissue network infiltrated with blood and containing scattered collections of bile ducts for the most part grouped around the portal vessels.

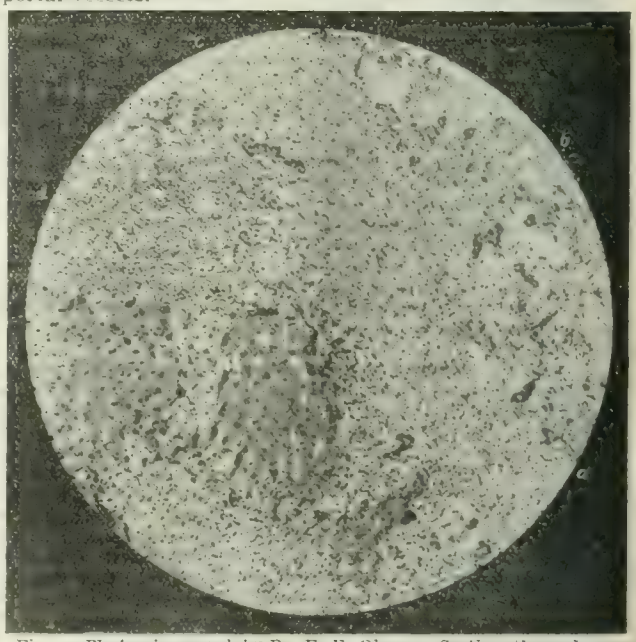


Fig. 1.—Photomicrograph by Dr. E. E. Glynn. Section through area of yellow and red atrophy. (*a*) Island of hepatic cells; (*b*) leucocytic exudation; (*c*) portal vessels and adjacent bile ducts. × 200.

At the periphery of the yellow areas, and in the neighbourhood of the portal canals there is an extensive infiltration of small round cells.

The substance of the hepatic cells is converted into irregular aggregations of fine and coarse granules, many contain bile pigment, and a few contain fat droplets. Although the degree of granulation varies in individual cells, its distribution is uniform throughout the affected lobules. It is more obvious in specimens hardened rapidly in formol than in those hardened slowly in Müller's fluid. The fat droplets, as well as the pigment granules, are confined to the edge of the cells nearest the blood capillaries.

As a rule the nucleus is regular and has a distinct nucleolus; occasionally it is double but without any evidence of karyokinesis; sometimes it is shrunken or destroyed, and the cell reduced to a skeleton. The destruction of the hepatic cells is most marked at the periphery of the lobules, but it also occurs in the region of the intralobular vein. Some of the hepatic cells contain small round deeply staining bodies resembling leucocytes, apparently the endocytes of McPhedran and Macallum.[5] The intralobular bile capillaries appear to be large and their lumen is occupied by a clear homogeneous colloid material which stains pink with eosine.

The areas of red atrophy are composed of a delicate felted network of connective tissue and scattered endothelial plates, containing numerous red blood corpuscles and occasional leucocytes, the latter being especially numerous at the periphery of the lobules and in the capsule of Glisson around the portal canals.

The connective tissue consists, for the most part, if not entirely, of the original stroma and small vessels of the liver which have been brought into prominence and condensed by the disappearance of the parenchyma and the consequent shrinking of the organ. In the opinion, however, of some competent pathologists who examined the sections the network is too dense to be derived entirely from this source, and the presence in it of certain long branching corpuscles with oval nuclei indicates a small amount of new formation. The increase in the number of bile ducts, however, is certainly apparent, not real, first, because they are not more numerous than might be expected from the general shrinkage of the liver; secondly, because they show no sign of proliferation, and lastly, because in some cases what at first sight appear to be bile ducts are in reality persistent parallel columns of shrunken hepatic cells.

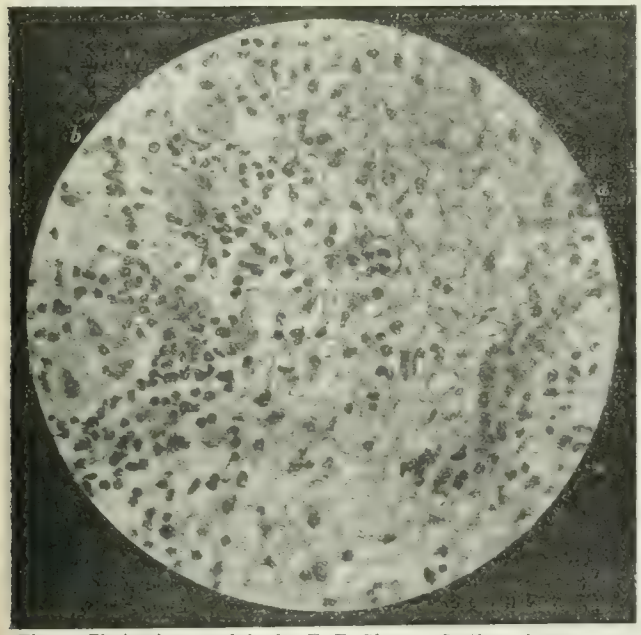


Fig. 2.—Photomicrograph by Dr. E. E. Glynn. Section of stroma containing red corpuscles, leucocytes, and endothelial plates. (*a*) Distorted hepatic cell; (*b*) bile duct. × 400.

The hepatic arteries are normal, no crystals of leucin or tyrosin are seen. On prolonged search an occasional cluster of cocci or a few bacilli, staining by Gram's method, are seen, but they have no regular distribution and are undoubtedly due to *post-mortem* invasion.

The pathological changes in the organ may be briefly summed up as follows:—

The hepatic cells are the subject of an acute necrotic process leading to their disappearance and beginning at the periphery of the lobules. It is attended by granulation of the protoplasm, but by very little formation of fat. The site of the cells which have disappeared is occupied by a dense network of connective tissue and endothelial cells containing numerous blood corpuscles and an abundant infiltration of round cells. The condition is almost identical with that shown in a plate in Ziegler's *Pathology*[1] illustrating the condition of the liver in a case of acute yellow atrophy said to have lasted four weeks. The only difference is that in Ziegler's plate the infiltration of blood and the granular changes in the cells are not figured. It differs from the other form of atrophy met with in acute phosphorus poisoning in the absence of any notable degree of fatty degeneration in the hepatic cells and in the interstitial changes.

The process of which the liver is the subject is an acute inflammatory one characterised by granulation and disappearance of the hepatic cells, and congestion and round-celled infiltration of the stroma of the organ. The plugging of the capillary bile ducts is probably analogous to the formation of casts in acute tubal nephritis, and explains the existence of jaundice in cases of this kind.

The kidneys are deeply congested, the epithelium being in a state of early cloudy swelling.

There is some slight fatty degeneration of the heart.

When we review the salient points in this remarkable case we fail to recognise the existence of any obvious predisposing or exciting cause of the disease unless it be the occurrence of severe mental shock about a fortnight before it began. That the relation between the fright and the subsequent illness may be more than a mere coincidence is suggested by the fact that fear or anxiety has been assigned as the cause of this disease, as well as of simple jaundice, by several observers.

While we must consider it highly improbable that depressing emotion could lead directly to any such condition as that we are considering we may admit the possibility of its having an indirect influence on its production. Thus it has long been believed, probably on good grounds, that when an infectious disease is prevalent the fear of catching it predisposes to its reception. It was probably not without reason that the liver was looked upon as in some way related to the emotions and the disturbed circulation and innervation of that organ which may be supposed to result from extreme alarm may not improbably render it more especially susceptible to the action of toxic agencies.

A noticeable feature in this case is the suddenness with which the symptoms assumed a grave type. You will find that apart from accidents such as hæmorrhage, patients in hospital seldom reach the bounds of mortality without their position being apparent to those about them in ample time to warn their friends of the coming change.

The mode of death is also remarkable, and points to direct paralysis of the respiratory nerve centres. The only previous case I can recall in which respiration ceased some hours before the heart's action was arrested was one in which there was abscess beneath the tentorium cerebelli, which apparently led to a fatal result by the pressure which it caused on the vital knot. In that case, also, the heart went on beating for some hours while artificial respiration was maintained. In both cases death appears to have resulted from paralysis of the nerve centres, in the one from pressure, in the other probably from toxic influences. This form of death has been particularly insisted on by the late Dr. Fagge.[2]

It is clear that the essential morbid condition is the destruction of liver substance. It is this which rendered a diagnosis possible during the last moments of life, and it was practically the only lesion to be found on the *post-mortem* table; and though the course of acute yellow atrophy is by no means identical in all cases, local manifestations of some affection of the organ can probably always be detected if they are looked for. Actual diminution of the liver may of course be masked by previous enlargement or by some abnormal fixation of the organ to the abdominal wall.

A moderate degree of jaundice is present in the great majority of cases though its absence has been noted in a few. In the case we are considering it was a late symptom, an unusual occurrence, since it is generally one of the earliest indications of the onset of the disease. In fact in a considerable proportion of cases, perhaps the majority, the illness is at first indistinguishable from simple or catarrhal jaundice, being marked by yellowness of the conjunctiva and the skin, and by gastro-intestinal disturbance. This condition lasts six or seven days and gives rise to no special anxiety until at the end of that time acute and alarming symptoms are superadded. These generally comprise fever, incessant vomiting, dry brown tongue, collapse and rapid decrease in the area of liver dulness. At this stage a remarkable condition has been frequently recognised in the urine, namely, great diminution in the urea and the appearance in its place of leucin and tyrosin. These bodies, you will remember, are produced in health in the small intestine as the result of the bacterial digestion of proteids, and are supposed to be antecedents of urea, and their presence in the urine in place of urea in acute yellow atrophy of the liver is cited as evidence that urea is normally formed in that organ. Whatever may

be the explanation of their presence when they occur it is certain that they are frequently absent as in the present case, in which also there was apparently no diminution of the urea.

I will now relate a case under my care some years ago in Ward XI. which corresponded in most respects with acute yellow atrophy, and which I have little doubt was one of the disease, though unfortunately we were not permitted to verify the diagnosis by a *post-mortem* examination.

Patrick K., aged 42, a fireman, was admitted to Ward XI., on September 14th, 1892, complaining of pains all over especially severe in the epigastrium, cough and jaundice. The illness had begun a week before with a rigor. On admission he was jaundiced, the pulse was 104, respirations 33 and the evening temperature 100°. The tongue was dry and coated, the breath very foul, there was no appetite and great thirst. There was tenderness and pain in the region of the liver and in the right lumbar region. The liver dulness measured 1½ inch; bowels confined, motions clay coloured. The heart was normal on physical examination. There was cough with a small quantity of expectoration which was mucopurulent and slightly rusty in colour. Physical signs pointed to the existence of a limited patch of pneumonic consolidation at the base of the left lung. There was slight nocturnal delirium. He passed 38 ounces of urine in the 24 hours, with a specific gravity of 1013 and containing 175.5 grains of urea. Albumen was present to one-eighth, but no leucin or tyrosin could be found. On the 18th the temperature rose to 102° at 2 A.M., but it never again reached 101° and was subnormal from the 16th until death, which took place on the 24th. The patient quickly sank into the typhoid state with dry glazed cracked tongue, and passed his evacuations under him. The expectoration soon ceased, though there was still tubular breathing at the left base, and the pulse became less frequent. The following note was made on the 20th: "The jaundice has steadily increased in intensity, the condition of the urine remaining the same. The liver dulness is very difficult to make out, but an area of impaired resonance, about two fingerbreadths, exists in the area of ordinary liver dulness." There were intermittent attacks of hiccough, and I remember distinctly that although the jaundice became more intense the stools lost their clay-coloured appearance. On the 23rd the jaundice was not so deep, but all the other symptoms were worse and the patient was comatose. He died on the 24th, having been ten days in the infirmary.

This case appears to have begun with acute pneumonia, of which the jaundice, which was present when he came under observation, appeared to be a complication. Jaundice is universally recognised as an occasional complication of pneumonia, and is stated to have been met with more frequently when the right lung was affected. In my experience, however, it is a very rare complication, at least in any marked degree; indeed, I cannot remember having met with it in any other case. In the tabulated list of 151 cases of pneumonia, published by Dr. A. T. H. Waters, consulting physician to this hospital,[3] its occurrence is not recorded in any instance, and although the author remarks that it sometimes is present, he informs me that he has rarely met with it in his own practice.

During the last week of this patient's existence the symptoms were identical with those attributed to acute yellow atrophy of the liver, and were quite unlike the symptoms of pneumonia. The disappearance of the liver dulness was most striking, and the small amount of urea excreted is very significant, since in pneumonia, as in other acute febrile conditions, it is generally largely increased. The fact that the stools, previously clay-coloured, again became dark without any improvement in the other symptoms is of some interest, such a condition having been noticed in other cases of acute yellow atrophy. In this connection it is worth while to recall the fact that clay-coloured stools have long been regarded as of good augury in jaundice.

Acute yellow atrophy may occur in a person who is the subject of some chronic enlargement of the liver or in whom the organ is fixed by adhesions so that it cannot fall away from the anterior abdominal wall. In such a case the diminution of the liver which is so characteristic of the disease may not be recognisable by physical examination. Further, it appears that there are cases, to which the term icterus gravis may with strict propriety be applied, in which the liver is not at all reduced in size and may even be enlarged. Thus Chauffard[4] quotes an instance in which it weighed 70 oz. and another in which it weighed 77½ oz. In such cases it is reasonable to suppose that death has taken place before the hepatic parenchyma has been absorbed to any great degree.

Some years ago I had under my care in Clarence Ward a case which illustrates this condition. The course of the disease was, in the main, that of acute yellow atrophy, the liver cells were affected in the way characteristic of the disease, but the physical signs during life were those of enlargement of the liver, and the *post-mortem* examination showed that the organ was certainly not reduced in size.

Annie W., aged 48, was admitted to Clarence Ward on July 4th, 1892, complaining of retching. The family history has no bearing on the case. She had been married eighteen years, but had no children; she stated she had always enjoyed good health but for the last six or seven years had suffered from shortness of breath and a feeling of languor. Three weeks before admission she began to suffer from headache and pain in the back, and after a fortnight she noticed that her motions became, as she expressed it, "like brewer's barm," while her urine diminished in quantity and became "thick." On admission she was a fairly well developed woman, though she said she had lost flesh considerably during the preceding few weeks. The complexion and conjunctivæ were yellow, the temperature on the evening of admission was 102°. There was pain in the back and the precordia, and there was anasarca of the feet. The tongue was dry and tended to be black. She had continued retching, and vomited nearly everything she took. The liver dulness was increased, the vertical measurement being 7 inches, and the organ could be felt below the costal arch. There was very great tenderness at the upper part of the abdomen. There were signs of slight consolidation at the bases of both lungs. The urine was high-coloured, sp. gr. 1015; albumen was present; no leucin or tyrosin was found. The quantity passed in the twenty four hours was 26 ozs. From the time of her admission until her death, which took place at 4.15 P.M. on July 9th, she lay in what may best be described as the typhoid state. The jaundice deepened, but though the patient's statement showed that the motions had been clay-coloured before admission, while she was in the infirmary they were dark. Restlessness and delirium came on, with sordes on the lips, and the temperature ranged between 103° and 104°, falling to 101.6° the day before she died. A note made on July 9th states that under the microscope the urine was seen to contain granular bodies, but whether they were leucin I am unable to say.

The diagnosis of this case was very obscure. I suspected that there was some inflammatory mischief in the liver, possibly phlebitis of the portal vein; but the enlargement of the organ seemed to exclude the possibility of its being acute yellow atrophy.

At the *post-mortem* examination we found that the liver was firmly adherent to the diaphragm, so that it could not be separated from it without cutting; the organ with the diaphragm attached weighed 84 ozs. Its substance was fairly firm, the cut surface being mottled with purplish and yellow spots. There was some recent fibrous tissue around the portal spaces. Some recent hæmorrhages were found in the stomach. There was evidence of former extensive peritonitis, the coils of intestine being closely adherent to each other; there was puckering of the upper parts of the lungs and calcification of the bronchial lymphatic glands. Numerous recent subpleural hæmorrhages were found.

Microscopic examination of the liver showed that there was a considerable amount of periphlebitis of the portal veins; the liver cells were very irregular in size and shape, and were extremely granular. "The appearance of the liver cells," the report states, "resembles that seen in acute yellow atrophy."

It is clear from the condition revealed by the *post-mortem* examination that, in spite of the patient's statements with regard to her general previous good health, she had at some time suffered from pulmonary tuberculosis and from a more or less generalised peritonitis, which was probably of tuberculous origin. Both the history of the fatal illness and the *post-mortem* findings show that the cause of death was an acute affection of the liver, which only differed from the accepted type of acute yellow atrophy in the fact that the organ was not reduced in size. There were present jaundice, intense vomiting, fever, severe nervous symptoms and a fatal termination. The *post-mortem* examination showed the existence of an acute affection of the liver characterised by inflammatory changes and destruction of the liver cells. The presence of recent hæmorrhages in the pleuræ and the stomach serves to complete the picture. It seems probable that if the patient had lived a few days longer the liver would have undergone considerable reduction in size, but even then it would have been exceedingly difficult to recognise it on account of the way in which the organ was firmly fixed to the abdominal wall.

The cause of this remarkable disease is still to seek. We are probably justified in assuming that the inflammatory and destructive changes in the liver are due to the action of some poison derived from the alimentary canal, but as to its nature or mode of production we are entirely in the dark. Bacteriological examination of the liver has led to various results; in some cases bacteria and micrococci have been found, either in the blood vessels or the bile ducts or the connective tissue, but in the majority of cases in which they were sought the result has been negative. Most probably when organisms have been found they have been present as a secondary infection, their growth being favoured by the

lowered vitality of the tissues. The toxic origin of the disease is supposed to receive support from what is known of the action of phosphorus on the liver. When this substance is swallowed in poisonous amounts it first gives rise to intense gastric irritation, which may subside, to be followed a few days later by fatal symptoms associated with the liver, chiefly jaundice and local pain and tenderness. After death in such cases the organ is found to be in a state of extreme fatty degeneration, which is sometimes spoken of as acute yellow atrophy, though the organ may, in point of fact, be greatly enlarged, as it was in a case of poisoning by phosphorus under the care of my colleague, Dr. Caton, in 1898, where the liver weighed 3 lbs. 14 oz.

The prognosis is extremely grave though, perhaps, not altogether hopeless, since recovery has been recorded in cases which presented all the characteristic symptoms of the disease, including diminution of the liver dulness. The possibility of considerable restoration of the lost liver substance is suggested by the observations of McPhedran and Macallum, of Toronto,[5] who found evidence of abundant cell division in a liver which weighed only 25 oz., and Ziegler states that where life is preserved a compensatory hypertrophy of the surviving portions of the liver substance takes place.

If the case be seen in the early stage before the symptoms characteristic of acute yellow atrophy have appeared the treatment commonly employed in cases of catarrhal jaundice will naturally be adopted. When the characteristic symptoms have been added unfortunately we know of no line of treatment which seems to have the slightest influence on the progress of the disease. All we can do is to endeavour to maintain the patient's strength in the hope that the morbid influences, whatever they may be, will exhaust themselves, promote the action of the kidneys so as to facilitate the elimination of toxic and other waste products and treat symptoms as they arise.

The chief practical lesson which we ought to derive from the consideration of the foregoing cases seems to me to be that although the majority of cases of simple jaundice are among the mildest of the diseases which come under our notice, we should never look on them as trivial; but remember that what has all the appearance of an affection which will disappear in a few days may in reality be the beginning of a formidable disease which will carry off the patient in as short a time.

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## ON THE TREATMENT OF WOUNDS IN WAR.

*Being a Portion of an Address Delivered before the Midland Medical Society.**

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[PROFESSOR WATSON CHEYNE commenced his address by observing that two important questions arose in reviewing the surgical experience gained in South Africa: (1) Should the experience gained with regard to the treatment of gunshot injuries in war lead to any modification of the rules which had been gradually formulated for the treatment of similar injuries in civil practice? (2) How far had the principle of modern surgery, and especially of asepsis, been acted on, and how far was it necessary and possible to act on them? After considering the first question and answering it in the negative, Mr. Cheyne turned to the second question and spoke as follows:—]

In considering this matter of the relation of the results to the treatment adopted we must divide the treatment into two stages—namely, that which takes place in the field and that which is carried out at the base hospitals, and my statement only applies in so far as regards the treatment of the patients in the field before they arrive at the base hospitals. When the cases reached the base hospitals the value of the recent advances in surgery at once came into play and the results from that period onward were of course incomparably better than they would have been before these recent developments had taken place. But in the first class of case, namely, those treated at the front, I believe that modern surgery and active asepsis had very little to do with the results, and in my opinion these results are mainly attributable to the character of modern bullet wounds, and to the climate in which these wounds were inflicted. In fact, I would go so far as to say that if these wounds had been made with the old round bullet and in a damper climate (say in the Crimea) the immediate results under the methods of treatment adopted in the field would not have been so very much better than those formerly obtained, in spite of the recent advances in surgery and the introduction of Listerism. Perhaps this is going a little too far because, although I cannot attribute the results obtained to any active application of the advances of modern surgery or of asepsis, still the treatment contributed considerably to the result in that, while in former days wounds were meddled with, probed, opened up, poulticed and so forth, in the present campaign they were left alone and mischievous interference was avoided. Probably the small size and apparently trivial character of the wound led to the plan of leaving it alone in the first instance, and this plan was further necessitated owing to the large number of wounds which occurred in the early battles, the consequent difficulty of finding time to open up these wounds, the small *personnel* and the other difficulties to which allusion will be made; and no doubt added to this there is unquestionably a diminishing tendency to interfere actively with wounds as the result of the experience of modern surgery. But this is a different matter from saying that the results obtained were due to modern surgery and asepsis, in so far as that implies an active application of those principles.

It is only necessary to consider the circumstances under which a man is wounded, and the various steps which have to be gone through before he reaches the base hospital in order to see how extremely difficult it is to apply modern surgical principles in the early treatment of these cases, and it is only by the study of these conditions that one can hope to lay down lines for progress in the future.

Let us look first at the conditions under which a man is wounded in the field. He is probably lying on the ground, perhaps behind a stone or an ant-heap, and all around him there is a shower of bullets which renders it quite impossible for anyone to walk up and attend to his wound properly or to carry him off the field and have him attended to at the dressing station. He must lie where he is till the action is over, or at any rate till it has passed away from his vicinity, and the only assistance that he can get in the first instance will be either by his own efforts or from a comrade, or from the regimental doctor, who makes his way to him as best he can, and naturally as unencumbered with apparatus and paraphernalia as possible. Under these circumstances what happens to the wound? He goes into the fight provided with what is called a "field dressing," which essentially consists of a small piece of antiseptic gauze, a piece of wool, and a bandage. The gauze is quite small in amount, and, if there is any bleeding going on, it very soon becomes saturated with blood, and, to begin with, contains such a small quantity of antiseptic material in it that the blood passing through it is not in any way deprived of the possibility of putrefying, so that this little dressing, as arranged in the packet which accompanies each soldier, is more a sort of clean rag than any actively antiseptic dressing. But under the circumstances in which it is employed it is very far from being even a clean rag. If the soldier or his comrade attends to the wound, they open this packet; their hands are covered with mud and sand and grease; they take out this piece of gauze with their dirty hands; very probably they lay it down on the ground while they are getting the clothes opened, and then they stick this piece of dirty gauze on the wound. And even if the dressing is made by the doctor the conditions are practically no better. He cannot carry bottles of lotion with him into the firing line; he cannot even wash his hands; and, though perhaps he may take a little more care that the piece of gauze does not get badly soiled, yet even in his hands with the greatest care this

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dressing is by no means an aseptic dressing, and to speak of it as an aseptic dressing, or to speak of such treatment of a wound as in any way an active application of Listerism, is, of course, an absurdity.

In a good many cases the man now lies on the ground for some considerable time, perhaps even for hours, exposed to the heat of the sun, and by the time that he reaches the dressing station or the field hospital the blood and dressing very often form a dry hard cake over the wound, which requires some little force to detach, and in many cases of small bullet wounds, if this cake of blood and gauze be left undisturbed for some days, it will be found when it comes off that healing has occurred under the scab. When the patient has arrived at the dressing station, even in cases where it is essential that the wound should be redressed, and where, therefore, the opportunity for thorough disinfection is presented, practically little or nothing is done in that way, mainly, of course, owing again to the circumstances of the case. At the same time, I may say that I did come across a few men who, in spite of the circumstances, made a fairly efficient attempt to carry out disinfection of the wounds as soon as they came under their care; but in the majority of cases the lotions at hand were quite insufficient and inefficient, and practically no real disinfection was carried out.

In the circumstances of the present war the chief obstacle to the thorough treatment of wounds at the front was connected with the water supply. In the first place the supply of water was deficient, and the ponds were a considerable distance apart, and it was by no means always possible during an engagement to arrange that the field hospital should be in such a position that an ample supply of water was obtainable. In the second place, even if this difficulty were overcome, the water was invariably bad and so extremely muddy that even after precipitation with alum the filtration was extremely difficult. In fact, a great deal of time and labour was required in the attempts to filter the water, for such filters as were efficient, such as Chamberland's and Berkefeld's filters, very quickly became clogged with the mud, and had to be repeatedly taken out and cleaned. One can easily understand that with a staff that was undermanned and working under high pressure it was difficult to find anyone who could be told off to collect and filter water, besides which the filtering of this water, on account of its muddiness, was a very slow process, and thus only a small quantity could be obtained in a given time. The third difficulty was the impossibility of obtaining boiled water. In the early stage of the campaign the transport was so cut down that only the number of kettles necessary to prepare food for the patients was provided, and there were no extra kettles available for boiling water for operation purposes, and further, the obtaining of fuel was a very great difficulty. The country itself is devoid of fuel; the absence of trees renders one dependent on the stray pieces of wood that one can pick up, such as the posts of wire railings, enclosures round the houses, and so forth, and the staple fuel used in that country is cow dung, which was not always obtainable.

It is thus evident that during the progress of an engagement, if lotions and sterilised water had not been made ready beforehand, it was really quite impossible to obtain the proper lotions or even for the surgeon or the attendants to keep their hands decently clean. In many cases no lotions were available at all, or if they were they consisted of some muddy water into which a little carbolic acid or sublimate was introduced—lotions which, I believe, were quite incapable of destroying even the most delicately-constituted bacterium. Hence in cases where it was thought advisable to change the dressing there was no proper disinfection of the skin around the wound. Indeed, in the majority of instances, another piece of gauze, which was very often, owing to the amount of dust and sand in the air and the absence of water to enable the surgeon to wash his hands, nearly as dirty as the former was put on and this could very seldom be described as an aseptic dressing.

The difficulties of aseptic work were also much increased by the amount of sand and dust present in the air. The veld, though in the springtime covered with grass, does not possess a closely-knit turf as in this country; the condition is more a series of tussocks of grass with sand between, and after the ground has been passed over by waggons or by soldiers these tussocks very soon become destroyed, and the whole ground is converted simply into a sandy desert. Hence the air was always full of sand, and with a little wind there were constantly dust storms, so that the dressings and other materials became saturated with this sand. And lastly, flies were extremely troublesome, especially where the camp was near water, and these were constantly trying to settle on wounds when they were exposed to view, and of course interfered with the aseptic arrangements.

I have said nothing as yet as regards another very great difficulty in carrying out the requirements of modern surgery, namely, the question of transport of the patients to the base hospital. The wounded when they were brought back to the dressing station or to the field hospital, were not put in comfortable beds and allowed to remain until their wounds were healed. In many cases, indeed, only a few hours elapsed, and they were then again put into an ambulance waggon, or an ox or buck waggon, and carted off either to the nearest base hospital or to the nearest point on the railway line, from whence they were transferred to the base. In some places, such as Paardeberg, these journeys of the recently wounded in ox waggons lasted for two or three days. One can easily imagine how deleterious such transport was, and what such a journey would mean to a patient with compound fracture of a limb, or with a fractured spine, or an abdominal injury or a fracture of the skull, and no one can be surprised to learn that deaths in these cases frequently occurred during, or as a result of, the journey. The conditions were not so bad where the engagement occurred in the immediate neighbourhood of a railway line, and where the wounded could be quickly transferred to a well-appointed hospital train, but even there they had to suffer in the transit over the rough veld.

That the results could not have been obtained if the wounds had not remained aseptic is, of course, self-evident; but the point is that this asepsis was not brought about by the surgeon, but depended on the climate and the nature of the bullet wound.

It must, not, however, be supposed that bullet wounds invariably escaped sepsis. On the contrary, a considerable number of cases even of the small wounds inflicted by a rapidly-travelling bullet had suppuration along the track. In these cases, although, so long as only soft parts were injured, this did not matter very much; nevertheless, when bones were broken, necrosis and other troubles were apt to follow. In cases, however, where the wound was an inch or larger in size, in my experience sepsis invariably occurred; and though many of these wounds healed ultimately well enough when they reached the base hospital early, I have seen some extremely rapid cases of acute septicæmia and emphysematous gangrene, and in many cases severe and prolonged suppuration with osteo myelitis, and some were only rescued by early and high amputation.

The explanation of the escape of a large number of the cases of small bullet wounds depends, as has been already said, partly on the nature of the wound inflicted by the bullet, and partly on the climatic conditions under which the injury took place. Wounds made with these small conical bullets vary a good deal in their character. On the one hand, if the bullet is travelling rapidly and strikes straight, and either passes through the soft parts or through the cancellous ends of bones, it generally makes only a small punctured wound of entrance and a slit or small wound of exit. On the other hand, when the bullet is spent it may strike sideways or obliquely, just as it may also do in a case of ricochet. If the rifling of the gun is worn it may also strike obliquely, or, if it strikes the shafts of bones and breaks them up, it may produce almost an explosive wound. In all these cases a larger wound is produced. The great majority of wounds, however, are, as has been said, very small, and differ very markedly from the old wounds with round bullets. In the first place these bullets seldom take in any portion of the clothing so that the wound does not become soiled from this cause, and apparently also the bullet seldom takes in any septic material. The most frequent cases where that occurs are where the bullet passes through stockings, flannel shirts, etc. Again, the aperture of exit is not larger than that of entrance, as used to be the case, and the injury to the tissues in the shape of bruising is usually comparatively slight. In fact, in many

cases the tissues are not so much bruised as pushed aside by the missile. The consequence is that the wound is, as a rule, quite small; there is no cavity in the interior because the muscles are separated rather than divided, the sides of the wound come together at once, and these sides are fairly healthy; hence, unless in cases where the bullet has carried in septic material, or where the skin and the part injured are very septic, the majority of the wounds heal without any trouble.

But as important as the size and nature of the wound are the conditions under which it is inflicted. I need not recall to your minds that a certain and large amount of moisture is necessary for the growth of bacteria, and that the concentration of organic fluids is one way of preserving them. Nor need I point out that healing by scabbing, which is an old and long-recognised method of healing, acts on this principle, the blood drying up and becoming concentrated before the bacteria have had time to grow in it. This principle has been recognised for many years, and various attempts have been made to promote the rapid scabbing of wounds by powdering them, by blowing air on them and so forth.

Now, in South Africa the climate is especially advantageous in that it promotes rapid drying up of the blood effused and healing under a scab. The excessive dryness of the air and the heat of the sun contribute to this result in a way that can rarely be found elsewhere and this was more especially the case seeing that the bleeding from these wounds was generally quite slight, so that only a small quantity of blood had to dry up. The antiseptic dressing and the surgical treatment adopted had little or nothing to do with the result in these cases and the only way in which we can bring in modern surgery as of value is because it has taught us the meaning and value of healing under a scab and has shown us that unless the wound can be made thoroughly aseptic the less such a scab is disturbed in the first instance the better. That the essential elements in these wounds are the bullet and the climate is shown by the following facts:—In the early stages of the war the field dressing which was provided contained a piece of mackintosh which the soldiers were instructed to apply outside the gauze. When this was done, however, it was found that sepsis and suppuration frequently occurred along the track of the wound and I have seen a number of cases brought in only a few hours after the infliction of the injury dressed in this way, and have found the gauze and discharge stinking, and of course, entire absence of scabbing. This was observed quite early in the campaign, and from that time orders were issued that the mackintosh was not to be used. But this very fact shows that the drying up of the discharge and not the antiseptic dressing was the important factor. It was also observed that those cases did best where the wounded lay out in the sun for a long time before they could be brought in, and where, therefore, a rapid and very dry crust formed. The size of the wound has naturally also a good deal to do with the result. Where the wound was too large or the effusion of the blood too great to permit of the formation of a rapid crust, sepsis was almost certain to occur, and, as I have just said, I have seen some very severe septic cases under these circumstances; indeed, I have never seen a wound of any large size which was not septic. And we must remember that the great majority of deaths which occur a few days after an action result from sepsis of the wounds, so that the results as regards asepsis where we consider cases of large wounds without crust formation are by no means so favourable as one would at first think when all the cases are grouped together.

It is thus evident from all that has been said that we were dependent for the success which followed in this war in so far as the treatment at the front is concerned, not on advances in surgical science, but on the merciful nature of the modern bullet wound and on the climate in which the fighting took place; and as I said before, if a larger bullet were used and if the fighting took place in a moist climate we could hardly expect anything like similar results. The question therefore arises, On what lines should the treatment of wounds be carried out in future?

It is quite clear that in no case can we hope for real asepsis from the first. The chances of getting the wounded out of the firing line quickly are becoming less and less; indeed the wounded themselves are very much safer if they are left alone, provided they have any protection at all, for they run a great risk of being killed or wounded again if an attempt is made to carry them out. Further, the surgeon in the field cannot carry about lotions or water to wash his hands, and the first field dressing must in a large number of cases be applied by the patient or his comrades. So that till the patient reaches the dressing station at any rate, and very probably the field hospital, there is no possibility of carrying anything like active aseptic treatment into force, and some considerable number of hours may have elapsed before the patient comes under these conditions. It seems to me, therefore, that it is only in the way of aiding the principle of rapid drying up of the blood and obtaining a good scab that we can help matters in the first instance, and the only way in which I see that we can do this is to resort to the attempts to promote scabbing and prevent decomposition by the free use of antiseptic powders, and by the free exposure of the wound to air and sun. The object of these powders would be partly to absorb moisture, and therefore tend to make a cake, and partly also, being antiseptic, to impregnate the blood with such a quantity of antiseptic material that bacteria cannot grow in it. The first point is the more important. As to what powder should be used, that is a matter that would need to be worked out, but I think that powder would be better than pastes, especially if these contained gummy materials, because the drying up of the blood would occur more quickly, and of course the use of anything in the shape of ointments would be to give up the whole principle of scabbing, and would not, I am sure, meet the requirements of the case. I think if, in addition to the cyanide gauze, there was in the field dressing a packet of antiseptic powder, which the soldier was instructed to open and sprinkle over the wound before applying the gauze, or if the gauze itself were full of loose powder, considerable help would be obtained. Further, the regimental surgeon, although he could not carry antiseptic lotions with him, might quite well carry a quantity of antiseptic powder and dust the wounds with it before applying the dressings. I tried this when I first went out, and furnished various bearer companies with pepper boxes containing various antiseptic powders of different strengths and kinds, but, owing to the ever-changing position of the bearer companies, I never knew what the result was, or indeed if they had ever been used. This is a point which, I think, might well be looked into by the authorities.

The question of a proper supply of water and lotions must be also thoroughly gone into. In such a country as the Free State it is clearly essential to provide the lotions and water before the engagement. In the case of an engagement one cannot always find a supply of water near which the dressing station or field hospital can be pitched and, even if it is found, it is sure to be muddy and require filtering and boiling,—conditions which, as I have already mentioned, are quite unattainable. It is true that water-carts accompany the hospitals, but one of the most distressing symptoms of the wounded is thirst, and the water in the water-carts must be reserved for drinking purposes, and is often indeed quite insufficient for that. It seems, therefore, that it is essential that arrangements should be made by which the field ambulances and bearer companies can carry into action a quantity of water which has been filtered and boiled and lotions which are ready for use, and I do not see that there can really be any serious difficulty in doing this. After we left Bloemfontein I was provided with an ambulance cart of my own in which I carried an operating tent and all the requisites for performing operations, and I made a point of having at hand a number of rum jars which were kept filled with strong lotions, which could be diluted as required. I also had a jar full of swabs soaking in lotion and a large eight gallon tin which I always kept replenished at every opportunity with filtered and boiled water. It really took very little time to keep these vessels replenished, and one was always ready far any reasonable emergency. If I could do this with the limited assistance and transport at my disposal I see no reason why it should not also be done in the bearer companies and field hospitals. Although in many of the ordinary small wounds it is best not to disturb the crust, if a good crust has formed, still in larger wounds the only chance of avoiding sepsis is by thorough disinfection of the skin and wound as soon as possible.

One other point to which I would call attention as interfering with the application of modern surgery is the difficulty in illumination in the operating and other tents. As a rule it is night before the wounded can be brought in and attended to: at any rate in most of the cases which I saw the dressing and operating work had to be done after dark. In our field hospitals the arrangements for illumination were very imperfect, and usually consisted of candles, which either had to be held by an orderly, or, owing to the small staff, had to be stuck in a dirty lantern or on a bit of wood. The only two abdominal sections which I did were both done late in the evening with the aid of a candle stuck in a piece of wood, and placed as near the wound as possible. In several of the foreign ambulances the acetylene light was provided, and in the cart which I organised at Bloemfontein I was fortunately able to procure and carry with me a small acetylene generator, which gave the most brilliant illumination. I would call attention to this point because I do not see that there can be any great difficulty in providing illumination of this kind to the various field hospitals, and it is a matter of the very greatest importance. For a field hospital to go into action without lotions, without water, without means of boiling water, or without proper illumination, is just as bad as for guns to go into action without proper fuses for the shells, or for the men to use black powder. These things are absolutely necessary equipments for the work, and if additional transport is required for them it must be provided.

One other question arises with regard to the better treatment of the wounded, and that is the question of the necessity of transporting them to the base. The ideal treatment would be to arrange for the field hospital to be left on the field of battle, and for the patients to be retained there till it was safe for them to be transported to the base. Certain difficulties, of course, arise in this connection, more especially the difficulty of feeding the sick, and also of providing sufficient attendants. In a civilised country one can hardly believe that the enemy would interfere with these field hospitals, and there is really nothing in the conduct of the Boers in the present campaign to lead one to suppose that they would do otherwise than treat such field hospitals if found with consideration. It is true they might take the wounded prisoners afterwards, but that is a minor matter, and it seems to me that it would be worth while to attempt to come to some agreement among the nations by which field hospitals might be left on the field of battle, and furnished with suitable supplies and medical comforts. Of course, in connection with that another difficulty which would arise in the present state of our Army Medical Department, namely, its undermanned condition, would render such an idea impossible. To drop field hospitals all over the country with suitable attendants would very soon deplete the service, and leave no one at hand to go forward with the army. Something of the kind, however, would be extremely important, and no one who has realised the sufferings of the patients in this campaign from the early transport, and the loss of life and limbs which have consequently ensued, will doubt as to the advisability of some plan of this kind. It is to be hoped that the efforts which are being made to improve the conditions of the service will attract a sufficient number of suitable men to allow a reserve supply for purposes of this kind to be available.

If once these requirements were attended to, notably better arrangements to prevent sepsis in the first instance, proper supplies of lotions and boiled water, proper illumination, diminished necessity for transporting the wounded to a distance, and increase in the *personnel* we could then look forward to a more efficient attempt being made to carry the advances of modern surgery into military practice. More especially more efficient efforts could be made to disinfect and treat bad compound fractures, to see that all cases of wounds of the skull were trephined as early as possible, to open the abdomen in cases where the wound was over a fixed portion of the intestine and where, therefore, injury of the tissues was probable, and so on.

There are a number of minor points in the treatment of wounds in the field and in the furnishing of field hospitals, which I need not go into. I think that all these questions of wound treatment should be considered by a properly constituted expert committee. In the meantime, I have said enough to show that in this matter far from having reached finality in the treatment of wounds in war we have hardly begun to bring modern surgery to bear on the subject. The details in this respect are as important as the larger schemes which are occupying so much attention at the present time, and without attention to them these schemes would fail to effect the ultimate object for which they are proposed, namely, the diminution of suffering and the saving of life in war.

## MEDICATED LOZENGES.

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"Qui miscuit utile dulci" may, with apologies to Horace, be spoken of a physician who prescribes a well-medicated lozenge, who knows how to combine efficient remedies in the acceptable vehicle of a delectable sweetmeat. In many affections of the mouth and fauces, as well as in some other morbid conditions, the form of lozenge offers a convenient, agreeable, and efficacious method of administering many remedies. We owe the modern therapeutic use of lozenges in some part to the old Edinburgh *Pharmacopœia*. In Dr. Paris's time, in the Twenties of the last century, he pointed out that inasmuch as trochisci, troches, or lozenges were then regarded as objects rather of confectionery than of pharmacy, neither the London nor the Dublin College condescended to notice them, while the Edinburgh *Pharmacopœia* contained several formulæ for their preparation, while they were undoubtedly useful in medical practice, either in the officinal forms or in certain magistral combinations, for which last Dr. Paris gave some valuable suggestions in his classical *Pharmacologia*. Since that time many considerations, physiological and pathological, and the use of improved diagnostic appliances, the laryngoscope to wit, have extended the use of medicated lozenges. The last edition of the *British Pharmacopœia* gives the formulæ for seventeen forms of trochiscus, these being made up with a "fruit basis," with a "simple basis," with a "rose basis," or with a "tolu basis." Besides these officinal lozenges there are many other medicated ones "in the market," some of them being tarred with the black mark of proprietary possession, and not a few of them being of unknown composition. In my present communication I have two objectives, namely, to encourage my brethren to prescribe lozenges in their own magistral formulæ whenever they can, and to draw professional attention to a "basis" which I have found in my own practice to be useful for the purpose. This "basis" is known as the pasta glycyrrhizæ alba, or *pâte de réglisse blanche*. It is described in Beasley's *Pocket Formulary*. It is prepared like the better known pasta althææ or *pâte de Guimauve* of the French *Pharmacopœia*, liquorice root being used instead of marsh-mallow root. This white liquorice paste is prepared from the following formula, according to Beasley: Take of decorticated liquorice root ℥iv, water Oiv; macerate for 12 hours; strain and add lb ijss of picked gum arabic and lb.ijss of refined sugar; dissolve, strain, and evaporate to the thickness of honey, constantly stirring, and add gradually the whites of 12 eggs well beaten with ℥iv of orange water: evaporate with constant stirring till the paste is so firm as not to adhere to the hands.

If the physician decide upon the exhibition in a given case of illness of a remedy in the vehicular form of a lozenge, the particular drug or drugs therapeutically indicated for this purpose in the particular case should be selected with a prescriber's usual care, and prescribed with the pasta glycyrrhizæ alba. The active drug or drugs should be skilfully combined by the dispenser, *secundum artem*, with the basis I have described, in the process of the making of that basis at a time before the paste attains its final consistency. For example, borax is an excellent local subastringent, detergent, and antiseptic. A lozenge of it may be prescribed magisterially as follows: ℞ Boracis gr.ij, pastæ glycyrrhizæ albæ (Beasley) gr.x; misce, fiat trochiscus. Signetur: one or two to be slowly sucked, as directed. A lozenge of borax so made is "nice" enough to be agreeable without being quite a sweetmeat. When freshly made it dissolves slowly and well in the mouth, and it is tough enough to be in part a masticatory.

# OBSERVATIONS ON THE RATE OF VIBRATION IN ANKLE CLONUS.

By J. A. MACWILLIAM, M.D.,
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Many observers have found the rate of vibration in ankle clonus to be usually about seven or eight per second. Gowers[1] says: "The movement is very uniform, from six to nine contractions per second." He recorded the movement by attaching a writing point to the foot, and causing it to inscribe its movement on a recording drum. Waller[2] described rates of 8, 9, and 10 in 3 cases of paraplegia, and a rate of 10 per second in a case of spinal syphiloma. Horsley[3] found the rate to be 10 per second in a man suffering from caries of the spine. Herringham[4] observed a frequency a about 7 per second in 4 cases from which he made tracings.

The upper limit of the vibration frequently seems, as far as has been described, to be sharply defined. I have not been able to find any record of a rate above 10 per second, but the following observations show that this limit is by no means an absolute one, that it can be overpassed to a very marked extent, and that different modes of registration may yield different results in some instances.

A man, aged 40, suffering from hemiplegia of ten months duration, showed greatly exaggerated "myotatic" reactions in the lower limb on the paralysed side. The knee-jerk was greatly increased; a single tap on the patellar tendon elicited several contractions in the quadriceps muscle—the condition called "tremospasm" by some observers. When continued tension was applied to the quadriceps by traction upon the patella a well-marked clonus was set up in the muscle and continued as long as the tension was maintained. A tap upon the tendo Achillis caused a multiple response from the calf muscles, two or three twitches following the tap. When ankle clonus was elicited in the usual way the vibration of the calf muscles looked unusually rapid, and tracings made showed that it was so. A tambour (button cardiograph, etc.) was strapped on the leg, so as to press on the calf muscles and record changes in them; this tambour was connected in the usual way with a recording tambour, while a time tracing showing half seconds was simultaneously inscribed. The rate of vibration was found to be as a rule 13.5 or 14 per second—that is about double the rate of ankle clonus as ordinarily observed. (See Fig. 1). In Fig. 2 a similar rate of



Fig. 1.

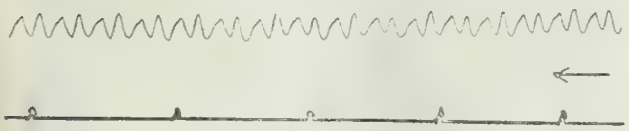


Fig. 2.

vibration (14 per second) is seen, while alternate vibrations exhibit a marked difference in character, each alternate curve being broader at the base and less sharp at the apex than the intervening curves. Indications of such difference, though only slight, may be detected in Fig. 1 also.

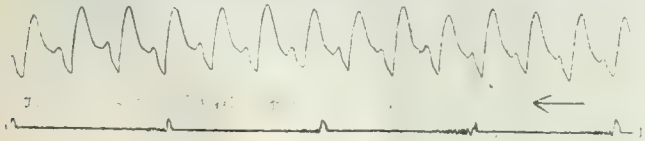


Fig. 3.

With somewhat different conditions in situation of tambour, amount of tension, etc., the differences in alternate vibrations may become very striking, so that the tracing obtained may look like a pulse tracing with a well-marked dicrotic wave (Fig. 3). Fig. 4 reproduces a portion of a tracing in which

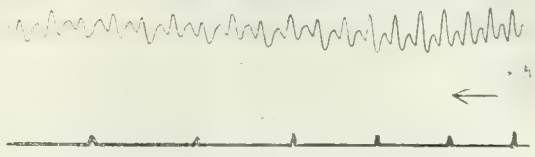


Fig. 4.

the "dicrotic" type gradually merged into the kind of tracing shown in Figs. 1 and 2. At the right hand side of Fig. 4 there are alternate large and small curves; towards the left side the general characters of Fig. 2 develop; it is seen that the small alternate waves gradeinto the broader curves of Figs. 2 and 1. In the early part of the tracing the rate is about 12 per second; in the later part 13.

The effects of two single taps on the tendo Achillis are shown in Fig. 5; two well-marked twitches occur after each

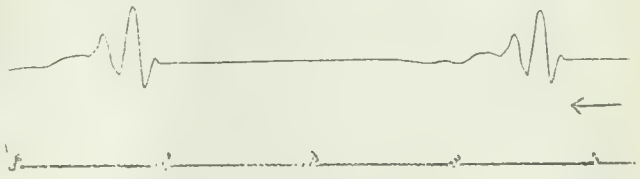


Fig. 5.

tap; these twitches occupy somewhat longer time than two contractions of the ankle clonus. After the two twitches (in Fig. 5) there come one or two slighter oscillations of longer duration. (Upward movement of the lever = contraction).

Fig. 6 shows a tracing of the multiple knee-jerks caused by

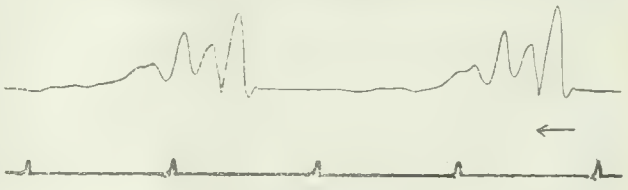


Fig. 6.

two separate taps on the patellar tendon, recorded by a tambour strapped on over the quadriceps muscle. Three large contractions resulted in each case, coming at the rate of about 10 per second.

Fig. 7 shows the clonus excited in the quadriceps by

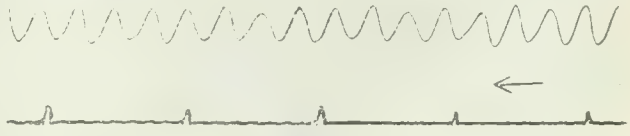


Fig. 7.

traction on the patella; it exhibits a rate of about 7.5 per second. It is noticeable that this clonus is decidedly slower than the rate of succession in the three well-marked contractions excited by a tap on the patellar tendon; this is in contrast to what has been stated above in regard to the calf muscles, where the rate of ankle clonus was somewhat higher than the rate of succession in the contractions caused by striking the tendo Achillis.

It is important to note that while a rate of 13 to 14 per second was obtained during ankle clonus when the receiving tambour was strapped on the calf muscles, a very different result was got when the movement of the foot was recorded, the button of the tambour being brought into contact with the ball of the foot while the clonus was going on. The vibration shown was only half as fast (see Fig. 8). In some

instances simple large curves at this rate occurred; in other instances the large curves described by the foot movement were notched at the top, indicating a probable fusion of two vibrations into one large curve. Thus, it is evident that the large movements executed by the foot are by no means necessarily a true indication of the actual vibration in the calf muscles.

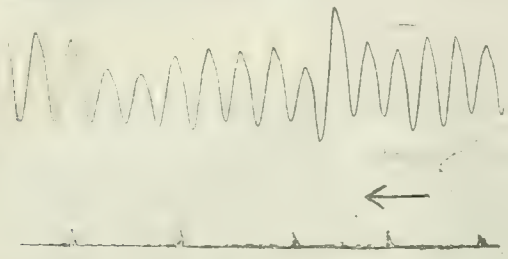


Fig. 8.

The tendency to fusion which sometimes exists in cases of tremor was pointed out by Dawson Williams and Wolfenden,[5] who examined cases of paralysis agitans, disseminated sclerosis, etc., by placing the hand (fingers or palm) on an india-rubber bag connected with a recording tambour. In a case of paralysis agitans they obtained large curves at the rate of 5.1 per second; these were notched at the summit, indicating a true rate of 10.2. So in disseminated sclerosis giving 5.2 large waves per second there was evidence of secondary waves, pointing to a true rate of 10.4. In some tracings they noted alternate smaller waves, recalling the appearances seen in a tracing of a "dicrotic" pulse. Herringham[6] also noted the tendency to fusion in some tremors.

It is hardly necessary to remark that I do not affirm the occurrence of fusion in ankle clonus generally, but only that such may occur, as in the case described above, and that the foot movement may only show half the real rate of vibration in the muscle.

So high a rate of vibration in ankle clonus as 14 per second is interesting in regard to its relation to the character of the discharge, tonic influence, etc., from the motor cells of the spinal cord. Horsley and Schäfer[7] state that the automatic action of the nerve cells of the cord appears to be never capable of originating a rhythm of greater frequency than 10 per second. But, while we know that the integrity of the spinal cord is essential for the occurrence of ankle clonus and cognate phenomena, we have no definite knowledge as to what relation the cord bears to the rate of vibration.

REFERENCES.
[1] *Diseases of the Nervous System*, London, 1886, vol. i, p. 13. [2] *Brain*, iii, p. 179. [3] BRITISH MEDICAL JOURNAL, 1885, i, p. 112. [4] *Journal of Physiology*, 1890, xi, p. 482. [5] BRITISH MEDICAL JOURNAL, 1888, i, p. 1049. [6] *Loc. cit.* [7] *Ibid.*, vii, p. 106.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

### SUPRARENAL EXTRACT IN GASTRO-INTESTINAL HÆMORRHAGE.

*Apropos* of Mr. Thelwall Thomas's interesting article upon the hæmostatic properties of suprarenal extract which appeared in the BRITISH MEDICAL JOURNAL of November 23rd, it may interest some of your readers to know that the drug is often of the greatest value in the treatment of severe hæmatemesis. During the past eighteen months the results I have obtained from its employment have been so uniformly satisfactory that I have quite abandoned all other remedies in its favour, and believe that in at least five cases death would certainly have ensued from loss of blood had preference been given to the more orthodox methods of treatment. The plan usually adopted was to administer 10 fluid ounces of a freshly-prepared decoction containing 2 grs. of the desiccated gland to the ounce, as soon as possible after an attack of hæmatemesis, and to repeat the dose at the end of two hours. In two instances, where melæna was the sole symptom, three doses were given in four hours. In no case were any unpleasant symptoms observed, though occasionally the first dose produced an inclination to vomit. The cases which afford the most immediate and striking results are those in which the ulcer is comparatively recent, and is situated near the cardiac end of the stomach, as, for example, in the acute disease of young adults, and in that which sometimes complicates cirrhosis of the liver and valvular disease of the heart. In chronic ulcers of the pyloric region, on the other hand, where the eroded vessel is often of large size and so firmly embedded in fibrous tissue as to be incapable of contraction, experience will probably show that suprarenal tissue, in common with other hæmostatics, is of little value: but even in such cases an effort should be made to irrigate the stomach with a strong solution through a soft tube.

I might also mention that the constant slight hæmorrhage of gastric cancer often ceases entirely with one dose a day, while enemata of a similar character will often control the bleeding from an inoperable cancer of the rectum.

London, N. W. SOLTAU FENWICK, M.D.

### A BREEDING PLACE OF MOSQUITOS.

THE accompanying photograph of a plantain illustrates what I believe to be, hitherto, an unobserved source of mosquitos. Each year the old leaves wither, and are cut down, leaving cup-shaped hollows, marked *c* in the photograph. These are



filled with a watery fluid, partly the exudation of the plantain and partly due to rain, and I have found myriads of mosquitos, together with eggs and larvæ, in these cavities. These plantains are cultivated to a large extent in Rhodesia for their ornamental value, but I feel sure not wisely.

Enkeldoorn, Rhodesia, South Africa. A. DUNLEY-OWEN.

## MOVABLE KIDNEY WITH RENAL COLIC: NEPHRORRHAPHY: CURE.*

Mrs. W., aged 45, with five children, had suffered for six or seven years, from uncomfortable sensations in the abdomen with periodical attacks of acute pain in the left lumbar region shooting down to the groin. On palpation the left kidney was found to be freely movable, but as the urine had no pus, blood, or casts, an abdominal belt with a pad on the left side was tried and gave great relief. However, the periodical attacks of pain still recurred from time to time with increasing frequency and severity till in August, 1898, the attack was so severe that she fainted, and was with difficulty brought to. After each of these attacks I examined the urine myself, and had it also examined by the Clinical Research Society, but without any evidence of stone.

However, after the severe attack in August she consented to allow me to operate and discover the cause of these attacks. On September 22nd, 1898, by means of the ordinary incision, I exposed the kidney, and finding the pedicle was sufficiently long, was able to draw it into the wound. The kidney looked perfectly normal in appearance and size, but was rather loosely attached in its bed to the fascia of the quadratus lumborum and psoas muscle. No stone could be felt externally in the pelvis of the kidney or in the substance. The kidney was split open by an incision to the pelvis, and the substance carefully examined. The ureter was palpated carefully to the brim of the pelvis, but no stone was found. Three sutures were then passed through the cortex of kidney. The kidney was then sutured to the top of the incision as high up as possible, the wound closed, and a drainage tube inserted. The tube was removed on the third day.

For a fortnight the case ran an uninterrupted course to recovery, the temperature never being over 99.4°. At the end of the fortnight the patient had a rather sharp attack of cystitis, due, I am afraid, to a catheter not being thoroughly sterilised. However, this attack ended in a week, and the patient left the home twenty-three days after the operation.

It is now three years since the operation, and there has been no return of the symptoms, the periodic attacks of acute pain having entirely disappeared. The only explanation of these pains that I can find is that the kidney was so loose in its position that at certain times it caused a kink in the ureter, and that the urine, being unable to reach the bladder, caused these severe attacks of pain simulating renal colic from a calculus, acting in the same way as a full bladder which cannot be emptied in consequence of a stricture or any other cause, or that the kidney by its loose attachment twisted the ureter and thus caused a similar obstruction.

I have mentioned this case, as the fixing of the kidney was made by passing silk sutures through the cortex of the kidney, and not by suturing the capsules. Three years have now passed, and there is no evidence that these silk sutures have cut through, as is alleged against this mode of procedure.

L. Cole-Baker, M.D.,
Assistant Physician, Royal Portsmouth Hospital.

## FOREIGN BODY IN LUNG: EXTRUSION BY PARIETAL ABSCESS.

On August 28th I was called in to see a child, aged 12 years, whom I found to be suffering from localised inflammatory trouble in the upper part of the right lung. This caused intense pain, more than is expected in an acute attack of acute bronchitis, extremely rapid and shallow breathing, together with great sleeplessness and unaccountable irritability of the nervous system generally. The pain was so great that the child was afraid to cough, yet there was no sign of pleurisy or pneumonia. Moreover, the pain could be exactly located by the child placing her finger over the spot, and I noticed that day by day this spot changed its position in an outward and downward direction, the lung in its path taking on the auscultatory signs of bronchitis, whereas the parts previously affected gradually lost those signs.

At the end of the first week the pain was experienced directly beneath the lower angle of the scapula, and now signs of localised pneumonia presented themselves, and shortly those of pleurisy. The area now involved had a radius of about 3 inches. At the end of the third week the child was greatly better, the lung and pleura having quite healed, but 4 inches from the lower angle of the scapula and 5 inches from the nipple and a little to the left of a vertical line from the axilla a very painful red spot appeared, which in a couple of days resembled a boil. This was regularly poulticed, and I soon found that I had a large abscess to deal with, which burst through the skin, giving off a large quantity of pus. There was no connection with the pleural cavity, and the lung was now doing its work quite well. On September 25th a foreign body made its appearance at the opening of the abscess: this I extracted, and found it to be a head of wild barley (hordeum murinum).

On showing this to the child's mother I now learned for the first time that the child had "swallowed a wild grass" on August 21st, or a week before she got seriously ill. This evidently had found its way into the trachea by means of a deep inspiration, and had travelled through the main bronchus to the lung, setting up the above described trouble in its train. The wild grass is an inch and a quarter in length, and has several long awns or spikelets, which being compressible considerably help its progress onward by a kind of spring, whereas the spiculæ or barbs with which each awn is furnished prevent the grass from travelling backward. In addition, the grass has a short, sharp stalk, which pierced everything with which it came in contact.

The child was quite well a few days after the removal, when the wound quickly healed.

Deal. A. Barnes Hughes, M.B., C.M.

## CASE OF PUERPERAL FEVER TREATED BY ANTISTREPTOCOCCUS SERUM.

A. H., a multipara, was delivered on January 20th, 1901. As the second stage was tedious and the patient felt herself getting exhausted, forceps were applied. On the third day she had a rigor, her temperature registered 103°, her pulse was 120. She complained of pain in her left shoulder and hip. The skin was slightly jaundiced. An intrauterine douche of biniodide of mercury was administered. She was douched daily with various antiseptics—viz., biniodide, chinosol, and creolin—and for the following four days her evening temperature was 102.5°, and her pulse 120. She was able to take only very little nourishment, bread tasted like wood. On the ninth day her temperature had dropped to 100° and her pulse to 96, and her general condition was improved, but on the tenth day she had another rigor, not so severe as the first, but her general condition was infinitely worse. She presented a pinched, anxious expression; her skin was quite jaundiced; her temperature was 104° and her pulse 140. Ten c.cm. of antistreptococcus serum with digitalin $\frac{1}{150}$ gr. and atropine $\frac{1}{150}$ gr. were injected. Her temperature dropped for about an hour to 103° when it returned to 104°; the pulse remained the same.

On the morning of the eleventh day the temperature had dropped to 101°, her pulse was 120, and her general condition was greatly improved. She had slept better and had a little appetite. The pain in her joints was not so severe. On the morning of the twelfth day the temperature had dropped to 101°, but it rose to 104° in the evening. Her pulse was 120. On the morning of the thirteenth day the temperature dropped to 100°, while the pulse was 124. As her temperature still kept up another injection of serum was given at 2.15 P.M. At 3.15 P.M. her temperature rose to 103°; at 9.15 P.M. it had dropped to 102°; her pulse was 132. On the morning of the fourteenth day her temperature had dropped to 100°, and her pulse was 96. From this time she gradually got better.

I do not think that douching by itself would have pulled her through. The serum reduced the temperature, but had apparently no effect on the pulse.

No bacteriological examination of the blood was made.

H. Hughes, M.R.C.S., L.R.C.P., L.S.A., L.M.
Penrhyndedraeth.

The King Edward's Hospital Fund for London has received the fourth annual grant of £1,000 from the trustees of the London Parochial Charities to be applied to the maintenance of convalescent hospitals.

* This case was shown before the South East Hants District of the Southern Branch of the British Medical Association.

# REPORTS
ON
## MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

### GENERAL HOSPITAL, BARBADOES, W.I.

SIMPLE EPULIS OF LOWER JAW OF EXTRAORDINARY SIZE: SUCCESSFUL REMOVAL BY RESECTION OF JAW.

(Under the care of E. HOWARD BANNISTER, M.D., Surgeon to the Hospital.)

F. H., a black man, aged 27, labourer, emaciated, anæmic, and of low type and feeble intelligence, was admitted to the hospital on April 29th, 1900. He stated that he was a native of Barbadoes, but had recently arrived from Santa Cruz, where he had been residing for some years. Three years previous



Fig. 1.—Profile.

to admission he had had a front tooth on the right side extracted, and three weeks later he noticed a small growth springing from the same spot. It had steadily increased to its present dimensions; bled very little, unless he accidentally got it bruised; and gave little or no pain, but had lately greatly interfered with his work.

On examination the tumour was found to be growing from the whole anterior surface of the symphysis of the jaw, and extended laterally from the first bicuspid tooth on the right side to the lower left canine, the alveolar border being broader than the mental. From the alveolar border a tongue-shaped process had grown upwards and backwards into the roof of the mouth for about 1½ inch, and this had pressed back the incisor teeth, so that their crowns could be felt looking downwards and backwards. The external portion of the tumour was more or less rounded and smooth, red in colour, elastic and slightly ulcerated in places, which exuded a sero-purulent discharge. Laterally its circumference measured 14½ inches, and the lower lip, as indicated by a straw in the profile view, was stretched around its base, everted, and rolled backwards under the chin. The body of the jaw on the right side was considerably thickened, while that on the left was normal. As the patient's general health was bad, the operation was deferred for nearly a month, during which time, however, his mental condition was observed to be somewhat impaired.

An operation was performed on May 17th, under chloroform. Anticipating considerable hæmorrhage from the vascular appearance of the tumour, I decided to transfix it close to the base with long steel pins and first remove the greater portion. This I found impossible to accomplish, as the middle of the tumour had undergone ossification. An elastic ligature was therefore applied around its base and the globular mass removed with knife and bone forceps. On relaxing the ligature some slight general oozing took place, but neither pressure forceps nor ligatures were necessary. The mucous membrane of the lip was next detached from the jaw, the submucous tissues divided, and the long pendu-



Fig. 2.—Full face.

lous lip drawn backwards. Keeping close to the tumour, the jaw was sawn through on the right side, obliquely downwards and forwards; on the left side it was cut through in the same oblique manner with bone forceps, the sublingual mucous membrane was incised close to the alveolar margin, the remaining attachments divided, and the V-shaped portion of bone removed. The ends of the bones, which were less than an inch apart, were then drilled through and firmly approximated with a stout silver wire, and the labial mucous membrane was stitched with a continuous silk suture to the sublingual mucous membrane. The enormous pendulous and inert lip now presented another deformity, and I was very much tempted to remove a V-shaped portion of the middle, and so reduce it more to the normal; but finally it was decided to leave it alone and see what would happen.

Next day visible contraction commenced, and in a few days it had entirely regained its normal size. A splint was applied to the jaw, the mouth was hourly irrigated with Condy's fluid,

and the wound healed rapidly and without any trouble. From his stupid condition, however, it was very difficult to make the patient understand that it was absolutely necessary for him to keep his jaws quiet. He was annoyed at being kept on fluid nourishment, and would take off the splint at every opportunity and move his jaws to show that he was quite capable of masticating solid food. His temperature continued normal throughout; he gained weight, and his intelligence improved considerably. At his own request he was discharged on June 16th after being on "full diet" for some days. As bony union had not taken place (a slight amount of movement being felt) he was requested to show himself again shortly.

When he was seen in the autumn it was found that firm bony union of the jaw had taken place but two sinuses were left, one opening at the point of the chin and the other immediately below and behind this. A sequestrum was found in each with the probe. From the first the wire suture with a piece of bone attached came away, and from the other a piece

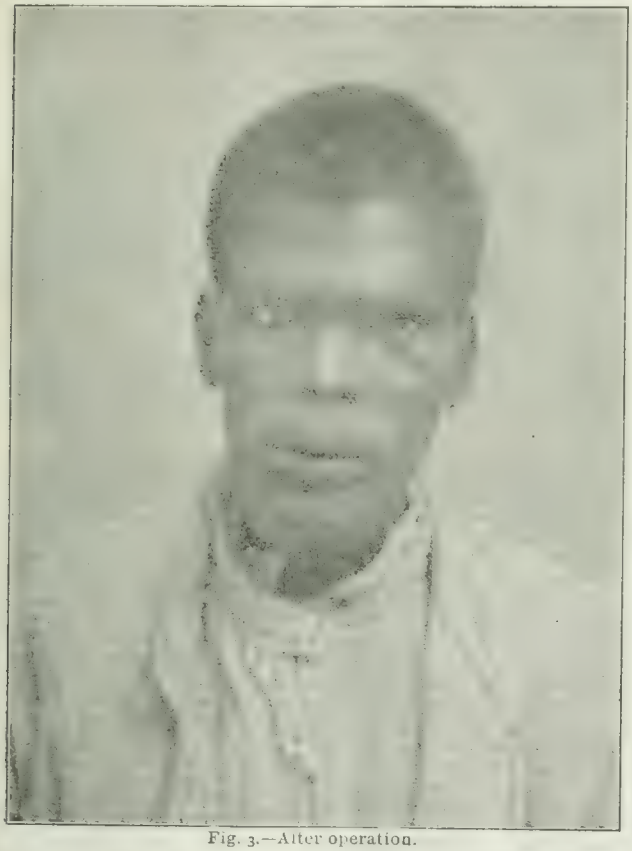


Fig. 3.—After operation.

of bone was also removed. Both sinuses have since healed soundly, and there is not the slightest indication of a return of the growth. The movements of the jaw are normal and the molars of both sides meet perfectly, rendering mastication easy and efficient. The patient's general health is excellent and his mental condition is sound. He is still under observation.

The tumour weighed 26 ozs. and was considerably ossified throughout. There was no enlargement of any of the neighbouring lymphatic glands. Fig. 3 shows the patient's general physical improvement and a higher look of intelligence. The asymmetrical appearance of the jaw is chiefly due to the hypertrophic condition of the body of the bone on the right side. The case is chiefly of interest from the extraordinary size of the tumour.

Mr. E. Archer Brown, M.B.Edin., M.R.C.S.Eng., has been appointed Medical Officer to one of the concentration camps in the Transvaal.

# REPORTS OF SOCIETIES.

## ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

C. Theodore Williams, M.D., F.R.C.P., Vice-President, in the Chair.

*Tuesday, November 26th, 1901.*

### Intestinal Obstruction from Pressure of a Vesical Sacculus.

Mr. Thomas Bryant brought forward this case.

The patient was a man, aged 67, who had been under treatment for angina pectoris and when seen had been suffering for five days from intestinal obstruction, with fœtid vomiting for twelve hours. He had had a tumour in the right lower abdomen for nearly two years, but had enjoyed good health during that time. On examination the abdomen was found swollen, but not tense, the swelling being chiefly left lower central, and in the right lower abdomen, extending up to the umbilicus, was a sausage-like swelling, resistant, and dull. The urine was normal, and no change in the tumour followed micturition. The intestinal obstruction persisting in spite of local treatment, laparotomy was performed. A tense elastic, sausage-like tumour was found which compressed a coil of intestine against the bodies of the lumbar vertebræ, and was evidently the cause of the obstruction. The tumour was apparently attached to the bladder, but catheterisation did not empty it; however, when pressure was exerted on it, there emptied into the bladder a fluid like clear urine indicating that the communication between the sacculus and bladder was a small one. Although the obstruction was relieved the patient died twenty-two hours after the operation. No *post-mortem* examination was allowed.

The case was unusual in exhibiting a vesical sacculus as a cause of intestinal obstruction. The possibility of a urachal cyst was easily excluded.

Mr. Reginald Harrison referred to two cases in some respects similar. In one occurring in connection with a large posterior vesical sacculus, there were long bouts of obstinate constipation. The sacculus was found to be in contact with the rectum. After it was drained the constipation, which had been serious, disappeared. In the other there was a large suppurating vesical sacculus, the apex of which at the necropsy was found adherent to and constricting a coil of small intestine.

Mr. Clinton Dent asked as to the actual condition of the gut, whether diseased or otherwise. In the absence of adhesion, the obstruction of the bowel from mere pressure was extraordinary.

Mr. Bryant, in reply, described the absolute whiteness and emptiness of the intestine beyond the point of pressure. There was no adhesion or evidence of organic disease.

### Alkaptonuria.

Dr. A. E. Garrod made this communication in continuance of a paper read before the Society in 1899 on the results of the examination of the urine in several cases of this condition. Evidence was brought forward which pointed to a special liability of alkaptonuria to occur in the children of parents who were first cousins. The facts available referred to four families, containing eleven alkaptonuric members in all, more than a quarter of the recorded cases. The parents of no fewer than three of these families were first cousins, but those of the fourth family were not blood relations. In each family there were two or more alkaptonuric members, but in no instance did the parents themselves show this peculiarity, or were cases known to have occurred in previous generations. In the only foreign case in which the point was referred to the parents were related, and the absence of any statement regarding other cases went for little, as the information was usually not obtained unless specially asked for. An account was given of some observations on a newborn alkaptonuric infant, the second child in the family showing the peculiarity. The observations, which were made by a trained nurse, showed that the characteristic staining of the napkins was absent during the first day of life, and was first observed, in a pronounced form, fifty-two hours after birth, and was afterwards constant. This suggested that the excretion of homogentisic acid followed the entry of food into the alimentary canal, although, as the child was suckled, the moment when this first took place could not be ascertained with certainty. As homogentisic acid, to which such urine owed its peculiar properties, was almost certainly formed from tyrosin produced in the digestion of proteids, the observations agreed with what was to be expected on theoretical grounds. Some observations were given of the relation in time of the excretion of homogentisic acid to a

proteid meal. These were suggested by a similar observation recently recorded by Mittelbach, which indicated that the maximum excretion followed within two or three hours of a meal. In the author's case, however, although a markedly increased output followed quickly upon the meal, the excretion of homogentisic acid reached its maximum during the second four hours after the proteid food had been taken.

Dr. OSBORNE mentioned the case of a man who was rejected for life assurance because his urine reduced Fehling's solution, which was found to be due to alkapton. A second and a third brother were similarly affected, and their parents were first cousins. These were cases referred to by Dr. Pavy. Homogentisic acid was present in the urine as a salt. When a tyrosin-free diet was given, if alkapton ceased from the urine a confirmation of the possible origin of the latter from the former might be obtained; the intermediate products in the oxidation of tyrosin might also be given.

Dr. GARROD, in reply, stated that fasting for three days did not reduce the amount of alkapton in the urine of a subject.

## CLINICAL SOCIETY OF LONDON.

HOWARD MARSH, F.R.C.S., President, in the Chair.

*Friday, November 22nd, 1901.*

### INTRACRANIAL SECTION OF THE SECOND AND THIRD DIVISIONS OF THE TRIGEMINAL NERVE FOR SEVERE NEURALGIA.

MR. T. H. MORSE (Norwich) referred to the articles published by Mr. Victor Horsley in 1891, those of Mr. Rose in 1892, also to those of Hartley, Krause, Jonathan Hutchinson, jun., and Lynn Thomas, and related two cases in which the Hartley-Krause operation was performed, the bone being removed with mallet and gouge, and gouge-cutting forceps. After section of the second and third divisions of the fifth nerve the foramina ovale and rotundum were blocked with Horsley's wax for the purpose of preventing reunion of the divided nerves. In both cases cure was obtained, the first having been done more than two years ago.

Mr. J. HUTCHINSON, jun., showed four cases in which he had performed this operation, the last only six weeks since, so far with complete relief. In another case, operated on four years ago, the patient had previously undergone several operations comprising division of nerves, etc., and, lastly, an operation in which Meckel's ganglion was removed. Case 3 had suffered for many years, and in this case the Gasserian ganglion was removed by Krause's method with success. The last case was one in which the neuralgia had spread to the occipital region. Krause's operation was done and the ganglion removed, together with the two lower branches of the fifth nerve behind the ganglion. Thereupon the occipital pain also subsided, showing that it was reflected pain. In none of these cases had there been a return of the pain. He preferred the temporal operation in preference to operations through the pterygoid region. The advantages of removing only the lower portion of the ganglion were (1) the cavernous sinus was not interfered with; (2) there was no danger of injuring the oculo-motor nerves; (3) there was no need to tie the middle meningeal artery, and (4) there was no anæsthesia of the cornea, although with regard to this point Horsley had stated that any damage to the cornea could be avoided by careful attention to antisepsis and sewing up the eyelids immediately after the operation. He, however, quoted a case in which he had divided the opthalmic branch of the fifth nerve, and there was corneal anæsthesia, and some months later ulceration set in and eventually the eye had to be removed; (5) neuralgia as a rule did not occur in the ophthalmic branch of the fifth nerve. He did not think it was necessary to make a large flap. In only one case did he have to tie the external carotid on account of hemorrhage. With regard to the position of the patient he much preferred to have him sitting erect in a chair, whatever the anæsthetist might say. He pointed out that the ganglion could not be effectually removed by means of the curette, but should be cleanly cut out. Estimates of the mortality from the operation varied from 20 to 50 per cent., but in this country, at any rate, he did not believe that the mortality exceeded 10 per cent. He himself had done 5 cases without a death. He condemned very strongly Doyen's method of operating, which entailed an unnecessarily extensive operation. He protested against the modifications of the operation being tacked on to the names of various surgeons, which produced a feeling of bewilderment. He advised that the major operation should not be postponed too long: in fact, whenever the pain was above the superior maxillary branch, only the major operation could be trusted to afford permanent relief.

Mr. CUTHBERT WALLACE referred to a case in which hæmorrhage from a wound of the cavernous sinus caused him much embarrassment. Results would eventually determine which operation should be selected. He had heard that already the temporal operation was falling into disrepute in America.

Mr. BALLANCE had performed the operation in 10 cases. In 2 of them he had removed the entire ganglion, pulling out the nerve beyond the ganglion on its proximal side. There was no difficulty in isolating the ganglion: the risk to the patient arose from the length of time it occupied and the hæmorrhage, which, however, need never alarm the operator if he were prepared for it, especially by careful study on the cadaver. Such study of details rendered the operation much easier. No age was too advanced for the operation: two of his patients were respectively 64 and 71 years old. If the operation was done in several stages shock was avoided. Relief was not likely to follow partial operations. He had removed a quarter of an inch of the first division of the fifth nerve in the wall of the cavernous sinus. He had never seen any cerebro-spinal fluid escape. By gentle traction one could remove half an inch of the main nerve trunk from behind the ganglion. He thought that all operations from the pterygoid region should be discontinued. Probably the time would arrive when one would cease to raise the dura mater from the middle fossa to arrive at the ganglion, and he hoped it would become possible to divide the sensory part of the nerve without touching its motor part. In reply to a question by Mr. LUCAS, he stated that he no longer replaced the piece of bone removed.

Mr. HUTCHINSON stated that he also did not replace it.

Mr. MORSE, in reply, did not think the mortality after these operations was as high as 20 per cent.; and was convinced that, with further experience, it would be much lessened.

### FRAGILITAS OSSIUM.

Mr. WARRINGTON HAWARD described the case of a boy, aged 10, who was admitted into St. George's Hospital, under Mr. Haward's care, in October, 1889, on account of extreme deformity of the legs.

He was a bright, intelligent, and healthy-looking boy, with no signs of rickets. He sat upright, and his spine was straight. The bones of the arms and forearms were thin and narrow, and were curved outwards to a varying extent. They showed signs of many old fractures. The hands were fairly developed, and were used actively. The lower limbs were less developed than the upper. The bones were thin, and with sharp margins. The femora were both curved forwards and outwards. The tibiæ both showed an extreme degree of forward curvature, so that the lower half was at a right angle to the upper half of the leg. There was evidence of numerous past fractures. The muscles of the legs were much wasted, and the skin was adherent over the most prominent part of the tibia. Photographs of the boy and skiagraphs of the bones were shown. The boy's health appeared in most respects to be good, with the exception of a remarkable condition of the urine. The urine when passed appeared natural, but on standing deposited a large amount of calcium salts, which formed a mortar-like sediment. An analysis of the urine kindly made by Mr. J. A. Gardner showed it to contain a very large excess of lime salts. The history of the case told that the boy was of healthy parentage, and that of eight children none but this boy showed any signs of disease. The only notable point in the family history was that before the birth of this child (the seventh) the mother had been weakened by rapidly succeeding pregnancies. When born this child was found to have fractures of both humeri and two ribs, and subsequently twenty-three fractures of long bones were recorded, all from slight causes. He had never walked alone. He had lived in a healthy part of the country, and had been well fed and cared for. He was given, after admission to the hospital, cod-liver oil and a highly nutritious diet, and attempts were made to straighten the limbs by extension, but without success. In January, 1900, he fractured the left femur when turning in bed, but the bone united well under ordinary treatment. In March an analysis of the urine by Mr. Gardner having shown that the excessive excretion of lime salts had ceased, Mr. Haward straightened the right leg by the excision of a wedge-shaped piece of the tibia, the ends of the bone being wired together. The bones united soundly. The left leg was subsequently operated upon with similar result, and the boy was sent home with leather splints on. He was now learning to walk.

Reference was made to a similar case recorded by Mr. Clinton Dent, and the paper concluded with some remarks upon the connection of the bone changes with the condition of the urine.

Mr. CLINTON DENT showed photographs and skiagraphs of a man, aged 29, whose case he had brought before the Medical

Society some years ago. In him the fractures were preceded by pain in the site of fracture, and by the throwing out of a plastic callus.

Dr. Poynton mentioned the case of a breast-fed infant at the Hospital for Sick Children in whom fracture was always preceded by tenderness and pain in the shaft and not in the epiphysis. There was in that case no history of syphilis.

Mr. Hutchinson, jun., mentioned a case in a child, the subject of inherited syphilis; but this might not have been other than a coincidence.

Mr. Lucas considered it most important to clear up the influence of inherited syphilis in these cases.

Mr. Haward, in reply, could not explain the cause of this form of malnutrition, but it certainly was not syphilis. In his case there was never any tenderness of the bones.

## MEDICAL SOCIETY OF LONDON.

John H. Morgan, M.A., F.R.C.S., Ex-President, in the Chair.

*Monday, November 25th, 1901.*

The Symptoms and Treatment of Movable Kidney.

Mr. Henry Morris, in opening the discussion, described what he included under the term movable kidney, not its normal mobility in respiration, and alluded to the difference of opinion in regard to its frequency, being, according to clinical observers, between 1 and 46 per cent. in the female sex, and, according to some *post-mortem* records, in fewer than 1 in 1,000 subjects. He then described how abnormal mobility was best ascertained to exist—by a method of bimanual palpation of the flank, particularly during long-drawn inspiration followed by sudden expiration, as in a long-drawn sigh. In addition to the physical signs the usual symptoms of movable kidney were pain, persistent or paroxysmal; digestive disorder, as vomiting, colic, and constipation, neurasthenia and hysteria; while occasional symptoms were urinary changes, as polyuria, and compression or dragging effects such as intestinal obstruction or gastric dilatation. The question of the influence exercised by a mobile, ectopic, or prolapsed kidney in producing any of the gastro-intestinal and nervous symptoms ascribed to it was then discussed. According to one view ptosis of the kidney was secondarily associated with ptosis of the intestines, and the gastro-intestinal symptoms were attributable to the primary condition. Contrarily, as he held, renal ptosis existed independently of other visceral ptosis, and cure of the kidney mobility abolished the gastro-intestinal symptoms, while the treatment suitable for enteroptosis was not sufficient in many cases to influence the symptoms due to movable kidney. In reference to the treatment of movable kidney, it was pointed out that in many cases the symptoms were so slight that none was necessary. The danger of applying bandages and pads before the kidney was replaced in its normal position was emphasised. The value of prolonged recumbency was very small. The only operation justifiable was fixation of the kidney or nephropexy, the average mortality of which was a little over 1 per cent. Where enteroptosis was associated with movable kidney, no operation should be performed on the kidney unless the more serious symptoms could be ascribed to it alone. If both kidneys were movable, the second should be fixed after an interval of a week, so that there might be a conjoint convalescence. In the presence of neurasthenia or hysteria all palliatives should first be tried, and the friends should be warned in accordance with the fact that a cure was obtained in only about half of such cases. In all uncomplicated cases where the chief symptoms were pain and gastro-intestinal troubles, fixation might be confidently advised and at once carried out. If renal crises were a feature of the case, the operation ought to be strongly urged, because of the impossibility of keeping the kidney in its proper place by a belt, and the constant risk of hydronephrosis and recurring pain if the crises were kept under control.

Mr. Morgan remarked on the difficulty of distinguishing what was true from what was false in the patient's account of symptoms. Rest was of little or no value in cases of movable kidney, and operation was generally efficient in relieving the symptoms; but in some of his cases they had recurred after operation.

Dr. Maclagan had found that prolonged rest was in some of his cases of service in relieving the symptoms, together with means of improving general nutrition. Jaundice and even biliary colic, was, in his experience, sometimes due to pressure on the bile duct by the floating kidney. Movable kidney in a person of neurotic disposition produced very exaggerated symptoms.

Mr. Bruce Clarke emphasised the importance of defining the important degree of movable kidney; the chief guide was the production of pain. The cause of the pain was probably the retention of urine in the pelvis of the kidney, and the symptoms could be relieved by squeezing the urine out of the renal pelvis. The association of movable kidney with digestive trouble was probably due to direct traction on the stomach. In operating, the kidney should be removed from its bed of fat, and closely applied to the lumbar fascia.

Mr. Swinford Edwards considered the most important thing in operating was to replace the kidney below the upper two ribs. Hydronephrosis sometimes followed nephropexy, even necessitating nephrectomy.

Mr. Bidwell inquired as to the ultimate results of the operation. In several of his own cases there had been return of pain in the course of two or three years without any renewed dislocation of the kidney. It was particularly liable to recur in neurasthenic cases.

Mr. W. G. Spencer alluded to the cases associated with hydronephrosis and lithiasis. In some of these cases nephrotomy in addition was indicated, mere fixation being insufficient to cure.

Mr. Morris, in reply, thought that the improvement following rest probably depended on relief of general enteroptosis. The fat around the kidney was, in his opinion, an important cause of fixation of the kidney. Jaundice was not, he believed, due to direct pressure on the bile passages, but to dragging on the duodenum. In about half the cases in which the nervous symptoms predominated only about half were relieved, but in the vast majority of the other cases satisfactory improvement ensued; about 90 per cent. were cured. The three operations he employed were Vulliet's, what he had been accustomed to call his own, and Tuffier's; these he employed in different cases. Vulliet's operation was not good in persons very sensitive to pain, or, in short, fat persons. Tuffier's operation required nothing between the kidney parenchyma and the lumbar fascia; this was indicated in cases where the kidney had been incised. The other method was to dip three interrupted sutures into the substance of the kidney without detaching its proper capsule, and stitched to the parietes gave perfect fixation.

Medico-Psychological Association of Great Britain and Ireland.—At the autumn general meeting held on November 21st. Dr. Blandford presiding, Dr. E. D. O'Neill, of the District Asylum, Limerick, moved the following resolution, of which he had given notice:

That the Medico-Psychological Association of Great Britain and Ireland earnestly desires to call the attention of Government to the great injustice inflicted on Irish asylum officials by the wording of the clause of the existing Act of Parliament dealing with the question of superannuation. It regrets that the Government did not avail themselves of the opportunity afforded by recent legislation to make more secure the provision for old age in the asylum service. The Association respectfully urges on the Government an alteration of the said clause by the introduction of the word "shall" instead of "may." It points out that all other services have a fixed scale of pension, and every official knows when he is entering what he will be entitled to on retirement, whereas asylum officials are left entirely to the discretion of their committees, from whom there is no appeal. Resolved: That a copy of the foregoing resolution be forwarded to the Right Hon. George Wyndham, M.P., Chief Secretary for Ireland.

Dr. O'Neill said he had hoped to include in the resolution the three countries, as it affected asylum officials throughout the kingdom. Dr. Hayes Newington, in seconding the resolution, said that the Parliamentary Committee of the Association, of which he was President, had had the matter before them for ten or twelve years, and were gradually making headway. The motion was unanimously carried.—Sir Lauder Brunton delivered an address entitled Fairies, Apparitions, Visions, and Hallucinations. He said the evidence they had in favour of many visions of fairies and of sights and sounds depended only upon the statements of individuals, and in

some cases those stories might be not confirmed but not denied by others. He explained that by hallucinations he meant perceptions having no objective cause; by illusions, perception having an objective cause wrongly interpreted; visions he regarded as hallucinations of the sense of sight; and apparitions as appearances or hallucinations affecting some one person or thing that the person seeing the vision had known. All were agreed that the perception of impressions occurred in the brain; but the changes in the nerve cells of the brain which accompanied perception were usually originated by some impress made upon the senses of sight, hearing, taste, smell, and common sensation, which were conveyed by the nerves to the brain, where they were perceived. Therefore, in order to have proper perception, it was necessary to have a proper condition of peripheral sense organs and the transmitting nerves, as well as of the receiving cells. When any one of those was damaged, there was not the perception of the individual corresponding to the condition in the external world. Some persons had a miraculous keenness of sense, and he instanced the case of a Red Indian hearing the splash of oars and the talking of people on a lake half an hour before they reached the bank, to the utter amazement of his white companion. Sir Lauder said that just as some people heard sounds to which others were deaf, and others saw things to which their fellows were blind, so some persons could feel things which others could not. Some were very sensitive to thunderstorms, while others did not mind them in the least. With regard to the ability to detect the presence of water underground otherwise than by looking at the strata, he believed some people possessed that power, and he knew two highly sensitive ladies with that capacity. He suggested a hypersensitiveness of the nervous system as the cause, and that also applied to warnings of weather changes. This sensitiveness could be tempered by the action of drugs: strychnine tended to make the senses keener, while cocaine tended to make them blunter. He went on to describe at length some personal experiments he had made on thought transference and allied phenomena, including the involuntary continuance of the association of ideas which had once been strongly fixed in the mind. When a student was beginning to learn auscultation he did not really hear what was in the chest, but what he thought he ought to hear, because he had before him a mental vision of something entirely different from the real object. When a person found it necessary to catch a very early train he retired to rest with certain data fixed in his mind, and during sleep some part of the nervous system was awake and kept watch over the time, and the person awoke punctually. He dealt at length with the subject of premonitions, and suggested ingenious explanations. The discovery of wireless telegraphy suggested that one man's brain might act as a transmitter and another's as a receiver. Apparitions were often due to an alteration of the apparatus concerned, as in the case of a lady who said she saw a goat's head, when it was found she had a central scotoma corresponding in appearance to a goat's head. Again, Head had shown that sodium salicylate had the power of producing visions. Visions might also arise from superficial cerebritis or brain irritation. He said the Koran was communicated to Mahomet in visions, in which he saw sights and heard sounds; and it was anxious to speculate on what the fate of the world would have been if potassium bromide had been known, and Mahomet had been thoroughly dosed with it. Dr. SAVAGE said Sir Samuel Wilks used to say, when going through the Bethlem wards, "How do you know that those hallucinated people are not speaking the truth, and that it is not your ignorance which makes you deny that there are voices and visions?" Dr. Savage recognised that there were many "*x* rays" associated with the senses, and he regarded the explanations given by Sir Lauder Brunton of some of the telepathic experiences as altogether satisfactory. A great deal of the so-called telepathy ought to be looked upon as rather beyond our present range of sensibility. Dr. MERCIER referred to the statement in Professor Clifford Allbutt's Harveian Oration that the supernatural should not be drawn upon for explanations of phenomena until all the possibilities based on natural laws had been exhausted. Sir Lauder Brunton had shown that a quite plausible explanation of many things regarded as occult was possible on known natural laws. Mr NUTT, of the Folk-Lore Society, spoke of the efforts of his Society to proceed on scientific lines in their investigations, and dilated upon the peculiar similarity of the signs and forms observed at all periods of history, the Babylonian priest, the Finnish enchanter, the wise man of Ireland, the medicine man of the Red Indians, and the wizard in South Africa, all using nearly the same methods for producing the same results. This he explained by a "law of convention." He protested, in conclusion, against the statement that there was a historical realistic basis for a belief in the fairy world. Dr. ROBERT JONES (Claybury), referring to Sir Lauder Brunton's statement that in all probability hallucinations were due to association of ideas, said one's experience in asylums supported that view. He had never yet known a hallucination of hearing in a deaf-mute, nor hallucinations of sight in a person who was congenitally blind. Hallucinations could not be a new creation. Sir LAUDER BRUNTON, in reply, said he was glad to find Dr. Savage and Dr. Mercier agreed that however much could be explained by ordinary laws, there was something which could not thus be accounted for. No doubt the boundaries of the known would be extended, but a considerable residue of the unknown was still left. In answer to Mr. Nutt, Sir Lauder said he supposed the uniformity of the methods to attain the same results was due to the headaches and mental disturbances being produced in the same way all the world over. Skulls of savages had been discovered in which a hole had evidently been made in the temporal region to "let out the pain," the subsequent partial absorption of bone showed that the persons lived afterwards. The same might be said with regard to the apparitions of goats—the form of scotoma was fairly constant.—Dr. WM. C. SULLIVAN (H.M. Prison, Pentonville) read a paper entitled Crime and General Paralysis.

# REVIEWS.

## DIETETICS AND TRAINING.

*The Training of the Body*[1] is the result of a happy collaboration. In its present English dress, the painstaking work of Dr. SCHMIDT has been to a useful extent predigested, as it were, for easier consumption by the general reader. Such technicalities as would be understood only by the anatomical and physiological student have been eliminated, and the involved asperities of a foreign tongue are rendered into simpler and attractive English. Mr. MILES has also incorporated a large amount of matter which represents the outcome of his own personal knowledge and observation as an athlete of recognised repute and a teacher of no mean capacity. Paper and print are both pleasant to the eye, and a profusion of pertinent illustrations—which do not belie their name—add appreciably to the value of the book. A large proportion of the illustrations are purely anatomical, but in the present instance they do not lose anything in value by the wise omission from the plates of the technical names of the general structures which they include, for the mere enumeration of these would serve no useful purpose for either the athlete or his trainer. Mr. Miles emphasises the value of games, properly undertaken and played, in the development of such mental and moral qualities as generosity, honesty, courage, and self-reliance, no less than their importance as a means of physical development and for the attainment of individual health and grace. The great aim of the book is to make both intelligible and interesting the practical value of training for and by games and athletics; training, that is, not so much in the sense in which the "trainer" uses the word as in that of learning, fitting oneself for, and intelligently practising the details which make for success in all forms of exercise. That there is a right and a wrong way of doing everything is an old story, founded on a mass of wasteful experience, and the personal experience of most learners is apt to be acquired only at an expense of trial and mistake which would have been avoided by some wise guidance and direction in the first instance. As Mr. Miles put it, "One object of the book is to

[1] *The Training of the Body.* By F. A. Schmidt, M.D., and Eustace H. Miles, M.A. London: Swan Sonnenschein and Co. 1901. (Demy 8vo, pp. 544. 7s. 6d.)

prevent a great deal of unnecessary personal experience," and the realisation of this object should be reasonably secure for those who will take the trouble intelligently to read its pages, and to follow out the course he indicates. The chapter on training is a good one, and the various hints and suggestions which occur on almost every page are not only valuable in themselves, but add materially to the interest of the book as a whole. In the section dealing with "The best exercises at different periods of life," there is a good deal which should be practically helpful to all those who have to do with the management and up-bringing of the young. The extreme value of fresh air in connection with every form of exercise —of exercise in the open air—is very rightly and repeatedly insisted on. Mr. Miles's own views as to food and feeding are not yet identical with those of the majority: but, while he advances them with the assurance begotten of a satisfactory personal experience, they are not unduly obtruded on the attention of the reader; the general conclusions which he advances under this head are undoubtedly sound. In comparing, however, the relative all-round advantages of flesh foods and fleshless foods, we are often apt to overlook the fact that the drawbacks attributable to the former are largely due to the fact that they are, in a large proportion by the act of cooking, especially by roasting and baking, converted into innutritious and merely stimulating substances, for few people take their meat so underdone as to avoid this result. On the other hand, experience in infant feeding would seem to show that the proteid of uncooked meat is not less nourishing and digestible, nor less easily assimilated, and not more stimulating than the albuminous principles of cereals or of milk. The book has a convenient table of contents and a full index. There is also a fairly long list of addenda and corrigenda, which will doubtless not appear in a new edition.

The first part of Dr. Heim's book on the artificial nutrient and stimulating preparations[2] is devoted to general considerations on the therapeutic value of artificial food stuff derived from meat, milk, and plants, etc. A good food from the author's standpoint is one that can be taken by the patient in question without producing digestive disturbances, and it must not be too bulky in relation to the amount of nutrient material which it contains. The second part comprises the greater portion (132 pages) of the book, and contains descriptions of and comparisons between the individual preparations somatose, tropon, Liebig's and other peptones, Hommel's hæmatogen, nutrose, plasmon, and a host of other preparations, including many well-known brands of meat juice, meat extract, and meat essence. In the third part the author describes the various methods of treatment by diet and mineral waters, including *Mastkuren* for promoting nutrition and increasing the body weight, the various methods for the reduction of fat in the obese, also milk cures, whey cures, kefir cures, koumiss cures, grape cures, etc. In regard to nitrogenous food preparations, it must be remembered that they are not merely foods, that in various degrees they stimulate the appetite and promote peristalsis; that in large doses they sometimes irritate the bowel; that they cannot be expected to be absolutely free from microbes, at least from non-pathogenic organisms. The book may be recommended to all who wish to understand the differences between the many food preparations and food derivatives now offered to the public, and to all who desire to recommend the preparation, or at least the class of preparations, best suited to the individual case, not forgetting of course that patients may have idiosyncrasies towards foods as towards drugs.

Professor von Noorden announced a series of small works on nutritional diseases by himself or his pupils, and leads off with a volume on obesity.[3] He urges great individualisation. In dealing with obese persons who are otherwise in good health he holds that in old age (which in some may be said to commence at 60, in others at 70 and 80) active attempts at reduction of fat are almost completely contra-indicated; in children and young persons, up to about the age of 20, he is content to oppose the further development of obesity, and only intermittently during short periods of four or five weeks, attempts to get rid of the superfluous fat; at other periods of life the indications for or against active courses of treatment are furnished by the degree of obesity, the progressive or stationary nature of the condition, the occupation and character of the patient, etc. The author points out the great difficulty often met with in the reduction of excessive fat in the abdomen, especially by rapid energetic measures. Abdominal massage may be of use in these cases, but is of greater service against accompanying intestinal atony. Sometimes local massage may have an unexpected effect. Thus von Noorden had one arm only of an obese lady daily massaged for a certain period, and found that this arm increased 1½ centimetres in circumference, whereas the size of the other arm remained the same. The question of treatment becomes much more complicated when obesity is combined with affections of the circulatory system or of the kidneys. The diet often ordered for renal cases may do harm by inducing the accumulation of fat, and von Noorden thinks that more notice should be taken of the general condition when regulating the diet of albuminuric patients. Obesity may probably be as dangerous in cases of chronic interstitial nephritis as it is in ordinary cardiac cases. In stout persons suffering from chronic bronchitis or chronic articular rheumatism the reduction of fat is he thinks often as beneficial as or even more beneficial than treatment exclusively directed towards the affected organs, and adds that in fatness a gouty patient should be treated. In some cases of functional nervous disorder reduction of fat is useful and gives the patient greater energy and power of will. In glycosuria a slight tendency to obesity should never be objected to because diabetics generally feel better when their fat is somewhat more abundant than it should be in normal persons. Conditions of cardiac weakness, may however, constitute an indication for the careful reduction of fat in otherwise only moderately obese diabetics. Von Noorden also points out that in pulmonary tuberculosis the excellent modern methods of treatment may occasionally, if not held in check, lead to an injurious accumulation of fat.

Dr. Leven commences his little book on obesity[4] with the very sensible remark that obesity is not a disease but a symptom, and that it must be studied and treated accordingly. He then proceeds to vitiate his position by allowing of no other cause of digestive disturbance than a reflex action through the nervous system. To arrive at this view he has to disprove the theories of previous investigators; he can hardly be said to do this satisfactorily, as he is usually content to dismiss them in a few words. Thus von Noorden's caloric theory is brushed aside summarily and almost contemptuously on p. 27. Dr. Leven holds that ingestion of water has no influence upon obesity, and that alcohol, if it acts at all in this respect, does so only as being a cause of dyspepsia; he directly contradicts Bunge's view that lack of muscular exercise is a causative factor. There is an air of what we may call cocksureness about all this that certainly does not carry conviction with it. Dr. Leven's positiveness extends also to chemical formulæ, and he has no hesitation in giving on p. 23 a definite one for albumen, of which he makes use in an equation. He has, however, done good work in ascertaining the nitrogenous output of the obese, which when they are on standard diet he finds to be quite normal. He quotes a number of cases to show that obesity never occurs without the coexistence of gastro-intestinal and nervous symptoms. With regard to the latter he is somewhat easily satisfied, dreams and palpitation being enough to condemn the patient. He regards the dyspnœa of obesity as being gastric in origin, arising reflexly through the relations between the gastric and pulmonary nerves, a view which is hardly in accordance with the teachings of modern pathology. He condemns all existing regimens for the affection without substituting anything beyond generalities.

[2] *Die kunstlichen Nahrpräparate und Anregungsmittel.* Von Dr. Max Heim. Berlin: A. Hirschwald. 1901. (Demy 8vo, pp. 240, M.5.)

[3] *Ueber die Indicationen der Entfettungscuren.* [On the Indications for Treatment of Obesity.] Von Dr. C. von Noorden. Berlin: A. Hirschwald. (Demy 8vo, pp. 27, M. 0.80).

[4] *De l'Obésité* [Obesity]. Par le Dr. Gabriel Leven, ancien interne des Hopitaux de Paris. Paris: G. Steinheil. 1901. (Demy 8vo, pp. 126. Frs. 5).

Successful Vaccination.—Dr. A. S. Hedley, Public Vaccinator for the Rothbury East and Rothley Districts of th Rothbury Union, has been awarded the Government grant for efficient vaccination.

## NOTES ON BOOKS.

*Wall and Water Gardens*[1] is one of the most delightful and interesting books upon gardening yet produced. It is one of a series of volumes belonging to the *Country Life* Library, and those who are acquainted with that weekly publication will know the style in which the volume now before us is produced. As its title indicates, it deals with a special branch of the art and science of gardening, and it does so in such a thorough manner that it leaves nothing to be desired, and, we believe, little or nothing unsaid. One strong feature of the book is the pictorial illustrations, of which there are about 130, occupying each a page. Some of these are from *The Garden*, and still more of them are from *Country Life*. Better illustrations have, in our experience, never been published in any book on gardening. One of the greatest delights of gardening is to look forward and hope and, perchance, to realise, and the happy owner of a garden with a wall and a pond may during this winter of his discontent, with Miss Jekyll's help, take into leisurely consideration the improvements which under its instruction he will have the opportunity of effecting in the coming spring. Probably there is no class of professional men who take a greater or more intelligent interest in gardening than medical men, and for their benefit we venture to end this very inadequate notice of Miss Jekyll's beautiful book by advising them to make a note of it at the end of their diary, so that if they wish to offer an acceptable Christmas present to a gardening friend, or to add to their own library a volume which shall be a joy for ever, they may know where to find one and how much they will have to pay for it.

We are glad to see that Mr. BARTON has been encouraged to give to the public a further instalment of *Records from General Practice*.[2] This Part II is chiefly occupied with a very careful record and analysis of 100 cases of midwifery, and his observations on the general management of cases, on the use of chloroform, the forceps, and drugs in expediting labour, cannot fail to be helpful to young practitioners. In a short section on drugs and remedies he pleads for a more frequent use of boric acid in cases of cystitis and of glycerinum boracis in diphtheria and other throat affections; and here, again, his remarks on the treatment of throat affections in children are eminently practical, and would prove most serviceable to the inexperienced practitioner. We fancy that many to whom this last epithet could not be applied would gather some useful hints from the latter part of this article, which deals with the administration of acid and alkaline tonics. There are some interesting cases of rare conditions recorded, and the last section contains some very useful advice on the subject of sea voyages.

Dr. ARTHUR FOXWELL has published in book form the Bradshaw Lecture on *The Causation of Functional Heart Murmurs*,[3] which was delivered before the Royal College of Physicians of London. It may be recommended as embodying an original contribution to a difficult subject of great interest. Evidence bearing on the physical phenomena exhibited by the so-called debilitated hearts is drawn from clinical, experimental, and pathological observations. This Bradshaw Lecture will remain as a distinct portion of our knowledge in regard to the vital defects of the heart as compared with its mechanical defects.

[1] *Wall and Water Gardens*, by Gertrude Jekyll. (George Newnes, Limited, Covent Garden, London, p. 177. 12s. 6d.)

[2] *Records from General Practice*. By J. Kingston Barton, M.R.C.P.Lond., J.P. Part II. London: John Bale, Sons, and Danielsson. 1901. (Demy 8vo, pp. 120. 2s. 6d.)

[3] *The Causation of Functional Heart Murmurs*. By Arthur Foxwell, M.A., M.D. Birmingham: Cornish Brothers. (Demy 8vo, pp. 48, Figs. 12. 2s. 6d.)

CIVIL HOSPITAL, PRETORIA.—The Colonial Secretary has selected Mr. Percy Stewart, L.R.C.P.& S.Irel., to be Resident Medical Officer of the Civil (or Volks) Hospital, Pretoria. The emoluments are £300 in the first year, £350 in the second, and £400 in the third, with board and washing. Mr. Stewart, whose student career was very brilliant, served with the Irish Hospital in South Africa as dresser, and soon after his return obtained first place at his diploma examination. He was then appointed House-Surgeon to the Richmond Hospital, Dublin, an office which he filled until his departure for South Africa.

# REPORTS AND ANALYSES

AND

# DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

## MEDICAL AND SURGICAL APPLIANCES.

*Teusch's Nitro-Propiol Test for Sugar.*—It is claimed for this test that it is the best, quickest, and most reliable reagent we possess, that the reaction is produced by glucose only, and is under no circumstances influenced by the presence of uric acid, kreatinine, glyconic acid, or bile colouring matter in the urine, or by the action of certain medicines upon the urine, such as iodine and its salts, salicylic acid, turpentine, rhubarb, and senna. We have received from Messrs. F. Williams and Co. (83, Upper Thames Street, London, E.C.) samples of Teusch's tablets of nitro-propiol. The method of performing the test is as follows: Dissolve a tablet in 10 c.cm. of distilled water; add 10 drops of the suspected urine and boil. If glucose be present, the fluid takes at first a greenish tint, and later becomes a deep indigo blue. We have found that it helps the solution of the tablet to warm the water gently, and by so doing the whole process is expedited. No doubt with practice it would be possible to perform the operation rapidly, but it certainly takes considerably longer than the test with Fehling's solution so that we cannot confirm the above claim that the test is the "quickest" we possess. It will certainly detect 0.1 per cent. of glucose, so that it is sufficiently delicate for clinical purposes. We cannot yet speak as to probable sources of fallacy, and only time can show to what extent these exist. A good many tests for sugar have been introduced during the last twenty years, but Fehling's solution has so far held its own in spite of its well-known drawbacks; moreover, nitro-propiol is only a qualitative test, and therefore does not enable practitioners to dispense with the use of Fehling's solution. It is not very rare to meet with urines which reduce Fehling's solution, although from the absence of other symptoms we may doubt whether sugar is really present. In such cases nitro-propiol may be useful as a confirmatory means, although only experience can decide whether it is worthy to supersede phenyl-hydrazin.

*Sterile Gelatin Solution for Injection.*—Mr. W. Martindale has sent us a specimen tube of sterile concentrated saline gelatine solution which he prepares. To prepare sufficient 2 per cent. sterile gelatine solution in normal saline for an injection, the ends of the tube are snapped off at the file marks at either




end in 5 ounces of boiling water. The tubes are packed in protected cardboard boxes, and can be conveniently carried in a surgical bag. Mr. Martindale states that owing to the precautions taken in his laboratory he can guarantee the sterility of the tubes.

ROYAL ASYLUM OF ST. ANNE.—A correspondent desires to call attention to the fact that out of 43 female candidates at the approaching election to the Royal Society of St. Anne no fewer than 7 are daughters of medical men. The schools at Redhill afford clothing, maintenance, and education to orphan and other necessitous children of parents who have once moved in a superior station of life. They provide for 200 girls and the same number of boys. We learn that the Council has shown a readiness to give special consideration to the claims of the daughters of medical men, and it is hinted that a larger measure of support from prosperous members of the profession would be highly appreciated. The offices of the Society are at 58, Gracechurch Street, E.C., and the Treasurer is Sir J. H. Puleston.

# MEDICAL EDUCATION IN ITALY.

By F. H. Burton-Brown, M.A., M.B., B.Ch.Oxon.,
Physician to the British Embassy in Rome; late Professor of Medicine, Punjab University, and Physician to the Mayo Hospital, Lahore.

## The Universities and the State.

Medical education in Italy is directly under the control of the Minister for Public Instruction, who is always a Cabinet Minister.

The degree of M.D. is granted by the Universities of Turin, Pavia, Parma, Padua, Bologna, Florence, Siena, Pisa, Genoa, Rome, Naples, Palermo, and Cagliari. Certain others—for example, Perugia—give instruction in the preliminary subjects of the course of medical study, but no clinical instruction; and therefore a student who has passed his preliminary examinations at one of these has to betake himself for three years of clinical study to one of the "universities of the first rank" to obtain his M.D. This is the only qualification recognised by the Italian law for Italian medical men, and the universities which grant it are directly responsible to the Minister; they are nowise independent as regards the standard of their examinations or official courses, so that the standard of medical education is in theory remarkably uniform throughout Italy.

## The Curriculum.

The academic year lasts from the middle of October to the end of July. Of this period the first fortnight and the last six weeks are given over entirely to examinations; and there are as well vacations at Christmas and Easter of about a fortnight each, so that the actual teaching year consists of about twenty-seven weeks. The period of study required by the law of the Italian medical student consists in six academic years, during which he has to attend courses in twenty-two subjects, and to pass examinations in these before he is admitted to the final examination or that for the M.D. These examinations may be passed in any order the student prefers, so that a student who fails in any particular one is not thereby put out of his year; he goes on with his regular course of studies; he has merely to pay particular attention to the subject he has failed in, and to have another attempt at the end of the next year.

There are 22 examinations required, namely:

Zoology.
Comparative Anatomy and Physiology.
Botany.
Physics.
General Chemistry.
Histology.
Human Anatomy.
Human Physiology.
Materia Medica.
General Pathology.
Pathological Anatomy.
Special Medical Pathology.
Special Surgical Pathology.
(The two latter subjects include the clinical teaching of the physical examination, and also the clinical history, of disease, the technical term for which is "Propedeutics." The professors engaged in teaching these have at many universities wards of their own.)
Surgical Anatomy and Practical Operations.
Clinical Medicine.
Clinical Surgery.
Clinical Obstetrics.
Clinical Diseases of the Eye.
Clinical Mental Diseases.
Clinical Diseases of the Skin, and Syphilis.
Legal Medicine.

As a general rule the professors teaching the first five subjects belong to the Faculty of Natural Science, so that the Faculty of Medicine and Surgery normally consists of 17 professors. In some of the smaller universities, however, there are only 14 or 15 professors, so that some have to teach in more than one subject; while in the larger there are generally more; the extra professors either take part in teaching one of the obligatory subjects, or else teach a subject an examination in which is not legally required; for example, diseases of nose and ear. The corresponding courses of instruction are, in general, annual, except that of pathological anatomy, which is always biennial; physiology, which is usually so; human anatomy, which is usually triennial; clinical medicine and surgery, which are always triennial. Each professor has one or two assistant professors, one or two ordinary assistants, and many have a varying number of extraordinary and honorary assistants.

## The M.D. Degree.

When the student has passed all of these examinations he may supplicate to be admitted to the final, or examination for the M.D., the "Laurea in Medicina e Chirurgia." This consists of a written and three oral theses, all of which are selected by him. The fees payable consist of 40 lire on matriculation, 127.67 lire annually, including 16.67 examination fees, and 60 for the M.D. diploma, in all about £33 10s. These fees include admission to all the official courses.

## Official and "Free" Lectures.

The university instruction includes, in addition, many non-official or free courses (which the student has to pay for). The official courses are given by the professor and his assistants. The free are given in some cases by the professors or their assistants, but in the majority of cases by the *privat-docents*. Of the official courses, some are obligatory, while others are not, and such are termed complementary courses. Some of the free are legally equivalent to the official—that is, the student can be "signed up" for attending them instead of the corresponding official courses, while others again are complementary; the student is not, however, allowed to attend more than a certain number of free courses, usually only three in the year, and their hours must not interfere with any official course.

## Laboratories and Special Institutes.

During the last ten years a great impulse has been given to medical study in Italy by the building of fine and even magnificent institutions and laboratories at many of the universities. A good example is to be seen in the Policlinico at Rome, which will shortly be opened. The laboratories of the University of Turin are admirable examples of what can be done by united effort, the State, the University, and the Municipality having contributed to their cost in equal shares. Similar institutions are shortly to be erected at Bologna. Private munificence has also not been lacking. Thus the fine orthopædic institution at Bologna was built out of funds bequeathed by a private individual. There is no doubt that England has much to learn from United Italy with regard to the endowment of research. A large amount of scientific work is done in the Italian university laboratories, and, judging from the number of memoirs issued from them, much of it of very high quality. Considering the comparative poverty of the country, too high praise can scarcely be given to the modern development of medical research in Italy. The laboratories and clinics are little frequented by English and American post-graduate students, but they certainly present great facilities for research.

The various universities which grant the degree of M.D. may now be considered *seriatim* from the point of view of the instruction given to the student.

## Turin.

The number of medical students at the University of Turin in 1900-01 was 793, of whom 9 were women. There are 15 professors; the professor of surgery also teaches operative surgery and surgical pathology, the professor of clinical mental diseases also teaches legal medicine, the professor of anatomy teaches histology, and there are two extra chairs for diseases of ear, nose, and throat, and parasitology respectively. There are 66 *privat-docents*.

The course of study is as follows:

*First Year.*—Physics, Botany, Zoology, Comparative Anatomy and Physiology, Human Anatomy and Histology, Dissection (every day from 1 P.M. to 9 P.M.).

*Second Year.*—Chemistry, Human Physiology, Human Anatomy and Histology, Dissections (as before).

*Third Year.*—Human Physiology, Practical Physiology, General Pathology, Materia Medica and Pharmacology.

*Fourth Year.*—Clinical Surgery, Special Medical Pathology, Practical Medical Pathology, Special Surgical Pathology, Pathological Anatomy.

*Fifth Year.*—Operative Surgery (practical classes), Surgical Anatomy, Hygiene, Practical Hygiene, Clinical Diseases of the Eye, Clinical Medicine, Technique of *Post-mortem* Examinations, Clinical Surgery and Operations.

*Sixth Year.*—Legal Medicine, Clinical Medicine, Clinical Surgery and Operations, Obstetrics (lectures and practical classes), Clinical Mental Diseases, Venereal Diseases (clinical, winter session), Clinical Diseases of the Skin (summer session).

The Faculty recommends the student to take the examinations in the following order:

*First Year.*—Zoology, Comparative Anatomy and Physiology, Physics, Botany.

*Second Year.*—Chemistry.
*Third Year.* Human Anatomy, Human Physiology, General Pathology, Materia Medica.
*Fourth Year.*—Medical Pathology, Surgical Pathology, Pathological Anatomy.
*Fifth Year.*—Surgical Anatomy, Practical Operations, Technique of *Post-mortem* Examinations, Diseases of the Eye, Hygiene.
*Sixth Year.*—Legal Medicine, Clinical Diseases of Skin and Syphilis, Clinical Mental Diseases, Obstetrics, Clinical Medicine, Clinical Surgery.

In the examinations of the first three years 25 per cent. failed, and about 12 per cent. in those of the last three; of 120 candidates for the Final all passed.

The University possesses a fine set of Biological Institutes, which were opened in 1898, the State, the University, and the Municipality contributing to their cost in equal shares. They are contained in four large blocks, facing the Park, and comprise the Institutes of Physiology, Human Anatomy, Chemistry, Physics, Pharmaceutical Chemistry and Toxicology, Materia Medica, Hygiene, Legal Medicine and Psychology, Pathological Anatomy, General Pathology.

These Institutes are contained in admirable buildings, very completely equipped. They comprise each a splendid lecture theatre, fitted for every method of demonstration, workrooms, museums, and examination room for students, and very complete research rooms and library for the professor (director) and his assistants. There are also rooms for the preparation of specimens, vivaria, etc. In fact the buildings and their equipment are so perfect that it is difficult to criticise them, except in a few small points. Thus the room for practical physiology for students is comparatively small, it is only adapted for small classes, and it is only in small classes that the student is taught. Therein lies the essential difference between the Italian system and the English: the student is taught admirably, and the demonstrations are as completely illustrated as is possible for any to be; specimens, diagrams, lantern exhibitions, experiments, etc., but the student does comparatively little practical work on his own initiative, except in private classes, which he is not bound to attend. This is also the German method, and on the Continent it is generally considered to be better adapted to the needs of the student than the English. It is not the place here to enter into a discussion of this wide question: it is sufficient to point out that it enables the demonstrator to cover a wider field of illustration, and this is particularly facilitated by the greater licence in demonstration experiments than is permitted in England, and at the same time on his part it permits of more time being spent in original research. On the other hand it is certainly deficient in that element of precision in observation which can only be attained by practical work by the student himself under the guidance of teachers, a system which requires much more individual teaching.

The same difference in systems is also to be observed on the clinical side, the student is trained to examine patients with the utmost care, but actually examines them for himself and on his own responsibility very little. The system of ward or house appointments is practically unknown.

*The Anatomical Institute* comprises, besides the general features already alluded to, a fine dissecting room, with a practically unlimited supply of subjects; a fine anatomical museum, divided into two parts, one comprising a very complete set of wax models, dry and wet dissections prepared bones, etc., for the use of students, and another containing in five large rooms material for research-rooms for practical histology, one for the official, another for private classes, room for practical anthropometry, and rooms for the preparation of subjects, etc. The instruction given comprises lectures four days a week for three years, daily dissections for the same time, a course in practical histology during one year, and special classes given by the assistant professor, and the assistants; forty "parts" are dissected by the student during the course of study.

*The Physiological Institute* contains a splendid set of research rooms, and the necessary workshops, vivaria, &c. There is also a room for practical physiology for the students. The instruction given comprises a course of lectures three days a week for two years, and a practical course three days a week for one year.

*General Pathology* has a very completely-equipped set of research rooms. The instruction comprises a set of lectures three days a week for one year.

*Pathological Anatomy* has a very good and well ventilated *post-mortem* theatre, a large room for practical microscopy, a large museum, and complete set of rooms for research, including a large *post-mortem* room. The instruction comprises a course of lectures and demonstrations for one year three days a week, and during another year a practical course two days a week of pathological histology and technique of *post-mortem* examinations.

*Hygiene* has a very complete museum, and a large room for practical work, well equipped for chemical and microscopic work. Here lectures and demonstrations are given three days a week for one year, and a practical course of one afternoon a week for one year.

*Legal Medicine* possesses a very interesting collection made by Professor Lombroso of wax models of the faces, ears, hands, etc., of numerous criminals, and also their skeletons, with the notes relating thereto. One room is full of the "tools of their trade": two others contain various objects made in prison, sketches scratched on earthenware vessels, and many very extraordinary objects bearing on the psychology of the criminal. The instruction comprises lectures three times a week for one year.

*Surgical Anatomy* and practical operations comprises lectures given in the Anatomical Institute twice a week during one year, a course of practical operations every day from 1 P.M. to 9 P.M. during one year in a large room in the same place, and a course of lectures on topographical anatomy twice a week during one year (by the Professor of Anatomy).

*The Institutes of Physics, Chemistry, Comparative Anatomy, and Materia Medica* give official instruction in annual courses of lectures; but private classes are also held in each for those students who desire to do practical work.

In *Botany* practical instruction is given two days a week for first year students, and also lectures three days a week.

*Clinical Instruction.*—At the great city Hospital of S. Giovanni, originally founded in the twelfth century (much of the present building dating from the rebuilding in 1680), especial wards are set aside for clinical teaching by the professors of clinical medicine, clinical surgery, special clinical medical pathology, and "propedeutics," special clinical surgical pathology and "propedeutics," and diseases of the ear, nose, and throat. The first two have two wards each of 45 beds, the last three one ward of 40 beds each. There are also newly-built and very completely equipped clinical laboratories for the use of each professor, as well as a clinical museum, photographic and *x*-ray rooms, *post-mortem* theatre, vivaria, etc. The lecture and operating theatres are old, and shortly to be rebuilt, as is also the library.

The course of instruction comprises on the part of the professors of surgical and medical "propedeutics" an annual course of clinical instruction in physical examination as well as practical work in the laboratory for three days a week. Special classes are also held in medical pathology, in the *post-mortem* theatre, and museum. A triennial course of clinical lectures is given by the Professor of Medicine, five days a week, and instruction in the wards is given during this time by him and his assistants. The assistants also give special instruction in classes in the wards and practical classes in the clinical laboratories, and instruction at out-patients is given every day.

A biennial course of clinical lectures is given by the Professor of Surgery on three days a week. Operations are usually performed on one day a week, and special courses of minor surgery are given by the assistants.

Ward work and instruction at out-patients are carried on every day at the S. Giovanni Hospital under the supervision of the Professor and his assistants. The Professor of Surgery also gives instruction at the Ospedale Mauriziano, a foundation of the House of Savoy dating from the sixteenth century, but entirely rebuilt in 1887. This is a very complete institution, arranged on the pavilion principle, with a good lecture theatre, two large operating rooms (one reserved for laparotomies), clinical laboratories, *post-mortem* rooms, and vivaria. The number of beds available for clinical teaching is 160. Here the Professor of Surgery lectures three days a week; operations are performed on one or two days, and also there are held special classes by the assistants every day.

Instruction in diseases of the ear, nose and throat is given as a complementary course, and consists of lectures during one year, two days a week, and instruction in the wards and

classes in the clinical laboratories, on usually two other days.

The beds used for clinical teaching at the S. Giovanni Hospital are selected from all admitted into the hospital, and the teaching is only carried on during the academic year, the wards reverting to the ordinary uses of the hospital for the other months. At the Mauriziano bedside instruction is given all through the year.

*The Eye Hospital* is very well arranged and equipped, chiefly owing to Professor Reymond's exertions; the instruction given here comprises an annual course of lectures, operations, and practical classes on three mornings a week.

*The Lying in Hospital and Gynæcological Institute* is modern, and an immense amount of work is done here. About 1,400 labours are attended during the year. The instruction comprises an annual course of lectures three days a week, work in the wards three other days, and practical classes. Instruction is given also at gynæcological out-patients and operations.

*Mental Diseases.*—Professor Lombroso gives an annual course of lectures on mental diseases at the asylum on three afternoons a week, and practical classes are taken in the laboratories.

*Diseases of the Skin.*—Clinical lectures are given at the clinic three days a week during the first half of the year as an annual course. During the second half year a corresponding course of clinical lectures is given at the clinic for syphilis.

*Complementary Courses* given by the professors include lectures, clinical chemistry, parasitology, and bacteriology. These are usually well attended. The courses given by *privat-docents* are forty in number, and include such courses as physiological chemistry and physics by Professor Mosso, clinical diseases of children at the children's hospital, orthopædics at the Maria Vittoria Hospital, a hospital for women and children, applied hygienic chemistry at the municipal laboratories, medical electricity, and other special courses. These are as a whole well attended by students, and, in fact, form no small part of their medical education.

*(To be continued.)*

# NOVA ET VETERA.

## ST. BARTHOLOMEW'S AND CHRIST'S HOSPITALS.

It may not be altogether unprofitable to retell the story of these great charities at a time when the removal of the one is causing a crisis in the history of the other.

St. Bartholomew's Hospital owes its foundation to Rahere, a knightly minstrel of the Court of Henry Beauclerc. Tradition tells that Rahere lay sick unto death. In a vision of the night a man of unearthly beauty and majesty came and stood by him, and said, "Rahere, I am Bartholomew the Apostle of Jesus Christ. Build in my name a holy house of God in Smithfield by London, and, lo! I will help thee." The sickness of Rahere passed away, and the minstrel devoted his life to the building of the stately church, over which he ruled as prior for 20 years, and close by it he placed the great hospital now known throughout the world. The buildings were begun in the year 1123, when it is said of Smithfield that

> Right unclean it was, and, as a marsh, dungy and fenny, with water almost everywhere abounding; and that that was eminent above the water dry was deputed and ordained to the gibbet and gallows of thieves and to the torment of others that were condemned by judicial authority.

The place lay without the city wall, and yet was within the liberties of London. This site the hospital has always occupied, and there has always been the main entrance from Smithfield and the smaller gate into Little Britain, though other gates have from time to time been opened and again closed.

The hospital was at first smaller than that of the present day, and consisted of separate buildings clustered round a great hall, in which were probably most of the beds. "The great hall had a large fireplace in the middle, and King Henry III made a present to the hospital on September 11th, 1223, and again in 1224," says Dr. Norman Moore, "in these terms:

> The King to Engelard de Cijoyny, greeting. We command you to give to the patients of the Hospital of St. Bartholomew in London as our gift one old oak in our forest of Windsor on the Thames, with the least possible injury to our forest and the greatest use to the aforesaid patients for their hearth.

Scattered amongst the hospital buildings were several chapels, with lodgings for their chaplains. One only of these chapels is now left, and it forms the parish church of St. Bartholomew the Less. A part of its tower dates from before the year 1300, and in the open space between it and the present great hall died Wat Tyler when he had been stabbed in the neck in Smithfield by William Walworth, Mayor, on Saturday morning, June 15th, 1381. It was for this deed, it is said, that the dagger was added to the arms of the City of London. Around the hospital there were also many private houses, some of which had large gardens even as late as the times of Vicary and Harvey. The original hospital had eight brethren and four sisters, who elected a head called the Master, Proctor, or Warden. All swore obedience to the Prior and Canons of St. Bartholomew's Church, and the Master of the Hospital rendered an account twice a year of all receipts and expenditure in the presence of the Bishop of London and of the Prior. Four times in the year too, all the brethren and sisters of the hospital house came to the general assembly of the members of the foundation of St. Bartholomew.

The hospital soon became popular among the citizens, and received many gifts of money and land, whilst it acquired a right of sanctuary or freedom from arrest for those within its precincts. In 1536 its possessions were surrendered into the hands of Henry VIII, and the hospital was derelict for two years. But in the winter of 1538 the citizens of London petitioned the king to give them the vacant hospital then valued at £304 16s. 5d. or £35 5s. 7d., yearly, the church remaining as a parish church for the inmates. It was not until June 23rd, 1544, that letters patent were issued which declared the King's will that there should be "comfort to the prisoners, shelter to the poor, visitation to the sick, food to the hungry, drink to the thirsty, clothes to the naked, and sepulture to the dead. He therefore erected and founded a hospital to consist of one master and priest, and four chaplain-priests, to be called vice-master, the curate, the hospitaler, and the visitor of the prisoners in Newgate. No endowment was given by these letters patent, or "only so much as would maintain three or four patients at most, and hardly that if cleanliness was regarded." The citizens continued to petition the King, Sir Richard Gresham, father of Sir Thomas Gresham, being particularly active in the matter, until in 1546 a new charter was granted to the Corporation of the City of London by which the hospital was refounded for the reception of 100 poor and sick. It was endowed from its former possessions to the extent of 500 marks per annum upon condition that the citizens should be bound yearly for ever to give a like sum. An attempt was made at this time to rechristen the hospital as "The House of the Poor in West Smithfield, near London, of the Foundation of King Henry VIII," but the older name was too well established to allow of any change though patients are still asked if they wish to be admitted into the "House."

The hospital was governed as a separate institution for about ten years, but in 1557 it was agreed to associate it with the rest of the royal hospitals, namely, Christ's Hospital, Bridewell, and St. Thomas's Hospital, the whole being under a comptroller-general and surveyor-general, while for each of the four was appointed for its special government four aldermen and eight commoners selected by the Lord Mayor and Court of Aldermen. Each member of this governing body held office for two years, the senior of the four aldermen being called the President and one of the commoners the Treasurer. This method of government did not prove entirely successful, and by the year 1666 the management of the affairs of the hospital had passed into the hands of a body of Governors, elected, as is still the case, either for their benefactions or for their services to the institution. Each Governor receives at his election a green staff of office, in shape like a billiard cue, with white letters upon it, the family colours, it is believed, of the house of Tudor, to whom the hospital owed both its destruction and its nominal refoundation.

In 1782 the government of St. Bartholomew's Hospital was separated from that of the other royal hospitals, and in 1866 it was decided that persons other than the Lord Mayor might be elected to the office of President. His Royal Highness Albert Edward Prince of Wales was chosen on this occasion,

and on his accession to the throne he has been graciously pleased to continue his connection with the hospital as its patron.

The hospital has undergone many changes in its outward appearance. In 1423 it was restored by Richard Whittington, Lord Mayor of London. In Aggas's map, supposed to have been made in the reign of Elizabeth, the hospital is shown as a group of buildings and houses sufficient to form a parish. It was separated from Christ's Hospital (the Bluecoat School) by a yard, by a space representing the Town Ditch, and by the City wall. Ryther's map of 1604 shows that the Town Ditch and the City wall still separated the two charities, and that the houses in the hospital were beginning to assume the shape of a quadrangle. In 1720 the hospital had become still more concentrated. It consisted of two small quadrangles, one newly-built and with cloisters, but there was still a row of houses within the Little Britain gate which formed a street —the "Long Walk"—between the hospital and the Bluecoat School. The hospital was entirely rebuilt by subscription during the years 1729-1760. James Gibbs, who built St. Martin's-in-the-Fields, and, the Radcliffe Camera at Oxford, was the architect, and his quadrangle still stands with a few minor alterations such as the removal of the arches which connected the four great blocks, and the addition of lavatories. The Abernethy block and the school buildings are of much more recent date.

The revenue of the hospital has increased steadily. The annual income at the time of the second foundation was about £800; in 1837 it was £30,000; in 1885 it was £60,000; and at the present time it cannot be far short of £100,000, derived partly from lands in and near the city of London, in Limehouse, Stepney, Essex, and other parts of the country.

The ecclesiastical foundations of London during the Middle Ages were as numerous as they were noble, and nowhere were they more numerous or more splendid than on the north side of St. Paul's. Here was the College and School of St. Martin's-le-Grand, covering the space occupied by the General Post Office, and extending over the site of Aldersgate Street to the still larger space occupied by the Grey Friars, now the Bluecoat School. These Franciscans were separated by the city wall and St. Bartholomew's Hospital from the Priory of the St. Bartholomew Benedictines, subject to the rule of St. Austin, which was separated in turn by a short distance from the Charterhouse or Carthusian Priory of the Salutation, which lay adjacent to the Priory of St. John. The Grey Friars, a branch of the Order founded by St. Francis of Assisi, settled in Holborn in 1224, and after they had lived for a time in Cornhill, John Ewen, a mercer, purchased for their use a void plot of ground near to St. Nicholas's Shambles, a part of the site of the present Bluecoat School, but then called Stynkyng Lane, no doubt from its proximity to the city ditch and the meat market in Newgate Street. Very beautiful buildings were soon erected, and the citizens vied with each other in defraying the cost. The splendid Abbey Church became a favourite place of burial, and it is said that four queens, with many of lesser degree, slept their last sleep within it. But the only one whose memory remains amongst the Bluecoat boys is Eleanor, the wicked Queen of Edward II, whose ghost still haunts the cloisters.

The Grey Friars shared the common fate of monastic establishments at the dissolution, and in 1546 the citizens of London were granted the buildings to rescue poor children from the street, to shelter, feed, and clothe, and, lastly, to educate them. The church under the name of "Christ Church within Newgate" was made parochial, and from it came the name of "Christ's Hospital." Three hundred and eighty children were admitted to the charity in 1552, attired in a livery or dress of russet cotton, the boys with red caps and the girls with kerchiefs on their heads, having a woman keeper to every twenty children, and with a staff of two surgeons, and the masters of the hospital. The livery, however, was soon changed, for at the following Easter the boys and "maiden children" were in "plunket" a coarse woollen cloth of blue, and the school thus obtained its well-known name of the "Blue Coat School." The dress remains little altered to the present day, and is an example of the ordinary costume of apprentices and serving men in the middle of the sixteenth century with some touches of the old Franciscan habit. The monastic buildings suffered severely in the Great Fire of London, which destroyed the Grey Friars church, the Great Hall, and the south front of the hospital. The church was the first part to be rebuilt a little to the east of the former edifice, and not more than half its original size. The other parts of the hospital were gradually rebuilt between the years 1672 and 1705: indeed, some of the old monastic buildings were standing as late as 1803. The entrance from Little Britain was made in 1783, and leads into the open space which had been obtained by covering in the city ditch, a kindly action performed by John Calthrop, draper, about 1552. In 1820 the infirmary was built on land acquired from St. Bartholowmew's Hospital and again in 1825 the hospital co-operated with the Governors of the Blue Coat School to secure the Newgate Street frontage partly occupied by the large gates which form so marked a feature of this part of London. The back wall of the Great Hall in which the public supping takes place each Lent is built on the city ditch, whilst the greater part of the building stands upon the site of the city wall and of the refectory of the monastery, which served as the dining hall of the school. The foundation stone was laid by the Duke of York, acting for King George IV, on April 28th, 1825. The old cloister of the Grey Friars Priory, repaired by Sir Christopher Wren, formerly served as a public thoroughfare from Newgate Street to Smithfield, but it is now stopped up, though there is still a door in the party wall between the Bluecoat School and its neighbour, St. Bartholomew's Hospital.

## THE PREVENTION OF CONSUMPTION.

### The Notification of Phthisis.

We have received a letter from an esteemed correspondent, in which he states that the medical profession in the city in which he resides have received a communication from the Town Council inviting them voluntarily to notify cases of phthisis in their practice, for which it is proposed to pay the same fees as for notification of cases of the acute infectious diseases. To this communication our correspondent has replied that the local members of the medical profession are most anxious to help the Council in every way in dealing with phthisis, and that they are also all of opinion that it would be a good thing if phthisis were notified to the sanitary authorities, but that on the other hand, the proposed notification raises a very large question. The Town Clerk has therefore been asked to state whether such notification is actionable unless made with the consent of the patient, and also whether the Town Council are prepared to indemnify any medical man against any such action.

As to the first question, we conceive that no practitioner is justified in voluntarily notifying a case of phthisis, unless he has reason to believe that the patient will not object to this procedure. This at once cuts off a large number of patients of the middle and upper classes from the possible scop of such notification. This has led in some towns, as, for instance, at Brighton, to the request being made that irrespective of formal notification of cases, medical practitioners will communicate changes of address of their consumptive patients, in order that the lately occupied rooms may be cleansed and disinfected before being occupied by others. The importance of this point is being realised, and the suggestion is being acted on to a steadily increasing extent. There remain a large number of cases of consumption occurring among the poor, particularly of the labouring classes, and among out-patients at hospitals and public dispensaries.

In such case the patient himself is the chief beneficiary by the action which in a properly-organised district follows on the notification. House defects are removed, particularly internal cleanliness of the house and improved ventilation are secured, and the patient if poor is provided with spittoons or paper handkerchiefs, and is placed under the best available conditions for recovery. If the notifying practitioner has serious doubt as to the care and delicacy with which the visits to houses concerning which he is requested to notify will be made, he will be amply justified in withholding his notification; but it will be for him to consider whether he may not possibly be diminishing his patient's prospects of recovery by allowing the continuance of removable evils of environment. In towns in which voluntary notification of

cases of phthisis among the working, and to a certain extent among other classes has been in operation for a considerable time, as in Brighton and Manchester, much good work has undoubtedly been accomplished, and without friction or inconvenience to the patients involved.

With regard to pauper patients the position is different. The medical officer of health has the right, under an order of the Local Government Board, to require returns of sickness from the medical officers of the Poor Law, and may therefore require returns of cases of phthisis. The importance, for instance, when an advanced consumptive patient is removed to the workhouse infirmary, of having the rooms he has vacated thoroughly purified, is sufficiently obvious, though when the above-mentioned machinery is not utilised, it is usually neglected.

It may be argued that if notification of phthisis is to be limited by the consent of the patient, such limited notification can have only a small value. On this point we may quote the following:

The absence of complete information in a limited outbreak of enteric fever may prevent one from discovering its origin; but in phthisis every single case notified may be treated alone, and if 25 per cent. of the total cases in a district are notified, we can obtain nearly if not quite 25 per cent. of the benefit which would follow in the wake of complete notification.[1]

Referring to the contention that the provision of sanatoria in which cases of phthisis can be suitably treated should precede the notification of this disease, there is much to be said for it. The provision of isolation hospitals preceded in most parts of England the compulsory notification of infectious diseases. In others, however, it was only the facts forced upon the attention of local authorities by compulsory notification that led to the provision of such hospitals. It is a good rule to proceed—if it be in the desired direction—along the line of least resistance. Every step in advance facilitates the next step. Further, quite apart from voluntary removal to sanatoria, notification enables a large amount of valuable preventive work to be carried out. The patient is encouraged to adopt simple precautionary measures, his home conditions are improved, and possibly also the conditions under which he works. Much information as to the working of the voluntary notification of phthisis can be obtained from the towns in which it is already practised, and this information tends to the conclusion that the majority of the difficulties which appear to present themselves when considering the question do not actually arise in practice.

*Voluntary Notification in London.*

The Stoke Newington Borough Council has adopted the following recommendation of its Public Health Committee:

That the voluntary notification of consumption be adopted in the borough, and that the fees paid for such notification by medical practitioners be the same as those specified in the Public Health (London) Act of 1891 in reference to the diseases the notification of which is compulsory.

Dr. H. Kenwood, M.O.H., has prepared a statement as to the action which it is proposed to take on this resolution:

(*a*) Forms will be issued to medical practitioners on which they are invited to notify (with the consent of the patient or those in charge of the patient) any case of consumption which may come under their notice and with respect to which the council would be of assistance in promoting preventive measures. (*b*) The preventive measures which the council will undertake are as follows: (1) A visit by the medical officer of health with the view of inspecting the surroundings of the patient, the conditions of work, etc., and the detection and removal of conditions likely to promote the disease; (2) verbal advice will be given and a printed handbill of instructions left at the house; (3) an offer will be made, free of all charge, to perform any necessary disinfection of rooms, bedding, etc.; (4) the house will be visited from time to time in order to see if the necessary precautions are being observed to prevent the spread of the disease; (5) arrangements will be made for examining without fee specimens of sputum from persons the nature of whose illness is dubious, in order to bring about a prompt diagnosis of the disease; (6) medical practitioners will be informed that the usual fees for notification will be paid for information of the existence of any cases of consumption which have not been previously notified from the same premises.

*Sanatoria.*

Dr. Louis C. Parkes in a report to the Public Health Committee of the Metropolitan Borough of Chelsea on the prevention of tuberculosis, urges the necessity of a scheme for the isolation and open-air treatment of consumptives in sanatoria if any great advance is to be made in the prevention of tuberculosis. Such a scheme for London, to be a success, should, in his opinion, be on a large scale, and should be independent of the Poor Law, the Metropolitan Asylums Board being probably the best body to provide sanatoria for the consumptives of London. The report was approved at a meeting of the Chelsea Borough Council on November 20th, and it was resolved that a copy be sent to the Local Government Board, the London County Council, the Metropolitan Asylums Board, and to each of the Metropolitan Borough Councils. Some months ago delegates from the various Boards of Guardians in London met in conference at the St. Martin's Town Hall, and decided that a conjoint sanatorium for the consumptive paupers of London was desirable. This decision was communicated to the Local Government Board, with a request that a deputation on the subject might be received. If the Board were now to take the initiative in bringing together representatives of all the bodies interested in this matter, there is little doubt that a scheme worthy of the metropolis could be brought to a practical issue without delay.

At a meeting of the Council of the National Association for the Prevention of Consumption, held in London on November 11th, Dr. Nathan Raw brought forward the following resolution:

That, in the light of our present knowledge, the time has now come when the whole question of tuberculosis, including treatment of suitable cases in municipal sanatoria, should be undertaken by the municipal corporations and county councils throughout the country.

After full discussion the resolution was moved from the chair by Sir W. Broadbent, Bart., seconded by Mr. Malcolm Morris, and carried unanimously.

[1] Dr. A. Newsholme: The Prevention of Phthisis, with Special Reference to its Notification to the Medical Officer of Health. *Public Health*, February, 1899.

## CONTRACT MEDICAL PRACTICE.

### Scotland.

It is to be regretted that the North seems lagging behind in some important matters affecting the interests of the profession.

This is not usual: reform has not infrequently commenced on the other side of the Tweed, and it might at least have been expected that where considerable improvement had been obtained in respect of club payments in other parts of the country, Glasgow would not be behindhand. A circular has been received pointing to a lamentable condition in the payments made by certain Rechabite "tents" in Glasgow, where, it would appear, that all the surgeon receives is 3s. per annum. A gentleman who had the courage to tabulate all the work during the year, and to show in black and white the amount of remuneration, was, we are informed, promptly replaced by another practitioner, and without any difficulty.

Under such circumstances the Rechabite "tents" can do what they like, and the wonder is they do not try to get their surgeons for 2s. instead of 3s.

### New South Wales.

An Australian correspondent writes to say that throughout New South Wales, in the matter of clubs the unit for payment is the family, and that included a large number of individuals, for example, adopted children, aged parents, and any grown-up member of the family who was dependent on the bread winner. He states that the payments per unit vary from 15s. in Sydney (medicine not included) to 25s. and 30s. in country places (medicines and surgical operations included). He had thought that the family was the unit in England, and, if so, there could be no doubt they were better paid in New South Wales, but this would not be the case if the English unit were the individual and not the family. The unit in England is in most cases the individual, but it must be admitted that there are plenty of cases where the family is the unit, and few of these pay as much as 15s., and they claim medicine in addition.

A Dental Congress in Italy.—An "Odontiatric" Congress was recently held at Milan under the presidency of Cavaliere Dr. Alberto Coulliaux. Among the subjects discussed were the following: Odontiatry in Forensic Medicine, by the President; Bleeding from the Gums caused by Hæmophilia, by Dr. Petracchi; the Treatment of Caries, by Dr. Caccia; and Dental Mechanics by Messrs. Mela and Puppo. Resolutions were passed asking for the establishment of chairs of odontiatry in all Italian universities having a faculty of medicine, and for the prohibition of dental practice except by holders of a certificate of knowledge obtained after an adequate course of education and examination.

# THE GENERAL MEDICAL COUNCIL ELECTION.

## THE APPROACHING ELECTION OF DIRECT REPRESENTATIVES.

### ENGLAND.

#### LETTERS.

*A Protest and a Warning.*

SIR,—I have received a copy of an election circular dated from Manchester, signed by Dr. J. Brassey Brierley and others, which is so seriously misleading that I must ask all those who have received it not to be influenced by its contents when voting.

The circular suggests that Dr. Woodcock was responsible for the alteration of the title of the Bill of the British Medical Association on the registration of midwifery nurses. This is untrue. It also suggests that there was a difference between Dr. Woodcock and myself in our attitude on this subject. This also is untrue. My views and Dr. Woodcock's are identical.

The circular goes on to say that the profession requires men who will "support" me in my efforts to obtain reform on the General Medical Council. The statements made in connection with this sentence are also wholly incorrect. The profession has no idea of the damage done to the cause of direct representation or of the cost incurred by useless prolongations of discussions by the so-called "support" which I have experienced at the Council during the last four years.

As undoubtedly the reform party requires all the strength it can in the General Medical Council, I earnestly hope that this circular will be disregarded, and that the cause of real reform will be furthered by the return of Dr. Woodcock and Mr. Jackson to the Council.—I am, etc.,

Cavendish Square, W., Nov. 28th. VICTOR HORSLEY.

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*The Proposed Conciliation Board.*

SIR,—I enclose a copy of a letter sent by me to the candidates for the vacancies on the General Medical Council and the replies received. It would be a misfortune if the opportunity of forming a Conciliation Board afforded us by the efforts of the General Medical Council (and especially Dr. Glover, Dr. Bruce, and the President) be allowed to slip owing to the wage limit difficulty. The answers received from the Branches showed how impossible it would be to draw up a wage limit suitable to the different parts of the country, and the discussion of such a difficult question would probably lead to no satisfactory result.

On the other hand, the report of the meeting between the Friendly Societies delegates and the Committee of the British Medical Association clearly showed that the Friendly Societies recognised that club doctors suffered from many grievances, and that they would be prepared to consider and remedy them. A Central Conciliation Board, if formed, would be called on to remedy the sweating of doctors by Medical Aid Societies and could carry out Dr. Woodcock's suggestion and divide the country into districts with Conciliation Boards of their own.

It is unfortunate that Dr. Glover has retired, and the club doctors owe him a debt of gratitude for the attempt he has made to benefit them.—I am, etc.,

C. H. W. PARKINSON.

DEAR SIR,—I gather from your election address and speeches that you are opposed to the formation of a Conciliation Board consisting of representatives of the Friendly Societies and the medical profession, because the Friendly Societies will not agree to discuss the question of wage limit. The question was discussed at a recent meeting of the Dorset Branch of the British Medical Association, and it was agreed that the formation of a Conciliation Board was desirable, and that a sliding scale of payments would meet in a measure the wage limit difficulty. It was felt that a satisfactory wage limit would be most difficult to decide on, suitable for different parts of the country, but that if representatives of the Friendly Societies and the profession met together in a friendly and conciliatory spirit the relations between the two parties could be greatly improved. I shall be greatly obliged if you will let me know your views on this question, which is of the greatest importance to so many members of the profession.

I am, yours very truly,
(Signed) C. H. W. PARKINSON,
Honorary Secretary, Dorset and West Hants Branch, British Medical Association.

DEAR PARKINSON,—The conditions and customs of practice are so various in different parts of the kingdom that I fear a Central Conciliation Board would hardly be likely to deal satisfactorily with questions submitted to them. My view is that Local Boards established for the purpose of arbitrating or advising with regard to disputes between doctors and Friendly Societies in different localities would be more likely to meet the difficulty, and I am prepared to recommend this course. So far, the representatives of the Friendly Societies have not exhibited a conciliatory spirit; but I am not quite hopeless of a better state of things.

Yours very truly,
SAM. WOODCOCK.

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MY DEAR PARKINSON,—The fundamental difficulty is that the Friendly Societies will not discuss this matter of the wage limit under any circumstances. They will not entertain the idea of a Conciliation Board if the question of wage limit is to be brought before it. All I say is that if you have a Conciliation Board you must take care that it is made clear beforehand that every question involving the profession in relation to Friendly Societies shall be on the paper for discussion.

With kind regards,
Yours sincerely,
VICTOR HORSLEY.

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DEAR SIR,—My objection to the Conciliation Board promoted by some members of the General Medical Council was based on the fact that the representatives of the Friendly Societies absolutely refused to discuss the wage-limit question, which appeared to me to be of great importance. Unless it is conceded I don't see much use in Boards of Conciliation. That need not prevent medical men in different districts combining to obtain more remuneration from Friendly Societies.

If the British Medical Association is made a more active association the several units will be able to do more, relying on the support of the Association at large.

What then is necessary is to get every medical practitioner to join the Association and a Branch thereof. I do not know what the decision was in your Branch, but in the South-Western Branch the Committee (of which I am a member) recommended the Branch to state that it thought a wage limit was very desirable. The scale we recommended was £1 4s. per week for a single man, going up to £1 14s. for a married man with five or more children. We recommended 5s. per annum as a minimum payment, and that if women and children were admitted they should pay the same. Mileage to be paid if patients resided beyond the three-mile limit. This scale would naturally vary with the conditions of different parts of the country. It certainly does seem a monstrous thing that men of good position and income can obtain medical treatment for a paltry sum of 4s. or 5s. per annum, and in some cases even less.—I am, etc.,

GEORGE JACKSON.

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Mr. George Brown does not wish his letter published.

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*The Gallery of the Council Chamber.*

SIR,—Mr. Horsley could not give Mr. George Brown a better testimonial than to say he has been "shouted down" in the Council Chamber and "flouted" by the President. This proves that Mr. Brown has done his duty without "fear or favour," and the electors, I have no doubt, will reward him by returning him and Mr. Jackson by a thumping majority. At the same time I am quite prepared to accept Mr. Horsley's statement without going in person to witness such a disgraceful and unedifying spectacle. If the profession is only true to itself in this election, "midwife registration" will receive its quietus and its advocates a most salutary lesson. The issue is clear, and the best advice on the eve of the election is to vote, vote, vote for Brown and Jackson.—I am, etc.,

Liverpool, Nov. 23rd. ALEX. MCCOOK WEIR.

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*Provincial Candidates.*

SIR,—As some of your readers may not be acquainted with Mr. G. H. Broadbent, of Manchester, it is necessary for me to briefly reply to the letter you publish from him in the BRITISH MEDICAL JOURNAL of November 23rd. Mr. Broadbent states that four years ago I opposed a "provincial candidate," Sir Walter Foster. This is untrue. Four years ago I opposed Sir Balthazar Walter Foster, who had become a metropolitan practitioner, and who continues to practise at his address of four years ago—namely, 30, Grosvenor Road, London, S.W. I do not know what other domicile he may own, but this metropolitan address is the only one, professional or otherwise, given either in the *Medical Register* or in the *Medical Directory*.

Mr. Broadbent says that within a year of my referring to the advisability of direct representatives being general practitioners I came forward myself for election. Mr. Broadbent omits to state that I made strenuous efforts four years ago to get a general practitioner to stand against Sir B. W. Foster, and it was only because no such practitioner would face the

contest that I agreed to stand myself, in the interests of medical reform.

Finally, Mr. Broadbent says, "It was Mr. Horsley himself who increased the number of representatives residing in London from two to three." This, like the rest of Mr. Broadbent's letter, is untrue. The profession in England and Wales four years ago increased the number of representatives residing in London from two to three by electing me to represent them in a contest in which there were, as shown by the voting, practically but two (actually four) candidates, both being consultants, and both practising in London.—I am, etc.,

Cavendish Square, W., Nov. 26th. VICTOR HORSLEY.

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SIR,—I consider the query appended to my letter, page 1545, something approaching an insult, and intended to detract from any points I made against Mr. Horsley. Any tiro in medical politics has "not forgotten" what is recent common knowledge, and I am surprised, having inserted so many of my letters recently, you have not given me credit for knowing or remembering this simple matter, without insinuating to those who are not acquainted with me that I do not.

Further, the omission of the reference in paragraph 2 of my letter to the BRITISH MEDICAL JOURNAL of November 28th, 1896 (page 1605), is evidently done in favour to Mr. Horsley, and prevents anyone seeing that I give chapter and verse for what I say, and they could have made the reference, which they cannot now.

Limited as I was to 250 words, I could not say much on any of the points at issue, but anyone will see from my last paragraph but one that I knew well enough that Mr. Horsley could not again stand now as a candidate if he resigned, and that I meant to say if he had resigned, as he promised four years ago, in order to save "the expense of an election in 1902," it would have proved his sincerity, and that he did not do it for any other object; and, also, that his idea of one London and two provincial representatives would be attained.

Many of us, however, at the time thought the real object was to have the partnership of Dr. Woodcock in the present contest, in order that they might be of mutual assistance to each other; and Mr. Horsley's advocacy has proved it, I think. If his promise was disinterested, he would have been bound in honour to have stuck to it.—I am, etc.,

Manchester, Nov. 23rd. G. H. BROADBENT.

*** If our correspondent will refer again to page 1545, on which his previous letter was printed, he will see that the reference which he complains was omitted appears in a special footnote to the letter.

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### MEETING AT HALIFAX.

Dr. J. T. Neech, M.O.H. Halifax (Convener) informs us that a meeting attended by about forty of the medical practitioners of Halifax and neighbourhood, was held, under the chairmanship of Dr. West Symes, on November 26th, to hear addresses from Drs. Brassey Brierley, Colin Campbell, and G. H. Broadbent, and a deputation from the Manchester Committee of Mr. George Brown and Mr. George Jackson. At the conclusion a vote of thanks was passed to the former gentlemen, and the practitioners present unanimously pledged themselves to support the candidates in question, and passed a further resolution earnestly protesting against any Bill being passed by Parliament which had for its object the creation of an order of practitioners licensed only to practise any one branch of the profession. Dr. Brierley pointed out that the General Medical Council had really no legal power to sanction any certificate issued to women who were not recognised medical students.

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## SCOTLAND.

### MEETING OF THE DUNDEE BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

A MEETING of this Branch was held in University College, Dundee, on November 21st, for the purpose of hearing the three candidates for the representation of Scotland on the General Medical Council. There was a large attendance. In the absence of Dr. Alexander Campbell, President of the Branch, the chair was occupied by Dr. Charles Templeman, who, in opening the proceedings, remarked that the election was a matter of the greatest importance to every member of the profession who took an intelligent interest in medical politics. It was not intended that that meeting should commit the Branch in any way to any particular line of conduct, or to any particular candidate.

Dr. Bruce said he had the honour of representing the whole of the profession in Scotland for fifteen years. It was natural to say that such an honour should go round; but if the Scottish representative was to feel that he had an insecure seat, he was placed at a disadvantage as compared with other representatives. Proceeding to refer to matters of special interest to the profession, he said that one question which had come to the forefront was that of doctors keeping open shops. He had a feeling that the keeping of open shops did lower them in the eyes of the public; but, while he did not approve of the custom, he could not be a party to any endeavour to establish any rule that would prevent what the law allowed, and at present the law did allow doctors to keep open shops and to dispense medicines. One thing, however, which ought not on any account to be permitted was the sale of poisons through the hands of unqualified assistants. With regard to the recognition of midwives, he was of opinion that a certain modified form of licence should be granted to them. Dealing with contract practice, he said it was essentially and fundamentally wrong. Going on to refer to the subject of medical education, he said he would not recede from the position he had taken up—that there should be at least five years course of medical study. He advocated increased direct representation of Scotland on the General Medical Council. A single representative from Scotland was, to say the least, very unfortunate. There ought to be territorial representation for Scotland, England, and Ireland. The gentlemen at present composing the Council, however, were men of the highest possible intellect, position, and integrity.

Dr. Robertson said he was a candidate in consequence of a requisition from his fellow-practitioners in the West of Scotland, a requisition which had its origin in the widespread dissatisfaction among medical men regarding recent proceedings of the General Medical Council. That had reference mainly to the refusal of the Council to receive a deputation from Glasgow and the West of Scotland regarding the question of the sale of scheduled poisons. Quite independently of his wish to obtain their support, he was glad of that opportunity to enlist their sympathy with a large body of men in the West of Scotland who were living in daily terror of being accused of "infamous conduct" in connection with the sale of poisons. They claimed the same right to sell scheduled poisons as the chemists themselves, and they claimed no more. The custom of keeping open shop in Glasgow and the West of Scotland was both ancient and widespread, and its propriety had never before been questioned. The present crusade by the Pharmaceutical Society had really nothing to do with the public safety. A Society that had the audacity to appear before the General Medical Council with complaints against members of the medical profession ought surely to be able to go there with its own hands clean. Instead of that, the counter-prescribing by chemists, which was everywhere prevalent, the wholesale advertising, the exhibition of "cures" for every known disease, and the publication in their trade journals of books for the treatment of disease were outstanding insults to the whole medical profession, and called loudly for redress.

Dr. Norman Walker dealt with the question of medical education, and advocated the desirability of introducing bacteriology into the curriculum. He did not think that examinations should be abolished or even diminished. As to midwives, he should insist upon their having three months training in a maternity hospital. The idea that there should be no club practice was outside the range of the practical and the solution of the difficulty was to be found in combination among medical men such as obtained in Dundee. With regard to parochial medical officers and their tenure of office, he held it was entirely wrong that they should be liable to dismissal at the caprice of small parish councils without the right of appeal. On the subject of the sale of poisons, he did not think that the Pharmaceutical Society was actuated by a spirit of narrow jealousy, but the medical practitioners in certain parts of Scotland were defying the Society. He was prepared to advocate that the sale of drugs, as well as poisons, by doctors' unqualified assistants should be interdicted.

Several questions were put to the candidates, and Dr. Robertson, in reply to interrogations regarding the practice of keeping open shop, said it was a custom of such long standing in Glasgow and the West generally that it was practically universal. He by no means acknowledged that there was anything wrong in the practice. It might be undignified—though he saw nothing undignified, and the chemists did not think it undignified.

Dr. Buist: Does it not encourage Glasgow people when they come to Dundee to expect to get their diseases prescribed for in chemists' shops?

Dr. Robertson admitted it would be a grand thing for the profession if it were practicable to abolish the custom.

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### Meeting in Edinburgh.

*The Sale of Poisons.*

Dr. Norman Walker addressed a meeting in Edinburgh on November 25th. Dr. James Ritchie, who occupied the chair in the unavoidable absence of Dr. Gibson, who had been summoned to the country, explained that the meeting had been hurriedly called for two reasons: one was that there was some misapprehension about the voting papers, which, he explained, went to the addresses in the *Register* and not in the *Medical Directory*. He urged those present to be sure and induce all their friends to vote; if they would do so, he thought Dr. Walker's chances were excellent. The other reason of meeting was to give Dr. Norman Walker an opportunity for contradicting a statement which had been made with reference to him.

Dr. Norman Walker said that the last time he addressed a meeting in Edinburgh, he had dealt only briefly with the question of the sale of poisons, and he regarded it as a matter where the issue between right and wrong was very clear, but since the other candidates apparently regarded it as the most important question, for they had placed it in the front of their addresses, he was not afraid to take up the issue and defend the action of the Council, though he considered it most deplorable that such a question should be the issue. He explained that in the interests of the public the sale of poisons was accompanied by certain restrictions, and that breaches of these restrictions were breaches of the law of the land. The Pharmaceutical Society was not a private association of chemists and druggists, but a body incorporated by Royal Charter, and confirmed by Act of Parliament, and to put it briefly, it acted as the hand of the law in these matters, and to suggest, as one of the candidates did in his address, that the General Medical Council was acting as the "cat's paw" of chemists and druggists was extremely ludicrous. It was not true to say that the Society only prosecuted in the case of doctors' shops, and he read the account of the conviction of an unqualified assistant of a local secretary of the Pharmaceutical Society so recently as the present month. The gravamen of the charge against practitioners before the Council was, not that they kept shops, not that their unqualified assistants sold poisons, but that the doctors were abusing their professional position by enabling them to commit these breaches of the law. In the test case the Council, in December last, tried the accused, found him guilty, and suspended sentence, so that he might have an opportunity of reconsidering his position. It was at this stage that a deputation wished to interview and remonstrate with the Council on its action; and how any judicial body could have been expected to receive such a deputation he could not understand. Dr. Bruce said "that he regretted that the Council, guided by legal advice, had refused to receive this deputation." It seemed to him (Dr. Walker) that, when fortified by legal advice, the Council's position was absolutely sound. The Council had evidently not taken fright, for he understood that a number of other practitioners were summoned to appear for the same offence at the present session of the Council. As to counter-prescribing by chemists, he regarded it as an unmitigated evil, and he thought a stop ought to be put to it. It had, however, nothing to do with the General Medical Council, which had no power over chemists at all, and he had no doubt that in the new Medical Bill, which he hoped would shortly be brought forward, that the matter would be dealt with. He further thought that their position would be much stronger in the matter if they went into it with clean hands themselves. One of the Scottish daily newspapers had humorously referred to the infamy of doctors keeping shops, and asked wherein they differed from butchers, grocers, etc. Keeping shops was not the infamy. He would repeat again. The infamy was the abuse of their professional position to enable unqualified persons to break the law, and he could not conceive that any considerable body of medical men in Scotland could support such an action.

Dr. Walker was thanked for his remarks.

Among those who have signed Dr. Norman Walker's nomination paper are: Drs. George A. Gibson, James Ritchie, Alexander James, W. Allan Jamieson, J. Murdoch Brown, George MacKay, Francis D. Boyd, R. J. A. Berry, and Mr. J. M. Cotterill, Edinburgh; Professor A. M. Stalker and Dr. R. Sinclair, Dundee; Dr. George Rose, Aberdeen; Dr. C. E. Douglas, Cupar; Dr. Spence, Dollar; Dr. Muir, Selkirk; Dr. Leslie Curror, Kirkcaldy, etc.

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### Letters.

*The Position of Parochial Medical Officers in Scotland.*

Sir,—For 30 years as a parish medical officer, and since I have ceased to hold such post, I have in season and out of season advocated that my late colleagues should have the right of appeal against dismissal to the Scottish Local Government Board. I mean to support the agitation in favour of this and other points of their programme of reforms.

But such questions cannot be dealt with by the General Medical Council as at present constituted. It is altogether beyond the limit of their duties, which are strictly defined by Acts of Parliament.—I am, etc.,

William Bruce, M.D.,
Direct Representative for Scotland in the General Medical Council.

The Castle, Dingwall, Nov. 24th.

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Sir,—For the information of your correspondent, Dr. Macara, Sutherlandshire, *re* Dr. Bruce, and his attitude to the question of a more secure tenure of office to Scottish parochial medical officers, I, as one of the Executive Council of the Scottish Poor-law Medical Officers Association, may be allowed to state that Dr. Bruce has always been favourably interested in our little Bill to secure an appeal to the Local Government Board in cases of unjust dismissal. Dr. Bruce was the first Honorary President of our Association, and came all the way from Dingwall to Glasgow, in the depth of winter, to preside over our first annual meeting and dinner. Since then his services have always been available in the interests of our Association, heading, on one occasion, a deputation of Poor-law medical officers to voice our grievances before the Local Government Board of Edinburgh.

I do not suppose a representative of the General Medical Council can do much to further our interests through his Council, unless in an indirect way, as it is to Parliament we must look for the redress of our grievances. All the same, the sympathies of Dr. Bruce have always been on our side, and, as I have pointed out, he has ever shown his willingness to help us, though he has not exhibited the electioneering astuteness to put a clause to that effect in his address, like Dr. Walker.—I am, etc.,

Dennistoun, Glasgow, Nov. 25th. William Findlay, M.D.

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*Highland Medical Officers.*

Sir,—In my capacity of candidate for the direct representation of the medical practitioners of Scotland on the General Medical Council, I have received a letter from Dr. Macara, of Durness, Sutherlandshire, enclosing copy of a petition presented to Parliament last session by the Poor-law medical officers of parishes in the Highlands and Islands of Scotland.

In reply I beg to state:

1. That I am strongly of opinion that such a fixity of tenure of office should be afforded to Poor-law medical officers in Scotland by the right of appeal to the Local Government Board of Scotland, as is already enjoyed by Poor-law medical officers in England and Ireland.

2. That I am in entire sympathy with all the other points referred to in the petition.

3. That I would endeavour to support these reforms in any practical way possible.—I am, etc.,

Glasgow, Nov. 25th. CHAS. E. ROBERTSON, M.D.

*The Pharmaceutical Society.*

SIR,—Our attention has been directed to Dr. Robertson's address published in the BRITISH MEDICAL JOURNAL of November 16th. The suggestion that the Pharmaceutical Society only prosecute doctors and not chemists is unjustified. We presume that Dr. Robertson had in mind the recent prosecution of a doctor for an offence against Section XVII of the Pharmacy Act of 1868. It is true that under this section of the statute no chemist has yet been prosecuted in Scotland, but it is important to note that the prosecution against the doctor in question is the first directed in Scotland against a medical practitioner. Chemists, being specially trained in the selling of scheduled poisons, comply with the letter of the Statute. Moreover, as the chemists are all day engaged at their shops personally, supervising their business, offences against Section XVII of the Statute within chemists' premises are practically unknown and not likely to occur. In doctors' shops, however, our experience leads us to say that the precautions attendant upon the sales of poison provided by Section XVII of the Pharmacy Act are not so carefully observed. This is caused, no doubt, by the facts (1) that so many unqualified dispensers are employed by medical practitioners to conduct their shops; (2) the medical practitioners do not give their entire time and attention to the conduct of their shops as chemists do: and (3) doctors owning shops as a rule prefer that their names should not be on the label of articles sold in their shops, and their unqualified dispensers have neither the proper experience nor training to enable them to know what the provisions of the Statute demand. In this connection it is of importance to note that the requirements of the Pharmacy Statutes and the conditions to be observed in retailing or dispensing scheduled poisons form no part of the curriculum for the medical practitioners' qualification, whereas they constitute one of the most important subjects of the chemists qualifying examination.—We are, etc.,

P. MORISON AND SON,
Solicitors in Scotland to the Pharmaceutical Society
Edinburgh, Nov. 22nd. of Great Britain.

## SMALL-POX IN LONDON.

*Prevalence.*

DURING the first three weeks of November there has been a considerable increase in the number of cases of small-pox under treatment in the hospitals of the Metropolitan Asylums Board. At the end of October and beginning of November there was a rather sudden increase in the number of cases admitted. Thus on October 30th 28 cases were admitted, on October 31st 28, and on November 1st 30. On Saturday November 2nd, there were 278 cases under treatment, on Saturday, November 9th, 297, on Saturday, November 16th, 368, and on Saturday, November 23rd, 396. The largest number of cases admitted on any one day was 37. This occurred on November 18th. The largest number of cases under treatment on any day was 421 on November 20th.

*Diagnosis.*

No bacteriological examination is available for the diagnosis of doubtful cases of small-pox, and the only means at disposal is clinical examination. Owing to the difficulties often experienced in arriving at a positive diagnosis at an early stage, and the disastrous consequences which result from an error, the St. Pancras Borough Council recently resolved that in each ward a medical man should be appointed as Medical Referee, who could be called in by the medical attendant in doubtful cases of small-pox, or of suspicious eruptions or symptoms. The Council had previously resolved that after October 5th last chicken-pox should also be a notifiable disease within the borough. The Borough Council has now appointed a Medical Referee for each of the wards in the borough, on the understanding that a referee is not prohibited from making a clinical examination beyond the ward for which he is appointed, provided the patient is within the Borough of St. Pancras. The Medical Referee is required to send to the Medical Officer of Health an additional or second notification form, or similar certificate, filled in and signed by the referee, and countersigned by the medical practitioner calling him in, for the purpose of establishing his claim to the additional fee for the clinical examination. The action of the St. Pancras Borough Council has much to recommend it, and it will be interesting to hear later on how the scheme has worked in practice.

## THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

THE plague returns for all India for the two weeks ending October 19th and 26th show 8,372 and 8,298 deaths from the disease. Although the figures indicate a slight decrease compared with the week immediately antecedent, they exceed by a large amount the deaths from plague during the week ending October 25th, 1900, when they stood at 2,174. In Bombay city the deaths from plague during the weeks ending October 19th and 26th numbered 180 and 175 respectively. It is in the Bombay districts that the epidemic of plague mostly prevails, the plague mortality returns for the two weeks in question showing 7,372 and 7,199 respectively. In other parts of India the returns for the two weeks ending October 19th and 26th show plague deaths to have been: Mysore State, 392 and 386; Calcutta, 15 and 20; Bengal, 76 and 47; North-West Provinces and Oudh, 44 and 30; Punjab, 248 and 300. It is satisfactory to note that no cases of plague were reported in Benares during the two weeks indicated. At Karachi, between November 1st and 5th, 54 cases of plague and 32 deaths from the disease were recorded. In the Jullundur, the Hoshiarpur, and Sialkot districts plague is prevalent, and it has spread to the Ludhiana district previously unaffected.

MAURITIUS.

For the week ending November 22nd, 67 fresh cases of plague occurred in Mauritius, and 39 deaths from the disease.

CAPE OF GOOD HOPE.

At Port Elizabeth alone, of towns in Cape Colony, have plague cases occurred during the week ending November 16th. Two fresh cases of plague (natives) were reported during the week, and 2 deaths (natives) from the disease. A fresh case of plague occurred at the Remount Camp, Port Elizabeth, in the person of a native.

EGYPT.

Throughout all Egypt 2 cases of plague only were reported by the Director-General, Sanitary Department, and but 1 death from the disease during the week ending November 10th. It is satisfactory to record the fact that on November 10th only 1 case of plague was known to exist in all Egypt. The Egyptian Sanitary Department is to be congratulated on the result of their summer campaign against plague. Egypt has now become a favourite winter resort, and visitors to Egypt during the winter 1901-2 may free their minds of the possibility of plague infection.

GRAVESEND.

The P. and O. steamship *Peninsular*, on arriving at Gravesend, reported a case of suspected plague on board. The usual precautions were taken.

## LITERARY NOTES.

THE number of French inaugural theses for the doctor's degree in the library of the British Medical Association is now between 5,000 and 6,000. During the past year 685 were presented to the University of Paris and 185 to that of Lyons.

The Berlin königliche Akademie der Wissenschaften and the Danish Academy at Copenhagen have, it is stated, decided to prepare a collection of all the medical works of antiquity under the title of *Corpus Veterum Medicorum*. The first step in this important undertaking will consist of a thorough examination of all libraries, Oriental as well as European, which are likely to contain MSS. dealing with medical subjects.

Major-General the Hon. Herbert F. Eaton, Secretary of the Portland Hospital, asks us to mention that members of the Portland Hospital staff, or patients who have passed through the hospital, may obtain one of the remaining copies of the *Portland Hospital Reports* on remitting 3s. to Mr. Oliver Williams, 71 and 72, King William Street, E.C.

The issue of the *Progrès Médical* for November 9th is a "Students' Number," and contains full information as to medical education and opportunities of clinical and scientific study in the universities and medical schools of France. The journal is published at 14, Rue des Carmes, Paris.

According to an official report recently issued the United States Surgeon-General's Library at Washington contained on June 30th 140,539 volumes, of which 4,644 had been added during the fiscal year proceeding. There were also 236,728 medical pamphlets and theses, 8,211 having been added during the year. Volume VI, Second Series, of the Index Catalogue, includes the letters G to H—to Hernette, and

forms a volume of 1,051 pages. It will be ready for distribution at the usual time. The appropriation for Volume VII, Second Series, having been made, the MS. is in course of preparation for the printer.

Two new journals have lately appeared in France. One is *La Clinique Générale de Chirurgie*, which is to be published monthly under the editorship of MM. Aubeau and Larrivé; the other, the *Revue-Album*, is of a higher character, and is to be adorned with "*illustrations gaies*" from the pencil of the editor, M. Jonchère.

## THE SCHEME FOR THE REORGANISATION OF THE ARMY AND INDIAN NURSING SERVICE.

THE Committee appointed by the Secretary of State for War to report on the reorganisation of the Army Medical Services presented also a report on the Army and Indian Nursing Service, which was published in the Special Supplement to the BRITISH MEDICAL JOURNAL of October 5th. An examination of the report shows that the scheme which it embodies marks a distinct advance on anything which has gone before, whether as regards the Army Nursing Service, or the relation of the War Office to nursing. The principle for which those have been striving who had the best interests of all concerned at heart, the principle that the nurses should have a voice on the administrative body which employs them, has at last been recognised; we hope that this good example will shortly be followed by other departments of the State. While the principle may be heartily approved, there is room for improvement in the scheme and for its reconstruction in respect of some of the details.

### UNIFICATION OF THE SERVICE AND CONSTITUTION OF THE NURSING BOARD.

The recommendation that the Nursing Service should be made one body under one Board would be a great gain. The Nursing Board, the presidency of which will, it is hoped, be accepted by Her Majesty Queen Alexandra, whose interest in all nursing questions has often taken very practical shape, would consist of the Director-General, or an officer nominated by him, as chairman; of two members of the Advisory Board, of whom one would be a civilian; of the matron-in-chief; of three matrons of large civil hospitals; of one representative of the India Office, appointed by the Secretary of State; and of two members nominated by the President. There is one point to which we would draw attention in the composition of this Board, and that is, the want of a direct representative of the military hospitals; the matron-in-chief, though presumably she would have served her time in a military hospital, would not be actively engaged in the work. The Board would be strengthened were at least one of the civil hospital matrons replaced by a military hospital matron.

### FUNCTIONS OF THE NURSING BOARD.

These are very comprehensive, and include all details of appointment, duties, leave, uniform, and the distribution of all nurses henceforth to be employed by the War Office, except in the case of India; but the Board is to draw up a scheme providing "adequate local control" for the members of the nursing service employed in India. This will be a difficult task for any Board however competent. Probably the principle of "adequate local control" proposed for India might with an increase of efficiency be utilised in other portions of His Majesty's dominions. If there is too much centralisation the service will be strangled with red tape, and the responsible officers having but little independent responsibility, may be satisfied with a routine performance of duty.

### GRADES IN THE ARMY NURSING SERVICE.

The grades are stated to be the matron-in-chief and principal matrons. The qualifications and functions of principal matrons are not defined, nor is it stated wherein they differ from matrons, the next grade. It may be suggested further that the term "staff nurse" should be adopted for the nurses, as it must be assumed that their position and duties will be the same as those in a civil hospital, and that the orderlies will be in a subordinate position in the wards.

### DUTIES OF THE MATRON-IN-CHIEF.

The Committee recommends that this official should have a seat by right of office on the Advisory Board, the administrative body of the Army Nursing Service, and that in her absence her place should be taken by a Principal Matron; but how and by whom this Principal Matron is to be nominated is not stated. On looking down the schedule of duties prescribed for the matron-in-chief, we own to a feeling of bewilderment. Whence is the exceptional woman to arise who shall be physically and mentally capable of all that is required of her? In brief she is to be responsible for the appointment and subsequent career of the individual members of the service, to make herself acquainted with the administration of the service in the various hospitals: to maintain and distribute as need arises the staff of special nurses maintained to meet emergencies; to draft and tabulate all reports for the Nursing or Advisory Boards: and, in conjunction with her subordinates, be conversant with the details of leave for the various grades of the staff. No mention is made of an office or clerks, or of a depôt for the emergency nurses, although these must all form parts of a detailed scheme: certainly the matron-in-chief will not be able to pay for any clerical aid out of the inadequate salary suggested for her remuneration. These routine duties would be more efficiently performed if they were devolved on the principal matrons who might be placed as chief nursing officers over military districts for the nursing of which they should be responsible under the matron-in-chief, in conjunction with the military and medical officers of the district. Especially does this appear to be necessary in the case of special or emergency nurses: the work of the medical officer in any district will be much hampered if an emergency nurse could only be obtained through the matron-in-chief. This suggestion is parallel with the medical organisation suggested in paragraphs 56 and 57 of the Committee's Report.

### CONDITIONS OF ENGAGEMENT OF NURSES.

We note with pleasure that the candidate must have a certificate of three years training in a civil hospital recognised by the Advisory Board, before she can make application, but we trust that the Nursing Board will provide her with facilities for making herself acquainted with the special routine in the nursing of tropical diseases. It must be assumed that the period of probation laid down in 19 (2) would be spent in a military hospital, but this is not stated. The provision recommended as to the circumstances under which the services of a nurse may be dispensed is "the agreement ..... may be terminated on the recommendation of the Commander-in-Chief by a three months notice from the Secretary of State." This ignores the Nursing Board, upon whose advice the Commander-in-Chief and the Secretary of State would no doubt act. On the other hand, it would seem to be desirable that the hospital matron, in conjunction with the medical officer, should have power to suspend any nurse for grave neglect of duty, or misconduct, pending enquiry by the matron-in-chief. After the agreed term of service is over we see that among other courses open to the nurse is to offer herself for the post of sister for a term of one year; should she not gain her step after an examination, would not a longer period than one year be of advantage to the service and the individual?

### PAY.

The question of pay ought to receive close attention. The salary suggested for the matron-in-chief seems quite inadequate to command the services of a capable gentlewoman, reading as we do that out of the £250 per annum she has to provide board and service; the scale of pay should compare favourably with the civil hospitals, or these posts will go begging. Among the allowances to nurses we would suggest one for outfit when ordered abroad, otherwise the nurses and sisters will be out of pocket.

### CONCLUSION.

In offering these criticisms, we would emphasise the fact that now is the opportunity to remodel the service, so that it shall be second to none in efficiency and organisation. The spirit of the nation is thoroughly aroused, and whilst prepared to pay for the best medical and surgical skill for its soldiers, it is equally ready to pay the bill for providing such nursing as, in the opinion of the medical staff, is wanted to secure efficient treatment at home and abroad.

## BRITISH MEDICAL ASSOCIATION.

### SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, NOVEMBER 30TH, 1901.

## THE GENERAL MEDICAL COUNCIL.

The winter session of the General Medical Council commenced on Tuesday last, and, following the usual custom, the Council adjourned, after sitting two hours, in order to enable the Committees to prepare their reports for the consideration of the Council during the session. As we have frequently pointed out, it is unfortunate that the Council should find it necessary to do its work in this way, as the preparation of the reports of the Committees at so late a date must tend to prevent these documents receiving the careful consideration from individual members of the Council which is desirable before they are debated, and as a matter of fact often leads to the adjournment of a decision until a subsequent session; when this is not the result, the fact that these reports are not published until after they have been discussed by the Council renders it impossible for the profession at large to form or express any opinion upon the questions at issue before they have been decided by the Council. The present custom is one which we think might usefully be considered by the Business Committee.

The greater part of the first sitting was occupied by the customary address by the President, who, after alluding to the arrangements which had been made for the election of two direct representatives in England and of one in Scotland, paid a graceful tribute to the qualities of Dr. Glover as a working colleague. He then passed on to consider the establishment of reciprocity with the Crown Colony of Malta, and with the kingdom of Italy. With regard to the former he observed that the Council had already decided, provided that a stipulation in the Maltese Ordinance requiring British graduates to spend a year in Malta before the recognition of their degrees were expunged, that it would inform the Privy Council that the requirements for the medical degrees of the University of Malta, and the Ordinances under which practitioners registered in the United Kingdom were permitted to practise in Malta were such that Part II of the Medical Act, 1886, might properly be extended to Malta as a British possession. The Council had now been informed that the provision to which it had taken objection had been repealed, and the ordinances re-enacted with the amendments suggested.

With regard to Italy the state of things is less satisfactory. It yet remains to be seen what the Italian Parliament may enact with regard to foreign graduates, and meanwhile the Education Committee has recommended that the degrees of all of the Italian universities should be recognised as admitting to the Foreign List of the *Medical Register*. All the universities are under State control, but no mention is made of the Istituti di Studi Superiori, and the whole question is in a most unsatisfactory position. Little information was given upon the subject of the Council's Bills, beyond a mention of the fact that the Bill for the increase of the penal and disciplinary powers of the Council had been introduced into the House of Commons and ordered to be printed, but that it had got no farther.

With regard to the educational question respecting the proper place of chemistry, physics, and biology, the President sounded a note of warning and expressed the opinion that anything which might tend to cause the Council to lose control over preliminary education was fraught with danger, and hinted that the reference to the Education Committee might tend that way.

The President further announced his intention of placing his resignation in the hands of the Council on the ground that the period of his representation of the University of Edinburgh will shortly expire, and that he prefers to consider that his election as President, though not limited by any specified time, should be taken as coextensive with his unexpired period as the University representative. But as the University has re-elected him, this may be taken rather as a desire to establish a good precedent than as having any practical significance.

The remainder of the time before the Council adjourned was devoted to a discussion of the changes recommended in the Standing Orders regulating penal business. The greater part of this discussion took place *in camerâ*, as it was considered that a satisfactory discussion would involve allusions to specific cases in which difficulties had arisen under the old Standing Orders. From the nature of the changes finally approved it appears that the alterations recommended had relation to the separation of the finding that facts alleged had been proved from the declaration that they did or did not amount to infamous conduct in a professional sense. However, the Council found something upon which all were not agreed, as it took some time to pass the recommendations, which were finally adopted. The contention of Dr. McVail that no person ought to be brought before the Council upon alleged facts which if proven did not amount to infamous conduct, and that therefore the finding of the facts proved ought to be tantamount to the conviction of infamous conduct seems to us absolutely untenable, as it strikes at the whole intention for which the decision on such a point was withdrawn from the ordinary law courts and placed in the hands of a professional body. It is just this point which it is the function of the Council to decide; and the logical outcome of the adoption of Dr. McVail's view would be that no cases the circumstances of which were at all novel could ever be brought before the Council, unless it chanced that they were covered by some published pronouncement of the Council.

Identical charges against seven medical practitioners from the West of Scotland of employing unqualified dispensers, who sold poisons in open shops, were considered on Wednesday. Convictions had in all cases been obtained by the Pharm-

ceutical Society against the dispensers, and proof of these convictions practically formed the evidence submitted. All the accused practitioners had written letters which were in effect admissions of the facts, and contained in varying terms expressions of regret and of willingness to submit to the rulings of the Council. Under these circumstances, the Council decided, after receiving proof of the facts alleged, to proceed no further in the matter, and the President in conveying this decision to the respondents admonished them as to the gravity of the position in which they had placed themselves. We understand that the Council will, as foreshadowed in the President's address, be invited to make some pronouncement on the subject in general terms. If this course be taken it is more than probable that a less lenient course will be adopted in dealing with similar cases in future. A question addressed to the President by one of the medical practitioners as to the propriety of employing unqualified dispensers so long as they did not sell poisons was very properly met by the answer that the only question before the Council was that of such persons selling poisons.

## LEAD POISONING IN POTTERIES.

THE unexpected course taken by Lord James of Hereford, the umpire in the arbitration between the Home Office and the pottery manufacturers, in suddenly bringing to a close the inquiry and postponing the arbitration for eighteen months, has given cause for considerable dissatisfaction. The decision to take this step Lord James said rested entirely with himself. The arbitration, it will be remembered,[1] was the outcome of objections by the manufacturers to the enforcement by the Home Office of the recommendations made by Professors Thorpe and Oliver in their report on the use of lead in pottery. Briefly, these recommendations were the abolition of raw lead in glazes, the fritting of lead compounds, the use of leadless glazes wherever possible, and periodic medical examination of males working in the dangerous processes. In 1899 lead poisoning had been very prevalent in the Staffordshire Potteries. Public opinion had been roused, and had become severe in its criticisms of the methods of management, and Parliament was obliged to take up the question, and through it the Home Secretary was forced to institute the important inquiry made by Dr. Thorpe and Dr. Oliver. Almost immediately after the publication of their report the manufacturers spontaneously intimated to the Home Office that for the future they would renounce the use of raw lead in their glazes, that if time were given them to experiment with lead fritts, and these were found to be successful, they would willingly adopt them. To leadless glazes they raised uncompromising objections. Professor Thorpe has all along maintained that it is possible to make and to use fritts that allow in a 0.25 per cent. solution of hydrochloric acid only 2 per cent. of lead to be dissolved out, calculated as lead oxide, and that the use of such would unquestionably be followed by a great diminution in the number of cases of plumbism in potteries. The manufacturers suggested that the test proposed should be made less severe. At first they requested that it might be a 12 per cent. standard solubility; subsequently they agreed to accept one of 5 per cent. Even this was a higher solubility than the Home Office believed to be consistent with the health requirements of the workers. Finally the manufacturers receded from this position, and made application for the whole of the points at issue to be submitted to arbitration.

At one stage of the proceedings, therefore, the n matter that divided the Home Office and the manufacturers was the percentage solubility of the lead contained in fritts. As nothing was definitely arranged, many of the pottery manufacturers who had agreed to dispense with raw lead in their glazes returned to the use of raw lead in the dipping tub, for at the arbitration it was stated that in some of the potters' glazes there was as much as 30 to 40 per cent. of raw lead, and it was alleged to be impossible to glaze earthenware without it.

To an impartial reader of the evidence the clear statement of facts made by Professor Thorpe and Dr. Oliver at the arbitration is convincing as to the greater safety of fritted lead compounds, owing to their greater insolubility, compared with raw lead and as to the possibility of producing sufficiently brilliant and beautifully coloured ware by their employment. The use of lead in any form will never be quite free from danger, but it is obvious that the dust of a lead compound which is soluble only to the extent of 2 per cent. in weak hydrochloric acid must be very much less dangerous if swallowed than dust from a similar compound soluble to 5 or 10 per cent. The crux of the whole matter is whether a fritted lead conforming to the suggested standard of solubility is capable of fulfilling the requirements of the potter and of totally taking the place of raw lead. It is in regard to this question that the manufacturers say theory must give way to practice, and that however valuable the Thorpe-Oliver report may be it is, after all, purely theoretical and experimental, and should not, therefore, be allowed to weigh against the experience of practical potters, otherwise the trade would be injured by the imposition of impracticable conditions from which Continental manufacturers are free.

Lord James's decision is a compromise. By putting off the arbitration for eighteen months, with the possibility, if necessary, of still further postponement, and by allowing the manufacturers meanwhile to add lead in whatever percentage and in whatever form they please to the glaze, he does more than simply retard progress. If the question of lead poisoning in the Potteries is to be seriously tackled, it will be through regulating the amount of soluble lead present in the glaze as much as, or more than, through better ventilation of the workrooms and greater cleanliness of the workers. The pottery manufacturers are jubilant, for they consider that they have beaten the Home Office: but Lord James has told them that they are placed upon their honour to do all they possibly can to render even more effective the Special Rules of 1898, with the view of still further reducing plumbism. The umpire believes that things are not quite right, but has given them another opportunity of putting their factories in order. This view of the matter rather detracts from the flattering remark that he made to the manufacturers, "That the trade is being conducted with credit to the country." We might well ask, is it creditable to the trade that it should have had 400 cases of lead poisoning four years ago, 100 last year, and, since January of this

[1] BRITISH MEDICAL JOURNAL, November 16th, p. 1483.

year, 87 cases of plumbism with 4 deaths? It is to be hoped that Lord James's remark as to the establishment of a mutual assurance fund will have some effect. The introduction of this principle, or the application of the Workmen's Compensation Act to pottery manufacturers whereby lead-poisoned workers would be compensated, would operate to induce the manufacturers to make the trade healthier, and thus indirectly hasten the practical solution of the problem raised by, and partly answered in, the reports of the experts.

As might be expected, all the manufacturers are not satisfied with the decision of the umpire. They feel that there is still a cloud hanging over the trade, and that for many months to come it is, so to speak, on its trial. The Home Office can afford to wait. The postponement of the arbitration is of itself an indication that the facts put forward by its witnesses were to a large extent unanswerable. It is now admitted that the manufacturers quite expected that a 5 per cent. standard solubility would have been insisted upon, seeing that they agreed to this in March last. Why Lord James did not impose this requirement upon them is not easily understood. No decision the umpire could have given would have been acceptable to all. As already stated, the industry is on its trial and the questions at issue are not settled.

## THE ELECTION OF A DIRECT REPRESENTATIVE FOR SCOTLAND.

THERE are three candidates for the one seat on the General Medical Council as direct representative for Scotland. One of the candidates resides in Edinburgh and one in Glasgow, while the retiring member, Dr. Bruce, who offers himself for re-election, is associated with practice outside these two great centres of Scottish life and activity. Dr. Bruce's long services on the Council constitute a claim of an indisputable kind, which must have considerable weight with the electorate, but turning to those questions of general policy in which his claims are comparable with those of his opponents, we find that real questions of policy—real issues, pertinent to the work of the Council—arise between the three candidates. The mere question whether Codlin or Short is the true friend of the medical practitioner is not very profitable to discuss, though certainly capable of animated debate. Nor is it quite satisfactory that election for the General Medical Council should be made to turn on midwifery legislation, suppression of unqualified practitioners, contract practice, and other matters which have only an incidental and occasional bearing on the duties of a member of the Council. These questions are indeed discussed in all the three addresses before us, but reformers who are practical and like to see what little progressive energy there is in the world applied in a way calculated to be effective, will be gratified to observe that attention is also given to matters with which the Council is more closely concerned.

Prominent among these is, of course, the burning topic in the West of Scotland—the sale of scheduled poisons by the unqualified assistants of medical men. Two important questions arise here, one of principle and one of procedure. On the question of principle, Dr. Bruce appears to hold that the Council was bound to intervene "in the interests of the public at large and for the sake of the good name of the profession;" and Dr. Norman Walker entirely agrees with the action of the Council in upholding the law that poisonous drugs shall not be sold by unqualified persons. Dr. Robertson, on the other hand, appears to treat the question as one of competition between chemists and medical men, the latter claiming "exactly the same rights as the chemists, and no more." He therefore maintains that so long as no action has ever been taken against the chemist whose unqualified assistant has sold scheduled poisons, "it reasonably follows that no action ought to have been taken against any doctor in a similar position." This, even if it were correct in fact, appears to us to be a dangerous line of argument. In the first place, the powers, and therefore the responsibilities to the community of a registered medical practitioner are incomparably greater than those of a chemist, so that laxity is more dangerous. Again, the traditions of our profession impose obligations from which the chemist is exempt—for instance, as to abstinence from advertising. *Noblesse oblige.* Further, for a medical man to make use of his status as such to enable an unqualified person to do something contrary to law and dangerous to the public health is clearly a matter into which the General Medical Council is entitled to inquire; and if so, then it is entitled to exercise its disciplinary powers in such cases if it finds that the conduct of the practitioners charged has brought them within the disciplinary provisions of the Medical Acts. The submission made by the seven medical practitioners summoned to appear before the Council on Wednesday, may, it is to be hoped, be taken as a proof that this view is becoming more generally accepted in the West of Scotland.

On the matter of procedure, Dr. Bruce's position, disapproving the action of the Council in refusing a hearing to the Glasgow memorialists, is defensible. A penal case involves the decision of two points: (1) Has A. committed the acts of which he is accused? (2) Are those acts "infamous in a professional respect?" The first question is plainly one to be tried by the ordinary legal rules of evidence. The second is one on which the Council may, as Dr. Bruce says, "listen to every form of deliberate and respectful professional opinion."

The agreement of Dr. Bruce and Dr. Walker as to the solution of the difficulty between the Council and the English Royal Colleges is interesting. The union in one person of the schoolboy and the medical student is plainly undesirable. The separation of the ancillary sciences from medical study proper may, however, tend eventually to raise the standard of preliminary scientific education and concentrate the energies of the medical student on his specialised work. Whether three years will prove sufficient for the collegiate and hospital medical courses, leaving the last year free for the practical work for which it was originally added, is another matter.

All the candidates refer to the question of midwifery legislation and amendment of the Medical Acts, and in the latter connection Dr. Robertson and Dr. Walker make special reference to the suppression of unqualified practice. In Dr. Walker's phrase, the latter questions, at all events, are "outwith the province of the General Medical Council," being matters for the Legislature. This ques-

tion, like that of contract practice, to which Dr. Bruce devotes a considerable portion of his address and Dr. Walker a paragraph, is really a matter whereon medical energy is more profitably expended through the agency of the voluntary associations of the profession. Dr. Bruce, indeed, has declared, during the discussions in the Branches of the British Medical Association on the report of the Constitution Committee, that in his opinion the General Medical Council is the proper body for dealing with such matters. Dr. Bruce appears in this and in some other respects to overlook the primary fact that the Council is a creature of Parliament, and more or less subservient to the Privy Council. Is not this a fatal disqualification for its assuming such functions as he desires it to undertake? The words of Sir James Paget addressed to the British Medical Association at Worcester appear pertinent in this matter. "I hold that our great anxiety, our great strife, should be to be a self-governed profession, to know our own wants and not to go to others to help us; to find out the remedies for ourselves; to find out by careful patient controversy and mutual concessions how we may without any external help bring about the results which the best and the largest number of us wish for. Let us be, as all highly cultivated persons should be, self-governed. It tells of feebleness, of cowardice and want of self-reliance, when we want to go to any Parliament living to help us." Reserving, as the great orator himself would have reserved, the need of going to Parliament to remove fetters which Parliament has imposed, or to prevent the imposition by Parliament of fresh disabilities, upon us—this states clearly the case for looking to voluntary associations rather than to State-created authorities for every work which has not clearly and definitely been assigned to the latter. It is for such reasons that the tendency shown in the present election to extend in all directions the scope of the Council should in the best interests of the profession be restrained.

## THE REPORT ON THE WORKING OF THE REFUGEE CAMPS.

In another column we have made an attempt to reduce to something like order and method the miscellaneous and undigested information contained in "the reports, etc., on the working of the refugee camps" recently issued. The statistical tables given on pages 1629 and 1630 will serve to give some idea of the heavy mortality in these camps. Owing to exigencies of space it has been necessary to confine attention to the Transvaal camps, in which, as was previously shown, the children's death-rate has been higher than in the camps in Natal and Orange River Colony. On an average the number of daily sick per 1,000 persons in each camp varied from 173 in August in the Vereeniging Camp (about one out of every six persons in the camp on the day in question) and 210 in August in the Heidelberg Camp (about one out of every five) down to 2 in every 1,000 in Klerksdorp Camp in May and June, and 1 in every 1,000 in the Krugersdorp Camp in July.

The causes of these great variations in the amount of sickness in the different camps are discussed in the special article on page 1629, and the new facts tend to confirm the conclusions stated in the article published on November 9th (pages 1418-20). Measles of a particularly malignant type has prevailed. Its fatality has doubtless been increased by the exhausted and semi-starved condition in which many of the Boers and their children have arrived at the camps. It has been impossible to isolate such cases in the camps; and the crude and ignorant and even mischievous methods of domestic treatment adopted by the Boer women have doubtless increased the evil, as have also the personal uncleanliness of the Boers and their fear of fresh air as well as of clean water. But, as previously pointed out, enteric fever and diarrhœa and dysentery have claimed a large toll of victims, and for the excessive amount of these the deficient sanitary control of the camps must be held in a large measure responsible. After giving due weight to the difficulties in preventing the Boers from fouling the soil about their tents, the more favourable experience of some of the camps suggests that there has been laxity of administration in some cases.

A large allowance must be made for the enormous difficulties that must have been encountered. A hundred or more refugees may be introduced into a camp on a single day; and it is difficult to improvise the necessary sanitary arrangements for them, especially when the staff is inefficiently small. But if the dense aggregation in camps is to be permitted, it is essential that this aggregation shall take place under the best possible conditions, and that no expense or trouble shall be saved in securing this end. The alternative and, from the sanitary point of view, the better plan is to form a large number of smaller camps on carefully selected sites, to insist on the utmost cleanliness of soil and of the interior of tents or other dwellings. These requirements are doubtless difficult of attainment, but that they can be fulfilled appears to be proved by the favourable experience of some of the camps.

The fact that the mortality in these camps, taken as a whole, has been very high, is being used to inflame the spirit of hostility to this country, which has been aroused by the persistent misrepresentations of some sections of the foreign press, and by a certain set of politicians in this country to support their charges that the war is being carried on by "methods of barbarity." It has now been shown that the administration of some of these camps permits an undue prevalence of preventable diseases. For the honour of this country, and for the sake of humanity, the responsible Minister, whether he be the Secretary of State for War or the Colonial Secretary, should at once see that a sufficient staff of medical officers with special knowledge and experience in sanitary administration, and armed with the necessary powers, is appointed without delay to superintend the measures which must be taken. When this matter was first raised the War Office, to pacify public opinion, resorted to the expedient of appointing a Commission of ladies to visit the camps. This has not, as far as can be seen, accomplished anything; the appointment of such a jury of matrons savours of mediævalism, and should now give way to the application of modern methods.

## THE CLERGY AND CHRISTIAN SCIENCE.

The clergy as a class are rather inclined to regard th medical profession with jealousy. There may often b noted in them a tendency to dabble in physic, and not in

frequently they show an undisguised sympathy with quackery. Possibly all this is to be explained by atavism, for among many ancient peoples the practice of the healing art was a part of the ministry of the priesthood, and till late in the Middle Ages medicine was regarded by the ecclesiastical authorities as falling within their sphere of jurisdiction. At the present day the intimate union which formerly existed between the medicine of the soul and that of the body has been revived in a new form under the name of Christian Science. Mrs. Eddy, however, claims a much larger authority in both these domains of practice than any priest-physicians or prelates have ever done. She heals—as we understand her—and this is one of the few things in her oracular utterances that is intelligible to the average man—by virtue of the same power that dwelt in the Founder of Christianity. A full account of her teaching as far as it relates to the healing of diseases has already been given in the British Medical Journal. As long as Christian Science was looked upon as nothing more than a form of quackery not much notice was taken of it by the clergy, but now that it is recognised to be in fact a new religion, it is beginning to flutter the ecclesiastical dovecots. To what extent this epidemic of folly—for it does not even rise to the dignity of a superstition—is prevalent in this country we are not in a position to say. It is known, however, that it has a considerable body of adherents, chiefly among fashionable or would-be fashionable women in London, and it has recently been stated that it is spreading rapidly in East Anglia. Lord Dunmore, the eldest son of the Lord Lieutenant of Norfolk, is a devotee of such fervour that, we understand, he has dedicated a volume of verse "by special permission to the Rev. Mary Baker G. Eddy." East Anglia, as Mr. Havelock Ellis has shown, is in a special manner the cradle of English genius, and genius is according to Lombroso, a form of degeneracy. We do not suggest that the prevalence of genius and the prevalence of Christian Science stand to each other in the relation of cause and effect; we merely indicate a coincidence which may supply a hint to some future student of the philosophy of quackery. The most interesting point to us in connection with the matter is that the increase of Christian Science in the Eastern counties has moved the Dean of Norwich to make a public announcement that he intends to take the field against this new rival of orthodox theology. We get so little help from the clergy in our warfare against quackery that we gladly welcome the aid of so doughty a champion. The claims of Christian Science as a method of healing—so far as it is not rank imposture—rest entirely on a spiritual basis; if this be destroyed, the foundation will be cut away and the superstructure of quackery will fall to the ground. We therefore wish all success to the Dean of Norwich in his enterprise, and hope that many of his brethren will imitate him in "addressing themselves controversially to the whole subject."

## A POLICY OF "THOROUGH" IN RELATION TO CONTRACT PRACTICE.

A correspondent has written to express the opinion that there is a considerable body of members of the Association who are opposed to the principle involved in club practice irrespective of the questions of adequacy of payments ordinarily made, or the suitability of some persons claiming attendance as club patients. We have no present means of ascertaining the number of members holding such views, but can readily believe that they are many. It is, at all events, plain to observers of current professional opinion that the rupture between the Friendly Societies and the profession is steadily increasing in extent and gravity. That which at first on the medical side was merely a sense of soreness in a few localities as to the spirit of aggression and encroachment on traditional bounds thought to be manifested by the local clubs, now appears to be developing into a determination spreading throughout the profession to institute a thorough inquiry into arrangements which for generations have passed without question. In this evolution a definite stage was reached by the minds of many thoughtful practitioners, watchful of the signs of the times, when the spokesmen of the Friendly Societies in the recent abortive negotiations took up a position of uncompromising hostility to the principle known, perhaps not very happily, as that of the "wage limit." The members of the medical profession claimed the right to dispose of their labour on their own terms. The Friendly Societies replied in effect, "You must attend at club rates every person, irrespective of sex, age, wealth, or rank, whom we in our absolute discretion think proper to place on your list of club patients." The effect of this declaration undoubtedly was that many moderate men previously desirous of compromise became satisfied of the impracticable and tyrannous disposition of the clubs, and began to inquire on what basis the whole system rested—what obligation rested on the medical profession that they should undertake this work on such or, as then came to be asked, on any terms. There appeared no ethical obligation on medical men, individually or as a body, to accept club appointments. Since the Friendly Societies have hotly repudiated the suggestion that there is an element of charity in the arrangement, the only reason that can be found for continuing the system is expediency. But this reason in turn crumbled away in the opinion of many on closer examination, as our columns have shown. At most the expediency only applied to the individual practitioner holding a club, not to the profession as a whole. The whole matter was one of competition, the clubs being found helpful to many practitioners in the struggle for practice with their competitors. To the profession as a whole no benefit appeared; the system, in fact, tending, in the opinion of some, to lower the professional standards of duty. Recently this inquiring spirit has taken the last step, and former club surgeons, like Dr. Larking and Mr. Moxon, have given us their reasons for doubting the advantage gained even by those holding such posts. The profession is thus led to ask, in the words of a correspondent in this Journal, "Why should medical men take upon themselves the risks and other burdens of what is in effect a system of insurance?" "Why should not Friendly Societies provide their own insurance against this as against the other risks of sickness, the arrangements to this end being a matter solely between the member and the Society, to which the medical officer should be in no way a party, he being paid for his attendances in the ordinary way by fees for work done?" Such are the questions now being raised. If, through the contemplated reorganisation of the British Medical Association, a really representative opinion on the whole subject of contract medical practice can be obtained after discussion, there can be little doubt that such far-reaching views as we have indicated will be put forward by capable advocates. It also seems clear that no effective settlement between the medical profession and the Friendly Societies can now be expected until the matter has been fully discussed from every point of view within the profession itself.

## THE HEALTH OFFICER AND THE PRACTITIONER.

We still hear occasionally complaints from men in practice of somewhat thoughtless acts on the part of their public health colleagues which seem to indicate, to say the least of it, a certain amount of indifference to the susceptibilities of those in ordinary practice, which certainly ought not to exist in members of the same profession. One correspondent, for instance, writes:

Some cases of scarlatina are notified. The county medical officer of health comes down to the place unknown to the medical men in attend-

ance, sees all the cases, and then tells residents in the village that he believes them to be only cases of German measles. The following day, when the medical attendants visit their patients, they are told they have made a mistake in their diagnosis, for the county medical officer of health has said so.

There is clearly something wrong here. No doubt it is difficult for a man, taking, we may suppose, lunch with some friend, who, anxious about the safety of his own family, pesters him with questions about the cases in the village, to avoid saying something which might be interpreted in the way our correspondent's informant has interpreted the words used. There is all the more need, therefore, for the health officer—whom we may, of course, acquit of any intention to injure the practitioner - to follow the ordinary rule of the profession, and at once to communicate directly to the practitioners in attendance any reasons he may have had for differing from them as to the exact nature of the disease. How far this particular health officer was justified in visiting the patients at all in the absence of their own attendants we are not in a position to say. Possibly it was as candidates for an infectious hospital, in which case it might be necessary that he should assure himself of the correctness of the diagnosis before exposing them to another possible infection, or the patients in the ward to the risk of contracting a second disease. Where possible it is obviously best for the medical officer of health to advise the medical attendant of his visit, and give him the chance of meeting him. In very large areas this is not always practicable. In any case there should be the greatest care to say nothing that will commit him to an opinion contrary to that of the practitioner until the latter has been communicated with, and has had the opportunity of seeing the relatives of the patient again. The intimation of any difference of opinion should come from the regular attendant. It is not, of course, ordinarily the duty of the health officer to see patients himself at all. Isolation should, we presume, in the case cited be carried out, even were the illness merely German measles, and, if there were no question of others suffering from the mistake, it was scarcely incumbent on the medical officer of health to correct his colleague's diagnosis, even if he thought it wrong. Another correspondent informs us that he notified a case of typhoid fever to the district medical officer of health, and adds:

He called at the house, and asked to see the patient, and took a specimen of her blood for the "Widal" reaction. I told him at the time that he had no right to do this, but he informs me that he has a legal right to do so.

In this case there seems to have been some communication between the two practitioners and the question referred to us, we understand, is not so much the wisdom of the visit as the legality of the removal of the blood. Here we must again remember that the medical officer of health is not by his office a consultant called in to settle a case of doubt; he is the executive officer and adviser of the sanitary authority. It is often highly desirable that a question of diagnosis should be settled and, in the absence of a consultant, he is often gladly welcomed by the practitioner as an expert in fevers. His office, however, in ordinary circumstances gives him no right to examine a patient. What we have said about cases to be removed to hospital applies equally here. On the other hand, we do not suppose that in either of these cases the medical officer for a moment dreamt of giving any offence or causing any pain to the medical men in charge. Evil, the poet tells us, is wrought from want of thought, and this is our excuse for dealing at such length with what may appear such a small matter. If all medical officers will observe in their relations to other practitioners the well known golden rule, as we believe most of them try to do, we feel sure that they may generally count in return upon receiving every assistance from their brethren, even should they wish to bring to bear upon the case the latest developments of scientific research.

## THE COLONIAL MEDICAL SERVICE.

We understand that the attention of the Colonial Office is at the present time being directed to the subject of the Colonial Medical Services, and as our readers are aware the matter is also being considered by a Committee of the Council of the British Medical Association, which was reappointed at the last meeting of the Council. In trying to formulate a scheme for dealing with so large and difficult a subject, and one presenting so many conflicting phases, it would be well that it should deal only with the principles of organisation, and leave details to local authorities in the Crown Colonies and Protectorates. The Service at present cannot be said to rank as one of the great public services, for it is a mere collection of units, each unit being practically a law unto itself. In the colonies in which the service exists the medical officers are frequently appointed locally, they are paid in accordance with the relative pay of other public servants in the particular colony in which they work, without reference to pay, grade, or position of medical officers in other colonies. The lines upon which improvement ought to proceed should be somewhat as follow: (1) That there should as far as possible be one portal of entrance by public competition. At present there is no competition for the service, but medical men are nominated at home and abroad to fill vacancies as they occur; a system altogether at variance with that followed in respect of other great public services and one not calculated to elevate the service in the opinions of the profession or the public. (2) Medical officers in the Colonial service should be graded and given titles according to the position they hold in respect of their period of service. (3) All members of the service should be required to obtain a certificate of attendance and efficiency from either the London or the Liverpool School of Tropical Medicine. Attendance at one of these schools should certainly be insisted upon before the medical officer proceeds abroad, or if already in the service study leave ought to be granted for the purpose of attending at one of these schools before promotion is sanctioned. No attempt to equalise pay, duties, leave, etc., is at present likely to meet with success, as the conditions vary so greatly. If only a beginning can be made towards an organisation of the service upon the basis of the other public services a great step will have been taken, and we hope that the work of the Colonial Office in this direction will serve to allay a great deal of the dissatisfaction in connection with colonial medical work which from time to time comes to our notice.

## BALDNESS AND BREATHING.

Of the making of theories as to the causation of baldness there seems to be no end. Heredity (which only throws the difficulty back a generation or two); the hard-rimmed hat of an artificial civilisation; the ubiquitous microbe, like time, *edax rerum*: gaslight; and the wearing of beards which by derivative action are supposed to take unto themselves the nourishment intended by Nature for the scalp—these are but a few of the hypotheses framed by ingenious persons, who do not follow the excellent example of Newton. The view most favoured by bald men is that which attributes the premature loss of their hair to excessive demands made by the working of a too active brain; but this theory is generally regarded as having no better foundation than Falstaff's plea that the huskiness of his voice was caused by the singing of anthems. A remarkable theory has recently been put forward by an American physician. His notion is that expired air contains organic matter which, if retained in the lungs and absorbed, blights the growth of the hair. He knows so much of this poison as to be able to give it a name, "trichotoxicon," though, to be sure, the name might by a captious critic be characterised as a question-begging designation. He has made experiments with it on animals and demonstrated

its toxicity to his own satisfaction. The fact that men are much more liable to baldness than women finds a ready, if not altogether convincing, explanation in the "fact" that, men being abdominal breathers, they do not empty their apical air cells: while, on the other hand, it is triumphantly pointed out that women, whose respiration is costal, develop little trichotoxicon, and hence have luxuriant hair. Consumptive patients, in whose consolidated cells the poisoned air cannot stagnate, are said to be markedly free from baldness, whilst in adults of both sexes, as fixation of the ribs comes on with advancing age, the tendency to baldness increases in direct proportion. If this theory is accepted, it is clear that the best means of preventing baldness would be the adoption of a good style of breathing. Now that this act, which used to be thought natural, has developed into a fine art, an appropriate system of "exercises" could doubtless easily be devised. It would be an interesting spectacle to see a number of gentlemen, whose heads are beginning to show the depredations of trichotoxicon, panting and blowing in the effort to expel from their lungs the "subtle thief" of hair. While we are on this subject we may refer to another "cure" for baldness which is said to emanate from the Oxygen Hospital, Fitzroy Square. This method consists in the application of oxygen. A large cap fits tightly round the head, and is supplied with oxygen from a bag which is slung over the patient's shoulders. It is worn for a few hours every day, and in even cases of absolute baldness is said to produce a more or less luxuriant crop of hair. We give this "with all reserve." The account of the procedure is quoted from the *Daily Mail*, an enterprising paper which might take for its motto *Semper aliquid novi*. But the *novum* is unfortunately not always *verum*.

## THE STUDY OF THE HISTORY OF MEDICINE.

An International Congress of Historical Sciences is to be held in Rome about the middle of April, 1902. A section has been allotted to the history of medicine and ancillary sciences. The President of the Section is Professor Piero Giacosa, who has issued a circular inviting those interested in such studies to attend "in a numerous and compact body, to justify the honour paid to this branch of study which has been placed on a level with others, and to fraternise with each other and with their colleagues of the other sections." The Section of the History of the Mathematical, Physical, and Natural Sciences, the President of which is Professor V. Cerutti, will hold some meetings in conjunction with the Medico-Historical Section for the discussion of subjects belonging to both fields of research. The German Society for the Study of the History of Medicine and the Natural Sciences which was founded at the time of the annual meeting of the Association of Scientists and Medical Practitioners, held at Hamburg last September, has already a membership of sixty, including Germans, Austrians, Hungarians, and Swiss. The Society has undertaken the issue of a periodical review of all publications on the history of the pure sciences and medicine. The first number of this review will appear in January, 1902. The President of the Society is Dr. Karl Sudhoff, of Düsseldorff, the well-known authority on Paracelsus; the Vice-President is Dr. Emil Wohlwill, of Hamburg. Among the members are Professor Kahlbaum, of Basel, and Dr. H. A. Peypers, of Amsterdam, the editor of *Janus*.

## VIOLETS AND CANCER.

Years ago preparations of violets used to be supposed to be efficacious in a number of diseases. Syrup of violets was used in this country within recent years, and it is mentioned in the thirtieth edition of the *Nouveau Formulaire Magistral*, by A. and G. Bouchardat (1894). The uses of violets are described at length in *The English Physician* of Nicholas Culpepper, "Gent. and Student in Physick and Astrology." The following details on violets are taken from a reissue of that work, dated 1792—more than a century after Culpepper's death—entitled *The English Physician; enlarged with three hundred and sixty-nine Medicines, made of English Herbs, that were not in any Impression until this. Being an Astrologo-Physical Discourse of the Vulgar Herbs of this Nation, containing a complete Method of Physic, whereby a Man may preserve his Body in Health, or cure himself, being Sick, for Threepence charge, with such Things only as grow in England, they being most fit for English Bodies.* It is herein stated (page 308):

Both the tame and the wild (violets) are so well known that they need no description. Time: They flower until the end of July, but are best in March and the beginning of April. Government and virtues: They are a fine pleasing plant of Venus, of a mild nature, no way harmful. All the violets are cold and moist while they are fresh and green, and are used to cool any heat or distemperature of the body, either inwardly or outwardly, as inflammations in the eyes, in the matrix or fundament, in imposthumes also, and hot swellings, to drink the decoction of the leaves and flowers made with water and wine, or to apply them poultice-wise to the grieved place. It likewise easeth pains in the head caused through want of sleep, or any other pains arising of heat, being applied in the same manner, or with oil of roses. A dram weight of the dried leaves or flowers of violets, but the leaves more strongly, doth purge the body of choleric humours, and assuageth the heat, being taken in a draught of wine or any other drink; the powder of the purple leaves of the flowers, only picked and dried and drank in water, is said to help the quinsy, and the falling sickness in children, especially in the beginning of the disease. The flowers the white violets ripen and dissolve swellings. The herb or flowers, while they are fresh or the flowers when they are dry, are effectual in pleurisy and all diseases of the lungs, to lenify the sharpness of the rheums and the hoarseness of the throat, the heat and sharpness of urine, and all the pains in the back or reins and bladder. It is good also for the liver and the jaundice, and all hot agues, to cool the liver and quench the thirst; but the syrup of violets is of most use, and of better effect taken in some convenient liquor; and if a little of the juice or syrup of lemons be put to it, or a few drops of the oil of vitriol, it is made thereby the more powerful to cool the heat and quench the thirst, and giveth to the drink a claret wine colour, and a fine tart relish pleasing to the taste. Violets taken or made up with honey do more cleanse and cool, and with sugar contrarywise. The dried flowers of violets are accounted amongst the cordial drinks, powders, and other medicines, especially where cooling cordials are necessary. The green leaves are used with other herbs to make plaisters and poultices for inflammations and swellings, and to ease all pains whatsoever, arising of heat, and for piles also, being fryed with yokes of eggs, and applied thereto.

It will be seen that violets were believed to be good for many complaints; but there is no mention of cancer. As to cancer, in vol. ii of Culpepper's *English Physician* (13th edition, 1812) no mention of violets is made in the paragraph treating of "a scirrhus and cancer," (p. 181). But extirpation by the knife or caustic is recommended should the tumour not yield to (mercurial, etc.) treatment.

Indeed, whenever this can be done with safety the sooner it is done the better. It can answer no purpose to extirpate a cancer after the constitution is ruined, or the whole mass of humours corrupted by it. This, however, is the common way, which makes the operation so seldom succeed. Few people will submit to the extirpation till death stares them in the face; whereas, if it were done early, the patient's life would not be endangered by the operation, and it would generally prove a radical cure.

This shows that violets had evidently proved unavailing even in those days, for it is fair to assume that violets were applied "to dissolve swellings" in accordance with the ideas then in vogue.

## DIPHTHERIA ANTITOXIN AND TETANUS.

It may be remembered that some months ago a painful sensation was caused in Italy and throughout Europe by a number of cases of tetanus which occurred in Milan and its neighbourhood in children who had been treated with diphtheria antitoxin. Twelve died and several others were dangerously ill. The serum was procured from the Sero-therapeutic Institute of Milan, and an investigation showed that the flasks of serum contained tetanus bacilli. The source of these micro-organisms was never positively

made out, but it is a suggestive circumstance that the Milan Institute is close to the Veterinary School, where there is a laboratory in which antitetanus serum is manufactured. Quite recently Dr. Belfanti, Director of the Institute, and Dr. Zenoni, who has charge of the preparation of serums there, were placed on their trial before the Milan Court for manslaughter. After the examination of numerous witnesses, including experts, the Public Prosecutor withdrew the charge, and the defendants were acquitted. It is a curious coincidence that quite lately a similar "regrettable incident" has occurred in America. Several cases of tetanus have occurred in St. Louis following the use of antidiphtheria serum furnished by the St. Louis Board of Health. Within six days eight children died and two were dangerously ill. According to the St. Louis correspondent of the New York *Medical News*, the first case was that of a child aged 5 years in the City Hospital, whose symptoms resembled meningitis so closely that the diagnosis of tetanus was not made until shortly before death. Others seem to have had atypical symptoms, but most of them showed the classical sign of lockjaw. One case at the City Hospital received an injection of tetanus antitoxin into the spinal canal, but without effect. Another received an intracerebral injection of tetanus antitoxin, also without effect. The city has manufactured its own antitoxic serum since 1894, the work being supervised by Dr. Amand Ravold. On August 24th a quantity of serum was taken from a certain horse, properly sterilised and tested upon guinea-pigs. This was distributed to practitioners throughout the city. On September 30th the horse was again bled. On October 1st the horse showed symptoms of tetanus, and was killed. The serum taken September 30th was at once destroyed, none of it having been distributed. Since the discovery of the infection of the serum all of it has been recalled, but between the time of its distribution and the time of its recall a considerable number of injections were made. The exact number is not known, and it is, therefore, feared that a few more cases of tetanus may develop. The Health Commissioner, Dr. M. C. Starkloff, has directed an investigation of the matter by Dr. B. Meade Bolton, Director of the Marion-Sims-Beaumont Pathological Laboratory of New York; Dr. E. C. Walden (Johns Hopkins), of the T. J. Milliken Company; and Dr. Carl Fisch, a pathologist of St. Louis. The local coroner is also conducting an investigation. The incident has naturally produced a scare, and the Philadelphia Board of Health has issued orders that all the antitoxin supplied by the city shall be tested to determine the presence or absence of the tetanus bacillus.

## THE QUEENSLAND "BLACK-FELLOW."[1]

Two bulletins on North Queensland ethnography, published recently at Brisbane by the Colonial Government, are two more specimens of the careful and conscientious work of Mr. Roth, who is rapidly adding to our knowledge of the very interesting, but, alas! fast disappearing "black-fellows." A paper on the Koko-yimidir language derives additional interest from the fact that this was the language of which Captain Cook obtained a short vocabulary in 1770. From a comparison of this with Mr. Roth's statements it is clear that the language is not, like those of many savage tribes, in an unstable and rapidly-changing condition; in fact, the discrepancies are but little greater than might be found between two lists taken down simultaneously by two observers. Of course a number of nouns have been added since 1770 to express new objects or ideas acquired by intercourse with white men. The language strikes one as being, on the whole, very well adapted to the needs of a people in the stage of civilisation of the Queenslanders. Words to express abstract ideas are of course wanting, but there are more generic terms than might have been expected. Thus there is a word for "thing," and words for "name" (in general), "tree" (in general), etc. The points of the compass, about which the ordinary British workman or woman is often ignorant, are accurately known to these people, who apply the idea and words connected with them extensively. Thus, though they have words for the right and the left hand, they prefer to speak of the north or the east side of the face, as the case may be at the time. The structure of the language and the etymology are generally clear and logical. In the latter the train of thought revealed is often analogous to that which our ancestors followed. Among notable points are the following. There is no passive voice. There are different suffixes in use to express the possessive case, according to whether the article possessed is or is not in its real lawful owner's actual possession. "Must" cannot be translated into Koko-yimidir, there being no compulsion exercised. There may be said to be five degrees of comparison—fairly good, good, better, very good, best. Left-handed is used to express the idea of "clever," the idea involved being that a man who can use either or both hands equally must be skilful. The verb "to be," in the sense of actual existence, is translated by the verb *una*, to lie down, for inanimate objects, and by *ning-gal*, to sit down, for animate objects. "Sit down" will be recognised as having passed into the vocabulary of Queensland squatters and bushmen. The industries of the races we (often with little justification) call savage, naturally die out when the cheap products of European civilisation become common. This is one of the great causes of the progressive degradation of the savage in contact with the white man. The Queensland black-fellow has a wide range of knowledge of vegetable and animal substances suitable for the making of string, bags, nets, etc., and he or she is very ingenious in ways of working and twisting these various sinews, thongs, and fibres; but with the introduction of cheap string and pottery this knowledge and skill will become useless and vanish away. Mr. Roth and his reverend coadjutors must have spent much time, labour and acute observation on the collection of material for their paper on the subject. It includes lists and names of all the materials employed, and descriptions of the processes in use, illustrated by a copious series of drawings showing these processes and their results. One can only rejoice that the aborigines of North Queensland have found in Mr. Walter Roth a person who will be not only a nominal and official but an actual and active protector; for sympathy as well as intelligence must have been needed in order to so thoroughly gain the confidence of these shy and child-like creatures. The German missionaries must belong to that high and conservative type of which were Moffat and Livingstone and Dugmore, not to that too common radical one which seeks first to destroy the whole of the dawning civilisation of its catechumens, and then finds that it has left nothing whereon to build anything better.

[1] *The Structure of the Koko-yimidir Language.* By Walter E. Roth, B.A., M.R.C.S., etc., Northern Protector of Aborigines, Queensland, with the assistance of Revs. G. H. Schwarz and W. Poland. Brisbane: Edmund Gregory. 1901. (Fcap. folio, pp. 35.) *String and other Forms of Strand: Basketry, Woven Bag, and Net Work.* By Walter E. Roth, etc. Brisbane: Edmund Gregory. 1901. (Fcap. folio, pp. 15. 18 illustrations.)

## THE MACCLESFIELD INFIRMARY.

A SOMEWHAT serious difficulty has arisen between the honorary medical staff and the governors of the Macclesfield Infirmary. The hospital is a general hospital, supported partly by public subscriptions, but mainly, as we understand, from the income of invested funds. It has two house-surgeons, senior and junior, and the difficulty has arisen in connection with the appointment of the junior house-surgeon. We learn from a statement drawn up by the honorary medical staff that the procedure heretofore followed in the appointment of a house-surgeon has been as follows: "All applications have been handed over by the governors to the honorary medical staff, with a request that they will select suitable candidates for election. The

medical staff then meet and carefully examine the applications, and by their professional experience and special knowledge of the duties to be performed select such candidates as they deem suitable for the post. The governors then proceed to elect one or other of these nominees." This is the procedure followed, we believe, in the vast majority of all voluntary hospitals, and it needs no argument to show that to the honorary medical staff should belong the duty of selecting from the candidates for the post that one who appears to them to be best qualified to discharge the duties of the office. A house-surgeon is the deputy of the honorary medical officer in his absence, and it is obvious that the efficient working of a hospital must to a great extent depend on the confidence which the honorary medical officers can feel in their resident deputy. On October 31st the honorary medical staff of the Macclesfield Infirmary received a communication from the Secretary enclosing the testimonials of three candidates for the post of junior house-surgeon. These applications were from one medical man and two medical women. On the following day the honorary medical staff met, and after carefully considering the three applications unanimously expressed the opinion that the medical man who had applied was the only suitable candidate. At the governors' meeting ten days later, it appeared that the male candidate had in the interval secured an appointment elsewhere. Dr. Averill, the representative of the honorary medical staff, after asking that their resolution should be read, proposed that no appointment should be made on that day, but that the advertisement for a junior house-surgeon should be repeated, the honorary medical staff undertaking to provide for the performance of the duties of that officer until the new appointment was made. The governors, however, proceeded to appoint one of the other candidates—a lady. As this course was considered to amount to a vote of want of confidence, Dr. Averill said that he was compelled with deep regret to hand in to the chairman the resignation of himself and all his colleagues. On November 25th a conference was held between the governors and the honorary medical staff, when it was suggested on behalf of the governors that the honorary medical staff should withdraw their resignation and discuss the matter *de novo*. Dr. Clarke, as the senior member of the staff, stated that he and his colleagues could withdraw their resignation only on condition that in future the governors should be guided as to the suitability of applicants for the post of house-surgeon by the advice of the honorary medical staff; that the services of the present junior house-surgeon should be immediately withdrawn and that the post be advertised afresh, the honorary medical staff undertaking to assist in the work of the infirmary until the appointment was made. Subsequently, after an appeal from the Mayor, the medical staff expressed their willingness, in consideration of a professional colleague placed in a difficult situation, to continue to work with her for another month on the condition that the honorary medical staff were called to treat such cases as they deemed it undesirable for a woman to undertake. This proposal was not accepted, and there the matter rests for the moment, one of the governors stating that, "no matter what the expense, they must obtain the services of an experienced man until they had breathing time to make further arrangements." The meeting was adjourned for a week, and we hope that in the interval the governors will see the wisdom of accepting the advice of the honorary medical staff of the infirmary. It appears that the last junior house-surgeon was a lady, and the medical staff have stated that from their experience they have come to the conclusion that the duties of the post are not of such a nature as render it possible for a woman to discharge them efficiently. This being so, we believe that the medical profession at large will approve of the conduct of the honorary medical staff in acting upon the opinion which they have deliberately formed.

## THE TEACHING OF CRIPPLED CHILDREN.

Mrs. Humphry Ward published a short time ago an interesting account of what had been done to provide for the education of children suffering from chronic maladies, such as spinal caries, tuberculosis of joints and bones, infantile paralysis, heart disease, and other crippling affections, which while they render the sufferers unfit for the struggle of ordinary school life, do not prevent their learning under favourable conditions. Mrs. Ward pointed out—and every surgeon will agree—that the intelligences of many of these children are very bright and active, and well repay culture. It is evident that the School Board for London recognises its responsibility for the education of the crippled as well as the sound child, as it has taken over the cripples' school, which was started in 1899 at the Passmore Edwards Settlement in Tavistock Place, and has opened two other schools for physically defective children in Maida Vale and Bethnal Green, and more are to follow. Many of these children are out-patients at various hospitals, or are looked after by that excellent society the Invalid Children's Aid Association, but, as Mr. Muirhead Little has pointed out, little or nothing has been done to teach the in-patients of those children's hospitals in the wards of which chronic cases remain for months. In some of the orthopædic hospitals in America regular instruction is carried on by a paid teacher, and a beginning has been made in London this year by the appointment of a trained lady at the National Orthopædic Hospital. Liverpool has not been behindhand in this matter, for at a convalescent home at West Kirby, where a wing is devoted to the treatment of chronic cases in children for more than a year the inmates have been taught by a voluntary staff of ladies; and we understand that the Liverpool School Board is about to take over the work, and will not only appoint and pay a trained teacher to this home, but will bear part if not all the expense of a newly built schoolroom ward. A similar work is being undertaken by the Board at Walton, near Liverpool. The London School Board has not yet decided to take any part in the teaching of children in the wards of hospitals or homes, but it seems probable that it will do so before very long.

## THE UNIVERSITY OF LONDON.

The Senate of the reconstituted University of London has been sitting for a twelvemonth, and hitherto no official announcement of the fruits of its labours has been forthcoming. We therefore welcome the appearance of No. 1 of Volume I of our new contemporary, the *London University Gazette*. It is the opprobrium of educational papers that they tend to be so academic as to be deadly dull; and we confess we arise from perusal of the 11 pages of the new *Gazette*, "published by authority," with considerable disappointment. It appears to be in the main a kind of summary of the minutes of the meeting of the Senate on October 23rd, coupled with an introductory statement of the most meagre description, and a calendar of university proceedings. When we recall the half-century and more of educational progress in which the University of London has played a distinguished part, and the dialectical contests waged for a dozen years over its constitution, we are forced to lament over the grand opportunity which the editor has missed of recording, in an attractive form, the story of a really great institution. We have searched its folio pages for information on the fundamental question, so full of interest to medical students and teachers, whether there is to be in the future one matriculation, or two, or twenty; whether the portal of the University is to be by way of the same examination test for all alike, or whether "other tests" darkly hinted at in the statutes are to be accepted in lieu of examination. Instead of light and leading on this crucial question we are put off with the Commemoration of King Alfred and an address to the Yale University. Undaunted we directed our investigation to

the discovery of where and when the classes of the teaching side of the University are being held and by whom they are conducted. We thought we had discovered some faint indication of such development in the department of practical Chinese under Mr. Brown of Kew Kiang "with native assistants from Nanking," but we are officially informed that this information is subject to correction, and we close our number 1 of the *London University Gazette* with a large-typed announcement of "Changes of Style and Title" of the new judge of appeal and His Majesty's Honorary Surgeon-Oculist. It appears to be intended to publish twenty numbers a year and there are to be supplements containing examination lists, and "approved advertisements," but none appear to have been approved for the first number. The annual subscription to the *Gazette*, including postage, is to be 5s., and single numbers are to "be sold at 2d. together with the actual postage in each case"; in the case of the first number it is 1d.

## THE *MIDLAND MEDICAL JOURNAL*.

THE *Midland Medical Journal*, the first number of which has recently appeared, is described on its title page as "the official organ of the Birmingham and District General Practitioners' Union." The editor is James Neal, L.R.C.P. Lond., M.R.C.S., the sub-editor F. J. V. Hall, M.B., Ch.B. In addition to these gentlemen the Editorial Committee includes the following: E. D. Kirby, M.D.: H. R. Leech, M.D.; W. J. Notley, M.D; E. W. Parsey, M.A., M.B.; H. W. Pooler, M.B., Ch.B.; G. Stead, L.R.C.P.Lond., M.R.C.S. It may be recalled that the Union, of which the new journal is the organ, was formed at a meeting of general practitioners held at Birmingham on July 7th, 1899. The Union has now a membership of 252. Its objects, which it is the special function of the *Midland Medical Journal* to promote, are as follows: (*a*) To provide an effective organisation for the purpose of dealing with all matters affecting the interests of general practitioners: (*b*) to promote union and good fellowship amongst neighbouring practitioners; (*c*) to endeavour to establish, as far as possible, an improved scale of fees; (*d*) to discourage advertising of every kind, and other unfair and unprofessional competition; (*e*) to promote more satisfactory relations between the different branches of the profession; (*f*) to consider and take action upon all legislative proposals calculated to affect the interests of general practitioners; (*g*) to endeavour to obtain increased representation for general practitioners on the General Medical Council and other public bodies; (*h*) to endeavour to remedy, as far as possible, the abuses of hospitals and dispensaries; (*i*) to establish a Medical Club House, with such accommodation as may be considered desirable for the purposes of the Union. But the journal will concern itself with scientific as well as medico-political matters, and the first number contains excellent original papers by Dr. Arthur Foxwell, Mr. Hamilton Williams, and Dr. Sydney Short. Sir James Sawyer, who was the first editor of the *Birmingham Medical Review*, contributes a graceful foreword in which he heartily wishes success to the new periodical. In that wish we cordially join.

## THE NEW DEAN OF THE PARIS MEDICAL FACULTY.

SOME time ago Professor Brouardel, who has been Dean of the Paris Faculty of Medicine for five consecutive periods of three years, intimated his intention of not offering himself for re-election. Accordingly, a meeting of the Members of the Faculty, including professors and *agrégés*, was held on November 14th for the purpose of electing a successor. The choice fell on Professor Debove, who received 48 out of 56 votes. Dr. Debove was born in Paris in 1845. He became *interne* in the hospitals in 1868, took his doctor's degree in 1873, became *chef de clinique* in 1875, physician to the hospitals and head of the clinical laboratory of the Hôtel Dieu in 1877, and Professor of Medical Pathology in 1890. He was elected a member of the Académie de Médecine in 1893, and in 1900 he succeeded the late Professor Potain in the chair of clinical medicine. Professor Debove was a favourite pupil of Charcot, and is the author of numerous papers on neurological subjects and of monographs on lavage of the stomach, the treatment of purulent diseases, etc. In collaboration with Dr. Rémond he published a treatise on diseases of the stomach, and in conjunction with Dr. Achard a handbook of medicine. He has also gained a considerable literary reputation by interesting studies on Molière's doctors, the life and work of Charcot, etc. Professor Debove is the fifteenth Dean of the Paris Faculty of Medicine.

## MR. JAMES HARDIE OF MANCHESTER.

MR. JAMES HARDIE, F.R.C.S., who has recently retired from the acting staff of the Royal Infirmary, Manchester, was entertained at dinner by his old house-surgeons. Mr. Hardie had been full surgeon to the infirmary for eighteen and a-half years, and of the 37 house-surgeons who had served under him during that period, 22 were present at the dinner. Dr. Joseph Clegg (Urmston) presided, and in proposing the health of the guest of the evening, referred in most suitable terms to the very high esteem in which both as a surgeon and a friend Mr. Hardie is held by all his former assistants. Mr. T. C. Orford acted as secretary.

## ASSOCIATION OF PUBLIC VACCINATORS.

WE are requested to state that at a meeting of the Council of the Association of Public Vaccinators of England and Wales, held on November 22nd, the publication of a notice in the *Standard* by the lay organising secretary was considered, and the Council expressed its regret that such a communication should have been made to the Press without its knowledge or sanction.

THE subject of the Bradshaw Lecture, to be delivered before the Royal College of Surgeons by Mr. T. R. Jessop, F.R.C.S., on Wednesday, December 11th, at 5 P.M., is Personal Experiences in the Surgical Treatment of Certain Diseases.

PROFESSOR CORFIELD, of University College, London, the Consulting Sanitary Adviser to His Majesty's Office of Works, has been awarded the Bronze Medal of the Royal Society of Public Medicine of Belgium, as a recognition of his devotion to public health work.

PROFESSOR W. J. SIMPSON, who recently returned from South Africa, where he acted as a member of the Commission on dysentery and enteric fever, and as expert adviser on plague, has, we understand, been appointed to advise the Government of Hong Kong as to the continued prevalence of plague in that colony, and is proceeding to Hong Kong this week.

AT the meeting of the Pathological Society of London on Tuesday next, Mr. H. T. Butlin will open a discussion on Lymphadenoma in its relation to Tuberculosis. Among those who are expected to take part in the discussion are Dr. F. W. Andrewes, Professor J. MacFadyean, Dr. Lee Dickinson, and Dr. Foulerton.

WE are informed by the Honorary Secretaries of the Prince of Wales's Hospital Fund for London that the King has intimated his pleasure that this Fund, which was established by him when Prince of Wales, shall henceforth be known as King Edward's Hospital Fund for London. The change of name will come into effect on January 1st, 1902.

# GENERAL COUNCIL
OF
# MEDICAL EDUCATION AND REGISTRATION.

*WINTER SESSION, 1901.*

## REPORT OF PROCEEDINGS.

*Tuesday, November 26th.*

Sir William Turner, K.C.B., in the Chair.

The seventy-second session of the General Medical Council was commenced on Tuesday, November 26th, at the offices of the Council, 299, Oxford Street, W.C.

The President stated that he had received a letter from Sir William Gairdner regretting that, owing to a recent illness, he would not be able to be present. He had also received a telegram from Mr. W. H. Power saying that owing to the pressure of public health work he would not be able to attend.

### President's Address.

*Election of Direct Representatives.*

Gentlemen,—In accordance with the provisions of the Medical Act, 1886, the period of office of two of the representatives of the registered medical practitioners resident in England, and of the representative of the registered medical practitioners resident in Scotland, expires at the end of the year, and arrangements have had to be made by the office for a new election. After consultation with our solicitor, and following as nearly as possible the practice of previous years as regards the date, I, as returning officer, advertised on Saturday, November 2nd, that vacancies would occur, and I issued the precepts to the English and Scottish Branch Councils on November 19th.

Nomination papers for four candidates for the representation of the practitioners in England, and of three candidates for the representation of the practitioners in Scotland have been received, and the issue of the voting papers has been completed this day. Wednesday, December 4th, is the last day for the return of the voting papers, after which the votes will be counted and the poll declared by the returning officer on Tuesday, December 10th. The Council will, I have no doubt, recognise that the work imposed by the election during the first ten days in December will tax the resources of the office and will require close attention on the part of the staff.

*Retirement of Dr. Glover.*

Of the three direct representatives of the profession whose five years period of office is about to expire, Dr. Bruce and Mr. George Brown again seek the suffrages of their constituents. Dr. Glover, on the other hand, acting under medical advice, has decided not to offer himself for re-election. The Council will join with me in expressing regret at the cause of Dr. Glover's retirement, and in wishing him a speedy restoration to health. We may feel confident that his interest in the public life and work of the profession, in which for so many years he has taken an active part, will continue, and that, although no longer sharing in our discussions, he will be keenly alive to, and possibly may be a critic of, our proceedings. Personally, I should like to state that during the period of fifteen years in which we have sat together on this Council, although we have often differed on questions of procedure and policy, I have received from him unfailing courtesy and consideration.

*Reciprocity with Malta.*

At the meeting of the Council on June 5th a report by the Education Committee on communications from the Privy Council relative to degrees in medicine granted by the University of Malta was under consideration. The Committee reported, provided that the year of probationary practice in Malta, proposed by the Maltese Government in Article 5 of the Ordinance were not required from practitioners on the *Medical Register* of the United Kingdom who might apply for licence to practise in Malta, that the Council should inform the Lord President that the requirements for the medical degrees of the University of Malta and the Ordinances under which practitioners registered in the United Kingdom are permitted to practise in Malta are such that Part II of the Medical Act, 1886, might properly be extended to Malta as a British possession. The Council approved of the recommendations in the report of the Education Committee, which I forwarded to the Lord President. In reply we have been informed that an Order in Council was passed on September 26th applying Part II of the Medical Act to the island of Malta, and that previously to the passing of the Order, Article 5 of the original Ordinance was repealed and the Ordinance re-enacted with the amendment suggested by the General Medical Council.

Two applications from Maltese graduates for registration on the Colonial List have been received.

*Reciprocity with Italy.*

In connection with applications from Italian practitioners to be placed on the Foreign List on the *Medical Register*, I wrote in pursuance of a recommendation by the Education Committee, to ask the assistance of the Lord President of the Privy Council in procuring copies of the existing regulations for medical qualifications in Italy. Information on this subject has now been supplied, and the Executive Committee is to report on the matter. I may state that applications for registration have been received from five graduates of Italian Universities.

*Penal Powers Bill.*

The Bill for the Increase of the Penal and Disciplinary Powers of the Council and of the Medical Authorities in the United Kingdom, prepared under the instructions of the Council, was introduced into the House of Commons by Sir Richard Jebb on June 18th, and ordered to be printed. It did not proceed beyond the first reading.

*Inspection and Visitation of Examinations.*

The inspection of Final Examinations by our Inspector, Sir George Duffey, acting along with Mr. Bryant at the University of Dublin, with Dr. M'Vail at the Royal University of Ireland, and with Dr. Payne at the Conjoint Examinations of the three Medical and Surgical Corporations in Scotland, has now been completed.

In conformity with the requirements of the Medical Act, 1886, and the Standing Orders, the reports prepared by the Inspector and the member of Council associated with him as Visitor have been forwarded to the bodies whose Final Examinations have been inspected, for their observations and remarks. These, I understand, have not yet been received excepting in one instance, and that only this morning, so that the reports are not ready for distribution among members of Council, nor can the Examination Committee report respecting them.

Dr. Herringham, the Council's Inspector specially appointed to be present at the examinations of the Apothecaries' Hall, Dublin, has expressed his willingness to act for another year. As the whole of the Medical and Surgical Corporations in Ireland will have their Final Examinations inspected next year by the General Inspector and the Council's Visitor, the Council should consider whether the Special Inspector should be required to attend the Final Examination of the Apothecaries' Hall on the occasion when the General Inspector is present. Should his attendance not be considered necessary, a motion to this effect must be submitted to the Council in the present session.

*Sale of Scheduled Poisons.*

The Council will have before them on Wednesday seven registered practitioners, residing in the West of Scotland, who are charged with habitually employing for the sale of schedule poisons persons not qualified to act as chemists or pharmaceutical assistants, and thereby causing such persons to commit breaches of the Pharmacy Act. The Council will recollect that a year ago a case of this kind was for the first time brought under their notice, and that the practitioner in question was admonished, the gravity of the charge was pointed out to him, and the case was adjourned to the June session of the present year. I was then authorised to say that the offence was grave and fraught with danger to the public, but as the case was the first to be brought before the Council, and in

view of the assurance given by the practitioner that he would discontinue this conduct, the Council decided to proceed no further with the charge. As regards the practitioners whose cases are now to be investigated, it is due to them to state that the offences alleged against them were committed before the Council had pronounced its judgment on the case above alluded to, so that they could not have been informed at the time how serious a view the Council took of an offence of this nature. It will be for the Council to consider whether, after these cases have been disposed of, the time has not arrived to issue a definite declaration on this subject for the information of the profession generally.

*Medical Aid Associations.*

Another penal case to be brought before you bears on the question of the employment of a registered medical practitioner by a medical aid association, which it is alleged systematically practises canvassing for the purpose of procuring patients.

*The Addendum to the Pharmacopœia.*

The Pharmacopœia Committee will report on the steps taken to secure the adoption of the Addendum by India and the Colonies, and on a proposal by the Government of India to purchase 3,500 copies, subject to an alteration in the formulæ of a few preparations.

*Reports of Committees.*

The Public Health Committee, the Examination, and doubtless some other Committees will report on matters appertaining to their respective departments.

Of the subjects to be reported on by the Executive Committee, I may especially refer to proposed modifications in the Standing Orders which govern the judicial procedure and decisions of the Council, and the recommendation for the approval of the Council of a list of scientific institutions at which medical study may be commenced.

*Preliminary Education.*

The Education Committee has had under consideration several important subjects. We may look for a report on the steps which they have taken in order to carry out the recommendation of the Council that the standard of preliminary examination required by some of the examining authorities should be raised.

The Council has asked the Education Committee to consider and report on the questions involved in motions proposed at the June meeting by Dr. Bruce and Mr. Ball, in which it was suggested that, in addition to the examination on the subjects of general education, on which the existing arrangements for the registration of students of medicine are based, a second or scientific registration of students who have passed in chemistry, physics, and biology should be established by the Council, and that the period of medical study should be four years after the second registration. In the discussion of this new question I hope that both the Education Committee and the Council will bear in mind the paramount importance of the Council not losing its hold on the standard of general education to be required from students of medicine.

I can recollect the day when some of the leading examining bodies in our profession gave their diplomas to candidates whose general education had never been tested, and others did so when the test was of the most meagre character.

The recommendation that all intending students of medicine should pass an examination on subjects of general education, and the consequent establishment of a *Students' Register*, formed an important epoch in the history of the Council, and in the educational progress of the profession. Although no special statutory powers had been conferred on the Council to require the registration of students, all the examining authorities were consenting parties, and agreed not to admit candidates for professional examinations unless their names had been previously placed on the *Students' Register*. Acting along with the qualifying bodies the Council has been able to require a standard of general education from entrants to our profession, which, in so far as can be provided by an examination test, secures that they possess a school education sufficient to enable them with intelligence to engage in professional study. The period of professional education has also been extended to five years, and an influence for good has been exercised on the training of the younger generation of practitioners. I regard with apprehension a movement which, by the withdrawal of one or more of the qualifying bodies from an agreement in which all had concurred, would destroy unity of action in the matter of students' registration, and would nullify the influence of the Council.

*The Office of President.*

In conclusion, I would remind the Council that on April 5th, 1898, I was elected to the honourable position of your President. No limitation or condition is expressed in the resolution to which you arrived, but it appears to me that I ought to regard the resolution as expressive of the intention of the Council that I should be elected for the unexpired period of my then tenure of office as the representative of the University of Edinburgh on the Council, and not for the full period of five years contemplated by the Act of 1886. As the five years for which I was appointed by the University in 1896 expire on December 18th, and as the Medical Act, 1886, requires the President to be a member of the Council, my period of office as President should in my judgment, although the University has again chosen me as its representative for another period, terminate on that day. As it would be highly inconvenient for the Council to meet on December 18th for the special purpose of choosing a President, I intend to place my resignation in your hands at the present meeting of the Council, so that before you separate you may proceed to the election of a President for another period.

*Vote of Thanks.*

Dr. MACALISTER proposed, Mr. BRYANT seconded, and it was carried:

That the President be thanked for his address, and that he be requested to allow it to be entered on the minutes.

COMPETITIVE EXAMINATIONS, 1901.

Dr. HERON WATSON moved, Sir CHRISTOPHER NIXON seconded, and it was carried:

That the table showing results of competition held on August 5th, 1901, for commissions in the medical staff of the Royal Navy be received and entered on the minutes.

It was then moved by Dr. HERON WATSON:

That the thanks of the Council be conveyed to the Director-General of the Medical Department of the Royal Navy for the returns which he has again furnished to the Council, with the request that these returns may in the future continue to be furnished to the General Medical Council.

Sir CHRISTOPHER NIXON seconded, and the resolution was carried.

Replying to Mr. VICTOR HORSLEY, Dr. NORMAN MOORE stated that the reason no army table was included was because there had been no such examination, but there had been one for the Indian Medical Service.

Sir CHRISTOPHER NIXON pointed out that the Army examination had been postponed pending the report of the Commission on Reorganisation.

On the motion of Mr. GEORGE BROWN, seconded by Dr. BRUCE, it was resolved: That the Registrar be instructed to write to the India Office to know if the examination had been held this autumn.

Moved by Dr. BRUCE, seconded by Mr. GEORGE BROWN, and resolved:

That the table furnished by the Director-General of the Navy be referred to the Examination Committee.

PROCEDURE IN PENAL CASES: AMENDMENT OF STANDING ORDERS.

The Council then proceeded to receive a report from the Executive Committee in regard to the Standing Orders, chapters xiv and xv, presented pursuant to the following resolution of the Council adopted on June 11th, 1901:

That the Standing Orders governing the judicial procedure and decisions of the Council be referred to the Executive Committee for consideration and report at the next session. (Minutes, vol. xxxviii, p. 87.)

The PRESIDENT said that the amendments suggested were essentially resolutions which had to be put from the chair when the Council sat *in camerâ*, and the Council should therefore consider whether this report should be taken in open Council or *in camerâ*.

Dr. Atthill moved, Dr. Pettigrew seconded:

That the consideration of this report be conducted *in camerâ*.

Dr. McVail did not think that any matter affecting the Standing Orders should be taken *in camerâ*.

Dr. MacAlister pointed out that the proposed changes were in reference to cases that would require to be dealt with *in camerâ*. It would be difficult to refer to such cases if the report were taken in public, and if they were not referred to the discussion would necessarily be hampered.

Mr. Victor Horsley thought that the discussion would be more useful and shorter if no reference were made to any former case, and if it were strictly an academic one.

Mr. George Brown said that there was a feeling in the profession that discussions *in camerâ* were increasing very much, and they should do nothing to give colour to that impression.

On being put, 8 voted for the resolution, 11 against, and it was declared lost.

The President observed that the Chairman of the Business Committee thought that the explanation of the suggested amendments ought to come from the Chair, because they were for the most part amendments to the resolutions to be put from the Chair. He desired to make a preliminary observation as to the attitude of the Penal Cases Committee in regard to cases brought before it, and to call attention to the fact that the Committee only referred cases to the Council when it considered there was a *primâ facie* case made out. If he understood aright the position of the Committee, it was analogous to that of a grand jury, and the decision must be come to by the Council itself after hearing and testing the evidence laid before it. Two classes of cases came before the Committee—criminal cases and professional offences—and the statute gave to the latter the term infamous conduct in a professional respect, and therefore in their Standing Orders it was necessary to preserve the distinction between those two classes of cases. The President then proceeded to compare the present Standing Orders with the proposed amendments.

Some discussion arose with regard to the proposed amendment of Standing Order xiv, 14, (2), (*b*), which contains the form of the resolution to be put from the Chair after the Council shall have resolved to proceed at once to pronounce judgment on a case before it. The existing order is as follows:

That the charge made against —— has been proved to the satisfaction of the Council.

The amended paragraph is as follows:

That the facts alleged against —— in the notice of inquiry have been proved to the satisfaction of the Council.

Subsection (*c*) of the same clause was also referred to. In the existing orders it stands as follows:

That the further consideration of the charge against —— be adjourned until the next session [or until the session of the Council to be held in the month of ——].

It was proposed to be amended in the following form:

That the further consideration of the facts proved against —— be adjourned until the next session [or until the session of the Council to be held in the month of ——].

Dr. Norman Moore thought that the words should read "further consideration of the charge against" leaving out the word "proved."

Mr. Victor Horsley agreed, and said he thought that if the words stood as proposed it would be very difficult from a judicial point of view for the Council to give an admonition in any form to a person whose conduct was complained of.

Mr. Tomes pointed out that the use of the word "facts" in this place would enable any of the parties to reopen the whole question at the adjourned hearing.

Dr. McVail thought the old form of words should be retained, and that the charge which appeared on the face of the summons should be one which, if proved, the Council would regard as infamous conduct.

The President pointed out there was really no motion before the Council.

Dr. MacAlister then moved:

That Standing Orders 14 and 15 should be amended as set forth in the Appendix.

Mr. Bryant seconded, whereupon

Dr. McVail moved that it be referred back to the Committee.

The President said as this necessitated his making a statement as to the reasons which operated upon the Committee the Council must go into *camerâ*.

Strangers were directed to withdraw.

On readmission, the President stated that the following resolution:

That the Standing Orders be amended as proposed in the Appendix to this day's Programme of Business,

would form one of the minutes of the Council in which subsection (*c*) reads as follows:

That the further consideration of the charge against —— be adjourned until the next session, etc.

### Reciprocity with Malta and Italy.

On the motion of Dr. MacAlister, seconded by Mr. Bryant, the following report of the Executive Committee was received and entered on the minutes:

(*a*) In Regard to Malta.

The Executive Committee report that Part II of the Medical Act, 1886, has been made to apply to Malta, by an Order in Council made on September 26th, 1901; that the amendment of Article 5 of the local ordinance, conditional on which the assent of the Council was on June 5th, 1901, given to the extension, has been duly made; that they have accordingly considered the application made on behalf of the University of Malta for the recognition of its degrees and their registration in the *Colonial List of the Medical Register* under Section xiii of the Medical Act, 1886; and that they have adopted the following resolution:

Resolved: That the requirements for the medical degrees of the University of Malta being such as in the opinion of the Committee furnish a sufficient guarantee of the possession of the requisite knowledge and skill for the efficient practice of medicine, surgery, and midwifery, these degrees be recognised as entitling to registration in the *Colonial List*.

(*b*) In Regard to Italy.

The Executive Committee report that Part II of the Medical Act, 1886, having been applied to Italy by an Order in Council dated March 9th, 1901, application was made to the Privy Council, at the suggestion of the Education Committee, requesting that the Council might be supplied through the proper official channels with such information as to the existing regulations for medical qualifications in Italy as would enable the Council to fulfil its statutory duties under Section xiii (1) of the Medical Act, 1886.

This information having been supplied by the Privy Council, the Committee have carefully examined the Royal Decree of October 8th, 1876, which applies to all Italian universities, and, having satisfied themselves that the regulations provide a sufficient guarantee of the possession by doctors of medicine and surgery of these universities of the requisite knowledge and skill for the efficient practice of medicine, surgery, and midwifery, have resolved:

(1) That the degrees of Doctor of Medicine and Surgery of all Italian universities should be recognised as entitling to registration in the *Foreign List* of the *Medical Register*.

(2) That with reference to applications from Italian medical graduates for registration in the *Foreign List*, the Registrar be instructed to require the applicant to produce:

(*a*) Satisfactory evidence of identity.

(*b*) Satisfactory evidence of good character.

(*c*) Satisfactory evidence that he is by the law of Italy entitled to practise medicine, surgery, and midwifery in that country.

(*d*) The diploma of Doctor of Medicine and Surgery of an Italian university.

(*e*) Satisfactory evidence in relation to the circumstances (1) (2) (3) set forth in Section xii of the Medical Act, 1886.

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*Wednesday, November 27th.*

Sir William Turner, K.C.B., President, in the Chair.

The minutes of the meeting on November 26th were read and confirmed, and the Council proceeded to consider *in camerâ* a letter from Mr. Muir Mackenzie (Counsel) to Mr. Winterbottom (Solicitor).

### Sale of Scheduled Poisons.

The Council then proceeded to the consideration of the cases of Alexander Stewart, of Uphall, registered as Lic. Fac. Phys. Surg. Glasg. 1878, M.B., Mast. Surg. 1880, Univ. Glasg.; Simon Prince Clark, of 59, Dixon Avenue, Crosshill, Glasgow, registered as Lic. Soc. Apoth. Lond. 1884, Lic. R. Col. Phys. Edin. 1885, Lic Fac. Phys. Surg. Glas. 1885; Alexander Whyte Mason, of 586, Springburn Road, Glasgow, registered as holding the Triple Qualification of Scotland 1893; William Allison McLachlan, of Dumbarton, registered as M.B., Mast. Surg. 1874, M.D. 1877, Univ. Glasg.; James Wilson, of Dumbarton, registered as Lic. Fac. Phys. Surg. Glasg. 1882; Richard Allan, of Dumbarton, registered as Lic. R. Coll. Phys. Edin. 1872, Lic. Fac. Phys. Surg. Glasg. 1872; and John Steele Smith, of 480, Springburn Road, Glasgow, registered as M.B.,

Bac. Surg. 1900, Univ. Glasg., who have been severally summoned to appear before the Council to answer the following charge as formulated by the Council's Solicitor:

That you have been guilty of infamous conduct in a professional respect, particulars of which are that you being a registered medical practitioner habitually employ as assistant [or assistants] for the sale of scheduled poisons a person [or persons] not qualified to act as a chemist [or chemists] or pharmaceutical assistant [or assistants] and thereby cause such person [or persons] to commit breaches of the Pharmacy Act.

The complainants are the Pharmaceutical Society of Great Britain.

The plural words in brackets were used in the notices addressed to Mr. Clark and Mr. Wilson.

On the parties being called in, the PRESIDENT inquired whether the seven defendants were willing to have their cases dealt with as one common complaint, or did they wish them to be gone into individually.

Mr. A. R. FERGUSON stated that he was acting as agent for Mr. Mason, and he was authorised by him and the other defendants to say that they were quite content to have them dealt with together.

Mr. WINTERBOTTOM (the solicitor) then read the charge against the defendants.

Mr. Muir Mackenzie was present as legal adviser to the Council.

Mr. PETER MORISON, jun., S.S.C., stated that Mr. Cripps, K.C., had been retained to conduct the complainants' case, but he was unfortunately not able to be present, and had requested him (Mr. Morison) to open the case. He proceeded to say that as the charge which had been made against the defendants had just been read, it was perhaps desirable for him to point out that the Legislature had entrusted to the Registrar and Council of the Pharmaceutical Society the duty of enforcing the provisions of the statutes in this country in the interests of the public. The Bill was one to regulate the sale of poisons. He regretted to say it had been suggested by some of the defendants that the action of the complainants was vindictive and was taken to serve ulterior purposes. He would, however, show that this statement was not correct. It was imperative in the interests of the public that they should take the steps they had taken, and it was taken only in those interests. He then proceeded to refer to the case of Dr. Martin Thomson which was before the Council on December 3rd, 1900, when a clear notification was given by the Council to medical men of what was required of them. He then pointed out that in nearly all the cases of the convictions of the assistants of the various defendants had occurred since December 3rd, 1900. The Pharmaceutical Society had not made a complaint against any medical men except for the contravention on the part of their unqualified assistant or assistants of the Pharmacy Acts since December 3rd, 1900. One of the defendants (Mr. McLachlan) had suggested that the conviction referred to in his particular charge was illegal. The position he (Mr. Morison) took up upon that was that the General Medical Council could not review in law the conviction. He was quite prepared to defend the law if necessary, because it was well established. They had found, in most cases, that the medical men took up the position that they had been sinned against by the unqualified assistants; but it was fair to point out that in a great many cases the doctor paid the fine, and thereby condoned the offence. It might be quite true that the assistants were in error occasionally, but usually it was the doctor, and the doctor only, who was responsible for putting the person in such a position as to enable him to commit offences against the statute for the benefit of his employer. He did not think the General Medical Council could fairly say that the responsibility was not one attaching to a doctor; and it was quite clear that the Court in a number of cases certainly regarded the doctor as the person really and primarily responsible. It had been suggested by some of the gentlemen who were present that the Pharmaceutical Society did not act in good faith; that it summoned doctors, and did not prosecute offending assistants of chemists and druggists. He was in a position to satisfy the Council that that was—he regretted to use the words—absolutely untrue. He had drawn up an extract of the cases, and he was prepared to speak to the prosecution of 26 unqualified chemists' assistants. That did not by any means represent them all, and the experience of the Society in the matter was that a chemist transgressing the law was much more ready to "put his house in order" than a great number of medical practitioners. He wished it to be clearly understood, as the adviser of the Pharmaceutical Society, that he advised the Society in all cases that they must proceed with clean hands, and see that the law was administered in the public interest, and if a complaint was well founded against a chemist it was at once dealt with by the Society.

The PRESIDENT suggested that each defendant should read the letter he had addressed to the Council.

This was done, each defendant expressing his regret for what he had done.

The PRESIDENT pointed out that as each of the respondents had admitted the fact of the conviction in each case in which he was concerned it did not seem necessary, unless the members of the Council especially desired it, that there should be adduced any further formal proof of the fact that the unqualified assistants of the respondents were convicted of selling scheduled poisons on the dates mentioned by the complainants. He understood the position to be that each of them came under an undertaking that in future he would not keep unqualified assistants. Were the Council to understand that each of them took up the position before the Council—in the face of the court—that he would not in future keep unqualified assistants for the sale of scheduled poisons? The respondents assented to this; whereupon the President enquired whether Mr. Morison, after what had been said, wished to reply.

Mr. MORISON thought after what had been said that he had very little to add. There were a number of statements in the letters themselves which certainly were not justified, as he could show from the verbatim reports at the different courts, but he would defer to what the President had suggested, and would say no more.

Strangers and the parties were ordered to withdraw. On their readmission:

The PRESIDENT said: "The Council have very carefully deliberated on the evidence contained in the prints before them, and on the statements that you gentlemen have made, and they have instructed me to read to you the decision at which they have arrived: and although I am only going to read it once, yet you must understand that this decision applies to each one of you. The decision is as follows: That each of you having expressed to the Council your regret for the commission of a professional offence, which the Council has declared to be grave and fraught with danger to the public, and having pledged yourself to abstain from any conduct affording similar ground of complaint in the future, the Council resolves to proceed no further in reference to the facts proved against you." That decision will be communicated in writing to each one of you.

### RECIPROCITY WITH MALTA AND ITALY.

Dr. MACALISTER brought forward the report of the Executive Committee on the medical degrees of the University of Malta and the Italian universities. [Printed at page 1627.] The Act of Parliament required a number of conditions to be fulfilled by the applicant. He had to prove that he was a British subject, or if he was not a British subject then he had to show that he had been in practice such a time as was set forth in the regulations. It was quite conceivable that a foreigner making application might not be aware of these conditions precedent to his being registered, and these regulations would be a precedent for the future as to the exact conditions laid down by Section XII of the Medical Act of 1886, providing that other things therein specified had been fulfilled. It was proposed that the Registrar should have a print of these conditions setting forth fully these requirements to be handed to any applicant who desired registration.

Dr McVAIL said he had not had a copy of the minutes of the Education Committee sent to him.

Mr. VICTOR HORSLEY stated that the Executive Committee was required to ascertain what steps were necessary to carry into effect the Medical Acts, and it had in fulfilling that duty taken upon itself to lay down that the regulations which were held to be necessary for the proper conduct of university education in this country were wholly unnecessary when dealing with Italian education. He was quite aware that very often members of the Council had not an opportunity of seeing the minutes of the Executive Committee

for some reason or other, as Dr. McVail had just told them. That was brought about by the fact of the Executive Committee meeting on the day before the Council, and taking upon themselves very often to do the Council's work. In a particular instance the Committee was empowered by a special resolution of the Council to do this work, but on previous occasions the whole of this Italian business had been undertaken by the Executive Committee without any such authorisation, and that was why there was confusion. The particular matter which in his opinion required attention at that moment was the resolution of the Executive Committee, and if Dr. McVail would move that the whole of the subject be postponed until the next day he would be glad to second, because he thought the action of the Executive Committee in regard to this subject was not fair to the English School of Medicine.

Dr. McVail then moved:

That the consideration of the report be postponed until to-morrow.

Mr. Victor Horsley seconded the motion, as he held that the conditions with regard to medical education in England and a foreign country were so different that they ought not to be lumped together: and moreover, the conclusions which the Executive Committee arrived at were very different; therefore he suggested that the resolution of Dr. McVail should only apply to Italy, and that the Council should enter on its minutes the conclusion which the Executive Committee had come to with respect to Malta.

Dr. McVail accepted Mr. Victor Horsley's suggestion.

The President then put the amendment:

That the consideration of the report of the Executive Committee on the medical degrees of the Italian universities be postponed until to-morrow.

And it was agreed to.

### Recognised Scientific Institutions.

Dr. MacAlister brought forward the report of the Executive Committee on scientific institutions other than universities or schools of medicine recognised by the licensing bodies presented in accordance with the desire of the General Medical Council that the list of institutions should be rearranged by the Committee. There were a number of institutions which the Committee had thought it desirable should not be included in the list. The information which the Executive Committee was able to obtain with regard to the various institutions was obtained by writing to each of the bodies which appeared in the list of those recognised by any licensing body asking for their calendars, and for information as to their status and so on. That list as recognised by the licensing body was gone through by the aid of those calendars, and wherever it appeared, in accordance with the instructions of the Council, that the institution was a higher elementary or secondary school, it was not included in the list, and wherever it appeared from the calendars or other information communicated to the Committee that the school was intended for trades and handicrafts and not for professions it was not included That was the principle upon which the list had been drawn up. As additional information was constantly coming in, and additional institutions of high class were being recognised for the first time by licensing bodies, some machinery would have to be provided for the continuous extension of the list if the Council approved of the principle upon which it was drawn up. The Executive Committee suggested that it might be left to the Students Registration Committee to give provisional approval on behalf of the Council to other scientific institutions of the same status which might hereafter be recognised by licensing bodies, on condition that the Committee reported at once to the Council every session what it had done, so that, if its action was challenged, it might have an opportunity of explaining it. He proposed in the first instance that the list be received and entered on the minutes.

Mr. Tichborne seconded.

After one or two inaccuracies in the designation of the schools, which had been pointed out by Sir Christopher Nixon and Dr. Bennett, had been corrected, the resolution was carried.

Dr. MacAlister said that the list was now submitted by the Executive Committee for the approval of the Council, and he begged to move that the list other than University Schools of Medicine be approved by the Council as follows:

Scientific Institutions, other than Universities or Schools of Medicine, at which the course of medical study may be commenced by applicants for registration in the *Medical Students Register*.

Bradford: Technical College.
Brighton: Technical Day College.
Bristol: Merchant Venturers' Technical College.
Cambridge: Girton College; Newnham College.
Cheltenham: Ladies University College.
Derby: Technical College.
Dublin: Royal College of Science.
Egham: Royal Holloway College.
Exeter: Royal Albert Memorial College.
London: Royal College of Science; Bedford College; Birkbeck Institute; East London Technical College; Central Technical College; Westfield College.
Newcastle: Durham College of Science.
Nottingham: University College.
Preston: Harris Institute.
Reading: Reading College.
Southampton: Hartley College.

Sir Christopher Nixon seconded the motion.

Dr. Norman Moore objected to the inclusion of schools which did not possess a biological museum and a complete apparatus for the teaching of physics, such as Newnham College, Cambridge, the Ladies' College, Cheltenham, and Bedford College, London. He thought the Council ought to be informed what were the fittings of these colleges for the teaching of biology and chemistry. If the Council was going to recognise a list of institutions it should take more pains to ascertain what were proper institutions than the Executive Committee had taken. He would not go so far as to say they ought to be visited, but he thought inquiry ought to be made as to whether they were thoroughly equipped for the teaching of these various subjects. He moved:

That the Newnham College, the Ladies' College, Cheltenham, and Bedford College be not included in the list.

If it was afterwards proved that all these institutions had the various appliances, they might then be included. He only wished to point out that the observations which he had made had nothing to do with the Royal College of Physicians. The Royal College of Physicians decided what institutions to include after visiting them, but this Council did not visit at all.

Sir Christopher Nixon wished to know if Dr. Norman Moore was correct in stating that all the scientific institutions recognised by the Royal Colleges had been visited, because he understood there were institutions as to which that had not been carried out.

Dr. Norman Moore, in reply, said that the Royal Colleges insisted on the power of visitation, and if there were still a few places which had not yet been visited it was merely because of the difficulty of a proper person not having time to go to them, but they would be visited in the course of time.

Mr. Victor Horsley pointed out that the Ladies' College at Cheltenham was provided already with a biological museum, with which he was quite satisfied, although he did not know anything about the teaching.

Dr. Norman Moore accepted Mr. Victor Horsley's assurance, and desired that the name of that College should be erased from his motion.

Sir Christopher Nixon desired to know whether, as Dr. Norman Moore was in a condition of uncertainty as to the institutions to which he had referred, whether he would persist in proposing such a drastic measure as removing the name from the list. It would be better if the matter was postponed until inquiries had been made.

Dr. Norman Moore said he was perfectly satisfied, when it was shown that the institutions had what the Council required, that they should be included in the list. But that had not been shown, and therefore he thought they ought not to be put on the list.

Dr. MacAlister said that though Newnham College was not part of the University of Cambridge, and the lady students could not prepare for the degrees of Cambridge, they could obtain the degrees of the London University or the Royal University of Ireland, and had free access to the laboratories and museum of Cambridge University. Further, they had an admirable chemical laboratory and a biological laboratory of their own. Therefore the students in their study of biology and chemistry had the best of appliances and the best of teachers, and if a lady preparing for the medical degrees of London or the Royal University of Ireland desired to com-

mence the study of those sciences at Newnham she could not be in a better place. Bedford College was attached to the University of London, and the students prepared for the degrees of the London University, and if they began with chemistry and physics that was ample, as it was all that the Council was concerned with. If there was no proper instruction in chemistry they could not be signed up for it. All the Council and the Registrar had to do was to let the student begin his first year at a proper institution; he began with chemistry and physics and he had nothing to do with biology; when he finished those subjects he went on to biology. With regard to the exclusion of technical schools, it was only where those institutions in which technical education alone was provided for which were excluded; but if technical education and medical education as well was conducted by them, then they were included.

Dr. NORMAN MOORE was very sorry to press anything against Newnham College, but he maintained that to take advantage of surrounding circumstances was a different thing to having a place adapted for teaching fitted up within its own walls; otherwise, if that view were adopted, a person living in London might have recourse to the British Museum. However, he had such a regard for Newnham College that he should be very unwilling to press it, and if the Council could be satisfied that the College was teaching those subjects within its own walls then it should be included.

The amendment was then put and declared lost.

The PRESIDENT pointed out that the motion before the Chair was that the list of scientific institutions submitted by the Executive Committee be approved.

Dr. MCVAIL thought that this matter should not be discussed until the report of the Education Committee had been considered, because it was practically the admission of a number of institutions that were not medical schools. If the motion was carried it would very greatly augment that list. Therefore he proposed:

That the further consideration of the report of the Executive Committee regarding the list of scientific institutions recognised by licensing bodies be postponed until after the Education Committee's report with regard to the conditions of admission to the *Students Register* has been considered.

Dr. GLOVER seconded the motion.

Dr. MACALISTER was of opinion that the postponement would only further complicate matters as it was not certain that the Council could come to a final conclusion upon the Education Committee's report with regard to the conditions of admission to the *Students Register*; and there was the further fact that the list could be extended at any time by taking the proper means. Many members were surprised at the omission from the list of certain well-known science colleges, but the reason of that was that those science colleges had not been recognised by the licensing bodies. As soon as such recognition was obtained there would be no difficulty in increasing the list.

Mr. GEORGE BROWN supported the amendment because he intended later on to move that this Council should recognise pupilage with a medical man as part of the first year's medical education.

The PRESIDENT pointed out that there were already cases before the Registrar awaiting some deliverance by the Council as to the recognition of certain scientific institutions, that was to say, certain applicants for registration who desired to know whether certain of these institutions would be recognised, therefore there was a practical question involved in the consideration of this list. It was obvious from what had fallen from Dr. MacAlister and the report itself that this list was not a final one, and he would observe that Scotland stood without a representative upon it. He had pointed out the fact to Dr. MacAlister, but the answer he got was one he was obliged to accept, namely, that none of the schools in Scotland were recognised by the licensing bodies there, but so soon as they were recognised by those licensing bodies the Committee would be prepared to admit them.

Sir WILLIAM THOMSON supported the postponement, because it seemed to him that the question was important and was involved in the matter of the Education Committee's report.

[The amendment was then put when 14 voted for and 5 against, and it was declared carried.]

At the request of Dr. PETTIGREW the names and numbers were taken down. The amendment was then put as a substantive motion, and was declared carried.

### RESTORATION OF NAMES.

On the motion of Dr. MACALISTER, the Council went into *camera* to receive a report from the Executive Committee in regard to certain applications for the restoration to the *Medical Register* of names removed under Section XXIX of the Medical Act, 1858.

At 6 P.M. the Council adjourned, no intimation being conveyed to the press.

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## THE WORKING OF THE REFUGEE CAMPS.

THE volume of reports, etc., on the working of the refugee camps has now become accessible, and we are therefore in a position to attempt a summary of their contents. This task is by no means an easy one, as the reports simply follow each other in chronological order, and to obtain a complete and continuous view of the different camps it is necessary to examine five different reports for each camp. We propose to confine ourselves in the present article to the camps in the Transvaal, which, as shown in our former article, have had a higher mortality than the camps in the Orange Colony and Natal.

### TRANSVAAL CAMPS.

The inmates of the different camps were divided in the first instance into three classes:

1. Those who have come into the camps for protection of themselves and their herds, and are self-supporting.
2. Those who have surrendered and come into camp for protection, but are unable to support themselves. In this class would be included widows and orphans and the relatives of our prisoners of war.
3. Those whose husbands are on commando, and have been brought into camp for their own protection against natives, etc., or for military reasons.

It is noted (March 22nd) that it is difficult to treat with the liberality they deserve Classes 1 and 2 without incurring the reproach of having treated Class 3 with undue generosity. The largest camps in the Transvaal are at Heidelberg, Irene, Johannesburg, Potchefstroom, Standerton, and Volksrust.

The following statistical table shows the sickness and mortality experience in the Transvaal camps in the month of April. The deaths for men, women, and children are massed together and cannot be differentiated, but it is possible to give separately the sickness-rate among children. For death-rates the nearest whole number has been taken, decimals being avoided:

*Statistics for April.*

| Name of Camp Arranged in Order of Increasing Population. | Total Population, April 30th, 1901. | Per 1,000 of Each Group. Men, Women, and Children. Monthly Death-rate. | Men, Women, and Children. Daily Sickness-rate. | Children Alone: Daily Sickness-rate. |
|---|---|---|---|---|
| Barberton ... ... ... | 445 | 10 | 133 | 115 |
| Vereeniging ... ... ... | 733 | 7 | 33 | 88 |
| Mafeking ... ... ... | 765 | 5 | 107 | 115 |
| Klerksdorp ... ... ... | 901 | 2 | 21 | 75 |
| Heidelberg ... ... ... | 1,086 | 2 | 61 | 7 |
| Krugersdorp ... ... ... | 1,088 | — | 2 | 23 |
| Standerton ... ... ... | 1,237 | 20 | 28 | 4 |
| Middleburg ... ... ... | 1,292 | 7 | 101 | 32 |
| Johannesburg ... ... ... | 3,170 | 28 | 44 | 66 |
| Volksrust ... ... ... | 3,578 | 7 | 18 | 31 |
| Irene ... ... ... ... | 3,703 | 13 | 86 | 20 |
| Potchefstroom... ... ... | 5,724 | 4 | 11 | 83 |

It will be noted that the highest general death-rate at this early stage of the history of the camps was in the Standerton, Johannesburg, Irene, and Barberton camps, the highest sickness-rate among children in the Barberton, Mafeking, Klerksdorp, Johannesburg, and Potchefstroom camps.

In May, deaths for children are given separately for each of the above camps, and the total monthly death-rate and the

death-rate for children, as well as sickness-rates can be stated.

*Statistics for May.*

| Name of Camp Arranged in Order of Increasing Population. | Total Population, May 31st, 1901. | Monthly Death-rate per 1,000 of each Group. | | Average Daily Sickness rate per 1,000 of each Group. | |
|---|---|---|---|---|---|
| | | Men, Women, and Children. | Children Alone. | Men, Women, and Children. | Children Alone. |
| Barberton ..... | 576 | 2 | 4 | 29 | 33 |
| Vereeniging ... | 811 | 7 | 1 | 95 | 4 |
| Mafeking ..... | 1,046 | 3 | 1 | 37 | 21 |
| Heidelberg ..... | 1,434 | 12 | 15 | 18 | 16 |
| Krugersdorp ... | 1,531 | — | 3 | 2 | 4 |
| Klerksdorp ..... | 1,963 | 4 | 5 | 2 | 1 |
| Pietersburg..... | 2,301 | 29 | 5 | 47 | 39 |
| Standerton ..... | 2,983 | 12 | 20 | 12 | 11 |
| Johannesburg .. | 3,379 | 24 | 45 | 45 | 95 |
| Irene ..... | 4,319 | 16 | 30 | 74 | 109 |
| Volksrust ..... | 4,810 | 71 | 13 | 38 | 39 |
| Potchefstroom .. | 6,149 | 72 | 8 | 18 | 20 |
| Middelburg..... | 6,637 | 46 | 6 | 47 | 43 |

Thus in May the highest general death-rates occurred in the Potchefstroom, Volksrust, Middleburg, and Pietersburg Camps, and the highest sickness-rate among children in the Irene, Johannesburg, Middleburg, Pietersburg, and Volksrust Camps. At the Johannesburg Camp, of 79 total deaths 51 were caused by measles, 14 by pneumonia and bronchitis, and 1 by diarrhœa. At the Irene Camp, of 70 total deaths 31 were caused by measles, 10 by diarrhœa, 5 by dysentery, 9 by pneumonia and bronchitis, and 3 by enteric fever. At Standerton there were no deaths from measles, but 3 from dysentery, 11 from enteric fever, and 3 from pneumonia and bronchitis. At Potchefstroom, of 44 total deaths 7 were due to measles, 5 to diarrhœa, 12 to pneumonia and bronchitis, 10 to enteric fever. From several camps measles was absent, but enteric fever prevailed. Thus in Volksrust no death from measles occurred, but 4 from diarrhœa, 2 from dysentery, 7 from enteric fever.

Having given somewhat full statistics for the first two months' records embodied in the official report, it will perhaps suffice for the remaining three months included in the report to give only the average daily number of sick in each of the Transvaal Camps. For convenience of comparison the data for five months are placed in parallel columns, and in the following table the largest camps are placed first:

*Average Daily Sick during the Month per 1,000 Men, Women, and Children in each Camp.*

| Name of Camp in Order of Population. | Population. Aug. 31, 1901 | Daily Sickness-rate per 1,000. | | | | |
|---|---|---|---|---|---|---|
| | | April. | May. | June. | July. | August. |
| Potchefstroom ... | 7,355 | 11 | 18 | 46 | 22 | 15 |
| Middleburg ... ... | 6,523 | 101 | 47 | 70 | 96 | 118 |
| Volksrust ... ... | 5,271 | 18 | 38 | 31 | 42 | 115 |
| Johannesburg Relief. | 5,139 | — | — | — | — | ? |
| Krugersdorp ... ... | 4,853 | 2 | 2 | *Nil* | 1 | 20 |
| Mafeking ... ... | 4,676 | 107 | 37 | 15 | 18 | 16 |
| Irene ... ... ... | 4,655 | 86 | 74 | 74 | 84 | 61 |
| Klerksdorp ... ... | 4,588 | 21 | 2 | 2 | 5 | 18 |
| Pietersburg ... ... | 3,713 | — | 47 | 102 | 136 | 141 |
| Johannesburg ... | 3,505 | 44 | 45 | 41 | 2 | 6 |
| Standerton ... ... | 3,297 | 28 | 12 | 8 | 8 | 9 |
| Heidelberg ... ... | 2,222 | 61 | 18 | 15 | 20 | 210 |
| Pretoria Relief ... | 2,000 | — | — | — | — | ? |
| Barberton ... ... | 1,938 | 133 | 29 | 17 | 13 | 59 |
| Balmoral ... ... | 1,660 | — | — | — | — | 17 |
| Nylstroom ... ... | 1,475 | — | — | 26 | 39 | 99 |
| Belfast ... ... ... | 1,407 | — | — | 18 | 16 | 31 |
| Vereeniging ... ... | 976 | 33 | 25 | 10 | 18 | 173 |
| Vryheid ... ... | 197 | — | — | ? | ? | ? |
| Lydenburg ... ... | 42 | — | — | ? | 185 | 71 |
| Waterval North ... | 8 | — | — | ? | ? | ? |

The Transvaal Camps may be roughly classified in accordance with whether they show an improvement, deterioration, or a fairly stationary condition as regards sickness month by month. In the improving group Mafeking Camp takes a prominent position; Johannesburg occupies a similar position, though how far this is due to the formation of Johannesburg relief camps, for which no vital statistics are given, must be left in doubt. Standerton occupies a fairly uniformly favourable position, while the statistics of Krugersdorp are even more favourable. On the other hand, Irene Camp has had a consistently bad record; so likewise has Middleburg; and the conditions at Volksrust, Petersburg, Nylstroom, and Vereeniging deteriorated. It would be easy to extend our comparisons to the camps in the Orange River Colony and Natal; but such statistics would be wearisome; and the present examples will probably suffice to illustrate the causes of the more or less favourable statistics in the different camps.

Irene, for instance, has had a consistently bad record. What are the facts recorded about it? Dr. George Turner, the Medical Officer of Health of the Transvaal, officially inspected the camp on the March 6th. He reports that the latrines are well placed, but that there are insufficient pails: and that the floors of the latrines require paving. Pails for night use near the tents were also needed. Slaughtering of sheep, which was forbidden in the camp, nevertheless was winked at to some extent. The number of sick was great, and something should be done to diminish the number of cases of diarrhœa. He particularly urges that all milk be diluted with boiled water before being served out, in view of the stupidity of the Boer mothers. He notes that no care could have prevented the measles cases.

For the month of May at the same camp, Dr. Green, the Medical Officer, ascribes the heavy mortality to malaria, dysentery and diarrhœa, measles, and pneumonia; either caused or made worse by cold and insufficient clothing. He also states that the average infantile mortality among Boers on their own farms is very great. The tents were unsuitable for invalids, allowing great extremes of temperature. The medical and nursing staff was deficient in numbers. In June, Dr. Woodroffe, then medical officer of the Irene camp, ascribes the high mortality to measles, to excessive changes of temperature in the camps, to the aversion of the Boers to fresh air and clean water, to the absence of fresh milk and vegetables from the diet, to the helplessness and callousness of many during sickness, and their belief in disgusting remedies, and their unwillingness to help one another.

For August it is reported that the constant importation of new inhabitants kept the measles going, that the disgusting remedies used by the Boers made matters worse; but that "the sanitary condition of the camp is good." It is stated that—

"A sharp watch has to be kept to prevent people emptying their slops at their front door. In the tents of some, slops and stools are allowed to remain for hours without being removed, blankets and shawls are often used as diapers for babies, with the result that the stench is unbearable."

The following disgusting details of Boer domestic medication remind one of mediæval Europe:

"No one can imagine the difficulty a medical man has in preventing these people from using their dangerous, useless, and disgusting remedies. Goat dung and wormwood made into a decoction and drunk in quantities is the favourite "drippel" or "middel" "for bringing the measles out;" pieces of raw meat are bandaged over each eye in acute conjunctivitis, and most of these cases are caused by dirt. Babies' ears are receptacles for an endless variety of rubbish, and consequently otorrhœa is very common. Rags wetted with human urine are used for open flesh wounds, and so on."

Krugersdorp may be taken as an example of a camp with a very good record. It is noted that in May the condition of the families brought in was deplorable, as they were very short of clothing and bedding. The food supply was, however, very good and the water excellent, and there was little sickness. The report for the month of June states that the camp is on sloping ground, that it has been drained by deep trenches, and that a reservoir for water, large enough for the entire camp, has been built. The pail system was in use. Only 8 deaths had occurred, 3 from starvation, the patients having been brought in in a dying condition. In July measles was epidemic, but the death-rate remained low. The sanitary arrangements were excellent.

It would be easy to extend the preceding examples. Sufficient, however, has been adduced to indicate some of the main lessons of the camps:

1. A large share of the high death-rate in them is ascribable to the condition in which the women and children arrive.

Often they have been half-starved and are broken down in health. It cannot be wondered at that under these circumstances measles and other diseases are inordinately fatal.

2. The dirty personal habits of the Boers, their use of improper and often disgusting remedies, and their ignorant errors of dietetics in regard to young children have rendered it extremely difficult to secure favourable results in the treatment of cases of sickness among the Boer children.

3. There appears to be no doubt, as indicated in our previous special article, that the measles which has been prevalent has been of a specially malignant type. Its malignancy has doubtless been intensified by the dirty condition of the Boer children, and by the overcrowding that has been permitted in the camps, as well as by the previous bad health of these children.

4. The present reports afford abundant evidence confirmatory of the conclusion at which we had previously arrived that dysentery, diarrhœa, and enteric fever in a large proportion of the camps have been prevalent as well as measles.

5. The fact that some of the camps have had but little of any of these diseases, and that measles when it has been introduced into them has had a relatively low fatality, appears to indicate not merely differences in the condition of the Boer women and children on their arrival in camp, but differences in the subsequent management of the respective camps. Numbers, however, as well as quality are required. Doctors, nurses, and inspectors cannot do a superhuman amount of work; and in a large proportion of the reports there is complaint of an insufficient staff.

6. It is clear that every attempt appears to have been made to provide necessary food, clothing, and medical comforts. Sometimes these attempts failed, but this was obviously not owing to lack of efforts in this direction.

7. We had anticipated that an examination of the preceding statistical tables, prepared at great labour, would have shown a regular relationship between magnitude of the camps and amount of sickness and mortality. Roughly speaking there is such a relationship but it is not uniform. One or two of the smaller camps show a high mortality: several of the large camps, particularly Krugersdorp, Klerksdorp, and Standerton show a low mortality. This may be partially due to the fortuitous non-introduction of infection. Internal evidence seems, however, to show that it is due in a much larger degree to more efficient administration than that of the more severely scourged camps. These facts do not, in our opinion, militate against the main conclusion which we urged in the previous special article—that the camps should be split up and scattered, and be placed on pure soil, the maintenance of which in its pristine freedom from contamination by excreta or "slops" should be the constant care of a sufficient staff. One of the chief causes of the recent high mortality has been the difficulty of getting the Boers to use latrines, of preventing them contaminating the soil around their tents. In some camps there has been much greater success in this matter than in others. If the unsuccessful camps were moved and placed under efficient supervision and control, great improvement could almost certainly be effected.

## JAMAICA AS A HEALTH RESORT.

[FROM OUR SPECIAL COMMISSIONER.]

WHEN, in the early part of the year, I was offered the opportunity of voyaging to Jamaica, with the object of briefly reporting from personal observation on the capabilities of that island as a health or pleasure resort, I accepted with pleasure. It was no small consideration to escape for more than four weeks from the rigour of this insular climate during the months of February and March. As with most others, too, the very name of the West Indies was to me associated with a charm and romance above, perhaps, those attaching to any other portion of the world. The writings of Kingsley and Michael Scott recurred to one, and with the younger and more ardent doubtless the writings of Marryat, with the descriptions of lovely Creoles and "dignity balls," would have recurred with still more vivid force. To visit for however brief a period some of the scenes these writers have described, to view with one's own eyes the wondrous wealth and beauty of the tropical vegetation, and to taste the numerous tropical fruits, whose excellence could only be tested on their native soil, made up a programme too enticing to be resisted.

### THE VOYAGE.

A drawback to Jamaica as a health or pleasure resort is, to many, its distance from this country, some 4,000 miles odd. Formerly this disadvantage was enhanced by the fact that it could be reached only by a line of steamers that called previously at several other West Indian islands, or by going over to America, and taking a long train journey south, with a final sea trip of several days' duration. In either case, by these routes the journey from England to Jamaica took the best part of three weeks. By the establishment of the Imperial Direct West India Mail Service (Elder, Dempster, and Co.), which runs a fortnightly service of boats direct to Jamaica, and has in contemplation a weekly service in the near future, a considerable reduction in the length of the journey has been achieved. It now lasts about twelve days, a less time than that occupied by going to Egypt by "long sea," and many intending travellers to the East might fairly turn their faces Westward Ho! with both pleasure and profit to themselves.

Journeying down from Paddington on February 16th skating was going on in numerous places adjacent to the line, and it was pleasant to think that in a couple of days or so one would be in a distinctly warmer clime, where great coats would be an unnecessary encumbrance. At Bristol we found the engine of the special boat train decorated with laurels and flags, ours being the pioneer journey of the service, and the same decorations were lavishly displayed on all sides on nearing Avonmouth. So much time, however, was wasted on this short journey that one could have wished for less grandeur and more speed, but it is not fair to cavil at the arrangements on an initial trip, and doubtless on subsequent occasions every punctuality has been maintained. As the arrival platform adjoined the wharf the vessel was easily reached from the train by walking through a covered shed. The appearance of our ship—the *Port Morant*—was a truly pleasing one. Painted a pure white, with an excellent promenade deck and other accommodations, she looked more like a steam pleasure yacht than a vessel designed for serious work in the North Atlantic. She was one of the smaller boats of the fleet, being slightly under 3,000 tons burden, most of the others ranging over 4,000 tons. In spite of several very minor defects, which only actual experience at sea could reveal, the *Port Morant* proved a trusty and seaworthy vessel, capable of steaming at considerably more than the guaranteed speed. As she was the pioneer vessel of the service, the whole of the inhabitants of Avonmouth and the district turned out to wish success to the enterprise which promises so much for the trade and prosperity of Bristol and the neighbourhood. It soon appeared that the passengers were a community almost solely on pleasure bent, and there was an absence of any distressing leave-takings, and to the joyous strains of a band, the waving of flags, and the continuous cheering of the crowd on shore, we started on our long journey.

We carried rather more than forty, our full complement, of first saloon passengers, one or two having to depend for sleeping accommodation on the resources of the second saloon, but this was no real hardship. Including the surgeon to the ship, there were no fewer than seven doctors on board, most of them making the trip for the sake of health or pleasure. A distinguished member of the medical coterie was Dr. F. W. Mott, who was suffering from some unpleasant sequelæ of "influenza"; and it must be a source of universal gratification that he came back restored to health to pursue his researches in neurology and pathological chemistry.

The first part of the voyage was somewhat rough, but the weather in the North Atlantic at that time of the year is proverbially uncertain. It was not so rough, however, as to be unpleasant except to very bad sailors, and it only gave rise to such minor inconveniences as the occasional having to dodge a dish at meals, and the necessity of dealing the cards at bridge directly into each player's hand as the motion of the vessel prevented their stopping on the table. The latter part of the voyage was delightful, and thoroughly enjoyed by every one on board. The sea was quite calm, and its intense blue surface was only broken by the frequent flights of myriads of

flying fish. The piano was taken out on deck, and the nightly concerts took place there instead of in the saloon. On more than one occasion, too, we had the customary form of athletic sports suitable to shipboard.

The first land we sighted after leaving England was the Island of Hayti, and we ran so close to this for the greater part of a day that villages, and even the inhabitants, could be distinguished on shore. There were, probably, few that did not regret the voyage coming to a close, and on the last evening a testimonial, signed by every passenger, was presented to Captain Parsons thanking him for the care and attention he had given to their comfort and enjoyment. The same courtesy and attention to the wants of the passengers was displayed by every officer of the ship.

But every voyage, pleasant as it may be, must have an end, and a glance out of the porthole on the thirteenth morning after leaving England showed that we had arrived. *Tenedos est in conspectu*—the island we have come 4,000 miles to visit is at hand. The beauties of Jamaica, as seen from the sea, have been described innumerable times, but it is difficult in words to do justice to their reality. Viewed from Kingston Harbour, it is surely the greenest spot on earth. The whole island appears to be an endless succession of mountain peak after mountain peak, each one clothed to its summit with tropical greenery. Between the bases of the mountains and the sea there is a plateau of comparatively level ground two or three miles broad; but in the brilliant tropical light distance is dwarfed and the mountains appear close at hand. The cocoanut trees and various palms growing at the edge of the sea complete a picture that is enchanting to the visitors from more temperate zones. The reality more than realises any verbal description they may have read.

### The Diseases of Jamaica.

The beauty of the scenery in all parts of the island fully justifies the epithet of "fair" so commonly bestowed on Jamaica. A second less pleasing one of "treacherous" that was often joined to the former one was doubtless equally justified in former times. Part of this ill-name was certainly gained from a total disregard to the elementary rules of hygiene and the crowding of soldiers and others into ill-ventilated and ill-drained barracks and similar buildings. Rum is cheap, too, and over indulgence in alcohol and other excesses contributed largely to the death-roll, more especially in those of weak self-control and newcomers to the island. But it was with regard to yellow fever—the dreaded "Yellow Jack"—that Jamaica gained the greater part of its former ill-name. That the disease caused fearful ravages in the past is not to be questioned, and the dread associated with its very name was fully warranted. Sporadic cases of it, too, occur from time to time, but in the course of sixteen years' practice on the island Dr. York Moore tells me that he has only known of one genuine epidemic. In this the disease was almost confined to one particular district, and the cases amounted to 50 or 60, with about 25 deaths. Modern methods will, no doubt, in course of time practically eradicate the disease from the island. Even as it is, there is less danger from yellow fever in Jamaica than there is from such diseases as enteric fever in England. Dysentery sometimes occurs, but cases of it are far from common. Malaria, on the other hand, is not infrequent, but is almost confined to certain low-lying and swampy districts that need not be visited. During the few days I was in Jamaica I neither saw nor heard a mosquito, although the dread *Anopheles* was stated to be met with in the near neighbourhood of Kingston. Memory still retains vivid recollections of the miseries endured through these pests in a short sojourn at a corresponding time of the year in Egypt. Mosquitos are doubtless to be met with at all seasons and in all parts of the island, and it was probably a mere matter of chance that I escaped them. The total number of cases of yellow fever and malaria—the two complaints in the worst repute as regards the West Indies—is so small that the fear of contracting either of them may be dismissed from the mind of the intending visitor.

It can certainly be claimed for Jamaica that it is not unhealthy if one or two malarial districts, which there is no occasion or inducement to visit, be avoided. The practice, then, of insurance offices levying an extra premium on the dwellers in the West Indies is obsolete and uncalled for: at least as far as Jamaica is concerned. Any slight risk that may be incurred of contracting such diseases as malaria is more than counterbalanced by the greater freedom of the island from many other complaints.

### Climate.

So far from Jamaica deserving the character of "treacherous" or unhealthy, it can be claimed, for the most part, that it is the very reverse, and competent authorities assert that its climate is equal to that of the healthiest parts of the world. Its temperature is singularly equable, there being only a few degrees difference between that of the hottest and coldest months of the year. During the last 20 years, too, the greatest recorded difference in the maximum and minimum temperatures has not exceeded 19° for any one month, and in the great majority the difference is considerably less than this. In Kingston and some other places on the plains the temperature, which approximates generally to about 90°, may be somewhat trying at first to newcomers from England, but this is tempered in the mornings and evenings by breezes from the sea and land alternately. It is not, necessary, moreover, to go far from Kingston to find a lessened temperature, as on one occasion when I was there, when the temperature was 90° in that town, at Constant Springs, a place on the train line about five miles off, and situated a few hundred feet above the sea, the temperature was only 72°. On the mountains the temperature varies more or less according to the elevation, and on the highest peaks drops down to as low as 50°, or even 40°, rendering extra blankets or even fires agreeable necessaries.

The rainfall is considerable, but except in the recognised rainy seasons, usually about the end of May and September, causes but little inconvenience or discomfort. In the tropics, too, the rainfall in a couple of hours or so would amount to that ordinarily occurring in a week or a month in these climes, so that the amount of sunshine is hardly curtailed. In certain parts, however, the rainfall may render the air unduly moist. But with an island 130 miles long by 40 or 50 miles broad, with an endless variety of mountains and valleys, the rainfall varies as much almost as the temperature. After giving tables of temperature and rainfall for the different months, the *Official Handbook* states:

> From the above tables it will be observed that a great diversity of climate is obtainable. From a tropical temperature of 80° to 86° at the sea coast, the thermometer falls to 45° to 50° on the tops of the highest mountains, and with a dryness of atmosphere that renders the climate of the mountains of Jamaica particularly delightful and suitable to the most delicate constitution.

There is little, if any, exaggeration in this last quotation, and there are large opportunities in Jamaica as a health resort—a fact already appreciated to some extent by our American cousins. The warm equable temperature, the clear air, and the large amount of sunshine renders it an appropriate residence for many cases of phthisis, especially such as those where undue dryness of the atmosphere induces cough. The humidity of the air, however, in many parts of the island is against it as a resort for the phthisical, except in properly selected cases. Amongst the local medical men it would seem that the Santa Cruz mountains, where the air is stated to be exceedingly dry, are regarded as almost an ideal residence for tuberculous cases generally. Phthisis and other forms of tuberculosis, it is true, are common enough amongst the blacks, but no conditions of climate will avail against such complaints with a people who will crowd together in any sort of dwelling, with light and air religiously excluded. From several medical men I learnt of cases of phthisis with advanced cavitation that had recovered from a residence on the island. The climate would seem a suitable one for chronic bronchitis and emphysema, cases in which the rigour of our winter is so trying, and for many forms of kidney trouble. Cases of rheumatism, too, would benefit doubtless from the Jamaican climate, although the complaint is frequently contracted by the negroes from the habit of sleeping on the damp ground in the open air. For those who are "run down," or who are suffering from symptoms commonly characterised by such indefinite terms as nervous "break down" or "depression," a trip to the West Indies may be prescribed with advantage: the sea voyage and the interest aroused by the novelty and beauty of the tropical surroundings would doubtless combine in most instances to work a speedy cure. For

the healthy pleasure seekers, who are not averse to a sea voyage, a trip to Jamaica can be strongly recommended. As a winter residence, too, the mountain parts of the island have numerous desirable features. The hospitality of West Indian residents to strangers and newcomers is proverbial, and I can personally testify to its prevalence.

My stay on the island was but a brief one, and most of the time was of necessity spent in Kingston or its vicinity, but Mr. Justice Lumb invited me to spend the day and night at his house at Craigton. Leaving Kingston at 5 o'clock in the morning, I journeyed along the sides of a mountain amidst the most gorgeous tropical scenery and vegetation for more than a dozen miles, and attained a height of about 4,000 feet above the sea. Many of the gorges and valleys viewed on the way up were fit to compare with the far-famed Thessalian Tempe, although of quite a different type of beauty. The views from the house and garden at Craigton and the kindness of my host and hostess will long remain the pleasantest of memories. On my return journey, after a drive down the mountains to Kingston, I took the train to Mandeville, a summer resort about fifty miles from Kingston. At Mandeville, situated some 2,000 feet above the sea, the air and scenery were delightful, and one might have imagined oneself in England on a pleasant summer's day were it not for the tropical vegetation and the black faces of the majority of the population. There was not a single spot I visited in Jamaica that was not beautiful to the eye, although in reality I saw none of the show places of the island.

### RETURN VOYAGE.

The voyage home was smooth and enjoyable until nearing its close. On the last day but one, off the coast of Ireland, we struck a storm, and five of the officers and men were badly damaged by a wave that came over the bows. The cuisine was excellent on both the outward and homeward voyage, and the passengers on the latter showed their appreciation of it by getting up a testimonial of a pecuniary nature to the cook. We landed at Bristol in a partial blizzard, and most must have regretted the climate we had left behind us in the tropics. Thus ended a trip that I look back to with nothing but pleasure, and one that I hope to make again at no distant date.

# ASSOCIATION INTELLIGENCE.

### ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

## LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

## BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT.—The next meeting of this District will be held at the Norfolk Hotel, Arundel, on Tuesday, December 10th, at 3.30 P.M. Dr. Eustace (Arundel) will preside. Agenda: Minutes of the Worthing meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. The following papers, etc., have been promised:—Dr. H. A. Caley (London): Peridiaphragmatic Lesions. Dr. Eustace (Arundel): The Treatment of Heart Disease. Dr. Lapthorne (Littlehampton): (1) A Case of Retention of Urine in a Boy; (2) The Notes of two Abdominal Cases. Members desirous of exhibiting specimens, or reading notes of cases, are invited to communicate at once with the Honorary Secretary. Dinner at the Norfolk Hotel at 5.30; charge 6s., exclusive of wine. The Honorary Secretary would be much obliged if members would kindly inform whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner. By so doing they will very materially facilitate arrangements, and promote the success of the meeting. All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends.—H. C. L. MORRIS, 10, The Steyne, Bognor, Honorary Secretary.

SHROPSHIRE AND MID-WALES BRANCH.—The next meeting of the Clinical and Pathological Section of this Branch will be held at the Salop Infirmary, on Tuesday, December 10th, at 5 P.M. Members who wish to read communications, or show cases or specimens, are requested to communicate with the Honorary Secretaries before Tuesday, December 3rd. Note.—Members are particularly requested to bring any cases, or notes of cases, of leukæmia or other anæmias, especially if associated with enlarged spleen. It is hoped that every member will endeavour to attend this meeting.—HAROLD H. B. MACLEOD and LEONARD J. GODSON, Shrewsbury, Honorary Secretaries.

## SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

A MEETING of this Branch was held at the Kent County Ophthalmic Hospital, Maidstone, on November 15th, Dr. PYE OLIVER in the chair. Fifteen members were present.

*Confirmation of Minutes.*—The minutes of the previous meeting were read and confirmed.

*Next Meeting.*—On the proposition of Dr. HOVE, seconded by Mr. HALLOWES, it was resolved that the next meeting be held at Rochester, the arrangements being left to the Honorary Secretary.

*Ophthalmia Neonatorum.*—MR. CARTWRIGHT, Surgeon to the Kent County Ophthalmic Hospital, read a paper on Ophthalmia Neonatorum, in which, having detailed the various symptoms and complications of the disease, he strongly emphasised the point that the essentials for successful treatment were promptness and thoroughness, and he expressed a very strong opinion that if efficiently treated from the first the cornea need never be affected. In his experience the best lotion, the application of which should not be left to the nurse entirely, was 1 in 4,000 sublimate solution, and the conjunctivæ should also be painted daily with a 2 per cent. nitrate of silver solution, which was best applied on a glass rod, a specimen of which he exhibited to the meeting. He pointed out that in some countries ophthalmia neonatorum was a notifiable disease, and he mentioned that the Local Government Board had been memorialised by the Ophthalmological Society, but with no result. A general discussion followed, in which several members gave their experiences of the disease.

*Surgical Experiences in South Africa.*—MR. CHARLES STONHAM, C.M.G., Senior Surgeon to Westminster Hospital, then read a most interesting and highly instructive paper on his surgical experiences whilst in charge of the Imperial Yeomanry Field Hospital in South Africa, which was followed by a discussion.

*Votes of Thanks.*—On the proposition of the CHAIRMAN, seconded by Mr. GOSSE, a vote of thanks for the use of the Board room of the hospital was passed, and a similar vote of thanks to the Chairman for presiding having been proposed by Dr. HOAR, and seconded by Dr. SHAW, and unanimously carried, the meeting terminated.

## BRITISH GUIANA BRANCH.

THE annual meeting of this Branch was held at the Public Hospital, Georgetown, on October 31st, Dr. F. H. EDMONDS, President, in the chair. Twelve members attended.

*Confirmation of Minutes.*—The minutes of two last meetings were read and confirmed.

*Communications.*—Dr. L. J. VEENDAM read notes and exhibited the specimens of a case of a large calculus passed *per urethram*, which was discussed by Drs. J. H. CONYERS, DUNSCOMBE-HONIBALL, and LAW.—Dr. J. M. ROHLEHR read a paper on a case of recto-vesico-vaginal fistula, exhibiting the patient, on whom he had operated with partial success under very difficult circumstances—namely, without an anæsthetic or skilled assistance. After the discussion following Dr. Rohlehr's paper, in which Drs. OZZARD, DUNSCOMBE-HONIBALL, LAW, and CONYERS took part, the PRESIDENT proposed a vote of thanks to Dr. Rohlehr for the great trouble he had taken in bringing the case before the Branch, which was duly seconded and carried.

*Proposed Reintroduction of By-law.*—Dr. FOWLER moved the reintroduction of By-law 18, but the PRESIDENT ruled it out of order, as a month's notice in writing had not been given to the Council.

*Election of Officers.*—The following officers were then elected for the ensuing year:—*President*: Dr. L. J. Veendam. *Vice-President*: Dr. F. H. Edmonds; Dr. C. J. Gomes. *Honorary Secretary and Treasurer*: Dr. J. B. de Freitas. *Council*: Dr. A. T. Ozzard; Dr. Dunscombe-Honiball; Dr. J. H. Conyers; Dr. J. F. S. Fowler.

*Vote of Thanks to Dr. Fowler.*—The President said he took this opportunity, as he was sure the whole Branch did, of thanking Dr. Fowler for the manner he had carried on the work of Honorary Secretary and Treasurer for the past five years, and he was only sorry that he was retiring, not only for the work he had done for the Branch, but also for the *British Guiana Medical Annual*, which he was sorry to say was dead, but pleased to say he had just heard from Dr. Fowler, that there was a hope of its revival, as Drs. A. T. Ozzard and C. P. Hennard had promised to take it in hand, and see what they could do, and he wished them all success. Dr. Dunscombe-Honiball seconded the vote of thanks, which was carried unanimously. Dr. Fowler thanked the President and members, and said although he was retiring at present for certain reasons, he would be always most willing to do anything he could for the Branch, and to assist the newly-elected Secretary in his duties.

*Circular and Statement of Accounts.*—A circular *in re* resolutions passed at the recent British Congress of Tuberculosis was circulated; also a statement of accounts, audited, showing a balance of 127.44dols. in favour of the Branch.

# SPECIAL CORRESPONDENCE.

## PARIS.

*M. Albarran on Perineal Prostatectomy for Hypertrophy.—Prophylactic Measures in the Navy against Tuberculosis.—Statistics of Cases of Small-pox treated in the Pasteur Institute Isolation Hospital.*

At a recent meeting of the Société de Chirurgie M. Albarran declared himself a partisan of prostatectomy, at least in so far as it concerns hypertrophy of the gland. He expressed the opinion that suprapubic prostatectomy was a grave operation, the mortality being on the average from 12 to 15 per cent., and that in the majority of cases the result was not altogether satisfactory. The indications for the perineal operation, however, were frequent; so frequent, indeed, that he now no longer looked for them, but rather for the contraindications—advanced age, marked pericystitis, double and serious kidney lesions, advanced urinary cachexia. In all other cases he was strongly in favour of a radical operation. He did not look on perineal prostatectomy as a grave operation, and the results were excellent. He operates as follows. He makes a bi-ischial incision, exposes the posterior surface of the prostate, and pushes back the rectum; a median incision is then made in the capsule, which is turned back to right and left; a median incision is now made in the gland, the lateral lobes of which are removed piecemeal in succession. The median lobe is easily enucleated by a finger introduced into the bladder through an incision in the urethra; the operation is terminated by the suture of the urethra, with cysto-perineal drainage. Since April he had performed this operation sixteen times without a death. The patients were all infected, and some gave considerable difficulty at the time of operation owing to the volume of the gland, which in one case was as large as two fists. One patient has been lost sight of, and four others have been operated on too recently to warrant conclusion; three are still under treatment, but the wound is closed, and they empty the bladder well; eight others, operated on from two to six months ago, may be considered as cured, they empty the bladder spontaneously and completely; the kidney lesions which were present in certain of these cases have been ameliorated, and the general condition of the patients has again become excellent.

The Minister of Marine has addressed to the Vice-Admirals Commanding-in-Chief, the maritime prefects, and the directors of all naval establishments outside ports a circular in which, after recalling such measures as he has already prescribed in previous circulars, with a view to preventing the development of tuberculosis among the staff, civil and military, of naval establishments, he invites the heads of each department to send in proposals as to any amelioration which may seem to them desirable from the hygienic point of view. Such proposals will, after due consideration, be embodied in circulars with a view to the more general application of such preventive measures as are recognised as efficacious. Moreover, the Minister has decided that the Inspector-General of the Naval Service de Santé shall visit each port to study on the spot the isolation in the naval hospitals of all cases of tuberculosis.

Owing to the kindness of Dr. Martin, the Director of the Pasteur Institute Isolation Hospital, I am able to give the following statistics regarding the 389 cases of small-pox which have been under his care. The great majority of the population in Paris being vaccinated, in these 389 cases we find but 26 cases occurring in persons who have never been vaccinated. Of these 26 cases, 9 occurred in newly-born infants, of whom 8 died: this leaves 17 cases treated among non-vaccinated persons, with 4 deaths. For the 363 cases occurring among vaccinated persons, the following table shows the sex distribution of the cases and the mortality among those who were protected by revaccination compared with those who had not been revaccinated since infancy:

| | Totals. | | Males. | | Females. | |
|---|---|---|---|---|---|---|
| | Cases. | Deaths. | Cases. | Deaths. | Cases. | Deaths. |
| Revaccinated ... | 62 | 7 | 30 | 3 | 32 | 4 |
| Non-revaccinated... | 301 | 54 | 90 | 16 | 211 | 38 |
| Totals ... ... | 363 | 61 | 120 | 19 | 243 | 42 |

It will be seen that small-pox especially attacked those who were not protected by revaccination—301 cases as against 62 among the revaccinated. This table also strikingly illustrates a fact pointed out in my letter of October 5th, page 1012, that is, the great incidence of the disease among females, who are not so protected as males by compulsory revaccination. Among the revaccinated the sex distribution is almost the same for either sex—30 males, 32 females—but among the non-vaccinated we find only 90 males, while 211 females out of a total of 301 cases among non-revaccinated persons were treated in the Pasteur Institute Hospital. The following table shows the case-mortality among the three classes of patients, that is, revaccinated, non-revaccinated, and the non-vaccinated:

| | Cases. | Deaths. | Percentage Mortality. |
|---|---|---|---|
| I. Revaccinated ... ... | 62 | 7 | 11.29 |
| II. Not revaccinated ... | 301 | 54 | 17.94 |
| III. Not vaccinated (exclusive of newly-born infants) ... ... ... | 17 | 4 | 23.50 |

This table clearly points to the value of revaccination; the mortality among those who had been vaccinated in infancy, and who had not been revaccinated, approaches that of those who had not been vaccinated at all. The type of the disease has been serious, as the mortality shows. Dr. Martin has observed 24 hæmorrhagic cases, with 21 deaths; these cases were distributed as follows: males 4 cases, 4 deaths; females 20 cases, 17 deaths—a very large proportion indeed. The following figures give the number of fresh cases of small-pox notified in Paris, and the deaths due to this disease during the forty-third and forty-fourth weeks:

| | | |
|---|---|---|
| Forty-third week ..... | 23 cases ..... | 3 deaths |
| Forty-fourth week ..... | 40 ,, ..... | 4 ,, |

There were in the Paris isolation hospitals the following numbers of small-pox patients under treatment at the following dates:

| | | | |
|---|---|---|---|
| On October 20th ..... | 48 cases ..... 17 males ..... | 31 females. |
| On October 26th ..... | 43 ,, ..... 15 ,, ..... | 28 ,, |
| On November 2nd..... | 49 ,, ..... 22 ,, ..... | 27 ,, |

## BERLIN.

*The Committee on Cancer Research.—Professor Virchow's Idea of a Holiday.—News.*

THE German Commission for Research on Cancer, which was instituted about two years ago, held a meeting last week in one of the bureaux of the Prussian Cultus-Ministerium. Professor von Leyden presided, and was able to inform the meeting that the report of the great general inquiry, with which the Commission has been occupied from its beginning, has been worked out and arranged in the Berlin Statistical Institute, and is now in the printer's hands. Regierungsrath Wutzdorff, of the Imperial Board of Health, read the paper of the evening, his subject being the spread of cancer in the German Empire. As in other European countries, in Germany cancer was undoubtedly on the increase. A discussion followed, in which Messrs. von Leyden, Olshausen, von Hausemann, and Behla took part. When the report comes out the medical public will be able to judge of what has been done by the commission—preliminary work chiefly, but for that very reason most important and valuable. An immense amount of material has been collected and sifted, and a road opened for the systematisation and centralisation of future research on cancer.

It is an old story that Professor Virchow gives himself no rest, and some people endowed with less energy have been heard to complain that he gives others no rest either. November 20th being a church holiday in Prussia (*Busstag*), all schools, universities, etc., were closed for the day. Here was a welcome opportunity for Virchow! He invited students of every faculty or profession to inspect the Pathological Museum under his guidance. About three hundred came, and to them Virchow delivered a long and extremely interesting address, dwelling on the importance of the museum for general culture. Lime-light illustrations followed, and finally Virchow and his assistants conducted the students through the museum, explaining its contents for upwards of two hours.

Professor Senator's Charité Clinic (the third university clinic), the further existence of which had been threatened, will continue after all. A new building is to be erected for the purpose in the Ziegel Strasse.

The "Gesellschaft für innere Medicin" has decided to admit female doctors of medicine as members.

## BELFAST.

*Ulster Medical Society.—Annual Dinner.—Generous Offer by Professor Whitla.—A Medical Institute for Belfast and Ulster.*

THE annual dinner of the Ulster Medical Society was held on November 21st. The President, Professor Whitla, occupied the chair, and eighty-three members and guests were present. The latter included the Lord Mayor (Sir Daniel Dixon, D.L.), the President of the Queen's College (the Rev. Dr. Hamilton), the President of the Royal College of Surgeons of Ireland (Mr. Thomas Myles), the President of the North of Ireland Branch of the British Medical Association (Dr. Darling, of Lurgan), Colonel Thomsett, R.A.M.C., Professor Redfern, Dr. Dunlop of Holywood, and Dr. McLaughlin of Derry.

After dinner, the toasts of the King and the other loyal toasts were proposed and received with enthusiasm. The Chairman next proposed the toast of "The Lord Lieutenant and Prosperity to Ireland," which was eloquently responded to by Mr. Myles. "The City and Trade of Belfast," was proposed by Dr. Walton Browne and responded to by the Lord Mayor; and the "President of the Ulster Medical Society" was proposed by President Hamilton and acknowledged by Dr. Whitla.

In the course of his reply Dr. Whitla alluded to the great need which existed in Belfast for a medical institute, where meetings of the Society could be held and a medical library established. The plan he proposed as the most dignified, most convenient, and one eventually most likely to receive cordial support was the erection of a suitable building on some vacant plot of ground. The initial cost and the subsequent upkeep of such an institute were primary and real difficulties; "but," said Dr. Whitla, "if you tell me that you are determined to keep up the building I will erect it, furnish it, and hand it over to you, or to trustees acting on your behalf." He suggested a building with one large or two or three smaller rooms on the ground floor; these would serve for smaller meetings, reading rooms, library, private room, office, etc. On the first floor there would be a large lecture hall to accommodate about two hundred, and the second floor could be used for any further purpose to be subsequently determined. He further suggested that the Society should consist of Fellows and Members; the former should double their subscription, and have to be elected to the rank; they would probably have some privileges not held by members. Country Fellows should be admitted, as is usual, at half rates, and the advantages of such an institution would especially appeal to professional brethren from the country. In reply to the President's words many of the leading medical men expressed their great pleasure and their high appreciation of the generosity displayed in this offer, which was at once taken up with much enthusiasm, and in less than twenty minutes a guarantee fund to cover the probable outlay for the next five years was raised. Everyone recognises the great benefit that would accrue to the medical profession in Ulster from such an institution: the North of Ireland Branch of the British Medical Association is also to find a home in the building; and there is no doubt that the memberships of both societies will greatly increase on its erection.

## ABERDEEN.

*The Marischal College Building Scheme.—Progress of the Fund.—Professor Finlay.*

THE subject of chief interest in Aberdeen affairs at present is the collection of £25,000 before the end of the current year to complete the funds necessary for the fulfilment of the Marischal College building scheme. At the extremely successful dinner of the London Aberdeen University Club, held on November 20th, under the presidency of Sir Frederick Treves, Principal Lang, in an eloquent speech, showed how the debt on the buildings, amounting to £20,000, had been removed by Mr. Mitchell's generosity; how Lord Strathcona had made his offer of £25,000 under the condition that a total sum of £100,000 should be raised by the end of the year; how that by the Carnegie gift a portion of this sum, applicable to equipment, could be met; and how by the energy of the Lord Provost of Aberdeen great strides were being made towards raising a portion of the required money.

The professors have contributed £1,200 in addition to £1,600 given at an earlier date. Various collections have been started; the workmen of the city are beginning to take the matter up, many influential tradesmen and others have given handsome donations, and very fair progress towards the required end has been made. There is, however, still a considerable deficit, and all former graduates and friends of the University are heartily requested to subscribe what their generosity may consider appropriate to a scheme which will provide the school with suitably handsome architectural features allowing for space urgently needed at present, and, judging from the history of the recent years of the University, still more essential for the developments which may justly be expected in the near future.

At the beginning of the month the students of medicine were glad to welcome Professor Finlay, LL.D, on his return from America, whither he had gone as representative of the Aberdeen University at the Founders' Commemoration at Yale University. The degree of LL.D. was there conferred upon him.

## GLASGOW.

*The Branch of the National Association for the Prevention of Consumption.—Action of the Corporation.*

THE first public meeting of the Glasgow and District Branch of the National Association for the Prevention of Tuberculosis was held in St. Andrew's Hall, and was presided over by the Duke of Argyll, the Honorary President of the Branch. In an interesting speech the Duke of Argyll commended the work of the Association, and referred particularly to the evils

of promiscuous expectoration and the necessity for the control of the habit. Sir James Crichton-Browne then gave an eloquent address on the nature, the prevalence, and the prevention of consumption and other forms of tuberculosis. He referred to the great improvement that had been achieved in the past by sanitary and hygienic methods, so that in Glasgow, for example, the death-rate for consumption had been reduced during the last forty years by exactly one-half. It was to be feared, however, that this improvement could not be relied upon to be progressive, so that with the improved knowledge of the nature of the disease and of its proper treatment and prevention it was proposed to take certain steps to stamp it out. He then indicated the recommendations of the National Association as to spitting, disinfection, notification, and isolation in suitable hospitals and sanatoria. Professor McCall Anderson also gave an address on tuberculosis, referring with commendation to the work already being done at Quarrier's Sanatoria for the Consumptive Poor, at Bridge of Weir, and expressed the hope that at no distant date much more might be done in Glasgow to stem the tide of tuberculous disease. The Lord Provost, Dr. Samuel Chisholm, also addressed the meeting, and said that the Corporation of Glasgow, recognising the fact that consumption was not only a curable but a preventable disease, were desirous of doing all that they possibly could to prevent the evil, whether or not they saw their way to take further steps towards the cure of it. On the motion of Dr. Finlayson a vote of thanks to Sir James Crichton-Browne and Professor McCall Anderson was adopted, and the Chairman was thanked for presiding.

It may be added that at the last meeting of the Corporation of Glasgow a grant of £500 to the Glasgow and District Branch of the National Association for the Prevention of Tuberculosis was agreed upon.

# CORRESPONDENCE.

## THE CINDERELLA OF THE PUBLIC SERVICES.

SIR,—The worst paid and hardest worked of the public services is the Poor-law medical service. No one cognisant of the facts will dispute that statement. And one of the worst paid portions of that service, if not *the* worst paid when the services required of it are taken into consideration, is the medical staff of the London Poor-law infirmaries. To take the position of the medical superintendent first: He must be a sound surgeon, for nowadays all operations, major and minor, are done by the medical staff of the infirmary; he must be, it goes without saying, a sound physician; he must know the details of the Poor Law and of hospital administration thoroughly; he must have a sound knowledge of hygiene, and must be an expert in the recognition of infectious diseases; he is expected to be acquainted more or less with all the special branches of practical medicine—obstetrics, gynæcology, pathology, ophthalmology, etc.; in many cases he must be an expert in lunacy matters; and lastly he must be able to lecture to the nursing staff on physiology, anatomy, and nursing. Withal he must be a man of infinite tact, patience, and industry, with an iron constitution, or his administration will be a sad failure. That one man should possess all these qualifications is obviously impossible, and the most striking fact about the service is the success with which so many of its members carry on their multifarious duties; for practically compared with the scandals, so-called or otherwise, of voluntary hospitals there are no infirmary scandals, and it is knowledge of this fact, I fear, which induces many Boards of Guardians to sweat their medical officers in a way they would not dare to sweat the members of a trade union. The Mile End Board pays its medical superintendent £300, the Fulham and Camberwell Boards £325 per annum. The highest salary paid to any medical superintendent in London is £500 per annum. To realise how unjust are these salaries one has only to compare them with the salaries paid by the Metropolitan Asylums Board and the London County Council for less arduous and responsible work. Medical superintendents of the M.A.B. fever hospitals are paid £400, rising to £700 per annum, those of imbecile asylums £600, rising to £800. The medical superintendents of L.C.C. asylums are paid £1,000 per annum. The emoluments of all these officers are, with few exceptions, the same—unfurnished house, coals, gas, and washing.

When we come to the position of the assistant medical superintendent the state of affairs is even worse. His salary is usually £100 or £120, rising by annual increments of £10 to £130 or £150, and his prospects are none, for guardians prefer to appoint outside men to the post of medical superintendent. They prefer a man with one year's experience in a M.A.B. hospital to a man with five years experience of a Poor-law infirmary. Hence the man who likes the work of a public institution had much better enter one of the fever hospitals. He will be paid at the rate of £160, rising to £200, and will stand a much better chance of promotion. The prospects of the junior medical officer are not worth discussing. No sane man would hold these posts, except for the valuable experience he gains. There is one point it would pay Boards of Guardians to ponder over very carefully. A man in the position of medical superintendent of a London infirmary has opportunities of saving his Board thousands of pounds in the course of a year without any detriment or rather with advantage to the infirmary. Is it likely that a man who knows his work is being exploited for a sum far below its market value is going to take the trouble to safeguard the interests of the men who sweat him? This, of course, is a very immoral attitude, but it is the attitude of the ordinary, intelligent citizen. Owners of successful industrial institutions recognise it. Their motto is, "Pay the highest price, get the best man, and you will secure the most economical administration."

Now, is there any remedy for this state of affairs? Short of inducing the Local Government Board to fix minimal salaries for the medical officers there is only one. Let the medical profession boycott the London infirmary medical service. Let the example of the profession with regard to the Army Medical Service be followed with regard to the indoor appointments of the Poor-law service—a service whose pay, prospects, and status are even lower than those of the A.M.S. used to be. If this is done Boards of Guardians will soon be forced to fall into line with other public bodies, and will be obliged to pay reasonable salaries to their medical officers. As minimal salaries for London there should be £500 rising by annual increments of £50 to £700 for medical superintendents, £150 rising by annual increments of £25 to £250 for assistant medical superintendents, and £120 for the junior medical officer. Finally, all higher appointments, including the Local Government Board inspectorships, should be made by promotion in the service.—I am, etc.,

November 13th. AN INFIRMARY MEDICAL OFFICER.

## THE STUDY OF THE HISTORY OF MEDICINE.

SIR,—I am glad to see correspondence following your article on the FitzPatrick lectureship at the College of Physicians. The permanent value of such a society as that projected by Dr. Biggs is unquestionable; but I would begin the study of the history of medicine at an earlier period in the career of members of our profession.

For a long time I have been urging the wisdom of some systematised elementary course of instruction for our students. In my presidential address to the Birmingham Branch of our Association, a dozen years or so ago, I set forth my views on this point, and I am not without hope that at some early date the medical curriculum in some schools may include a course of lectures on the subject. I would not leave such a valuable aid to a sound foundation in training for our work to the period of actual practice. I would have every student acquainted with the outlines of the history of medicine before he embarks in the struggle of bread-winning. There has been, and is now, much misconception of the value of historical teaching in medicine. It has been treated with "contempt tempered by indifference" because it has been looked upon as the presentation of a mass of examples, instead of a series of preparations in the interdependence of which lies their utility.

It is perhaps too much to expect that when taught, the history of medicine shall be at once raised to the highest and most profitable level; but even in its most simple form, having a true regard for method, it cannot but be valuable. Time might be found, it seems to me, in the student's last year for a rudimentary course which, like a good school

training, should be inculcative of method based on a sound foundation of detail.—I am, etc.,

Birmingham, Nov. 24th. D. C. Lloyd Owen.

## THE TEACHING OF PHYSICS AND BIOLOGY.

Sir,—It is to be hoped that the General Medical Council will not commit themselves to the retrograde step of consigning the teaching of physics, biology, and chemistry to non-medical schools. Referring to my own subject I may point out that there may be all the difference in the world between the elements of physics as taught even in the best schools and in medical colleges. In the former we shall have schoolboys exercised in dynamics and in arithmetical exercises on falling bodies, with a little light, sound, heat, and electricity thrown in, while in the latter the student will be taught those branches of physics which will be of most value to him in physiology and his future professional studies. Such a course should be essentially of an experimental and practical nature, comprising the elements of sound, heat, light, and electricity. To try to cram these along with dynamics into a three months course is to attempt an impossible task.

In Surgeons' Hall we study, after a little elementary dynamics, the laws which govern the flow and pressure of liquids in uniform and in dilated tubes (aneurysm, the pulse). In the subject of light particular attention is paid to refraction, spectrum analysis (the blood, chemical and heat rays), and polarisation. In heat, to thermometers, hygrometry, and calorimetry. In electricity, to static electricity, batteries, accumulators, galvanometers, Ohm's law, magnetism, and the induction coil, not omitting the Roentgen rays. But I am only touching the fringe of the subject. Every day sees some further advance in scientific medicine. The use of electricity in medicine and surgery is constantly extending: we have the Roentgen rays, Finsen rays, Dowsing treatment, and high-frequency currents; and yet, instead of helping the student to get such a grounding in the physics of these subjects that he may be able to understand them and apply them properly in his future practice, the General Medical Council is desired in some quarters to reduce their study to a vanishing point by relegating them to schools and schoolboys. A course of medical physics can only be satisfactorily given by a teacher who has had both a scientific and medical training.—I am, etc.,

Dawson Turner,

Edinburgh, Nov. 20th. Lecturer on Physics at Surgeons' Hall.

## THE PRINCIPLES OF LOCAL TREATMENT IN DISEASES OF THE UPPER AIR PASSAGES.

Sir,—The discussion which has been called forth by the lucid and comprehensive lectures given by Sir Felix Semon is of extreme interest and great moment, not only to the specialist and the whole medical profession, but also to the public at large.

His criticism of the treatment of aural affections will be highly appreciated by those otologists who also are "rather sceptical, concerning the asserted great influence of nasal stenosis, without concomitant chronic catarrh, upon all possible ear troubles" and the "endeavour to improve labyrinthine disease by removing a crest from the nasal septum." As a specialist, I strongly endorse "the principles of local treatment" which have been expressed by the lecturer in such strenuous, yet fair and square, language. It is, I think, greatly to be regretted that Dr. Scanes Spicer should have seen fit to insinuate that the lecturer's acquaintance with rhinology is still far to seek. Surely, the opposition to the lecturer's opinions is not so weak that it is necessary to present this *petitio principii* instead of scientific argument? One certainly hears it stated at times, in private, that many of us are not only unable to treat nasal affections, but are even incapable of making a proper examination of the nose. This, however, is the first time, to my knowledge, that this charge has been boldly and baldly put down in black and white. Are the select few in possession of some hidden knowledge regarding diseases of the nose, which to others is a closed book, or are they merely making unwarrantable pretensions to superior skill?

In regard to such views, the words of the ancient seer instinctively come to mind, "Surely, *ye* are the people and wisdom will die with you."—I am, etc.,

Wimpole Street, W., Nov. 26th. Edward Law.

Sir,—If anything had been needed to confirm the wisdom of my intention not to continue correspondence on this subject it would be found in the lamentable letter of Sir Felix Semon, which occupies yet another five columns of the Journal.

But the writer knew full well that it would be impossible for me to "remain (absolutely) faithful to my laudable intention," if only because my silence would be interpreted certainly by him, and possibly by others, in the same sense as is assumed to account for the general indifference to his diatribes, namely, an agreement with the "soundness of his conclusions" and "the disinterestedness of his motives." Allow me, therefore, to touch on the three principal points involved, and in the fewest possible words.

1. Recollection of the result of an attack made on me at the Pathological Society, on December 23rd, 1893, should have taught this champion of accuracy a little more caution in claiming an unbroken record of victory in the controversial field or of implying that I am the only one who damages his own cause by the methods of his advocacy. With this trivial side issue it would be fruitless to deal further.

2. I cannot think I am alone in the error I made in not realising that, addressing himself to British students, a lecturer should have taken two out of three illustrations of prefatory justification for his censorship, on the one hand from a provincial town of Germany in future to be celebrated as that in which he was born, and on the other from the chief city of the United States, of the clinical teaching and practice of which Sir Felix Semon is up to now personally as ignorant as Cato was for so many years of.....Greek. In other words, I did not realise that the lecturer was posing as an international censor of the surgical intelligence and rectitude of the practitioners of laryngology and rhinology throughout the civilised world.

Sir Felix Semon is particularly severe on me for my rendering of the words "I see it stated"; he will hardly deny that he is speaking in the present tense. But as a matter of fact, not only has he gone far afield for these proffered reasons for present "serious misgivings" and for the urgency of his present animadversions, but also very far back into the past, since his charges against Dr. Y. (Ziem) and against Dr. Z. (myself) refer to something published six years ago, while that against Dr. X (Bosworth) is taken from a work which has been universally accepted as a classic since its publication in 1889—twelve years ago.

3. With regard to "lingual varix," in his first lecture[1] Sir Felix Semon announced its utter collapse, and expressed a prayer that it might rest quietly in the shades of oblivion. Is it not rather illogical for him so soon to revive it? He is aware—and considering his bibliographical omniscience was probably always aware; I was not so until the year 1896—that though my first communication on the subject was made at Milan in 1880, the condition had been carefully described by G. Lewin, of Berlin,[2] in 1863, and that this eminent pioneer in laryngology had in his article not only published an engraving of lingual varix, reproduced in my systematic work,[3] but that he had actually employed the words "hidden hæmorrhoids," which I later unconsciously plagiarised in the term "throat piles," the inelegance of which seems to have so wofully disturbed the refined taste of my critic. Reference to my book will show that lingual varix has been the subject of much attention almost universally favourable in various centres of Europe, America, and Australia, and to such an extent that there are certainly at least as many—I believe twice or thrice as many—authorities of repute who could be quoted in agreement with its importance, as of those who minimise it. Curiously enough also, almost all, if not all, of the latter class are British, and a large majority metropolitan. I desire to point out another instance of Sir Felix Semon's unfairness. In his second lecture[4] he says in effect, "Can you believe it, gentlemen, that varicose veins have been held

[1] British Medical Journal, p. 1404.
[2] *Clinical Essays on Disease of the Larynx.*
[3] *The Throat and Nose and their Diseases*, fifth edition, 1899, p. 392.
[4] *Loc. cit.*

responsible for 'paresis of an upper limb?'" and by the context it is clear that he imputes this suggestion to me, whereas the statement was made by Villecourt, a French observer, whom I quoted with the remark that this "was a view which seems even to the enthusiast to be exaggerated." Moreover, this observation of Villecourt does not refer to "varicose veins," but to "hypertrophied lingual tonsil," a distinction much insisted upon by those who deny the pathological importance of varix.

Lastly as to treatment. Sir Felix Semon, who is so careful to verify his references, has contented himself with quotation from my article in the *Liverpool Medico-Chirurgical Journal* for January, 1896, in which general measures were barely considered. Had he gone to my more recently published systematic work (1899) he would have found it to contain over three pages on treatment as a whole, half one of which is devoted to the constitutional, and commences with the following words:

It must not be assumed that all cases require local treatment, for it is certainly true that, as regards varix, at least a third of the cases were noted in my figures as a physical sign during the course of a throat examination, which beyond assisting the diagnosis require no further attention.

Even in the Liverpool article it can be also seen that galvano-cautery is by no means the only local procedure recommended. In the light of these facts I feel I am justified in resenting the reopening of this question and the assumption of authority by Sir Felix Semon to decide a debateable point of practice not even originating with me, albeit accepted, in my revival of it, for over twenty years by laryngologists, at least the equal of either of us in eminence and experience.

I with confidence leave it to your readers to decide whether the epithet "irrepressible" and the charges "of distorting his adversary's plain meaning, of dragging in matter quite foreign to the subject under discussion, of obscuring the real issue under a cloud of words,...of blind animosity," etc., most fitly apply to the "preacher of literary ethics" who employs them or to—Yours faithfully,

Mansfield Street, Nov. 26th. LENNOX BROWNE.

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SIR,—Sir Felix Semon has missed an opportunity of scoring one against Mr. Lennox Browne with regard to the verification of references. He might have pointed out that the quotation "what the policeman says is not evidence" is incorrect. The correct version will be found in chapter 34 of the *Pickwick Papers*, and is as follows:

"You must not tell us what the soldier, or any other man said, sir," interposed the judge; "it's not evidence."

—I am, etc.,

Plumstead, Nov. 24th. C. F. CLARKE, M.R.C.S., etc.

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## RECURRENCE OF LARYNGEAL PAPILLOMATA IN A CHILD AFTER TRACHEOTOMY.

SIR,—Having charged Dr. Hunter Mackenzie with discourtesy in his reference to a case of mine, I have now to add the charge of misrepresentation:

| *Fact.* | *Fiction.* |
|---|---|
| On April 10th, 1890, I performed tracheotomy. *For some time she was able to breathe fairly freely and to whisper, when the tube was removed and a finger laid on the opening.*—Dr. SYMPSON, BRITISH MEDICAL JOURNAL, November 9th, 1901, p. 1408. | I think it is perfectly evident that Dr. Sympson did not perform tracheotomy, but laryngotomy; *that as the growths did not disappear, but increased, there was and could be no recurrence.*—Dr. Mackenzie, BRITISH MEDICAL JOURNAL, November 16th, 1901, p. 1503. |

I call the operation tracheotomy because I opened two rings of the trachea, and, as there was little room, I cut through the cricoid cartilage also (as Ashby and Wright say: "In almost every case in which tracheotomy has been done, examination will show that two or three rings of the trachea and the cricoid cartilage have been divided," technically speaking a laryngo-tracheotomy). After the operation — as Dr. Mackenzie might have learned if he had read my note with less animus—the growths disappeared. Unfortunately they did recur, and consequently the tracheotomy tube had to be replaced. With the narration of these facts, Dr. Mackenzie's imaginative discursus may be dismissed to the limbo of unverified hypotheses.—I am, etc.,

Lincoln, Nov. 25th. E. MANSEL SYMPSON, M.D.

## INFANTILE MORTALITY AND THE MORTALITY OF "CHILDREN."

SIR,—Your correspondent in the BRITISH MEDICAL JOURNAL of November 23rd quoted from the *Daily Chronicle* of November 12th a sentence taken away from its context concerning the mortality of children in the refugee camps of South Africa. To be fair you should have also quoted the following sentence: "The deaths in South Africa were among older children, who are naturally more robust than infants." My remarks at the Sanitary Conference concerning the Registrar-General's quarterly return were correctly reported in the local papers, one of which I enclose, but probably the sentence referred to above, was omitted from the telegram sent to the London papers by their local correspondents. But it was referred to in the *Daily Chronicle* of November 14th, and was published in the *Daily News* and many other papers, and I should have thought would hardly have escaped your notice.

I was not able to obtain a copy of the official reports on the working of the refugee camps until to-day. The following statistics, on page 253, which by chance was the first page I saw, are sufficiently instructive: Burgher Camp, Middleburg. Medical report, July, 1901. Mortality statistics for July.—Number of deaths under 1 year of age, 148; 2 (? 1) years to 10 years, 198; 11 (? 10) years to 20 years, 38 deaths; over 20 years of age, 29 deaths; total 413 deaths. On the next page we find causes of death—measles, 334; influenza, 35; diarrhœa, dysentery, etc., 11; enteric fever, 8; all other causes, 25 deaths; total, 413. It will be observed the number of deaths from measles was almost equal to the number of deaths from all causes under 10 years of age, and that measles caused over 80 per cent. of the mortality. Dr. Newsholme, on page 192 of *Vital Statistics*, quotes Dr. T. Thomson on the mortality from measles during an epidemic in England. The population of the district was 35,606; the following were the death-rates from measles—under 1 year of age, 6.9; 1 to 2 years, 23.6; 2 to 3 years, 17.5 per 1,000.

The fatality from measles per 1,000 attacked was under 1 year of age 96, between 1 and 2 years of age 197, between 2 and 3 years of age 102. I give these figures to show how fatal measles may be even in this country, and also to show that measles is more fatal to children between 1 and 3 years of age than to infants under 1 year. The child mortality during an epidemic month in South Africa might be more fairly compared with the infantile mortality of the great towns of England than with the mean annual death-rate at all ages; but this latter comparison has been made by means of large placards, the child mortality for September (433) being compared with the mean annual death-rate of 18, and illustrated by means of columns of unequal length. I have seen no protest either in the medical or the lay press against this monstrous misrepresentation of facts. It would have been less unfair to compare the death-rate in Kroonstad Camp for August with the mean death-rate in England, for the rates both show deaths per 1,000 of all ages; the former was 1,176 the latter 18, the disparity would be too obvious, and inquiry would disclose the reasons of this enormous death-rate, namely, a severe epidemic of measles, a small population, and a short period death-rate calculated to an annual death-rate.

During the three months June, July, and August, there were in the camps 452 births, while there were 146 deaths of infants under the age of 1 month, and 393 over 1 and under 12 months of age. From these figures it is easy to calculate the infantile mortality, namely, 1,192 per 1,000 births, or for June 1,264, July 1,170, and August 1,173 per 1,000 births; but such figures would be just as misleading as the death-rates per 1,000 children because the deaths of infants under 1 year of age who had been brought into camp after birth are included among those of infants born in camp. Somewhat similar errors must occur in all statistics referring to a floating population.

No one can doubt the appalling mortality in the camps of South Africa; there have been severe epidemics of measles and whooping cough amongst the refugees, many of whom were in a most deplorable state, suffering from the privations and hardships which they had endured when with the commandos, and therefore quite unable to bear up against any

specific fever, but no good purpose can be served by false comparisons or by overstating death-rates.—I am, etc.,

Guildhall, Bath, Nov. 23rd. W. H. SYMONS, M.O.H.

*** Our comments were made on a paragraph sent to us by a correspondent who had, as was stated, seen it in the *Daily Chronicle* of November 12th. Our correspondent had evidently been misled by it, and we thought, and still think, it was proper matter for comment. Dr. Symons now sends us the fuller accounts of his observations, as given in the *Bath Chronicle*, in which the safeguarding remark as to the greater robustness of children older than infants appears. This we had not seen. In the article published in the BRITISH MEDICAL JOURNAL of November 9th, on the official monthly statistics, the only statistics then available, the figures for the four months, and not for a single month, were taken in instituting comparisons, and due weight was given to the prevalent epidemic diseases the very statistics as to measles being given which are now requoted by Dr. Symons. In the article on the new volume of reports published at page 1629, the statistics of deaths at ages under 1, 2 to 10, etc., are not attempted to be utilised, because the populations at the corresponding ages are unknown. Dr. Symons's *reductio ad absurdum* of such methods confirms the wisdom of our abstinence. After making all due allowance for epidemic diseases there remains sufficient reason for grave concern as to the mortality statistics of the camps; and the details given last week amply justify our advocacy of the importance of a more complete and efficient sanitary organisation in connection with the administration of these camps.

## MORTALITY AMONG BOER CHILDREN.

SIR,—There is so much controversy in the English papers anent the high infant mortality in the Boer refugee camps, that if you have any space left in your columns it may interest your readers to learn the conditions that obtain in the Boer home with regard to this question. I am in medical charge of troops garrisoning blockhouses and fortifications on the Orange River east of Bethulie Bridge, and have frequently been called upon by neighbouring Boers on the Cape Colony side of the river to attend their sick children. In practically every case the effects of outrageous ignorance on the part of the mothers with regard to the dietary of children about a year old was manifest, and is about on a parallel with the ignorance displayed by the poorest classes in England. I venture to think that this may explain the high mortality among infants and young children not only in the refugee camps, but also in the Boer homes.—I am, etc.

JNO. C. VELENSKI, M.B., B.S.,
Civil Surgeon to His Majesty's Troops.

Caledonsfontein, Orange River, near Bethulie Bridge, South Africa, Oct. 31st.

## INERT LYMPH AND REVACCINATION.

SIR,—Mr. J. Graham Forbes's letter in the BRITISH MEDICAL JOURNAL of November 9th, page 1441, and your remarks in the JOURNAL of November 16th, call for a few remarks from me. Mr. Forbes is very severe on the Aldershot Institute, but he refrains from giving the name of the "independent establishment" for obvious reasons. Because the vaccine failed in Mr. Forbes's hands it does not prove that it was inert when it left this institute; moreover, I have abundant evidence to prove that while he failed with the vaccine the officers of the R.A.M.C., Militia Medical Staff Corps, civilian medical practitioners, and volunteer civil surgeons were forwarding most satisfactory results of vaccinations with vaccine from the same calves (*vide* Mr. Forbes's returns and 30 others from officers of the R.A.M.C., etc., which I enclose for perusal, information, comparison and return—they speak for themselves).

After the perusal of these returns I think you must conclude that the vaccine from these calves was not inert when it left the institute, and that something must have gone wrong with it in the keeping and using by Mr. Forbes. He made no complaint to this institute of his failures; neither did he complain or ask for an explanation through the War Office. His letter is most misleading, and calculated to cause fear in the country for the safety of her soldiers and sailors, but there need be no alarm, for if anything was wrong with the Aldershot Vaccine Institute it would be very quickly inquired into by the Director-General R.A.M.C. and other responsible officers.

As regards inertia in vaccine I think you will find it occurs chiefly in hot weather. It can become ineffective from four or more causes after it leaves the institute, namely:

1. Exposure to high temperature in the post.
2. Exposure to the heat of a room in hot weather.
3. Exposure to a very low temperature.
4. Exposure to the sun's rays during the operation of vaccination.
5. Unskilful operations.—I am, etc.

R. MOORE, F.R.C.V.S.,
Veterinary Major: Professor, Army Veterinary School and Vaccine Institute.

*** The original returns forwarded by Professor Moore bear out this statement.

SIR,—From the letters of your correspondents, and from my own experience, I have little doubt that various English lymphs at present on the market have been found inefficient for revaccination. In my own practice I have during the last two and a-half months used three different kinds of English lymph; and I find from my notes that the best of these produced really good vesicles in only 63 per cent. of the cases. A foreign lymph, on the other hand, led to 83 per cent. of successes; by this I mean that at the end of the week the appearances were such as one is accustomed to see in infants. At least another 10 or 12 per cent. of these cases had small vesicles or papules.

There is, however, one class of revaccinations of which I should like to hear the results, namely, those of the public vaccinators who use "Government lymph." Many of your correspondents seem to desire Government supervision of lymph supplies, and some would like to have "Government lymph" supplied to any practitioner. Is this lymph like that of most English makers, or is it like the more successful foreign variety? My own experience of "Government lymph" is limited; but I recently revaccinated a patient who had had it used on him six weeks previously, and had been told that he was protected by the result. He described the result as "small papules." My operation resulted in good vesicles. Again, I vaccinated six servants in one house with the foreign lymph. All of these took; four very well, while two had small vesicles. Subsequently, three more servants in the same house were done by the public vaccinator. I have not seen the results, but I am told that one only of these three took, and that "slightly."

If these two examples represent anything like the usual results of the use of "Government lymph," it seems to me that before adopting this as a standard preparation, it would be well to come to a definite understanding as to what is efficient revaccination, and to ascertain what percentage of all revaccinations after, say ten years, ought to reach a certain standard. My own opinion is that the standard to aim at should be the production of vesicles similar to those in infants, each of not less than the size of a threepenny piece, in at least 80 per cent. of the cases. I know that I can attain a higher percentage than this with what appears to be called a "concentrated and reinforced" lymph.—I am, etc.,

Kensington Gardens Square, W., Nov. 24th. CHAS. BUTTAR.

## PUBLIC AND PRIVATE VACCINATION.

SIR,—I have been particularly struck with the splendid marks (four and five large scars) many country-born patients carry on their arms, bearing witness, as Dr. Lovell Drage says, to the excellent vaccination of the much-abused country public vaccinator. At the same time, I have specially noticed the fact that by no means infrequently such markedly scarred arms take a great deal more severely in revaccination than many arms which have only one or two scars. I am therefore inclined to think that very large scars only indicate a greater tendency to take vaccinia (and, therefore, presumably small-pox) more readily rather than that they mean extra efficiency of vaccination.—I am, etc.,

London, S.W., Nov. 25th. J. KINGSTON BARTON.

SIR,—I wish with your permission to comment on the injustice of the executive perpetrated inadvertently on the

general body of medical practitioners throughout the kingdom by appointing a special gentleman in a locality to vaccinate and monopolise. Two persons called on me about a month since, and named a day and hour to visit me for the purpose of being vaccinated. The parish authorities advertise freely that all persons may be vaccinated free of cost by applying "to their medical officer," and doubtless these good people above mentioned have since calling on me read the public announcement and availed themselves of it, as I have not heard anything of them since.

Of course this is not an isolated instance, but my contention is that all registered practitioners should have the privilege of vaccinating the public (or such members as elect to avail themselves of it), and the doctor look for his remuneration from the public purse at the modestly allotted fee. Doubtless the vaccination law would then be more efficiently carried out, and it would be an incentive to the general body of practitioners to persuade their patients to be sufficiently protected. At the same time it would tend to relieve the burden of taxation by stamping out the disease more efficiently, and reducing the number of patients at the temporary hospitals. —I am, etc.,

A Member of the Court of the Society of
November 23rd. Apothecaries.

## THE ASSOCIATION OF PUBLIC VACCINATORS.

Sir,—In your issue of November 16th, page 1487, you mention the publication of a circular by the Association of Public Vaccinators, and go on to speak of "One section of the Medical Profession—practically advertisers, etc." Now, as a Public Vaccinator, I maintain that this is most unjust to the bulk of us.

I happen to have received lately a circular from the organising secretary, giving a list of reasons why every public vaccinator should join the Association, and stating in one place that it is a deplorable state of things that there should be over 3,000 public vaccinators and only 300 members of the Association.

Now, for a whole body of public servants to be blamed for the advertisement of less than ten per cent. of their number is most unjust, and I protest against it.

From the balance sheet of the Association for 1899-1900 I see the subscriptions amounted to £43 10s., and out of this £23 3s. 9d. went to cover the deficit on the dinner account. I would suggest that for the future the Association devote the whole of its funds to gastronomy, and do not again emulate the three tailors of Tooley Street.—I am, etc.,

New Romney, Nov. 26th. Henry Hick.

## DOCTORS AND MIDWIVES.

Sir,—I cannot agree with Dr. Whiteley when he says that women belonging to the labouring classes are attended in confinement at any fee from ten shillings to a guinea. I know many districts where it is extremely difficult to find a medical man who will attend them for ten shillings, and others where it is impossible. Hence comes the necessity for midwives.

Let me again state in a word the position some of us take in this matter. If medical men are prepared and willing to attend all midwifery, there will be no demand on the part of the public for a midwifery Bill, nor any obligation to attend women who have been neglected or maltreated by midwives. If medical men are not willing to attend all classes in confinement, there must of necessity be midwives. There is no other alternative. There will be no difficulty in obtaining a Bill for the registration of so-called midwifery nurses. Everyone must see that there will be great difficulty in obtaining a clause in that Bill that will provide for attendance in every case by a medical man, and still greater difficulty in securing an adequate fee for that attendance. If a new order of practitioners—midwives or midwifery nurses—be established, as it may readily be, without restrictions, the end will be worse than the beginning. You have well put the issue in your reference to Rehoboam, and the chastisement may be not with whips, but with scorpions.—I am, etc.,

Greenwich, Nov. 24th. J. H. Keay.

Sir,—In towns where there are police surgeons and policemen on point duty, a reference to the latter would, I conceive, remove the responsibility from the medical practitioner who may decline to accept a call for his services.—I am, etc.,

Lincoln, Nov. 26th. W. A. Carline.

## THE MIDWIVES QUESTION.

Sir,—In reply to Dr. MacLean's note in the British Medical Journal of November 23rd, may I point out that the "occupation for women," which seems to him to be the whole of the midwives question, did not come up in any direct form before the Select Committees which considered the matter, nor is it alluded to in their reports. Yet they gave a very decided opinion upon the necessity for legislation. Thus the Committee of 1893 reported as follows:

> As proved by the evidence before your Committee, the services of midwives are a necessity, and consequently every precaution should be taken to discourage the practice of women who are ignorant and unqualified. Your Committee are of opinion that by legislative enactment no woman should be allowed to call herself or to practise as a midwife except under suitable regulations.....Your Committee therefore recommend that a system of examination and registration of midwives should be established.

The "main issue" is sufficiently indicated in this extract from the report.—I am, etc.,

South Hampstead, S.W., Nov. 25th. F. R. Humphreys.

## THE REPORT OF MR. BRODRICK'S COMMITTEE.

Sir,—The letter of Sir Frederick Treves demands reply. It is clear that he is anxious to remove misapprehensions concerning the new scheme, and to show that the War Office earnestly desires to meet A.M.S. requirements in a thoroughly sound way. But unhappily his defence rests on a not unnatural ignorance of the real inner necessities of the R.A.M.C. and of military exigencies generally. In the corps a very just irritation is felt at the prominent position accorded in the scheme to the examinations. Only one inference can be drawn from this feature—namely, that the officers of the R.A.M.C. are deemed so ignorant that only by a constant series of examinations may they be rendered fit for service in the army.

It has been assumed that the history of the corps in South Africa has demonstrated such a degree of professional incompetence that in future this can only be overcome by repeated examinations; and so the new scheme provides for seven in eighteen years. This assumption is not complimentary to the medical officers, nor is it even commonly just, for it is a concession to the groundless clamour raised by Mr. Burdett-Coutts, whose value as a faithful critic has long since been discounted in your columns and elsewhere. Amongst the many R.A.M.C. officers who have served since 1899 in South Africa it is not denied that there were some whose professional attainments were not of a high order; but the bulk of them were skilful, experienced, conscientious servants of the State, and the new scheme has shocked them, indicating as it does the diminished appreciation in which they are held both by the Secretary of State and by their civil *confrères* who occupied so large a place on the Committee.

The system of examinations ruins the scheme, as no such system could ever produce the best men. Sir Frederick says "it is the purpose of these examinations to make promotion in the service dependent upon professional ability." The answer to this is obvious. The best surgeon or physician who ever lived might easily make one of the most unsuitable officers the R.A.M.C ever had. Sound "professional ability" is always necessary in the A.M.S., but it is only one of many essentials. An officer who is only a "good doctor," to use Sir Redvers Buller's phrase, may be a very useless administrator, and no examination in the world can indicate the possession of the qualities necessary for the latter. The multifarious duties required from the medical officer demand much more than is contained in the term "professional ability," and when one acquainted with the corps realises the nature of the work demanded from the R.A.M.C. officers in all parts of our empire, it is easy to understand the contempt that is now openly expressed for the elaborate system of examinations devised by the Secretary of State's Committee.

Sir Frederick condemns "confidential reports;" there is nothing in the new scheme to show that these are to be abolished: in fact, their retention, unsatisfactory as they are, is a necessity; and all that they need is a radical modification to make them very useful records indeed as regards the determination of an officer's fitness for promotion.

Sir Frederick claims support for the Advisory Board, but it is extremely unlikely that this will be accorded. No other branch of the army is ruled by such a body. Paragraphs 5 to 16 of the scheme defines its duties, and under Paragraph 17 even the appointment of the Director-General himself is to be subject to its advice. From this it will easily be realised what in future his position will be, and from the range of duties under the control of the Board it is clear that his unfettered action on any single branch of his work is henceforth impossible.

We have thought that the tendency of the time was in favour of an extension of the principle of individual responsibility: but the creation of the Advisory Board is absolutely destructive of any such principle; and when one contemplates the constitution of the Board one stands dismayed at the idea of any useful work ever being carried out by such a body. I hesitate to differ from Sir Frederick Treves, but the opinion expressed by the critic he quotes is exactly the one generally held. "The D.G. as a personal factor in the R.A.M.C. practically disappears." The Director-General is only the Chairman of the Board, and may at any time be out-voted; where, then, comes in his "responsibility?"

To myself, an officer of 35 years' experience in the A.M.S., the scheme as it stands seems hopelessly unworkable, and it is certain to prove anything but attractive to would be candidates. The reforms needed in the A.M.S. could have been obtained so much more easily, that it is difficult to understand why such cumbrous machinery has been erected. The Committee, we know, have desired to find a remedy for existing evils, but have failed simply from the want of that special knowledge which could alone give the key to the puzzle.—I am, etc.,

November 3rd. E. F.

## THE FOURTH DISEASE.

SIR,—As I hold a position where the health of many young people is at stake, it has been my constant aim to prevent the advent and to limit the spread of infectious diseases. Consequently the investigation of the exanthemata has consumed much of my time and thought for a period of a third of a century. I have been puzzled from time to time by not being able to include some instance of the exanthemata under the three recognised diseases named rubella, morbilli, and scarlatina. And it goes without saying that I must have made many mistakes. It is said that a man who never makes mistakes never makes anything.

In endeavouring to arrive at an accurate diagnosis in certain inexplicable cases there was only one course open to me—to arrange and classify them. By this means I discovered a history and a series of definite symptoms common to them all. That the discriminating characteristics, though so difficult at present, are capable of diagnosis there can be no shadow of doubt. Similar difficulties arose, though now so easily solved, when the distinguishing features between typhus and typhoid fevers were first pointed out by Jenner.

I fully recorded the details of the fourth disease in the *Lancet*, July 14th, 1900. In presenting these researches to the profession, the time arrived for affixing a name to the disease. This I did by assigning to it a number, like a prisoner in gaol, leaving it to the Nomenclature Committee of the Royal College of Physicians to name it eventually.

Criticism is wholesome and beneficial; but contradiction is not criticism, though the truth can only be threshed out at the bedside. I have no doubt that my able and esteemed critic, Dr. Caiger, has seen the fourth disease many a time, like myself, without diagnosing it as an "entity" which is not scarlet fever; and I am sure that, when he has singled it out, he will be the first to acknowledge his own conviction.

Meanwhile many besides myself have now separated this disease from scarlet fever, and I hope will publish their cases themselves in detail. When this disease is fully recognised, it means that the chapter on scarlet fever must be largely rewritten. For two diseases have been hitherto described under one name, which alters the statistics of mortality, the age-incidence, and its seasonal occurrence.

There is as clearly marked distinction between scarlatina and the fourth disease as there is between morbilli and rubella. The question is, Are the two former diseases to be called by the common name of scarlet fever, as the two latter are continually called by the common name of measles, to the serious detriment of the health of schools and to our professional credit?—I am, etc.,

Rugby, Nov. 18th. CLEMENT DUKES.

## THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

SIR,—May I be allowed to state, for the information of those of your readers who are Members of this College and take an interest in it, that the Society of Members (whose object is to obtain representation on the Council), has doubled its numbers during the present year, and that more than 2,500 applications have been received from Members for copies of the "annual report from the Council?"

Also that, regarding as we do reform of the government of this College as the keystone of much-needed reforms in the profession generally, we intend to keep "pegging away" at the walls of Jericho until they fall.—I am, etc.,

W. G. DICKINSON,

Putney, Nov. 25th. Honorary Secretary, Society of Members.

# HOSPITAL AND DISPENSARY MANAGEMENT.

## THE WARNEFORD ASYLUM, OXFORD.

WE have received a letter from the medical superintendent of the Warneford Asylum, Oxford, enclosing copy of correspondence between the Committee of that asylum and the Commissioners in Lunacy with regard to a double homicide and suicide done by a female patient who was allowed leave of absence on trial from that asylum to reside with her sister. Our columns are too crowded at present to enable us to publish the whole correspondence. The case led to some strictures by the coroner at the inquest, concerning which the medical superintendent, in a letter to us, writes as follows:

"Early in September last a female patient of this institution, when absent on trial, murdered her widowed sister with whom she was living and her sister's boy, and then committed suicide ..... At the inquest the coroner ..... made some severe remarks on the manner in which the patient had been granted leave from the asylum without any precautions having been taken. He thought fit to do so without calling any witness from the institution he was criticising adversely, or, so far as the published reports show, taking steps of any kind to ascertain what precautions had or had not been taken."

Undoubtedly the facts were startling, and were such as to require explanation; at the first blush it might seem that an error had been made. But the correspondence shows that satisfactory explanations were forthcoming; and both the Committee of the Asylum and the Commissioners in Lunacy exonerated the asylum officials from any blame.

The Commissioners expressed the opinion that the medical superintendent had exercised due care and showed good judgment in the matter, and that the unfortunate incident which occurred did not result from any failure in the exercise of these qualities.

Had opportunity been given of making these exonerating facts known at the inquest, much misunderstanding and heart-burning might have been avoided.

# OBITUARY.

HENRY SUTHERLAND, M.D., M.A.OXON., M.R.C.P.LOND. DR. HENRY SUTHERLAND died on November 19th, aged 59 years. He was the son of the late Dr. Alexander John Sutherland, and the grandson of the late Dr. Alexander Robert Sutherland. Each of these had been for many years Physician to St. Luke's Hospital for the Insane, London. Dr. Henry Sutherland followed much the same lines of practice as these ancestors, and was a well-known physician for the insane.

He studied at Cambridge University and Addenbrooke's Hospital, Cambridge; also at St. George's Hospital Medical School in London. At Cambridge he passed as B.A. in 1867, and took the M.B. and M.A. degrees of the University of Oxford in 1869. In 1870 he became a Member of the Royal College of Physicians of London, and in 1872 M.D. of Oxford. He studied mental diseases at Bethlem Royal Hospital in London, at the West Riding of Yorkshire Asylum at Wakefield, and in the London private asylums with which he was connected. This connection he continued throughout the rest of his life; and he lived in London, where he had a consulting practice.

For about fifteen years he was Lecturer on Insanity at the Westminster Hospital Medical School. He was also Physician to the St. George's, Hanover Square, Dispensary. This office he rightly considered to be of great medical value to

him, as joining the different kinds of practice, and instructive or general clinical purposes.

He was a Fellow, or Member, of the Medico-Psychological Association, the Neurological Society, the Clinical, and Royal Medical and Chirurgical Societies; also of the Medical, the Obstetrical, and West London Medico-Chirurgical Societies, of which last he was at one time Vice-President, and he expressed to the writer how much he enjoyed the meetings of this Society, and how much interested he was in the practice at the Dispensary above mentioned.

He was the author of *A Directory of Justices in Lunacy*, and of various articles in the *Dictionary of Psychological Medicine*, in the *West Riding Asylum Medical Reports*, the *Medico-Chirurgical Transactions*, the *Journal of Mental Science*, and the weekly medical press. Among the last he had a closer connection with the *Lancet*. He usually chose practical subjects for his published articles; such, for example, as forcible feeding of the insane, the relations between menstruation and insanity, and between the change of life and insanity, the premonitory symptoms of insanity, the prevention of suicide in the insane, cases on the borderland of insanity. Other contributions were on arachnoid cysts, and the histology of the blood in the insane, and some lectures on mental diseases were published in the *Medical Times and Gazette* in 1883. Two subjects in which he was much interested latterly were the prognosis in different forms of insanity, and suicide by the insane.

Dr. Sutherland was a man of wide sympathies and broad interests. He was wise enough to accept enjoyment from any innocent pleasure which offered itself as a relaxation from the anxieties and monotony of professional work. He was possessed of much social tact and consideration for others, was thoroughly good-hearted, made for himself many friends, and retained their friendship. Tactful, sympathetic, unassuming, and courteous, a pleasant companion, and a genial host; he was always a great favourite with those of his medical contemporaries who had the pleasure of knowing him, and always held their respect and esteem. He had many solid and serious mental tendencies, did not confine his attention solely to his profession, and was deeply interested in works bearing on religious subjects. During his later years a congenial marriage widened his already wide social relations, enhanced his interest and pleasure in life, and matured his qualities. He leaves a gap not easily filled.

W. J. M.

# UNIVERSITIES AND COLLEGES.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

### Annual Meeting of Fellows and Members.

Mr. H. G. Howse, President, took the chair at the annual meeting of Fellows and Members held at the College on November 21st, 1901.

The President said that in response to a request made at the last annual meeting the Council had added to the annual report a list of Honorary Fellows, Fellows, and Members whose deaths had been reported during the year. The report of the Council was now sent to all those Fellows and Members who had registered their names as wishing to receive the report annually.

*Members and the Election of the Council.*

Dr. T. Morton moved:

That this annual meeting of Fellows and Members adheres to the opinion, which it has regularly expressed during the last seventeen years, that a certain proportion of the College Council should be elected by the Members. As, however, the Council has hitherto refused to entertain this proposal, it is hereby invited to suggest some alternative means by which the Members may be admitted to that share in the direction of the affairs of the College to which they are entitled on account of their Membership, their numbers, their professional status, their large contribution to the College income, and by the fact that in them alone is vested the whole of the College property.

He said that his motion raised the whole question of the right of Members to representation on the Council that had been urged year after year, and would be continually put forward until some reform in this direction was conceded.

Mr. J. Smith in seconding said that the President of the College would hold a more dignified and important position if he represented the Members, and was not elected by the small number of Fellows who voted.

Mr. F. W. Collingwood said that it was not too late for the Council to give a moderate degree of extension of the franchise to the Members.

Surgeon-Major Ince looked forward to the establishment of a national and imperial amalgamation of the various examining bodies in the United Kingdom.

Mr. Cornish thought that there should be a State examination entirely independent of the Royal Colleges. He believed that medical students would in future go abroad, where they could get their education much cheaper, and be registered all the same. He suggested that the Members of the College should apply to the Privy Council for what they wanted.

Mr. W. G. Dickinson feared that self-interest was the only thing that could induce the Council to grant the request of the Members.

Mr. G. H. Hills said that the College would fade into insignificance unless it attracted the medical students, who were going more and more to provincial schools.

Mr. Morton (Putney) said in regard to midwifery legislation the Council was ready to barter away the privileges of the Members.

Mr. Bateman recommended that the Members should interest Parliament in the matter, and offered to join with any other Member in that object by contributing £100 to have the whole matter threshed out.

The motion was then put and carried by a large majority.

*The First Year of the Curriculum.*

Mr. George Brown moved:

That this meeting regrets that the Council has adopted the policy of contravening the regulations of the General Medical Council in the matter of the recognition of scientific institutions, thereby acting disloyally to the General Medical Council, and setting an example which, if followed by other licensing bodies, must result in materially lowering the standard of medical education.

He said that two or three years ago the curriculum was raised from four to five years, but the Royal Colleges accepted one year spent at certain Board Schools and higher grade schools as one out of the five years which should be spent at a *bonâ-fide* medical school. The Irish and Scotch Colleges demanded explanations, and the representative of the Royal College of Surgeons blurted out that the five years system was found not to pay, so that some system had to be devised to attract the students under other regulations.

Mr. T. Bryant said that Mr. Brown's statement was not in accordance with the facts.

Mr. Brown replied he was present when Mr. Bryant made the statement.

Surgeon-Major Ince, who thought the question delicate, wished to move the previous question, but the meeting objected to his views, and advised him to vote against the motion.

Mr. T. Bryant explained that he did use the words alluded to, but they referred to a totally different subject

Mr. Brown invited Mr. Bryant to explain in the medical journals what his words did apply to. The Medical Acts evidently intended that the General Medical Council should be the supreme body in the matter of medical education.

Mr. Nelson Hardy in seconding said that the annual report of the Council showed that it wished to shield itself under the action of the Conjoint Examining Board.

Mr. T. R Atkinson said that it was extreme presumption to dictate to the Conjoint Colleges what they should do.

Mr. Joseph Smith supported the motion.

Mr. Bryant said it was a great pity that any subject still *sub judice* should be discussed.

Mr. Dickinson said Mr. Bryant used that argument a year ago.

Mr. Bryant said that the matter was just where it was a year ago.

Surgeon-Major Ince thought that the meeting had not the *data* for the discussion of the matter.

Mr. Dickinson showed that the *data* were in the report of the Council.

Mr. Brown pointed out that full reports were obtainable at the office of the General Medical Council.

The CHAIRMAN, in reply to Mr. Nelson Hardy, said that it was impossible to avoid quoting the Conjoint Examining Board in the annual report, because they acted together. The Council had acted for the best interests of the profession at large and to maintain the legal rights of the College.

The motion was then put and carried.

*Amendment of the Medical Acts.*

Dr. G. DANFORD THOMAS moved:

That this meeting concurs generally in the suggested amendments to the Medical Acts mentioned as desirable in the letter quoted on pages 5 and 6 of the report. This meeting regrets, however, that the Council declines to actively promote even those amendments of which it approves, and trusts that it will at least give hearty support to the Bill of the British Medical Association when it comes before Parliament.

He asked the Council to accept six copies of the Bill for their consideration at a convenient time.

Mr. DICKINSON seconded the motion, and the CHAIRMAN, after stating that he would accept the six copies on behalf of the Council, then put the motion from the chair and declared it carried.

*Election of Representatives on General Medical Council.*

Mr. BRINDLEY JAMES moved:

This meeting is of opinion that the representatives of the College in the General Medical Council should be elected jointly by the Fellows and Members of ten years standing.

This was seconded by Mr. J. C. SMITH, and supported by Mr. COLLINGWOOD.

The CHAIRMAN said that it was the necessary that the representative of the College on the General Medical Council should be chosen from the Council of the College.

The motion was then put and carried.

*Admission of the Public to the Annual Meetings.*

The following motion proposed by Dr. HERBERT SNOW, and seconded by Mr. BRINDLEY JAMES, was not carried:

That it is inadvisable to continue to hold the annual meeting with closed doors; and that the Council be requested to sanction the free admission of the public to the gallery.

The proceedings then terminated.

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Mr. JOHN SPENCER FERRIS, M.B.Lond., M.R.C.S.Eng. (Uxbridge) writes: I attended the meeting at the College of Surgeons last Thursday, and was surprised to find only about 40 members, though we were told there were 16,000 of them. We cannot expect the Council seriously to consider the subject of representation while members by non-attendance show such a feeble interest in the question.

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UNIVERSITY OF CAMBRIDGE.

DR. LAURENCE HUMPHRY has been appointed University Lecturer in Medicine for five years from Christmas next.

Cardiff Infirmary has been recognised by the Medical Board as a place of clinical study.

Mr. D. G. Sutherland, of St. John's College, has been awarded the Certificate of Research for his work on certain spore-bearing anaërobic organisms, considered as criteria in the bacteriological examination of water supplies.

At the Congregation on November 21st, the following degrees were conferred. *M.B.*: O. F. F. Grünbaum, Trinity; T. W. S. Paterson, Caius. *M.B. and B.C.*: J. H. P. Fraser, Jesus.

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UNIVERSITY OF EDINBURGH.

OCTOBER EXAMINATIONS.

THE following are some of the statistics of the recent October examinations:

*Medical Preliminary.*—Entered for examination, 151 (including 17 women). English, 69 passed and 40 failed; mathematics, 72 passed and 52 failed; Latin, 61 passed and 64 failed; Greek, 17 passed and 3 failed; French, 32 passed and 26 failed; German, 2 passed and 5 failed; Arabic, 1 failed; Syriac, 1 passed.

*First-Year Students of Medicine.*—The number who passed the preliminary at one university examination was 45. Passed preliminary at two University examinations, 9; passed preliminary partly with outside exemptions, 17; passed preliminary entirely with outside exemptions, 60; exempted by a degree in arts or in science, 10; completed preliminary, 141, as against 128 last November; partly completed preliminary, 3; formerly completed preliminary or otherwise accounted for, 88; total first-year students of medicine (including extra-academical graduation women students), 232.

*Women Students.*—The number matriculated is: Arts, 245; science, 1; medicine, 4; music, 16. There are 21 non-matriculated women students, and 84 extra-academical graduation students of medicine. Thus the total number of women students in connection with the University is 371, as compared with 345 in November of last year.

UNIVERSITY OF WALES.

THE annual meeting of the Court of the University was held at Aberystwith on November 22nd, when Dr. Isambard Owen, Senior Deputy-Chancellor, presided.

It was announced that the King had come to the decision with much regret, and after full consideration, that it would not be quite suitable that the Sovereign should remain the Chancellor of any University. His Majesty expressed the pleasure with which he had watched, during the last five years, the early success of the University, and its steady advance and the diligent care with which its business, both academic and general, had been administered by its authorities and officers, the high standard of learning they had reached, and the industry with which the students strove to attain to it. The King added that it would afford him pleasure to retain a titular connection with the University, and should it be agreeable to its members would have great satisfaction in assuming and bearing the honorary title of Protector of the University of Wales.

The Deputy-Chancellor said that while deep regret would be felt that His Majesty was unable to continue in the office of Chancellor all would appreciate the reasons which had led him to take that step and would feel that the spontaneous offer on His Majesty's part to assume an honorary connection with the University was most gracious.

A resolution was adopted expressing loyal gratitude to His Majesty for the services he had rendered to the University during his tenure of office as Chancellor during the past five years, and gratefully accepting his offer to assume the title of Protector of the University.

The Court subsequently resolved to ask the Prince of Wales to accept the post of Chancellor.

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# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## REORGANISATION OF THE ARMY MEDICAL SERVICE.

WE have received a further large batch of letters, much of the same distinctive tenour as the first, on the proposals of the Committee, which apparently seem less liked the more they are looked at. The following are summaries:

DISGUST writes: What are the salient features of this new scheme? (1) Four tremendous examinations, with certain advantages for high marks; (2) four chances of being dismissed the service, each handicapped with disgrace, the final with ruin; (3) insidious trenching on the one great asset of the R.A.M.C.—the right to retire on £1 a day after twenty years service; (4) not one of the evils resulting from undermanning grappled with. Had the Committee simply recommended increase of establishment and increased pay, with charge pay, the various evils which press would soon have disappeared, and the R.A.M.C. been popularised.

STREFFORD writes: Let me add my testimony against several of the proposals of the Committee: (1) By what reasoning could the Committee imagine that young medical men, already weary of examinations during a severe curriculum, would deliberately join a service in which there would be no rest from such examination for twenty years of their lives? (2) What gratuity is preferable—the old £1,250 at ten, or the new £1,000 at nine years service? (3) There is no guarantee of the one inducement to serve—£1 a day pension after twenty years service. (4) What proof exists that the best officers, executive or administrative, can be selected by marks attained in a theoretical examination? (5) By paragraphs 50 and 51 it appears that medical officers of the Guards may not belong to the R.A.M.C., and yet may become Surgeon-Generals or even Director-General. These be "privileges" without justice.

SPERO MELIORA writes: We serving abroad simply regard this new scheme as warranted to keep good men out of the service as a career. The most clamant evils—excessive foreign service, constant moves, no sufficient leave, private or study, resulting from undermanning—are not considered at all. No expert evidence of the true needs of the service was called, or, if received, considered. The examinations alone would defeat the scheme. How comes it the Indian Medical Service is not reckoned professionally incompetent without them? Tampering with pensions at twenty years service is quite fatal.

A DISGUSTED ONE writes: Senior medical officers in India regard the new scheme as most disappointing and disheartening: (1) I assert that the R.A.M.C. as medical officers are more up-to date than their detractors seem to know or are willing to allow; it is therefore entirely uncalled for to seek to convert them into a mere "mandarin corps." They claim to be truly practical men in their duties, and such knowledge cannot be acquired as mere bookworms. (2) They are simply astounded at the wild proposal to invalidate the one great attraction—retirement on £1 a day at twenty years—by substituting a gratuity of £2,500 (para. 45 of the report). (3) Accelerated promotion by examination marks they fear may and could be worked with injustice towards individuals, considering that men would be examined under totally dissimilar conditions. (4) The slight reference to Indian pay in an appendix gives no assurance, and is wholly unsatisfactory. (5) There is no attempt to equalise the disproportionate tours of home and foreign service. (6) The proposed rates of pay proper seem generous, but there is no certainty that the allowances may or may not be included. Finally, in what other branch is an officer who fails to pass an examination placed in a "supernumerary list," thereby losing time both for promotion and pension?

ANOTHER INDIAN CORRESPONDENT writes: Personally, I and many others engaged to serve with a right to pension of £1 a day after twenty years' service; is that to be abrogated? Then, indeed, the total wreck of the Army Medical Service is effected. I have served eighteen years, with only two and a-half at home. To be called upon to pass severe examinations on ten different subjects, and if one fail to pass a mere theoretical examiner to submit to the forfeiture of a life's service is monstrous.

X. Y. Z. writes: In my protest against this scheme I ask, was it not the quantity rather than the quality of the R.A.M.C. that was chal-

lenged in South Africa? Is quantity likely to be increased under this scheme? Will men deliberately subject themselves to continuous examination for twenty years, with the risk, the clear possibility, of being turned out of the service then? Have these preposterous examinations been devised in order to curtail the pension list at twenty years? Service is hard enough already; we in India have been unable to obtain leave for years; our numbers reduced by the war to the vanishing point, working on a half, or at most two-thirds, establishment. Officers of other branches get leave for months; we cannot get off duty for one day. Do we get extra pay for this? Not a bit; the Government of India, on the contrary, save through an undermanned establishment, yet, perforce, have to spend a good deal of the savings in engaging civil aid. What is the advantage of increase in home pay if two-thirds of our service are spent under different rules at the mercy of the Government of India?

HOPE DEFERRED writes: The blots in the scheme are: (1) Uncertainty of retirement on £1 a day after twenty years, or even £200 after fifteen. (2) Repeated examinations, especially that after eighteen years' service. (3) Revival of the regimental system.

AN INDIAN CORRESPONDENT complains of the want of business grasp and the superficiality of the scheme, and the impracticable nature of the proposals. The present lack of candidates for commissions is met by a scheme which at least must reduce them still further. Much is said, or implied, about study leave, but no provision is made in establishment for giving it. The present civil examinations for qualification, with a competitive entrance examination and a further promotion examination for major, would meet the most exacting requirements for the army.

R.A.M.C. writes: No new Warrant that does not specifically financially apply to India, where the majority spend at least three-fourths of their foreign service, can be acceptable. The examinations of lieutenants for captains is superfluous and impracticable, as under any workable foreign-service roster these young officers must be abroad within two years of entry, and cannot have special opportunities of study. The same largely applies to the examinations of captains for major; they will be mostly in India. The examination for lieutenant-colonel is quite unnecessary, except as a means of limiting the pension list!

ANOTHER CORRESPONDENT complains he has actually been superseded in promotion, not on professional but technical grounds; and, although he wishes to retire, is kept in India without the smallest hope of bettering himself.

MAJOR writes: I submit some of the proposals of the scheme are absurd, others unworkable; mere book examinations will neither secure "good doctors" nor good officers.

MAJOR R.A.M.C. writes: The scheme may be considered under these heads: (1) The Advisory Board may lead to efficiency, but the responsibility and authority of the Director-General will be reduced, which is very undesirable; friction and divided counsels are likely to arise. (2) Examinations are necessary for progress, but the periods objectionable; subalterns should be examined after 2 years, captains after 8 years, and majors after 14 years' service, which is in accordance with service rules generally. (3) The pay is excellent, except for colonels. Candidates should remember that if the Medical Service is the best paid at home it is the worst paid in India. (4) The establishment of a Medical Staff College might remove many difficulties in the scheme as it stands. (5) Some points are good; others impracticable: but could not the scheme be tried in order that the Advisory Board may evolve something acceptable?

### ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—HUGH W. MACNAMARA, Staff Surgeon, to the *Albion*, November 22nd; E. COX, B.A., M.B., Surgeon, to the *Mars*, November 22nd; GEORGE M. O. RICHARDS, Surgeon, to the *Wildfire*, additional, November 22nd; JAMES H. FERGUSSON, Surgeon, to the *Australia*, November 25th; RICHARD R. HORLEY, Surgeon, to the *Furious*, November 25th.

### ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL G. D. BOURKE, who is serving in the Punjab Command, has been appointed Principal Medical Officer Mhow District, Bombay Command.

Lieutenant-Colonel C. H. SWAYNE, D.S.O., who is serving in the Bengal Command, is appointed to officiate as Principal Medical Officer Poona District, Bombay Command.

Captain W. A. WARD is returning to South Africa in medical charge of the 7th Hussars, which is under orders to leave Southampton in the s.s. *Templemore*, on November 30th.

The undermentioned tour-expired officers have been directed to proceed to England with invalids:—Transport *Plassey*—Lieutenant-Colonel P. J. DEMPSEY, Bengal; Major F. S. LE QUESNE, V.C., Punjab; Captain H. S. THURSTON, Bengal. Transport *Assaye*—Major J. C. HASLETT, Bengal; Major C. S. SPARKES, Bombay; Captain T. W. GIBBARD, Madras. Transport *Syria*—Lieutenant-Colonel R. BLOOD, Bombay; Major R. J. A. DURANT, Madras; Captain C. E. POLLOCK, Bengal.

The undermentioned officers have been discharged to duty from hospital in South Africa: Surgeon-Lieutenant Colonel W. J. NAISMITH (6th Battalion Imperial Yeomanry), Lieutenant M. F. FOULDS (attached 13th Hussars), Lieutenant J. V. ROCHE, Captain H. A. BERRYMAN, Captain G. H. FROST (Indian Medical Service), Civil Surgeons W. SUMMERS, N. HARDING, A. J. CAMPBELL.

The following are returning home: Surgeon-Lieutenant-Colonel G. S. ROBINSON (2nd Scots Guards), Captain R. J. W. MAWHINNY, Civil Surgeons D. S. SUTHERLAND, C. M. ROBSON, W. R. WILLIAMS, F. M. MCINTOSH, A. S. ARTHUR, R. MOORE MADDEN. Returning invalided: Major M. O'D. BRADDELL, Surgeon-Captain E. F. N. CURREY (21st Battalion Imperial Yeomanry), Civil Surgeon H. B. T. SYMONS.

### INDIAN MEDICAL SERVICE.

ASSISTANT-SURGEON G. W. DODSWORTH, Bombay Indian Medical Service Department, in medical charge of R.I.M.S. *Elphinstone*, died at Andamans, on October 11th, aged 26 years.

# PUBLIC HEALTH

### HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,471 births and 4,677 deaths were registered during the week ending Saturday last, November 23rd. The annual rate of mortality in these towns, which had been 19.7 and 19.4 per 1,000 in the three preceding weeks, rose again last week to 21.3 per 1,000. The rates in the several towns ranged from 12.6 in Huddersfield, 12.9 in Halifax, and 14.7 in Croydon and in Derby to 24.7 in Burnley, 25.0 in Oldham, 25.4 in Salford, 28.2 in Wolverhampton, and 28.4 in Norwich. The mean death-rate in the thirty-two large provincial towns was 20.6 per 1,000, and was 1.7 per 1,000 below the rate recorded in London, which was 22.3 per 1,000. In the thirty-three large towns the zymotic death-rate averaged 2.2 per 1,000; in London this rate was equal to 2.0 per 1,000, while it averaged 2.3 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 3.7 in West Ham, 4.0 in Salford, 4.5 in Blackburn, and 10.7 in Norwich. Measles caused a death-rate of 1.1 in Wolverhampton, in Oldham and in Huddersfield, 1.6 in Manchester, 1.8 in Sheffield, 2.9 in Blackburn, and 10.7 in Norwich; scarlet fever of 1.1 in Oldham and in Sunderland, and 1.6 in Cardiff; whooping-cough of 1.0 in Newcastle, 1.1 in Wolverhampton, and 1.2 in Leicester; and "fever" of 1.0 in Sheffield, 1.1 in Sunderland, and 1.2 in Salford. The 82 deaths from diphtheria in these towns included 37 in London, 8 in West Ham, 4 in Leeds, 3 in Birmingham, 3 in Leicester, 3 in Salford, and 3 in Sheffield. Twenty-two fatal cases of small-pox were registered in London, but not one in any other of the thirty-three large towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals at the end of the week was 396, against 284, 297, and 368 on the three preceding Saturdays; 141 new cases were admitted during the week against 169, 62, and 113 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 3,392 and 3,331 at the end of the two preceding weeks, had further declined to 3,337 on Saturday, November 23rd; 379 new cases were admitted during the week, against 425, 380, and 376 in the three preceding weeks.

### HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, November 23rd, 883 births and 680 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 21.7 and 19.9 per 1,000 in the two preceding weeks, rose again last week to 21.3 per 1,000, and was equal to the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.7 in Paisley and 18.6 in Edinburgh, to 24.2 in Dundee and 25.2 in Perth. The zymotic death-rates in these towns averaged 2.7 per 1,000, the highest rates being recorded in Glasgow and Dundee. The 327 deaths registered in Glasgow included 24 from measles, 4 from diphtheria, 5 from whooping-cough, 5 from "fever," and 14 from diarrhœa. Two fatal cases of diphtheria and 2 of diarrhœa occurred in Edinburgh. Four deaths from measles and 5 from diarrhœa were recorded in Dundee; and 4 from diarrhœa in Aberdeen, 3 in Leith, and 2 in Paisley.

# MEDICO-LEGAL AND MEDICO-ETHICAL.

### A COUNTY COURT JUDGE ON MEDICAL FEES.

WE learn from the *Wood Green Weekly Herald* that Dr. F. W. Wiles, of Wood Green, recently claimed in the Wood Green County Court two guineas for professional attendance, etc. The defendant admitted owing one guinea, and that amount he had paid into court. With regard to the remainder he had never received particulars, though admitting he had never asked for them.

His Honour gave judgment for the amount claimed with costs, at the same time congratulating Dr. Wiles in prosecuting his claim as he had. He hoped other medical men would do likewise, for he was of opinion by not so doing the medical fraternity did great harm to the community. Their reticence engendered a belief in the minds of people, not only that medical men should not be paid, but that ordinary tradesmen should not be paid as well. This was a very demoralising state of affairs, and his Honour considered plaintiff had acted wisely in the step he had taken.

### UNQUALIFIED PRACTICE.

AT an inquest upon the body of Bertha Hobson, wife of a cotton operative living at Tame Valley, evidence was given that she was attended by Charles Samuel Spencer, described as "homœopathist," and also by Louisa Heaton, a midwife. According to the report in the Ashton-under-Lyne *Reporter*, it appeared that deceased gave birth to a child, and at first all went well, Spencer attending her daily. Later she became ill, and Spencer suggested that Dr. Mann of Ashton should be called in. The husband of the deceased stated that he did not know that Spencer was unqualified, and Louisa Heaton the midwife also swore to the same effect, and further stated that had she known it she would have sent for "another doctor."

The medical evidence was that the deceased died from blood poisoning, and the jury returned a verdict of death from natural causes, and asked the coroner to censure Spencer, although they did not consider him to blame; they also desired that he should be advised to be more careful in future. Spencer stated in reply to the jury that he was "going in for being a medical practitioner. Unfortunately he had been left with a practice."

It would be interesting to learn more particulars of Mr. Spencer's practice which he has had the misfortune to acquire. Such legacies are likely to lead to trouble even in the present unsatisfactory state of the Medical Acts which ostensibly exist for protection of the public against unqualified practice. Perhaps the publicity which Mr. Spencer has obtained through this inquest will cause it to be known that he is not a registered medical practitioner, and may induce him to cease from acting even as a "homœopathist."

# MEDICAL NEWS.

THE American Medical Association will hold its annual meeting at Saratoga, New York, in June, 1902, when it is expected that fully 5,000 delegates from all parts of the United States will be present.

A MEETING promoted by the British Medical Temperance Association was held recently at Guy's Hospital, under the chairmanship of Mr. Charters Symonds, when a paper on the advantages of total abstinence was read by Dr. Claude Taylor, and led to an interesting discussion.

WE are asked to state that the twenty-third annual dinner of the past and present students of the Leeds School of Medicine will be held on Thursday next, December 5th, at the Queen's Hotel, Leeds. Mr. C. J. Wright will preside, and further particulars can be obtained from the honorary secretaries, Mr. H. M. Birkett and Mr. H. Wales, at the Medical School, Leeds.

CAMBRIDGE MEDICAL GRADUATES CLUB.—The smoking concert of the Cambridge Medical Graduates Club was held at St. James's Hall on Wednesday, November 21st, and was well attended by members of the club and their guests, and also by members of the Oxford Medical Graduates Club as guests of the Cambridge Club. The number present was 218.

THE OBSTETRIC DEPARTMENT AT ST. THOMAS'S HOSPITAL.—The term of office of Dr. C. J. Cullingworth as Obstetric Physician to St. Thomas's Hospital expired under the age-limit in June last. He was invited to continue in the office for a further period of three years, but being desirous of diminishing the amount of his work, and not wishing to hinder the ordinary course of promotion, he suggested that his colleague Dr. Walter Tate should be associated with him as full Obstetric Physician, and become responsible for the large share of the ward work. This proposal was unanimously supported by the medical staff, and, some technical difficulties having been overcome, Dr. Tate was at the Court of Governors on November 20th elected an additional Obstetric Physician to the hospital, with charge of twenty-one beds. Dr. Cullingworth will retain charge of seven beds.

ROYAL DENTAL HOSPITAL OF LONDON.—The annual dinner of the staff and past and present students of this hospital took place at the Hôtel Métropole on November 23rd. Mr. W. H. Woodruff occupied the chair, and in proposing the toast of "The King" alluded to the new designation of the hospital, and to the fact that the King had become its Patron. In toasting "The Past and Present Students" he stated that the new entry this year was 55, the largest that had ever been. Mr. E. G. Batts and Mr. G. Sheppard responded. Dr. Washbourn, C.M.G., in proposing "The Hospital and School," said that during the past two years, while in South Africa, he had found that many men were incapacitated from service on account of defective teeth. Mr. R. Winch and Mr. W. B. Paterson replied. Mr. Norman Bennett proposed the health of the visitors, and Mr. H. F. Waterhouse, Dean of Charing Cross Hospital, responded. Mr. W. E. Harding, of Shrewsbury, an old fellow student of the Chairman, proposed his health, and the Chairman replied.

## MEDICAL VACANCIES.

**The following vacancies are announced:**

BEVERLEY DISPENSARY AND HOSPITAL.—Medical Officer and Dispenser. Salary, £160 per annum. Applications to the Clerk by December 2nd

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—(1) Resident Medical Officer. (2) Resident Surgical Officer. Salary, in each case, £60 per annum with board, washing, and attendance. Applications to the Secretary, Children's Hospital, Steelhouse Lane, Birmingham by December 4th.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant. Applications to the Secretary by December 5th.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by December 9th.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—(1) Second House-Surgeon and Anæsthetist. Salary, £70 per annum, with board and residence. (2) Third House-Physician. Candidates must be unmarried, and under 30 years of age. Applications to the Secretary by December 11th

BUXTON: DEVONSHIRE HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum Furnished apartments, board, and lodging provided in each case. Applications to the Secretary by January 25th, 1902.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by December 9th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Resident Medical Officer, unmarried. Salary, £60 per annum. Applications to the Secretary by December 7th.

CROYDON GENERAL HOSPITAL.—(1) Senior House-Surgeon. Salary, £105 per annum. (2) Junior House-Surgeon. Salary, £60 per annum. Board, laundry and residence provided in each case. Applications, endorsed "Senior" or "Junior," to be sent to the Secretary by December 2nd

DOWNPATRICK: DOWN DISTRICT LUNATIC ASYLUM.—Assistant Medical Officer, unmarried, and not exceeding 32 years of age. Salary, £150 per annum, increasing to £200, with furnished apartments, board, washing, and attendance. Applications to the Resident Medical Superintendent by December 17th.

DUBLIN: CHILDREN'S HOSPITAL, Temple Street.—House-Surgeon. Salary, £50 per annum, with apartments. Applications to the Honorary Secretary, Medical Board, by December 5th.

DUBLIN: DR. STEEVENS'S HOSPITAL.—House-Surgeon. Salary, £100 per annum, with apartments, fire, and light. Applications to the Governors and Guardians by December 9th.

DUBLIN: ROYAL HOSPITAL FOR INCURABLES, Donnybrook.—Resident Medical Officer. Salary, £140 per annum, with board and furnished apartments. Applications to Mr. John J. Thompson, Registrar, at the Hospital, by December 6th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Physician. Board, residence, etc., provided and honorarium of £25 at the completion of six months satisfactory service. Applications to the Secretary by December 14th.

GLASGOW UNIVERSITY.—Additional Examiners for Degrees in Medicine, with special reference to (1) Chemistry, (2) Materia Medica and Therapeutics, (3) Zoology, (4) Practical Medicine, systematic and clinical, (5) Surgery systematic and clinical. Salary for (1), (2), and (3), £30, and for (4) and (5), £50. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by December 3rd.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Physician; unmarried. Appointment for six months. Salary, £20; washing allowance, £2 10s., with board and residence. Applications to the Secretary by December 4th.

ITALIAN HOSPITAL, Queen Square, W.C.—Honorary Surgeon. Applications to the Secretary by December 2nd.

KING'S COLLEGE, London.—Demonstrator of General Pathology and Bacteriology. Applications to the Council by December 7th.

LEWES: EAST SUSSEX COUNTY COUNCIL.—Medical Officer of Health. Salary, £200 per annum, with fees, etc. Applications to the Clerk of the County Council, County Hall, Lewes, by December 19th.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Resident Medical Officer for the In-patient Department, Bowdon. Salary, £101 per annum, with board, apartments, washing, and railway contract to Manchester. Applications to the Secretary by December 7th.

MANCHESTER: OWENS COLLEGE.—Assistant Lecturer in Pathology. Stipend, £150 per annum. Applications to the Registrar by December 4th.

MANCHESTER: ST. MARY'S HOSPITAL, Quay Street.—House-Surgeon and Resident Obstetric Assistant Surgeon. Appointment for one year, but eligible for re-election. Salary, £100 per annum, with board and residence. Applications to the Secretary by December 5th.

MIDDLESEX HOSPITAL, W.—Medical Officer and Registrar to the Cancer Department. Salary, £100 per annum, with board and residence in the College. Applications to the Secretary-Superintendent by December 14th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—House-Surgeon. Salary, £120 per annum, increasing £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by December 5th.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—(1) Resident Medical Officer. (2) Assistant Resident Medical Officer. Appointments for six months; the junior officer is eligible for the senior post. Salary in each case at the rate of £50 per annum, with board, residence, and washing. Applications to the Secretary by December 2nd.

NOTTINGHAM GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, rising to £120, with board, lodging, and washing. Applications to the Secretary by December 12th.

NOTTS COUNTY LUNATIC ASYLUM, Sneinton.—Medical Superintendent, married, and over 30 years of age. Salary, £600 per annum, with unfurnished house, coal, light, washing, etc. Applications to the Clerk to the Committee of Visitors by December 18th.

PAISLEY: INFECTIOUS DISEASES HOSPITAL.—Resident Physician. Salary, £120 per annum, with board, washing, and attendance. Applications to the Town Clerk, Union Buildings, Paisley, by December 11th.

PERTH DISTRICT ASYLUM, Murthly.—Assistant Physician, unmarried and not over 30 years of age. Salary, £110 per annum with furnished apartments, board, attendance, etc. Applications to Dr. Bruce at the Asylum.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington. Obstetric Tutor. Applications to the Dean by December 11th.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, W.—Resident Medical Officer. Salary, 100 guineas per annum, increasing to 120 guineas, with furnished apartments, attendance, coal and light. Applications to the Secretary by December 9th.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road.—Honorary Physician. Applications to Mr. P. P. Bodkin, Honorary Secretary, 23, Gordon Street, W.C., by December 2nd.

ST. THOMAS'S HOSPITAL.—Assistant Obstetric Physician, must be M.R.C.P.Lond. Applications to Mr. E. M. Hardy, Treasurer's Clerk, by December 6th.

SCHOOL BOARD FOR LONDON.—Medical Officer, must give his whole time. Salary, £800 per annum, rising to £1,000. Applications, on forms provided, to be marked outside 'Application for the Post of Medical Officer," to be sent to the Clerk of the Board by January 1st, 1902.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—House Surgeon. Salary, £120 per annum, with board, lodging, and washing. Applications to the Secretary by December 11th.

THROAT HOSPITAL, Golden Square, W.—Three Honorary Anæsthetists. Applications to the Secretary by December 7th.

TOTTENHAM HOSPITAL.—House-Surgeon. Salary, £50 per annum, with board, residence, and laundry. Applications to the Chairman of the Joint Committee by December 9th.

WEST HAM HOSPITAL, Stratford.—Junior House-Surgeon. Salary, £75 per annum, with board, residence, etc. Appointment for one year, but eligible for the post of Senior House-Surgeon. Salary, £100. Applications marked "Junior House-Surgeon" to be sent to the Secretary.

WEST LONDON HOSPITAL Hammersmith Road, W.—(1) House-Physician; (2) House-Surgeon. Appointments for six months. Board and lodging provided. Applications to the Secretary-Superintendent by December 25th.

WILTS COUNTY ASYLUM.—Assistant Medical Officer; unmarried. Salary, commencing at £150 and rising to £180 per annum, with board, residence, attendance, and washing. Applications to the Medical Superintendent by December 4th.

WINCHESTER: ROYAL HANTS COUNTY HOSPITAL.—House-Physician; unmarried. Salary, £85 per annum, rising to £75, with board, residence, etc. Applications to the Secretary by December 9th.

## MEDICAL APPOINTMENTS.

AIRD, I., M.B., B.S Edin., appointed Certifying Factory Surgeon for the Bangor District of County Down.

ARMSTRONG, A. J. M. L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Southgate District of the Edmonton Union.

CANT, Arthur, M.B., B.Ch (Birmingham University), M.R.C.S., L.R.C.P.Lond., appointed Medical Officer to the Marston Green Cottage Homes, Medical Officer for the Coleshill and Maxstoke Districts of the Meriden Union, and Public Vaccinator for Coleshill, Warwickshire.

CUTHBERT, W. H., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health to the Frinton-on-Sea Urban District Council.

EVANS, Thomas, M.B., appointed Medical Officer to the Holborn Union Workhouse, *vice* G. Cowie, M.B., C.M. Aberd., resigned.

GOOD, J. Percy, M.B., Ch.B.Vict., appointed District Medical Officer to the Pendleton Branch Dispensary of the Salford Hospital, *vice* Harold Bailey, M.B., Ch.B.Vict., resigned.

HALLIDAY, F. W., M.R.C.S., L.R.C.P.Lond., appointed Surgeon for the D Division of the Leeds City Police.

HEALD, G. H., L.R.C.P.Edin., M.R.C.S.Eng., appointed Surgeon for the A Division of the Leeds City Police.

HUTTON, J. W., M.R.C.S., L.R.C.P.Lond., appointed Surgeon for the C Division of the Leeds City Police.

INGLE, C. D., M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Somerton District of the County of Somerset.

JOHNSTONE, R. J., B.A., M.B., B.Ch., B.A.O.R.U.I., appointed Assistant to the Gynæcologist to the Royal Victoria Hospital, Belfast.

KENNINGTON, E., M.C.C.S., L.R.C.P.Lond., appointed District Medical Officer of the Aylsham Union.

LONG, Sydney H., M.B.Cantab., appointed Physician to the Jenny Lind Infirmary for Sick Children, Norwich.

MONYPENY, H. J., M.B., B.Ch., B.A.O.R.U.I., appointed Honorary Anæsthetist to the Royal Victoria Hospital, Belfast.

MUSCHAMP, R., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health for the Yeadon Urban District, *vice* C. J. R. McLean, M.D.Edin., resigned.

PRESTON, L. L., M.B., B.S.Durh., appointed Medical Officer of Health to the St. Helens Urban District Council.

REID, A. R., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Paddington Green Children's Hospital.

REID, R. Watson, M.B., Ch.B., appointed House Physician to the Paddington Green Children's Hospital.

RICHMOND, J. D., M.B., B.S.Glasg., appointed Assistant to the West Derby Union Infirmary, *vice* A. B. Hope-Simpson, M.R.C.S., L.R.C.P.Lond., resigned.

SECCOMBE, J. W. S., M.R.C.S., L.R.C.P., appointed Junior House-Surgeon to the Radcliffe Infirmary, Oxford.

SECCOMBE, P. J. A., M.B., B.C.Camb., appointed District Medical Officer of the Uxbridge Union, *vice* P. J. Slevin, L.R.C.P., L.R.C.S.Irel.

SINCLAIR, Norman J., M.B., Ch.B.Aberd., appointed Medical Officer of Health for the Burgh of Leith, and Police Surgeon, *vice* T. W. Parkinson, M.D.Edin., resigned.

WOODCOCK, H. de Carle, L.R.C.P., L.R.C.S.Edin., appointed Surgeon for the B Division of the Leeds City Police.

## DIARY FOR NEXT WEEK.

### MONDAY.

**Otological Society of the United Kingdom,** 17, Chandos Street, Cavendish Square, W., 4.30 P.M. Annual Meeting.—Cases and Specimens will be shown by Mr. Richard Lake, Dr. Cobbledick, Dr. William Milligan, Dr. Dundas Grant, Mr. C. A. Ballance, Dr. Herbert Tilley, Mr. F. C. Abbott, Dr. Urban Pritchard, Mr. C. H. Fagge, Mr. L. A. Lawrence, Dr. G. Cathcart, and Mr. Arthur Cheatle.

### WEDNESDAY.

**Obstetrical Society of London,** 20, Hanover Square, W., 8 P.M.—Specimens will be shown by the President (Dr. Horrocks), Mr. Maxwell, Dr. Wilson, Dr. Amand Routh, Dr. Stannus (introduced by Dr. Tate), and Dr. Lockyer. Dr. Griffith will show a person of uncertain sex. Paper, Dr. Robert Sanderson: A Case of Combined Vaginal and Abdominal Hysterectomy for a Pregnancy of four and a-half months Complicated by Cancer of the Cervix.

### FRIDAY.

**West London Medico-Chirurgical Society,** West London Hospital, Hammersmith Road, W., 8.30 P.M., Clinical Meeting.—Mr. Keetley, Dr. Seymour Taylor, Dr. Saunders, and others, will show cases.

**West Kent Medico-Chirurgical Society,** Royal Kent Dispensary, Greenwich Road, S.E., 8.45 P.M.—Dr. James F. Goodhart, The Purvis Oration on General Practice, and Original Research, to be followed by a Conversazione.

### POST-GRADUATE COURSES and LECTURES.

Charing Cross Hospital, Thursday, 4 P.M.—Demonstration of Surgical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, Wednesday, 4 P.M.—Lecture on Bronchiectasis.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 P.M.—Lecture on Medical Consequences of Adenoid Vegetations.

London Throat Hospital, 204, Great Portland Street, W., Wednesday, 5 P.M.—Practical Demonstration.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—Demonstrations will be given at 4 P.M. as follows: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, throat.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 P.M. Lecture: Surgery of Nervous System.

West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 P.M. as follows:—Monday: Anæsthetics in Rectal Operations. Tuesday: Medical Anatomy. Wednesday: Surgical Anatomy. Thursday: Uterine Hæmorrhage. Friday: Skin Cases.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTH.

POTTS.—On November 27th, at 160, Hagley Road, Edgbaston, Birmingham, the wife of W. A. Potts, M.D., of a son.

### MARRIAGES.

DAWSON—ROBERTS.—On November 25th, at St. Saviour's, Oxton, Birkenhead, by the Rev. E. D. Pollock, assisted by the Rev. C. C. Elcum and the Rev. H. E. Nixon, Harry G. Dawson, L.R.C.P., L.R.C.S.I., L.M., son of Major H. Dawson, late 14th Hussars, of Kildare and Lincolnshire, to Katie, eldest daughter of Edmund Roberts, Quispamsis, Oxton.

MOSLEY—DOBSON.—On November 28th, at Burley Parish Church, Leeds, by the Rev. J. Cockerill, Vicar of Kettlewell, assisted by the Rev. J. Longbottom, Vicar of St. John's, Leeds, and the Rev. D. Walker, Vicar of the Parish, Syrian Acton Mosley (Surgeon), elder son of George Mosley, F.G.S., Thorpe, Robin Hood's Bay, formerly of York, to Lottie, second daughter of Joseph Dobson, M.D., Thornville, Burley, Leeds. At home January 7, 8, and 9th, Larchmont, Clayton, near Bradford.

NAIRN—KING.—In St. Columba U.F. Church, Helensburgh, on November 26th, by the Rev. A. C. Welch, B.D., Minister of the Church, assisted by the Rev. Robert Barclay, M.A., West Parish Church, Greenock, Cuthbert Nairn, M.B., C.M., Greenock, to Marta Melville, youngest daughter of John King, Esq., Auchengower, Helensburgh, and Cove, Dumbartonshire.

### DEATHS.

ASPINALL.—At 11, Evelyn Gardens, South Kensington, London, on the 13th inst., Dr. Thomas Aspinall (late of Darwen), after a short illness.

DOBIE.—On November 22nd, at Tewnfield House, Keighley, William Dobie, M.D., J.P., aged 67 years.

## LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

### QUERIES.

T. E. S. asks: Is cornet playing likely to cause any ill-effects in a fairly strong youth aged 18?

X. Y. Z. asks for suggestions in the treatment of a case of intercostal neuralgia, following shingles, in a lady aged 63. He has tried the usual remedies, and has had the nerves excised in two intercostal spaces.

GUNSHOT HEADACHE.

SPORTSMAN will be thankful for any advice or hint as to the best treatment for "gunshot headache." A piece of indiarubber held between the teeth has been tried with some benefit. The pain comes on after the second or third shot.

TRAINING OF FEEBLEMINDED YOUTH.

B. H. (Yorkshire) desires to hear of any institution for the training and teaching a trade to a youth of somewhat deficient mental capacity.

*** If the youth can be certified as "imbecile," the Royal Albert Asylum, Lancaster, would be a suitable institution. Particulars could be obtained from the Secretary, Mr. J. Diggens. If only slightly deficient, application might be made to Miss Dendy (Honorary Secretary Lancashire and Cheshire Association for Care of Feebleminded), 13, Clarence Road, Withington, Manchester.

INCOME TAX.

C.P.C. writes: I lately informed the income tax assessor that I was going to appeal against my assessment, and sent up a list of deductions which I always understood were allowed. He wrote back: "Rent, taxes, etc., are not permissible deductions from a physician's income." I should be very glad of any information on this important matter. I believe medical men usually deduct one-third or one-half of their rent and taxes in cases where they practise their profession in their dwelling houses.

*** We have referred the query to the Income Tax Repayment Agency, 6, Chichester Road, W. They reply: "The surveyor of taxes is un questionably wrong; the only tax not a permissible deduction is income tax. 'C.P.C.' should deduct two-thirds of rent, rates, and taxes. The Agency ask whether he will give them the name of the district in which the surveyor acts.

### ANSWERS.

PUZZLED.—There is no known parasite of man which could produce such results.

VERITAS.—We could not publish the letter without the signature of the writer.

IGNORAMUS might consult *Diseases of the Thyroid Gland and their Surgical Treatment*, by J. Berry, B.S., F.R.C.S. London: J. and A. Churchill. 1901. 14s.

### LETTERS, NOTES, Etc.

THE DUFFERIN HOSPITALS FOR INDIA.

WE have received a letter from a lady who signs herself "M.D. late Dufferin Service," which we do not feel at liberty to publish, but the gist of her communication is that the reason for the non-success of the Dufferin hospitals among purdah women is largely to be found, not in the admission of women of lower class, but in the fact that the Indian-trained medical women, so largely employed by the Dufferin Association, are not capable of undertaking serious surgical work. It can hardly be expected, she adds, that a lay association should appreciate the fact that the mere passing of an examination does not make all those who pass equally capable of important surgical work. The admission of medical women to the Councils of the Dufferin Association is, she considers, urgently called for in the interests, not only or chiefly of these medical women, but of the patients of the Dufferin Association.

### A CASE OF SNAKE-BITE WITH TEMPORARY AMAUROSIS.

MR. EDWARD S. CRISPIN, M.R.C.S., L.R.C.P. (attached Egyptian Army, Omdurman) writes: A. M., an Egyptian, sleeping on the ground up the White Nile, was awakened about midnight by sharp pain in the middle finger of the right hand; on raising his hand he found a snake hanging on to his finger. He describes it as a black snake about 2 feet long, with red spots on the back, and fairly thick round. He went immediately to some natives, who gave him milk to drink and cauterised his finger with fire. Almost immediately his arm began to swell and he suffered severe pain, being violently sick seven times, and feeling unable to move his arm or stand up.

He arrived at hospital here about 9 A.M. the next morning. He was then able to walk, his whole arm was enormously swollen up to the shoulder and quite anæsthetic. The pulse was good. He was admitted and his arm freely incised right up to the shoulder, the incisions were numerous but not deep, and were made without an anæsthetic, the patient feeling nothing. His arm was then put into a bath with a weak solution of ammonia, but after a short time had to be removed as the bleeding was excessive. Strong solution of potassium permanganate was applied to the original wound, which was enlarged. The patient was also given a good dose of calomel. Five days later he complained of dimness of vision, which increased to almost total blindness, and then gradually improved, the whole covering a period of about eight days. The patient was discharged after about sixteen days quite well; all incisions healed by first intention, but he complained that he couldn't see quite as well as formerly, though on testing his sight it was found to be very fair.

I should like to know (1) the name of the snake if the description is sufficient, and what is known as to the virulence of his poison? (2) Was the hæmorrhage, which was out of all proportion to the wounds and which continued for some time after removal from the bath, due to the poison circulating in the blood preventing the coagulation of the blood? (3) Is temporary amaurosis common in snake-bite?

### AGE-DISTRIBUTION OF DEATHS FROM SMALL-POX.

MR. D. BIDDLE (Kingston-on-Thames) writes to point out that the Royal Commission on Vaccination, in its Final Report, endorsed his view as to the advisability of distributing deaths into age-groups (see p. 154). But the proportion of deaths occurring in a group should, he continues, be taken in conjunction with the proportion of the population belonging to that group, as in my paper on Youngest England, which you were good enough to publish in the BRITISH MEDICAL JOURNAL of October 13th, 1894, rather less than two years before the Final Report on Vaccination appeared. The table on p. 154 of the Final Report was supplied by the Registrar-General!

### AN OBSTINATE CASE OF HICCOUGH LASTING FIVE YEARS.

DR. E. H. THOMAS (Dehra Dun, India) has sent us the notes of a case which in abstract are as follows: The patient, aged 52, was of dissipated habits. In 1891 he showed tertiary signs, and in June, 1895, at 5 A.M., after a day of very hard drinking, as he was getting up from the bed he had an epileptic fit. About 2 P.M. hiccough started, and continued with frequent remissions for five years. The period of remission was from two to twelve days, and the duration of an attack was from two to fifteen days. The severity of the hiccough at the beginning of the disease was very great, and it did not stop even during sleep. There was no history of epilepsy or mental weakness in the family. A second epileptic fit occurred nearly four months after the first, a third a month later, and afterwards fits occurred irregularly, sometimes every week for three or four weeks together, and then disappearing for three or four months. The urine was always free from albumen, and he never suffered from any lung complaint. During the attacks of hiccough the patient's mental state deteriorated, and he slept badly, while his gait suggested paralysis agitans. During the periods of remission he was perfectly well, could sleep better, and there was marked improvement in his memory and general intelligence. The hiccough invariably started whenever he had a heavy meal. Various modes of treatment were adopted. The hiccough stopped for an hour or two after a strong dose of a mixture containing aromatic spirits of ammonia, brandy, and tincture of lobelia. Extract of belladonna and extract of cannabis indica administered in pill also checked the hiccough, but only for a few hours. Erb's method of treatment by faradisation applied to the epigastrium failed in stopping it, as also did a mustard plaster at the epigastrium. Antisyphilitic remedies were given without result. Morphine had to be given hypodermically whenever the attack was very severe. Notwithstanding the employment of many methods of treatment the hiccough continued with great regularity during the period of five years for which the patient survived.

### ARSENIC IN GLUCOSE.

THE recent arsenical beer-poisoning epidemic in Lancashire has been attributed to the contamination of the sulphuric acid used in the manufacture of glucose. It would appear from various papers contributed to the subject that this fact was not generally known. As early as 1877, however, Clouet, Professor at the Rouen Medical School, had pointed out that glucose contained both arsenic and free sulphuric acid, and, further, that commercial sulphuric acid was rarely free from arsenic. Clouet found that the amount of sulphuric acid present varied from 1.32 to 4.98 grams per kilogram of glucose, and the arsenic from 0.0015 to 0.007 grams per kilogram. These details are taken from the seventh edition of Chevallier and Baudrimont's valuable *Dictionnaire des Altérations et Falsifications des Substances Alimentaires, Médicamenteuses et Commerciales*, etc., published in 1897 under the editorship of Dr. L. Heret (vol. i, p. 726).

LETTERS, COMMUNICATIONS, ETC., have been received

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## BOOKS, ETC., RECEIVED.

Atlas der Krankheiten der Nase. Von Dr. P. H. Gerber. Lief. 6 und 7. Berlin: S. Karger; and London: Williams and Norgate. 1901. 6s. each.

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# A Clinical Lecture
ON
# DELAYED UNION, NON-UNION AND MAL-UNION OF FRACTURES,

*Delivered at Westminster Hospital.*

By A. H. TUBBY, M.S.,
Surgeon to the Hospital.

Gentlemen,—On the last occasion when we met we discussed the methods by which a simple fracture is united, together with the treatment of simple fracture, and to-day it is proposed to speak of departures which occur from the normal process of union of fracture. Such departures are delay in union, failure of union, and union in bad position.

It is necessary to make a distinction between delayed union and non-union, and the two are not identical, for a fracture may be a long time joining, yet it may ultimately do so, and thus the case may serve as an example of delayed union. On the other hand, it may not join at all unless surgically treated; such is a condition of non-union. It therefore follows that non-union includes all cases of delayed union, but the latter does not always imply the former. Therefore it is important for clinical purposes to make distinctions between delayed union and non-union, and the first that occurs is that of the time element. If, for example, a simple fracture of the lower part of the tibia is not united in six weeks, the case comes into the category of delay; but if, after three months treatment, the callus is not ossified, it is a case of non-union. Yet this point, however, is rather arbitrary, for, in certain situations, union is naturally slow. An example of this is a fracture of the upper end of the tibia. It would not be correct to speak of delayed union at the end of six weeks after a fracture in this situation, for it is well-known that healing is slow to occur there.

Passing from the question of the time element to signs at the site of fracture, it is safe to say that if, some weeks after the accident, a mass of callus be present, and gentle, passive movement causes pain or inflammatory signs, the case is probably one of retardation rather than failure of union.

A striking example is the case of a patient, aged 56, in Hollond Ward, who was sent to me from Ramsgate as an instance of non-union occurring in the lower third of the right femur. Either on touching the skin over the fracture, or on attempting gentle passive movement, the patient experienced acute pain. The presence of malignant growth was suspected, and so I cut down to the site of fracture. It was then found that the compact tissue of bone was extremely thin, the medulla in a state of fatty degeneration, and that very little repair had taken place; but the irritation produced by an examination at the site of fracture set up a rapid reparative process, and, six weeks after the operation, the bones had united.

Another point of distinction between non-union and delayed union is the following:—

If there be much loss of voluntary movement with pain on passive movement delay is signified, but if there be no pain on passive movement non-union is present; and the presence of a large amount of callus generally indicates that union will ultimately take place.

## Delayed Union.

Having, as far as possible, defined the terms, we may now proceed to discuss the causes of delay in the union of a fracture. The most common cause at work is absence of mobility of the fragments due to the following conditions:—In some positions it is almost impossible to effectively control the fragments, for instance, in the upper third of the femur it is exceedingly difficult to obtain effective purchase upon the upper fragment. Another cause at work is incomplete fixation of the limb by inefficient splints. They are often applied wrongly or loosely, or it may happen that a small portion of muscle is entangled between the fragments and contracting from time to time in harmony with the main body of muscle, it keeps the fragments in motion. Local anæmia, due to tight bandaging, is not seldom to blame for failure in the sequence of the normal processes of union. Thus, a tight bandage placed around the upper part of the leg will very likely result in a fracture of the lower part taking eight or nine weeks to unite instead of six. It is also quite certain that if the fragments are not placed in perfect apposition delay will occur. Such then are the chief local causes. There are also some general causes at work, but these will be discussed under the heading of non-union.

With regard to treatment it is of importance to ascertain if there be any condition of the patient which is responsible for general malnutrition. The most usual causes are: Syphilitic disease, anæmia, and the debility arising from ague. Having recognised them the treatment is self-evident. Locally the most important consideration is to immobilise the fragments effectively without undue pressure or interfere with the circulation. This, in the case of a simple fracture of the lower third of the tibia and in many other cases is best effected by the application of Croft's plaster-of-paris splints.

There can be no doubt that many weakly patients with fractured limbs are kept too long in bed, and delay in union arises from this cause, for if the limb be properly fixed in plaster-of-paris and the patient be removed from his bed and taken into the fresh air proper union rapidly sets in.

## Non-union of Fracture.

It is very difficult to draw the boundary line between delayed union and non-union, but, fortunately, non-union is of rare occurrence; that is to say, nearly all fractures unite ultimately with patient treatment, so that the probability of non-union is as small as from 0.2 to 0.8 per cent. of all fractures. There are, however, certain situations in which failure of the healing process occurs, and these are, in order of frequency: the upper third of the femur, due to an excessive displacement of the fragments, and the leverage of strong muscles; the middle of the humerus, due to the defective blood supply, owing to the fibrous nature of the periosteum in the neighbourhood of the insertion of the deltoid muscle; oblique fractures of the tibia; fractures of both bones of the forearm, and the lower jaw. The causes of non-union may be discussed under the headings of general and local. In compound fractures, especially those arising from gunshot wounds, excessive loss of blood is followed from time to time by a flail-like union; and, in a profound anæmia, such as is found in pernicious anæmia, when fracture occurs non-union frequently follows; so, too, it happens in the anæmia of malarial disease. The most commonly recognised cause of non-union is specific disease, and a rare one is the condition described by French authors as phosphaturia, wherein an excessive amount of phosphates is passed in the urine, and the bones become softened. Pregnancy also has afforded striking examples of non union. One of them is the classical case of Dupuy's, the details of which are as follows:

A young woman, pregnant, at the third month fractured the shaft of the femur; the amount of bruising was slight. A splint was carefully applied for thirty days, and at the end of that time the patient was examined. The fracture was found to be completely mobile. The apparatus was then reapplied, with extension, for six weeks, but no union was obtained, although her general condition remained very good. Parturition took place at the usual time, and—remarkable to relate—one month afterwards the femur had competely united.

Rare causes of non-union are scurvy and rickets. It has been said that in old age non-union is particularly prone to occur; but this is a fallacy, as is shown by the case of a woman, aged 86, in Hollond Ward, who was run over eight weeks ago, and sustained a fracture of the lower ends of the right tibia and fibula. In her case good union occurred in six to eight weeks, and she was able to leave the hospital on crutches. I have also had under my care, during the last three years, two cases of fracture of the neck of the femur in old ladies, aged respectively 83 and 84. In both these cases good union, although with considerable shortening, occurred, and the patients were able to get about. The details of these cases I propose to put on record later. It is quite likely that the idea of age being a bar to union has arisen from the many cases of non-union occurring after fracture of the neck of the femur. The failure is not due to age only, but to the unique arrangement of the blood supply, for it has been shown that the arterial supply to the globular head of the femur is derived from the neck, and, when the former is separated from the latter, local anæmia occurs, with consequent failure in the production of callus. As to the matter of sex, non-union occurs seven times as often in males as in females.

With reference to general constitutional conditions, such, for instance, as rickets, mild varieties of this disease have no

influence upon the process of union, for fractures in these cases unite quite readily; as, for instance, in the case of a girl, aged 18, in Hollond Ward, who has had two fractures of the upper end of the left humerus, and one of the lower end of the right femur, which have joined quite well within an ordinary time. In the severer forms of rickets, and especially in that form associated with hæmorrhage beneath the periosteum, and known as scurvy rickets, non-union frequently occurs. Locomotor ataxy is sometimes quoted as a cause of non-union, but this is not so; for although spontaneous fracture occurs in this disease, yet it is curious to observe that many such fractures unite readily. Again, in the case of infantile paralysis, where the bones are often fragile and show signs of fatty degeneration, when fracture occurs, timely healing takes place.

The local causes, as a rule, are more important than the general. In a severe compound fracture, with much comminution of fragments, succeeded by necrosis and extrusion of



Fig. 1.—Roentgen-ray photograph. Side view of femur, showing mal-position of bone and overlapping of fragments.

fragments, non-union is likely to follow. This is particularly a condition which results from gunshot wounds, such as you saw in the patient in Northumberland Ward, who was wounded at the battle of Paardeberg through the lower jaw by an explosive bullet. He stated that a piece of his jaw was driven out, carrying the whole of the lower incisor teeth, and you have seen that these and the corresponding portion of the jaw are entirely absent, while the two fragments of the bone remaining can be easily moved one on the other. Defects in the local blood supply as in the upper end of the humerus and the upper end of the femur, have been already alluded to, and it is possible that, in fracture of the patella, the firm application of crescentic-shaped pads above and below the fragments is responsible for some of the glaring examples of fibrous union which occur there, for there can be no doubt that such pads press upon the arterial plexus which surrounds the bone. Then, too, excessive mobility of fragments, as in the upper third of the femur and middle of the humerus due to the action of strong muscles placed at the greatest mechanical advantage, exercises a deleterious influence. The interposition of a portion of muscle or fascia between the fragments has been quoted, and has been scoffed at, but Macleod has proved by a dissection that such was the exciting cause in one of his cases. Unfortunately, we have learned to expect fibrous union in certain spots, especially in the patella and olecranon, but, since the introduction of the method of wiring, failure to unite either by close fibrous tissue or by bone, has become less frequent.

There are certain supposed causes which are copied from one book to another which may be alluded to. One of these is the entrance of synovial fluid between the fragments. This, doubtless, is hypothetical; but, in the case of the patella, one can readily understand that if the torn synovial membrane itself is insinuated between the fragment, it is not likely that union will occur by bone. Again, it has been said that the direction of the nutrient artery in a bone has an

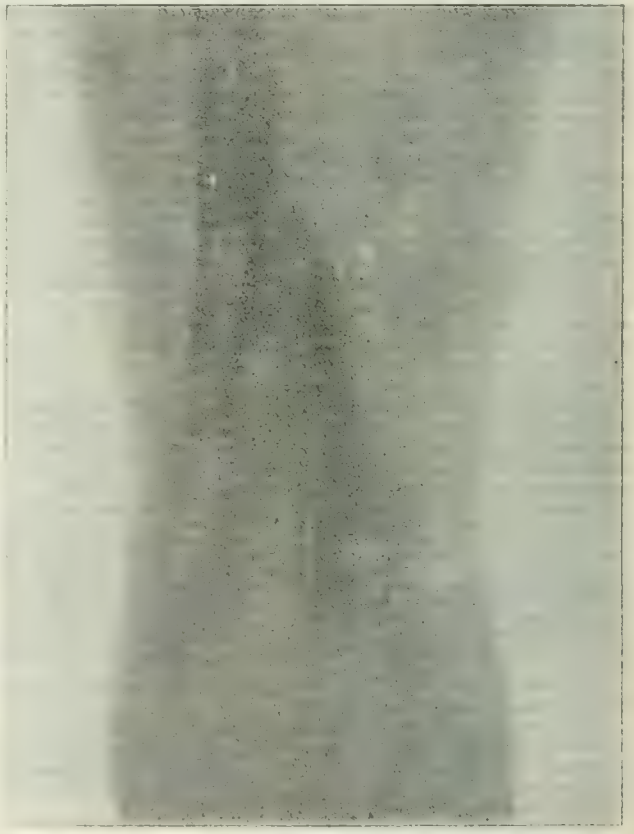


Fig. 2.—Antero-posterior view of A. S. B., showing mal-union of fracture of femur.

influence upon the question, that is to say, that fractures in that portion of bone towards which the nutrient artery is not directed are more likely to fail to unite than those occurring at the opposite extremity. Such, however, is not the case.

The result of non-union is the formation of a false joint, or *pseudarthrosis*. Several forms of pseudarthrosis have been described somewhat minutely, but, for practical purposes, the following varieties may be remembered. The bones are joined end to end by fibrous tissue; that is to say the intervening callus has not proceeded beyond the fibroid stage. In some examples of this class the bone ends are of normal size, or tapered, while others are swollen and bulbous, owing to the formation of a certain amount of ensheathing callus around them. Or it may happen that, instead of a more or less complete cylinder of fibrous tissue intervening between the ends of the bones, their peripheries are joined by a membrane of fibrous tissue containing a cavity which has no resemblance to a true joint. Occasionally in the fibrous tissue more or

less isolated portions of ossified callus are found. In very rare cases there is a very close attempt at the formation of a true joint cavity: that is to say, there is a membrane of fibrous tissue uniting the bone ends; inside this membrane is an imperfect synovial membrane, while the bone ends are shaped so as to fit each other more or less completely.

The symptoms of non-union are the following:

The most striking one is abnormal mobility, and it is well to repeat that this mobility is often painless, especially in long-standing cases, with passive movements, thus affording a distinction between delayed union and non-union, for, in the former, the passive movement is painful. Of course, if the fibrous tissue in non-union be stretched beyond reasonable limits, pain ensues, as it always does when fibrous tissue is so treated.

The next set of symptoms are those due to functional troubles in the limb. Thus, if the fracture be near the trunk, most of the coarser movements are lost, and in the case of



Fig. 3.—Side view of fracture in Figs. 1 and 2 after operation. The fracture is rectified and maintained in position by the steel screw.

the leg, there is inability to bear weight upon it, associating with a wasting of part. A striking example of this condition is sometimes seen when non-union follows osteotomy of the tibia and fibula after rickets. I have seen at least three cases of non-union due to such a cause. In one case of non-union which came under my care, in a child aged six years, the non-union was associated with acute fatty degeneration of the lower third of the leg and the foot, as was readily seen after amputation. I do not think it is fully understood that non-union after osteotomy of the tibia and fibula occurs in a somewhat surprising proportion of cases, and, to my mind, it affords a strong protest against indiscriminate operations of this kind. Unfortunately these sad examples are not seen at general hospitals, but they drift to those societies which afford charitable relief to the lame.

The diagnosis from delayed union can only be made by waiting and noting the effects of general treatment and appropriate local treatment. If in the course of a month or two there is no sign of bony callus, non-union is impending, and this suspicion is strengthened if painless passive movement can be obtained.

As to the prognosis, it may briefly be said that the outlook depends upon the recognition of the causes of the condition and the success of the treatment adopted.

### Treatment.

This may be spoken of under two headings: the treatment of a suspected case, and that of an established case. If union be so much delayed that it appears complete failure may occur, you are not called upon to operate immediately, but to adopt fully the lines laid down in the treatment of delayed union, and which may be summed up as follows: Be patient, improve the general health, immobilise the fracture and wait. In some cases massage, skilfully applied, may be of great value, and it is well to examine the fracture from time to time by the *x* rays. But too much reliance must not be placed

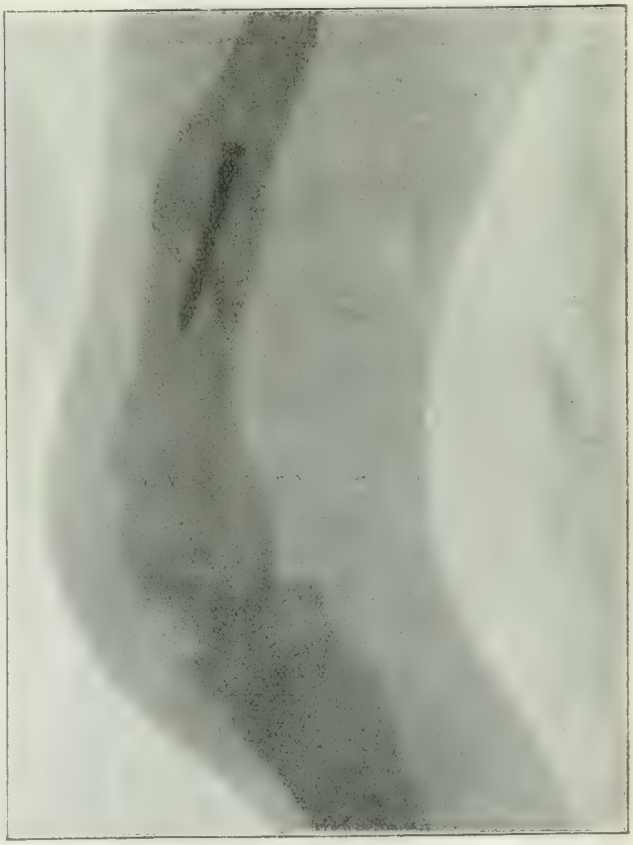


Fig. 4.—Antero-posterior view of the limb in Fig. 3 and showing the final result.

upon this, for it is curious to note that even when fractures have become so firmly united, as in the case of the lower extremity, that the weight of the body is well borne, the newly ossified callus remains transparent to the *x* rays and gives the impression of fibrous tissue. Indeed, it is not until some months afterwards that this ossifying callus becomes opaque. After patient trial of several weeks, or even months has been made, the question of non-union must be entertained.

There are certain methods still quoted in textbooks, and they serve as a warning and are to be avoided. Such are the injection of irritating fluids, acupuncture, the introduction of setons and of foreign bodies and electrolysis. There are also doubtful methods spoken of, such as rubbing the ends of the fragments together and subcutaneous section of fibrous callus. It is quite possible that if you propose such measures to your patients and they allow you to carry them out the result will be disappointing, and it is a pity all mention of them is not expunged from textbooks.

There are, however, certain well-recognised measures which have become permissible since the advent of aseptic surgery. These are refreshment of the ends of the fragments as you have seen me carry out in a case in Hollond Ward; resection of the fragments and fastening them together, either by wire or by screws, or by the application of a bone ferrule, as described by Nicholas Senn, and finally transplantation of bone has been performed.

With reference to the method of wiring success depends very largely upon whether the anatomical conditions will allow safe access to the surfaces of the bone at the time of operation. As an example of where such may be safely attained the lower end of the tibia may be quoted. It is quite easy to reach the internal aspect and by tearing off the periosteum, carrying with it the artery and nerve, the external aspect may be safely exposed.

But in the case of the upper third of the femur the anatomical conditions are such that it is extremely difficult to fully




Fig. 5.—Roentgen-ray photograph of a case of traumatic separation of the lower epiphysis of the right femur and forward dislocation of the right tibia. The lower epiphysis of the femur A is seen lying on the front of the shaft, and attached to the epiphysis is a portion of the shaft B, which was removed at the time of the operation. The black broad line C to the right represents the splint in section. This photograph was taken on the day following the injury.

expose the whole circumference of the ends of the fragments. In front are the femoral vessels, behind is the sciatic nerve, externally are numerous vessels, branches of the external circumflex, and internally are the branches of the internal circumflex and the perforating vessels, while the bone lies at such a depth and imbedded in such a mass of muscular tissue that easy access to it is extremely difficult, and the whole field of operation is narrowed and obscured by hæmorrhage. In fact no operation of this kind should be lightly entered upon, and statistics show that in the case of operation on the femur for pseudarthrosis one patient in five dies. Therefore, you should consider whether the patient's life cannot be made tolerable by apparatus in preference to his undergoing the risk of so severe an operation.

## Mal-union of Fracture.

This condition ought to be rare, except perhaps in some situations. Such are the upper third of the femur and the middle of the humerus; but the occasional occurrence of mal-union in these situations should be no excuse for such an event in others; and I would beg you, in practice, to exercise the utmost care in accurately adjusting the fractures you meet with, and maintaining the adjustment until proper union has occurred. A badly set fracture will always be an annoyance to the patient and to you, and he will doubtless remind you of it from time to time in ways far from pleasant.

The main causes are insufficient treatment at the first, and negligent treatment afterwards. Insufficient treatment at first too often means non-recognition of the fracture, such as occurs in Colles's fracture, or in those about the elbow, but since the advent of skiagraphs, such want of recognition ought not to occur. A striking example of non-recognition of the fracture is seen in the case of the boy in Hollond Ward.




Fig. 6.—Roentgen-ray photograph taken four weeks after the injury. The forward dislocation of the tibia is seen to be partially reduced, but the epiphysis is still in its abnormal position. The shadows of the screws C are those of the double inclined plane which supported the limb.

Alfred S. B., aged six, was admitted into Westminster Hospital on account of vicious union of the lower part of the left femur, on October 31st, 1900. In March, 1900, the child fell on his left knee. He was first treated for a bruised bone in a home in one of the suburbs of London, and afterwards for a fractured knee-cap. Suppuration seems to have set in about the knee, and incisions were made, and some diseased bone taken from the neighbourhood of the knee-joint. His condition improved, but about three months ago, that is, in July, he fell and broke his thigh. The fracture was put up in the same home, and kept up for six weeks. The faulty condition of the limb was as follows:—

On admission there were several scars over the left knee-joint, which is bent at an angle of nearly 60 degrees, and has only about 4 degrees or 5 degrees of movement in it. The left leg and thigh are wasted, and the outline of the thigh, at its lower part, is entirely abnormal. In fact, the lower part of the thigh projects forward at an angle of about 30 degrees or more with the upper part of the bone; so that, with the combination of a bent knee and a malunited fracture of the thigh bone, the foot is several inches off the ground, and the patient is unable to walk. Two *x*-ray photographs were taken. (See *x*-ray photographs 1 and 2), and the condition is well seen in the photographs. The upper end of the lower fragment is directed upwards and backwards, and is overlapped by the lower

end of the upper fragment. It was felt that there was no alternative but to operate and attempt to remedy the condition.

*Operation.*—Esmarch's bandage was put upon the right thigh, and an incision five inches long was made on the outer aspect of the left femur. The site of the mal-union was exposed, and cleanly divided with a chisel, a small portion being removed with bone forceps, so that the two ends might be brought into contact. A steel screw, $2\frac{3}{4}$ inches in length, was then put in obliquely (see *x*-ray photographs 3 and 4), so as to traverse the lower end of the upper fragment and the upper end of the lower fragment. The direction of the screw was from above downwards, and from without inwards. The wound was then closed, and the limb placed on malleable iron splints at a suitable angle. On January 14th of this year complete union was found to have taken place, and so five pounds extension was applied to the limb, in order to overcome the flexion at the knee joint. Gradually the flexion disappeared, and the movements of the joint were found to be increased to between 30 degrees and 40 degrees. The final condition of the patient is seen in the skiagraphs 3 and 4. He has left the hospital walking well.

Negligent treatment means want of constant supervision after the fracture, and employment of unsuitable apparatus, such as ill-fitting splints, which fail to fix the fragments. It is not sufficient to put the fracture up, and to leave it for some




Fig. 7.—A Roentgen-ray photograph of the limb seven weeks after the injury and three days after the operation described in the text. At A is seen the shadow of the nickel-plated steel screw inserted into shaft and through the epiphysis to keep the latter in place. At B is seen the gap caused by the removal of a portion of the shaft which was adherent to the displaced epiphysis. The screw A is still *in situ*, and has given rise to no trouble at this date—November, 1901—that is, two years after the operation.

five or six weeks, but the patient should be seen at intervals of two or three days, to make sure that everything is going well.

In slight cases of mal-union of fracture, in which there is but little shortening of the limb, slight loss of movement, or slight deformity, the use of prothetic apparatus is sufficient. But, in severe cases, you may be called upon to consider the propriety of operation, always remembering that the same remarks made as to the danger of operating in non-union apply to mal-union. Some surgeons, especially the French ones, have advocated osteoclasis, a process which is expressed by the public as "breaking the bone again," and setting it. This is not to be recommended: as in the case of a long bone of the lower extremity in an adult, the instruments which must be employed are very powerful, and great damage to the soft tissues must necessarily ensue, while the application of the force is often ill directed, and the result is far from good. The only recommendation of osteoclasis is that no wound is made, and risks do not arise from hæmorrhage and sepsis, but there can be no doubt that osteotomy is preferable, because more precise, and it should be done by the open operation. Difficulties will necessarily occur arising from the following conditions: the position and depth of the fragments, the hardness of the callus, and the removal of a sufficient portion of bone to allow the resulting ends to come into accurate apposition. Many of the conditions of such an operation are illustrated by the following case:—

*Traumatic Separation of the Lower Epiphysis of the Right Femur: Subsequent Rectification by Open Operation: Epiphysis Retained in Place by a Screw: Fracture of the Middle of the Left Femur.*—George B., aged nine, was admitted to Westminster Hospital on October 24th, 1899. He was going to school, when he ran after a four-wheeled cab, and grasped the back rail. In endeavouring to get down, he caught his legs in one of the wheels, and the limbs were carried round nearly to the level of the middle of the door, when the wheel became locked, with his legs projecting through the spokes. The child was brought to the hospital immediately.

On admission, the boy lay in bed with his knees drawn up, and in great pain. There was a slight abrasion on the front of the left knee, and another on the other side of the left leg. The left thigh was found to be fractured obliquely in its middle, and there was eversion of the foot, with an inch shortening. There was already considerable swelling around the right knee, which was flexed to an angle of 30 degrees, and the leg was rotated inwards. The patella was intact, but posteriorly two sharp points could be felt almost projecting through the skin in the popliteal space, and the pulsation of the popliteal artery was well marked. Anteriorly, a distinct mass could be felt lying on the front of the femur (see Fig. 5). The joint could be moved, but no true crepitus obtained. From the nature of the injury, and from the character of the displacement of the femur a diagnosis of separation of the lower epiphysis of the right femur was made, which was confirmed by a Roentgen-ray photograph. The foot was somewhat cold, but feeble pulsation could be felt in the anterior and posterior arteries. Neither of the fractures were compound.

The boy was placed under an anæsthetic, traction was applied to the right foot, reduction of the deformity effected, and the limb was put up on a double inclined plane, and an extension weight of five pounds applied. To the left femur a long Liston splint was applied, after reduction of the fracture, and the bone was thereby maintained in good position. The boy experienced great pain during the following night in the right knee-joint, and the foot became very œdematous and cold, there was evidently interference with the circulation, and it seemed that gangrene might follow. The angle of the inclined plane, which had previously been about 30 degrees, was now increased to 45 degrees, and after twenty-four hours the foot became warmer, and the œdema gradually decreased. But there could be no doubt that, during these frequent manipulations necessary to relieve the pain and the œdema, displacement of the epiphysis recurred, although this untoward occurrence was masked considerably by the great swelling about the knee joint anteriorly and posteriorly. The condition was uneventful until November 21st. It was then quite clear that the epiphysis was still lying on the front of the femur, and was evidently adherent to it, and pointing directly forwards, and the intercondylar notch was felt well defined. At this time, too, the sharp lower end of the shaft could be felt in the popliteal space, merely covered by skin, and nearly coming through it. Another radiograph (Fig. 6) was taken, and it is seen thereby that the epiphysis is lying on the front of the shaft, while the shaft itself is in contact, at its under part, with a small portion of the upper articular surface of the tibia, at its posterior part.

On November 27th, thirty-four days after the injury, the patient was again put under an anæsthetic, and an attempt was made to displace the epiphysis from its connections by tapping it smartly on its inner side with a mallet, the skin being guarded with thick felt. This attempt resulted in failure, as might be expected. So the tendo Achillis was divided, and it was decided to open the knee joint and replace the epiphysis. A long curved incision was made, commencing at the upper and inner angle of the patella, and passing horizontally outwards, and then curving downwards for about $3\frac{3}{4}$ inches, the total length being 8 inches. This incision completely divided the extensor tendon and the upper and outer part of the capsule of the joint. The patella and the superjacent structures were then turned downwards and inwards, and the displaced epiphysis was fully exposed by retracting the soft parts. The epiphysis was found to be so tilted that its articular surface looked forwards; its upper surface looked backwards and inwards, and on the inner side of the epiphysis was a piece of bone, the size of a walnut, which had been detached from the shaft of the femur with the epiphysis. This piece of bone was chiselled away, and then the epiphysis was chiselled off the femur, care being taken not to leave any of it behind as it was thought that the growing line was attached to the epiphysis, and this proved afterwards to be the case. The difficulty now was to lever back the epiphysis between the closely-locked tibia and the shaft of the femur. It was not possible to further detach the epiphysis from its soft connections as these had been left intact on the inner side only. But by applying vigorous extension to the limb and using a periosteal elevator as a lever the epiphysis was ultimately forced into position. Then, flexing the knee-joint to a right angle a gimlet was run through the epiphysis into the shaft of the femur and a nickel-plated steel screw (Fig. 7) driven home, care being taken that its head was flush with the under surface of the articular cartilage of the femur. Six deep sutures were then passed through the soft parts, including the divided portions of the extensor tendon, leaving a small opening for the insertion of a drainage tube. The limb was then put up on a back splint with a foot piece and two side splints. After the operation the temperature fluctuated between normal and 101°, and he was much troubled with sickness for

three days. There was also a great deal of oozing of blood and serum from the tube but no pus. On the fifth day the drainage tube was removed and on the twenty-eighth day the wound was soundly healed. On January 3rd, 1900, it was noted that the limb was not so straight as desirable, there being a considerable amount of genu valgum and the knee-joint was stiff. So on January 8th the boy was anæsthetised, the limb was straightened, some adhesions were broken down and the leg was put up in plaster. He was discharged from the hospital on January 12th, wearing a plaster-of-paris splint. The right leg measured $23\frac{5}{8}$ inches from the anterior superior spine to the internal malleolus and the left leg $24\frac{3}{8}$ inches, so that there was a difference of half an inch. In April the boy was readmitted, the plaster-of-paris taken off, and gentle movements of the knee commenced. Since then he has worn a trough splint applied to the outer and posterior aspects of the knee until now. The final result is that the left leg is straight, does not require support, has 25 degrees of flexion at the knee and is only half an inch shorter than its fellow, and the screw has given rise to no trouble whatever and is still *in situ*.

In this particular instance a nickel-plated screw was employed, but the ingenuity of the surgeon is often considerably exercised in deciding as to whether he should use wire or screws, and how he should put the binding material in to the best advantage. There are, however, some cases of mal-union which seem to defy successful operation. Such a one is seen in the case of cross union of the bones of the forearm with ossification of the interosseous membrane.

## COLLES'S FRACTURE AND ITS TREATMENT.

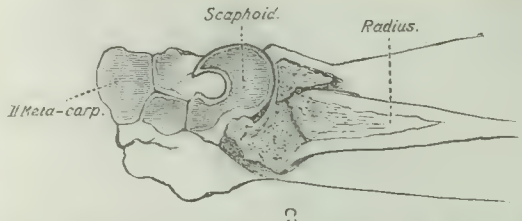
By JOSEPH GRIFFITHS, M.A., M.D., F.R.C.S.,
Reader in Surgery in the University of Cambridge, and Surgeon to Addenbrooke's Hospital.

THE variety of Colles's fracture which I wish to speak of is the one in which the lower articular extremity, whether comminuted or not, is driven upwards and backwards upon the shaft of the radius. Other varieties of this fracture are occasionally seen, and each requires a special treatment of its own. This form is often found to be difficult to set, and frequently the displacement which accompanies this fracture is only partially corrected. This difficulty, which is a very real one, occurs so often that some surgeons go so far as to say that a Colles's fracture if deformity exists is rarely if ever properly set. Such a view receives substantial support from the fact that a large number of persons who have sustained this injury show permanent deformity with considerable limitation of movements in the wrist, and of supination and pronation of the forearm and hand; also, in a lesser degree it is true, from the numerous specimens in which the original deformity persists that are to be found in different pathological museums in this and other countries. The difficulty in the proper reduction of the displaced fragments is usually attributed to impaction, which causes fixation of the fragments one to the other. I hope to show that in the majority of instances impaction, such as is enough to defy manipulation with or without an anæsthetic, does not occur, and that it is not difficult to set the fracture properly, and that it is easy to redisplace and again to reset the fragments. When the fracture is properly set the several fragments fall into their natural positions, and the lower articular surface of the radius regains its normal contour and inclination, and owing to this the movements of the wrist-joint are not to any material extent interfered with. Under ordinary treatment, however, interference with the movements of the wrist-joint after this fracture is often considerable, and massage, early passive movement, and other manipulations are resorted to in order to reduce the degree of such interference to its smallest limit. Further reference will be made to this at the end, so I will at once proceed to review the methods now in use for the treatment of this fracture, leaving out of consideration the mechanism of its production.

The methods now employed in the reduction of the displacement may be classified as follows: (1) pull the hand straight out; (2) pull and flex the hand towards the ulnar side; and (3) pull the hand and flex the wrist-joints. To what extent the first two methods are effective in the hands of other persons I cannot tell, but I know that I have quite failed to produce any satisfactory impression upon the displaced fragments whenever I have adopted one or the other, or both in succession; pulling, as a rule, proves quite useless, and even when combined with ulnar flexion of the hand in my experience it is equally ineffectual. With the last method, on the contrary, I have invariably succeeded, and found no impaction, or, I should say, no such degree of impaction as to defy ordinary manipulation. I now, however, find that a simple and full flexion forwards at the wrist-joint without any pulling suffices to reduce the deformity and to give back the natural contour to the broken radius. I have lately had an opportunity of testing this in a right forearm in which there was a recent Colles's fracture. During life—the man being in an unconscious state from injury to his head—as well

1





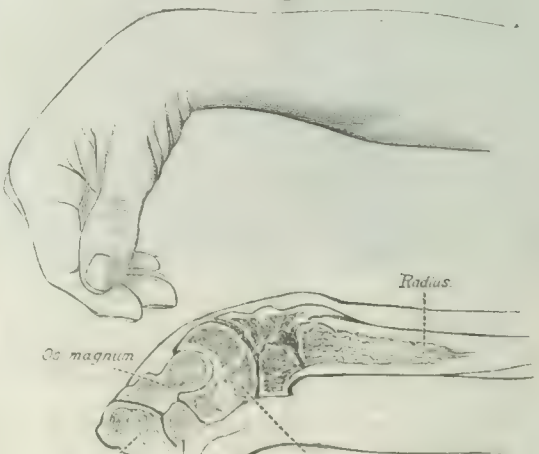

2

Fig. 1.—Taken from cast of hand and forearm, showing the usual deformity in Colles's fracture.

Fig. 2.—Section of radial half of radius and carpus as reflected in a mirror, showing the ordinary displacement of the lower fragment and carpus in Colles's fracture.

as after death, it was easy to reduce the displacement, which was of the ordinary kind, but by letting the hand go the fragments at once regained their displaced position. A plaster cast was made with the hand straight out, and another with the wrist fully flexed. In the former (Fig 1), the deformity is seen to be marked and of the usual kind, but in the latter (Fig. 3) it is reduced and the natural contour of the wrist is seen.

3




4

Fig. 3.—Cast of same hand and forearm as shown in Fig. 1, showing complete disappearance of deformity in Colles's fracture by simple flexion at the wrist.

Fig. 4.—Section of ulnar half of radius and carpus, showing reduction of displacement when wrist is flexed (opposite half to that seen in Fig 2).

The forearm and hand after their removal were sectionised in a median antero-posterior plane: one half was left with the hand straight out, but in the other the hand was bent forwards on the forearm in the positions corresponding to

those seen in Figs. 1 and 3, under which they are respectively placed. One half was hardened with the fragments in their displaced positions; in the other half the wrist was fully flexed forwards to reduce the displacement of the fragments and to restore to the radius its natural contour. In the former the characteristic displacement and impaction are well exhibited (see Fig. 2), whereas in the latter the broken fragments are replaced and the articular surface of the radius is in its proper position (see Fig. 4). It may here be observed that in the natural radius the lower end is carried forwards and is surmounted by the articular surface, which looks slightly forwards as well as downwards; but in a radius, the seat of Colles's fracture, the lower end is, on the contrary, carried a little backwards and the articular surface looks not only downwards but decidedly backwards. As shown in Fig. 5, the lines joining the hinder and the fore part of the articular surfaces cross one another at an angle of 37° in these two specimens, the articular plane in the normal radius being 15° below, and that in the radius the seat of Colles's fracture 22° above the horizontal as the bone is held erect. This is the chief deformity which is present in a recent Colles's fracture and which persists, and is indeed the one that is difficult to remove by pulling and flexing the hand to the ulnar side. On the contrary, an outline in a transverse vertical section of a normal radius, and one in which there had been a Colles's fracture shows that the articular surfaces run in this direction in each specimen almost parallel to one another (Fig. 6), there being no tilting upwards and outwards of the outer end of the articular extremity of the radius that had been broken. The specimen from which this drawing was taken was selected from a large collection of specimens of ordinary examples of Colles's fracture, and it only shows what each of the others does namely, that there is no important displacement in an outward and upward direction of the lower fragment.



Fig. 5.—Mesial antero-posterior sections in outline of (*a*) normal radius, and of (*b*) radius after a Colles's fracture.

Fig. 6.—Transverse sections in outline of (*a*) normal radius, and of (*b*) radius after a Colles's fracture.

Hitherto it has been generally thought that, when the usual method of reducing Colles's fracture, namely, pulling the hand straight out, fails to produce dissociation of the displaced fragments, the broken parts were jammed into one another—impacted—the shaft being driven into the expanded, and may be split, lower end. That difficulty in dissociation of the fragments often occurs under these circumstances I am quite convinced of and have demonstrated it to my pupils and others on several occasions, but that firm impaction does exist in such cases is, however, clearly disproved by the adoption of another method of reduction, namely, flexion of the wrist, which immediately replaces the fragments and restores to the radius its natural outline and contour. I am as convinced as was Dr. Alex. Gordon that impaction, which may be said to occur to a more or less degree in most examples, can with ease be overcome by manipulation with or without an anæsthetic. What is there, then, that prevents reduction of the displaced fragments by a fair steady and straight pull, and gives rise to the idea of a firm impaction of the fragments into one another? I would venture to offer the following explanation, and, in order to make matters easier, I will first refer to some anatomical points. Take a median antero-posterior section through the forearm and hand in which the joints of the wrist and carpus are sectionised, the joint surfaces being no longer kept together by the influence of atmospheric pressure. In such a specimen traction upon the hand will separate the lower row of carpal bones from the upper and the upper from the radius to a distance of at least one-sixth of an inch respectively (see Fig. 7). The anterior and posterior ligaments of these two joints are naturally a good deal longer than is necessary just to join the bones together; and this extra length is in order to allow of the great range of movement which may take place in the carpus itself, and in the wrist joint proper.

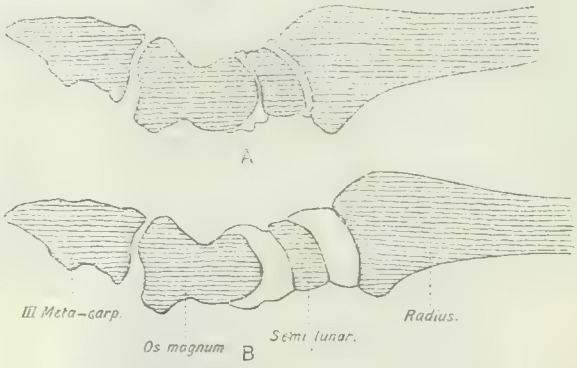



Fig. 7.—Diagrammatic mesial sections of bones of wrist. A, normal. B, Separation of bones when hand is pulled upon.

In the living person traction of the hand upon the forearm is accompanied by an appreciable "give" in the carpus and in the wrist joint, and this, it seems to me, can be fully accounted for by the laxity of the anterior and posterior ligaments of these joints, so that when the hand is pulled upon the bones of the forearm and the first carpal and second row of bones are separated from one another to a certain distance, the ligaments being at the same time indrawn into the intervals thus created between the adjacent articular surfaces just as they are in the interphalangeal joints when the fingers are pulled upon, and a pull upon the hand is first expended in distancing the two rows of carpal bones from one another and the carpus from the radius and the ulna covered by the triangular fibro-cartilage. This seems to me to be a satisfactory explanation of the "give." Further traction upon the hand by a straight pull sets up a state of contraction in both flexors and extensors, a state in which it is very difficult even by the aid of considerable force to elongate the muscles. The "give" which occurs in pulling upon the hand is equivalent to the distance the bones can be separated from one another owing to the laxity of the ligaments and to the degree of extension the muscles of the forearm and wrist are accustomed to allow but beyond this limit they offer great resistance.

Now in Colles's fracture a similar result follows traction (straight pull) of the hand upon the forearm for something "gives," but the displaced fragments remain unaffected and the deformity uncorrected. The "give" is what the limit of simultaneous extension of the flexors and extensors of the forearm and of the ligaments allow but beyond that the yielding is so small as to be for all practical purposes insignificant, further traction proving ineffective. In other words a pull upon the hand in a case of Colles's fracture is followed by a "give" which is like that obtained in an uninjured limb, a further pull causes simultaneous extension of the opposing groups of muscles, flexors and extensors, which extension throws each group into a state of contraction such as will scarcely yield to any moderate force. The ineffectiveness of simple traction upon the hand in reducing the displacement

in an ordinary Colles's fracture is, I believe, thus accounted for.

When the hand is bent forwards, however, the extensors readily yield and the dorsal ligaments of these two joints are soon put on the stretch and afterwards any pull upon them by further flexion at the wrist is communicated to the turned-back fragment of the radius, to which the posterior ligament is attached, causing it to yield and turn forwards to its proper position, all deformity thereby disappearing. When the hand in this injury is bent forwards the dorsal ligament of the wrist and mid-carpal joint soon become stretched, that is, before the full limit of flexion is attained, and in order to obtain a proper degree of bending the hand must pull the displaced fragments of the radius downwards and forwards full flexion of the wrist joint necessitating complete replacement of the broken articular end of the radius.

To resume the main theme, the difficulty in the treatment of this fracture no doubt chiefly results from inability in effecting reduction which, as has been demonstrated above, can be accomplished with comparative ease by flexing the wrist-joint but not by pulling the hand straight out. Now once the fragments are reduced and the normal position is acquired by flexion of the wrist-joint, recurrence of the displacement can only be prevented by fixing the hand in this new position. For as soon as the hand is again pulled into the straight line with the forearm the fragments become displaced even in spite of moderate or considerable traction upon the hand; and if displacement does not recur immediately it is almost certain to show itself as the swelling subsides to the great disappointment of the surgeon. The hand

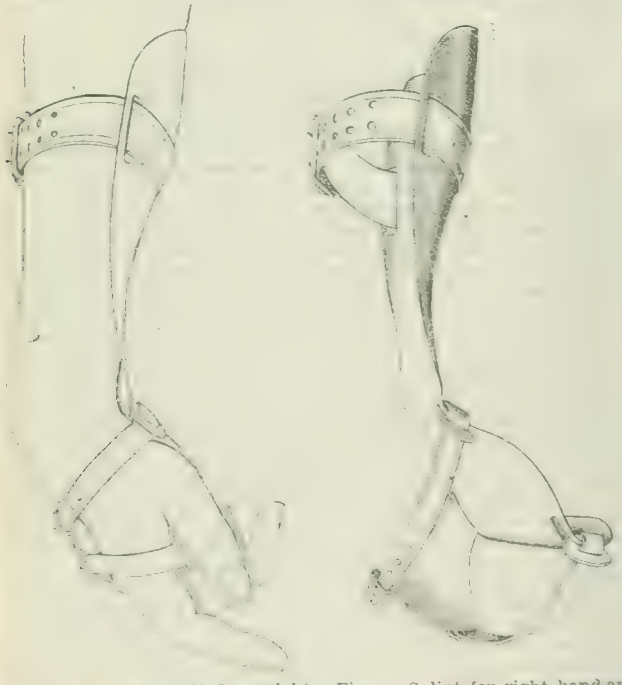


Fig. 8.—Splint as applied on right side.

Fig. 9.—Splint for right hand and forearm.

The splint is prepared by laying on its upper surface a single or double fold of lint cut to shape and stuck to the metal with gum along the middle. When the injured hand is flexed the splint is applied on its under surface where it is secured by the straps. The straps should not be drawn tightly on the first occasion, as swelling is certain to take place in and around the seat of fracture. A sling to support hand and forearm is next adjusted and the limb laid comfortably in it. The splint is made by Mr. Offord, Cambridge, at a cost of 6s. 6d.

can be easily fixed in this flexed position upon an ordinary Carr's splint by placing a large pad in front of the lower end of the shaft of the radius and strapping the forearm and hand to the splint—a dorsal splint being unnecessary. This forms a good makeshift and serves its purpose well. The dorsal splint devised by Dr. Alex. Gordon, of Belfast, serves a similar purpose, that is, it maintains flexion at the wrist and he obtained good results in all the cases thus treated. Modifications of Gordon's splint, to which I need not refer, have since been invented.

The splint which I have designed (Fig. 8) seems, however, better adapted to effect this purpose, and its use is attended with good results. The splint itself is light, comfortable and not expensive. After a few trials it was found that the same splint with the help of a little padding could be made to fit the forearm of almost all adults and consequently the same splint may if necessary be used over and over again—a considerable economy. It may be constructed of copper, brass, aluminium, etc., and it is made in such a way as to fit pretty accurately on the front of the lower part of the forearm and palm of the hand when the wrist is almost fully flexed; a strap across the back of the forearm at a level where the bellies of the muscles thin out secures the upper end and a Y-shaped strap across the metacarpals, one limb going to the outer side of the wrist above and the other below the thumb secures the hand. In copper-nickel it weighs only 6 ounces. The thumb and fingers are thus left free and nothing more is required except a sling of the ordinary kind. When the hand is thus flexed without restraint of any kind it is of interest to note that it is carried slantingly to the ulnar side and the splint was modelled with the hand in this position. Accordingly there is in addition to simple flexion at the wrist a slant given towards the ulnar side. At the end of 14 days and after several inspections and adjustments of the straps if necessary the splint should be taken off and the wrist moved freely in all directions, the lower end of the radius being at the same time gently supported by the hand of the surgeon. This manipulation is usually almost painless. In seven days more the wrist and fingers should be freely moved and at the end of four weeks the splint should be discarded for the sling and the patient allowed free use of the hand, movement being then as a rule quite free. At first extension at the wrist joint is limited but this is apparent not real, and it is, I presume, due to keeping up a flexed position for so long a time.

The results obtained by this method of reduction of the displacement in Colles's fracture and of fixing the broken limb are very satisfactory. For at the end of four weeks—a time when the uniting medium in a cancellous bone has generally undergone consolidation—the movements at the wrist are free in all directions, there is no stiffness and no pain—just what we should expect if the fragments were apposed in a proper position.

Of late years much attention has been paid to massage as a dispeller of stiffness and as a freer of joints after fractures in their neighbourhood. The advantages gained by early massage in fracture of articular extremities of bones are undoubtedly great, but proper setting and the maintenance of complete reduction of the displacement until firm union of the fragments occurs practically does away with the necessity for it. For when broken parts are properly replaced, healing takes place with but little if any deformity, and normal movements can be resumed without pain or discomfort—the two most important factors in controlling the instinctive or involuntary movements of a joint. Do away with these deterring factors and the patient is soon seen to be using and exercising the damaged joint and, almost imperceptibly, a free and full range of movement is quickly re-established. By this, I do not desire to disparage anyone in the use of massage after these and similar injuries, but all I wish to emphasise is, that it is of far greater importance to reduce the displacement and to maintain the reduction and thus to restore the original contour of the articular surfaces than to practise early movement. The stiffness of the joint results from incomplete reduction of the displaced fragments and consequent distortion of the articular surfaces, which throws the carpus backwards, and causes the most serious interference with the joint movements. Replace the fragments, and massage, except of a very trifling kind, is unnecessary. If treatment fails to replace the fragments then massage will prove of great service, and the sooner it is begun the better will be the result in avoiding permanent stiffness of the wrist joint in a Colles's fracture. Before concluding, I desire to express my thanks to Mr. Seaping, house surgeon at Addenbrooke's, for valuable hints and suggestions, and for the care he has taken in the treatment of the cases that came under my care.

# A CASE IN WHICH, AFTER ERASION OF A TUBERCULOUS ELBOW, A THIN GOLD PLATE WAS BURIED IN THE JOINT FOR TWO MONTHS.

By C. B. KEETLEY, F.R.C.S.,
Surgeon to the West London Hospital.

The two photographs which illustrate this paper were taken recently from a young woman of 23, named Clara G., a patient of Dr. Curtis, of Orpington. Four years ago I removed all the cartilage, and most of, if not all, the synovial membrane of the elbow-joint, as well as the head of the radius and much of the olecranon, for tuberculous disease. I was desirous not to shorten the arm by a free excision, because such a shortening is, to my taste, repulsive in appearance, and, to a layman, almost more unpleasant than the result of an amputation, since it is more mysterious. I therefore proceeded, as described in the following report, which is from the notes of Drs. Seccombe and Poynder, house-surgeons:

Clara G., aged 17, was admitted into the West London Hospital, December 29th, 1896. She was tall, thin, and pale, and gave a tuberculous family history. The left elbow had been gradually getting larger, stiffer, and more painful for seven years. The arm had been useless for two months. The elbow was semiflexed and tender, and there was "considerable swelling with a pulpy feel." Movements were restricted.



Fig. 1.—Showing limit of extension. (Case of Clara G.)

*First Operation*, January 1st, 1897.—A longitudinal incision was made over the outer border of the olecranon and down to the bone. A second incision outwards, transversely, from the middle of the first. The olecranon was sawn through and turned up after the joint capsule had been freely divided. The joint was "full of a dryish mass of jelly-like matter, with masses of caseous material." The synovial membrane, and the ends of all three bones were diseased, especially the head and neck of the radius and the interior of the olecranon. The head of the radius was excised, and the joint surfaces of the other bones freely removed with sharp spoons, etc. The olecranon remained as an empty shell. The synovial membrane was cut away with scissors. After careful swabbing with cotton wool soaked in hot lotion (sublimate, 1 in 2000), iodoform crystals were put into the joint, which was also packed with iodoform gauze. The wound was partly closed and the elbow fixed at right angles. The gauze was removed in four days and the progress of the case was uneventful. I obtained some thin, soft, gold plate from Messrs. Wellby, of Garrick Street, Covent Garden, and proceeded to the

*Second Operation*, February 2nd.—The old incisions were reopened. The joint looked healthy, but the shell of the olecranon contained granulations and a little caseous material. These were removed. A finger was now passed into the joint and, with it, the adhesions of the capsule were separated from the front of the humerus. Some sharp edges of bone at the lower part of the humerus were cut off with bone forceps. The joint was well sponged and washed out with warm solution of perchloride (1 in 2000). The gold plate, cut to a shape resembling a short-peaked bicycle saddle, as seen from above, was spread over the end of the humerus, the narrower portion going up in front. The remains of the olecranon were sutured to the ulna with silkworm gut, the wound closed, and the limb fixed in plaster-of-paris, with the elbow nearly at a right angle. Except a rise of temperature on the second day, there was no reaction and the patient was sent home temporarily five days afterwards (February 2nd).

The gold plate was left *in situ*, with the elbow fixed, for exactly eight weeks, when the patient was readmitted.

*Third Operation (removal of the Plate)*:

*Preliminary Note.*—"The elbow is still in plaster-of-paris. The elbow has been perfectly comfortable—in fact, she could hardly say anything was the matter with it." Thus, the gold caused no irritation.

*March* 30th.—The wound was reopened, the gold was found a little crumpled or waved, and gripped between the opposing joint surfaces. It had to be removed in several separate pieces. The wound was reclosed with silkwork gut.

*April* 3rd (fifth day).—The splint was removed and passive and active exercises used.

A week afterwards the patient was discharged with a great deal of smooth and painless mobility in the joint.

Four years afterwards the patient was sent for and examined. She had been all the time at work in a paper factory and using her elbow freely. She often, however, had pain in it, and a sinus was found, not opening into the joint but leading to a fistulous and almost superficial canal which completely perforated the olecranon near its outer border. This was slit up with a chisel and scraped out. It was barely wide enough to permit a probe to pass through it and may have been caused by a piece of silkworm gut which lay near it, more probably it was the remains of the large cavity caused by scraping out the interior of the olecranon.

The movements of the joint are smooth and painless. They are limited only in the direction of extension. (See Fig. 1).



Fig. 2.—Showing limit of flexion. (Case of Clara G.)

Supination and pronation are free. I was led to use the gold by the following observation. I had frequently buried small discs and plates of silver and of aluminium in operating for radical cure of hernia. These caused no irritation. But several which were buried in very thin patients lay inconveniently superficial so that the skin over them was liable to be injured by pressure upon them. I removed some of these superficially-placed discs. Each lay in a little closely fitting bed of connective tissue with a surface as smooth and glistening as that of a mirror. I thought "that is what one would like to see the surface of a joint look like."

I resolved to bury the gold plate only temporarily, because it could not be expected to remain unirritating when once the joint began to work. For a buried foreign body to remain quiescent, it should be left at rest as regards the surface touching it.

On September 15th, 1900 (that is, last year), in the *Centralblatt fur Chirurgie*, p. 921, Chlumsky, assistant to von Mikulicz of Breslau, described some experiments on animals, in which he studied the effects of burying metal in joints. As a result of these he came to the conclusion that the burial should not

be permanent. He tried also magnesium, which is absorbed by the tissues.[1]

I myself should think an objection to the use of any absorbable metal is that it would not be everywhere removed simultaneously. If, therefore, movements were commenced too soon, a part of the magnesium would be still present, and would be a foreign body, possibly worked up into a lumpy one in the joint. If, on the other hand, movements were postponed, adhesions would form in those parts of the joint where the magnesium was first absorbed. Moreover, the precise time *when* absorption of the magnesium would be finished would be uncertain.

The slight crumpling of my gold plate was, of course, due to the cicatricial contraction in the size of the joint cavity during the two months the gold was buried and the elbow fixed in plaster-of-paris. I think one month's fixation would have sufficed.

In order to facilitate the removal of the plate I would recommend the use of a rather thicker sheet. The technical description of that used is "fine gold plate, gauge 0 50." I would recommend the use of gauge 0.75, and that the gold plate used should be carefully weighed before and after removal. I should add that Messrs. Wellby, to whose assistance and courtesy, given to me through Mr. Evans of that firm, I am greatly indebted, take back and allow for all the gold plate not required by the surgeon.

I am convinced that the procedure I here describe is practicable and useful. Unfortunately its value is limited by the fact that, in tuberculosis, which causes so large a proportion of stiff joints, it is often best, for weighty reasons, not even to try to get a movable joint.

REFERENCE.

[1] An admirable abstract of Chlumsky's paper is given in the EPITOME of the BRITISH MEDICAL JOURNAL, January 12th, 1901, par. 24.

## AN OBLIQUE PELVIS ASSOCIATED WITH A CONGENITAL DISLOCATION OF THE HIP-JOINT.

By LLEWELLYN PHILLIPS, M.B., B.C., F.R.C.S.

THE specimen described and figured is of interest, as it shews the changes in the articular surfaces, the result of congenital dislocation of the hip, of a higher grade than are usually encountered, together with concomitant pelvic changes.

It was obtained from the body of a female of very short stature sent for dissection to St. Bartholomew's Hospital.

Her back showed well marked scoliosis and kyphosis. She was an elderly subject, and her hymen was intact.



Fig. 1.

The right hip joint is quite normal. The left acetabulum is flattened (Fig. 1) and can be divided into three parts, a lower, abutting on the obturator foramen and corresponding to the non-articular portion of the normal bone, is rather depressed and extends upwards in a cave-like manner beneath the upper articular portion. Above this first part there is an area which articulated with the remains of the neck of the femur; it is eburnated in part. Below and behind is another area which was in contact with the remains of the small trochanter; it is neither eburnated nor covered with cartilage. These two latter surfaces have been formed by the flattening of the margin of the acetabulum. At the seat of the upper articular surface the bone is thicker than on the other side, but the non-articular is thinner.

The upper extremity of the femur (Fig. 2) has lost all trac



Fig. 2.

of the head, but there is a portion of the neck remaining, which slightly overhangs and is eburnated where it was in contact with the os innominatum. The small trochanter is almost unrecognisable, being flattened and elongated from above down.

The surfaces of the two bones shew that the thigh was flexed, adducted and slightly internally rotated, as well as shortened.

There was a joint capsule, and the lower and anterior acetabular surface was covered by fibrous tissue, but the other two portions were in direct contact with the femur.



Fig. 3.

The pelvis is markedly asymmetrical, the right half being better developed than the left. The asymmetry is especially

noticeable in the ilium, the left being smaller and more vertical than the right. This is well shown in Fig. 3, the asymmetry shown there being real and not due to foreshortening as might be supposed on first sight. The right sacro-iliac articulation is superficially ossified in front. The condition of the left is uncertain, as the bones had been separated during dissection. The brim is markedly oblique, the symphysis lying opposite the right anterior sacral foramina. The curve of the brim is greater on the right side than on the left. The coccyx is ankylosed to the last piece of the sacrum. The sacrum is almost flat.

That this is not an old case of tuberculous disease of the hip, the entire absence of adhesions and ankylosis is evidence, and the normal condition of the bones immediately around. That it is not due to osteo-arthritis, the total absence of osteo-arthritic changes, save in the eburnation of the neck and corresponding surface of the os innominatum, is witness. The remaining joints of the lower extremity were quite normal. It may have been due to traumatic dislocation early in life, but the changes, being those of congenital dislocation in an exaggerated degree, mark the specimen as such.

Hoffa figures several advanced specimens, but none so extreme.

The following are the principal measurements of the pelvis:—

*Brim.*—Conjugate diameter, 4⅕ inches; transverse diameter, 4⅘ inches; left sacro-iliac synchond. to right iliopect. emin., 4¾ inches; right sacro-iliac synchond. to left ilio-pect. emin. 4⅘ inches; outlet, antero-posterior diam. (from lower end of sacrum), 4 inches; transverse (middle of tubera), 3 inches.

*Bisiliac.*—Outside measure, 8¾ inches, inside measure, 8½ inches; ant. sup. spine to symphysis, right side, 4⅜ inches; left side, 4⅖ inches; ant. sup. to a spot opposite middle of sacrum, right side, 5⅗ inches; left side, 4 inches.

*Sacrum.*—4 inches long by 3½ inches broad at its widest part.

In the Museum of St. Bartholomew's Hospital there is a somewhat similar specimen. Such is described as "repair after hip disease," but that is merely conjectural, as there is no history attached to it.

## AN OUTBREAK OF EPIDEMIC CATARRHAL JAUNDICE IN DERBYSHIRE.

By HERBERT PECK, M.D., D.P.H.,

Medical Officer of Health for the Rural District of Chesterfield and the Borough of Chesterfield.

The outbreak began in the hamlets of Speedwell and Poolsbrook, in the parish of Staveley, in the Rural District of Chesterfield, in the first week of August, and has continued to the time of writing. Three of the medical men practising in Staveley then had cases of jaundice, which they regarded at first as being of the simple catarrhal variety, but these gradually increased in number, and they gradually became impressed with the idea that the disease was of an infectious nature.

Speedwell and Poolsbrook are colliery villages belonging to the Staveley Coal and Iron Company. They are well drained, and have roads paved with furnace slag and engine ashes. The conservancy system is in vogue, and the privy ashpits, 35 to 46 feet from the houses, are regularly emptied by the company's servant. Each house has a privy, two or four of which empty into each ashpit. The houses in Speedwell are 175 in number, are built of brick, and are in good repair, but have only one door, though through ventilation is obtainable by the back windows. Poolsbrook is more modern than Speedwell, and contains 213 houses, a church, school, public-house, and several shops. The houses are in excellent order, and have each two doors. The water supply of both is upland surface water from the Crowhole and Ramsley reservoirs but owing to drought the supply has been almost entirely drawn from the latter. The water from Ramsley reservoir has a slightly peaty character and more colour than that from Crowhole. The greatest proportion of Ramsley to Crowhole water during the summer was supplied on and between July 28th and August 1st, when the water had a distinctly yellow colour, which fact gave rise to the popular, but erroneous, opinion that the colouring matter of the water was the cause of the outbreak of jaundice which followed soon after.

Dr. Arthur Court was the first to inform me of the outbreak. This he did on September 29th. This gentleman and Drs. Badcock and Blight most obligingly furnished me with lists of their patients suffering from the malady, but unfortunately these were not complete, owing to the fact that many of the patients suffered so little inconvenience that they attended at the surgeries for treatment, where their names were not recorded. I supplemented these lists by my own inquiries at the houses of patients, who often informed me of cases of which I had not previously heard.

I visited altogether 53 houses where cases had occurred, and found 3 households with 3 patients each, 9 with 2, and 42 with 1 patient each; 50 of the patients were males and 19 females. The youngest patient was a child of 16 months, nursed by a jaundiced mother, and 2 other young patients were respectively aged 2½ and 9 years. The oldest patient was 70 years of age, and 2 others 50 years and a few months. The following are the age-periods of the patients:

| | |
|---|---|
| Between 1 and 5 years... ... ... ... | 8 |
| ,, 5 ,, 10 ,, ... ... ... | 1 |
| ,, 10 ,, 15 ,, ... ... ... | 2 |
| ,, 15 ,, 20 ,, ... ... ... | 8 |
| ,, 20 ,, 25 ,, ... ... ... | 16 |
| ,, 25 ,, 30 ,, ... ... ... | 17 |
| ,, 30 ,, 35 ,, ... ... ... | 6 |
| ,, 35 ,, 40 ,, ... ... ... | 8 |
| ,, 40 ,, 45 ,, ... ... ... | 2 |
| ,, 45 ,, 50 ,, ... ... ... | 1 |
| Upwards of 50 years ,, ... ... ... | 5 |
| Total ... ... ... ... | 69 |

I think this number represents quite half the cases which have occurred up to the present.

### Symptoms.

The onset of the disease was usually gradual, with *malaise*, want of appetite, and in many cases headache. Drowsiness was a frequent symptom. There was almost always abdominal pain, sometimes very severe; and cramps in the calves of the legs occurred in many cases. After a variable period, usually two or three days, but sometimes longer, the patient vomited, but there were several exceptions to this. Diarrhœa was only occasionally present. When the temperature was taken at this stage, it was found to be elevated, being usually between 100° and 101.5° F, but a temperature of 104° was observed in at least one case. A distinct rigor occurred in several cases, and there was a history of chilliness and shivering in all.

Jaundice usually came on a day or two after the vomiting, but was delayed for a week in several cases, though, on the other hand, slight jaundice and yellowness of the conjunctivæ was sometimes observed before the vomiting, but became more marked after it. When the temperature was taken at this stage (jaundice), which was the one at which the greater part of the patients were first seen by a doctor, it was found to be normal. No elevation was observed after this in uncomplicated cases. Pruritus was a frequent symptom. Tenderness of the liver was present in most cases, but enlargement less frequently.

The spleen was frequently found enlarged. Nephritis was found in only one case. The only complications observed beyond the case of nephritis were two cases of acute croupous pneumonia, two of urticaria, and one of acute yellow atrophy. A *post-mortem* examination of the patients who died from the last named disease was made by Dr. Court, and a microscopical examination of her liver, spleen, and kidneys, by Professor Arthur Hall, of University College, Sheffield. The conditions found pointed to the death being due to acute yellow atrophy, this was probably accelerated by epidemic catarrhal jaundice.

### Illustrative Cases.

The following cases will illustrate the usual history:

Case I.—J. M., aged 34. "I had a cold and thought I had influenza, for I ached all over—every bone in my body. This was on Wednesday, and I got worse next day and was jaundiced on Friday."

Case II.—G. S., aged 27. "I had a cold and ached all over. Then I vomited and was jaundiced afterwards—two or three days afterwards."

Cases III and IV.—E. R., aged 33, was ill and then jaundiced. He vomited on Saturday and was jaundiced on Monday. W. S., aged 30, living in the same house as the last, began to vomit on the following Sunday and was jaundiced on the Tuesday.

Case V.—J. J., aged 30. "I started with influenza on September 20th and vomited; jaundice came on gradually a week after."

Cases VI and VII.—S. S., aged 24.—"I had a chill and perspiration in the pit on September 20th and was jaundiced the same day. I did not vomit." S. A. P., aged 13, living in the same house as the last, took ill

later and vomited on September 29th, when she was observed to be jaundiced.

CASES VIII AND IX.—G. N., aged 50. "I felt poorly and uncertain on my feet. I had no vomiting or diarrhœa. I felt just like when I had ague when I lived in the fen country. Jaundice came on gradually. I have been a total abstainer for twenty-seven years." W. N., aged 16, son of the last, was taken ill a fortnight later. "I had headache and pain in my stomach. I vomited, but jaundice was on me at the time."

CASES X, XI, AND XII.—A. L., aged 24. "I began with a cold: I felt starved and cold. I felt sick and vomited, and had jaundice three days afterwards." E. L., aged 38, wife of the last, was jaundiced a fortnight after him. E. L., aged 15 months, daughter of the couple, was on the breast, and had diarrhœa, vomiting, and jaundice at the same time as her mother.

CASES XIII, XIV, AND XV.—J. F. D., aged 23. "I was sick and had pains and ached all over. I had a shivering fit at the beginning and vomited. Jaundice came on three or four days after vomiting." J. W. D., aged 31, began to be ill a week after the last patient—his brother—and had the same symptoms. "There was no difference." F. N., aged 16, living in the same house as the last two, "felt poorly and was sick. I felt tired and worried. I was jaundiced after a week."

I could adduce a large number of cases, the symptoms of which agreed in the main with those given above, but the latter appear to me sufficient to show the usual course followed by the disease.

### CONCLUSIONS AND REMARKS.

1. I believe the disease to be icterus gravis or epidemic jaundice, sometimes called Weil's disease. It differs from the accounts given of previous outbreaks in its onset being sometimes gradual, and in the comparatively low temperatures recorded.

2. The incubation period is perhaps six or seven days.

3. The period of duration of the disease from exposure to infection to commencing recovery is ten or twelve days, but the jaundice may persist after complete recovery in other respects.

4. The mode of infection cannot be deduced by consideration of the cases recorded in this outbreak, but bacteriological examination might elucidate it

5. The disease is not due to the ingestion of food or drink. The popular impression that the outbreak was caused by the drinking of water from the Ramsley reservoir is incorrect, for none but isolated cases occurred outside Speedwell and Poolsbrook, which villages contain only about 2,000 of the 23,000 persons thus supplied.

6. The disease is probably conveyed by individuals. Being informed that a Speedwell collier had carried the disease to Buckley, Flintshire, I wrote to the Medical Officer of Health, Dr. Fraser, making inquiries, and was informed that he had had 3 cases. Dr. Kershaw, of Farnsworth, near Bolton, wrote under date of October 11th, to say that an outbreak of jaundice, presumably infectious, was progressing in that district.

### PATHOLOGICAL REPORT ON SPECIMENS FROM FATAL CASE OF JAUNDICE.

We are indebted to Professor Arthur Hall, University College, Sheffield, for the following:

Portions of liver, spleen, and kidney were sent to my laboratory for examination by Dr. Arthur Court, of Staveley, from a woman who had died with jaundice during the epidemic. Of these the spleen was so fragile that it was impossible to make sections in gum, and I have not as yet had time to examine sections in paraffin.

*Liver.*—The lobular arrangement of the liver is almost entirely lost, and, except for the presence of the interlobular vessels and ducts at intervals, it would hardly be possible to recognise the organ. It consists of a mass of loose, shaggy, irregular connective tissue, a large number of fat cells of various sizes, liver cells in all stages of fatty degeneration, some retaining their size and form but full of minute fat globules, others granular and shrunken, and the rest of the tissue a more or less amorphous *débris*. Here and there are a few hepatic cells retaining something of their normal arrangement, but even these show fatty changes. There appears to be some slight increase in the intralobular connective tissue, but possibly this is more apparent than real. The smaller interlobular bile ducts show distinct evidences of catarrh, the lining epithelium being overgrown, and the lumina, in places, completely obstructed thereby.

*Kidney.*—There is a certain amount of increase of the interstitial tissue, but the most striking feature is the marked fatty degeneration of the tubular epithelium of the cortex. Some of these cells show cloudy swelling, but the greater number are distended with small closely-packed fat globules. The nuclei stain fairly, but the lumina are narrowed or completely obstructed.

Sections stained with Sudan III show that the fatty changes well. The microscopical appearances resemble very closely those seen in the liver and kidney in acute yellow atrophy, and correspond with those which I described fully in the *Quarterly Medical Journal*, vol. ix, p. 140, February, 1901.

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We are indebted to Dr. Alfred Kershaw, Farnworth, near Bolton, for the information that towards the end of August, and early in September, a number of cases of jaundice which occurred in his practice led to the belief that the disorder was not the ordinary type of catarrhal jaundice, and at about the same time Dr. Kershaw learned from a medical friend that he also had met with many cases. From inquiries made recently, Dr. Kershaw believes that, speaking roughly, there have been about 150 cases under treatment in the district, which has a population of 26,000 people. It is a manufacturing and mining district, stands high, has a good water supply, and is well drained. The persons affected were chiefly of the working class, well fed, and well housed. A few cases were of the well-to-do class. The ages were from 3 years to 60, the majority being from 17 to 25. In a few cases the disease attacked a second person in the same house. Certain neighbourhoods suffered more than others, and usually a new case occurred in a street where others who had suffered resided. Some parts of the district were quite exempt. The attack usually began by vomiting, often very severe, gastric pain (sometimes quite absent), pains in the limbs, and languor. The temperature was usually normal, but in a few cases slightly raised: there was little or no itching; after a few days the skin and conjunctivæ were observed to be bright yellow. The urine was yellowish brown, or of the colour of porter. The fæces were clay-coloured, and there was constipation. Some of the sufferers had to keep to bed, most of them could get about. The duration was from two to three weeks. All made good recoveries. In one case the illness preceding the characteristic jaundice was so acute that it was notified as typhoid fever, but after the jaundice appeared the case ran the usual course, and did well. There is no reason to think that the habits of the affected people had any share in the causation: on the contrary, the ages of many would preclude this, and, indeed, most of the sufferers were temperate people. So far as had been ascertained, none of the patients have been in any way associated with Derbyshire. Many workmen from various parts of the country have been engaged upon an electric tram scheme, but no case is known to have occurred amongst them. New cases are now less frequent, though within the last few days two or three have come under observation.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

### RECTAL SERUMTHERAPY.

A FEW months ago I was hastily summoned one Saturday to meet Dr. Wallis near Tunbridge Wells, regarding a gentleman, aged 58, who had been under my care before he removed from the neighbourhood. He had for many years been the subject of considerable permanent glycosuria, which I regarded as gouty, inasmuch as he was addicted to the pleasures of the table, had lost no flesh, and maintained fairly good health. However, as indicating the suspicion with which his glycosuric condition was regarded, I may mention that various insurance offices quite recently had declined to insure his life save with such heavy increase of premium as practically to make his life uninsurable.

I found him suffering from erysipelas of the face spreading towards the neck and head from a pimple at the end of his nose, which gave me the impression of having been produced by gnat bite. He had been very sick and drowsy all day. I arranged to see him again with Dr. Wallis on the following day. It struck me that under the circumstances, if there was

no improvement by the morrow, serumtherapy ought to be tried. With that object I procured three vials, each containing 10 c.cm. (about 3 fluid drachms) of antistreptococcus serum, prepared by the Jenner Institute of Preventive Medicine, from Messrs. Allen and Hanburys, and went down in the afternoon ready to inject the serum, if so decided, either subcutaneously or by the rectum.

Finding the patient no better but rather worse with the erysipelas continuing to spread, with Dr. Wallis's approval I obtained the consent of the family—as it was not considered advisable to mention the matter to the patient—to try serumtherapy, on my assurance that the serum could do no harm, and could be given by the bowel, for they objected to its being given by the skin. After a lavement of hot water in order to wash out the bowel, I injected from an ordinary glass syringe through a Jaques catheter, high up into the rectum, the contents of one of the vials of serum at 5 P.M. When examined four hours later the patient already felt and looked better. Next morning, at 7 A.M., the nurse said he had passed an excellent night, and his temperature had become normal. The erysipelas had ceased to spread, and was declining. The rectum having been washed out as before, I then gave him by the bowel the contents of the second vial of serum. Two hours later, after a breakfast which he had enjoyed, at our final consultation we found him so much improved that he was walking about the room dictating business telegrams. His further progress was entirely satisfactory.

I was much impressed by the rapidity and efficacy of serumtherapy in this instance no less than by the simplicity of its administration. Early in 1896 M. Chantemesse recounted his experience in favour of rectal serumtherapy in 20 cases, laying stress upon the fact that in all of them the fluid was absorbed easily and quickly, without subsequent unpleasant or untoward effects, such as pyrexia, joint pains, or skin eruptions; noting also that the same effect was produced by the same dose of serum administered either subcutaneously or by the rectum. My own experience so far accords absolutely with that of M. Chantemesse in cases of diphtheria as well as of erysipelas in which I have resorted to this method. I am fully satisfied of the advantage of administering serum by the bowel owing to its efficacy, rapid action, absence of unpleasant sequelæ, and simplicity of employment; and it appears to me that this safe and easy method of serumtherapy has not received the attention it deserves.

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Surgeon, Children's Infirmary, Sydenham.

## CASE OF ECTOPIC GESTATION: RUPTURE INTO THE GENERAL PERITONEAL CAVITY: OPERATION: RECOVERY.

I was called to see Mrs. D., aged 31, at 5.30 A.M. on April 19th, who had been taken suddenly ill. The patient, on my arrival, complained of excruciating pain in the lower part of the abdomen; she was extremely collapsed, deadly pale, with a pulse small and frequent, and the body bathed in a cold perspiration; in short, she had all the symptoms of an intense internal hæmorrhage.

On examination there was found extreme tenderness over the lower part of the abdomen, chiefly on the right side, the slightest pressure causing the patient to call out. The breathing was purely thoracic. *Per vaginam* a little fulness could be made out in Douglas's pouch and on the right side of the uterus.

*History.*—The patient for the previous six weeks had suffered from irregular hæmorrhagic discharges, and sometimes solid material was passed. This discharge was accompanied by a great deal of pain of a neuralgic character. Previous to the appearance of the symptoms the patient had not menstruated for six weeks, that is, she had missed one period. From the above symptoms and history I diagnosed ectopic gestation at three months, with rupture into the general peritoneal cavity. After consultation with Dr. Fell, who confirmed the diagnosis, I decided to operate as soon as possible.

*Operation.*—At 7.50 A.M. with the assistance of Dr. Fell, ether being given by Dr. Maclean, I opened the abdomen in the middle line between the umbilicus and the pubes, the incision being three inches long. On reaching the peritoneum that membrane bulged into the wound, and on cutting through it a large quantity of fluid blood and clots escaped. I easily reached the tube, brought it out through the wound and transfixed it with an aneurysm needle armed with stout silk. The needle was withdrawn and the loop of silk cut so as to leave two ligatures which were firmly tied round the two halves of the pedicle. One ligature was cut short while the other was thrown round the whole pedicle and tied again, and the pedicle allowed to drop into the abdominal cavity. All clots were now removed and Douglas's pouch was well washed with boracic lotion and sponged. The abdominal wound was stitched in the usual way. Everything went on well until the twenty-first day when I was again sent for; there was now great abdominal distension, vomiting, constipation, great pain and a temperature of 102° F. *Per vaginam* there was felt bulging of the posterior vaginal wall, the cervix being pushed upwards and forwards. I made certain there was an abscess in the pelvis and decided to open it *per vaginam*. On examination *per rectum*, however, the abscess was found to be pointing there, and slight pressure by the finger was sufficient to open it, when a large quantity of pus escaped. The patient afterwards made an uninterrupted recovery. The operation was performed in a small private house, where strict antiseptic principles could not be carried out. The patient was so bloodless that not a single drop of blood escaped while cutting through the abdominal wall, and the fact of the patient recovering although so heavily handicapped makes me desirous of reporting the case.

D. Lloyd Clay, M.R.C.S.Eng., L.R.C.P.Lond.
Wellington, New Zealand.

## PAROXYSMAL DYSPNŒA IN ANEURYSM OF THE ARCH OF THE AORTA.

I am able to answer in part the question of Dr. Seymour Taylor as to whether relief would not accrue from the induction of anæsthesia in cases of orthopnœa arising in aneurysm of the arch of the aorta. I have administered chloroform to a patient after tracheotomy under these conditions, with immediate cessation of the dyspnœa. The answer to the further question whether chloroform anæsthesia alone, without tracheotomy, would suffice, must perhaps depend on the state of the patient. It seems clear that if the administration of an anæsthetic did not immediately abolish the laryngeal spasm, laryngotomy would have to be at once performed, and artificial respiration (? with the administration of an anæsthetic) resorted to.

The following are brief notes of the case I refer to: R. J., aged 34, ex-soldier, suffered from cough with expectoration for six weeks after "congestion of the lungs." He had rhonchus over the front and back of the chest; no physical signs of aneurysm or mediastinal tumour, except "tracheal tugging," were observed, though he was carefully examined. There was no laryngeal growth. The expectoration resembled prune juice. One morning he became acutely orthopnœic, cyanosed, and rapidly unconscious. Tracheotomy was immediately performed, without an anæsthetic, to save life, though the cause of the dyspnœa was uncertain. The relief afforded was slight, though a rubber drainage tube the size of the ring finger was inserted into the trachea; the spasms of the ordinary and extraordinary muscles of respiration continued. The amount of spasm suggested a reflex irritation of a laryngeal nerve; chloroform and amyl nitrite in capsules were therefore administered, and caused immediate cessation of symptoms, air entering at once freely into the lungs with easy respiration. Inhalations of oxygen and hypodermic injections of strychnine and ether were also given. The patient lived two days.

At the necropsy on February 1st, 1901, I dissected out the vagi, and found the left with its recurrent branch lost in a matted inflammatory tissue, which was continuous with a sacculated aneurysm, the size of a tangerine orange, projecting from the lower and posterior part of the arch of the aorta immediately beneath the origin of the left subclavian and common carotid arteries. It had ulcerated into the trachea without pressing upon it sufficiently to cause much obstruction, the cartilaginous rings being intact. The aorta had lost its resiliency. The aneurysm contained firm, pale, and red fibrinous clot. The lungs were grey and solid, and sank in water, but contained no blood; the tracheotomy wound was

septic; the larynx was apparently normal. Scarring on the shins and thighs were the only possible signs of syphilis. The abdominal cavity contained an excess of clear yellow fluid. The wall of the left ventricle of the heart was slightly hypertrophied but there was no valvular lesion.

The specimen was shown at a meeting of the Plymouth Medical Society.

F. Bushnell, M.D.
Clinical Laboratory, South Devon and East Cornwall Hospital. Plymouth.

# REPORTS
ON
## MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

### BRADFORD ROYAL INFIRMARY.

DOUBLE INGUINAL HERNIA WITH UNUSUAL SAC CONTENTS.

By William H. Horrocks, F.R.C.S., Honorary Surgeon to the Infirmary.)

P. F., a delicate male child, aged 9½ months, was admitted on April 18th, 1901, with a painful swelling in the left inguinal region.

The patient was ill-nourished, and had a spina bifida in the lumbar region and an inguinal hernia on each side. On the right side the hernia could be partly reduced, the skin over the left inguinal hernia was red and œdematous, and the scrotum and inguinal canal filled with a tense tumour, over which no impulse could be felt when the child cried. There was no vomiting, and the bowels were moved after admission.

On April 23rd an incision was made over the left inguinal swelling and the hernial sac opened. It was found to contain pus, and along the back part of the sac a thin band about ⅜-inch in diameter and 2½ inches long extended to the bottom of the sac, where it was adherent. This was easily separated from the sac wall, and found to be continuous above with the small intestine, of which it was a diverticulum. The tissues were so infiltrated that it was considered desirable to remove the testicle and sac. The diverticulum was cut off near its origin from the intestine, and its stump inverted and buried by two rows of catgut sutures. The pillars of the inguinal canal were brought together with catgut, and the skin with silkworm-gut; collodion dressing was applied. The part removed from the sac was found to be a thin, hollow band, which had perforated and become attached at its distal extremity. The fluid contained in the sac was a glutinous pus, which had not found its way along the patent inguinal canal, owing to the narrow nature of that connection. The wound healed without trouble.

On May 7th an incision was made over the right scrotal hernia; the sac was opened and found to contain the lower part of the cæcum, which had a mesentery of sufficient length to allow its return to the abdomen without disturbing its vascular connection to any extent. A pad was formed of the sac, and the pillars of the ring brought together.

Remarks.—Perforation of Meckel's diverticulum in a hernial sac is a rare occurrence. Dr. Stretch Dowse in the *Transactions* of the Pathological Society describes a case in which a fæcal fistula had formed from ulceration of the diverticulum. Dr. Keeling in the British Medical Journal, December 21st, 1899, records a case of gangrene of the diverticulum with extravasation of its contents (crab shell) into a hernial sac. In the present case the long narrow band stretching down the back of the sac had little resemblance to the ordinary finger-like process of a Meckel's diverticulum. It was only after tracing it upwards to its origin and drawing down the small intestine from which it came that its nature was discovered. The cæcal hernia on the right side had a long mesenteric attachment, so that it was reduced without difficulty, care being taken to avoid injury to the vessels going to the right testicle as the left had been previously removed. The wall of the spina bifida was thick and the skin sound, and it was not interfered with on the present occasion.

# REPORTS OF SOCIETIES.

## PATHOLOGICAL SOCIETY OF LONDON.

W. Watson Cheyne, F.R.S., President, in the Chair.

*Tuesday, December 3rd, 1901.*

Lymphadenoma and its Relation to Tuberculosis.

A discussion upon the above subject was opened by Mr. H. T. Butlin, who commenced by stating that the term lymphadenoma must be limited to a particular set of cases of glandular enlargement. In one form the glands were soft to the feel; they might in time become adherent; other groups than those originally affected might enlarge, together with the spleen and liver. In a second form the glands were firm. In his opinion the disease was not a true hypertrophy, it was not tuberculous, and not inflammatory; it was a disease *sui generis*. It had not as yet been proved to be infective, though that was, of course, a possibility. The disease could at present only be classified by its morbid anatomy; and the author went so far as to believe that the diseased glands presented a characteristic or pathognomonic structure. The structure had been figured by Dr. Greenfield in the Society's *Transactions*. Insuperable difficulties at times presented themselves in the diagnosis between tuberculosis and lymphadenoma. What was more, the two diseases might coexist; and he thought that glands affected with lymphadenoma were slightly more liable to tuberculosis than normal ones.

The President having adverted to the difficulty of differential diagnosis,

Dr. F. W. Andrewes remarked that he had examined 23 cases chiefly supplied by Mr. Butlin's practice. The disease was that known as Hodgkin's, or by Virchow as lymphosarcoma—a progressive enlargement of lymphatic glands and lymphatic tissues, without metastasis in the usual sense, and without distinctive changes in the blood. Histologically, the general plan of the gland was abolished; the number of lymphocytes was diminished; the stoma underwent hyperplasia, the endothelial cells proliferating; the eosinophile cells, of which normally only a few are present, were increased. The whole gland was affected. In the soft form endothelial hyperplasia was chiefly present; but between the soft and the hard there were intermediate stages. Caseous foci might be encountered, and these sometimes, at least, were probably indicative of an added tuberculous infection. In tuberculosis a gland might exhibit miliary tubercles, or caseous foci, or endothelial proliferation; the disease was not generalised through the gland, and here the number of eosinophile cells tended to diminish. In undoubted examples of lymphadenoma, the speaker had not been able to discover tubercle bacilli. He considered a mixed infection as at times occurring, and in such cases experimental inoculation in the guinea-pig led to tuberculosis; in unmixed lymphadenoma such inoculations with the diseased glands gave negative results. Nevertheless, some cases offered extreme difficulties in diagnosis, not only clinically, but after death, the lesions in the organs being of both kinds; in such cases the tuberculosis was the secondary affection.

Dr. Lee Dickinson recounted at length a case in which tuberculosis supervened upon lymphadenoma.

Professor J. MacFadyean had not had an opportunity of examining lymphadenoma in animals, though the disease was alleged to occur. Doubtless some such cases were tuberculous, as for instance those where nodules occurred in the spleen; tubercle bacilli could be demonstrated in such, as well as the histological signs of tuberculosis. He had a suspicion that in lymphadenoma the glands first enlarged did not, in many cases, correspond with those first diseased in tuberculosis.

Dr. N. Pitt adverted, like other speakers, to the great clinical difficulty of the diagnosis as between lymphadenoma and tuberculous disease. In three cases, regarded during life as typically lymphadenoma, the necropsy revealed tuberculosis as a complication. Possibly the tuberculin test might be applied. As to whether caseation occurred in uncomplicated lymphadenoma he was doubtful. In the visceral lesions of lymphadenoma he pointed out that fibrosis was uncommon; and he did not think lymphadenoma related to tuberculosis—it was not a para-tuberculous affection.

## SOUTH-WEST LONDON MEDICAL SOCIETY.

John Gay, L.R.C.P., M.R.C.S., President, in the Chair.

*Wednesday, November 13th, 1901.*

### The X Rays in Cancer.

Mr. Cecil R. C. Lyster, Medical Superintendent of Bolingbroke Hospital, Wandsworth Common, brought before the Society two cases of local cancerous disease treated by the *x* rays at the Bolingbroke Hospital. His experience of *x*-ray work dated from June, 1900, when, by the kindness of one of the Board, Mr. Mackrell, he was enabled to purchase a Wimshurst induction machine and vacuum tube apparatus, very largely for the purpose of treating a case of lupus in which they were interested. Success resulted, and other successes followed. He next treated a rodent ulcer of the outer canthus of the right eye, and was as fortunate as hitherto. Studying with some care the pathological effect of this new-found remedy, he eventually formed the opinion that the diseased tissues were gradually thrown off in the form of crusts and scabs, or absorbed. This belief induced him to apply the Roentgen rays on the first of the two patients whom he showed. J. L., aged 65, a knife-grinder and tinker by trade, came to Mr Lyster on March 1st, 1901, complaining of a sore on the lower lip. On examination, he found the lower lip everted, there was a hard growth, an inch by three-quarters of an inch, slightly to the left side of the middle line, and a foul ulcer, the size of a sixpence, at the junction of the skin with the mucous membrane, extending from the middle line towards the left. The edges were indurated, irregular, and markedly everted. It was, in short, a typical epithelioma. For the reason stated above, Mr. Lyster treated this in the same way as his lupus cases had hitherto been treated, and with the usual 10-inch tube. The rays were applied on March 5th, 6th, 7th, 8th, 9th, and 11th, giving sittings of ten minutes, with resulting congestion. The ulcer was now discharging a thin, serous fluid, and a healthy granulating surface was beginning to make an appearance. Treatment was discontinued until March 19th, by which time the congestion was disappearing, the ulcer being smaller, cleaner, and definitely not so hard as before. He again applied the *x* rays on March 19th, 20th, 21st and 22nd. Less congestion resulted, and the ulcer daily grew smaller and healthier. Treatment as hitherto was continued on March 25th and 26th and on the first three days of April; marked diminution in the size of the ulcer and growth being manifest. The rays were applied for the last time on April 10th, 1901, by which time the ulcer had practically healed, and except for a slight scar the lip looked normal, although some slight thickening towards the middle line was still apparent. He told the patient to come again as usual, but considering the cure to be complete, the order was not obeyed, and they had not seen him until this evening, having been at some pains to discover his whereabouts to bring him before the Society. Mr. Lyster added that the patient was somewhat addicted to $C_2H_6O$, and was for various other reasons—obvious to all bystanders—not the person one would have chosen in order to demonstrate rapid healing under a new treatment. The treatment of all their *x*-ray cases had been carried out by Mr. Lyster and by his assistant, Mr. Eric M. Perkins, and it was intimated that they would be glad to demonstrate their methods and appliances to any member of the Society.

Mr. Lyster then read a communication to the Society from Mr. Thomas Bryant, F.R.C.S., to the following effect:—As I well know how interested every member of your Society is in the work carried on at the Bolingbroke Hospital, I wish to report the result of our experience in the treatment of cutaneous and subcutaneous cancer by the *x* rays. You probably are all aware of the striking beneficial influence of these rays in the treatment of lupus, for the examples of its successful application have been numerous and must be known to all of you. But you may not be acquainted with the fact that we have had at Bolingbroke good success in the treatment of rodent and epithelial skin ulcers, and in one typical example of epithelial tumour of the lower lip of an old man, which did not seem suitable for a surgical operation which Mr. Lyster treated and will show to-night. Indeed it has been from these successes that Mr. Lyster and myself have been induced to try the treatment upon a case of recurrent cancer of the breast which came under my care in private work, and its influence has been so remarkably beneficial, and the lady patient is quite ready to submit herself to your inspection, I have taken the occasion of this meeting of your Society to send you this report of our doings. The patient you will see is about forty-three years of age, and came into my hands in August, 1901, for a recurrent cancerous disease involving the seat of an operation which I had performed in December, 1900, and which had manifested itself about one month before I saw her, and seven months after the original operation. The clavicular flap was the seat of tubercles of a florid red colour, and the lower flap near the original scar was dotted with like tubercles. The upper flap near its axillary end was also the seat of a raised tumour, the size of a crown, the surface of which was breaking down. In front of this tumour was a second, situated beneath the skin, with a convex surface, and apparently infiltrating its deeper layers, as the skin over it was fixed. There was likewise a tubercle in the scar at its extreme axillary end. A rough diagrammatic drawing of the case, as it appeared when the treatment was first commenced, will be laid before you. I may add that the patient complained of much pain at the seat of disease. At the present time—three months after continuous treatment—it has to be reported that in this case all pain has ceased, and that this result was secured about two weeks after the treatment was commenced; that many of the active tubercles have entirely disappeared, and that all are disappearing. That the ulcerating nodule, the size of a crown, upon which a scab existed when the treatment was started, has now healed under the scab and flattened out; that the nodule next to it has likewise assumed a like shape, and is far less prominent; that the skin in which the disease had returned is now movable, whereas, before the treatment, it was quite fixed; and, lastly, that the tubercle, which was situated at the end of the scar in the axilla appears to be undergoing a withering process. Indeed, from these facts no other conclusions can be drawn than that, as a result of the treatment, the disease has been scotched, if not killed; that the acute form of the disease which existed on its recurrence has been entirely checked and exchanged for an atrophying condition, which it seems reasonable to believe may pass on, by the continuation of the treatment, to the removal of the local manifestation of disease. It is likewise to be emphasised that the treatment itself is absolutely painless, and that it relieves pain if present after the application of the rays for a few days. In a second case of recurrent cancer, now in the hospital, similar changes are also to be observed to those just recorded. With such facts before us, as have thus been briefly described, it seems reasonable to suggest that the treatment of local cutaneous forms of cancer, by the means we are now considering, is most hopeful, and that such treatment should be applied in all cases when the disease is not otherwise suitable for the operative treatment. That in all recurrent cases of carcinoma, as illustrated by the example you have just seen, the treatment should certainly be employed. What it may do in cases of sarcoma has yet to be tested; for my own part, I should anticipate good success, for there seems to be but little doubt that the *x* rays have a destructive influence upon cell life, the extent of which has yet to be worked out, but which is full of promise. Let me, however, again repeat that we must not yet talk of cancer cures, although we seem to be quite justified in saying that these *x* rays will kill pain and retard growth. How much more they may do has still to be worked out; but what we have done at our local hospital, in which all of you take so much interest, has been so hopeful, that I have thought it only right to present to you these brief notes; and I do so with the hope that you may help us in our work, and in so doing help those who fall into your hands for treatment.

The President and several members of the Society took part in the discussion which followed.

### Paper.

Mr. Yearsley read a paper entitled The Diagnosis and Treatment of Pain in the Ear.

### The Clinical Society: A Correction.

Mr. Cuthbert S. Wallace (Upper Wimpole Street) writes: In the discussion at the Clinical Society on intracranial section of the fifth nerve you report me as saying that the "temporal route" had fallen into disrepute in America. As a matter of fact, I quoted an American author as saying that the partial excision of the Gasserian ganglion had fallen into disuse,

# REVIEWS.

## TEXTBOOKS OF MEDICINE.

Whether or not the *Encyclopædia Medica*[1] will really be completed in twelve volumes, the editor, it is to be presumed, is well past half way in the course of the publication of this colossal work. The articles in the eighth volume are of good average excellence. Of articles in series, six are on operations, one being on amputations and the other five all, curiously enough, on obstetric operations. No fewer than ten are on the examination and diseases of the nose, and are likely to be useful to the general practitioner. A group of articles, comprising one on mental deficiency by Dr. George Shuttleworth, one on education of mind by Dr. Fletcher Beach, and one by Mrs. Garrett Anderson on neurasthenia —which, although making no pretensions to refinements of pathology or diagnosis, is full of practical suggestiveness— are all worthy of special attention. Among other single articles deserving particular notice may be mentioned that by Mr. Christopher Martin on disorders of menstruation, one by Dr. Edwin Bramwell on myæsthenia gravis—a clear exposition of an unfamiliar subject—that on nephritis by Dr. Nestor Tirard, one on morphinomania by Dr. H. C. Drury, and one on micro-organisms by Dr. G. H. F. Nuttall. On the other hand, several of the articles on important subjects, besides being meagre, are only indifferently good, and these seem to be in greater proportion than in previous volumes.

The final volume of the *Twentieth Century Practice of Medicine*[2] is largely taken up with the consideration of the subjects of tuberculosis and yellow fever, and fully maintains the high standard of previous volumes. Nearly 400 pages are devoted to tuberculosis. Dr. A. J. Lartigan, of New York, discusses the bacteriology, pathology, and etiology of the disease. Due attention is given to the variations in form of the tubercle bacillus, which is described as ordinarily a "strict parasite." Dr. Henry W. Berg, also of New York, writes the section on symptomatology. This portion of the book does not strike us as quite so satisfactory as much of the rest. We seem to require some subdivisions before it is possible to discuss symptomatology satisfactorily. For instance, we read: "But an observation of large numbers of patients will show that fever is not present in every case of pulmonary tuberculosis, even when large cavities have been formed; that the extent and duration of the fever are not always a measure of the gravity of the disease ....." We seem here to have active and quiescent cases considered side by side. So also with regard to physical signs, which are spoken of as though they by themselves indicated something more than the mere physical condition of the parts examined. "So manifold, therefore, are the variations, that it is never advisable to depend upon the results of percussion alone for an absolute diagnosis" is undoubtedly true, but it suggests that there may be some other physical sign which may by itself be relied upon for this purpose. Diagnosis, prognosis, prophylaxis, and treatment are discussed by Dr. S. A. Knopf with the clearness and knowledge of his subject which we are led to expect from this author's previous writings. The whole article is completed by some thirty pages devoted to tuberculosis of the skin by Dr. John T. Bowen, of Boston. The section on yellow fever contains a careful consideration of the etiology of the disease, and a well-illustrated chapter on quarantine. The general index occupies some 300 pages.

[1] *Encyclopædia Medica.* Under the general editorship of Chalmers Watson, M.D., M.R.C.P.E. Vol. viii: Menstruation to Orbit. Edinburgh: William Green and Sons. 1901. (Roy. 8vo, pp. 574. 25s.)

[2] *Twentieth Century Practice of Medicine.* Edited by T. L. Stedman, M.D. Vol. xx. Tuberculosis, Yellow Fever, General Index. London: Sampson Low, Marston, and Co. 1900. (Roy. 8vo, pp. 914. 25s.)

A new out-patient department of the Bolingbroke Hospital will be opened by Mr. Thomas Bryant on December 11th at 3 P.M.

Presentation.—Dr. Stenson Hooker, on the occasion of his leaving Hastings for London, has been presented by his friends and patients with a silver tea and coffee service and cake basket, together with an oak tea-tray bearing a suitable inscription.

# GENERAL COUNCIL

OF

## MEDICAL EDUCATION AND REGISTRATION.

*WINTER SESSION, 1901.*

## NOTES.

Sir William Turner's term of office as representative of the University of Edinburgh expires this month. He had been re-elected for a further period, but nevertheless considered it advisable to resign the office of President of the Council, which he has held for the last three and a-half years. It was, however, understood that he was willing to accept re-election, and the Council before adjourning re-elected him unanimously.

The matter of most immediate practical interest considered by the Council during the present session has been in our estimation the hearing of a charge against the medical officer of a Medical Aid Company. We have commented on this case elsewhere, and publish below a full report of the hearing which threw much light, and it may be said much-needed light, on the inner workings and methods of business practised by those who have the control of Medical Aid Companies

The recalcitrancy of the Royal Colleges of Physicians and Surgeons in England led to more than one animated debate, and finally the whole subject of the powers of the Council with regard to courses and conditions of study and the recognition of institutions in which the required courses may be taken were referred to a Special Committee, which is to report to a special meeting of the whole Council in February next. The members nominated to this Committee were:—*For England:* Mr. Bryant, Dr. Norman Moore, and Mr. Young. *For Ireland:* Sir William Thomson and Professor Ball. *For Scotland:* Dr. McVail and Sir Hector Cameron. At an earlier stage of the debates Sir Christopher Nixon, in a very temperate and lucid speech, had suggested a *modus vivendi* which, as embodied in his amended motion, proposed to remove Physics, Chemistry and Biology to the position of preliminary subjects, registration as a medical student to take place subsequent to the passing of a preliminary examination in subjects of general education and of an examination in these subjects. In this way he urged the student would be secured an unbroken four years of study in purely medical subjects. The proposal was, however, rejected by the Council, perhaps because it was felt that in view of the absolutely uncompromising attitude assumed by the two Royal Colleges in England it was of little use to pass resolutions which might not have any binding effect. Dr. McVail, however, went further than this, and urged that the proposal involved an actual surrender by the Council of an important part of its duties as hitherto understood. He was indeed prepared to appeal to the Privy Council by way of a representation under Section xx of the Medical Act of 1858. We are compelled by pressure on space to postpone the publication of a complete report of these debates, and we shall hope to deal more fully with the present position of the controversy in an early issue.

A first list of scientific institutions, other than universities or schools of medicine, approved by the Council as places at which the course of medical study may be commenced by applicants for registration in the *Students' Register* was submitted by Dr. MacAlister, who explained that no institution had been included which was professedly maintained to give instruction for trades and handicrafts and not for professions. No amount of tall talk concerning the close connection of the success of the British Empire with trades and handicrafts will alter the fact that a school which plainly states in its prospectus that it is not intended for the education of students preparing for one of the professions cannot be deemed a fit institution in which to commence a course of

medical study. Dr. Norman Moore was singularly unfortunate in moving (without being adequately acquainted with their equipment for teaching purposes) that the Ladies' University College, Cheltenham, Newnham College, Cambridge, and Bedford College, London, should not be included in the list. Other members of the Council were able to supply, off-hand, information which he would have done well to obtain before moving an amendment which took up a good deal of the time of the Council. For other reasons, however, the final consideration of this list was postponed to a later day, when it came on after it had been decided to form a committee which should report to the special meeting of the Council on the relations of the Royal Colleges and other licensing bodies of the Council. Nevertheless, Dr. Norman Moore then brought forward another amendment, that the list should include all institutions recognised by any of the licensing bodies, provided that they (the licensing bodies) had inspected them. This, of course, had it been seriously entertained, would have led to immense waste of time, as it would have involved reopening the whole issue, but happily the Council saw that whatever the merits or demerits of the amendment in itself, it was inadmissible pending the general consideration of the question, and it was negatived after a short discussion.

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Sir John Batty Tuke, Chairman of the Education Committee, secured the adoption of a second report from that Committee on the steps taken for the improvement of preliminary examinations. The Committee had been met in a spirit of cordial co-operation by certain of the examining bodies with whom they had been in communication, but the conclusion was that until secondary education in the country had been improved there was no probability of the General Medical Council being able to insist on the raising of the standard of the preliminary examinations to a level beyond that at present justified by the quality of the teaching in these schools. Into the debate on this question, as in most debates at the Council, the question of the action of the Royal Colleges was imported and the occasion improved.

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The report of the Personation Committee is certainly not a favourite subject with the General Medical Council. Each time that this report has come up for discussion a certain amount of progress has been made, and then apparently the Council becomes dismayed at what it has done, and incontinently by some means or other manages to shelve the further consideration of the subject. This session, after the abandonment of an injudicious motion that the matter should be taken out of the hands of the Committee, and that the registrars of the three countries should form a Committee to report to the Council, the report was returned to the Committee on the ground that it would be advantageous to have the criticisms of the registrars on the proposed regulations. Before this conclusion was reached, a step forward was made by the passing of a regulation that no registration on the *Students'*, *Medical*, or *Dentists' Registers* respectively shall be effected unless application has been made on one of the forms supplied. The Council stands more or less committed to the principle that the applicants shall fill up the forms in their own handwriting; but as this was passed in Committee of the whole Council, it is presumably not at present effective, and will have to be confirmed.

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On the last day of the session a number of subjects were hurried through, or, where this was impossible, were as usual postponed. It is much to be regretted that among the matters thus deferred was the report of the Public Health Committee, which had received a deputation of medical officers of health, who had represented that experience had shown that the new regulations as to the curriculum were in certain respects impracticable. As these new regulations come into force at the beginning of the year it is a great pity that the matter was not settled, and that a greater economy of time could not have been practised earlier in the session. We cannot help thinking that on some occasions too much latitude is afforded to speakers who wander from the point at issue, sometimes to such an extent that it is difficult to gather the trend of their remarks.

## REPORT OF PROCEEDINGS.

*Thursday, November 28th.*

Sir William Turner, K.C.B., President, in the Chair.

### MEDICAL AID COMPANIES AND CANVASSING.

#### The Liverpool Victoria Legal Friendly Society and the National Medical Aid Company.

The Council proceeded to the consideration of the case of Robert Rendall, of 19, St. Peter's Road, Great Yarmouth, registered as M.B., Mast. Surg. 1893, Univ. Edin., who had been summoned to appear before the Council as formulated by the Council's Solicitor (see below).

The complainants were the Medical Defence Union. Dr. Bateman, Secretary of the Medical Defence Union, attended to conduct the case for that Society, together with Mr. Hempson, its Solicitor.

Mr. Rendall attended in answer to his notice. He was represented by Mr. Lawson Walton, K.C., M.P., and Mr. Charles Mathews, Barrister-at-Law, instructed by Mr. J. Tickle, solicitor. Three representatives of the Friendly Society which employed Mr. Rendall also attended, together with twelve witnesses.

Mr. Winterbotham: This is the notice which has been served:

On behalf of the General Medical Council, I give you notice that you have been summoned to appear before the Council to answer the following charge as formulated by the Council's solicitor:

That you have been guilty of infamous conduct in a professional respect, particulars of which are that you have accepted and continue to hold the appointment of medical officer to the Liverpool Victoria Legal Friendly Society at Great Yarmouth, a society which systematically practises canvassing for the purpose of procuring patients, and that you have approved or acquiesced in such canvassing

Then the notice goes on to the formal parts and to the summons to attend.

Opening Address by Dr. Bateman.

Dr. Bateman: This is a case which raises questions of the very greatest importance not only to the profession, but also to certain societies such as the Liverpool Victoria Legal Friendly Society and the National Medical Aid Association. To show that these interests are of importance, I think I need only point to the presence of two of the most learned counsel of the day appearing on behalf of the respondent. The case turns upon the question which was raised by a resolution passed by this Council on June 6th, 1899: "That the Council strongly disapproves medical practitioners associating themselves with Medical Aid Associations which systematically practise canvassing and advertising for the purpose of procuring patients." I have no doubt that the system to which this resolution points is thoroughly known to all the members of the Council here present, but I am afraid I shall have to, I will not say waste, but occupy a little of your time in first putting the salient points before you, which I hope I shall be able to prove as facts later on by witnesses and by statutory declarations. In the first place, the National Medical Aid Association exists for the purpose of granting medical advice through a limited liability company to persons in good health. The entrance fee for each family is sixpence and the charge for the subscription card is one penny. At the present time they work by a series of agents, planting themselves in a city or town, and canvassing for patients from door to door, quite irrespective of the fact as to whether those people could afford to pay larger fees—that is to say, there is no wage limit—and quite irrespective of the question of whether the people in those houses were already employing a medical attendant or not. The first thing that was done in most of the cities and towns was to ask the medical practitioners in the district whether they would act as medical officers to the National Medical Aid Association. Where they agreed to do it then, of course, there was no further question of bringing anyone else into the district; but where they did not, but objected to acting as medical officers, then men from outside were obtained, planted in the district, and all the cases were sent to them. That has led to an immense amount of friction between the profession and the society. Cases were reported to the Council time after time, and in the end the Council appointed a Committee to hold an inquiry and to investigate

the matter. Finally, as the result of that Committee's deliberations the Council issued to the profession the resolution which I have just read. Then the National Medical Aid Society found it exceedingly difficult to obtain medical officers, and what I am directed to say with regard to this is that they associated themselves with the Liverpool Victoria Legal Friendly Society, a Society which exists apparently as a burial club, more or less, or as an insurance society. Small premiums are paid—1d., 2d., or 3d. per week—and £7, I believe, is paid from the burial club when a member dies. This Society affiliated itself to the National Medical Aid Society, and the persons who canvassed for the insurance company also canvassed at the same time for the National Medical Aid Society. The witnesses in this case will illustrate what has been done by the depositions which will be brought before you. A man calls at a house, knocks at the door, and a woman comes down, and he says, "Are you insured?" and he proceeds to show her the advantages and benefits that she will derive from joining the Liverpool Victoria Legal Friendly Society. After the people have listened to the statements made with regard to this Society, the next statement made in the individual case was, "Would you not like to join the doctor's club?" In this case, there is no question about it, it was Dr. Rendall who was pointed to in those statements. Dr. Rendall's club is a branch of the National Medical Aid Society, and it may be said that the Medical Aid Society does not canvass, and that Dr. Rendall himself does not canvass, and therefore it cannot be brought within the lines of this resolution. But in all the depositions which are printed and are before the Council, it will be seen that Dr. Rendall's name has been specifically mentioned in every one. I have no doubt that, had it been necessary, we could have got a great deal more information, but we thought a few specific cases would be quite sufficient for the purpose of the inquiry the Council is now holding. I do not think it will be necessary to do more than point out that in the case of Mrs. Wilkins she was asked to put herself and the baby in the doctor's club. "He," the canvasser, "said it was Dr. Rendall's club, who lived at St. Peter's Road," and Mrs. Wilkins has sworn that until this time she had never heard of Dr. Rendall at all. Again, in the evidence of Florence Nutman, the canvasser told her all about the club, and she says that he said the doctor was a very nice doctor, Dr. Rendall, a Scotch doctor. In confirmation of these statements, cards with Dr. Rendall's name upon them were left with the policy of the Liverpool Victoria Legal Friendly Society. Again, in the case of Emma Catchpole, there is distinct evidence of direct touting on behalf of Dr. Rendall, the canvasser going so far as to ask, "If you can get any more members it would be better for the doctor"—not for the Society, but for the doctor, identifying the doctor with Mr. Rendall by stating, "It is Dr. Rendall, living at 19, St. Peter's Road, and he is a very nice man and a good doctor, and would call any hour of the night if needed." Again, to show the connection between the doctor's club and the burial club, the witness Catchpole asked the canvasser whether she could join one without the other, and the reply was, "No, you must join both." She did so, and the usual card with Dr. Rendall's name upon it was given to her. Then Alice Redgrave also confirms the canvassing for Dr. Rendall, and so does Elizabeth Jackman. In the evidence of Elizabeth Jackman it will be noted that she was told that she could join the Insurance Society without the doctor, but not the doctor without the Insurance Society, showing the close connection between the two. Again, Mrs. Jackman was asked not to let any other doctor have the cards. A card, again, was given in this case. The evidence of Cecilia Albrow is even more specific proof of touting for Dr. Rendall. "A strange man called, and he said, 'Do you belong to this doctor's club?'" holding up a paper, and then the usual embellishments followed in favour of the doctor. Mrs. Albrow resisted, stating that she was quite satisfied with the doctor she had; and the canvasser in that case did not gain his point. If it is said that the canvasser acted without the authority of the Society that is no defence. If a medical man associates himself with a company, which we will say for the sake of argument does not allow canvassing but whose servants canvass, surely it is either his duty to resign at once the moment it is proved to him that canvassing does exist, or he must bear the consequences. Now, in this case I shall be able to prove that there is absolutely nothing malicious at all. I do not think Dr. Rendall can complain that the matter has not been brought before him repeatedly. Medical men at Yarmouth, all of whom had left the National Medical Aid Society and all other clubs which would cause the slightest risk to themselves by canvassing or touting, personally wrote to Dr. Rendall, and he was asked to have an interview with the president and secretary of the local society. He went, and in the most professional and friendly way he was asked to give up his appointments. Friendly overtures had been made by local practitioners and the Union, and no pains have been spared to enable him to retire from what we consider to be an untenable position. Even after the friendly advice he received last year it does not appear that Dr. Rendall took any steps to dissociate himself from the canvassing which was going on and is going on still. In order to save time, I propose to put Mr. Wyllys first of all into the box, and if the learned counsel for the respondent will allow me, I shall ask leave, with your consent, to read his statement to him instead of taking him over it line by line by examination. By that means I think I shall save the time of the Council, and I do not think that learned counsel will object.

Mr. Muir Mackenzie: You mean the statutory declaration?

Dr. Bateman: Yes.

Mr. Muir Mackenzie: That is quite regular. You can read that and put Mr. Wyllys into the box when the time comes.

Dr. Bateman: I thought it would save time if I put Mr. Wyllys into the box, and then read the statutory declaration to him and asked him whether he swore it.

Mr. Muir Mackenzie: He has sworn it.

Dr. Bateman: I know he has; I will therefore now call Mr. Wyllys.

Mr. William Edward Wyllys,
*Examined by* Dr. Bateman.

Q.—I believe you are a medical practitioner of Great Yarmouth, in the county of Norfolk, L.R.C.S. and L.R.C.P. of Edinburgh?

A.—I am.

Q.—And on the 27th April, 1901, did you swear a declaration in reference to this matter?

A.—I did.

Dr. Bateman: I will read it to you and ask you if it is correct.

In the month of March, 1896, the practitioners residing in the Yarmouth portion of the Borough of Great Yarmouth (with one exception, namely that of Dr. Herbert Collier) united in a local Medical Association called "The Great Yarmouth District Committee" I.M.P.A., of which I was elected Honorary Secretary and still retain that position. At the time o the formation of the local Medical Association three Industrial Assurance Societies were actively conducting medical aid work in the town, namely, "The London and Manchester Assurance Company," the "Liverpool Victoria Legal Friendly Society," and the "Refuge Assurance Company.' Each Society, I am informed, had a different system of working it Medical Aid Branch, the London and Manchester Assurance Company organising its medical aid work in its own name, the Liverpool Victoria Legal Friendly Society through an auxiliary company, the National Medical Aid Society, and the Refuge Assurance Company through the private club of Dr. Herbert Collier, the outstanding practitioner above referred to, who at that time, namely, the date of the formation of our local Medical Association, was also medical officer to the conjoint Liverpool Victoria Legal Friendly Society and National Medical Aid Society, the Medical Officer of the London and Manchester Assurance Company being Mr. Charles O'Farrell. These various methods in the working of the Medical Aid and Life Insurance departments obviously made no difference in the practical effect as regards canvassing, since I am informed that in each case the collecting agents of the two departments were identical and no person could join the Medical Aid section without joining or having previously joined the Life Insurance section. The effect was in every case the same, namely, indiscriminate canvassing by paid agents of the various companies whereby the private patients of practitioners were solicited directly for the Insurance Company, and indirectly for the medical officer attached to the Medical Aid Branch. These lay organisations conducted medical practice, it is presumed, purely as a commercial speculation, the main idea being to attract insurance business, in one case—namely, the London and Manchester Assurance Company—so I am informed, paying the medical officer a fixed salary and appropriating whatever profits were received over and above this sum. All the members of the local Medical Association who held or had previously held appointments similar to

those above referred to were satisfied that when Medical Aid was managed by these Industrial Life Assurance Companies as an adjunct to their legitimate business it was impossible for either the medical officer or the Company to prevent their agents, who were paid by commission on the amount of the business introduced by them, from using the Medical Aid as an inducement to attract custom to the Life Insurance department. From the very formation of the local Medical Association it was unanimously agreed that no member should canvass or knowingly permit others to canvass on his behalf for patients, and that no member could therefore consistently act as medical officer to any of the Medical Aid departments carried on as above described in various forms by the Industrial Insurance Companies. Having regard to the above facts and the agreement lastly above referred to, Mr. Charles O'Farrell resigned the position of local medical officer to the London and Manchester Assurance Company, but the company appointed another gentleman whom they brought into the town for the purpose to act as its medical officer; he, however, very shortly afterwards left the town, and the position was then taken over by Dr. Collier, who thereupon became medical officer to all the Medical Aid Societies conducting business in this part of the Borough of Great Yarmouth. In the month of May, 1899, the General Medical Council declared its condemnation of Medical Aid appointments connected with Insurance Companies which canvassed for business, and thereupon Dr. Collier wrote me as Secretary to the local Medical Association that in view of that declaration he felt obliged to resign the whole of his appointments, the resignation taking effect at the expiration of a six months notice, namely, in December, 1899. The London and Manchester Assurance Company and the Refuge Assurance Company, at the expiration of Dr. Collier's six months notice, abandoned the Medical Aid section of the business; the Liverpool Victoria Legal Friendly Society did not, however, follow that course. Mr. R. Rendall succeeded Dr. Collier as the medical officer to the company and its auxiliary company the National Medical Aid Society. As the Medical Aid work carried on by the Liverpool Victoria Legal Friendly Society through its auxiliary company, the National Medical Aid Society, and Dr. Rendall its medical officer was, in the opinion of the local Medical Association, contrary to the declaration of the General Medical Council above referred to, and was also open to every objection hitherto urged against any Medical Aid Association; on May 18th, 1900, I, acting as the Secretary to the local Medical Association, and at the request of the Association, wrote to Dr. Rendall calling his attention to the objectionable features inseparable from his appointment. He subsequently saw the President of the Association and also myself, and discussed the position. In view of the fact, however, that he was bound by his engagement to act as medical officer for twelve months from the date of his appointment, no definite action was taken by the local Medical Association. The twelve months expired in February last. On December 19th, 1900, I wrote him inquiring if he intended relinquishing his appointment at the expiration of the twelve months, but notwithstanding the above interview and the correspondence that passed between Dr. Rendall and myself, nothing satisfactory has been arranged or done by him, and he still retains the appointment, and I have been informed that the canvassers for the Liverpool Victoria Legal Friendly Society are also canvassing for its auxiliary society, the National Medical Aid Society, and that they are probably using Dr. Rendall's name in connection therewith. In consequence of the apparent evils connected with the Medical Aid appointment in Great Yarmouth the local Medical Association memorialised in August, 1897, the General Medical Council on the evils and abuses then and at the present time existing in connection with the administration of Clubs and Medical Aid Societies, and requested an expression of opinion on the points referred to in such memorial. A copy of such memorial was subsequently forwarded to all the Medical Licensing Bodies and a copy is hereunto annexed and marked by me. I say that in the bringing of these proceedings there is no malice or vindictiveness whatever, either on my part or on the part of any member of the local Medical Association against Dr. Rendall. The aim of the local Medical Association is to prevent unprofessional conduct being carried on in Great Yarmouth, and also to obtain compliance on the part of the medical practitioners practising in Great Yarmouth with the expressed declaration and opinions of the General Medical Council. The correspondence between Dr. Rendall and myself above referred to, and the gist of the above interview also referred to is hereunto annexed and marked by me. And I make this declaration conscientiously believing the same to be true, and by virtue of the Statutory Declarations Act, 1835.

The President: The paragraph you have just read referring to the correspondence between Dr. Rendall and the gentleman who is now in the box, Mr. Wyllys, and the account of the interview, you should look at, and read such parts to us as you think important.

Dr. Bateman: I was going to put it to you, Sir, whether those exhibits are the same as I am now showing to the witness.

The President: They are referred to in the statutory declarations. The point is the correspondence between Mr. Wyllys and Dr. Rendall, and the report of the interview. It will do if you will read those parts you consider important.

Dr. Bateman: Then I am afraid I shall have to read the whole of the first letter.

25, King Street, Great Yarmouth,
May 18th, 1900.

Sir,—I am directed by the Great Yarmouth District Committee of the Practitioners' Association to address you in respect of the appointment you hold in the Medical Aid Department of the Liverpool Victoria Life Assurance Company, which appointment after full experience, has been considered unprofessional by the local medical men, who therefore have declined to accept it. Our Society is informed that the Company generally pays its medical officers at a very low rate, making direct and indirect profit from their services: that the Company employs the same paid canvassers to obtain members for both their Medical Aid and Life Assurance branches and that thereby the patients of other medical men are in effect canvassed on your behalf, and that cheap medical attendance is held out as a great inducement to join the Life Assurance department. We believe that this class of medical work comes under the condemnation of the General Medical Council, and I am to inform you that unless you favour us with a satisfactory explanation of your position we intend to bring the matter to the notice of that body.—I am Sir, your obedient servant,

(Signed) W. E. Wyllys.

[To the witness]: You received a letter from Mr. Rendall dated May 21st.

Mr. Lawson Walton: I think, as the correspondence will have to be read at some time or another, it might be convenient to read it now.

Dr. Bateman: I had not intended to read it, but I will read it now if you wish.

The President: Yes.

Dr. Bateman: The next is the letter of May 21st, 1900.

19, St. Peter's Road, Great Yarmouth.
May 21st, 1900.

Dr. Wyllys, Dear Sir,—I received your letter of the 18th inst., and after full inquiry and consideration into the matter to which you refer, I am quite unaware of breaking any regulation or ruling of the General Medical Council. Regarding your request for a satisfactory explanation of my position, I do not understand. I believe there are hundreds of medica brothers throughout the country at the present time in a precisely similar position to my own.—I am, yours obediently,

(Signed) R. Rendall.
Late Admiralty Surgeon and Agent.

To this a reply was sent on May 25th, 1900, by Mr. Wyllys:

Dear Sir,—I beg to acknowledge your letter of the 21st inst., which I will place before my committee in due course. Would it be agreeable to you to meet the subcommittee or a deputation of two of its members? If such a meeting could be arranged I think it would greatly facilitate the establishment of an understanding as to the matters on which I had occasion to address you last week. If you feel inclined to acquiesce in the above suggestion I will make the necessary arrangement for carrying it into effect.—I am, yours faithfully.

(Signed) W. E. Wyllys.

Then the answer was received on May 28th, 1900:

Dear Sir,—In answer to your letter of the 25th inst., I beg to say I am willing to meet two members of your Committee to discuss over matter to which you referred in your previous letter.—I am, yours obediently,

(Signed) R. Rendall.

[To the witness]: An interview did take place. Do you remember at what date?

A.—Some time subsequent to the date of that correspondence.

The President: I think it is stated here in our print that it took place on May 31st.

A.—Yes.

Dr. Bateman: I can either prove this by putting it in at once and reading it, or I can prove it by Mr. Moxon and Mr. Wyllys themselves taking it line by line—the account of the interview, if the account of interview is not disputed?

Mr. Lawson Walton: I would rather you decided that yourself.

The President: Have you our print, Mr. Wyllys?

Mr. Wyllys: Yes. I have only just this moment received it, but I have not had an opportunity of reading it.

Dr. Bateman: I think I had better read it through.

*Report of Interview with Dr. Rendall.*

The arrangement alluded to in Dr. Rendall's letter of May 28th was duly carried out, and on May 31st he was received at the residence of the President by that gentleman and Mr. Wyllys, the Hon. Secretary. (1) It was then pointed out to Dr. Rendall that the Medical Aid Association, for whom he was acting as medical officer, is supported by a general indiscriminate canvass by paid canvassers. (2) That the canvassers are connected with a Life Assurance Society, and the Medical Aid branch is used as an attraction to induce people to take life policies, membership of the Medical Aid Association being limited to those whose lives are insured. (3) That the salary of the medical officer depends (or will eventually depend) on the results of this canvassing. (4) That only a portion of the money paid for Medical Aid goes to the medical officer, the surplus being utilised as a profit to a lay body. (5) That such methods have distinctly been condemned by the General Medical Council. (6) That other members of the local profession had previously held the same appointment, but had relinquished it in consequence of the ruling of the General Medical Council, and in deference to the opinion of the Great Yarmouth District Committee, who deemed such appointments derogatory to the profession as well as detrimental to to the public. (7) And that the local profession felt bound in honour to support those members who (in deference to the ruling of the General Medical Council, and of their own by-laws) had resigned this and similar posts. In reply Dr. Rendall—

May I ask if Dr. Rendall had had the opportunity of seeing it?

Mr. LAWSON WALTON: He has not seen it.

The PRESIDENT: Was this report of what Dr. Rendall admitted read to Dr. Rendall at the interview, that is to say, did Dr. Rendall know what he is said in this document to have admitted?

The WITNESS: That I do not know.

Dr. BATEMAN: Was anything taken down in writing and read to Dr. Rendall before he left the room?

A.—No, it was not.

The PRESIDENT: It was not read.

A.—No.

Dr. BATEMAN: I am afraid then I cannot read Dr. Rendall's reply in that case, so that I had better pass on.

Mr. MUIR MACKENZIE: Yes, you can, if Mr. Wyllys says it is correct.

Dr. BATEMAN: I see, and then Dr. Rendall would be able to dispute it.

Dr. Rendall admitted that he was disappointed with the position, as he found on experience that it was not altogether as had been represented to him on his acceptance of the post. He denied the alleged practice of systematic canvassing by the Society, although admitting that the canvassers represented both the Life Assurance and the Medical Aid businesses. He stated that the agents worked only among the poor, and claimed that he had the power of refusing any candidate whom he deemed unfit by reason of his state of health or of his social position. Dr. Rendall explained that he had signed an agreement to retain his appointment for one year, and that this agreement secured to him a fixed minimum salary for that period. Replying to Dr. Rendall, it was urged that the District Committee were at the present time in possession of evidence of canvassing, and that it was a matter of common knowledge that this was not confined to the really poor; that the agents of other kindred societies who had themselves abandoned the Medical Aid department (by reason of the resignation of their medical officers) complained of the falling off of their business on account of the competition of the National Medical Aid Society, thus showing that Medical Aid was used as a powerful lever to forward legitimate insurance work, being, in other words, a lay association farming the services of the profession for their own profit. In conclusion Dr. Rendall was assured that, as in the case of previous officers, should he express his willingness to resign the post, he might rest assured that the Society would not involve him in any legal embarrassment in respect of his present signed contract, but that the Society was determined to press the matter home, and to bring the whole matter to the notice of the General Medical Council. Finally it was agreed that Dr. Rendall should take a fortnight for consideration, and should then apprise the Society by letter what course he elected to pursue.

Then a letter was written on June 11th by Dr. Rendall in reply:

Dr. Wyllys, Dear Sir,—I have carefully questioned the agent and collectors of National Medical Aid Society, and they all strongly deny that there is any systematic canvassing carried on. All the new patients I have come across I have also questioned, and they invariably inform me that they have joined through recommendations of previous patients that I have had under my treatment. There is another medical colleague in the borough, namely, Dr. Bately, who holds the same appointment in Gorleston, and he informs me that the number of years he has been medical officer to the National Medical Aid Co. he has never come across any cases of systematic canvassing which I may say he is quite as much averse to as I am. Would you kindly give the name of the parties whom you allege have been canvassed?

To that he replied on June 13th, 1900, as follows:

Great Yarmouth, June 13th, 1900.

Dear Sir,—I beg to acknowledge your letter of the 11th inst., which I will place before my Committee in due course.

Yours faithfully,

W. E. WYLLYS.

Then there is another letter addressed to Dr. Rendall on December 19th, 1900:

Sir,—Referring to previous correspondence with you, commencing with a letter dated May 18th, 1900, signed by myself, I am requested by my Committee to inquire whether it is your intention to relinquish or to retain your appointment in connection with the National Medical Aid Company at the expiration of the year during which you informed us you had contracted to act for that Company, and I am further to ask you to favour me with a reply which will reach me by Friday morning next.

I am, Sir, yours faithfully,

W. E. WYLLYS.

[To the Witness]: Have you ever had any reply to that letter?

A.—No.

Q.—That is the last letter that you have received in connection with this case?

A.—It is.

Q.—I believe you came from Yarmouth to-day, did you not?

A.—Yes.

Q.—And you handed to me a card as you came in; you received that card [handing same to Witness], one of the National Medical Aid cards, and the last date is November 23rd? December is put in to show that Dr. Rendall is still a medical officer of the club, and the card bears his name and has been filled in?

A.—Yes, that is the card.

The PRESIDENT: Will you put that card in?

Dr. BATEMAN: I thought I would put it in with all the other documents. I have no further questions to ask Mr. Wyllys.

The PRESIDENT: Mr. Lawson Walton, Mr. Wyllys is now before you if you wish to put any questions to him?

*Cross-examined by* Mr. LAWSON WALTON.

Q.—I only just want to ask one or two questions. I see that in the letter of June 11th a distinct issue is raised as to whether there has been systematic canvassing in connection with the Liverpool Medical Aid Society. That is so, is it not?

A.—Yes.

Q.—You alleged that you had received information that that was the fact, and that Dr. Rendall said it was entirely inconsistent with what had been told to him?

A.—Yes.

Q.—Then I observe in his letter of June 11th he seeks to bring that controversy to a head, and he writes to you and says, [Letter of June 11th from Dr. Rendall to Mr. Wyllys printed above, read.] That was not an unreasonable question, was it, if you assumed Dr. Rendall to be anxious to ascertain whether there had been any club canvassing or not? He asked you for the name or names of the party or parties whom you allege have been canvassed. Did you reply to that question?

A.—No; certainly not.

Q.—Did you give him any means of sifting the statements that had been made to you as to the existence of canvassing?

A.—I gave him no more means because he had more means than I had.

Q.—He gives you the result of his own inquiries, and the result of a statement of another medical man in relation to the same Society, to the effect that no canvassing had been carried on. Do not you think you should have replied to that by giving him the information which was before you, so that he could have examined it and satisfied himself upon the point?

A.—I did not think my Society would be justified in giving up the evidence which we held.

Q.—There was a question between you. He condemned canvassing as you did, but he disputed that it existed. Do not you think it would have been fair, in order to have enabled him to get at the truth, to tell him what the facts were as you understood them?

A.—My giving him the facts would not be the only means of his obtaining the truth. He was quite as well able, and much better able, to get at the truth than I was, as he had access to all the facts.

Q.—He tells you he had asked every collector and canvasser and that they distinctly denied it. He tells you further that he had interviewed every patient, and the patients with one accord said it was not so. You had some other source of information, why did not you put it before him?

A.—I had no other source of information.

Q.—Had you no names?

A.—The only source of information I had was the statement that is now put in evidence.

Q.—Am I to understand that you had no names of any parties at that time?

A.—Yes, I had names, but I was not at liberty to send Dr. Rendall the names of those people who had given me the information.

Q.—Why not?

A.—I think we had done everything we possibly could.

Q.—Did you regard Dr. Rendall as an honourable man—a man of character?

A.—I looked upon him as such.

Q.—Did he seem anxious to put an end to any canvassing that existed?

A.—It did not occur to me that he seemed particularly anxious.

Q.—But he said so, did he not?

A.—He did not say so except in that letter.

Q.—He says: "Dr. Bately as strongly disapproves of canvassing as he himself does." However, do I understand you had the names of these very people, Emma Catchpole and the rest, before you?

A.—No.

Q.—What names had you?

A.—Do you mean at the interview?

Q.—Yes, at the time of this letter.

A.—No, I cannot say that I had, but the dates would show that.

Q.—Will you tell the Council what authority you had at that time for alleging that canvassing existed?

A.—First, common knowledge. We were aware for a long time how these societies had been worked. Secondly, information received from members of my Society who had in the course of their practice come across cases of the kind.

Q.—Did they give you particulars?

A.—They did not give me particulars at that time, but they gave me a general statement.

Q.—They had accepted and used common knowledge and general statements. I take it you had no specific statement?

A.—I am not prepared to say I had, and I am not prepared o say I had not.

*Re-examined by* Dr. Bateman.

Q.—As there was a dispute between your Society and Dr. Rendall as to the truth of the charges brought against him, you thought it your duty to collect specific evidence and send it to the Council?

A.—Certainly.

The President: If no member of the Council wishes to put any question to this gentleman, Dr. Bateman will call the next witness.

Mr. A. H. Moxon,

*Examined by* Dr. Bateman.

Q.—I believe you are a registered medical practitioner living at Great Yarmouth.

A.—I am.

Q.—And you are the president of the local Medical Society, are you not?

A.—I was at that time.

Q.—But you are not now?

A.—No.

Q.—Were you present at the interview referred to in Mr. Wyllys's evidence?

A.—I was.

Q.—Did it take place at your house?

A.—Yes.

Q.—And is everything with regard to that interview which has been stated by Mr. Wyllys absolutely true?

A.—It is absolutely correct to the best of my belief.

*Cross-examined by* Mr. Lawson Walton.

Q.—I understand that you and Mr. Wyllys were together throughout this interview?

A.—At my house? Yes.

Q.—Did you discuss with Dr. Rendall the social position of these patients?

A.—Yes; Mr. Wyllys mentioned it.

Q.—Did you tell him that they were extremely poor people?

A.—No; I did not tell him so. He said they were very poor people.

Q.—Did you say this to him, that there was no use his expecting ever to get a practice in Yarmouth in starting in that way, the people were too poor?

A.—That is quite right; I did say so.

Q.—I am not complaining that you have not put it in your statement, but that is your evidence?

A.—That is so.

Dr. Bateman: May I now put in the Memorandum as evidence?

The President: Yes.

Dr. Bateman: I put that in formally.

The President: And the Statutory Declarations?

Dr. Bateman: Yes. I will read the Statutory Declarations of all these people.

Statutory Declarations.

The first is the Statutory Declaration of Esther Wilkins, dated April 29th, 1901: I, Esther Wilkins, of 4, Briggs Buildings, Exmouth Road, Great Yarmouth, in the County of Norfolk, the wife of William Wilkins, Private in the 4th Norfolk Regiment, do solemnly and sincerely declare as follows. About the first week in October last a person called at my door when I was living at 2, Briggs Cottages, in a yard on the South Quay, Great Yarmouth, and asked me whereabouts in the yard a woman lived. I forget the name of the woman. I have since been told that the name of the man is Clarence Bingham. After I told him that there was no such woman in the yard as he was inquiring about, he began talking about the club, and asked me if I would put myself and the baby on the doctor's club. He stayed quite half an hour, telling me all about the club. He said it was Dr. Rendall's club, who lived on St. Peter's Road. I had not heard of Dr. Rendall before, and asked the man about the doctor, and he said "he was a very nice doctor, and if I went to him he was sure I should like him." He said, also, that he had got a lot of people to join, and told me the names of a good many who had joined. I told him it seemed a funny thing a man could attend to such a number of people, and he said "the doctor was going to have two assistants coming from London." I asked him about the price of joining, and he said it was "three ha'pence a week for the doctor for both of us," and I think he said threepence a week for the insurance, and I should be in benefit at once, and I could go to the doctor that afternoon and whenever I liked. He had not talked about the insurance before, and I asked him what that meant. He said that it was a burial club, and they would pay £7 at my death if I joined. After he had talked about the doctor's club a good bit and told me how cheap the doctor was I said I would join for myself and the baby, and I paid him 4½d. down, and he gave me some cards and some papers, which he said were from the doctor. He told me the name of the insurance company, which he said was the "Liverpool Victoria," and he gave me a policy afterwards. The insurance card was similar to the card now produced and shown to me and marked "A." He also let me have a card for the doctor's club. On the front part of the card was the name of the club, "the Medical Aid," and Dr. Rendall's name was also written on it and the times I could see him, and the card was similar to the card now produced and shown to me and marked "B." I only paid the club man the money for four weeks and then let it drop, as I felt it was no use to me, as if I or the baby were ill I should like to have my own doctor and should not care for a stranger. And I make this declaration conscientiously believing the same to be true and by virtue of the Statutory Declaration Act, 1835.

Then next the Statutory Declaration of Emma Catchpole, dated April 29th, 1901: I, Emma Catchpole, of 29, Bolton Buildings, Grosvenor Road, Great Yarmouth, in the county of Norfolk, spinster, do solemnly and sincerely declare as follows: On Saturday, March 17th, 1900, I was at my sister's, Mrs. Stone, of No. 11, George Street, Great Yarmouth, when a person named Mann, called upon her for the club money. After my sister had paid the club money Mr. Mann asked me to join the club. I said "I would consider about it and let him know next week." He also asked me if I could get any more members as it would be all the better for the doctor. I knew it was a burial and a doctor's club, because my sister had told me all about it. Mr. Mann, continuing, said, "Do you know who the doctor is?" I said "No," and he said, "It's Doctor Rendall, living at 19, St. Peter's Road, and he is a very nice man, and a good doctor, and would call any hour of the night if needed." On the following Saturday, March 24th, 1900, I went down to my sister's again, accompanied by my cousin, Ethel Catchpole. Mr. Mann, the agent, was at my sister's. He said to my sister, "Would the young lady like to come into the club?" and my sister turning to me, said, "Would you like to?" Mr. Mann then asked me if I would do so, and I said, "Yes, I would." I did not want to join the medical club, so I

asked him if I could go into the burial club without going into the doctor's club, and he said "I could not, but must join both." I thereupon joined both clubs. I paid Mr. Mann 2d. a week, 1d. for each club. My cousin also joined both clubs at the same time. When I joined Mr. Mann made out the doctor's card, which is now produced and shown to me and marked "F." About October, 1900, I was very ill, and as I did not care for Doctor Rendall I did not call him in, and did not pay anything further to the club. And I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Statutory Declaration Act, 1835.

The next is the Statutory Declaration of Alice Redgrave, dated April 20th, 1901: I Alice Redgrave, of 17, Row 44, Great Yarmouth, in the County of Norfolk, spinster, do solemnly and sincerely declare as follows. About six weeks before last Christmas a man called at mine. I did not know who he was, but have since been told by a friend that his name is Willett. He got into conversation with me and asked me "if I would join the doctor's club, the doctor was Dr. Rendall, and he lived on the Jetty Road." He said "if I was too ill at any time to go up to the doctor's he would call on me." Mr. Willett showed me a card, and it was similar to the one now produced and shown to me and marked "G." I did not ask him the terms. I said I should not join without my mother's consent. I have not seen him since. I am perfectly satisfied with my present doctor And I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Statutory Declarations Act, 1835.

Then the next is a Statutory Declaration of Elizabeth Wiseman, of 8, Wordsworth Place, Tower Street, Great Yarmouth, who says: A short time before last Christmas (1900) I was standing in my backyard against the gate when I saw a man whom I knew was a club man, come out of my sister-in-law's, Mrs King, who lives in the same passage. I have since been told that the man's name is Clarence Bingham. When he came up to me he said, "Good morning, ma'am." We got into conversation, and he said he had just come from Mrs. King's. I said she was my sister-in-law, and he replied, "Really." He asked me if I had any children, and I told him three, "and they were all in the British Workmen's Club." He said, "Look how nice it would be to put them in a club so you have a doctor free without paying for him. It's only a penny a week. It's Dr. Rendall's club, and I have got a lot of little children off the road in." I told him, "I would not go in any club as I had a good doctor of my own." He tried very hard to persuade me to put the children in, and said, "I shall call and see your husband when he comes home," but I said "it would be no use, as he would not like the children to go in." I do not remember that he even mentioned the name of the insurance club. All he talked of was the doctor's club.

Then the next is a Declaration of Elizabeth Jackman: I, Elizabeth Jackman, of No. 9, Garden Cottages, Tower Street, Great Yarmouth, in the county of Norfolk, married woman, do solemnly and sincerely declare as follows: About three weeks after the birth of my baby Elsie, and my baby was born on the 6th day of March, 1900, I was in the passage in front of my house talking to a neighbour, Mrs. Bland Mr. Newark came up the passage. I knew him as I had often seen him calling at my neighbours. I knew he was a club man. I had my baby in my arms, and he asked me if the baby was insured. I said, "It is only three weeks old." He said, "It is a good club, and a good doctor to it." I said, "I have belonged to the Prudential ever since I have been married, but could I join the doctor's club without the insurance?" But he said, "No, you could go in the insurance without the doctor's. Several of my neighbours were in the doctor's club, and I knew from talking with them it was Dr. Rendall's club Mr. Newark meant. Mr. Newark said, "Go in now; it is only a penny a-week for the insurance and a penny for the doctor." I said I would put the children in. He then wrote out the four cards, one for each child, and also the doctor's book, and I paid him the first money the next week. The cards and the book are now produced and shown to me and marked "H" "J." "K." "L." and "M." I kept the club up for some time, but had to let it drop when my husband was out of work. My children a little time after I put them in the club had the whooping-cough, and I took the three eldest to the doctor's on St. Peter's Road. Dr. Rendall came to my house to see the baby, as the baby was worse than the other children Once when Mr Newark called for the money he told me not to let any other doctor have the cards. And I make this solemn declaration conscientiously believing the same to be true, etc.

Then Cecilia Athrow's Declaration sworn on April 29th, 1901. She says: Some time about the early part of last November a strange man called, and he said, "Do you belong to this doctor's club?" holding up a paper, and I said, "No, that I don't, and don't want to be; I should be too much expense to the doctor as I was always ailing." He said he was a nice doctor and was sure I should like him. I said it was no use, as I was quite satisfied with my doctor that I have. He went on talking for a long time about the benefits and all about Dr. Rendall, the club doctor, and he said the doctor would only cost me a halfpenny per week and the insurance a penny. He kept on talking and persuading me, and he said directly I paid I should be able to have the doctor whenever I liked. I said "Don't the doctor want to see you before you join?" and he said "No, you can join at once." I told him it was no use tormenting, as I was quite satisfied with my own doctor. The next week when my daughter, Mrs. Wilkins, who lives close to me, was in my house, my daughter-in-law, who lives with her, brought a man round who had called there for her club money for a doctor's club she had joined the week before, and I then found it was the same man who had called on me, and he then again tried to persuade me to join Dr. Rendall's club. And I make this solemn declaration conscientiously believing the same to be true, etc.

Then George Horne's Declaration, sworn on April 27th, 1901. He says: At the time I took over the local branch of the Refuge Assurance Company an arrangement was in operation, having been entered into by my predecessor with a local practitioner, Dr. Herbert Collier whereby local insurers with the Refuge Assurance Company were admitted to Dr. Collier's Medical Club. This arrangement I continued. The collectors for the Refuge Assurance Company also collected and entered new members for Dr. Collier's club. The members paid the same collector at the same time the contributions for both the Insurance Company and the club. There were separate contributions payable in respect of both the company and the club, and separate cards of membership, and, as the Medical Club was used as a "feeder" for the insurance, it is highly probable that the collectors held out the Medical Club as an inducement to persons to enter the life insurance. About June, 1899, Dr. Collier notified me in writing that he was giving up his club, and that his arrangement with the Refuge Assurance Company as to the working together of both the companies' business and his club must cease. Dr. Collier gave as his reason for this course that it was in consequence of the action of the General Medical Council condemning the holding by medical men of Medical Aid appointments in connection with these Industrial Life Assurance Companies, and that he (Dr. Collier) considered that this appointment might come within such condemnation. Dr. Collier had, however, to give six months notice of his intention to sever his connection with the company. This he did. No effort was made to get another medical man to take over the Medical Club, and at the expiration of Dr. Collier's notice the Medical Club was allowed to drop, the company thereby ceasing to work the insurance in conjunction with the Medical Club. This course was adopted by the company in deference to the opinion expressed by the General Medical Council. By reason of the Refuge Assurance Company adopting the above course—namely, ceasing to combine with their own insurance business that of Medical Aid—the company had lost considerable business. Persons who were insured with the Refuge Assurance Company allowed their policies to lapse and joined or were induced to join the Liverpool Victoria Friendly Society, which Society had a local branch, assigning as their reason for joining the latter Society and ceasing to belong to the former Society that it offered Medical Aid to its members, and that if the Refuge Assurance Company had continued such Medical Aid they would not have left that company. The Refuge Assurance Company, as stated above, in deference to the opinion of the General Medical Council have ceased to give medical aid or work in conjunction with the insurance business or Medical Aid section, yet the Liverpool Victoria Legal Friendly Society is still acting contrary to this expressed opinion of the Council, and as stated above is affecting somewhat the local business of the Refuge Assurance Company. And I make this declaration, etc. Then I have a further declaration of Mr. Horne, as follows: I George Horne, of 7, Euston Road, Great Yarmouth in the County of Norfolk, the Local Superintendent of the Refuge Assurance Company, do solemnly and sincerely declare as follows: As stated in my declaration of the 27th day of April, 1901, in the matter of the above complaint, policy holders permitted their policies in the Refuge Assurance Company to lapse and joined the Liverpool Victoria Legal Friendly Society, giving as a reason for taking this course that the latter society offered medical aid to its members. I have in the schedule hereto given the names and addresses of some of the persons who left the Refuge Assurance Company, and for the reason given above joined the Liverpool Victoria Legal Friendly Society. And I make this solemn declaration, conscientiously believing the same to be true, etc.

Then then is a Statutory Declaration by Dr. Collier, dated April 30th, 1901, as follows: I, Herbert Collier, of 21, South Quay, Great Yarmouth, in the county of Norfolk, M.D. (Bruxelles), L.R.C.P. (London), M.R.C.S. (England), etc., do solemnly and sincerely declare as follows: Previous to the General Medical Council recording its sense of condemnation of certain Medical Aid appointments held in connection with Industrial Life Insurance Companies whose agents were in the habit of canvassing for members and policy holders, I was connected with the local Medical branch of three of such companies—namely, the Refuge Insurance Company, the Liverpool Victoria Legal Friendly Society, and the London and Manchester Assurance Company. The Refuge Assurance Company had, strictly speaking, no Medical Aid section, but worked a private club of my own on the same basis and conditions of those entertained by Medical Aid Societies generally, with this exception, that the working expenses and payments to collectors were limited to 10 per cent. on all moneys received for every service rendered. In each of the three cases active canvassing was systematically practised by the agents in order to obtain new members; and it is quite within my knowledge that the advantages of membership of the Medical Aid branch were constantly advanced as a special and peculiar inducement for taking out industrial life policies. And so far as I know and believe, and have been given to understand, no person was accepted as a member of the Medical Aid section unless he had a policy with the life assurance division. After the above-mentioned action of the General Medical Council I at once came to the conclusion that it would be highly improper of me to continue to hold these offices, and I immediately communicated to the several parties concerned my desire to be relieved from my appointments, and my resignation came into effect at the end of the same year. And I make this solemn declaration conscientiously believing the same to be true, etc.

Then Henry Blake made a Statutory Declaration on April 30th, 1901: I, Henry Blake, of Regent Road, Great Yarmouth, in the County of Norfolk, M.B. (Lond.), do solemnly and sincerely declare as follows: On the local medical practitioners in March, 1896, uniting in a local Medical Association, I became a member and am still a member of such Association. From its very inception the members agreed not to canvass or knowingly permit others to canvass, directly or indirectly, on their behalf for patients. Previous to, but not at the date of the formation of the local Medical Association, having some time prior thereto resigned the position, I was medical officer to the Medical Aid section of the Liverpool Victoria Legal Friendly Society. The company had several collectors and canvassing was systematically practised by them in order to obtain policy-holders, and the Medical Aid section was held out as an inducement for taking out industrial life policies, the agents not entering any members for the Medical Aid unless they also took out an industrial life policy. As the collectors had a free hand and could canvass anywhere and anyone they pleased, it appeared to me that indiscriminate canvassing was the result, and that the private patients of other medical men with others were canvassed by them to join the company, and I frequently objected to the class of patients the collectors entered as not being unable to pay moderate medical fees. I was satisfied, and so were the whole of the members of the Association, that where Medical Aid departments were managed by Industrial Life Assurance Companies as an adjunct to their legitimate business of life assurance, it was impossible for either the medical officer or the company to prevent the agents from using the Medical Aid as an inducement to attract members to the Life Assurance department. I resigned the Medical Aid appoint-

ments because experience had convinced me that the work could not be done satisfactorily or ethically, as I had, as stated above, no direct control of the company's canvassers. And I make this solemn declaration conscientiously believing the same to be true.

Then there is a Declaration by Mr. O'Farrell, of Norfolk Square, Great Yarmouth. He says: On the local practitioners in March, 1896, uniting in a local Medical Association I became a member, and am still a member of such Association. From its very inception the members agreed not to canvass, or knowingly permit others to canvass directly or indirectly on their behalf for patients. At the time of the formation of the local Medical Association I was medical officer for the Medical Aid section of the London and Manchester Assurance Company, but in view of the above understanding I resigned my position, being satisfied that the holding of such an appointment was quite contrary to such understanding. My resignation, however, did not take effect till after the expiration of a six months notice. The London and Manchester Assurance Company had a collecting agent who canvassed persons to join, but as this agent was, I am informed, paid by commission on the amount of the business done, he would use, and invariably did use, every effort to get members, and would, I am satisfied, use the Medical Aid as an inducement to attract members to the Life Assurance department. The system appeared to me to be one of indiscriminate canvassing, the collector calling on the private patients of other medical men, asking them to join the Insurance Company, and holding out as an inducement the alleged benefits of the Medical Aid department, and possibly introducing into the canvass the name of the medical officer. I was satisfied, and so were the whole of the members of the association, that where Medical Aid departments were managed by Industrial Life Insurance Companies as an adjunct to their legitimate business of life insurance, it was impossible for either the medical officer or the company to prevent the agents from using the Medical Aid as an inducement to attract members to the Life Assurance department. As the canvassing of those collectors appeared to me to amount to indirect canvassing for the benefit of the medical officer of the Medical Aid section of the insurance company, and as I was altogether averse to such a course of action, and agreed entirely with the understanding arrived at by the members of the local Medical Association above referred to, I, as stated above, resigned my position as such medical officer, and I make this solemn declaration, conscientiously believing the same to be true.

Dr. Bateman: That is my case.

The President: You have now put in all your proofs?

Dr. Bateman: I have handed in all the documents.

The President: You will observe, Mr. Walton, our procedure is that you state your case and produce your proofs in support of it; but our custom is that you only address the Council once, either before or at the conclusion of your proofs.

### Opening of Case for Respondent.

Mr. Lawson Walton: I have some proofs and some witnesses in attendance, but I feel that until I have intimated to the Council what is the defendant's view of the charge against him, it will be a little difficult to connect the bearing of the case with the evidence which may be called. Therefore, I should like at once to deal with the charge, and such evidence as the Council may think necessary to hear can be adduced, because if they accept the view which I invite them to adopt, it is not a case in which evidence will be of very much assistance. I think, therefore, the best course will be for me to address the Council at once. There are two questions which appear to us to arise in connection with this charge. The first is whether the allegations made against Dr. Rendall bring him within the scope of the resolution passed by this Council in June, 1899, indicating their opinion with regard to a certain course of professional conduct. The second question will be, on these facts, whether it can be said on reasonable grounds that professional misconduct has been shown. I should like to deal with those two questions separately. First, I submit to the Council that, accepting for the sake of argument the case that is made, the allegation does not fall within the terms of the resolution to which I have referred. The resolution is one which condemns the practice of systematic canvassing for the purpose of procuring patients. Now, except as an indication of the opinion and the view of the Council, the resolution does not appear to have any binding effects upon its members. But it will be observed that the resolution has been most carefully framed, having regard to the very great difficulty which the Council no doubt feel in dealing with a large number of provident institutions existing throughout the country for the purpose of providing medical aid to the very poor. It was not intended to proscribe all these institutions. It was recognised that these institutions in many cases were of great advantage to the profession itself, because they ensured the employment, at terms of remuneration, of medical men who otherwise would not be employed at all by a certain class, who would either resort to the dispensary or to the hospital. It also recognised that it was a very great advantage to the community at large that providence should be inculcated among the people in these social stations, and the patients be encouraged by means of these institutions to pay for the medical assistance they received. Therefore I may remind the Council of the very carefully-framed language of that resolution, because it is obvious it does not hit, and was not intended to hit, all societies which afforded medical aid to the poor. The objection is, in the first place, to systematic canvassing by any institution with which the doctor has associated himself, and systematic canvassing which is pursued with the object of procuring patients for the medical man who has become an officer of that institution. In other words, it attacks the medical official upon the ground that he has employed to his own professional advantage the canvassing machinery of the institution of which he has become a member, and he becomes a party to the employment of that machinery. So that you must have systematic canvassing by the organised and recognised machinery of the institution. You must have knowledge of the existence of that canvassing by the medical officer; and you must have conscious employment by him of that machinery for his own professional advantage, and the acceptance of the professional profit which ensues from it. As I gather, it is only in that mode that the language of this resolution can be used, so as to bring personal censure to bear upon the members of the medical profession who may be affected. I wish to point out very briefly that two important elements which are present in the language of that resolution are entirely absent from the case as it is presented for the consideration of the Council. In the first place there is no systematic canvassing, and has been no systematic canvassing, by the Medical Aid Society of which Dr. Rendall has become an officer; and in the second place any canvassing which has been recognised, and which exists, is not canvassing for the purpose of procuring him patients, but it is canvassing carried on for the purpose of promoting the insurance business of the Liverpool Victoria Legal Friendly Society, with which the Medical Aid Society is affiliated. To make this position clear, it is necessary that I should very briefly point out what is the connection which exists between the two bodies to which I have referred. There is first the Friendly Society, which is in the nature of a burial club or a life assurance on a small scale, and that is doing a considerable volume of business. It exists for the use of poor people in a poor position of life. There is also what I may call a sick benefit club; that is to say, there is a Medical Aid Society by means of which medical aid is furnished for a small weekly payment. Those organisations are legally distinct, and they are also distinct entirely in their origin and history, although they have become closely connected in their present operation. The Friendly Society came into existence first, and was a mere Insurance Society, and no medical aid in cases of sickness was given. The benefits were given solely in the case of death. In fact, it was a Friendly Society; it made no profit. It simply divided its funds in the shape of benefits in the case of death to its members. One enterprising and ingenious officer of the Friendly Society started a Medical Aid department in one of the large centres, a department which he organised himself, and which attained a very considerable degree of success. He was dismissed, and the Friendly Society had to take up the business. They had to provide for a Medical Aid Club, and the only way in which it could be done, as they thought, was by extending it, and they thought it would be of great benefit to the classes for which it was intended if they did so. I fail to see how that policy can be challenged. They wanted legitimately to extend that business in connection with the Friendly Society in all its different centres, and they registered what they called the Medical Aid Company. It has a very small capital, and it makes no profits. It is carried on at the risk of a few directors, who are not shareholders. It exists simply for the purpose of collecting the pence weekly, and guaranteeing the salary of the medical men who act as its officers in the different centres, and I think it pays over to them as much as 80 per cent. of the pence it receives. Of the remaining 20 per cent., it is estimated that 10 per cent. goes in collection, and, of the remaining 10 per cent., 7½ per cent. goes in office expenses, stationery, and rent, and things of that kind, and the remaining 2½ per cent. is absorbed in sundry managers' expenses. In fact,

what they collect in connection with this Medical Aid Society is disposed of in this way; the doctors' proportion is 80 per cent.: collectors' remuneration, 10 per cent.: manager's remuneration, 2½ per cent.: and rent, stationery, clerks' services, staff expenses, and so on, 7½ per cent. There are no shares, and no dividends declared or profits made. They simply divide the whole revenue, which they obtain by means of this Medical Aid Society between the medical man they employ, and the expenses incidental to his employment, so that it is distinctly not a profit-earning, dividend-paying, concern, but it is a medical adjunct to an insurance society. Now, if I may say so with deference, it would be a very strong thing for the Council to prescribe the practice or policy of an insurance society, assuming it to have a legitimate position and carrying on legitimate business, from establishing as an adjunct to its usefulness a sick club in the nature of a Medical Aid Company. The Insurance Society gives a benefit to the poor solely in case of death: it does not provide for the case of sickness; and when you have a machine consisting of a staff of collectors working among poor people, and begging them to insure their lives, it is obvious that they will have to deal with cases of sickness, and it is also obvious that these poor people will naturally inquire, "What is to happen if we do not die, but have a very serious illness?" That an insurance company may—and, I submit, legitimately may—establish an aid company of that kind, is a proposition which I submit to the Council, and invite the Council most carefully to consider and accept. At all events, it is not challenged in this case that the Friendly Society did adopt that system. They founded the Medical Aid Company, and they founded it simply for the purpose of giving to their own members, and to no one else, medical aid in case of sickness. Until the month of June, 1899, no censure which could in any way affect the operations of the Medical Aid Company had been pronounced by this Council. That company was then in existence; it had been in operation for some time; it had a staff of collectors, all of whom were employed in connection with the insurance society, and whose business it was to obtain members for the insurance society, and if those members afterwards chose to join the Medical Aid Company and to pay their contributions they were entitled to the relief for which that company made provision. The only connection between these two bodies is that which I have described—namely, that the Medical Aid Company was extended, and extended solely to those persons who had already insured their lives in this insurance club. Of course, one cannot say that the one agency assisted in its operations the other, because inasmuch as it is the interest of an insurance society to keep alive its members as long as possible, it is in the interests of that society to give medical aid among its own members if they desire it, and give them medical aid on terms which may be most favourable to those persons. The interdependence and natural connection between these two societies, I submit, is very difficult to dispute, and it is extremely difficult as a matter of policy for this Council to discourage it. The resolution had to be dealt with, and I shall call before you the officials of the Medical Aid Company, if necessary, who will tell the Council exactly what happened. At that time they had not been in any way censured, and their practice had not been in any way criticised. Their collectors were none of them employed in connection with the Medical Aid Company. They had not a single collector, and they paid no commission in connection with procuring business for the Medical Aid Company. The collectors are upon the staff of the Friendly club, and their business is to obtain the insurances. They are paid a commission for obtaining insurances, and they are not paid, except in the payment of a commission for collection in connection with the Medical Aid Company; in other words, they are not remunerated for obtaining members of the Medical Aid Company, but, of course, the advantages of belonging to the Medical Aid Company are encouragement to the insurance society. I followed Dr. Bateman's statement, and I have read these papers, and I cannot dispute the proposition, and I wish to face it at once frankly—and ask the Council to deal with it—that no doubt a collector whose business it is to try and induce poor persons to insure their lives in a particular society will say: "If you join our society you will be able afterwards to join the Medical Aid Company." He would be in a position to say that. He is not instructed to say it; it is not his business to say it. As a matter of fact, he is instructed not to say it, and he gets no advantage to say it, but I admit that he may say it. That, of course, I cannot deny, because it is undoubtedly an advantage and a recommendation. What he is employed to do is to canvass for the Friendly Society, and no doubt one of the advantages of belonging to that society is that the Medical Aid Company may be joined by the members of the Friendly Society, because the advantages of that Medical Aid Company are not open to all the world. The officials of the society will tell you that the collectors are distinctly cautioned and have been distinctly cautioned against using in any way their position to the advantage of the Medical Aid Company, because the society gets nothing out of the Medical Aid Company. There is no dividend and no profit; it is not to their interest to encourage the Medical Aid Company. Their interest is to encourage the insurance society and it is only because of the incidental advantage which attends the belonging to the insurance society that no doubt assists in some way the business of the Medical Aid Company. I can perhaps show the justice of those remarks by giving some statistics. I have had inquiries made as to the proportion of the members of the Liverpool Victoria Legal Friendly Society who afterwards join the Medical Aid Company, and I find throughout the kingdom that of all the members of the Friendly Society only 6½ per cent. availed themselves of the advantage of the Medical Aid Company. There are no fewer than 2½ million members of the Friendly Society and of that number only 6½ per cent, or 150,000 have availed themselves of the advantage of the Medical Aid Company. Therefore, those two figures, as I submit, show conclusively that the two societies are not run together, that they do not work together, but that the Medical Aid Company only exists for the purpose of affording to the members of a very much larger body medical assistance in cases of sickness if they want it on the extremely moderate terms at which that assistance is provided. I point this out, because I am dealing with matters which I do not think are in controversy. Now let me satisfy the Council of the *bona fides* in this matter not only of the officials of the Medical Aid Company but of Dr. Rendall, and their anxiety to keep within the legitimate scope of what the Council may consider the legitimate sphere of a medical man. Dr. Rendall when complaint was made to him by his brother practitioners in Yarmouth went to the agent, Mr. Cully, of the Medical Aid Company, and told Mr. Cully that a complaint had been made by Mr. Wyllys that canvassing was carried on. Mr. Cully told him that the collectors of the Medical Aid Society had been told expressly they were not to canvass, and that no canvassing existed. Mr. Cully went further. He called the collectors together and he told them what had happened in Yarmouth, and he inquired whether there was any foundation for the statement made. The men all repudiated it and denied it, and Mr. Cully told them that if any canvassing of the sort took place it would be in defiance of the instructions which he had received from the head office, and if it were shown to exist in the case of any one of the collectors he would be instantly dismissed. Dr. Rendall himself saw the collectors and questioned them, and they all denied it. Dr. Rendall communicated to Mr. Wyllys what took place, and said it was repudiated and denied and invited Mr. Wyllys to give him the names of the persons whom he alleged had been canvassed. Mr. Wyllys never answered that letter, so that both Dr. Rendall and the local representatives of the Medical Aid Company did their best to get to the bottom of this charge, and in so far as it involves a specific charge of canvassing attributed to the Medical Aid Company it was found by them to have no foundation. Dr. Rendall will tell the Council further that he sees a large number of these people who are his patients, and he has asked them in each case, "How did you come to me? Have you been canvassed?" and he has found in every case that these people say they were recommended by somebody else. They recommend each other, and the collectors have been the agency by means of which this practice has been got together. We know what human nature is. I am not going to say that a particular collector when the subject is mentioned will not dwell on the professional merits of Dr. Rendall. I am

not going to say that if a poor woman asked the question the collector will not give her the information that she requires. But the question is not whether it is casual canvassing, not whether it is unauthorised canvassing, but the question is whether you have authorised or systematic canvassing of which the doctor knowingly avails himself for the purpose of advancing his own professional interests. We have had a numbers of statements read by Dr. Bateman. All I can say is that the moment we got the names of these different people submitted to us the people were approached, and I think in one case one of the good women, a Mrs. Nutman, has furnished to us a statement, as well as to Dr. Bateman, and the two statements entirely contradict each other.

Dr. Bateman: That is only what I expected.

Mr. Lawson Walton: These people are referring to a matter which had occurred some time ago, and I daresay they would be mystified if they were asked whether canvassing took place; they would be at a loss to know what canvassing means. I understand it is one of the most difficult terms to define. The statements are very vague and loose amongst the people in the class of life from which the club members are drawn, people who are proverbially unreliable and inaccurate. If the Council thinks it worth while to go through the contradictory statements on the subject, the facts will probably result in this: That in some cases some of the collectors may have exceeded their duty and may have done what they were not authorised to do and were told not to do. They are thrown into contact with these people, and may have recommended the Medical Aid Company, and there may in that way have been some canvassing. But I think I am in a position to show conclusively that that canvassing was not authorised, was not recognised, and that it was in defiance of the recommendation of the Society, and was in no sense systematic. I think I am further in a position to show that it certainly has not existed to Dr. Rendall's knowledge or approval. In saying that Dr. Rendall has discountenanced throughout any direct canvassing for his own professional benefit, of course the man cannot be prevented from canvassing for the insurance society; that has nothing to do with him. But, to show that he is perfectly honest in discountenancing any canvassing for his own direct professional benefit I have to point to the letters which he wrote to Mr. Wyllys at the time, because when the matter was first brought to his attention he said he would inquire into it. He said he had inquired into it. He said no one could more strongly disapprove of canvassing than he did, and he assured Mr. Wyllys, as was the fact, that no canvassing had existed to the knowledge of the collectors or the officials of the Society, and had been repudiated by the collectors, and he invited Mr. Wyllys to give him the means of ascertaining whether there was any foundation for this charge. I really cannot understand how Mr. Wyllys could fairly have withheld from Dr. Rendall the means of satifying himself in reference to this matter. Mr. Wyllys says it was common opinion. But nothing is more fallacious than common opinion. I have no doubt that the persons to whom Mr. Wyllys was referring did not distinguish between canvassing for the insurance club and canvassing for the Medical Aid Company. There was canvassing for the insurance club, but the canvassers who worked for the insurance club were not permitted to recommend the Medical Aid Company or canvass for that company except in the indirect way that the members of the insurance club, amongst other advantages, have the advantage of sick benefit if they chose to afterwards join the Medical Aid Company. Mr. Moxon admitted to me that what took place at the interview was not unimportant, because it showed at all events that Dr. Rendall was doing no harm to the medical men in Yarmouth by what was taking place. As Mr. Moxon said, he told Dr. Rendall that he would not get a practice in Yarmouth amongst those people as they were too poor. What does that mean? That means that Dr. Rendall was working in connection with this provident institution among a class of the population so poor that they could not afford to pay for medical services in the ordinary and regular way. I ask, Can anyone seriously say that it is a serious and reasonable ground for finding a professional man guilty of infamous conduct in a professional respect, when it is admitted that he has been labouring amongst a class of the population who could not command medical skill except upon the terms on which it was supplied by means of this agency? It is philanthropy, not infamous misconduct. If Dr. Rendall could have been shown to be getting paying patients from other medical men by means of this agency, and if the agency were working amongst that class of population, I could understand the censures and the strong indignation that might be felt against him by his brother medical men; but if it is admitted that the class of the population is so poor that no medical man can get a medical practice amongst them, then the agency, so far from doing harm, in every sense is doing good, because at all events one medical man is being employed by these people, and one member of the profession is receiving remuneration which would not have been received otherwise from this class of people, a class of people who would have gone to the dispensary or to the hospital, and would not have afforded any source of income to the medical profession. Throughout this case from first to last Dr. Rendall has shown a spirit to act entirely within the scope of the resolution of this Council. In the first place, there are his letters to Mr. Wyllys, which have been read. Then there are letters which Dr. Bateman has not read to the Registrar of the Council, and I really think that I should read one of these letters because it shows the spirit with which Dr. Rendall has throughout approached this matter. Perhaps I may say that he is a medical man entirely free from all reproach, and bears a high character. I have a bundle of testimonials before me which have been given at different times, one, I think, from the Chairman who presides over this Council while he was connected with the hospital at Edinburgh, and others given by medical men of high position in different parts of the country. He held an official position under the Admiralty in one of the Orkney Islands. He is a man against whom not a word can be said, and he is only anxious to do what is right. He cannot compromise, and has no wish to compromise, the institution with which he is connected, and the institution is here not merely in defence of Dr. Rendall, but in the defence of a system which they submit to the Council does not properly fall within the Council's censure, and which cannot be attended with injury to the profession, but with great benefit to the whole body of the poor public. I should like, before I sit down, to read that letter to which I have referred, because it shows, as I have said, the spirit with which Dr. Rendall has approached this matter. It is a letter written to Dr. Bateman on March 8th, 1901. On March 4th, 1901, Dr. Bateman wrote to Dr. Rendall, and said that he had been directed to ask him whether he still held the appointment in the Medical Aid department of the Liverpool Victoria Legal Friendly Society, and he said it appeared from certain evidence laid before them that canvassers were employed to tout for patients in this company, and that information had been furnished that patients of other medical practitioners had been so canvassed, and Dr. Bateman pointed out that, if such evidence was correct, it was clear that the conduct in question would come within the jurisdiction of the General Medical Council. Dr. Rendall disputes that, and in his letter of March 8th he writes to Dr. Bateman as follows:

Dear Sir,—Yours of the 4th inst. to hand. I beg to contradict the statement made to you that the above Society employs canvassers to tout for patients, as least not in this district. There was a good deal of discussion between the local Branch of the Incorporated Medical Practitioners Association and myself regarding this last year. I made careful inquiries into the matter, and was satisfied there was no systematic canvassing carried on then. I have again, from time to time, questioned patients who have recently joined, and they, without exception, deny having been canvassed, but had become members of the Society through the recommendations of their friends or neighbours who were already members. I hardly think that any of the collectors of the Society would dare to canvass or tout for patients to the Medical Aid branch, as they are liable to immediate dismissal for that offence. However, if such reports and allegations have reached you, be good enough to let me know particulars, so that I may find out if they are true. I may here state that in my last letter to the Honorary Secretary of the Incorporated Medical Practitioners' Union, I asked for evidence of any canvassing, and the only communication I got in answer was received some considerable time afterwards, and it only amounted to a demand to be informed if I still held the medical appointment to the Society. I deeply

regret that there has been such bad personal feeling raised locally over this question, and I am sure that the methods adopted of wholesale condemnation without practical proofs are not conducive to reform, if such reform is necessary. There is one thing that appears peculiar to me, and points to a personal attack in this whole affair, and that is—I have a medical colleague in this borough who holds a similar appointment in the Liverpool Victoria Legal Friendly Society, and is under the same local management in every respect, and yet he has been left entirely unmolested. In conclusion, I beg to affirm that I strongly disapprove and abominate canvassing or touting for patients, either personally or through the medium of others, and nothing of such a nature has ever been countenanced by me,

There is no answer whatever by Dr. Bateman to that letter, and I may take it that in March of this year before the then meeting of the Council at which he proposed to bring up this matter, but which for some reason he did not do, I assume he had materials which one would have thought he might have sent to Dr. Rendall and allowed Dr. Rendall to examine for his own satisfaction. On May 14th a letter was written by Dr. Rendall to the Registrar of the General Medical Council, which was also written before the last meeting of Council, and which is as follows:

Since receiving your communication of 8th instant I have been making careful investigation regarding the allegations made against the Liverpool Victoria Legal Friendly Society in respect to their canvassing for patients in the medical aid in this town, and I can firmly assert that I find no trace of evidence to show that such is the case. By way of explanation, I may say that I know there is a good deal of jealousy and bad feeling shown towards me by several of my medical brethren in combination with officials of insurance societies in this town other than the Liverpool Victoria Friendly Society; and in further explanation of the matter I will here quote a letter I wrote during March last, in answer to one received from Dr. Bateman, General Secretary of the Medical Defence Union.

Nothing is done. Dr. Bateman does not bring the matter before the Council at its last meeting. Dr. Rendall had asked for particulars and he received no answer to his letter. He communicated with the Registrar and sent a copy of his reply to Dr. Bateman. He asked that these materials with all the evidence should be submitted to the President of the Council, and said he was quite willing to abide by the opinion of the President in the matter if the materials were placed before him. I do not know how far the President received these materials, but it does show an honest wish on the part Dr. Rendall to act within honourable professional lines in connection with this matter. You will accept the challenge of *bona fides* in connection with this matter and will at all events acquit him of any acquiescence in or approval of any canvassing which has been taking place, because he has over and over again inquired into it and begged to be provided with evidence of it, and no such evidence has been given him: and as far as he has been able to ascertain, there is no foundation for that challenge. Now, Sir, I propose to put before the Council, if the Council think it necessary to receive it, a statement that we have been able to obtain contradicting the specific allegations of canvassing which are referred to in the statutory declarations made in support of the complainant's charge. I also propose to call Dr. Rendall, and to call evidence of the leading officials of the Medical Aid Company to show what their attitude has been uniformly in reference to any canvassing on the part of their staff of collectors in connection with the medical aid. As I have said, the remuneration of their collectors, in so far as it consists of a commission, is remuneration in connection with the insurance. I think the only pay they get in connection with medical aid is a payment for collection: they get a certain commission on the payments collected in connection with this. I believe in connection with these clubs it is found that unless you employ a collector and pay him for collecting, you could never get the money from your members. It is the usual payment. There is no payment in connection with the introduction of business except that the payments for the first three weeks are allowed to be retained by the collector as remuneration under the Medical Aid Company. I am sorry to have detained the Council so long, but I thought it important to communicate just what are the grounds on which this charge is met, because the Council will, of course, recognise that they are laying down now principles of very great importance, principles which do not merely affect this body, but must affect a very large number of bodies. The cases not only affect Dr. Rendall, but, I am told, 2,000 medical men connected with Medical Aid Companies in a similar capacity. In so far as the Medical Aid Companies are affected, all the kindred societies throughout the kingdom are affected, and therefore the inquiry is a very wide one. I am anxious to point out to the Council that the issue, so far as it arises in this particular case, is, whether the language of that resolution has been infringed, and if the language of that resolution has not been infringed, as I submit it has not, then the occasion for this inquiry, I submit, has altogether ceased. There has, I submit, been no systematic canvassing for the purpose of securing patients as distinct from the purpose of procuring persons to insure their lives. There is no evidence that it has been assisted by Dr. Rendall, but this proof rests on the evidence which I shall call before the Council.

Dr. Bateman: Allow me to intervene for one moment. I wish just to clear up one point. I may say that the matter was reported to the Council, and all the statutory declarations and evidence were put in on May 2nd, 1901, by us. The reason why it was not taken at the last session I do not know.

Mr. William Edward Peters.

*Examined by* Mr. Charles Mathews.

Q.—I believe you are chief clerk of the Liverpool Victoria Legal Friendly Society?

A.—I am.

Q.—And are you a director of the Medical Aid Company?

A.—I am.

Q.—The Society was formed in the year 1844, or thereabouts?

A.—That is so.

Q.—But the company was not registered until 1886?

A.—That is so.

Q.—What is the number of members of the Society?

A.—We have 2½ million members in the Society.

Q.—And what proportion of that number belong to the Medical Aid Company—150,000?

A.—That is all.

Q.—How many doctors are employed?

A.—About 2,000.

Q.—In the Society I mean?

A.—That is in the Society.

Q.—In the Medical Aid Company?

A.—No, not so many in the company: I mean in the Liverpool Victoria Legal Friendly Society.

Q.—In the Medical Aid Company would there be some 750 doctors employed?

A.—I think nearly 1,000 in the Medical Aid Company.

Q.—Do you employ canvassers in connection with the Society's work?

A.—We have canvassers.

Q.—I mean canvassers who have no relation whatever to the Medical Aid work?

A.—They are simply collectors for the Liverpool Victoria Legal Friendly Society, and they naturally would not canvass for the Medical Aid Company at all.

Q.—They are canvassers for the one Society?

A.—Yes.

Q.—Do you know yourself, having given them, what instructions they received in regard to canvassing for the Medical Aid Company?

A.—I know of my own knowledge.

Q.—What are those instructions?

A.—A special letter was sent to them in June, 1899, informing them of the resolution of the Council, and instructing them that they were not to do any canvassing.

The President: Canvassing for what?

A.—Canvassing for the Medical Aid Company.

The President: You are referring now to the collectors in the Insurance Society, the Liverpool Victoria Legal Friendly Society. They were instructed that they were not to canvass for the Medical Aid Company?

A.—That is so.

The President: Would you look at one of these cards which have been handed in [handing same to witness]? Look at the foot of the card and you will find the name of the district, which in this case is Great Yarmouth, and below that the name of the collector. Now who is that collector?

A.—His name is Newark.

The President: Is he a collector for the Insurance Company or for the Medical Aid Company?

A.—He is a collector for both.

The President: But which of the two Societies pays him?

A.—Both societies pay him something.

The President: Do you mean they pay him a percentage or a fixed sum?

A.—He gets a collector's percentage for the Victoria and a small commission for the Medical Aid for the trouble of collecting.

The President: You will observe that in addition to the name of the collector on the card there is the name of the doctor.

A.—Yes, Dr. Rendall.

The President: Who puts the doctor's name on these cards?

A.—The collector writes that on after the person is elected to have medical relief.

The President: The doctor's name written on the card is the doctor for the Medical Aid Company?

A.—Yes.

The President: The appointed doctor?

A.—That is so.

The President: The doctor appointed by the Medical Aid Company?

A.—Exactly.

The President: I beg your pardon, Mr. Mathews, for interrupting; but I thought it was necessary to get the information on this point.

Mr. Charles Mathews: I am much obliged to you, Sir. [To the Witness]: With regard to this card, I see at the back of it that it is only given to a person who becomes a member after payment for membership?

A.—That is so. They do not see that card before they become members of the company.

Q.—And they have to pay something for the purpose of receiving this card? I am told that appears upon it somewhere?

A. The collector gets a small fee at times, but people are so poor that they often do not pay a penny for the card.

Q.—But is that the rule, that the entrance fee for each family 6d., and the charge for the subscription card is 1d?

A.—The collector can insist upon receiving that.

Q.—But you say, with regard to the card and its contents, that it is only made known to the beneficiary after he has agreed to become a member?

A.—Precisely.

Q.—The Friendly Society is, as its name denotes, a Friendly Society in all things?

A.—Yes, that is so.

Q.—It is not an insurance company carrying on a business at a profit?

A.—No.

Q.—With regard to the Medical Aid Company, what do you say as to that? Has it any profitable existence—any large monetary returns or anything of that kind?

A.—Absolutely none. It is the same as the mutual arrangement of a Friendly Society in effect.

Mr. Charles Mathews: Have you the card before you, sir?

The President: Yes.

Mr. Charles Mathews: The card which I have is in blank, but I understand the doctor's name is written on the card which you have.

The President: Yes, it is written upon it.

Mr. Charles Mathews: I have not the doctor's name on card before me. [To the witness.] That would be an entry made by the collector after the person had become a member?

A.—Exactly.

Q.—And for the purpose of giving him the name of the doctor?

A.—Exactly.

Q.—For the purpose of giving him the name of the doctor connected with the Society in a particular place?

A.—Exactly.

*Cross-examined by* Dr. Bateman.

Q.—I suppose the collectors start out in the morning with policies in one pocket and cards with the doctor's name on in the other, do they not?—is not that the case?

A.—It is just possible they might carry both.

Q.—But is it usual—general?

A.—I could not say that of my own knowledge.

Q.—But you would rather object if they did not do that, would you not?

A.—We have no regulations.

Q.—You mean to say that it is not to your interest to have an increase of members in the Medical Aid Company at all?

A.—No.

Q.—Is it not to the interest of your collectors?

A.—No.

Q.—Do you not get extra fees?

A.—The collectors get such a trifle that they do not care for it.

Q.—But do not trifles make a big whole in the end?

A.—Seeing that is only 6½ per cent. of the entire membership of the Victoria, it is not much.

Q.—Still I may take it that they do get an increased pay by gaining members for the Medical Aid Company?

A.—They get a trifle, but the work is not worth it.

Q.—You have forbidden them to canvass?

A.—Absolutely.

Q.—You have had a difficulty in getting medical men for the National Medical Company have you not during the last year?

A.—We had some difficulty on account of the war. We have had difficulty.

Q.—But even before the war you had difficulty, had you not?

A.—We had not so much difficulty before the war.

Q.—But you have had a good deal of difficulty?

A.—We have had difficulty at times.

Q.—You had to go to the Orkneys for your doctor?

A.—I was not aware of it.

Q.—May I ask how you got into communication with Dr. Rendall?

A.—I am not aware.

Q.—Do you advertise the appointments?

A.—Sometimes.

Q.—What do you advertise them in?

A.—In the *Daily Telegraph*, perhaps.

Q.—Not in the medical papers?

A.—No.

Q.—Do you know why? Is there any reason why you do not advertise in the medical papers?

A.—I do not know.

Q.—Would you not have thought that that was the best source of obtaining medical men, that you should advertise in the medical papers?

A.—No, we think the public papers are as good as any.

Q.—Have the medical papers refused your advertisements?

A.—No, not to my knowledge.

Q.—Are those cards sent out wholesale to these various agents? Do they come from the London office or are they sent out from the district offices?

A.—They are sent out from the London office: they are sent to the district offices with a lot of stationery.

Q.—How does the member get to know the doctor's name—how are the advantages of medical aid brought to the notice of those persons who are members of the insurance society?

A.—Generally by repute. Neighbours recommend one another to join.

Q.—But how do you first get into the district, because there must be some origin of the National Medical Aid Company in the district? What do you do? Do you get a medical officer first of all, and then employ canvassers?

A.—No.

Q.—You have been opening a lot of districts during the last few years, have you not?

A.—I cannot say in the last ten years. We have been in existence since 1886, and the districts are practically the same.

Q.—I did not quite understand what you said just now as to how you get fresh members for the Medical Aid. I contend that your canvassers go round touting for the Liverpool Victoria Legal Friendly Insurance Society, and at the same time it is to their own advantage and to the advantage of

their medical officer to tout for the Medical Aid department. That is my contention.

A.—That is not the case.

Q.—Do you say they are sufficiently honourable never to wish to increase their incomes by canvassing?

A.—I am quite sure they adhere to their orders.

Q.—Do you know Mr. Bingham?

A.—I have met him.

Q.—Is he one of your agents?

A.—He was one of our agents.

Q.—Up to what time?

A.—Up to about April this year.

Q.—Was he discharged?

A.—No.

Q.—Then he would have remained on until this meeting? You would have kept him on; there was nothing against him?

A.—Nothing against him.

Q.—He was an honourable man?

A.—Yes.

Q.—And he did his business properly?

A.—Yes, as far as I know.

*By the Council.*

Sir WILLIAM THOMSON: I should like to ask whether I took this answer quite correctly—that the Insurance Society works without profits?

A.—No, not the Insurance Society, but the Insurance Society cannot divide any profits except amongst its members.

Sir WILLIAM THOMSON: Are there many shareholders?

A.—No, there are no shareholders of the Insurance Society at all.

The PRESIDENT: Do you mean that it is a mutual Society?

A.—It is simply a Society with a representative Committee elected at the annual meeting of members. That Committee can be removed in twelve months, if necessary.

Sir WILLIAM THOMSON: Then nobody makes any profit in connection with the Society?

A. That is impossible, by the law. The funds are divided amongst the members annually.

Sir WILLIAM THOMSON: The profits are entirely divided amongst the members?

A.—Yes; if any profit is shown it is added on to the existing policies.

Sir WILLIAM THOMSON: Therefore, I suppose the more successful this Society is in getting an income the larger division of profits there will be for the members?

A.—That is so with regard to the Liverpool Victoria Legal Friendly Society.

Sir WILLIAM THOMSON: Do I also understand that no person can be a member of the Medical Aid Company who is not insured?

A.—That is so.

Sir WILLIAM THOMSON: You tell me that there is no dividend?

A.—No.

Sir WILLIAM THOMSON: Am I also right in understanding that there are about 2½ million members in the Society?

A.—Yes, in the Victoria Society.

Sir WILLIAM THOMSON: And the gentleman who collects the money for the Insurance Society is also the gentleman who puts in the name of the doctor on the card, and collects the money for the Medical Society and returns it; he is one and the same person?

A.—Exactly.

Sir WILLIAM THOMSON: The canvasser who represents the Insurance Company is the collector also of the Medical Company?

A.—Exactly.

Sir WILLIAM THOMSON: And he does the two classes of work at one and the same time?

A.—That is so.

Mr. TOMES: You said, I think, that there were about 2½ million members in the Victoria Society?

A.—Yes.

Mr. TOMES: And that 6 per cent. of those only belong to the Medical Aid Society?

A.—Yes; 6½ per cent.

Mr. TOMES: That is, roughly speaking, 150,000 members?

A.—Yes.

Mr. TOMES: And I believe you said there were 2,000 doctors employed?

A.—I had to correct that. That was for the Victoria Society altogether.

Mr. TOMES: But about 2,500,000 members belonged to the Victoria Society?

A.—That is so.

Mr. TOMES: And 6½ per cent. of those members belong to the Medical Aid Company?

A.—Yes.

Mr. TOMES: That is 2,000 doctors to the 150,000 members, is it not?

A.—Perhaps I ought to explain. If a doctor is acting as medical officer to members of the Life Assurance Society—for the Victoria—it does not necessarily mean that he is doing anything for the Medical Aid Company.

Mr. TOMES: That was not at all clear to me. You led us to infer that there were 2,000 doctors employed in connection with the Medical Aid Company. It was put to you by somebody, by one of the Council, that any decision which might be arrived at would affect 2,000 medical men.

A.—I do not know whether you are referring to the observation of Mr. Lawson Walton when he said, I fancy, that 2,000 doctors belonging to institutions in connection with the various Medical Aid institutions of the country might be affected by any decision of the Council.

Mr. TOMES: Quite so. It would lead to the inference that they were connected with the Medical Aid Company. I have worked it out, and I find that comes to only 75 patients to each doctor, and at 1d. a week would make about £15 a year for each doctor.

A.—I did not mean to convey the impression that the 2,000 doctors of the Victoria Society were connected with medical aid at all.

Dr. ATTHILL: With regard to the payment of these gentlemen, Mr. Lawson Walton said in his speech that the doctor got 80 per cent. of the total funds?

A.—Yes.

Dr. ATTHILL: And that the collectors got 10 per cent.?

A.—Yes.

Dr. ATTHILL: You said, I think, that it was a very small remuneration indeed. The other 10 per cent. went to the company?

A.—The manager gets 2½ per cent.

Dr. ATTHILL: That is the company. Do you know what the company receives out of these 150,000 subscribers? What is the amount?

A.—The expenses are all absorbed in the work of the office.

Dr. ATTHILL: You say that 80 per cent. goes to the doctor, 10 per cent. to the collector, and 10 per cent. to the company. You may divide it up how you like; but that works out pretty closely to between £3,600 and £4,000 a year as the share of the company. Is that no profit?

A.—The management absorbs a lot of that—the chief office and the district office. They take a lot of that 2½ per cent.

Mr. VICTOR HORSLEY: I observe that in the statutory declarations read by Dr. Bateman there were the names of four collectors—Newark, Mann, Willett, and Bingham. We have just heard that Mr. Bingham is no longer a collector, and I wish to know if the other three are still collectors?

A.—They are.

Mr. LAWSON WALTON: I think they are here.

Mr. MUIR MACKENZIE (Legal Adviser to the Council): What is the percentage of those who are insured by the Yarmouth Branch that are members also of the Medical Aid Company?

A.—I am sorry I have not brought any details like that with me. When I say 6½ per cent., it is speaking generally of the members all over the country. There are 150,000 members out of 2½ millions. I think the percentage may be a little higher at Yarmouth, because Dr. Rendall is very popular in Yarmouth, and that may be the cause of a few more joining the Medical Aid Society than would ordinarily join.

Mr. MUIR MACKENZIE: Are your collectors furnished with blank forms and cards to take round?

A.—Yes, they are furnished with blank cards, but they are not to give those cards unless the people elect to become members of the Medical Aid Company after joining the Liverpool Victoria Legal Friendly Society.

Mr. Muir Mackenzie: But they do have them to go round with?

A.—I do not know their actual practice, but I should imagine they would have them with them. They write these out at the street door after the person has decided to become a member of the company.

Dr. Glover: I suppose the joining of the Medical Aid department is always suggested to persons waited upon by the collector?

A.—That would be absolutely contrary to instructions.

Dr. Glover: But he takes the cards with him generally?

A.—That is on account of the initial payment which is generally made for the medical aid.

Dr. Glover: Do you think that generally proceeds from the person and not from the agent?

A.—That is my own experience. I have inquired into this matter personally, and I found that to be the case.

Dr. Glover: Are you prepared to say that the object of the Liverpool Victoria Legal Friendly Society in establishing the Medical Aid department is entirely a philanthropic one?

A.—I am.

Dr. Glover: Purely philanthropic?

A.—Purely philanthropic.

Dr. Glover: What is the relation of the Liverpool Victoria Legal Friendly Society to the great Friendly Societies we know, such as the Oddfellows and the Foresters?

A.—It is similarly registered as they are, under the Friendly Societies Acts.

Dr. Glover: But are the Foresters and Oddfellows of Yarmouth included in this Society of yours?

A.—No.

Dr. Glover: Are they quite distinct?

A.—They are quite distinct. They are registered also under the Aot. We have to work under the same statute.

Dr. Glover: As a matter of fact, have you any Oddfellows or Foresters in your district?

A.—I should not be surprised if we had, but I do not know.

Dr. Glover: They might be members might not they? There is no hindrance to their being members of the Friendly Societies is there?

A.—There is no hindrance to their being members.

Dr. Glover: As a matter of fact, the great Provident Societies of the country stand aloof from your Society, do they?

A.—Well, it is like this. People cannot become members of more than one Friendly Society if the benefit at death exceeds the total amount which is allowed by law—that is to say, if the total sum assured contravened the statute.

Dr. Glover: As a matter of fact, the Oddfellows and Foresters have their own separate arrangements in the case of death?

A.—I suppose they have their arrangements also.

Dr. Glover: Do you know that some societies have given up their Medical Aid in deference to the action of the Council?

A.—I am not aware of that.

Dr. Little: You said the canvassers were instructed not to give any name to the person until he had made up his mind to join the society?

A.—Exactly.

Dr. Little: Is the man when he produces the card under any obligation to receive it?

A.—I should not think he would produce the card until he was asked to.

Dr. Little: Is the recipient of the card under any obligation to receive it?

A.—I did not quite gather your question. I do nct know that they are under any obligation to receive it.

Dr. Little: Surely it is an absurd thing. They can see the card; they can hand it from one to another, and anyone who has a card can show it to another person?

A.—I think the people, when they have had the services of the doctor, might recommend the Medical Aid Company to their neighbours, and that is how we have got most of the people as members.

Dr. Little: Surely it is mere humbug—excuse my using the expression—for canvassers to keep the cards in their pockets and get people to join, because the person has seen dozens of cards before they got that one?

A.—It may be as you say.

Mr. Victor Horsley: I wish just to ask a question with your permission, Sir. The witness stated, in answer to Dr. Glover, that he was not aware of any Friendly Society, or such-like society, giving up its Medical Aid business or its connection with Medical Aid business. I wish to ask the witness whether he is not aware that the branch of the Refuge Insurance Company in Yarmouth has, in accordance with the statutory declaration of George Horne, the medical superintendent of that company, ceased to give medical aid for work in conjunction with an insurance business. Are you not aware of that?

A.—No.

Mr. Horsley: I mean the branch in Yarmouth?

A.—No, I am not aware of that.

Dr. Atthill: With respect to the monetary side of the question, what do you think is the pecuniary benefit which the manager gets out of the 2½ per cent. collected?

A.—I do not know; it would depend on the amount collected.

Dr. Atthill: You have said there are 150,000 members, and it is very easy to work out what a penny a week amongst 150,000 members would be?

A.—It is such a trifle.

Dr. Atthill: I have taken the trouble to do it and I find that it is between £900 and £1,000 a year. The total pennies per week amount to about £31,500. Without taking the interest, at 20 per cent., one-half of which goes to the collectors and of the other half 25 per cent. goes to the other man, which comes as nearly as possible to £950 a year?

A.—I have not made the calculation.

*Re-examined by* Mr. Lawson Walton.

I just want to make that clear. Is it any part of the organisation of the Mutual Aid Society that they should make profits and declare dividends?

A.—It is not.

Q.—Have they ever done so or attempted to do so?

A.—They have not.

Q.—As to the receipts which they get, you have told us how 90 per cent. is absorbed, that is 90 per cent. is absorbed in remunerating the agents—80 per cent to the medical man and 10 per cent. to the collector?

A.—Yes.

Q.—Has your experience shown that the remaining 10 per cent. is more than is required to meet the expenses of the concern?

A.—Our experience has been exactly that.

Q.—Is there one penny of profit?

A.—There is not.

Q.—I am using "profit" in the sense of revenue over expenditure.

A.—That is so.

Q.—As to that 10 per cent., 2½ per cent., I understand, s left for managers' remuneration?

A.—That is so.

Q.—One member of the Council told us what that worked out to in figures. How many managers would there be amongst whom that £800 or £900 a year would be paid?

A.—I should say about 300.

Q.—It is not the remuneration of the chief manager, but the remuneration of all the local managers?

A.—It is spread over a large number.

Q.—That being so, has the Mutual Aid Society, *per se*, s distinct from the Insurance Society, any motive in extending ts business?

A.—Absolutely none.

Q.—Does it employ a single canvasser or agent whose duty or business it is to canvass?

A.—It does not.

Q.—You have told us that the Insurance Society—what I call the Insurance Society, that is the Friendly Society—does employ canvassers?

A.—Yes.

Q.—And collectors?

A.—Yes.

Q.—But is there a single person in the employ of the Mutual Aid Society who could canvass without breach of duty?

A.—There is not a single person who could do it.

Q.—Just one question more. The Friendly Society, of course, is a profit-earning concern in this sense that all its profits are added in the shape of bonuses to the policies of its members?

A.—Exactly.

Q.—It is like all other Friendly Societies?

A.—That is so.

Q.—The holders of the different policies get the total values of their policies increased year by year in proportion to the success of the operations of the Society?

A.—In proportion to their interest.

Q.—Therefore it is to the interest of the canvassers of the Society to encourage that business?

A.—It is.

Q.—But they have no interest to encourage the business of the Medical Aid Society?

A.—They have not, and I have had that explained as I went round to the various districts.

Q.—What did they say about having any interest?

A.—They said it would not be worth their while to call specially at these houses for the Medical Aid on such small terms of remuneration. They recognise that there is some clerking work to be done when the fees are applied for, and they recognise that these fees cover that extra labour. They can at one visit transact the two portions of their business, but there is some extra labour involved in making out the cards for Medical Aid, and they press this thing upon the Society's collector.

Q.—Can you tell the Council, from your experience since June of 1899, when you issued these special instructions to all your canvassers, whether you have any reason to believe that those instructions have been disregarded either systematically or to any considerable extent?

A.—I have every reason to believe that they have not been disregarded, and I find, furthermore, to my satisfaction that the managers have on several occasions since that letter of ours impressed on the men that they must not canvass, and that is specially so in Great Yarmouth.

Q.—You are one of the directors, and I put it to you: Have you, as a body, done your best to give effect to that resolution of the Council?

A.—We have, undoubtedly. It was in connection with the resolution of the Council that we issued those special instructions against canvassing.

William Cully.

*Examined by* Mr. Charles Mathews.

Q.—You are the district manager of the Liverpool Victoria Legal Friendly Society at Great Yarmouth?

A.—Yes.

Q.—I think you have been engaged in that capacity since January of 1890?

A.—Yes.

Q.—Have you been also district manager at Yarmouth for the National Medical Aid Company?

A.—Yes.

Q.—Do you remember the passing of the resolution by this Council in June, 1899?

A.—I do not remember the passing of the resolution.

Q.—But you remember the fact that it was passed and had an intimation of the fact?

A.—Yes.

Q.—It was succeeded by the addressing to you of a letter signed by two of the directors of the National Medical Aid Company, which you received at Great Yarmouth. A letter dated September 22nd, 1899?

A.—Yes.

Q. Is that the letter. (Letter shown to witness.)

A.—That is the letter.

Q.—As a consequence of receiving that letter did you call a meeting of your collectors and read the letter to them?

A.—Yes.

Q. And have you since then taken care to inform any fresh collector of yours of the terms of the resolution of the Council?

A.—I have repeatedly.

Q.—Do you remember Dr. Rendall coming to take up his residence in Yarmouth?

A.—Yes, very well.

Q.—That was in the early part of 1900?

A.—Yes, January.

Q.—In the course of the May of that year do you remember Dr. Rendall coming to you about this correspondence which he had with Mr. Wyllys?

A.—Yes.

Q.—And as a consequence of his coming to you, did you make some special inquiries of the collectors who were on the spot?

A.—Yes, I asked each collector whether he had done canvassing, and each denied it.

Q.—Among the collectors who were so asked, were there the four who have been named here—Newark, Mann, Wylett, and, I believe, Bingham?

A.—No; Bingham was not employed at that time.

Q.—Had he gone?

A.—No, he had not been employed.

Q.—You made inquiry of the men on the spot, and did you report to Dr. Rendall the result of that inquiry?

A.—Yes. I reported to Dr. Rendall that I could find no existence of canvassing of any description. They utterly denied it.

Q.—In this year, 1901, was your attention again called to certain correspondence passing between Dr. Rendall and Dr. Bateman?

A.—Yes.

Q.—And again, did you make special inquiry into the subject matter of that correspondence?

A.—Yes, I made special inquiry again.

Q.—Could you discover that there had been any canvassing whatever on behalf of the National Medical Aid Company?

A.—No.

Q.—If there had been, would it have been in contravention and in disobedience to your order?

A.—Certainly.

Q.—What class of people are they who belong to this National Medical Aid Company? Is it a fact that they are very poor people?

A.—I should say very poor; they are amongst the labouring and fishing classes.

Q.—The fishing classes in Yarmouth.

A.—Yes.

Q.—And they would be about the poorest class there?

A.—They would.

Q.—When they were earning wages at all they would be very small wages?

A.—Very small, varying from 10s., 12s., 14s., up to 20s. per week.

Q.—And 20s. a week would be high?

A.—It would be, I think.

*Cross-examined by* Dr. Bateman.

Q.—Do your canvassers, before producing this card, ask whether the people require medical aid or not—how does the subject crop up?

A.—I do not think they ask it.

Q.—Then you think the people are so anxious to join the Medical Aid Company that instinctively upon joining the Insurance Society they ask for a card?

A.—I do not think they ask for a card.

Q.—How does the card get out of the pocket of the canvasser and into the hands of the person?

A.—They know we have the Medical Aid Company in connection with the insurance society.

Q.—How? that is what I want to get at.

A.—By the collectors going round collecting the Liverpool Victoria Legal Friendly Society money. They have hundreds of people to call upon, and it is natural that each collector would call upon a hundred or two hundred people who belong to the Medical Aid Company, and they recommend each other.

Q.—You think it is simply by the recommendation of the patients that you get members?

A.—I am sure it is.

Q.—How do you account for canvassing people who have other doctors and refuse to join?

A.—I am not aware that it has been usual.

Q. It has been sworn to, has it not, by Alice Redgrave:

Mr. Wylett showed me a card, and it was similar to the one now produced and shown to me, and marked "G." I did not ask him the terms. I said I should not join without my mother's consent. I have not seen him since. I am perfectly satisfied with my present oc[illegible]

I will not go into the evidence again, but a large proportion of the evidence which has been brought before the Council to-day proves distinctly that these people had their own doctors. How do you account for that?

A.—I cannot account for it at all.

Q.—You simply took the word of the canvasser, I suppose?

A.—Most distinctly.

Q.—That was quite sufficient?

A.—Yes.

Q.—I suppose it is much cheaper to get a canvasser to canvass for two societies than one?

A.—No, I do not think it is.

Q.—You think the work would be so heavy that it would be more difficult?

A.—It would not be so heavy. I want a good many collectors for the Liverpool Victoria Legal Friendly Society alone.

Q.—Do you think it would be impossible to get collectors for the National Medical Aid Company, and therefore you join the other on to that and get them to canvass for both?

A.—No, they canvass only for the Liverpool Victoria Legal Friendly Society.

*By the Council.*

Dr. GLOVER: You have told us that the class of persons who constitute the membership of your Society is very poor?

A.—Yes.

Dr. GLOVER: How do you manage to confine your attention to that poor class—do you give your agents any instruction: do they go to the very poorest class?

A.—It is natural they would, because the sum is so small. They would not think of going to a good class of house to canvass for the Liverpool Victoria Legal Friendly Society unless it was a bigger premium altogether. These are penny premiums.

Dr. GLOVER: Do you give him any instructions to avoid the better class of working people?

A.—No.

Dr. GLOVER: Or does your arrangement make any distinction between the Foresters and Oddfellows and one of the classes which are so very poor?

A.—I cannot see how they could make any distinction. It is a difficult thing to find out whether they belong to the Foresters or any other Society.

Dr. GLOVER: You have no restrictions. You give the collector a free hand to go all over the town?

A.—Yes, all over the town.

Dr. GLOVER: And into any house?

A.—Most decidedly.

Sir JOHN BATTY TUKE: How many members are there in Great Yarmouth belonging to the Medical Aid Company?

A.—In Great Yarmouth proper I should think about 2,000.

Professor BALL: The remuneration the collectors get is 10 per cent. of the money that is collected?

A.—Yes.

Professor BALL: It was also mentioned a short time ago that they get the three first weekly premiums.

A.—Yes.

Professor BALL: Out of what fund does that 3d. come? What is that deducted from, the doctor's money, or from the management expenses?

A.—It is taken from the first three weeks' money collected from the people themselves.

Professor BALL: These people are not in benefit until they have been in the company for seven weeks. Until then they are not entitled to medical aid?

A.—No, they are not entitled.

Dr. LITTLE: Is it not part of the duty of your canvassers, in endeavouring to induce a man to join the Friendly Society, to put all the advantages they can think of before the person so as to induce him to join?

A.—Most decidedly, as far as the Friendly Society is concerned.

Dr. LITTLE: Then is it not your evidence that the inducement which was offered to many people to join the Legal Friendly Society was the fact that it enabled them to join the Medical Aid Company?

A.—I do not think so.

Dr. LITTLE: That has been given in evidence already, that the circumstance which is most powerful in inducing a man to join the Friendly Society is the fact that membership of that society enabled him to join the Medical Aid Company?

A.—Most decidedly, if they join the Friendly Society. After that, if they wish to become a member of the Medical Aid Company they are entitled to do so, but they must be of a very poor class, not earning more than 30s. or 25s. I think, in the Great Yarmouth districts.

Dr. LITTLE: But do not you think that the possibility of joining the Medical Aid Company would operate very strongly as an inducement to join the Friendly Society?

A.—I do not think so.

The PRESIDENT: From an observation you have just made, are we to understand that as regards the National Medical Aid Company there is a wage limit?

A.—Yes.

The PRESIDENT: I am not putting this as regards the Insurance Society, but I am putting it to you as regards the National Medical Aid Company? Is there a wage limit?

A.—We are not allowed to take people in the National Medical Aid Company, I think, who earn over 30s. a week.

The PRESIDENT: Then there is a wage limit?

A.—Yes.

Sir JOHN TUKE: You said there were about 2,000 members?

A.—Yes.

Sir JOHN TUKE: That would be 4s. 6d. a head per annum, working out to about £475 a year.

A.—Yes.

Sir JOHN TUKE: Is that the total income of your Medical Aid Society?

A.—In Great Yarmouth it would be about that, and we have two doctors there.

Sir JOHN TUKE: You pay the doctors out of this £475?

A.—Yes.

Mr. VICTOR HORSLEY: There is an extremely important answer of the witness relating to the wage limit which I should like to have more clearly defined. I should like to know whether you mean it to apply to Yarmouth alone or to all the districts of the National Medical Aid Company—this wage limit of 30s?

A.—I could not say.

Mr. HORSLEY: You do not know?

A.—I do not know.

Mr. HORSLEY: I should like also to ask whether you, as district manager, received instructions from the central office that you were not to take any members whose earnings amounted to more than 30s. a week?

A.—Only the instructions laid down to me when I first started the office. I could not say I had instructions—I may have had them, but if I did they are destroyed. Ten years is a very long time to go back.

Mr. HORSLEY: I should have thought that would naturally be one of the written instructions to a manager, but, however, I understand it is not. My other point is this: Assuming that to be the practice in Yarmouth I wish to know how you as district manager ascertain the earnings of the person who joins as a member?

A.—As a rule, after these collectors bring in fresh members of the Medical Aid Company, I go round and visit these people to see whether they are such people, and also whether they have joined the Liverpool Victoria Legal Friendly Society: and we can generally tell by the class of house they are living in, and in many cases I have asked the questions as well.

Dr. BRUCE: Have you ever struck a man off from the roll of membership because his wages were beyond the wage-limit?

A.—I do not think so in Great Yarmouth.

*By* Mr. MUIR MACKENZIE.

What are the numbers in the Friendly Societies in Great Yarmouth?

A.—I could not tell you the exact proportion, but I should think there would be in Great Yarmouth alone—my district extends to Lowestoft—

Q.—I mean in Great Yarmouth alone?

A.—Probably 10,000; between 8,000 and 10,000.

Q.—Then the proportion is about 20 per cent.?

A.—It would not be 20 per cent. I should say about 10 per cent.

Q.—You said there were 2,000 members of the Medical Aid Company, and 8,000 to 10,000 members of the Liverpool Victoria Friendly Society?

A.—It would make the percentage come up more, no doubt.

*By the Council.*

The President: Can you tell me how much Dr. Rendall received during the first twelve months he was with you?

A.—Only by referring to the chief office accounts or my own accounts. I have not the accounts with me.

Sir John Tuke: It must be a very heavy item in your account: could you not give it us approximately?

A.—Taking all the years I could not tell you.

Sir John Tuke: I mean for the year?

A.—Shall I say the first year?

Sir John Tuke: Yes.

A.—Probably it would be £150. I am not quite sure whether it is as much as that or whether it is less.

Sir John Tuke: It would not be more than £200?

A.—I do not think it would be £200.

The President: Do you require the whole of Dr. Rendall's time and services? Is he allowed to have a private practice in addition to the club practice?

A.—Most decidedly he is. We have no control over him whatever in that way.

*Re-examined by* Mr. Lawson Walton.

Q.—In practice do you find that your class of members are taken from the very poor—impoverished community?

A.—Very.

Q.—You gave us a wage limit of 30s., would that be an outside wage?

A.—It would be an outside wage, decidedly.

Q.—I do not think you have actually counted the number of members of the Medical Aid Company, and compared it with the number of members in the Friendly Society?

A.—I have not.

Q.—I suppose the proportion varies in different places?

A.—Yes.

Q.—You have the company spread over the whole kingdom, but it must vary according to the locality?

A.—Yes.

Q.—You told us what you had done with regard to these different canvassers. Does any canvasser of the Liverpool Victoria Legal Friendly Society approach any person on the subject of the Medical Aid Society until after he has become a member of the Victoria Friendly Society?

A.—He does not approach them until after they have become members of the Liverpool Victoria Friendly Society.

Q.—You have told us that many people think it is not worth their while to join the Medical Aid Company, and never join it?

A.—There are many.

Q.—Are there conditions imposed upon their joining with which some of them could not comply? For instance, is it the first condition of their joining the Medical Aid Company that, although they join the Friendly Society, they shall not be admitted members of the Medical Aid Society unless they are in good health?

A.—Yes.

Q.—You do not allow any person to join your Medical Aid Society unless he is in good health?

A.—No.

Q.—And then he has to subscribe over seven weeks before he gets any benefit at all?

A.—Yes.

Q.—Is it any part of your policy as district agent to encourage the joining of the Medical Aid Company?

A.—No.

Q.—Do you get anything out of it yourself?

A.—Yes.

Q.—How much do you get?

A.—2½ per cent.

Q.—Except the 2½ per cent. that you get, you have no interest in the Medical Aid Company?

A.—None whatever.

Q.—You have told us the Medical Aid Company have no canvassers, but have the canvassers of the Liverpool Victoria Friendly Society any interest in running the Medical Aid Company except the trifling remuneration that you have told us of?

A.—None whatever.

*By the Council.*

Mr. Victor Horsley: You have just told us that persons are not allowed to join the Medical Aid Company unless they are in good health. I wish to know who is the judge of that. Is it the collector when he enters the name on the card, which appears to be the admission of the person? Or does the medical officer, Dr. Rendall, go to the patient afterwards and examine the patient from the point of view of his admission into the society?

A.—In the first instance the collectors have instructions that they should see the people they actually put in for medical aid and also in the Victoria Society.

Mr. Horsley: I do not want to have anything to do with the Liverpool Victoria Friendly Society. I am only speaking of the Medical Aid Company.

A.—He is supposed to see each person. After that I have a list supplied to me, and I go round and see each person myself, and if I think there is any doubt I report to the doctor. These people are not in benefit until the seventh week, and should a person go to the doctor and he found he was not a person in the proper state of health to become a member, he has power to reject him.

Mr. Horsley: But if they do not happen to go to the medical officer within the first seven weeks, then the determination of the state of the health of the member is based on the examination of the collector and yourself—that is what I understand?

A.—There is no medical examination.

*Rules of the National Medical Aid Company.*

Mr. Lawson Walton: Perhaps I may read the rules on the back of the card:

All persons must be in good health on joining, and are entitled to benefit on the seventh week from date of entrance. Should it be subsequently discovered that any member was in bad health on date of entrance such member will be immediately expelled and the premiums forfeited.

(To the witness): That is your rule?

A.—Yes.

Q. Then there is this rule:

The medical aid does not apply to confinement cases or surgical operations.

A.—Yes.

*By the Council.*

Dr. McVail: Where is the head office of the Friendly Society?

A.—18, St. Andrew's Street, Holborn Circus.

Dr. McVail: And does it issue regulations by which all the local branches are governed?

A.—Yes.

Dr. McVail: Do you act under a set of rules sent to you from London?

A.—Yes.

Dr. McVail: Entirely?

A.—Yes.

Dr. McVail: But these rules are not quite explicit as to the wage limit—as to the necessity for those who enter being in good health at the time?

A.—You are speaking of the National Medical Aid Company?

Dr. McVail: I am talking of the Liverpool Victoria Friendly Society. Is that your Society?

A.—Yes.

Dr. McVail: And the head office is in London you say?

A.—Yes.

Dr. McVail: I presume you, as a branch, have to act under regulations from the central office—the same as any lodge of Foresters must act under the regulations of the Supreme Court. Is that so?

A.—Yes.

Dr. McVail: Have you got those regulations?

A.—No.

Dr. McVail: Can you tell me whether there is a wage limit in these regulations?

A.—Are you speaking of the Medical Aid Company?

Dr. McVail: Is there any wage limit first of all with regard to the Friendly Society?

A.—No, there is not.

Dr. McVail: Where is the head office of the Medical Aid Company?

A.—80 and 80A, Fleet Street.

Dr. McVail: That is a different office?

A.—Yes.

Dr. McVail: A different society?

A.—It is not a society; it is a company.

Dr. McVail: Then that company, of course, must have pretty definite rules, as it deals with money?

A.—Yes.

Dr. McVail: Have you a copy of the printed regulations of that company?

A.—No.

Dr. McVail: Are there copies to be obtained?

A.—I should think so.

Dr. McVail: Then any member of the Council could get a copy if he applied?

A.—The secretary will be able to inform you upon that point.

Dr. McVail: Is there any wage limit in the central rules?

A.—I could not tell you.

Dr. McVail: You do not know?

A.—No.

Dr. McVail: How does it come that you in Yarmouth have a wage limit? What I mean is this, Are the local branches themselves empowered to make any modifications of the general regulations?

A.—I received the instructions ten years ago, and I have not kept copies of them. I cannot remember as far back as that. All I know is that there is a wage limit.

Dr. McVail: You say there is a wage limit, but you do not know whether that wage limit goes over the whole country?

A.—I should think not.

Dr. McVail: I hardly understand how it works out. Where does the money which you receive, and which these people pay in Yarmouth, go to? Who deals with it?

A.—It is sent on to the head office in London each week.

Dr. McVail: Then it is quite impossible for you in Yarmouth to be working under any other rules than those which govern the other branches throughout the country. They could not deal in one way with Yarmouth money and in another way with money, say, from Birmingham?

A.—Probably they could not. I do not understand anything at all about it.

Dr. McVail: Who is the Chairman of the Medical Aid Company?

A.—Mr. Henry Long is, a director.

Dr. McVail: How is the Board appointed?

A.—I could not tell you. I do not know anything about it.

Dr. McVail: I can only express very great surprise that a district manager of a body like this can tell us nothing whatever about the way in which the money is managed at the head office.

A.—I have no control over the management of the head office.

Dr. McVail: Surely the assistant manager of a great place like Yarmouth should know enough of his appointment——

The President: He has told us that he does not know.

Dr. McVail: I am only expressing my surprise.

Mr. Lawson Walton: I have called Mr. Peters, who is one of the directors. He could have given all this information.

Mr. Victor Horsley: As I am rather responsible for some of these questions, perhaps you will allow Mr. Peters to be recalled, when I could repeat my question relative to the wage limit.

Mr. Lawson Walton: Certainly. This gentleman is merely the district superintendent of Yarmouth, and he knows nothing of the action of the Board of Directors. I will recall Mr. Peters.

Professor Young: I understood from you that the members joining the Medical Aid department cannot benefit until the seventh week. Is that correct?

A.—That is correct.

Professor Young: What I want to draw attention to is the statement directly to the contrary in the statutory declaration given by Esther Wilkins. It seems to me that the words are of importance. She asked the canvasser when she would benefit, and she was told she could go to the doctor that afternoon, and whenever she liked. That seems strangely contradictory to the statement that people could not benefit until the seventh week, and it seems it would not be possible that they could have had, at that time, any information as to whether the patient was in good health or not. Is that statement false?

A.—Yes, I should think so.

Professor Young: The statement is made that the card was given to the patient at once, and she was informed she could see the doctor that day. It seems to me rather important to have that cleared up.

A.—I believe that is wrong,

Dr. Heron Watson: You must remember that the statutory declaration is on oath.

*By* Mr. Muir Mackenzie.

Was Mr. Blake medical officer when you were in office?

A.—Yes.

Q.—He states in his declaration, "I frequently objected to the class of patients whom the collectors entered as not being persons unable to pay moderate medical fees." Were you aware of that?

A.—No; he has never made any objection to me.

*By* Mr. Lawson Walton.

The woman who has made this declaration, Esther Wilkins, is not here to be cross-examined. Have you ever heard of a case, until she suggested it, of its ever having been suggested that any of your directors had put a sick person on to benefit at once, in contravention of these regulations on the back of the card?

A.—No.

Q.—Has any collector any authority to admit any person to benefit except upon these terms?

A.—None whatever.

Q.—Have you any knowledge of these terms being departed from in your case?

A.—No.

Q.—Have you ever sanctioned any departure from them in any case?

A.—No.

Q.—This person, Esther Wilkins, whoever she is, if she states this as a fact, it is a fact of which you have no knowledge whatever?

A.—No knowledge whatever.

Mr. Lawson Walton: We shall hear what the collector says about it. Mr. Peters is here, if the Council wish me to call him now.

The President: What is the point you wish to put to him?

Mr. Victor Horsley: I wish to ask a question of him.

Mr. William Edward Peters, *recalled.*

*By the Council.*

Mr. Victor Horsley: You will recognise the importance of the matter when I say that I wish to know whether the central Board of Directors of the National Medical Aid Company issued instructions to their district managers at any time that they were not to accept persons as members of the company unless their earnings were below 30s. per week?

A.—No, most emphatically, we have not issued instructions. In fact the printing in regard to the company has been discontinued of late years out of sympathy with the resolution of the Council. We do not issue any printed or advertising matter now.

Mr. Horsley: I think you misunderstand me. I asked whether any instructions had been issued to the district managers that they were not to accept members whose wage earnings were over 30s. a week. Did you issue such instructions?

A.—We did issue such instructions—verbally.

Mr. Horsley: To all the districts?

A.—Yes; as we have had occasion we do that.

Mr. Horsley: Not to all the districts.

A.—No, just as the occasion arises. We tell them this benefit is not intended at all for people who can pay private accounts.

Mr. Horsley: Did you issue such instructions to your district managers that in all districts they are not allowed to

accept such persons, or are there districts in which you tacitly allow them to accept them?

A.—We never tacitly allow them to accept them. When we have anything of that kind we emphatically instruct them not to do it, and the managers have power to strike out proposals for this medical benefit when they come from a locality where we know the person residing in it ought not to have it.

Mr. HORSLEY: But until such matters are brought to your notice you do not take action?

A.—We usually instruct our managers as we appoint them as to the proper working of the regulations.

Mr. HORSLEY: I understand. In the particular instance at Yarmouth did you issue such instructions?

A.—We informed Mr. Cully, not by writing but verbally, especially in view of the resolution of the Council, that he must not take cases over a certain limit, but we have to leave it to the manager's discretion largely. He cites 30s. a week, and that is Mr. Cully's idea of a limit beyond which it would not be correct to go in Great Yarmouth. It varies greatly in different localities. There are many poor people in Yarmouth with large families whose earnings are 30s. a week, and sometimes people with large families earning 30s. a week would be very badly off. On the other hand, a man may be earning 30s. a week without a large family, and he would not be so poor.

Mr. HORSLEY: I understand that the Board of Directors have never fixed a wage limit of any kind, and have not made that wage limit public?

A.—No; it would be impossible to do that. A person might be well off in one town and with the same wages be very poor in another, according to the family.

*By* Mr. LAWSON WALTON.

Q.—Do your directors visit the managers from time to time?

A.—They do.

Q.—They have personal interviews with them on these occasions?

A.—They have.

Q.—Are they able to ascertain the method by which the business is carried on?

A.—Yes.

Q.—And whether the wage limit fixed for that particular district is in accordance with their principle?

A.—That is so.

*By the Council.*

Dr. LITTLE: Who are the directors of the Central Society?

A.—I will give you the names.

Dr. LITTLE: Are they the same men or any of the same men who are on the direction of the Medical Aid Society?

A.—Some of them are of necessity.

Dr. LITTLE: Are the two societies, although the accounts are kept distinct, run by the same directors?

A.—No. The Board of Directors for the Medical Aid Company is different from the Board of the Liverpool Victoria Legal Friendly Society, but some of the representatives of the Victoria Society are on the Medical Aid Board in order to have the necessary harmony between the two institutions.

*By* Dr. BATEMAN.

I want to ask one question. Would you say that the National Medical Aid Society caters for a poorer class than the other Friendly Societies? You keep on speaking of the very poor. Would you say that the Medical Aid Company have to deal with a poorer class than an ordinary Friendly Society like the Oddfellows and Foresters?

A.—I think our Friendly Society deals with poorer people than the other Societies.

Q.—I want to know whether you get a poorer class in your Society than in the Oddfellows?

A.—We do in Yarmouth.

Q.—You astonish me. I understand that they have medical aid for 4d. in your Society. That is higher than any other Society in Yarmouth?

A.—I do not know that.

*By the Council.*

Dr. GLOVER: I think we had better be quite clear about this; that there are two London offices, one in Holborn, and one in Fleet Street?

A.—That is quite right.

Dr. GLOVER: The one represents a purely commercial company?

A.—I do not think that is quite correct.

Dr. GLOVER: That is the Liverpool Victoria Friendly Society?

A.—I do not think that is correct.

Dr. GLOVER.—The other at Fleet Street represents a purely philanthropic society?

A.—I should class them both the same.

Dr. GLOVER: Both as philanthropic?

A.—Yes.

Dr. GLOVER: Why should a group of philanthropic persons assume the name of a company? Is there not something in the name of a "company" which implies profit?

A.—There ought to be, but I do not know if I am right in referring to what the learned counsel stated to you just now about the inception of the Medical Aid Company. It was done under circumstances of emergency, and was rapidly constructed in order to cope with the delinquencies of one of our managers, and the most rapid way of getting the machinery to deal with that was to form themselves into a company.

Dr. GLOVER: And they formed themselves into a company?

A.—Yes.

Dr. MCVAIL: Are there any definite printed rules for the Medical Aid Company issued by the Board in Fleet Street?

A.—Not to-day. There are no rules printed and issued to-day.

Dr. MCVAIL: Not one of your officers, not your assistant manager, in fact, nobody, can have in his hands the constitution or rules under which he is to conduct the business of gathering in money from these people?

The PRESIDENT: There are regulations on the back of the card.

Dr. MCVAIL: Yes, but I want to get at this as I think it is highly important. There is a Central Board in London, and there are branches over the country, and they collect money and send it to the Central Board in London?

A.—That is quite right.

Dr. MCVAIL: Are there any regulations or rules common to the whole society under which they work?

A.—I do not quite grasp your question. They issue stationery, and there are certain explanatory forms showing in what manner the collections are to be marked down in these forms and reported to the manager at the head office.

Dr. MCVAIL: There is no such thing as a wage limit. That is not in print or in writing anywhere?

A.—That card we are going to fix properly for all times.

Dr. MCVAIL: Is there any regulation which says that the local branch may fix a wage limit?

A.—There is no such regulation.

Mr. TOMES: Are there any printed accounts?

A.—I do not know that there are any printed accounts.

Mr. TOMES: Is there a balance-sheet prepared?

A.—A balance-sheet is prepared from year to year.

Mr. TOMES: And submitted to whom?

A.—To the shareholders.

Mr. TOMES: But is not everybody a shareholder?

A.—Everybody is not necessarily a shareholder. The shareholders are the people who are on the Board.

The PRESIDENT: Are you a company licensed by the Board of Trade?

A.—Yes, we are under the Companies Acts. Although, as I understand, we are really a company in name, the effect of our work is purely philanthropic. But we actually call ourselves a company for convenience sake.

Sir WILLIAM THOMSON: Do the directors receive no recompense whatever?

A.—They do: a trifle for attending every week and going into the different cases laid before the Board. It is a mere bagatelle.

Sir WILLIAM THOMSON: I understand there are ten shareholders?

A.—Yes.

Sir WILLIAM THOMSON: And all the benefits go to the two and a-half million people?

A.—You are not now speaking of the Medical Aid, are you?

Sir W. Thomson: No, of the Friendly Society.

A.—Then I beg your pardon. I must amend my answer. There are no shareholders in the Liverpool Victoria Legal Friendly Society. There is a Committee of Management appointed by the Society.

Sir W. Thomson: It is also philanthropic?

A.—Yes.

Sir W. Thomson: Altogether?

A.—Undoubtedly.

Sir W. Thomson: And do these ten gentlemen give their time absolutely free year by year in managing this great concern?

A.—No, they get salaries passed by the meetings held every year. At the annual meeting of members held every year, salaries for acting as a Committee are voted to them.

Sir W. Thomson: A lump sum?

A.—Yes.

Sir W. Thomson: From year to year?

A.—Yes.

Sir W. Thomson: Do you receive it from month to month?

A.—It is per annum. They pass it for them so long as they are in office. They usually receive so much.

Sir W. Thomson: Does that vary according to the income of the society?

A.—No.

Sir W. Thomson: Whether the income is a comparatively small one, or in a good year a very large one, do they receive absolutely the same?

A.—Yes, a sum fixed by the meeting. There is no control over that remuneration.

Sir W. Thomson: So that you, as directors, have no advantage in the extreme success of the Society or in its comparative failure in any particular year?

A.—That is so; we have no advantage.

Sir W. Thomson: You have no advantage?

A.—No.

Sir W. Thomson: And the same thing holds with regard to the Medical Aid Society?

A.—Exactly.

Dr. Pettigrew: Who are the shareholders who benefit?

A.—There are several gentlemen on the Board of Directors. I forget their names.

Dr. Pettigrew: How many would there be?

A.—About ten.

Dr. Pettigrew: Do the accounts appear in a public form? Does the Government take any cognisance of them?

A.—Yes, we act under the Companies Acts.

Dr. Pettigrew: The accounts are supervised and audited?

A.—Yes, strictly.

*By* Mr. Lawson Walton.

Q.—Is the Liverpool Victoria Legal Friendly Society registered under the Friendly Societies Acts like all the other Friendly Societies?

A.—Yes.

Q.—Is it managed in the same way that a similar institution is managed?

A.—Yes.

Q.—So that the Medical Aid Company is a concern that is called a company because it is registered under the Joint Stock Companies Acts?

A.—That is right.

Q.—But it is not organised for a profit, and it does not make or divide any profit?

A.—That is so.

Q.—It does not divide any profit?

A.—It does not.

Q.—In that sense it is philanthropic as well as in the sense that it gives medical aid without bringing in revenue to your Company?

A.—Exactly.

The President: Have you any other witnesses?

Mr. Mathews: Before I call Dr. Rendall, my learned friend, Mr. Walton, desires me to make some further reference to a letter, which was not put in evidence, of September 22nd. This letter, which was written after the Council had passed the resolution in June, 1899, was written as a letter of instruction to Mr. Cully, of Great Yarmouth, and is from the Medical Aid Company in London. I would ask your indulgence while I read it, if I may. It is addressed to Mr. Cully, and is as follows:

As you are probably aware the matter of the Medical Aid Associations was under the consideration of the General Medical Council at their last session, and a resolution was passed expressing "strong disapproval" of medical men associating themselves with Medical Aid Associations "in which systematic canvassing is practised." The resolution does not of course affect this company, as the collectors canvass for the Insurance and not for the Medical Aid, which is only introduced to those who are eligible and have become members of the Society; but we think it as well to emphasise the fact, as we have had several resignations from doctors recently who were under a misapprehension on the subject. It has been our constant endeavour to prevent any cause of complaint from our medical officers arising out of matters in which questions of medical ethics are involved, and to this fact more than to any other we attribute the cordial relationship which, we are gratified to feel, exists between us. We take this opportunity of reiterating the importance of the rules framed in the interests of the doctors being rigidly adhered to, especially those relating to members' arrears and the ineligibility for membership of sick persons or those in a position to pay a doctor's bill. The last-named matter is one upon which medical men naturally feel very strongly, and with the object of still further ensuring the admission to membership of none but those for whom medical aid is intended, we wish you to see that in future the doctor is furnished with a list of new members, so that he may have an opportunity of rejecting such cases as he is of opinion, from personal knowledge of their circumstances, are not eligible for membership in the company. We have for some time past had under consideration —

I think I can stop at that point because I think the writer then goes into another matter; but I desire that that letter should go informally before you.

Dr. Rendall, *examined by* Mr. Lawson Walton.

Q.—I think you are a graduate in medicine and in surgery of the University of Edinburgh?

A.—Yes.

Q.—And you took your degree of Bachelor in both departments of medicine in the year 1893?

A.—Yes.

Q.—Perhaps you can tell us shortly what practice you had on leaving Edinburgh.

A.—I was at Ipswich for several years. After leaving Ipswich I went to the North of Scotland and obtained appointments of District Medical Officer and Medical Officer of Health and Admiralty Surgeon, and then I came back to London looking out for an opening in a practice for myself, and I saw this advertisement for a medical officer in Yarmouth and applied for it and was appointed.

Q.—On leaving Edinburgh and afterwards on leaving Ipswich did you receive a large number of testimonials from different medical men of position with whom you were brought in contact?

A.—Yes, from almost everyone with whom I was brought in contact.

Q.—On leaving Edinburgh I think you had certificates from the Professors of the University and the teachers with whom you associated, including the present President of this Council?

A.—Yes. Certificates of merit.

The President: These were class certificates?

A.—Yes I also had one from Dr. Hepburn, with whom I was very closely engaged in Edinburgh.

Mr. Lawson Walton: You were appointed, and I think you signed an agreement?

A.—Yes.

Q.—Under which you were to be employed for twelve months by the Medical Aid Company upon the terms which appeared in that agreement?

A.—Yes.

Q.—Did you enter upon your duties under that agreement, and did you see a large number of persons who were brought to you as patients, and who were members of both the Friendly Society and the Medical Aid Company?

A.—Yes.

Q.—What class of life were they in?

A.—They were very poor people; they came from very poor districts.

Q.—I think you were appointed Medical Referee to the Liverpool Victoria Legal Friendly Society afterwards?

A.—Yes, a fortnight later.

Q.—Getting a fee on the examination of those who entered the Society?

A.—That is so.

Q.—I observe in the regulations of those Medical Aid

Societies that each member has to pay for seven weeks before he is entitled to come for medical aid, and that he should not be a member unless he was in good health at the time of joining?

A.—That is so.

Q.—Were those regulations observed in your experience?

A.—Yes, they were always observed.

Q.—Were you of opinion that the work you were carrying on interfered with legitimate practice of other medical men?

A.—None whatever.

Q.—Were the class of people whom you treated able to afford medical advice except in this way?

A.—I think not.

Q.—Mr. Moxon told us that he expressed that opinion to you and you concurred in it?

A.—Yes.

Q.—You got a letter objecting to your continuing your position on May 18th, signed by Mr. Wyllys?

A.—Yes.

Q.—On getting that letter did you make any investigation with a view of ascertaining whether there had been any canvassing?

A.—I did. I communicated immediately with the local manager.

Q.—What did he tell you?

A.—He quite denied that there was any canvassing carried on by his collectors for the Medical Aid Company. He also stated that he would make further inquiries into the matter and let me know the result.

Q.—What was the result of those inquiries?

A.—He found that there were no such cases.

Q.—Did you afterwards attend an interview and discuss this matter with Mr. Moxon and Mr. Wyllys?

A.—Yes.

Q.—Did you tell them the result of your inquiries?

A.—I informed them that, so far as I could gather, there was no canvassing carried on for the Medical Aid Company.

Q.—Then I think after that interview you made a point of seeing collectors yourself?

A.—Yes, whenever I had an occasion to see them.

Q.—What did they tell you?

A.—I inquired if they did any canvassing, but they entirely denied canvassing for the Medical Aid Company.

Q.—Did you take any steps by inquiring amongst your own patients whether they had been canvassed?

A.—I did frequently. I asked many of the patients who had recently joined whether they had been canvassed by the collectors, and I never got a case to admit that they had been. When I asked them how they had come to know of the Medical Aid Company, they told me that they had been recommended by some relative or neighbour, or by someone they knew.

Q.—Having made this investigation, did you write a letter of June 11th to Mr. Wyllys asking him to give you the names of some of the persons who it was alleged had been canvassed?

A.—Yes, I did. I was anxious to know what cases of canvassing had been carried on that did not come under my notice.

Q.—Did you ever receive any answer to that letter?

A.—I received no answer at all.

Q.—I think afterwards the matter was allowed to rest until December of that year, when you got a letter from Dr. Bateman. You answered that letter in March, telling him that you had been making inquiries amongst the collectors and canvassers, and that you found they denied they had canvassed, and you in your opinion thought they would not care to do so because they would be liable to immediate dismissal if they did. On what ground did you make that statement?

A.—The manager told me so.

Q.—Were you able to ascertain that there was no foundation for the charge that those collectors either systematically or in any authorised or regular way were canvassing for the Medical Aid Company apart from the Insurance Company?

A.—I had no idea of it at all.

Q.—I think you wrote a letter to the Registrar of the Council on May 8th this year in which you asked him to lay the correspondence before the consideration of the Council and the President, and you said this:

In conclusion, I ask if you will kindly lay this communication, with the enclosed testimonials, before the President of the Council, and I am most willing to be entirely guided by his opinion in this matter.

A.—I remember writing that.

Q.—Was that a perfectly sincere letter on your part?

A.—It was, quite.

Q.—Then I think when you had received from Mr. Winterbotham an ordinary letter on October 14th, you wrote to him and said that you indignantly and emphatically denied the suggestion that you had approved or acquiesced in the practice of canvassing or procuring persons to become members of the Medical Aid Company; and you went on to say?

You will find upon reference that in my reply to your communication of May 8th last and to which I shall adhere. I have repudiated the charge of canvassing and in requesting you to kindly furnish me with specific instances, further expressed my complete willingness to resign my appointment if the President considered that a clear case of canvassing had been made out: to that letter I have received no reply.

Does that express and did it express your sincere view with regard to this matter?

A.—It does.

Q.—Have you had the smallest wish to utilise this machinery for the purpose of securing a private practice?

A.—I had no idea that it would procure me a private practice.

Q.—Have you been a party to canvassing on behalf of yourself by any of these men?

A.—Not at all.

Q.—Do you know a single case in which they have canvassed?

A.—I do not know.

*Cross-examined by* Dr. Bateman.

Q.—May I take it that you agree that the report of the interview with you is fairly correct?

A.—I believe it is.

Q.—Do you dispute any of it in any way?

A.—No.

Q.—Then I may take it as it stands?

A.—Yes.

Q.—Do you remember that you were told distinctly that evening that other members of your profession had held the same appointment, but had relinquished it in consequence of the ruling of the General Medical Council; and also I hear you were told distinctly that that was due to the canvassing that went on and which they could not put a stop to?

A.—I did not know.

Q.—Did not the question of canvassing crop up at all?

A.—I deny that there was any canvassing.

Q.—Were not you told that there was, and that other medical officers had ceased their association with the company on the ground that there was this canvassing, and that they found they could not put a stop to it?

A.—It was not pointed out or put to me directly.

Q.—Was it put indirectly to you? Did you gather that from anything that was said?

A.—I may have, but not very distinctly.

Q.—I suppose you read the medical papers?

A.—Not very regularly—occasionally.

Q.—Have you never come across a discussion with regard to Medical Aid questions or the National Medical Aid Company?

A.—I have never taken great interest in the question.

Q.—But you took sufficient interest in it to become a medical officer in it?

A.—I had no interest in becoming a medical officer in it.

Q.—May I ask this? If you think it is a rude question please do not answer it. What salary did you get in the first year?

A.—I believe somewhere about £130.

Q.—What number of patients had you when you first came into the town? Was there a large number waiting for you on your arrival, or what happened?

A.—There was not a great number.

Q.—How many would you say, because there had been some little interval between your joining and the last medical officer resigning? Do you know who saw the patients in the meantime?

A.—I believe that Dr. Blake, of Gorleston, did so.

Q.—And he handed them over to you when you arrived?

A.—Yes.

Q.—Did you know that these cards had been taken about by the canvassers of the Liverpool Friendly Society?

A.—No.

Q.—You did not know anything about the cards at all?

A.—No, nothing at all.

Q.—How did your patients get the cards when they came to you; I suppose they had to produce their cards?

A.—They did.

Q.—Did you not ask them how they got the cards with your name on?

A.—I had no reason to ask them the question.

Q.—You accepted it as a matter of fact that they belonged to the Medical Aid Company—that they did give cards away and you did not know how they got them? You accepted them as your patients?

A.—I accepted them as patients.

Q.—You only looked to see if they were members or not, and how many weeks they had paid?

A.—Yes.

Q.—Were they in good health? If they were, they would not come to you, of course?

A.—No.

Q.—That is the only question you asked?

A.—Yes.

*By the Council.*

Mr. Victor Horsley: I should like to ask you how you came to join this company? As I understand you, you came to London and saw an advertisement. In what paper did you see that advertisement?

A.—I believe it was in the *Daily Telegraph*.

Mr. Horsley: You have answered a question relative to certain medical men in Yarmouth having vacated their appointments in consequence of the canvassing that went on. I understood from you that you knew that was so?

A.—Not until I had an interview with Mr. Wyllys.

Mr. Horsley: I only want to make that perfectly clear that at that interview you were made aware of this fact. You were aware at that interview?

A.—Yes, indirectly.

Mr. Horsley: Of course one either is aware or one is not aware.

A.—I was aware.

Mr. Horsley: You became aware at that interview?

A.—Yes. I was not aware it was on account of canvassing specially, but I was aware they had given up their appointments owing to some objection.

Mr. Horsley: But you did not hear what objection?

A.—I cannot recollect what was said distinctly.

Mr. Horsley: You cannot recollect any ground being stated on which they resigned their appointments?

A.—Not distinctly.

Mr. Horsley: Did you know the Refuge Insurance Company?

A.—I believe I noticed the name in the paper.

Mr. Horsley: And you were aware that the Refuge Insurance Company ceased to give medical aid in Yarmouth as a Medical Aid section?

A.—I am not aware of that.

Mr. Horsley: As regards your inquiries from the collectors as to whether they canvassed, did you ask the collectors whose names had been mentioned to you—Newark, did you ask him?

A.—Yes.

Mr. Horsley: Did you ask Mann?

A.—Yes.

Mr. Horsley: And Wylett?

A.—Yes.

Mr. Horsley: And Bingham?

A.—No, I did not ask him.

Mr. Horsley: Did you ask them in reference to cases which had occurred—at what date?

A.—I did not know of any cases. I asked them if they did canvass.

Mr. Horsley: You asked them generally?

A.—Yes, generally.

Mr. Horsley: And they replied to you generally that they never canvassed?

A.—That they never canvassed for the Medical Aid Company.

Mr. Horsley: Did you ever hear that there was a wage limit in Yarmouth?

A.—No, I was not aware of that.

Mr. Horsley: You did not hear of that, then?

A.—No.

Mr. Horsley: Mr. Cully never told you there was such a thing as a wage limit?

A.—No, not a wage limit. He told me the class of people who joined.

Mr. Horsley: Did he ever state to you definitely that no person was to be admitted to the Medical Aid Company as a benefiting member if his earnings exceeded 30s. per week?

A.—He did not state any sum, but I understood that those who were able to pay a private account I had the liberty to strike off my list.

Mr. Horsley: My point is this: Did you ask the patients who came to you whether they had in any sense been canvassed, and do you say that they universally replied in the negative?

A.—Yes.

Mr. Horsley: I wished to know if you asked the reason that patients joined. Suppose a patient came immediately subsequent to your appointment when you first went there?

A.—Within a month of the time that they had joined.

Mr. Horsley: What I wanted to get at was the date on which you began to make these inquiries?

A.—After I had had an interview with Mr. Wyllys—about the middle of the summer, about June.

Mr. Horsley: Your letter was dated June 11th, and it was at that time you made inquiries?

A.—Yes.

Mr. Horsley: I wish to know did you make inquiries of patients who had been entered upon the books of the company at the previous Christmas or about the end of the previous year. You came in January?

A.—I did.

Mr. Horsley: Did you make inquiries of the patients who had been entered on the books of the company at any previous year and the beginning of 1900?

A.—I was not aware at that time that there was a necessity.

Mr. Horsley: My other question is this: When you received the names of the patients who had given the statutory declarations did you visit those patients?

A.—I did not. I left them to my solicitor.

Mr. Horsley: You did not visit any of them.

A.—No, I did not.

The Council adjourned at this point.

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Second Day.

*Friday, November 29th, 1901.*

The Minutes.

The President: Mr. Mathews, is Mr. Cully present? There is one question I want to put to him. I want to clear up what his position is in relation to these two bodies. Would you ask Mr. Cully that question? We did not quite understand whether he was the district manager of the Liverpool Victoria Legal Friendly Society or the district manager of the National Medical Aid Society, or of both.

Mr. Charles Mathews: Of both; district manager at Yarmouth of both these institutions.

Dr. MacAlister: There is one other matter. I notice in the minutes we have put down complainants, the Medical Defence Union, on behalf of the Great Yarmouth District Committee." I should like to ask is that correct?

Dr. Bateman: No. I appear on behalf of the Medical Defence Union alone.

The President: This is what I understood, that the complainants were the Medical Defence Union on behalf of the Great Yarmouth District Committee.

Dr. Bateman: I never said so; but many members of that Society happen to be members of our Society. I have only power to act for our own Society.

The President: Would this be a correct statement, "That the complainants were the Medical Defence Union," and stop there?

Dr. Bateman: Yes, sir, if you please.

The President: Mr. Horsley, I understand that you were desirous of putting another question to Dr. Rendall?

Mr. CHARLES MATHEWS: While we are upon the corrections, according to the report of the *Times* proceedings of yesterday—I do not know whether the same error has been taken in the minutes here. Mr. Peters is made to say that you, Sir, handed him a card showing that in a number of cases canvassers canvassed for both the Friendly Society and the Medical Aid Society with the doctor's name upon it. I do not think that that could be in accordance with the minutes if they be correct according to the evidence given by Mr. Peters yesterday. I think I shall have your sanction for saying that that is not so?

The PRESIDENT: At this stage I may state that details of that kind we do not put on our minutes. We do not record on our minutes the questions and answers, but we have to record exactly the position of the parties and the names of the witnesses tendered.

Mr. CHARLES MATHEWS: That was not quite a correct report.

The PRESIDENT: It has not been put upon the minutes. We ought to have Mr. Peters's position exactly stated.

Mr. PETERS *recalled.*
*By the Council.*

The PRESIDENT: We have put you down in the minutes as the Chief Clerk of the Liverpool Victoria Legal Friendly Society.

A.—That is so.

Q.—Are we to add anything to your description as an officer of the Medical Aid Company?

A. Yes, simply a director of the National Medical Aid Company as well.

Dr. RENDALL *recalled.*
*By the Council.*

The PRESIDENT: At the end of our proceedings yesterday members of the Council were putting questions to you and Mr. Horsley will now put another question.

Mr. VICTOR HORSLEY: Just to remind the members of the Council, I asked Dr. Rendall whether when he received the names of the persons who had furnished the Medical Defence Union with statutory declarations, did he go to those persons and inquire from them whether they had been canvassed, and Dr. Rendall replied that he did not do so, but that he left such inquiries to be made by the Medical Aid Company. (To the witness): That is correct, is it not?

A.—By my solicitor I mentioned.

Mr. HORSLEY: What is the name of your solicitor?

A.—Mr. Tickle.

Mr. HORSLEY: Mr. Tickle represents the Medical Aid Company, does he not?

A. I am not aware of that.

Mr. HORSLEY: We can find that out afterwards if you do not know. My point was in reference to the letter which Dr. Rendall wrote on November 1st of this year, that is to say a month ago, when he received the further communication from this Council. In that letter Dr. Rendall says:

> You will find upon reference to my reply to your communication of May 8th, to which I still adhere, I repudiated the charge of canvassing, and in requesting you to kindly furnish me with specific instances, further expressed my complete willingness to resign my appointment if the President said that a clear case of canvassing had been made out. To that letter I have received no reply.

Dr. Rendall would appreciate that it was unreasonable to expect the President of the Council to reply in that matter. Complaint had been made to the Council. I wish to know whether Dr. Rendall has communicated with the solicitor as to the repudiated canvassing by these people. Have you asked your solicitor whether these patients were canvassed?

A.—I left it in his hands to ascertain.

Mr. HORSLEY: And he has not reported to you the result of his investigation?

A.—Yes.

Mr. HORSLEY: Then what has he reported to you?

A.—He has not reported in writing, but through his managing clerk I have been told.

Mr. HORSLEY: What has he told you?

A.—That a number of those alleged to have been canvassed have not been canvassed.

Mr. HORSLEY: I understand that Mr. Tickle's managing clerk has told you that the persons are alleged to have been canvassed all of them.

A.—Not all, I think.

Mr. HORSLEY: Which of them are admitted by Mr. Tickle to have been canvassed?

A.—I did not inquire.

Mr. HORSLEY: And you did not visit these persons yourself?

A.—No: I did not visit them myself.

Mr. HORSLEY: Then you do not consider, I take it, that you are in a position to fulfil the kind of understanding that is implied. I did not say that you made a bargain at all, but certainly from your letter of November 1st it would appear that you were willing to resign your appointment if it had been made clear to you that any canvassing had occurred. That is so, is it not?

A.—Yes.

Mr. HORSLEY: Then, perhaps, you will explain to the Council why you have not resigned your appointment. I mean, put it in your own words?

A.—I have not considered that these cases have been proved to be canvassed.

Mr. HORSLEY: That is an answer I want to obtain. You consider that you have not had proof of canvassing brought to you?

A.—No: that is the point.

Mr. HORSLEY: Do you consider that you have made on your own behalf proper inquiry into that subject?

A. [After a pause].—That I left to my solicitor to inquire into.

*Re examined by* Mr. LAWSON WALTON.

Q.—Had you repeatedly in the letters begged for information and also for the names of the persons who it was suggested had been canvassed?

A.—Yes.

Q.—Did you ever get any answer from the complainants in reply to that inquiry?

A.—No, I did not.

Q.—Till November 13th have you ever had the means of asking any living person who it had been suggested had been canvassed?

A.—I was not told of a single person.

Q.—Could you by your own inquiry find a single case?

A.—No, I could not.

Q.—In November of this year, this list was sent to your solicitors?

A.—To my solicitors.

Q.—It has never been sent to you at all?

A.—Never.

Q.—Your solicitors had these names submitted to them, and have they been making inquiries?

A.—Yes.

Q.—And as a result of these inquiries there are a number of statutory declarations to show that these allegations are complete fiction?

A.—Yes.

Q.—They are untrue as far as you can ascertain?

A.—Yes.

Q.—As a result of the inquiries by your solicitor, are you in a position to say, as far as you are concerned, that these charges as to canvassing are untrue?

A.—Yes.

Q.—And therefore under those circumstances you felt you were not called upon to send in your resignation?

A. Yes.

HENRY S. MANN, *called.*
*Examined by* Mr. CHARLES MATHEWS.

Q.—You have been a collector for the Friendly Society since November 6th, 1897, I think? You have also been an agent for the National Medical Aid Company?

A.—Yes.

Q.—Since that date down to the present you had acted in your capacity as collector?

A.—Quite correct.

Q. Is it true that you have ever canvassed for any member of the National Medical Aid Company?

A.—I can conscientiously say I have never canvassed in my life, and never intend to.

Q.—Did you attend a meeting which Mr. Cully held in Yarmouth in June, 1899?

A.—I believe it was the end of September, 1899.

Q.—Did you receive certain instructions with regard to canvassing from Mr. Cully?

A.—I did, very important instructions.

Q. What were they?

A.—Mr. Cully told me on no account to canvass for Dr. Rendall or for the Medical Aid Company, and on no account to mention it if I did so—which I have never had occasion to do.

Q. You tell the Council that you have never canvassed for any members for the Society?

A.—I have never canvassed.

Q.—It is said here—I think your name is specifically mentioned in this one declaration—that you called upon Miss Catchpole?

A.—No; I did not call upon Miss Catchpole.

Q.—I will put it as she put it.

A.—But she makes a mistake.

Q.—She says she was at her sister's—a Mrs. Stone.

A.—I did not call on Mrs. Stone.

Q.—Listen to what she says:

On Saturday, March 17th, 1900, I was at my sister's, Mrs. Stone, of 11, George Street, Great Yarmouth, when a person named Mann called upon me for the club money.

A.—Yes: quite right.

Q.—You did call upon a Mrs. Snowley?

A.—Yes; not upon her, but upon Mrs. Snowley.

Q.—Was there a Mrs. Stone in residence there?

A.—Yes; lodging there.

Q.—Is she a sister of Miss Catchpole?

A.—Yes; she is.

Q.—In calling on Mrs. Snowley, it is said by Miss Catchpole:

After my sister had paid the club money, Mr. Mann asked me [that is, Miss Catchpole] to join the club. I said "I would consider about it, and let him know next week." He also asked me if I could get any more members, as it would be all the better for the doctor.

A.—I believe that is a deliberate falsehood.

Q.—Did you say anything of the kind to other of those three, either Mrs. Stone, or Miss Catchpole, or Mrs. Snowley?

A.—No.

Q.—Then she goes on to say—

Mr. Mann continuing said, "Do you know who the doctor is?" I said, "No," and he said, "It's Dr. Rendall, living at 19, St. Peter's Road, and he is a very nice man and a good doctor, and would call any hour of the night if needed."

A.—It is very funny that she should mention that when her sister and her friend had had the doctor attending them for several months; it seems rather strange. I cannot understand it.

Q.—You think it would have been an extraordinary question having regard to the knowledge which she must have had at the time?

A.—Yes, sir, that is what I mean.

Q.—She said she was at her sister's on the following week, accompanied by her cousin, Ethel Catchpole.

Mr. Mann, the agent, was at my sister's. He said to my sister: "Would the young lady like to come into the club?" And my sister turning to me said: "Would you like to?" Mr. Mann then asked me if I would do so, and I said, "Yes, I would." I did not want to join the medical club, so I asked him if I could go into the burial club without going into the doctor's club, and he said I could not, but must join both. I thereupon joined both clubs.

Is that correct?

A.—I do not think it is. She told me that after she had been recommended by Mrs. Stone and Mrs. Snowley she would join my club, and also as she had two cousins she would join them at the same time, and I took them in as I was in duty bound.

Q.—That was from a recommendation which she told you she had from her own relatives, and not from any canvassing by you?

A.—No, I have never canvassed in my life.

Q.—You told us that she had at that time several relatives who already belonged to the club?

A.—That is quite correct.

Mr. Charles Mathews: I think that is the only case in which Mr. Mann is concerned?

Dr. Bateman: Yes, it is.

Mr. Charles Mathews: We have some other evidence upon that point.

*Cross-examined by* Dr. Bateman.

Q.—You say this, that everything is absolutely untrue that has been sworn to.

A.—Absolutely.

Q.—You told the Council just now that Mr. Cully spoke to you and told you not to canvass?

A.—Quite correct.

Q.—And you were not to mention it if you did do so.

A.—I beg your pardon, it is a mistake. You misunderstood me.

Q.—That is a mistake on your part. I took your words down.

A.—Then I made a mistake.

Q.—You have just told me everything she said is absolutely untrue, and I took the words down as you said them.

Mr. Lawson Walton: I can only say I understood the witness in an entirely different sense.

Dr. Bateman: I took the words down: "Mr. Cully told me not to canvass and not to mention it if I did so."

A.—I made a mistake. I did not say so.

Q.—Do you say that is not so?

A.—What is it you are referring to?

Q.—Do you mean to say the statement which you have just made with regard to Mr. Cully was untrue?

A.—Mr. Cully told me not to canvass in any case; that is what I mean.

Q.—And told you not to mention what?

A.—Not to mention Dr. Rendall's name.

Mr. Lawson Walton: Not to mention the name,

Dr. Bateman: Very well. I have to deal with what the witness said really.

Mr. Lawson Walton: I must ask the President or Mr. Muir Mackenzie to state their impression. The witness said he was told not to canvass for the doctor, and not to mention his name.

Dr. Bateman: "Not to mention if it I did.' I took the words down.

The President: Dr. Bateman, you observe that supposing that were the correct interpretation of what was said, the witness withdraws the words.

Dr. Bateman: Quite so; but I ask for his interpretation, and now I have got it. [To the Witness]: Do you say Mrs. Catchpole did not join the doctor's club?

A.—Which Mrs. Catchpole?

Q. Emma Catchpole.

A.—She joined the Friendly Society.

Q.—Did she afterwsrds join the National Medical Aid Society?

A.—Yes.

Q.—How did she come to join this club at all? Do you know?

A.—Yes, I can explain that. Mrs. Stone and Mrs. Snowley said she would like to recommend her sister to join. I said, "Certainly, if you like I should take her if you would recommend her; otherwise I could not do it by the rules of the Medical Aid Society."

Q.—You say it is absolutely untrue that on the following Saturday, March 24th, you had a conversation with her?

A.—Yes.

*By* Mr. Muir Mackenzie.

Q.—Used you to take your cards in your pocket with you?

A.—I am in duty bound to take the cards, otherwise I could not give a receipt for the money which I took on the round.

*By the Council.*

Dr. MacAlister: Did you take a supply of clean cards in case you came across a person wishing to join?

A.—Yes, in case they asked to join.

Dr. MacAlister: You do take them, but do not take them out?

A.—Yes.

Dr. MacAlister: You never took them out of your pocket unless you were asked for them?

A.—No.

Dr. ATTHILL: Are we to understand that you never admitted anyone as a member of the Medical Aid Society except voluntarily?

A.—Yes, voluntarily.

Dr. ATTHILL: And you never asked them to join?

A.—I never mentioned anything about it.

Dr. GLOVER: You say you never canvassed in your life?

A.—No. I never did for the Medical Aid and very seldom for the Victoria.

Dr. ATTHILL: You do not extend that to the Victoria?

A.—No.

Q.—You are an agent of both?

A.—Yes.

*By* Mr. LAWSON WALTON.

I do not know if members of the Council have the cards before them: if so, they will observe on the back of the card the places where the payments are recorded week by week, and it is the only form of receipt acknowledged.

The WITNESS: May I mention that at the present time Dr. Collier has still a medical club at Yarmouth—the London and Manchester?

The PRESIDENT: That matter is not before us to-day.

*Declarations.*

Mr. MATHEWS: I will read the Declaration of Eliza Snowley, who was present at the conversation just referred to at the time Mr. Mann was said to have canvassed this Miss Catchpole. It says:

I, Eliza Snowley, of 11, George Street, Yarmouth, in the county of Norfolk, widow, do solemnly and sincerely declare that I have been a member of the National Medical Aid Company, Limited, since the 17th February, 1900. I joined it by being recommended to do so. I have recommended several persons to join it both before and since that date. I am also a member of the Liverpool Victoria Legal Friendly Society, which I joined before joining the National Medical Aid Company. I am well acquainted with Emma Catchpole, of 29, Bolton Buildings, Grosvenor Road, Yarmouth, and I recommended her to join the National Medical Aid Company, and she asked me to speak to my collector, Mr. Mann, about it, and get her entered as a member, and she gave me the money to pay the premiums for both institutions, the Liverpool Victoria Legal Friendly Society and the National Medical Aid. When Mr. Mann called to collect my premiums I spoke to him about Emma Catchpole, and at my request he entered her in both institutions. This was about the 24th March, 1901. Mr. Mann has told me he is not allowed to canvass for the National Medical Aid Company.

That is dated November 26th, 1901. Our first intimation of any name in connection with this matter having been, as already stated, on June 13th, 1901. Then there is another declaration by Mrs. Rose Eleanor Stone, of No. 5, Row 32, Great Yarmouth. She says:

I am a member of the National Medical Aid Company, Limited, and have been so since January 20th, 1900. My children William Edward and Isaac are also members of it. I, my said children, and my husband are also members of the Liverpool Victoria Legal Friendly Society. I have recommended several persons to join both the Medical Aid Company and the said Victoria Society, and amongst them my mother, Mrs. Ann Catchpole, of 29, Bolton Buildings, Grosvenor Road, Yarmouth, and my sister Emma Catchpole, of the same address. This was about March, 1900, soon after Dr. Rendall came on for the Medical Aid Company. I lodged at Mrs. Snowley's at the time, and made these recommendations as well as Mrs. Snowley, and spoke to Mr. Mann about their joining at their request; he did not first speak to me about them. I joined this being recommended to do so.

That is dated November 26th. Then this is not unimportant, "My husband earns 14s. per week." I would call your attention to the fact that I have here these two statements, signed by these two witnesses, which afterwards were drawn up in the form of a statutory declaration, and both of those statutory declarations are signed on November 22nd of this year by that very Emma Catchpole mentioned in the statutory declaration printed in the book before you. She has signed this statement that both those statements are substantially correct.

Mr. MUIR MACKENZIE: If you tender those, I shall feel it my duty to advise the Council not to admit them.

The PRESIDENT: We have the statutory declaration.

Mr. MATHEWS: That I understand. It is quite understood that I am not offering in evidence the two unsworn statements; what I am offering in confirmation of the statutory declarations was a signed statement by Emma Catchpole that the statements on the statutory declarations were true.

Mr. MUIR MACKENZIE: I shall adhere to the advice which I have given, as advised at present, when it is tendered.

A.—It is not tendered yet.

The PRESIDENT: Have you any other evidence?

Mr. MATHEWS: Yes; there is the collector whose name has been mentioned.

WILLIAM WILLETT, *examined by* Mr. LAWSON WALTON.

Q.—You live at Great Yarmouth, were appointed collector for the Liverpool Victoria Legal Friendly Society in March, 1900, and at the same time, I think, you acted in connection with the collection of payments for the Medical Aid Society?

A.—Yes.

Q.—When you were appointed were you given any instructions by Mr. Culley, the local agent, in regard to your duty?

A.—I had instructions from Mr. Cully not to canvass for the National Medical Aid or collect for it.

Q.—As to the Liverpool Victoria Friendly Society, you were a canvasser as well as collector for that?

A.—Yes.

Q.—As to the Medical Aid you were collector only?

A.—Yes.

Q.—Is it true that in any case you have deviated from those instructions?

A.—No.

Q.—Are you aware of any collector having deviated from those instructions?

A.—No, not one.

Q.—Are you aware of any other person having deviated from those instructions?

A.—No.

Q.—Are you aware of Mr. Cully having sanctioned the deviation from those instructions?

A.—No.

Q.—Do you remember when this complaint was made with regard to Dr. Rendall?

A.—Yes.

Q.—Were you at that time a collector?

A.—I was appointed on March 13th, 1900, and I resigned on June 1st, 1901.

Q.—Were you interviewed by Dr. Rendall in regard to this case?

A.—On several occasions.

Q.—With what object?

A.—I was not in any way to use his name or mention it to any member either directly or indirectly.

Q.—Did he ask you if you had ever done so?

A.—Yes.

Q.—What did you tell him?

A.—I told him I had not done so and did not intend to.

Q.—There is a suggestion by Alice Redgrave that you canvassed her. Do you know the person referred to?

A.—I do not know the person; I know the house.

Q.—What do you say to this? She says:

About six weeks before last Christmas a man called at my house. I do not know who he was, but have since been told by a friend that his name is Willett. He got into conversation with me, and asked me "if I would join the doctor's club; the doctor was Dr. Rendall, and he lived on the Jetty Road." He said, "if I was too ill at any time to go up to the doctor's he would call on me." Mr. Willett showed me a card, and it was similar to the one now produced and shown to me, and marked "G." I did not ask him the terms. I said I should not join without my mother's consent. I have not seen him since. I am perfectly satisfied with my present doctor.

Is there any truth in that?

A.—No: no truth.

Q.—Had you any conversation with this young woman? She says she was a spinster living with her mother. Had you any such conversation with her?

A.—I think I may say in all the Rows of Yarmouth I have had conversations with various people, that is for the Incandescent Light Co.

Q. You act for the Incandescent Light Co.?

A.—Yes; I am agent for them and for the Society.

Q.—Did you ever have any such conversation with this young woman at that house?

A.—None whatever.

Q. Or with any other young woman?

A. No.

Q.—Have you any other position in the Society?

A.—No.

Q.—It does not interest you?

A. No. I was asked by Dr. Rendall to come and I have come to tell the truth but nothing but the truth.

*Cross-examined by* Dr. Bateman.

Q.—You suggest that this conversation did not take place at all?

A.—Not as regards the Medical Aid.

Q.—Do you say it might have referred to the Incandescent Light Company and not Dr. Rendall?

A.—To the Incandescent Light and not Dr. Rendall.

Q.—It is very awkward to go into a house and not be able to mention the doctor. Do not people say to you "I won't join that club; who is the doctor in connection with it?" Do you mean to say you would absolutely refuse to give the name of the doctor or where he lived until the person came to you and you had made out the card?

A.—I never canvassed for the Medical Aid Company: I simply canvassed for the Liverpool Victoria Legal Friendly Society.

Q.—You said just now you would not mention the name to any member; I suppose that would be until he had joined?

A.—That would be until he had joined the Liverpool Victoria Legal Friendly Society. They would know there was a medical aid, but they would mention it themselves.

Q.—And then you would not mention the name of Dr. Rendall until after they had become members?

A.—Not even then. It was of no interest to me.

Q.—Do not you get any remuneration at all?

A.—Well, I do get something.

Q.—What do you actually get as collector for the National Medical Aid Society?

A.—It is very little.

Q.—Never mind about how little. What is it?

A.—I think about 10 per cent.

Q.—*Plus* what was your week's subscriptions?

A.—Yes.

*By the Council:*

Dr. MacAlister: You said that Mr. Culley gave you instructions not to canvass?

A.—Yes.

Dr. MacAlister: When did he first give you those instructions?

A.—When I began; before I was connected with the Society.

The President: That was on March 13th, 1900.

A.—Yes, of course, I was appointed agent for the Liverpool Victoria Friendly and the National Aid Medical Society, but at the same time I had strict instructions not to canvass or use the doctor's name in any way whatever, and I can safely say that I have never in any case mentioned the doctor's name in connection with medical aid, either directly or indirectly.

Mr. Charles Walker Newark,

*Examined by* Mr. Charles Mathews.

Q.—You are a collector for the Liverpool Victoria and Legal Friendly Society in Yarmouth, and have collected for that Society since April, 1889?

A.—Yes.

Q.—Have you also been collector to the National Medical Aid Company as from 1889 also?

A.—From 1889.

Q.—Have you ever canvassed for members for the National Medical Aid Company.

A.—No.

Q.—Do you remember a meeting called by Mr. Cully in the autumn of 1899 in regard to a resolution which had been come to by this Council?—Yes.

Q.—Do you remember receiving certain directions about that time?

A.—Yes, I think it was on September 25th.

Q.—What were the instructions you received?

A.—Not to canvass for the Medical Aid Society or for Dr. Rendall?

Q.—And you carried out those instructions implicitly?

A.—Yes.

Q.—Against you certain statements are before the Council. The first of them is made by Mrs. Florence Nutman, who says that when she was living at Southdeans Road, Great Yarmouth, you called upon her, and she says:

I knew a Mrs. Baxter who has got a baby in the club, and she told the club man to see me. When he called, Mrs. Baxter was in mine. He said, "I have called about the baby." I said, "What, are you the man that Mrs. Baxter sent?" Mrs. Baxter, who could hear what was said, said, "Yes, that is the man." I asked him about the club and the doctor, and what sort of a man he was. He said the doctor was a very nice doctor. He was Dr. Rendall, a Scotch doctor. He told me it was 1d. a week for the doctor and 1d. a week for the insurance, and I should find it all right, as the doctor would come when I wanted him.

Is there any truth in that?

A.—No.

Q.—

He also told me that the club had been standing a good many years and that there was a lot in it. I put my baby in and paid the club man 2d., and he wrote out the doctor's card and the club card.

Did Mrs. Nutman become a member of the Medical Aid Company?

A.—No, she put the baby in.

Q.—Was Mrs. Baxter a member of the Medical Aid Company?

A.—Yes, and she is at the present time. I called there one day, and she asked me to go and see this woman, as she said she wanted to put her baby in our Society.

Q.—That is what she told you?

A.—Yes.

Q.—And did you go and see her?

A.—Yes, and Mrs. Nutman came up there.

Q.—What did she say?

A.—She said she wanted to put the baby in the same club as Mrs. Baxter, and I took out the card and wrote it and gave it to her.

Q.—So it was solely through the recommendation of Mrs. Baxter and not due to your canvassing that she was made a member.

A.—Exactly, solely through Mrs. Baxter.

Q.—Then as to Mrs. Jackman; she said on March 6th, 1900, you came up the passage of her house, and she says:

I knew him, as I had often seen him calling at my neighbours'. I knew he was a club man. I had my baby in my arms, and he asked me if the baby was insured. I said "It is only 3 weeks old." He said, "It is a good club and a good doctor to it." I said "I have belonged to the Prudential ever since I have been married; but could I join the doctor's club without the insurance?" He said, "No; you could go in the insurance with the doctor's. Several of my neighbours were in the doctor's club, and I knew from talking to them it was Dr. Rendall's club Mr. Newark meant. Mr. Newark said, "Go in, now; it is only 1d. a week for the insurance and 1d. for the doctor." I said I would put the children in.

And then you wrote out the cards. Is that a true account of any interview that you had with Mrs. Jackman?

A.—No.

Q.—Do you know Mrs. Jackman?

A.—Yes, very well.

Q.—Do you remember anything that did happen?

A.—Yes: I was collecting money at the house where Mrs. Jackman lives. She was talking to a neighbour at the time, and she had the baby in her arms. I asked her if the baby was entered, and she said, "No," and this neighbour said, "Why do not you put her in the club; this gentleman represents the Liverpool Victoria Legal Friendly Society as well as the doctor's club." She knew we had a Medical Aid, and she said to Mrs. Jackman, "Why do you not put him in the club?" She said she would like to put him in a club where there was a doctor and not an insurance, and she said, "Cannot I put him in the club without joining the insurance?" I said, "No." She said she had had a good many bills lately and could not afford it, as her husband only earned 14s. a week.

Q.—Those were trade bills.

A.—Yes.

Q.—What was the name of the neighbour?

A.—Mrs. Bland; she was a member herself and her children.

*Cross-examined by* Dr. Bateman.

Q.—I do not quite see what the objection is to Mrs. Nutman's statement. The statement is: "When I was living at South Denes Road, Great Yarmouth, the club man called on me." You quite agree that you did call upon her?

A.—Yes.

Q.—"This was about the end of last November. His name is Newark." Is that true?

A.—Yes.

Q.—"I knew a Mrs. Baxter who has got a baby in the club, and she told the clubman to see me." Do you object to that?

A.—No.

Q.—Then that statement so far is absolutely correct.

When he called, Mrs. Baxter was in mine. He said, "I have called about the baby." I said, "What, are you the man Mrs. Baxter sent?" Mrs.

Baxter, who could hear what was said, said, "Yes, that is the man." I asked him indoors. I asked him all about the club and the doctor, and what sort of a man he was.

Is that true?

A.—No.

Q.—Do you mean she never said a word about the club?

A.—Mrs. Baxter was in the house when I went in.

Q.—I mean Mrs. Nutman. Do you mean she never asked about the baby at all?

A.—She asked me if she could not put her baby in the same Society as Mrs. Baxter.

Q.—"He said the doctor was a very nice doctor. He said Dr. Rendall"—did not she mention the doctor at all?

A.—No.

Q.—It would be strange if she did not ask the name of the doctor she was going to put her baby under. Do you mean to say she did not ask the name of the doctor?

A.—She said she wished to put her baby in.

Q.—Do you mean to say you never mentioned the doctor's name at all?

A.—Not until I had filled in the card.

Q.—And then you never made this statement?

A.—No.

Q.—Do you know Mrs. Jackman has made this statement?

A.—Yes.

Q.—It is a sworn statement?

A.—Yes.

*By the Council.*

Dr. MACALISTER: You told us you were present at a meeting where Mr. Cully read or gave you instructions not to canvass?

A.—Yes.

Dr. MACALISTER.—He forbade you all to canvass for the doctor or to mention his name?

A.—Yes.

Dr. MACALISTER:—Did he threaten to dismiss you if you did?

A.—I think he said it would be a very serious matter if it was found out.

Dr. MACALISTER: If Mr. Cully found out you canvassed it would be serious?

A.—No, I did not canvass, I did not like him enough in years gone by. I have lost too much business through the doctor. I do not care about it.

Dr. GLOVER: When any person did ask about the doctor in connection with your business, what did you say?

A.—I never had a person ask about the doctor unless they had been recommended by someone.

Dr. GLOVER: When they have asked you about a doctor, what do you say?

A.—I have asked what doctor they meant.

Dr. GLOVER: But when they asked what doctor you would recommend, what would you say?

A.—I simply said we had a doctor whom you could have if you joined.

Dr. GLOVER: You gave no name until they joined the insurance?

A.—I gave no name until they joined the insurance.

Dr. GLOVER: And then you gave the name of Dr. Rendall?

A. And then I gave the name of Dr. Rendall.

Dr. GLOVER: Did these persons who are admitted to the benefits of the insurance society undergo any medical examination?

A. No; not under a certain amount.

Dr. GLOVER: Persons who are admitted into the insurance society for a small policy do not undergo a medical examination?

A.—No.

Dr. GLOVER: I want to be quite clear on this point. Did Dr. Rendall act both as medical officer for the Medical Aid Company and as the medical officer for the Liverpool Victoria Legal Friendly Society?

A.—I believe so.

Dr. GLOVER: For both.

A. Yes.

Dr. LITTLE: You said Mr. Cully told you the serious consequences that would result if you mentioned the doctor's name in connection with the Medical Aid Society?

A. Yes, or canvassed in any way for the Medical Aid Society.

Dr. LITTLE: On whom were these serious consequences to be visited did you suppose?

A.—On us, I suppose; I was led to infer that.

Sir WILLIAM THOMSON: You said you had lost business through the medical officers, and that was the reason you had never canvassed?

A.—Yes, some years ago.

Sir WILLIAM THOMSON: I should like you to explain that a little more. Why should you lose business if you do not recommend the medical officer? How did it bring about a loss of business to you?

A. They got the members I had on my books to attend, and they did not attend the members properly in this way; they did not listen to what grievances they had to say when they had a complaint; they simply gave them medicine when they were sick, and would not listen to what they had to say, but started them off; and there was insufficient accommodation at the surgery.

Sir WILLIAM THOMSON: Still, I hardly understand what you mean by losing business. Do you mean you could not get further people to join?

A.—No.

Dr. ATTHILL: Did they give up the insurance company because of this?

A.—No, only the club.

Dr. ATTHILL: Why did they give up the one and not the other?

A.—In some cases I have lost business both ways.

Dr. ATTHILL: If any of these families ceased because they were dissatisfied with the doctor, evidently they must have had the benefit of the doctor's services?

A.—Mrs. Jackman has left the Society and has joined another.

*By* Mr. LAWSON WALTON.

Q. You said below a certain limit there is no medical examination of any person before they are insured, that is, I think, £25?

A.—Yes.

Q.—All insurers for £25 and upwards are examined by the doctor?

A.—Yes.

Q.—And Dr. Rendall is the doctor for that Society

A.—Yes.

Q.—And receives a fee for every examination?

A.—Yes.

DECLARATIONS.

Mr. CHARLES MATHEWS: Then I put in the statutory declaration of Florence Nutman, who, after stating where she lived, says:

That Mrs. Baxter told me she was a member of the Liverpool Victoria Legal Friendly Society and the National Medical Aid Company, Limited, and one day we had some conversation about the Medical Aid Company and about putting my baby boy, George Thomas Nutman, into it. Mrs. Baxter said she would ask Mr. Newark, her collector, to call round, which he did, when I asked him to enter my said baby as a member of the Liverpool Victoria Legal Friendly Society and the National Medical Aid Company, which he did, and I paid him 2d., the premiums for the two institutions. This was about the end of November, 1900. I was never asked to become a member of either society.

The PRESIDENT: Is this the same Florence Nutman who on April 29th, 1901, made a statutory declaration?

Mr. CHARLES MATHEWS: Yes. Then there is another statutory declaration by

I, Bridget Catherine Baxter, of 4, Trinity Passage, Southgate Road, Yarmouth, in the county of Norfolk, wife of Forbes Smith Baxter, of same place, do solemnly and sincerely declare that I am a member of the Liverpool Victoria Legal Friendly Society and the National Medical Aid Company, Limited. I have recommended several persons to join these useful institutions. I remember Mrs. Nutman, of No. 2, Trinity Passage, asking me about putting her little baby boy into the National Medical Aid Company. This was about November, 1900, and at her request I sent my collector Mr. Newark to her to enter him as a member, and I did so. I would not have mentioned it to Mr. Newark, but that Mrs. Nutman first spoke to me about it. She joined her baby as a member of the Liverpool Victoria Legal Friendly Society and of the National Medical Aid Company, and paid two premiums of 1d each to Mr Newark in my presence. I cannot afford to pay a doctor's charges. My husband earns 20s. per week. And I make this solemn declaration, etc.

Then there is a statutory declaration of James Thomas Bingham, who declares that:

I was a collector in the employ of the Liverpool Victoria Legal Friendly Society, and agent for the National Medical Aid Company, Limited, at Great Yarmouth, from August 4th, 1900, where I acted until December 29th, 1900, after which I went to Lowestoft, ceasing altogether to act for the Liverpool Victoria Legal Friendly Society and for the National Medical Aid Company about April, 1901. When I was appointed by Mr.

Culley, the Yarmouth district manager, he told me that on no account was I to canvass for the National Medical Aid Company or for the doctor, Dr. Rendall. He told me that on several occasions and in the presence of other collectors, and I never did canvass for the National Medical Aid Company or for Dr. Rendall: I canvassed only for the Liverpool Victoria Legal Friendly Society, and I never entered a single name in the National Medical Aid Company as a member unless by recommendation and being requested to do so at the instance of the member, and I always insured them in the Liverpool Victoria Legal Friendly Society first. I have seen the list of seven names which it is alleged were canvassed upon, and the only name I recognise is that of Esther Wilkins, which she entered with me on October 20th, 1900, but she only paid three payments, and thus was never in medical benefit. I never canvassed her for the National Medical Aid Company; she spoke to me first about it, and I at the same time insured her in the Liverpool Victoria Legal Friendly Society. I do not know the names of Cecilia Albrow or Elizabeth Wiseman; Cecilia Albrow was never in the National Aid Company, nor was she ever canvassed by me. I say the same with regard to Elizabeth Wiseman. I believe I had her father and mother on my books, but I never canvassed Elizabeth Wiseman to become a member of the National Medical Aid Company. The remuneration I received for medical aid work was so small that it was not worth my while to canvass for it or work it without the Liverpool Victoria Legal Friendly Society. I was constantly requested by strangers, owing to Dr. Rendall's popularity, to make them members of the National Medical Aid Company, and was always having recommendations to make persons members of both institutions whom I never spoke to on the subject. I had no printed canvassing literature for the National Medical Aid Company, and they do not advertise. And I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Statutory Declaration Act, 1835. James T. Bingham. Subscribed and declared by James Thomas Bingham, at Hanley, in the county of Staffor. this 26th day of November, 1901.

Dr. Pettigrew: Before the case is closed for the defence, may I ask Mr. Peters, the Secretary of the Liverpool Victoria Legal Friendly Society and a director of the Medical Aid Society, to be recalled?

Mr. Peters, *recalled*.

Dr. Pettigrew: Are you Secretary to the Liverpool Victoria Legal Friendly Society?

A.—No; I am chief clerk.

Dr. Pettigrew: Then are you a secretary of the National Medical Aid Company?

A.—Not secretary, but director.

Dr. Pettigrew: I should like to get some information of the nature of this company. It is entitled the "National Medical Aid Company." How many individuals compose the company?

A.—Ten.

Dr. Pettigrew: Is it a limited liability company?

A.—Yes.

Dr. Pettigrew: Does it carry on its operations under the Friendly Societies Act?

A.—No; that is impossible, of course.

Dr. Pettigrew: It is a limited liability company which acts under terms of benevolence?

A.—Exactly, as I have already stated to the Council.

Dr. Pettigrew: Now, are those ten shareholders paid anything?

A.—No, they are not paid anything. They get a small balance if there is anything left.

Dr. Pettigrew: A bonus?

A.—No, not a bonus, but a balance.

Dr. Pettigrew: How often do they get this?

A.—At the end of the year.

Dr. Pettigrew: What may be the amount?

A.—I am almost ashamed to say how small it is: it is very small, but if you press me to go into these figures I am quite willing to give them to the Council. It is a small fee; I think it averages about £10 per annum each. That is what is left over after all expenses are paid.

Dr. Pettigrew: Are the individuals who act under this limited liability company all paid?

A.—They get percentages, as was explained yesterday.

Dr. Pettigrew: How are these shareholders appointed? You say there are ten. How do they become shareholders?

A.—The founders of the organisation are chiefly those that are there on the list.

Dr. Pettigrew: Then you, the company, employ a doctor, and do your business in fact through the doctor.

A.—Oh, no; nothing of the kind.

Dr. Pettigrew: Did it not come out yesterday that you paid to Dr. Rendall £150 a year.

A.—We have nearly a thousand doctors, as I explained yesterday.

Dr. Pettigrew: These doctors are under your direction?

A.—We do not interfere with the doctors; they act in their own way.

Dr. Pettigrew: You employ them and encourage them. Dr. Rendall got in the first year £150?

A.—That is so.

Dr. Glover: Are these terms of medical attendance under this arrangement of yours less than those of the great Friendly Societies?

A.—I do not know that they are less.

Dr. Glover.—Are they more?

A.—I do not know. I have not compared the rates of other societies. I am not prepared with information on that subject.

Dr. Glover: What do the members pay?

A.—A penny a week, and the families 6d.

*By* Mr. Lawson Walton.

Do you know whether this Medical Society appeals to a lower class of the population than the Foresters and the other societies?

A.—Yes: I am inclined to think it does.

Dr. Glover: And they charge higher terms?

A.—I do not think they do.

Mr. Lawson Walton: That is the case for the defence.

Concluding Addresses.

The President said that it was contrary to the rule of the Council to permit counsel the right of reply, but as this was evidently regarded as a rare case, he would, with the sanction of the Council, call on Mr. Lawson Walton and Dr. Bateman to reply.

Mr. Lawson Walton: At the outset it is important—inasmuch as the Council is called upon to exercise a disciplinary function—to ascertain exactly how the charge against Dr. Rendall is framed. The various considerations which have been discussed in the evidence, after all are relative, in so far as they tend to show that that charge has been substantiated. I do not think I can quarrel with the language used by Mr. Winterbotham, the legal representative of the Council, in the communication which he made on October 4th to Dr. Rendall. He there invited the defendant to meet a specific allegation before the Council, and he framed it in these terms. He said: You have been guilty of infamous conduct in a professional respect, particulars of which are that you have accepted and continued to hold the appointment of medical officer to the Liverpool Victoria Legal Friendly Society at Great Yarmouth a Society which systematically practises canvassing for the purpose of procuring patients, and that you have approved or acquiesced in such canvassing. There the charge is twofold; it involves first the organisation with which Dr. Rendall is associated: and, secondly, it commits him to a conscious acquiescence in the operations of that organisation. I submit with confidence to the Council that neither of those statements has been proved. The whole of the evidence which has been adduced is evidence which tends to show that persons who are employed both to canvass and to collect for the Friendly Society have both canvassed and collected for the Medical Aid Society, and those statements rest upon the testimony of a class of persons in conditions of life whose testimony has invariably proved to be untrustworthy in courts of law; they are inaccurate and often illiterate, and they have not the mental training which a person in a higher state of life gets and which conduces to accuracy of recollection, and as a result, as an illustration of the degree in which this unreliability of testimony exists, I find that Emma Catchpole has made a statement which Dr. Bateman has read; also, although I agree it is not evidence, she has had read over to her statements entirely inconsistent with her own version, and she adopts those statements in a signed memorandum and says they are substantially accurate, so I refer to her case because whether this statement is true or the other story is true, it is quite impossible for the Council to determine upon this testimony without cross-examination. Then we have also the evidence of Nutman, which contradicts itself, because she has given Dr. Bateman's client a statement, and also a statement to Dr. Rendall, and these statements absolutely conflict. Therefore you have not merely a conflict between the witnesses, but you have a conflict in the statements of the same witnesses, and in the absence of persons upon whose

evidence the Council might fairly arrive at some definite conclusion as to which of them is entitled to credit. I submit the whole of that evidence is mere morass, and it is impossible to tread upon it, and would only lead to great confusion if any weight were attached to it. On the other hand, you have much higher testimony. You have the testimony of men who have been here and who have faced the ordeal of appearing before the Council. It is quite true you have not the power to administer the oath, but I am surprised to hear it said that greater credit is to be attached to a person who is absent than to a person who is present but is not sworn, because of the inability of the tribunal to administer the oath. The collectors have been called here, and they have in each case exonerated themselves, and, I submit exonerated the Society. Is there evidence that systematic canvassing has taken place in fact? It must be systematic canvassing. It is not enough to show that in a particular case a person was canvassed in order to induce him to enter the Society: it is not enough to show that here and there there have been cases of canvassing, but has it been systematic? Now, in order to be systematic, it must take place in a recognised way, and it must take place on recognised lines. The collectors one and all say they have not followed it systematically; there has been no systematic canvassing. The office is opposed to canvassing, and there have been instructions issued from the office against canvassing; and the system adopted by the office, Mr. Cully says, was such as to make it hardly possible that there could be any canvassing by collectors. I grant, if you like, as Dr. Bateman has said, that there have been one or two cases of casual canvassing, but how can that assist him? We know that it was not recognised. Mr. Willett is no longer in the employ of the company. I put it to the Council if there was connivance at canvassing, if it was true it was pursued under the rose and Mr. Cully ignored it, why should not Mr. Willett admit it? Why should not he have said, "I did occasionally canvass, and it was found out and nothing was said about it?" Instead of that Mr. Willett says, although he is no longer in the employment of the Society, it was enjoined upon him not to canvass or mention the doctor's name until after the particular patient, the member had been formally admitted into the Society. I submit to the Council there has been no systematic canvassing shown, and no authorised canvassing in point of fact has been proved to exist, and therefore the first part of the charge fails. What evidence is there that the office has sanctioned canvassing? I have called the directors, and they say they are dead against it. I have called the agent, and he says he is dead against it, and has always opposed it. There has been canvassing for the Friendly Society, but that, I submit, is perfectly legitimate, and I submit this Council will not seek in any way to interfere with it. But unless they go this length, and say that there must be a distinct staff for the National Medical Aid Society, as compared with the staff employed by the Friendly Society, or some such separation of that kind should take place, it is inevitable that the men who collected for the one should collect for the other, because the organisations are very similar, and the same machinery must, to a great extent, be used in both. Of course, if the Council thinks that a separate staff for collecting by the Medical Aid Society should be kept, I am authorised to give an undertaking that that should be done. If the Council think that a separate staff of collectors should be engaged, these gentlemen authorise me to say that that shall be done, because they are anxious to take a course in regard to this matter which would be reasonable, and in accordance with the wishes of the Council. The National Medical Aid Society have not been parties to any canvassing; they have been against it, and there is no evidence to the contrary. Then with regard to the charge, that Dr. Rendall knew of this canvassing. There has not been a single case brought forward to prove that Dr. Rendall acquiesced in canvassing. It has not been proved that he had knowledge of the fact, and there is not a tittle of evidence to show that he knew of a single instance of canvassing. The only evidence we have is that Dr. Rendall has been asking for information about it, but so far from their giving Dr. Rendall any information, they would not give him even the names of the persons whom it was alleged had been canvassed, and it was only at the end of this year when the Council's solicitor communicated with him that he knew what the charges were, and then investigations were made with the result that it went far to repudiate the charge which was set up. Therefore there is no evidence that Dr. Rendall knew of or acquiesced in canvassing, which has been suggested, and certainly there is no evidence that there has been any systematic canvassing, and that if so the case fails. Then one remark on the general policy which certainly arises in connection with this inquiry, and which is of enormous importance so far as the public at large are affected. This is a test case. It has been suggested that the wage limit which the Medical Aid Societies has adopted is not sufficient and rigid. You have the evidence before you of what it is. In Yarmouth it is fixed at 30s. It is fixed in different districts at different figures, having regard to the average rate of wages. I should have thought some flexibility was not unreasonable. But with regard to that matter, the directors instruct me to say they are willing to adopt any wage limit which the Council may think right in order that those people who are so poor that they are unable at their own cost to obtain medical assistance may be able to do so by some system of medical aid of this kind. These are very poor people, and anything which would enable them to have medical assistance in their own home is an object to encourage; it enables a number of people who would otherwise not have any medical assistance at all to obtain it, and that encourages thrift in the working classes; and, therefore, in so far as this case rests on a question of policy, I feel sure that this Council will consider with very great care any resolution which they lay down, or any decision at which they arrive. It is a very serious matter, not only to this Society, but to hundreds of kindred societies throughout the kingdom. Mr. Lawson Walton read the written definition by Lord Justice Lopes, and adopted by Lord Esher in the Court of Appeal, in the Crown *v.* Allison of the powers of the Council:

> If a medical man in pursuit of his profession had done something in respect to which it would be reasonably regarded as infamous by his professional brethren of repute, that would be evidence of infamous conduct in a professional respect. The question was not whether that which a medical man had done would be infamous if done by someone outside the medical profession; the conduct must be infamous in a professional respect.

Continuing, Mr. Walton said that, therefore, is the question for this Council to determine. Are there in the features of this case, or are there in the facts which have been introduced into this case, reasonable grounds for regarding Dr. Rendall's conduct as infamous in a professional respect? In other words, can anything that Dr. Rendall has done be regarded as infamous in a professional respect? What has Dr. Rendall done? He is a man of character; he is a man who is highly qualified in his profession; he has taken high degrees in the schools of medicine; he has occupied a position under Government; he has earned considerable experience; he has carried with him the good opinion of medical men wherever he has been, and his testimonials range from Ipswich up to the far North, where he had an Admiralty appointment; and then, when he is out of a situation, he accepts this position on the assurance that no canvassing of any kind and no improper proceedings were to be taken, and when it is suggested to him that canvassing in his interests does go on, he asks for evidence of it. He interrogates all the collectors and all the patients to ascertain if it exists, and every source of information is exhausted, and he comes to the conclusion that no such charge can be substantiated, and therefore he feels that he is bound to continue in his position. Now that this employment is not without its advantages to this class of people is clear, because Mr. Moxon says he told Dr. Rendall that the class of people among whom he practised were so poor that they could not support any medical man, and he could not hope to get a practice amongst them. By his services they got medical assistance, and he is not a party, nor does he acquiesce in any conduct which is unprofessional; and I submit to the Council that the mere fact that he has acted for a Medical Aid Society which is organised on these principles does not constitute, and cannot reasonably be held to constitute, infamous conduct in a professional respect. Of course, if the Council come to such a resolution with regard to Dr. Rendall, it affects a very large body of medical men throughout the country; it would affect every medical man connected with a Medical Aid Society of this kind. I think this particular

Society has no fewer than 750 medical men occupying exactly the same position as Dr. Rendall. They are not conscious of misconduct; they are honourable men practising their profession. They accept the position on the assurance that no canvassing takes place, and they do not acquiesce in it. But if the case is established against Dr. Rendall then all those gentlemen must be brought within this wide net which is cast round them by this conviction, and not only the Medical Aid Societies, but all the other Societies would be affected. Therefore I ask the Council to decline to accept the case that has been put before them, and to come to the conclusion that this case has not been established. And in dismissing it to leave to every Society of this kind the full right to carry on its operations, provided it is clear that all the authorities controlling that Society set their faces against the unprofessional practice of canvassing for members for the support of their medical men; and unless there be evidence that the controllers of the organisation have sanctioned the use of this practice, this Council should not countenance complaints against medical men who have not in any way been party to such practices in connection with their own personal conduct, and who cannot be connected in any way with it. For these reasons I ask you to dismiss this case. I am much obliged to you for having allowed me to sum up the case. I said the gentlemen I represented were quite willing to do whatever this Council thought reasonable in general terms, and I can repeat, and do repeat, that undertaking so far as the wage limit is concerned. The directors who are present endorse my undertaking so far as the Medical Aid staff is concerned. What they say is that it would not be worth the collectors' while out of this small charge of a penny per week to keep up a separate staff for the Medical Aid Society. It can only be worked as an accessory to the Friendly Society, and it would suit them better to let the Medical Aid Society die out—which I think in some way would be a misfortune—rather than resort to any very expensive machinery order to keep it separate from the Friendly Society.

Dr. Bateman: There are one or two observations I should like to make in relation to my opening and in relation to the case which is before you. This, as I said before, is of great importance both to the profession and to the public. These cases are not decided by words, but by the facts which are brought before you, and I venture to think that the facts which I brought before you to-day and yesterday will go far to prove my case. What was it I was prepared to prove? First, the connection between the two Societies—the National Medical Aid Society and the Liverpool Victoria Legal Friendly Society. I may at once say that, if I have failed to do this, what I have failed to do Mr. Walton and his witnesses have done for me, because they have proved without any discussion at all the one and indivisible character of those two Societies. Secondly, it is said that canvassing is only casual and not systematic. Of course it was impossible for us to go round and find out all the people who had been canvassed and get declarations to proved systematic canvassing. We have had to take a case where we could get it, and I submit that what I have brought before you has not been disproved by what has been said by the other side. Then, thirdly, that Dr. Rendall is a doctor to a Medical Aid institution and to a society which practised canvassing and also advertising for securing patients. The close connection between these two Societies must not be lost sight of, because it is acknowledged by Mr. Lawson Walton, on behalf of his client, that these collectors had collected for the National Medical Aid Society, and when I have proved as I have done that these two Societies are one and indivisible, I think I have proved, also, that there is canvassing for the Medical Aid Society, and that canvassing for the one is canvassing for the other. The defence raised is a denial that there has been canvassing. But from whom does it come? A denial from those men who, if they had confessed to having done it, would have been instantly dismissed. That is my answer to that denial. I also proved that the collectors got a percentage on the fees paid by the patients, and also that they had a certain number of weeks subscriptions paid to them as a bonus. Therefore I have proved that there is a distinct temptation on the part of canvassers or collectors of this Society to do their level best to increase their own earnings or add to the earnings of Dr. Rendall by recommending this Society. With regard to Dr. Rendall not knowing this, personally, as a brother practitioner of Dr. Rendall, I can only say, if he did not know it, he ought to have done so. It has been notorious for years that this National Medical Aid Society does canvass and does collect from house to house. The defence raised to-day—that they only call at the houses of the poor—I think myself is absolutely disproved; and I have not the slightest doubt that, if that were raised in a court of justice, I could bring ample evidence to show that they not only go into the houses of the poor, but into the houses of the more wealthy classes. It is a mistake to say that they exist only for the benefit of the very poor, and that they do not canvass from door to door, because the opposite could be easily proved. I submit that the statements that I have brought before you are entirely proved. I might mention that because the case of Dr. Rendall was, as Mr. Walton naturally imagined, a picked case. I personally took the case from many others which might have come up before you. I trust they will not. For many reasons I personally picked the case, as I considered that all the objections which were involved in this question of Medical Aid were in this very case, and therefore I could not bring forward a better case for a test one. The Medical Defence Union, I may add, is determined to do its best to put a stop to this canvassing for medical men and advertising of medical men by the National Aid Society. It is asserted that this will affect a large number of medical men. I do not care if it affected ten thousand, provided they belonged to the National Medical Aid Society. It has been said that other Friendly Societies are involved in the matter. Other societies need not be involved; they need not be frightened. I have not the slightest objection to the Friendly Society treating the sick poor, but what we object to is the canvassing, and the canvassing alone. It is not the small fee that they charge, because as a matter of fact this philanthropic Society charges more than a Society like the Hearts of Oak and other Friendly Societies to the very poor, and yet it poses as a philanthropic institution. It is absurd. It has been held by the Court time after time that the Council alone can decide what is meant by the term "infamous conduct" in a professional respect.

The President: I will now request the parties to withdraw, so that the Council may deliberate.

Strangers and the parties withdrew.

Strangers and parties being readmitted,

The President, addressing Dr. Rendall, said: Dr. Rendall, the Council have deliberated very carefully on your case, and they have come to the conclusion that the facts alleged against you in the notice of inquiry have been proved to the satisfaction of the Council. The Council feel it their duty to express their sense of the gravity of the facts which have been proved against you, but in order to give you an opportunity seriously to reconsider your position in relation to the Liverpool Victoria Legal Friendly Society and the National Medical Aid Company Limited, they have adjourned the further consideration of the charge until the next session, when you will have to appear and satisfy the Council as to your conduct in the interval. You will receive due notice when the next session of the Council will take place; it will probably be towards the end of May.

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*Friday, November 29th.*

Sir William Turner, K.C.B., President, in the Chair

## Dental Business.

*Case of Alexander Wood Donaldson.*—The Council considered the case of Alexander Wood Donaldson, registered on the *Dentists' Register* as in practice before July 22nd, 1878, of Bury St. Edmunds. The Dental Committee reported that he advertised himself for many years with the description R.D.S., R.C.S.Eng., and subsequently with the description R.D.S. Eng., that he by statutory declaration apologised for what he had done, stating that he erred through ignorance, that he had withdrawn all descriptive letters from his advertisement, and undertook not to use them in the future. The Council having heard the respondent's solicitor and having

questioned the respondent, deliberated *in camerâ*. On the re-admission of strangers the PRESIDENT addressing Mr. Donaldson said: The Council has given full consideration to your case, and to the declaration which has been read on your behalf and to which you have assented, and this is the resolution passed:

The Council, taking note of your pledge with respect to the withdrawal of the false description which you have been in the habit of advertising, and of your expression of contrition for the offence you have committed, decides to proceed no further in reference to the facts proved against you.

*Dentists' Registers.*—A further report from the Dental Committee was received and entered on the minutes. It stated that certain names erased under Section XII of the Dentists' Act 1878, had been restored, and that the Registrar had been directed to erase from the *Dental Students' Register* the name of a dental student who had spontaneously confessed that he had been registered in respect of a fraudulent certificate in Preliminary Education.

### ITALIAN DEGREES.

The Council then proceeded to the consideration postponed from November 27th, 1901, of the report of the Executive Committee on the Medical Degrees of Italian Universities. (See BRITISH MEDICAL JOURNAL, November 30th, p. 1627.) After some discussion with regard to the mode of procedure, Mr. VICTOR HORSLEY, in order to put himself in order, moved to refer the report back to the Executive Committee, and this was formally seconded by Dr. BRUCE.

Mr. VICTOR HORSLEY considered the Council had been treated by the Government with the grossest disrespect and contempt. He recognised, as no doubt other members of the Council did, that it was under the harrow, and it was no use holding out. If the Council were ordered to enter certain Italian practitioners on the *Register* by the Central Government it had no option but to comply, and do its duty towards those gentlemen in the same way as it did towards the gentlemen who were educated in British universities. As he had pointed out two years ago, when the matter was in an earlier stage, the danger which presented itself then, and which was accentuated now, was that inequality of treatment would arise, that foreigners applying for registration would obtain admission on easier terms; and the report of the Executive Committee without further explanations showed this. In the first place, he wished to draw attention to the fact that the Executive Committee came to this decision, that the regulations of the Italian universities were sufficient proof of a person's qualifications to be entered on the *Register*, he maintained that there was no proof at all. The Council inspected the examinations of the various British universities, and he desired to know if the Committee proposed to inspect the examinations of the universities in Italy. There was not a word about it in the report. The Italian regulations as drawn up were constructed some twenty-five years ago, but a great deal had happened since then in this country. Our curriculum had been entirely altered, but the Italian curriculum remained the same. There was not the slightest evidence to show that those examinations were carried out efficiently or in the practical direction which was held to be necessary in this country, and which British students were compelled to undergo, and unless the system of inspection was added to the study of the regulations the admission to the *Register* became a matter of inequality between British students and foreigners. He then proceeded to criticise the special conditions which the Executive Committee had framed in order to carry out the regulations. He considered them ineffective, and therefore a source of danger to practitioners in this country. He believed that the proposed regulations were not trustworthy, and for that reason he would enter his protest against their being received.

Dr. MACALISTER pointed out that although the regulations were dated originally twenty-five years ago, subsequent decrees referred to them and ratified them and brought them up to date. As to the second point he reminded the Council that it was bound by Section XII of the Medical Act of 1886 and it had no choice in the matter. The form which the Committee had adopted was not an enactment of the Executive Committee, but was the law of the land. With regard to the certificate of identity there were many methods in which identification could be established, as by a statutory declaration or a certificate of the Consul which would satisfy the Registrar when in doubt that the applicant was the person mentioned: and he also had to satisfy the Registrar that he was not a British subject, or that being a British subject he was not at the time he received the degree and was domiciled abroad. The question of diplomas was regulated by Section VIII of the Act of 1886 which said they were to be such diploma or diplomas as might be recognised by the General Medical Council as an efficient guarantee of the requisite knowledge of medicine, surgery, and midwifery. The Committee had applied to the Privy Council as to the regulation on which diplomas were granted in various universities of Italy and were furnished with the regulations which it was told applied to all Italy. The Committee, therefore, had to consider them altogether or not at all. With regard to the inspection of examinations, the objection raised applied also to the Colonial List. It was quite impossible for the Council to inspect the examinations of universities in Australia or New Zealand. The procedure in that case was exactly the same as in this case. The law in regard to the matter was carefully examined, and the examination papers of the various universities inspected. If the Council refused merely because it could not inspect any diploma, the practitioner was empowered to appeal direct to the Privy Council, and the Privy Council might, if it thought fit, order the Council to recognise the diploma or register the individual.

Dr. GLOVER said that personally he would like some further information, but he would ask Mr. Victor Horsley if he was prepared to move an amendment.

Mr. VICTOR HORSLEY could not make any suggestion until he knew what the position of the Executive Committee was. Dr. MacAlister had not answered his point. He had asked why there should be a difference in the treatment of Italian and British universities, and the reply was: Because they did not inspect Colonial universities, therefore they did not inspect the Italian. He did not desire the Colonial universities to be on the same platform as foreign. As to the practical question of inspection, it was quite clear that, if the Council was to exercise any control over the *Register*, it must know the degree of education of the persons who were to be put upon it, and obviously that could not be learnt from regulations, but only by inspection. If the Privy Council chose to order the Council to take up a certain responsible position, the responsibility would be upon the Privy Council to provide the necessary expenses for the due performance of the duties. The Council did not derive a sufficient income from the registered practitioners in this country to enable it to inspect the Italian universities, but he maintained that an application should be made to the Privy Council to defray the expenses of such inspection. He resented being called upon to perform a duty by his country without having the necessary means of doing it. That was a practical solution of the difficulty, and he was surprised that the Executive Committee did not make such a proposal, and, if his motion was not carried, he would certainly put a notice on the paper to that effect.

Dr. NORMAN MOORE said the Council was acting according to an Act of Parliament, and this was one of the proceedings under the powers given or not given to the Council by law, and he did not think it would be justified in protesting.

Dr. MCVAIL agreed with Dr. Moore that the Council had to fulfil the law: it was an administrative body. Under Clause XIII of the Act it fell to the General Medical Council to decide as to what university or universities furnished a sufficient guarantee of the possession of a sufficient knowledge or skill in medicine, surgery, or midwifery, but the clause did not say how the Council was to decide that point. The Act of 1858 said the Council was to inspect British universities, but the Act of 1886 was silent on the point either way. To him it appeared that the Council required legal advice on the construction of this clause.

The PRESIDENT pointed out that it was not for the legal advisers to advise the Council whether inspection was a necessary part of its duty in coming to a conclusion as to whether these diplomas were sufficient or not: the Council was the body which must determine whether diplomas were

evidence of the possession of the requisite knowledge and skill by applicants.

Mr. Victor Horsley said, in reply to Dr. Norman Moore, that the Act of 1886 placed the whole responsibility upon the Council's shoulders. He contended if the Council exercised that responsibility towards British universities to the extent that it felt obliged to inspect them, then *a fortiori* it ought to inspect the Italian universities.

The motion to refer the report back to the Committee was then put and declared lost. At the request of Mr. Victor Horsley the names of members were taken down, and 10 voted for and 11 against, 7 did not vote and 3 were absent.

### Report of Education Committee.

A second report of the Education Committee on the steps to be taken for the improvement of Preliminary Examinations was received and entered as an appendix to the minutes.

Sir John Batty Tuke (Chairman of the Committee) said that he hoped that this report was the last of a long series of reports on preliminary examination. In November, 1898, the Education Committee was asked to report when in its opinion it would be practicable to raise preliminary examination to the senior and higher standards. In June, 1899, the Committee reported, after consultation with a large number of educational authorities, that it would be better if educational experts were appointed to review the circumstances of all examinations. Experts were appointed, and in December, 1899, the Committee submitted a report, along with a report of the experts, who held that it was impossible to raise the standard to the senior or higher grade in the present condition of secondary education in Great Britain. Thereupon the experts were asked to state reasons for the belief. This produced a report from the experts, which he was sure was held to be a very important document in connection with the whole principle of preliminary examination. In March, 1900, they gave these reasons, and the Committee were then enabled to work upon certain fixed principles. While speaking of the experts he thought the thanks of the Council, but certainly of the Committee, were due to them for the admirable way in which they did their work, and he thought he might mention the name of Professor McCormick, who, by his diplomacy and his vast knowledge of the subject, had enabled the Committee to do its work in what it believed to be a satisfactory manner. It had acted on the principle laid down in the report, and the main principle was to improve materially the quality of examinations. The principal difficulty in doing that was to produce a rise in the character of examinations in reality, a real *bonâ-fide* rise. All knew how easy it was on paper to make an examination look more serious than it was. The Committee had used its best endeavours to do nothing of that kind. The method it had adopted was to make representations to the various examining bodies, asking them to raise the standard of the pass-marks rather than increase the difficulty of an examination. The Committee had met with very great success in establishing this principle all along the line, and he thanked, on behalf of the Committee, all the examining bodies for the cordial support they had given. Feeling that the Council had the true interests of education at heart, they had met it in the most conciliatory spirit, and had wherever necessary provided examinations in order to bring about a common good. No question of established rights had entered in any way into the discussion; the greatest and the oldest of their universities had met the Committee on common ground. Oxford, in response, had added mathematics, and Cambridge had added English. The principle acted upon throughout had been *noblesse oblige* in regard to these matters. The same treatment had been received from Dublin, and all had said: "We consult our dignity best by working together for one common object." He might be asked, When does the Committee see a chance of giving effect to a further rise in the quality of examination? His answer to that was when the state of secondary education in the country was in a less chaotic condition. Till then it was hopeless to do so. The responsibility lay with the country, and it was sincerely to be hoped that the Government during the next session would bring forward a strong measure by which this important object might be attained. The Committee still required the services of an expert, and if this was appointed he would ask the Council to vote £50 for the current year for that purpose. He felt that the Committee had done as much as it was possible to do under the circumstances, and that it had made a very material advance in the improvement of preliminary education. But there was a sad side to the story. It was quite possible that all their work might be futile, because he noticed that in the regulations for the Conjoint Board in England for 1902 it was stated that students were required to complete five years of professional study after passing a recognised preliminary examination, and that preliminary examination in general knowledge was that recognised by the Conjoint Board and not recognised by the General Medical Council. It was quite possible that the Conjoint Board in England might adopt the list now proposed, but possibly it might not; and it must be remembered it was open to any other body to act as this Board proposed to do, so far as the individual recognition of the examination was concerned. It was with a considerable amount of regret and sorrow that he had to say this, more especially as during the last five years this subject had been engaging the deep attention of the Educational Committee, the work of which might at any time be rendered futile. He moved that the list contained in the report be approved.

Sir Christopher Nixon seconded the motion and wished to say that the announcement which Sir John Tuke had just made as to the determination of the Royal Colleges in England to recognise a preliminary examination of its own without any reference to the Council was a matter that was completely new to him, and he supposed to other members of the Education Committee.

Dr. Norman Moore protested that there was no ground whatever for Sir John Tuke's statement. The subject had not been considered by the College of Physicians. Sir John Tuke had referred to the regulations of the College of Physicians in which it was stated that a student was "required to produce the following certificate before admission to the several examinations, first of having passed one of the preliminary examinations in general education recognised by the Examining Board in England, a list of which can be obtained on application."

Sir Christopher Nixon thought the important point was that the Royal College of Physicians did not merely determine the school at which the first years of school duties were to be taken, but reserved a right of recognition of examinations quite irrespective of the General Medical Council.

Dr. Young pointed out that Sir Christopher Nixon was in error in thinking it was a new matter. He, Dr. Young, had pointed out at the last meeting of the Council that this was the crucial point of departure of the Royal Colleges; it was in effect that they establish for themselves what should be the preliminary examination.

Dr. Norman Moore, speaking for the College of Physicians, desired to say that it had the right, and intended to retain it, of saying what should be the conditions of admission to its licence, and that right it absolutely retained in the fullest degree. Sir John Tuke, no doubt undesignedly, had entirely misrepresented its conduct. It had not discussed the question of having any other regulations with regard to preliminary examinations than those to which this Council had agreed. The Council had endeavoured to encroach upon an undoubted right of the College of Physicians and all the other qualifying bodies of saying where people should study who proposed to take their licences. In the face of the unconscious tendency towards encroachment, it was obvious that it should frame its regulations in such a way as clearly to show that it did not give up the duties which belonged to it before the regulations were made. He did not doubt that most of the qualifying bodies in the country complied with the regulations of the Council, because it had been so clearly demonstrated to them that it was wise and just, and in accordance with the best interests of education to do so. But supposing the Council some twenty years hence made some unwise regulation with regard to education was it to be supposed that the universities of this country and the other qualifying bodies would agree merely because it was the edict of the Council? It was not because it was the edict of the Council, it was because it was the well-considered advice of the Council that they agreed to it. No qualifying body as long as it had the power would give up its responsibility. With re-

gard to the report, he had only been on the Committee a very short time, but he cordially supported it: but he did not think it would impair the efficiency of the list if the Council omitted after "University of London Matriculation Examination" the words "certificate to include the required subjects." The Council should be careful in a matter which was of the greatest possible utility to show that it considered everybody with whom it came in contact in the fullest way.

On the motion of Dr. PAYNE the debate was adjourned.

[The Council then proceeded to the further consideration of the case of Dr. Rendall, of Yarmouth (reported above).]

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*Saturday, November 30th.*

Sir WILLIAM TURNER, K.C.B., President, in the Chair.

REPORT OF EDUCATION COMMITTEE.

THE Council resumed the debate on the second report from the Education Committee on the steps taken for the improvement of preliminary education adjourned from yesterday.

Dr. PAYNE said that the subject was important, but a misapprehension seemed to exist as to the precise position of the University of Oxford to the effect that as a condition for taking its degree it required a certificate which was not in accordance with the resolutions of the General Medical Council. That was not the case. As regards the degree of that university there was no obligation on the candidate to have registered himself as a medical student; that would be a serious matter, and would require a special statute to enact it. But it was the practice in Oxford to strongly recommend those who were studying there to register at the earliest possible moment with the General Medical Council, and he thought it was probable that there was an impression among students that it was absolutely necessary, whereas in fact it was not. A large number of students at Oxford took other qualifications beyond the degree in order to hold such a position as a hospital appointment, and therefore it was very important to be registered in a formal manner. It was true that a very important modification was introduced into the examination of the University of Oxford in deference to the recommendations of the General Medical Council. It was the same thing in regard to the University of London. Candidates for matriculation who desired to take a degree were strongly recommended to register at the General Medical Council, but it was not obligatory. The Universities of London and Oxford in this respect were absolutely on a par. He trusted the amendment of Dr. Norman Moore would not be carried because it would result in confusion, although there was much to be said on both sides of the question. To make an exception on behalf of the University of London would be a striking instance of partiality, and if the motion were carried he should move an amendment to except Oxford, and if one was carried and not the other then he would advise the students at Oxford not to trouble to register.

Dr. MACALISTER fully endorsed all Dr. Payne had said, and put forward two other considerations. At present it was well known that the whole question of the matriculation of London University was in the melting pot, and nobody knew what would come out when the discussions were concluded Another consideration of very great importance was that although the examination of the London University was a matriculation it was not the same as in other institutions. It was taken by thousands of students as a leaving school examination It was the duty of the Council to look at it as an examination open to all the world, and put it on exactly the same footing as other examinations. Oxford was not the same, nor was Cambridge, because their examinations were open only to students who were going through the university course.

Dr. WINDLE wished to congratulate the Education Committee on the work it had done. He had had the honour of being on the Board of Secondary Education ever since it was formed by Parliament, and in connection with that had had to read a large number of Blue Books and other documents, none of which, in his opinion, exceeded the value of the report of the Education Committee, and he knew that that was the opinion of other bodies in the country. There was a point in it, however, which he wished to emphasise. They often read in the medical papers loud cries to raise the standard of preliminary examination. He would not enter into the argument which led to that, but he would point out that any person who had carefully studied the matter relating to preliminary examinations must see that it was perfectly impossible for the Council, or any other body, to raise the standard of preliminary examination suddenly. It was impossible to go too far in defence of the schools without danger. At the present time the Council had brought its standard up quite as high as the schools in the country would bear. If the Council were to attempt to go any further, a sudden decrease would be produced in the number of persons passing the preliminary examination which would have a serious effect on the output of medical men for the services of the country. He trusted that no appeal from the outside would lead the Committee to pursue any other course than that which they had followed, namely, the gradual improvement of the standard.

Sir CHRISTOPHER NIXON wished to say that if he had taken time to consider he would probably not have seconded the motion that the report should be adopted. He understood that not a single member of the Education Committee was aware of the printed regulations of the Royal Colleges with regard to preliminary education and the recognition of institutions giving instruction in the subjects of preliminary education until the evening before the report was submitted to the Council, and it was a great surprise to him when Sir John Tuke threw what he might term his education bombshell among the members of the Committee. In his opinion when the regulations of the Royal Colleges came to the notice of Sir John Tuke he should have called an emergency meeting of the Committee to deal with the question, because it was a matter of the gravest consequence to the Council. He understood that the examination of the London University was recognised by the Royal Colleges, and he asked Dr. Norman Moore if that was so.

Dr. NORMAN MOORE had explained that there was not a single institution or examination recognised, or proposed to be recognised, by the Royal Colleges which was not at present recognised by the Council. The lists of the Royal Colleges were absolutely identical, and he declined to answer the question.

Sir CHRISTOPHER NIXON said he simply inquired for information, which he thought he could have elicited from the highest authority on the subject. What he did know was that the Royal Colleges were in antagonism with the General Medical Council with regard to this subject, and in connection with that he should raise the question of the status of the Royal Colleges with regard to secondary education.

Dr. PETTIGREW stated what had been said by Dr. Payne and Dr. MacAlister was quite true with regard to the University of London. The matriculation of that University had hitherto had a double function. It was taken by men who went through the University, and took their degree in one or other Faculties, and it was taken partly as a leaving school examination. At the present moment the Senate was considering whether it would not be better to have two examinations.

Dr. NORMAN MOORE observed that the Council had laid down principles and rules, but its function was in relation to practical subjects. His amendment had reference to facts about the matriculation examination of the University of London well known at the present time and he thought he was justified in bringing it before the Council as it was a practical difficulty which he thought ought to be met. He approved as strongly as any member of the Council of the report of the Education Committee, which was a most excellent report After all, preliminary examination was not such an important matter. He quite agreed that the plan which the Council had adopted was on the whole the best plan and he thoroughly approved of the details of the educational report.

The amendment was then by leave withdrawn.

The PRESIDENT observed that Dr. Norman Moore was perfectly right in bringing the matter forward, because he had had various letters written to him on the subject by parents and gentlemen holding important educational positions, and he thought the suggestion in the report with regard to the Students Registration Committee was a very fair and admirable way of meeting the difficulty.

Sir CHRISTOPHER NIXON said that the object of the report was mainly to raise the standard of preliminary training and to do

that its regulations should apply to every university and licensing body throughout the United Kingdom. It was a considerable pleasure to him to learn from so high an educational expert as Dr. Windle that the labours of the Education Committee had been productive of good results, and that its recommendations were so advantageous. But it was important that the work of the Committee should bear fruit, and that it would not do if the Council did not take steps to secure that all bodies under its control should adopt its recommendations. The Royal Colleges had said that they would only adopt institutions recognised by themselves, and the Council had no guarantee that those bodies would adhere to the present arrangements which existed. When the Council recommended that certain examinations should be discontinued, the Conjoint Board in Ireland did not assert its privileges as the English Royal Colleges had done where the exercise of those privileges would be disadvantageous to the profession at large and the education of medical men. It communicated with the various bodies concerned, and asked them to appoint representatives who would conduct preliminary examinations which would be acceptable to the Council. It was found that these bodies could not work in harmony. The Intermediate Education Board was then tried. A formal proposition was made to that Board that it should hold an examination in a standard equivalent to the middle grade twice a year, at such time as would be suitable to students. That Board gave consideration to the suggestion, but found that it was impossible to carry it out, as it would be a departure from the usual regulations. Not being able to get the bodies connected with preliminary examination to form an examining body, the Irish Colleges reorganised the Board as constituted by the two Colleges. Was he to tell the Royal Colleges in Ireland that the General Medical Council had one very drastic rule for them, and another rule as regarded the English Royal Colleges, who could do as they liked, and need not recognise any of the institutions put down on the list by the Council? He told the Council frankly that except it was prepared to deal with this matter in a uniform spirit of fairness, he would tell his College and the Royal University with which he was connected that this Council was not disposed to act with uniformity towards the universities and corporations throughout the country, and that it was not necessary to adhere to any particular course of preliminary education. He had stated, as he believed, that the Royal Colleges were right in reference to the matter of the first year's course of medical education and the Council was wrong, and he was prepared to advise a *modus vivendi* in connection with it; but this action of the Colleges with reference to preliminary training showed that the Council could not really come to terms with those bodies in any way, and it was important for the Council for its own dignity to have its position defined, and if it had not the power let it get the power, but if it had the power then let it exercise it.

Mr. Bryant wished to say that the Royal Colleges in England, so far as these examinations were concerned, had been strictly loyal to the Council, and it was he who some few years ago brought the question of the value of the examination held by the College of Preceptors before the Council. The Royal Colleges were of opinion that that examination was not quite good enough for a matriculation examination for the medical profession, and he proposed that some inquiry should be made into the value of the examination. His proposal was accepted, and the Council determined that inquiry should be made not into the examination of the College of Preceptors but into matriculation examinations all round. The Royal Colleges had accepted all the regulations of the Council with regard to preliminary examinations, and they had worked with the Council all through, so as to raise the standard of education, and it seemed to him there was no practical point in the debate. The list of the Royal Colleges was really the same as that of the Council, and he reminded the Council that the character of the institution was the only security which they had in regard to the matter.

Dr. Pettigrew said that they would not have one law for the Royal Colleges of England and another for the Royal Colleges of Ireland, which was practically the result of the attitude taken up by the Royal Colleges.

Dr. Ball said that the College of Surgeons in Ireland had made no pronouncement upon the subject at present before the Council.

Dr. Atthill moved the closure.

The President thought that before the closure was put Sir John Tuke should have a right of reply.

Sir John Tuke said that he gathered that the representatives of the two Colleges had stated that they undertook not to go beyond the list of bodies which had been laid before the Council; he inferred that a promise or an undertaking had been received from Dr. Norman Moore and Mr. Bryant that the Royal Colleges would not go outside the list of bodies which the Education Committee laid before the Council.

Dr. Norman Moore declined to answer the question. If a preliminary examination in general education was recognised by the Conjoint Examining Board in England, then it would be open to any other body to do the same. It would be absolutely impossible for the Council or its Education Committee to maintain a standard of preliminary education.

The President then put the closure, which was carried.

Dr. Heron Watson requested the names and numbers to be taken down.

The President then put the motion, which was adopted as follows:

That the Report of the Education Committee on the steps taken for the improvement of preliminary education be approved.

### The Prevention of Personation.

The Council then commenced the consideration of the provisional regulations and notice of motion approved by the Personation Committee arising out of the following resolution adopted on June 11th, 1901:

That the Personation Committee be reappointed and requested, in consultation with the Registrars, to bring up for the consideration of the Council a complete set of regulations as appendant to the recommendations made in their report.

Mr. Victor Horsley said on the last occasion when this subject was before the Council it passed the first two recommendations of the Committee, and then thought it would be better that the recommendations should be cast in the form of regulations which the Council could consider and, if it thought well, adopt. The Committee had done this, and the provisional draft regulations proposed were now before the Council. The word "schedule" in the first regulation applied to all the forms of application which were to be found in the report of the Committee for 1899. The Committee in 1899 pointed out that the Standing Orders required verbal alteration in the one case and a material alteration in the second. He then moved the adoption of Regulation (1):

(1) No registration on the *Students'*, *Medical*, or *Dental Registers* shall be effected unless application has been made for the purpose on one of the forms included in the accompanying schedule.

Dr. Reid seconded.

It was suggested that the word "respectively" should be inserted after the word "*Registers*."

Dr. Windle did not think the schedule went far enough, and he would like to see a place for some communication by the official to certify that the underwriting on the schedule and the handwriting on the papers for examination were identical.

Dr. MacAlister thought that would be a desirable thing in order to prevent personation, which did occur, but to make the schedule cover such cases would give an enormous amount of trouble, and would scarcely have the desired effect.

The President desired to know, as the Personation Committee were requested in consultation with the Registrars to bring up a complete set of regulations if the schedule had been submitted, not merely to the Registrar of the Council, but to the Scotch and Irish Registrars.

Mr. Horsley said originally it was, and they did not object to the proposals, and the proposals now made did not in any way differ from the original ones.

Mr. George Brown pointed out that two years ago the Council had a report from the Registrars which had not been inserted on the minutes.

Dr. Little was of opinion that Dr. Windle had pointed out a real objection.

On the motion of Mr. George Brown, seconded by Mr. Victor Horsley, it was agreed that the memoranda of the General Registrar and the Branch Registrar should be received and entered on the minutes.

Mr. VICTOR HORSLEY pointed out that the schedule forms were subject to revision at any session of the Council, but the form which the Committee had adopted was the form given to them by the Registrar.

At the suggestion of the PRESIDENT, the words "as revised up to date" were added at the end of the Regulation. The President then put the Regulation as amended, and it was adopted as follows:

(1) No registration on the *Students'*, *Medical*, or *Dental Registers* respectively shall be effected unless application has been made for that purpose on one of the forms included in the accompanying schedule as revised to date.

Moved by Mr. VICTOR HORSLEY, seconded by Dr. REID, and resolved that:

(2) All forms of application for registration, duly signed and presented, shall be bound, indexed, and preserved by the Registrar of the Branch Council to whom they may be presented.

Moved by Mr. VICTOR HORSLEY:

(3) No certificates of registration of any name on the *Medical* or *Dental Register* shall be given except a letter in the Form 8 of the accompanying schedule.

He contended that a man had a right to demand of the College proof that he was registered, for production, for instance, in a court of law, and it had been the practice to issue certificates of registration. But a great danger existed in issuing these certificates. The Registrar had stated that if any person asked for a certificate of registration and paid the fee, he was bound to give it. At the trial of a man who robbed medical practitioners by representing himself to be a qualified medical man, and applying for their assistance, it appeared in the evidence of a detective that he walked into the Council's office, and said, "I require a certificate of registration of Mr. So-and-So," and obtained it. This constituted an obvious danger, and the Committee thought that there should be no such certificates granted; but to meet the case of a man asking legitimately for a certificate, a certificate in Form 8 would be sufficient, which was obviously only a letter written *ad hoc*.

Dr. REID seconded.

The PRESIDENT pointed out that a registered practitioner if challenged in the witness box might have absolutely nothing to show beyond a receipt that he had paid to the General Medical Council a sum of £5. He held that he had a right to ask under the Act for a certificate when he paid his £5, and that the Council had no right to refuse it.

Dr. ATTHILL thought that the certificate should be given.

Dr. MACALISTER was of opinion that if the recommendation were adopted, instead of diminishing the number of documents in connection with registration it would multiply them.

After some further conversation on the matter, the Council adjourned the further consideration of the recommendations until Monday.

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*Monday, December 2nd, 1901.*

Sir WILLIAM TURNER, K.C.B., President, in the Chair.

QUESTIONS OF PRIVILEGE.

THE PRESIDENT stated that it would be within the recollection of the Council that on Saturday he intimated that he had received a letter from a member of the Council in which a certain question was put to him. He would like to state briefly what the custom of the Council had been when a written question was put to the President, which question demanded an answer in the Council itself. He had been requested by the member of the Council to answer his question in the Council itself. The rule had been that the question should go on the programme of business, so that the members of the Council might have before them in print the question which had to be answered, and that when the President gave his answer that should also appear on the minutes, so that the Council might have an opportunity of seeing both question and answer. He would follow that rule on the present occasion, as it was perfectly obvious from the letter that the question could not very well be understood by the Council unless they knew the circumstances under which the question was put; he felt that not only should the question go on the programme of business but also the letter, so that the Council might see the question and see also what led to the asking of the question. There was appended to the letter which he had received from Mr. George Brown, a print of a letter which appeared in one of the public journals, in which certain words or expressions were, he presumed, quoted, because they were marked by inverted commas. Those expressions were, it was alleged, used by Mr. Horsley—when and where he (the President) did not know, and there was no evidence given in the letter when the words were used. He thought the first step in the procedure was to give Mr. Horsley the opportunity of stating before the Council whether those words or expressions marked in inverted commas were a correct representation of what he had said.

Mr. VICTOR HORSLEY thought the first step which should have been taken in the matter would have been for the President, on the receipt of Mr. Brown's letter, to have communicated the contents to him (Mr. Horsley) and to have asked whether Mr. McCook Weir's letter was a correct statement of what he (Mr. Horsley) had said or not before the matter was placed on the programme of business: because the whole of this question was nothing but a squalid electioneering device, and he could show that this letter from Mr. Weir was nothing but a literary forgery, and yet it appeared on the programme of business. He did not think, therefore, that that matter had been dealt with quite in the proper way, although he quite understood the President's feeling in the matter. He would now proceed to deal with the letter. In the first place, he made a speech at Liverpool in which he drew attention to the methods of direct representatives in the chamber and the way in which those methods reacted unfavourably on direct representation and on the conduct of business, and how those methods brought down the condemnation of the Chair. As he could not obviously refer to any of the direct representatives in person, he was obliged also to refer to his own experience, in fact to mix up the two together: but in order that there should be no doubt whatever as to what he meant, he made his statements entirely in support of the return of general practitioners to the Council who should worthily represent practitioners and persons who should not, as he stated in one of his speeches, excite derision or contempt on the part of the members of the Council.

The PRESIDENT was sorry to interrupt Mr. Horsley; but the question he put to Mr. Horsley was that he should state to the Council whether the words correctly represented what he had said.

Mr. VICTOR HORSLEY replied that he was about to show that they did not. He was stating to the Council what he did say, because he thought that was the fairest way of beginning the business. If the President thought he had said enough he would say no more.

The PRESIDENT replied in the negative, and said he did not think Mr. Horsley had answered the question.

Mr. HORSLEY said he was going to answer the question, but he must have a foundation for his statements first. The letter stated that he had said that Mr. Brown had been "shouted down in the Council chamber." Those words were set out in inverted commas. He asked for a record of that speech containing those words. The record of his speech was to be found in the BRITISH MEDICAL JOURNAL. All he could say was that he never used those words. [Hear, hear.] Then it was stated in the letter that he had used the words "flouted by the President." He never used those words. [Hear, hear.] Then the letter said, "This proves that Mr. Brown has done his duty, without fear or favour:" and then the letter went on to say that Mr. Brown had been attacked by the President in an unwarrantable manner in the Council, that was without justification, and that constituted the very reason for returning him at the election. That was not what he (Mr. Horsley) said; but, on the contrary, the whole tenour of his remarks was directly in absolutely the opposite direction, so that that letter was not only a falsification of words, but it was a total falsification of his meaning; and if the question had been addressed to him on Saturday he should have assured the President of that. That was not the first time that his speech had been falsified by Mr. McCook Weir. This was actually the second edition, if he might say so, because they would find in the BRITISH MEDICAL JOURNAL of November 16th—

The PRESIDENT did not think they had anything to do with it.

Mr. VICTOR HORSLEY understood that he was required to prove that he did not use the words.

The PRESIDENT pointed out that the question put to Mr.

Horsley was, Did the words or expressions marked in inverted commas correctly represent what he had said?

Mr. Horsley replied that they did not.

The President stated that the Council had now heard that Mr. Horsley entirely disclaimed that the words and expressions marked in inverted commas correctly represented what he said. That was the present position of the matter.

Mr. George Brown asked to be allowed to say a few words in the matter. He said he would be very brief, and he would avoid the personal altogether. As the letter referred to previous correspondence he had hunted it up, and seeing that the conduct of the President in the chair had been called in question, he concluded that the matter had got beyond a personal matter as regards himself. He should have taken no notice of election speeches but for the fact that the conduct of the President had been referred to, and then he thought that it was his duty to write the letter which appeared on the programme of business that day. In reply to a member of the Council he had stated that he did not know whether Mr. Horsley had said anything of the kind or not. He had not time to read Mr. Horsley's speeches; but what he did know in regard to himself was that he had been thirty years before the profession, and he had whilst on the Council advocated medical reform, and he was quite content to leave his professional and public character with the professional gentlemen who could judge for themselves. He had looked up the files of the British Medical Journal to see if there was anything in Mr. Victor Horsley's speeches to justify the statements.

Mr. Victor Horsley rose to a point of order. If Mr. Brown was going to refer to his speech which he delivered at Liverpool and was going to comment upon it, then he submitted that he should have notice of it, and that the whole of his speech should be printed in order that the whole of the Council might know what he said. He was quite prepared to substantiate every single word of the speech, but he submitted that could not be done without notice.

The President pointed out that the position of members was that Mr. Brown had put to him a question in writing and he wished him (the President) to answer it in the Council. He meant to do so. In answering the question it would be understood that Mr. Horsley had himself stated definitely that he did not use those expressions and therefore it would be also understood that his (the President's) answer did not apply to him because he disclaimed having used the expressions. He thought it was advisable he should state in writing what his answer was and submit it to the Council. His answer was as follows: "The President stated on his own behalf and on that of the Council that the words and expressions referred to do not correctly represent his attitude towards Mr. George Brown in this Council and that such words and expressions are a complete misuse of the English language as regards any proceedings in the Council." (Hear, hear).

### The Prevention of Personation.

The consideration in Committee of the whole Council of the provisional regulations and notices of motion approved by the Personation Committee, was resumed.

Mr. Victor Horsley moved and Mr. Tomes seconded:

No Certificates of Registration of any name on the *Medical* or *Dental Register* shall be given except a letter in the Form 8 of the accompanying schedule.

Dr. Bruce moved:

That the report of the Personation Committee be sent back to that Committee, together with the provisional regulations now proposed, with a view of obtaining detailed comments by the Branch Registrars of England, Scotland, and Ireland respectively on these regulations respecting registration as formulated by the Personation Committee.

The discussion at the last sittings showed that the Council was embarking on a very serious matter, and he thought that the question was not quite ripe for decision.

Dr. Reid seconded.

Mr. Victor Horsley suggested that the names of Dr. Windle and Sir Christopher Nixon should be added to the Committee. Since the Committee was formed two years ago they had lost one Crown member and an Irish member, so that the Committee had been reduced to a small number.

Dr. Bruce said he was quite willing to agree to this, whereupon Mr. Horsley announced his willingness to withdraw his motion.

Mr. Tomes inquired what then became of the motions which had been passed.

The President replied that they had been merely passed in Committee.

Mr. Bryant, whilst in sympathy with Dr. Bruce's resolution, thought it would perhaps save time if he moved the following amendment:

That the Committee of the whole Council not being satisfied that the regulations submitted by the Personation Committee are practicable in their present form, resolves to proceed no further with the consideration of the report, but instructs the Registrars in consultation with the Council's solicitor to draw up and submit to the Council a statement of the changes, if any, in the present practice which should be made with the object of preventing personation by applicants for registration in any of the Council's *Registers*, and that this resolution constitutes the report of the Committee of the whole Council.

Dr. Pye-Smith seconded.

Mr. Tomes pointed out that the report had been pending for two years, and it was not very encouraging to the Committee to propose that the matter should be taken out of their hands and placed in the hands of the Registrars who did not initiate the question and who might—he said it with all due respect—be a little inclined not to make any change which would entail additional office work.

Dr. Little said he should vote against Mr. Bryant's amendment in favour of Dr. Bruce's motion. He was quite sure the Registrars of the three Councils should have a great voice in advising what changes should take place. At the same time he did not think they were likely in their official capacity to know very much about the ways of students, as compared with anyone in the position of Dr. Windle. He thought they might overlook many things that were not connected with mere office work in preparing their report. He also saw great difficulty in the Registrar for England putting himself in communication with the Registrar for Ireland and Scotland, whereas the members from Scotland could go to the office in Scotland and get whatever information they could from the Registrar there and bring it to London.

On Sir John Batty Tuke intimating his desire to withdraw from this Committee, Dr. Reid's name was, on the suggestion of the President, substituted for that of Sir John Batty Tuke.

At the request of Mr. Bryant and Dr. Pye-Smith, and with the leave of the Council, the amendment was withdrawn, and Dr. Bruce's motion was then put and declared by the President to be carried.

### Sale of Scheduled Poisons.

*Notice to Registered Medical Practitioners.*

Dr. MacAlister said it would be in the recollection of the Council that the President in his address dealt with the matter of certain practitioners, and referred to the drawing up of a notice which should be issued. With the help of their legal advisers he had ventured to draw up a notice very much on the lines which had already been adopted by the Council and circulated far and wide in relation to the covering of unqualified practitioners. It was very desirable that the Council should issue a precise description of the particular offence which had come under their notice, and which they had had to deal with judicially, because some misunderstanding had previously taken place among practitioners in a certain part of the kingdom regarding the precise nature of what might be regarded as an offence. He thought, therefore, it was necessary that such notice should be issued.

A discussion then took place as to the wording of the notice, and ultimately it was agreed that the notice should appear as follows:

Whereas it has been made to appear to the General Medical Council that certain registered medical practitioners who keep medical halls or open shops in which scheduled poisons or preparations containing scheduled poisons are sold to the public have been accustomed to leave in charge of such halls or shops assistants who are not legally qualified to sell scheduled poisons to the public; and that such practitioners have thereby for their own profit and under cover of their medical qualifications enabled such unqualified assistants to sell scheduled poisons and so to commit breaches of the law; and whereas in the opinion of the Council such practices on the part of a registered medical practitioner are professionally discreditable and fraught with danger to the public, the Council hereby gives notice that any registered medical practitioner who is proved

to have so offended is liable to be judged as guilty of "infamous conduct in a professional respect" and to have his name erased from the *Medical Register* under the 29th Section of the Medical Act 1858.

This was agreed to, and it was also agreed that Dr. Bruce should inform the Registrar of the names of certain papers in which the notice should appear.

### Education Committee Report.

Sir John Batty Tuke moved:

That the report of the Education Committee be now considered,

And it was seconded by Dr. Bennett that the report of the Education Committee, entered under No. 5 in the day's programme should be received and entered on the minutes.

Dr. Windle moved that the further consideration of this item should be postponed until after the consideration of No. 22. In the report of the Education Committee there were some points which were not before the Council at the last session, and he thought that if No. 22 was taken first and carried in the affirmative, it would dispose of the question practically altogether.

Dr. Reid seconded.

Dr. Atthill objected to any step being taken which would leave the question in absolute uncertainty for at least a third year. He knew there was a feeling of very great irritation on the part of the licensing bodies at this continual postponement, and if something was not definitely decided at present steps would be taken which would probably place them in a difficult position.

Sir Christopher Nixon suggested that they should adhere to the order of business as it appeared in their programme.

Sir William Thomson expressed the same wish, and pointed out that the report was in reply to an act of the Council at the last session. The Council sent down certain notices of motion to the Education Committee in order to take its opinion upon them. Now that appeared in the report, and it was for the Council to hear the report in the ordinary business-like way.

The President (after discussion) then put the amendment to the Council, when 7 voted in favour of it and 14 against it. He then declared the amendment lost, and said the motion then before the Council was:

That the report of the Education Committee be then considered.

To this the Council agreed.

Sir John Batty Tuke (Chairman of the Committee) said that the suggestions of Dr. Bruce and Professor Ball had been very carefully considered by the Committee, but there was such divergence of opinion that it was hopeless for the Committee to come to anything like a proper report which they could present to the Council. They agreed so far as to state the general principles involved in those proposals and the first of those was:

1. That for *complete* registration a medical student should fulfil three conditions: (*a*) He must have passed a recognised "Arts" examination, as at present; (*b*) he must have paseed a recognised "Preliminary Science" examination, such as at present usually concludes the first year of the curriculum; and (*c*) he must have begun professional study at a medical school.

2. That the minimum period of professional study after such complete registration should be four academic years.

But the Committee was so far from unanimous that all they could do was to place two propositions before the Council:

I. That the Council approves of the suggestion that the registration of a medical student should be postponed until he has passed a recognised examination in the preliminary scientific subjects, on the understanding that the subsequent course of professional study should occupy at least four academic years.

II. That the Council instructs the Education Committee to communicate the foregoing resolution to the licensing bodies, and to inquire on behalf of the Council whether the change therein suggested is considered by them to be desirable and practicable.

His feelings in the matter did not allow him to move the first resolution, and he thought it was arranged by the Committee to leave it to Sir Christopher Nixon to move the adoption of that.

Sir Christopher Nixon would ask the Council to affirm the principle that it would be desirable to establish a preliminary scientific examination; that it was desirable to postpone the registration of students until the preliminary scientific examinations had been passed, and that the period for the medical curriculum for the date of registration should be four years devoted to strictly medical study. He proposed to discuss the points that he had mentioned in a purely academic form, so as to elicit from the Council its opinion whether it would be desirable to make what seemed a very radical change in their system of education. He moved the adoption of No. 1:

1. That the Council approves of the suggestion that the registration of a medical student should be postponed until he has passed a recognised examination in the preliminary scientific subjects, on the understanding that the subsequent course of professional study should occupy at least four academic years.

He desired to keep the two things apart: first, the conditions with regard to preliminary subjects and the length of period of the medical curriculum dating from the date of registration, and secondly, the question as to where those preliminary scientific subjects should be studied. He desired to emphasise the first point. The subjects put down in their first year of medical education were not medical subjects at all. They were subjects of general culture, subjects of general education put down to ensure that the student had a certain amount of broad culture, and put down as medical subjects, they ceased to be subjects of general culture, inasmuch as they were specialised. There was very much greater reason for introducing a preliminary scientific examination now that the ordinary course had been extended to five years than when it was only four; and he submitted that it was a hardship on medical students to prolong the period of study. The question as to what institutions ought to be recognised as giving instruction in preliminary scientific subjects really affected more the licensing corporations than the universities. He assumed that universities would require a higher system of education, and that lectures should be given and specific courses attended. He did not think that was necessary in connection with students presenting themselves for the examinations of licensing corporations, and he did not see why those bodies should not be put in the same position as the University of London, which required no certificate and no specific courses of lectures to be attended. That was the point which had really raised the contention between the Royal Colleges and the Council. He must say that in this respect he thought the Colleges were right. He did not wish to imply that in the matter of dealing with the Council the Royal Colleges were right. That was not a question that he need enter upon, but what he did argue was that when the Council recognised certain scientific institutions in which training in medical subjects might be taken, it gave away the whole case. Its first duty was to raise the status of the profession, and to secure that the men who were on the *Register* should be safe practitioners, men of culture, as a physician ought to be, and in that way alone the obligation of the Council as to medical education and registration be fulfilled.

Dr. Bruce seconded the motion formally.

Dr. McVail pointed out that this really should come as an amendment to the report.

At the suggestion of the President, Sir Christopher Nixon modified his resolution as follows:

And that the Council approves of the suggestion that the registration of medical students should be postponed until he has passed (1) a recognised examination in arts, and (2) a recognised examination conducted by the qualifying bodies in preliminary and scientific subjects on the understanding that the course of professional study should occupy at least four academic years.

Dr. Pettigrew thought that to carry this motion would be to take a step backwards: it would be taking the so-called medical subject out of the curriculum, and the effect would be to lower the standards. The Council should extend rather than obliterate the so-called scientific subjects. In his opinion there was no reason at present to interfere. The curriculum had been threshed out again and again, and by tinkering it confusion would be introduced, as the licensing bodies would not know where they were.

Dr. Bennett observed that in considering the position taken up by the Royal Colleges in Ireland relating to the first year of medical study, it should be clearly understood that the University of Dublin held itself free to vary the five years curriculum in such a way as might be considered best to further the interests of its students and of medical education in Ireland. He was instructed to say that the proposed changes, so far as they were affected by the resolution before the Council, would operate against medical education in Ireland, and that to substitute examination for the syste-

matic teaching as at present given in the various bodies was a retrograde step. They had had a memorial to the Vice-Chancellor of the University on the position of organic chemistry in the medical curriculum, and the professors were of opinion that teaching of chemistry limited to such as could be got in the first years of medical study would be insufficient, and its adoption a retrograde step. The registration of medical students was at present incomplete in view of the action of the Royal Colleges, and in that view the University of Dublin held itself free in regard to any question of registration, and he took it that most of the other bodies would follow in the same course.

Professor Ball was of opinion that the result of adopting this proposition by the Council and its acceptance by the licensing bodies would be undoubtedly to place scientific subjects in the same category as subjects in general education. The report of the Education Committee showed how much general education had improved. It was quite obvious that there was a wide divergence of opinion among the members of the Council upon this most important subject. He would ask those who differed from the resolution what alternative they proposed in order to get out of the deadlock. Dr. Bennett had just said that the University of Dublin threatened to withdraw its allegiance, and to deal with the five years as it thought fit, and there could be little doubt that a number of similar notices would flow into the Council before long from other licensing bodies. This proposition, if approved of by the Council and by the licensing bodies, would enable them to come to an agreement as to the four years professional study. If there was any other proposal to come before the Council which would do this in a better way, he would only too warmly accede to it; but until such a proposal should come before the Council he would urge them to consider whether they should not give their approval to this proposal, and he would urge the licensing bodies to accept it, in order that they might have uniformity.

Dr. Payne said the first time he spoke on this subject was in 1899. He suggested to the Council then what he considered the best *modus vivendi* between the Council and the licensing bodies which did not agree to adopt precisely the principles which had now been reported upon by the Education Committee. They all agreed that a certain amount of scientific education was necessary for a student, but when they looked at the practice in the different qualifying bodies, they found a great divergence as to the necessary requirement. The scheme of the Education Committee recognised not nearly so many institutions as was recognised by the Conjoint Board in London, but the University of London allowed a student in this matter to get his teaching where he liked. Between the various bodies connected it was a question of degree, and it was practically certain that a list of bodies drawn up by those various institutions would differ. He thought that if the Council were to adopt this resolution it should not approve of any particular method for the acquirement of scientific education, but allow a certain amount of liberty to the students.

Dr. Windle thought it quite clear if this alteration were made it would ease the situation in one direction but not in another. Certainly not in connection with University of Birmingham which he represented. He felt bound to vote against this resolution, it being directly contrary to what his University believed to be the best in the interest of medical education; he was instructed to say that if it was carried it was not a condition which his University could observe.

Dr. McVail said there had been no formal consideration of this matter by the Scotch Universities, but he was perfectly satisfied that not one of them would fall in with this proposed system. They were engaged in the discussion because one single examining body had chosen to break away from the requirements of the General Medical Council, and with a view of getting them on to the rails again, the Council was asked to wreck its whole machinery. It was absolutely necessary that a medical man should have a knowledge of these fundamental subjects. At present in some medical schools the teaching of chemistry and biology had not advanced as it ought to have done, but that was due to the Council's whittling down its requirements on these subjects. It had been said that the University of London did not require these subjects. That was true, but the University of London did not lay down in its Calendar any curriculum for the arts or sciences, but they did lay it down for medicine.

Dr. Pettigrew said that that was in deference to the wishes of this Council.

Dr. McVail thought that that made his observation stronger, because there was no man who could pass that examination who had not been through a thoroughly good course. If the Royal Colleges would abolish the preliminary examinations in biology, chemistry, and physics, and allow the London University to examine for them, so far as the scientific examination was concerned, he had not the slightest objection—he meant if the London University continued to examine up to the high standard as they had done in the past. This proposition was framed in order to save the position of the Royal Colleges. They had chosen to depart from the rules, but what of other universities and corporations in the country?

Mr. Victor Horsley thought he felt bound to report to the Council the attitude of the profession at large on this subject; he also felt as a graduate of the University of London that a total perversion of the position of that University had been presented in the debate. The general practitioners throughout the country were watching this matter very closely. At every meeting which he had attended—and they had been very diverse in character, and in different parts of the country—this question had been brought up in one form or another. The profession was aware that it was not academic discussion on the question of the form of the curriculum. It was a revolt on the part of two licensing bodies against the attitude of the Council, and the profession, as far as he could make out, was of one mind that the authority of the Council should be maintained. It was true that there was only one resolution before the Council, but it would have no effect unless the second resolution was passed. If the second resolution was read into the first and passed, the Council was coming to a decision by which its authority was destroyed, and such a thing would be a serious blow to medical education throughout the country.

Dr. Young could not say anything definite on behalf of his University except that it was waiting to see what course the Council would take. He thought he would best express the opinion of the Victoria University in the words of Dr. Bennett, that they leave themselves free to deal with this question of the medical curriculum in such a way as they thought best for the institution. He deprecated the slightest antagonism to the Royal Colleges or the slightest suspicion on the part of the University which he represented that they were not acting in good faith in the matter.

Dr. Glover would point out to Mr. Victor Horsley that there was no essential difference in principle between the arrangement proposed and that in practice at the London University already. If it was right for the London University to have a scientific examination, it could not be wrong for the Royal Colleges, and he thought the more the question was dissociated from particular bodies and personalities the better.

Mr. Tichborne was of opinion that at the present time chemistry was not taught as it should be in the medical schools. He was very pleased at the attitude taken by Trinity College in the matter, as he thought the Council would be taking a retrograde step in adopting the resolution.

Dr. Little felt constrained to vote against the proposal of Sir Christopher Nixon. Dr. Norman Moore had satisfied him that the Royal Colleges had done their best to make their plan work well, but they should have thought of the five years curriculum before they gave their acquiescence to the scheme, and it was hardly becoming to them, and greatly disturbing to the work of the Council, that this was introduced now. The great reason for voting against the proposition was that it would serve to substitute examination for education, which he thought was the greatest detriment to the profession.

Dr. MacAlister at this point interposed and said he had just had handed to him a memorial from a number of teachers of chemistry, physics, and biology in the Scotch Universities, which, at the suggestion of Dr. McVail, was read.

Mr. George Brown pointed out that the Members of the Royal College of Surgeons were not at all in sympathy with the position taken up by the representatives of the College on

this question. At the annual meeting last month a resolution which he proposed was carried by a very large majority, regretting the action taken up by the Council of the College in this matter, and he believed that if the General Medical Council adapted its regulations in the future to meet the wishes of the Conjoint Board, medical education would be materially lowered.

On the motion of Dr. MacAlister, the Standing Orders were suspended until the conclusion of the debate.

Sir John Williams was of opinion that before the Council could form an opinion upon the subject it should know the way in which science was taught in the schools which were so tabooed by the Council. He thought it would be infinitely better for preliminary scientific education to be carried on in the schools so long as the students entered the universities or medical colleges. It would be a good thing for the Council to recognise the training in those schools, because the teaching of science was bound to increase and it would be an important thing if the Council were to encourage it by recognising them as places where young boys could obtain their training.

Dr. Bruce endorsed the observations of Sir John Williams, and hoped the Council would pass the resolution. He was one of those who thought the course taken by the Royal Colleges in the matter was not the proper one for any body to take which acted with the General Medical Council. Their action was one which might end one day in what some people desired to see, namely, the one-portal system, which appeared to him to be a way out of the difficulty.

Sir Christopher Nixon having replied, the motion was then put and declared lost.

On the names and numbers being taken down, it appeared 10 voted for, 17 against; 2 did not vote, and 2 were absent.

The President stated that as a consequence of the above decision, the other proposal of the Education Committee as a matter of course dropped.

The Council then adjourned.

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*Tuesday, December 3rd, 1901.*

Sir William Turner, K.C.B., President, in the Chair.

Questions of Privilege.

Mr. Victor Horsley pointed out that the minutes as printed did not contain a protest which he made in his remarks on the previous day against questions of privilege being raised on irresponsible reports of members' speeches. He did that in order to bring the proceedings of the Council into line with those of the House of Commons; he did not think the Speaker of the House of Commons would allow a question of privilege to be raised on a letter of the kind that had appeared in the British Medical Journal in connection with this matter. No one would object to explain words that he had used which appeared in a good report of his speech in a public journal, but he (Mr. Horsley) protested against a member being called upon to explain a misrepresentation of his speech by some irresponsible person.

The President inquired if Mr. Victor Horsley was prepared with a motion on the subject.

Mr. Victor Horsley replied that he was. He therefore proposed that there should be added to the minutes of the previous day that

Mr. Horsley also entered a protest against questions of privilege being raised on irresponsible reports of members' speeches.

Sir Christopher Nixon seconded.

The President then put to the Council that the words proposed by Mr. Victor Horsley, and seconded by Sir Christopher Nixon, should be added to the minutes. This was agreed to, and then the minutes of the previous day's proceedings, with another alteration, were confirmed.

Election of President.

The President stated that as the next business related to himself he would withdraw.

The President then retired.

On the motion of Dr. MacAlister the Senior Treasurer took the chair.

The Registrar read a letter addressed by Sir William Turner to the Chairman of the Business Committee resigning the office of President for the reason stated in his address at the opening of the session. (British Medical Journal, November 30th, p. 1626.)

It was agreed that the letter should be received and entered on the minutes.

Dr. Pye-Smith said that those who like himself had had the privilege of knowing Sir William Turner for 35 years would need no laboured eulogy on his work as President. All members of the Council knew his scientific eminence, his great experience in University matters, and all had experienced his constant courtesy, punctuality, and the good temper with which he blended the appropriate dignity of the Chair. They had observed the benignant solemnity with which he addressed delinquents in carrying out the important and painful duties imposed on the Council, but of all his admirable qualities there was one that all must admire, because it was one in which they occasionally found themselves deficient, and that was the admirable quality of patience which had characterised Sir William Turner in his work. They were glad to know that the ancient university which he represented on that Council had reappointed him its representative, and therefore he had much pleasure in moving that Sir William Turner be re-elected President of the Council for the further period of five years.

Dr. Atthill, in seconding the motion, said that the proposer had so admirably expressed both his own feelings and, he was sure, the feelings of every member of the Council, that it was not necessary for him to add anything except to say that the loss to the Council of Sir William Turner as President would be most serious.

Mr. George Brown wished to support what had been said, and he would like to say that throughout the time he had had a seat on the Council he had met with uniform courtesy, in fact he might say with sympathetic courtesy, from the President. He felt it his duty to state that, and he hoped it would be publicly recorded.

The Chairman said that they all fully appreciated the remarks that Dr. Pye-Smith had made with reference to Sir William Turner, and each member of the Council would endorse them if they were to add their views; but he was so convinced that he was simply stating the feelings of the Council that he did not think it was necessary to do anything more than at once proceed to the vote, and he was sure the resolution would be passed with acclamation.

The resolution was carried unanimously.

Sir William Turner upon entering the room was met with loud applause.

The Chairman, addressing Sir William Turner, said that he had great pleasure in announcing that he had been re-elected unanimously as President of the Council.

The President asked permission to say one or two words. When the Council did him the honour three years and a half ago to ask him to take the chair he deeply felt the responsibility of the position. He felt it all the more on account of his place of residence, and the fact that so much of the business of the Council was to be transacted when he was living four hundred miles away. He had grave doubt in his own mind at that time whether it would be possible, living at that distance, for the work to be performed in a way which would satisfy himself, because he thought, perhaps, in that matter he was as keen a critic of his own actions as President as any member of the Council could possibly be. He wished to place on record that if it had not been for the invariable assistance he had received from the Registrar, Mr. Allen, it would not have been possible for him to have done his work. The members of the Council must bear in mind that, although that part of the business of President which came most prominently before the public took place in that chamber, and was duly reported, yet during the intervals between the meetings there was a large amount of business—in fact, he might almost say daily business of some kind or other—connected with the work of the Council which had to be brought to the notice of the President and considered by him. Mr. Allen had always sent him every item of business which he had to consider arranged and prepared in a way which enabled him at once to grasp the chief points. He was satisfied of Mr. Allen's loyalty to the Council and to himself, and he was sure that in this new period of office that the Council had so unanimously asked him to accept he should receive from Mr. Allen in the future as in the past

the same loyal co-operation. He hoped that he might have health and strength given him to continue in the work which they had again asked him to undertake. He could not in the natural course of things look for the full period of five years for which he understood they had elected him, but he hoped that he would be able to do his duty towards them and towards their common profession, because that was how they ought to look at it. The Council was the great administrative body of the profession, and each member individually had to strive to do his duty to the great profession, so that it might continue to advance, and that in no matters might it lag behind. He thanked them most heartily for again reposing their confidence in him.

(*To be continued.*)

## THE LONDON LICENTIATES AND MEMBERS SOCIETY.

Dr. Frederick J. Smith took the chair at a meeting of the London Licentiates and Members Society on November 29th, held at the Wimpole Hotel, Wimpole Street, London.

The Chairman said there appeared to be sufficient money in hand to start a petition. There were three schemes. The first was to petition the Royal College of Physicians to rescind By-law 177, but he thought that would not do them the slightest good. The by-law was that the Royal College of Physicians did not grant to its licentiates any power to call themselves "Doctor," or to put that style on their doorplates. He regarded all those present as "Doctors," and he would not think of addressing them in any other way professionally. But they ought not to try to sail under false colours by putting on a doorplate a description to which they were not entitled. Medical practitioners enjoyed the title of "Doctor" in the minds of the general public. The second suggestion was to petition the Royal Colleges of Physicians and Surgeons to obtain power to grant the degree of M.D. Some time ago the Royal Colleges had felt their way in the matter, but did not pursue the subject, and he did not think they would take it up again. The third course suggested was to petition both the Royal Colleges to approach the London University and prevail upon that body to admit Licentiates and Members of the Colleges for the final examination for the M.D. of that University. That seemed to him to fulfil every reasonable expectation of the Licentiates. The University of London had power to "associate" itself with the existing bodies in London for the advancement of medical education, including examination. He asserted that men who had passed the present examinations knew as much of medicine and surgery as any man who qualified, and the standard required was as high as any in the kingdom.

Mr. F. W. Collingwood pointed out the grave disabilities which the double qualification men of London were under. In Dublin every man called himself a "Doctor" who was a Licentiate of the College of Physicians; in Edinburgh the authorities did not authorise it, but permitted it, and every Scotch M.B. called himself "Doctor." Many of them had felt themselves seriously hampered by not being able to use the style "Doctor." It had been held by the High Court that the double-qualication men were physicians and surgeons, or physicians or surgeons, or both, therefore they should be equal to M.B.s.

Mr. Douglas said there were many who would be unwilling to pass a stiffer examination to call themselves "Doctor" when they knew they deserved that title already.

The Chairman said that it was impracticable to expect any institution to give away the degree of M.D.

Mr. E. R. Dawson asked why it was impracticable. He advised anyone going in for a medical education to go to a provincial school to have the legal right to call himself "Doctor." The double-qualification man was handicapped by being trained in London.

Mr. W. G. Dickinson made some remarks on the fees demanded by the various corporations and universities.

Mr. A. E. Joscelyne said it would be better to have an examination, and asked that the Colleges should approach the London University or some other body on the matter.

Mr. Arthur Greenwood thought that it was desirable to increase the numerical strength of the Society before issuing the petition.

The Chairman said that the London medical schools were fighting for their existence. The number of medical students in the provinces had increased by 800, while those in the London schools had decreased.

Mr. P. Rose deprecated any lowering of the standard of the London M.D.

The Chairman hoped that the representations which would be made to the new University of London might have some influence, and suggested that the wording of the petition should be vague. It might even suggest the possibility of a thesis being taken as the qualification for a degree.

Mr. E. R. Dawson stated that 90 per cent. of the provincial graduates called themselves "Doctor."

The following resolution was proposed by Mr. A. E. Joscelyne, seconded by Mr. F. C. Langford, and carried unanimously:

That a petition be sent to the College of Physicians and College of Surgeons, requesting them to approach the London University and prevail upon that body to admit Licentiates and Members of the Colleges to the final examination for the M.D. degree of that University.

Dr. F. J. Smith, Mr. A. E. Joscelyne, Mr. P. Rose, Mr. E. R. Dawson, Mr. F. C. Langford, Mr. F. W. Collingwood, Mr. W. E. Morgan, and Mr. E. H. Tipper were appointed a Committee to frame the petition.

The proceedings ended by the election of Dr. F. J. Smith to the office of President of the Society.

# THE PLAGUE.

### Prevalence of the Disease.

#### India.

In the city of Bombay, during the week ending November 2nd, 139 deaths from plague occurred. This was a slight increase on the previous week, when the number was 173. It is significant that in Bombay, when the general mortality from disease other than plague diminishes, the plague returns increase, and *vice versâ*. The diseases which increase and diminish contemporaneously with plague are: Remittent fever, phthisis, and other diseases of the respiratory system. The present method of registration of the causes of death no doubt accounts for the anomalies—if they are actually anomalies, which appears very probable. It is to be hoped that the improved scheme of registration suggested by Dr. Turner, and about to be laid before the Corporation of Bombay, will be adopted, so that the defects of the present system may be removed.

In Bangalore City and Cantonment during the week ending November 2nd, 48 fresh cases of plague occurred, and 38 deaths from the disease. In Mysore City during the same period there occurred 26 cases and 95 deaths, and at the Goldfields 2 cases and one death. At Karachi during the six days ending November 8th, there were 71 cases and 38 deaths from plague.

Medical inspection was re-established for all passengers leaving Poona subsequent to November 8th.

#### Egypt.

During the week ending November 17th, 2 cases of plague and 1 death from the disease have been reported for all Egypt. The two cases and the death occurred in Alexandria among Europeans of Italian nationality.

The Director-General Sanitary Department reports that "2 cases only remain under treatment throughout Egypt at Alexandria, isolated respectively on November 3rd and 9th."

#### Cape of Good Hope.

The plague report for the Cape states that during the week ending November 23rd only 1 case of plague occurred there, the patient being a native resident at Port Elizabeth. One native died of plague at Port Elizabeth during the week. No other cases were reported from anywhere else in South Africa.

#### Mauritius.

During the week, November 28th, 61 fresh cases of plague were notified in Mauritius and 37 deaths from the disease.

#### Russia.

That plague prevailed in Odessa was unknown until a letter published on November 30th by the *Times* from its correspondent in that city. The actual number of plague cases in Odessa on November 16th, when the letter was written, is not mentioned, nor have we any indication of the extent of the outbreak. It is stated that during the previous 24 hours no cases of plague were reported, implying apparently an exceptional circumstance. It is further stated that the Plague Committee holds its meetings daily under presidency of the Governor. The temporary plague hospital consists of closed-in railway luggage vans fitted up comfortably for the reception of patients. When a plague patient dies the van in which he has died is uncoupled, run along to an isolated part and fired. Persons inventing stories about plague or expressing wild views on the subject in public places are liable to a heavy fine or are sent to prison for three months. This is a branch of the plague laws not yet adopted in British dominions.

Medical Magistrate.—Dr. W. F. Marsh Jackson, of Smethwick, has been appointed a Justice of the Peace for the Borough of Smethwick.

## BRITISH MEDICAL ASSOCIATION.

### SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, DECEMBER 7TH, 1901.

## MEDICAL AID COMPANIES AND CANVASSING.

The whole of one day's sitting and the half of another were devoted by the General Medical Council to the hearing of a case of the first importance, in which the relations of medical men to Medical Aid Associations was dealt with. In June, 1899, the Council had declared "That the Council strongly disapproves of medical practitioners associating themselves with Medical Aid Associations which systematically practise canvassing and advertising for the purpose of procuring patients," and it was now asked to declare that such a course in a particular case amounted to "infamous conduct in a professional respect." The case is so important as a test case that we give elsewhere an exceedingly full report of the proceedings; moreover it will probably be long before a like opportunity occurs of obtaining an insight into the working of such organisations, an insight which would tend to be lost in any condensed report.

The Medical Defence Union were complainants, and the case, very clearly and ably stated by Dr. Bateman, the General Secretary of the Union, which it was sought to establish by declarations and by the evidence of witnesses, was that Dr. Rendall had knowingly committed an offence by associating himself with the Liverpool Victoria Legal Friendly Society. It appeared from the evidence that the business of this Society was conducted in intimate association with that of the National Medical Aid Company, Limited. Affidavits were put in sworn to by persons of the poorer class in Yarmouth, that they had been canvassed to join the National Medical Aid Company, Limited, and that the doctor's name was mentioned in such canvass; his name appeared upon the cards of admission, and other declarations were put in from medical men who had formerly acted for the company stating in various terms that they had resigned their connection with it because the canvass was not and could not be so conducted as to be free from objectionable features. Evidence was given that Dr. Rendall, who had been imported from a distance, was informed of this feeling and that he had an interview with a deputation from a local medical society in which this was represented to him; he admitted the substantial accuracy of the report of this interview.

As Mr. Lawson Walton, K.C., M.P., and Mr. Mathews appeared for the defence, it may be assumed that all that could be urged was forcibly presented, and they took the line that even if canvassing as alleged had taken place, it did not fall precisely within the lines of the Council's pronouncement, inasmuch as the canvass was conducted primarily on behalf of the Liverpool Victoria Legal Friendly Society, and not on behalf of the Medical Aid Company, the latter being merely a subsidiary part of the older parent organisation. Declaravits contradicting some of those put in by the other side were tendered, and evidence, to the effect that no canvassing for the Medical Aid section had been done was given by persons acting as collectors for both sections, these collectors also admittedly acting as canvassers for the insurance society. Beyond this no attempt was made to rebut the declarations given by former medical officers, to which indeed little or no allusion was made in the speeches for the defence. Much, therefore, turned upon the exact relations which subsisted between the older Liverpool Victoria Legal Friendly Society and the more recently-formed Medical Aid Company, and important evidence was given by the chief clerk to the former, who was also director of the latter body. He stated that the Liverpool Victoria Society possessed about 2,500,000 members, but that only about 6.5 per cent. of these (or about 162,000) had joined the Medical Aid Association, and he laid much stress upon the fact that no person could join the latter without becoming a member of the former. It was further claimed that both were philanthropic and not profit-making concerns, but that the immediate benefits of the medical aid served to attract possible subscribers to the insurance society, though it was denied that they were canvassed to join the Medical Aid Company, and it was stated that the collectors since 1899 had instructions not to do so. But it was elicited that the Medical Aid Company had no printed rules and regulations, these instructions being merely verbal, and it was further elicited that it printed no accounts, but that a balance-sheet was prepared, which was submitted to the shareholders, ten in number and identical with the directors, who received any profit there might be, which was, however, alleged to be trivial in amount. It is not, like the parent body, a Friendly Society, but a limited liability company, and therefore is not subject to the same obligations as to accounts. Eighty per cent. of the money received was said to go to the medical officers. As to the number of these officers some confusion arose. It had been implied by counsel that there were 2,000, but on its being pointed out to the witness that this was one doctor to 81 healthy subscribers, this was explained as including the medical officers of the parent Friendly Society. As the Friendly Society does not provide medical attendance, their only function would be that of certifying as to the healthiness of those who insured for £25 or more, and in his final address counsel referred to 1,000, but this number does not appear to have been definitely stated in evidence, so that the number of medical men employed by the Medical Aid Company remains doubtful. Ten per cent. went to the collectors and the remaining 10 per cent. paid expenses of administration other than collecting, and furnished the profit. In response to a question the Chief Clerk of the Liverpool Victoria Legal Friendly Society who is also a director of the National Medical Aid Company, said that he was not

aware whether the Company's terms for medical aid were higher or lower than those of the great Friendly Societies. It was stated that a wage limit of 30s. a week was in operation in the Yarmouth district, but that this was varied in different districts. Further it was stated that the subscription was a penny a week a head; if the subscription was not kept up for seven weeks the subscriber was not entitled to medical aid, and the subscription was forfeited.

The collectors called to give evidence contradicted the statements in the affidavits put in for the complainants and maintained that no canvassing whatever had been done since 1899 for the Medical Aid Company, one even saying that he had done none from 1889, and that the commission amounted to so little that it was not worth their while. But Mr. Lawson Walton, while repudiating systematic canvassing, apparently did not care to contend for quite so much as this; at all events he did not emphasise it in his concluding address.

Dr. Rendall in his evidence stated that he was not aware of any canvassing on behalf of the Medical Aid Company, but, on being pressed, admitted that he had not made any personal inquiry, not having been furnished until recently with the names of those alleged to have been canvassed, but had left it to his solicitor.

The Council, after deliberating *in camerâ*, availed itself of its amended standing orders. It found that the facts alleged in the notice of inquiry served on the respondent had been proved, but adjourned the further consideration of the charge until the next session. This, with an admonition, was communicated to Dr. Rendall. The practical effect of this course, so far as determined by precedent, is that if Dr. Rendall severs his connection with the Medical Aid Company, no further steps will be taken. A similar course pursued in the case of the Birmingham Consultative Institution had this result.

Judging from the evidence tendered, this, and it may be presumed also other canvassing Medical Aid Societies, have already experienced a difficulty in procuring medical officers who will face the risks of the position and the certainty of the disapprobation of their local colleagues, and this difficulty will be greatly intensified by the present decision. Looking at the matter in the broadest spirit, indeed, from a philanthropic standpoint, this decision is in no wise harmful to the poorer classes, but a real benefit. As the matter has hitherto stood, the poor who place themselves on the list of any society which pursues an objectionable course in canvassing are debarred from obtaining the services of any practitioner who desires to stand well with his professional brethren, and this does not conduce to their obtaining the best services locally available. It is possible that some attempt may be made to show that decisions such as these are to the advantage of the profession rather than to that of the public. But great as is the gain to the profession of the maintainance of a high standard of professional ethics, the gain to the public is even greater. Any methods of inducing patients to place themselves in the hands of a particular medical man which do not essentially rest upon the capacity which he has shown in the discharge of his professional duties must ultimately tend to inferior service. Experience has abundantly proved that it is practicable to give to the poor sick-club benefits without introducing any objectionable element of canvassing, and we have no hesitation in saying that the conjunction of a Friendly Society with a subsidiary Medical Aid body which is not a Friendly Society, but is a limited liability —and possibly a profit-earning—company, is one which in no way commends itself to the better judgment of the profession.

## THE HOUSING QUESTION.

With the genial optimism, not unmixed with humour, which is so characteristic of him, the President of the Local Government Board contrived to dismiss, not ill pleased with their reception, the important deputation of the Association of Municipal Corporations which waited upon him the other day, and this without having committed himself to any very definite promises of immediate help. With evidently very genuine expressions of general agreement with many of the views laid before him, he put difficulties gently aside with an occasional joke and, when not able to promise anything from the pigeon-holes of Whitehall, suggested another of those innumerable Commissions by which a timid Government is apt to put responsibility on to other shoulders. On the whole, however, the right honourable gentleman was sympathetic, and perhaps after all the deputation got as much from him as could reasonably be expected from a Minister with colleagues. It is amusing to compare the comments of the daily press. The *Standard* evidently considers that Mr. Long had outlined a programme for the coming session which had no possible chance of being carried out, while the *Daily News* seems to regard the addition to our shelves of another row of Blue Books on the housing question as all that is likely to follow from good intentions of our Minister of Health.

Perhaps one of the most important practical points urged by the deputation was that the Local Government Board in the exercise of the powers it already possesses should allow a longer time for the repayment of money borrowed for the improvement of the dwellings of the working classes. This demand is not only the demand of the Association of Municipal Corporations, but it is a demand made at conferences on this subject held under the auspices of the Sanitary Institute, of the Royal Institute of Public Health, of the Section of State Medicine of the annual meeting of the British Medical Association, and later still, of the Housing Conference convened at Glasgow in connection with the recent Exhibition. It means this: that under present conditions, when houses are built by public bodies on borrowed capital, such a sum must be set aside annually as will ensure the repayment of the loan with interest in a period of thirty or forty years. The deputation contended, and this contention is supported by the almost unanimous voice of all who have given special attention to the subject, that, as these buildings are not put up to last only for so short a period as thirty or forty years, and as they should be rent-earning for more nearly a century, the period of repayment should at least be extended to sixty years.

Supposing a municipality spends £100,000 in building workmen's dwellings and borrows money at 3½ per cent., the annual sum required to clear off this debt, and the in-

terest upon it, in equal instalments would, if spread over a period of thirty years, amount to £5,437 4s. per annum. By spreading the repayments over sixty years the annual liability on this account would be £4,008 18s., or £1,428 6s. less. At the end of that period the property, if kept in good repair, would be a valuable asset, free from all charges for borrowed capital. The extension from thirty to forty years was a step in the right direction, allowing, as it does, quite half the saving gained by the longer extension suggested. The spreading of the repayment over a hundred years, as was suggested in the case of land, would as compared with sixty years, save the community annually £393 on the £100,000 borrowed. Mr. Long expressed a desire to know, not so much what the municipalities of to-day desired, as what our descendants would wish could they be heard. It is right, of course, that each generation should bear its own burdens, but the best way to get an answer from the future is to interrogate the past. What has been the burden that we have had to bear, not because our forefathers did but because they did not spend freely in the improvement of our great towns?

By a judicious expenditure in Liverpool and Manchester a hundred years ago what immense sums of money, and what an incalculable amount of misery might have been saved to those communities? What a trifle would the Clare Market improvement have cost the London of a century ago compared with the huge expenditure the London County Council is now incurring?

There is reason in everything, and we are far from advocating the transfer of our needful expenditure entirely to the shoulders of our descendants. We do not advocate long periods for borrowing for armoured ships, or torpedo catchers which become obsolete almost before they are completed, nor do we hold that posterity should provide the powder for our guns. But houses do not change so rapidly as ships, nor are we called to replace them as if they were torpedo boats. Improvements in building will undoubtedly occur, but the cost of building will also in all probability continue, for some time at any rate, to increase. In providing sanitary houses we are providing for posterity what in all probability posterity would have to pay for at a higher rate than ourselves. It is important, of course, that what we do build should be built well and strongly, and that all overcrowding of sites should be absolutely prohibited. We must not rest content merely to bring up our new buildings in our crowded towns to the level of some antiquated by-laws. All buildings for which posterity is to be made even to share in the payment must be such as an enlightened foresight tells us posterity will itself desire. We do not think, for instance, that posterity will approve of having to pay for back-to-back cottages, or for dwellings without forecourts, or for those built in narrow courts and ill-ventilated streets. Posterity, if we may judge from the history of the past, will dwell further and further in the suburbs; posterity will still further improve the means of rapid locomotion. There will probably still remain, however, a large number—let us hope a less number proportionately than at present—who must live near their work and for them houses built with ample air space even in the heart of towns will still have attractions. The poorer classes of the community always gravitate to the inferior dwellings, and, as the time passes, the reproach that the houses erected by municipalities to-day are seized by the comparatively well-to-do will naturally disappear in regard to the habitations now being erected. If these dwellings still remain, as it is to be hoped many will still remain, the property of the community, the temptation to overcrowd them and to surround them with other buildings will, we may assume, be resisted and, though the rents may be lower then than are asked for now, by that time they will have become the property of the community free from any burden other than that of necessary repairs. If meanwhile the new dwellings provided by the authorities serve a somewhat higher class than those immediately dispossessed by the removal of the worst of the slums, it must be remembered that these people have moved out of houses far superior to those demolished. Did the transfer take place in a single night there would be an infinity of hardship. But the process is gradual. The tendency of the well-to-do towards the outer zone is providing a steady, if not an excessive, supply of empty houses, and amongst the less desirable of these the less desirable of the dishoused tenants will find new homes, in houses which, however far they may be from ideal dwellings, are vastly superior to those they have left. There is thus an upraising in this manner of the whole working-class population. It is a natural process, and as such is probably safer than the alternative that seems to find favour with some well-meaning but slightly impracticable persons of building a cheaper and inferior kind of house at once for the very poor.

The improvement of means of transit, however, is a practical policy, as is also the provision for the class next above the very poorest, of good wholesome dwellings at a reasonable rent. There must, however, be a somewhat rigorous enforcement of the laws against overcrowding.

Mr. Long, in his address, so far as we can gather, gave no promise of any further legislation on the housing question. Indeed, it almost seems as if he dreads to meddle with the thorny subject. It is one, however, that demands attention, perhaps not less, some might think even more, urgently than the law of Public Health which he proposes to codify. Does the President of the Local Government Board know, for instance, that if an authority wishes to close an unhealthy building, rendered so chiefly from its having been built at first in a close ill-ventilated court, or from having been built without any proper provision in the shape of forecourt, to prevent its being surrounded by other buildings, shutting out the air and light—does the President know, we ask, that the first step the authority is required to take under the Consolidated Housing Act of 1890 is to send the owner notice to do the impossible and make the house fit for human habitation?

## THE REFORM OF THE ARMY MEDICAL SERVICE.

Immediately after the publication of Mr. Brodrick's scheme for the reorganisation of the medical services of the army, we expressed the opinion[1] that although the good intentions of its framers were manifest, they had been very imperfectly fulfilled. Some of the principal defects in the scheme were indicated, and criticisms from

[1] British Medical Journal, October 3rd, p. 997.

those best acquainted with the practical working of the Army Medical Service were invited. In response to this invitation we have received a vast number of letters from officers at home and abroad. Owing to the very large demands on the space of the Journal made during the last few weeks by matters belonging to the sphere of general medical politics, it has been impossible to do more than present the concentrated essence of these communications. What has been published, however, is abundantly sufficient to show that the scheme has been received by the Army Medical Service with a feeling of bitter disappointment and, indeed, dismay. For this—as may be gathered from our previous article on the subject—we were prepared; and we hope that the unanimous condemnation of the scheme by the men best qualified to judge of its merits will awaken Mr. Brodrick from the enchanted sleep into which he seems to have been thrown by the spells of his Committee of Experts, aided by the lullabies of otiose laudation sung by an ill-informed press.

We have reason to believe that the scheme is no longer an unembodied idea, but, with one or two alterations in points of detail, has already taken concrete shape in a Royal Warrant shortly to be issued. Mr. Brodrick has not hitherto shown any particular disposition to take advice; but in the interests alike of the army and of the nation we appeal to him to pause before he asks the King to set his sign manual to a document which will at best fail to secure the immediate purpose for which it is intended, and at worst may hopelessly alienate the medical profession from the service of the army.

As there is still time, and, we believe, opportunity for reconsideration before the final step is taken, the objections which have been brought against the scheme may be briefly recapitulated.

The fundamental objection to the scheme is that, as was to be expected from its origin, it is unworkable. Whether Mr. Brodrick himself is to be regarded as its "onlie true begetter," or whether it is the intellectual offspring of the Committee, it betrays in its whole framework the hand of the amateur. Indeed in all his recent dealings with the medical service of the army the Secretary of State for War would appear to have taken as his guiding principle a mistaken interpretation of Hamlet's maxim, "The hand of lesser experience hath the daintier sense." His Committee of Experts was composed mainly of civilians whose only experience of the medical service of the army was gained in the course of a few months' work with the forces under altogether exceptional conditions. Of the duties of medical officers in the ordinary course of their service they could know nothing, and evidently did not trouble to inquire. Mr. Brodrick declined to avail himself of information offered him by the British Medical Association and by officers whose long service made them really "experts" in the matter. He even disdained to take counsel with the official heads of the Army Medical Service. Is it any wonder, therefore, that the scheme, like certain plans of campaign that have been heard of, is plausible on paper, but from a practical point of view simply futile?

For instance, it is to be the duty of the Advisory Board to make annual inspections of the military hospitals; How is this to be done in India and the Colonies? No one doubts the public spirit of the distinguished civilian physicians and surgeons on the Board; but will they always be willing to go to any part of an empire on which the sun never sets?

Again, the officers of the Royal Army Medical Corps are for the first eighteen years of their service to be under what John Knox would have called a "monstrous regiment" of examiners. This alone is enough to wreck the scheme. It is a fact beyond all question that the great attraction of the service has hitherto been the practical certainty of earning the right, after twenty years of service, to a pension of £1 a day. It cannot be too clearly understood by the Secretary of State for War that if this right is taken away, as the wording of the scheme seems to imply, he will never get men to enter the service. What is a gratuity of £2,500 to a man of, say 47, who has spent the best years of his life under conditions which tend to make him disinclined, if not unfit, for private practice? We have made inquiries as to the amount payable to an insurance office of good standing that would secure him a life annuity of £365, and we find that on the basis of the average expectation of life the sum would be about £5,000, and in some offices nearly £6,000. Mr. Brodrick's scheme invites men to put their fate to the touch at a time when their future career should be well assured. Examinations, as Professor Clifford Allbutt has well pointed out, are the worst possible test of the fitness of a man of mature age for official promotion. When non-collegiate students were a new feature of university life, the playful undergraduate fancy evolved a vision of a child running to its mother with the doleful news, "Oh, mama! papa's plucked again!" This imaginary scene is likely, if Mr. Brodrick's scheme is adopted, to become a dismal reality in the medical service of the army, and in not a few cases, we fear, it will be a "grandpapa" that will be plucked. The system of promotion by examination is likely to give all the highest posts to officers versed perhaps in the wiles of bacteria, but not necessarily possessing administrative capacity or the power of handling men.

The system of promotion by merit, as determined by examination, set forth in the scheme is all very well in theory, but it will work out curiously in practice. This may be illustrated by a few concrete instances taken from the *Army List*. Let us assume that a major of February 2nd, 1896, obtains an acceleration of six months; he will gain an increase of pay (as lieutenant-colonel) six months earlier than he otherwise would have done; but he will not gain a single place, because the date of the batch above him is August 4th, 1895, while the date of his batch is six months and two days later. On the other hand if a major of August 1st, 1897, gains six months acceleration he will go over the heads of 35 of the batch before him. The last man in the first batch referred to might go to the top of the batch, while the first man cannot improve his position at all. Of men who do get over the batch above them, some can go over only five seniors, while others may go over forty or fifty; it all depends on the size of the batch above them. One officer may gain 18 months acceleration by examination at 3 years service, while another may gain 18 months at 10 years. He would therefore be entitled to promotion (by selection) to lieutenant-colonel at 17 years

service if he had passed his examination, but he may not go up for that examination until he has 18 years service!

There are equally curious anomalies in the matter of pay. We have already said that the increase of pay in the junior ranks is on a fairly liberal scale. This statement, however, must be taken as referring only to officers serving at home and in the Colonies. In India the pay of lieutenants and captains will actually be less than it is at home. Again, although the consolidated pay of surgeon-generals looks imposing, the £1,500 a year they will draw under the scheme will, when they have paid income tax on the total sum, leave them rather worse off than they are with their present pay and allowances. If the scheme is not to be an utter failure, it is essential that the Indian Government should enter into a definite agreement, from which it cannot by any official sophistry recede, securing to the medical officers of the army lent to it by the War Office a rate of pay on the higher scale allowed to all other branches of the service, with charge pay in addition.

Other serious defects in the scheme are those pointed out by Professor Ogston, especially in regard to sanitation. The medical service of the army is first of all a sanitary corps. Medicine and surgery are comparatively speaking of secondary importance in time of peace. Hence the proposal that civilian consultants should be appointed is unnecessary, particularly in view of the fact that the service is to be encouraged to produce specialists for itself. This proposal is one of the many manifestations of the vein of suspicion as to the professional efficiency of the Corps that runs through the report of the Committee.

The scheme, as we have said, is full of good intentions, but the service and the profession have learnt by experience that the War Office cannot be trusted to carry out the good intentions of would-be reformers. We are practically invited to leave everything to the Advisory Board, and all will be well. To speak plainly, however, the War Office has played the "confidence trick" so often that we put no trust in vague assurances; before we can conscientiously advise young men to enter the service we must have the full details of the proposed reorganisation before us in black and white. The best thing Mr. Brodrick can do is to refer the whole scheme to a really expert committee, in which the administrative heads of the Army Medical Service shall be included. To the fact that they have been jealously kept aloof from any share in the attempted reorganisation of the service must be ascribed the production of a scheme so crude, so vague, and so badly worded, that to it might almost be applied, in a figurative sense, Johnson's description of an unsatisfactory leg of mutton as "ill-killed, ill-dressed, ill-cooked, and ill-served."

## DEATH OF SIR WILLIAM MAC CORMAC.

WE learn, with a regret which will be shared by hosts of friends, of the sudden death on Wednesday morning, December 4th, of Sir William Mac Cormac in his 66th year. His death must, it is feared, be traced to the effects of fatigue and exposure during his services as Consulting Surgeon to the Field Force in South Africa. Since his return he had suffered from dysenteric symptoms, accompanied by lumbar pain and abdominal tenderness. His appetite had failed, and he had lost flesh, and suffered from sleeplessness. Some years ago he had a severe attack of pleurisy, and the recent fogs in London tried him very much, so that he determined to visit Bath, where he hoped that the more genial climate and the baths might restore him to health. He travelled down last Monday, accompanied by Lady Mac Cormac and an old professional friend. He placed himself under the care of Dr. Douglas Kerr, and had already derived benefit from immersion baths, and there seemed reason to hope that still further improvement would be assured by the hydrotherapeutic resources of Bath. He had a bath and douche on Tuesday, from which he derived relief, but remained in bed most of the day. He slept better that night than he had done for several weeks, and awoke at 5.30 comfortable and cheerful. At 7.30 A.M. he was sitting up taking coffee, and sent a message to the bath attendant that he would have his bath half an hour earlier than had been arranged. Suddenly, with an expression of pain, he put his hand to his heart and fell back on the pillow, dying almost immediately, and without speaking again. Lady Mac Cormac was with him to the end. We hope to publish a biography in an early issue. The funeral will take place on Monday next at Kensal Green Cemetery, and we understand that the first part of the service will be said at St. Peter's, Vere Street.

## THE INSTALLATION ON THE PRESIDENT OF ST. BARTHOLOMEW'S HOSPITAL.

H.R.H. THE PRINCE OF WALES was duly installed as President of the Royal Hospital of St. Bartholomew, in Smithfield, on December 3rd, in succession to the King who allowed himself to be nominated Patron of the hospital on his accession to the Throne, after serving the office of President for the long period of thirty-four years. A special Court was held in the Great Hall of the hospital, which was well filled with the governors and their friends, members of the medical and surgical staff and the ward sisters. The Prince of Wales entered the hall punctually at noon, and Sir Trevor Lawrence, treasurer of the hospital, delivered a short address, after which the clerk, Mr. W. H. Cross, read the ancient form of admission as a governor, to which His Royal Highness signified his assent, and was presented with the governor's green staff of office. The Prince then received his charge as President of the hospital, and was inducted into the Presidential chair. He addressed a few words of thanks to the Treasurer and Almoners of the hospital, in the course of which he alluded to the long period during which the King had held the same position. At its second foundation, in 1550, St. Bartholomew's Hospital was vested in the Mayor and Commonalty of the City of London, who soon delegated the authority to sixty-six of their number, forming a committee to govern the four Royal Hospitals of St. Bartholomew, St. Thomas, Bridewell, and Christ's Hospital, better known as the Blue Coat School. Fourteen members of the governing body were to be aldermen, of whom six must have passed the mayor's chair, whilst of the fifty-two commoners four at least must be "scriveners." Three aldermen and thirteen commoners were more particularly allotted to each hospital. One of the three aldermen, provided that he had passed the chair, was elected President, and one of the thirteen commoners was appointed treasurer. Half the committee retired every two years. This method of government gradually fell into disuse, and by 1666 it had become the custom to elect as "governors" those who had been benefactors, or had rendered services to the hospital. The City, however, retained a shadow of authority until 1778, for the list of governors was presented to the Court of Common Council annually on St. Thomas's Day. The autonomy of the Royal Hospitals was secured by Act of Parliament in 1782, though they still remained under the patronage of the Corporation, and the offices of President or Treasurer were

always filled by a senior alderman, or by one who had held a high position in the city. The final separation of St. Bartholomew's Hospital from the Corporation occurred in 1866, when a lawsuit was instituted to determine whether, in accordance with ancient custom, the Lord Mayor for the time being should be elected President on the occasion of a vacancy, or whether the governors had the power of choosing whom they would. The suit was determined in favour of the governors, and the first President (elected in 1867) was H.R.H. the Prince of Wales, now His Majesty the King.

## THE UNIVERSITY OF LONDON.

The Senate met last week, and, we understand, considered further the fundamental question of the Matriculation Examination. Most medical teachers would probably desire that there should be one portal for all undergraduates, whether they intend to become "internal" or "external" students of the University. Indeed, there is no meaning at present in the distinction between internal and external graduation, so far as the medical faculty is concerned, at any rate in the case of the great bulk of medical students. Collegiate courses have long been recognised as obligatory in the medical faculty, and the private medical student is an unthinkable entity. It is reported that Dr. McClure has resigned his seat on the Senate as an Arts representative of Convocation. We understand that the new judge, Sir Joseph Walton, has been invited to come forward as a candidate by an influential committee, and that he has accepted the invitation. Mr. Easterbrook's name is also mentioned as a probable candidate. Members of Convocation who are graduates in Arts are alone entitled to vote; but the election will not take place until the new year.

## A TRUE HERO OF MEDICINE.

The title "Hero of Medicine" has been reserved for the workers who have striven to wrest from Nature the secret of disease or given us new weapons with which to fight against death. But a professional heroism equal, perhaps indeed superior, to that of the discoverer or the pioneer is shown by the practitioner who sacrifices ease, health, and often life in the faithful discharge of his mission of relieving suffering. A striking example of heroism of this kind has recently been afforded by an Irish doctor who in his unselfish devotion to patients of the humblest class has died of disease contracted in the course of his ministrations. The sad, yet glorious story is told by Sir Christopher J. Nixon, Mr. Thomas Myles (Presidents of the Royal College of Physicians of Ireland and of the Royal College of Surgeons in Ireland), and Sir Francis Cruise, and Sir Thornley Stoker, ex-Presidents respectively of the same Colleges, in an appeal issued by them. Dr. William Smyth was the medical officer to the Burtonport Dispensary District, which includes the island of Arranmore. The island was visited by an epidemic of typhus fever. Owing to the terror inspired by the disease, Dr. Smyth could get no help in fighting the epidemic. Alone each day he rowed his boat across the stormy waters of the Sound to the island—a distance of four miles. Alone he tried to be at once nurse and doctor to the poor stricken people in their miserable homes. When at length he succeeded in persuading them that their only chance of recovery lay in removal to the mainland, he was confronted by the difficulty that no one would help him, or even lend him a boat. Fortunately Dr. Brendon M'Carthy, Medical Inspector to the Local Government Board, arrived on the scene. Without any other help, these two devoted men brought the patients down to the beach, embarked with them in a crazy boat, and rowed them across the Sound. The boat was only kept afloat by the continuous baling of the strongest of the patients, and sank five minutes after reaching her destination. Happily all the patients were safely transferred, and are all now on the way to recovery. But Dr. Smyth has fallen a martyr to his devotion to duty, having himself contracted the disease which he had fought so manfully. He leaves a widow and eight children practically destitute. The gentlemen above named have formed themselves into a temporary Committee for the collection of subscriptions, and propose to open an account at a bank in the name of the "William Smyth Memorial Fund." A Provisional Committee for Belfast and district has been formed, which includes the names of Professor Whitla, M.D., J.P., President of the Ulster Medical Society; and Dr. Singleton Darling, Lurgan, President of the North of Ireland Branch of the British Medical Association; with Mr. Robert Campbell, F.R.C.S., 21, Great Victoria Street, Belfast; and William Calwell, M.D., College Square, North, Belfast, as Honorary Secretaries; and Mr. Henry S. Woods, the Bank Buildings, Belfast, as Honorary Treasurer. The Duke of Abercorn, as Lord Lieutenant of the County of Donegal, has also issued a sympathetic appeal. We are informed that a sum of about £400 has already been collected in Ireland. But such a man as William Smyth is a glory to the whole profession, and his death in the prime of manhood in the circumstances related must be counted more truly heroic than a death in battle. Soldiers die for their country in the fierce joy of combat; William Smyth died for his fellow men with nothing to cheer him on but the sense of professional duty. We think many of our readers will be glad to help in relieving the needs of those left behind by one of the noblest in the long list of medical heroes who have given their lives for the suffering poor.

## CIVIL SURGEONS WITH THE ARMY AT HOME.

Owing to the strain put upon the Royal Army Medical Corps by the war, which when it broke out found the corps in an undermanned condition, the War Office obtained the services of a number of civil practitioners to take the place with troops at home of R.A.M.C. officers ordered to South Africa. They were engaged at an inclusive salary of £270 a year, and were required to give their whole time to the service. In common with the majority of people in this country, these gentlemen did not foresee that the war would continue for so long as has already proved to be the case, and their contract with the War Office did not contain any provision for an increase of salary dependent upon length of service. These considerations applied more or less to many other persons, and in June, 1901, an Army Order was issued setting out that a gratuity would be paid to a number of persons employed in the emergency by the War Office, among others, to "civilians appointed to military positions in imperial forces." The gratuity was to amount to £100, and after the completion of twelve months service a further gratuity for each year or part of a year for further services at the rate of £50 a year was to be paid if the services were given at home. The civil surgeons appear to have assumed that they came within the provision of this order, but we are informed that on July 3rd an order appeared in the local corps order book at Aldershot notifying that the Secretary of State for War had decided that civil surgeons employed at home under civil contract are not eligible for the gratuity. We understand that 164 medical practitioners whose period of engagement expires at the end of this year are affected by this action of the Secretary of State for War. Not unnaturally they feel indignant that they should have been discriminated against in this fashion, and they contend that under the terms of the order of June, 1901, they are entitled to receive the gratuity. It is obvious at any rate that the conditions under which they engaged have practically been varied by the unexpectedly long continuance of the

war. They have now addressed to the Secretary of State for War applications for the payment of the gratuity, or in the alternative for an increase of salary to £1 a day. This seems to be, under the circumstances, a most reasonable request, and it is to be hoped that the War Office will see the wisdom of acceding to the application, and will not drive away a body of practitioners, who have become acquainted with their special duties, and whose retirement could not but be a serious disadvantage to the troops serving at home.

## THE CONSOLIDATED PUBLIC HEALTH BILL.

THE year 1848 is memorable for the great Act which is the basis of all subsequent public health legislation. It was actually preceded in the Statute Book by certain quasi-permissive Acts, which enabled authorities and "undertakers" to save expense in promoting private legislation by accepting certain clauses to which Parliament had repeatedly given its consent. In 1847, for instance, an Act was passed for "consolidating in one Act certain provisions usually contained in Acts for paving, draining, cleansing, lighting, and improving towns." Many of the clauses of this Act—as of the Towns Police Clauses Act of the same year—are incorporated, with certain conditions, as part of the Public Health Act, 1875. The latter Act contains also important clauses introduced since 1848 in the various Sanitary, Local Government, and Nuisance Removal Acts, culminating in the important Public Health Acts of 1872 and 1874. Many of the additions since 1848 had been first tried as local enactments before they found their way into the general public health law. Since 1875 several other important measures, most of them if not all of the adoption class, have also found their way into the mass of general law, after having been first tested in large municipalities. The Act for the notification of certain infectious diseases was on the lines of Acts which came into force in 1876 and 1877 in Huddersfield and Bolton respectively. Similar Acts were soon obtained by other large towns, and at length the legislation in 1889 made notification compulsory in London and gave other authorities the power of adopting the powers given in the Act of that year if they so desired More recently the 1889 Act has been made the law of the land. The clauses of the Infectious Disease (Prevention) and those of the Public Health Amendment Acts of 1890 still remain adoptive. They also were the result of the experience of some of the more active municipalities. The law of public health is now to be found in statistics dating as far back as 1847 and coming down to times as recent as the session before last. The Consolidation Act of 1875 did a little to simplify matters, but it was not bold enough. Instead of re-enacting necessary sections it incorporated, as has been said, clauses from old Acts. This method of legislating has the disadvantage of leaving these incorporated clauses subject to the interpretations of the context and defining sections of the ancient Acts to which they originally belonged. But this is not all. What an Act of Parliament means is not determined by the power that makes the law, but by the interpretation put upon the wording of the enactment by the Courts of Appeal. In some cases the real meaning and intention of Parliament are set aside by an error of the draughtsman. Many of these slips have been corrected by subsequent legislation, but probably some yet remain. Apart, however, from mere questions of interpretation, there are many working difficulties of an administrative character which ought to be removed in any consolidation Bill. The familiar subject of nuisance removal is beset by small technical difficulties, of which few but those who administer the law, and get all the blame of the law's delays, are aware. With its skilled body of assistants, and possessed by every sanitary authority, and especially in our large towns, where the health department is now generally under the direct oversight and control of a medical officer who devotes his whole time to his duties, it ought not to be necessary for every step in the removal of a nuisance to be separately sanctioned by a vote of the authority. A general instruction to do a certain class of work ought to be all that is necessary to induce the removal of nuisances: for which the man in the street can, if he will, take action, but which the head of the sanitary department can only proceed against by a special resolution, often a series of resolutions, by his authority. We hope that Mr. Long, for the sake of passing quickly a mere re-enactment of the existing law, will not perpetuate the absurdities of some of the existing legislation to introduce some of the scarcely less inconvenient oversights which crept into the London Act of 1891.

## THE OTOLOGICAL SOCIETY.

THE second annual dinner of this Society showed how well it has justified its creation. That it really represents the United Kingdom was evidenced on December 2nd by the presence of members from such distant places as Dundee and Cork, while the position it has secured was not only touched on in various speeches, but witnessed to by the number of distinguished guests. Amongst these were the Presidents of the Medical Society (Dr. Allchin) and the Pathological Society (Mr. Watson Cheyne), Sir Thomas Barlow, Sir James Crichton-Browne, Dr. Ferrier, Sir Felix Semon, Mr. Bernard Pitts, and Professor Young (Manchester). In proposing the toast of the evening, Sir James Crichton-Browne congratulated otology on having secured a divorce, or rather a judicial separation, from laryngology, but he playfully hinted that this fissiparous division must not go too far, or else we should have a cochlear, a labyrinthine, and a semicircular society. He referred to the blatant, impudent, and monstrous advertisements of ear quacks which are received by daily papers. This ready gullibility of the public was a poor return for the millions spent on education, and as Lord Rosebery had suggested the creation of censors of biographies, Sir James suggested that censors of public advertisements would find a useful task in saving the public from the wiles of the advertising charlatan. The President, Sir William Dalby, referred those present to the *Transactions* of the Society for the evidence of the good work being done, not simply in examining functional disorders, but in investigating the prevention and cure of grave septic processes which were so apt to threaten life. "The Health of the Guests" was proposed by Mr. Stephen Paget, and in acknowledging it Sir Thomas Barlow suggested that members of the Society, after their deliberations on matters of technique and pathology, should bring the fruits of their labours to the larger societies so as to maintain the unity of medicine. Mr. Ballance proposed the toast of "The Society's First President," referring to his strong character and individuality, to the interest he had shown in the welfare of deaf-mutes, to the fact that as long ago as 1878 he had foreshadowed the mastoid operation, the zealousness and tact with which he had occupied the chair during the first two years of the Society's existence, to his kindness to the younger members of the profession, his literary and oratorical accomplishments, and his high reputation. Sir William Dalby acknowledged the honour as being one of those he appreciated most highly in his thirty-five years of practice. The toast list was embellished with drawings of ossicles, cochleæ, specula, Eustachian catheters, and other symbols of aural surgery.

## THE GLASGOW UNIVERSITY CLUB.

THE winter dinner of this club, which was held in the Hotel Cecil, on November 28th, under the presidency of Dr. George Heron, possessed special significance from the fact that the occasion was utilised to do special honour to

Mr. Norman L. MacLehose, who was made the guest of the evening in recognition of his valuable services as senior honorary secretary during the last seven years. There was a large attendance, which included Sir John Batty Tuke, M.P., Sir James Crichton-Browne, Sir Hector Cameron, Sir Christopher Nixon, the Hon. Charles Rothschild, Professor McVail, Professor W. P. Ker, and Professor Cormack. The Chairman, in proposing the toast of the evening, expatiated upon the part which the University of Glasgow had played in the intellectual life of Scotland, and how some of her alumni, notably Adam Smith, William Hunter, James Watt, Joseph Lister, and William Thomson, now Lord Kelvin, had materially contributed to the progress of the world's history. He expressed a personal feeling of regret, which was keenly shared by all his hearers, at the absence through indisposition of Sir William Gairdner, whose name might well be added to the brilliant list he had mentioned. He alluded in terms of appreciation to Mr. Carnegie's recent gift to the Scotch Universities, but his belief that one of the greatest blessings arising from Mr. Carnegie's munificence was the hope it created of an early and complete disappearance of professorial lectures was not generally accepted either by the audience or the subsequent speakers. In speaking of the guest of the evening, Dr. Heron made graceful reference to the good work he had done, pointing out that much of the club's success was directly the result of his painstaking and indefatigable labours. Mr. MacLehose suitably replied, and reminded those present that his task had been made easy by the fact that the Chairman himself had been for many years his predecessor in office, and that as first secretary, and almost originator, of the club he had done more than anyone to establish it on a sure foundation. In proposing "The Scottish Universities," Sir Christopher Nixon said they were very much the reflex of the Scottish character, and were conspicuously successful because they represented the people and carried forward the work of the secondary schools. This gave to Scotland an intellectual supremacy which did not exist in Ireland; where the universities failed to influence in the same way the masses of the people. He pointed out the immense aid which the German universities received from the State, and thought Scotland was much to be congratulated that in the person of Mr. Carnegie she had found a benefactor who practically stood to her universities as the State did to those of Germany. Other toasts followed. The tables were profusely decorated with a large variety of chrysanthemums, the gift of Dr. Aikman of Guernsey.

## THE COMMISSION ON ENTERIC FEVER AND DYSENTERY IN SOUTH AFRICA.

We understand that the Commission on Enteric Fever and Dysentery which was sent to South Africa in August, 1900, has now presented its report to the Secretary of State for War, and we venture to express the hope that its publication may not long be delayed. It must necessarily throw much light on the steps which should be taken to prevent the recurring epidemics of enteric fever. As the season when an increased prevalence of the disease may be expected in South Africa is at hand, it seems the more desirable that the observations and recommendations contained in the report should be made known at as early date as possible for the information of commanding officers, of officers of the Royal Army Medical Corps, and of the public, who take a deep interest in this matter.

## TUBERCULOSIS OF HUMAN BEINGS AND OF CATTLE.

Following in the footsteps of Dr. Theobald Smith, Dr. D. A. de Jong, a veterinary surgeon at Leyden, has, since 1899, been pursuing the same line of investigation as that reported by Koch at the British Congress of Tuberculosis. The full text of Dr. de Jong's report to the Dutch Minister of the Interior will, we understand, shortly be published. His work is already practically finished, and a summary of his conclusions are given by his countryman, Dr. Van der Hoeven, writing in the American *Courier of Medicine*. They are as follows: (1) Tubercle bacilli taken from man can produce tuberculous processes in cattle; (2) human tuberculosis can produce tuberculous processes in domestic animals other than cattle (sheep, goats, dogs, and also monkeys); (3) the tuberculosis in the above-mentioned animals caused by the tubercle bacillus of human beings is, however, generally less severe than that caused by the tubercle bacillus of cattle; (4) we may therefore conclude that the tubercle bacillus of cattle has in general a greater virulence than the bacillus of human tuberculosis; (5) the increased virulency of the bovine tubercle bacillus as observed in cattle, sheep, goats, dogs, and monkeys will likewise have increased virulence in human beings; (6) human beings are to be regarded as a less dangerous source of infection to cattle than cattle are for men; (7) tuberculosis in cattle requires more rigid measures from a hygienic point of view than was formerly thought necessary. These conclusions, as will be observed, are directly opposed to those of Koch.

At the meeting of the Royal Medical and Chirurgical Society on Tuesday next, at 8.30 P.M., a discussion on modern methods of vaccination and their scientific basis will be opened by Dr. S. Monckton Copeman. Dr. Copeman's address will be illustrated by lantern slides.

We regret to learn of the death from pneumonia of Mr. J. D. Harries, of Shrewsbury, Consulting Surgeon to the Salop Infirmary, and the representative of the Shropshire and Mid-Wales Branch of the British Medical Association on the Central Council. We hope to publish an obituary notice in a subsequent issue.

Owing to the great length of the reports of the proceedings of the General Medical Council, especially in regard to the Liverpool Victoria Legal Friendly Society and the National Medical Company, a case raising matters of first-rate importance to the general body of practitioners in this country, we are unable to publish a large number of letters and other communications which under ordinary circumstances would have been inserted in this issue of the Journal.

A Reuter's telegram, dated December 1st, announces the death of Surgeon-General Harvey, C.B., D.S.O., the Director-General of the Indian Medical Service. Surgeon-General Harvey returned to India only some six weeks ago, after spending several months' furlough in Scotland, and then seemed to be in his usual excellent health and full of energy. His death, we believe, occurred at Simla, and is said to have been due to peritonitis. We are compelled, owing to the pressure upon our space, to postpone the publication of a notice of his career.

A Medical Club in Paris.—A medical club has recently been founded in Paris at No. 5, Avenue de l'Opéra, in premises belonging to the Cercle National. Its object is to promote friendly relations among its members, to form a professional centre for the medical practitioners of Paris, and to provide the advantage of a club for provincial and foreign doctors visiting Paris. Visitors will be able to obtain at the club all the information they may require as to lectures, hospital visits, scientific and medical societies, etc. Professor Pozzi is the president, and Dr. Doléris the secretary-general of the club. The medical profession of Brussels is also, we learn, thinking of founding a club.

## SMALL-POX IN LONDON.

### Prevalence.

The number of cases of small-pox under treatment in the hospitals of the Metropolitan Asylums Board on Saturday, November 30th, had risen to 427, the largest number recorded during the present epidemic. Since then the number of cases admitted has still further exceeded the number discharged, so that at midnight on December 2nd-3rd there were 459 patients under treatment.

### Statistics of Small-Pox and Vaccination.

The publication in the *Times* of an article, giving the vaccination statistics of the small-pox cases in the hospital ships, will, we hope, tend to satisfy those who have been desirous of learning whether the evidence of the present outbreak tends to support the arguments of those who favour or are opposed to vaccination. By all who have had experience of former outbreaks no new lesson is learnt—it is found that vaccination in infancy protects for a number of years against attacks of and against death from small-pox; that after the lapse of years this protection wanes, and that the protection must be renewed by revaccination to maintain immunity from small-pox. The table given in the article, which shows the numbers attacked and the number of deaths at the several ages with the condition as to vaccination of those at each age, does not, however, precisely accord with the tabular classification of the deaths from small-pox in the weekly returns of the Registrar-General. This, however, is, we understand, due to the fact that the returns take no account of the time when the patient was vaccinated. Vaccination performed after infection with small-pox and too late to be protective against the attack entitles the patient to be classified if he dies as "vaccinated." Thus the deaths of 3 vaccinated children under 1 year of age have recently been registered.

We read in the return of the forty-fifth week:

In the course of the fortnight ended November 2nd there were admitted to the hospital ships at Dartford two newly-born infants, together with their mothers, who were suffering from small-pox. These infants died shortly after admission; they were vaccinated at the ships, but not until they had become infected with small-pox.

In the return of the forty-sixth week it is stated:

An infant who died from small-pox in the hospital ship *Atlas* on November 13th, aged 15 days, had been vaccinated on November 1st. This case is classed as "vaccinated" in Table 4.

The first two cases are interesting, because the interval which elapsed between the birth and the date of the attack by small-pox was less than the incubation period of small-pox; they had therefore before birth been infected with the small-pox from which their mothers were suffering, and the vaccination being performed necessarily after birth, was too late to prevent their subsequent attack and death. In the third case the same course of events probably occurred. We shall hope to learn later the date of the appearance of the disease; but, even supposing infection occurred at the time of birth, it was too early to enable the subsequent vaccination to overtake the small-pox.

We publish in another column a letter from Dr. W. R. Macdonell, one of the mathematicians who is engaged in statistical word in association with Professor Karl Pearson, showing that in the present epidemic, so far as the figures are at present available, there is an even larger correlation between recovery from small-pox and the presence of vaccination marks than existed in the epidemic of 1893[1]. So far as the statistics upon which Dr. Macdonell's calculations are founded go, his results confirm the numerical weight of the previous calculation.

### Finsbury.

The latest report of Dr. Newman, M.O.H., Finsbury, states that down to November 26th 54 cases of small-pox had been notified in the borough. Of these 12 had never been vaccinated, and 40 others had only been vaccinated in infancy, leaving two cases in which efficient vaccination had been done during the last ten years. They were the two children, aged 7 and 8 respectively, of one of the cases who had on three or four days "kissed and fondled" them while suffering from unrecognised but virulent small-pox. Among the whole 54 cases 6 deaths had occurred, 3 in unvaccinated persons, 2 in persons only vaccinated in infancy, and death appeared to be due to complications. The sixth death was in a boy aged 10 years and 4 months, who while himself very frail, was one of 10 children, 8 of whom had died in infancy from constitutional diseases, and he died from complications.

[1] British Medical Journal, October 26th, 1901, p. 1289.

# ASSOCIATION INTELLIGENCE.

## PROCEEDINGS OF COUNCIL.

The President of Council regrets that in the British Medical Journal of November 2nd, in the Report of Proceedings of Council, a copy of a letter appears in which is contained an expression capable of being interpreted as reflecting upon the position and status of the *Manchester Evening News*.

In publishing such letter the Council did not intend in any way to reflect on the newspaper in question, and very much regret that any expressions capable of such a construction should have been used.

429, Strand, December 2nd, 1901.

## BRANCH MEETINGS TO BE HELD.

South-Eastern Branch: West Sussex District.—The next meeting of this District will be held at the Norfolk Hotel, Arundel, on Tuesday, December 10th, at 3.30 P.M. Dr. Eustace (Arundel) will preside. Agenda: Minutes of the Worthing meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. The following papers, etc., have been promised:—Dr. H. A. Caley (London): Peridiaphragmatic Lesions. Dr. Eustace (Arundel): The Treatment of Heart Disease. Dr. Lapthorne (Littlehampton): (1) A Case of Retention of Urine in a Boy; (2) The Notes of two Abdominal Cases. Members desirous of exhibiting specimens, or reading notes of cases, are invited to communicate at once with the Honorary Secretary. Dinner at the Norfolk Hotel at 5.30; charge 6s., exclusive of wine. The Honorary Secretary would be much obliged if members would kindly inform whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner. By so doing they will very materially facilitate arrangements, and promote the success of the meeting. All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends.—H. C. L. Morris, 10, The Steyne, Bognor, Honorary Secretary.

Shropshire and Mid-Wales Branch.—The next meeting of the Clinical and Pathological Section of this Branch will be held at the Salop Infirmary, on Tuesday, December 10th, at 5 P.M. Mr. T. Law Webb in the chair. Cases will be shown by Dr. Gardner, Mr. MacLeod, and Dr. McClintock (for Dr. Cureton). Papers:—The Chairman: On Leukæmia, illustrated by diagrams, blood preparations, and cases. Dr. Sankey: A Case of Double Suppurative Parotitis. Dr. Codd: On the "Electric Series" Bath. Dr. R. de S. Stawell: A Case of Post-epileptic Automatism. Demonstrations will be given by Dr. Cureton and Dr. Cecil Salt. It is hoped that every member will endeavour to attend this meeting.—Harold H. B. Macleod and Leonard J. Godson, Shrewsbury, Honorary Secretaries.

# SPECIAL CORRESPONDENCE.

## BRISTOL.

*Annual Meeting of University College.—University College Colston Society's Dinner.*

The annual meeting of the Governors of Bristol University College was held on November 20th, the Bishop of Hereford presiding. The report of the Council stated that the number of students attending classes showed a very satisfactory increase: also that the students on an average took out a more full and complete course of instruction. The Council welcomed the members of the Western College which for greater education advantages had recently migrated from Plymouth to Bristol. The clinical and bacteriological laboratory, now open for little over a year, had received eighty-eight specimens for examination—a number which was considered satisfactory. Very valuable assistance had been afforded by the laboratory in the examination of some rats found dead in a ship, the presence of the plague bacillus being ascertained and reported, so that the Medical Officer of Health was able to take prompt measures to safeguard the city. The new buildings, the large hall, library, and biological lecture rooms afford much-needed space, but additional room was still required.

In the Hall was held the second University College Colston Society's dinner, at which Sir Michael Foster was the guest and chief speaker. It resulted in £400 being handed over to

the College. The Vice-Chairman, Mr. P. J. Worsley, referred to the large amount of research being carried on by the staff in addition to their work of lecturing, thereby keeping the College in the front of scientific investigation as well as stimulating the students to engage in similar undertakings. The Bishop of Hereford referred to the steady increase in the number of students as a gratifying fact, but more satisfactory was the report he had received that the quality of the work showed improvement. He spoke in eulogistic terms of the work done by the medical department, and expressed his belief that one of the best things effected by the supporters of the College was the additional strength and support given to the medical school. Educational movements of all kinds were now being heard of, and he hoped that before long the question of a university for the West of England, with Bristol as as its centre, would become a pressing one. It would be a proud day for those who had for twenty-five years worked for the University College when they felt that the new university was an assured fact.

# CORRESPONDENCE.

## MORTALITY OF SMALL-POX IN VACCINATED AND UNVACCINATED PERSONS.

Sir,—In a letter published in the British Medical Journal of October 26th, Professor Karl Pearson pointed out that "in exhibiting the relationship between two quantities we can obtain absolutely reliable statistical results from very broad classifications." These results are obtained by a method which Professor Pearson has explained very fully in a paper on the Correlation of Characters not Quantitatively Measureable in the *Philosophical Transactions*, vol. cxcv, pp. 1 to 47, and having used this method largely and tested it with excellent results in the course of a recent anthropometric inquiry into certain physical characters in criminals, I have applied it to the very interesting statistics relating to the present epidemic of small-pox which were published in the *Times* of November 30th.

The "broad classifications" here are vaccinated, unvaccinated, recoveries, and deaths. The statistics can then be exhibited in a four-fold table, thus:

| | Recoveries. | Deaths. | Totals. |
|---|---|---|---|
| Vaccinated ... ... ... | 195 | 45 | 240 |
| Unvaccinated ... ... ... | 38 | 71 | 109 |
| Totals ... ... ... | 233 | 116 | 349 |

The two quantities whose relationship we have to discover are strength to resist small-pox, and degree of effective vaccination; in neither case is a quantitative scale attainable; we know only the number of recoveries and deaths, and the presence or absence of vaccination marks.

The problem is to calculate the coefficient of correlation between the two quantities. Applying Professor Pearson's method to the above table, I find that this coefficient is 0.6733: this is evidently higher than the coefficient calculated by Professor Pearson for the epidemic of 1893, namely, 0.5954, which he characterised as "quite a large correlation." I should point out, however, that his calculation was based on 2,081 cases, mine on 349 only; I cannot, therefore, claim that my result is definitive, but, taken with Professor Pearson's, it may help us to form an idea of the degree of relationship in question.

In the *Times* statistics it appears that 19 "doubtful" cases with 11 deaths are included in the "non-vaccinated": it would be very desirable to have these "doubtful" cases shown separately in any future tables.—I am, etc.,

Enfield, Dec. 2nd. W. R. Macdonell.

## THE GENERAL MEDICAL COUNCIL ELECTION.

*The Gallery of the Council Chamber.*

Sir,—I have already, in the British Medical Journal of November 23rd, exposed Dr. McCook Weir's malversations of my words.

As I stated in the General Medical Council on December 2nd, his second letter, in which he repeats his offence, is a literary forgery, inasmuch as he not only places words in inverted commas, alleging I used them, though I did not, as your report shows; but he also entirely falsifies my meaning, seeing that I showed Mr. Brown's election would be most injurious to reform and direct representation.

Dr. McCook Weir's conduct is a very typical instance of the manner in which Mr. Brown and his friends are conducting his candidature.—I am, etc.,

Cavendish Square, Dec. 4th. Victor Horsley.

*Mr. Victor Horsley's Protest and Warning.*

Sir,—I observe Mr. Horsley's letter is dated November 28th, therefore it must have been written in haste, and doubtless also in anger, but neither condition justifies the unmannerly expressions of the second paragraph. But it is more even than uncivil—it makes assertions entirely contrary to fact. In the circular in question there is no mention—not even a suggestion of a change of title of any Bill; it states distinctly "abandoned" the Obstetric Nurses Bill and "substituted" a Midwives Bill; and for Mr. Horsley to suggest that the electors could misconstrue these words as he would have your readers believe he did is an insult to their intelligence.

I do not write in my capacity of Chairman of Messrs. Brown and Jackson's Election Committee. I do not consider Mr. Horsley's protest and warning of sufficient importance as to command official notice, but I submit that having published this remarkable communication, it was your duty, in fairness to the candidates whose interests it was clearly intended to damage, to intimate, as is your occasional practice, in a footnote to your readers that the information in the circular Mr. Horsley protested against, and indeed the whole of the facts contained therein, had already been published officially in the British Medical Journal and elsewhere. I quite understand how unpleasant it must be to be reminded of these unpleasant and plain truths, and doubtless Mr. Horsley's alarm at the damaging effect they must have upon the issue of the contest is shared by most of his followers.—I am, etc.,

Old Trafford, Dec. 3rd. Jas. Brassey Brierley.

*Provincial Candidates.*

Sir,—Whether many or few of your readers are acquainted with me is not germane to the question before us, and is an allusion on the part of Mr. Horsley unworthy of a gladiator of his renown.

The sophistries and special pleading in his letter are astounding, and his effrontery in making them is no less so.

First, with regard to Sir Walter Foster, it is of no moment whether he "has now only one address in the *Register* or *Directory*," and does not alter the fact that his Birmingham address was there in 1897 and 1898, and that he was resident at that place as a provincial practitioner. His letters were during the election addressed from there and replies sent thither, a few of which I could show if Mr. Victor Alexander Haden Horsley thinks this is also "untrue."

Secondly, Mr. Horsley says "he sought for a general practitioner." Did his friend, Dr. Woodcock, refuse, and why? Was it because he was so low down on the list of returns? Did he ask Mr. George Jackson, whom it now suits his purpose to push forward? Is he aware that he was willing to come forward, and actually had his address printed, a few hundred copies of which were sent to me? Does he want proofs that this latter is not "untrue"?

Thirdly, as to Mr. Horsley making the "third representative resident in London, and that it was not his doings but the electors'." This is puerile, as everyone will admit, as he was not a mere automaton in the affair, but exerting himself to the utmost for success.

No one will feel, after reading his letter, that he has cleared himself from the charges and inconsistencies I brought forward, though their astonishment at his skill as a dialectician when he had no case may have been increased, if that is any comfort to him.

He says "the rest of" my letter is "untrue." I deny it. It is very easy for him to say this, but it does not prove it; it is a wholesale way of getting rid of difficulties. His first letter, on page 1610, proves conclusively that he wishes "to oust Mr. George Brown." Surely he will not condescend to

say, "It is not to oust Mr. Brown, but to secure the return of Messrs. Jackson and Woodcock."—I am, etc.,

Manchester, Nov. 30th. G. H. Broadbent.

*** We hope that these controversies may come to an end with the contested election out of which they have originated.

### AN ELECTRO-THERAPEUTICAL SOCIETY.

Sir,—May I ask your kind assistance in making known to the profession that it is intended to form an Electrical Society for duly qualified medical practitioners who are interested in the application of all forms of electricity to disease? Any practitioners willing to give their support to such a society are requested to send their names to the undersigned.—I am, etc.,

20, Bedford Square, W.C., Dec. 3rd. Chisholm Williams.

### MEDICAL BIBLIOGRAPHY.

Sir,—The discontinuance of *Bibliographia Medica* would be a calamity to all students of medicine. Is it not possible for a combination of the great medical institutions and societies in this and other countries to avert such a disaster which a recent circular says may happen to us?—I am, etc.,

L. M. Griffiths,

December 2nd. Honorary Librarian, Bristol Medical Library.

### INTRAVENOUS MEDICATION IN SMALL-POX.

Sir,—The conspicuous success which is reported to have followed the treatment of foot-and-mouth disease in cattle with mercury perchloride—a procedure devised and carried out by Baccelli—suggests that a similar form of intravenous medication might be tried in small-pox. As the exciting cause of both these diseases is still in dispute and scientists are divided in opinion as to whether the infective agent be a bacterium or a protozoon, no objection could be raised on the ground that the virus belonged to the opposite kingdom. At any rate, as the treatment of variola does not appear to have made much advance in the past century, any new method which holds out the slightest hope of efficacy should be given a trial.—I am, etc.,

November 22nd. R. G. Hebb.

### DILATATION OF THE ŒSOPHAGUS.

Sir,—In the British Medical Journal of November 16th I notice a lecture by Professor Swain on Idiopathic Dilatation of the Œsophagus. If Dr. Swain cares to refer to an article by me on Spasmodic Stricture of the Œsophagus, which appeared in the Journal of June 4th, 1898, he will find recorded several cases similar to his in which symptoms referred to dilatation disappeared when the cardiac sphincter had been well stretched.—I am, etc.,

Southport, Nov. 22nd. J. C. Russel.

### MOSQUITO ATTRACTED BY SOUNDS.

Sir,—The observation that mosquitos are attracted by sounds, communicated to you by Major Ross, is, I fancy, an old one in India. Not infrequently during the last thirteen years I have had to stop playing my violin in consequence of the cloud of mosquitos attracted by the sound. They swarmed round head and violin, and rendered playing almost impossible. It has only occurred to this extent during the "mosquito season," when the insects were very numerous, but I believe mosquitos are always attracted by music, and more by stringed instruments than by a piano.—I am, etc.,

F. P. Maynard, F.R.C.S.

Patna, Nov. 2nd. Major I.M.S.

## ROYAL NAVY AND ARMY MEDICAL SERVICES.

### REORGANISATION OF THE ARMY MEDICAL SERVICE.

With many communications commenting on the new scheme we have also received a large bundle of letters addressed to and forwarded to us by Dr. Thompson, M.P., from which we propose to give extracts in a subsequent issue. He has also favoured us with the following letter:

Sir,—I send a few of the more important letters which I have received from army medical officers. There is no necessity to urge upon your readers and the medical profession in these islands their great importance. Neither should it need much pressure to request that they should receive the very earnest attention of the War Secretary and the heads of the Army Medical Department. All my correspondents with one voice condemn the report of the Commission, and warn the authorities that if a warrant is issued based on the Committee's report the result must be to make the position of the R.A.M.C. far worse than it was originally. I have taken the liberty of writing several times to Mr. Brodrick and have conveyed to him the wishes of officers who have been good enough to communicate with me. I have before stated I believe in Brodrick, and feel certain that it is his desire to make the R.A.M.C. what it should be, namely, thoroughly efficient. The letters I enclose for your perusal will clearly demonstrate the great initial mistake which was made in not allowing the army medical officers to choose their own representatives on the Committee; and, secondly, in not taking evidence of representative medical officers. The result has been a report which in many particulars, unless amended, will prove a dismal failure. Some months ago I published in the British Medical Journal a scheme of army medical reform, suggested to me by correspondence with a very large number of army surgeons. Without exception this scheme has been accepted as most satisfactory by every officer who has written to me; of course it was merely a skeleton scheme, but it could have been made the basis of a thorough and lasting reform, as it remedied all the grievances, both social and otherwise, the army surgeon complained of. In criticising the Committee's report, exception is taken by all my correspondents or most of them

1. To the Advisory Board; several officers from India pertinently ask, How would the corps of Royal Engineers like to have their military affairs controlled by an Advisory Board half civilian and half military? This Board will never work, and should be made an exclusively Military Board or else abolished altogether.

2. To the total absence of the reforms necessary to improve the social position of the officers of the Army Medical Service by ranking their corps next to the other scientific corps of the army.

3. To the abolition of the pension of £1 per diem after twenty years service, which is looked upon by every officer in the service as the one privilege they desire most earnestly to see retained.

4. To the harrassing series of examinations necessary to secure promotion.

5. To the absence of sufficient notice of the difference in the Indian pay of the medical and combatant officer.

6. To the retention of a special and necessarily favoured corps of medical officers for the Guards. This is really a very serious matter, and, if the recommendation of the War Office Committee is retained, will cause in the future no end of friction, jealousy, and ill-will.

7. To the absence of recommendations as regards regular leave.

8. To the indefiniteness of the recommendations as regards the future strength of the corps.

9. To the absence of a distinct understanding that the director-general shall rank as a lieutenant-general.

10. Many of my correspondents have an affection for Netley, and prefer it to any new home in London or elsewhere. They ask—and very reasonably—Why not make Netley thoroughly up to date? It can easily be done, and the situation is far better and more healthy for officers who have seen active service than any hospital in or near London.

There are many other minor objections contained in the letters which have reached me, but if those I have referred to are remedied the Army Medical Service will have good reason to remember with affection and respect the efforts the War Secretary is making to place their corps on a satisfactory basis. Sir Frederick Treves—a name held in the highest respect throughout these countries and the world—has lately written an important letter to the *Times*, recommending the Army Medical Service as a fitting career for our young surgeons. I am afraid he has not properly gauged the strength of the objections held by officers of the R.A.M.C. to the Committee's recent report, or else he has failed to grasp the effect this almost universal condemnation of the scheme by those

most interested will be certain to have on intending candidates. Sir F. Treves has clearly great influence with the War Secretary. I trust he will use it in pressing on his attention the matters referred to in this letter.

Believe me, faithfully yours,

Omagh, Nov. 18th. EDWARD THOMPSON, F.R.C.S.I.

# MEDICO-LEGAL AND MEDICO-ETHICAL.

## A LIBEL CASE.

CLARA COOPER, described in the report of the *Devon and Exeter Gazette* as a nurse, was indicted at Exeter for maliciously writing and publishing defamatory libels concerning Dr. Charles Lovely, of Dawlish. The defendant pleaded guilty. From the statement of Mr. Clavell Salter for the prosecution it appeared that for some time various libellous documents were received by the prosecutor and his wife, the vicar of an adjoining parish, and even the editor of a local paper. These libels were directed against Dr. Lovely and were unfit for publication. The defendant, in order to avert suspicion from herself, wrote similar libels to herself and brought them to Dr. Lovely. The matter was placed in the hands of the London and Counties Medical Protection Society, and certain steps taken which resulted in Miss Cooper being charged and committed. The prosecution most generously believing that the defendant's mind was not normal had her examined at their expense, and counsel stated that the medical examiner considered that although the defendant was fit to plead, yet at the time the libels were published she was not.

The Judge decided, after some discussion with counsel, to sentence the defendant to six months imprisonment in the second division, leaving the question of her sanity or insanity to be dealt with by the prison authorities.

We congratulate Dr. Lovely upon this result and upon the successful action taken by the London and Counties Medical Protection Society on his behalf.

## DR. WILLIAM BRUCE v. PROPRIETORS OF *NORTH STAR* (NEWSPAPER).

THE Second Division of the Court of Session at Edinburgh (consisting of the Lord Justice Clerk and Lords Young and Trayner) on November 22nd heard a reclaiming note for the defenders against an interlocutor of Lord Low, approving of an issue for the trial of the action in which Dr. William Bruce, Dingwall, sued the proprietors of the *North Star* newspaper for £1,000 for alleged slander. The issue contained the question whether, in paragraphs admittedly published by the defenders in their newspaper on March 9th, 1901, they falsely and calumniously represented that the pursuer, as a medical man, and the Superintendent of the Ross Memorial Hospital, Dingwall, had been guilty of cruel treatment of a man, a patient in hospital, to the loss, injury, and damage of the pursuer.

The Lord Justice Clerk was of opinion that the paragraphs complained of were a mere criticism of facts that were not disputed, and that the decision in the case of Archer against Ritchie and Co. to the effect that criticism, however strong, of facts that were not disputed, was not libellous, applied to the present case.

Lord Young was of opinion, with the Lord Ordinary, that the paragraph complained of was actionably libellous. He thought the paragraph was defamatory of the pursuer in his profession as a practising physician, and as the holder of important medical offices in the district where it was published. The argument of the defender's counsel was generally to the effect that the strong language of condemnation used in the paragraph regarded only a rule of the hospital, of which the pursuer was medical superintendent, and did not impute cruelty or impropriety to him in his conduct. His Lordship could not accept that view, and he thought it would be unjust to the pursuer to deny him the opportunity which he sought of clearing his character against these imputations.

The issue of the action was that the Division (Lord Young dissenting) found that the pursuer (Dr. Bruce) had not set forth a relevant case entitling him to an issue, recalled the interlocutor of the Lord Ordinary, and dismissed the action with expenses.

## FEES IN A LUNACY CASE.

FORCEPS asks what would be a reasonable charge for a patient for five or six professional visits (distance half a mile), and for filling up a lunacy certificate for committal to a private asylum. Patient is a retired tradesman, having no one dependent on him, with £60 per annum from private property.

*** For signing the lunacy certificate the fee could not be less than 1 guinea; but, considering the patient's means, the visiting fees should be small—for example, 2s. 6d. to 3s. 6d.

## INTRODUCTION TO PRACTICE.

PARVUS GRACILISQUE.—As our correspondent is going to receive a partnership introduction, it will be better for him to be guided by his partner with regard to introducing himself to the neighbouring practitioners.

## INCOME-TAX REMISSIONS AND FOREIGN INSURANCE COMPANIES.

J. McG. who writes from the North, states that he has a policy of insurance in the New York Life Insurance Company. He informs us that he has recently made a claim on the Inland Revenue for a rebatement of the premium, but without success. He is told that premiums payable to any foreign or Colonial insurance companies not registered under British law cannot be allowed as deductions from income for income-tax purposes.

*** There can be little doubt as to the correctness of the information received by our correspondent from the Inland Revenue Office. It is to be feared he will not be able to recover his premium. When contemplating insurance this must be taken into consideration.

## ALLEGED COVERING.

R.—There would appear to by *primâ-facie* grounds for a charge of "covering." It is to be hoped that the facts may be brought out at the trial of the person alleged to have inflicted the wound. Our correspondent might communicate the facts to one of the medical defence societies. (The Medical Defence Union, 4, Trafalgar Square, W.C., or the London and Counties Medical Defence Society, 12, New Court, Lincoln's Inn, W.C.)

## ADMISSION TO LOCAL MEDICAL SOCIETY.

ETHICS.—Without knowing the objects and constitution of the medical society we cannot give any answer, but we believe that the best way of improving the relations of the members of the medical profession in any district, and of raising the professional standing of those who may show a tendency to fall below what is desirable, is through such societies.

# UNIVERSITIES AND COLLEGES.

## UNIVERSITY OF OXFORD.

DIPLOMA IN PUBLIC HEALTH.—The following candidates have satisfied the Examiners:

*Part I.*—H. B. Foster, R. J. Willson.

*Parts I and II.*—G. J. Blackmore, H. A. Colwell, W. Watkins-Pitchford.

*Part II.*—E. B. Bostock.

## UNIVERSITY OF CAMBRIDGE.

AN Allen Research Scholarship of £250 for one year will be filled up next term. Candidates must be graduates under 28 years of age on January 8th, 1902. Among the departments in which the researches of the scholar may be pursued is that of medicine. Names are to be sent to the Vice-Chancellor by February 1st, 1902.

Professor Woodhead is appointed a member of the General Board, Dr. D. MacAlister a member of the Local Lectures Syndicate and of the Special Board for Medicine, Dr. Anningson and Dr. Nuttall members of the State Medicine Syndicate, and Mr. E. G. Browne, M.B., a member of the Oriental Studies Board.

At a Congregation on November 30th Mr. J. S Clarke, Caius, was admitted to the M.B. degree.

## UNIVERSITY OF EDINBURGH.

*German Library.*—A very important addition to the equipment of the University of Edinburgh was opened recently by Miss J. S. S. Gibson, whose name it bears, and who is the author of its existence. Miss Gibson offered in June of last year the sum of £500 for a German library on condition that the University authorities provided the necessary room. That, with difficulty, has been done, and the library is now an accomplished fact. The room, under the artistic care of Dr. Otto Schlapp, the German lecturer, has been re-created and made a place of beauty and comfort, at a cost of about £200, got partly from University funds and partly from private subscriptions. Sir William Muir presided at the inaugural ceremony, and a large and influential company lent him support.

## UNIVERSITY OF LONDON.

M.B. EXAMINATION.—The following candidates have satisfied the examiners:

*First Division.*—J. Atkins, Guy's Hospital; H. Balean, London Hospital; Janet Mary Campbell, London (Royal Free Hospital) School of Medicine for Women; F. Challans, London Hospital; C. F. Coombs, St. Mary's Hospital; A. E. Jones, University College Hospital; H. C. Keates, Guy's Hospital; R. Kelsall, Owens College and Royal Infirmary, Manchester; R. A. Lloyd, St. Bartholomew's Hospital; J. F. Northcott, Guy's Hospital; R. H. Paramore, St. Bartholomew's Hospital; A. Ricketts, University College Hospital; C. A. S. Ridout, St. Bartholomew's Hospital; W. M. Robson, Guy's Hospital; Ellen Mary Sharp, London (Royal Free Hospital) School of Medicine for Women; J. H. Sheldon, Owens College and Manchester Royal Infirmary; J. E. Stratton, University College Hospital; A. E. Thomas, St. Bartholomew's Hospital; C. J. Thomas, B.Sc., St. Bartholomew's Hospital; K. V. Trubshaw, Guy's Hospital; J. F. Walker, London Hospital; W. H. Wynn, B.Sc., University and Queen's and General Hospital, Birmingham; E. E. Young, St. Bartholomew's Hospital.

*Second Division.*—K. B. Alexander, Guy's Hospital; A. E. Baker, Middlesex Hospital; R. Balderson, Guy's Hospital; E. G. Bark, Queen's and General Hospital, Birmingham, and Birmingham University; H. S. Barwell, St. George's Hospital; A. Birch, St. Mary's Hospital; W. H. Bowen, Guy's Hospital; S. Bree, University College Hospital; J. C. Briscoe, King's College Hospital; H. M. Brown, St. Mary's Hospital; H. W. Brown, Guy's Hospital; Katherine Chamberlain, London (Royal Free Hospital) School of Medicine for Women; Olive Claydon, London (Royal Free Hospital) School of Medicine for Women; M. Coplans, Guy's Hospital; L. E. Dickson, University College, Liverpool, and St. Bartholomew's Hospital; A. Edmunds, B.Sc., King's College Hospital; B. G. Fiddian, Charing Cross Hospital and University College, Cardiff; H. Hallilay, Westminster Hospital; Helen Beatrice Hanson, London (Royal Free Hospital) School of Medicine for Women; T. A. Hawkesworth, King's College Hospital; Helena Gertrude Jones, London (Royal Free Hospital) School of Medicine for Women; E. W. J. Ladell, St. Bartholomew's Hospital; E. L. Lilley, Charing Cross Hospital; E. V. Lindsey, St. Bartholomew's Hospital; T. L. Llewellyn, University College Hospital; K. F. Lund, Cambridge

University and Royal Infirmary, Liverpool; Z. Mennell, St. Thomas's Hospital; E. Morgan, University College Hospital; B. W. Moss, Guy's Hospital; F. H. Noke, St. Bartholomew's Hospital; W. G. Parker, Guy's Hospital; W. E. Peck, University College Hospital; J. A. Perdrau, University College Hospital; H. W. Reynolds, University College Hospital; R. E. Roberts, B.Sc., St. Thomas's Hospital; Florence Robinson, London (Royal Free Hospital) School of Medicine for Women; Agnes Catharine Scott, London (Royal Free Hospital) School of Medicine for Women; W. B. Secretan, Guy's Hospital; C. G. Seligmann, St. Thomas's Hospital; C. F. Selous, St. Thomas's Hospital; H. F. Seymour, London Hospital; H. W. Sinclair, St. Thomas's Hospital; Anna Maude Smith, London (Royal Free Hospital) School of Medicine for Women; D. W. Smith, Guy's Hospital; A. R. Spencer, University College Hospital; L. E. Stamm, B.A., B.Sc., Guy's Hospital; W. L. Stuart, King's College Hospital; J. H. Sykes, Owens College and Manchester Royal Infirmary; C. Tessier, Guy's Hospital; R. C. Turnbull, London Hospital; G. W. Watson, Yorkshire College and Leeds School of Medicine; G. E. Waugh, Cambridge University and University College Hospital, London; A. J. Wernet, Guy's Hospital; F. C. Wetherell, Guy's Hospital; C. B. Whitehead, St. Mary's Hospital; J. T. Williams, University College Hospital; A. G. Wilson, Owens College, Manchester; Edith Louisa Young, London (Royal Free Hospital) School of Medicine for Women.

## ROYAL COLLEGE OF SURGEONS IN IRELAND.

FELLOWSHIP EXAMINATION.—The following candidates, having passed the necessary examination, have been admitted Fellows of the College: M. Ballesty, E. T. Coady, F. P. Colgan, H. Clayton-Fox, P. G. Lodge, G. E. P. Meldon, E. F. Stapleton, F. S. Walker, R. J. White, and G. O'Keeffe Wilson.

The following candidates have passed the primary part of the Fellowship Examination: Miss L. A. Baker, M. Deeny, M. Fitzgerald, A. E. F. Hastings, Miss M. R. Kapadia, E. B. Kenny, J. N. Meenan, W. L. Murphy, H. R. C. Rutherford, J. W. Rutherford, and F. C. Sampson.

## SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, November, 1901.—The following candidates passed in:

*Surgery.*—J. E. Bolton (Sections I and II), Leeds; E. N. de V. Dawson (Section I), St. Thomas's Hospital; R. Gauld (Section I), London Hospital; W. St. A. F. Hubbard (Section I), Charing Cross Hospital; B. S. O. Maunsell (Sections I and II), St. Bartholomew's Hospital; H. S. McLellan (Section I), Manchester; D. V. Muller (Section I), Charing Cross Hospital; R. Rees (Sections I and II), Cambridge and St. Mary's Hospital; C. M. Woods (Sections I and II), Charing Cross Hospital.

*Medicine.*—C. H. Allan (Sections I and II), London Hospital; P. C. Burgess (Section II), Middlesex Hospital; A. Dewar, McGill and Westminster Hospital; P. S. Hopkins (Section I), London Hospital; H. S. McLellan (Section I), Manchester; D. V. Muller (Section I), Charing Cross Hospital; B. E. Sansom (Sections I and II), St. Thomas's Hospital; F. I. Trimmer (Sections I and II), London Hospital.

*Forensic Medicine.*—C. H. Allan, London Hospital; J. H. Beasley, Birmingham; S. F. Cheesman, Charing Cross Hospital; A. Dewar, McGill and Westminster Hospital; P. S. Hopkins, London Hospital; C. E. A. Huddart, London Hospital; H. S. McLellan, Manchester; B. E. Sansom, St. Thomas's Hospital; F. I. Trimmer, London Hospital.

*Midwifery.*—R. Gauld, London Hospital; H. S. McLellan, Manchester; F. H. Rotherham, London Hospital.

The diploma of the Society was granted to C. H. Allan, J. H. Beasley, P. C. Burgess, B. S. O. Maunsell, B. E. Sansom, F. I. Trimmer.

# PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

## HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,504 births and 4,450 deaths were registered during the week ending Saturday last, November 30th. The annual rate of mortality in these towns, which had been 19.7 and 19.4 per 1,000 in the two preceding weeks, rose again last week to 20.3 per 1,000. The rates in the several towns ranged from 9.9 in Huddersfield, 12.1 in Wolverhampton, 12.3 in Derby, and 13.0 in Plymouth, to 24.4 in Preston, 24.6 in Manchester, 25.8 in Birkenhead, 26.3 in Birmingham, and 28.5 in Oldham. In the thirty-two large provincial towns the mean death-rate was 20.2 per 1,000, and was 0.3 below the rate recorded in London, which was 20.5 per 1,000. In the thirty-three large towns the zymotic death-rate averaged 2.0 per 1,000; in London this rate was equal to 1.0 per 1,000, while it averaged 2.1 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 3.4 in Oldham, 3.7 in West Ham, 4.5 in Blackburn, and 6.5 in Norwich. Measles caused a death-rate of 1.1 in Huddersfield, 1.3 in Manchester, 1.6 in Sheffield, 2.5 in Halifax, 2.0 in Blackburn, 3.0 in Oldham, and 5.6 in Norwich; scarlet fever of 1.1 in Liverpool and 1.2 in Salford; whooping-cough of 1.0 in Leicester and 1.1 in Swansea; and diarrhœal diseases of 1.5 in Derby. In none of the thirty-three towns was the death-rate from "fever" as high as 1.0 per 1,000. The 79 deaths from diphtheria in these towns included 40 in London, 8 in West Ham, 4 in Portsmouth, 3 in Cardiff, 3 in Leicester, 2 in Liverpool, and 3 in Sheffield. Twenty-one fatal cases of small-pox were registered in London, but not one in any other of the thirty-three large towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals, which had been 207, 368, and 396 on the three preceding Saturdays, had further increased to 427 on Saturday, November 30th; 123 new cases were admitted during the week against 62, 113, and 141 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 3,278, against 3,331, 3,353, and 3,336 at the end of the three preceding weeks; 320 new cases were admitted during the week, against 380, 376, and 379 in the three preceding weeks.

## HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, November 30th, 856 births and 706 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.9 and 21.3 per 1,000 in the two preceding weeks, further rose last week to 22.2 per 1,000, and was 1.9 in excess of the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 17.5 in Greenock and 18.0 in Dundee, to 24.1 in Glasgow and 28.0 in Paisley. The zymotic death-rates in these towns averaged 2.4 per 1,000, the highest rates being recorded in Glasgow and Dundee. The 355 deaths registered in Glasgow included 23 from measles, 2 from scarlet fever, 5 from diphtheria, 7 from whooping cough, 6 from "fever," and 11 from diarrhœa. Four deaths from measles and 3 from diarrhœa occurred in Dundee, 4 from diarrhœa in Aberdeen, and 2 from fever in Paisley.

## PAYMENT OF FEES UNDER THE NOTIFICATION ACT.

E.—The action of the Deptford Borough Council is certainly most unusual. What is generally done is to make out the accounts due to medical practitioners in respect of the notifications of infectious diseases quarterly, and to send out the amounts by post to their private addresses. The only explanation which can be suggested is that some medical men may have neglected to return the acknowledgment of receipt, and that the Deptford Borough Council is taking the course complained of only with respect to those medical men who make such default.

## SUPERANNUATION AFTER SERVICE IN TWO DIFFERENT UNIONS.

B. D. T., who has been district medical officer and public vaccinator in two different unions simultaneously for nine years, asks whether for superannuation purposes this is to be reckoned as nine or eighteen years service.

*** As our correspondent's total length of Poor-law service appears to have been nine years only, it cannot be reckoned as more than this, but the amount of his claim when made will depend on the amount of his earnings in each union during the last five years. He should, however, distinctly understand that his position as public vaccinator, whether in one union or more, has no bearing whatever on the amount of superannuation.

## PUBLIC VACCINATION AND REVACCINATION.

PETROS writes: I am a public vaccinator, receiving 6s. 6d. for primary vaccination, and 1s. 6d. for the visit. I am now doing the revaccinations for the first time. What am I justified in charging the council for the operation and the visit; also must I put down in the vaccination register the patients that I vaccinate publicly, irrespective of social position? I have vaccinated myself. Can I charge for that?

*** Fee(*a*)—the visit fee—is only chargeable for primary vaccinations, not for revaccinations. All cases vaccinated publicly must appear in the register, irrespective of social position. If a public vaccinator successfully revaccinates himself, and has not been revaccinated successfully within a period of ten years, his claim to the usual fee would apparently be a valid one.

P.V.—All vaccinations with Government lymph must be entered in the register, and no charge can be made privately for any case thus vaccinated. Vaccinations performed privately, and for which a private fee is charged by a public vaccinator, must conversely not be performed with Government lymph, but with such other supply as the public vaccinator may approve, and will not appear in the register.

# OBITUARY.

## JAMES MANN WILLIAMSON, M.D., C.M.EDIN.,

Casualty Physician to the Royal National Hospital for Consumption, Ventnor.

UNIVERSALLY lamented by all classes of the community among whom he laboured for a quarter of a century, Dr. Williamson of Ventnor passed away on November 12th. Never robust, his life had been one of semi-invalidism, more or less, since he had the misfortune to lose his wife in 1890; but he did his work bravely, and only relinquished active practice about two months before his death. Three days before he died his patients presented him with a handsome clock and album, and a cheque for £150, as a token of their appreciation and affection.

Dr. Williamson was born on Christmas Day, 1849, at South Shields, where his father practised for more than forty years. He graduated at Edinburgh in 1872, having gained medals in surgery and midwifery. Immediately thereafter he was elected Resident Officer of the Marylebone

General Dispensary, from whence he passed to the Royal National Hospital for Consumption at Ventnor as Resident Officer, a post he had sought as his health had failed in London. He took his M.D. degree with honours in 1875. He then commenced general practice in Ventnor, and became a member of the hospital staff. In July, 1899, he was appointed Honorary Consulting Physician to the hospital.

Although absorbed by the claims of a large practice, Dr. Williamson found time for observation and reading, and in 1877 he published his *Ventnor and the Undercliff in Chronic Pulmonary Diseases*, a second edition of which was issued in 1884. He also published a work, entitled, *On Hæmorrhage and Altered Barometric Pressure*, which contained observations on 120 cases of hæmoptysis. He contributed several papers to this Journal upon questions principally relating to phthisis. He took much interest in the affairs of the British Medical Association, and was twice President of the Isle of Wight District of the Southern Branch—first in 1887, when he delivered a very able presidential address on A Plea for a Fuller Study of the Elimination of Drugs from the System. Ten years later he gave a most interesting account of the evolution of the treatment of phthisis.

Dr. Williamson stood in the front rank as a specialist in diseases of the chest, but his friends and patients will remember him best as a man who was always overflowing with sympathy and kindness.

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We regret to have to announce the death of Mr. Francis Henry Lyon, L.R.C.S.I., L.R.C.P.I., which occurred at the Royal City of Dublin Hospital in his 54th year. For over twenty-four years he had been in extensive practice in Thatcham, Berkshire, where he was highly esteemed on account of his skill and benevolence. He had held the offices of Medical Officer and Public Vaccinator for the third district of the Newbury Union; Surgeon and afterwards Consulting Surgeon to the Cold Ash Hospital, and District Surgeon to the Newbury Dispensary. He was the eldest son of the late Rev. Thomas Lyon, M.A., and on his mother's side was descended from the late Sir Richard Cox, Bart., Lord Chancellor of Ireland.

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Sir James Wilson Agnew, M.D., who, according to a Reuter telegram, died at Hobart on November 8th, was admitted a Member of the Royal College of Surgeons of England in 1838, and took the degree of M.D.Glasg. in 1839. Shortly thereafter he emigrated to Tasmania, and for many years practised in Hobart. He was a member of the Legislative Council for seven years, and in 1886 became Premier and Chief Secretary of the colony. He was Vice-President and Honorary Secretary of the Royal Society of Tasmania, a member of the Tasmanian Council of Education, and a member of the Council of the University of Tasmania.

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Dr. Henry R. Rogers, the oldest physician in Chautauqua County, New York, died recently at his home at Dunkirk. He was born in 1822, and was a graduate of the Jefferson College in Philadelphia. He won distinction by his scientific investigations, and his original views of matter and the laws which govern it have attracted the attention of scientific men. His theory was that all physical phenomena, without exception, are transformations of electrical energy. His articles on astronomy and physics have had a wide circulation both in the United States and Europe, and have provoked much discussion. He was a member of the Chautauqua County Historical Society, the New York State Medical Society, the American Medical Association, and the American Association for the Advancement of Science. He abandoned the medical profession some years ago to devote all his time to literary work.

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Dr. Hannah E. Longshore, who is said to have been the first woman who practised medicine in New York, died on October 18th at the age of 83. She was one of the ten members of the first graduating class of the Women's Medical College of Pennsylvania, and was for a time Demonstrator of Anatomy in that institution. When she started in practice as a doctor she met with sneers and ridicule. Male physicians refused to consult with her, druggists refused to dispense her prescriptions, and teachers in the public schools instructed their pupils not to walk with Miss Longshore, "because her mother was a 'woman doctor.'" Nevertheless her practice increased to such an extent that after forty years of activity she retired with a modest fortune. Her practice is said to have been larger, with one exception, than that of any other woman physician in the United States.

# MEDICAL NEWS.

The Woman's Hospital of the State of New York celebrated the forty-sixth anniversary of its foundation on November 21st.

St. Andrews Graduates Association.—The annual general meeting of this Association was held at 11, Chandos Street, Cavendish Square, W., on November 29th, when the following officers were elected for 1901-2: *President:* Sir Charles Gage Brown, K.C.M.G., M.D. *Vice-Presidents:* Surgeon-General W. B. Beatson, Dr. R. L. Bowles, Dr. R. Braithwaite, Dr. T. B. Crosby, Dr. T. Duka, Deputy Surgeon-General E. McKellar, M.D., Professor J. Bell Pettigrew, M.D., F.R.S. *Treasurer:* Dr. T. Langston. *Honorary Secretary:* Dr. W. Rigden.

A University for Hamburg.—The Municipality of Hamburg has adopted a scheme by which all the scientific institutions of the city are to be grouped together into a University. The Directors of these institutes and the lecturers, who have the title of "Professors," will form the professorial College, which every year will elect its own President. It will also be the duty of the College every year to draw up a programme of lectures and practical courses. The programme for the current winter semester includes courses by 117 lecturers. This movement is a step towards the foundation of a fully-equipped university in Hamburg, a project which has long been under consideration.

The expedition under Dr. Charles Balfour Stewart to the Gold Coast, arranged by the Liverpool School of Tropical Medicine, to conduct a series of operations there with a view to improving the conditions of health and sanitation, the departure of which has been delayed by Dr. Stewart's employment in connection with the occurrence of plague in Liverpool, sailed on November 30th. We learn that Sir Charles King Harman, Governor of Sierra Leone, has recently informed the Liverpool School of Tropical Medicine that at the time of writing out of 400 officials there, only 3 were in hospital, none of whom were suffering from malarial diseases, and that he highly appreciated the work done there by the School's expedition under Dr. Logan Taylor.

The Victoria Hospital for Consumption, Craigleith, Edinburgh.—A number of ladies and gentlemen in the City of Edinburgh have formed themselves into an amateur dramatic club, bearing the name of the "Tragic Comedians Dramatic Club," their object being to make the study of dramatic works a pastime, and to devote their talents to the aid of some deserving local charity. Their first appearance was made in the Theatre Royal, under the patronage of Her Royal Highness the Duchess of Argyll, the Duke of Argyll, the Chief Magistrate of Edinburgh, and a distinguished company. The club made an excellent start by playing *David Garrick* to a crowded house. The performance was exceeding good, and the free proceeds are to be given to the funds of the Victoria Hospital for Consumption at Craigleith.

British and American Nursing.—The Society of American Women in London received the British delegates to the Nurses' Congress in Buffalo at Princes Hall on November 29th. The object of the reception was to hear from the delegates their impressions of the present condition of trained nursing in the States and by comparing notes to form an opinion by which to guide future work. Seven delegates were able to accept the invitation, and the subjects discussed were The Need of Legislation for the Profession, Preliminary Training for the Probationer, the Nursing of the Insane, District Nursing, Nurses Co-operations, and Nursing in the Colonies. Mrs. Webster Glynes, President of the Society, received the delegates and guests.

THE eleventh Congress of Russian Scientists and Medical Men will open on January 2nd, and will continue to sit till January 12th, 1902. Among the Sections there is one of Anatomy and Physiology, and one of Scientific Medicine and Hygiene.

## MEDICAL VACANCIES.

The following vacancies are announced:

BETHLEM HOSPITAL.—Two Resident House-Physicians. Appointment for six months. Apartments, board, and washing provided, and honorarium at the rate of £25 per quarter each. Applications, endorsed "House-Physician," to be sent to the Treasurer, Bridewell Hospital, New Bridge Street, E.C., before December 16th.

BIRKENHEAD: BOROUGH HOSPITAL.—Junior Male Resident House-Surgeon. Salary, £80 per annum, with board and washing. Applications to the Chairman of the Weekly Board before December 19th.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by December 9th.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, unmarried. Salary, £100 per annum, with board and residence. Applications, endorsed "Dispensary Surgeon," to be sent to the Secretary.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—(1) Second House-Surgeon and Anæsthetist. Salary, £70 per annum, with board and residence. (2) Third House-Physician. Candidates must be unmarried, and under 30 years of age. Applications to the Secretary by December 11th.

BRISTOL EYE HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board and residence. Applications to the Secretary by December 11th.

BUXTON: DEVONSHIRE HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Furnished apartments, board, and lodging provided in each case. Applications to the Secretary by January 25th, 1902.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by December 9th.

DOWNPATRICK: DOWN DISTRICT LUNATIC ASYLUM.—Assistant Medical Officer, unmarried, and not exceeding 32 years of age. Salary, £150 per annum, increasing to £200, with furnished apartments, board, washing, and attendance. Applications to the Resident Medical Superintendent by December 17th.

DUBLIN: DR. STEEVENS'S HOSPITAL.—House-Surgeon. Salary, £100 per annum, with apartments, fire, and light. Applications to the Governors and Guardians by December 9th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Physician. Board, residence, etc., provided and honorarium of £25 at the completion of six months satisfactory service. Applications to the Secretary by December 14th.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—(1) Resident House-Surgeon. Salary, £110 per annum. (2) Assistant House-Surgeon. Salary, £75 per annum. Board, residence, and laundry provided in each case. Applications to the Honorary Secretary.

LEWES: EAST SUSSEX COUNTY COUNCIL.—Medical Officer of Health. Salary, £200 per annum, with fees, etc. Applications to the Clerk of the County Council, County Hall, Lewes, by December 19th.

LINCOLN COUNTY HOSPITAL.—Junior House-Surgeon. Appointment for six months, but eligible for re-election. Honorarium, £25 for each six months. Board, residence, and washing provided. Applications to the Secretary by December 19th.

MIDDLESEX HOSPITAL, W.—Medical Officer and Registrar to the Cancer Department. Salary, £100 per annum, with board and residence in the College. Applications to the Secretary-Superintendent by December 14th.

NOTTINGHAM GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, rising to £120, with board, lodging, and washing. Applications to the Secretary by December 12th.

NOTTS COUNTY LUNATIC ASYLUM, Sneinton.—Medical Superintendent, married, and over 30 years of age. Salary, £600 per annum, with unfurnished house, coal, light, washing, etc. Applications to the Clerk to the Committee of Visitors by December 18th.

PAISLEY: INFECTIOUS DISEASES HOSPITAL.—Resident Physician. Salary, £120 per annum, with board, washing, and attendance. Applications to the Town Clerk, Union Buildings, Paisley, by December 11th.

RAINHILL: COUNTY ASYLUM.—Assistant Medical Officer; unmarried, and not more than 30 years of age. Salary commences at £150 per annum, with prospect of annual rise of £25 to £200, and further increase according to promotion, with furnished apartments, board, attendance, and washing. Applications to the Medical Superintendent by December 11th.

ROCHDALE INFIRMARY.—Resident Medical Officer, unmarried, and legally qualified. Salary, £100 per annum with board, residence, and washing. Applications to the Honorary Secretary, Mr. R. W. Shaw, Southfield, Rochdale, by December 18th.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington. Obstetric Tutor. Applications to the Dean by December 11th.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, W.—Resident Medical Officer. Salary, 100 guineas per annum, increasing to 120 guineas, with furnished apartments, attendance, coal and light. Applications to the Secretary by December 9th.

SCHOOL BOARD FOR LONDON.—Medical Officer, must give his whole time. Salary, £800 per annum, rising to £1,000. Applications, on forms provided, to be marked outside "Application for the Post of Medical Officer," to be sent to the Clerk of the Board by January 1st, 1902.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—House Surgeon. Salary, £120 per annum, with board, lodging, and washing. Applications to the Secretary by December 11th.

SWANSEA GENERAL AND EYE HOSPITAL.—Resident Medical Officer. Salary, £75 per annum, with board, apartments, washing, and attendance. Applications to the Secretary by December 10th.

TOTTENHAM HOSPITAL.—House-Surgeon. Salary, £50 per annum, with board, residence, and laundry. Applications to the Chairman of the Joint Committee by December 9th.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Second House-Surgeon, unmarried. Salary, £80 per annum, with board, residence, and laundry. Applications to the Honorary Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Physician; (2) Assistant Physician; (3) House Physician; (4) House Surgeon. Board and lodging provided for (3) and (4), the appointments for which are for six months. Applications to the Secretary-Superintendent by December 25th.

WINCHESTER: ROYAL HANTS COUNTY HOSPITAL.—House-Physician; unmarried. Salary, £65 per annum, rising to £75, with board, residence, etc. Applications to the Secretary by December 9th.

WORCESTER COUNTY AND CITY ASYLUM. Junior Assistant Medical Officer, unmarried, and not over 30 years of age. Salary, £120 per annum, rising to £150, with board, furnished apartments, and washing. Applications to the Medical Superintendent, Powick, Worcester, by December 17th.

## MEDICAL APPOINTMENTS.

CHOYCE, Charles C., M.B., Ch.B.Edin., B.Sc.N.Z., appointed House-Physician to the Leicester Infirmary.

CUNNINGHAM, John, M.B., C.M., appointed Certifying Factory Surgeon for the Stewarton District of North Ayrshire.

DEE, J. P., M.B., B.S.R.U.I., appointed District Medical Officer of the Tendring Union.

DONALDSON, William Ireland, B.A., M.D.,Dub., appointed Medical Superintendent to the London County Asylum, The Manor, Epsom.

DUNCAN, Andrew, M.D., B.S.Lond., M.R.C.P., F.R.C.S., appointed Physician to the Westminster Dispensary.

HEWETSON, Alfred, M.R.C.S.Eng., L.R.C.P.Lond., appointed Civil Surgeon of the Military Depot, Fremling Green, Aldershot.

LIMONT, A. W., M.B., M.S.Edin., appointed District Medical Officer of the Truro Union.

LOW, V. Warren, F.R.C.S., appointed Surgeon to Out-patients at the Great Northern Central Hospital.

NICHOL, F. E., M.B., B.C.Cantab., appointed Certifying Factory Surgeon for the Margate District of Kent.

PARRY, Leonard A., F.R.C.S.Eng., B.S., M.D.Lond., appointed Assistant Surgeon to the Royal Alexandra Hospital for Children, Brighton, *vice* T. H. Iconides, F.R.C.S.Eng., resigned.

STOKES, H. Fraser, M.D., appointed Medical Officer to the Highbury Truant School of the London School Board.

SUTCLIFFE, W. Greenwood, F.R.C.S., appointed Surgeon to the Royal Sea Bathing Hospital, *vice* W. K. Treves, F.R.C.S., appointed Consulting Surgeon.

WYNTER, Walter Essex, M.D., B.S., F.R.C.S., F.R.C.P., elected Physician to the Middlesex Hospital.

ST. THOMAS'S HOSPITAL.—The following gentlemen have been selected as House-Officers from Tuesday, December 3rd, 1901:
House-Physicians—W. M. G. Glanville, B.A., M.B., B.Ch.Oxon.; T. W. S. Paterson, M.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S.
Assistant House-Physicians—T. B. Henderson, M.A., M.B., B.Ch.Oxon.; H. S. Staonus, L.R.C.P., M.R.C.S.
Obstetric House-Physicians—(Senior) Z. Meonell, M.B.Lond., L.R.C.P., M.R.C.S. (Junior) H. T. D. Acland, L.R.C.P., M.R.C.S.
Clinical Assistant in the Special Department for Diseases of the Throat—A. P. Bowdler, B.A.Cantab, L.R.C.P., M.R.C.S.
Clinical Assistant in the Electrical Department—L. S. Dudgeon, M.R.C. M.R.C.S.
Several other gentlemen have received an extension of their appointmen .

## DIARY FOR NEXT WEEK.

### MONDAY.

**Medical Society of London,** 11, Chandos Street, Cavendish Square, W., 8.30 P.M.—Dr. Alexander Crombie on the Physical Disabilities for Tropical Life. Dr. John Anderson, C.I.E., on the Remote Effects of Tropical Life on Europeans.

### TUESDAY.

**Royal Medical and Chirurgical Society,** 20, Hanover Square, W., 8.30 P.M. Dr. S. M. Copeman will deliver an Address upon Modern Methods of Vaccination and their Scientific Basis. The address will be illustrated by lantern slides, and a discussion will follow.

### WEDNESDAY.

**South-West London Medical Society,** Bolingbroke Hospital, 8.30 P.M.—Dr. Arthur E. Giles: Diagnosis of Pelvic Tumours.

**Royal College of Surgeons of England,** 5 P.M.—Mr T. R. Jessop: The Bradshaw Lecture on Personal Experiences in the Surgical Treatment of Certain Diseases.

**Dermatological Society of London,** 11, Chandos Street, Cavendish Square, W., 5.15 P.M.—Demonstration of Cases of Interest.

**Hunterian Society,** London Institution, Finsbury Circus, E.C., 8.30 P.M.—Dr. F. R. Humphreys: Antiseptic Midwifery in Private Practice.

### THURSDAY.

**Ophthalmological Society of the United Kingdom,** 11, Chandos Street, London, W., 8.30 P.M.—Clinical Evening.

**British Gynæcological Society,** 20, Hanover Square, W., 8 P.M.—Mr Stanmor Bishop on a Demonstration of some Changes observed in Uteri the Seat of Fibromyomata. Specimens will also be shown.

### FRIDAY.

**Epidemiological Society,** 11, Chandos Street, Cavendish Square, W., 8.30 P.M.—Dr. Mott: On Dysentery in Asylums.

**Clinical Society of London,** 20, Hanover Square, W., 8.30 P.M.—Dr. Habershon: The Association of Movable Kidney on the Right Side, with Symptoms of Hepatic Disturbance. Dr. Stacey Wilson: The Theory of Compensation in Disease of the Mitral Valve. Drs W. Hale White and W. C. Pakes: A Case of Malignant Endocarditis giving Widal's Reaction. Mr. E. Percy Paton: A Case of Hair Ball removed from the Stomach of a Child of 9 Years.

### POST-GRADUATE COURSES and LECTURES.

Charing Cross Hospital, Thursday, 4 P.M.—Demonstration of Medical Cases.

Hospital for Consumption and Diseases of the Chest, Brompton, Wednesday, 4 P.M.—Lecture on Pleurisy with Effusion.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 P.M.—Demonstration of Ophthalmic Cases.

London Throat Hospital, 204, Great Portland Street, W., Wednesday, 5 P.M.—Practical Demonstration.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—Demonstrations will be given at 4 P.M. as follows: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, ear.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 P.M. Lecture: Surgery of Nervous System.

West London Hospital, Hammersmith Road, W.—Lectures will be delivered at 5 P.M. as follows:—Monday: Empyema. Tuesday: Nephrorrhaphy and its Results. Wednesday: Surgical Anatomy. Thursday: Uterine Hæmorrhage. Friday: Medical Anatomy.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

BENHAM.—On November 26th, at 72, Sackville Road, Hove, to Dr. and Mrs. Charles Benham, a daughter.

MACGREGOR.—At 2, Burnbank Terrace, Glasgow, on the 3rd inst., the wife of G. Scott MacGregor, M.D., of a son.

### DEATHS.

CAMPBELL.—On November 18th, suddenly, Andrew Campbell, surgeon, of Navenby, Lincolnshire, aged 63 years.

HARRIS.—On November 30th, at his residence, 6, Adam Street, Strand, London, John Russell Harris, M.D.Brux., M.R.C.S.Eng., L.R.C.P.&L.M.Edin., Medical Officer and Public Vaccinator to the Strand Union, aged 45 years.

HARVEY.—On December 1st, at Simla, Surgeon-General Robert Harvey, C.B., D.S.O., F.R.C.P., LL.D., Director-General of the Indian Medical Service, eldest son of the late Dr. Alexander Harvey, Regius Professor of Materia Medica in the University of Aberdeen.

# LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

## QUERIES.

M.B.R U.I. asks whether skin grafting would be of any use to improve the appearance of a lady deeply pitted on the face by small-pox.

QUERIST asks for advice in the treatment of a patient who has had for four years paralysis of the left half of the face (Bell's palsy). At meals there is a flow of tears from the left eye which is sufficient to necessitate the constant use of the handkerchief while eating.

### TOBACCO AMBLYOPIA.

OCULUS asks whether any precautions are taken in the army, navy, and, railway services in order to avoid tobacco amblyopia among the men. The efforts of the authorities to exclude the colour blind may be frustrated by permitting an excessive indulgence in tobacco.

### TREATMENT OF ECZEMA.

F.R.C.S.I. asks for advice in the treatment of a medical man who has recurring irregular patches of eczema on knuckles, behind the knee, and front of thigh, and a few of lesser severity on elbow, neck, and cheek. The pruritus is very distressing.

MEDICUS also asks for advice in the treatment of a man, aged 40, who has eczema practically all over his body in patches of about the size of a shilling. He has not been ill before, but has had, and now has, boils on the back of his neck.

Numerous remedies have been tried in these cases, including mercurials, salicylates, and ichthyol.

### TORTUOSITY OF BOTH INTERNAL CAROTID ARTERIES.

DR. HORACE WILSON (Lower Clapton), writes: In reference to the interesting case of tortuosity of the internal carotid artery which was so well illustrated in the BRITISH MEDICAL JOURNAL, for November 23rd, 1901, p. 1526, the occurrence of this abnormality irrespective of age was pointed out to us in 1800 by Sir William Mitchell Banks in his anatomical lectures. Heat the same time emphasised its importance on account of its proximity to the outer surface of the tonsil, especially if the "twist" were internal. This "twist" appears to be quite different from that of old age, an excellent example of which I was recently shown in the anatomical department of the London Hospital, and since it occurs at an age when tonsillar troubles are more common might prove as suggested an element of danger in case of a too free or incautious incision. The fact of it lying in the position noticed by Dr. Kelly rather increases this danger, as if it lay directly to the outer side of the tonsil it would probably be displaced further outwards in case of tonsillar enlargement or abscess, and therefore less liable to injury.

## ANSWERS.

RUS IN URBE.—The full report of the hearing of the charge in connection with the Liverpool Victoria Friendly Society and the National Medical Aid Company at Yarmouth in this issue of the JOURNAL will give our correspondent the material for forming an opinion.

M. O.—Leaflets for distribution upon the sanitary precautions necessary for the prevention and restriction of consumption are published by the National Association for the Prevention of Consumption, 20, Hanover Square, W.

E. W. S.—We should recommend our correspondent and any other members of the profession who receive indecent literature through the post to forward it under cover to the Postmaster-General, and invite his attention to the abuse of the postal system. If the Chief Constable of the borough or county could be induced to take an interest in the matter, his action might tend to reinforce the application to the Postmaster-General.

### INFECTIOUS DISEASES AND LIFE ASSURANCE.

A CORRESPONDENT inquires where he can see an authoritative estimate of "the average duration of the ordinary infectious diseases and their average age-incidence for life assurance purposes." The average duration of each infectious disease is given in the ordinary textbooks. Statistics of the age-incidence of each of the infectious diseases are given in Newsholme's *Elements of Vital Statistics* (Sonnenschein, third edition, 1899), for measles on p. 192, for enteric fever p. 203, for small-pox p. 216. Each annual report of the Statistical Committee of the Metropolitan Asylums Board gives complete statistics of age-incidence of the chief notifiable infectious disease.

### THE SMOKE TEST.

J. W. B.—The proper method of applying a smoke test for drains and soil pipes is to force in the smoke at the lowest accessible portion of the drain until it is observed to escape from the soil pipe ventilator, when the top of the soil pipe ventilator should be closed, and a further quantity of smoke forced into the drainage system. After the soil pipe ventilator has been closed sufficient smoke should be forced in to ensure that it occupies the drainage system under a slight pressure. It is undesirable to continue the pumping for a long time, otherwise, as "J. W. B." suggests, the smoke may accumulate under sufficient pressure to force the traps of gullies and waterclosets.

### URETERAL SPASM.

DR. J. HENTON WHITE (Edgbaston) writes, in answer to "A. B.'s" question (page 1515): A year or so ago a case of ureteral spasm of very severe character came under my notice, and I found that occasionally, just after or during an attack, long mucous casts of the ureter were passed. These were only present in very severe attacks, but in the milder ones small fragments of such casts were found, and after very mild attacks no traces could be discovered. The history of the case is a long one, and I published it a few months ago in this JOURNAL. I saw the case to-day, and she is now quite well, having been cured by ½-gr. doses of potassium iodide in an ounce of mist. sodæ c. rheo thrice daily. The treatment lasted about six months. During the early part of the treatment draughts containing mxx of chlorodyne and mj or mij of fl. extract of belladonna (P. D. and Co.) gave relief, but she never needs them now. The woman went about as usual between the attacks, and was not specially dieted.

### TREATMENT OF UNBROKEN CHILBLAINS.

T. C. D. writes to ask for suggestions as to anything useful for unbroken irritable chilblains—some local curative application. In answer to similar requests in the past correspondents have recommended the following applications: A 30 per cent. ointment of ichthyol with vaseline or lanoline has been recommended by Surgeon W. G. Macpherson, especially for relieving the irritation rapidly and completely, but also for eventually bringing about a cure. The following preparation is also adapted for relieving the itching: R Linimenti aconiti, 3jss; linimenti belladonnæ, 3jss; tincturæ opii, 5iij; olei amygdalæ amaræ, mv; vel olei lavandulæ, mx; linimentum saponis ad 5ij. About 3ss to 3j is to be applied to the painful part night and morning. Professor Bälz recommends the following: Caustic potash, ½ per cent.; glycerine and alcohol, of each 20 per cent.; water, 60 per cent. This is to be rubbed into the skin of the hands after they have been bathed with warm water. A cure is said to follow two or three applications. It may be taken as a general principle that general treatment should be combined with local.

### LOCAL TREATMENT OF MALIGNANT GROWTHS.

PSOROSPERMIÆ writes that a patient of his has a small epithelioma on the lower lip, refuses operation, and insists on its removal by "cancer plaster." He asks for suggestions for its local non-operative treatment.

*** In the BRITISH MEDICAL JOURNAL of February 11th, 1899, p. 337 Dr. Mitchell records a case of sarcoma of the cheek which was successfully removed, without hæmorrhage, by the daily application of dressings soaked in a 20 per cent. solution of formic aldehyde (these being covered with guttapercha tissue and the surrounding skin being protected by a layer of a solution of caoutchouc) followed by curetting. The drawbacks of the treatment were the pain (which was relieved by nepenthe), the tendency to cause spreading œdema, and the production of a general urticaria, which, however, was readily amenable to treatment. In the JOURNAL of January 27th, 1900, p. 194, Dr. F. Wyatt-Smith records good results from the treatment of rodent ulcer by the outward application of formalin. He packed the ulcer with dressings soaked in a 20 per cent. solution in glycerine and water, guarding the sound skin by a coating of liquid guttapercha. Healing occurred leaving a supple white, smooth scar. The pain of the application lasted about an hour.

### RATS AND PLAGUE INFECTION.

J. K.—Although the evidence that rats and plague are intimately associated is daily acquiring wider credence, the exact method by which rat plague is communicated to human beings is not settled. Some consider that rats suffering from plague infect human beings by way of food and drink. The plague rat, by its droppings, may infect human food, or may actually contaminate milk, etc., whilst feeding. The general opinion is that man becomes contaminated by touching the rat, as happens when a rat dies and is being removed from a dwelling. In the case of a dead or dying rat contact presumably causes plague, through the parasites (fleas, etc.) of the rat's coat, leaving the dying or dead rat and settling on the human being, and biting and inoculating him with plague. In support of this belief is the fact that the plague bacilli have been found in several of the varieties of parasites which inhabit the rat's fur. Against this theory, however, it may be urged that the parasites in the rat are not the same as those on human beings, and do not bite man. Parasites, however, when their host dies in abnormal situations, as when the rat is trapped, will temporarily fasten on any living being at all likely to maintain their existence; so that even though not parasites of man they may bite him. That the parasites of the plague-infected rat, although charged with plague bacilli, do actually cause plague in man has not been proved, but it is the only link in the cycle of evidence which is actually wanting. At present, therefore, all that can be said is that there is sufficient testimony to afford presumptive evidence that the rat, probably by the parasites of its coat becoming infected with plague bacilli, can transmit plague to man. We may refer our correspondent to Dr.

Ashburton Thompson's article entitled A Contribution to the Etiology of Plague, published in the *Journal of Hygiene*, vol. i. p. 153, April, 1901. An abstract of this paper was published in the BRITISH MEDICAL JOURNAL of May 4th, 1901, p. 1100.

INJURIOUS EFFECTS OF CORNET-PLAYING.

MR. BALMANNO SQUIRE (London) writes in reply to "T. E. S.": When I also was a fairly strong youth aged 18, I learnt the cornet—that is to say, the cornet à-piston, as it was then called. My impression was that it was not altogether free from liability to cause ill-effects. In the process of learning the effort required in producing the higher notes is very considerable indeed, and it continues to be so for many months. It caused considerable congestion of the head (including the face), and is a tremendous strain on the lungs, and, I should think, must produce emphysema of the lungs in at all events some degree. When skill has been acquired, the effort needed becomes very considerably less, but in the case of the ordinary amateur who takes to the instrument and forsakes it by fits and starts, and then loses his knack and has to acquire it again and again, the effort is very much greater than in the case of the steady professional player. I was the first person to whom the idea occurred that the human voice is produced in the same manner as the sound of the cornet-à-piston, or of the "siren," and is not a reed instrument like the flageolet. I therefore admit that the high notes of the human voice are produced in the same way as those of the cornet-à-piston, only that in the latter the lips of the mouth take the place of the vocal cords. Still, the conditions are in effect very different in degree; the strain in the case of the cornet is infinitely greater. In the act of coughing—as in the case of a bad attack of bronchitis, when the muco-pus is very tenacious—the conditions, as I know from personal experience, are very similar to those present in producing the higher notes of the cornet, and bronchitis, as we well know, produces emphysema of the lungs. I remember that I felt a strong conviction at the time that I was damaging my lungs, and I consequently gave the instrument up, although I had acquired a moderate degree of skill as a player.

## LETTERS, NOTES, Etc.

CORRECTIONS.

IN connection with Dr. A. E. Garrod's reply to the discussion on his paper on Alkaptonuria at the Royal Medical and Chirurgical Society last week, it should have been stated that Mittlebach found that after fasting for three days his patient excreted a greatly diminished quantity of homogentisic acid, but that it did not altogether disappear from the urine, and not as printed at p. 1600.

MR. GUSTAVUS HARTRIDGE (London) writes: In my paper on the Comparative Value of the Various Preparations of Silver in Ophthalmic Work, published in the BRITISH MEDICAL JOURNAL of November 2nd, argentamine is stated to contain 2.6 per cent. of silver; it should read, 6.35 per cent. of silver.

CHANGES IN PIGMENT OF IRIS.

ANON writes: Bearing on this subject, noticed by Dr. Havelock Ellis in the BRITISH MEDICAL JOURNAL of November 23rd, is the apparent change noticed in the colour of the iris in some people under the influence of emotion. One of my brothers has irides between blue, grey, and green. In the nursery we always noticed they became green when he was angry; "G —'s eyes went green" was a common observation. My eyes and my daughters are a kind of blue; when we have bilious attacks they become more decidedly blue. This does not appear to be due to dilated pupils admitting more light. I have also seen dark brown eyes become a lambent red under passion. It has been observed that the pigment cells in the skin of a frog undergo changes as regards the distribution of the pigment masses under the stimulus of light, electricity, etc. On account of the slight personal allusions you will excuse my remaining anonymous.

CARE FOR POSTERITY.

DR. VON JIRUSCH, Professor of Pharmacology at Prague University, whose death was recently announced in the BRITISH MEDICAL JOURNAL, has bequeathed nearly £3,000 to the National Museum of the city on condition that all his belongings—furniture, clothes, plate, linen, library, manuscripts, and letters—shall be packed into airtight cases and kept for 200 years. His object is to enlighten the people of the twenty-second century as to the manners and habits of those of the twentieth.

THE NOTIFICATION OF PHTHISIS.

DR. GERALD LEIGHTON (Pontrilas) writes: Among other reasons why phthisis should be made a notifiable disease—as urged by Sir Henry Littlejohn—is one which I do not remember to have seen mentioned. It is this: If all cases were notified as they came under the medical man's attention, we should very soon know the areas of "distribution" of phthisis. Some districts are quite free from it, and such knowledge would be very valuable from the point of view of advising intending residents, or in early cases of disease.

FATAL CASE OF VIPER BITE.

ANTIDOTE writes, with reference to the case reported by Dr. Cass in the BRITISH MEDICAL JOURNAL of November 16th, in which heart and respiratory organs were unaffected: Potassium permanganate and Calmette's chloride of lime are chemical antidotes chiefly, and so it is difficult to understand the action on an albumose in the system. In a case of bite with pain and œdema extending over a surface of the size of a penny, without other symptoms except fear, the local application of permanganate, rubbed in, cleared off pain, etc., in a day or two. In the case of a dog with respiratory and heart affection, topical applications and a little by the mouth, cleared off paralysis, etc., in less than eighteen hours. Forbes (*Oriental Memoirs*) relates the case of a gardener treated by "mesmeric" passes only. The "albumose" poison, like the gland extracts, generally is eliminated from the system, and while the heart and respiration are good there is generally little need for alarm.

**LETTERS, COMMUNICATIONS, ETC., have been received**

**A** Anonymous; Mr. M. A. Alabone, London; Anti-Club; Altitude. **B** Mr. L. Browne London; Barmouth; Dr. J. Brydon, Hawick; Believer in Vaccination: Mr. W. M. Beaumont, Bath; Dr. J. Braithwaite, Leeds; Mr. G. H. Broadbent, Manchester: Dr. F. D. Boyd, C.M.G., Edinburgh: Mr. L. M. Breton, Southampton; A. H. Burgess, M.B., Manchester; Mr. C. Ballard, Oxford; Mr. L. Boyer, Paris; Mr. L. A. Bidwell, London. **C** Mr. H. W. Carson, London; Dr. T. D. Crothers, New York; Dr. F. C. Coley, Newcastle-on-Tyne: Dr. M. Craig, London; Mr. N. H. Choksy, Bombay; Dr. J. Ward Cousins, Southsea: Dr. C. W. Cooke, London: C. C. C.; Mr. A. Clarke, London Mr. E. Cree, Dublin; C. and C. S.; Mr. F. A. Coward, Huddersfield. **D** Dr. J. T. H. Davies, Leicester; Mr. A. R. Down, London; Mr. W. T. Davis, Pen-y-bont; Dr. L. Drage, Hatfield; W. Duncan, M.B., Maryculter; J. M. Duncan, M.B., Birmingham. **E** Mr. A. Eastwood, London; Mr. J. F. Elliott, Tongaat; E. H.; Mr. W. A. Easte, Stony Stratford; Mr. H. Elliot-Blake, London; Edina. **F** Dr. G. B. Flux, London Dr. R. H. Fox, London; F. C. L.; Dr. W. E. Fothergill, Manchester. **G** Mr. J. F. Gummow, Birmingham: Dr. T. G. Gurry, Florence; J. J. E. Gemmell, M.B., Liverpool; Dr. J. Galloway, London; Mr. L. M. Griffiths, Clifton: Dr. J. C. M. Given, Liverpool. **H** J. A. G. Hamilton, M.B., Adelaide S.A.; Dr. W. D. Haslam, Wallington; Dr. J. Highet, Pretoria; Mr. N. W. Holmes, London: Dr. J. W. Hamill, Manchester; H. Hodgson, M.B., Blisworth; Dr. J. Hooker, London; H. J. Hillstead, M.B., London; Mr. G. Hartridge, London: Dr. S. H Habershon, London; Dr. J. A. Hayward, London. **J** J. F. C.: Mr. W. F. M. Jackson, Smethwick; Dr. R. Jones, Woodford Bridge; Dr. G. P. Johnson, Stoke-on-Trent J. B.; J. F. O'M.; Mr. M. H. Judge, London. **K** Mr. G. McK. Knight, London; Dr. E. D. Kirby, Birmingham; Kentish Club Doctor; A. S. Kelso, M.B., Broxburn. **L** F. H. Low, M.B., London; Lucinia; Dr. C. J. Lewis, Edinburgh; L.R.C.P., L.R.C.S.Edin. **M** Mr. A. M. Martin, Newcastle-on-Tyne; Dr. W. Milligan, Manchester: Member of North Wales Branch; Mr. H. H. B. Macleod, Shrewsbury; M.R.C.S., etc.; Dr. C. K. Millard, Leicester; M.B.R.U.I.; Mr. W. McCallin, London; Messrs. J. L. Mason and Co., Liverpool; M.R.C.S.; Mr. K. N. Macdonald, Harrogate; Mr. A. MacLean, London; J. MacCombie, M.B., Woolwich; Dr. A. C. Munro, Paisley: Medical Ethics. **N** Mr. W. N. Newell, Bristol; Mr. N. H. Nixon, London. **O** Optic. **P** Mr. G. C Peachey, Wantage: Dr. A. E. Price, Bromley; P. V.; Dr. W. C. D. Prendergast, Hanley; Dr. F. L. Phillips, Leamington; Professor Karl Pearson, London; P. J. P.; Dr. O. Y. Pearson, Cork: P. B. G. **R** Remus; Mr. J. Rooth, Oxford; G. A. Reid, M.B., Southsea; Dr. H. H. Rubra, London: Dr. F. Robson, Hayward's Heath; Mr T. F. Raven, Broadstairs Mr. W. H. Richardson, Manchester: Rus in Urbe; Dr. T. Robinson, London. **S** Dr. J. D. Slight, Portobello; Mr. C. G. Stuart-Menteath, London; Mr. W. R. H. Stewart, London; Senex; Dr. D. W. Samways, Mentone; Dr. J. P. Simpson, London; B. Strachan, M.B., Sunderland; Sheffield Medico-Chirurgical Society, Secretary of, Sheffield; Spes; B. Squire, M.B., London; A. M. Sheild, M.B., London; G. P. Shuter, M.B., London; Mr. J. Steed, London; A. Shillitoe, M.B., London; Sordello; Dr. G. A Stephens, Swansea; S. Stephenson, M.B., London; W. S. Syme, M.B., Gaulingay; Dr. T Smalles, Honley; Satis quot sufficit; Messrs. W. B. Saunders and Co., London. **T** Mr. J. L Thomas, C.B., Cardiff; Total Abstainer; Dr. J. C. Thomson, Hong Kong; Thalassa; Dr. D. Turner, Edinburgh; Dr. E. Thompson, M.P., Omagh: Ten-pounder T. T. T.; Mr P. Thompson, London; J. H. Targett, M.B., London. **V** Veritas; Dr. F. Vicars, London. **W** E. B. Waggett, M.B., London: Mr. O. Williams, Glandovey; Dr. J. G. Watkins, M.B., Lincoln; Mr. E Wheal, Oxford; Dr. P. W. Williams, Clifton; Mr. H. G. G. Wilkins, Eastbourne; Dr. T. J. Wood, Bradford: Mr. J. J. Weaver, Southport; Dr. N. Walker, Edinburgh; A. Wauchope, M.B., Glasgow: Mr. C. Williams, London; T. A. Watson, M.B., Sunderland; C. S. Wallace, M.B., London; W. **X** X X X. **Y** Dr. E. S. Yonge, Manchester; Mr. P. M. Yearsley, London: "Yorkshire Herald," Managing Editor of the, York.

## BOOKS, ETC., RECEIVED.

Report on the Treatment of Plague with Professor Lustig's Serum at the Arthur Road Hospital, Bombay. By Dr. N. H. Choksy. Bombay "Times of India" Press. 1901.

The Central London Throat and Ear Hospital. Formulæ supplemental to those in the "British Pharmacopœia." Compiled by the Honorary Medical Staff. New Edition. London: John Bale, Sons, and Danielsson. 1901. 1s.

Small pox in London. By J. F. J. Sykes, M.D. London: P. S. King and Son. 1901. 1s.

Transactions of the Ophthalmological Society of the United Kingdom. Vol. xxi. London: J. and A. Churchill. 1901. 12s 6d.

Elementary Ophthalmic Optics, including Ophthalmoscopy and Retinoscopy. By J. H. Parsons, B.S., B.Sc., F.R.C.S. London: J. and A. Churchill. 1901. 6s. 6d.

Syllabus of Lectures to Nurses. By A. Davidson, M.D. London: The Scientific Press. 1s.

Die nervöse Schlaflosigkeit, ihre Ursachen und ihre Behandlung. Von Dr. M. Helm. Bunn: F. Cohen. 1902. M.1

Sémiologie Pratique des Poumons et de la Plèvre. Par H. Barbier. Paris: J. B. Baillière et Fils. 1902. Fr.4

Studies of the Internal Anatomy of the Face. By M. H. Cryer, M.D., D.D.S. Philadelphia: S. S. White, Dental Manufacturing Co. 1901. 1 5odol.

Klinik der Verdauungskrankheiten. Von Dr. C. A. Ewald. III. Die Krankheiten des Darms und des Bauchfells. Berlin: A. Hirschwald. 1902. M.14.

Die chronischen Nierenentzündungen in ihrer Einwirkung auf die Blutflüssigkeit und deren Behandlung. Von Dr. H. Strauss. Berlin: A. Hirschwald. 1902. M.4.

A Textbook of Zoology. By G. P. Mudge A.R.C.Sc., F.Z.S. London: Edward Arnold. 1901. 7s. 6d.

Year Book of the Scientific and Learned Societies of Great Britain and Ireland London: Charles Griffin and Co. 1901.

*** In forwarding books the publishers are requested to state the selling price.


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# The Bradshaw Lecture

ON

# NEPHRECTOMY, NEPHROLITHOTOMY, AND LITHOTOMY.

*Delivered at the Royal College of Surgeons of England on December 11th, 1901.*

By T. R. JESSOP, F.R.C.S.,

Vice-President of the College; Consulting Surgeon, Leeds General Infirmary.

Mr. President and Gentlemen.—Permit me, before commencing my address, to express to you, however inadequately, my deep sense, shared, I am sure, by everyone here present, of the enormous loss our profession and the entire community have sustained in the death of our late President, Sir Wm. MacCormac.

The whole world knows how, at the call of the Government, he faced the dangers of the South African battlefields in order to place his unrivalled experience at his country's service, at a time, too, when he might well have claimed his right to rest.

Who can estimate the sum of consolation carried by this act of patriotism into the innumerable anxious homes throughout the length and breadth of the land? We alone who have been brought into close contact with him within these walls can appraise the value of his work on behalf of this College. No man has had its interests more at heart, none been more ready to place time and labour at its disposal.

To us it is a consolation to know that he has died honoured alike by his Sovereign, his professional brethren, and the people.

The generous founder of the Bradshaw Lecture exercised, I think, a wise discretion in permitting each individual lecturer to select his own subject, placing no further restriction upon him than that he shall not range beyond the realm of surgery. Such liberty of choice would seem admirably calculated to afford opportunities for the appointed lecturers to place before their colleagues matured opinions upon subjects in which they may have been specially interested, or may perchance have obtained wide, if not exceptional, experience.

Our late distinguished President, when asking me to undertake the task for this year, must chiefly, I feel sure, have intended to do honour to the large and well reputed hospital with which I have for many years been connected, and yet whilst fully recognising this, I desire to place on record my high appreciation of the compliment paid to myself.

I have hesitated somewhat in my desire to say something concerning the surgery of the kidney; our colleague, Mr. Morris, having recently published so complete and masterly a work on this subject as to leave little unsaid. On most questions, however, and especially on those of recent origin and development, there is room for personal experience, even if the outcome be no more than to confirm what has been observed by others; nay, more, it is only by the accumulated experience of many that such works as Morris's are rendered possible, and so it becomes a duty for each of us to make what addition we can to the common stock. I will not therefore apologise for offering my small contribution to so large a subject, but will claim that in so doing "I've done my duty and I've done no more."

My first essay in renal surgery dates back to the winter of 1869-1870, and as it exhibits a combination of boldness with timidity, which not inaptly exemplifies the surgery of that date, I will not hesitate to make confession of it. It was about this time that M. Dieulafoy had introduced to the profession his well-known "pneumatic aspirator," an instrument which early came into very general use, and by means of which surgeons were emboldened to evacuate and examine the contents of cavities and swellings hitherto most frequently reserved for *post-mortem* examination. Few diagnoses indeed were considered complete which did not include the information to be obtained by means of this instrument.

A dispensary patient, pale and emaciated from a long-standing pyuria, was brought under my notice, in whose right loin could be plainly felt a large swelling, firm, fixed, and elastic. A diagnosis of abscess in the kidney was confirmed by an obvious diminution in the urinary sediment after several ounces of pus had been evacuated through the loin by means of the aspirator needle. The suppuration along the needle track which ensued led me to freely incise the loin and the subjacent kidney, the dilated calices of which were readily felt by the finger introduced through the incision. No foreign substance was felt, nor was any diligent search made. The after-treatment consisted of the inevitable linseed poultice, and the results, I need hardly say, were pyæmia and death. In addition to the pyæmic foci of recent origin, the necropsy revealed nothing more than a kidney converted into a thick-walled sacculated bag of pus, in which was imbedded a phosphatic-coated uric acid calculus of considerable size. Of the early history of this patient I have neither note nor recollection. Probably it was less eventful than the extent of mischief would seem to imply.

## Nephrectomy in Children.

The result warned me off the kidney, and increased the superstitious dread, which I shared with the profession at large, of meddling with so vital an organ. These, too, were the preantiseptic days, for although Lister had been labouring hard for some years to secure the acceptance of his doctrines respecting the origin, causation, and prevention of surgical inflammation, it was not until about the year 1870 that he obtained anything like a general adhesion to his teaching: and it is not too much to say that had it not been for Lister's discoveries, there would in all probability have been even now but little advance in renal surgery upon the sample I have just related. It was not, indeed, until late in the Seventies that surgeons made any serious attempt to bring the kidney within the range of their treatment. Mr. Morris tells us that he was the first to undertake a nephrolithotomy, and his operation took place in February, 1880. Simon, of Heidelberg, is credited with having been the first intentionally to perform a planned nephrectomy in 1869; and in these early days Dr. Meadows and Mr. Durham in this country, and others abroad, have reported cases in which the operation was either completely or incompletely performed, albeit on a mistaken diagnosis. In June, 1877, I undertook my first nephrectomy.

The patient was a child, aged 2 years and 3 months, who for several months had been passing bloody urine, and whose condition was one of pallor with some wasting. In the left loin an increasing mass of considerable size, easily defined and possessing some slight degree of mobility, had been under observation during several weeks. The operation consisted of an incision in the loin, commencing a fingerbreadth from the vertebral spine and carried midway between the costal margin and the iliac crest to an extent sufficient to allow of the insertion of the fingers and thumb. On careful division of the muscles, the capsulated tumour was exposed, and its separation from surrounding tissues, together with that of the kidney from which it sprang, was easily effected. The whole of the pedicle, containing ureter and blood vessels, was secured in a double ligature of hemp, and the mass, severed from its pedicle by scissors, was removed. The growth, which involved a considerable portion of the renal structure, is described in the notes as encephaloid. The immediate recovery of the child was complete and satisfactory: but the respite was not of long duration, inasmuch as during the ensuing autumn the child died with unequivocal signs of a return of the disease beneath the site of the operation. Owing to my absence from home the body was not examined.

These details may be of some interest from the fact that this was, so far as I am aware, the first nephrectomy undertaken of set purpose in this country, and for the additional reason that the general outlines of the case as here given do not differ materially from those found in a large majority of the cases of sarcoma of the kidney in young children, of which this was probably an example. Eight similar cases have come under my own observation, in which, with variations only in age—the youngest being 13 months and the eldest 5½ years—in the size and duration of the tumour, and in the general condition of the patient, the description I have given would apply equally. Nor have I in the later cases materially altered the mode of operation. The incision has been made somewhat nearer the last rib, and has been lengthened when necessitated by the size of the tumour: silk ligatures have been substituted for the hemp, and greater care has been exercised in establishing and maintaining complete asepticity of the wound. One little patient died under operation from loss of blood and shock; the rest recovered from the effects of the operation.

Walsham in Morris's *Treatise of Anatomy* points out the danger, when performing nephrectomy on the right side, of including within the ligature a portion of the vena cava. Once this actually occurred in my hands, and on another occasion my previous experience alone enabled me to avoid a like catastrophe.

The first of the two cases was that of a female, aged 2 years and 10

months, sent the me in June, 1883, in whose abdomen her father accidentally discovered a swelling at a time when the child was believed to be quite well. No deviation from health and not a symptom of any kind had been observed. Once attention had been drawn to the swelling it was closely watched, and it soon became evident that a rapid increase was taking place. When brought under my notice the right half of the abdomen was occupied by a smooth firm mass, equal in size to a fœtal head at birth, which moved visibly during respiration, and admitted of a considerable amount of lateral displacement. (I may remark parenthetically that unusual mobility due to or at least attended with an elongated pedicle was a marked feature in both cases.) In accordance with my practice at that time—a practice which I have long since abandoned as an aid to the diagnosis of any abdominal tumour—an aspirator needle was introduced, with the result that the withdrawal of a minute quantity of blood only determined the solid character of the growth. It was then decided to remove it, and the operation was performed at the patient's home. Owing to the entire absence of symptoms, the extreme mobility of the mass, and our inability to attach it to any organ, no diagnosis was arrived at. An incision was made through the linea alba in mid-abdomen, and the tumour, with cæcum and ascending colon, pushed across to the left and the vertebral column exposed. On inspection it was seen to consist of a growth springing from the kidney, and tethered by a broad pedicle, containing the renal vessels and the ureter, to the loin so loosely as to allow a free range of movement. Through an incision made in the external layer of the mesocolon the peritoneum was stripped, and the mass was delivered with more readiness than was expected, owing to the length of the pedicle. This was transfixed and tied with a double silk ligature. The kidney and tumour, weighing together 3 lbs. 2 ozs., were detached by means of scissors. The peritoneal incision was sutured, and the cavity drained by a rubber tube passed through the loin. The operation lasted an hour and a quarter. Five hours after its completion the temperature was found to be 101°, and the pulse was of good volume. The child was cheerful and chatted freely with her nurses. Two hours later—seven hours, that is, after the operation—the patient died with absolute suddenness. A subsequent examination of the growth—there was no *post-mortem* examination—threw some light on the cause of death, seeing that in the portion of the pedicle removed it was found that the enlarged renal vein abruptly widened out so enormously where ligatured as to suggest that the vena cava had been dragged by the weight of the mass of disease so as to project well within the root of the kidney.

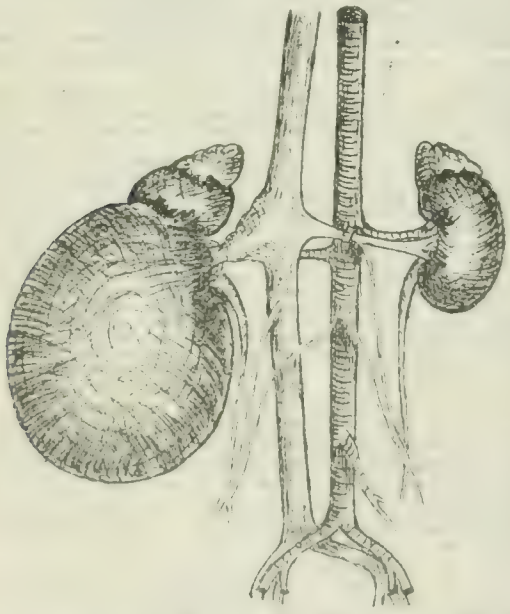


Fig. 1.—Diagram illustrating effects of large tumour of right kidney producing great dilatation of renal vein and lateral displacement of vena cava.

In removing the kidney for malignant disease the surgeon, naturally anxious to avoid leaving a portion of the disease behind, secures the vessels at as great a distance as possible from the kidney. In avoiding this danger it is well to bear in mind another, that of including within the grip of the ligature a portion of the wall of the vena cava, and so incurring the risk of the formation of a thrombus, which at any moment may be washed into the right heart and give rise to sudden death.

The second case was that of a child 2 years old, admitted into the Leeds Infirmary in October, 1888. The right kidney was the seat of a cystic sarcoma, forming a large tumour, which filled the right half of the abdomen, and extended beyond the mid-line. This, as in the former case, admitted of a considerable range of lateral movement; but, unlike it, was not visibly affected by respiration. It was removed by the abdominal route, the incision being made to follow the course of the outer right linea semilunaris. After incising the peritoneal covering and stripping the mass from its surroundings, it was found, as in the former case, that owing to the length of its pedicle it could readily be withdrawn from the abdominal cavity; and on closely examining the pedicle there was no difficulty in demonstrating the vena cava as one of its constituents; it occupied, indeed, so much of the mesonephron as to necessitate special care in the selection of the spot at which to place the ligature. The visceral peritoneum was closed by a continuous suture except at its lower end, where it was attached to the inferior extremity of the abdominal wound for drainage purposes. The patient recovered, and was sent home in December; but in the February following the attendant doctor wrote to say that the child died on the 7th of that month.

It will thus be seen that of the 11 cases of nephrectomy for tumour in young children 9 were operated on by the lumbar method, and two only by the abdominal. In deciding which of the two methods to adopt I have been guided chiefly by the size of the tumour, and in some measure by its mobility. Hitherto there has been, rightly or wrongly, a general consensus of opinion in favour of the lumbar route whenever applicable, and it is applicable to all or nearly all in which the tumour can be brought whole through the lumbar incision. In the two removed by the transperitoneal operation the mass was of relatively enormous size, and in both there was a degree of mobility sufficient to suggest an elongated and narrow pedicle. Of the 11, one, a pallid and wasted child 13 months old, died before the completion of the operation, and another lived only seven hours, death being sudden and probably due to cardiac thrombus arising from an injury to the vena cava. Nine recovered from the operation, but the longest survivor lived only 2 years and 5 months, whilst one was reported to have died at the end of 9 weeks. In how many death resulted from recurrence of the disease I have no means of knowing. Three times only had I the opportunity of seeing the child when nearing its end, and in each of these were undoubted evidences of recurrence. In two others the medical men in charge reported the presence of abdominal tumour.

My results are neither better nor worse than those reported by other surgeons. It is several years since I last undertook a nephrectomy in a young child, and unless future experience gives better ultimate results than I have hitherto met with, the want of confidence I already feel in recommending the operation in children suffering from malignant growths cannot but be emphasised.

In dealing with a mortal disease an immediate mortality of a little over 18 per cent. seems encouraging enough, but when it is borne in mind that the longest survivor of 11 died within two and a-half years the question forces itself upon our consideration whether it is worth while to incur the undoubted immediate risk of the operation and the anxiety to parents and friends for the possibility of so small a gain. Bear in mind, it is of young children I am speaking, in whom an addition of a few months, or of even a year or two of life is not comparable with a similar addition to the lives of adults. It is even doubtful if in these 11 children there was any actual increase in the aggregate length of life obtained. This raises a grave question, one which cannot, of course, be determined upon the experiences of a few. It is, indeed, too early yet to express an authoritative opinion upon the point, seeing that it is only within very recent years that nephrectomy has been undertaken by the general surgeon; and the collected data, although considerable, are insufficient for the purpose. In not one of my cases was an early diagnosis arrived at, and in all, consequently, the disease had made considerable advance before the operations were undertaken. The absence of prominent symptoms has doubtless militated against early removal in some, whilst in none, probably, has the surgeon deemed it right to open loin or abdomen until such time as he has been satisfied of the presence of a substantial growth. Considering with what little risk an intraperitoneal inspection of the kidneys may be undertaken, if, on the earliest suspicion of a growth, an examination by inspection and palpation of the organs be made, it may be possible to detect the presence of sarcoma or other growth at a much earlier date than has hitherto been accomplished, and so, it may be assumed, to lessen the probabilities of return. Bearing in mind, however, that the only prominent signs of the disease in young children are the presence of a tumour in one or other loin, and the occurrence of hæmaturia; that whilst the latter is by no means constant, the former, even though it be of fœtal origin, has usually attained a considerable degree of development before its existence is suspected, the probability of very early diagnosis seems somewhat remote; and

yet by early detection and prompt removal alone can we hope, to improve upon our hitherto unsatisfactory results.

In estimating the value of this operation, it is not sufficient for the statistician to tabulate his cases under the two heads, "Cured," "Died"; we must be informed as to the duration of life in those reported "Cured" or statistics will only mislead.

### Nephrectomy in Adults.

Much more encouraging are the results obtained after nephrectomy in adults, partly because in the majority of cases the operation is performed for conditions other than those of malignancy, and in part it may be because of the lesser degree of malignancy usually met with in the renal tumours of the adult, and of their consequent diminished liability to diffusion and speedy return.

I have operated on 16 adults, of whom 6 had tumour, 3 calculous pyelitis, 4 tuberculous or other form of non-calculous pyelitis, 2 fistula following nephrolithotomy, and 1 uncontrollable hæmorrhage after nephrolithotomy.

Of the 6 tumour cases 2 recovered, 2 died within a few hours from shock, 1 died on the third day after operation with symptoms of intestinal obstruction which were not relieved by enterostomy, and 1 lingered nine days, gradually sinking from exhaustion.

The first of the two patients who recovered after nephrectomy for tumour was a man, aged 56, whose chief symptoms were frequent hæmaturia, a dull aching in the left loin, which was completely filled by a large growth, and increasing pallor with loss of strength. The substance was removed by the lumbar operation, and it was found to consist of an upper third of normal renal tissue and a lower two-thirds of new growth which was reported to be a malignant adenoma.

The second was a woman aged 36, in whom a diagnosis was arrived at only during the progress of the operation. She was very stout and her abdomen especially was fat and large. After her third confinement, nine months before she came under observation, she discovered a globular substance in her left abdomen, which, however, gave rise to no inconvenience. It increased in size, and in June, 1900, it was described as being round and of the size of an average cocoa-nut. It lay in the left iliac fossa, was firm, and it had a free range of movement. It could be made to lie on the lumbar vertebræ, could be pushed upwards into the loin, leaving the iliac fossa empty, and it could be brought downwards just within touch of the fingers in the vagina at the brim of the pelvis. No attachment to the uterus could be made out. The functions were in no way interfered with and the patient's general health was good. On opening the abdomen in the middle line and exposing the tumour it was seen to spring from the left kidney. Pushing the intestines to the right it occupied the whole of the space between the twelfth rib and the iliac fossa, and was composed of the upper half of the normal kidney resting upon a capsulated growth which included the pelvis and the rest of the kidney. The upper portion of the kidney, not directly involved in the growth, had a remarkably elongated appearance as if it had been stretched by the weight of the tumour, and by its means the range of movement was greatly increased. Its peritoneal covering having been incised and stripped off, the pedicle was secured and the whole removed. Drainage was effected through the loin and the peritoneal wound was closed by suture. The tumour was composed of a mass of cysts enclosed in a thick capsule, and contained no malignant element.

The 4 who died presented large tumours, and in all the transperitoneal method was the operation selected. Two males, aged respectively 53 and 61, and one female aged 34, were the subjects of disease in the left kidney, pronounced to be sarcoma. The fourth was a male, aged 56, with carcinoma of the right kidney and adrenal extensively adherent to the under surface of the liver.

Of the 10 adults in whom nephrectomy was performed for conditions other than that of tumour, 2 died and 8 recovered.

One of the fatal cases was that of a young man from the substance of whose kidney I had removed a calculus by an incision made directly over the stone, through the substance of the kidney tissues. Very free bleeding at the time of operation was temporarily arrested by pressure, and it was not until after several recurrences of the hæmorrhage during the next three days it was decided to remove the kidney. At the operation, the wound was believed to be in a septic condition, infected probably by the suppurating pelvis of the kidney. In spite of much care and pains taken to cleanse the wound, the patient died of septic peritonitis. The other fatal case was that of a delicate woman, aged 30, from whom I had a few months before removed four small calculi found loose in the pelvis of the kidney, which was also largely distended with pus. It had become evident that the patient must sink. The lumbar nephrotomy wound continued to discharge pus mixed with some urine in large and undiminishing quantity, the condition of the patient was deteriorating, and the temperature pointed to a general septicæmia. In the hope of being able to arrest this down grade the kidney was removed through the loin. The patient only survived the operation fifty-eight hours, and during that time no more than 8 ounces of urine were secreted.

Of the 8 who recovered, 3 were the subjects of calculous pyelitis, and had previously undergone the operation of nephrolithotomy; 4 were for tuberculous or other form of non-calculous pyelitis, and 1, like the former, had previously undergone nephrotomy; and 1 was for urinary fistula following nephrolithotomy. In each the lumbar operation was selected.

It will thus be seen that of the 5 transperitoneal operations, 4 died, whilst of the 11 lumbar nephrectomies 2 died, showing a difference as between 80 and 18 per cent.; whilst if the whole 16 be classed together, with 6 deaths, the mortality is 37½ per cent. This places the transperitoneal operation in a very unfavourable light. But in estimating the relative dangers of the two operations, the nature and extent of the disease as well as the character of the operation itself must be taken into account. The lumbar route being inapplicable to the largest tumours—and the larger the tumour, other things being equal, the more dangerous its removal—it follows that some of the least promising are transferred to and made to swell the mortality of the abdominal operation. So again, the age of the patient must influence the death-rate. Of the 4 who died, 1 was over 60, and 2 between 50 and 60.

A mortality of 37½ per cent. cannot be accepted as at all satisfactory, and increased experience leading, as doubtless it will, to improvements in the technique of the operation and the avoidance of many pitfalls, may be confidently reckoned upon for the securing of better results. How far, for instance, with improved methods of combating or averting shock we may be able to lessen the mortality, the future will decide. At the time when the 4 transperitoneal operations for tumour were undertaken we were not in the habit of injecting strychnine hypodermically, or of introducing saline solutions within the veins, two powerful agents without which no surgeon would at the present day consider himself sufficiently armed when undertaking operations of such magnitude or involving such prolonged anæsthesia. The 2 patients, at least, who died within a few hours of the operation, I cannot but think would have had a better chance of recovery had we been able to make use of the means for averting shock with which we are now familiar.

In weighing the advantages and disadvantages of the two operations with a view to selection in a given case, it must be noted that in the anterior method the peritoneum is twice incised, whilst in the posterior that membrane is not necessarily wounded at all. This is a matter of very considerable importance, more especially if the organ to be removed is in a septic condition, as is the case in all suppurative diseases. Speaking generally, the lumbar route is to be selected in preference to the anterior whenever the kidney is known to be undergoing septic inflammation, as also in those cases of neoplasm which present no such difficulties as are due to mobility or to extreme size; for whilst the danger of soiling the peritoneum during the extraction of a septic organ through an anterior opening is a very real one, and would lead to a preference for the posterior route, the difficulty of removing a very large growth through the limited space between the costal margin and the iliac crest, or of enucleating a kidney having a free range of movement within the abdomen, would suggest the desirability of attacking it from the front. The transperitoneal method possesses further advantages, such as enabling the operator to examine the opposite kidney as well as the other abdominal organs, in any of which might be found secondary growths or other conditions sufficient to negative the completion of the operation; and, again, the readiness with which the renal vessels may be secured in such manner as to render the operation a comparatively bloodless one.

On reviewing my own work, apart altogether from results—for, indeed, the number of cases is not sufficiently large for statistical purposes—I incline to the opinion that the lumbar operation will continue to be preferred for those cases in which sepsis is known, or is assumed, to exist, and for those neoplasms in which the growth is of recent origin and of small or moderate size, whilst the larger renal tumours will be attacked from the front with more prospect of success in proportion to our increased knowledge of and attention to details in the operation itself, and to our ability to avert death from shock.

I have said that nephrectomy in the adult gives more encouraging results than is obtained in children. This declaration must be qualified in that it applies not to the immediate but only to the ultimate result. It will have been seen that of the 11 children, 9 recovered from the immediate

effects of the operation, showing a mortality of 18 per cent., whilst of the 16 adults 6 died whilst under treatment, giving a mortality of 37½ per cent.; but on inquiring into the future history of these 10 adults, whose operations were successfully accomplished, we find a much more favourable record than in the cases of the children, the longest survivor of whom, you will remember, died within two and a half years. Of the 10 adults who recovered one, aged 56, the subject of "malignant adenoma" attended with persistent and profuse hæmorrhage, whose kidney was removed by the lumbar method in 1888, survived nine years without any sign of return of the disease, the cause of death being certified "cardiac dropsy." This man during several years after the operation continued to work as a compositor in a newspaper office, and on several occasions he assured me that his health was in no way impaired.

Another of the successful series was that of the woman, aged, 36, whose left kidney with tumour attached was removed by the anterior operation in June, 1900. The growth in her case was reported as one of cystic degeneration devoid of malignant elements, and she is now in good health. Of the remaining 8 successful nephrectomies—all of which, undertaken for conditions other than that of neoplasm, were performed by the lumbar method—3 are known to be still alive and well, and their respective operations bear the dates 1883, 1890, and 1891. One was reported to be in good health 15 months after the operation, 1 migrated to Australia "about 3 years after his kidney was removed," and of 3 I have failed to find any trace. Such results as these, if we take into consideration the hopeless condition in which most of the patients were placed at the time their operations were undertaken, imperfect though they are, cannot fail to encourage us in persevering with a radical treatment which, if essentially fraught with risk, may yet admit of such improvements as will lead to greater and more certain success in the future.

### Nephrolithotomy.

In furtherance of my intention to place before you some examples taken from my own personal experience in renal surgery, and altogether repudiating any pretensions to originality or claim to address you *ex cathedrâ*, I will now pass on to a brief consideration of nephrolithotomy—an operation which I confess not to have held in the highest estimation until within the last five or six years, owing, as I now realise, to the non-recognition of essential anatomical considerations.

In October, 1882, I attempted to sound a kidney for stone by means of a long fine needle passed through the loin, and whilst the instrument was being manipulated it snapped, leaving five inches buried in the tissues. This *contretemps* compelled me to incise the loin, and, owing to the difficulty I experienced in finding the needle—which, however, was eventually recovered—the kidney was exposed, and I was thus enabled to make a more thorough exploration by means of the needle passed in many directions and to varying depths. The result was negative as regards the discovery of a calculus, but from that time the renal pain disappeared, and thus a cure, which at that date and for many years after seemed inexplicable, was accidentally brought about. Not until 1886 did I succeed in locating and removing a calculus, although I had in the meantime made unsuccessful attempts on 4 patients to discover a suspected calculus by means of manipulation and needle-puncture of the kidney exposed at the bottom of a lumbar incision. Fortunately no harm was done to any of the four. The patient from the pelvis of whose kidney I succeeded for the first time in removing a calculus had a narrow escape from death by hæmorrhage, owing doubtless to the position and direction of the incision, which was made on the anterior aspect of the kidney immediately beyond the pelvis, parallel with the long axis. The stone was branched, weighed a little over two drachms, and was so imbedded in the kidney structure as to cause some amount of tearing in its extraction. Hæmorrhage, very free at the time from the wound, was eventually arrested by sponge pressure, and as on removal of the sponge a few hours later the hæmorrhage had apparently ceased, whilst there was no indication of an escape of urine, the external wound was closed. Next day, as he had not voided urine, and the bladder was found to be moderately distended, a catheter was passed and some deeply-stained urine drawn off without materially lessening the distension. Upon this a suction syringe was improvised, and by its means a large amount of coagulated blood was extracted. As upon examination the lumbar wound was found to be in a wholly satisfactory state, further interference seemed uncalled for. During several days the pumping operation had to be repeated, but eventually the bleeding ceased, and his recovery progressed slowly to its completion. In 1888 there occurred the unfortunate case I have previously mentioned, in which after an incision similar to the one just described, repeated external hæmorrhage extending over several days decided me to remove the kidney, with the result that the patient died from septic infection. It thus became manifest that hæmorrhage constituted a formidable danger in the removal of calculi impacted in the kidney substance.

Amongst my early cases again were two in which stones were readily discovered by palpating the pelvis, and were almost as readily removed through direct incisions in the pelvic wall without implicating the kidney tissue proper. In one of the two I made an attempt to suture the wound, but in both the whole of the urine continued to flow through the drainage tube and permanent fistulæ became established. Relief from the intolerable nuisance produced by the leakage was at length obtained by removal of the organ.

For a time my hope for the future of nephrolithotomy fell to a low ebb, and I almost despaired of seeing it established as a useful operation. Interest, however, was revived in May, 1888, by a successful issue in the following case:

A farmer, aged 52, came under my care in the infirmary complaining of loss of strength, and of his urine being "milky." He was stout and sallow faced, of aged appearance and flabby limbed. His complaints were exceeding few. His urine contained one-fourth pus, and the left half of his abdomen was occupied by a smooth definitely outlined elastic tumour. He had never known pain, had worked up to the time of his admission, and had only noticed the change in his urine for a few weeks. He was not an observant man, and his previous history was almost a complete blank. On a diagnosis of pyonephrosis I cut down upon the left kidney, and on incising it twenty-six ounces of pus were collected. A digital exploration of the thin walled sac into which the kidney had been converted revealed the presence of this unusually large stone, which after extraction by means of large lithotomy forceps was found to weigh eleven ounces, one hundred sixty grains. It was firmly adherent and had to be peeled off, so intimate was its connection with the pelvic wall. The kidney was a mere shell, and had ceased to perform its function, for at no time was there any discharge of the urine from the drained wound. During the first few weeks pus flowed freely, though in diminishing quantity, and in little more than four months the wound was closed. About five years after the operation, having meanwhile enjoyed good health, he died with symptoms, so I was informed, of intestinal obstruction.



Fig. 2.—Renal calculus (one-half size) weighing 11 ozs. 160 grs.

In view of the enormous size of the stone and of the very extensive character of the disease in this case, the entire absence of pain from commencement to end forms a very remarkable feature, which serves, however, to emphasise the fact, verified again and again in my own practice, that the amount of suffering in nephrolithiasis bears for the most part an inverse relation to the size of the stone. A small mobile calculus lying loose in the pelvis, partially blocking

now and again the orifice of the ureter, gives rise to greater and more frequent pain than does a larger one fixed in a calyx or embedded in the kidney substance. This, by far the largest specimen I have myself removed, was unattended with pain at any period of its formation or growth, whereas the patient who within my recollection suffered most and most frequently, requiring daily administration of morphine for a period of three to four months, eventually passed a small lithic acid calculus *per urethram* to her complete and permanent relief. It is worth mentioning in this connection that the stone was passed during the night following my first examination of the patient, which included a free manipulation of the loin, and resulted in arrangements being made for a nephrolithotomy on the following morning—arrangements which were of course indefinitely postponed. How far it may be claimed that the stone received a determining impulse on its outward passage from the hands of the manipulator I am unable to assert, but that such an explanation is not wholly chimerical receives some support from the following two cases.

I was asked by the directors of a railway company to examine on their behalf a man who was seeking compensation for damages received in a collision. The injuries were severe and indicated considerable violence. Amongst the details of the accident it was stated that he was thrown upon the floor of the compartment, where he received several blows upon his back from other passengers falling in a confused heap upon him. After having been conveyed home his sufferings were so severe that, pending the arrival of a medical man, his wife had him placed in a hot bath. Whilst lying there micturition became imperative and frequent, the urine being decidedly blood-stained, and at length he emitted a lithic calculus of the size and shape of a barleycorn. The other case was that of a young man suffering from well-marked renal colic, in whose kidney I failed to detect a stone by careful manipulation and needle puncture. The search was abandoned and the wound closed. Early next day he was found to be suffering from retention of urine, due to the impaction of a calculus in the membranous urethra, plainly felt in the perineum. It was removed through a median incision, and the retention was speedily relieved. In the one case the escape of the calculus so shortly after the patient had been violently shaken and severely pounded amply suggests cause and effect, whilst in the other there is little room for doubt that the search by palpation of the kidney and its pelvis directly resulted in the escape of the stone and its forced entrance into the ureter. The possibility, therefore, of a stone becoming detached and released should not be lost sight of lest an additional danger be introduced, necessitating a further operation for the recovery of the stone, the presence of which in the ureter or elsewhere has become a matter of certainty.

To return, after this diversion, to the early misgivings I entertained in regard to the future of the operation of nephrolithotomy—misgivings which were in no degree lessened by the satisfactory result following the removal of this exceptionally large stone. Up to the year 1896 I had operated on 19 patients whose symptoms had led me to diagnose stone in the kidney, exclusive of 2 in whom unsuspected stones were met with—that, namely, in whose attenuated kidney the large calculus was found, and another who presented similar symptoms of pyonephrosis only, and in the pelvis of whose kidney, besides a quantity of pus, two calculi were discovered. In none of the 19 operations was the kidney withdrawn from its normal situation; it had not, indeed, occurred to me that such a procedure was feasible. The plan adopted had hitherto been to expose the kidney by incision through the loin, to strip it anteriorly and posteriorly of its investing fat, to palpate the whole organ, including its pelvis and the upper portion of the ureter; to needle puncture in every direction those cases in which simple palpation gave negative results; and, finally, to cut directly upon the stone wherever one was discovered, whether in the substance of the kidney, in the pelvis, or in the upper reaches of the ureter. In 5 no stone was then or thereafter found; in 1 a displaced stone was subsequently extracted through an incision made in the perineal urethra; in 2 severe hæmorrhage—leading to a fatal nephrectomy in 1—followed the incision made directly over the stone through the kidney substance; in 2 nephrectomy was resorted to for relief from permanent urinary fistula; and in 9 recovery was uncomplicated and complete.

About the year 1896, in a conversation with him respecting a patient suffering from advanced tuberculous disease of both kidneys, Mr. Henry Morris stated that he was in the habit of withdrawing the kidney from its bed so as fully to expose it outside the lumbar wound, of splitting the organ into two symmetrical halves by an incision carried from its convex border through to the pelvis, with the object of curetting and otherwise treating masses of tubercle and of returning the kidney to its natural position after having passed three or four catgut sutures deeply through the substance of the organ, which he tied with just the amount of force needed to arrest the bleeding. Since that time I have adopted a similar procedure in the removal of stones from the kidney in five cases with most satisfactory results. In none has there been any difficulty in controlling the hæmorrhage, in all the wounds healed directly and there has been no urinary fistula to complicate the results. Should the future confirm these experiences nephrolithotomy will have been deprived of two of its chief dangers, those, namely, of severe hæmorrhage at the time of operation and afterwards, and of that most troublesome and distressing condition, a leakage of urine through the loin; in addition to which there are the manifest advantages during the operation of a complete inspection of the kidney and its pelvis, and the consequent diminished likelihood of overlooking a stone, together with a greatly increased facility of examining the ureter from end to end by means of a probe, in case of suspicion that a stone has escaped during the earlier steps of the operation.

To account for the abundant hæmorrhage attendant on an incision through the anterior or posterior surfaces of the kidney as compared with one made through its centre, splitting it into two symmetrical halves, it is needful only to bear in mind the arrangement and mode of distribution of the renal vessels when once they have entered the organ, and the very liberal supply of blood they receive. The radiating interpyramidal arteries and veins intercommunicating by arches across the pyramidal bases, from which numerous vessels carry the blood to and from the cortex, constitute a plexus which, if anywhere cut across, pours out blood as freely almost as if the renal vessels themselves were wounded. The further we proceed, on the other hand, from the primary branches of the renal artery into the substance and towards the periphery of the cortex, the smaller the vessels become and the more easily is the bleeding controlled, and thus it follows that an incision carried from the outer border of the kidney straight through its centre to the pelvis, involving fewer of the primary branches, is attended with less hæmorrhage, and that of a kind more easily arrested, than if the incision is made transversely across the organ. So also as regards the formation of urinary fistula, incisions made through the comparatively thin walls of the ureter or pelvis, more especially if these be diseased owing to the presence of a stone, are less likely to result in primary union than are the extensive, even, and vascular surfaces of the two halves of the kidney when accurately approximated by deeply-placed sutures. It has not, moreover, in every case been necessary to split the entire kidney, but I have not hesitated to do this where such a course has been called for, and in all the incision has been commenced at the convex border, and carried down to the pelvis, or so far as has been needed to expose the stone.

In withdrawing the kidney, so as to inspect it outside the loin, the danger of tearing the pelvis, or even of detaching the ureter must not be lost sight of. The former accident actually occurred in my hands, and although by carefully suturing the the wound a fistula was avoided, the risk of establishing a permanent leakage is greater when the pelvis is torn than in the case of an incision made for the purpose of extraction, and we have seen that in two cases—in neither of which, it is true, was any attempt made to suture the edges of the incision—this untoward result was brought about. The pelvis which has been long occupied by a stone, and has thereby become attenuated, and more especially if the seat of a pyonephrosis, will be likely to give way more readily to the stretching than one in a state of health, and the wound in it will, moreover, be less likely to close, no matter how carefully sutured. Bearing these possibilities in mind, the withdrawal and expo-

sure of the kidney, followed by the operation of splitting muffin like, is calculated, I feel sure, not only to facilitate the removal of stones from the interior of the kidney, but to render the operation safer and more effective.

### VESICAL CALCULUS.

In no single branch of surgery have more important changes and improvements been made during recent years than in the method of dealing with stone in the bladder. Within the recollection of every middle-aged surgeon a complete revolution indeed has been witnessed, and it may be considered not altogether inappropriate if, after having indicated the method of dealing with calculus in the kidney which in my hands has given the best results, I conclude by making a few observations upon the present and former procedures made use of for the removal of stones from the bladder.

But a little while ago the choice lay between perineal lithotomy and lithotrity as practised by Civiale. It is doubtful if at the present day half-a-dozen hospital surgeons could be found in this country who are in the habit of performing either operation. During several generations lateral lithotomy stood at the head of the list of the surgeon's performances, and few of the elders amongst us can fail to feel a pang of regret on looking back to the days when students and other onlookers anxiously watched whilst the surgeon with more or less precision and rapidity relieved his patient of the stone. Lateral lithotomy was the accepted test of the surgeon's claims to pre-eminence as an operator, and few I imagine ever experienced an entire absence of nervousness when about to undertake its performance. The oldest, most experienced, and most successful lithotomist of my acquaintance published a confession that he invariably suffered from a feeling of nervousness when about to undertake the removal of a stone, and as on no other occasion was he the subject of fears or qualms, he termed it his lithotomy feeling. There was good excuse for this. So many pitfalls surround the operation as to make it a matter of relief when safely completed; so many excellent operators have failed once at least in bringing about a successful issue. The traditions of almost every large hospital contain at least one example of failure. I have myself seen one of the ablest surgeons of his day remove a stone of considerable size by this operation from an adult in whom, *post mortem*, it was found that neither urethra, nor prostate, nor rectum had been wounded—a result which elicited from an enthusiastic admirer the remark that the operator was probably the only surgeon in England who was capable of performing such a feat.

Notwithstanding the difficulties and dangers attendant upon the operation itself, the occasional occurrence of unpleasant sequelæ, and the mortality, amounting in the best hands to 1 in 8, and in spite of the many attempts at modification—bilateral incision, median incision, the use of curved, of straight, or of rectangular staff—lateral lithotomy maintained its position at the head of cutting operations for stone until within twenty years of the present time.

Lithotrity, in the hands of a few skilful manipulators, from the time of its introduction about the middle of the first half of last century, gradually increased in favour as the instruments for crushing and evacuation were improved, but it cannot be said at any time to have rivalled the cutting operation, being for the most part reserved for those comparatively few favourable cases in which the stone was small and the organs generally healthy. It was not until the gradual development of lithotrity into the more complete litholapaxy at the hands of Bigelow nearly a quarter of a century ago, and the almost simultaneous revival of suprapubic lithotomy, that the doom of lithotrity and of lateral lithotomy was sealed.

The manifest advantages and the vastly-increased safety secured by removing at a single sitting the crushed fragments of a stone, whether small or of a considerable size, the precision and certainty with which the bladder was opened, digitally explored, and even inspected through an anterior incision, was not long in obtaining for the two new operations an established position, and at the present time I shall not be far wrong in saying that with very few exceptions litholapaxy or suprapubic lithotomy is chosen in every case of vesical calculus, whether in male or female, in child or adult; and litholapaxy claims first consideration. There must be some good reason for deciding upon lithotomy in preference to litholapaxy now that the latter operation in skilled hands and in well-selected cases is attended with so little danger and incurs so brief a period of disability. The mortality no doubt after either method of extracting a stone depends less upon the nature of the operation itself than upon the presence or absence of complications. Apart from the general health and strength and age of the patient, the size and composition of the stone, the capacity of the urethra, the presence or absence of prostatic enlargement and of inflammatory disease in bladder or kidneys must materially influence the results. In a perfectly uncomplicated case, one in which a successful issue may be expected from either operation, litholapaxy would naturally be chosen as involving less mutilation and a less prolonged period of convalescence. Some complications there are which, apart from other considerations, entirely negative the less serious procedure, such, for instance, is the presence of an advanced stricture in any part of the urethra beyond the meatus, with which I may class an abnormally narrow urethra, one which admits only an instrument altogether disproportionate to the size of the stone. I have met with one instance in a generally ill-developed man of middle age whose urethra, though showing no signs of disease past or present, would not, even after slitting the meatus, admit the smallest sized lithotrite I possessed. The presence of advanced prostatic disease may be, I think, rightly held to exclude litholapaxy, not so much on account of the obstruction it presents to the free use of the lithotrite and evacuator, or on account of its liability to injury, but chiefly because, by adopting the suprapubic operation, an opportunity is afforded for dealing radically with the prostate as well as for removing the stone.

There are calculi too large to be crushed, and a few—I have met with two such—so hard as to resist the most strenuous efforts to break them. The presence of cystitis, if of long standing, must be held—certainly if the stone be of more than moderate size—to contraindicate the crushing of the stone, seeing that a prolonged operation involving more or less injury to the bladder would incur the risk of converting a mild into an acute and relatively dangerous state of inflammation; and, finally, in the case of an encysted calculus, litholapaxy may be considered to be wholly inapplicable, not only because of the difficulty, for the most part insuperable, of releasing the stone from its pouch and of effectually breaking it into fragments which shall be accessible to the aspirator, but also because of the intense cystitis which, so far as my observation extends, is a marked feature in cases of encysted calculus. In these the superiority of suprapubic lithotomy over any other form of operation is abundantly manifest, and, seeing that I have met with 3 such cases, whilst the total number successfully operated on is very small, I desire here to place them on record:

The first was that of a young man of very poor physique, in whom the sound struck a stone the moment it entered the bladder. His symptoms had been of long duration and markedly pronounced, so that I concluded the stone was large. A lithotrite passed into the bladder grazed the under surface of the stone, but all attempts to seize it proved futile. With the left forefinger in the rectum and my right hand placed on the lower abdomen I could distinctly feel the projecting calculus fixed beneath the pubic arch. Here was a combination of circumstances which might be said to invite an attack from above, and accordingly I proceeded at once to perform my first suprapubic lithotomy. Sir Henry Thompson had but a few months before described the operation in detail, and I followed in the main the directions he had given. On inserting my finger through the suprapubic opening it immediately impinged upon a stone slightly projecting on the left of the urethra. A further examination revealed the fact that the calculus was imbedded to about three-fourths its extent in a sacculus occupying a space below the pubic arch, and between it and the prostatic urethra. From this hollow it was shelled out by means of a scoop and the finger, and then readily removed.

I do not believe that by any other operation the stone could have been extracted. No finger could have done more than touch the exposed end if introduced through the perineum, nor could any lithotrite have been made to grasp the stone between its blades. Of further complications there were none and his recovery was uninterrupted.

The second which came under observation at the infirmary in 1888 was in a man 73 years of age. His urethra, owing to what was supposed to be an enormously enlarged prostate, did not readily admit a sound, and on that account, as also because of his advanced age, the severity of his symptoms, the presence of a considerable amount of muco-pus in the urine,

and the fact that his bladder retained from six to eight ounces of residual urine, the suprapubic operation was decided upon. A globular oxalate calculus weighing thirteen drachms was removed from a pouch at the base of the bladder, situated on the right of the middle line, which con-

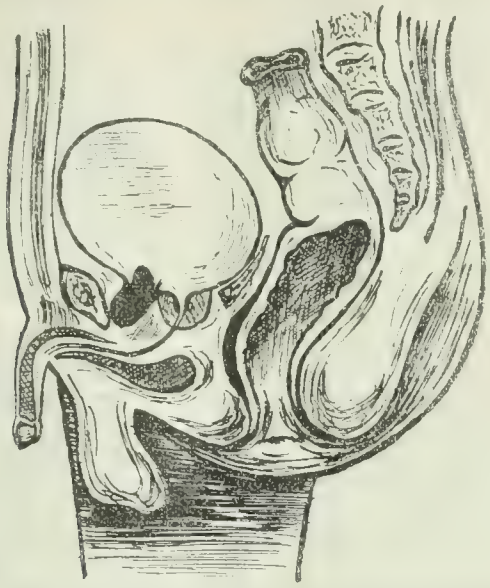


Fig. 3.—Diagram of sagittal section to left of middle line through pelvis showing encysted calculus in bladder beneath pubic arch and to the left side, removed by suprapubic lithotomy from a young man. Weight of calculus, 3vij.

cealed all but the slightly projecting surface of the stone. This it was which had led to the supposition of his prostate being largely hypertrophied. As a matter of fact the prostate was enlarged, but the hypertrophy was confined to the middle lobe, which, projecting upwards in such manner as to obstruct the urethral entrance, was removed. Recovery followed.

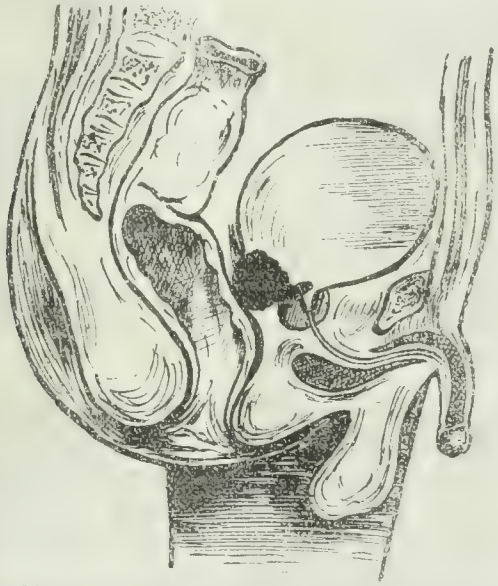


Fig. 4.—Diagram of sagittal section to right of middle line through pelvis, showing encysted calculus on right of base of bladder and projecting middle lobe of prostate, in a man, aged 73 years; both removed by suprapubic lithotomy. Weight of calculus 3xiij.

The third case came under my care in 1899.

The patient, aged 60, after having long suffered from painful micturition, had the misfortune whilst following his occupation to crush his perineum by falling from a height astride a beam. Urethral laceration, attended with copious hæmorrhage, was followed by a troublesome stricture which added considerably to his urinary difficulties and suffering. Prior to the accident he had undergone treatment for cystitis. When brought under my observation, some months after his accident, his condition was most unpromising. His urine, passed *guttatim*, was purulent and offensive. He was sallow, thin, and devoid of appetite. As a No. 3 gum elastic catheter had been occasionally passed with temporary relief, and without exciting any febrile disturbance I began gently to dilate the stricture by means of Lister's sounds, beginning with 2 to 5. Before I had proceeded far the sound struck a stone, and thus I found myself in face of an added difficulty. My first impulse was to perform external urethrotomy and to extract the stone through the median incision, but as for this I was not prepared proceedings in that direction were arrested. Further dilatation enabled me to make a closer and more detailed examination. First I satisfied myself of the facility with which a free dilatation of the urethra could be accomplished; then I was able to make out by means of the sound that the stone was of considerable size, that it lay on the left at the base of the bladder, that it was fixed in its position and, lastly, by means of the finger in the rectum that it projected backwards beyond the prostate towards the sacrum, and was probably situated in a pouch. On a subsequent day I opened the bladder above the pubes and removed a calculus weighing ten drachms from a pouch, situated as I have just described, which enclosed almost the entire stone, leaving only a segment of its surface exposed. His future course and recovery were uneventful.

The success attendant upon these cases thus briefly narrated, together with the facility with which the stones, though deeply embedded in the bladder wall, were extracted weigh much with me in estimating the relative value of the several modes of peforming lithotomy. In the first case, as I have already remarked, by no other route could the stone have been removed; in the other two the difficulties of their extraction through the perineum must have been well nigh insurmountable, whilst in none of the three would it have been possible to grasp the stone within the blades of a lithotrite.



Fig. 5.—Diagram of sagittal section to left of middle line through pelvis, showing encysted calculus on left of base of bladder removed from a man, aged 60 years, by suprapubic lithotomy. Weight of calculus 3x.

Up to the year 1883 perineal lithotomy, lithotrity, or a combination of the two in the case of a very large stone, was adopted in my practice in every case, lithotrity being reserved for the smallest stones in adults whose general conditions were favourable, median perineal lithotomy was selected for small stones in children, and lateral, or very rarely bilateral, lithotomy for medium-sized and large stones at all ages. From 1883 to 1890 was a period of transition. Litholapaxy was rapidly superseding lithotrity, and suprapubic lithotomy was with almost general consent replacing the perineal operation. Since 1890 my practice has been without exception limited to the two operations litholapaxy and suprapubic lithotomy; to the former, whenever I have found it reasonably practicable, irrespective of the age of the patient, and to a great extent of the size of the stone; to the latter, whenever existing conditions were such as definitely to forbid the use of the lithotrite and aspirator, and in a few instances in which the weight of evidence seemed to favour the shorter, if on the whole

severer measure. With these two operations and their results I feel much reason to be satisfied; and although finality is no more applicable to the treatment of stone in the bladder than to other surgical problems, I feel little doubt that in the near future any improvement in our means of dealing with calculous formations must be directed to the perfecting of our present methods of procedure, rather than to the discovery of new operations or the revision and revival of the old. Perineal lithotomy, associated though it has been with many generations of the greatest surgeons in the world, up to a few years ago universally held to be the most important operation in surgery, is now all but relegated to the past, lingering only, I believe, in the hands of the few, and is doomed almost certainly to become ere long a subject for the historian alone.

The three subjects upon which I have so cursorily discoursed are not the least important amongst the many which have exercised, and still are exercising, the minds of the present generation of surgeons. In each there is much need for increased experience and for wider observation; and if my small contribution be considered at all worthy of the acceptance of this audience, I shall feel myself more than rewarded.

# An Address
ON
# THE SANATORIUM TREATMENT OF PULMONARY TUBERCULOSIS.

*Introductory to the Discussion of the Subject at the British Congress of Tuberculosis.*

BY R. W. PHILIP, M.A., M.D., F.R.C.P.EDIN.,
Physician to the Victoria Hospital for Consumption, Edinburgh.

IN this address I shall endeavour to refrain from the expression of merely academic opinion regarding the effect of what has been termed the sanatorium treatment of pulmonary tuberculosis.

I prefer on the present occasion to base my statement on personal observations which have been continued for some ten years. These have concerned a large series of patients. The list includes more particularly some 700 patients treated on more formal sanatorium *regime* under my eye at the Victoria Hospital for Consumption, and at Woodburn Sanatorium, Edinburgh. It includes also patients who have been subjected, on my advice, to similar treatment at other sanatoria or privately. While I am familiar with the methods of, and have visited, many sanatoria both in the United Kingdom and abroad, it seems desirable to restrict the present survey to "facts observed by myself."

## THE SYSTEM.

It may be convenient if I outline in a word or two the leading features of the system as I conceive it.

In the first place, while the principles of the system are physiological and correspondingly definite, there can be no hard-and-fast rule applicable to every case. The detailed application varies in different instances. Herein lies one of the dangers both to the system and to patients who happen to be committed for treatment into the hands of persons, who regard the matter as largely rule of thumb, or swear blindly by the precepts of one master. Each case requires consideration *per se*. At the same time certain broad lines are followed. These may be considered under the following heads:

### 1. *Open Air.*

There is no doubt, notwithstanding much that has been written in qualification of the statement, that hyperaëration (as conventionally we are wont to conceive it) is the major agent in the treatment. It is the one essential—the *conditio sine quâ non*. While difference of opinion as to dietary, as to the relative amount of rest or activity, may be admitted in different cases, the uninterrupted exposure of the patient to the influence of fresh air is applicable in every instance. In my experience there cannot be too much of this.

I remember in the early days feeling a certain timidity as to the length and degree of exposure of the patient. We were careful to attain a fairly constant temperature in dwelling and bed rooms occupied by patients. It used to be an instruction to our nurses that the temperature should be regulated by the thermometer placed in each room. Especially were more delicate patients thus carefully handled. Experience has modified this greatly. I allow the freest access of fresh air to the patient day and night, at all seasons, provided he is sufficiently clad. I am not careful as to the temperature of the surrounding air, whether in or out of doors. Indeed, there seems a disadvantage in endeavouring to combine free exposure of the patient out of doors with his occupancy of rooms whose temperature is maintained constant, or, still worse, which may become over-heated. It is more logical, and experimentally more successful, to subject the patient indoors to approximately the same conditions as out-of-doors. Assuredly let him be comfortably warm by means of clothing, and, if necessary, by hot bottles; but let us be sparing of artificial heating of the atmosphere.

It is an interesting commentary on this statement to add that the results during the series of years I have mentioned have proved themselves in many respects more satisfactory in winter than in summer. Even with the most delicate patient I have on no single occasion observed a bad result follow the most complete exposure to such influence. Contrariwise, in proportion as the patient is more freely exposed the satisfactory result is attained more quickly. During the present spring, for example, I have allowed a considerable number of patients not only to be out all day but to sleep outside all night, merely under cover of a three feet deep shelter, which is completely open to the front. Some of these patients literally ran ahead as compared with other patients sleeping indoors and in the entire group the results were uniformly satisfactory. Subject to reasonable care in respect of clothing there cannot, in my experience, be too free exposure to the open air.

### 2. *Rest and Release from Disturbing Conditions.*

It is a mistake to speak as if the system of rest were one, and the system of exercise for such patients were another thing. Neither the *Liegehalle* or hill climbing is applicable in every case. These should not be pitted against each other as if they constituted opposing modes of treatment.

For almost all patients rest is the immediate indication when treatment is commenced. This must be maintained for most patients, as part treatment at least, for a long time. The determinant of the necessary degree of rest is especially the state of the pulse and the temperature. It is desirable that the patient should rest chiefly if the temperature oscillate from day to day above 100.5° F., or if the pulse-rate be maintained above 90 per minute.

The negation of rest means in such cases greater irregularity of temperature and increase of pulse-rate with other evidence of circulatory prejudice. It is remarkable how certainly an apparently slight error in this matter registers itself in elevation of temperature and circulatory disturbance. Even the visits of friends, the receipt of letters, or similar incidents may exercise a definitely harmful influence.

### 3. *Exercise.*

As improvement proceeds, as evidenced by the general condition, and more particularly by the pulse and temperature, the necessity for complete rest is removed. The patient is allowed to take short turns, measured by minutes at first, and then of greater extent, once or twice in the day. Such exercise is begun on the level, and gradually allowed on an incline, until even hill climbing becomes possible. At all times the rate of progression should be slow, and care be taken that the respiratory movements are free and full.

As the necessity for rest lessens, the intervals of activity are correspondingly lengthened. The effect of activity should be gauged by careful record of pulse and temperature. At this stage, too, simple respiratory exercises often prove of service. Many patients have much to learn regarding the physiology of respiration.

### 4. *Dietary.*

Alimentary disturbances form leading features of the disease. These are corrected by a carefully studied dietary, of which the patient must be induced to take a sufficient quan-

tity. This is not the same as "forced feeding"—at least, not in the sense in which that term is sometimes realised.

The dietary of each patient, and of the same patient at different periods of his illness, is worthy of most careful consideration. There is reason to fear that frequently enough an unsuitable dietary is prescribed, a crude attempt is made to ram the material into the alimentary tract, and the patient perhaps rudely handled if either he or his stomach rebel.

On the other hand, if physiological conditions are fulfilled, the patient generally eats of his own accord. He frequently becomes voracious. In order to reach this end, he must rest sufficiently before and after meals, and the bowels must be regulated with care. The rules regarding fresh air day and night must be followed strictly. It is often of much advantage that the patient take meals in the open air.

It is impossible in the limit of time to enter further on details of dietary.

5. *Skin Hygiene.*

The condition of the skin should receive attention. This is not merely a question of cleanliness. From the point of view of heat regulation and excretion, healthy skin activity is demanded. Hence both clothing and bathing should be carefully considered.

The clothing should be sufficiently warm, but preferably of light weight and porous. Shetland wool materials afford an excellent example of the sort of thing that is wanted. The absurd overclothing which used formerly to be, and, indeed, is still, sometimes sanctioned, is to be condemned. Chest protectors of all kinds are wrong. The patient must get rid of the notion that he got his disease by exposure and that he will cure it by protection.

The regular use of a rapid cold bath is in most cases not only possible but highly beneficial. Sometimes improvement in a patient's state commences only when cold bathing is undertaken. The temperature of the water is of course to be regulated according to the season, so as to avoid undue shock. Care should be taken that the patient is quickly and comfortably dried after the bath, without over-effort to himself.

6. *Medication.*

It would be out of place at this time to enter on the discussion of the value of drugs in the treatment of the disease. It is remarkable how comparatively few drugs seem necessary when the more cogent physiological indications have been fulfilled. None the less is it true that the significance of medication becomes greater if the use of drugs be directed from day to day under careful surveillance. Particularly does this hold good in respect of tuberculin, which has proved itself in a considerable number of my cases of immense diagnostic and therapeutic service.

## The Site of the Sanatorium.

My experience has led me to the opinion that a sanatorium can be suitably established, with the expectation of excellent results, practically anywhere, provided that the immediate surroundings be free and open and there be a sufficiency of ground for the carrying out of open-air methods, and directly noxious influences be absent. It is of course inadvisable that the sanatorium be actually within our large cities. On the other hand it is not necessary, nor indeed is it from several points of view desirable, that the sanatorium be too far removed from the town or district in which the patient usually lives and has to make his livelihood.

If it is possible, as my experience indicates it is, to obtain cures under the normal climatic conditions of the individual, this is most assuredly to be preferred. For thereby the patient and the wider circle of persons whom the patient influences are made to recognise that the prevention and cure of the disease lie within their own power, that it is possible at their own door. The two sanatoria in which my observations have especially been made are both of them situated within three miles of the centre of Edinburgh, and I am satisfied, both by direct observation and comparison, that the results have been no less satisfactory than the best results elsewhere.

## Results.

In the foreground it may be stated without fear of contradiction that the results obtained on sanatorium *régime*, whether actually at a sanatorium or otherwise, are much in advance of the results which used to obtain on the more or less protective system. Indeed I am bound to say that the results have been uniformly good when the condition has been taken in hand reasonably early.

In no case have I seen harm accrue. The results of treatment even in the worst and most advanced cases are such as seem to justify the mode of treatment no less than do the effects obtained in early cases. It is true that dying patients are not re-created by the system. But the change in the type of disease which occurs, even in such cases when physiological treatment is adopted, has seemed to me one of the most remarkable facts of medicine. The speedy disappearance of the more distressing symptoms and the return of comparative comfort are striking. Even if death be the final issue, much has been done towards a euthanasia.

It is, however, in the recovery of incipient and comparatively early cases that the curative significance of the method is especially witnessed. In these the results which have come under my observation enforce the view that, given the opportunity for a sufficiently long and satisfactory course of treatment, the result will be almost certainly good.

It may be serviceable to individualise some of the more evident results:—

1. *General Condition of the Patient.*—The aspect of the patient is very different from that of the patient treated on protective lines. It is amazing how quickly the change is effected and the worn, discoloured look is replaced by the appearance of ruddy health. Many members of the Congress must be familiar with the picture. For those who are not it is difficult to describe the change in words without seeming to exaggerate. It seems simpler to ask you to look at the photographic repre-



A. B.

Plate I.—A, shows patient, aged 26, with extensive pulmonary (bilateral) and laryngeal tuberculosis; photograph taken in Canary Islands after residence at various climatic resorts prior to entering a sanatorium. B, same patient after twelve months sanatorium *régime*.



A. B.

Plate II.—A, shows patient, aged 28, with extensive pulmonary tuberculosis (bilateral), chiefly basal. B, same patient after nine months sanatorium *régime*; gain in weight 60 lbs.

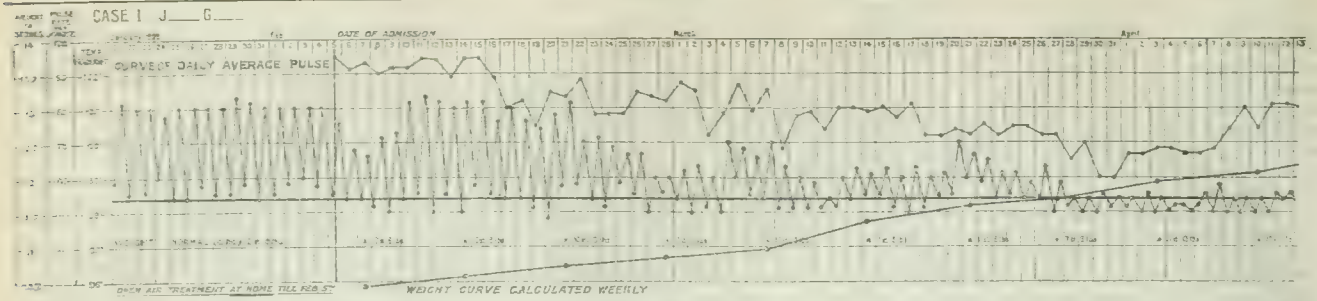



Chart 1.—From a case of extensive bilateral pulmonary tuberculosis; shows course of temperature during five months sanatorium *régime*; in pulse frequency; lowermost curve shows

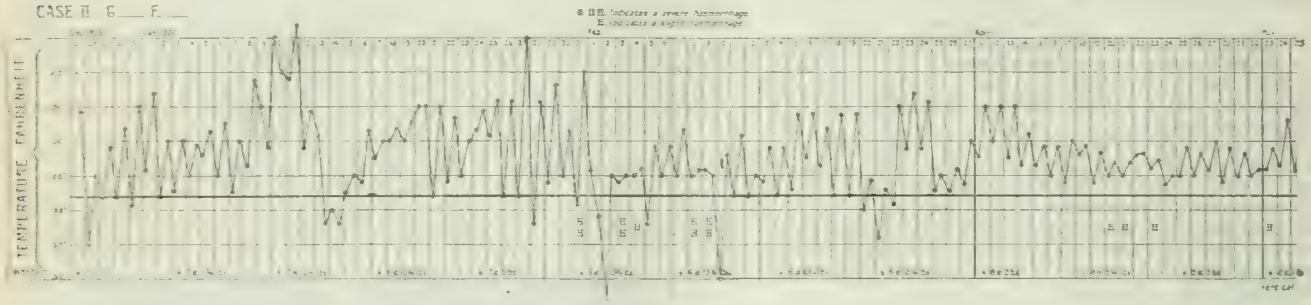



Chart 2.—From case of widespread bilateral pulmonary tuberculosis. with vomica formation and repeated grave hæmorrhage; shows

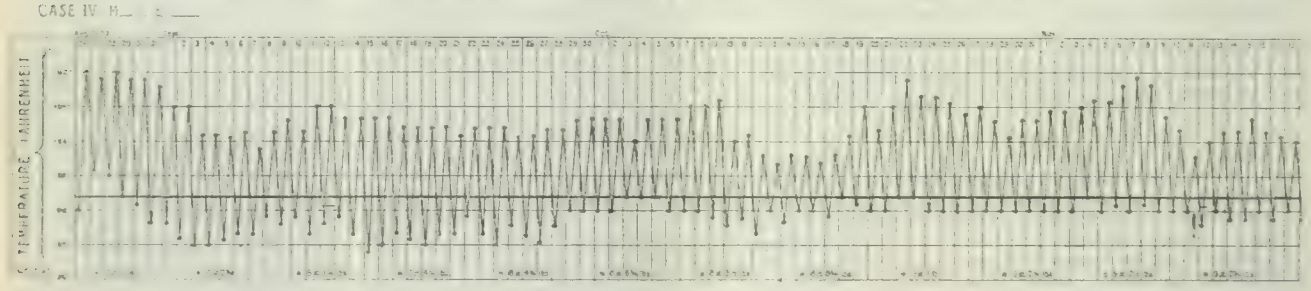


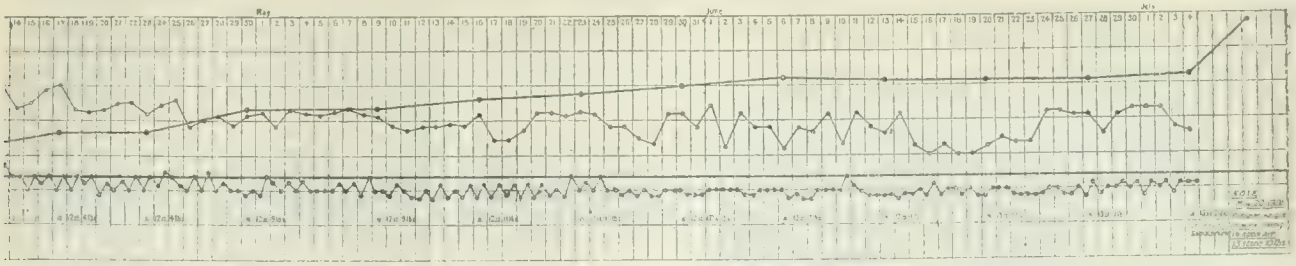

Chart 3.—From case of extensive pulmonary (bilateral) and laryngeal tuberculosis; shows course of temperature during seven months; for more

sentations of patients which I have placed in your hands. I would ask your especial regard to Plate I, that of a gentleman who had for many months sought for cure of grave pulmonary and laryngeal disease by residence in reputed climatic resorts, and who at the end of two years time was in the condition indicated on the left-hand side. The portrait to the right represents the appearance of the same patient after 10 to 12 months sanatorium treatment at Edinburgh. I do not think I exaggerate when I say he looks another man. Plates II, III, and IV* are hardly less striking; and were there space for freer illustration I might multiply this abundantly. Nor is the change confined to appearance merely. Flesh is rapidly made. Thus, for example, patient No. 2 gained within six months some 60 lbs. in weight. A gain of from 2 to 4 lbs. a week is common, and 8 lbs. or more have been registered in my experience. More important than mere gain in weight, the flesh which is made is good solid stuff when the dietetic programme is satisfactory. The muscles, no less than the adipose tissue, increase in bulk and become plump and firm. Myotatic irritability and other evidence of want of muscular tone tend quickly to disappear.

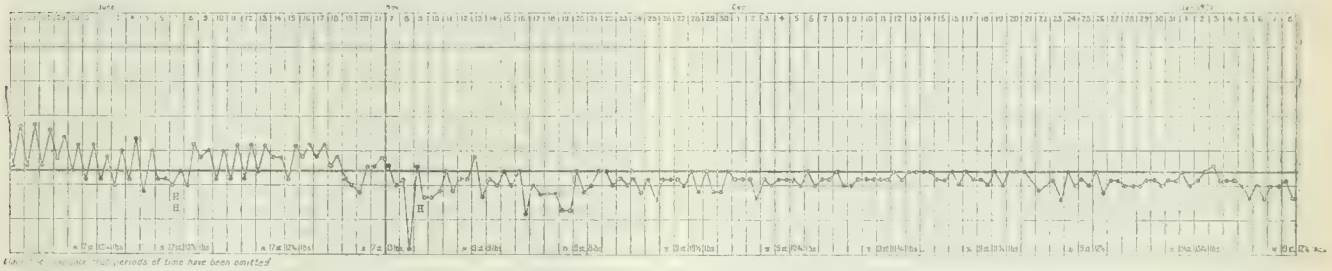
2. *Temperature.*—The effects on temperature are highly noteworthy. It is matter of every day experience to observe that swinging temperatures—oscillating perhaps from subnormal to 101° F. or thereby—are gradually modified so as to approach the normal. In going round a properly managed sanatorium it is exceptional to find much evidence of pyrexic disturbance among patients who have been any length of time in residence. This is not because the physical condition of the lung is satisfactory. Contrariwise it is the commonest thing in the world to find abundant evidence of moisture and vomica formation in the chests of persons whose temperature taken four-hourly or even every hour is strictly normal. Here again the fact is best illustrated by actual reproductions from the charts of patients, and I place in your hands several such records carefully reproduced for me by Drs. Mears and Galbraith of Edinburgh, to whom I am glad to have the opportunity of expressing my obligation. In all these the return of the temperature to the normal after prolonged periods of grave pyrexial perturbation is remarkable. The uninterrupted uniformity of temperature thereafter for months is most striking. Such illustrations might be repeated indefinitely, and commonly the result is attained apart from special drug treatment.

3. *Circulation.*—There are few more beautiful phenomena in clinical medicine than the change effected on the rapid, soft and wavering pulse of the tuberculous patient when for the first time he is placed on the physiological line of treatment. Within a day or two in many cases, and with few exceptions within a week or two, the rapid soft pulse is replaced by a slowed and comparatively resistant beat. I regard the less or greater degree to which this is established as immediately of great prognostic value. Chart No. 1 which I place in your hands shows in the uppermost line the alteration in rate of pulse coincident with the fall in temperature

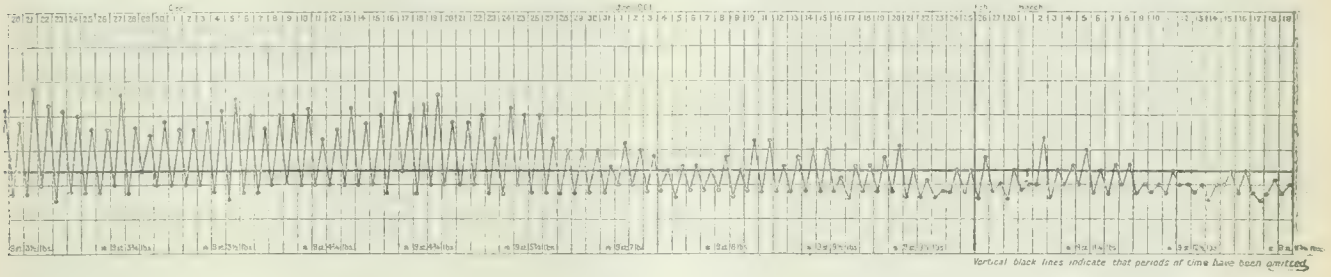
* Plates I and II are reproduced only.



the later three months of residence and for eighteen months subsequently, normal temperature. Uppermost curve shows coincident decrease of coincident gain in weight, 39 lbs.



course of temperature during twelve months, in latter five months temperature almost constantly normal; coincident gain in weight 39 lbs.



than four months the temperature very irregular and intractable, and thereafter becoming proximately normal; coincident gain in weight 28¾ lbs.

and increase of weight (lowermost line). The tendency to coldness of extremities and shiveriness similarly goes.

4. *Alimentary Disturbances.*—Anorexia, digestive discomfort, and other alimentary disturbances, which form distressing features in most cases under the usual system of treatment, are reduced to a minimum. I have already referred to the return of appetite. The disappearance of the dyspeptic phenomena is no less remarkable. Measures specially directed to the stomach commonly become unnecessary.

5. *Night Sweats.*—In nothing is the change of type produced by the physiological line of treatment rendered more evident than as regards night sweats. This classic symptom disappears entirely. A patient who may have perspired so much as to require a change of nightdress three or four times a night, loses the tendency within a few days or at most a week or two. So true is this in my experience that I am in the habit of teaching students to regard night sweating as largely an expression of ignorance or culpability on the part of those in charge. I can hardly recall the time when last I ordered special drugs for the symptom.

6. *Other Symptoms.*—Cough, expectoration, and dyspnœa lessen similarly. There is, in fact, little cough to be heard save among the newcomers. Of special interest is the comparative infrequency of hæmoptysis. Apart from faint streaking of expectoration with blood I can almost count on my fingers the occurrence of hæmoptysis among the cases included in the present review. Yet the list includes many cases of pronounced and advanced disease.

7. *Physical Signs.*—It is needless to enter here on the question of physical signs which improve correspondingly.

## General Conclusions.

In this rapid survey of so large a subject it has been possible only to accentuate certain of the more salient points. It may be frankly yielded that these are sufficiently striking to warrant the belief that in the system—by whatever name we choose to call it—there lies much hope in relation to tuberculosis.

The conception of pulmonary tuberculosis in the past has been, and still is by many, too much that of a localised lung disease, while the constitutional condition has been insufficiently considered. So far as treatment is concerned, the reverse must be the case. The constitutional, rather than the local, disorder must be kept in view.

The systemic disturbance is immense. To combat this successfully implies a vast systemic reformation. A return to the physiological life must be the aim of treatment, whether conducted in a sanatorium or at home.

The observed phenomena indicating the tendency towards natural cure are in no disease more striking than in tuberculosis. The chief object of treatment must be to limit as much as possible those factors which diminish the normal resistance of the tissues, and to interpose no obstacles in Nature's path through clumsy attempts to hasten cure.

I believe the open-air or sanatorium treatment has come to stay, because the method is physiological. Not even when

the therapeutic activity of tuberculin is rendered more definite can a method which is no less prophylactic than curative be discounted.

It has been asked, Can the system be carried out elsewhere than in a sanatorium? Can the method be carried out at home? My answer is, that it may be practised at home, that it may be practised anywhere, provided there is sufficient accommodation, a sufficient appreciation of what is necessary, and a sufficient determination to carry this out at all cost. It is not easy to realise these in practice. In order to this it is desirable that the patient, the nurse, and doctor have had some experience of sanatorium methods. The educational value of sanatorium life can hardly be exaggerated in relation to the patient. Hence in some cases where it is impossible to extend the patient's residence at a sanatorium to the full limit, it may be worth while to sanction his residence there for, say, a couple of months—and this from the educational point of view—so that faulty home conditions may be amended on physiological lines, with the intelligent acquiescence of the patient.

A further grave difficulty in the way of home treatment exists commonly in respect of the patient's relatives and friends, who, in the name of kindness, or on the plea of common sense, are apt to come between the patient and his cure. It may reasonably be expected, however, that this difficulty will tend to disappear in time, and the physiological *régime* become more generally applicable. There is little doubt that already a considerable wave of education has passed over the country through the labours of individual physicians, the measures which have been adopted by Public Health Departments, and the efforts of the National Association for the Prevention of Consumption. It is to be hoped that in this respect good fruit will result from the session of this Congress.

The measure of success in treatment will depend on the correctness with which the physiological indications are fulfilled. Much must therefore depend on the physician who is chiefly reponsible for the *régime* and surveillance of the patients.

Much will depend, too, on the earliness or otherwise of diagnosis. The comparative certainty of cure in early stages of the disease affords one of the strongest incentives to exactness in early diagnosis. A week or month lost in relation to the determination of this may require to be multiplied many times in relation to the treatment of the disease. Further, much patience will be required both on the part of the sick man and his attendants in order to prevent disappointment as to final result through undue curtailment of the period of more rigid treatment. Nor less disappointing may prove the later attempt to force Nature to maintain a cure which has been achieved with difficulty under physiological conditions—under conditions the reverse of these. Hence in all cases, but more especially among the working classes, the question of after-life becomes one of pressing moment. It is disappointing to find that patients who recovered perfectly well, and who retained recovered ground for months or longer—indeed, so long as they were able to lead a physiological life—have gone back to the old state or still further, simply because by force of habit or necessity, they fell from the physiological path.

### Tuberculous Colonies.

It was in view of the tendency to such declensions that some years ago I ventured to point out the great desirability which exists for the establishment of some system of tuberculous colony in which the convalescent and convalescing patient might each contribute by work, according to his physical capacity, towards the common good, remaining the while for his own benefit under suitable medical superintendence.

When our municipalities and local authorities seriously tackle the treatment of early cases this aspect of the question should be kept in view. The colony would be made the training school for a variety of outdoor occupations which, after a due probationary period, would come to be means of livelihood to the individual. At present, in the disposal of patients after treatment, a pressing difficulty occurs, because many of them have no capacity for an outdoor occupation. This would be obviated largely under the scheme which I have proposed.

### Length of Residence.

The length of residence must necessarily vary in different cases. It is difficult to lay down a law which is applicable to all. Taking a wide survey of results, however, I incline to fix six months as a desirable minimum. It will be understood, of course, that in some cases this may be curtailed. On the other hand most of the pronounced disappointments which one has witnessed have been in relation to cases where the hand of the physician has been forced, either through financial or other necessity, or through impatience. To promise, or to expect, a cure within much shorter limits is apt to affect the discredit of the system.

### Proportion of Cures.

The question of actual and permanent cure is surrounded with difficulty. In the foreground it is not very easy to define what is meant by cure or recovery. The term is used in different senses by different observers. The term should imply the disappearance of symptoms (including pyrexia), the return to the normal standard of weight (in many cases this is apparently exceeded), the establishment of healthy muscular tone and a stable circulation, the capacity for healthy activity and work of a suitable kind, and the maintenance of these conditions under competent observation for, say, twelve months.

While it is easy enough to obtain this evidence regarding a certain section of the patients, the final result in a good many cases eludes observation, from one cause and another. This is apt to introduce fallacy into the statement of results, unless careful and just deduction be made on this account. I have endeavoured to make a fair computation of the material accessible to me. Without affecting to be absolutely certain, I think that the percentage of satisfactory recoveries may reasonably be expected to range from 50 to 60, if the conditions I have presupposed be fulfilled.

The percentage would be higher were it not for the fact that many cases are sent for treatment at far too late a date—that is to say, at too advanced a stage. This is a deduction which will probably require to be made less in the future, as an intelligent appreciation of the value and limits of the method becomes more general. The percentage of recoveries will also be increased by the greater effort after early diagnosis, which seems to be already a traceable fruit of the increased attention directed to tuberculosis.

I feel satisfied that, were it possible to undertake the treatment of all cases, at stages which might fairly be described as incipient, the percentage of recoveries would be remarkably increased. It is difficult indeed to see any limit to the proportion of recoveries. In judging of results, it is to be kept in view that, in addition to the apparently definite recoveries, a large percentage of patients show varying degrees of improvement. The percentage of those who go steadily back during the continuance of the treatment is, in my experience, very small indeed.

In closing, let me add that it seems to me that we are on the threshold of a still wider development in the application of the open-air method. The question may well be asked whether we have not, as physicians, been too protective in respect of the treatment of many diseases. With our latter-day conception of the origin of disease, we have gradually relegated the etiological influence of so-called "cold" to a back seat. In our treatment of disease we want to realise more fully that the action of pure, fresh air is directly curative. Within the last few years I have rearranged my conception of practice on these lines, and am fully satisfied with the results attained. Thus, I have treated pleurisy with effusion (I doubt not tuberculous in origin), of such a degree as to require repeated tapping, in the patient's garden, with much comfort throughout to the patient, and with the evident result that the patient manifested far less pyrexic and circulatory disturbance than one usually finds.

In the treatment of the various states which are described vaguely as conditions of delicacy—both in young and grown-up persons—it is remarkable how speedily the indications of ill-health yield to the adoption of fresh air measures. In the adaptation of the system to the treatment of other medical conditions there seems to exist the potential of successes comparable to, if not so striking in character as, those obtained in surgery through the adoption of aseptic measures.

## AN ELECTRO-THERMAL PARAFFIN BATH.

By R. H. STEEN, M.D.,
Senior Assistant Medical Officer, West Sussex Asylum.

Scientific instruments which are required to work at a constant temperature are supplied, as a rule, by coal gas for this purpose. Many institutions and private houses are now being exclusively provided with electricity as an illuminant, and in these circumstances an electro-thermal apparatus becomes almost a necessity. The only alternative is to use the regulated heat from a paraffin lamp, but this arrangement is cumbrous, requires considerable attention, and is by no means delicate.

In the apparatus figured below the electric current from the mains is utilised to raise the temperature of a paraffin bath by means of the heat radiated from one or two ordinary lamps placed in an asbestos box beneath it. A mercurial thermostat placed in the bath maintains the temperature at a constant level by causing the lamps to be switched off and on when the temperature tends to rise above or fall below the degree required.

The diagram will assist in explaining how this is effected. It is lettered for purposes of demonstration, and shows the condition of things when the mercurial thermostat is so operating as to extinguish the lamps under the bath.

H I J G is the switch of the lamps K, which heat the bath. G is an electro-magnet, which attracts the armature H, thus causing the plungers at I to be drawn up (as in the diagram); when the magnet is not acting the armature is released, the plungers fall, and come into contact with the mercury cups which are in contact with the nuts J. These nuts are included in the circuit from the main which feeds the lamps, they are insulated, and the current can pass from the one to the other only by means of the mercury and the plungers, so that when the plungers are drawn up the circuit is broken, and the lamps extinguished; and when they fall the lamps re-light. The circuit in which the coil of the magnet G is placed must now be dealt with.

A wire is carried from the positive main at N to the base of the electro-magnet C; the current from the main then passes up the pillar of the magnet through the armature D, which, when the magnet C is acting, makes contact with E; from thence the current passes through a lamp F, which is merely a resistance, then through the coil of the magnet G, the other end of the coil being connected up with the negative main. And so it happens that the activity of G depends on contact being made at E, which in its turn depends on the activity of the magnet C, for when C is not active the armature is released, and the contact at E is broken by means of the spring.

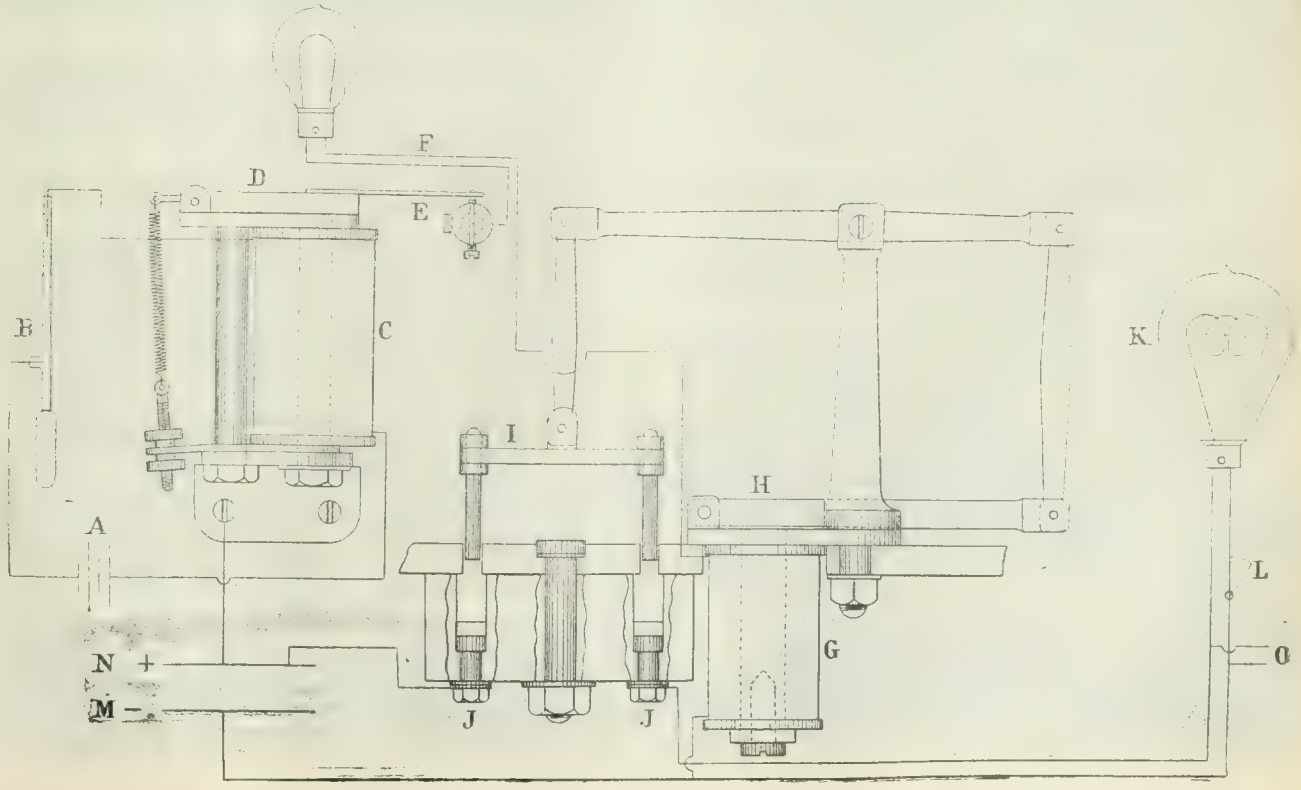
Therefore, when C is active G is active, and the lamps under the bath are extinguished; and when C is inactive G is inactive, and these lamps re-light, so that the temperature of the bath depends on the electric magnet C. This magnet (C) is controlled by the mercurial thermostat B, which is in the bath, and acts as the automatic regulator of the apparatus.

This instrument in shape resembles an ordinary mercurial thermometer. It is provided with two platinum wires—one passes through the glass and is in contact with the mercury near the bulb, the other passes into the bore hole from above. The lower wire is connected with the positive pole of a small battery A; the upper wire has a connection leading to one terminal of the coil round the magnet C, the other terminal having a connection with the negative pole of the battery.

When the mercury in the bore of the thermostat rises into contact with the upper wire the circuit in which the magnet C is placed is opened and the magnet acts. The series of events when the bath is in use is then as follows:

The temperature of the water in the bath rises owing to the heat radiated from the lamps K beneath it; the mercury in the thermostat at the same time expands till it touches the upper wire, C becomes a magnet pulling down the armature D into contact with E, which brings the magnet G into play. This attracts the armature H, thereby elevating the plungers I, and the lamps under the bath are extinguished. The temperature of the bath then falls, the mercury in the thermostat contracts, contact with its upper wire ceases, C is no longer a magnet, upon which the magnet G ceases to act, the plungers fall and the lamps are relit, and the series is complete.

An incubator could be worked by the same apparatus, as the upper wire in the thermostat can be adjusted for any required temperature. As a matter of practice, the bath has worked



satisfactorily for weeks together without any attention, and its temperature does not alter to an extent that is appreciable to an ordinary thermometer.

The apparatus is simple, but difficult of explanation in a few words. My excuse for entering into minute detail is that I have desired to render myself clearly understood. There are probably not a few who have felt the want of such a contrivance, and who, like myself, have been informed by instrument makers that an electrical regulator was an impossibility.

Before closing, I desire to acknowledge my indebtedness to Mr. Weatherby, engineer, for constructing the apparatus and for valuable practical suggestions, and to Mr. A. C. Cossor, Farringdon Road, for making the thermostat.

## PROLONGED ACTION OF THE HEART, MAINTAINED BY ARTIFICIAL RESPIRATION WITHOUT OTHER SIGNS IN A NEW-BORN INFANT.

BY

JOHN J. REDFERN, M.D., M.CH., Surgeon. and GERVASE NEWBY, F.R.C.S., Assistant-Surgeon.

Croydon General Hospital.

A WELL-DEVELOPED male child was delivered with forceps, under chloroform, at full term, at 3.30 P.M. on August 24th, 1901. The delivery showed no unusual symptoms for a primiparous one, the amount of pressure on the head being about that usual with instrumental delivery. The cord was wound twice round the child's neck, and respiration was entirely absent. The heart beat normally, and there was pulsation in the cord. Artificial respiration was attempted, and the chest and face flicked with towels wrung out of cold and hot water, and brandy was rubbed on the chest and along the spine. The trachea was free of mucus.

As all efforts to start respiration, including rhythmical traction on the tongue with the head dependent, were unavailing, and as the heart still continued to beat normally, and the cord to pulsate, intubation was attempted; but a tube small enough to pass into the trachea not being at hand, the cord was tied, tracheotomy was performed, and a catheter introduced into the trachea. Through this tube air was blown into the lungs, and expressed by compression of the ribs. This was continued for over one hour, the heart continuing to beat regularly as long as the inflation was kept up, but if this was stopped the heart began to fail almost immediately, and at times the rate fell to about 50.

The use of the mouth to inflate the lungs proving very fatiguing, a bicycle pump was used, but a small pair of hand bellows acted more efficiently, and raised the heart-beat to over 100.

At the end of two hours and a half, during a short intermission of the bellows action, the first inspiratory effort was made; and again a few minutes afterwards, on stopping the bellows for a moment, it was repeated.

From this time breathing efforts were regularly repeated, three successive breaths being followed by an interval of 15 seconds. The bellows was still occasionally employed, as it seemed to quicken the heart's action, which was, however, remarkably strong and regular. By about 6.45 P.M. the respirations had increased in frequency, being two in every five or seven seconds, and this continued without artificial help until 10 P.M. The temporary tracheotomy tube was now removed, and as respiration through the mouth was only partially possible, another, softer and larger tube was inserted, with a lateral opening to allow respiration through the mouth, as well as through the tube. This tube tended to get blocked with mucus, and was kept free by passing a feather down in the usual way.

During the early hours of the night the respiratory rate was once in two and a half seconds and of this type . . . —. About midnight the respiration became gradually shallower and at longer intervals, say five to seven seconds. The lips turned colour about 2 A.M., the colour then returned and kept good until 4 A.M. when it became darker. The body was warmed with hot water bottles, and wrapped in cotton wool. Between midnight and 1 A.M. clonic spasms of the right hand occurred.

About 4 A.M. the respiration was of the type . . — instead of . . . — as it had been during the preceding six hours. Then it faded gradually. Death occurred about 4.20 A.M. After death the lips, ears and tongue were deeply cyanosed.

The points of unusual interest in this case are (1.) That the heart beat continued good for two and a half hours, without any voluntary respiratory effort, during which time artificial respiration was carried out; (2) increased use of the bellows produced marked quickening of the heart beat; (3) the child never gave any other sign of life than action of the heart and lungs, and clonic spasms of the right hand.

The causes of respiratory failure in this case involve the consideration of the following possibilities: (1) That it may have been caused by strangulation on the neck by the cord possibly producing pressure on the vagus, or phrenic nerve fibres, or (2) by the action of the chloroform inhaled by the mother and carried through the cord to the child, or (3) by injury to the respiratory centre through pressure of the forceps on the child's head.

If the second of these considerations may be entertained, the case would afford a striking example of respiratory failure preceding cardiac failure, and due to chloroform anæsthesia. As bearing on this case, it is interesting to read the opinion of Dr. Robert Kirk of Glasgow, published in the BRITISH MEDICAL JOURNAL of July 10th, 1897, in which he states that inversion without artificial respiration, is the way to treat cyanosis of chloroform. In the above case it was during the cessation of attempts at artificial respiration that the child first gasped, and it breathed better when artificial respiration was discontinued.

## HERNIA OF A DIVERTICULUM, A TRUE LITTRE'S HERNIA.

BY T. RUDOLPH SMITH, M.B., B.C.CANTAB., F.R.C.S.,

Surgeon to the Stockton and Thornaby Hospital.

C. B., female, aged 34, married, was admitted into the Stockton and Thornaby Hospital, September 26th, 1901, complaining of pain across the lower part of the abdomen, and of a swelling in the left groin. Dr. Densham being absent, I took charge of the case at his request.

For the last two years the patient had had a swelling in the left groin when standing or straining; this always disappeared on lying down. For a few days before admission she had had a bilious attack; on the morning of September 26th, while retching, the swelling in the left groin became much more prominent and could not be pushed back. She vomited several times during the day and her bowels acted naturally three times. In the evening Dr. Taylor saw her and sent her into the hospital.

She was examined under an anæsthetic shortly after admission. There was a sausage-shaped swelling on the left side parallel to and half an inch below Poupart's ligament, extending from the situation of the femoral ring to half an inch internal to the anterior superior iliac spine. The swelling was very tense and moderate; taxis failed to reduce it. A vertical incision was made over the position of the femoral ring, and a tightly-distended hernial sac exposed. On incising the sac, blood-stained fluid escaped and some deeply congested gut was seen. This proved to be part of an intestinal diverticulum, the blind end forming the remainder of the swelling extending out towards the anterior superior iliac spine. The sac contained nothing else. The diverticulum was six inches long and of the calibre of the ileum slightly distended. Owing to the congestion of the gut and to the tightness of the femoral ring, there was great difficulty in dividing the constriction which was at the upper and inner margin of the ring.

On drawing down the gut, it was found to be nipped about three quarters of an inch from its point of origin from the small intestine. As the intestine could not be brought into view sufficiently to remove the diverticulum, and the condition of the patient did not warrant any further delay, the herniated diverticulum was returned and the ring sewn up.

The wound healed by first intention, though the temperature

ran a rather varied course for the first ten days, and the patient left the hospital in three weeks, promising to lie up for a further period at home.

This is, I believe, a case of true Littre's hernia as described in Mr. A. Bowlby's *Surgical Pathology*, and is of interest as a rare occurrence. Undoubtedly, the preferable course, if circumstances had permitted, would have been to remove the diverticulum at the time. It remains a constant source of danger, and I shall advise the patient to consent to its subsequent removal if opportunity occurs.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

### HERNIA INTO THE UMBILICAL CORD.

Within the last fourteen days I have operated on two cases of hernia into the umbilical cord, and as I have always understood that it was a very rare deformity, and have never seen a method of operating described in textbooks, they seem worthy of publication.

Case I.—A healthy male infant, 12 hours old. There was a very large hernia distending the cord for about 3 inches, and clearly visible through it. The cord was opened; the cæcum with appendix and several inches of large and small intestine were in the sac. The umbilical opening was too small to allow reduction, and was enlarged upwards; the intestine was then reduced with some difficulty, the cord cut off at its junction with healthy peritoneum, and the wound closed in the usual way with silkworm gut. The child was sent back to its mother, and recovered without a bad symptom.

Case II.—In this case the umbilicus was distended; the opening at its attachment to the cord measured 1½ inch from side to side, and was elevated like the edge of an eggcup from the abdomen. On opening the cord a thin layer of healthy peritoneum, from which the cord could be raised, was seen to cover the umbilical opening. The cord was cut at its junction with the skin all round the umbilical edge (the vessels entering at the lower margin). The peritoneum was then opened, and the umbilical opening stitched with silkworm gut. The child, who was one hour old at the time of operation, did quite well.

In 10,000 births I only remember having seen one other case, and that being 3 days old the cord had sloughed, and the child died of peritonitis.

A. E. Kennedy, Jun.,
Honorary Surgeon, Plaistow Maternity Charity.

### SURGICAL EMPHYSEMA FROM A WOUND OF THE ARM.

The following case seems to be worth recording in connection with the case reported by Dr. Stewart in the British Medical Journal of October 26th, page 1267:

E. T., aged 23, came to my rooms on October 14th. He had slipped while climbing over a fence. As he slipped he caught his arm on a projecting nail in the fence. He had a punctured wound of the left forearm, some 3 inches below the elbow; the hæmorrhage had been trifling; there was some bruising of the skin.

I found well-marked surgical emphysema extending upwards from the wound to half way up the arm. A few hot fomentations cured the pain, and the emphysema disappeared in three days.

Both this injury and that recorded by Dr. Stewart were punctured wounds into muscle. The explanation of the emphysema does not seem very obvious.

Hovingham. Charles W. Smeeton, M.R.C.S., L.R.C.P.

### MOSQUITO LARVÆ IN MAIL STEAMERS.

While travelling in a mail steamer from the Gold Coast to Sierra Leone I was surprised to find a full-grown larva of the mosquito of the variety debited with the odium of conveying yellow fever come through the tap into the wash-hand basin of my cabin. This larva hatched out into a fine stegomyia in three days. As far as I could make out it must have come from the tanks below, through the pumps and from thence into the small tank over the basin. On mentioning the matter to the captain I was informed by him that he had seen them more than once in his basin. The ship had pumped in water from the Congo River four weeks before, and presumably the egg responsible for this larva came up at the same time. The small tank in the cabin did not appear to contain any more larvæ, and as it is open to the air only by a tiny opening in the top it is not likely that a mosquito laid eggs therein. The fact is interesting as showing how mysterious outbreaks of disease on ships may be accounted for, bearing in mind that sick people from the Coast are constantly to be found on the steamers.

Fred Smith, D.P.H.Durham. Major, R.A.M.C.
Sierra Leone.

### A CASE OF RÖTHELN.

It is probable that two distinct diseases are included under this term. One comes across cases very like measles, and others which mimic very mild scarlet fever—morbilliform and scarlatiniform rötheln—(Ashby and Wright). The following is an example of the latter type: A child, aged 8, had scarlet fever a year ago for which he was in hospital twelve weeks. He had typical measles six months ago along with his brother and sister.

The first symptom noticed in the present attack was a rash all over the face and body. His brother had a similar attack a fortnight ago which his mother attributed to "indigestion," for which advice was not sought. The face, trunk, arms, and legs were covered with uniformly scattered rose-pink papules, very slightly raised above the skin, and each with a little areola of its own, exactly like what one sees in very mild scarlet fever, save that the spots were more raised, pointed, and were present on the face. The fauces were redder than normal, but there was no swelling or exudation. The eyes were somewhat suffused, but there was no coryza or coughing. The glands along the posterior border of the sterno-mastoid muscle on each side were enlarged and tender. There was no fever, and the child was otherwise in good health.

The diagnostic features of the case were: (1) History of previous scarlatina and measles; (2) history of similar attack in the case of his brother fourteen days earlier; (3) presence of the rash on the face, and uniform distribution over the body; (4) swollen and tender posterior cervical glands.

Southall, W. J. D. Windle, M.D., B.Ch.Vict.

### AN UNUSUAL CAUSE OF HÆMORRHAGE DURING PARTURITION.

On October 9th I was called to attend a primipara, aged 43, whose labour had just commenced by rupture of the membranes, accompanied by hæmorrhage. The os admitted one finger, the vertex was presenting in the left occipito-anterior position, the vagina was filled with blood clot, and blood was slowly trickling from the cervix uteri.

Pains increased, and labour made steady progress until the birth of the stillborn child seven hours later; each pain was accompanied by a flow of blood. The patient's strength was well maintained, her pulse was good, and there appeared to me to be no urgent need of instrumental interference, but I was at a complete loss to account for the hæmorrhage, as there was no placental edge or laceration of the cervix to be felt, and, so far as the history of the case went, no reason to suspect so-called "accidental hæmorrhage." On delivery of the placenta the cause was at once obvious: the umbilical cord, instead of being directly attached to the placenta, was joined as nearly as possible to the most central point of the membranes; here it divided into two arteries and two veins, both of which coursed over the membranes to the placenta. It had so happened that on the rupture of the membranes, which occurred, as I have previously stated, at a very early stage of labour, one of these veins was torn. This undoubtedly accounted for the hæmorrhage, from which the child was suffering and not the mother. The patient made a complete and uninterrupted recovery.

Lancelot M. Breton, L.R.C.P., M.R.C.S.
Portswood, Southampton.

# REPORTS
ON
## MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

### LONDON TEMPERANCE HOSPITAL.

DYSENTERY: SECOND ATTACK IN SOUTH AFRICA FOLLOWED BY HEPATIC ABSCESS: ONE PINT AND A HALF OF FŒTID PUS REMOVED: HEPATOTOMY: DRAINAGE: COMPLETE RECOVERY.

(Under the care of W. J. Collins, M.S.Lond., F.R.C.S.)

[Notes by J. S. Hosford, M.R.C.S., Surgical Registrar.]

A. B., aged 25, had dysentery for the first time six years ago in the Red Sea. His present illness began in October, 1900, when on his way to South Africa, with indigestion, abdominal pain, night sweats, and diarrhœa. On admission into the London Temperance Hospital on December 11th, 1900, he presented a sunburnt, though anæmic, appearance, and was very prostrate and weak. He was passing small loose stools, containing blood and mucus. The right lower thorax showed local bulging, was dull on percussion, immobile on respiration, and tender to touch. The temperature rose every night to over 101°. Dr. Collins was asked to see the case by Dr. Parkinson, and it was at once transferred, with a view to operation for hepatic abscess secondary to dysentery. There was dulness from the fourth right rib to nearly a handbreadth below the costo-chondral margin.

On December 14th, under chloroform, Dr. Collins made an incision 3½ inches long in the right hypochondrium, 2 finger-breadths below and parallel with the costo-chondral margin. The surface of the right lobe of the liver was exposed, and appeared to have contracted adhesions to the parietal peritoneum. Palpation with the finger indicated the presence of fluid in the right lobe; an aspirator needle was inserted and a pint and a-half of fœtid pus withdrawn. The now flaccid walls of the hepatic abscess cavity were freely opened; towards the middle line, where the parietal adhesions appeared to be wanting or insecure, several sutures were inserted, completely excluding the abscess cavity from that of the peritoneum. The residue of the fœtid contents of the hepatic husk, into which the right lobe had been converted, were then mopped out with swabs on long forceps. Iodoform was dusted in and the cavity lightly packed with several strips of cyanide gauze. The wound was dressed daily for the next five weeks, the discharge gradually abating. The temperature only rose once over 100° after the operation and the patient's condition rapidly improved. He was occasionally troubled with watery evacuations for which Dover's powder was given.

By February 8th the wound had practically closed; his motions were normal, and he had greatly increased in weight. He was discharged well on February 11th.

### ROYAL VICTORIA HOSPITAL, BELFAST.

CASE OF VALVULAR DISEASE OF HEART FOLLOWING INJURY IN A HEALTHY MALE.

[Under the care of Dr. Calwell, Physician to the Hospital.]

(Reported by Mr. Campbell, Clinical Clerk.)

Cases of valvular disease following injury in those whose hearts are unaffected by any degeneration are rare; the notes of the following case may therefore prove of interest.

B. C., a carpenter, aged 20, was admitted to hospital on October 1st, 1901, suffering from contusions about the left temple, forehead, and eye, due to a fall from a scaffolding 16 feet high. He was only able to answer in monosyllables. His pupils were unequal, and his breathing was harsh. The pulse was irregular, 68, and collapsing. There was a history of perfect health up to admission, and none of rheumatism, weakness, shortness of breath, inability to work, or precordial oppression (These facts were ascertained subsequently.)

On October 10th he was removed to the medical wards considerably improved. The pulse was then somewhat "water-hammer" in character and about 80. There was some hypertrophy of the heart with marked arterial pulsation in the neck; the apex beat was slightly heaving and situated in the fifth space in the nipple line. A soft systolic and an indefinite rumbling diastolic murmur were heard at the apex. A harsh systolic murmur, conducted into the arteries was heard at the base, and also a diastolic murmur, musical in the region of the manubrium sterni, but heard outwards in both directions as far as the mid-clavicular line. There was a well-marked systolic thrill over the base and lower part of neck. The patient discharged himself on October 19th against advice. A further important fact came to light while he was yet in hospital. He had been examined on September 5th by Dr. Mark, Belfast, for insurance, and the chest was then found healthy. Dr. Mark kindly examined the patient in hospital, and confirmed the opinion that the condition found had developed since the previous examination.

Remarks.—Physical signs of such a marked kind, pointing very strongly to a rupture of an aortic valve, are rare in healthy adolescents. Cases are mentioned by Broadbent, Bramwell, Allbutt, and other authorities; but still the frequency of such effects of injuries is doubtful. In this case it would have been impossible to have missed the signs present owing to their intensity on even a cursory examination. But the question arises, May not a weakness be left behind, to develop at some future date, in cases where nothing is detected at the time? The probable interpretation in this case is a rupture of an aortic cusp, with consequent dilatation of the auriculo-ventricular orifice and of the ventricle. The peculiar transmission of the murmur suggested a similar accident at the pulmonary orifice. An accurate record was not made on admission as to the presence or absence of hypertrophy, but such a condition was not noticed by those who examined him, although easily recognised on his discharge.

A violent injury to or blow on the chest may cause a rupture of a cusp, or of the walls of the artery leading subsequently to aneurysm, independent of any sudden effort. In this case there may have been some violent struggle from the patient trying to save himself.

# REPORTS OF SOCIETIES.

## ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Sydney Ringer, M.D., F.R.C.P., F.R.S., President, in the Chair.

*Tuesday, December 10th, 1901.*

### Discussion on Modern Methods of Vaccination and their Scientific Basis.

Dr. S. M. Copeman, in opening the discussion, referred to the present epidemic of small-pox in London and the probability of its serious increase unless energetic measures were carried out; he alluded to the origin of the Jennerian method, and its historical development, tracing it up to the point of the official recognition of glycerinated calf lymph. The methods employed by the Government were described: Vaccination of the calf: It was placed in quarantine for a week; then examined as to its general health. When required for use it was strapped to a table, its abdomen shaved and rendered aseptic, and it was then vaccinated with glycerinated calf lymph by incision, not drawing blood, the proceeding being conducted aseptically. It was next placed in a warm stable. After five days the vaccinated surface was washed, crusts were removed; the skin having been put on the stretch, the contents of the vesicles were removed by a sterilised Volkmann's spoon and placed in a sterilised stoppered bottle. The calf was then slaughtered, and an examination made by a veterinary surgeon; and no lymph was used until the organs had been pronounced healthy. The contents of the glass bottle were triturated aseptically, and mixed with four times their bulk of a 50 per cent. solution of glycerine in distilled water, and cultures were made. Storage of lymph was in tubes filled as full as possible, plugged, and sealed. Week by week agar plates were established from the emulsion, the cultures progressively decreasing, and by the fourth week disappearing. When agar plates showed no more cultures, capillary tubes containing it were sent to a children's institution and its potency tested; then sealed capillary tubes were prepared and stored in ice chests waiting distribution. Each

public vaccinator recorded on schedules, indicating the batch of lymph, what the results of vaccination had been. A register was also kept in regard to each calf employed. Details of the success obtained with the Government lymph were given. Changes following on the Vaccination Act of 1898 in regard to regulations of public vaccination, including the effect of the conscience clause, were enumerated. The conscience clause had abolished martyrdom. The conditions of the old arm-to-arm vaccination were described, and the effect of substitution of domiciliary for institution vaccination, the provision of Government lymph, and the instructions for its use. Efficient vaccination involved the clinical activity and purity of the lymph, its proper aseptic insertion, with future aseptic treatment, and revaccination at least once after childhood. Lymph should be used as soon as possible after its asepticity has been demonstrated. Every batch of lymph should be tried on children before being distributed, as effects on the calf were not an infallible criterion. The treatment of the arm was discussed. The preliminary friction of the arm helped the process by the capillary dilatation it produced. During the second week some absorbent dressing was required. A dusting powder of boracic acid was in every case desirable. Scarification should be made through each of four separate drops of lymph placed on the arm, and not *vice versâ*. The huge and deep scars of former years were probably unnecessary. His experiments[1] were then described suggesting that the relation of small-pox to vaccinia was through inoculated small-pox, a condition prevalent at the time of Jenner, and not in itself sufficiently serious to prevent a dairyman from following his occupation. Small-pox in the monkey was found to pass through what was apparently precisely the same course as inoculated small-pox in man. After passing through a series of monkeys small pox could be transferred to a series of calves, and then without any ill-effect to the child. (Lantern slides were shown exhibiting the results of inoculation of variolous matter from man on monkeys, then on calves, and then giving efficient vaccination in the child.)

Dr. L. C. T. Dobson referred to the difficulties in the production of calf lymph. The best results were from small, thin calves with light hair. If the glycerine were acid sooner or later the lymph would certainly become inert. Complaints in regard to the tested lymph sent out were described. There was no test at present known by which lymph could be standardised. Recent complaints were mostly in regard to the secondary vaccination of adults, but the present time gave the first general experience of this. The phenomena of apparent failure of revaccination were mentioned. In some cases vesiculation could be obtained again and again in the same person with different lymphs—a case was referred to of three successful vaccinations in a child in four months. What efficient revaccination was was not yet established.

The discussion was adjourned.

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## MEDICAL SOCIETY OF LONDON.

W. H. Allchin, M.D., F.R.C.P., President, in the Chair.

*Monday, December 9th, 1901.*

The President, in opening the proceedings, made a sympathetic allusion to the death of Sir William Mac Cormac.

### The Measure of Physical Fitness for Life in the Tropics.

Dr. Alexander Crombie contributed a paper on this subject. It was not the climatic conditions which adversely affected the health of Europeans in the tropics but various accidental circumstances; in course of lengthy residence, however, certain defects of constitution and health manifested themselves. Allusion was made to thermogenesis and thermolysis as modified by external temperatures in the tropics. Persons subject to deposition of uric acid did well in equable tropical climates, so that gout was rare. Similarly albuminurics did well depending on the extra call on the functions of the skin, but they were not more easily cured. Acute rheumatism was rare, almost unknown among Europeans, but in India subacute rheumatism was not infrequent among certain classes of natives. The hyperæmic condition of the skin was pathologically helpful to parasitic and exudative skin diseases. Dry scaly eruptions were rare. Susceptibility to chills and internal congestions was great, thus no Anglo-Indian could tolerate cold baths. People of feeble circulation did well, but only for a time, in the tropics. In many tropical regions heat loss was practically prevented. The bodily temperature in the tropics was always about half a degree higher than in Europe, and the temperature of natives was about half a degree higher still; men marching encumbered with accoutrements had a yet higher temperature. In the tropics there was a constant strain on the nervous system, due to the effort to adapt itself to the high external temperature, particularly if conjoined with effects of overwork or loneliness. Two sets of causes predisposed to this neurasthenia, one obesity, the other a weak or unstable nervous system. Nervous breakdown was especially marked in the Civil Service and in the Forestry Department. The man who would retain his health should have no difficulty in the digestion and absorption of nutriment. Neurasthenia with a dilated stomach was an especially unfavourable association, the dilatation being probably due to excessive drinking with meals. The antiseptic action of healthy gastric juice was of importance. A tendency to looseness of the bowels was a disqualification. Among the Indian natives who as a matter of religion adopted all necessary conditions for escaping bovine tuberculosis phthisis was rare. While common in half castes it was rare in Europeans. A phthisical heredity was no bar to tropical residence, such as in Lower Bengal; but if the disease were in existence its course was exceedingly rapid, possibly from the deterioration of the blood by the malarial parasite. Early syphilis, but not the later, could be successfully treated in the tropics. Diabetes ran a slow course.

### The Remote Effects of Tropical Life in Europeans.

Dr. John Anderson, C.I.E., who read this paper, dealt particularly with India. Many diseases attributed to heat were rather attributable to defective personal hygiene. The physiological disadvantages from changes in external temperature were more easily overcome in youth. The reverse process, after return, was not so easy, occurring in later life. Experience from the Standard Life Company was unfavourable in regard to former residents in the tropics. Malaria was *par excellence* the source of physical evil among such. Reference was made to the more usual late sequelæ of malarial disease, such as neuralgia and frontal headache. Locomotor ataxy was very rare among the natives of India, although syphilis was common. Certain serious sequelæ of heat stroke were also alluded to. An apyrexial cachexia, with enlargement of the spleen, was sometimes associated with the malarial parasite. The so-called typho-malarial fever was probably a grafting of typhoid on previous malaria. Hepatic abscess was often latent for years after the return of the patient to Europe. The differential diagnosis of this condition from malaria was discussed. Dysentery, although not dependent etiologically on malaria, was yet specially apt to occur in malarious subjects. The native soldier, extremely liable to dysentery, was comparatively free from liver abscess; a possible relation to diet was suggested to account for this immunity. Sprue or psilosis was probably not known except among persons living in or having lived in tropical countries. Fruit in these cases was well tolerated, and might in part be used in place of milk.

Dr. G. Thin considered that the man who was likely to retain his health in the tropics was the man of good proportionate weight and physique. The late symptoms of malaria were obscure, and many cases of supposed malaria were not due to the plasmodia, instances of which were given.

Mr. Cantlie referred to the relation of liver abscess to dysentery. Dysentery was not the cause of suprahepatic abscess; such might occur in the absence of dysentery and indeed only a few weeks after arriving at a tropical country. The importance of rest in bed for obscure febrile attacks, apart from malaria, was emphasised.

Dr. Lawrie believed that diseases in India were often attributed to climate which were really due to errors in diet.

Dr. Duncan considered that the prevalence of tuberculosis in India varied with the district. In some recovery occurred; in others, as in the Punjab, downward progress was rapid. A European who had once had dysentery should be careful about going out again to India. A subject of sunstroke or

[1] See British Medical Journal, May 11th, 1901, p. 1134.

syphilis should not return to India, and no man should go out to India under the age of 25.

Dr. CROMBIE and Dr. ANDERSON replied.

## ROYAL ACADEMY OF MEDICINE IN IRELAND.

THOMAS MYLES, P.R.C.S., President, in the Chair.

*Friday, November 8th, 1901.*

SURGICAL SECTION.

PRESIDENT'S ADDRESS.

THE PRESIDENT took for his subject the advantages of operative interference in complicated fractures of the long bones, as practised by Mr. Arbuthnot Lane. The older classifications of fractures were, he considered, too artificial to be helpful, and were, to the beginner, stumbling-blocks to diagnosis. Cases of fracture complicated with dislocation were difficult of diagnosis, and where, as was sometimes the case, calcareous deposits formed, the Roentgen rays gave little aid. He met one such case in which a fracture of the anatomical neck of the humerus was complicated with dislocation of the head of the bone, and the deposition of a large calcareous mass which extended up to the clavicular articulation. All the classic symptoms of separation of the greater tuberosity were present, and the pathological condition was only made known by raising the deltoid muscle. In such doubtful cases he recommended that the deltoid should be separated from its brachial insertion, and the part exposed so that the lesion might be recognised. The operation presented no difficulties, was quickly performed, and was comparatively free from risk.

LAPAROTOMY FOR INTESTINAL OBSTRUCTION.

Mr. LENTAIGNE read a paper on a case in which laparotomy had been twice performed, with six months interval, for the relief of intestinal obstruction, resulting from the presence of large concretions in the colon.

The patient, a boy commencing his teens, had been addicted to chewing woollen fabrics, blankets, and such like, and when admitted to hospital was suffering from constipation and vomiting, which daily became worse. For a week he got injections through an O'Beirne's tube, which were unattended with any good results. An operation was performed. The abdomen was opened, a large concretion removed from the colon, and the boy made a good recovery. Six months afterwards he was again admitted to hospital, and again after a fair trial of injections a laparotomy was performed and the colon opened and evacuated, in the performance of which the old silk continuous sutures of the previous operation were come on and found to have remained unimpaired. An attempt was made to create a fistula in order to prevent the recurrence of the condition. The fistula, however, closed, and the boy, now convalescent, left hospital, to return some time afterwards with the same symptoms—vomiting and constipation. A finger in the rectum now detected a large concretion, which was in part scooped out and washed out. The boy made a good recovery. He had discontinued the pernicious habit and remained well

Remarks were made by the PRESIDENT, Mr. CROLY, Mr. MCARDLE, Mr. MITCHELL, Mr. ORMSBY, Mr. DOYLE, Mr. CHANCE; and Mr. LENTAIGNE replied.

CASES.

Mr. H. GRAY CROLY showed: (1) Child, aged 4, showing results of excision of astragalus for tuberculosis; (2) child, aged 7, showing results of excision of astragalus and end of fibula, with gouging of os calcis for tuberculosis; and the astragali removed from three patients. — Mr. E. H. TAYLOR showed: (1) Patient in whom the so-called excision of the superior maxilla had recently been performed for sarcomatous disease; (2) cases showing the result of operation for complete cleft of the hard and soft palate (own operation); (3) case presenting extensive varicosity of the veins of the right upper extremity. He also exhibited: (1) Parts removed in the operation of suprapubic prostatectomy; (2) kidney removed for calculous disease; (3) sarcoma of superior maxilla; (4) comminuted fracture of the atlas vertebra, the result of a fall.

## OBSTETRICAL SOCIETY OF LONDON.

PETER HORROCKS, M.D., President, in the Chair.

*Wednesday, December 4th, 1901.*

PREGNANCY COMPLICATED BY EPITHELIOMA OF THE CERVIX.

DR. R. SANDERSON read a paper on a case of pregnancy of four and a-half months, complicated by epithelioma of the cervix uteri, in which he had performed vagino-abdominal hysterectomy. Finding that the epithelium was operable he removed the uterus and the growth by a combined vaginal and abdominal operation, without previous induction of labour. The specimen and microscopic section of the growth were described and shown. He discussed the ethics and the treatment adopted under the following heads: (1) That where pregnancy and operable cancer of the cervix coexisted, the life of the mother was alone to be considered; (2) that anterior to the 4th month of pregnancy vaginal hysterectemy was the orthodox treatment; (3) that after this period the alternative methods were (*a*) induction of labour followed by vaginal hysterectomy; and (*b*) hysterectomy, without induction of labour, by a combined vaginal and abdominal operation; (4) that the latter of these alternatives, having regard to the improved statistics of abdominal hysterectomy, was in this case to be preferred.

Dr. W. H. TATE congratulated Dr. Sanderson on the successful result of his operation. He thought, however, that it was not necessary to have subjected the patient to the risk of a vagino-abdominal hysterectomy, and that the operation might have been more safely performed by the vaginal route alone. By making a longitudinal incision through the cervix, and emptying the uterus of its contents, it was possible to remove a uterus in which the pregnancy had advanced to the sixth month, if not later. Six years ago Dr. Tate had treated a case of carcinoma of the cervix complicating a five months pregnancy by the older method of inducing abortion, and removing the uterus *per vaginam* ten days later. Although the case was a favourable one for operation the disease rapidly recurred.

Mr. J. H. DAUBER said he thought time alone would decide whether the operation that had just been described afforded the patient a longer period of immunity from recurrence than the more usual method of procedure in these cases. That operation was the best which came nearest to effecting a real and permanent cure. He would like to know in three or five years time if Dr. Sanderson's case were alive and well, and he hoped the Society might be informed on this point. He himself had had a similar case under his care in 1898. He emptied the uterus, and then waited for its involution when he performed vaginal hysterectomy. Recurrence occurred within eighteen months. This he considered unsatisfactory. The fœtus was destroyed, and the mother did not long survive.

Dr. W. S. A. GRIFFITH said he agreed that vaginal hysterectomy after emptying the uterus was at present the best operation, the mortality being very low, and the prolongation of life in many cases considerable.

Dr. AMAND ROUTH said that vaginal hysterectomy could be performed at a much later date than that of a four months gestation. By incising the anterior uterine wall along its centre, as it was pulled down into the vagina, the contents could be readily evacuated. The uterus promptly retracted, and its size became so materially diminished that its removal became easy by the vaginal route. The alternative procedure to this operation in such a case would be somewhat as follows: First, a temporary removal of the cervical growth by scissors, gouge, or cautery, treating the stump with pepsin dressings to digest any sloughs; secondly, induction of abortion; and, thirdly, in a week's time, to allow some involution to take place, vaginal hysterectomy. In early pregnancies he much preferred the former plan. In every case the uterus should be emptied before removal *per vaginam*.

Dr. HERBERT SPENCER agreed that it was not necessary to resort to abdominal section in this case. In a recent paper by E. Alterthum, who had himself performed vaginal hysterectomy for cancer at the sixth month, a list of 18 cases was given in which the uterus was thus removed, all the cases recovering. Nevertheless there was tendency at the present time to operate by the abdomen in these cases, not for the simple removal of the uterus as in Dr. Sanderson's case, but in order to remove the broad ligament and glands as widely as possible. This operation received support from the researches made in Professor Rosthorn's clinic, which showed that 57·5 per cent. of cases of cancer of the cervix in the operable stage had already the glands infected, and therefore a vaginal operation would be useless from the point of view of cure. If these researches were confirmed they would considerably alter our views upon the treatment of cancer of the uterus. As far as he knew the results had not been good, but a sufficient time had not elapsed to allow us to judge of the chances of "cure." At the present time he (Dr. Spencer) believed that in the case under discussion a better operation would have been high amputation with the cautery, followed by removal of the ovum. He thought also that high amputation after induction of abortion was a good operation, if the growth was not in a septic condition. He had not had a case of early pregnancy complicated by cancer in an operable

stage; but in three cases of cancer complicating labour he had amputated the cervix and part of the lower segment after delivery, and the patients were now well after eight and a-half, six, and five years. He did not know of such good results after any kind of hysterectomy for cancer complicating pregnancy.

The President agreed that it was nearly always justifiable to consider the mother alone when both she and the child could not be saved, though he thought it might so happen that it would be justifiable to save the child. He could not help agreeing with those who advocated the vaginal route; and even where the uterus was too large, as when the child was viable, he advocated the induction of labour, and then waiting until involution had proceeded far enough to allow of vaginal extirpation. Moreover, in the earlier states of pregnancy he considered it bad practice to try and drag an unemptied pregnant uterus through the opening made in the vaginal roof: it was far better to remove the contents, thereby reducing the bulk of the uterus to a minimum before extracting it. The removal of the cancerous mass first, leaving the uterus to be dealt with afterwards, had not been considered by the author, but he agreed with Dr. Routh that it might in some cases be practised with advantage. In operating he used numerous short forceps, grasping very little tissue, and removing them in thirty hours. In this way, by the help of formalin douches, offensive discharges following upon the operation were reduced to a minimum.

Dr. Sanderson, in reply, recognised the justice of the criticisms in the debate on this case. He, however, found it difficult to understand why a combined hysterectomy should be a more severe operation than a vaginal or an abdominal one. Whether the cervix was circumcised from below or from above, as in Doyen's operation for abdominal hysterectomy, could make little or no difference in the severity of the operation, and he believed that in the future, as abdominal methods improved, the abdominal or combined route would be preferred to the vaginal.

### Paper.

A short paper by Dr. J. P. Maxwell (Changhoo, China) was then read on 2 fatal cases of pernicious vomiting in pregnancy.—This was discussed by the President.

### Report of Subcommittee.

A report of the Subcommittee upon the President's specimen of deciduoma malignum was then received.

### Specimens.

The following specimens were shown:—Dr. Cuthbert Lockyer: Two septicæmic uteri, with bacteriological investigations.—Dr. W. S. A. Griffith: A person of uncertain sex.—Dr. C. Hubert Roberts: Case of male pseudo-hermaphroditism.—Dr. Amand Routh: Tubal gestation where rupture occurred during the process of tubal abortion; operation; recovery.—Mr. H. S. Stannus (introduced by Dr. W. H. Tate): A case of orbital tumour in a hydrocephalic fœtus with hydramnios.—The specimens were discussed by the President, Dr. G. F. Blacker, Mr. A. C. Butler-Smythe, Dr. C. J. Cullingworth, Dr. F. J. McCann, Dr. G. H. Drummond Robinson, and Mr. J. H. Targett.

## LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

A. G. Barrs, M.D., F.R.C.P., in the Chair.

*Friday, December 6th, 1901.*

### Axis Traction Forceps.

Dr. Hellier read a paper on the use of axis traction forceps in midwifery. He briefly sketched the development of the midwifery forceps, demonstrating the need of the third or perineal curve. He described the points requisite for the construction of an efficient traction instrument and showed and criticised various patterns now on the market. He examined the objections urged against such instruments in several modern works on midwifery. The alleged difficulty of application was very easily overcome. It was quite a mistake to assert that in any way the prognosis to the child was less favourable than when ordinary forceps were employed. Axis traction forceps were suitable for low as well as for high positions of the head. He believed that if anyone who had had experience of old patterns would use the axis traction forceps sufficiently to become familiar with their application, and would apply them in a few really difficult cases they would not again abandon the use of them

Mr. C. J. Wright, Dr. Braithwaite, Dr. Croft, and Dr. Draper took part in the discussion; and Dr. Hellier replied

### Cases illustrating Resonance to Percussion over Ovarian Tumours.

Dr. E. O. Croft read a paper on this subject. He said that the chief conditions which might give rise to a resonant note over the situation of an ovarian tumour had been described thus: (1) By intracystic changes producing gas, such as decomposition of contents after tapping or suppuration associated with gas-forming bacilli; (2) by the entry of air into a cyst from a communication with the bowel produced by breaking through of an adherent portion; (3) by the displacement forwards of coils of intestine and their adhesion to the front of the tumour. The following illustrative cases were related:

Case I. Married woman, aged 27. One child born seven years previously. Abdominal enlargement noticed about eighteen months. "Caught cold" during menstruation, which was arrested. Three months afterwards a severe attack of peritonitis. The tumour was then discovered, and there were normal physical signs of an ovarian cyst about the size of a child's head. The symptoms were subsiding and operation was postponed. A few weeks later the outline of the cyst could be felt as before, but over its whole area the percussion note had altered to one of tympanitic character. Ovariotomy was done. The tumour, with twisted pedicle and many adhesions, was found to be full of fœtid gas. Only a very small amount of foul pus existed in its lowest pocket. There was no opening of communication with any portion of bowel. The gas was evidently produced by gas-forming bacilli associated with suppuration, the infection probably having gained access by means of the damaged vitality of the adherent portion of bowel wall. The patient made a good recovery. Unfortunately a bacteriological examination was not made. Case II. Married woman, aged 38. Two pregnancies, the last 10 years ago. For four or five years the patient had suffered from severe attacks of abdominal pain at intervals. About twelve months ago she had an attack of peritonitis and about one month before operation a more severe attack. Menstruation regular throughout. On examination the abdomen was enlarged by an obvious cystic tumour. On percussion a central area of dulness existed, having the umbilicus at its centre. This area was surrounded by tympanitic areas in the epigastric, both hypochondriac and lumbar regions, but in addition a broad tract of tympanitic resonance occupied the iliac and hypogastric regions. The physical signs thus suggested a pancreatic or mesenteric cyst. A pelvic examination revealed, however, the fact that when the uterus was pulled on by a vulsellum it dragged on the tumour. A probable diagnosis of ovarian tumour with long pedicle and abnormal relations of bowel was made. The abdomen was opened. The tumour was a large dermoid of the left ovary embedded in adhesions. The pedicle had twisted so that the original left surface of the tumour had passed across anteriorly to the right, and in doing so had drawn with it a mass of adherent bowel which was found lying across the lower half of the front of the tumour. The tumour was removed and the patient recovered.

Dr. Barrs, Mr. Littlewood, and Dr. Hellier discussed the paper; and Dr. Croft replied.

### Cases.

Dr. Trevelyan: (1) A case of profuse hæmatemesis in a man (treated with gelatine); (2) an unusual case of wasting of the muscles of the forearm: (3) a case of functional intentional tremor of the arm; (4) a case of Graves's disease with a previous history of acute insanity; (5) a case showing retrogression of marked cerebral symptoms, with the exception of papillitis, which had passed into atrophy (? quiescent tuberculous tumour); (6) a case of laryngeal paralysis.

Society for the Study of Disease in Children.—At a meeting held on November 15th, Mr. Robert Jones (Liverpool) in the chair, Dr. David Walsh showed a girl, aged 14 years, with a tumour in the left flank diagnosed as hydronephrosis. An *x*-ray examination of the case showed a small calculus impacted in the ureter near the bladder, and also a hydronephrosis shadow. Mr. R. Clement Lucas suggested that before operation was resorted to the patient should be examined *per vaginam* under a general anæsthetic.—Mr. Sydney Stephenson exhibited a child, 17 months old, who was suffering from acute miliary tuberculosis, with pulmonary and cerebral manifestations. Double optic papillitis existed, and a typical tubercle was present in the choroid coat of the right eye. There was, in addition, a tuberculous ulcer involving the palpebral conjunctiva of one eye. The ulcer—in scrapings from which tubercle bacilli had been demonstrated—had destroyed a portion of the free edge of the eyelid, and was not associated with granulations. Mr. George Pernet thought the conjunctival ulceration corresponded to the miliary tuberculous ulcer occurring sometimes about the edges of the lips. Dr. C. O. Hawthorne remarked that the optic discs were considerably swollen, and suggested that the papillitis might possibly be due to a tuberculous intracranial tumour and not to tuberculous meningitis.—Dr. C. O. Hawthorne showed a boy of 6 years with considerable

enlargement of the lymphatic glands of the neck, with a similar but less marked condition of the axillary glands. The blood showed no excess of white corpuscles, but a relative increase of lymphocytes. He considered the case to be one of Hodgkin's disease. Dr. A. E. Sansom asked whether the spleen was enlarged. Dr. R. Hutchison suggested that the case was one of tuberculous glands. He doubted whether there was really such an affection as Hodgkin's disease. Mr. Pernet and Mr. R. Clement Lucas also discussed the case. Dr. Hawthorne, in reply, said the lower end of the spleen could just be felt. He pointed out that the glands were not matted together, and that their characteristics were different from those of tuberculous glands.—Dr. G. A. Sutherland and Mr. Jackson Clarke showed a child of 2 years with marked shortening of all the limbs, six digits on each hand, slight harelip and congenital heart disease. They suggested that an achondroplasic condition was present, The case was discussed by Dr. Hutchison, Mr. Pernet and Dr. Shuttleworth. Dr. Sutherland briefly replied.—Dr. Edmund Cautley showed the heart of a child, aged 15 years, who had died from pulmonary regurtitation. Thespecimen weighed 11 ozs. and was firm and globular. The right ventricle was markedly hypertrophied. The pulmonary valves were much thickened and puckured, and on two of them were warty vegetations with apparent loss of substance. Dr. Theodore Fisher thought the case one of infective endocarditis, a view shared by Dr. E. A. Sansom. Dr. Cautley replied.—Mr. Gifford Nash (Bedford) showed the kidneys from two children of the same family, whose ages were 6 months and 10 weeks respectively. The kidneys were the seat of congenital cystic degeneration and the enlargement in each case was noticed shortly after birth. Dr. Theodore Fisher inquired whether it was common for children with congenital cystic kidneys to live weeks or months. Mr. Nash, in reply, said there were instances on record of such patients surviving to 20 or 30 years of age.—Mr. J. Howson Ray (Manchester) showed specimens and sketch illustrating a case of congenital umbilical hernia of the size of a fœtal head occurring in the Children's Hospital, Manchester.—Dr. Edmund Cautley read a paper on the etiology and morbid anatomy of tuberculous meningitis based upon the necropsy and clinical records of the last 27 fatal cases under his care. Twenty-two occurred in children under 5 years of age, and only 5 during the next five years of life. A family predisposition existed in 5 cases. In two instances only was the disease limited to the meninges. In 23 the mediastinal glands were caseous, and in 4 of these the mesenteric glands were also affected. Dr. Cautley summed up his views shortly as follows: Inheritance means exposure to infection. Injury is rarely an exciting or predisposing cause. The respiratory tract is the great channel of infection. The alimentary tract is rarely primarily infected. Tuberculous milk is rarely, if ever, the source of infection. The prognosis is very hopeless on account of the extent of the tuberculous disease elsewhere. The evidence obtained from the examination of the brain shows that operative treatment may be discarded as experimental rather than useful. The paper was discussed by Dr. G. A. Sutherland, Dr. Theodore Fisher, and Dr. Willmer Phillips.

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Otological Society of the United Kingdom.—The annual meeting was held on December 2nd, when the following were elected office-bearers for the ensuing year:—*President*: Urban Pritchard. *Vice-Presidents*: Peter McBride, Edward Law, and Arthur Sandford. *Honorary Treasurer*: Alphonso Elkin Cumberbatch. *Honorary Librarian*: E. Cresswell Baber. *Editor of Transactions*: Arthur H. Cheatle. *Honorary Secretaries*: William Milligan and W. Jobson Horne. *Council*: Sir William Dalby, Adolph Bronner, Dundas Grant, Charles A. Ballance, Stephen Paget, and John Story.—The reports of the Council, the Treasurer, and the Honorary Librarian were read and passed.—Mr. A. H. Cheatle was appointed Editor of the Society's *Transactions*.—Mr. R. Lake showed a patient from whom he had removed the necrosed labyrinth, and had secured a very beautiful specimen of the membranous cochlea.—Dr. Milligan showed a patient on whom the complete mastoid operation had been performed, with grafting of the antro-tympanic cavity. The result was good, and the hearing power of the patient had materially improved. The case was discussed by the President, Mr. De Santi, Dr. Edward Law, Dr. Hill, Mr. Pritchard, and Mr. Cumberbatch.—Dr. Dundas Grant and Mr. C. A. Ballance showed a patient who had been operated upon for temporo-sphenoidal abscess, with complete recovery. In connection with this case Mr. Ballance showed Prysing's knife for use for exploration in cases of intracranial abscess, and also a mallet for mastoid operations made of cowhide.—Mr. C. A. Ballance showed a patient upon whom a mastoid operation had been performed, and where a ragged opening in the bone with exposed dura mater had been successfully closed by means of an epithelial graft.—Dr. Herbert Tilley showed a patient who had been successfully operated upon for thrombosis of the lateral sinus. Recovery without ligature of the jugular vein had taken place.—Mr. F. C. Abbott showed a patient suffering from a rapidly growing carcinoma of the external auditory meatus. A considerable amount of fluid, which Mr. Abbott considered to be cerebro-spinal in nature, was constantly oozing from the ear, suggesting the probability of the growth having eroded the bone towards the cerebral substance.—Mr. Cheatle and Dr. Bronner made remarks upon cases of malignant disease arising from the external auditory meatus. Dr. Milligan suggested in the event of operation not being feasible, the injection of formalin solution into the growth, with the idea of trying to mitigate the patient's sufferings. Mr. Waggett suggested injections of pyoktanin: Mr. Fagge and Mr. Yearsley suggested the use of the *x* rays as a means of treatment.—Mr. A. H. Cheatle showed a patient with a membranous web stretched across the external auditory meatus at a distance of about half an inch from the normal position of the membrana tympani. The President considered the tissue to be cicatricial. Dr. Macnaughton-Jones related a case of a similar nature in which a membrane had formed, and in which after excision the hearing power had been considerably improved. Dr. Scanes Spicer considered the membrane to be a very much distended membrana tympani. Dr. Milligan suggested that the membrane was a congenital web.—Mr. Urban Pritchard showed a specimen of aspergillus: and Mr. Waggett remarked upon the occasional presence of aspergillus in stablemen.—Mr. Fagge showed a temporal bone removed from a patient suffering from tuberculous disease of the middle ear. The bony portion of the facial canal had been much eroded by the disease.

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Society of Anæsthetists.—At the opening meeting held on November 1st the President, Mr. Walter Tyrrell, chose as the subject of his inaugural address the dosage of anæsthetics considered from a clinical standpoint. He disapproved of those methods in which large quantities of chloroform were administered suddenly, and emphasised the view that anæsthesia should be gradually induced by the aid of carefully graduated and evenly increasing doses. In the discussion that followed Dr. Garner gave some details of Dr. Lawrie's methods of procedure. He thought the teaching of Dr. Lawrie was similar to that of the Society of Anæsthetists. With regard to the struggling of the patient, he respectfully differed from the President. He would not push the chloroform when the patient was beginning to vomit or becoming sick. In India the surgeon had to attend to the anæsthetic as well as to the operation. Dr. Silk said he preferred to begin with a small but increasing dose of the anæsthetic. He did not approve of the plan of commencing with a drachm or half a drachm, or with making the strength of the vapour just sufficient for the patient to breathe. In cases of struggling he preferred, unless the breathing was absolutely restricted, to continue the administration, allowing plenty of air. He thought struggling a dangerous period, and the sooner it was got over the better. He did not consider that sickness during administration ought to occur, and when it did occur it was due either to idiosyncrasy on the part of the patient or to some miscalculation on the part of the administrator. The debate was continued by Mr. W. E. Burton, Mrs. Dickinson-Berry, and Dr. Dudley Buxton. Dr. Buxton considered that neurotic persons were more liable to vomit than others in consequence of their secreting and swallowing a greater amount of saliva mixed with chloroform. It seemed to him that the dosage was a question for the administrator and also for the method.

An ignorant man might achieve success with a faulty method because he was careful; ignorance combined with skill did not justify the use of a bad method.—Mr. Edmunds exhibited a stationary apparatus for administering chloroform vapour mixed with air, the apparatus somewhat resembling Junker's adaptation of the wash bottle with Richardson's bellows. The supply of air driven through the liquid chloroform was obtained from a gasometer, the gasometer being filled with air at the commencement of the administration; the pressure of the air passing through the fluid being controlled by loading the cylinder of the gasometer with sandbags of various weights. The supply of chloroform was continuous, the strength of dose being regulated by varying the distance at which the facepiece was held from the patient's face. Mr. Edmunds used paper facepieces of an inexpensive pattern, so that they could be thrown away as soon as used.

Anatomical Society of Great Britain and Ireland.—The annual meeting was held at Middlesex Hospital on November 29th.—Professor G. B. Howes, the Honorary Treasurer, in submitting a statement of accounts, referred to the healthy financial condition of the Society.—The following were elected officers for the ensuing year:—*President:* C. B. Lockwood. *Vice-Presidents:* R. Clement Lucas, M.S., Arthur Thomson, M.B., A. M. Paterson, M.D. *Treasurer:* G. B. Howes, LL.D., F.R.S. *Secretaries:* Peter Thompson, M.D. (England), L. H. Bryce, M.D., F.R.S.E. (Scotland), C. H. Patten, M.D. (Ireland). *Council:* C. Addison, M.D., R. J. Berry, M.D., F.R.S.E., A. Birmingham, M.D., J. Black, M.B., D. J. Cunningham, M.D., F.R.S., A. F. Dixon, M.B., E. Fawcett, M.B., W. H. Gaskell, M.D., F.R.S., Robert Howden, M.B., A. Keith, M.D., Alex. Macalister, M.D., F.R.S., J. Musgrove, M.D., F. G. Parsons, W. G. Ridewood, D.Sc., Arthur Robinson, M.D., Barclay Smith, M.D., J. Symington, M.D., G. D. Thane, A. H. Young, M.B., B. C. A. Windle, M.D., F.R.S.—After Mr. Lockwood had taken the presidential chair the thanks of the Society were given to the outgoing President, Professor A. H. Young, and to the outgoing Secretary for England, Dr. Arthur Keith, for their invaluable services.—The following communications were brought before the Society: Dr. Walter Kidd: Diagrams illustrating the arrangement of the hair on the frontal region of man.—Dr. F. H. Theile: A heart showing transposition of the aorta and pulmonary artery, with complete separation of the right and left ventricles.—Dr. A. Keith: A specimen of complete absence of the left lung in a child (shown by Mr. F. W. Jones).—Dr. A. Keith and Mr. F. W. Jones: Specimens illustrating the development of the cardiac end of the human stomach.—Dr. R. J. Gladstone: Some cephalometric instruments, including (1) an improved form of callipers designed by Mr. J. Gray; (2) an instrument for measuring the distance between the biauricular line and bregma; (3) a machine for drawing the contour of the head.

Glasgow Southern Medical Society.—At a meeting on November 28th, Dr. John Stewart, President, in the chair, Dr. James Hinshelwood gave an address on further observations on congenital word-blindness. He referred to the comparative frequency of the disease, he himself having seen quite a number of cases during the last few months. One was too apt to think of the eye itself when dealing with the powers of vision in any given case. In order to comprehend the full extent of the visual act, one must think also of the relationship of the work of the cerebrum. As an illustration of this close relationship of eye with brain, he mentioned the result of the operation for congenital cataract. After removal of the cataract, the patient, while able to perceive, was for a time unable to recognise, the visual memory not having been developed. In connection with each special sense there was a memory which developed unconsciously, and enabled us to remember past impressions. In some these memories were very highly developed, and an instance of an acute visual memory was given in which a painter, after having once only seen the person, could produce a good portrait. In some brain diseases, on the other hand, the patient, while able to see with his eyes, could not recognise his own relatives. With regard to the anatomical connection of the auditory speech and visual centres in the brain, Dr. Hinshelwood showed, with the help of diagrams, that they received their blood supply from the same artery. A thrombosis might affect one branch of the artery, and should that branch supply the brain area connected with the visual memory for words, there would be produced a state of word-blindness, though the eye structures would be found on examination to be quite normal. From a prolonged study of the subject, he had come to the conclusion that there were memory centres in the brain for words, figures, and letters; that in man these centres were acquired; that they were present on one side of the brain only, and that they consisted of groups of specially developed cells. On what other theory, he asked, could be explained those cases in which the memory for words alone was blotted out, or where the scholar conversant with many languages became deaf to his mother tongue alone? After some remarks on the prognosis of word-blindness he referred to treatment, and recommended re-education of the patient, in the hope that a corresponding area on the other side of the brain might take up the work. Speaking particularly of congenital word-blindness, Dr. Hinshelwood read notes of two cases seen lately. Both children were very intelligent, could spell, count, and repeat passages by heart, but had great difficulty in learning to read. In the attempt to read, both would repeat the letters aloud, thus making use of their auditory memory, which was quite intact. In explaining the causation he thought there was defective development in the cells of the brain area concerned with the visual memory for words and letters. In conclusion, he dwelt on the importance of having these defects of children recognised and attended to, and advocated special classes for backward children.

Bristol Medico-Chirurgical Society.—At a meeting on November 13th, Dr. B. J. Baron in the chair, Mr. T. Carwardine showed a patient with symmetrical lipomata of unusual distribution, and a case of sarcoma which he considered had undergone spontaneous recovery. Mr. C. A. Morton, Dr. T. Fisher, Dr. L. Firth, and Mr. R. Williams discussed the cases.—Dr. E. C. Williams showed a child with a peculiar cardiac murmur. Drs. Michell Clarke, Stack, K. Wills, T. Fisher, E. Markham Skerritt, and C. Elliott discussed the condition.—Dr. W. H. Newnham showed the following specimens: Ruptured tubal pregnancy, pregnant fibroid uterus, fibroid uterus of an unusual character. Dr. J. Swain, Mr. T. Carwardine, and Mr. C. A. Morton commented on the specimens.—Dr. T. Fisher showed specimens of actinomycosis of the liver and lungs. Dr. J. Swain, Dr. E. Markham Skerritt, Mr. T. Carwardine, and Mr. Paul Bush spoke on the subject.—Dr. Walter C. Swayne read a paper on three cases of abdominal section, and showed the specimens. Mr. C. A. Morton discussed the paper.—Mr. James Taylor read a paper on *x* rays in the diagnosis of renal calculus. Mr. Paul Bush, Dr. J. Swain, Mr. C. A. Morton, Dr. F. H. Edgeworth, Mr. A. L. Flemming, and Dr. T. Fisher remarked on the paper.

Ulster Medical Society.—At a meeting on December 5th, Professor Whitla, President, in the chair, Dr. McQuitty showed two men who had suffered from myxœdema, but now presented little feature of the disease owing to the steady exhibition of the thyroid treatment. The rarer features of the disease exemplified in these cases were persistent sweating of the head, more marked in one case, on one side.—Mr. Fullerton showed photographs of a case of penile hypospadias and cleft scrotum, and discussed the operative procedures in such cases.—Dr. Darling and Professor Lorrain Smith showed the kidneys and bladder from a case of enlarged prostate; the patient, an old man, never complained of any difficulty in urination, and yet the bladder was hypertrophied and the ureters and renal pelves greatly enlarged; the middle lobe projected inwards in a conical shape, blocking the meatus.—Dr. Charles O'Neill read a paper on the biological purification of sewage, illustrated with limelight views; reference was made to the plans in various towns in England, and to Drs. Letts and Lorrain Smith's experiments in Belfast.—Mr. Kirk described a modification of Thiersch's method of skin grafting, which allowed the easy escape of any exudation of blood or serum from beneath the graft.—Dr. Fielden showed the apparatus for the combined administration of

nitrous oxide gas and oxygen, which allowed the continuation of the anæsthetic for much longer and with perfect safety than was possible with the former gas alone. A large number of members offered remarks on all the papers. Dr. O. M. Praeger (Belfast), Dr. C. K. Darnell (Bangor), and Dr. Joseph Fulton (Belfast) were elected new members. After a few appropriate remarks, expressing not only his own sorrow, but that of all members of the Society on hearing of the death of Sir William Mac Cormac, Professor BYERS moved the following resolution:

That we, the members of the Ulster Medical Society, desire to take this the earliest opportunity of placing on record the great loss we have sustained by the death of Sir William Mac Cormac. Originally an ordinary, afterwards an honorary, member, he took the deepest interest in the affairs of the Ulster Medical Society, and the members always followed with pride the distinguished career after he left Belfast. Like his able father he maintained in all his actions the highest traditions of the medical profession. The members of the Ulster Medical Society wish also to express their sincere sympathy with Lady Mac Cormac in her present deep trial.

Dr. DEMPSEY seconded, and the motion was pased in silence.

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SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on November 21st. Dr. C. H. WILLEY, President, in the chair, Dr. C. N. GWYNNE showed a girl, aged 5, suffering from double congenital dislocation of the hip in which he had tried bloodless reposition of the head of the femur as recommended by Lorenz.—Dr. G. CARTER narrated two cases of labour occurring during the course of acute croupous pneumonia. He considered that labour occurring early during the course of pneumonia in a healthy subject while the powers were still good was not probably a very dangerous complication, but when it occurred later in the disease it was of grave omen.—Mr. R. FAVELL related the following cases and showed specimens: (1) Removal of unruptured tubal gestation of one side with hydrosalpinx of the other side; (2) dermoid tumour of ovary removed by vaginal cœliotomy.—Dr. L. HUSBAND read notes of a case of hydatidiform degeneration of the chorion, of which the noteworthy features were the occurrence of severe vomiting rather than hæmorrhage as the chief symptom, and the early period at which evacuation occurred, namely, the tenth week.—Mr. SNELL showed the following patients: (1) A young woman from whom an encapsuled tumour (endothelioma) had been removed from the orbit. The growth reached to the back of the orbit, along the lower floor, and was loosely connected with the eyeball and optic nerve. The globe was preserved and vision was normal. (2) A woman from whom a sarcoma had been removed from the lower wall of orbit. (3) A man injured by burn from piece of hot steel. Four rectifying operations had been performed: (*a*) For ectropion of lower lid, (*b*) for obliteration of canaliculus (epiphora), (*c*) for extensive symblepharon, (*d*) for ingrowing eyelashes of upper eyelid. Mr. Snell also showed a large clear cyst (size of a pigeon's egg) removed from the upper and inner angle of orbit. The patient was a young man, aged 19, and the cyst had existed for many years, but had increased in size, especially recently. Mr. Snell related a case of headache relieved by correction of refraction error, and remarked upon the effect of cycling in some instances.

The patient was a missionary, aged 32. The headaches were severe, affecting chiefly the left side, upper part, and back of head. They commenced in February, 1899. A doctor declared the eyes were normal, and ordered six months change of scene, etc., with less work. The patient returned to work, somewhat improved, in the autumn. He managed, though suffering at times considerably, to run on until February of this year, when he completely broke down and was invalided to England. The Medical Board ordered six months rest. At the expiration of this time he was still unfit for work, and he was recommended to consult an oculist. He accordingly saw Mr. Snell in October last. V = ⅞ each eye: after homatropine and cocaine, V = ⅝, or + .5D cyl., axis horizontal, V = ⅞ each eye. Muscle balance was normal. Cylinders were ordered for general use. Relief was speedy and complete. After three weeks he desired to return to work, and on November 23rd took up the duties of a curacy.

Mr. Snell remarked on the frequency with which headaches depended on eye conditions, and said that knowledge of this relationship was becoming more widely recognised. The instance related was a good illustration of the relief following the correction of error of refraction. The defect was of low degree, as was often the case, but the axis of the astigmatism was contrary to the rule. The muscle balance ought always to be tested. Another point in this case was the increased headache and discomfort which sometimes followed cycling. Mr. Snell alluded to this as occasioned, in this and other instances he had met with, by the rider stooping over the handle bars and thereby necessitating, when looking forwards, the gaze being directed above the horizontal line, thus inducing weariness of the elevator muscles.

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LIVERPOOL MEDICAL INSTITUTION.—The first meeting of the Pathological and Microscopical Section for the session was held on November 14th, Dr. J. HILL ABRAM in the chair. Sir W. M. BANKS showed a specimen of tuberculous kidney, a recurrent sarcoma, and a rubber drainage tube which he had removed from a pleural cavity, and which had been responsible for prolonged empyema.—Drs. ABRAM and DIMOND showed multiple aneurysms from a man, affecting the aorta, cœliac axis, and the superior mesenteric artery.—Mr. W. THELWALL THOMAS showed a melanotic carcinoma of the kidney, a tumour of the mesentery probably an endothelioma, also an adenomatous prostate which he had removed by suprapubic prostatectomy.—Mr. R. C. DUN showed an ileo-cæcal intussusception removed *post mortem* from a child 6 months old; no abdominal tumour was discernible during life, and the intussusception was discovered at the necropsy high up in the left hypochondriac region entirely overlapped by the left lower ribs.—Dr. BRADSHAW showed a specimen of cicatrised tuberculous lungs from a man who ten years previously had suffered from phthisis, and had gone to Davos Platz, where he recovered and remained. On his return to Liverpool he died from an attack of acute bronchitis.

Dr. GRÜNBAUM showed a micro specimen of typhoid lesions in the intestine of a chimpanzee.—Dr. E. GLYNN showed specimens of acute yellow atrophy of the liver and phosphorous poisoning: he contrasted the appearances and illustrated his remarks with microphotographs.—Dr. CARTER showed a specimen of ulcerated colon associated with hydatid cyst of the abdominal wall from a woman; at the necropsy the right pulmonary apex was the seat of a cicatrised tuberculous cavity with a calcareous nucleus; the vermiform appendix was of embryonic type.—Mr. GEO. HAMILTON exhibited a specimen of cancer of the sigmoid flexure of the colon.—The specimens were discussed by the CHAIRMAN, Drs. T. R. GLYNN, CATON, BUCHANAN, CARTER, GRÜNBAUM, BRADSHAW, Messrs. CRAWFORD and HAMILTON, and Professor BOYCE.

—Dr. ABRAM discussed some points in cardiac pathology under the headings of: (1) Failure of compensation in valvular disease; stating that whilst in agreement with the view that in most, if not in all, cases a nutritional factor was the essential one, he had not found any appreciable change in the cardiac muscle in an examination of 10 cases. He could not, therefore, support the statements of various writers as to the existence of myofibrosis in the walls of dilated and hypertrophied cavities. (2) The morbid anatomy of simple endocarditis. Dr. Abram mentioned the view that in the early stage of endocarditis a proliferation of subendothelial connective tissue alone occurred, and that superjacent thrombosis and leucocytic infiltration were late and secondary phenomena. He also suggested that this view lent some anatomical support to Dr. Caton's treatment for the prevention of valvular disease. The paper was illustrated with microscopic specimens and lantern slides. The discussion which followed was entered into by Drs. T. R. GLYNN, CARTER, CATON, RENDLE, and Professor SHERRINGTON: and Dr. ABRAM replied.—Dr. GRÜNBAUM demonstrated the near relationship of the anthropoid apes to man as shown by the biological blood test. "Human antiserum" gave a precipitate with gorilla, orang, or chimpanzee blood, practically indistinguishable from that with human blood. On the other hand, "chimpanzee antiserum" reacted with human, gorilla, and orang blood. The various serums and bloods were quite interchangeable. Quantitative investigations might reveal differences; also further use of the microscopical method, which was quicker and plainer than the macroscopic method hitherto employed. A discussion followed, in which the CHAIRMAN and Professors SHERRINGTON and BOYCE took part; and Dr. GRÜNBAUM replied.

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CLINICAL SOCIETY OF MANCHESTER.—At a meeting on November 19th, Mr. HERBERT LUND in the chair, Dr. EUGENE S. YONGE described Ash's operation for deflected nasal septum, and demonstrated minutely the technique of the operation and the instruments used in its performance. He showed some patients upon whom he had operated with very satisfactory results.—Dr. MILLIGAN gave a demonstration on the

treatment of chronic suppurative mastoiditis with special reference to the employment of epithelial grafts as a means of healing the cavity in the bone left by the operation. The demonstration was illustrated by a number of lantern slides, several of which had been lent by Mr. Ballance. The technique of the operation for removing disease in the bone was fully described, and slides shown to illustrate various points in the anatomy of the mastoid area. The method of grafting, as suggested by Mr. Ballance, was fully dealt with, the various steps of the operative technique being shown upon the screen. Certain of the instruments necessary in the performance of the grafting operation were also shown, and reference was made to the electric motor which the reader of the paper in conjunction with Mr. Ballance had invented. Special stress was laid on the necessity of clearing out all disease and the difficulties which were encountered in doing so. The method of cutting grafts was also demonstrated, and the lining of the cavity with gold leaf was fully illustrated. The results of the operation as a whole were then considered, and it was shown how the period of after-treatment was distinctly diminished by the employment of epithelial grafts. Two patients upon whom the operation had been performed were demonstrated to the meeting, and the favourable results upon the hearing power emphasised.

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Midland Medical Society.—At a meeting on November 27th, Mr. Arthur Oakes, President, in the chair, Dr. Kauffmann showed a case for diagnosis.

It was that of a girl, aged 11, who was affected with a slowly-progressing paralysis, with ataxia, which had commenced at the age at 8. There was no evidence of congenital syphilis, and no history of the paralysis following on acute infective disease. The legs were now extremely weak, and in spastic extension, which was, however, not very rigid; six months ago, when she could still walk a little, there was some reeling ataxia of the gait. The arms were now weak and tremulous, the tremors resembling those of insular sclerosis in every respect. There was also a little shaking of the neck and trunk on exertion; no nystagmus had been observed, and her fundi oculorum and pupils were normal. The voice was extremely low and a little nasal, as though there were slight paresis of the soft palate; utterance was very slow and very imperfect, but could not be described as scanning. The ends of the words were clipped, and their meaning was understood with difficulty; there was no aphasia. Sensation all over the body was normal. The bladder and rectum were controlled. The mind showed a condition of quiet satisfaction, and the face wore a permanent smile. The intellectual development was not that of a child of 11, and would have been poor for a child of 6 or 7.

Dr. Kauffmann was inclined to regard the case as one of hemispheral cortical degeneration; the view of its being one of hereditary cerebellar ataxia was propounded, and the question of insular sclerosis was discussed.—Mr. Haslam showed a woman aged 49, whom he had treated by the method suggested by Sir W. Bennett in the *Lancet* of November 4th, 1899. The neuralgia had existed for six years and during the latter half of that period the pain had been very severe, while for the last six months it had been almost more than she could bear. Immediate and complete relief followed the operation, which was performed four months ago, and there had been no return of pain. Dr. Haslam pointed out that though it was too soon to speak positively about the curative effect of the method in this case, there was every reason to believe that the results were at least as good as those obtained by the major surgical operations devised for the relief of this terrible condition.—Mr. George Heaton showed a dentigerous cyst which he had removed from the lower jaw of a boy, aged 11½ years. The cyst, which was the size of a pigeon's egg, contained clear straw-coloured fluid. A bicuspid tooth of the permanent set was fixed in its wall with the crown projecting into the cavity of the cyst. The fangs of the tooth were ill-developed. The cavity left in the jaw was packed with gauze and closed up by granulation.—Dr. Purslow read a paper on acute hydramnios, and Mr. Leedham-Green one on the closure of traumatic defects of the skull.

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Halifax and District Medical Society.—The first meeting of the session was held on October 8th, when the President, Dr. Lodge, gave an address on the Diagnosis and Treatment of Suppuration in the Middle Ear and its Complications. The differential diagnosis of marasmic thrombosis of the intracranial venous sinuses from infective and traumatic thromboses was discussed. The importance of recognising pneumococcal and tuberculous suppurative middle-ear mischief was also dwelt upon. The various operative procedures for suppurative processes in the middle ear and its adnexa were dealt with at length. Stress was laid upon the necessity for following surgically the path of invasion of the cranial cavity whenever possible—for example, draining temporo-sphenoidal abscess through the tegmen tympani or a cerebellar abscess through erosion in the posterior surface of the petrous bone, thus preventing unnecessary wounding of the lateral lobes of the cerebellum to reach the abscess cavity. A vote of thanks to the President for his address brought the proceedings to a close.—The second meeting of the Society, held November 12th, was devoted to the exhibition of clinical cases and pathological specimens. Among others the following cases were shown:—By Dr. George Hoyle: Congenital absence of sternum.—By Dr. Stevenson: Aphasia (cerebral embolism).—By Dr. Leech: Tendon lengthening.—By Dr. Lockwood: Ectopic gestation (abdominal section).—By Dr. Wright: Congenital absence of both radii.—By Dr. Mantle: Lymphadenoma. The pathological specimens included a hydatid mole and a fœtus with meningocele, both shown by Dr. J. Strickland.

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Bradford Medico-Chirurgical Society.—At a meeting on November 19th, Dr. Honeyburne in the chair, Dr. Rabagliati read notes on a case of submucous uterine myoma removed by hysterotomy.

The patient was an unmarried woman, aged 35, who was first seen on account of retention of urine. Difficulty in emptying the bladder had occurred at intervals for the previous four months. She had menorrhagia to some extent. Pelvic examination showed that there was a round smooth tumour projecting from the os uteri, which latter was patent, admitting the finger easily. On September 15th, 1901, ether was administered, and the patient placed in the lithotomy position. An attempt was made to remove the swelling by the vaginal route by separating it from the uterus with the fingers and blunt instruments, the cervix having been divided to give more room. It was not found practicable to get it away by this means. The patient was then put into the supine position and the abdomen opened. The tumour was seen to have distended the uterine cavity, the latter organ retaining its shape and appearing to be simply enlarged. It was decided to open the uterus and attempt to remove the tumour without removing the uterus itself. A clamp was put on each broad ligament to prevent bleeding, and an incision was made in the anterior uterine wall, high up towards the fundus, and carried through the fundus to the posterior wall. The attachments of the tumour were torn through, and it was removed. The wound in the uterus was closed with catgut sutures, which included the serous and muscular coats, but left out the mucous membrane. There was no hæmorrhage, no vessels requiring ligature. The patient made a rapid and uneventful recovery.

The tumour was a fibro-myoma measuring 5 inches by 4 inches.—Dr. James Metcalfe read a paper entitled A Plea for Care in the Diagnosis of Pregnancy. He related several cases in which the diagnosis of early pregnancy had been established only after very careful watching and examination; and on the other hand cases occurred in which the patients had been informed that they were pregnant and nearly at the supposed full term when they were not pregnant at all. In the latter cases the medical attendant might be misled by the presence of some of the symptoms of pregnancy, for example, amenorrhœa and some enlargement of the breasts, and if a careful physical examination were not made, but the patient's statements relied on, error was likely to follow.—Dr. D. Goyder read notes on a case of asthma and its treatment.

The patient was a boy of 14 who had for many years been subject to attacks of bronchitis. He was seized on September 29th, 1901, with sudden and extreme difficulty in breathing. The dyspnœa was very great and the patient from time to time gave a sharp scream. There was a slight cough but no expectoration. Temperature 101°, pulse 130, respiration 24. A mixture was given containing antimony, sodium nitrite, chloroform, and an alkali, and heat was applied to the chest and extremities. No relief being obtained after several hours, nitroglycerine was given—one tablet every two hours. Next day the condition was much the same except that there was then some muco-purulent expectoration. It was next determined to give oxygen gas, and until this could be obtained 5-grain doses of potassium iodide were added to each dose of medicine. The effect of this was very marked, as in a quarter of an hour after the first dose the spasm began to relax, and the face regained its natural colour and expectoration became free. In spite of the improvement oxygen gas was used at intervals of two hours for two days. The boy regained his normal condition of health in about ten days. After the spasm passed off the temperature rose to 104°. The previous bronchitic attacks came on after a period of barometric depression and this was the case previous to the asthmatic attack.

Dr. Goyder pointed out that it was noteworthy that sodium nitrite and nitroglycerine completely failed to relieve the spasm, while potassium iodide gave almost instant relief; the nitrites acting on the walls of the blood vessels rather than on the air tubes.—Mr. Phillip Miall read notes on a case of fracture of a rib through cough.

A stout woman, aged 56, subject to chronic diarrhœa had been laid up

several weeks with bronchial asthma. During a paroxysm of coughing she felt something give way and experienced a grating sensation when the cough returned. The eleventh rib on the right side was found to be fractured not far from the spine. A tight bandage aggravated the cough, and there was some difficulty in keeping the part at rest. Grating was still present eighteen days after the fracture occurred, and there was some pain felt for five weeks.

Mr. Miall referred to two other cases of fracture of a rib by muscular action which he had published, and to cases by other writers. He pointed out the importance of the subject in view of the frequency of fractured ribs among the insane, and where the suggestion of violence by the attendants might be raised.—The following specimens were shown:

Dr. R. H. Crowley: (1) Rupture of aortic aneurysm into œsophagus; (2) blood cast of stomach from the same patient; (3) aneurysm of first part of aortic arch from a woman, aged 23; (4) pharyngeal new growth; (5) unusual form of ulcerative endocarditis of mitral valve; (6) mediastinal new growth causing obliteration of the superior vena cava.—Dr. Bronner: An apparatus for massage of the drum and ossicles.

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Nottingham Medico-Chirurgical Society.—At a meeting on December 4th, Mr. E. C. Kingdon, President, in the chair, Mr. A. R. Anderson read notes of the case of a man, aged 47, who was admitted into hospital in the early part of the year with epithelioma of the skin of the left cheek, involving the parotid gland, and showed the patient.

He had for years noticed a small lump there like a wart or mole, but it was only recently that it had begun to spread. On admission the ulcer, which was situated just in front of the tragus, measured 1½ inch by ¾ inch, and was firmly adherent to the subjacent parts. It had a raised, everted, indurated edge, and a hard warty irregular base, presenting quite a different appearance from the typical rodent ulcer with its slightly raised and scarcely indurated edges, and its slightly depressed, glazed, pinkish base. In addition there were a few enlarged glands. The growth was freely excised, and as its base was found to involve the parotid, a considerable portion of the gland was removed, as were also the lymphatic glands. The wound healed readily and the patient went home in a few weeks. Early in October he came back with recurrence in the scar tissue over the cheek. He had now two typical epitheliomatous ulcers, one in front of the tragus 1½ inch long by 1 inch broad, the other occupying the site of the tragus, and extending for a short way down the meatus. It was evident that nothing short of a serious and extensive operation would suffice to give reasonable prospect of success. Treatment with the Roentgen light was begun on October 26th, and continued by daily sittings for twenty-one days, at the end of which time the ulcers had disappeared and he was apparently cured, their site being occupied by pale, firm, scar tissue. The sittings for the first fortnight were of ten minutes duration, increased during the last week to fifteen minutes. A microscopic section of the growth removed at the operation was shown.

Mr. W. M. Willis and Dr. W. B. Ransom spoke on the case, and Mr. Anderson replied.—Mr. T. Davies Pryce read a paper on the necessity of medical asepsis and antisepsis. For the purpose of illustration attention was chiefly directed towards enteric fever, in which the speaker advocated boiling all excreta, and recommended that the necessary utensils should be provided by the municipality, who should collect periodically from the patients' houses and destroy such excreta. The paper was discussed by the President, Dr. Handford, Dr. Ransom, and Dr. J. Mackenzie. Mr. Pryce replied.—Dr. T. Aldous Clinch read notes on two cases of herpes affecting (*a*) first sacral nerve, (*b*) fifth lumbar nerve. The President and Dr. W. B. Ransom spoke, and Dr. Clinch replied.—Dr. W. B. Ransom read notes of a case of intestinal sand, and showed specimen. The condition appeared to have been the result of eating large quantities of pears, and the symptoms were such as to suggest gall stones. The President, Mr. J. Mackie, and Mr. T. D. Pryce spoke on the subject; and Dr. Ransom replied.—Mr. A. R. Anderson showed a skiagraph of a nail in the right bronchus of a child. He also showed the nail, which was 2 inches long, and had been removed by a high tracheotomy; a probe then discovered the nail at 3½ inches from the wound, and it was subsequently removed with forceps. The patient recovered. Mr. Willis discussed the case, and related that of a child who had been under his care at the General Hospital with a central upper incisor lodged in a bronchus. The *x* rays failed to reveal it. An attack of pneumonia supervened, from which the patient recovered; but when convalescent, one day suddenly died. The tooth was found at the necropsy situated at the bifurcation of the trachea.

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Irish Medical Schools' and Graduates Association.—The autumn general meeting of the above Association was held on November 27th at the Hotel Cecil, London, the President, Dr. William Alexander, F.R.C.S.Eng., of Liverpool, in the chair. The Council reported that Mr. P. J. Freyer, who has held for four years the post of Metropolitan Honorary Secretary, had been appointed Chairman of Council, *vice* Dr. T. Gilbart-Smith, whose period of office had expired. Dr. Stewart proposed, Dr. W. H. Bourke seconded, and it was carried by acclamation, that the heartiest thanks of the Association be accorded to Dr. Gilbart-Smith for his valuable services at the head of the Executive during the last three years. The meeting then adjourned. The members and their guests, to the number of 102, sat down subsequently to dinner in the Victoria Hall. The toasts were commendably few—only four. The proposers and those who responded included Sir Charles Crosthwaite, K.C.S.I.; the Hon. H. B. Lefroy (Agent-General for West Australia); Judge Rentoul, M.P.; Mr. Atherley Jones, K.C., M.P.; Inspector-General Lloyd, M.D., R.N.; Professor C. B. Ball; Inspector-General Turnbull, R.N.; and Surgeon-Captain Sleman (Senior Medical Officer, C.I.V.).

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Medico-Legal Society.—At a meeting held at 20, Hanover Square, on Thursday, December 5th, it was unanimously resolved to form a Medical-Legal Society. Dr. Fred. J. Smith, who presided, explained how the meeting came to be held, and the objects aimed at in proposing the Society, which would, no doubt, be an advantage to medical men and lawyers by extending its efforts to every question involving both medical and legal matters. He also read letters from Dr. Harvey Littlejohn, Dr. Wynn Westcott, and others supporting the movement. On the motion of Professor W. R. Smith, seconded by Dr. R. L. Guthrie, a Committee was appointed to draw up a set of rules, arrange for the next meeting, and enlist members. Those who are willing to join the Society are invited to send their names to Dr. McCallin, Reading Room, Inner Temple.

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# REVIEWS.

## BOOKS OF THE SEASON.

*Kim*,[1] Mr. Rudyard Kipling's latest volume, is a character sketch rather than a story. There runs through it an episode connected with the Indian secret intelligence department and frontier politics, which is the thread by which actors and incidents are held together; but the interest and value of the book are psychological. It displays with the insight of genius the doings and motives of Indian humanity under a great variety of circumstances, and is everywhere illuminated by that keen power of observation and incisive faculty of description of which the author has given such striking evidence in many previous writings. The central figure of the composition is Kim, orphan son of Kimball O'Hara, once colour-sergeant of an Irish regiment. Kim was reared amid squalid and disreputable surroundings in the Lahore Bazaar. By inheritance he is nimble-witted, plucky, adventurous, and loyal. His early environment is altogether oriental, and the key to the narrative consists in the interaction of a being so born and bred and his surroundings. He comes under the influence of a Pathan horse dealer, who is in reality an agent of the secret intelligence department, and subsequently of a Thibetan Lama, who is attracted by his personality and entertains for him a parental affection which is fully reciprocated. Kim meets his father's regiment whilst travelling in company with the Lama, who is on a pilgrimage to the four holy places, and in search of a river in the waters of which he expects to obtain purification necessary for entering *Nirvana*. He is identified and taken possession of by a kindly Roman Catholic priest, who arranges with his *guru* to have him educated at the school of St. Xavier in Partibus, at Lucknow. His gifts and acquirements commend him to the notice of the head of the secret intelligence department, and he is educated and trained for that service, which he subsequently enters. Various types of Indian character flit across the stage, and by a few master touches they are endowed with vivid reality, and one is almost enabled through them to see and estimate how much of their life and thought, conversation, and action is due to higher or lower motives—to religion, superstition, sentiment, passion, self-interest, humanity, revenge, lust, and the like. The actors stand out clear and characteristic, consistent through-

[1] By Rudyard Kipling. London: Macmillan and Co. (413 pp. Extra crown 8vo. 10 illustrations. 6s.)

out; and the incidents and scenery are made vividly apprehensible by a few bold strokes of the brush. *Kim* is a word picture drawn by a great artist, and the beautiful illustrations by Mr. J. L. Kipling are a worthy accompaniment.

There is no doubt that Mr. G. A. Henty knows the secret of how to hit the taste of young people of both sexes. As a young critic has observed to us, "there is some satisfaction in reading Henty's books, he tells you a good story and gets his facts and dates right." The observation is the more illuminating because at first sight facts and dates are not what one would suppose a boy or girl to look for in a story-book. Mr. Henty thinks otherwise, and apparently he is right, and the *a priori* reasoner wrong. His latest story, *With Roberts to Pretoria*[2] is very full of facts, and these are of course of very recent date; they are illustrated not only by pictures by Mr. William Rainey, R.I., but by a map. The hero is a young Englishman who goes to South Africa shortly before the war, and at its outbreak joins Rimington's Scouts. He sees Belmont, and Graspan, and the Modder River, carries despatches into Kimberley, is taken prisoner on the return journey, escapes, is given a commission, is put on General Pole-Carew's staff, is captured again and detained at the race-course at Pretoria, escapes again, is put on Lord Roberts's staff, is present at Paardeberg and joins the expedition which relieved Mafeking. The book is thus a history of the most stirring incidents of the earliest and middle stages of the war in the Orange River and Transvaal. The story is well told, the interest in it sustained from start to finish, and altogether Mr. Henty must be congratulated on scoring another success, and on having written a book which he himself will find it hard to beat.

*Major Thornton*[3] (by Ernest Glanville) is also a tale about South Africa and war; but Mr. Glanville is as conspicuous for lack of dates as is Mr. Henty for the plentitude of them. The volume is apparently a reprint of a book published some time ago; how long we are not told. It is a stirring story of a ride of a young English colonist from Durban to East London, and of the many strange and exciting incidents that happened by the way. There are illustrations by Mr. J. S. Crompton, R.I.

Mr. Gilliat, who was formerly a master at Harrow, has chosen for the hero of *God Save King Alfred*[4] the king's eldest son, the Atheling Edward. It is a tale mainly of the incursions of the Danes on the east coast and of the siege of Rochester raised by Alfred with the help of the hero. It contains descriptions of "the methods of barbarism" followed by our ancestors, or the ancestors of some of us, at this remote period. Some of these might perhaps have been spared the gentle reader of to-day, but the incidents are many and varied, and the book no doubt gives a vivid picture of war and its horrors as understood and practised by a barbarous people. It is well illustrated by Gutzon Borglum.

In *The Youngest Girl in the School*[5] Evelyn Sharp has written a school story which is fresh evidence that the school girl of the period attends a different sort of school, and amuses herself in a different way, from her mother. Incidentally we learn that fagging, or something very like it, is practised at girls' schools. The book is indeed an agreeable contrast to the rather namby-pamby productions which were supposed to be adapted to the reading of young girls even a few years ago. It is a healthy story, and the heroine, who longs to go to school and then regrets for some time the fulfilment of her wishes, is helped by the ingenious ingenuity of her brothers to some very pretty adventures.

It is perhaps strange that in the search for novelty of scene and character the short story teller has not had more resort to New Zealand, where the contact between the rough civilisation of the remoter districts and the ancient and sturdy race of the Maories must afford episodes ready to the hand of the romancer. Mr. Alfred A. Grace has put together a bundle of New Zealand stories, and has given them the general title of *Tales of a Dying Race*,[6] because, "in spite of the sincerest efforts of a paternal Government, it is the sad belief of those who know the race best that the Maories are doomed to be extinguished or absorbed." The tales are of very unequal merit, but some are excellent, and give the impression that they reproduce local characters and racial peculiarities faithfully. Some deal with social customs of elementary simplicity, while others treat of the rough lives of rough men.

Hardly less rough are the heroes and heroines of Sundowner's tales *Told by the Taffrail*,[7] mainly of the islands of the Pacific, but some of Australia, and a few of South and Central America. The island stories are the best; many are very good, and have not lost in the telling. The collection may be recommended as an agreeable companion for spare half-hours.

Mr. Max Pemberton luxuriates in treasons, stratagems, and plots, and in the *Giant's Gate*[8] the reader has his fill of them. The subsidiary title of the book is "A Story of a Great Adventure," and in this it is not difficult to recognise the exploits of General Boulanger mixed up with some more recent incidents in the chequered career of the French Republic. The whole is well constructed, and the incidents are well conceived, while the somewhat shady side of the career of *le brav' général* is transformed into a pure attachment to an English girl, with whom the reader is led to conclude that the hero will settle down to a respectable life of wedded bliss so soon as he escapes from the fortress in which a caitiff Government has interned him.

Dr. Weir Mitchell continues to seek laurels in a field far separated from that in which he first won reputation. His new story, *Circumstances*,[9] is so called apparently because it illustrated the bending of weaker characters to the influence of circumstances, and the increased strength which resistance gives to those who will not be their sport. The interest of the story is well sustained; the plot, in fact, hinges upon a case of oinomania, which is very graphically portrayed. We doubt whether Dr. Weir Mitchell is quite justified in hi happy ending. We should fear a relapse.

In *Marietta, a Maid of Venice*,[10] Mr. F. Marion Crawford has written a very charming story of the glassblowers of the Queen of the Adriatic, a guild which possessed very special privileges, amongst others that of intermarrying with the noble class. Upon this the plot turns, but incidentally there are many curious details of the glass-blowers' craft, and many illustrations of the jealous care with which their secrets were guarded. The glowing pictures which Mr. Crawford knows so well how to paint are a pleasant relief to the gloom of an English winter.

The idea of Allen Upward's *The Ambassador's Adventure*[11] is ingenious. The ambassador, at a loose-end in London, is lead by a mysterious guide one foggy day to a house where he finds assembled a committee of highly distinguished persons, and is there and then initiated into a kind of secret anti-anarchist society. In the approved style of conspirators the ambassador is despatched in disguise to a foreign country with confederates, not to plot against the young king, but to protect him from an anarchist scheme to assassinate him. The story does not therefore pretend to be probable, but its topsy-turvydom is amusing, and the plots and counterplots are most exciting. Rather free use is made of recent incidents in the lives of princes and crowned heads still living or only recently dead.

It is impossible not to admire the versatility of Mr. H. G. Wells, and his characteristic qualities have never been better

[2] London: Blackie and Son. 1902. 8vo. 384 pp. 6s.
[3] Chatto and Windus, London. 8vo. pp. 318.
[4] London: Macmillan and Co.. 1901. 8vo. pp. 432. 6s.
[5] London: Macmillan and Co. New York: The Macmillan Co., 1901. 6s.
[6] London: Chatto and Windus, 1901. 8vo. pp. 260.
[7] London: Chatto and Windus. 1901. Pp. 320.
[8] London: Cassell and Co., Paris, New York, and Melbourne. 1901. (8vo. pp. 368. 6s.)
[9] London: Macmillan and Co. 1901. Pp. 496. 6s.
[10] London: Macmillan and Co. 1901. 8vo. pp. 452. 6s.
[11] London: Cassell and Co. 1901. 8vo, pp. 344. 6s.

displayed than in *The First Men in the Moon*.[12] The conception is fantastic of course, but Mr. Wells makes effective use of elementary facts of physics and biology to produce a kind of illusion of conviction. The means imagined for reaching the moon are novel, the description of physical conditions on the moon's surface and interior are founded on conceptions made familiar by the researches of Professor Dewar and his collaborators, and the constitution of the inhabitants of the moon is based on adaptations and extensions of known facts of biology. The book is worth reading if only for the ingenuity with which it is devised.

Those who have read the earlier books of the writer of *The Benefactress*[13] will know pretty well what to expect from her—minute and striking studies of character, no little skill not only in painting a picture of the outward forms of scenery, but also of conveying the mental state produced by the atmosphere and the environment of the locality selected, the whole illumined by a quiet but caustic humour. In her new book the story is slight. A young Englishwoman inherits from a German uncle an estate in the north of Pomerania, looking out on the Baltic towards the island of Rugen, a poor and bleak land. She desires to use her new property for the benefit of the German people, and turns her house into a home for decayed gentlewomen. Two-thirds of the book consist of a series of character sketches of the bailiff of the estate and his wife, of the pastor of the village and his wife, and of the decayed gentlewomen themselves. These are for the most part biting satires, and leave a most unfavourable impression of the social standards of the upper and lower middle classes. The only reliefs are the shrewd and practical old Princess who is engaged to manage the establishment, and a neighbouring landowner whose manly character is as evidently drawn from life as are those of the other actors. The misfortunes of this admirable personage supply materials for a somewhat melodramatic ending. The book is one about which there will be much difference of opinion, but those who appreciate it at all will not be content with a single perusal.

## NOTES ON BOOKS.

IN a book entitled *Modern Natural Theology*,[14] Mr. F. J. GANT, F.R.C.S., has presented much material for thought upon a subject of which former works from his pen show that he is an able exponent. The doctrine of evolution is discussed at length, with a view to reconcile the relations between the material and the spiritual, attention being drawn to Wallace's argument that in man's origin, as in the transition from the inorganic to the organic, the hand of a Supreme Creator is witnessed as introducing a special additional element. The main object of the book appears to be to give expression to a belief in the unity rather than the opposition between the doctrine of evolution and religion. Doubtless it will raise very varying criticisms from different shades of thought, as such a reconciliation as is here argued must depend largely upon the attitude in which the student approaches his subject, whether with the mind of a materialist or with a faith in things unseen.

It seems almost superfluous to praise *Whitaker's Almanack*. (London, 1901. 2s. 6d. net.) It has indeed become so much an institution that it is a surprise to read that the volume for 1902, an early copy of which we have received from the publisher, is only the thirty-fourth annual volume. During the generation for which it has existed much experience has been gained and a great amount of hard work has been put into its revision. In the new issue it has been necessary to make an unusual number of changes owing to the accession of King Edward VII and the numerous honours bestowed in connection with the war in South Africa. Thus we learn that the number of persons holding the C.B. has been increased from 639 to 741, the C.M.G. from 385 to 672, and the D.S.O. from 345 to 1,312; room for the new information has been found by rewriting and shortening some of the special articles, and the size of the volume is the same as last year.

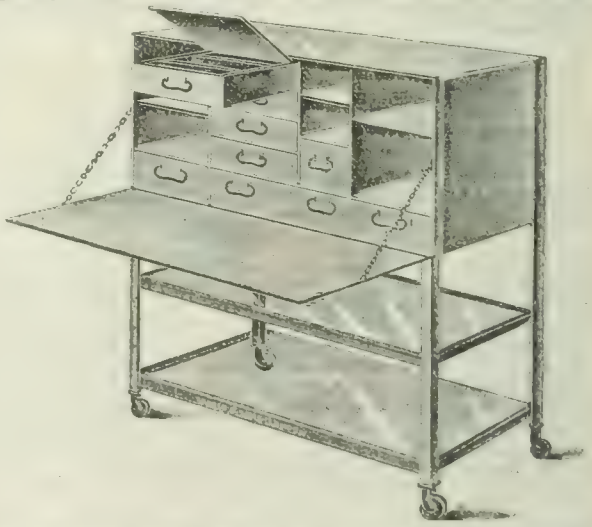
[12] London: George Newnes Limited. 1901. 8vo, pp. 342.

[13] By the Author of *Elizabeth and Her German Garden*. London: Macmillan and Co., Limited. New York: The Macmillan Company. 1901. (Crown 8vo, pp. 420. 6s.)

[14] *Modern Natural Theology, with the Testimony of Christian Evidences*. By Frederick James Gant, F.R.C.S. (London: Elliot Stock. 1901. Crown 8vo, pp. 164. 2s. 6d.)

# REPORTS AND ANALYSES
AND
# DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

*A Surgical Dressing Wagon.*—Messrs. Arnold and Sons have made a useful dressing wagon for the surgical out-patient department of the Dumfries and Galloway Royal Infirmary. It was designed by Mr. George Livingston, M.B., for use in a surgical out-patient room, but is adapted also for use in a ward or private surgery. It consists of an upper air-tight case for antiseptic dressings. The front of this case folds down, and being supported by chains on either side, forms when open a convenient tray for cutting dressings upon. The floor of the case is occupied by three drawers intended for carbolised macintoshes, coats, and towels. There are four larger compartments for various antiseptic absorbent wools, and two smaller compartments for lint, gutta-percha tissue, etc. There are also five drawers, four being intended for bandages of various sizes. The fifth is divided into compartments for cylindrical rolls of gauze. Each compartment is made air-tight by a lid which has a narrow slit over the centre of each



compartment through which the gauze can be drawn and cut off of required length. The lid is so arranged that it forms a tray upon which the cut ends of the gauze lie, and they do not, therefore, form a hindrance to the easy running of the drawer. There is also a covered compartment in this drawer for catgut, horsehair, needles, etc. The whole is surmounted by a glass top upon which lotion bottles, etc., stand, and below there are two glass shelves for lotion basins, instrument trays, etc.

THE VALLAURI PRIZE.—The Royal Academy of Science of Turin announces that under the terms of the will of the late Italian Senator Tommaso Vallauri it will award a prize to the scientific investigator, Italian or foreign, who during the four years 1899-1902 shall be adjudged to have published the most important and most highly-esteemed work on any one of the physical sciences, that expression being taken in the widest sense. The prize will be 30,000 lire net, unless the interest of the capital invested in the Italian Funds should undergo any modification. The award will be made one year after the date fixed as the limit of the competition. Works sent in to the Academy by competitors will not be returned. No attention will be paid to manuscripts. Italian members of the Academy are ineligible.

# GENERAL COUNCIL

OF

# MEDICAL EDUCATION AND REGISTRATION.

*WINTER SESSION, 1901.*

## REPORT OF PROCEEDINGS.

*Thursday, December 4th.*

Sir William Turner, K.C.B., President, in the Chair.

(*Continued from page 1703*).

### The Royal Colleges in England.

Dr. McVail moved:

That a Committee be appointed to prepare a report on the differences that exist between certain licensing bodies on the one hand, and the General Medical Council on the other, regarding the courses and conditions of study, and the recognition of the institutions and schools in which the required courses may be taken; and that the report be considered by the General Medical Council at a special meeting, when the Council will decide what action, if any, shall be taken, and in particular whether the circumstances are such as to require action to be taken under Section xx of the Act of 1858.

The name given to the Council was the General Medical Council of Education and Registration, and they had spent more time and given more energy to the question of education than to any other that had come before the Council. The most important Committee of the whole Council was a a Committee appointed some 15 years ago, named the Committee of Education, whose reports the Council had discussed at great length from time to time. The position of the Council under the Acts was that it laid down the minimum standard of study to be required by the various universities and licensing Boards. Those universities and licensing bodies undoubtedly could add to the course of study but under the Act the Council had proceeded as if those bodies could not subtract from a course of study and obviously if the medical profession were to be so governed that every name inserted on the *Register* should be that of a person who had been adequately taught, then only the Council could decide what the adequate study should be, otherwise there could be no minimum, and the reason for having a *Register* under the control of the Council would not exist. All the rights possessed by the licensing bodies were modified by the Acts of Parliament. Whatever rights they had as regards the study of the subjects under consideration must be carried out to the approval of the Council, and if the Council did not approve then its duty was to inform the Privy Council that the course of study of the particular licensing body was not sufficient. The Council had laid down certain definite regulations as to the study of different subjects, and the Royal Colleges had not confirmed those regulations as regards the institutions in which, and conditions under which, they could be taken. They had entirely gone against the Council's view as to the time of life at which these studies should be pursued. That was the difference between the Royal Colleges and the Council, and it was a great and most important difference. Three years had passed since this came to the knowledge of the Council. The Council had been most patient; it had not rushed into any particular course with regard to it. The Education Committee had reported upon it, and the Council decided that its policy should be upheld. Again it went to the Education Committee, and they had advised the Council to uphold the recommendations it had laid down. There was no indication that the bodies concerned were disposed to meet the views of the Council; on the contrary, a departure from the Council's recommendation with regard to the first year's study had led that body to question the Council's right to inspect any examination except the final examination in medicine, surgery, and midwifery. The original divergence on the part of those bodies from the regulations of the Council had led them to take their students entirely out of the *Students' Register*. Only those members of the Council who knew the state of affairs before there was a *Students' Register* could know how important it was. The preliminary examination which the Colleges required from their students was no longer what was required according to the Council's regulation, and what these bodies did other bodies and the universities would consider themselves at liberty to do. This had been emphasised by the representative of the University of Dublin on the previous day, who stated that if the Royal Colleges held themselves free to do with the first year's study as they chose the University of Dublin would hold itself free to do as it liked in regard to the whole five years curriculum. Was the Council to let the matter drift on and sit still and do nothing? If it did by-and-by all the bodies would draw up what list of instructions they liked. The Council was bound to register on diplomas of the Colleges, but it was bound to report to the Privy Council when it thought a diploma was given on insufficient study, and it would then be for the Privy Council to say whether these diplomas should continue to be registered or not. If the Council did nothing it would be useless to continue the *Students' Register*, as it was not a complete list, and was no longer of value to anybody with reference to the date when a medical student began his curriculum. That, in his opinion, was a very serious matter. The whole of the Council's work in building up the system of medical education would practically come to an end if nothing was done, and there would be no safeguard to the public interests. He asked the Council whether it would or would not take action under such extraordinary circumstances. He proposed that a Committee should be appointed to draw up a statement of the whole of the facts of the case; that that Committee should submit the whole matter to independent counsel, and that the subject should be considered by a special Committee, in order that the Council might meet to settle this one question so grave and important to the whole profession. Then it would be for the Council to decide whether it should take action on the report or not. These bodies had a minimum course of study which the Council regarded as less than its minimum. The Council had decided that it would not give way on the matter, but somebody must give way. Simply to sit still and do nothing was giving way, and therefore the Council must decide formally and definitely whether it should do anything or nothing. If it decided to do nothing, then every one of the corporations could act in this matter precisely as it thought fit. There was one melancholy aspect of the matter, which was that these bodies were not small bodies; they were the most powerful bodies in the three kingdoms, but it was much better, if the Council had questions to settle as regards its rights under the Acts, that it should settle it with such distinguished bodies as the Royal Colleges in England rather than with smaller ones. That was the only point upon which they could congratulate themselves in relation to the whole business.

Dr. Young seconded the motion because he considered it essential in the interests of medical education, and for the guidance of licensing bodies as a whole, that the Council should with as little delay as possible declare its policy; that it should make a clear, and explicit, and emphatic statement as to the course it intended to pursue with regard to the conditions of registration of medical students, and with regard to the conditions of medical study that it required of all those students subsequent to registration. The difficulties existing between the various bodies had been so fully explained during the present session that he did not think he should be justified in employing the time of the Council in recapitulating them. He reminded the Council that other bodies than those to which special reference had been made deviated from the regulations as laid down by the Council much more strongly than the bodies already alluded to. The question how far the deviation was permissible was one which the Council should decide. It was a question as to whether in future the Council was to determine the conditions of study and the conditions for admission for the course of study, or whether it should be left to the licensing bodies to determine for themselves by what conditions and special regulations the students who sought the licence which they gave should be governed. That was the point he wished to emphasise, because it was the principal point at issue. The Education

Committee had dealt with a few of the exceptions and had made certain suggestions which he did not think were practicable and had not met with the approval of the Council. It was not a question of the recognition of a special institution. If that were all there was no body better than the Royal Colleges of Physicians and Surgeons to determine what was satisfactory. It was whether the Council was in future to regulate the course of study for medical students or leave it to the licensing bodies. That was the point at issue between the Council and the Colleges, and he thought Dr. McVail's proposal was a satisfactory way of bringing about a settlement and as a step towards that settlement he hoped he might appeal with confidence to every member of the Council to support the proposal.

Dr. Glover said he had never heard, during the time he had been a member of the Council, a more grave resolution proposed than that now under discussion, and he never heard a resolution with a flimsier basis. He objected to the resolution, first because it involved a certain amount of disrespect to the Education Committee.

Sir John Tuke assured Dr. Glover that there was no such feeling.

Dr. Glover maintained that there was, but if the Committee did not desire to express the sentiment he would express it for them. He objected to the multiplication of special meetings of the Council, as two meetings in a year were amply sufficient for its business, and this session had been prolonged by the discussion of these subjects. He invited Dr. McVail to tell the Council what was the value of appointing a Committee and holding a special meeting. There were no new facts to bring out.

Dr. Atthill would support Dr. McVail's resolution, for it would bring the matter to a conclusion; but he considered it was another mode of postponing any attempt at settlement. He had done his best to prevent any rash step being taken by the licensing bodies in Ireland, which had been anxiously looking for some decision upon the subject by this Council. He could have understood if Dr. McVail had moved that the English Colleges should be censured, but he could not understand what was to be gained by this resolution. What it was proposed the Committee should do could be found by studying the books and regulations of the licensing bodies. The Council had been advised by Mr. Muir Mackenzie that an appeal to the Privy Council would not succeed; and, as to a special meeting, the expense would run into about £500; and, while he regretted the action taken by the two English Colleges, and thought it a great misfortune in the interests of medical education, yet to lay the matter before the Privy Council would be still more to lower the dignity of the profession.

Mr. Victor Horsley felt that the motion was the first attempt to get the Council to look at this question not from the point of view of a side issue, but from the point of view of the constitution of the Council itself, and he therefore hoped that the Council would see its way to support it. In his opinion, considerable misapprehension had crept into the minds of some of the members. In the first place, there was no reason to employ counsel to determine what was the precise position of the Council. That had been done, and counsel knew that the licensing bodies had their own rights under their own charters. He would be very glad if the Privy Council could give an *ex cathedrâ* statement of what its opinion was as to whether this Council was the supreme authority on medical education, as it was understood to be by the Central Government. He believed if they applied to the Central Government, they would say that in 1886 they handed over medical education to the General Medical Council, and he thought at the present moment that same Government was hardly aware of what was happening in the Council. In his opinion it would be a good thing if the legal advisers supported the idea of going to the Privy Council and telling it what was going on, so that the opinion of the Privy Council might be asked on the question as to who was really the highest authority on medical education.

Dr. Little was opposed only to that part of the resolution which referred to the holding of the special meeting, as it would be very difficult to hold a special meeting at any time which would not seriously interfere with the engagements of the members. It was no use to endeavour by any kind of compromise or patience to settle the question. If a decision were much longer delayed the Council would have far more numerous, and perhaps graver, departures from its regulations forced upon it. As Dr. Atthill had said, he had persuaded the College of Physicians in Ireland to hold its hand, but he (Dr. Little) was certain he could not persuade that College to hold its hand much longer. It would adopt new resolutions to counteract the effect of the action of the English Royal Colleges. The Royal Colleges had taken a course which no other body had followed, and it was time that the Council put on its armour or submitted to be vanquished entirely.

Sir William Thomson regarded the question as one of the most important that had ever come before the Council. It was not a question affecting the position of the two Colleges, but affecting the position of the Council and its very existence. The Council existed for the purpose of directing or controlling medical education and looking after registration. If at the outset the Council was to be told by certain bodies that it had no right to lay down conditions which they should follow, then so far as the question of education was concerned as a function of the Council, he could not see why the Council existed. That being so, he could not understand the position taken up by Dr. Glover, who had taunted them as to the expense of these discussions. No matter whose fault it was that the discussion had taken place, it was a question of the highest importance not only to medical education in particular, but to education in general. The Council had laid down a scheme of education lasting five years which had been broken into by two of the bodies. A motion to accept a four years course had been rejected on the previous day, yet the Council sits still while two bodies adopted the four years course in spite of the decision of the Council. The Council must assert its authority, if it had authority, and if it had no authority, then it was absurd that it should time after time make schemes for education, and send them out to licensing bodies simply to have them hurled back upon them with contempt. The Council had been told that if it was dissatisfied with the standard of education adopted by any licensing body that it was to appeal to the Privy Council, and it had done so already with regard to one small body. If it were to do so in this case, whether it succeeded or not, it would at all events know where it was, and whether it was after all living in a fool's paradise or not. He hoped the resolution would be adopted and the Committee appointed, and that before their report came up some *modus vivendi* would be found which would be satisfactory to both bodies.

Dr. Pye-Smith thought it would have been better and a saving of the Council's time if an appeal had been proposed at once to the Privy Council. That right of appeal was given with an object, but surely the object was to prevent bad administration, to prevent the lowering of the standard upon which men ought to be put on the *Register*. Could any one say honestly and faithfully that the present case was one to which those terms applied? Could anyone say, if the English Royal Colleges carried our their programmes as proposed, that the men who received their diplomas would be less educated than other men. The shower of pebbles had come from what might be called the crystal palaces. The Council ought to be content to believe that although it had powers strictly limited by Act of Parliament, yet it had on the whole exercised those powers with judgment and moderation, and if it continued to do so its influence would gradually extend. A good fight was an admirable thing, but let it not be a fight which would endanger the profession, which would do more to undo the influence of the Council and the progress which it had made than anything else. That was the position, and he thought it was not without hope. The two bodies would in a short time no doubt find a *via media* which would not lead to the triumph of one or the other, but would lead to the gradual progress in medical education which had increased up to this time, and that very much because all had worked together.

Sir Christopher Nixon said that it was a matter of extreme regret to him that there should be this difference between this Council and these two most important corporations. But the Council could not ignore the result of the Colleges insisting upon their right to take a particular action which was in direct contravention of what had been laid down by

the General Medical Council. He had said that the interest of education was served by the action of the Colleges on the subject of the first year's medical study; but unfortunately the action taken by the Colleges reduced the power of the Council to a nullity. The danger of having it shown that the Council had not these powers was that an opportunity for a process of disintegration arose; each individual corporation, not with the power and authority and position of the Royal Colleges, and not from particularly worthy motives, instituting a set of regulations with regard to the medical curriculum which they would say they had a right to adopt equally with the English Royal Colleges, that was a danger which threatened from a variety of sources. In his opinion the Privy Council should determine whether this Council had the power which Mr. Victor Horsley said the central Government thought it had in connection with education and registration. If the Privy Council gave that distinct decision, he presumed that the licensing corporations would at once hold their hands. There was no other course open to the Council; there must be an authoritative decision upon this question. If the Privy Council distinctly limited the functions of the General Medical Council, and said that it had not legally the rights upon which it had been acting, and which it maintained it had, then as a great profession they ought to organise in every way in order to get the Legislature to give the Council that power, not merely in the interests of the profession, but in the interests of the public at large.

In reply to the President the representatives of the Royal Colleges declined to take part in the debate.

Dr. MacAlister asked the Council if it could imagine their going before the Privy Council with the demand that the licence and Membership of the Royal Colleges should cease to be a registrable qualification, because the Privy Council sitting as a judicial body would not give a legal opinion upon the point as to whose authority was paramount. The Council could not bring the case before the Privy Council unless it absolutely asserted as the result of its investigations that these diplomas were unworthy of being registered. The General Medical Council would have no *locus standi* in the matter unless prepared to state that. He for one was not prepared to go so far. No doubt the Royal Colleges had dealt a blow at medical education which would be felt for some time, but he did not think the Council had lost all its influence as had been suggested. So long as it kept its hand on the registration of medical students and stood firm on the conditions which it alone had the right to make with regard to medical students, it would be a very powerful lever on the teaching bodies, and upon the parents of students, as it was still a desirable thing to be a registered student.

Dr. McVail, in reply, expressed his surprise at the speech of Dr. MacAlister, who seemed to think that the Council was to sit by and hope for a time when these bodies should repent. The University of Dublin had told the Council what it was going to do and other bodies would do the same thing. He did not think the Council could ask the Privy Council for advice as Sir Christopher Nixon had suggested. If the matter came before the Privy Council he assumed that body would deal with these two large bodies as it would between the Council and a small body, with regard to the first year of study, and say that these bodies did not come up to regulations. The point was that these bodies were accepting a course of study which in the opinion of the Council was insufficient, that was assuming the Council still adhered to the resolution that it passed at the instance of the Education Committee as to the first year's course. But as the whole matter was so involved a complete statement of all the facts should be made and that was why he proposed this resolution.

The President then put the resolution, which he declared carried.

By request the names and numbers were taken down, when it appeared that 16 voted for, 10 against, 3 did not vote, and 2 were absent.

Dr. McVail, at the request of the President, nominated the following members to serve on the Committee: Mr. Bryant, Dr. Norman Moore, and Mr. Young on behalf of the English Branch Council; Sir William Thomson and Mr. Ball on behalf of the Irish Branch Council, and Dr. McVail (to be Chairman), and Sir Hestor Cameron on behalf of the Scotch Branch; and the President being *ex officio* a member of the Committee to be requested to take an interest in the proceedings, and that the fourth Tuesday in February be fixed for the date of the special meeting of the Council.

Mr. George Brown asked, if the draft Midwives Bill was obtained from the late President of the Privy Council about that time, whether it could be submitted to the Council at the special meeting.

The President thought that was a very proper question. The first thing the Council would have to consider would be the report of this Committee, and on such an important question as the Midwives Bill if it were ready he thought the Council would think it advisable to consider it after the special subject had been disposed of.

### List of Scientific Institutions Recognised by the Licensing Bodies.

Dr. MacAlister moved that the list of scientific institutions, other than universities or schools of medicine at which the course of medical study might be commenced by applicants for registration in the *Students' Register* be approved by the Council. The list was published in the British Medical Journal of November 30th, p. 1629.

Sir Christopher Nixon seconded.

Dr. Norman Moore moved the following amendment, which he said was in the spirit of the resolution adopted by the Council in 1894 in connection with this subject, as he thought it was very desirable as far as possible that the list should be the same not only as to any particular body, but as to licensing bodies in general. He therefore moved:

That the list of scientific institutions other than universities and schools of medicine consist of teaching institutions where physics, chemistry, and elementary biology are taught, recognised by each licensing body as stated in the list forwarded each year, provided that the list in each case be accompanied by a statement that, after due inspection, the licensing body is satisfied that each institution so recognised possessed sufficient laboratory accommodation and appliances for the efficient teaching of the required subjects.

Mr. Bryant seconded.

Dr. MacAlister said that to adopt this amendment would be to knock the bottom out of everything that the Council had been doing, and Mr. Tomes urged Dr. Norman Moore to withdraw his amendment.

Sir Christopher Nixon thought the Royal Colleges had advanced a distinct step, because this came nearer the words which the Council laid down "as approved by the Council" than any other action taken by the Royal Colleges.

Sir William Thomson pointed out that the adoption of the amendment would raise very great difficulties.

Dr. Norman Moore said that the Royal Colleges were anxious to take every possible step to meet the Council; they had the most profound respect for it, and, as the amendment was practically the same as the resolution which the Council had originally come to, he persisted in it.

The amendment was then put and declared lost, whereupon Dr. MacAlister's motion was put and carried.

Dr. MacAlister moved, Dr. Windle seconded, and it was resolved:

That the Students Registration Committee be empowered to give provisional approval on behalf of the Council to other scientific institutions of the same status which may be hereafter recognised by licensing bodies; and that the Committee be instructed to report to the Council at each session the institutions it has thus provisionally approved.

### Instruction in Anæsthetics.

Sir John Batty Tuke brought up a report of the Education Committee on a communication from the Council of the Society of Anæsthetists. This communication, dated June 6th, pointed out that:

1. There is at present no compulsory training in anæsthetics in any hospital or teaching centre in Great Britain and Ireland.
2. There is no examination in this subject testing the knowledge or experience of students before admission to practice.
3. The responsibility of giving anæsthetics involves risks to life.
4. Every member of the medical profession is liable to be called upon to give anæsthetics, and very many are compelled to undertake that duty without help, advice, or guidance.

The Society therefore urged that the teaching of the administration of anæsthetics should be included in the schedule of compulsory subjects, and expressed its willingness to furnish details, should the Council desire it, with regard to the

manner in which teaching and examination should be conducted. Upon this the Committee reported as follows:

The Committee fully appreciate the importance of proper teaching in the subject of anæsthetics; but they are of opinion that it is not expedient that it should be compulsorily included as a separate subject of the medical curriculum.

Sir John Batty Tuke said that the Committee sympathised with the desire that every student should be instructed in anæsthetics, but this was already so fully done in all large schools that this school did not think it desirable to make it a separate subject. He moved that the report be received, entered on the minutes, and approved.

Dr. NORMAN MOORE seconded.

Mr. VICTOR HORSLEY thought that the subject ought to be specifically mentioned in the Council's recommendation as being included in the final examination.

Mr. GEORGE BROWN suggested that candidates for the final examination should produce evidence of having given anæsthetics in a certain number of cases.

Dr. PYE-SMITH observed that the subject was taught very well. It was one that all students were desirous of learning, and it was not necessary, therefore, to make it a compulsory subject.

Dr. HERON WATSON stated that from the very time anæsthetics were introduced it was taught and all dressers were required to have a certain knowledge of the subject.

Mr. VICTOR HORSLEY did not say that the schools did not teach it. His contention was that the schools were in advance of the Council.

### FINANCIAL POSITION OF THE GENERAL AND BRANCH COUNCILS.

On the motion of Dr. MACALISTER, seconded by Mr. BRYANT, the following interim report from the financial relations was received and entered on the minutes:

The Committee report that the present relations between the General and Branch Councils are determined by the Medical Act, 1858. To modify these relations and secure a satisfactory financial basis, an Amending Act will be required. The Committee is not prepared at this meeting to recommend the lines on which the amendments should be framed, and asks the Council to continue the Committee to the next session.

Mr. TOMES moved and Dr. ATTHILL seconded:

That the annual payments of £215 12s. 6d. to the Alliance Insurance Company, which form a sinking fund, be discontinued, under the terms of the agreement with the Insurance Company.

After some discussion as to the rate of interest and amount of loss incurred by the Council, this motion was, with the assent of the mover and seconder, referred to the Finance Committee, with a request to report to the Council at the May meeting, Mr. Tomes being added to the Committee.

On the motion of Mr. BRYANT, seconded by Mr. TOMES, it was resolved:

That in order to obviate the necessity for the English Branch Council to sell out Consols at their present depreciated value, the General Medical Council sanctions the temporary advance of £600 at 3 per cent. by the Dental Fund to the English Branch Council.

### REPORT OF THE PHARMACOPŒIA COMMITTEE.

Dr. MACALISTER, Chairman of the Committee, brought up a report. The report stated that 31,268 copies of the *British Pharmacopœia*, 1898, and 320 copies of the *Indian and Colonial Addendum*, 1900, had been disposed of. In the fresh issue of 1,500 copies of the *Pharmacopœia* made in July a slip correcting a few minor errors in the text had been inserted. A communication had been received from the Secretary of State for India asking for 3,500 copies of the *Indian and Colonial Addendum*, and requesting that, having regard to the conditions obtaining in India, certain alterations affecting three of the formulæ in the *Addendum* should be made. The Committee stated that by sanctioning the insertion of two short paragraphs in the appendix, with consequential alterations in a few lines of the text, the Council could do what was necessary to adapt the *Addendum* for official use in India.

The Council considered the matter *in camerâ*, and on readmission of strangers the PRESIDENT announced that the Council had come to the following resolutions:

1. That the issue of a "Government of India Edition" of the *Addendum*, including the modifications communicated to the Council *in camerâ*, be sanctioned by the Council for use in India.

2. That the Executive Committee be empowered to take on behalf of the Council the necessary steps for the publication of the "Government of India Edition" of the *Addendum*.

### EXAMINATION COMMITTEE REPORT.

On the motion of Mr. BRYANT, seconded by Dr. PETTIGREW, it was resolved:

That the reports from the Examination Committee on the inspection of the examinations of the Apothecaries' Hall, Dublin—(*a*) On the examination held in July, 1901; (*b*) on the examination held on October, 1901—be received and entered on the minutes.

### REPORT OF PUBLIC HEALTH COMMITTEE.

On the motion of Dr. BRUCE, seconded by Sir HECTOR CAMERON, a report from the Public Health Committee was received and entered on the minutes. The most important recommendation in the report was that the period during which a candidate should be "associated day by day in the duty, routine and special, of public health administration under the supervision of" a medical officer of health, and that such period should be distinct and separate from the period of a laboratory instruction, should be reduced to three months.

Dr. BRUCE explained that the Committee desired to maintain the course of nine months and that the proposed alteration was confined to the outdoor course, and moved a resolution approving the recommendation.

Dr. NORMAN MOORE seconded, as the regulation with regard to the six months had caused great inconvenience throughout London.

Mr. YOUNG said he had been asked to move that the words "day by day" be omitted from the regulation.

Dr. MCVAIL said that this was a very important subject and suggested that it would be better to adjourn its further consideration to next session which after further discussion was agreed to.

### REPORT OF STUDENTS REGISTRATION COMMITTEE.

On the motion of SIR HUGH BEEVOR, seconded by Mr. VICTOR HORSLEY, the report of the Students' Registration Committee was received, entered on the minutes, and approved.

### INSPECTION OF EXAMINATIONS.

On the motion of Dr. MACALISTER, seconded by Mr. BRYANT, it was resolved:

That Sir Geo. Duffey be appointed Inspector of the Final Examinations for the year 1902.

On the motion of Dr. MACALISTER, seconded by Mr. BRYANT, it was resolved:

That the attendance of Dr. Herringham be not required at the Final Examination of the Apothecaries' Hall, Dublin, on the occasion in 1902 when the Council's Inspector of Final Examinations is present.

### INSPECTION OF PRELIMINARY EXAMINATION.

It was moved by Sir JOHN TUKE, seconded by Dr. NORMAN MOORE, and resolved:

That the sum of £50 be placed at the disposal of the Education Committee for the purpose of providing for the inspection of certain of the recognised preliminary examinations in general education during the year 1902.

### MULTIPLICITY OF EXAMINATIONS.

On the motion of Dr. WINDLE, seconded by Dr. MACALISTER, it was resolved:

That the Council recognises the disadvantages arising from the present multiplicity of examinations qualifying for entrance to the various professions, but that, being unable itself to take any active step in the matter, the Council do forward the memorial from the Committee of the Headmasters' Conference to the Lord President of the Council with a suggestion that this is suitable question for the consideration of the Consultative Committee to the Board of Education.

### VOTE OF THANKS TO THE PRESIDENT.

Dr. GLOVER, as one of the direct representatives, proposed a vote of thanks to the President for his conduct in the chair, which was unanimously agreed to.

The PRESIDENT expressed his thanks, and regretted that this was the last occasion on which Dr. Glover would be in a position to make such a motion.

The proceedings then terminated.

# MEDICAL EDUCATION IN ITALY.

By F. H. Burton-Brown, M.A., M.B., B.Ch.Oxon.,
Physician to the British Embassy in Rome; late Professor of Medicine Punjab University, and Physician to the Mayo Hospital, Lahore.

[*Continued from page 1607.*]

## Florence.

"The Royal Institute of Practical Higher Studies and Post-graduate Study" of Florence is not a University in the technical sense of the word, since it only grants degrees in the four Faculties of the Natural Sciences—Medicine and Surgery, Philosophy, and Pharmaceutical Chemistry. Its medical degrees are, however, of high repute, and the course of instruction here very thorough. There are 15 professors belonging to the Medical Faculty. The professor of physiology is not included in this; the professor of anatomy also teaches histology, the professor of clinical surgery surgical anatomy and operative surgery, and there is an extra chair for diseases of children (medical), while the professor of special surgical pathology gives instruction in the surgical diseases of children. There are 32 *privat-docents*. In 1900-01 there were 205 students, besides 51 entered for the post-graduate course. In the examinations of the first three years 23 per cent. of the students failed, and in those of the last three years 10 per cent. failed; 32 entered for the final, of whom none failed.

The official course of study is as follows:

*First Year.*—Botany, Zoology, Comparative Anatomy and Physiology, Normal Human Anatomy.

*Second Year.*—Physics, Normal Human Anatomy, General Chemistry, Physiology.

*Third Year.*—Normal Human Anatomy, Physiology, General Pathology.

*Fourth Year.*—Pathological Anatomy, Special Demonstrative Medical Pathology, Clinical Instruction in Physical Signs (Medical), Special Surgical Pathology and Diagnosis, Materia Medica, Operative Surgery.

*Fifth Year.*—Pathological Anatomy, Clinical Medicine, Clinical Surgery, Mental Diseases (Clinical), Ophthalmic Surgery, Hygiene.

*Sixth Year.*—Clinical Medicine, Clinical Surgery, Obstetrics and Gynæcology, Diseases of the Skin and Syphilis (Clinical Instruction), Legal Medicine.

The great Hospital of Santa Maria Nuova, founded in the thirteenth century by Folco Portinari, the father of Dante's Beatrice, contains most of the medical clinics and laboratories, as well as the library, with most of the current periodicals.

The *Anatomical Institute* is provided with a good lecture theatre, dissecting room, practical histology room, and museum. The professor and his assistants have besides rooms for their own private use, and there is a small library of anatomical works attached. The work done by the student consists in attending lectures by the professor five days a week for three years, in dissecting forty "parts" during the three years of study, and in attending practical classes in histology for two years. Demonstrations are also given by the assistants.

*General Pathology.*—This is Professor Lustig's laboratory, and it is very complete. There are rooms for practical work by the student in bacteriology and pathological chemistry, in which he attends classes during his third year, as well as lectures three days a week. Professor Lustig has prepared large quantities of his plague serum here.

*Pathological Anatomy.*—This has a good and well-ventilated *post-mortem* theatre, where lectures are given three times a week to students of the fourth and fifth years; these lectures are systematic, and are intended to cover the most important divisions of the subject. Besides these, special classes are given in pathological histology—a good histological room—three days a week. During the first two months of each year demonstrations are given on the technique of *post-mortem* examinations twice a week in the theatre, and three days a week there are given demonstrations of *post-mortem* examinations to the students taken in classes. There is also a good pathological museum attached, and well-appointed rooms for the professor, Professor Banti, and his assistants, including the usual special library.

Materia medica lectures are given three days a week to students in their fourth year, and there is a suitable museum and rooms for the Professor and his assistants.

*Clinical Medicine.*—This has an entirely new and magnificent institute which has only just been built; it comprises wards for 70 cases which are selected from the cases admitted to the hospital, and very complete laboratories for clinical bacteriology, histology, and chemistry. There are photographic and x-ray rooms. The electric room is at the back of the lecture theatre, so that the keyboard can be pivoted round, and demonstrations in electro-therapeutics given to the students in the theatre. There are also vivaria, and a Pasteur Institute which treats about 50 cases weekly is annexed. The instruction given here comprises daily clinical lectures on cases selected so as to cover each session two or three principal divisions of clinical medicine. One-half of the lecture is taken up with the clinical history and physical signs and symptoms of the cases presented, the other half being concerned with diagnosis and treatment. The Thursday lecture is dedicated to the consideration of physical signs. Every day the assistant professor and the first assistant take classes in the physical signs and symptoms of the cases presented during the lecture of the morning, while the second assistant takes the fourth year students over a similar field. In addition the assistant professor and the assistants, twenty in number, take practical classes in bacteriology, histology, and clinical chemistry.

*Clinical Surgery* occupies an older part of the Hospital, but one which has been well adapted and brought up to date for its purpose. The wards are light and airy, the operating theatre quite modern in its arrangements, and there are good clinical laboratories. The course of instruction comprises clinical lectures five days a week, with especial reference to diagnosis and treatment, operations one day with remarks on surgical therapeutics. Occasionally there are instead of clinical lectures, others on groups of cases which may present especial scientific or therapeutic points. The students assist in turns at the operations. The assistant professor takes classes in minor surgery and bandaging. The students examine the cases entrusted to them in the wards under the supervision of the assistants.

*Hygiene.*—The laboratory is a very good one, but medical students do not do any practical work therein: they only attend the lectures which are held three times a week during their fifth year. A yearly course is given of practical work for candidates for the Diploma of Public Health, which is required of all health officers.

*Practical Operative Surgery.*—Classes are held in a suitable set of rooms, and 40 beds in the hospital are set aside for the purposes of teaching clinical and surgical diagnosis: these are attended by students in their fourth year.

*Clinic of Diseases of the Skin and Syphilis.*—The instruction given comprises three lectures a week, which are partly clinical, and also clinical demonstrations given by the assistant professor and the assistants, as well as classes in diagnosis. The students are taken over the cases in the wards in groups.

*Legal Medicine.*—The instruction given comprises lectures three days a week, during which cases of poisoning and others of medico-legal interest admitted are used for purposes of clinical demonstration, as well as such material as may be available from the courts of justice. *Post-mortem* demonstrations are also given on cases of interest, and practical classes are taken by the assistant professor in the well-appointed laboratory and *post-mortem* theatre belonging to the Institute.

*Obstetric and Gynæcological Clinic* is opposite the hospital. This is a large and well-appointed institute, and takes in about 900 labours annually, and has 60 gynæcological beds. The course of instruction is given to sixth year men, and comprises five lectures weekly, three of which are clinical. The students assist in turns at the labours, of which there are about 900 yearly, and at the gynæcological operations. There have been 750 laparotomies here during the last six years. The assistant professor holds special classes in practical obstetrics with the dummy. The assistants also take classes in obstetric and gynæcological diagnosis. The students who have assisted at a labour follow up their case in the wards by accompanying the professor or the assistant in his visits. There are also special post-graduate classes. In the same building are also given lectures and demonstrations three times a week for students in their fourth year on special medical pathology.

*The Laboratories of Chemistry, Physics, and Physiology* are contained in another building a little way off. They all possess well-appointed lecture rooms in which lectures and demonstrations are given in each subject three times a week; for students in their second year in physics and chemistry,

and for students in their second and third years in physiology, but no practical classes are held in these subjects.

*In Zoology, Comparative Anatomy, and Physiology*, students receive instruction in their first year by means of six lectures a week at the Zoological Institute. Practical classes are also held which, though not compulsory, are recommended by the Faculty of Medicine, and are well attended.

*The Botanical Institute.*—Lectures and practical classes are given for students in their first year under similar conditions as the preceding.

*Mental Diseases.*—Instruction in mental diseases is afforded by means of clinical lectures given twice a week at the asylum for students in their fifth year.

*Ophthalmic Surgery.*—Instruction, systematic and clinical, is given at the special hospital to students in their fifth year. The ophthalmic hospital is a quarter of a mile from Santa Maria Nuova, and has been lately largely remodelled and enlarged. It is now a very complete hospital with good examination and operating rooms and clinical laboratories. The wards are pleasantly arranged round little cortiles, in which grow palms and flowers, and the hospital looks neat and trim. The instruction given comprises systematic and clinical lectures three times a week for students in their fifth year. Operations, at which the students help in batches of six, are performed on one day a week. The assistant professor and the assistants take classes in ophthalmoscopic examination.

*Diseases of Children.*—Instruction is afforded by two courses—medical and surgical—which are "complementary," that is, not obligatory but are advised by the Faculty. Practically every student takes them. The Children's Hospital is just outside the city; it was opened in 1899, and is built on the pavilion system. The pavilions are connected by a main building, which contains exceedingly good rooms for instruction and research, comprising a very complete operating room with adjoining rooms for sterilisation of operators and material, a neat lecture theatre, very complete clinical laboratories, professor's room (which is a model), and special library and a well-appointed out-patient department. The block of wards for contagious cases is perfectly isolated from the rest of the building, and there is a small building, also isolated, containing a set of small observation wards. The whole hospital is light and airy and cheerful, and in every way good. The instruction given comprises clinical lectures and demonstrations twice a week on cases selected from the wards and out-patient department, and operations once a week.

The instruction given for the *privat-docents* comprised during the year 1900-1 the following courses:

Lectures on embryology twice a week.
Lectures and demonstrations on medical technique twice a week.
Lectures and demonstrations on the physicial signs and symptoms of diseases of the circulatory system.
Bacteriology, lectures, demonstrations, and practical work three time week (Professor Lustig).
Lectures on special surgical pathology once a week.
Demonstrations on the symptoms of disease of the nervous system once a week.
Lectures on the medical diseases of infancy once a week.
Lectures and demonstrations of elementary neurology twice a week.
Lectures on the clinical and pathological differences between diseases in childhood and adult life.
Lectures on diseases of the digestive system three times a week.
Lectures on pathological bacteriology twice a week (Professor Banti).
Lectures on gynæcological diagnosis twice a week.
Lectures on diseases of the eye once a week.
Lectures on the morphology of the vascular system twice a week.
Lectures and demonstrations on medical parasitology.
Lectures on experimental toxicology twice a week.
Lectures on medical ophthalmoscopy.
Lectures on orthopædics once a week.

The post-graduate course is a yearly one. It comprises lectures and demonstrations and practical classes by the professors, and is most complete.

### Rome.

The number of medical students in Rome in 1900-1 was 641. There were 805 entries for the examinations of the first three years, of which 163 failed (or nearly 20 per cent.), and 1,501 for those of the last three years, of which 120 failed (or 8 per cent.; 128 entered for the M.D.; none failed.

The Medical Faculty consists of 25 professors, the extra chairs being History of Medicine, Diseases of Children, Neuropathology, Traumatology, Diseases of Ear, Clinical Chemistry and Histology. Professor Magini, of the Faculty of the Natural Sciences, also teaches medical students in general physiology and histology. There are 45 *privat-docents*. The course of study recommended is:

*First Year.*—Comparative Anatomy, Human Anatomy, Botany, General Chemistry, Physics, Zoology, Dissections.
*Second Year.*—Human Anatomy, Histology, General Physiology, Organic Chemistry, Experimental Physiology, Dissections, Practical Histology, Complementary Courses, Comparative Embryology, Practical Chemistry, Practical Physics.
*Third Year.*—Topographical Human Anatomy, Lectures, and Practical Work, Experimental Physiology, General Pathology, Complementary Courses, Physiological Technique, Physiological Chemistry and Physics.
*Fourth Year.*—Clinical Surgery, Clinical Medicine, Pathological Anatomy, Materia Medica and Experimental Pharmacology, Legal Medicine, Special Demonstrative Medical and Surgical Pathology, Complementary Courses, History of Medicine, Traumatology.
*Fifth Year.*—Surgical Anatomy and course of operations, Demonstrations in Pathological Anatomy, Clinical Surgery and Medicine, Diseases of the Eye, Experimental Hygiene, Complementary Courses, Diseases of Children.
*Sixth Year.*—Demonstrations of Pathological Anatomy, Clinical Surgery and Medicine, Clinical Diseases of the Skin and Syphilis, Obstetrics, Clinical Mental Diseases, Complementary Courses, Diseases of the Ear, Neuropathology.

The clinics are at present not very satisfactory; they are scattered over the city and located in old buildings. When, however, the magnificent Policlinico is completed (it is hoped in a year's time) the University will possess in it one of the most complete buildings of the kind in the world.

At present the old hospital of S. Spirito in Sasso, originally founded towards the end of the eighth century by Ina, King of the West Saxons, in the Borgo or borough of the Saxons, is the place where the clinics of medicine, diseases of the eye, of children, of ear, nose, and throat, are held; and although skilfully adapted, yet there is no doubt that they are insufficient to present needs. When the policlinico is opened the old hospital will probably no longer be used as a hospital at all, and its story, extending over 1,200 years, will come to an end, a story so curiously connected with the Saxon race.

The *obstetric clinic* is at the hospital of S. Giovanni, an even older hospital, attached as it was originally to the palace of an imperial senator. About 1,000 labours take place here annually, each student seeing 12 or 15.

The *surgical clinic* is also in an old building, as also are those of diseases of the skin and syphilis, and mental diseases, all somewhat inconvenient in spite of really skilful adaptations.

The instruction given in these clinics is practically the same as the courses given at Turin.

The *laboratories of human anatomy, physiology, general pathology, pathological anatomy, experimental pharmacology, general physiology, and zoology* are quite modern, and are all situated in a large building, very well arranged and equipped for the needs of a large school and for practical work. The course of instruction given is much the same as at Turin, except that in general physiology which is peculiar to Rome, and comprises an annual course of lectures and demonstrations three days a week.

The *Institute of Hygiene*, directed by Professor Celli, is near at hand. It is admirably arranged and equipped. Here an annual course of lectures is given three days a week, and a practical course.

The *Institutes of Chemistry, Physics, and Materia Medica* are also close to the others, there being a large garden which is common to all, except that of Hygiene. This garden serves as materia medica garden, place for vivaria, etc. These institutes do not directly belong to the Faculty of Medicine; the instruction given in them for medical students comprises courses of lectures, and also, in the two former, courses of practical work.

In all, forty-six free courses are given, no fewer than ten of which have to do with pathology. Many of these are given by men of world-wide celebrity: thus Professor Mazzoni gives a course of clinical gynæcology at the S. Giovanni Hospital, where a large number of gynæcological operations are performed annually.

Various courses are also given at other hospitals. Thus, Professor Ghilarducci gives a course on neuropathology at the Hospital of S. Antonio, and a great amount of surgical work is performed at the Consolazione Hospital, where there is a very good operating room under Professor Raffaello Bastianelli. In this way practically the whole of the clinical material

of the hospitals of Rome, containing some 3,000 beds, is used for teaching purposes, and there is no doubt that this teaching, both in quality and quantity, is extremely good.

### Bologna.

The number of medical students in 1899-1900 was 457. The number of professors is 19, histology being taught by the Professor of Anatomy. There being three extra chairs, orthopædics, diseases of children, and physical therapeutics. There are 30 *privat-docents*. The number of students who satisfied the examiners for the M.D. was 94. The need of new laboratories is shown by the falling off in students of late years at this once considered the premier medical school; there were 125 students in their sixth year and only 39 in the first. When the fine laboratories projected are built no doubt the students now attracted by the Universities possessing ampler establishments will again be drawn to Bologna by the fame of its teaching staff.

The course of studies is—

*First Year.*—Physics, Botany, General Chemistry, Human Anatomy, Histology, Practical Histology, Dissections.

*Second Year.*—Human Anatomy, Zoology, Comparative Anatomy, and Physiology, Organic Chemistry, Human Physiology, Dissections.

*Third Year.*—Human Anatomy, Human Physiology, Pathological Anatomy, Special Medical Pathology, Special Surgical Pathology.

*Fourth Year.*—General Pathology, Materia Medica, Pathological Anatomy, Special Medical and Surgical Pathology, Clinical Medicine, Clinical Surgery, Practical Operations.

*Fifth Year.*—Clinical Medicine, Clinical Surgery, Clinical Mental Diseases, Clinical Diseases of Skin and Syphilis, Legal Medicine, Hygiene, Obstetrics.

*Sixth Year.*—Clinical Medicine, Clinical Surgery, Clinical Diseases of the Eye, Clinical Obstetrics, and Gynæcology.

The corresponding examinations held are divided as follows:

*First Year.*—Physics, Botany, General Chemistry, Histology.

*Second Year.*—Zoology, Comparative Anatomy and Physiology, Organic Chemistry.

*Third Year.*—Human Anatomy, Human Physiology.

*Fourth Year.*—Pathological Anatomy, Meteria Medica, General Pathology, Special Medical and Surgical Pathology, Practical Operations.

*Fifth Year.*—Hygiene, Legal Medicine, Mental Diseases, Clinical Diseases of Skin and Syphilis.

*Sixth Year.*—Clinical, Medicine, Surgery, Diseases of Eye, Obstetrics.

*Complementary.*—Diseases of Children, Orthopædics, Physical Therapeutics.

The biological institutes are old and not well adapted to modern requirements. The museums are rich in specimens, particularly in those of comparative pathology, but are not well catalogued.

All the clinical instruction is given in the University hospital, which is well arranged and equipped, the clinic of Professor Murri being particularly practical in its arrangements. Here great attention is paid to the practical instruction of the student: thus the clinical histories are compiled and registered with great care, and the student seems to have more responsibility than in most medical clinics. The nursing arrangements are especially good, and quite comparable to a large English hospital. The special medical library seemed very good, and it was gratifying certainly to see all the best British authorities represented there. Four courses of special medical pathology are given here by *privat-docents*, so that this clinic is in every way exceptional.

### Siena.

There were 88 medical students in 1898-99. In the examinations of the first three years 16½ per cent. failed, about 6 per cent. failed in those of the last three years; 19 presented themselves for the final, all passed.

There are 15 professors, two teaching in two subjects each. The course of study is particularly practical.

*First Year.*—Zoology, Comparative Anatomy and Physiology, Lectures and Practical Work, Human Anatomy, Dissections, Histology, Practical Histology, Botany.

*Second Year.*—General Chemistry, Practical Chemistry, Physics, Human Anatomy, Dissections, Histology, Practical Histology, Human Physiology.

*Third Year.*—Pathology (General), Human Anatomy, Dissections, Histology, Practical Histology, Human Physiology.

*Fourth Year.*—Surgical Anatomy, Practical Surgical Anatomy, Medical and Surgical (Propedeutics), Pathological Anatomy, Materia Medica (this course is also recommended to the students of the third year), Clinical Medicine, Clinical Surgery.

*Fifth Year.*—Pathological Anatomy, Hygiene, Clinical Medicine, Surgery, Eye Diseases, Obstetrics.

*Sixth Year.*—Practical Surgical Operations, Legal Medicine, Clinical Medicine, Surgery, Mental Diseases, Diseases of Skin and Syphilis.

There are 10 free courses, including such subjects as history of medicine, diseases of children, medical ophthalmoscopy, duties of the medical officers of prisons, applied splanchnology, and others.

The University institutions are all modern. The ancient City Hospital was entirely remodelled and transformed into a University Polyclinic—the first opened in Italy—in 1886, under an agreement between the Minister of Public Instruction and the hospital, renewable every nine years. This contains the two general clinics, each of which has depending on it the two special clinics of surgical and medical special pathology and propedeutics. Here are also the other clinics, except that of mental diseases, which is at the large lunatic asylum. There is a very good operating room, lecture theatre, clinical laboratories, and out-patient department. The wards are those of the old hospital, with some fine fourteenth and fifteenth century frescoes on the walls, but have been modernised, new flooring and an excellent system of ventilation having been provided. The obstetric wards are at the top of the building; here about 300 cases of labour are attended yearly, so that each student gets about 12.

The laboratories of anatomy, pathological anatomy, hygiene, general pathology, and histology are contained in a modern building a little way from the hospital; they are very completely equipped and admirably arranged. The instruction given is particularly practical. The arrangements of the hygienic laboratory are particularly good.

### Pavia.

The number of students in 1900-1 was 487. There were 759 entries for the special examinations of the courses of the first three years. Of these 127 were referred, or about 12 per cent. For those of the last three years there were 1,060, 46 of these were referred, or about 4¼ per cent.; 75 entered for the Final, and 1 failed to pass.

There are 14 professors, surgical anatomy is taught by the professor of surgery, Professor Golgi teaches history and general pathology; neuropathology is taught by the Professor of Mental Diseases. There are 27 *privat-docents*, who give 27 courses, comprising special parts of the official courses, and also some others, such as human parasitology, diseases of children, and diseases of the ear, nose, and throat.

The official courses are:

*First Year.*—Botany, Zoology, Human Anatomy, General Chemistry.

*Second Year.*—Physics, Comparative Anatomy and Physiology, Human Anatomy, Physiology, Histology, Dissections.

*Third Year.*—Physiology, General Pathology, Materia Medica.

*Fourth Year.*—Medical Pathology (lectures and practical work), Surgical Pathology, Pathological Anatomy, Practical Operations, Hygiene, Medical and Surgical "Propedeutics," Medical Histology and Chemistry (Complementary).

*Fifth Year.*—Practical Pathological Anatomy, Medical Pathology, Clinical Medicine, Clinical Surgery, Lectures on Obstetrics, Diseases of the Eye (Clinical and Practical Work), Legal Medicine.

*Sixth Year.*—Clinical Medicine and Ward Work, Clinical Surgery and Ward Work, Clinical Obstetrics and Gynæcology, Clinical Diseases of the Skin and Syphilis, Mental Diseases and Neuropathology.

The laboratories are contained in the Biological Institution, a fine and well-equipped building; those belonging to Professor Golgi and Professor Monti are particularly good. The University Hospital is well arranged, and possesses good clinical laboratories, lecture and operating theatre, *post-mortem* theatre, etc.

### Parma.

There were 181 medical students in 1900-1901, and 38 passed the final examination. There are fourteen professors, three teachers, two subjects each.

The official course of study is as follows:

*First Year.*—Botany, Zoology, Comparative Anatomy and Physiology, Human Anatomy, Histology, Practical Histology.

*Second Year.*—Human Anatomy, Dissections, Physics, Chemistry.

*Third Year.*—Human Anatomy, Dissections, Physiology, General Pathology, Materia Medica.

*Fourth Year.*—Surgical Anatomy, Clinical Pharmacology, Special Medical and Surgical Pathology and "Propedeutics," Operative Surgery, Pathological Anatomy.

*Fifth Year.*—Clinical Medicine and Surgery, Clinical Diseases of the Eye, Hygiene, Experimental Legal Medicine, Practical Pathological Anatomy, Obstetrics and Gynæcology.

*Sixth Year.*—Clinical, Medicine, Surgery, Diseases of Skin and Syphilis, Mental Diseases, Obstetrics and Gynæcology (practical).

The institutes and clinics are partly old, but, on the whole, made fairly suitable for modern needs by adaptations, and partly new, well built, and equipped. Thus most of the laboratories are in an old Jesuit convent, which has had to be

considerably altered; they are, however, fairly well equipped, though the rooms for practical work are only suited for small classes. Much attention is, however, paid to practical work in all subjects. The two general clinics and their corresponding "propedeutic" clinics are situated in a new building in the grounds of the city hospital, as is also the clinic of diseases of the eye. This is quite modern, and well equipped, though somewhat small. This defect it is hoped to remedy shortly by the building of a new clinic to contain the surgical division. The wards here have the privilege of choosing their cases from the cases admitted, and, what is quite exceptional, of returning them to the general wards as soon as they have been used for teaching purposes. A newly-built children's hospital also, which is used for teaching purposes, is attached to the city hospital. The clinic for diseases of the skin and syphilis is a new building, and is very well arranged, particularly for teaching purposes. It has plenty of room for the students, as well as good research rooms, room for endoscopic work, wards, out-patient's department, photographic room, and library.

The Lying-in Hospital takes in over 200 cases of labour yearly, and possesses a good lying-in room, and, what is somewhat unusual, a room for students on duty to sleep in. There is a good operating room, and wards for gynæcological cases.

There is a large lunatic asylum some way out of the city where instruction is given in mental diseases. Both teachers and students are conveyed thereto at the public expense.

PALERMO.

The number of students in 1897-98 was 316. Twelve per cent. failed in the examinations of the first three years, and about 4 per cent. in those of the last three. Fifty-nine entered for the final examination, and all passed. There are 17 professors—the normal number, and 29 *privat-docents*.

The course of study recommended is:

*First Year.*—Physics, Chemistry, Human Anatomy, Histology.

*Second Year.*—Human Anatomy, Dissections, Physiology, Botany, Zoology, Comparative Anatomy, and Physiology.

*Third Year.*—Human Anatomy, Dissections, Materia Medica—lectures and practical work, Physiology, General Pathology, Topographical Anatomy.

*Fourth Year.*—Clinical Medicine and Surgery, Special Medical and Surgical Pathology, Pathological Anatomy.

*Fifth Year.*—Clinical Medicine and Surgery, Clinical Diseases of the Eye and Obstetrics, Surgical Anatomy, Pathological Anatomy.

*Sixth Year.*—Clinical Medicine and Surgery, Clinical Mental Diseases, Diseases of the Skin and Syphilis, Legal Medicine, Hygiene.

The laboratories and clinics of the university are old and unworthy of its reputation as the premier university of Sicily. It is intended to replace them by entirely new institutions at an early date.

NAPLES.

There were 1,889 medical students in 1894-1895. About 18 per cent. were rejected at both preliminary and later examinations; 282 presented themselves for the final, of whom 1 failed. There are 25 professors, the 8 extra chairs being in practical pathological anatomy, neuropathology, laryngology, physiological chemistry, diseases of the ear and nose, orthopædics, diseases of children, and second clinical medicine. There are considerably more than the usual number of assistants, corresponding to the size of the school, and 128 *privat-docents*.

The course of studies recommended by the Faculty is very explicitly set out. The official courses are much the same as those of Pavia, but in addition the Faculty strongly recommends the following free courses:

*First Year.*—Practical Chemistry, Practical Physics, Dissections (2 courses only can be taken).

*Second Year.*—Practical Embryology, Practical Histology, Practical Comparative Anatomy and Physiology, Microscopic Anatomy (2 courses only).

*Third Year.*—Practical Physiology, Practical Physiological Chemistry.

*Fourth Year.*—Pathological Histology, Neuropathology.

*Fifth and Sixth Years.*—One of the complementary professorial courses.

There are 158 free courses, so that the student has plenty of choice.

GENOA.

The numbers of medical students in 1897-98 was 355, the latest figures to which I have had access. The number of entries for the examinations of the last three years was 609, of whom 94 failed, or 16 per cent. The corresponding figures for the last three years were 853 and 54, or 6 per cent. Fifty entered for the final, and 1 failed. There are 19 professors; the professor of anatomy teaches in addition histology, the three extra chairs being in diseases of the ear and throat, physiological chemistry, and dental surgery.

The course of study is much the same as that of Florence. There is a particularly large lying-in hospital, with wards for gynæcological cases, taking over 1,000 cases of labour yearly.

PADUA.

The number of students in 1897-98 was 389; 12 per cent. failed in the examinations of the first three years, and 11 per cent. in those of the last three; 73 entered for the final and 2 failed. There are 18 professors, including a chair for diseases of children. There are 24 *privat-docents*. The course of study recommended is practically the same as that of Bologna. There were 32 courses given by the *privat-docents*. The Anatomical Institute comprises what is said to be one of the finest collections of wax models in the world.

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In conclusion, there is no doubt that a vast change has come over medical teaching at the Italian universities during the last thirty, and especially the last fifteen, years. New laboratories and clinics have been built and are being built everywhere, and method and order introduced. The university authorities appear to be animated by the desire to give a sound scientific and practical training to their students; and, indeed, the feelings which I have experienced in visiting them may be best expressed by the lines:

For, when such light is in the world, we share,
All of us, all the rays thereof that shine.

## REORGANISATION OF THE ARMY MEDICAL SERVICE.

EACH foreign mail—especially from India and South Africa—brings us a large number of letters from medical officers, offering, of course, altogether independent criticism (for no collusion could be suggested in places so widely apart) and mostly destructive of the the scheme embodied in the report of the Reorganisation Committee. The unanimity with which leading features of the scheme meet with strong condemnation is very striking and can be no mere coincidence. It proves that, in the opinion of those best fitted to know, it would have disastrous consequences to the present and future of the Army Medical Corps should it be forced on the service in its first crude form.

One of the letters received within the last few days is of particular interest, because it is stated to embody the views of nine officers of the corps of from 7 to 16 years service. After a prelude, it reviews the several clauses of the Reorganisation report, as follows:

Although we consider the scheme contains many good points, as a whole it is fantastic and unworkable. We who for many years have been working under existing warrants consider our rights under the scheme seriously jeopardised; it will not, moreover, attract recruits to the corps. The whole matter should be rediscussed by a committee of senior officers. Here are some of its objectionable features:

Paragraph 1.—The Director-General is deprived of real authority, and the medical service will be without a head, under a composite irresponsible Advisory Board.

Paragraphs 14 to 18.—The Director-General alone should have promotion in his hands.

Paragraph 25.—We feel strongly that Netley should be retained and strengthened, and, instead of a proposed farcical, there should be a real four months probation there for lieutenants, followed by a two-months course at Aldershot.

Paragraph 26.—A probationer who fails is not likely to be worth retaining, and should be dismissed.

Paragraph 28.—This will destroy medical *esprit de corps* and cause friction.

Paragraph 30 requires explanation. Anything like a post-graduate course comes too early in a lieutenant's career, and, if he be kept at home for study purposes, it will operate most unfairly on the foreign service roster of seniors.

Paragraph 31 to 33.—This examination is unnecessary for good candidates and impracticable for the indifferent. So many examinations will prove most deterrent, coupled with so heavy risks in case of failure, and in any case with supersession through mere marks.

Paragraph 34 means that no young officer can be available for foreign service, which is absurd and unworkable.

Paragraph 36.—Six months for real study should be given at the end of the first tour of foreign service.

Paragraphs 37 to 38.—Special and first-class certificates should carry for accelerated promotion, only six and twelve months not twelve and eighteen. The second and third examinations have much of a chance element, are quite unnecessary, and must breed grievous dissatisfaction. Any competition by a supersession of seniors is entirely new to the army.

Paragraph 39.—Unfair, impracticable, deterrent.

Paragraph 43.—Replace gratuity by £250 pension at least.

Paragraph 44 to 45.—Most objectionable; would prove a complete stumbling block.

Paragraph 46.—Too terrible; unless withdrawn must keep every recruit out of the service. It abolishes the rights of officers now serving with a stroke of the pen. Not only does the pension of £365 a year go, but the denial of promotion involves a loss of £20 a year to the officer's widow.

Paragraph 48.—Every officer should serve at least one tour in India before twenty years service.

Paragraph 51.—Most unfair. What right have the Guards officers to such advantages or privileges?

Paragraph 65.—Impracticable. Are the interests of sick soldiers not to be studied?

Paragraph 66.—Foolishness. Officers recruited from various medical schools, including the Colonies we hope, are much more likely to be broader and freer than those educated in a narrow military medical school.

*Pay.*—Regarded as liberal, except for colonels. Any Warrant which does not extend increased pay in India will not avail. Seniors would practically draw less in that country than at home.

The omissions in the scheme are many:

1. Nothing said of increased establishments, without which much of the scheme, including reasonable leave, and lessened foreign service, must prove inoperative.

2. Nothing about extinguishing employments of retired officers.

3. Nothing about increased efficiency of the rank and file of the corps.

In view of all the above, young medical men will certainly think twice, and even thrice, before entering the Army Medical Service.

In this, as in many other communications received, we notice that it is assumed that the new proposals will be made retrospective to officers now serving. This we cannot for a moment believe. Betterment warrants are, of course, applied to officers serving, but, when conditions of service are fundamentally changed for the worse, the changes are either not applied or compensation is given. When the highest administrative medical officers were retired at 60 instead of 65, they were given compensation. To withhold or abrogate pension at twenty years by a stroke of the pen would be a revolutionary act, and as fatal to national credit as a repudiation of Consols. Even if choice between the old and the new scheme was given to officers serving, it is not difficult to divine what the choice would be. We have received many other letters, the consideration of which we are compelled to hold over.

The following are extracts from letters from abroad, written before the publication of the Committee's report, to Dr. Thompson, M.P., of Omagh:

An Indian Correspondent writes: In your letter to the British Medical Journal of May 25th you invite comment. Let me respond: (1) Indian service, with its drawbacks, is largely responsible for discontent in the R.A.M.C.; the Indian Government does not recognise home regulations unless they suit itself, and simply "sweats" us: (2) substantive rank has done more for us than anything else these twenty years past; (3) the director-general should rank as lieutenant-general, and have a seat on the Army Board; (4) charge pay in India must be granted if we are to be placed on a footing of equality with all other branches serving in that country; (5) pensions should be granted to officers of over fifteen years service who are compelled to retire through ill-health; (6) pension at twenty years to be absolutely inviolate; (7) home and foreign service to be equalised by increased establishment; (8) attachment of junior officers to regiments might be useful; (9) no abolition of half-pay appointments; (10) retired medical officers to have administrative appointments in the auxiliary services; (11) all officers under twenty years service on return from foreign tours to go through a course of drill and other instruction at Aldershot; (12) first appointments to be by nomination, with, of course, examination; (13) establishment of a general military hospital in or near London; (14) leave for post-graduate courses; (15) entrance limit twenty-six years; (16) horse allowance in India; (17) undermanning and all its attendant evils to be grappled with.

A Retired Officer writes: Do not touch retired pay appointments: they are necessary in order that full-pay officers may be concentrated in large stations and camps of instruction. All retired officers, whether on pension or gratuity, should be eligible for appointments.

Subsequent to the publication of the scheme came the following letters:

A Correspondent wrote: I have served for fifteen years with a view to retirement at twenty on £1 a day. Am I now to be called upon to pass a sink-or-swim examination in order to obtain that?

Major writes from India: I have served under five Warrants, each granting retirement on £1 a day at twenty years. Is that now cancelled, should I fail in an examination, and a gratuity of £2,500 substituted?

A Correspondent wrote: The first duty of the Advisory Board should be to alter the scheme which has called it into existence, because it is quite impracticable. It seems framed as if candidates were plentiful, whereas it contains little to attract, much to repel. The enhanced scale of pay roundly equals about 25 per cent., but the emoluments of assistants in civil practice, with free board and lodging, have advanced 50 per cent. Is it likely that a well-qualified man who can receive the equivalent of £400 a year, retaining his freedom in civil life, will enter a service to be driven from pillar to post during twenty years of examinations, with the excellent chance of being finally kicked out at an advanced age without a pension? Surely the committee meant to end and not mend the service. Nor can they have reasoned out many points they recommend. How, for instance, can a lieutenant be promoted captain at the end of three years, if the examination for such is delayed to three and a-half years service? The same crudeness appears in the recommendations for "accelerated" promotion; if such be given to the first few batches entering, they will pass over the heads of those already serving, whose seniority does not exceed the period for which acceleration has been gained; such supersession will apply to captains, majors, and lieutenant-colonels. How are officers in the examination for lieutenant-colonel to obtain information in subjects mentioned in paragraphs 5 and 10 on which not a textbook even exists? It might be hastily assumed any idiot could obtain 40 per cent. of marks on certain recondite subjects: perhaps so, but where is the living man likely to obtain the full marks for advancement, let alone army medical officers condemned practically to constant foreign service? Let it be asked, if an army doctor is found by examination unfit to serve the King, why should he be considered fit to remain on the *Medical Register?* How would the medical members of the Committee themselves like to be called upon to pass stringent examinations at intervals of three, nine, and eighteen years in order to remain on the *Register*, or to be able to practise their profession? What will be the unfair incidence of these examinations on officers, who are kept serving abroad, without opportunity of preparing for them? How is the foreign-service roster to be administered if no young officers are to be sent abroad until after four years service? It will practically mean perpetual foreign service for the seniors. Before this scheme the army did afford a medical career; now it offers none that can possibly be accepted.

An Indian Criticism is as follows: The outcome of the Committee's work is far worse than the most pessimistic officer of the R.A.M.C. anticipated. Would the officers themselves have chosen the sole representative they had on the Committee? Not a word have I heard in favour of this scheme. I am a junior, and we are the men who will be the most injuriously affected. The Committee have done practically nothing to make the service in any way more desirable to the bulk of medical officers. Against a few pounds extra pay we run the risk of being turned loose in the world after eighteen years service with a mere gratuity. Not a single one of our chief grievances are redeemed. As to the Advisory Board, what would the Royal Engineers say, to serve under a mixed Board, partly civilian and partly military? Can such a Board help us? It is completely under the Secretary of State for the time being. What of candidates? A candidate has first to get a confidential report from his Dean, which may (luckily) cause his rejection, or, if not bad enough for that, will nevertheless be recorded against him; he passes the entrance and buys some uniform; in two months time comes his first chance of being turned out, if he cannot pass an examination of unknown stringency; in three months more he may be turned out at Aldershot. Para. 27, *re* resident post in civil hospitals, will meet with approval as likely to bring in useful men. Para. 28, much can be said for and against attaching junior officers R.A.M.C. to regiments and other units. But if adopted it is not said whether he is to move with the unit or go abroad with it. The Committee did not seem aware that every regiment in India has a medical officer in charge, who, however, is constantly being changed. At the end of three years an officer may be sick of the service and retire; yet he may be compulsorily tied to it for seven years for £25 per annum! Who could accept such a condition? Should he go in for and fail in his examination, then, his three years becomes a dead loss. How, owing to exigencies of the service is the incidence of the examination to be equalised between officers? A young captain sent abroad at four years service cannot return before nine or ten years, yet at nine years he has to accept examination or retire with £1,000, and quit the whole business. At present he can claim £1,250 at ten years. If he is wise he will probably clear out at nine years service, but then that is just the time when he becomes generally useful to the State in the charge of hospitals and dealing with soldiers. A large drain of officers at this period would be most embarrassing to the service. But if he stays on he has to face an examination on ten subjects, failure in any one of which means loss of seniority. I gather that the captain going in for promotion to major is not to get six months study leave, but is to do duty in some military hospital, and after his day's work attend some civil hospital; that work may be constantly recurring orderly duty. But the most vital of all is para. 43, for it does away with the only thing worth serving for, namely, retirement on £1 a day after twenty years. After nineteen and a-half years service, with perhaps shattered health, is an officer to be sent adrift with a sum that would not bring him £100 a year? Imagine a middle-aged medical man in that position with a wife and children dependent on him! It is an awful prospect. Give me back the £1 a day pension at twenty years, and I will give you all the "advantages" (?) offered by the report of the Committee. What the R.A.M.C. wanted was (1) increase of strength, (2) less foreign service, (3) study leave. Let a new committee be formed on which the R.A.M.C. of all ranks shall be represented, and a scheme will soon be drawn up which will suit the army and satisfy medical men.

An Old Officer writes: Since 1858 there has been nothing but giving with one hand and taking away with the other in a series of warrants often broken and disregarded. Without legal guarantees of pension and old-age provision no sensible man will risk such hazardous conditions as now proposed. These periodical examinations have been already exposed and condemned. What does it all mean? It seems to attempt periodical weeding, as well as to expedite promotion, and to prevent as many men as possible from completing twenty years full-pay service, and thus earning a pension of £1 a day.

We are compelled to postpone the publication of a large number of letters sent direct to us.

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Female Medical Practitioners in Russia.—According to official statistics, the total number of legally qualified medical women now holding public appointments as medical officers of health, physicians to schools, and to the poor, and on the staff of municipal dispensaries, is 624. The number of male practitioners is 14,784. This does not include dentists, male and female.

## CONTRACT MEDICAL PRACTICE.

PROFESSIONAL AGREEMENTS AS TO VACANCIES AND CLUB APPOINTMENTS.

A MEETING of the medical society of an important provincial town is shortly to consider the following among other propositions:

1. That the committees of the various works and Friendly Societies be approached with a view to obtaining increased remuneration in contract medical work as under: (1) Clubs connected with works, from 2d. to 3d. per week; (2) midwifery fees to be not less than 15s.; (3) clubs associated with Friendly Societies not less than 4s. 4d. per member per annum.

2. In the event of Proposition 1 being carried, that every member of this Society sign an agreement not to accept any club held at present by another member, even at increased rates, within a period of two years from date.

We are asked to say whether Proposition 2 may be taken as a fair reading and interpretation of medical ethics, or whether it is expecting too much from any practitioner. The medical practitioners in the locality are agreed not to accept appointments at a less remuneration than is paid to present holders, and in some cases only at a certain higher fixed rate, but no time limit has been introduced.

*** In our opinion some agreement on the lines of the Proposal 2 may reasonably be required by present holders of contract appointments when entering upon combined action for the general good which will not improbably result in a considerable disturbance of existing relations. Such an agreement could hardly, however, be indefinite in duration; the exact time limit suitable to the case depends upon local conditions. So far as we can judge, a term of two years does not seem unreasonably long.

We note that the terms of the proposed resolution would cover all cases of vacancies in contract appointments, whether originally in connection with the proposed joint action, or for other reasons. If the agreement is not intended to have so wide a scope, some reservation appears desirable. Perhaps the words "except with the sanction of this Society" might with advantage be added at the end of Proposal 2.

CONTRACT PRACTICE AND THE REMEDIES SUGGESTED.

M.R.C.S.Eng. L.R.C.P.Lond. writes: In view of the attitude adopted by the great Friendly Societies on the wage limit question, I feel certain that item in the programme will have to be dropped. Will a general increase of say 25 per cent. on the pittance we already receive either ameliorate our position or ensure members of societies better attendance, or what is of equal importance, better drugs? I think not. Personally my club patients receive the same mixtures I should prescribe for them were they private patients. I look after them with the object of getting them off my list as soon as possible. I am of opinion that the exponents of the "faith and purgation doctrine," if there are any, find in the long run their club patients more expensive with regard to medicine and attendance than those who treat them on rational principles. Many medical men who hold appointments, be they club, union, or what not, would, if the truth were known, admit that without their appointments they could not keep their doors open six months. The demands made on them are so great and unceasing that they have no time to devote to private practice; and further, the sight of a waiting-room filled with women who wear shawls on their heads, and working men in their everyday clothes, would be quite sufficient to drive away all the better class patients.

The position of the average general practitioner is not likely to be remedied by tinkering, or by going cap in hand to the Friendly Societies and saying, "Please will you give us five shillings a year instead of four." We should be met with the same *non possumus* as in the case of the "wage limit." The time has come when it is absolutely necessary to employ drastic remedies to relieve an intolerable situation, for instance, the total abolition of contract work. It seems to me impossible to abolish the abuses of the system without abolishing the system itself.

Because our predecessors, actuated by philanthropic motives, instituted the principle of family clubs, is no reason why we, their descendants, should not repudiate them now that they have grown into huge sweating machines which keep their doctors in a position analogous to the unfortunate woman in Hood's "Song of a Shirt," while committees and companies are making fat profits out of the thankless and unceasing drudgery of the medical man.

The difficulties in the way of such action are not so great at first sight as they may seem—certainly not greater than those opposed to remedies which have already been suggested. For instance, there is no reason why Boards of Guardians, works clubs, and other bodies of public men who employ a medical man by contract, should not agree to receive a quarterly statement of work done and disburse the amount due to him not at so much a head but at a charge, to be mutually agreed upon, for each visit, or consultation at the medical man's house.

In the case of really poor patients surely it is better to accept a small fee or even to work gratuitously than to be the underpaid servant of some medical aid association whose agents filch from a man what private patients he may happen to have. This is no exaggeration, but a fact. Doctors are not as a rule a hard-hearted class; but the present system is steadily stifling that feeling of pity and good feeling which prompts them at times to render valuable services without expectation or desire to receive payment, and is converting them into mere percussing and auscultating machines.

The greatest obstacle to our emancipation is in ourselves. What reform was ever effected, be it political religious, social or moral—observe I carefully avoid trades-unionism—without combination on the part of those who succeeded in carrying it out? The same applies to the medical profession. Combination is the spirit of the age in which we live. We see it in commerce. We see it in other professions. Ours is the only one in which its members are mere units. Until we adopt the principle of those who have been wiser than ourselves, so long shall we be dissatisfied with our own status, and the performance of our duties will be drudgery when it should be a pleasure.

MEDICAL AID ASSOCIATION.

ONE OF THEM writes: The following is a copy of a circular letter being sent to the medical practitioners of the district in which I live:

Dear ——.—An attempt having just been unsuccessfully made to induce a medical practitioner of this town to examine and attend people for a canvassing association for medical aid, by means of the false assertion that three other medical men—whose names were given, had already consented to act in that capacity, I acquaint you of the fact, and can show you the correspondence and disclaimers if you wish.

It is to be expected this exposure will prevent another insidious attack from being made on our status; the more we present a united front against our foes the easier it is for all of us to support the recent notice about medical aid associations from the General Medical Council.

MEDICAL AID AND FRIENDLY SOCIETIES.

MEDICUS writes: Having read in the very full report you gave in the BRITISH MEDICAL JOURNAL of December 7th *re* Dr. Rendall's position with the Yarmouth Medical Aid Society, I would like to know if the same ruling would apply to doctors holding Medical Aid Societies now formed or in contemplation by combinations of Friendly Societies. Doubtless they are registered, but the wage limit is not enforced, and canvassing for members is adopted.

*** We cannot pretend to give an answer to this question. It must in any individual case depend on the nature of the evidence available.

## THE LATE DR. WILLIAM SMYTH.

IN the BRITISH MEDICAL JOURNAL of December 7th a short account was given of the heroic death of Dr. William Smyth, of Burtonport, co. Donegal, who died of typhus fever, contracted in the course of his ministrations to poor sufferers during an epidemic on the island of Arranmore.

This was not the first occasion on which Dr. Smyth had rendered heroic service for his district. A district inspector of the Royal Irish Constabulary, who had had charge of the district, and knew him well, writes: "He has combated, single-handed, many outbreaks of fever and small-pox in that district, and has not only acted as nurse and doctor, but has frequently supplied the patient with food from his own home. He was one of the manliest men I ever knew. He stood up for right and loyalty when it would have been easier and more profitable to have gone with the multitude."

Dr. Smyth's widow and eight young children (the youngest only a few months old) are, as was stated in our last issue, left very poorly provided for, and the deepest sympathy, not merely from Donegal, but from all Ireland, is felt for them. The Duke of Abercorn has made an appeal to the county of Donegal. The President of the College of Surgeons of Ireland and others have written to the *Irish Times*, and a small provisional committee, including Professor Whitla, President of the Ulster Medical Society: and Dr. Singleton Darling, President of the North of Ireland Branch of the British Medical Association, with representative laymen, has been formed in Ulster. Dr. William Calwell, 1, College Square North, and Mr. Robert Campbell, 21, Great Victoria Street, Belfast, act as honorary secretaries: and Mr. Henry S. Woods, The Bank Buildings, Belfast, as honorary treasurer, to any of whom subscriptions may be sent. Dr. Smyth was a member of the North of Ireland Branch of the British Medical Association, and it is confidently felt that an appeal to his fellow practitioners will be generously responded to.

SUBSCRIPTIONS ALREADY PROMISED.

| | £ | s. | d. | | £ | s. | d. |
|---|---|---|---|---|---|---|---|
| Sir J. Musgrave, Bart., D.L. | 5 | 0 | 0 | Professor Whitla ... ... | 2 | 2 | 0 |
| Wm. Robertson, Esq., J.P.... | 5 | 0 | 0 | Professor Byers ... | 2 | 2 | 0 |
| Sir J. Henderson, D.L., J.P. | 1 | 0 | 0 | Dr. Singleton Darling ... | 1 | 1 | 0 |
| John Wales, Esq. ... ... | 1 | 1 | 0 | Dr. Bracken ... ... ... | 1 | 1 | 0 |
| John Y. Calwell, Esq. ... | 1 | 0 | 0 | Dr. William Calwell ... ... | 2 | 2 | 0 |
| Professor Lindsay ... ... | 2 | 2 | 0 | Professor Sinclair ... ... | 2 | 2 | 0 |
| Henry S. Woods, Esq. ... | 5 | 0 | 0 | | | | |

THE RAILWAY TRANSPORT OF CONSUMPTIVES.—The question of the provision of separate railway carriages for the conveyance of persons suffering from consumption has become one of urgent "actuality" in the United States. The Travellers' Protective Association recently requested the Western Passenger Association to provide separate carriages, or at least separate compartments, in the sleeping cars for tuberculous travellers. In consequence of the increasing demands upon the Western and the Southern railroads for transportation for consumptives, the Transcontinental Passenger Association has submitted a similar proposal. The railway authorities are temporising, but will doubtless have to give way.

## BRITISH MEDICAL ASSOCIATION.

### SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.


# British Medical Journal.

SATURDAY, DECEMBER 14TH, 1901.


## THE ELECTION OF DIRECT REPRESENTATIVES.

The results of the polls for the election of two direct representatives for England and of one for Scotland were declared on December 10th, when it was announced that Mr. George Jackson and Mr. George Brown had been elected in England, and Dr. Bruce in Scotland.

Mr. Jackson is to be congratulated on standing at the head of the poll in England and Wales by a large majority, nearly equal to that of the first candidate in 1896; Mr. George Brown has maintained his position, polling—by a curious coincidence—exactly the same number of votes as in 1896. Both the successful candidates are returned by a large majority over Dr. Woodcock, whose name stands third on the list; Mr. Brown, in fact, who is the second of the two successful candidates, has a clear majority of votes over those given for the two unsuccessful candidates combined. In Scotland the election would appear to have excited much more general interest than in England and Wales. The poll was considerably heavier than in 1896, and of those entitled to vote only 34.5 per cent. failed to return the voting paper. Dr. Bruce is therefore the more to be congratulated on his success, although the number of votes which he received was notably less than in 1896, and he was run hard by Dr. Norman Walker.

In England and Wales the poll has been lighter and the percentage of abstentions higher than in 1896. At the meeting of the English Branch Council, on December 10th, the Registrar presented a detailed report containing an analysis of the voting, but this is not available at the time we go to press. We understand, however, that of the voting papers sent out, the number returned, after excluding the papers which through change of address or other causes failed to reach their destination and were sent back by the Post Office, amounted to only 42.6 per cent., so that it would appear that considerably more than a half of the members of the profession in England and Wales did not take the trouble to vote. The proportion of abstentions is thus a good deal larger than at any previous election; in 1891 the abstentions amounted to 38.7 per cent., in 1896 to 40.3 per cent., at the by-election in 1897 to 35.7 per cent., and this year we understand to 57.4.

Since a far larger proportion of medical men voted in Scotland, it is difficult to see why so many in England abstained. The apathy with which too many medical men engaged in busy practice regard public matters will no doubt account for much, but this consideration would apply equally to Scotland. Something may be attributed to the fact that from the nature of things any candidate, more especially in England and Wales, must be personally unknown to a very large number of those whose votes he seeks. But when all such allowances are made there remains much to be explained. The fact that there were only four candidates for two vacancies may perhaps help to account for the smallness of the total poll, but that this explanation will not take us very far may be seen by the history of previous elections. In 1886, when the first election for direct representatives was held, there were fourteen candidates, and Mr. Wheelhouse, who stood at the head of the poll on that occasion, received over 8,500 votes; in 1896, when there were ten candidates for three vacancies, 59.7 per cent. of the profession voted, and Dr. Rentoul, who then headed the poll, received over 6,600 votes; but in 1891, when there were only five candidates for three seats, 61.3 per cent. of the profession voted, and Dr. Glover, who was then at the head of the poll, received over 8,300 votes.

Whatever opinions may be held as to the relative merits of the candidates who offered themselves on this occasion, it cannot but be a matter of regret that so large a proportion of the profession should have abstained from voting at this election. The influence with their colleagues on the General Medical Council of those who are elected cannot but be weakened by the fact that in their election only a minority of the profession took part. Moreover, the indifference displayed must have a damaging effect upon the whole principle of direct representation, and must tend seriously to diminish the force of the demand for an increase in the number of direct representatives.

## PRESERVATIVES AND COLOURING MATTERS IN FOOD.

It is impossible to please everybody, and the fact that the report[1] of the Departmental Committee appointed rather more than two years ago to consider the subject of preservatives and colouring matters in food leans, if it leans at all, in favour of the protection of the public against harm, may possibly be urged against the conclusions the Committee has arrived at by those who are more concerned to favour commercial enterprise than careful to secure the consumer against injury and fraud. The process by which the sophisticator persuades himself that the public is really a gainer by the introduction into his food of non-natural pigments is a subtle one, and is akin to the reasoning by which the dealer in so-called preservatives justifies the addition of certain drugs to various articles of our diet. That boric acid has been added to milk to the extent of 210 grs. to the gallon is somewhat startling to the medical man called to treat the summer diarrhœa of an infant. Yet it is less so when we recollect that, with the present almost unrestrained facilities for the addition of drugs to the food supply, the child's

[1] Report of the Departmental Committee appointed to inquire into the Use of Preservatives and Colouring Matters in the Preservation and Colouring of Food. Eyre and Spottiswoode, East Harding Street, Fleet Street, E.C., and 32, Abingdon Street, Westminster, S.W.: or John Menzies and Co., Ross Street, Edinburgh, and 90, West Nile Street, Glasgow; or Hodges, Figgis and Co., Limited, 104, Grafton Street, Dublin. Price 4s. 3d.

milk may have received a dose of this "preservative" at the farm, have been again treated in the same way by the dealer or middleman, and have received a third instalment from the retailer. The sample in which this large amount was discovered was actually sold in this state, so that it was not beyond the bounds of possibility that the purchaser, uninformed of the previous additions, might himself have added a further amount of this medicament in the form of one or other of the proprietary preparations that are on the market and warranted harmless. It would have been, to put it mildly, highly inconvenient had this dose of boric acid been unexpectedly given to an infant without the medical attendant being aware of the fact. His patient, if a child consuming, say, a quart of cow's milk in the twenty-four hours, would thus have had 52 grs. of boric acid.

It should however, we think, be more generally known that salicylic acid and its compounds are far from infrequent constituents of jams, jellies, and even meat juices, though certain respectable firms absolutely refuse so to medicate their preserves and meat extracts. The same drug is found in wines, especially in British wines, and it is a common adulteration of cider and of several of the unfermented temperance beverages. Attempts have also been made to create a trade in benzoic acid and the benzoates as food preservatives, while the comparatively new antiseptic agent formalin seems to be competing with the boron compounds as a preservative of milk. It is matter for congratulation in regard to a substance capable, as is this strong solution of formaldehyde, of entering into intimate combination with the protein elements of our food, that the Committee has unhesitatingly, and in its very first recommendation, advised that the use of formaldehyde or formalin, or preparations thereof, in foods or drinks, be absolutely prohibited. In regard to the salicyl compounds, its advice is that the quantity added be limited to 1 gr. to the pint or pound respectively, and that its presence be in all cases declared.

Considering the importance of its purity to our infantile population, very few medical men will object to the recommendation that the addition of any colouring matter or preservative whatever to milk be regarded as an offence under the Sale of Food and Drugs Act. At the same time the Committee satisfied itself that, with proper precautions, even London can be easily supplied with this important article of food without the use of any chemical preservative. The evidence led it to the opinion that, in addition to the objectionableness of the actual drug used, the habit of relying on artificial means for preventing changes in the milk sold tended to a carelessness on the part of the farmers and milk dealers which ought not to be encouraged. It is a little curious to compare the statements as to the possibility of dispensing with preservatives made by different dairymen and collected into a table, under numbers instead of names, by Mr. Carrington Smith, who appeared on behalf of the Central Chamber of Agriculture. As to milk, No. 2 says "prohibition (of preservatives) would injure business." No. 18, a farmer who acknowledges to putting a tablespoonful of "crystalline" to seventeen gallons of milk, candidly says, "prohibition not injurious if applied all round." No. 37 thinks "prohibition would be injurious unless universal," while No. 44 says it is "impossible to carry on the milk business without preservatives." The majority of the sixty five replies, however, leave that part of the question severely alone. In regard to cream there is less difference of opinion, most of those who speak at all regarding some preservative as necessary. For instance, No. 56, a dairyman, remarks that it is "difficult, if not impossible, to keep cream without preservative. As regards milk," he adds, "preservatives have been discarded, because it was found that by selecting first-class dairies, and attention to feed and cooling, preservatives can be done without." The appendix from which we have been quoting contains also a copy of a resolution passed at the annual meeting of the Central Chamber of Agriculture as follows: "That this meeting is opposed to the employment of preservatives and colouring matters in articles of dairy produce, whether British or imported: and that it be an instruction to the witnesses, appointed by this Chamber to give evidence before the Departmental Committee, to urge that, as preservatives and colouring matters are believed to be deleterious to the health of invalids and children, their use should be prohibited." This, coming from the source it does, is reassuring. It might, however, be urged, and doubtless it will be urged that while the rich and well-to-do can, and will, get good and sweet milk, even if all preservatives be prohibited and the prohibition rigidly enforced, yet that the poor, by the deaths of whose children it is that the high mortality in our great towns assumes in the summer months so appalling a figure, will only get sweet milk if during the hottest part of the year it has been treated with chemical preservatives. At present this means generally the addition of either boric acid compounds or formaldehyde. The former is a well-known cause of diarrhœa. The latter is at present less well known in its effects to the profession, but as it is an agent proved by experiment to have a retarding influence on digestion *in vitro*, it is not unfair to assume that by interfering with the digestive process in the stomach of the infant it would favour, if not actually occasion, the very diarrhœa we dread.

It seems absurd, therefore, to attempt the prevention of this disease by the very means that are themselves competent to bring it about. By strict attention to cleanliness, by cooling the milk down as soon as it leaves the cow, and, of course, protecting it afterwards from contamination and from excessive heat, milk can be brought, even long distances, and delivered in a perfectly sound condition in the very height of summer. Large dealers do it. One difficulty with many of the smaller farmers and retailers is the want of a sufficient supply of cold water for application to the outside of the milk cans. This is a matter for rural sanitary authorities and county councils to see to.[2] Even without the regulations which every authority is empowered to make the requisite supply of pure water for cooling the milk, and so effectually preventing contamination by the multiplication of micro-organisms and the production in consequence of lactic acid and the products of other fermentations, can be secured.

One great fault of the milk legislation of this country is

[2] By the Dairies Orders of 1885 it is "not lawful for any person..... to occupy as a dairy or cowshed any building .....so long as ..... the water supply thereof" is not such as is "necessary or proper..... (c) for the protection of the milk therein against..... contamination."

that the responsibility of all these reforms falls upon the tenant. It is the occupier that the authority can proceed against. He is often a poor man, a tenant at will, and, having no security of tenure, would scarcely dare, even were he able, to lay out the necessary capital on the property of his landlord. One of the great difficulties, especially in the neighbourhood of large towns, in getting proper housing for the cattle and proper appliances for the dairy lies in the unwillingness of landlords and the inability of tenants to lay out the sums necessary to make good and prosperous dairy farms. One of the not least hopeful things about the recent movement of the agriculturist and the interest he is taking in the purity of dairy products is that this interest may induce some hesitating landlords to expend more capital in the not unprofitable extension of their dairy farms.

The Committee further recommends that for cream, butter, and margarine, the only permissible preservatives be boric acid or boric compounds, and that the amount of these be limited to $\frac{1}{4}$ per cent. for cream and $\frac{1}{2}$ per cent. for butter and margarine, calculated as boric acid, and in all cases the presence of the preservative be indicated, if in cream, by a label. It recommends, also, that no preservatives whatever be permitted in foods intended for infants or invalids, and that copper be prohibited as a colouring matter for preserved foods. In regard to this latter matter, Professor Tunnicliffe adds a note of dissent. He would permit the colouring of peas by copper, but would limit the amount to half a grain of metallic copper per pound (surely a large enough amount), and would require the presence of the foreign matter to be in every case declared. With this exception the report is unanimous.

## ISOLATION OF SMALL-POX "CONTACTS."

As a result of public anxiety with regard to the spread of small-pox, a demand has arisen in some quarters for a policy of dealing with this disease by the systematic isolation of "contacts." By this is meant that persons who are known to have come into relation with a case of small-pox—in particular other occupants of the patient's house—should for a period covering the incubation time of the disease be voluntarily or compulsorily kept within doors, or, if this is not thought sufficient, should be moved to special shelters or temporary lodgings where they can be kept under observation and supervision. Sanitary authorities, it is urged, should have wider powers than they at present possess to take action in this direction, the expense of maintaining the "contacts" being defrayed by the ratepayers, and compensation being given from the rates to heads of families and others who have been prevented from earning their living.

It will be recognised that this plan, when advocated for general application in times of epidemic small-pox, recalls medieval methods of dealing with infectious disease rather than those principles of preventive medicine which in this country it is our boast to have substituted for the vexatious system of quarantine. For, if strictly enforced—no easy matter—it would involve a degree of interference with healthy persons which might well become intolerable to the industrious breadwinner (particularly if his detention was prolonged, fortnight after fortnight, by reason of the occurrence of small-pox among his fellow "contacts"), while it would appear capable of considerable abuse by the idle. Sytematic "contact isolation," looked at from the social and economic side, is in itself so far from desirable that very substantial reasons should be advanced before its adoption can be encouraged, and it becomes worth while, therefore, to inquire how far this method affords safeguards which are not likely to be attained by the more usual administrative precautions against small-pox.

To the individual who has taken care to secure that he and his household are adequately protected by vaccination or revaccination, the fact of association with a person suffering from small-pox need give no concern, and still less need he be troubled with apprehensions of risk from "contacts." But the bulk of the adult population of this country have unfortunately not secured renewal of their protection by revaccination, and must be considered to be in greater or less degree susceptible to small-pox infection. To what extent then is the "contact" a risk to such susceptibles? In the first place the contact, while being himself free from the disease, may be capable of conveying infection to others as a result of recent close association with a person actually suffering from small-pox. In the course of this association he may receive on his person or clothing infectious matters from the small-pox case, and thereby carry infection to other people. In the second place, even if his association with the small-pox case is some days old, he may be the occasion of allowing other people to become infected by articles of clothing and the like which were used by the small-pox patient before the latter was removed to hospital. Against these risks our ordinary safeguards of isolation and disinfection are specially directed. If a case of small-pox is removed within a few hours of notification—as now usually happens—the first risk is removed also; for the "contact" no longer has the chance of going about his occupation while there is a case of small-pox in his house. If the clothing, bedding and other belongings of the case are at the same time disinfected or destroyed, and the room or rooms occupied by the patient are promptly disinfected, and these things are done thoroughly, the second risk is also dealt with. If sanitary organisation in these respects is efficient, the above dangers attaching to the "contact" will be reduced in ordinary circumstances to the vanishing point, and no substantial grounds for requiring his isolation will be afforded. On the other hand, it is clear that attempts to isolate "contacts" will effect little if such organisation is incomplete.

It may be said, however, that the principal reason for requiring the isolation of contacts is the risk they will occasion to others if and when they develop small-pox, and particularly if they show the disease in a form so mild as to leave them capable of going about their business. Now, against this risk, the precautions usually adopted are, first, vaccination of the contacts, which, if sufficiently timely, may prevent any spread of the disease among them; and secondly, medical examination during each of the few days on which symptoms of small-pox are likely to declare themselves, with a view to prompt isolation of suspicious cases. On these days, as a general rule, there is not much difficulty in arranging for the examination to

be made at a suitable hour when all the "contacts" will be found at home, and, from a preventive point of view, this proceeding seems to have as much practical advantage as a similar examination of people who have been kept indoors for a fortnight. In either instance the first symptoms, for example, headache, pain in the back, or fever, will almost certainly be detected in time to prevent any spread of the disease by the patient after the eruption has appeared. Moreover, these persons, who of necessity know that they have been exposed to small-pox infection, and are on the watch for symptoms, are not very likely to be associating freely with others when these symptoms occur. The person who spreads small-pox is rather the man who has been exposed to infection without his knowledge, and who when ill does not suspect small-pox; in other words, the very person who has never been recognised as a "contact" at all.

In view of these and other considerations it may, we think, be concluded that "contact isolation," as a system for dealing with epidemic small-pox, affords but a slight additional security, which can be obtained only at a wholly disproportionate price. In saying this, however, we could not be understood to deny the usefulness of isolating "contacts" in particular instances for exceptional reasons—for example, when the case of small-pox remains in the house of the "contact," being too ill to be removed; or when the case occurs in a common lodging-house and the contacts are unable to satisfy the medical officer of health that they will be available for medical examination after the necessary interval. In such special instances some advantage might be derived from their isolation and maintenance at the public cost.

We cannot leave this subject without emphasising a real weakness in the ordinary administrative dealings of the public health authority with small-pox "contacts" in the interests of these people themselves. If it is found that such persons are unprotected by vaccination it is essential that they should be vaccinated with the least possible delay. This, however, the medical officer of health cannot be at all certain of securing by officially-prescribed methods. He has to notify to the vaccination officer, who in turn is to inform the public vaccinator, and in this process much valuable time may be lost. Perhaps no better plan can be devised whilst vaccination is committed to public bodies who otherwise have no responsibilities to the public health, but the result is none the less to be regretted.

## THE UNIVERSITY OF LONDON.

WE learn from the columns of the second number of that unsensational periodical, the *London University Gazette*, that at the last meeting of the Senate the report of the Advisory Board on the matriculation examination was further considered, and after some discussion on the matter was referred to the Academic and the External Council for consideration and report to the Senate, with power to confer. That is to say the Committee to which the statutes specially relegate the whole question of the entrance portal to the University has had its chief, if not its only, duty transferred to two other standing committees, whose constitution is calculated to make them entertain divergent, if not hostile, views as to the mode in which undergraduates should be initiated into the University. Meanwhile, of course, the old matriculation examination continues to be a *sine quâ non* for all intending graduates. It is not surprising that onlookers are beginning to inquire what are precisely the advantages which London has acquired by the virtue of a teaching university having been in work in its midst for more than a twelvemonth. A notice of motion has been given at the London County Council to the effect "That it be referred to the Technical Education Board to report in detail the progress that has been made in constituting the University of London a teaching university for the metropolitan area, the facilities that are now available for London students, the number of internal undergraduates studying at the schools of the University, and the grants which have been made by the Council in money or sites to the various schools of the University, and their respective amounts or values." A report in accordance with this motion should certainly be valuable and instructive.

## THE CASE OF THE INVALIDED SOLDIER.

IN an article on this subject in the December number of the *Practitioner*, Dr. Hillier calls attention to the problem of our duty to soldiers who are incapacitated by chronic illness contracted in and by the service, and discharged as "unfit." A reference to any volume of the Annual Reports of the Army Medical Department will show that the leakage from the service under the heading of invaliding is considerable. Taking the last report issued, we find that 3,190 men were invalided for some cause or another in 1899 from the army at home and abroad; this number was equivalent to 16.07 per 1,000 of strength. These figures relate to a period antecedent to the South African war, and will be materially increased by the circumstances connected with those prolonged operations in the field. Of the men annually invalided from the service as medically unfit, a very large proportion are capable of either wholly or partially contributing to their maintenance in civil life. There remain, however, a certain number of cases which re-enter civil life with insufficient means for subsistence, and no capacity to earn a living. Under the present regulations an ordinary permanent pension cannot be gained by a soldier with less than 21 years service, unless he be invalided or discharged on reduction of establishment after having put in 14 years service. These pensions are sufficient to support the recipients. Owing to our short service system, the number of men qualifying for pensions under the above provisions of the Royal Warrant for pay and non-effective pay is steadily lessening. To meet the case of short service men who have been discharged as medical unfits, the Chelsea Commissioners have power to allot small pensions varying in amount according to term of service and ability to earn a livelihood, as certified by the medical officers. With rare exception, however, these pensions do not serve to support the recipient, and it is clearly impracticable that in all cases they should be made to do so. It is on behalf of these short service "unfits," especially those suffering from tuberculosis and syphilis, that Dr. Hillier pleads. In spite of sympathetic treatment by the Chelsea Commissioners, the poorhouse alone stands between many of these men and starvation. Moreover, apart from any hardship to themselves, these men are a distinct danger to the community, for, turned adrift under no supervision among the working classes, each single case becomes a possible focus for further infection. An examination of the last Army Medical Report shows that for tuberculosis and secondary syphilis 248 and 276 men were respectively invalided from the army in one year (1899). As regards the syphilitics discharged into civil life, much as one regrets this annual taint from the army, it is unlikely that public opinion would tolerate any organised effort by the State to pamper sufferers from disease which was the direct result of their own vice: but, in the interests of the community and of the future population, it is incumbent upon the State to recognise the existence

of these possible foci of enthetic disease, and certainly in extreme or severe cases to afford them shelter, subsistence, and means of cure before discharging them upon civil society. If on sanitary and humanitarian grounds such views are possible in respect of syphilitics, how much greater are the claims of the tuberculous "unfits" from the army. In the campaign against general tuberculosis, England is behind Germany and some other countries in the establishment of open-air sanatoria for all classes of the community. Surely now is a fitting time for the country to turn over a new leaf, and show it by a national effort to provide one or more large convalescent homes for the medically unfit from our army. As Dr. Hillier says, an institution of the kind, while it could not entirely remove the evil, would certainly go far to diminish it: it might well contain a sanatorium for the tuberculous, with wards for other medical and surgical cases. Situated in grounds of fair extent and on the southern or western coasts, a convalescent home on these lines would afford the means of curing the curable, make provision for the incurable, and in both classes prevent them infecting their neighbours. The need for such a home or homes is a national one, and offers a fitting expression for a public desire to perpetuate the memory of our late Queen. In memory of Queen Mary, William III founded Greenwich Hospital on similar lines for her sailors, though now the hospital buildings are no longer used for the purpose originally intended. Is there any reason why Queen Victoria's memory should not be perpetuated on a more liberal scale for our soldiers? The great hospital which bears her name at Netley is climatically and by environment eminently adapted for such a convalescent home. We understand that the removal of the Army Medical School from the banks of Southampton Water, and the construction of one or more large military hospitals in or near London are within the range of practical politics; if so, we earnestly hope that the need of a military convalescent home, and the suitability of the Royal Victoria Hospital for the purpose, may not be overlooked, and that the one reform may be the complement of the other.

## EPIDEMIC CATARRHAL JAUNDICE.

The recent epidemic outbreak of jaundice in Derbyshire, so fully recorded by Dr. Herbert Peck in the British Medical Journal of December 7th, presents many features of interest. It began in the first week of August in Staveley, where isolated cases of what appeared to be simple catarrhal jaundice were observed. The number gradually increased, till it became clear that the disease was of an infectious nature. By September 29th when Dr. Peck, the medical officer for the district, was first informed of it the outbreak affected the inmates of no fewer than fifty-three houses—three of these having 3 patients each, nine having 2 each, and forty-two 1 patient each. The persons affected were of all ages, from a child 16 months old, nursed by a jaundiced mother, to a patient aged 70 years. The cases in the houses numbered in all 69, and formed about half of those observed up to the time of his report. The first symptoms were *malaise* and more or less gastro-intestinal disturbance usually with abdominal pain, and often with cramps in the legs. There was a rise of temperature, usually moderate (100° to 101°), but occasionally reaching 104° F., followed on the third or fourth day by jaundice. The spleen was frequently found enlarged; nephritis was only observed in one case. Of special interest is the fact that one patient died with the symptoms of acute yellow atrophy, and the microscopic examination of liver and kidney made by Professor Arthur Hall, of University College, Sheffield, revealed the necrobiotic and fatty changes in the liver and renal cells characteristic of this condition. Such is the brief account of this outbreak, for the careful investigation of which its various observers deserve much credit. A no less marked outbreak—150 cases in a population of 26,000—is reported by Dr. Kershaw, of Farnworth. Taken together, the two outbreaks are the most extensive met with in this country for many years past. Such occurrences are much more common in warmer climates. The interest of such outbreaks is of two kinds. First, they throw light on the infective nature of those rare and isolated cases variously designated "febrile jaundice," "infectious malignant jaundice," "icterus gravis," "Weil's disease," up to and including acute yellow atrophy of the liver, the rarest of all. They are of hardly less interest in suggesting the possible infectious nature of many cases of jaundice usually regarded as of simple digestive origin. In the outbreak described the mild cases were indistinguishable from simple catarrhal jaundice, and the severest case died of acute yellow atrophy. Attempts made from time to time by observers to distinguish particular cases by special names, such as those mentioned above have not been successful, and it is doubtful whether they serve any useful purpose. It is probable that the differences in individual cases or in separate outbreaks are more of degree than of kind, but they may be determined by differences in the character of the poisons responsible for the production of the jaundice. There can be no doubt that the degree of the ictero-genetic power possessed by poisons of this class varies very much. According to the writer of the article on jaundice in Allbutt's *System*, the degree of jaundice induced by such poisons is proportioned to the degree of irritation and catarrh they set up in the smaller bile ducts in the course of their elimination by the bile. The jaundice is catarrhal obstructive, but the catarrh is intrabiliary, not of duodenal origin. For the reasons first mentioned the actual nature of the jaundice in the outbreak now under consideration is, in the absence of any definite investigations regarding its bacteriology, of subordinate interest. Dr. Peck considers it to be icterus gravis, or epidemic jaundice, sometimes called Weil's disease, but the title he has given to his report, "epidemic catarrhal jaundice," seems to describe the condition more accurately than any other. The generic title most applicable to all cases of this class is probably "infective jaundice." In all, whether mild or severe, the essential feature is that the clinical features are those of an infection, the disease always setting in with more or less fever and constitutional disturbance, and running a more or less definite course. In the present instance Dr. Peck considers the incubation period to be perhaps six or seven days, and the average duration from exposure to infection to the beginning of recovery to be ten or twelve days. As regards its mode of propagation, he satisfied himself that it had nothing to do with the ingestion of food or drink, and he considers that it was probably conveyed by individuals, and it would appear that in one case a collier had carried the disease to Buckley, Flintshire. Investigations are still proceeding, and it is to be hoped that definite information may yet be obtained as to the cause of the outbreak.

## THE HOUSING QUESTION.

An important conference was held last week at Westminster on the housing of the working classes. Sir Walter Foster, M.P., presided, and the morning sitting was devoted to a consideration of the problem in rural districts, while in the afternoon the question of housing the poor in towns was discussed. A large number of delegates from all parts of the kingdom attended. The debate which followed the reading of papers by Mr. R. J. Price, M.P., and Sir J. Dickson Poynder, M.P., clearly showed that local authorities are no longer as apathetic or as corrupt as the Royal Commission of 1885 alleged them in many cases to be. The failure of private enterprise to supply the "commodity called a house" in sufficient quantity and of eligible quality was emphasised, and the demand for

municipal activity was made alike by Conservative and Liberal politicians. The paying of extravagant sums by way of compensation to slum landlords for compulsory expropriation of land they had allowed to become a menace to the public health was denounced, and a change in the law demanded, whereby such owners should be penalised instead of being compensated and rewarded for their neglect and failures. The case of Leeds was cited, where a special tribunal has been instituted, before which demolition orders are heard and dealt with more satisfactorily than is often the case in police-courts. The old demands for extending the period for repayment of housing loans by local authorities, and the abolition of the requirement to provide a sinking fund in the case of land were reiterated.

## PILULES AGAINST SMALL-POX.

WE have all heard—for even Miss Marie Corelli cannot escape advertisement—of *The Mighty Atom*. Of the book we confess we know nothing, but we are inclined to suspect from the title that it is autobiographical; certainly there could be no better proof of the mightiness of an atom than the popularity of its author's writings. But mighty as the atom is, there is something mightier still, and that is the pilule. We need not here recount the wonderful things that can be done by pilules; are they not written in the books of the homœopaths? There is just one point, however, as to which we should be glad to be enlightened? Do our "separated brethren" themselves know the full virtures of the pilule? Are they, for instance, aware that it may be charged with potentialities of prophylaxis (if we may be allowed to pay the great shade of Johnson the flattery of imitation) against small-pox beyond any that can be claimed for vaccination? This startling discovery seems to have been made by a well-known firm of homœopathic chemists who are supplying pilules labelled "Vaccin 6" to be taken as prophylactics against small-pox infection. A practitioner in the West of London informs us that he finds well-to-do and intelligent patients taking these pilules instead of being vaccinated. They state that at the establishment in question they were advised not to be vaccinated, as vaccination was no protection against small-pox in comparison with the pilules. *O grande puissance de l'orviétan!* The matter would be too absurd for mention were it not for the danger not only to the credulous individual but to the public created by such pernicious nonsense. The firm which supplies the pilules bears a name honoured in homœopathic Israel, and one hesitates to accuse them of such gross ignorance as would be implied in a real belief in the efficacy of their precious prophylactic. On the other hand, they must be presumed to know the doctrine of their master, who claimed vaccination as a homœopathic remedy. We observe that the *Hahnemannian Monthly* for November (quoted—presumably with approval—in the *Monthly Homœopathic Review* for December) says that if vaccination were more generally practised, small-pox would become a thing of the past. It is earnestly to be wished that homœopathic practitioners will strive to inoculate the vendors of their remedies with this sound doctrine. If the public is induced to rely on pilules rather than on vaccination, small-pox will become, and will long continue to be, a thing of the present.

## INERT LYMPH AND REVACCINATION.

THE article under the above heading published in the BRITISH MEDICAL JOURNAL of November 16th has been followed by the receipt of several letters from medical men and others, reporting good results from the use of certain specified brands of glycerinated calf lymph. An incidental disadvantage of the present limitation of Local Government Board lymph supply and of the absence of official supervision of the production of lymph by private makers is that the whole subject has a competitive or trading aspect which is somewhat repellent to professional feeling. It is quite natural and proper for a vendor of lymph to submit to actual or possible customers as much evidence as possible of the value of his product, but it would seem better that each should do so for himself and in his own way than that our correspondence columns should be made a battlefield for rival brands. Unintentionally any such publication might do serious injustice to makers whose lymph had not chanced to be used by medical men desiring to communicate their good results through our columns. Moreover, it is possible that a firm usually issuing reliable material may once in a while distribute a supply of inactive lymph. The whole question, indeed, is one which—as was urged in the article above referred to—demands thorough official examination by authorities of unquestioned competence. Such an investigation can be undertaken only by Government on behalf of the public. But meanwhile we continue to indulge the hope previously expressed that the prominence which has now been given to complaints of inert lymph will have for the time at least a large effect in removing their cause.

## FREE VACCINATION.

SOME of the defects of the present vaccination law are being only too well illustrated in the present prevalence of small-pox in London. It has been repeatedly urged in our columns and by the Council of the British Medical Association that every medical practitioner who chooses to undertake the work and to do it properly should in effect be made a public vaccinator. A possible alternative to this would be that public vaccinators should be debarred from private practice and should give all their time to their duties. The present system by which one practitioner is advertised all through his district as a man to whom the patients of all other medical men may go for free vaccination cannot but breed dissatisfaction. Why should not all alike be empowered to vaccinate or revaccinate on behalf of the local authority? We are aware that systematic inspection of results could not be thoroughly carried out under the latter system, but that is a disadvantage of less consequence than the countervailing advantages. In Scotland, when small-pox threatens, the sanitary authorities offer to supply lymph and pay a small fee for every vaccination not privately paid for. This offer applies to all medical men practising within the sanitary authority's boundaries, and blank forms are furnished to every practitioner who undertakes the work, to be filled up with particulars of each case operated on. The system is not perfect, but it is much nearer perfection than that which is in vogue in London at present. The Public Health (Scotland) Act gives power to every local authority to take these steps, and it was in this way, for example, that the great majority of 400,000 vaccinations were recently performed in Glasgow. The application of such a system to England would mean, of course, an alteration in the law, and there is now no chance of that being accomplished until the end of the five years during which the latest Act remains in force. Meanwhile the present experiences of administrative difficulties are to be carefully noted as a guide to future legislation.

## BENJAMIN JESTY: A PRE-JENNERIAN VACCINATOR.

FEW great discoveries have been made *per saltum*, and a historical examination usually shows that each genius has been to some extent anticipated by some humble predecessor. Vaccination is no exception to the rule, and Benjamin Jesty was only one of the precursors of Jenner, as was pointed out in the BRITISH MEDICAL JOURNAL, vol. i, 1896, p. 1304, though he is one of the most interesting to us on account of his nationality and his epoch. The material relating to Jesty has been very fully collected by Crookshank in his work on the *History and Pathology of Vaccina-*

*tion*, and it has been summarised by Dr. McCrae in the *Johns Hopkins Bulletin* for February, 1900, his article being illustrated by Say's engraving of Sharp's painting. Benjamin Jesty was born at Yetminster in Dorset, and was a farmer who moved to the farm of Downshay in the Isle of Purbeck, near Swanage, in Dorsetshire. He appears to have been an eccentric man, full of quaint actions and speech, but with good power of observation and of sensible reflection on what he had observed. In 1774 small-pox was prevalent in his locality. He was thought to be in no danger of it himself, as he had already acquired cow-pox which he had contracted accidentally from the cows. Some of his family were not so protected, and the fact that two of his maidservants who had previously had the disorder from the cows attended patients suffering from small-pox without infection seems to have determined Jesty to inoculate the cow-pox into his own family as a preventive of small-pox. Accordingly, Jesty carried out his ideas and inoculated his wife and two sons, aged 2 and 3 years, with the cow-pox. The patients went into the fields and the virus was taken on the spot from the teats of the cows. A stocking-needle was the instrument used, Mrs. Jesty being inoculated under the elbow, the sons above. The latter had the disorder in a favourable way, but in the course of a week Mrs. Jesty's arm was much inflamed. She had fever, and was so ill that a neighbouring surgeon, Mr. Trowbridge, of Cerne, was called. He said, "You have done a bold thing, but I will get you through it if I can." She soon recovered perfectly, but the boldness and novelty of the attempt produced no slight alarm in the family and no small sensation in the neighbourhood. Fifteen years later, in 1789, the sons were inoculated for the small-pox by Mr. Trowbridge along with others who had not had the cow-pox. The arms of the Jestys inflamed, but the inflammation soon subsided, and no fever or other variolous symptoms were observed, whilst the unprotected individuals went through the usual course of inoculated small-pox. Subsequently Mrs. Jesty and her sons were often exposed to small-pox without taking it, while in 1805 one of the sons was again inoculated with a negative result. In 1805 the Jennerian Society persuaded Jesty to come to London for five days for the purpose "of taking your portrait as the earliest inoculator for cow-pock, at the expense of the institution; you will receive fifteen guineas for your expenses." He came and his portrait was duly taken, but he conceived a very unfavourable opinion of the metropolis, though he admitted it possessed one great merit, namely, that he could be shaved every day. He died April 16th, 1816, at the age of 79, and is buried in the little village churchyard at Worth Matravers.

## MORE CANCER CURES.

The New York correspondent of the *Morning Post* reports that "an epidemic of cancer is spreading throughout the State of New Jersey." We have seen no mention of this remarkable occurrence in the American medical journals, but your up-to-date journalist would reply that this is due to their want of enterprise. If the epidemic of cancer must be regarded as a little doubtful, it is certain that we are suffering from a severe epidemic of cancer cures. If the *Western Mail* is to be believed violet leaves have already been thrown into the shade by sulphur. A patient suffering "with a cancerous lip and neck" for which he had undergone one operation, being threatened with recurrence betook himself to the Glanne Sulphur Springs, Builth Wells, and "after taking the waters, and bathing the wound about five or six times a day for some days" was eased of his pain, and announced that he looked upon himself as cured. Next we have Dr. John Gilman, Professor at the Hahnemann College, Chicago, who (according to the *Times*) has recently declared that we are at the beginning of a new era when cancer will have no terrors. He believes that the disease "can in future be broken down quickly and surely." The only information vouchsafed as to how this is effected is that Dr. Gilman "gives medicines which will supply the material needed for rebuilding the destroyed tissues and subjects the patient to the influence of the rays for weeks or months as the case may be." It is needless to add that among the numerous cases already treated by Dr. Gilman, he has so far "failed to find a single one which did not yield readily." One death is indeed admitted, but that was due to weakness; the medicines must have supplied inferior material or the work of "rebuilding" was scamped. Then there is Dr. Hutchins, of Atlanta, described as a specialist in cancerous diseases, who is said by the papers to have "written an epoch-making chapter in medical history" by curing a case of "cancer of the chin" by means of the Roentgen rays. He has completely destroyed the disease, and "is now engaged in building up the patient's chin and lip." It is characteristic of the ineptitude with which medical matters are dealt with in the lay press that both the correspondents who report this "epoch-making" case and the editors who publish it appear to be ignorant of the fact that there is nothing new in the therapeutic use of the Roentgen rays in cancer. As our readers know, cases of rodent ulcer in which this method has been applied with success have been reported by Mr. Malcolm Morris, Dr. Sequeira, and many others. Only last week we published a case of cancer of the breast treated in this way by Mr. Bryant. As a medical correspondent of the *Morning Post* points out, reports of cases in which the Roentgen rays have been used in rodent ulcer may be found in the records of almost any medical society in Great Britain for the last five years. Moreover, it is only fair to point out that Dr. Hutchins is by no means the first to apply the method to the treatment of cancer in the United States. To name only one or two, Dr. Wallace Johnson and Dr. W. H. Merrill of Philadelphia, and Dr. F. H. Williams of Boston, reported cases two years ago. The only point of novelty in the matter is the undesirable publicity which it has obtained in the general press. Such publicity is undesirable for many reasons. In the first place the accounts given of any supposed discovery or achievement in the realm of medicine are invariably inaccurate, usually exaggerated, and often distorted out of all likeness to truth. In the second place such exaggerated statements naturally breed exaggerated expectations in sufferers from the diseases which are said to have been robbed of their terrors, and the way into the valley of the shadow of death is made darker to them by the eclipse of a vain hope. Again, a premature publicity is apt to be detrimental to the scientific worker himself, a fact of which striking modern instances will occur to everyone who has followed the history of medical research during the last few years. For this reason we are inclined to sympathise with Dr. Horace Manders, who has had greatness thrust upon him by the *Morning Post*, which in its issue of December 6th devoted nearly a column to the instruction of its fashionable readers in the details of his method of curing cancer. The scribe, it is true, states that an interview was "courteously granted" to him by the distinguished physician, but then your professional interviewer when labouring in his vocation does not stick at a trifle like asking his victim's leave. We are sorry for Dr. Manders, but we are also sorry for the readers of the *Morning Post* who may have been misled by an article horribly stuffed with epithets of what looks like science into believing that a cure for cancer has been found in electrical stimulation of "the cells of the body." Dr. Manders may be on the right track, and we have no wish to depreciate his work. But we are sure he would repudiate the suggestion conveyed in the *Morning Post* that he has found the long-sought answer to the Sphinx-riddle of cancer.

## PAUPER LUNACY FEES.

WE have received a long letter from a practitioner in a rural district informing us that the guardians of his union are now endeavouring to cut down the fees which have been usually paid for certifying pauper lunatics from £1 11s. 6d. to 21s., and that this proposal of the guardians has been put in writing and sent by their clerk to all the magistrates in the district. This has brought an official answer from the clerk to the magistrates, implying that the request made by the guardians is not likely to be acceded to, as when their communication was discussed by the Bench it was considered that the guinea and half hitherto paid was not too high a fee. We understand further that this proposal of the guardians has not met with the approval of the medical men in the district, twenty of whom have positively declined to accept the guinea fee for certifying cases in the future. We are, however, informed that one practitioner has differed, and has given as his reason that he had entered into an agreement with the relieving officer to accept the guinea fee in future. As by the Lunacy Act, 1890, it is expressly provided that the amount of the fee paid for this form of certification is to be decided by the magistrates, we are much surprised to hear that any relieving officer should have attempted to take this duty out of their hands by entering into an agreement with any medical practitioner in reference to it. If any such private agreement as that stated has been come to, it is possible that some further understanding in reference to these fees may exist between the same parties. We therefore look upon such understanding as being for many reasons highly objectionable. It is indirectly setting the Lunacy Act at defiance by taking power out of the hands of the magistrates which has been specially invested in them. We do not hesitate to describe any such action of a relieving officer as being *ultra vires*, and recommend all such officials to show a more wise discretion than to make any attempt (even for the purpose of pleasing their guardians) to rule the payment for the certification of pauper lunatics. We have every reason to believe that any such action, if brought to the notice of the Local Government Board, would not meet with its sanction, but would be followed, if not by censure, by an expression of marked disapprobation.

## SPECIAL RULES FOR THE BOTTLING OF AERATED WATER.

THE Home Office has issued through the Chief Inspector of Factories a memorandum requiring the makers of aërated water to provide "face guards, masks, or veils of wire gauze" for the use of their workers. It is unfortunately only too common for surgeons to have to deal with serious wounds as the result of bursting bottles, and many are the eyes which are damaged beyond repair by flying glass. With a view of obtaining further information as to the necessity for the special rules promulgated by the Home Office, the Chief Inspector requested Mr. Simeon Snell of Sheffield to visit numerous factories, and his report is now before us. As has been the case with some other rules passed for the benefit of the workmen themselves, these, which required workers to use masks, have been badly spoken of by the men, as some have asserted that the wearing of wire masks produces headaches and damage to the eyesight. This on the face of it is absurd, for no damage could be produced by a fine wire gauze placed in front of the eyes. As well might one say that baneful results to the sight are occasioned by ladies' veils. We quite admit that at first anything, be it only a pair of spectacles, will produce some discomfort and annoyance, and this is experienced by all when first taking to glasses, but a little perseverance readily gets over the difficulty. It is not generally known that an enormous number of bottles burst during all stages of the manufacture of mineral waters; thus in one day in the summer a certain factory will turn out 1,600,000 bottles, and of these no fewer than 2,962 will burst. In another factory 1,608 bottles burst in a week. The most severe accidents are caused by the bursting of siphons, as the bottles are larger and the glass thicker. Of course these do not fly so readily as bottles, but even here out of 70,000 filled in one day no fewer than 16 burst. When it is remembered that bottles burst not only when they are being filled and corked, but frequently also when they are being labelled or stacked the extreme importance of all those employed in this work being protected becomes obvious. Mr. Snell brings out most clearly in his report that those workers who continually wear masks make no complaint about any eye trouble, and that the people who do complain are those who have rejected the shield after a very short trial and long before they have become accustomed to it. Eye goggles are proved to afford insufficient protection, and the masks in present use admit of much improvement, but the point insisted upon is that the mesh should not be too coarse, or small fragments may fail to be caught, and also in view of the possibility of injury to the vessels of the neck the masks should be connected with leather collars or be continued downwards so as to afford protection to the neck and its vessels. A circular letter issued recently by the Chief Inspector instructs inspectors of factories to enforce the rules as to the use of "face guards, masks, or veils of wire gauze."

## THE HALIFAX POOR-LAW INFIRMARY.

IT is disappointing to learn that at the new Union Hospital, Halifax, there has been for some time what is described by the *Halifax Courier* of November 30th as a "state of unrest" amongst the officials. This, we learn from the same source, has now culminated in the resignation of Miss Wilkie, the matron, the assistant matron, and five charge nurses. A short time back we had to advert to the ungrateful attitude of the guardians towards their medical officer, who for 32 years had served them faithfully and well at the old workhouse infirmary. The extraordinary proposal was made to him that he should undertake the management of the new hospital without any honorarium, with a possible expectation that at the end of the year he might be awarded some remuneration. This offer Dr. Dolan rightly declined, and the guardians filled up the appointment, offering to the principal medical officer and the visiting surgeon the inadequate salaries of £105 and £60 respectively. Yet these offices were eagerly sought. The new Halifax Union Infirmary in its structural arrangements leaves little to be desired: it is a fine and well-appointed building, but bricks and mortar do not alone make a hospital. It is medical organisation which gives life to it, and reading between the lines we can only gather from these resignations that the Committee have not realised their responsibilities; still more, that prodigal even in their expenditure on the institution, they have in their staffing of this hospital fallen back into old workhouse traditions. It seems probable also that they have attempted to manage the hospital themselves. Skilled and trained officials will not accept dictation from untrained persons, and though, as we gather from the *Halifax Courier*, Miss Wilkie declines to enter into controversy as to the reason of her resignation and that of her nurses, it is evident from the gravity of this step that there must be great underlying discontent with some of the conditions of service. There is already serious difficulty in attracting well-educated women to the Poor-law service, and indeed, in many workhouses it has been impossible to secure good nurses. The Halifax Union Infirmary was fortunate in its superintendent of nurses, and the probationers were recruited from the ranks of the professional classes, daughters of clergymen and medical men. As a training school it was progressing, and the possibilities in the future were very great. The incidents which have already happened in connection with its

medical officers and the nurses will not add to its prestige, and there is danger of its experiencing the same scarcity of nurses as other unions. What is the inherent evil in our Poor-law administration? Why this constant unrest in its service, not only in Halifax, but all through England? We believe it to be lamentably too true that the guardian is but a poor type of hospital governor. The problem is how to improve the type.

## OUTBREAK OF POISONING FROM EATING DUTCH CHEESE.

The first cases of an outbreak of poisoning from eating Dutch cheese, part of a particular consignment, were reported to the medical officer of health for Finsbury (Dr. Newman) on October 21st. Nine persons had been seized with acute toxic symptoms after having eaten some of the cheese supplied by a wholesale dealer in Finsbury to a small shopkeeper in Bethnal Green. It was ascertained that the Finsbury dealer had obtained it from a large wholesale firm in central London. A sample was procured, and Dr. Newman, in order to test it, ate an ounce or two without noticing anything peculiar in the taste. Four or five hours later however, he suffered acutely with symptoms similar to those in the previous cases. Next day the head of the Finsbury firm, in order to show that the illnesses reported had no relation to the cheese in question, himself ate about 6 ounces. On the following day he suffered acutely from the same symptoms. A little later a man complained that he, his wife, and two daughters had suffered from acute poisoning after eating cheese that was traced to the same consignment. These made 17 cases in all, forming the outbreak. The symptoms, which came on in from two to eight hours after eating the cheese, comprised epigastric pain, rigors, vomiting, diarrhœa, prostration, and some fever. The degree of sickness did not appear to depend on the amount eaten. There had been no death attributed to the poisoning, and in general the symptoms passed off in the course of forty-eight hours. The shortness of the incubation period and the fact that the acuteness of the symptoms did not appear to have a direct relationship to the amount of cheese eaten, suggested to Dr. Newman a similarity of the present outbreak to the outbreaks occurring in Michigan in 1883 and 1884, in which 300 persons were affected. Samples of the cheese were accordingly sent to Mr. Kear Colwell, the public analyst, for examination. While analysis of dried samples showed no evidence of poisonous substances, a body possessing the characteristics of tyrotoxicon was found in small quantities in the moist cheese, which had a peculiar sour smell. It has since appeared that the Medical Officer of Health of Bermondsey, Dr. R. King-Brown, has recently traced 13 cases of poisoning to certain Dutch cheese of precisely similar kind, but it is not yet known whether they were derived from the same shipment as those coming into Finsbury. It is suggested in the report that the provisions of Section VII of the Sale of Foods and Drugs Act, 1899, which require every manufacturer of margarine or margarine cheese to keep a register showing the quantity and destination of every consignment sent out, should be extended to cheese, and that not only the representative of the Board of Agriculture but the medical officer of health of the local sanitary authority should have an opportunity of inspecting it when necessary. Tyrotoxicon, a body isolated at the time of the Michigan outbreak, is stated to be a violent poison both to man and the lower animals. Professor V. C. Vaughan, who investigated this outbreak, has maintained that about three months are required for its development in milk contained in tightly-stoppered bottles, and that under certain circumstances, and in the presence of butyric fermentation, it may be produced in eight or ten days. A similarly-acting and possibly identical poison called lactotoxin is said to occasionally occur in cream and rancid butter. The normal ripening of cheese is no doubt a beneficent activity of bacterial growth, but the conditions under which noxious organisms can gain access to and elaborate their products in cheese intended for human consumption needs precise investigation. The present cases belong to a group in which the difficulties of distinguishing between the results of the presence of bacteria and merely that of their toxins is very great. The toxic effects are no doubt the direct results of the action of the toxins, whether the bacteria themselves are present at the time or not, and an incubation period of from two to eight hours is certainly very short for the elaboration of albumoses or other poisonous substances by living bacteria, yet the fact that the poisonous element found in the moist cheese was absent from both dried samples induces the hope that a careful bacteriological examination of the incriminated cheese has been made.

## AN AMERICAN INTERNATIONAL HEALTH SERVICE.

For the prevention of the spread of yellow fever and other infectious diseases originating in insanitary cities in America, Dr. Walter Wyman, Supervising Surgeon-General of the Marine Hospital Service, proposes the election of an International Sanitary Commission of five members, to be appointed by the Bureau of the American Republics. Of these members, one shall be a diplomat, one shall be learned in the law, one shall be a physician and sanitarian, one shall be a sanitary engineer, and one shall be a representative of commerce. To these five members there shall be temporarily added two to represent the National Government in whose domain the seaport city or town to be investigated or to be subjected to sanitary requirements is situated. The suggested duties of the International Sanitary Commission are: "First, by an inquiry of a commercial and statistical character, to determine upon and prepare a list of the seaport cities or towns necessary to be visited, with a view to sanitary improvements, as heretofore stated. This will be done by a commission of five. Secondly, to visit said cities or towns in the order of greatest commercial necessity, and with the two additional commissioners, to make a thorough sanitary inspection of the port and city or town, and make a formal report upon the sanitary measures deemed necessary, keeping within the limits of this convention. Thirdly, this report shall be in duplicate, signed by seven members of the Commission. One copy shall without delay be transmitted to the President of the Republic, within whose domain the town or city inspected is located, and the other copy sent for file to the Bureau of American Republics."

## A NESTOR OF MEDICINE.

Sir Charles Nicholson, M.D., J.P., D.C.L., LL.D., who the other day entered on his ninety-third year, is the Grand Old Man of Anglo-Australia. He was born on November 23rd, 1808, and took his M.D. degree at Edinburgh in 1833. He emigrated in 1834, and settled in practice in Sydney. Australia was then practically a penal settlement; Sir Charles Nicholson has lived to see it a great federated Commonwealth of six constituent self-governing States. He was elected a member of the first Legislative Council of New South Wales in 1844, and was three times chosen as its Speaker. Of that body he is now the sole survivor. He took a prominent part in the agitation for representative institutions, and with regard to the political development of the Colony he may truly say of himself *Pars magna fui*. Sir Charles Nicholson was Chancellor of the University of Sydney from 1854 to 1860. After thirty years of active life in Australia he returned to England, and took up his abode at Totteridge, in Hertfordshire. He was made a Baronet in 1859. Sir Charles Nicholson must be nearly if not quite the oldest member

of the profession in this country. We hope he has before him many years in which to recall the pleasant memories of a well-spent life.

## THE R. B. ANDERSON FUND.

WE would request the special and favourable attention of our readers to the appeal, in another column, of Lord Stamford and Mr. T. Holmes on behalf of the Committee which is engaged in collecting funds for the relief of the widow and children of the late Mr. R. B. Anderson. Whatever some may think of the prudence of the course which Mr. Anderson pursued, or the practicability of his aims, no one can doubt that he had suffered grievous wrong, and that he tried to use his own bitter experience so as to produce a permanent benefit for the profession to which he was proud to belong. Nor can anyone doubt the genuine distress in which his family is left. We trust that during the short interval for which it remains open a substantial addition will be made to the fund.

WE learn with much regret of the unexpected death of Mr. J. R. Upton, who for over twenty-seven years acted as Solicitor to the British Medical Association. Mr. Upton, who was in his 69th year, retired from practice as a solicitor about two years ago, and at the time of his death was making a tour with his younger daughter in India. He appears to have contracted dysentery and to have succumbed to the disease on December 8th while staying at Delhi. The Association, when Mr. Upton first began to act as its Solicitor, was a comparatively small institution, and in any history of the way in which it has gradually increased in numbers and influence, and been brought to its present sound and independent position, the advice and assistance which Mr. J. R. Upton always ungrudgingly gave must be gratefully remembered. Mr. Upton held the office of Clerk to the Society of Apothecaries of London for many years. He was a courteous, highminded, and genial gentleman and his death has been a rude shock to his many friends.

APPOINTMENT OF MEDICAL SUPERINTENDENT OF THE ROYAL VICTORIA HOSPITAL, BELFAST.—Shortly after the death of the late Colonel John Glancy, Superintendent of the Royal Victoria Hospital, the Board of Management determined that it was advisable that the next Superintendent should be a medical man. Colonel Glancy had discharged his duties with conscientious exactitude and devotion for over twenty years; he had lived in the hospital, and finally died suddenly in harness of heart trouble at an advanced age. Some twenty-nine applications were received in answer to the advertisement; several of these were both most able and capable men, and would have been gladly chosen, as fitted in every way. Finally, however, after prolonged deliberation, Lieutenant-Colonel Andrew Deane, M.D., was selected. Colonel Deane has seen much service in India, and in 1898 was appointed Inspector-General of the Civil Hospitals in the Punjab.

THE ROYAL INSTITUTION.—The arrangements for lectures at the Royal Institution before Easter are announced. Among the courses are six lectures by Dr. A. Macfadyen on The Cell: Its Means of Offence and Defence; Immunity; Mr. W. N. Shaw will give two lectures on the Temperature of the Atmosphere, its Changes and their Causes; Professor E. B. Poulton, two lectures on Recent Researches on Protective Resemblances, Warning Colours, and Mimicry in Insects; Dr. A. S. Murray three lectures on Recent Excavations at Delphi and in the Greek Islands; the Rev. John Watson (Ian Maclaren) three lectures on the Scot of the Eighteenth Century. The Friday evening meetings will be resumed on January 10th, when Lord Rayleigh will deliver a discourse on the Interference of Sound. On succeeding Friday evenings discourses will be delivered by Mr. H. G. Wells, Professor A. Crum Brown, Professor Arthur Gamgee, Major P. A. MacMahon, Mr. W. Duddell, Professor Henry A. Miers, Professor H. Becquerel, Professor E. Ray Lankester, Geheimrath Professor Otto N. Witt, and other gentlemen.

## THE GENERAL MEDICAL COUNCIL.

### ELECTION OF DIRECT REPRESENTATIVES.

#### ENGLAND.

THE following is the result of the poll formally declared on December 10th:

| | |
|---|---|
| Jackson, George (Plymouth) ... ... ... | 6,518 |
| Brown, George (London) ... ... ... ... | 5,369 |
| Woodcock, Sam (Old Trafford) ... ... | 3,161 |
| Hayward, Charles Williams (Liverpool) ... | 1,385 |

Mr. George Brown and Mr. George Jackson were therefore declared duly elected.

We understand that the report of the Registrar to the English Branch Council will show that 57.4 per cent. of voting papers sent out were not returned.

#### SCOTLAND.

The following is the result of the poll formally declared on December 10th:

| | |
|---|---|
| Bruce, William (Dingwall) ... ... ... ... | 975 |
| Walker, Norman (Edinburgh) ... ... ... | 854 |
| Robertson, Charles E. (Glasgow) ... ... | 618 |
| Majority for Bruce ... ... | 121 |

The number of voting papers sent out was 4,157.

The number of voting papers rejected through informality was 28: of the voting papers sent out 250 received too late or were returned through the Post Office marked "not found" or "dead."

The number of abstentions was 1,432 (or 34.5 per cent.).

We have received the following letters for publication:—

*The Election in England and Wales.*

To the registered medical practitioners of England and Wales:

FELLOW PRACTITIONERS,—I have to offer you my most sincere thanks for having returned me to represent your interests as a direct representative on the General Medical Council. I feel greatly the honour you have conferred on me, and hope to be able to help carry out the reforms we all desire to see accomplished.—I am, etc.,

Plymouth, Dec. 11th. GEO. JACKSON, F.R.C.S.Eng.

FELLOW PRACTITIONERS,—I thank you very sincerely for the great honour you have done me in re-electing me, by an increased majority, as one of your representatives in the General Medical Council, and I beg to assure you that in discharging the duties of the office I shall continue, as heretofore, to do all I can, having due regard to the claims of the public, to promote the welfare and best interests of the profession.—I am, etc.,

Gibson Square, N., Dec. 11th. GEORGE BROWN.

*The Election in Scotland.*

SIR,—Will you allow me, through the medium of your columns, to express my hearty thanks to those ladies and gentlemen who voted for me in the election? I am, of course, well aware that it is to the principles which I advocated I owe so large a measure of support.—I am, etc.,

Edinburgh, Dec. 9th. NORMAN WALKER.

*The Gallery of the Council Chamber.*

SIR,—"No case, abuse the plaintiff's attorney," is the burden of Mr. Horsley's letter in the BRITISH MEDICAL JOURNAL of December 7th. His lame defence before the Council proves that there was not a word of truth in his allegations against his colleagues, and particularly Mr. George Brown, against whom he now admits they were directed (*vide* JOURNAL, November 23rd, p. 1544, and December 7th, p. 1713). As to the rest, it can stand over until Mr. Horsley comes up for judgment before the constituency next year.—I am, etc.,

Liverpool, Dec. 7th. ALEX. MCCOOK WEIR.

MEDICAL INSPECTION IN AMERICAN SCHOOLS.—The Orange (New Jersey) Board of Education has appointed a medical inspector whose duty it will be to visit daily each school, and examine any pupil suspected by the teacher of having a contagious disease. If the suspicion proves correct the child will be sent home with a note advising that the family doctor be summoned.

## THE PRINCE OF WALES'S HOUSEHOLD.

The *London Gazette* of Friday, December 6th, announces the following appointment to the Prince of Wales's Household:

*Physicians in Ordinary.*—Sir William Broadbent, Sir James Reid, and Sir Francis Laking.

*Surgeons in Ordinary.*—Sir Frederick Treves, and Mr. H. W. Allingham.

*Honorary Physicians.*—Dr. Robert W. Burnet, and Dr. Samuel J. Gee.

*Surgeon-Apothecary to the Prince of Wales's Household.*—Sir Francis H. Laking.

*Surgeon-Apothecary to the Prince of Wales, and to the Household at Sandringham.*—Dr. Alan R. Manby.

*Chemist and Druggist.*—Mr. Peter Wyatt Squire.

## LITERARY NOTES.

Gustav Fischer of Jena announces the publication of a comprehensive work on the history of medicine, under the title of *Handbuch der Geschichte der Medizin*. The work, which was originally planned by the late Professor Theodor Puschmann, of Vienna, is intended to present a complete survey of the evolution of medicine from the earliest times to the present day, and the collaboration of specialists in various departments of medical science and practice, as well as historical students, has been secured. Professor Arndt, of Griefswald, deals with the history of psychiatry; Dr. Bartels, of Berlin, writes on folklore and prehistoric medicine; Dr. Wolf Becher, of Berlin, takes the position of the profession and medical education for his province; Dr. Iwan Bloch, of Berlin, tells the story of medicine in India, and treats besides of the ancient mythological medicine of Rome, Roman medicine (Celsus), Post-Galenic and Byzantine medicine, and syphilis and leprosy. Professor Chiari, of Prague, relates the history of pathology; Professor Fasbender, of Berlin, that of obstetrics; Professor Fossel, of Graz, that of epidemic diseases. Dr. Robert Fuchs, of Dresden, writes on Pre-Hippocratic medicine, Hippocrates and his works, the Asclepiadæ, the Methodists, Pliny, Dioscorides and the Eclectics, and Galen; Professor Helferich, of Würzburg, deals with the history of surgery; Dr. Paul Heymann, of Berlin, with that of laryngology; Dr. Höfler, of Totlz, with Old German Medicine; Professor Hartsmann, of Berlin, with the history of ophthalmology from the sixteenth to the nineteenth century; Professor Husemann, of Göttingen, with toxic diseases; Professor Ipsen, of Innsbruck, with forensic medicine; Staff Surgeon Professor Albert Köhler with military sanitation and war surgery from the eighteenth to the nineteenth century. Dr. G. Korn writes on the history of diseases of the digestive apparatus, the urine, bladder, male genitals, neuropathology, and medical chemistry; Professor Kossmann, of Berlin, on that of gynæcology; Dr. Kreidl, of Vienna, on that of physiology; Dr. Ritter von Metnitz, on that of dentistry. Baron von Oefele, M.D., of Neuenahr, contributes articles on the medicine of the Egyptians, Babylonians, Assyrians, and Persians, and on the history of balneology; Professor Pagel, of Berlin, deals with mediæval medicine; Professor Politzer, of Vienna, with the history of otology; and Professor Prausnitz, of Graz, with that of hygiene and bacteriology. Dr. Preuss, of Berlin, relates the history of Hebrew medicine; Professor J. H. Rille, of Innsbruck, that of dermatology; Professor Schaer, of Strassburg, that of pharmacology and toxicology. Dr. Scheube, of Greiz, writes on medicine in East Asia, in China, and Japan; Professor Schrutz, of Prague, on Arabian medicine; Dr. Ritter von Töphy, of Vienna, on the history of anatomy, histology, and embryology; Professor Vierordt, of Tübingen, on that of diseases of the lung and of the heart, percussion, and auscultation, and animal parasites. The work, which is edited by Dr. Max Neuburger, of Vienna, and Professor Julius Pagel, will appear in ten fasciculi, forming, when complete, three volumes. The whole of the first volume will be issued by the end of the present year, the other two in the course of 1902.

The Christmas number of the *Wide World Magazine*, which has just been published, contains an interesting illustrated article on "Life in a Refugee Camp," by Dr. Herbert Crook, Medical Officer of the Johannesburg Camp. In view of the strictures which have been passed upon these camps in Parliament and elsewhere, Dr. Crook's paper—the first of its kind, we believe, to appear in this country—is of considerable importance.

In a leading article headed A Protest against Operative Intemperance, which appeared in the British Medical Journal of November 9th, reference was made to a remark of the late Bishop of London, Dr. Mandell Creighton, as to the "marvellous prospect opened to the medical man" by the doctrine of the resurrection, inasmuch as the marks of the surgeon's skill would be stamped on certain human frames to be carried by them into eternity. We have received several inquiries as to this, in reply to which we may state that the remark was attributed to the Bishop in what purported to be a report of a sermon delivered by him to the Guild of St. Luke in St. Paul's Cathedral on October 19th, 1898, which appeared in the public press at the time. The report was never, as far as we are aware, repudiated by Dr. Creighton.

The *Rivista Pellagrologica Italiana* is a new journal devoted, as its title imports, to the subject of pellagra, which is now occupying the minds of pathologists, sanitarians, and statesmen in Italy. It is to be published every two months at Udine, under the editorship of Dr. L. Perissuti and Signori G. B. Cantarutti and G. Antonini. In the first number it is stated that a comparison of the statistics as to the prevalence of pellagra for the years 1881 and 1899 respectively shows that in the regions where the disease is most rife—namely, Lombardy and Venetia, it has undergone a material decrease. Unfortunately it has increased in the Marches and in Umbria, and to some extent in Tuscany and Latium.

The sixth part of the *Manual of Surgical Treatment*, by Professor Watson Cheyne, C.B., F.R.S., and Mr. Burghard, is, we understand, now in the press, and will probably be issued in two or three months. It has, however, been found necessary to prepare a seventh part, which will consist chiefly of articles on genito-urinary surgery. It was found that to embody these articles in Part VI would have made the volume too large, and would have delayed its publication. Part I has already been reprinted twice since its appearance in 1899.

# ASSOCIATION INTELLIGENCE.

## NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1902.

Meetings of the Council will be held on January 15th, April 16th, July 9th, and October 22nd. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, December 24th, 1901, March 26th, June 18th, and October 1st, 1902.

### Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

## LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

## BRANCH MEETINGS TO BE HELD

Metropolitan Counties Branch: West London District.—A meeting of this District will be held at the Cancer Hospital, Fulham Road, S.W. (by kind permission of the Staff), on Tuesday, December 17th, at 4.30 P.M.: Mr. T. Aird Jolly, Vice-President, in the chair. Agenda:—Dr. Purcell: Why we Operate in Malignant Disease. The Staff will show some interesting specimens.—Thomas Dutton, M.D., 7, Manchester Square, W., Honorary Secretary.

## YORKSHIRE BRANCH.

A MEETING of this Branch was held at Harrogate on October 23rd. The PRESIDENT (Dr. Major) occupied the chair, and thirty-four members were present.

*Confirmation of Minutes.*—The minutes of the previous meeting were read and confirmed.

*New Members.*—The SECRETARY announced that Dr. Thomas Taylor (Bradford), and Dr. McCormack Boyd (Harrogate) had been elected members of the Association and Branch.

*Election of President-elect.*—The meeting unanimously elected Dr. Swanson (York) as President-elect for the ensuing year.

*Communications.*—Dr GIBSON (Harrogate) showed (1) a case of chronic arthritis of eight years' duration affecting many joints, in a man, aged 39. He came to the Royal Bath Hospital absolutely crippled, and after two months treatment was able to walk home. He had suffered from gonorrhœal rheumatism eighteen years previously. (2) A case of chronic rheumatoid arthritis which had not as yet undergone treatment. Dr. GOYDER (Bradford), Dr. BLACK (Harrogate), and Mr. WILLIAM HALL (Leeds), spoke in reference to these cases: and Dr. GIBSON replied.—Mr. SINCLAIR WHITE (Sheffield) showed three specimens. The first was a post-rectal dermoid, which was particularly interesting from the fact that it contained a mass of true bone. A photomicrograph was also exhibited of a section of the mass, showing it to be normal bone tissue containing Haversian canals. The author referred to the difficulty of explanation of such an occurrence. Whilst many would be inclined to regard the tumour as belonging to the teratomata, he failed to see that bone as well as other mesoblastic tissues should not at times be included in dermoid growths. Mr. White also showed a greatly distended vermiform appendix which he had removed from a sac of an irreducible hernia, and an unruptured tubal gestation. In the latter case there had been a supposed attack of appendicitis a fortnight previously. On opening the abdomen an unruptured tubal gestation was discovered and removed. The patient made a good recovery. Mr. BASIL HALL (Bradford), and Dr. GOYDER (Bradford) spoke in reference to the specimens; and Mr. WHITE replied.—Dr. HINSLEY WALKER (Harrogate) read a paper on the treatment of disease by the D'Arsonval apparatus. Various cases had been treated during the past six weeks by this method. The treatment had been most successful in cases of hæmorrhoids, a rectal electrode being used. Phthisis, anæmia, and chronic rheumatism, one case of rodent ulcer, and many other cases, were being treated, reports of which would be given at a later date. The results so far, although incomplete, had shown that this method was worthy of extended trial. The PRESIDENT and Dr. EDDISON (Leeds) spoke; and Dr. WALKER replied.—Dr. MACGREGOR YOUNG (Leeds) read a paper on the use of a linen bag in ether anæsthesia. He showed a modification of Clover's inhaler in which he had substituted a holland bag for the usual rubber one, and gave details of a number of administrations. Two important advantages were obtained by this modification: First, a clean bag being used for each case, and no inflation by the administrator being required, a degree of cleanliness was obtained which was impossible with the original apparatus. Secondly, the tendency to cyanosis which was frequently troublesome in ether administrations was very materially lessened. Anæsthesia was induced almost if not quite as quickly as with the rubber bag, and the quantity of ether used was only slightly in excess. The mouthpiece of the inhaler was of metal, with a detachable red rubber cushion round the rim, which would stand boiling.—Dr. HYSLOP (Menston) and Mr. BASIL HALL (Bradford) both spoke to having used Dr. Young's method with excellent results.—Dr. EDGECOMBE (Harrogate) read a paper on a case of acute temporary obstruction of the œsophagus.

The patient, a man aged 38, in good health, caught a chill by bathing in the sea on a very cold day. When seen three days later, he had acute coryza and severe frigeminal neuralgia. Next day there was swelling of the cervical glands and slight dysphagia. The dysphagia rapidly increased; there was regurgitation of fluids through the nose; the dysphagia ultimately became absolute; the larynx was normal. On passing a bougie, obstruction below the cricoid was felt, which gradually yielded to pressure. The passage of bougies relieved the dysphagia, which gradually disappeared within four weeks of the onset.

Dr. Edgecombe mentioned the possibility of an an acute enlargement of the bronchial glands similar to the cervical, but pointed out that this was improbable, as there was no communication between them. On the other hand, the duration of the symptoms seemed to negative the view that the condition was one of spasm. He had not been able to find a record of any similar case. The PRESIDENT, Drs. GOYDER and BRONNER spoke; and Dr. EDGECOMBE replied.—Dr. CHURTON (Leeds) read a paper on a case of paramyoclonus multiplex treated by subcutaneous injections of curare.

The patient was a hysterical girl who suffered from clonic movements of the arms and head. The range of movement was a very wide one and of great rapidity, eight or nine per second. Various forms of treatment had been tried, including faradism, without any effect. Hypodermic injections of the extract of curare were finally exhibited. Commencing with one-twenty-fourth of a grain daily, the dose was gradually increased to one-quarter. The movements steadily diminished and ultimately disappeared.

Dr. Churton also mentioned a second case of clonic spasm associated with nystagmus which he treated in a similar manner. Great improvement took place, sufficient, as he expressed it, "to spoil the case for a clinical lecture." The improvement had remained permanent. Dr. MERCER (Bradford) and the PRESIDENT spoke: and Dr. CHURTON replied.—Dr. D'OYLY GRANGE (Harrogate) read a paper entitled a plea for normal saline. He referred to a large number of instances where normal saline solution might be used to advantage in medical practice. In eczema, for example, and skin affections, where the use of water was injurious, normal saline solution had a beneficial action. He urged its more extensive use, not only after hæmorrhage, but in all conditions where the body was being drained of its fluids.—Dr. GOYDER spoke, and Dr. GRANGE replied.—Dr. SOLLY (Harrogate) read short notes on the causation of rheumatic arthritis. He included in the term "rheumatic arthritis" all forms of chronic arthritis in which there was no gouty element. He regarded these conditions as manifestations of a chronic toxæmia, and urged that in all cases a thorough search should be made for a source of infection. He cited a number of cases in which the joint conditions had been relieved by the treatment of coexisting urethral strictures, and pointed out the frequency of chronic uterine conditions in women suffering from these forms of arthritis.—Dr. GIBSON, Dr. GOYDER, and Dr. CHURTON spoke; and Dr. SOLLY replied.

*Dinner.*—After the meeting the members dined at the Majestic Hotel.

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## STAFFORDSHIRE BRANCH.

THE first general meeting of the session was held at Stoke-on-Trent on November 28th, Mr. H. FOLKER, President, in the chair. Twenty-four members were present.

*Confirmation of Minutes.*—The minutes of the last general meeting (May 30th, 1901) were read, approved, and signed.

*New Members.*—Albert James Adkins, M.D., M.R.C.S., L.R.C.P., D.P.H., Stoke-on-Trent Workhouse Hospital, and Humphrey Donell O'Sullivan, M.B., C.M Camb., Burton-on-Trent, were elected members of the Branch.

*Specimens.*—Dr. HUNT (Stoke-on-Trent) showed (1) a stone weighing 4 ozs. removed from bladder of a horse by lateral lithotomy. Animal under chloroform: returned to work in four weeks. (2) Kidney full of calculi causing suppuration, removed from a lad 17 years old, who had been reduced to last stage of emaciation by suppurating through very large sinuses in the loin. The kidney was removed *en bloc*. Three days after operation 44 ounces of urine were passed, whereas only 14 ounces had been the daily amount previous to the operation. A few days later 60 ounces per diem passed. Lad rapidly recovered, wound healed, and in two months was perfectly well and very robust.—Dr. SMALLWOOD SAVAGE (Birmingham) showed two specimens of salpingo-oöphoritis, which he had removed by abdominal section in two cases:—

CASE 1.—The patient, aged 43, had had nine children, the last child three years and a half ago. She complained that for years she had had scalding of urine, that for two months she had had pain in the right lower abdomen, and that for five weeks previous to being seen and three days after a menstrual period she had been suddenly seized with severe pain in the right iliac region and right hip, that she vomited, had cold sweatings at night, and a profuse pus discharge. On examination the vagina was hot, the uterus fixed, the external os patent, and a tender doughy mass was felt in the pouch of Douglas. Abdominal section was performed on November 17th, 1900, and a wholly adherent mass of an enlarged right tube and ovary was removed. The tube was dilated in its distal extremity into the shape of a funnel, and the ovary was enlarged, œdematous, and cystic. The left appendages being healthy, were not removed. The patient made a good recovery.

Case II.—The patient, aged 28, had been married 3½ years and had had one child eight months ago. The illness began sixteen days after the confinement; it commenced by a rigor, and when seen one month after she complained of pain in the right side of the lower abdomen, right hip, and groin, slight discharge, profuse night perspirations, slime in motions, dysuria, and loss of flesh. On examination there was found a cellulitic thickening in the right broad ligament which extended into the abdominal wall above the pubes, in the posterior vesical wall and slightly in the left broad ligament; the uterus too was found somewhat fixed. For a month the patient was ordered rest and was given mercury and potassium iodide when all her symptoms were much improved and on examination the vesical thickening had gone, the left broad ligament was free, but a well-defined swelling was felt in the situation of the right ovary and tube. A fortnight later the pain and sweating became worse, and she continued to lose flesh. The diagnosis made was pyosalpinx with parametritis. Abdominal section was performed on June 4th, 1901, with the patient in the Trendelenburg position and an adherent right tube and ovary removed. The left appendage was not removed. The right tube was thickened, elongated, and tortuous in the form of a U, the bend being attached to the right pelvic wall. The right ovary was the size of a tangerine orange and contained a firm brick-red hæmatoma. The patient made a good recovery and three months after the operation when seen all her symptoms had disappeared and she had grown quite stout, having gained 11 lbs. in six weeks.

*The Treatment of the Mother during the Puerperium.*—A discussion on this subject was introduced by Dr. Hatton, who deprecated the use of antiseptic douches as a routine practice, inasmuch as they were generally unnecessary, and always more or less dangerous. They should be used only in cases where operative interference was necessary, or where a septic discharge existed. He placed reliance on the rigid observance of the aseptic principle of surgery, both by the doctor and the nurse. Dr. Edge, The President, Mr. Spanton, Dr. Smallwood Savage, Dr. C. M. Allan, Dr. Deanesly, and Mr. Aitken took part in the discussion.

*Lead Poisoning in the Potteries.*—Dr. McAldowie read a paper, in which he maintained that the prevalence and severity of the poisoning had been much exaggerated, and that the rule as to solubility suggested by the Home Office, had it been enforced, would have led, in all probability, to an increase in the severity of the cases.—After the President had spoken on the subject, the further discussion was postponed till the next general meeting of the Branch.—On the motion of Dr. Malet, seconded by Dr. Lowe, a Committee was appointed as requested by the manufacturers, to consider and suggest any measures which might be adopted by them to further diminish the evil of lead poisoning.

## SHROPSHIRE AND MID-WALES BRANCH.

The annual general meeting of this Branch was held at the Salop Infirmary, on November 5th, Dr. George Whitwell, President, in the chair. Thirty-five members were present.

*Confirmation of Minutes.*—The minutes of the last meeting were read and signed as correct.

*Report of Council.*—The report of the Branch Council was read showing that it had held three meetings during the past year, that there had been two general meetings of the Branch, and two special meetings; also two ordinary meetings of the clinical and pathological section. The membership of the Branch had increased from 107 to 120, the largest membership yet recorded in its existence. The report on being put to the meeting was unanimously adopted.

*Election of Officers.*—The officers for the ensuing year were then elected as follows:—*President:* George Graves Whitwell. *Vice-President:* Ernest Tredinnick. *President-elect:* G. H. Keyworth. *Honorary Secretary and Treasurer:* H. H. B. MacLeod. *Assistant Honorary Secretary:* Leonard J. Godson. *Branch Representative on the Council of the Association and Branch Representative on the Parliamentary Bills Committee:* J. D. Harries. *Chairman of Clinical and Pathological Section:* T. Law Webb, M.B., Ch.B. *Branch Council:* E. Burd, M.D., E. Cureton, M.D. (Auditor), W. B. Davies, H. W. Gardner, M.D., H. Nelson Edwards, T. Law Webb, R. W. O. Withers, S. T. Gwynne, M.D., J. D. Harries, G. H. Keyworth, M.B., J. McCarthy, M.D., W. H. Packer, M.D. *Ethical Committee:* E. Cureton, J. D. Harries, G. H. Keyworth, J. D. Lloyd, S. T. Gwynne, J. McCarthy, and the President (*ex-officio*).

*Conferment of Degrees on Former Presidents.*—The President announced that the University of Birmingham had recently conferred the degrees of M.B., Ch.B., upon Edward Cureton and T. Law Webb, both former Presidents of the Branch, and proposed a hearty vote of congratulation to those gentlemen. This was carried by acclamation.

*Contract Practice.*—The Secretary read letters from the Secretaries of four Branches of the Association acknowledging the receipt of the resolution of the special meeting of the Branch anent the annual fee payable for contract practice.

*New Members.*—The following gentlemen were elected members of the Branch: H. E. Mortis, Kinnerley; Cyril P. Budd, Salop Infirmary; L. T. McClintock, Salop Infirmary; J. Morgan Evans, Llandrindod Wells; T. Kirk, Montgomery; J. G. Pigott, Belmont, Shrewsbury; John Murray, Llandrindod Wells; Louis F. B. Knuthsen, Shifnal.

*President's Address.*—The President then delivered an address on tuberculosis. After thanking the members for the great honour they had done him in electing him President for the ensuing year, he traced the history of tuberculosis from the time of Galen. All the most famous names in ancient medicine were associated with the elucidation of the disease, and the list included, besides Galen, those of Paulus Egineta, Oribasius, Rhazes. Forrestius, in 1653, gave a detailed recital of many cases founded on extensive practical observation. Sylvius, about 1680, seemed to have been the first to recognise lymph nodes in connection with ulceration and suppuration of the lungs; but it was not till the close of the seventeenth century that attention was directed to the close similarity between scrofulous lymph nodes and the caseous nodules in phthisical lungs. Reid, in 1785, discarded the old idea that tubercles were enlarged lymphatic glands, and conceived that they were the result of exudation; and in 1793 Baillie pronounced them new formations, and described them. The birth of the last century was signalised by the conception of tubercle in its most general sense when Bayle, and Laënnec (his pupil), described it very accurately but were bitterly opposed by Broussais and all the leading men of the day, until their investigations culminated in the discovery of miliary tubercle, which decided the vexed theory of the relation of scrofula to tuberculosis. Between 1789 and 1830 experimental inoculations were made, sometimes on human beings, but chiefly on animals, and seem to have had negative results. Klencke in 1843 and Villemin in 1865 announced successful inoculations and the latter summed up his conclusions as follows:—

> Tuberculosis is a specific affection. Its cause resides in an inoculable agent. Tuberculosis then belongs to the class of virulent maladies, and in the nosological scheme must take place beside syphilis, but more close to glanders.

Nothing further important took place till the discovery of the tubercle bacillus was announced by Koch before the Physiological Society of Berlin on March 24th, 1882. As to its age-distribution Ransome in his Milroy Lectures stated that "it kills one-third of those who die between ages 15 to 45, and nearly one-half of those who die between 15 to 35 years of age, and that 30 per cent. of those who die of other diseases show signs of tubercle," and said that a great many cases in early life as "tabes mesenterica" and "consumption of the bowels" were simply diet diseases true intestinal tuberculosis being rare; adolescence showed a decided partiality for the disease, and in old age many deaths ascribed to chronic bronchitis, etc., were really due to tuberculosis. He then showed from statistics and published experimental observations that the incidence of the disease depended more on the aggregation of human beings, indoor life, malnutrition, and unhygienic surroundings than upon any influence of climate, latitude, or altitude, that inherited vulnerability, though not to be entirely neglected, played only a small part in the programme, and quoted the classical descriptions of Hippocrates and Jenner of the individual of phthisioid tendency. The infectiousness of phthisis had held the medical mind since the time of Galen, and in Nancy in 1750 a bed used by a phthisical person was burned; in 1754 Florence and in 1767 Lucca recognised its infectious character and passed certain regulations. In 1782, in Naples, stringent laws as to disinfection were passed, and heavy fines inflicted in cases of neglect of notification. In 1839, so great was the dread of the disease that Georges Sand and Chopin (who was consumptive) were thrust out of several towns in Spain and Portugal which they had visited. In 1884 the Collective Investigation Committee of the British Medical Association collected 158 cases in which the disease was transmitted from husband to wife or *vice versâ*. The President touched on the different methods of distribution of the bacilli, as milk, meat, dust, butter, hands, etc., and instanced a few of the many sources of poi-

sible infection, as cigar and cigarette makers, performing the act of circumcision, public drinking cups, etc., and of the modes of infection suggested heredity in some cases, inhalation, inoculation, ingestion, etc. Finally, he gave a general review of the symptomatology, physical signs, prophylactic, general and climatic treatment, and concluded by apologising for the inordinate length of the paper, due to the immensity of the subject and the amount of literature extant concerning it.

*Vote of Thanks.*—A hearty vote of thanks to the President for his most able paper was proposed by Dr. Tredinnick, seconded by Mr. Harries, and carried by acclamation.—A discussion followed in which Drs. Porter and Gardner took part.

*Communications.*—Mr. R. de Stawell read notes of a case of acute intestinal obstruction caused by a large gall stone and showed the specimen. Mr. Stawell gave a short summary of the recent literature of the subject.—Dr. T. Law Webb read a note on the detection of the tubercle bacillus in sputum and urine, and gave a brief history of 27 cases from his own practice classified as follows: (1) Those in which the bacillus was present from the first (*a*) in great numbers, (*b*) more sparingly; (2) those in which for a long time no bacilli were found, but in which they appeared shortly before the fatal termination of the case: (3) those in which no bacilli were found, though the other signs of tuberculous disease were present. He pointed out the great importance of frequently-repeated examinations of both sputum and urine, and described a reliable and simple technique. Dr. Webb also showed microscopic preparations of the blood in a case of myelogenic leukæmia.—Dr. Gore (Whitchurch) read a short paper on the treatment of phthisis by intravenous injections, and showed a nursemaid, aged 20.

She had a cough and expectoration for ten months, and had not been well for two years. Her father and several near relatives died of phthisis. On admission to Whitchurch Cottage Hospital she was anæmic; there was slight cough and expectoration; tubercle bacilli were present in sputum, crepitation was heard over both apices, limited in extent. Her weight was 8 st. 2 lbs. Treatment was commenced on September 3rd by a modification of Maguire's method of intravenous injection of formalin. This was continued till November 4th. When shown on November 5th at Shrewsbury there were no apparent physical signs. She had no cough or expectoration, and had not had any for some time. Her weight was 9 st. 12 lbs. She had never weighed more than 9 st. before in her life. She looked and felt in perfect health. She had no other treatment or diet different from the ordinary diet of patients in the cottage hospital. She was examined by several members, who could find nothing the matter.

*Annual Dinner.*—After the meeting the annual dinner of the Branch was held at the Music Hall, fifty-five members and their guests being present.

## SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

The 161st meeting of this District was held at the Kent and Canterbury Hospital on November 28th, Dr. Kessick Bowes of Herne Bay in the chair. There were twenty members and visitors present.

*Confirmation of Minutes.*—The minutes of the last meeting, held at Folkestone in September, 1901, were read and confirmed.

*Chairman of the Meeting in March, 1902.*—On the motion of Dr. Halstead, seconded by Dr. Gosse, it was unanimously agreed that Dr. Robinson of Dover should take the chair at the meeting to be held at Dover in March next.

*Appendicitis.*—Dr. Whitehead Reid (Canterbury) read a paper on this subject. He referred especially to the diagnosis and the prognosis of the disease. He related a case of streptococcus peritonitis on which he had operated, where the injection of antistreptococcus serum had saved the life of the patient. He fixed the time as under forty hours in which an appendicular abscess might give way from the initial symptoms, and gave a case in illustration. He also laid stress on the fact that the pulse rather than the temperature was the best guide in judging of the severity of a case. Finally, he insisted on the fact that the disease was essentially a surgical one, as in progressive lesions interference might be required during the second day of the attack.

*Experiences of Small-pox.*—Mr. Raven (Honorary Secretary) read a paper on this subject. He dealt only with the rarer aspects of the disease. It seemed probable, judging from the success that often attended early isolation, that small-pox was not so actively infectious in the initial stage as it had hitherto been believed to be. Difficulty in diagnosis was dwelt upon, especially in the hæmorrhagic form of the disease, and when a prodromal measly rash shows itself, as well as when there was doubt between varicella and varioloid. Cases of purpura variolosa were related, and allusion was made to the "variolous fever" of Sydenham or the "variolæ sine variolis" of de Haen, and the author gave illustrative cases to support his belief in the existence of this strange form of the disease, which had been disputed by Watson and others. Incubation terms were mentioned, chiefly to illustrate the value of vaccination during such periods. It was shown by a series of cases that so long as the vaccine vesicle was matured by the time that variola declared itself, the disease was greatly modified or even practically nullified; whereas if the vesicles, before they were ripe, were overtaken by small-pox, no alleviation of symptoms ensued. From indisputable facts incubation, in a group of 8 cases, ranged from twelve to nineteen days. Hence, though twelve days are generally recognised as the common term of incubation, and vaccination four days after infection would probably ensure safety, yet it might be hoped the vaccination performed many days later than this would be effectual on the chance of a protracted incubation. Treatment was described as opportunism; symptoms alone could be treated. Fresh air and good nourishment were the chief factors in recovery. Vaccination during an attack of small-pox was found to be quite useless, though it had been advocated. The form of death was sometimes peculiar to the disease. A patient apparently strong and in good spirits would suddenly die as though the poison was incompatible with life and nothing more.

## METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

A meeting of the District was held at St. Thomas's Hospital on November 28th, Dr. Hyslop, Vice-President, in the chair.

*Confirmation of Minutes.*—The minutes of the last meeting were read and confirmed.

*Paper.*—Dr. Box read a paper on some points in connection with ulceration of the stomach and duodenum, which will be published. The following gentlemen joined in the discussion which followed:—Dr. Sharkey, Mr. C. S. Wallace, Dr. Bryant, and Dr. Hyslop. Dr. Box replied.

*Cases.*—Several cases of interest from the wards of the hospital were shown by Dr. Sharkey, Dr. Acland, and Dr. Hawkins.

*Votes of Thanks.*—A vote of thanks was proposed to Dr. Box and the staff of St. Thomas's Hospital, and also to the Treasurer and Governors of the hospital, for the permission to use the Court Room. These were carried unanimously.

## BATH AND BRISTOL BRANCH.

The second ordinary meeting of the session was held at Bath on November 27th, Dr. G. C. Fayler, President, in the chair. There were twenty-eight members present.

*New Members.*—Mr. George Boyd, of Portishead, and Dr. Kyle, of Bristol, were elected members of the Branch.

*Communications.*—Mr. G. S. Pollard read a paper on the Tuberculin Test in Cattle, and a discussion on the subject ensued, in which the following members took part: Dr. Waldo, Dr. Watson Williams, Mr. Willett, Mr. Flemming, Dr. Cave, Dr. Fisher, and Dr. Michell Clarke. Dr. Wilson Smith discussed Some Problems of Medical Treatment; and Dr. Shingleton Smith and Dr. Waldo commented upon them.

*Specimens.*—Mr. C. E. S. Flemming showed the following specimens: (*a*) Pulmonary artery perforated by needle; (*b*) cancer of œsophagus, involving left bronchus; (*c*) retro-peritoneal tumour, involving pylorus; (*d*) gall bladder impacted with gall stones; (*e*) congenital hernia of ovary; and (*f*) a small tumour of an angiomatous nature: and they were discussed by Mr. Paul Bush, C.M.G., Dr. Watson Williams, Dr. Michell Clarke, and Dr. Fisher.

*Cases.*—Mr. W. M. Beaumont showed lantern slides of some cases of ptosis; and Dr. Michell Clarke, Mr. Willett, Mr. Richardson Cross, and Dr. Cave discussed them.

# OBITUARY.

## Sir WILLIAM MAC CORMAC, Bart., K.C.B., K.C.V.O.,

Consulting Surgeon to St. Thomas's Hospital; late President of the Royal College of Surgeons of England.

The hand of death has closed all too early on one of the most striking personalities of the profession. To the life work of few men of our calling has it been given to cover so wide a field as was the case in that of Sir William Mac Cormac. A prominent figure in every professional event for the last thirty years, he passed quietly away on Wednesday, December 4th, at Bath, perhaps happily removed from the sounds of the great city in which so many of his battles had been fought and so many of his triumphs won.



Born in 1836, the eldest son of Dr. Henry Mac Cormac of Belfast, he received his education in the Royal Belfast Institution, in Dublin and in Paris, while later a considerable time was spent in the study of surgery in Berlin. He became B.A., M.A., M.Ch., and D.Sc. *honoris causâ* of the Queen's University in Ireland and received its gold medal. He subsequently became a member of the Senate of the Queen's University, an Hon. M.D. and M.Ch. of the University of Dublin, and a Fellow of the Royal College of Surgeons in Ireland. In 1871 he was admitted *ad eundem* a Fellow of the Royal College of Surgeons of England. In the year 1881 he received the honour of knighthood as a recognition of his services as Honorary Secretary General to the International Medical Congress held in London in August of that year. In 1897 he was created a baronet, and in the same year received the appointment of Surgeon in Ordinary to the then Prince of Wales. In 1898 he received at the hands of Her late Majesty Queen Victoria the honour of knighthood of the Royal Victorian Order in recognition of services rendered to H.R.H. the Prince of Wales, upon whom he attended when the Prince had received a serious injury to his knee. In 1901 the Knighthood of the Bath was conferred upon him in recognition of his services as Consulting Surgeon to the South African Field Force. He was an honorary member of the Imperial Military Academy of Medicine in St. Petersburg, and honorary member or Fellow of many other foreign medical and surgical societies. He was also an Officer of the Legion of Honour, Commander of the Orders of the Dannebrog of Denmark, the Crown of Italy, and the Takovo of Servia. He held the Orders of the Crown of Prussia, St. Iago of Portugal, North Star of Sweden, Ritter Kreuz of Bavaria, Merit of Spain, and of the the Medjidieh of Turkey.

At the Belfast Royal Infirmary he was successively Surgeon and Consulting Surgeon. He held the similar offices at St. Thomas's Hospital, London, successively from the year 1871 until the time of his death; also the Chair of Surgery for twenty years. He also held the post of Consulting Surgeon to the French, Italian, and Queen Charlotte's Hospitals in London. He was Surgeon-in-Chief to the Anglo-American Ambulance in the Franco-German War in 1870-71; Chief-Surgeon to the National Aid Society during the Turco-Servian Campaign of 1876 and Consulting Surgeon to the South African Field Force 1899-1900. He was at various times examiner in the Queen's University in Ireland, the London University, the Royal College of Surgeons of England and for His Majesty's Naval, Army, and Indian Medical Services.

He was a member of the Council of the Royal College of Surgeons of England from the year 1883 until his death, Bradshaw Lecturer in 1893, Hunterian Orator in 1899, and President of the College for the unprecedented period of five successive years from 1896 onwards.

It is impossible to relate in detail the events of a career so full of action as that of Sir William Mac Cormac. It will therefore perhaps be of mst interest briefly to consider those events of his life which chiefly determined his success, a success entirely dependent on his own unaided energies and largeness of view.

Of these the first may be said to have been the wise action of his father in sending William Mac Cormac to complete his education in France, and the time subsequently spent in study in Germany. Thus he became a linguist and thoroughly acquainted with the broad lines upon which such surgeons as von Langenbeck were developing the modern practice of surgery. A mutual affection at this time sprang up between teacher and pupil which was ended only by the death of von Langenbeck in 1886. This was the period of development at Berlin of the brilliant generation of surgeons in Germany, of whom Billroth and von Esmarch may perhaps have been the most prominent figures, and with one and all of whom Mac Cormac's association was firm and lasting. From this commencement emanated the international reputation gained by Mac Cormac, and the power of organising successfully such future movements as the International Medical Congress of 1881, or the Centenary celebration of the Royal College of Surgeons in 1900.

The next great step was his migration from Belfast to London. Success as a student at Dublin and abroad, an early appointment to the hospital and university of his native town would have been sufficient to satisfy many men, but Mac Cormac belonged to that sturdy and energetic type of

Northern Irishmen to whom the whole world appears as the most fitting field of action, and throwing up all, after an excellent start, he came to the metropolis of the empire. Here he at first dropped but a passing anchor. The outbreak of the Franco-German war found him thirsting for active work and fame, and he at once set out for Paris and placed his services at the disposal of the French military authorities. Of his work on that occasion he has himself given us a modest and interesting account in his book, *Notes and Recollections of an Ambulance Surgeon*, mainly a collection of communications which first appeared in the BRITISH MEDICAL JOURNAL. Suffice it here to say that this established a reputation that secured for him on his return a position in one of those close boroughs, a large London hospital and medical school.

The appointment as Assistant Surgeon at St. Thomas's Hospital in 1871 marked the commencement of a second period in his career. Now he began to further develop his powers as a clinician and teacher, and to gain a reputation as a London surgeon. The thoroughness with which he threw himself into his work, and his rapid assimilation of all that was good in the traditions and associations of his adopted school, rapidly effaced any feeling that he had come from without, and from this time forward he was a St. Thomas's man in every thought and action, and was so regarded by every member of the school. He joined the school in some respects at a fortunate moment both for himself and it, the interregnum due to the abandonment of the building in the Borough being followed by what may well be considered a new start in life for the school. All the strength of his energetic nature was put forth in his efforts to elevate the science and art of surgery, to educate his pupils, and to bring the work of the hospital under the eyes of the profession both at home and abroad. To these efforts no small part of the success of the school in its new home may be traced, and no member of the staff took a more hearty interest in everything pertaining to its welfare. At first teacher of practical surgery, in 1873 he became full surgeon and was appointed Lecturer on Surgery, a chair which he always delighted to remember had once been occupied by Sir Astley Cooper, and which he filled with conspicuous success. On his retirement in 1894, he was elected Consulting Surgeon and a governor of the hospital, and Emeritus Lecturer on Surgery in the school.

Strenuous work at the hospital and school, together with numerous contributions to the deliberations of the London Societies and periodical literature, absorbed the next eight years. One special meeting, however, must be mentioned, as it well illustrates Mac Cormac's power of turning opportunity to good account. On December 3rd, 1879, the South London Division of the Metropolitan Branch of the British Medical Association held a meeting at St. Thomas's Hospital, when Mac Cormac gave an address on the Present State of Antiseptic Surgery. After the address a discussion and adjourned discussion took place, in which Mr. Bryant, Mr. Macnamara, Mr. Barwell, Sir Spencer Wells, Sir Thomas Smith, Mr. T. Holmes, Lord Lister, Mr. John Wood, Mr. Jonathan Hutchinson, Sir James Paget, Mr. Lund, Dr. Newman, Mr. Knowsley Thornton, and Mr. Morrant Baker took part. It is difficult to estimate how great an effect this meeting and discussion had in the crystallisation and concentration of opinion in London on this, at that time, still undecided topic. The address and discussion, together with an appendix showing the results attributable to the introduction of antiseptic methods, was published as a book, which met with general recognition from the profession both at home and abroad, and was translated both into French and Italian.

In 1879 he was appointed Honorary Secretary General to the International Congress to be held in 1881. This Secretaryship may be regarded as the third important event in Mac Cormac's London career, for whatever individual merit may have been due to other actors in it, to him alone belonged the inception of what the Congress ought to be and should be as an actual aggregation of international medical science of the day. Strong Committees aided him in his labours, and helped him in the difficult task of steering the ship through the rocks and shoals which attend such a great occasion. At the meeting, Paget, Savory, and Lister, Gull, Jenner, and Andrew Clark met the prominent men of every country; here such men as Koch and Pasteur met on neutral ground, and enjoyed an opportunity of personal intercourse and exchange of opinions such as had not been afforded before. The occasion of this Congress has been referred to by the biographer of the President as one of the great events of Sir James Paget's life, and the same may be said of Mac Cormac. At this period he solidified, concentrated, and enlarged his friendships with Continental and American contemporaries, and showed himself to his compatriots not only as a surgeon and teacher, but as a leader of men. The success of the meeting did in fact result from the broadness of view and the energy with which its organisation was conducted, and the mainspring of the organisation was Mac Cormac.

From this period onward his private work engrossed more and more of his time, but he in no way allowed it to interfere

with his public duties in the profession. Important services were rendered to the Army Medical Department in 1883 on the occasion of a committee appointed by the Secretary of State for War to inquire into the work of the medical department during the Egyptian campaign, services which obtained the appreciation and gratitude not only of the medical service of the army, which has always held him in high esteem, but also of the profession in general. The Presidency of the Medical Society of London was held by him in 1888-89, and he was President of the Metropolitan Branch of the British Medical Association in 1890 91.

During this period many important medical papers were written, and also his work on operative surgery, always a subject of absorbing interest in his life work. He was elected to the Council of the Royal College of Surgeons of England in 1883, he became in 1887 a member of the Court of Examiners, later a Vice-President, and in 1896 reached the zenith of his professional ambitions in being appointed President, an appointment to which he was re-elected five times, an occurrence unique in the annals of the College. His services in this position are briefly chronicled below; hence no further mention of them need be made here.

Although the sketch above given may seem a sufficiently comprehensive record for a professional life, to it must be added a few words regarding Mac Cormac's services as a military surgeon. His experience in the Franco-German campaign bred in him a deep and lasting love for this form of surgery, founded not so much on a spirit of adventure as on a feeling that war afforded the greatest opportunity for prompt action and an unlimited opportunity for aiding his fellowmen. The experience then gained was recorded in the book of recollections already referred to, and after its publication he was always regarded as an eminent authority on the subject.

It is interesting to note that Mac Cormac on this occasion was deeply impressed with the value of female nurses at the seat of war, and consideration of the remarks on page 86 of his *Notes and Recollections of an Ambulance Surgeon* might have saved the occurrence of some of the difficulties which arose in the earlier days of the present campaign. The book, however, is not the only lasting memorial of his surgical work in the campaign, as he also made a most interesting collection of gunshot fractures which now form a valuable part of the contents of the museum at St. Thomas's.

A second opportunity in the same field was afforded in 1876, when as Surgeon-in-Chief to the National Aid Society with Lord Wantage he proceeded to the seat of war in Servia. Here he was present at the battle of Alexinatz, and took part in the disposal of surgeons—mostly his own pupils—and stores, etc., to the armies of both the Turks and Servians. After his return home he continued to take an active part in the work of the Stafford House Committee until the end of the campaign.

Mac Cormac's last entrance into the arena of war is fresh in the memory of all, and naturally was of more engrossing interest to him than all, since his own countrymen were those affected. When the project of sending out consulting surgeons to the war was broached, Mac Cormac—although at his mature age he might well have hesitated—at once placed his unrivalled experience at the disposition of his country, and on November 3rd, 1899, at a week's notice, sailed, accompanied by his old pupil, Mr. Makins, for Capetown. A large assembly of the past and present members of his old school bid him God-speed from the platform of Waterloo Station, and a circumstance of no little interest and gratification to him was the presence on the platform of Sir John Furley, Dr. P. Frank, and Dr. Blewitt, three of the veterans with whom he had been associated in the Franco-German campaign. Mac Cormac's work in South Africa may be briefly summarised in his own words :

> I have accomplished a great deal—I am myself astonished how much during the four and a-half months I was in the country. I have visited all the hospitals in Natal and in Cape Colony, and have seen the working of the field hospitals at the front—where I have been four times—the hospitals and hospital trains along the lines of communication, and the base hospitals. To make the experience complete I have been a patient in hospital myself with a short attack of dysentery which was sufficiently unpleasant and painful.

While in South Africa he showed himself to be an old campaigner in his ready capacity to suit himself to the surroundings and the life of the soldier on active service. None the less his illness and the hardships and exposure he encountered made a lasting mark upon his constitution.

It was remarkable to note his popularity with Tommy Atkins, who was quick to recognise the public spirit and patriotism of the great London surgeon. A word from Mac Cormac was sufficient to soothe many an aching brow and heart on the treeless veld or in the temporary hospital. The proudest remark of a severely-wounded man's mother at home was "that he had been seen by Sir W. Mac Cormac." His old habit of recording his observations and convictions was kept up, and many interesting letters were sent to the profession at home by the medium of the *Lancet;* while, on his return to England, some of his experiences were embodied in addresses to the Medico-Chirurgical Society, the annual meeting of the British Medical Association, etc. Her late Majesty Queen Victoria honoured his return by an invitation to dine at Osborne, and his services receive a generous meed of public appreciation.

As a surgeon, while his field throughout life embraced the whole area included in the work of a general surgeon to a large hospital, like the masters of olden times he disliked the tendency to specialisation beyond the limits found necessary in the working of a general hospital. On the other hand his special attention was often diverted in one direction or another as the advance of surgical technique opened up fresh opportunities for the improvement of the treatment of any particular class of case. His earliest love was the study of fractures and dislocations, then he was an ardent exciser of joints, later plastic surgery, especially by the method of Thiersch, with transplanation of flaps, occupied his attention, again, he was an early and enthusiastic ovariotomist, the operation which did most to encourage and advance abdominal surgery of all kinds, and no doubt led up to his brilliantly successful sutures of the ruptured urinary bladder in 1886. His rapid adoption of any new method worthy of trial had a powerful and far-reaching effect on the school with which he was connected, while no new instrument or appliance escaped his watchful eye without trial. Operative technique had a great attraction for him; he developed his own manipulative skill in a remarkable manner to those who had the opportunity of watching his professional progress, and a considerable portion of his time was devoted to writing a book on operative surgery, which his premature death has left unfinished.

As a teacher Mac Cormac was deservedly popular with his pupils. In each he took a kindly individual interest, an interest unbroken by their qualification and removal to a sphere of their own and often marked by substantial help through the exertion of his great and widespread influence without the walls of the school. A very remarkable demonstration of the respect and affection with which he was regarded was offered by the dinner given to him in 1899 by the house-surgeons to St. Thomas's Hospital during his tenure of office as surgeon, at which with five unavoidable exceptions and the defects due to death, the whole number of these gentlemen gathered from every part of the United Kingdom to do him honour.

His lectures were designed to furnish his class with the most recent and approved views on surgical subjects, tempered with his own personal experience. He took great pains to make a summary of these, a printed copy of which was handed to each member of the class, often abundantly illustrated with original drawings and specimens. His experience as a teacher made him a good examiner, and this the more as a result of the interest he took in the candidates and the real pleasure he had in the work. He held many appointments of this nature during his professional career, and in one and all he gained the respect of the candidates who had an invariable confidence in his fairness and consideration.

In the wards of the hospital he was beloved by the nursing staff, while his patients held him in the highest estimation. In his private practice he was equally successful in retaining the respect and friendship of his patients, and the public estimation in which he was held was marked in 1898 by his summons to attend the Prince of Wales.

Mac Cormac was an industrious literary worker, but his writings are for the most part scattered through numerous

*Transactions* of societies, and periodicals. Three books alone were published, but each has exerted considerable influence on the subjects of which it treats: *The Notes and Recollections of an Ambulance Surgeon*, on military surgery; the *Antiseptic Surgery* on the early growth and adoption of the system; while the work on *Surgical Operations* has been widely read by surgeons and students. For many years the project of writing a system of surgery was a fond one with him, but his busy life, stood in the way of the fulfilment of this desire. He accomplished the labour of accumulation, but for the secondary work of arrangement and editing sufficient leisure could never be found in view of his multifarious engagements. The failure to accomplish this coveted task, however, in no way diminished his appetite for reading surgical literature, and until his death he kept himself thoroughly abreast not only with English, but also Continental and American advance.

His massive frame, fine open countenance, genial smile, and courtly bearing are familiar to all, and such was his unbounded hospitality and generosity that few men's homes were known to such a large circle of friends and acquaintances. An habitual early riser he succeeded in getting a great part of his work done before others were stirring, and this custom stood him in good stead on many occasions when his duties were almost unnegotiable. His habits of work were perhaps never more sorely tried than in the preparations for the Congress of 1881. During the last six weeks Mac Cormac himself started with daylight while some of his staff left 13, Harley Street in time to post the letters by the 3 A.M. mail, and this at the end of some twenty months of arduous preparation which had been of so engrossing a nature as to oblige him for a short part of the period to delegate a large portion of his hospital work to others. The meeting over he set to work with unabated ardour at the task of editing the 2,370 pages of the *Transactions*, which in their three languages appeared complete within a period of six months of the termination of the meeting.

He was an impatient holiday maker, always anxious to return to his work and professional interests and the only real holidays he ever enjoyed were those taken on the sea which he loved, and which the conditions of travel did not allow to be broken short. None the less he was a charming travelling companion, enjoying to the full scenery and art, and wonderfully successful in throwing himself into the spirit of the land in which he found himself, and adopting the customs of the people. During his lifetime, beyond his war service, he travelled very widely in Europe and twice in America, and there were few important places or art treasures with which he was not familiar. He was a good draughtsman, and at one time worked with the brush to some effect, but want of time prevented him from ever giving prolonged attention to this relaxation.

As a youth he was of athletic tendencies; later in life he always retained a liking and felt the need of physical exercise. He was very fond of walking, took a fleeting affection to the bicycle, and at times played tennis and rowed: of late years he became an enthusiastic golfer, and was a familiar figure on the links at Mitcham and Deal. He was a great lover of animals; throughout his whole life a dog was his constant companion, and his last dog Bruno became almost as well known a public character as his master, accompanying him almost everywhere. This love of animals probably prevented him from ever becoming an ardent sportsman, and he disliked much the sight of a falling bird, but he was fond of fishing, and spent several holidays in Scotland and Ireland in that pursuit.

He dearly loved his own home, and this strong affection to his habitual surroundings was, perhaps, one of the chief elements in his dislike to a long holiday. At 13, Harley Street he was seen at his very best, surrounded by his collection of pictures, etchings, and bronzes. Together with Lady Mac Cormac, he exercised the most generous hospitality to all: colleagues, pupils, and members of his profession from all quarters of the globe constantly assembled there, sometimes in a formal party, the more intimate in quiet social gatherings, and Mac Cormac gave of his best and welcomed all with a heartiness that will never be forgotten. Those who were privileged to enjoy his hospitality often met from time to time the most distinguished members of the profession from either side of the Atlantic, and not only the seniors, but many of those visiting this country prior to making a start in life, for Mac Cormac never looked upon an introduction given to him as a pure formality necessitating merely a permission to visit his wards with him.

His friendships were many and varied, but perhaps the most striking characteristic of them was the loyalty with which he held to the friends of his youth. Some of these, as the late Lord Russell of Killowen, had attained to the highest spheres, others had found life a more thorny or at any rate a less successful path, but to all William Mac Cormac was the same, and the history of his many kindnesses and generosity remains hidden as he wished it to be. Again, although a vigorous he was a generous opponent, and many an open difference in a short time was forgotten or even became a bond of union between him and those whose opinions were opposed to his. A man of great ambition and rigid determination there were few schemes on which he set his heart in which he did not succeed, but this success never altered his kindly nature and proved of equal importance to his friends for whose benefit the influence he obtained never ceased to be exercised. Large of frame and wide in his ideas, successful in his career, it was kindliness and generosity of nature which above all characterised his life, and the loss of which will be most missed in his death.

In spite of his fine physical development, Mac Cormac was never a typically strong man, and his habits of periodical inordinate work, and his frequent disregard of precautions in this respect which would have been observed by a man more careful of his own health, no doubt accounted for his premature death. During his life he had some severe illnesses. An attack of erysipelas in 1879, which rapidly turned his hair to grey, and a serious attack of pneumonia followed by empyema in 1896, both made marks upon his constitution.

Characteristic of the man and his determination was his decision to offer his services in the present war, and, when there, the strain to which he exposed his health. When at Capetown, prior to his return home, his friends were much disturbed by his appearance, but hoped that the sea voyage home—always a good influence on him—would thoroughly repair the effects of the hard life he had been leading in South Africa. After an apparent return to his usual health, however, a gradual loss of strength and activity set in, noted at first by his intimate associates, but for the last few weeks of a rapid nature.

Sir W. Mac Cormac married the daughter of the late Mr. John Charters, who survives him, but he leaves no family. No notice of his life could be complete without a mention of the lady who has been associated with all his joys and sorrows. No human insight can realise the influence of her constant support and sympathy on his anxious and stirring career: enough to say that no man ever made a happier choice or was more blessed by it in his subsequent life, and with the sorrow for his loss felt by Mac Cormac's wide acquaintance, their heartfelt sympathy goes out to his widow.

We are indebted to Mr. REGINALD HARRISON for the following notes: By the death of Sir William Mac Cormac the surgical profession has lost, at a comparatively early age, one of its most prominent and well-known representatives. He may with truth be said to have been a many-sided man, for he occupied various offices, the duties of which he fulfilled with no ordinary distinction and credit, and, if his life had been prolonged, it is possible he might have added even further lustre to his career.

Sir William Mac Cormac's association with the Royal College of Surgeons was a long, useful, and distinguished one, and the announcement of his sudden death was received by his colleagues of the Council and the official staff of the College with feelings of much sorrow and regret. He was elected a member of the Council in 1883, and re-elected in 1891. His period of service on the Council would have expired in 1899, but, as he was at the time and subsequently President, he remained on the Council, in accordance with the terms of the charter, until the expiration of his office. He proposed retiring from the Council in July next, and thus would have completed nineteen years service, during five of which he occupied the Presidential chair. He had been a

member of the Court of Examiners for ten years, from 1887, as well as the Dental Board for a shorter period. In 1893 he delivered the Bradshaw Lecture, choosing for his theme "Sir Astley Cooper and his Surgical Work." In 1899, in the presence of the Prince of Wales—now King Edward VII—and a distinguished audience, he delivered the Hunterian Oration. This record includes the more important positions he held in connection with the College.

In various other ways, however, he added largely to the fame and influence of the College. In the doing of this he was never tired, not only in giving the most diligent attention to all the well-recognised business and traditions of the College and the high office he held, but also in furthering them.

The association of the City of London with the medical profession in May, 1898, when the Lord Mayor received the Presidents of the two Royal Colleges as his principal guests, was an important occasion during Sir William Mac Cormac's period of office. It was on this occasion Lord Lansdowne announced that all the reforms asked for by the Army Medical Department and the profession had been granted, and that the Queen herself had graciously consented to the new corps being styled the Royal Army Medical Corps. This recognition of the Colleges and the profession by the City of London gave Mac Cormac great satisfaction and pleasure, and there can be no doubt that his personality contributed to bring this about. The occasion was a distinct success, and he, as chief representative of the Royal College of Surgeons, had reason to be proud of it. His continuance in office as President for the unprecedented period which included a fifth year was distinctly creditable to his colleagues on the Council in view of the approaching centenary of the College in 1900. Mac Cormac was, so to speak, made for such an occasion. His knowledge of men of all ranks, and his influence over them when required, was in itself a forecast of success. His labour and power of organisation, with much attention to detail, never ceased for many months before the ceremonies took place. His ideas, plans, and modes of approach, even when he was thousands of miles away on the serious service of his country, during the anxious half-year which almost immediately preceded the function, came with the regularity of the mail or the swiftness of the wire to those at home who represented him in this business. These College Committees carefully considered, but seldom revised.

Thus, did Mac Cormac prepare the College for its centennial, and saw the function carried through without a flaw, to the credit of his country and his profession in all parts of the world. In his address of welcome to the centenary and his biography of the Masters and Presidents of the College who had preceded him, he has left behind a permanent record of his fitness for the high position he thus occupied which hitherto is unique in the history of the College.

Sir William's public appearances at Congresses at home, abroad, and in America were numerous, and though not possessing the silvern tongue of Paget, his utterances were invariably on the side of good sense and manners, and were listened to with the attention and consideration they deserved. Even as on a recent festive occasion when there was some confusion of tongues, and with a voice somewhat enfeebled by his African labours and sickness, he had no difficulty in securing a warm reception and patient hearing.

In Sir William Mac Cormac, the Royal College of Surgeons of England has lost one who never allowed an opportunity to pass him of adding to its usefulness and increasing its well-earned renown.

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The funeral took place on December 9th at Kensal Green Cemetery in a vault in the central avenue in the presence of a large number of friends and representatives of scientific societies and other associations with which he was connected. The first part of the burial service was said at St. Peter's, Vere Street, this was choral, and in addition to two hymns. Spohr's anthem, "Blest are the departed," from the *Last Judgment*, was sung. As the coffin was being carried up the aisle the organist played "O rest in the Lord," and during its conveyance back to the hearse the "Dead March" from *Saul*. The officiating clergyman, both at the church and cemetery, was the Rev. W. Page Roberts, Canon of Canterbury and incumbent of St. Peter's. The nave and aisles of the church were filled to their utmost capacity and a large number of persons were in the galleries, so that it would not be possible for us to give a list of those present; but it may be mentioned that His Majesty the King was represented by General Godfrey Clerk; and the French and German Ambassadors, the Army Medical Department, the Naval Medical Service, and the British Medical Association sent representatives. Deputations also attended from the Royal Colleges of Physicians and Surgeons and St. Thomas's, the French and Italian Hospitals, and the Irish Medical Schools' and Graduates' Association. Viscount Duncannon, Viscount Knutsford, Lord Lister, Sir Norman Lockyer, Sir Squire Bancroft, Mr. Peter Reid, Mr. Wainwright, and Mr. Trimmer were also present, and medical friends and colleagues too numerous to mention. There were so many wreaths and floral tributes that it required two hearses in addition to the one containing the coffin to convey them.

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## Surgeon-General ROBERT HARVEY,

C.B., D.S.O., M.D., LL.D., F.R.C.P.

Director-General Indian Medical Service.

The announcement of the death of this distinguished officer, which we had the sorrow of making last week, will have been a source of surprise and regret to many friends in Great Britain. During recent years he has visited this country on several occasions, and when he left London not many weeks ago seemed to be in his usual health, and as usual full of energy. His death, which occurred at Simla, was due, we are informed, to peritonitis, but information as to the cause of his fatal illness has not reached us.

Robert Harvey was born in the year 1842. His father, Dr. Alexander Harvey, was Professor of Materia Medica in the University of Aberdeen. The son studied medicine at Glasgow and Aberdeen, and obtained the degree of M.B. (with honours) and C.M. from the Aberdeen University in 1863 at the age of 21. He subsequently, in 1883, took the degree of M.D., and in 1895 his Alma Mater conferred upon him the degree of LL.D. In 1889 he became a Member, and in 1894 a Fellow, of the Royal College of Physicians of London.

In 1864, after filling the appointment of Resident Medical Officer of the Birmingham Lying-in Hospital, since replaced by the Birmingham Lying-in Charity, he entered the Army Medical Service, and proceeded to Netley. On the opening of the Indian Medical Service in 1865 he passed the examination and was allowed with several others to count his Netley tour and examination, the combined result of both examinations placing him third on the list—Kenneth MacLeod being first and James Cleghorn second. Proceeding to India he took part in the Bootan war of 1865-66, for which he obtained a medal and clasp. He subsequently served in Central India in medical charge of the Central India Horse and as Agency Surgeon at Bhurtpur. In 1871 he volunteered for the Lushai expedition, and had charge of a base hospital. His services were acknowledged in despatches and he obtained a clasp. He was appointed Civil Surgeon for Simla in 1876, and served for a short time as Sanitary Commissioner in Bengal, and on the retirement of Dr. Edmondston Charles was appointed Professor of Midwifery in the Calcutta Medical College and Obstetric Physician to the College Hospital. He rapidly obtained a large practice in Calcutta, and was popular and successful as a family practitioner and consultant. He superintended the building and furnishing and fitting of the magnificent Eden Hospital for Women and Children, and acquired a high reputation for kindness and skill, especially in his own speciality. In 1891 he accepted promotion to the administrative grade, and relinquishing practice applied himself diligently and successfully to the duties of military and civil administration; serving successively as Principal Medical Officer of the Miranzai and Hazara expeditions in 1891 and the Isazai expedition of 1892. He obtained two clasps, was mentioned in despatches, and received the D.S.O. and C.B. for his services. He subsequently filled the offices of Inspector-General of Civil Hospitals, Bengal, and Surgeon-General of the Punjab Command, and on the retirement of Surgeon-General Cleghorn became Director-General of the Indian Medical Service and Sanitary Commissioner with the Government of India.

Surgeon-General Harvey's life thus presents three phases: professional, sanitary, and administrative, and he took part in addition, both in an executive and administrative capacity, in five military expeditions. He was a type of the Indian medical officer—ready to turn his hand to any work which promised fruitful occupation and distinction, and ardent in the execution of that work whether purely professional or otherwise. He filled a great variety of important offices, and always with advantage to the Government and the public, and credit to himself.

Harvey was a man of kindly disposition, hospitable, genial, and true. He had a high sense of fidelity, friendship, honour, and duty. His intellect was bright and ready, but he was lacking in originality and original initiative. He has, therefore, left no scientific or professional work which will remain as an accretion to medical science. He had good powers of exposition, was a fluent lecturer and a facile writer. He contributed many interesting and useful papers to current medical literature, and as the head of the Indian Medical Service encouraged men to work. He also keenly promoted scientific institutions and labours. The Sanitary Reports issued by his office were of exceptional merit. In their preparation he was ably assisted, but the credit of selecting and supervising his assistants and their work is due to him. In administration he was sympathetic and sensible, and he did not spare himself; working hard with cheerfulness and enthusiasm, often under physical difficulties connected with defective eyesight and delicate health.

## WILLIAM DOBIE, M.D., J.P.

THE death of Dr. Dobie of Keighley has removed from the profession one whose influence extended far beyond the town in which he lived. He was a Scot of the best type—shrewd, intellectual, cultured, and both widely and deeply read. Although he loved and admired Nature in all her moods, his passion was for books. He was a ripe Shakespearian scholar, a critical student of Carlyle, a lover of Burns and Scott, and had an intimate acquaintance with everything concerning the sisters Brontë. He had a fund of dry humour, which was always kindly, excepting when he was exposing a sham, and then it was caustic and direct. As a writer he has not left much behind him, only stray papers in the medical journals, and occasional letters and articles in the lay press. As a poet he had no mean skill, and it is a matter for regret that he did not allow himself more expression in this direction. Enthusiastic in his profession, and thorough in his methods of examination, he was yet intensely human, and never allowed the disease to obscure the patient.

The influence he exerted upon his fellow-townsmen may be gathered from the following quotation from the *Keighley News*:

> The funeral was remarkable for the rallying of all classes, parties, and sections of the community to one spot, united by the common sentiment of affection and respect to the deceased. The first service was conducted in Devonshire Congregational Church by his minister and close personal friend, the Rev. E. Pringle. At the Nonconformist Chapel in the cemetery, Mr. Pringle again conducted the ceremony. But he was assisted by the Rev. H. J. Palmer, Rector of Keighley, and the Lord's Prayer was led by the Rev. Dr. Strauss, Chief Rabbi from Bradford, also a personal friend of the deceased. Quite a large number of Church of England clergymen, some who have ceased to reside in the town, were among the spectators, and their presence served to accentuate the fact that Dr. Dobie did not belong to a sect or a section, but to the whole community.

Dr. Dobie was born at Langholm, Dumfriesshire, on November 21st, 1834. He was originally intended for the Church, but turned aside for medicine, and studied at Edinburgh. After obtaining the diploma of L.R.C.S.Edin. in 1864 he commenced his medical career at Temple Sowerby, near Penrith; in 1867 he removed to Keighley, where he succeeded to the practice of Dr. Alleyn Nicholson. In 1869 he became L.R.C.P.Edin. and in 1876 M.D St.And. When two years go the Borough Commission was formed at Keighley Dr. Dobie was one of the first to be made a justice of the peace. At the first meeting of the Bench after his death the Chairman, Alderman Brigg, made a speech, from which we quote the following:

> Dr. Dobie has been a most valued member of this Bench. His long training in the diagnosis of physical disease enabled him to apply in a similar manner his intellect to the windings of the criminal mind; he was also, by his training and experience, admirably qualified to sift conflicting testimony and to apportion due weight to each witness, and in particular were his advice and presence here beneficial, when cases were brought before us in which medical testimony was adduced, or in which the complainant was suffering from some ailment or disease produced by ill-treatment.

Dr. Dobie was one of the founders of the Keighley Hospital and remained on the active staff for nearly a quarter of a century. He resigned early in 1900, when he was appointed consulting physician. He was latterly a Vice-President of the Deaf and Dumb Mission, having been formerly for many years one of its honorary physicians. Those who knew Dr. Dobie best loved him most; he was never a self-seeker but invariably kept a high ideal before him; he was a generous opponent and a warm friend, kind to the poor and courteous to all. His death leaves a gap in the profession which will not be readily filled.

The following letter from Professor Clifford Allbutt speaks for itself:

"I scarcely know how to answer your request for some appreciation of my late friend William Dobie of Keighley. Not very long ago on a public occasion we met, and had a long and cordial talk together. I thought him looking a little worn and pale, but presumed it to be no more than the marks which the hand of time writes on the faces of us all. No rumour of his serious illness reached me, or I should have asked leave to visit him; and now the shock of the news of his death leaves me little able at present to think calmly on his memory.

"William Dobie was one of those men of whom, happily for our own land, there are many—if few be so excellent as he—who, too modest to display the high attainments and qualities of character of which they can hardly be unaware, full of resources within themselves, always deeply interested in the problems and culture of mankind, devoted to the discharge of the duties and humanities of the hour, fortified by a keen sense of humour against the petty rivalries and bickerings of the world, and by strong common sense against its narrow fads and gusty fashions, form what has been well called 'the backbone of the country.' It is the sturdy rectitude of such men which leavens the society in which they move, and which keeps us all steady in times of stress. Beneficent in his calling, rich in the stores of his mind and of his library, strong and comprehensive in mind, and cultivated in literature and in philosophy as many Scotchmen are, for William Dobie the *fallentis semita vitæ* brought full content. I never heard a hint from him that a wider sphere or more personal distinction would have had any charm for him.

"The fruit of this serene and thoughtful life was apparent in his conversation even on matters which in the mouths of many of us might have seemed trivial. However little a subject seemed to be, Dobie would enrich it with some touch of wisdom or brighten it with some touch of wit or humour. His passing reflections on our common friends and on their doings lost nothing in kindliness for their shrewdness of tact and insight. So it was that no work was more of a holiday to me than a call to meet Dobie, and the long half hour's talk in his brougham as we climbed slowly the hills of the Worth Valley.

"Well do I remember those times and regret them, yet, in the midst of my regrets, cannot but smile as I recall our ever new remorse as we would find ourselves at the patient's door with all the story of him to begin. Once or twice Dobie thus took counsel with me on personal vexations due to the thoughtlessness or blunders of others, for I feel sure that no one would wittingly have caused him annoyance. On one such occasion especially I learned, what I expected to learn, the depths of his charity and unselfishness.

"In his profession his knowledge was very wide, and in practice he was full of resources; this everyone knew. I may add that he had a strong grip of the scientific principles of medicine, and would at times surprise me by his brief and effective criticism of new researches in physiology or of pathology. This power he owed in great part, no doubt, to natural ability and current reading, but not a little to the excellent general and scientific education which he brought with him from Edinburgh into Yorkshire.

"But I must add no more to these notes, the miserable inadequacy of which none knows so well as the writer."

## JOHN DAVIES HARRIES, M.R.C.S., L.S.A.,

Consulting Surgeon to the Salop Infirmary, Shrewsbury.

The death of Mr. J. D. Harries of Shrewsbury was briefly announced in our last issue. We are now able to publish the following brief notice of his life and character written by an old colleague:

With every token of sincere sympathy and regret we have just paid our last act of respect to the memory of our old friend and colleague, John Davies Harries, who, after only a few days' illness, succumbed to an attack of pneumonia and heart trouble on November 30th last. Although for some years Mr. Harries had shown some signs of cardiac failure, and had not been robust in health, he worked up to the last, and how many sorrowing friends he has left was evidenced by the large assemblage in St. Chad's Church to take part in the funeral service. This was attended by the mayor, corporation, and officials of the borough, by nearly every medical man in the town and district, and by a large number of old patients and friends.

Mr. Harries, born in Shrewsbury 66 years ago, was educated there, and, after an apprenticeship to the late Mr. Keate, became a student of King's College, London. He qualified in 1857, and, settling in practice in his native town, was in 1860 elected to the surgical staff of the Salop Infirmary. Although at the time considered young for the appointment, his energy and skill soon justified the governors in their confidence, and, after thirty years service, he retired and was appointed Honorary Surgeon, carrying with him the well-earned good wishes of the governors, his colleagues, and patients.

He was a member of the old Shropshire Scientific Branch of the British Medical Association, and, on its amalgamation with the Ethical in 1876, became one of its first members. He was a member of the Branch Council from 1879, and its President in 1886. At the time of his death he had been its representative on the Central Council since 1888, and on the Parliamentary Bills Committee since 1894. Although living so far from London, he was a regular attendant at the meetings of these bodies, and always ready to represent the views of his Branch.

He was an alderman of the borough, of whose council he had been a member for 25 years; he had also been a magistrate for 23 years, and Surgeon to the County Gaol for 41 years. A widower at the time of his death, he leaves four daughters to mourn the loss of a most affectionate father, his only son, a surgeon of great promise, having died at an early age.

Mr. Harries had long enjoyed a large private practice, the last eleven years in partnership with Mr. John Gray. He was of a retiring disposition, sometimes perhaps rather brusque in manner, due more to the harassing nature of his occupation and not overgood health than anything else; but many can recall acts of unostentatious charity and good nature. Always a welcome guest at any public or social function, full of anecdote, droll, amusing, and good company, we, his professional *confrères*, who have also so recently had to follow Kope and Churnley to early graves, cut off in the full vigour of their work, will long cherish the memory of John Davies Harries, and regret his loss.

## ARCHIBALD CAMPBELL CLARK, M.D., F.F.P.S.G.,

Medical Superintendent, County of Lanark Asylum.

We regret to announce the death of Dr. Campbell Clark, which took place at his residence, Hartwood, on November 28th. Dr. Clark had been in declining health during the last year, having had a somewhat severe attack of influenza, which was followed by visceral complications to which he eventually succumbed.

Dr. Clark was a distinguished student at the University of Edinburgh, where he took his degree of M.D. with honours in 1886. After having been for a few months Assistant Medical Officer at the Melrose Asylum, he joined the staff at Morningside, under Dr. Clouston. At a comparatively early age he was appointed Medical Superintendent of the Glasgow District Asylum at Bothwell, where he soon distinguished himself by original research and literary work, and where he laid the foundation of his reputation as one of the foremost alienist physicians of the day. While Superintendent of the Bothwell Asylum he was chosen for the superintendency of the new asylum for the county of Lanark, to be built at Hartwood, and he was for several years engaged in connection with the plans of the new asylum and in the superintendence of its erection and equipment. The asylum, which was opened about six years ago, remains a monument to his genius for organisation and to his mastery of the principles governing the humanitarian treatment of the insane. In the happy combination of simplicity of design, adaptation of means to ends, and economy of construction, Hartwood Asylum is almost unique. Dr. Clark was the pioneer of the latter-day movement for the scientific training of attendants upon the insane, and was joint author of a practical manual on the subject.

Dr. Clark's contributions to medical science were varied and important, and always characterised by originality. His Essay upon the Etiology, Pathology, and Treatment of Puerperal Insanity, published in the *Journal of Mental Science*, embodies clinical observations of abiding value, and his work in connection with experimental dietetics in lunacy practice was of the most brilliant character. His *magnum opus*, however, was *A Clinical Manual of Mental Diseases*, published in 1897. He held the post of Lecturer on Psychological Medicine at St. Mungo's College, Glasgow, and was President of the Caledonian Medical Society which held its Annual Meeting in Glasgow in August last. The fact that it was prepared on a sick bed lent a pathetic interest to his presidential address on that occasion. Dr. Clark was a man of generous character and wide sympathies, and his death will be deplored as a personal loss by a large circle of friends, and in the wider circle of those to whom he had held out a helping hand in time of distress and adversity.

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We regret to announce the death of Dr. Jenkin Lloyd, of Bethesda, which occurred on November 20th. He was born in 1853 at Llanddeiniol, Cardiganshire, being one of a large and gifted family, the head of which, his aged father, survives to mourn his loss. After a brilliant career at the University of Glasgow he graduated M.B., and C.M. in 1881, and then entered on practice at Blaenau Festiniog. After some years he went to Bethesda, in the first place as assistant to Dr. Hughes. In 1891 he married Miss Williams, of Carnarvon, the niece of Dr. Hughes and daughter of Ioan Mai, a well-known bard and writer. Dr. Lloyd was an ardent Welshman, and himself an excellent bard. His death was very sudden. He left home on the morning of November 20th to attend to his professional duties, at 11 A.M. he returned complaining of feeling ill; he rapidly became unconscious and died at 6 P.M. He was universally beloved; the kindly, observant eye, the gentle and skilful touch, the sympathetic heart that ministered and soothed in sickness and sorrow will be sorely missed by rich and poor alike.

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Mr. Bernard Charles Kendall, M.R.C.S., L.R.C.P., of Helston, died after a very short illness on October 24th, in the 36th year of his age. He was born at Weymouth, and was the son of Surgeon-Major Bernard Kendall (Retired), of the Indian Army. He was educated at Clifton College, and commenced his professional studies in the University College, Bristol, and continued them at Guy's Hospital and the Rotunda Hospital, Dublin. After taking the diplomas of M.R.C.S. and L.R.C.P., he held a junior surgical post in the Bristol Royal Infirmary, and in 1895 began practice in Helston, where he had won high esteem both by his private character and his professional ability. He was medical officer and public vaccinator for the Wendon District of the Helston Union, and joint medical officer of the Helston Dispensary. For three years he had been Councillor in the Corporation of Helston. He was married in April, 1899, to the second daughter of Mr. E. P. Kendall, of Helston, who is left with two children, the youngest only a few weeks old.

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Dr. John Eliott Woodbridge of Cleveland, whose views concerning the treatment of typhoid fever at one time brought his name prominently before the profession in the United States, died recently of heart disease at Bad Nauheim. Dr. Woodbridge, who was about 55 years old, acted as a volunteer surgeon during the Spanish-American war.

# SPECIAL CORRESPONDENCE.

## PARIS.

*Report of Parliamentary Commission on New Public Health Law.—French Vital Statistics for 1900.—Small-pox Statistics in Paris.*

M. BORNE, deputy, has recently laid before the Chamber the report of the Parliamentary Commission of Public Health, which had been charged with the examination of the new law, already discussed and adopted in a modified form by the Senate. The Commission asks the Chamber to ratify, and that without discussion, the text of the proposed law in its entirety, with the exception of one slight modification under Section 25; the Commission being of opinion that there is no immediate necessity for the appointment of six new assistant inspectors. The report contains a description of sanitary legislation in France and abroad, a historical summary of and the actual position of French legislation, and concludes by giving the following summary of the proposed law:

*General.*—The new law depends on the local authorities. The mayor, with the advice of his council, must draw up communal sanitary regulations determining necessary measures for salubrity, fixing obligatory disinfection and the destruction of infected objects, regulating the important question of drinking water and that of the evacuation of stagnant water, etc.

The prefect will collaborate in the municipal work, direct it, and complete it on occasions. Everything of utility in preceding laws, and especially in the law of 1884, remains in force.

*Sanitary Regulations.*—Each commune shall be required to provide itself or shall be provided with sanitary regulations.

*Statistics.*—If the mortality statistics are not satisfactory during three consecutive years in any commune, an inquiry shall be held to discover the cause and to remedy it immediately.

*Epidemics.*—In case of epidemic, special urgent orders shall be laid down, and extraordinary measures can be imposed by the central authority.

The following are obligatory:

1. Notification by doctors and midwives.
2. Disinfection, which shall be carried out by the municipal or departmental services.
3. Vaccination against small-pox and revaccination at 11 and 21 years.

The method of applying these regulations and the list of contagious diseases shall be drawn up in accordance with reports and decrees from the Ministry of the Interior, after taking the advice of the Academy of Medicine and the Comité Consultatif d'Hygiène Publique.

*Drinking Water.*—Detailed regulations as to obtaining water from springs, and the acquisition of a sufficient surrounding area to prevent all pollution. Interdiction to spread organic matters and to bore wells in this area. The possibility of acquiring a spring by decree as of public utility. Article 28 happily foresees every necessary precaution to guarantee and protect this important branch of public alimentation against all danger.

*Buildings.*—Authorisation necessary for every new construction in towns of 20,000 inhabitants and over. In the case of a construction, built or not, reputed or stated to be dangerous, the mayor or the prefect shall order an inquiry to be carried out by a sanitary commission, which shall devise such works as may be urgent, or shall interdict the whole or part of the construction. The claims of interested parties and sections for interference have been provided for.

*Sanitary Administration.*—The prefect, with the general council, shall organise the service in each department as follows: (1) A departmental council of hygiene; (2) a sanitary commission for each administrative division. These bodies shall be consulted on the application of the law, and generally on all questions interesting the public health. The Comité Consultatif d'Hygiène Publique will decide as a court of appeal all points in dispute, and draw up special regulations for the application of the different clauses of the law.

*Expenses.*—The cost of organisation of the disinfection services and the expenses necessitated by the legislative applications in general shall be portioned among the communes, the departments, and the State. Remunerative taxes shall be established by a regulation of the public administration.

*Penalties.*—The proposal forsees all desirable and sufficient sanctions to assure the normal and regular working of the law. The sanitary service of Paris comprises two categories of attributions, some granted by the new law to the Prefect of the Seine, others continue under the Prefect of Police who remains President of the Conseil d'Hygiène et Salubrité de la Seine in accordance with the existing legislation.

From this summary it will be seen that once the above project is voted France will at last possess a real public health code, instead of her ancient rudimentary legislation, which is incoherent, in places contradictory, and generally insufficient and inapplicable.

The Minister of Commerce has just received a most interesting report on the population during 1900. The balance of births and deaths shows an excess of 25,988 deaths, while in 1899 there was an excess of 31,394 births. This result is as much due to the diminished birth-rate as to an increase in the death-rate. In 1900 there were registered 20,330 fewer births and 37,052 more deaths than in 1899. In 55 departments there was an excess of deaths over births, as against 43 departments in 1899; 2 departments show an increased excess of births as compared with 1899, while 30 departments, though still showing an excess of births over deaths, have a decrease in this difference as compared with 1899; 4 departments show a diminution in the excess of deaths. In all the remaining departments the excess in deaths has increased.

*Marriage and Divorce.*—299,084 marriages were celebrated in 1900, an increase of 3,332. The proportion of new couples is 1.54 per 100 inhabitants, a figure which has not been attained since 1876; during the decennial period 1890-99 the annual mean proportion has been 1.40 per cent. This increase in the number of marriages has taken place throughout one-half the country. Divorce is decreasing, as the following figures show: 1897, 7,460; 1898, 7,235; 1899, 7,179; 1900, 7,157.

*Births and Deaths.*—In 1900, 827,297 births were registered. There were in addition 39,246 stillborn births. There were 422,056 male and 405,241 female births—that is, 1,041 males to 1,000 females, an almost invariable proportion in France. Legitimate births numbered 754,176; illegitimate births 73,121, a figure slightly below the mean for the decennial period. 853,285 deaths (442,435 males, 410,850 females) were registered in 1900, as compared with 816,233 deaths in 1899.

The number of fresh cases of small-pox notified in Paris and the deaths due to this disease have been as follows:

| Week. | Cases. | Deaths. |
|---|---|---|
| 45th ... ... ... ... | 22 ..... | 4 |
| 46th ... ... ... ... | 32 ..... | 3 |
| 47th ... ... ... ... | 41 ..... | 9 |
| 48th ... ... ... ... | 21 ..... | 2 |

The number of small-pox patients under treatment in the Paris isolation hospitals has been as follows:

| Date. | Cases. | Males. | Females. |
|---|---|---|---|
| On November 3rd ... ... | 49 ..... | 22 ..... | 27 |
| November 10th ... ... | 54 ..... | 26 ..... | 28 |
| November 17th ... ... | 58 ..... | 25 ..... | 33 |
| November 24th ... ... | 56 ..... | 23 ..... | 33 |
| November 30th ... ... | 50 ..... | 22 ..... | 28 |

# CORRESPONDENCE.

## THE IDEAL DOCTOR.

SIR,—For a quarter of a century before his death Sir James Paget was the *doyen* of the medical profession (though that mantle of a peculiar combination of affection and reverence, raised to the highest pitch of enthusiasm, has now by general consent been placed on the shoulders of Lord Lister). To say that is perfectly compatible with the recollection of the galaxy of great surgeons and physicians whose character and skill have made us proud of our countrymen.

And yet the perusal of *The Memoirs and Letters of Sir James Paget* (Longmans, 1901) will lead most of us to feel that "the half was not told us": we did not, till we read it, understand the full greatness and nobility of the man's career. Wisely did some one the other day publicly state (I cannot give the exact words) that every medical student and young doctor should read that book and take Sir James Paget as the "ideal" of his profession. To give effect in some measure to that exhortation is my justification for writing this letter, though I am "only a parson."

There is no need to refer to the intensity of Sir James's religious belief, to his ceaseless efforts to prevent any lowering of the highest standard of professional honour, to his profound insight into disease, to the unique beauty of his oratory—these were already known to all who cared to know. But some things which are not so well understood are revealed in the *Memoirs and Letters*.[1] That so bright and

[1] So packed with facts are the 420 pages (the greater number closely printed), that very important points are barely named, and others affecting the family are, by a self-denying ordinance, omitted. It is satisfactory, however, to know from other sources that the third generation has fully sustained what Sir James Paget reports (p. 114) as sung by his father of the family name:

"For my sons I've preserved it unblemished by shame,
And it still from a spot shall go free."

As to what *is* stated the following may be noted:—(1) Young James Paget's school education cost only eight guineas a year, and this, brought to an end at the age of 10, was followed by an apprenticeship, which most young men would now consider humiliating; yet on pp. 33 34 is a quotation from his introduction to the *Natural History of Yarmouth*, written by one of his brothers and himself when he was not yet 21, which exhibits a maturity of trained observation, restrained powers of thought, and perfect style which would do honour to a president of the British Association. (2) The extraordinary difficulties which he went through to secure an income, which with the most painful economy only sufficed to make two ends meet though he worked sixteen hours a day, should be a great encouragement to all struggling professional men of high aims. (3) The way in which every step he took and every discouragement he met with worked together to shape him into what he became, when he was recognised as the head of his profession, is very suggestive.

noble an example may have its full effect on those who are not too old to be capable of enthusiasm, or too "set" in habit to care to rise to higher things, I would respectfully suggest to the deans and other guardians of the interests of the rising medical generation to arrange for a lecture or address to be given this winter on what Sir James Paget suffered, strove for, and attained.—I am, etc.,

United University Club, Dec. 9th. C. Lloyd Engström.

## THE PASTEUR INSTITUTE OF INDIA.

Sir,—I have read the notice of the Pasteur Institute of India in the British Medical Journal of November 16th, and without wishing to detract in the smallest degree from the credit it most justly gives to Surgeon-General Taylor and Major Semple for their excellent work in actually starting the Institute and bringing it so rapidly to its present state of efficiency, I would venture to suggest that we ought not to forget what we owe to the two men with whom the scheme originated. I mean Surgeon-Colonel Crawford Roe, late Sanitary Commissioner of the Punjab, and Dr. Kay Robinson, late editor of the *Civil and Military Gazette* at Lahore. Both of them were moved by feelings of benevolence and public spirit, but Dr. Roe, who had studied under Pasteur and Koch, was further moved by professional zeal. It was they who started the Central Committee and collected the money; it was they who pressed the Government of the Punjab (that is to say me) and the Government of India to take up the scheme and make a grant in aid and provide a medical superintendent; and I very much doubt whether, if these two gentlemen had not worked as they did, you would have had a Pasteur Institute at Kasauli at this moment. It is true that their scheme hung for a considerable time, but that was not their fault. They could do nothing without the co-operation of the Government, and the Government had many things to consider before moving.—I am, etc.,

Dennis Fitzpatrick, K.C.S.I.

Queen's Gate Gardens, S.W., Dec. 5th.

## THE PRINCIPLES OF LOCAL TREATMENT IN DISEASES OF THE UPPER AIR PASSAGES.

Sir,—I have been in doubt whether I should reply at all to Mr. Lennox Browne's last letter, as not a single new argument is advanced in it, but have ultimately decided to do so, because in my first letter I had promised to answer further objections, and because I feel sure that silence on my part would be misconstrued by him.

Experience has taught me that, however strongly the case may go against Mr. Browne, he invariably endeavours to sum up as if he had come out with flying colours. The present instance makes no exception to the general rule. This time he speaks of the "general indifference" to my "diatribes." I am sorry to disillusion Mr. Browne, but my correspondence tells a very different tale. Ever since my lectures appeared, and more particularly since Mr. Browne chose to constitute himself the champion of the excesses which I combat, I have been, and still am, receiving letters from physicians, surgeons, general practitioners, and—last, not least—specialists in all parts of the country, thanking me for my protest against operative intemperance, telling me of illustrative cases within their own experience, and affirming, as you yourself have done, Sir, that "some plain speaking on the subject was required." That, surely, does not look like indifference.

Mr. Browne's next paragraph is totally misleading. It was not an "attack" I made on him at the meeting of the Pathological Society on December 19th (not 23rd, as he writes) 1893, but an indignant protest I endeavoured to raise—unfortunately without the success it deserved—against his methods of argument. He had committed in an American work, Burnett's *System of Diseases of the Ear, Nose, and Throat*, a series of very grave misstatements concerning a case published by Mr. Shattock and myself in the *Transactions* of the Pathological Society. I wished to submit our grounds of complaint to the Society. The President, however, refused to let me take that course on the ground that the meetings of the Society were devoted to scientific matters only. From the formal point of view he was no doubt quite right, but I still deplore his decision, for I strongly hold that if a member of a Society misrepresents statements made by other members in the Society's own *Transactions*—the plenum of the Society is the proper tribunal before which such conduct ought to be brought. However, the President held different views, and I had, of course, to bow to his ruling. If Mr. Browne claims an episode of this kind as a controversial victory he is welcome to it. What some independent judges, whose competence and impartiality nobody will doubt, thought of his peculiar use of literature, when the evidence had been as fully laid before them[1] as I had intended doing at the meeting of the Pathological Society, may be found in the editorial comments, which followed Dr. David Newman's and my own subsequent protests against Mr. Browne's methods of quotation, in the *Glasgow Medical Journal*, July, 1894, *Lancet*, July 14th, 1894, and *New York Medical Journal*, September 1st, 1894. They form curious and instructive reading.

In the next paragraph Mr. Browne finds fault with me, because in a lecture addressed to British students I have taken out of three illustrations one from a provincial town in Germany, one from the chief city of the United States, and one only from this country. How curious! I should have thought that the very fact that I had chosen my illustrations from different nationalities would please most readers, as showing the lecturer's desire to be perfectly fair, and as proving that his protest *primo loco* was directed against tendencies he considered detrimental, not against individuals. But there is no pleasing Mr. Browne.

The bulk of his letter, dealing with "lingual varix," is such a gem that I would not touch it for anything, hard though it be to sit still under the accusation of being "illogical." But the spectacle of Mr. Browne laboriously explaining away his own previous statements, and resenting that the once dearly beloved should ever be mentioned again, whilst not new to the connoisseur, is too lovely to be spoiled by any outside criticism.

Mr. Browne, in conclusion of his letter, leaves it "with confidence" to your readers to decide whether the various epithets I employed and the charges I made when replying to his first letter more (or as he says: most) fitly apply to him or to myself. I heartily concur.

And now, Sir, having twice answered objections of an essentially personal nature, may I venture to express a hope, that further contributions to this discussion, may apply more to the questions of principle I raised than to the purely personal aspect, which deplorably enough, cannot be altogether separated from them?—I am, etc.,

Wimpole Street, W., Dec. 8th. Felix Semon.

Sir,—The profession owe a deep debt of gratitude to Sir Felix Semon for his outspoken, courageous, and unsparing criticism of what he has mildly called the "excessive zeal for operation." His words are wise and opportune, for I believe that the profession are by no means indifferent to this grave question.

As a physician, my attitude towards the surgeon is necessarily critical, and if I find that one specialist is an advocate for the removal of the turbinated bones in almost all cases of nasal or bronchial troubles that come within his review, while another will remove a uvula or adenoid vegetations in every case, however insignificant the symptoms may be, I do not impugn his honesty, but I profoundly distrust his judgment, because I regard it as warped by this mental concentration on one idea. At the same time the operator, when dealing with a private patient, lays himself open to the imputation of dishonesty; and though this may be entirely unjustifiable, he has only himself to blame for the impression created.

I am deeply conscious that Sir Felix Semon's remarks are fully justified by the existing state of affairs. I venture to think that the views which he has so trenchantly expressed will meet with the general approval of the medical profession.—I am, etc.,

Harley Street, W., Dec. 4th. S. H. Habershon.

Sir,—In his recent lectures Sir Felix Semon has expressed most lucidly and forcibly the views of many whose practice is specially directed to the upper air passages, and, I believe also, of the great bulk of general physicians and surgeons. While, on the one hand, he utters a timely and vigorous pro-

[1] See particularly the *New York Medical Journal* of June 2nd, 1894.

test against the too-prevalent craze for operation which tends to bring contempt on medical practitioners as a body, he as warmly insists on the value and necessity of radical local treatment in its proper place.

No one intimately acquainted with current laryngo-rhinological practice can doubt for a moment that the unstaunched enthusiasm of some specialists has misled them into ridiculous treatment for many trivial and even purely hypothetical complaints, and those who are really anxious to see the speciality maintain its position as a scientific branch of medical practice will be glad that one holding the authoritative position of Sir Felix has spoken out so definitely on this question.

To take one class of case as an example: In my position as medical officer to a large public school I have known boys who have been operated on for adenoids within a few days or weeks of my seeing and examining them very carefully, and in whom not a symptom or sign of adenoids existed. Some of them have been splendidly-developed specimens of English boyhood; yet some persistent hoarseness at puberty, a recurrent tonsillitis, or other commonplace affection has alone sufficed some more distinguished practitioner as a basis for "diagnosis requiring immediate operation," and usually "quite a large mass was removed."

But I must admit that while I have received blame for having omitted to recognise the existence of these "large masses," I have also found parents supported by their medical advisers in refusing to have real sufferers from adenoids operated on. For the former class "breathing exercises" would prove at least as valuable as operation, and doubtless would result in many "successes"; for the latter one can still hope that radical treatment will be allowed to bring about that rapid growth and development which alone and invariably follows thorough operation in suitable subjects.

Without entering further into these questions, I desire to associate myself with all Sir Felix Semon's remarks on the unduly exaggerated importance attributed by some of our *confrères* to the slighter forms of nasal stenosis, from fulness of the lower turbinated bodies, septal deflections, or spurs, etc., and to lingual varix and so forth.

Of course, one does not expect Mr. Lennox Browne to agree with the spirit and the purport of Sir Felix Semon's lectures. But why when Sir Felix refers to and quotes written statements of certain specialists, amongst them one hailing from New York, does Mr. Lennox Browne complain that Sir Felix is personally ignorant of the clinical teaching and practice of that city, as though Bosworth's book (which Mr. Lennox Browne states is universally considered as a classic) afforded no sufficient indication of the actual practices of the writer? Does Mr. Lennox Browne, after all, wish us rather to take "what the policeman says" (*sic*) as more correct evidence of his or other's actual practice? Surely, too, it is a lame retort that Sir Felix has gone "very far back into the past, since his charges against Dr. Y. (Ziem), and against Dr. Z. (Lennox Browne) refer to something published six years ago," while that against Dr. X. (Bosworth) is taken from a work published in 1889. Does Mr. Lennox Browne mean to imply that the practices Sir Felix deprecates are things of the past? For if so their ephemeral existence only proves that Sir Felix is right in condemning them as unnecessary operations. On the other hand, if these practices are continued with equal enthusiasm through all these years, it is high time outspoken criticism should be at least as widely and fearlessly expressed as the advocacy of those who are mainly responsible for them.—I am, etc.,

Clifton, Dec. 1st. P. WATSON WILLIAMS.

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SIR,—It appears to me that Sir Felix Semon has, in his lectures, so amply vindicated his position from the point of view of the laryngologist and rhinologist, that little remains to be said.

Perhaps, however, you will allow me space to make a few remarks from the etiological side of the question. In his letter,[1] Sir Felix Semon has done me the honour of quoting from the first edition of my work on *Diseases of the Throat, Nose, and Ear*, in which, ten years ago, I entered a strong protest against what appeared to me to be the abuses of operative rhinology. The passages have reappeared in subsequent editions, and I have not hesitated elsewhere to reassert my associations on this matter.

It has, however, always been difficult to bring matters to a point. There are a considerable number of neurotic individuals in the world who seem to be so impressionable that they are ready to expect benefit from any form of treatment—if only the details of it be sufficient to furnish material for a dramatic recital to friends and relatives, and the remedy be administered with a proper degree of assurance. Where subjective symptoms only are in question, those who—as many of us think—are too much given to operating on the throat, and more particularly the nose, can therefore always refer to cases of this nature to justify their position. So can the faith healer, the Christian Scientist, and others of the same class. In the treatment of ear diseases, however, objective tests can be applied. It is true that sufferers from deafness are often sanguine and frequently unduly hopeful. Thus some of them are found ready enough to believe themselves benefited even where the various tests applied indicate the deafness to be *in statu quo*, but errors so arising can readily be checked by careful examination.

From my position as a worker alike in the fields of laryngology and otology I am privileged to look upon the nose from both aspects. On the one hand I frequently see complete nasal obstruction unassociated with deafness, and indeed very rarely meet with marked impairment of hearing in such instances. On the other hand, I do not often find gross lesions of the nose (for example, such as to justify operation) in those who suffer from advanced middle-ear catarrh and so-called sclerosis. I believe therefore that the importance of supposed deviations from the normal in the nasal passages is enormously exaggerated. Observe, I refer here to the nasal passages and not to the naso-pharynx, where I believe that under certain circumstances a small amount of adenoid tissue, if wedged between the Eustachian orifices, may give rise to very considerable trouble in the form of Eustachian obstruction and recurrent acute otitis media.

Now, holding such views, and having had the above experience, I am more than amazed at the number of patients suffering from advanced chronic non-suppurative middle-ear disease in whom it has been found necessary to operate in one way or another upon the nasal passages. I am still more astonished and very incredulous when I hear of middle-ear sclerosis being benefited by such treatment.

I have a very strong impression that there are a number of enthusiastic rhinologists who have a most elementary knowledge as to the diagnosis and prognosis of ear disease. Thus, when I read of cured sclerosis of the middle ear, I am inclined to assume the good faith of the writer, and that he has therefore made a mistake in diagnosis.

It is perfectly well known to aurists that there are two types of chronic progressive middle-ear deafness with imperforate tympanic membrane. In the first—known as chronic middle-ear catarrh—there is indrawing or thickening of the membrane, the Eustachian tube is frequently obstructed, and the patient may find that he hears worse when he gets a cold. In such cases it is possible that, given a definite obstructive lesion in the nasal passages, good may result from its removal; but the prognosis must be founded on data to which I shall refer presently.

To avoid misunderstanding I will at once say that in cases like the above I consider operative treatment—provided it be undertaken to remove an obvious obstruction—perfectly legitimate if no exaggerated expectations as to results be aroused. In the second type the drum membranes are normal, or they may be characterised by very sharp definition of the manubrium, while occasionally they show a delicate flamingo hue. The Eustachian tubes are often freely open, while the deafness and tinnitus may be aggravated by fatigue, shock, loss of blood, etc. This is the typical sclerosis, which depends upon changes in the region of the stapes—perhaps also of the labyrinthine capsule—and which is, I believe, incurable by local treatment. Moreover, in such cases it is sometimes very questionable whether, even if obvious nasal anomalies exist, it is desirable to operate, for the patients are liable to be made temporarily and even permanently worse by shock or loss of blood

I have thus merely sketched some salient features of the

[1] BRITISH MEDICAL JOURNAL, November 23rd, 1901.

two forms of ear disease, in connection with which I believe nasal treatment most frequently arises. Any reader who knows anything of modern otology can fill in the missing details.

The prognosis, and to a considerable extent the diagnosis in both instances depend largely upon the following question: What is the result of opening the Eustachian tubes upon the hearing distance? Here again I repeat a truism familiar to everyone who knows anything of the matter. We have had records of cures in middle-ear sclerosis, we have heard generalisations as to the benefits of nasal surgery in obstinate ear cases, but we have rarely, if ever, had details. For these I therefore venture to ask with a mind perfectly open to conviction. I would accordingly propose that some of the many who seem to put their trust in attacking the nasal passages for relief of deafness, should give information on the following points with regard to their cases:

1. The appearances of the tympanic membrane.
2. The hearing distance as observed at first visit.
3. The effect upon hearing distance produced by successful inflation, either by means of Politzer's bag alone or by way of the Eustachian catheter.
4. The duration of any improvement so produced.
5. If such improvement is produced of course inflation ought to be continued until no further benefit results. Has, under these circumstances, additional improvement followed a nasal operation?
6. Of course it is presumed that the hearing for bone conduction and for high notes has been tested—with what result?
7. What was the nature of the nasal operation?

I must apologise for taking up so much of your space, but answers to the above queries would tend to convert those who are now sceptics or to place them in a stronger position. If no such answers are forthcoming, then I fear that we must conclude that a vast amount of nasal operating has been done with no result, and we may consider, without injustice, that those who are its advocates for the cure of otherwise incurable ear disease have no case. *Fiat justitia ruat cœlum!*—I am, etc.,

Edinburgh, Nov. 25th. P. McBride.

Sir,—In my opinion those who have the real interests of laryngology, rhinology and otology at heart should welcome the candid and straightforward statements which have recently been made by Sir Felix Semon, and which have appeared *in extenso* in your columns. That the time was ripe for some such authorative statement cannot be denied. The swing of the rhinological pendulum has been so great during the past few years that there is reason to fear an unreasonable reaction, and that what are admittedly beneficial operative procedures may be relegated to the same nameless abyss as those which have been shewn by many competent observers to be valueless.

It appears to me that now-a-days much rhinological surgery is undertaken without any definite and clear idea of the *raison d'être*. Because a patient has a slightly deviated septum or a slight spur upon his septum is it reasonable to suppose that by straightening the former or removing the latter the inspiratory pathway will be so improved as to promote the general health, to rid him of some "reflex neurosis" or to cure some existing deafness of which he complains? Seeing as I do every year a considerable number of patients suffering from one or other morbid condition of the upper respiratory tract I am constantly noting the presence of slight abnormalities within the nasal passages, abnormalities, however, which in my judgment at any rate have no practical pathological import. The idea forcibly expressed in some quarters and as forcibly acted upon that the relief of nasal obstruction is the panacea for chronic deafness is an assertion as unwarranted as it is mischievous. In that condition usually termed sclerosis of the middle ear, especially when the Eustachian tubes are patent, no amount of intranasal treatment will cure the disease; nay rather, in my opinion, it accelerates it—the loss of blood, the shock to the system and the disappointment at the result having an undoubtedly baneful influence upon the pathological process present.

In dry hypertrophic catarrh, with thickening and retraction of the membrane, etc., the matter stands quite differently. Within certain limits, intranasal treatment is of undoubted value in such cases. How often do we not find the nasal passages blocked with polypi, and no existing ear lesion present, and, on the other hand, how many cases of middle-ear sclerosis do we not come across with normal and patent nasal passages?

Whilst it is admittedly difficult to define just what a normal nose should be, a more mature and more temperate judgment will, I think, save many from regarding every slight deviation from the so called normal as necessitating energetic intranasal surgical interference.

Lesions in the naso-pharynx, whether obstructive to respiration or not, fall under a totally different category. Naso-pharyngeal adenoids may be present in considerable abundance, but from their position may cause no ear symptoms at all. On the other hand, small tufts, if situated about the fossæ of Rosenmüller and around the Eustachian tubes, whilst producing no nasal obstruction, may yet be responsible for the existence of progressive pathological changes within the middle ears, and demand operative treatment without delay. That genuine adenoid hyperplasia will disappear even when "breathing exercises" are systematically and carefully carried out has not been my experience, but that much valuable time has been lost during the continuance of such exercises, and pathological changes thereby allowed to progress within the middle ears for want of timely operation has been noted by me upon many occasions.

Unfortunately the fact that advanced cases of dry middle-ear catarrh have up to the present baffled the resources of the most experienced aurists should not be allowed to be the peg upon which to hang the cloak of intranasal surgical experimentation. Careful study, temperate reasoning, and a due appreciation of what is cause and what effect are required of all who wish to practise these specialities scientifically and logically.

Hence, Sir, I welcome Sir Felix Semon's lectures in the spirit in which I am sure they were given, namely, with the desire that the large and rising school of rhinologists should pause and "look before they leap," that they should take a comprehensive grasp of the case before them, and not be led to magnify every deviation from the normal in the upper respiratory tract as necessarily the *fons et origo* of the malady they fain would cure.—I am, etc.,

Manchester, Dec. 9th. W. Milligan.

## THE MODERN TREATMENT OF CHRONIC MIDDLE-EAR DISEASE.

Sir,—As a professed otologist, Dr. Edward Law should know a little more of the literature. He should know that chronic drip catarrh of the middle ear does not exist as a pathological fact. The condition indicated by this title has nothing in common with the catarrhal process as found in the lungs and other mucous membranes. It is quite unwarrantable to assume that the catarrhal process as found in the nose and post-nasal space spreads to and invades the tympanum in these cases. There is absolutely not one particle of evidence to support this assumption; in the vast majority of cases there is no pain at any time, no fluid, and never sudden loss of hearing. The loss of hearing is slow, gradual, and often to the patient imperceptible.

If he and others equally uninformed had really read my paper on this subject at the Cheltenham meeting of the British Medical Association, he would have learnt that this so-called chronic sclerosis of the middle-ear was a disease of early adult life, not of old age; that it was an affection peculiar to the damper portion of the temperate zone, where sudden changes of temperature were common; that one-half of the inhabitants of these regions have some involvement of the middle ear, and that a majority of these suffer from so-called sclerosis, with more or less deafness; that chronic sclerosis with deafness is distinctly related to and a sequence of chronic nasal and post nasal catarrh; that chronic nasal catarrh acts by mechanically obstructing the free supply of air to the tympanic cavity; that a lessened supply of air to the tympanic cavity must result in congestion of the lining of this cavity and depression of the drum head; that chronic congestion of the lining of the tympanic cavity with chronic depression of the drum head must result in the changes found in this form of chronic

middle-ear disease so inappropriately called chronic catarrh of the middle ear. He would have learnt also that the rational treatment of these cases is to cure the catarrh, restore the free patency of the Eustachian tube and the free supply of air to the tympanic cavity; that this treatment associated with subsequent daily movements and exercises of the drum head in a considerable percentage of cases results in a substantial and permanent improvement of hearing.—I am, etc.,

Harley Street, W., Dec. 4th. MAYO COLLIER.

## THE TREATMENT OF LARYNGEAL GROWTHS IN CHILDREN.

SIR,—In the BRITISH MEDICAL JOURNAL of November 15th Dr. Walker Downie takes exception to my method of dealing with his cases, in so far as I selected for quotation one which might be considered as favourable to my views regarding the operation of thyrotomy, and omitted others which had an opposite trend, and then he says "the case referred to was one of five children brought before the Society in whom intralaryngeal papillomata had been successfully removed by means of thyrotomy. In the other 4 cases one operation alone was called for, and the result in each case was most satisfactory and has been permanent."

In the first place I would like to point out to Dr. Downie the marked discrepancy which exists between this statement and his paper as published in the *Glasgow Medical Journal*.[1] I have this journal now before me, and in it I find a series of 8 carefully-reported cases, in tabular form, of Thyrotomy (Crico-Thyrotomy) with one death, for removal of Intralaryngeal Growths, etc.[2] I note that 3 (not 5) of these are children with laryngeal papillomata, and recurrence, with subsequent operation or operations, took place in each. These cases are Nos. II, VI, and VII on the list. The history of Case No. VII (that quoted by me) concludes with the note (after six thyrotomies and six tracheotomies had been performed): "On evening of April 9th (1896) while being bathed, he suddenly fell down, as if from cardiac weakness; lips white, not livid, and not preceded by dyspnœa. Foulis tube inserted, and child laid flat on nurse's knee. Subsequent examination showed recurrence of papillomata." Dr. Downie informs us, in his note to you, that a subsequent thyrotomy was performed, and that the child is now well, and attending school. That he should have been rescued from the jaws of death is very creditable to Dr. Downie, but all the same I do not think that his experience of this case is of that nature which renders frequent repetition desirable.

I have in the next place to advance my reasons for quoting this case, and omitting the others. Although the case is not quite so unique as Dr. Downie believes, it is sufficiently striking to serve as a warning to those who would thyrotomise young children. Then, again, Dr. Downie's eminence in his profession and his well-known surgical ability are sufficient guarantees that these recurrences were not due to lack of operative skill, but to a constitutional tendency—the "papillomatous dyscrasia" of the old French pathologists. On this theory alone can we explain why so many distinguished surgeons fail to prevent recurrences. The other 2 cases I did not quote, for they seemed to be ordinary cases of a recurrence, without any striking features. If, on the other hand, Dr. Downie's table had embraced one single case of thyrotomy for papillomata in children without recurrence, and without necessitating any further operation, I would have felt it my duty to refer to and quote it.

I am afraid Dr. Downie's views as to the value and efficacy of thyrotomy in these cases are not shared by the profession generally. In a recent and well-known work I find the following sentences on the subject:[3] "Thyrotomy must be entirely condemned. It is by no means free from danger, it may leave permanent impairment of the voice or stenosis of the larynx, and no patient should be exposed to such risks for a disease which can be far better treated by other methods." I am, etc.,

Edinburgh, Nov. 25th. G. HUNTER MACKENZIE.

[1] Vol. xlvi. p. 264.

[2] Paper read and cases shown at the Glasgow Medico-Chirurgical Society, April 17th, 1896.

[3] *Manual of Surgical Methods*, Cheyne and Burghard, Part v, p. 438. (The Intrinsic Diseases of the Nose, Ear, and Larynx, by H. Lambert Lack, M.D.).

## PUBLIC AND PRIVATE VACCINATION.

SIR,—The wisdom of the Local Government Board results in this:

In all ordinary cases of primary vaccination the public vaccinator must aim at producing four separate good-sized vesicles or groups of vesicles, not less than half an inch from one another. The total area of vesiculation resulting from the vaccination should not be less than half a square inch.

If this result did not coincide with the opinion which I have formed for myself from observation, I should not be behindhand in denouncing it, but, as a matter of fact, it does.

Dr. Barker introduces considerations connected with the country which have nothing to do with the point at issue. It is quite true that I do venture to live in a rural district, but my experience is drawn from a wide and varied area, and is not confined to country districts. I therefore, with the utmost respect for the superiority of the dweller in a large town, venture in the most delicate manner possible to mention that Dr. Barker has refrained from stating how many years had elapsed between the primary and secondary vaccinations in the cases to which he refers.

In persons revaccinated for the first time at an interval of more than 25 years, no doubt the second operation would result severely; but taking two persons say at the age of 18, one of whom showed four good primary scars, and the other, one, it is my experience that there would be a marked difference in favour of the former, so far as comfort to the patient is concerned.

The severely marked arms are not what I should call good specimens, and are probably the result of a poultice applied, or neglect of some kind. I heard to-day, that the arm of a telegraph boy, aged 14, which I had vaccinated and carefully dressed, was poulticed as soon as the boy returned home. That arm will not be one of my successes, and possibly should it ever come under the eye of Dr. Barker it will not please him. The point which I venture to believe of importance is the number of insertions, and not the extent of the area scarified. In the first place, with, say, four insertions there is a greater chance of not meeting with failures; very often there is a reaction, especially in persons already well protected, in two or three places, and at all events one or two good vesicles. In the second place, so far as I have been able to ascertain, the number of persons suffering from small-pox received into hospital with four good primary scars is very small as compared with those who have only one good or other indistinct scars.

Since writing my first letter on this subject, I have been informed that a practitioner has offered his services to the Board of Guardians of his district during the present crisis at a considerably less price than that which the Board is compelled by law to pay the public vaccinator. Now, I ask, is not this a suicidal policy for the medical profession to adopt? It is a policy largely outlined already in letters received by you, Sir; one which works out at this: "If I cannot get the work by any other means, for which another receives a fair fee, I will offer to do it for nothing, or at any rate at a considerably reduced price." Luckily there are no hospitals for vaccination, so the profession will have to make up its mind as to whether, as a body, it means to play fair or not.—I am, etc.,

Hatfield, Dec. 2nd. LOVELL DRAGE.

SIR,—As public vaccinator of a large urban district I have read with much interest the various letters that have appeared in the BRITISH MEDICAL JOURNAL recently on this and kindred subjects.

The one point on which most of the writers seem to be agreed is that the present state of affairs as regards vaccination is unsatisfactory.

I think it cannot be denied that taken all round, public vaccination is far more efficient than private (so-called) vaccination. I do not say this because I happen to be a public vaccinator. I have always held the same view, and for several years before I thought of holding the public appointment I never vaccinated a single case. The game was not worth the candle. Inadequate fees were usually offered, and insufficient protection desired. Surely the blame for this must be laid at the doors of the medical profession.

I have heard of one medical man who is said to vaccinate and give the certificate at the same time—inspection is a detail not worth troubling about. And yet it has been seriously proposed to make every practitioner a public vaccinator, and pay him from the public purse! With the better class of general practitioner I have much sympathy. His well-to-do, intelligent patients accept the offer we are in duty bound to make them, whereas, the lower class say "If we get it done at all, we shall pay a shilling and have it *properly* done."

I am happy to say the lymph issued by the Local Government Board now gives uniformly successful results both in primary vaccination and in revaccination. Of course all results are carefully and accurately recorded by the public vaccinators, and registers are available for reference at any time. The vague word "successful" sums up the information obtainable about most private cases.

Finally, with regard to the much-abused Public Vaccinators Association, I think it would be much better for all public vaccinators to join it and make it what it should be—a representative body—rather than to encourage still further the policy so dear to the profession in most matters—disunion.—I am, etc.,

Bristol, Dec. 2nd. W. N. Nevill, B.A., M.D.

## INERT LYMPH AND REVACCINATION.

Sir,—There have been communications more than enough lately published in the British Medical Journal to afford *primâ facie* evidence that (1) the conditions under which vaccination lymph is issued are highly unsatisfactory, and (2) a large proportion of the lymph which is on the market is more or less unreliable. Meanwhile the epidemic of small-pox is progressing, and in the opinion of the Metropolitan Asylums Board has still a long course to run.

Of writing letters there is no end and very little good, and it is time that more definite steps were taken to remedy the ill. It is possible that an influential deputation to the Local Government Board might have some effect, and perhaps it may not be too much to ask the Council of the British Medical Association as representative of medical opinion to be public-spirited enough to take the matter in hand. A committee might be formed to invite reports from public vaccinators and others, and afterwards, if necessary, to undertake, or invite the Local Government Board to undertake, an investigation as to the best method of preparation, the impurities, and standardisation of lymph, and the control of its issue by central or local authorities.—I am, etc.,

Wimbledon, Dec. 3rd. John A. Hayward.

Sir,—In spite of Professor Moore's reassuring letter in the British Medical Journal of November 30th, my preference for the lymph supplied to me by an independent establishment whose name I have but did not mention for obvious reasons, was, I think, fully justified by the superior results it yielded when compared with those following the use of the lymph sent from Aldershot.

Whatever the cause of the inefficiency of the latter, it was certainly inert when it reached my hands: whereas the lymph obtained from the independent source was active, as I clearly showed in the case of three children mentioned in my letter in the Journal of November 9th. So far from misleading the public, my letter corroborated Dr. Verdon-Roe's experience of the use of an inefficient lymph.

Professor Moore states that no complaints were made as to my failures; there I wish to make a correction. Not only were complaints made to the Vaccine Institute at Aldershot, but also to the Director-General, R.A.M.C., and to the Principal Medical Officer, Home District, on several occasions. Copies of these letters I now have with me. The only encouragement received by way of reply was to the effect that, as such good results had always been obtained from the Aldershot Vaccine Institute, I had either failed in my duties or was making a frivolous complaint! At the time I heard on good authority—the then acting P.M.O. Home District—that mine were not the only failures.

In addition to the causes of the inefficiency of vaccine lymph mentioned by Professor Moore, based presumably on his own observations, I would suggest two others—cleansing of the arm preparatory to vaccination with too powerful an antiseptic, and high dilution of the lymph with glycerine.—I am, etc.,

Clevedon, Dec. 6th. J. Graham Forbes, M.B., D.P.H.

## THE REPORT OF MR. BRODRICK'S COMMITTEE.

Sir,—It was with great pleasure that all well-wishers of the Royal Army Medical Corps read Surgeon-General Hamilton's letter in the British Medical Journal of November 23rd. Amongst all the anonymous criticism of the Army Medical reorganisation scheme that has appeared, this letter, with those of "An Officer of Long Indian Experience," published on October 12th, and of Dr. Edward Thompson, M.P., stands conspicuous as showing a sincere, impersonal, and discriminating zeal for the welfare of the service. With the other letters, written for the most part by officers on the active list, who naturally fear radical changes that may affect their whole future prospects, one has also the greatest sympathy; and it is in the hope of easing to some extent the minds of their writers that I venture, in an independent capacity, to take up a few of the points raised in the three letters which have more especially focussed the criticism of the scheme.

Surgeon-General Hamilton, admitting that "this new scheme has good and liberal points," lays chief stress on four features which he finds objectionable:

(*a*) "The keeping at home of all the junior officers till they complete four years service." This, as he justly remarks, would be fatal to the efficiency and credit of the scheme; but it is nowhere laid down, and, indeed, was not even contemplated. The Committee intended that lieutenants, on leaving Aldershot, should at once proceed to India, and should there, after three years service, undergo the first examination for promotion.

(*b*) "The right to retire on £1 a day after twenty years service is taken away." This would, indeed, be a grave injustice to officers of the corps, and would produce the direst results. But it was not intended by the Committee. The mistake arises from a chance difference in the wording of the conditions which have always existed, by which an unsatisfactory officer may thus be retired without drawing further attention to his defects. A major of my acquaintance in South Africa was thus retired after eighteen years service at an early period of the present war.

But it may be noted that, even in the letter, apart from the spirit, of the scheme, such a punishment is never to be inflicted on an officer unless he twice fails, after three months study-leave, to get a bare 40 per cent. of marks in a simple examination on administrative subjects, in which proficiency is as essential to the service as it must be natural to an R.A.M.C. officer with eighteen years experience; and even then only with the approval of the Advisory Board, by whom the case will be considered entirely on its merits, and on the further recommendation of the Director-General and the Secretary of State for War. These are so many courts of appeal which will surely protect an officer from unjust treatment. Compulsory retirement at this stage will be, as hitherto, an active rather than a passive process.

(*c*) "Examinations have their value: but they are not everything that should be considered." Quite so. Examinations test only the candidate's knowledge, the only thing that he can by his own initiative improve. It is hoped in this scheme to secure a real "practical and clinical" standard of examination to test knowledge of the right kind. The examinations will enable men, who do their best to keep abreast of the times, to get some reward in return for their labours, as hitherto they have never had; and it will be agreed that no officer, who is unable after six months special preparation to get an all-round mark of 50 per cent., is worthy of his commission. On the other hand, as Surgeon-General Hamilton puts it, tact, temper, zeal, and a host of other virtues are of far greater importance. But as these cannot be tested by any exact comparative system, the scheme provides (1) for brevet promotion, and (2) for charge-pay in command of hospitals, appointment to which will be made by the Director-General, doubtless with regard to fitness apart from examination.

(*d*) "The inspection of military hospitals by the Advisory Board will be unwelcome and most unpopular." I venture to

contest both points. The Board is to inspect "as far as is practicable" and presumably will do most of its home inspections by a few short tours; it is not unlikely that it will depute proxies to inspect abroad from time to time. These inspections, it will be noticed, are of an advisory and scientific, not of a disciplinary character: for the Director-General is responsible for all discipline (Section 18). Officers in charge will be only too glad of an opportunity of pointing out their needs. The Inspecting Subcommittee will be the scientific eyes and ears of the Director-General. Well must Surgeon-General Hamilton be aware of the great gulf that has hitherto been fixed between 18, Victoria Street and the *personnel* of three-quarters of the corps.

(*e*) A further criticism—that the position of the Director-General is undermined—now falls to the ground with his new position as Lieutenant-General on the Army Board. By virtue of this position many minor points may secure attention as they arise; and by the help of the Advisory Board the corps will be in touch with the medical profession in general, and will have its weighty support.

I think these are the chief objections that have been raised to the scheme. It is admittedly only a framework on which the Advisory Board will start work. But the Royal Warrant will undoubtedly be based on the spirit rather than the letter of the scheme; it will take into consideration the points that have been raised in this discussion; it will pin down the Indian Government to their share of the bargain; and as the objections have been mostly in keeping with the spirit of the Committee—that of justice, progress, and reform—I feel confident that there is a good prospect in store for the R.A.M.C.—I am, etc.,

December 4th. FRANCIS E. FREMANTLE.

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SIR,—I think you have hit the nail on the head when you state that "the most important function of the Army Medical Service, not only in peace but in war, is the prevention of disease among troops." Your strictures *re* the constitution of the civilian part of the Advisory Board will, I am sure, be emphatically endorsed by the majority of civilian surgeons who have had the honour of serving their Queen (or King) and country in South Africa. The dominating idea which prevailed at the beginning of the Britain *v.* Boer war as regards the necessity of having a number of experts in abdominal surgery has been shown by experience to be based entirely upon theoretical grounds sound in civil life, and not upon the actual conditions which exist after engagements. In the vast majority of gunshot wounds that require laparotomy after a battle, the psychological moment for operating had passed before the arrival of the surgeon, and the safety of the patient was best considered by adopting a conservative course.

It is to be hoped that the Advisory Board will be augmented by men who have special knowledge and strong determined views regarding the prevention of disease among troops. I am one of those who believe that if Dr. Canney's ideas about the water supply of the army could be carried out, more lives would be saved than would be if the whole craft of laparotomists and dermatologists were to follow in the wake of an advancing army.

I may perhaps be allowed to relate the experience of the Welsh Hospital staff as regards enteric fever. The water for the use of the staff was boiled and filtered. The orderlies did not take the trouble to draw water from the filters for their own use, and five out of the seven we took up country with us were down with enteric within a month. Not one of the qualified staff, dressers, and sisters who eschewed unboiled water contracted enteric during the existence of the hospital. Seven of the nursing sisters stayed out in South Africa after the hospital was handed over to the authorities, and it is a significant fact that three of them afterwards contracted enteric fever. I am not in a position to state whether their drinking water was conscientiously boiled or not after we left. There is no doubt in my mind that if eminent sanitary medical officers were appointed with well-defined executive powers, an immense reduction in the mortality list would be the immediate result. Prevention "much more than the treatment of wounds or skin disease," is the most urgent problem in every campaign, but so far one cannot but feel that until the civilian element of the Advisory Board is radically altered their opinion with regard to this important matter will not command the confidence of the medical profession.—I am, etc.,

Cardiff, Nov. 27th. J. LYNN THOMAS, C.B., F.R.C.S.

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SIR,—As the accuracy of my statement placing the pay and "advantages" of a surgeon-general at home as high as £1,480 a year has been questioned, will you kindly permit me to give the following figures, as supplied to me from an official source:

| | £ | s. | d. |
|---|---|---|---|
| Daily pay ... ... ... ... | 2 | 15 | 0 |
| Lodging allowance ... ... | 0 | 11 | 0 |
| Stable ... ... ... ... | 0 | 1 | 9 |
| Servants... ... ... ... | 0 | 2 | 0 |
| Fuel and light ... ... ... | 0 | 2 | 3 |
| Forage ... ... ... ... | 0 | 4 | 3 |
| Total (daily) ... | £3 | 16 | 9 |

This multiplied by 365 equals £1,400 13s. 9d. Each surgeon-general is allowed two soldier grooms, to whom he pays about £1 a month each, or, say, £24 a year. Civilian grooms cost at least £1 1s. a week each, which amounts to 104 guineas, or £109 4s. a year; deducting the £24 paid to the soldier grooms leaves a net balance of £85 4s. to credit, which added to £1,400 13s. 9d. makes a total of £1,485 17s. 9d. per annum. The proposed pay of a surgeon-general is £1,500 a year, from the whole of which income tax has to be deducted, and this leaves the surgeon-generals £15 17s. 9d. a year to the bad; but as in the summer months there is a small reduction in the fuel and light allowance, I showed the loss to be about £10 a year for the new over the old rates.

As regards the rates of pay in India, the following table gives the new rates of home pay converted into rupees at 1s. 4d.:

| | Home. | India. |
|---|---|---|
| Lieutenant under 3 years ... | Rs.404 | Under 5 years ... Rs.330 |
| Captain over 3 years ... ... | ,, 474 | ,, 10 ,, ... ,, 450 |
| ,, ,, 7 ,, ... ... | ,, 500 | Over 10 ,, ... ,, 500 |
| ,, ,, 10 ,, ... ... | ,, 597 | ... ,, 500 |

by which it will be seen that lieutenants and captains will draw less pay in that country than at home. Majors and junior lieutenant-colonels are fairly well paid, but the 50 senior selected lieutenant-colonels (of whom 17 are on the Indian Establishment) will draw but Rs.1,150 against Rs.1,450, the pay of all infantry lieutenant-colonels.—I am, etc.

J. B. HAMILTON.
Cromwell Mansions, S.W., Dec. 4th. Surgeon-General R.P.

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## THE LONDON UNIVERSITY AND CONJOINT STUDENTS.

SIR,—I beg to suggest that now is a most favourable opportunity for the London University and the Royal Colleges to formulate some scheme for the institution of a pass degree in medicine for London students.

The situation is pressing. I submit that most future medical students will demand at least a pass degree as a reward for their labours. If this is not forthcoming they will not be induced to come to London.

Generation after generation of medical students have hoped that something would be done by way of relief. Long-deferred hope is at present in a dying condition and approaching the end, and will be buried in the near future: hence the falling off in the entries at the metropolitan schools.

As a result London will cease to be the great medical teaching centre, and the Royal Colleges will lose their position as a pass diploma-granting body within, say, the next 15 years.

The plea that London has great clinical advantages will no longer lure the student to London, as provincial universities, with well-equipped laboratories and able staffs of teachers, have been formed in populous manufacturing districts, which offer clinical material to satisfy the most enthusiastic teacher and student.—I am, etc.,

Wimpole St., W., Dec. 8th. FREDERICK W. COLLINGWOOD.

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SIR,—I am sure the great majority of London Conjoint men will thoroughly endorse the letter by "L.R.C.P." upon the question of a degree for London diplomates.

One cannot too strongly emphasise the fact that should the conditions of obtaining the M.D.Durh. for practitioners be withdrawn, our last chance will go with it if we except the

Brussels degree, which when obtained is unregistrable, and unfortunately does not confer the power to practise even in the country where granted, which still lessens its value.

I have no doubt that there will be a steady increase of students at the provincial schools of medicine year by year, whilst London, the finest teaching centre in the kingdom, must suffer by a diminution in numbers in consequence. Whenever consulted by intending students, I have always pointed out the disabilities and disadvantages in taking the conjoint examinations.

The reconstructed London University is still struggling with the difficulty how to deal with the London students. One looks in vain for light for "other tests" darkly hinted at in the statutes—whether other preliminary examinations may be accepted in lieu of the matriculation. No doubt the University is in the "melting pot," but all must agree that it is high time some light was thrown upon the question, "Where are the undergraduates?"

On referring to a late teacher of a London hospital school as to my position to the university, he informed me I was, as an old student of the school which is now a recognised college of the University, an undergraduate. Further, I was informed that although in his opinion an undergraduate, I should still have to pass the Matriculation, Preliminary Science, Intermediate and Final if I wished to proceed for the M.B.Lond.!

If the Birmingham University grant the concession to its old conjoint students the privilege of proceeding to its M.B. degree on passing a Final Examination, is it too much for us to expect similar treatment from the reconstructed London University?—I am, etc.,

December 2nd. F. C. L.

## THE MORTALITY IN THE CONCENTRATION CAMPS.

Sir,—An unsigned article in the *Times* of November 26th from "An Actuarial Correspondent," speaks of the statistics of mortality in the concentration camps as "valueless," and that "no true deduction can by any possibility be drawn" from them. There has no doubt been much incorrect writing upon both sides in this matter. But I think that your examination and analysis of these statistics, contained in the British Medical Journal for November 30th, as well as in previous issues, cannot be refuted in its main conclusions, which are fairly and temperately stated.

May I offer a few comments on the actuarial article in the *Times*? The writer bases the sweeping assertions quoted above upon two considerations: (1) The age-distribution of the population is not known; (2) the prevalence of epidemic diseases for short and temporary periods. As regards the first, the Blue Book returns give fuller particulars than he implies, and you can take out the mortality-rate for children under 12 years of age in each camp from quite reliable data; the number of deaths of children under that age, and the number living under the same age.

The suggestion that there may be a very large proportion of infants (under 1 year of age) is unlikely, for reasons contained near the close of the article, and it is indeed contradicted by the returns, which give separately the number of deaths of infants.

As to the second consideration, the only one of the instances of temporary high epidemic death-rates given by the writer in the *Times* which approaches the rates in these camps is that of the awful cholera epidemic of 1832 in St. Petersburg—surely a very condemnatory comparison. There the mortality was, he says, 25 to 30 per 1,000 for one month; in the sixteen Transvaal camps in August (Blue Book, p. 311) it was 1,477 deaths in 58,114, or 25 per 1,000. I do not say these are properly comparable—they are not—but I am taking his figures, given for the purpose of illustrating his point. The other epidemic rates he instances are far below this, none exceeding about 8 per 1,000 per month.

The quotation of mortality rates of infants (under 1 year) is entirely beside the mark. The death-rate of these is known to be very large. The writer repeats without disapproval the current fallacy that an annual death-rate would in a certain time wipe out a population, whereas, as I have already shown in the British Medical Journal, no death-rate short of the full integer can ever destroy a whole population, because it constantly operates on a diminished number of survivors.

The truth is that a very appalling mortality has prevailed. Allow me to quote from the Blue Book the following deaths of white children under 12 years of age during the month of August in two of the camps:

Volksrust.—199 deaths among 2,413 living, or 82 per 1,000 per month.
Pietersburg.—149 deaths among 1,334 living, or 111 per 1,000 per month.
Totals for the sixteen Transvaal camps, recorded at p. 311, 1,190 deaths out of 26,125 children living, or 45 per 1,000 per month.

The death-rate of children under 5 years of age in England and Wales may be taken as from 4 to 5 per 1,000 per month; that of all children under 12 would be less.

A private letter from one of the largest camps, dated October 15th, speaks of the Government Commission of ladies as going very thoroughly into everything, and likely to produce an exhaustive report. Great and self-denying efforts are being made to meet the needs. "England is maintaining these people, and doing it in a most marvellous way ..... yet no one can deny that the death-rate is enormous; but this is due to enforced life in the camps, herded together in a way to which they are unused."—I am, etc.,

Finsbury Square, E.C., Nov. 30th. R. Hingston Fox.

## WOUNDS IN WAR.

Sir,—In reference to Mr. Watson Cheyne's most interesting lecture published in the British Medical Journal of November 30th, it may be of interest to know that some of the senior officers of the R.A.M.C. realised the great use of antiseptic powders in treating wounds on the field of battle. In the 10th Brigade Bearer Company and Field Hospital a great point was made of this, and I believe also in the 11th Brigade Bearer Company and Field Hospital, and among the regimental medical officers belonging to these brigades. I myself invariably used boracic and iodoform powders for first aid to the wounded, and when on the trek carried a "pepperpot" of the same in my surgical haversack, with the best possible results. I may mention, too, that I never saw a wound heal by the first intention when the mackintosh in the older-fashioned first field dressing was used outside the gauze it contained.—I am, etc.,

G. L. K. Finlay, B.A., M.B., C.M.,
Edinburgh, Dec. 5th. Late 10th Brigade F. Hosp., Natal Field Force.

## AN ELECTRO-THERAPEUTICAL SOCIETY.

Sir,—Referring to the letter of Mr. Chisholm Williams in the British Medical Journal of December 7th suggesting the formation of a new Society, will you allow me to say that the Council of the Roentgen Society have for some time past been considering the advisability of enlarging its scope so as to include the investigation of other radiations than those immediately connected with its name? The President, in the address he delivered on November 7th last, expressed these views somewhat fully, and it has since been decided to carry them out, and the question of a possible modification in the name of the Society is also under consideration.

The object Mr. Williams desires to effect by forming a special Medical Society has not been lost sight of, but it is felt that the new therapeutic agents, such as high-frequency electric currents, Finsen light, etc., call for so much further investigation that it would not be wise, certainly at present, to exclude the valuable help of physicists who have leisure to undertake such inquiries, few medical men having the time at their disposal for original research.

This plan has worked very well in our Society in the matter of *x* rays, the result being that the medical profession has now in its hands better apparatus and fuller knowledge than would have been possible had there not been the co-operation of which I speak.—I am, etc.,

J. J. Vezey,
December 12th. Honorary Treasurer, Roentgen Society.

P.S.—Mr. Williams has unfortunately not been able to attend the last two or three Council meetings, or he would have known of the developments I have alluded to, and could have assisted with his valuable advice.

## THE LATE R. B. ANDERSON FUND.

Sir,—With reference to the affairs of the late Mr. R. B. Anderson, it may be within the recollection of your readers that in July last we made an appeal to the profession for subscriptions towards the support of his widow and their twin sons. This subscription now amounts to about £80, a very

inadequate sum; but the Committee feel that it is useless to keep the fund open much longer. It has, therefore, been decided to close it on January 8th, 1902, and to make an earnest appeal in the meanwhile for further donations. The amount realised will be at once sent out to the island of Tobago, to be used for the benefit of Mrs. Anderson and her two sons at the discretion of the Warden of that island.

We may add, in view of a rumour which has prevailed that the Civil Rights Defence Committee was dissolved in consequence of some misconduct on Mr. Anderson's part, that the only reason for the dissolution of that Committee was its failure to collect, in the time given for the purpose, the funds required for the contemplated appeal to the Privy Council.

Donations are to be marked "for the late R. B. Anderson Fund," and to be sent and made payable to the Manager, Union Bank of London, Chancery Lane, London. They will be duly acknowledged.—We are, etc.,

Stamford,
Chairman.
Timothy Holmes,
Honorary Treasurer.

December 9th.

## DOCTORS AND MIDWIVES.

Sir,—In reply to Dr. Thomas M. Watt, page 1506, permit me to say that the object in view could be attained by a neat card hung in the waiting room with the words "Midwives need not apply," or "No followers of midwives here."

I see that Dr. Humphreys is again to the fore maintaining consistently his old positions that I have previously pointed out: (1) in the promotion and protection of the interests of midwives: and (2) in asking questions rather than answering them.—I am, etc.,

Manchester, Nov. 23rd. G. H. Broadbent.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## THE UNDERMANNING OF THE ARMY MEDICAL SERVICE.

The following is the distribution of medical officers employed on the Active or Reserve Lists according to the *Army List* for December, 1901:

*Distribution in December Army List.*

| Ranks. | Home. | South Africa. | Other Foreign Stations. | Not Posted. | Total. | Remarks. Seconded. | Remarks. Reserve of Officers. |
|---|---|---|---|---|---|---|---|
| Surgeon-Generals ... | 5 | 1 | 3 | — | 9 | — | — |
| Colonels ... ... ... | 10 | 6 | 10 | 1 | 27 | 4 | — |
| Lieutenant-Colonels... | 60 | 60 | 88 | 2 | 210 | 5 | 24 |
| Majors ... ... ... | 43 | 129 | 117 | 2 | 291 | 3 | 4 |
| Captains ... ... ... | 30 | 82 | 111 | 4 | 227 | 9 | 4 |
| Lieutenants ... ... | 33 | 140 | 59 | 2 | 234 | 2 | — |
| Total... ... ... | 181 | 418 | 388 | 11 | 998 | 23 | 32 |

The total is exactly the same as last month, but there are slight changes in the distribution; there is 1 fewer at home, 4 fewer in South Africa, and 5 more at other foreign stations. Deducting the seconded and reserve, the total effective active list is 943.

There is still 1 surgeon-general short of the establishment. The number of retired pay officers employed remains practically unaltered.

## RE-EMPLOYED RETIRED MEDICAL OFFICERS.

Dr. Edward Thompson, M.P., sends us the following reply which he has received from Mr. Brodrick relative to the grievances complained of by retired army medical officers who have accepted half-pay appointments. Dr. Thompson adds: "I received several communications from these officers, which I tabulated and forwarded to the Secretary of State. I am afraid the reply will hardly be considered satisfactory."

War Office, London, S.W.
November 30th, 1901.

Sir,—With reference to your letter of the 31st ult., forwarding a statement respecting certain alleged grievances of re-employed retired medical officers in regard to their pay and leave, I am directed by the Secretary of State for War to acquaint you that he is not prepared to admit that those officers have any just cause for complaint.

The employment of retired medical officers in certain specified posts, such as headquarters of regimental districts, commenced in 1880. It was supposed that retired officers would be glad, in consideration of an addition of £150 a year to their pensions, to assume comparatively light duties at fixed posts where they could establish their homes and carry on a little private practice. Experience has shown that as regards the majority of the stations referred to candidates were readily forthcoming for service under the conditions above mentioned.

When, as in the statement forwarded by your letter, remonstrance is made against the inadequacy of the emolument the fact must be borne in mind that the acceptance of the duties and of the pay attaching to them is voluntary. There is no obligation to serve, and the best proof of this is that there are stations where retired medical officers will not serve at all.

Any comparison therefore between the pay of these volunteers and that of reserve officers called up for service, compelled to leave their homes, and liable to be moved about according to service exigencies, is entirely inappropriate.

It is probable that the duties of these fixed appointments have been somewhat increased owing to the drain on the Royal Army Medical Corps imposed by the war, for any full pay officers who could have rendered them assistance have been drafted out to South Africa, but the temporary strain does not, in Mr. Secretary Brodrick's opinion, call for a revision of the financial conditions attaching to the posts.

The argument that pensions, which are the recognition of previous service, should be entirely disregarded in assessing the emoluments for subsequent service is one which cannot be admitted.

As regards the claim put forward for fees for recruit examination upon the ground that recruiting officers receive extra remuneration beyond their pay as combatant officers, I am to point out that there is an essential distinction between the pay of combatant and medical officers. The pay of a medical officer is upon a scale which is intended to remunerate him for all duties falling within the range of his profession: that of the regimental officer is bare emolument for regimental duty, and when any special duty is superadded to it, "extra pay" is justly earned.

Further, in regard to the statement of the difficulties experienced by the re-employed retired pay officers in obtaining the leave which, equally with officers on full pay, is allowed them under the regulations, I am to state that no representations can be traced as having been received in this office, except in the case of some officers who have represented that they were not able to obtain leave at the exact date they desired it, but such cases are not of recent date.

The establishment of medical officers for each district has a margin to provide for officers being on leave, and the employment of civilian medical practitioners as substitutes at the public expense is admissible when the number of officers is below the establishment.

I have the honour to be, Sir,
Your obedient servant,
G. Fleetwood Wilson.

## DESPATCHES FROM SOUTH AFRICA.

The *London Gazette* of December 3rd contains a despatch from Lord Kitchener, dated Pretoria, October 8th, detailing the operations of the troops under his command during the month preceding the date of his report. After detailing the results obtained during the period under notice, Lord Kitchener concludes by bringing to notice the services deemed worthy of special mention, among these being the following:

"Royal Army Medical Corps.—Major T. G. Lavie and Civil Surgeon W. S. Kidd; wounded early in attack on Colonel Kekewich's camp at Moedwill on September 30th, but continued at their duties many hours."

Supplementary despatches are added from Colonel Kekewich, commanding at Moedwill; Lieutenant-Colonel Chapman, commanding at Itala; and Captain C. A. Rowley, commanding at Fort Prospect, during the attacks on those places. At the action at Fort Itala, Lieutenant Fielding, R.A.M.C., was released, and came into camp shortly after the column had evacuated their position. Lieutenant Fielding reported that "nothing could exceed the kindness and courtesy of General Chris. Botha to the wounded; it was only his presence and influence which restrained his burghers from robbing the wounded, and on several occasions he struck burghers for trying to do so."

## THE OPERATIONS IN CHINA.

The *London Gazette* of December 10th contains a list of honours and promotions for services rendered during the operations in China last year. Among them Lieutenant H. A. Williams, Indian Medical Service, is made a Companion of the Order of the Bath, and Major C. C. Manifold, M.B., of the Bengal Establishment, is promoted to be Lieutenant-Colonel. The honours granted bear date November 29th, 1900.

Miss A. M. Waterhouse and Miss M. J. Hislop receive the decoration of the Royal Red Cross.

## ROYAL NAVY MEDICAL SERVICE

Surgeon Robert Hill has been appointed to the *Pactolus*, November 27th; and Staff Surgeon Alfred H. L. Cox to the *Rainbow*, December 17th.

Staff-Surgeon Herbert Parke Shuttleworth died at Melbourne, Australia, on the 1st instant. He was appointed Surgeon August 20th, 1885, and Staff-Surgeon August 20th, 1897; he retired from the service October 23rd, 1900.

## ARMY MEDICAL SERVICE.

Surgeon-General A. F. Preston, who is temporarily acting as Director-General, is to resume the post of P.M.O. in Ireland, on being relieved at the War Office by Surgeon-General W. Taylor, C.B., who is returning from India to take up the post of Director-General. Surgeon-General Preston has been officiating as Director-General since June 3rd last.

Surgeon-Major-General A. M. Tippetts, retired pay, has been granted a Distinguished Service Reward of £100 a year. He entered the service as Assistant-Surgeon April 5th, 1854; attained the rank of Surgeon-Major-General December 27th, 1891; and retired April 5th, 1892. He was in the Eastern campaign in 1854-5 with the 7th Fusiliers, including the affair of Bulganac, the battles of Alma and Inkerman, and siege of Sebastopol (medal with three clasps, and Turkish medal). He was also in the Afghan war in 1878-80, including the expeditions into the Bazar and Hissarik Valleys (medal).

## ROYAL ARMY MEDICAL CORPS.

Surgeon-Lieutenant M. Taylor, M.B., Volunteer Medical Staff Corps, is granted the temporary rank of Lieutenant whilst serving in South Africa, December 4th.

Surgeon-General W. S. M. Price, Principal Medical Officer Bombay Command, has been directed to officiate as P.M.O. H.M.'s Forces in India. Colonel R. C. Eaton, P.M.O. Poona District, is appointed to officiate as P.M.O. Bombay.

Colonel W. F. Burnett, P.M.O. Meerut and Bundelkhund Districts, is appointed to officiate as P.M.O. Bengal.

Lieutenant-Colonel A. Keogh, M.D., C.B., who has served in South Africa, but is at present in the Home District, is to be Deputy-Director-General Army Medical Service from January 1st, *vice* Surgeon-General H. S. Muir, M.D., C.B.

Civil Surgeon F. F. M'Cabe reported as missing, Doornkop, November 28th, has resigned.

Lieutenant-Colonel F. A. Harris is placed on temporary half pay on account of ill-health, October 24th. He was appointed Surgeon February 5th, 1881; Surgeon-Major, February 5th, 1893; and Lieutenant-Colonel, February, 1901. He was in the Egyptian war of 1882, and has the medal and Khedive's star granted for the campaign; he was also in the South African war 1899-1900.

Captain J. E. Carter, M.B., also, is placed on temporary half pay for ill health, December 1st. He entered as Surgeon-Captain January 31st, 1891, and has been serving in South Africa since the latter part of 1899 up to last month; he was wounded during the operations of Paardeberg in February, 1900.

The undermentioned officers have been discharged to duty from hospital in South Africa: Captain C. O'C. Hodgens, Lieutenant J. G. Foster, Civil Surgeons A. Strange, G. H. Ward, A. C. McLean, H. Gould, J. C. Lavertine, A. Dickenson, A. Strange.

The following are on passage home: Major S. Butterworth, Captain J. Grech, Captain R. J. M. Mawhinny, Major B. M. Skinner, Civil Surgeons H. B. Bannerman, J. D. Doherty, Gilroy, Walker, A. Cameron, R. Corfe, R. Raycroft, R. V. Milnthorpe. E. R. Townshend, W. A. Summers, A. Rutherford, B. K. Goldsmith, C. F. Ackland, F. J. Haiha-way, W. Graham, D. S. Sutherland, C. M. Rolston, W. A. Densha, G. Phillips, and C. Y. Flewitt. Returning invalided: Major F. A. Saw, Lieutenant and Quartermaster W. N. Archibald.

## INDIAN MEDICAL SERVICE.

Lieutenant-Colonel E. Bovill, M.D., Bengal Establishment, is permitted to retire from the service from November 8th. He entered as Surgeon, October 1st, 1872, and became Brigade-Surgeon-Lieutenant-Colonel, August 10th, 1898. He was with the Duffla Expedition in 1874-5.

The retirement from the service of Lieutenant-Colonel W. A. Simmonds, Bengal Establishment, which has been already announced in the British Medical Journal, has received the approval of the King.

Lieutenant-Colonel F. D. C. Hawkins, Bengal Establishment, is transferred to the half-pay list, October 26th. He was appointed Surgeon, April 2nd, 1881, and Lieutenant-Colonel, April 2nd, 1901.

The retirement of Lieutenant-Colonel C. Adams, Madras Establishment, has effect from July 8th; and that of Major G. H. Fink, Bengal Establishment, from July 13th, and not as previously notified.

Major W. H. W. Elliot, and Captain G. H. Frost, Bengal Establishment, have left South Africa for Bombay.

Surgeon-Major David Robert Ross, M.D., Bombay Establishment, retired, died at Park Crescent, Brighton, on November 26th. He was a son of the late Major D. R. Ross, 68th Regiment, and grandson of the late D. R. Ross, Esq., M.P., of Ross-Trevor, co. Down, Ireland, and was appointed Assistant-Surgeon, September 30th, 1876, becoming Surgeon-Major, September 30th, 1888. He retired from the service, December 25th, 1893.

## IMPERIAL YEOMANRY

Temporary-Captain G. H. Reynolds, Medical Officer unattached, relinquishes his commission, February 23rd.

Surgeon-Lieutenant H. W. Whyte, 3rd County of London (Sharpshooters), is seconded for service in South Africa with Imperial Yeomanry, November 13th.

## ROYAL MALTA ARTILLERY.

Surgeon-Major L. Manché, M.D., is placed on retired pay, November 25th. Dr. Manché's commission dated from February 27th, 1875: he was granted the relative rank of Lieutenant-Colonel, February 27th, 1895.

## THE VOLUNTEERS.

Surgeon-Captain E. Haworth, M.D., 3rd Lancashire Artillery, resigns his commission, November 23rd.

Surgeon-Lieutenant Colonel P. A. Young, M.D., 1st Midlothian Artillery, resigns his commission, retaining his rank and uniform, November 23rd.

Surgeon-Captain L. E. Shore, M.D., 4th (Cambridge University) Volunteer Battalion the Suffolk Regiment, resigns his commission, November 23rd; Mr. Henry B. Roderick, M.B., is appointed Surgeon-Lieutenant in the same corps, November 23rd.

Surgeon-Captain F. H. Westmacott, 2nd Volunteer Battalion Manchester Regiment, resigns his commission, and is appointed Captain, November 23rd.

Mr. James F. Findlay, M.B., is appointed Surgeon-Lieutenant in the 1st Volunteer Battalion Highland Light Infantry, November 23rd.

Surgeon-Lieutenant R. G. Dick, M.B., Highland Artillery, resigns his commission, November 30th.

Lieutenant T. M. J. Powell, M.B., 2nd Volunteer Battalion the Welsh Regiment, resigns his commission, and is appointed Surgeon-Lieutenant, November 30th.

Brigade-Surgeon-Lieutenant-Colonel H. M. Morgan, 2nd Volunteer Battalion North Staffordshire Regiment, retires under para. 111 Volunteer Regulations, retaining his rank and uniform, vacating at the same time his appointment as Senior Medical Officer to the Staffordshire Volunteer Infantry Brigade, November 30th.

Surgeon-Captain A. Nicol, M.D., 4th (Donside Highland) Volunteer Battalion the Gordon Highlanders, is promoted to be Surgeon-Major, November 30th.

Surgeon-Lieutenant J. Wilson, M.B., Forth Division Submarine Miners, Royal Engineers (Volunteers), is promoted to be Surgeon-Captain, December 7th.

Mr. Harold S. Ballantyne, M.B., is appointed Surgeon-Lieutenant in the 6th Volunteer Battalion the Royal Scots, December 7th.

Surgeon-Lieutenant Colonel S. Johnston, M.D., 2nd Volunteer Battalion West Yorkshire Regiment, resigns his commission, retaining his rank and uniform, December 7th.

Surgeon-Captain C. E. R. Bucknill, 2nd Volunteer Battalion the East Lancashire Regiment, resigns his commission, December 7th.

Surgeon-Major S. A. H. Moore, 2nd (South) Middlesex Rifles, resigns his commission, December 7th; he retains his rank and uniform.

## VOLUNTEER MEDICAL STAFF CORPS.

Mr. Herbert G. Parker is appointed Surgeon-Lieutenant in the Manchester Companies, December 7th.

## THE VOLUNTEER DECORATION.

The King has conferred the volunteer officers' decoration upon Surgeon-Lieutenant-Colonel E. J. Lloyd, M.D., of the 1st Cheshire and Carnarvonshire Volunteer Artillery, and upon Surgeon-Lieutenant-Colonel R. A. S. Daly, of the 7th Lancashire (the Manchester Artillery) Volunteer Artillery.

## VOLUNTEER MEDICAL STAFF CORPS RELIEF FUND.

This fund which was started at the beginning of last year in aid of the wives and children of men of the Royal Army Medical Corps on service in South Africa has now been closed, and a copy of the report and balance-sheet has been sent to each subscriber. The short report, signed by Surgeon-Lieutenant-Colonel Squire, the chairman, on behalf of the Committee, shows that the various companies of the Volunteer Medical Staff Corps have contributed £230 for the families of the men of their branch of the regular service, and with some private subscriptions the amount sent altogether by this fund to the Royal Army Medical Corps Depôt Mobilisation Fund has exceeded £300. The Hon. Secretary of the fund, Surgeon-Major V. Matthews, is to be congratulated on a success to which his efforts have largely contributed.

## UNIFORM.

S.M.O.—Volunteer Regulations (paragraph 915) state that brigade-surgeon-lieutenant-colonels to volunteer infantry brigades may wear in full dress and in mess dress either their regimental uniform or the departmental dress of officers holding similar appointments in the regular army (silver being substituted for gold). In other orders of dress they will wear the uniform laid down in the dress regulations for officers holding similar appointments in the regular army (silver being substituted for gold). "S.M.O." will see in the *Army List* that only surgeon-generals come under the heading Army Medical Staff, and all medical officers below that rank are classed under Royal Army Medical Corps (R.A.M.C.). The "gorget" does not appear in the dress regulations as an article of dress or accoutrement of the Army Medical Staff or R.A.M.C. If he pouch-belt and pouch is intended this is worn with the undress jacket unless the Sam Browne belt is worn.

## PRECEDENCE ON MIXED BOARDS.

A correspondent is informed that the regulations for precedence on mixed boards in India are to be found in the Indian Code, which we cannot refer to.

# MEDICO-LEGAL AND MEDICO-ETHICAL.

## FALSE CHARGE AGAINST A MEDICAL MAN.

In the *Birmingham News* and other local papers is an account of a case important to medical practitioners as illustrative of the dangers run in making a vaginal examination of a patient without a third person being present in the room. In many instances the patient herself objects to the presence of anyone; but to prevent the possibility of gross charges being preferred later it would be well for practitioners to refuse absolutely to make such examinations without a third witness.

The case reported was an action raised at the Solihull County Court by Mrs. Alice Spicer, of Hay Mill, near Birmingham, against Dr. Frederick Vincent Hall, also of Hay Mill, the action being for damages for an alleged assault. The prosecution was conducted by Mr. Dorsett, instructed by Mr. Philip Baker, and the defence by Mr. Colam, instructed on behalf of the Medical Defence Union by Mr. Hempson.

The allegation of the prosecution was to the effect that Dr. Vincent

Hall, in July of last year, knowing that the husband of Mrs. Spicer was away in hospital, called at the house of Mrs. Spicer, and, after some conversation in reference to there being no children by her marriage, forcibly and against her will, made an examination of her which caused her much distress. This statement by the counsel was supported by Mrs. Spicer in her evidence; but she admitted that she had not told her husband until later, although she alleged that she had told certain women in the district. The plaintiff could not fix the date of the alleged assault, but gave it approximately as being about thirteen months ago.

Dr. Vincent Hall gave evidence that he had called at a certain date upon the woman to inquire after her husband, whom he had sent into hospital, taking much interest in the case. The plaintiff had some conversation with him about her childless condition, and asked if it were possible for her to have children. The defendant stated that he could not tell without making an examination, which the plaintiff desired him to make. He demurred, stating that he could not do this without someone else being present; to which the plaintiff objected strongly. After some further conversation, he consented to make the usual examination at the plaintiff's desire.

Dr. Hall was cross-examined by Mr. Dorsett, and other witnesses were about to be tendered by the defence, when the jury stopped the case, and the judge gave a verdict for the defendant, with costs on the higher scale.

A great deal of interest was shown in the case, and a large number of medical men from Birmingham attended to support their colleague Dr. Hall, but the collapse of the prosecution prevented their evidence as to his high professional character and reputation being brought forward.

We congratulate Dr. Vincent Hall upon the successful issue of this action, and the Medical Defence Union upon the manner in which the case was conducted.

### THE SUPPLY OF ANTITOXIN BY DISTRICT COUNCILS.

C. W. C.—A district council is not compelled to supply antitoxin for the treatment of diphtheria. If it does supply antitoxin, as many councils do, it can make what conditions it thinks proper. We do not think that our correspondent could enforce any claim against the district council.

### ALLEGED CLUB CANVASSING.

LAMBDA.—1. It is a matter of evidence. The view which the Council is prepared to take is illustrated by the hearing of the case at Yarmouth, very fully reported in the BRITISH MEDICAL JOURNAL of December 7th, p. 1665. If our correspondent is a member of the Medical Defence Union or the London and Counties Medical Protection Society he might lay the facts before the Secretary. 2. We quite agree with our correspondent that the arrangements ought to be carried out by the local nursing association

# UNIVERSITIES AND COLLEGES.

### UNIVERSITY OF CAMBRIDGE.

*Appointments.*—Dr. Mansell Moullin and Mr E. Owen have been appointed additional Examiners in Surgery: Dr. Donald Hood an additional Examiner in Medicine; Mr. H. B. Roderick, Demonstrator of Surgery: and Mr. B. T. P. Barker, Walsingham Medallist.

*Degrees.*—At a congregation on December 5th the following degrees were conferred:—*M.D.:* J. Cropper, Trinity; H. W. P. Young, Caius; S. E. Denyer, C.M.G., Queens'. *M.B.:* A. T. Fraser, Caius. *M.B. and B.C.:* F. K. Weaver, Trinity; T. Gillespie and A. C. Ingram, St. John's.

### UNIVERSITY OF LONDON.

*Meeting of the Senate.*

A MEETING of the Senate was held on November 27th under the presidency of the Vice-Chancellor.

*Matriculation Examination.*

The Report of the Advisory Board on the Matriculation Examination was further considered, and after some discussion the matter was referred to the Academic and the External Councils for consideration and report to the Senate with power to confer.

*Recognition of Teachers.*

Dr. J. Probyn-Williams was recognised as a Teacher of Anæsthetics at the London Hospital Medical College; and Mrs. Florence Boyd as a Teacher of Gynæcology at the London School of Medicine; and Mr. G. B. M. White was provisionally recognised as a Teacher of Anatomy at University College.

*The Brown Institution.*

The Committee of the Brown Animal Sanatory Institution appointed annually consists of the following members: The Chancellor, the Vice-Chancellor, the Chairman of Convocation, Sir William Church, Dr Collins, Mr. Victor Horsley, Dr. Payne, Dr. Pye-Smith, Sir John Burdon-Sanderson, and Sir Samuel Wilks.

*Principal's Office.*

Mr. Percy M. Wallace, M.A., was appointed Secretary to the Senate: Mr. William R. Hill, B.A., House Secretary; and Mr. William H. Sampson, B.A., Superintendent of Examinations.

M.B. EXAMINATION (HONOURS).—The following candidates have satisfied the examiners:

*Medicine.*—First Class: A. E. Jones (Gold Medal), University College: H. C. Keates, Guy's Hospital; J. H. Sheldon, Owens College and Manchester Royal Infirmary; H. W. Sinclair, St. Thomas's Hospital; C. J. Thomas, B.Sc. (Scholarship and Gold Medal), St. Bartholomew's Hospital. Second Class: C. . Coombs, St. Mary's Hospital; M. Coplans, Guy's Hospital; R. Kelsall, Owens College and Manchester Royal Infirmary; A. E. Thomas, St. Bartholomew's Hospital. Third Class: E. G. Bark, Queen's and General Hospital, Birmingham, and Birmingham University; W. H. Bowen, Guy's Hospital; J. C. Briscoe, King's College; Ellen Mary Sharp, London (Royal Free Hospital) School of Medicine for Women; J. E. Stratton, University College; G. E. Waugh, Cambridge University and University College.

*Obstetric Medicine.*—First Class: A. E. Jones (Scholarship and Gold Medal), University College: J. H. Sheldon, Owens College and Manchester Royal Infirmary; C. J. Thomas, B.Sc. (Gold Medal), St. Bartholomew's Hospital: E. E. Young, St. Bartholomew's Hospital. Second Class: Olive Claydon, London (Royal Free Hospital) School of Medicine for Women: C. F. Coombs, St. Mary's Hospital; Ellen Mary Sharp, London (Royal Free Hospital) School of Medicine for Women: H. W. Sinclair, St. Thomas's Hospital; W. H. Wynn, B.Sc., University and Queen's and General Hospitals, Birmingham. Third Class: A. Edmunds, B.Sc., King's College: R. Kelsall, Owens College and Manchester Royal Infirmary; J. F. Northcott, Guy's Hospital.

*Forensic Medicine.*—First Class: Ellen Mary Sharp (Scholarship and Gold Medal), London (Royal Free Hospital) School of Medicine for Women; A. E. Thomas (Gold Medal), St. Bartholomew's Hospital. Second Class: R. E. Roberts, B.Sc., St. Thomas's Hospital; W. H. Wynn, B.Sc., University and Queen's and General Hospitals, Birmingham.

### UNIVERSITY OF EDINBURGH.

ANNUAL MEETING OF THE UNION.—The annual general meeting of the University Union was held in the hall of the Union on December 6th. The chair was taken by Professor Cossar Ewart, in the absence of Dr. Dupont, the President, and there was a very large attendance of members. On the motion of Sir William Turner, K.C.B., both the Secretary's and Treasurer's reports were adopted. The following office-bearers were elected for the forthcoming year:—*President:* Mr. H. H. Bullmore. *Honorary Secretary:* Mr. A. A. Hall, M.A. *Assistant Secretary:* Mr. D. Duncan Paton, M.A. *Members of Committee:* Messrs. Blacklock, Raubenheuner, Flett, Fletcher, Mitchell-Thomson, and Gush. *Auditor:* Mr. H. Hay Brown, C.A. The membership of the Union now amounts to 850, and its popularity increases annually. It is indeed reported that there is an increase in the present year of 80 members. It is interesting to note that, as has been the case all along, the medical faculty, whether because they are more socially inclined or not we do not know, provide an overwhelming majority of the total membership, even allowing for their numerical superiority. In spite of the praiseworthy efforts of the late committee to deal with the question, there is still much overcrowding, especially at the luncheon hour, and it would appear that nothing short of extension can remedy the evil. The debates have been continued this year, and have been attended on each occasion by a large number of students.

# HOSPITAL AND DISPENSARY MANAGEMENT.

### LONDON COUNTY LUNATIC ASYLUMS.

THE following notes are founded on the reports of the London County Lunatic Asylums for the year ending March 31st, 1901:

*Banstead.*—The average number of patients resident during the year was 2,428. The number admitted, 547, was the largest for ten years, except 1896, when some new wards were opened. Of these admissions, 141, or about 25 per cent., were discharged recovered, 22 were discharged not recovered, and 45 died, leaving rather more than half still resident. This low recovery-rate is accounted for by some of the patients transferred from other asylums being of a very incurable and violent character. Dr. Claye Shaw states that the causes of insanity seem to be chiefly drink, privation, worry, and general disease; few cases were attributable to influenza. Of the total number discharged, calculated upon the number admitted, the recovery-rate stands very high, giving a percentage of 47·3 per cent., but here, as Dr. Shaw also points out, the comparison between recovery-rates of different asylums is very misleading because so much depends upon the special circumstances under which patients are discharged. There were 247 deaths registered during the year, and the proportion of these from phthisis was 18·21 per cent., and from general paralysis 23·07 per cent. The number of *post-mortem* examinations held was 153. In every case admitted the permission of the friends is asked to allow a *post mortem*, but it is difficult to obtain, and Dr Claye Shaw regrets this not so much from a scientific point of view (because he is of the opinion there is quite enough for this in the number made), but because it is satisfactory to be able to correct diagnosis by the *post-mortem* appearances. The general health of the inmates and staff was good, but 5 nurses and 2 patients had scarlatina, which was prevalent in the neighbourhood. After twenty-four years service Dr. Claye Shaw has resigned his appointment. The Committee have granted him a pension of upwards of £800 a year, and in this report they "express the sincere hope that Dr. Shaw may have full enjoyment of this pension, which he has so thoroughly deserved."

*Cane Hill.*—The calling up of the Army Reserves, the Committee states, has affected this asylum more, perhaps, than any of the other London asylums, no fewer than 34 of the employees having been called to the colours, and grants—not exceeding half-pay and half-ration allowance—have been made in 28 cases to their wives or relatives dependent. The total number of patients under treatment was 2,642. There were 440 cases admitted, 227 discharged, and 100 died; the number discharged recovered was 149, giving a recovery-rate, calculated upon the number admitted, of 34·98 per cent. The death-rate of males was high, being 13·72 per cent., but 33 per cent. of these deaths were due to general paralysis of the insane. On the other hand, the death-rate among the females was only 4·73 per cent., being the lowest but one since the opening of the asylum. Fifteen females and 8 males died of phthisis. The general health was good, there being no epidemic or zymotic disease. There were four inquests held; in two the verdict was death from natural causes; another was asphyxiated by having an epileptic fit while he was chewing a piece of bacon rind, which was drawn into his trachea; in the fourth case, Dr. Moody states, a tumour for which the patient had been

under observation was found to be caused by a large mass of semi-masticated straw, weighing in the moist state 31 ounces, impacted in the stomach; the evidence proved that the patient had not had access to straw for a considerable time before death. The certificate of the St. John Ambulance Association was obtained by 18 attendants and 18 nurses, and classes were held for the examination for the certificate of the Medico-Psychological Association. The Committee grants £1 per annum to the holders of these certificates.

*(To be continued.)*

# PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

## HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,358 births and 4,202 deaths were registered during the week ending Saturday last, December 7th. The annual rate of mortality in these towns, which had been 21.3 and 20.3 per 1,000 in the two preceding weeks, declined again to 19.5 per 1,000 last week. The rates in the several towns ranged from 13.6 in Croydon, 14.0 in Portsmouth, 14.3 in Derby, and 15.3 in Bradford, to 23.0 in Manchester, 23.9 in Oldham, 28.6 in Blackburn, and 29.3 in Norwich. In the thirty-two large provincial towns the mean death-rate was 19.5 per 1,000, which was also the rate recorded in London. The zymotic death-rate in the thirty-three large towns averaged 1.9 per 1,000; in London this rate was equal to 1.5 per 1,000, while it averaged 2.1 in the thirty-two large provincial towns, among which the highest zymotic death-rates were 3.2 in Birmingham and in Manchester, 3.8 in Oldham, 4.5 in Halifax, 7.3 in Blackburn, and 7.9 in Norwich. Measles caused a death-rate of 1.0 in Sheffield, 1.6 in Manchester, 3.0 in Oldham, 3.5 in Halifax, 6.5 in Blackburn, and 7.0 in Norwich; scarlet fever of 1.2 in Birmingham; "fever" of 1.0 in Plymouth; and diarrhœal diseases of 1.1 in Swansea, in Nottingham, and in Burnley. In none of the thirty-three towns did the death-rate from whooping-cough reach 1.0 per 1,000. The 70 deaths from diphtheria in these towns included 36 in London, 5 in Liverpool, 4 in Sheffield, 3 in Bristol, and 3 in West Ham. Sixteen fatal cases of small-pox were recorded in London, but not one in any other of the thirty-three large towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals, which had been 368, 396, and 427 at the end of the three preceding weeks, had further risen to 474 on Saturday, December 7th; 170 new cases were admitted during the week against 113, 141, and 123 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 3,241, against 3,353, 3,336, and 3,278 on the three preceding Saturdays; 377 new cases were admitted during the week, against 376, 379, and 320 in the three preceding weeks.

## HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, December 7th, 830 births and 653 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.9, 21.3, and 22.2 per 1,000 in the three preceding weeks, declined again to 20.5 last week, but was 1.0 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14.2 in Perth and 14.4 in Paisley to 23.6 in Aberdeen and 24.8 in Leith. The zymotic death-rates in these towns averaged 2.3 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 318 deaths registered in Glasgow included 20 from measles, 4 from scarlet fever, 4 from diphtheria, 4 from whooping cough, 7 from "fever," and 8 from diarrhœa. Two fatal cases of scarlet fever and 4 of diarrhœa were recorded in Edinburgh; 2 of measles and 5 of diarrhœa in Dundee; 2 of diarrhœa in Aberdeen; 2 of "fever" in Paisley; 2 of diarrhœa in Leith; and 3 of scarlet fever in Greenock.

## MUNICIPAL SANITATION AT WOLVERHAMPTON.

At the recent Mayoral banquet, at Wolverhampton, Sir James Sawyer made some interesting remarks upon the subject of municipal sanitation. He referred to the many directions in which the town of Wolverhampton is well to the fore in municipal enterprise. As early as 20 years ago the Corporation set an example to the rest of the country by the demolition of an insanitary area in the middle of the town. The Corporation now possesses its own waterworks and its own tramways, and Sir James Sawyer dealt well with the public health advantages of the municipal control of tramways. He remarked, "They were looking forward to the time when they would find that it would pay to run trams at very cheap rates, and to take the working men away right into the fresh air. They wanted to make it possible that those who had to earn their bread in heated workshops should be able to live as far from these workshops as possible and yet be able to get to and from their work rapidly and at a very small expense, and that could only be done by municipalising the means of conveyance." On the subject of sewage disposal works he happily summarised the present modes of dealing with sewage as "to a large extent imperfect, and to a great extent they assisted in imperfectly disintegrating and disposing of the sewage, and especially in getting rid of it by passing it on to somebody else."

## REMOVAL OF INFECTIOUS PATIENT TO HOSPITAL.

X.X.X. asks: In the case of a child suffering from typhoid, has the urban council, acting on the advice of their medical officer of health, power to forcibly remove the patient to an infectious hospital several miles away, contrary to the wishes of the parents and advice of the medical attendant, who certified the case to be efficiently isolated and nursed at home?

*** A patient suffering from a dangerous infectious disease may not be compulsorily removed to hospital if there is "proper accommodation," that is to say if the patient can be housed in a manner which does not prejudice his chances of recovery, and if at the same time he does not expose others to the risk of infection. In any event the removal cannot be effected legally, if the parents object, without a magistrate's order.

## BRANDY FOR WORKHOUSE PATIENTS.

Total Abstainer.—We believe it is the usual plan for brandy to be kept in the charge of the master of the workhouse, and given out by him according to the doctor's orders. If our correspondent considers that any stimulant ordered by him for patients under his charge is not suitable for the purpose he should report such fact to the guardians in writing.

## EXAMINATION OF ALLEGED LUNATIC.

Unless L. W.'s agreement with the guardians was that the examination of alleged lunatics was one of the duties he agreed to do for his fixed salary, then the justice who directed him to examine the alleged lunatic may make an order upon the guardians of the Union in which the examination took place for payment to L. W. of "such reasonable remuneration... as the justice thinks proper." Non-certification makes no difference to this. The payment is for examination and opinion; in such a case medical practitioners should first see that they receive a "direction" from the justice to make the examination.

# MEDICAL NEWS.

At the meeting of the Pathological Society of London, on Tuesday, December 17th, at 8.30 P.M., Professor C. S. Sherrington, M.D., F.R.S., will give an address on Cortical Localisation with special reference to the Higher Apes.

According to *Nature*, Mr. Jonathan Hutchinson, F.R.S., is about to proceed to South Africa to study leprosy. He will go to Robben Island, and thence to Natal and Basutoland. His object is said to be especially to obtain facts as to the use of dried and badly-salted fish.

The Middlemore Post-graduate Lecture will be delivered at the Eye Hospital, Birmingham, on Thursday, December 19th, at 4.30, by Mr. Eales, Senior Honorary Surgeon to the institution, who has chosen for his subject Some Functional Disorders of Vision. It will be open to all members of the medical profession.

The inhabitants of Glanton and district (Northumberland) have erected by public subscription a handsome memorial stone in Bolton churchyard to the memory of the late William Robertson, M.D., of Glanton. Dr. Robertson, who died in May last at the ripe age of 80, practised for 54 years in the district. He took a great interest in the public affairs of the neighbourhood, and was honoured and esteemed professionally and socially by all who knew him, and his loss is much regretted.

Durham University Medical Graduates Association.—Under the auspices of the Southern Division of the Association the autumnal dinner was held at the Café Monico on Thursday, the 5th inst. Dr. Frederick S. Palmer, the President of the Association, was in the chair, and about sixty members and guests were present. Excellent music was provided by Messrs. Fred. Peachey, Aspinall, and F. Ross, which was by no means the least enjoyable feature in a most successful evening's entertainment.

The Medical Sickness and Accident Society.—The usual monthly meeting of the Committee of this Society was held on November 29th at 429, Strand, London, W.C., Dr. de Havilland Hall in the chair. The accounts presented showed that the sickness claims had been abnormally light during the summer months. During the current year the number of new entrants had been somewhat larger than in 1900. As usual, at the end of the year the number of current claims was rising. The number of members permanently disabled remains about the same, but there is reason to fear that one or more additions to this list must be expected next year. Prospectuses and all particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness, and Accident Society, 33, Chancery Lane, London, W.C.

The Life Assurance Medical Officers' Association.—The annual dinner of the Life Assurance Medical Officers' Association was held at the Grand Hotel, Trafalgar Square, on Wednesday, December 11th, The President, Dr. C. Theodore

Williams, was in the chair, and among the guests were the managers and actuaries of many of the principal life assurance societies. After the health of the King had been drunk, the President gave the toast of "The Guests." In the course of his speech he sketched the growth of life assurance, and expressed the pleasure with which the medical officers welcomed the managers and actuaries, with whom they worked in intimate and harmonious relations. He referred also to the valuable work done by the Institute of Actuaries, and the toast was acknowledged by Mr. Higham, President of that Institute. The health of the President was given by Sir Richard Douglas Powell and acknowledged by Dr. Theodore Williams. The proceedings were brought to a close by the toast of "The Life Assurance Medical Officers' Association," given by the President-elect, Dr. G. V. Poore.

Presentations.—At the Kent County Ophthalmic Hospital, Maidstone, on November 29th, Mr. M. A. Adams, F.R.C.S., was presented with his portrait in oils in recognition of his valuable service as surgeon to the hospital during a term of thirty-seven years. Mr. Charles Whitehead, J.P., Chairman of the Board of Management, in making the presentation, said that he could not speak too highly of the skill, devotion, and energy shown by Mr. Adams during his long period of office. Mr. Adams, in acknowledging the presentation, said that he had the keenest appreciation of the kindness of the subscribers, and described the changes which had taken place in the hospital during his recollection. The portrait is to be hung in the hospital.—At the Liverpool Medical Institution on November 28th, Dr. R. McCraith was presented with a double-barrelled gun of modern type on the occasion of his leaving Liverpool to take up an important Government appointment at Old Calabar. The presentation was made by Dr. Rentoul on behalf of a number of medical friends as a token of their high esteem and of their good wishes for his future.—Mr. J. J. Hopkins, L.R.C.P.I., L.R.C.S.I., J.P., who has recently been appointed medical officer to the No. 1 District of Castlebar, has been presented with an illuminated address by his friends at Leenane, where he had been medical officer for eight years. The presentation included a horse and trap with harness, together with an American roll-top desk and other personal gifts.

Harveian Society of London.—The annual dinner of the Harveian Society of London was held on Thursday, November 28th, in the Regent Saloon of the Café Monico. The chair was occupied by Dr. David B. Lees, President, and 77 members and guests sat down to dinner. Amongst those present were Sir Thomas Barlow, Sir Anderson Critchett, Mr. G. B. Howse, Dr. W. H. Allchin, Mr. Howard Marsh, Mr. Alfred Cooper, Mr. Watson Cheyne, Dr. Dundas Grant, Mr. G. P. Field, Mr. Edmund Owen, Mr. E. Noble Smith, and Mr. C. R. B. Keetley. The usual loyal toasts having been proposed by the President, Dr. Lees, Dr. W. H. Allchin, President of the Medical Society, proposed "Success to the Harveian Society," briefly sketching the career of the Society from its foundation in 1831, and pointing out the various causes which rendered it attractive. Dr. Lees responded for the Harveian Society. Mr. C. R. B. Keetley then proposed "The Sister Societies," and "Our Guests" in his usual humorous style, drawing a fancy picture of what the profession might become in a few years time should the members ever adopt trades-union principles in their work. Mr. Howard Marsh, President of the Clinical Society, responded for the Sister Societies, and Mr. H. G. Howse, President of the Royal College of Surgeons, responded for the Guests. "The President" was proposed by Mr. E. Noble Smith. Dr. Lees replied, and proposed "The Honorary Secretaries," to which toast the Senior Secretary, Mr. Hubert Phillips, replied. In the intervals between the speeches a selection of excellent music was rendered under the direction of Mr. Herbert Shartan.

Alcoholism and Disease.—The British Medical Temperance Association held a meeting for medical students on December 5th in the Governors' Hall of St. Thomas's Hospital (by kind permission of the Treasurer). Dr. H. G. Turney, Dean of the Medical School, who presided, said that he thought the medical profession rather lagged behind public opinion on this subject in this country. Abroad the reverse was the case. The alcoholic habit was responsible for an amount of disease and death which it was difficult to appreciate. The death certificates in this country did not adequately indicate its extent, but in Switzerland a system of State certification had revealed that during the last fifteen years 1 in 10 males and 1 in 50 females died from some disease connected with alcohol. In Prussia alone in 1895 over 10,000 people were being treated for the alcoholic habit. This was a problem, therefore, which it was the special duty of the medical profession to work out. Among those who took part in the discussion which followed were Dr. J. J. Ridge, Dr. C. R. Drysdale, Mr. F. Churchill, and some of the students.

Nobel Prize Awards.—The decision of the Alfred Nobel Peace Prize Committee was announced in the Norwegian Storthing on December 10th. The prize of 150,000 kronen for 1901 has been divided equally between M. Henri Dunant, to whose initiative is due the starting of the Red Cross movement, and M. Frederic Passy. The ceremony of distributing the four Nobel prizes, each of the value of 8,000 guineas, took place at Stockholm on the same evening. The prize for medicine was awarded to Dr. Emil Adolf Behring, of Halle; that for chemistry to Professor Jacobus Hendrikus van Hoff, of Berlin; that for physics to Professor Wilhelm Konrad Rontgen, of Munich; and that for literature to M. Sully-Prudhomme.

## MEDICAL VACANCIES.

**The following vacancies are announced:**

BETHLEM HOSPITAL.—Two Resident House-Physicians. Appointment for six months. Apartments, board and washing provided, and honorarium at the rate of £25 per quarter each. Applications, endorsed "House-Physician," to be sent to the Treasurer, Bridewell Hospital, New Bridge Street, E.C., before December 16th.

BIRKENHEAD: BOROUGH HOSPITAL.—Junior Male Resident House-Surgeon. Salary £80 per annum, with board and washing. Applications to the Chairman of the Weekly Board before December 19th.

BUXTON: DEVONSHIRE HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Furnished apartments, board, and lodging provided in each case. Applications to the Secretary by January 25th, 1902.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane Square, S.W.—Honorary Surgeon to the Western District of the Dispensary. Applications to the Secretary by December 31th.

DOWNPATRICK: DOWN DISTRICT LUNATIC ASYLUM.—Assistant Medical Officer, unmarried, and not exceeding 32 years of age. Salary, £150 per annum, increasing to £220, with furnished apartments, board, washing, and attendance. Applications to the Resident Medical Superintendent by December 17th.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Senior Assistant House-Surgeon. Appointment for six months. Salary at the rate of £80 per annum, with board lodging, and washing. Applications to the House-Surgeon by December 23rd.

GLASGOW ROYAL INFIRMARY.—Superintendent, must be registered medical practitioner, and not exceed 45 years of age. Salary, £500 per annum, with board, house, coals and light. Applications to the Secretary by January 15th, 1902.

GREAT NORTHERN CENTRAL HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £30 per annum, with board. Applications, on forms provided, to be sent to the Secretary by December 16th.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—(1) Resident House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £75 per annum. Board, residence, and laundry provided in each case. Applications to the Honorary Secretary.

LEWES: EAST SUSSEX COUNTY COUNCIL.—Medical Officer of Health. Salary, £300 per annum, with fees, etc. Applications to the Clerk of the County Council, County Hall, Lewes by December 19th.

LINCOLN COUNTY HOSPITAL.—Junior House-Surgeon. Appointment for six months, but eligible for re-election. Honorarium, £25 for each six months. Board, residence, and washing provided. Applications to the Secretary by December 19th.

LIVERPOOL DISPENSARIES.—Head Surgeon, not under 25 years of age. Salary, £200 per annum, with board and apartments. Applications to the Secretary, 56, Vauxhall Road, Liverpool, by December 19th.

LIVERPOOL: EYE AND EAR INFIRMARY.—House-Surgeon. Salary, £80 per annum, with residence and maintenance. Applications to the Honorary Secretary by December 28th.

MIDDLESEX HOSPITAL.—Assistant Physician, must be F. or M.R.C.P Lond. Applications to the Secretary-Superintendent by January 1st, 1902.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Locum Tenens as Assistant House-Surgeon for six weeks. Salary, 2½ guineas per week, with board, apartments, and washing. Applications to the Secretary.

NOTTS COUNTY LUNATIC ASYLUM, Sneinton.—Medical Superintendent, married, and over 30 years of age. Salary, £600 per annum, with unfurnished house, coal, light, washing, etc. Applications to the Clerk to the Committee of Visitors by December 18th.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and residence. Application to the Honorary Secretary by December 28th.

ROCHDALE INFIRMARY.—Resident Medical Officer, unmarried, and legally qualified. Salary, £100 per annum with board, residence, and washing. Applications to the Honorary Secretary, Mr. R. W. Shaw, Southfield, Rochdale, by December 18th.

SCHOOL BOARD FOR LONDON.—Medical Officer, must give his whole time. Salary, £800 per annum, rising to £1,000. Applications, on forms provided, to be marked outside "Application for the Post of Medical Officer," to be sent to the Clerk of the Board by January 1st, 1902.

SOUTHSEA: ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.—Assistant House Surgeon. Appointment for six months. Remuneration at the rate of £50 per annum, with board and residence. Applications to the Secretary by December 27th.

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon. Salary, £75 per annum, with board, residence, etc. Appointment for six months, but eligible for election for six months as Senior House Surgeon, at a salary of £100 per annum. Applications, marked "Junior House Surgeon," to be sent to the Secretary.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Second House-Surgeon, unmarried. Salary, £50 per annum, with board, residence, and laundry. Applications to the Honorary Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Physician; (2) Assistant Physician; (3) House-Physician; (4) House-Surgeon. Board and lodging provided for (3) and (4). the appointments for which are for six months. Applications to the Secretary-Superintendent by December 25th.

WESTMINSTER GENERAL DISPENSARY, 9 Gerrard Street, W.—(1) Resident Medical Officer; (2) Honorary Surgeon. Applications to the Secretary by December 28th.

WORCESTER COUNTY AND CITY ASYLUM.—Junior Assistant Medical Officer, unmarried, and not over 30 years of age. Salary, £120 per annum, rising to £150, with board, furnished apartments, and washing. Applications to the Medical Superintendent, Powick, Worcester, by December 17th.

## MEDICAL APPOINTMENTS.

BANNERMAN, Wm., M.B., C.M.Edin., appointed District Medical Officer of the Clitheroe Union.

BERESFORD, Edwyn H., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Superintendent of New Metropolitan Asylum, Tooting Bec.

BEVAN, Arthur, M.B.Lond., M.R.C.S., L.R.C.P.Lond., appointed House-Physician to the Hospital for Sick Children, Great Ormond Street.

COLLINS, E. Treacher, F.R.C.S., appointed Visiting Ophthalmic Surgeon to the Metropolitan Asylums Board Ophthalmic Isolation Schools at Brentwood and Swanley.

CUNNINGHAM, John, M.B., C.M.Glasg., appointed Certifying Factory Surgeon for the Stewarton District of Ayrshire

CUTHBERTSON, J. O., M.B., B.Ch.Oxon, appointed Senior House-Surgeon, Radcliffe Infirmary, Oxford.

DOBSON, Margaret B. Austin, M.B., appointed Assistant Medical Officer to the Bracebridge Asylum, near Lincoln.

FREETH, Harold, M.D.Dub., appointed House-Surgeon to the Grimsby and District Hospital.

GUNN, C. B., M.B.Edin., appointed Certifying Factory Surgeon for the Peebles District.

HARDENBERG, F. J. F., M.R.C.S.Eng., L.R.C.P.Lond., appointed Junior Resident Medical Officer to the North-West London Hospital.

HARDWICKE, G., M.R.C.S.Eng., appointed District Medical Officer of the Newmarket Union.

HENDERSON, Miss Jane Buchanan, M.D.Brux., L.R.C.P.&S.Edin., appointed Medical Officer to one of the Boer Concentration Camps in the Transvaal.

JOHNSTON, George A., M.B., Ch.B.Aberd., appointed Assistant Medical Officer at the Sunnyside Asylum, Montrose.

JOY, Norman H., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the Bradfield Union Workhouse.

M'GAVIN, Lawrie, F.R.C.S., appointed Clinical Assistant to the Throat Department of Guy's Hospital.

MEACHEN, G. Norman, M.B., B.S., M.R.C.P., appointed Honorary Physician to the St. Pancras and Northern Dispensary.

NYHAN, Denis, L.R.C.P., L.R.C.S.Edin., appointed Certifying Factory Surgeon for the Brynmawr District of Brecknockshire

PAKES, Walter C. C., D.P.H.Camb., F.C.S., appointed Analyst and Bacteriologist to the Transvaal Government.

PARSONS, J. A., M.D., appointed District Medical Officer of the Oakham Union.

PRITCHETT, G. W. Morris, M.R.C.S.Eng., L.R.C.P.Lond., appointed Senior Resident Medical Officer to the North-West London Hospital.

PURDON, J. A., L.R.C.S., L.R.C.P.Irel., appointed District Medical Officer of the Spalding Union.

SCHOLEFIELD, Harry, M.B., B.S.Vict., appointed Second Assistant Medical Officer to the Paddington Parish Infirmary.

SHANNON, W. J., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer of the Biggleswade Union.

SMARTT, Walter, F.R.C.S.I., L.R.C.P.I., L.M., appointed Medical Officer and Public Vaccinator for the Tarporley District of the Tarvin Union.

WALLACE, Stanley, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer of Health of the town of Skegness, Lincs.

MANCHESTER ROYAL INFIRMARY: The following appointments have been made:
House-Physician—W. P. Gowland, M.R.C.S., L.R.C.P.
House Surgeons—H. S. Lister, M.B., Ch.B.Vict.; P. H. Green, M.B., Ch.B.Vict.
Assistant Medical Officer—W. R. Matthews, M.B., C.M.Aberd.
Clinical Assistant at the Convalescent Hospital, Cheadle—M. B. Arnold, M.B., Ch.B.Vict.

## DIARY FOR NEXT WEEK.

### TUESDAY.

**Chelsea Clinical Society,** Jenner Institute of Preventive Medicine, Chelsea Gardens, Grosvenor Road, S.W., 8.30 P.M.—Mr. L. A. Bidwell: Cases of Empyema of the Gall Bladder.

### WEDNESDAY.

**Royal Microscopical Society,** 20, Hanover Square, W., 7.30 P.M.

**Royal Meteorological Society,** Institute of Civil Engineers, Great George Street, Westminster, S.W., 7.30 P.M.

**British Balneological and Climatological Society,** 20, Hanover Square, W., 8.45 P.M.—Dr. Clippingdale: On the Clay and Gravel Soils of London, and the Relative Advantages of Dwelling on Either.

### THURSDAY.

**Harveian Society of London,** Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 P.M.—Clinical Evening.—Cases: Mr. F. Jaffray: (1) Trephining for doubtful Cerebral Disease; (2) Diffuse Craniotabes. Dr. E. Cautley: Infantile Scurvy simulating Acute Epiphysitis.

### POST-GRADUATE COURSES and LECTURES.

Hospital for Consumption and Diseases of the Chest, Brompton, Wednesday, 4 P.M.—Lecture on Symptoms and Physical Signs of Pulmonary Excavation.

Hospital for Sick Children, Great Ormond Street, W.C., Thursday, 4 P.M.—Lecture on Cretinism and Allied Conditions.

Medical Graduates College and Polyclinic, 22, Chenies Street, W.C.—Demonstrations will be given at 4 P.M. as follows: Monday, skin; Tuesday, medical; Wednesday, surgical; Thursday, surgical; Friday, eye.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C.—Tuesday, 3.30 P.M. Lecture on Optic Neuritis.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTH.

COLEMAN.—On the 3rd inst., at Beaufort House, Castle Street, Reading, the wife of Maurice W. Coleman, M.B., of a son.

### DEATH.

FULSHAW.—On December 3rd, at Earl Shilton, Leicestershire, William Singleton Fulshaw, L.R.C.P. and L.R.C.S.Edin., aged 33.

## LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

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TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

### QUERIES.

M.D. desires to hear of an agency which introduces resident patients.

M. S. D. writes: A young woman tells me she dreams vividly of eating voraciously of dish after dish during her sleep. She sleeps heavily and wakes exhausted. She suffers much from headache and indigestion (alternating). She is constipated, and aperients add to her distress. The menses are too frequent. She has a high colour, moist red lips, and dilated pupils.

EXCRETION OF DRUGS WITH MILK.

F. R. asks for information as to what substances taken by a mother pass out in her milk to her suckling child—particularly if opium be one.

*** Opium certainly passes into the milk. As the recent epidemic of arsenical poisoning has emphasised, arsenic does so, also antimony, mercury, lead, zinc, bismuth, and iron. Iodine and potassium iodide do so, also quinine, strychnine, ammonia, chloroform, and chloral. Various aperient substances may pass in this way from mother to child, such as castor oil, senna, rhubarb, scammony, sulphur, neutral salts, and probably cascara. Both pleasant and unpleasant flavouring agents impart their taste to the milk, as anise and dill, the aromatic and volatile oils, garlic, copaiba, and turpentine.

WORKS ON BACTERIOLOGY.

J. B. (Blackburn) asks to have recommended a work on bacteriology, of convenient size, suitable for medical officers of health as well as for examination purposes.

*** The following books would probably prove suitable for his purpose. The earlier works on the list are perhaps more adapted for examination purposes, and the later more for medical officers of health, but any one of the first three, at any rate, is sufficient for both purposes: *Manual of Bacteriology*, by R. Muir, M.A., M.D., and J. Ritchie, M.A., M.D., second edition (Edinburgh and London: Young J. Pentland, 1899, 12s. 6d.), a review of which was published in the BRITISH MEDICAL JOURNAL, October 14th, 1899, page 1021; *Textbook of Bacteriology*, by E. M. Crookshank, M.B., fourth edition (London: H. K. Lewis, 1896, 21s.), review published November 7th, 1896, page 1388; *A Manual of Bacteriology*, by R. T. Hewlett, M.D., M.R.C.P., D.P.H. (London: J. and A. Churchill, 1898, 10s. 6d.), review published November 19th, 1898, page 1563; *Bacteria especially as they are Related to the Economy of Nature, to Industrial Processes, and to the Public Health*, by G. Newman, M.D., F.R.S.E., second edition (London: John Murray, 1900, 6s.), review published August 24th, 1901, page 478.

### ANSWERS.

COUNTY PALATINE.—A dentist is often pressed both by the patient and by the baffled medical practitioner to extract teeth on the bare possibility of their being the cause of an intractable neuralgia. The diagnosis of certain forms of dental disease, such as exostosis, or irregular calcification in the pulp, which may be a cause of neuralgia, is neither easy nor certain.

THALASSA.—Artists who have not yet made their name have great difficulty in finding their public. Their pictures are to be found at the smaller open exhibitions, sometimes at frame-makers, and sometimes at the smaller dealers, but there is real difficulty in seeing their work, and there seems room for some sort of co-operation amongst them for the display of pictures at moderate prices for sale.

ALCOHOLISM IN THE MEDICAL PROFESSION.

A MEMBER OF THE NORTH WALES BRANCH.—The statistics of mortality from alcoholism among medical men are based on such small numbers, both of deaths and also of lives exposed to risk, that they are quite unreliable. In a population of less than 19,000 registered medical men, only eleven deaths from alcohol were recorded in the three years

1890-92. Recognising this, Dr. Tatham has rightly abstained in the *Decennial Summary* from anything beyond the most general remarks on the mortality of medical men from alcoholism. All that he has stated is that, so far as the meagre facts at his disposal indicate, there is no reason to believe that medical men suffer more from this cause than do other members of the community. We trust that in preparing the forthcoming decennial report on occupational mortality, a larger basis of facts will be consulted before any definite statement is made on this subject, either in one direction or the other.

### TREATMENT OF RODENT ULCER BY THE *X* RAYS.

"OPTIC" writes to ask what kind of *x*-ray apparatus is necessary for treating a rodent ulcer extending nearly the whole length of the lower eyelid.

*** Dr. J. H. Sequeira, with others, has obtained good results in the treatment of rodent ulcer by the *x* rays (See BRITISH MEDICAL JOURNAL, February 9th, 1901, p. 332); he used for his cases a current of from 3 to 4 amperes, and a coil producing a 10-inch spark, and the tube was placed about 6 inches from the ulcer. The treatment lasted ten minutes and was repeated daily.

### GUNSHOT HEADACHE.

P. B. G., in reply to "Sportsman," writes that the following are all points that separately or in combination are the most effectual remedies for gunshot headache: (1) A heavy gun, that is, one with plenty of metal in the barrels: (2) nitro cartridges: (3) the least amount of shot that will give a good pattern at 25 yards; (4) introduce on a brush a drop of liq. atropin. sulph. on to the tympani. If "Sportsman" is gouty, he should see to that as a factor.

DR. J. INGLIS PARSONS (London) writes: The causes of gun headache may be classified as follows:

1. Concussion from (1) overcharge of powder: (2) from not getting the stock home to the shoulder; this often happens in snapping at rabbits crossing a ride: (3) from leaning back while shooting. The remedies for this are as follows: Use a powder without much recoil; I find "Normal" the best for this purpose. Get the gun well home to the shoulder before pulling, and lean well forward, with the weight on the left leg. Have an indiarubber end to the stock of the gun.

2. Certain states of the nervous system. After one attack of influenza, I had to give up shooting for one season on account of violent headache; but I also found that any jar would bring it on, such as playing a golf ball out of a bad bunker.

3. Congested liver. It is a common observation of shooters that when they feel liverish and are shooting badly, they also get some headache with it. A mild liver pill overnight, or some Condal water the morning of the day before shooting will put this right.

### LOCAL TREATMENT OF MALIGNANT GROWTHS.

WE have received several communications relating to the local treatment of the case of epithelioma of the lower lip referred to in the BRITISH MEDICAL JOURNAL of December 7th, on account of which "Psorospermiæ" invited suggestions:

MR. M. M. SHARPE, (Beaumont Street, W.) writes to recommend the treatment by high frequency currents. The process is slow but painless.

DR. F. HARRISON LOW (West Kensington), Honorary Secretary of the Roentgen Society, considers the case described thoroughly suitable for treatment by the *x* rays or "perhaps by high frequency currents." The admirable results hitherto obtained by himself and others have, he says, practically established the great value of the method, and there is little or no inconvenience to the patient.

DR. F. WYATT-SMITH (Woking) writes describing another favourable case from the use of formic aldehyde. "While revisiting the British Hospital, Buenos Aires, some months ago, a woman, aged about 80, applied for relief from a rodent ulcer which had thrown the ear, orbit, and mouth into one cavity, in the floor of which the carotid could be seen pulsating. I thought the case hopeless, but Dr. O'Conor at once admitted her to try what he was kind enough to remember as my treatment, described in the BRITISH MEDICAL JOURNAL of January 7th, 1900. His house-surgeon, Dr. Philps, took infinite pains in dressing the wound with formalin, as described in the above reference, and was rewarded by seeing the ulcer gradually cicatrise in the course of months. When I left Buenos Aires it looked in a fair way to cure. But Dr. Philps has since reported to me that the old lady tired of the process and returned up country of her own accord before the wound was completely healed."

## LETTERS, NOTES, ETC.

### A CORRECTION.

MR. L. VERNON CARGILL (Stratford Place, W.) writes: In the discussion on the Relation of Gonorrhœa to Disease of the Eye, alluded to in the BRITISH MEDICAL JOURNAL of November 2nd, my remarks on p. 1332 should read: "That in a large proportion of cases of rheumatic iritis, in men, there is a history of gonorrhœa previously to any arthritic or iritic affection. Most cases of iritis during gonorrhœa show the so-called 'lens like' exudation in the anterior chamber."

### DURHAM UNIVERSITY MEDICAL GRADUATES' DINNER.

DR. RONALD DANIEL (Ravenscourt Park, W.) writes: With a most courteous Chairman, Secretary, and council, distinguished guests, and an excellent dinner, the gathering of the Durham University graduates on December 5th was an undeniable success. One point for regret, however, seemed to me the sad lack in attendance of the younger members of the University, and it was a distinct disappointment to find oneself looking round in vain for a man of one's year. Surely an occasional social evening is within the reach of all graduates in and round London, an evening in which to renew old friendships, and once again converse on the somewhat less prosaic doings of our more youthful days.

**LETTERS, COMMUNICATIONS, ETC., have been received from**

A Dr. J. Adam, Hamilton; Messrs. Arnold and Sons, London: Dr. F. P. Atkinson, Bexhill-on-Sea; Mr. A. R. Anderson, Nottingham; Amicus. B Dr. J. B. Brierley, Manchester; Mr. G. H. Broadbent, Manchester; Messrs W. Blackwood and Sons, London; Dr. O. F. Ball, St. Louis, Mo.; Dr. A. W. Beaumont, London; Mr. S. Boake, Ilminster; Dr. F. Bushnell, Plymouth; Mr. W. Bredt, London; Mr. E. C. Barnes, London; Blunder; Blance; Mr. W. Buchanan, Chatham. C Dr. E. Cureton, Shrewsbury; C. M. B.; Mr F. W. Collingwood, London; Mr. L. V. Cargill, London; Mr. J. M. Carvell, London; Country Practitioner; Dr. C. Christy, London; Mr. S. D. Clements, Leeds; Dr. E. Cautley, London; Mr. A. Clark, London; Mr. W. H. Clarke, Macclesfield. D Mr. G. Drury, Newcastle-on-Tyne; Mr. J. J. Dunne, Stamford; Mr S. Daly, Manchester; Mr. C. De Haney, Middleburgh, S.A.; Mr. T. Davies-Sewell, London; Dr. A. Duke, Cheltenham; Dr. R. Daniel, London; Deluded; D.P.H. Cantab.; Dr T. Dutton, London; Mr. J. Davies, Bath. E W. McA. Eccles, M.B., London; Mr. W. S. Eccles, San Remo; Enquirer; Edinburgh; Rev. C. L. Engström, London; E. R. D.; Mr. H. Eales, Birmingham. F Mr. H. C. Fox, London; Mr. J. Fryer, Dewsbury; Mr. G. L. K. Finlay, London; J. G. Forbes, M.B., East Grinstead; Dr. T. Fisher, Chilton; Mr. W. T. Freeman, Reading; Dr. R. F. Fox, London; Fair Play; Mr. D. Fitzpatrick, London. G Dr. E. M. Goldie, South Woodford; Mr O. F. F. Grünbaum, London; Dr. A. Greene, Bury St. Edmunds; Dr. W. A. Gibo, Ipswich; General Electric Company, Manager of, London; Dr. J. G. Glover, London; Mr. T. B. Green, London. H Honesty; Dr T. Hall, Belfast; Dr. S. H. Habershon, London; Mr. E. Hampden-Cook, Sandbach; F. W. E. Hutchison, M.B., Netley; Dr. J. P. Henry, London; Mr. W. H. Hall, Tunbridge Wells; Messrs C. J. Hewlett and Son, London; A. Howie, M.B., Westbury; Dr. J. Hern, Nottingham; L. F. Hemmans, M.B., Newcastle-on-Tyne. I I.M.S.; Inquirer; Dr. A. Inglis, Mayhole. J Mr. T. R. Jessop, Leeds. K Mr. W. B. Kemp, Pinetown. L Long Service; L. K. J.; J. R. Logan, M.B., Liverpool; L. W.; Lambda; F. H. Low, M.B., London; Longissimus Dorsi; J. Laurie, M.B., Greenock; Mr. S. M. Laurence, Port of Spain; E. E. Laslett, M.B., Hull. M Dr. W. Milligan, Manchester; M.B.; Dr. T. H. Moorhead, Cootehill; Dr. K. Martyn, Bath; A. Murchison, M.B., Uig; G. N. Meachen, M.B., London; Mr. J. D. Marshall, London; D. Munro, M.B., Dee'fontein; P. McDougall, M.B., Manchester; Mr. W. J. Midelton, Bournemouth; Mr. W. S. Mercer, Wolverhampton; M.D., F.R.C.S.I., L.R.C.P.; Mr. J. MacMunn, London; Mr. W. Monmington, London; Mr. W. McCallin, London; M. S. D.; Medicus; M.D.; Meckel. N Dr. J. T. C. Nash, Southend-on-Sea; Nottingham Medico-Chirurgical Society, Secretary of, Nottingham. O Mr. D. Owen, Manchester; Obstetrical Society of London, Secretary of, London; One of Them. P Dr. J. I. Parsons, London; Mr. V. G. Plarr, London; F. M. Pope, M.B., Leicester; Mr. H. C. Philips, London; L. D. Parsons, M.B., Nassau; Mr. W. C. C. Pakes, London; Dr. W. H. Peake, Marden; Poor-Law Medical Officer. Q Querist. R Royal Fed Up; Dr. C. Ruata, Perugia; Dr. J. J. Ridge, Enfield; Mr. W. J. Robertson, London; J. Reid, M.B., Manchline; J. H. Ray, M.B., Manchester. S Dr. J. H. Swanton, London; Student Still; Dr. R. B. Selby, Port William; Mr. M. M. Sharpe, London: H. Smurthwaite, M.B., Leeds; Surgeon; A. M. Sheild, M.B., London; Dr. H. Snow, London; Dr. M. Sinnathamby, Colombo; Dr. R. H. Steen, Chichester; Dr. W. S. Syme, Gamlingay; Dr. W. M. Stevens, Cardiff; Dr. G. Sharp, Leeds; Dr. W. Sheen, Cardiff; E. G. Sworder, M.B., Folkestone; Dr. G. A. Stephens, Swansea. T Dr C. L. Tuckey, London; Dr E. Thompson, M.P., Omagh; Dr. E. F. Trevelyan, Leeds. V Mr. J. J. Vezey, London. W Mr. A. W. Wigmore, London; Mr. W. H. Waac, Molteno; F. Wyatt-Smith, M.B., Woking; Dr. A. McC. Weir, Liverpool; Woodlands; Dr. T. O. Wood, London; Wigan Medical Society, Secretary of, London; Dr. N. Walker, Edinburgh; Dr. D. Walsh, London; Dr. A. D. Waller, London; E. Waggett, M.B., London; Dr. A. E. White, Aldershot. X X. Y Dr. M. Young, Stockport.

## BOOKS, ETC., RECEIVED.

The Descent of Man and Selection in Relation to Sex. By Charles Darwin, M.A., F.R.S. New Edition. London: John Murray. 1901. 2s. 6d.

Etudes de Clinique Chirurgicale. Par Dr. P. Mendes. Paris: O. Berthier. 1901.

Vade-Mecum d'Obstétrique et Gynécologie des Médecins-Praticiens. Par Dr. H. Fischer. Paris: L. Boyer. 1902. Fr. 4·50.

On Liquid Air and its Application. Liquid Air Wells. By J. Frick. London: G. Barber. 1901.

A Manual of the Practice of Medicine. By G. R. Lockwood, M.D. Second Edition. London and Philadelphia: W. B. Saunders and Co. 1901. 17s.

A Textbook of Pharmacology and some Allied Sciences. By T. Sollmann, M.D. London and Philadelphia: W. B. Saunders. 1901. 16s.

A Laboratory Handbook of Urine Analysis and Physiological Chemistry. By C. G. L. Wolff, B.A., M.D. London and Philadelphia: W. B. Saunders and Co. 1901. 5s.

On Disorders of Assimilation, Digestion, etc. By Sir Lauder Brunton, M.D., D.Sc., LL.D., F.R.S., F.R.C.P. London and New York: Macmillan and Co. 1901. 16s. 6d.

Atlas and Principles of Bacteriology. By Dr. K. B. Lehmann and Dr. R. O. Neumann. Authorised Translation from the Second German Edition. Edited by G. H. Weaver, M.D. Parts I and II. London and Philadelphia: W. B. Saunders and Co. 1901. 21s.

A System of Physiologic Therapeutics. Edited by S. S. Cohen, A.M., M.D. Vol. iv. Climatology, Health Resorts, Mineral Springs. By F. P. Weber, M.A., M.D., F.R.C.P., and G. Hinsdale, A.M., M.D. Book II. London: Rebman, Limited. 1901. 10s. 6d.

Anatomy in its Relation to Art. By G. McClellan, M.D. London and Philadelphia: W. B. Saunders and Co. 1901. 12s.

L'Immunité dans les Maladies Infectieuses. Par E. Metchnikoff. Paris: Masson and Cie. 1901. Fr. 12.

La Migraine et son Traitement. Par Dr. P. Kovalevsky. Paris: Vigot Frères. 1902. Fr. 3·50.

La Fièvre des Tuberculeux et son Traitement. Par Dr. P. Sentze. Paris: Vigot Frères. 1901. Fr. 1·50.

Hygiene for Students. By E. F. Willoughby, M.D. London and New York: Macmillan and Co. 1901. 4s. 6d.

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# Remarks

ON THE

# BACTERIOLOGICAL EXAMINATION OF POTABLE WATERS FROM THE PUBLIC HEALTH POINT OF VIEW.

By A. C. HOUSTON, M.B., D.Sc.,
London.

During the last ten years bacteriology has made rapid strides, but it cannot be said that progress has been swift in all directions. For example, the bacteriological examination of sewage in relation to the detection of dangerous pollution of potable waters with excremental matters is a subject which would still seem to offer to the patient worker an endless field for useful research.

## I.—The Bacterioscopic Examination of Waters.

An enormous amount of work has been carried out by numerous and accurate observers on this subject. Their investigations have been largely directed towards determining the bacterial flora of waters of diverse sort. That the results that have been accumulated in this direction are of value no one is likely to deny. Owing, however, to the almost insuperable difficulties of recognising microbes from their descriptions, even when these are accurate and complete, fresh workers unable to classify or identify the bacteria met with in their "water cultivations," either give them new names or are content to remain in ignorance of their identity, and merely to register the total number of micro-organisms of all sorts present in a sample. The number of "water bacteria" now described is quite remarkable, yet no one who has devoted any serious attention to the subject doubts for a moment that a large number of them belong to the same species. The inability to identify the different kinds of bacteria in water has of recent years shown itself in the direction of endeavouring to place the microbes met with in "water cultivations" under one or other of a number of separate and fairly well-recognised groups, for example, B. proteus (and allied forms), B. mesentericus (and its allies), fluorescent bacteria (liquefying and non-liquefying), B. subtilis (and its varieties), etc. Although this is to some extent a confession of ignorance, it is nevertheless of considerable practical value. Again, other authorities seek to classify water bacteria in unnamed groups according to the sum of their morphological and biological characters, being guided by factors whether they are chromogenic or non-chromogenic, liquefying or non-liquefying, sporing or non-sporing, long or short, rod-like or round in shape, motile or non-motile; whether they clot or do not clot milk, produce acid or alkali, gas or no gas, indol or no indol, and so on. From the public health point of view these records are perhaps of secondary importance, although on purely scientific grounds they may be of considerable interest. Thus it is of advantage to possess data, even if they be of a crude and imperfect kind, enabling different workers to compare approximately the bacterial flora of waters of diverse sort. But what the student of hygiene really wants is not so much a knowledge of the microbes proper (peculiar as it were) to water, but rather information regarding those bacteria which are to be thought of as of adventitious and possible of dangerous sort. In this direction our knowledge is far from complete. During 1898 and 1899 I devoted a large amount of attention to this subject, in connection with the study of the bacterial treatment of London crude sewage at Barking and Crossness. These results have been published, but it is important to place some of them again on record in their relation to the bacterioscopic examination of potable waters, and in order to draw attention to certain matters hitherto neglected by bacteriologists.

## II.—Sewage in Relation to the Pollution of Potable Waters.

Beyond question the most dangerous and most common source of the pollution of potable water is sewage. Yet our knowledge of the bacteria either proper to sewage or peculiarly abundant therein, and also the relative abundance of such microbes in sewage, is of an imperfect kind. It is true that much stress has been laid, and rightly so, on the presence of B. coli as an indication of objectionable contamination. But around this very question a great controversy has been waged, and it is still attracting the serious attention of many workers.

There can be no doubt that the failure to recognise the significance of the relative abundance of microbes of one or another sort in substances on the one hand to be thought of as pure and on the other hand as obviously polluted, is largely responsible for this state of things. To emphasise this point it will not be amiss to borrow from the experience of the chemist. All natural waters contain some organic matter, but in pure waters the amount is so small in relation to the gross amount found in foul substances such as sewage as to be negligible. The chemist does not condemn a water because it contains organic matter, but because it contains organic matter in undue amount. The knowledge of the chemist has been reached, not only by a consideration of the facts revealed by multiple analyses of natural waters of diverse sort, but also by the examination of the substance most to be dreaded in relation to the pollution of water supplies—namely, sewage.

It is true that the position of the chemist is not secure, for he is forced to admit that, as far as we know, organic matter *per se* is harmless. And all his standards of potability are seemingly based on an assumed relationship which may or may not exist between the amount of organic matter and the number and character of the bacteria likely to be associated with such organic matter. But it is not the fault but rather the misfortune of the chemist that there are factors outside the scope of his subject which limit the usefulness of his analysis. From the logical point of view the history of the chemical analysis of potable waters is an object lesson to the bacteriologist. In a word, all chemical statements are based on a correct appreciation of the value of relative proportion. In the language of the bacteriologist this means the determination not only of the mere presence, but also of the relative abundance of microbes of one or another sort in substances of widely different character. This aspect of the question is one which has hitherto been neglected by bacteriologists. Strictly speaking no one unacquainted with the kinds of bacteria (and approximately the relative abundance of each species as well as the total number) in air, soil, and sewage, can hope to fully understand the bacteriology of water supply. This is a counsel of perfection, but at least from the public health point of view it might be insisted upon that as a basis for the condemnation of a water supply contaminated with objectionable sewage microbes, some evidence should be forthcoming of the relative abundance of the same bacteria in raw sewage. It is, to say the least of it, most remarkable that this view of the subject has in the past seemingly escaped the serious attention of bacteriologists.

### (*a*) *B. Coli.*

It has been asserted that the question of the significance of B. coli in water as implying pollution of objectionable nature has given rise to much controversy.

Thus those hostile to the value of this test insist that B. coli is abundant everywhere, that it multiplies outside the animal body, that it is associated with vegetable as well as animal organic matter, and that it is present in the intestinal tract not only of human beings but nearly all animals.

Against these views, which are largely conjectural in character, many arguments may be urged. For example, if B. coli is abundant everywhere one might expect to find it habitually and in large numbers in soils, since the earth is the last resting place of micro-organic life. But I have shown that it is absent (or relatively so) from many virgin soils and the "washings" therefrom.[1] Again, if it multiplies outside the animal body under favourable conditions, there is every reason to suppose that it declines in number or perishes under unsuitable circumstances. As regards its association with vegetable organic matter, I have found it to be absent (or relatively so) from virgin peaty soils and in their "washings."[1] It cannot be denied that B. coli is present in the evacuations of many animals, but we have yet to learn that the excreta of animals are altogether harmless to man.

It is not disputed that the subject is a debatable one so long as the mere presence and not the relative abundance of B. coli is the point insisted upon. But it may be questioned

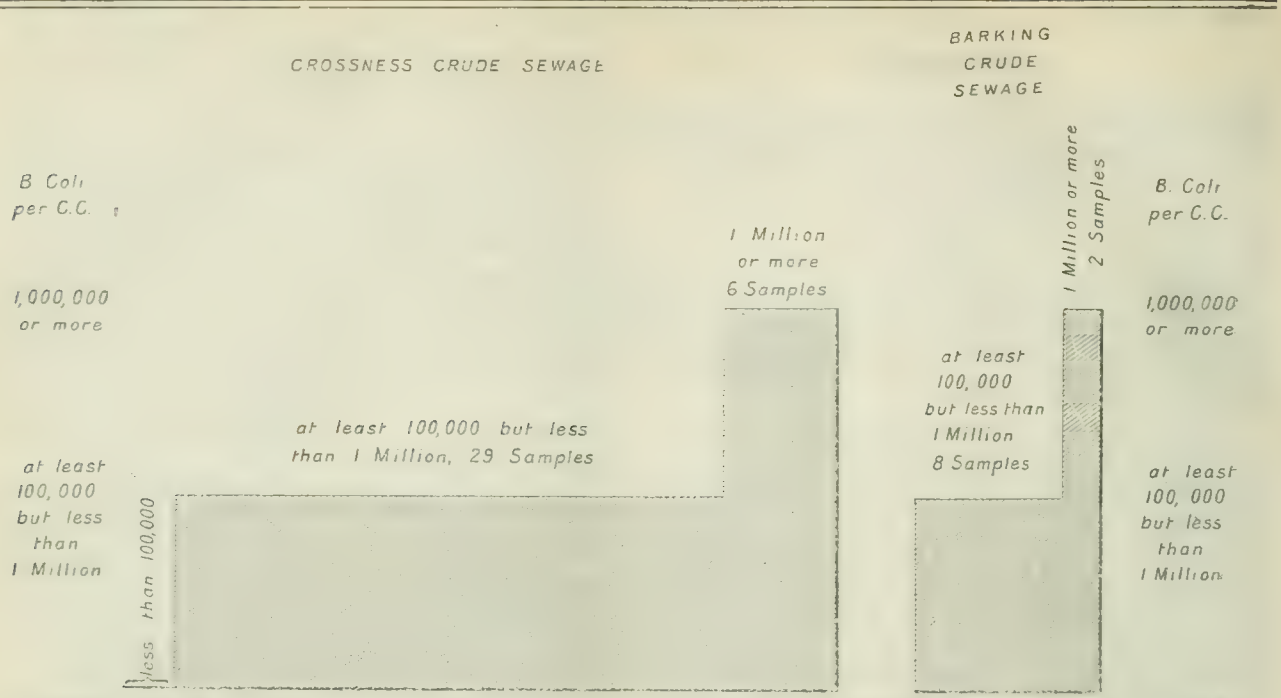



Diagram 1, showing as regards B. coli the results of the bacteriological examination of 38 samples of Crossness crude sewage and 10 samples of Barking crude sewage.




Diagram 2, showing as regards B. enteritidis sporogenes the results of the bacteriological examination of 48 samples of Crossness crude sewage and 17 samples of Barking crude sewage.

if any serious controversy could ever have arisen or been maintained if the subject had been studied in a more logical manner. If, for example, instead of merely insisting that B. coli was present in sewage and absent from uncontaminated water, it had been shown that this microbe is absent from as much, it may be, as 100 c.cm. of at all events some pure waters and habitually present in most samples of raw sewage in numbers exceeding 100,000 per c.cm., the position of those hostile to the test would have become untenable. For it would only be necessary for those in favour of the test to say that although the purest water contained no B. coli in 100 c.cm., they were prepared to pass a water containing no more than one germ of B. coli per c.cm., since even then the distinction between such a water and raw sewage was, as regards B. coli, represented by the figures 1 to 100,000. Nay, even if a still more lenient attitude was adopted, and as many as 10 B. coli per c.cm. were considered permissible in a drinking water, the test would yet remain much more delicate than any test of potability at present available to the chemist.

It will be understood that no attempt is here made to lay

down any arbitrary standard. It is sought to show merely that it is quite unnecessary for the bacteriologist to adopt a dogmatic or an unreasonable position in the matter, considering the wide range of the B. coli test and its ability to draw a distinction almost inconceivably great between pure water and sewage.

To many the difficulty is ever present of determining whether the microbes met with in their cultures should or should not be classed as B. coli. And the problem is one not easily answered, as it involves the consideration of questions open to much controversy. Are we, for example, to go by the original descriptions of B. coli? But these are fragmentary and incomplete. Or by later descriptions founded on the study of certain cultures of B. coli which have found their way into one or another laboratory, and which are either believed to be true descendants of the original stock, or else the progeny of strains of B. coli in the first place isolated by bacteriologists of repute? But even these more or less accredited cultures of B. coli would seem to differ from each other to some extent, and it is difficult to believe that a microbe undergoes no change in its morphological and biological characters when subcultured year after year, and kept under artificial laboratory conditions. Lastly, we may take note of all these things, but supplement our knowledge with the careful study of the coli-like microbes met with in cultures made from the dejecta of human beings and animals, and from crude sewage.

Some bacteriologists take an extreme view, and refuse to accept any microbe as B. coli (or even as akin to B. coli) unless it responds to all of a number of positive tests, and does so moreover within a specified and quite arbitrary period. Thus, for example, they would reject a microbe otherwise like B. coli if it showed a delayed "clotting" power in milk culture or a tardy ability to form indol in broth cultivations.

Assuming that the ancestors of such a micro-organism previously possessed these positive characters in normal degree, this would seem almost equivalent to considering that a man who had become short-sighted or slightly deaf could not any longer be regarded as belonging to the human species. It is well to remember that microbes of the above sort are very numerous in crude sewage, and, especially as regards indicating recent pollution, some of them may be of greater importance than the ideal B. coli of those who drive matters to an extremity. Some of the coli-like microbes of sewage clot milk in 24 hours, others in 48 hours or in 72 hours, or even later. As regards indol, this may be produced in three days or less, or may take five days or longer. Again, sewage microbes seemingly indistinguishable from B. coli morphologically and in their growth in gelatine and agar cultures, may produce acid in milk culture without clotting it, and fail to respond to the indol test in broth cultivation even after a week's incubation or longer. Again, an indol-producing microbe may give rise to little or no visible change in litmus milk culture or a micro-organism producing acid clotting of milk may yield a negative result as regards indol formation. Indeed, in rapid or slow response to positive tests, or in lack of ability to respond to one or many of them, these coli-like microbes of sewage seem to present every possible variation.

Of course, it is possible to go to the other extreme and consider microbes as allies of B. coli, which have really no kinship to the B. coli of the intestinal tract. While admitting that some of these microbes may be of as great, or even greater, importance than B. coli, they, perhaps, ought to be placed in a separate group. Of microbes isolated from crude sewage indistinguishable from B. coli in gelatine plate cultivations, the great majority, in my experience, correspond to the following brief description:

(*a*) Small motile rods occurring singly, in couples, or as short chains (Gram's stain negative, no spore formation).

(*b*) Produce "gas" in gelatine "shake" culture in twenty-four hours at 20° C. (no liquefaction).

(*c*) Produce abundant diffuse cloudiness in broth cultures in twenty-four hours at 37° C.

(*d*) Produce acidity in litmus milk cultures in twenty-four to seventy-two hours at 37° C.

A considerable proportion of these microbes produce good clotting of milk in twenty-four to seventy-two hours at 37° C., and indol in broth culture within five days at 37° C.; but failure in these respects should, I think, not be regarded as proving absence of kinship to B. coli. However this may be, the fact remains that $\frac{1}{10,000}$ to $\frac{1}{100,000}$ c.cm. of crude sewage contains microbes which are either indistinguishable from B. coli or seemingly closely akin to B. coli, and that 1 c.cm., or more, of at all events most pure waters does not contain micro-organisms of comparable sort.

By adopting a reasonable attitude in this matter, and by paying some attention to the hitherto neglected question of relative abundance it becomes possible to avoid points possibly open to serious controversy, and yet retain a test of great practical utility and remarkable delicacy.

Diagram 1 shows as regards B. coli the results of the bacteriological examination of 38 samples of Crossness crude sewage and 10 samples of Barking crude sewage. It will be seen that in nearly all the samples the number of B. coli was at least 100,000 per c.cm.

### (*b*) *B. Enteritidis Sporogenes* (*Klein*).

In the preceding paragraphs I have endeavoured to show as regards B. coli the real importance to the bacteriologist of the question of relative abundance. But it is obvious that the same principle may be applied, although not necessarily with an equal measure of success, to many other microbes. For example, there is the B. enteritidis sporogenes test, the value of which can only be appreciated by a consideration of the relative proportion of this organism in substances of widely different sort.

Those hostile to the test have asserted that B. enteritidis sporogenes is not causally related to acute diarrhœa in human beings, that it is not always pathogenic even to animals, that there are other microbes which produce a similar transformation in milk cultures, and finally that as it is abundant everywhere in nature its presence in a water is of little or no significance.

Avoiding as far as possible facts the interpretation of which may be open to controversy, it is at the least certain that B. enteritidis sporogenes (in culture) may be, and commonly is, extremely virulent to guinea-pigs, and further that there is strong evidence that this anaërobe has been intimately associated with certain epidemics of acute diarrhœa in the human subject.[3] As regards other microbes producing a similar transformation in milk culture, it is by no means easy to determine whether they are of different species or whether we are dealing with aberrant and non-pathogenic strains of the B. enteritidis sporogenes itself. This question, although of considerable scientific interest, is of minor importance from the point of view of the bacterioscopic testing of potable waters. The change in anaërobic milk culture which we are in the habit of ascribing to B. enteritidis sporogenes is a most characteristic one, and in my experience always points to pollution, although not necessarily of recent sort. Even if such a culture were found to be non-pathogenic it might lessen but would not destroy my belief that objectionable pollution was indicated. Indeed, in my experience if a substance (for example, soil or sewage) produces in certain amount the "enteritidis change" in milk minus virulence of culture it is only necessary in most cases to add the same substance to milk in greater quantity to obtain the same result plus extreme virulence. Whether this is due to the virulent enteritidis sporogenes being accompanied and sometimes superseded by either aberrant and non-pathogenic strains of B. enteritidis sporogenes or by anaërobes of separate species matters very little so far as the test as a test is concerned.

As regards the alleged universal distribution of B. enteritidis sporogenes, all sporing microbes are apt to have a wide distribution, and particularly is this likely to be the case with sporing anaërobes. B. enteritidis sporogenes is peculiarly abundant in excremental matters, and as these substances are widespread, it need excite no surprise if Klein's microbe be found largely diffused in nature. That it should persist and remain as a record of past pollution is only what might be anticipated in the case of a sporing anaërobe; but it is a little difficult to see why all this should be considered a fatal objection to the use of the B. enteritidis sporogenes test in the bacterioscopic examination of potable waters. If B. enteritidis sporogenes were equally abundant in pure and impure substances—for example, in virgin soil as compared with cultivated and polluted soil, and in pure water as contrasted with sewage-polluted streams—the test would indeed

be one of little or no value; but when the relative abundance of this microbe in substances of pure and impure sort is taken into consideration, the practical value of the test becomes at once apparent. For example, in polluted and cultivated soils the number of spores of B. enteritidis is usually 1,000 to 10,000 per gram, whereas in virgin soil it may be absent from 10 or more milligrams. Further, the "washings" of polluted soil contain B. enteritidis sporogenes in abundance, while in the "washings" of virgin soil it is absent or relatively so.[4] As regards pure water, I have failed on numerous occasions to demonstrate its presence in the bacterial contents of 200 c.cm. or more; yet in crude sewage it is habitually present in so minute a quantity as 0.01 to 0.001 c.cm.[5]

There is one objection to the test—namely, that it does not prove that the pollution was necessarily recent. It is worth noting that this fact was pointed out in the first place not by those hostile to the test, but by those whose practical experience had led them to adopt it. Moreover, this objection may in certain cases resolve itself into a positive advantage. For example, in cases where we seek to ascertain whether a substance showing no evidence by other tests of recent pollution, has or has not been contaminated at some time in the past.

In brief summary, it is to be noted that if so small an amount as 0.01 to 0.001 c.cm. of crude sewage is added to a sterile milk tube, the tube heated to 80° C. for ten minutes, and then incubated in a Buchner's tube at 37° C., a highly characteristic change occurs in the milk culture known as the "enteritidis change." Polluted soils and their "washings" effect a similar transformation in milk cultures when added thereto in minimal quantity. Virgin soils and their "washings" give rise to no such change, or only do so when added in relatively gross amount. Lastly, the bacterial contents of 100 c.cm. or more of at all events some pure waters yield in milk cultures a totally negative result as regards this "enteritidis change."

Whether B. enteritidis sporogenes is or is not causally related to acute diarrhœa in the human subject, whether the cultures showing the "enteritidis change" are or are not virulent in animals; whether or not aberrant and non-pathogenic strains of B. enteritidis sporogenes or other anaërobes of different species can produce a similar change in milk and accompany or even sometimes surpass in number the true B. enteritidis sporogenes, matters very little so far as the test, *as a test*, is concerned. All responsible workers will admit that Klein's researches have placed in their hands a test ("the enteritidis change" in milk culture) of singular value in the bacterioscopic examination of potable waters.

It has been said that B. enteritidis is present in 0.01 to 0.001 c.cm. of crude sewage, and is absent from 200 c.cm. or more of, at all events, some pure waters. This distinction is so great that it is evident that even if we adopted a most lenient standard and considered one spore of B. enteritidis sporogenes permissible in 10 c.cm. of water, the ratio of water to sewage as regards B. enteritidis would still remain 1 in 1,000 or 1 in 10,000 according to the strength of the sewage. But it is not sought to lay down any fixed standard, although the large number of examinations of samples of soil, sewage, and water that I have now made might possibly justify me in doing so.

Diagram 2 shows as regards B. enteritidis sporogenes the result of the bacteriological examination of forty eight samples of Crossness crude sewage and seventeen samples of Barking crude sewage.

### (*c*) *Streptococci.*

In various reports of the Local Government Board I have endeavoured to show the real importance of the streptococcus test from the public health point of view in the bacterioscopic examination of potable waters.

It has been pointed out (1) that streptococci, as a class, are delicate germs that readily lose their vitality and die when the physical conditions are unfavourable, and further, that they comprise species highly pathogenic to human beings; (2) that they are present in human fæces and in crude sewage in considerable number; and (3) that they are seemingly absent from relatively large amounts of pure waters and virgin soils, but present in abundance in water and soil recently polluted with animal dejecta. It is not claimed that all streptococci are necessarily delicate germs, or pathogenic or of recent animal outcome. It may be that certain streptococci are comparatively hardy germs, and that others may be capable of multiplying in Nature outside the animal body. Again, there may be streptococci in Nature which do not owe their origin to excremental matter, and doubtless many of them may be non-pathogenic, although this latter circumstance is no proof that at a stage prior to their isolation they were non-virulent, nor does it impair the value of the test as an indication of recent fouling with objectionable matters.

But in judging the value of a test we must look to the results obtained in actual practice, and from this practical point of view the facts I have adduced cannot be without significance. These facts briefly stated are that I have failed to find streptococci in virgin soils and in pure water, and failed even in the case of polluted soils and waters when the contamination was not extremely recent in character. That I have found streptococci habitually present in crude sewage in $\frac{1}{10'000}$ c.cm., present in human fæces in one milligramme, and present in minimal quantities of soils and water recently polluted with matters of animal outcome. These results encourage the belief that the streptococcus test is the most delicate yet suggested for detecting recent and therefore, presumably, specially dangerous pollution.

The question of relative abundance in connection with the streptococcus test also deserves consideration. For if streptococci are absent from 10 c.cm. or more of pure waters and present in $\frac{1}{10'000}$ c.cm. of crude sewage the distinction as regards streptococci between water and sewage is sufficiently great to allow of considerable latitude being observed in framing a standard without seriously impairing the value of the test. What standard should be adopted is a matter of opinion, and it is not proposed to lay down any bacteriological standards in this article.

The biological distinction between crude sewage and potable waters might with advantage be discussed at much greater length. For example, it may be pointed out that crude sewage harbours in great abundance virulent microbes belonging to the B. proteus class, and that pure waters are free (or relatively so) from micro-organisms of similar sort. But enough, perhaps, has been said to show that, as regards certain microbes, a biological distinction almost inconceivably great exists between crude sewage and pure water, and that it is quite unnecessary and most inadvisable to adopt bacteriological standards of stringent, and therefore controversial, sort. The fact is that even if standards be adopted of so extremely moderate a nature as to disarm all hostile criticism, the bacteriological tests that I have mentioned greatly surpass in delicacy any tests of potability at present available to the chemist. If anyone should entertain any doubt on this matter, the following statement may serve to carry conviction:—Each drop of crude sewage harbours about 5,000 B. coli, from 5 to 50 spores of B. enteritidis sporogenes, and about 50 streptococci. Although I am here speaking of crude sewage, it may not be amiss to add that a single drop of the urine of a patient suffering from typhoid bacilluria may contain 1 million or more typhoid bacilli.

In previous writings[6] I have endeavoured to show that it is desirable not only to possess full knowledge of the kinds of bacteria that are to be thought of as essentially of animal outcome, but also to draw a distinction between (*a*) bacterial tests indicating extremely recent, and therefore presumably specially dangerous, pollution; (*b*) bacterial tests pointing to less recent contamination, but still not so remote in character as to be other than most objectionable; and (*c*) bacterial tests which afford evidence of pollution which bears no necessary relation to the recent evacuations of animals, and therefore indicates potential rather than actual evil. The (*a*) streptococcus, (*b*) B. coli, and (*c*) B. enteritidis sporogenes tests in the order named yield, in my opinion, reliable information of the above kind.

### Conclusions.

In conclusion, the following points are worthy of note:

1. That from the public health point of view knowledge is required, not so much as regards those microbes proper (peculiar, as it were) to pure water, but rather as regards those micro-organisms which are to be thought of as being of adventitious, and possibly of dangerous, sort.

2. That as sewage is the most common and dangerous source of the pollution of potable water, further knowledge is required of the bacteria characteristic of sewage.

3. That bacteriologists have hitherto almost entirely neglected the question of the relative abundance of micro-organisms of different sort in pure and impure substances—for example, water as compared with sewage, virgin soils as compared with polluted and cultivated soils, etc.

4. That attention to this question of relative abundance has a most important bearing on the bacterioscopic analysis of potable waters from the public health point of view, because it shows that the biological distinction between pure and impure substances (for example, water and sewage) is so great as to be almost inconceivable, so great as to render the adoption of rigid and stringent bacteriological standards unnecessary and inadvisable, and so great, also, as to allow the bacteriologist to detect in a water the presence of objectionable polluting material in quantity so small as to be far beyond the reach of chemical analysis.

5. That streptococci are absent from 10 c.cm. (or more); B. coli from 1, 10, it may be 100 c.cm. (or more); and B. enteritidis sporogenes from 100 to 500 c.cm. (or more) of pure waters: that is, these microbes are altogether absent or relatively so from pure waters.

6. That streptococci, B. coli, and B. enteritidis sporogenes are commonly present in $\frac{1}{10000}$ c.cm., $\frac{1}{100000}$ c.cm., and in $\frac{1}{100}$ to $\frac{1}{1000}$ c.cm. respectively of crude sewage; that is, these microbes are present in crude sewage in great abundance.

7. That it is evident from these figures that there are tests available to the bacteriologist in the bacterioscopic examination of potable waters which far surpass in delicacy any known chemical tests.

8. That a stage may be reached in the pollution of water with sewage when the contaminating material is so small in relation to the bulk of water as to be inappreciable by chemical means, while yet yielding to bacteriological tests unequivocal evidence of gross pollution with microbes of intestinal origin. This is a matter which has passed the stage of controversy.

9. That the presence of streptococci are to be thought of as indicating extremely recent, and B. coli less recent, but still not remote, pollution of animal sort, but that the presence of B. enteritidis sporogenes cannot be considered to afford evidence of pollution bearing a necessary relation to the recent evacuations of animals.

10. That streptococci and B. coli are either altogether absent or present in sparse amount in virgin soils, and may be absent even from polluted soils, unless the contamination is of comparatively recent sort. In soils recently polluted with animal matters streptococci and B. coli are of course present in abundance. B. enteritidis sporogenes may be present even in seemingly virgin soils, but in sparse proportion compared with the large number found in cultivated and polluted soils.[5]

11. That the presence of streptococci in any number in a water supply points not only to recent animal pollution, but also implies that the antecedent conditions—conditions intervening between the period of pollution of the water and the time of collection of the sample—could hardly have been of so unfavourable a character as to destroy the vitality of seemingly more hardy microbes—for example, the typhoid bacillus. Quite the same cannot be said for the B. coli test, since B. coli is a more hardy germ than B. typhosus.

12. That organic matter *per se* is, so far as we know, harmless, it is the bacteria apt to be associated with the organic matter that constitutes the element of danger.

13 That the amount of organic matter in a drop[6] or even a few drops of sewage is so small as to be hardly appreciable on chemical analysis, and yet a like quantity of sewage can be shown by bacteriological tests to harbour objectionable germs in great abundance.

14. That it is not necessary to demonstrate in a polluted water supply the presence of definitely pathogenic microbes to prove that there is danger in drinking such water.

15. That it is sufficient to show that microbes indubitably of intestinal origin are present in a water to condemn that water, because it is beyond controversy that these micro-organisms are apt at any time to be accompanied by other bacteria which are clearly known to cause disease in human beings.

16. That the bacteriologist can show that between a pure water and a water contaminated even with minute traces of excremental matter there exists a biological difference not only of degree but of kind.

17. That under like conditions the chemist may fail to appreciate the pollution altogether, and most certainly can form no conception of its dangerous character.

18. That the chemist's methods of endeavouring to ascertain the truth in the analysis of water are necessarily indirect ones, and all his standards of potability are based on an assumed relationship which may or may not exist between the amount of organic matter and the number and character of the associated bacteria.

19. That valuable as the chemical analysis of a water undoubtedly is, it ought in the future to occupy a secondary position, and the bacteriological examination take its place in judging the purity or otherwise of our water supplies.

20. That until these facts are recognised and acted upon progress in the prevention of waterborne disease must needs remain unsatisfactory.[10]

NOTES AND REFERENCES.

[1] Reports to the Local Government Board. [2] Much credit in this connection belongs to Dr. M. H. Gordon, *Journal of Pathology and Bacteriology* 1897. He studied over 100 microbes isolated from stools, urine, sewage, milk and water, all resembling B. coli morphologically, and in gelatine and agar cultivations. These apparently similar microbes were found to differ in many cases in their attributes, and to be capable of being classified as sixteen separate varieties. Many have since confirmed his results, but a few have failed to do so. The latter, I think, have used some method or medium which either destroys the majority of coli microbes present or tends to "draw out" a particular strain of B coli at the expense of all other accompanying and possibly more important organisms of the coli tribe. [3] See reports by Dr. Klein. Reports of the Medical Officer, Local Government Board, 1896-7-8-9; also reports by Dr. Andrewes, Report of the Medical Officer, Local Government Board, 1896-97, and *Lancet*, January 7th, 1899. [4] Reports to the Local Government Board. [5] Although it is of interest to find that B enteritidis sporogenes may be present in substances bearing no conceivable relation to water supply, this fact cannot reasonably be adduced as an argument against the use of Klein's test in the bacterioscopic examination of potable waters. [6] Reports on the bacteriological examination of soil and water Report of the Medical Officer Local Government Board, 1899-8-9-1900. [7] In the sense of being specially abundant in, or almost peculiar to, sewage. [8] Coli is so intimately connected with water supply that these brief notes are not out of place. It may again be pointed out that the demonstration of B. enteritidis sporogenes in substances bearing no conceivable relation to water supply may be of interest. But why this circumstance should be adduced as an argument against the employment of the B enteritidis sporogenes test in the bacterioscopic examination of potable waters is not very clear. [9] A single drop of the urine of a patient suffering from typhoid bacilluria may contain a million or more typhoid bacilli (Dr. Horton-Smith's results indicate that 1 c.cm. (about 20 drops) may contain 500,000,000). [10] Since this paper was written Dr. Horrocks's treatise on the *Bacteriological Examination of Water* has been published: the author fully confirms my contention that the presence of streptococci indicates sewage contamination, but he does not consider the presence of streptococci proof of recent pollution.

## ON RUBELLA, SCARLATINA, AND "FOURTH DISEASE."*

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It is a matter of considerable importance that the existence of an infectious eruptive disease, having points of resemblance to rubeola, rubella, and scarlatina, yet a distinct pathological entity, which has been so ably advocated by Dr. Clement Dukes[1] under the term "fourth disease," should be recognised or refuted. It is needless to urge that rubella[2] manifests variations from its normal symptoms and course; indeed, it has been well described as "a disease specially got up to plague the young practitioner,"[3] but often enough it puzzles the most experienced. Perhaps no one feels the need for help in the early accurate diagnosis of the exanthemata more than medical officers to schools, for while on the one hand it is of the utmost importance that scarlatina should be recognised and promptly isolated, it is, on the other hand, a disaster for a school to be credited with an outbreak of scarlatina, when in reality the disease is nothing more serious than German measles or perhaps "fourth disease."

The eminent position and long experience of Dr. Clement Dukes rightly stamps his differentiation of "fourth disease" with authority, and thus on all hands one hears of the outbreak of epidemics which are diagnosed as this affection.[4] To prove that such a disease does not exist requires a wider

* Read before the Bath and Bristol Branch of the British Medical Association.

experience than I can claim, but two recent epidemics occurring in Bristol seem to show that the symptoms of so called "fourth disease" may be exactly simulated by both rubella and scarlatina, and thus Dr. Dukes's points of differential diagnosis of "fourth disease" become in practice almost valueless.

In brief, the question is: Are there two types of rubella? namely, rubella morbillosa and rubella scarlatinosa, or are these two types in reality two distinct diseases, the one not protecting from the infection of the other? A further question arises. Does scarlatina exhibit departures from its normal course, so as to present a group of symptoms indistinguishable from Dukes's "fourth disease."

In the course of an epidemic of rubella at Clifton 32 cases occurred in a school under my charge as physician. I was first asked to see a small boy in House H., who had been playing cricket and was said to have "heat spots." He was feeling quite well, but he had widely scattered small papules all over the body. The temperature was 99° F. The following morning the rash had disappeared, the temperature was normal, and the boy well. Thirteen days later another boy in the house developed a similar rash, and I suspected the case to be very mild German measles, though there was no rise of temperature when I saw him. Four days later another case occurred with diffuse fine papular rash, but no temperature. He was the son of a medical practitioner, and when his father saw him he suggested it was like "fourth disease," of which he had just had several cases. The fourth case arising in the house was obviously rubella of "measles" type.

The same day another exactly similar case occurred in another house, M., of the junior school, and this one was followed by 18 more cases, only 4 in the house escaping. Many of these 18 cases were exceedingly mild, resembling the first case; others were the usual typical rubella of the measles type and one of the scarlatina type. Of the other cases 2 occurred in another junior house and the rest in senior houses, in one house 2 cases, and 1 case in each of four senior school houses.

It would serve no useful purpose to recount these cases in detail; 3 cases alone call for special comment. The highest temperature in the majority of cases did not exceed 101.° F., and in none did it reach 102° F. There was the usual enlargement of the posterior cervical glands in many, of the inguinal and axillary glands in a few, and mealy desquamation of the face and neck was observed in a large proportion.

The three cases I must allude to especially are:

Case A.—No. 23 P. (No previous history of rubella or scarlatina.)
June 29th. Slight sore throat, felt sick.
June 30th. Acute tonsillitis, very red fauces, vomited. Temperature 102·2° F.
July 1st. Tonsillitis pronounced, very red angry fauces. Temperature, morning, 99.2°; evening, 101.2°.
July 2nd. Rash first appeared, very profuse all over arms and wrists, chest, trunk and back, also behind ears and on neck, thighs and feet, somewhat punctate and finely papular, picking out hair follicles especially, but also in large erythematous patches, especially over thighs and shoulders. The fauces and palate brick-red; the tongue clean, bright, cherry-red, and same colour on mucosa of lips. Temperature 100° F.
July 3rd. Fauces and lips and tongue very red, marked tonsillitis, no submaxillary bubo. Slight enlargement of post-cervical glands, but no tenderness. Rash all over body, but fading from feet and neck. Feels and looks much better. Temperature normal in morning, 100·6° evening.
July 4th. Feels fairly well. Faucial redness much less. Rash rapidly fading. Definite desquamation around lips, alæ of nose, and on forehead.
July 6th. Desquamation of fingers, face powdery desquamation.
July 7th. Feet beginning to peel. Mixing freely with other boys from to-day.
July 9th. Large flakes coming from soles and palms, as much as 4 square inches in size.
July 18th. Feet, hands, wrists desquamating freely still, but abdomen finished.
July 22nd. Forearms only peeling now.
From July 7th—that is, five days from appearance of rash—allowed to mix with other nine boys, none of whom contracted any fresh illness.

Case B.—No. 25 E. (No previous history of rubella or scarlatina.)
June 29th. Prodromal headache.
June 30th. Sore throat, no vomiting.
July 1st.—Bright brick-red tonsillitis.
July 2nd. Sore throat better; but profuse, red, punctate, fine papular rash all over chest, trunk, neck, not on the face. Temperature, evening, 99·°
July 3rd. Rash still profuse and scarlatiniform all over the body, but to-day appearing on the arms. Posterior cervical and inguinal glands enlarged and tender. Feels fairly well. Tongue coated, not red. Temperature, morning, 98.6°; evening, 100.6° F.
July 4th. Face, neck, and chest powdery. The tongue and mucous membrane of the lips bright cherry-red. Later there was powdery desquamation of the skin of the abdomen.

Case C.—No. 27 M. July 3rd. Sore throat, fauces red, eyes suffused. Temperature, morning, 99 0°; evening, 101.6°.
July 4th. Tongue coated, lower lip mucosa cherry-red, eyes more suffused, glands enlarged and tender, indefinite punctate rash on chest. Temperature, morning, 98 6°; evening, 99.8°.
July 5th. Tongue and mucous membrane of lips bright cherry-red. The usual morbilliform papular rash on chest trunk. Later desquamation occurred on both hands, which peeled freely. None elsewhere.
(This case was of the morbilliform type, yet developed the cherry-red tongue, and peeled.)

In no case was there ever a trace of albuminuria, and in none were Koplik's spots observed—symptoms which were carefully and repeatedly sought for. The three cases A. B. and C., were all from different houses.

Now Case A could scarcely have been distinguished from scarlatina, indeed, despite the occurrence of the case in the midst of this epidemic of rubella, I could not at the outset say with any certainty that it was not scarlatina, and Dr. Harrison, who saw the case in consultation with me, could only go so far as to say he thought, like myself, that it was not scarlatina. The initial sore throat and vomiting, the high temperature, and profuse scarlatina-like rash, followed by very free desquamation, pointed to the graver disease, but the absence of albumen and of any pronounced *malaise* seemed to negative scarlatina. To all appearances it was, I venture to think, a very typical example of Dukes's "fourth disease," with this sole exception, that the tongue was bright cherry-red on the fourth day of illness. Case B resembled Case A in many respects, but was a less pronounced illness—sore throat with acute tonsillitis for two days, but becoming much relieved on the third day, when a profuse scarlatina-like red punctate papular rash appeared, the temperature being then under 100° F.; mealy desquamation followed. This, again, was to all appearances a typical example of "fourth disease" except that the tongue and lips became bright cherry-red on the fifth day.

The first of these two cases after the fifth day of rash was allowed to mix freely with other boys who had rubella, and the second case was at no time separated from the rubella cases. Yet no boy contracted either scarlatina or "fourth disease" from them, neither did either of these two boys contract rubella from their constant companions. There is little room for doubt that all the 32 cases were suffering from German measles, and we see examples of every grade and variety of this exanthem from the mildest form which might readily pass for roseola æstiva to the more pronounced morbilliform and scarlatiniform varieties.

In an outbreak of rubella at Clifton College in 1891, recorded by my predecessor, Dr. W. J. Fyffe,[5] there were 91 cases in all, and amongst them were 8 cases in which the usual pink papular discrete spots appeared and faded in due course, only to be followed after an interval of one to three or four days by a bright scarlet finely punctiform rash which covered the whole body, together with, in some cases, a fresh rise in temperature, sore throat and vomiting. There were also 5 other cases of this scarlatiniform rash without a primary papular rash, several of the 13 cases desquamating very freely. There was no evidence of any boy contracting this scarlatina-like rash from the various cases of rubella mixing together at the sanatorium. Dr. Haig Brown[6] has also recorded 13 similar cases occurring at Charterhouse School in 1884 in the course of an epidemic of rubella. Five of these had previously had scarlatina, and in 1886, when an epidemic of 202 cases occurred, not one of the 9 remaining in the school (out of the 13) contracted rubella.

There is undoubtedly a tendency for rubella to breed true as regards type, so that in any given epidemic the cases mostly exhibit either the morbilliform or the scarlatiniform type, but the occurrence of the two types together leaves no room for doubt that such two types of one and the same disease do exist.[7]

I will now turn to another group of cases of *scarlatina resembling rubella*, all arising from drinking milk from one supply, which has caused a recent epidemic in Clifton. Fresh from the careful observation of these 32 cases of rubella, I hoped I had so enlarged my experience that I should have little difficulty in differentiating this affection from developed scarlatina.

On August 31st I was asked to see the following cases in one house.

Case I.—W., aged 10, had a sore throat, and vomited two days before. A bright scarlatinal rash all over chest, trunk, legs, appeared this morning.

The fauces bright-red, throat sore, tongue coated. Posterior cervical glands on either side enlarged. But the temperature was only 101.2°, pulse 100. He appeared fairly comfortable, certainly did not feel very ill.

I then saw three of the other children who were with him:

Case II.—A baby, aged 1½, vomited yesterday, did not seem ill, and to-day is running about quite well. No rash.

Case III.—B., a boy, aged 6, vomited this morning, throat red, no rash, two post-cervical glands enlarged and tender. Temperature 100.2°. Pulse 116.

Case IV.—D., a girl, aged 4, vomited day before yesterday. Yesterday poorly; to-day punctiform red rash on face, chest, and stomach, and an erythematous rash on the inner side of the right thigh. Pulse 118. Temperature 101.2°.

Could these really be cases of scarlatina? They looked more like rubella. But I would not commit myself to a diagnosis, till I saw them with my colleague who was to take charge of them, as I was leaving for a holiday. He being a physician of very large experience, I felt that we might reasonably hope to come to a definite and satisfactory decision. Thus the next day, on September 1st, I saw the children with my friend.

Case I (W.).—The rash to-day is fading on chest and trunk, still bright red and diffuse on the legs, and to-day has appeared on the feet, where it is more papular, just as the rubella rash spreads down. Tongue cleaning, labial mucosa bright red, like the rubella cases, Nos. 23, 25, 27, marked tonsillitis. No submaxillary bubo. No albumen. Temperature 99.2°. Pulse 88

Case II (Baby).—Yesterday was well; to-day a diffuse papular scarlet rash all over back only. Tonsils full; throat not red; tongue clean. Posterior cervical glands on either side enlarged and tender. Temperature 98°.

Case III (B.).—No rash, even to-day. Some tonsillitis. Temperature 99.4°. Pulse 94. Tongue normal.

Case IV (D.).—The rash of yesterday on the chest and trunk is only a diffuse subcuticular mottling to-day; the rash still on the inner side of the thigh, but to-day it has appeared on the hands and feet as diffuse discrete fine papules. Temperature 100.8°. Pulse 112.

We felt that there could not longer be reasonable doubt; none of the children were really ill; the absence of fever, only slight rise in temperature, the low pulse-rate, the enlarged posterior cervical glands in several cases, and the character of the rash in those who showed any, namely, a tendency to be discretely papular, spreading gradually down to the feet, and the absence of albumen in the urine, seemed to exclude the possibility of scarlatina; so we reassured the mother, and told her it was certainly German measles.

Subsequently the marked desquamation in three of the children, and the occurrence of typical mild scarlatina with strawberry tongue, etc., in another child, left my colleague in no doubt as to the disease being scarlatina, but in no case did the urine contain albumen.

Now I cannot doubt that believers in "fourth disease" would have diagnosed these cases as that complaint.

However, these children were undoubtedly victims of the milk epidemic of scarlatina. Five days after the infected milk was begun the first child vomited and became ill. Lest it be argued that the milk episode was a mere coincidence, I will mention two cases in another house arising whilst I was away from home.

A. F. S., aged 50, developed sore throat, temperature 102°, and a scarlatiniform rash on the chest. The temperature did not fall to normal till the fourth day.

On September 16th, A. D. S., his son, aged 17, developed sore throat, rash on chest and back, temperature 100°, enlargement of posterior cervical glands; no vomiting, no suffusion of conjunctiva. September 17th. Face very red and puffy. September 18th. Rash still out all over face and body, temperature 101.5°, pulse 111. These cases were diagnosed by my colleague (not the same as in the group of children) as German measles. I then saw these two cases for the first time, and considered that the rash in the son was absolutely typical of scarlatina; moreover, the father was desquamating on the toes, face, and chest. My colleague, however, adhered to his diagnosis of either German measles or "fourth disease." He had other similar cases under his care at the time. "Show me," he said, "one typical severe case of scarlatina with usual complications arising amongst these cases and I will admit it is scarlatina." These two patients desquamated freely, and in each case the process was not completed till four weeks after their attack began. There were no complications, and in the urine of the son only did I detect a very slight trace of albumen for a few days, but there was no "strawberry tongue" at any time.

Neither patient had had rubella or scarlatina before, and the son certainly answered in all respects to the description of "fourth disease." But they were likewise victims of the infected milk supply. Numerous cases of scarlatina were being notified in one district, and Dr. Davies, M.O.H., found all the infected houses had their milk from the same source, and many of the patients were removed to Novers and Ham Green fever hospitals. If further proof be needed that these mild cases were true scarlatina, I may point out that several of the group were treated in the fever hospital wards with many other scarlatina cases, yet no one of them contracted scarlatina in the hospital, nor did they communicate "fourth disease" to the other scarlatina patients.

The main points which, according to Dr. Dukes, serve to distinguish the "fourth disease" from scarlatina are its prolonged incubation (nine to twenty-one days); the usual absence of pre-eruptive vomiting; the low pulse rate, which seldom reaches 100; absence of desquamation of the tongue about the fourth day; absence of renal complications; shorter period of infectivity. I would point to the group of scarlatina cases that I have cited as exhibiting all the features that Dr. Dukes relies on as indicative of "fourth disease." Is it not possible that some of the cases hitherto recorded as "fourth disease" were rubella and some scarlatina?

Rubella occurs in two types, the morbilliform and the scarlatiniform, and it is remarkable how one or the other type prevails in any single epidemic. But do we not see the same thing in regard to other infectious complaints? Take, for instance, the protean influenza. At one time the gastro-intestinal type has prevailed, at another the scarlatina form, at another the pulmonary, and so on. Scarlatina likewise in various epidemics exhibits types, as in the recent milk epidemic, throughout which, as far as I can hear, the cases ran a mild, though generally a fair typical course, yet very different from that exhibited in other epidemics, in which the cases are designated as scarlatina maligna.

When it can be shown that an attack of "fourth disease" protects the patient from rubella and yet occurs in those who have previously had scarlatina, the evidence of its being a distinct exanthem will certainly be very convincing, but hitherto such evidence is lacking.

Notes and References.

[1] *Lancet*, July 14th, 1900, p. 89. [2] *Syn.*, German measles, rötheln. [3] Strahan, *Med. Ann.*, 1894, p. 291. [4] For example, Weaver, *Dublin Medical Journal* 1900, p. 416. [5] *Bristol Medico-Chirurgical Journal*, 1882, vol. x. [6] Cited by Fyffe, *loc. cit.* [7] I observed one feature in the papules of my cases of rubella which I have not noticed in any other eruptive fever, namely, that the round, pink, slightly raised, discrete papules in size and appearance resembling a typhoid spot, were often ringed round by a distinct white ring. I had a patient under my care at the Royal Infirmary with typhoid fever, and was told that she had developed an extraordinary crop of typhoid spots in place of the few spots she had before on the abdomen. The existence of this leucodermic ring suggested to me that she might have rubella, developing during the course of the typhoid fever, and the copious rash appearing also on the arms and legs for two days and then completely fading, left me in no doubt, although the course of typhoid fever was in no way modified by the concurrent rubella.

## POST-SCARLATINAL DIPHTHERIA AND RHINORRHŒA AND OTORRHŒA.

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Children convalescing from scarlet fever, especially in hospital practice, are without doubt peculiarly susceptible to the invasion of the diphtheria bacillus; not only is the mucous membrane of the throat liable to become infected, but also that of the nose, and to a lesser degree the surfaces about the external auditory meatus excoriated by discharge from the ear. It is my intention to record a few facts relating to rhinorrhœa apart from that associated with the acute stage of the disease, and otorrhœa, in scarlet fever wards in one of the Metropolitan Asylum Board Convalescent Hospitals gained by careful investigation over a period of three months and a half, from October 8th, 1900, to January 15th of this year. This period I may say at once is far too short to admit of any dogmatic conclusion, but is sufficient to urge the immediate isolation and bacteriological examination of all such cases, with the object by so doing of reducing the incidence of post-scarlatinal diphtheria of the ordinarily recognised type.

Although the mortality of post-scarlatinal diphtheria has enormously decreased since the introduction and use of antitoxin in 1895—namely, from 43.8 per cent. in 1892 to 14.2 per cent. in 1895, and 2.5 per cent. in 1899, the importance

of the factor of its occurrence in hospital may be estimatated from the following table compiled from the last four Metropolitan Asylums Boards reports:

TABLE I.

| | 1896. | | 1897. | | 1898. | | 1899. | |
|---|---|---|---|---|---|---|---|---|
| | Number of Cases of Post-Scarlatinal Diphtheria. | Deaths. | Number of Cases of Post-Scarlatinal Diphtheria. | Deaths. | Number of Cases of Post-Scarlatinal Diphtheria. | Deaths. | Number of Cases of Post-Scarlatinal Diphtheria. | Deaths. |
| In 9 Acute Hospitals | 275 | 30 | 354 | 23 | 394 | 18 | 280 | 13 |
| In 2 Convalescent Hospitals | 430 | 6 | 442 | 7 | 267 | 4 | 336 | 3 |
| Total ... | 705 | 36 | 796 | 30 | 661 | 22 | 616 | 16 |
| Percentage rate ... | 4.4 | 5.1 | 5.2 | 3.7 | 5.4 | 3.7 | 4.6 | 2.5 |
| Total Scarlet Fever Admissions ... | 15,982 | | 15,113 | | 12,125 | | 13,290 | |

It is, however, fair to state that of the 104 fatal cases 11 were immediately due to the following complications:

1 varicella gangrenosa;
2 pericarditis;
1 tuberculosis;
6 measles;
1 otitis media and meningitis.

By taking the incidence of post-scarlatinal diphtheria in the acute hospitals on the total number of scarlet fever admissions and that of the convalescent hospitals on those transferred to them from the former—generally in the third week of the disease—we get the following:

TABLE II.

| | 1896. | | 1897. | | 1898. | | 1899. | |
|---|---|---|---|---|---|---|---|---|
| | Number of Admissions or Transfers. | Percentage Incidence. | Number of Admissions or Transfers. | Percentage Incidence. | Number of Admissions or Transfers. | Percentage Incidence. | Number of Admissions or Transfers. | Percentage Incidence. |
| In 9 Acute Hospitals | 15,982 | 1.7 | 15,113 | 2.3 | 12,125 | 2.5 | 13,290 | 2.1 |
| In 2 Convalescent Hospitals | 9,513 | 4.5 | 10,190 | 4.3 | 6,890 | 3.8 | 7,732 | 4.3 |

This indicates that the incidence of post-scarlatinal diphtheria is considerably greater in the convalescent hospitals; anyhow the cases are distributed through 9 acute hospitals, and those in the convalescent are confined to 2.

It is in these latter institutions that the children are nearly all up and about, intermixing freely with one another in the airing grounds and playrooms of the pavilions, the former, as a rule, common to the occupants of several of the latter. Hence the power for evil possessed by a patient having the diphtheria bacillus in any secretion is very much greater than in the ward of 20 beds in an acute hospital having half or more of the patients confined to bed.

Table III shows the presence or invasion of the diphtheria bacillus in weeks after the onset of scarlet fever amongst my own cases.

The number present on admission leaves the date of invasion in the majority of the nose and ear cases uncertain, but the table shows the greater case-rate to be within the fourth and fifth weeks from the date of scarlatinal attack.

Table IV shows the onset of the post-scarlatinal diphtheria in the acute hospitals for the last four years in weeks after

TABLE III.

| Weeks After Onset of Scarlet Fever. | Nasal. | | Faucial. | | Aural. | |
|---|---|---|---|---|---|---|
| | On Admission. | After Admission. | On Admission. | After Admission. | On Admission. | After Admission. |
| 3 | 4 | 1 | 0 | 0 | 0 | 1 |
| 4 | 14 | 3 | 0 | 0 | 1 | 0 |
| 5 | 7 | 7 | 0 | 4 | 0 | 1 |
| 6 | 2 | 2 | 0 | 2 | 0 | 0 |
| 7 | 4 | 1 | 0 | 0 | 0 | 0 |
| 8 and upwards | 5 | 7 | 0 | 12 | 0 | 0 |
| Total ... | 36 | 21 | 0 | 20 | 1 | 2 |

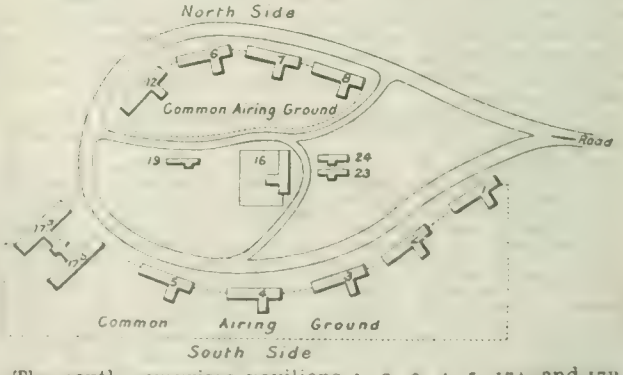
the commencement of scarlet fever, and points to the marked prevalence of invasion in the convalescent stage of scarlet fever.

TABLE IV.

| Weeks after onset of Scarlet Fever. | 1896. | 1897. | 1898. | 1899. | Total. | Percentage. |
|---|---|---|---|---|---|---|
| First week ... ... ... ... | 9 | 6 | 25 | 9 | 49 | 3.6 |
| Second week ... ... ... | 37 | 25 | 42 | 23 | 127 | 9.7 |
| Third week ... ... ... ... | 60 | 71 | 61 | 40 | 232 | 16.7 |
| Fourth week ... ... ... | 47 | 71 | 60 | 37 | 215 | 16.5 |
| Fifth week ... ... ... ... | 41 | 38 | 38 | 35 | 152 | 11.6 |
| Sixth week and upwards ... | 81 | 143 | 168 | 136 | 528 | 40.5 |
| Total ... ... ... ... | 275 | 354 | 394 | 280 | 1,303 | — |

As regards the first week in 1898, 2 cases each occurred on the second and third days, and 4 on the fourth, and it is quite possible they may have been originally cases of mixed infection.

The hospital at which the following observations were made is divided into two portions, north and south, as illustrated in diagram.




The south comprises pavilions 1, 2, 3, 4, 5, 17A, and 17B, all scarlet fever wards for females and boys under 7. Each contained at the time of my observations 40 beds, and a large airing ground is common to all.

On the north, in addition to certain entirely separate male pavilions, are pavilions 12, 6, 7, and 8, similar in class of case, size, and numbers as 1 to 5 on the south side: 12, 6, 7, and 8 have a common airing ground limited to their use. Of these only 7 and 8 were at the time occupied, and the comparison instituted was between them and the pavilions on the south side.

All cases of rhinorrhœa and otorrhœa on the south side of

the hospital were transferred into (*a*) Hut 23 if diphtheria bacilli were found on cultivation, or (*b*) Hut 19 if no bacilli were found. The ordinary post-scarlatinal diphtherias were transferred to Hut 24, whereas the rhinorrhœas and otorrhœas were not removed from Pavilions 7 and 8. There is no communication whatever between any of these wards or their airing courts and the true diphtheria pavilions and their airing courts, which, however, are not represented in the diagram.

*Class of Case and Clinical History.*

In the south side all cases of rhinorrhœa and otorrhœa, however slight and of whatever character, were immediately isolated, examined bacteriologically, and warded according to result.

During the period the following bacteriological examinations were made:

TABLE V.

| Part Affected. | Total Examinations. | With Diphtheria Bacilli. | Without Diphtheria Bacilli. |
|---|---|---|---|
| Nose ... ... ... ... | 141 | 57 | 84 |
| Fauces ... ... ... ... | 53 | 11 | 42 |
| Ears ... ... ... ... | 62 | 8 | 54 |

Of the nasal cases containing diphtheria bacilli, 36 were found on admission; of the remainder:

7 occurred in the 1st week after admission.
3 " 2nd " "
4 " 3rd " "
5 " 4th " "
1 " 6th " "
1 " 7th " "

None of these were associated with any general symptoms except a slight rise of temperature in a few of them. The character of the discharge in 39 of the cases was thin, clear, watery, sometimes profuse, generally of a neutral or alkaline reaction to litmus paper, rarely acid, but often associated with redness and excoriation of the external nares and upper lip. Of these 22 were present on admission.

The remaining 18 had a profuse, thick, yellowish, and sometimes blood-stained discharge, often faintly acid in reaction, but sometimes alkaline, 14 being present on admission. All cases were subjected to small doses of antitoxin serum, and in the majority the discharge ceased within ten days, the usual antiseptic douches being used.

Eight of the cases had slight albuminuria before serum administration; one, however, was a case of post-scarlatinal nephritis, and 33 gave a trace of albumen either the day after the injection, or about the ninth to the twelfth day after in association with the antitoxin rash and joint pains. There was a very marked increase of albumen in the nephritis case about the rash period, but no rash.

None of these cases had paralysis, and none developed diphtheria in Hut 23, though undoubtedly exposed to the infection of virulent diphtheria bacilli, as proved by inoculation experiments to be noted later. They certainly had all been injected with antitoxin serum, but this, used as a prophylactic measure, is stated to establish immunity for about three weeks only, though this may be a debatable point. All the cases referred to, however, were in Hut 23 over that time, the average being fifty-two days; and it is worthy of note that three cases believed to be well were transferred to Pavilions 2 and 5, to make room for fresh cases; and that, notwithstanding precautions taken with regard to bathing and clothing, these were followed within a few days by 2 cases of typical faucial and 2 nasal diphtherias in Pavilion 2, and 1 faucial in Pavilion 5.

I will here refer to two particular cases:

CASE I.—A. K., aged 5, was admitted with a clear, thin, nasal discharge on November 20th, the fauces being normal. She was isolated at once and a cultivation taken. On November 21st diphtheria bacilli were found, and the patient warded in Hut 23, and injected with antitoxin, but in the meantime membrane had formed on the tonsils.

CASE II.—H. H., aged 17. I was called to see her on the evening of January 9th. Found tonsils covered with thick firm membrane; right nostril blocked, and the external nares caked with thick dry discharge. Temperature was 103°. The patient stated her nose had been like that for the last three days, her throat being painful for the first time that evening, before which she felt quite well. The left nostril was clear and free from discharge. A cultivation was taken from the throat and both nostrils; that from the former and right nostril gave pure typical Klebs-Loeffler bacilli: that from the left nostril a few staphylococci only.

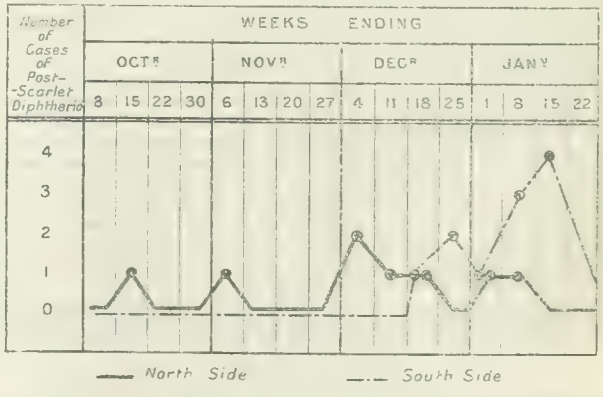
These cases show that a diphtheria attack may manifest itself in the nose before the throat. Case I clearly indicates the advantage gained by the cultivation of the nasal discharge and the isolation of the patient. Case II. If the nasal discharge had been noticed at its commencement the patient would have been isolated three days earlier than was the case, and the risk involved by her presence amongst the healthy proportionately reduced, not to mention the possible gain to the patient herself in cutting short or reducing the severity of the attack.

*Otorrhœa* as a complication of scarlet fever varies in the Board's hospitals during the last four years from 15 per cent. in 1896 to 13 per cent. in 1899, and as it often produces excoriation of the external meatus and pinna, it seems quite possible that such surfaces may be invaded by the diphtheria bacillus as well as the discharge. It is recognised that otorrhœa in faucial diphtheria cases is often associated with diphtheria bacilli, besides the ordinary pus organisms then in all probability being originally mixed infections. As shown in Table V, in 8 cases of otorrhœa the diphtheria organism was found. Five of them had already been warded in Hut 23 with diphtheria bacilli in the nasal discharge. In one diphtheria bacilli were present on admission, and membrane was found the following day on the raw surfaces near auditory meatus. The remaining 2 were cases of otorrhœa developing in hospital. In neither of these cases could diphtheria bacilli be found in the throat or nose. The organism was apparently a typical Klebs-Loeffler bacillus, but was non-pathogenic to guinea-pigs, but produced acidity in sugar broth.

Of the ordinary true post-scarlatinal diphtheria associated with membrane on the fauces in the pavilions under consideration, the distribution was as follows:

TABLE VI.

| Side of Hospital. | Scarlet Fever Cases Treated in. | Number of Case of Faucial Diphtheria. | Percentage Incidence. |
|---|---|---|---|
| South ... ... | 679 | 11 | 1.62 |
| North ... ... | 190 | 7 | 3.68 |
| Total ... | 869 | 18 | 2.08 |




By the above table we see the incidence in the south side (namely, that from which all rhinorrhœas and otorrhœas were isolated) was 1.62, whereas that in the north was 3.68. This striking difference may, I think, be reasonably attributed to the system of isolation adopted.

Then, again, if we refer to the weekly incidence curve we find the cases fairly equally distributed throughout the period in the north side, whereas in the south there were no cases at all for the first nine weeks. We then get a sudden rise in the week ending December 18th, gradually reaching its maximum in the week ending January 15th with hardly any intermission, but falling suddenly the following week to 1 and then to zero.

This curve seems to point to the introduction into these wards on the south side of some potent diphtherial infection from without, and we possibly find this factor in the transfer of the three cases from Hut 23 to Pavilions 2 and 5 on December 16th and 23rd, previously referred to, although the first case occurred on December 15th, the day previous to the transfer.

Of the 11 cases:

(*a*) Four were between 14 and 18 years.
(*b*) Three between 8 and 14 years; and
(*c*) Four under 6 years

Groups (*a*) and (*b*) were friends, and may possibly have infected one another by contact, such as kissing, though not all in the same ward. Adult patients over 14 years of age are in a minority, and are fairly evenly distributed through the pavilions, but have unrestricted communication with each other in the airing ground, which is common to the occupants of all.

*Bacteriological Procedure.*

Immediately a rhinorrhœa or otorrhœa was discovered a streak was made on Loeffler's blood serum with a platinum loop, the specimen being taken from the discharge at a point as far as reasonable from the external nares, in order to avoid as much as possible contamination from without. Incubated from eighteen to twenty four hours at 37° C. All colonies differing macroscopically from one another were examined; any giving pure bacilli resembling the Klebs-Loeffler bacillus were transferred to a fresh tube, incubated, and examined as below.

If, however, the growth was exuberant and the individual colonies had coalesced together, preparations were stained and subcultures made from the part where bacilli had been found in the following manner: Three tubes of blood serum were taken, A, B, and C. The water of condensation in A was inoculated from the original culture—that of B from that of A, and that of C from B. The water in each tube was then run over the surface of its medium, incubated, and pure cultures were obtained without much difficulty; but a better way would be to inoculate a tube of nutrient broth first, and so insure thorough dilution and increase the chance of getting pure colonies in the serum tubes.

*Stains.*—Loeffler's methyl blue, Gram's and Neisser's. If, however, no beading of the bacillus was found with the first stain, Neisser's was not used, as I have found that all cases which have answered to the latter stain have always previously given the beading with Loeffler's methyl blue, provided, of course, due care was taken.

In using Neisser's stain I was careful always to use a 24-hours growth, and the solutions were prepared as recommended by the inventor.[1] I, however, pin my faith to Loeffler's methylene-blue stain as being the most reliable and most free from possible error. With Gram's method the bacilli are somewhat shrivelled, and stained so deeply even with great care that the beading and clubbing so characteristic of the Klebs-Loeffler bacillus is often, I may say generally, destroyed. It is, however, very useful, as it excludes several bacilli which may be mistaken for the modified diphtheria organism, and should consequently be used when dealing with an atypical variety. From the staining capacity of the organisms found in my cases, I believed them to be diphtheria bacilli or indistinguishable from them, and have divided them into four groups.

I. Thin, unevenly-stained bacilli, 2 to 4 $\mu$ in length, giving the recognised clubbed, beaded, and dumbbell-shaped forms, rounded ends, with typical grouping, namely the bacilli lying parallel side by side in larger or smaller clusters; in fact, having the generally accepted characters of the Klebs-Loeffler bacillus. In this set fall 8 faucial cases, 9 nose, 2 ear.

II. Evenly-stained thicker bacilli, 2 to 4 $\mu$ in length; rounded ends, sometimes curved, with parallel grouping. One faucial, 2 nose, 1 ear case.

III. Evenly-stained thick bacilli, especially in the centre, 1 to 2 $\mu$ long, rounded ends, with parallel grouping, and occasionally lying end to end. Two faucial, 34 nose, 5 ear cases.

IV. Consisting of bacilli from Groups II and III. Nine nose.

These bacilli, recognising them all as diphtheria bacilli, were associated with other organisms, as will be seen from Table VII.

TABLE VII.

| Parts Affected. | Number of Cases Examined. | D. B., Pure | D. B. with other Organisms | D. B. with Staphylococci | D. B. with Streptococci | D. B. with Staphylococci and Streptococci | Staphylococci | Streptococci | Staphylococci and Streptococci | Other Organisms. |
|---|---|---|---|---|---|---|---|---|---|---|
| Nose | 141 | — | 1 | 31 | — | — | 10 | 5 | 20 | 6 |
| Ear | 62 | 1 | — | 6 | — | 1 | 29 | 2 | 22 | 1 |
| Fauces | 53 | — | 1 | — | — | 0 | 23 | 9 | 3 | 7 |

It is dealing with Groups II. III. and IV. that we are confronted with a great difficulty, and I was constantly asking myself the question, are these modified diphtheria or are they not? A positive answer I could not give; and it was far from consoling to remember the remark of the late Dr. Kanthack, "the various tests generally enumerated do not suffice to distinguish the various modifications from the text-book variety of the Klebs-Loeffler bacillus."

However, I was certain that for the benefit of the healthy, and probably for the patient itself, they ought to be classed as diphtheria bacilli and the patient isolated and treated as having the disease, and so at least give both parties the benefit of the doubt.

Not being able to apply the crowning test of animal inoculation with and without antitoxin I approached Dr. Cartwright Wood, who very kindly undertook to do it, and I am sure at much trouble. I therefore sent cultures of the bacilli taken here and there from among my cases throughout the period with the result indicated in the following table.

TABLE VIII.

| Number. | Name. | Source of Culture. | Form and Characters of Organism. | Action upon Sugar Broth. | Action of Broth Culture on Animals. | Action of Broth Culture with Antitoxin upon Animals. |
|---|---|---|---|---|---|---|
| 1 | X. | Nose | Short rods | Slight acid reaction | *Nil* | *Nil* |
| 2 | W. M. | Nose | Short rods | Acid reaction | *Nil* | *Nil.* |
| 3 | F. C. | Ear | Thick rods frequently curved | Acid reaction | *Nil* | *Nil.* |
| 4 | R. H. | Nose | Thick rods frequently curved | Slight acid reaction | G-p. dead in 24 hours | *Nil.* |
| 5 | W. N. | Nose | Long and short forms | Strong acid reaction | *Nil* | *Nil.* |
| 6 | G. | Nose | Thick rods variable lengths and thickness; many involution forms | Slight acid reaction | *Nil* | *Nil.* |
| 7 | A. R. | Nose | Short thick rods | No growth | *Nil* | *Nil.* |
| 8 | R. B. | Ear | Short rods of variable thickness | Strong acid reaction | *Nil* | *Nil.* |
| 9 | H. | Nose | Short form | No growth | *Nil* | *Nil.* |
| 10 | Har. | Nose | Short form | No growth | *Nil* | *Nil.* |
| 11 | E. I. | Nose | Short form | Slight acid reaction | *Nil* | *Nil.* |
| 12 | E. C. | Nose | Short form | No growth | *Nil* | *Nil.* |
| 13 | J. Z. | Nose | Short form | No growth | *Nil* | *Nil.* |
| 14 | C. W. | Nose | Long c. involution forms | Strong acid reaction | *Nil* | *Nil.* |
| 15 | E. B. | Ear | Short form | Strong acid reaction | *Nil* | *Nil.* |
| 16 | K. S. | Nose | Long forms with few involution forms | Acid reaction | G-p. dead in 24 hours | *Nil.* |
| 17 | B. | Nose | Short forms | Strong acid reaction | *Nil* | *Nil.* |
| 18 | H. P. | Nose | Very short forms | Strong acid reaction | G-p. dead in 24 hours | *Nil.* |
| 19 | L. H. | Ear | Short forms | Strong acid reaction | *Nil* | *Nil.* |
| 20 | A. B. | Nose | Short form | No growth | G-p. dead in 24 hours | *Nil.* |
| 21 | Chas. | Nose | Short form | Acid reaction | *Nil* | *Nil.* |

Nos. 4, 16, 18, 20 are undoubtedly virulent diphtheria bacilli, though they do not conform to the recognised appearances of the true Klebs-Loeffler bacillus. Nos. 7, 9, 10, 12, and 13 produced no acid in sugar broth, are non-pathogenic to guinea-pigs, and are probably Hoffman's pseudo-diphtheria bacilli, though their staining properties and appearances under the microscope correspond with some of the virulent variety. The remaining 11 gave rise to acid in sugar broth, and are therefore not of the Hoffman variety. It is possible, or rather probable, that these organisms may be modifications of the Klebs-Loeffler bacillus, but, owing to their want of pathogenicity, that cannot be demonstrated. This being assumed, and it certainly cannot be denied, that any person

with these organisms in their nasal or aural discharge are capable of giving rise to diphtheria in others. On the other hand, it may be argued that diphtheria bacilli, as with other organisms, may be virulent to man and not to animals and *vice versâ*, so that these 11 cases, which after all are in the majority, may have been virulent in their original state.

No. 20, though proved to be a virulent Klebs-Loeffler bacillus, gave no growth or acidity in sugar broth, which suggests that this test, on which so much stress has been laid by some writers, is not infallible.

### Conclusions.

In conclusion, to enumerate a few points which this only too short investigation appears to indicate:

1. That it is advisable to cultivate all cases of rhinorrhœa—apart from that of the acute stage—and otorrhæas in scarlet fever cases, especially in hospital practice.

2. That bacilli when found at all resembling the diphtheria bacillus, must in the present stage of our bacteriological knowledge be regarded as a modified variety of that organism, bearing in mind that their staining properties are often the only means of diagnosis available, the clinical symptoms in this class of case being for the most part absent. For other proofs of the unsatisfactory state of our knowledge we can refer to the writings of Stamm,[2] Meyer,[3] Freeman,[4] Abbott,[5] and others, who found organisms indistinguishable from that of diphtheria in rhinitis fibrinosa, similar results by J. W. Stephens and Kanthack in cancrum oris, and again by Cautley[6] in catarrhal pharyngitis.

3. That systematic isolation of these rhinorrhœas and otorrhœas is not only justified but advisable.

4. That such isolation may be reasonably expected to reduce the post-scarlatinal diphtheria incidence.

5. That it is an open question whether such mild cases require antitoxin treatment. The two cases, however, referred to in the early part of this paper, in which the rhinorrhœa was followed by the deposit of membrane upon the fauces, seems to indicate the use of the serum; at least it may do good, and can do no harm. Even assuming that many of these cases unassociated with general symptoms have not the disease themselves, but have had the bacillus simply grafted on to an ordinary coryza or cold, or on to an existing rhinorrhœa or otorrhœa, none the less it is highly important that they should at least be separated from the healthy. It is a generally accepted fact that healthy people may carry about diphtheria bacilli in their throats, and produce in others a severe attack of the disease; examples of this are given by Airy,[7] the late Sir Richard Thorne,[8] Newsholme,[9] and others; similarly the otherwise healthy subjects of nose or ear discharge containing diphtheria bacilli may reasonably be held to be pathogenic to others.

6. That these discharges, unassociated with sore throats or symptoms, and therefore easily overlooked, may be the cause of the often unaccountable outbreaks, and the persistence of the disease amongst school children.

And, finally, I wish to thank Dr. Hume, the Medical Superintendent of the hospital, for giving me every possible facility for the conduct of my investigation; and Dr. Cartwright Wood for determining the pathogenic powers of the bacilli; without the facts elicited by his animal experiments my observations would have remained without the positive value which I venture to think they now possess.

### References.

[1] *Zeitschr. f. Hyg.*, xxiv, 1897, p. 443. [2] *Archiv für Kinderheilkunde*, Band xiv, 1892, p. 157. [3] *Archiv für Laryngologie und Rhinologie* Band iv, 1896, p. 249. [4] *Medical Record*, New York, vol. i, p. 618. [5] *Medical News*, May 13th, 1893. [6] Supplement to the Twenty-fourth Annual Report of Local Government Board, p. 455. [7] *J. Epidem. Soc.*, vol. iv. [8] *Diphtheria Natural History and Prevention*, p. 57. [9] *Epidemic Diphtheria*, p. 138.

## PNEUMOCOCCUS ARTHRITIS WITH NOTES OF SEVEN CASES.

By NATHAN RAW, M.D., M.R.C.P.Lond.,
Physician, Mill Road Infirmary, Liverpool.

The microbic origin of acute lobar pneumonia has met with such general acceptance by physicians in all parts of the world that it is unnecessary here to mention the many arguments in favour of it. Acute lobar pneumonia must now be classified amongst the specific infectious diseases depending entirely on the presence of its specific micro-organism, the diplococcus pneumoniæ of Fraenkel. Up to a short time ago, the action of this organism was thought to be confined to the lung tissue, but recent investigations have clearly demonstrated that the micrococcus pneumoniæ is capable of being conveyed by the blood stream to various parts of the body, and setting up most acute and serious lesions.

These lesions may either precede the actual onset of pneumonia or may occur either during or after an attack. The lesions which have been accurately observed as being caused by the pneumococcus are as follows:

1. Fibrinous lobar pneumonia.
2. Pneumococcus arthritis.
3. Pneumococcus abscess.
4. Pneumococcus cellulitis.
5. Pneumococcus peritonitis.
6. Pneumococcus empyema.
7. Pneumococcus meningitis.
8. Pneumococcus pericarditis.
9. Pneumococcus otitis media.
10. Pneumococcus salpingitis.
11. Pneumococcus endocarditis.
12. Pneumococcus keratitis.

The exudation might be purulent from the first, serofibrinous throughout, followed by suppurative or hæmorrhagic.

In a later paper I hope accurately to describe many of the above-mentioned complications which have occurred in my own practice; but I want to confine my attention now to the action of the pneumococcus in the joints, setting up either a simple synovitis or a violent suppurative arthritis requiring immediate surgical treatment.

The occurrence of arthritis during an attack of pneumonia had been noted by several observers long before the specific organism had been isolated, but they were considered to be merely coincidences, and not in any way directly connected with the attack of pneumonia.

A very remarkable monograph was published by Dr. Leroux of Paris in 1899, in which he tabulated some 28 cases of pneumococcus arthritis occurring in the practice of Continental physicians. Dr. Cave of Bath also published an admirable paper in the *Lancet* of January 12th, 1901, recapitulating these cases and adding more, bringing the total of authentic cases up to 31, and minutely describing 2 cases which had occurred in his own practice.

It has been a matter of surprise to me during the last few years that more cases have not been recorded in this country, and I can only attribute it to the fact that general attention had not been directed to the subject. I feel sure that cases will now be properly classified and opportunities given for more extended observation. It would appear from the papers of Drs. Leroux and Cave that arthritis was a very rare complication of acute lobar pneumonia; but my experience is that it is not so rare as we would be led to believe, and those of us who have the opportunity of seeing a large number of cases of pneumonia will, I feel sure, be able to support this view.

During the last four years I have had under treatment in Mill Road Infirmary, Liverpool, an institution containing over 800 beds, no fewer than 817 cases of acute pneumonia. As the cases occur amongst the very poor population, many of whom are addicted to alcohol, the mortality has been high, averaging each year 24 per cent.

Of these 817 cases of pneumonia, arthritis as a complication showed itself in 7 cases: 6 of these were suppurative and 1 serous; 4 patients recovered and 3 died.

The following are very brief notes of my 7 cases:

Case I.—H. G., aged 28, was admitted into Mill Road Infirmary with acute pneumonia of the right lung. The whole lung was involved, and the attack was a very severe one, with considerable pleurisy. He had his crisis on the eighth day, and was apparently doing well, when on the eleventh day of his illness he had a rigor and was seized with intense pain in the right ear, accompanied by a sudden rise of temperature. Next day a swelling appeared over the second right costal cartilage with great pain and tenderness. Two days afterwards a large abscess rapidly formed over the right buttock. His condition became very critical, and his temperature high and erratic. An incision was made over the swelling on the chest, and was found to be an abscess of the right sterno-clavicular joint pointing between the first and second ribs; the abscess of the buttock was drained, giving exit to a large quantity of sweet-smelling pus. The abscess in the middle ear burst the same day, giving great relief.

Very careful precautions were taken in examining microscopically and bacteriologically the pus from every source above described, as well as the sputum.

In all cases the apparently same organism the pneumococcus of Fraenkel was found in pure culture. The man made a good recovery and is well to this day. I have no doubt that in this case prompt surgical interference saved his life.

CASE II.—T. A., aged 52, was admitted on January 5th, 1900, with severe pain in right side of chest and profuse dark expectoration. He had also pain and swelling of right ankle and swelling with great tenderness over the right sternoclavicular joint. Next day he was found to have definite pneumonia at the right apex, with effusion at the base.

The joints seem to have swollen before the onset of his pneumonia and he had suffered from rheumatism on several occasions. As soon as pus was found in the joints they were freely incised and drained, both articulations being found roughened and bare. The pneumonia ran an ordinary course and his temperature fell, but later he developed an empyema which was also opened and drained. This man had a most severe general infection by pneumococci, and although repeated cultures were made from the pus and sputum no other pathogenic organisms were found except diplococci. After a long illness he made an excellent recovery, his chest quite healed, as also the sterno-clavicular joint; the ankle healed up but the joint remained stiff. I am greatly indebted to my senior assistant, Dr. John Hay, for the great care he bestowed in the treatment of this case.

CASE III.—K. F., aged 49, charwoman, admitted June 11th, 1900, with severe pain in right chest and abdomen, with all the symptoms of acute pneumonia. She was an alcoholic, and had a severe struggle until the crisis, which occurred on the seventh day. Two days after this a swelling appeared under the right deltoid muscle, with great pain on movement. A needle was inserted into the joint and pus withdrawn. I freely incised the joint, and let out 18 ounces of curdy, sweet-smelling pus. I noticed at the operation there was considerable infiltration between the muscles around the joint. Her temperature dropped and she appeared to be doing well for twelve days, when she developed empyema of the right side. This was opened and drained; then a large abscess developed in the abdominal wall, which was drained, but the patient sank into a condition of general pyæmia, and died on the twenty-eighth day. Pneumococci in pure culture were obtained in all the samples of pus and sputum.

CASE IV.—A man, aged 23, was admitted with an ordinary attack of acute lobar pneumonia of the right lung. His crisis occurred on the seventh day. Two days afterwards he developed a painless swelling of the right knee, with a temperature of 100°; a needle drew off clear serous fluid. Under the microscope, however, pneumococci were found in abundance. The joint was aspirated of 7 ounces of fluid and firmly strapped. After a slow and tedious convalescence he eventually recovered and walked out with a useful joint.

CASE V.—A man, aged 43, a confirmed alcoholic, was admitted in a collapsed condition with acute lobar pneumonia of the right lung. Two days after admission, being the sixth day of the disease, he developed a painless swelling of both knees. A needle showed sero-fibrinous effusion which on cultivation and examination was found to be a pure culture of pneumococci. He died on the following day, and at the *post-mortem* examination he was found to have a most severe pneumonia with inflammation of both knee joints. The organisms recovered from the lung and the knee-joints appeared to be identical.

CASE VI.—A man, aged 58, also a drunkard, was admitted on April 13th, 1900, with acute pneumonia of the right lung. He had his crisis on the seventh day, and appeared to be comfortable, when he was seized with great pain in the right knee and rapid distension of the joint. A needle showed sero-pus, which on being stained revealed pneumococci with well-defined capsules. Dr. Pitt-Taylor opened and drained the joint, which continued to discharge pus for two weeks and eventually healed, leaving the man a very useful joint. He was discharged recovered, but his knee was fairly stiff, although not in any way ankylosed.

CASE VII.—F. D., aged 42, tram driver, was admitted on July 12th, 1901, with acute pneumonia of the right lung. On admission he complained of great pain in his right shoulder, which was dusky-red and inflamed, but without any definite fluctuation. He died before any operation could be performed, and careful examinations of the fluid from the shoulder showed pure culture of pneumococci. In this case also an extensive intramuscular infiltration was found around the shoulder-joint.

### CONCLUSIONS.

From an observation of a large number of cases of pneumonia I am convinced that the pneumococcus is capable of producing very serious lesions in other parts of the body than the lungs. It will be seen that arthritis as a complication occurred in 7 patients out of 817 cases of pneumonia—equal to about 1 per cent. Of these 7 cases 4 have recovered and 3 died. Curiously enough, my cases correspond almost exactly with those recorded by Continental observers, in that 6 were males and 1 female. In all 7 cases the pneumonia was right-sided, and the joints affected were all on the right side. This, I should say, was only a coincidence, although the fact is striking.

I have observed also in some cases of pneumonia a slight redness and pain in the shoulder-joint of the side affected which has subsided with the crisis. The joint affection may either precede the lung symptoms or follow the crisis, or develop intercurrently. In Liverpool alcohol seems to decide in a great measure the severity of the attack and the prospect of recovery, and I feel sure that one at least of the above cases would have recovered had he not been a confirmed drunkard.

The only treatment to my mind is early evacuation of the pus if it can be reached. It is just possible that many isolated cases of synovitis and arthritis occurring either during or after an attack of pneumonia—or even independent altogether of pneumonia—may be due to this organism, and I would suggest that the name, "Fraenkel's diplococcus," would be more suitable than "pneumococcus." Appended is a table of the above cases.

*Table of Cases of Pneumococcus Arthritis.*

| No. | Date | Sex | Age | Relation to Pneumonia. | Seat of Arthritis. | Nature. | Complications and Remarks. | Treatment. | Result. |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1898 | M. | 28 | Pneumonia 3 days before | Right sterno-clavicular joint | Suppurative | Right otitis media, abscess of thigh | Free incision and drainage | Recovered. |
| 2 | 1899 | M. | [illegible] | Pneumonia 2 days after | Right ankle, right sterno-clavicular | Suppurative | Right empyema, joint stiff | Free incision, arthrotomy | Recovered. |
| 3 | 1900 | F. | [illegible] | Pneumonia 2 days before | Right shoulder joint | Suppurative | Right empyema, extensive cellulitis of shoulder | Incision, drainage, arthrotomy, septicæmia | Died. |
| 4 | 1897 | M. | 23 | Pneumonia 2 days before | Right knee | Serous | None | Aspiration | Recovered. |
| 5 | 1898 | M. | 51 | Pneumonia 2 days before | Both knees | Serous | A very severe infection, toxæmia, alcoholism | General | Died. |
| 6 | 1900 | M. | 58 | Pneumonia 3 days before | Right knee | Suppurative | Stiff though fairly useful joint | Free incision and drainage | Recovered. |
| 7 | 1901 | M. | 42 | Pneumonia about same time | Right shoulder | Suppurative | Severe general infection, with extensive cellulitis of shoulder | General | Died. |

## CASE OF ANTHRAX IN WHICH THE INFECTION AROSE FROM A HITHERTO UNDESCRIBED SOURCE.

BY J. CONNAL WILSON, L.R.C.P., L.R.C.S.EDIN.,
Haworth, Keighley, Yorkshire.

THE following case is, I think, of sufficient interest to have it placed on record.

J. W. W., aged 26, "picker" maker, consulted me in the surgery on the evening of July 1st, 1901, his chief complaint being directed towards a spot on his left cheek, slightly lower than the angle of the mouth. As there appeared more swelling and induration than were consistent with such an apparently trivial cause, his temperature was taken and ascertained to be 101.8° F. He was ordered home to bed, placed upon Listerine internally, and when seen next morning had a slightly higher temperature, a greater amount of swelling involving all the glands of the head and neck, and extending down to the clavicles and top of the sternum. At my request he was seen by Dr. Bell of Bradford, who agreed with me that the case was one of malignant pustule, and advised speedy removal of the infected area, which was perhaps not markedly characteristic, but from which were obtained capillary tubes of serum, these being proved to contain the bacillus of anthrax when examined microscopically the same evening. The operation was performed in the course of a

few hours at the Keighley District Hospital, and the patient passed through an uneventful course, being discharged on July 13th. When seen on July 16th the wound presented a healthy granulating surface, and the swelling had largely subsided.

The greater interest in the matter, however, is the fact that the source of infection in this particular case has hitherto not been described as one from which anthrax has been communicated to man. It will, perhaps, be necessary to state that a "picker" is that part of a weaving loom which, having a hole pierced in it, receives into that hole the metal point of the shuttle at the end of its flight across the loom, and from that hole the shuttle is thrown to the other side on its return journey. For the purpose of preserving the shuttle-point from injury, the material of which the "picker" is constructed requires to be not only resilient, but tough, and very strong, seeing that in a fast loom the shuttle-point will be thrown with immense force into the hole of the "picker" upwards of 100 times per minute. It has been found that untanned hide is the substance which combines in the highest degree the qualities necessary, and it was in the manufacture of these pickers that the patient contracted anthrax.

From information which the man's employer gave me it appears that the hides used in the process are mainly of two descriptions: (1) Heavier hides, being the whole skins of buffaloes which are shipped at Singapore; and (2) lighter hides, chiefly used for equalising thicknesses, being known as "heads," and shipped at Buenos Aires. The hides with the hair on are delivered at both Bristol and Warrington, and in the neighbourhood of these places are put through the first process of preparation, which consists in allowing them to lie in lime for about three months in order that the hair may be stripped from them. After being dried and having had the surplus lime removed they are delivered to the "picker" manufacturer. On inspection there the hides have a semi-translucent grey appearance and are covered with a bloom of lime dust. As required, the hides are next soaked in water for about three hours—the water in this particular case was rain water—and then allowed to dry for perhaps a day. Afterwards they are cut into suitable pieces, and while still fairly soft folded into the primary shape by hand prior to being moulded by machinery into the required form. It was as a folder that the patient had been working for nearly ten years when he contracted the disease, the first case which has occurred in the particular manufactory referred to. The man's master stated that no record was to be found in the business of any previous attack during the 160 years for which it had been established. As it is quite a common habit for the workers to chew small pieces of the hide—chiefly on the same principle that a sailor chews tobacco or a Yankee chews gum—it is probable that the presence of the anthrax bacillus is an accidental occurrence; indeed, the industry has always been regarded as not an unhealthy one, most of the workers living to an advanced age. The "scrap" and cuttings are used in a neighbouring paper factory for sizing purposes, and it is darkly hinted that "pickers" which have served their purposes in the weaving sheds finally find their way into the confectioners hands, there to be transformed into throat pastilles, jujubes, calves' feet jelly, and other toothsome delicacies for invalids!

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

### TRIONAL IN CHOREA.

The remark of Mr. Meade in his interesting note on the above subject,[1] that he was not aware that it had been mentioned before, induces me to send you the following.

Moncorvo's cases, reported to the Paris Academy of Medicine in 1897 and confirmed by Claus and others (as referred to in Bayer's *Clinical Excerpts* for October and December of that year), led me to try the drug in some cases marked by extreme restlessness, and with successful results, which I may illustrate by the brief record of one case, which is in other respects an interesting clinical study.

T. G., now aged 17, came first under my care as a very obstinate case of general chorea (following on a kick in the back), with mitral complication, six or seven years ago at the Sussex County Hospital. On that occasion, after trial of many remedies he ultimately got most good from full doses of conium.

In November, 1899, having relapsed several times during the interval, he was again admitted with chorea and concurrent acute rheumatism, pain and swelling with effusion into knees and ankles, pyrexia, etc. By this time he was earning his living as an errand boy, exposed to weather, etc. He was treated by salophen, alternating with iron and arsenic, and in February, 1900, he went out well, remained so till shortly before readmission, on August 1st, 1900, with very severe chorea, without marked rheumatism. He was again treated with conium, and also iron and arsenic in increasing doses up to August 20th, when antipyrin was substituted for conium. This often does good, but by August 29th there was not much improvement, and restlessness day and night was extreme and distressing; this was partly due to disturbing cases near him. On that date trional (5 grs.) with glycerine, spirit, and camphor water was ordered thrice daily. A sedative effect was soon evident, and by September 10th he was sleeping most of his time, and the movements were much less when awake. He was ordered trional only night and morning, and on September 16th he went out much better, and continuing with one dose nightly.

Six weeks later (October 26th) he was readmitted with severe chorea, mostly of the left side; the heart was as before, but larger, and he was anæmic. At first he got iron and arsenic, but on October 29th trional was given at night, and he continued both drugs in suitable doses. On November 5th he was distinctly better, on November 26th up, and on November 29th, out.

On October 4th, 1901, he was readmitted for acute rheumatism of a month's duration, having been, and being, quite free from chorea since the attack of last year. The hands, knees, and feet were swollen and painful; the heart dulness extended to the third rib. The temperature was 103°. He was treated by two blisters (small) and by full doses of aspirin (30 grs. and then 20 grs.) every three or four hours for two days, when the temperature was subnormal, and he was much better in every way. On October 9th he was free from pain anywhere, and smaller doses were continued night and morning. Hæmatogen was given for the anæmia with advantage, and he went out last week practically well.

It may not be generally known that Dr. Weir Mitchell has recorded his experience of trional in epilepsy, and finds it a useful substitute sometimes for bromides.[2] I can corroborate this observation.

Since the above was written, a very severe chorea gravis in a youth of 17, has been much relieved by the same sedative, though hyoscin was also required and cacodylate injections. Trional can only be considered an adjuvant, but it is a good one.

Brighton. Edward Mackey, M.D.

### LATENT NASAL POLYPI.

Miss B., aged 41, consulted me some years ago for nasal polypi. When I first saw her she had both sides of the nose filled with polypi, and I removed from 12 to 15. The case gave me a good deal of trouble, and there was still a small recurrence on one side when, four years ago, she went out as a sister to a hospital in the Far East. She nursed through a plague epidemic, and also went further north to help nurse the wounded of the Naval Brigade. She states that the whole time she was away the nose was perfectly well. When she arrived at Marseilles, on the road home, the dock strike was in full swing, and consequently she was kept there some five days in the damp and cold. She at once began to feel her nose uncomfortable, and on arriving in London she came to me. I found a good deal of redness, but no sign of growth. She then went to the South of England for three or four months, and at the end of that time came to me again, when I found

[1] British Medical Journal, November 2nd, p. 1339

[2] *Univ. Med. Mag.*, March, 1896.

and removed a polyp about three-quarters of an inch in diameter.

The case is interesting, for after the long spell of trouble with the nose she goes out to the East, and is perfectly well for four years. Immediately she comes back to Europe the nose gets troublesome and the growth recurs. I do not in my experience remember a case being free for so long a time and then suddenly developing mischief, more especially as there is no apparent cause for the growth.

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Devonshire Street, W.

### ANGIO-NEUROTIC ŒDEMA OF THE TONGUE.

A LADY, aged 86, in good health, sent for me on account of difficulty of speaking and swallowing. On entering her room and hearing her speak, my first impression was that she had suffered a paralytic seizure. But examination showed that the right half of the dorsum of the tongue was œdematous—to such an extent that she had difficulty of articulation and deglutition. No other symptoms whatever were present. In twelve hours' time the œdema had in great degree subsided, and next day there was nothing of it left. She remained somewhat weak and indisposed for some days, and, considering her age and the shock to her system, this was not surprising. She had never before suffered from any attack of the kind. I learn that since leaving the neighbourhood the patient has had another and more extensive attack of œdema.

Broadstairs. THOS. F. RAVEN, L.R.C.P., M.R.C.S.

# REPORTS
ON
## MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

### WESTMINSTER HOSPITAL.

#### A CASE OF PYÆMIA FOLLOWING OTITIS MEDIA.

(Under the care of Dr. MURRELL and Mr. PHILIP DE SANTI.)

*Condition on Admission.*—A married woman, aged 43, was brought to the hospital in a cab on September 5th, 1901 in a condition of noisy delirium. No history could be obtained beyond the statement that she had been in that condition for a fortnight. She had a severe rigor soon after admission. Her temperature was 104°, pulse 112, and respirations 32. The urine, which was drawn off by a catheter, had a specific gravity of 1015, was acid, and contained neither albumen nor sugar. There was no peculiar odour in the breath, the pupils were equal and not dilated, there was no paralysis, no diarrhœa, no enlargement of the spleen, and no distension of the abdomen. The heart sounds were normal; there was no cough and no dulness or crepitation at the bases of the lungs. The tongue was dry, thickly coated, and tremulous. The patient was not insensible, but was apathetic and answered questions slowly. There were no abrasion or external wound. She had inflamed piles but they were not bleeding.

*After-History.*—In a few days the delirium subsided but the temperature remained high; for example, on September 8th it was at 3 A.M. 98 4°, at 7 A.M. 100°, at 11 A.M. 103.2°, at 3 P.M. 103.2°, at 4.30 105°, at 6 105.4°, at 7 104 8°, at 8 102.6°, and at 11 102 8°. On most days the temperature ranged from 100° to 104°, the pulse being usually 108 and the respirations 36. There were several rigors, and the catheter was always needed. It was obvious that there was pus somewhere but there was nothing to indicate its situation. There was some tenderness about the abdomen but it could not be localised, and patient seemed equally tender all over the body. There was no vaginal discharge, although it was stated that some time before the patient had suffered from leucorrhœa. The Fallopian tubes were suspected, but an examination of the pelvic contents failed to afford any indication of pyosalpinx. Almost from the first it had been known that she was deaf in the left ear, and although with a speculum some pus could be detected, there was no tenderness over the adjacent portion of the skull. She was carefully examined by Mr. de Santi, who thought that as the condition was evidently of old-standing, and apparently quiescent, there were not sufficient grounds for operative interference. There was practically no alteration in the condition of the patient until September 16th, eleven days after admission, when tenderness, swelling, and fluctuation in the sacro-lumbar region were noticed. Mr. de Santi made a free incision, and evacuated about 2 ounces of laudable pus. The wound was probed, but no necrosis and no communication with the pelvis could be detected. On this day 10 c.cm. of antistreptococcus serum were injected into the wall of the abdomen, and this dose was repeated on September 18th and 19th. There was no fall in temperature, and the rigors continued. On September 26th there was some pus in the urine, which was alkaline, and had a specific gravity which varied from 1007 to 1015. An examination of the blood gave 51 per cent. as the hæmoglobin value, with 2 175,000 erythrocytes and 15,960 leucocytes per c mm. On September 27th the patient had three severe rigors, and the temperature ranged from 99.0° to 105 6°. On the following day there was pain in the right knee, which gradually developed fluctuation. On October 1st the joint was opened, and a large quantity of sero-purulent fluid exuded. A drainage tube was introduced, and the leg was put up in a splint, with a foot-piece. Films from the synovial fluid showed chains of streptococci both free and in the pus cells. Cultures yielded an apparently pure growth of streptococci. There was no fall in temperature, which on October 3rd reached 105 8°. On October 5th, 6th, 7th, 8th, and 9th 20 c cm. of antistreptococcus fluid were injected without effect. The urine at this time contained numerous organisms, chiefly chains of streptococci, staphylococcus rods were also present. The deposit showed pus cells, a few uric acid crystals, and some granular casts. On October 12th the patient was put on 15 grs. of quinine sulphate three times a day, but it had no influence on the temperature, which on October 13th ranged from 100 8° to 105 8°. Stimulants were administered, but not in large quantities. The wounds showed no signs of healing, and the patient was obviously sinking. She died on October 15th, the temperature remaining high until within a few hours of death.

*Necropsy* (by Dr. Lazarus Barlow).—The left middle ear contained pus in small but definite quantities, the tympanic membrane was widely perforated, the auditory ossicles were present, but the ligaments were torn through. There was general suppurative meningitis, especially well marked over the convexity. There was no cerebral or cerebellar abscess. The heart was normal, except that there were several small vegetations, with one ulcer on the mitral flaps. There was a small collection of pus, with denuded bone at the lower part of the left sacro-iliac synchondrosis. The kidneys gave indications of early consecutive nephritis and the bladder of cystitis. The Fallopian tubes were healthy, and nothing abnormal could be detected in the œsophagus, stomach, or intestines.

REMARKS BY DR. MURRELL.—This case presented many difficulties in diagnosis. Pyæmia sometimes supervenes on typhoid fever, and masks the ordinary range of temperature, but there was nothing pointing to the existence of enteric. The condition of the left ear naturally excited suspicion, but it appeared to be of long standing and quiescent, and we felt justified in disregarding it. How long the patient had had meningitis it is impossible to say, for it is notorious that cortical meningitis is with difficulty distinguished from the symptoms produced by many of the specific fevers. Headache, convulsions, and rigidity, spasm, and twitching of the muscles were all absent. There was nothing pointing to appendicitis, and frequent vaginal examinations excluded pyosalpinx. Undoubtedly the case was one of otitis media, and the meningitis and other *post-mortem* appearances were secondary to it. It is, perhaps, hardly surprising that the injections of antistreptococcus serum—130 c cm. were given in all—failed to influence the course of the disease. That the patient should have lived so long—nearly six weeks from the date of admission—is remarkable, especially when it is remembered that ordinary cases of surgical pyæmia rarely survive the second week.

REMARKS BY MR. PHILIP DE SANTI.—From a surgical point of view the above case presented many points of interest both with regard to diagnosis and treatment. When I was asked

to see the patient by Dr. Murrell there was no doubt that she was suffering from pyæmic infection, but on careful examination I could detect nothing pointing to the *fons et origo* of the trouble except the condition of the left middle ear. On careful examination I found a small quantity of non-fœtid pus in the left tympanic cavity and a large perforation. There was no carious spot to be felt, and nothing pointing to involvement of the adnexa of the middle ear. Examination clinically for sinus thrombosis was quite negative; there were no eye symptoms present. I saw the patient on several other occasions, and could detect no signs justifying the diagnosis of intracranial complications of otitic origin. Later an abscess was detected over the left sacro-lumbar region. This I opened, but could not discover any connection with the interior of the pelvis. The *post-mortem* examination was of great interest as showing general purulent meningitis, presumably due to the middle-ear suppuration. It is, however, important to notice that at the *post-mortem* examination no caries, or even purulent infection in the attic or antrum, was discoverable and that there was no sinus infection at all. An operation, therefore, on the middle ear and antrum would, in my opinion, if performed, have been negative in its results, and the case must be looked upon as one in which general pyæmia ensued on apparently quiescent middle-ear suppuration without implication of any of the intracranial sinuses. On this question of pyæmia arising from ear disease without complication of a cerebral sinus, Leutert concludes (1) that otitic pyæmia without sinus thrombosis has not been proved; (2) it is improbable, and at best rare.

# REPORTS OF SOCIETIES.

## EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Professor T. R. Fraser, M.D., President, in the Chair.

*Wednesday, December 4th, 1901.*

### The Temperature of Phthisis.

Dr. Lawson, Nordrach-on Dee Sanatorium, Banchory, read a paper entitled some clinical observations upon the temperature of phthisis based upon experience of 100 consecutive cases treated by open-air methods. He said the clinical picture of an active phthisical lesion in process of arrest was characterised by well-marked clinical phenomena which appeared and were maintained simultaneously. These phenomena were (1) gain in weight, (2) fall in pulse-rate, (3) fall in respiration-rate, (4) fall in temperature by lysis, (5) diminution in amplitude of temperature. Two fallacies were noted: (1) that there was often a gain in weight without improvement; that while the patient was gaining weight he was steadily losing ground: (2) that there was sometimes gain in weight and fall in temperature, and yet a downward tendency. The temperature of phthisis was then discussed, and it was pointed out that it was characterised by two main qualities: (1) inelasticity, and (2) instability. By the former term was meant "that tendency which temperature exhibits when disturbed by any exciting cause to remain in the altered condition after the disturbing factor has been withdrawn." By instability was meant "a marked sensitiveness to reaction, an extreme liability to become disturbed in the presence of apparently trivial influences—influences so slight that they produce practically no effect on the temperature of healthy persons." The excitement of a visitor, slight digestive irregularity, the hot weather of July last, seemed to produce great instability of temperature. As to the method of taking temperature, Dr. Lawson strongly urged the rectal method as "incomparably more reliable and better than any other, and which should be adopted in almost every case of pulmonary phthisis." The advantages of the rectal method were that in some cases of genuine relapse the rise in temperature appeared in the rectum some time before it gave any indication elsewhere. The difference in time sometimes amounted to twelve hours. Then the rectal temperature was higher both relatively and absolutely. The rectal temperature was disturbed by trivial factors, such as slight indigestion and nervous causes, which often did not affect the axillary range. The rectal method was of greatest value in relation to the question of when to begin and how to regulate a patient's exercise. Reference was next made to common errors in diagnosis due to faulty temperature records. The temperature should be taken at the same hours each day. By faulty temperature taking tuberculosis was sometimes mistaken for enteric fever. By taking the temperature at 10 A.M. and 10 P.M. pyrexia was often mistaken for apyrexia. An inverse temperature was sometimes missed through a night call. The effect of exercise upon the tuberculous and the healthy subject respectively was next discussed, and it was stated that in the tuberculous subject exercise both depressed temperature and raised it. Cases were referred to in illustration, and charts shown. In one case a walk of a mile and a quarter lowered the temperature by a degree Centigrade. In another case with a steady morning (8 A.M.) temperature of 98·6° F., where there had been a gain in weight of 20 pounds in eight weeks, exercise gradually increased up to four miles produced marked improvement all round, but in particular the range of temperature was greatly lessened. The practical value of temperature records as a guide to treatment was strongly urged and illustrated. In conclusion Dr. Lawson said that while of great value, probably of more value than any other sign, it was not altogether safe to trust to temperature indications entirely. In the majority of cases the general rule held good, and a rectal temperature of 98.6° at 8 A.M. contraindicated exercise. But in the residuum of cases which did not come under that category he had frequently found it an extremely difficult point to decide when exercise should be begun. The pulse indication was of some value, but had been overestimated in some quarters. No single sign could be trusted, neither weight, pulse, nor temperature. An all-round view must be taken, the physical signs and symptoms should be taken, and in interpreting these the experience of the physician counted for much. Those who had worked most at this subject most felt the difficulties of the task, and refrained from formulating hard-and-fast rules for treatment. Individualising was absolutely necessary in all the details of examination and management.

The paper was discussed by Drs. James, G. Lovell Gulland, and others; and Dr. Lawson replied.

### Suprapubic Prostatectomy.

Mr. David Wallace read a paper with notes of 11 cases. He drew attention to the difficulty of accurate diagnosis in prostatic cases as regards the condition of the prostate or the presence of complications, and pointed out that no single procedure was applicable to every case, and that a radical cure was not to be expected by any one method in every case even where the prostate acted mechanically to obstruct the outflow of urine. He advocated catheterisation in early cases in which atony of the bladder wall was absent, and believed castration should only be used in cases in which the passage of the catheter became more difficult, and especially when much bleeding resulted subsequent to the use of the catheter. Vasectomy was an alternative to castration in such circumstances. Mr. Wallace gave all credit to McGill (Leeds) for the introduction of the operation of suprapubic prostatectomy, and expressed the opinion that complete excision of the prostate without opening into the urethra was an anatomical impossibility. He discussed the reasons for McGill's operation not having been more generally adopted, and attributed this to three things: (1) The belief that suprapubic operations were *per se* accompanied by danger; (2) the great benefit derived in many cases by "catheter life;" (3) the introduction of castration or vasectomy, even the former, being supposed a safe operation. From 40 consecutive cases in his own practice, Mr. Wallace gave the mortality of suprapubic operative work performed under all circumstances —for example, septic urine—and for all affections—for example, calculi, tubercle, tumours, and excision of the prostate—as 12.5 per cent., and gave details of the patients in the 5 fatal cases. He said this was not a high mortality, and he saw no reason why the operation *per se* should be a dangerous one. He chiefly advocated suprapubic cystotomy as a means of diagnosis in prostatic cases. The actual conditions could be distinctly seen and dealt with, any procedure deemed advisable being chosen—for example, excision or division, or drainage with cystopexy. The suprapubic open-

ing acted just as cystopexy, which Goldmann recommended as a means of treatment in prostatic cases. All prostates which were enlarged he believed to be more or less adenomatous, the large ones being almost invariably so; but in many cases much of the size was due to vascular engorgement. A convenient division of prostatic hypertrophy, so-called, was into: (1) The vascular, (2) the fibrotic, (3) the fibroadenomatous. It was in the last of these that prostatectomy was particularly applicable. Septic urine was not a contraindication. Bleeding did not occur to any extent during the operation, and could be readily arrested. Drainage by Cathcart's adaptation of the Springel pump was most satisfactory. Permanent fistula did not occur if the obstruction was removed. In 11 cases, in which the age of the patients averaged 64 years, 3 being over 70, there were 5 cures: 3 cases of marked improvement in all the symptoms, 1 in which no improvement resulted, 1 death and 1 case in which the time since operation—three weeks—was too short for an opinion to be given of the ultimate result. The patient in whom death occurred lived for 19 days. Death was apparently due to imperfect functioning of the kidneys. The patient who did not benefit from operation, except for a few weeks, had a prostate which formed a ring round the urethral orifice, and in him the operation was performed in two stages—a method which increased the difficulty of operation considerably. Mr. Wallace maintained that these cases, with a mortality of 9 per cent., went far to strengthen the view that the operation of suprapubic prostatectomy was a good operation.

The paper was discussed by Messrs. CAIRD, COTTERILL, CATHCART, A. E. MILLER, and others, and replied to.

### THE PATHOLOGY OF GOUT.

Dr. CHALMERS WATSON showed a series of photographs illustrating the results obtained from an experimental research on the comparative pathology of gout.

The investigation consisted in feeding poultry (eight individuals) with a diet strictly limited to red meat and water for a period of fifteen months or less, and noting the clinical and pathological results. A study of the results emphasised the importance of more attention being paid to the individual factor in disease. At the end of nine months, at which period the experiments were partially concluded, the subjects were divisible into three groups: (A) Those (two in number) which had succumbed, or of necessity been killed, within four months of the commencement of the special feeding. The symptoms observed were of an acute nature—ataxia, paraplegia, gradually-developing unconsciousness, and death within four days of the onset of symptoms. (B) Those (five in number) which had exhibited no nervous symptoms of a similar profound nature. (C) One hen which was at this time in fair health, but which had experienced two severe attacks of a nature similar to those recorded in Group (A), without, however, involvement of the higher neurons. The fowl recovered slowly from each of these attacks, and was killed three months later on the occurrence of a third more severe attack. These results had previously been referred to, and their bearing on disease in the human subject pointed out in the author's paper On the Pathogenesis of Tabes and Allied Conditions in the Cord.[1] Dr. Chalmers Watson also exhibited a photograph of the feet of a hen supposed to be the subject of true gout. The bilateral enlargement of the feet was shown not to be of a gouty nature, but to be the result of a local infection.

### APPARATUS.

Mr. DAVID WALLACE showed Beckmann's apparatus for ascertaining the freezing point of blood. Dr. DAWSON TURNER showed: (1) Apparatus for measuring the electrical resistance of blood; and (2) gave a note on Roentgen rays in syphilis.

### CASES AND SPECIMENS.

Patients were shown by Dr. WILLIAM ELDER and Mr. MILES, by Drs. LOVELL GULLAND and LOGAN TURNER, and by Mr. JOHN SHAW MCLAREN. Card specimens were shown by Dr. WILLIAM ELDER and Mr. MILES, Dr. FRANCIS D. BOYD, Dr. T. BURN MURDOCH, Mr. ALEXIS THOMSON, Dr. HARVEY LITTLEJOHN, Mr. CHARLES W. CATHCART, and by Mr. F. M. CAIRD.

## CLINICAL SOCIETY OF LONDON.

HOWARD MARSH, F.R.C.S., President, in the Chair.

*Friday, December 13th, 1901.*

### THE ASSOCIATION OF MOVABLE KIDNEY ON THE RIGHT SIDE WITH SYMPTOMS OF HEPATIC DISTURBANCE.

DR. HABERSHON, in introducing the subject, defined the term hepatic diathesis, and instanced three classes of patients in whom functional hepatic symptoms were liable to be set up, namely, those of definite biliary susceptibility, the cases in which biliousness was induced by circumstances well within their control, and a third class in whom the hepatic symptoms depended on a ptosis of kidney or liver. His object was to emphasise the medical aspect of the condition known as movable kidney, and to describe certain biliary symptoms which were prominent. The cases of movable kidney occurred chiefly in women, and statistics were given from the writings of Glénard, Landau, Mathieu, and others to show that from 20 to 28 per cent. of all dyspeptic women possessed a movable kidney. The causes, diagnosis, and symptoms were then narrated, and among the difficulties that occurred in the recognition of the condition, the variability of position, the stimulation of an enlarged gall bladder, of Riedel's lobe (of the floating lobe) of the liver, and of certain renal and appendicular conditions were cited. The mortality occurred in an enormous proportion of the cases on the right side. The symptoms of movable kidney were subjective and visceral. Among the latter class the left kidney was more prone to produce gastric than hepatic symptoms. Hepatic conditions occurred in cases of movable kidney of the right side. They were defined in three groups: (*a*) General symptoms of severe biliousness, (*b*) attacks of colic simulating true biliary colic from the passage of gall stones, and probably identical with Diett's crises, (*c*) attacks of jaundice, 3 cases reported by Maclagan being quoted. The cause of these hepatic disturbances was next discussed, and of the three possible causes, due to pressure on the duodenum or common bile duct, traction on the middle portion of the duodenum, and reflex irritation of the pneumogastric nerve, stress was laid on the latter two. The author divided cases of hepatic symptoms into three classes from the point of view of their symptomatology: (1) Cases of uncomplicated ptosis of right kidney; (2) cases in which the renal condition was accompanied by a coincident ptosis of liver; (3) cases in which the renal ptosis was part of a general enteroptosis. In the slighter degrees of ptosis of the right kidney the hepatic symptoms were often paramount, and the following classes of symptoms should lead to the suspicion of movable kidney. First the intractability of the hepatic condition which did not yield to ordinary methods of treatment. Secondly, the fact that the symptoms were produced or aggravated by shaking or exertion in any form, this being entirely contrary to the experience with regard to an ordinary biliousness, not due to ptosis of kidney. Eight cases were reported to illustrate the various forms of hepatic symptoms, and the relief afforded by replacing the kidney in position.

Mr. R. C. LUCAS had frequently noticed the symptoms described. One patient, a trained athlete, suffered from very severe symptoms, which completely incapacitated him for work. They were attributed to gall stones, but Sir Spencer Wells saw him and discovered a floating kidney. For this a belt was ordered but it only aggravated the symptoms. Fixation of the kidney, however, led to complete recovery. He considered that the proximity of the right kidney to the second part of the duodenum, into which the bile duct opened, explained the hepatic symptoms. He had long since remarked that with mobility of the right kidney the symptoms were more referable to the hypochondrium than to the renal region.

Dr. MACLAGAN observed that many cases with movable kidney had no symptoms whatever. Other cases, however, gave rise to great discomfort. These were almost always associated with the right kidney, because, as he believed, there was a solid organ, the liver, near it. Rarely did movable kidney on the left side give rise to symptoms. He had seen 2 cases in males, both on the left side, but neither gave rise to any symptom whatever. He had seen 3 cases in which the gall bladder had been opened by surgeons, as the symptoms had been considered by physicians to be due to gall stones, and in each instance the mobility of the kidney was found to be the cause of the distress. The kidney was consequently fixed, and all 3 cases permanently recovered. It must be remembered that the kidney might impinge on either the cystic, the hepatic, or the common duct. Very few trusses did any good, and unless they fitted well they were harmful. He had experienced the most benefit from a truss recommended by Sir Frederick Treves, but it was usually necessary to worry the man who made it until it fitted. Rest in bed was often beneficial, especially in emaciated women, as it favoured the production of fat around the kidneys and elsewhere. For such cases rest might be combined with massage and plenty of food. Lastly, there were cases which passed into the hands of the surgeon for fixation of the

[1] BRITISH MEDICAL JOURNAL, June 1st, 1901.

kidney. These were the three classes of cases: (1) those without symptoms; (2) those benefited by medical treatment; and (3) those requiring the surgeon's assistance.

Dr. T. Stacey Wilson considered that many cases could be treated with great advantage by the use of a pad and belt.

Dr. Habershon briefly replied.

### The Theory of Compensation in Disease of the Mitral Valve.

Dr. T. Stacey Wilson (Birmingham) read a paper in which he laid down the following propositions:—In mitral incompetence: I.—The process of compensation necessitates dilatation of the cavity of the left ventricle, as well as hypertrophy of its walls, and the amount of dilatation in the compensated heart is directly proportional to the amount of blood which regurgitates into the auricle at each beat of the heart. As mitral incompetence involves the leakage back into the auricle of a certain part of the contents of the ventricle at each beat of the heart, it therefore follows that in order to compensate for this leakage and allow of a normal amount being thrown into the aorta at each beat: (1) The ventricle must enlarge so as to hold both the normal amount and that which will escape back into the auricle; (2) it must thicken its walls so as to be able to move this additional volume of blood: (3) the theory of the enlargement of the ventricular cavity is as follows: On the first occurrence of regurgitation through the mitral valve a progressive over distension of the auricle will theoretically result from the leakage of blood back into that chamber. As soon, however, as the size of the auricle exceeds that of the ventricle, the latter will during its expansion be drawing towards itself more blood than it can hold; and the momentum of the blood which cannot find entrance will tend to dilate the cavity of the ventricle. In this way the ventricle will be dilated by its own aspiratory force until its size is comparable to that of the auricle. This will not occur until the ventricle is large enough to hold the full amount of the leakage in addition to its normal contents.[1] II.—The dilatation and hypertrophy, which can compensate for the defective working of the left ventricle during systole, will, according to this theory, also relieve the auricle from embarrassment during diastole by ensuring the proper filling of the ventricle. For (1) since the enlarged ventricle is able to accommodate all the regurgitated blood in addition to its normal contents, it follows that it will be as easy for the abnormal amount of blood to enter the abnormally large ventricle as for the normal amount to enter the normal ventricle. And (2) the increased muscularity of the enlarged ventricle will ensure the slight addition to the aspiratory force which is required to draw the larger amount into the ventricle. III.—Therefore by the time the expansion of the ventricle has ceased, the auricle will have been relieved of all the regurgitated blood, and only the normal amount will remain to be dealt with by it. IV.—Therefore in fully-compensated mitral regurgitation no extra work will be thrown upon the left auricle, and there will be no embarrassment of the pulmonary circulation, and no accentuation of the pulmonary second sound. V.—Neither would there be any dilatation of the left auricle unless the regurgitation were extreme. Since the systole of the auricle and of the ventricle together occupy one-half of the cardiac cycle, it follows that only one-half of the full volume of blood will normally enter the auricle during this portion of the cycle. Therefore there will be room in the auricle during the ventricular systole for any amount of regurgitated blood up to one-half of the total quantity put into circulation at each beat. If, on the other hand, the amount of regurgitation were to exceed one-half of the normal output of the ventricle there might be dilatation of the auricle, even when compensation was fully established. VI.—According to this theory of compensation there ought to be a slight increase in the loudness of the aortic part of the second sound, because the greater expansile force of the hypertrophied and dilated ventricle will induce a more powerful recoil of the blood in the aorta, and will result in a more powerful closing and stretching of the aortic valves than in the case of the normally-acting ventricle. In mitral stenosis, according to this theory, the left ventricle increases its aspiratory power in order to facilitate the entry of blood through the narrowed orifice, and so establish compensation. This is brought about as follows: VII.—In mitral stenosis the left ventricle contracts with greater force than normal in order that the rebound, both muscular and elastic, may be correspondingly increased. (1) An evidence of this is the increased loudness of the first sound which occurs in mitral stenosis. (2) Temporary embarrassment of the circulation is accompanied by an increase, often excessive, in the loudness of the first sound, which lessens again as the circulation improves. (3) This increase in the force of the ventricular contraction is also suggested by the occurrence of the hypertrophy of the left ventricle which is not infrequently noticed in mitral stenosis. VIII.—The left ventricle alters its beat. Its contraction terminates with greater suddenness and force than normal. This concentration of ventricular effort at the termination of the systole has the effect of further increasing the force of the ventricular recoil which immediately follows the systole, lasting as it does only one-tenth of a second. (1) This is the explanation of the sharp and loud end of the first sound which is so characteristic of mitral stenosis. (2) The characteristic cardiographs of mitral stenosis often show a more sudden recession of the heart from the chest wall at the end of the systole than in the normally-beating heart. IX.—As a result of this additional aspiration, the auricle can be relieved of much, if not all, of the additional work which the narrowness of the mitral valve entails. We find very frequently an absence of dilatation of the left auricle in mitral stenosis where compensation was perfect at the time of death. X.—Therefore, in compensated mitral stenosis, if the narrowing be not very excessive, no extra work is thrown upon the right side of the heart, and there is no engorgement of the lungs. (1) As evidence of this, we find the pulmonary second sound of normal loudness, even in cases of severe mitral stenosis. (2) We find that the accentuation of the pulmonary second sound, which is characteristic of failing compensation, gradually lessens as compensation improves. (3) We may find no clinical evidences of pulmonary congestion or engorgement even in severe cases of mitral stenosis. XI.—We may also expect some increase in the loudness of the aortic second sound, apart from that due to increased arterial pressure, because of the increased ventricular aspiration, as suggested in Proposition VI.

Dr. Percy Kidd considered that the subject could not be properly discussed until the paper had been quietly studied.

Dr. F. W. F. Ross said that it was not novel, inasmuch as Dr. Rutherford had given it much attention before 1888. He challenged the views of the author from several points, and asked why dilatation of the ventricle should first cause dilatation of the auricle and then stop that dilatation? And why the latter part of the stream of blood from the auricle to the ventricle should gather momentum?

Dr. Kingston Fowler remarked that Dr. Wilson's views were contrary to those that he himself taught. In the normal heart, whilst the blood was flowing from the auricle through the mitral valve, the curtains of that valve were gradually floated up and came into apposition before the acme of the dilatation occurred, and the first sound arose from the edge of the closed curtain. In mitral stenosis the accentuation of the first sound was produced by the bringing together of the thickened edges of the stenosed orifice, which were facetted from their contact as were gall stones.

Dr. Wilson replied.

[1] *Vide* writer's paper, *Clin. Soc. Trans.*, vol. xxxiv, Case iii.

## OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

David Little, M.D., F.R.C.S.E., President, in the Chair.

### Clinical Evening.

*Thursday, December 12th, 1901.*

### New Growth of Orbit.

Mr. H. Work Dodd showed a peculiar new growth in the orbit. The patient was a woman, aged 39, who was seen in October, 1901, with the history that eleven years ago she had a small growth of the upper lid which in four years had attained the size of a pea. This was then removed. Two years later a lump appeared, and this broke down and healed several times, and had attained the size of a filbert, being situated at the outer side of the orbit. It was adherent to

the bone. The eye was pushed to the nasal side, and there was an enlarged gland in front of the ear. The whole contents of the orbit was removed, and the bone to which it was adherent was scraped. The lachrymal gland was normal. The pathologist's report stated that it was an unusual form of carcinoma allied to rodent ulcer. As much difference of opinion was expressed on the sections, the growth was referred to a pathological committee.

CASES.

MR. HENRY JULER showed the following cases: (1) A congenital case of retinal pigmentation situated towards the periphery of the fundus (2) Peculiar macular changes due to choroido-retinitis. (3) A case of congenital aniridia. In this latter case the mother and daughter were affected. The mother came to Mr. Juler stating that the sight had always been defective, and when seen one eye was quite blind from glaucoma. After removal, it was found on dissection that there was a ring of iris at the extreme periphery which had caused blocking of the angle. The lens was partially opaque. The daughter had come under the care of Mr. R. D. Batten also suffering from glaucoma, and for this he had been induced to do sclerotomy, but it was not successful. He thought it was contrary to what one would expect that an eye without an iris should have glaucoma. Mr. DEVEREUX MARSHALL stated that he had seen several cases of this sort, and he never remembered seeing one who did not have glaucoma. This was due to the fact that the stump of iris which was always found present was sufficient to block the angle, and this narrow ring was quite sufficient to produce the disease. Mr. TREACHER COLLINS had examined several cases, and had shown that they were specially liable to chronic glaucoma. —Mr. TREACHER COLLINS showed a child with congenital thickenings of the conjunctiva, opacities of the cornea, and a notch in the left lower lid in the vicinity of the outer canthus.—Mr. G. BROOKSBANK JAMES showed 3 cases of infantile tabes due to congenital syphilis. They were all members of the same family, and showed Argyll-Robertson pupils and other symptoms of tabes. There was, however, no atrophy of the discs, and the fields were normal. He also showed a case of occlusion of the four lachrymal puncta, probably congenital. There was epiphora with dacryocystitis and for this he had opened one of the occluded lower puncta.—Mr. J. B. LAWFORD showed an unusual case of choroido-retinitis in a subject of hereditary syphilis.—Mr G. W. ROLL showed a case of localised fundus changes, probably of traumatic origin. The eye was injured in May last by being struck with a piece of iron. Two months later definite fundus changes were present. A foreign body was localised in or just in front of the sclerotic. There was seen to be a patch of atrophy close above the macula with pigmentary changes around it. He thought the foreign body, which was 3 mm. long, had entered through the cornea, iris, and suspensory ligament as the lens was clear. Mr. ORMOND mentioned a similar case he had had in which after ten days no wound was visible, although it was easily seen immediately after the injury. Mr. DOYNE said there was a black mark at the back of the lens which possibly was a scar. Mr. LANG mentioned a similar case he had watched for two years without deterioration of vision, and in the present case as everything was quiet he should be inclined to leave it alone.—Mr. J. H. FISHER showed a case of Mooren's ulcer of the cornea.—Mr. L. V. CARGILL showed a woman, aged 22, whose sight had been gradually failing for about a year. The family history was good. Two years ago she suffered much from headache, and when first seen she was very anæmic, but an examination of the blood and urine showed nothing abnormal. The vision was $\frac{6}{9}$ and J 14. The changes consisted of numerous greyish yellow spots in the choroid. There were no vitreous opacities and the vessels of the fundus showed nothing but perhaps slight dilatation.—Mr. N. BISHOP HARMAN showed a patient with a badly developed eye with ciliary processes adherent to the anterior surface of a shrunken cataractous lens. This was congenital. Mr. FISHER said that about three years ago he had seen an almost identical case.—Mr. HARMAN also showed a simple and efficient portable refractometer.

## LIVERPOOL MEDICAL INSTITUTION.

EDGAR A. BROWNE, F.R.C.S.E., President, in the Chair.

*Thursday, December 5th, 1901.*

CASES.

MR. ROBERT JONES showed two cases of congenital elevation of the scapula, and stated that the condition was first described by Springel in 1890, and was known as "Springel's deformity." It consisted of an elevation of the scapula above the level of its fellow, accompanied by rotation, approximating the lower angle to the middle line, with limitation of scapular and humeral motion, and sometimes with a slight curvature of the spine. The etiology of the affection was doubtful, but the probability was in favour of constrained fœtal position.

CASE I.—A boy, aged 5 years. The deformity was noticed when he was vaccinated at three months old. The child is weird-looking, walks with a stoop, and carries his head slightly bent to the left side. The left shoulder is raised 2 inches above the right. The distance of the inferior angle of the scapula to the spinous process of the vertebra is $1\frac{1}{2}$ inch; on the right side $2\frac{1}{2}$ inches. The left superior angle three-quarters of an inch from the spine; the right 2 inches. The scapula is therefore rotated; the length of the posterior border of the left scapula is 4 inches, and the right 5 inches; from the left acromion to the episternal notch $3\frac{3}{4}$ inches, the right 4 inches. The arms are of equal length; the dorsal spine is slightly curved, the convexity pointing backwards. There is a marked limitation in the movement of the scapula. Rotation of the arm is normal. Abduction and adduction are limited. The trapezius muscle is contracted and tight. No exostosis can be felt, and no articulation with rib or spinous process.

CASE II.—A girl, aged 7. The left scapula is displaced upwards, its lower angle touches the fifth rib, whereas the right touches the seventh rib. The movements of the shoulder are limited, so that the arm only comes up to a right angle without movement of the scapula; she cannot place the hand at the back of the neck. The right scapula, as shown by the radiograph, is normal in site and structure. The left, or displaced bone, has the axillary border shorter and more curved than that on the opposite side. The posterior border consists of an upper portion, with which the extraneous portion of bone articulates, and a lower portion which is nearly straight. At the junction of these two portions there is a distinct projecting angle. The abnormal portion of bone is triangular, its outer border articulating with the upper portion of the posterior border of the scapula, and its inner angle with a spinous process of the cervical vertebra. The extraneous portion of bone was removed in order to increase the range of scapular movement, and proved successful. Examined three years later the patient has much improved, and stands with shoulders square. There is a projection of the upper and inner angle of the scapula, and this still blocks somewhat the movement of placing the hand behind the back of the neck. The deformity was noticed a month after birth.

Mr. Jones also showed a case of congenital dislocation of the shoulder, and remarked on the literature, stating that cases described might be grouped into those due to faulty development and those due to injury during birth.

The patient, aged 9, showed the head of the humerus displaced backwards under the acromion, and rotated inwards so that the rounded portion was felt posteriorly. On pressing in front the inner margin of the glenoid cavity is felt. The condyles of the humerus point anteroposteriorly as the arm falls by the side. Measurements: Length of post-border of left scapula, 5 in.; ditto to right, $4\frac{1}{2}$ in.; from angle of scapula to left acromion, 6 in.; ditto of right, $5\frac{1}{2}$ in.; post-border of left scapula, $5\frac{1}{4}$ in.; ditto of right, $4\frac{1}{2}$ in.; the arm measurement from apex of right acromion to external condyle, $7\frac{3}{4}$ in.; ditto from left acromion, 9 in. There is an elevation of scapula, and on fixing it the humerus can be slightly abducted, but not adducted. The range of scapular movement is increased, so that in spite of humeral fixation the boy can place his hand both behind his head and behind his back. Radiograph shows the glenoid thickened, not due to exostosis but to the new socket formed on its posterior aspect. The head of the humerus smaller than its fellow, the shaft attenuated.

Mr. Jones classed the case amongst the co-natal traumatic displacements, and as to treatment trusted to stretching exercises.

Dr. W. B. WARRINGTON brought forward two cases. (1) Acute pneumonia characterised by long duration and intermittent type of pyrexia, the crisis not occurring until the nineteenth day. This condition suggested that the case might be an acute phthisis beginning with acute pneumonia. Symptoms were profuse sweating, progressive emaciation and hæmorrhage. The subsequent course of the disease showed that he had to deal with a migrating pneumonia, possibly of influenzal origin. (2) Acquired hydrocephalus in a man aged 35. The patient for eight months showed signs of cerebral tumour, namely, marked optic neuritis, with headache and some vomiting, tremors in the tongue, slight exophthalmos, of one eye and weakness in the legs. His mental faculties became markedly impaired, and he gradually passed into a comatose condition. At the necropsy dilatation of the lateral ventricles was the only gross lesion found, the microscope showed inflammatory thickening of the ependyma of the fourth ventricle. The nature and diagnosis of such cases was briefly discussed.

Dr. T. R. GLYNN briefly remarked upon the second case, and related a case similar to this in which there was marked optic neuritis, headache, reeling gait, staggers, etc., and a diagnosis of cerebellar tumour made. The patient was trephined over the cerebellum, no tumour was found, but some cerebro-spinal fluid escaped after opening the ventricle and the patient recovered. Such cases explained those cases of apparent cerebral tumour that recovered.

Mr. DAMER HARRISSON related a similar case of relief of symptoms after opening the lateral ventricle.

Mr. RUSHTON PARKER read a note on a series of fourteen foreign bodies, various in nature and locality. The cases were, with one exception, from his own practice.

(1) Wooden splinter over $2\frac{1}{2}$ inches long and from a quarter to half an inch wide and thick, embedded in the pterygo-maxillary region of a man, where it was broken off a bundle of swinging boards that struck him in the right lower eyelid. The object was thought to be loose bone, and was withdrawn after a few weeks (early in 1878). (2) Piece of a sailor's knife blade $2\frac{1}{2}$ inches long and three-quarters of an inch wide, broken off in the left pterygo-maxillary region of a man stabbed in New York. The object was removed fourteen days later at the Liverpool Northern Hospital by Mr. Puzey (in 1879). (3) Gun-breech and screw bolt, forced by the bursting of a fowling piece into the middle of the owner's face, and lodging five years in the nose. Removed through an incision under the upper lip on December 20th, 1882. The objects weighed $\frac{1}{2}$ ozs., measuring 3 by $1\frac{1}{2}$ by 1 inches. (4) Piece of parasol rib 3 inches long, broken off in a woman's forearm: removed after twelve days. (5 and 6) Cases in which a

bullet was displayed by radiography, and removed from subcutaneous regions of the leg and hand respectively in boys. (7) Radiographs of small bullet flattened against the lower end of the radius in a young man, and when seen two days after the accident the wound was healed, and the bullet was left alone: and seen five years later has caused no inconvenience, and was radiographed again. (8) Radiograph of leaden pellet from an air gun, between the metacarpal bones; removed a fortnight later, as it caused annoyance, and apparently pressed on a nerve. (9) Photo of a piece of red rubber catheter, over 3 inches long, encrusted with phosphatic calculus from the bladder of a man, aged 71. Calculus crushed and evacuated: catheter removed by lithotrite. (10) Photo of silver tooth plate, 2 by 1½ inches, extracted from the pharynx of a man, aged 36, after nine hours. (11) Photo of tooth plates, vulcanite and metal, with attachment hooks, 2 inches by 1 inch by 1 inch, swallowed, and removed eight days later by œsophagotomy with success. (12) Iron staple, 1 inch long 1 inch wide, swallowed by a boy, radiographed, and shown lying in the pelvis three days later, and passed *per anum* next day. (13) A piece of turned oak, 7 by ⅝ by ⅝ inches, known as a "knitting sheath," removed from the rectum of a man, aged 70, after a fortnight. No harm resulted. (14) Radiographs of the ankle of a girl, aged 15, showing a piece of glass broken off a strip of window glass 1 inch long, more than ⅝ inch wide, less than ⅛ inch thick. The object had been there five years, causing slight but very persistent disability of the ankle-joint. It was removed with an end to all trouble. A radiograph was shown of the parts after removal of the glass and its shadow.

Drs. and Messrs. Damer Harrisson, Alexander, Hill, and Briggs related instances of other foreign bodies, and commented upon some of Mr. Parker's series.

# REVIEWS.

## BOOKS OF THE SEASON.

*The End of an Epoch*[1] is a clever book, if gruesome. The name on the title page is "A Lincoln Green," but it conceals, we are told, that of an English medical man whose scientific work is known to physiologists. Otherwise we might have supposed that it was a kind of antivivisection pamphlet writ large. The idea of the book is hideous enough. A German bacteriologist of Jewish extraction has discovered a bacillus paradoxus pathogenic to man only, which after an incubation period of six days produces coma or delirium and death in a few hours. By an accident, not very ingeniously imagined, a huge quantity of the spores of this bacillus get loose at Epsom on a Derby Day. The bacteriologist has discovered an antitoxin, but has inoculated with it only one person, a young English bacteriologist, before the accident. The German goes mad immediately after the accident, and six days later the pestilence begins. In a few weeks England and apparently all Europe and America are depopulated. Only the young Englishman and the very old who are immune escape. So far the author does very well, and describes the pestilence and the blind fear and fury of the populace vividly enough, but having got his stage quite clear he is evidently embarrassed by its vastness. The hero gives himself up to trying to keep a colony of old people alive in the Charterhouse, and there is much imagination and good description in the story of the sayings and doings of these callous old folk. Something also is made of the return of domesticated animals to a feral condition, and there is a good description of a pack of buckhounds chasing a thoroughbred stallion into St. Paul's Churchyard and being beaten off by a phalanx of bulldogs. But really to develop the situation the author wants more room, as much as an eighteenth-century romancer would have given himself. As it is, he has to hurry on to the ending which is to bring an Eve to the Adam of this childless world to be inoculated with some newly-made antitoxin. There the matter ends at the threshold of what ought to have been the most interesting part of the story, but one which would have stretched the author's ingenuity to the uttermost, the repeopling of the world. This is perhaps a somewhat ungrateful criticism, for he has shown a great deal of ingenuity, much knowledge, and no little imagination.

Dr. W. H. Fitchett is an imperialist of the imperialists, and is already well known as a writer of popular histories of the building of the British Empire. His last volume, *The Tale of the Great Mutiny*,[2] tells briefly the story of that wonderful time when a handful of men stood against thousands, when men, unknown before beyond a narrow circle, leaped to imperishable fame in a few weeks. When we remember some of the "regrettable incidents" of the last few years, we may well think that such a book as this will give better ideals of courage and tenacity than some more recent history. In particular let us see whether such a piece of heroic self-sacrifice as that of Willoughby and his nine men in the powder magazine at Delhi will not appeal to them more that the prospect of a piano and a cooking range. Delhi, Cawnpore, and Lucknow occupy much of the volume, and in the description of the memorable siege of the last-named place, many references are made to the organisation of Dr. Fayrer's house. It is pleasant to think that Sir Joseph Fayrer still lives—and may yet live we hope many a day—an honoured member of our own profession. The volume is suitably illustrated by portraits and maps.

Experienced readers of Mrs. Frances Hodgson Burnett's always charming stories will know what to expect from *The Making of a Marchioness*,[3] if it be described, as it briefly may be, as a study of an English lady, poor but of good birth, who has to earn her living as "useful companion" and general utility woman to many fashionable women, some of whom are snobs and most of whom are inconsiderate. That she finally marries the marquis is, of course, only the proper reward of virtue, but that she afterwards barely escapes murder by the Indian servant of the disappointed heir presumptive is an unwonted touch of melodrama. The reader who quarrels with the plot will, however, be ungrateful, for Mrs. Burnett's book could be read and enjoyed if there were no plot, for her writing possesses the indefinable quality of charm.

In *Carbineer and Scout*[4] E. Harcourt Burrage has told a story of a kind popular with writers of books for boys this year, and this particular one will, we believe, prove popular also with their clients. It is a tale of two English boys who found their way to Johannesburg just before the war. They are sent down in one of the crowded trains in which the expelled Britishers were sent to Durban, and first join the ambulance corps, with which they see the fight of Talana. Afterwards they join the Natal Carbineers, and are shut up in Ladysmith. One of them gets through with despatches to Buller, and the other is taken prisoner by the Boers so that an opportunity is given to describe the incidents of the Natal campaign from both sides. We observe that writers of stories about this war appear all disposed to settle their heroes on the soil.

The occasional occurrence of cases of so-called double consciousness has been described by more than one scientific writer, chiefly, however, in France; and there is no reason why the condition should not again be used by the romancer. In *A Friend with the Countersign*,[5] the author, B. K. Benson, has imagined a very different environment for the victim. That a person so afflicted being engaged in the War of Secession in America, and passing one phase of consciousness as a Northerner, and the other as a Southerner, should find himself in very awkward predicaments, is to be expected. By the care of a wise doctor, who acts as *Deus ex machinâ* at important moments, however, he escapes the fate which seems to await him. The book is one which may be strongly recommended for boys, who will gather a certain amount of historical information on the way.

To those who know Mr. Frank Bullen's writings there will be no need to give the advice to read the collection of stories from the sea to which he has given the title *Deep-Sea Plunderings*.[6] Most of them have appeared before in magazines or newspapers, but to many all, and to all some will be new. Most of them have something of the melancholy of the sea, but Mr. Bullen seems to have caught more of the true spirit of the seafaring life than any modern writer with whom we are acquainted. It is the romance of the sea, but with a difference.

Mr. Stephen Gwynn is one of the apostles of the Celtic

[1] Edinburgh and London: W. Blackwood and Sons. 1901. Cr. 8vo, pp. 390. 6s.
[2] London: Smith, Elder and Co. 1901. Cr. 8vo, pp. 392. 6s.
[3] London: Smith Elder and Co. 1901. 8vo, pp. 352. 6s.
[4] London: Blackie and Son. Pp. 240. 2s. 6d.
[5] New York: The Macmillan Company. London: Macmillan and Co. 1901. 8vo, pp. 460. 6s.
[6] London: Smith Elder and Co. 1901. Cr. 8vo, 362. 6s.

revival, but we are not sure that his new volume will much advance the cause. *The Old Knowledge*[7] is a story of Donegal in the present day, and of the doings of an English girl there. The central person of the book is a peasant possessing the true sombre Celtic imagination to a high degree, overlaid and intensified by a faculty of seeing visions, and a certain crude superstition. "The old knowledge" is the rather inapt term for the folk beliefs of the peasantry, which when treated as in some sort realities have a curious air of crudeness in the hard light of to-day. A more sympathetic and serious treatment would appeal more to those who have a genuine appreciation of the singular beauty of many of the beliefs and legends which still influence many lives not in Donegal alone.

*St. Nazarius*,[8] by Mrs. FARQUHARSON, is a character study of two boys, in the course of which their careers are traced from early youth to manhood. They are of differing temperaments, the religious and the artistic, and the contrast is well worked out, so that the story, though it contains few incidents, seems inevitable in its course. The scene is laid in Germany, and the descriptions of forest scenery lend local colour to the book. It is well written and leaves altogether a most agreeable impression on the memory.

*Count Hannibal*[9] is a story of the massacre of St. Bartholomew's, but its real theme is, "None but the brave deserve the fair." The hero, Count Hannibal de Tavannes, is unquestionably brave, but he is needlessly truculent, and his speech and acts sometimes come perilously near to melodrama. The real interest of the story lies in the subtle transformation of the heroine's feelings towards the man who, as the price of her lover's safety, has forced her to marry him from horror to love. Mr. STANLEY WEYMAN'S books are always wholesome in tone, and *Count Hannibal* may be warmly commended to all lovers of stirring tales of fighting with a thread of love interest running through the web of the plot.

*The Tory Lover*[10] is an excellent story, also full of love and adventure, and written in a thoroughly healthy tone. The period is the time of the American Revolution, and the redoubtable Paul Jones plays a leading part in the tale. The reader is also introduced to Benjamin Franklin, but there is not enough of that highly respectable person to bore the most intolerant of wise saws. The story is written altogether from the American point of view, but the most patriotic Briton can read it with pleasure without having his susceptibilities ruffled. After all, Paul Jones was by birth a Briton, and at this time of day we can almost be proud of him.

In *Richard Halpin*[11] Mr. MORGAN ROBERTSON gives a picture of the American navy from within. It may therefore be read with instruction by adults thirsting for information on that subject. To boys it will be attractive by the very large part which the science and art of fisticuffs play in the story. The period is that of the recent war with Spain, and the hero, who rises from the rank of common sailor to that of a commissioned officer, has many exciting experiences before he wins the hand of the girl on whom he has set his heart when they were at school together.

*Under the Great Bear*[12] is a thrilling tale of mining exploration in Newfoundland and Labrador, with collisions with icebergs, shipwrecks, fights with treacherous Indians, timely deliverances by the intervention of a terrible "man wolf" apparently armed with lightning, and hairbreadth 'scapes of many kinds. The "man wolf" turns out to be a shipwrecked electrician, who, having lost his wife, had determined to cut himself adrift from his fellow men. He accordingly buried himself in a cave, which his inventiveness soon turned into an electrical laboratory. By various applications of electricity he was able to produce manifestations which gained for him a reputation of being something more than human, and thus protected him both from the indiscreet curiosity of civilised men and the attacks of unfriendly natives. The book is intended to blend instruction with amusement, and on the whole successfully fulfils its purpose, although occasionally it becomes rather oppressively didactic. For boys with a turn for science it will be a feast of nectared sweets.

In *Longfeather the Peacemaker*[13] the same author tells the story of the colonisation of New England, and attempts to explain how the white man was allowed by the Indians to invade a territory from which he could easily have been kept out. The friends of our youth, the noble Redskins, are shown in a somewhat novel light. The tale, though not intended as history, sets forth a historical theory, in which the wampum belt, on which were pictured the distinguishing totems of seven leading New England clans, plays a prominent part. The book, while containing a sufficient amount of adventure to interest boys, may be read with pleasure by their elders.

*Despair's Last Journey*[14] is a gloomy and not altogether intelligible record of the progress of a poetic but decidedly wayward soul from the sordid surroundings of a poor home, through bitter struggles in London, to the position of a successful dramatist. He gets entangled with various women, matrimonially and otherwise, and finally comes to grief. But we gather that in the end he finds salvation by repentance. The main interest of the book is intended to be psychological. The tale is described by the hero himself as the "autobiography of an ass," and we are inclined to accept the description, with the gloss that the ass in question is of an extremely morbid disposition. There is some good characterisation, and some of the descriptions of what may be called the inner life of the stage remind us somewhat of the account of the doings of Mr. Crummles and his company in *Nicholas Nickelby*. It should be stated that in this book Mr. Christie Murray does not write *virginibus puerisque*.

*Dumb*[15] is a slight variation on the theme so dear to lady writers of fiction. A winsome but wilful maiden marries the wrong man to please her grandmother, and flirts with the right one—the common Lothario type who passes for a hero among women—to please herself. The husband, when his eyes are accidentally opened to the situation, obligingly takes himself out of the way by cutting the rope by which he is suspended over an Alpine precipice. By this act he saves not only his wife but her lover. The latter is dismissed by the momentarily penitent lady with words of undeserved insult, but marries her in the end when he returns covered with glory from Indian battlefields. It is all very banal, and the want of interest of the story is not redeemed by any brilliancy of style. Here and there, however, it is lit up with transient flashes of keen observation and pregnant epigram.

*Only a Nigger*[16] is a romantic story of an Englishman who had got into the toils of an Italian secret society, whose agents pursue him to India. The plot turns on the devices for his deliverance employed by an old college friend, a Hindu doctor named Ashutor. By means of Indian drugs Ashutor manages to make his friend apparently die a natural death at sea, and he is buried in the deep, so that all trace of him is lost. Later, however, the Englishman's identity is revealed by his own imprudence, and his relentless enemies finally track him down in America. It seems impossible for him to escape his fate, but here again Ashutor, who has followed him across the Atlantic, finally rids him of his pursuers. The motive of the Hindu physician is not altogether disinterested friendship, but is largely love for the sister of the Englishman's wife. The racial difficulty proves a barrier, and although Ashutor's self-sacrificing devotion at last wins the girl's love, he for no obvious reason decides that the situation calls for his absorption into the infinite. Here again his knowledge of drugs

[7] London: Macmillan and Co. 1901. Cr. 8vo, 310. 6s.
[8] London: Macmillan and Co 1901. 8vo, pp. 318. 6s.
[9] *Count Hannibal*: a Romance of the Court of France. Stanley T. Weyman. Smith, Elder, and Co. 6s.
[10] *The Tory Lover*. By Sarah Orne Jewett. With a frontispiece. Smith, Elder, and Co. 6s.
[11] *Richard Halpin*: a Romance of the New Navy. By Morgan Robertson. Smith Elder and Co. 6s.
[12] *Under the Great Bear*. By Kirk Munroe. Illustrated by Howard Giles. Cassell and Co. 3s. 6d.
[13] *Longfeather the Peacemaker, or the Belt of Seven Totems*. By Kirk Munroe. Illustrated by Emlen McConnell. George Newnes. 3s. 6d.
[14] *Despair's Last Journey*. By David Christie Murray. Chatto and Windus. 6s.
[15] *Dumb*. By the Hon. Mrs. Walter R. D. Forbes. Chatto and Windus.
[16] *Only a Nigger*. By Edmund Mitchell. Chatto and Windus. 6s.

proves useful, and he ends his life *cito, tuto, et jucunde*, leaving a large sum of money to the man whom he had so faithfully befriended and the bulk of his fortune to the lady whom he had hopelessly loved. The story is interesting, but is spun out to a somewhat wearisome length and the author is too prone to moralise on insufficient provocation. Ashutor is represented as almost a monster of impossible perfection and knowledge, but the book may serve a good purpose by helping our unimaginative race to realise that a native though "only a nigger," may be a man of character, ability, and attainments which place him on the level of any white man. We cannot, however, accept the selfish and cowardly Earlstone as the typical Englishman any more than Dr. Ashutor is the typical Hindu.

*The House on the Scar*[17] is the tale of a young man whose love ran very unsmoothly indeed. The maiden on whom he had fixed his heart marries another, who turns out to have a past of a picturesque but piratical and generally disreputable character. The innocent young wife soon discovers what manner of man she has married, and takes refuge with her mother. She is, however, kidnapped from that peaceful haven by her husband, who carries her on board his lugger and sails on an indefinite cruise. The faithful lover, who is by way of being an artist, disguises himself, and with the connivance of the ship's cook, who has been heavily bribed, ships on board the vessel in a somewhat nondescript capacity in order to keep secret watch over his lady love. On the cruise her husband tries to drown her by a carefully arranged accident, but she is saved by the lover. Then the husband, who is in financial difficulties, and, generally speaking, under a dark legal cloud, absconds in a boat, taking the disguised lover with him. The boat runs on a rock on the coast of France in a fog, and the husband disappears. Later, to the relief of all concerned, he is killed in the South Seas, but still the persevering lover does not win his bride. The story, although it has plenty of incident, is told in a somewhat disjointed manner, but the book will serve to wile away an odd half hour, and may safely be taken to bed without the risk of a sleepless night.

*Herb of Grace*[18] is a long and somewhat tangled tale of lovers at cross purposes. There are several couples who execute the most complicated *chassez croisez* movements, but settle down comfortably in the end. The characters are good enough in their way, but they all talk too much, and their talk is not exhilarating. One is tempted to say of the book what Johnson said of Richardson's novels, that a man who should read it for the story would hang himself; and there is nothing but the story to read it for. In the case of a lady writer's work, it may not be superfluous to state that it does not deal with "the problem," and that it may safely be commended to the primmest of maiden aunts.

The interest of *Mrs. Pederson's Niece*[19] turns largely on the blindness of the hero. He goes to Germany to be operated upon by a living specialist whose name is several times mentioned as if, unlike ordinary mortals, or at any rate British ophthalmologists, it were in him to command success. Nevertheless the infallible one fails, but as his failure is the means of awakening in the heart of the heroine the love which the hero longed for, in one sense it was better than success. An interesting episode in the book is the breakdown of a young lady student of medicine from overwork. Napoleon used to carry with him on his campaign a travelling library of novels which he threw away after skimming them through, thus marking his route through Europe as if he had been engaged in a gigantic paper chase. A famous physician of our day also reads novels in his carriage which he tears up as he goes along. For such a purpose *Mrs. Pederson's Niece* may honestly be recommended.

*Tom and Some Other Girls*[20] is the story of a girl who after being spoilt at home is sent to a girl's school conducted on the lines of a boy's public school. Here she goes through the unpleasant experience of being broken in to the wholesome discipline of school life, meeting with various misadventures in the process. She comes through the ordeal successfully and all ends happily. A large part in the disciplinary process is played by the head girl of the school, whose nickname "Tom" gives the title to the book. The book will be amusing to girls and may safely be recommended for their reading, as it has none of the sickly sentimentalism which so often makes books intended for the rising female generation either unwholesome or unreadable.

*The Sinner and the Problem*[21] is not so formidably psychological as its title might be taken to imply. The "Sinner" is a schoolboy and the "Problem" is another, and both are as little sinful or problematic as it is possible to conceive. The book, in fact, is a delightful sketch of healthy boy life, with a background of curious types of the boys' natural enemies, the masters. The "eternal feminine" is also present in a very charming form. The plot—if plot it can be called—is so gossamerlike in texture that an attempt to summarise it would be like dissecting a butterfly's wing. We heartily commend the book to our readers as a dainty piece of literary art full of a delicate humour which *circum præcordia ludit*.

*The Boy's Odyssey*,[22] which, as stated in the preface, "was inspired by and is partly founded on" Butcher and Lang's translation, forms an admirable introduction to the knowledge of the old bard who, though blind, saw so much in "the light that never was on land or sea." Nothing could be better calculated to arouse an interest in Greek literature in the mind of the young reader. The book is beautifully illustrated by Mr. Jacomb Hood.

*The Wood Pigeons and Mary*[23] is an "animal story" exquisitely told and pointing an unobtrusive moral. Mary, who lives in London, makes friends with two wood pigeons—the Cooies—who have for some years built in the trees in the square and learns to understand their language. They desert the city, leaving Mary heartbroken, till an invitation from her godmother, who lives on the borders of Levin Forest, brings joy to her life again, for there she finds her "Cooies." She is taken to their fairylike meeting place and is allowed to compete for a prize to be given by the Queen White Dove to the one who produces the whitest feather. Mary's cousin sends her a feather picked up in mid-ocean, which is adjudged the whitest, and she is told that if she can keep it spotless for one week she shall have the prize. Unfortunately she soils it on the last day by getting impatient with a maid, but, nevertheless, she goes to the meeting place; and as she hands the feather in, confessing that she has soiled it, a flake of snow falls on the spot and obliterates it, as the tear of the angel blotted out the record of My Uncle Toby's oath. The Queen declares that the snow fairies have taken Mary into favour. The prize is awarded to her, and when she returns to her own folk, she receives it in the form of a wonderful gold chain found in a drawer by her godmother. The story cannot fail to delight children, and "grown-ups" who can appreciate a tender and beautiful creation of fancy will be fascinated by the book.

*The Would-be Goods*[24] tells of the adventures of the denizens of the Barnstables nursery, and two little friends who get into trouble by attempting to reproduce in the back garden the jungle life as pourtrayed by Mr. Rudyard Kipling. With the object of avoiding further misadventures they form themselves into a Society of Would-be-Goods at the instigation of two of the girls who draw up a code of rules. These rules, which were intended to promote the practice of virtue, are mitigated by amendments introduced by two of the boys, whose theory of life is that "being good is to be a muff generally." The Society, like others founded for equally praise-

[17] *The House on the Scar*: a tale of South Devon. By Bertha Thomas. Chatto and Windus. 6s.

[18] *Herb of Grace*. By Rosa Nouchette Carey. Macmillan. 6s.

[19] *Mrs. Pederson's Niece*. By Isabel Sturt Robson. 8 illustrations. Cassell and Co. 3s. 6d.

[20] *Tom and Some Other Girls*, a public school story by Jessie Manserg. Eight full-page original illustrations by Percy Tarrant. Cassell and Co. 3s. 6d.

[21] *The Sinner and the Problem*. By Eric Parker. Macmillan and Co. 6s.

[22] *The Boy's Odyssey*, by Walter Copland Perry. Illustrated by Jacomb Hood. Macmillan. 6s.

[23] *The Wood Pigeons and Mary*, by Mrs. Molesworth. Macmillan and Co. 4s. 6d.

[24] *The Would-be Goods*: being the Further Adventures of the Treasure Seekers. By E. Nesbit. T. Fisher Unwin.

worthy objects, is led astray from its initial purpose. Its members remind us of the man of whom Boswell tells who tried to be a philosopher but failed because "cheerfulness was always breaking in." The cheerfulness of children is for the most part what their elders call mischief, and in this sense cheerfulness is constantly breaking in on the society of Would-be-Goods. How they get into all kinds of scrapes and how they get out of them is delightfully related by E. Nesbit. The book is well got up and excellently illustrated, and will, we are sure, prove a most acceptable addition to the library of all well-regulated nurseries.

Mr. R. KEARTON, F.Z.S., has written under the title *Strange Adventures in Dicky-Bird Land*,[25] a series of animal stories adapted for very young children, and they are illustrated by a large number of photographs of many birds and of a few animals taken direct from Nature by Cherry Kearton. The photographs form the most interesting part of the book, and they are as good as Mr. Kearton has led us to expect in his previous work.

*The Animal Book*,[26] by Fred Smith, is a collection of short accounts of some thirty animals, wild and domestic, written in a style suitable for young children. It contains a coloured frontispiece and 34 full page illustrations by F. Specht; these, for the most part, represent the animals in their natural environment and on the whole show a considerable advance upon what was allowed to pass muster for such books a few years ago.

*Queen Mab's Fairy Realm*[27] is a collection of fairy tales, six translated from German, two from French, one from Spanish, and six apparently original. There is an effective coloured frontispiece by Richard Savage, and a number of black and white drawings by H. Cole, A. Garth-Jones, H. R. Millar, and A. Rackham. The book is very prettily got up and would make a charming present.

### NURSERY RHYMES.

Of illustrated books of rhymes, *Old King Cole's Book of Nursery Rhymes*[28] and *The Olde Irishe Rimes by Brian O'Linn*,[29] by S. ROSAMOND PRAEGER, deserve a special word of praise. The former contains 24 full-page coloured illustrations by Mr. Bram Shaw. All are admirable, but if we had to choose among them, our verdict would be given in favour of the Three Wise Men of Gotham, the complacent fatuity of whose countenances is somehow suggestive of a certain type of local authority; and Goosey, Goosey Gander, in which the fussiness of that sapient fowl as it enters my lady's chamber might almost indicate that it was a Scotch sanitary inspector. The adventures of Brian O'Linn and his old grey mare are depicted with admirable humour; in the final catastrophe, when the bridge breaks and they all fall in, the look of solemn remonstrance on the mare's face as she hears Brian O'Linn's optimistic assurance that they will find ground at the bottom is enough to move a dyspeptic statistician to laughter.

*Nonsense, Nonsense!*[30] is a very good book of nonsense rhymes for small children, written by WALTER JERROLD. The illustrations by Chas. Robinson, drawn in outline with bright colour washes, form the most important part of the book and are very effective.

A picture book of a different kind is *Britannia's Bulwarks*,[31] in which the achievements of our seamen and the honours of our ships are set forth in most attractive guise. The book is edited by Commander CHARLES N. ROBINSON, R.N., and contains forty-eight excellently executed large illustrations in colours by Charles Dixon, R.I., and in monochrome by C. T. Staniland, R.I. For fostering the feeling of patriotism in the citizens of the future and this we hold should be a leading motive of books intended for boys—we know of nothing better than this splendid representation of "Britannia's bulwarks."

### MAGAZINES AND ANNUALS.

*Cassell's Family Magazine*[32] contains stories by Kipling, who contributes "Kim;" Max Pemberton, S. R. Crockett, Halliwell Cutcliffe, W. Pett Ridge, Robert Barr, Stephen Crane, T. W. Speight, John Strange Winter, Marie A. Belloc, and G. Manville Fenn. In addition to the stories, there is much other matter likely to be interesting and instructive to the young readers for whom the periodical is intended. This yearly volume of the favourite magazine well maintains the high reputation gained for it by its predecessors.

The annual volumes of other periodicals issued by Messrs. Cassell and Co., *Little Folks*[33] *Bo-Peep*, *Tiny Tots*, *Chums* and the *Quiver*, are also up to the high standard to which those of previous years have accustomed us.

*Little Folks* contains six coloured illustrations and stories by Edward S. Ellis, Mrs. Edwin Hohler, E. S. Bucheim, Margaret Watson, Winifred Fenn, and others.

*Bo-Peep*[34] contains rhymes, illustrated stories, little tales in simple verse and other matter making it a veritable treasury for the little ones.

*Tiny Tots*[35] contains numerous delightful pictures of animals, particularly on the birds species, which cannot fail to amuse young children, with little tales well adapted to their intelligence.

*Chums*[36] is as usual full of matter of the most varied kind, all interesting to boys. It is profusely and excellently illustrated, the coloured plates in particular being very attractive. There could be no better present for a nursery or a children's ward.

The *Quiver*[37] is too well known to need either description or praise at our hands. The present annual volume, which contains contributions by the Bishop of Ripon, Bishop of Albany (U.S.A.), "Ian Maclaren," the Dean of Norwich, John K. Leys, Rev. Mark Guy Pearse, Sir Lewis Morris, and others, shows no falling off from the high level attained by this popular magazine.

The *Captain*[38] contains Tales of the Trenches (South Africa) by John Mackie, and stories by G. A. Henty and others. There is an "Athletic Corner" conducted by C. B. Fry, and a "Cycling Corner" by Haydon Perry. The tone is thoroughly healthy.

What Mr. LOUIS WAIN does not know about cats is not worth knowing, and his skill in portraying them in every phase of possible and impossible existence has in it something of the uncanniness of the graceful creature which he loves to draw. In addition to 55 full-page illustrations, *Louis Wain's Annual*[39] contains stories and other contributions by Sir William Ingram, Lady Decies, Lady Bancroft, T. P. O'Connor, M.P., J. MacWhirter, R.A., Justin MacCarthy, Frank Bullen, and many others.

The contents of the December number of the *English Illustrated Magazine*,[40] which is now published by Mr. Fisher Unwin, are varied and interesting. There are contributions by John Oliver Hobbes, Mrs. Archibald Little, Mary Robinson, Harry Furniss, G. B. Burgin, Louis Becke, and others, with numerous well-executed illustrations.

*Pear's Annual* for 1901 contains a stirring story of "Merrie England" by G. R. Sims. There are three large coloured pictures: Witchery (by Adolphe Piot), The Coming Nelson (by Fred Morgan), Little "Bobs" (by Edgar Bundy, R.I.), and twenty-two illustrations by Frank Dadd, R.I.

*The Gentleman's Annual*[41] contains a complete novel,

[25] London: Cassell and Co. Cr. 8vo. pp. 208. 3s. 6d.
[26] London, Glasgow, and Dublin: Blackie and Son. 4to. pp. 96. 2s. 6d.
[27] London: George Newnes, Limited. Cr. 8vo. pp. 310.
[28] *Old King Cole's Book of Nursery Rhymes.* By S. Rosamond Praeger. Macmillan and Co.
[29] *The Olde Irishe Rimes of Brian O'Linn.* By S. Rosamond Praeger. Macmillan and Co.
[30] London: Blackie and Son. 1902. Qrto. 6s.
[31] *Britannia's Bulwarks.* George Newnes. 10s. 6d.
[32] *Cassell's Family Magazine.* Yearly volume. 8s.
[33] *Little Folks.* A Magazine for Young People. Cassell and Co. 5s.
[34] *Bo-Peep.* A Treasury for the Little Ones. Cassell and Co. 3s. 6d.
[35] *Tiny Tots.* A Magazine for Very Little Folks. Cassell and Co.
[36] *Chums.* An Illustrated Paper for Boys. Cassell and Co. 8s.
[37] The *Quiver.* Annual Volume for 1901. Cassell and Co. 7s. 6d.
[38] The *Captain.* Volume v. George Newnes. 6s.
[39] *Louis Wain's Annual.* Anthony Treherne and Co. 1s.
[40] *English Illustrated Magazine.* December, 1901. T. Fisher Unwin.
[41] *The Gentleman's Annual* for 1901. Chatto and Windus. 1s.

entitled "As it was Written," by T. W. Speight, which is well worth reading.

DIARIES.

Messrs. John Walker and Co., of Farringdon House, Warwick Lane, E.C., have sent us a number of specimens of the various types of *Diary* which they publish. They vary in size from a desk diary giving an octavo page for each day, to a small volume giving two pages for a week, which slips easily into the waistcoat pocket. They vary in price from 6d. to 17s. 6d. Some are bound for the year's use, others are in loose cases, for which refills can be obtained for future years. A convenient feature of many of the pocket diaries is a loop at the back for carrying a pencil. A good point often forgotten by publishers is that each volume contains a calendar for the following year.

Messrs. Eason and Son, Ltd., Mid-Abbey Street, Dublin, send us a specimen of their "Every Hour" diary for 1902. It is in reality an appointment book, giving room for appointments for every hour from 9 A.M. to 6 P.M. for every day in the year. It can be obtained in paper covers for 1s., and is a convenient book for the consulting-room table. They also supply an index tablet scribbling diary, foolscap size, with the six weekdays on an opening.

*The Dental Surgeons' Daily Diary and Appointment Book* issued by John Bale, Sons, and Danielsson, Ltd. (price 7s. plain, and 8s. 6d. interleaved with ruled or blotting paper), to be obtained also from Claudius Ash and Sons, Ltd., has been in use for a good many years; it shows a working week on an opening, and has room for appointments from 9 A.M. to 5 P.M. It is indexed, and contains information likely to be of use to dental practitioners, including a list of members of the British Dental Association.

*The Royal Navy List and Diary and Naval Handbook* (London: Witherby and Co. 3s. net) contains an ordinary diary giving a page to a day, with memoranda and various short articles especially adapted to the wants of naval officers.

*The Diary and Scientific Handbook* issued by our contemporary *Knowledge* is particularly addressed to amateur astronomers, and the welcome which it received last year has been sufficiently encouraging to induce the publishers to issue a volume for 1902. It contains star maps, showing the night sky for every month, as well as charts of the paths of the principal planets throughout the year. In addition to articles on the observation of comets, meteors, on the telescope, and astronomical notes and tables, the volume contains notes on the microscope, on field botany, and some hints on meteorology. The diary proper gives a page to each day including Sundays.

## NOTES ON BOOKS.

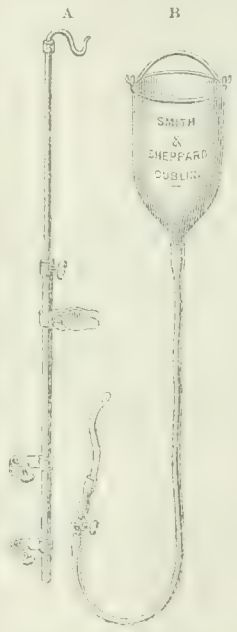
*Wright's Visiting Lists, 1901*; compiled by Robert Simpson, L.R.C.P., L.R.C.S. (Bristol: John Wright and Co. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited), have again been improved, so that the lists may meet the wants of practitioners with few or many patients. Form A is dated for 1902; Form B is not marked for any particular year, but may be commenced at any time and used until filled. Further, Form A issued in six different sizes, No. 1 for 40 patients, No. 2 for 80, No. 3 for 120, No. 4 for 160, No. 5 for 200, and No. 6 for 240 patients. Form B provides for 160 patients for twelve months. The list having been used by large numbers of members of the profession for the past eight years, its excellences are well known. Each volume is printed on stout white paper, with lines ruled alternately in red and blue ink; it is bound in strong leather, and contains two pockets, and a pencil case with a refill of lead. It is so arranged that the name of any patient requires to be written only once each month. Besides the visiting list each volume contains pages for cash receipts, obstetric engagements, and much general information useful to medical men in emergencies and on other occasions. It is said, indeed, to be so compendious as to obviate the need of a daybook; but, we opine, that few practitioners would care to forego the use of that time-honoured tome. The price for Form A, Nos. 1 and 2, is 5s. each; for A, Nos. 3 and 4, and for Form B, 5s. 6d; for A, No. 5, 6s. 6d; and for Form A, No. 6, 7s.

# REPORTS AND ANALYSES
AND
# DESCRIPTIONS OF NEW INVENTIONS,

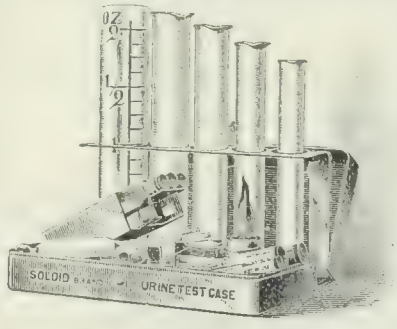
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

## MEDICAL AND SURGICAL APPLIANCES.

*An Aseptic Portable Douche Apparatus.*—Mr. Claude Burgoyne Pasley, L.R.C.P. and S.I. (Cahir, county Tipperary), late House Surgeon and House Physician to the Meath Hospital and the County Dublin Infirmary, finding when working in the poorer parts of Dublin the need of an easily sterilised and portable douche apparatus for use in midwifery practice, has devised an apparatus illustrated in the accompanying drawing. A is made of light but strong bicycle tubing in lengths, which telescope the one within the other. When in use the rod is retained extended by binding screws; at the lower part the rod carries two clamps, by which the whole apparatus can be fastened to the leg of a bed by the screws shown. The douche pan, B, is made of vulcanite indiarubber, kept open at the top by a metal ring. When in use it is slung by its metal handle from the hook at the top of A. At the bottom it has a nozzle, to which is attached a glass and metal tube, which connects it with the douche tube, which is of the ordinary type of "Rotunda" tube. At the middle of the rod, just below the upper opening screw is shown a clip to hold a tumbler, into which the end of the douche tube can be inserted when not in use. The whole apparatus weighs about 4½ lbs. The bucket can be sterilised, and folds into a small space. It gives a fall of about 6 feet, if necessary. It is made by Messrs. Smith and Sheppard, of St. Stephen's Green, Dublin.




*Portable Urine Test Case.*—With the object of facilitating the bedside analysis of urine, Messrs. Burroughs, Wellcome and Co. have made a compact, nickel plated metal case, fitted with the necessary apparatus and material. The case, which can be carried in the pocket, contains, in addition to test tubes and stand, an Esbach's albuminimeter (which of course cannot be used immediately at the bedside), a urinometer, a 2-oz. measure, and a nickel-plated spirit lamp, also test tablets of picric acid, potassium ferrocyanide, the materials for making Fehling's solution, and citric acid. The chemicals of the tablets are stated to be reliable, and of accurate weight, and as they are readily soluble the preparation of the requisite solutions is a simple matter. In a sense, provision has been made for the quantitative estimation of albumin, but the more speedy quantitative analysis of sugar in glycosuria is made possible by observing how much of the urine is required to discharge the blue colour from a definite quantity of the Fehling test solution. The soloid urine test case, as it is called, measures 5¾ in. by 2¾ in. by 1¼ in., and its price, including a card of instructions and a doeskin cover, is 1 guinea.



## GENERAL MEDICAL COUNCIL ELECTION.

ANALYSIS OF THE VOTING.

THE following is the report presented by the Registrar to the meeting of the English Branch Council on December 10th, when the result of the poll of the recent election was declared:

"In reporting the result of the election of direct representatives in England under the Medical Act, 1886, that has taken place this year, it may be well to compare its statistics with those of the elections that occurred in 1896 and 1897.

"The constituency has somewhat increased. In 1896 and 1897 the number of voting papers sent out was almost identical, being 22,577 in the former year and 22,576 in the latter. This year 23,305 papers were issued, showing an increase of 729 over the number for 1897. The number of voting papers returned in proper time in 1896 was 12,227, and in 1897, 13,466. On the present occasion 8 971 were duly returned.

"Expressing this in percentages, 54.2 per cent. were returned in 1896, 59.64 per cent. in 1897, and this year 38.49 per cent.

"As in previous years, a certain number of papers were returned too late to be included in the poll: 126, or 0.5 per cent., of the total were too late in 1896; 227, or 1.01 per cent., were too late in 1897; and this year 208, or 0.89 per cent., were received after the proper time. It is satisfactory to note the increasing correctness of the *Medical Register*, as shown by the number of returned voting papers received through the Dead Letter Office; 1,137 were so returned in 1896; in 1897 the number had sunk to 822, while on the present occasion 779 were received back in this manner. Of these 330 related to practitioners originally registered in Scotland and under the official management of the Scottish Branch, 69 related to practitioners originally registered under the office supervision of the Irish Branch, and 380 related to practitioners originally registered in England and under the supervision of this Branch.

"In classifying these papers it has been noticed that a large number of the voting papers belonging to the English Branch returned through the Dead Letter Office relate to newly-registered practitioners—who apparently gave temporary addresses at the time of registration—or to practitioners who have moved away from addresses advised to the office as recently as this year.

"The 399 returned dead letters relating to the Branches will be sent respectively to Scotland and Ireland to be dealt with as the Branches may think best, while the remaining 380 will form the basis of inquiry and correction by this office. The inaccuracies disclosed by the election have thus sunk from 5 per cent. in 1896 to 3.35 per cent. in 1901.

"Taking now the total of 23,305 voting papers sent out this year, they are accounted for in the following way:

8,971 (or 38.49 per cent.)
were returned by the voters within the proper time according to the regulations;
208 (or 0.90 per cent.)
were returned by the voters, but received at too late a date to be lawfully reckoned in the enumeration;
779 (or 3.34 per cent.)
were returned through the Dead Letter Office; and
13,347 (or 57.27 per cent.)
did not come back in any way.

23,305

"It remains to notice from this table the proportion of electors not taking part in the elections this year as compared with previous occasions:

In 1896, 9,079 papers (or 40.3 per cent.) did not come back in any way.
In 1897, 8,061 (or 35.71 per cent.) did not come back.
While in 1901, 13,347 (or 57.27 per cent.) did not return.

"To give statistics now respecting the gross total of 8,971 papers duly returned this year in proper time:

8,784 represented good votes.
187 were invalidated for the following various reasons:
102 were not signed in any way;
42 were insufficiently signed;
3 were signed, but did not indicate any voting;
13 were improperly marked;
20 were returned unused;
2 gave votes for 3 candidates;
5 represented voters who stated that they declined to vote.

187 total of invalid votes."

The report then gives particulars as to the method of the counting and scrutiny of the votes, the whole being completed in one day.

*England.*

SIR,—I trust you will permit me to thank, through the medium of your columns, all those members of the medical profession who were kind enough to record their votes for me at the recent election. Considering the lateness of the hour when I came forward, and the consequently exceedingly limited opportunities I had of placing my views personally before the electorate, I believe that the number is a record for a candidate's first appearance. I therefore hope that on some future occasion they will again do me the favour of voting for me, and that with their votes as a nucleus I may be able to obtain sufficient new supporters to enable me to devote myself to doing the utmost of which I may be capable in the true interests of the general medical profession.—I am, etc.,

Liverpool, Dec. 15th. CHARLES W. HAYWARD.

*Scotland.*

DR. BRUCE begs to thank the Scottish registered medical practitioners to the number of 975—who by their votes placed him at the top of the poll at the late election. Especially he wishes to express his most grateful thanks to the large number of those who have taken the trouble to personally congratulate him on his victory. Now that the fight is over, he assures the constituency generally of his desire to give his utmost energies towards advancing their interests in so far as it may be in his power to do so during his term of office.

## THE ADMINISTRATION OF THE CONCENTRATION CAMPS.

THE further papers relating to the working of the refugee camps which have been recently published[1] contain information, some of which is very painful reading, while some is of a gratifying character. We do not propose to consider in detail the statistics contained in this report, which carries us to the end of last November. The following table gives sufficient information for an approximately accurate comparative view of the experience of the camps in the Transvaal and the Orange River Colonies:

*Annual Death-rate per 1,000 per annum.*

| During the Month of | Transvaal Camps. | Orange River Camps. |
|---|---|---|
| June ... ... ... ... | 104 | 106 |
| July ... ... ... ... | 203 | 160 |
| August ... ... ... ... | 252 | 236 |
| September ... ... ... | 251 | 291 |
| October ... ... ... ... | 321 | 400 |
| November ... ... ... | 268 | 354 |

The rates it will be noted are annual rates per 1,000 of the total population in the camps—men, women, and children. We have sufficiently emphasised in preceding articles the importance of separate death returns for different age-groups to secure for ourselves freedom from misunderstanding in presenting the above general statement. It suffices to say that no explanation based on anomalies of age and sex distribution of population can convert the above death-rates into anything but phenomenally high rates of mortality. The above table furthermore shows the hollowness of the contention of those, including an actuarial contributor to the columns of the *Times*, who have objected to the statement of monthly deaths in the form of an annual death-rate. A death-rate which stated as an annual rate increased in five months in the Transvaal camps from 104 to 321, and in the Orange River camps from 106 to

[1] *South Africa: Further Papers relating to the Working of the Refugee Camps, etc.* December, 1901. Eyre and Spottiswoode. Price 1s. 1½d.

409 per 1,000 occupants of the camps, justifies its statement in this form.

The first cause for congratulation is that in November there was some decrease in the death-rate, though it still remains phenomenally high, and higher than would occur were a reasonably sanitary environment and sufficient and suitable food provided. A much more pronounced cause for congratulation consists in the important decisions which have been arrived at by Mr. Chamberlain and Lord Milner. There is no doubt that if the measures forecasted in Mr. Chamberlain's telegrams are promptly carried out, great saving of life will follow. The fact that the most important of these telegrams was sent on the afternoon of the day on which the British Medical Journal containing the first article on this subject was circulated in London and extensively quoted in newspapers, may be a mere coincidence, but is so striking that we give here in parallel columns the essential sentences of our own article and of the telegrams which have passed between Mr. Chamberlain and Lord Milner:

*Extracts from Article in* British Medical Journal, *November 9th (issued in London on November 8th).*

The one essential thing is to split up the camps into a number of much smaller camps on new and unpolluted soils.

We have serious doubts as to the efficiency of the sanitary control of the camps. It is due to inefficient sanitary control that a large share of the dysentery and enteric fever in the military camps has occurred, and the statistics give ground for suspecting that similar inefficiency has characterised the control of the concentration camps.

*Telegram from Mr. Chamberlain to Lord Milner (sent 4.25 P.M., November 8th, 1901).*

Please consider whether aggregation of large numbers will not always involve excessive mortality. If so, only remedy is to break up camps into smaller units. Expense must not be allowed to stand in the way.

*Extract from further Telegram from Mr. Chamberlain to Lord Milner (November 9th).*

It is necessary, in view of your responsibility, that I should be satisfied that all possible steps are being taken to reduce the rate of mortality, especially among children. ..... Are you satisfied that the medical and nursing staff is sufficient? ..... The camps must, if necessary, be moved and broken up into smaller units, as I have already indicated.

*Extract from Telegram from Mr. Chamberlain to Lord Milner* (November 20th).

I am much impressed by the necessity for strict discipline in all matters relating to health, etc.

*Extract from Telegram of Lord Milner to Mr. Chamberlain* (December 1st).

I propose to break up some of worst situated camps, and to reduce numbers in all camps..... It will, of course, take some considerable time to get the new camps ready, so we cannot look to immediate improvement from that source..... The increased number of nurses and doctors from home will be a great help...

The control of these camps would appear to be divided. They were formed as a matter of military exigency, and there are, we believe, military guards, but the internal administration of the camps has been conducted by the civil authority, and the medical officers are civilians, apparently supplied through the Colonial Office here, but appointed by the civil authority in South Africa. It will be observed that the number of medical officers and nurses has recently been increased. The new Blue Book affords many other indications that the Colonial Secretary has become thoroughly aroused to the extent of his responsibilities, and there is, we think, therefore good reason to hope that a more efficient, painstaking, and business-like administration may thus be secured for these camps, and that what Lord Milner has termed "the present deplorable mortality" may be greatly diminished at an earlier date than would otherwise have been practicable.

Incidentally we note the following contrasted statements, and welcome Mr. Chamberlain's endorsement of our contention that the statistics of the camps should be supplied in such a manner as will enable satisfactory comparisons with other communities to be made:

*Extract from Article in* British Medical Journal, *November 9th (Times, November 8th):*

The three groups in the returns are "men," "women," and "children," no clue being given as to the definition of child, or the proportion of infants, of children aged 1 to 5, and of children over 5, though these data are essential in order to arrive at satisfactory statistics.

*Telegram from Mr. Chamberlain to Lord Milner (sent 1.10 P.M. on November 9th).*

For purposes of comparison with rates elsewhere, I am anxious to have the statistics as to child mortality in the concentration camps placed as far as possible on the basis of a definite classification by ages. Here the Registrar-General prepares mortality returns for under 1 month, under 12 months, under 5 years, under 10 years, and so on in periods of 5 years. It would be desirable to have, also, statistics as to the mortality in the larger towns, Capetown, etc.

## LITERARY NOTES.

Sir Felix Semon's two lectures on The Principles of Local Treatment in Diseases of the Upper Air Passages, delivered at the London Polyclinic on October 2nd and 9th, and published in the British Medical Journal of November 2nd and 9th, will, we understand, shortly be issued in book form by Messrs. Macmillan and Co.

The *Memoirs and Letters of Sir James Paget*, edited by his son, Mr. Stephen Paget, reached a second edition within a few weeks of their publication. Mr. Paget hopes soon to publish a selection of his distinguished father's lectures, essays, and addresses.

Mr. Frowde has just published a volume of *Hausa Notes*, by Mr. W. R. Miller, M.R.C.S., of the Church Missionary Society, to which General Sir F. Lugard contributes a prefatory appreciation, in which he points out that the language is spoken probably by millions.

In the October number of *The Sphinx*, the Liverpool University College Students' Magazine, Sir William Mitchell Banks brings to a close his interesting Recollections of Student Days in Edinburgh, extracts from which have already been given in the British Medical Journal. Speaking of the Professor of Anatomy, who was then in the early stages of the locomotor ataxy which ultimately caused his death, Sir William Banks gives a graphic description of a scene in the lecture room, which paints the character of the man:

One day he was a little excited over his subject, when his poor ataxic legs gave way beneath him, and his great body fell with a crash on the floor. He was speedily helped up by those nearest at hand, the table was set up, and the delicate skull bones that were on it replaced. Goodsir, though evidently agitated, steadied himself again. There was a dead silence for a brief period while he gazed intently over his favourite sphenoids and ethmoids, and then he looked up with a delighted air and said, with the greatest earnestness, "Gentlemen, there is not a bone broken." His own bones were of no moment compared to his specimens, and the notion so tickled us that we gave him a tremendous cheer.

Goodsir lived a curious kind of life, absolutely devoted to his science. Very few people ever entered his house, and so a kind of mystery hung about it. It was said that he worked incessantly, and that he ate and drank and slept simply when imperious necessity to do so came upon him, and without any regard to times and seasons. Shortly after a visit he had paid to Germany, Sir William Banks asked him how he had enjoyed himself, and he said he had enjoyed himself immensely: one day he had had sixteen hours with Kolliker over the microscope! That was his notion of holiday enjoyment. Recollecting the good he got from the lectures of Playfair, Bennett, Christison, Simpson, and Syme, Sir William Banks takes occasion to express the opinion that too much contempt is shown for lectures nowadays. With the exception of chemistry, there was practically no laboratory work at all in Edinburgh in his day, but the knowledge of the students was quite sufficient as regards those sciences which are aids to medicine and surgery, while their knowledge of the future business of their lives was rather better than at present, because they had more time to spend in the hospital. The fault he has to find with the student of to-day is that he will not sit down in the hospital ward by the patient's bedside and hammer away at the case by himself. There is so much tutoring and demonstrating, and teaching of special classes for examination ends, that the prosaic ward work is neglected and even disliked. The result is that an experienced examiner finds out in ten minutes that the student has not learnt his lesson from Nature, but from cram books and cram classes.

A new periodical will shortly make its first appearance in Rome under the title of *Archivio di Farmacologia Sperimentale*. The editor is Professor Giuseppe Colasanti, director of the Institute of Experimental Pharmacology in the University of Rome.

# THE FIFTH INTERNATIONAL CONGRESS OF PHYSIOLOGISTS AT TURIN.

*(Continued from page 1541.)*

## MUSCLE NERVE PHYSIOLOGY.

### *The Causes of Muscular Fatigue.*

PROFESSOR F. S. LEE (New York) said that of the two recognised causes of muscle fatigue, loss of a substance necessary to contraction, and accumulation of so-called fatigue products, he had in his present research paid special attention to the former. Cats were submitted to a prolonged administration of phloridzin when the animals became muscularly very weak. Single muscles gave only a few contractions, and graphic records of these showed a condition of pronounced fatigue. This had been proved not to be due to any possible direct toxic effect of the phloridzin upon the muscle substance. But the drug caused loss of carbohydrate to the body both loose and combined, for example that in the proteid molecule, and hence the supposition arose that normal muscular fatigue was associated with loss of carbohydrate. This was strengthened by the fact that dextrose administered after prolonged phloridzin poisoning counteracted the effects of the former and restored the muscle. Various considerations made it probable that in normally induced fatigue there was a first or simple stage caused by the accumulation of fatigue products followed by a later one of exhaustion due chiefly to the loss of carbohydrate. In the discussion which followed, Professor Lee admitted that he had made no comparisons between the progress of the fatigue and the output of carbohydrate as sugar in the urine; nor had he estimated the contents of glycogen in the muscles at different stages. Nevertheless, when viewed in the light of Locke's experience of the restoring effect of dextrose in the case of an excised mammalian heart, and of Prevost's in that of an asphyxiated heart (references to both of which have been previously made in these abstracts), it must be admitted that it is not improbable that Lee's views may prove to be correct.

In conjunction with Mr. C. C. HAROLD, Professor LEE had also noted that the muscles of phloridzinised cats passed into rigor a few minutes after death. But if before the animal were killed dextrose had been given, the onset of rigor was delayed. Absence of carbohydrate, therefore, favoured the development of rigor. Hence in this particular, notwithstanding hypotheses regarding their similarity in other respects, there was an antagonism between rigor and contraction.

### *The Action of Alcohol on Muscle.*

Professor LEE and Dr. W. SALANT (New York) described experiments in which they had injected alcohol of various percentage strengths into frogs in quantities proportional to the weight. In each case one leg was protected from the action of the alcohol and the work which its gastrocnemius was capable of performing, contrasted with the muscle of the opposite side. In small quantities (half a minim of a 10 per cent. solution per gram of frog) alcohol had no effect; in larger quantities (1 to 4 minims of a 10 per cent. solution per gram of body weight) it increased the amount of work, sometimes to more than 100 per cent.: in still larger quantities exactly opposite effects were produced. It was uncertain whether the results were due to direct action on the muscle protoplasm, or on the intramuscular nerve endings.

### *"Negative Variation" and "Nerve Impulse."*

Professor A. HERZEN and Dr. C. RADZIKOWSKY said that they contended, in agreement with Valentin, that the negative variation and functional activity of a nerve were not one and the same thing, but two phenomena, the first of which accompanied, but did not constitute, the second; while, on the other hand, they agreed with Waller that nerves more or less altered were still able to manifest the electric phenomenon, although they were no longer capable of physiological activity. To demonstrate this point, Dr. Radzikowsky had made experiments on frogs' nerves slightly anæsthetised, or spontaneously dying after removal from the body. These were described in a recent issue of the *Centralblatt für Physiologie* (August 17th, 1901), and the present was a supplementary communication. The sciatic nerve, with the gastrocnemius muscles attached, was removed from the frog, the peroneal branch having been severed as low down as possible. The preparation was placed on a paraffined layer of cork within a moist chamber provided with four du Bois Reymond non-polarisable electrodes. The trunk of the nerve was laid upon one pair, which led to an inductorium, the divided branch on the other pair and connected with a galvanometer. Into the chamber a small capsule containing 2 to 4 c.cm. ether was also brought. After a certain time, varying from fifteen minutes to one hour, the muscle ceased to respond by contraction, not only to a very weak current from the coil (imperceptible on the tongue) but also to very strong currents (unbearable on the tongue). Nevertheless each stimulus applied to the nerve in this condition gave a negative reaction in the branch leading to the galvanometer. The absence of contraction in the muscle was not due to any alteration in the motorial end-plate, because a weak stimulus applied to the nerve by a third pair of electrodes placed close up to the gastrocnemius, at once caused a contraction. A further experiment was now brought forward in proof of the same contention. Professor Herzen destroyed the irritability of a proximal stretch of the nerve by the application of chloralose. Excitation of this part, and of this part alone, no longer gave a contraction, but it did occasion a deflection of the galvanometer. Another objection which had also been raised was that the deflection was not a true negative variation, but an electrotonic effect. This was the more serious and there was only one means of setting it aside, namely, to give up exciting by the induced current and find some other means of doing so. This latter was suggested by an experiment of Boruttau, in which a portion of the sciatic nerve of a frog was exposed to desiccation till it completely lost its irritability. The dried part of the nerve was then moistened with a drop of artificial serum and replaced in the limb. Afterwards the frog was poisoned with strychnine, when the limb in question took no part in the otherwise general tetanic contractions which resulted; but if the sciatic were cut close to the gastrocnemius, and connected up with the galvanometer, each convulsion was accompanied by a negative variation. This experiment demonstrated to conviction that an altered tract of nerve arrested the transmission of functional activity, while it still allowed the accompanying negative variation to pass on, while on the other hand the peripheral, irritable part of the nerve propagated the negative variation without at the same time entering into functional activity. It was true that the author of this experiment drew a different conclusion from it, but the authors of the paper held to their own interpretation. It must be admitted that the question is one of fundamental importance, and so far Herzen and Radzikowsky seem to be in possession of the true explanation.

### *The Propagation of the Contractile Impulse in the Mammalian Heart.*

Professor LANGENDORFF (Rostock) explained a method which he had instituted in conjunction with Herr F. Schüter. The nerves of two muscle-nerve preparations were laid transversely across the left ventricle of an artificially fed heart (cat) and at a distance of 20 to 30 mm. apart from each other. The muscles (gastrocnemii) were connected with Engelmann's double lever and their contractions recorded. At each beat of the heart both nerves were excited by the current of action and both muscles contracted. If the wave of contraction had passed from base to apex the muscle nearer the former should contract first, and from the interval of time between the two contractions its rate of propagation could be calculated. Numerous measurements showed, however, that this was not by any means always the case. While it was often present with fresh hearts, the points of rise in the two curves very soon approximated to each other till they appeared simultaneous or almost so. Later, that near the apex contracted first. Assuming a wave-like mode of propagation of the impulse to be correct the rate of its progress in the first and last cases was found to vary between 1 and 2 metres per second. But in hearts badly nourished and beginning to pass into a moribund state, weak but regular contractions were often seen which passed from base to apex with a rapidity of only 0.44 to 0.45 metres per second. Hearts in

"fibrillary" contraction were also able to excite "secondary fibrillation" in muscle-nerve preparations and these gave a very instructive picture of the irregular propagation of the contraction in such cases.

*Instantaneous Photomicrographs.*

Professor Hürthle (Breslau) had attempted to study the contractile phenomena of living muscle fibres of hydrophilus by means of instantaneous photomicrographs. He soon found it necessary, however, to compare his results with the appearances of fixed and stained fibres. The photographs were taken, partly in ordinary light (exposure 0.012 sec.), partly in polarised light (exposure 0.024 sec.). His chief conclusions were:

1. That within the contraction wave the transverse striation was closer and sharper than in the resting part.
2. In polarised light a homogeneous band or space preceded the contraction wave. It was doubtful whether this was to be attributed to an accumulation of sarcoplasm or to a loss of the power of double refraction in the sarcous substance. The possibility of this latter event was indicated by the appearances of fixed preparations.
3. That in the fixed fibres, both the transverse and longitudinal striations, were more obvious than in the living
4. That, during contraction, the nuclei became shorter and spiny. The shortening was an active, not a passive change, since its extent was not proportional to the shortening of the whole fibre.

## Electrical Response of Living Tissue.

Dr. A. Waller, F.R.S., London, speaking in French, gave an elaborate demonstration of his later work on the electrical response of living tissues to various forms of excitation in which both animal and vegetable tissues were brought under investigation. The electro-positive condition of the mechanically stimulated portion, and also of illuminated portions of a leaf to the unstimulated parts, were shown. The application of great heat and great cold, as also the effects of anæsthetics, the results of electrocution, all did away with the response of uninjured vegetable tissues. A relation appeared to exist between the magnitude of the electric response and the vigour of the plant or seedling. The greater the "vitality" the stronger the response. Vegetable tissues also manifested the phenomena of "fatigue," "summation of effects," and the so-called "staircase effect." The electrical response of the skin in different animals was also illustrated. In the cat excitation of the sciatic nerve produced an ingoing current in the skin of the paw after a latent period of three seconds. A similar effect was obtained with the skin of the frog, which in this case was destroyed by atropine. The current of response in human skin was in the opposite direction. It was remarkable in lasting for as much as ten days after removal from the body, but was at once done away with by immersion in hot water.

## Respiration.

*The Placenta in Poisoning by Carbon Monoxide.*

Dr. M. Nicloux (Paris) said that the passage of carbon monoxide from the mother to the fœtus had been demonstrated by Grehaut and Guinquard, who had caused a dog in gestation to respire a mixture of the gas with air. This was fatal in thirty-five minutes, and the proportion of gas in the blood of the fœtus when death occurred was found to be six times less than in that of the mother. His own experiments had been carried out on guinea-pigs, and in these he had examined the effects of a whole series of mixtures of the gas with air as under:

| Proportion of CO in the Air. | Length of Time Breathed in Hours and Minutes. | CO in 100 c.cm. Maternal Blood. | CO in 100 c.cm. Fœtal Blood. |
|---|---|---|---|
| 1/10000 | 1.30 | 0.75 | 0.75 |
| 1/5000 | ,, | 1.45 | 1.45 |
| 1/2500 | ,, | 2.70 | 2.70 |
| 1/1000 | ,, | 7.00 | 6.80 |
| 1/500 | ,, | 12.40 | 11.10 |
| 2/500 | ,, | 15.10 | 13.30 |
| 1/200 | 0.50 (died) | 15.70 | 3.75 |
| 1/100 | 0.15 ,, | 13.50 | 2.80 |
| 1/50 | 0.53 ,, | 16.22 | 1.70 |

Between 1/10000 and 1/5000 the content of gas in the two bloods was identical and in proportion to the amount of CO in the mixture; above 1/5000 the identity disappeared, and the difference became more and more accentuated the greater the proportion of gas contained. Since the maternal and fœtal circulations were completely independent, and there could consequently have been no direct transference of CO-hæmoglobin from the one to the other, he concluded that the passage of the gas into the fœtal blood was preceded by a dissociation of its combination with hæmaglobin, and that this dissociation was effected by the placenta. Another simple experiment gave an instance of a similar dissociation effected by respiratory organs in every way comparable to the placenta. A carp was plunged into a mixture of water (3 litres) with dog's blood (120 c.cm.) previously charged with CO, and killed after a variable length of immersion. It was then found that the blood of the carp contained five, six, or even seven times as much CO as the medium in which it was placed. The respiration in the mixture did not seem in the least abnormal. It did not appear, however, that Dr. Nicloux had excluded the possibility of another circumstance explaining the phenomena, namely, the relative affinity of the different media in the cases cited for the CO gas.

*The Function of the Sensory Nerves of the Diaphragm in Respiration.*

Professor N. Mislawsky (Kasan) related experiments by which he had found that excitation of the central tendon of the diaphragm produced an expiratory arrest of thoracic movements. This effect was abolished by division of the vagus nerve, either in the neck or immediately above the diaphragm. Further, excitation of the peripheral segment of the divided phrenic nerve (while causing a contraction of the diaphragm) produced an expiratory arrest of the thorax. This latter was abolished by section of the pneumogastric nerves. He had also stimulated the central portion of the phrenic nerve, but had not obtained results differing from those of previous observers. Professor Mislawsky concluded that the diaphragm must receive sensory fibres from the vagus, and that they played a similar *rôle* in respiration to those which it supplied to the lungs.

*Plethysmographic Method Applied to the Lung.*

Drs. T. G. Brodie and W. E. Dixon (London) had adapted a specially-shaped air oncometer to the plethysmographic record of lung movements and other variations in volume, artificial respiration having been maintained. Their first series of experiments, directed to a study of the effects of nerve excitation and of drugs upon the bronchial muscles gave the following results:

1. The vagus contained both constrictor and dilator fibres to the bronchial muscles.
2. The sympathetic contained no such fibres.
3. Muscarine, pilocarpin, veratrine, and gold chloride caused constriction of the bronchi (asthmatic effect).
4. Atropine, curare, and to a less extent chloroform and ether, produced dilatation of these tubes.

In a second series of experiments the changes in blood volume were observed, both with air freely entering, and in a lobe, the bronchus of which had been previously plugged. They found that the lung capillaries became distended with blood as a consequence of a rise of aortic blood pressure, whether due to constriction of systemic vessels or to increased cardiac action. Failure of the heart as a rule also resulted in their distension. In asphyxia the lung volume increased during the first stage, but gradually decreased in the second and third. They were not able to convince themselves of the existence of vaso-constrictor fibres to the pulmonary vessels, and thought the results of previous observers on this point inconclusive, since the action of cardio-accelerator nerves had not been sufficiently excluded.

## Ductless Glands and Metabolism.

*The Thyroid Gland and the Parathyroids.*

Professor E. Gley (Paris) contended that there was no such complete independence between the thyroid gland and the parathyroids as had been supposed by many experimenters. In support of a functional association between these organs he adduced the following evidence:

1. *Physiological.*—Whilst some dogs survived complete extirpation of the parathyroids, others presented slowly-developing nutritive troubles similar to those which followed total thyroidectomy. Professor Gley had observed this also in the cat and the rabbit.

2. *Chemical.*—The parathyroids contained iodine just as the thyroids did, and the importance of iodo-thyroidine had now been established.

3. *Histological.*—Edmunds had shown that removal of the parathyroids was followed by hypertrophy of the thyroid, accompanied by increased growth of blood vessels, development of embryonic tissue, and disappearance of the colloid substance. Conversely, extirpation of the thyroids produced modifications in the structure of the parathyroids. The disappearance of the colloid substance had previously been observed by Lusena and Vassale with Generali.

Dr. G. CORONEDI (Sassari) gave an account of two dogs, which he fed on bromated fat for different periods before the complete removal of the thyroid and parathyroids. The first had been fed in this way for fourteen days before the extirpation, and had received, in all, 22.6 grams of bromine. This animal soon after the removal showed in a mild form the symptoms characteristic of the operation, later it was restored to perfect health, and lived for 71 days. Towards the end a condition of grave cachexia supervened, however, from which the animal died. The second dog, operated upon on April 23rd, 1901, had been fed for twenty-six days previously on the bromated fat, receiving in all 36.21 grams of bromine. It was still alive at the date of the Congress, and in perfect health, having shown only mild symptoms soon after the operation, and none subsequently. The parts removed in each case were exhibited, showing that a complete extirpation had been effected. A photograph of the second animal was also shown. Dr. G. Marchetti (Florence) had taken part in the research, which was still in progress.

Dr. H. CHRISTIANI (Geneva) referred to previous researches in which he had succeeded in obtaining lasting and functional grafts of the thyroid taken from one animal and transplanted into another. His experiments had been carried out on various species of animals, but up till now the grafts were only tried between animals of the same species. His further researches had been directed towards finding out whether effective transplantation could be carried out between those of different species, and, if so, how wide apart in the zoological scale the animals might be. Systematic attempts were made on various vertebrates of different classes, different orders of the same class, different families, genera, species, and varieties. The grafts did not succeed between animals widely separated in the scale (classes and orders); some success was obtained between families; this was still better and more frequent between genera, and almost constant between species and varieties. Dr. Christiani's general conclusion was now—contrary to what he had before enunciated—that for successful thyroid grafting the animals need not be of the same species: the graft might even succeed between those of different families. In the latter cases, however, the transplanted tissues appeared to have less vitality.

*Glands which Regulate Circulation and Nutrition.*

Professor E. DE CYON (Paris) stated that he had obtained incontestible proof that the thyroid body and hypophysis cerebri exerted a double action on the organism: (1) a mechanical action on the circulation, above all within the cranial cavity; and (2) a chemical effect, which served to maintain in proper function the cardiac and vasomotor nerves, more especially the pneumogastric, the depressor and vasodilator nerves. The chemical action of special substances produced by these glands, namely, iodothyrine and hypophysine, was so powerful that it could neutralise the toxic effects of the strongest cardiac poisons, such as atropine and nicotine. Again, the active substance of the suprarenal capsule, epinephrine or suprarenine, exercised an analogous action on the accelerator nerves of the heart and on the vasoconstrictor nerves, that is to say, on the sympathetic system. Between the action of iodothyrine and hypophysine on the one hand, and that of suprarenine on the other, there was therefore a true physiological antagonism of the highest functional importance, designed to maintain the action of regulatory nerves of the circulation in harmonious equilibrium. In view also of the effects which the same systems of nerves exercised on the functions of the digestive glands (the stomach, the pancreas, and the liver), it was justifiable to conclude that it was through the influence of their active substances upon the nervous system that the thyroid and hypophysis were able to effect nutritive changes. There was no serious reason to believe that their influence was chemical other than this, nor any real proof to warrant the hypothesis that the glands were destined to destroy the effects of toxins elsewhere produced. Their minute size would alone negative this. Consequently Professor de Cyon proposed that the so-called vascular glands should be called regulatory glands of the circulation and nutrition.

*The Effects of Suprarenal Extract.*

Professor J. N. LANGLEY (Cambridge) had found in addition to the effect described by others that suprarenal extract caused:

1. Secretion of the salivary and lachrymal glands and of various mucous membranes. The salivary secretion was at first accompanied by constriction of the gland blood vessels, and later by slight dilatation. Atropine and suprarenal extract had therefore on this secretion a mutually antagonistic action much like atropine and pilocarpin.
2. An increase followed by a decrease in bile secretion.
3. Inhibition of the gall bladder.
4. Inhibition of the cardiac sphincter of the stomach (rabbit) and of the walls of the stomach (rabbit and cat).
5. Slow contraction of the pupil in the dog.
6. Contraction and pallor of the uterus, vas deferens, and seminal vesicles.
7. Dilatation with pallor at the end of the rectum and internal anal sphincter in the rabbit, slight contracion and pallor in the cat and dog.

In nearly all cases suprarenal extract produced a similar effect upon a tissue to that caused by excitation of its sympathetic nerve, and in no case did it produce an effect of the same kind as the cranial autonomic or sacral autonomic nerve to the given tissue, with the possible exception of constriction of the dog's pupil. Notwithstanding, the action appeared to be a direct one upon the tissue and not upon the sympathetic nerve endings, for after degeneration of the post-ganglionic fibres of the cervical sympathetic in the cat, the extract caused its usual effects on the eye, the submaxillary gland, and the hairs of the face. The action of the suprarenal extract on the secretion of saliva and that on the cardiac sphincter were demonstrated.

## SPECIAL SENSES.

*Accommodation in the Human Ear.*

Professor HENSEN (Kiel) said that he had previously found that a transitory contraction of the tensor tympani muscle in the dog could be excited by the utterance or emission of a sound. The drum of the ear, which owing to its own rigidity ordinarily remained in a condition neither of tension nor of flaccidity, was thereby brought into a state of tension, and in its movement passed through the optimum position of accommodation for the perception of any given tone. When a tuning fork was sounded, while at the same time a metronome was made to click, after each click a wave-like increase of the tuning-fork note was distinctly perceptible, and the same result followed other short-sound impressions. This, however, might be a contrast effect, or it might be due to accommodation, or it might be due to both. Contrast was excluded by the following experiments: If during the sounding of the tuning-fork the nostrils were actively closed at regular intervals, or the finger or other soft object were bitten, the increase of the note occurred in the same way, and always with the rhythm of the voluntary movements. Professor Hensen could find no other explanation for this latter phenomenon than a simultaneous contraction of the accommodation muscle. Further, when attention was paid to a sounded note it did not disappear immediately, but recurred one or more times after the sound had stopped. This he also regarded as evidence of accommodation in the ear.

*Diffusion Towards the Eye of Substances Injected into the Temporal Region.*

Dr. GAETANO VINCI (Messina) said that starting from the clinical fact that when small doses of strychnine (0.001 to 0.005 gram) were injected subcutaneously in the region of the temple, they acted on the eye of the same side, increasing the acuteness and enlarging the field of vision. He had made experiments to determine whether soluble substances injected in this situation made their way into the eyeball by the process of diffusion, without entering or before they entered the circulation. Three series of experiments had been carried out. In the first solutions of potassium iodide or sodium iodide, of sodium salicylate, and of potassium ferrocyanide (0.2 to 0.3 to 0.5 gram in 2 to 3 c.cm. distilled water) were injected into the temporal region of a dog or rabbit. After half an hour to an hour the animals were killed by puncture of the bulb and the

eyeballs enucleated. Test reagents were now let fall, drop by drop, into the orbital cavity—namely, starch solution, chlorine water, or nitrous acid and ferric chloride respectively. When colour reactions were given, blue or reddish violet, according to the substance on the side injected, but only on the outer wall of the orbit and on half or two-thirds of the external side of the globe of the eye, while the inner sides of both and the whole of the opposite cavity and eyeball remained uncoloured. In the second series 0.5 gram doses of potassium iodide in 3 to 5 c.cm. distilled water were injected in the same way, but calomel powder was strewn in the interior of the globes of both eyes. The mercurous chloride became transformed into iodide in both eyes, but always four to eight minutes sooner in that of the injected side, a certain indication, as he believed, that the injected substance had not entered by way of the general circulation. The third series of experiments were performed on dogs chloroformed and injected with morphine. Doses of potassium iodide and sodium salicylate (0.5 gram) had been injected as before twenty to thirty minutes previous to the anæsthetisation. Hypodermic needles were now inserted through the corneæ of both eyes into the anterior chambers. The outer extremities of these had been provided with small stoppers of elderwood. From time to time one or two drops of aqueous humour were allowed to escape, and were received into portion of the requisite reagents. As a method of demonstration, the results could not have been more brilliant. A positive reaction was invariably manifested on the injected side three to five minutes earlier than on the other. Dr. Vinci, however, did not succeed in obtaining evidence in this way of the entry of potassium ferrocyanide or of atropine or of strychnine. It must be accepted, he thought, that soluble substance injected into the temporal region were able to penetrate ultimately into the eyeball through the simple physical process of diffusion.

## THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

A meeting of the governors of the National Hospital for the Paralysed and Epileptic was held on December 12th at the Hospital, Queen Square, Bloomsbury, to receive the report of the Reconstruction Committee appointed on July 6th, 1901, after the adoption of the report of the Committee of Inquiry. In redrafting the rules of the hospital the Committee confined themselves in the main to the recommendations of the report of the Committee of Inquiry by which they felt themselves bound.

The Hon. Sydney Holland, having taken the chair, said the meeting had been called to reject or accept the proposals of the Reconstruction Committee, appointed in consequence of the decision of Sir Edward Fry's Committee of Inquiry. He called on Mr. Melvill Green, as Chairman of the Reconstruction Committee, to move the adoption of the report of that Committee, and asked him for convenience to divide it into two parts, the first to deal with the reconstitution of the hospital, and the second with the pension for Mr. Rawlings.

Mr. Green agreed that the report should be received in two parts, and moved that the report of the Committee of Reconstruction, so far as it related to the repeal of the rules that now existed and the enactment of new ones, be adopted, and that the rules of the hospital be repealed and the new rules adopted accordingly. The rules carried out in substance the report of the Committee of Inquiry, but the Committee had taken the opportunity of making a few small alterations in the existing rules on some points not touched upon by the Committee of Inquiry. They had also in their report advised that the existing by-laws be abolished *en bloc*, and that the Board of Management be left to make such by-laws as might from time to time be found to be necessary. They were not able to advise the Governors to go quite so far as the Committee of Inquiry recommended in paragraph 106 of their report, which suggested that new by-laws should not be effective until confirmed by a general meeting. By rule 39 they had provided that new by-laws should be immediately effective, but that unless these were confirmed by the following annual general meeting they should be annulled. He thought that was the only point of variation of real consequence, and he believed they had been unanimous in thinking that it would work with greater convenience than if twelve months were allowed to elapse before the Board could make a by-law which they saw was useful. The Committee were of opinion that the rules as now laid before them were not only those that would work, but that under the circumstances they were the best that could be provided. They had as certainly made sure of the representation of the medical staff on this Committee, as they had made sure that the office of director should be abolished. The governors had received a circular addressed to them under the signature of Mr. Russell, but he (Mr. Green) did not know exactly how far it represented the Board; it certainly did not represent them all, because Mr. Pearman and Mr. C. F. Campbell, who were part of the Committee of Reconstruction, had assented to the rules being carried *en bloc*. The Committee had taken the precaution of sending the rules to every member of the Board, in order that before asking that this meeting might be called they might learn whether there was anybody who objected to or thought the rules unworkable, and until he received the circular he was under the impression that there would be no doubt as to their being carried unanimously. This circular from the Board had produced a most unfavourable impression on his mind as to the capacity of the Board of Management for managing the affairs of the hospital.

The Chairman reminded Mr. Green that the meeting was called to discuss the rules of the hospital and the advisability of their adoption.

Mr. Green thought the circular had been sent to influence the meeting. It disclosed the fact that the Board on whose behalf it was signed was perfectly satisfied with the management of the hospital as it had been. It seemed to him that the Board had tried to maintain the old system, that they had made every effort to do so until they saw they were beaten; they did not agree and would not agree to a searching inquiry until they saw they were about to be beaten, and then they withdrew their motion in favour of his (Mr. Green's) amendment for the Committee of Inquiry. Since then much light had been thrown on the reason why the Board had struggled so hard that there should not be a searching inquiry.

The Chairman said he must rule this discussion as out of order, and asked Mr. Green from the chair to keep to the argument and nothing else.

Mr. Green said he would endeavour to do that. This circular admitted that the two great points mentioned had to be maintained, and then it went on to try and water them both down. At the bottom of page 2 of the circular there were two suggestions made about the medical staff. The Committee of Reconstruction, in the Draft Rule 10, suggested that every member of the staff should be at liberty to speak and vote with the governors, but the Board would have a man serve seven years on the staff before he was allowed to do that; and, further, that the quorum required for a general meeting should be independent of governors who were members of the medical staff. In fact, it seemed as if this circular had the idea of keeping the staff down, and making their position almost impossible. Rule 41 provided for the appointed of a secretary, a senior house physician, and a lady superintendent, who should have the sole control of their separate departments under the Board. The circular said the duties and functions of these three officers must necessarily overlap, and in the absence of some authority to whom instant and effective reference and appeal could be made upon matters of daily and hourly occurrence as to which differences of opinion might arise, confusion must ensue, with consequent injury to the interests of the patients and of the institution. In all the years that were past, for seven hours of the day only had Mr. Rawlings been on the spot to prevent confusion. No confusion had arisen during the other seventeen hours, so why should confusion be feared during the twenty-four hours? The staff was not to be belittled, and the director was not to be brought back; the two things agreed on must be carried out in their entirety.

Sir James Crichton-Browne, in seconding Mr. Green's resolution, said that he thought the spirit of the report was eminently conciliatory; in that spirit it was certainly accepted by the medical staff and by the governors who supported the staff.

He thought that the medical staff, and the governors who supported them, had a right to expect that the Board of Management should loyally accept the report and the drafted rules for the reconstitution of the hospital. He thought they had a right to expect that there should be no attempt by hints or suggestions, or by amendments of those rules to get behind the report of Sir Edward Fry's Committee of Inquiry, and render some of its recommendations nugatory. It appeared that the Board of Management considered it a serious proposal to divide the work of carrying on the daily administration of the hospital between three independent co-ordinate authorities—the secretary, the senior house physician, and the lady superintendent—and that this arrangement was certain to lead to difficulties, but they seemed to forget that all these three different authorities would have a central authority, and would be responsible to the newly-appointed Board of Management, and that this very same tripartite arrangement had been tried and found to work exceedingly well in many large public hospitals in this country. The circular seemed to him an attempt to emphasise and put into prominence everything that was favourable to the Board of Management in Sir Edward Fry's report, and to ignore everything else. The report of the Committee of Inquiry recommended that two members of the staff should be appointed to the Board. That was the crucial point. One of the members of the Board had distinctly told him that rather than accept a single member of the staff on the Board the Board as a whole would resign. They had not resigned; they had taken the recommendation very tamely, with a complacency that was more creditable to their fortitude than to their pride.

The meeting then proceeded to adopt several verbal corrections and amendments to the proposed new rules. In the course of this discussion Sir HENRY BURDETT moved the following amendment to Rule 41:

> That there shall be a secretary, a senior house-physician, who shall be appointed resident medical superintendent, and who shall be a permanent official and the responsible and resident head of the whole institution under the Board of Management, and a lady superintendent, etc.

He said it was a matter involving a very important principle, and the whole future of the institution would depend upon the decision of that question. His amendment embodied the recommendation of Sir Edward Fry's report. The patients of the institution from the very nature of their malady were long resident in the hospital, and it was essential that there should be a head. There had been a great dispute between the Board and the staff, which had centred round the rights of the medical profession, and he believed it was most important for everybody that there should be a responsible head, and that that head should be a medical man.

Mr. R. A. BENNETT seconded.

Dr. BASTIAN said that he had been for thirty years a physician at a hospital where practically what was intended in this rule had had effect, and during the whole of that time he had never known any difficulty arising in regard to it. There was at University College Hospital, the hospital to which he alluded, a resident medical officer with supreme control of all affairs connected with the medical department; that was to say, the general medical superintendence of the hospital. There was a sister superior or a lady superior and a secretary, and there had never been any difficulty. The Committee of the hospital met once a week, and any question could then be referred to them. He supposed that the Board, or a committee of the Board of the National Hospital, would meet once a week, and that any question that arose would be then decided. He thought it a matter of considerable importance whether they had as one of the alternatives in Sir Edward Fry's report a permanent medical superintendent or whether they had a man whom he thought it would be better to call the resident medical officer elected for a short term of years. It would be a decided mistake to have a permanent medical superintendent. There were always men who had gone through the appointments of house-surgeon and house-physician at other hospitals who knew perfectly well all that was necessary to carry on the work of a hospital. Those were the men who come up for such an appointment as that of resident medical officer of a hospital. It was much better not to have a permanent medical superintendent, but a resident medical officer who should be elected for two or three years and be subject to re-election.

Mr. GREEN thought Sir Henry Burdett had not quite grasped the recommendations of the Committee of Inquiry. The Reconstruction Committee had adopted an alternative recommendation of the Committee of Inquiry. There was to be a secretary entrusted with the ordinary duties of a secretary, a house-physician, and a lady superintendent.

Sir FELIX SEMON said the medical staff were perfectly satisfied with the arrangements as recommended by the Committee, and would do everything to avoid friction, and give a fair trial to the proposal.

The amendment was put to the meeting and declared lost.

Mr. GEORGE W. E. RUSSELL said that he did not suggest or contribute a line to the circular. He merely signed it because he was in the chair at the time. He now rose to meet the adoption of the report of the Committee of Reconstruction with a direct negative. The rules as they stood were satisfactory and only susceptible of improvement in small details which could be very well dealt with by the Board as it already existed or as it would be when altered at any subsequent election. The great fundamental question was whether two members of the medical staff should have seats on the Board. His opinion was that such a course would be attended with inconvenient consequences to the hospital. He admitted that the Board had altered its attitude with a zeal which did more credit to its fortitude than its pride. At the meeting held early in August, 1900, he was in the chair and spoke on behalf of the Board in the strongest possible sense hostile to the admission of two members of the medical staff to the Board of Management. At that time he expressed so far as his belief went the unanimous sentiments of the whole Board save and except one member. Then came the autumn of that year and the long controversy in the columns of the *Times*, and when the Board resumed its deliberations in the fall of the year it became apparent that a very considerable change had passed over the minds of the Board. The Board had then come round to think it desirable to submit the matter to inquiry. He thought that the good-natured sarcasms of Sir James Crichton-Browne were justly merited and justly applied, but as a matter of personal explanation he would like to say that whatever change had occurred in the mind of his colleagues no change had occurred in his mind. He wished to make it clear that he had been so constantly in the chair that it was impossible for him to express his opinions or try to enforce them upon his colleagues as he would have done if he had been merely a member of the Board. He held strongly that no case had been made out for revolutionising the rules of the hospital under which it had lived and flourished up till now and to substitute for them a new constitution.

The resolution of Mr. Green was then put to the meeting and declared carried.

A ballot was moved for by Mr. RUSSELL, but he failed to find four governors willing to support the motion, which accordingly fell to the ground. The remainder of the time of the meeting was occupied in discussing the question of the retiring pension to be granted to Mr. Burford Rawlings. It was suggested by some that it should be £600 a year, by others that it should be £400 and finally it was decided that he should be given a pension of £450 a year, with a present of £600, being one year's salary.

The proceedings closed with a formal vote of thanks to the Chairman.

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PLANS FOR THE EXTERMINATION OF MOSQUITOS.—The inventive ingenuity which is one of the characteristics of our transatlantic cousins is exercising itself on the problem of finding what Daniel Defoe would have called a "short way" with mosquitos. Quite recently, as we learn from *American Medicine*, Mr. John M. Rogers, of Wilmington, Delaware, owner of a large hotel at Cape May, has suggested to the authorities of that town that the ditches and stagnant pools should be connected with the sea, so that salt water shall take the place of fresh, and that the pools be stocked with fish that will eat the larvæ. On the other hand, Mr. William C. Levere, the city treasurer of Evanston, proposes to kill mosquitos by freezing. His plan is to turn liquid air suddenly on the haunts of mosquitos and freeze the whole brood.

## RETREATS AND REFORMATORIES UNDER THE INEBRIATES ACTS.

The report of Dr. R. W. Branthwaite, the inspector under the Inebriates Acts, dated September 21st, 1901, contains the twenty-first report concerning the work of Retreats and the second report on Reformatories for Criminal Inebriates.

### Retreats.

At the close of 1900, 20 retreats had received their licence in accordance with the provisions of the Acts, and the accommodation, which at the end 1899 showed 276 available beds, had been increased by the end of 1900 to 357. During the current year 2 other retreats have been added, giving 22 institutions in full working order. It is a matter for satisfaction that some of the recently added retreats are designed for persons of strictly limited means. This has become possible owing to the introduction of the principle of compulsory labour. At the same time a fair amount of daily labour is both physically advantageous to the patients concerned and an important agent in reformation, by breaking habits of idleness associated with inebriety, thus aiding in developing an improved moral tone. At Spelthorne St. Mary, Bedfont, the minimum weekly charge is 5s.; at Corngreaves Hall, Cradley Heath; at Ellison Lodge, Dulwich; at The Grove, Fallowfield, Manchester and at Hancox, the minimum charge is 7s. 6d. per week; and at the Hermitage, South Cave, Yorkshire, it is 10s. 6d. Absolutely destitute inebriates are still almost unprovided for; there are eight beds available for women in this condition, but not one for a male case throughout the kingdom.

*Admissions to Retreats.*

During 1900, 219 persons were admitted as signed patients under the Act, an increase of 16 over the admissions during the previous year. During the same period, 203 persons entered licensed institutions as "private" patients—that is, by simple contract, undertaking merely to conform to the rules in force in the retreat. During the year, 207 private cases were discharged from retreats; the average term of voluntary detention barely amounting to 4 5 months per case, a period certainly inadequate. It is found that inebriates usually consider themselves cured after a few weeks abstinence, and it is a matter of extreme difficulty to detain such persons for a beneficial period unless they are signed under the Act. The desirability, therefore, of obtaining the patient's consent to a definite period of detention, and of having it duly attested by a justice of the peace before admission to a retreat, is obvious.

*Discharges and Deaths.*

One hundred and seventy-five persons who had signed under the Act were discharged during 1900, 131 of whom left upon expiry of the period for which they had signed. In 41 instances persons were discharged by order of a justice on the request of the licensee of the retreat. Two deaths occurred during the year due to disease attributable to alcoholism.

*Concerning Refractory Patients.*

In spite of the voluntary character of retreats, a number of cases give constant trouble after admission by setting rules at defiance, and by nullifying all attempts at maintenance of discipline and restraint from liquor. Out of 422 cases treated during the year, 48, or over 11 per cent., were troublesome in this way. The difficult patients are, as a rule, those who approach nearest to definite lunacy, and therefore most need control, alike in their own interest and in that of their friends. The only method of dealing with such at present open to licensees is their discharge as uncontrollable; but this method is clearly unsatisfactory, and the ideal method—that of transference to an institution more capable of exercising the necessary control—is not yet in the range of practical politics.

### Certified Inebriate Reformatories.

During 1900 5 reformatories have been in use, giving 416 available beds as compared with 4 having 227 beds in the previous year, and during the current year an additional reformatory has been certified. During 1899 88 cases were admitted, all female; in 1900 144 were admitted, of which 128 were female and 16 male. The certified reformatories are as follows: Two at Brentry, one for men and the other for women; one at Horfield, near Bristol, for women; one at Duxhurst, near Reigate, for women; St. Joseph's, at Ashford, Middlesex, and Farmfield, at Horley, Surrey, both for females; and one, opened during 1901, Newdigate Farm House, at Dorking, for male cases.

*Action of Local Authorities.*

At present the London County Council is the only local authority having a reformatory of its own, certified and in working order. Out of 50 county councils in England 15 have already made definite arrangements for the reception of cases committed from courts situate within their jurisdiction—that is, 30 per cent.; 13 out of the 65 county boroughs have taken similar action; and of 220 non-county boroughs in England and Wales 64 are now supplied with beds for the use of committed cases.

*Committed Cases.*

During 1900, 144 committed cases were received into reformatories; of these, 17 were sentenced for crime caused or contributed to by drink, and 127 for habitual drunkenness. Of the crime cases, no fewer than 12 were associated with cruelty to children arising out of drunken habits. The great majority of the committed cases were of middle age, but 4 young girls under 21, the children of drunken parents, were admitted, indicating mental defect with a low moral standard.

It is pointed out in the report that for generations past many endeavours have been made to lessen drunkenness by advocating national teetotalism as a remedy, but no real attempt has been made on a large scale to reach this end by attacking individual drunkards. Consequently, all initial action will of necessity be directed against inebriates who are the progeny of those who have themselves been confirmed inebriates through many years, and who are morally degraded by constant prison and police-court proceedings. About 27 per cent. of the cases admitted in 1900 were the subjects of mental defect, and wherever lunacy is present, or mental deficiency to any great extent, the possibility of reformation is very greatly reduced, as in the majority of such cases drunkenness is a symptom of an insanity which is irremovable and itself due in many cases to hereditary causes.

As in retreats so in reformatories, troublesome cases are a great difficulty. There are only two ways of dealing with such—either discharge from sentence or detention in a State inebriate reformatory. The discharge plan is obviously out of the question, as it places a premium on bad behaviour, yet in the absence of a State reformatory no fewer than 7 cases were thus discharged during the year. A scheme has, however, been approved by the Secretary of State whereby a portion of Aylesbury prison has been adapted for female cases and a portion of Warwick prison for male cases. Permanent buildings are to be erected for the same purpose in the near future on ground contiguous to the former. Of 9 cases discharged from expiry of sentence, 3 are known to be doing well, 1 was satisfactory when last heard of, and 5 have relapsed. Of the number discharged by order of the Secretary of State, 5 were for lunacy, and 7 for continued refractory conduct which could not be otherwise dealt with, as explained above, owing to the absence of a State reformatory.

## THE PREVENTION OF CONSUMPTION.

One of the most notable of the immediate results of the British Congress on Tuberculosis held in London last summer is to be found in the reports presented to the various public bodies throughout the kingdom by the delegates who attended the Congress. Through these reports, the main points with regard to the prevalence of consumption and the means by which the great mortality from this disease may be diminished have been clearly laid before the corporations, town, borough, and district councils all over the country. The wide dissemination of the information contained in these reports has a great educational value. Many of these reports contain practical recommendations which have in most instances received the approval of the sanitary authority, and have been sanctioned by the executive body. An organised campaign against tuberculosis will thus be commenced, which should

within a few years produce a very marked result in the health of the community.

KENSINGTON.

The Council of the Royal Borough of Kensington adopted, at a recent meeting, a report of the Public Health Committee on the Preventive Measures against Consumption. The recommendations in this report include the adoption of a system of voluntary notification, with payment of the customary fees, arrangements for bacteriological examination of suspected sputa, and the disinfection of infected houses. The report further suggests an appeal to the Local Government Board to give effect to the opinion of the Conference of Poor-law Authorities:

That the time has come when provision should be made for the open-air treatment of the sick poor of the metropolis suffering from consumption.

YORK.

Several of these reports have already been commented on in the BRITISH MEDICAL JOURNAL. Amongst the most recent is the report on the Visit of the Delegates of the York Corporation to the British Congress on Tuberculosis, which has been printed by order of the Health Committee. This had been prepared by Dr. Edmund M. Smith, M.O.H., and is an admirably lucid and concise summary of the opinions expressed and the conclusions arrived at during the discussions at the Congress.

BRIGHTON.

Owing in great measure to the initiative of its medical officer of health, Brighton has for some years been well to the front in the measures taken to prevent consumption. Voluntary notification has been in existence in the borough since 1898, although only a proportion of the cases are notified—the notifications reaching only about half the number of deaths from the disease. So too disinfection of rooms and microscopical examination of sputa are undertaken gratuitously by the Town Council. Dr. Newsholme is fortunate in having a committee able to appreciate his endeavours for the health of the borough, and willing to endorse his suggestions. The report presented to the Sanitary Committee upon the work of the British Congress on Tuberculosis held this summer contains several suggestions for the extension of the precautions hitherto in force, and these suggestions have been accepted by the Committee and confirmed by the Town Council. The additional precautionary measures decided upon at a meeting of the Town Council last month include a crusade against indiscriminate expectoration in public rooms and vehicles, and the medical officer of health is instructed to collect information as to the treatment of consumptives in sanatoria with a view to the possible establishment of such an institution.

SOUTH WALES.

In continuation of the good work started on October 3rd at Cardiff, when a South Wales Branch of the National Association for the Prevention of Tuberculosis was formed, a public meeting was held on December 13th in the Shire Hall, Haverfordwest, to inaugurate a sub-branch of the South Wales Branch. The Earl of Cawdor was in the chair, and after a short speech by him and an illustrated address on tuberculosis by Dr. Paterson of Cardiff, Sir John Llewelyn proposed the formation of the western sub-branch. The proposition was seconded and adopted. Local officers and an influential committee were then appointed, and with the usual votes of thanks the proceedings terminated.

Owing to the great area covered by the South Wales and Monmouthshire Branch it was felt that the work could be carried out better if sub-branches were formed in the different districts. The "Western Sub-Branch" is for the counties of Pembroke, Carmarthen, and Cardigan. Probably other sub-branches will be formed. In addition to the above at Swansea a separate branch of the Central Association was formed on October 4th for Swansea and district. A public meeting was convened on December 11th, and officers were elected.

LEAFLETS.

The National Association for the Prevention of Consumption and other forms of Tuberculosis has added to the leaflets and tracts which it has already published, two which deal respectively with ventilation and disinfection. That on ventilation appropriately draws attention to the injurious effects of the impure atmosphere of churches, public halls, theatres, schoolrooms, and shops, as well as dwelling houses. The Notes on Disinfection in Consumption deal with the destruction of infection in rooms on clothes and bedding, and everything which has been touched by the phlegm of consumptive persons. These small pamphlets should be widely distributed amongst all classes of the community.

## CONTRACT MEDICAL PRACTICE.

GLASGOW.

A CORRESPONDENT sends us a cutting from the *Glasgow Evening News* of December 7th, giving a report of a recent meeting of the town council, and draws our attention to one of the motions brought forward on that occasion. The motion was:

"That as the fee of 5s. per member, per annum, presently paid by the Glasgow Corporation Tramways Friendly Society to its medical officers for attendance on tramway employees is considerably in advance of that paid by other Friendly Societies, and as this is causing universal complaint amongst outside societies, a committee be appointed to consider the question of adjusting such fee."

Our correspondent states that it is true that nearly all the Friendly Societies in the West of Scotland pay no more than from 2s. 6d. to 3s. a member.

*** It is not surprising that the "outside societies" objected to the scale. Neither individual nor society cares to have its meanness brought into public light, and a 5s. scale paid by the Corporation Tramways Society would at least make the public think that 2s. 6d. was rather unworthy remuneration. The above motion, though it does not appear to have met with any support, may serve to draw attention to a very obvious danger. If medical men continue to accept, and even to compete for, Friendly Societies paying no more than 2s. 6d. per annum per member, public bodies will become imbued with the notion that this is the market value of their services, and will have some justification. In this way a general lowering of fees in the public services might be brought about.

SURGICAL OPERATIONS FOR MEMBERS OF FORESTERS' COURTS.

S. asks whether club members of Foresters' Courts are entitled to surgical as well as medical treatment for their subscription of 4s. per annum.

*** In spite of the inadequacy of payment such members have always claimed both medical and surgical treatment, and under their contract it is very doubtful whether club surgeons could refuse either.

VILLAGE MEETINGS.

E. sends us a copy of a parish magazine and draws attention to a paragraph dealing with a recent public meeting in support of a local branch of the National Deposit Friendly Society. He asks if such meetings do not bring the medical officer, in whose behalf they are held, within the terms of the resolution of the General Medical Council against "touting."

*** Notices in the press of this nature, though not infrequently improper, would hardly have the effect our correspondent suggests. If however, the public are "regularly canvassed," as he states, to join the society, he should bring evidence of this to the notice of one of the Medical Defence Societies, and then the matter might be brought before the General Medical Council.

CANVASSING FOR CLUB APPOINTMENT.

H.—We think our correspondent has reasonable grounds for feeling aggrieved. Under the circumstances described, no outside medical practitioner could properly compete for such appointments unless they were officially thrown open by the clubs themselves. Even in the latter case the method of canvassing alleged to have been adopted by the practitioner complained of would have been undignified.

AN AMBIGUOUS BEQUEST.—A somewhat curious point has been raised in the terms of the bequest by Dr. Lyon, who in 1891 left a sum the annual interest of which, amounting to some £55, was to go as a prize to the most distinguished student in the University of Aberdeen of the year. The University Court had petitioned for a settlement in favour of a scheme by which the prize should annually be received by the most distinguished student in the Faculty of Science, but there is much to be said on the score of fairness in favour of the scheme presented to the Court of Session by the Reporter, which would give the prize to the most distinguished student in each faculty in rotation. An annual division of the sum among the faculties could not fulfil the terms of the bequest. The settlement will be looked to with interest.

ACCORDING to custom the Royal Academy of Medicine of Madrid recently attended in a body a solemn mass for the repose of the souls of deceased members, of Spanish physicians and surgeons whose work had reflected lustre on their country, and of benefactors of the Academy.

## BRITISH MEDICAL ASSOCIATION.
## SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, DECEMBER 21ST, 1901.

## VIRES ACQUIRIT EUNDO.

Nearly seventeen years ago there was published in the British Medical Journal under this title an article drawing attention, in connection with the report of the Council of the Metropolitan Counties Branch of the British Medical Association on the subject of University Degrees for London Medical Students, to the movement which had then for some time been on foot for the reorganisation of the University of London as it then existed. Since that date the movement has indeed gathered strength and during the intervening period we have, as opportunity offered, on many occasions maintained the thesis that there should be one University for London, that this should be a real teaching university containing the medical schools of London as constituent colleges, and that the curriculum should be so adjusted and that the conditions of teaching in the medical schools and colleges should be such as to place within the reach of London students of average ability and reasonable diligence the advantage of university associations and a university degree.

Largely through the instrumentality of an Association for Promoting a Teaching University for London founded in 1884, of which the first President was Lord Reay, and the second Lord Rosebery, it became evident that the need for a real university in and near London was recognised by teachers and graduates of other faculties, and in this way the risk which at one time appeared to be imminent of the foundation of a one-faculty university was averted. This is not the place to attempt a history of the labours of that Association, of the animated debates in the Convocation of the University, or of the inquiries of the two Commissions, nor is there perhaps any reason why such a history should be written; the work has been done, and we have entered upon a new epoch when the ideas and aspirations which animated those who took part in the earlier stages of the conflict seem on the way to be realised.

To the completeness of the change of view, the report of the Faculty of Medicine, which, by the courtesy of the Dean and Secretary, we are enabled to publish elsewhere (p. 1837), bears striking testimony. It was roundly asserted, even within very recent times, that it would be impossible to obtain any concerted or united action between the medical schools in London, but we have always entertained and expressed the hope that when the representatives of these schools were brought together under the maternal wing of a teaching university they would quickly perceive that their own individual interests were identical with those of London as a centre of medical education. There is great virtue in a round table, whether it be covered with green cloth or white linen, and there was, therefore, reason to hope that the ultimate result of conferences which have been taking place during the last nine months would be to produce more or less general accord even with regard to certain points upon which it was feared it would be most difficult to obtain agreement.

It is, however, surprising to find not only that this agreement has been already attained, but that is absolutely unanimous. Some part of this result must be attributed to the information with regard to the condition of medical education at other centres which Mr. Butlin, the Dean of the Faculty, obtained, with admirable public spirit, by sending a special visitor to various universities in Great Britain. Some influence also must be attributed to the statistics of the remarkable falling-off in the number of students entering at the London schools. Comparing the entries at London and provincial schools in the five years 1879-1883 with those in the five years 1896-1900, it appears that there has been a falling-off in the total number of new students for the whole country. The number in the English schools in the first quinquenniad was 4,705, and in the second 4,423, yet in the interval the number of new students at the provincial schools had increased, the annual average increase amounting to 120, whereas there has been a notable decrease in London, the annual average decrease being 175. The shifting of preponderance may also be shown by noting that whereas in the first quinquenniad 28 per cent. of the students at English schools entered at provincial schools, in the second quinquenniad the number entering at provincial schools was 43 per cent. The rivalry between the great centres of medical education is a very different thing to competition between a multiplicity of individual medical schools in the same centre—a condition which has hitherto prevailed in London, and it would appear that the medical schools of London have now realised the importance of a concentration of the teaching of preliminary and intermediate subjects if London, as a centre of medical education, is to maintain, or perhaps we ought to say regain, its place. They have also, it would appear, realised that the success of the London schools of medicine is bound up with the University.

For this view we have all along contended, but the two influences which seemed to stand in the way of the triumph of these opinions have been the jealousies of the medical schools and the nature of the matriculation examination of the University which was designed rather as a test of knowledge acquired than of the capacity to acquire knowledge, which is its proper function in a university. The schools seem now to have laid aside their jealousies, and to be determined to take the position prepared for them in the University scheme—one to which they are fully entitled by the unrivalled opportunities which London affords for clinical teaching. The second difficulty, we may hope, is also in the way to be removed, although the process of preliminary inquiry is so prolonged that the relative celerity of the Faculty of Medicine is as that of a motor car to a State procession. The Senate at

its meeting on November 27th referred the subject to the Academic and External Councils. One result of this reference has been, we understand, that the Academic Council has already requested the Faculty of Medicine to express its opinion upon the subject. We trust that in this matter also the ultimate decision may be to establish a single standard of admission for all undergraduates. It would, we believe, be most unfortunate to do anything which would mark off the medical undergraduates from those seeking degrees in other faculties. If it be necessary to make provision for those who have hitherto found in the matriculation a certificate of knowledge valuable to them on seeking employment as junior teachers in secondary schools, the University could easily meet this want by establishing a special examination.

The report of the Faculty of Medicine, which has now been transmitted to the Senate, recommends that body to take steps to secure funds to enable it to establish in the near neighbourhood of the University a school of preliminary and intermediate medical studies to which all students of the medical schools in London should be admitted. The Faculty is therefore prepared to go as far as the Statutory Commissioners recommended, and the schools are ready at once to give up to the central University institutes the duty of teaching the preliminary subjects, that is to say, chemistry, physics, and biology. They are prepared also, should it appear on further reflection to be desirable, to give up in addition the teaching of anatomy and physiology to central university institutes. Whether this scheme, in so far as it concerns anatomy and physiology, may eventually turn out to be feasible or not remains to be seen, but it is quite conceivable that certain colleges might consider it wiser to continue the teaching of these subjects, in which case they would, we presume, stand somewhat in the position of extramural schools, such as exist in Edinburgh and Glasgow. There would, as experience in those cities has proved, be certain advantages attending this arrangement. The rivalry would act as a healthy stimulus to the university institutes, and the success of the schools which continued to teach these subjects would prevent the university classes from attaining unwieldy dimensions. The details of the scheme are, however, too perplexing to be discussed here and now, and it is a sufficient matter for immediate congratulation that the Faculty of Medicine, composed as it is of representatives of all the medical schools in London, has resolved that "a school of preliminary and intermediate studies," by which we understand a series of university institutes, ought to be established as soon as funds can be obtained. That the funds will be obtained if the Senate makes a suitable appeal on behalf of a definite and well-considered scheme we make no doubt.

## THE BACTERIOLOGICAL EXAMINATION OF WATER.

In an article which appears in this issue, Dr. Houston has discussed the bacteriological examination of potable waters from a public health point of view. Up to the present time a large amount of labour has been expended in describing the various kinds of bacteria which have been found in water. This work is no doubt of great value, but, as Dr. Houston points out, the student of hygiene requires information with regard to the bacteria which are adventitious and possibly dangerous, rather than a knowledge of the microbes proper to water.

A knowledge of normal water bacteria is, of course necessary before determining which ones are adventitious but Dr. Houston considers that we posssess sufficient knowledge in this direction, and that the bacteriologist should pay more attention to the bacterial flora of sewage and soil, thus enabling him to decide the probable source of adventitious bacteria in a potable water. It is fortunately not necessary to demonstrate in a polluted water supply the presence of definitely pathogenic microbes to prove that there is danger in drinking such water; for, were this so, the value of a bacterioscopic examination would be considerably diminished. All bacteriologists are aware of the technical difficulties of demonstrating the presence of typhoid bacilli in water. In the report of the Maidstone epidemic of 1897 it was clearly pointed out by Dr. Washbourn that no importance could be attached to the failure in discovering the typhoid bacillus in water suspected of conveying the disease: the evidence of contamination with alvine excreta was of much greater importance, and such evidence could be obtained by the presence of large numbers of coli bacilli.

Dr. Houston considers that water should be condemned if microbes indubitably due to intestinal origin are present. This statement is, perhaps, rather too sweeping, and he himself qualifies it by pointing out that the relative abundance of these bacteria is the most important factor in determining the quality of a water, and he aptly compares a bacterioscopic examination to a chemical examination in this respect. A minute number of intestinal bacteria in water would not be sufficient to condemn it absolutely, for these bacteria are not necessarily harmful in themselves, but are rather indications of the possibility of specific contamination with pathogenic bacteria. The question to be decided, then, is the number of intestinal bacteria necessary to constitute contamination.

The bacillus coli, the bacillus enteritidis sporogenes, and streptococci are common intestinal bacteria, and are the most important in determining the contamination of water. In regard to the bacillus coli, as Dr. Houston properly insists, it is not sufficient to simply determine its presence, but the actual number should be ascertained. This point has been insisted upon by other bacteriologists. In the Maidstone epidemic of 1897 it was pointed out that "the presence of one or two coli bacilli in 100 c.cm. of water is probably not a matter of much importance, but the presence of a large number, such, for example, as the sixty colonies in the cubic centimetre of sample C, is definite proof of contamination with animal excreta." Mr. Pakes stated in 1900 that water which contained B. coli in 20 c.cm. or less should be condemned, that if the B. coli were only present in from 50 to 100 c.cm. the water should be looked upon as slightly suspicious, and that if only present in greater quantities than 100 c.cm. the water was probably safe. Mr. Horrocks considers that water which contains B. coli so sparsely that 200 c.cm. is required to be tested in order to find it is probably polluted with sewage, but the contamination is not of recent date. The question of the actual number of coli bacilli neces-

sary for condemnation of water is one that can only be determined by extended experience. Those who are in the habit of making bacteriological examinations of water would render great service by publishing the results obtained in this direction in one of the technical periodicals. Some difficulty arises in determining whether any given bacillus should be considered to be the B. coli or not. There is no doubt that many varieties of the B. coli exist, differing from one another in many points, and it is a question how far variations from the typical bacillus should be considered as constituting a separate species. This question also was raised in connection with the Maidstone epidemic, and it was pointed out that atypical forms of the B. coli was frequently present in the intestinal evacuations, and that they constituted, when present in water, good evidence of contamination. It would be well if bacteriologists could agree upon the nature of the variations from type which should be included under the denomination of bacillus coli.

The B. enteritidis sporogenes, which was discovered by Klein and was considered by him to be the cause of an epidemic of acute diarrhœa, has been of great valne in the bacterioscopic examination of water. Dr. Houston states that it is present in as small a quantity as 0.01 c.cm. of sewage, and that it is not present in as large a quantity as 200 c.cm. of pure water.

Streptococci he has failed to find in virgin soils and in pure waters, and even in the case of polluted soils and waters when the contamination was not extremely recent. On the other hand, they are to be detected in 0.0001 c.cm. of crude sewage and in minimum quantities in soils and waters recently polluted with matters of animal outcome. Dr. Houston looks upon the streptococcus test as the most delicate for detecting recent pollution.

With all these bacteria it is important that not only their presence but also their relative numbers should be definitely determined before drawing any conclusions as to the nature of the contamination. We believe that it is upon these lines that the bacterioscopic examination of water must be conducted. It is probable that with a further knowledge of the bacteria of sewage and soils other bacteria will be discovered which will serve as criteria of the contamination of water, but the principle of determining the presence of such bacteria as are not normally present in pure waters is obviously the correct one for estimating their purity. The mere presence of these adventitious bacteria by itself is not sufficient, any more than the presence of organic matter in the chemical analysis is sufficient to show that the water is contaminated. It is necessary to go further and to determine the quantity of these bacteria present, and, although no definite standard can be fixed—nor, indeed, does such appear desirable—yet bacteriologists possess sufficient data from which to draw accurate conclusions as to the purity of a water.

There seems to be no doubt that the bacterioscopic examination is a much more delicate test than the chemical, but its very delicacy shows how carefully it should be applied. The chemist has had a large experience in the examination of water, the bacteriologist comparatively little. The chemical method appears to have reached as far as it is likely to go, while the bacterioscopic test has still a future before it.

Both tests are of great value in determining the purity of water, although they attack the question from a different standpoint, and we believe that both tests should be applied in every case.

## THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

Experience has shown that before proclaiming that a war is over, it is well to be quite sure of the fact. It may now, however, be stated with certainty that the long and bitter struggle at the National Hospital for the Paralysed and Epileptic is at last at an end. Elsewhere we publish a report of a meeting of governors held on December 12th, to receive the report of the Committee appointed to redraft the rules of the hospital in accordance with the recommendations of Sir Edward Fry's Committee, a summary of whose report was published in the British Medical Journal of June 22nd. The adoption of the Committee's report was moved by Mr. Melvill Green, who had been its chairman, and it was considered in two parts, one dealing with the reconstitution of the hospital, the other with the question of a pension for the Secretary-Director. Mr. Green pointed out that the new rules proposed carried out in substance the recommendations of the report of the Committee of Inquiry with a few further alterations in points of detail.

It was proposed that the existing by-laws should be abolished, and that the Board of Management should be empowered to frame new ones to meet the requirements of circumstances arising from time to time. The new rules provide for the direct representation of the medical staff on the Board by two members chosen by themselves. Further, in accordance with a principle contended for by Sir Felix Semon, it is provided that henceforth every member of the medical staff shall be *ipso facto* a governor of the hospital. This is only right, for a physician or surgeon gives his time and knowledge freely to the hospital, and these are of incomparably greater pecuniary value than a donation of thirty guineas.

The staff, therefore, has obtained the share in the management of the affairs of the hospital which it asked for, and it has also succeeded in getting the office of secretary-director, which has been the main cause of the trouble, abolished. It has, in fact, won all along the line, and its enemy, the old Board of Management, lies vanquished at its feet. The Board seems to have fought almost to the last moment to undermine the scheme of reform proposed by the two Committees; finally, however, with one exception, it not only "consented to death," but "conquered agony" so far as to vote with the majority. But it was not a case of *la mort sans phrase*. Mr. G. W. E. Russell stood to his guns and rained a storm of vituperative phrases on his opponents and on the science of which they were the representatives. While his colleagues accepted the situation, as Sir James Crichton-Browne put it, "with a complacency that was more creditable to their fortitude than to their pride," he declared that, whatever change had occurred in their minds, none had occurred in his. The figure of Mr. Russell standing on the burning deck whence all but he had fled has a kind of grotesque sublimity which might command our admiration but for the absurdity of his position. He can at least comfort himself with the thought that he

is like the stern old Roman of whom it was written, *Victrix causa diis placuit sed victa Catoni.*

The Secretary-Director was granted an adequate pension, which we hope he will long continue to enjoy in the retirement which he has so thoroughly earned. Henceforth his place will know him no more, but his name will live in the story of the hospital which he served so ardently. He was the first, and will, it is earnestly to be hoped, be the last, of his official race. It was made abundantly clear that the governors would have no more autocratic embodiments of the idea of "lay supremacy" in the hospital. An amendment, moved by Sir Henry Burdett, that the senior house-physician should be a permanent official and the resident head of the whole institution, under the Board of Management, was rejected; it deserved no better fate, for, whatever may have been the intention of the mover, it was nothing more than an attempt to replace the deposed autocrat in the insidious disguise of a medical superintendent.

We heartily congratulate the medical staff on their decisive victory. The new Board of Management will be elected at a meeting of the governors to be held on January 9th, and, to judge from the names that are mentioned, there is every prospect that an administrative body thoroughly in touch both with the philanthropic and the scientific aspects of hospital work will take the place of the Board which is already virtually defunct. It is more than a change of government; it is the fall of a dynasty. With a new system of government administered by enlightened men in sympathy with the aims of the medical staff, the famous hospital, which was so nearly brought to ruin by the obstinacy and folly of a few wrongheaded zealots, will be able to discharge with ever-increasing success its function of relieving human suffering and enlarging the boundaries of knowledge.

## THE REMUNERATION OF LIFE ASSURANCE MEDICAL OFFICERS.

SIGNS are not wanting that the medical profession is awaking to the necessity of looking a little more carefully after its pecuniary interests. There can be no doubt that in the past the tendency of medical men has been to pay too little attention to the purely business side of their work; but the time has, we think, come when the public should recognise in a more liberal spirit the great debt it owes to the profession of medicine. Unfortunately, competition is so keen in the ranks of the profession that men are often found to accept, and even to compete for, appointments carrying very inadequate remuneration. Men of business, however, ought to realise that, if they require work to be well done, it should be well paid for, and the truth of this proposition ought to be particularly obvious in life assurance. The responsibility imposed on the medical examiner is so great that assurance offices for their own protection should offer such remuneration as will ensure the best possible work, and in this connection directors should bear in mind the risk a conscientious examiner runs of losing a valuable professional connection should he give an adverse report in the case of one of his patients. The increasing complexity and the number of questions contained in the examination forms now entail so much more work than was formerly required, that the practice adopted by some of the leading offices of paying at least a guinea for assurances of £100 and upwards should become the rule. For industrial policies of sums under £100 the offices must be content with a less stringent examination if they offer less than a guinea. There was a prolonged correspondence on the subject in our columns a short time ago, but the point raised by Dr. Selfe Bennett in the letter published elsewhere in this issue is apparently a new one. It certainly seems unjust and illogical that wealthy assurance companies should on the one hand assert their inability to pay more than half a guinea for the examination where the amount is under £500 or £250 as the case may be, and yet offer to the examiner the paltry sum of one guinea for an assurance amounting to £70,000 as in the case recorded by Dr. Bennett. Though we do not see our way to advise that the medical fee should bear any direct proportion to the sum assured, yet it seems obvious that an office reassuring sums of £1,000 and upwards could well afford to pay a fee to the medical officer of the company taking the reassurance. The amount to be thus distributed would be very small. Take, for instance, the extreme case brought forward by Dr. Bennett, where an assurance was effected for £70,000. We will assume that the head office pays its chief medical officer a salary, and would therefore not pay him a special fee. His colleague for the time being would receive two guineas, and each of the medical officers perusing the documents and reporting thereon would receive a guinea. That is to say, the total medical fees payable under this scheme on a sum of £70,000 (a most unusual amount) would be from eight to sixteen guineas, according as the assurance was divided among seven or fourteen offices. Taking the larger sum, sixteen guineas, this would represent less than a guinea for every £4,000 of assurance, and yet we know that it pays a company to pay a guinea on an assurance for £500. We are not clear as to the validity of another point raised by Dr. Bennett. It is certainly true that if a life be declined or rated up by No. 1 company the medical reports may be borrowed by No. 2, but it is not, we believe, usual for such a life to be accepted without re-examination. However this may be, Dr. Bennett has done a service to his fellow medical officers by inviting them to take steps to secure what we regard as only the just recognition of the very important and valuable services rendered to life assurance companies by their medical officers. The age of miracles, however, has passed, and it is to be feared that even Dr. Bennett's long trumpet blast will not bring down the walls of the assurance Jericho. Something more than an individual effort will, we suspect, be necessary, and though the Life Assurance Medical Officers Association was founded to give attention to the purely scientific and medical aspects of life assurance, we nevertheless think that it would render useful service to the profession if it were to appoint a committee which would be in a position to express an authoritative opinion on financial and other business questions which occasionally arise.

## "EFFICIENCY!"

In the first part of his great speech at Chesterfield, Lord Rosebery said that the Liberal party should take for its watchword "Efficiency," and referred in illustration to the notorious inefficiency of the War Office. The complaints against it, he said, were unanimous, and a massive Blue Book indicated that they were just. He went on to say, with reference to the army, that the Government, without really and seriously considering what were the wants and requirements of the army, introduced a hurried scheme, the only result of which was that four or five generals were at the head of army corps looking hungrily about to find where their armies might happen to be. We quote these words because *mutatis mutandis* they may be applied to the course which has been pursued with regard to the reorganisation of the Army Medical Service, and we may go on to quote Lord Rosebery's further comments, which also have an exact application to the same matter. "The Germans,"

he said (we quote from the *Times* report). "who are our masters in the art of elaborate and painful and learned inquiry, would have adopted a very different system. They would have got the best minds of the country and of the army to inquire solidly into what was required, and what was wanted, and at the end of the war, not before. They would have satisfied themselves in the meantime with meeting the immediate requirements of the war, and at the end of the war they would have propounded their scheme with the knowledge that the whole war had evolved." This is, if we may say so without presumption, exactly what we have been for months past endeavouring to express with regard to the way in which Mr. Brodrick set about reorganising the Army Medical Service. He did not institute an elaborate, painful, and learned inquiry; he did not satisfy himself in the meantime with meeting the immediate requirements of the war, and instead of being in a position to propound a scheme at the end of the war with the knowledge that the whole war has evolved, he has launched upon the country, and upon the medical profession, a scheme which bears in nearly every clause traces of inadequate inquiry, of imperfect acquaintance with the lessons of the past and of the present, and of failure to grasp the essential fact that the most important duties of the Army Medical Service have to do with the preservation of the health of the army—that is to say, with sanitary measures in the widest acceptation of the term.

## A POLICY OF "THOROUGH" AS TO CONTRACT PRACTICE.

Letters which we have received as to contract practice, both those which have been published and others not intended for publication, appear to show that there is a growing feeling in the profession in favour of the policy of "thorough," to which reference was made in the British Medical Journal of November 30th, p. 1619. The correspondent whose communication was there mentioned has again written, reiterating his conviction that medical men as a body are at heart opposed to the whole system of club practice. Apart from the many who absolutely decline such practice, our correspondent is of opinion that, generally speaking, those who now hold club appointments would be glad to give them up if assured that there would be no successors; that such appointments are unremunerative, the rate working out (as other correspondents have shown) at less than the average obtainable in ordinary private practice among the working classes, an average the working man can afford to pay, and the minimum capable of compensating the practitioner for his time and skill: that private practice affords the patient the free choice of his attendant, and other advantages in his relations with his medical adviser; and that, therefore, contract practice should not be undertaken by individual medical men, or officially recognised by professional organisations like the British Medical Association. By "not officially recognise" we take our correspondent to mean that the Association should not lay down regulations as to the terms, wage limits, or other restrictions to be imposed by general consent on contract appointments, but should treat all such practice, under any conditions, as contrary to the interests of the medical profession. This is no doubt the logical conclusion to which much recent discussion of this question tends, but we cannot without further evidence concur in the statement that such far-reaching views are at present consciously held by any considerable number of practitioners: and the assertion that, consciously or subconsciously, they are those of a majority, or of the profession generally, appears to be, to say the least, unproven. The true state of affairs we believe to be this: that, speaking generally, those medical practitioners who have seen much of contract practice under existing conditions are dissatisfied with those conditions. A certain number—no one knows what number—would be content for the present with an increase of remuneration—in some districts apparently with a relatively small increase. Again, a certain number—also unknown—would not be satisfied without a clear recognition of the right of each practitioner to decline to attend under such contracts those whom he considers unsuitable in respect of means—the so-called "wage" or "income" limit. Lastly, certain others—number again entirely unknown—have come to the conclusion that the fundamental principle of such practice, that of the practitioner virtually undertaking the burden of an assurance of his patient against the expenses of medical attendance, is unsound, and should be repudiated by the profession. It is plain that, whatever the logical strength of this last position, it implies a profound change in a very widespread and long-established system, which has had very considerable practical recognition in the acceptance by medical men of appointments under it. It will be agreed that the whole subject deserves much more thorough investigation than it has yet received. The adherents of the policy of "Thorough" will be well advised, in the interests of their own cause, if they now devote careful attention to the practical requirements of the community, to satisfy which the existing system has been evolved, and consider how on their plan these necessities, so far as they are just, would be provided for by the medical profession. It is desirable to encourage thrift, and a thrifty working man may wisely desire to insure against the cost of medical attendance in sickness, but the question is who shall undertake the insurance, and how on any system certain practical difficulties ought to be met.

## THE LEAGUE OF MERCY.

The second annual meeting of the Presidents of the various districts comprised in the beneficent operations of the League of Mercy was held last Monday afternoon in the Governors' Court-room at Guy's Hospital. Sir Whittaker Ellis presided, and was supported by a distinguished company, including the Marquis of Camden, the Earl of Mansfield, Lord Farquhar, Lady Florence Pelham Clinton, Lord and Lady Pirbright, and many other representative persons well known in works of practical philanthropy. In the year of its inauguration the League of Mercy contributed £1,000 to the Prince of Wales's Hospital Fund for London, last year it handed over the handsome sum of £6,000 to the same object; and it is gratifying to learn that, despite many adverse circumstances, it is proposed to credit King Edward's Fund, when it assumes that name next year, with £7,000. It will be remembered that the League of Mercy was established under Royal Charter in 1899, and that among its foremost objects was to enlist the services of a large number of persons in works for the relief of sickness and suffering, in the first instance by bringing home to the working classes and the small subscribers a knowledge of the needs and work of the metropolitan hospitals. We observe that next year a special appeal is to be made by the "Organising Committee of the Prince of Wales's Hospital Fund" towards the coronation gift to His Majesty in the shape of a large contribution to the Fund which in future is to bear His Majesty's name. The energy displayed by those who are responsible for this appeal is beyond all praise, and it is hoped that the original expectation of securing £100,000 per annum for the London hospitals may be eventually attained. It is, however, just possible that leagues, and funds, and gifts, all having the same excellent object in view, may overlap, to their respective detriment, and to the bewilderment of the small subscriber. We do not say that such is the case, but we hope that by making clear the scope and object of the various agencies at work, the able advisers and organisers who have these matters in hand will co-ordinate them to the best possible advantage.

## MEDICAL PRACTITIONERS IN CAPE COLONY.

WHETHER it be the result of accident or of design, a great influx of foreign medical practitioners and dentists into Cape Colony has recently occurred. The Colonial Medical Council, becoming aware of the circumstance, has consequently decided not to allow foreign subjects to practise in the Colony unless they belong to a country in which the holders of British medical diplomas are accorded similar privileges. The proposal was introduced to the Council by Dr. Gregory, Health Officer for the Colony, and was adopted by seven votes to two. It has been the custom to admit to practise in the Colony men holding diplomas from countries which refuse to grant the same privileges to men holding a British registrable degree. Dr. Gregory's resolution declared for reciprocity as the policy to be adopted. The figures that he adduced showed the rapid growth in recent years of the foreign element in the medical profession in the Colony. Eight or nine years ago 14 per cent. held foreign diplomas; last year that proportion had risen to 27 per cent.; and already during this year, of 16 practitioners admitted no fewer than 10 are holders of foreign degrees. Inasmuch as all practitioners who are on the Cape *Medical Register*, whatever their nationality, have the privilege of voting for the elected members of its Medical Council which legislates for the whole medical profession of the Colony, the majority of the Council might in time come to be composed of practitioners who are not even British subjects. The legal profession is much more restrictive. No barristers or attorneys, save those admitted in England, Scotland, or Ireland, may practise in the courts of Cape Colony; and not even barristers or attorneys from other British Colonies possess any advantage over those coming from foreign countries. A movement to reciprocate in this matter with other British Colonies is now in progress; but some considerable time must probably elapse before the change can be accomplished. Until lately there was no such reciprocity even with England, but a law passed last session at Westminster admits attorneys of Cape Colony to practise in the United Kingdom without serving articles afresh. For barristers of Cape Colony, however, there is still no reciprocity in England, though a Cape barrister has been recently called by Benchers of one of the Inns of Court without eating the usual number of dinners. Reciprocity for medical practitioners between the Mother Country and the Colonies generally is an intelligible policy, and the decision of the Medical Council of Cape Colony will achieve an advance in that direction.

## ABDOMINAL HYSTERECTOMY FOR UTERINE INVERSION.

AT the last annual meeting of the Association Dr. Haultain read a report of a successful operation which he had performed for the reduction of a chronic uterine inversion. This interesting communication was published, with illustrations, in the BRITISH MEDICAL JOURNAL of October 5th, p. 974. When the abdomen was opened, a transverse slit three quarters of an inch long was seen in the peritoneum of the pelvic floor at the site of the fundus uteri; from each extremity of the slit protruded an ovary and the ostium of a tube. The uterus could not be drawn up, nor the slit dilated. The operator therefore decided to cut through the constricting ring, which he succeeded in reaching from above. This incision was made posteriorly. Only a small portion of the uterus could be reduced on pushing from below. Dr. Haultain, therefore, directing his assistant to press steadily on the fundus in the vagina, continued the incision through the posterior uterine wall as it appeared through the slit, till reduction was complete. The incision thus made in the back of the uterus was closed with thick catgut sutures, which included the entire thickness of the wall, and with fine catgut Lembert sutures superficially. The result was quite satisfactory. We find that Dr. M. T. Brennan, Professor of Gynæcology, Laval University, published last year a case of a somewhat similar operation[1] in a Canadian contemporary and a second communication[2] appeared in the same periodical just a week before Dr. Haultain's report was printed in our columns. The two authorities have worked in absolute independence of each other, and Dr. Brennan admits, we are informed, that the date of Dr. Haultain's operation is not given in the communication above noticed, so that the trivial question of mere chronological priority remains unsolved. In Dr. Brennan's first case the inversion, it must be noted, was of under a fortnight's standing, nevertheless it was irreducible. Dr. Brennan opened the abdominal cavity, and vainly attempted to dilate the constricting ring. He therefore incised the ring posteriorly down into the uterine cavity. The inverted uterus was now gradually and easily reduced by traction with forceps made to grasp its surface higher and higher towards the fundus during reduction. During this process of dragging up the uterus with forceps, counter-pressure was made on the constricting ring by the forefinger and thumb of the operator's left hand. The wound was sutured with three layers of continuous catgut applied to the mucous membrane, muscular wall, and serous coat respectively. The patient did well. A few months later Dr. Brennan operated in a very bad case where there was puerperal infection. Reduction was effected by the abdominal operation, but with some difficulty, as the inflamed uterine tissues were soft and the forceps tore them. Unfortunately the patient died on the second day from pulmonary œdema; there was apparently no intraperitoneal infection. Dr. Brennan, after some instructive comments, suggests an ingenious manœuvre for avoiding the dangers of infection through the uterine wound, of hæmorrhage and of laceration of a softened uterus with forceps. A stout needle is threaded and thrust into the fundus from the abdominal side into the vagina. The thread carries with it a loop of stout silk, silkworm-gut, or silver wire. The ends of this loop remain in the abdomen; into the loop itself, now in the vagina a big pad of gauze is fitted by an assistant. Then the operator pulls on the ends of the loop with his right hand, using his left to make counter-pressure on the constricting ring. The assistant may steady the pad, if necessary, with a forceps or with his finger. The constricting ring may require more or less deep incision. After the reduction, the threads on the pelvic side of the fundus are knotted or cut off short, and the pad and loop removed through the vagina. The pad may be left in as part of the subsequent tampon, if desirable. The puncture in the fundus, made by the needle, is cauterised with pure carbolic acid, neutralised by 95 per cent. alcohol and a catgut suture inserted. Lastly, the uterine cavity is curetted, swabbed out with carbolic acid and alcohol, and packed with gauze. Dr. Brennan's experience and propositions alike deserve consideration on this side of the Atlantic. Dr. Haultain, we note, operated upon a case which was essentially chronic, being of over nine months standing; Dr. Brennan's cases were as essentially recent.

## THE FUNDUS OF THE MAMMALIAN EYE.

WHILST the coarse anatomy of the mammalian eye has been investigated with some degree of completeness, ophthalmoscopic examination appears not to have been carried out on the comprehensive scale attempted by Dr. Lindsay Johnson,[3] and the results of his investigations are of far-reaching interest. Thus, he finds that a classification based on the characters observed corresponds, with

[1] Inversion Utérine, Nouvelle Technique Opératoire, Guérison. *Revue Médicale du Canada*, August 22nd, 1900, p. 57.
[2] "De l'Intervention Intra-Abdominale dans l'Inversion Utérine Irréductible." *Ibid.*, September 11th, 1901, p. 121.
[3] The Comparative Anatomy of the Mammalian Eye, chiefly based on Ophthalmoscopic Examination. By G. Lindsay Johnson, M.D., F.R.C.S.

but few exceptions, remarkably closely with the most recent classification of the mammalia based on general grounds, and amongst other things it is very interesting to see that the ophthalmoscopic picture of the fundus of a negro differs markedly from that of a darkly-pigmented European, but resembles very closely that of a chimpanzee. Moreover, certain moot physiological points as to the exact process of human vision receive some elucidation from a comparison with the structures found in lower animals. The limitation of the greatest sensitiveness to a small area—the macula lutea—is peculiar to man and the apes, in whom alone a macula exists; it is not found even in the lemurs: in all lower mammals the sensitive area is far more diffuse. Convergence appears to be closely associated with the existence of a macula, for (with the exception of a few domesticated animals which develop the power in a slight degree) convergence is limited to man and the apes, and man alone can maintain it for any time. Hence it becomes doubtful if lower animals possess binocular vision. The divergence of the optic axes ranges from zero in man and the apes, 1° in the felidæ, 20° in the dog, up to 85° in the hare. This wide divergence taken in conjunction with a diffuse sensitive area and a nearly spherical lens must enable some rodents to see almost directly behind them. Slight hypermetropia is the rule amongst mammals and in the lower, such as rodents, edentates, and marsupials, it is greater in amount, whilst simple emmetropia is hardly met with. This fact, considering the known acuteness of vision in many animals, and the further observation that those amongst a number of youths from the Congo who possessed exceptionally good vision were all found to be more or less hypermetropic, leads the author to doubt whether emmetropia is compatible with visions of high perfection. In some nocturnal animals a circumferential arrangement of pigment, recalling retinitis pigmentosa, was observed, and it was found that if these animals were for a prolonged period exposed to daylight they became blind by a concentric extension of this pigment. This appeared to offer a hint for treatment of this intractable disease, which ordinarily progresses till vision is destroyed, and the author has found some encouraging results by treating such cases with spectrum-blue goggles. It was also found that certain conditions normal in some animals were parallel to the congenital defects met with in human eyes, thereby suggesting that the defects may be of the nature of reversions. The pigmentation of some mammalian eyes suggests that the image perceived may not be formed on the front surface of the retina, but that it is reflected back into it, and the further possibility that our perception of colour may be an interference phenomenon; but this is too lengthy a matter to enter into here. Such are a few of the salient points in a paper which will well repay perusal by all interested in the eye, whether as comparative anatomists, physiologists, or practitioners.

## SMALL-POX AND LIGHT.

John of Gaddesden's method of treating the small-pox in the King of England's son is well known. But what is less generally known is the fact that the treatment of the disease by wrapping up the patient in red clothing and surrounding his bed with red hangings still survives in various parts of the world—in Roumania, Japan, and Tonquin. In 1832 Picton obtained good results, in so far as subsequent scarring was concerned, by keeping patients in obscurity. In this country, Black, Waters, and Barlow recorded similar results. Finsen came to the conclusion this was really due to cutting off the chemical rays. He therefore advocated the use of deep red glass, which does not allow the passage of actinic rays; artificial lights used in the rooms or wards were also to be protected by deep red globes. The various rules laid down by Finsen were practised by Lindholm and Swendsen of Bergen, who published their results, which were very favourable, in 1893. They were confirmed by Feilberg, Strandgaard, and by Œttinger in France, but Juhel-Renoy found that the method only succeeded in very discrete forms of the malady, which got well of themselves. This unfavourable opinion was combated by Péronnet, who criticised Juhel-Renoy's treatment as incomplete, and not in accord with Finsen's rules. Courmont, of Lyons, has since tried the red light treatment with negative results. This is confirmed by an eye-witness, Bayle. One lesson learnt at Lyons was that the red light was very trying both to the patients and the attendants. The former, four women, became much excited and repeatedly asked to be placed in the ordinary light of day; and the latter were unable to go on with their duties without blue spectacles. This peculiar influence on the mind of those working in red light has been observed among the employees of the firm of Lumière of Lyons. The rooms where photographic plates and papers were handled were illuminated by red light, and it was not unusual to find some of the workmen labouring under great mental excitement. But since green light, which also stops the actinic rays, has been substituted for red, such cases no longer occur. This peculiar disturbing effect of red light has been confirmed in the case of variola patients by Oleinikoff. Several said they preferred the scarring to being confined in the red light; some also became delirious and had terrifying hallucinations. In confluent small-pox, however, delirium is not uncommon. Perhaps the substitution of green light for red would answer, but this is a matter for experiment. The reader interested in the subject will find further details in Dr. Finsen's paper in the British Medical Journal of December 7th, 1895, p. 1412, and references to the more recent literature of the subject in Dr. Bayle's Lyons thesis entitled *Contribution à l'Etude de la Photothérapie (1901)*.

## A PROPOSED GOVERNMENT COMMISSION ON VACCINATION IN AMERICA.

In a paper published in *American Medicine* of November 16th, Dr. C. Good of New York suggests that it would be well if Congress were to appoint a Commission to take evidence and report on the whole subject of vaccination, with the object of supplying an authoritative answer to certain questions as to which there is some uncertainty in the profession. Among the points which it would be desirable to refer particularly to the Commission, Dr. Good mentions the following: (1) Does one attack of small-pox give absolute immunity? If not, for what time is immunity accorded? (2) How soon after an attack of small-pox can vaccine vesicles be produced by careful vaccination with a good virus? (3) Should a person be considered not immune if having had an efficient vaccination some few years before a revaccination produces vaccinal possibilities? (4) The importance of carrying out control tests with one species of virus from four to six weeks after the original vaccine had apparently taken. (5) What kind of lymph is it most safe to rely upon, and what is the most approved technic? In America, as in this country, doubts are finding more and more frequent expression as to what is a proper vaccination. The *Cleveland Journal of Medicine* says that one of the most important problems now confronting the medical profession is that of finding a method to ensure that all vaccine placed on the market is pure and effective. Careful investigation forces the conclusion that much lymph now on the market fulfills neither of these requirements. There is general complaint that much of the best quality of vaccine on the market is not effective. It is no unusual experience to vaccinate and revaccinate unprotected children, using all the necessary precautions, without producing vaccinia. On the other hand, the conclusion is forced on practitioners that some vaccine conveys only pyogenic infection. The inoculation

of such vaccine is followed by severe reaction, including fever, erysipelatous dermatitis, a sloughing sore, and great swelling of the arm. Such a vaccination, in spite of its apparent thorough reaction, produces no immunity to subsequent small-pox. In view of the untrustworthiness of commercial products would it not be well if the Government made itself responsible for the quality of all lymph issued, either by supervising its manufacture, or by authorising its sale after adequate tests of its purity and efficiency?

## THE VALUE OF SERUM TREATMENT FOR DIPHTHERIA.

IN a recent number of the *Semaine Médicale*, No. 51, the editor, Dr. de Maurans, gives the results of an inquiry made by him into the mortality from diphtheria from 1883 up to the present time in thirty-two large towns, including the principal cities of Europe, and prints thirty-three curves illustrating the figures he has obtained from official sources. He thinks the result is to show that the number of cases and the mortality have a general correspondence, so that where the mortality is high the number of cases is also great. The evidence in favour of this point consists of only two curves, but it is essential to the argument, as the later conclusions are based upon the curves of mortality which are accepted as expressing not mortality only, but morbidity. The second point, of which there is abundant evidence, is that there were sudden rises and nearly as sudden falls in the period anterior to the introduction of the serum treatment. For example, in the city of Berlin the total number of cases in 1883 was 2,650; from this point the curve falls steadily during the succeeding five years, until in 1888 it reaches 850, then rises again to a maximum of 1,450 in 1890, and the next year falls to 1,000; in 1893 it reaches 1,550, and from 1893 falls steadily to 500 in 1896. In Edinburgh the curve rises from 30 in 1883 to a maximum of 90 in 1887, falls away to 40 in 1892, rises again to 80 in 1894, and again falls slowly to 30 in 1899; in Brussels the maximum is 160 in 1885, and falls gradually to 60 in 1889. Since the introduction of serum treatment in 1894-95 the mortality has remained low in most of the towns, thus affording grounds for the belief in its success. But in Birmingham, Liverpool, Dublin, Bucharest, and Stockholm a rise took place after 1895, which reached its maximum in Birmingham in 1896, in Liverpool in 1899, in Dublin in 1897, in Bucharest and in Stockholm in 1899. The conclusion drawn by Dr. de Maurans is that the fall in the curve of mortality noticed in many cities after the introduction of the serum treatment is due to the fact that the epidemic in these cities had reached its acme at or about the time at which the new treatment was introduced. But he repudiates the conclusion that serum therapeusis is useless; he believes its local effect to be undeniable, but its antitoxic power to be doubtful. If, he contends, it possesses any specific antitoxic power, mortality from diphtheria under its use should be maintained at a constant percentage, whereas in the eleven months of 1901 to the end of November there were 4,347 cases of diphtheria notified in Paris with 630 deaths, or a mortality of 14.49 per cent; while in the corresponding part of 1895, which was the year most favourable to serum therapeusis, the total number of cases was 3,842 with 362 deaths, a mortality of 9.42 per cent., which means that in 1901 an increase of 505 notified cases has been attended by 268 more deaths. He rejects the defence that the recent high mortality is due to a greater number of cases of associated infection of which there is no evidence; and he concludes that antidiphtherial serum, whatever its efficacy, either does not possess at all times the same degree of antitoxic power, or is not the specific remedy it is generally believed to be. These criticisms are worthy of careful consideration, and we would refer all interested to the original paper.

## THE AFTER-CARE OF INEBRIATES.

AT page 1823 will be found an account of the latest report of Dr. Branthwaite, the Inspector under the Inebriates Acts on the working of those Acts during the past year, and in this connection the proceedings of the recent Conference on the care of inebriates after they have left a retreat or reformatory are valuable. The Conference, which was held at the invitation of the Home Secretary, consisted of representatives of various sociological and religious bodies. The causes of the relapse of inebriates after they had been discharged from institution treatment, and the means of its prevention, were discussed. Sir Kenelm Digby, who presided on behalf of the Home Secretary, was accompanied by Dr. R. W. Branthwaite and Mr. Byrne. The invitation issued by the Home Office drew attention to the fact that the sudden change from the discipline of these institutions to the condition of absolute freedom tended to cause an abrupt undoing of the good received, and suggested as a counteracting influence the establishment of voluntary homes in which some discipline could be kept up, and good resolutions and efforts consolidated. An all but essential feature of such homes was held to be that in or through them some systematic work should be provided as part of the process of cure. These ideas were further amplified by the Chairman in his opening remarks. He pointed out that the treatment of inebriates under the Acts was even yet in an experimental stage, and that what was particularly wanted was an intermediate step between the institution and the freedom of the street—a worker's home or agency in which the discharged inebriate might take refuge for a time. The suggestion was cordially supported by Dr. Forman of the London County Council, by Mr. Haden Corser, the metropolitan magistrate, and by Mrs. Bramwell Booth of the Salvation Army. The latter stated that arrangements had been made by the organisation which she represented for private families to take discharged inebriates as boarders, and that rescue homes were now in existence in London, Bristol, Plymouth, Cardiff, Newcastle, and Sheffield into which such women could be received. It was understood that Dr. Branthwaite, whose experience in these problems is unrivalled, was willing to help with his advice any organisation making effort to meet this real need. While it is true that, in a sense, every man makes his own environment, and that the home surroundings of such unhappy sufferers are mostly inimical to improvement, yet, on the other hand, after a certain stage of improvement is reached the very influences which at an earlier stage would probably have tended to relapse may become through a process of inversion, helps in preventing it; as there is advantage in treating a person suffering from pulmonary tuberculosis in a sanatorium having a similar climate to that in which he will be obliged to live after his return to ordinary working life, so there is probably advantage in an inebriate passing the last stage of his cure under not altogether favourable social conditions. However, the application of the principle of the convalescent home to the reclamation of inebriates will probably prove a valuable auxiliary in their re-education in self-control by physiological combined with ethical means.

## SICK TRANSPORT IN WEST AFRICA.

THE Liverpool Chamber of Commerce has submitted to the Colonial Secretary, and recommended for his approval a design by Lieutenant-Colonel J. J. Lamprey, R.A.M.C., for a corridor ambulance train for use on the British West African light railways. The drawings show that the carriage has accommodation for thirty persons—twelve lying down in cots, twelve seated, a medical officer, and five attendants including a cook. It can be utilised at a railway station, at a siding, or at a junction, as a temporary hospital. As it will be complete in every equipment—drugs, instruments, and dressings, kitchen and larder, with pantry and table appointments, medical comfort box, store

room and water tank—Lieutenant-Colonel Lamprey claims that his car will not only serve as a general purpose saloon for railway service anywhere, but that the addition of the wire-wove cots and mattresses will vastly increase the comfort of the invalids. At present the sick and wounded are placed on stretchers resting across the backs of the seats in open carriages—a practice which, apart from the agony of the jolting and the danger and discomfort to the patient, is to say the least of it primitive. Those who have visited Sierra Leone, the Gold Coast and Lagos recently are of opinion that the light railway accomodation should be made as convenient and as comfortable on the West Coast of Africa as in India

## A TRUE HERO OF MEDICINE.

We observe with great satisfaction that the heroic death of Dr. William Smyth, of Burton Port, Donegal, which was recorded in the British Medical Journal of December 7th, has been the subject of many laudatory and sympathetic notices in the general press. The sublime self-sacrifice of the practitioner who in very truth gave his life for his patients forms the theme of a poem, signed L. M. Little, which appeared in the *Westminster Gazette* of December 17th. After describing the wilds of Donegal, "so lovely in their loneliness" but "so terrible, so grimly desolate," the *vates sacer* celebrates the heroism of the martyr to duty in the following lines:

Above its coast there lies a lonely isle
Unnoted in a solitary sea.
But not unmarked by Death, who swings his scythe
About the cabins, harvesting the poor.
Late, a great terror on the people fell
Of the old fever and the new-made graves,
So from the sick they shut themselves away,
And they were left to moan beneath the thatch,
Unnursed, unhelp'd, unheeded, save by one:
Now this man, look you, had a wife at home,
And eight young children, whose soft-clinging arms
Were links of love to bind him to the land,
And yet he set his face to the grey sea,
Under a low sky burning stormy red,
Like to the smouldering fire of his doom.
I think the shining stars have never smiled—
Nor the sweet Presences that walk unseen
Noting white records to redeem the world—
Upon a nobler sight than that lone boat
Facing the elemental forces, Wind and Wave,
Fronting the phantom eyes of Death and Fear.

So every day that Healer went and came.
But when his utmost skill of brain and heart
Could hardly save the sufferers where they lay,
With his own hands he laid them in his boat,
And, no man aiding,[1] rowed them to the land
Where blew the breath of life and they were saved:
Then fell the fever on him, and he died.

But since he died for men I hold he leaves
In a perpetual legacy to us,
A sacred charge and memory—his name—
That none shall be more honoured under Heaven:
His children: that we see their lives shall grow
Worthy the fashion of their father's death.

Another poet has told us that *fortes creantur fortibus et bonis*, and as Dr. Smyth was brave and good far beyond the average standard, the conservation of his race is of importance to the nation. We have no doubt that many of our readers will be glad to help in enabling Dr. Smyth's children to walk in their noble father's footsteps, and in this connection we would draw attention to a letter from Dr. William Carter of Liverpool (p. 1840).

## THE YOUTHFUL OFFENDERS ACT, 1901.

One of the most important Acts passed in the last session of Parliament bears the above title. Consonant with the policy of recent criminal legislation, it aims at the prevention rather than the cure of criminal tendencies in the youthful mind. The object of the Act is to prevent youthful offenders from falling into the criminal class by lessening the consequences of the crime to the children, while it imposes a greater responsibility upon their parents. Those who have the care and custody of children are not to be immediately answerable for offences committed by the children, but they will suffer in pocket if the child offends by reason of wilful default or habitual neglect. Omitting Section I. which modifies the First Offenders Act, the most important provisions of the Act are contained in Sections II and IV. The general effect of Section II is that if the parent or guardian has conduced to the commission of an offence by the child (that is, under 12) or young person (that is, under 16), he may be ordered to pay the fine, damages, or costs so imposed. The fine, costs, or damages are to be imposed upon the youthful offender, but the parent or guardian may be compelled to pay them by an order. Before such an order can be made against a parent or guardian, the Court must be satisfied that the parent or guardian has "conduced to the commission of the offence by wilful default or by habitually neglecting to exercise due care" of the child or young person. We anticipate that neglect, which occasions the semi-starvation of a child and so compels it to steal, will come under this heading. The insertion of the word "wilful" may serve to protect parents whose children are neglected or starved through no fault on their part. The procedure for enforcing this section presents no difficulties, as the parent may be brought before the court by information, and a summons which will be heard when the charge against the child is dealt with. The parent has a right of appeal to quarter sessions. Section IV, like those which precede it, is also aimed at keeping youth away from the contaminating influence of the criminal classes. It enables a court of summary jurisdiction, when it remands or commits for trial any offender under 16, instead of committing him to prison, to remand or commit him into the custody of any fit person willing to receive him. The name of the person is to be stated in the commitment, and, in choosing the person, the religious persuasion of the child is to be taken into consideration. The court has power to revoke the order in case the child escapes from the custody of his guardian. The class of custodian will probably depend upon the amount available for his remuneration, which is to be paid in the first instance out of the district police fund, and is to be repaid out of moneys provided by Parliament. The amount is to be settled by regulations issued by the Secretary of State. In addition to this the parent or guardian may be ordered to pay a sum not exceeding 5s. a week for the maintenance of the child, or the district council or School Board may contribute towards it. The powers specified in the Act may be exercised not only by justices of the peace, but by courts of quarter sessions and assizes.

## THE MACCLESFIELD INFIRMARY.

The deadlock still continues at the Macclesfield Infirmary. Up to the present the medical staff have kept to their posts and carried on the work of the institution; but this state of affairs cannot be expected to continue, and a final arrangement will shortly have to be made. The governors show the greatest irresolution. At one time they seem about to end the crisis by agreeing with their medical staff, but immediately after they spoil everything by vainly endeavouring to effect a compromise between the parties. The lady house surgeon (Dr. Clarke) has been asked by the governors to resign, and has been offered a year's salary as a gratuity if she will do so. But she contends that it is a matter of principle with her, and that she feels compelled to hold to her post in defence of the rights of lady members of the profession generally. After receiving the lady's refusal the governors passed the following resolution:

[1] The poet has forgotten Dr. Brandon M'Carthy, himself we believe the son of a poet, the late Denis Florence M'Carthy.

That the honorary medical staff be asked to withdraw their resignation, and that Miss Clarke be released from her promise to stay twelve months.

This resolution was forwarded to the medical staff, who replied that they were prepared to withdraw their resignations provided that (1) the selection of resident medical officers be left in the hands of the honorary medical staff, and (2) that the services of the present junior house-surgeon be dispensed with from January 15th, 1902. The staff added that while they would do all in their power to prevent any patient suffering from lack of needful medical attendance, they could not agree to the continuance of the present arrangement for any further period, since they believed that it would be prejudicial to the interests of the institution and the patients; they therefore informed the governors that the staff could not be responsible for the care of patients after January 15th next except under the conditions stated. The governors, owing to their want of due consideration at an earlier stage, now find themselves in a very embarrassing position, but it is difficult to see what other course the honorary medical staff could have have taken. Miss Clarke has also been placed in a trying position, but it is clear that the objection made against her by the staff is not dictated by any opposition to lady members of the profession. That women have equal rights with men to practise medicine is now admitted everywhere. But there may be local reasons—and we believe this to be the case at Macclesfield—against their employment at special institutions, and if these are well founded, Miss Clarke injures rather than assists by undue obstinacy the principle for which she is contending.

## THE LEECH MEMORIAL FUND.

A MEETING of the subscribers to the Leech Memorial Fund was held on December 11th, Alderman Thompson presiding, at the rooms of the Manchester Literary and Philosophical Society. The report of the Committee, read by the Secretary, stated that the sum of £1,251 12s. 6d. had been received from 152 subscribers. Of this amount £1,000 had been paid to the Owens College on condition that it should be called the Dr. Leech Memorial Fund, that the income and such portion of the capital as the Council of the College may from time to time think fit should be applied for the immediate maintenance of the professorship in, and for promoting the study of, materia medica and therapeutics in the Owens College, and that the name of Dr. Leech should be associated with the chair. The money, on these conditions, was gratefully accepted by the Council of the College with the desire that its best thanks should be conveyed to the subscribers to the fund. Out of the remaining balance, a portrait in oils of the late Dr. Leech has been commissioned for presentation to the Owens College, and it was also proposed, if sufficient funds were available, to have another portrait executed as a bronze medallion to offer to the Board of Management of the Royal Infirmary, Manchester, to which hospital Dr. Leech was honorary physician for over twenty years. The report was unanimously adopted, and the Committee was instructed to carry out its proposals, and to issue a balance sheet and final report to all the subscribers when the fund has been closed.

## THE NEW *JOURNAL OF OBSTETRICS AND GYNÆCOLOGY.*

THE first number of the *Journal of Obstetrics and Gynæcology of the British Empire* will, as already announced in our columns, appear early in January. It will contain contributions by several leading authorities attached to the medical schools of London and other centres of professional education in the United Kingdom, with the products of co-operation from the British realms beyond the seas. It is the object of its promoters to make it a truly representative journal. The number of able British writers in the field of obstetrics and gynæcology has become very large, and many desire to make known researches which are more suited for publication in full in a special periodical than for discussion before meetings of societies. The value of societies and of associations like our own which provide for the reading of papers and the exhibition of specimens has long been proved by experience, but the *Journal of Obstetrics* will be independent of any society, and will devote itself to work of a nature best promoted by publication in a monthly magazine, not neglecting to chronicle special work undertaken by societies or recorded in the general medical press. We wish the editor, Mr. Alban Doran, and his collaborators, among whom are nearly all the leading representatives of the speciality throughout the United Kingdom, every success in their important undertaking. The new journal cannot fail to have a highly stimulating influence on the growth of knowledge in the special field of medical science, to the cultivation of which it is to be devoted. The publishers are Messrs. Baillière, Tindall, and Cox.

## A CASE FOR THE TREPHINE.

REFERENCE is made elsewhere to the dogged resolution with which Mr. G. W. E. Russell, at the recent meeting of the Governors of the Hospital for the Paralysed and Epileptic, stood alone, deserted by his colleagues, and defied the doctors to the last. Impenitent, and impenetrable to argument, he persisted in declaring that the hospital would come to grief if the *ancien régime* were overthrown. The *Manchester Guardian* has unearthed the following expression of opinion from an article by Sydney Smith which appeared in the *Edinburgh Review* some seventy years ago: "The Russells are an excellent race, but they have one great peculiarity—they never alter their opinions; they must be trepanned before they can be convinced." Our Manchester contemporary points to the illustration of this peculiarity given by Mr. Russell in Queen Square. It is hinted that it would not have been difficult to find a surgeon willing to "trepan" him without other fee or reward than a gratified sense of philanthropy.

## THE RECONSTITUTION OF THE ASSOCIATION.

WE are informed that the Committee appointed to draft the new articles and by-laws, as instructed by the resolutions of the annual general meeting at Cheltenham, has held four meetings, and completed its portion of the task on November 15th. The matter is now in the hands of the legal advisers, and when it has been settled to their satisfaction no time will be lost in calling the special statutory meeting to which the new articles and by-laws will be submitted.

## THE GENERAL MEDICAL COUNCIL ELECTION.

IT appears that there was an error in the figure, as first received, of the number of votes polled by Mr. George Brown at the recent election. The printed return shows that he received 5,569 votes, and not 5,369 as previously stated. We print at page 1816 the analysis of the voting in England, prepared by the Registrar, to whose courtesy we owe the opportunity of doing so.

WE are informed that the members of the medical staff of the National Hospital for the Paralysed and Epileptic dined together on Wednesday, December 18th, when Dr. J. A. Ormerod was presented by his colleagues with a valuable service of plate in recognition of his services as Secretary to the Medical Committee, and in particular of the energy and ability which he has displayed in the struggle for a better system of management of the hospital which has now been brought to a successful issue.

## SMALL-POX IN LONDON.

### Prevalence.

The number of cases of small-pox under treatment in the hospitals of the Metropolitan Asylums Board was, on Saturday, November 30th, 427. On Saturday, December 7th, the number had risen to 474 and on Saturday, December 14th, to 507. Since then the number of cases under treatment has increased, and at midnight on December 17th-18th was 546.

### Small-pox Hospital Accommodation.

It is interesting to learn that the Hospitals Committee of the Metropolitan Asylums Board has reported that within a few weeks 1,740 beds will be ready for persons suffering from small-pox, but is of opinion that there should be 2,500 beds, which is equivalent to provision for nearly five times the number of patients at present under treatment. In 1882 the Royal Commission appointed to inquire respecting small-pox and fever hospitals in London, stated that 2,100 or by special exertions 2,700 beds should be provided. At this time the population of London was 3,893,000. The population in 1901, 4,543,000, is 13 per cent. greater, and to this must be added a population outside London which also sends patients to the hospitals of the Metropolitan Asylums Board. The estimate as to future needs must in the main be based upon the condition of the population as to vaccination, the administrative machinery for dealing promptly with cases of the disease, and the lesser opportunities of infection by the removal of the small-pox hospitals out of London. As to vaccination, there is evidence that routine vaccination of infants has been less complete, but in the last year there has been so much vaccination of persons at all ages as the result of a better appreciation of its value that this has probably compensated in large degree for the neglect of routine vaccination of infants. It is difficult to take stock precisely of the position, but in respect of the removal of the small pox hospitals from London, and of the better machinery for dealing with cases as they occur, the gain is very considerable. On the whole, we are disposed to be satisfied with the estimate of the Metropolitan Asylums Board. Estimates are necessarily guesses based on the experience of the past, and we have nothing better to guide us than the facts we have stated. With so much uncertainty as must attach to the subject it would be more satisfactory could provision be made for extension of the accommodation, if this should be found necessary. Until a regular system of revaccination is introduced into London it will be necessary to provide for the accommodation of large numbers of patients.

### Statistics of the Hospital Small-pox Cases.

We referred, in the Journal of December 7th, to an article, evidently "inspired," which was published recently in the *Times*, giving what may be regarded as the first-fruits, statistically speaking, of the present prevalence of small-pox in London; but it appears desirable to examine the statistics given therein more closely. They relate to the cases treated in the hospitals of the Metropolitan Asylums Board. The fatality rates shown are necessarily excessive at present, alike as to unvaccinated and vaccinated, because they relate only to cases already completed, and therefore include all the deaths, but do not include any convalescents not yet discharged. This, however, does not prevent some useful information being gleaned, and needless to say the facts only repeat the old lesson of the value of vaccination in modifying small-pox among those who, through lapse of time or otherwise, are not altogether protected against attack.

In 233 vaccinated cases there were 47 deaths, the rate thus shown being 20 per cent. In 97 unvaccinated cases there were 58 deaths, the rate being 60 per cent. In 19 doubtful cases there were 11 deaths, or 57 per cent. The total 349 cases thus dealt with are also subdivided into age periods, and to save complication the 19 doubtful cases are classed with the unvaccinated, though to prevent quibbling by antivaccinist controversialists, it might have been better to omit the doubtfuls, or even to debit them to the vaccinated, for the difference between vaccinated and unvaccinated is so great that the former could easily bear the burden without seriously affecting the lessons which the figures teach. The table as given in the *Times* is, however, as follows:

| Age. | Cases. | | Deaths. | |
|---|---|---|---|---|
| Under 5 ... ... ... | Vaccinated | 0 | Vaccinated | 0 |
| | Unvaccinated | 23 | Unvaccinated | 19 |
| 5—10 ... ... ... ... | Vaccinated | 1 | Vaccinated | 0 |
| | Unvaccinated | 18 | Unvaccinated | 10 |
| 10—15 ... ... ... ... | Vaccinated | 23 | Vaccinated | 1 |
| | Unvaccinated | 16 | Unvaccinated | 8 |
| 15—20 ... ... ... ... | Vaccinated | 41 | Vaccinated | 1 |
| | Unvaccinated | 14 | Unvaccinated | 7 |
| 20—30 ... ... ... ... | Vaccinated | 81 | Vaccinated | 11 |
| | Unvaccinated | 18 | Unvaccinated | 10 |
| 30—40 ... ... ... ... | Vaccinated | 53 | Vaccinated | 10 |
| | Unvaccinated | 6 | Unvaccinated | 3 |
| Over 40 ... ... ... | Vaccinated | 41 | Vaccinated | 10 |
| | Unvaccinated | 14 | Unvaccinated | 13 |

Under 5 years of age there were no vaccinated cases, and among 23 unvaccinated there were 19 deaths. Between 5 and 10 years 1 vaccinated child was attacked and recovered, while of 18 unvaccinated 10 died. In the third quinquennium of life there is suggestion of the diminishing power of vaccination to prevent attack, for 23 vaccinated have been seized with the disease. All but 1 of these recovered. Among the 9 unvaccinated there were 8 deaths.

Concerning fatality, the lesson is repeated period by period. From 15 to 20 years, 1 vaccinated person died and 40 recovered, while 7 unvaccinated died and 7 recovered. In adult cases there is indication that the power of vaccination to prevent death is also diminishing through lapse of time since the performance of the operation. The fatality rate among the vaccinated increases, so that between 20 and 30 years 11 die and 70 recover, between 30 and 40 years 16 die and 53 recover, and over 40 years 16 die and 41 recover. The fatality among the unvaccinated is much higher at all these periods, the total cases being 38 and the total deaths 27.

As to revaccination, it is stated that 11 patients are said to have been revaccinated at different times. In 6 of these the operation had not been performed until small-pox was already incubating. Of the other 5, 1 is returned as having been revaccinated six years ago, another seven years ago, and the rest are of older date. Among the 11 there were 2 deaths, the revaccinations being respectively ten and twenty-three years old.

The article notes a fact which was very prominent in the Glasgow outbreak—namely, the entire absence from the lists of persons who, not being already in the incubation stage of small-pox, have been successfully revaccinated since the beginning of the present prevalence of the disease.

### Conditions of Spread of Small-pox.

We note that Dr. John F. J. Sykes, Medical Officer of Health for St. Pancras, has published, as a pamphlet with the title *Small-pox in London*,[1] a paper recently read by him to the Incorporated Society of Medical Officers of Health. The pamphlet seems incomplete, as it contains no record of the discussion which followed regarding questions considered to be of vital administrative importance to local authorities. One of these questions is "the exclusion and seclusion of persons in contact with small-pox," on which we commented in a recent leader. Dr. Sykes's first conclusion is "that small-pox is an imported disease, imported (*a*) from abroad, and (*b*) from one town or part to another." Scarlet fever and diphtheria are also conveyable from one part of a town to another, or from town to town, or across the English Channel from the Continent, but it has not been the habit to call them "imported diseases." The pamphlet gives a number of examples of conveyance of small-pox from abroad, and by tramps and vagrants. A disease of which the incubation period is long has greater opportunity of spread by such means than another disease with a short incubation period, and this fact should always be borne in mind. Dr. Sykes's second conclusion is "that small-pox is imported and spread from person to person (*a*) by unrecognised cases, (*b*) by cases delayed in recognition, and (*c*) by incubating cases probably between falling ill and development of the rash." Scarlet fever and diphtheria, it may be observed, are also "imported and spread" by (*a*) and (*b*), while as to (*c*) Dr. Sykes seems to use the word "incubation"

[1] Westminster: P. S. King and Son. 8vo, pp. 20. 1s.

where invasion would be more suitable. Measles is similarly spread during its period of invasion between falling ill and the development of the rash. The further conclusions in the paper are unquestionable—that small-pox may be carried by dirty linen and clothing of cases either recognised or not, and of persons who have been in contact with small-pox. The points stated in the paper for consideration by the Society were: International notification; the observation by vaccination officials of suspicious rashes, etc.: the thoroughness of every vaccinal operation, and the recording of the local result: the clinical examination of doubtful cases; and the direct communication of health officers with small-pox hospital superintendents. No doubt the discussion on these practically important matters will be published in *Public Health*—the Incorporated Society's journal—along with the paper itself.

## MEDICAL WORK IN BENGAL.

*Sanitary Report, 1900.*—The report for 1900 has been considerably shortened without any impairment of its utility. The year was an unhealthy one. The rainfall was deficient, the monsoon commencing late and closing early. There was an excessive fall in September over a large area. The price of food grains was high in consequence of the abnormal weather conditions and exportation into famine-stricken provinces. The birth-rate, calculated on the census of 1901, was 36.9, and the death-rate 34.9, the former being nearly equal to and the latter in excess of the quinquennial average calculated on the census of 1891. As the recent census shows an excess of some 3½ millions in the population of the province, these quinquennial averages are too high, and rates of 1900 consequently less favourable in comparison. There was a rise in all the causes of mortality specified in the returns. A serious epidemic of cholera prevailed throughout the province, the mortality being higher than any on record. The number of preventive inoculations performed was 13,291, and evidence is given in support of the success of this measure. Small-pox was also in excess, and the mortality caused by fevers and bowel complaints was higher than usual. Plague caused 38,412 deaths, and raised the mortality of Calcutta to 53.8. The information regarding this disease is meagre. Municipalities spent Rs.180,000 more than in the preceding year on sanitary works, and the Provincial Sanitary Board had under consideration numerous projects for improving the sanitation of towns and rural areas. The report is submitted by Major H. J. Dyson, I.M.S., Sanitary Commissioner for Bengal.

*Charitable Dispensaries, 1900.*—The number of institutions underwent increase by 19, the number at work at the close of the year being 532. The number of in-patients was 2,200, and of out-patients 173,938 more than in 1899: the total treated amounting to 3,467,381, or 4.96 per cent. of the population of the province. To this must be added 42,063 patients treated by travelling civil hospital assistants, and 315,655 in private, railway, and police hospitals, raising the percentage to 5.41, the highest figure on record. The death-rate among in-patients was 12.8 per cent. of treated. In 84 per cent. of the dispensaries arrangements have been made for the separate treatment of females. Great improvements have been made under Colonel Hendley's energetic administration in the building, furnishing, and appliances and arrangements for treating the sick. The increased attendance was due to increasing popularity of these institutions and to the unhealthy character of the year. In some districts operations were hindered by the plague scare. An increased number of cases of cholera, small-pox, fever, bowel complaints, and worms were treated, and 656 cases of plague were admitted. In view of the great prevalence of intestinal worms, cheap microscopes are being distributed for the purpose of the detection of the ova. An epidemic of virulent syphilis was discovered in Orissa, and steps taken to treat the disease. The surgical work of the hospitals is active and successful. The daily attendance was composed of 59 males, 17 females, and 24 children per cent. It is hoped that under improved arrangements the proportion of women and children will rise. The income of the dispensaries amounted to 11½ lakhs of rupees, of which 47 per cent. was obtained from local and municipal funds, and 27 from European and native subscriptions.

*Calcutta and its Medical Institutions.* The population of Calcutta, as shown by the census of 1900, has undergone an increase of 23.74 per cent. since the census of 1891. This increase is due, not to natural growth, but to immigration. Males are twice as numerous as females, and a large percentage of the latter unproductive. The death-rate of 1900—43.54—is therefore a very high one, and as the town area is the same there must be more overcrowding. The density of the population varies from 111 to 282 persons per acre. The birth-rate of 1900 was only 15.8. The year was a very unhealthy one. Cholera, small-pox, fevers, and bowel complaints were in excess, and 8,354 deaths by plague were registered. The large and important hospitals of the city had in consequence a larger amount of work thrown on them. An increase of 4,226 indoor and 32,520 outdoor patients is shown by Colonel Hendley's report. The death-rate among the former class was 17.57, an unusually high number, but including a higher proportion of moribund patients. The percentages of men, women, and children were 66, 19, and 15 respectively. The number of cases of cholera, small-pox, fevers, and bowel complaints treated was in excess; 449 cases of plague were treated, with a mortality of 79.51 per cent.; 810 admissions for tuberculous disease occurred, against 598 in 1899. It would seem that in Calcutta, as in Bombay, phthisis is on the increase. The surgical operations performed were numerous and important. The finances of these institutions are shown in great detail. All the requirements of humanity and science appear to be generously met. The bacteriological laboratory has already been found useful in aiding diagnosis and directing treatment. The transactions of the leper asylum are not included in the report.

*Lunatic Asylums.*—The average number of inmates of the five native asylums in 1900 was 898. These figures present a very small proportion of a population of 74 millions: about 54 per cent. were criminal lunatics and 20 per cent. females. The recovery-rate was 9.01 and the death-rate 10.68 per cent. of strength. The latter ratio is somewnat high on account of the unhealthy character of the year. The admissions, mostly criminal lunatics, were a little more numerous than usual. In a considerable number of cases the mental disturbance was attributed to Indian hemp, but information regarding causation is meagre and untrustworthy. About 54 per cent. of the inmates were employed in various industries, the profits of which amounted to Rs.6,005. The large central asylum at Berhampore has been commenced, to which it is intended to transfer all the lunatics in the province.

## THE TESTING OF VENTILATING EXHAUST COWLS.

THE current number of the *Journal of the Sanitary Institute* is devoted to the publication of a long series of experiments which were carried out by a Committee appointed by the Institute about twenty-three years ago, "for the purpose of testing the efficiency of the various cowls and terminals which were being introduced, in order to give the public some reliable means of judging of their merits."

The Committee consisted of Sir Douglas Galton, Mr. W. Eassie, Mr. Rogers Field, and Mr. J. Wallace Peggs. Since the time of its appointment an enormous number of experiments, observations, and records have been made by the Committee, but unfortunately all the members of the Committee died before any report could be compiled. The last survivor, Mr. Rogers Field, not only contributed £2,000 towards the expenses, but also devoted much of his time regularly to the work. His lamented death in March, 1900, left the work incomplete, and the report still unwritten. The Council of the Institute then invited Mr. Shaw (of the Meteorological Office) to bring the experiments to a close and to superintend the preparation of the report. A complete record of all the observations made is preserved among the papers of the Committee at the Institute. So voluminous are these records that it has taken more than twelve months for the two assistants (Mr. W. D. Matthews and Mr. H. Farmer) to complete the report under Mr. Shaw's superintendence.

The report occupies about 250 pages, and is illustrated with sketches of the apparatus used, and diagrammatic and tabular representations of the results of the observations. It

is full of interesting details, most instructive to those who wish to make an intimate study of the subject.

Part I records results obtained by previous observers, and gives a brief historical synopsis of the work done by the Committee, together with correspondence, and some notes on the efficiency of louvres variously modified.

Part II deals with the elaborate series of experiments which were made in order to test air-current meters under varying conditions "with a view to determining the relation of the dial readings to the actual flow of air passing the meter, both in an open space and in a tube." It contains a full description, copiously illustrated, of the experimental hut at Kew, in which so many of the observations were made.

Part III gives an account of experiments for the determination of wind velocities by means of the Robinson cup anemometer and other apparatus; also the measurement of low velocities by the amount of inclination produced by air currents on a candle flame, of especial interest to those engaged in studying ventilation.

Part IV describes experiments carried out for the purpose of determining the flow of air through open tubes from the interior of the building by the passage of air over the top.

Part V records the results of experiments on various forms of terminals, cowls, and injectors (291 in number), fitted on the top of an open pipe, each one carefully illustrated. The relative efficiency of these varieties, as determined by the Committee, is recorded in each case. In addition to other interesting material, this part also contains an account of Mr. Farmer's observations on the behaviour of smoke issuing from terminals. They "led to a very instructive and interesting series of results," but could not be made comprehensible without diagrams.

The report contains descriptions with drawings of those forms of cowls which were found to be most effective in extraction.

## CONCENTRATION OF PRELIMINARY AND INTERMEDIATE TEACHING IN LONDON.

*Report of the Faculty of Medicine of the University of London.*

### The Reference from the Senate.

On February 27th, 1901, the Senate of the University of London instructed the Faculty of Medicine to consider and report to the Senate as to the manner in which it may best carry out the duty stated in the following paragraph of Section LXXX of the Statutes of the University:

The Senate shall use its best endeavours, whenever practicable, to secure common courses of instruction for internal medical students in the preliminary and intermediate portion of their studies under appointed or recognised teachers at one or more centres.

### Action taken by the Faculty.

On March 8th the Faculty of Medicine met and appointed a Committee of thirty-one members representative of the schools of the University, and as far as possible of all branches of medical study. This Committee resolved itself into three Subcommittees for the purpose of making inquiries in London and elsewhere as to the existing conditions. The first Subcommittee was instructed to draw up a memorandum and schedule of inquiries to be addressed to the medical schools with the object of obtaining:

(*a*) Information as to the conditions under which the teaching of the preliminary and intermediate periods respectively is now carried on.

(*b*) Expressions of opinion as to the conditions under which the institution of "common courses of instruction" in either case would be likely to meet with approval by the schools.

The second Subcommittee was instructed to draw up a a schedule of inquiries for the guidance of the visitor whom the Dean had offered to despatch at his own cost to seek information as to the conditions under which the teaching of the early and intermediate periods of medical study is carried on in certain British universities, and to report to the Committee as to the universities which should be visited. By "early" subjects physics, chemistry, and biology are to be understood; by "intermediate" anatomy and physiology.

The third Subcommittee was instructed to investigate and report to the Committee whether there is any space available in or about the University for the erection of suitable buildings for the instruction of students in the preliminary and intermediate periods, and the conditions under which such space could be obtained; and further to report upon the existing accommodation for the instruction of such students in the schools of the University, and the possibility of extension of such accommodation by building or adaptation.

### Information Collected.

These Subcommittees collected a large amount of valuable information which was submitted to the full Committee, which has met six times. Finally, and in the result, a report was drawn up for presentation to the Senate, and this was adopted by the Faculty without amendment and without dissent on December 13th, 1901, and was forwarded to the Senate on December 16th.

The report has been printed, and the reports of the Subcommittees and of the Visitor are printed as appendices. The report of the Visitor, Dr. Lewis Smith, who visited Cambridge, Manchester, Liverpool, Glasgow, and Edinburgh in the course of the inquiry, is a valuable document; and the liberality of the Dean, Mr. Butlin, in defraying the cost of this inquiry will be gratefully recognised by all who take an interest in the development of the University of London and of medical education in London.

The report of the Faculty now presented to the Senate, after rehearsing the terms of the reference to it from the Senate, and quoting at length the words used by the Statutory Commissioners in explaining the reasons which led them to frame Section LXXX of the Statutes, continues as follows:

"After carefully considering the information obtained the Faculty finds itself in substantial agreement with the statutory Commissioners as to the need and advantages of diminishing the number of centres in London at which the subjects of preliminary and intermediate medical studies are taught.

"The facts collected on behalf of the Faculty fully bear out the statement of the Commissioners that the present method causes a serious financial strain on the resources of the medical schools, and fails to provide for the senior teachers of the preliminary and intermediate subjects a standard of remuneration in any way comparable with that paid to teachers of similar rank in other colleges and universities of Great Britain.

"An important factor in determining the increasing financial strain has been brought to the notice of the Faculty in the following tables, with explanatory notes, indicating the persistent decline in the numbers of medical students in London:

*Entries of Students at the English Schools of Medicine from 1879 to 1883 inclusive.**

| | 1879. | 1880. | 1881. | 1882. | 1883. | Total. |
|---|---|---|---|---|---|---|
| London Schools ... ... | 731 | 702 | 722 | 634 | 605 | 3,394 |
| Provincial Schools ... | 257 | 281 | 342 | 219 | 212 | 1,311 |
| English Schools ... | 988 | 983 | 1,064 | 853 | 817 | 4,705 |

* Copied from Table XI of the Report of the Council of the Metropolitan Counties Branch of the British Medical Association on "University Degrees for London Medical Students," dated January, 1885.

*Entries of Students at the English Schools of Medicine from 1896 to 1900 inclusive.**

| | 1896. | 1897. | 1898. | 1899. | 1900. | Total. |
|---|---|---|---|---|---|---|
| London Schools ... ... | 478 | 502 | 535 | 536 | 465 | 2,516 |
| Provincial Schools ... | 417 | 363 | 351 | 423 | 353 | 1,907 |
| English Schools ... ... | 895 | 865 | 886 | 959 | 818 | 4,423 |

* Taken from the British Medical Journal.

*Comparison of the Two Periods of Five Years.*

Total falling off of entries=282.

Total falling off of London entries=878, which means an annual average falling off of 175 entries.

Total increase of provincial entries=596, which means an annual average increase of 120 entries.

The above facts indicate the need of some material altera-

tion in the conditions of medical education in London if the metropolis is to maintain its leading position.

RECOMMENDATIONS OF THE FACULTY.

"An examination of the expression of opinion from the schools shows that although there is not a complete consensus of opinion in regard to the mode in which concentration should be carried out, there is nevertheless a very strong desire on the part of the majority of the schools to see the principle of concentration applied.

"Further, it appears that the opinion in favour of concentration is gaining ground, and it is believed that decisive action on the part of the University authorities in the direction now recommended will remove so much of the remaining opposition as is due to the not unnatural fear of some of the schools lest a method of concentration should be adopted which would benefit one or more institutions to the detriment of others.

"*The Faculty recommends that the Senate should take steps to secure funds to enable it to establish in the near neighbourhood of the University a school of preliminary and intermediate medical studies.*

"The Faculty has no doubt of the immediate success of such a school, and of its good influence upon medical education throughout the metropolis, provided that the following requirements are met:

(*a*) That the funds forthcoming are sufficient to provide ample educational facilities, and adequate remuneration for the teachers, without increasing the present cost of education to the students.

(*b*) That provision is made for teaching all classes of medical students, whether preparing for the examinations of the University or for those of other qualifying bodies, so that any existing school of the University should be able at once to abandon altogether the teaching of the subjects provided for at the new school.

(*c*) That due provision is made for research.

(*d*) That adequate provision is made for the instruction of women students in an institution under the direct control of the University.

"When such a policy is within measurable distance of fulfilment, the Faculty believes that the Senate will have little difficulty in coming to satisfactory arrangements with the schools of the University to transfer a large number of students to the Central School in addition to those who would be directly attracted thereto.

"With regard to those schools which desire to retain the teaching of the preliminary and intermediate subjects, it seems to the Faculty that they should be permitted to do so, subject to the approval of the Senate that their courses of study are suitable for internal students. In this way the objections which have been felt by some of the schools to concentration at a single centre might be met.

"The University will thus be able not only to improve the teaching of the subjects which it will directly provide for, but it will also enable those schools which relinquish the teaching of these subjects to make necessary and important advances in teaching and in research in those branches of study which they will still retain."

# THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

THE plague mortality for the weeks ending November 9th, 16th, and 23rd for all India were 8,900, 8,710, and 8,431 respectively. The numbers of plague deaths have remained at over 8,000 since the week ending October 12th, and although the numbers show some signs of decreasing, the retrocession is but slow.

In the city of Bombay the number of plague deaths during the week ending November 9th, 16th, and 23rd were 172, 181, and 177 respectively. Although there has been a slight decline in the mortality from plague, there has been a corresponding increase in the number of deaths from respiratory diseases and dysentery.

At a plague volunteer meeting held at Poona on Tuesday, November 26th, General Burnett, who presided, said that there were only two ways of minimising the evil effects of the plague epidemic, namely, inoculation and evacuation. From the statistics it appeared that there had been in Poona only 34 deaths among the inoculated since the year 1897. Four thousand persons had been inoculated during the present year, and almost 20,000 last year. Within the past few days (November 26th) 2,000 persons from Poona had gone into tents on the advice of the authorities, who urgently recommended evacuation of plague-infected dwellings.

In Calcutta the number of plague deaths was 35 during the week ending November 9th.

In Karachi during the week ending November 16th the number of fresh cases was 84 and 50 deaths from the disease.

In Poona from 25 to 35 fresh cases of plague were reported daily during the third week of November.

In Satara the outbreak threatens to become serious; between October 20th and November 17th, 259 fresh cases of plague occurred and 193 deaths from the disease.

CAPE OF GOOD HOPE.

In the Cape Peninsula no fresh cases of plague were recorded during either of the weeks ending November 30th and December 7th, nor were there any deaths from the disease.

At Port Elizabeth during the weeks ending November 30th and December 7th the fresh cases of plague were 2 and 1 respectively, and there was but 1 death from the disease during the latter week. At Mossel Bay, situated about half-way between Capetown and Port Elizabeth, 5 cases of plague were reported during the week ending November 30th, and 2 further cases of the disease during the week ending December 7th. Three deaths from the disease during these weeks occurred at Mossel Bay. At Ladismith, about 180 miles eastwards from Capetown, 2 cases supposed to be plague were reported during the first week of December. In all other places in Cape Colony 2 cases of plague were reported during the week ending December 7th.

EGYPT.

During the week ending December 1st, 2 cases of plague and 3 deaths from the disease were reported by the Director-General of the Sanitary Department as having occurred throughout Egypt. All the cases and deaths occurred among natives at Zifteh. During the week ending November 24th a man was found dead out of hospital at Zifteh, and on examination the cause of death was proved to be pneumonic plague. A few days subsequently (November 27th) the man's wife and, later, his mother-in-law were taken ill and both died of pneumonic plague. It is significant that both women had nursed the man during his illness. The direct infection of pneumonic plague seems to be undoubted, whatever may be said of bubonic plague.

MAURITIUS.

During the week ending December 5th, 52 cases of plague occurred in Mauritius, and 37 deaths from the disease.

## THE LATE R. B. ANDERSON FUND.

WE have received the following letter as we go to press:

SIR,—Permit me to add a word to the appeal of Lord Stamford and Mr. Timothy Holmes in reference to the R. B. Anderson Fund. It seems a most melancholy and depressing thought that an appeal renewed at intervals over six months, made by men of the highest standing, backed up by the editors of the great medical journals, and on behalf of a man who was one of the martyrs of the profession, if ever we had one, should only result in the miserable sum of £80. This is both inadequate for the pressing needs of Mrs. Anderson and family and discreditable to the profession.

When Mr. Anderson was alive—when the memory of the gross injustice perpetrated on him (and through him on the profession) was fresh—we rewarded him for his heroic endeavours to secure justice in the usual way. He was looked on as a crank, a misguided enthusiast, a man with a grievance, and therefore a nuisance. Or even worse, he was regarded with suspicion and his motives impugned. Ridiculous as it will seem to those who knew him, I have even met people who talked of him as a "paid agitator"! The last few years of his life were spent in anxiety and poverty. I am afraid that sometimes he even had not enough to eat. It is a story that we as a profession can only recall with shame; but it is not too late to do something for our credit's sake.

Especially would I appeal to those who take an interest in medical politics. I had the honour of Mr. Anderson's intimate acquaintance, and never did I meet a man to whom the honour and interests of the profession were so sacred. Even his own wrongs were swallowed up in his enthusiasm for the cause. When the rights of the profession were assailed in his person he defended them with a courage and tenacity which nothing could shake. He faced prison and financial ruin rather than compromise one jot of those rights. He hastened his own death by the privations and mental anxiety incurred in fighting a battle which was not his alone but that of the whole profession. We may think his conduct quixotic, and that he was foolish in neglecting his family and financial interests in order to fight the battle. But those of us who would have been less courageous (more prudent, if you will), may at any rate honour his undaunted spirit, and sympathise with the family left in very distressed circumstances. Every man who reads this could afford a few shillings, and I trust, for the honour of the profession, that the fund will not be closed in anything like its present miserable state.

I shall personally be glad to receive and forward to the Treasurer, any subscriptions sent to me.—I am, etc.,

Cotfield House, Gateshead, Dec. 18th. ALFRED COX.

# ASSOCIATION INTELLIGENCE.

## COUNCIL.

### NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 15th day of January, at 2 o'clock in the afternoon.

Dec. 19th, 1901. FRANCIS FOWKE, *General Secretary.*

### NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1902.

MEETINGS of the Council will be held on January 15th, April 16th, July 9th, and October 22nd. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, December 24th, 1901, March 26th, June 18th, and October 1st, 1902.

### ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

## LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

## BRANCH MEETINGS TO BE HELD.

STAFFORDSHIRE BRANCH.—A special general meeting of this Branch will be held at the North Staffordshire Hotel, Stoke-on-Trent, on Friday, December 27th. The President, Mr. W. H. Folker, will take the chair at 8 P.M. Business: To discuss the leading article in the BRITISH MEDICAL JOURNAL of November 30th, 1901, entitled, "Lead Poisoning in Potteries." As the matter is of great importance, all the members in North Staffordshire are specially asked to make an effort to be present.—G. PETGRAVE JOHNSON, Stoke-on-Trent, General Secretary.

BORDER COUNTIES BRANCH.—A meeting of this Branch will be held at the Infirmary, Whitehaven, on Friday afternoon, January 17th, 1902. Members intending to read papers, show cases, etc., and gentlemen desirous of joining the Branch, are requested to communicate as early as possible with the Honorary Secretary, W. F. FARQUHARSON, M.D., Garlands, Carlisle.

## SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

A MEETING of this District was held at Eastbourne on November 29th. The chair was taken by Dr. ALEXANDER HARPER.

*Confirmation of Minutes.*—The minutes of the Lewes meeting were read and confirmed.

*Letters.*—A letter was received from Mr. Golding-Bird Collett, Vice-President, regretting his inability to be present; and one from Mr. Percy Gravely (Newick), thanking the members for the vote of sympathy passed at their last meeting with reference to the death of Mr. Richard Gravely.

*Next Meeting.*—It was resolved to hold the next meeting at Brighton about the end of March, 1902.

*Communications.*—Dr. MERRY read a paper on a case of non-specific perforation of the bony septum of the nose occurring in a lady, aged 40, as the result of chronic inflammatory changes in the mucous membrane of the periosteum.—Mr. G. H. EWART read notes of a case of enteric fever of unusual interest. The primary attack lasted twenty-eight days; it was followed by four days apyrexia, a relapse lasting twenty-one days, seven days apyrexia, and a second relapse of fourteen days duration. The primary fever was accompanied by none of the usual enteric symptoms, but was remarkable for the rapid development of acute endocarditis affecting the mitral valves. It was at first uncertain whether the case was one of enteric fever or of acute ulcerative endocarditis. The application of an icebag to the precordium was effectual in reducing the temperature, and under its use the cardiac dilatation and the intensity of the mitral murmur both diminished rapidly. The first relapse was marked by the appearance of typical enteric stools. The second was as devoid as the original attack of any typical symptoms. During neither relapse was there any exacerbation of the cardiac mischief.

## CAMBRIDGE AND HUNTINGDON BRANCH.

A MEETING of this Branch was held in the New Museums, Cambridge, on December 12th. The President, Mr. LUCAS of Huntington, took the chair. Twelve members were present during most of the meeting.

*New Members.*—Seven members of the Association were elected to the membership of the Branch.

*Resolution as to Medical Aid Agencies.*—The meeting was about to proceed to ballot for another candidate, when Mr. PENBERTHY proposed:

That any practitioner who acts as salaried officer of a medical aid agency which makes a profit out of his services and devotes his whole time to its service is not a fit person to be elected a member of this Association or Branch.

Mr. APTHORPE WEBB seconded, and the resolution was carried. After some discussion on kindred subjects the session ended.

## SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE autumn meeting of this Branch was held at Merthyr on November 29th, A. P. FIDDIAN, M.B., President, in the chair.

*New Members.*—The following were elected members:—Association and Branch: Morgan W. Williams, M.B. (The Infirmary, Carmarthen); George Arbour Stephens, M.D. (Swansea); Evelyn J. Evatt, M.B. (University College, Cardiff); William Martin, M.B. (Cardiff); David Illtyd Jones (Abergwynfi). Branch only: Ewen J. Maclean, M.D. (Cardiff).

*Communications.*—The following were read: Notes on a case of neurasthenia, by H. H. TIDSWELL, M.R.C.S.—Short notes on three successful cases of nephrolithotomy, by TREVOR JONES, M.D.—New method of dealing with the peritoneum in operations for (*a*) femoral and inguinal hernia and (*b*) umbilical hernia, by W. F. BROOK, F.R.C.S.—Remarks on latent and masked forms of uræmia, by W. MITCHELL STEVENS, M.D.—(*a*) Ambulatory treatment of ruptured tendo Achillis, a personal reminiscence of the South African campaign, and (*b*) a photograph of a large meningocele cured by operation, by J. LYNN THOMAS, F.R.C.S.

## SYDNEY AND NEW SOUTH WALES BRANCH.

THE regular monthly meeting of this Branch was held at the Royal Society's Room, Sydney, on September 27th, 1901, Dr. FOREMAN, President, in the chair. There were 62 members present.

*Confirmation of Minutes.*—The minutes of the previous meeting were read and confirmed.

*New Members.*—The PRESIDENT announced the election of Drs. Nolan and W. S. McKay, and the nomination of Drs. Ayres, Morton, and Fox.

*Communications.*—Dr. POCKLEY read notes of a case of primary neoplasm of optic nerve sheath, removed by Krönlein's operation, with preservation of the eye and good vision. The patient was exhibited. Dr. S. H. HUGHES made remarks.—Dr. W. A. BURFITT read notes on a case of intussusception. Drs. MAITLAND and HINDER discussed the paper.—Dr. WORRALL read notes on spontaneous rupture of the uterus successfully treated by abdominal section. A discussion ensued in which Drs. BARRINGTON and MCKAY took part.—Dr. W. S. MCKAY exhibited a tumour weighing 27 lbs., success-

fully removed by the interscapulo-thoracic amputation.—Dr. J. B. CLELAND exhibited some microscopic sections and films.

*A Question of Privilege.*—Dr. WILKINSON moved:

That the article in the *Australasian Medical Gazette* of the date August 20th, 1901, upon the climatic treatment of pulmonary consumption was a breach of privilege.

The resolution was not seconded.

### HALIFAX, NOVA SCOTIA, BRANCH.

THE annual meeting of this Branch was held at Halifax, on November 20th.

*Report of Council.*—The SECRETARY read the report of Council for Session 1900-1901. Twelve meetings had been held with an average attendance of about twenty members at each. The Branch, which has been in existence for about fourteen years, was never in a more flourishing condition, including in its membership all the leading practitioners of the city and vicinity.

*Election of Officers.*—The following officers were elected for 1901-2:—*President:* T. W. Walsh, M.D. *Vice-President:* N. F. Cunningham, M.D. *Treasurer:* M. A. B. Smith, M.D., re-elected. *Secretary:* C. Dickie Murray, M.B., re-elected. *Branch Council:* Jas. Ross, M.D., T. J. F. Murphy, M.D., E. A. Kirkpatrick, M.D., A. I. Mader, M.D., T. Trenaman, M.D., N. F. Cunningham M.D., F. W. Goodwin, M.D., M.R.C.S. *Representative on Council:* Surgeon-General O'Dwyer, A.M.S.

## SPECIAL CORRESPONDENCE.

### BIRMINGHAM.

*Presentation to the President of the General Hospital.—Post-Graduate Lectures.—Lupus and Rodent Ulcer treated by Roentgen Rays and by Light.*

AN extremely interesting and graceful ceremony took place at the General Hospital on December 9th, when the President, Sir John Holder, was presented with his portrait, painted by Mr. John Collier. The presentation was made by the Earl of Howe in the name of over 200 governors and subscribers, as a recognition of the great and valued services and the large benefactions rendered to the hospital by Sir John Holder. A replica of the portrait and a handsome silver casket containing an address was at the same time presented to Lady Holder.

Last spring a series of post-graduate lectures were given at the General Hospital and Queen's Hospital, mainly intended for qualified practitioners—old members of the Birmingham Medical School—who were reading for degrees at the Birmingham University. These proved so successful that it has been decided to give another series. Gentlemen who intend joining these classes have been asked to send in their names to the Secretaries of the Clinical Board, as it is wished to commence early in January.

The treatment of lupus cases and rodent ulcer by light is receiving its due attention in Birmingham. At the General Hospital the radiographic department has had a large number of cases of lupus under treatment by the Roentgen rays, and already a large amount of success has followed in some of the cases. At the Hospital for Skin and Urinary Hospital they have also a Roentgen-ray apparatus for application to various skin affections. Lately they have introduced a complete apparatus for the treatment of lupus by Finsen's light treatment. The lamp used is of the same pattern as that used at the London Hospital. At the present time 40 patients are undergoing treatment: but it is still too early to state the results achieved.

### LIVERPOOL.

*Address on Sir James Paget.—The Smyth Fund.*

ON December 7th, Mr. Stephen Paget, M.A., F.R.C.S., gave an eloquent and intensely interesting address on his father, Sir James Paget, to the members of the Liverpool Medical Club. The audience was the largest that has ever assembled in the club's rooms, and included a considerable number of guests, invitations having been sent by the President, Dr. Briggs, to the members of the Medical Institution, and to Principal Dale of University College, and a number of medical students. Mr. Paget held his audience spellbound by his singular grace and charm of expression, and by the delicate literary taste which pervaded his address. The attentive silence with which it was received was only broken by hearty applause, and the various steps in the illustrious career of the subject of the discourse were followed with intense interest by the whole assembly. At the close of the address a vote of thanks to Mr. Stephen Paget was proposed and seconded by Dr. Glynn and Mr. R. A. Bickersteth, both former students of Paget's old hospital, St. Bartholomew's. Dr. Briggs, the president of the club, who was in the chair, invited anyone present to speak, whereupon Mr. Rushton Parker rose to add his tribute, as a surgeon who venerated the memory of Sir James Paget, to the excellence of Mr. Stephen Paget's address.

Dr. William Carter recently issued a special appeal to the members of the medical profession in and about Liverpool on behalf of the widow and family of the late Dr. William Smyth. The appeal has already met with a hearty response, upwards of £350 having been subscribed. It may be hoped that if the other large centres make an equally ready response, sufficient funds will be collected to place the recipients beyond the reach of want.

## CORRESPONDENCE.

### THE WILLIAM SMYTH FUND.

SIR,—May I be permitted to make a suggestion of a practical character as to a method by which I trust the widow and eight orphan children of that manliest and bravest of men, the late William Smyth, of Burton Port, Donegal, can be secured, as they certainly ought to be, from every fear of want?

When the case was brought to my notice, after forwarding my individual subscription I undertook, at the suggestion of the gentlemen who mentioned the matter to me, to write a letter to the Liverpool papers, in which, after briefly setting forth the case, I offered to receive and acknowledge any monies forwarded to me. The response has been very kind and generous, both on the part of the medical profession and the public of this city. Sums of varying amounts have been sent to me, and I have been able thus far to transmit to Sir Christopher Nixon £350 (inclusive of my own subscription), while there is still nearly £40 to send.

The suggestion which I wish to make is that some senior and thoroughly well-known medical man in each of the large towns and cities of England, Wales, and Scotland should undertake a similar duty for his own neighbourhood, appealing to patients as well as to his medical brethren. The result would not be in the least doubtful. Sir Christopher Nixon and the gentlemen associated with him will look after Ireland.—I am, etc.,

Liverpool, Dec. 16th. WILLIAM CARTER.

### THE "FOURTH DISEASE."

SIR,—The question of the existence of the so-called "fourth disease" has been brought forward in your columns by the letters of Dr. Clement Dukes and Dr. Foord Caiger. Dr. Clement Dukes maintains that he has proved the existence of an infectious fever distinct from measles, German measles, and scarlet fever. This disease, which he designates "fourth disease," resembles scarlet fever, but differs in two important points—it is not dangerous to life and the period of infectivity is shorter than that of scarlet fever.

The evidence upon which the existence of this disease depends was published by Dr. Clement Dukes in the *Lancet* of July 14th, 1900. It is derived from the study of three small epidemics. Epidemic 1 occurred in 1892, 16 boys at a school being affected. The only evidence brought forward by Dr. Clement Dukes to prove the existence of the "fourth disease" in this epidemic was: (1) He did not hear of scarlet fever appearing in any of the lads who went home for the holidays; (2) he did hear that one of the nurses after leaving suffered from what was diagnosed as a genuine case of German

measles. In the absence of details of the clinical course of the cases it is impossible to form an opinion of the real nature of this outbreak. If the nurse really suffered from German measles, the presumption is that the other cases were of the same nature, as indeed Dr. Clement Dukes in the first instance had proved to his own satisfaction.

Epidemic 3 occurred in 1890, 19 boys at a school being affected. The disease was probably not German measles, as 8 of the patients are stated to have previously suffered from this complaint; nor were the symptoms those of German measles. On the contrary, the character of the eruption, the desquamation, and the affection of the throat point very strongly to scarlet fever, and none of the patients had previously suffered from this disease. The chief points of difference between the clinical features of this outbreak and scarlet fever are that the pulse was not rapid and that albuminuria was not observed. Neither of these differences is essential. The pulse of adults and older children is often not accelerated out of proportion to the temperature in scarlet fever, and in one of the cases in this outbreak the pulse is stated to have been rapid. The incidence of albuminuria in scarlet fever is variable, and in this epidemic the boys appear to have been sent home before the usual period for the development of late albuminuria. Two of the patients during the period of desquamation mixed freely with others without conveying the disease. This, however, in no way excludes scarlet fever, for there is very little evidence to show that the virus of scarlet fever resides in the skin, and it is probable that the usual isolation period adopted for scarlet fever is unnecessarily long. Dr. Clement Dukes states that in this outbreak the infectivity lasted in some cases as long as twenty-one days where efficient disinfection was in operation. A case arising after the school had broken up was diagnosed as scarlet fever, which supports the view most people will adopt on reading the account of this epidemic—namely, that it was an epidemic of mild scarlet fever.

Epidemic 2 occurred in 1896, 31 boys being affected. Dr. Clement Dukes proved that two diseases existed in the school at the same time, for several of the boys passed through two attacks in a short period. He considers one of these diseases to have been scarlet fever, and in this contention he appears to be right, but he has brought forward no evidence to show that the other disease was "fourth disease." As in Epidemic 1, he gives us no clinical details of the cases, and thus leaves us with nothing to go upon to form an opinion.

Such, then, is the evidence of the existence of "fourth disease." In Epidemic 3, where the clinical symptoms are given, the evidence is strongly in favour of an epidemic of mild scarlet fever; in Epidemic 1 such evidence as there is is in favour of German measles; and in Epidemic 2 the only evidence brought forward is that two diseases existed at the same time, one of which apparently was scarlet fever.

Dr. Clement Dukes assumes that Epidemic 1, Epidemic 3, and part of Epidemic 2 were necessarily of the same nature, but such an assumption, from the evidence he has adduced, is quite unjustifiable.

In a letter published in the British Medical Journal of November 2nd Dr. Clement Dukes makes the statement that patients suffering from "fourth disease" are admitted into scarlet fever wards of hospitals and there become attacked by scarlet fever and give "fourth disease" to the scarlet fever patients in the wards. It is clear that, if a disease so closely resembling scarlet fever really exists, cases must be admitted into the scarlet fever wards of hospitals where they would from time to time give rise to limited epidemics of "fourth disease." Dr. Foord Caiger in the Journal of November 16th stated that in his experience at the South Western Hospital he has never met with such an occurrence. My own exprience in the wards of the London Fever Hospital quite bears out Dr. Foord Caiger's and I have never heard of such an epidemic occurring in any other hospital

Dr. Clement Dukes, in his reply to Dr. Foord Caiger, offers no evidence whatever in support of the statement which Dr. Foord Caiger challenged, from which we must infer that he cannot substantiate it.

In conclusion, I do not consider that Dr. Clement Dukes has brought forward any evidence to justify us in accepting his view of the existence of "fourth disease," and I believe that the acceptance of such a view is likely to result in considerable harm.—I am, etc.,

Cavendish Place, W., Dec. 12th. J. W. Washbourn.

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Sir,—Since Dr. Clement Dukes still persists in his belief that he has discovered a new disease, I should like to point out that he appears to have considerably modified his ideas as to its nature since he first introduced his "discovery" to the notice of the profession. His original paper in the *Lancet* (July 14th, 1900) was entitled On the Confusion of Two Different Diseases under the Name of Rubella (Rose Rash); and the thesis was then clearly propounded that his supposed new disease was an affection which had hitherto been regarded as the scarlatiniform variety of rubella.

It now appears, however, that the new disease is quite different from rubella, of which Dr. Dukes admits there are still the two varieties.[1] The mere fact that "fourth disease" is stated to be followed by desquamation, sometimes very profuse, should indeed be a sufficiently distinguishing characteristic. It seems it is with scarlet fever, and not with rubella, that the "new disease" is now liable to be confused. In his last letter[2] Dr. Dukes says: "The question is, Are the two former diseases" (that is, "fourth disease" and scarlet fever) "to be called by the common name of scarlet fever?" It can only be concluded, therefore, that either the title of his original paper to the *Lancet* was an unfortunate misnomer, or that Dr. Dukes was not quite clear as to what he was describing.

In his first letter to you[3] Dr. Dukes says: "One speaker at the Cheltenham meeting regarded my recorded cases as rubella, and another was persuaded that they were scarlet fever. Well, they cannot be both."

In this statement I beg respectfully to differ from Dr. Dukes. His recorded cases consisted of three series, and I pointed out at the time,[4] when criticising his original paper, that the first series (judging from the meagre facts given) was probably rubella; the second series, rubella concurrent with scarlet fever; and the last, scarlet fever pure and simple. Dr. Dukes has not advanced any evidence whatever against this supposition, and until he does so he can have no claim to have established the existence of a new disease.

It would be rash for anyone to dogmatically deny the possible existence of some hitherto unrecognised disease closely resembling scarlet fever but distinct from rubella. What I do deny is that Dr. Dukes has as yet given any description of such a disease which would at all justify its being accepted as a new and distinct malady, or which would enable anyone but himself to diagnose it. If he will kindly tell us some definite symptoms which he considers characteristic of "fourth disease" and which are not found in scarlet fever, it would greatly strengthen his case and help others to discover the disease.

In his original paper, to which he refers us, he certainly tabulates an imposing list of "distinguishing characteristics," but on analysis these "characteristics" will be found to be anything but distinguishing.

In conclusion, I may remark that if there is a "fourth disease," I think it must certainly be looked for amongst those occasional cases which find their way into fever hospitals as scarlet fever, but which afterwards contract that disease. In the cases I refer to, however, the primary attack is *not* followed by desquamation, nor have I known it to spread to others.—I am, etc.,

Leicester, Dec. 2nd. C. Killick Millard.

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## INSURANCE COMPANIES AND MEDICAL OPINION.

Sir,—The following narration of facts may be of some interest to many members of the profession both in town and country. A short time ago I was requested by the secretary of an insurance company to keep an appointment with an agent, and go with him to examine, in concert with their own medical adviser, a man who was insuring for a further £70,000, and who had already been "passed" for £30,000; now the maximum liability on any one life is limited in most British offices to £10,000; this risk was therefore to be distri-

[1] British Medical Journal, November 2nd, 1901.
[2] British Medical Journal, November 30th, 1901.
[3] British Medical Journal, November 2nd, 1901.
[4] *Lancet*, November 3rd, 1900.

buted among several other companies. The joint examination took place at the proposer's place of business, and after our report was sent in, it was duly copied and sent round to the various reinsuring offices: how many Boards of directors considered this report cannot be stated, but they could not, for the reason mentioned above, number less than seven, and were probably more; consequently at least this number of companies, and probably several more, enjoyed the benefit of our expert opinion, and accepted or declined the considerable monetary risk accordingly. What fee my colleague was offered or accepted for this responsibility I know not, but two days after the examination the following typewritten document was sent to me: "Dear Sir, I thank you for your *joint* (in ink) report in this case, and have pleasure in enclosing the usual fee, kindly sign the enclosed receipt, and return to yours faithfully."

The enclosure consisted of two postal orders for 10s. 6d. each. The following correspondence then took place:

53, Upper Berkeley Street,
October 31st, 1901.

Dear Sir,—Please acknowledge receipt of the enclosed (which has, I presume, been sent in error), and kindly accept my thanks for your appreciation of my poor services.

Believe me, Sir, etc.

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Scottish Widows Fund Insurance Office,
28, Cornhill, London, E.C.,
November 1st, 1901.

My dear Sir,—*Re* examination. I am this morning in receipt of your favour of yesterday's date (and enclosures), which I read as a declinature to accept the usual fee of one guinea in this case. I am communicating with my head office in the matter, and shall subsequently advise you as to the result.

Yours truly,
Secretary in London.

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November 1st, 1901.

Dear Sir,—I am obliged by your acknowledgment of my note and enclosures of yesterday. I regret to find, however, that, owing to inadequate power of expression, my meaning was not clear, and beg to assure you further correspondence on the matter, and the result of your communication with head office is of no interest to

Yours, etc.

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Scottish Widows Fund Insurance Office,
28, Cornhill, London, E.C.,
November 4th, 1901.

My dear Sir,—Referring to my letter of the 1st, I have pleasure in informing you that as a result of my having mentioned to the head office the circumstances in connection with the medical examination in this case, I am authorised to pay you a fee of two guineas, of which I request your acceptance. Postal orders enclosed. Kindly acknowledge receipt.

Yours very truly,
Secretary in London.

P.S.—Your letter of the 1st was duly received.

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53, Upper Berkeley Street, Portman Square, W.,
November 5th, 1901.

My dear Sir,—I beg to acknowledge with thanks the receipt of your note of yesterday with enclosures. I am sorry to have been the unwilling cause of so much correspondence and trouble on your part, but please note and express to head office that no request for any fee was made by me. I should have been content to let matters remain as they were when I wrote you last on the 1st inst.; for I would beg you to understand that I took the course which I did as a matter of principle, although I find it difficult to induce belief in some minds that it is not always a desire to possess an additional 21 shillings which is the actuating cause of conduct. It may interest you to know that I am taking steps to bring to the knowledge of directors and others, who are at present ignorant of it, what I regard as a vicious system of professional brain-sweating which has become habitual in insurance circles, but which I am sure honourable men would refuse to sanction or be responsable for if they knew of its existence. I enclose formal receipt.

Yours very truly,
H. SELFE BENNETT.

How does the above correspondence become of general interest to the profession?

First, as showing the contemptuous estimate of medical skill and advice held by highly-paid managers of insurance companies; such men know unfortunately only too well that if A. objects to such an estimate of the value of his services, B. is willing and ready to step in and do the work required for even less pay.

Secondly, my object in sending you these particulars is to draw attention to what I had no hesitation in thus characterising as "a vicious system of professional brain-sweating" adopted by the commercial managers of these enormously wealthy corporations that have so much difficulty in investing their vast reserves of capital. It has been said that corporations have no heart or bowels of compassion; yet it requires an excess of optimism to believe that the great majority of directors are absolutely ignorant of the treatment of the doctors by their paid servants, and would, if their attention were called to the matter, indignantly plead not guilty to any part or lot in such an iniquitous system. The instance given of at least seven different societies incurring a life risk of thousands of pounds without any acknowledgement or remuneration for the medical opinion on which their decision was founded, although a glaring one, is unfortunately by no means exceptional. It will, however, suffice to call the attention of those interested in this subject to the custom which has become habitual of handing round for the general benefit of other companies a private and confidential document for which only a single fee has been paid for the advising of one such company.

We may smile at the story of the Duchess who ordered 38 boxes of pills to be made up and distributed to her retainers because the prescription of her physician "had done her so much good"; but such conduct, however legal, is not to be expected from honourable business men with any appreciation of the services rendered. It is, however, no uncommon experience for the doctor to be asked to meet a proposer for insurance at a fixed time in the busiest part of the day, and if the proposer does not keep the appointment it is a case of "no work no pay." The manager is "very sorry, but he had to get the case examined elsewhere."

Again, if a case is declined by medical advice one week, it commonly happens that in a short time another company's agent thinks he can get the proposer accepted in his office; an outsider would naturally suppose that the client would necessarily be examined again by the medical officer of the second company; by no means necessarily: for the papers of No. 1 (including the medical report) are borrowed by No. 2, and No. 2 enjoys as a matter of course the benefit of the expert opinion given to No. 1 without paying a penny piece therefor; just as in the case first mentioned, ten or a dozen companies may have benefited "free gratis for nothing" by an opinion for which the exorbitant sum of one guinea has been paid by the office lucky enough to receive a proposal for £100 000.

It is fair to state that all companies are not alike in their treatment of medical men: some English companies form a more generous estimate of the services of the doctor, but an American company that paid its medical adviser £1,000 per annum was outrageously exceptional, and was considered to have "spoilt the market."

That medical men themselves are mainly responsible for the present sorry condition of matters is unfortunately true, but is no reason for the continuance thereof: that we are at all times ready to work for nothing when the poverty of the recipient of our services requires it, is notorious, but this furnishes no ground for being put upon when our employers are well able to remunerate us. It must, however, be thoroughly understood that the question here is not as to the legality but as to the morality and equity of such conduct.

In the consideration of this subject, the following queries require an answer:

1. Is such treatment by prosperous commercial undertakings of men who have acquired their professional status by years of expensive training, waiting, and experience, fair and considerate, to say nothing of generous?

2. Is legal and other expert advice paid for in a similar manner?

3. Are the directors of insurance companies conscious of the fact that they often benefit by a professional man's brains without any expense to themselves?

4. When directors are told that "proposals" up to £500 will not bear the expense of more than 10s. 6d fees, do they know that they accept every year proposals of tens of thousands of pounds without the payment of any fee whatever?

5. Is there any sufficient reason why, when the papers are sent round (as in this case) to several reinsuring companies, medical fees should not be paid by each, even as the commission expenses are shared?

6. In view of the fact that each company has a presumably trustworthy medical examiner, is there any sufficient reason why when the papers are borrowed, for example, to test the veracity of the statements in the new proposal, the confi-

dential medical reports should be sent with them; or if so, that they should not be paid for as often as used?

The answer to all these questions by all fair-minded men, whose consciences are not "like the dyer's hand," would doubtless be a decided negative. Yet custom is all-powerful, the medical profession timorous and divided, the prosperous man cares not, and the poor man dares not; whilst the would be reformer is altogether objectionable to him who believes that "whatever is, is right."

Nevertheless, a sense of fairness and justice may confidently be looked for in the minds of directors when enlightened on the subject, and there is reason to hope that some of them will direct their managers that they not only can, but must, afford to pay reasonable fees for professional services rendered.

It is with no forlorn hope of persuading the canny Scot who manages the poor Widows Fund (which exceeds £15,500,000) that the "usual fee" for consultation in London, outside the office, is not one guinea or even two, but in the expectation that he has thus unconsciously become the unintentional means of attracting attention to the beggarly meanness of the treatment adopted towards professional advisers, that this lengthy epistle has been written by a "dense Southron."—I am, etc.,

Upper Berkeley Street, Nov. 19th. H. Selfe Bennett.

P.S.—It should be mentioned that my colleague on the occasion was not the chief medical adviser at 28, Cornhill, E.C.

## PROFESSOR KOCH AND BOVINE TUBERCULOSIS.

Sir,—A Royal Commission having been appointed to investigate the relationship between bovine and human tuberculosis, there is a perhaps not unnatural tendency among the profession and the public to regard the question as *sub judice* and to await events. In some respects this is an unfortunate attitude. The results of Professor Delépine's experiments are therefore a timely additional piece of evidence in favour of the hitherto accepted views on this subject, and also in support of the importance of the public health legislation which those views have called into existence.

It is obvious that the Commission's work must last some considerable time, possibly years. In the meantime, it is the opinion of most scientific men that a relaxation in such restrictions against the sale of tuberculous milk as already exist would be a public calamity. Under these circumstances, it is eminently desirable that Professor Koch's opinion should not carry more weight than established facts entitle it to, and any investigation of the data on which that opinion is based must be taken as demanded by the exigencies of the situation rather than as a personal attack upon a man whose abilities we have all learnt to admire, and whose great work in former years we frankly recognise. It is in this spirit that I venture to trespass upon your space and to examine certain testimony which Professor Koch has himself invoked in support of his contention, the testimony furnished by his own work in former years.

The contention which Professor Koch made in his paper read at the British Congress, held in London in July, may be stated in very brief terms. It was that the danger of infection by the tuberculous flesh or milk of tuberculous cattle is practically *nil*. With regard to this opinion a good deal of weighty criticism from Lord Lister and others has already been expressed, and, as I pointed out in a former letter to the British Medical Journal, the premisses of Professor Koch's argument are disputed, the reasoning is illogical, and the conclusion is in conflict with the bulk of scientific opinion and a formidably increasing array of fact.

I would now invite attention to Professor Koch's own previous testimony adduced by himself in his recent address. Thus he says:

> Even in my first circumstantial publication on the etiology of tuberculosis I expressed myself regarding the identity of human tuberculosis and bovine tuberculosis with reserve. Proved facts which would have enabled me sharply to distinguish these two forms of the disease were not then at my disposal, but sure proofs of their absolute identity were equally undiscoverable, and I therefore had to leave this question undecided.

As this statement did not coincide with my recollection of the "circumstantial publication on the etiology of tuberculosis" to which Professor Koch refers, I have since turned it up. The essay is one which will for ever rank as a classic in the history of science. It is not only a masterly record of one of the finest pieces of scientific research work that has yet been accomplished, but it deserves to rank for its luminous, careful, scientific writing with the best literary work of Darwin. I should be the last to desire to withhold from Professor Koch that honour which is undoubtedly his due, but when he says that in dealing with the question of the identity of human and bovine tuberculosis he did so "with reserve," and that he "had to leave this question undecided," I submit that he does not accurately describe the views expressed in that famous essay on this now much-vexed question. The following extract from that essay will best illustrate my meaning:

> But the perfect identity and unity of the tuberculous process in different kinds of animals *cannot be doubted* when attention is diverted from the macroscopic condition of tuberculous organs and from the secondary changes in them, as caseation and calcification, to the primary structure of tubercle, which, as we have already seen, recurs with typical regularity in all the different processes in man, and such is the case also in the apparently widely different forms of tuberculosis *in the various species of animals*.

To say that certain facts cannot be doubted is scarcely to speak of them "with reserve," or to leave them as questions "undecided." In another portion of his original essay Professor Koch also says:

> It is certain that the milk of tuberculous animals may give rise to infection.

And further on:

> Although infection from domestic animals does not, on the whole, appear to be very common, it is *by no means to be underrated*.

This view is "unreservedly" and "decidedly" in conflict with that expressed in the Congress paper; and, what is of still further significance, is the fact that all observation on the subject since has tended to confirm this original view. The evidence adduced by Dr. Sidney Martin before the first Royal Commission on Tuberculosis in this country, the testimony of Nocard and numerous others, all goes to support it, while much of the evidence in support of it adduced by Professor Koch himself in his first essay remains entirely unrefuted by him in his last paper.

It is impossible to regret that the "reserve" and "indecision" which Professor Koch erroneously believes himself to have expressed in his first essay, are absent from his last.—I am, etc.,

Wimpole Street, W., Nov. 27th. Alfred Hillier.

## THE PRINCIPLES OF LOCAL TREATMENT IN DISEASES OF THE UPPER AIR PASSAGES.

Sir,—Under the heading of "The Modern Treatment of Chronic Middle-Ear Disease," in your recent issue, there is a letter from Mr. Mayo Collier. This has apparently been called forth by my letter, which was published in the British Medical Journal of November 30th, under the title of "The Principles of Local Treatment in Diseases of the Upper Air Passages." As both communications have arisen out of the discussion on Sir Felix Semon's lectures, I must request you to publish this letter under the original title. Mr. Mayo Collier's overweening assumption of superiority is really quite amusing, and I take it from his aggressively personal attack that he is unfortunately labouring under the erroneous impression that some portion of my remarks was directed against himself. If such a misapprehension exist it is absolutely without the slightest foundation. I must, however, plead guilty to what Mr. Mayo Collier evidently regards as a very grave dereliction of duty, and admit that until yesterday I had not seen, much less "really read," his paper "On So-called Sclerosis of the Middle-ear: its Causation and Treatment," and had neither Mr. Mayo Collier nor his paper in view when I wrote my letter.

Mr. Mayo Collier, both in his letter and in his paper, makes certain dogmatic assertions, but advances no proof in support of them. To give a single example, he states "that one half of the inhabitants of these regions (that is, the temperate zone) have some involvement of the middle ear, and that a majority of these suffer from so-called sclerosis, with more or less deafness." It is certainly alarming to find that more than one-fourth of the unfortunate inhabitants of the temperate zone are "more or less deaf" from so-called sclerosis alone. In view of this statement, it would be instructive to have the statistics of deafness including the further large percentage due to the other aural affections. Mr. Mayo Collier begins

his letter thus: "As a professed otologist Dr. Edward Law should know a little more of the literature." Perhaps he will be kind enough to say where the literature in question is to found: because in his letter he refers me to his paper, and in his paper he very modestly states that he does "not see the good of following the textbooks in their description of this affection."

In conclusion, would it be too much to suggest that if Mr. Mayo Collier were to "really read" the latest textbooks and the letters of the eminent specialists which immediately precede his own, it might prevent him in future taking himself so seriously?—I am, etc.,

Wimpole Street, W., Dec. 17th. EDWARD LAW.

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SIR,—I entirely agree with the greater part of Sir Felix Semon's admirable lectures. My experience with breathing exercises as a cure for adenoids have been unfortunate, for in every case in which I have tried them they have "gone contrairy," as Mrs. Gummidge would say. I have tried many exercises in many cases, but in no case of true hypertrophy was there ever the slightest improvement. I mentioned in the BRITISH MEDICAL JOURNAL a short time ago the good effect of breathing exercises after the operation in restoring nasal breathing and preventing recurrence, and this, I think, is the true part to be played by them.

I think Sir Felix is rather severe on the "whiff of gas and finger operation." I am certain there is no safer or surer means of operating, more especially in young children, than the use of the finger, but it must not be a "little scratching"—it must be thorough, and of course some cases require instruments. With regard to the anæsthetic, too, I think if Sir Felix should be unfortunate enough, as I have been, to lose a patient on the table from chloroform, he would alter his opinion and think better of gas and ether.

I do not suppose in all my small experience, which covers only a quarter of a century, I have come across a dozen cases of empyema of the maxillary antrum that require operation in the course of the year, and this including hospital work.—I am, etc.,

Devonshire Street, W., Nov. 26th. W. R. H. STEWART.

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SIR,—Any treatment which holds out a prospect of cure without recourse to the surgeon's knife must appeal to the physician, and I for one cannot but feel sympathetically disposed towards the method of treating adenoids advocated by Mr. Arbuthnot Lane. I have not yet had the advantage of reading Mr. Lane's papers on this subject, but I apprehend that he urges the adoption of his treatment as early as possible in the course of the disease, so as to nip it in the bud and prevent it from becoming so pronounced that there is nothing for it but to resort to surgical methods. Sir Felix Semon holds that in quite a large number of patients affected with adenoid disease an operation is both unnecessary and unjustifiable; now it is clear that all those cases on which Sir Felix would operate have once belonged to the class on which he would not operate. These latter, I take it, are the cases *par excellence* for Mr. Lane's treatment, and if there is anything in that treatment we ought to be able materially to reduce the number of cases developing from non-operation into operation cases.

It is well to check the growth of adenoids which have already made their appearance—and all credit to Mr. Lane for showing us how this may be done—but it is still better to prevent them altogether. Why do not laryngologists, rhinologists, otologists, one and all put their multitudinous heads together and seek to discover the causation of this ever-increasing pest—this scourge which deforms the jaws, displaces the teeth, distorts the features, dulls the intellect, damages hearing, spoils the voice, upsets the digestion, and opens the door to all manner of pulmonary and other disorders? We hear much about the treatment of this latter-day appanage of civilisation, but little, or nothing at all, about its cause. And yet that cause is not far to seek.

Let any one study the skulls of primitive peoples as displayed in our museums; let him note the broad, flat palate and well-worn teeth, the capacious nasal passages and naso-pharynx; and let him by way of contrast study these same parts in the patients who flock to the hospitals, and examine the casts of the jaws in a modern dental workshop. He will find that in respect of the points indicated modern man shows a great falling off from his ancestors.

Now to what are we to attribute this defective development in civilised man? Obviously to the fact that his food is of a kind requiring much less mastication than did that of primitive man. If during the years of growth the young human is fed on food requiring little or no mastication, neither the jaws and their appendages, nor the nasal passages with their accessory cavities, nor the naso-pharynx, will develop properly, and all these parts will in consequence be so much the more predisposed to disease. If we desire to strengthen them against disease we must feed our small children on other things than milk, whether by itself or fortified with patent foods, milk puddings, mashed potatoes and gravy, rusks soaked in milk, pounded meat, thin bread and butter, and an occasional biscuit, which collectively constitute (so the expert tells us) the correct dietary for a child between the weaning time and the end of the second year. So long as this system prevails so long shall we need a small army of laryngologists, rhinologists, and otologists, to say nothing of physicians, to combat the diseases arising out of it. How is it possible, on such a diet, to secure that vigorous circulation of blood and lymph needful for the adequate development of the oral and neighbouring structures and for rendering them adequately resistant to disease?

In conclusion, I would ask your readers to ponder these facts: Adenoid tissue belongs to the lymphatic system; a sluggish circulation of lymph through it predisposes it to disease: the lymphatics of the buccal structures communicate with those of the nose and pharynx; rhythmic muscle contractions hasten the flow of lymph (if while the muscles of an extremity are at rest one of its lymphatic trunks be opened no lymph flows from it, in order to secure a flow of the lymph it is necessary to cause the muscle to contract rhythmically).

That man has always suffered from disease of the throat, nose, and ear is certain, but it is also certain that our primitive ancestors suffered far less in this way than we do, and though doubtless civilisation introduces other causative factors than that mentioned, all the evidence which I have been able to gather goes to show that the prevalence among us of these diseases, above all adenoids, is largely to be explained by reference to it.—I am, etc.,

Wimpole Street, Nov. 24th. HARRY CAMPBELL.

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## THE REPORT OF MR. BRODRICK'S COMMITTEE.

SIR,—With reference to Dr. Fremantle's letter in the BRITISH MEDICAL JOURNAL of December 14th, kindly allow me to make a few remarks.

First, I wish to express my gratitude to Dr. Fremantle for his kindly remarks about myself, and I desire to assure him, and all interested in the future of the R.A.M.C., that my sole object in entering into this discussion has been to see my old service put in a position that will enable it to take its proper place in His Majesty's army, and be formed into a thoroughly efficient corps, not only for treating but preventing disease. Dr. Fremantle says (*a*) with reference to "the keeping at home of all the junior officers till they complete four years service," it was "not even contemplated." In reply to this I can only say that the wording of the scheme appears to me most clear on this point; and, further, on October 11th Sir Frederick Treves, then a member of the Subcommittee of the British Medical Association, of which I am Chairman, stated in the very clearest way, before the Committee, that that was the intention of the scheme; I then and there pointed out to him its utter impracticability. Dr. Fremantle says "the Committee intended that lieutenants on leaving Aldershot should at once proceed to India and should there, after three years service, undergo the first examination for promotion." I can only quote the old saying, "Words were given to us to conceal our thoughts," and if Dr. Fremantle is right, Sir Frederick Treves, and, indeed, the wording of the report, is wrong. Let us, however, take it according to Dr. Fremantle, and suppose that the lieutenants are sent to India immediately after leaving Aldershot. Some 50 would be sent out each winter, and on completion of three years service there they are to "undergo their first examination for promotion."

But the scheme lays down that they are to be allowed to study at a hospital for six months before being examined. How is this to be carried out, and what would the Government of India say to a demand to release 50 officers out of a total strength of 300 from duty for six months to enable them to study? Fifty others would have to be sent out to take their places, or else the whole medical service would be disorganised, all leave would be stopped, and in the event of active service these 50 officers would be at once recalled to duty. Again, where are the hospitals to be found in India which would enable these 50 officers to study all the subjects for such an examination? Some of the lieutenants would be in Burmah, some at Aden, some on the frontier, and so on. I think it must be admitted that if this is really the intended scheme, it is not only unworkable but impracticable.

(*b*) "The right to retire on £1 a day after twenty years service" is not to be taken away. Such an idea is now admitted to be "a grave injustice," and "would produce the direst effects." All I can do is to refer to the report, but we are told "it was not intended by the Committee." The "mistake" (I thank thee for the word) "arises from a chance difference in the wording of the conditions." All I can say is, that for such a statement to have been allowed to appear over the signatures of the Secretary of State for War and his "experts" is an extraordinary example of carelessness, and the mistake should have been officially corrected the moment it was pointed out. As matters now stand, this "mistake" has caused infinite pain and uncertainty to many officers of the corps quartered in every part of the world. Apparently the examination after eighteen years service is to be upheld, and Dr. Fremantle points out there are "so many courts of appeal" that the officer will be protected from injustice. It will be observed that allusion is made by him to retirement on a gratuity of £2,500 at eighteen years service: but the examination does not take place till after eighteen years service, so the argument does not apply. The main point to be settled is—is an officer who completes twenty years service to be given a pension of £1 a day.

(*c*) Dr. Fremantle then wanders off into the realms of examination, and there I will leave him. The feeling of the service is that an examination for lieutenants for the rank of captain is unnecessary, and indeed impracticable; that one for captains is right, and should be final; but that to examine officers of over eighteen years service will not be submitted to.

(*d*) "The inspection of military hospitals by the Advisory Board will be unworkable and most unpopular." Dr. Fremantle contests this statement, and says it will "do most of its home inspection by short tours." It has been argued that, because civil hospitals receive "surprise visits' from certain municipal officials, military hospitals ought not to object. To this I reply: These "surprise visits" relate only to equipment and internal economy, never to professional examination of patients. The first is natural enough, and the guardians of the funds have a perfect right to see that the donations given to civil hospitals are properly expended. In a military hospital the system is totally different. The bedding, clothing, furniture—except those in actual use—etc., are all under charge of the barrack department, which has its own separate store in the hospital, and changes everything on the requisition of the medical officer. The diets are provided by the Army Service Corps, who are responsible for their being up to contract, the medical officer having power of rejection if they are not. The medicines and instruments are supplied from Woolwich after most careful inspection. The Royal Engineers are responsible for the condition of the buildings, drainage, water supply, etc. Every day an officer of the garrison visits the hospital and inquires from every patient if there are any complaints. The principal medical officer frequently visits the wards, and the general officer commanding and local commanding officers do the same. So that a further inspection by two members of the Advisory Board seems quite unnecessary. The "professional" inspection of patients stands self-condemned. Dr. Fremantle makes the extraordinary statement that "it is not unlikely that it (Advisory Board) will depute proxies to inspect abroad from time to time." Can such an idea have really entered the mind of the authorities? It seems incredible. The expense would be enormous, and I should like to see the faces of the India Council when asked to pay a number of proxies (eminent surgeons and physicians) at the rate of £5,000 a year and travelling allowances to inspect their military hospitals.

(*e*) The position of the Director General? Dr. Fremantle states that this officer is to have the rank of Lieutenant-General! He certainly ought to have it, but nowhere is it mentioned. Dr. Fremantle further states the new warrant "will pin down the Indian Government to their share of the bargain." All I can say is, "first catch your hare," and when you have "pinned" the Indian Government down take care that it does not wriggle off. I have bitter experience of that Government, and till I see the Indian pay and allowances in print and signed by the Secretary of State I can only repeat my advice—"put not your trust in princes."

I would not have entered into these points so fully had not Dr. Fremantle's position as Assistant-Secretary to Mr. Brodrick's Committee given him a quasi-official standing, and as his remarks are in many instances at variance with the "Report" and also with statements by Sir Frederick Treves, I think it only right the matter should be cleared up.—I am, etc.,

J. B. Hamilton.
Cromwell Mansions, Dec. 16th. Surgeon-General (retired).

## FREE VACCINATION.

Sir,—I think you have given ventilation to a most important defect in the present vaccination law; and, as you say, "the present system, by which one practitioner is advertised all through his district as a man to whom the patients of all other medical men may go for free vaccination, cannot but breed dissatisfaction."

Still more so is this the case when a practitioner (the public vaccinator) is allowed to send written notices to the patients of all the other medical men in his district, stating that he intends to call on a certain date with a view to vaccinating a child.

It would be far better if all alike were empowered to vaccinate on behalf of the local authority. This would naturally necessitate a new scheme for statistical results, in place of the present inspection.—I am, etc.,

G. P. W.
December 14th.

## THE LYMPH OF THE NATIONAL VACCINE ESTABLISHMENT.

Sir,—My experience of Government lymph is, I have no doubt, that of many other public vaccinators, and though the number of my cases is small, the results have been so satisfactory that, in justice to the National Vaccine Establishment, I think they should be recorded. During the past twelve months I have done fifty-seven primary vaccinations and forty-five revaccinations, using National Vaccine Establishment lymph. In all the primary cases and in forty of the revaccinations I have obtained four really good vesicles per case. In the remaining five of the revaccinations I have also had four vesicles, but more or less modified, coming to a height earlier and drying up quickly.—I am, etc.,

W. S. Syme.
Gamlingay, Dec. 3rd.

## PREPARATION OF STERILISED CATGUT.

Sir,—As the efficient sterilisation of catgut is a matter to which I have given considerable attention for some years past, I read with interest the article on the subject in the British Medical Journal of November 16th by Mr. C. Arthur Ball. The method he describes differs very little from that which I have now been employing with success for over twelve months. Before describing it I may say that I attempted the preparation of "formalin catgut" before I had heard of its having been employed by others, and met with many failures and disappointments. I believe that I owed my ultimate success to learning from Surgeon Myles of Dublin that the brittleness of the catgut was due to the imperfect washing out of the formalin. I also found that too strong a formalin solution resulted in brittleness, and now I never use stronger than 4 per cent. Indeed, it cannot be too strongly emphasised that the object of the formalin is not to sterilise, but to enable the catgut to bear subsequent boiling in water, and also to prevent its too rapid absorption by the tissues. The method I now employ is a modification of that

described by Mr. Charles Truax of Chicago in his work on *The Mechanics of Surgery*, 1899, as that of Dudley, and is as follows:

1. Wind the gut loosely and in a single row, on glass slides having ground edges taking care to fix the ends.
2. The slides may be immersed in ether for twelve or twenty-four hours to remove all trace of fat, though in my experience this is not essential.
3. Immerse for forty-eight to seventy-two hours in 4 per cent. formalin, according to the thickness of the gut.
4. Wash out the formalin with running water for twenty-four hours. This is best done by placing the reels or plates in a jar, and conducting a running stream to the bottom with a rubber tube while allowing it to overflow.
5. Place in water which is quickly brought to the boiling point, and continue to boil for seven minutes. Truax says twenty minutes, but this is, I believe, unnecessary, though it is well to know that the gut may be reboiled if required.
6. Finally, the slides are taken from the boiling water with sterilised forceps, and dropped into bottles containing the preserving solution, which consists of glycerine, 5 parts, absolute alcohol 95 parts, with mercury biniodide added in the proportion of 1 in 1,000. They may be left in this until required for use.

If I may offer any criticism on the method recommended by Mr. Ball, it appears to me that he winds the gut on too tightly and too closely. Personally I think it inadvisable to have more gut on one slide than will be sufficient to supply material for about three continuous sutures.

I may mention that I have had experience of catgut which has been supplied as sterile, and prepared by a lengthy and cumbersome "cumol process," but have not found it reliable. I believe sterilisation by Jellett's method—boiling in alcohol under pressure—has given satisfaction in the hands of those who have used it; but experiments show that boiling water is a more powerful germicide than alcohol raised to the same temperature.

It is important not to trust to a simple reef-knot with a catgut ligature, no matter how tightly drawn: it is always safer to use a third knot, as owing to swelling of the gut from absorption of water, a reef-knot occasionally opens, especially if the ends are cut too short.

I do not claim any originality for my method, as others have succeeded before myself, but I can guarantee it as being perfectly trustworthy.—I am, etc.,

Queen's College, Cork, Nov. 18th. C. YELVERTON PEARSON.

## THE MIDWIVES QUESTION.

SIR,—The "main issue" of this important question, I gather from Dr. Humphreys's last letter, is that the services of midwives are a necessity. I do not doubt that, as, "proved by the evidence before the Committee," this is so; but it does not follow that all the evidence was before the Committee.

From my own personal experience, I can understand that a few midwives may be necessary in some remote country districts, and nowhere else; in towns the services of medical practitioners can always be procured if required by anyone who wants them. This has been proved over and over again by various correspondents of the BRITISH MEDICAL JOURNAL and other medical papers; and unless these correspondents are utterly wrong (and they are men, many of them, of large experience, such as Dr. Rentoul), it seems very much as if the evidence given before the Committee was not of much value.

I have had thirty years of practice, including Poor-law appointments in town and country, and my experience most certainly is that the poorer classes can be attended if they wish by medical practitioners, either through the Poor Law or charities; that those rather better off can join provident dispensaries, etc.; and above these are the artisan class, who can very well look after themselves.

If "occupation for women" is not the crux of the whole question, how is it that such a large number of women (several thousands) have obtained the L.O.S. during the time it has been in existence, and that schools and lecturers compete for the privilege of teaching the numerous candidates for the diploma? Can it be seriously supposed that all this is done for the good of the poor out of pure philanthropy? I do not wonder that some of the supporters of the Midwives Registration Bill fight so hard to obtain legal recognition for these midwives, as unless it is obtained their occupation will be gone.

I maintain what I stated in my first letter on the subject in July last—that interested motives are the chief cause of the movement, and "occupation for women" the crux of the whole question.—I am, etc.,

Dulwich, Dec. 2nd. ALLAN MACLEAN.

## THE BRITISH ELECTRO-THERAPEUTIC SOCIETY.

SIR,—At a meeting held on Friday, December 13th, it was unanimously decided that a Society be formed for the study of electricity in its relation to medical science, and that the Society be named "The British Electro-Therapeutic." Also that a Provisional Committee be appointed, to consist of Drs. Hedley, Lewis Jones, H. G. Turney, J. H. Bryant, George Herschell, J. Ashton, H. McClure, and Chisholm Williams, to take the necessary steps for the formation of such a Society, and to report to a meeting to be convened for January 10th, 1902.—I am, etc.,

Bedford Square, W.C., Dec. 16th. CHISHOLM WILLIAMS.

# OBITUARY.

THE LATE SIR WILLIAM MAC CORMAC.—Canon Page-Roberts, the incumbent of St. Peter's, Vere Street, in the course of his sermon on Sunday morning, December 15th, made the following reference to the late Sir William Mac Cormac: "Here permit me to speak of one, now passed from our sight, but for many years a familiar and striking figure in our church. In the *Life of Sir James Paget*, that eminent surgeon and refined orator is quoted as thus describing Sir William Mac Cormac: 'He is certainly the most stirring, resolute man of work that I have had to do with, and one of the most businesslike.' There is an authority in these words for many of my hearers beyond any I can have on such a subject. But of a friend I held in warm affection I must add he was frank, manly, benignant, of wide experience in many lands, and honoured of them all. Many of us remember his genial hospitality. I do not forget that by his bedside I have knelt. As years advanced, without making emphatic profession of religion, his attendance at Divine worship became more frequent, and since his return from South Africa it has been continuous. Three days before he died, and unaware that the Angel of Death was nigh at hand to lead him to the world unseen, his cheerfulness was unbroken. Thus he passed into the clearer presence of God, leaving behind him a name which affection will continue to cherish."

IT is with much regret that we record the death of Dr. ANDREW CAMPBELL, of Navenby, Lincolnshire, which occurred with tragic suddenness as he was riding to a meet of the Blankney hounds at Waddington. He had complained of palpitation for some considerable time previously, although not of late, so that his death is attributed to syncope. He was the youngest son of the late Mr. Andrew Campbell, of Rankinstone, Coylton, Ayrshire, and was born in 1838. He received his medical education in Glasgow, and qualified as L.F.P.S. Glasgow and L.M. in 1860, and as L.R.C.P.Ed. in 1866. After acting as assistant to the late Dr. Girvan, of Pitlochry, he practised for several years on Lochavenside, and then in 1868 removed to Navenby, where he had since, either alone or in partnership, carried on an extensive practice. He took a great interest in country life and sports; he was both a parish and county councillor. He will be greatly missed by a large number of grateful and devoted patients, for, whatever their social position, he spared no pains in helping them. His funeral was attended by some 600 persons from all classes and from great distances in the country side. Much sympathy is felt for his widow in her sudden bereavement.

DR. DAVID RITCHIE PEARSON, who died on December 5th, near Rye, in Sussex, was the son of the late Major Pearson, H.E.I.C., and was born in April, 1837, and educated at Madras College, St. Andrews, and Edinburgh University. In 1858 he was appointed Assistant Surgeon to the Rifle Brigade, and served for two years in India. He settled in practice in Kensington in 1863, where he remained until his retirement in 1900. Dr. Pearson served as Assistant Surgeon in the Tower Hamlets Militia and the London Scottish Volunteers. He was for thirty-five years Honorary Physician to the National Industrial Home for Crippled Boys, and worked

hard on the Managing Committee of that institution. He also helped to found, and took great interest in, the Kensington Dispensary, of which for twenty-five years he was Physician and a member of the Medical Board. He was Consulting Physician to the Industrial Institution for the Blind and to the Working Ladies Guild. Dr. Pearson was a man of attractive personality, gentle, wise, and dignified, with a touch of old-world courtesy. He never acquired a very large practice, and amongst his patients were a considerable number of people of gentle birth but little fortune, who seemed to gravitate into his kind and sympathetic hands, and always commanded his utmost efforts for their welfare. But rich and poor gained confidence from his steadfast character and skilful handling, and his memory will be held in affection and respect by many friends and former patients. Dr. Pearson contributed some thoughtful papers to the Pathological and Clinical Societies of London and to the British Medical Journal. He married in 1869 Jane, eldest daughter of Mr. James Rae, of Phillimore Gardens, who survives him, and has left a family of several children, of whom four are sons—one (Dr. Allan Pearson) is in the Army Medical Service, another is in the Royal Engineers, and two are in the Indian Civil Service.

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Professor Adolf Fick, who died at Blankenberg at the age of 72, some time Professor of Physiology in the University of Würzburg, apart from his well-earned fame as a physiologist, was well known as a philosopher, as a physicist, and as a mathematician of no mean order. Born at Cassel, he first studied mathematics and later medicine at the Universities of Marburg and Berlin, taking his doctor's degree in 1851. In 1852 he became prosector under Ludwig at Zürich, and ten years later, as successor to his master, he became ordinary professor of physiology. In 1868 he was called to the chair of physiology at Würzburg, and this post he held for thirty-one years, resigning it at the age of 70, to make room for the younger generation. Professor Fick investigated the muscular mechanisms of joint movements, the physiology of muscular contraction, and of the blood pressure in the earlier stages of his career. He especially did good work relative to the physical chemical changes of muscular contractions. He improved the apparatus for examination of blood pressure, and introduced the "spring manometer," the "plethysmograph," and other well-known instruments. His manual skill was shown off to great advantage in the extremely neat and exact construction of these instruments, which he made himself with the help of very simple tools. He also worked at the physiology of the special senses, metabolism, glandular physiology, and digestion, as well as many other branches of this science. Besides many publications on physiological subjects, he wrote a number of articles on subjects lying half way between physics and philosophy; a certain number of his literary productions were purely philosophic. Professor Fick's highest ideal of life was that a man should throw himself with the whole energy of his mind into the work he has to carry out, and should sacrifice a fair proportion of his worldly good to the benefit of the object of his work. In his private life he was in every way exemplary.

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We regret to announce the death from apoplexy of Dr. Albert Leary Gihon, Senior Medical Director of the United States Navy, retired. Dr. Gihon was born in Philadelphia in 1833, received the degree of A.B. in 1850, and that of A.M. from Princeton in 1854. In the meantime he took the M.D. degree at the Philadelphia College of Medicine and Surgery in 1852. He was Professor of Chemistry and Toxicology in the Philadelphia College of Medicine and Surgery for the session of 1853-54. Entering the navy as Assistant Surgeon in 1855, he served continuously until his retirement in 1895. He was present at the engagements which resulted in the capture of the barrier forts on the Pearl River, near Canton, China, in 1856, and again saw active service with the blockading squadron off Fernandino and South Carolina during the civil war. Dr. Gihon was attached to the hospital ship *Idaho* at Nagasaki, Japan, during the typhoon of September 21st, 1869, and for services rendered to the Portuguese fleet on that occasion he received from the King of Portugal the decoration of Knight of the Military Order of Christ. He also received the thanks of the English and French Governments for services rendered. He was retired from active service on September 25th, 1895, with the rank of Commodore. Dr. Gihon represented the navy at many of the meetings of medical, sanitary, and climatological associations, and was a member of numerous American and foreign medical and sanitary societies, in several of which he held important office, having been President of the American Academy of Medicine, of the American Public Health Association, and of the Association of Military Surgeons of the United States. His principal contributions to medical literature are monographs such as *Practical Suggestions on Naval Hygiene*, which appeared in 1871; *Need of Sanitary Reform in Ship Life*, *Sanitary Commonplaces Applied to the Navy*, and *The Prevention of Venereal Diseases by Legislation*.

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On December 3rd there passed away at the early age of 39, William Singleton Fulshaw, who for the last fifteen years has worked hard and patiently among the inhabitants of Earl Shilton, in Leicestershire. After several years of study at Queen's College, Birmingham, he took the L.R.C.P. and L.R.C.S. of Edinburgh, and joined his father, the late Ralph Fulshaw, M.R.C.S., in practice. Mr. Fulshaw was Medical Officer and Public Vaccinator for the Earl Shilton District of the Hinckley Union, and also Certifying Factory Surgeon. As recently as November 26th he performed his daily work, but the same evening was compelled to take to his bed with signs of acute pneumonia. Dr. Shiels, who came to discharge the manifold duties attendant on a large practice, and Dr. Franklin of Leicester did all that human power could do, but without avail. On December 6th, amid signs of universal respect and sympathy, he was laid to rest. As a staunch Churchman, as an enthusiastic Mason, and as "the poor man's friend," Mr. Fulshaw will be sorely missed. To know him was to love him.

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By the death of Mr. William McCormack, L.R.C.S.Edin., J.P., on October 31st, the medical profession in the South of Scotland has lost one of its oldest and most honoured members. He was born on September 16th, 1816, the son of a farmer in the parish of Kirkmabreck, Kircudbright, and, after receiving his early education at the parish school of Kirkcowan, he commenced the study of medicine in the University of Glasgow. He subsequently continued his studies at Edinburgh, and took there the L.R.C.S. diploma in 1840. For two or three years he practised in Kirkcowan, but in 1845 he removed to Glenluce, being appointed Medical Officer to the parish of Old Luce, and he remained there until the time of his death, more than fifty-five years later. Bringing with him an excellent reputation, and having a great capacity for work, he soon acquired an extensive practice. He was held in high esteem by his brother practitioners in Galloway and Dumfriesshire, and he was called far and wide into consultation. He led a very active professional life until 1896, when he retired from general practice, still, however, continuing to do consulting work. Not only was he in great esteem on account of his professional abilities, but his kindness to the poor was also a subject of constant comment. He took a great interest in education, and was elected a member of the School Board of Glenluce on the passing of the Education Act in 1872. In 1880 he was chosen Chairman, and continued in this office until he retired from the Board in 1900. He was on the Commission of the Peace for the county of Wigtown. His wife, who was a daughter of the Rev. John M'Dowall, late minister of the parish, survives him.

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The Marquis de Magaz who recently died at Madrid at an advanced age was a leading member of the medical profession in Spain. He was for some time Professor of Physiology in the University of Barcelona, and later was transferred to Madrid. There he filled the office of Dean of the University. He was also a Member of the Council of Public Instruction, and Representative of the University of Barcelona in the Spanish Senate. He retired from active professional life many years ago. The Marquis de Magaz was a member of the Spanish Academy of Medicine, and the author of various works, the principal among them being a treatise on physiology which enjoyed a long run of popularity in the Spanish schools.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession who have recently passed away are Dr. Carl Schuchardt, head of the Surgical Department of the City Hospital, Stettin, who died of blood poisoning contracted in an operation; Professor Arthur Koenig, head of the Physical department in the Berlin Institute of Physiology, aged 46; Dr. Yanez, of Font, Professor of Forensic Medicine in the University of Madrid; Dr. J. H. Chievitz, Professor of Anatomy in the University of Copenhagen; Dr. A. Villard, Professor of Clinical Medicine in the Medical School of Marseilles; Dr. Edler von Jirus, Professor of Pathological Anatomy in the Czech University of Prague, aged 62; Dr. Laurens, representative of the Drôme in the French Senate, aged 54; Dr. Luigi De Rossi, Professor of "Oto-rhinolaryngoiatry" in the University of Rome, aged 57; Dr. William Fisher Norris, Professor of Ophthalmology in the University of Pennsylvania, aged 63; Dr. P. J. Galvanis, Professor of Clinical Surgery in the University of Athens; Dr. Jarvis S. Wight, Professor of Operative and Clinical Surgery at Long Island College Hospital, Brooklyn; Professor Karl von Liebermeister, Chief of the Medical Clinic in the University of Tübingen, aged 68; Dr. Löhlein, Professor of Obstetric Medicine in the University of Giessen, aged 54; Dr. Foley of Andrésy, first an officer in the French navy, afterwards a medical practitioner, a friend of Auguste Comte, and one of the thirteen executors of that philosopher, author of *Four Years in Oceania*, *Eki*, a novel the scene of which is placed in Oceania, *The Natural History of Man*, and other works, aged 80; Dr. N. Guardia, formerly Professor of Midwifery in the Medical Faculty of Caracas; and Dr. Floribert Soupart, Belgian Senator, Emeritus Professor of Surgery in the University of Ghent, aged 91.

# ROYAL NAVY AND ARMY MEDICAL SERVICES.

## STUDY LEAVE FOR NAVAL MEDICAL OFFICERS.

WE have with much satisfaction recently noticed that the Admiralty have granted study leave to some half-dozen fleet and staff surgeons. We fail, however, to note that similar leave has been granted to surgeons who remain twelve years in that rank, and not a few of them must consequently desire and even require such advantages. This must, we presume, be attributed to the present scarcity of naval surgeons, whose members cannot now apparently be increased even to supply the unavoidable wastage by death, retirement, withdrawal or resignation. Little advantage seems to have been taken of the instruction available at the London School of Tropical Medicine; the names of only three naval medical officers appear in the list of those who have studied there. We are also informed that the Admiralty recently declined to sanction study leave there. As such study was recommended by Admiral Moore's committee in 1900 we are surprised that it has not been approved to a greater extent.

Instruction in tropical diseases is given to surgeons entering the service at Haslar, but we have no information as to any other medical officers profiting by that course, whereas medical officers of all ranks, except the most senior, are employed in the tropics, and it is now generally recognised that special knowledge of tropical disease is most essential.

## REORGANISATION OF THE ARMY MEDICAL SERVICE

THE following is a summary of additional communications which have lately been received:

DELUDED, writing from India, says: Sir F. Treves, in the BRITISH MEDICAL JOURNAL of November 2nd, seems surprised that such wholesale condemnation of the recommendations of the Committee of which he is a member should be made. He says: "No man competent to undertake the duties of higher rank could object to the examination." They both could and do; not so much to the examination as to the penalties attached to failure namely, deprivation of pension. At least 80 per cent. of those now serving would never have entered could they have believed such monstrous conditions could have been proposed. Let those who will be compulsorily retired on £1 a day if you like. He further says: "It is possible also that the much-cherished 'right' to retire after twenty years on £1 a day has not been so entirely overlooked. On what authority does he make this statement? The "right" to retire is a part of our contract, though he may not think so; so long as this right is "possible" or doubtful, not a man is likely in future to take a leap in the dark.

A CORRESPONDENT in Burmah sends a long but able criticism of the report, the points in which are, we understand, being duly considered by the Subcommittee appointed by the Council of the British Medical Association.

ANOTHER correspondent, under the heading "a word of warning," urges upon those who may contemplate army medical service that the acceptance of the proposed conditions would amount practically to "professional suicide."

LONG SERVICE writes: After thirty years service and experience I hold that the proposed interference with the "right" to retire on £1 a day after twenty years service should alone deter from entering the R.A.M.C. There is no provision for regular leave as in other branches of the service—a grievous and invidious omission.

## HEALTH OF THE UNITED STATES ARMY.

SURGEON-GENERAL STERNBERG, in his annual report to the Secretary of War on the health of the United States army, says

The health of the army must be regarded as having been unusually good during the calendar year 1900. The admission-rate for all causes in the army, volunteers and regulars, with a mean strength of 100,389 in 1900, was 2,311.81 per 1,000 of strength as compared with 2,178.06 in the previous year: but during the year 1899 only 39,280 men out of a total of 105,546 were serving in the Philippines, while during the past year 66,882 of a total of 100,389 were thus serving. This is an important point to remember in considering the sick rates of the two years. The death-rate in China was large, 47.76 per 1,000 of strength, 23.62 from disease, and 24.14 from injury. From the close of the calendar year 1900 to the latest reports, the health of the troops in the Philippines had been steadily improving. Small-pox, so prevalent and deadly in the early occupation of the islands, has been almost entirely suppressed. Dysentery, constituting 12.44 per cent. of all cases of sickness, is the dangerous disease. The health of the troops serving in Cuba was excellent during the year. The medical record of the troops in Porto Rico for the year 1900 is an excellent one, comparing favourably with that of troops serving at the home stations. Referring to alcoholism in the army, General Sternberg says: "The steady decrease of late years in the admissions for alcoholism among the men of the regular army is a matter for congratulation. Military officers may be said to be unanimous in their opinion that this was mainly the result of the establishment of a post exchange, or canteen, at military posts. There is less drunkenness among troops in active service than in a command doing garrison duty in time of peace. In the Philippines during the past year the admission-rate for alcoholism among the volunteers was 8.68, and for regulars 12.41; for troops in China, 7.70. These statistics do not sustain the newspaper reports of drunkenness among the troops in the Philippines. In fact, medical officers report the habits of the enlisted men in the Philippines as very much the same as in the United States.

## THE VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

AT the headquarters of the Artists Rifle Volunteers, on December 11th, Colonel Sir Thomas Galliwey, K.C.M.G., Principal Medical Officer, Home District, in presenting the prizes to the members of the recent class of the school, spoke in high terms of the service the medical branch had rendered during the war in South Africa to the sick and wounded. Perhaps no branch of the army required aid more than the medical branch, and he hoped that some of those he was addressing would volunteer for service to relieve the tired men now out there. The instruction given was intended to prepare them for war, and by assisting the sick and wounded they would be doing as much as any other soldiers in the field. Amongst the officers present were Major Maclure (late London Scottish R. V.), President of the School; Brigade-Surgeon-Lieutenant-Colonel P. B. Giles, V.D., Senior Medical Officer of the School; and Surgeon-Major R. R. Sleeman, late C.I.V. The 1st Cadet Battalion, King's Royal Rifles, furnished the best teams, both in the advanced class and also in the new class, whilst the best man was Private P. H. Freeman, of the same battalion. At the conclusion of the proceedings several men volunteered for active service in South Africa with the R.A.M.C.

## ROYAL NAVY MEDICAL SERVICE.

FLEET SURGEON ALEXANDER M. FRENCH has been placed on the retired list, December 2nd. He was appointed Surgeon, September 30th, 1878; Staff Surgeon, September 30th, 1890; and Fleet Surgeon, March 28th, 1899.

The following appointments have been made at the Admiralty: THOMAS E. H. WILLIAMS, Fleet Surgeon, to the *President*, for R.N. Rendezvous, and at medical department, January 1st; HENRY A. W. RICHARDSON, Fleet Surgeon, to the *Defiance*, January 1st; EDWARD J. MORLEY, Staff Surgeon to the *Magnificent*, January 1st; JOHN LYON, Deputy-Inspector-General (retired), to be examining medical officer for recruiting duty at Manchester, January 1st; HENRY W. D. WALSH, Fleet Surgeon (retired), to be examining medical officer at Exeter, January 1st; EDWARD G. SWAN, Staff Surgeon, to be examining medical officer at York, January 1st.

## ROYAL ARMY MEDICAL CORPS.

THE Government of India have decided that officers of the R.A.M.C. employed in station hospitals in Presidency towns may be regarded as holding specific appointments if within the sanctioned establishment of medical officers for Calcutta, Madras, and Bombay, and granted house rent if not provided with public quarters.

The undermentioned officers have been discharged to duty from hospital in South Africa: Major O. R. A. JULIAN, Lieutenant J. M. BUIST, Civil Surgeons D. MACAULEY, J. K. CLARKE, F. C. NEWLAND, J. E. CLEMENTS, T. GODFREY, E. R. WALKER.

Civil Surgeons J. GARDNER and T. S. ALLAN are on passage home.

## ARMY MEDICAL SERVICE.

SURGEON-GENERAL W. TAYLOR, M.D., C.B., Honorary Physician to the King, is gazetted Director-General, *vice* Surgeon-General A. F. Preston, M.B., Honorary Physician to the King, whose tenure of temporary ap-

pointment has expired, December 2nd. In the BRITISH MEDICAL JOURNAL of October 26th we gave so fully the services of Surgeon-General Taylor that it is not necessary to recapitulate them here.

## CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month :

| | From. | To |
|---|---|---|
| Colonel J. L. Notter, M.D. ... ... ... | South Africa... | Aldershot. |
| Lieutenant-Colonel D. Bruce, M.B. ... | ,, | Home District. |
| ,, T. Archer, M.D. ... | Dublin ... ... | South Africa. |
| ,, H. K. Allport, M.D. . | Madras... ... | Netley. |
| ,, W. C. T. Poole, M.B. | South Africa... | Devonport. |
| ,, R. F. O'Brien... ... | Newbridge ... | South Africa. |
| Major C. E. Nichol, M.B. ... ... ... | South Africa... | Bengal. |
| ,, S. O. Stuart ... ... ... ... | Woolwich ... | South Africa. |
| ,, G. Raymond, M.B. ... ... ... | South Africa... | Chester. |
| ,, M. Halloran, M.B. ... ... ... | ,, | Aldershot. |
| Captain G. W. Tate, M.B. ... ... ... | — | South Africa. |
| ,, H. A. Berryman ... ... ... | Colchester ... | ,, |
| Lieutenant L. F. F. Winslow ... ... | South Africa... | Home District. |
| ,, E. McDonnell ... ... ... | Cork ... ... | South Africa. |
| ,, C. D. Myles, M.B ... ... | Dublin ... ... | ,, |
| ,, A. H. McN. Mitchell ... ... | York ... ... | Bengal. |
| ,, T. F. Ritchie, M.B. ... ... | Aldershot ... | South Africa. |
| ,, E. V. Aylen ... ... ... | Chatham ... | Wei-hai-Wei. |

Lieutenant-Colonel T. M. O'Brien, retired pay, has relinquished the medical charge of troops at Exeter.

## INDIAN MEDICAL SERVICE.

THE undermentioned Majors, having completed twenty years full-pay service, are promoted to be Lieutenant-Colonels, from October 1st :—Bengal: JAMES B. GIBBONS, DONALD ST. J. D. GRANT, DIROM G. CRAWFORD. Madras: ROBERT B. ROE, JOHN SMYTH, M.D., HUGH GREANY, M.D., EDWARD P. YOUNGERMAN.

The undermentioned Captains, having completed twelve years full-pay service, are promoted to be Majors, from September 30th :—Bengal: HENRY B. MELVILLE, JOSEPH C. S. VAUGHAN, ALEXANDER L. DUKE JOSHUA C. WHITE, M.D., HARRY W. ELPHICK, CHARLES H. BEDFORD, M.D. Madras: CHARLES L. WILLIAMS, M.D., WILFRED C. VICKERS. Bombay JOHN B. SMITH, HENRY F. CLEVELAND.

The retirement from the service of Lieutenant-Colonel J. M. ZORAB, M.B., Bengal Establishment, which has been already announced in the BRITISH MEDICAL JOURNAL, has received the approval of the King.

Lieutenant-Colonel F. D. C. HAWKINS, Bengal Establishment, also retires from the service, from October 26th. This notification supersedes that of the transfer of Lieutenant-Colonel Hawkins to the half-pay list recently made (*vide* BRITISH MEDICAL JOURNAL, December 14th).

Lieutenant-Colonel P. MULLANE, M.D., Bengal Establishment, likewise retires from the service, November 1st. He was appointed Surgeon, April 2nd, 1881, and Lieutenant-Colonel April 2nd, 1901. He was in the Burmese campaign in 1885-7 (medal with clasp); with the first Miranzai Expedition in 1891 : with the Chitral Relief Force in 1895 (medal with clasp); and with the Tirah Force in 1897-8, including the action of Dargai, capture of the Sampagha and Arhanga Passes, and the operations in the Bara Valley, December 7th to December 14th, 1897 (two clasps).

It has been ruled that a medical officer officiating in medical charge of a native regiment in India in addition to his own duties, in a leave vacancy, will, in the event of the permanent incumbent being promoted to higher rank while on leave, receive a moiety of the Staff salary of his official appointment at the higher rate, from the date of such promotion.

## ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANT-COLONEL H. M. MORGAN, having retired from the Volunteer forces, ceases to belong to the Army Medical Reserve of Officers, December 18th.

## THE VOLUNTEERS.

SURGEON LIEUTENANT W. J. HILL, 1st Gloucester Artillery, is promoted to be Surgeon-Captain, December 14th.

Mr. ARTHUR W. SCOTT is appointed Surgeon-Lieutenant in the 2nd East Riding of Yorkshire Artillery, December 14th.

Mr. GEORGE A. HAWKINS-AMBLER is reappointed Surgeon-Captain in the 1st Lancashire Engineers, December 14th.

Surgeon-Lieutenant F. WARD, M.D., 1st Volunteer Battalion the Suffolk Regiment, is promoted to be Surgeon-Captain, December 14th.

Brigade Surgeon-Lieutenant-Colonel G. H. TURNBULL, M.D., 1st Roxburgh and Selkirk (Border) Rifles, is seconded while holding the appointment of Senior Medical Officer to the Scottish Border Volunteer Infantry Brigade, December 14th.

Surgeon-Lieutenant A. S. TINDAL, M.D., 3rd Lanarkshire Rifles, is promoted to be Surgeon-Captain, December 14th.

Surgeon-Captain J. C. FENWICK, 3rd Sunderland Volunteer Battalion Durham Light Infantry, resigns his commission, December 14th.

## THE KAISAR-I-HIND MEDAL.

THE Viceroy of India is pleased to announce that His Majesty the King, Emperor of India, has been graciously pleased to award the Kaisar-i-Hind Medal for Public Service in India to the following officers, among others :

### FIRST CLASS.

Major Herbert Edward Deane, Royal Army Medical Corps, Special Health Officer of Calcutta.

Major Thomas Edward Dyson, M.B., Indian Medical Service, Deputy Sanitary Commissioner, Gujarat, Bombay Presidency.

Lieutenant-Colonel James McCloghry, F.R.C.S., Indian Medical Service, Civil Surgeon, Karachi, Bombay Presidency.

Captain Edmund Wilkinson, F.R.C.S., Indian Medical Service, Deputy Sanitary Commissioner, Punjab.

### SECOND CLASS.

The Viceroy of India is pleased to award the Kaisar-i-Hind Medal for Public Service in India of the Second Class to the following, among others :

Assistant Surgeon Julius Augustus Lobo, Indian Subordinate Medical Department, Resident Assistant Surgeon, Persian Gulf.

Captain John Norman MacLeod, M.B., Indian Medical Service, Civil Surgeon of Bikanir, Rajputana.

Miss J. Yerbury, M.D., Lady Doctor, Lady Lyall Hospital, Agra, North-Western Provinces.

## RETIRED OFFICERS EMPLOYED.

A CORRESPONDENT complains that although many retired medical officers voluntarily returned to duty through patriotic motives when the war began, and although they have carried on duty without trained non-commissioned officers and men, and although they have made pecuniary sacrifices in so serving, not an atom of recognition has been accorded them, although honours have been showered on civilians under similar circumstances. Could they not receive an honorary step in rank ?

*** We trust that at the end of the war retired officers who have so served will receive some suitable recognition.

## THE PAY OF THE DIRECTOR-GENERAL, ARMY MEDICAL SERVICE.

TABLE MONEY writes : Mr. Brodrick proposes to raise the pay of the D.-G. A.M.S. to £2,000 per annum from £1,500, the present rate. Mr. Brodrick now, in 1901, reverts to the pay-rate drawn by Director-General Sir James McGrigor, Bart., from 1815 to 1851, when money was far more valuable than it is to-day. But meanwhile the quartermaster-general, the director-general of ordnance, and the inspector-general of fortifications draw £2,100 per year. Why not assimilate the D.-G. A.M.S. in pay to the other chief officers of the army headquarters staff ? He will lose £500 in his five years of office if paid as proposed.

*Table Money.*—Every general officer in command of a district draws "table money" to entertain his officers. It varies from £250 to £350 and £400 per year, and is entirely in addition to his pay, which is liberal. It is essential such an allowance should be paid to the D.-G. A.M.S. The want of knowledge of their officers has always been the besetting sin of directors-general of the medical service of the army. Want of income may have largely entered into the causes of this ignorance, and social knowledge is essential.

I serve abroad for a tour of five years, perhaps see several epidemics, perhaps make a campaign. I come home with many suggestions and a few ideas which I wish to bring to the personal notice of my chief. To-day I think myself lucky if I see him for five minutes on a *levée* day at 18, Victoria Street, but have not any opportunity of opening out my views to the responsible head of my service. I propose to give him £300 a year in addition to his pay as "table money," and thus enable him to ask 300 people to his dinner table a year, of whom half the number may be his own officers. By so doing he will learn much as to the profession and his own service which he controls, and that service may perhaps in the course of a few years get rid of the want of confidence, not to say positive dislike, that hangs like a London fog round the headquarter office of the Medical Service of the army. If such a result can be purchased for £300 per annum there never was a cheaper bargain made by the authorities.

# MEDICO-LEGAL AND MEDICO-ETHICAL.

## MARTIN *v.* ALLEN.

BEFORE Mr. Justice Grantham and a special jury at the Leeds Assizes, December 12th, 13th, and 14th. This was the retrial of an action which was heard before the Lord Chief Justice and a special jury in August, 1901, and reported in the BRITISH MEDICAL JOURNAL, August 17th, 1901, p. 441. On that occasion the jury disagreed and were discharged. The action was brought by Miss Elizabeth Martin, of Glossop Road, Sheffield, against Richard Grammer Allen, M.R.C.S. and L.R.C.P.Edin., Medical Superintendent of the Belper Isolation Hospital, to recover damages for a libel said to be contained in a report made by the defendant to the committee of the hospital of which the plaintiff was matron from May, 1899, to July, 1900.

Mr. Tindal Atkinson, K.C., and Mr. Waddy appeared for the plaintiff; Mr. Scott Fox, K.C., and Mr. J. A. Compston, and Mr. Valentine Ball (instructed by the solicitor to the Medical Defence Union) appeared for the defendant.

On July 12th Dr. Allen sent to the clerk of the committee a letter which contained passages upon which the present action was founded. In consequence of this the plaintiff was dismissed on July 25th.

The defendant pleaded that the letter was privileged, and that he was actuated by no malice towards the plaintiff, and in the alternative that his statements were true in substance and in fact.

The plaintiff, in the course of her evidence, admitted that she had had friction with Dr. Gaylor and Dr. McElligott, the plaintiff's predecessors. She said that Dr. Allen tried to get the nurses drawn into a plot against her. She denied the allegations made against her in the letter above referred to. A number of witnesses were called in support of the plaintiff's case, amongst whom were Dr. Hooper and Mr. John Booth, who were members of the Hospital Committee in Miss Martin's time, and Mr. Job Spencer, Inspector of Nuisances for the Alfreton Urban District Council; a number of patients and parents of patients, who were at the hospital in Miss Martin's time, spoke to her kindly treatment of them.

At the close of the plaintiff's case, Mr. Scott Fox submitted (*a*) that the occasion was privileged, and (*b*) that there was no evidence of malice. The learned judge ruled in his favour on the first point, but said that he thought there might be evidence of malice.

Dr. Allen was the first witness called for the defence. He said he had been in practice at Belper for twenty-five years. His salary as

superintendent at the hospital was £35 minimum and £75 maximum. He knew very little of the plaintiff on his appointment, but had promised to try to work amicably with her. He also said that the statements in the letter were founded upon complaints which had reached him, and that he had an honest belief in their truth. Mr. Strutt, Chairman of the Derby County Council, Miss Edith Clinton, formerly a nurse at the hospital, Mrs. Warren, one of the nurses who resigned in April, 1900, Mrs. Priestly (formerly Nurse Sykes), Nurse Keene, Mrs. Spencer, a former patient at the hospital, Mr. Pym, Clerk to the Hospital Committee, Dr. McElligott, and Mr. Waite, Chairman of the Committee at the time of Miss Martin's dismissal, and other witnesses were called in support of the defendant's case.

Counsel having replied, Mr. Justice Grantham, late on the third day of the trial, summed up to the jury. As to the law applicable to the case, he said he had ruled that the alleged libel was privileged, so that the question for their consideration was whether the defendant in making the statements in question had been actuated by malice. The fact that statements were untrue was not of itself evidence of malice, if the defendant had made them believing them to be true. His Lordship then reviewed each clause in the alleged libel, and pointed out to the jury that the defendant had failed to give sufficient evidence of their truth. He also suggested that there seemed to have been a conspiracy among the nurses to do the plaintiff an injury.

After a short retirement the Jury found a verdict for the plaintiff, damages £100. A stay of execution pending an appeal was refused.

## MEDICAL COMMUNICATIONS TO THE LAY PRESS.

OUR attention has been drawn to a letter from the Surgeon to the Roentgen Ray Department in the London Skin Hospital published in the *Pall Mall Gazette* and the *Morning Post*, calling attention to the alleged cures by Dr. Hutchins, of Atalanta, and claiming priority on behalf of English surgeons for the treatment of cancer by the *x* rays. A letter of a somewhat similar kind appeared in the *Daily Mail* on December 5th in reference to a so-called novel surgical feat reported in that newspaper as having been performed in Paris, where severed fingers had been successfully united to the hand. A practitioner, doubtless jealous for English surgery, related how he had twice performed a similar operation with good results. The temptation to send such communications to the press is no doubt great when statements appear in newspapers about wonderful cures effected by some foreigner with the implied hint that the British medical practitioner, like the British manufacturer, is not up to date. If such replies are to be sent at all, it would be more conducive to the dignity of the profession if they were so composed that the writers could not be suspected of seeking personal advertisement under the guise of patriotism.

## TESTIMONIALS AS ADVERTISEMENTS.

WE have received copy of a circular issued by the firm of C. Richter and Co. extolling the virtues of an asthma powder and cigarettes as invaluable specifics for asthma and what they call "emphysemabronchitis." We regret to see on this circular testimonials from four members of the medical profession who have been induced to testify to the beneficial effects of this nostrum. We have repeatedly expressed our opinion that no medical practitioner should allow testimonials to be used for advertising purposes. This view has been supported by some at least of the licensing bodies.

## THE ASSOCIATION OF MEDICAL PRACTITIONERS WITH CHEMISTS.

THE following advertisement taken from the *Yorkshire Evening Post* of December 11th has been sent to us by a correspondent:

SITUATIONS VACANT AND WANTED.

MEDICAL.

Wanted by a retired Army Surgeon a Consulting Room, in conjunction with a chemist or druggist or herbalist, having a good connection. For further or full particulars write to Y 625, the *Yorkshire Evening Post*, Leeds.

We find it hard to believe that the above is genuine, or that anyone who has occupied the position of an officer and a gentleman can contemplate thus associating himself. We have received complaints of medical practitioners hiring consulting rooms in chemists' shops, and even in the shop of an unqualified chemist, and also complaints of "covering" the chemist under such circumstances, but it seems to us that such irregularities can be checked only through the action of the local medical society. If it fail to induce any medical practitioner in the district to conform to the recognised standard of medical ethics, it should bring the matter before the General Medical Council after obtaining the necessary evidence either independently or with the assistance of one of the medical aid societies. It may be as well to reprint here the notice issued by the Council:—Further, in regard to the practice commonly known as "covering," the Council gives notice that any registered medical practitioner who by his presence, countenance, advice assistance, or co-operation, knowingly enables an unqualified or unregistered person (whether described as an assistant or otherwise) to attend or treat any patient, to procure or issue any medical certificate or certificate of death, or otherwise to engage in medical practice as if the said person were duly qualified and registered, is liable to be judged as guilty of "infamous conduct in a professional respect," and to have his name erased from the *Medical Register*, under the said enactment.

## THE TENURE OF OFFICE BY THE HONORARY MEDICAL OFFICERS OF HOSPITALS.

X.—It was formerly the custom for the honorary medical officers of hospitals to hold their appointments *ad vitam aut culpam*, but of late it has been the practice to determine the period of office either by election for a certain number of years or by compulsory retirement on reaching a certain age. The Board of Management usually has the power to ask for the resignation of an honorary medical officer, and to dismiss him if he refuses to resign, but such action would only be taken in case of some grave fault, and the medical officer should have the right of appeal to the governors against the Board of Management. In some hospitals the honorary medical officers are elected by a special committee which alone has the power to remove them.

## OUT-DOOR PRACTICE OF MATERNITY HOSPITALS.

M.R.C.S. writes that he was suddenly called to see a woman who had just been confined, and was flooding. He found the patient under the care of a pupil of a maternity hospital. The pupil informed him that she had sent to the hospital for assistance, but as there was free hæmorrhage, and the patient's state was serious, he proceeded to treat the case, and succeeded in arresting the bleeding. Just before he had finished assistance arrived from the hospital in the form of the matron or a senior nurse. The latter thanked our correspondent, and said that if the patient's husband were unable to pay the fee he might send his bill into the hospital. The patient's husband says that he cannot afford to pay the fee, and our correspondent desires an opinion as to whether he can properly apply to the hospital for it.

*** Under the circumstances we think that our correspondent would be quite justified in applying to the hospital authorities for his fee. This case is an example of a reprehensible custom followed at certain lying-in charities Where an unregistered person is in charge of a lying-in woman, in the case of any difficulty a medical practitioner should be at once summoned. That time should be wasted by sending for another unregistered person—for the pupil here did not call in our correspondent—is a practice which must be condemned. If no medical aid had been at hand, and this woman had died, a coroner's jury might have treated the matter very seriously.

## MEDICAL ADVERTISING.

MECKEL.—As stated on a former occasion (see BRITISH MEDICAL JOURNAL, September 29th, 1900) it is difficult to condemn altogether the practice of placing notices on a shop that messages can be received for Dr. So-and-So, as local conditions may make it convenient, but it may very easily be abused.

## A QUESTION OF MEDICAL ETHICS.

T. L. K.—We gather from the correspondence that the parties understood that T. L. K was willing "to co-operate" in the management of the case, and could be sent for if required. Apparently the other practitioner did not intend to be discourteous. Our correspondent is, of course, fully justified in asking a reasonable fee for his services. Considering the position of the patient we think he may fairly charge ten guineas for the attendance at the confinement and a guinea for each subsequent visit.

## A QUESTION OF CONTRACT.

SCHOONER writes that he is one of the appointed medical officers to the pilots throughout a certain district, at a fixed remuneration per head per month. A steamer ran down a schooner having on board one of these pilots, who was injured in the collision. If the steamship owners admit their liability by compensating the owners of the schooner or the pilot, would he be justified in demanding payment from them for attendance, or does his contract with the Harbour Board preclude him from so doing?

*** It is to be presumed that our correspondent attended the pilot as the medical officer of the Harbour Board. If so, he can have no claim to any payment other than that laid down in his contract.

## MEDICAL ETIQUETTE.

X. complains of a consultant who wrote to a patient nine years after he had seen him to say that as he is very much interested in the future of such cases he would be much obliged for information as to the subsequent state of the patient's health and mode of life. "X." says that he sent the case originally, and he wishes to know whether the consultant should not have made the inquiry through him.

*** We quite agree that it would be better for the consultant to make such inquiries through the practitioner by whom the case was sent.

# UNIVERSITIES AND COLLEGES.

## UNIVERSITY OF OXFORD.

FIRST M.B. EXAMINATION.—The following candidates have passed this examination in the subjects undernoted:

*Materia Medica and Pharmacy.*—W. Brown, Christ Church.

*Anatomy and Physiology.*—G. E. Barry, Trinity College; J. H. Hebb, St. John's College; A. C. Inman, Wadham College; P. A. Mansfield, Keble College; A. Shelley, Keble College; E. McL. Smith, Queen's College.

*Organic Chemistry.*—M. B. Baines, Exeter College; H. H. Baker, University College; B. E. A. Batt, Trinity College; C. Beards, Jesus College; H. B. Billups, Worcester College; E. C. Browne; F. W. Browne, Wadham College; H. H. Carleton, Keble College; R. A. Chisholm, Wadham College; C. D. Corbett, University College; C. G. Douglas, Magdalen College; G. R. Gladstone, New College; O. G. Luker, Christ Church; S. R. Mutch, Brasenose College; W. S. Pinching, St. John's College; C. F. Ryder, Magdalen College; A. P. Yonge, Exeter College.

SECOND M.B. EXAMINATION.—The following candidates have passed this examination in the subjects undernoted:

*Medicine, Surgery, Midwifery, Forensic Medicine, and Public Health.*—E. C. Bevers, St. John's College; H. W. Crowe, Christ Church; G. G. Davidson, New College; A. W. Fisher, New College; A. J. Jex-Blake, Magdalen College; G. F. D. Smith, New College.

*Pathology.*—E. F. Beaumont, Wadham College; E. C. Bevers, St. John's College; H. W. Kaye, Magdalen College; T. G. Longstaff, Christ Church; S. G. Mostyn, Exeter College; C. Rolleston, New College; H. M. Turnbull, Magdalen College.

## UNIVERSITY OF CAMBRIDGE.

FIRST EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following candidates have satisfied the Examiners:—

*Part I: Chemistry and Physics.*—G. D. Alexander, B.A., Cai.; F. W. Argyle, Joh.; F. O. Arnold, Trin.; J. Barcroft, M.A., King's; H. Bowring, King's; P. E. Braham, Cla.; J. P. Buckley, Trin.; H. V. Byatt-Byatt, Cla.; B. P. Campbell, Cla.; H. B. Carryll, Joh.; R. C. Chance, Trin.; H. Chapple, Joh.; L. Colledge, Cai.; A. F. Comyn, Pemb.; R. Crawford, Jes.; N. R. Cunningham, B.A., Cai.; G. H. Davy, Cai.; A. T. Densham, Joh.; H. Dimock, Sid. Suss.; A. C. J. Elwin, Corp. Chris.; F. S. Eschwege, Christ's; A. W. Ewing, Christ's; N. M. Fergusson, Magd.; H. B. H. Follit, Cla.; L. A. Fothergill, Emm.; N. H. Gandhi, Cai.; G. Graham, Trin.; B. Haigh, Cai; H. W. Hesse, Trin. H.; F. S. Hewett, Cai.; T. R. Hodgson, Christ's; G. Hoffmann, Cai.; W. D. Hopkins, Trin. H.; N. W. Jenkin, Christ's; A. R. Jordan, Cla.; J. L. Joyce, King's; R. P. Lamb, Trin.; A. A. H. Lawrence, B.A., Emm.; W. S. Leicester, Emm.; R. G. Markham, Cai.; W. Mathieson, Sid. Suss.; L. Meakin, Trin.; M. W. B. Oliver, Trin.; E. S. Perrin, Cai.; A. H. Platt, Cai; A. V. Poyser, Magd.; C. H. Rippmann, B.A., King's; J. H. Roberts, Emm.; S. H. Scott, Joh.; R. E. Smith, Emm.; C. Stanley-Clarke, B.A., Cai.; F. A. Stockdale, Magd.; O. Teichmann, Cai.; F. B. Treves, B.A., Cai.; W. W. Treves, Cai.; G. Walker, Trin.; K. M. Walker, Cai.; D. R. P. Walther, Pemb.; C. E. Whitehead, Cai.; T. M. O. Williams, Christ's.

*Part II: Elementary Biology.*—F. O. Arnold, Trin.; E. W. Atkinson, Cai.; J. Barcroft, M.A., King's; H. S. Berry, Cla.; J. P. Buckley, Trin.; L. S. T. Burrell, Trin.; H. V. Byatt-Byatt, Cla.; H. J. B. Cane, Cai.; F. Clayton, Trin.; R. Colgate, Trin.; R. Crawford, Jes.; G. H. Davy, Cai.; H. Dimock, Sid. Suss.; N. H. Gandhi, Cai.; J. F. Gaskell, B.A., Cai.; G. Graham, Trin.; B. Haigh, Cai; H. A. Hancock, Non-coll.; H. W. Hesse, Trin. H.; F. H. Holl, Trin.; W. D. Hopkins, Trin. H.; E. C. D. Marriage, Cla.; J. H. B. Martin, Emm.; B. N. Nutman, Jes.; W. S. Perrin, Cai.; A. H. Platt, Cai.; C. H. Rippmann, B.A., King's; S. H. Scott, Joh.; R. C. Standring-Smith, B.A., Cath.; H. H. Taylor, Pemb.; K. M. Walker, Cai.; H. K. Waller, Trin.; C. E. Whitehead, Cai.; W. H. Williams, Cai.

SECOND EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following candidates have satisfied the Examiners:—

*Part I. Pharmaceutical Chemistry.*—W. A. Alexander, Cai.; J. H. Board, Pemb.; L. B. Cane, King's; A. de C. C. Charles, Magd.; H. J. Clarke, Trin.; E. B. Clayton, Cai.; A. W. C. Drake, Pemb.; J. R. Draper, Joh.; D. Embleton, Christ's; M. F. Emrys-Jones, Cai.; S. Gooding, B.A., Joh.; G. S. Haynes, King's; G. A. M. Heydon, Christ's; G. Holroyd, B.A., Christ's; R. S. Jenkins, Joh.; C. E. M. Jones, King's; S. G. Luker, Pemb.; R. M. Miller, B.A., Cla.; H. E. H. Oakeley, B.A., Joh.; E. V. Oulton, Christ's; D. G. Pearson, Pemb.; M. Phillips, B.A., Cai.; J. H. Pratt, Trin.; F. S. Smith, B.A., King's; S. J. Steward, Down; R. Svensson, Cai.; R. Wade, B.A., Christ's; B. Wahby, Non-coll.; G. L. Webb, Cai.; H. N. Webber, Joh.; A. Wilkin, B.A., King's; W. H. Woodburn, B.A., Christ's; O. K. Wright, Christ's.

*Part II. Human Anatomy and Physiology.*—C. B. M. Aldridge, B.A., Christ's; E. Beaton, Cai; H. C. Cameron, B.A., Joh.; M. A. Cassidy, B.A., Cla.; H. M. Clarke, B.A., Cla.; E. R. T. Clarkson, M.A., H. Selw.; R. P. Cockin, B.A., Cai.; W. J. Cumberlidge, Christ's; C. E. Droop, B.A., Trin.; T. Drysdale, B.A., Jes.; L. Dukes, B.A., Trin.; T. W. N. Dunn, Cai.; R. G. Elwell, B.A., Trin.; H. J. Fardon, B.A., Christ's; N. C. Fletcher, B.A., Queens'; D. H. Fraser, B.A., Cai.; S. H. Gibson, B.A., Jes.; H. E. Graham, B.A., Jes.; R. E. G. Gray, B.A., Pemb.; J. R. C. Greenlees, B.A., Joh.; C. F. R. Hall, B.A., Trin.; H. Hardwick-Smith, B.A., Joh.; W. H. Hastings, Trin.; W. Hastings, Christ's; R. F. V. Hodge, Emm.; W. R. Honeyburne, Pet.; E. C. Hughes, B.A., Cla.; N. H. Illingworth, B.A., Cla.; F. A. Juler, B.A., Trin.; C. King, B.A., Trin.; J. C. Lawton-Roberts, B.A., Cla.; W. Lowe, B.A., Cai.; G. H. K. Macalister, B.A., Joh.; J. M. Intyre, King's; S. M. Mackenzie, B.A., Trin.; J. T. Macnab, B.A., Christ's; C. D. Mathias, B.A., Trin.; J. Mellanby, B.A., Emm.; A. H. Miller, B.A., Trin.; A. R. Moore, B.A., Cai.; S. A. Owen, B.A., Trin.; C. E. Palmer, B.A., Cai.; C. W. Ponder, B.A., Emm.; W. H. Robinson, Down.; E. W. Sheaf, B.A., Down.; G. C. E. Simpson, Joh.; W. H. Smyth, B.A., Emm.; W. H. Thresher, B.A., Cai.; G. T. Western, B.A., Pemb.; W. P. Williams, Down.; E. K. Williams, B.A., Cai.; J. K. Willis, B.A., Queens'.

THIRD EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following candidates have satisfied the Examiners:

*Part I: Midwifery and Surgery.*—J. F. Alexander, B.A., Trin.; J. A. Andrews, B.A., Joh.; L. B. Aveling, B.A., Christ's; L. E. H. R. Barker, B.A., Cai.; G. D. Barton, B.A., Pemb.; J. M. Bennion, B.A., Joh.; E. Bigg, B.A., Cai.; F. Bryan, B.A., King's; C. V. Bulstrode, B.A., Trin.; J. W. E. Cole, B.A., Corp. Chr.; G. L. Crimp, B.A., Cai; H. Davies-Colley, B.A., Trin.; S. Dodd, B.A., Cai.; F. P. Edwards, Down.; A. F. Elliott, B.A., Emm.; R. B. Errington-Smith, B.A., Trin.; A. O. M. Fehrsen, B.A., Cai.; W. S. Fox, M.A., Trin.; G. W. Greene, B.A., Down.; G. P. D. Hawker, B.A., Cai; F. B. Manser, Pet.; J. C. Matthews, B.A., Down.; C. L. Nedwill, B.A., Trin; F. D. Nicholson, B.A., King's; G. B. Norman, B.A., Joh.; F. H. Parker, B.A., Pemb.; J. E. Payne, Pet; J. S. Pearson, B.A., Trin.; H. V. Pryce, B.A., Joh.; R. M. Ranking, B.A., Pemb.; F. Richmond, B.A., Cla.; C. Roper, B.A., Cai.; E. A. Ross, Trin.; H. M. Scaping, B.A., Cla.; E. S. Scott, B.A., Pemb.; W. T. Scott, B.A., Cla.; H. J. Shone, B.A., Emm.; A. I. Simey, B.A., King's; G. E. St. C., Stockwell, B.A., King's; E. Weatherhead, Joh.; H. C. Williams, B.A., Pemb.; J. A. Wood, M.A., Joh.

## UNIVERSITY OF LONDON.

B.S. EXAMINATION.—The following candidates have satisfied the Examiners:

*First Division.*—Janet Mary Campbell, London (Royal Free Hospital) School of Medicine for Women; F. B. Carter, M.D., University College; A. Edmunds, B.Sc., King's College; E. L. Lilley, Charing Cross Hospital; C. A. S. Ridout, St. Bartholomew's Hospital; T. C. Savage, University College; R. P. Williams, King's College; W. H. McMullen, King's College.

*Second Division.*—W. F. Addey, University College; K. B. Alexander, Guy's Hospital; W. Billington, Birmingham Medical School and King's College; C. H. Bullen, Birmingham Medical School; A. Caddy, St. George's Hospital; Katherine Chamberlain, London (Royal Free Hospital) School of Medicine for Women; C. F. Coombs, St. Mary's Hospital; D. L. Davies, University College; H. C. Jonas, St. Thomas's Hospital; Helena Gertrude Jones, London (Royal Free Hospital) School of Medicine for Women; H. C. Keates, Guy's Hospital; R. Kelsall, Owens College and Manchester Royal Infirmary; H. J. Marriage, St. Thomas's Hospital; R. R. Mowll, King's College; F. H. Noke, St. Bartholomew's Hospital; W. T. Rowe, St. Bartholomew's Hospital; D. W. Smith, Guy's Hospital; W. L. Stuar, King's College; K. V. Trubshaw, Guy's Hospital; Blanche Elinor Walters, Royal Free Hospital; H. S. Ward, Cardiff Medical School and St. Bartholomew's Hospital; Florence E. Willey, B.Sc., London (Royal Free Hospital) School of Medicine for Women; Louisa Woodcock, London (Royal Free Hospital) School of Medicine for Women; Edith Louisa Young, London (Royal Free Hospital) School of Medicine for Women; E. E. Young, St. Bartholomew's Hospital.

## UNIVERSITY COLLEGE, CARDIFF.

OUR Cardiff correspondent writes: The county councils of Glamorganshire and Monmouthshire, with a wise thoughtfulness and appreciation of the benefits of education, have for some years past given a number of free studentships with attached scholarships to students working at University College, Cardiff. Their scholars have taken many prizes in different fields of education, but the success of two of them in the last M.B.Lond. examination is especially conspicuous. Mr. C. J. Thomas (St. Bartholomew's Hospital) obtained the Scholarship and Gold Medal in Medicine, and a Gold Medal in Obstetric Medicine; and Mr. A. E. Jones (University College, London) the Scholarship and Gold Medal in Obstetric Medicine and a Gold Medal in Medicine. That is two out of three scholarships and four out of six gold medals. Both these gentlemen held county council scholarships. These results speak well not only for the later hospital training, but also for their education in the more preliminary subjects; and, coupled with others at previous medical examinations, are a sufficient answer to those who contend that to take the preliminary subjects at a provincial medical school is a waste of time.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary Council was held on December 12th, Mr. H. G. Howse, President, in the chair.

*The late Sir William MacCormac.*

The Council recorded their deep regret at the death of their colleague, Sir William MacCormac, Bart., K.C.B., K.C.V.O., and their very sincere sympathy with Lady MacCormac in the great loss which she had sustained. The Council desired to express their grateful sense of the many services rendered to the College by Sir William MacCormac, and especially to record their appreciative recognition of the dignity and distinction with which he fulfilled the duties of President during his five years of office. For these reasons, as well as for those personal qualities which won for him so many friends, the Council believed that his loss will be long felt and deeply mourned. The vacancy in the Council occasioned by Sir William MacCormac's death will be filled up by the Fellows at the annual meeting for the election of Members of Council in July, 1902.

*Annual Meeting of Fellows and Members.*

The following answers were adopted by the Council to the four resolutions carried at the above meeting, held on November 21st, 1901:

1. That the Council having fully considered the resolution moved by Dr. Thomas Morton, seconded by Mr. Joseph Smith and carried by 30 votes to 2, are of opinion that it would be most undesirable to reopen the question of the representation of Members on the Council.

2. That the mover and seconder of Resolution No. 2 be informed that the resolution has been placed before the Council.

3. That the mover and seconder of Resolution No. 3 be informed that, if the British Medical Association should officially forward a copy of their Bill (if there be one) for the Amendment of the Medical Acts, the Council will be prepared to give it their earnest consideration.

4. That, as it is essential that the Representative of the College on the General Medical Council should be a member of the Council of the College, the Council of the College are of opinion that the election should remain in their hands.

*Jubilee of the Owens College.*

The President consented to the wish of the Council that he should represent the Royal College of Surgeons on the above occasion, March 12th and 13th, 1902.

## ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

AT a meeting of the College held on December 16th the following gentlemen having passed the requisite examinations, were admitted Fellows of the College: J. J. Berry, L.R.C.S.E., M.D., R. H. Gibbs, L.R.C.S.E., G. W. Hardie, L.R.C.S.E., J. Phillips, M.R.C.S.Eng., L.R.C.P.Lond., W. F. Rawson, M.R.C.S.Eng., L.R.C.P.Lond., and A. Wilson, L.R.C.S.E.

## ROYAL COLLEGE OF SURGEONS IN IRELAND.

*Regulation for Academic Costume.*—The College has issued a notice as to the making of a gown which may be worn with College cap by the general body of Fellows at all public functions. Further particulars can be obtained from the Registrar.

# INDIA AND THE COLONIES.

## INDIA.

### MISSION HOSPITAL AT MIRAJ.

FROM the report of the Presbyterian Mission Hospital at Miraj, in the Southern Maratha country, we learn that as an outcome of the famine in India, several permanent additions to the hospital buildings have been made, including a detached infectious ward, a new annex to the main hospital containing five private wards, an operating room, a sterilising room, an anæsthesia room, a laboratory, and a lecture room. A new leper asylum, providing accommodation for thirty patients, has also been erected; it is situated about a mile from the mission compound. The hospital and dispensary are under the charge of Dr. W. J. Wandless, who is assisted by Dr. G. W. Harding.

## HONG KONG.

### REPORT ON MOSQUITOS.

THE report of Dr. J. C. Thomson to the principal medical officer, Hong Kong, on the results of his systematic examination of mosquitos is an excellent illustration of the results that can be obtained in a colony when sufficient aid is afforded by the lay authorities.

Dr. Thomson distributed to the various police stations test tubes and instructions as to the method of catching and killing mosquitos. The first dozen or so caught on any given date were sent to him. By this simple plan and without any expense he was able to examine 32,266 insects, of which 31,390 were mosquitos, and of these 3·7 per cent. were *Anopheles*. The proportion of *Anopheles* varied in different localities and at different times, but on the whole, according to the author, there was a marked general correspondence between the fever rate and this proportion. As the police stations are scattered all over the colony and its dependencies, he was able in this manner to obtain information from a wide area.

Dr. Thomson describes the mosquitos found, which include several new species, but the final classification necessarily rests with the entomologists. *Anopheles sinensis* was the most common representative of the genus.

Observations as to the breeding places of the *Anopheles* at some of the stations were made, and differences in the favourable conditions required for different species noted. The effect of changes in the weather is considered. Cold was found to induce torpidity, but the access of warmer weather restored the activity of the larvæ.

Some of the breeding grounds were destroyed, but the author considers that the repeated application of kerosene is both the cheapest and most effective way of dealing with the matter in Hong Kong.

It is most satisfactory to find the local medical men, with the active co-operation of the civil authorities, are undertaking such excellent work, strictly adapted to the local requirements in the important colony of Hong Kong.

# HOSPITAL AND DISPENSARY MANAGEMENT.

## THE DOWN DISTRICT ASYLUM.

THE total number of patients under treatment in this asylum during 1900 was 717, and the population remaining at the end of the year was 588.

The total number admitted was 149, being 21 in excess of the previous year. The discharges amounted to 68 in all, and the percentages of these discharged "recovered," calculated upon the number admitted, was 37.6, as compared with 37.7, the recovery rate of all Irish asylums.

The death-rate reached 10.8 per cent. of the average number resident, phthisis, heart disease, and dysentery being responsible for half the entire number. Influenza, which broke out in the asylum with great virulence, was the cause of 13 deaths.

No fewer than 500 cases are returned as having been under treatment for physical ailments, and Dr. Nolan states that a large proportion of these cases were sent from workhouses where they had been detained until their presence became too irksome owing to their being completely broken down in health, and because of degraded habits.

The promptitude with which Dr. Nolan grappled with the dysentery contributed no doubt largely to its limitation, but in a brief notice such as this the far-seeing wisdom which rendered isolation possible and prompted measures in anticipation of further attacks can only be mentioned as worthy of all praise. The question also of dealing with chronic "harmless" (?) patients by the erection of "auxiliary asylums" is fully dealt with in an appendix to Dr. Nolan's report, which will well repay careful reading on the part of those interested in the care of the insane. His conclusions are practical, just, and enlightened. He advocates and gives excellent reasons for adding to the existing asylum by the erection of buildings "less elaborate than the original ones" as a new department to the existing asylum, and placing it under the same superintendence. Indeed for years he has anticipated this suggestion, now coming from outside, for the betterment and more humane treatment of the chronic insane. This subject was dealt with more fully in the BRITISH MEDICAL JOURNAL of July 13th, 1901, p. 94.

CRAIG COLONY PRIZE.—At a meeting of the Board of Managers of Craig Colony, held at Sonyea, New York, on October 8th, the report of the Prize Committee, consisting of Drs. G. W. Jacoby, Pearce Bailey, and Ira van Gieson, was approved, and the prize of $200 (£40) was awarded to Professor Carlo Ceni, of Pavia, Italy. The successful essay, the title of which is Serumtherapy in Epilepsy, will shortly be published. The prize is again offered for universal competition.

# PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

## HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 5,752 births and 4,076 deaths were registered during the week ending Saturday last, December 14th. The annual rate of mortality in these towns, which had been 21.3, 20.3, and 19.5 per 1,000 in the three preceding weeks, further declined last week to 18·5. The rates in the several towns ranged from 11.0 in Blackburn, 12.8 in Croydon, 13.3 in Derby, and 14.3 in Huddersfield and in Bradford, to 21.6 in Sheffield, 22.1 in Preston, 22.6 in Birmingham, 22.7 in Plymouth, and 24.7 in Oldham. In the thirty-two large provincial towns the mean death-rate was 18·6 per 1,000, and very slightly exceeded the rate recorded in London, which was 18.5 per 1,000. The zymotic death-rate in the thirty-three large towns averaged 1.9 per 1,000; in London this death-rate was also 1.9 per 1,000, and corresponded with the rate in the thirty-two large provincial towns, among which the highest zymotic death-rates were 2.8 in Liverpool and in Birmingham, 3.3 in Birkenhead, 3.7 in Blackburn, and 5.6 in Norwich. Measles caused a death-rate of 1.2 in Manchester and in Sheffield, 1.5 in Halifax, 1.9 in Oldham, 2.3 in Preston, 2.9 in Blackburn, and 5·6 in Norwich; scarlet fever of 1.0 in Newcastle; whooping-cough of 1.0 in Liverpool; and diarrhœal diseases of 1.1 in Swansea and in Burnley. In none of the thirty-three towns was the death-rate from "fever" last week equal to 1.0 per 1,000. The 73 deaths from diphtheria in these towns included 31 in London, 6 in Liverpool, 5 in Salford, 3 in Sheffield, 3 in Brighton, 3 in Portsmouth, 3 in Bristol, and 3 in Birkenhead. Twenty-six fatal cases of small-pox occurred in London and 1 in Birmingham, but not one in any other of the thirty-three large towns. The number of small-pox cases under treatment in the Metropolitan Asylums Hospitals, which had been 396, 427, and 474 at the end of the three preceding weeks, had further increased to 506 on Saturday, December 14th: 134 new cases were admitted during the week against 141, 123, and 170 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 3,188, against 3,330, 3,278, and 3,241, on the three preceding Saturdays; 332 new cases were admitted during the week, against 379, 320, and 376 in the three preceding weeks.

## HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, December 14th, 831 births and 660 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 22.2 and 20.5 per 1,000 in the two preceding weeks, rose again to 20.7 last week, and was 2.2 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 15.0 in Paisley and 16.1 in Leith, to 21.6 in Glasgow and 24.8 in Dundee. The zymotic death-rates in these towns averaged 2.2 per 1,000, the highest rates being recorded in Dundee and Perth. The 317 deaths registered in Glasgow included 19 from measles, 7 from whooping-cough, 7 from "fever," and 6 from diarrhœa. Three fatal cases of scarlet fever, 2 of "fever," and 2 of diarrhœa were recorded in Edinburgh. Six deaths from measles and 5 from diarrhœa occurred in Dundee; 2 from measles and 2 from "fever" in Paisley; and 2 from diarrhœa in Perth.

## RABIES.

THE Board of Agriculture have issued a memorandum stating that it is believed that rabies has now ceased to exist in any part of the United Kingdom, and calling attention to the fact that there are now no districts in Great Britain to which muzzling orders made by the Board are applicable. In view, however, of the existence of rabies on the Continent and in other parts of the world, an order is issued directing that no dog shall be imported without the licence of the Board, which licence will prescribe its detention for six calendar months from the date of landing in some place under the control of a veterinary surgeon.

## SMALL-POX ISOLATION IN GERMANY.

REGARDING the so-called "Isolation Law" of 1883 in Germany as to small-pox, Mr. C. G. Stuart-Menteith (of London) has been good enough to send us the exact text from Dr. A. Guttstadt's *Deutschland's Gesundheit's Wesen* (Leipzig, 1901). It is no new "law," but simply a notification from the Supreme Court of Justice to the local authorities that not only the dwelling (*Wohnung*) of a small-pox patient is to be isolated, but the whole house (*Sondern auch das ganze Haus*), and that the isolation can be maintained after removal of the patient until the house has been properly disinfected. Wilful disobedience of these rules entails imprisonment. There is no mention of any 1883 Isolation Law in the law collection of the German empire. Readers will remember that it has lately been asserted that the very low small-pox mortality of Germany ever since the 1874 Law of Vaccination came into effect is due to a mysterious Vaccination Law passed in 1883, an absurd contention. Germany might take a lesson from England as regards isolation of patients.

## DIPHTHERIA IN GLAMORGAN.

A SMALL epidemic of diphtheria has occurred at Aberkenfig, in the Penybont Rural District of Glamorganshire. Thirty-eight cases in all occurred, but of these no fewer than 13, or 33 per cent., proved fatal. The county medical officer of health was unable to ascertain what proportion of the medical men engaged used the antitoxin serum, and was only able to say that one of them at least used it in every case. In Glamorgan generally there has been a considerable amount of diphtheria during the past few months.

# MEDICAL NEWS.

Mr. William Hunter, M.B., C.M.Aberd., Assistant to the Bacteriologist to the London Hospital, has been appointed Government Bacteriologist to the Colony of Hong Kong.

The Prussian Cultus Minister has issued an order for the establishment of a bacteriological institute in every administrative district of Prussia.

It has been resolved to change the name of the North London Hospital for Consumption to the Mount Vernon Hospital for Consumption and Diseases of the Chest, Hampstead and Northwood.

In the new Budget for the German Imperial Home Office, a sum of 12,000 marks is allocated for the institution of researches on protozoa and one of 150,000 marks for the prosecution of researches on tuberculosis and the means of preventing its spread.

A Congress on Pellagra.—The National (Italian) Congress on Pellagra will hold its second meeting at Bologna, in May, 1902. The programme includes an exhaustive list of questions relating to the etiology, pathology and treatment of the disease, with schemes of legislation for its prevention and extirpation.

The honorary medical staff of the Stockport Infirmary have presented an installation of *x*-ray apparatus of the latest design to the infirmary. The Chairman, in moving a vote of thanks for the presentation, recalled the fact that the staff had previously presented an operating room to the institution.

Bulawayo, which in the early days of its history showed an enlightened appreciation of the importance of sanitation, has now taken the retrograde step of abolishing the office of medical officer of health. This is part of a policy of retrenchment, but is likely in the long run to prove very expensive.

We are asked to state that in connection with the Livingstone College at Leyton, which was opened in October, 1900, for the training of missionaries in the elements of medicine and surgery, a special six months course will be commenced in January next, concerning which further information may be obtained from the Principal of the College, Dr. C. F. Harford-Battersby. During last term there were nineteen students in residence and nine who were non-resident. Clinical facilities have been afforded at the Poplar and West Ham Hospitals.

Dr. Charles Porter, formerly medical officer of health for Stockport, and now medical officer to the Shropshire County Council, has accepted the post of Health Officer for Johannesburg. The appointment, which has been made by the Colonial Secretary on behalf of the municipality, places the incumbent at the head of the health and sanitary department, and fixity of tenure is ensured by a special ordinance of the High Commissioner. The salary commences at £2,000 a year. In the discharge of the duties of the appointments which he has previously held, Dr. Porter has shown himself to be an energetic officer, and we have no doubt that he will find much room for sanitary reform in Johannesburg in connection with the selection and control of native locations outside the city, the removal of refuse, the improvement of the public water supply, the prevention of typhoid fever and pneumonia, and the framing of a sanitary code.

The Royal National Pension Fund for Nurses.—Sir Henry Burdett, K.C.B., has sent us a large quarto pamphlet which is intended to serve as a *souvenir* of the receptions by Queen Alexandra of the nurses of the Royal National Pension Fund for Nurses. The Fund was founded by Sir Henry Burdett in 1887, and incorporated in 1888, the main idea being to establish a Nurses' Mutual Insurance Company. The foundation of the Fund on this business basis was rendered possible by the co-operation of Mr. Junius S. Morgan, Lord Rothschild, Mr. E. A. Hambro, and Messrs. Anthony Gibbs and Sons, who severally deposited £5,000 to make up the £20,000 required to be deposited with the Court of Chancery. These sums were ultimately presented as free gifts, with the view of ensuring that the moneys paid by the nurses should not suffer any deduction for expenses of management. The first thousand nurses to join the Fund were received by the Princess of Wales at Marlborough House on July 4th, 1890. Other receptions have been held since, the last in July, 1901. It is stated that 7,000 nurses have now joined the Fund, and that its income will this year approach, if it does not exceed, £120,000. In 1890 a Benevolent Fund was started as a memorial to Mr. Junius S. Morgan, who died in that year, for the benefit of those nurses who had not had the opportunity for self-help presented by the Fund, and this Benevolent Fund has been largely increased by gifts from members of the family of the late Mr. Morgan. The *souvenir* contains collotype portraits of the King and Queen, of Lady Rothschild, President of the Benevolent Fund, and of Mr. Hambro, Chairman, and Sir Henry Burdett, founder of the Pension Fund, as well as other illustrations of interest to the beneficiaries.

Dr. D. A. Welsh, Senior Assistant to the Professor of Pathology in the University of Edinburgh, has been appointed to the Chair of Pathology in the University of Sydney, and will enter on the duties of his Chair on March 1st, 1902. Professor Welsh, who was awarded a gold medal for his graduation thesis in 1897, is a Lecturer on Pathology and Bacteriology in the University of Edinburgh, and is the author of contributions Concerning the Parathyroid Glands; a Critical, Anatomical and Experimental Study (*Journ. Anat. and Physiol.*, vol. xxxii); On the Parathyroid Glands of the Cat: A Preliminary Study in Experimental Pathology (*Journ. Path. and Bacteriol.*, 1898); and The Relation of Micro-organisms to Hæmatoma Auris (*Edin. Hosp. Reps.*, 1896).

Memorial to the late Professor Tom Jones.—On December 10th a bronze medallion portrait of the late Professor Tom Jones, which has been placed in Owens College Medical School, was unveiled in the presence of a large gathering of friends and students. At the same time a brass tablet bearing the names of Professor Jones and those of Dr. Davies, Mr. Eames, and Dr. Aldred, former medical students of the College, who also lost their lives in the South African war, was unveiled. The total sum contributed by 275 subscribers to the memorial was £978 9s., and Professor Wright, the treasurer, after defraying the cost of the medallion and tablet, was able to hand over £852 14s. to the College authorities for the foundation of an exhibition in anatomy.

Golders Hill House as a Convalescent Home.—The London County Council has decided to renew for another year the arrangement whereby the house on their Golders Hill Park will be available for non commissioned officers and men of the Household Brigade who have been invalided from South Africa. The house was formerly the residence of Sir Spencer Wells, and is ideally situated for the purposes of a convalescent home. We understand that Dr. Collins suggested to the Council that, when the soldiers have concluded their occupation of the premises, it might suitably be devoted to similar use on behalf of London's industrial army of workers; or, better still, for the children of some of the crowded areas in North-West London. The cost of transit to convalescent homes at the seaside sometimes bars the way to sending a child who leaves hospital sadly needing recruiting in the open air to many of the existing sanatoria. For such Golders Hill House would be a veritable paradise. We understand that the Council, though empowered to erect homes for the inebriate and the insane, has no power at present to establish or maintain convalescent homes. Such power could doubtless be obtained in its General Powers Bill, or, as is the case at present with the military patients, a local Committee might see fit to arrange to carry on such beneficent work under an arrangement with the London County Council.

An Institute for Infectious Diseases in Chicago.—The American journals announce that one of the wealthy families of Chicago is arranging to endow, in a most liberal manner, an institution for the study and scientific investigation of infectious diseases. The details have not yet been made public, but it is reported that the institution will be second in importance only to Mr. Rockefeller's splendid gift for the endowment of research in New York, mention of which was recently made in the British Medical Journal.

THE INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA.—The Intercolonial Medical Congress of Australasia will, as has already been announced in the BRITISH MEDICAL JOURNAL, hold its sixth meeting in Hobart, Tasmania, February 17th to 22nd, 1902, under the presidency of Dr. Richard Stonehewer Bright. His Excellency the Earl of Hopetoun, P.C., K.T., G.M.G., is Patron of the Congress; and the Vice-Patrons, the Hon. Sir James Wilson Agnew, M.D., K.C.M.G., Hobart, and Sir Thomas N. Fitzgerald, F.R.C.S.I., K.C.B., Melbourne. The Congress has also the special countenance and support of the Hon. N. E. Lewis, C.M.G., Premier of Tasmania, and His Majesty's Ministers in Tasmania. The work of the Congress will be divided among six Sections as follows: Medicine, under the presidency of James Jamieson, M.D., M.Ch., Lecturer on Medicine in the University of Melbourne; Surgery, under the presidency of Louis Edward Barnett, M.B., F.R.C.S., Lecturer on Surgery in the University of Otago, New Zealand; Diseases of the Eye, Ear, Throat, and Nose, under the presidency of T. K. Hamilton, M.D., F.R.C.S.I., of Adelaide; Midwifery and Diseases of Women, under the presidency of Ralph Worrall, M.D., M.Ch., Gynæcologist to the Sydney Hospital, Sydney; Public Health (including State Medicine, Forensic Medicine, Psychological Medicine, and Demography), under the presidency of D. Astley Gresswell, M.A., M.D., President of the Board of Health, Victoria; and Anatomy, Physiology, Pathology (including Bacteriology and Pharmacology), under the presidency of J. H. Scott, M.D., C.M., Professor of Anatomy and Physiology in the University of Otago, New Zealand. One of the most important features of the Congress will be a discussion on Cancer, to be opened by Professor H. B. Allen, of Melbourne University.

## MEDICAL VACANCIES.

**The following vacancies are announced:**

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon; unmarried. Salary, £150 per annum, with £30 per annum cab allowance, furnished rooms, etc. Applications to the Secretary.

BIRMINGHAM: GENERAL HOSPITAL.—Resident Medical and Surgical Officer at the Jaffray Branch of the Hospital, Gravelly Hill. Salary, £75 per annum, with board, residence, and washing. Applications to the House-Governor, General Hospital, Birmingham, by December 30th.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon; unmarried. Salary, £100 per annum, with board and residence. Applications, endorsed "Dispensary Surgeon," to be sent to the Secretary.

BUXTON: DEVONSHIRE HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Furnished apartments, board, and lodging provided in each case. Applications to the Secretary by January 25th, 1902.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane Square, S.W.—Honorary Surgeon to the Western District of the Dispensary. Applications to the Secretary by December 31th.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to the Honorary Secretary.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Second House-Physician. Appointment for six months. Salary, at the rate of £70 per annum, with board, washing, and residence. Applications to the Secretary by January 8th, 1902.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Senior Assistant House-Surgeon. Appointment for six months. Salary at the rate of £80 per annum, with board, lodging, and washing. Applications to the House-Surgeon by December 23rd.

GLASGOW ROYAL INFIRMARY.—Superintendent, must be registered medical practitioner, and not exceed 45 years of age. Salary, £500 per annum, with board, house, coals, and light. Applications to the Secretary by January 15th, 1902.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians. Appointments for six months; honorarium, £25. Applications to the Secretary by January 2nd, 1902.

LANARK COUNTY ASYLUM, Hartwood, Glasgow.—Third Assistant Medical Officer and Pathologist. Salary, £120 per annum, with fees, board, washing, and residence. Applications to the Medical Superintendent.

LIGHTBURN JOINT HOSPITAL FOR INFECTIOUS DISEASES, Shettleston, near Glasgow.—Resident Physician. Salary, commencing at £130 per annum, with board, etc. Applications to the Clerk to the Joint Committee, 194, Ingram Street, Glasgow, by December 28th.

LIVERPOOL: EYE AND EAR INFIRMARY.—House-Surgeon. Salary, £80 per annum, with residence and maintenance. Applications to the Honorary Secretary by December 28th.

METROPOLITAN ASYLUMS BOARD.—Dentist to Rochester House for Imbecile Children, Little Ealing. Salary, £50 per annum. Applications, on forms provided, to be sent to the Office of the Board, Embankment, E.C., by December 31st.

MIDDLESEX HOSPITAL.—Assistant Physician, must be F or M.R.C.P. Lond. Applications to the Secretary-Superintendent by January 1st, 1902.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—(1) Surgical Assistant. (2) Senior Assistant to Out-patient Department. (3) Clinical Assistant. Candidates must be qualified medical women. Applications to the Secretary by January 1st, 1902.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Junior Assistant Medical Officer for the Male Division; unmarried and under 30 years of age. Salary begins at £120 per annum, with board, lodging, and washing. Applications to the Medical Superintendent.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House-Surgeon. Salary, £70 per annum, with board and residence. Application to the Honorary Secretary by December 28th.

SCHOOL BOARD FOR LONDON.—Medical Officer, must give his whole time. Salary, £350 per annum, rising to £1,000. Applications, on forms provided, to be marked outside "Application for the Post of Medical Officer," to be sent to the Clerk of the Board by January 1st, 1902.

SOUTHSEA: ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Remuneration at the rate of £50 per annum, with board and residence. Applications to the Secretary by December 27th.

STATE CRIMINAL LUNATIC ASYLUM, Broadmoor, Crowthorne.—Junior Assistant Medical Officer; unmarried. Salary, £175 per annum, rising to £200, with furnished quarters, etc. Applications to the Medical Superintendent.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £100 per annum, increasing £15 annually for three years if approved by the Committee, with board and residence. Applications, endorsed "Application for Resident Medical Appointment," to be sent to the Secretary by January 1st 1902.

WATERFORD DISTRICT ASYLUM.—Assistant Medical Officer; unmarried, and not exceeding 30 years of age. Salary, £100 per annum, with furnished apartments, board, washing, and attendance. Applications to the Resident Medical Superintendent by January 6th, 1902.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Physician; (2) Assistant Physician; (3) House-Physician; (4) House-Surgeon. Board and lodging provided for (3) and (4). The appointments for which are for six months. Applications to the Secretary-Superintendent by December 25th.

WESTMINSTER GENERAL DISPENSARY, 9 Gerrard Street, W.—(1) Resident Medical Officer; (2) Honorary Surgeon. Applications to the Secretary by December 28th.

WESTMINSTER HOSPITAL.—Aural Surgeon. Must be F.R.C.S. Eng. Applications to the Secretary.

WESTMORLAND CONSUMPTION SANATORIUM.—Resident Medical Officer. Salary, £150 per annum and all found. Applications to Dr. W. R. Parker, Kendal, Westmorland.

## MEDICAL APPOINTMENTS.

ARMSTRONG, W. B., M.B., C.M.Glasg., appointed Certifying Factory Surgeon for the Kirkintilloch District.

BARFORD, A. M., M.D., L.R.C.P., M.R.C.S., appointed Anæsthetist to the Throat Hospital, Golden Square.

BENNETT, William B., M.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Surgeon to the St. George's Hospital for Diseases of Skin, Liverpool.

BURRIDGE, H. A., M.R.C.S., L.R.C.P.Lond., appointed District Medical Officer for the Brixton District of the Lambeth Union, *vice* J. Harman, M.R.C.S.Eng.

CHEATLE, George Lenthal, C.B., F.R.C.S., appointed Surgeon to the Italian Hospital, Queen Square.

CLAYTON, John Cecil, M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Bristol Eye Hospital.

DAVIS, H., jun., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of Health for the Callington Urban District.

DEANE, Lieutenant-Colonel Andrew, M.D., F.R.C.S.I., I.M.S.(Retired), appointed Superintendent to the Royal Victoria Hospital, Belfast.

DE BEAUVAIS, R. N., L.S.A., appointed District Medical Officer of the Sleaford Union, *vice* F. Newcombe, M.R.C.S.Eng., resigned.

HIND, Wheelton, M.D.Lond., F.R.C.S., appointed Senior House-Surgeon to the North Staffordshire Infirmary and Eye Hospital, Stoke-on-Trent, *vice* W. D. Spanton, F.R.C.S.

HUNTER, William, M.B., C.M.Aberd., appointed Government Bacteriologist to the Colony of Hong Kong.

JOHNSTON, S. E., M.B., C.M.Edin., appointed Assistant Resident Medical Officer to St. Mary's Hospital for Sick Children, Plaistow, *vice* T. E. Frazer Toovey, L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg.

KENT, Sydney, M.B., B.C.Camb., appointed Medical Officer and Public Vaccinator for the Bexhill District of the Battle Union.

KNOTT, E. M., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of Health for the Brixworth Rural District, *vice* J. R. Lowndes, L.R.C.P., L.R.C.S.Edin., resigned.

M'LORINAN, William, L.R.C.P., L.R.C.S.Irel., appointed Medical Officer for the Waterfoot Dispensary District of the Larne Union, *vice* J. W. Fogarty, M.B., B.Ch., R.U.I.

PARSONS, J. A., M.D., appointed District Medical Officer of the Stamford Union, *vice* J. R. Scott, M.R.C.S., L.R.C.P.Lond., resigned.

PERREIRA, J. A. W., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer to the Exeter Union Workhouse.

PORTER, Charles, M.B., C.M., B.Sc.(Public Health) Edin., appointed Assistant to the Medical Officer of Health, Leith.

ROGERS, F. C., F.R.C.S.E., L.R.C.P.E., appointed Medical Officer of Health to the Erith District Council, *vice* John Elliot, M.R.C.S., resigned.

SPANTON, W. D., F.R.C.S., appointed Honorary Consulting to the North Staffordshire Infirmary and Eye Hospital, Stoke-on-Trent.

STANSFIELD, H., M.B., Ch.B.Vict., appointed Medical Officer of Health to the Clayton District Council.

WELSH, D. A., M.D.Edin., B.Sc., appointed Professor of Pathology in the University of Sydney.

WILLSON, Howard S., B.A., M.B.Cantab., D.P.H., appointed Demonstrator of Pathology and Bacteriology in King's College, London.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTHS.

CALWELL.—December 13th, at 71, Duncairn Gardens, Belfast, the wife of William Calwell, M.B., B.Ch., of a son.

MCCLOSKY.—On 20th November, at Selangor, Federated Malay States, the wife of A. J. McCloskey, M.B., of a son.

NASH.—On the 16th inst., at Oakfield House, Accrington, the wife of Elwin H. T. Nash, M.R.C.S., L.R.C.P., of a son.

ROE.—On December 11th, at 121, Old Street, E.C., the wife of William Francis Roe, L.R.C.P.I., L.R.C.S.I. & L.M., of a daughter.

SPAIGHT.—On December 12th, at 15 Trundsburg Road, Strood, the wife of Henry W. Spaight, L.R.C.P., L.R.C.S.Irel., of a son.

SUTHERLAND.—At 32, George Square, Edinburgh, on the 17th inst., the wife of L. R. Sutherland, M.B., Professor of Pathology, University of St. Andrews, of a daughter.

### MARRIAGES.

BATTY—ROY.—On the 17th inst., at St. Peter's, Southborough, James Henly Batty, of the Gold Coast and London, to Violet, widow of the late Professor Roy, F.R.S., and daughter of the late Sir George E. Paget, K.C.B., F.R.S., of Cambridge.

FOSTER—DALLAS.—On the 12th December, at Christ Church, Brockham, by the Rev. J. G. Ward, M.A., Vicar of Bramshing, Herts, M. Bernard Foster, M.R.C.S.Eng., L.R.C.P., D.P.H.Lond., of Puckeridge, Herts, younger son of Michael E. Foster, of Brockham, Surrey, to Gertrude Mary, elder daughter of Seymour Dallas, J.P., of Kimberley, South Africa.

### DEATHS.

LEGGATT.—December 15th, at his residence, 60, Bouverie Road, West Folkestone, Richard Shocklidge Leggatt, M.R.C.S.E., L.S.A., for nearly 50 years in practice at Eastry, Kent.

SPENCE.—At Burntisland, on the 11th inst., Annabella Bain, wife of Robert Spence, M.B., C.M.

WILLIAMS.—On December 11th, at Cheap Street, Sherborne, Dorset, Mary, widow of the late W. P. Williams, M.D., aged 70.

# LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

## QUERIES.

### MERCURIAL TREATMENT IN INFANCY.

L. K. J. asks: How long might one with safety continue hyd. c creta in 1-grain dose daily to an infant aged 1 year, who shows no sign of hereditary syphilis? Father acknowledges having had syphilis, and being thoroughly treated for it, but desires the child to be treated as though it had signs of the disease, so as to prevent any possible taint developing. Would the mercurial treatment be likely to delay dentition?

### VACCINATION BY CIVIL SURGEONS.

EDINBURGH asks to be informed if he is entitled to vaccination fees under the following circumstances:—He is a civil surgeon, and is in charge of a military hospital, and amongst his duties are to vaccinate soldiers' children. He notifies to the registrar the results obtained. He wishes to know what are the fees to be received, if any.

*** An army medical officer gets no extra fees for this work, which is part of his duty. The civil surgeon is for the time acting as an army medical officer, and as such is presumably not entitled to any fee for this duty.

### SCHOOL BOARDS AND MEDICAL CERTIFICATES.

J. F. O'M. asks: (1) Is it part of a parish medical officer's duty to give certificates to pauper patients exempting them from attendance at school on account of sickness? (2) Ought not the school Board to pay for such certificates?

*** (1) If the guardians require certificates for pauper patients exempting them from school on account of illness, it will probably be the duty of the parish medical officer to provide such certificates. As they are never legally required unless a case goes into court the question will scarcely arise. (2) The School Board cannot be made to pay for any such certificates. The law throws the onus of proof of such illness on the parents or guardians (see answer BRITISH MEDICAL JOURNAL, November 2nd, 1901, p. 1382).

### PREGNANCY AFTER VAGINAL OÖPHORECTOMY.

SENEX writes: Some three years ago a young lady had an ovary (cystic) removed *per vaginam*, no abdominal scar. She is now pregnant for the first time. What danger, if any, is there with regard to the vaginal scar, situated at the posterior aspect of the upper part of the vagina? And what treatment, if any, ought to be adopted at the confinement to prevent rupture or laceration at the site?

*** There is little or no danger of rupture of the vaginal scar. It is more likely abortion, premature labour, or pain in the later stages of pregnancy will occur through dragging of the pedicle more or less adherent to the cicatricial tissue.

### INCOME-TAX REBATEMENTS.

INKPOT has asked as rebatement: (1) Accident insurance premium on own life; (2) insurance premium on mare which is used for the practice only; (3) one-third of total rates and taxes of dwelling-house, stabling, and feu being a fair proportion to put on the professional portion of the premises; (4) 10s. a month for cleaning, lighting, etc., of surgery. The first three items are not allowed, and "Inkpot" desires a further opinion as to whether they can be insisted on as admissible and an opinion as to whether the fourth item is admissible and fair.

*** Life insurance premiums cannot be deducted as a professional charge, but can be claimed either as a reduction on the assessment, or repayment, the same applies to the part of an accident insurance premium which is applicable to the death risk. Insurance premiums of any kind belonging to professional items are, of course, admissible deductions. As to rates and taxes, they should be allowed in the same proportion as the rent or annual value of the house. A medical man must surely be a better judge than a surveyor of taxes as to what cleaning, lighting, etc., of a surgery cost him, but 10s. a month appears inadequate. We are advised that judging from the questions asked, which are most elementary, "Inkpot" does not know what deductions he has a right to make, and it might be worth while to submit his accounts to an expert in income-tax matters.

## ANSWERS.

C.M.B.—Dr. George M. Gould's *Illustrated Dictionary, Biology and Allied Sciences* (fifth edition; Baillière, Tindall and Cox, London, 1900) would fulfil our correspondent's requirements.

C. AND C.S.—Our correspondent will find an account of Christian Science and its medical pretensions in an article entitled, Christian Science: What It Is, which appeared in the BRITISH MEDICAL JOURNAL of November 12th, 1898, p. 1515.

N. M.—(1) We believe that one important method of combating the plague of house flies in the tropics is to give particular attention to latrines, ashpits, dustbins, and other casual collections of rubbish, particularly animal rubbish; (2) the cylindrical copper boiler for boiling water recommended by Dr. Leigh Canney was designed with his assistance by Messrs, Ewart and Sons, 346 to 350, Euston Road, N.W.

### TREATMENT OF ECZEMA.

DR. R. FORTESCUE FOX (London) writes in answer to questions from "F.R.C.S.I." and "Medicus," in the BRITISH MEDICAL JOURNAL of December 7th, p. 1719: The eczema is in all probability symptomatic, and not curable by local remedies. A course of spa treatment, preferably by sulphur water, and appropriate dieting, are indicated. The use of alcohol should be discontinued during the eruption. Intestinal elimination aided by regular use of salines—for example, 3ss Carlsbad salt every morning, and the cutaneous circulation promoted by a daily prolonged bath (40 to 60 minutes) in water at an indifferent temperature (93° F.). A small dose of sulphur every night for one or two months is also often helpful.

DR. G. NORMAN MEACHEN (London, W.) writes: Recurring eczema of the nature described is frequently associated with the "gouty diathesis." "F.R.C.S.I." might employ a modification of Lassar's paste: Acid. salicyl. grs.x, zinc. oxid. et pulv. amyli, aa 5ij, ichthyol, grs.x, vaselin. ad. 5ij The internal administration of vinum colchici in mx doses; and bathing the patches with a 2 per cent. creolin lotion may be found useful. "Medicus" would in all probability find immersion in a bath containing half-a-drachm of creolin to six gallons of warm water, daily, of benefit. No soap is recommended, but a bran bag may be employed instead, especially for the hands and face. An ointment of equal parts of the ung. zinc. and ung. plumb. subacet. of the *B.P.*, with grs 10 of ammoniated mercury to the ounce may then be applied to the patches in the form of a linen suit, especially at night time. The urine should be examined for sugar.

### THE EXAMINATION FOR THE M.D.BRUX.

J. H. B. asks what are the best books to read for the M.D.Brux. examination, and whether a candidate who has been some years in practice would require to take out a special course?

*** We are informed that no other books are required than the ordinary manuals in use for the professional examinations in this country. It would be better for a candidate who has been some years in practice to take out a special course unless he is well up in the book-work as well as the practice of his profession. A candidate ought at least to feel able to pass an examination like that of the Conjoint Board if he wishes to proceed to Brussels with confidence.

### LOCAL TREATMENT OF MALIGNANT GROWTHS.

DR HERBERT SNOW (Gloucester Place, W.) writes that until someone discovers a perfectly painless escharotic the stick potassa fusa holds the foremost place as an application to localised malignant growths of limited extent. It burns rapidly, the action is entirely under control, and all pain ceases immediately water is brought into contact with the part, caustic action being of course arrested at the same time. Formic aldehyde appears to be only a mild and far from painless escharotic. The same, he thinks, may be said of the latest "cancer cure"—the Roentgen rays.

## LETTERS, NOTES, Etc.

### DURHAM UNIVERSITY MEDICAL GRADUATES ASSOCIATION.

DR. T. OUTTERSON WOOD (40, Margaret Street, London, W.) writes: The courteous letter of Dr. Ronald Daniel in your last issue is greatly appreciated by the Executive of the Association, and in deference to the wish of our President I beg you will permit me through the medium of your columns to assure him that it was through no lack of energy or want of good will on our part that men of his particular year happened to be absent on the occasion of our autumnal dinner which was so successful. The members of the Association are steadily increasing in numbers and there is no want of *esprit de corps* among them. We number now about 400 members, and the Association is ably represented in the Senate of the University, where all matters connected with the medical faculty are kept well to the front. We trust that each member of the Association will let it be known to fellow graduates who have not yet joined us the excellent work we are doing at headquarters and how desirable it is for us to join hands in making our efforts as successful in the future as they have been in the past.

### OBSTINATE HICCOUGH.

DR. F. W. ERNEST HUTCHISON (Netley Hospital) writes: Dr. E. H. Thomas's case of obstinate hiccough (BRITISH MEDICAL JOURNAL, November 30th, p. 1648) brings to my mind a somewhat similar case seven years ago. I was called to see a man, aged about 40, big and powerful, who "had never had a day's illness." He had that morning been seized with the most violent hiccough. The paroxysms were so severe as to shake almost violently the bed he was lying on. I tried alone and in combination all the usual sedatives, but with negative results, whilst assiduous care was bestowed on his diet and excretory functions. The case continued unabated for four days, night and day, and the state of the sufferer was becoming serious, the exhaustion

being most remarkable. At this time I decided to try a pill containing pine beechwood creosote, m iij, in combination with solid opium, gr. ½. After taking one of these pills the paroxysms entirely ceased. The condition had never returned since, as I have lately heard from the patient. He was a great eater and drinker, and was neglectful as to his excretory functions. Possibly the cause might have been a septic state of the primæ viæ, and hence the success attendant upon the exhibition of the creosote.

DR. PERCY MCDOUGALL (Fallowfield, Manchester) writes: In my experience a few drops of oil of cajeput, taken on a lump of sugar, rapidly put an end to an attack of hiccough.

### THE BRITISH MEDICAL BENEVOLENT FUND.

MR. EDWARD EAST, F.R.C.S. (26, Linden Gardens, Bayswater, W.) desires to remind readers of the BRITISH MEDICAL JOURNAL that he still collects and distributes for the British Medical Benevolent Fund, men's, women's or children's clothing, new or in useful condition, to necessitous cases; he thinks that the season of the year and the severity of weather justifies him in renewing this appeal.

### THE CAUSE AND TREATMENT OF SEA-SICKNESS.

WE have received from Dr. C. BUTLER SAVORY (Leeds) a communication in which he refers to the points raised in the correspondence on sea-sickness which was initiated by his letter of March 30th. He writes: The sickness of gestation and strangulated hernia is known as sympathetic, occurring through the primary affection of other organs than the stomach, and I look upon sea-sickness as being a sympathetic affection occurring through a disturbance primarily of the semicircular canals. As to "land-sickness" bearing on the case, I have had an absolutely blind patient on board, and he has suffered from all the symptoms of sea-sickness notwithstanding his loss of vision.

MR. J. F. ELLIOTT (Natal) writes that he believes, from an experience of nearly five years as a ship's surgeon, that the secondary causes of sea-sickness differ in different individuals, the primary cause being the mechanical disturbance of the body. In some cases the disturbance affects chiefly the digestive organs, and in these a slung cot with careful dieting is serviceable. In others where there is bilious vomiting the patient should be urged to remain erect or in the sitting posture as much as possible. In others where moving objects cause dizziness a darkened cabin or the blindfolding of the patient, with some nerve sedative, are helpful measures. He refers to attacks of diarrhœa as a result of the mechanical disturbance of the intestinal tract.

DR. JOHN HIGBET (Pretoria) writes in support of the value of ammonium bromide. He has recently had experience in treating the malady on board a Government transport conveying 500 Boer prisoners between Durban, Colombo, and Madras. The Boers were, almost without exception, bad sailors. Their chief symptoms were headache, vertigo, deafness, and unsteady gait, but gastric symptoms were not prominent. These on the other hand were prevalent among the British soldiers on board. Great relief was experienced by the Boers after the administration of an aperient pill followed, at bed time, by 25 grs. of ammonium bromide.

### THE ACTION OF IODIDES ON THE HEART AND CIRCULATION.

DR. GORDON SHARP (Leeds) writes: It is interesting to learn that the experiments of Professor Stockman and Dr. Charteris have led them to conclude "that sodium or potassium iodide, when given to man by the stomach in ordinary doses, has no depressing effect on the action of the heart or on the blood pressure in the arteries." The usual theories then advanced to justify the employment of iodides in the treatment of aneurysm cannot be maintained; but although the theories may be fallacious, the practice is sound and the results often happy. The reason for the curative action of potassium iodide in aneurysm may not be so far to seek. The salt is a rapid eliminant and a stimulant to protoplasm, and as such will quickly remove morbid deposits, and so place Nature under conditions the most favourable for effecting a cure. What is the explanation given of the limp and depressed condition of the patient taking a course of iodide? He complains of being "tired all over," or he says he feels as if he had been engaged in violent exercise for some hours, or he may express himself conscious of the fact that he is not accomplishing his usual amount of work, and although he makes an effort to reach the mark he fails. Does this condition depend on the rapid and continuous process of elimination in which practically all the tissues are engaged, so that in a comparatively short time they become exhausted?

### INCOME TAX ABATEMENT, ETC.

SORDELLO has always returned a part not exceeding a sixth of rental of residence, but from what he gathers, he seems justified in making the following table (*vide* BRITISH MEDICAL JOURNAL, November 30th, 1901): (1) Rental two-thirds, and (2) rates and taxes two-thirds of professional residence (full reduction if surgery detached); (3) repairs of professional quarters; (4) repairs of professional furniture, instruments and reasonable additions; (5) drugs, dressings and sundries (cost of); (6) professional stamps, stamps, stationery and papers; (7) insurance—man, beast, house, carriage, fire, accident, sickness; (8) licences for carriage and man (may be allowed); (9) debts—good or bad of the preceding year's return remaining unpaid, but not those of previous years; (10) salaries and wages of assistants and man and assistant's board; (11) warming, lighting, and cleaning of doctor's rooms; (12) expenses of necessity and expedience, locum tenens, engaging assistants, Defence Society, employers's liability; (13) income from investments or property already taxed should be added to the "general income from all sources" before abatement is made, and a (14) wife's income (whether the doctor enjoy it or not) should be merged in that of her husband, and here though it fall short of £160, separate exemption is not allowed, as applied before her marriage.

Prospective income tax and inhabited house duty, though reasonable as deductions, are not allowed.

When a man starts practice or first "sets up," his estimate of taxation may be returned as *x* or professional exemption, or unknown. When one joins a large firm or practice, his return is that of his share, plus private means (if any), minus deductions. When he "follows on" he may make a deduction of one-third of previous three years average for depreciation until he has realised the yearly value of his "level best."

The last half-yearly receipts on insurance of life and property should accompany estimate and where the next year's receipts fall short of such estimate, appeal is warrantable.

*Abatement.*—£70 may be claimed on £700, £120 on £600, £150 on £500, £160 on £400, but the income must not exceed these figures.

### PERSONATION IN THE MEDICAL PROFESSION.

DR. JOHN P. HENRY (London, W.) writes: I believe there is very little doubt that personation is often carried out at medical examination and that in more than one case men are at the present moment practising on diplomas which do not belong to them. A handwriting test is of very little use, as writing may be imitated and often changes in the course of a man's life. I would therefore like to suggest the use of the Bertillon system. If, when a student is first registered, a careful note were taken of his thumb-marks and chief physical characteristics there would be no possibility afterwards of his being personated at examination or in practice.

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LETTERS, COMMUNICATIONS, ETC., have been received from

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## BOOKS, ETC., RECEIVED.

The Guide to South Africa. Edited annually by A. S. Brown and G. G. Brown. 1901-1902 Edition. London: Sampson Low Marston and Co. 1901. 2s. 6d.

Lehrbuch der speciellen pathologischen Anatomie. Von Dr. J. Orth. Siebente Lieferung. 1 Haelfte. Berlin: A. Hirschwald. 1902. M 7.

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Syphilis und Nervensystem. Von Dr. M. Nonne. Berlin: S. Karger; and London: Williams and Norgate. 1902. 14s.

Jahresbericht uber die Leistungen und Fortschritte auf dem Gebiete der Neurologie und Psychiatrie. Redigirt von Dr. E. Mendel und Dr. L. Jacobsohn. IV. Jahrgang. Berlin: S. Karger; and London: Williams and Norgate. 1901. 32s.

Hazell's Annual for 1902. Edited by W. Palmer, B.A. London: Hazell, Watson, and Viney. 1902. 3s. 6d.

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# An Address
ON
# LOCALISATION IN THE "MOTOR" CEREBRAL CORTEX.

*Delivered to the Pathological Society of London, December 17th, 1901.*

BY
C. S. SHERRINGTON, M.D., F.R.S., Holt Professor of Physiology, University College, Liverpool.
and
A. S. F. GRÜNBAUM, M.D., M.R.C.P., Assistant Lecturer on Physiology, University College, Liverpool; Assistant Physician, Hospital for Disease of the Chest.

The subject of cerebral localisation is one of obviously great extent. We should be lacking in all sense of proportion did we suppose ourselves expected to attempt before such a meeting as this to deal with it except in regard to some portions with which as experimentalists we are acquainted at first hand.

We may recall, however, how very different is the point of view from which the cerebral cortex is to-day regarded from that taken prior to the observations of Hughlings Jackson and the experiments of Hitzig and of Ferrier. Up to that epoch, experimentalists had failed to get evidence of localisation of function in the cortex of the hemispheres, though in microscopic structure the great sheet of grey matter presented such similarity to nervous formations, regarded elsewhere as nerve centres. Progress of knowledge in regard to the nervous system has been always indissolubly linked with determination of localisation of function in it. This has been so from the time of the Bell-Magendie discovery of the differentiation of function in the two spinal roots; and another instance is Flourens's delimitation of the respiratory centre in the bulb. The discovery of localisation of function in parts of the cortex laid the foundation for an advance of knowledge regarding it, which has led to the supply to the student of charts of its functional topography very similar to the geographical maps of continents which are supplied to the schoolboy. And just as the schoolboy, looking over the political map of a continent, is liable to forget the complexity of the populations and States which it so simply represents, so that we, looking at the brain chart of the textbook, are liable sometimes to forget the unspeakable complexity of the reactions thus rudely symbolised and spatially located.

If we may be allowed an *a priori* consideration it is this,—that though it is not surprising that such territorial subdivision of function should exist in the cerebral cortex, it is surprising that by our relatively imperfect artifices for stimulation we should be able to obtain clear evidence of the localisation which does exist. The nerve-cell chains that together build up the nervous system are in the architecture of that system so arranged that the longest of them all tend to pass through the cerebral cortex. Every increase in the number of links composing a nerve-cell chain seems to increase greatly the uncertainty of its reactions under artificial excitation. With increase in number of links goes increase in numbers of side-branches and connections. The difficulty of getting long cell-chains to react in a regular way under artificial stimulation seems greatly enhanced by the multiplication of the side connections, because the momentary condition of any cell-chain is in part a function of the condition at the moment of all the other cell-chains with which it is connected. The cortex cerebri might therefore well have been expected to yield under artificial stimulation only extraordinarily irregular results. We owe to Hitzig and to Ferrier the pregnant demonstration that as regards the motor region this expectation is not well founded. It is mainly of the reactions of the Rolandic area of the cortex that I shall venture to speak, and Ferrier showed that the application of faradic currents to that cortex excites with great regularity movements which vary in distribution as the electrodes are moved from place to place in the region, but that the reactions remain very regularly similar under repeated application of the stimulus to any one and the same spot. Ferrier's mode of indicating the topographical arrangement of the reactions he obtained is seen in his well-known diagrams of the cortex. His motor centres, as he termed them, were marked in his figures by circular areas. "The areas have no exact line of demarcation from each other, and where they adjoin stimulation is apt to produce conjoint the effect peculiar to each."[1] He showed these motor centres to extend forward over the frontal lobe, including these reactions of the eyeballs. Regarding their extension round the upper edge of the hemisphere and down upon the mesial surface he noted them in the marginal convolution. "This convolution in the parieto-frontal region gave rise to movements of the head and limbs apparently similar to those already obtained by stimulation of the corresponding regions on the external surface."[2]

This ever-memorable original research by Ferrier ranks among the classics of experimental neurology and physiology. It has been followed by a number of kindred contributions from workers largely of our own country—names familiar to us all—Schäfer, Horsley, Beevor, Mott, Ballance, and others. These have led to the detailed knowledge we possess of the localisation of functions in the cerebral cortex of the common ape, the macaque. These are concisely given in the well-known figures of the textbooks. It was an interesting step further when Dr. Beevor and Professor Horsley published eleven years ago their observations on the localisation of the "motor" functions in the Rolandic cortex of an orang-outang. Their experiment has remained the single one for which an anthropoid species of ape has been laid under contribution. It has exercised a notable influence on the scheme of "motor" localisation adopted as probably obtaining in the brain of man. An experiment upon the brain of an anthropoid ape presents special interest from the two points of view—(1) the cortical organ in these species is, except for man, at its highest development: and (2) it undoubtedly presents that type of development which culminates in man.

Of the three or four species of anthropoid apes that are known, most authorities agree that the gorilla is that which possesses the most highly developed cerebrum; next to it probably comes that of the chimpanzee, and last, but not far below that of the chimpanzee, comes that of *Simia satyrus*, the orang-outang. But there are great individual differences, and the simpler examples of chimpanzee brains seem inferior in development to well-developed examples of the brain of the orang.

We have recently had the opportunity of making physiological experiments on all the known species of anthropoid apes. As it is upon the chimpanzee that we have obtained the larger number of our observations, we will mention first our results upon that type. We have used besides the ordinary chimpanzee (*Troglodytes niger*), the rare variety of which the celebrated "Sally" of the Zoo was a specimen, *Troglodytes calvus*—by some considered a separate species.

In the chimpanzee the scheme of topography which we find existent is illustrated. We ask your attention to the extent of the so-called "motor" area presented by it. The extent and arrangement differs considerably from that found by other observers in the lower apes and from that found in the orang by Dr. Beevor and Professor Horsley.

The so-called motor area occupies unbrokenly the whole length of the precentral convolution, and in most places the greater part or the whole of its width. It extends into the depth of the Rolandic fissure, occupying the anterior wall, and in some places the floor, and in some extending even into the deeper part of the posterior wall of the fissure. We have examined 19 hemispheres, but have never found the motor area extend to the free face of the postcentral convolution. At the upper mesial edge of the hemisphere the motor area extends round and down upon the mesial face of the hemisphere; but we have not found it reach the calloso-marginal fissure. The anterior limit of the motor region is, for the most part, not coincident with any fissure. The front portion of the region usually dips into and across the upper part of the superior precentral fissure, and lower down it not infrequently dips into the inferior precentral fissure. Occasionally the front edge of the region dips into almost the whole length of the superior precentral sulcus. It is not the extent of the motor area which appears to be variable;

the variant is the sulcus itself. The great variety of individual pattern exhibited by the convolutions and sulci in these richly convoluted brains gives opportunity for studying critically the claim of value of these fissures as landmarks to the topography of the functional centres of the cortex. From this point of view their use for strict localisation is almost *nil*. Not only are the extremes of pattern exhibited by the convolutions extraordinarily different one from another, but the frequency of the individual variation is so great that hardly a pair can be found in which the existent convolutions are—when compared with the same minuteness as we apply to the functional centres—really closely alike. Professor Schäfer, in his important contribution to the physiology of the motor cortex in 1887,[3] pointed out that the fissures of the cortex do not mark in any sense the boundaries of the functional areas of the organ. Our examination of the considerable number of anthropoid brains we have now worked through convinces us that not only do the fissures of the frontal region not mark physiological boundaries, but that they are not even reliable landmarks to the functional topography, since their relation is too inconstant and variable. The degree of subjection of these fissures to individual variation and the frequency of their asymmetry in the two hemispheres is in striking contrast to the far greater constancy from individual to individual and far greater symmetry of bilateral situation, which we have found hold good for the arrangement of functional centres of the motor region as examined by physiological methods. A practical outcome of this is that we have found it essential for accurately detailed localisation when we have desired the opening through the skull to be kept to a small size, not to trust to the anatomical details of the exposed cerebral surface, but to obtain orientation as to the topography by application of the electrodes and observation of the movement, if any, which was excited. In our early experiments we thought to obtain much help by having at hand an individual brain already experimented upon; and we thought to save time in recording the results of the fresh experiment upon chart outlines prepared from the specimen already worked upon. But the variation of the convolutions from individual to individual has been too great to allow of these expedients being employed. Defeated in this way the only recourse must be to the electrodes. Two landmarks of real value are the genua of the Rolandic fissure.

A matter of some surprise to us has been the ease with which faradism elicits movements from this so-called motor region of the cortex of the anthropoid. It is general belief that for excitation of the cortex in man the intensity of the faradic currents has to be much greater than that effective for the cortex of the monkey. Our predecessors with the orang-outang state that the cortex of that animal required much more intense electric stimuli than the cortex of the bonnet monkey. Their impression was, however, based on no direct comparison. We have actually compared the excitability of the cortex of the anthropoid with that of the bonnet monkey by employing exactly the same current in each case. We find that the excitability as measured by the least intensity of current required to evoke motor reaction is practically the same in the anthropoid and in the lower ape. The motor cortex of the anthropoid, though undoubtedly far more complex in many ways than that of the lower ape, remains as readily amenable to electric stimulation. If, therefore, it is really necessary to employ intense faradisation for the human motor region that is a difference between the human motor region and that, not only of the lower ape, but of the anthropoid.

A further point cognate to the above on which our experience differs from that of our predecessors regards epileptiform discharge from the cortex. It will be remembered that Dr. Beevor and Professor Horsley never observed epilepsy to follow excitation in the brain of their orang, although their electrodes were occasionally kept in contact for five seconds. Though we also find that in some individual anthropoids the tendency for the discharge from the cortex to take an epileptiform character is very slight, yet in other individuals the tendency under apparently the same external conditions is strong. In the majority of the individuals upon which we have experimented, cortical epilepsy has been easily provoked.

Turning to the localisation in the cortex, the sequence of representation starting from below upward follows closely that already known for the lower apes. Broadly speaking, the sequence runs tongue, mouth, nose, ear, eyelids, neck, hand, wrist, elbow, shoulder, chest, abdomen, hip, knee, ankle, toes, perineal muscles, anus, and vagina. It is noticeable that movements of the eyeballs do not appear in this list. As did Beevor and Horsley in the orang, we in the chimpanzee find a frontal area extending into the middle and inferior frontal convolutions, excitation of which gives conjugate deviation of the eyeballs to the opposite side. We find this area separated from the area yielding the other movements by an intervening space of so-called "inexcitable" cortex, as our predecessors found in the orang. We find this intervening space broken, however, by a small area whence movements of the eyeballs can be elicited, which partially bridges between it and the upper facial region on the precentral convolution.

The sequence of representation of movement which we note follows a plan more in accordance with the order of the spinal series of segments than that hitherto obtained, because we find between the representation of shoulder and hip an area which, next to the shoulder, yields unilateral movement of the chest muscles, and, next to the hip, yields unilateral movement of the abdominal muscles.

A noteworthy discrepancy between our results and those of our predecessors is regarding the extension of the excitable "motor" region to the free surface of the postcentral convolution. We have seen nothing to lead us to include that surface or any part of it in the "motor" area of any of the anthropoids we have used. In our experience the electrodes, carrying even very strong currents, when placed upon the surface of the postcentral convolution, fail to evoke any obvious effect, though when placed, using a weaker current, upon the precentral they evoke extremely widespread movement. I may add also that though small lesions in the precentral convolution cause marked paralyses and descending spinal degenerations, similar and larger lesions in the postcentral produce not even temporary paralysis and no unequivocal degeneration.

With regard to the degenerations, it is noteworthy that from a hand-area lesion the spinal pyramidal degeneration shows in the chimpanzee the feature of a ventral direct pyramidal tract not obviously inferior in size to that of man. On the other hand, a lesion somewhat smaller situate in the region for the ankle and foot produced a pyramidal degeneration in which a direct ventral tract is not obvious. The hand-area lesion gave a heavy degeneration of the homolateral pyramidal tract in the lateral column on the same side as the cerebral lesion.

As regards the symptoms resulting from the cortical lesions, the extirpation of a great part, if not of the whole, of the hand area from the right hemisphere caused an immediate severe crossed brachioplegia without the slightest sign of paresis in either face or leg. The paresis affected most the fingers, which were kept helplessly semi-extended, the wrist being dropped. The elbow seemed little, if at all, affected, but the shoulder was distinctly paretic, there being great difficulty in raising or abducting the upper arm at the shoulder. The paresis diminished quite rapidly, and in six weeks time the animal had largely recovered the normal usefulness of the limb.

A lesion in the leg area similarly caused temporary paresis of the opposite leg, especially in the toes and at the ankle joint. The lesion was smaller and the recovery more rapid than with the arm-area lesion. It is perhaps noteworthy that the knee-jerk, which showed no alteration under the arm-area lesion, here showed exaltation immediately, that is, a quarter of an hour after the leg-area lesion, and that when the paresis to inspection had passed off the knee-jerk still nevertheless exhibited great briskness on the crossed side.

Although we have used a more minutely localised method of excitation than our predecessors, we have not found in any of our anthropoids those remarkable inexcitable intervals noted by them between the main regional divisions of the area—that is, between the upper and lower facial areas, between the facial and the arm, between the arm and leg.

On the other hand, we have seen often confirmed what our

predecessors with the orang have well pointed out, namely, the greater integration of localised representation of movements in the anthropoid as compared with the lower ape. Thus there is not one of the fingers that we have not seen move separately and alone under excitation of certain points of the cortex: again isolated movement of the pinna of the ear, of the tip of the tongue, rare in the lower monkeys are easily obtainable in the anthropoid.

Finally, one word with regard to the extent of the so-called motor area. From our observations we think it probable that perhaps as much of that area lies hidden from the surface in the sulci as actually lies at the free surface on the convolutions. Nevertheless, we endorse the opinion expressed by Beevor and Horsley that the so-called motor area in the anthropoid brain forms altogether a smaller fraction of the total surface than is found in the lower types of monkey. If it has grown in extent—as undoubtedly it seems to have done—other regions belonging to that so-called inexcitable field whence electric stimulation excites no obvious response have increased still more. It is especially with the exploration of that great inexcitable field that the progress of research has to deal. We cannot help thinking that this progress will have to look for means to the patient combination of clinical and microscopical research rather than to the excitation experiments of the laboratory.

We would call your attention to the fact that the results on the gorilla confirm perfectly those we have obtained on the chimpanzee and orang. This is a matter of interest because many considerations go to show that the gorilla's brain is the highest form of brain excepting only that of man himself.

We have ventured to put before you only the broadest features of the results at present accumulated by us. The detailed collation of our observations may bring out points of interest of a more detailed kind, but the process of collation will be a matter occupying a good deal of time.

References.
[1] *Functions of the Brain.* London, 1876. [2] *Ibid.* [3] *Festschrift zu Karl Ludwig.* 1887. Leipzig.

## ON THE QUANTITATIVE ESTIMATION OF CHLOROFORM IN ANIMAL TISSUES.

By A. D. WALLER, M.D., F.R.S.,
Lecturer on Physiology, St. Mary's Hospital Medical School, London.

*Prefatory Note.*—I have summarised in the following brief account the results of the quantitative estimations of chloroform carried on by Dr. Dodgson in the physiological laboratory of St. Mary's Hospital Medical School during the years 1898 and 1899 at my suggestion and by aid of a grant from the British Medical Association. Dr. Dodgson's work and the preparation of his report were interrupted by his appointment to investigate the results of antityphoid inoculation in South Africa. His absence having become unexpectedly prolonged, and the work begun by him having passed into other hands by reason of the appointment in July last of a special Chloroform Committee by the Council of the British Medical Association, I have at Dr. Dodgson's desire prepared the following summary of his laboratory notes. The credit for work done is Dr. Dodgson's. The responsibility for the summary is mine, and I trust that any defect of this summary will at some future time be made good by a fuller account of the subject from Dr. Dodgson's pen.

### Summary of Dr. Dodgson's Observations.

The methods of quantitative estimation hitherto employed are in chronological order:

1. That of Lallemand, Perrin, and Duroy, 1850.
2. That of Schmiedeberg, 1867 (modified under his direction by Pohl, 1891).
3. That of Grehant and Quinquaut, 1883.
4. That of Chancel and Parmentier, 1885.

In principle the method of the French observers consists in the decomposition of chloroform by a strong solution of potash and subsequent volumetric estimation of chlorine the resultant potassium chloride.

This procedure is directly applicable to an aqueous solution of chloroform, and can be applied to a mixture of chloroform and air, the gas being first brought into aqueous solution by shaking with a sufficient volume of chloride-free water. In the case of blood and tissues, the chloroform present is first distilled off *in vacuo* and a chloride estimation made as before in the distillate. Gréhant estimated chloroform in the distillate by the reducing power upon Fehling's solution.

In the German method of estimation the chloroform present in a fluid or tissue is distilled off and slowly aspirated through a combustion tube filled with calcium or preferably magnesium oxide, and the resultant chloride estimated as before by $AgNO_3$. This method is also applicable to the quantitative estimation of chloroform in air, a known volume of the gaseous mixture being slowly driven through the combustion tube by mercury displacement.

After trial of all these various methods with known weights of chloroform in water, in blood, and in small animals, the following procedure was adopted as giving the most trustworthy results as regards the quantitation of chloroform in small animals and organs of large animals.

[The results of preliminary trials by the potash method need not be given in detail. These results were less promising of accuracy than the preliminary results of combustion, which therefore was adopted as the standard method. It is possible, however, that on further trial the method by digestion with strong KOH may prove to be an available one. The experiments reported by Dr. Edmunds in the *Lancet* point in this direction.

In the early trials of this method made by Dr. Dodgson the deficit per 100 in 5 successive experiments was with the distillate 13, 12, 20, 23, 15, and in 2 experiments with the original solution (1 c.cm of $CHCl_3$ in 999 c.cm. of water)—20 and 21. The only remarkable point in these results is that the error was about the same (20 per cent.) for 100 c.cm. of the original fluid, as for the distillate of 100 c.cm.—that is, that as much $CHCl_3$ is recoverable from the distillate of an aqueous solution as from the original solution.]

### Apparatus and Method (see Fig. 1, p. 1860).

#### A.—*Distillation and Combustion.*

A is a glass vessel with two-way Drechsel stopper to contain the distilland (water, blood, organ, or small animal) and placed in a water bath. The inlet and outlet tubes are connected respectively with W B (a wash bottle) and F C (a froth chamber). The volatile products of distillation are slowly drawn through a combustion tube (B B) by means of the aspirator (C). The combustion tube (B B), 80 cm. long and 14 mm. in diameter, is filled with granulated MgO (previously washed until chloride free), and kept at red heat in an ordinary gas furnace. Two wash bottles containing respectively KOH and $AgNO_3$, placed between combustion tube and aspirator, serve to stop and to indicate any possible escape of HCl through the combustion tube. No such escape occurred, however; the rate of aspiration was maintained at about 60 bubbles per minute.

Estimations were also made without heat in the cases of chloroform in water and chloroform in blood—in the latter case for the sake of avoiding coagulation of proteids—air being slowly aspirated through the solution at ordinary temperature. In this case a longer duration of experiment was necessary than when heat was employed. The two ends of the combustion tube were bent at a right angle, and connected with the other parts of apparatus by mercury joints M. M. at the two ends.

The duration of a distillation was generally four to six hours (*vide* tables), at the end of which time the chloride present in the combustion tube was titrated, and from this result the amount of $CHCl_3$ in the distilland calculated.

#### B.—*The Estimation of Chloride.*

This was conducted as follows:—The combustion tube when cooled was turned up and filled with 30 per cent. $HNO_3$. The solution when complete is transferred to a beaker; the tube is washed out with a known volume of distilled water. The titration of chloride is carried out with $AgNO_3$ and AmSCN with iron alum as the indicator (Volhard's process).

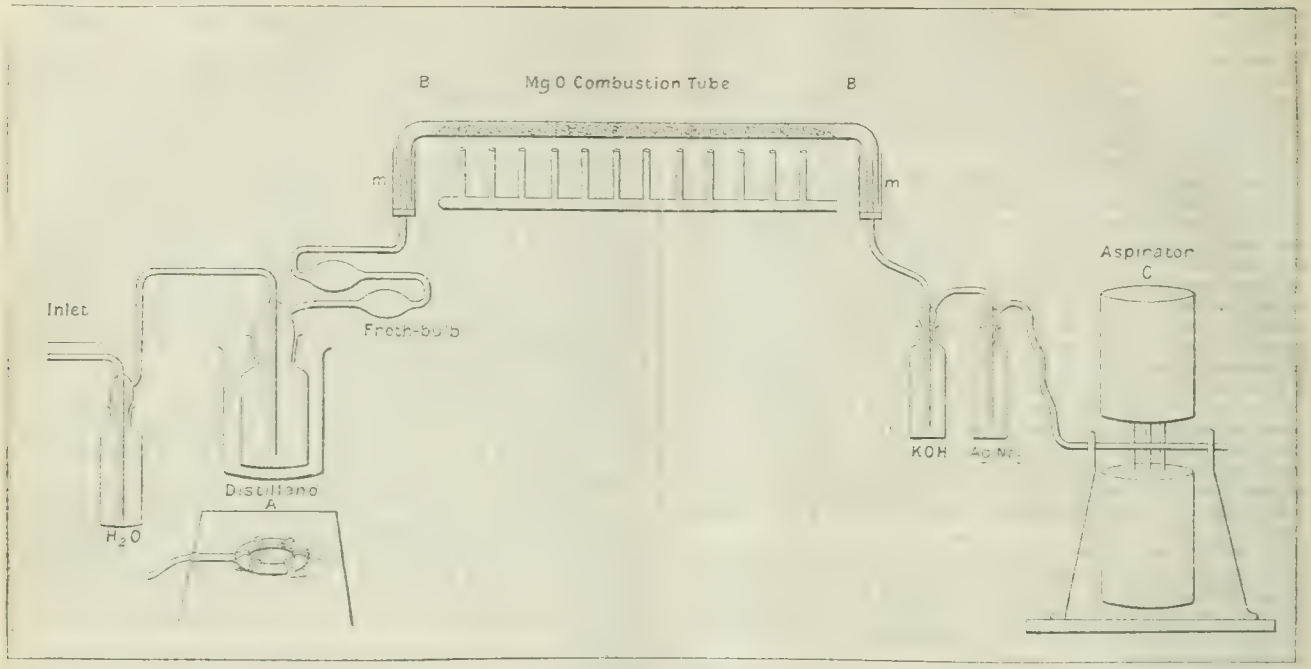



Fig. 1.—Apparatus.

By preliminary trial the error of this stage of the process was determined to be + 0.0001 gram Cl.

The results so far obtained by this method are summarised in the following tables, giving the quantities recovered of (approximately) known quantities of $CHCl_3$ mixed (1) with water and with blood, (2) inserted into the peritoneal cavity of recently killed rats, and (3) the quantities recovered from animals killed by the inhalation of unknown quantities of $CHCl_3$.

It is evident that much remains to be done before we may hope to obtain definite quantitative information as regards the distribution of chloroform in the fluids and tissues of animals chloroformed to a surgical degree and chloroformed to death.

TABLE I.—*Amounts of Chloroform Found in Mixtures of Measured Volumes of Chloroform in Water, in Blood, and in Serum, Calculated from Chloride Found in Combustion Tube. Aspiration made without Application of Heat.*

| | Duration. | Contents of Vessel A. | Weight of $CHCl_3$ Taken. | Weight of $CHCl_3$ Found. | Difference. | Error per 100. | Remarks. |
|---|---|---|---|---|---|---|---|
| Experiment 1 | 6½ hours | [illegible] c.cm. water + 0.1 c.cm. $CHCl_3$ | 0.150 gram | 0.134 gram | [illegible] | −11 | |
| ,, 2 | 10 ,, | [illegible] ,, ,, + 0.2 ,, ,, | [illegible] | 0.316 ,, | [illegible] | + 5 | |
| ,, 3 | 6½ ,, | 100 ,, ,, + 0.2 ,, ,, | 0.300 ,, | 0.308 ,, | [illegible] | + 3 | |
| ,, 4 | [illegible] ,, | 100 ,, ,, + 0.2 ,, ,, | 0.300 ,, | 0.290 ,, | [illegible] | − 3 | |
| ,, 5 | 4 ,, | 400 c.cm. blood + 0.2 ,, ,, | 0.300 ,, | 0.216 ,, | −0.084 | −28 | Short period of aspiration; chloroform is disengaged more readily from water than from blood. |
| ,, 6 | 1 ,, | 100 ,, ,, + 0.2 ,, ,, | 0.300 ,, | 0.177 ,, | −0.123 | −41 | Ditto ditto. |
| ,, 7 | 15 ,, | [illegible] ,, ,, + 0.3 ,, ,, | 0.450 ,, | 0.449 ,, | [illegible] | − 0.2 | Long period of aspiration. |
| ,, 8 | 15 ,, | [illegible] ,, ,, + 0.3 ,, ,, | 0.450 ,, | 0.460 ,, | [illegible] | + 2 | Long period of aspiration. The source of the + error in this series was discovered and removed at Experiment 19 of the second series. |
| ,, 9 | 4 ,, | [illegible] ,, serum + 0.3 ,, ,, | 0.450 ,, | 0.417 ,, | [illegible] | − 7 | |

TABLE II.—*Amounts of Chloroform (Calculated from Chloride) found by Distilling Small Animals into which Weighed Amounts of $CHCl_3$ had been introduced. The Animals (Rats) weighed approximately 200 grams, and the Chloroform was introduced by weighed Glass Bulbs.*

| | Duration. | Weight of $CHCl_3$ introduced. | Weight of $CHCl_3$ found. | Difference. | Error per 100. | Remarks. |
|---|---|---|---|---|---|---|
| Experiment 10 | 4½ hours | 0.324 gram | 0.262 gram | −0.062 gram | 19 | Some $CHCl_3$ lost by exposure to air. |
| ,, 11 | 5 ,, | 0.277 ,, | 0.275 ,, | −0.002 ,, | 1 | |
| ,, 12 | 5 ,, | 0.397 ,, | 0.308 ,, | −0.081 ,, | 20 | Mishap during analysis for chlorides. |
| ,, 13 | 4½ ,, | 0.128 ,, | 0.127 ,, | −0.001 ,, | 1 | |
| ,, 14 | 4½ ,, | 0.238 ,, | 0.234 ,, | −0.004 ,, | 2 | |
| ,, 15 | 5 ,, | 0.000 ,, | 0.000 ,, | 0.000 ,, | — | Check experiment without $CHCl_3$. |
| ,, 16 | 4½ ,, | 0.158 ,, | 0.152 ,, | −0.006 ,, | 4 | |
| ,, 17 | 4 ,, + 4 ,, | 0.487 ,, | 0.481 ,, + 0.004 ,, | −0.006 ,, | 1 | Second distillation of same animal. |
| ,, 18 | [illegible] ,, | 0.016 ,, | 0.019 ,, | +0.003 ,, | | |
| ,, 19 | [illegible] ,, | 0.000 ,, | 0.003 ,, | +0.003 ,, | | Check experiment; source of error traced. |
| ,, 20 | [illegible] ,, | 0.000 ,, | 0.000 ,, | 0.000 ,, | — | Check experiment; error abolished. |

Table III.—*Amounts of Chloroform (calculated from Chloride) found by Distillation of Small Animals (Rats) Killed by Inhalation of Chloroform Vapour.*

| | Duration. | Weight of Animal. | Weight of $CHCl_3$ Found. | Lethal Quotient. Ratio of $CHCl_3$ to Body Weight. | Remarks |
|---|---|---|---|---|---|
| Experiment 21 ... | 6½ hours | 175 grams | 0.0164 gram | 0.000094 | |
| ,, 22 ... | 6 ,, | 191 ,, | 0.0180 ,, | 0.000102 | First distillation. |
| | 7 ,, | | 0.0015 ,, | | Second distillation of same animal. |
| ,, 23 ... | 15½ ,, | 157 ,, | 0.0000 ,, | — | Check experiment; no $CHCl_3$ introduced. |
| | 15 ,, | | 0.0000 ,, | — | Same result on second distillation. |
| ,, 24 ... | 17½ ,, | 168 ,, | 0.0157 ,, | 0.000093 | First distillation. |
| | 16 ,, | | 0.0000 ,, | | Second distillation of same animal. |
| ,, 25 ... | 16½ ,, | 174 ,, | 0.0170 ,, | 0.000098 | |
| ,, 26 ... | 22 ,, | 210 ,, | 0.0250 ,, | 0.000119 | |

The mean lethal quotient of 5 experiments is 0.000101, or very nearly 1 part of chloroform by weight to 10000 parts of animal by weight.

The results recorded in the preceding summary are defective mainly as regards Table I, which should contain a more extensive and accurate elementary justification of the method. The data of this table were, however, obtained at the outset of the investigation, when experimental error was great. Table II is more satisfactory, the experimental error is greatly diminished; and in those instances where an unduly large deficit has occurred, the source of error has been clearly due to some very recognisable and therefore avoidable accident. These "bad" results might properly have been omitted from the summary, but have been left undisturbed on account of the warnings they convey. Table III, containing the latest series of experiments, in which various improvements of detail suggested by previous experiments had been introduced, is probably the most accurate, although obviously there is here no measure of inaccuracy possible by comparison between amount of $CHCl_3$ taken and amount found.

The preliminary conclusion from this last series—to be confirmed or modified by further experiment—is that the weight of chloroform recoverable from the body of a small animal killed by the inhalation of chloroform amounts to 1 part in 10,000 of the body weight in the case of a small animal (rat), a quotient which is about twice that estimated by Snow as being lethal to the human subject.

## THEORIES OF INHERITANCE.

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All the characters of a living being may be grouped under one or other of two headings—either they are *inborn* or else they are *acquired*. Inborn characters may be defined as those which take origin in the germ cell. Thus arms, legs, eyes, ears, etc., are all inborn. They arise because the germ cell is so constituted that it tends under fit conditions of shelter and nutrition to proliferate into an organism having arms, legs, eyes, ears, etc. An acquired character (technically termed "modification") is an alteration impressed on an inborn character by influences acting on that character *after* it has developed from the germ. Thus a hand is inborn, but if it be altered in any way, as by use or injury, the alteration is an acquirement. It will thus be seen that the difference between the inborn and the acquired is essentially one of *origin*. Inborn traits take origin in the germ, acquired characters in cell descendants of the germ. It is necessary to dwell on this point. Endless confusion has arisen through the ambiguous use of the of the term "acquired." For instance, in medical literature, the term is frequently used as synonymous with "new," and every new character is then called an acquirement. Thus a sixth digit on its first appearance in a family is often called one: but a sixth digit, since it results from a germinal peculiarity, is no more an acquirement than a man's head is. It could only be an acquirement were it implanted on an already developing hand by outside influences.

### Variations.

Among the higher animals at least offspring invariably differ inherently from their parents—that is, they are born different from what their parents were born.[1] They make a different start in life. These congenital differences are technically termed "*variations*." Thus a sixth digit on its first appearance in a family is a variation. It follows, since a variation takes origin in the germ, that it is not an acquirement, but an inborn trait. It arises because the germ from which the offspring sprang is different from the germ whence the parent sprang. Formerly the term "variation" was used in a less restricted sense, being applied to acquirements, as well as to congenital differences. But in the interests of scientific precision of late years the more restricted meaning has generally been adopted.

[1] I use the word born to avoid circumlocution. But of course if an embryo or fœtus (as distinguished from a germ) acquired a character (say a disease), the change is as much an acquirement as if acquired after birth.

### Alleged Transmission of Acquirements.

It is a fundamental assumption of every theory of heredity that variations (not acquirements) are transmissible to offspring, and through them to remoter descendants. Thus a sixth digit after its first appearance tends to be transmitted to posterity. The fact is nowhere disputed; and up to this point all theories of heredity march together. But they differ in the causes they assign to variations; that is, in the reason by which they seek to explain the fact that children at birth differ from their parents at birth. At present we need not enter into an elaborate exposition of the many theories that have been formulated in past times to account for variations. It will be sufficient if we note the theory which finds most favour among medical men and the rest of the general public. This theory, authentically as old as the patriarch Jacob, is certainly of even vaster antiquity. Probably it dates from the time when men first began to consider the relation of child to parent; that is, from the time when men began to reason. According to it, parental acquirements (that is, changes in the parental soma) tend *so* to affect the associated germs that identical variations are reproduced in the offspring which spring from the germs. Thus it supposes that, if a man strengthens his arms by exercise, his germs will be so affected that his offspring will tend to have arms stronger than they would otherwise have had. In that case the child is born different from what the parent was born, since it has inborn the peculiarity the parent only acquired. According to this—the Lamarckian—theory, then, the parents' acquirements tend to be transmuted into variations in the child, andt hus to become transmissible to the child's offspring and toremoter descendants. It is, in fact, the theory that supposes that parental requirements are transmissible.

Before we proceed to test the truth of this alleged transmission of acquired characters it is necessary to note one fact of vital importance. Even if it be true that acquirements are transmissible, yet it is abundantly clear that variations in offspring cannot all be attributed to the transmission of parental acquirements. Thus, since no man ever acquires a sixth digit, since a sixth digit is always inborn from the first, that structure on its appearance in an infant can never be attributed to the transmission of an acquirement. Again, the individuals of a litter of puppies not only vary from their parents but they differ among themselves. Some of them are bigger or stronger, smoother or rougher than the others. The endless differences cannot be attributed to the transmission of parental acquirements, for the acquirements if transmitted would produce the same variations in all the puppies. Clearly, then, variations do arise in offspring quite irrespective of the transmission of acquirements. How they arise

does not at present concern us. The essential fact is that they do arise, no matter how.

### THE CHARACTERS ACQUIRED BY MAN.

We now reach the kernel of our inquiry. The characters acquired by every human being, for example, are millions in number. In fact, the adult man is structurally a mass of acquirements, reared on a comparatively insignificant basis of inborn traits. His body changes from infancy to old age mainly in response to influences acting on him from the environment—that is, it changes by the endless superimposition of one acquirement on another. His limbs grow in response to use and exercise, for an infant limb does not develop when rendered useless by disease or accident. His brain and most of the structures of his trunk grow in response to the same strain. It may be said that after birth almost nothing except his hair, teeth, and the full development of his congenital organs comes to him except by way of acquirement—that is, except in response to stimulation from without. Mentally he is even more a creature of acquirement than he is physically. At birth his mind is a blank. Later it has an enormous range. Again, almost nothing enters him save as an acquirement. For example, every single word of his language, every idea he possesses is a separate acquirement. The whole contents of his memory, in fact, and all that flows from memory, are acquirements.

The human body is compounded of billions of cells, but a future individual springs from only one of them, a germ. The other cells—the somatic cells—afford shelter and nutrition to the germs, but there is not a tittle of evidence that they do more. They are specialised for their separate functions, just as the germ is specialised for reproduction. There is nothing to show that they are concerned in reproduction, any more than that the germs are concerned in the secretion of saliva or bile.

Now let us see what the current medical belief in the transmission of acquirements involves. It involves the supposition that, of all the millions of acquirements, every one tends to influence each germ cell in such a special manner that offspring tend to reproduce as inborn characters—variations in this case—the particular traits the parent acquired. A change in the great toe is supposed to affect the germs in one way, a change in the thumb in another, a change in the lung in a third, a change in the mind in the fourth, and so on *ad infinitum*. In each instance the child is supposed to reproduce the trait the parent acquired.

### ACQUIRED CHARACTERS NOT TRANSMISSIBLE.

It is unbelievable that this can be true. What is the machinery by which this magical process is carried out? We know of none. On the face of it, therefore, the transmission of acquirements appears wildly incredible. We are entitled to reject all belief in it unless the clearest and most conclusive evidence be furnished. Has such evidence been furnished? The simple fact is that, though during the past twenty years the plant and animal kingdoms have been ransacked, no single instance of the transmission of an acquirement has yet been proved. In every instance—and the instances have been hundreds if not thousands in number—when transmission has been alleged, the case has broken down on investigation.

It matters nothing that a belief in transmission is almost universal among medical men. Medical men as a body have not studied the subject. It is true that they ought to have done so. Heredity is a part of physiology—an essentially medical science—its most important part. Nevertheless, it has been studied almost exclusively by zoologists and botanists, whose interest in the question has been merely abstract, and whose fund of data has been incomparably inferior to that in the possession of medical men, the students in health and disease of man, the best known of all living beings.

Medical men know—or rather should know, for the fact is constantly ignored—that man passes from infancy to old age almost solely by the accumulation of thousands upon tens of thousands of acquired traits. Were acquired characters transmissible, the child of an old man ought to be clearly distinguishable from the child of one 40 or 50 years younger. In fact, the child of the aged should be born aged. But no medical man is able to distinguish the child of an aged couple from the offspring of a boy or girl who have barely reached puberty.

We are told that though local modifications, which affect this or that organ merely, may not be transmissible yet widerspread and deeper-seated acquirements are transmissible. Hæmophilia is given as a case in point. But hæmophilia is never an acquirement. It appears as a variation, an inborn trait, from the beginning.

Syphilis is another instance. But syphilis never occurs in the absence of the specific virus. A foreign body passes from parent to child, and it would be as reasonable to speak of a bullet, which, after piercing the mother, lodged in the child, as an instance of the transmission of an acquirement. The parent acquires syphilis and the child in turn acquires it. It is never inborn in either, it is never a variation, and as we have seen the transmission of an acquirement implies the reproduction of it as a variation by the child. A distinction is sometimes drawn between hereditary syphilis and "syphilitic heredity." In the latter case, any abnormality in the child of a parent who has suffered from, and even recovered from, syphilis is attributed to the parental disease. But people who have not had syphilis occasionally have feeble children. There is such a thing as a confusion of *post* with *propter hoc*.

Gout is a third example. It is admitted on all hands that parents, who have become gouty under fit conditions of ease and high living, tend to have children who are liable to develop gout under like conditions, just as big or dark men tend to have big or dark children. Thereupon it is assumed that parental high living is a cause of filial goutiness. *Post hoc* is again confused with *propter hoc*; diathesis with disease. The diathesis, the inborn tendency to acquire the disease under certain conditions, is transmissible; but there is no evidence that parental high living increases it in the child. On the contrary, there is evidence that the children of poor Irish peasants who have never had gout are as liable to it when placed under easy circumstances as the scions of the British aristocracy. Were gout very common and fatal, races that had most been affected by it would, following the rule of other common and fatal diseases, be the most resistant to it, the least liable to contract it.[2]

Long experience of certain zymotic diseases has endowed various races with superior resisting powers, which in each case are specific. We are told to attribute this to the transmission of acquired immunity. But in no case has there been an evolution of greater resisting power than in the case of tuberculosis. Experience of tuberculosis does not confer immunity or increased resisting power on the individual. It weakens, rather than strengthens, against subsequent attacks. If then acquired characters were transmissible, a race that had long been afflicted by tuberculosis should be weaker, not stronger, against the disease. The contrary is the case. The British, for example, who have suffered for thousands of years, are infinitely more resistant to tuberculosis than Polynesians, whose ancestry had no experience of it. Again the mortality caused by chicken-pox is practically non-existent, but one attack confers immunity against subsequent attacks. In this case races that have longest been afflicted suffer as severely, but not more severely, than races to which it has been newly introduced. Clearly then in every case the evolution of resisting power has been due to the weeding out of the unfit, to the constant and prolonged elimination by each lethal disease of individuals weak against it, not to the transmission of any acquired character. It is needless to multiply instances here. But presently it will be necessary to return to the subject.

The fact that each individual is derived from a single cell, the fertilised ovum, enables us to formulate a theory of heredity which denies the transmission of acquired traits. The fact is undisputed: the deduction reasonable, and supported by a vast mass of evidence. But attempts have been made to go deeper, to formulate theories as to how parental characters are transmitted to the offspring. Several so-called working hypotheses have been put forward.

### DARWIN.

Darwin supposed that each cell of the multicellular organism sent off portions (which he called gemmules) of itself to each

[2] *Vide infra.*

germ cell, which thereafter, on being fertilised, was thus enabled to proliferate into a being resembling the parent organism. To understand the full beauty of this theory it must be remembered that the germ cells of a man, for instance, are in millions, and his somatic cells in billions. To compute the number of the gemmules we must multiply the millions of the germ cells by the billions of the somatic cells. This theory was quite seriously discussed by biologists for a number of years. It is very wonderful, but by far the most wonderful thing about it is the fact that of all men Darwin should have been its author.

### Weismann.

Subsequently, after the transmission of acquired characters had been denied, Weismann formulated his theory of the continuity of the germ plasm. He supposes that some of the germ plasm of the fertilised ovum is separated off and handed on more or less unchanged to form the germ cells of the offspring. He adds amazing complications in the way of ids and idants, biophors, etc., the bearers of heredity. If his hypothesis be true, it must follow as a corollary—*but as a mere corollary*—that acquired traits are not transmissible. But a theory that only inborn characters are transmissible is one thing; a theory as to how inborn characters (to the exclusion of acquired characters) are transmitted is quite another thing. The former theory rests on the solid ground of well-ascertained fact—on the cell theory. The other is absolutely unsupported by evidence. It may or may not be true. There is not a shred of evidence one way or the other. No one has seen, or, at least, no one can recognise the germ plasm, much less an id or an idant. It is a remarkable fact that a great many people have assumed that the proof of the doctrine of the transmissibility of acquired traits depends on the proof of Weismann's hypothesis of the continuity of the germ plasm.

### Adami.

Weismann had at least the excuse that he built on a foundation of fact—offspring do arise from a single cell, and no instance of the transmission of an acquirement is known. The latest theory has not this excuse. Its author, Professor Adami, pours contempt on Weismann's scholastic subtleties, and then proceeds to formulate a hypothesis entirely similar in kind. He puts forward a chemical theory of inheritance. But the chemistry of inheritance is, if possible, even more a matter of speculation, of pure guess-work, than are ids, idants, and biophors. No doubt, as Weismann says, the germ plasm is the bearer of heredity, and no doubt, as Professor Adami says, it has its chemistry. But there our knowledge, and even our power of making legitimate inferences, ends. If we attempt to go forward we enter into the regions of the unknown and probably the quite unknowable. Consider a man. Consider the vast complexity of his body, and, above all, of his mind (or its physical concomitant the brain). Consider that he springs from a microscopic speck of protoplasm, the fertilised ovum. Think of the enormous complexity and mystery of the processes, vital or chemical, which transform that speck into a child, an adult, an aged human being. Remember that the fertilised ovum of an elephant or a mouse is indistinguishable in all essential particulars from that of a man. Think of all this, and think also of our futile microscopes, our infantile chemical analyses, and some idea will be gathered of the vanity of attempting to pry into the how of the inheritance either of inborn or of acquired traits. The infinitely small is as difficult as the infinitely great. With our present knowledge it were as wise to attempt to solve the mystery of the universe as to seek to solve the mystery of inheritance. All we can do is to found ourselves on verifiable evidence, and by the light of it say that such-and-such traits are not inherited, and that such-and-such traits are inherited. How they are inherited is, as I say, quite another problem.

It is unnecessary therefore to discuss Professor Adami's chemical theory of inheritance in detail. In support of it he offers absolutely no evidence, but only some illustrations drawn from chemistry, or rather from some chemical "working hypotheses." Like Weismann he may or may not be right; indeed, both he and Weismann may be right, though owing to the obscurity and complexity of the subject, and the absolute lack of data, it is infinitely more probable both are wrong; but apart from speculations about things which are unknown, Professor Adami falls into manifest error about things which are positively known. He adopts the fallacy that the theory of the non-transmissibility of acquired traits depends on Weismann's transcendental speculations concerning the continuity of the germ plasm. With that we need not deal. It is probable that Professor Weismann deserves all and more than Professor Adami says of him. He makes an even worse error when he confuses the inborn with the acquired, with the odd result that his theory is perfectly compatible with a belief in the non-transmissibility of acquired characters. In fact, contrary to the author's intentions, it is like Weismann's theory—really a speculation as to how inborn characters are inherited.

Professor Adami remarks that characters acquired by unicellular organisms are transmissible, and, after giving various examples, declares that "the argument that phenomena observed in unicellular organisms cannot be applied to multicellular organisms is, to say the least, severely strained." Again, after arguing that toxins circulating in the parent's blood must affect the germs, he continues, "Here Weismann would make the somewhat subtle distinction that we are not dealing with the direct transmission of acquired parental defects; that the toxins produce these results not by acting on the body cells, but by direct action on the germ cells: that the inheritance is blastogenic, not somatogenic. This is a sorry and almost Jesuitical play upon words. Let us grant that they are of blastogenic origin; they are nevertheless of individual acquirement."

Now, as we have seen, the words acquired and acquirement are technical biological terms having very precise and definite meanings. They are applied to the alterations of the soma. We have seen, moreover, that when an acquired character is thought to be transmitted, the parental germs are supposed to be so altered that the character the parent acquired is reproduced as an *inborn* trait by the offspring. Alterations of germ, therefore, result in *inborn* changes. It follows, since unicellular organisms have no soma, and, since each one is a germ cell, that alterations of them are inborn characters, and for that reason are transmissible. In this case the very cell that is modified transmits its modification to its own descendants and to every one of them. In the case of a multicellular organism, one set of cells (the somatic cells) acquire the modifications, but quite another set (the germ cells) are supposed to transmit the modifications to some of their very remote cell descendants. Professor Adami might with as much reason complain that since Brown is able to transmit his traits to his own offspring, we severely strain the argument when we decline to admit that he can transmit them to the offspring of Jones and Robinson also.

### "Indirect Transmission."

He seeks to prove that parental ill-health or toxins circulating in the parents' blood tend to enfeeble offspring subsequently born. He calls this "indirect transmission." But when an acquired character is said to be transmitted, a peculiarity similar to the acquirement is supposed to be reproduced by the offspring, and this (according to the Lamarckian doctrine) for the reason that acquirements tend to be transmitted. But if a parent's acquirement so affects the germ that something quite different is reproduced, then that clearly is no case of transmission. Thus if a man has some disease (say phthisis), and his child in consequence is merely enfeebled, that would not constitute a transmission. To constitute a transmission the child should reproduce the lesions of the parent. Similarly if a toxin circulating in the parent's blood enfeebled both the parent and the offspring again we should have no transmission, not even if by a singular coincidence the enfeeblement were identical in type in parent and child. It must be remembered that no one has asserted that the germs of multicellular organisms are incapable of alteration. It has only been asserted that modifications of the parental soma do not tend so to affect the associated germs that similar peculiarities are reproduced in the offspring. When, therefore, Professor Adami speaks of the transmission of acquirements by unicellular organisms, or of "indirect inheritance" among multicellular organisms he is speaking in reality of the transmission of alterations of the germs (variations, new inborn traits), not of acquirements (modifications of the soma). And then, as I say, his theory

like Weismann's, is an attempt to explain how these inborn traits are transmitted.

### Effects of Parental Disease.

Had, then, Professor Adami proved that parental diseases, etc., affect offspring subsequently born in some way other than by causing them to reproduce parental acquirements, he would still have been very far from proving his case. As a fact he has not even proved the little that in this instance he sought. His assumption is apparently reasonable. We have abundant evidence that the germs of unicellular organisms are capable of being altered by environmental influences, and it seems only reasonable to expect the germs of multicellular organisms are equally capable of alteration (for example, by toxins circulating in the blood). Nevertheless the evidence is still to seek. Indeed it seems probable that the germs of multicellular organisms are much less capable of modifications than lower types. For did environmental influences (toxins circulating in the blood) so injure germs as to enfeeble offspring, a race that used alcohol for instance, or was affected by malaria would by the accumulation of the injury grow more and more enfeebled generation after generation till by the accumulation of injury it would tend towards extinction. I am not aware that South Europeans who have used alcohol for thousands of years are more degenerate than the lowest savages, the Terra del Fuegians, for instance, who have never used it. Again were Professor Adami's reasoning correct races that have long suffered privation and hardship should be degenerate whereas races that have lived in ease and plenty should be the reverse. If anything the contrary is the case.

### Theories of Evolution.

All theories of heredity are in essence theories of evolution. If the Lamarckian doctrine be true, if acquirements are transmissible then all agencies which beneficially affect the individual, good and plentiful food, sunlight, fresh air, exercise and so forth must also benefit the race, must during the lapse of generations become causes of evolution, whereas all agencies which injuriously affect the individual must equally injure the race, must be causes of degeneration. On the other hand if acquirements are not transmissible then agencies which benefit the individual cannot be causes of evolution, which must be attributed wholly to injurious agencies that by weeding the unfittest leave the propagation of the race to the fittest. The two doctrines are thus fundamentally and violently opposed. It follows, by watching the course of racial change, that we are able to decide which of the two doctrines is true. Let us then turn to Nature. Does she furnish a single instance of racial change due to the transmission of acquirements? Not one. It is true instances by the hundred have been alleged, but all without exception have broken down on investigation. Does she furnish instances of racial change due to the weeding out of the unfittest, of the accentuation of variations by selection (natural or artificial)? She furnishes them without number. The effects of disease selection in rendering races resistant to disease, and the effects of artificial selection in evolving our domesticated animals and cultivated plants are alone decisive.

Moreover this line of argument furnishes conclusive proof that agencies that affect the parent do not as a rule in any way affect the offspring subsequently born; otherwise in this case also beneficial agencies would lead to evolution, injurious agencies to racial degeneration. As we see the contrary is the fact. Professor Adami quotes Paul to prove that plumbism in the parent almost invariably results in the death of offspring subsequently born. I am not prepared to impeach Paul's results off hand. It is possible that lead specially poisons germ cells just as strychnine poisons nerve cells. But in that case it is a very remarkable poison. It does not destroy the delicate sperms; it merely destroys the offspring which arise from the sperms many months, even many years after. In other words plumbism does not destroy the cells which are exposed to its influence, but only their very remote cell-descendants when long removed from its direct influence. Considering the number of mare's nests of this description that reinvestigation has exposed it is probably wise to suspend judgment until this particular case has been reinvestigated. In any case one swallow does not make a summer. If ever deleterious agencies acting on the multicellular parent do affect the germs, the instances in which they do are evidently so rare as not to affect the general question.

### The Object of the Essay.

The main object of this essay is an endeavour to place heredity on what I hope is a scientific basis for medical readers. Heredity ought to be a science. Already we have excellent data on which to found very important conclusions. The fact that offspring take origin, not from the whole of the parent's body, but only from the microscopic germs renders the transmission of acquirements exceedingly improbable. Doubt is converted into certainty by the fact that though all high organisms acquire millions of traits in no case has the transmission of an acquirement been proved. This line of argument is extremely simple and absolutely clear and conclusive. But it has been almost quite ignored. One may wade through volumes devoted to the subject and get no hint of it. Instead we are treated to theories of *how* characters are transmitted—to treatises on pangenesis, physiological units, the continuity of the germ plasm, and so forth. We are led through a fog of vague conjectures into the darkness of the unknown. "What might be a science is converted into a tumbling ground for whimsies." Let us keep to the facts we know. We shall not then be able to explain how a man transmits a head to his offspring, nor why a man has for offspring another man and not a dog or a tree, nor indeed why he has offspring at all. But we shall be able to formulate certain "laws" from the facts of our common experience. We shall be able to say that while inborn traits are transmissible, acquirements are not transmissible, and having done that we shall have stated a truth of enormous importance to all men, but to none more than to medical men.

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## DIRECT INTRODUCTION OF PURGATIVES INTO THE LARGE INTESTINE IN CASES OF OPERATION FOR SEPTIC PERITONITIS.

By A. MARMADUKE SHEILD, M.B., F.R.C.S.,
Surgeon to St. George's Hospital.

I wish to draw the attention of the profession to a method which I believe is of great utility in the surgery of septic peritonitis—the direct introduction of purgatives into the intestines at the time of operation. It is not too much to say that in many of these cases the patient's life hangs on the possibility of overcoming the paralytic obstruction and the free evacuation of gas and fæces. The worse the case the more difficult is this to bring about, since the patient vomits everything he takes by the mouth.

I have hitherto only used this method in cases of perforative appendicitis, and here the performance of the injection is very simple. The nozzle of a small syringe—the hydrocele-injecting syringe is a convenient form—is introduced into the "stump" of the appendix and the solution directly thrown into the cæcum. Three drachms of magnesium sulphate, with ten drops of tincture of nux vomica, and a drachm of glycerine in an ounce of water is the formula I have generally employed. Two hours afterwards a turpentine enema is given, and the result has been excellent.

I have employed this method in 5 bad cases of septic peritonitis associated with perforative appendicitis. In every case the results have surprised me. And though the number is too small for a pronouncement as to the establishing intra-cæcal purgatives as a definite line of treatment, yet the cases are sufficiently striking to justify me in urging a trial of it upon my professional brethren.

It is obvious that in other cases the solution could be easily and safely thrown into the colon by means of a hypodermic syringe obliquely introduced. Further experience may elicit better purgatives than magnesia. The amount of magnesium sulphate is difficult to estimate. In one very bad case I introduced four drachms, and I think the dose should be proportional to the age of the patient and the extent of the peritonitis.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

### INVERSION OF UTERUS.

The report in the British Medical Journal of November 9th, p. 1408, of a case of inversion of the uterus, together with the textbook accounts, is somehat terrifying. The following case might encourage any one who is unfortunate enough to meet with this occurrence.

The patient, Mrs. A., aged 19, an anæmic, underfed, badly developed primipara, behaved in a very hysterical manner from the time the pains began. The pains were inefficient. As she was becoming exhausted and no progress was being made after seven hours, and the head was low, chloroform was given (by M. W.) and forceps were applied (by E. W.), and delivery easily effected. One of us (E. W.) at once placed a hand on the uterus in order to ensure contraction. E. W. now remarked that the uterus felt as if it had a sharp transverse ridge at or near it upper border. M. W. felt and agreed, but at this point no suspicion of anything wrong was aroused. As the patient had been so unmanageable throughout and was becoming so again on her recovery from the anæsthetic, refusing violently to allow the slightest manipulation, we gave a few whiffs more of chloroform in order to remove the placenta, M. W. having previously examined and remarked that it was lying quite free in the vagina. E. W. then exerted very gentle downward pressure on the uterus and the placenta was at once expelled, but the whole mass appeared so large that we knew something was wrong. In a few moments we discovered that the mass consisted of the placenta still attached to the completely inverted uterus. M. W. at once detached the placenta, and without a moment's delay replaced the uterus in the vagina, and then effected reduction. Meanwhile the patient's condition had become grave, though the hæmorrhage was quite insignificant. She was in a state of collapse, was almost pulseless, with cold clammy skin, and irregular sighing respiration. We gave ergot, applied hot-water bottles to several parts, injected strychnine and brandy hypodermically, gave brandy and salt solution in bulk by the rectum, and washed out the uterus with a hot weak solution of mercury perchloride. In less than a quarter of an hour the danger was mainly over. From this point the patient made an uninterrupted recovery, the temperature never rising above normal.

Was the uterus wholly or only partly inverted when the transverse ridge was felt? The mass felt by M. W. in the vagina must have been the placenta and uterus, and in that case the uterus must have been inverted at the time, for the hand was passed round the mass. Hence, it appears clear that the inversion was not due to any manipulation performed to expel the placenta.

E. G. Hamilton Williams, D.P.H., M.R.C.S., L.R.C.P.
Mary Hamilton Williams, M.B., B.S.Lond., D.P.H.Camb.
Birmingham.

### THE THIRD STAGE OF LABOUR.

I heartily agree with Dr. Cullingworth when he advises "the diligent hunting for membranes" as the surest way of avoiding trouble during the puerperium, but that is just what, in cases of the better class, and especially nervous ones, we hesitate in doing. In cases at all doubtful, I am convinced from long experience, that with the hand thoroughly cleansed and disinfected with bichloride, there is far less risk in diligently searching for shreds, and finally scooping out the whole contents of the uterus, than in adopting simply a *laissez-faire* policy.

The twisting of the membranes is a good routine method of treatment, yet even this must be used with discretion. When the child is born towards the margin of the placenta, through a hole in the membranes, these remaining otherwise intact, there is formed a *cul-de-sac* in which clots may gather, and it is obvious that the twisting of the membranes up to these may form a ball incapable of being removed by pressure or traction. This I found on one occasion to be markedly the case, whereas by untwisting the blood clot was easily expressed, the membranes readily following *en bloc*.

It is surely unnecessary to urge the most careful examination of the maternal side of the placenta, especially in rough, nodular ones. Yet a case of this kind caused me one night a good many hours of anxiety. A stout, flabby patient had had an ordinary, though somewhat tedious, labour, and the placenta, which was lobulated, was easily removed, and, undergoing the usual scrutiny, showed no signs of not being entire. Although the uterus seemed fairly well contracted under friction and pressure, there was a persistent oozing of blood, which was by-and-by followed by decided symptoms of a hæmorrhage much more serious than the mere external escape warranted. On introducing my hand what was my surprise to find a nodule not much larger than a hazel-nut firmly adherent to the posterior wall of the uterus, and surrounded by blood clot. On the removal of this, followed by a uterine douche, with glass catheter and siphon, of bichloride solution, and a hypodermic injection of ergotin, she gradually rallied, was sitting up in bed on the fifth day, and otherwise made an excellent recovery.

Gentle circular friction of the fundus with the point of the finger, over a limited area and at short intervals, I have found the uterus specially sensitive to, contracting at once and firmly, when general friction and pressure failed.

Sunderland. B. Strachan, M.B.

### RARITY OF RHEUMATISM AND OSTEO-ARTHRITIS IN INDIA.

In the report of a discussion on Chronic Diseases of Joints commonly included in the terms "Chronic Rheumatism," "Osteo-Arthritis," and "Rheumatic Gout" in the British Medical Journal of October 12th, no mention is made of the rarity of these diseases in India, a fact which may have an important bearing on their etiology.

In my experience these diseases never occur among natives of India, whether dwelling in the hills or plains, in hot or cold, or in dry or moist localities. These diseases, too, appear to be very uncommon among European and Eurasian residents. Gout is, I believe, practically unknown among natives of India. It is met with among Europeans, but the attacks are not, in my experience, severe or frequent. Acute rheumatism in severe form is very unusual among natives; slight attacks, attended with only moderate pyrexia and almost never with heart complications, are occasionally met with. Acute rheumatism would also seem to be much less common in India among Europeans than in Europe, but severe fatal cases with serious heart complications occasionally occur.

The rarity in India of the chronic diseases first mentioned would suggest a trial of prolonged residence in India as a form of treatment in suitable cases. There are many worse places to live in than the hills and plains of India each in their seasons.

C. Duer, M.B., F.R.C.S., Captain I.M.S.
General Hospital, Rangoon.

### CASE OF ANENCEPHALIC MONSTER.

The following account of an anencephalic child may interest your readers: The confinement was attended by a midwife, and I was summoned to remove the placenta, which was adherent. The child was well-nourished and large, and the bones of the skull well-formed but flattened on the top; in the position of the fontanelle there was a red bleeding mass of fibrous tissue, which seemed to be adherent to the base of the skull. The case is somewhat interesting from the fact that the mother, four years ago, suffered from chronic endometritis; and two years ago she had to be removed to a lunatic asylum on account of profound melancholia and a tendency to suicide.

Wigan. J. Thomson Shirlaw, M.B.Edin.

### SUICIDE BY INCISION OF THE NECK POSTERIORLY.

On October 27th I was called upon by the police to examine the body of a young Venezuelan who about midday was found *in articulo mortis* in a small room. The man died before my arrival. The body was lying on the floor face downwards, in a pool of blood, and in the relaxed right hand was the handle

of an opened sharp razor. There was no evidence of a struggle. There was an incised wound in the front of the neck opening into the pharynx, but the air passage was not touched and the large vessels were intact in their sheaths. There was a gaping incised wound at the back of the neck 6¼ inches long, almost on the level with the lowest edges of the lobes of the ears. It passed deeply through all the soft structures, entered between the first and second cervical vertebræ, opened the sheath of the spinal cord, and slightly cut the spinal cord itself. Death was due to hæmorrhage. The deceased had not long left hospital, and chronic ill-health was given by his friends as the reason for the act. After investigation, a verdict of suicide was returned by the coroner. Dr. E. I. Read kindly assisted me with the *post-mortem* examination.[1]

HENRY ALSTON, M.B., C.M.,
Trinidad Medical Service.

# REPORTS
ON
## MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

### BRISTOL ROYAL INFIRMARY.

#### TWO CASES OF PARALYSIS OF THE THIRD NERVE, WITH SUDDEN DEATH FROM RUPTURE OF INTRACRANIAL ANEURYSM.

(By H. WALDO, M.D., M.R.C.P., Physician to the Infirmary.)

CASE I.

S. P., female, single, aged 43, was admitted on April 17th, 1899.

*History.*—She had been in good health till one month earlier, when she suddenly developed pain in the head so severe that she had to go to bed. The next day she was able to resume her occupation as a domestic servant, but still had some headache; she noticed that the right upper eyelid was "somewhat swollen," and that she "could not open that eye so widely as the other." A week or two later the pain increased, and she had "twitchings of the face;" a few days later both calves became painful, and once more she had to remain in bed; soon after this she was brought to the infirmary. There was no history of syphilis, lead poisoning, rheumatism, or alcoholism.

*Condition of Admission.*—The patient was a fairly healthy looking woman. She evidently had great pain in the head. There was complete ptosis of the right eyelid. The pupil was widely dilated and quite fixed, and the only movement of the eye was due to the external rectus. It remained almost fixed in a position of marked external strabismus. The left eye was natural. The lungs, heart, abdomen, and digestive system were normal. The urine had a specific gravity of 1012, and was free of albumen and sugar. The knee-jerks were present and equal, and there was no evidence of hemiplegia or of any loss of sensation.

*After-History.*—She remained in bed for a few weeks, and took increasing doses of potassium iodide, and later this was changed to a sixteenth of a grain of red iodide of mercury with five grains of the potassium salt three times a day. She improved considerably, and was able to get about. The headache abated, and there was some movement in both eye and eyelid. On May 19th, while sweeping the floor of the ward, she suddenly fell in a fit, becoming unconscious and foaming at the mouth. She died a few hours later.

*Post-mortem Examination.*—An aneurysm was discovered about the size of a pea, which had completely destroyed the right third nerve about half an inch from its origin; this had ruptured, and there was a large effusion of blood over the base of the brain. With the exception of some chronic interstitial nephritis there was no other pathological change.

CASE II.

E. C., female, single, aged 55, was admitted on December 6th, 1899.

*History* (obtained after admission from friends and confirmed later by herself).—She had been a domestic servant in the same family for many years. She had always enjoyed very good health. She left the house on the day of admission, and was about to enter a tram car when she fell and was brought to the infirmary.

*Condition on Admission.*—She was quite unconscious, and the breathing was stertorous. There was no pupil reflex, and the left pupil was smaller than the right. The knee-jerks were present. Half an hour later she began to have convulsions, in which spasmodic rigidity of both arms occurred frequently, the patient screaming loudly and groaning. She moved the left arm more than the right, and later the right was much more flaccid than the left. No difference was noticed between the two legs. There was no œdema anywhere. The urine, specific gravity 1013, contained a trace of albumen and 1.3 per cent. of sugar.

*After-History.*—On the following day it was noted that she had been very noisy, but had become quieter but more comatose: the temperature had risen to 101°; the pulse, of fair volume, was 122; the respirations 40, and shallow. The prognosis given to the friends was hopeless. On December 8th the patient was better; the extremities warmer. The right pupil was smaller than the left, and the left did not react to light. On December 10th she could be roused, and was much better. The right arm was paretic. On December 11th there was external strabismus of the left eye, and ptosis. The pupil was dilated and fixed, and there was paresis of left side of face. By December 30th she had gradually become quite conscious, and could sit up in bed and feed herself. The urine still contained a trace of albumen, but no sugar. The temperature had been normal for the previous week. The eye condition was the same as on December 11th, and there was still slight weakness of the right hand grip. On February 6th, 1900, the urine contained no albumen, the headache was better, and she was getting about in the ward. On March 11th she went home quite well except for complete paralysis of the left third nerve. She went back to work, and was seen occasionally in the out-patient department, her general health being very good; the eye the same as before. On June 2nd she was walking in the garden, when she fell unconscious, and died shortly afterwards.

*Post-mortem Examination.*—The base of the brain was bathed in recent hæmorrhage. An old hæmorrhage in the region of the left third nerve showed very plainly when recent clot was washed away. On the posterior communicating artery, on the left side, was an aneurysm the size of a cherry stone; this had completely flattened out the third nerve, which was spread over it as a thin band. The kidneys and heart were natural.

[1] A similar case will be found recorded in the *Lancet* for September 14th this year, p. 744, by Mr. C. A. J. Wright.

# REPORTS OF SOCIETIES.

## PATHOLOGICAL SOCIETY OF LONDON.

W. WATSON CHEYNE, F.R.S., President, in the Chair.

*Tuesday, December 17th, 1901.*

LOCALISATION IN THE MOTOR CEREBRAL CORTEX.

PROFESSOR C. S. SHERRINGTON and Dr. A. S. F. GRÜNBAUM gave an address on this subject, which will be found at page 1857.

Dr. F. W. MOTT had seen a case of monoplegia in which at the necropsy only the ascending frontal convolution was affected. This corresponded with Professor Sherrington's experimental results in the anthropoids. Histologically, again, in man, the large pyramidal cells were found mainly in the ascending frontal, and very little in the ascending parietal convolution. He inquired whether, in the anthropoid apes, there might not be association fibres between the frontal region and occipital (visual region) in correspondence with those animals having assumed a semi-erect posture. In general paralysis the degeneration of such fibres was observable. Professor Schäfer and he had obtained positive results on stimulation of the frontal area and calcarine region of the occipital simultaneously. The speaker asked, also, whether, in Professor Sherrington's ablation experiments, any degeneration was traceable in the ventral horns of the cord.

Dr. C. E. BEEVOR observed that there was a difference in the order of representation of movements in the motor area as found by Mr. Horsley and himself and that given in the

account of Professor Sherrington's work in the report of the International Congress of Physiologists held at Turin, recently published in the Journal. Dr. Beevor added that in his work with Professor Horsley two electrodes had been used close together and a minimal excitation; he thought the unipolar stimulation a valuable new departure.

Mr. C. A. Ballance referred to some work he had carried out with the late Dr. W. B. Hadden in the bonnet monkey, in which form cortical centres were represented in the ascending parietal as well as the ascending frontal convolutions. The cortex was stimulated in order to localise a certain centre (the thumb), which was then excised, but no precisely corresponding paralysis resulted. The return of movement impaired was rapid.

Dr. Purves Stewart cited a case of Jacksonian epilepsy (leg) in which the discharging area was excised. After exposure of the cortex he had stimulated behind the fissure of Rolando in the ordinarily assumed position of the leg centre in man, but without result. Stimulation of the cortex in front gave a positive result. No single movement was represented by a single point in the cortex, but there were many motor points of different values concerned with each movement. The rapid recovery of power after excisions was best explained by the less developed points acquiring a more marked degree of function.

Professor Sherrington made a brief reply. In answer to Dr. Mott he stated that degeneration was observed in the ventral cornu of the cord after cortical ablation in the anthropoid. Stimulation of the calcarine region produced result only if the stimulation was strong. In reply to Dr. Beevor, he stated on behalf of Dr. Grünbaum and himself that the short account of their experiments which had appeared in the Congress article of the British Medical Journal, was not an authors' report; and, although in most respects excellent, in the detail referred to by Dr. Beevor it was not correct. The results observed by Dr. Grünbaum and himself did not, however, on all points coincide with those of Dr. Beevor and Professor Horsley. He was not inclined to attribute to their (Dr. Grünbaum and his own) use of older animals the explanation of the discrepancies. In quite a young chimpanzee typical excitation results had been obtained.

# REVIEWS.

## The Administration of Anæsthetics.

The second edition of Dr. Frederic Hewitt's work on *Anæsthetics*[1] is much enlarged, and in great part rewritten. After an elaborate statement of its contents, which should prove useful to the student, the book opens with an admirable historical chapter on the evolution of anæsthesia. This is followed by an account of the pharmacology of the various drugs, and two chapters are then devoted to the physiology of anæsthesia. While a fairly complete account of the experimental physiological work bearing upon the subject is given, this section largely consists of what may be called clinical physiology, and in this its chief interest lies. Dr. Hewitt is always careful not to theorise upon insufficient grounds, and consequently little here calls for criticism. One or two points, however, may be mentioned. When the incarceration of carbonic acid during obstructed breathing is discussed, we do not think that the author makes it sufficiently clear that the need of oxygen in such conditions is an infinitely more important factor. It is said that, other things being equal, the better the arterial supply to the respiratory centre the better the breathing, and *vice versâ*. This is, of course, only true within limits, for when rich supplies of oxygen are circulating in the blood the breathing becomes of small amplitude from lack of stimulus to the centre; and, as is admitted in other places, it may under some circumstances be of advantage to the patient that respiration should be kept vigorous by a slight but constant obstruction. Dr. Hewitt states that the commonest form of stertor during anæsthetisation is produced by the tongue; but it is the epiglottis which frequently causes stertor by vibrating against the pharyngeal wall. This may be determined by digital examination, and is surely the commonest cause of the condition. After preliminary considerations—selection of the anæsthetic, state of patient, operation, preparation, posture, etc.—have received full notice in four chapters, the administration of the various anæsthetics, mixtures, and sequences are dealt with in great detail. Three chapters upon the treatment of complications and one upon the after-condition of the patient complete the book, which is provided with a full and useful index, much facilitating reference. The administration of anæsthetics is primarily an art—an art which has now attained a high degree of perfection, while the science of the subject is still unfortunately rudimentary and imperfect. To teach an art by writing is a difficult matter. Art is only apparent by its results; when it can be reduced to definite laws then is a science evolved. Furthermore, the point of view of the artist is necessarily somewhat myopic, as that of the scientist should be all-embracing; and hence from the nature of things the chief part of this book consists of the opinions which have been formed by Dr. Hewitt from his own experience. While it may be regretted that he does not sometimes permit himself a wider view, and often is content merely to mention the methods of others, we would point out that in this personal element lies the chief value and charm of the book. The 52 illustrative cases which are reported are so apt and lucid that the reader will wish that they were even more numerous. Extreme care has been taken throughout to omit nothing which bears upon the particular point under discussion, and this, while increasing the value of the book as a work of reference, is the cause of much repetition. For instance, Waller's estimate of the relative strengths of chloroform and ether is referred to three times in six pages, and many facts are to be found in two or more separate places. It is fair to say, however, that this could not have been altogether avoided without altering the whole character of the book, which we would by no means do. Dr. Hewitt's desire for completeness has also led to the inclusion of some material which is so obvious as to seem unnecessary, and some which is only remotely apposite. Indeed, the book might be strengthened by some judicious omissions. On the other hand, two points that we could wish had received more attention are the employment of venesection and of oxygen as remedial measures in certain complications. Nor, while a case is recorded in which compression of the heart saved life, is artificial circulation otherwise alluded to. The language is clear, the book is beautifully produced, and we have no hesitation in saying that it is at once the most complete and best account of the subject which has yet appeared.

The persistent use of the term anoxæmia in the first of the essays in Mr. Bellamy Gardner's small volume on *The Asphyxial Factor in Anæsthesia*[2] appears to indicate that he regards deoxidation of the tissues as the chief danger in narcosis. Owing to a want of clearness and definition in his mode of writing it is difficult in many cases to grasp his meaning. In dealing with the physiology of so complex a matter as anæsthesia it is safer for an author to define his terms and only admit statements which are current coin among physiologists. We imagine Mr. Gardner is writing only for beginners and would disclaim so ambitious an aim as that involved in reviewing the wide field embraced in the title of his book. If his essay is an attempt to impart knowledge to the tiro and to warn him against the common fault of allowing asphyxial symptoms to go unnoticed we welcome it, although we believe its usefulness would be increased by judicious pruning and avoidance of involved sentences. The other essays are concerned with the administration of nitrous oxide and oxygen, ether, and chloroform for surgical operations, and the transference of a patient from bed to the operating table. In these Mr. Gardner is more at home, and if he gives us nothing very novel, he is at least clear and emphatic, and what he says is reliable and up to date. He does not seem to think the possibilities of nitrous oxide and oxygen in general surgery are very great, as it affords only a moderate anæsthesia, induces rigidity, does not abolish all reflexes, and is not suitable for young children.

[1] *Anæsthetics and their Administration.* By Frederic W. Hewitt, M.A., M.D.Cantab. Second edition. London: Macmillan and Co. (Demy 8vo, pp. 552; 59 illustrations. 15s.)

[2] *The Asphyxial Factor in Anæsthesia.* By H. Bellamy Gardner, M.R.C.S., L.R.C.P. London: Bailiere, Tindall, and Cox. 1901. (Crown 8vo, pp. 63.

## THE TREATMENT OF CONSUMPTION.

It will be remembered that soon after the conclusion of the Congress on Tuberculosis held in London last summer a letter was published in the *Times* by Colonel Le Poer Trench, who roundly accused the medical profession of having deliberately suppressed a method of curing consumption invented by Mr. Edwin W. Alabone, at one time a Member of the Royal College of Surgeons of England. The letter led to a correspondence in the columns of our contemporary so prolonged that it has only come to an end—if, indeed, it has yet ended—within the last fortnight. Some account of the general tenour of the correspondence was given in the BRITISH MEDICAL JOURNAL of September 28th (pp. 912-913), and it was mentioned that Mr. Alabone's son had announced in a letter to the *Times* his intention to publish for the information of the medical profession an account of the treatment which Colonel Trench had called "the lachnanthes cure." Mr. M. Anslow Alabone in a subsequent letter to the *Times* said that he proposed to send this account to the BRITISH MEDICAL JOURNAL. He had not communicated with us previously on the subject, but the communication printed below was subsequently received. We should perhaps add that the diagram has been supplied by Mr. Anslow Alabone at our request, as we found some difficulty in understanding the verbal description of the "comminutor" which he states is so important a part of the "cure" described by Colonel Trench as "the lachnanthes cure."

## THE TREATMENT AND CURE OF TUBERCULOSIS PULMONIS, AND THE USE OF THE COMPOUND COMMINUTOR IN THIS DISEASE.

By M. ANSLOW ALABONE, L.R.C.P.E., L.F.P.S.G., L.R.C.S.E.

OWING to many unfortunate circumstances, I wish the reader to understand that any remarks occurring in this paper must be laid to my credit, and should they fall short of expectation the fault is mine, and not that of my father.

It was not my intention to bring before the profession this method of treatment until I had had sufficient time to quote undoubted cases of cure, under my immediate care. This time I consider should be at least one year from the date of dismissal of the patient. But circumstances have arisen that apparently demand an explanation, which I will endeavour to the best of my ability to furnish, concerning this treatment for phthisis. Although, as I have already mentioned, it is much earlier than I had originally anticipated. The principal reason is that I have only had the necessary instrument in my possession for a comparatively short space of time, as mentioned in one of my letters to the *Times* (September 4th, 1901), and commented upon in the BRITISH MEDICAL JOURNAL of September 28th, 1901. So I ask that my statement will be accepted when I say that I am taking the earliest opportunity possible to bring to light what has been considered for over a quarter of a century a secret remedy.

First, it is, I consider, important to comment upon a very broad error which has unfortunately been floated in the press, and that is naming this treatment the "Lachnanthes cure," although an explanation was given for this mistake; an error soon spreads (and in this case it most unfortunately has), but it is undoubtedly a misnomer.

I wish the reader to notice that I have not myself led anyone to suppose this drug to be the only essential power. If reference be made to my letter of the *Times* of September 4th, it will be seen that I said "I was willing to give any advice in my power regarding this treatment," and when I noticed the error which was abroad I expressly stated in the *Times* of September 20th: "This treatment does not entirely depend on lachnanthes, but is also a special mode of inhalation."

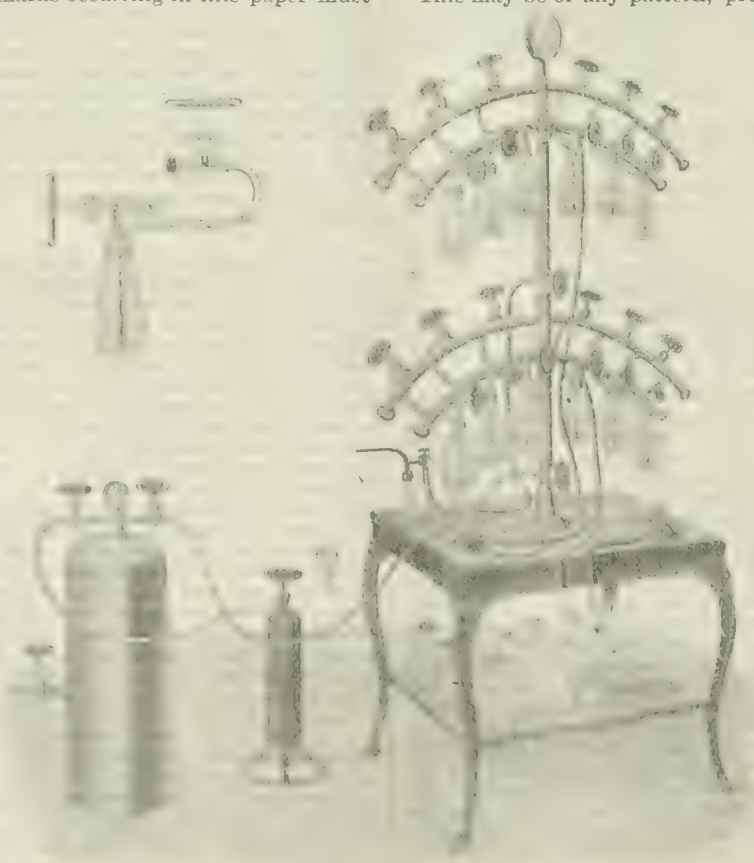
I cannot say I advocate such a high standard for the drug as some, but at present perhaps I have not had so large an experience. But I use it, having been naturally conversant with my father's treatment for many years, and seeing the number of cases he quotes as cured. At present, since this correspondence in the *Times*, I am earnestly investigating what the specific action and what the active principles are in lachnanthes. I think it is accepted that it has power to allay the cough, and as regards its further actions I shall hope to give a favourable report in due time.

The principal agent of this treatment I consider is the compound comminutor. Many of these instruments are now in use amongst medical men, but for those who are not familiar with it I will describe the construction.

The compound comminutor consists of four essential parts: (1) Pump; (2) Cylinders, (3) Generator, and (4) the Remitters.

1. *The Pump.*

This may be of any pattern, provided it has the power to exert a pressure of 100 lbs.



2. *The Cylinder.*

This should be made of thin steel, and tested to a pressure of about 200 lbs. In this air, or a mixture of oxygen and air, are compressed. It has two entrance valves and one egress valve. One entrance valve is for the connection with the pump, and the other with any oxygen cylinder, so that any proportion of oxygen may be mixed with the air. The egress valve is in connection with the generator. The cylinder should have a gauge attached to it in order to ascertain the pressure which has been produced.

3. *The Generator.*

In this construction lie the essential components. The pattern I use is comprised of two tubes closed at their ends and connected at the centre with a hollow upright shaft, the upper tube only having access with the internal part of the shaft. The shaft is fixed into a firm base

at one end, and at the other has a gauge attached thereto in order to ascertain the pressure which is being allowed to pass into the generator. The upper tube is employed for the conveyance of a current of air, or gas, or a mixture of both, into flasks which hold the drugs. While the lower tube is for the conduction of the produced "comminutæ" from the flasks, it has an outlet from which point tubing is attached, and at the further end of this tubing the various remitters are affixed. The flasks are therefore the part in which the charging of the state of the drugs takes place. The inlet from the upper tube and the egress to the lower tube are controlled by competent valves.

The arrangement of the flasks is such that a "comminuta" may be generated in and transmitted from a single flask, so that two or more comminutæ may be generated and united into a common stream: moreover, each flask being governed by its own valves, the stream from them may be regulated in any proportion irrespective of each other. The comminuta is produced in this way. When the air, or air and oxygen, is allowed to pass into the flask, it enters through a central tube; this tube extends the length of the flask, but the air leaves it at a level a little above the fluids, thus creating a vacuum in the lower part of the tube; the fluid is drawn up and directed through small apertures with some considerable force against the walls of the vessel. In this way the already fine spray is broken up and converted into the exceedingly delicate comminuta, which bears resemblance to mist; and this, still under the pressure, is driven out from the flasks through the egress valves and lower tube, and, finally, transmitted through the remitters for inhalation.

The principle, as will now be seen, is to compress the air, or air and oxygen, in the cylinder, conduct it through the tubes into the flask, comminuting the fluids therein, and finally producing the comminutæ in such manner as the case may require.

The volume, quantity, and density of the vapour can be regulated to any desired amount by the governing valves which control the entrance of air to the generator. The pressure gauge on the generator allows of administering any desired quantity of drug, for by comminuting the fluids at a certain pressure and regulating the valve to ¼, ½, or "full," the proportionate amount of drug administered can be ascertained.

The amount given will be in indirect ratio to the specific gravity, the pressure being equal and the valve openings being equal, or in direct ratio to the pressure, the specific gravity and the valve openings being equal. Further, the pressure and the specific gravity being equal, the quantity will be in direct ratio to the opening of the valves. This may appear rather misleading to some, but I take as my base viscidine all through. Some bases will comminute much easier than others, but the ratio given above will be correct if the same base be used, and diluted with further drugs to a lower specific gravity.

I have forgotten to mention that from the central shaft there is an extra valve, independent of the generator to which an ordinary spray bottle may be attached and used for various useful purposes.

The comminution under these principles now described is so fine and delicate that drugs may be inhaled or driven without any deleterious result, such as spasm, coughing or irritation, etc., into the cavities or recesses of the lung whether of natural or morbid origin.

4. *Remitters.*

The administration of the comminutæ can be adopted by the following remitters:

1. *Facepiece.*—This method is the most general and useful, being of advantage in all cases of pulmonary disease. By this means the drugs are inhaled throughout the whole respiratory tract; it may be of any pattern, but should essentially be of metal or glass, thus allowing of strict antiseptic precautions. It of course covers the nose and mouth in the same way as an ordinary anæsthetic "mask," and has a valve to allow of free expiration. It should be held close to the face, or the vapour may escape and be unpleasant to the patient, causing irritation to the eyes. The patients themselves hold the facepiece, which gives confidence to any at first nervously inclined.

2. *Nosepiece.*—This is of the usual shape used on "nose siphons," and is preferably made of glass, which can be boiled and kept clean.

3. *The Mouthpiece* is a straight, short glass tube flattened at the end, and used in cases where a single stream is required.

4. *The Laryngeal Tube.*—This should be of metal. It is a plain hollow tube of the usual laryngeal curve, and is used obviously for projecting a stream into the larynx and neighbourhood. At present I must admit I have not met with much success with it, owing to the length of time required when using this tube, and have had to resort to the facepiece or mouthpiece.

5. *Throatpieces.*—These are of glass, much the same as the mouthpiece, but of various shapes, and used for projecting a stream on any given part of the throat.

6. *The Post-nasal Piece* is also of glass, with a sharp curve almost at right angles, used for affections of the posterior nares.

The reader will, I hope, now have a fair knowledge of the instrument and its parts, and I will proceed to give some of the most useful prescriptions I prescribe, which naturally vary in every case. In early infiltration, where no breaking down of tissue is present, one of the following prescriptions will be found excellent:

*Prescription 1.*

| | | |
|---|---|---|
| ℞ Formic aldehyde | ... ... | mxx increasing to ʒj |
| Menthol | ... ... | gr.x |
| Eucalyptus | ... ... | mv |
| Mollueine | ... ... | ʒj |

*Prescription 2.*

| | | |
|---|---|---|
| ℞ R. lachnanthes | ... ... ... | mxx |
| Creosote | ... ... ... | miv |
| Pinus canadensis | ... ... ... | mxx |
| Viscidine | ... ... ... | ʒj |

But now let us take a case where there is considerable disease, softening and breaking-down of tissues, etc., purulent expectoration and signs of progressive infiltration such as described as the last, second, and third stages. My first principle is to clear the lung as quickly as possible of the fœtid secretion, for which I give expectorants internally and employ the following for inhalation:

*Prescription 3.*

| | | |
|---|---|---|
| ℞ Vin ipecac. | ... ... ... ... | mx |
| Vin antimon. | ... ... ... ... | mv |
| Guiac. carb. | ... ... ... ... | gr.v |
| R. benz. co. | ... ... ... ... | ʒj |

*Prescription 4.*

| | | |
|---|---|---|
| ℞ Pix. liq. | ... ... ... ... | mx |
| Terebenth | ... ... ... ... | mv |
| Balsam Peru | ... ... .. ... | mv |
| R. benz. co. | ... ... ... ... | ʒj |

I then direct my attention to purifying the diseased parts, and use for this purpose either Prescription 1 or 2, or one of the following:

*Prescription 5.*

| | | |
|---|---|---|
| ℞ Thymol | ... ... ... ... | gr.x |
| Eucalyptol | ... ... ... ... | mxv |
| Menthol | ... ... ... ... | gr.v |
| Viscidine | ... ... ... ... | ʒj |

*Prescription 6.*

| | | |
|---|---|---|
| ℞ R. lachnanthes | ... ... ... ... | mxx |
| Pinus Canadensis | ... ... ... | mxv |
| Calendulæ | ... ... ... ... | mvi |
| Viscidine | ... ... ... ... | ʒj |

Should any of these cause irritation or coughing I always prepare one flask filled with prescription 7, which I give for two minutes before and after the inhalation, or sometimes at the same time, but as will be seen in prescription 1, I have already placed eucalyptus in it on account of the irritating properties of formalin.

*Prescription 7.*

| | | |
|---|---|---|
| ℞ Eucalyptol | ... ... ... ... | mxx |
| Menthol | ... ... ... ... | gr. v |
| Ol. ricini | ... ... ... ... | mx |
| Viscidine | ... ... ... ... | ʒj |

Later, when the patient has been inhaling for some time (say a month) with beneficial results, I use a prescription with astringents such as the following:

*Prescription 8.*

| | | |
|---|---|---|
| Terebinth | ... ... ... ... | mxx |
| R. hamamelidis | ... ... ... ... | mxx |
| Mollueine | ... ... ... ... | ʒj |

I will now give the reader an idea as to the time, etc. For convenience I will write the prescription with the number of

prescription above, and the time below. In a case as that just mentioned I give first

| 7 | 3 | 2 | 7 |
|---|---|---|---|
| 3 min. | 4 min. | 3 min. | 4 min. |

say for one week. I then give

| 7 | 3 | 1 | 2 | 7 |
|---|---|---|---|---|
| 2 min. | 1 min. | 5 min. | 2 min. | 3 min. |

for another week. Then

| 7 | 1 | 8 | 7 |
|---|---|---|---|
| 2 min. | 10 min. | 5 min. | 2 min. |

And finally

| 7 | 6 | 8 | 7 |
|---|---|---|---|
| 2 min. | 5 min. | 6 min. | 2 min. |

But, as I have already mentioned, no rule can be laid down, as each case must naturally be treated on its own basis.

In cases of hæmorrhage, of course hæmostatics are indicated, and I generally use one of the following, giving also (if severe) an internal preparation.

*Prescription 9.*

| | |
|---|---|
| Ext. ergot liq. ... ... ... ... | mxx |
| Terebinth ... ... ... ... | mx |
| Viscidine ... ... ... ... | ʒj |

*Prescription 10.*

| | |
|---|---|
| ℞ Hamamelidis ... ... ... ... | ʒj |
| Terebinth ... ... ... ... | mxv |
| Viscidine ... ... ... ... | ʒj |

*Prescription 11.*

| | |
|---|---|
| ℞ Hamamelidis ... ... ... ... | ʒj |
| Renaglandin ... ... ... ... | ʒj |

I combine this with the usual inhalations, somewhat as follows:

| 7 | 9 or 10 | 6 or 2 | 9 or 10 | 7 |
|---|---|---|---|---|
| 1 min. | 4 min. | 5 min. | 3 min. | 1 min. |

Prescriptions 1 or 5, or any such drugs, would directly suggest themselves as being too irritating to be used in hæmorrhagic cases.

I think this will have given the reader a fair description of the comminator and the method of using it. And I will briefly put forward the treatment which I administer internally.

I generally prescribe a syrup containing

| | |
|---|---|
| ℞ Lachnanthes ... ... ... | mlj to xxv |

with one or more of the following:

| | |
|---|---|
| Calcium hypophosphite | |
| Sodium hypophosphite | |
| Potassium hypophosphite | |
| Iron hypophosphite | |
| Manganese hypophosphite ... | ad gr.v to gr.x |
| Quinine ditto ... | gr.ii to gr.v |

and

| | |
|---|---|
| Sy. simplex ... ... ... | ʒss |
| Aqua ad ... ... ... ... | ʒj |

made into a syrup.

I order this syrup to be taken first thing in the morning and after the last meal at night. During the middle hours of the day I treat the most prominent symptoms, so that I cannot give any definite proportion. Cough and night sweats, etc., are treated by draughts as occasion requires. I use for these symptoms or other complications such drugs as suggest themselves as most beneficial to the type of case.

Whenever a case of pulmonary and general tuberculosis occurs, I invariably prescribe, in conjunction with this treatment, urea with the best results, and find it of great value in healing localised tuberculous lesions. I prescribe it as recommended by my friend Dr. Harper, of Nottingham,[1] in doses of gr.x to ʒiss with aq. menth. pip.

Regarding the rest of the principles carried out I will mention briefly:

*Diet.*—This should be of the most nourishing, and given in liberal quantities, but I do not approve of "stuffing," but rather to better the patient's condition, so that his appetite will naturally be improved with his return to health. With meals I invariably prescribe King's emulsion, which cannot be excelled in its properties and quality.

*Fresh Air.*—Here, again, I do not believe in the extreme methods practised in the open-air treatment. Let the patient certainly be out in the fresh air, if dry, all he can, and sleep with his upper window down; if damp, a piece of gauze, pinned across with drawing pins, keeps out fog and dries the air. When out of the bedroom let it be thrown thoroughly open to the fresh air. I recommend, where possible, for a patient to have two living rooms, one which may be left free to the access of air whilst the other is inhabited; but let him change from one to the other frequently, every one or two hours would not be too often; a double room, with folding doors, is excellent for this purpose. Occupation, and other modes of living, must, of course, be considered; but I am rather wandering from my subject, which has been to bring to the notice of the profession the compound comminutor, not as a new instrument, decidedly, for, as I have already mentioned, it has been in use for years, but as one not so widely known as I think it should be. The following is a case now under treatment, and it will give the reader a good idea as to the effect of the treatment:

CASE I.

A professional nurse consulted me on September 22nd, complaining of cough, weakness, and emaciation.

*Previous History.*—Pleurisy four years ago, and three times since.

*Family History.*—Brother and sister died of phthisis.

*Respiration.*—Dyspnœa on least exertion.

*Cough.*—Troublesome, especially at night; *expectoration* greenish, thick.

*No History Hæmorrhage.*—Emaciation marked, and anorexia; weight, 8.9.

On examination I found flattening at both apices with increase T.V.F. and diminished movement. Percussion, dull above the clavicles and extending downward to second rib on left and third rib on right side. On auscultation I found bronchophony on both sides, and attended with loud moist *râles* on the right side, and softer *râles* on the left side. On examining the back I found similar signs, but not by any means so well defined. Beyond this there were the physical signs cognisant with old pleuritic adhesions. I have forgotten to mention there was little rise of temperature.

I considered this a good case to demonstrate the effect of any treatment, and I prescribed the following:

| | |
|---|---|
| ℞ Lachnanthes ... ... ... | ʒij |
| Mang. hypophosphite | |
| Sod. hypophosphite ad ... ... | ʒiss |
| ℞ Nux. vom. ... ... ... | ʒj |
| Syrupus simplex ... ... ... | ʒij |
| Aq. ad. ... ... ... ... | ʒviij |

ʒss t.d.s. before meals,

and gave daily inhalations:

| 7 | 3 | 2 | 7 |
|---|---|---|---|
| 3 min. | 5 min. | 2 min. | 4 min. |

On September 29th she reported that the cough was less, and she had had much better nights on this account, also that the expectoration was freer and more abundant. I gave her:

| 7 | 3 | 1 | 2 | 7 |
|---|---|---|---|---|
| 2 min. | 1 min. | 5 min. | 2 min. | 3 min. |

On October 23rd the report was as satisfactory, and then I made her a special preparation of 7, 3, and 1 combined, which she still takes daily. When I examined her a few days ago, I found the lungs had quite dried, and she had gained 6 pounds in weight (on ordinary diet). The breathing was easier, the appetite much improved, and all in respects she appeared greatly benefited. She is of course still under treatment, but I hope to dismiss her from my care in a few weeks as apparently cured, until I hear from her in course of a year that she is still in good health, when I shall naturally claim the case as one cured.

CASE II.

The second one I will quote is of a much more serious type. F., aged 29, consulted me on October 18th. I found the patient in bed.

*Family History* was bad.

*Previous History.*—Pneumonia ten months ago, from which illness he never recovered.

*Expectoration.*—Nummular, green, and purulent.

*Cough.*—Severe.

*Voice.*—Almost lost, extensive tuberculous infiltration around larynx, severe dyspnœa.

Temperature 103° to 101° at night, falling to 99° in morning. Pulse weak, 130.

On examination the whole of the right lung was infiltrated and breaking down, and the greater part of left lung was also affected, there being a cavity of considerable size in the right upper lobe. I placed him under lachnanthes and hypophosphites, the same as the last prescription, and gave him nitrate of strychnine in small doses, gr. $\frac{1}{100}$, with inf. gent. co. in the middle of the day; and, as he was unable to come to me, I gave him the following for inhalation every two hours:

| | |
|---|---|
| ℞ Creosote ... ... ... ... | gr. iv |
| Pinus canadensis ... ... ... | mxxv |
| Thymol ... ... ... ... | gr. x |
| Menthol ... ... ... ... | gr. x |
| Eucalyptus ... ... ... ... | mxx. |

to inhale through an ordinary inhaler.

November 6th. Lungs are much dryer; patient looks better and appetite is increased. I ordered the patient out of bed and told him to sit in a well ventilated room.

November 13th. There are no moist sounds to be heard in front of the chest; there are, however, a few at the back, the patient is much more cheerful and has been walking about the room, appetite increased but complains of pains of a drawing nature in chest; this I explain as being the

[1] *Lancet*, March 9th and June 15th, 1901.

drawing together of the scar tissue. The temperature has been down to 101° on four occasions, but is to-day 102°.

November 30th. Improvement still maintained, patient gaining strength. There are no moist *rales* to be heard now in the chest. The temperature during the last week has not been higher than 100° and not lower than 98.4°. The voice is, however, still husky.

This case I do not pretend to call anything but greatly benefited in a short space of time, which to anyone who had seen him when he was ordered home from a sanatorium appears most striking, and I quote it as an excessively bad case which is now being satisfactorily treated, I might give a few more instances but these two are fair examples of those I have under treatment at the present time; and will close by saying again I regret, owing to many circumstances, I am not able to quote several cases of cure which have come under my notice, but not under my individual professional care.

[We are informed by Mr. M. A. Alabone that "mollueine" is supplied to him by Mr. J. Wells Wood, M.P.S., of Stoke Newington and South Hackney, and is described as a mixture obtained by the action of superheated steam on fats, practically a glycerine of lower specific gravity than the ordinary *B.P.* product, and that "viscidine" is also obtained from Mr. J. W. Wood, and is a preparation of hydrocarbon oil. Mr. M. A. Alabone also informs us that "King's emulsion" contains 50 per cent. of pure cod-liver oil, with lactophosphites, and that he believes that it can be obtained through any chemist.]

## THE FACTORY AND WORKSHOP ACT, 1901.

This Act, which comes into force on January 1st, 1902, consolidates all the previous statute law relating to factories and workshops, and introduces certain important amendments. As there is nothing in the Act as published to show what parts are new and what are old, it may be useful to point out which of its provisions are new, paying special attention to those which are of interest to the medical profession.

The Act is divided into ten parts, of which the first relates to

### Health and Safety.

*Health.*—All the provisions of the older Acts with regard to the sanitary condition and overcrowding of factories, workshops, and workplaces are here reproduced. It will be remembered that the Factory Acts of 1891 and 1895 made provision for the cubical space which should be allowed in factories and workshops accommodating a certain number of workers. These sections are re-enacted, but it is now provided by Section III (3) of the new Act that if a workshop or workplace (not being a domestic workshop) is occupied by day as a workshop and by night as a sleeping place, the Secretary of State may increase or otherwise modify the amount of cubical space prescribed. If the Home Secretary is satisfied that the provisions of the Act and of the law relating to public health, so far as it affects factories, workshops, and workplaces are not carried out by any district council, he may authorise an inspector to take the necessary proceedings for the enforcement of the Act. The duty of attending to the sanitary condition of workshops has always been imposed, in the first instance, upon the district council, and consequently upon the medical officer of health, by the Public Health Acts. That duty is now extended to factories and workplaces, and default on the part of the district council may in future be remedied by immediate action on the part of an inspector, who may recover the expenses incurred by him from the district council in default (Section IV). The air in factories must be kept at a reasonable temperature by some method which will not interfere with its purity. The Secretary of State may require thermometers to be kept in convenient places (Section VI). Ventilation, which was formerly required only in factories where gases and vapours were generated to an injurious extent, and in a few other cases, is now compulsory in every factory and workshop (Section VII). The standard of ventilation is to be prescribed by the Secretary of State (Section VII (i)). The cost of providing suitable means of ventilation may be apportioned between owner and occupier. Section VIII provides for the draining of floors in places where processes are carried on which render the floor liable to wet.

*Accidents.*—There are no new provisions with regard to the investigation of accidents. Section XXXII of the Act of 1878, which provided that a certifying surgeon should in certain circumstances make a full investigation as to the nature and cause of death or injury caused by an accident, is reproduced in Section XX of the new Act.

### Fitness for Employment.

Part II of the Act relates to employment, and contains a number of provisions dealing with hours and holidays. The only portion of this part of the Act which interests the medical profession is that relating to "fitness for employment." By Section LXI it is provided that the occupier of a factory or workshop shall not knowingly allow a woman or girl to be employed therein within four weeks after she has given birth to a child. By a curious oversight, this salutary provision was not extended to "girls" in the former Acts. What is still more singular, no alteration of the law was discussed in the House of Commons, the words "or girl" being added in the drafting office.

Now, as formerly, a certificate of fitness is necessary before a child or young person can work full time in any factory or workshop (see Section LXIII). The necessary certificate of fitness must be drawn up by the certifying surgeon of the district, and must be to the effect that the surgeon has personally examined the child or young person, and that he is satisfied, by the production of a certificate or otherwise, that the child is of the required age. So much of the law is old, but it is provided by Section LXIII (5) of the new Act that the certificate of the surgeon may be qualified by conditions as to the work on which a child or young person is fit to be employed. Further, the surgeon is to have the same powers as an inspector for the purpose of examining any process in which a child or a young person presented to him for the grant of a certificate is proposed.

### Education.

Part III, which is a reproduction of those parts of the older Acts which relate to education, contains nothing new.

### Dangerous and Unhealthy Industries.

Part IV.—In this department of the law, relating to factories, there have been few changes which affect the medical men who take part in the administration of that law. By Sections LXXIX and LXXXV, however, the Secretary of State is empowered to make regulations with regard to such trades, processes, or industries as he may consider to be dangerous or injurious to health, life, or limb. The determination of the question whether a particular industry is dangerous to health will probably fall upon the medical profession.

With regard to home work, provisions for its regulation are to be found in Sections CVII to CXV. Formerly it was found that any such place was injurious to health, it became the duty of an inspector to serve notice in writing to that effect upon the occupier of the factory, after which the occupier was compelled to refrain from giving out work to be done in that place. In future the notice above referred to may, by Section CVIII of the new Act, be given by the district council, which means that new duties will be imposed on the medical officer of health. It is added, however, that the section shall not apply except in the case of persons employed in such classes of work as the Home Secretary may specify.

### Infectious Diseases.

New and important provisions are made in order to prevent the spread of infectious disease in domestic workshops. By Section CX it is provided that, if the inmate of a house is suffering from an infectious disease required to be notified under the law for the time being in force in relation to the notification of infectious diseases, the district council may make an order forbidding any work to be given to any person in that house. In a case of urgency, the powers conferred on the district council by the section may be exercised by any two or more members of the council acting on the advice of the medical officer of health. The work to which the section is to apply is the making, cleaning, washing, etc., of wearing apparel. It would seem, therefore, that the chief difficulty attendant upon the non-admission of laundries to the provisions of the Factory Acts is overcome by this section, as the sending of any clothes to be washed in a house where there is infectious disease may be forbidden by a district council.

ADMINISTRATION OF FACTORY ACTS.

Part VIII, which relates to the administration of the Factory Act, comprises, *inter alia*, regulations with regard to certifying surgeons (Sections CXXII to CXXIV). The provisions of the Act which relate to certifying surgeons are merely a re-enactment (Sections XXXII, LXXI, LXXII, and LXXIV) of the Act of 1878, and Section XLVI of the Act of 1895. Those Acts provided that, subject to such regulations as might be made by the Secretary of State, an inspector might appoint a sufficient number of duly registered medical practitioners to be certifying surgeons under the Act. The older Acts made provision for the absence of a certifying surgeon by enacting that where there was no surgeon within three miles his work could be done by the medical officer of health. Section CXXIII of the Act now provides that, where there is no certifying surgeon for any factory, the Poor-law medical officer for the district in which the factory or workshop is situate shall act for the time being as the certifying surgeon for that factory or workshop. Another alteration has been made with regard to the fees of a certifying surgeon. It was provided by Section LXXIV of the Act of 1878 that the occupier of a factory might deduct the certifying surgeon's fee, or any part thereof, from the wages of the person for whom the certificate was granted. This was specially repealed in the Amendment Bill of the present year. The fees of certifying surgeons must still, however, be paid by the occupier of the factory, either upon a scale fixed by the Home Secretary or in pursuance of an agreement between him and the surgeon (see Section CXXIV).

REGISTERS AND RETURNS.

Sections CXXVII to CXXXII, which relate to notices, registers, and returns, contain some new provisions of interest to medical officer of health. Thus it is provided by Section CXXXII that the medical officer of health shall in his annual report to the Council report on the administration of the Act in workshops and workplaces. It was formerly the duty of the medical officer of health to give notice to an inspector whenever he found any woman, young person, or child employed in a workshop. This duty is now restricted to cases where there is no abstract of the Act fixed up in the workshop (Section CXXXIII).

OPERATION OF THE ACT.

The Act is extended to Crown factories and workshops by Section CL, subject to a dispensing power which may be exercised by the Home Secretary in times of emergency. Another important point is the inclusion in the definition of the word factory, electrical stations, "that is to say, any premises or that part of any premises in which electrical energy is generated or transformed."

## LITERARY NOTES.

THE *Medical Chronicle* for September, which we only lately received, contains an interesting account, with a portrait, of the life and work of the late Professor W. Kühne, of Heidelberg, by Professor Stirling. According to him, Kühne was one of the greatest and most distinguished of physiologists since the death of Brücke, Helmholtz, Ludwig, and Du Bois-Reymond. He was a many-sided man, and used every available method of research. His name will ever remain associated with three great fields of physiological inquiry—the physiology of muscle, and of the retina and the chemistry of digestion. His Croonian Lecture on the Origin and Cause of Vital Movement, given before the Royal Society in 1888, contains an epitome of his own work on the relation of nerve to muscle. Kühne was a man of richly-stored mind. He had travelled much and gave much attention to art. He was a man of genial presence and sparkling wit, and his hospitality and kindness were unbounded. He gave directions that his body should be cremated to an accompaniment of the first part of Beethoven's Ninth Symphony.

The paper entitled Was Cornaro Right? read at the annual meeting by Dr. Van Someren has excited a good deal of discussion. John Abernethy's opinion on the subject may therefore be worth quoting as being appropriate, if not altogether edifying. We take it from the *St. Thomas's Hospital Gazette* for November, where it is given among some examples of the famous surgeon's method of lecturing culled from early numbers of the *Lancet*. In speaking of the results of disturbed digestion, as when a man "overcharges his stomach with all the cursed mixtures which a vitiated appetite can invent," Abernethy delivered himself as follows:

> When patients apply to me, and I see that their complaints are chiefly of the nature I have been describing, I tell them that I am no physician, and I offend them stoutly when I tell them that they have their health in their own keeping. If a man were to do as Cornaro did, he would be rewarded for it by a long and happy life. Cornaro was given over by his physicians at the age of 35; he saw that there was not the least chance of recovery if he continued to swallow the trash they were in the habit of giving him, and that there was no good in putting food into his stomach if his stomach could not digest it. What did it do there? Why, it played the very devil with Cornaro's guts. "So," said he, "I dropped the plan pursued by my physicians, and adopted a regimen of my own....." He went down to the grave at the advanced age of 105, as the account is given by his niece, who was a nun at Padua.

The *Journal of Medical Research* is the title of a new periodical devoted, as its name indicates, to the publication of research work in any branch of medicine. It is controlled by the recently-founded American Association of Pathologists and Bacteriologists, and will contain the proceedings of that body. It will appear under the editorial direction of Dr. H. C. Ernst, whose aim it will be to publish the results of original investigation as rapidly as material accumulates. Each number will contain about 50 pages. Volumes will consist of ten numbers.

Dr. Paul de Régla, a well-known French physician and Orientalist, is finishing a work entitled, *Au Pays de l'Espionnage, Les Sultans Mourad et Abd-ul-Hamid II.*

A new monthly journal entitled the *Fraternal Medical Examiner* has made its appearance in Omaha. It is edited by Dr. Ira W. Porter of that place. It is specially devoted to the medical affairs of fraternal beneficiary orders, but life insurance in general also falls within its scope.

Mr. Elliot Stock has just published a work entitled *Reading Abbey*, by Jamieson B. Hurry, M.A., M.D., of Reading, formerly of St. John's College, Cambridge. The following titles of the various chapters will briefly indicate the scope of the work.

Chapter I. The Abbey: Foundation; Precincts; Church.
" II. The Abbey (continued): Monastic Buildings; Leper House; Hospitium of St. John; Infirmary.
" III. The History of the Abbey.
" IV. The Martyrdom of Hugh Cook Faringdon.
" V. The Struggle between the Abbey and the Guild Merchant.
" VI. The Establishment of the Abbey.
" VII. The Endowments, Privileges, and Revenues of the Abbey.
" VIII. The Arms, Seals, and Coinage of the Abbey.
" IX. The Library Belonging to the Abbey.
" X. The Relics, Plate, and other Treasures belonging to the Abbey.
" XI. The Fate of the Abbey after the Dissolution.

The work is embellished by many illustrations of the locality, as well as by facsimiles, plans, etc.

The *American Journal of Anatomy*, of which the first number is before us, has, according to the prospectus, been founded to collect into one place, and present in a worthy manner, the many researches from American investigators now scattered through many publications at home and abroad. Many aspects of comparative anatomy, embryology, histology, and cytology are so intimately bound up with the problems of human anatomy that these subjects will be included within the scope of the new journal. It will be the aim of the *American Journal of Anatomy* to recognise this close natural relationship between the various branches of the science, and to publish results of the best original work of American students of anatomy. The Editorial Board consists of the following gentlemen: Lewellys F. Barker, University of Chicago; Thomas Dwight, Harvard University; Simon H. Gage, Cornell University; G. Carl Huber, University of Michigan; George S. Huntington, Columbia University; Franklin P. Mall, Johns Hopkins University; Charles S. Minot, Harvard University; George A. Piersol, University of Pennsylvania; Henry McE. Knower, Secretary, Johns Hopkins University. The *Journal* is published at Baltimore, and will appear quarterly. The first number contains among other contributors a paper on the intralobular framework of the human spleen by Dr. Preston Kies of the University of Chicago, and studies on the neuroglia, by Dr. G. Carl Huber of the University of Michigan. The *Journal* is beautifully printed, and the execution of the illustrations is beyond praise.

## BRITISH MEDICAL ASSOCIATION.
## SUBSCRIPTIONS FOR 1901.

Subscriptions to the Association for 1901 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.


# British Medical Journal.

SATURDAY, DECEMBER 28TH, 1901.


## DOCTORS AND MIDWIVES.

Our columns have during the last few months borne voluminous testimony to the anxiety felt by a large number of members of the profession with regard to the present position of what is commonly called the midwives question. Certain instances have recently been reported in the newspapers in which medical men have declined to go to confinements which they have not been engaged to attend on the ground that they did not "follow midwives." To one such instance Surgeon-Major Ince drew attention in a letter published in the British Medical Journal of October 19th. In this instance the woman died without medical attendance although the husband had applied to three medical practitioners for their aid. The incident has excited a great deal of indignation and many searchings of heart, in which the medical profession as a whole has shared. The case was undoubtedly a hard one, but it is a proverb that hard cases make bad law, and it will be well to consider the nature of the circumstances which has led certain medical men to follow a course which is, at first sight at least, contrary to the traditions of the profession, and what means exist, or can be provided, for preventing such occurrences in the future.

It is very well known in the profession that many lying-in patients attempt to obtain the services of a qualified medical practitioner without any intention of payment, and if some discretion is not exercised by medical men in general practice, a direct encouragement is afforded to what is really little less than systematic fraud. But it is a reproach to a civilised nation that a woman should die of some preventable accident of childbirth when skilled medical assistance is at hand. There seems to be a very general opinion that a way out of the dilemma can be found through the machinery of the Poor Law. But the Poor-law regulations as to "medical aid in urgent midwifery cases" are at the present time unsatisfactory. As they were framed as long ago as July 1847, it is not astonishing that they are ill-adapted to present-day requirements. As a matter of fact, one of the most important of them, which provided that no fixed salary of a district medical officer should include attendance on midwifery cases, but that all such cases should carry an extra fee, has been practically set aside in some unions by a suspension of the order in question. Such suspension must have had the sanction of the Local Government Board, as otherwise the original order would have remained in force.

It is often assumed that if in an urgent case application is made to the Poor-law medical officer of the district in which the patient resides it would be his duty to attend the patient. It does not, however, become his duty to do so unless the request for attendance is accompanied by a medical order signed by a proper official, that is to say, either by a relieving officer or by an overseer. In most districts this is well understood by the poorer classes, but many object to make any effort to comply with the regulation, and direct application is made to the parish medical officer for his assistance in an emergency. If he yields, he may find that he has accepted a serious responsibility, with no chance of being remunerated, as the public auditor of Poor-law expenditure would not be likely to sanction the payment of a fee for medical services rendered, even in an urgent case, without the necessary written authority. It is true that in many districts, if the Poor-law medical officer attends an urgent case without order, it is the custom for the relieving officer to give the friends an order on the following day; this is recognised by the Board of Guardians, though granted *ex post facto*, and the fee is paid. It is further true that, if the order is not subsequently given, the guardians may decide that the woman was "in a destitute condition," which would entitle the medical officer to the usual fee.

But some Boards of Guardians, especially in country districts, will pay no fee, even in urgent puerperal cases which cannot be recovered in a court of law, neither will they exercise the powers they possess (by passing a special resolution as indicated above) to enable a district medical officer to be paid a fee which he has already earned, but cannot otherwise claim. When such professional fees are applied for, the usual practice of such Boards of Guardians is to refuse payment, and to assign as a reason that the medical practitioner attended the case as a private practitioner, and must consequently apply to the patient or the friends for his remuneration. This he knows well is useless, and a Poor-law medical officer therefore in a district in which Boards of Guardians assume this unreasonable attitude may well take exception to the proposal to refer to him every confinement in the management of which a midwife has got into a difficulty.

In many localities voluntary organisations fill the gap, but where they do not exist any systematic refusal to attend an urgent case because a midwife was in attendance would bring about a very serious position. Already the effect of this attitude, even though it may have been taken by a few practitioners only, has been considerable; it has been seized upon by the supporters of the Midwives Bill as an additional reason for calling upon the public to support that measure, which, it is stated, will be introduced again in the next session of Parliament. This Bill will have the support in the House of Commons of many members, and outside it will be warmly advocated by a large body of influential men and women. It is condemned by many members of the medical profession, probably by the majority, and it does not

embody all the safeguards considered necessary by the General Medical Council. Suppose the Bill, either by the fortunes of the ballot or the favour of the Government, to obtain a good place, what will then be the position? The House of Commons will have before it a scheme embodied in a Bill, supported by an organised body of opinion within and without the House. If, as happened in 1900, this Bill comes up for second reading, members will be asked to vote "Aye" or "No" on the scheme. Is there to be any alternative scheme? There is the Bill drafted by the Parliamentary Bills Committee, and approved by the Council of the British Medical Association. It is asserted that this Bill does not express the opinion—the present opinion at any rate—of the majority of the members of the Association, and there appears to be no present means of either proving or disproving this assertion. At any rate it is clear that a very considerable number of members of the Association do not approve the Bill, and it is, we apprehend, safe to assume that it will not be introduced into the House of Commons at the beginning of the session. Therefore, it will not be balloted for, and so far as the average member of Parliament goes, it might be non-existent. There is another scheme embodied in some resolutions of the Manchester Medical Guild which very much resembles a scheme put forward by Dr. McCook Weir in a document called by its author a bill, though not drafted according to accepted rules of legal phraseology. This scheme, or these schemes, will also be for the average member of Parliament non-existent; they may be used in argument as offering a possible alternative, but they cannot be voted upon, they cannot be referred to a standing committee, and if the matter comes to a vote the member must vote either for or against the Bill of the Midwives Registration Committee. The experience of 1900 shows that it is highly probable that the second reading of that Bill will, if the House reaches it, again be carried, and it may again be referred to the Standing Committee on Law, where amendments founded on any alternative scheme might no doubt be moved. The experience of the attitude of that Committee in 1900 does not afford grounds for any very sanguine expectation that such amendments would be carried. If the Bill instead of being referred to a Standing Committee, were taken in Committee of the whole House, we cannot say that the prospect of any material amendment being carried is much greater; in fact, it would probably be less. If, however, such an amendment were carried the Bill would no doubt be dropped to be revived again in another session.

If a Bill embodying an alternative scheme were carefully drafted and introduced at the beginning of the session there would be strong grounds for asking the House of Commons, in the case of the Bill of the Midwives Bill Committee being read a second time, to refer both Bills to a Committee, either to the Standing Committee on Law, or to a Select Committee which might take evidence and make a report in a subsequent session.

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The *Athenæum* states that Professor Koldewey, who directs the explorations of the ruins of Babylon for the Deutsche Orient Gesellschaft, has discovered a temple of Adar or Ninib, the tutelary god of physicians.

## THE "COMMINUTION" OF CONSUMPTION.

The age of chivalry did not die with Don Quixote, for have we not a worthy successor to that doughty champion in Colonel Le Poer Trench? The equipment in which the gallant colonel comes forth to do battle against all comers on behalf of one whom he regards as a persecuted benefactor of mankind is as inadequate as that in which the Knight of the Sorrowful Countenance rode out to relieve distressed damsels: but this fact makes his valour all the more conspicuous. The first giant whom he encountered was the General Medical Council, which he charges with having in a professional sense suppressed Mr. Edwin William Alabone, and with thus having kept from the public the knowledge of a method of treating consumption discovered by that gentleman, "with the result that many thousands of cases pronounced hopeless and incurable, under the recognised treatments, have been left to die." Those wicked enchanters, the doctors have, Colonel Trench seems to believe, since conspired to hide Mr. Alabone's discovery from the profane vulgar: the implied reason being that, if the remedy were known, the doctors' occupation would, so far as consumption is concerned, be gone. With regard to this it need only be said that the suppressed discoverer had abundant opportunities of bringing any method of treatment which he thought useful before the medical profession in the ordinary way; that for reasons known to himself he did not choose to do so; and that it was just because he adopted methods of publicity condemned by the College of which he was a Member, and had been guilty of a breach of the declaration made by him on his admission to Membership, that his name was removed from the *Medical Register*. The punishment inflicted on Mr. Alabone can no more be called persecution than the withdrawal of an officer's commission, or the striking of the name of a solicitor off the rolls, can be designated by that term.

If the remedy has been "practically kept from the public," this is surely as much the fault of the discoverer as of the medical profession. Mr. Alabone has not shown any particular disposition to hide his light under a bushel, and if he had chosen to reveal it he could doubtless readily have found channels for the purpose. He may say that he has revealed it in a book entitled *The Cure of Consumption*, but the description there given is not sufficient to enable anyone else to apply the method, and indeed, it may be gathered from a statement made by Colonel Trench, that it cannot safely be used except under the "entire control" of the inventor. From another statement made by his champion, that Mr. Alabone has been forced "to devote his wonderful cleverness and aptitude to the perfecting of his splendid apparatus, which, though he may not himself profit by it, has already been of great value," we are apparently invited to believe that the treatment is applied in a spirit of pure philanthropy. Why then did not the discoverer make it known *urbi et orbi*? The responsibility for the "suppression" so loudly complained of lies with Mr. Alabone himself, and not with the medical profession. It is doubtless the perception of this obvious fact that has led Mr. Alabone's son to come forward and reveal the precious secret which has so long

been kept from the public. Mr. Anslow Alabone is a qualified member of the medical profession, and we have therefore thought it right to give him the opportunity which he asked for "to bring to light what has been considered for over a quarter of a century a secret remedy." His communication will be found at p. 1868. With a filial piety worthy of all respect, Mr. Anslow Alabone takes the full responsibility for it on himself; but, as he claims to have been conversant with his father's treatment for many years, he may also be taken to speak as the medium of his father's long-delayed revelation to suffering mankind.

It would seem that after all there was very little to reveal. When Dr. Stirling Hutchinson published a book entitled *The Secret of Hegel*, it was unkindly said that he had kept the secret which he professed to disclose; if Mr. Anslow Alabone has not kept his father's secret, it must be concluded that there is no secret to keep. He tells us, indeed, that the treatment should not be called the "lachnanthes cure," because it does not entirely depend on lachnanthes, but is also a special mode of inhalation. Here, again, it is Mr. Alabone himself or his champion Colonel Trench who is responsible for this "broad error." In a letter addressed to the *Times* the latter gentleman urged that "immediate steps be taken to publicly test the efficacy of the 'Lachnanthes' cure." The alleged virtues of the drug are to be submitted to a scientific test by Dr. Latham of Cambridge, and it is only fair to Colonel Le Poer Trench to say that he has undertaken to bear the expense of the investigation. Colonel Trench's sincerity and singleness of purpose have been conspicuous throughout the controversy, but this fact makes it all the more regrettable that he should have lent the support of his name to the vaunting as a specific of a remedy which for the present at least must be regarded as of doubtful value.

There seems to be nothing special in the "mode" of inhalation, but the apparatus, to judge from the illustration which has been supplied by Mr. Anslow Alabone at our request, is sufficiently "special," at least in appearance, to produce a considerable moral effect. The "comminutor" is indeed well calculated to give a susceptible patient the notion that his disease is to be "smashed, shattered, and pulverised." Mr. Gladstone's famous phrase is so appropriate to the subject that we wonder it has never been used to describe the effect of the "comminutor." The drugs used are all, with the exception of lachnanthes, in common medical use; the only peculiarity is in the vehicle. We have done our best, as may be seen from the editorial note appended to Mr. Anslow Alabone's communication, to learn what "mollueine" and "viscidine" are, but the information vouchsafed is somewhat vague. This, however, is of little consequence; for, as already said, it is the *mode* of inhalation that is the essential feature of the treatment. We have heard of a practitioner who was reputed to work marvellous cures, and whose secret turned out to be that he impressed on his patients the necessity of sipping the medicine which he prescribed "like a bird." The true inwardness of the "Alabone treatment" would seem to be something of a kindred nature.

In regard to the two cases of which notes are given, Mr. Anslow Alabone explains that they are not to be taken as examples of cure. This explanation was hardly needed, for in spite of the scantiness of detail given, it is clear that there is nothing in them to warrant any claim to superior efficacy for the "comminution" treatment. We will go so far as to say that there is nothing to show that the "special" treatment had any effect at all. Mr. Anslow Alabone is alive to the importance of good feeding and fresh air in the treatment of consumption; and, as Voltaire said, an incantation will kill a flock of sheep—if a sufficient dose of arsenic be given at the same time.

On the whole we may say with regard to Mr. Anslow Alabone's communication what Mr. Weller, Senior, said of matrimony: that it seems to be scarcely worth while to go through so much to learn so little.

## NATIONAL PHYSIQUE.

Earl Grey has recently called attention to the value of a systematic weighing and measuring of our school population as a means of assessing, from the physical point of view, our national progress or deterioration. The practical suggestion that he makes is that each half-year, in the first week of March and the first week of October, dates when every school in the country is in session, the weights and measurements of all children on the rolls of attendance should be registered. There is no doubt much to commend this proposal, which needs only the practical sympathy of School Boards and school managers to procure, at a comparatively small expenditure of time and money, a body of statistical information which could not fail to be useful in estimating the physical condition of the rising generation in the various parts of the kingdom, and in throwing light upon the problems arising out of the growing absorption of our rural population into urban communities. In 1883 the Anthropometric Committee of the British Association published its final report, and in this we find certain statistics of the height and weight of children of school age, not, however, sufficiently comprehensive to found upon them "safe conclusions as to the relative physique of different classes of the community." More recently Mr. C. Roberts furnished to the Royal Commission on Secondary Education, 1895, a memorandum on the "Medical Inspection of, and Physical Education in, Secondary Schools," wherein it is stated that "the more intelligent classes are taller and heavier at corresponding ages than the less intelligent—the most favoured classes than the less favoured classes." Thus, from 11 to 12 years of age the public school boy averages 55 inches in stature, and 78.7 lbs. in weight, and the elementary school child 52.6 inches and 67.8 lbs.; while factory children measure 51.6 inches and weigh 67.4 lbs., and those at industrial schools 49.6 inches and 63.2 lbs. respectively. It would seem from a recent return presented to the Home Office that during the last twenty years some improvement has taken place in the physique of children admitted to our industrial schools, for, instead of the figures quoted by Mr. Roberts above from the Anthropometrical Committee's report of 1883, the boys between 11 and 12 in these schools in 1901 measured 50.82 inches and weighed 64.63 lbs. As these children may be taken as typical of the slum-dwellers of our great cities, these recent statistics, so far as they go, do not favour the view put forward by Earl Grey of the deterioration of our urban populations of late years. Of course the number of observations in this particular class is hardly sufficient to warrant any general conclusions, and a reference to the tables in Mr. Roberts's book on *Anthropometry* lends support to the view that between 8 and 12 (at any rate) the child of the agricultural labourer has the advantage, both in height and weight, over the child of the poorer class of indoor workers in towns,

though children of urban artisans appear to surpass the former in weight. Systematic weighing of school children, in rural as well as urban districts, would help to settle some of these debatable questions, and be of service socially as well as scientifically. The question of underfed school children, which has recently engaged much attention in London, is one which affects education in rural districts as well as in our large cities, though methods of judicious relief are perhaps less systematically organised in the former. It has been well said that the children of a nation constitute the physical capital with which it will have to face the future; and it is a national duty to scrutinise from time to time, and as far as possible safeguard the national capital. Such anthropometrical methods as Earl Grey proposes would help in this, but it is essential that the observations should be uniform and universal to be of practical value. "The measuring rod and balance should" (as Mr. Roberts remarks) "be deemed as necessarily a part of the school furniture as the desks, forms, and books," and all teachers should be trained to make and record the necessary simple observations, which, to be of scientific service should be supervised by the school medical officer. Not only weight and height, but chest girth (in the case of boys), should be recorded. It is for the Board of Education to issue official directions, but no doubt willing assistance would be given by the Society formed in 1896 "for the scientific study of the mental and physical condition of children."

## THE LATE SURGEON-GENERAL HARVEY.

OUR Special Correspondent in Bengal writes: The death of Surgeon-General Harvey after only a few days' illness, and within a week or two of his return from leave to complete the few remaining months of his tour of service in the highest position open to him, is an event of a most pathetic nature, while it removes a well-known figure from our midst who can ill be spared in the present state of the Indian Medical Service, whose honoured head he was. In the course of his thirty-five years service he filled many posts of a very diverse nature, and his success in all is the best tribute to the versatility and ability of the man. He served with distinction in the field, both shortly after entering the service (in the Bhutan and Lushai expeditions) and in the responsible post of Principal Medical Officer with the Hazara and Miranzai field forces twenty years later. Most of his service was spent in the civil department in Bengal, where he distinguished himself by most painstaking researches in the field of medical jurisprudence as Sanitary Commissioner, and for many years as Professor of Midwifery at the Medical College, Calcutta, where he did a very great deal in overcoming the timidity of native women in submitting themselves to operations for ovarian tumours, etc., and thus opened up a wide field of useful work for his successors. During this time he had a very large practice, which on attaining administrative rank he had to relinquish. In doing so he only entered a sphere of wider utility, and his great energy and tact marked him out for the Director-Generalship of the Indian Medical Service in 1898. In this high office he earned the love as well as the respect of the whole service, his courtesy and hospitality and evident desire to know his officers personally endeared him to all, while the untiring zeal with which he worked for the good of his service inspired confidence and hopefulness, which was much needed during the heavy strain of the last few years. During his all too brief period of office he organised a bacteriological department, and another in charge of the lunatic asylums, while the recent sanction of an increase in the numbers of the service was also carried through by him. And now, just when he was about to retire to a well-earned leisure, and when it was confidently expected that his services would have received some fitting reward from the Government he served so long and so well, his life has suddenly been cut short, and a gap which it will be very difficult to fill has been left. His body was cremated, in accordance with his wishes, and the ashes buried in Simla.

## THE HOUSING OF THE WORKING CLASSES.

DR. T. ORME DUDFIELD has presented a valuable and interesting report to the Public Health Committee of the Borough Council of Kensington, upon the subject of the housing of the working classes. The report is largely based upon an extensive local inquiry into the nature and extent of overcrowding in the borough, and of necessity much of it is of purely local concern; but the report also contains many facts of general interest. Of cases of overcrowding, judged by the standard of the by-laws, which require for an adult 400 cubic feet of space in a room occupied both by day and night, and 300 cubic feet in a room occupied by day or by night only, very few were found, and, when this was the case, it was generally a question of one child too many. The death of a child would abate overcrowding, the birth of a child create overcrowding. A case was noted of a family comprising the parents and a 2-year-old child occupying a room containing 1,200 cubic feet, or 200 feet more than the by-laws exact. The mother gave birth to twins, and overcrowding was thus brought about, the space required for the family being now 1,400 cubic feet. Had Nature been less bountiful the room would have proved exactly the space required for the four persons (equal to three adults). In several cases nocturnal overcrowding was brought about by the misuse of space, as, for example, when all the members of a family slept in one room, another room being used by day only. The report is also interesting as showing what a large percentage of the earnings of the working classes goes in rent. "Cases could be cited of houses worth perhaps 12s. to 15s. per week unfurnished, let in furnished rooms so as to bring in 30s., 40s., and in a few cases even 50s. a week." The rent for a single room tenement ranged from 3s. to 7s. 6d. per week. Dr. Dudfield is of opinion that considerable benefit would accrue if the sanitary authorities of the metropolis generally adopted and fully exercised the powers conferred upon them by Part III of the Housing of the Working Classes Act, 1890. They would be enabled as landlords to provide the poorer classes, without any material increase upon the rates, with more and better accommodation than they can ever hope, unaided, to obtain for the money they now pay in rents to the existing landlords, who study little beyond their own interests. He also maintains that legislation is required to restrict the amount of compensation paid for the removal of property in unhealthy areas within reasonable limits; for hitherto owing to the heavy costs rehousing schemes have been of no benefit to the indigent and evicted poor.

## ALCOHOLISM AS A CAUSE OF DEPOPULATION.

AN interesting study of alcoholism as one of the main causes of depopulation in France from the pen of Dr. Lucien Mayel of Lyon recently appeared in the *Archives Générales de Médecine*. A statistical inquiry into the rate of births and deaths in the various Departments of the French Republic tends to the conviction that alcohol by its action on the offspring of the drunkard (who may be himself of average fecundity) produces feeble and sickly children, the rate of mortality among them is excessively high, and they are peculiarly prone to succumb to disease before the age of sexual maturity is reached. A minor etiological factor is the shortening of life which drink produces directly in the drunkard. The alcoholic subject is the victim of a constitution which does not sustain injury[1] or resist disease well. He is, moreover, specially prone to

[1] *De la Gravité des Lésions Traumatiques et des Opérations Chirurgicales chez les Alcooliques.* Par Verneuil Hardy, etc. Paris. 1871.

contract phthisis. In women given to drink pregnancy frequently ends by abortion or miscarriage, and statistical evidence on a large scale in support of this has been published by Legrain in his work *L'Alcoolisme en France* (1897). As regards infantile mortality in alcoholic families, a periodical investigation of 215 such families, comprising a total of 814 descendants spread over three generations, showed that 32 per cent. of the total issue died in infancy or early childhood. One striking example is cited of two drunkards in Rouen whose offspring comprised a total of 30 children not one of whom survived to an adult age. Out of a total of over 800 children born of alcoholic parents, Legrain had noted that 21.3 per cent. included either stillbirths, miscarriages, or deaths in infancy and early childhood. The author quotes freely also from the statistical researches of the late Dr. Ogle[2] and of Dr. Tatham,[3] which clearly show the high rate of mortality prevailing among those whose occupations facilitate drinking—brewers, potmen and waiters, hawkers, dock and other labourers, etc., a conclusion which is further supported by statistical returns from the Scottish Temperance and the New York Mutual Insurance Companies. The author concludes that alcoholism is a most potent cause of race degeneration, relative sterility, and depopulation; and after allowing for all fluctuations in population from emigration and immigration, is satisfied that the *rôle* assigned to alcoholism is undoubtedly one of serious importance.

## THE FIRST COTTAGE HOSPITAL.

Mr. Charles Williams, in an interesting paper on Medical Advertisements in Norwich Newspapers,[4] gives the following account of the first cottage hospital established in England. He says: The Reverend Thomas Havers, better known as Dr. Havers, has a monument on the outside of the south wall of Stoke Holy Cross Church, on which he is described as being learned in theology, physic, surgery, and lithotomy, as well as "*pauperibus ægrotis semper amicus.*" The designs of various surgical instruments are carved in stone at the bottom of the inscription. He appears to have had a considerable reputation as a surgeon, and it is perhaps surprising that with his ability and love for the profession he did not leave Stoke and seek a larger scope for his talents in Norwich. In 1683, at the age of 24 years, he was presented by the Duke of Norfolk to the living of Framlingham Earl, from which he retired in 1701 to devote his time and energies to the practice of medicine and surgery at Stoke Holy Cross. He never left the village, but ended his days in 1790, at the age of 60, his widow dying a few days after him. He was in the habit of taking pupils and teaching them surgery and midwifery. In his will, dated 1719, he left £20 to the poor of Stoke, and his instruments of surgery to his nephew, Robert Bransby, of Hapton Hall, Norfolk. This Robert Bransby, whose aunt Havers had married, was a surgeon. He subsequently removed to Shottesham, and there died in 1748. His daughter Elizabeth became the wife of Benjamin Gooch, the most celebrated surgeon of the day, who in 1771 greatly assisted to establish the Norfolk and Norwich Hospital. His patron, William Fellowes, of Shottesham Hall, distinguished by his friends as "The Man of Shottesham," from his resemblance to Pope's "Man of Ross," was the actual founder of that institution. This gentleman some years previously had recognised the value and advantage of such places, and had erected at his own expense in Shottesham a cottage hospital for the benefit of the poor in that neighbourhood. With this Gooch was for many years connected as surgeon. It gave him the opportunity of acquiring an amount of surgical practice which subsequently enabled him to write three very interesting volumes of *Cases and Observations in Surgery*. This is the first instance of the existence of a village hospital in England; the next was founded eighty-eight years later at Cranleigh, in Surrey, in 1859, by Mr. Napper, and they have since become general. Benjamin Gooch's only daughter Sarah was engaged to Lord Chancellor Thurlow, but Lord Campbell says that she was afraid of him, and they were never married. She became the wife of Dr. D'Urban, who succeeded Gooch at Shottesham, and by him became the mother of General Sir William D'Urban, the founder of Durban in South Africa. Sir Astley Cooper's father was the Rev. Dr. Samuel Cooper, for some time Rector of Shottesham. He married a daughter of James Bransby, second cousin to Mrs. Gooch. In this way the families of Bransby, Havers, Gooch, and Cooper became intimately connected.

[2] *Registrar-General's Report, Supplement*, 1885.
[3] *Ibid*, 1897.
[4] The Empire Press, Norwich, 1901.

## CEREBRO-SPINAL FEVER.

In reviewing the Statistical Report of the Health of the Navy for the year 1899, the occurrence of 11 fatal cases of cerebro-spinal fever on the home station, 9 of which were registered at Haslar Hospital as arising among boys from the training ship *St. Vincent* at the time when influenza of a grave type was prevalent on board that ship, was commented on. The mortality from this disease in the United Kingdom in the year 1899 is officially returned as: England 19, Scotland 4, Ireland 45. Professor Osler, in his Cavendish Lecture,[1] dwells on the confusion liable to occur in the diagnosis of the several forms of meningitis; he referred to the occurrence of a cerebral form of enteric fever and of pneumonia, and he remarked that among specific diseases cerebro-spinal fever stands in some points close to pneumonia. Sir William Broadbent, at the annual meeting of the British Medical Association at Ipswich, in 1900, stated that he had seen in consultation at Portsmouth an officer of the *St. Vincent*, who died of influenza with fatal cerebral complications at the time these fatal cases of cerebro-spinal fever were registered at Haslar. The organism described by Weichselbaum has been pretty constantly found, and is described by Dr. Littledale from a series of cases under the care of Dr. Alfred R. Parsons, in Dublin, in the British Medical Journal of June 23rd, 1900. It would be interesting to know whether any bacteriological examination of the cases observed at Haslar was made, otherwise it seems legitimate to doubt whether they may not have been in their pathological nature similar to the case mentioned by Sir William Broadbent. In any case it would be satisfactory to have the cause of the occurrence of the series of fatal cases in this country in connection with one of the training ships for boys cleared up.

## THE HEALTH OF PUBLIC SCHOOL TEACHERS.

Chicago has recently given a proof of progressive spirit in a matter of educational policy which we commend to the notice of our own School Boards. So important indeed do we think the matter that we should invite the special attention of the Duke of Devonshire and Sir John Gorst to the step taken by the educational authorities of Chicago were it not that we presume they have now at last been awakened to the existence of the General Medical Council, and are at present giving their minds to the study of the minutes of that interesting body. It is now required that candidates for appointments as teachers in the public schools of Chicago shall pass a physical as well as an educational examination before they can be licensed. The beneficial result of this measure has already manifested itself there in the health both of teachers and of pupils preparing for the teaching profession. Better health means increased efficiency of work, and, what is equally important, better temper. A teacher suffering from overstrain not only suffers herself, but is the cause of much suffering in the children under her charge.

[1] British Medical Journal, June 24th, 1899.

## WOMAN'S WORK IN SANITATION.

THE Woman's Health Protective Association of New York affords a striking example of what women can do in spreading the gospel of health. The Association has, during the seventeen years of its existence, waged successful war against numerous sanitary evils, and has been in the forefront in promoting many useful reforms. To mention only a few, it has striven for the sanitary betterment of bakers' shops, and it has wrought what is described as a marvellous change in the conduct of slaughterhouses. In school hygiene it has been very successful, and it has been strenuous in obtaining larger public parks and playgrounds for children. It has also rendered great service in the repression of the spitting nuisance in street cars, and it was at the request of the Association that the Board of Health first used prohibitory notices. Now the Association is taking active measures for the prevention of the nuisance in ferry houses and ferry boats. But it is by no means satisfied with getting ordinances passed; it is vigilant in seeing that they are enforced. We only wish we had a similar society here; spitting in omnibuses and railway carriages would soon become a thing of the past if a few determined ladies made it their business to put it down.

## THE RECOGNITION OF TUBERCULOUS PLEURISY.

IT is well known that many cases of acute pleurisy are or become tuberculous, and that pulmonary phthisis has often followed what was believed at the time to be an attack of simple pleurisy. In a recent clinical lecture published in the *Semaine Médicale* (No. 48), Professor Dieulafoy has collected the evidence which has accumulated to the effect that a large percentage of cases of acute pleurisy attributed to catching cold are really tuberculous. He now urges that it is important to determine in every case whether or not tuberculous lesions are present. He reviews the various means by which a diagnosis of pleural tuberculosis can be established: (1) By recognising the tubercle bacillus in the effusion by the microscope, by cultivations, or by injections into the peritoneal cavity of rabbits; (2) by Koch's tuberculin injections; (3) by an adaptation of serum diagnosis, as employed in the Widal test for the recognition of typhoid fever; and (4) by cyto-diagnosis or the careful examination of the leucocytes present in the effusion. He concludes in favour of the last method, and states that in single pleurisy, such as is met with in heart disease, Bright's disease, etc., the fluid does not contain, at least in the earlier stages, either lymphocytes or polynuclear leucocytes, but almost exclusively large endothelial cells derived from the serous membrane by desquamation. In infective pleurisy caused by streptococci, pneumococci, the typhoid bacillus, etc., polynuclear leucocytes are met with abundantly, as well as large mononuclear cells. If lymphocytes are present they are less numerous, and endothelium is observed only exceptionally. On the other hand, in acute tuberculous pleurisy, lymphocytes and red blood corpuscles are exclusively present, polynuclear cells and endothelial flakes being absent. These statements are interesting, and deserve to be followed up, but their value is diminished by the admission that the prognosis in tuberculous pleurisy is not always bad, in fact, Professor Dieulafoy thinks that tuberculous pleurisy may be perfectly curable, and is sometimes really benign; if aspiration is properly performed, a cure should result, but he leaves us in doubt as to the future prospect of the patient, who should be kept under careful supervision for a long time, and receive all the hygienic and dietetic care required by cases of early phthisis.

## A PERUVIAN MUMMY.

IN the Court of King's Bench lately Mr. Justice Darling heard the suit of Aitken *v.* the North-Western Railway, and the plaintiff obtained £75 damages for injuries received by a mummified human body obtained from Peru, and consigned by Mrs. Aitken to the Prefect of Studies at the Maison de Melle, a college for boys near Ghent, in Belgium. The trouble arose in London in April, 1899, because of the loss of the consignment note referring to the package which contained the body. The package unclaimed was opened at the City goods station, and the officials of the railway were alarmed to find the dead body of a female, discoloured, dry, burned or dried up, stiff, in a crouching position. They called in the police, and the police called in the coroner's officer, who at the urgent desire of the railway officials had it removed to the public mortuary of Shoreditch. The evening newspapers were full of sensational accounts of the discovery of the body of a murdered woman. Next day the coroner saw the body, and a police surgeon reported on the case to the police authorities; the coroner, seeing that the body was an imported mummified body of South American Indian race, at once informed the press that there was no tragedy. The coroner kept the body for a fortnight, and it was still not definitely claimed, and it was somewhat damaged. Being in his possession, he had to get rid of it, and he was unwilling to issue an order for its burial, as is the coroner's duty in all cases. The police then reported to the coroner that several persons had claimed it; the consignor, the consignee, the carriers who were to forward it to Belgium, and the railway company who had a claim upon it for railway carriage. So in order to settle conflicting claims, and to find the true owner, a formal inquest was held in the coroner's court house, after the ordinary inquests of the day had been concluded, and the parties agreed that the body should be handed back to the railway company, which was done. The mummy's troubles, however, were not over, for it arrived at Ghent and there it smelled, and the Belgian police seized and buried it.

## "STATE CHILDREN" IN AUSTRALASIA.

AN interesting paper on Methods of Dealing with State Children in Australasia, read by Miss Hilda Martindale to members of the State Children's Association, has recently been printed. In it we are told of the enlightened views which prevail, especially in South Australia and Victoria, as to methods of dealing with children who are destitute or neglected, or who have been convicted as juvenile offenders. In South Australia there is a special State Children's Council appointed by the Governor to deal with the several classes just named, to look after lying-in homes, and to protect infant life. The interpretation of the term "neglected child" is very wide, including children under 10 found selling articles in the street between 8 P.M. and 5 A.M.; and also uncontrollable, incorrigible children. Such children may be detained under supervision until 18 years of age. On commitment they are first sent to a receiving depôt consisting of separate cottages facilitating classification, and thence drafted off to the care of foster parents, unless they are considered to need reformatory treatment. The near relatives of such children are made responsible for a share of their maintenance, and as a matter of fact one-fifth of the aggregate cost is thus defrayed. It is stated that in Victoria out of 4,905 children under State care 3,113 were boarded out, 820 were maintaining themselves at service, 334 were in reformatories, and 689 were with relatives without cost. Individual treatment of the children seems to be the keynote of the report, and even girls formerly in a reformatory institution had been dispersed amongst cottage homes (containing not more than 15) with considerable success. In New South Wales, crippled, feeble-minded, and invalid children have also been dealt with on the scattered homes system, each presided over by a "mother," who is assisted in the education of her charges by a visiting teacher. In South Australia a separate court has been instituted for dealing with children's offences.

## CONTRACT MEDICAL PRACTICE.

Medical Aid Companies.

A correspondent writes that in view of the recent decision of the General Medical Council he has sent in his resignation as medical officer for his district. Since doing so he has received the following communication:

The National Medical Aid Company Limited,
District Office,
December 5th, 1901.

Dear Sir,—In view of the decision arrived at by the General Medical Council on the 29th ult., in which a medical officer of this Company was concerned, I have reluctantly to inform you that henceforth there must be no new member accepted even by recommendations.

This course is imperative for the very large number of doctors acting for the Company—nearly 800—who will by this means be at once placed in a position of perfect security from any possible unpleasantness on account of their connection with a Medical Aid Association. It cannot be too clearly understood that the sole charge in the case referred to and upon which the General Medical Council was asked to give a decision, was in connection with canvassing and that alone.

Faithfully yours,
(Signed)
District Manager.

Our correspondent asks for an opinion as to whether he would be justified in continuing to act as their medical officer. He has never known of a case of canvassing, and has only added five or six members to the club who have come voluntarily and asked if they might join; he has a written guarantee that no member can join who has over twenty shillings a week. He understands that the only suggestion the General Medical Council make is that canvassing must not be done, and he thinks that if he prohibited any new members joining, that would at once meet their suggestion.

Under the circumstances stated, our correspondent would still have to rely in great degree on the discretion of the collectors and other officers of the Society, persons whose primary (assurance) business depends for its success on touting, and who have no conception of or sympathy with the rules against advertising which bind medical men. We must think that his professional honour and reputation would be safer in his own keeping.

It is, of course, open to him to make such arrangements for attending poor persons at contract rates as he and his professional neighbours might think suitable. The part played by Medical Aid Societies in such matters has been shown to be purely parasitic. The requirements of the community in respect of "medical aid" are found to be better provided for by a public medical service under the control of the profession, without any interference from lay contrivances for exploiting our labour and skill.

## THE PREVENTION OF CONSUMPTION.

Devon and Cornwall.

An influential meeting was held at Plymouth on December 3rd, under the presidency of the Mayor, in connection with the Devon and Cornwall Association for the Prevention of Consumption. The object of the meeting was to consider the establishment of a sanatorium for the consumptive poor of Devon and Cornwall.

The Mayor, in opening the proceedings, expressed his entire sympathy with the movement. Lord Mount-Edgcumbe then moved:

That in the opinion of this meeting it is desirable to establish a sanatorium in the neighbourhood of the Three Towns for the open-air treatment of consumptive patients in Devon and Cornwall, and that a committee be appointed with a view of carrying out this object.

This resolution was seconded by Dr. Davy of Exeter, and was carried.

A large and representative committee was nominated, and a working subcommittee was appointed to obtain subscriptions and work out the details of the scheme.

Dr. Bushnell said that the views of the subcommittee were that the sanatorium should be for the consumptive poor and those of limited means, in the early stage of the disease, and that the institution should be founded and maintained by a combination of voluntary subscription and public moneys.

# ASSOCIATION INTELLIGENCE.

## COUNCIL.

### NOTICE OF MEETING.

A Meeting of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 15th day of January, at 2 o'clock in the afternoon.

Dec. 19th, 1901. Francis Fowke, *General Secretary.*

### NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1902.

Meetings of the Council will be held on January 15th, April 16th, July 9th, and October 22nd. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 26th, June 18th, and October 1st, 1902.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or any recognised Branch Council.

Francis Fowke, *General Secretary.*

### LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

### BRANCH MEETINGS TO BE HELD.

Border Counties Branch.—A meeting of this Branch will be held at the Infirmary, Whitehaven, on Friday afternoon, January 17th, 1902. Members intending to read papers, show cases, etc., and gentlemen desirous of joining the Branch, are requested to communicate as early as possible with the Honorary Secretary, W. F. Farquharson, M.D., Garlands, Carlisle.

### CORRECTION OF LIST OF MEMBERS.

We find that the name of Dr. W. Macphun Semple of Yeovil, was included by inadvertence in the List of Members recently published as "Dead." We hasten to publish this correction and to express our regret for an unintentional clerical error.

### BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

The third ordinary meeting of the session was held in the Birmingham Medical Institute on December 12th, 1901, the President, Dr. E. Malins, and later, Mr. Bennett May, being in the chair. Thirty-seven members were present.

*Confirmation of Minutes.*—The minutes of the previous meeting were read, confirmed as amended, and signed.

*Acknowledgement of Vote of Condolence.*—A letter was read from Mrs. T. Vincent Jackson expressing her thanks for the sympathy of the members of the Branch.

*New Members.*—The following members of the Association were elected members of the Branch, namely—E. S. Nutting, M.D., Edgbaston, nominated by Professor Leith; E. Whichello, M.B., Birmingham, nominated by Dr. R. Shiels; J. A. Wolverson, L.R.C.P. and S., Chapel Ash, nominated by Dr. F. Edge.

*Cases of Lupus and Phthisis treated by Koch's Tuberculin R.*—Dr. Saundby showed two cases which were treated last summer in the General Hospital by injection of Koch's tuberculin R. It was now five months since their dismissal from the hospital and the cure seemed permanent.

Case 1. W. P., aged 30, admitted May 25th for hæmoptysis; had been an out-patient for phthisis for a year; some flattening, dulness, and numerous crepitations at left apex; tubercle bacilli abundant in sputa; weight 9 st. 2 lbs.; treated by injections of tuberculin R., commencing with mg. 0.002, gradually increased to mg. 2; the treatment caused no rise of temperature. The patient was discharged on July 18th; he had gained 4 lbs. in weight; the sputum was examined on July 30th, and no tubercle bacilli were found. He has returned to work, is free from cough, and considers himself nearly as strong as he was before his illness. His weight in September was 9 st. 12 lbs., but at present he weighs exactly the same as on his discharge, 9 st. 6 lbs. Case 2. W. H., aged 10, was admitted on May 16th with an ulcerated lupus involving the nose, both cheeks, and the upper lip; the disease had existed for three years. The treatment by tuberculin R. was begun on May 21st, and reached mg. 2 by July 17th, when he was discharged. His face was quite healed by July 1st. The cicatrix has remained perfectly sound, pale, and free from any appearance of recurrence of the disease. In both cases the injections of mg. 2 have been continued once a fortnight up to the present time.

*Pseudo-hypertrophic Paralysis.*—Mr. M. A. Messiter showed a boy, aged 10, presenting the characteristic features of this disease.

*The Treatment of Lupus, Rodent Ulcer, etc., by Finsen Light, Roentgen Rays, and Electrical Currents.*—Mr. Hall-Edwards

read a paper with the above title, and gave a demonstration of the apparatus used. Remarks were made by Dr. DEANESLY, Mr. HEATON, Dr. SAUNDBY, Dr. D'ESTE EMERY, and Mr. BENNETT MAY; and Mr. HALL-EDWARDS replied.

*The Electric "Series" Bath.*—Dr. J. A. CODD read a paper on this subject, under the following headings—namely: Failure of treatment, often due to too little current. Available current strength limited through painful and caustic effects. These avoided by lessening density by increasing area of electrodes. The local bath an ideal electrode. The ordinary or "shunt" bath—advantages and disadvantages. Gärtner's diaphragm. The writer's "series" bath. Whole body (except head) traversed by current; exact dosage possible. Solitary disadvantage of absence of stimulation of skin of trunk and thighs.

*Vote of Thanks.*—On the motion of Mr. MORRISON, seconded by Dr. STACEY WILSON, and supported by Mr. BENNETT MAY, it was resolved:

That the best thanks of the meeting be given to Dr. Codd for his valuable paper.

Dr. CODD expressed his acknowledgment of the vote.

# SPECIAL CORRESPONDENCE.

## INDIA.

*The Report of Mr. Brodrick's Committee on the Reorganisation of the Army Medical Service.—Effect on other Medical Services.*

THE report of the Committee on the Army Medical Service has been received with very mingled feelings in India. The increase of the pay of the junior ranks and the granting of charge pay to the senior ones is sufficiently liberal to go a very long way towards removing the principal grievance of the service, and in itself would probably have been effectual in attracting the right stamp of recruits. Unfortunately these concessions have been to a great extent, if not entirely, neutralised by the absurd system of frequent re-examinations, and still more by the abolition of the certainty of a pension after twenty years' service or promotion to the rank of lieutenant-colonel with its pay. The Committee cannot have much faith in the quality of the candidates it expects to obtain if it considers it necessary to re-examine them in such subjects as medicine and surgery within three years of their entry into the service, nor would it serve any useful purpose to test them once more in sanitation, bacteriology, and tropical diseases at such an early period if the four months course at Netley was not to be cut down to the ridiculous period of two months. The attempt to create a reserve of junior officers is all right as far as it goes, but it is considered that the regulation to readmit from the reserve within three years will only gather in the failures in civil practice a not altogether desirable thing. Another difficulty will be that officers will not be available for foreign service until after their examination for the rank of captain in the middle of their fourth year, while formerly they might be sent abroad at an earlier period. The examination for the rank of major is already in force, but it is considered doubtful if the mark system in these examinations will work quite fairly or is the best way to ensure the rapid promotion of the most practically efficient men, for some will be much more favourably placed for studying for the examination than others. However, by far the most objectionable feature of the scheme is the series of regulations concerning promotion to the rank of lieutenant-colonel. Under these rules any officer who fails twice in the examination in the miscellaneous assortment of subjects laid down loses all right to any pension whatever, which is only granted by special permission of the Secretary of State. Now it is well known that the mainstay in the attractions of the service has always been the pension of £1 a day after twenty years service, and the taking away of this right will, in the opinion of those best qualified to judge, probably more than counteract the attractions of the increased rates of pay. Just as bad is the provision that, even after running the whole gauntlet of examinations, including that for promotion to the rank of lieutenant-colonel, the unfortunate officer is neither sure of such promotion, nor even of the pay of the rank unless specially selected for promotion from among those qualified, so that even if all the obstacles of the race are successfully surmounted, all that can be counted on is the pay of a major and the pension of that rank after 25 years service. Under such conditions it will be surprising if many men remain in the corps longer than the three years qualifying for the reserve or a longer period for a gratuity, and that these terms will have to be modified before contentment and well-competed-for examinations are once more the order of the day.

But there is another point of view from which this scheme is of great interest in India, and that is the question of what will be the effect of the enhanced rates of pay proposed for the R.A.M.C. on that of the other medical services. The failure of the navy to secure the required candidates by competitive examination will undoubtedly necessitate the offer of an increased rate of pay. No less urgent is the case of the Indian Medical Service as shown by the shortage of qualified candidates in February last, and the generally recognised grave discontent in the service. Matters will now be brought to a crisis, for the increased pay in the junior ranks, and the charge allowances in the senior now proposed, will actually raise the pay of the R.A.M.C. officers to higher rates than that of the I.M.S. both in the first five years and in the senior ranks of major and lieutenant-colonel, and leave practically no difference between them during the few remaining years in the rank of captain. As all services which spend their whole time in India are paid at a higher rate than similar services which spend much of their time in England, it is evident that the pay of the I.M.S. will have to be very substantially raised in order to secure the number and stamp of men hitherto obtained. This will also raise the question of the pay in civil employ; the reduced rate of pay given for much harder work in the civil branch, based on the long-exploded fiction that this is more than made up by private practice, will have to be remedied. The market value of young medical men has been greatly enhanced recently by the five years curriculum and the suppression of unqualified assistants, and this fact must be recognised by the State by the granting of more liberal pay. No time should be lost in meeting this demand in no niggardly way if the Naval and Indian Medical Services are to be saved from the depletion and paralysis which, as the experience of the R.A.M.C. eloquently testifies, are easier to prevent by timely prophylaxis than to cure by carefully-considered and well-meant, if drastic, remedies.

## SYDNEY.

*The Sydney and Suburban Provident Medical Association.—The Sydney Metropolitan Medical Association.—The Prevention and Treatment of Consumption.—Dr. Ashburton Thompson.—Death of Dr. R. S. Bright of Hobart.—Papers at the New South Wales Branch Meeting.*

THE annual meeting of the profession of Sydney and suburbs to receive the report of the Sydney and Suburban Provident Medical Association was held recently. The report of the honorary secretary showed a steady increase in the number of financial members, but a large number of members drop out from time to time, and it is felt that the absence of benefits in the shape of funeral donations and sick pay militates against the rapid progress of the Association. The question of providing additional benefits has been discussed on several occasions by the committee, but no satisfactory scheme has been adopted. Some £2,000 has been divided amongst the active medical staff during the year, in addition to about £1,000 paid to the chemists employed by the Association. Dr. Ralph Worrall was re-elected President, and Drs. O'Hara and Binney, Honorary Secretary and Treasurer respectively.

The Sydney Metropolitan Medical Association has been a very active organisation ever since its formation some months ago. This is due to the energy of Mr. Hankins, the President, and Dr. Sinclair Gillies, the Honorary Secretary. A few weeks ago Sir James Graham, M.D., the Mayor, entertained the Association at the Town Hall, and on this occasion Dr. W. G. Armstrong, the Government Medical Officer of Health, read a paper on municipal sanitation, which is pub-

lished in this month's *Australasian Medical Gazette*. The Association has been very successful in a recent dispute between a lodge and its medical officers, and secured the adoption of the medical officers' terms by the lodge.

Following on the public meeting held at the Town Hall, reported in my last letter, a deputation waited on the Premier of the State to urge upon the Government the necessity for the establishment of a hospital for consumptives in the immediate vicinity of Sydney. It was represented that a hospital of at least 200 beds was required for the reception of advanced cases of pulmonary tuberculosis, and also as a place of observation of patients in the earlier stages prior to their being sent away to country sanatoria. The Premier promised to place a sum of £5,000 or £10,000 on the Estimates for the erection of a temporary wooden building at Long Bay, about six or seven miles from Sydney along the south coast. It is gratifying to know that the Government is alive to the importance of this question, and is prepared to take action at once.

Dr. Ashburton Thompson, President of the Board of Health, who has been seriously ill, has obtained six months leave of absence, and is taking a trip to England. Dr. Frank Tidswell, the principal assistant medical officer and microbiologist to the Board of Health, has been appointed Acting President of the Board of Health during Dr. Thompson's absence.

Dr. R. S. Bright, of Hobart, the President-elect of the Sixth Intercolonial Medical Congress, to be held at Hobart in February, 1902, died suddenly last week. He had been in failing health for some time, and he had just retired from the staff of the Hobart Hospital, and was entertained by a few friends at dinner on the occasion of his retirement from the hospital. His loss is deeply regretted by all.

At the last meeting of the New South Wales Branch of the British Medical Association, an interesting paper was read by Dr. Sinclair Gillies on Two Cases of Mitral Stenosis complicated by Laryngeal Paralysis. One case, a male, died suddenly, and Dr. Gillies was able to exhibit the thoracic viscera, showing the compression of the recurrent laryngeal nerve by a much-dilated pulmonary artery. The other case, a female, was living, and presented the signs of a pure mitral stenosis with abductor paralysis. Dr. Sydney Jamieson read a paper on some cases illustrating the wide degree of infectivity of the pneumococcus. This paper was specially interesting taken in conjunction with the discussion on the same subject in the Section of Pathology at the Cheltenham meeting of the British Medical Association.

# CORRESPONDENCE.

## THE TEACHING OF PHYSICS AND BIOLOGY.

Sir,—As the election will be over by the time this appears in print, I can hardly be again accused of "electioneering astuteness" if I ask a little space to reply to Dr. Dawson Turner's letter. With much that he says I agree. Our graduates do not know as much as they should about electricity in its application to medicine, and I should be in entire sympathy with any proposal to introduce some further instruction on the subject at a later stage in the curriculum. But can any one seriously maintain that physics as now taught to boys and girls of sixteen, is likely to remain fixed in their minds during the years when they see no practical application of it?

Perhaps the best solution would be a course of medical physics in the third or fourth year. This is an entirely different matter from the amount and nature of the physics required in the first professional, and indeed Dr. Dawson Turner admits this when in his last sentence he says: "A course of medical physics can only be satisfactorily given by a teacher who has had both a scientific and a medical training." If I mistake not, the only teacher of physics in Scotland who fulfils this requisite is Dr. Dawson Turner.—I am, etc.,

Edinburgh, Dec. 2nd. Norman Walker.

## THE REPORT OF MR. BRODRICK'S COMMITTEE.

Sir,—Professional *esprit de corps* is very laudable and necessary. But when it goes the length of trying to foist an inferior article on the British income-tax payer, I think most of your readers will agree with me that it goes too far and is only unpatriotic.

This was the impression I received from reading the last issue of the British Medical Journal on army medical reform. Your numerous correspondents object to the new scheme outlined by Mr. Brodrick's Committee, and as one who has seen the R.A.M.C. from within, I should like to record my admiration of the statesman-like and earnest attempt of the Committee to solve this thorny problem.

I was a volunteer non-commissioned officer in the R.A.M.C. at Bloemfontein from April till October, 1900, and though I have nothing but praise for the energetic and whole-hearted manner in which the R.A.M.C. responsible officers coped with unprecedented difficulties, I saw in that period anomalies that the new scheme means to remove. For instance, at one general hospital we had a Major of the R.A.M.C. drawing the pay and allowances of a colonel as P.M.O. of the hospital, while at another general hospital in the same town there were three lieutenant-colonels.

It was the general impression among the men that the two spare lieutenant-colonels at the latter hospital were unfit to command, so besides paying them the field allowances, etc., of lieutenant-colonel, the long-suffering British taxpayer has to promote temporarily a junior man, and pay him (of course) for doing their work.

Now, under this new scheme the Committee proposes to weed out the men who are unfit to perform the duties of their rank, and at present the only way this can be done is by the admittedly crude one of examinations.

A patriotic and useful criticism of this scheme would suggest an alternative that would so satisfactorily give the Empire value for its money.

Why medical officers (or for the matter of that Royal Engineer officers) should object to Advisory Boards, constituted as the Committee's is, is difficult to understand. Judging from a medical officer's whole training from the time he leaves school it seems reasonable that he can only get invaluable help in the administrative and business parts of his work from the laymen on the Advisory Board.

The rank and file of medical officers, too, will find in the Advisory Board a safeguard against unfair failing in their seventeenth year examination.

The scheme is only an experimental one; it can only be judged by giving it a fair trial. If it succeeds, it will attract the medical officers the Empire and the army want. No candidate will apply to become an army medical officer unless he means to keep himself efficient. Every medical officer will be anxious to keep up his clinical work, and the "plums" of the service will go a-begging.

Principal medical officers will recruit their secretaries from quartermasters and warrant officers with clerical experience, and the appointments of adjutant to the V.M.S.C. companies of London and Manchester might possibly have to be filled from the young quartermasters of the R.A.M.C., as medical officers who wish to be thoroughly efficient in their clinical work will find that it does not pay to waste their time either as clerks or drill instructors.—I am, etc.,

St. Bartholomew's Hospital, Dec. 9th. Hugh G. McKinney.

## THE PRINCIPLES OF LOCAL TREATMENT IN DISEASES OF THE UPPER AIR PASSAGES.

Sir,—I must admit to having hoped that wiser counsels had prevailed to prevent Sir Felix Semon from persisting in a line of conduct such as is generally associated with a litigant who has no case.

In my letter of November 30th[1] I had endeavoured to dismiss the trivial side issue of these "deplorable" personalities in a very few lines; but it appears impossible, even with the fewest words, to escape captious criticism and continued charges of unworthy motives. I am forced to trouble you with one more letter, because Sir Felix Semon's rendering of the incident of the Pathological Society[2] is so entirely at variance with published reports as to demand correction.

Sir Felix Semon denies that he made "an attack" on me at the Pathological Society on December 19th, 1893, and calls it instead "an indignant protest." The fact remains that I

[1] British Medical Journal, November 30th, p. 1638.
[2] *Ibid.*, December 14th, p. 1779.

attended on that date solely because I had received a registered type-written communication signed "F. Semon," that it was the signatory's intention to bring certain statements made by me in *Burnett's System* before the next meeting at the Society. The audience constituted an ample "plenum"—in common parlance the room was crowded.

The report of the meeting in the BRITISH MEDICAL JOURNAL[3] and in the *Lancet*,[4] gave a full, albeit carefully edited, account of what occurred; in the JOURNAL it is stated that after Mr. Shattock had spoken—he was the sixth who took part in the discussion—"Mr. Lennox Browne observed that after the record of the subsequent histological examination he withdrew his previous statements as to the present case being an instance of the transformation of a benign into a malignant formation," that being in fact the *gravamen* of the protest.

The *Lancet* put it somewhat stronger, remarking that "after hearing a statement from Mr. Shattock he withdrew the suggestion that Dr. Semon and Mr. Shattock had become converts to his views."

So far, then, from the President (Dr. Pavy) refusing Sir Felix Semon permission "to submit our grounds of complaint to the Society," he allowed some two hours to be occupied therewith. Ultimately he referred the specimen to the Morbid Growths Committee, adding that "he had endeavoured, and he hoped effectively, to keep any personal element from the discussion." These, sir, are the facts; they require no comment.—I am, etc.,

Mansfield Street, W., Dec. 17th. LENNOX BROWNE.

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SIR,—I am much surprised that no one has up to now drawn attention in this discussion to the more notorious cause of the hostile attitude of general practitioners and of the public towards throat, nose and ear specialists. I allude, of course, to the disproportionately high fees which have obtained in recent years for minor, everyday operations such as the removal of adenoids and enlarged tonsils.

It cannot be argued that the technical knowledge and manipulative skill involved in these measures can be compared with the difficulties and responsibility undertaken by the surgeon who deals with a complicated case of nasal polypus, with disease of the accessory cavities, with a radical mastoidectomy, with an aural exostosis, or with a case necessitating intralaryngeal operations; yet the average fee we get for these cases, which are as difficult as most in surgery, is rarely adequate to cover the highly technical and tedious after-treatment. It is true that the very senior men occasionally get a handsome fee for this class of work. I recently heard of a distinguished laryngologist asking two hundred guineas to clear up a complicated case of nasal disease and he explained that he was not particularly anxious to undertake the case even at that sum. Fancy fees are, however, altogether the exception.

From what I can gather there has been quite a slump in adenoids in the private practice of many members of the speciality in recent years, and the reason is not far to seek, for the general practitioners have been compelled, in many instances, to operate on their adenoid cases themselves; they will do so more in the future as the general public begin to appreciate the fact that many of them perform these operations extremely well and at a fee more commensurate with the parent's pockets and the labour and skill involved.

I trust I shall not be understood as hypocritically posing as an advocate of cheap fees, but if "the punishment is to be made to fit the crime," a readjustment of the tariff prevailing amongst the rank and file of our speciality appears to me to be inevitable.

On reading Sir Felix Semon's lectures, I formed the opinion that many of the pictures he presented to us of operative intemperance were overdrawn and far too highly coloured; but I note that in the BRITISH MEDICAL JOURNAL of December 14th letters appeared from representative specialists from all parts of the kingdom generally endorsing his indictment. I have no sympathy with immoderate practices tending to degrade rhinology, but in reference to some of the more purely scientific points so cogently raised by Sir Felix, I know that there are many like myself who do not always see eye to eye with him. The lecturer himself on this subject says with commendable generosity and candour that he is "fully aware that in questions of treatment there is very often legitimate room for considerable difference of opinion; that the more enthusiastic and therapeutically active section of our profession is actuated by motives as honourable as those of the more sceptical section, and that to the former we are indebted for most of the therapeutic advances of the present day." It appears to me, however, unwise to emphasise now such points of difference of view as we may be sure that texts from Sir Felix Semon's lectures will lead to debates in the special and general medical societies during the coming year, where differences of opinion can be more adequately discussed than in the correspondence columns of the JOURNAL.—I am, etc.,

Weymouth Street, W., Dec. 17th. WILLIAM HILL.

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SIR,—Now that the floods and torrents of accusation, recrimination, and abuse generally, are somewhat subsiding, the more timid combatants may be expected to come forth.

It may interest some of your correspondents to know that in an address on the surgery of the nose and accessory cavities delivered by myself before the Willesden Medical Society on January 15th, 1897, and reported in the *Clinical Journal* on February 3rd, 1897, the following passages occur:

*Apropos* of enlarged turbinal bodies, on p. 237, second column, I say:

Your object is to restore nasal respiration, not to see how much of the interior of the nose you can remove without killing your patient.

I must vow, and confess when I read and hear how patients with anterior nasal obstruction, are subjected to operations with ploughs and gouges, spokeshaves, chisels, and saws, for the removal of the lower turbinated bone, I am at a loss unless in the most exceptional circumstances to understand where the necessity, benefit or justification comes in. Working for the last fifteen years, operating almost daily, I have not removed six entire turbinated bodies. All that is required when the anterior obstruction is bony and approximated to the septum is the removal of a small part of the scroll of the anterior end of the bone to open up the lower meatus for nasal respiration.

On page 238, 1st column:

Now one word as to spurs and ridges growing from the septum.

I do not believe that a spur or ridge on the septum, unless it is an obstruction to nasal respiration, is of itself the smallest detriment to a patient. I never counsel interference with such, if I can help it, and when I do operate it is to restore nasal respiration.

On the same page, speaking on Post-nasal growths:

Post-nasal growths.—

I look upon post-nasal growths as in a great extent caused by, and a sequel to, anterior nasal obstruction.

Post-nasal growths, are nothing more than a simple hypertrophy of the normal lymphoid tissue that exists in the mucous lining of the naso-pharynx. This hypertrophy is a natural and normal result of the chronic engorgement of the parts that takes place when nasal respiration is suspended.

Why should they be removed? What harm do they do? What degree of hypertrophy demands an operation? Of course, post-nasal growths exist in all degrees of extent and firmness of texture. In many cases of lesser degree, to restore nasal respiration use a wash and apply chloride of zinc to the post-nasal space. This will effect, in many cases, a perfect cure. I treat many cases in this way in my hospital clinic. About the operation I need say little more than this. It is an operation requiring skill, dexterity, and presence of mind, and should not be undertaken by those not accustomed to the whole technique. I may remind you that scratching the pharynx with the finger nail is not performing the operation for the removal of post-nasal growths in its entirety. I would define the proper procedure as a difficult and dangerous operation, requiring a practised anæsthetist and a specially trained surgeon.

Speaking of the treatment of the affections of the accessory cavities of the nose, on page 238 I say:

My experience is that these abscesses are coquetted and flirted with by the bashful and diffident surgeon in a manner that is open to regret. Who, for instance, would pass an aspirating needle into a well-marked bubo and drain through a capillary tube. Yet we find the antrum perforated in various directions with aspirating needles and trocars and drained through an alveolus by a tube not larger than a bodkin.

Again the Frontal sinus when distended with pus, and almost bursting to belch itself into the orbit is usually opened through the upper eyelid amongst muscular tissues and most important structures; and drained by a tube large enough to allow the passage of a well fed bacterion.

Speaking of the Sphenoidal and Ethmoidal sinuses I say.

My plan and practice is to do rather too little than too much.

I have seen the brain cavity opened and entered by the instrument of the too vigorous and incautious surgeon.

The disease was removed, but the patient died.

Sir, This is the older testament A.D. 1897.

At the time it was not worth noticing. It was too plain, simple, and matter of fact.

It was not spicy and sensational enough, and above all it

[3] *Ibid.*, December 23rd, 1893, pp. 1376, 1377.
[4] *Lancet*, December 23rd, 1893, pp. 1568, 1569.

contained one great fault, it was wanting in uncharitable imputations on honourable men.—I am, etc.,

Mayo Collier,
Past President of the British Laryngological, Rhinological, and Otological Association.

Harley Street, W., Dec. 18th.

### THE MIDWIVES QUESTION

Sir,—The following are the five facts I pointed out in the British Medical Journal of July 6th, which together prove that the great bulk of the medical profession is strongly opposed to the Midwives Bill, and most certainly not in favour of it, as Mr. Humphreys would have us believe in his reply of July 13th.

1. That at the largest annual meeting of thousands of members of the British Medical Association, the following resolution was carried unanimously:

That we, the members of the British Medical Association, while anxious to improve the training and supervision, and, if need be, to support a practical scheme for the registration of medical, surgical, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical and surgical or midwifery practitioners other than those recognised under the Medical Act, 1886, as now existing.

In his reply, Mr. Humphreys totally avoided discussing this.

2. That similar resolutions had also been carried at other meetings in various parts of the country. Mr. Humphreys also totally avoids this.

3. That the Lord President of the Privy Council distinctly informed the promoters of the Midwives Bill that they were greatly mistaken if they imagined that they had the support of the medical profession. Again, Mr. Humphreys totally avoids this.

4. That the members of the Incorporated Medical Practitioners Association are to a man opposed to licensing midwives. In replying Mr. Humphreys was only able to name one gentleman (Mr. George Brown) in favour of the Midwives Bill, but, comically enough, in the very same issue as Mr. Humphreys's letter, there appeared the notice that Mr. George Brown intended to move a resolution at the Cheltenham meeting diametrically opposed to licensing midwives.

5. That at the 1896 General Medical Council election those candidates (for seats as direct representatives), who were opposed to licensing midwives, were elected by very large majorities over those who were in favour of that measure. The exact number of votes being 26,040 polled by the opposers of the Midwives Bill as compared with only 8,443 polled by the midwives advocates. In replying to this Mr. Humphreys quibbles by using the word "legislation" without stating what kind of legislation he means. He says: "Even those two direct representatives to whom your correspondent refers agree that legislation is necessary and inevitable." These direct representatives certainly agree with legislation to register obstetric nurses to act merely as nurses, but Mr. Humphreys must not flatter himself that they agree with such legislation as the Midwives Bill proposes, namely, to create a new inferior order of licensed practitioners.

The Bill of the British Medical Association (on which Mr. Humphreys can alone rely to support his contention) cannot by any possible stretch of imagination be considered to represent the view of the medical profession, because it was merely the work of the Parliamentary Bills Committee, and was neither discussed at general meeting nor sent round separately to each member of the profession for criticism. However, it is now beyond dispute that the medical profession is strongly opposed to the Mldwives Bill, because its members have again elected (as their direct representatives) two powerful opposers of the Bill by overwhelming majorities; and as practically all these voters are general practitioners (who are alone in the position to foresee the dangers of the Bill), I hope, for public safety, that those who benefit financially by teaching and examining midwives, and those who are seeking occupation for women, will again fail to pass their Midwives Bill this session.

I do not intend at present to further discuss this question, as the medical profession has now distinctly expressed its view and proved my contention.—I am, etc.,

December 17th. M.R.C.S.

### UNQUALIFIED DISPENSERS.

Sir,—I approve of the General Medical Council's decision in this matter. But "sauce for the goose should be sauce for the gander." Mr. Morison must show that the twenty-six druggists stated to have been prosecuted (*Pharmaceutical Journal*, November 30th) were "members of the Pharmaceutical Society." Persons entitled to use the abbreviation "M.P.S." after their names must be subscribers to the Society. This is the crux of the whole question of prosecution. Only under very exceptional circumstances will the Pharmaceutical Society prosecute its own members. For it derives its income from them, and it is an almost universal custom for these members to employ "unqualified," that is to say, non-qualified assistants.

The President (British Medical Journal, November 30th) erred slightly in saying "not qualified to act as . . . . assistants." The persons referred to are not legally "qualified" to keep open shop. They may act as assistants. It is from this class that the "qualified" men are necessarily drawn. Unless unseemly rivalry prompt him to do so, one member is not likely to lodge complaints against a neighbouring member. Limitation of space prevents notice of errors in P. Morison and Son's letter (Journal, November 30th). It is even possible to detect the "cat's-paw."—I am, etc.,

December 18th. Scrutator.

## ROYAL NAVY AND ARMY MEDICAL SERVICES.

### INDIAN MEDICAL SERVICE.

An I.M.S. officer sends us a long letter which shows that he agrees with our other correspondents that the Indian Medical Service is in a very unsatisfactory state. He sums up the requirements of the situation as follows: More liberal pay for the junior ranks at least, a larger number of reserve officers so that leave may be taken when earned, and a more liberal policy generally towards the medical men, both on the part of the Government of India and of the local Governments.

### NON-DIETED HOSPITAL AND CIVIL CONTRACT RATES.

A Civil Surgeon of Many Years Standing writes to call attention to the fact that there are a number of civil surgeons in medical charge of troops in Great Britain and Ireland who only receive what is known as "contract rate" for their services, that is, to put it shortly, 16s. 8d. a month for every twenty-five men at the station of which they have charge. As these stations, he continues, are usually small, rarely holding a detachment exceeding a hundred men, it can be easily seen how trifling, and when his duties are enumerated how inadequate, the amount of remuneration which the medical officer in charge receives annually. This remuneration is totally out of proportion to his duties and responsibilities, which are to all intents and purposes the same as if he were an officer of the R.A.M.C.: and the regulations for the army medical services apply to him quite as rigidly. He has to treat all cases of illness and accidents at the station, the serious cases in station hospital, usually a non-dieted one, and the trivial cases which are pretty certain to "come sick" two or three each morning (including Sunday, possibly to escape church parade), and also the sick women and children at the station in their own quarters, and dispense his own drugs to all. He has to make numerous inspections, keep many books, and make numberless returns, weekly, monthly, and annual, some of which, the last especially, take much time and need a considerable amount of arithmetical skill and acumen in their preparation. Until the South African war, the clerical duties were considerably modified owing to the presence at each station of a trained hospital orderly, usually a lance-corporal or private of the R.A.M.C.; but the exigencies of the war, and the undermanned condition of the R.A.M.C. in its non-commissioned ranks, made it impossible to keep these men (all of whom had some training in the preparation of returns and the compilation of statistics) at small stations, with the result that the unfortunate civil surgeon has had to do all the clerical work with his own hand—at least this has been my experience—and under the circumstances I did not care to grumble. The reforms required fall under four principal heads, namely: (*a*) The rate of pay should be made proportionate to the amount of work; (*b*) the War Office should supply drugs, etc.; (*c*) the civil medical officer should be supreme as regards both duty and discipline as far as hospital subordinates are concerned; and (*d*) non-dieted hospitals should be converted into dieted or station hospitals. All these reforms are urgently needed; to the actual civil surgeons the first is, of course, by far the most important, and the initiated will understand how important the last is. I have had most unpleasant and disheartening experiences of trying to treat cases of serious illness in a non-dieted hospital, and the reform is urgently needed in the interest and for the comfort of the sick soldier at small stations.

Presentation.—Dr. T. Gerald Garry of Florence was recently presented with an illuminated address by the members of the F Division of the Liverpool police force as a token of their respect and esteem, and in appreciation of his skill, kindness, and attention to them in illness during the six years he was their medical officer.

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*List of Presentation of Books, etc.*

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- Thorne (W. Bezley). The Open-air Treatment of Phthisis. 1899.

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- Three vols. Lancet.

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- Bojanus. Anatome Testudinis Europaeae. 1819.
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Presented by the PHARMACEUTICAL SOCIETY.
- Five numbers of the Pharmaceutical Journal to complete series.

Presented by JOHN RAND, Esq., F.R.C.S., Raynes Park:
- Guy's Hospital Reports. 1858-66, 1871-96.
- Medical Times and Gazette. 1861-80.

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- American Gynecological Society. Vol. 25. 1900.
- American Orthopedic Association. Vol. 13. 1900.
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- Bengal Sanitary Commissioners' Report. 1899.
- Bombay Municipal Plague Report. 1899.
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- Connecticut State Board of Health Report. 1900.
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- Otological Society Transactions. Vol. 1. 1900.
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- Trinidad Report of Surgeon-General. 1900.
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- American Journal of Ophthalmology. Vols. 1-9.
- American Laryngological Association. Transactions. Vols. 1-6, 8-9.
- American Medical Association. Transactions 1-28, 30, 31.
- American Otological Society. Transactions. Vol. 3, part 2, 1883.
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- Annals of Surgery. Vols. 1-11; 13-16; and 26-27.
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Applications for duplicates from medical societies forming libraries may be addressed to the Librarian, 429, Strand.

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THE Derby Child Study Society, recently founded, seeks to gain "greater insight into child nature, and secure more sympathetic and scientific methods of training." It is a good sign that so many are becoming convinced that the doctrinaire methods of a past generation must give place to a more scientific and humble attitude, and an endeavour to build up a system of child training on a basis of observed facts. Parents are often indignant if it be hinted that they are wanting in sympathy with their children, retorting that they love their children devotedly; but affection and sympathy are different states of mind.

# UNIVERSITIES AND COLLEGES.

## UNIVERSITY OF CAMBRIDGE.

THIRD EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following candidates have satisfied the Examiners:

*Part II: Medicine, etc.*—R. G. Abercrombie, B.A., Cai.; A. G. Bate, King's; F. H. Beckett, B.A., H. Selw.; A. P. Bowdler, B.A., Sid. Suss.; F. G. Bowen, B.A., Cai.; C. de L. Carey, B.A., Emm.; E. I. Claxton, B.A., King's; J. G. Cooke, B.A., Sid. Suss.; G. W. Deeping, B.A., Trin.; A. B. Dunn, B.A., Queens'; A. J. F. Clarke, B.A., Emm.; A. C. Hudson, B.A., Trin.; E. B. Leech, B.A., Christ's; D. J. Morgan, B.A., Joh.; J. S. S. Perkins, B.A., Joh.; J. W. Pettinger, B.A., H. Selw.; H. V. Pryce, B.A., Joh.; J. W. Rob, B.A., Joh.; R. Rolfe, B.A., Cla.; F. Sanger, M.A., Joh.; A. de W. Snowden, M.A., Christ's; J. Stirling-Hamilton, B.A., Jes.; E. J. D. Taylor, B.A., Cai.; G. L. Tuck, B.A., Emm.; E. G. Wales, B.A., Down.; H. H. Weir, B.A.; Trin.; J. Wharton, B.A., Joh.; H. M. Wilson, B.A., Trin. H.; F. E. Wood, B.A., Down.

## UNIVERSITY OF LONDON.

MEETING OF THE SENATE.

A MEETING of the Senate was held on December 18th.

*Advanced Physiology.*—A letter was read from Mr. Walter Palmer, M.P., offering a sum of £2,000 for the purpose of providing scientific apparatus for the proposed course of lectures in advanced physiology, The Principal was instructed to convey to Mr. Palmer the thanks of the Senate for his very generous gift, and it was resolved that the following Committee be appointed to confer with the Board of Studies in Physiology as to the details of the scheme: The House Committee, Sir Michael Foster, M.P., Dr. Bradford, Professor Farmer, Dr. Halliburton, Mr. Walter Palmer, M.P., and Dr. Waller.

*Jubilee of the Owens College.*—An invitation was received to send delegates to the celebration of the Jubilee of the Owens College, Manchester, in March, 1902, and the Vice-Chancellors, Sir Henry Roscoe, Sir Thomas Barlow, Professor W. P. Ker, and the Principal were requested to represent the University.

*Internal Students.*—It was resolved that any student who has matriculated, and is attending any one approved course in a school or under any one recognised teacher of the University, can be registered as an internal student.

*Assistant Examiners.*—Dr. Peter Thompson and Mr. F. G. Parsons, F.R.C.S., were appointed assistant examiners in anatomy for the Intermediate Examination in Medicine in January.

M.D. EXAMINATION.—The following candidates have satisfied the Examiners in the subjects undernoted:

*Medicine.*—F. H. Atkinson, Charing Cross Hospital; A. S. Barnes, B.Sc., Birmingham University; E. V. Brown, St. Bartholomew's Hospital and Owens College; S. A. Bull, Westminster Hospital; J. E. G. Calverley, B.S., St. Bartholomew's Hospital; H. S. Capper, University College; A. S. Cobbledick, B.S., St. Bartholomew's Hospital and Bristol Medical School; M. W. Coleman, St. Bartholomew's Hospital; A. R. Cook, B.Sc., St. Bartholomew's Hospital and Cambridge University; P. R. Cooper, B.S., Owens College, Manchester Royal Infirmary, and St. Bartholomew's Hospital; F. S. Dawe, B.Sc., St. Mary's Hospital; J. T. Dunston, B.S., Guy's Hospital; H. L. Eason, B.S., Guy's Hospital; W. N. East, Guy's Hospital; J. G. Emanuel, B.S., B.Sc., Birmingham University; W. L. Griffiths, B.Sc., University College; J. Grimshaw, London Hospital; G. H. J. Hooper, Charing Cross Hospital; Charlotte Elizabeth Hull, B.S., London (Royal Free Hospital) School of Medicine for Women; Mary Muriel Griffin Iles, B.S., London (Royal Free Hospital) School of Medicine for Women; F. H. Jacob, King's College; Harriett Minnie Levick, B.Sc., London (Royal Free Hospital) School of Medicine for Women; D. J. McGavin, Queen's Hospital, Birmingham and Birmingham University; B. Melland, Owens College and Manchester Royal Infirmary; J. Moore, Guy's Hospital; Winifred S. Patch, B.S., B.Sc., London (Royal Free Hospital) School of Medicine for Women; A. R. G. Pocock, University College; G. E. J. A. Robinson, B.S., King's College and Dublin University; L. A. Smith,* London Hospital; Mabel Geraldine Stephenson, B.S., London (Royal Free Hospital) School of Medicine for Women; W. H. M. Telling, B.S. (Gold Medal), Guy's Hospital and Leeds General Infirmary; H. J. Van Praagh, St. Mary's Hospital; Ethel Miller Vernon, B.S., London (Royal Free Hospital) School of Medicine for Women; W. B. Watson, St. Mary's Hospital; Eliza Turner Watts, B.S., London Royal Free Hospital) School of Medicine for Women; W. H. Willcox, B.Sc., St. Mary's Hospital.

*State Medicine.*—F. S. Lloyd, St. Mary's and Guy's Hospitals.

M.S. EXAMINATION.—The following candidates have satisfied the examiners:—

J. F. Dobson, Yorkshire College and General Infirmary Leeds; A. H. Evans, M.D., Westminster Hospital; H. M. Rigby, London Hospital; P. Turner, B.Sc., Guy's Hospital.

## ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

ANNUAL ELECTION MEETING.

THE annual election meeting of the College was held on Thursday, December 5th, when the following office-bearers were elected for the ensuing year, namely:—*President:* Dr. T. R. Fraser. *Vice-President:* Dr. Andrew. *Council:* The President, Vice-President, Dr. John Wyllie, Sir John Batty Tuke, Dr. T. S. Clouston, Dr. G. A. Gibson, and Dr. D. Berry Hart.

EXTRAORDINARY MEETING.

An extraordinary meeting of the College was held on Tuesday, December 17th, Dr. Fraser, President, in the chair.

*Election of Office-bearers.*

The Secretary reported that the following office-bearers had been elected by the Council for the ensuing year—namely:

*Treasurer:* Peter A. Young, M.D. *Secretary:* R. W. Philip, M.D. *Librarian:* George W. Balfour, M.D. *Curator of Research Laboratory:* Sir John Batty Tuke, M.D.

*Examiners for the Licence.*

*First Board.*—Physics: Dawson Turner, M.D., and Alfred Daniell, D.Sc. Chemistry: W. G. Aitchison Robertson, M.D., and John Gibson, Ph.D. Biology: John Macmillan, M.B., and Arthur T. Masterman, B.Sc.

*Second Board.*—Anatomy; Sir James A. Russell, M.B., and Joseph R. Whitaker, M.B. Physiology: D. Noël Paton, M.D., and J. Craufurd Dunlop, M.D.

*Third Board.*—Pathology: Norman Walker, M.D.; Robert A. Fleming, M.D.; and Francis D. Boyd, M.D. Materia Medica: J. Murdoch Brown, M.D.; G. Lovell Gulland, M.D.; and Alex. Lockhart Gillespie, M.D.

*Final Board.*—Medicine: Andrew Smart, M.D.; Claud Muirhead, M.D.; James O. Affleck, M.D.; Chas. E. Underhill, M.B.; W. Allan Jamieson, M.D.; Alex. James, M.D.; Byrom Bramwell, M.D.; G. A. Gibson, M.D.; J. Graham Brown, M.D.; Alexander Bruce, M.D.; Wm. Russell, M.D.; and R. W. Philip, M.D. Midwifery: J. Halliday Croom, M.D.; D. Berry Hart, M.D.; A. H. F. Barbour, M.D.; R. Milne Murray, M.B.; F. W. N. Haultain, M.D.; and J. W. Ballantyne, M.D. Medical Jurisprudence and Public Health: R. Peel Ritchie, M.D.; James Andrew, M.D.; P. A. Young, M.D.; James Carmichael, M.D.; J. Allan Gray, M.D.; and R. S. Aitchison, M.D. Insanity: Sir John Batty Tuke, M.D.; T. S. Clouston, M.D.; John Macpherson, M.D.; and John Fraser, M.B.

*Examiners for the Membership.*

G. W. Balfour, M.D.; R. Peel Ritchie, M.D.; A. R. Simpson, M.D.; Andrew Smart, M.D.; Claud Muirhead, M.D., T. R. Fraser, M.D.; John Wyllie, M.D.; James Andrew, M.D.; Sir John Batty Tuke, M.D.; T. S. Clouston, M.D.; J. J. Kirk Duncanson, M.D.; P. A. Young, M.D.; James O. Affleck, M.D.; John Playfair, M.D.; Sir John Sibbald, M.D.; Chas. E. Underhill, M.B.; W. Allan Jamieson, M.D.; Alex. James, M.D.; Peter McBride, M.D.; Byrom Bramwell, M.D.; G. A. Gibson, M.D.; J. Halliday Croom, M.D.; D. Berry Hart, M.D.; Sir James A. Russell, M.B.; W. S. Greenfield, M.D.; A. H. F. Barbour, M.D.; Alex. Bruce, M.D.; James Ritchie, M.D.; William Russell, M.D.; G. H. Melville Dunlop, M.D.; N. T. Brewis, M.B.; John Thomson, M.D.; J. Haig Ferguson, M.D.; W. G. Aitchison Robertson, M.D.; William Elder, M.D.

*Examiners for Diplomas in Public Health.*

*First Examination.*—Practical Work in Laboratory: W. G. Aitchison Robinson, M.D. Chemistry: Alex. Crum Brown, M.D. Physics: Dawson Turner, M.D. Meteorology: Sir Arthur Mitchell, K.C.B.

*Second Examination.*—Epidemiology and Endemiology: Claud Muirhead, M.D. Practical Sanitation: J. Allan Gray, M.D. Sanitary Law, Vital Statistics, and Statistical Methods: Sir James A. Russell, M.B.

*Professor Virchow's 80th Birthday.*

A report was submitted by Dr. Graham Brown to the effect that he had the honour of presenting the address of the College to Professor Virchow in person; and that Professor Virchow, in thanking the College, has paid a pleasing compliment to the College and its laboratory.

*The Royal Infirmary.*

The College unanimously reappointed Dr. Andrew and Dr. P. A. Young to be representatives of the College on the Board of Management of the Royal Infirmary.

## ROYAL COLLEGE OF SURGEONS IN IRELAND.

*The late Sir Wm. Mac Cormac, Bart., F.R.C.S.I.*

AT a meeting of the Council on December 19th, the following resolution was unanimously adopted:

"That the President, Vice-President, and Council desire to convey to Lady Mac Cormac their profound sympathy with her in her great bereavement, and at the same time to give expression to their appreciation of the irreparable loss which the science of surgery has sustained by the death of their distinguished fellow-countryman, her illustrious husband."

## SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, December, 1901.—The following candidates passed in:

*Surgery.*—J. W. W. Adamson (Section I), St. George's Hospital; A. A. E. Baptist, Calcutta; R. C. Bennett, University College Hospital; L. Courtauld (Section I), Cambridge and Middlesex Hospital; W. P. A. Hardwicke, Durham; D. V. Muller (Section II), Charing Cross Hospital; F. A. Paterson ((Section II), Royal Free Hospital; W. G. Rogers (Sections I and II), Cardiff and Charing Cross Hospital; C. W. Smith (Sections I and II), Sheffield; W. Thorp (Sections I and II), Royal Free Hospital; C. Watson (Sections I and II), Dublin and Westminster Hospital.

*Medicine.*—W. Alcock (Sections I and II), Sheffield; T. J. M. Clapperton (Sections I and II), King's College Hospital; J. T. Crowe, St. Mary's Hospital; J. M. King (Sections I and II), University College Hospital; C. A. Lower (Section II), Guy's Hospital and Bristol; D. V. Muller (Section II), Charing Cross Hospital; W. G. Rogers (Sections I and II), Cardiff and Charing Cross Hospital; C. W. Smith (Sections I and II), Sheffield; W. Thorp (Sections I and II), Royal Free Hospital; S. C. Wilkinson (Sections I and II), Leeds; J. H. Williams, London Hospital.

*Forensic Medicine.*—T. J. M. Clapperton, King's College Hospital; W. T. Colyer, Cambridge; G. Cross, St. Thomas's Hospital; J. T. Crowe, St. Mary's Hospital; W. G. Rogers, Cardiff and Charing Cross Hospital; C. W. Smith, Sheffield; W. Thorp, Royal Free Hospital.

*Midwifery.*—J. H. Clements, University College Hospital; K. A. Dawson, Royal Free Hospital; A. Dewar, McGill and Westminster Hospital;

* Obtained the number of marks qualifying for the Gold Medal.

G. Dewick, St. Thomas's Hospital; B. M. Dunstan, St. Thomas's Hospital; H. J. Gater, Guy's Hospital; D. R. T. Griffiths, Guy's Hospital; G. W. C. Hollist, Guy's Hospital; A. Holroyde, Leeds; C. H. Pring, Westminster Hospital; W. G. Rogers, Cardiff and Charing Cross Hospital; C. J. Taylor, Bristol; W. Thorp, Royal Free Hospital.

The diploma of the Society was granted to R. C. Bennett, T. J. M. Clapperton, G. Cross, J. T. Crowe, C. A. Lower, D. V. Muller, F. A. Paterson, W. G. Rogers, C. W. Smith, W. Thorp.

## MEDICO-LEGAL AND MEDICO-ETHICAL.

### MEDICAL ETIQUETTE.

F. T. M. C.—We think that if a specialist were told that a practitioner who sends the patient is prepared to carry out a certain line of treatment, he ought not to treat the patient himself without the practitioner's consent; but if he has not been informed of the practitioner's desire to treat it himself, he might suppose that the patient had been sent to him not only for an opinion, but for treatment.

## PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

### DISEASE IN TRAVELLING VANS.

Typhoid.—Our correspondent should send a succinct and orderly statement with regard to his cases to the sanitary authority of the district in which the van is situate, including a statement of the result of the Widal test. If this does not produce a satisfactory result, a copy of the same statement, with a covering letter, should be addressed to the Secretary of the Local Government Board, Whitehall, S.W.

### PUBLIC VACCINATION.

Another General Practitioner.—If a certificate for unfitness of vaccination had been granted and lodged early enough, the child's name would not have been in the lists supplied to the public vaccinator, and that official would have been saved the necessity of visiting for the fee of 1s., which is paid for such work, while our correspondent would have been saved the annoyance of which he complains. If he was not called in until the child was 4 months old, a note sent by him to the public vaccinator ought to have been sufficient to prevent all friction and difficulty.

## HOSPITAL AND DISPENSARY MANAGEMENT.

### LONDON COUNTY ASYLUM.

The following notes are in continuation of those published in the British Medical Journal of December 14th, 1901, page 1780:

*Claybury Asylum.*—In the annual report of the Subcommittee, one of the first statements made is the following: "It is with extreme regret that we have to report the resignation of Dr. Margaret Orange, Fourth Assistant Medical Officer, through confirmed ill-health. She was attacked by patients on two occasions, and sustained injury and shock which necessitated her being off duty for over a year, and subsequently compelled her to resign the service. On our recommendation the Asylums Committee granted her a superannuation allowance of £100 per annum, which was confirmed by the Council." The Medical Superintendent, Dr. Robert Jones, also refers to this unfortunate case, in pointing out the dangers attending the supervision of the insane, and he also mentions the case of one male nurse who had to be removed himself to an asylum and another who attempted suicide. During the twelve months covered by the report 3,043 patients are returned as having been under treatment: 301 were admitted, 213 were discharged recovered, 92 relieved, and 233 died. The recovery-rate, calculated upon the number admitted, stands at 40·42 per cent., and the death-rate at 7·66 per cent. upon the total number under treatment. Colitis, or so-called asylum dysentery, still is very prevalent here, no fewer than 194 cases are recorded, with 34 deaths, and in spite of complete isolation of the cases no real diminution has occurred. Among the admissions, over 30 per cent. were reported to have strongly marked suicidal tendencies, but as Dr. Jones can fortunately record, the vigilance of the staff has prevented any fatality. Erysipelas broke out, and attacked 17 persons, resulting in the death of 1 female. Seven male and 24 female nurses obtained the certificate of the Medico-Psychological Association.

*Colney Hatch.*—In this Asylum the total number of patients under treatment during the year was 3,043, by a remarkable coincidence the same number as at Claybury. There were 500 cases admitted, 242 were discharged recovered, 51 removed not recovered and 212 died. The recovery rate of 53·53 is the highest for the last nineteen years. The total number of deaths was 212, giving a death-rate of 8·33 per cent. of the average number resident. General paralysis was the cause of death in 33 cases and Dr. Seward calls attention to the prevalence of this disease among the Jewish male patients. Colitis has been prevalent, 62 cases being recorded with 26 deaths. In this connection the erection of a sufficiently large isolation hospital to enable the more complete isolation of these cases, is urgently needed and is under the consideration of the Committee.

*Hanwell.*—Dr. Alexander deplores the admission of a good many feeble senile cases and hopes that before long at institutions in connection with workhouse infirmaries means may eventually be provided for properly and indefinitely treating such cases. The inadequacy of the accommodation of these institutions at present is too well known. A case of suicide occurred during the year. It was that of a man whose tendencies in that direction had been fought against by the staff for about four years and a-half. After attemping suicide by "precipitation" and setting himself on fire he developed the "swallowing" mania," and he at last succeeded in hanging himself. As Dr. Alexander pertinently and very truly remarks it is almost impossible to prevent a patient who is bent on suicide from carrying out his object in the long run. The nursing certificate of the Medico-Psychological Association was obtained by 19 male and 37 female nurses. The recovery rate among the discharges is returned as 35.68 for men and 52.49 for women, and the total number of patients under treatment was 3,062

*(To be continued.)*

## MEDICAL NEWS.

We have received from the Registrar of the General Medical Council a copy of the Minutes of the Council and of the various Committees, and of the English Branch Council, from July 1st to December 10th. The volume contains seven appendices, including the report of the Education Committee on the steps taken for the improvement of preliminary examinations (see British Medical Journal, December 7th, p. 1695), and the report of the Public Health Committee on various matters, including the new regulations for the diploma of D.P.H. The volume can be obtained from Messrs. Spottiswoode and Co., 54, Gracechurch Street, E.C., price 5s.

The St. Andrews Ambulance Association.—The St. Andrews Ambulance Association is in a flourishing condition in Edinburgh. At a recent meeting of the Executive Committee, held under the presidency of Dr. P. A. Young, the annual report showed that some 560 pupils had attended the classes held in Edinburgh and the district. Of these, 447 had passed. This showed an increase of over 100 on the preceding year. The record increase in the number of waggon removals of last year had also been maintained. This year the number of removals was 1,272; five years ago it was only 808. Sufficient funds had been raised to purchase a new ambulance waggon. It has lately been proposed that the Grand Priory of the Order of St. John of Jerusalem in England should be approached with the view of the St. Andrews Ambulance becoming the ambulance department of that Order in Scotland, in the same way as the St. John Ambulance is in England.

Dinner to Dr. Hall, of Hay Mills.—On December 17th a congratulatory dinner was given to Dr. F. J. V. Hall, of Hay Mills, by a number of his professional colleagues in the Birmingham district on the occasion of his establishing the falsity of a charge made against him by a former patient, as recorded in the British Medical Journal (December 14th, 1901, p. 1787). Professor Windle, Dean of the Medical Faculty in the University of Birmingham, as chairman, in congratulating Dr. Hall said that no one who knew him doubted the rights of the case; but, unfortunately, the rights of the case and the finding a jury would give upon it were not always the same thing. Dr. Neal proposed the guest's health, and was supported by Dr. Milligan, who referred to the bold stand Dr. Hall had made for his private character and professional honour. Medical men were particularly exposed to such charges. It was to be hoped that the victory he had gained for the profession would be great and lasting in its effects. Dr. Hall, in responding, gave a review of the proceedings, and expressed his appreciation for the help of the Medical Defence Union.

Investigation of Diseases of Sheep.—The Board of Agriculture has appointed a committee to investigate the two diseases of sheep known as "braxy" and "louping-ill." The members of the Committee are Professor Hamilton of Aberdeen University, Mr. J. McI. McCall, M.B., C.M., Assistant Veterinary Officer to the Board, Mr. E. J. Wheler, agent to the Duke of Northumberland, with Mr. R. B. Greig, F.H.A.S., F.Z.S., Lecturer on Agriculture to the Durham College of Science at Newcastle-on-Tyne, as Secretary and Demonstrator. The mortality from the diseases in question is a cause of very great loss to the sheep-farming industry in Scotland, amounting, as it probably does, to somewhere between a quarter and half a million sterling annually, or even more. The diseases have never yet been the subject of an official inquiry, and it

is to the credit of the present Board of Agriculture that it has seen the necessity for moving in the matter. The Treasury has voted a large sum of money to defray expenses.

Mount Vernon Hospital for Consumption.—It is announced that the foundation stone of the country branch of this hospital, which is to be erected at Northwood, will be laid next May by Princess Christian. The Committee of the hospital has received a donation of £500 from Mr. E. Steinkopff towards the completion of the building at Hampstead.

Presentation to Dr. Glynn.—On December 18th a complimentary dinner was given to Dr. Glynn, of Liverpool, after which Dr. and Mrs. Glynn were presented with their portraits in oils, which were subscribed for by his many medical friends on the occasion of his resigning his position as physician to the Liverpool Royal Infirmary. The health of Dr. Glynn was proposed by Dr. Caton, the chairman for the evening, and that of Mrs. Glynn by Mr. Rushton Parker. Appropriate speeches were also made by Sir William Banks and Mr. Edgar Browne.

Pious Foundresses in Lyons.—Madame Mangini has left her chateau and a sum of 300,000 francs for the foundation of a sanatorium for anæmic and chlorotic women of Lyons, between 15 and 20 years of age. Madame Rémond, of the same city, has left her fortune of about a million of francs for the erection of an asylum for the newborn children of poor parents at Lyons.

Death as a late Sequel of Chloroform Anæsthesia.—At the Royal Lancaster Infirmary, on December 4th, a coroner's inquiry was held concerning the death of a boy who had died shortly after an operation for squint. He was a healthy boy, his heart was ascertained to be sound before the operation, he took the anæsthetic well, the operation was not attended with any untoward circumstance, and it lasted only three minutes. He was taken back to his cot, and after ten minutes began to retch; three or four minutes later he suddenly became collapsed, and after a minute or two died. Artificial respiration was kept up for fifty minutes, but without result. At the necropsy the right heart was found overdistended, and filled with blood; the left was contracted and empty; except for recent congestion of the lungs, liver, and kidneys no pathological changes were found. There was no obstruction in the respiratory passages. The jury found that death was caused by sudden failure of the heart's action.

## MEDICAL VACANCIES.

**The following vacancies are announced:**

BIRMINGHAM: GENERAL HOSPITAL.—Resident Medical and Surgical Officer at the Jaffray Branch of the Hospital, Gravelly Hill. Salary, £150 per annum, with board, residence, and washing. Applications to the House-Governor, General Hospital, Birmingham, by December 30th.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon; unmarried. Salary, £100 per annum, with board and residence. Applications, endorsed "Dispensary Surgeon," to be sent to the Secretary.

BUXTON: DEVONSHIRE HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Furnished apartments, board, and lodging provided in each case. Applications to the Secretary by January 25th, 1902.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane Square, S.W.—Honorary Surgeon to the Western District of the Dispensary. Applications to the Secretary by December 30th.

CHELSEA HOSPITAL FOR WOMEN.—Clinical Assistant. Applications to the Secretary.

CHORLEY: RAWCLIFFE HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to the Honorary Secretary.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Second House-Physician. Appointment for six months. Salary, at the rate of £30 per annum, with board, washing, and residence. Applications to the Secretary by January 8th, 1902.

CLARE HALL SMALL-POX AND VACCINATION HOSPITAL, South Mimms, Barnet.—Resident Medical Assistant. Salary £100. Applications to the Secretary, Mr. C. Wilkins, 30, Coleman Street, E.C.

DUBLIN: ROYAL HOSPITAL FOR INCURABLES, Donneybrook.—Resident Medical Officer; unmarried, and under 30 years of age. Appointment for one year. Salary £150, with board and furnished apartments. Applications to the Registrar by January 2nd, 1902.

DURHAM COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary £140 per annum, rising to £160, with board, laundry and attendance. Applications to the Medical Superintendent, Durham County Asylum, Winterton, Ferryhill.

EDINBURGH ROYAL INFIRMARY.—Pathologist. Salary, £400 per annum. Applications to Mr. W. S. Caw, Treasurer and Clerk, by January 31st, 1902.

GLASGOW ROYAL INFIRMARY.—Superintendent, must be registered medical practitioner, and not exceed 45 years of age. Salary, £500 per annum, with board, house, coals, and light. Applications to the Secretary by January 15th, 1902.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House-Physicians. Appointments for six months; honorarium, £25. Applications to the Secretary by January 2nd, 1902.

LANARK COUNTY ASYLUM, Hartwood, Glasgow.—Third Assistant Medical Officer and Pathologist. Salary, £120 per annum, with fees, board, washing, and residence. Applications to the Medical Superintendent.

METROPOLITAN ASYLUMS BOARD.—Dentist to Rochester House for Imbecile Children, Little Ealing. Salary, £39 per annum. Applications, on forms provided, to be sent to the Office of the Board, Embankment, E.C., by December 31st.

MIDDLESEX HOSPITAL.—Assistant Physician, must be F. or M.R.C.P. Lond. Applications to the Secretary-Superintendent by January 1st, 1902.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hampstead.—Honorary Anæsthetist. Application to the Secretary at the offices, 41, Fitzroy Square, W., by January 4th, 1902.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—(1) Surgical Assistant. (2) Senior Assistant to Out-patient Department. (3) Clinical Assistant. Candidates must be qualified medical women. Applications to the Secretary by January 1st, 1902.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Junior Assistant Medical Officer for the Male Division; unmarried and under 30 years of age. Salary begins at £120 per annum, with board, lodging, and washing. Applications to the Medical Superintendent.

NOTTINGHAM GENERAL DISPENSARY.—Assistant House Surgeon. £100 per annum, with board, lodging, and washing. Applications to the Secretary by January 1st, 1902.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL: Marylebone Road, W.—Assistant Resident Medical Officer. Appointment for four months. Salary at the rate of £50 per annum, with board, residence, and washing. Applications to the Secretary by January 1st, 1902.

SCHOOL BOARD FOR LONDON.—Medical Officer, must give his whole time. Salary, £800 per annum, rising to £1,000. Applications, on forms provided, to be marked outside "Application for the Post of Medical Officer," to be sent to the Clerk of the Board by January 1st, 1902.

STOCKTON-ON-TEES: STOCKTON AND THORNABY HOSPITAL.—House-Surgeon, non-resident, not exceeding 30 years of age. Salary, £250 per annum. Applications to the Secretary by January 7th, 1902.

STROUD GENERAL HOSPITAL.—House-Surgeon. Salary £80 per annum, with board, lodging and washing. Applications to the Secretary by January 8th, 1902.

ST. BARTHOLOMEW'S HOSPITAL.—Surgeon. Must be F.R.C.S.Eng. Applications to the Clerk by December 31st.

ST. THOMAS'S HOSPITAL.—Resident Assistant-Physician. Applications to Mr. E. M. Hardy, Treasurer's Clerk, December 28th.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £100 per annum, increasing £15 annually for three years if approved by the Committee, with board and residence. Applications, endorsed "Application for Resident Medical Appointment," to be sent to the Secretary by January 1st, 1902.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, Chelsea.—House-Surgeon. Appointment for six months. Honorarium, £25, with board and lodging. Applications to the Secretary by January 11th, 1902.

WATERFORD DISTRICT ASYLUM.—Assistant Medical Officer; unmarried, and not exceeding 30 years of age. Salary, £100 per annum, with furnished apartments, board, washing, and attendance. Applications to the Resident Medical Superintendent by January 6th, 1902.

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## MEDICAL APPOINTMENTS.

BARRETT, W. A. H., L.R.C.P.Lond., L.R.C.S.Edin., appointed Officer of Health for the Shire of Mansfield, Victoria.

BOAG, James, M.B., C.M.Glasg., appointed Certifying Factory Surgeon to the Wishaw District of Lanarkshire.

BRUCE, C. W., M.B.Melb., appointed Government Medical Officer and Vaccinator at Cadelo, New South Wales.

COATES, C. M., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg. appointed Certifying Factory Surgeon for the Creech St. Michael District of Somerset.

COOKSON, Joseph, M.B.Melb., appointed Officer of Health for the Shire of Wimmera, Victoria.

DALY, Joseph P., L.R.C.S., L.R.C.P.Irel., appointed Certifying Factory Surgeon for the Monasterevan District, County Kildare.

HOWE, Neville R., F.R.C.S.Eng., appointed Visiting Surgeon to the Gaol at Orange, New South Wales.

JOHNSON, Edward A., M.B., B.S.Adel., appointed Honorary Assistant Physician to the Adelaide Hospital.

JUBB, George, M.D.Glas., appointed Extra Physician to the Glasgow Central Dispensary.

LOVEGROVE, James F., M.R.C.S.Eng., L.S.A., appointed Government Medical Officer and Public Vaccinator at Rylstone, New South Wales.

PARKE, T. H., L.R.C.P.Edin., M.R.C.S.Eng., appointed Certifying Factory Surgeon for the Ilkeswell District of Derbyshire.

PORTER, Charles, M.D., R.U.I., B.Ch., appointed Medical Officer of Health to the Municipality of Johannesburg.

PRICE, D. R., M.B., C.M.Edin., appointed Medical Officer for the South District of the Llandilofawr Union *vice* Evan Lloyd, M.R.C.S.Eng.

ROSE, A. Macgregor, M.B., Ch.B., D.P.H. Aberd., appointed Acting Government Medical Officer No. 1 District, Antigua, British West Indies.

RUSSELL, R. Hamilton, F.R.C.S.Eng., appointed Surgeon to In-patients at the Alfred Hospital, Melbourne, Victoria.

THURSTON, E. Paget, M.D.Cam., M.R.C.S.Eng., appointed District Medical Officer at Lawiers, West Australia.

TOD, Hunter F., M.A., M.B., B.C.Cantab., F.R.C.S.Eng., appointed Assistant Aural Surgeon to the London Hospital.

UPCOTT-GILL, G. A., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Medical Officer to the St. Pancras Infirmary.

WILSON, H. S., M.R.C.S.Eng., appointed Government Medical Officer and Vaccinator at Germanton, New South Wales.

WORGER, R. G., M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Radstock District, County Somerset.

## DIARY FOR NEXT WEEK.

### THURSDAY.

**Harveian Society of London.** Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 P.M.—Clinical Cases will be shown by Mr. Edmund Roughton, Dr. L. Guthrie, Mr. F. Jaffrey, and others.

**Roentgen Society.** 20, Hanover Square, W., 8.30 P.M.—Mr. C. E. S. Phillips: On the Function of an Auxiliary Electrode in X Ray Bulbs. Mr. Prosper H. Marsden: On Radiography applied to Dental Surgery. Mr. H. W. Cox: Demonstration of New Method for Exciting Several Tubes simultaneously from One Coil.

### POST-GRADUATE COURSES and LECTURES.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C.—A demonstration on the Throat will be given on Friday, at 5 P.M.

## BIRTHS, MARRIAGES, AND DEATHS.

*The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.*

### BIRTH.

HOBBS.—On December 19th, at 24, Ellison Place, Newcastle-on-Tyne, the wife of A. Holmested Hobbs, M.B., B.S., of a son.

# LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

## QUERIES.

INQUIRER asks where a summary of the arguments in favour of the transfer of vaccination from the guardians to the sanitary authority can be found.

### TREATMENT OF ACNE ROSACEA.

WOODLANDS asks for suggestions in regard to treatment of an obstinate case of acne rosacea. Some benefit followed the use of ichthyol preparations, but pustules persist on the nose and chin. The patient is a strong, healthy woman, and does not suffer in any other way. She is a strict teetotaller.

### THE COLONIAL MEDICAL SERVICES.

W. asks whether myopia, varicocele, or varicose veins would prevent employment as medical officer under the Colonial Office.

*** We believe that so long as these conditions do not interfere with efficiency they do not disqualify.

## ANSWERS.

S. S.—(1) The most favourable time is during the week following menstruation. The woman's inclination should be the guide as to frequency. (2) To lead a regular, temperate life, avoiding causes of ill-health; eating simple meals; keeping early hours; taking open-air exercise short of fatigue; and following the advice given in answer to Question (1)

LONGISSIMUS DORSI.—A "wash-out" watercloset is of quite a different type from the "wash-down" watercloset. The form mentioned by our correspondent is a "wash-out" and this form certainly does not meet all the requirements of a good type, for it frequently happens that paper, etc., hangs back in the trapping water after the flush has been discharged; and, moreover, the space between the water in the basin and the surface of the water in the trap is generally very foul. In the "wash-down" type the water in the basin is continuous with that in the trap, and the type is one of the most approved at the present day. Any dealer in sanitary apparatus would be able to supply a "wash-down" form of watercloset.

### APPOINTMENT OF NURSES.

D.—We agree with the medical members of the House Committee of the hospital that the selection of a nurse should rest entirely with the matron, and that she should deal with all applications, and interview, in the first instance, all candidates for the post, and when she has found one whom she considers suitable, present her to the Committee for election.

### GERMAN TEXTBOOK IN MEDICINE.

KLINIK wishes to have recommended a short inexpensive work on general medicine in German.

*** He would probably find the following (which can be obtained through Messrs. Williams and Norgate, 14, Henrietta Street, Covent Garden, W.C.) suitable for his purpose: *Grundriss der inneren Medicin für Studirende und Aerzte*, by C. Liebermeister, M.D., Professor of Pathology and Therapeutics in the University of Tübingen. Second edition. Tübingen: Franz Pietzecker. 1901. (Demy 8vo, pp. 448. 10s.)

### BOOKS ON DIETETICS.

WEARDALE asks to be recommended some works on dietetics.

*** He would probably find the following useful: *Food and the Principles of Dietetics*, by R. Hutchison, M.D., M.R.C.S. (London: Edward Arnold. 1900. 16s.), and reviewed in the BRITISH MEDICAL JOURNAL of May 11th, 1901, p. 1151; *Food in Health and Disease*, by J. Burney Yeo, M.D., New Edition (London: Cassell and Co. 1899. 10s. 6d.), reviewed September 4th, 1897, p. 596.

## LETTERS, NOTES, Etc.

### SUPRARENAL GLAND IN INTESTINAL HEMORRHAGE.

DR. D. N. COOPER (Woolwich, S.E.) writes to suggest, considering what an efficient haemostatic suprarenal gland substance is, that it should be given in intestinal haemorrhage in cases of enteric fever in a keratin coated vehicle.

### THE VALUE OF REST AND STIMULATION.

DR. T. D. NEWBIGGING (Abington, N.B.) writes: I have read with interest Dr. Caton's paper on Arrest of Endocarditis (BRITISH MEDICAL JOURNAL, October 12th, 1901). I see the treatment referred to as "Dr. Caton's plan of treatment," but surely there is nothing in the treatment to merit its being so called. It consists of three "essentials"—rest, diet, and stimulation of trophic nerves of heart. Rest and diet are well enough known and universally employed; and in trophic nerve stimulation there is nothing new, although it may not be so universally employed. Personally I have employed it ever since I graduated. I got the idea somewhere when still a student, and have carried it out often, although not only (or even mostly) in heart cases. The principle of treatment as it appears to me is this: When any organ or part of the body to which such trophic nerves go is acting irregularly—that is, the heart in pericarditis or endocarditis, etc.; the lung in phthisis, pleurisy, etc.; the intestine in enteritis; even the foot in club-foot. This irregular action, if not due to irregular nerve stimulation, is at least under the control of the nerves supplying the part, or, it may be, has escaped from such control. A better way to put it is this: Irregular nerve stimulation (control) is in excess or in defect. If in defect you apply stimulus—for example, heat; if in excess you apply control as by cold. The cold bath in hyperpyrexia, the icebag in local inflammations are in this view very gross attempts at control of excessive nerve stimulation. A moderate degree of cold applied for a longer time, and more directly over the trophic nerves, is infinitely safer, and productive of better results. In the same way a moderate degree of stimulation applied for a longer time, or more continuously, leads to better results in cases where the irregular nerve control is by defect. For this reason I have never used blisters in stimulating; they injure the skin, and therefore limit constancy of application. By their action on the kidneys, moreover, they limit the extent of surface over which they may be applied. By way of cold I have always used a towel firmly wrung from cold water: by way of heat I use an extract of capsicum in spirit and water. In both cases applied along the spine, or even covering the whole back in region indicated. My phthisis cases wear a "waistcoat" soaked in this extract day and night, and, whether rightly or wrongly, it gets the credit of most of the good that accrues. The benefit arising from massage to the spine (the most important part of the body to be so treated in cases in which massage is advisable, and yet the most frequently omitted) is entirely due to this "regulating" effect on trophic nerve control. Let any surgeon try the effect of mild stimulation and well-directed spinal massage in certain cases of club-foot: the effect is sometimes surprising. In all cases it would markedly assist operative treatment. It involves the same principles as Dr. Caton advances.

LETTERS, COMMUNICATIONS, ETC., have been received from

A A.M. B Mr. L. Browne, London; Dr. F. C. Bryan, London; Mr. G. Brown, London; Mr. W. M. Beaumont, Bath; Mr. J. M. Brown, Toledo, Ohio; British Viavi Co., Director of, London; H. S. Bennett, M.B., London; Messrs. Burroughs, Wellcome and Co., London. C M. Collier, M.B., London; A. Cox, M.B., Gateshead-on-Tyne; Coronella; Hon. Stephen Coleridge, London; Dr. D. N. Cooper, London. E Mr. A. Eastwood, London. F Dr. W. F. Farquharson, Carlisle. G Mr. W. E. Green, Sandown, Isle of Wight; Mr. J. E. George, Edinburgh. H H. J. Hillstead, M.B., London. J Mr. E. Jones, Exeter. L F. H. Low, M.B., London; Dr. J. L. Livingston, Hursley. M Dr. P. McBride, Edinburgh; Mr. E. McIntyre, London. O Dr. Oretchkin, St. Petersburg. P Dr. L. Pincus, Danzig; Mr. A. de Prenderville, London; Dr. F. A. Purcell, London; Mr. F. T. Paul, Liverpool. R Royal Dental Hospital, Secretary of, London; Messrs. Roberts and Co., London; Major R. Ross, Liverpool; Mr. R. H. Russell, Melbourne. S Messrs. Scott and Bowne, London; E. J. Sidebotham, M.B., Manchester; Dr. D. W. Samways, Mentone. T Dr. C. Turner, Butte, U.S.A.; Mr. H. P. Taylor, Midyell. W Mr. S. W. Wilson, Dublin; W. W. Westcott, M.B., London; Dr. T. S. Wilson, Birmingham; Mr. H. G. G. Wilkins, Eastbourne; W. A. T. X X.Y.Z.

## BOOKS, ETC., RECEIVED.

The Composition of Dutch Butter. By Dr. J. J. L. van Ryn. London: Baillière, Tindall, and Cox. 1902.

Manual of the Diseases of the Eye. By C. H. May, M.D. Second edition. London: Baillière, Tindall, and Cox. New York: W. Wood and Co. 1901. 8s. 6d.

The Estivo-Autumnal (Remittent) Malarial Fevers. By C. F. Craig, M.D. London: Baillière, Tindall and Cox. 1901. 10s. 6d.

A Handbook of Pathological Anatomy and Histology. By F. Delafield, M.D., LL.D., and T. M. Prudden, M.D., LL.D. Sixth edition. London: Baillière, Tindall and Cox. 1902. 21s.

Knochenenkrankungen im Röntgenbilde. Von Dr. A. Kohler. Wiesbaden: J. F. Bergmann. Glasgow: F. Bauermeister. 1901. 2os.

The Underground Watering of Plants and Gardens. By J. Grant. London: Ward, Lock and Co. 1901. 1s.

Personal Experiences in Pelvic and Abdominal Surgery. By R. S. Sutton, A.M., M.D., LL.D. Pittsburg, Pa.: Calumet Publishing Co. 1901. 2.50 dols.

Herbert Fry's Royal Guide to the London Charities. Edited by John Lane. Thirty-eighth edition. London: Chatto and Windus. 1901-2. 1s. 6d.

*** In forwarding books the publishers are requested to state the selling price.


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# ARMY MEDICAL SERVICE.

*In this list, Surgeon-Generals of the Army Medical Staff, as well as retired officers of the late Army Medical Staff, are distinguished by the letters A.M.S. Officers of the Royal Army Medical Corps by the letters R.A.M.C., and retired officers of the late Medical Department by the letters A.M.D.*

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Hill, C. B., Lt.-Col., R.A.M.C.
Hilliard, G., M.B., C. M. G. Major, R.A.M.C. (dead)
Hinde, G. L., C.B., Surgeon-Major Gen. (retired), A.M.S., (address unc mmunicated)
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Irvine, P. S., M.B., Lieut., R.A.M.C.
Irvine, L. A., Lt.-Col., R.A.M.C.
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Johnston, Hon. Brig.-Surg. J. C., Surg.-Major (retired), A.M.D. (dead)
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Kearney, J., M.D., Major, R.A.M.C.
Keatly, J., Major, R.A.M.C. (dead)
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Lewis, W. H. P., M.B., Major, R.A.M.C.
Lilly, A. T. I., Major, R.A.M.C.
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Norrington, H. L. W., Capt., R.A.M.C.
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O'Callaghan, D. M., M.D., Major, R.A.M.C.
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Pollock, C. E., Captain, R.A.M.C.
Pollock, C. F., M.B., Colonel (ret.), R.A.M.C.
Poole, W. C., M.D., Major, R.A.M.C.
Poole, W. C. T., Lt.-Col., R.A.M.C.
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Porter, F. J. W., Captain, R.A.M.C
Porter, R. M.B., Lt.-Col., R.A.M.C.
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Powell, S., M.B., Major, R.A.M.C.
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Power, R. I., Major, R.A.M.C.
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Smith, H. E. H., Major, R.A.M.C. (dead)
Smith, L. F., Captain, R.A.M.C.
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Tate, G. W., M.B., Captain, R.A.M.C.
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Treherne, F. H., Major, R.A.M.C.
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Trevor, H. O., Major, R.A.M.C.
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Trotter, W. J., Major, R.A.M.C.
Tucker, T. J., Surg.-Maj. (ret.), A.M.D., Hindon, Salisbury
Tuckey, T. B. A., Lt.-Col., R.A.M.C.
Tuke, G. J. A., Major, R.A.M.C.
Turner, A. F., Surg.-Maj. (retired) A.M.D
Turner, W., Major, R.A.M.C.
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Wade-Brown, F. J., Captain, R.A.M.C.
Wates, Hon. Brig.-Surg. J., Surg.-Maj. (ret.), A.M.D., S.E. Br.
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Wallis, K. S., Lieut.-Col. (ret.), R.A.M.C.
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Ward, W. A., Captain, R.A.M.C.
Wardrop, D., M.B., Lt.-Col., R.A.M.C.
Waring, A. H., Captain, R.A.M.C.
Waters, R., M.D., C.B., Brig.-Surg. (ret.), A.M.S., Tubbermore
Watling, Hon. Brig.-Surg. C. W., Surg.-Maj. (ret.), A.M.S., Leominster
Watson, A. O. C., M.B., Major, R.A.M.C.
Watson, John, M.D., Lt.-Col., R.A.M.C.
Watson, J. J. C., M.D., Major, R.A.M.C.
Watts, Brian, Capt., R.A.M.C.
Watts, Hon. Dep. Surg.-Gen. J., Brig.-Surg. (retired), A.M.D., 97, Central Hill, Upper Norwood, S.E.
Way, L., Captain, R.A.M.C.
Webb, C. A., Lt.-Col., R.A.M.C.
Webb, R., Dep. Surg.-Gen. (ret.), A.M.S., Dublin
Webb, W. E., M.D., Lt.-Col., R.A.M.C.
Westcott, S., C.M.G., Major, R.A.M.C.
Weston, G. E., Lt.-Col., R.A.M.C.
Whiston, P. H., Captain, R.A.M.C.
White, C., Lt.-Col. (ret.), A.M.S.
White, Hon. Brig.-Surg. W. O'B., Lt.-Col. (ret.), A.M.S., 23 Denny St., Tralee
Whitehead, H. R., Lieut.-Col., R.A.M.C.
Whitestone, C. W. H., M.B., Captain, R.A.M.C.
Whittaker, J. H., R.P., Col., late A.M.S., 7, Longford Ter. Monkstown, co. Dublin
Whitty, M. J., M.D., Major, R.A.M.C.
Wight, E. O., Major, R.A.M.C.
Wikeley, Hon. Brig.-Surg. C. E., Surg.-Major (ret.), A.M.D.
Wiles, Hon. Dep. Surg.-Gen. J., Brig.-Surg. (ret.) A.M.D.
Wilkinson, F. T., Lt.-Col., R.A.M.C.
Will, J., M.B., Major, R.A.M.C.
Williams, E. M., Captain, R.A.M.C
Williamson, John G., Lt.-Col. (retired), A.M.S.
Wills, S. R., Major, R.A.M.C.
Wilson, E. M., D.S.O., Lt.-Col., R.A.M.C.
Wilson, G., M.B., Major, R.A.M.C.
Wilson, J., Lt.-Col., M.B., R.A.M.C., Farnborough
Wilson, J. B., M.D., Major, R.A.M.C.
Wilson, Sir W. D., M.B., K.C.M.G., Surg.-Gen., R.A.M.C.
Wilson, W. J., M.D., Brig.-Surg. (ret.), A.M.S., Farenam
Windle, R. J., M.B., Major, R.A.M.C.
Winter, —, Captain, R.A.M.C.
Winter, T. B., Major, R.A.M.C.
Withers, S. H., M.B., Captain, R.A.M.C.
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Wood, O. G., M.D., C.B., Lieut.-Col., R.A.M.C.
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Woodley, R. N., Lieut., R.A.M.C.
Woods, C. G., M.D., Major, R.A.M.C.
Woods, C. R., M.D., Lt.-Col., R.A.M.C.
Woolfryes, J. A., C.B., C.M.G., K.H.P., M.D., Surg.-Gen., Barton Grove, Rumsey ford
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Wright, R. W., Major, R.A.M.C.
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Young, A.S.W., Lieut.-Col., (ret.) R.A.M.C.
Young, C. A., Major, R.A.M.C.
Younge, G. H., Lt.-Col., R.A.M.C.
Yourdi, J. R., M.B., Lt.-Col., R.A.M.C.

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Davidson, J., Captain, Bengal Estab.
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# AN EPITOME
OF
# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (1) Appendicitis.

In the Section of Medicine at the recent annual meeting of the American Medical Association, John B. Deaver (Philadelphia) presented a communication on appendicitis (*Phil. Med. Journ.*, June 15th) in which he suggested the following classification as convenient and well founded:

*Acute Appendicitis.*

| | |
|---|---|
| First ... ... ... | Catarrhal |
| Second ... ... | Interstitial |
| Third ... ... ... | Ulcerative |
| Fourth ... ... ... | Gangrenous |

*Chronic Appendicitis.*

| | |
|---|---|
| First ... ... ... | Catarrhal |
| Second ... ... | Interstitial |
| Third ... ... ... | Obliterating. |

He had never seen much good from the efforts of Nature to cure. The abscess itself, by its tendency to infect the peritoneum, was a great menace, and even if the abscess ruptured into a hollow viscus the situation was not much better. In the pathology two points were especially emphasised. First, the practical non-existence of any form of inflammation which by obliterating its lumen rendered the appendix harmless; secondly, the appalling rapidity and suddenness with which the appendix might suffer bacterial invasion and necrotic degeneration with resulting general peritonitis. Upon these two facts he based proper treatment, and the justice of claiming appendicitis as a purely surgical affection. No disease presented its signs and symptoms in such varied form and locality as appendicitis, and he made it a rule, therefore, in all abdominal cases first to exclude appendicial irritation, because careful examination would often reveal as due to it the affections otherwise apt to be classified as "enterocolitis," "acute dyspepsia," "cholera morbus," etc. In all inflammations of the appendix there were three cardinal symptoms, namely, pain, tenderness, and rigidity. Pain was the most significant, so much so that he regarded with suspicion every clinical history with belly-ache, inflammation of the bowels, neuralgia of the stomach, etc. The pain of appendicitis was paroxysmal, cramp-like, and colicky, and might at intervals almost disappear. It was usually first referred to the umbilical and epigastric regions, becoming localised in the right iliac fossa only after the lapse of several hours, and that not in all cases. He advised that the practitioner should at first examine away from the disease, and then slowly and gently approach the tender area. A localised spot of extreme tenderness he considered to be the surest indication of pus formation; conversely abrupt cessation was apt to denote complete gangrenous change and a paralysis of peripheral nerve filaments by toxin absorption. After referring briefly to some of the other symptoms of appendicitis, he stated that he did not depend to any extent upon blood examinations; a leucocytosis of over 20,000 indicated pus usually unless either shut off by adhesion or the individual was overwhelmed by septic absorption. The symptoms of appendicitis were seldom in proportion to the appendix regions; therefore it should suffice to diagnose early the inflammatory involvement which was of itself proper enough indication for rational treatment. He did believe there was but one treatment for appendicitis—namely, the aseptic scalpel of a surgeon, and it should be called upon as promptly as the diagnosis was made.

### (2) Abnormal Clinical Forms of Pyloric Stenosis.

Bouveret (*Lyon Méd.*, April 14th, 1901) records examples of two abnormal forms of obstruction of the pylorus, stenosis without vomiting, and stenosis with periodic vomiting. In the first case his patient suffered from pyloric carcinoma for at least two years, and never vomited during that time. The stomach was for a long time much dilated. Besides an uncommon tolerance on the part of the stomach, the case was in part explained by the fact that from time to time, at first at intervals of some weeks, the patient was troubled with discomfort after food, foul tongue, and loss of appetite: and, as soon as these symptoms appeared, he went to bed and abstained from all food for two or three days. In the second case the patient suffered from gastric intolerance for a few days each month. The attacks were exactly periodic, occurring once a month for a considerable time. The case was diagnosed as cicatricial contraction of the pylorus from old ulcer. Bouveret regarded the two cases as similar, the occurrence of the vomiting in the second case being due to the fact that the patient did not pay attention to the first signs of his gastric distension, but continued to eat and drink. Three conditions favour the absence, rarity, and periodicity of the vomiting: (1) slightness of stenosis, (2) exceptional tolerance, and (3) reduction in the amount of food taken.

### (3) Intermittent "Limping."

S. Goldfiam (*Neurol. Centralbl.*, March 1st,) points out that the symptoms of intermittent "limping" (*intermittirende Hinken*) are very characteristic, and considers that when a man complains that during the exercise of walking pains or paræsthesia appear in the legs (especially in the calves), and that these pains disappear on resting, only to reappear after the walking has been again indulged in, the duty of the practitioner is to examine the arteries of the feet, to determine whether there is pulsation or not. The absence of pulsation in the dorsalis pedis artery (*inter alia*) is conclusive evidence that the disease is "intermittent limping," and not rheumatism, sciatica, or neuralgia. He cites cases to exemplify the nature of the paræsthesia. The local conditions depend on a definite arteritis, and he considers that the vasomotor disturbances are partly consecutive. He has not been able to detect atheroma in any cases, and points out, further, that the age of the patients is generally inconsistent with the view that it could depend on a pre-existing atheroma. The sufferers from intermittent limping are generally between 30 and 40 years of age. He mentions that this disease has been stated to be associated with diabetes, but he cannot accept this, as only in one patient out of thirty did he find glycosuria. Nicotine poisoning also does not, in his mind, give a satisfactory causal explanation of the condition. He points out that there is a considerable likeness to Raynaud's disease, and, further, makes some general statements with regard to a marked hereditary neurotic diathesis in most of his patients. He next points out that, in his experience, gangrene occurs in 28 per cent., and that the disease, even when it does not lead to mortification, is a serious progressive one. It sometimes remains stationary for many years, and among the cases he relates is one in which the condition remained unaltered in one foot only. With regard to treatment, he does not lay down any hard-and-fast rules. Reasonable local and general means to allay symptoms—pain, etc.—good diet, an attempt to establish a collateral circulation, and rest are the indications he follows.

## SURGERY.

### (4) Dry Caries of the Shoulder-joint.

Kirmisson and Kuss (*Rev. d'Orthop.*, May, 1901) publish two cases of dry caries of the shoulder-joint in which the tuberculous nature of the morbid condition was proved by histological examination and by inoculation on animals. This form of articular tuberculosis is marked by a total absence of the signs of ordinary white swelling, as there is neither enlargement of the joint nor suppuration, and the synovial membrane is quite free from fungous growths. The chief feature of the affection is extreme atrophy of the deltoid, rendering very prominent the neck of the humerus and the bony prominences around the joint. The other symptoms are limitation of the movements at the shoulder, abduction and inward rotation of the arm, and severe pain in the joint. The relative frequency of dry caries of tuberculous origin in the shoulder is stated to be much more apparent than real. This affection is occasionally met with in the elbow and in the knee, and the supposed freedom of the hip from this form of tuberculosis may be due to the fact that this joint is so thickly covered by soft parts that it is difficult to make out the actual condition of the bones. Most surgeons, it is pointed out, have met with cases of coxalgia resulting in ankylosis and partial absorption of the bone, without the occurrence of suppuration or the formation of sinuses. The results of slow

and insidious lesions of a tuberculous nature in the osseous constituents of the hip may, it is asserted, be confounded with the special deformity of the neck of the femur known as coxa vara. In conclusion the authors refer to two instances observed by themselves of well-marked white swelling of the shoulder-joint with suppuration, in which careful investigation failed to demonstrate a tuberculous origin of the disease. Hence they point out it is in the present state of science absolutely indispensable to verify clinical diagnosis by bacteriological study and experimental inoculation.

#### (5) Uretero-Intestinal Anastomosis.

Guinard (*Bull. et Mém. de la Soc. de Chir.*, No. 19, 1901) puts on record a case in which, after accidental resection of the left ureter in the course of a very difficult hysterectomy, he established an anastomosis between the renal end of the divided duct and the sigmoid flexure. As a considerable extent of the ureter had been resected in the division of adhesions between the uterus and the intestines and omentum, it was found impossible to bring the severed ends of the ureter together, or to apply the upper end to the bladder. The patient made a good recovery, and, though much troubled during the period of convalescence by diarrhœa, subsequently suffered but very slight inconvenience from the abnormal discharge of urine, and when last seen, about eight months after the operation, was in good health, had increased in weight, and stated that her bowels were relieved only once in the course of twenty-four hours. The author states that there has hitherto been no tendency to occlusion of the uretero-intestinal fistula, a point of much importance in this case, as it was made out during the operation that the opposite kidney was atrophied, and the corresponding ureter considerably dilated.

#### (6) Resection of the Rectum per Vaginam.

Murphy (reprint from the *Philadelphia Medical Journal*, February 23rd, 1901) reports five cases of partial removal of the rectum through an incision made in the posterior wall of the vagina. In the opinion of this surgeon trans-sacral and ischio-rectal methods of dealing with malignant disease of the rectum are difficult, dangerous, and in many respects ultimately unsatisfactory. The vaginal method advocated and practised by the author, and fully described and illustrated in this paper, offers, it is believed, the following advantages: (1) The sacrum and posterior bony wall of the pelvis are not disturbed; (2) the field of operation is as extensive and the anatomical parts as accessible as in the trans-sacral operation; (3) the peritoneal cavity is opened in both the vaginal and sacral operations, and in neither is this step in the operation a source of great danger; (4) the diseased tissue is more accessible for inspection, and the extent to which the operation may be carried in an upward direction is as great, if not greater, than by the sacral route; (5) the peritoneal cavity may be freely drained through the vagina; (6) a perfect end-to-end approximation either by suture or by the use of the button may be secured. The preferable method of uniting the two ends is by interrupted sutures of silk, because, as there is no peritoneum on the sphincteric segment, failure of union is likely to result from the use of the button; (7) when the operation has been completed the parts are practically in their normal position.

## MIDWIFERY AND DISEASES OF WOMEN.

#### (7) Neuritis of Anterior Crural Nerve in Childbed.

Meyer (*Centralbl. f. Gynäk.*, No. 25, 1901) observed this condition in 17 out of 1,000 patients in the Royal Lying-in Hospital, Copenhagen. Pain in the thigh sets in about the third day, and there is distinct tenderness over the point where the anterior crural nerve passes under the crural arch. The pain radiates over all parts supplied by the nerve—to the hip, knee, and part of the foot supplied by the long saphenous nerve. Of the 17 patients 13 were primiparæ (63.5 per cent. of the entire 1,000 were primiparæ), 3 were 2-paræ, and 1 a 3-para. The children were not specially big; the heaviest weighed 9 lbs., the lightest 4¼ lbs. In only 1 case were there twins. In all cases the presentation was vertex, excepting 2 breech and 1 footling; in these three the arm was brought down and the head guided. In 1 vertex case the forceps was used. Delivery was spontaneous in the remaining 13 cases. In 3 cases there was pelvic deformity, twice universally contracted pelvis, once an exostosis on each sacro-iliac synchondrosis, but all 3 cases were delivered spontaneously. Parametritis or perimetritis never occurred in any case. In 1 pneumonia developed, the neuritis set in on both sides on the eighteenth day, the latest date of development in the whole series. In 7 out of the 17 cases the neuritis was bilateral. The cause of puerperal neuritis of the anterior crural is obscure. That well-known nerve lies far from the area of pressure of the fœtal head in parturition. Septic neuritis is out of the question; there was no evidence of sepsis in any of the 17 cases, nor was there any exudation which could press on the nerve in any case.

#### (8) Hernia of Fallopian Tube without Ovary.

Morf (*Annals of Surgery*, March, 1901) reports 23 authentic cases, adding 1 in his own experience. Out of the total of 24, 13 were inguinal, 10 femoral, and 1 obturator; 5 of the 13 cases where the tube was found in an inguinal sac were in infants; Morf's own patient was 24, but reported herself as ruptured from birth. As the canal of Nuck is patent and the tube lies relatively high at birth, a congenital hernia of the tube is easy to understand. Two cases occurred in pregnancy, where the tubes are raised above the pelvic cavity. In the remaining cases the explanation was not evident. All the 10 cases of femoral hernia occurred in adults, 6 being over 40; 4 patients were pregnant. Strangulation occurred in 14 out of the 24 (inguinal 6, femoral 7, obturator 1); it is not so dangerous as strangulation of intestine, even if unrelieved. In 1 case abscess formed and burst and the sloughy tube came away in the dressings. Tubal pregnancy occurred in 1 case; at the operation the sac was found full of clots, and also contained a fœtus 3 inches long. Reduction by taxis is inadvisable; when the sac is opened, however, the tube should be reduced if healthy, but removed if sloughy.

#### (9) Funis Strangulating Fœtus in Utero.

Strassmann (*Centralbl. f. Gynäk.*, No. 25) reports a case of some interest where a woman, who had borne four living children, had occasional slight hæmorrhages in the course of her fifth pregnancy between the fifth and eighth month. There was no evidence of placenta prævia. Fœtal movements ceased a fortnight before labour pains began in the ninth month. The uterus grew perceptibly smaller during the last fortnight. The presentation was transverse, a macerated fœtus was delivered by spontaneous evolution. The funis had become twisted five turns round the neck, which was deeply constricted and much elongated. Only a short segment of the cord was attached to the placenta, which was free from disease. The bleeding during pregnancy was due either to tearing of the placenta by traction of the shortened cord or to engorgement and congestion caused by the obstruction in the circulation of the umbilical vessels.

#### (10) Atresia Vaginalis in the Infant: Hæmatokolpos.

Bulins (*Centralbl. f. Gynäk*, No. 25, 1901) reports a case of congenital atresia and hæmatokolpos in a newborn child; he considers that it supports Kussmaul's theory of fœtal inflammation. The nurse when she washed the infant for the first time noticed a swelling between the labia. Four days later, as it grew larger, Bulins was called in. He found that the child was well nourished and free from any malformation beyond the genital tract. The labia were normal, but separated by a swelling of the size of a chestnut, bearing on its most prominent part a stellate white cicatrix. The hymen, as usual in such cases, was entire and lay against the surface of the swelling. When the child cried the swelling grew larger. It was bluish and slightly translucent. Operation was forbidden, but the parents a few days later found that the swelling had grown very much larger, and was so painful that the child cried continually. The rectum was obstructed and the anus was patulous, the abdomen greatly distended, and urine could not be passed. The swelling had become as large as a hen's egg. An incision was made and two

test-tubesful of a bloody mucous fluid removed. This fluid was found to be absolutely sterile. The child showed no further sign of disturbance or malformation later on.

**(11) Fatty Changes in Uterine Fibroid.**

VON FRANQUE (*Centralbl. f. Gynäk.*, No. 25, 1901) recently met with a tumour of this kind in a woman, aged 64, a multipara. It bore all the external appearances of a polypus of the cervix, and was made up of adipose tissue, clearly the result of fatty degeneration of uterine tissue, and not due to fœtal inclusion. Seydel (*ibid.*) reports a similar case, but the tumour was interstitial and lay in the anterior wall at the fundus.

## THERAPEUTICS.

**(12) Treatment of Inoperable Sarcoma by Coley's Fluid.**

W. B. COLEY (*Phil. Med. Journ.*, May 25th) gives some late results of the treatment of inoperable sarcoma with the mixed toxins of erysipelas and bacillus prodigiosus. In August, 1898 (*Journ. Amer. Med. Assoc.*) he published his results in 140 cases of inoperable sarcoma treated with the mixed toxins. In 24 of these the tumour completely or partly disappeared; 84 of this series were round-celled sarcoma, 21 spindle-celled, 9 melanotic sarcoma, 2 chondro-sarcoma; 12 were sarcoma (diagnosis confirmed by the microscope, but type of cell not stated); 6 were inoperable sarcoma resting on clinical diagnosis combined with a history of repeated recurrence in most cases. In 40, or slightly less than half, of the round-celled cases, there was more or less improvement, as shown by decrease in size and cessation of growth. In only 3 of these was the treatment successful. Of the 21 cases of spindle-celled sarcoma, 10 disappeared entirely, and all the remainder showed marked improvement. In melanotic sarcoma Coley had no successes. George R. Fowler, of Brooklyn, however, reported 1 case of melanotic sarcoma of the tonsil and fauces, which entirely disappeared under the use of the mixed toxins. The patient remained well for two years, when a local recurrence followed and proved fatal. In addition to Coley's own results, the paper contained a summary of results in 35 cases successfully treated by other surgeons employing the same method. Of these 35 cases, 10 were round-celled, 10 spindle-celled; in 5 the diagnosis was clinical only; in 5 there was, in addition to the clinical signs of sarcoma, a history of recurrence after operation; in 4 the diagnosis of sarcoma was confirmed by microscopical examination, but the type not stated; 1 was an endothelio sarcoma. Of these 35 cases, 26 disappeared completely; 2 others decreased so much that only a small node was left, which was easily excised. One of the latter cases was well three years, and the other one year at the time of the report. Of the 35 cases referred to 14 were well over two years, and 6 cases over three years. At the time of the report (August, 1898) 8 of Coley's own cases had remained well from three to six years. He has since made a very great effort to trace the after-histories of these cases, and he is now able to report 16 cases that have remained well from three to eight and a-half years. Of these 2 recurred after three and eight years respectively, one dying of metastases in the abdomen; the second, after remaining well for eight years, died of local recurrence. The cases were all hopeless, inoperable cases, and the diagnosis was confirmed by the microscope with two exceptions. In these instances the history of the cases, with the clinical appearances, made the diagnosis of sarcoma unquestionable. The type of tumour in the 15 cases that passed the three-year limit was as follows: Spindle-celled sarcoma, 9; round-celled sarcoma, 2; mixed-celled sarcoma, 2; epithelioma, 1; sarcoma (clinical diagnosis only), 2. It is worthy of special note that two of the successful cases, now well $3\frac{3}{4}$ and $4\frac{1}{4}$ years respectively, were sarcoma of the parotid gland. The diagnosis was not only confirmed by a competent pathologist, but, further, by a history of repeated recurrences after operation. Another case still is also worthy of special mention, inasmuch as it shows that the toxins may be taken for long periods of time without harm. The patient, a well-known physician, with eight times recurrent spindle-celled sarcoma of the soft parts of the chest (anteriorly) was treated with small doses of the mixed toxinsi with varying intervals of rest, for upwards of two years. The patient regained his usual health, and has now been perfectly well over six years from the beginning and four years since the cessation of the treatment. The tumours, while originally pure spindle-celled, were becoming more mixed with round cells, and more vascular with each recurrence; in other words, the disease, as so often happens, was increasing in malignancy until the toxins were begun. In addition to these 16 cases that have passed the three-year limit, in 8 others the tumours disappeared. One, a spindle-celled sarcoma of the abdominal wall, was well a year and a-half, when the patient returned to her home in Europe, and was lost sight of. A third, a spindle-celled recurrent sarcoma of the leg, is now in perfect health, without recurrence, two years and a-quarter after treatment. A fourth, a twice recurrent, spindle-celled sarcoma of the palm of the hand disappeared, and the patient remained well two years and a-half, when the tumour recurred. Refusing amputation of the arm, she was under the care of a Christian Scientist for eight months, during which time the tumour in the hand reached the size of a cocoanut, and extended above the elbow. Coley then amputated the arm just below the shoulder-joint, but she died of metastases three and a-half months later. Though the patient was an especially intelligent person, aged 22, while under the Christian Science treatment she watched a small tumour, the size of an English walnut, grow to the size of a cocoanut, and yet was made to believe it was actually getting smaller and improving. She also stated that she felt no pain. This is a good illustration of the utter impossibility of placing any value upon personal statements of patients in regard to improvement or cure of malignant tumours by Christian Science. A fifth case, a chrondro-sarcoma of the ilium of large size, disappeared; and the patient, after remaining well for seven months, had a recurrence, which proved fatal in about a year's time. A sixth, a round-celled angio-sarcoma of the breast, was well six months later, when the patient was lost sight of. A seventh, a recurrent fibro-angioma of the lip, was well when last heard of over two years after operation; and an eighth, a recurrent spindle-celled sarcoma of the thigh, disappeared; but the patient, after remaining well for a year, had a recurrence locally and in the groin, which no longer yielded to the treatment. In addition to these 24 personal cases, Coley mentions two other cases in which he directed the treatment, although it was carried out by another surgeon. One case (Johnson's) a large, spindle-celled sarcoma of the pharynx, entirely disappeared, and the patient was well more than six years later. The second (Storr's and Griswold's), inoperable sarcoma of the breast and axilla, disappeared under 78 injections of the mixed toxins, and is now well, more than four years after treatment. The diagnosis in both of these cases was confirmed by microscopical examination, in the latter case by Professor William H. Welch, of Johns Hopkins University. The results thus far, Coley says, seem sufficient to warrant advising the treatment as a routine measure after all operations for primary sarcoma. While the treatment is not recommended in carcinomatous growths, it has been the experience of the writer that in many cases the toxins exert a marked inhibitory influence in carcinoma, although it is rarely curative. The only cases of carcinoma in which the toxins are likely to prove of much value, he thinks, are those in which they are used after primary or secondary operation as a prophylaxis against recurrence. The writer still believes that the action of the toxins upon malignant tumours can be explained only upon the theory that such tumours are the result of some infectious micro-organism, and this view is strongly supported by the recently expressed opinion of Czerny.

**(13) Is Cancer Curable?**

UNDER this heading A. Adamkiewicz (*Berl. klin. Woch.*, June 10th, 1901) publishes an article dealing with cases treated by cancroin. The editor attaches a foot-note inviting a discussion on the subject, which will be reported in due course. Adamkiewicz says that he has already reported the case which he uses as a basis for his present communication. The patient was suffering from

"cancerous degeneration of the worst description of the womb, vagina, and parametrium." The vaginal cervix, he says, had disappeared into a tumour mass, which included the vaginal fornices, and reached over the whole mucous membrane. The vagina was so narrowed that an examination of the parametric tissue was impossible. The process was so far advanced that Albert feared that a perforation into the bladder or rectum might occur at any minute, and put aside the idea of any operative interference. Zwintz, who was treating the patient, had recourse to Adamkiewicz's method of injecting cancroin. "The picture of the illness changed as if by magic." He describes in almost dramatic language the metamorphosis which followed, and continues: "The woman, who had been bedridden for more than half a year, was able to leave her couch of pain, and, in spite of the verdict of science and of experience that she had only to wait for death, she could again busy herself with her household duties." Local examination showed softening and decrease of the tumour but not an entire disappearance of it. He states that the anatomical condition after the use of cancroin is not a fair criterion; the true index is the physiological condition. Cancroin causes necrosis and softening of the fresh and growing cancer cells only, which ultimately become absorbed. The older cells are killed, and remain *in situ*, as dead masses, but doing no harm. He claims that the patient is cured, and that a mere arrest of the process does not describe the changes brought about by the cancroin injections. He says further that he has been able to "prove that it could not have been a mere accident" which led to the curing of the patient; for "the regularity with which cancroin displays its action always in the same way, and has displayed that action in a very large number of cases, shows that a law is manifested by this occurrence." He refers, in support of his arguments to his announcement in 1891 that "a cancer cell was no epithelium, but was an animal—a protozoon—specially a coccidium." The cure is the result of three factors; there is the pathological process, the means used to combat it, and the particular individuality in its relation to the disease. How these are factors of the cure he does not explain in detail. Again and again he reiterates the assertion that the patient already mentioned was in a hopeless condition before the application of his remedy. It would appear that the reiterations were intended to emphasise the fact. He proceeds next to give an account of the illness in the patient's own words (much as one reads of the person who suffered from a strange complex of symptoms, representing some wonderful disease, and was cured, after all the "doctors had given him or her up," by somebody's patent cure). He concludes by the two sweeping assertions: "(1) Cancer is curable; and (2) one may look at the problem of this cure of cancer as scientifically solved.

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**(14) Chemical Caustics in Epithelial Cancer.**

At a meeting of the College of Physicians of Philadelphia on June 5th (*Philadelphia Med. Journ.*, June 15th), J. F. Schamberg exhibited two patients showing epithelial cancer of the cheek treated by chemical caustics. The first patient was a woman of 83, who had only a short linear scar marking the site of an epithelioma of fifteen years' standing. The treatment consisted in the application of 25 per cent. carbolic acid ointment for a week, and then a 50 per cent. solution of caustic potash, followed by 25 per cent. arsenious acid. These applications were made after swabbing the parts with cocaine. In four weeks the growth was completely healed. The second patient was a man who is at present undergoing the same treatment.

**(15) The Treatment of Tuberculosis.**

Klebs (*Münch. med. Woch.*, No. 49, 1900), impressed with the uncertainty of the treatment of tuberculosis in sanatoria, recommends the continuance of attempts to arrive at a satisfactory causal treatment. The method which he now uses is the injection of the zymases of tubercle bacillus cultures, "tuberculocidin" and "antiphthisin," which he has found capable of arresting an experimentally-produced tuberculosis in guinea-pigs and rats. Clinically he has used this method in tuberculosis of the lungs and other organs. In phthisis he is able to record improvement in 78 per cent. of the cases, and marked improvement in 60 per cent. The most satisfactory results have been obtained in the younger patients, and especially in cases of scrofulous adenitis. Administration by the mouth had the advantage of being better tolerated, and followed by less febrile reaction than injection. External application is efficacious when the disease affects the skin, and intra-articular or peri-articular injection where the joints are concerned.

## PATHOLOGY.

**(16) The Significance of Variations in the Freezing Point of Blood and Urine.**

Kummell (*Münch. med. Woch.*, October 30th, 1900) claims that the most important progress in the diagnosis and treatment of renal diseases is due to the introduction of catheterism of the ureters, which renders possible an examination of the secretion of each kidney separately. Before nephrectomy is performed it is essential to know that the other kidney is performing its function satisfactorily. Under certain conditions, such as contracted hypertrophied vesical walls, abnormal position of the ureteral openings, or turbidity of the vesical contents, catheterism of the ureters may be impossible. In other cases, again, nephrectomy is evidently indicated on one side, and ureteral catheterism reveals that the function of the other kidney is not quite perfect, a satisfactory conclusion as to whether it may be trusted to take on the work of the extirpated organ is often impossible from catheterism of the ureter alone. The important methods employed in forming a decision are: (1) The estimation of the total quantity of urea excreted; (2) the determination of the freezing point of the blood; (3) the determination of the freezing point of the urine; (4) analyses of the urine excreted by each kidney after the administration of certain drugs. The total amount of urea excreted is of least value, as it may vary normally between 20 and 35 grams in the twenty-four hours; if it is below 15 or 16 grams it may be concluded that it is unsafe to remove a kidney. The result should always be checked by the other methods available. Normal human blood should have, according to Koranyi, a freezing point of $-0.56^\circ$ C. A lowering of the freezing point to $-0.58^\circ$ to $0.60^\circ$ C., or more, indicates that the function of both kidneys is impaired. Renal operations are unjustifiable unless the freezing point approaches $-0.56^\circ$ C., at which point it may be assumed that at least one kidney is acting properly. The cause of the lowering of the freezing point of blood in renal disease is the greater molecular concentration produced by the unexcreted products of metabolism. Thus, in 10 of the writer's cases there was bilateral renal disease: the freezing point of the blood sank to $-0.60^\circ$ to $-0.65$, and in one case even to $-0.75^\circ$ C. If one kidney is doing its work well the freezing point of the blood is normal. In 11 cases of nephrectomy, in which the freezing point of the blood had been found previously to be $-0.56^\circ$ C., there was no disturbance of the renal function after the operation. The determination of the freezing point of the urine itself is simpler and equally valuable. The freezing point of normal urine varies between $-0.9^\circ$ C. and $-2^\circ$ C. When the kidneys are diseased the freezing point is raised, and in severe bilateral renal disease, for instance in chronic interstitial nephritis, may approach or pass that of blood. A rise of the freezing point above $-0.9^\circ$ indicates renal disease. More valuable still is the determination of the freezing point of the urines obtained by catheterism from each kidney separately. In pyelitis and other diseases not involving the kidney substance the freezing point of each sample is approximately identical. If one kidney is diseased there are great differences between the freezing points of the two samples. In three instances it was $-0.19^\circ$, $-0.14^\circ$, and $-0.37^\circ$ C. respectively for the diseased side, and $-1.75^\circ$, $-1.03^\circ$, and $-1.53^\circ$ C. for the healthy side. The fourth method is used as follows: A weak solution of phloridzine is injected hypodermically, and renal diabetes results. By ureteral catheterism it is found that the diseased kidney excretes much less sugar than the sound one, or even none at all. Methylene blue may also be given internally and the ureters subsequently catheterised. It is excreted less rapidly and in less quantity on the diseased side.

# AN EPITOME
OF
# CURRENT MEDICAL LITERATURE.

## MEDICINE.

**(17) Diagnosis of Latent Malaria.**

GRIXONI (*Gazz. degli Osped.*, May 12th, 1901) points out that the prophylaxis of malaria now depends on the thorough cure of cases in the cold months, so that the *Anopheles* may not become infected in summer. To make sure of a thorough cure latent malaria must not be overlooked, and a rapid and certain method of diagnosing it will be of great scientific value. The author experimented on the known property of malarial blood to produce agglutination of the red corpuscles. If two drops of malarial blood (or one of malarial and one of healthy) are placed on cover glasses and then brought into contact and closely pressed together to get a uniform layer, in less than a minute the red corpuscles group themselves into masses of from 3 to 5 up to 80 to 100 or more. The leucocytes take no part, and if they are included in one of the masses they are surrounded by a zone free from cells, as if they exercised a negative chemiotactic force. The ordinary roulette arrangement is never met with in a well-made malarial preparation. In 7 patients who had been free from malarial attacks for periods of from one to six months and were in good health, the blood still had this agglutinating power. In 3 of them which entered the hospital for non-malarial febrile complaints, after a few days of fever without any parasites, fever of the old malarial type recurred and parasites were then found: these attacks occurred when there were no mosquitos about, and so were true relapses and not reinfections. The author believes that the agglutinative power is not merely the survival of the former state of the blood, but represents a continuous production in minute quantity of the agglutinating substance by organisms existing in the body. Not only does the return of the malaria in these 3 cases point to this, but also the fact that in bad and old-standing cases energetic treatment will cause the agglutinating property rapidly to disappear: if this property can rapidly disappear in some cases, its persistence in others is probably due to its continuous production. So that the phenomenon of agglutination serves to diagnose latent malaria which evades all other diagnostic methods. By dilution of the blood with normal saline solution an approximately quantitative estimation of the agglutinative power was obtained, and thus a very marked action of quinine was demonstrated. In subcutaneous administration the maximum effect was reached two hours after the dose, and was maintained for seven to eight hours: in the case of doses by the mouth the maximum was reached after four hours, and lasted about five hours more. By the same method, a slight diminution of agglutinative power was detected towards the end of the interval in patients with fever of a long period, but no such change could be detected in tertian or quartan cases. A large series of experiments was made in other febrile diseases (measles, varicella, erysipelas, mumps, syphilis, typhoid, acute rheumatism, bronchitis, phthisis, lobar pneumonia, pleurisy—dry and exudatory—meningitis, tubercle of bones, abscesses, suppurating glands, febrile gastric catarrh, gonorrhœa, ankylostomiasis, and ephemeral fever). The only cases in which the reaction occurred were those of typhoid (in which it was constant, being specially marked when typhoid and malarial blood were mixed). In one case of streptococcus meningitis it occurred, but malarial history could not be absolutely excluded, and in severe cases of streptococcus erysipelas no agglutination occurred.

**(18) Pernicious Anæmia.**

TH. RUMPF (*Berl. klin. Woch.*, May 6th, 1901) publishes the results of his analyses of blood in cases of pernicious anæmia. He first turns his attention to the etiology of the disease. He can only explain the disease by looking on it as a combination of symptoms due to various causes. Of these he mentions bothriocephalus latus in the intestine—a very rare cause—carcinoma, specially of the stomach, pregnancy and parturition, syphilis, insufficient nutrition, and pathological conditions of the gastro-enteric canal. Besides cases due to or following one of these conditions, he calls attention to those cases for which no cause can be ascribed—cryptogenetic pernicious anæmia (Birch-Hirschfeld). He says that just as ill-understood as the etiology of the disease is the actual condition of the blood. The microscopical appearances are well known, but the true chemical changes have almost entirely been neglected. He conducted experiments with Dennstadt. They examined the blood of two stillborn fœtuses as a control, and further compared the results with those obtained by Schmidt and other analysts. They found that the blood in pernicious anæmia contained a larger quantity of water than normal blood, a smaller quantity of solids, a higher proportion of chlorine, and a lower proportion of potassium, iron, and fat. The deficiency of potassium is more evident when a comparison is made with the quantity of sodium and of chlorine. In pernicious anæmia there is not sufficient sodium to "cover" the chlorine, and the potassium also is present in too small quantities to combine with all the free chlorine. In normal blood there is an excess of sodium when estimated by the side of chlorine, without any of the potassium being needed to take up the chlorine. They further examined various tissues of the body, and found that the proportion of water was higher than normal in the heart, but considerably lower in the liver, spleen, and brain. The solids were in excess in the heart, and especially in the liver and spleen. There was also a deficiency of sodium to cover the chlorine in the liver and spleen, while in the former potassium was present in a higher proportion than normal, and in a lower proportion in all other organs. Making his deductions from these investigations, he turned them to practical use by treating pernicious anæmia with potassium carbonate, tartrate, and citrate. He reports 4 cases, 3 of which he describes as dying when he began the treatment; all recovered. A fifth case was improved, but as he did not continue the treatment for a sufficiently long time, Rumpf does not include that in the trial cases. The patient relapsed later, and died after two months' further illness. He does not claim that potassium salts are a true specific remedy for all cases of pernicious anæmia, but strongly recommends that a trial of the treatment should be made.

**(19) Sphygmographic Appearances of the Infant's Pulse.**

H. O. NICHOLSON (*Scott. Med. and Surg. Journ.*, viii, 419, May, 1901) proves by carefully-taken sphygmographs that the generally-accepted statement that the infant's pulse has no dicrotism, and is little more than a wavy line with no apex, is incorrect. In a tracing obtained immediately after ligature of the umbilical cord there was, it is true, a rounded apex, but the ascent of the up-stroke was nearly vertical, and the position of the dicrotic notch was easily seen. In a sphygmograph from an infant 6 days old there was a distinct apex, the tidal wave was developed almost immediately and was well sustained, the dicrotic notch was situated high up above the base line, and the dicrotic wave was small, features which indicate a pulse of relatively high tension. Nicholson also points out that in very young infants the form of pulse tracing is comparable to that obtained in aortic stenosis and aortic aneurysm in the adult; and that pyrexia in children under a year rarely produces dicrotism or hyperdicrotism of the pulse.

## SURGERY.

**(20) Unilateral Intestinal Exclusion.**

DELORE AND PATEL (*Rev. de Chir.*, March, 1901), in a paper on unilateral exclusion as a method of treating persistent intestinal fistulæ, publish two recent cases observed in the surgical clinic of Piniet. The first of these cases was one of pyostercoral fistula in the right iliac fossa following tuberculous appendicitis. Ileo-colostomy was performed with unilateral exclusion of a long segment of small intestine. The small intestine having been divided on the proximal side of a dense mass of adherent coils the distal end was closed by suture, and the opposite end fixed by Murphy's button to the ascending colon. The immediate results of the operation itself were good, as there were no signs of peritoneal irritation, and the button was expelled on the twelfth day. The sup-

puration in the iliac fossa, however, persisted, and the patient died from exhaustion on the twenty-eighth day from the date of the operation. In the second case, which was also one of stercoral fistula, due to ileo-appendicular tuberculosis, unilateral exclusion by anastomosis of the proximal end of the divided ileum to the sigmoid flexure resulted in complete recovery and suppression of the fistula. A study of this subject has led the authors to the following conclusions: (1) Unilateral exclusion may be placed in the category of intestinal operations, which, without effecting a direct attack on the lesion, aim at its cure by placing it at rest; like other operations of anastomosis it is not very dangerous and often very efficacious; (2) in its application to the treatment of intestinal fistulæ its results are variable according to the seat of operation, and whether it be practised on the small or the large intestine; in the small intestine it leads to the same result as entero-anastomosis—that is to say, the fæcal matter accumulates in the inferior segment and the fistula persists; in the large intestine, on the other hand, its results are more favourable; if the fistula be situated in the ileo-cæcal region and the cæcum itself be involved, the ileum should be attached to the sigmoid flexure; if the terminal portion of the small intestine only be involved and the cæcum be free, anastomosis of the ileum with the ascending colon will suffice; (3) in unilateral, as in bilateral exclusion, there is a definite suppression of the accumulation of fæcal matter; unilateral exclusion is more favourable than bilateral exclusion to the closing of the fistula, and the risks of infection by propagation seem to be less serious; (4) unilateral exclusion may also be practised in cases of non-fistular tuberculosis of the cæcum, with an aim both at definite cure and at prevention of the development of a stercoral fistula.

#### (21) The Treatment of Caries of Temporary Molars.

Martin (*Lyon Méd.*, February 3rd, 1901) protests against the general tendency to neglect caries of the milk teeth. Continued pain and the disturbance of digestion from lack of mastication at the very time when assimilation is most active lead not only to fretfulness and illness but to actual arrest of development of the children. On the other hand, the temporary teeth are difficult to treat by the conservative methods applicable to the permanent teeth, because of their lesser resistance, and extraction is not without inconvenience when premature. Martin has treated his recent cases in a new way. After a few days of vigorous disinfection, he applies a closely fitting capsule of gold or platinum to cover the whole of the crown. If there has been any marked loss of substance, the cavity is cleaned and then closed by using first a little pulpine (essence of clove, oxide of zinc, calcium carbonate and tannin) and then cement before the application of the capsule. All four molars of the affected jaw should be capped in order to ensure absolute concordance between the dental arches. The results have been very satisfactory, the cachexia and fretfulness disappearing, and nutrition rapidly improving. In one case, where all the molars were in an advanced stage of caries, eight separate capsules were applied, and the child has for two years suffered no return of pain or discomfort.

#### (22) Scirrhus of the Stomach.

Joh. Muller (*Berl. klin. Woch.*, March 4th, 1901) relates of a patient, aged 48, who had an attack of hæmatemesis in January, 1900, and in September became dysphagic. A sound passed for 15.35 inches, and then met an obstruction. The œsophageal tube was, however, passed for 18.4 inches. The patient could not take more than a few drops of fluids, and after the condition had become complicated by ascites she succumbed to her disease (December, 1900). *Post-mortem* examination revealed: (1) Dilatation of the lower two-thirds of the œsophagus; and (2) a much-contracted stomach, the walls of which were diffusely infiltrated with carcinomatous growth, and were absolutely rigid. An old healed ulcer (that is, scar) was discovered. In the œsophagus pouch-like folds were seen in the dilated walls. The stomach's capacity was just over $3\frac{1}{2}$ ounces of fluid, and it could not be dilated or stretched to receive any more.

#### (23) Transplantation of Toe.

Nicoladoni (*Wien. klin. Woch.*, No. 8, 1901) reports a case of transplantation of the second toe of the right foot to replace a thumb lost by a machinery accident. The skin flap from the dorsum of the foot was cut in a trapeziform manner. The extensor tendon of the toe when removed was united with the stump of the extensor longus pollicis. The flexor tendons of the toe and thumb were also united. The phalangeal stump of the thumb and the first plalanx of the toe were united with silver sutures. The result is said to have been good and sensation was returning.

## MIDWIFERY AND DISEASES OF WOMEN.

#### (24) Influenza in Childbed.

M. Stolz (*Monats. f. Geburts. u. Gynäk.*, 1901, Bd. xiii) reports on 39 cases which occurred in Rosthorn's clinic at Graz in February-March, 1901. All occurred after the patients were transferred to the delivery ward, none arising among the pregnant women. The interval between transfer and onset varied from one to nine days. The diagnosis from puerperal infection was therefore important. The epidemic began gradually. The incubation period was sometimes under twenty-four hours. Usually the attack began suddenly with rigor and fever lasting one or more days, headache, especially frontal, and lumbar, sacral, and limb pains. Prodromals as *malaise*, cough, or sneezing sometimes occurred for a day or two. The fever rose as a rule sharply to 104° F., lasted a few hours or days, and ceased before the other symptoms. Tendency to recur was marked. The cases were of three types: (1) Seventeen cases. Sudden rise to 104°; pulse quiet and regular, never over 120, seldom over 100. Ten cases lasted a few hours, 2 over a day, 5 three days, and these had a tendency to marked morning remission on the third day. (2) Thirteen cases, of intermitting type, the fever rising sharply for a few evening hours, coming down as quickly to rise again for a day one to five days later Six had two fever waves, 2 three, and 1 four, of one day duration, and 4 had waves of more than one day. (3) Severe recurrent or intermittent fever attacks, with diffuse bronchitis, pneumonia, or pleuropneumonia, and once an empyæma. In the 3 worst cases it began two to four days after labour, rising suddenly, to fall again to normal or subnormal and rise again at night for one to three weeks. The sputum was profuse, frothy, and nummular, with here and there bloody streaks. There was a relative bradycardia, even when the temperature is high. Involution of the the uterus was distinctly slower. In 13 cases the fundus had not, at intervals between the eleventh and twenty-second day, reached the pelvic brim. The tendency to bleeding was marked, its duration but not its intensity mostly proportioned to the subinvolution. Lochial decomposition and fœtor were noted in 20 cases, once only before the onset of fever. No severe inflammatory process was noted in the pelvis, but one patient was found to have slight swelling in the parametrium, and one to have an adnexal tumour. These were probably mere coincidences, but the influenza seemed to predispose to the slighter infective phenomena. Of the 39 cases only one was up on the ninth day. The average period in bed was fifteen to sixteen days. Of the children 5 had green diarrhœa, 2 bronchial catarrh and rhinitis. The milk secretion was unfavourably influenced, and only 25 children were kept solely on the breast. The initial catarrhal symptoms and the tendency to recurrence marked the difference between the slighter cases and slight puerperal fever. The most severe cases gave least difficulty in diagnosis from puerperal fever. The relatively slow pulse and the recurrences were most helpful in the diagnosis.

#### (25) Abscess of the Uterus.

Brindeau (*Bull. de la Soc. Obstét. de Paris*, March 21st, 1901) reports a fatal case where criminal abortion was suspected. The patient was 22. The period ceased in November. She made out that she fell down stairs on January 30th; next day she miscarried. She was admitted into the Hôpital St. Louis in a septic condition. The curette was used on February 2nd, but only a trace of membranes came away. Death occurred on February 4th. After death general peritonitis was discovered, and a great quantity of pus lay in the peritoneal cavity. The uterus was of the

size normal at the second month of pregnancy. A tumour of the size of a hen's egg projected from its anterior aspect; it was uniformly convex, and of a reddish-violet hue. There was a small hole on its surface whence dark pus escaped. A second abscess lay in the fundus. Both had developed in the muscular wall of the uterus; they were cut off from the endometrium, but a tract of tissue between the main abscess and the uterine cavity showed clear indications of perforation. No doubt the uterus had been injured by some instrument introduced to produce abortion. The blood before and after death was sterile; the pus contained the streptococcus and bacillus coli in abundance.

**(26) Lithopædion in Umbilical Hernia.**

PHENOMENOFF (*Monats. f. Geburts. u. Gynäk.*, May, 1901) exhibited at the St. Petersburg Obstetrical Society last autumn a lithopædion, originating in a tubal pregnancy, which had wandered into an umbilical hernia. The patient was certain that two years and a half before treatment the period ceased and did not return for seven months, and there were the other symptoms of pregnancy. Then she felt violent abdominal pain as though someone had struck her a blow on the abdomen. She had to lie up and uterine hæmorrhage occurred; she did not suffer from anything like syncope. The period then returned, and the patient did well till the spring of 1900, when debility and emaciation set in. A tough tuberous swelling projected from the abdomen. Phenomenoff found that it was an umbilical epiplocele with a growth firmly incorporated with its wall. This growth was a lithopædion enveloped in vascular omentum. Its sole connection with the pelvic viscera consisted of two cord-like bands, one connected with the left tube and one with the left ovary.

**(27) Surgical Perforation of the Uterus.**

REBREYEND (*Revue de Gynéc. et de Chir. Abd.*, March-April, 1901) has compiled an instructive summary of this kind of lesion, with abstracts of 14 reported cases. These wounds may be received through the abdomen or through the vagina. The abdominal perforations include chiefly cases of hydrammion in twin pregnancy, tapped intentionally or in error, ovarian cysts being suspected. Occasionally a normal pregnant uterus has been punctured, in Stickney's case this was done twice near term, labour being apparently not hastened. The results of abdominal perforation are seldom grave; mere compression of the wound with lint after application of collodion seems sufficient. Vaginal perforation is not rare when a large fibromyoma is enucleated through the vagina. The prognosis is very serious. Rebreyend considers that abdominal section should be performed at once in such cases, and the wound must be then sutured, its edges being trimmed if necessary. Only when the wound is very free and the uterus the seat of multiple fibroids, or otherwise unhealthy, should hysterectomy be performed. The perforation of the uterus by a sound or curette when antiseptic precautions have been already taken is seldom followed by bad complications.

## THERAPEUTICS.

**(28) The Diuretic Action of Caffeine and Theobromine.**

ANTEN reports (*Arch. Internat. de Pharm. et de Thérap.*, vol. viii, Fasc. v and vi) a series of extensive and important researches on the question of diuresis and the diuretic action of caffeine and theobromine. Opinions have differed much as to the part played by the different renal structures in the elimination of urine. According to Bowman, the corpuscular capsule is charged with the elimination of the watery part of the urine, the epithelium of the convoluted tubules secreting the characteristic constituents of the urine. According to Ludwig, the urine is entirely eliminated by Bowman's capsule, and during passage through the convoluted tubules becomes concentrated by the absorptive action of the epithelium. After an analysis of later work, Anten describes experiments on dogs in which the renal circulation was isolated, and an ammoniacal solution of chloride of silver passed through the vessels, the kidneys then being removed and sections examined microscopically. The granules of urate of silver were only found in the lumina and epithelium of the canaliculi, and the ascending limb of Henle's looped tubules; they were absent from the glomeruli. The conclusion arrived at is that uric acid is excreted almost if not quite exclusively by the epithelium of the convoluted tubules and the ascending branch of Henle's tubule; probably the same rule applies to urea. The experiments show the correctness of Bowman's theory. Further experiments were next undertaken to define the influence of the nervous system on the diuretic action of caffeine. In the dog caffeine does not increase diuresis to the same extent as in the rabbit and other animals. This has been supposed by Schroeder and others to be due to the vaso-constrictor action of the drug. In the experiments the blood pressure, the respirations, and the amount of urine were simultaneously recorded. They showed that caffeine occasionally exerts a diuretic action on the kidney of the dog, but that it usually does not; that its usual inactivity is due to the tonic influence of the vagus on the kidney which is exaggerated by the caffeine; that this influence is not vaso-constrictor, but directly controls the secretory elements of the organ. Theobromine proved to be diuretic in the same sense as caffeine, but exerted little influence on the vagus, and thereby does not tend to inhibit diuresis through excitation of the nerve. The saline diuretics increase at the same time the flow of urine and the flow of lymph; by measuring these simultaneously, Anten showed that the diuretics of the xanthin class (caffeine, theobromine) are not lymphagogues. The members of this class differ in solubility, but there does not appear to be any proportion existent between the degree of solubility and the diuretic effect. They act as direct excitants of the renal parenchyma. In contrast with the saline diuretics, which appear chiefly to provoke elimination of water and at the same times of salts, and especially chlorides, the xanthin bodies increase the elimination of nitrogenous elements, and specially urea and uric acid.

**(29) The Treatment of Coughs in Tuberculous Subjects.**

THE results obtained in sanatoria tend to show the advantages of dealing effectively with cough in cases of pulmonary tubercle. Lalesque of Arcachon records his experiences (*Journ. de Méd. et de Chir. Pratiques*, April 25th, 1901. He shows that in very many cases the patients contract a habit of coughing as soon as they have any tickling or irritation of the fauces, larynx, or trachea. Such cough is likely to be spasmodic, irritating, and unaccompanied by expectoration. It differs completely from the expectoration cough which has as its object to get rid of accumulated secretion. A very common method of treatment in the former cases is the administration of sedatives. This is a method which the writer condemns in the strongest terms. He shows that it is quite possible to drill the patient into the manner of not giving way to the sensation productive of cough, and with practice he shows that it is quite possible to avoid all such spasmodic attacks which have as their result fatigue, perspiration, cerebral congestion, possibly followed by vomiting. He states that it as easy with a little practice to avoid coughing as it is to avoid scratching in public. In many cases the patients require encouragement combined with firmness on the part of the medical attendant to enable them to overcome this very injurious habit. The writer also demonstrates that failure may be due to some fault in the directions to the patient. He is not to close his mouth and hold his breath in the hopes that the desire to cough may pass off. Such a result is likely to be followed by a sudden severe cough. The best method is to close the mouth gently, and take three or four quiet deep respiratory movements through the nose. As regards expectoration cough it is also shown that it may be unduly excessive on account of effort on the part of the patient to expectorate mucous material which is as yet undetached. The patient should be instructed to avoid coughing prematurely, and a little practice will soon enable him to recognise when expectoration may be brought about by a single cough. This may prevent a great deal of tiring effort which cannot but prove injurious to the tuberculous patient.

**(30) The Treatment of Formalin Poisoning.**

SEVERAL cases of poisoning by formalin have recently been adopted (*vide*

Epitome, vol. i, 1901, paras. 42 and 300), and it is probable that they will become more frequent with the increasing use of this antiseptic. In an editorial in the *Therap. Monats.* of February, 1901, it is pointed out that the antidote is ammonia. Formaldehyde combines with ammonia to form hexamethylemetetramin (urotropin), which is neither a local caustic nor a general poison, according to the formula: $6\,(HCOH) + 4\,(NH_3) = (CH_2)_6N_4 + 6\,(H_2O)$. A few drops of the liq. ammon. fort., well diluted with water, or perhaps still better the liq. ammon. acetatis, which has been recommended in France as being itself non-caustic, should be given at frequent intervals.

**(31) Cold Baths in Delirium Tremens.**

Salvant (*Thèse de Paris*, 1901) states that the treatment of febrile delirium tremens by baths at 18° C. or tempered according to individual cases, constitutes a therapeutic method of choice capable of inducing rapid resolution of symptoms. The temperature being reduced the motor and sensory hyperexcitability usually disappear. Salvant argues that by using this plan of treatment the infection and auto-intoxication are directly antagonised. The method is then a pathogenic one and not only symptomatic as is the treatment by sedative drugs, bromides, chloral, etc. Well marked cardio-vascular disease is, however, a contraindication to its employment.

**(32) The Behaviour of the Blood Pressure in the Treatment of Chronic Heart Disease.**

Schott (*Deut. med. Woch.*, 1901, Nos. 22 and 23) records the results of his investigations into the condition of the blood pressure in cardiopaths while under gymnastic and balneic treatment. He states that he has been led to do so mainly by the fact that many other observers have extended the domain of these therapeutic measures far beyond the limits laid down by him and his brother, and have even considered the contraindications noted by them to be indications. Schott has employed the sphygmomanometer in preference to the sphygmograph for recording the pulse curve; he finds that the results given by Basch's instrument are apt to be inaccurate when there is arterio-sclerosis and is inclined to recommend the apparatus of Riva-Rocci. For the rapid mensuration of variations in the blood pressure he uses Gaertner's tonometer; he lays great stress on the observance of precautions, often neglected, as to its being always used under identical conditions. He recommends that the hand to which the instrument is applied should always be held at the level of the heart; the pressure recorded invariably falls as the hand is raised. The non-observance of this rule has led other writers to state that balneo-therapeutics have caused a fall in blood pressure when the Schotts have found a rise. The most recent investigations of the author show that gymnastic treatment leads in healthy people and in cardiopaths in whom it is indicated to a rise of blood pressure, while massage produces little or no effect. Treatment by baths also, if it is doing good, raises the blood pressure, after a while persistently; where it is contraindicated as in acute heart disease, advanced myocarditis and arterio-sclerosis and aneurysms of the heart and great vessels a marked fall occurs, together with a rapid, small pulse and accelerated respirations. The effects of the bath upon the tonometer tracing can be thus used as prognostic and therapeutic indications and the investigations of the author upon the human subject confirm the results obtained by Heidenhain upon animals.

## PATHOLOGY.

**(33) Experimental Vaccination.**

Calmette and Guérin (*Ann. de l' Inst. Pasteur*, March 25th, 1901) have studied the evolution of vaccination in the rabbit, and have made several attempts to cultivate *in vivo* the unknown virulent agent of vaccine. It was found that if the lymph was inoculated into scarifications which involved the dermis more or less deeply, the characteristic umbilicated pustules were rarely obtained. Generally a red zone formed about the scratch upon the third day, the subjacent tissues became swollen, and a crust soon formed and separated about the seventh day; but if the lymph was spread over the skin which had recently been shaved characteristic confluent eruptions formed. The eruption was mature on the third day, many of the vesicles were definitely umbilicated, crusts formed and separated on the eleventh or twelfth day. Immunity was acquired on the sixth day. The rabbit was found an excellent animal of control for verifying the virulence of lymph obtained from children or calves, and for old glycerinated lymph. Experiments were also made by subcutaneous and intravenous inoculation. The multiplication of the virulent elements of vaccine was not found to take place in any organ other than the skin. It was found possible to obtain aseptic lymph, that is, lymph not giving rise to any microbic development on artificial media, by injecting it into the peritoneal cavity of rabbits prepared by a previous injection of bouillon, and allowing it a stay of some hours. The leucocytes appeared to act upon adventitious organisms before affecting the virulence of the lymph. The attempts to cultivate the virulent agent of the lymph failed.

**(34) Mental Depression and Malignant Disease.**

At the meeting of the American Surgical Association, held on May 7th, 8th, and 9th (*Phil. Med. Journ.*, June 1), Joseph D. Bryant, of New York, read a paper entitled "The Influence of Mental Depression on the Development of Malignant Diseases," in which he dwelt at length on the history of cancer as affected by mental depression. Paré, in 1510, was the first to refer to mental perturbation, anger, and the like, as making a cancer "more fierce and raging," while the same authority, under the head of treatment, insists that the patient must eschew fasting, watching, sorrows, cares, and mourning. Astley Cooper was of the same opinion, while Velpeau thought otherwise. General Grant and Napoleon have been referred to as examples of cancer following reverses, and Paget and Virchow gave a qualified allegiance to the passive side of the question. The foundations of the different phases of the contention rest on the beliefs (1) that cancer may result from the direct influence of mental depression; (2) that cancer may arise indirectly from mental depression because of the defective nutrition attendant upon it, and (3) that mental depression exercises in no respect influences that admit of sufficient proof to warrant serious discussion. The author referred to the infrequency of cancer in insane patients, and stated that females suffered twice as often as males. Statistics were given from a number of institutions which showed that the death-rate in the female was nearly double that of the male, although there were more male melancholics, but melancholia in the male does not seem to exercise any distinctive effect on the death-rate. Neither is melancholia in the male more often associated with cancer than with other forms of malignant growths. Many authors were quoted, and the following division of the cases was suggested: (1) Cases in which mental depression is not associated with the idea of cancer; (2) cases in which mental depression is associated with the idea of impending cancer of primary or secondary occurrences, and (3) cases in which the depression is the outcome of common causes.

**(35) The Myocardium in Infection, Intoxication, and Poisoning.**

Giacomelli (*Il Policlin.*, An. viii, f. 3, 4) has made a series of experiments on animals with various culture preparations, and afterwards examined the state of the myocardium. More or less marked alterations were constantly seen, for the most part confined to the heart muscle fibre itself, sometimes, but rarely, affecting the interstitial connective tissue or the vessels. The changes in the connective tissue are generally associated with the presence of micro-organisms, and consist in a more or less diffuse lymphoid infiltration. There is no causal relationship between the changes in the connective tissue and vessels and those in the heart muscle; the two may exist independently. The changes in the heart muscle vary from simple atrophy to fatty degeneration and destruction. There are no definite anatomical lesions corresponding to definite specific poisons. The changes are due to the direct action of the bacterial toxin and poison on the muscle fibre itself, and are sufficient in themselves to produce cardiac paralysis, for example, after chloroform narcosis.

# AN EPITOME
OF
# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (36) Pneumothorax Produced by Sneezing.

STILLER (*Wien. med. Woch.*, May 4th, 1901) was summoned to a young man, whom he had treated shortly before for nervous dyspepsia. He was half-sitting, half-lying on the bed, and groaning loudly. An hour previously a violent sneeze had produced the most unbearable abdominal pain. He had been brought home in a cab, and had dragged himself up to the third storey, though suffering greatly. Inspection revealed that the whole of the upper part of the abdomen was enormously distended by a large tumour. Over this area there was dulness to percussion. This proved to be the liver, which had become luxated from the diaphragm and forced downwards and inwards, and at the same time rotated forwards until its lower border reached the umbilicus. The right side of the thorax was distended and immovable. Over it percussion was resonant but not tympanitic, and vocal fremitus was abolished. There was amphoric breathing everywhere, but no metallic phenomena or Hippocratic succussion. The heart's apex was in the left anterior axillary line. The pain quickly yielded to an injection of morphine, and on the following day the liver had returned almost to its normal position. A week later there were no traces of pneumothorax or of anything abnormal. There was never any pleural effusion. Dislocation of the liver by the pressure of a pneumothorax is probably unique, and for its production it must be assumed that the communication between the lung and the pleural cavity was of a valvular nature, so that air escaped during inspiration into the pleural cavity, but was prevented from returning during expiration. When the intrapleural pressure reached a certain point the valve would no longer be able to open, and the fact that the air was absorbed so rapidly proves that this mechanical closure was soon replaced by an organised cicatrix. The lungs were certainly healthy. Except for the slight digestive disturbances the man had never been ill, and neither before nor after the accident could anything be discovered amiss. As a sneeze was the cause the pneumothorax must have occurred during an expiratory effort. The case somewhat resembles one in which the pneumothorax was produced in a healthy man by a fit of laughter (*Munch. med. Woch.*, No. 41, 1899).

### (37) An Epidemic of Zona.

CH. DOPTER (*Rev. de Méd.*, May 10th, 1091) relates 3 cases of zona which affected people who occupied the same bedroom. Two bedfellows were attacked the same day, and five days later a man who slept on the opposite side of the room. The first patient suffered on October 15th, 1899, from tonsillitis and vomiting. On the 20th, his angina and gastritis being cured, he complained of pain in the right subpectoral region, and showed typical herpes zoster on the 22nd. On October 15th also, the second patient suffered from vomiting and diarrhœa, which were cured on the 18th. On the 19th he complained of pain in the right thigh, and on the 21st had a crop of herpetic vesicles situated over the hypogastric region and Scarpa's triangles. The third patient sought treatment on October 20th for nausea, constipation, and sore throat. On the 26th his symptoms had disappeared, but on the 27th he suffered from dental neuralgia, and on the 28th a herpetic eruption appeared on the tongue, gums, and mucous membrane of the cheeks. At first sight these cases would seem to uphold the theory which regards idiopathic zona as a distinct morbid entity, standing to the zosteriform eruptions in the same relation as scarlet fever to the scarlatiniform. Having regard, however, to the facts that in two patients the eruption was consecutive to an infectious state consisting of angina and gastro-intestinal troubles: that in the other case the clinical picture was almost the same, save for the absence of the angina; and that in all the zona did not appear until after the cure of this infection, Dopter believes that the epidemic character of the zona was merely the expression of an elective affinity of the virus for the nervous system, and that not the zona itself, but the infection to which the zona was tributary, was really epidemic.

### (38) Congenital Ichthyosis.

G. A. HAUS, (*Norsk. Mag. f. Lægevidensk.*, lxii., 542, 1901), describes two cases of fœtal or congenital ichthyosis which had been met with in the clinic of Professor C. Boeck. They were the offspring of the same parents, and were males. Neither the father nor the mother had ichthyosis, but on the mother's side was a family history of nervous disease, one of her sisters being insane and another epileptic. The ichthyotic infants did not long survive birth, one dying in twenty-eight hours and the other in eight days. The external appearances were those which are so deforming and so characteristic of fœtal ichthyosis: there was the great thickening of the epidermis with resulting plates of horny tissue and the deep fissures between the plates due to cracking. Although Haus regards the disease as truly ichthyosis, he prefers for it the name "hyperkeratosis diffusa congenita," with the addition of one of the descriptive adjectives, "serpentina," "nitida," or "hystrix." Under the microscope no increase in the number of sudoriparous or sebaceous glands was noted. There was an almost uninterrupted layer of kerato-hyaline, a structure which Wassmuth believes to be imperfectly formed in congenital ichthyosis; the stratum granulosum was undoubtedly well developed in the present cases. Another instance of fœtal ichthyosis was put on record by Annie S. Daniel and Louise Corders (*Journ. Amer. Med. Assoc.*, October 27th, 1900). The parents were Sicilians and healthy, and the ichthyotic infant was the result of the mother's sixth pregnancy. The child, a male, died suddenly 27 hours after birth. It had all the characteristic appearances of this fœtal malady: epidermic thickening with fissures, ectropion of mouth and eyes, defective external ears, etc. The necropsy showed, in addition to the above, a cephalhæmatoma, meningeal hæmorrhage, atelectasis, and congestion of all the organs. Cultures from all the viscera gave signs of the presence of a bacillus of the colon group, and the kidneys were in a state of acute nephritis. All the layers of the epidermis, save the stratum granulosum, were thickened.

### (39) Purpura Simplex.

CARRIÈRE contributes an article (*Arch. de Méd. Expér.*, March, 1901) on the bacteriology of a case of purpura simplex. The nature of purpura in general and of purpura simplex in particular is a to a very large extent unknown, and therefore investigations such as those of Carrière, Thiroloix, and others are of use in helping to elucidate the question. The case described by Carrière is that of a male, aged 14, the subject of typical purpura simplex. There was no history of scorbutus or previous illness of any kind. The patient showed considerable hæmorrhagic spots and had also expectorated some blood. Examination of the blood showed 4,350,000 red blood corpuscles and 17,900 white. Polymorpho-nuclear leucocytes showed 65 per cent., and eosinophilous cells 15 to 20 per cent. Cultures were taken from the blood in peptonised bouillon. In 48 hours one tube showed under anaërobic conditions a large bacillus very like that of anthrax but movable, and having in fact all the characters of the bacillus described by Achalme and Thiroloix in cases of acute articular rheumatism. These characters are as follows: The organism is strictly anaërobic. It is motile, though this feature is lost in a very short time on exposure to air. The ends of the bacillus are slightly rounded and tend to stain unevenly. Grown under certain conditions, it may show slight constrictions such as to imitate diplobacilli. There do not seem to be any flagella. It tends to degenerate as time goes on, so that cultures of ten or twelve days' standing do not show the typical forms. Grown in milk the fluid is coagulated with the formation of little bubbles of gas. The organism stains easily with Loeffler blue and fuchsine, but the colour is not well retained. It also stains with Gram. Inoculated into animals the results are variable. Two guinea-pigs showed no symptoms. In another the animal died on the sixth day of pulmonary congestion with cardiac dilatation. The peritoneal cavity showed blood-stained serous effusion from which the organism was reobtained. The young guinea-pig is much more predis-

posed than the older animal. Intramuscular injections produced marked œdema with blood-stained fluid. Mice are not susceptible, and rabbits vary very much in their reactions. The writer found that one of a litter of rabbits occupying the same cage as an inoculated animal developed an arthritis of very marked character. The fluid from the synovial showed the presence of the bacillus described by Achalme and Thiroloix. Examination of the joint showed marked inflammation of the articular cartilages and periarticular sclerosis.

## SURGERY.

### (40) Early Laparotomy for Typhoid Perforation.

In 1897 Monod and Vanverts were only able to collect from the literature 27 cases in which laparotomy had been performed for perforation in typhoid fever. These showed a very small percentage of success, all of them where peritonitis was localised. In 1898 Keen collected 83 recorded cases with 19.3 per cent. cures, and during the following year to October, 1899, 75 more with 28 per cent. successes. Harvey Cushing (*Archives Générales de Médecine*, January, 1901) states that during the last three years 11 cases from Dr. Osler's wards have been operated on and 5 saved, a percentage of 45.4. This result is attributed to the early stage at the laparotomy was performed. The surgeon should never wait for signs of general peritonitis before interfering. Preperforative symptoms may often be recognised. Perforation of the appendix gives as a rule definite symptoms early enough for surgical intervention. These cases, however, are excluded from Cushing's list, which deals only with the ordinary ulcer of the ileum. Vomiting, hiccough and increased sensibility and rigidity of the abdominal wall are among the earlier preperforative signs. With these cessation of the respiratory movements of the abdominal wall is a valuable indication. Perforation was not observed in any case where marked meteorism was present. A rapid fall of temperature does not generally occur until the onset of general peritonitis and is, moreover, a sign of many other accidents, such as hæmorrhage, acute obstruction, or rarely a true crisis. Importance is now given to the question of leucocytosis. Thayer has shown that in typhoid the leucocyte count may show no more than 3,000 per c.mm. If blood examination, however, be frequently made, a rapid increase of leucocytes (for example, from 3,000 to 10,000) has been found a preperforative sign, the number generally sinking rapidly again with the effusion of intestinal contents into the peritoneal cavity. Four cases were operated upon owing to mistaken diagnosis, and are not included in the statistics. In one case, the symptoms were due to diaphragmatic pleurisy and pneumonia, in another to double iliac thrombosis. The laparotomy had no untoward influence. Chloroform is not without danger and the intra-arachnoid injection of cocaine causes unpleasant after-effects. It has been found enough in the later cases to use Schleich's method of producing local anæsthesia, by endermic injection of cocaine. The great danger of waiting for actual perforation before operating is the liability to streptococcus infection, which proves fatal in a few hours. Streptococci were found in one of the successful cases, hitherto unrecorded, but only in a small proportion to the total number of micro-organisms.

### (41) Errors in the Diagnosis of Appendicitis.

Brewer (*Annals of Surgery*, May, 1901), in a recent communication to the New York Surgical Society, alluded to the frequency with which errors are made in the diagnosis of intra-abdominal inflammations, and to the fact that in the majority of instances of this kind the error has consisted in mistaking atypical forms of appendicitis for other morbid conditions. Full reports are given of 11 cases in which, in the course of eighteen months, Brewer made the mistake of regarding as appendicitis conditions which, upon operation or necropsy, were shown to be other and unsuspected pathological processes. These cases are classified as follows: In 2 the symptoms were found to be due to renal calculus; in 4 to diseases of the uterine appendages; in 1 to sarcoma of the ileum; in 1 to cholecystitis; in 1 to acute suppurative pancreatitis; and in 2 to general sepsis. In the discussion in this paper, McCosh stated that those engaged in gynæcological work are often much puzzled to distinguish between suppurative conditions of the tubes and ovaries and those of the appendix. Sometimes, it was asserted, it is quite impossible to make a correct diagnosis before the abdomen has been opened, and even then it may be difficult to determine the primary seat of the trouble. It was pointed out by this speaker that in cases of general suppurative peritonitis the appendix is usually presumed to be the origin of the infective mischief. In male subjects this, in his opinion, is probably the case in 19 instances out of 20; but in the female there is not this almost constant relation, as the pelvic organs or the stomach are at times found to be at fault.

### (42) Resection of Hip in Cases of Tuberculous Disease with Abscess.

A communication by Nélaton (*Bull. et Mém. de la Soc. de Chir. de Paris*, tom. xxv., p. 887) before the Surgical Society of Paris on this subject, was followed by a long discussion in which very different opinions were expressed. Félizet strongly supported resection, and considers the conservative treatment unsatisfactory. Of 80 patients with morbus coxæ, aged from 15 months to puberty, only 9 lived to the age of 20. Of the remaining 71, 20 died from exhaustion, 15 of tuberculous meningitis, many had a secondary infection of other joints, and a large number developed spondylitis. He stated that of 300 resections of the hip for tuberculous coxitis, he had lost 2 only. In his view albuminuria is the only contraindication to operation. He does not wait for abscess or fistula, if the hip is painful, if this pain is not removed by extension and immobilisation: or if the patient has fever and is declining in general condition he recommends proceeding to the radical operation.

### (43) Tuberculous Coxitis.

Stecchi (*Il Policlin.*, February 16th, 1901) reports two cases where he practised with success Giordano's method of operating, the chief novelty of which consists in the large primary incision. This is crescent-shaped, with the convexity below, starting from the junction of the middle and external third of the line joining the pubes and superior iliac spine, it proceeds round the great trochanter to the middle of the nates fold. The advantages claimed for this operation are: (1) the greater freedom with which the hip-joint can be reached and thoroughly treated; (2) the absence of certain technical difficulties (largely due to the smaller incision) common to the older operations; (3) the possibility of freely washing away loose tuberculous detritus and infective material; (4) the possibility of establishing complete hæmostasis so that no drainage of the wound is necessary. In spite of the destruction of so many muscles as this operation seems to imply, the patients recovered as much power and solidity in their limbs as would have been expected after other operations.

## MIDWIFERY AND DISEASES OF WOMEN.

### (44) Rupture of the Uterus.

Cristeanu (*Ann. de Gynéc. et d' Obstét.*, 1900, Avril) reports 3 cases treated by abdominal hysterectomy: (1) 7-para, admitted at term, true conjugate, 9.3 cm. Head in left occipital position, fixed at brim. After eight hours, the cervix being dilated, the membranes were ruptured. No tendency to engagement. Two and a-half hours later, after a hot bath, the pains became more painful, and then ceased. No abnormal symptom, pain, faintness, or weakness. Fœtal heart not heard. No blood from the vagina. Called in the night to put on forceps for the inertia. Cristeanu found a rupture of the uterus at the left lower part. He turned with much difficulty on account of the clinging of the intestines to the legs. A ten-inch loop and some omentum appeared at the vulva immediately after the issue of the placenta; the omentum prolapsed after being returned, and had to be ligatured off. The belly became tender and distended, and vomiting set in. Fourteen hours after the rupture cœliotomy was performed. There was a complete tear of the uterus and left *cul de sac*, the left round ligament and uterine artery were torn, and on the right the peritoneum was torn up to the level of the kidney. Total hysterectomy was done, the bleeding points being ligatured. She had first chloroform, and then ether. Drains

were put in. Vomiting continued for a day, and there was some pulmonary congestion, but for the next two weeks she did well. The progress was then temporarily disturbed by painful swelling in the right inguinal fossa. Discharged at thirty days. (2) A woman, aged 38, who had eight difficult labours, was, after eleven hours labour, seized with severe abdominal pain, faintness, vomiting, and vaginal bleeding. Admitted to the Maternity cœliotomy was done, the fœtus and placenta were removed, and total hysterectomy performed. There was vomiting and tenderness for three days after, but the rest of the convalescence went well. The uterus was torn on the left side, and there was free bleeding into the peritoneum. True conjugate, 9 cm.; albuminuria before the operation. (3) 3-para, with two previous difficult labours. A midwife perforated the membranes, and a doctor called to put on forceps did not succeed, and the patient was sent into hospital exsanguine. The cord was prolapsed and the child dead. Cristeanu turned and delivered the head with forceps. During these operations no blood escaped outwards. There was a rupture on the left, and the placenta was extracted from the abdominal cavity. Cœliotomy was done, the round ligament was found torn, and the peritoneum torn in both iliac fossæ. The uterus was removed. There was a little sloughing in the vaginal stump. All 3 cases had repeated injections of saline solution. Herrgott (*Idem*, May) relates another case where the patient died of shock. She was at term of her seventh pregnancy, and the waters having broken three days before, she was admitted after forty-eight hours of labour, with the abdomen very painful, the uterus hard, and the left arm prolapsed. Evolution had begun. The dilated cervix was spasmodically contracted on the fœtus, and did not relax under anæsthesia. Embryotomy was exceedingly difficult, and took two hours. At one point some blood flowed from the vagina, and Herrgott was struck by the appearance of the uterus, which seemed as if divided into two parts, separated by a groove. There was a rupture on the left. In spite of the bad condition of the patient Herrgott thought it best to do a cœliotomy. He found an irregular tear, and removed the uterus by a Porro operation.

**(45) Extemporary Curettage in Out-patients.**

FROM lack of beds in the civil hospital at Odessa, Boukoëmsky (*Ann. de Gynéc. et d'Obstét.*, June, 1901) has been led to treat curetted patients as out-patients. Recent abortions were treated when the patients first came; in endometritis the uterus was stuffed with highly iodoform gauze and the curetting done next day. Almost half the cases needed dilating to Hegar 9 to 10 to admit the curette. Before the stuffing and before the curetting the genitals, both internally and externally, were scrubbed with soap in alcohol, and then with 1 to 500 formol solution. After curetting 4 to 5 litres of this solution were run through the uterus and iodine injected (alumnol 2.5, alcohol, tinct. iodi aa 25). The vagina was then stuffed with weak iodoform gauze. Patients were given ergot in powder (0.5 to 1 gm.), kept in bed with ice on the hypogastrium for some three hours, then sent home and told to lie up for four days and to come back on the fifth. In 1900 Boukoëmsky treated 5,593 gynæcological out-patients; 154 were curetted —116 for endometritis, 35 for recent abortion, and 3 for diagnosis. Of 116, 102 were completely cured and 14 had some further bleeding, treated and cured by intrauterine injections of tr. iod. Eight cases of endometritis after abortion had parametritis posterior but the curetting did no harm. Even when the tube was finger thick and the ovary as big as a pigeon's egg no harm followed. From the good results Boukoëmsky has determined to continue the practice.

**(46) Hysterical Tetany in Childbed.**

CRISTEANU (*Rev. de Chir.*, An. v) reports the case of a woman, aged 20 years, in labour at term, who had extreme anasarca without albuminuria. Pains at first good, then failing. Os found dilated after twenty-four hours, and, there being no progress three hours later, she was delivered under chloroform with forceps, in the interest of the child. There was great hæmorrhage. Convalescence was normal, temperature normal, and she was anxious to nurse the child herself, though very anæmic. On the twentieth day her husband decided to get a wet nurse. Two days later she had a sudden attack of severe pain in the left temporo-maxillary joint, without rise of temperature. The pain persisted in spite of antipyrin, salicylates, and massage, and spread to the left half of the neck, simulating a rheumatic torticollis. She then had frequent attacks—twelve to twenty in twenty-four hours—of sudden violent contractions of the left masseter, so that she bit her tongue severely, and once she had retraction of the head and opisthotonos. There was impairment of swallowing and an attack of suffocation. In spite of bromides and enemata with chloral and opium, the condition spread till the whole left side was affected. The attacks lasted about twenty minutes, were painful, came on at any time, but specially under the influence of gay or sad emotions. She had a zone of complete anæsthesia and hyperæsthetic spots without any visible alteration. Under the administration of valerianate of ammonium and warm baths she improved, and in forty-five days was completely recovered. Her previous history furnished no explanation. She had never shown hysteria, and the family history was good.

**(47) The Etiology of Eye Inflammation of the Newborn.**

F. SCHANZ (*Zeits. f. Augen*, Bd. v, H. 6) protests against the doctrine of some of the standard books, such as Fuchs and Finger, that cases of blenorrhœa in the newborn are uniformly gonorrhœal, and against the practical deduction that when they are not gonorrhœal a little douching is all the treatment needed, and that they disappear in a few days (Greef). He cites from the literature from 1884 onwards observations proving that even in a series of bad cases the gonococcus is absent in a considerable proportion, usually about a third. Experience in practice inclines one to join in his demur to Finger's proposition, "Micro-organisms cultivated from gonorrhœal pus and not identical with the gonococcus produce no blenorrhœa."

## THERAPEUTICS.

**(48) Treatment of Summer Diarrhœa of Children.**

IN a discussion on this subject at the annual meeting of the American Pediatric Society (*Philad. Med. Journ.*, June 8th, 1901) Charles G. Kerley, of New York, read a paper based on the study of 551 cases. Only 6 per cent. of his cases were nursed, and 472 were fed on cow's milk in whole or in part. He considered the expense of proprietary infant foods a fortunate circumstance. When first seen his cases had lasted from one to ten days or more; 80 cases recovered in three days, 168 in four to seven days, the rest in longer periods; 499 patients were treated to the conclusion of the sickness, 10 resulting fatally. One invariable rule was to stop the milk, on the ground that it favoured the growth of the various bacteria involved. In 218 necropsies in which gross lesions were suspected slight lesions were found, and, on the other hand, extensive ulcerations had been found in cases from which little mucus and no blood had been passed. In patients dying within a few hours a pale, washed-out gut, with enlarged lymph follicles, was found, but no ulcers. Milk is recommended only when the stools become apparently normal. For the most part, barley or other cereal water, combined with meat broths or beef juice, should be given; brandy should not be given. By "dextrinising" the barley—at a temperature not higher than 100° F. to prevent the development of a nasty malty taste—its nutritive value may be doubled, but it is impossible to give for any length of time a stronger barley water than that containing two tablespoonfuls to the pint. The drugs used were limited to four—calomel, castor oil, bismuth subnitrate, and opium. Irrigation of the colon has been much overdone; it should never be practised oftener than once in eight hours, and not at all without a positive indication. Henry Keplik advocated albumin water for the acute period, and regarded irrigation with salt solution as positively nutrient on account of the absorption of the salt. The stimulant action of meat should also be considered. Emmett Holt would add magnesium sulphate to the list of useful drugs, giving 10 grs. to 15 grs. every hour or two until the stools looked like clear water.

**(49) Poisoning by the External Application of Bismuth Subnitrate.**

Mühlig (*Münch. med. Woch.*, April 9th, 1901) states that though chemically pure subnitrate of bismuth is absolutely non-toxic when given internally even in such large doses as 5 drachms daily, its application to wounds is not as safe as is usually supposed. The older reported cases of poisoning by bismuth, given internally, were due to its contamination with arsenic or lead, chiefly the former. The following cases illustrate the possible danger of bismuth as a surgical dressing. On December 14th a man was burned deeply on both forearms and hands, on the right arm, and over the right clavicle and right side of the neck. The wounds were dressed with lin. calcis in the first instance, and a few days later were covered with bismuth subnitrate in powder under a dry dressing. On January 5th slight salivation and a bluish-black line on the gums appeared. On January 10th the whole of the buccal mucosa, the tongue, the palate, and the uvula were of a blue-grey colour, swollen, and in parts superficially ulcerated. Salivation became marked, the mouth could be opened only with great difficulty and pain. The general condition remained satisfactory, although the diet was necessarily restricted. Urine and digestion were normal Although the bismuth dressing was abandoned on the first appearance of symptoms, no improvement in the stomatitis took place until the wound, which was covered with granulations tipped with bismuth, was scraped with a sharp spoon. By February 2nd there remained only a greyish discoloration of the gums, and this disappeared shortly afterwards. The teeth were unaffected. (2) A man, aged 34, scalded both legs and feet with hot water on November 8th. The same treatment was employed as in the previous case. On November 20th the breath became fœtid, there was copious salivation, a bluish-black discoloration of the gums, the tongue, and the palate, and superficial ulceration of the mucous membrane. The stomatitis had disappeared by January 1st, but not before the wounds had been scraped. The bismuth subnitrate employed in each case was obtained from different makers, and in each case proved on analysis to be chemically pure. Dreesmann, of Cologne, has also observed toxic symptoms from bismuth dressings.

**(50) Dietetic Treatment of Epilepsy.**

R. Bálint (*Berl. klin. Woch.*, June 10th, 1901) discusses the position of the therapy of epilepsy, and in comparing it with its position at the time of Galen, when valerian root was freely used, he comes to the conclusion that we have not advanced materially towards being able to check the disease. He proceeds to describe a method of treatment which he has carried out in 30 cases. It is based on the observations of Toulouse and Richet that the human organism is more susceptible to bromine when the chlorine in the body has been to a great extent withdrawn He applied a diet which was practically free from chlorine, and gave bromides with the food. Two of the 30 patients voluntarily broke off the treatment, so that he reports only on 28 cases; 9 of these were "fresh" cases, and 19 older standing cases. The diet was comprised of milk (1¾ to 2½ pints), butter (1½ to 1½ oz.), 3 eggs, and bread (from 9½ to 12⅗ ozs). This was given without any addition of cooking salt, and he estimates that the contained quantity of NaCl was under 30 grains. The nutritive value was reckoned to be from 2,300 to 2,400 calories. To the bread he added 45 grains of bromide of sodium, instead of the usual chloride. The effect on the epileptic attacks, he remarks, was extraordinary. At first some of the patients had more frequent and heavier fits, while others immediately showed a diminution of the number of fits. After from 6 to 7 days, every case showed a considerable change. In some cases the number of attacks diminished very greatly, while in others the character of the attack became modified. Violent clonic and tonic spasms were replaced by tremulous movements, by more loss of sensation, or by attacks of giddiness. In 7 of the 9 fresh cases, and in 15 of the 19 old-standing cases, that is, in about 80 per cent., the fits ceased altogether during the treatment, while in the remaining 20 per cent. the intensity and number of the attacks were materially lessened. The treatment was continued for thirty-five to forty days. The general condition of the patients improved; almost without exception they increased in weight, and took on a more healthy complexion. There were no signs of bromism present in any of the cases. He found that the bromine taken in replaced the chlorine (chlorides) excreted in almost exact quantities. Dealing with the ultimate results of the treatment in those cases treated for forty days, he noted a recurrence of the attacks, at first mild and infrequent, but later becoming more intense. In one case, which he treated for three months, the fits had not returned up to the time of writing, that is, one month after the end of the treatment. He concludes: (1) A diet poor in chlorine is applicable in every case of epilepsy and worthy of trial. (2) The treatment should be most successful when carried out in a sanatorium or "home." (3) Until the nature of the condition is fully known, a *strict* "chlorine-poor" diet should be applied. (4) Beside the diet, small doses (33 to 45 grs. per diem) of bromine salts should be given. (5) The easiest and most pleasant method of giving the drug is to let it take the place of NaCl, especially in bread. (6) The beneficial action of the treatment rests on the increased sedative action of the bromides, and therefore it may be useful in other nerve diseases where bromides are at times given.

**(51) Absolute Alcohol in Herpes Zoster.**

Winternitz (*Sem. Méd.*, April 3rd, 1901) recommends local applications of absolute alcohol in herpes zoster. Several layers of absorbent gauze soaked in alcohol are applied to the skin and covered with impermeable tissue, over which cotton wool is applied. The author reports six cases, including one hæmorrhagic and one gangrenous. The pain is said to be quickly relieved and healing promoted.

## PATHOLOGY.

**(52) The Etiology of Ozæna.**

F. Perez (*Ann. de l'Inst. Pasteur*, May 25th, 1901) has made many further bacteriological examinations of ozænic discharges since he first described the so-called "cocco-bacillus fœtidus" in 1899, and is now convinced that this organism is the only exciting cause of ozæna. Liguier, while studying the hæmorrhagic septicæmia known as "pasteurellosis," found the cocco-bacillus in a pneumonic patch of a dog which had been inoculated with a culture of canine pasteurella. Although minute precautions had been taken to disinfect everything used in the experiment, the presence of the cocco-bacillus was attributed to accidental contamination. But sometime later the same experimenter found the organism under similar circumstances; and Perez was led to examine the bacterial flora of the nose and saliva of various animals. The cocco-bacillus was found once out of six dogs examined, but not in the case of other animals; for example, cats, pigs, and sheep. It may be concluded, then, that dogs may transmit ozæna. Some confirmation was obtained from clinical history: 9 patients out of 41 gave striking stories of unusual contact with dogs, due in some cases to business, in others to inclination. It is probable that the cocco-bacillus is a normal occupant of the dog's nasal secretion, but that an attack of pasteurellosis is necessary to cause it to become virulent.

**(53) Variability in the Agglutinative Property of the Typhoid Bacillus.**

The researches of Sacquépée (*Ann. de l'Inst. Pasteur*, April 25th, 1901) have led him to the conclusion that the agglutinative property of the bacillus of Eberth is variable. The variations towards a low degree are the most important. Bacilli corresponding exactly to the typical B. typhosus are found in Nature, rarely in water, occasionally in typhoid stools, which are only slightly or not at all agglutinated by typhoid serum. These behave as typhoid bacilli when injected into animals, and the serum obtained from these animals has all the properties of typhoid serum. If kept in closed tubes they transform themselves spontaneously into bacilli, giving the agglutinative reaction typically. A normal type of the bacillus, on the other hand, if kept for a long time in immunised animals loses by degrees its agglutinative property; this resistance to agglutination is therefore an acquired property, and a given specimen of the organism may possess it to a greater or less degree according as it is obtained from a source more or less immunised or infected.

# AN EPITOME
OF
# CURRENT MEDICAL LITERATURE.

## MEDICINE.

**(54) The Influence of Typhoid Fever on the Course of Pre-existent Epilepsy.**

LOUIS LENOIR (*Thèse de Paris*, 1901) refers to a commonly prevalent view that epileptic attacks are lessened or ameliorated by an intercurrent disease, such as typhoid fever. Hippocrates had stated (*De morbo sacro*) that intermittent fever replaced or mitigated epilepsy at least temporarily, whence the adage: "*Quartana epilepsiæ vindex appellatur*," and this view was also upheld by Van Swieten and Esquirol, the latter of whom said that epileptic attacks diminished, and even ceased entirely, upon the intercurrence of febrile attacks (*accidents fébriles*). This was confirmed by Féré, Lannois, and Voisin, but a certain element of doubt still persisted which led Lenoir to investigate somewhat minutely a number of cases of epilepsy with intercurrent typhoid fever. Two cases in particular were very exhaustively watched and studied; one a girl of 14 years of age, the subject of epileptic fits since the age of 10 years, and the other a girl of 13 years who had fits for an unknown period. Lenoir concludes that while epileptic convulsions proper are diminished, epileptic vertiginous attacks are increased by typhoid fever, attacks of the latter class being regarded as "attenuated fits." If therefore all attacks, convulsive and vertiginous, are added together, the average number per week or month is slightly increased by typhoid fever. The older view thus requires modification. He also points out that in association with such vertiginous attacks there occur slight but brusque elevations of temperature. As regards treatment proposed by some, namely, the injection of cantharides (P. Marie in 1892) or of soluble toxins of staphylococci (Lannois in 1892), he finds the application of cold sponging or immersion the best, both for the general pyrexia and for the brusque elevations of temperature due to convulsive or vertiginous attacks.

**(55) Hepatic Colic.**

HUCHARD, in a clinical lecture (*Journ. de Méd. et de Chir. Pratiques*, May 10th, 1901), points out the extreme variability presented by hepatic colic. He quotes the case of a woman recently under his care, who for years was treated for some gastric disorder of which the chief manifestation was paroxysmal pain. Two striking features in her case were that the pain came on regularly about three hours after food, and the other was that the pain was nocturnal. These two facts pointed either to the presence of the pseudogastralgic form of hepatic colic or to hyperchlorhydria. That this latter condition may come on in paroxysms during the night is stated to be not uncommon, and is explicable on the grounds that when the stomach becomes empty the excess of acid contained in it is more likely to irritate the mucous membrane. So far as Huchard's case was concerned, it appeared on careful cross-examination that the attacks of pain lasted for about a fortnight, after which there was a period of complete intermission. This was much more in accordance with hepatic colic, and it was found, moreover, that the urine was muddy in appearance and contained urobilin. In cases like these it is generally possible to ascertain the presence of some distension of the gall bladder, with pain on palpation—a phenomenon which was present in this case, which therefore confirmed the diagnosis of pseudogastralgic hepatic colic. The writer's prescription in this case was 10 grams of sodium benzoate and 20 of salicylate, divided into 30 cachets, one to be taken with food three times a day. Huchard emphasises the importance of diet. The meals should be regular, and no fat or salt should be consumed. Regular daily exercise should be taken, and the bowels should be most carefully attended to. The same writer has found the local application of salicylate of methyl of use.

**(56) A Case of Albumosuria.**

KALISCHER (*Deut. med. Woch.*, xxvii, p. 54, 1901) records another case of this disease associated with myelomata of the ribs, and similar to those already reported by other authors. The patient, a woman aged 67, first complained of pains over the lower part of the thorax, which were aggravated by movement. The diagnosis in the early stages was quite obscure. After the symptoms had been present for a year the woman was seen by Kalischer. He discovered various points of maximum tenderness, especially marked at the junction of the fifth, sixth, seventh, and eighth left ribs, with their cartilages. Later various irregularities appeared in the rib outlines, prominences and depressions, with softness and bending at certain points. The sternum, clavicles, and scapulæ also exhibited soft and tender areas. Pain was severe on the slightest movements of the arms, on taking a deep breath, or on the exertion of speaking loudly. Death occurred from general weakness a year and a half after the first onset of the disease. Albumose was found in the urine when first examined by Kalischer, and continued present constantly until death; occasionally albumen was also found. On heating the urine a copious precipitate appeared, which dissolved entirely on boiling and reappeared on cooling. Nitric acid in the cold gave a precipitate which dissolved with heat, and also reappeared on cooling. At the necropsy the ribs were found soft and friable, and easily cut with scissors. The bony substance had almost entirely disappeared, and its place was occupied by a brownish-red diffluent material. Microscopical examination of this material showed it to consist for the most part of white corpuscles, without any appearance of regular "tumour" growth. The condition was therefore one of lymphoid myeloma.

**(57) Spontaneous Escape of Cerebro-spinal Fluid from the Nose.**

FREUDENTHAL (*Virchow's Archiv*, Bd. clxi, Heft 2, 1900) reports the case of a married woman, aged 50, who had a persistent frontal headache for nine weeks, most intense just above the nose. Under ice-cold compresses, constantly changed, there was some improvement. Exactly a year later, in October, 1898, there was a pyrexial attack, which was followed by "a kind of bronchial cough" and a constant discharge of watery fluid from the left nostril. Simultaneously the pain was relieved, and though still without much energy, the previously apathetic patient became cheerful and talkative. The hearing, previously impaired through chronic catarrhal otitis media, improved. Anosmia had been present since the beginning of the illness, and this persisted; it was probably due to increased intracerebral pressure. In December, 1899, the discharge ceased temporarily, and the symptoms of cerebral compression—headache, dulness, disturbed nights, and muscular twitchings—reappeared until the discharge was re-established. In June, 1899, when seen by the writer, the discharge required more than twenty handkerchiefs a day, and the pillow was saturated every morning. It increased when the head was tilted forwards, and apparently ceased when the dorsal position was assumed; in reality it ran down the pharynx and produced the "bronchial cough." Two polypi were removed from the left nostril, but as it was otherwise normal, they were doubtless due to the irritation of the discharge. Their removal, as in other reported cases, had no influence on the condition. The pupils reacted, and there was no ophthalmoplegia. The visual fields were contracted. There were left neuro-retinitis and slight right optic neuritis. The function of the cranial nerves, other than the first and second, was normal, except that the sense of taste was deficient in the anterior two-thirds of the tongue. The cause of the symptoms was probably a tumour situated in the hypophysis cerebri, and involving the optic chiasma. The discharge almost certainly consisted of cerebro-spinal fluid. It contained 0.06 per cent. of sugar, or a reducing substance, a small quantity of albumen, and 0.31 per cent. of mineral salts. Mucin was absent, as also, somewhat unexpectedly, was phosphorus. It was alkaline, and the specific gravity was 1007.2. How it escaped from the cranial cavity is obscure. In a case mentioned by StClair Thomson a small aperture was found by the side of the crista galli. Of the few other reported cases, where death occurred with symptoms of cerebral pressure, the track of the fluid was discovered in only two. In two cases there appeared to be no communication between the brain and the nose,

although the brain and its membranes were extensively diseased, and in one case nothing abnormal was found. Doubtless the fluid must then escape through the cribriform plate of the ethmoid, though why some cerebral tumours should cause such unusual pressure as to force the cerebro-spinal fluid through, or why the cribriform plate should be so weak as to allow its passage it is impossible to say. In most of the reported cases the discharge was from the left nostril. No treatment is possible or desirable. The condition must be distinguished from hydrorrhœa nasalis and from hay fever, both of which are pure neuroses. The chief distinction between nasal hydrorrhœa and spontaneous escape of cerebro-spinal fluid through the nose is that in the former the discharge is intermittent and generally periodic, while in the latter it is continuous. In the former mucin is present, but there is no sugar; in the latter mucin is absent, but a reducing substance is present.

## SURGERY.

### (58) Tendon Transplantation.

E. Kumik (*Münch. med. Woch.*, February 12th, 1901) has directed a great deal of attention toward the treatment of paralysis, especially spinal paralysis in children, with transplantation of tendons. He describes four operative methods. The first, which he calls "the old method," he considers a questionable procedure, inasmuch as it necessitates the sacrifice of a functionally healthy muscle. This method consists in choosing a healthy muscle, which can be spared, dividing its tendon, and suturing the central portion to the tendon of the paralysed muscle. The second operation consists in dividing the whole or a part of the tendon of the paralysed muscle and suturing the peripheral end to the tendon of a functionally active muscle. The third variation consists of splitting the tendon of a functionally healthy muscle into two parts, and attaching one part to the tendon of the paralysed muscle. The fourth proceeding, of which he has only availed himself once, and which is said to give very accurate and good results, is the suturing of a split off portion of a healthy muscle tendon to a properly chosen site in the periosteum. With regard to the nomenclature, he points out that the terms used are very faulty. He prefers Friedrich's terms "intrafunctional" and "intraparalytic fixation." Vulpius calls the second method "ascending" and the third "descending superplantation," and Hoffa names the second and third methods "passive" and "active transplantation" respectively. He suggests that "implantation" conveys the meaning better than "transplantation." The success of the operation depends partly on the correction of the displacement, and this, he urges, is better carried out by a lengthening or shortening of tendons than by simple tenotomy. He uses Beyer's operation for the former, which consists of cutting into the tendon in step shape, or, in dealing with broad tendons, he makes two longitudinal incisions of equal length, one 1 cm. higher than the other. From the lower end of the second, and from the upper end of the first, transverse incisions are made in opposite directions. Thus the tendon is lengthened by the sum of the two incision lengths. The shortening operations are either excision of a part of the tendon and end-to-end suture, or simple division and suturing the ends overlapping one another. He claims that tendon surgery has been greatly advanced by a skilled combination of tendon transplantation with tendon lengthening or shortening. His operations were performed for the functional improvement of cases of paralytic talipes equino-varus, spastic talipes equino-varus, spastic talipes equino-valgus, congenital talipes equino-varus, radial paralysis, and quadriceps extensor cruris paralysis. His results were very satisfactory, and from the patients' and patients parents' view especially so, because splints and and expensive cumbrous apparatus were no longer required to be worn. He considers that the surgeon ought to propose the operation, when the paralysis is no longer active, and when no functional improvement has shown itself during the course of a reasonable time, for example, one to two years. Operative interference is, however, always indicated if the resulting deformity is increasing. He lays great stress on the formation of an exact diagnosis before undertaking an operation, and says that it is absolutely essential to be fully informed as to the electrical and other conditions of each individual muscle of the limb. He also urges that a very definite plan of procedure be first clearly formed. He discusses the three varieties of muscle degeneration and their appearances. After the operation is performed, he applies a splint of plaster of paris, kept in place by means of strips of gum-elastic strapping, which at the same time cover the dressings of the wound. From six to eight weeks after he employs massage, active and passive movements, of which he considers the active to be the most important.

### (59) Sterilisation of Catheters.

Jacob (*Berl. klin. Woch.*, March 11th, 1901) criticises the method of sterilising catheters by means of formalin vapour. He has used Kutner's method of applying formaldehyde vapour with good results, but tested the results again, and found the latter method reliable in each case after eight minutes application of the vapour. The pure formalin vapour was tried in 10 experiments. First catheter, absolutely dry, was artificially infected; a control experiment showed abundant growth of micro-organisms (cocci); after exposure to the vapour for ten minutes it showed no growth. Second catheter, absolutely dry, was infected; control catheter showed abundant growth; with five minutes exposure to vapour growth of cocci took place after twenty-four hours, but with ten minutes exposure it proved to be sterile. Third catheter, dried for half-an-hour, infected with staphylococcus; control showed abundant growth; with exposure to vapour for ten minutes growth took place after twenty-four hours. Fourth catheter, dried for half-an-hour, infected with bacteria coli; control showed abundant growth; with exposure to vapour for fifteen minutes growth took place after twenty-four hours. Fifth catheter, same as No. 4; control showed abundant growth; with twenty minutes exposure to vapour growth of bacteria took place after twenty-four hours. Sixth catheter, dried twenty-four hours, infected with B. coli; control showed abundant growth; with fifteen minutes exposure to vapour growth appeared after twenty-four hours, but with thirty minutes exposure it proved to be sterile after several days. Seventh catheter, lying on threads infected with anthrax spores, formalin vapour applied for thirty minutes: control showed abundant growths; catheter (*a*) lying nearest to the formalin developer showed growth after twenty-four hours: (*b*), (*c*), and (*d*) proved to be sterile after twenty-four hours Eighth catheter, infected by threads (anthrax spores); control showed growth after twenty-four hours; after exposure for ten minutes showed growth after twenty-four hours, for 15 minutes showed growth after forty-eight hours, for twenty-five minutes proved to be sterile after forty-eight hours. Ninth catheter, anthrax spores infecting threads; control showed abundant growth after twenty-four hours; (*a*) dried threads exposed for fifteen minutes showed growth after forty-eight hours; (*b*) moist threads showed growth after several days; (*a*) dried threads exposed for twenty-five minutes showed growth after forty-eight hours; (*b*) moist threads showed growth after several days: (*a*) dried threads exposed for thirty minutes proved to be sterile after twenty-four hours: (*b*) moist threads proved to be sterile after twenty-four hours. Tenth catheter (ureter), infected with B. anthracis; control showed growth; sterilised with "Kutner" for eight minutes remained sterile; (*a*) ten minutes formalin showed growth after twenty-four hours: (*b*) twenty minutes formalin showed growth after twenty-four hours: (*c*) thirty minutes formalin showed growth after twenty-four hours. He therefore considers that, while formalin vapour can only give fair results after thirty minutes' exposure, the sterilisation by means of formaldehyde vapour is satisfactory after eight minutes, and that the latter may be considered reliable.

## MIDWIFERY AND DISEASES OF WOMEN.

### (60) The Surgery of Fibroids in Pregnancy.

Green (*Journ. Amer. Med. Soc.*, March 16th, 1901) operated on a woman five months pregnant. The fibroid had existed for over ten years, and had in-

creased rapidly during pregnancy. Distension was great, and there were symptoms of peritonitis; the temperature was 101°. Two fibroids, each as large as a child's head, sprang from the uterus, which was thickly studded with similar growths. The entire mass was removed, the peritoneum flushed with saline solution, and the wound closed without drainage. Subcutaneous injections of saline solution were given twice on the day of operation, and the patient recovered.—J. Duncan Emmet (*Amer. Gyn. and Obstet. Journ.*, June, 1901), after noting the general principles of treatment, insists that the form of surgical interference always indicated when any surgical procedure is indicated at all is myomectomy. Statistics before 1890 are of little value. Between 1890 and 1900 the reported cases of myomectomy in pregnancy amount to 44, the maternal mortality being 9 per cent., the fœtal 21 per cent. Since January 1st, 1900, to April, 1901, 5 cases of myomectomy in pregnancy have been reported (Doléris, Lewis, Muir Evans, Gemmel, and Emmet's present case). In 3 delivery occurred at term; this fact is not noted in the remaining 2, term not having been reached when the report was published. Emmet operated on a woman, aged 30, early in the fourth month. She had never been pregnant before. A large uterus filled the pelvis, and several myomata could be felt in its body. At the operation the uterus was brought out of the pelvis, and was found to be studded with myomata varying in size from that of a hen's egg to that of a pea. Most of them lay near the fundus, some were pedunculated. Two of the largest and most prominent were situated just above the cervix, one anterior and the other posterior. Emmet operated on account of these two growths as they would have enlarged in the course of the pregnancy and then natural labour would have been impossible. He removed nine myomata through eight incisions, closing the peritoneal surface of each incision with continuous catgut ligature. In several incisions the suture was carried deep down into the interstitial tissue. Bleeding was inconsiderable. Aristol powder was freely dusted over each line of sutures to prevent the formation of adhesions to the intestines. The abdominal wound was closed with deep interrupted silver-wire sutures. Emmet contrived that the uterus should be as lightly handled as possible during the operation. Labour took place at term and the child was delivered in twenty minutes, chiefly by two strong pains. The placenta and membranes came away spontaneously in the course of half an hour, the uterus contracted firmly. But owing to the force of the pains the cervix was torn and the perineum incompletely lacerated. The child was a healthy female and as well as the mother was in good health six months after the operation. (See also the discussion at the Obstetrical Society of London on the same subject, British Medical Journal, June 22nd, 1901, p. 1545.)

**(61) Nutrition in the Puerperal State.**

Keller (*Ann. de Gynéc. et d'Obstét.*, lv, May, 1901), having in 1897 published results showing that the rhythm of vital function in non pregnant women reaches its maximum in the premenstrual period, now inquires whether a similar rhythm holds during pregnancy. He has made observations on a series of 14 women for periods from twenty to fifty-seven days, including in the cases of 12 the period of labour and the puerperium. The urine was measured and its density and the total nitrogen and the urea were investigated. The ratio of the nitrogen in urea to the total nitrogen—coefficient of oxidation, *rapport azoturique*—is calculated. The average values for the pregnant and non-pregnant are: Volume 1,375 to 1.551 c.cm., density 1017.6 to 1017.3, urea 20.02 to 24.47, total nitrogen 11 to 13.232, coefficient 84.7 to 86. The results are carefully tabulated. Keller decides that there is a less active destruction of albuminoid material and an increase of imperfectly oxidised matters. Patients not quite well showed the difference more, but in urea and in total amount of nitrogen none even of the healthy pregnant women reached the average values for non-pregnant women. This he thinks consistent with the theory of a hepatotoxæmia of pregnancy. The coefficient of oxidation was less in the multiparæ, and this is attributed to the injurious effects of former pregnancy. To examine the question of rhythm the observations are divided into groups of four days. Counting from delivery, Keller thinks that he can read the same rhythm of nutrition as in the non-pregnant state, delivery taking the place of menstruation. The figures do not seem sufficiently uniform to fully justify this, but the whole is a useful and suggestive piece of work which calls for extension and repetition.

**(62) Pelvic Abscess Associated with Atresia.**

Weinlechner (*Monats. f. Geburts. u. Gynäk.*, May, 1901) relates a case of clinical interest. A female, aged 22, suffered from purulent discharge from the rectum. She had never menstruated, and the vagina was a shallow, blind pouch. The internal organs could not be clearly defined. There was a swelling in the left iliac fossa; on pressing it pus escaped into the rectum. An incision was made in the iliac fossa, whence pus ultimately flowed. There remained doubt as to whether there was a pararectal abscess or suppuration in a left uterus unicornis. Schauta considered that the latter condition was the more probable.

**(63) Tubercle of the Vulva.**

Strassmann (*Monats. f. Geburts. u. Gynäk.*, May, 1901) describes a case of disease of the vulva which occurred in a woman aged 38, suffering also from tuberculous phthisis and lupus. The local malady consisted of an eruption of small tuberous elevations which in part healed, but recurred. Neither the tubercle bacillus nor any giant cells could be detected. The vulval structures were excised, but recurrence occurred in three weeks. Strassmann considers this affection as a so-called paratuberculous condition, best named "folliculitis acneiformis."

## THERAPEUTICS.

**(64) Removal of Malignant Tumours by the External Application of Arsenic.**

Trunecek (*Wien. med. Woch.*, May 11th, May 18th, and May 25th, 1901) gives further details of the method introduced by himself and Czerny (*Vide* Epitome, vol. ii, par. 15, 1897). In the case of a carcinomatous ulcer the surface is cleansed with boracic or peroxide of hydrogen lotion until slight hæmorrhage is produced. After this has ceased the arsenical mixture is painted over the raw surface and left to dry in the air. No dressings are applied. The wound soon becomes moist and moderately painful. The following day it is covered with a scab. If there is œdema of the surrounding tissues further treatment is postponed until it has subsided, but otherwise the arsenic is painted over the ulcer daily. The scab, at first superficial and brown, becomes daily thicker and darker, and extends over the whole ulcer until the entire growth is necrosed. Finally a line of demarcation forms, and the tumour can be removed by snipping through any remaining adhesions. The arsenical mixture (not solution) employed consists of 1 part of arsenious acid in 75 parts of absolute alcohol and 75 parts of distilled water. As the necrosed mass becomes thicker the strength is increased to 1 part of arsenious acid in 100 or even 80 parts of spririt and water. The great advantage of arsenic over all other caustics is that the cells of carcinomata and sarcomata have a special affinity for it—are, in fact, "arsenophile," so that though the new growth is destroyed, the healthy tissues are spared. Hence it is possible, after the mass of the tumour has been cast off, to determine whether the whole has been removed by continuing to paint on the arsenical mixture, or still better at this stage a 1 in 250 solution of potassium arseniate in equal parts of absolute alcohol and water. If a superficial yellowish-green slough, which can be readily removed without hæmorrhage, is present the next day, all the growth has probably been removed, but if a dark adherent slough forms over the whole or portions of the ulcer, and cannot be removed without hæmorrhage, the treatment must be continued until it has separated and the application of arsenic produces no further characteristic necrosis. A clean granulating wound results, which heals readily. Owing to the affinity of the cells of malignant tumours for arsenic it matters not how small the area of cutaneous ulceration may be compared to the growth beneath; the whole mass necroses, and is eventually cast off. Hence in cases of non-ulcerated super-

ficial cancers, it is sufficient to snip off a small piece of overlying skin, and, after hæmorrhage has ceased, to apply the arsenical mixture to the wound every day. Trunecek claims that the affinity between arsenic and malignant growth results in the tumour being more radically removed than is possible with the knife, and that recurrence is seldom if ever seen. The method is also valuable as an aid to diagnosis. If there is any doubt as to whether an ulcer is malignant or simple, the application of arsenic and the appearance of the characteristic scab are decisive. The method is only suitable for cases in an early stage, when there is no implication of the lymphatic glands. Naturally, also, the growth must be in a position easily reached, such as the skin, lips, and buccal mucous membrane. Even in cases of epithelioma of the mouth the writer has never seen any toxic symptoms from the absorption of arsenic when care is taken to prevent it coming in contact with healthy mucous membrane. Microscopical examination of tumours thus removed shows that the epithelial cells of carcinomata become necrosed, while the stroma undergoes a kind of hyaline degeneration with a small-celled exudation from the vessels. In the case of sarcomata, there is necrosis *en masse*, without a trace of small-celled exudation. The healthy tissue surrounding the necrosed tumour reacts as though it were a foreign body.

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**(65) Dietetic Treatment of Scurvy.**

LOUIS STARR (*Philad. Med. Journ.*, April 27th, 1901) regards scurvy as a constitutional disease due to faulty feeding, the cause being the absence of fresh food—that is, of food that is not "live." The symptoms include intense hyperæsthesia of the limbs, a shiny and tense skin, pseudo-paralysis, and immobility, fusiform thickenings of the long bones, especially near the joints, and spongy red gums which bleed readily. The symptoms disappear rapidly on treatment. The greatest dietetic fault is the absence of fresh milk (human or cow's), and the use of proprietary infant foods administered without the addition of fresh milk. Condensed milk, boiled milk, and even pasteurised milk form no substitute for fresh milk in treatment. "The milk, if carefully handled at the dairy and kept clean and sweet, should never be pasteurised or predigested." The juice of fresh fruits (oranges, lemons, grapes) should be added. The following is the typical diet for an infant 8 months old: (*a*) At 7 A.M. 4½ ounces of fresh milk to which has been added half an ounce of cream and 1 drachm of milk sugar; this should be repeated at 10.30 A.M., 2 P.M., and at 10 P.M.; (*b*) at 9 A.M. one or two teaspoonfuls of fresh orange juice, repeated at 1 P.M. and at 5 P.M.; (*c*) at 11.30 A.M. two teaspoonfuls of raw beef juice, free from fat, with a little salt added; this should be repeated at 3 P.M. and at 8 P.M.; (*d*) if the orange juice is not obtainable, grape juice (free from pips and skin) or scraped ripe apple should be given; (*e*) the limbs should be gently rubbed with warm olive oil and a ferruginous tonic (citrate of iron and quinine) administered internally. Starr gives a table of 26 cases so treated during the ten years (1890-1900), in most of which improvement set in in a week, and rapid recovery in about three or four weeks.

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**(66) Use of Suprarenal Capsule in Cardiac Diseases.**

FLOERSHEIM (*New York Med. Journ.*, May 11th and 18th, 1901) concludes from a careful series of trials of the suprarenal extract in 82 cases of cardiac disease, in males and females of all ages, a few of whom also suffered from bronchitis, that the following results may be drawn: (1) A weak and irregular heart becomes strong and more regular after the administration of the extract of suprarenal body by the mouth. (2) A dilated heart contracts and is restored to a size approaching the normal. (3) A diffused cardiac apex beat becomes localised. (4) A diffused murmur of mitral regurgitant origin, loud and rough at first, becomes smoother and lessened in intensity, and, in some cases, disappears after taking suprarenal extract for some time. (5) A cardiac murmur which, owing to the extreme weakness of the heart, was almost inaudible, became more distinct after its use. (6) The normal cardiac sounds when indistinct are made distinct and clearer after treatment. (7) In some cases a rapid pulse becomes slower; and in others a slow pulse becomes more rapid after exhibition of the drug. (8) Patients who are very weak with organic heart disease are improved in strength. (9) No effect was observed from administering the drug in cases of organic heart disease when the pulse and heart action were strong and regular. (10) Cases of bronchitis with cardiac disease obtained considerable relief or improvement of the bronchial trouble, and patients with attacks of dizziness of cardiac origin were freed from them after the taking of suprarenal extract. The drug had thus a distinct value in cases especially of feeble and dilated or irregular hearts, with or without acute bronchial congestions superadded, all such conditions being relieved.

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**(67) Euchinine as a Prophylaxis against Malaria.**

MORI (*Centralbl. f. Bakt.*, June 10th, 1901) remarks on the fact that although houses can be made mosquito proof yet the attempts to render individuals who are not confined in these immune to the disease have not as yet yielded practical results. Such attempts have concerned themselves with the provision of masks, gloves, etc., or the employment of substances as ointments or powders. Others have endeavoured to confer immunity by the prophylactic use of drugs, arsenic, the usual quinine preparations, and methylene blue. Mori has experimentally used euchinine in this way; a preparation prepared by Zimmer and Co., of Frankfort, and recommended by Celli. Doses ranging from 0.25 gram to 0.5 gram per diem were administered, varying with the age; and this treatment was maintained for some five months before the malaria season. Of 42 persons dwelling in a malarial district who were protected in this way, 5 only suffered from fever, while of 47 unprotected 39 were attacked with the disease, the proportion being 11.9 per cent. protected, and 82.9 per cent. unprotected. The five protected who suffered had the fever in a very mild form. The result is therefore very encouraging.

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## PATHOLOGY.

**(68) Danysz's Bacilli.**

J. KISTER AND P. KOTTGEN (*Deut. med. Woch.*, May 2nd, 1901) have experimented with the bacilli which Danysz found to be pathogenic to rats and mice. They have come to the conclusion that these organisms, in their virulent form, are capable of killing rats in from five to seven days and mice in four to seven days. When passed through animals, at first the virulence becomes slightly enhanced, but later becomes lessened, until, after passing through ten series, it no longer is capable of killing rats. When healthy animals are left in the same cage with rats, fed on pure cultures, and these latter die, the former remained unaffected if the bodies of the dead rats were removed early; on the other hand, however, if the healthy rats were not fed, but allowed to gnaw at their cadavers, they sickened and died as quickly as if they had received pure cultures themselves. They further pursued experiments to determine the length of time which a culture could retain its virulence, and found that agar cultures were virulent (killing 50 per cent. of rats fed with them) after thirteen weeks at 23° C. The cultures on horse bouillon, as recommended by Danysz, lose their virulence after four weeks. The bacilli are somewhat like B. coli, short, thin, almost cocci-like, possess free movement, do not show any pole staining with aniline dyes, grow freely on grape sugar-agar, and develop gas after twenty-four hours incubation at 37°. They are non-pathogenic to all birds and other animals.

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**(69) Colloid Carcinoma of the Peritoneum.**

EWING (*Proc. New York Pathol. Soc.*, February, 1901) describes a case of early colloid carcinoma of the peritoneum associated with a small tumour of the caput coli. The latter, originating in the straight tubular glands of the mucosa, had made its way through the muscular coat to the peritoneum, and showed throughout the structure of colloid carcinoma. The nodules on the neighbouring peritoneum were evidently secondary. It has been held that these carcinomata usually originate in the peritoneal endothelium; this growth shows that they may have another origin, in the intestinal mucosa, probably from the mucus-secreting cells.

# AN EPITOME

OF

# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (70) Sero-fibrinous Pleurisy of Traumatic Origin.

Barjon and Lesieur (*Lyon Méd.*, May 5th, 1901) report two interesting cases of pleurisy with sero-fibrinous exudation following injury, and ultimately being proved to be tuberculous. In the first case a man, aged 33, an alcoholic, without any family history of tuberculosis, fell and bruised the neck and shoulder. Twelve days afterwards he complained of oppression on the least effort, and slight shivering, and two or three days later was found to have an effusion into the left pleura reaching to the spine of the scapula. Paracentesis was performed three times; after the third operation the effusion did not recur, and the patient rapidly improved. The fluid from the third tapping injected into the peritoneum of a guinea-pig caused death, with marked signs of tuberculosis, and about five weeks after the last tapping the blood serum of the patient agglutinated Koch's bacilli with one-fifth dilution. In the second case, a man, aged 53, an alcoholic, with good personal history otherwise, and with a very good family history, fell and contused his left side. For more than three months the pain in the side continued, and was increased by deep respiration, but during this time there was no cough or shivering and no wasting. The patient applied for treatment on account of the persistent pain and was found to have a moderate pleuritic effusion which one parancetesis cured. He had no definite sign of phthisis, the pleuritic fluid caused marked tuberculosis when injected into a guinea-pig's peritoneum. About three months after his discharge from hospital the patient returned with definite signs of bilateral phthisis, most more at the left apex. The authors consider that both were cases of latent tuberculosis, and that the injuries asked as exciting causes.

### (71) Paramyoclonus Multiplex.

Murri (*Arch. Ital. de Biol.*, tome xxxv, fasc. i, April 20th, 1901) regards paramyoclonus multiplex as a symptom-complex which may have various causes, and not as a necessarily hysterical manifestation. He records 2 typical cases in which there was no history or sign of hysteria. In the first case a man, aged 64, had marked polyclonia, the movements persisting during sleep. *Post mortem*, chronic localised pachymeningitis was seen with atrophy of the grey substance of the central convolutions. On histological examination, the muscles, peripheral nerves, and intervertebral ganglia were found unaltered; in the cord a few pyramidal fibres were degenerated, and there was slight chromatolysis of some cells of the anterior horns. The affected area of cerebral cortex showed a great increase of neuroglia, surrounding small areas filled with masses of pigment and round cells. In the second case a man, 26 years of age, had suffered when 14 from nocturnal attacks, consisting of sharp movements of the legs, with hiccough, difficulty of speech, and violent starting of the limbs, and ending in profound sleep. After lasting for six years the attacks were cured by the administration of bromides. On examination the generalised clonic movements were seen to be characteristic, but were rapidly cured by the use of bromides, only to reappear when the drug was discontinued for more than a day or two. Murri regards this case as undoubtedly epileptic. Myoclonia should not then be regarded as hysterical unless certain definite hysterical characteristics are also present, such as the variability of the muscular movements from day to day, their alternation with other symptoms, or their cure by means of suggestion.

### (72) The Cutaneous and Tendon Reflexes.

Tedeschi (*Rif. Med.*, May 28th-31st, 1901) has examined the relation between the superficial and deep reflexes in a certain number of epileptics during the interaccessual period. Speaking generally, when the pyramidal tracts are injured, if the tendon reflexes are exaggerated there is usually weakening or abolition of the cutaneous reflexes—taking the knee-jerk as the type of the former and the hypogastric reflex as the type of the latter. In certain varieties of chorea and in epileptics, especially after the fit, an antagonism between the superficial and deep reflexes is frequently seen. In the differential diagnosis between functional and organic disease of the nervous system the state of the cutaneous reflexes is of much value. The disappearance of these latter, especially if accompanied by the phenomena of Babinski—extension instead of flexion of the great toe on provoking the plantar reflex—is in favour of organic disease. As regards Babinski's symptom, it is almost constantly associated with disease of the pyramidal tract, but the state of the muscles concerned must be reckoned with in the presence or absence of this sign.

### (73) Myoclonus.

Schuffer (*Il Policlin.*, fasc. 1, 2, 3, 5, 1900) after a lengthy examination and discussion of the various types of myoclonus comes to the following conclusions. Myoclonus in itself is only a symptom and not a clearly defined nosographical type. It may present itself in many different forms, either as clonic of groups of muscles, or of single muscles or again as fascicular and fibrillary contraction. Of the cases published under the name of paramyoclonus multiplex some belong to chorea, some to convulsive tic, some to hysteria or to rhythmic spasms of probable hysterical nature, some to neurasthenia, some to various diseases of the cerebro-spinal axis (lesions of the Rolandic area, spinal muscular atrophy, chronic poliomyelitis, syringomyelia, etc) and some to various psychoses. Very few cases cannot be grouped in one or other of the above forms, possibly the remaining cases may be due to some form of autotoxæmic poisoning. Myokimia is only a special form of myoclonus and is often symptomatic of other disease. There is a special variety of myoclonus frequently associated with epilepsy and liable to be confounded with hysterical myoclonus. The seat of this epileptic myoclonus is not confined to the brain alone, but is spread over the whole cerebro-spinal axis. As regards its symptoms, although resembling the chorea of Dubini it is not identical with it; both are probably of toxic or infective nature. It generally affects several members of a family and by preference the females; often the father is alcoholic. The myoclonic attacks resemble the contractions produced by electricity, usually symmetrical on the two sides but not always synchronous, generally beginning at the upper extremity, they cease during sleep.

### (74) The Toxicity of Phosphorus.

According to Cau (*Thèse de Paris*, 1901), the oxidation of phosphorus in the tissues is the primary cause of the lesions produced by this drug in poisonous doses. The fatty degeneration, which is the most remarkable pathological change, may be explained in two different ways; it may be due to the direct action of the poison on the cell or to alterations in the blood which render it incapable of nourishing the tissues. The second explanation is probably the correct one. Theoretically the coefficient of toxicity of phosphorus for an adult man may be put down at 5 cg. Practically this amount is too large or too small, according to the method of administration. It must be estimated for each individual, taking into consideration age, physical condition, and individual susceptibility. A previous morbid state which has left serious changes in the kidneys, heart, or liver, makes the coefficient of toxicity very small, and is an almost absolute bar to its employment. Cases of poisoning following the use of therapeutic doses are not rare, so that the drug is one that must always be used with caution: its value in rickets and certain nervous affections is well established.

## SURGERY.

### (75) Cancer of the Pylorus.

The prognosis of carcinoma of the pyloric end of the stomach after gastro-enterostomy is generally accepted to lie within the limits of one to two years, and in cases where the second year has been overstepped, doubt is felt as to the correctness of the diagnosis. In order to illustrate that at times this limit of time is markedly overstepped, H. Strauss (*Berl. klin. Woch.*, March 11th, 1901) relates the history of a man, aged 35, who had previously enjoyed good health with the exception of gonorrhœa, syphilis, and one attack of typhlitis.

In 1895 he vomited, at first about every fortnight, but suffered no pain. There was no hæmatemesis. In 1897 he sought advice on account of vomiting of large quantities of "pap"-like material, of loss of flesh, and abdominal swelling. The report at this stage shows that the patient was wasted but not cachectic. A tumour was felt under the left lobe of the liver; it was about the size of a walnut, and not painful or tender. There was free HCl in the contents of the stomach. No sarcinæ were found. A laparotomy was performed, and a small tumour about the size of a small apple was found in the pylorus: it was adherent to the surrounding tissues. Several small round knobs were also discovered, situated on the walls of the stomach. As extirpation was impossible, gastro-enterostomy was performed. The patient picked up well, and gained rapidly in flesh and general strength, and stated that for 1½ year he felt no inconvenience at all. About the beginning of 1899, however, the vomiting began again. In June, 1900, he was admitted into hospital with thoracic signs, that is, dulness at the right base and some dulness at the left base. The patient died of cardiac weakness in 1½ day. A necropsy was made, and the condition in the abdomen was as follows: A coil of intestine was adherent to the stomach and abdominal wall, and showed infiltration with dense, flat, whitish masses. There were also small dense growths in the large gut and in the omentum. The stomach wall at the pyloric end was much thickened, and the muscular layer showed some hypertrophy. The mucosa was densely infiltrated with cancerous tissue, but showed no definite tumour. The pylorus was closed by cancerous growth. The infiltration extended along the lesser curvature, as far as the œsophagus and up to the fundus. Further growths were found in the mesentery, appendices epiploicæ, and in the recto-vesical pouch, also in the capsule of the liver. Microscopically the growths proved to be glandular carcinomata with abundant fibrous tissue (scirrhus). The conditions found *post mortem* were summed up: (1) fibrous pneumonia of both lobes of the right lung; (2) chronic fibrous pleuritis (carcinomatous); (3) hydropericardium; (4) left pleural effusion; (5) carcinoma of the pylorus; (6) obliteration of the pyloric opening (carcinomatous); (7) gastro-enterostomy (results of); and (8) chronic carcinomatous peritonitis. Strauss points out that this case lasted 3 years and 4 months after the gastro-enterostomy, and that the cancer was probably already 1½ year old at the time of the operation. Further, he considers it an important point that at the operation a definite tumour was found, and 3¼ years after the palliative interference this tumour had given way to a general indefinite infiltration. The death actually was caused by the pneumonia. He recalls another case reported by Alsberg, where the patient lived 3½ years after the operation, and proceeds to discuss the possibility of a retarding of the growth simply in response to the laparotomy. The next point of interest in his case is the fact that the effusion in the pleura was left sided. He finds that not only is this extremely common, but under certain circumstances, a left sided pleural effusion may point to the existence of a cancer in the stomach. The age of the patient is also a point of interest. He finds that cancer of the pylorus attacks younger subjects than cancer of other parts of the body, with perhaps the exception of cancer of the female genital organs and breasts. In 245 cases of cancer of the stomach, 9.5 per cent. occurred in subjects under 36 years of age, and 21.2 per cent. under 41. In 411 cases of cancer, not of the stomach, 5.8 per cent. occurred in subjects under 36, and 12.4 per cent. under 41. He quotes other statistics, which, in the main, agree with these.

#### (76) Closure of Wounds without Suture.

LILIENTHAL (*New York Med. Journ.*, February 9th, 1901), in order to avoid the frequent infection of operation wounds by sutures, has devised a method of closing wounds without cutaneous sutures. The deeper layers of the wound are closed with buried sutures in the usual way. The edges of the skin are approximated by strips of zinc rubber plaster, made sterile by exposing it to the fumes of formalin in a vacuum chamber. Before applying the plaster all hæmorrhage must be checked, and the skin dried with alcohol or ether. The method should not be used when there is tension. It is quite applicable to the partial closure of wounds with drainage. The strips are removed on the fifth or sixth day, and need not be reapplied.

#### (77) Ulcerated Paraphimosis followed by Tetanus.

FAVRE (*Lyon Méd.*, June 2nd, 1901) records a case of tetanus notable both as regards its point of origin and the rapidity of its course. The patient, a gardener and stableman, aged 24, was admitted into hospital suffering from paraphimosis of four days' duration. The phimosis was congenital; there was a ring of small ulcers round the line of strangulation of the glans, but no chancre. The constriction was divided on the following day, and the patient improved rapidly till three days after admission, when he complained of stiffness of the neck. About midnight he suffered violent pain in the cervical and lumbar regions, became unable to open his mouth, and soon afterwards was quite rigid in the position of opisthotonos. The paroxysms recurred every two or three minutes. He was treated by antitetanus serum (10 c.cm.) and by morphine and chloral at 6.30 A.M. At 9 A.M. he had distinctly improved, and under morphine and chloral remained better till 9 P.M., when the contractures became severer and again generalised. The patient died at 1 o'clock the following morning. The only wounds of recent date were on the penis, and it is probable that the inoculation was caused during the attempts to reduce the strangulation, made by the patient himself.

#### (78) Exophthalmic Goitre of Syphilitic Origin.

ABRAHAMS (*Phil. Med. Journ.*, February 9th, 1901) reports three cases of exophthalmic goitre in the course of syphilis. The first case, in a woman aged 35, developed five months after the primary sore. Both the goitre and the exophthalmos entirely disappeared under treatment with iodide of sodium. The second case, a woman aged 36, developed goitre two years after the initial sore. She was cured by mercurial inunction. The third case occurred in a woman aged 27 during the course of secondary syphilis. She was cured by large doses of iodide of sodium. These cases show that exophthalmic goitre may sometimes be caused by syphilis, and that antisyphilitic treatment should be tried in this disease.

## MIDWIFERY AND DISEASES OF WOMEN.

#### (79) Operation for Uterine Cancer: Statistics Unreliable.

BALDY (*Amer. Jour. Obstet*, May 1901) opened an instructive discussion last winter at the College of Physicians, Philadelphia, on the results of treatment of cancer of the cervix and the unreliability of statistics on the same. He feels certain that the early detection of carcinoma must be effected by the practitioner. We rely too much on the laboratory, microscopic evidence is but secondary and coroborative, it lets us know that cancer has developed. Several authorities find from experience that the results of hysterectomy are most discouraging. All statistics on this subject are put together to prove how large a number of cases the individual operator secures, and are made to present the best appearance possible. Baldy shows that Cullen's statistics of Kelly's result at the Johns Hopkins Hospital are quite unreliable as regards, not recovery from hysterectomy but cure, and immunity from recurrence. Out of 15 cases reported as cured 7 were operated upon within two years, yet cancer may return in two-and-a-half, three or more years. Cullen's 20 per cent. of cures must be cut down, partly by deduction of short after-histories, partly by elimination of all doubtful cases from those which have survived the operation for many years; for the microscope has not settled the means for detection of the transition of benign morbid processes into cancer; pathologists are divided amongst themselves on this question. Shoemaker agreed with Baldy that operations are unsatisfactory; but cases come too late—for one early case he sees ten advanced cases of cancer of the cervix. Da Costa insisted that even if only 5 per cent. were cured by operation, hysterectomy was justified as they were saved from certain death. One case on which he operated sixteen years ago was alive free from cancer, but the uterus was removed

when the disease was in its earliest stage. After the glands are involved a radical operation is of no more value than in cancer of the breast when the glands are extensively involved. It is merely palliative, and other palliative procedures much less dangerous than the radical operation can be done. Baldy, in reply, urged that recent statistics misled the practitioner. The more he is impressed with the terror of cancer of the uterus, the more carefully will he scrutinise his cases and will arrive at an early diagnosis, and will insist on an early consultation and operation even in suspicious cases. It is not true, as is now taught, that there are no early symptoms. It is due to the ignorance of the practitioner that these symptoms are not recognised. The present tendency to laboratory teaching is pushing clinical teaching into the background, and Baldy can conceive nothing more disastrous to the future of cancer of the uterus.

**(80) Malignant Uterine Fibroid.**

Merttens (*Monats. f. Geb. u. Gyn.*, May, 1901) reports what he claims to be a genuine example of a very rare condition—sarcomatous degeneration of a uterine fibromyoma. The sarcoma tissue had made its way through the capsule of the former fibroid, and apparently burrowed. so as to push its way between the intestine and the mesentery. Within six months the malignant growth had developed into a tumour which reached to the ribs. At the operation this tumour, soft and easily broken down, was first exposed, and the original fibroid found deep down behind it; this uterine tumour, whence the malignant growth arose, was of the size of a fœtal head. The uterus was removed with the malignant tumour. It is not hinted that the sarcoma might have been independent, adhering to the fibroid, and growing through its capsule. The operation proved fatal.

**(81) Puerperal Inversion of the Uterus.**

Kain (*Pester med-chir. Presse.* 1901, No. 23) reports the case of a woman, aged 20, who, in January, 1893, was delivered of her first child (breech). The midwife rubbed the fundus and then pulled strongly on the cord, and the patient had sudden noise in the ears and then lost sight and hearing. Kain found her unconscious, pale, with bleeding mass between her thighs. After no long disinfection he peeled off the placenta and pushed the mass within the vagina. The immediate change in her condition was astonishing. She began to whimper, the paleness left her face, the cyanosis her lips, and the pulse could be felt. Reinversion was not easy, and he had to dilate the cervix with the coned hand from above. The fundus gradually returned. There was no after-bleeding, but the patient was eight weeks in bed. At her second confinement in 1895 Kain had to remove the placenta manually. The third in 1897 was entirely normal. Cohn (*Rev. de Chir.*, 1901, No. 3, p. 123) describes the case of a young primipara in whom the midwife pulled on the cord to extract the placenta, felt a lump in the vagina and had free bleeding, which was controlled by hot douching, but continued for two months. After this it was much less save at the menstrual periods. The woman became very anæmic. There was fœtid discharge between the bleedings. Attempted reduction under chloroform failed, and patient was sent into hospital. Median cœliotomy was made, and the uterus and tubes removed without the ovaries. The arteries were ligatured. The patient did well.

**(82) Lithopædion Developed within a Year.**

Slamjer (*Centralbl. f. Gynäk.*, No. 22, 1901) records a case where menstruation ceased on July, 1898. Attacks of syncope occurred in the third month. Spurious labour set in on January 10th, 1899, and lasted for nearly three days. Gradually the abdomen grew smaller, but the patient became sickly, and suffered from abdominal pain. Menstruation began again in March and became regular. A tumour like a fœtus in outline lay above the right groin. Retained fœtus was diagnosed, and abdominal section performed on November 5th. The fœtus and greater part of the placenta were removed. They lay in a cavity formed by the cæcum and right broad ligament to the right and anteriorly, by the uterus in front to the left, and by the left broad ligament to the left and posteriorly. The cavity was packed with gauze. Convalescence was delayed owing to an abscess in the left inguinal region and right oöphoritis. The fistulous tract caused by the drainage did not heal for fifteen months. The fœtus was a male, weighing close upon 3 lbs. It was doubled up and covered with adhesions; the skull was hydrocephalic. Tha body was not flattened but fairly round. The skin seemed as though tanned, and was covered at certain points, especially on the back, with yellowish-white streaks, which on microscopic examination proved to be deposits of lime salts. Similar deposits lay in the adhesions. There were abundant crystals of fatty acids in the subcutaneous tissues.

## THERAPEUTICS.

**(83) Experimental Observations on the Treatment of Tetanus.**

Von Török (*Zeitschr. f. Heilk.*, Band. xxi, *Abthlg. f. Chirurg.* Ht. 1) has investigated experimentally on rabbits, guinea-pigs, and mice the activity of tetanus antitoxin in relation to the different methods of administration (subcutaneous, subdural, and cerebral) and the time of administration (preventive, simultaneous with, and subsequent to, infection). He has arrived at the following conclusions: The antitoxin is capable of successfully combating the disease, whether administered before or after infection. Relatively small doses administered before or simultaneously with infection with the toxin are capable of preventing death. Severe cases can be cured if the antitoxin is administered early and in large doses. Subcutaneous injection is the least active, and only very large doses take effect administered in this way. More active are subdural injections, but the cerebral injections are most efficacious of all. This rule holds whether the injections are preventive or curative; the cerebral injections appear to be four times as active as the subdural; they require a special technique. The antitoxin is not capable of reversing the changes caused by the toxin in the ganglion cells of the motor nerves; the animals remain alive, but the contractures persist for a long period before recovering.

**(84) Treatment of Cirrhoses of the Liver.**

At the recent meeting of the American Medical Association John H. Musser, of Philadelphia, in a communication to the Section of Medicine (*Phil. Med. Journ.*, June 15th) divided cirrhoses of the liver into (1) those in which no symptoms occurred during life, the cirrhoses having been found at the necropsy, the patient dying from other causes; (2) those cases that were not suspected until such an accident as hæmorrhage made it apparent, that is, latent cirrhoses of the latent; (3) cases with the symptoms of portal obstruction; and (4) on the other hand biliary obstruction. The lines of treatment were largely dietetic and hygienic, great care being taken to see that the functions of the gastro-intestinal tract were kept in action and the renal secretions properly regulated as well as the action of the skin. He uttered a word of caution in regard to the presence of hæmorrhoids. He had seen two or three deaths follow the operative treatment of hæmorrhoids, and at the necropsy cirrhosis of the liver was discovered for the first time. In all cases of hæmorrhoidal disease a thorough knowledge of the state of the liver should be known before any operative interference was advised. In the treatment of ascites occurring in cirrhosis he was accustomed to use mild purgation and calomel from time to time; he also used calomel in $\frac{1}{10}$th gr. dose every three hours as a diuretic. He also relied upon the old-fashioned pill, digitalis, squills, and calomel. He also had considerable confidence in the use of the oil of copaiba. In any case of ascites he resorted to tapping early and frequently. The question of permanent drainage was then considered, and he referred to a case that was operated upon by Frazer; the abdomen was opened, the peritoneum was scarified, and the omentum attached. This was done twelve months ago and the patient was cured, there having been no recurrence.

**(85) Toxic Origin of Neurasthenia and its Treatment.**

Allen Starr (*Med. Record*, May 11th, 1901) deals with a limited group of cases of neurasthenia, namely, that of toxic origin. This form occurs in poorly-

nourished women or in men about the age of 45 years who have lived rather freely, taken little care of their diet, neglected exercise, and indulged in alcohol and tobacco. The symptoms are headaches and feelings of fulness and dull pressure in the skull, irritability of disposition, coldness of extremities, frequent flushings and "burnings" in different parts of the body, indigestion with flatulence and acid eructations, irregular bowels, and offensive stools, and indicanuria with polyanuria or anuria. The spirits may be depressed, and melancholic in the early hours of the morning (4 A.M. to 7 A.M.), recovering towards the evening. The cause is some toxic agency of obscure nature connected with digestive processes. Treatment is summarised as follows: (1) Diet, fish of all kinds, oysters, rice, maccaroni, fresh milk, and raw or slightly cooked eggs; no cheese or tea: no wines, sweet or sour, but alkaline mineral waters or plain water; (2) calomel (one-tenth of a grain) every half hour, till 1 grain is taken; to be continued on alternate days for one or more weeks; podophyllin (one-quarter of a grain daily, and alternate with the calomel); stimulate the liver with Carlsbad salts or an equivalent beverage taken daily; for intestinal asepsis take castor oil and salol in shellac capsules (which dissolve only in the intestine), or Na. benzoate (2 grains) and β-naphthol (1 grain), and zinc sulphocarbolate combined and enclosed in a capsule: (3) baths, hot in the morning at 104° F. for three minutes, followed by cold sponging for fifteen seconds; (4) exercise, walking, horse-riding, running, golf, Indian clubs; (4) recreation, outdoor study (farm, gardens, chickens, botany, etc.).

**(86) Injections of Biniodide of Mercury in Syphilis.**

MELIS (*Arch. Méd. Belges*, 1901, p. 21) uses a solution of biniodide of mercury in olive oil as an intramuscular injection in syphilis. One drachm of the oil (containing one-eighth grain of biniodide of mercury) is injected daily, or 3 drachms every two or three days. The injections are said to be almost painless. After seven to ten days' treatment chancres, ulcers, and bone lesions are said to yield to the treatment. The author also claims to have had good results in chronic tuberculous abscesses, eczema of the scalp, and pruritus.

## PATHOLOGY.

**(87) Transmission of Syphilis to the Third Generation.**

TROISFONTAINES (*Journ. des Mal. Cut. et Syph.*, April, 1901) describes a case of possible transmission of syphilis to the third generation. The father in 1876 had syphilis, and died of cerebral disease in 1885. His daughter was born in 1878, and suffered from nasal necrosis and gummata of the leg when 9 years old. She was cured by iodides. The daughter of the last patient (third generation) suffered from typical hereditary syphilis—wasting, "old man" aspect, nasal coryza, and a papular syphilide of the face. The child was cured by specific treatment. The father and mother of the last child were examined by the writer, and no sign of syphilis found in either of them. Troisfontaines points out the only weak point in the case, namely, the possibility of the supposed father of the last child not being the real one. This objection is always possible, and the case, like most others, must be considered "non proven."

**(88) Bactericidal Action of Red Blood Cells.**

L. HEIM (*Münch. med. Woch.*, April 30th, 1901) considered that there was not sufficient evidence at hand to dispose of possible action of red blood corpuscles in the bactericidal influence of blood. He therefore has investigated the point. As the red cells do not exert any visible action on bacteria if observed during their life in the circulation, he considered it necessary to extract their contents and study the effect of this on bacteria. He dissolved the red cells of freshly-defibrinated and washed-out rabbit blood, by means of eel's blood. The sediment, which he collected, contained the freed substance of the red cells, stromata, and also some unaltered red cells. To 1 c.cm. of the sediment was added a "little" (!) typhoid culture (bouillon). At first he observed, on the warm stage of the microscope, that the bacilli were very active, swimming about and knocking against the red cells, which they pushed aside. The red cells were pale and "biscuit"-shaped, and some were red. After twenty-four hours in an incubator, only a few red cells were to be seen, the greater number had disappeared. In order to show that the solution of the erythrocytes was not due to eel's blood serum, he used diluted blood (with saline solution) reacted on by the serum and normal rabbit's blood. With both the same changes appeared. He repeated the experiments with "hanging drop," and found the same dissolving influence. The bacteria, however, lost their mobility, showed a slight tendency to collect together, and soon showed granular degeneration. At the ordinary room temperature the bacilli continue to grow, but as soon as the preparation is incubated, the contents of the red cells are freed, and exert their destructive influence on the bacilli. The action takes place slowly, so that some days must pass before the immobilisation and degeneration is accomplished. The fact that the same substances as those freed became apparent when the blood is heated for 1 hour to 60° C., suggests strongly that hæmoglobin plays an important part in the action. And although the destruction of the bacilli took place in the same manner with pure hæmoglobin, he found that the action in blood could not depend alone on it, as the same degeneration took place with pieces of various organs which were free from hæmoglobin (for example, brain, spleen, liver, etc.). He therefore comes to the conclusion that one is not dealing with alexins, but with antibodies which are called into existence by the micro-organisms themselves. Red cells may be a culture medium for bacteria, but the action of these cells on micro-organisms, which have successfully gained a footing in the organism before definite antitoxins can be formed is a definite destructive one.

**(89) Compensation of Sensory Ataxia.**

A. BICKEL (*Deut. med. Woch.*, March 21st, 1901) has attempted to clear up the question of compensation of sensory ataxia by experiment. The clinical aspects of the problem, he says, lie in the fact that many cases of tabes dorsalis exhibit symptoms of a very limited nature, which are quite out of proportion to the great loss of substance of the central organs (nervous) found *post mortem*. He points out that if the sensory nerve roots to the hind legs of a dog are divided the results are: (1) Stage of pseudo-paraplegia; (2) stage of decided ataxia; and (3) compensation stage. The dog, in one of his experiments, was able to perform tricks, such as dancing on his hind legs, jumping, etc., although the posterior nerve roots had been completely divided, and complete anæsthesia was demonstrated. In inquiring into the cause of this compensation he first states that sensory ataxia is due to a loss of muscular tonus (Brondgeest's tonus), and to a deficiency of the sense of localisation on the part of the higher centres. He states that the reflex tone of the muscle cannot be regained without a regeneration of the divided sensory nerve, but he considers that a part of the lost tonus may be recovered through other nerve channels, and actually from the organs of special sense. He removed the labyrinth of a dog, whose sensory nerve roots (hind legs) had been divided, and was able to show an ataxy, which did not admit of compensation. This complimentary action he calls labyrinth tonus. The *rôle* played by the organs of special sense in building up ataxia is chiefly referred to the sense of sight. He found that by removing the cortical sensomotorial centres in a dog whose hind legs had been rendered anæsthetic (and in whom compensation had occurred) there followed the ataxia in the same stages as had followed the first experiment, that is, preparaplegic stage and true ataxic stage, but compensation did not follow. If, however, only parts of the centres were removed, a certain degree of compensation took place, and on removing the rest of the centres later on he produced a third ataxia. He removed the sensory-motor centres (cortical) from all four limbs, in order to have a sort of control experiment in the fore legs, in which the sensory nerves were intact. The changes in the fore legs were the usual changes observed in destructive experiments on the cortical centres. His conclusions are that the power of compensation in ataxia lies in the labyrinthian sensory apparatus, and in the cortical sensory-motor centres.

# AN EPITOME

OF

# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (90) The Frequency of Tuberculosis among Alcoholics.

Felix Imbault (*Thèse de Paris*, 1901) draws attention to the importance of the relations between alcoholism and tuberculosis, especially since the recent revival of a vigorous campaign against these two potent causes of disease and social degeneration. According to Landouzy alcoholism "makes the bed for tuberculosis" *(fait le lit de la tuberculose)*. It is with a view to get precise conclusions on this point that the present research was carried out—namely, as regards the frequency of tuberculosis among alcoholics. In 1864 Leudit, in a paper presented to the Medical Congress at Lyon, stated that among 121 adult drunkards who had died from various kinds of alcoholic intemperance, 20 were found to be tuberculous. He concluded that pulmonary phthisis was less frequent among habitual drunkards than amongst the habitually sober. Imbert (*Thèse de Paris*, 1896-97), from a total of 318 male alcoholics examined at the Laënnec Hospital, made a special study of 131, and found that 15 of these, or 11 per cent., were affected with tuberculosis. From a similar special study of 68 females he found 6 cases of pulmonary tuberculosis and one of tuberculous peritonitis, or 10 per cent. It should be added that Imbert did not search specially or systematically for tuberculosis among these patients. Paul Raymond (1896) made observations at the Hôtel Dieu in Paris. Among 62 drunkards of excessively intemperate habits and incapable of working he found 14 cases of pulmonary tuberculosis. These cases were apparently free from a phthisical heredity, and comprised 38 males and 24 females. Imbault, from a series of inquiries addressed to medical practitioners in the country and in small towns, obtained trustworthy accounts of 248 alcoholics as regards the causes of death; of these, 44 died of pulmonary tuberculosis, 2 of tuberculous meningitis, 1 of laryngeal phthisis, 1 of general tuberculosis, and 1 of diabetes and tuberculosis, thus showing 49 deaths from tuberculosis, or 19.7 per cent., a proportion that he thinks is apparently very high. Tabarry, in a recent *Thèse de Paris* (1899-1900), from a careful statistical study of the geographical distribution of tuberculosis in France, came to the conclusion that it prevailed most in the districts where most alcohol was consumed, the correspondence being very close in the majority of the departments. In some, however, no parallelism could be traced. It appeared that in Brittany, where phthisis is very prevalent and is on the increase, other factors (hygienic and social) co-operate with alcoholism (Renault, *Thèse de Paris*, 1900). From observations collected by Destrée and Gallemaertz (*La Tuberculose en Belgique*, 1889), from the Annual Official Statistics of Italy (1892), and from those of Bertillon for Paris (1897), it appears that "the professions or occupations in which alcoholism is common have in general a high mortality from tuberculosis." This is partly due to alcoholism, but other etiological factors are also present. Among 45 phthisical patients studied Imbault found 8 to be of temperate habits, the daily consumption of wine not exceeding 1½ litres per head. The rest were heavy drinkers, but of these 7 had ceased to drink heavily after the appearance of phthisical symptoms. All were male adults. The descendants of alcoholic parents show an excessive mortality, in which tuberculosis and meningitis play a most important part, as shown by the observations of Legrain, Grenier, and others, and confirmed by the author.

### (91) Primary Tuberculosis of the Pericardium.

Riesman (*Amer. Jour. Med. Sci.*, July, 1901) regards primary pericardial tuberculosis as a rare disease like tuberculosis of the pleura. The site of entry of the bacilli may be the tonsils, gums, or bronchial and intestinal mucous membranes. The primary form is most often seen in men, the symptoms being those of adherent pericardium, although they may simulate those of pericardial effusion. In a case recorded of a man of 32 years, of intemperate habits, the symptoms began with pains in the shoulders, chest, and back, cough, and headache, while on a debauch. Later, a loud, rasping, superficial, to-and-fro friction sound developed. The pulse was rapid, feeble, and compressible. Then followed signs of heart failure—dropsy, cyanosis, and intense dyspnœa on exertion. Signs of pericardial effusion or endocardial murmurs were absent, and the apex beat was imperceptible. The absence of cardiac impulse without augmentation of the area of the cardiac dulness had been noted before by Morgagni and by Hayem and Tissier. The early appearance of ascites before the onset of œdema of the legs is a symptom that deserves mention. The disposition of the patient was morose and suspicious, and, though no single type of psychic disturbance could be called characteristic of cardiac disease, there was no doubt of the connection between aortic or pericardial disease and cerebral and mental disturbance. The symptoms, however, in this and similar cases did not permit the author to differentiate between adherent pericardium of tuberculous and non-tuberculous origin. The most frequent focus of infection is a tuberculous mediastinal or bronchial lymphatic gland. The course of the disease is usually chronic, and the symptoms those of adherent pericarditis.

### (92) Cerebral Hæmorrhage and Endocarditis.

M. Simmonds (*Deut. med. Woch.*, May 30th, 1901) reports 7 cases of cerebral hæmorrhage in which he considers the cause to be connected with vegetative endocarditis. The pathology of these cases, as Eppinger has made out, rests on the formation of miliary aneurysms by means of coccic infection. The cocci are derived from the vegetations of the valves, and are carried in the circulation to the cerebral vessels, when they are arrested by the deposition of a thrombus, or it may be as an embolus. In 5 cases this pathology is not clearly depicted, but Simmonds points out that in the absence of any other cause of arterial decay, the explanation given is probably the correct one. A girl aged 11 was brought into hospital in a dying condition. The history was that there had been severe headache for two years, which became worse, and within the last few days gradual loss of consciousness and onset paralysis had taken place. *Post mortem*, a large hæmorrhage was found in the right cerebral hemisphere. In an arteriole of the pia mater a ruptured miliary aneurysm was found. The heart showed vegetations on the mitral cusps. The muscular wall and the whole arterial system was free from degenerative processes. The second case was that of a child, aged 10, who had suffered for years from otorrhœa. It was sent to hospital for operation on account of severe cerebral symptoms, but died a few hours after admission. *Post mortem*, a hæmorrhage of the size of a hen's egg was found in the occipital lobe. At the lowest point of the clot, a ruptured aneurysm was discovered. There was endocarditis. The blood vessels were free from atheroma or other pathological conditions. In both the first and second cases the specimens of the pial thrombosed vessels and of the mitral valve on being stained by Gram. Weigert's method showed masses of staphylococci. In the third and fourth cases, miliary aneurysms were found in the seat of hæmorrhage or in the cerebral vessels, but no micrococci were discovered. In both cases there was no arterial sclerosis, atheroma, or any other ascertainable cause of cerebral hæmorrhage. In the last 3 cases the *post-mortem* examination did not reveal any aneurysms, but beside the hæmorrhage the vegetative endocarditis was the only abnormality found. He discusses the pathology of each case, and refers at length to the work of Ponfick and Eppinger on the subject.

## SURGERY.

### (93) Double Ureter.

Scudder (*Amer. Jour. Med. Sci.*, July, 1901) reports a case noticeable as being only the ninth recorded instance of the blind ending of a supernumerary ureter, and for its association with acute abdominal symptoms. A child, 1 year and 8 months old, suddenly became ill, with restlessness, abdominal pain, and vomiting. Castor oil caused an ordinary

movement of the bowels. Two days later the child looked ill and pinched in the face, the temperature was 100° F., and on examination a soft, elastic, movable, sausage-shaped tumour was felt in the right half of the abdomen. The abdominal muscles were not rigid, and enemata caused normal fæcal dejections. A laparotomy was performed, there was no free fluid in the peritoneal cavity, the bowel seemed normal throughout, and the tumour was found to be retroperitoneal, and to consist of a fluctuating swelling extending in curves from the right kidney to behind the bladder. The wound was closed, but the child died the day after operation. At the necropsy the tumour was found to represent an enormously dilated ureter of the right kidney, filled with a thin, yellowish fluid containing leucocytes and bacteria, and ending blindly as a closed sac about the diameter of the thumb, in the neighbourhood of the internal meatus of the urethra. The upper part of the kidney was associated with the dilated ureter. Its pelvis was enlarged, and connected with that of the other portion of the kidney, from which ran a ureter also dilated, so as to measure about 8 mm. in circumference, situated posterior to the one described above, and ending normally in the bladder.

**(94) Resection of the Liver.**

FILLIPINI (*Il Policlinico*, April, 1901) reports two cases of resction of the liver for new growth. The first case was a woman, aged 22, with a large cavernous angioma of the left lobe of the liver the size of a human head. The abdomen was opened by a median incision. The coronary and falciform ligaments were ligatured and cut through and the tumour draw out. Its pedicle was secured by a thick elastic ligature, and the tumour cut off. The pedicle was afterwards returned. The patient made a complete recovery. The second case was a man aged 62, with primary cancer of the liver, apparently confined to the left lobe. In this case the lobe was excised 48 hours after it had been extruded from the abdominal cavity. The patient recovered from the operation, but died shortly afterwards from growth in the right lobe and secondary deposits in the other organs. The author says that the left lobe can be removed rapidly, and with little loss of blood. In severe cases he advises ligature of the pedicle by an elastic band and extraperitoneal fixation, which is most likely to prevent hæmorrhage.

**(95) Gunshot Wounds in the Philippino-American War.**

ROBINSON (*Annals of Surgery*, February, 1901) draws the following conclusions from a record of 1,596 cases of gunshot wounds observed during the Philippino-American war, supplemented by personal experience of 462 of these cases: (1) The modern gunshot wound is generally aseptic, and should be treated on this supposition. (2) Asepsis is due chiefly to the character of the bullet, and early application of first-aid dressing, and in a minor degree to the velocity of the projectile. (3) Primary hæmorrhage from modern gunshot wounds is exceeding rare, the blood vessels being displaced rather than cut by the rapidly moving projectile. (4) The "explosive effect" of the modern bullet is much less common than recent military literature would indicate. This peculiar destructive effect is produced by the character of the tissues struck, as well as by the great velocity of the bullet. (5) Gunshot wounds of the chest are rarely infected. Simple antiseptic treatment, with aspiration of pleura in cases of severe hæmorrhage, is all that is necessary. (6) Gunshot wounds of the knee-joint are usually aseptic, but if infected demand immediate amputation to save life. (7) Excision of the elbow is always a justifiable operation in severe shattering or infection of this joint. Resection of bones of other joints is rarely necessary, erasion or amputation being preferable. (8) Injuries of nerves from gunshot wounds can often be benefited by resection. (9) In modern military surgery abdominal section for gunshot wound is not justifiable, the patient's best chance of life lying in conservative treatment.

**(96) Operation for Cancer of the Stomach.**

ROHLEDER (*Berl. klin. Woch.*, March 4th, 1901) records a case of scirrhous cancer of the greater curvature of the stomach, in which he removed the growth by resection. The patient, who was a female, aged 52, had for some time suffered from chronic gastritis. Later appearances include pain, palpable abdominal tumour, and wasting. The operation consisted of opening the abdomen in the middle line and pulling the stomach forwards. The omenta were then examined, and a small hard gland was shelled out of the lesser omentum. The omenta were then ligatured in stages, and the portion of the stomach to be resected was thus isolated. Next the duodenum was ligatured and cut off. As the duodenum could not be pulled forward sufficiently to allow of an anastomosis with the stomach, this was accurately closed with a double row of silk sutures and returned. The healthy portion of the stomach was firmly held by the hands of an assistant, and the tumour was removed. The lumen of the stomach (? pylorus) was next closed, and an anastomosis effected between a coil of duodenum and the anterior wall of the stomach. The intestine was further secured higher up to the stomach in order to prevent the formation of a spur. The wound was closed by three layers of silk sutures. The healing process took place uneventfully. Microscopical examination of the tumour proved it to be a simple scirrhous carcinoma.

**(97) Osseous Cysts of the Tibia.**

BECK (*Amer. Jour. Med. Sci.*, June 1901) finds that the Roentgen rays are an important aid in the differentiation of osseous cysts from osteosarcoma. The skiagraph of such a cystic enlargement exhibits a cavity with wall of regular texture. Whereas that of an osteosarcoma shews an irregular texture. Two cases are cited in illustration. In one a large swelling occupying the upper half of the leg had previously been diagnosed as sarcoma and amputation suggested, the skiagraph showed a large lightly-shaded area surrounded by a narrow dark and regular shade representing the distended but otherwise normal cortex of the tibia. The cyst was incised and recovery followed. The second case was similiar, except that the cyst concerned the lower third of the tibia.

## MIDWIFERY AND DISEASES OF WOMEN.

**(98) Retroflexion of the Uterus in Pregnancy.**

F. LEHMANN (*Berl. klin. Woch.*, May 27th and June 3rd, 1901) says that, although as a general rule fixed retroflexion of the uterus is a cause of sterility, pregnancy does at times occur, and then there are three possible terminations. Most frequently patients who have become pregnant with fixed retroflexed wombs abort early, or the pregnancy may go on, and present that terrible picture of suffering which the textbooks describe so well—incarceration; or—and this possibility, he says, is apparently not well recognised—they may have an almost normal pregnancy and parturition. The opinion of several competent authorities that pregnancy taking place in a retroflexed uterus, began in an anteflexed organ, is not to his mind based on sound premisses. He has known cases, it is true, in which the uterus, having been replaced and kept anteflexed by means of a ring, conception has taken place; and, as the pregnancy advanced, the ring proved incapable of keeping the uterus in anteflexion. As a rule, however, he finds that the patients are under observation, and show an irreducible retroflexed uterus. The symptoms complained of are generally due to the inflammatory process, which binds the uterus down, and after these symptoms (that is, the inflammatory condition) lessen, the conception takes place. The retroflexion is not a sufficient mechanical obstruction to prevent conception. The patients then seek advice, not for the amenorrhœa, but for the returning symptoms due to the inflammatory processes. He details the history of two cases which exemplify the possibility that the adhesions may stretch sufficiently to allow of a reposition of the uterus. The first case was that of a woman who had suffered from an inflammatory process of the right appendages after her first confinement, and was treated by antiphlogistic remedies, in the spring of 1897, for a fixed dextro-retroflexion. She improved considerably, and about the middle of January, 1898, became amenorrhœic. In March a successful attempt was made to lift the uterus out of the small basin of the pelvis. A ring was worn at first, but later this was dispensed with, while the uterus remained in normal anteflexion. The second case was that

of a woman who consulted Lehmann on account of symptoms due to prolapse in the third month of pregnancy. The uterus was retroflexed, and the vaginal portion of the cervix, which was about the size of an apple, and had an erosion on the posterior lip, was protruding from the vulva. With some difficulty the uterus was anteflexed, but at the right side there remained a part bound backwards. After five days the whole uterus was raised out of the small basin of the pelvis. The pregnancy, parturition, and puerperium ran a normal course. He states that a spontaneous reposition, as Chrobak describes, does not take place as a rule. He also calls Chrobak's attention to the fact that the round ligament must be looked upon as a mechanical support for antiflexion, since in the Alexander-Adams fixation operation both round ligaments, after being dissected out, are drawn on, and suffice to anteflex any retroflexed uterus, showing that his (Chrobak's) statement that it can play no part in the question of anteversion and retroversion is wrong. If spontaneous reposition takes place, the adhesions, which are attached below the level of the internal os uteri, help to keep the organ anteflexed. He cites two cases in support of this. One 2-para has suffered from "fever" in her last confinement two and a-half years previously. The last period was seen six weeks before. On examination the uterus was found to be retroflexed, fixed by palpable bands, and the left ovary was palpable but not enlarged. In the third month attempts were made to replace the uterus, and these being fruitless he proposed attempting a reposition under an anæsthetic. The patient declined. Later on he had another opportunity of examining the patient, and found that the uterus was then antiflexed, and taut bands were felt in Douglas's pouch, keeping the organ in that position. The other patient was infected with gonorrhœa by her husband shortly after marriage. She was laid up for four weeks with acute perimetritis, with exudation in Douglas's pouch. After the acute process had quieted down the uterus was found to be firmly fixed in retroflexion. Since March, 1899, there were no complaints on the part of the patient. In November, 1899, the period was missed, and in January, 1900, the diagnosis of retroflexio uteri gravidi fixata was made. In the middle of February it was found that the pregnant uterus was anteflexed, definitely twisted, and bound with numerous bands posteriorly. The right appendages were slightly swollen, fixed and tender. But, he says, the disorders of the pregnancy are not put aside necessarily by the disappearance of the retroflexion. The adhesions—scarring, especially of the broad ligaments—are apt to become a source of danger to the fœtus. The constant resistance which they offer may induce pains, and, therefore, abortion. A patient who became pregnant (although she had been pronounced sterile before marriage, became of fixed retroflexion) after six years of married life, was examined by Lehmann in the third month. The uterus was gravid and fixed in retroflexion. After three weeks of rest in bed it was found in anteflexion, but the shortened right ligament was dragging on the uterus and producing considerable pain. In spite of the greatest care the patient miscarried in the seventh month. He next describes the dangers and difficulties of the puerperium in these cases. The patients have a great disposition to phlebitis and thrombosis, with the complications (for example, embolism, etc.) attached to these occurrences. He remarks that it is of the greatest value, not only to watch the temperature carefully, but also the pulse curve, as a rise in the latter, even with a normal temperature, frequently indicates thrombosis of the deeper pelvic veins. He mentions the types of puerperia which he has observed. As a rule the retroflexion recurs, but occasionally the uterus is kept anteflexed as during the pregnancy. When the malposition recurs it is advisable to adjust it, and keep the uterus in anteflexion by means of a pessary. Returning to those cases in which the retroflexion is kept up during pregnancy by bands, which are capable of being stretched, he says that he has attempted to give the uterus a better position by applying a pessary before the anteflexion is complete. These attempts do not appear to have been successful. In conclusion, he cites a case, which proves that by reposition the difficulties are not always overcome, as the patient may abort in spite of the retroflexion having been overcome.

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**(99) The Mineral Composition of the Human Fœtus.**

Proceeding gradually to incineration, Hugounenq (*Bull. de l'Acad. de Méd.*, xlv, 1901) gives analyses of eight fœtuses ranging from 4½ months to term. The series is valuable as being more extensive than those hitherto examined, but though suggestive it is still too scanty to furnish absolutely trustworthy conclusions. The fœtuses were six females from 4½ to 6 months and two males at term. From the comparison of the ash and body weights, the conclusions are drawn that the rate of mineral deposition is much greater in the last three months, and that at term the fœtus has taken about 100 gr. of mineral from the mother. The amounts of salt per kilo of body weight are much more uniform, and if we compare the female series alone we find as high percentage of salts in the 4½-month fœtus as in those older. The two male fœtuses at term show a distinct but not great mineral preponderance, especially in lime and phosphorus. Bunge's law that the mineral composition of young animals is proportional to that of the mother's milk is not borne out by the analyses of the two full-time children. Calculations on a somewhat hypothetical basis seem to show that part of the iron in the body is outside the blood. The ratio of soda to potash seems to decrease somewhat towards term. This is probably associated with the relative increase of blood corpuscles and striped muscle. The relative increase of lime salts is due to the development of the bones, but the nutritional needs of the cells are the same all through embryonic life.

## THERAPEUTICS.

**(100) Transfusion of Blood.**

A. Bier (*Münch. med. Woch.*, April 9th, 1901) was impressed with the fact that for 200 years some of the most eminent physicians have claimed good results in certain diseases by the injection of the blood of a different species. That transfusion of the blood of an animal can never succeed in supplying the red corpuscles of man lost by hæmorrhage has been rendered certain by the discovery of agglutination and hæmolysis. The transfusion of foreign blood produces, however, certain definite symptoms: (1) There are dyspnœa, often intense, increased liability to cough, and if there is pulmonary disease, sanguineous expectoration. (2) The skin of the face, and then of the rest of the body becomes red and hot. (3) There are severe lumbar pain, and sometimes headache. (4) Peristaltic movements are increased, and may lead to colic, tenesmus, diarrhœa, eructations, and vomiting. All these, according to Landois, are due to obstruction of the capillaries by completely or partially disintegrated red corpuscles. (4) The temperature always rises, often within a few minutes of the injection, and may reach 105° F. or even 107.6° F. Rigors are common. (5) Somewhat later consequences of transfusion of an animal's blood are albuminuria and hæmoglobinuria, cutaneous eruptions of which urticaria and œdema, especially of the skin of the face, are the commonest, and in many cases improvement in the appetite and assimilation of food. (6) The spleen is often greatly enlarged, and probably always increases even if it is not palpable, since this is the rule in all diseases and intoxications accompanied by solution of the red blood corpuscles. Thus the symptoms resemble those of an infectious disease, the (aseptic) agents of infection being red corpuscles instead of bacilli. Considering the improvement in appetite, the stimulation of metabolism, and especially the extreme but temporary hyperæmia produced in the skin and internal organs which is followed by a prolonged œdematous infiltration, Bier considered it justifiable to inject defibrinated lamb's blood in certain cases of tuberculosis. These included 1 of bilateral sacro-iliac disease, 1 of tuberculous orchitis and cystitis, 1 of advanced pulmonary phthisis with epididymitis, 1 of tuberculous arthritis of the knee-joint with tuberculous adenitis and sepsis, 1 of advanced phthisis with tuberculosis of the larynx, œsophagus, intestine, and ankle-joint, 1 of phthisis with tuberculous peritonitis and chronic ileus, 1 of phthisis with peritoneal and cerebral tuberculosis,

and 4 cases of lupus which had repeatedly resisted other treatment. In the first case weight was gained, the discharge from the sinuses diminished, and the patient could walk about. The second patient, after 9 injections in ten weeks had gained 10 lbs., and the vesical ulceration was less, though the orchitis was unaltered. The third gained 18 lbs. in two months; the pulmonary physical signs were unaltered, but the epidydimitis had improved. The symptoms of obstruction were regularly but temporarily removed after each injection of blood in the case with tuberculous peritonitis. The patches of lupus became red and swollen together with the rest of the skin; the ulcers became covered with scabs, and healed quickly under them. Whether this improvement is permanent it is impossible to say. On the whole, the writer claims to have benefited the patients, and believes the results would have been more striking in less advanced cases. Except for the fourth case of lupus, all were practically hopeless, and were selected on that account in view of the possible danger of the treatment. All the patients were warned beforehand of the consequences. A peculiarity of the pyrexial period is that in spite of rigors the patients feel well and are able to eat, unless there are headache and nausea. The technique consists in inserting the needle of a syringe without a skin incision directly into a vein of the arm held between two fingers, after it has beccome prominent through an assistant grasping the upper arm tightly. Occasionally the initial dose of blood was as much as 15 to 25 c.cm. In this case the dose was gradually reduced, since with every injection the patient's blood acquired greater hæmolytic power, and the foreign blood exercised a greater effect. In other cases the initial dose was small (5 c.cm.), and was gradually increased. Up to a certain point it then appeared that human blood became accustomed to lamb's blood, but when the human blood had acquired a marked hæmolytic power the conditions were suddenly reversed, and it became immediately necessary to reduce the dose injected.

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**(101) Raw Meat in Tuberculosis.**

Under the name "zomo-therapy" Richet and Héricourt described a form of treatment of tuberculosis which gave them definite results. C. Fraenkel and G. Sobernheim (*Berl. klin. Woch.*, July 15th, 1901) have carefully tested these results, and publish their conclusions. The basis of the treatment is that dogs who are injected with virulent tubercle bacilli, and subsequently fed on from 2 to 3 lbs. of raw meat daily, were alive and apparently well after six months, while the control animals, who received ordinary diet, died in from 30 to 45 days. Cooked meat, according to the two French observers, failed to produce the same result, but raw meat juice (ζωμὸς) acted still better than the meat. Several other workers have experimented in this manner, and their results are not uniform. Salmon, for example, found that dogs first fed on raw meat and then injected, died as soon as the control; dogs first injected and then fed on raw meat lived for a considerable time, and dogs first injected and only fed on raw meat when wasting had begun died rapidly. Fraenkel and Sobernheim performed two series of experiments with dogs and one with rats. The 5 dogs in the first series received from 1 mg. to 5 mgs. per kilo body weight of a culture of tubercle bacilli of medium virulence. Three received on raw meat subsequently, and the remaining 2 received mixed diet. One of the raw meat dogs died after 13 days, but no tuberculosis was found. The other two raw-meat dogs died after 51 and 81 days respectively of advanced tuberculosis. The first of the mixed-diet dogs died after 34 days, with slight tuberculous lesions, while the fifth animal (a bitch) is alive and well, and has since given birth to a litter of apparently healthy puppies. The second series deals with two pairs of dogs, of approximately the same weight. The first of pair No. 1 had previously and subsequently been fed on raw meat, and the second dog had previously been fed on meat and subsequently on mixed diet. The first dog of the second pair had been previously kept on mixed diet, and subsequently received raw meat, while the second dog had previously and subsequently received mixed diet. All dogs were treated with 4 mgs. per kilo body weight of a culture emulsion, and all died of marked tuberculosis. The first one died earliest, after 28 days. The series with rats gave similar results. They therefore conclude that raw meat diet has no influence on the course of tuberculosis, and they cannot agree with Richet and Héricourt that the method is worthy of a trial on human subjects.

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**(102) Heroin in the Treatment of the Morphine Habit.**

Ahlborn (*Med. Sum., Phil.*, February, 1901) treated several cases of morphinomania with heroin successfully, and now records the results. Heroin is one of the milky derivations of morphine, and it was at first used empirically as a likely substitute in the following case which is a typical one. A man given to the morphine habit would take hypodermically about 12 grs. of morphine hydrochlorate per diem. He was then put under treatment, the morphine was entirely withdrawn, and heroin tablets of one-twelfth grain each substituted for each half grain of the morphine. The patient thus had two grains of heroin daily, and under this treatment he was gradually freed of his craving for morphine and slept well. At the end of a month the morphine craving was quite gone, and the dose of heroin was now reduced to one grain per diem without provoking bad symptoms. A month later it was reduced to quarter of a grain daily, and subsequently it was altogether discontinued, only tonics being given. The patient was cured and remained without a relapse for seven months. Two other cases were similarly treated and with success. Ahlborn claims that the substitution of heroin for morphine prevents the injurious effects of total withdrawal of the morphine, allays the craving, and permits of "tapering off" the heroin itself gradually and without any ill-effects.

## PATHOLOGY.

**(103) Tuberculosis of the Bladder.**

Casper (*Deut. med. Woch.*, 1900, Nos. 41 and 42) has investigated 35 cases of tuberculosis of the bladder. The greater number had coexisting disease in other parts, most frequently in the kidneys (14 cases, 11 primary), the genitals (10 cases, 7 primary), and (the lungs (7 cases, all primary). No evidence was found that the disease can be transmitted by sexual intercourse, and such an occurrence must be very rare. Three of the histories support the idea that gonorrhœa, especially of the bladder, may act as a predisposing trauma. In one case —a tuberculous epididymitis and cystitis with the bacilli in the urine—followed immediately on an attack of gonorrhœa; in the two other cases a long-standing post-gonorrhœal cystitis was cleared up by the discovery of bacilli in the urine, by experimental evidence in rabbits, and by the results of specific treatment. The symptoms are in general those of vesical catarrh. Tubercle bacilli were found in 50 per cent., and can be differentiated from the smegma bacillus by the decolorising of the latter by hydrochloric acid alcohol, and by the very slow growth of the tubercle bacillus on blood serum and glycerine agar. Experiments on animals are without result if the bacilli do not pass in the urine, and unless they are of sufficient virulence. The distressing cramp-like pain on micturition is characteristic. Cystoscopy should only be employed when the condition is not otherwise clear, as it is both painful and often harmful; the posterior bladder wall is seen to be the first seat of the disease in the primary cases, in the secondary the orifices of the urinary channels.

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**(104) Diphtheria Bacilli in Noma.**

Walsh (*Proc. Pathol. Soc. Philadelphia*, June, 1001) has examined bacteriologically eight cases of noma. All showed in cultures the true diphtheria bacillus. In one the culture was pure, in the others there were associated bacteria. Four of the cases began with ulcerative stomatitis; fifteen cases of the latter disease were examined bacteriologically but the diphtheria bacillus was not found. Freymuth and Petruschky (*Deut. med. Woch.*, No. 15, 1898) have also reported finding the diphtheria bacillus in two cases. Walsh does not maintain that B. diphtheriæ is always the cause of noma, but that it may frequently be so; streptococci also probably are the primary cause of necrosis in many cases.

# AN EPITOME

OF

# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (105) Nervous Disorders Associated with Abnormal Tonsils.

Alexis Berest (*Thèse de Paris*, 1901) deals with the nervous disorders which arise from an abnormal condition of the tonsils, and most of which are the result of reflex disturbance starting from hypertrophy of the glands. The contact of these bodies with the base of the tongue is often sufficient to provoke nausea and efforts towards vomiting, which may be produced not during meals but during the intervals. Among the rarer disturbances is spasm of the œsophagus, of which a case was recorded by Senez (*Thèse de Paris*, 1893) concerning a sailor who suffered for several years from dysphagia, and was treated with antispasmodics without result. Ablation of the hypertrophied tonsils produced considerable improvement in this case. Cough is also produced by enlarged tonsils. The mechanism in this case is preferably pressure upon, and irritation of, the pillars of the fauces and consequently of the palatal twigs of the trigeminal nerve. The character of the cough is in these cases dry and hissing as in quinsy. Less frequently spasm of the glottis may be excited, or even attacks of bronchial asthma, of which several instances were published by Schmidt in 1877. Where the enlarged tonsils press upon or obstruct the pharyngeal orifice of the Eustachian tubes some degree of deafness may result. This may be due to mere mechanical obstruction, or to the production of a local naso-pharyngeal catarrh, or according to Noquet, to paresis of the dilator of the Eustachian tube. The last observation has been confirmed by Weber-Liel in 1873 and by Woakes in 1879. Ocular and visual disturbances are uncommon, the better known of these being blepharospasm and asthenopia. Paræsthesiæ of the throat and tongue, including feelings of globus, may arise in a similar way, and Boulay records an interesting case of neuralgia of the tongue thus produced, and which was cured after excision of the the hypertrophied tonsils. The enlarged tonsils may be either firm and fibroid, or soft. In the latter form the coexistence of adenoids of the naso-pharynx has often been established. Treatment consists in partial excision of the enlarged glands and local applications of a sedative character.

### (106) Nervous Tachypnœa.

Rechzeh (*Berl. klin. Woch.*, April 29th, May 6th and 13th, 1901) has collected 36 cases of nervous rapid breathing which occurred in Gerhardt's clinic, and adds 4 cases, which he observed in the same clinic. He points out that out of 1,155 patients suffering from functional neuroses, these 40 represent the number of functional tachypnœa cases. He excludes all cases of organic dyspnœa, from any cause, and he exemplifies the distinction between the two conditions by remarking that the nervous condition is not influenced at all by inhalation of oxygen. The cases occurred in 14 males (1.20 per cent. of all functional neuroses), and 26 females (2.25 per cent). The minimum number of respirations per minute was given as 40. The women, he says, were suffering from hysteria and other neuroses, including two cases of Graves's disease, and the men from neurasthenia and traumatic neuroses. The average age of the women was 23.12 years, and of the men 26.54. Of the causes, he puts heredity in the first place. A neurotic family history was present in 17.5 per cent. Next he considers diminished power of resistance through alcohol abuse (10 per cent.), severe injury with marked shock (10 per cent.), psychical depression (12.5 per cent.), sexual excess and disturbances (32 per cent.), and disorders of menstruation (32.5 per cent.), and other constitutional conditions. The type of breathing varied in the different cases, and he notes that in many the expiration and inspiration was of equal length, while no pause could be detected. The breathing was mostly costal. The capacity of the lungs was lowered in most cases. Tachycardia was present in some, but not all, of the cases, and appeared not to accompany the severer attacks more frequently than the milder ones. Stomach and intestinal disorders, chiefly in the form of severe diarrhœa, occurred in 70 per cent. of the cases. Vomiting was also noted in some. In 8 cases the larynx appeared affected. The nutrition of the patients did not suffer, and he gives tables which shows that the metabolic processes were well carried out, and that nearly 4 grams of albumen were absorbed daily. This is estimated by the amount of N. taken in by the food, and the amount excreted in the urine and fæces. The diagnosis, he states, is an easy one, and the prognosis in general good. He found that even in the worst cases temporary improvement could be obtained, and an increase of body weight in nearly all cases. The patients usually were capable of returning to work after the treatment. The latter was partly symptomatic and partly general. Morphine, bromides, sulphonal, etc., were used for the former, and valerian, electricity, hydrotherapy, etc. for the latter. He gives short clinical accounts of all the cases.

### (107) Acute Arteritis in the Course of Influenza.

Edmond Fort has collected a series of 18 observations showing the occurrence of acute arteritis in the course of influenza (*Thèse de Paris*, 1901). This form of arteritis is very similar to that met with in other infective diseases, especially that which occurs in typhoid. It generally appears in patients who are over 30 years of age, when perhaps the arteries have begun to suffer from degenerative changes. It is most frequently met with in the vessels of the lower limbs, and is usually unilateral in distribution, though cases of its occurrence in both legs are not uncommon. It most frequently occurs during the period of convalescence, but, on the other hand, its incidence may be much more remote, occurring in patients who are presumably cured. The onset is usually sudden, the patient experiencing a sensation of numbness. Pain is present, and increased by pressure along the course of the inflamed vessel. This pain may be so severe as to require the injection of morphine. It is usually accompanied by a lowering of the temperature in the affected part, the colour of the skin changes, showing bluish areas. Arterial pulsation may be lost below the lesion, which is pathognomonic of obliteration. This arrest of circulation may be merely temporary, and if the blood flow be re-established no subsequent changes take place, but the opposite condition is extremely likely to be followed by gangrene, the usual signs of which do not call for any special note other than that it is very frequently of the dry form. Should there be phlebitis at the same time the gangrene may be of the humid type. The subsequent history of the case depends on circumstances, there being separation of the part affected or general invasion with fatal results. The writer records 6 deaths in 15 carefully observed cases. As regards treatment, the first thing to do is to place the limb completely at rest in splints, which are to be carefully lined with wadding. The writer recommends the application of salicylate of methyl or a liniment containing salicylic acid, turpentine, and extract of belladonna. The pain in severe cases must be dealt with as a symptom. Surgical intervention may be called for should the results not always be satisfactory.

## SURGERY.

### (108) Lumbar Cocainisation.

Chaput (*Bull. et Mém. de la Soc. de Chir. de Paris*, April 30th, 1901), in the course of a discussion on lumbar cocainisation, reported favourably on this method of establishing anæsthesia, which he has practised in 57 operations, both major and minor. In the practice of this surgeon, lumbar anæsthesia has given very satisfactory results, inferior to those of general anæsthesia in the single disadvantage of the emotion and anxiety so often associated with its application. Chaput states that he has been much impressed by the absence, in most cases, of post-operative shock and pulmonary complications, which absence, in his opinion, renders lumbar cocainisation the anæsthetic method of election on pulmonary, cachectic, and very feeble patients. Most patients, it is asserted, prefer this method to general anæsthesia, but complaints are made by many of the intense headache

following the use of cocaine. In Chaput's opinion, it is contraindicated in children and in nervous and timid patients, particularly women; also in operations demanding muscular relaxation, such as those for the reduction of fracture and dislocation, and in cases of difficult and prolonged laparotomy. In women, particularly those who are young and nervous, lumbar anæsthesia, it is pointed out, is not satisfactory, as it is so liable in such subjects to give rise to intense discomfort and a very rapid pulse, and to be followed by obstinate vomiting and severe and prolonged headache. This method, indeed, should not be applied to female patients, except those who are calm and free from timidity, and in cases in which general anæsthesia is contraindicated. In operations on regions above the level of the xiphoid appendix, lumbar cocainisation, by reason of the necessity of increased doses and of the delayed manifestation and uncertainty of its results, is much less serviceable than general anæsthesia.

**(109) Anæsthesia by Chloroform and its Dangers.**

FLOCKEMANN (*Centralbl. f. Chir.*, No. 21, 1901), in a contribution on "the limit to the pupillary reaction to light in chloroform narcosis," expresses a strong objection to the practice of continuing the administration of this anæsthetic during the stage of deep unconsciousness, marked by a decided tendency independently of the influence of light, to dilatation of the pupils. Such a condition, he points out, is very near to one to complete death, and ought always to excite great anxiety. He regards as the limit contraindicating any further pushing of the anæsthetic that stage in which the pupils, though still contracted, cease to act to light when both eyes are uncovered. When the contracted pupils do react to light the patient is just about to come round or has already become to some extent sensible. Then the renewed administration of a small quantity of chloroform slowly and by drops in the first case, rather rapidly in the latter, will effectually and with safety again place the patient under the influence of the anæsthetic to the required degree. The only indication for a further administration of chloroform beyond the stage at which the contracted pupils have ceased to react to light is the somewhat rare event of persistence in this stage of corneal reflex. The author holds that by this method of regulating the administration of chloroform in accordance with his limit of pupillary reaction to light, the full benefits of this anæsthetic can be obtained with reduced consumption of the agent and much less risk to the patient. In the same number of the *Centralblatt* Aglinzeff publishes a case of death from chloroform in which direct massage of the heart was practised without success. At the end of an operation for the removal of an osteomyelitic sequestrum from the radius, during which a mixture of chloral and chloroform had been administered by drops, the patient—a boy aged 15 years—suddenly became pulseless. After the performance of tracheotomy and prolonged attempts to establish artificial respiration, an opening was made in the anterior wall of the thorax on the left side and the pericardium exposed. Rhythmical compression of the heart excited slight movements of this organ, and pulsation was observed in the large blood vessels of the thoracic cavity, but the respiration, in spite of strenuous and prolonged efforts to restore the action of the lungs, was not renewed, and after an interval of half an hour, during which cardiac massage was energetically and persistently practised, the movements of the heart ceased. In some comments on this case the author states that he is disposed to attribute the failure of cardiac massage to the fact that the patient had been for two months the subject of severe pyæmic infection with continuous fever. The result of the treatment was also unfavourably influenced by a wound of the left pleura during the operation for exposing the pericardium, and by consequent pneumothorax on the left side. Whilst acknowledging that no subject of intense poisoning by chloroform has yet been brought to life by Maag's plan of cardiac massage, the author thinks that with future improvements in its technical details a good result is not altogether hopeless.

**(110) Lymphatic and Portal Infections following Appendicitis.**

MUNRO (*Proc. Phil. County Med. Soc.*, January, 1901) publishes a series of cases of infection of the retroperitoneal lymphatics and of the portal vein and its tributaries, originating in appendical inflammations. Lymphatic and portal infection, it is held, occur more frequently than is generally supposed in cases of appendicitis. The author's study of these complications have led him to the following conclusions: (1) The retroperitoneal lymphatics are probably always infected to some extent in inflammation of the appendix, the degree of the infection not necessarily depending on the extent of the inflammation, as a mild, chronic appendicitis may at times give rise to severe lymphangitis; (2) the lymphatic disturbance may date its origin from an appendicitis occurring many months beforehand; (3) a lymphatic infection severe enough to warrant local treatment is rare when compared with all the cases of appendicitis, but such an affection is probably more common than a portal infection; (4) mild infections of both the lymphatics and of the portal system may yield to medical treatment; (5) persistent fever, without other evident cause, should suggest one or both of these infections; (6) spasm, tenderness, and, after a time, fulness in the right loin, should indicate a retroperitoneal infection from some source or other, possibly due to appendicitis, though due in many cases to renal, hepatic, pleural, or other lesions; (7) chills and hepatic tenderness, often associated with jaundice, may be of appendicitic origin, and this origin, especially in obscure cases, should be most carefully sought for in physical examination, personal history, and, if necessary, in abdominal exploration; (8) drainage of the lumbar region gives prompt and satisfactory relief where pus has been formed or a diffuse cellulitis developed; (9) prompt and thorough drainage of the liver, together with removal of the inflamed appendix, offers the best means for recovery from septic infections of the liver; (10) aspiration of the liver is an imperfect, unsatisfactory, and unsurgical procedure. Abdominal section with free exploration of the liver, and free opening of all abscesses within reach is far more satisfactory and less dangerous than aspiration.

## MIDWIFERY AND DISEASES OF WOMEN.

**(111) Prolapse of the Female Urethra.**

GLAEVECKE (*Münch. med. Woch.*, May 28th, 1901) reports a case of prolapse of the female urethra. A child, aged 11 years, in whose family history tuberculosis appeared frequently, showed a past history of rickets and infantile diarrhœa. In early life she developed bronchitis, which led to a large bronchiectasis. She spat up large quantities of almost pure pus. No tubercle bacilli were found in the sputum on several examinations. In spite of all treatment the bronchiectasis remained, and the child's condition when first seen was one of emaciation and great weakness. Four weeks before admission the child was noticed to have some blood in the vagina. She complained of pain in micturition. On examination a tumour about the size of a cherry was seen between the crescentic hymen and the clitoris. At about the centre of this tumour a small opening was found. On passing a sound through the opening it was found to lead into the bladder. The tumour was red, glistening, and bled on handling. The right side was more prolapsed than the left. The diagnosis being clear, Glaevecke attempted to replace the prolapsed urethra and keep it in place by means of a T-shaped bandage. As this did not succeed he proceeded to operate. After dividing the prolapsed portion in the central line into two lateral halves, he fixed the non-prolapsed portion with silk sutures, cut the prolapse around at the base, and sutured the cut edge of the remaining urethra to the outer skin. A Nélaton catheter was kept in place for seven days. The result was in every way satisfactory. Referring to the literature on the subject, he finds that this condition is very rare. He describes the condition, and turning to the etiology he finds that cystitis, cystic calculi, abuse of venery, and masturbation are given as causes. In inquiring into the cases he states that cystitis is generally secondary, calculi have rarely been found in the cases reported, abuse of venery is an unlikely cause, since prostitutes, in whom the abuse is most practised, have not been known to suffer, and in children the age is usually so young that masturbation

can scarcely be thought of. On the other hand, ill nourished, degenerate tissues (weak, debilitated children and old folk being most commonly affected), combined with strain, especially in coughing, whooping-cough, bronchiectasis, as in his case, are most likely to lead to a prolapse. He deals next with the symptoms, then the diagnosis, prognosis, and treatment. Of the latter, he finds that astringents and caustics have been recommended, but he believes in the majority of cases that the treatment is insufficient. Of the operations he mentions Emmet's "button hole" operation, Israel's cautery operation (like that for rectal prolapse), Kleinwächter's removal of the prolapse and subsequent suturing the small ring from wound, and, lastly, Sänger's modification of colporrhaphy applied to the urethra.

**(112) Three Cæsarean Sections in One Patient.**

Wiener (*Centralbl. f. Gynäk.*, No. 23, 1901) states that a dwarf underwent Cæsarean section twice at the Munich Maternity Hospital. An abscess developed in the abdominal walls after the second operation and burst; a fistula developed and continued to discharge during the next pregnancy. One night, close upon term, flooding occurred through the fistula and caused serious anæmia. She was at once admitted into the Maternity Hospital, the fistula plugged, and abdominal section undertaken as soon as possible. Firm adhesions between the uterus, parietes, and omentum had to be separated. Then a transverse fundal incision was made; as the placenta was attached to the anterior wall and did not reach so high as the fundus it was not wounded. A recently-dead child was delivered. Then retroperitoneal hysterectomy was performed. Infusion of saline solution subcutaneously and injection of the solution into the bowel was practised. The patient recovered. The fistulous tract did not open into the uterine cavity, but was in direct proximity to the placenta. In the track of the cicatrix of the second operation was further evidence of suppuration of sutures.

**(113) Breech Presentation delayed by Congenital Vaginal Band.**

Boissart and Coudert (*L'Obstétrique*, May, 1901) report a labour at the seventh month of a primipara, aged 19. She had been in labour since 4 P.M.; at 11 P.M., when examined, the breech was presenting; no fœtal heart sounds could be heard. Vaginal exploration caused great pain, and two prominent folds of the mucous membrane could be felt in the upper third of the vagina. In defining the cervix the explorer's finger came across a broad, tough band which crossed the vagina obliquely from behind and above on the left, forwards and downwards to the right. At midnight the breech had reached the vulva. Traction was made on the left foot, then on the right, then on the groin, but, though the pains were strong, the fœtus could not be extracted. The right hand, introduced into the vagina along the left thigh, detected the band passing under the popliteal space of both legs of the fœtus, which was thus swinging on the band like an acrobat on a trapeze. This band was divided and secured with pressure forceps. Then the fœtus, which weighed 4¾ lbs. and was partly macerated, came away with ease. Boissart and Coudert explain their theory why the fœtus came to get the band caught under its knees instead of being forced down astride of the band.

**(114) Labour Pains simulated by Mucous Colitis.**

Thoyer-Rozat (*L'Obstétrique*, 1891) remarks that Budin and Bouchard have already noted how mucous colitis in pregnancy and the puerperium involves serious complications and leads to errors of diagnosis. He relates a case where a primipara was seized during the seventh month with abdominal pain. Several attacks of diarrhœa had occured during the pregnancy. On this occasion the uterus was felt to contract at each pain and effacement of the cervix was beginning. The patient was kept at rest, belladonna was given by the mouth and opium by the rectum. On the next day the pains continued, with fever and vomiting. Then it was found that the uterus did not contract at each pain, whilst above it, along the tract of the colon, lay a tender, painful area. A purgative was given, and in consequence a very painful action of the bowels occurred, abundant masses of mucous casts passing. More were evacuated after the administration of purgatives for several days. Gradually the intestinal mischief settled down and pregnancy continued till term. Thoyer-Rozat attributed the contractions of the uterus at the beginning of the attack to absorption of intestinal toxins into the blood through the vessels of the colon.

## THERAPEUTICS.

**(115) Hetol in Tuberculosis.**

The literature dealing with the general and pharmacological effect of hetol on tuberculous subjects is assuming large proportions, and the method of action of the drug has been ascertained and described by others as well as by the introducer, Landerer. The whole subject has been investigated afresh by Guttmann (*Berl. klin. Woch.*, July 8th, 1901), who confirms the statements of Landerer that it produces a definite general leucocytosis, and by means of the wall of leucocytes cuts off the tuberculous deposit. That hetol is a positive chemotatic compound producing an increase of leucocytes has been proved on animals and human beings. In the rabbit the number of leucocytes rose from 8,000 to 31,440 in four hours; while in a human subject it was observed to rise to 20,000. The spleen is responsible to a great extent for this increase in leucocytosis, for after the removal of this organ hetol, even in very large doses, only occasions a slight increase. In tuberculous subjects the effect can be divided into four stages: First, a pronounced leucocytosis of the whole lung; secondly, the surrounding or walling in of the deposit by leucocytes; thirdly, the formation of connective tissue in the leucocyte wall, and the cutting off of the deposit; and, fourthly, the scarring of the whole area. The changes are, therefore, identical with those which have been observed in spontaneous cure, but they take place more rapidly. Guttmann suggests that although hetol is not a specific against tuberculosis, the enormous increase of leucocytes in the diseased area would free an alexin—an antibody which would anchor itself to the toxins of tubercle bacilli and render them more or less inert; and that the leucocytes themselves would act as "phagocytes" to the bacilli *in situ*. After dealing with the whole literature of the subject, he concludes that the majority of observers report an improvement even after the first injection; that the cough and expectoration are lessened, as also is the night sweating; that the appetite increases and the patient gains in weight; that too large doses may cause hæmoptysis, but with care no bad symptoms due to the drug occur; and, lastly, that the patients can be treated in the out-patient room, and need not necessarily be inmates of a sanatorium, although it offers a better chance of recovery if the treatment is combined with Brehmer's open-air treatment. Guttmann records two series of cases treated in the out-patients' room. In the first series he says that the cases were obviously unfavourable for the treatment. Nearly all cases showed laryngeal as well as lung signs of disease. Of the 33 cases, 1 was quite cured, 10 were improved, 9 showed no improvement, and 8 died, while 5 broke off the treatment on their own account. He is able to add further to these cases, 2 private patients, both of whom recovered entirely, and of 102 other cases, 22 were completely and 21 partially restored. As the benefit of hetol in early cases is no longer questioned, he says, he does not enter into any account of these. He used his laryngeal cases in order that he might gauge the exact pathological changes going on. This examination was carried out by Cordes, who reports that after two to three weeks' treatment the tubercles are mostly large and isolated or massed in groups of three or four. They consist in their central parts of epithelioidal polymorphous cells, with large nuclei and one or more giant cells. Surrounding these epithelioidal cells are more or less numerous leucocytes, at times arranged in layers. In some cases the leucocytes have penetrated to the central parts. In a few there is some formation of new connective tissue. After five or six weeks' treatment, the process of leucocytosis and walling-in has advanced considerably. The outer layers of leucocytes have formed a connective tissue capsule, consisting of long thin cells, with small, longish nuclei, and delicate, mostly capillary, vessels. The arrangement takes place in from 5 to 20 layers, and between these layers some leucocytes are still seen. Nearly

all the tubercles are smaller than they were after two to three weeks' treatment. After ten to twelve weeks' treatment the tubercles are very markedly smaller in size. The capsule is thickened, and the connective tissue is growing into the interior of the tubercles. The connective tissue penetrates the substance of the less epithelioidal and also of the giant cells, so that at last only a mass of arranged small round cells is left. Later the nuclei of the connective tissue cells disappear, and the resulting concentric arrangement of the scar tissue is all that remains of the former tubercle. This picture, Cordes says, represents only some of the tubercles in the cases of laryngeal phthisis, as unfortunately in many cases fresh tubercles keep on appearing. He explains the generally disappointing results of hetol for this class of case, by stating that nearly all were very advanced ones, and the whole body had not enough energy to produce "even cicatrisation" in such a large surface of granulating tissue. Guttmann does not attempt to disguise the fact that his results were not particularly good, but he states his facts plainly and merely points out the severe test to which he put hetol. He describes the technique of the injections, and gives directions with regard to the dosage. In conclusion, he points out that hetol is non-poisonous, and produces very few disagreeable symptoms, and urges others to use the drug, so that a very large material can be collected in order to judge its action fairly.

**(116) Artificial Respiration and other means of Resuscitation.**

Satterthwaite (*Post-Graduate*, May, 1901) says that usually in persons recovered from drowning or from poisoning by illuminating gas the respiratory function rather than the heart is at fault, and apnœa is present and requires attention. Artificial respiration is also of material value in sunstroke, but if the heart will not beat the attempt is useless. Breathing may sometimes be very slow, for example, four respirations per minute were noted in a case of opium poisoning. A case is cited of a man who had poisoned himself with opium. One physician had pronounced him dead and another had confirmed this view, yet five hours afterwards artificial respiration was done, and the man resuscitated. Accessory means to resuscitation were faradism of the phrenic nerve, flagellation, and strong coffee. The poles conveying the electric current should be applied to the right side of the neck above the clavicle and of the intercostal space on the right side, so as to avoid the vagus and the heart. The application of the current should only be made during expiration. Transfusion of blood had less efficacy than artificial respiration, but saline injections were useful, especially in narcosis from anæsthetics. The most heroic method of resuscitation of the heart was that of Maaq, who in a case of chloroform narcosis, after trying the various methods in vogue without effect, and finding the pulse gone, boldly opened the pericardium, and grasping the heart in his hand compressed it rhythmically. After a while it began to beat naturally, and then artificial respiration was resorted to. The patient rallied and lived for 12 hours after this, dying then of shock from injury to the pleura. Where mucus or other obstruction is in the throat, this should be cleared out before artificial respiration is attempted. In the case of persons accidentally falling into the water during syncope (for example, epilepsy, apoplexy, sunstroke), life may be prolonged for several hours if little or no water has been taken into the lungs. The face is pale, and little or no froth appears in the mouth in such cases. In practising any of the known methods (Sylvester's, Marshall Hall's, or Howard's), it would be well to have the patient's mouth opened and the tongue well drawn out during the procedure. Laborde's method of rhythmical tractions on the tongue at the rate of about 15 or 20 per minute is useful, especially in the case of newborn children who have not breathed. The tongue is seized with the aid of a handkerchief or piece of lint. Respiration is in this case excited by the stimulation of the laryngeal nerves. The after-treatment includes warmth (blankets and hot-water bottles), hot coffee, and hot broth with or without a little brandy. Perseverance for about two hours is necessary in most cases, and in cases of opium poisoning even longer trial has been needed before the patient was known to recover.

**(117) Certain Congeners and Derivatives of Aconitine.**

In the course of two papers, recently read before the Royal Society, Professor Theodore Cash and Professor Wyndham K. Dunstan described the results of experiments undertaken to compare the properties of pseudaconitine and japaconitine with those of aconitine; and to investigate the action of pyraconitine and methylbenzaconitine. Pseudaconitine, the alkaloid obtained from aconitine ferox or Indian aconite, was first isolated in 1878 by Alder Wright. Its formula is now given as $C_{30}H_{43}NO_{10}$. Its salts in solution cause tingling of the tongue and lips. When heated in the dry state, pseudaconitine gives off a molecular proportion of acetic acid, leaving another alkaloid, pyropseudaconitine which does not produces the toxic effects of the parent base. Japaconitine, the alkaloid present in aconitum japonicum, has now been assigned the formula $C_{31}H_{43}NO_{11}$. On heating japaconitine jap-pyraconite and acetic acid are formed. The differences between the three alkaloids, aconitine, pseudaconitine, and japaconitine, are differences of degree, not of kind. Thus all three alkaloids have a similar effect upon the hearts of mammals, but pseudaconitine acts qualitatively more energetically towards cats, while japaconitine is more active upon frogs. Again, there is less tendency to acceleration of respiration with pseudaconitine, as also a less frequent initial rise of temperature. Less tolerance is shown to pseudaconitine than to the other two, after repeated administration. Based upon the observations made, the relative doses for therapeutical purposes would be approximately, regarding that for aconitine as the unit, for pseudaconitine 0.4 to 0.45, and for japaconitine 0.8. Pyraconitine, obtained from aconitine by heating to separate a molecule of acetic acid, causes no tingling of the lips or tongue. It causes slowing of the heart, partly from vagus irritation, partly from depression in function of intrinsic rhythmical and motor mechanisms. After its administration activity of respiration is reduced (by central depression) to a degree incompatible with life. Neither muscular nor intramuscular nervous tissue are strongly influenced by pyraconitine, but the spinal cord is impaired in its reflex function, and there is a curious condition of exaggerated motility. Methylbenzaconine was obtained from aconitine by heating it with methyl alcohol in a closed tube. This alkaloid differs from aconitine by containing a methyl group in place of the acetyl group. It is a body with very feeble toxicity, and has to be given in large doses in order to cause failure of the heart. Large doses depress the cardiac vagus, neither section of the vagus nor atropine administration relieving the slow and faulty action of the heart. Impairment of cord reflexes is later in occurring than the action upon intramuscular motor nerves. Salivation and clonic movements suggest the action of a near ally of aconitine, but the effects of methylbenzaconine are much more curare-like in character, motor nerves being much affected by comparatively small doses.

## PATHOLOGY.

**(118) The Permeability of the Kidneys after Chloroform Narcosis.**

Benassi (*Gazz. degli Osped.*, March 3rd, 1901) has made some experiments with regard to this question. He took 12 patients who had been chloroformed, and tested the rate of elimination of urine before and after chloroform by means of rose aniline—that is, he injected under the skin 1 c.cm. of a 1 per cent. solution of rose aniline, emptied the bladder, and then carefully estimated qualitatively and quantitatively the amount of rose aniline found in the ensuing urine. As a rule it took twenty-four hours to get rid of all traces of the pigment. The patient in each case had as far as was known healthy kidneys. In every case elimination was delayed by chloroform anæsthesia—for example, in the first case, whilst it took thirty-five hours to eliminate the pigment before chloroform, it required forty-one hours afterwards. No constant relation between the quantity of chloroform and duration of the anæsthesia and the alteration in renal function could be detected, as the personal equation of the kidney varies so much. The quantity of urine after chloroform narcosis was for the most part less than before.

# AN EPITOME

OF

# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (119) Tabes Dorsalis.

Allan Bonar reports (*Jour. of Med. and Ment. Dis.*, May) the results of his observations on 286 cases of tabes dorsalis admitted to the Vanderbilt Clinic under Professor M. Allen Starr during thirteen years (January 1888 to January 1901). Of these patients 242, or 84.6 per cent. were males, and 44 or 15.4 per cent. were females, a proportion of 6.5 males to 1 female. Thomas at Johns Hopkins University found that among 111 cases 97 were males and 14 were females, the proportion of males to females being 7 to 1. Both these ratios are somewhat higher than that given by Gowers, which is 10 to 1. As regards the age of the patient at the onset of the disease it appeared that 17½ per cent. were between 20 and 30 years of age, 40 per cent. were between 30 and 40 years of age, 32 per cent. were between 40 and 50 years of age, 10½ per cent. were between 50 and 60 years of age. In no case did the disease begin after the sixtieth year. These figures agree with those obtained by Thomas, and point to the view that tabes is a disease of adult or middle life, and from the great frequency of syphilis in the history of patients, Dr. Bonar concludes that Fournier is right in regarding tabes dorsalis as a parasyphilitic disease. In the 286 cases inquiry showed that syphilis had occurred in 166 patients, or 58 per cent. In 32 cases, that is, in 11 per cent., there was a doubtful history of syphilis, and the disease was held to have been entirely absent in 88 cases, or 31 per cent. Dr. Bonar concludes that 70 per cent. may be regarded as the true proportion of cases of tabes dorsalis with a history of previous syphilis, as against 80 per cent. as given by Gowers (1886), 90 per cent. by Strümpell (1889), 88 per cent. by Erb (1881), 90 per cent. by Rumpf (1887), and 91 per cent. by Fournier (1882). In syphilitic cases the time which elapsed between the appearance of the chancre and the onset of tabes dorsalis varied from 1 to 40 years according to the detailed histories obtained from 57 cases. Among other etiological factors were alcoholism, undue exposure to heat and cold, and traumatism. Sexual excess was also present or was alleged to be a cause in one case and articular rheumatism in another. The more important clinical symptoms and their relative frequencies were as follows: One or both knee-jerk absent in 95 per cent., Argyll-Robertson pupil in one or both eyes in 78.6 per cent., lightning pains in the legs or body in 7.9 per cent., Romberg's sign with variable degrees of ataxia of the gait in 79 per cent., optic atrophy in 8.75 per cent., paræsthesias and numbness of the limbs and body in 55 per cent., girdle sensation in 48.5 per cent., and various visceral crises in 17 per cent. The crises included those of gastric, intestinal, and laryngeal nature in descending order of frequency. In regard to the development of optic atrophy the interesting observation of M. Benedikt, of Vienna (1887), is quoted: "that all symptoms, even after they have attained a high degree, retrograde as soon as optic atrophy appears." Vesical troubles in the form of incontinence or retention of the urine, from paralysis of the sphincter and of the general musculature of the bladder, was present in 62 per cent. of cases. Trophic disturbances occurred in a few cases, mainly in the form of Charcot's disease of the joints (6 cases), and of perforating ulcer of the foot (4 cases).

### (120) Segment Diagnosis of Spinal Tumours.

F. Krause (*Berl. klin. Woch.*, Nos. 20, 21, and 22, 1901) discusses the methods of diagnosing tumours of the spinal column and cord, and especially of localising them. He illustrates his remarks by the report of three cases. The first case was that of a woman, aged 65, who showed a good past and family history. In January, 1899, she slipped on some snow, and fell with her back against the edge of some steps. For four weeks she suffered from pain in the back, but was able to get about. Three months later she suffered from pain in the right knee and right great toe. In May of the same year she noticed some weakness of the right knee, which was a little swollen. Shortly after, she stated that while sitting at her needlework she felt a sensation as if a mouse was running up from her knee to her hip. This was so realistic a feeling that a comrade and she hunted after the suspected mouse, but failed to see or feel any live animal. Later still, she felt a burning sensation first in the sole of the right foot, and then in the whole extremity, as far upwards as the hip. In 1898 and 1899 she was treated for sciatica, without any benefit. During the summer of 1899, she experienced a "girdle pain." Since February, 1900, she had difficulty in walking, and in June she was admitted into hospital, her condition having been diagnosed as spinal-cord tumour by Dr. Böttiger. On admission, Krause found her general condition good. She was very constipated, could retain solid material, but wind passed without her noticing it. She could also hold her water, but as soon as the desire to pass it presented itself, she had to allow it to flow (imperative incontinence). The spine appeared normal. She required the assistance of two nurses to get up from the sitting posture. On attempting to walk with this help, the left leg was used well, but the right leg was dragged helplessly after the other. She was also incapable of performing movements of the right leg, when lying on his back. Right dorsal plantar foot reflexes were very weak. The gastrocnemius and extensor hallucis longus, however, were functional. The right leg was generally atrophied (muscular masses). Patellar reflex was increased on the right side, and there was right ankle clonus. The sensation nerves on being examined gave the following results: Girdle pain at the level of the upper rim of the pelvis. The patient complained of a burning sensation (pain) with hyperæsthesia on touch in both lower extremities, but especially in the left leg and foot. The left lower limb was generally insusceptible to the pain of a needle point. The external genitals (left half) also participated in this hypalgesia. There was also thermo-hypæsthesia. The right lower limb gave a normal sensibility to the needle, except a small area over the right half of the sacrum. A patch of complete anæsthesia was found posteriorly between the great trochanter and the sacrum, just below the hyperalgetic area. The muscular sensation was diminished over both limbs. Summing up the points of the case, for the purpose of diagnosis, he finds that following on an accident three years before, weakness of the right knee, followed by abnormality of sensation in the whole limb, and later the girdle pain were the chief symptoms. The weakness of the right leg rapidly became a paralysis after the third year. This pointed to a compression of that part of the cord which contains the pyramidal columns. The disturbances of bladder and rectum were slight. He considered that the lesion corresponded to Brown-Séquard's half-sided lesion, and that the nature of it was a slow-growing tumour. It could not be situated within the cord, for there were would have been degenerate signs following the destruction of the ganglia cells, nor could it be in the vertebræ themselves. Therefore the localisation was between the dura mater and vertebral bodies. The next question was the localisation of the level (segment diagnosis). The patellar reflex was present. Thus the second and fourth lumbar segments were normal; thus the tumour could not reach lower than the first lumbar segment. But as the tendon reflexes were changed, it was probable that the pressure just reached as far downwards at the upper margin of the lumbar enlargement. Turning to the symptoms arising from the upper level, he found that the ileo-psoas muscle was paralysed, with the rest of the right lower limb muscle. The innervation of this muscle is from the first lumbar segment, but according to Sherrington the innervation of a muscle is derived not only from one root, but by anastomosis, from the next above and next below. Therefore, he counted with the twelfth dorsal segment. The girdle pain was at the level of the crests of the ilia. The sensory nerves of this area are derived from the twelfth and also eleventh segments. The other sensory disturbance pointed to the implication of the twelfth segment in its entirety. He therefore placed the upper limit at the eleventh dorsal, and the lower limit at the first and second lumbar segment, but, following Bruns's researches, it should reach

as high as the tenth segment. According to Gowers, the first lumbar segment is opposite the eleventh dorsal spinal process; according to Reed, opposite the ninth and tenth; and according to Henle, between the tenth dorsal process and the eleventh dorsal body. The tenth segment is opposite the base of the ninth dorsal spinal process (Gowers); opposite the seventh and eighth (Reed); and opposite the eighth (Henle). Krause therefore came to the conclusion that the tumour lay between the level of the seventh dorsal spinal process, and that of the ninth or tenth dorsal vertebral body. He removed the ninth and eighth vertebral arches at first, but, finding that he could not get a clear view, also the seventh. He found the tumour opposite the seventh vertebra, and, to remove it, found it necessary to cut away the sixth arch. The tumour lay immediately beneath the dura mater. It measured 17 mm. (0.66 in.) in its greater length, 15 mm. (0.585 in.) in breadth, and 11.5 mm. (0.45 in.) in depth. The growth was composed of calcified cells and squamous cells. The subsequent history of the patient tells that the signs and symptoms gradually decreased, although the pain had not left her, nor could she walk without assistance when last seen (April, 1901). The second case was that of a secondary carcinoma (primary growth in the breast) in a woman aged 53 years. The girdle pain was at the level of the ensiform cartilage. An anæsthetic zone reached the level of the eleventh rib. This would suggest the level of sixth dorsal segment (Sherrington), or the fifth (Bruns). According to Gowers, the fifth segment lays opposite the fourth dorsal vertebræ (body). The patient died, and *post mortem* the tumour was found, as was expected, opposite the fourth vertebral body. The third case was that of a man aged 42 years, who had hurt his back in a fall three years previously. His symptoms were complete anæsthesia as high as the sixth intercostal space (left side) and behind, as high as the seventh vertebra. On the right side, the upper limits of anæsthesia were the eighth rib and tenth vertebra. These gave a segment diagnosis (upper level) of sixth segment corresponding to the left side, and eighth segment to the right side. According to Sherrington, the eighth segment innervation also means some nerve derivation from the seventh segment, and this would, according to Gowers, lay opposite the fifth vertebra. The patient was operated on, and a sarcoma was found opposite the fifth vertebral body, lying to the left and in front of the cord. The patient died a few days after the operation, from bronchitis, hypostatic pneumonia, and extreme weakness. In this last case the fifth and seventh vertebræ were tender to touch, and hypersensitive to thermic influences.

## SURGERY.

### (121) Peritonisation.

QUÉNU AND JUDET (*Rev. de Chir.*, No. 2, 1901) publish 13 cases in support of their advocacy of peritonisation or peritoneal autoplasty in laparotomy practised for hysterectomy and other gynæcological operations. In this method an attempt is made to cover the raw surfaces at the seat of operation by peritoneum, either by bringing together lax peritoneal flaps or, when no such flap can be obtained from the posterior wall of the abdomen, by attaching the anterior peritoneal flap to the serous coats of the rectum, cæcum, and sigmoid flexure. The authors from their experience of peritonisation systematically practised in gynæcological laparotomies in the course of the past four years believe that this method has reduced mortality and prevented to a considerable extent pelvic suppuration. The patients thus treated do not so frequently complain of the colicky pains which are so liable to cause discomfort after laparotomy. Abdominal drainage, it is stated, may be discontinued on the the second or third day after the date of operation. The subsequent history of old cases has convinced the authors that patients on whom peritonisation has been practised suffer much less than other subjects of laparotomy from disturbances of digestion and severe abdominal pains. As a result, it is held, of the absence of peritoneal adhesions the intestinal functions are much less impaired. Since 1895 one case only of post-operative intestinal obstruction has been observed in the author's practice. This was due to intestinal paralysis after abdominal hysterectomy for fibroma. The patient recovered after secondary intervention.

### (122) The Influence of Traumatism in the Causation of Appendicitis.

IN a lengthy review of recent contributions on the subject of appendicitis (*Journ. de Chir. et Ann. de la Soc. Belge de Chir.*, No. 5, 1901) reference is made to two recent papers dealing with the relations of this affection with injury. Schottmüller (*Mitt. aus der Gren. der Med. und Chir.*, Bd. vi, Hefte 1 and 2) thinks that in the study of the etiological factors of appendicitis sufficient importance has not been attached to traumatism. The question is regarded as an interesting one from a medico-legal as well as from a clinical point of view, and the author reports three cases in support of his view that a slight injury may give rise to a fatal attack of appendicitis. These cases show that a small deposit of hard fæcal matter in the appendix may, after prolonged retention, set up localised necrosis, which is not likely to cause mischief so long as it involves only the inner layers of the appendical wall. Should, however, under these circumstances, any injury be inflicted on the abdomen, the intact external coat being too feeble to resist the sudden increase of pressure, or intervening directly between the impact of a blow and the fæcal calculus, may be ruptured and afford vent into the abdominal cavity of the infected contents of the appendix. Neumann (*Arch. für klin. Chir.*, Bd. 72, Hft. 2) expresses a similar view. Direct or indirect traumatism may, he believes, produce an attack of appendicitis in a healthy subject, but in most traumatic cases a laceration caused by a confined enterolith is the starting point of the inflammation.

### (123) Rapid Restoration of the Functions of a Divided Ulnar Nerve after Suture.

TOUSSAINT (*Rev. Méd. de l'Est*, June 15th, 1901) reports an interesting case in which suture of an ulnar nerve that had been accidentally divided two years previously was almost immediately followed by restoration of movement and sensation in the corresponding hand. The patient was a French soldier, aged 23, who, in November of 1898, was severely wounded just above the left wrist in thrusting his forearm through a pane of glass. This injury was followed by distortion of the left hand, with loss of sensibility of the last two fingers, and also by severe pain extending along the course of the ulnar nerve. When the man came under the author's notice at the end of last year, it was found that tactile and thermic sensibility, together with feeling of pressure, had completely disappeared over the digital distribution of the injured nerve. The muscles of the hand supplied by this nerve were paralysed. The first palmar interosseous muscle had lost all apparent contractility even under the influence of the electric current, and the ring and little fingers were bent on to the palm. Voluntary apposition and separation of the fingers were, the author states, reduced to their most simple expression. Trophic disturbances were indicated by the absence of hairs over these fingers, by longitudinal furrowing of the nails, and by the soft and glossy skin. On December 21st the author exposed the separated ends of the ulnar nerve, and fixed the lower end into a vertical cleft cut in the bulbous upper end by catgut sutures passed through each segment of the nerve trunk. On the following day the patient complained of pain in the last two fingers, and stated that he could move the little finger. On December 24th the dressings were removed, and then it was found that voluntary movement of these fingers had been restored, together with cutaneous sensibility, both to the contact of external bodies and to heat and cold. This case, taken together with two well-known instances reported by Tillaux of rapid restoration of nerve function after secondary suture of the median, furnishes an encouraging though very exceptional example of nerve suture. The good results in the author's case are attributed to the care taken to approximate the ends of the divided ulnar, and to keep those ends together by sutures passed through the whole thickness of the nerve.

### (124) Reinfection in Syphilis.

MRACEK (*Wien. klin. Woch.*, No. 9, 1901) reports a case of second infection in syphilis. The patient, aged 35, was treated in hospital for primary and secondary syphilis in 1893. In February, 1901, he was attended by Mracek for typical secondary syphilis. The hospital

notes of the first attack having been obtained, there is no doubt that it was a case of reinfection. The author comes to the following conclusions: (1) There are undoubted cases of syphilis in which the disease has left the organism, so that a second infection is possible; (2) the collection of numerous known cases gives no conclusion as to the space of time between the first and second attacks; (3) it is not the rule that the second attack is less severe than the first.

## MIDWIFERY AND DISEASES OF WOMEN.

**(125) Constipation and Stercoræmia in Pregnancy.**

Macé (*L'Obstétrique*, May 15th, 1901) brought before the Société Obstetrique de France in April three instructive cases of stercoræmia, two associated with pregnancy and one with the puerperium. In the first cases abortion appeared imminent during the second month, there was albuminuria and rise of temperature. A glycerine enema was given: it was followed by a free evacuation. Two days later, though all hæmorrhage had passed off, there was still albuminuria, the temperature was 101°; 20 grams (about three-quarters of an ounce) of sulphate of soda were given, and eight very free motions followed, much of the fæcal matter was fœtid and very old. Two days later, as the temperature rose, a glycerine enema was given, another large motion was passed; afterwards all went well and the pregnancy continued. The second case is yet more important, as being associated with hyperemesis, how far as cause or effect may be disputed. At her previous pregnancy premature delivery was induced at the eighth month. On the occasion reported, vomiting caused great emaciation, the last period was at the end of August, 1900, the sickness set in during December and on February 2nd the patient was so ill that the induction of labour was suggested. It was then found that her bowels had not been opened for thirteen days. An enema brought away a quantity of old fæces, after some difficulty the bowels were thoroughly opened at the end of five days, enemata being used exclusively without purgatives. The vomiting ceased and the pregnancy continued uninterruptedly. The third case suffered from albuminuria during pregnancy, and was put on a milk diet. Just before delivery she declared that her bowels had acted regularly; delivery was normal. The temperature rose, there was no evidence of sepsis even on the second day, when the temperature was 103.8°. Fifteen grains of rhubarb were given, then the bowels opened well; next day the patient took 15 grs. of benzonaphthol, and after free intestinal irrigation, masses of old fæces came away, then the patient began to recover. Budin has already noted how constipation is not rarely caused by the milk diet used in albuminuria. This stercoræmia brings about a reappearance of the albuminuria, with rise of temperature. Thus albuminuria in pregnancy may be directly due to stercoræmia and high temperature in the puerperium may also signify retention of old fæces, no true puerperal sepsis existing. Budin, in the discussion on Macé's cases, admitted that it was not always possible to empty the bowels sufficiently in constipated pregnant and puerperal women. He found that salines caused liquid motions which might go on passing indefinitely without bringing away old solid fæces. He therefore gave an evening dose of rhubarb or "tamar Indien," followed the next morning by a saline in a tumbler of water. Very free purgation usually followed; if that medication failed or proved slow, an oil or a water and glycerine enema was administered.

**(126) Malignant Mucoid Polypus of Cervix.**

Krzyszkowski (*Przegla. Lekarski*, 1901, Nos. 12, 13, and 14) reminds us that, as in the case of deciduoma malignum, the malignant soft polypus of the cervix is not so purely a pathological curiosity as was once supposed. Already 24 cases have been recorded of this "myxosarcoma striocellulare," which means that many more have been overlooked. It has been detected at all ages, from 2½ years to 63. It grows with great rapidity and is of extreme malignancy, all cases already recorded having ended fatally. It always appears in its earliest stages as a tumour resembling in outward characters a common mucous polypus. Speedy recurrence reveals its malignancy; it soon sprouts up again and forms a racemose tumour formed by sessile and pedunculated masses of variable size, gelatinous, and pale red or even very dark in colour. In form the tumour recalls a hydatidiform mole; it fills the vagina and protrudes from the vulva. Krzyszkowsky's patient was aged 29, and had been once pregnant, twelve years previously. Already she had twice undergone the operation for removal of a mucous polypus, and the curette had also been removed. The uterus was quite movable; the tumour sprang from the posterior lips of the cervix. Total hysterectomy was successfully performed and recurrence was rapid.

**(127) Cancer of the Body of the Uterus.**

Baldy (*Amer. Gynec. and Obstet. Journ.*, June, 1901) has had 24 cases of cancer of the body of the uterus under his care; 3 were too far advanced for operation or refused operative assistance. On 21 hysterectomy was performed, the 8 earliest by the vaginal route; 2 very corpulent cases by the combined method, and the remainder by abdominal section; 2 out of the 21 died from the operation, 1 died of pneumonia seven years after operation, and 1 is suspected to be suffering from a recurrence about eight years after the hysterectomy; 17 remain well, including 5 done in 1892 and 9 between 1893 and 1899, the remainder being more recent. Baldy remarks that his results confirm the theory that clinically at least cancer of the body is much less malignant than cancer of the cervix. His experience of the latter, whether it be the squamous-celled cancer of the portio or the adeno-carcinoma of the canal of the cervix is most discouraging; with few exceptions all are dead or dying. Making every allowance for errors of diagnosis in operation on early cases, and other sources of fallacy, he is unable to place his hands on 5 per cent. of patients that have been under his treatment for cancer of the cervix that are alive and well to-day. —Beyer (*ibid.*) quotes a case of cancer of the body where the uterus was removed by Penrose seven years ago. The patient is now free from any sign of recurrence. The patient was 61 when she underwent the operation. The uterine muscular tissue was destroyed down to the serous coat. Beyea recently operated on a similarly advanced case in a virgin aged 51.

## THERAPEUTICS.

**(128) The Best Cure for Hysteria and Neurasthenia.**

Mitchell of Philadelphia (*Journ. of the Amer. Med. Assoc.*, March 9th, 1901) thinks that many of the graver cases of hysteria and neurasthenia which exhibit nervous instability, combined with physical weakness and with the moral defects of hysteria, react well to the rest cure when organic disease is absent. From a somewhat extensive experience he summarises the methods of treatment adopted by him. The most troublesome symptoms are headache and backache, tenderness of the spine and ovaries, insomnia and chronic fatigue. Anæmia, loss of appetite, and emaciation are present in varying degrees. The treatment is summarised thus: (*a*) The patient is placed in a private house (according to means), and best if away from home, the room being sunshiny and freely capable of ventilation. (*b*) The nurse should be, preferably, young, of agreeable manner, and a stranger to the patient. She should never converse with the patient about symptoms or treatment. She should be able to read aloud. (*c*) Isolation is most important, and the more distinctly hysterical the disease is the more strict the isolation must be. "No letters are sent or received, no visitors seen, and but three or four persons enter the room, the nurse, the physician, the masseuse, and the servant." (*d*) In ordinary cases six to eight weeks of isolation are long enough, after which a single visitor may be allowed. Letters may then be received or written in the way of reward for good conduct. This long isolation is necessary to break up radically the habits of long invalidism. (*e*) Rest, at first ill-borne and irksome, is well borne after a week. At first feeding should be done by the nurse, and the patient overfed. All voluntary movements should be forbidden, except sitting up for the bowels, etc. The circulation and thinking are thus kept at a low level, and one result soon observed is the improvement of the ability to sleep.

(*f*) Diet: Milk in small quantities is given every three hours, skimmed, if ordinary milk is not tolerated. On the fifth day of treatment a chop or steak at midday is given. From the sixth day onwards bread and butter and eggs are allowed. If milk is badly borne broth and jellies will give satisfaction. (*g*) Massage: A separate masseuse is desirable. Massage should begin on the third day with light massage lasting twenty minutes, and increasing daily to deep massage lasting one hour or more. If the patient is obese long and deep massage is good. A second rubbing of the abdomen and spine by the nurse before sleep is helpful. At the end of the first week the patient will begin to put on weight, but if this goes up too fast massage is not thorough enough and should be increased. Oil is not necessary to aid massage. (*h*) Electricity: The slowly interrupted faradic current should be applied to the "motor points" all over the body so as to contract every muscle two or three times. This should be continued for three-quarters of an hour. (*i*) Constipation is treated with aloes and strychnine pills, and for specially refractory cases hot injections of castor oil *per rectum* may be given. (*k*) Insomnia is diminished by massage before bedtime. Hypnotics should be avoided, and the wet pack or abdominal compresses first tried. (*l*) After the first week the patient is allowed to sit up fifteen minutes, the next day twenty minutes, etc. In a fortnight he is allowed to walk in the room after passive movements of the legs have been carried out. Swedish movements complete the exercises and the cure. The disease is not restricted to women of fashion and indolence, as it is often met with in school teachers, washerwomen, etc.

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**(129) Cacodylic Acid in the Treatment of Mental Disorders.**

Ernest Paulet (*Thèse de Paris*, 1901) gives a series of observations on the treatment of certain mental disorders with cacodylic acid and its salts. Magnan and Gautier had recently treated such cases with excellent results in St. Anne's Asylum, especially as regards melancholia, and Gautier had previously recorded cases of chorea treated successfully with the same drug, this being confirmed later by Lannois of Lyon. Cacodylic acid is a crystalline odourless solid, with a feebly acid taste, and has the formula: $\begin{matrix}CH_3\\CH_3\end{matrix}\!\!>\!As\!-\!O.OH$. It has not nearly the toxic properties of ordinary arsenic. It is best given hypodermically, for which purpose the sodium salt (neutral) is employed. The marked diminution of toxicity is due to the combination of the arsenic organically with the two methyl groups. Given by the mouth it becomes relatively more toxic, because the oxide of cacodyl is produced in the alimentary canal, but this does not occur in hypodermic medication. The injection is prepared as follows: Sodium cacodylate, 5.0 grams; morphine hydrochlorate, 0.25 gram; cocaine hydrochlorate, 0.10 gram; sodium chloride, 0.20 gram; distilled water, 100.00 c.cm. The preparation contains 0.05 gram of sodium cacodylate per c.cm. Cases with congenital weakmindedness were not benefited; for example, a man aged 32 years, weak-minded, apathetic, and of dirty habits; confusion of ideas; no improvement. Cases of melancholia, and the acute functional psychic disturbances improved: for example, a woman aged 28 years, with delusions of persecution, and hysteria, with alternations of depression and excitement, erotic tendencies, refusal of food, and cataleptoid attacks. She showed gradual and steady improvement with the hypodermic treatment. Paulet records 17 cases in all, with full clinical histories. Further, in Magnan's clinic of St. Anne's Asylum the following cases were treated, viz.: Melancholia and mania in their excited states, neuropaths with want of mental balances (*desequilibres*), general paralytics, and dements. The Na or Mg salt was used: the general result was that the treatment was good in cases of profound depression of spirits and lowered bodily nutrition.

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**(130) Intramuscular Injections in Syphilis.**

In pleading for a more general use of intramuscular injections of mercurial salts for syphilis, Max Stern (*Münch. med. Woch.*, July 2nd, 1901) points out that treatment by inunction and by internal administration of mercury has a great many drawbacks. The former is dirty, does not admit of exact dosage, acts irregularly, and, if left to the patients or patients' attendants, is rarely carried out satisfactorily. He gives a brief historic survey of the injection treatment, which dates back to John Hunter, and was at first practised as subcutaneous then as intramuscular, and more recently (by Baccelli) as intravenous injections. The latter method is too dangerous to be introduced into daily practice. In favour of the intramuscular method, he states that it is certain in its action, the absorption is quicker than by other methods, and its application is clean; further, one can be certain of the exact dose of the salt which is absorbed. The condition of the skin has no influence on the rate of absorption, as with inunction, and he lays great stress upon the fact that in advanced age, and in cases complicated with eczema, psoriasis, prurigo, ichthyosis, etc., the inunction treatment cannot be carried out at all. Its drawbacks consist in the possibility of local disturbances, which, however, are rarely severe. The intramuscular method can be carried out by means of soluble or insoluble salts of mercury. Of the former, calomel in oil emulsion, hydrarg. salicylic. in paraffin emulsion, ol. cinereum and thymol mercury are the most usual preparations. Of the latter, the perchloride, the peptonate, the cyanate and hydrarg. benzoicum are among the best. The latter class has the advantage over the former that the dose can be more exactly determined. He (Stern) considers that the statement that the insoluble salts are gradually absorbed, and therefore protect the organism against an overdose, is questionable, since there is evidence that the insoluble salts at times collect, and suddenly give rise to dangerous or even fatal poisoning. He further has experienced that the action is much more rapid with soluble salts. He gives reasons for preferring hydrarg. perchl., which he uses in a 1 per cent. solution for women and 2 per cent. for men, and to this he adds 45 grs. (90 grs. for men) of sodium chloride. The injection is carried out with a well-built glass and metal syringe, and with an ordinary needle. This is to be carefully sterilised, and the site of injection (gluteal region) is carefully disinfected. The needle is then inserted quickly and deeply at right angles to the skin into the muscular tissues. The syringe is detached, and if any blood flows out of the needle another site must be chosen. The fluid is then slowly injected. He describes some cases in which this method acted with remarkable certainty and rapidity after other methods had given unsatisfactory results. In conclusion he sums up thus: The intramuscular injections should be used (1) when the pathological or other condition of the skin or digestive organs render inunction or pills inadvisable; (2) in severe syphilis, when important organs are attacked, and rapid and energetic treatment is called for; (3) when one wishes to clear up a doubtful diagnosis; (4) when other means have already given unsatisfactory results; and (5) alternately with other methods in the intermittent form of treatment.

## PATHOLOGY.

**(131) The Typhoid Bacillus.**

Guizzetti (*Il Policlin.*, f. 5, 1901), continuing his researches into the ways of the typhoid bacillus when introduced into the human organism, says that in the great majority of cases the bacillus enters first by way of the intestine, passing thence through the lymphatics of the intestine and mesenteric glands into the thoracic duct and blood stream. Thence it becomes distributed to all the organs and tissues, but finds in the spleen and red bone medulla alone places where it can develop and thrive. It may be carried to the liver (probably *viâ* the splenic vein), and become eliminated in the bile. In all the other organs of the body, including the blood, it is usually destroyed and eliminated by the kidneys. Sometimes, however, owing to diminished resistance, it may develop in irregular situations, and so give rise to complications. In cases of extreme virulence you may even get a true typhoid septicæmia. At the end of the disease the bacillus usually disappears, and last of all from the spleen and red medulla; it may remain longer, and then is confined to infarcts, abscesses, etc. The author finds no evidence that the typhoid bacillus ever enters *viâ* the respiratory passages.

# AN EPITOME

OF

# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (132) Chronic Pentosuria.

J. Meyer (*Berl. klin. Woch.*, July 29th, 1901) reports a case which has come under his notice. He states that only 4 other cases have been recorded. The patient was a male, aged 39. He was always pale, thin, and nervous, but had never been ill before. Six years previously he was refused by a life insurance office on account of "diabetes." His urine gave a marked positive reaction with Trommer's and Moore's tests, but no examination was made as to polarisation or by the yeast test. After undergoing a dietetic treatment and a course at Carlsbad, his urine was examined by polarisation, and found to be natural. Five years ago the same result was found, and the patient was considered well enough to marry. On examination he presented a pale, drawn appearance. His weight was 11st. He complained of pain in the back, feeling of languor, headache, and giddiness, as well as severe neuralgic pains in both sciatic nerves. There was no increase of thirst and no changes in the skin. The urine was clear, and contained no albumen. His average daily quantity was about 63 ounces. Tested by Moore's and Trommer's reagents, there was a marked positive reaction, which, however, developed very slowly. A negative result was obtained by testing by the yeast test, and with polarisation. The orcin test for pentose was applied. This consists of mixing a few cubic centimetres of urine with an equal quantity of concentrated hydrochloric acid; to this is added about a saltspoonful of orcin, and the whole is heated to boiling. If pentose is present a green coloration and a precipitate of greenish blue flakes takes place. The contents of the test tube is then shaken up with amyl alcohol, and the coloration will be taken up by this latter, and will show, on spectroscopic examination, a band between C and D (in the transition of red to yellow). A further test was applied, which consisted in the demonstration of osazon, which has a melting point of between 157° and 160° C., and which shows a N value of 17.09 per cent. Pentose was thus shown to be present. The patient was treated with a full diet, and somatose, and improved rapidly. He lost his headache, neuralgia, and other symptoms, and the pentose decreased to half the quantity. Later on, caused by mental excitement, the symptoms recurred, and the pentosuria was found to be as severe as before, but in four weeks this was again greatly diminished.

### (133) Etiology of Beri-beri.

S. Ebbell (*Norsk Mag. f. Laegevidensk.*, lxii, p. 956, August, 1901) argues strongly in favour of the theory that beri-beri is due to infected rice. He points out the unsatisfactory character of other theories, and emphasises the fact that the disease is most common in the rice-producing countries — for example, China, India, Korea, the Philippines, Japan, Java, New Guinea, Malay Peninsula, Brazil, Fiji Islands, and Madagascar. Further, its symptomatology is that of a poisoning rather than of an infection; the virus seems to require to be constantly renewed from without; there is usually little or no fever; it is not infectious; it has a long incubation period; and it is almost hopeless to treat the disease during a bad epidemic in the place where it was acquired. Further, rice is not well borne by patients suffering from beri-beri, and often the substitution of wheat, barley, beans, or even animal food has a good effect in treatment. In many ways beri-beri resembles such a toxic condition as chronic alcoholism.

### (134) The Tenacity of Scarlatinal Infection.

F. Lommel (*Münch. Med. Woch.*, July 16th, 1901) considers that a characteristic of the infection of scarlatina is its power of remaining active for a very long time. He quotes Murchison (among others) to show that a case of scarlet fever may occur a considerable time after a previous case has been removed. His own observations were made in Jena. In a home for deaf children, a boy was taken ill with scarlatina on October 10th, 1900, and was removed to hospital on the same day. On November 17th he was discharged and returned to the home. Twenty-one days later another boy, who occupied the same room, was taken ill with scarlatina. He was at once removed to the isolation room, and was thence removed to hospital on the following day. The isolation room was disinfected with formalin a few days after. A little later on a 16-year old girl occupied this room as a bedroom, and mixed freely with the other inmates of the home. The room was thoroughly "cleaned" at Eastertime, and on April 9th, 1901, the son of the director (9 years of age) used the room to sleep in until April 15th. He returned to his own room then, and on April 20th was taken ill with scarlatina. There was no other case of scarlatina in Jena or its neighbourhood. Lommel points out that in spite of the 133 days which had elapsed since the removal of the second patient, the room had remained infectious, and further remarks that the girl, who was herself insusceptible to the infection, did not carry it to any of the children. He excludes the possibility of the second case having brought back the infection, for in that case some of the other children in the house would have been infected.

### (165) Orbital Stenosis and Hereditary Syphilis.

L. Bouveret (*Lyon Médical*, May 19th, 1901) records the following case. A girl, aged 18 years, presented many signs of old-standing syphilis. She was of very small stature; the head was large and asymmetrical; the teeth were small, decayed, and striated; the tibiæ were characteristically deformed, and there was a diffuse enlargement of the right femur. The patient's grandmother stated that the mother had been inoculated with syphilis before the birth of the patient, who was treated for signs recognised as syphilitic immediately after birth. She had never suffered from articular rheumatism, and had escaped the usual infectious diseases of childhood, including scarlet fever. At 8 years of age she had pains in the bones of the legs. Menstruation appeared at 15, and the girl then began to suffer from anæmia and palpitation. The heart showed marked signs of mitral stenosis, diastolic and presystolic murmurs at the apex, with reduplication of the second sound. The symptoms were slight, consisting only of a little oppression and of palpitation on hurrying. Similar cases have been recorded by Gaston and Keim, by Ed. Fournier and others, and Bouveret thinks that the relation cannot be a coincidence. He stated that both tuberculosis and hereditary syphilis can provoke two kinds of endocarditis, the one characterised by tuberculous nodules or gummata, the other a simple sclerosis, to which the mitral stenosis may be consequent. Usually, as in the recorded case, many signs of syphilis are present and simplify the diagnosis, but it is possible that syphilis is accountable for certain cases of mitral stenosis of obscure origin, the cardiac lesion being the only dystrophy.

## SURGERY.

### (136) Treatment of Simple Fractures of Long Bones.

Tuffier (*Bull. et Mém. de la Soc. de Chir. de Paris*, June 25th, 1901) holds that in order to bring about complete reduction of a fracture of a long bone, and perfect coaptation of its fragments, it is necessary not only to make out the nature of the injury but also to make sure of the results of the attempts at reduction by the repeated application of the *x* rays. If the fragments cannot be brought into what is called mathematical coaptation by ordinary means, the author would expose the seat of fracture, bring the ends into perfect contact by careful and patient manipulation, and maintain them in position by a metallic suture. A contrast is drawn between the results of ordinary or clinical reduction and of those of radiographic or anatomical reduction, and a long list is given of troubles, both primary and remote, which are likely to follow an inacurate consolidation of a broken bone. Tuffier points out the necessity of most careful attention to aseptic details in the open method of treating fractures. The wound is made through contused tissues and effused blood, which may be regarded as passive and devitalised elements constituting a favourable medium for the culture of infective agents. Much im-

portance is attached to the subsequent immobilisation of the injured limb by means of suitable splints or plaster of paris.

**(137) Myositis Ossificans in a Stump.**

A. KATZ (*Progrès Méd.*, August 17th) records a case in which amputation of the thigh just above the knee was performed for the results of an accidental traumatism; suppuration followed and necrosis of the femur necessitated a second operation; thereafter a good, well cicatrised, and painless stump was obtained. Some weeks later the stump became painful on pressure, and soon the sensitiveness which was limited at first extended to the whole cicatrix, and became almost intolerable. Careful palpation revealed a hard patch which had all the feeling of bone; the skin over it was intact and moved freely. A third operation was performed and the osseous disc removed; it lay about 1 cm. below the cicatrix, and while its outer aspect was smooth its under surface was irregular and firmly fixed to the underlying muscles. It was not, however, adherent to the lower end of the femur. It weighed 120 grams. Recovery was complete, and the resulting stump was in every way satisfactory. Katz regards the pathogenesis as doubtful, but thinks that perhaps during the amputation some pieces of periosteum may have been left in the wound, and that these afterwards may have proliferated and formed the osseous disc. On the other hand, it may have been a case of localised myositis ossificans comparable to the osteomata which are met with after contusions accompanied by rupture of muscular fibres. These osteomata are not attached to neighbouring bones, but adhere firmly to the muscles in which they are embedded, two characteristics which were present in the above case.

**(138) The Dangers of Systematic Resection of Omentum in the Radical Cure of Hernia.**

DEJARDIN (*Journ. de Chir. et Ann. de la Soc. Belge de Chir.*, No. 6, 1901) holds that the practice of systematically removing herniated omentum in operations for the radical cure of hernia ought to be abandoned. Such practice, it is held, is quite useless and, if the whole of the sac be removed and its orifice completely closed, can be readily dispensed with. Removal of prolapsed omentum constitutes suppression of a portion of a useful abdominal organ, and, moreover, is a dangerous procedure, as, whatever precautions are taken, it may result in post-operative pains, in primary or secondary internal haemorrhage, in localised suppuration or peritonitis due to infection from the ligature, and, finally, in the formation of adhesions which may excite pain, and cause sooner or later intestinal obstruction.

**(139) Hat-pin in the Bladder.**

H. E. W. BARNES (*Medical Age*, July 25th, 1901) records the case of a man suffering from a urethral stricture which he was in the habit of relieving by introducing a porcelain-tipped hat-pin head first into the bladder. On one occasion the point of the pin slipped from his grasp, and the foreign body passed within the bladder. The pin was five inches in length. Half an hour later the writer saw the patient, and found the point of the pin within the urethra at the junction of scrotum and penis. He passed his finger inside the rectum and found the head of the pin within range of touch. He then pressed upon the head of the pin, and made the point emerge through the tissues in the anterior part of the perineum. He pulled the pin out till only the head was left in the urethra: then, changing the direction of pressure, he pushed the head along the urethra till it appeared at the external meatus. The small wound gave no trouble.

**(140) Appendicitis in a Seven Weeks' Infant.**

G. BLUMER AND H. L. K. SHAW (*Arch. Pediat.*, xviii, p. 593, August, 1901) point out the rarity of appendicitis in the first two years of life, and give details of a case in an illegitimate male infant 7 weeks old. The child had gonorrhœal ophthalmia and thrush, and had in his short life been fed on various infant foods. When little more than a month old he had an ischio-rectal abscess, with both an internal and an external opening. He was soon thereafter brought into hospital in a comatose state; for a week there had been œdema of the face and limbs, and there was now general anasarca. He weighed only 6 lbs. 6 ozs.: there was talipes calcaneus, there was some intertrigo, and the skin had an offensive odour. Under treatment with hot baths the œdema diminished, and the infant was fed upon barley water and milk. He grew weaker, however, and died in a stuporous condition two days after admission. There had been one evacuation of the bowels, and that contained blood, pus, mucus, and undigested food. The necropsy revealed adhesions between the caput cæcum and the sigmoid flexure, and on breaking up these it was found that there was an abscess cavity with the appendix (1 inch long) projecting into it. The cavity contained 10 c.cm. of brownish pus. Sections of the appendix revealed a state of acute inflammation. During life there were practically no symptoms pointing to any special abdominal disturbance.

## MIDWIFERY AND DISEASES OF WOMEN.

**(141) Laceration of Vagina in Labour.**

LUDWIG (*Wien. klin. Woch.*, 1901., Nos. 18 and 19) has prepared a valuable monograph on this subject. He publishes notes of cases already reported and discusses the theories of the causation of this complication. In 58 cases the laceration was posterior in 17, postero-lateral in 5, anterior in 14, antero-lateral in 4, and lateral in 9. In the remaining cases the rent was circular and more or less complete. The chief complications are laceration of the peritoneum or bladder, and prolapse of the abdominal viscera. The latter as well as the passage of the child or placenta through the laceration may interfere with the passage of the forceps. Prognosis is grave. Out of 47 cases, 16 died of peritonitis, 6 of hæmorrhage, 5 from uncertified complications. The child must be delivered speedily by the forceps, but craniotomy, decapitation, or evisceration may be needed. Abdominal section is usually needed when the fœtus has passed more or less into the abdominal cavity through the rent. It is dangerous in such a case to deliver it through the rent. The laceration must be treated by suture from the vaginal side in order to check the hæmorrhage; but when the laceration runs up high and there is persistent bleeding from its upper part abdominal section is needed. In Ludwig's own case it was then necessary to do a hysterectomy, though usually the bleeding point may be secured without extirpation of the uterus. When the hæmorrhage is stopped the bruised edges of the rent must be trimmed. Drainage is necessary. Sometimes the obstetrician has to rely on the tampon.

**(142) Treatment of Primary Vaginal Cancer.**

KROENIG (*Arch. f. Gynäk.*, vol. lxiii, 1901, Parts 1 and 2) reminds us that this rare disease is often inoperable from the first, that is, in cases where it infiltrates the whole vagina, converting it into a rigid canal. There is a localised variety, however, which in two-thirds of all reported cases arises in the posterior wall. Simple excision is quite useless. Extirpation of the entire vagina with the uterus has proved on the whole unsatisfactory; recurrence nearly always occurs. Out of two cases operated on by Kroenig, one patient died ten weeks after the operation from return of the disease, the second was living free from recurrence five years after the operation. The rectum is rapidly involved, and the tissues of the posterior part of the bladder soon became infected. The bladder, especially its portion in close relation to the vagina, cannot be safely excised. But, as general surgeons have shown us, the rectum can be freely excised with relative ease and safety. Kroenig considers that parasacral incisions are not needed; the rectum can easily be reached from the vagina. The vagina and uterus may be extirpated first, the rectum set free and its upper part drawn down, then a portion is excised and the contents united (Zweifel). Friedrich's plan is more suitable in some cases. The posterior wall of the vagina is resected, and the corresponding part of the rectum set free by lateral incisions which are prolonged till the entire calibre is liberated. Douglas's pouch is opened, and the uterus and part of the anterior vaginal wall removed, then the portion of the rectum which was adjacent to the vagina is resected. Care must be taken not to disseminate the disease, the incisions being made far from the cancerous deposit.

**(143) The Pathogenesis of Eclampsia.**

Stroganoff (*Zeits. f. klin. Med.*, Bd. 39, p. 503) endeavours to prove that eclampsia is a general acute infectious disease, and that the theory that the condition arises out of a primary renal disease cannot be sustained. According to his opinion the nephritis which frequently accompanies it is secondary. In support of this view he makes the following statements: Eclampsia is a general disease and affects different organs, the brain, lungs, liver, kidneys, spleen, heart, pancreas, blood, in degrees of varying intensity. The symptoms of the short incubation stage are headache, dulling of the senses, affection of the sight, etc. The disease is very acute and may be fatal in a few hours; it is accompanied by fever which cannot be explained by the convulsions. According to the observations of many authors, it is rarely repeated, one attack appears to confer immunity. Stroganoff also finds support for the theory in the frequently concurrent disease of the infant, presumably contaminated through the placental circulation. He also states that cases occur in series in the large lying-in establishments, and a house-to-house infection may be traced. He supposed the cause of the disease must be of high virulence, and only finds its most favourable ground for development in lying-in women and infants.

**(144) Abscess of Uterus after Abortion.**

Brindeau (*L'Obstétrique*, May 15th, 1901) writes of a woman who was admitted into hospital on the evening of January 31st, having been delivered in the afternoon of an embryo two months and a-half old. The abortion was attributed to a fall. The patient was very weak, with a dry tongue, small pulse, and high temperature. The abdomen was painful, but not tympanitic. Two days later the abdominal pain persisted, and there was fœtid vaginal discharge. The curette was employed, but only a little broken-down tissue was removed. The woman died on February 4th. On opening the abdomen in the pathological theatre a great quantity of pus escaped. The peritoneum and pleura were lined with false membranes. The pelvic cavity was full of pus, containing streptococci and the bacillus coli. On the anterior aspect of the uterus, which was as big as at the second month of pregnancy, lay a swelling as big as a hen's egg. Dark pus escaped through a minute orifice in its wall. The abscess, for such the swelling was, had developed in the middle of the uterine wall, and a small track was found running between the tumour and the uterine cavity—clearly a perforation made by an instrument.

**(145) Evils of the Ovarian Pedicle.**

Rosen (*Przeglad Lekarski*, 1900, Nos. 46 and 47) shows from statistics that the usual pedicle of an ovarian tumour or of a diseased tube or extrauterine sac, tied in one piece, is a source of danger. Hæmorrhage, free and fatal, or else in the form of a hæmatoma liable to suppurate, is not rare. Obstruction, usually late, has been noted nine times in 665 recent cases. Parametric and peritoneal exudations are very common in thick pedicles, and greatly retard convalescence. Jordan of Cracow modifies the customary treatment of the pedicle. It is held with one or two forceps, and divided on the distal side of those instruments. The big vessels are then secured; the forceps are afterwards relaxed, and any vessel that bleeds is tied. The peritoneal folds of the pedicle are sewn over its bare surface. Out of 51 cases under Jordan, before the adoption of the new method, exudations occurred in 23 (45 per cent.). Since then, out of 56 cases where the pedicle was treated as above described, exudations were noted only in 5 (9 per cent.); whilst in 26 cases where the pedicle was tied in one piece there were exudations in 14 cases (23 per cent.). The advantages of the new method are self-evident.

## THERAPEUTICS.

**(146) The Action of Atropine in Bradycardia.**

Johanessen (*Wien. med. Blätter*, July 4th and July 11th, 1901) points out that an injection of atropine may sometimes decide whether bradycardia is due to direct or reflex stimulation of the inhibitory centre in the medulla oblongata, or of the cardiac branches of the vagus, on the one hand, or to intracardiac causes on the other. If the bradycardia is of extracardiac origin, atropine causes its disappearance. A man, aged 37, had right hemiplegia due to thrombosis of the left Sylvian artery. The pulse-rate was 45 in the minute, though the heart was normal. A hypodermic injection of 0.001 gram (1/60 gr.) of atropine caused it to rise to 110 in the minute. If, however, the bradycardia is of intracardiac origin, it is uninfluenced by atropine. The most common cardiac changes, which may be accompanied by bradycardia, are, in order of frequency, fatty degeneration of the myocardium, sclerosis of the coronary arteries with the resulting fibrous myocarditis and thrombotic myomalacia, aortic stenosis, and mitral stenosis. In the last-named lesion, however, bradycardia is very rare. Since, however, these lesions are more often unaccompanied by bradycardia, they cannot be its cause, and the slow pulse can only be explained by a diminution in the energy of the automatic motor centres situated in the heart itself. The reaction to atropine may, therefore, be considered to be the measure of the excitability of these centres. If all external inhibitory stimuli are removed, and yet no increase in the rate of the cardiac beats results, the motor centres are exhausted. Atropine causes an appreciable acceleration of the pulse in healthy subjects only under 50 years of age. Above that acceleration is slight or absent. In other words, the senile heart is as incapable of responding to atropine as are many organically diseased organs. Thus even in youth atropine seldom accelerates the beats if the aortic valves or the myocardium are diseased, though as a rule it does if the mitral valves alone are affected. If bradycardia is a complication of heart disease there are usually characteristic symptoms, and frequent sudden attacks of syncope, in which the heart ceases to beat for as long as sixteen or eighteen seconds, occur. The sudden cessation of cerebral circulation gives the attacks a superficial resemblance to apoplexy. Though death may result during an attack, consciousness is usually regained rapidly, and there are no paralytic sequelæ. Convulsions have been observed, but the attacks are never accompanied by dyspnœa, pain, or angina pectoris.

**(147) Trional Poisoning.**

M. Rosenfeld (*Berl. klin. Woch.*, May 30th, 1901) finds that out of the enormous number of cases in which trional is given there are only 8 cases published in which the drug produced severe intoxication symptoms. He mentions 2 further cases of trional poisoning, but disregards them as they were attempted suicide cases and dealt with very large doses. In 4 of the cases hæmatoporphyrinuria was reported. In 1 case an unknown pigment (not hæmatoporphyrin) was found in the urine, and in another a pigment is reported as identical with Quincke's pigment of sulphonal poisoning. Three of the cases ended fatally. Rosenfeld is in a position to add a further case to the list. A young woman, aged 28 years, whose father had died of "senile dementia," was admitted into the Strasburg Psychiatric Clinic suffering from delusional insanity, dementia, etc. Eleven days after admission patient refused food and slept very badly. Trional gr. xv was ordered. About six weeks later, in a report stating that the patient's condition was unaltered save for some loss of weight, a note appears that trional was taken irregularly. Two months later the patient is reported to have "good nights when trional was taken." Six weeks later, during a remission of the mental symptoms, trional was taken regularly. The remission lasted for about a month, and the notes report that trional was continued irregularly. The secretion of saliva was enormously increased in quantity. Ten days later the patient appears to have lost ground, and the note reports "advanced weakness; patient has to lie in bed; urine (retention) was normal." Trional was now discontinued. Two days later the respirations increased in depth and frequency (35); urine passed in the bed, hence no examination. The next day the weakness increased, and without any fresh symptoms, the patient died. Before death urine was drawn off and found to contain a pigment, which proved spectroscopically to be hæmatoporphyrin—no albumen, sugar, indican, diazo, or blood. The *post-mortem* examination reports remarkable smallness of all organs, but especially the heart and uterus. Central nervous system

macroscopically normal. The diagnosis rests on the symptoms of giddiness, unsteady gait, loss of reflexes, the deep type of respiration, and is confirmed by the presence of hæmatoporphyrinuria. The explanation offered by Rosenfeld why 15 grs. of trional at first produced no toxic symptoms, but later led to the death of the patient, is that the puerile habit of body (small organs, and chiefly small heart), with the increasing loss of strength due to the psychical changes, predisposed the patient to the toxic effects of the drug. The hæmatoporphyrinuria appeared late, after the other symptoms had developed, instead of the more usual early appearance of this symptom.

**(148) Protective Inoculation for Dysentery.**

K. SHIGA (*Sei-i-Kwai Med. Journ.*, xx, p. 89, June 30th, 1901) describes the method of obtaining and testing the therapeutic serum for use in dysentery. The horse or ass was used as the immune animal, an antiseptic (carbolic acid) was added to the serum, and the testing was carried out on guinea-pigs and mice. He has treated 470 cases of dysentery since 1897; of these, 258 had the serum. It was injected into the side of the chest, and the dose varied from 6 to 10 c.cm. in mild cases to 15 to 20 c.cm. in serious ones. Usually the site of the injection showed no change. An eruption round the site occasionally followed (37 per cent.); this was very rarely found all over the body (2.5 per cent.), and sometimes there was pain in the joints (knee, elbow, wrist). If the treatment was carried out in the early stages of the disease, the diarrhœa disappeared and in two or three days normal stools were passed; but if it was given at the time when the stools were muco-sanguineous, the diarrhœa was only diminished, and the duration of the illness was somewhat shortened. With the serum the mortality was from 12.5 to 8.5 per cent.; with medicinal treatment it was 35.6 per cent.

**(149) Treatment of Malarial Hæmaturia.**

SPARKMAN (*Therap. Gaz.*, May 15th, 1901) regards the hæmaturia or hæmoglobinuria of malaria as due to profound poisoning in neglected or frequently-recurring cases of intermittent fever. It does not occur in the primary attacks of malarial fever, and seldom in the remittent form. Nausea and jaundice are frequent accompaniments. Suppression of urine, when it occurs, is due to clotting of the exuded blood within the uriniferous tubules, and the result is uræmia and death shortly afterwards. There is no warning of the attack of hæmaturia, except that it comes after a chill. Treatment includes the exhibition of aromatic sulphuric acid in mild cases, and a mixture of digitalis, tincture of ferric chloride, and ammonium chloride in the severer forms. For the nausea and vomiting mustard plasters should be applied to the epigastrium, while to prevent suppression of urine triacetate combined with infusion of digitalis should be given for diuresis. Ergot is not good in such cases, as it tends to favour clotting of the blood and increases the renal mischief. During convalescence the sulphate of quinine and iron should be administered regularly, but if hæmaturia returns the quinine should be stopped. For constipation, which is liable to occur in these patients, calomel should be given.

## PATHOLOGY.

**(150) A Bacillus Isolated from the Blood of Syphilitics.**

DE LILLE AND JULLIEN (*Académie de Med.*, Paris, July 2nd, 1901) report the successful isolation of a characteristic bacillus from the blood of syphilitics. The blood in each case was taken from a vein of the arm; in this blood are to be seen the spherical refractile bodies which have been described by other writers, but the nature of which has not been elucidated. The authors believe that the negative results of culture experiments hitherto have been due to the presence in the coagulated blood of a bactericidal alexin. They have used for culture blood plasma separated from the serum, and also fluid from blisters which they state is alexin-free. From these on the ordinary media they almost always obtained a culture: in cases primarily negative they were successful by using the method of culture in a collodion sac. The bacillus is polymorphic, either short or threadlike. The appearances on culture media are described. The bacillus is pathogenic to guinea-pigs, and produces locally an indurated ulcer with swelling of the nearest lymph glands; the organism was in no case found in the cadaver. The blood of syphilitic patients added to a three days' old culture of the bacillus causes agglutination of the latter; normal serum produces no such effect. Inoculation of the bacillus on animals already infected with syphilis was without effect. From a rabbit inoculated from a culture a large quantity of blood was obtained on the third day: on separating this into plasma and serum cultures were obtained from the plasma, not from the serum, an observation which supports the theory of an alexin in the serum. This alexin, the authors state, is "fixed" by the isolated bacillus when the latter is injected into animals already infected with syphilitic products.

**(151) The Bacteriology of Acute Articular Rheumatism.**

MEYER (*Deut. med. Woch.*, February 7th, 1901) records the results of the bacteriological examination of a series of cases of this disease. Hitherto the most interesting results have been those of Leyden, who in 1894 isolated a small diplococcus from four of six cases of malignant endocarditis, and of Wassermann, who isolated a streptococcus from the blood and the cardiac valves of a fatal case of chorea, which when injected into animals produced a purulent exudation in the joints. Meyer obtained negative results from the blood and joint exudations of the first cases examined though many methods were tried. Finally from the tonsils of the five cases of typical acute rheumatism he isolated a diplococcus arranged in streptococcus chains. This grew best on blood agar, but the cultures soon lost virulence. Streptococci were also isolated from several control cases of throat lesions in scarlet fever, sepsis, influenza, etc., but none of these produced the characteristic results which followed the injection of the organism isolated from the cases of acute rheumatism; these were locally infiltration and necrosis, but never abscess, and generally after six to ten days a sero-purulent exudation of the joints, from which the organism, however, was not isolated, although in two cases it could be seen microscopically in the pus cells. Usually three or four joints were affected, the temperature rose to 40° and 41° C., and the signs persisted for eight days. *Post-mortem* examination showed changes resembling those of human acute rheumatism. In eight cases there was pericarditis with effusion, in two peritonitis, and in one pleurisy; in seven endocarditis affecting the valves. From two of the latter the organism was recultivated, the results from the others were negative: but the negative results are to be understood in view of the great instability of the organism in cultures and in the light of the very numerous negative results of bacteriological examination in human polyarthritis. The organism is probably identical with v. Leyden's, possibly also with Wassermann's, and appears to be, if not exclusively, at any rate in a large proportion of cases, the actual cause of the disease.

**(152) Chorea.**

LUIGI (*Rif. Med.*, April 1st, 1900) has practised lumbar puncture in five cases of chorea in children with the object of testing for bacilli. In the first case, a girl of 10 years, suffering from acute fatal chorea, the rachidian fluid extracted during life proved sterile in all media, although after death the staphylococcus pyogenes aureus was found in the brain, and then in the blood in the cerebral vessel. In the second case the staphylococcus citreus was found in the cerebrospinal fluid and urine, not in the blood; it was only slightly virulent. This is the first case in which a staphylococcus has been found in chorea in the cerebrospinal fluid during life. The third and fourth cases proved negative to bacteriological examination. The fifth case, a girl of 14, with poor family history, was first admitted into hospital with facial erysipelas in February, 1900, cured in fifteen days; second slight attack in April; readmitted May 31st for third attack. On the third day of the disease she developed chorea. Lumbar puncture was performed on June 3rd, and about 12 c.cm. clear fluid let out. After puncture the child seemed better, and left the hospital quite well June 13th. Cultures of the fluid withdrawn showed the presence of streptococcus.

# AN EPITOME

OF

# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (153) Albuminuria after Cold Baths.

Giacomo Rem-Picci (*Il Policlin.*, August, 1901) has experimented with 35 healthy young men whose urine was examined some 350 times after 115 cold baths, that is, baths in the open air of about three minutes duration, the temperature being 12° to 13° C. Under these conditions albuminuria was a constant phenomenon: in the most marked cases, however, it never reached more than 0.25 gram per 1,000. The tests used were Heller's, Spiegler's, and Reale's. The less robust and thinner subjects showed the most albuminuria. Above 15° to 20° C. no albuminuria appeared even after prolonged bathing. The albumen appears rapidly—according to one experiment in eleven minutes after a bath of ten minutes duration. It does not last long, and is always absent the next day. The habit of constant bathing does not prevent albuminuria under the aforesaid conditions. The albumen was of serum-albumen class, and hyaline cyanides were occasionally found. Diuresis is frequently observed, but is not a constant phenomenon, and is more often noticed after short baths in people who feel the cold very much. The total solids eliminated in the urine were increased. No urobilinuria was ever detected. As to the pathology of these cases, the author believes it to be due to an action on the nervous control of the kidneys excited reflexly through the shock of the cold water on the skin, such action on the kidneys not being through vasomotor disturbance alone, but chiefly directly on the nerve supply of the kidney. Albuminurias of the type in question are functional, but if long continued would be a contraindication against bathing—at any rate, at such low temperatures.

### (154) Adiposis Dolorosa.

Féré (*Rev. de Méd.*, August, 1901) discusses this malady, and arrives at the conclusion that the symptom complex described by Dercum under the name of adiposis dolorosa is merely an accidental association of nerve pain with obesity. He quotes at length 4 cases of his own—one of them in a man—to show that these two symptoms may develop at different times, and run a course which is by no means concurrent, and that the other manifestations are but casually combined with them. He states that the deposition of fat assumes two chief types—a diffuse allied to ordinary obesity, and a disseminated resembling multiple lipoma. The localised tumours in the latter case have often been described under the names of painful subcutaneous tubercle, irritable tumour, etc., but it has been shown that in many instances the pains persist after their removal; that, in fact, it is the patient and not the tumour which is irritable, and that the growth is merely the determining cause of the local sensibility. In one of Féré's cases the pains became more intense, as the adiposity diminished. Two of his patients were hysterical, the others the subject of neurasthenia; in two of the women the adiposis was associated with the menopause: as to the third, who was 42 years of age, no details in this respect are given. The author discusses the theories of the disease put forward by Kjellberg, Mills, and others. He does not believe the pains to be due, as a rule at any rate, to chronic inflammation of either the muscles or the subcutaneous tissue, nor does he find any evidence from his own patients that the obesity is of thyroid origin. Such circumstances may account for some of the examples of the disease, but the occurrence of so many alleged causes is to be regarded as further evidence that adiposis dolorosa is not a clinical entity.

### (155) Tuberculosis of the Pericardium.

Riesman, of Philadelphia, records a case of pericardial tuberculosis, which must be regarded as primary from the clinical point of view, and possibly also in the strict anatomical sense (*Amer. Journ. of Med. Sci.*, July, 1901). His patient, a man aged 32, with good family history but of intemperate habits, was admitted into hospital on May 22nd, 1900, with a ten days history of pains in the shoulders, chest and back, with cough and headache. On examination the patient was seen to be a well nourished man with very irritable manner. The pulse was small, feeble and compressible. The apex beat could neither be seen nor felt. The cardiac dulness was increased to the left, and a loud friction sound was heard over a variable area of the precordia. There was a slight left pleural effusion but no endocardial murmurs, no systolic retraction of the impulse, and no pulsus paradoxus. The temperature was irregular. On July 11th a quart of bloody fluid was withdrawn from the left pleural cavity. In September the patient was tapped a second time, but ascitis developed and he died from syncope on October 11th. At the necropsy the abdominal organs were found congested. The left pleural cavity contained much fluid, the left lung was collapsed. The right pleural cavity was obliterated by old adhesions. The pericardial sac was obliterated. The two layers, bound together, had attained in places a thickness of 1½ cm. Macroscopically the only evidence of tuberculosis was an old healed fibroid patch, very small in size at the right apex. On microscopic examination the two layers of pericardium were seen to be intensely inflamed with round-cell infiltration. At the points of densest infiltration numerous giant cells were seen surrounded by epithelioid cells. The appearance was typical of the so-called tuberculous infiltration. Over the right ventricle there was much caseous necrosis. No tuberculosis of the pleura could be seen. A guinea-pig injected with the pleural fluid died four months after inoculation and showed typical tuberculous lesions. Riesman recalls the fact that Harris's table of 25 cases of mediastino-pericarditis contained 9 cases associated with tuberculosis, and believes that a great proportion of cases of pericarditis without obvious cause are due to the tubercle bacillus. In the case recorded the bloody character of the exudate first aroused suspicion.

### (156) The Tendo-Achillis Reflex.

Babinski (*Rev. Neurolog.*, May, 1901) again draws attention to the value of the tendo-Achillis reflex in the early diagnosis of certain nervous diseases. He maintains that its absence will serve to distinguish true sciatica due to affection of the sciatic nerve from hysterical pseudo-sciatica. He holds also that it is of great importance in the early diagnosis of tabes; he states that he has seen only 5 cases of this disease in which the knee-jerks were absent, but the Achilles reflexes present, while in over 40 the latter were alone obtained, or in excess of the former. He showed 2 cases at the Paris Neurological Society in May in which the diagnosis of tabes could be verified by the absence of the gastrocnemius jerks, although the knee-jerks were present. He believes that the Argyll-Robertson pupil, if present alone, merely indicates that the central nervous system has been attacked by syphilis.

## SURGERY.

### (157) Surgical Treatment of Acute Infective and Chronic Nephritis.

Pousson (*Bull. et Mém de la Soc. de Chir.*, June 18th, 1901) advocates a discriminating and cautious recourse to operative treatment in certain cases of acute infective and chronic nephritis. Four cases are recorded of the former affection occurring in the course of some general infective disease or as a result of cystitis, in which such treatment was practised by the author. In two of these cases nephrotomy with free incision of the renal capsule was practised with complete success. Of the other two cases in which it was thought advisable to remove the affected kidney, both were fatal, one from infection of the remaining kidney after an interval of four months, the other on the third day from pre-existent pyonephrosis on the opposite side. To these four cases the author quotes eleven others of surgical intervention for acute renal infection, collected from various sources. The mortality in the total of fifteen cases is calculated to amount to 26.66 per cent., which, it is held, is not discouraging if regard be paid to the very unfavourable prognosis of acute infective nephritis, and to the fact that in two only of the fatal cases could death be attributed to the operative treatment. The results in the successful

cases were decidedly good, as all the patients who recovered after operation were living and in good health when last seen at varying, and in some instances considerable, intervals from the period of convalescence. The results of surgical treatment in these cases indicate that in operable forms of acute infective disease of the kidney nephrotomy is preferable to nephrectomy. In such cases the author believes that exposure of the diseased organ and free incision of its capsule acts favourably in the first place by causing a copious flow of blood from the renal tissues, and secondly, by giving issue to pathogenic germs and their toxins, and also by relieving the obstructed canaliculi of epithelial *débris*. Incision of the cervix margin of the kidney and subsequent drainage is regarded as a method of treatment analogous to cholecystostomy in its application to infective angiocholitis. In discussing the operative treatment of chronic nephritis, the author refers to two cases under his own care in which uræmic symptoms consequent on oliguria and renal insufficiency disappeared for a time after nephrotomy to be renewed after the renal incision had closed: in one of which cases the patient was ultimately cured by nephrectomy. In such cases the operation, according to the author, acts favourably by relieving the congested renal tissues, by renewing the circulation and innervation of the diseased kidney (of the normal physiological conditions), and consequently of restoring to the epithelial cells their function of secreting urea and other excrementitial products. Nephrotomy when practised under such conditions, by suppressing the starting point of an inhibitory reflex, may act favourably not only on the diseased kidney but also by indirect influence on the opposite, and it may be quite healthy, organ. In conclusion, the author states that he is of opinion that in certain cases renal insufficiency may be regarded as a formal indication of nephrotomy or nephrectomy.

#### (158) Inflammatory Affections of the Eyes of Infants.

GROENOUW (*Arch. f. Ophthalmol.*, Bd. lii, p. 1) has examined bacteriologically 100 cases of infantile ophthalmia, clinically ranging from a simple catarrh to a severe blenorrhœa. From all these children secretion was taken from the neighbourhood of the lower lids and inoculated on to serum, and subsequently the colonies examined by cover glass preparations. The results showed that the following organisms occurred as definite causes of these inflammatory affections—gonococci, pneumococci, and streptococci; possibly in some cases staphylococcus aureus and bacillus coli. The etiological importance of other organisms was doubtful. The severe cases of blenorrhœa were for the most part caused by gonococci, but there occurred cases in which, in spite of most careful examination, gonococci were not found. The gonorrheal cases always showed clinically certain peculiarities. The cases without gonococci were never complicated by corneal ulcer and ran a much shorter and milder course. Also cases of slight and medium severity without gonococci showed after a few days treatment marked lessening or disappearance of purulent discharge, whereas the pus of gonorrheal inflammation seldom disappeared under two weeks. Gonococci were the cause of the inflammation in 41 of the 100 cases, in 25 of these the affection was severe. In gonorrheal cases for days and weeks after pus has disappeared gonococci may be found in the conjunctival sac so that the use of silver preparations must be continued long after purulent discharge has ceased. The first signs of gonorrhœal inflammation appeared in these cases from the second to the fifteenth day after birth. The presence of leucorrhœa in the mother is of little value in distinguishing gonorrhœal from non-gonorrhœal cases. With regard to the other organisms pneumococci were present in 5 cases (all of severe catarrh), streptococci in 2 (1 slight catarrh and 1 slight blenorrhœa), staphylococcus aureus in 4, bacterium coli in 7. One case of severe blenorrhœa was caused by micrococcus luteus. In the remaining 40 cases the organisms found could not with certainty be connected etiologically with the disease.

#### (159) Abscess of the Liver.

KOBLER (*Virchow's Archiv*, Bd. clxiii, Hft. 1, 1901) discusses the causation of abscess of the liver, and especially its relation to dysentery. In preantiseptic days liver abscesses were common and were due to pyæmic processes. Since then statistics of the disease have been scanty, and affections of the area drained by the portal system supply the greater number of cases, especially inflammatory affections of the cæcum. Kobler analyses 79 cases from the Institute of Pathology and Anatomy at Vienna. Thirty-one of these occurred in connection with occlusion of the bile ducts (23 gall stones, 7 carcinoma, 1 ascaris lumbricoides). Seventeen were secondary to disease in the portal area (6 disease of the female genital organs, 4 dysentery, 3 typhlitis, 1 pancreatic abscess, 1 suppurating hæmorrhoids). Thirdly, pyæmia accounted for 13 cases, and fourthly, in 18 either the cause was not discovered or arose from echinococcus (8) or contiguous suppuration (4). In Bosnia the disease appears to be unusually common. In the Sarajevo Hospital, 10 cases were examined *post mortem* in six years. In 8 of these there was dysentery. Two other cases operated on in the hospital were secondary to dysentery, and Schweiger has published records of 26 other cases in Bosnia, in 20 of which dysentery was present. In this country dysentery is endemic, and accounts for the large number of cases of liver abscess. A comparison of the two sets of statistics shows that any conclusion as to causation drawn from the records of a single locality are likely to be fallacious.

#### (160) Salivary Calculus.

SALOMON (*Prog. Méd.*, August 17th, 1901) records a case of calculus in Steno's duct in a woman, 64 years of age. It had been growing for thirty years. It at length gave rise to an abscess in the cheek, leading to its recognition and removal. It weighed over 7 grams, and was composed chiefly of triple phosphate of lime along with some carbonate of lime. Part of it had been embedded in the left cheek and part projected into the buccal cavity, resting on the second upper molar tooth. Such calculi are much less common in women than in men.

## MIDWIFERY AND DISEASES OF WOMEN.

#### (161) Foreign Body Obstructing Parturition.

CZARNECKI (*Deut. med. Woch.*, June 6th, 1901) records a very rare form of obstruction to the act of childbirth. He was called to a woman in labour, and was told by the husband that a "tin box" would have to be removed before the baby could be born. Although he took this to be a joke, he took forceps with him. On arrival he found a primipara, aged 27, of good muscular development, in labour. The os was scarcely the size of a two-shilling piece, and through it he found he could not diagnose the presentation, because of a foreign body which lay between it and the head of the fœtus. This foreign body proved to be a tin box, having a "long-rounded" shape, and it lay transversely across the os uteri. As the head could not pass the obstacle, he proceeded to remove it, which he did by turning it so that the lid presented, taking the lid off, and, securing the body of the box with a pair of bone forceps, he extracted it by careful rotatory movements. He discovered later that the os uteri was incapable of dilatation beyond the size of half a crown, as there were some dense fibrous scars at the right lower surface. On division of these scars the rest of the parturition took place naturally, and the patient made a good recovery. She admitted that she had, as a child of 12, after her first menstrual period, passed the tin box into the vagina to prevent a further hæmorrhage. She had later on attempted to withdraw the box, but in vain. She menstruated regularly, and at the age of 25, after having been married for six months, aborted in the fifth month of pregnancy. She had kept her secret, and had not even told her husband of the box. Shortly before the abortion she had felt the box in the vagina, but, after this had taken place, to her surprise it had disappeared. She was certain that it had not passed through the vulva. Thus the tin box, which measured about 4 in. in diameter, and $1\frac{3}{4}$ in. in height, had been in the vagina for over thirteen years, and in the uterus for a year and a half, without producing any bad symptoms.

#### (162) Antistreptococcus Serum in Puerperal Fever.

BLUMBERG (*Berl. klin. Woch.*, Nos. 5 and 6, 1901), has used Marmorek's anstitreptococcus serum in 12 cases of puerperal fever in the University Clinic of Leipzig. In general all the cases were severe; cases where there was long standing fever which showed no tendency to fall. The investigation makes it appear probable that the serum is of value, especially when the puerperal fever is due to a pure infection with streptococcus. In two such cases the patients recovered. The one had had fever for two and a half days up to 40° C. and above; after she had received 20 grams of serum the temperature was normal and remained so for two days; it then rose again to 40.4° C. in the rectum but fell again on the further administration of serum and remained normal thereafter. As complications of the injections, urticaria, erythema and general and local exanthemata were noted. The local eruptions can be avoided if care is taken to inject the serum entirely into the subcutaneous tissue and not into the skin.

#### (163) Anomalies of Development Due to Intrauterine Periods of Stress.

J. G. KIERNAN, of Chicago, read a paper (*Journal of the American Medical Association*, May, 1901) at the Chicago Academy of Medicine on intrauterine periods of stress, dealing with certain periods of fœtal life specially deserving of attention owing to characteristic pathological anomalies closely associated with them. The fœtal periods specially important were the simian periods, at four and a-half months of intrauterine life, and the period of sexual differentiation. Arrest of development at four and a-half months produced, when syphilis was the cause, a senile appearance of the newborn child, who looked like a little wizened old man. Such a child failed to pass naturally through the first dentition or readily fell a victim to secondary infections. "Precocity, whether of the intellectual or physical (for example, sexual) type is an expression of senile (simian) arrest of development, which causes the child to pass through growth and senescence rapidly." The truth of the popular opinion of precocity—early ripe, early rotten—is illustrated very frequently. Louis II of Hungary was crowned in his second year; at fourteen he was sexually mature and had a full-grown beard; at fifteen was married, at eighteen had grey hair, and at twenty he died. Premature decay may show itself in children as atheroma of the arteries. "This has been observed rather frequently in the children of vegetarians, and after the essential fevers." Many cases of premature or "senile" decay in infancy are met with, and Henoch has called it the state of infantile atrophy. Talbot states that perhaps no two structures in the body are so much affected by the law of economy of growth as the face, jaws, and teeth. Originally the jaws measured 2¾ inches across, now the average one measures only about 2 inches across. The "simian" stage, which occurs at the middle of the fifth month of fœtal life, is a period at which the teeth are very readily affected, and if pathological influences have play during the fourth month of fœtal life the teeth are liable to alter in shape and structure. Teeth without enamel are not infrequently found; sometimes slight quantities of enamel may be found on some teeth. Premature decay of the alveolar tooth-bearing ridges of the jaws may occur, especially in degenerates, neurotics, deaf-mutes, congenital idiots, and blind children. A newborn infant who at birth appears well-nourished is not necessarily a perfectly developed one. The child of a woman who is suffering from phthisis, syphilis, or other defects may be well-nourished at birth, and yet break down at the first dentition, the second dentition, puberty, or at another critical period because of congenital defects present in their germ at infancy, but unfolding themselves later in life.

#### (164) Hysterectomy for Fibroid on Tenth Day after Delivery.

PROCHOWNIK (*Monats. f. Geburts. u. Gynäk.*, July, 1900) reports that a primipara, aged 31, was subject to a myoma larger than a man's head. It lay in the anterior and right aspect of the uterine wall. A smaller growth had developed in the fundus. At term the vertex presented, the child was easily delivered with forceps; it was alive, and weighed 7¾ lbs. Rigors set in on the tenth day. The lower side of the myoma could be felt in the partly contracted cervical canal. The cervix was split and the myoma removed by *morcellement*. Then it was found that the uterus was inverted; it was full of small fibroids. The peritoneum had been opened. On that account the uterus was removed entire.

#### (165) Resection of Obstructed Ureter in Uterine Cancer.

MACKENRODT (*Monats. f. Geburts. u. Gynäk.*, May, 1901) has operated for so-called inoperable cancer on account of suppression of urine. The first case underwent operation three years and three months before this report was read. Two and three-quarter inches of the obstructed ureter were excised. As yet there is no sign of recurrence. Six weeks ago he removed another cancerous uterus for the same reason. In both cases the suppression of urine was cured, and in neither did it seem to be due to pressure from cancerous glands.

#### (166) Puerperal Tetanus.

VAN DE POLL (*Nederl. Weekblad. van Noord en Zuid Nederland*, No. 29, 1900) relates the case of a unipara delivered by a midwife at the seventh month. Two hours later he was called in, and separated manually the firmly adherent placenta. He also sutured a small rupture of the perineum. On the seventh day tetanus set in; 20 c.cm. of antitetanus serum were given, but the patient died on the eighth day.

## THERAPEUTICS.

#### (167) Prophylaxis against Malaria.

FOLLOWING the discovery that the mosquito carries and distributes the malarial parasite, hygienic measures have been attempted in two ways—either the protection of individuals against the bites of these insects or the immunisation of persons against the parasite. The protection of houses by wire netting has given very good results, but the protection of exposed individuals has not been attended with the same success. The experience of Baldi with masks and gloves has been disappointing, as also have been attempts at immunisation with the usual quinine preparations, arsenic, methylene blue, etc. Mori (*Centralbl. f. Bakt.*, June 10th, 1901), on the recommendation of Professor Celli, has similarly experimented with euquinine on certain families in the Campagna. Doses of 0.25 to 0.5 gram per diem were administered over a period of five months. Forty-two persons living in highly malarious districts were thus treated, of these 5 were attacked; of 47 untreated in the same localities 39 contracted the disease. The 5 immunised persons who developed the disease did so in a very mild form.

#### (168) Prophylactic Inoculation against Plague.

BANNERMANN (*Centralbl. f. Bakt.*, June 24th, 1901) asks the questions—Is Haffkine's prophylactic harmful when employed in the incubation stage of plague, and when does protection begin to be effective, and how long does it last? Calmette has condemned the use of the prophylactic serum in those who have been in contact with the disease, and Buchner states that immunity by this method is only obtained after about a week. Both of these opinions are shown by Bannermann to be contradicted by statistics which he has compiled from gaols and villages in Bombay. He states that an administrator may with confidence proceed to inoculate all in the neighbourhood of a plague case, even though they have been in actual contact with it. The evidence produced also supports Haffkine's statement that the serum begins to be effective within twenty-four hours. A degree of protection appears to be present for as long as eighteen months after inoculation.

#### (169) The Influence of the Method Employed in the Treatment of Syphilitic Mothers on the Fate of the Fœtus.

RIEHL (*Wien. klin. Woch.*, June 27th, 1901) states that the differences of opinion as to the value to the fœtus of treating a syphilitic mother are due partly to the conflicting results obtained by the different methods of treatment employed and partly to the dissimilar material used for the statistics. The more nearly maternal infection and conception are synchronous the greater is the danger to the fœtus; conversely if maternal infection takes place after the fifth month of pregnancy the fœtus may

escape. Nevertheless in some cases quoted in support of the advantages of treating the mother the good results have been obtained only after seven or eight miscarriages have occurred, that is, at a time when the secondary stage is over and the virulence of the syphilis is diminishing. If cases of recently acquired syphilis are alone considered, the most favourable statistics show that there is but little chance of the birth of a healthy child, even though the mother has been treated efficiently by ordinary methods. The writer has utilised the well known fact that secondary or tertiary lesions heal more rapidly when mercury is applied directly to them than when the treatment is entirely general. His statistics are based on 33 cases of pregnancy in women, with recently-acquired syphilis, who were treated by local applications of mercury to the presumably diseased uterus. Pessaries consisting of 1 gram of the German unguentum cinereum and 1 or 2 grams of ol. theobrom. were introduced as far as the vaginal fornix and kept in position with a tampon soaked in glycerine of tannin. As the pessaries melt, the mercurial ointment comes in contact with the mucous membrane of the vaginal *cul-de-sac* and the portio vaginalis of the cervix. The treatment should be begun as soon as pregnancy is diagnosed, and continued until the child is born. In every case general treatment by inunctions or injections of mercury was practised simultaneously since all the women consulted the writer about themselves rather than the fœtus, and it did not seem justifiable to omit it. That the general treatment alone did not account for the results is rendered probable by their superiority to those published by others. That the results were not due simply to an unusually great absorption of mercury with the combined methods is shown by the general absence of stomatitis and the occurrence of relapses in the writer's cases. It seems, therefore, that the claim for some special local action of the mercury on the uterus is justified. In the 33 cases there were only 1 abortion and 3 premature labours in the eighth and ninth month, while abortions occurred in 22 per cent. of the cases under Fournier's treatment. The number of stillbirths was 6 per cent., compared with 23·4 per cent. in Löwy's statistics of treated cases; the number of children who showed signs of syphilis 21 per cent., compared with 89 per cent. in Fournier's experience. Still better results may be expected if treatment be begun at the beginning of pregnancy instead of at whatever period the women happened to enter the hospital, as was necessarily the case with the writer's cases. Whether the method would succeed in cases in which the fœtus is infected by the father without maternal infection there has been no opportunity of deciding.

**(170) Treatment of Hay Asthma.**

A. SIMON (*Deut. med. Woch.*, July 11, 1901), reports a case of hay asthma in which he used atropine with remarkable success. The patient was an analytical chemist, 33 years of age, who was first taken ill with hay fever in spring, 1886, after taking a foot bath. After three years the symptoms were further complicated by conjunctivitis. In 1891 he had an attack of asthma. Certain external influences, such as dry air, cold footbaths, country walks, and the drinking of dark beer, etc., were capable of setting up an attack. He found that if he took potassium iodide all through the summer, and burned saltpetre papers frequently, he could to a certain extent alleviate his sufferings. Later on he added arsenic to his systematic treatment. In May, 1900, he had a bad attack of acute conjunctivitis and nasal catarrh. On June 13th there was an attack of asthma. Neither saltpetre nor morphine was of use. The next day, Simon gave him $\frac{1}{6}$ gr. of atrop. sulph. His attacks did not take place that day. During the next three days atropine sulphate was given in quantities of $\frac{1}{25}$ gr. per diem. No attack took place either then or since, and further the patient finds that he can face those external influences which formerly produced attacks with absolute impunity. Simon recalls the fact that Trousseau introduced a "China-belladonna" treatment, which Dechambre replaced by atropine; but most other observers did not find the treatment of use.

**(171) Acetopyrin.**

ACCORDING to the *Therap. Monats.* for May, 1901, acetopyrin is a combination of aspirin and antipyrin. It is a white crystalline powder, almost insoluble in cold water, and has a very marked acetic acid odour. If artificially digested it is found that only a small portion splits up into antipyrin and acetyl-acetic acid, the remainder remaining unchanged. It is a prompt and powerfully acting antipyretic, and exhibits no untoward effects. It is also a useful drug in acute rheumatism and neuralgia. The dose is 7½ grs., to be given up to six times a day in powder form.

## PATHOLOGY.

**(172) New Growths Originating in Scar Tissue.**

FREUND (*Festschr. z. Ehren v. M. Kaposi*, 1900) describes a case of keloid growth treated by excision and skin grafting by Professor E. Lang with satisfactory results. It originated in the scar of a large superficial wound of the back caused by sulphuric acid. Microscopically the normal epidermal papillæ were present over the whole surface with the exception of a few spots; the growth consisted of interlacing thick homogenous bundles and columns embedded in a highly cellular but otherwise normal connective tissue; there was no strict demarkation, the bundles dividing into fibres and losing themselves in the surrounding connective tissue. The author holds that there is no true distinction in the pathological anatomy of what are called spontaneous keloid, scar keloid, and hypertrophied scar. Distinctions have been drawn from the presence or absence of papillæ, the circumscription of the growth, the return after extirpation; the arrangement of the fibrous framework, vessels, and glands has also been described as different in the different growths. However none of these distinctions will bear investigation, as for instance papillæ may cover a scar keloid, as in this case, although they have been stated to be characteristic of spontaneous keloid, and in other respects this growth answers to descriptions which have been given of both hypertrophied scar and keloid. Cases of the kind very commonly follow the action of chemical irritants—in addition to sulphuric acid, caustic potash, nitrate of silver, tartar emetic ointment, fuming nitric acid have set up such growths, also electrolysis and heat. There is probably always a local disposition, but not every irritant and not every chemical irritant is capable of producing the growth; the nature of such irritants should be further studied. The bundles of this growth consisted largely of collagen, and this is also one of the end products of the action of such chemicals as silver nitrate on the tissues. Freund considers that keloid should be classed as a new growth, distinct from a hyperplasia of ordinary connective tissue and also from the fibromata. It should belong to the group of granulomata. With regard to therapeutics, writers differ much as to the use of operative measures; in this case at any rate the result was good.

**(173) The Etiology of Acute Rheumatism.**

SINGER (*Wien. klin. Woch.*, May 16th, 1901) has found the streptococcus pyogenes in 5 cases of acute articular rheumatism and in 1 of chorea. In another case of chorea with arthritis of the elbow-joint, which followed acute follicular tonsillitis, the staphylococcus pyogenes aureus was present, but no streptococci. The streptococci were present in various organs, and illustrations are given showing them in the renal blood vessels, the peritoneum, the tonsils, and on the mitral valve; the staphylococcus was found in the peri-articular tissue of the elbow-joint. The writer claims that these fresh observations confirm his previously expressed views as to the pyæmic nature of rheumatism (*vide* EPITOME, vol. ii, 1895, par. 128, and vol. ii, 1897, par. 333). The effusion in the joints was sterile, except in the one case of arthritis of the elbow-joint, in which the pus contained the staphylococcus. Since, however, all the writer's cases were severe and were complicated by endocarditis, pericarditis, myocarditis, pleurisy, or pneumonia, and since the smear preparations and cultures were all obtained *post mortem*, it is impossible to exclude a secondary or agonal infection with the organisms. The pyæmic theory of rheumatism is, therefore, still unproved.

# AN EPITOME

OF

# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (174) The Juvenile Form of General Paralysis.

Most authors define the juvenile form as general paralysis of the insane occurring in subjects under 20 years of age. J. A. Hirschl (*Wien. klin. Woch.*, No. 21, 1901) says that it would be more correct to classify this condition according to the form of syphilis which produced it—that is, juvenile paralysis is the disease caused by hereditary syphilis, and adult general paralysis of the insane by acquired syphilis. But there are a few cases of each class in which no history of syphilitic disease can be obtained. In his clinic in Vienna, during the past ten years, 20 cases of juvenile general paralysis have been under observation. Of these 8 have already been dealt with in previous reports, and Hirschl details the history of 4 others, and at the same time gives a general summary of the total number of cases. In 17 a definite history of hereditary syphilis was presented, in 1 case it could be considered highly probable, and in the remaining 2 cases there was nothing to justify the assumption of such a taint. The first of these two, however, showed a family history in which the mother appears to have died from some ill-defined form of paralysis; while, in the second case, the parents of the patient had disappeared, and no family history could be obtained. As far as neuropathic taints were concerned, in 2 cases there was apoplexy in the patient and "potus" in the father. In 4 cases some relative suffered or had suffered from general paralysis of the insane. In 9 cases (45 per cent.) the patients were more or less marked imbecile individuals. The illnesses began between the ages of 8 and 20 years, in 10 cases it began between 14 and 16 years. In most cases puberty had not been entered. Of the 12 males, 9 had undeveloped genital organs, and 3 normally developed organs; while of the 8 females, 5 did not menstruate at all, 1 menstruated at first, but during the course of the illness the periods ceased, 1 menstruated regularly, and of the last no note appears to have been made. The course of the illness, the physical and mental symptoms, and the *post-mortem* appearances were singularly typical in most of the cases. As an example, one of the 4 cases recorded by Hirschl presented the following history: Male, aged 16: father died of cerebral hæmorrhage; mother has pupils which do not react to light; has had 11 pregnancies, the first, second, ninth, tenth, and eleventh living, healthy children; third and fourth abortion in fourth and sixth month respectively; fifth the patient; sixth, seventh, and eighth full-time babies that died after four, six, and three weeks respectively. Patient was treated at the age of 4 weeks for a rash, and the diagnosis entered in the hospital books was "congenital syphilis." At the age of 6 he entered school, but did not progress as other children do. At the age of 13 the mother noted that the child was weak-minded. Since the early part of his fourteenth year he has been noted to have "playing" movements with his fingers. These movements are like those of cigarette rolling. He also makes grimaces, but is very quiet and apathetic. The right pupil measured (on admission at the age of 14) 6 mm., and the left 4.5 mm. They neither react to light, nor does the left pupil react to accommodation. Weakness of muscles supplied by N. facialis. Fibrillary tremors around the lips; coarser movements of the tongue. Speech slow, somewhat "scanning," tremulous phonation, "dragging" and "stumbling" of syllables. Deep reflexes exaggerated. Paralytic disturbances of writing and reading. Patient occasionally exhibited an idiotic smile, but otherwise showed no changes of mood. Intelligence markedly deteriorated. Has forgotten what he had learned, but still appeared to grasp the simple "one times one." All his doings are slow. In the course of the two years the dementia has progressed, and the bodily condition has deteriorated. The paralytic symptoms have not developed in general, but the rhythmical movements are more marked. His intelligence has disappeared; he does not recognise any of the people around him, although he knows that food brought to him is meant to be eaten. He has no power of mimicry, or of symbolising, and he does not even show, by movements or otherwise, when he is hungry. In summing up the points of difference between juvenile paralysis and the adult disease, Hirschl states that: (1) Congenital syphilis is the cause of juvenile paralysis: (2) this disease begins in early life: (3) the patients in this form are mostly mentally weak: (4) the prodromal period is characterised by manifold symptoms; (5) the greatest mental disturbance is dementia, and paralytic mania or paralytic hypochondriasis are rarely seen; further, there are no remissions, but symptoms of irritation and "attacks" are common; (6) the disease has a relatively long course (average in the 20 cases $3\frac{3}{4}$ years): and (7) a diffuse cerebral sclerosis with severe leptomeningitis is found *post mortem*.

### (175) Rheumatic Exanthemata.

M. Behrend (*Münch. med. Woch.*, July 9th, 1901) relates the history of a youth, aged 15 years, who applied to him for advice on March 3rd on account of hoarseness. His family history contained some rheumatic affections. The condition, on examination, was as follows: At the nape of the neck there were a number of bluish-red, raised spots, of the size of a lentil, and arranged in crescents. The colour of the spots disappeared on pressure. There was no other skin eruption, nor were any joints or glands affected. Temperature 99.2°. Over the apex of the upper lobe of the right lung were heard some crepitations, and the same were heard over the apex of the middle lobe. The heart's apex beat was visible, and the effect of the impulse could be seen from the left axillary line to the epigastrium. The first sound at the apex was not clear, and a systolic murmur was heard here, and also at the base, where it was louder. There was some accentuation of the pulmonary second sound. The mucous membrane of the pharynx was reddened and the tonsils much enlarged. On the palato-glossal arch on each side were numerous spots of a red colour, raised, and of the size of a lentil. On the left tonsil there appeared to be a confluent collection of such eruption. The surface epithelium here was detached and the edges eroded. The rash was also seen on the posterior wall of the pharynx. The larynx was diffusely reddened. Several rash spots were seen on the inter-arytenoidal region. The epiglottis was merely reddened. On April 2nd a typical erythema papulation appeared on the extensor surfaces of the hand-joints. On the 7th all the rash was disappearing, but the condition of the heart remained the same. The diagnosis of the eruption was comparatively clear from the first, and the subsequent rash on the hand confirmed Behrend's impression that it was an erythema exudativum multiforme. He considers that it is rare for this erythema to affect the mucous membranes while the skin is but little attacked. That herpes, eczema, lichen rubra planus, urticaria ex ingestis, and erythema from antipyrin, etc., at times affect the mucous membranes has often been proved. He describes the eruption as a mild exanthem, with a moderately severe exanthem. Turning his attention to the heart he says that there was clearly insufficiency of the mitral valve. By far the larger percentage of mitral valve affections are rheumatic in origin, although they are met with in other conditions: for example, pneumonia, puerperal sepsis, pyæmia, and gonorrhœa. As the patient came from a rheumatic family and presented a rash, which is frequently intimately connected with rheumatism, one can accept the statement that the attack for which he sought advice was a rheumatic one. Erythema exudativum multiforme occasionally follows trauma (and Behrend briefly relates such a case) and toxic absorption (Heller). He states that the pathology of the condition is not known; and, further, that, opposed to German and French schools, the English school does not divide it from erythema nodosum. Believing that the two eruptive processes are distinct, and yet both mostly due to rheumatic infection, he quotes a case of the latter (E. nodosum) which distinctly was of a rheumatic nature. In forming a prognosis and determining on a treatment for either condition, one must first of all consider the etiology, since the tendency for rheumatism to recur, and the way in which it reacts to treatment by salicy-

lates, must affect the rashes of rheumatic origin to a great degree.

**(176) Differentiation of Tuberculous and Non-tuberculous Pleurisies.**

Dieulafoy (*Gaz. degli Osped.*, July 4th, 1901) concludes that idiopathic pleurisy *a frigore* is really of a tuberculous nature, sometimes primary, sometimes secondary, to pulmonary lesions. The most certain diagnostic method is the microscopic examination of the centrifugalised deposit from the effusion. In cardiac and renal cases there is nothing but scales of endothelium formed of a few cells and also a few red corpuscles—that is, the contents of an œdematous exudation. In pleurisies due to the pneumococcus, streptococcus, etc., the chief elements are multinuclear leucocytes, the red corpuscles are more numerous. Finally, in tuberculous cases there are lymphocytes and numerous red corpuscles. Dieulafoy looks on the lymphocytes not as having migrated from the vessels, but as the locally-formed product of the tuberculous process. The frequent cure of acute idiopathic pleurisy does not disprove its tuberculous nature: it is the most curable of the tuberculoses of the serous membranes. A patient cured of an acute pleurisy *a frigore* must be considered tuberculous, and must undergo for a time suitable hygienic and therapeutic treatment.

## SURGERY.

**(177) Nephrectomy in Cases of Hydatid Cyst of the Kidney.**

Albarran (*Bull. et Mém. de la Soc. de Chir.*, No. 21, 1901) reports a case of renal hydatid cyst in which he was led by the thickness of the walls and the almost complete destruction of the kidney, both by direct invasion and by compression, to perform lumbar nephrectomy. In consequence of the extensive and firm adhesions of the sac to surrounding structures, both the abdominal cavity and the left pleural cavity were opened in the course of the operation. The patient, a woman, aged 33 years, made a good recovery. The author holds that nephrectomy is indicated in certain cases of hydatid cyst of the kidney. When the affected organ is so far destroyed as to be quite incapable of performing its function and when the anatomical conditions are not unfavourable to extirpation this operation, it is believed, is preferable to nephrostomy. The lumbar method should in such cases always be practised. The mortality of the transperitoneal operation for removal of a renal hydatid cyst has been very high, whilst lumbar nephrectomy has proved successful in all four cases of this disease in which it has hitherto been practised. Delbet's operation of removing the cyst and closing the gap in the affected organ is inapplicable in most cases of renal hydatid cyst, by reason of the thickness and the calcified condition of the wall of the sac. In hydatid disease of the kidney the affected organ is destroyed, not only by direct invasion of the cyst, but also by hydronephrosis resulting from compression or displacement of the ureter, or by obstruction of the ureter and pelvis. Under such circumstances nephrostomy might result in suppuration and the retained kidney, quite useless with regard to function, might become a source of serious septic mischief.

**(178) Lumbar Puncture as an Aid to Diagnosis in Cases of Head Injury.**

Tuffier (*Bull. et Mém. de la Soc. de Chir.*, No. 27, 1901) reports 3 cases which suggest that in cases of head injury presenting diagnostic difficulties, lumbar puncture may help to reveal not only the existence of a subarachnoid effusion of blood, and consequently the presence of a cranial fracture, but also afford some idea as to the quantity of this effusion, and probably as to the extent of the lesions to which such effusion is due, the intensity of the coloration of the collected fluid bearing a relation to the degree of the meningeal hæmorrhage. Lumbar puncture should not be practised at a very early stage, as blood staining of the cerebro-spinal fluid in the lumbar region, like subconjunctival ecchymosis, is slowly developed. The practice of lumbar puncture and of bacteriological examination of the removed fluid is likely to be of value with regard to both diagnosis and prognosis in cases of suspected infective meningitis. Lumbar puncture also, it is thought, may do therapeutical service in cases of head injury by relieving pressure on the nerve centres.

**(179) The Topography of the Vermiform Appendix.**

Müller (*Centralbl. f. Chir.*, No. 27, 1901) discusses the topographical anatomy of the vermiform appendix with regard to the difficulties so often experienced in finding this organ during the operation of resection after one or more attacks of appendicitis. The insertion of the appendix, it is pointed out, corresponds to that part of the cæcum where the three longitudinal bands meet. The situation of this meeting point varies in different subjects. It is found sometimes on the anterior at other times on the posterior wall of the cæcum, and at a variable distance from the insertion of the ileum. Where, however, the three descending longitudinal bands come together there will always be found the cæcal attachment of the appendix. As a guide to the seat of this attachment the well-marked and conspicuous band in front of the cæcum is preferable to either of the other two bands. In operating in a case in which there is difficulty in finding the appendix the surgeon should look for the anterior muscular band, and when he has found this, take it as a guide and follow it through adhesions and old exudation in the direction of the appendical attachment. By doing this with care and patience he will not fail, the author states, to reach the desired object however extensive the adhesions may be. When the proximal extremity of the appendix has been found and detached from adhesions, the release and exposure of the rest of the organ will be found in most cases free from difficulty. The situation of the terminal portion of the appendix becomes a matter of relatively slight importance when the chief difficulty of the dissection has been overcome. This help may, it is stated, fail in cases in which the appendix has been detached from the cæcum in consequence of suppuration, but even then the direction of the longitudinal band will indicate the situation of the separated structure. The author, in conclusion, states that he has never failed, even in spite of old and very dense adhesions, to distinguish and expose the muscular band and to utilise it as an efficient guide.

## MIDWIFERY AND DISEASES OF WOMEN.

**(180) Lactation in Damaged and Partially Amputated Breasts.**

Bouchacourt (*L'Obstétrique*, May 15th, 1901) writes of a female, aged 18, who had been severely burnt on the chest when 3 years old. Nothing remained of the right breast except white fibrous bands, amidst which it was hard to find a trace of nipple. During pregnancy the scars became deeply pigmented and assumed a keloid type, whilst the subjacent gland, which seemed before as though entirely destroyed, hypertrophied and became the seat of the usual sensations. After delivery the milk was felt to rise in the right breast, but the pressure of the cicatricial tissue soon checked and stopped secretion. The patient was able to suckle her child with the opposite breast. Budin, in discussing this case, reported another where both breasts had been removed in girlhood for hypertrophy. After every labour the thorax, quite flat at other periods, became convex, as milk formed in the portions of mammary tissue not removed. Abscess never occurred, and Bouchacourt's case showed no sign of suppuration. Thus retention of milk is not in itself alone a cause of suppuration.

**(181) Interstitial or Tubo-Uterine Gestation.**

McReynolds (*Amer. Jour. Obstet.*, June, 1900) operated on a woman aged 23 with two children. She was still suckling the younger infant, yet began to menstruate five months after delivery and was regular for three months, but two periods had been missed. Then an attack of violent pain occurred after the patient got out of bed; this was followed by pallor, tympanites, and general signs of internal hæmorrhage. Operation was performed on the third day. The peritoneum was full of bloody serum and clots. The uterus was of about twice its normal size, and there was a ruptured gestation sac at the left cornu. The ovarian artery was tied, the left tube and ovary removed, and the gestation sac excised by a wedge-shaped incision. The edges of the resulting wound were united by interrupted silk

sutures. The fœtus was found floating amidst the intestines, and all blood clots were removed by flushing out the peritoneal cavity with normal salt solution, some of which was left in the abdomen. Ten hours after the operation the patient was restless; 1,000 c.cm. of normal salt solution were injected into the median basilic vein, but symptoms became worse and the patient died three hours later.

**(182) The Gynæcology of Appendicitis.**

BRANDT (*Norsk Mag. f. Laegevid*, 1900) describes 13 operations on women for chronic appendicitis, all successful. In 2 of the same cases cholecystotomy was performed at the same time for gall stones. Three of the patients had been subject for years to severe dysmenorrhœa. The symptoms completely disappeared, which Brandt considers remarkable, as there were no adhesions between the appendix and the tubes and ovaries, nor was any neurosis present. One patient underwent removal of her appendix in the sixth month of pregnancy, owing to recurrent inflammation, which made her very ill. The bulky uterus was much in the way of the operator. The patient recovered and was delivered spontaneously at term. In two similar cases where the patient was pregnant, the appendix, less severely affected, was not removed till after the delivery and convalescence from the puerperium.

**(183) Rest in the Last Weeks of Pregnancy.**

QUEIREL AND PLATON (*Marseille Médical*, xxxviii. p. 449, August 1st, 1901), in their report of the Maternity Hospital of Marseilles, point out that all the patients, 827 in number, belonged to the working class, and most of them continued working up till the full term; but 169 women came into hospital and rested some weeks before confinement, and of these 121 had infants weighing over 3,000 grams. This was a larger proportion of heavy infants than was shown by the women who only came into hospital when in labour. The authors advise the establishment in Marseilles of a hospital where working women can rest in the last three months of pregnancy and have nourishing food.

**(184) Hysterectomy by the Sacral Method.**

SACHS (*Centralbl. f. Chir.*, No. 28. 1901), points out that hysterectomy by the sacral method, though far less preferable in most cases to the abdominal and vaginal method, is still indicated under certain exceptional conditions, as, for instance, extreme constriction of the vagina, extension of malignant disease to the vagina, a tumour so large that it cannot be extracted by the vaginal method, and firm adhesion of the diseased uterus to surrounding structures. A case is reported in which a further but very rare indication for the sacral method was met with. This case was one of operable carcinoma of the cervix in a woman aged fifty, the subject of ankylosis at both hips with the thighs adducted and slightly flexed. As it was found impossible to place the ankylosed limbs in the lithotomy position, and the close adhesions of the diseased womb contra-indicated the abdominal operation, sacral hysterectomy was performed, which operation, in spite of many difficulties encountered in the course of the after-treatment, was ultimately followed by very good results and by freedom from disturbed functions both of bladder and rectum.

**(185) Rupture of Uterus: Subsequent Labour.**

KOSMINSKI (*Monats. f. Geburts. u. Gyn.*, May, 1901) reported before the Lemberg Gynæcological Society recently a case where a woman, with contracted pelvis, suffered from rupture of the uterus at the fourth labour. Abdominal section was performed and the rupture closed by suture. In her next pregnancy she came under Kosminski when in the eighth month. It was decided to perform Cæsarean section at term, but pains soon set in, and he had to turn and deliver. This manœuvre proved very difficult. The child was asphyxiated, and could not be revived.

## THERAPEUTICS.

**(186) The Treatment of Obesity.**

E. STADELMANN (*Berl. klin. Woch.*, June 24th, 1901) reports an exceptional case of obesity, and discusses the various methods of treatment suggested for this condition. The patient, an actress, aged 32, was admitted into hospital suffering from alcoholic neuritis. She stated that during the past three years she had drunk about four bottles of porter, three-quarters of a pint of "schnapps" (spirit), and some wine daily, and quite recently she had within two days drunk, besides her usual quantum, eight soda water bottles full of rum. The illness, accompanied by some mental symptoms, ran a slow and severe course, and eventually she recovered, except for some paralysis and atrophy of the muscles of the lower extremities, especially of the peronei. She was transferred to a surgical ward, in order that Achilles tenotomy might be performed, and while there her weight increased with alarming rapidity. Some friends kept her well supplied with cake and sweets, for which she had a seemingly inexhaustible appetite. On leaving the medical ward her weight was 11 st. 2½ lbs. She was returned to the medical ward about a year later, when she turned the scale at 23 st. 2½ lbs—that is, an increase of 12 st. Her neck measured, just below the larynx, 16.7 ins.: the upper arm, some 6½ ins. from the axilla, 15.2 ins.; the chest, just below the axilla, 48.36 ins., just below the breasts, 53 ins.; the thighs, some 6½ ins. above the lower edge of the patella, 32 ins. She had received thyroidin tabloids in the surgical ward, but these had to be discontinued as sugar appeared in the urine. Stadelmann at first applied a diet representing a value of about 1,500 calories. In spite of this low caloric value, the patient still increased in weight up to 23 st. 9½ lbs. He therefore decreased the diet down to about 1,000 calories, as the patient's neuritis, etc., made it impossible to "work off" any of the extra food products by exercise other than massage. The diet now consisted of albumen, 106 to 125 grams (3 ozs. 5 drs. 24½ grs. to 4 ozs. 3 drs. 2½ grs.), fat 32 to 36 grams (1 oz. 56½ grs. to 1 oz. 2 drs.), and carbohydrates 49 to 53 grams (1 oz. 5 drs. 3½ grs. to 1 oz. 6 drs. 20½ grs.). As an example, he gives the list of articles of diet given on a certain day, which represents a value of 1,014 calories. It reads as follows: Coffee, 400 grams (about 14 oz. 1 dr.); seltzer water, one bottle; Graham bread (like aërated bread), 80 grams (about 2 ozs. 6 drs.); Gruyère cheese 80 grams (about 2 ozs. 6 drs.); cucumber salad, 400 grams (14 ozs. 1 dr.); beef (roast), 200 grams (7 ozs. ½ dr.); boiled ham, 80 grams (2 ozs. 6 drs.); tea, without milk or sugar, 500 grams (about 17 ozs. 4 drs. 46 grs.). The patient lent herself very well to the restricted diet, as she was anxious to return to the outside world without the handicap of a great weight. The weight reduced from 3 to 4 lbs. every week, and at the end of each six to eight weeks a pause was made for a fortnight, during which time the diet was so arranged that the weight neither increased nor increased. After about a year the patient left the hospital of her own accord, weighing 14 st. 1 lb., that is having decreased about 9½ st. Stadelmann would have wished to have continued the treatment until her weight was decreased to about 11 st. He reports that he heard later that although she had not had any alcoholic drinks for the whole of her stay in hospital (nearly three years), she soon took up her former excessive habits, and naturally began again to gain weight. He turns to the general lines of treatment. He has tried thyroidin in this and other cases, but cannot believe that it did any good; and further says that, even if it does, the same and better results can be obtained in a safer way. Débove published a case somewhat similar to this one, and the treatment adopted, with a good result, was ordering an entirely milk diet at first. The quantity was reduced from about 4¼ pints to 1½ pint daily. The restriction down to this quantity, Stadelmann considers, is unnecessarily severe, and indeed not quite safe, seeing that the caloric value is about 680 only. He discusses the Harvey-Banting system, but comes to the conclusion that the principle is faulty, as it is impossible to divide all the fat from the meat, and he estimates that if one uses a large quantity of lean meat, as Banting suggested, say, 700 grams (about 24½ ozs.), over 40 grams (about 1¾ oz.) of fat is unconsciously taken in. The Ebstein method, he says, is more sound. Although he criticises it favourably, he prefers to employ no diet method, but to decrease either fats, or carbohydrates, and also albumen down to a sufficiently low level, according to the tastes, habits, and idiosyncrasies of his patient. He

thinks that the chief point is to determine the diet in caloric value which will cause the patient to lose weight, and to use all means to persuade the patient to keep to it for a long period. He further mentions the methods of Oertel and Schweninger. These two advise a dry diet on the lines of Schroth. He states that the methods are unscientific and untrue, and savour distinctly of charlatanism. He expresses his opinion in very plain language, especially in regard to the Schweninger method.

#### (187) Massage in Sciatica.

R. JUDICA (*Gazz. degli Osped.*, July 23rd, 1901) discusses the treatment of sciatica fully, and concludes that ointments and embrocations, pills and empirical remedies, opiates and palliatives of all sorts should be abandoned, and the treatment greatly restricted. Massage must take the first place, and he names three systems: (1) Schreiber's, aiming at a bloodless nerve stretching, by means of passive and active movements, which Judica does not recommend. (2) Ordinary massage, by passive movements slowly done, and increased in amplitude as the pain will allow, a period of several minutes' rest intervening between each movement: to this should be added small active movements in the recumbent position. (3) The method of Dr. Negro, which Judica strongly recommends. The patient should lie face downwards, with the gluteal muscles entirely relaxed. The thumb is then placed over the point of exit of the nerve from the pelvis, and the strongest possible pressure applied with the aid of the other thumb superposed; this is maintained for fifteen to twenty seconds, the thumb being slightly moved in all directions laterally, but not raised; after an interval of a few minutes this is repeated. By half a dozen sittings on alternate days a cure is effected even in old-standing cases. Massage should be used in all cases where there is no anatomical condition demanding surgical treatment, and should be used with patience and careful technique. It may be advantageously supplemented by electricity (applied in various ways) or by hydrotherapy. Surgical intervention is the last resort in desperate cases, and the right treatment in all cases due to special anatomical causes.

#### (188) Schneiderlin's Anæsthesia.

B. KORFF (*Munch. med. Woch.*, July 16th, 1901) discusses the utility of Schneiderlin's anæsthesia, and gives his experience of a modification of it. Schneiderlin had, in order to avoid the unpleasantness and dangers of nitrous oxide, chloroform, and ether, as well as the difficulties of application of Schleich's infiltration anæsthesia, set himself the task of finding a drug or a combination of drugs which (1) in its action as an anæsthetic is not dangerous to life, (2) does not worry the patient by all sorts of manipulations; (3) produces a continuous anæsthesia, and does not give rise to vomiting, coughing, etc., and (4) has no unpleasant or dangerous after-effects. He claims to have found a combination of drugs which fulfil these conditions in scopolaminum hydrobromate (hydrobromate of hyoscine) and morphine. He advises 3 dmg. (= about $\frac{1}{20}$ gr.) of the former, and 1 cg. (= about $\frac{1}{6}$ gr.) of the latter as hypodermic injections to be repeated after 1 to 2 hours, or he gives a trial dose on the evening before and a higher dose on the day of the operation. For this reason Korff considers that the second condition is not fulfilled, for the patient is certainly worried by the trial injections. Schneiderlin further advises the injection of higher doses, even up to $\frac{1}{30}$ gr. of sc. hydrobr. and $\frac{1}{2}$ gr. of morphine in infant cases. He finds that the combination owes its freedom from danger to the fact that to a certain extent the drugs are physiological antagonists. Korff has carefully considered the method, and preferred to adopt a modification of it, which he tested in 80 cases of major and minor operations. He injected 4 dmg. of sc. and 1 cg. of morphine (= $\frac{1}{15}$ gr. + $\frac{1}{6}$ gr.) twice with an interval of two hours between the injections, and then applied a few drops of chloroform to the mask, until complete anæsthesia was produced. He found that very little chloroform was necessary, and that the anæsthesia was deep, quiet, and satisfactory, while the chief advantage lay in the fact that the patients slept for hours after the operation and did not complain of any pain. In one case only was there any unpleasant symptoms, which took the form of bradycardia (pulse, 46). He claims that the method, as Schneiderlin says, is absolutely free from danger to life.

#### (189) The Hypodermic Use of Iron Preparations.

A. PLESSI (*Gazz. degli Osped.*, July 7th, 1901) reports 12 cases in which he has used daily injections of 1 c.cm. of a 10 per cent. solution of ammonio-citrate of iron. Unpleasant symptoms sometimes set in after the lapse of a few minutes to half an hour, namely, a sense of general heat, severe headache, vertigo, debility, sometimes an epigastric oppression and a feeling of œsophageal constriction, followed in most cases by vomiting. These symptoms often occur at the beginning of the treatment, and then disappear, only to return when the organism is saturated with iron; but in this latter case they can often be prevented by lengthening the interval between the injections. Avoiding these liabilities to error, Plessi found that the locality of the injection had a very marked influence on the occurrence of the unpleasant symptoms. They occurred in greater or less degree after 51 out of 54 injections (94.4 per cent.) in the dorsal region, but only in 17 out of 305 injections (5.3 per cent.) made in the gluteal region.

## PATHOLOGY.

#### (190) Hæmolytic Serum.

IT is now a matter of common knowledge that by injecting the blood of one species of animal into another species a change in the serum of the latter is brought about which renders it destructive to the corpuscles of the species from which the original specimen of blood was derived. Metalnikoff (*Centralbl. f. Bakt.*, April 18th, 1901) has found that the same hæmolytic property can be conferred by feeding. For example, the serum of rabbits fed on horse's blood exhibits a hæmolytic action on the corpuscles of the horse after seven to ten days. The other cytotoxins can probably be produced in the same way—for example, spermotoxin, leucotoxin, etc. In large doses they exercise a destructive action on the specific cell elements, the spermatozoa, leucocytes, and so on; in small doses their action is stimulating. Metchnikoff has already suggested the therapeutic use of small doses. If the other cytotoxins can be produced by feeding instead of by injection, the method will obviate some of the difficulties at present attaching to those experiments.

#### (191) Histology and Pathology of Hæmolymph Glands.

WARTHIN (*Journ. Boston Soc. Med. Sci.*, April, 1901) gives a preliminary account of the structure of hæmolymph glands, and of the changes which they undergo in certain affections of the blood. These glands, which are chiefly found in the retroperitoneal region, were discovered in 1884 by Heneage Gibbes, and have been studied chiefly in the lower animals by Vincent and others. Warthin states that they are of two kinds, to which he has applied the terms "splenolymph" and "manololymph" respectively, but that transition forms exist, and also structures intermediate between them and the spleen on the one hand and ordinary lymph glands on the other. Normally he considers that their function is mainly hæmolytic and in connection with leucocyte formation, but that in diseases causing marked changes in the blood they assume hæmopoietic functions. The author says that in these circumstances they may take on the structure of either spleen or marrow. He finds that transition forms exist between small lymphocytes and erythroblasts, and also between hyaline mononuclear leucocytes and nucleated red cells, in confirmation of the views of Löwit and Howell.

#### (192) Aortic Orifice with two Semilunar Valves.

BRUNEAU (*Marseille Médical*, August 1st) reports the case of a sailor, aged 50 years, who suffered from palpitations and precordial weight. There was a diastolic aortic murmur, very loud, but not heard at the posterior part of the chest. He died of syncope following an attack of broncho-pneumonia. At the *post-mortem* examination the aortic orifice was found to possess only two valves, one to the right and posteriorly, the other to the left and front; the latter was the smaller. Bruneau regards the anomaly as congenital, and as due to the fusion of two valves into one (the larger of the two).

# AN EPITOME

OF

# CURRENT MEDICAL LITERATURE.

## MEDICINE.

**(193) Tuberculous Rheumatism or Pseudo-rheumatism of Bacillary Origin.**

In a paper read before the French Academy of Medicine on July 23rd, Antonin Poucet described 3 cases in which tuberculous rheumatism was the only possible diagnosis (*Lyon Médical*, July 28th, 1901). His first patient, a bricklayer, 44 years of age, had had no illness till 4 years before admission into hospital. He then suffered from suppurative epididymitis without appreciable cause. A year later he had an attack of bronchitis, which was associated with left pleurisy, and eight months before admission he suffered from pain and swelling in several joints, the swelling disappearing in eight or ten days, but the pain persisting in the lumbar region and right hip. On admission examination showed Pott's disease at the site of the fifth lumbar vertebra, with right iliac abscess and plastic inflammation of the right hip-joint. In the second case, a woman, 45 years old, who suffered from old-standing phthisis, was suddenly attacked with acute multiple arthritis. The attack subsided in a week, leaving a fungous suppurating osteo-arthritis of the articulation between the first and second phalanges of the right medius. The secretion from this joint inoculated into guinea-pigs caused definite tuberculosis. Other small joints were involved to a less extent. The third case was still more important, since the patient died in hospital and a necropsy was made. A woman, aged 63, the subject of advanced phthisis, suffered from acute multiple arthritis eighteen months before death. A fungous suppurative inflammation persisted in the right ankle joint, with lesser changes in most of the other articulations of the limbs. Inoculations made from several of the joints gave positive results. At the necropsy, tuberculous broncho-pneumonia was found. The cartilages of the right tibio-tarsal joint were ulcerated. Non-suppurative osteo-arthritis was marked in the right thumb joint and the right elbow and shoulder.

**(194) The Localisation of Cerebral Tumours in the Parietal Region.**

Mills, of Philadelphia (*Philad. Med. Journ.*, April 20th, 1901), gives an account of five cases of cerebral tumour of the parietal region of the brain, and discusses the differential diagnosis as regards more exact localisation than has been hitherto possible. Two of the cases have a special interest, and are as follows: Case 1, a man of 57 years, had for five months ataxia of the right arm and later of the right leg. There was also loss of muscular sense and of cutaneous sensibility, astereognosis, paresis, and finally paralysis of the arm and leg. Reflexes exaggerated on the paretic side with ankle clonus. The patient was emotional and hysterical. Operation by W. Keen showed tumour of superior parietal lobule. Enucleation and removal followed by recovery, and no symptoms of return or recurrence of the growth fourteen months after the operation. Case 2, a man aged 65 years, had noticed gradual loss of power in the right hand for five weeks with impairment of sensation in the same. He would drop things unconsciously from his hand. He could not tell that he was holding things in his hand except by looking and did not know whether his fingers were in his pocket. There was astereognosis of the right hand and a sensation as of a cushion under the right foot. The pressure sense, thermal sense, and the pain sense were diminished or absent in the right hand, especially in the ulnar nerve distribution. The muscular sense was diminished, there was no wrist or elbow jerk, but Babinski's great toe reflex (*phénomène des orteils*) was present on the right side. Later there followed cephalalgia with throbbing chiefly in the left temple. Four days later he had a severe attack of tonic spasms of the right arm lasting fifteen minutes. Marked optic neuritis in the left eye and commencing neuritis in the right. No hemianopsia. There was a spot tender to percussion on the left side of the skull, close to and half way up the coronal suture. Headache and general symptoms now grew worse. Diagnosis of tumour in the superior parietal convolution of the left side, with some invasion of the Rolandic area. Operation by trephining showed a tumour just growing through the cortex. As much of it could be removed as could be enucleated with the finger and curette. The operation was a serious one, and he rallied, but grew weak afterwards, and died two days after the operation, with a temperature of 101°. Necropsy showed the tumour to be an infiltrating glio-sarcoma without a capsule. The following diagnostic conclusions are put forward by Mills: (1) Tumours of the posterior parietal region give as their most important localising symptoms disturbance of cutaneous and muscular sensibility, and especially astereognosis, or the incapacity of recognising solid objects placed in the hand. (2) Other symptoms often present in such cases are the result of compression or invasion of adjacent cerebral regions. (3) Tumours and other lesions implicating the angular gyrus and the adjacent parts (middle occipital and upper retrotemporal) give as their main localising symptoms word-deafness and word-blindness, with the usually accompanying speech disturbance. Later there may appear homonymous hemianopsia, astereognosis, and disorders of cutaneous and muscular sense.

**(195) Paralysis of the Rectum.**

A Hesse (*Berl. klin. Woch*, June 3rd, 1901) considers that too litte attention is paid to the conditions leading to incontinence of fæces in textbook and journal literature. He reports a case of a boy of 6 years who had had rickets but never any form of paralysis. The child ate enormous quantities of food (bread, cake, meat, etc.) and suffered from a constant diarrhœa. He passed his motions either into his trousers or into the bed, and also his urine. The abdomen was enlarged; the sphincter ani without any tone, so that the finger could be passed into the rectum quite easily, and even moved, when passed, from side to side. The fæces contained free starch granules and muscle fibres. Hesse ordered a constipating diet and prescribed tannalbin. The result was satisfactory, for the motions became formed, the sphincter regained its tone and power, and the general condition of the child improved. The nocturnal incontinence of urine, however, persisted. He ends by giving a summary of the literature of the subject.

## SURGERY.

**(196) The Treatment of Aneurysm by Subcutaneous Injection of Gelatine.**

Lancereaux and Paulesco (*Bull. de l'Acad. de Méd.*, July 16th, 1901) consider that non-success from the method which they first recommended in 1897 has arisen from two causes: (1) It has been used in cases where it could not have effect, as in those of fusiform aneurysm; (2) the technique has been arbitrarily modified, doses have been insufficient, 20 to 30 c.cm. instead of 200 to 250 c.cm., and the number of injections have been too few—two or three instead of from fifteen to thirty. They have found experimentally and clinically that the minimum dose of gelatine should be about 5 grams, which is easily and rapidly absorbed when dissolved in a 0.7 per cent. solution of sodium chloride. After a dose the sac diminishes in size, the movements decrease, and the pain subsides, but after some days the movements and pains return, and it is only after from ten even up to as many as thirty-five injections that definite cure is obtained. If slowly injected into the cellular tissue the injections are painless and if aseptic they are not followed by fever. Two cases were shown, one of aneurysm of the right subclavian, the other of the arch of the aorta. In both the size of the tumour was decreased, the movements were less marked and the general condition improved. In the first case there remained an elongated hard mass without expansive movements, and symptoms of paresis and atrophy of the hand much improved. Two other cases of aortic aneurysm were also related in which the treatment had been followed by marked amelioration.—Sorgo (*Zeits. f. klin. Med.*, Bd. xlii, Heft 1 and 2), as a result of animal researches, does not consider that the subcutaneous or internal administration of gelatine actually increased the coagulability of the blood, and thinks the manner in which it brings about coagulation in aneurysm is unexplained. Clinically he has used a 4 to 5 per cent. solution without any untoward consequences; he has employed the treat-

ment in 6 cases of aortic aneurysm. Pain and transitory fever are common complications of the treatment. To estimate the therapeutic effects of the injections it is necessary to distinguish those signs which may with certainty be ascribed to coagulation in the aneurysmal sac. If during the treatment a restricted diet and rest are insisted on, amelioration from these measures may easily be fallaciously ascribed to the injections. Of chief importance are the objective signs, diminishing and hardening of the tumour, disappearance of compression symptoms, etc. From these considerations the author passes to the discussion of the 48 cases (including his own) recorded in literature; he excludes 14 from the discussion owing to insufficient data. In 13 of the remaining 34 coagulation resulted in the aneurysm, 21 were unimproved; or, in other words, of 18 cases of saccular aneurysm, 13 were consolidated, of 16 cases of diffuse dilatation none were cured. Whether the coagulation in the aneurysmal sac is due to the treatment with gelatine cannot be definitely settled, since rest and a strict dietetic *régime* were concurrently enforced, and so long as there remains no experimental proof of the coagulating action of subcutaneous gelatine injections.

**(197) An Iodoform "Stopping" for Cavities in Bone.**

Hackmann (*Wien. klin. Woch.*, May 30th, 1901) recommends that all cavities left in bones after removal of sequestra or scraping tuberculous foci should be filled with von Mosetig-Moorhof's "stopping." This consists of iodoform 60 or 30 parts, spermaceti 40 parts, and oil of sesamum 20 parts. It acts as an antiseptic and stimulates the process of granulation. In order to melt this mass and keep it in a liquid condition until it is required, a special "thermophore" has been devised. The previously sterilised mass is contained in a wide-necked bottle, which is placed in a metal cylinder containing acetate of sodium, paraffin, and glycerine. The whole apparatus is placed in boiling water for ten minutes, the acetate of sodium melts in its own water of crystallisation, and as it slowly recrystallises gives out the heat absorbed in melting, and so keeps the iodoform mass at a temperature of 131° F. for at least an hour. After the cavity is cleansed and sterilised as far as possible it is filled with the melted iodoform mass, which permeates every nook and crevice, and then solidifies. Radiographs show that the mass is absorbed *pari passu* with the growth of new tissue, and that it does not disappear until the cavity is completely filled with healthy granulations. The advantages of filling bony defects with an aseptic and stimulating material are that no suppuration occurs in the cavity, healing by first intention is almost invariable without the aid of drainage, the wound requires to be less frequently dressed, and the duration of the treatment is usually shortened. The operation should be performed bloodlessly with Esmarch's bandage, which should not be removed until the iodoform "stopping" has completely solidified.

**(198) Lacerations of Large Blood Vessels in Cases of Simple Fracture of the Clavicle.**

Gallois and Piollet (*Rev. de Chir.*, July and August, 1901) present the results of an analysis of 11 cases, one original, the others previously recorded, of laceration of one or more of the large blood vessels at the root of the neck, produced in association with simple fracture of the clavicle. In 2 of these cases the internal jugular vein was injured; the subclavian vein was involved in 6 cases, in 4 by itself, in the remaining 2 together with the subclavian artery; this artery was the only vessel wounded in 3 cases. In the original case reported in this paper the subclavian artery and vein and the internal jugular vein on the right side were the injured vessels. In 1 case the lacerated vessel was either the suprascapular or the transverse cervical. The small number of cases collected with much care and effort by the authors indicate the extreme rarity of serious vascular lesion as a complication of simple fracture of the clavicle. The usual result of neck injury is a large hæmatoma after wound of a large vein alone, and traumatic aneurysm after injury to a large artery. In the original case published by the authors the result of the injury was a large arterio-venous aneurysm. Of the 11 cases, 8 were fatal. The list, apart from its clinical bearings, is of interest from its including the case of Sir Robert Peel. The authors, in discussing the surgical treatment of these formidable lesions, deal in the first place with simple venous laceration. The danger in exposing the wounded vein consists in the probability of the aspiration of air into the circulation. It is suggested that as both the subclavian and the internal jugular veins are usually wounded at the same situations, the venous wounds may be exposed without any large and dissecting operation, and secured either by forcipressure or ligatures. In a case of wounded subclavian artery in which operation is indicated, the authors would prefer the apparently desperate measure of first tying the proximal portion of the wounded vessel and then extirpating the sac. In such an operation, it would be necessary, they state, to make free exposure of the seat of injury and to remove the inner fragment of the broken clavicle, or even the whole bone. The same treatment is recommended for the very rare lesion of artero-venous aneurysm in case the vascular tumour is increasing rapidly in size, threatening rupture into the pleura or mediastinum, and also if signs of inflammation and suppuration of the sac be observed.

**(199) Rupture of the Liver.**

Wilms (*Deut. med. Woch.*, Nos. 34 and 55, 1901) considers that the opinion of the value of surgical treatment of rupture of the liver, gained from the reported cases, is so misleading that a summary of all the cases during the last five years in Trendelenburg's clinic may be of practical use. Fraenkel states that of 31 operated cases 17 were cured. Wilms records 19 cases. Four died without operation, and *post mortem* the rupture of the liver was found to be complicated by other severe lesions, for example, fracture of ribs, rupture of diaphragm, rupture of kidneys. In one case the gall bladder was completely torn off from the liver, and in the second a piece of liver, weighing 324½ gr., was found in the right auricle, and another the size of a bean in the right ventricle. Four cases were treated by laparotomy without suture or other local treatment of the rupture. These were all fatal cases, and are described as complicated severe injuries, which excluded the possibility of any therapeutic interference. Three further cases died after laparotomy for other internal injuries; in Cases 9 and 10 for internal hæmorrhage (the spleen was ruptured and had to be removed in Case 9, and the kidney and spleen had to be removed in Case 10), while Case 11 was operated on for rupture of the intestines, and tears were found in the omentum, mesentery, and liver, as well as in the duodenum. The next 5 cases were fatal cases operated on for the rupture of the liver. Case 12, complicated by much crushing of the right lobe of the liver and fracture of several ribs, died directly after the operation, probably from the hepatic hæmorrhage. Case 13 died on the seventh day, and pericarditis, pleurisy, and peritonitis were found *post mortem*. Case 14, complicated by rupture of the right kidney, died soon after the operation. Case 15, complicated by fracture of several ribs and tearing of diaphragm and pleura, died on the third day, and *post-mortem* small hæmorrhages were found in the liver substance, while there was œdema and pneumonic patches in both lungs. Case 16, complicated by injuries to the lower lobe of the right lung and fractures of ribs, died six hours after the laparotomy. The last three cases were laparotomied, and recovered. Case 17 showed a small tear in the liver, which was not locally treated. On the third day laparotomy was again performed, on account of severe pain with pyrexia. Recovery after pneumonia of right lower lobe. In Case 18 a small tear was found in the liver, which was packed with gauze. Uneventful recovery. In Case 19 a deep tear, measuring 7 inches in length and 4 inches in depth. The liver tissue had broken down at the bottom of the tear, and a considerable cavity was found. The tear was packed with a large quantity of gauze. Convalescence was influenced by a free drainage of bile from the wound, so that the stools were rendered quite colourless. Thus of 19 cases, 16 died and 3 recovered, while 4 were not operated on, and only 8 cases were subjected to laparotomy for the injury to the liver. In discussing the etiology, he finds that most frequent accidents are crushes between the buffers of railway coaches and running over by carriages. He discusses the anatomical

changes, the symptoms, prognosis, and methods of treatment. In choosing between suture and packing, he believes that both are capable of arresting hæmorrhage, and that the packing is preferable, since it establishes a drain, and does not risk enclosing any pathogenic bacteria.

## MIDWIFERY AND DISEASES OF WOMEN.

**(200) Treatment of Anuria in Cases of Cancer of the Uterus.**

Patel (*Rev. de Chir.*, August, 1901) concludes an elaborate analysis of the pathological anatomy, the causation, and the symptoms of anuria developed in the course of uterine cancer, with some remarks on the surgical treatment of this complication. In discussing the comparative advantages of nephrostomy and lumbar ureterostomy in such cases, the author sums up in favour of the former operation which he regards as the only treatment for anuria due to compression of the ureter. It is much easier in its performance than ureterostomy in which latter operation the surgeon is often obliged to make an extensive and tedious dissection of the soft parts before the duct can be exposed, and thus to run the risk of subsequent infection, and if the sutures be not closely applied of infiltration of urine around the kidney. As the fibrous thickening of the structures around the obstructed ureter may have established close adherence to the parietal peritoneum. There is, moreover, a possibility of tearing through this serous membrane. In nephrostomy on the other hand the surgeon does not meet with these sources of trouble. The kidney may be easily exposed, there is less risk of wounding the peritoneum, and deep suturing is unnecessary. The primary advantages of the renal operation, the author points out, are less difficulty in its performance, less danger, and a shorter stay of the patient on the table. Nephrostomy, moreover, allows of better drainage, and as the opening is a larger one than that affected by the ureteral operation, the urine flows away as soon as it has been secreted. In lumbar ureterostomy the surgeon cannot be sure that he has opened the ureter above all the obstacles to the discharge of urine from the kidney, as this duct may present flexures as far as the renal pelvis, and the internal valves thus produced may impede if not prevent altogether the passage of fluid. The only point in favour of this latter operation is that by not distending the renal tissue it is not liable, like nephrostomy, to cause inhibition of the urinary secretion. This inhibition, however, in cases of nephrostomy is, the author states, usually of short duration, as the flow of urine is always re-established some few hours after the operation. In discussing the indications for nephrostomy for anuria due to compression of the ureter by uterine cancer the author states that the operation should not be practised on a very cachectic patient in whom the malignant disease has attained an advanced stage, as in such a case the surgical intervention and even the administration of an anæsthetic might cause death. In a young and still vigorous patient the operation is indicated, and it should be performed early and when only slight signs of intoxication are observed. The indications for nephrotomy in such cases are compared to those for the establishing of an artificial anus in cases of incurable intestinal obstruction. In both classes of cases there is a period of tolerance which is always protracted, but is likely sooner or later to become suddenly critical when uræmic or stercoral intoxication has attained its maximum. If both kidneys be enlarged and distended, it is not a matter of great importance on which side the operation be practised, but it would be well, the author thinks, to select the right organ as being more accessible thad the left. If the exposed kidney be found completely atrophied and reduced to a fibrous shell, the other organ should be opened. Although not invariably successful, nephrostomy, the author concludes, is a justifiable operation in most cases of anorexia caused by ureteral compressional in the development of uterine cancer, and that, as has been pointed out by Jaboulay, it is necessary to intervene in such cases for the same reason that the surgeon opens the trachea for laryngeal obstruction, the bladder when the urine cannot flow along the urethra, and the stomach in instances of œsophageal stenosis.

**(201) Gangrene of the Uterus in the Puerperium.**

Zaborowski (*Gazeta Lekarska*, Nos. 1 to 3, 1901) has prepared a monograph on this disease, which was first described correctly as "metritis dissecans" by Syromiatuikow in 1881. He collects the reports of 41 cases published since that date. In his own case the patient was a young primipara. Six days after delivery fever, rigors, and urticaria set in; then abdominal swelling occurred, followed by fœtid vaginal discharge. At the end of a month the curette was applied: then a perforation of the posterior wall of the abdomen was detected; the uterus was therefore removed entire, and the patient recovered. It appears that metritis dissecans may have a well-defined line of demarcation, or this may be wanting, then the entire inner aspect of the uterus is invaded. Young women are most subject to this affection, especially when affected with serious general disorders, or when labour is lingering, and obstetrical operations are needed. The clinical features are usually just as described in Zaborowski's own case. Rashes are common. In some cases the uterus takes to contract and expel sloughy parts of its mucosa and muscular walls, sometimes the whole mucosa comes away. Abuse of caustics frequently causes this singular complication. The mortality is 32 per cent. Complete cure is rare, the uterus being much damaged. In bad cases hysterectomy alone will save the patient.

**(202) Cæsarean Section and Ovariotomy during Labour.**

C. H. Stratz (*Weekblad van het. nederl. Tijdschr. voor Geneeskunde*, No. 6, p. 328, August 10th, 1901) describes a case of labour in a primipara, 24 years of age. The woman was anæmic, her temperature was 37.7° C., the pulse 120, and there was fœtor of the breath. The child was alive, in the first cranial position; there was a tumour of the left ovary with adhesive peritonitis, and uterine rupture was imminent. Cæsarean section was successfully performed; and at the same time the tumour, an intraligamentous dermoid, was removed. The whole operation lasted twenty-five minutes, and the recovery was rapid.

## THERAPEUTICS.

**(203) Hypodermic and Submucous Injections of Paraffin.**

Moszkowicz (*Wien. klin. Woch.*, June 20th, 1901) reports 30 cases in which purified paraffin was injected hypodermically in the clinic of Gersung, who originated this method of treatment. By mixing solid and liquid paraffins in certain proportions an ointment is obtained with a melting point of from 96.8° to 104° F. This is sterilised by boiling, is drawn into a sterilised syringe while liquid, and injected after partially cooling, so that it issues from the needle as a semi-solid thread. The melting point is of importance, because paraffins with a lower melting point are not sufficiently firm, and those with a higher require to be injected so hot that there is danger of producing thrombosis in the veins in the neighbourhood. This probably occurred in the case reported by Pfammensteil, in which, after the injection of paraffin with a melting point of 113° F. round the neck of the female bladder in order to reduce the size of the opening and cure incontinence of urine after resection of the urethra for carcinoma, there were symptoms of pulmonary embolism. In Gersung's clinic the injection of the paraffin with a lower melting point has never produced untoward symptoms. Sterilised paraffin is non-toxic, and produces no reaction when injected hypodermically. Unless it is injected in situations in which it is immediately exposed to pressure or violent muscular contractions, paraffin remains at the seat of injection, and eventually becomes encapsuled and of cartilaginous hardness. The newly-formed connective tissue penetrates the mass and eventually encloses it in a sponge-like meshwork. It is probably never absorbed. Two years ago an artificial testicle was made by injecting paraffin into the scrotum after castration; it is now of stony hardness, but has not diminished in size. In cases in which much paraffin is injected or in which the injection is made into unyielding tissues, Schleich's infiltration anæsthesia should be employed. The injections have a wide range of usefulness. They were employed with success to remedy incontinence of urine in a

woman after the removal of the sphincter vesicæ and the whole of the urethra; to improve phonation after an operation for cleft palate (the injection was made behind the posterior wall of the pharynx, which was thus made to bulge forward until the short soft palate could meet it and completely close the naso-pharyngeal passage); to cure incontinence of fæces due to a fistula in ano; to narrow the inguinal rings in cases of hernia; and to remedy prolapse of the vagina. In the last-named condition, however, the submucous projection caused by the paraffin is a contraindication unless there is no chance of the occurrence of pregnancy. The injections also proved useful in certain deformities, and excellent results were obtained in depression of the bridge of the nose, whether due to syphilis or injury, by filling the defect with a hypodermic injection of paraffin. After resection of the superior maxilla the sinking in of the cheek was removed or prevented by injecting paraffin. The amount of paraffin injected varied between a few c.cm. and 65 c.cm. This large quantity was employed to raise the retracted skin and do away with the depression left after resection of several ribs. Paraffin may also be injected into joints to prevent the articular surfaces coming into too intimate contact if ankylosis is feared, or between the ends of nerves, in which a piece has been resected for neuralgia to prevent their growing together again. The method is simple and safe.

**(204) Atropine in Intestinal Obstruction.**

H. GEBELE (*Münch. med. Woch.*, August 13th, 1901) reviews the literature of the treatment of intestinal obstruction by atropine. Dealing first with obstruction of a paralytic or spastic nature, he finds that internal remedies are of use, and that the most common drugs employed are opium, atropine, and morphine. Apart from its quieting effect on the bowel, which is due to a paralysis of the nerve endings in the involuntary muscular tissue, atropine causes a regular and general distribution of the meteorismal pressure, and probably, also, a diminution of the intestinal secretion. Opium causes frequently severe gastro-intestinal disturbances, and appears to act in direct opposition to the enemata which are necessary in these cases. Furthermore, atropine produces intoxication symptoms (delirium, excitement, difficulty in swallowing, etc.) very easily. The chief objection to the use of both drugs, he says, is that they tend to mask the symptoms and to prevent a proper estimation of the progress of the condition from being made day by day. He therefore considers that morphine, which quiets the intestine without producing such lasting or severe effects as the other two drugs do, is the best drug to employ in paralytic obstruction. But when one is dealing with mechanical obstruction, as in strangulation by kinking, twisting, by bands or pressure from without, there can be, in his opinion, no doubt that the application of atropine is a grievous mistake. To exemplify this danger of atropine treatment he quotes a case which has recently occurred in his practice. A woman, 72 years of age, was taken ill with symptoms of intestinal obstruction, that is, complete suppression of flatus and fæces, together with pain and vomiting. Later on the abdomen became tympanitic. Hydrostatic applications, enemata, etc., were tried, and on the fifth day of illness an operation was thought of. As a last resort atropine sulphate was injected three times (gr. $\frac{1}{65}$ per dose). The pain, vomiting, and tympanites passed almost completely away, but no stool or wind passed. However, the practitioner attending her regarded her as saved, and waited until the ninth day, when all the symptoms broke out with renewed energy. She was then admitted into hospital, and Gebele operated as soon as possible. He found a coil of the small intestine gangrenous, and completely obstructed by inspissated fæces. There was profuse fibrinous peritonitis. The patient was so desperately ill that his only chance was to perform an enterotomy, but in spite of a short operation, camphor injections, and saline fluid infusion she died shortly after. He feels convinced that the operation might have been successful had it been undertaken on the fifth day. He concludes by stating that for paralytic intestinal obstruction morphine is preferable to atropine, and for all other forms surgical interference is the only reasonable method of treatment, provided that simpler mechanical means have failed, such as enemata, olive oil taken internally, etc. In the same journal F. Pritchard reports a case of obstruction due to gall stone, which he believes was cured by atropine. The symptoms were typical and resisted treatment (carried out by the patient or his friends) by enemata, etc. Chlorodyne, hyoscyamine, and strychnine were given one after another, and then atropine sulphate and 2 ounces of olive oil were given. On the fourth day of illness, the patient passed a copious stool, which contained a gall stone of the size of a walnut. Aronheim also reports a case in the same number. His patient was 51 years of age, and was said to be suffering from paralytic obstruction. There was no tympanites. Abdominal compresses (salt water, ice, etc.) and morphine were given, and enemata. Movements of the bowels were felt on the third day, but no wind or fæces passed. The same day he ordered atropine, and had the satisfaction of hearing in the evening that a copious motion had been passed. In the same number H. Schulz gives an interesting historical account of the belladonna and atropine treatment, to which we must refer our readers, as want of space prevents our publishing an extract of it.

**(205) Endovenous Injections of Sodium Cacodylate in Phthisis.**

ANELLI (*Rif. Med.*, July 19th, 1901) has practised with considerable success the above method of treatment in an advanced case of phthisis. The injections were given daily, usually in the veins of the arm, and never gave rise to unpleasant symptoms. Strict antiseptic precautions were taken, and to avoid air emboli the needle of the syringe was inserted into the vein separately, and allowed to get full of blood before the syringe was attached to it. The quantity of the drug injected was 5 centigrams in 1 c.cm. of water. At the beginning of the treatment the patient's evening temperature was 40° C., respirations 30, and pulse 120; less than one month later it was 37° C., respirations 20, and pulse 85. Examination of the sputa showed very few cocci, marked diminution in the bacilli, and no elastic fibres, as compared with the reverse of all this before treatment. If this treatment did good in an advanced case, the author asks what may it not do in an early case?

**(206) Formic Aldehyde in Lupus.**

SCATCHARD (*Semaine Méd.*, May 8th, 1901) reports a case of lupus of the nose treated by the application of a mixture of equal parts of 40 per cent. formic aldehyde and glycerine. After fifteen days the ulcers had healed. A few fresh patches which appeared later were cured by an application of the solution. Orthoform was applied first to prevent pain.

## PATHOLOGY.

**(207) Rat Plague.**

EDINGTON (*Centralbl. f. Bakt.*, June 27th, 1901), in the course of investigations at Capetown, has isolated from a rat supposed to have died of the disease a bacillus resembling the plague bacillus in cultures, and in its effects on guinea-pigs, but differing from it morphologically and in having no effect on rabbits. He deduces that the so-called rat plague is not the same disease as bubonic plague, and suggests that in future in cases where rats die from a plague-like disease, other animals besides guinea-pigs should be used for diagnostic experiment. The disease produced by the organism isolated by the writer resembles in guinea-pigs that produced by the true plague bacillus. Rabbits are the best test animals.

**(208) Permeability of Granulation Tissue for Pathogenic Organisms.**

As a result of investigations on this subject Jürgelünas (*Ziegler's Beitrage*, Bd. xxix, Heft 1, 1901) has arrived at the following conclusions. Aseptic undamaged granulation tissue acts in most cases as a mechanical barrier against the entrance of micro-organisms into the tissues, and the cells of this tissue forms also a second line of defence owing to their phagocytic properties. Bacteria taken from the granulation tissue of susceptible animals show very slight structural changes, but those recovered from the granulation tissue of immune animals are profoundly altered; they die in the exudation and in wounds of animals immune to anthrax; anthrax bacilli are destroyed and are not recoverable after six days.

# AN EPITOME
OF
# CURRENT MEDICAL LITERATURE.

## MEDICINE.

**(209) Purulent Cerebro-spinal Meningitis due to Influenza.**

Lauger (*Jahr. für Kinderheil.*, January, 1901) narrates a case in which he discovered influenza bacilli in the cerebro-spinal fluid removed by lumbar puncture, and recovery from meningitis began immediately after this was performed. Pfeiffer, the discoverer of the influenza bacillus, at first declared that it could only be found in the respiratory tract, but further researches proved its presence in the brain, cord, and meninges *post mortem*. A published case of Slawyk's is the only other instance of influenza bacilli being detected, during life, in the central nervous system. Lauger's case is one of a boy 9 years old, who was attacked, together with the whole family of eight, with coryza, fever, and headache. A week later he became listless and drowsy and complained of severe headache. During sleep he was restless. Vomiting began a few days after and muscular rigidity towards the end of the first fortnight. On admission there was rigid retraction of the head, great tenderness in the head and neck, general muscular rigidity, with flexion at the knees and elbows and retraction of the abdomen and hyperæsthesia, so that he desired not to be touched or moved. From time to time, though undisturbed, he had stabbing pains in the neck and occipital region. Pupils reacted sluggishly; knee-jerks and ankle-clonus not elicited. Pulse slow, 72; temperature, 99.6°. He lay in a partial stupor and frequently sighed deeply, but would look up when addressed and reply to questions. The diagnosis—acute intracranial disease, probably tuberculous meningitis—was recorded. Under observation, the pulse rose to 132 and the temperature to 104° on the third day, and Quincke's lumbar puncture was performed. Following the strictest aseptic technique, the needle was inserted in the middle line between the third and fourth lumbar vertebræ. Two and a-half drachms of purulent fluid came away pretty quickly in drops through the needle. When centrifuged this yielded a quarter its volume of tenacious yellow deposit, composed of fibrin and abundant pus cells. A few of the latter contained short bacilli. The only medium which would produce colonies was blood-smeared agar. The bacilli in these were short and slender, non-motile, staining readily with most dyes, but decolorised by Gram's. In short, they were influenza bacilli. Cultivations from the boy's nasal secretion produced only staphylococci and other small cocci. Interesting as these results were from the diagnostic standpoint, the therapeutic effects of the puncture appeared to be even more striking, for it was followed by a critical fall of temperature to normal, and to the normal, and the temperature never rose again. The next morning he was so much better that he sat up in bed and ate his breakfast eagerly. The neck was rigid and tender, but the spontaneous shooting-pains were gone. Skin was hyperæsthetic and pulse rapid, 120. In the two subsequent days the rigidity of the neck and limbs was greatly reduced, and he could change his position, read, and play without discomfort. By the end of a week the symptoms of spinal inflammation had so far abated that he made an attempt to walk. Eighteen days from the date of puncture all objective signs had cleared up, including optic neuritis, which was at its height during the febrile period. The knee-jerks, however, did not return. The recovery of a case of attested influenzal meningitis is evidently of great importance. From the standpoint of pathology it strengthens Lepuie's assertion that influenzal meningitis is not necessarily a fatal complication, and that symptoms, such as headache, stupor, rigidity and retraction of the neck, slow pulse, etc., which occur in influenzal cases, and often disappear gradually or suddenly with recovery of the patient, are really signs of a true meningitis. Other writers have given such symptoms the name of "influenzal pseudo-meningitis," considering them due to influenzal toxins, but not to inflammation by the bacillus, because the cases recovered. This case, however, shows that bacilli may be present in the cerebro-spinal fluid without a fatal issue. Lumbar puncture must be made use of more frequently to decide whether or no pseudo-meningitis is to be considered a correct term. Still more important is this operation from the therapeutic standpoint. Lauger was so much impressed by the crisis immediately following the puncture in this case that, while admitting that such a crisis is not unknown to occur spontaneously in influenza, and may have been merely an accidental coincidence with the lumbar puncture, he intends always to resort to that as a therapeutic measure henceforth in similar cases.

**(210) Direct Infection with Phthisis.**

Direct infection of a nurse from a consumptive patient is reported by Stewart (*Amer. Journ. of the Med. Sci.*, September, 1901) in the description of a case of acute splenic miliary tuberculosis. The patient was a young woman who had had no evidence of tuberculous infection prior to her attendance upon a phthisical patient. The patient was in poor circumstances, and had apartments which were badly heated and damp, and the nurse's nourishment while attending him was of very poor quality. In the middle of her second week of attendance upon the case she became acutely ill and died sixty-eight days later, the necropsy revealing a universal tuberculous infection.

**(211) Gastric Ulcer and Hysteria.**

Guido Bigi (*Gaz. Med. Lombard.*, June 9th, 1901) discusses the theories as to etiology of gastric ulcer, and relates a case in which a woman of 26 had hæmatemesis after a severe fright. She had indubitably hysterical symptoms, after almost three months a second severe hæmatemesis occurred, and from that date the other symptoms of gastric ulcer began to appear. After the first hæmorrhage the lacerated mucous membrane was restored, but not after the second. He suggests that the process of formation is comparable to the production of a neurotic œdema or even a bullous urticaria on the skin. In hysteria the gastric mucous membrane, like that of the lung or any other viscus, is liable to hæmorrhages arising from the direct influence of the neurosis; our knowledge of trophic affections of the skin enables us to state that the process has a general tendency towards necrosis. The hysterical process being thus actually a gangrenous one, when it is situated on the gastric mucous membrane, the gastric juice is able to maintain as a permanent ulcer the solution of continuity produced by an original hæmorrhage. Gilles de la Tourette and others have shown that half the clearly diagnosed cases of gastric ulcer have a hysterical etiology. This must be remembered if one wishes to carry out a suitable and rational treatment.

## SURGERY.

**(212) Wounds of the Venous Sinuses of the Brain.**

Wharton (*Ann. of Surg.*, July, 1901) gives the results of a study of 70 cases of wounds of the great venous sinuses of the brain, collected from various sources. Of these cases, 5 came under this surgeon's personal observation, and he was thus led to investigate this class of injuries with special reference to their frequency and mortality, and to the determination of the method of treatment which had been employed with the most satisfactory results. The results of this study are summed up in the following conclusions: (1) Wounds of the venous sinuses of the brain should be classed as dangerous injuries, being followed by high mortality from external or intracranial hæmorrhage or septic infection; (2) they are specially liable to infection, resulting from septic thrombus and pyæmia, therefore the greatest care should be taken to render them aseptic and to maintain them in that condition; (3) the most satisfactory and generally available method of treatment consists in controlling the bleeding by aseptic gauze packing; (4) ligation of the venous sinuses presents definite dangers in itself, is only available in certain wounds where a free exposure of the injured sinus is possible, and cannot be employed with advantage in ordinary accidental wounds of the sinuses; (5) the application of a lateral ligature to a wound of a sinus is less difficult and dangerous than ligation of the sinus, but is applicable only to small wounds; (6) suture of sinus wounds is a valuable procedure in a certain class of cases, namely, small wounds

which can be freely exposed; (7) forceps pressure is also a ready method of controlling hæmorrhage from wounds of the sinuses, but possesses no distinct advantage over some of the other methods, and its employment is not free from danger.

**(213) Subcutaneous Fracture of the Larynx.**

Nizzoli (*Rif. Med.*, August 16th, 1901) reports the case of a child, aged 10, who, whilst endeavouring to mount an adult bicycle, fell with the machine on the top of him in such a way as to give the larynx a severe blow with the handle bars, the head being extended at the time. The child coughed, spat some blood, and was aphonic and appeared badly injured, suffering from severe dyspnœa. Inspiration was painful, prolonged, and stridorous, and most of the auxiliary muscles of inspiration were called upon. There was slight swelling over the thyroid cartilage, and some bluish discoloration on the left side. The crepitation of subcutaneous emphysema could be felt in the neck. The left half of the thyroid cartilage appeared movable, and gave rise to a sensation of crepitus. Tracheotomy was proposed but refused by the relatives, so the child's head was fixed in a position of extension (which seemed to give him most relief), and a bladder of ice applied to the neck. Under this treatment the child got gradually better, and on the tenth day was quite well. The pomum Adami was deviated to the left, and the line of superposition of the fragments in the lower half of the thyroid cartilage could be distinctly felt. The voice remained hoarse.

**(214) Posterior Sclerotomy.**

Motais (*Annales d'Oculistique*, July, 1901) sums up his personal experience of this operation. To get the best results the knife should traverse the cavity of Tenon, and should pierce the sclerotic 10 to 12 mm. behind the corneal limbus. Light ocular massage, in the manner recommended by Dianoux, must be practised for at least a fortnight after the operation. Motais has obtained good results: (1) In absolute glaucoma—pain being relieved and enucleation avoided; (2) in acute glaucoma, where iridectomy and anterior sclerotomy have failed; (3) as an immediate preliminary to iridectomy for acute glaucoma—here it is particularly indicated owing to its simplicity of execution and the rapidity with which it lowers the tension; (4) in the treatment of glaucoma in the prodromal stage, in certain cases of chronic secondary glaucoma, and in certain cases of acute secondary glaucoma (traumatic cataract, serous iritis with plus tension). Motais does not deny the preponderating value of iridectomy for glaucoma and especially acute glaucoma, but thinks the sclerotomies, anterior and posterior, have also their place.

**(215) The X Rays in Pulmonary Surgery.**

Tuffier (*Rev. de Chir.*, August, 1901) states that the diagnosis of the localisation of pulmonary lesions is often very difficult, and that in every case skiagraphy ought to be utilised. When skiagraphy confirms the results given by percussion and auscultation, we have but to act on its indications, as it is then only an additional security. When its results are not in accord with those of the use of the plexímeter, the surgeon, it is held, should be guided by the skiagraph, and attack the obscure point indicated by it. If the *x* rays give negative results, especially if the disease be in the left side of the chest, skiagraphy should be ignored and sole trust be placed on the results of auscultation and percussion. It is probably that the cardiac shadow obscures the pulmonary lesion. In cases of hydatid cyst of the lung, skiagraphy will probably fail to localise and even to reveal the lesion. In the most successful instances of the the application of skiagraphy to the diagnosis of pulmonary lesions, the rays will fail to indicate their nature, and even to show whether the disease be single or multiple.

## MIDWIFERY AND DISEASES OF WOMEN.

**(216) Chlorosis: Its Morbid Relations, and the Toxicity of its Serum.**

Leclerc and Levet (*Lyon Méd.*, August 4th, 1901) have carefully investigated the family history of 36 cases of chlorosis during the last five years in order to ascertain the connection between chlorosis and tuberculosis. In 1890 Jolly concluded from an examination of 54 cases that in the majority of instances a personal or family history of scrofula or tuberculosis was to be found. The 36 cases now recorded, however, show that tuberculosis has not more influence in the causation of chlorosis than have other pathological states. Thus two-thirds of the parents of the patients suffered from some definite morbid condition: neuropathy 10 cases, gout 7, tuberculosis 5, diabetes 3, nephritis 3, rheumatism 2, etc. In less than a third of the cases the brothers and sisters have presented various pathological states: tuberculosis 8 cases (3 in the same family), chlorosis 5, neuropathy 2, asthma 2, albuminuria 2, etc. Only one of the 36 patients became tuberculous. It is concluded that the influence of hereditary tuberculosis is only exerted by enfeebling the stock. Since the study of the morbid relationships of chlorosis has thrown little light upon the etiology, the authors, struck by the analogy of the auto-intoxications, for example, myxœdema, determined to test the toxicity of the blood. This was done by means of intravenous injections in rabbits, in five cases of chlorosis. The number of c.cm. per kilogram required to kill the rabbits was in the case of blood taken from healthy people 15; in the five cases where the blood came from chlorotic patients, 15 in one case, 11 in three cases, and 8 in the other. The toxicity of the blood serum is then generally increased, and chlorosis may provisionally be regarded as an auto-intoxication.

**(217) Granulations on the Peritoneum in Association with Eclampsia.**

Chiresotti (*Il Policlin.*, No. 57, f. 9, 1901) in making a necropsy on the bodies of two pregnant women who died from eclampsia found certain granulations of the size of a millet seed on the peritoneum covering the ovaries, Douglas's pouch, and the adjoining peritoneal folds, but nowhere else. Somewhat similar bodies have been described in connection with normal pregnancy, but of the 10 normal cases the author examined he could find no trace of such granulations in any. It is probable they are an effect rather than a cause of eclampsia. Microscopically the growths were seen to be composed of large polymorphic cells, with irregular outline, large nucleus containing nucleoli. They somewhat resemble the cells of the uterine decidua, but are longer and more fusiform. The author believes they originate from the epithelium of the perivascular lymphatic spaces. Possibly these masses are absorbed during the puerperal period. In the two cases examined some of the cells were degenerating. As to the cause nothing is certainly known.

**(218) Auto-Cæsarean Section.**

Loeffler (*Wien. med. Woch.*, No. 10, 1901) relates as authentic the following case: A Bosnian woman, who had borne 15 children, was sinking from phthisis, and was also subject to osteomalacia in an advanced degree. Desirous of saving her child and herself without medical assistance, she cut through her abdomen into the uterus with a notched and rusty knife. She saw the fœtus escape and then fainted: on reviving she woke up her daughter, a girl aged 13, who sewed up the abdominal wound with a continuous suture of waxed hempen twine, dressing it with moss. The wound was 5½ inches long, and healed by first intention. Mother and child recovered, and the former seemed better after the puerperium, as far as the osteomalacia was concerned.

**(219) Cancer of the Pelvic Connective Tissue.**

Heinsius (*Centralbl. f. Gynäk.*, No. 31, 1901) relates a case which seems to show that primary malignant disease may arise in the parametrium, probably when carcinomatous, from Gartner's duct. Hence we must not conclude, when a malignant mass is detected after a short history of local disease, that the new growth of necessity arose primarily in the uterus, ovary, or tube. The patient was a multipara, aged 30. A left parametritic mass developed in the course of a chronic attack of pelvic inflammation. An exploratory operation was performed. The mass seemed an ordinary parametritic exudation. The right appendages were removed, presumably for inflammatory changes, and the fundus fixed to the parietes. Two months later the mass on the left side of the pelvis had increased greatly in size. A vaginal incision was made; no pus escaped, but a cavity with rigid walls was opened. A piece of the wall

was excised, and found to be true carcinomatous tissue. Six months later the patient died of cachexia. The uterus, ovaries, and tubes were certainly free from cancer when the operation was performed.

**(220) Puerperal Suppuration of Gall Bladder.**

Doléris (*L'Obstét.*, May 15th, 1901) reports a case where the patient was delivered prematurely in the eighth month, when the temperature was over 102°; on the next day it exceeded 105°. At first typhoid fever was suspected, but as uterine infection seemed so probable, the curette was used, but the uterus was found to be healthy. Next day serum diagnosis proved that there was typhoid fever, according to rule. A few days later a swelling developed in the right hypochondrium, and suppuration of the gall bladder was diagnosed. Abdominal section was performed and the diagnosis confirmed. The bile which drained away during the first few days after the cholecystotomy was found to contain Eberth's bacillus.

## THERAPEUTICS.

**(221) Postural Treatment of Phthisis.**

Schenk (*Wien. med. Woch.*, July 6th and 13th, 1901) has applied the principle of passive hyperæmia, introduced by Bier for arthritis and tuberculous joint disease (Epitome, vol. i, 1900, par. 181) to pulmonary tuberculosis, and considers it specially suitable owing to the antagonism which is said to exist between phthisis and those heart lesions which are accompanied by pulmonary congestion, such as mitral stenosis. According to Benecke, congenital predisposition to phthisis depends on a disproportion between the size of the lungs and the heart, the former being abnormally large and the latter abnormally small, so that a permanently deficient pulmonary circulation results. Acquired predisposition consists essentially in the malnutrition which is the cause or result of anæmia, and which affects the nutrition of the lungs among other organs. In order to increase the supply of blood to the apices, the foot of the couch or bed is raised on blocks, so that the patient lies on an inclined plane with the head at the lower end. The more obliquely the patient lies, the more rapid is the improvement. The cerebral hyperæmia produced is grateful to anæmic subjects, but if it causes headache an icebag or Leiter's tubes may be applied to the head. The hyperæmia produced mechanically in the apices of the lungs renders them an unfavourable medium for the development of the tubercle bacillus. The principle involved in the writer's treatment is not new, and was advocated by Schian in 1899 (*Deut. militärärzt. Zeit.*, February). In dry weather the patients lie in this position the whole day out of doors, in rainy or misty weather in the dry air of a heated room. Damp air is injurious in phthisis, as it diminishes inspiratory exosmosis. During the night the foot of the bed is raised on blocks. In order to further increase the pulmonary hyperæmia, for some hours every morning and afternoon a moist bandage is applied to the chest; over this is drawn a kind of vest made of indiarubber tubing, through which water at 113° F. or more is made to circulate, as in Leiter's tubes, and a dry flannel bandage is applied over all. The rest of the body is lightly clothed—in summer with a single sheet—so that the determination of blood to the chest is aided by the contraction of the cutaneous arterioles in other parts. For the same reason the feet, hands, and abdomen are rapidly moistened every five minutes with a sponge wrung out in cold water. The patients are allowed off the couch or bed only for their meals. The proof that the hyperæmia produced by the application of warmth affects the lungs as well as the skin is that, after the treatment has been applied for a few days, a systolic murmur appears at the apex, with accentuation of the pulmonary second sound. The heart can be made to meet the extra work thrown upon it, and the murmur disappears if a separate coil of tubing through which cold water circulates is placed over the cardiac region. During sleep the oblique position of the patient allows the secretion in the smaller bronchi to gravitate to the larger, with the result that on waking the sputum is very copious, but is lessened during the day. Cough, therefore, is greatly lessened, partly through the posture, partly through the sedative action of warmth. The pulmonary hyperæmia produced does not increase the danger of hæmoptysis.

**(222) Thiosinamine.**

The therapeutic use of thiosinamine, which was first brought into notice by Hebra, is the subject of an elaborate paper by F. Juliusberg (*Deut. med. Woch.*, August 29th, 1901) The drug is a white crystalline substance, soluble up to 20 per cent. in alcohol. The reputed action ascribed to it is the softening of scar tissue. Juliusberg has applied it in a series of cases of lupus, and found in some that the scar tissue became softer and more movable, and in one case he obtained a remarkable degree of softening. In hypertrophic cicatrisation, and in keloid following burns, furuncules, etc., the scar tissue also softened considerably at times, but in some cases no changes were noticeable. Post-lupus scarring appeared to be particularly suitable for treatment by thiosinamine. He found that its use in sclerodermia led to more satisfactory results; the stiff, hardened tissue became softer, more pliable, and more movable after a few injections. He used the drug in a 10 per cent. solution (Hebra suggested 15 per cent. solution in alcohol), according to the following formula: ℞ Thiosinamini, gr. xlij (or 10 grams); glycerini, ʒ jss (or 20 grams); aq. destil., ad ʒ j (or ad 100 grams); misce. This mixture, injected subcutaneously, in doses of 17 minims (= about 1½ gr. of the salt) does not cause any pain, while the alcoholic solution does cause temporary pain. The dose may be increased to 34 or 51 minims. The salt may separate after standing for a few days, but it is readily redissolved by placing it in warm water. Another method of application is by the local use of thiosinamine plasters (10 per cent. to 20 per cent. and 30 per cent.) and of thiosinamine soap. These methods are, however, at times not well tolerated. On one occasion he met with an idiosyncrasy against even the injections, but by using smaller doses he succeeded in overcoming it. The symptoms produced were slight *malaise*, fever, a morbilliform eruption, and itching of the skin. At times urticaria has followed the use of the drug. He concludes by stating that it is of no value in fresh cases of lupus, tabes dorsalis, mycosis fungoides, and plastic induration of the corpora cavernosa penis, although the contrary has been claimed for it.

**(223) Antisepticised Gelatine as a Hæmostatic.**

Giordano (*Gaz. degli Osped.*, July 14th, 1901) carried out an extensive series of experiments on a gelatine solution (gelatine 100 parts, salt 7 parts, water 1,000), and found it a fairly good culture medium even when neutralised with soda. He recommends that when used in the mouth, nose, vagina, etc., it should have an antiseptic added; and he finds that 1 in 3,000 of perchloride of mercury is more effective than 1 per cent. of carbolic acid, salicylic acid, or lysol. The bactericidal action of the perchloride is manifested even in a 1 in 10,000 solution.

**(224) Treatment of Sarcoma by the Roentgen Rays.**

Carl Beck (*Münch. med. Woch.*, August 6th, 1901), of New York, has treated a case of recurrent sarcoma by the Roentgen rays with apparent success. A man, aged 36, had had a black spot, possibly a mole, over the left external malleolus for fifteen years. This began to enlarge rapidly in November, 1900, and by Christmas was the size of an apple, ulcerated, and adherent to the underlying tissues. There was an enlarged inguinal gland. Amputation was refused, and the operation was limited to removing the tumour with the underlying periosteum and the gland in the groin. It was a melanosarcoma. Six weeks later the tumour had recurred, and though flatter had a greater circumference than before its removal. There were also multiple bluish-black nodules, the size of a pea round about it. There was a mass of inguinal glands the size of a goose's egg. These, with the tumour, were again extirpated. Four weeks later the recurrent tumour was surrounded by at least thirty smaller nodules the size of grapes, which bled readily when touched. There were also numerous nodules over the inner side of the calf, and the inguinal glands were again enlarged. A third extirpation of the tumours, which were of alveolar structure, with pigment in the cell nests

and in the cells of the interstitial connective tissue, was performed. The Roentgen rays were applied to the wounds over the ankle left after the third operation, at first for ten minutes, then for twenty, thirty, and at last forty-five minutes. After seven applications at intervals of from two to three days, the whole course lasting six weeks, there was no sign of recurrence, and some of the nodules over the calf (which apparently had not been removed at the operation) had completely disappeared, while others were diminishing. During this treatment the inguinal glands again enlarged. They were removed, the rays were applied to the wound, and three weeks later there had been no recurrence. Thus, nine weeks after the removal of the tumour over the ankle there had been no recurrence, though before the rays were applied the growth rapidly reappeared after removal. The fact, also, that typical sarcomatous nodules over the calf disappeared entirely under the rays without surgical interference proves their efficacy. The writer has seen also an epithelioma disappear entirely under the application of the *x* rays. He suggests that they should be applied in every case of malignant tumour in which it is doubtful at the operation whether the whole of the disease has been removed in order to guard against recurrence.

**(225) Treatment of Neuritis by Currents of High Frequency.**

DENOYÈS AND LAGRIFFOUL (*Arch. d'Elect. Méd.*, August, 1901) record two cases of neuritis—the one of saturnine, the other of influenzal origin—in which great amelioration followed the employment of d'Arsonval's high-frequency currents. A combination of local and general treatment was adopted; a full account of the state of the patients before and after its use is given. The authors describe the various troubles of sensation and movement as rapidly clearing up; when the patients left the hospital functional restoration was virtually complete. Moreover, the examination of the reflexes and of the electrical reactions sufficed to show that the symptomatic improvement denoted the anatomical clearing up of the affections.

**(226) Arsenic in Cutaneous Epithelioma.**

LASSAR (*Sonderabdr. aus der Berl. klin. Woch.*, No. 10, 1901) has treated several cases of "cancroid" with Asiatic pills. A woman, aged 62, had a nodule, about the size of a lentil, on the right side of the nose below the bridge. It was slightly raised above the surface and was covered with a rust-coloured scab. It had appeared three months previously, and had slowly increased. A small piece was excised for diagnostic purposes, and proved to belong to an epithelioma in an early stage. Asiatic pills, each containing 1 mg. ($\frac{1}{64}$ gr.) of arsenious acid, were taken in first increasing and later decreasing quantities for several months, until in all 1 gram, or 15.4 grs., of arsenious acid had been taken. From the beginning a gradual diminution of the tumour was obvious, and finally it disappeared completely, leaving no trace except a tiny linear scar of the exploratory incision. There had been no recurrence. The arsenic produced no complications. Eight years ago the writer showed 2 cases of epithelioma and 1 of rodent ulcer before the Berlin Medical Society which were completely cured by the internal administration of arsenic. One patient, a woman, died of senile decay, aged 81, two years ago without recurrence having taken place. The patient who had the rodent ulcer is still alive and well. The third patient was a man, aged 66, with a raised epitheliomatous growth on the left ala nasi. It completely disappeared under arsenic, leaving behind a small depressed scar. There had been no recurrence up to February, 1901.

## PATHOLOGY.

**(227) Infantile Atrophy.**

HEUBNER (*Jahr. f. Kinderheilk.*, January, 1901) shows that infantile atrophy is a functional disorder simply, and is not due to an organic degeneration in the intestinal mucosa. Since 1884 Baginsky's theory has been largely accepted. This was that the symptoms are originated by an actual disappearance of a large number of the secreting glands and absorbing cells lining the intestine. The theory was founded on microscopical appearances of sections of intestine similar to those which Nöthnagel in 1882 described as indicating intestinal atrophy. But Heubner proves these changes to be normally the result of two conditions, that is fasting and relaxation of the intestinal muscles. During fasting the solitary follicles always shrink from emigration of lymph cells which return with active digestion of food. Atrophic infants are always hungry and consequently their intestinal adenoid tissue is always shrunken. Sections of intestine present totally different features if taken from a distended coil from those found in a contracted part. In an elastic tube, like the gut, the elements must move apart with increase in its calibre—the glands become separated, villi and folds flattened out, and the wall reduced to perhaps a third of its previous thickness. Heubner then describes fully experiments performed by himself and by others, which show that the so-called "atrophy of the intestines" of Nöthnagel and Baginsky can be produced at will by simple inflation, whether in animals or in man, and in the latter in health or disease. His investigations further negative the existence of gross lesions in the gut wall in infantile atrophy which he regards as a severe but functional disorder of the gut. Previous exhausting influences, as from continued overfeeding or starvation, can nearly always be traced as the exciting cause, and are probably aided by a congenital debility of the intestine. The result of the defective absorption of nourishment is that bodily energy is insufficiently supplied, and part of this is wasted in the excess of work required for the expulsion of the large undigested residue of the food. The balance of income and expenditure is upset, and the child will waste as long as it remains so. But a slight change in the food, increasing its digestibility and limiting its residual waste, is often just sufficient to turn the scale and lead to rapid restoration of flesh. The fact that cases of advanced atrophy not infrequently do suddenly improve and recover with great rapidity should have been enough to discredit the existence of profound organic changes in the gut. These could not be recovered from so quickly, but restoration of the balance of metabolism produces great changes in short periods. Heubner works out the equation of the energy of the organism and of the food in terms of units of heat or calories.

**(228) Lumbar Puncture.**

OSSIPOW (*Deut. Zeit. f. Nervenheilk.*, Bd. xix, 1901, p. 105) has in Oppenheim's laboratory made a series of observations on the vascular changes following lumbar puncture with or without aspiration of the cerebro-spinal fluid. Hyperæmia of the cerebral and spinal vessels follows especially in the upper dorsal and lumbar regions of the cord. Repeated puncture is followed by punctiform hæmorrhages, most common in the grey matter of the lumbar, upper dorsal, and lower cervical regions; less frequently beneath the cerebral cortex. If the cerebro-spinal fluid is aspirated hæmorrhage occurs in the central canal, especially in the lumbar part. Degenerative cellular changes were also found after repeated puncture. Lumbar puncture is not therefore so entirely harmless a procedure as it is usually assumed to be.

**(229) Changes in the Spinal Cord after Ligature of the Thyroid Vessels.**

OTTO MAAS (*Berl. klin. Woch.*, 1901, No. 32) carried out these important experiments in the Brown Institution in London. All the vessels of the thyroid gland in some dogs were ligatured with horsehair. On the day after the operation the animals appeared normal, but a few days afterwards the following well-known symptoms presented themselves: Hurried respiration, tremor in the muscles of the trunk, great ataxy and rigidity of the extremities, increased knee-reflex and diminished sensation for pain in the skin; epileptiform convulsions, however, were never observed. Death occurred between the fourth and seventeenth days after operation, except in one dog which was killed on the forty-eighth day. In all cases the thyroid gland appeared much atrophied. In one case a little interstitial nephritis was noted. In all six cases examined degenerative changes were found in the white substance of the spinal cord, chiefly in the posterior columns. In the brain also some pathological change was observed, chiefly in the animal which survived the operation by forty-eight days.

# AN EPITOME

OF

# CURRENT MEDICAL LITERATURE.

## MEDICINE.

**(230) Albumosuria in Osteomalacia.**

Of the 7 cases of typical albumosuria on record, Jochmann and Schumm (*Münch. med. Woch.*, April 20th, 1901) find that 6 were connected with softening of bone, and 4 were connected with multiple myeloma (myelogenic sarcoma). Of the 7 cases, the condition of the skeleton was examined in 4 *post mortem*. They add an eighth case. The patient, a woman aged 37, complained in November, 1900, of severe pains in the spine, and of inability of walking. The urine was found to be acid, and contained 0.2 per cent. albumen (Esbach's test), a few granular casts, a few epithelial casts, some leucocytes, and an excess of urates. Ten days after admission, the sternum showed a protrusion at the level of the second and fourth ribs. Later on this deformity increased, and the head sank lower and lower. Six months later, a kyphosis of the dorsal and lumbar vertebræ was noted, and about the same time double spontaneous fractures of the necks of the femora occurred. Beside these changes, in the left eye there was a hæmorrhagic glaucoma, and in the right eye numerous retinal hæmorrhages. The patient died of a right apical pneumonia. The diagnosis of osteomalacia was made from the clinical signs and the skiagraphic appearances, and confirmed *post mortem*, macroscopically and microscopically. During the last few weeks, the urine attracted particular attention. It was found to give the following reactions, which the authors consider to prove that albumose (Bence-Jones body) was present: (1) On heating to 53° C. (127.4° F.) gradually, clouding appeared, which did not alter on further heating to 100° C. (212° F.). The boiled fluid was filtered, and the filtrate was clear, but clouded on cooling; this disappeared on reboiling. (2) A white ring on gently pouring it on to $HNO_3$; shaking produced a general clouding, which remained permanently. (3) A heavy precipitate fell on addition of acetic acid and solution of potassium ferrocyanate. The clear filtrate (boiling) clouded on cooling, and cleared again on boiling. (4) A heavy white precipitate on addition of $HNO_3$ in the cold, which soon coloured pink. (5) On adding 1 part of $HNO_3$ to 10 parts of boiling urine, the clouding remained, turned red and then yellow. The clear filtrate behaved as already described. (6) It gave the Millon's and (7) biuret reactions. (8) With equal parts of saturated saline solution, the urine remained clear, but a heavy precipitate fell on further addition of some acetic acid. (9) There was no precipitate with acetic acid alone. On boiling, a heavy precipitate fell. (10) On addition of acetate of lead, a black coloration took place. (11) The addition of sulphate of ammonium (saturation) to urine slightly acidified with acetic acid, brought down the whole of the albuminous bodies. The clear fluid gave neither biuret test nor any tannic acid test. The thrown down albuminous bodies were partly soluble in water. The albumen could be removed from this solution by boiling and slight acidification. The filtrate gave a marked biuret reaction and nitric acid reaction for albumose. (12) The alternate repeated warming and cooling, and filtering of the urine (after different degrees of temperature, including 100° C.) produced a brownish-yellow supernatant fluid, of slightly acid reaction, which remained clear both when hot and when cold. It contained a fair quantity of albumose-like substance. (13) On addition of equal parts of alcohol, a heavy flocculent precipitate took place. After filtration, the renewed addition of alcohol produced a further precipitate; after filtering and washing, the precipitate was found to be somewhat soluble if acidified. The filtrate was clear, faintly yellow, and showed a precipitate with potassium ferrocyanide and acetic acid; with saturated saline solution and acetic acid, and with nitric acid; with sodium hydrate and a few drops of 1 per cent. solution of copper sulphate, a bright reddish-violet coloration took place. Jochmann and Schumm describe some further tests which they partly carried out to identify the albumose (Bence-Jones body), but as the quantity of urine at their disposal was limited, their results were not quite complete.

**(231) Multiple Sclerosis.**

Hofmann (*Neurol. Centralbl.*, July 16th, 1901) read a paper on multiple sclerosis before the recent Neurological Congress in Baden-Baden, based upon 100 cases observed by him in the Heidelberg Hospital. He is not able to agree with those authors who attribute a share in its causation to metallic poisoning. Of his patients, 37 were field workers and the rest mainly labourers. In 50 per cent. of the cases absolutely no etiological factor could be discovered: febrile diseases only preceded 5 per cent. and trauma 13 per cent. Hofmann agrees with previous observers as to the variability of the early symptoms; the most constant were psychical disturbances, cerebral and bulbar palsies, and attacks of vertigo. In 50 per cent. there was some affection of the optic nerve or ocular muscles; in 10 to 12 per cent. there was retrobulbar neuritis (Burns had found this in 30 per cent.). Differences in the two pupils were rare. Tremor was present in 75 per cent.; the author regards it as a variety of ataxy. The principal disturbances of sensation were paræsthesiæ and hyperæsthesiæ; severe pain was rare. The tendon reflexes were as a rule increased; the condition of the skin reflexes was very variable. Strangury, dysuria, and tenesmus were common. The course of the disease was found to be of variable rapidity, long remissions often simulating cure; the prognosis as regards recovery is unfavourable. All remedies are at best uncertain in their action; the author has found mild hydrotherapy and electrotherapy most useful. He gave the results of three careful *post-mortem* examinations, and pointed out that while pathologists were pretty well agreed as to the anatomical appearances, there were at least three theories as to their cause: those of congenital hyperplasia of the neuroglia, of primary vascular disease, and of affection of the nervous elements (as by a toxin). Hofmann criticised all these, and concluded that no one of them offers a satisfactory explanation of the disease, which is yet to seek.

**(232) The Diagnostic Value of the Diazo-Reaction.**

In view of the contradictory reports on the above subject Bolli (*Rif. Med.*, August 8th, 9th, 10th, 1901) has studied the behaviour of this reaction in phthisis, pleurisy, and peritonitis. Of the 15 cases of pulmonary tubercle those in the second and third stage, with the exception of two, constantly gave a positive result to the test; if present in the early stage it is not necessarily of bad import; in the later stages its absence indicates a somewhat less rapid course. In 12 cases of pleurisy with effusion the diazo-reaction was present in about 50 per cent. and if present was strongly suggestive of tubercle. Similar results were found in the 8 cases of peritoneal effusion examined. The dimunition or disappearance of the diazo-reaction in pleural or peritoneal effusion usually coincided with absorption of the fluid. The reaction was absent in peritonitis, secondary to labour and miscarriage. Certain drugs, for example phenol and several of the aromatic series, have the power of annulling the test.

## SURGERY.

**(236) Diagnosis of Deep-seated Œsophageal Diverticula.**

W. Zweig (*Deut. med. Woch.*, August 15th, 1901) publishes 4 cases to illustrate a method which he has used to differentiate between idiopathic dilatation of the œsophagus and deep-seated diverticulum. Although so few cases are recorded of the latter condition, he believes that they must be more common, since he has, within a short space of time, been able to demonstrate three. The first case was that of a man aged 35 years. Two years before admission he had noticed difficulty in swallowing solids. He stated that he always had the feeling as if the food were arrested near the entrance to the stomach. Later he experienced similar symptoms with fluids. The food was very frequently vomited, but was always the food taken recently, and not that taken in a few days previously. The patient had lost flesh and was very pale. The stomach was dilated. Attempts to in-

flate it with tartaric acid and sodium bicarbonate failed, as these substances did not enter the stomach at all. A sound passed into the œsophagus met with a resistance 16 inches from the teeth. The fluid obtained from the cavity entered by the sound contained no free HCl, no ferments, but plentiful lactic acid (acidity = 14). A stomach tube was passed with difficulty into the stomach, and the contents were found to contain free HCl (26) ferments in normal proportion (acidity = 36), no lactic acid. The second sound of swallowing was not heard. Zweig now passed a tube into the diverticulum, and another into the stomach. Each tube was provided with a glass funnel. Into the diverticulum tube he poured a quantity (100 cm.) of a weak solution of methylene blue. He had previously measured the capacity of the pouch, and used somewhat less fluid. Turning the stomach filter downwards, he very slowly drew the tube out of the stomach through the œsophagus. If the pouch, which was filled with the solution of methylene blue, were a dilatation, then the stomach tube would pass through the fluid, and as soon as the eye was immersed the fluid would flow from the inverted funnel, and, furthermore, the eye would on withdrawal be slightly stained with blue. On the other hand, if there was a diverticulum, no fluid could pass through the stomach tube. In this case no fluid passed. A skiagraph was taken with the diverticulum filled with an emulsion of bismuth subnitrate, and the relations were clearly shown. The second patient was a female, 38 years of age. The history consisted in difficulty in swallowing, vomiting, and pain. She had succeeded in passing the stomach tube herself, and knew that if it entered the pouch she would have to withdraw it, and then could generally succeed in guiding it into the stomach. The methylene-blue test was employed here also and demonstrated a diverticulum. A further condition was present in the stomach. The contents were found to contain no free HCl and very little pepsin. The third case was similar. The fourth case was that of a 63-year-old man. He had fractured some ribs twenty-seven years before. At that time he noticed that solid food could only enter the stomach if he washed it down with fluid. If he did not drink, after a time the food was returned unchanged. The stomach sound passed for 17½ inches. It was then felt to be in a cavity or pouch. The contents were acid (=4), no free HCl, but lactic acid. On passing a tube into the stomach, the contents were found to contain HCl (34) normal ferments (acidity=36). The methylene-blue test was applied. On withdrawal of the stomach tube, blue fluid issued from the filter. The condition was therefore a dilatation of the œsophagus.

#### (234) Forcible Taxis.

H. Bertram (*Deut. med. Woch.*, August 8th, 1901) publishes the account of some cases illustrating the results of forcible taxis in strangulated hernia. The first case was that of a man whose doctor applied taxis in vain, and later carried out a herniotomy and reduced the hernia. The symptoms of strangulation still persisting, Bertram opened the abdomen after finding the rings quite clear, and found a coil of small gut was fixed to the pillars of the internal ring, while coils of distended intestine were found between the peritoneum and the transversalis fascia. The adhesions being divided, the coil was found to be gangrenous, and was removed. A second case was that of a man whose doctor had apparently been successful in reducing the hernia after using considerable force. The symptoms, however, persisted, and therefore he was admitted into hospital. On the abdomen being opened it was found that the circular portion of the incarceration ring had been torn completely off the rest of the hernial sac. The case was treated accordingly. In the third case the patient, a woman aged 50 years, had used some force in trying to reduce her umbilical hernia. The peculiar point in this case was that on operating for the reduction of the hernia he found that there was a smaller hernia into the older hernia, which had existed for about twenty years; and, further, that there was no peritoneal covering to the hernia at all. He excised a portion, and examined it carefully, but found no endothelial cells in the covering. The hernial opening was wide, but there were dense adhesions between the omentum and coils of intestines. The skin covering the hernia had been ulcerated previously, and was covered with scars. In the convalescence he had some difficulty with the skin, as a piece as large as half-a-crown became gangrenous. The fourth and last case was also one of umbilical hernia in a female. Her husband had "reduced" the hernia. As the symptoms persisted he operated, and found the hernia reduced *en masse* behind the fascia, while there was a large hæmatoma in the omentum. He states that he considers taxis dangerous, and that in 137 cases of strangulated hernia he has only employed it twice while he has operated 135 times.

#### (235) Idiopathic Peritonitis.

Nöthnagel (*Wien. med. Presse*, July 14th, 1901) states that primary "idiopathic" peritonitis, with no anatomical changes in other organs, occurs only as the chronic circumscribed patches, which are produced by pressure, and are situated most often at the splenic flexure or the cæcum. Such patches may be produced by the pressure of chronically overloaded large intestine or tumours. Though many cases have been reported as diffuse primary acute or chronic peritonitis, not one is above criticism. This is remarkable, since primary acute inflammation of the serous membranes, such as the pleura, is common. Primary peritonitis has been reported in influenza, but Leichtenstern has shown that the inflammation is always secondary to influenzal enteritis. In the case of "rheumatic" peritonitis the peritoneum has always been infected from the thoracic cavity by direct extension through the lymphatics of organisms causing pleurisy, pneumonia, or pericarditis. Probably every septic peritonitis is secondary. Even in cases in which peritonitis or appendicitis has followed tonsillitis, the peritoneum is probably not affected through the circulation, but through the gastro-intestinal canal. The normal intestinal wall is impervious to micro-organisms, but even slight catarrh may, under certain conditions, render it pervious. The secretion from the tonsils is swallowed, and the organisms contained in it penetrate the gastric or intestinal walls and set up peritonitis. A young man had sudden rigors, followed by pains in the thorax, abdomen, the left side, the shoulder, and the neck, with high pyrexia. Five days later laparotomy was performed, and acute purulent peritonitis found. *Post mortem* there were acute gastritis and cicatrices in the fundus and pylorus, but no perforation. An overlooked purulent tonsillitis was then discovered. The pus contained streptococci, which were also present in the contents of the stomach, in the gastric mucosa, and the tissues of the stomach walls; neither is there any proof of the existence of primary chronic diffuse peritonitis. Galvagni has described such a disease in children, which he believes to be non-tuberculous, chiefly because it may end in recovery; but recovery is no argument against the disease having been tuberculous, and all cases of tuberculous peritonitis are secondary to a tuberculous focus elsewhere, generally in the intraperitoneal lymphatic glands. Every case of chronic diffuse non-tuberculous peritonitis is likewise due to extension of inflammation from some neighbouring organ—for example, the uterus.

## MIDWIFERY AND DISEASES OF WOMEN.

#### (236) Puerperal Gangrene of Lower Extremities.

Andérodias (*L'Obstétrique*, May 15th, 1901) read a monograph on this rare condition at a recent meeting of the Société Obstétricale de France. Amputation and also *post-mortem* examination show that there is a puerperal gangrene of arterial and a second variety of venous origin. The first type either arises from an embolon expelled from the heart and arrested in an artery supplying the limb, with the consequent thrombotic changes, or from endarteritis obliterans. The latter is the more frequent cause; it is accompanied by general symptoms, whilst auscultatory evidence varies. Venous puerperal gangrene, the existence of which has been denied, occurs when stasis is sufficiently absolute to cut off nutrition from the tissues of the limb. Both arteries and veins have been found obliterated when there was not clear evidence which was plugged first. Two cases of symmetrical gangrene in the puerperium have been reported.

All 3 cases of venous gangrene ended fatally. Out of 12 cases of arterial gangrene 7 recovered. General treatment may avail in the venous variety, whilst in the arterial type amputation is demanded directly the line of demarcation has developed. In one case diabetes was detected. Phlebitis is naturally suspected as a common cause of puerperal gangrene, as infective phlebitis is so frequent in the puerperium. Andérodias points out, however, that in three reports only was phlebitis detected; in all the others the veins of the affected extremity were free from disease.

**(237) Utero-Intestinal Fistula after Curetting Puerperal Uterus.**

Baldwin (*Amer. Journ. Obstet.*, August, 1901) reports a case where a woman, aged 37, was confined in April, 1900. On account of septic symptoms, a most competent physician used the curette. Nothing unsatisfactory was observed until the tenth day; all septic symptoms had disappeared, but fæcal matter then passed through the vagina. Baldwin confirmed the physician's opinion that the fæces issued from the uterus, motions could be seen through the speculum coming out of the os externum, flatus passed as well, and nothing had come away through the rectum for several days. The pulse and temperature were high, and there was a mass about half the size of a fœtal head on the left iliac fossa and Douglas's pouch. The parts were kept as clean as possible, the fever subsided, and at the end of two weeks a little flatus passed by way of the rectum. By the middle of July, 1900, fæcal matter had not passed by the way of the vagina for several days. The patient's general health was very good. In September, 1900, she was cured, nothing remained but a little thickening at the back of the uterus on the right side. Menstruation had been quite normal for two months. Baldwin noted that the fæces which passed from the uterus were clearly not from the small intestine. Probably the uterine wall was injured at the time she was curetted and a localised peritonitis occurred with adhesion to the sigmoid flexure. Involution seems to have involved dragging of the fistulous canal with subsequent obliteration. In a discussion on this case P. F. Chambers and Janorin warned obstetricians against the use of the sharp curette after confinement. It cuts soft tissue and leaves a number of raw surfaces for the absorption of septic tissue. In parturient cases and in subinvolution a large blunt curette should be used; it is best adapted to catch hold of any material within the uterine cavity, and to bring it down. There was no evidence and practically no possibility of laceration of the uterus during labour, nor did it seem likely that the intestine pushed itself into a wound caused by the curette.

**(238) Uterine Fibroid in a Virgin aged 21.**

Jacobs (*Bull. de la Soc. Belg. de Gyn. et d'Obstét.*, vol. xii, No. 2, 1901) reports a case of a large sloughing fibroid in an unusually young subject. The period appeared at 13, menorrhagia set in early, and at length caused great anæmia. The abdomen had enlarged slowly; at length fœtid discharge set in. The patient, aged 21, was a big girl, the hymen was intact, and there was no suspicion of pregnancy. The abdomen was greatly distended up to the umbilicus. A round movable tumour reached to a little above the umbilicus. It was continuous with the cervix, which was patulous and extremely soft. Dirty-coloured fœtid fragments escaped from the os. A putrid mass as big as a fœtal head was removed after dilatation. Another mass quite as large could be felt higher in the uterine cavity. Three days later the patient was so ill that Jacobs decided to remove the uterus, which was of the size of an adult head. The retroperitoneal operation was performed, the cervix was divided by the thermo-cautery; not a drop of sanies escaped into the peritoneal cavity. No drainage was employed. For a week the patient did well, but there was already phlebitis in the left lower extremity and the anæmia was extreme. Death occurred suddenly on the sixteenth day, probably from embolism. The myoma, which could not be enucleated, was almost as sloughy as that which was removed at the first operation. It was interstitial and partly submucous. The uterine mucous membrane had given way at the point where it touched the tumour, so that the uterine cavity communicated with the sloughy mass.

**(239) Primary Ovarian Pregnancy.**

Mendez de Leon (*Centralbl. f. Gynäk.*, No. 33, 1901) describes this condition in a woman aged 31, pregnant for the second time. The last pregnancy occurred eight years before observation. De Leon removed a tumour of the size of a goose's egg; it consisted of an enlarged right ovary, and on section appeared to be an old hæmatoma. Holleman carefully examined the specimen, and detected amongst old extravasated blood distinct remnants of fœtal tissue.

## THERAPEUTICS.

**(240) Gelatine Injections in Hæmorrhage.**

Grunow (*Berl. klin. Woch.*, August 12th, 1901) details the results of the extensive use of gelatine subcutaneous injections to arrest hæmorrhage. He used a 2 per cent. solution in saline solution, and injected twice 2 grams (that is, 200 c.cm., or about 7 ounces of the solution) in one or two sites. The hæmorrhage was caused by the following conditions—phthisis, gangrene of the lung, gastric ulcer, typhoid fever, hæmatemesis in hæmophilia, intestinal hæmorrhage due to leukæmia, etc., bladder trouble, nephritis causing kidney and pelvis of kidney hæmorrhage, and aneurysm of of the pulmonary artery. Referring to the cases of hæmoptysis in phthisis, one patient died, but he considers that the treatment was begun too late, and was insufficient both as regards the quantity of gelatine injected and the number of times the injections were made. In all the other cases he believes that the effect of the injections was a beneficial one. The case of gangrene of the lung ended fatally, but the hæmorrhage was arrested thirteen days before death from secondary putrid abscess. He found it advisable to combine the gelatine treatment with morphine and acetate of lead or ergot. He observed good results in all the cases of hæmatemesis, and also in the kidney bleeding. In one hæmorrhage from the bladder, however, it appeared to have no effect at all. Although he does not find the treatment attended with any danger to life, he noted the following side-effects, which are undesirable: (1) Pain in the site of injection. This was at times considerable, and lasted from a few minutes to twenty-four hours or even longer; (2) fever, not exceeding 103° F., 3 urticaria and 4 circumscript deep-seated swellings in the muscles (in one case). He concludes from his observations (1) that gelatine injections exert some beneficial action on hæmorrhage of the internal organs; (2) that the injections are accompanied by some unpleasant side-effects, which, however, do not contraindicate their applications; (3) that the injections should be continued until all hæmorrhage has ceased for a definite space of time; and (4) that as the coagulating power of gelatine does not suffice alone to arrest bleeding in some cases, other hæmostatics should be combined with it.

**(241) Antitoxin Treatment of Diphtheria.**

Cuno (*Münch. med. Woch.*, May 14th, 1901) gives an analytical account of the results of the treatment of diphtheria with antitoxin in Frankfort. Referring to the disadvantages of the injections, he states that exanthemata, swelling of joints, pyrexia, and albuminuria are much less often observed now than when the serum was first introduced. Local suppuration very rarely occurs if sufficient precaution is taken, and he considers that the use of a syringe made entirely of glass is a great advantage from an aseptic point of view. From 1883 to 1894 inclusive 1,928 children were treated for diphtheria, and a mortality of 36.7 per cent. occurred. In 1894 (October) antitoxin was first used, and from that time up to December, 1900, 1,257 children were treated, and a mortality of 9.4 per cent. resulted. Of these 1,257 children, 845 were proved bacteriologically to have diphtheria. So that if one accepts negative bacteriological results as conclusive evidence against the disease being diphtheria, the mortality for the period would be 13.1 per cent. However, he points out that there was clinical evidence of the nature of the disease in many cases in which no diphtheria bacilli were found, and believes that one may place the mortality at a lower rate than 13.1 per cent. Turning to the operations for laryngeal stenosis, he states that tracheotomy is now only performed within the first few hours after admission into hospital. The mortality-rate up to 1899 of tracheotomy

cases was not improved in proportion to the non-operated cases. In the first quarter of 1899 every tracheotomy case died, and although during the subsequent three-quarters of the year they got better results, the mortality for the whole year worked out at 51 per cent. For this reason, early in 1900 he attempted to substitute intubation for tracheotomy. In all he intubated 31 children suffering from laryngeal diphtheria, and of this number 8 (= 25.8 per cent. died. But in 21 of the 31 cases he had to perform tracheotomy later. The local effect of a long-continued wearing of the intubation tube, including the difficulties experienced in withdrawing the tube, stenosis of the larynx, and upper trachea, etc., led him to modify the procedure. He intubates the child now when the dyspnœa calls for operative treatment, and a little later, after the mucus and membrane had been coughed up, he chloroforms the child and performs tracheotomy with the intubation tube *in situ*. The advantages which he claims for this procedure are: that one gains much time and need not operate (tracheotomy) in a great hurry, and that the veins being no longer dilated to their maximum size there is less danger of wounding these and causing considerable hæmorrhage. Further, he finds that the hard tube within the trachea is a good guide, far better than the soft collapsible trachea of some young children. Of 38 children operated on for laryngeal diphtheria during the latter part of this series (26 were intubated and 12 were primarily tracheotomised), 9, that is, 23 per cent. died.

**(242) General Electrification in the Treatment of Certain Mental Diseases.**

H. L. Jones (*Journ. of Ment. Sci.*, April, 1901) refers to the effect upon the body as a whole of electrical application, which is useful, through its power of stimulating tissue change and promoting nutrition, as shown by quantitative determinations of respiration, heat production, and the elimination of urea from the body. The best method for debilitated patients who are insane is the electric bath, with an alternating or interrupted current. Metal plates at the two ends of the bath are connected with the source of current, and the patient lies in the bath in warm water for ten or fifteen minutes daily, or less often. The best form of current to use is the sinusoidal current of the alternate current dynamo. It should be maintained at an even magnitude, without irregularities. When a public lighting supply of the required character can be obtained, this, when properly reduced to four or five volts, serves well. Failing this, a small dynamo is used which can be driven by a water motor or gas engine. Second to the sinusoidal current is that from an induction coil. The continuous current is not of the same value for purposes of general stimulation. Jones cites three cases which improved under treatment; the first a case of post-influenzal debility and neurasthenia in a middle-aged man, the second a shorthand writer, who became anæmic and listless, with loss of memory and dejected spirits; and the third a man aged 40 years, who was somewhat similarly affected, but who recovered after nearly a twelvemonth of treatment.

**(243) The Treatment of Carcinoma of the Skin.**

Unna (*Monatsh. f. prakt. Dermat.*, Band xxxii, No. 6) gives details of a method of treatment which he has used with good results in rodent ulcer and other forms of carcinoma of the skin, originating in moles and seborrhœic warts. He specially recommends it in cases with a chronic history and when operation is declined. He first uses the cautery, not to destroy masses of growth, but simply stabs the surface all over; then he uses resorcin either in substance or in the form of plaster muslin, or as an application of 5 per cent. in spirit. Benzoic acid also, either alone or in combination with resorcin in a 1 per cent. to 5 per cent. alcoholic solution, he has found beneficial. Thirdly, he recommends a plaster muslin containing 5 parts of acid arsenic, 5 parts of extr. cannabis, 20 parts acid salicyl; this, he says, destroys the cancerous tissue but does not affect the sound skin except after long application.

**(244) Aspirin.**

Jorgen Thesen (*Norsk. Mag. for Laegevidensk.*, lxii, p. 986, August, 1901) has employed aspirin in 50 cases with good effect, there being a rapid fall in the temperature. Twelve of the cases were instances of acute rheumatism; in them the fever rapidly diminished and the pain and swelling of the joints were much relieved. Unpleasant effects were rarer than with other salicin preparations. He also used aspirin in 12 cases of pleurisy.

**(245) Intravenous Injections of Iodine.**

Spolverini (*Bull. Med.*, May 8th, 1901) recommends intravenous injection in cases of syphilis and scrofulo-tuberculosis of infants. The solution used contains 1 gram of iodine and 3 grams of potassium iodide in 100 grams of distilled water. The maximum dose is 5 c.cm.

## PATHOLOGY.

**(246) Immunity in Recurrent Fever.**

Metchnikoff showed in 1887 that the fall of temperature in recurrent fever and the disappearance of the spirilla from the blood is always associated with marked phagocytosis; but the spirillum shows itself affected not only by phagocytes, but by the specific anticorps discovered by Pfeiffer. In 1896 Gabritschewsky proved that serum taken during the days immediately following an attack, especially the terminal attack of fever, when added to blood containing spirilla shortens their life considerably. An epidemic of recurrent fever in Kasan during the winter of 1900 has afforded to Sawtschenko and Melkich rich material for further research (*Annales de l'Institut Pasteur*, July 25th, 1901). If in a moist chamber was placed a drop of serum containing spirilla coming from the blood of a patient on the second day of the first or second attack, and in a similar chamber another drop of the same serum, but with the addition of an equal quantity of serum from a patient cured of recurrent fever, the spirilla in the second case perished much more rapidly than in the first. While in the first case the spirilla became immobile, homogeneous, and bright, and swollen to double their normal size before granulation took place, when the immunising serum had been added small granules appeared almost at once, and the body of the spirilla rapidly shrank. When serum containing spirilla in sufficient quantity was introduced into the peritoneal cavity of the guinea-pig leucocytes began to exude in three or four hours, and phagocytosis continued on the second day, living spirilla being found thirty hours after inoculation. Experiments were also made with immunised guinea-pigs: whether immunised actively by successive injections of serum containing spirilla, or passively by the serum of convalescents, the result was the same. After ten to fifteen minutes immobile spirilla were found in the exudate of the peritoneal cavity. In forty to fifty minutes at most no mobile spirilla were to be seen. The spirilla collected in groups agglutinated, and followed a degeneration according to the type of Pfeiffer's phenomenon. The afflux of leucocytes did not begin till half an hour to two hours after inoculation. It is obvious then that under different circumstances both intracellular destruction (phagocytosis) and extracellular (action of specific anticorps) occur.

**(247) The Bacteriology of Acute Articular Rheumatism.**

Meyer (*Deut. med. Woch.*, No. 6, 1901), after a series of fruitless attempts to isolate an organism from the blood and articular effusion in five typical cases of acute rheumatism, found a small diplostreptococcus in the mucous secretion covering the tonsils. It stained feebly by Gram's method, required a high degree of alkalescence, a large proportion of peptone in media, grew on blood agar as small clear droplets, made broth uniformly turbid, coagulated milk, and on injection caused a local non-suppurative necrosis, followed in six to ten days by serous or sero-purulent joint effusions which were for the most part sterile, and in most cases disappeared without leaving any permanent lesion. In some of the animals inflammation of the valves of the heart was also found. The blood was always sterile. In five cases bacteriological examination of the heart lesion was negative, in two a pure culture of the organism was obtained. The author believes the organism is identical with that found by von Leyden and Wassermann, and that it is in all probability the cause of acute articular rheumatism.

# AN EPITOME
OF
# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (248) Fat Embolism of the Lung.

H. Engel (*Münch. med. Woch.*, June 25th, 1901) describes the history and *post-mortem* appearances of a case of pulmonary fat embolism. The patient, 44 years of age, was the subject of tuberculous disease of the whole left lung and of the apex of the upper lobe of the right lung in 1892. In 1893 his condition improved considerably. In 1896 his left knee became affected, probably with tuberculosis; this healed up after a time, leaving some stiffness and limitation of movement. In September, 1900, his pulmonary condition became worse, and he was taken with hæmoptysis. There was no fever, but the physical signs were well marked: there was dyspnœa and cyanosis. Tubercle bacilli were present in the sputum. On November 27th the patient slipped while walking. To save himself from falling on his left knee he made a sudden twisting movement to the right. He walked back (about ten minutes) and ascended to the second storey, where his room was situated. The knee was slightly swollen and tender on the inner side. In the evening the temperature rose to 102° F. The next morning the patient was found to be dyspnœic, with a sensation of pressure and tenderness all over the chest. The physical signs pointed to œdema of the lungs. The pulse increased in frequency during the next few hours, and the dyspnœa and cyanosis became extreme. At 4.15 P.M. he died. *Post mortem* cyanosis was the only abnormality found externally. The left lung was considerably contracted: the pleura was almost completely adherent. The left upper lobe contained a cavity, larger than a pigeon's egg, with indurated walls. The lower part of the lung on section was flesh-coloured, tough, and contained no air. On section no fluid escaped. The right lung was nearly twice the size of the left lung, did not retract on opening the pleura. On opening the organ through the bronchi a large quantity of watery, slightly blood-stained, froth escaped. The tissue was greatly infiltrated with this froth. In the apex some induration was found: the middle lobe contained many caseous tubercles, and was much contracted. Some isolated caseous tubercles were found in the lower lobe. In neither lung was there an infarct. The right heart contained a large quantity of partly clotted and partly fluid dark blood. The clot showed a yellow, fatty, shining surface. The left heart and aorta were empty. As the liver was removed, freshly-clotted blood was seen between its convex surface and the diaphragm. In the upper convex surface of the right lobe a tear ¼ inch deep into the substance of the liver was found. This was situated about ¾ inch from the attachment of the coronary ligament, and was about 4 inches in length. Microscopically, the capillaries of the right lung were seen to be filled with fat. The liver was examined and showed fat drops and droplets in the cells (Sudan staining). The cells near the tear, however, contained no fat droplets; in the neighbourhood were found fat globules outside the cells: the same was found at some distance from the tear, and free fat was also found in the capillaries. The fluid blood from the right heart also contained fat. The urine, collected carefully from the bladder, contained fat, and some glomeruli of the kidneys were filled with fat. He concludes that the sudden movement to the right acted by exerting suddenly an enormous pressure on the liver, the coronary ligament was stretched to such a degree that a rupture of its insertion took place. The damage to the liver which caused the freeing of fat was not only at the seat of rupture, but also in other parts where the effect of the sudden extraordinary pressure was felt. He also believes that the extensive tuberculous disease of the lung rendered the work of the fat embolism more easy in leading to a fatal issue.

### (249) A New Sign of Hysterical Hip Disease.

Jas. Putnam, of Harvard (*Journ. Amer. Med. Assoc.*, May 4th, 1901), states that absolute increase of measurements from the anterior superior iliac spine to the internal malleolus is a sign of hysterical hip disease. The differential diagnosis between tuberculous and hysterical hip disease is sometimes easy, but sometimes very difficult, while a correct diagnosis is always of great importance. Whereas in tuberculous disease the erosion and absorption of the bone shortens the measurement from spine to malleolus, in hysterical hip disease this measurement is sometimes longer on the affected side. The explanation of this was given by Halsted—namely, that the affected leg is adducted in hysteria, while the opposite leg, with which comparison is made, is abducted. The pelvis is literally tilted in such cases, and is probably due to the contracture of the muscles of the affected thigh. The presence of other symptoms characteristic of hysteria will confirm the diagnosis. These, according to Gilles de la Tourette, include pain and tender spots at various points along the affected limb, marked cutaneous hyperæsthesia, absence of nocturnal paroxysms, the presence of hysterical œdema about the affected joint and limb, involvement of the knee muscles in the rigidity, coldness of the affected parts, and the presence of fits and the mental "stigmata" of hysteria. In a patient aged 30 years, who fell through a trapdoor and struck her hip and the back of her feet on the floor 5 feet lower, the symptoms of hip disease, with contracture and hyperæsthesia, and pain on passive motion were present. The attitude and measurements corresponded with those of hysterical hip disease, and hemianæsthesia was also noticed. Œdema of the hip persisted for a long time, and the entire left leg was cooler than the right. The knee-jerk and plantar reflex was also exaggerated in this leg. On examination under ether, the differences disappeared, the movements of the hip-joint were free, the measurements normal, and the feet and whole appearance of the two hips became essentially alike on the two sides.

### (250) Pleuropulmonary Complications of Erysipelas.

Andrieu has made an extensive series of observations on the complications and results of erysipelas (*Journ. de Méd. et de Chir. Pratiques*, April 25th, 1901). In 703 cases which came under his notice, there were 51 deaths, of which 8 were due to some pleuropulmonary condition. A curious fact in reference to these cases is that the micro-organism met with in the lungs is as frequently the pneumococcus as the streptococcus, this latter being, as is admitted, the cause of erysipelas. This is probably due to the fact that in many cases of erysipelas there is a form of auto-infection; the pneumococcus which is so generally present in the mouth is enabled to invade the thoracic organs when the constitution is undermined by a depressing disease such as erysipelas. Anatomically the form of pneumonia present is described by the author as pseudo-lobar; the disease is insidious, and the patient shows a recrudescence of temperature with dyspnœa, and an adynamic condition develops. Prognosis is bad, as three-fourths of the cases die. Treatment is often elusive, but it should be borne in mind that any symptoms appearing in a patient just recovering from erysipelas must be most carefully watched lest pulmonary complications supervene. The writer recommends the use of the cold bath, from which he seems to have had good results in these cases. In people of 40 or over very great caution must be observed, as collapse is not infrequent. The injection of 400 c.cm. of artificial serum has in the hands of the writer proved satisfactory.

## SURGERY.

### (251) Differential Diagnosis of Appendicitis from Typhoid.

R. Mühsam (*Deut. med. Woch.*, August 8th, 1901) relates the history of a case in which he operated for appendicitis, but found that the patient was suffering from typhoid fever. The patient was a man of 32 years, who had been taken ill suddenly with a rigor on May 4th. Pain in the ileo-cæcal region and complete intestinal obstruction followed. On the 8th the bowels were moved after a saline aperient. Vomiting and renewed obstruction followed this, and the pain increased. There was some fever. He was admitted into hospital on the 11th, The patient then was slightly flushed, cerebration quite clear; temperature, 100.8° F. In the ileo-cæcal region, just

below McBurney's point, was found a circumscript painful area of the size of a crown-piece, which was also tender on palpation. The diagnosis of appendicitis was made. Later in the day, after an enema had been administered, which was followed by a motion of hard brown fæces, the patient suddenly became worse. The pain became excruciating, and in the tender area a definite resistance was felt. He became restless, and the temperature rose to 103° F. The spleen was not palpable, and there were no rose spots. Believing that the abscess in the appendix had perforated, Mühsam operated on him at 5 P.M. On opening the peritoneum he found that the omentum was free from adhesions, but there were some fine vascular bands binding the tip of the appendix to the cæcum; through the ring thus formed the greater part of the cæcum had passed. The appendix itself showed no recent inflammation. In the cæcum, however, he came across a large blood-stained area. The serous covering was intact. It was obvious that there was a typhoid ulcer which had been recently the seat of some hæmorrhage. The base of the ulcer appeared to be very thin. He proceeded to fold the ulcer in, and sewed the serosa up with two rows of sutures. The tip of the appendix having been removed with the bands, the abdominal wound was closed. The patient was much improved after the operation, and did not complain of much pain. During the following days, the temperature ranged between 100° F. and 102.6° F. The urine did not give a diazo-reaction. On the 20th slight disturbance took place owing to a stitch abscess, which, however, was easily dealt with. On the 14th the spleen had become palpable, and on the 17th a few rose spots were seen. On the 22nd for the first time Widal's reaction was obtained. The rest of the illness ran an uneventful course, and the temperature finally sank to normal on June 12th. Mühsam points out the extreme difficulty in diagnosis of this case. Rigors, he says, are very rare as initial symptoms of typhoid. Although he owns that he would not have operated had he made the correct diagnosis, he says that the patient came to no harm by having undergone the operation, actually benefited, as far as the allaying of the acute pain was concerned, by it, and possibly may have been saved the danger of a perforation. He cites a case of Rendu, in which the symptoms also pointed to appendicitis, but in which a reddened but not adherent appendix was removed. The patient died five days later, and the necropsy revealed the typical intestinal lesions of enteric fever.

**(252) Sarcoma of the Wall of the Thorax Partial Excision of Three Ribs and of the Diaphragm.**

Porter (*Annals of Surgery*, August, 1901) reports a case of successful removal of a large and very vascular sarcoma on the right thoracic wall of a man aged 41. Preliminary tracheotomy having been performed with the object of facilitating inflation of the lung in case of shock from sudden collapse of this organ, the tumour was exposed by a curved skin incision commenced over the fourth rib in the mid-axillary line, carried downwards to the infracostal margin of the ribs, and thence forward to the edge of the rectus. The growth, it was found, involved, the seventh, eighth, and ninth ribs. These bones were divided in the mid-axillary line about ¾-inch beyond the outer margin of the tumour. The cartilages of these ribs having been divided, it was found that the growth extended deeply into the pleural cavity, and was adherent to the diaphragm. This muscle was then cut away from the growth by an elliptical incision, removing ½-inch of normal diaphragm beyond the margin of the malignant growth. The large opening in the diaphragm, through which intestine protruded into the pleural cavity, was closed by a "shoemaker's stitch" of animal tendon. The patient ultimately made a good recovery, and when last seen after an interval of sixteen months from the date of operation, had gained 38 lbs. in bodily weight, and showed no signs of any recurrence of the sarcoma. There was a marked bulging between the ribs bordering the resected area. According to a pathological report by Whitney, the growth was a medullary (giant-celled) sarcoma that had evidently originated in one of the resected ribs.

**(253) Primary Tubercle of Breast.**

Chambers (*Amer. Journ. Obstet.*, August, 1901) observed this rare condition in a woman aged 37. She showed no sign of tuberculosis, nor was there any family history of that disease; this question was carefully scrutinised after the nature of the swelling in the breast had been settled by the microscope. The patient had been married for eleven years and had borne two children; she had never miscarried. Two years before observation a swelling was noted in the right breast; it was opened and drained five months later. Within five weeks another swelling, cystic, like the first, was treated in the same manner. From then until six weeks before she was attended by Chambers there was no further local trouble, but at that date a painful indurated lump developed and grew quickly. The breast was examined, and found to be enlarged and full of cysts and indurated patches. Cystic cancer was diagnosed and the breast was removed. It was found riddled with tortuous sinuses filled with cheesy tubercle. The wound seems to have healed well.

**(254) Gaseous Cysts of the Intestine: Pyloric Stenosis.**

Jaboulay (*Lyon Méd.*, May 26th, 1901) has had under his care a man 50 years of age, who had suffered from stomach trouble for eight years. The patient had lost weight steadily, but had avoided vomiting by the daily passage of the œsophageal tube. On examination marked dilatation of the stomach was found with resistance and tenderness over the site of the pylorus. A diagnosis of cicatricial stenosis due to previous ulcer was made and laparotomy performed. On opening the abdomen a white circle of induration was seen, bounding the lower orifice of the stomach and extending on to the duodenal wall. The stenosis, however, seemed to be due to compression of the pylorus by a coil of small intestine, covered by gaseous bullæ and situated above and in front of the induration. The neighbouring coils were also riddled with similar cysts, a group of which were seen upon the diaphragmatic peritoneum in addition. The stenosis was dilated by invagination of the duodeum with the index finger and the abdominal wound closed without interference with the cysts. The patient improved rapidly after the operation. Jaboulay does not believe the cysts to have taken origin from a pyloric ulcer, but rather to be the result of gas-producing organisms. He stated that the case differed clinically from classical pyloric stenosis by the greater tenderness to pressure and less spontaneous pain.

## MIDWIFERY AND DISEASES OF WOMEN.

**(255) Delivery of the After-coming Head.**

W. Nagel (*Berl. klin. Woch.*, July 22nd, 1901) describes a case of a labour in a subject whose pelvis was contracted to a high degree; and he uses the history of this case to exemplify the practical value of a method of delivery which he believes was first described by Van Hoorn (1715). The patient was a primipara, aged 32 years. On April 13th, 1900, labour pains began, and after an hour the "waters" broke. She was a small woman, measuring only 4 ft. 7 ins. in height, and showed ample signs of past rickets. The pelvic measurements were: dist. spin. ilii, 10½ ins.; dist. crest. ilii, 10½ ins.; conjug. ext., 5¾ ins.; conjug. diag., 3 ins. From these figures he estimated that the conjugata vera could not exceed 2¾ ins. The fœtus presented by the first vertex, and a large coil of the cord together with the left arm were prolapsed through the partly dilated cervix. The cord did not pulsate. The pains were strong, but the head had not entered the pelvis. He chose to attempt the delivery *per vaginam* rather than by Cæsarean section, since the fœtus was dead, and, with the conviction that it would be the least difficult procedure, he turned the fœtus and perforated the after-coming head. The version was performed with ease, and the left foot brought down. As the buttocks of the fœtus passed the inlet of the pelvis, the whole child rotated on its long axis, and the presenting leg was seen to lie to the front of the mother. The fœtus was extracted as far as the shoulders in this position. The arms were brought down with much difficulty, and then it was found that the head was stopped above the inlet of the pelvis, with the chin resting on the symphysis to the right, and the occiput directed to the left. Seizing both legs, he brought the abdomen of the fœtus

forwards on to the abdomen of the mother. The occiput immediately entered the pelvis, and the left hand was now passed into the vagina, behind the buttocks of the fœtus. The occiput was then perforated. The cranioclast was applied without much difficulty, and, aided by the continued anterior flexion of the whole of the fœtus, the head followed. The whole operation occupied an hour and a-half. The fœtus (without making any allowance for loss of blood and brain) weighed nearly 5½ lbs., and measured 19½ ins. There was a ruptured perineum, which was immediately attended to, but otherwise the patient bore the procedure well. She was able to get up on the fourteenth day. Nagel strongly recommends the method of bringing the fœtus forward on to the abdomen of the mother in all cases of the after-coming head, when the face at the time of entry into the pelvis is looking forwards. By this means the birth can be rendered materially easier when perforation is not as well as when it is required.

**(256) Malignant Dermoid of Ovary.**

Backhaus (*Arch. f. Gynäk.*, vol. lxiii, Nos. 1 and 2, 1901) reports a case of unusual malignancy. The patient was a girl of 17, and the tumour had caused but little distension of the abdomen, but acute pain had set in suddenly when torsion of the pedicle was diagnosed. Ovariotomy was performed, and a solid tumour was removed: it contained very few cysts. This tumour was a dermoid of the type known as steatoma. The solid substance consisted of well-formed tissues mixed in inextricable confusion, not after the manner of dermoid growths within cysts where large patches of bone or thick tufts of hair are frequent. Skin, hair, cerebral material, bone, and plain muscle fibres were found collected together. It was noted that in the cystic portion there was a distinct tooth, as is so common in dermoid cysts. As the tumour was clearly a malignant growth, the uterus and the opposite appendages were removed through the vagina on the twenty-fifth day after the ovariotomy. A month later signs of intestinal obstruction set in, and an operation was necessary. Six days later a fourth operation was needed. At the end of the third month after the first operation the patient had had headaches with vomiting. Agitation and convulsions set in, and subsided a little, to recur in greater force. Indurated masses could be felt in the upper part of the abdomen and in both supraclavicular regions. Death occurred in a few days, but no necropsy was allowed.

**(257) Suppuration of Gall Bladder in Childbed.**

Doléris (*L'Obstétrique*, May 15th, 1901) attended a woman who was delivered at the eighth month: the temperature was 102.2°, and on the second day of the puerperium it rose to 105°. Typhoid fever was suspected, but the curette was used, the uterus, however, proving healthy. Next day serum diagnosis seemed to prove that there was typhoid. A few days later a swelling developed over the region of the liver, and suppuration of the gall bladder was diagnosed. Abdominal section was performed and much pus escaped from the gall bladder. The bacillus of Eberth was detected in the bile which escaped from the wound during the first days which followed the operation.

**(258) Enchondroma of Uterus.**

Seydel (*Centralbl. f. Gynäk.*, No. 31, 1901) removed a tumour of the size of two fists from a single multipara, aged 42. It filled the vagina, and appeared to be inserted by a broad base into the uterine wall near the os internum. It had grown very rapidly within three months from the time it was first observed. It was chiefly made up of cartilage with embryonic tissue, a little white fibre, and collections of spindle cells, which were possibly young plain muscle cells.

**(259) Treatment of Syphilis in Pregnancy.**

Gaucher and Bernard (*Journal des Praticiens*, March 2nd, 1901) advise treatment to be begun as near as possible to the beginning of pregnancy when syphilis is ante-conceptional, and as soon as possible after infection in post-conceptional syphilis. Treatment should be continued throughout pregnancy. The authors advise perchloride of mercury internally and benzoate of mercury subcutaneously (0.02 c.cg. daily). If there is nephritis the dose must be diminished.

## THERAPEUTICS.

**(260) Tannoform for Night Sweats in Phthisis.**

A. Nolda (*Berl. klin. Woch.*, July 1st, 1901) recommends the use of tannoform powder in the treatment of night sweats in those cases of phthisis which resist other forms of treatment—for example, by atropine, ac. camphoric, etc., and indeed often instead of these means. *En passant*, he states that although formalin and alcohol act very well the poisonous and unpleasant side-effects of the formalin and the somewhat elaborate method of application render this form of treatment of little practical value. Nolda reports 12 cases which he treated with tannoform, the powder being simply rubbed into the chest, or chest, neck, and back, with the hand. Eight cases were of a mild type, and in 7 of these the night sweats ceased altogether after a few applications (in 6 after three to five applications, and 1 after 11 applications). The eighth case was improved, but the tannoform producing a sense of burning and itching, was discontinued after a time. In 4 severe cases the treatment was completely successful three times, and partially so in the fourth instance. Curiously enough, he points out that the temperature did not rise as high during and after the treatment as it had before. In the first case the highest daily temperature had varied between 101.4° F. and 103.2°, but did not exceed 99.5° F. after the treatment. In the second case the highest daily temperature having varied between 101° and 102.2°, sank to 98.8°; the third case showed a previous fever, between 99.8° and 102°, and subsequently one not exceeding 98 8°; while in the fourth (a very severe case) the previous highest daily record lay between 102° and 103.2°, while after improvement it did not exceed 100.8°. The effect on the temperature, he considers, is not easy to explain.

**(261) Treatment of Cough.**

M. Sänger (*Therap. Monatsh.*, July, 1901) deals with the symptomatic treatment of cough, apart from its causation. In menthol, he says, we have a non-poisonous local anæsthetic of great value, which can quiet the irritation of the respiratory passages, and so diminish cough as thoroughly as morphine can, and yet produce no ill-effects. He applies the remedy by placing a few crystals in a spoon and warming this over a lamp or candle for five to twenty seconds. This causes an evaporation of the menthol which will last for a short time, after which the patient rests while he again warms the spoon. Another method consists in using a solution of 40 or 50 per cent. of menthol in alcohol, and with 10 to 20 drops on the palms of the hands, this may be inhaled, or it can be applied by means of a mask. As the presence of mucus covering the bronchial mucous membrane hinders the direct action of the vapour, he advises the injection of the drug dissolved in olive oil into the larynx. This produces a strong irritation, and the cough which follows is sufficient to remove the mucus. The method is of use in chronic bronchitis and in phthisis, while it is of less value in acute bronchitis. He also recommends it for whooping-cough.

**(262) Treatment of Acne Vulgaris.**

Algar (*New York Medical Times*, July, 1901) recommends the following treatment for acne: Arsenic is useful in some cases by hastening exfoliation of the skin, but is contraindicated in acute cases. In pustular cases it may be of value by increasing the resistance of the skin to pyogenic organisms. In many cases, especially in young girls, there is anæmia, which should be treated by iron. The author has not much faith in calcium sulphide. The main treatment must be local. To prevent heaping up of epithelium about the mouths of the follicles a dermal curette is useful. The skin is scraped with this to remove the tops of the papules and pustules and the epithelial heaps about the follicles. Pustules should be opened and treated with peroxide of hydrogen or 50 per cent. carbolic acid. This treatment should be done several times a week. The patient should use hot water daily to the face. Where there are many comedones but few pustules the following is useful: Resorcin, ʒjss; hydrarg. perchlor., gr.ij; aq. rosæ ad

℥iv. This should be used often enough to cause exfoliation of the outer layers of the skin without causing much inflammation of the face. When there are many pustules, sulphur is better: Sulphur., ℥j; sodii hyposulph., ℥iv; aq. rosæ ad. ℥iv. When the skin has become smooth, the patient should use a sulphur or resorcin soap. Individual lesions can often be aborted by passing into the follicle a blunt needle dipped in carbolic acid, or by painting with ichthyol. When the skin is clear but rough and dry, the following is useful: Resorcin., gr.xx; ol. theobromæ, ℥j. This can be perfumed and moulded into stick form. In acne indurata of the back, the back should be scrubbed with nailbrush and hot water in which is an alkaline washing powder. This softens and removes the superfluous epidermis. A saturated solution of hyposulphite of soda is the best lotion for these cases.

**(263) Chinosol.**

J. Nottebaum (*Deut. med. Woch.*, August 15th, 1891) calls attention to the styptic property of chinosol. He has found that in a 1 to 2 per cent. solution it has the power of arresting hæmorrhage, and believes that this action renders the drug exceptionally valuable in lesions of the cervix, vagina, or rectum associated with hæmorrhage, and in epistaxis. This action, he states, is probably dependent on the presence of a potassium sulphate in the formula, and therefore is a direct powerful astringent one. The bactericidal and disinfectant actions of the drug are too well known to need description. He adds that in spite of the fact that the action of chinosol is disturbed by alkaline water and by soap, the manufacturing chemists have introduced a chinosol soap. If soap is used for washing purposes the hands must be thoroughly rinsed with clear water before being brought into the chinosol solution. Chinosol solution should be placed in glass or china vessels, as it discolours white metal containing iron. Knives are rendered blunt or turned black, but plated instruments are not injured. Perchloride of mercury and chinosol, when brought together in solution, cause a heavy precipitate. It is therefore unwise to use the two antiseptics together or alternately.

**(264) Urotropine as an Intestinal Disinfectant.**

Loebisch (*Wien. Med. Presse*, July 7th and July 14th, 1901) discovered that urotropine (hexamethylenetetramine) is an excellent intestinal disinfectant on testing the urine of a man who was taking 7½ to 15 grs. of urotropine daily for posterior urethritis, and finding that it contained no indican (potassium indoxylsulphate). The degree of intestinal putrefaction may be gauged by Baumann's quotient (the ratio between the preformed sulphates and the fixed ether-sulphuric acids excreted in the urine) and by the intensity of the indican reaction: indican being derived from indol (benzopyrrol), which, with skatol (methylindol) is an end-product of the bacterial decomposition of tyrosin, and the ether-sulphuric acids, or rather ether-sulphates, from the poisonous end-products of bacterial decomposition of the aromatic radicles of albumins, such as paracresol, phenol, indol, skatol, indoxyl, and skatoxyl. Many experiments carried out by the writer's assistant on himself showed that with an ordinary mixed diet the indoxylsulphuric acids excreted in the urine were greatly diminished or altogether suppressed if half a drachm of urotropine were taken daily. Utropine is superior to most other intestinal antiseptics, including carbolic acid, cresol, tribromophenol, alpha-napthol, and thymol, because it is not poisonous. Being very soluble in water it is readily absorbed, and is, therefore, preferable to salol, aspirin, and resaldol. Though urotropine has long been recommended as a disinfectant of the genito-urinary tract, its action on abnormal intestinal putrefaction has been hitherto overlooked.

**(265) Saline Irrigations in Gonorrhœa.**

Woodruff (*Semaine Médicale*, March 27th, 1901) recommends irrigation of the urethra in cases of gonorrhœa with hot saline solution, repeated every two or three hours. He has treated ninety-eight soldiers by this method, and most of them were cured in ten days. The author is sceptical with regard to the therapeutic value of the many germicidal drugs recommended for gonorrhœa, and thinks it possible that their action is simply mechanical. He puts no faith in internal remedies, and considers that rest in bed and low diet do more harm than good.

## PATHOLOGY.

**(266) The Pathology of Ozæna.**

Pasmanik (*Rev. Méd. de la Suisse Romande*, April 20th, 1901) believes that his observations upon 20 cases of ozæna throw some light upon the disputed question of the pathology of the disease. There have been advanced at different times six theories to account for the origin of ozæna. Certain French and German pathologists have considered ozæna not as a separate disease, but as a symptom of suppuration of the nasal sinuses. In most cases, however, the nasal sinuses have been found healthy. Again, ozæna is above all a disease of childhood and early adult life; sinusitis occurs generally at an advanced age. Moreover, if, as Sissier stated, the primary lesion is situated in the ethmoidal cells, the atrophy and crust formation should be most marked over the superior part of the nasal mucous membrane; but all observers are agreed that the inferior third is most involved. Störk regards ozæna as a consequence of syphilis. Pasmanik found no evidence of syphilis in any of his cases. Trousseau points out that ozæna is a non-ulcerating process, while syphilis is essentially an ulcerating disease. The third hypothesis is that fœtid atrophic rhinitis is the last stage of a purulent rhinitis. But purulent rhinitis may persist for twenty to forty years, causing more and more obstruction of the nasal passages without any sign of atrophy. Pasmanik can only find one case of such transformation of hypertrophy into atrophy recorded in the literature. The neuropathic theory seems to be an inversion of occurrences. Ozæna causes neurosis rather than neurosis ozæna. The bacterial theory is not fully satisfactory. The mucus bacillus, described by Abel, has been found in the purulent secretion below the crusts but never actually in the tissues. It can cause the catarrhal inflammation then but not the atrophy. The atrophy can hardly be due to the pressure of the crusts, for it is most marked in the lower part of the nose where there is most room. The true explanation, Pasmanik believes, is to be found in a combination of the bacterial and the anatomical of nativistic theories. The last supposes that ozæna is caused by an abnormal conformation of the nose, especially of the nasal bones, which is innate and sometimes hereditary. In ozæna the nose is almost always found large and flat, the so-called platyrrhinia. This platyrrhinia is usually associated with the brachyprosopic face. It may, however, occur with the leptoprosopic face as a result of nasal traumatism. In 15 of Pasmanik's 20 cases the platyrrhinia was marked. The other 5 cases occurred at a more or less advanced age, and in these the atrophy and the fœtor were but little pronounced. In 14 cases the onset occurred before adult life. Twice Pasminik has been able to trace ozæna through three successive generations. In 2 cases the appearance of crusts was seen to be preceded by a short suppurative stage.

**(267) The Blood in Malignant Disease.**

Donati (*Giorn. della R. Accad. di Med. Torin.*, June, 1901) as the result of a careful examination of the blood in 31 cases of malignant disease, mostly carcinoma, is unable to say there is any specific type of blood associated with malignant disease, as, for example, in anæmia, although certain changes are more or less constant, and the toxic power of such blood is higher than normal. Speaking generally the changes observed were a diminution in the hæmoglobin and in the number of red corpuscles (this to a smaller degree), lower globular value (chlorotic type), alterations in the shape and size of the red corpuscles, and in some cases the presence of erythroblasts; absolute and relative increase in the white corpuscles and changes in the relative preponderance of the various kinds of leucocytes; presence of idiophile cells, especially in grave cases; diminution in the specific weight, the proteid constituents and dry residue and increase in the sugar. These were the chief changes observed, and they seemed to depend more on the seat of the tumour than on its nature. Each case is described carefully, and there is a good bibliography at the end of the paper (172 references).

# AN EPITOME

OF

# CURRENT MEDICAL LITERATURE.

## MEDICINE.

**(268) Auto-intoxication in Epilepsy.**

Hebold and Bratz have carried out a series of experiments in order to clear up the doubt which still exists with regard to the part played by auto-intoxication in the pathogenesis of epilepsy, and publish their results, together with some critical remarks in the *Deut. med. Woch.*, No. 36, 1901. They injected the urine and blood of epileptics into dogs and white mice. The dogs received from 2 to 10 c.cm. of urine obtained (1) immediately after the epileptic fit, and (2) one hour after the fit. The patients from whom the urine was obtained were selected because they were suffering from forms of epilepsy which strongly suggested a gastro-intestinal or other forms of auto-intoxication. In no case were convulsions produced in the dog. The blood was obtained by wet cupping and by venesection, and was defibrinated at once, so that within 5 or 10 minutes 10 c.cm. could be injected subcutaneously. In one case the motor centres had been destroyed, so that a scar taking its place the dog was in a favourable condition for the onset of an epileptic attack. All these experiments, too, were negative. Two animals, a dog and a bitch, were fed on milk and alcohol in increasing doses, and kept in one kennel. The bitch gave birth after 11 weeks to a litter of puppies, who all appeared healthy, and these puppies were treated by subcutaneous injections of urine and blood, but without effect. They aimed at producing an alcoholic hereditary taint. They had as little success with white mice, although they found that mice were more suitable experiment animals, since, by way of a control experiment, they produced convulsions which preceded coma and death by injections of carbaminate of ammonia. One case only produced anything approaching a positive result. An elderly spinster, who suffered from occasional epileptic attacks, was suffering from migraine, furred tongue, constipation, and vomiting, after a pause of 1½ year in her fits. They applied a wet cup, and the blood obtained thus, when injected into a mouse in doses of 1.6 c.cm. produced twitchings after ¼ hour. These twitchings reappeared after 1 hour, and the mouse died 30 hours after the injection. A second mouse died after 18 hours, but without twitchings or convulsions. They conclude that their experiments fail to show any connection between the toxicity of the juices of the body and the occurrence of epilepsy, and although they do not put aside the possibility that certain forms of epilepsy may be due to auto-intoxication, they cannot support this theory until future experiments give them different results. They detail all the important self-poisoning theories, from Alt's simple explanation of epilepsy as a gastro-intestinal disturbance producing a poison which irritates the brain cells, to Binswanger and Jolly's theory of a secondary "toxæmic epilepsy."

**(269) Intermittent Nervous Affection of Malarial Origin.**

Busquet (*Rev. de Méd.*, May 10th, 1901), relates the following case:—A soldier, aged 28, entered his hospital ward on May 16th, 1898, with the diagnosis of malarial anæmia after a sojourn of two years in Madagascar. No morbid antecedents, no syphilis, no alcoholism, and no history of urinary incontinence during childhood. The patient had noticed that at the onset of each malarial attack he passed water involuntarily, and that he did not regain control of the bladder till his temperature again became normal. During his stay in hospital he had four attacks of ague—May 16th, June 10th, June 26th, and July 16th. Incontinence of urine occurred on each occasion, lasting five days the first time, eight days the second, and three days each on the third and fourth occasions. During the second attack incontinence of fæces also occurred and lasted for four days. The lesser duration during the last two attacks was probably due to the administration of large doses of quinine. Other nervous symptoms accompanied the incontinence, such as muscular weakness and rhythmical tremor of the right arm and leg. Romberg's sign was not present, and there were no sensory phenomena, hysterical stigmata, or retraction of the field of vision. It is reasonable, then, to suppose that the symptoms were due to the development of the malarial parasite in the small vessels of the brain or spinal cord.

**(270) Appearance of Red Corpuscles in Urine.**

Tarchetti (*Gazz. degli. Osped.*, June 9th, 1901) says that red corpuscles are sometimes found almost in their normal condition in urine, but usually altered: they may be (1) partially decolorised: (2) colourless homogeneous corpuscles looking like little rings, often irregular in outline and much smaller than normal; (3) they may even become invisible, only the colourless stroma being left. Their appearance has been supposed to indicate the source of the blood, but is unreliable. In a case of chronic hæmorrhage undoubtedly vesical the first specimen showed the blood colour to the naked eye, but even after centrifuging only a stray corpuscle or two could be seen. This was put down to the specific gravity being only 1010: the patient was transferred from milk diet to mixed diet for a few days, and though the specific gravity only rose to 1013 the corpuscles were found well preserved. Sabraziz and Boncom, from analogous results, concluded that the preservation of the corpuscles is not due to variations in specific gravity, but to variations in the amount of sodium chloride, which is very deficient under a milk diet. Why, then, are the red corpuscles coming from the kidney always markedly decolorised? Not because of length of sojourn in the urine, for they can be kept for much longer periods in urine without such effect. It is probable that in the glomerulus the corpuscle is in more dilute urine, and specially in urine poorer in chlorides than that in the bladder. In hæmorrhagic nephritis sections fixed by Müller's method show normal red corpuscles in the vessels and almost colourless rings in the tubules. This indirectly supports Ludwig's hypothesis that the dilute urine is concentrated in the tubules.

## SURGERY.

**(271) Traumatic Aneurysm of the Thoracic Aorta treated by the Introduction of Wire and Electricity.**

Willard (*Univ. of Penn. Med. Bulletin*, September, 1901) reports the 24th case treated by this method. A healthy man, aged 23, who had never had syphilis, was injured in November, 1899, by a box weighing about 500 lb., which fell 2 feet and struck his chest. At the end of six weeks he resumed work, though there remained a "tightness" and pain in the chest. His condition gradually deteriorated until he was admitted to the hospital in December, 1900, thirteen months after the injury. There was no tracheal tugging or suprasternal pulsation. The whole of the right side of the thorax was powerfully uplifted at each systole, and there were dulness, a slight thrill, practical absence of the respiratory murmur, and a systolic blowing murmur over the whole area. On the left side the apex beat was diffused for 3 inches below the normal position, and there were a loud systolic murmur and an accentuated first sound over the upper part of the chest. The physical signs, with the absence of pulsation in the neck, indicated an aneurysm of the descending aorta rather than of the arch. Under rest and large doses of potassium iodide the pain, cough, and bloody expectoration became worse, and the anterior thoracic wall at the junction of the third and fourth ribs, with their cartilages, became thin. As rupture appeared certain a steel trocar the size of a No. 4 French catheter, surrounded by a vulcanite cannula (size No. 7, French catheter scale), in order to protect the skin and subcutaneous tissues from the electric current, was introduced into the fourth right interspace, well into the sac, where its wall was thinnest. On the removal of the trocar blood spouted through the cannula 3 feet in the air, but hæmorrhage was easily controlled with the finger. Six or 8 feet of silver wire, No. 24, were then inserted into the sac through the cannula. The external end of the wire was connected with the copper positive pole of a galvanic battery, the negative pole of which was attached to a large, flat, sponge-covered electrode placed between the scapulæ. Five milliampères were at first employed. More wire was introduced, until about 20 feet

had been inserted, and the current was gradually increased by 5 milliampères at a time, until 80 milliampères were measured. The ends of the wires were pushed in as far as possible, the cannula was withdrawn, and the opening closed with gauze and collodion. No pain was experienced except in the back at the negative electrode, where two superficial burns were produced. After the current was turned on there was no further hæmorrhage, and the blood in the cannula coagulated. The pulsation in the thorax was lessened at the end of the operation, was still less on the following day, and in a week was diminished by 25 per cent. The original point of thinning was much more solid, but latterly below the axilla the pulsation had increased slightly. The patient was eating and sleeping well, had no pain, could dispense with morphine, and had much less oppression. Nine weeks after the operation he was so well that he left the hospital against advice. There was good consolidation of the anterior portion of the sac, but there was a dilatation outward towards the axilla, which would probably necessitate a repetition of the operation. The writer considers that a weaker current than that used in this case would have been equally efficacious, and would prefer to use a veterinary hypdoermic needle, calibre No 24, insulated by several coats of shellac varnish, French lacquer, or porcelain, in place of the vulcanite cannula, which was difficult of introduction.

**(272) Treatment of Ulcer of the Leg.**

Schulze recently reported a series of cases of ulcer of the leg, which he had treated by various ointments containing camphor, and at the same time he criticised the use of "wine of camphor" unfavourably for two reasons; first, he stated, that it caused pain, and secondly that the treatment was unsuitable for certain cases. Walbaum (*Münch. med. Woch.*, June 25th, 1901) writes that he has used camphor, and especially "wine of camphor" in cases of chronic ulcer of the leg, and has not met with a single instance where it failed to heal the wound up completely. He has never heard a patient complain that the application was painful. The method which he employs is the following: The leg is well washed and rubbed with soft soap and water, and then a dressing moist with "acetic acid clay" is applied daily, until the exudation is less and nearly odourless. This usually takes two or three days only. He then applies the wine of camphor on a graduated compress, which is covered with a dry layer of gauze, and over that a piece of protective not quite reaching to the edge of the dry gauze. The whole is enveloped in cotton wool and carefully bandaged. This has to be renewed every alternate day, and before it is put on again the leg is well rubbed with a pad of cotton wool soaked in lysol or carbolic acid solution. He finds that the ulcer usually heals up with this treatment in three weeks.

**(273) Spasm of the Urethra.**

F. Fuchs (*Therap. Monatsh.*, August, 1901) considers that the want of attention to the spasm of external sphincter of the bladder, or, as he puts it, of the membranous portion of the male urethra, often causes great difficulty in the diagnosis of stricture. The most common mistake is, that passing a soft catheter through the penile portion it is arrested at the membranous part and held tight by the spasmodic action of the sphincter. If extra force be then applied the spasm becomes more distinct, and therefore the diagnosis of stricture is made. However, one has only to wait for a few minutes, after which the spasm disappears and the catheter can be pushed without difficulty into the bladder. A metal catheter, he says, rarely produces the spasm. At times, when the ureter is being washed out with a solution of nitrate of silver for gonorrhœa, he has met with another effect of this spasm. Introducing a silver catheter into the membranous portion and washing this out, the spasm is set up, and on attempting to withdraw the instrument it is found to be tightly grasped. One has again merely to wait a few minutes, after which the spasm will disappear and the catheter can be withdrawn with ease.

**(274) Murphy's Button in Gastro-enterostomy.**

Kammerer (*Annals of Surgery*, August, 1901) reported at a recent meeting of the New York Surgical Society a case of successful posterior gastro-enterostomy for pyloric obstruction due to a large tumour, which at a second operation, performed with a view to its removal, was found to have disappeared. As the Murphy's button used at the first operation had not been passed, a search was made for it during the secondary laparotomy, and it was found in the stomach, from which it was removed by gastrotomy. Kammerer stated that in about 24 cases of posterior gastro-enterostomy with the Murphy button, he had seen only 2 instances in which the button escaped into the stomach, whereas in anterior gastro-enterostomy this happened quite frequently. This he attributed to the fact that when the patient is in the recumbent position evacuation of the stomach after posterior gastro-enterostomy is a more continuous process than after the anterior operation, and the button is therefore continually pushed in the right direction.

## MIDWIFERY AND DISEASES OF WOMEN.

**(275) Eclampsia.**

A. Hartz (*Münch. med. Woch.*, Nos. 21 and 22, 1901) gives a summary of the present teaching as to eclampsia, with full bibliographical references. (The reader is referred to the original article for these references, as want of space renders it impossible to reproduce them in this place.) He states that eclampsia is an acute pathological process of parturition and of the puerperium, characterised by clonic and tonic convulsions, accompanied with loss of consciousness and more or less coma. The frequency of eclampsia is given in general as 1 case in every 500 births, but some authors give it as often as 1 in every 68 births. It occurs more frequently in spring and autumn than in other seasons. Primiparæ who are no longer young are most frequently attacked than others, and especially if the uterus is distended by hydramnios or twins. The attacks occurred most frequently during the parturition, next during the pregnancy, and least frequently during the puerperium. In the latter it generally occurs during the first two days. A woman is rarely attacked for a second time with eclampsia. The attack may accompany abnormal as well as normal pregnancies. The eclampsia may affect the child as well as the mother. There are generally, but not always, prodromal symptoms, for example, headache (frontal and sagittal), sickness, pain in the stomach, giddiness, sudden blindness, restlessness and excitability, difficulty in passing water, and œdema. Epigastric pain is the most important of these. The attack very frequently sets in during sleep. If it occurs during waking the patient suddenly becomes quiet, the look becomes fixed, the eyes roll from one side to the other. The pupils generally dilate, the muscles of the face begin to twitch chiefly about the mouth, the arms, buttocks, and legs are next convulsed. The jaws are closed, the patient struggles in vain for air, the tongue protrudes between the teeth and is bitten, foam issues from the mouth, a deep cyanosis sets in, the respiration becomes stertorous, and a profuse sweating breaks out. The convulsions are mostly of a clonic nature. The attack does not exceed two minutes in duration. After the first attack, consciousness, which was lost, is regained mostly, but later on the patient remains unconscious during the intervals, and eventually enters into a deep coma. The number of attacks varies enormously in different cases, it may be limited to a single attack of convulsions or may be as many as 60 or 80; one case had 104 attacks. During the attack the pulse is of high tension, frequent, and intermittent, and the blood pressure raised. In the somnolent intervals the pulse is slower and often very full. In severe cases there is frequently some rise of temperature. In cases which end fatally the intervals become shorter, consciousness is not regained, and œdema of the lungs or apoplexy ends the scene. If eclampsia occurs during the course of pregnancy, a premature birth usually takes place. Rarely the patient may retain her fœtus and recover; in this case a dead, macerated fœtus is born at full time. Very rarely the child lives and is born at the ordinary time. In eclampsia during parturition the birth of the child takes place very rapidly as a rule. The attacks cease after parturition in between 65 and 93 per cent. of the cases. The course is milder in the puerperium than

during pregnancy or during the birth (mortality given at 25 per cent). Jaundice occurs occasionally, and is regarded as a bad sign. Psychoses follow the attacks in some cases (5 to 13 per cent.). During the attack the quantity of urine is diminished, and frequently a considerable quantity of blood is present. Albumen in large quantities and casts of all sorts are found in the urine in nearly all cases. The albuminuria ceases after the attacks are over in a certain number of cases, while in others it persists as a nephritis. Hartz deals with the various theories of the etiology of this malady. He leans toward the opinion that eclampsia is due to an auto-intoxication, produced either by the metabolic changes in the maternal or in the fœtal tissues. Each theory and very many modifications are expounded. Under the heading of morbid anatomy he states that no definite pathological changes are constantly found in persons dead of eclampsia. The most common changes are in the kidneys, but these have no relative bearing on the severity of the cases. Stasis, hæmorrhages, cloudy swelling are each found in different cases; sometimes the kidneys are pale, whitish grey, in other cases greyish red, or even dark red, and emboli, infarctions, and necrosis are also found. Acute nephritis, with definite necrosis of epithelium, which has grafted itself on an old chronic nephritis, is perhaps the most common of the changes in the kidneys. The changes in the liver are much less common than those in the kidneys, and include enlargement and stasis, fatty degeneration, anæmic and hæmorrhagic necrosis, thrombosis and infarction, and hæmorrhages in the liver tissue, and under the capsule. In the lungs one finds at times œdema and emboli of liver cells, and giant cells from the placenta; the heart is often hypertrophied, and the brain shows œdema, bleedings into the parenchyma, into the ventricle, and under the meninges patches of softening, thrombosis, and emboli. He also mentions other changes, including those in the placentæ. None of the *post-mortem* changes, however, help to clear up the etiology of the disease. The diagnosis is usually easy, he says. A single attack may be mistaken for an epileptic fit, but with a little care these two conditions can easily be separated. Hysteria may also give rise to some confusion, but the incompleteness of the loss of consciousness and the absence of coma are sufficient to clear up the doubt. Apoplexy and convulsions due to anæmia are easily differentiated from eclampsia. The chief difficulty lies in the differential diagnosis between it and uræmia. The history and character of the case must be studied to remove this difficulty. Cerebro-meningitis has been confused with eclampsia, and the correct diagnosis was made on the *post-mortem* table. The prognosis is always a serious one. For the mother it is doubtful, and for the fœtus it is bad. Under the heading of prophylaxis he advises a careful treatment of all cases of albuminuria in pregnancy, with rest, milk diet, baths, and sudorifics. Fehling examines the urine for albumen once every week during the last three months of pregnancy in every case. The treatment is directed towards stopping the convulsions, managing the labour properly, increasing the secretion of urine, and treating any coexisting pathological condition appropriately. Chloroform, morphine, and chloral hydrate are means of arresting the convulsions. He warns against a too free use of chloroform. He considers that morphine is the most useful drug in combating with this affection. He mentions that several competent authorities, however, consider its exhibition as unjustifiable. Good results are said to be obtained with veratrum viride, especially in England and America. He warns against the use of pilocarpin. Amyl nitrite and amyl hydrate are said to give good results, and the same is claimed for bromides and for calomel. Much difference of opinion exists as to the value of blood letting, but he is of opinion that it is useful in some cases. Intravenous injections of saline fluid alone, or after a bleeding, is also said to give good results. Further, warm and hot baths, cold, wet, and warm packs, and Corvin's serum are mentioned as methods of treatment, with warm supporters. Jörgens and others claim to have reduced the mortality of eclampsia enormously by injecting potassium iodide solution into the breasts. The question of the management of the birth presents less differences of opinion. All are agreed that the birth must be completed as quickly as possible. There are, however, various opinions as to how this is to be managed. Fehling punctures the membranes, no matter how small the os cervicis may be. Most others use dilators, plugs, etc., and later on apply the forceps. A few recommend *accouchement forcé*. This is mostly to be carried out by deep incision of the cervix. Another method is by means of Cæsarean section, which has many advocates. He concludes by giving an account of Stroganov's treatment by oxygen inhalation and morphine, with other therapeutic aids.

## THERAPEUTICS.

### (276) Inunction in Tuberculosis.

B. Rouden (*Therap. Monat.*, August, 1901) has for some years worked at the subject of inunction for tuberculous, scrofulous, and other affections, and believes that he has obtained a good method of applying this treatment with the help of a new cod-liver oil-iron preparation. "Dermosapol" is a neutral balsam of cod-liver oil, which possesses good qualities for the purpose of inunction and has a pleasant odour. It consists of 50 per cent. ol. jecoris aselli (finest deodorised cod-liver oil), balsam of Peru, ol. cinnamomi, ol. citri and ol. thymi, lamb's-wool fat, glycerine, and an alkali. He claims to have reduced tuberculous glands of the neck to a very small size in a few weeks by rubbing it in. This he carries out twice or three times a day, after the skin has been well rubbed with brandy and then with water; 100 grams should suffice for 10 to 12 days. He says that it enters through the follicles of the sebaceous glands, and reaches the lymph vessels without difficulty, and effects an action in (1) heightening the alkalinity and oxidation of the lymph apparatus, which is always lessened in scrofula and tuberculosis; (2) producing the peculiar changes in the cells and tissue elements as cod-liver oil does; and (3) by the direct carrying of glycerine in the ethereal balsam into the lymphatic vessels. He uses, further, potassium iodide, pernol-dermosapol, and formaldehyde-dermosapol for scrofula and for joint affections, lycoform-dermosapol for skin affections, iodoform-lysol-dermosapol for surgical uses, and ichthyol-dermosapol for gynæcological uses, all with good results.

### (277) Treatment of Tetanus.

In recording the history of a case of severe tetanus, which was cured by intradural injections of tetanus antitoxin, E. von Leyden (*Deut. med. Woch.*, July 18th, 1901) briefly describes the development of what he considers to be the proper treatment of the disease. Von Behring introduced the serum with the belief that once introduced anyhow into the body, the results would be efficient, and therefore it was at first injected subcutaneously. The unsatisfactory results led to its application into the vascular system, and later into the cerebral dural cavity, but without the hoped-for results. It was found that in fatal cases of the disease, treated in one of these ways, the blood was incapable of producing tetanus in mice, although when not so treated it was capable of producing tetanus. On closer investigation, however, it was demonstrated that the spinal cord and the cerebro-spinal fluid contained tetanus toxin, and when these were injected into mice, the animals died of tetanus. Thus the subcutaneous or intravenous injection of antitoxin, although capable of rendering the toxin in the blood harmless, was powerless to attack the toxin in the cerebro-spinal fluid. Von Leyden's assistant, Jacob, therefore suggested and applied the method of intradural injection, and the trial case recovered. Other observers also attempted this method, and Von Leyden finds reports of 5 cases which died and 5 which recovered. His new case had a temperature of 105.8° F., a temperature which, he says, is always followed by a fatal issue in tetanus. The treatment was begun on the third day, and consisted in an intradural injection of 5 c.cm. of antitoxin (equal to about ½ gram of solid antitoxin, and therefore about one-eighth of the usual subcutaneous dose) after 10 c.cm. of the fluid had been withdrawn, together with injections of morphine and the exhibition of chloral. The temperature sank on the same day to 101.3° F., and on the next day to 99.3° F. The fall in the

temperature he regards as a distinctly life-saving result of the antitoxin. On the third day of treatment the injection was repeated. Of the other interesting points in the case he points out that (1) the patient had two years previously had a mild attack of "head" tetanus; this points to the inability of a given attack to protect against subsequent infection; (2) although working in a stable, no wound was present, and therefore the point of entry of the bacilli is unknown; and (3) no tetanus bacilli were found either in the vomit or in the blood. On the other hand, mice injected with his cerebro-spinal fluid slowly developed symptoms of tetanus, that is, after six days.

**(278) Blood Transfusion and its Therapeutic Value.**

BIER (*Münch. Med. Woch*, No. 15, 1901) has been led, by a consideration of the good effects recorded in many cases by the older physicians following transfusion of blood, to consider its use as a therapeutic agent. The dangerous symptoms not infrequently following injection are of the nature of an aseptic infectious disease. By agglutination and solution of the foreign corpuscles transitory hyperæmias and serous exudations occur from capillary blockage, perhaps especially in diseased parts; common symptoms are dyspnœa, cough, erythema, pain in the back and head, diarrhœa, rigors and fever, sometimes albuminuria and enlargement of the spleen. When these symptoms have passed there is usually a marked reaction signalled by hunger, thirst, and increased metabolism generally. Bier has recently used defibrinated sheep's blood in amounts up to 20 cm., injecting this slowly into a superficial vein of the arm. He administered this to seven severe cases of tuberculosis. Most of these exhibited a markedly favourable result, improvement in appetite and general strength and also local improvement. A case of tuberculosis of the bladder and testicle after nine injections in the course of two and a-half months gained 5 kilos. in weight. In four cases of lupus the ulcerative process improved. Bier intends to try the effect of this tranfusion in other diseases, especially inoperable cancer.

**(279) A New Antiseptic.**

K. MANASSE (*Therap. Monatsh.*, July, 1901) states that asterol is a mercurial compound possessing a neutral reaction and being soluble in water. It is a whitish-grey powder, and possesses no odour. The chemical formula is $C_{12}H_{10}O_4S_2Hg.4C_7H_7O_6(NH_4)_2+8H_2O$. It possesses bactericidal properties of equal value, and those of corrosive sublimate and arseniate of mercury; it does not precipitate albumen, it does not irritate wounds, and produces no unpleasant effects. Further it can be used for instruments without injuring them, and as compared with lysol dissolves with a clear solution. It is used in strength varying from 2 to 5 per cent., and for intrauterine application 10 per cent. It is prepared in tablets of 2 grams (= about 3ss), which when dissolved in a litre of water (=35 ounces) represents a solution of 2 per cent.

**(280) Mercury in Lichen Planus.**

LUSK (*Amer. Journ. of Cut. and Gen.-Urinary Dis.*, May, 1901) advocates the internal administration of mercury in cases of lichen planus. He reports 17 cases treated with ½ gr. of perchloride of mercury given thrice daily. The results were good in all cases. In only two cases was there a history of syphilis, but the author goes so far as to regard the disease as a manifestation of syphilis affecting the nerves, either acquired or hereditary.

## PATHOLOGY.

**(281) Gangrene caused by Carbolic Acid.**

ROSENBERGER (*Verhandl. d. Phys. Med. Gessellsch. z. Würzbury*, Bd. xxxiv) has experimentally investigated the subject of gangrene resulting from the external application of carbolic acid. The subject was suggested by the case of a sailor who lost his left middle finger by gangrene following the application of a dressing soaked in a solution of carbolic acid of unknown strength. The dressing was kept on for two days and when then removed the finger was gangrenous up to the metacarpo-phalangeal joint. Rosenberger was able to show that the supposed coagulating power of carbolic is non-existent, in fact that solutions of all strengths somewhat delay coagulation. On the other hand, the acid has a markedly destructive action on the red cells. More important is its vaso-constrictor action when it comes into actual contact with vessels. When applied to the surface the epithelial cells are attacked by the hygroscopic action of the acid and shrink: through the interstices it reaches the subcutaneous tissues. If the circulation is vigorous it is carried away, and if in sufficient quantity it may be detected in the urine. If the circulation is sluggish the acid causes contraction of the vessels and the flow is further slowed, the red cells adhere to the walls and stasis and thrombosis follow. The accident of gangrene has usually happened in weakly subjects, women, and children, and where the circulation is mechanically interfered with by tight dressings.

**(282) Experimental Dysentery in Dogs.**

HARRIS (*Proc. Pathol. Soc. Philadelph.*, June, 1901) has succeeded in producing typical dysenteric symptoms in puppies by injection into the large intestines of fresh fæces of individuals suffering from the disease. On the other hand he has had no positive results with injections of mixed bacteria grown from the fæces of individuals suffering from dysentery, or with cultures of the bacillus dysenteriæ of Shiga. Attempts to cultivate amœbæ were unsuccessful. Kartulis is the only writer who claims to have cultivated amœbæ from dysenteric stools, and he also states that by these cultures he produced typical symptoms in three cats. In microscopic sections from the intestinal lesions in puppies Harris found amœbæ abundantly present in and around the ulcers. As the cultures of bacteriæ obtained from the stools produced no effect it is reasonable to suppose that in the type of dysentery experimented with a bacterium is not the cause of the disease; on the other hand the amœbæ were present in the fæces and also in the experimental lesions, while they were absent from the cultures; it seems clear that the latter are the causative agents. In a discussion following the paper Flexner distinguished acute dysentery, which is due to the activity of the bacillus dysenteriæ of Shiga, from chronic dysentery, in which the history of an acute onset was wanting. It is in the latter class of cases that amœbæ are often found in the dejecta. His own experiments and those of Kruse and others had convinced him that the bacillus of Shiga is the cause of acute dysentery of hot climates.

**(283) The Effect of Industrial Electric Currents on Nerve Cells.**

BORDIER AND PIÉRY (*Arch. d'Electricité Méd.*, June, 1901) have investigated the cells of the central nervous system in two rabbits killed by the action of electric currents from the main. The currents had a voltage of 120 volts. In one case an intensity of 3,000 milliampères was maintained for five seconds, in the other it was raised from 600 to 1,000 milliampères in fifty-five seconds and then shut off; the quantity of electricity passing through the body was 30 coulombs in the first case, 72 in the second. The electrodes were so arranged that the bulk of the current passed through the medulla and spinal cord. Both of these were examined by the Nissl method without any change being detected in the nerve cells, a result totally different from that obtained by Corrado upon dogs.

**(284) Ovarian Cytotoxin.**

CECONI AND ROBECCHI (*Rif. Med.*, September 14th to 16th, 1901) have carried out a series of experiments on rabbits and guinea-pigs, with a view to clearing up some of the questions in connection with the subject. They removed the ovaries and tubes from guinea-pigs, macerated them in physiological solution, and afterwards injected into rabbits. The best results followed intraperitoneal injections, and injections of moderate quantity at intervals of four or five days up to 7 or 8 injections gave better results than more rapid methods. Briefly, the results of the serum thus prepared in the rabbit when injected into the guinea-pig were as follows: Both agglutinating and hæmolytic properties were marked, and special examination of the tubes showed that the movements of the cilia of the epithelium were decidedly lessened, and in strong serums abolished. The bearing of this on pregnancy will be examined by the authors in a future series of experiments.

# AN EPITOME
OF
# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (285) Echinococcus of the Lungs.

Pel (*Berl. klin. Woch.*, August 26th, 1901) reports the history of a man, aged 37 years, who had had syphilis twelve years before, was a heavy drinker, and had led a vagabond life. Two days before admission he was taken ill suddenly with a rigor. He had been spitting up some blood-stained sputum for a few days previously. On admission he was found to be very dyspnœic and orthopnœic. His face was cyanotic; pulse small, soft, 130; temperature 101.3° to 103° F. Sputum muco-purulent and copious. The chest on the right side showed a zone of indistinct tympanitic resonance, between third and fourth ribs, and dulness below this. Over the zone there were heard indistinct breath sounds, and many crepitations. On the dull area the crepitations were loud. On the left side, at the axillary line, there were dulness, many crepitations, and weak bronchial breathing. Behind there was pleural rubbing all over the right side. On the left side the base was dull, with weakened breath sounds, with a zone of skodaic resonance above. The heart was natural. Urine, no albumen or sugar. The diagnosis of right middle lobe croupous pneumonia and dry pleurisy, with left pleural effusion was made. As the condition became alarmingly bad during the next few days, and an exploratory needle into the left posterior part of the chest struck pus, the thorax was incised in the ninth space. No pus was met on opening the pleura, but the patient became suddenly very cyanotic, coughed a great deal, and fainted. At last he expectorated a stinking bloody mass with a membrane. On probing the wound in the pleura a membranous structure was discovered. This was with great difficulty coughed out through the pleural opening. It was easily recognisable as a hydatid cyst. The patient continued to cough and to spit up bloody foul masses for about two hours, when he became collapsed and died. The *post-mortem* examination showed that the venæ cavæ were compressed by echinococcus cysts. There was chronic hyperplastic adhesive pleuritis, which extended to the diaphragmatic pleura, and fresh pleurisy at the base of the right side. The upper lobe of the right lung was possessed by echinococcus cysts of considerable size. The surrounding lung tissue was collapsed but not inflamed. On the left side there was a large cavity communicating with the opening made at the operation. No cyst walls were left in the cavity. The pleura and adherent lungs were infiltrated with pus. There was also some perihepatitis and syphilitic perisplenitis.

### (286) Inguinal Adenopathy and Visceral Cancers.

Viannay has recently observed several cases of inguinal adenopathy accompanying visceral cancers variously situated (*Lyon Méd.*, September 22nd, 1901). He has seen enlargement of the inguinal glands in cases of cancer involving the viscera of the pelvic, abdominal, and even the thoracic cavity. Thus among the sites of the primary growth were the bladder, uterus, rectum, colon, stomach, small and large intestine, liver, pancreas, lung, and œsophagus. Three different forms of adenopathy were found: (1) Inflammatory or fibrous enlargement; (2) true cancerous; and (3) inflammatory from secondary infection, with ulceration of the primary tumour. The glandular enlargement may be caused in three ways: (*a*) Primary direct involvement; the uterus is the only viscus which sends lymphatics direct to the glands of the groin; (*b*) secondary direct invasion; cancers of the abdomen which involve the peritoneum, and cancers of the bladder or prostate involving the ureter may invade the lymphatics running to the inguinal glands; (*c*) retrograde invasion. This may be caused by cancerous lymphangitis, or by a true cancerous thrombosis proliferating in a direction opposite to that of the normal lymph flow, or possibly, according to Waldeyer, by amœboid movements of the neoplastic cells in the lymphatics. Inguinal adenopathy is not infrequently an early sign of visceral cancer, and may indeed appear before any other symptom. The hardness and indolence of the enlargement, and the unilateral position, are usually signs definite enough for diagnosis. Viannay agrees with Jaccoud in thinking that enlargement of the inguinal glands is a more frequent and important sign than the subclavicular enlargement upon which Troisier has laid stress.

### (287) Detection of Locomotor Ataxia in its Early Stages.

A. Fournier (*Internat. Clin.*, 11th series, vol. ii, p. 185, July, 1901), in the course of a clinical lecture, refers to the means of diagnosing locomotor ataxia in its earlier stages when the ataxia is latent. There are six special tests for bringing to light the earliest signs of inco-ordination. The first is Westphal's sign or the absence of the knee-jerks, found in two cases out of three in the preataxic period. Then there is Romberg's sign or oscillation of the body in the erect posture with the eyes closed: in the early stages this sign may take the form of nothing more marked than a slight balancing motion. Thirdly, there is the staircase test, or the difficulty experienced in going downstairs. Fourthly, the leg-crossing test consists in the fact that in executing this movement the patient passes his leg through a segment of a circle of unnecessary magnitude. Fifth is the test of walking and halting at the word of command, nanœuvres which are badly executed by the patient in the preataxic stage; turning quickly round at command will be done specially badly. The most effective test, however, is the sixth, viz., standing on one foot first with the eyes open and then with them shut; it may reveal a muscular disorder which has eluded many other modes of examination, and it is often most decisive. All the six tests, however, ought to be employed for the early detection of locomotor ataxia.

### (288) Infection of Typhoid Fever from a Corpse.

W. Fürnrohr (*Münch. med. Woch.*, June 18th, 1901) finds that only two cases of typhoid fever infection from a corpse have been reported, one having occurred in Giessen and the other in Erlangen, where an assistant died of the fever which he acquired at a *post-mortem* examination. Fürnrohr was engaged in performing a *post-mortem* examination on April 17th, 1900, on a case of typhoid fever, and states that he was careful with regard to his hands. Three weeks later he was taken ill, and was admitted into the hospital, where he remained during the attack, and during a recurrence. The cause and symptoms of the illness left no doubt that the diagnosis of enteric fever was correct. The case, examined in April, was traced to a source at some distance from Erlangen, where he was, and there was no other case either in the town or in any place where he had been during the few weeks preceding his illness. He therefore concludes that he must have become infected at the *post-mortem* examination.

## SURGERY.

### (289) Reindeer Tendon for Ligatures.

H. Greibe (*Münch. med. Woch.*, June 18th, 1901) discusses the relative merits of catgut and reindeer tendon. He points out that, although some surgeons are fully satisfied that catgut is a perfect material for ligature and suture, there are many who, admitting the excellency of the physical properties of catgut, have put it aside on account of the difficulty or impossibility of completely sterilising it. In examining sections of prepared catgut stained by Gram's method, he found numberless single micro-organisms, and even colonies. This is readily explained, when one considers that the gut can only be very superficially cleaned by washing with water and by scraping, and that micro-organisms can easily gain access to the interior of the raw gut by slight splitting of the different layers. The preparation of the article by means of twisting and drying makes it almost impossible for the process of sterilisation to be carried out completely. On the other hand, reindeer tendon, which is obtained from the tendons of the neck of animals killed in late autumn after the onset of frost, lends itself readily to sterilisation. The raw tendons are dried at a low temperature, and later, after softening with water, the threads can be divided by

tearing with forceps or with the fingers. These threads are sorted according to their size, dried, and laid aside for sterilisation. They consist histologically of parallel fibres of connective tissue, with a small intermixture of elastic fibres. It owes its easy division into threads and its resorbability to this structure. Compared with catgut, it is less likely to be contaminated in its raw condition than the other, and those micro-organisms which are found are always only on the surface. To show that the interior of the threads, however, can be influenced by antiseptics, he plunged pieces of catgut and reindeer tendon into a watery solution of methylene blue. After six hours the reindeer tendon, on section showed an equally stained blue surface, while after forty-eight hours the catgut showed blue staining only in the outer third, the centre remaining white. Infecting the threads with anthrax spores, he performed experiments to determine the best method of sterilising the ligatures. The spores, he found, were killed in three minutes by boiling water, and in thirty-six hours by 1 in 1,000 corrosive sublimate solution. The method which gave the most satisfactory results, was the application of aqueous solutions of corrosive sublimate and oil of juniper. The former of the strength of 1 in 200 gave absolutely sterile threads after soaking for from two to seven days, and the latter gave the same result after four days soaking. He found that oil which was a year old was more powerful than fresh oil. For practical purposes he used the following method of preparation: (1) Two days in ether and free the threads from fat; (2) one month in ol. juniperi; (3) two days in ether and two to seven days in alcohol (to remove the oil); (4) two days in 1 to 2,000 hydrarg. perchl. solution; (5) storing in alcohol—the threads are thus, with the addition of water up to 30 per cent., rendered flexible. The ligatures and sutures prepared in this way proved to be absolutely sterile, and to be easy and comfortable to work with. At times the ligatures, however, are thicker at one than at the other end, but he has not been inconvenienced by this. He gives a table, comparing the elasticity of silk, catgut, and reindeer tendon, which show that the latter has a slighter but more perfect elasticity. In conclusion, he states that the ligatures and sutures have been used in a large number of operations, among which were 450 laparotomies, without giving cause for dissatisfaction once. The threads can be obtained in Moscow, Berlin, and Paris, at the price of 3s. per 1,000 threads.

#### (290) Tonsillotomy Rash.

Wingrave (*Laryngoscope*, July, 1901) records 34 cases (8 of which have occurred since publication) in seven years of "tonsillotomy rash" associated with removal of tonsils and adenoids. The small percentage is accounted for because many cases are merely reported by parents as having had a rash, and therefore further systematic investigation in all cases after tonsillotomy or adenoid removal would probably show a greater percentage. In 3 instances out of the 34 the rash proved to be scarlatinal, and 1 of the cases developed diphtheria, but the remaining 30 were simple non-specific rashes. The eruption appears on the second or third day about the neck, chest, and abdomen, and after lasting from two to three days disappears without desquamation, but is often accompanied by itching. It is either papular, roseolar, or erythematous in type, and may occur at any age, being noticed twice as often in females as in males. Generally the constitutional disturbance is but slight, the temperature rising 1° or 2° F. The recognition of the condition as following these operations is of importance in preventing the formation of a graver diagnosis. The fact that scarlet fever occurred in 3 cases and diphtheria in 1 has an important practical bearing upon the practice of removing actively-inflamed tonsils as advised by many surgeons, because of the following advantages: (1) Greater facilities in using the guillotine presented by the inflamed tonsils; (2) the more thorough removal and the relief of angina. The possibility of tonsillotomy occurring in a case of an unrecognised specific fever is not regarded as giving additional risk, but it is doubtful whether this view can be taken if adenoids are removed at the same time, because of the increased denuded surface presenting a large area for the absorption of toxic matter. Blood examination during the week following operation shows an increase of mononuclear white corpuscles, rarely lasting beyond the tenth day. As most of the cases were taking potassium bromide and sodium salicylate, the rash may be one of drug intolerance, but, whatever its pathology, the knowledge that such a non-specific rash may occur will be a reassurance to practitioners meeting with it for the first time.

#### (291) Gonorrhœal Myositis.

Ware (*Amer. Journ. of Med. Sci.*, July, 1901) has been able recently to demonstrate gonococci in inflamed muscle. His patient, a man, 35 years of age, who had contracted gonorrhœa two months previously and suffered from chills and pain in the left knee a month later, complained of severe pain about the shoulder. Passive abduction of the arm caused spasm of the adductor muscles, and a tender, indurated patch was detected in the muscles of the posterior axillary fold. As the patch increased rapidly in size, an incision was made into it. The muscle was sodden, greyish, and in parts friable. No pus was found, but much turbid serum exuded. Tubes of sugar agar and sugar bouillon remained sterile after inoculation, but coverglass smears showed diplococci without any other organism. These were typical gonococci in shape and arrangement, and were decolorised according to the Gram stain. A section of the muscle showed typical interstitial inflammation. Some of the fibres were the seat of cloudy swelling. The connective tissue proliferation was so great as to separate and compress the individual muscle fibres. Stained sections showed a liberal scattering of diplococci grouped about the nuclei and in the interstices of the muscle fibres. The incision relieved the pain, but the inflammation spread as far as the insertion of the latissimus dorsi. Ware thinks that the myositis was more probably due to extension from the shoulder-joint than to metastasis.

## MIDWIFERY AND DISEASES OF WOMEN.

#### (292) Puerperal Fever.

A. Hegar (*Münch. med. Woch.*, September 17th, 1901) includes among the sources of infection suppurating and putrefying wounds, abscesses, purulent catarrh, lochia, peritoneal exudation, turbid fluid found in the connective tissue spaces in erysipelatous and phlegmonous processes, and nychia, while to dirty clothing, neglected condition of the external genitals, and of the surroundings of the anus he accords a place in another category, but the great source of infection lies in the hands of the medical attendant and of the nurse. The conditions of the genital canal are favourable to the development of streptococci, while the general disposition of the body toward septic absorption is frequently heightened. Hegar describes in detail all the factors which lead to the development of the infection, and pays particular attention to the want of free drainage for the lochia, which is so frequently met with. Obstruction by retained portions of membrane or placenta, or by blood clots, reflex contractions of the sphincter vaginæ is responsible for this deficiency at times, but he believes that sutured tears of the perineum, when the suture includes but little more than the skin, while the rupture extends until high into the pelvic floor, and thus a blind space is formed in which the fluids stagnate, are most frequently the starting point of the coccus infection. Under certain circumstances these may be a sort of safety valve, and lead the parturient woman past all these dangers, save when the organisms introduced are very virulent, and these circumstances, he says, consist in good uterine contractions, only moderate stretching of the cervix and the vaginal vault, with a small fœtal head, or a rapid passage through the pelvis, no external or internal obstruction, and the natural flow of the blood and lochia, no marked fall of the intra-abdominal pressure, and in a plentiful lochial discharge during the first few days. He proceeds to describe the different effects the invasion of the parturient genital canal by streptococci may have. He discusses the pathology of phlegmonous processes affecting the parametric tissue; the local invasion of various tissues of the pelvis, the connective tissue, the secondary affection of the tubes and ovaries, and of the surrounding folds of peritoneum. These pro-

cesses, he states, may remain circumscribed, and the inflamed appendages surround themselves with encapsuled exudation, and thus limit the extension of the local damage. He next deals with the invasion into the endometrium; and next with the pathological processes in the uterine vessels. In turning his attention to the clinical aspect of these conditions, he reminds us of the high fever, the frequent pulse of low tension, the rapid respirations and slight cyanosis, the dry tongue, and the marked effect on the nervous system which characterise septic fever. Of the so-called "milk fever" he says a few words. The pathology of this condition is not clearly understood, although he says that without doubt stasis and obstruction of the excretions play a part in the causation. He considers that the prognosis of septic fever in progressive processes in the connective tissue or in breaking down thrombi is fairly hopeless, although marvellous recoveries occur occasionally. We do not possess a reliable antistreptococcus serum, and quinine and alcohol usually prove themselves useless. Circumscribed phlegmons and peritonitis offer a better prognosis. In discussing the prophylaxis, he realises the difficulties which beset the general practitioner in dealing with the poorer classes in their own homes. He deals with the question of abstaining from attending confinement cases when the practitioner is brought into contact with other septic conditions, and warmly advises the utmost care under all circumstances with respect to clothes, hands, etc. He approves strongly of indiarubber gloves for the practitioner. Lastly, he speaks very definitely and with excellent precision on the value and technique of intrauterine douching and drainage. The former he carries out at least once every hour, and sometimes three times, using chlorine water, diluted with from 3 to 7 parts of sterile water. With the combined use of these methods, he believes, that much can be accomplished if properly carried out.

**(293) Infantile Vulvitis and Gynatresia.**

Labusquiere (*Ann. de Gynéc. et d'Obstét.*, August, 1901) does not entirely concur with Nagel, Veit and Pincus, who believe that atresia of the vagina where the uterus is well-developed is as a rule acquired and not congenital. They go further and teach that hæmatosalpinx, in these cases, is one of the later effects of the inflammatory affection in infancy which caused the atresia. Sänger has shown that hæmatosalpinx, independently of any evidence of old inflammation lower down the genital tract, may set up local peritonitis caused simply by leakage of blood, free from germs, out of the ostium. Still, the recent researches of Pincus demonstrate on clinical evidence the greater frequency of acquired over congenital atresia of the vulva and vagina alone. Labusquière notes Pincus's case where a girl of 17 died of typhoid fever a few hours after a mass of clot had escaped from the vagina. A retro-hymeneal atresia was detected, and a hæmatosalpinx had ruptured into the peritoneum. On inquiry the patient's mother admitted that the girl had suffered from scarlatina four years previously, followed by free escape of clots from the vagina. In another case a girl of 15 apparently menstruated for the first time during scarlatina, but the period did not reappear during convalescence. Pincus found that there was ulceration of the vagina behind the hymen, caused by inflammation during the fever, with adhesion of the opposite sides of the canal. There is evidence, easy to understand after considering the above cases, that infantile vulvitis is a yet more frequent cause of vaginal atresia. Hence when a female infant is born the vulva should be carefully inspected. When there is suspicious discharge from the maternal genital tract, not only the eyes, but the vulva, of the infant must be treated by prophylactic measures. The physician must be slow to diagnose bloody discharges in little girls as "precocious menstruation," a very rare condition; more likely they represent gonorrhœal or leucorrhœal vulvo-vaginitis. Even in simple leucorrhœa in children a probe should be passed when the discharge is diminishing after treatment, to make sure that adhesions have not formed. Shows of blood in backward young girls suffering from fevers or other acute or chronic infectious disorders must not be hastily reckoned as menstruation; they demand local examination. In any case of complete amenorrhœa in a girl of 15 or 16 care must be taken to ascertain the previous history. Vulvitis in infancy may be overlooked; none the less it may account for the symptom, whilst attacks of infectious disorders point also to possible atresia. A history of either of these diseases indicates that the parts must be examined.

**(294) Resection of Sacrum or Coccyx Unjustifiable in Women.**

Edebohls (*Amer. Jour. Obstet.*, Aug., 1901) is convinced that everything that can be done by Kraske's operation can be done equally as well or better without interfering with the integrity of the coccyx or sacrum. He is unable to escape the deduction that the Kraske operation or any of its modifications involving resection of the sacrum or coccyx for the purpose of gaining access to the pelvic or abdominal cavities is unjustifiable in women. Malignant or otherwise incurable disease of the rectum is the only legitimate indication for Kraske's operation; it is quite needless for extensive resections of the female genital tract. Edebohls dispensed with it in a case of malignant disease of the rectum. The patient was four months pregnant, and it was the upper part of the rectum that was involved. The operation consisted in removal of the uterus, resection of the cancerous bowel, and end-to-end anastomosis of the sigmoid flexure and the rectum, all performed at one sitting through an anterior abdominal incision.

## THERAPEUTICS.

**(295) Treatment of Phthisis.**

Volland (*Therap. Monats*, July, 1901) gives an account of his method of treatment of pulmonary tuberculosis. In the first place, he considers that, although the treatment can be carried out elsewhere, a high altitude is necessary to obtain the best results. He forbids all mountain climbing, and rigidly prescribes limited walking exercise on the level. By this means he believes that hæmorrhage and recurrence of fever can at times be prevented. Further, he forbids cold baths and douches. In cold water he sees an agent which can act very unfavourably in the injured tissue of the consumptive, and, on the other hand, he does not believe that the least benefit from its use can accrue. The next point of contention which he takes up is diet. As it is all-important that the consumptive shall have his stomach in good functional order, he finds it advisable to give a mixed diet, which shall be pleasant to the palate and which the patient feels inclined to eat. He does not overfeed his patients, nor does he force them to eat when disinclined. He considers milk indigestible, and therefore does not give it to his patients at all. Usually he gives three meals a day, and if the patient has a fair appetite, and no fever, he allows a little nourishment to be taken between breakfast and dinner. His observations have led him to believe that the natural temperature of a consumptive is very low, and he puts it at an average of 97.2° F., while he looks on 98.2° F. as pyrexia. This natural low temperature is the reason why cold water is not well tolerated, and he considers it advisable to modify the regulation as to fresh air accordingly. The patients are not allowed out in rough weather (wind and rain) or after sunset, and in winter, when the thermometer registers a considerable degree of cold, he forbids the patients to sleep with open windows. All alcohol is forbidden, since this acts badly on a delicate stomach. The rest in bed as long as there is pyrexia is carried out very thoroughly; just as thoroughly as if the patient had peritonitis. The cough is controlled with morphine, codeine, or heroin. And later when the pyrexia is passed, and the cough continues, and especially if there is expectoration from the bronchi, he gives narcotics freely. He briefly refers to the treatment of laryngeal affections by rest, and to diarrhœa by warmth and bismuth salicylate. He says, "the best treatment for hæmorrhage of the lung is to prevent it, which one can usually succeed in doing by protective and careful general treatment." If, however, this symptom should occur in spite of the general treatment, he uses preparation of ergot, which can be given subcutaneously without producing bad symptoms.

**(296) Serum Treatment of Syphilis.**

Moore (*Dermatol. Zeitsch.*, April, 1901) reports 30 cases of syphilis treated with serum obtained from patients with ter

tiary syphilis. The serum was obtained by means of cantharidin plasters, and from 10 to 40 c.cm. were injected every third or fourth day for one or two months. Cases of refractory syphilis quickly improved, and the improvement is said to be more lasting than after a course of mercury or iodides. Syphilitic sores healed under local application of the serum on compresses. The best serum was obtained from robust persons in the later stages of syphilis, and those patients who were treated with the serum yielded in turn better serum than those who had been treated with mercury.

**(297) Treatment of Skin Affections by Cold.**

HEARING a good account of the use of fluid air in skin affections, E. Saalfeld (*Therap. Monats.*, July, 1901) applied this remedy to five cases. These cases included 1 of lichen ruber planus, 1 of eczema lichenoides, 1 of tylosis of the hands, 1 of warts on the dorsum of the hands, and 1 of a soft sore. The temperature at which air is made fluid is —190° C., and the sudden cooling down of a vessel into which the fluid is poured was shown by the bursting of a glass vessel into which he wished to transfer the fluid. He applied it, by means of a small swab, twice to the back of a mouse: the skin became of a leathery hardness, and the animal died ten minutes later from shock. The same hardening of the skin took place in a rabbit, and this disappeared after a day or two. The application to the patients caused burning and itching which lasted from fifteen to thirty minutes. After an hour or longer a blister rose, and on puncturing this, plentiful serum escaped. The secretion gave rise to a crust forming, which remained from one to three weeks, after which in the case of the lichen, the eczema, and the tylosis, the skin healed up and appeared normal. The warts were removed, by a process of falling out, in a few hours. The soft sore disappeared in about four days. As fluid air is expensive, in spite of the American claim that it is the same price as "seltzer water," he attempted to use a mixture of chloræthyl, and chlormethyl (15 per cent.), which is known as "metœthyl." This freezing mixture gave him excellent results in some chronic infiltration affections, in eczema lichenoides, in lichen planus, and in tylosis. Further, he reports that in leucoplakia of the tongue, he found the spray mixture of great value, and advises the use of the knife to shave the surface flat, when the tongue is sufficiently but not too intensively frozen.

**(298) Eumenol, Diontin, and Stypticin.**

H. LANGES (*Therap. Monats.*, July, 1901) reports on three new drugs. Eumenol (an extract of the Araliaceus root, found in China) is a hæmostatic useful in cases of menorrhagia and metrorrhagia. He has tried it with good results in dysmenorrhœa, in cases with slight deviations of the uterus (retroversion), and in uncomplicated menorrhagia. The dose of a tablespoonful three times a day is well stood, and he has not seen any ill-effects. Dionin, he says, is used in bronchitis, phthisis, asthma, and in the cough of influenza. In phthisis, at times, it diminishes the cough and expectoration, checks the sweating, and improves the appetite. In acute bronchitis he has not seen any benefit from its application. He uses 6 drops of a 10 per cent. solution three times a day in phthisis, and 8 drops of a 5 per cent. solution in bronchitis. Stypticin and tinctura styptici (= 1 in 10 with tinct. cinnamonii), dose 10 drops in water four times a day, are of considerable use in moderating the loss of menorrhagia. He gives the first dose on the first day of the period, with the result that after profuse loss with labour-like pains, the period becomes more normal, and rarely exceeds four days in length. In conjunction with iron it is of use in anæmia.

## PATHOLOGY.

**(299) Danysz's Bacilli.**

A. KRANSZ (*Deut. med. Woch.*, May 30th, 1901) has carried out experiments to test the results obtained by Kister and Köttgen with Danysz's bacilli. He passes over the morphological and biological characters of the bacilli, as his observations coincided precisely with those of the two above named authors. He received his original cultures from Professor Danysz. These were growths on agar. He then proceeded to test the bacilli on household animals, and found that they are perfectly harmless, not a single animal having had any illness or symptoms after feeding on the growth. Turning to the effect on rats, he imprisoned 20 rats in a large cage; of this number one occupied an outer compartment and the 19 others the body of the cage. The isolated rat was fed on bread soaked in a culture of bacilli, and the other rats were fed on ordinary food. On the fourth day the single rat was admitted to the body of the cage. On the eighth day one of the 19 rats died, the isolated one died on the eleventh day, and up to sixteen days 8 rats had died. During the following fifteen days the rest, with two exceptions, died. *Post mortem* he failed to find any organisms in the organs or blood. He repeated the experiment, after disinfecting the cage with steam. The 20 rats died within twenty-seven days, and he again failed to discover the bacillus *post mortem*, nor could he obtain a growth by inoculation. The third experiment was conducted as above, with the exception that the rats being kept on very low diet, were impelled to gnaw at the cadavers of their defunct comrades. They all died in four weeks. The fourth experiment was made with a culture which had undergone two passages to enhance the virulence. Krausz could not accept, even with this trial, that there was anything in the nature of a true epidemic among the rats. They all died more or less slowly. After peritoneal injection each animal died in from seven to nine days, and the examination after death revealed a splenic tumour, while the bacilli were found in the spleen and more abundantly in the blood. He concludes from the results of his experiments that the Danysz bacillus is incapable of setting up a definite epidemic. Rats die very easily, he says, when kept in cages for laboratory experiments, and a large proportion of them, without any special feeding, will die within five or six weeks. He also relates an experiment which he carried out in a sewer. The rats ate the bread soaked in a culture, but the number of dead rats found in the next few weeks did not exceed the average. Danysz claims that in Paris, after feeding rats with his bacilli in a sewer, an epidemic occurred in eight days, and after fourteen days 80 out of 200 rats were killed. On the fourteenth day only gnawed cadavers were found, and no live rats. Abel in Hamburg reported that in the laboratory rats died in from six to twelve days. In a large ship rats were fed on the prepared bread, but no dead bodies were found, nor was a diminution of the live rats noticed. In an experiment carried out in a store only one dead rat was found, and only a slight diminution of numbers of live animals was subsequently noted. In a stable the experiments gave the same result.

**(300) Cerebro-spinal Meningitis due to Pneumococcus Infection from the Nose.**

JASSNIGER (*Centralbl. f. Bakt.*, July 12th, 1901) reports a case of purulent cerebro-spinal meningitis where Friedlaender's pneumococcus was found in pure culture in the lesion. At the *post-mortem* examination the direction of infection was traced as follows: From the nose to the sphenoidal sinus, which was full of thick greenish pus; thence through the vessels in the bony walls of the chamber to the cavernous sinus. Here a phlebitis started, which spread, especially along the nerves, to the whole of the cerebro-spinal system. The organism has now been recorded as the cause of meningitis in a considerable number of cases.

**(301) The Poison of Tapeworm.**

MESSINEO AND CALAMIDA (*Rif. Med.*, July 17th, 1901) believe that the effects of tapeworm are not due so much to mechanical reasons as to some toxic substance in a secretion by the tænia itself. They found that by injections or inoculations of extract of tapeworm constant and characteristic symptoms were produced- for example, tremor, depression, paresis of posterior extremity, somnolence, etc. These symptoms were more marked in the case of extracts non-stored than in those where the extract had been kept at a temperature of 40° to 45° F. Control experiments showed that the results were not due to the injection of proteid substances merely, but especially related to the tapeworm. All the species tried gave the same result.

# AN EPITOME
OF
# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (302) Acute Delirium.

Carrier and Martin (*Revue Neurolog.*, August 30th, 1901) refer to this rare but important disorder, which develops only in individuals whose nervous systems have been profoundly debilitated by pre-existing disease or by cerebral overstrain. The prodromal symptoms are those of cephalalgia, insomnia, *malaise*, constipation, anorexia, wasting, anxiety, and cerebral irritability. The onset is marked by a subacute mental confusion, with lassitude and occasional attacks of hallucinatory troubles. The acme of the disease is marked by acute delirious excitement and restlessness, absolute incoherence, pyrexia of moderate or marked type, with irregular oscillations, a dry, hot skin, dyspnœa, and a feeble and rapid pulse (120 to 160). Constipation which has prevailed till now may give way to diarrhœa. The symptoms of cerebral excitement and of terrifying hallucinations now increase, and may lead to danger of suicide, homicide, or violence to self or others. Next follow symptoms of profound cerebral exhaustion, with a dry brown tongue, sordes on the lips, and a condition of adynamia. The urine secreted is small in quantity. A condition of stupor or coma may now supervene, and at this stage bedsores and other trophic lesions readily make their appearance. Recovery seldom takes place, the termination being fatal in most cases. *Post-mortem* examination shows that chromatolysis and fatty degeneration of nerve cells occur in the cerebral cortex, cerebellum, and spinal cord, as demonstrated by Nissl's method. Ruptures and varicosities of the dendrites are present when sections are prepared by Golgi's method, and some degree of nerve-fibre degeneration in the cortex of both cerebrum and cerebellum is shown by Weigert's method. The pathogeny is a toxic condition set up variously by streptococci, staphylococci, and by the colon bacillus, or a special bacillus described by Bianchi and Piccinino.

### (303) Pruritus Senilis Linguæ.

E. Baumgarten (*Münch. med. Woch.*, September 24th, 1901) describes a rare neurosis of the tongue under the name of "senile pruritus," which occasionally comes under the notice of the general practitioner or specialist. Among 9,000 out-patients who have been treated by him during the past three years, he has only seen two cases. He points out that the diagnosis must depend upon entire absence of all local tongue lesions (and to be less liable to err in overlooking slight changes, he advises examining the organ in sunlight with a lens as well as with reflected lamplight), and must be differentiated from pure neuralgias, paræsthesia and hyperæsthesia, and allied conditions dependent on general nerve diseases. He lays great stress on the diagnosis of changes in the tongue affecting the sensibility which are due to causes in remote organs, for example, stomach, bowels, kidneys, circulation, and uterus. Again care must be taken to distinguish the disease from those symptoms which herald a local lesion, and exemplifies the need of such care by quoting cases of pemphigus of the tongue. Senile pruritus of the tongue is an entirely incurable disease, but the symptoms, intolerable itching and slight pain, may disappear to a great extent when senile skin pruritus develops in another part of the body. He advises that all cases should be kept under observation for some time, and many local treatments be tried before the diagnosis is definitely made. He adds a short account of the differential diagnosis of the conditions likely to be confused with this disease.

### (304) General Paralysis and Hereditary Syphilis.

E. Régis, of Bordeaux, has published in the *Archives de Neurologie* of June an article dealing with general paralysis occurring on a basis of hereditary syphilis. Eighteen years ago he published the first case of juvenile general paralysis known in France (*Journ. de Méd. de Bordeaux*, 1883), since when he has at intervals observed and reported three similar cases. The present case is the fifth of the series, and the patient is 23 years of age. A paternal aunt is mentally feeble, his father is of drunken and dissipated habits, and had a disease of the lip, probably syphilitic, contracted from a woman. There was no neuropathic heredity on the patient's maternal side. The patient has an elder brother in good health, a sister who is afflicted with Pott's disease of the spine, two other sisters of whom one died shortly after birth at full term, while one child was stillborn. The patient was never seriously ill. He was of above average intelligence, docile and diligent in school, and won several prizes. At the age of 17 he was a workman, and seemed both intelligent and well educated. He then went abroad. The following year, being now 18 years of age, his aunt noticed that his letters were beginning to be defective both as regards the expression of ideas and handwriting. He returned home after an absence of three years, and his appearance shocked his relatives. He arrived hatless, half dead with cold, with a stupid air, and with his memory and intelligence both distinctly enfeebled. He joined a regiment of artillery at Tarbes in November, 1897, his mental condition passing undiscovered. The following spring he sustained a fracture of the left femur, and after being treated in hospital in four months was discharged cured. Radiography showed complete union. He was sent out for convalescence for a period of two months, and during this time he showed progressive evidences of mental failure, and, being twice placed in a situation to earn a living, failed completely, and returned home. He was listless, apathetic, and inert. In September, 1898, he rejoined his regiment, but his mental condition was now so pronounced that he was discharged in January. He then came under the care of Régis. The patient was a tall young man, with the aspect of a boy of 17 or 18, his speech was embarrassed, he suffered from jerks and tremors of the lips and tongue in speaking, and the pupils were unequal and reacted feebly to accommodation but not at all to light. The fundus of the eye was normal. Both gait and locomotion were awkward, especially in turning round. The knee-jerk was exaggerated on the right side and absent on the left (side of fracture). There was testicular anæsthesia. Sleep and appetite were normal. Memory was vague and confused, and nearly all the instruction he had acquired was obliterated. The handwriting showed ill-formed words, misspelt, and illegible, like that of an infant in its early attempts. Régis regards the symptoms as those of general paralysis, commencing at the age of 17 or 18 years and running a slow course. Maisonneuve, in a letter addressed to Régis, stated that the father of the patient was afflicted with pellagra as was his father. He also had syphilis, and communicated it to his wife before the birth of the patient, and the woman was at the time of her confinement suffering with the secondary symptoms of syphilis.

## SURGERY.

### (305) Suture of the Heart.

To the 12 cases of wounds of the heart wall treated by suture, Tg. Watten (*Deut. med. Woch.*, September 12th, 1901) adds one more, and thereby increases the number of successful cases to 6. The patient, aged 23, received a stab in the right side of the chest with a large clasp knife. He succeeded in reaching his home and then lost consciousness. A medical man applied a a few sutures to the external wound and a firm bandage and the patient was removed to hospital. The dressing, which had been twice changed during transport, were soaked with blood on admission. He was extremely pale, wore an anxious expression, and his respirations were rapid and laboured. There was occasional violent coughing. Pulse over 100, irregular and small. In the fourth intercostal space on the right side was an oblique incised wound of about 1 inch in length. It reached to within half an inch of the sternal border. Air entered the wound at each respiration with a loud noise, and during coughing blood spirted out. From the level of the eighth rib there was tympanitic resonance, while at the posterior axillary line (in the dorsal position) there was absolute dulness. The heart dulness was not increased. The sounds were barely heard. The temporary sutures were removed in order to disinfect the

wound, and a large quantity of dark blood mixed with air streamed out of the pleural cavity. No wound was found in the internal mammary artery, nor in the diaphragm, but on passing the finger toward the pericardium, a hole was found in this sac and another wound was felt in the heart muscle. During the examination air entered the pericardium, and a noise was suddenly produced, which was somewhat like that of water boiling in a closed vessel. Since the right pleura was already opened Watten preferred to attempt the suture from this side rather than to attack it from the left side. He enlarged the wound to the sternum inwards, and for a few centimetres outwards, then he resected the fourth costal cartilage, and tied the internal mammary artery in the third space. A second incision was made from the sternal edge at the level of the lower border of the second rib, to the sternal end of the first incision, the skin flap was dissected off, the third costal cartilage was divided, and the whole triangular flap of chest wall was reflected upwards and outwards. The pleura was swabbed out, and the lung, which presented at the wound, was pushed back with gauze. The hole in the pericardium, which measured a little more than ½ in., was enlarged downwards to 1½ in., and two strong sutures were passed through the cut edges in order to keep the wound open. The wound in the heart was nearly ½ in. in length. Dark blood trickled slowly from it. The upper end of the wound reached nearly to the base of the heart. Apart from the frequent cardiac contractions, the organ was tossed about in the pericardium, so much that it was at times impossible to differentiate between the individual phases of the heart's action. With a pair of long forceps and a needle-holder, Watten attempted to seize the edges of the wound, but failed to do so. He therefore introduced two fingers of the left hand behind the organ and steadying it for a short space of time, succeeded in passing a deep suture through the upper end of the wound. The ends of the silk suture were held in order to steady the organ, while two more were introduced. All these were then tied, the pericardium cleaned up, and the ends of the suture cut short. No more bleeding occurred from the heart wound, and the action became quieter. A gauze drain was introduced and the external wound was partly closed. The patient did well at first, but on the evening of the second day the frequency of the pulse increased and the respiration became impeded. On removing the gauze drain about 3½ ounces of bloody serous fluid escaped. The pericardium was again drained and the patient improved. After the third day the patient began to improve uninterruptedly, and the pneumothorax rapidly disappeared. He was discharged at the end of five weeks, and two weeks later, on examination, his condition appeared to be quite normal. Watten describes the methods of operation adopted in the other published cases.



**(306) Catheterism of the Ureter.**

In a paper recently read before the Lyons National Society of Medicine, Rafin expressed his conviction that the cystoscope was as indispensable to the urological surgeon as the ophthalmoscope to the oculist (*Lyon Méd.*, September 29th, 1901). By the adaptation of the cystoscope, Albarran has made catheterism of the ureter a simple and reliable operation. Rafin has practised this catheterism seven times for various conditions. Twice, before removal of a kidney for tumour, the ureter of the opposite side was catheterised in order to make sure of the functional activity of the unaffected kidney. Once the urine was taken direct from the ureter for bacteriological examination in a case of suspected renal tuberculosis. In a fourth case the obstruction of a ureter by a fixed calculus was verified. The remaining three explorations were undertaken in cases of movable kidney. The object in these instances was to verify the assertion of Sinitzine and Albarran that the painful crises of movable kidneys are due to actual renal retention. The experiment is practically conclusive, because the kidney can be displaced and again replaced in its normal position while the catheter is in the ureter. In the first case, before displacement, four drops of urine were evacuated at intervals of about thirty seconds. When the kidney was depressed, isolated drops were obtained every fifteen seconds, and on replacement four drops every ten to twelve seconds. In the second case, it was unfortunately found impossible to move the kidney at the time, though it was freely movable both before and afterwards. In the case of the third patient, no urine was obtained after the first displacement; on replacement, the evacuations occurred at intervals averaging eighteen seconds: on a second displacement the flow became most irregular. Rafin has used both Albarran's and Nitze's cystoscopes. He has never noticed any unpleasant after-effects, and has never had occasion to employ general anæsthesia, even the injection of cocaine being found unnecessary.

**(307) Treatment of Facial Neuralgia by Resection of the Cervical Sympathetic.**

Delagénière (*Travaux de Neurol. Chir.*, June, 1901), reports two cases of obstinate facial neuralgia treated by resection of the great cervical sympathetic and, at the same time, by resection and forcible stretching of the branches of the fifth nerve distributed to the painful areas. By the latter step he aimed at giving immediate relief, and by the former at preventing renewal of the neuralgia in other branches of the affected nerve. The results of this treatment, the author reports, were not favourable. In one case there was slight but temporary amelioration, and in the other the patient obtained no appreciable relief. Two negative results however, it is held, should not cast discredit on a new method of treatment, especially when tried in so obstinate an affection as neuralgia of the face. They simply show that the method practised by the author is not an infallible one, and that it ought still to be studied with regard to a selection and a classification of cases. It is held that neuralgia is never an idiopathic affection, and that efforts should be made to distinguish the different pathogenic causes of these painful afflictions, and to act medically or surgically in accordance with the nature and primary cause of each. It is probable, the author thinks, that certain cases capable of deriving much benefit from resection of the sympathetic might then be found. In the same number Cavazzani reports two cases of facial neuralgia successfully treated by resection of the superior cervical ganglion. In one case the patient was quite free from pain seventeen months after the operation, and in the other there was no return of the neuralgia at the end of the fourth month. These good results are attributed by the author to a post-operative modification of the trophic influence of the sympathetic nerve on the Gasserian ganglion.

## MIDWIFERY AND DISEASES OF WOMEN.

**(308) Dropsy of the Fœtus Complicating Labour.**

Kreisch (*Münch. med. Woch.*, August 27th, 1901) relates that he was called to assist a colleague who had found it impossible to deliver a fœtus, which presented by the foot. The mother was a 4-para, and had suffered from nephritis, with anasarca, for some weeks previously. On examination he found that the abdomen was too œdematous to allow of any certain palpation externally. *Per vaginam*, he found two livid fœtal legs presenting; they did not react to stimulation. The mother had not passed water for eight hours. An attempt to pass a catheter had the effect of penetrating the mucous membrane about ¼ inch posterior to the urethral opening, without any force being used. Under an anæsthetic the catheter was easily passed, but the bladder was found to be empty. On passing the hand into the vagina it was found that the fœtus was fixed by a ballooning of its belly, this being above the symphysis of the mother. He perforated the belly, and collected about 1¼ pint of clear, light-coloured fluid. The extraction of the fœtus progressed as far as the umbilicus, when it was discovered that the thorax was of great dimensions, and was incapable of passing the inlet of the pelvis. On perforating this a large quantity of fluid escaped. The rest of the birth followed easily. The placenta was expressed shortly after, and was found to weight about 4⅛ lbs. The fœtus was a female, apparently well developed. It weighed about 7 lbs. The skin was œdematous, especially over the face. No necropsy was allowed by the parents, so that the condition of the fœtal organs could not be determined.

**(309) Agalactia.**

Keim (*L'Obstét.*, May 15th, 1901) reports this condition in a woman aged 33 years, married thirteen years. She had borne eleven children, yet, though quite regular before marriage, had never menstruated afterwards, nor had her breasts undergone the least change or secreted a drop of milk. Hysterical attacks occurred at long intervals during pregnancy and the puerperium. She had been hysterical since the age of 15. Her mother had died of diabetes and had been pregnant six times. On none of these occasions did milk form in the breasts. Chavane attended a woman during an abortion in the fourth month; there were no characteristic changes in the breasts. She became pregnant again, and bore a child till term. The areolæ became a little pigmented during pregnancy, but no colostrum exuded; it was found impossible to get a drop of blood out of the breast after delivery. Patients with agalactia do not necessarily bear weak children. In Keim's case the child born, when the mother was under his observation, weighed over eight pounds. The patient had been delivered of her first six children at term, and all were living and well developed, then followed 2 abortions, 2 premature deliveries, and lastly 1 at term, under Keim's care.

**(310) Ovarian Tumour in a Child.**

Jens Schou (*Ugeskrift for Laeger*, No. 27, p. 636, July 5th, 1901) records the case of a female child, 7 years of age, suffering from a swelling in the lower part of the abdomen. There was an ovoid tumour, movable from side to side, reaching as high as the umbilicus, and springing from the pelvis—as was found by rectal examination: it had in the greater part of its extent a smooth outline and a fluctuating feeling; but part of it, to the left side, was more solid in consistence. The urine was normal. Ovariotomy was performed and the tumour along the uterine annexia on the left side was removed. The recovery was rapid; the sutures were removed in thirteen days and the patient got up in seventeen days. The parts removed consisted of a normal ovary and Fallopian tube and of the tumour, which was a parovarian cyst with a dermoid attached to it. The dermoid contained four teeth, a rudimentary alveolar process, and balls of hair.

**(311) Trauma and Extrauterine Gestation.**

L. Seeligmann (*Deut. med. Woch.*, June 27th, 1901) is not satisfied with the etiological explanation of extrauterine pregnancy, as given by Virchow and others, that a previous local pelvic peritonitis, having led to an alteration of the epithelial lining of the tube, and more especially to the cilia of the epithelial cells, is the original cause of the non-passage of the fertilised ovum to the uterus. At all events, he says he believes that a large number of cases must be explained otherwise. Three out of four cases of extrauterine gestation on which he operated during the past year, as well as one striking case reported at the end of his paper, and a fifth taken from his past practice, give clear proof that trauma contributed towards the unfortunate accident. In all cases the trauma took the form of contusion of the pelvis, and generally was produced by a sudden falling into a sitting posture. The case referred to above as striking was that of a young woman who had always been healthy and whose last (of two) pregnancy had taken place 3½ years before. She fell from a table on which she had been standing on April 18th. Pain followed on the left side of the abdomen. On May 4th a tumour of the size of a hen's egg was detected, and on the 8th this was removed by laparotomy. The tumour was situated in the left tube, and contained a 3 weeks old fœtus. He explains that the accident on April 18th probably took place a few days after the fruitful coitus, and this coincides with the fact that a 3 weeks fœtus was removed 20 days later. He prefers to deal with all cases which need operation by laparotomy rather than by vaginal section.

**(312) Supernumerary Ovaries.**

Essen-Möller and Engström (*Mittheil. aus der gyn. Klinik von Prof. Engström.*, vol. iii, Part 3, 1901) throw a little more light on the question of so-called supernumerary and accessory ovaries. In Engström's case the patient was 29 years of age and had been three times pregnant. There was a dermoid on the left side, but part of the ovary seemed to be cut off entirely from the growth. This was evidently the result of traction. Essen-Möller dissected the abdomen and pelvis of an infant, 6¾ lbs. in weight, who had died two days after birth from vomiting and hæmorrhage from the bowels. The uterus was well developed, the right ovary normal, the left small, though not displaced. A second ovary lay attached to the end of the left tube by a short round pedicle.

## THERAPEUTICS.

**(313) Oxygen in Croup.**

Hagenbach-Burckhardt (*Jahr. für Kinderh.*, October, 1901) reports favourably on the use of oxygen inhalations in the children's hospital at Basle. Besides lung and heart diseases of adults, oxygen has lately been recommended for broncho-pneumonia. The writer gives his experiences of 20 cases in which oxygen was given, and 15 were cases of laryngeal diphtheria. The benefit resulting was that it allowed time to be gained, and brought the children into a better condition for performing the necessary operations. Tracheotomy is made much easier by its use, and can be begun and carried out with more deliberation. The replacement of an intubation cannula is simplified if the lividity and distress is kept in check by oxygen while the tube is out. In 2 cases of sudden apnœa—in 1 on the completion of tracheotomy, in the other during the night following intubation—timely administration of oxygen undoubtedly saved life. A severe case of broncho-pneumonia is also described in which cyanosis was kept in check for three days by oxygen, and the infant then recovered. The general condition of all the cases was more or less improved, lividity passed off, breathing became slower, and the alæ nasi ceased to work, restlessness and narcotic phenomena were reduced, and life prolonged. All the cases were severe, and 13 out of 20 died; among the 7 recoveries there were some remarkable results from the oxygen treatment. This certainly deserves a more extensive trial in the obstructive respiratory diseases of children, as, though by no means infallible, it far surpasses in efficiency any other drug that could be used in like conditions. The croup ward at Basle has always a plentiful supply of oxygen ready to hand. The cylinders contain 300 litres; they are connected with a meter, and this again with a rubber tube ending in a mask. The meter records the doses; children soon take kindly to the mask, perceiving the relief it brings. The inhalations should last five or three minutes, and be repeated every five, fifteen, or thirty minutes. From 30 to 150 litres may thus be consumed by a case every day.

**(314) Treatment of Pneumonia by Ipecacuanha.**

Perreau has carried on a series of investigations on the treatment of pneumonia by the method first suggested by Dreyfus-Brisac by ipecacuanha (*Thèse de Paris*, 1901). This method has for its object the depletion of the lung, and, as a consequence, such a modification of its tissues that microbic infection is counteracted. The method consists in giving a sufficient dose of ipecacuanha to obtain a nauseating effect without inducing serious digestive trouble. A gram of ipecacuanha powder is diluted in 120 grams of mucilage. A tablespoonful of this is given every hour for about eight hours. The administration of the drug is usually tolerated, but at the same time a certain amount of practice is required, as it is necessary to avoid either vomiting or diarrhœa, which may be accomplished by lengthening the interval between the doses. The effects produced are diminution of dyspnœa and pain, increase of, and ease in, expectoration. Sputa become less blood-stained, the reduction of temperature, and, lastly, a general improved state in the patient's well-being. The action of ipecacuanha, however, may be harmful in the following circumstances: Very marked defect in some part of the digestive tract; secondly, pronounced cardiac disease. The writer gives records of 41 cases in which this method of treatment had been employed, and which showed very satisfactory results, especially in those which had been employed early in the course of the disease.

**(315) The Prophylaxis of Tuberculosis.**

B. Fraenkel (*Berl. klin. Woch.*, September 23rd) states that long before the bacillus of tuberculosis was discovered he

was of opinion, and wrote that opinion in Gerhard's *Handbook on Diseases of Children*, that tuberculosis could not be conveyed to children by means of milk from tuberculous cows. He points out that this opinion was based on clinical observation. Agreeing, therefore, with the statement that bovine and human bacilli differ from one another, he turns to Koch's advocacy of isolation as a prophylactic measure of paramount importance. Last year he (Fraenkel) spoke in favour of generalised treatment of all cases of consumption in asylums, but his advice was not at that time listened to. Now, however, Koch has again reiterated his views, and he considers that a few words from him are now in place. He details his views with regard to infection by means of droplets, and shows how, even on apparently unsoiled portions of gauze in his protection mask, virulent bacilli can be found. The fact that this mask has not been generally adopted causes him much regret. He recounts the advantages of its use, and the dangers of the air, even when unmixed with sputum, which the consumptive breathes or coughs out. Isolation, he says, is the only means by which the disease can be dealt with, and in support of this statement he quotes roundly from the statistics published by the Governmental Insurance Office. His figures are intended to demonstrate that by a widening of the sanatorial and hospital treatment of phthisis the disease will surely, if slowly, be eradicated.

#### (316) The Uses of Chinosol.

Nottebaum (*Deut. med. Woch.*, August 15th, 1901) considers chinosol an especially valuable preparation, in that it combines antiseptic with styptic properties. Clinically he has observed the latter property in the case of a wound of the head with profuse parenchymatous hæmorrhage, in two cases of severe epistaxis, and troublesome capillary hæmorrhage from the surfaces of granulating wounds. For the epistaxis he used wool tampons soaked in a 1 in 500 solution, for the wound surface a 1 in 1,000 solution. Ostermann has used a 1·2 to 1,000 solution in uterine hæmorrhage in parenchymatous hæmorrhage from the cervix and in wounds of the vagina. Its hæmostatic properties are not due to the coagulation of albuminous fluids, for chinosol does not coagulate albumen at the ordinary temperatures. Kossmann has drawn attention to the advantages chinosol has over sublimate; its antibacterial action is equal to that of the latter; it is non poisonous, and dissolves blood clot from the crevices of the skin, while sublimate fixes it. Chinosol is phenol free potassium-oxychinolin sulphuric acid. From solutions in water, in which under all conditions it is only slightly soluble, oxychinolin sulphate and potassium sulphate are precipitated. Possibly the astringent action is due to the potassium sulphate. In addition to the bactericidal and astringent action, chinosol also has the property of lessening secretion. Lenhartz has shown this with regard to purulent collections in the pleural and peritonal cavity, and Ostermann praises its use as a dressing for tamponing abscess cavities. The gauze may be left two days in the wound, even in fœtid collections of pus. Nottebaum has used it in addition in two cases of catarrh of the bladder with good effect. Given internally, chinosol has been stated to be antipyretic and antibacterial, but Nottebaum found that objectionable symptoms followed its administration. Certain chemical peculiarities must be noted; it is precipitated by alkaline water and by soap, so that if it is used to disinfect hands or skin after washing with soap, distilled water must first be employed. Solutions must be kept in glass receptacles, as chinosol acts on metal, but nickel-plated instruments are not attacked. The chief disadvantage to its general use is the readiness with which it is precipitated from solutions.

#### (317) Injections of Lymphatic Glands in Syphilis.

Butte (*Ann. de Thérap. Dermat.*, May 20th, 1901) has tried subcutaneous injections of a decoction of lymphatic glands of the cow in the treatment of syphilis. The idea is based on the supposed bactericidal power of the glands. The dose was equivalent to a gram of lymphatic gland. The author claims good results from the treatment.

## PATHOLOGY.

#### (318) The Etiology of Scurvy.

Lewine (*Arch. des Sciences Biol. de St. Petersbourg*, 1901, No. 3) recounts his bacteriological investigations in 12 cases of scurvy. These were all examined during the active febrile stage, and, in order to avoid contamination, by aseptic puncture of the liver and spleen. In 11 of these cases he obtained upon peptonised gelose a pure culture of a bacterium with rounded ends, staining very slightly, if at all, by Gram's method. It was immobile, formed no spores, and did not liquefy gelatine. The author gives a detailed account of its biological characters, which lead him to include it in Hueppe's group of bacteria of hæmorrhagic septicæmia, and to call it B. hæmosepticus. He states that it is identical with the microbe which causes fowl cholera, rabbit septicæmia, contagious swine pneumonia, and several other diseases, all characterised by hæmorrhagic septicæmia, and particularly enteritis. The difference in these cases is one of virulence for particular species of animals; the organism which Lewine regards as the cause of scurvy in man kills sparrows and canaries in a day and a-half to three days with the characteristic signs of hæmorrhagic septicæmia, but after three or four passages through these birds causes death with the symptoms and *post-mortem* appearances of fowl cholera. The bacterium is found to have multiplied in the tissues of the dead animals. The author regards scurvy as a chronic hæmorrhagic septicæmia, due to a microbe which is widely distributed in Nature, but does not acquire the power of causing the particular disease until it has become acclimatised in the human subject. Koch has found this particular organism in the mother liquors of preserved foods: and the author gives details of the recent epidemic in Kazan, which he believes to prove that it attacked mainly those who were eating salt horseflesh rather than those who were suffering from actual starvation. With regard to the microorganism described by Babes, Lewine has not been able to find it in scurvy, but points out that the latter author had also recognised the B. hæmosepticus in the disease without attributing to it any etiological importance.

#### (319) The Anatomical Basis of Muscular Dystrophy.

Kollarits (*Sonderabd. aus der deut. Archiv f. klin. Med.*) remarks on the variations of the pathological findings in progressive muscular dystrophy and allied disorders. Many authors have reported entirely negative results from examination of the nervous system. The case he records was that of a 10 year-old boy who for two years had showed symptoms of the pseudo-hypertrophic form of muscular dystrophy, especially affecting the thigh and calf muscles and the pectoral muscles, to a less degree the neck, shoulder, and arm muscles. The child was accidentally drowned in its bath. At the *post-mortem* examination the affected muscles were seen to be infiltrated with fatty tissue; some also showed degenerative changes without fatty infiltration. The biceps, gastrocnemius, trapezius, and pectoralis major were removed for microscopic examination, as well as the structures of the nervous system. Microscopically the muscles showed the usual form of dystrophy with fatty degeneration and atrophy. In the nervous system was found enlargement of the central canal, disappearance of fibres in Lissauer's zone, in the substantia grisea centralis, the anterior and posterior grey commissures, and in Clarke's column. This poverty of fibres began in the cervical and extended to the lumbar region. The ganglion cells were normal as regards their structure, but in size, especially in the upper lumbar region, they were markedly smaller than normal. The changes in the nervous system cannot for the most part be shown to correspond with those in the muscular system. Jendrassik has had a similar experience. The change in size of the motor cells is probably the most important in relation to the muscular degeneration. Other authors have described this, some speaking of it simply as smallness, others as atrophy. These may be explained on the ground of defective development, and the poverty of fibres is probably also due to the same cause. If at a certain stage the evolution of the motor cells is arrested, the muscular structures, in default of the normal stimulus to activity, will in their growth develop a pathological bias resulting in dystrophy.

# AN EPITOME OF CURRENT MEDICAL LITERATURE.

## MEDICINE.

**(320) Glycosuria in Mental Diseases.**

Emil Raimann (*Wien. klin. Woch.*, No. 21, 1901) contributes from the psychiatric clinic of Professor Wagner in Vienna an important article based on the study of 103 patients suffering from various forms of idiocy and mental disease, to determine the capacity for assimilation of sugar in the economy, and to ascertain the degree to which this may be lost in mental diseases. Control experiments were made first on healthy subjects, who gave results showing that, after ingestion of sugar, nearly the whole was assimilated, and that the traces of sugar met with in the urine were small (less than 0.2 per cent. as a rule), and exhibiting little variation. In mental disease the power of assimilation was weakened or disordered, and in some a considerable excretion of sugar occurred in the urine. The chief conclusions were as follows: (*a*) In idiocy the assimilative capacity for sugar was high, and the same was the case in paranoia and epilepsy. (*b*) In acute mania the assimilative capacity was further slightly increased, and this was more so in the case of alcoholics under abstinence. (*c*) The assimilative capacity for sugar was low in senile dements, and in cases of acute mental confusion (acute dementia), of paralysis. (*d*) It was especially low in cases of melancholia and of alcoholic delirium. (*e*) Diabetes might and did occur in insanity. Thus amongst the 103 patients there were two diabetics, and one of these (a paranoiac) showed an excessively high degree of glycosuria following the ingestion of sugar. (*f*) In a general way, out of a total of 103 patients examined, 14 (exclusive of the 2 diabetics above alluded to) showed some degree of glycosuria. (*g*) The assimilation of sugar is a general metabolic function, and its disturbances in the insane are due to the action of endogenous or exogenous toxic agents or poisons absorbed into the body.

**(321) Lysol Poisoning.**

G. Burgl (*Münch. med. Woch.*, September 24th, 1901) has added 2 cases of poisoning with lysol to the 16 published cases. Lysol is a fluid, prepared by dissolving one part of coal-tar creosol in one part of linseed oil potassium soap. The caustic local action of the drug is due to the creosol, which is the nearest homologue of phenol—that is, it is methylphenol. Many investigators have tested its antiseptic action, and place it before carbolic acid: but its internal medicinal use appears to have been attended with very disappointing results, although so much was claimed for it a few years ago. It is, as the list of poisoning cases clearly demonstrate, not a harmless drug, and especially when undiluted. The smallest fatal dose for a child (8½ years) appears to be about 1 drachm, while 2½ drachms nearly proved fatal in an adult, the patient only recovering after most energetic treatment. Of the 18 cases, 13 were poisoning by internal administration (accidental and otherwise), and 6 of these died, while the remaining 5 were poisoned by external application of lysol (three times undiluted, once in 1 per cent. solution used in large quantities for washing out the uterus, and once the strength was not mentioned), with 3 deaths. The two cases which Burgl reports are as follows: A male baby, 5 days old, received from the nurse a coffee-spoonful of lysol in mistake for syrup. rhei. The child's mouth was seen three-quarters of an hour after to be extensively cauterised, and the respiration was "rattling." Milk was given, and mucus was swabbed out of the fauces, but the stomach was not washed out. The child died 14½ hours after the poisoning. The necropsy revealed extensive cauterisation of the mouth, tongue, pharynx, epiglottis, and œsophagus, and congestion of the stomach and duodenum. There was purulent bronchitis. The second cases was that of a girl aged 8 years and 4 months, the daughter of a doctor. She was suffering from slight sore throat and laryngitis, and had been ordered by her father a drachm of infusion of ipecacuanha. The mother gave her a drachm of lysol, which was in a bottle on the table next to the infusion. The child retched almost at once, but, in spite of a dose of tartar emetic, did not vomit. The father being away from home, another practitioner was called in, who passed a stomach tube for over 11 inches, whereupon the contents of the stomach were evacuated by vomiting. The father arrived at this time; the child was cyanotic and comatose, and, in spite of a camphor injection, died a few minutes later. Both doctors agreed that a necropsy was unnecessary, and the child was buried. Later on, however, the mother charged the medical man called in with having introduced the stomach tube into the air passages instead of into the stomach, and thus having caused the death. Since the tube passed for nearly 12 inches, this was proved to have been impossible.

**(322) The Association of Pulmonary Lesions with Inflammatory Affections of the Naso-pharynx.**

Du Magny (*Bull. de l'Acad. de Méd.*, Paris, July 2nd, 1901) emphasises the importance in acute and chronic pulmonary affections of searching for a possible initial cause in the nose and its accessory sinuses, the ear and the pharynx. Various pulmonary diseases may depend on such a cause: congestion, bronchitis, broncho-pneumonia, lobar pneumonia. Symptoms are either acute or chronic; in the acute form signs of congestion and bronchitis appear in the upper lobes with fever recurring again and again; chronic symptoms simulate tuberculosis, and Du Magny has found in several cases reported as such, a primary focus of suppuration in the naso-pharynx and its vicinity, on the treatment of which all pulmonary signs subsided. Comparative culture experiments from the bronchial secretions and the pharyngeal lesion have been found of valuable diagnostic assistance; the physical signs first make their appearance about the angle of the scapula and at the point of origin of the upper bronchus. Eight clinical observations support these opinions; in almost all there were repeated attacks of bronchitis, reproduced several winters, and simulating tuberculosis. In one the primary lesion was nasal polypi, in four a sinusitis, frontal or maxillary, in two naso-pharyngeal adenoids, and in one suppurative otitis. He brings clinical and experimental evidence to show that pulmonary infection takes place ordinarily during sleep and on the side on which the subject usually lies.

## SURGERY.

**(323) Abscess of the Spleen.**

Tédenat (*Rev. de Gynéc. et de Chir. Abd.*, July-August, 1901) has written a valuable article on the literature of this affection, with a full report of a new case. There was an abscess in the middle of the spleen in a woman, aged 24, following four months after an attack of what seemed to be mild enteric fever. The patient was rather emaciated, with a pale but flushed face. There was a swelling in the left hypochondrium, hidden partly under the ribs and extending to a little below the umbilicus. There were two shallow notches on the inner border. The swelling was firm, but on pressure between the hands a vague fluctuation was felt. The evening temperature exceeded 102°, and the pulse was 110. An incision was made along the outer border of the left rectus. There was no sign of peritonitis, the spleen was not adherent. It was fixed by a continuous suture to the peritoneum and fascia, the suture needles did not cause much hæmorrhage and the splenic tissue was firm. Then a bistoury was plunged into the spleen; it had to be pushed 2 inches deep before pus escaped. Two pints and a half of brownish pus with fragments of splenic tissue and clots came away; two large drainage tubes were inserted into the abscess cavity. The pus contained quantities of Eberth's bacillus, living and easily cultured. The drainage tubes were removed permanently at the end of two months; a fistula persisted for four months, and during the fourth month there was fever due to pulmonary tubercle, which abated. Over a year later the cicatrix was healthy and deeply cupped; the spleen could no more be felt. The patient was distinctly phthisical, but had a good appetite.

**(324) Ligature of the Vessels of the Spleen.**

In order to render the pathological changes connected with the "methoda atrophicans," the tying of vessels and ducts to induce atrophy, in cases of in-

operable disease, and especially in diseases of the spleen. Balacescu (*Münch. med. Woch.*, August 27th, 1901) has performed several series of experiments on dogs. He details the technique of the procedures and the individual results, and finally sums up his results as follows: (1) The ligation of all the vessels of the spleen, together with the gastro-splenic ligament, causes gangrene of the organ, and is followed in the majority of cases by death of the animal. Should the animal be kept alive, in spite of the intoxication, the spleen becomes atrophied. This atrophy occurs rapidly, and it is found that within a week the organ has contracted to a small nodule. (2) Ligature of the artery or the vein produces little effect on the life of the animal or on the nutrition of the spleen. A sufficient collateral circulation rapidly becomes established. (3) After ligature of both artery and vein some atrophy takes place, but this occurs slowly. (4) After ligature of afferent vessels rapid atrophy of the spleen occurs, the interstitial connective tissue proliferates, and a definite cirrhosis is found. (5) The adhesions containing new vascular tissue, between the spleen and the abdominal wall, suffices to keep the organ alive. Thus, after ligature of the afferent vessels, gangrene does not take place, although the atrophy progresses rapidly, and the organ becomes increasing functionless. (6) Micro-organisms penetrate from the intestine into the spleen only when they are absorbed into the circulation.

#### (325) Suture of Wounds of Large Blood Vessels.

HALSTED, of Chicago, reports an interesting case of successful suture of a wound of the axillary artery (*Med. Record*, July 20th, 1901). He points out that it is only during the last twenty years that the conservative treatment of wounds of large blood vessels has received attention. In 1762 Lambert, a surgeon of Newcastle, successfully sutured a wound of the carotid artery. No other attempt is recorded till Czerny, in 1881, sutured a wound of the internal jugular vein. The publication, in 1891, of the results of Jassinowsky's experiments revived interest in the subject. His experiments, 26 in number, were made on the carotids and abdominal aorta of dogs. The wounds sutured were longitudinal, oblique, and transverse. The results of these experiments showed that suture of a wound of a blood vessel, with subsequent healing, could be accomplished without much risk of aneurysm or hæmorrhage, provided asepsis was maintained. Closure of the wound was found to be due to proliferation of the endothelium of the intima and of connective tissue cells of the adventitia. In 1894 Abbe experimented with end-to-end union of blood vessels, employing glass tubes placed inside the vessels. Murphy in 1897 reported the results of experiments on animals showing the practicability of end-to-end union of arteries by suture. He also reported two cases—one of suture of the femoral vein and one of the femoral artery. In the latter case the cut ends were invaginated and sutured. Both patients recovered. According to Halsted, the indications for arterial suture are: (1) All cases where ligature of the artery may cause serious nutritional changes in the parts supplied by the injured vessel (this is especially liable to occur when the corresponding vein is injured at the same time); (2) all wounds of large vessels caused by puncture, gunshot, or laceration; (3) operation wounds of large vessels, accidental or intentional, as when part of the vessel must be removed. In wounds involving no more than half the circumference of the vessel, simple suture is enough. When more than half the circumference is involved resection and end-to-end anastomosis by invagination is the best method. Experiments on animals have shown that after end-to-end anastomosis the vessel generally becomes obliterated by endothelial proliferation, but that this does not usually occur till after several weeks, during which time collateral circulation will probably have been established. According to Halsted, the arteries in which suture is important are the aorta, carotid, iliac, femoral, popliteal, subclavian, and axillary. Perfect asepsis is, of course, essential, and the operation should not be performed if the wound is septic. Halsted, in the case reported, closed the wound in the axillary artery with catgut sutures passed through the two outer coats of the vessel. The perivascular sheath was also sutured and the wound closed without drainage.

#### (326) Disinfection of Instruments.

J. H. POLLAK (*Deut. med. Woch.*, No. 36) has made comparative investigations on the various methods of disinfecting cutting instruments. He has employed pure alcohol, diluted alcohol, spiritus saponis kalinus, hydrargyri perchl. (1 in 1,000 and 1 in 5,000), carbolic acid (1 in 50 and 1 in 20), and formalin (1 in 500 and 1 in 1,000) as chemical means of sterilisation: mechanical cleaning with sterile water, with alcohol, and with spiritus saponis; and sterilisation with boiling water and with boiling soda solution. He used a shoemaker's awl as a test instrument, and infected this with pus containing virulent staphylococci, so that the conditions met with in surgical practice were imitated. Only in a few cases did he use anthrax spores. In his first series of experiments he found that all the chemical agents except formalin were capable of destroying the staphylococci in twenty-five minutes. In the second series he determined the number of colonies which grew after treatment with formalin for five, ten, fifteen, thirty, forty-five, and sixty minutes, and two and three hours. The results show that formalin is of no use for the sterilisation of instruments. Carbolic acid (1 in 20) and spiritus saponis kalinus were capable of destroying all bacteria used (staphylococci and streptococci) in five minutes, and in a further row of experiments the number of colonies found after treatment with these agents for one, two, three, four, five, six, and eight minutes show that carbolic acid is only slightly more antiseptic than soap spirit. Mechanical cleaning with spiritus saponis for thirty seconds proved sufficient to sterilise the awl, while, when water or alcohol was used, a longer time was necessary. He concludes that: (1) Boiling, and especially in soda solution in a closed vessel, is the best means of sterilising, but that sharp instruments are blunted by the process. (2) Soap spirit is capable of sterilising sharp-edged instruments in fifteen minutes, without blunting or otherwise affecting them, when infected with ordinary pyogenic organisms. (3) Mechanical rubbing with soap spirit for thirty seconds is an excellent procedure. He further states that in actual surgical practice he has had every reason to be satisfied with this method of cleaning sharp instruments.

## MIDWIFERY AND DISEASES OF WOMEN.

#### (327) Inoperable Cancer of the Uterus.

FR. TORGGLER (*Münch. med. Woch.*, July 23rd, 1901) finds that the percentage of inoperable cases of cancer of the womb, and all cases of this disease varies greatly according to different observers. In his practice he found that 92 per cent. were inoperable. In his gynæcological department during the years 1896 to 1900, 2,097 patients applied for treatment, and 274 of these (that is, 13 per cent.) were suffering from carcinoma uteri: 22 cases were fit for operation, but only 14 submitted to it. On the other hand, Doederlin found 50.1 per cent. of his cases inoperable, while Mackenrodt found 92.9 per cent. inoperable. In Berlin, from various causes, the operability of cases has increased from 19 per cent. to 53 per cent. With this enormous number of inoperable cases, Torggler considers it of use to give his experience of palliative treatment. The symptoms for which he applies his treatment are discharge, hæmorrhage, and pain. To combat the first he finds that peroxide of hydrogen, in a 12 per cent. (by weight) solution injected or applied, rapidly diminishes the quantity, and removes the offensive odour of the discharge. The method he finds most efficacious is as follows: A speculum is carefully and properly introduced, the surface of the growth is cleaned up by swabs and iodoform gauze soaked in the solution of $H_2O_2$ is packed into the vagina. As soon as the $H_2O_2$ touches the suppurating surface a formation of foam is seen, which is produced by the liberation of oxygen. To allow this action to be effective as long as possible, strips of dry gauze are further packed into the vagina. The whole packing is allowed to remain for from two to four days. He cannot believe that $H_2O_2$ acts in stopping hæmorrhage, as some observers maintain. Further, he advises

the application of formalin. At first this is applied as a 4 per cent. solution, but later he uses 40 per cent. (that is, Schering's original solution). The caustic action of this drug causes contraction of the raw surface of the growth, and its antiseptic action diminution of the discharge. With these two palliative remedies the profuse stinking flux, the occasional hæmorrhage, and the wearing pain so common in these cases can be effectually dealt with.

**(328) Results of Amputation of the Vaginal Cervix.**

M. Graefe (*Münch. med. Woch.*, May 28th, 1901) raises a protest against the operation of amputation of the vaginal portion of the cervix for hypertrophy (prolapse), and for other conditions. He merely mentions that the operations with Paquelin's knife cautery, with the *écraseur* and with the galvano-caustic snare, are operations of the past; and then he turns to the operation of removing a wedge-shaped piece of the cervix. The first disadvantage that he points out is that, unless one carefully guards against it, the cervical mucous membrane is very easily brought outwards into the vagina on sewing up the cut surface. That the delicate epithelium of the cervical canal is unfitted as a lining membrane of the vagina is obvious, and he briefly describes how easily it is wounded in coitus, and how ill capable it is of guarding itself against microbic invasion. The next disadvantage is that the remains of the cervix, after wedge-shape amputation, shrinks, and very frequently shrinks to such a degree that there is no vaginal cervix left at all. In itself this appears to produce no direct symptoms, but Graefe states that he frequently has observed marked retroflexion of the uterus, either as a result or existing before the operation. To correct this displacement, a ring or other pessary should be worn, but after the cervix has disappeared no pessary will keep in place. He considers that when the patient has a retroflexed uterus the operation should not be done, or, if it be carried out, a shortening of the round ligament must also be performed, and this is best done after the fashion of Alexander Adams. The elongation of the cervix or prolapse is sometimes cured, when it exists simultaneously with retroflexion, by correcting the latter, and keeping the uterus in a position of anteflexion. In pregnancy, the existence of a vaginal cervix is of importance, and he quotes some cases which show that after the operation a tendency to early labour presented itself. In one case a healthy working woman, after her first pregnancy, got a large prolapse. Anterior and posterior colporrhaphy was performed and cured the condition. After the next parturition the prolapse reappeared. A portion of the mucosa was abrased and the wedge-shape operation performed. The stump of the vaginal cervix immediately after the operation was larger than normal, but, on the patient being examined one year later, no vaginal cervix was present. She again became pregnant, and at the end of ten months, in spite of the pains having set in and the patient having walked a very long way, the opening of the cervix remained as at the last examination. There was stenosis, or rather conglutination, which was only overcome by the passage of a probe, and later on by dilatation. True fibrous stenosis also occurs after the operation. He deals with the other forms of treatment, which he prefers to this means, for prolapse with cervical hypertrophy. In the elongated form of cervical hypertrophy, called in German "penis-like," he agrees that the operation is of use. Some authors consider that the wedge excision is of therapeutic value for chronic metritis, but he entirely disagrees with them. Lastly, the operation is suggested by some gynæcologists for every case of erosion, since they see in this condition a possible nest for carcinoma. Although he owns that he used to believe this a wise procedure, the observation of several cases, who refused operation, and whose condition of erosion lasted unaltered for a long time has led him to change his opinion, and to advise the operation only in a very few cases.

**(329) Cæsarean Section and Resection of Sloughy Intestine: Recovery.**

Karström (*Monats. f. Geb. u. Gyn.*, September, 1901) relates a successful case of very bold operating. A woman, aged 31, was seized with symptoms of intestinal obstruction in the eighth month. The uterus was pushed to the right by an enormous mass of distended intestine. An attempt was made to induce premature labour by bougies, with no result, so abdominal section was performed. When the uterus was brought out of the wound the sigmoid flexure was found to be gangrenous, its convexity adhered to Douglas's pouch. Fæces were removed from the pelvic cavity, and the sloughy intestine set free. As the gravid uterus could not be reduced it was emptied of its contents by Cæsarean section. The right ovary was sloughy, and was therefore removed; then a drainage tube was passed through the posterior vaginal fornix. The intestine above and below the sloughy sigmoid flexure was divided by Paquelin's cautery after it had been drawn to the lower angle of the abdominal wound. Parametritic exudation with fever occurred during recovery from the operation, and the patient lay four months in hospital. She was able soon after to resume her work as a field labourer; there was an artificial anus at the lower end of the wound.

## THERAPEUTICS.

**(330) Medical Treatment of Perityphlitis.**

Bourget (*Therap. Monats.*, July, 1901) protests against the treatment of perityphlitis being left to the surgeon. He refers to divergence of opinion among surgeons whether to operate during the attack or to wait. Those who wait carry out the expectant treatment by the application of ice to the ileo-cæcal region, and administer opium. Bourget quotes Lauder Brunton's experiments on rabbits to prove that the external application of ice must raise the local temperature in the appendix, and therefore must have the contrary effect to that which is desired. He then turns to his idea of the pathology and etiology of the condition, and comes to the conclusion that appendicitis is due (indirectly) to hyperacidity of the stomach, and its concomitant disturbances of intestine, including constipation. Under these circumstances, he considers that opium can only increase the causal conditions, and that there could be no worse treatment than the combination of cold and opium, although it doubtless suits the surgeon, for it necessitates within a short time an operative interference. He believes that habitual constipation is a predisposing cause of perityphlitis, and argues that the judicious treatment of this can be regarded as a prophylactic measure. He advises a diet consisting of but little meat, much vegetable, well-cooked fruit, and farinaceous foods, and the use of Carlsbad salts, or some other saline aperient, or castor oil. The use of enemata, he considers, is of great value. Massage is also a remedy, which he praises highly, and suggests a method which the patient can carry out by himself. The patient lies on his back, and with crossed arms passes his hands under his knees. Alternately he briskly flexes his right and left thigh until it presses against the abdomen. This is to be carried out four times a day, in the morning and evening, when the patient is to be naked, and at 11 and 4, when he may keep his clothes on. At the beginning of an acute attack the diet is to consist of light soups, oatmeal, rice, and eggs. If the patient is hungry he gives him weak tea with very little milk. Every day he prescribes a dose of salicetol and castor oil, and he also frequently washes the stomach out with a 1 per cent. solution of sodium bicarbonate. The large intestine, too, is washed out as far as the cæcum. He uses one litre of fluid, and passes the rectal tube in as far as possible. The fluid is used at a temperature of 100° F., and consists of a solution of ichthyol (4 in 1,000). A little olive oil is introduced into the rectum, so that it may be carried up by the enema solution to the cæcum, and in this way act locally. Linseed meal poultices are applied to the ileo-cæcal region, or occasionally five or six leeches. After two or three days he substitutes for the castor oil sodium sulphate. He contends that he gets better results by this method than surgeons do, and even goes so far as to say that in one patient who, after his treatment had his appendix removed, the perityphlitic pain returned.

**(331) The Treatment of Hæmorrhagic Pleurisy by Gelatinised Serum.**

Raymond Bernard (*Lyon Med.*, October 13th, 1901) relates four cases of hæmorrhagic pleurisy, in which, after evacua-

tion of the fluid, the subcutaneous injection of gelatinised serum apparently prevented further effusion. In the first case the effusion persisted after two aspirations, but after the third, by which more than a litre of fluid was removed, 200 grams of gelatinised serum were injected under the skin of the thigh. The injection caused some local cellulitis, which, however, soon improved. Punctures made a week and fortnight after the injection gave only 150 grams and 2 c.cm. of fluid respectively. In the second case, on June 15th, 2,500 grams of blood-stained fluid were withdrawn, and on the 23rd 2,050 grams. On the 24th, and again on the 25th, 200 grams of gelatinised serum were injected subcutaneously, and caused some local disturbance, with fever, nausea, and headache. On July 2nd only 200 grams of fluid were obtained by aspiration, and nine days later the patient was discharged convalescent. In the third instance, 2,700 grams of brick-coloured fluid were removed. The injection of the serum, which was done at once, caused a marked febrile reaction. Four days later 500 grams of fluid were evacuated, and ten days after the injection no fluid could be obtained. The last case was a very mild one. The patient suffered very little discomfort; 1,800 grams of fluid were evacuated by paracentesis. The injection of serum caused no local or general disturbance. Two days later 700 grams of fluid were withdrawn, and a second injection was performed, after which the patient made a rapid recovery. The good results obtained in these cases cannot altogether be attributed to the use of gelatinised serum. The patients were young soldiers with healthy hearts, livers, and kidneys. Bernard concludes that the use of the serum moderates or suspends the effusion by the exercise of its hæmostatic power, but that it has no influence whatever upon tuberculosis, the general primary cause of the effusion.

#### (332) The Administration of Thyroid Extract in Infancy.

AUSSET (*Gaz. Hebdom.*, September 19th, 1901) emphasises the fact that the thyroid possesses a very marked influence on nutrition; it stimulates organic changes, and is a suitable medicament for administration in all cases when these are sluggish or arrested. In addition to its specific action on myxœdema its use in what is termed by Ausset infantilism gives excellent results. Of these cases some are truly myxœdematous in character, while others are due to rickets, tuberculosis, syphilis, etc. Even in these latter he considers it probable that the arrests in development are due to an adulteration of the thyroid function by the diseases in question. The conception of deficient action of the thyroid due to rickets producing various developmental disorders throws light on the pathology of the disease; fœtal rickets has been observed to follow removal of the thyroid from mothers; the extract certainly produces a favourable result in rickets; these facts appear to prove the importance of the thyroid gland in relation to ricketty lesions. The success of the phosphates, so long known as an antirachitic remedy, probably depends on the fact that it supplies some of the deficient stimulus of the thyroid, which is very rich in these salts. It is, however, not possible to support the theory of Hertoghe that the growth of adenoid vegations is due to deficient thyroid secretion; the extract is useless in these cases. The administration to infants demands the greatest care; the first doses must be minute to test the susceptibility of the subject: these are slowly and progressively increased. Preparations must be chosen of which the dosage is very accurately known, and which are of recent preparation.

#### (333) Oil of Turpentine in Ringworm.

LEVEN (*Journ. des Mal. Cut. et Syph.*, April, 1901) recommends oil of turpentine in ringworm and pityriasis versicolor. In the latter disease the oil is rubbed in daily for five minutes. In ringworm pieces of linen soaked in the oil are applied night and morning. After six days the patches become inflamed and the epidermis exfoliates. The skin is afterwards treated with simple ointments.

## PATHOLOGY.

#### (334) Schuller's Cancer Parasite.

FR. VÖLCKER (*Deut. med. Woch.*, July 25th, 1901) set himself the task of controlling the experiments described in Schüller's book. He says that although Schüller claims that his parasite possesses all the qualities required by bacteriology for such an organism, yet his arguments lack that sharp logic which is so characteristic of scientific work, and which can convince the reader that the views of the discoverer are correct. He claims for his organisms, first, that they live; secondly, that they multiply; thirdly, that they are regularly found in the growths; and, fourthly, that they produce similar changes in animals. Völcker takes these points singly before he gives the results of his experiments; first, to prove that they live, Schüller says that they, at times, possess fine threads, with which they catch up granules floating past them; and, further, only the young organisms have movement, but this is very slight. Völcker fails to recognise any proof here of the life of the so-called organisms. When Schüller states that in warm living tissue, and also in dead tissue, one only needs use a few drops of lavender oil or some such medium to demonstrate them in crowds, Völcker considers that it is not only a disgrace that pathologists but even that students have not discovered them over and over again. The parasites are described as relatively large golden brown globes, with a bright appearance. The brown colour is due to a pigment. Sometimes the globes contain "air vesicles." The protoplasm is finely granular, and is invested with a capsule. At times the capsule falls off, leaving an empty network arrangement. Völcker followed the directions minutely, and sought in vain for "golden globes" in fresh preparations, in cultures, and in old spirit-preserved specimens. After a considerable number of fruitless attempts he happened to hit on a right idea on again perusing Schüller's work. He dabbed the objective of his microscope with the cork of a bergamot oil bottle, which had not been used for a long time, and immediately the whole field was filled with countless golden-brown globes, partly filled and partly empty. He describes fully how in every respect these bodies, which are only cork cells in some oil medium, and neither parasites nor yet even present in the growths which were supposed to be examined. Particularly striking is the coinciding of the chemical reaction which Schiller describes for his organisms and that of the cork cells. Neither give the cellulose reaction, and both stain yellow with a concentrated solution of caustic potash, which colour deepens with heating. He concludes that he failed to find any young "organisms," and perhaps these may still be the causal microbes of cancer.

#### (335) Five Cases of Osteoplastic Carcinoma.

ERBSLÖH (*Virch. Archiv*, Bd. clxiii, 1901, p. 20) found in 3 cases of primary carcinoma of the prostate, 1 of gastric carcinoma, and 1 of carcinoma of the bile ducts, extensive metastases in the bones with new bone formation in their structure. In all the primary tumours there was some tendency to degeneration and a penetration of the connective tissue by the cancer cells resembling a round cell infiltration without the formation of larger, more compact cell nests. In their extension the cells showed a predilection for preformed channels, especially capillaries. The new bone was in the interstitial tissue, and for the most part without the intervention of osteoblasts; from the connective tissue osteoid tissue developed, and lime salts were deposited therein. The author attributes this development to a congestive hyperæmia secondary to blocking of capillaries, and compares it with the new formation of connective tissue in varix and the influence of circulatory stasis on the formation of callus. These bone-forming metastases were found chiefly in the spongy structure especially of the lumbar vertebræ, the upper end of the femur, etc., and also in the marrow of the long bones.

#### (336) Cholecystitis Due to the Typhoid Bacillus.

BRION (*Centralb. f. Bakt.*, Bd. xxx, No. 10) records a case of typhoid relapse complicated on the seventh day by a cholecystitis. At the *post-mortem* examination, although made 27 hours after death, he isolated a pure culture of the typhoid bacillus from the gall bladder. This was identified by culture reactions and also by the agglutination test. Several similar cases have been recorded, but apparently none verified by the agglutinating reaction.

# AN EPITOME
OF
# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (337) Syphilitic Sciatica.

F. Mendel (*Münch. med. Woch.*, July 2nd, 1901) reports 3 cases of syphilitic sciatica to exemplify that sciatica, and especially obstinate cases, is occasionally due to syphilis, that these cases answer very well to a course of intramuscular injections of mercury, and that the treatment in doubtful cases can clear up the etiology. Case 1 was a young man who had a primary sore three years previously. Four months before he was seen by Mendel he was attacked with drawing pains in the right leg from the gluteal region to the middle of the calf. These pains were constant, day and night, were very severe, and prevented him from standing or sitting quietly. He had been treated by electricity, potassium iodide, and antipyrin without any benefit being derived. He had lost strength and flesh, and was nearly distracted by the pain. The physical examination of the body disclosed no abnormalities, save for a swelling on the parietal bone (gummatous) and the symptoms of right-sided sciatica—tenderness, stiffness, pain—which increased on movements of the leg, and a definite scoliosis of the spine towards the left side. He was treated with intramuscular injections of hydrarg. salicyl. in paraffin emulsion (1 in 10). The dosage was 17 minims, and the site chosen was in the neighbourhood of the sacro-sciatic foramen. Even after the first injection the pains were greatly lessened, and after the fifth they had disappeared altogether. The parietal gumma, however, was not influenced. The patient broke off the treatment then as he felt quite well. Mendel could only trace him for a few months, during which time the sciatica had not returned. The second case was that of a man, aged 52, who denied having had any venereal disease. Four years previously he had had a swelling on the left shin, which softened, and had to be incised. The wound did not heal at first, but later did heal after an energetic course of rubbing in "blue" ointment. In March, 1898, he was first attacked with sciatica on the left side. The pain was very severe, and exhausted the patient's strength to a great degree. He was incapable of leaving his bed. The symptoms were those of ordinary severe sciatica. As the diagnosis was syphilitic periostitis of the tibia and syphilitic sciatica, intramuscular injections of hydrarg. salicyl. were given as in the first case. The sciatica rapidly got well, and the swelling, which remained under the scar over the tibia reduced in size. Case 3 "caught his sore" in 1889. He was treated for three weeks only. Since July, 1899, he had had very severe left sciatica. He came to Mendel in October of the same year, when he was extremely emaciated and suffering great pain. After a single injection of hydrarg. salicyl. improvement took place, which continued until the pain had entirely disappeared. He received five injections in all. In discussing the cases, Mendel says that there can be no doubt as to the nature of these cases. He further opens up the question of the treatment of other syphilitic lesions by means of intramuscular injections, and claims that after injecting hydrarg. salicyl. emulsion over 1,500 times, he has never seen any bad effects, and the good effects were remarkable. He finds that this salt is rapidly and entirely absorbed, and produces its action in a very equal manner. He quotes a case in which the lesion resisted treatment by the mouth and by inunction, but disappeared very rapidly by intramuscular injection.

### (338) Polymyositis.

Lépine describes (*Rev. de Méd.*, May 10th, 1901) a condition under this name—though he considers that the term "myositis" or "angiomyositis" would be more correct. The patient was a male, 59 years of age, who had had small-pox and typhoid earlier in life, but without history of either syphilis or rheumatism. The patient was a carpenter by trade and in the enjoyment of good health. He first noticed, eight months before coming under observation, vague pains in the head, and others of a lancinating character in the left side, coming on apparently without obvious cause. Three months before admission the patient noticed that his left temporal region was the seat of a well marked swelling, forming a small tumour, somewhat hard but very slightly painful. This lasted three or four days, and caused considerable difficulty in mastication. This swelling disappeared, but a similar one reappeared on the right side and extended into the eyelids. The duration of this second swelling was about a fortnight. Somewhat later the patient complained of severe lumbar pain, especially on movement, and just before admission he noticed that the middle portion of his right arm also showed a patch of œdema on the dorsal aspect. Similar areas of swelling appeared on various portions of the body. They showed only slight pitting. There was some slight general weakness. The thoracic organs showed no lesion. The appetite was somewhat diminished but the tongue was clean. The spleen showed distinct enlargement, being very palpable. Examination of the blood showed 2,000,000 red blood corpuscles, but the white appeared normal. Bacteriological examination of the blood gave negative results. There was neither sugar nor albumen in the urine, and there was no pyrexia. The patient was treated with asperine, which seemed to relieve the condition in the course of a few days. The writer points out that the leading condition in this case was pain in certain muscles accompanied by circumscribed swelling; secondly, increase in size of the spleen. These are the leading characters of the disease, of which occasional reports have appeared under the head of "polymyositis," but which is favourable in its course. In some of those described the swelling has invaded the pharynx and been followed by fatal results. Cutaneous eruption is described in connection with other cases, but, according to Lépine, is not an essential feature. In some cases there is a hæmorrhagic myositis, but the writer does not feel inclined to place such a condition under a special heading, but rather regards it as a variety of polymyositis. Cases where the blood vessels play a marked part in the disease—and perhaps hæmorrhagic cases are under this heading—might be characterised, as the writer suggests, by the term "angiomyositis."

### (339) Lumbar Puncture and Tuberculous Meningitis.

The examination of cerebro-spinal fluid drawn off by lumbar puncture in doubtful cases of tuberculous meningitis has not hitherto proved of much value as an aid in diagnosis. The subject is reviewed by Hellendall (*Deut. med. Woch.*, No. 13, 1901). In cases subsequently proved to be tuberculous meningitis, microscopic examination of the fluid has often been negative. Langner sought to aid diagnosis by incubating the spinal fluid itself, but found that growth did not occur sufficiently rapidly to be of any clinical use; the patients died usually before there was any culture result. Bernheimer and Moser made use of animal experiment, by intraperitoneal injection of the fluid; however, very large amounts were found to be necessary to obtain a positive result, and the latter only showed after a long interval. Hellendall, taking fluid immediately after death from children dead from tuberculous meningitis, injected this in quantities not exceeding 2 c.m. into the spinal canal of seven guinea-pigs between the fourth and fifth lumbar vertebræ. Two of the animals died within twenty-four hours, the remainder later from miliary tuberculosis without meningitis. The author's attempt therefore to aid diagnosis by the experimental production of tuberculous meningitis failed, and it is doubtful whether in default of microscopic demonstration experiment is capable of giving a rapid means of verifying diagnosis.

## SURGERY.

### (340) Perforation Peritonitis.

Brunotte (*Münch. med. Woch.*, September 24th, 1901) records a successful operation for peritonitis due to perforation of the intestines. The patient, a man, aged 36, was kicked by a foal in a stable, but continued to work for three-quarters of an hour, after which increased pain, fainting, etc., compelled him to desist. Brunotte found him in bed, not looking ill and not in great pain. There was a tender spot over the

region of the cæcum, and the temperature was 101.8° F. From the temperature he diagnosed an injury to the intestines, with peritonitis. The friends refused to allow an operation. Opium was given. The next day the temperature had risen to 102.6°, and the general condition had got considerably worse. A right inguinal hernia, which the patient had never noticed before, and which had certainly not been present on the day before, was noticed. It resisted moderate taxis. On the fourth day the patient was extremely ill; the pulse-rate lay between 160 and 180, temperature 95.8°; on the skin a cold clammy sweat. Vomiting of fæcal material had occurred. The patient, who at length consented to an operation, was removed to hospital (about 5 miles distant), and no time was lost in proceeding. Brunotte at first made the incision for herniotomy, and found a swollen injected portion of omentum without a true hernial sac. On attempting to replace this some turbulent purulent fluid escaped through the internal ring. The incision was then prolonged upwards as far as the level of the navel. The intestines were blown up, injected, and covered with fibrin. The omentum was much inflamed, and on gentle manipulation being applied to separate the coils of gut a quantity of yellow, fæcal, purulent fluid escaped. No point of perforation was found, and as the patient was almost *in extremis* Brunotte completed the toilette of the peritoneum, and left a gauze drain in, sewing up the part of the wound. The stitches were removed a few days later on account of increased tension, so that the whole wound was left for a time completely open. In spite of some unfavourable symptoms during the first ten days, the patient gradually improved and ultimately recovered. The hernia is not yet reduced, but Brunotte proposes dealing with it shortly.

#### (341) Surgical Treatment of Traumatic Facial Paralysis.

BRÉAVOINE (*Travaux de Neurologie Chirurgicale*, June, 1901) discusses at length the method first proposed by Faure and Furet of treating facial paralysis of traumatic origin by establishing an anastomosis between the involved facial nerve and the spinal accessory. In this operation both nerves are divided, the facial near its exit from the stylo-mastoid foramen, and the portion of the spinal accessory which supplies the trapezius muscle just before it enters the sterno-mastoid, and the central end of the latter is sutured to the peripheral end of the former. Reference is made to records of experimental work which show that in dogs spino-facial anastomosis has invariably resulted in cure of facial paralysis. It is also stated that of two cases in which the operation has been performed, it was very successful in one, and in the other, submitted to surgical treatment at too late a period, the occurrence of nerve regeneration was established beyond doubt. The author concludes his interesting contribution with the following summary: Facial paralysis caused by division or destruction of the nerve in its intrapetrosal portion may be cured by a properly-effected spino-facial anastomosis. Experiments on animals have proved with certainty the facts of nerve regeneration and of both physiological and histological restoration. The application of the operation to man is indicated in cases in which the facial nerve has been accidentally cut or destroyed in the course of surgical intervention for middle-ear disease, or has been similarly injured in gunshot wounds and fracture of the petrosal. The operation, however, should not be attempted unless it is certain that the facial paralysis is beyond all other methods of cure. It is indicated also in cases of facial spasm, a successful instance of the benefits to be derived from such treatment having been reported by Kennedy. Spino-facial anastomosis, though a difficult and delicate operation, is free from risk. Wounding of the internal jugular vein may be prevented by proper care, and the consequent paralysis of the trapezius is usually restricted to some few clavicular fibres of this muscle.

#### (342) Pharyngo-œsophageal Diverticulum.

SCHMILINSKY (*Deut. med. Woch.*, August 15th, 1901) relates the history of a case of a 72-year old man, who complained of cough and difficulty in swallowing which had lasted for two to three years. The patient had lost considerably in weight, and showed himself to be somewhat short of breath. There was some impairment of resonance in the first intercostal space on the right side close to the sternum, and a diastolic murmur was heard over the aorta. The heart appeared to be normal. Examination by Roentgen rays did not show any definite abnormality. When seen six months later he was in a state of extreme inanition. The cough and difficulty in swallowing had persisted. More difficulty was experienced in swallowing fluids than solids. Food was brought back either at once or shortly after being taken. Mucus was also brought up either with retching or coughing at intervals during the day. The impaired resonance had disappeared, as also had the diastolic murmur. There was some impairment of resonance at the apices of both lungs. A soft sound passed 7½ inches easily. At this point a resistance was met with. With some difficulty the sound was guided into the stomach. He died a few days later. At the necropsy a typical pharyngo-œsophageal diverticulum was found; it measured about an inch and a-half in length. Further there was found fresh tuberculosis of both upper lobes, and less marked tuberculosis of the lower lobes. On the vocal cords there were some tuberculous deposits. The aortic valve was calcified. Schmilinsky compared this case with another. A woman, aged 74, had been subject to noisy eructations for the last three years. There was no vomiting. Two years ago she brought up a large quantity of mucus with a loud accompanying sound. Her food appeared to be "stopped at her neck." Semi-solids were more easily swallowed than solids or fluids. On passing the stomach sound a resistance was met with 6½ inches from the teeth. On slowly withdrawing the sound for about 1 inch and turning it forwards he succeeded in guiding it into the œsophagus and thence into the stomach. He experienced considerable difficulty in introducing the œsophagoscope, and only succeeded in passing it over a wire sound with an ivory end which he had previously passed. A skiagraph showed the relations of the diverticulum clearly.

## MIDWIFERY AND DISEASES OF WOMEN.

#### (343) Dermoid Cyst of Breast.

ROCHER (*Rev. Mens. de Gyn. Obst. et Ped. de Bordeaux*, July, 1901) reports a characteristic case of this rare disease. The patient was 53. She had noted a small lump on the outer side of the right breast when she was 8 years old; it was of about the size of a grain of maize. At 20 it had reached the size of walnut: at 40 it was as large as an egg. Between 20 and 26 her three pregnancies occurred. Neither they nor the subsequent lactation had any effect on the tumour. When 43 the patient received a blow on the tumour, then for the first time it became a little painful, and the skin grew red and the veins slightly dilated. No fluid ever issued from the adjacent nipple. Rocher found the patient robust and free from cachexia. The swelling had reached the size of a fist. It lay in the upper outer quarter of the breast; fluctuation was very indistinct. The right axilla was free from enlarged glands. The breast was removed; there was no adhesion to the pectoral muscle. The cyst lay surrounded by fat. Its wall, though very thin, was quite distinct and uniformly white. It was covered externally with indented lines simulating cerebral convolutions, and corresponding to markings on its inner aspect. The contents, faintly acid in odour, consisted of grease containing masses of epidermis; the inner wall was true epidermis, without hairs, sebaceous or sudoriparous glands. There was no hair, teeth, or bone, but islets of adenoid tissue lay in the substance of the wall externally.

#### (344) Bougie in Peritoneal Cavity after Abortion.

CHAMBERS (*Amer. Journ. Obstet.*, August, 1901). A married woman, aged 23, whose second child was 18 months old, had consulted a female abortionist five months before she came under Dr. Chambers's care. Pain followed some operative procedure, and a tender, yet not very painful, lump developed in the right groin. Of the attempt at abortion she said nothing. Two masses were found in the abdomen, one about the size of a walnut just above the pubes in front of the bladder, the other of the size of a hen's egg in the right inguinal region. On opening the abdomen the two masses were found firmly fixed. A cord-like band, taken at first

for a chain of lymphatics, extended from each mass to behind the transverse colon. It proved to be a No. 8 silk gum-elastic bougie. One end was coiled up, resting against the pubes; it was enclosed in a mass of inflammatory tissue. The other end rested on the crest of the right ilium. The apex of the sharp angle formed by the bending of the bougie had almost perforated the transverse colon. Inflammatory bands between coils of intestine passed over the bougie. These bands were broken down, then the track of the bougie was laid open thoroughly and scraped. The intestine was damaged in two places, and the injury repaired by Lembert sutures. Recovery was uneventful. Chambers at first thought that the bougie was a catheter, which had been pushed through the bladder, but found that it was a bougie: then he suspected abortion, and the patient confessed. The uterus was free from any sign of injury. Chambers quotes Sims's case, where there was a mass in the right broad ligament. An incision was made in the vault of the vagina, and a silver female catheter extracted. In Gaillard Thomas's case the patient herself thrust the steel rib of an umbrella into the uterine cavity, as she had successfully done before. On this second occasion it slipped. Operation was refused, and the patient died on the twelfth day. A steel umbrella rib, 13 inches long, was found in the abdomen. One end had perforated the diaphragm, and extended 2 inches into lung tissue.

**(345) Incontinence of Urine: Supernumerary Ureter.**

Wertheim (*Centralbl. f. Gynäk.*, No. 31, 1901) reports the case of a girl, aged 18, subject since birth to spontaneous escape of urine. The cause was detected through the cystoscope, for a duct was found to open into the urethra near the meatus externus on the left side, whilst the normal left ureter opened into the bladder at the usual point. The supernumerary left ureter bore a dilatation above its orifice which projected into the vaginal wall. Wertheim endeavoured, by a plastic operation, to establish a communication between this dilatation and the bladder. This attempt failed, and then he dissected up the whole of the lower part of the abnormal ureter, and fixed it into an opening in the bladder made close to the orifice of the normal left ureter. Then the patient could keep the parts dry for the first time in her life. The orifice of the abnormal ureter made by the second operation could be plainly seen through the cystoscope: it functioned perfectly.

**(346) Delivery of a Tubal Mole per Vaginam.**

Bröse (*Centralbl. f. Gynäk.*, No. 26, 1901) exhibited in May before a Berlin Society, a deciduum from a tubal sac. He had performed posterior colpotomy, drawing the gravid tube down into the vagina. Then he pressed out the tubal sac till the mole came out of the abdominal ostium. No bleeding followed this manœuvre, therefore the tube was not removed but pushed back into the peritoneal cavity. The opposite tube was inspected. Its ostium was found closed by adhesions: it was therefore opened up and its edges sutured all round, in fact salpingostomy was performed. The patient recovered.

## THERAPEUTICS.

**(347) Phototherapy in Lupus.**

Leredde (*Presse Médicale*, September 7th, 1901) gives the results of his experience in the light treatment of lupus and other affections of the face. After describing the well-known apparatus used by Finsen, the writer explains the new modification of it by Lortel and Genoud, which he has used with success. The arc lamp used is weaker than Finsen's, and the current is 10 to 20 ampères. The time of exposure by this apparatus is only fifteen minutes, instead of an hour by the Finsen apparatus. Also larger areas can be treated. The author, while admitting the good results obtained by the light treatment, does not consider that it totally replaces the other forms of treatment, such as galvano-cautery, scarification, and excision. He is not in favour of scraping owing to the frequent relapses. In lupus of the orifices he prefers phototherapy. For lupus of the mucous membranes he has devised an apparatus by which the light rays can reach the affected parts. Leredde concludes that phototherapy is indicated (1) in lesions of the face which are rebellious to other methods; (2) in lesions of the face which would leave much scarring after total excision; (3) in certain cases of acute rosacea, rhinophyma, epithelioma of the face, and sycosis. His experience of the treatment of alopecia areata by phototherapy does not agree with the results claimed by Finsen and others.

**(348) Treatment of Lupus by Blue Light.**

Colquhoun (*New Zealand Med. Jour.*, March, 1901) describes a simple modification of Finsen's light treatment. The patient sits with his back to the window and sunlight is reflected from a mirror and focussed through a biconvex lens of eight to twelve inches focal length. Between the patient and the lens is a bottle containg an aqueous solution of ammoniac sulphate of copper, to absorb the heat rays. The patient receives on the diseased patch a concentrated beam of blue light. Good results are claimed in cases of lupus after daily sittings of an hour's duration.

**(349) Treatment of Gonorrhœa.**

Bleicher (*Wein. med. Woch.*, April 6th, 1901) recommends the following treatment for gonorrhœa. The patient remains in bed for ten days with an ice-bag applied to the penis, and takes balsam of copaiba twice a day. On the eleventh day the copaiba is left off, and injections of potassium permanganate commenced (1 in 1,000). For the first week injections are made three times, and for the second week four times, a day. The fluid is retained for ten minutes. After this the discharge has become catarrhal, and an astringent injection of sulphate of zinc and alum is substituted. Cases are usually cured after a week of the latter treatment. The writer attributes the success to the ice-bag checking the multiplication of the gonococci. He advises all injections to be warmed to 25° C. The treatment in bed is more applicable to military hospitals than to private practice. H. de Brun (*Journ. des Praticiens*, June 15th, 1901) recommends picric acid as an injection for gonorrhœa. Injections are made with a 1 to 2 per cent. solution two or three times a day. Acute anterior urethritis is said to be cured in four or days by this method. In cases of posterior urethritis instillations are required. Frank (*Deut. med Zeit*, No. 31, 1901) describes a method of prophylaxis against gonorrhœa. He uses 20 per cent. solution of protargol in glycerine, with which is mixed a small quantity of perchloride of mercury (1 in 2,000). This is injected into the urethra, and according to the writer acts as a preventive measure.

**(350) Subcutaneous Injections of Chaulmoogra Oil in Leprosy.**

Hallopeau (*Lepra*, vol. ii, Fasc. 2) comes to the following conclusions: (1) Lepers treated with large doses of chaulmoogra oil, either by intramuscular injections or by the mouth, may show so much improvement as to be considered cured. (2) More frequently the disease continues to show itself, but usually in a benign manner. (3) In some cases marked local and general exacerbations occur in spite of the treatment. (4) The effect of chaulmoogra oil, although beneficial, cannot be compared with that of mercury and iodine in syphilis or of quinine in malaria. (5) The hypodermic method is to be preferred if it is well borne: it is, however, a painful method. (6) The comparative effects of the various products supplied under the name of chaulmoogra oil should be studied. Du Castel (*loc. cit.*) is not in favour of subcutaneous injections as a routine method on account of the pain and induration and the possibility of fatty pulmonary embolism.

**(351) Treatment of Pruritus by Acids.**

Leo (*Bull. Méd.*, September 4th, 1901) remarks that the subjects of pruritus often have alkaline urine. Considering that this is due to increased alkalinity of the blood, he administers small doses of dilute sulphuric acid. By this means he claims to have cured inveterate cases of pruritus.

**(352) Iodipin in Syphilis and Psoriasis.**

Rille (*Wien. klin. Woch.*, No. 30, 1901) reports two cases of tertiary syphilis and six cases of psoriasis treated with iodipin (a 10 per cent. combination of iodine with oil of sesamum). In the syphilitic cases injections were made daily in the nates with 10 c.cm. of a 25 per cent. solution of iodipin. In one case 10 injections were made with good results.

In the second case 42 injections were made. There was no induration at the point of injection. The same solution was used with good effect in cases of psoriasis. Iodipin is said to cause less iodism than iodides and also to remain longer in the body, even several months.

## PATHOLOGY.

**(353) Serum Diagnosis of Tuberculosis.** E. ROMBERG (*Deut. med. Woch.*, May 2nd and 9th, 1901) has investigated the work of Arloing and Courtmont. In criticising the results published by them, he points out that the serum reaction is supposed to be positive in early or mild cases, while in advanced cases, or in those which terminate rapidly, it is negative. In this way it is not only of diagnostic but also of prognostic value. The failure of the reaction in rapid and late cases is, therefore, an ample explanation for the 12 1 per cent. of negative results in cases (191) of certain tuberculosis. In 130 patients, who were suffering from other diseases, and in whom tuberculosis was not demonstrable, 34 6 per cent. reacted positively (that is, 45 patients), 20 of these cases were proved, *post mortem*, to have small tuberculous deposits, but in 2 no such lesions were recognised. Romberg regrets that Arloing and Courtmont, who suggest that these 45 patients really had slight tuberculosis, do not report on the *post-mortem* appearances in the negative reaction cases. Courtmont reports elsewhere that in 31 experiments with tuberculous pleuritic effusion, 23 gave positive reactions and 8 negative. Of the 8, 6 died, while of 16 that gave weak reactions 4 died. All the well-marked reaction cases recovered. In 1 case the effusion gave a weak reaction, and the blood serum no reaction. In this case the pleurisy cleared up, but an acute phthisis rapidly terminated the life of the patient. Romberg gives further details of Courtmont's work, as he considers that the results are not well enough known. Comparing the usefulness of this reaction to that of tuberculin injection, he points out that if the results of the former can be proved to be reliable it must be preferred, as the application of three injections in doubtful cases must offer great difficulties with many patients; but, so far, opinions, even of authorities, differ greatly with regard to the reliability of the serum reaction. He considers that the agglutination takes place chiefly in a certain stage of the illness, and is not dependant on the extent of the deposits. He also believes that the specific nature of the infection plays an important part, and he expects to find that the reaction fails in cases of mixed infection. Turning to the causes of failure outside the patient, he calls attention to the fact that there is a considerable difficulty in preparing a proper homogeneous cultures of T. bacilli. So great, in fact, are these difficulties that he doubts if it could be practicable to employ this method as given by Arloing and Courtmont in ordinary practice. To overcome the difficulty von Behring, with whom Romberg is working, has attempted to find an easily-handled material, which will keep for a long time, and which will demonstrate the reaction as well as the homogeneous attenuated cultures. He finds that killed tubercle bacilli, which are minutely divided and emulsified with aqueous solution of an alkali answer well. He uses 1 litre (= 35 ounces) of a $\frac{1}{2}$ per cent. solution of caustic soda, to which he adds 10 grams (=155 grs.) of dried and divided (*zerkleinerte*) tubercle bacilli, and this he keeps for eight days at a temperature of 37° C. (98.6° F.). This emulsion he calls Tb. G. To stop the action of the alkali he neutralises the emulsion with acetic acid. He claims that the serum of tuberculous animals react to this emulsion of dead bacilli as well as to Courtmont's cultures. He obtained four preparations from von Behring, and studied the reactions in human tuberculosis. Three of these were milky emulsions, and one was a colourless, clear solution (in which the bacilli were dissolved, and which gave a precipitate with serum of tuberculous animals). He calls the emulsions Tb. G. II, and for several reasons preferred to work with them. The Tb. G. II kept well for over two months without showing any deterioration. For use he adds three parts of sterile water to one part of the emulsion. The blood is gained by means of wet cupping of the loins, but care must be taken that there be no moisture left on the skin or instruments, after cleaning, which could dilute the blood. The cupping glass is either put aside, lying obliquely, in the incubator or in the room for three to six hours, and then the serum is removed by means of a pipette. At least 0.5 c.cm. (=8½ minims) of serum and the same quantity of diluted Tb. G. II should be mixed together, and, further, 0.2 c.cm. of serum (measured in a graduated pipette) should be added to 5, 10, 15, 20, and even 30 times the quantity of the diluted Tb. G. II, and further a test tube of pure diluted Tb. G. II, and one with pure blood serum, should be used as a control. The tubes must not be shaken. The agglutination takes place mostly after about nineteen hours, but sometimes it takes forty to forty-four hours to become manifest. He requires not only that a precipitate falling to the bottom of the tube, but also that a perfect clearing of the upper part of the mixture takes place in order to call the reaction positive. Realising the difficulty of proving the absence of tuberculous lesions in man, without *post-mortem* examinations, he made use of Nägeli's table of the frequency of tuberculosis. In newborn infants, Nägeli found no tuberculous lesions (in 28 cases) In 6 cases of newborn infants he collected blood from the placental end of the umbilical cord, and found that there was no reaction at all. This was made all the more valuable, as the mother of one of the infants was suffering from lung and gland tuberculosis, and another mother was suffering from gland and bone tuberculosis. From these observations he considers that one is justified in stating that the serum of human beings absolutely free from tuberculosis gives a negative result with the emulsion. Of 39 adults who showed no clinical evidence of tuberculous lesions, 22 gave a positive reaction, of whom 18 gave a reaction with 1 in 5, 6 with 1 in 10, 2 with 1 in 15. 2 with 1 in 20, and 1 with 1 in 30 dilution. According to Nägeli's tables tuberculous lesions are found in corpses of people of the ages between 18 and 30 years, 96 per cent.; between 34 and 40, 97 per cent.; and between 40 and 80, nearly 100 per cent.! And further, that between the ages of 11 and 30, 62 per cent. are "active latent" tuberculoses, and 33 per cent. positive; between 30 and 40, 42 per cent. active and 42 per cent. passive; between 40 and 80, varying between 24 and 29 per cent. active and 53 and 58 per cent. passive. A certain number are classified as doubtful. Romberg's results compared with these give a positive reaction between the ages of 18 and 29 at 61 per cent., and negative at 39 per cent.; between 30 and 39 years, 70 per cent. positive and and 30 per cent. negative; between 40 and 49 years, 50 per cent. positive and 50 per cent. negative; and between 50 and 59, 43 per cent. positive and 57 per cent. negative. The numbers of his observations are too small, he says, to allow of a "binding conclusion," but he is struck with the coinciding of his positive results with the frequency of active latent tuberculosis. He reports that in one case in which absolutely no physical signs could be detected, but which gave a positive serum reaction, eight months later a well-defined apical phthisis was diagnosed. Of 43 patients suffering from tuberculosis, 35 (that is, 81.4 per cent.) gave a positive reaction, and 8 (18.6 per cent.) a negative reaction. Thirty of these were in the first stage of consumption, and had no or very little sputum; 26 of these early cases gave positive reactions; 11 patients were in the second stage; and of these, 8 gave positive and 3 negative reactions, while the 2 remaining patients were in the third stage, and 1 gave a positive reaction, and 1 a negative reaction. Four of the patients of the first stage and 2 of the second stage, who showed a negative reaction, were very severe cases, and were good examples of what Arloing and Courtmont have said with regard to prognosis. He was further able to show that in 2 cases, who gave negative reactions, that the lesions had become inactive. He concludes, therefore, that the serum diagnosis is no help for the so-called early diagnosis of already manifested tuberculosis, and considers that the questions still to be answered are: Is a positive agglutination a certain proof of the presence of progressive, or at least not inactive, tuberculous processes? and Does the negative result mean either that there is no tuberculosis, or that the tuberculous deposit is quite healed, or that the case has a very bad prognosis, or is far advanced? He believes that these questions can be answered affirmatively.

# AN EPITOME

OF

# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (354) Diabetes and Phthisis.

The prognosis of phthisis coexisting with diabetes is accepted as hopelessly bad, but G. Oeder (*Deut. med. Woch.*, October 3rd, 1901) reports a case in which the expected did not occur. In 1896 (April) he was consulted by a man, aged 51, who had been suffering since November, 1895, when he had an attack of influenza. His history showed that in 1888 he had an attack of perityphlitis, which had given him trouble from time to time, and which, in spite of three operations, had left a discharging sinus. His physical signs pointed to a tuberculous pneumonia of the left lower lobe, and also of the apex of the left upper lobe in a progressive stage (fever, and numerous tubercle bacilli in sputum). On examining the urine he found that it contained 7·5 per cent. of sugar. Oeder therefore told the wife of the patient that the prognosis was very bad, but postponed giving an absolutely hopeless prophecy for a short time. Eleven days later the patient was seized with profuse hæmoptysis. He recovered slowly from this, and on May 1st had a second attack, and a third one on May 29th. Shortly after this the pyrexia disappeared and the "catarrhal" lung changes diminished. In December the abdominal sinus healed, the patient was in good condition, but still showed 4½ per cent. sugar. The condition continued fairly satisfactory, in spite of the diet not being strictly adhered to, until February, 1901. He then had a cold, and on physical examination Oeder found impaired resonance on percussion both behind and in front over the left side of the chest, and weakened vesicular breathing. There were plentiful tubercle bacilli in the sputum. The urine showed 3·3 per cent. glucose; no albumen. There was no polyuria, no retinitis or cataract. In Oeder's opinion, the phthisis was in a stage of arrest.

### (355) Gastro-intestinal Hæmorrhage in Newborn Infants.

Audry (*Lyon Médical*, October 27th, 1901) has met with evidence of considerable hæmorrhage into the alimentary canal 14 times in a series of 100 necropsies of children under 1 month old. The examinations dated from the beginning of December, 1900, till early in May, 1901. The children all died in an infant asylum, where the conditions of life were admittedly abnormal. A great proportion of the children admitted were either prematurely born or very feeble, and in one year (1890), with 790 admissions, there were 280 deaths. In the 14 cases the small intestine was found almost constantly involved; once only the hæmorrhage was limited to the stomach, and in a second case was seen almost to be confined to the stomach. The upper part of the duodenum was generally free from blood. The large bowel contained blood in three cases only, and in these the small bowel was practically full. The blood in the intestine was liquid, sometimes syrupy. The intestinal mucous membrane was intensely congested, in some instances almost ecchymotic. Small abraded patches were found about the size of a pinhead, but never any ulceration of the least importance. Peyer's patches were sometimes much congested. The nervous system was not examined in all cases, but in one instance the intense meningeal injection which Billard found constant was absent. There was one instance of concomitant pulmonary hæmorrhage; in most cases the lungs were hyperæmic, and showed patches of broncho-pneumonia. There were several examples of infection among the cases recorded. One child was infected with influenza by a nurse, another with whooping-cough. A third patient showed distinct evidence of inherited syphilis. In most of the cases, however, the symptoms were first those of simple gastro-enteritis. The cases were of much more frequent occurrence in cold weather, but Audry believes that there was an epidemic and even a contagious element in their etiology. Thus four instances of hæmorrhage were met with between January 29th and February 1st. Again, there were 5 cases between April 10th and 25th. In 11 cases of the 14 there was no hæmatemesis or melæna; the signs were simple vomiting, and especially diarrhœa. In 5 cases cyanosis was pronounced. The treatment advocated is prophylactic, especially the improvement of hygienic conditions.

### (356) Koplik's Spots.

Lorand (*Jahr. f. Kinderheilk.*, June, 1901) gives the results of two years' experience at the Children's Hospital, Buda-Pesth, of the value of Koplik's spots in the differential diagnosis and prophylaxis of measles. During 1899 and 1900 the mouth of every child in the out-patient's room was examined. Over 30,000 cases passed through the department in that time and in no other disease, except measles, was the sign found to be present. Among these out-patients there were 348 measles cases and Koplik's spots were absent in only 19. Among 144 in-patients with measles 57 showed Koplik's spots on admission and developed the rash on the skin in from one to five days later on. The others had the skin eruption already out, of these, 8 were without the sign, but then the eruption had been out for two days or more. Lorand quotes Fruitnight, of New York, and Schmid, of Graz, who were able, by this sign to distinguish with certainty between measles and rötheln during an epidemic of the two diseases. Koplik and others, for example Slawyk, of Berlin, consider the spots as pathognomonic; but Widowitz, of Gratz, while admitting their great value, says they occur, although rarely, in rötheln, angina lacunaris, and respiratory catarrhs as well. Lorand describes the locality for finding the spots, that is, the buccal mucous membrane opposite the premolar teeth of the lower jaw. They never appear upon the palate, tonsils or fauces, but red spots with central vesicles may be found in these places very frequently in measles and also many other inflammatory diseases. Koplik's spots are now well known as tiny, fine, opal dots looking as if scattered by a spray over the glistening buccal mucous membrane. They require a good white light for their detection, and cannot be seen by lamplight. The base they lie on may or may not be reddened, their size is uniform, their number varies, and they never coalesce. They are composed of heaped-up epithelial cells. They last three or four days, disappearing with the full efflorescence of the measles rash upon the face. They were known and described in 1854 (*Virchow's Archiv*, vol. vii.) but it was Koplik who first really appreciated their value in 1896.

### (357) Congenital Facial Paralysis.

Marfan and De Lille (*Prog. Méd.*, vol. xiii. p. 72, August 3rd, 1901) record the case of a newborn infant suffering from peripheral facial paralysis. There was a marked nervous heredity, and the infant had been born at the eighth month and brought up on the bottle. At 3½ months it suffered from gastro-intestinal dyspepsia, and was brought into hospital. There was complete facial paralysis of the right side, and a malformation of the external ear of the same side. The external auditory canal was rudimentary, and there seemed to be no tympanic cavity. The child died, and on dissection no internal ear was found on the right side. The brain appeared to be normal but the nuclei of the right facial nerve were in an atrophic condition. The paralysis, therefore, was not obstetrical in origin.

## SURGERY.

### (358) Abdominal Inflation for Intestinal Hæmorrhage.

Hæmorrhage in the abdominal cavity, unlike that in the thorax or cranium, is dangerous on account of the quantity of blood which is poured out of the vessels. This condition has led G. Kelling (*Münch. med. Woch.*, Nos. 38 and 39) to experiment on animals and on the human cadaver in order to produce a "tamponage" of the peritoneal cavity, which would be sufficient to arrest hæmorrhage. Abdominal hæmorrhage is most frequently intestinal hæmorrhage, but wounds of the liver and spleen also at times provide dangerous hæmorrhage. He states that on an average the total quantity of blood in the human body measures about 5 litres (8⅔ pints), and that the removal of half of this quantity, that is 2½ litres or 4⅝ pints, may lead to death. The abdominal cavity—indeed the stomach and the colon—can contain this amount. If this occurs, the intra-abdominal pressure is not increased, but the abdominal walls merely become

pushed forward. To arrest abdominal hæmorrhage, the usual methods too frequently prove useless. Compression and ligature of the bleeding vessels are the only reliable methods of controlling it. Ligature is not often possible. Direct tamponage through the stomach is not free from danger and not easy to perform. Tamponage after laparotomy with gauze has many obvious objections. Kelling therefore comes to the idea of blowing up the abdomen with air. He first determined the blood pressure in the bleeding vessels, that is in the abdominal vessels. In six dogs he found that the pressure in the femorals was 100 to 120 mm. of Hg., in the gastrolienalis 50 to 60 mm., in the coronary arteries 30 to 50, and in the gastric mucosa 15 to 25 mm. In man, he was able to measure the blood pressure in the inferior coronary artery, during operations in 3 cases, and found it between 38 and 53. He therefore deduced that most bleeding will be arrested if the intra-abdominal pressure be raised to about 50 mm. of mercury. In a series of experiments he found that dogs bore a blowing up of the abdomen to this degree very well. The blood pressure was scarcely affected by the increase of intra-abdominal pressure; this, he explains, is due to the fascia covering the large vessels not giving way as do the muscular elements, so that the increased local pressure does not easily reach them. He further performed an ingenious experiment to determine the effect of the pressure on the organs. After inflating the abdomen he introduced a small cystoscope encased in an outer metal tube with a pointed end. No air escaped through this arrangement. Under a pressure of from 50 to 60 mm. Hg. the diaphragm was not used in respiration and was tightly stretched, liver and spleen were compressed, and appeared dark-reddish brown in colour, the stomach and intestines were flattened against the posterior wall and were pale, the larger intestinal arteries appearing like fine threads. He produced some wounds of various organs with the point of the cystoscope, and observed that little or no bleeding occurred. In order to compare exactly the bleeding from wounds with and without air tamponage, he introduced a double-edged knife, provided with a thread, so placed that on drawing on the thread the knife would divide the liver, spleen, mesentery, or other part. The thread was pulled on as soon as the abdominal wound was closed, with the exception of two sutures, which, however, were immediately tied after the knife was removed and the trocar with air-pumping apparatus was applied. The effect of inflation was very marked, hæmorrhage almost at once being stilled from small and medium-sized vessels, and much diminished from large ones. In order to avoid injuries to the abdominal wounds in introducing the trocar, he performed a series of experiments on dogs and human corpses. These taught him that the needle must be obliquely pointed, and that the flat surface must be introduced parallel to the abdominal wall. As soon as the skin and subcutaneous tissue are pierced (under infiltration anæsthesia if necessary) he commences blowing in air, so that after traversing the fascia, the liver and other organs are forced away from the sharp point by the force of the incoming air. The apparatus consists of a double scent squirt arrangement with a tube leading to a cross tube which connects the trocar or needle with a tonometer. The needle should be provided with a sheath to protect the points when introduced, and this should be left *in situ* until the residue of air is to be let out again, so as to avoid a double puncture. The cross tube is provided with a cotton wool filter to clean the air mechanically.



**(359) Pylorectomy: Nineteen Years After-History.**

RYDYGIER (*Przeglad Lekarski*, No. 29, 1900) reports the after-history of his oldest case of pylorectomy. He operated, 19 years before that report was published, on a woman then aged 30 for a gastric ulcer in the pylorus which had penetrated into the pancreas, the affected portion of which organ was at the same time excised. Since then the patient has had five children, the eldest 17 years old. Her digestion is good, and she works hard. Rydygier prefers pylorectomy to gastro-enterostomy in cases of perforating ulcer of the pylorus without much adhesions and in fairly healthy women. It avoids the danger of future hæmorrhages or malignant degeneration of the ulcer; again, in gastro-enterostomy a "vicious circle" is established, and in one case of Rydygier proved fatal. In the above case of pylorectomy a conical piece of the posterior wall of the pylorus was excised, so that the duodenum and stomach could be united directly by suture without any folding.

**(360) Prevention of Autoextubation.**

E. SCHLECHTENDAHL (*Münch. med. Woch.*, April 30th, 1901) considers that there is a great danger of the patient himself or herself dislodging the intubation tube in diphtheria if one leaves the thread attached to the tube, while if one does without the thread one loses the advantage of being able to withdraw it quickly in case of need. The thread, further, he says, may be bitten through and thus rendered useless. He suggests that, after the tube is placed *in situ*, a Bellocq's sound be passed and the thread be withdrawn through the nose, and attached by means of a piece of strapping or collodion to the nostril or upper lip. He recites the advantages which he sees in this method.

**(361) How to Deal with the Divided Tendons in Amputation of the Fingers.**

LAUENSTEIN (*Centralbl. f. Chir.*, No. 41, 1901) is of opinion that the frequent occurrence of suppuration in the palm and along the sheaths of the flexor tendons is due to the common practice of drawing out tendons in amputation of the fingers for injury, and in dividing them at some distance above the seat of operation. By such practice, it is held, the stretched tendon may become infected, and the retained portion, which after division is drawn upwards into the sheath to a depth of from 1 to 2 inches, may carry the infection into the hand and beyond the wound. The author, who has frequently observed bad results after carefully-performed amputation of the fingers, thinks it necessary to direct attention to what he regards as a very probable cause, and to point out that the practice of drawing out a tendon in amputations of a finger or toe before it is divided is not only useless but dangerous.

## MIDWIFERY AND DISEASES OF WOMEN.

**(362) True Interstitial Pregnancy.**

VON GUÉRARD (*Monats. f. Geb. u. Gyn.*, October, 1901) successfully operated in a case of ruptured interstitial or tubo-uterine pregnancy. The patient was 38 years old, and in her seventh pregnancy. When her period had been absent for three months she was seized with severe crampy pains, attacks of syncope, and vomiting. Thirty six hours after the attack began abdominal section was performed. The peritoneum contained much blood, and amidst the clots lay a three-months fœtus. The uterus was markedly retroverted, and the right half of the fundus was occupied by a cavity as big as a small fist; its wall had ruptured, and the placenta lay in its deeper part. It was an essential feature in this case that the placenta itself was not involved in the laceration. The uterine tissue around the sac was excised by a wedge-shaped incision, the gap being closed by a continuous catgut suture. The right appendages were removed. Recovery was uninterrupted. The right tube was quite intact; it measured 3 inches in length. The cavity of the sac was completely distinct from that of the uterus, and its walls were made up of pure uterine muscular tissue. The round ligament was attached to the external aspect of the sac. The cavity, as it was found after rupture, measured 2 by 2½ inches.

**(363) The Genesis of Carcinoma of the Fallopian Tube in Hyperplastic Salpingitis.**

LE COUNT (*Johns Hopkins Hosp. Bull.*, March, 1901) discussing an illustrative case, analyses the published cases and reviews the literature relative to the question of the connection between hyperplasia and new growth. The patient, 47, had two miscarriages, then an instrumentally delivered living child, followed by a long series of miscarriages but was otherwise well till 45 when she began to have menstrual pain setting in just before the flow and continuing all through, and lost strength. A year later protrusion of the vagina set in and increased, and the abdomen enlarged. She had constant bloodstained leucorrhœa. By median cœliotomy two gallons of fluid escaped and the enlarged

left tube was removed, the right being normal. The vaginal protrusion, a fluid filled Douglas pouch, was incised and amputated. The uterus was curetted and gave no sign of uterine neoplasm. Nine weeks later ascites reappeared and an orange-sized tumour was found on the left. On cœliotomy the peritoneum was found studded with papillomata of all sizes up to a hen's egg, and in the left lower quadrant they adhered to form a mass adherent to the pelvic wall and to the omentum. The larger masses were removed. Ascites again appeared, and in five months paracentesis was needed and was repeated every few weeks till the patient died twenty months after the first operation. The details of the necropsy are not included in the paper. The left tube weighed 250 grams, was 13 5 cm. long, and 7 cm. diameter at the middle. At the abdominal end was an exuberant cauliflower-like growth consisting of smooth round nodules with rough tissue between. When hardened and divided the tube had the serous and muscular coats very thin, the mucosa very thick and the lumen containing some grey necrotic *débris* which also dotted the proliferating surface. At the uterine end there was much necrotic tissue and but slight proliferation. Microscopically, set on the muscular coat, are many villous growths with a stroma of tenuous stalks of connective tissue covered by epithelium in many strata, only the deeper being columnar. The nuclei are large and irregular and stain lightly. Karyokinetic figures are poorly preserved, but equally common in all layers, and not specially irregular. The nucleoli are large. At the edges the epithelium shows degenerative changes. Leucocytes occur only isolated. There is no elastic tissue, and the endothelium of the vessels is well preserved. In the vessels and among the necrotic tissue is some fibrin in a delicate irregular net. The villi join as well as branch. In the deeper layers the stroma is outside the epithelium and is abundant. There are œdematous regions. There are no signs of wandering epithelial cells. In the inner half of the muscular wall are occasional groups of lymphoid cells showing the effects of pressure. In the masses removed at the second operation the central parts are largely necrotic. Where the necrosis is less the appearances of the inner parts of the tubal tumour are repeated, but karyokinetic figures are much more numerous, and, especially under the capsule, the connective tissue cells also show mitosis. The demarcation of connective tissue and epithelium is less distinct, especially close to the capsule. The blood vessels in the stroma have very little wall.

**(364) Resuscitation.**

Ogata (*Sei-I-Kwai Med. Journ.*, August 31st 1901) says that for use in small houses as in Japan, for slight asphyxia in the newborn the method recommended is to strike the heart region with the extended fingers 10 to 15 times a minute. For deep asphyxia the child is held on its back, one hand grasping the feet, the other under the chest with the thumb and index over the shoulders. The trunk is then raised and fully flexed on the thighs, held so for three seconds, and then returned to the first position. It is then held by the feet alone, and the trunk allowed to drop back. The manœuvres are then repeated. The essentials of the manœuvre are the same as in Dew's method, and the author has had the same good results as others who practise the various modes of resuscitation.

**(365) Gonorrhœal Endocarditis in the Puerperium.**

Harris and Dabney (*Johns Hopkins Hosp. Bull.*, March, 1901) record the following case: A primipara, aged 19, was admitted on the twenty-fifth day of her puerperium with fever and weakness, which began with chill on the fourth day of the puerperium. She had nausea and vomiting, and for some days cough and pain in the side. She was mentally dull and very anæmic; temperature 102.4°, pulse 120. She had a double cardiac murmur at the apex and a clear diastolic murmur at the base. She had repeated attacks of vomiting and collapse, and died in one of these next day. There was acute vegetative and ulcerative endocarditis, involving aortic, tricuspid, and pulmonary valves, acute splenic swelling and infarct, and catarrhal cystitis. The aortic vegetations yielded gonococcus, streptococcus pyogenes, bacillus coli communis. The same organisms grew from the splenic infarct. Two suspected cases in men are also detailed and the literature is reviewed.

## THERAPEUTICS.

**(366) Treatment of Tuberculous Laryngitis.**

At the recent Congress on Tuberculosis StClair Thomson read a paper in which he said that of the 70,000 persons who died annually in the United Kingdom from pulmonary tuberculosis, at least 35,000 would have required medical help in diminishing their sufferings from tuberculous laryngitis. There were probably in this country at least 75,000 patients who claimed the aid of the medical profession in arresting or easing the progress of the disease. The majority of cases were unsuitable for direct treatment of the larynx by surgical methods. Briefly recapitulated, the principles to bear in mind in tuberculosis of the larynx were as follows: (1) Pathology teaches that in the majority of cases the focus of infection is in or near the cricoarytenoid joint; (2) many cases only present themselves at a stage when the possibility of effecting a cure by local measures is quite untenable; (3) the principle of "*primum non nocere*" should be constantly kept before us, as many measures which have been tried in this affection have only distressed the patient and hastened the disease; (4) in the light of present knowledge and therapeutic resources the most rational principle is to attempt to make an early diagnosis of the disease in an incipient stage; any persistent or suspicious laryngeal catarrh should be treated seriously, on even a presumptive diagnosis: (5) once diagnosed, the patient should be treated on the principles laid down in the modern method of sanitorium treatment: (6) symptomatic treatment should be directed to any irritative, catarrhal, or obstructive condition of the air passages; (7) in addition, silence should be enjoined, the disuse of the voice being proportionate to the degree in which the focus of infiltration approaches or interferes with the arytenoid joint; (8) in cases where the situation or extent of the disease do not warrant an expectation of complete arrest of the process, the treatment should be symptomatic, and in many cases the sanatorium treatment is uncalled for.

**(367) Internal Disinfection.**

Dealing with pulmonary tuberculosis and typhoid fever L. Weill (*Therap. Monats.*, November, 1901) considers that disinfection applied internally should be very useful. He chose corrosive sublimate as the best chemical means, since it has an inhibitory action on bacteria, even in the dilution of 1 in 500,000. He says that he realises that since so many vaunted specifics have been brought out, the medical public are very sceptical about new remedies, and therefore he does not intend at present to report the numerous cases of ordinary apical phthisis, which he has quickly cured by his method. The cases he writes of are acute tuberculosis and tuberculous glands of the neck. (One case of apical phthisis, however, he does report, in which all signs and symptoms disappeared after two months of treatment). He applied the perchloride in the form of a vapour for inhalation. Two inhalations were made daily, and in each case subjective improvement and a fall of temperature followed the procedure. The tuberculous glands, also, reacted in an astonishing manner to the treatment; the glands being reduced in size rapidly. He warns one, however, that the glands must not be too hard (that is, contain too much fibrous tissue), nor too soft (that is, there must be no caseation). For typhoid fever he applies a 1 in 10,000, or 1 in 20,000 solution in the form of an enema, directing that about 17½ ounces (½ litre) shall be retained as long as possible. Here, again, he noted a fall of temperature, and states that comparing the case so treated with those treated in the ordinary way, he believes that the course is shorter, and the type less severe, when treated by injections of sublimate.

**(368) Cacodylic Acid in Skin Diseases.**

Saalfeld (*Therap. Monats.*, June, 1901) has employed salts of cacodylic acid in about 50 cases of various skin diseases. Sodium or ferric cacodylate may be given internally as pills containing 0.025 gram (about ⅓ gr.) in each, four of which may be given daily, or in a 5 per cent. solution, of which the single dose is 10 to 20 drops (0.025 gram to 0.05

gram, or about ½ gr. to ¾ gr. of sodium or ferric cacodylate), and the maximum daily dose 40 drops. For hypodermic injection 1 c.cm. (17 minims) of the sterilised 5 per cent. solution of sodium or ferric cacodylate solution may be given daily. Very convenient glass capsules containing the exact dose of a sterilised solution can be obtained. The cacodylic preparations may also be administered *per rectum*, either in solution or as suppositories, one or two of which containing ¾ gr. of sodium cacodylate in each form a daily dose. The writer concludes from his experience that the salts of cacodylic acid are distinctly superior to all inorganic arsenical preparations. Only one patient complained of gastric disturbance after taking a few ½-gr. pills, and she was clearly hysterical. Two patients with whom arsenious acid in any form disagreed could take four pills of ½ gr. of sodium or ferric cacodylate daily without gastric disturbance resulting. Diarrhœa, a sensation of dryness in the throat, heaviness in the eyes, dermatitis exfoliativa, and arsenical neuritis, were never produced, though they have been adduced as disadvantages of the treatment by other observers. A persistent odour of garlic in the breath was observed in about one-third of the patients, who were, however, mostly anæmic individuals with abnormal gastric and intestinal functions. It was never present in cases in which the cacodylate was administered hypodermically or *per rectum*. Arsenic acts more quickly and potently when administered hypodermically than when given by the mouth; the method, however, has hitherto been too painful for general application. Cacodylates, on the other hand, are not caustic, and are quite painless when injected subcutaneously. The writer reports cases of relapsing psoriasis and lichen ruber planus which were rapidly cured or improved in this way. Gautier recommends that an injection should be given on ten consecutive days, and resumed only after an interval of another ten days, but the writer has given as many as thirteen consecutive injections without the supervention of any toxic symptoms. Thus cacodylic acid surpasses all other arsenical preparations in its great activity, its slight toxicity and the consequent possibility of employing larger doses, and the complete painlessness of hypodermic injections. The ferric cacodylate enables iron and arsenic to be administered hypodermically to chlorotic subjects with whom iron internally disagrees.

### (369) Lysulphol.

IN the November number of the *Therap. Monats.* E. Rumpf recommends the use of a soluble preparation of sulphur, which bears the name of lysulphol. It is a 10 per cent. combination of sulphur and soap, with cresolin added, and appears in semi-fluid form as thick, black substance. The preparation is rubbed into the affected part every evening and washed off in the morning, and on tender skins it can be diluted with equal parts of glycerine. In pityriasis versicolor, scabies, acne, desquamatory conditions, at times in old cases of psoriasis, and of prurigo, he has found it of considerable value.

## PATHOLOGY.

### (370) Specific Serums and Flesh.

UHLENHUTH (*Deut. med. Woch.*, November 7th, 1901) has extended his experiments as to the precipitation reaction of the serum of an animal treated with the blood of another species on the blood of the second species to flesh. He finds that when, for example, a rabbit is injected with pig's blood, the serum of the rabbit will, when brought into contact with an aqueous (saline) extract of pig's flesh (pork, uncooked ham) produce a precipitate, although no other meat extract will be capable of being so affected. Further, he finds that when the serum of a rabbit treated with horse's blood is used, a marked precipitation occurs with horse's flesh, and a fainter reaction occurs with donkey's flesh. The importance of this reaction is practical. At times horse's, dog's, and even cat's flesh, is offered for sale, divided into small pieces, either in a natural form or as "sausage meat," under the description of beef, ham, or other meats. He has succeeded in demonstrating the constituents of mixtures of all kinds, except in cases where a very small quantity of the particular sort had been taken. Smoking (of hams and sausages) does not disturb the reaction, but as may be expected, cooking does so. He usually grates the flesh to be tested, and allows it to stand in physiological saline fluid or tap water. If he requires to hurry the process he adds a few drops of chloroform. The solution or extract is then filtered until clear, and should possess a weak yellowish colour; 3 c.cm. of this clear extract is added to 10 to 15 drops of the specific serum. If the flesh is derived from the animal corresponding to the serum a distinct precipitate will befall. He is of opinion that if, instead of injecting the rabbit with the blood of the second species, one employs an extract of the flesh (muscle) of the species, a more potent serum may be obtained.

### (371) The Entrance of Ankylostoma Larvæ through the Human Skin.

HITHERTO the only known way by which the ankylostoma gains entrance to the human body is in food and drink contaminated by fingers soiled with the excreta of infected individuals. Looss (*Centralbl. f. Bakt.*, May 30th, 1901) now brings forward experimental evidence which goes to show that the larvæ may make their way through unbroken skin. After some months experimental work with the parasite, during which time the greatest precautions were taken to prevent mouth contamination, the writer found that he was infected: he was convinced that this could not have been through the mouth. Experimenting with a drop of larva containing water placed on the hand, he found that the skin in a short time became red and irritable, and that the fluid when examined after an interval contained only empty larval capsules and more or less shrunken and inactive specimens. This experiment being capable of several interpretations, it was necessary to investigate further. The experiment of incubating a piece of human skin in a larva-containing fluid was without result; an opportunity was then taken of inoculating on to living skin; a drop of water containing larvæ was placed on the skin of the leg of a patient an hour before the limb was to be amputated in hospital. At the operation the piece of skin so treated was obtained and examined microscopically. The examination showed that the larvæ gain entrance chiefly by way of the hair follicles, and they could be seen in the various stages of making their way in: they penetrate into the papilla and thence into the subcutaneous tissues.

### (372) The Etiology of Hospital Gangrene.

MATZENAUER (*Archiv. f. Derm. u. Syph.*, February, 1891) has investigated this subject, and concludes as follows. Hospital gangrene has not entirely disappeared since the advent of antiseptic surgery, but occasional sporadic cases may occur at the present time, although milder than in the preantiseptic days. It occurs most often on the anus and genital organs. The ulcer progresses rapidly, and causes much destruction of tissue. It is covered with a dirty grey or greenish membrane; this membrane is gelatinous or slimy. Round the ulcer is a red inflammatory halo. The ulcer has a foul odour. Microscopically, congulation necrosis is found. The disease is infectious, and is probably caused by an anaërobic bacillus, which is present in large quantities in the ulcer. The bacillus is slender, and usually single. The ends are rounded, and the bacillus is stained by Gram's method.

### (373) Pathology of Secondary Laryngeal Tuberculosis.

OSTOWSKY (*Thèse de St. Petersbourg*, 1900, abstracted in *Rev. de Méd.*, August, 1901) has studied the origin of laryngeal tuberculosis in pulmonary phthisis by means of an exhaustive microscopical examination of 24 cases, 10 of which were slight and the rest advanced. His conclusions are thus summarised: (1) In tuberculous disease of the larynx the tubercle bacillus is found in all the layers of the mucosa, commencing in the epithelium and penetrating towards the muscle. (2) Its presence in the unaltered epithelium proves that it penetrates from the surface and not by way of the lymphatics. (3) In early cases showing only a few tubercles or superficial erosions the bacilli are found in small numbers in the subepithelial layer; when, however, the mucosa is ulcerated, they are found more numerously in the deeper structures. (4) The presence of bacilli in the lymphatic glands was only ascertained in very advanced cases.

# AN EPITOME

OF

# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (374) Hysterical Fæcal Vomiting.

Bregman (*Neurol. Centralbl.*, October 1st, 1901) reports the case of a servant girl, aged 23, who was admitted to hospital with symptoms of intestinal obstruction. There were painful abdominal distension, vomiting, and a history of absolute constipation for ten days. Under an anæsthetic the meteorism disappeared, and palpation revealed nothing abnormal. The illness was said to have begun a year before with a fall in the street, which was followed by hæmoptysis and later by intestinal symptoms, including obstinate constipation and abdominal pain. The woman was obviously neurotic, and complained of headache, debility, backache, and numerous other vague symptoms. She had attacks of aphonia, and was capricious and egotistical. The conjunctival and pharyngeal reflexes were diminished, the tendon reflexes increased. No distended coils of intestine were visible. The abdomen was tympanitic in front, dull in the flanks: castor oil, senna, rhubarb, aloes, and simple enemata had no effect. If several litres were used as an intestinal irrigation, a few fæcal fragments, or even scybala, might be brought away, but frequently the water was merely discoloured. Vomiting was the most prominent symptom. It occurred as ordinary emesis after food, and as hæmatemesis and fæcal vomiting. The last was fairly constant, though it might be absent for days or weeks. The vomit had the characteristic colour and odour of fæces, and contained solid fæcal particles, or occasionally larger masses. Bregman was often present during these attacks and could exclude trickery. Hæmatemesis was less common and generally slight. In February, 1900, prolapse of the rectum and frequent and copious intestinal hæmorrhage occurred. The rectal mucosa was congested but not ulcerated. In a few days the general condition of the patient deteriorated greatly, and there was complete anorexia. Suppositories of opium, belladonna, cocaine, and tannin failed to relieve, and the rectum was, therefore, cauterised under an anæsthetic. The general condition then improved, vomiting became less frequent, appetite returned, and the bowels acted occasionally spontaneously. On the return of the tenesmus, intestinal hæmorrhage, and prolapse, a second cauterisation failed to relieve. The prolapsed rectum was therefore excised by the extraperitoneal method. The result was brilliant. The patient ate well, did not vomit, and had natural evacuations. She was discharged from hospital in May, 1900, but soon returned with complaints of dysuria. In October, 1900, her condition was again serious; the rectal prolapse had recurred, its mucosa was ulcerated, and though the bowels acted naturally, there were great tenesmus and copious intestinal hæmorrhage. Fæcal vomiting had occurred only once since the operation, and there had been no hæmatemesis; but there were such extreme anæmia and debility that a further operation on the prolapse appeared unjustifiable. In spite of the gravity of the symptoms the writer feels justified in reporting the case as "hysterical." The multiplicity of the serious symptoms in a neurotic subject—the hæmatemesis, fæcal vomiting, intestinal hæmorrhages, prolapse of the rectum, dysuria, and amenorrhœa—did not point to any known disease. Finally, there was the general improvement after operations directed only to the relief of rectal prolapse. The nature of hysterical fæcal vomiting is obscure. In this patient the obstinate constipation, which was not always overcome by irrigations, pointed to intestinal occlusion. Whether this was due to intestinal spasm or to paralysis with consequent fæcal impaction is doubtful. There is also the possibility that antiperistalsis occurred. Thus Briquet injected bismuth and starch into the rectum in a similar case and recovered it in the vomited matter twelve minutes later. As regards the hæmorrhages, there was no question of hæmophilia, and seven teeth were extracted without undue bleeding. Fæcal vomiting is a rare manifestation of hysteria, but when it occurs it has frequently led to needless laparotomies, as in a case reported by Treves, in which after six fruitless operations recovery ensued on the isolation of the patient.

### (375) The Flint Murmur in Aortic Insufficiency.

Thayer (*Amer. Journ. Med. Sci.*, November, 1901) after discussing the various explanations of the Flint murmur which have been suggested, deals with the prevalence of the murmur in cases of aortic incompetence. In 74 cases of aortic insufficiency followed by *post-mortem* examination at the Johns Hopkins Hospital 45 showed *intra vitam* a rumbling echoing murmur in diastole limited to the region of the apex: in other words, a murmur exactly similar to that characteristic of stencsis of the mitral valve. In some few cases it was separated by a short interval from the other sounds, being in other words mid-diastolic. In 12 of these cases there existed a stenosis of the mitral valve as well as aortic insufficiency. In 33 the mitral orifice was of normal or increased circumference. With regard to the frequency of mitral presystolic murmur in aortic incompetency uncomplicated with mitral stenosis, the writer found such a murmur present in 33 out of 58 cases, though in this number are included 16 cases in which the mitral valve, though not in the least stenosed, showed other lesions. In the other 27 cases of incompetence the mitral valve was absolutely normal in 17. As regards diagnosis between the two conditions, the occurrence of a presystolic thrill is of great assistance. The character of the murmur differs in no way in aortic incompetence from that of mitral stenosis. In true mitral stenosis, however, even if complicated with aortic insufficiency, the tapping systolic shock and the snapping first sound are common. The Flint murmur, on the other hand, is usually associated with the characteristic heaving impulse of aortic insufficiency, and the dull, ill-defined, prolonged first sound. A tapping impulse and a snapping first sound may, however, be present. Of special importance is the character of the pulse. In cases of aortic insufficiency with Flint murmur the pulse is large and collapsing; in instances combined with true mitral stenosis there is generally an appreciable modification of the size of the pulse. The diagnosis of a Flint murmur is fairly safe when a rumbling or echoing presystolic murmur in the region of the apex is present in aortic insufficiency occurring in an individual with well-marked general arteriosclerosis, especially where there is no history of any acute malady ordinarily associated with the development of endocarditis, and in the absence of a marked systolic shock or snapping first sound. If, on the other hand, the patient be an individual with soft peripheral arteries and a history of attacks of acute rheumatism or chorea, or other evidence suggestive of the existence of an endocarditis, the probability of a concomitant affection of the mitral valve is greater, and the possibility of arriving at a definite diagnosis is correspondingly less. While, as a rule, the Flint murmur is not of very great intensity, is associated with little or no thrill, with no marked tapping systolic shock, and rarely with a snapping first sound, there may be striking exceptions to this rule.

### (376) Sudden Death from Hypertrophy of the Thymus.

Ducrot has collected (*Rev. de Méd. et Chir. Prat.*, October 25th, 1901) some important information in reference to sudden death in young infants in whom the thymus was apparently to blame. It is a well-known fact that many cases of sudden death occur annually in infants, even among those who are to all appearances in perfectly good health. Death may occur during sleep, and even a mother may be unaware that anything is wrong till she find the child dead in the morning. In many instances it has been supposed that death has been due to overlying. It has now become recognised that in many such cases the thymus is unduly large, and it is essential to examine this organ in all medico-legal necropsies on all young children so dying. The writer describes three clinical forms. Sometimes the child succumbs in a condition of acute asphyxia. He may have had several similar previous attacks, but each had always ended safely. Such a case has been put down to spasm of the glottis, whereas in reality there has been pressure exerted on the trachea by an enlarged thymus. In other cases the child has been

carried off suddenly without any previous attack or even warning. The head is thrown back, the pupils dilate, and one or two ineffectual inspiratory movements are made and the child dies without a cry. In the third group a previously healthy child is attacked with progressive asphyxia, and dies in the course of a few hours. It is in this form, if any, that spasm of the glottis might be present. The writer states that the primary cause of the enlargement of the thymus is as yet unknown.

## SURGERY.

### (377) Hodgkin's Disease.

MARTIN (*Journ. Med. Research*, vol. i, No. 1) records a case exhibiting some undescribed lesions of Hodgkin's disease. Clinically all the superficial lymph glands were enlarged, there was marked diminution of the red and increase of the white blood cells, enlargement of the spleen and milky fat, containing fluid in both pleural cavities and in the peritoneal cavity. At the necropsy there were found abundant masses of enlarged superficial lymph glands and the mediastinal and peribronchial glands showed moderate enlargement. The pleural surfaces were covered with a deposit which looked like granulation tissue; the abdominal viscera were matted together and almost the whole surface of the peritoneum covered with a diffuse granular deposit, villous-like in character, for the most part close together and presenting a velvet-like surface. This deposit could be easily detached with the finger and the underlying peritoneum was smooth and glistening. Microscopically it was seen to consist of lymphoid cells without any signs of inflammation, and with a fairly abundant reticulum. The case is evidently to be classed with those examples of Hodgkin's disease to which the term lymphosarcomatosis is applicable. In Martin's opinion the term "Hodgkin's disease" is a purely clinical one, and is associated with very different pathological conditions, the two main varieties being those which belong to the infective granulomata (including tuberculosis) and those which are properly termed lymphomatous. The lymphomatous variety is indistinguishable from lymphosarcoma. Hitherto it would appear that no such case as the present, exhibiting this extensive lymphosarcomatous growth on the serous membranes, has been recorded.

### (378) Local Anæsthesia for Abdominal Section.

A. SCHMIDT (*Münch. med. Woch.*, July 23rd, 1901) details some points of interest in connection with abdominal operations carried out with local anæsthesia. He accords the due praise to Schleich for having introduced the infiltration method, and for having rendered major operations possible without general narcosis, but explains his reason for modifying the method somewhat. He used a 1 per cent. solution of cocaine, and injected this in the simplest way possible. The anæsthesia was produced whenever possible before the operation sufficiently completely to render injections during the procedure unnecessary. The total dose averaged about half a grain of cocaine, while the greatest quantity used in one case was less than 1 gr. The operations performed were gastro-enterostomy, gastroplasty, gastrostomy, colotomy, exploratory laparotomy, strangulated hernia operations, opening of perityphlitic abscess, and cystotomy. In all thirty-four patients were operated on. He describes in detail the effect of handling, cutting, and other manipulations of the abdomen. The abdominal wall was anæsthetised, but not the peritoneum or other abdominal contents. The muscles of the abdominal wall remained rigid, while the difficulty of manipulation was further increased by the "pressing" of the patient, forcing the bowels, etc., out of the wound. The parietal peritoneum is practically insensitive to cutting with knife or scissors, or to pressure with forceps, but acute pain is set up when stretched or pulled upon. It requires great care, therefore, not to cause this pain. Adhesions, attached to the intestines and elsewhere, are very sensitive to pain when broken down. He advises general narcosis when the presence of adhesions can be ascertained. The stomach and intestines can be cut, perforated, sewn up, and pressed by forceps without pain, but on pulling these organs out of place, as is necessary in gastro-enterostomy retrocolica (*inter alia*), considerable pain is felt. The pain is, however, produced by the pulling on the peritoneum or mesentery. Ligation of the mesentery is painful, while the omentum appears to be almost insensitive to all handling. The urinary bladder is practically insensitive to pain, but separation of the peritoneum from the anterior wall or forcibly pulling the wound in the bladder open causes some pain. He discusses the question of post-laparotomy pneumonia. In two of his gastro-enterostomy cases he was unable to prevent its occurrence. In conclusion, he considers that although still far from perfect, the methods of local anæsthesia should be used in many abdominal operations.

### (379) Staphylococcithæmia.

REYMOND AND ALEXANDRE (*Rev. de Chir.*, No. 10, 1901) report a case of a baker, aged 29 years, treated by Terrier for severe symptoms of acute general infection associated with a recently-developed swelling in the left lumbar region. This swelling was at first diagnosed as a cold abscess of vertebral origin that had undergone secondary infection, but a careful examination of the patient led to the conclusion that it was really an acute purulent collection consequent on furunculosis. The patient, it was found, had for about six weeks before the attack noticed boils on the arm and the armpit of the left side. Whilst he was under treatment, and after incision of the abscess, the staphylococcus pyogenes was found in the pus, and also in the blood and urine. After the abscess had been laid open the patient rapidly recovered. A more frequent recourse to bacteriological examination of the blood in cases suggesting acute general infection would, the authors think, show infective morbid conditions due to this staphylococcus are neither rare nor very grave. The following are given as the chief points in this case: furunculosis, general infection of the blood, secondary phlegmon in the dorso-lumbar muscles, increase in the number of staphylococci in the blood and their discharge through the kidneys, incision of the abscess at once, followed by recovery of the patient and disappearance of the microbe from the blood and urine. The presence of the staphylococcus in the blood of this patient was proved both by direct microscopical examination and by cultures. Infection of the blood by this microbe, though traced to other sources, such as an external wound, an inflamed corn, and otitis, seems to have its most frequent origin in boils. The tendency of the blood-infecting microbe to be arrested in the capillaries of the kidney is indicated by its presence in the urine and by the frequent occurrence of nephritis as a complication of both furunculosis and osteomyelitis. The localisation of the secondary purulent deposits in cases of staphylococcus infection is influenced by physiological congestion of the affected parts and also by contusion and undue strain. In the subject of the authors' case the last-mentioned condition was probably the predisposing cause of the suppuration, as the dorso-lumbar muscles which were thus attacked are, as is pointed out, much exercised by bakers.

## MIDWIFERY AND DISEASES OF WOMEN.

### (380) Tuberculosis of the Genital Organs in the Female.

MARIE GOROVITZ (*Rev. de Chir.*, No. 10, 1901) sums up the chief points of a lengthy article on genital tuberculosis in the female in the following statement: (1) Tuberculosis of the female genital organs occurs much more frequently than has hitherto been supposed. By the help of histological and bacteriological investigations, and of inoculation, many cases of this class of lesions which would formerly have escaped notice can now be diagnosed with precision. (2) Genital tuberculosis, though usually secondary, may be primary. The main object of the practitioner is not only to recognise the primary forms, but to make the diagnosis in the early stages when the lesion has made but little way. Examination of the secretions and of shreds of tissue removed by scraping (curettage) will, from this point of view, render very great service in cases of tuberculous endometritis. This affection, it is well known, is almost always consecutive to tuberculosis of the Fallopian tubes, which is a much more frequent lesion. (3) The results of clinical observation and of surgical

intervention show that tubal tuberculosis excites, on the side of the peritoneum, more or less marked reaction and, particularly a special form of peritonitis, with encysted effusion, known under the term of "ascites of young women"; (4) consequently it is advisable in practising abdominal section for tuberculous peritonitis in the female to examine the uterine annexes, and to make sure of their condition; it will often be discovered that these were the starting points of the disease, and then, if it be possible, the affected organs should be removed; (5) this removal should be effected by the abdominal method, and the operator should aim at a free extirpation; the abdominal section will serve the double purpose of permitting removal of the original affection, and of acting with beneficial results on the peritoneal lesions; such treatment has, in the practice of Bouilly, been attended with decided success; (6) with regard to the pathogenesis of genital tuberculosis, this affection may be set up by the "descending way" or from the circulation, or by the "ascending way" and from without; (8) experimental researches made by the writer show that the tubercle bacillus deposited without injury on the mucous membrane of the genital apparatus is capable of germinating there, and of exciting the characteristic lesions of tuberculosis.

**(381) Rupture of the Uterus.**

VARNIER (*Rev. de Gynéc. et de Chir. Abd.*, September-October, 1901) publishes 23 personal observations collected between 1885 and 1901. He divides them into two groups: (I) 1885 to 1897—11 cases of rupture of the uterus treated from below, that is to say, delivery of the child and placenta by the natural passages, followed by plugging. The appalling result of 10 deaths to 1 recovery is recorded. (II) 1897 to 1901—12 cases, out of which 6 were treated from above by an exploratory and reparatory operation on the uterus; 3 recovered. In 6 remaining cases death supervened too early to allow of preparations for abdominal section. Varnier, on the above experience, insists that the extent of the rupture and its completeness or incompleteness can never be safely defined by palpation alone; an exploratory operation is, therefore, always needed. When the abdomen is opened, conservative treatment is to be rejected. The laceration of tissues interferes with repair, and, even when the uterine wound cicatrises well, there will be danger of rupture through the scar during a future labour. The scar in this kind of case is different from the scar of the clean-cut wound through healthy tissues after a successful normal Cæsarean section. Either Porro's operation should be practised in a case of rupture, or else retroperitoneal hysterectomy with careful suturing of the torn peritoneum as well as of the flaps of the uterine stump. The scar should be kept against the abdominal wall and the vagina plugged. Pinard discussed Varnier's memoir, which was read at a Congress at Nantes in September, 1901. He considered that rupture of the uterus was always grave, whatever the subsequent treatment. In some cases the symptoms are ill-marked, the patient being a little restless and the pulse rapid. Even after rupture there may be no flooding, and the uterine contractions may continue and deliver the child and placenta spontaneously. The mildest-looking cases may end fatally if treated from below only or "expectantly." In short, Pinard insists that when once rupture of the uterus is diagnosed abdominal section is indicated.

**(382) Acute Pelvic Inflammation in Pregnancy: Labour at Term.**

KLEINWÄCHTER (*Wien. med. Presse*, No. 26, 1901) reports at length a remarkable case showing how much the pregnant uterus will tolerate with impunity. The patient was aged 28, married eleven years; she had not been pregnant for over four years. About the beginning of April, 1900, she conceived; a month later irregular uterine hæmorrhages set in, with pelvic pains on the left side. There was pain during defæcation and micturition. By the third month the uterus was found fixed and firm and rigid, as though in tonic contraction. Both parametritic and perimetritic inflammation could be detected; in particular there was firm exudation behind the pubes. The patient was kept in bed for fourteen days, viburnum prunifolium was administered to counteract uterine contraction, whilst ichthyol and morphine tabloids were applied to the cervix, as there was much pain. All the objective and subjective symptoms shortly disappeared. The patient was delivered at term of a living child, and the puerperium was normal. This case shows how tolerant is a gravid uterus. That organ bore bleeding, exudation, and tonic contraction, which at one time almost effaced the vaginal portion of the cervix; there was also fever. This case also shows that perimetritis as well as parametritis may occur during labour, contrary to Veit's opinion. Viburnum seeems an excellent uterine sedative in a case like the above.

## THERAPEUTICS.

**(383) Chloralose in Mental Affections.**

BRESSON (*Thèse de Paris*, 1901) pursued a systematic series of experiments to determine the efficacy of chloralose in various mental affections. Chloralose is anhydrous glyco-chloral, a crystalline powder fairly soluble in hot water, and prepared by the action of glucose on chloral at a temperature of 100° C. It has the empirical formula $C_8H_{11}Cl_3O_6$. Fourteen cases in all (7 males and 7 females) were treated, their ages varying from 13 to 46 years. The conclusions reached were as follows: (1) It produces sleep rapidly, the sleep being fairly deep and uniform. (2) Given to dogs it produces "psychical blindness," the animals moving about like somnambulists. (3) Chloralose is superior to chloral in hypnotic power with a smaller dose; it also produces less cerebral congestion than the latter. (4) Some troublesome sequelæ may follow its use, especially ataxia and titubation, as if the patient was drunk, exaggeration of knee-jerks and of deep reflexes, and a state of psychical blindness resembling induced somnambulism. (5) Among rare sequelæ are tremblings and startlings (or shocks). (6) During chloralose sleep free perspiration occurs (dilatation of the cutaneous vessels), and urine may be passed. (7) The cardiac condition should be tested before giving the drug, as collapse may occur with a dilated or diseased heart. (8) The principal indications for the use of chloralose are marked insomnia with or without agitation. It is especially useful in cases of hysteria and early general paralysis with insomnia. (9) In epileptic vertigo it diminishes the attacks. The main contraindications are diseases of the respiratory apparatus, phthisis, and acute hallucinations. (10) The dose is 0.15 to 0.75 gram, and may be slowly increased after a while.

**(384) The Effect of Food in Epilepsy.**

ON surveying the literature of therapeutic effect, and influence of various food stuffs on epilepsy, H. Schlöss (*Wien. klin. Woch.* No. 46) finds that in almost every instance, different observers come to conclusions, which are directly in contradiction to those of others. Some claim for meat diet, a distinctly beneficial effect, while others consider it to be harmful. The same can be said of milk diet and other foods. In order to discover the actual effect of both meat and milk diet, he has made especial experiments with 16 patients, which he divided into 4 groups. The first 2 groups he fed on an exclusively meat diet for 6 weeks, and on an exclusively milk and vegetable diet for another six weeks, while groups 3 and 4 received the milk diet first, and the meat later. Comparing the number of attacks before the experiment was begun with that in each of the six weeks, he found neither diet exercised any appreciable effect on the number of attacks, while the general condition of the patients also remained unaltered. He next turned his attention to the work of Toulouse and Richet. These observers claimed that by lessening the amount of sodium chloride in the organism, and introducing large quantities of bromide, the epileptic attacks lessened, and gradually disappeared. The usual amount of salt taken in by an ordinary man appears to be about 4 grams, while the minimum is 2.4 grams. Choosing a diet, which is very poor in common salt, he found that he could diminish the intake to 2.1 grams, while the caloric value of the diet was represented by 2,387. At the same time, the patients received 4 grams of Erlenmeyer's mixed bromides. As 4 out of the 5 patients experimented on lost in weight, the diet was increased to represent 3,243 calories. All 5 patients stil lost in weight. The diet was then

further increased to 3,760 calories. Still the patients lost in weight, became weaker and paler. At the same time, the number of attacks diminished: in 2 they ceased altogether, while in the other 3, they became of very rare occurrence. The psychical disturbances, which had previously occasionally appeared, were unaffected. That the loss of chlorides is responsible for the loss of weight, weakness, pallor, etc., is proved by Forster's experiment. He next investigated the effect of fat and acid foods. The end result of these experiments show that neither of these forms of food has any influence on the number of the attacks. The various opinions expressed with regard to the effect of alcohol on epileptics, and especially Jolley's opinion that it is not necessary to deny all epileptics all forms of alcohol, incited him to inquire into this question. He began by allowing each patient ½ litre (= 17½ ozs.) of beer every evening, but none appeared to be affected by this. He next allowed a half of a litre at dinner, as well as a half at supper. It appeared that this quantity also had no effect in increasing the number of attacks.

#### (385) Vanadium.

Lyonnet, Hartz, and Martin (*Lyon Méd.*, November 10th, 1901) have had further experience, experimental and therapeutic, of the use of vanadium, and claim to have confirmed the conclusions which they published in 1899. Tracings taken after the experimental injection of meta-vanadate of sodium into the circulation of animals show that the heart is but little affected at a time when respiration is profoundly modified. Thus, in one instance with Cheyne-Stokes respiration the cardiac contractures were vigorous and were well registered by the cardioscope of Laulanié fifty seconds after the breathing had ceased. When used therapeutically no ill-effects have followed the administration of 4 to 5 mg. of meta-vanadate of sodium per diem, given three days in each week. There is now a mass of independent evidence to show that vanadium stimulates the gastric mucosa, increases the appetite, and thus improves the general condition of the patient. The drug has been found of especial service in cases of tuberculosis, chlorosis, neurasthenia, and occasionally in cancer of the stomach. Various combinations of vanadic acid have been tried. Strychnine vanadate—prepared by mixing sodium vanadate and strychnine sulphate—has been employed with satisfactory results in tuberculosis, neurasthenia, and atonic dyspepsia. Vanadates of caffeine and of quinine and a phospho-vanadic acid have also been prepared and used. The authors believe that they are justified in claiming an important place for vanadate of sodium among the stimulants of appetite and nutrition.

#### (386) Bacillol and Lysoform

The two new disinfectants, bacillol and lysoform, are coming into frequent use, and Cramen (*Münch. med. Woch.*, October 8th, 1901), who has tested their action carefully, considers it important to detail their antiseptic powers. While he finds that lysoform falls very far short of what is required for an antiseptic, he finds that it is useful as a deodorant and cosmetic, when its high price does not exclude its use. Bacillol, on the other hand, which is said to contain 52 per cent. of cresol, is a very useful antiseptic, and in view of its cheapness, its odourlessness (in 2 to 3 per cent. solutions), it should take the place of lysol and even of carbolic acid. He details the methods which he adopted in testing the action of the two drugs. He found that ½ per cent. bouillon dilution of bacillol was incapable of killing staphylococcus aureus in 15 minutes, but in 20 did so. All organisms experimented on with 1 per cent. solution were killed within 8 minutes, while with 2 per cent. all were killed in 1 minute. Staphylococcus aureus was not killed after 60 minutes in 3 per cent. lysoform, nor were typhus bacilli killed after 30 minutes in the same strength solution. For practical purposes (destroying tubercle bacillus in sputum, disinfecting hands, etc.), 2 per cent. or 3 per cent. bacillol will be found sufficiently active. A 3 per cent. solution of lysoform costs 7½d. per pint, while a 2 per cent. solution of bacillol only costs about ⅔d. per pint.

#### (387) Formalin for Night Sweats.

K. Wohrn (*Deut. med. Woch.*, October 24th, 1901) advises the external application of a fluid soap, made with 5 to 10 per cent. of formalin and linseed or olive oil. He makes the soap he recommends chiefly for children. He rubs the soap on the back of the patient energetically for some minutes every evening. The skin is next freed from the soap with a damp towel, and then carefully dried. He has used the method in 12 cases, and has observed a complete disappearance of the sweating in 7. In 4 others the symptoms materially diminished, while in the last case the treatment was interrupted early on account of the irritation of the conjunctivæ. The soap is further to be recommended on account of its cheapness, 250 grams (about half a pound), which quantity will suffice for four weeks, costs 1s. 4d.

## PATHOLOGY.

#### (388) Experimental Phthisis.

Baumgarten (*Wien. med. Woch.*, November 2nd, 1901) refers to the theory held by some that pulmonary phthisis is never caused by the tubercle bacillus unless patches of chronic inflammatory infiltration are present; only then does the bacillus, when inhaled, find a suitable soil for its development. This view is supposed to explain the fact that all attempts to produce pulmonary phthisis, as distinct from miliary tuberculosis, experimentally, have failed. The longer the time between inoculation and the fatal issue the more chance there is of the occurrence of caseous degeneration and cavities. These, however, are always small, and lack the characteristic distribution of phthisical lesions. The writer long vainly attempted to obtain a product which, when inoculated, would produce phthisis, by employing bacilli of varying virulence and in varying doses. At last chance showed the way. He was experimenting as to the paths by which tuberculosis of the urogenital tract progresses, and found that virulent tubercle bacilli produced typical apical phthisis, with large vomicæ and caseating nodules when they entered the system from the intact urethra or bladder. The reason is probably that the bacilli have to penetrate a layer of stratified pavement epithelium before reaching the connective tissue and lymphatics, and that therefore only a a few or even a single one can arrive in any given part of the lung simultaneously. By this slow and gradual method of infection, so different from the intravenous injections commonly practised in experimental inoculation, the tuberculous predisposition of the apices has full play: if, however, the lungs are flooded simultaneously with crowds of bacilli the universal infection overshadows the greater predisposition of the apices. Baumgarten is convinced that some such process plays the preponderating part in the production of phthisis, and while admitting the possibility, denies the probability of the frequent occurrence of direct aërial infection, that is, he believes that phthisis is usually of hæmatogenous origin. The more one compares tuberculous lungs, the more one sees that there is every gradation between acute miliary tuberculosis and chronic ulcerative tuberculosis or ordinary phthisis. Ribbert, who also believes in the hæmatogenous origin of phthisis, does not discard the inhalation theory: the bronchial glands are first infected aërially, then the lungs through the blood. Baumgarten goes further and believes that even the bronchial glands are usually infected hæmatogenously.

#### (389) The Bones in Raynaud's Disease.

Carl Beck has investigated the condition of the bones in two cases of Raynaud's disease (*Amer. Journ. Med. Sci.*, November, 1901), and his observations support the statement that the disease is not confined to the soft tissues. Careful skiagraphs were taken by means of the Roentgen rays, which showed an osseous proliferation at the upper end of the second phalanges; the epiphyseal ends of the second, third, and fourth metacarpal bones were thickened; the third phalanges appeared triangular, and resembled claws. Similar conditions were found in a feeble male patient, aged 30, who had had his right foot removed by a Syme. From these cases it would seem that the nutrition of the bone is liable to suffer extremely from this disease.

# AN EPITOME
OF
# CURRENT MEDICAL LITERATURE.

## MEDICINE.

**(390) Abdominal Pain in Typhoid Fever.**
Georges Martin has made a series of observations on the different forms of abdominal pain and their significance in typhoid fever (*Thèse de Paris*, 1901). A certain amount of abdominal pain seems to be the normal condition of affairs in typhoid, but in many instances such pain takes on special characters, and may demonstrate the presence of some complication, pneumonia pleural or otherwise. At times cutaneous hyperæsthesia is so marked that the patient cannot bear to be touched and his cries almost suggest peritonitis. Abdominal pain in typhoid may mean retention of urine. In some instances hæmorrhagic effusion into the abdominal muscles has been the explanation. If menstruation persists during the course of typhoid, which is in itself exceptional, there may be intense pain. Such cases must be regarded with caution, as hæmorrhage and pain may all the time be due to imminent abortion. It may happen, again, that during the course of typhoid fever the patient suddenly complains of violent abdominal pain, the parietes becoming distended and tense. The patient utters sharp cries, and everything suggests perforation. Careful examination in such cases has demonstrated the presence of hysteria. Epigastric pain accompanied by vomiting has been described by Chuffard, in some cases as the dominating symptom of the disease. Such pain may be provoked by the ingestion of some food material. When diarrhœa is intense in the course of typhoid, it may give rise to a sharp pain of a colicky character, coming on especially when the bowels are about to move. The pain is generalised, and careful consideration of this fact will sometimes prevent serious mistakes in diagnosis. Inversely, constipation with accumulation of fæcal material may be the cause of severe abdominal pain. The too early administration of solid food may also cause pain. Perforation and peritonitis are, of course, the chief causes of abdominal pain, and it is from such that the other conditions require to be diagnosed. Pain in the region of the right hypochondrium suggests the possibility of hepatic complications such as congestion of the liver, hepatic abscess or empyema of the gall bladder. Similarly, on the left side it may be due to infarction of the spleen. On the other hand, Martin describes cases of severe abdominal pain without there being any indication of its cause, and at the *post-mortem* examination nothing being found to account for it. Many cases are quoted in which the pain was so severe that the abdomen was opened with a view to discovering the cause.

**(391) Plague.**
Terni (*Rif. Med.*, October 8th, 9th, and 10th, 1901) gives some of the results of his experience of over 1,000 cases of plague, seen chiefly at Rio de Janeiro. In differentiating between plague bubo and glandular enlargements from other causes, one ought to pay particular attention to the mode of onset, the character of the local pain, the temperature, and any symptoms of toxæmia, for example, tachycardia and delirium. In bubonic plague there is no suppuration during the acute period of infection. The septicæmic form of plague is always preceded either by gastro-intestinal infection or by bubos (perhaps too small to be felt) which are generally cervical or axillary. In many of the cases diagnosed as septicæmic from the clinical point of view death occurs really from general toxæmia before the bacilli have reached the blood. Septicæmic plague is never primary. The classical type of plague pneumonia has a close analogy to the pneumonia of influenza in its rapid onset and equally rapid course. But there is another type of much slower onset and development, the general and local symptoms appear to be slight, but death is apt to occur quite suddenly between the fifth and tenth days. Certain skin lesions—primary and secondary, and mostly trivial in character—are discussed. The toxic poison in plague appears to act almost exclusively on the circulatory system; even the disturbances of the nervous system are correlated with the want of equilibrium in the circulatory system. Examination of the blood for bacilli is most uncertain and unreliable; it is in the lymphatics and lymph serum that they can be most readily found. As a culture medium the author prefers glycerinated (3 per cent.) agar. The bacteriological and microscopical examination gives such satisfactory results that it can be safely relied on in doubtful cases as a means of diagnosis.

**(392) Cinchonism, Tinnitus, and Articulation.**
Carl Seiler (*New York Med. Record*, October 26th, 1901) records some observations on this subject. His conclusions are the result of a large number of investigations extending over more than ten years. Much difficulty was naturally experienced in getting definite data as regards the loudness and pitch of subjective noises. Valuable help, however, was obtained occasionally from musically-trained patients, complete sets of tuning-forks and rods, etc. Seiler found: (1) That ordinary tinnitus aurium never transgressed the limits of pitch from D—1 (297 vibrations) as the lowest point, to F—2 (704 vibrations) as the highest. It had no appreciable effect upon articulation or vocalisation, but invariably and materially affected the perception of those sounds which had nearly the same number of vibrations per second. (2) That subjective noises of so-called cinchonism arising from the administration of such drugs as quinine, sodium salicylate, alcohol, ether, and many others were invariably of a very high pitch, varying from G—3 (1,584 vibrations) to as high as I—4 (3,960 vibrations) and even higher. (3) In the case of musically educated persons it was found that the noise was composite in character, being made up of a variable number of individual sounds. These were sometimes harmoniously blended, thus forming a chord, the fundamental tone of which varied in pitch with the drug used. It was usually lowest if quinine was the cause and highest where sodium salicylate was being exhibited. This Seiler had frequently verified in his own person. (4) Any composite noise of high pitch, such as the hissing of steam or the sound of a rapidly-revolving grindstone, interfered both with pronunciation of certain consonants and with their proper appreciation by the ear. Such consonants were those which had for their characteristic (as pointed out by Helmholtz and others) a combination of sounds of very high pitch, such as, "th," "s." "sh," "z." This fact was recognised by workers among machinery when their attention was called to it. It could be easily explained by the well-known acoustic law of interference with each other of sound waves of nearly equal length; and that the higher the pitch of two non-harmonious sounds, the greater the difference can be in the number of vibrations allowing interference. But acoustic laws completely failed to explain how subjective, and in reality physically non-existing noises, such of those of cinchonism, undoubtedly interfered with the *pronunciation* of those consonants already referred to, and even with the quality of high-pitched vowel sounds.

**(393) Polyneuritis following Whooping-cough:**
Guinon puts on record, *Journ. de Méd. et de Chir. Prat.*, October 10th, 1901) the case of a child, aged 5, affected for some time by paralysis of the neck, the trunk, the lower limbs, accompanied by severe general pain and tenderness, especially on pressure, all of which symptoms followed a very typical attack of whooping-cough. Later on there was respiratory embarrassment, the diaphragm, however, escaping, as also the internal recti of the eyeballs. All the symptoms subsided gradually. The wide character of the symptoms, the favourable evolution, and the electrical reactions all pointed to a diffuse neuritis. Other writers, such as Charles Leroux and Moebius, have described neuritis as a sequela of whooping-cough.

## SURGERY.

**(394) A Contraindication to Circumcision.**
Rey (*Jahrbuch für Kinderheilkunde*, June, 1901) of Aix-la-Chapelle, contributes an article against indiscriminate circumcision. He gives a definite contraindication thereto, which has not been properly recognised as yet, namely, cystitis, the signs of which often escape notice, or are mistaken for those of a tight pre-

puce. In infancy there is naturally what may be called physiological phimosis, and the foreskin cannot be retracted without exerting undue force. It grows looser, and its orifice expands during childhood, so that by 8 years of age it can be readily brought back over the glans. Failure of ready retraction in early childhood, therefore, does not indicate operation, and causes no symptoms. If the infantile condition persists into adolescence, and then gives rise to difficulty, or if there is a congenital narrowness of the opening, causing symptoms from the first, operation is of course required. The Jews perform the rite on the eighth day, the Egyptians and Turks at puberty, while the Persians choose the sixth year. None of these nations select the ages between one week and five years, and that is the period in which it has become recognised lately that cystitis is a very common complaint. Urinary troubles, indeed, during that period are very seldom due to phimosis, but usually to urethritis or cystitis, and these diseases are the strongest contraindication against producing a wound at the end of the penis. Of cystitis the first signs are an ammoniacal odour of the napkins, and the reddish ring-like stains on them. It soon produces a peculiar intertrigo which, avoiding the folds in the skin, which are protected from the acrid urine, affects those parts in contact with the wet napkins. This distribution distinguishes it from eczema and ordinary intertrigo. The passage of urine is interfered with by reflex impulses from the inflamed bladder wall, hence the temporary attacks of retention. The end of the penis gets inflamed or ulcerated from evaporation of the urine and external pressure. The prepuce becomes swollen, and its orifice is pushed out of line with that of the urethra; hence the sac gets irritated by urine which decomposes. But if there is no prepuce in front of the glans, the latter becomes the end point subject to the corroding action of the evaporating urine, and ulceration of the urethral orifice is liable to ensue. This may go on to stricture, and even cause death, by the effects of the backward pressure, or it may leave scars there which in later life set up intractable nocturnal incontinence of urine. Rey declares that all the really bad cases of that complaint in his experience occurred in children with defective or removed foreskins. The prepuce, whose function has long been debated, and which has often been deemed worse than useless, can thus be seen to be a great protection to the glans should cystitis arise. On this account Rey advocates the avoidance of circumcision till after the fifth year, except it be required soon after birth for congenital cases not curable by dilatation. Inflammatory conditions of the prepuce require gentle dilatation and antiseptic lotions syringed in. Cure the inflammation in the mucous membranes of the urinary passages by milky diet, calomel and salol, and the swelling of the prepuce and the reflex retention of urine will soon subside. The bad effects of operating when there is cystitis are the following: Bursting of stitches, ulceration of the wound edges, extreme œdema—sometimes permanent, relapse from cicatricial contraction, and, worse than all, ulceration of the urethral orifice. These are common mishaps after circumcision, and have been looked upon as unavoidable. Now they should be known to be due to operating at all upon cases which require really nothing but medical treatment.

**(395) Radiography in Spinal Caries.**

Kirmisson (*Rev. d'Orthop.*, No. 6, 1901) holds that with regard to diagnosis and prognosis, and also to therapeutical indications, examination of the spinal column by the *x* rays in cases of Pott's disease is of very great importance, and ought henceforth to be methodically applied in the clinical study of this morbid condition. In cases in which the diagnosis is rendered uncertain by the absence of a distinct projection of the spines, the existence of the disease may be thus proved by the disappearance of the clear intervals corresponding to the discs, this disappearance indicating fusion of two or more vertebral bodies, by altered form of one or several vertebræ, and by more or less irregular and extended dark shadows, corresponding to masses of caseous exudation. Radiography, it is stated, reveals that in caries of the upper part of the thoracic spine the affected bones are very frequently surrounded by a thick mass of tuberculous exudation, a condition which accounts for the frequent occurrence of paraplegia in association with the disease in this region of the spine. After prolonged treatment it is by radiographic examination alone that the surgeon can be assured, even in the presence of the most favourable signs, that the patient has recovered and is able to walk. Restoration of general health and freedom from pain are, the author states, no sure indications of the absorption of exudation at the seat of disease and of the cessation of suppuration.

**(396) Wound of External Iliac Artery Treated by Suture.**

Hogarth Pringle (*Scot. Med. and Surg. Journal*, October, 1901) records a successful case. The patient was a labourer, aged 45, and he had been stabbed profusely with a pocket knife. The wound was situated on the antero-internal aspect of the vessel, and was about a quarter of an inch in length. It lay rather obliquely to the axis of the artery, so that, owing to the contraction of the muscular coat, it had an elliptical shape. The site of the wound was about a quarter of an inch above the origin of the deep circumflex iliac. The patient when seen was collapsed; his clothes were soaked in blood, pulsation below was feeble, and a large extravasation had formed in the left iliac fossa. A small clot which projected through the opening in the vessel was removed, the aorta being compressed. The sheath of the artery was much bruised, but the iliac vein was uninjured. The artery was sutured with catgut and the deep circumflex iliac tied. A very decided kink was produced in the artery on releasing the aorta, but no leakage took place, and the tibial pulses at the ankle showed no difference in force. The patient recovered without a bad symptom, and when seen six months later was at work without any sign of hernia or yielding of any of the arterial coats, nor had he felt any pains in the limb or weakness.

## MIDWIFERY AND DISEASES OF WOMEN.

**(397) Abortion and Uterus Septus.**

Fieux (*Rev. Mens. de Gynéc., Obst. et Péd. de Bordeaux*, July, 1901) was consulted by an intelligent lady, aged 27, who could not understand why all her nine pregnancies had ended badly. Seven times had she aborted between the second and fifth month, whilst on one occasion, the seventh pregnancy, premature labour occurred at the seventh month, and the ninth pregnancy ended at eight months and a half; the children were born alive in both cases, but soon died. The ovum had not perished in at least five out of the seven abortions; there was no evidence of syphilis in the patient or in her husband, nor any proof of pelvic inflammation or auto-intoxication of pregnancy. On bimanual palpation the uterus seemed perfectly normal and lying in its natural axis. There was no depression on the fundus. Through the speculum the cervix seemed healthy; a little transparent mucus oozed from the os externum. The sound passed 3 inches with ease, but with care Fieux succeeded in passing a probe for 2 inches a little to the left of the sound. The two instruments diverged slightly, and were clearly separated by a septum. It was evident that the larger cavity was growing more tolerant, as the seventh and ninth pregnancies had advanced much further than the rest. Fieux held it reasonable to suspect that the abortion as early as the second month in the fourth pregnancy and the abortion at the third month in the eighth represented gestation in the left, or least developed, uterine cavity.

**(398) Danger of Partial Operations on the Tubes.**

Henrotin (*Amer. Journ. Obstet.*, September, 1901) writes, as the result of long experience, against treatment of diseased tubes by mere incision (salpingotomy) or by partial and designedly incomplete resection. They are most undesirable operations, and only the most formally-expressed desire for offspring on the part of the patient, after explanation of the uncertainty of results, will warrant their performance. Pyosalpinx always demands exsection, and any tube materially damaged by any disease should be removed in its entirety. Henrotin has performed at least 250 operations, which might be classified as salpingotomies, salpingectomies, and ovarian resections. He

could safely state that 40 per cent. might be termed delayed and partial cures and failures. Of this 40 per cent., the heaviest proportion by far, comes from such as have had salpingotomy or partial resection of the tube performed. For every baby born in the after-history of a series of these so called conservative operations on the tubes there would be forty uncured or partially-cured patients.

**(399) Malignant Hydatidiform Mole.**

Solowij and Krzyszkowski (*Nowe Lekarskie*, 1900, Nos. 22 and 28; *Revue de Gyn. et de Chir. Abdom.*, May-June, 1901) observed a very distinct case of this affection in a woman, aged 47. She had borne eleven children, and the last pregnancy was five years before observation; she had never aborted. The period had ceased for two and a-half months; since then uterine hæmorrhage was continuous, and for a week abdominal and lumbar pains had been felt. The patient was cachectic. A smooth, hard, immovable tumour, of the size of a fœtal head, could be felt above the symphysis. It proved to be an enlarged uterus, and a painful swelling lay in the right fornix. A spongy, bleeding mass protruded at the os on the day after examination; a day later the cervix was dilated and a typical hydatidiform mole was removed with much clot. Free hæmorrhage followed, and was checked by the tampon. Death from septicæmia occurred a few days later. The uterus was examined after death. The new growth had invaded all the uterus, destroying the anterior wall and fundus, the appendages, and broad ligaments. The right ovarian vein was plugged by the new growth, and there was embolism of the right pulmonary artery. Metastatic deposits were found in the lower lobe of the left lung; they consisted of sessile and pedunculated vesicles, as in the mole. Syncytial cells were disseminated over the neoplastic deposits and the uterine parenchyma. According to Veit, the origin of deciduoma malignum and of hydatidiform mole are different. He admits that this form of mole was detected in 40 out of 89 cases of deciduoma reported by different observers. Unfortunately it is not easy to distinguish an innocent from a malignant hydatidiform mole. It becomes dangerous after the second month. About 10 per cent. of these moles are malignant. The removal of any such growth entire is very difficult late in pregnancy, therefore, considering the danger of leaving relics, Solowij advises total hysterectomy.

**(400) Ovarian Cancer in a Child Simulating Pregnancy.**

Walker (*Monats. f. Geburts. u. Gynäk.*, September, 1901) publishes a case of much medico-legal interest. A girl, aged 11, had brown uterine discharge which was taken by her parents for menstruation. Five months later the abdomen was noticed to be distinctly swollen. Pregnancy was diagnosed by a physician, the patient admitting that she had been seduced. The circumference of the abdomen was 30 inches, the tumour closely resembled a fœtus and a *souffle* was detected. The cervix seemed expanded, but the precise relations between the tumour and the uterus could not be determined. A fluid-like colostrum issued from the nipples. At length the sound was used, then the uterus was found retroverted, measuring $2\frac{3}{4}$ inches. At the operation a large cancerous tumour of the right ovary of a peculiar red colour was detected and removed. The left ovary was apparently healthy, so it was not removed. The report of the microscopical appearance of the tumour is not conclusive as to its precise nature.

## THERAPEUTICS.

**(401) Poisoning by Boracic Acid.**

Rinehart (*Therap. Gaz.*, October 15th, 1901) records two rare cases of the symptoms of poisoning with boracic acid, and points out the importance of the subject in view of the use of boracic acid as a food preservative, and the general belief in its supposed innocuousness. In 2 fatal cases cited by Wood, of Philadelphia, the symptoms were nausea and vomiting, hiccough, an erythematous skin eruption, fall of temperature, and fatal collapse. The mind remained clear. The textbook dose of boracic acid—10 grs. every four or five hours—is regarded as too large and prone to induce symptoms of cardiac enfeeblement and collapse. Case I.—Man, aged 38 years, had posterior urethritis treated with weak $AgNO_3$ solution locally, and 5-gr. doses of boracic acid by the mouth every four hours. Two days later there followed extreme weakness, and an erythematous rash beset with papules and vesicles developed on the back of the hands and between the fingers. Pulse weak, but not accelerated. The symptoms subsided slowly upon withdrawal of the boracic acid, and reappeared on resuming the drug. The case would probably have ended fatally if the cause of this alarming collapse had escaped detection. Case II.—Man, aged 50 years, had a suprapubic lithotomy performed on him, and the bladder washed out daily with saturated solution of boracic acid, and 5 grs. of the drug given by the mouth every four hours. Ten days after the operation there appeared an erythematous rash about the wound and spreading over the hypogastrium. Scales and crusts formed on the rash, and the skin thus affected became thickened and infiltrated as in eczema. On discontinuing the boracic acid the eruption slowly disappeared, and on resuming the drug it reappeared in two days. The drug was slowly eliminated from the system, and hence the rash could be made to reappear with ease. Albuminuria and weakness became prominent symptoms during the appearance of the rash in this patient; the pulse was feeble, nausea was present, and at the height of the eruption the temperature rose one or two degrees above the normal. Rinehart concludes that in view of the above facts the use of boracic acid as a food preservative should be discontinued, "as the poisonous effects of any quantity sufficient to preserve food would appear to be proven."

**(402) Electricity and Chloroform Anæsthesia.**

S. Jellinek (*Wien. klin. Woch.*, No. 45) makes a preliminary statement on his observations dealing with the effect of electrical currents on anæsthetised animals. He says, however, that one is not yet justified in drawing any practical conclusions from his results. He found that if one applies a high frequency interrupted current, with the poles in the fauces and rectum, to a rabbit, the animal either dies instantaneously, or it may be paralysed in all four limbs, or a paraplegia of the hind extremities may be caused, or may be attacked by "nodding spasm," refuse its food, and soon die. A very different effect, however, is produced when the current is applied to a chloroformed animal. He produced deep anæsthesia with chloroform in two rabbits, so that they did not react to any stimulus, neither to hot or cold applications, nor to needle pricks in the spinal cord and elsewhere. A strong high-frequency current was applied to Rabbit No. 1. Immediately marked opisthotonos appeared, the animal attempted to spring up, fell over, rolled about, cried out, and in the course of a few minutes gained its four feet, and walked about naturally, only exhibiting signs of anxiety. The control Rabbit No. 2 showed superficial irregular respiration and died soon after. On repeating the experiment another control rabbit lay in deep narcosis, but eventually recovered after fifteen minutes. He deduces from this that a strong current of definite alternation and situation of the poles, which either kills or seriously injures a rabbit in the wakeful condition, acts as a life-saving agent in the condition of dangerous chloroform anæsthesia. Jellinek has set himself the task of continuing his observations on other animals and with other anæsthetics.

**(403) The Treatment of Anthrax.**

The expectant treatment of anthrax in the human subject is strongly supported by v. Bramann and his pupils, while the energetic local treatment has its champion in Germany in Strubell. Considering the arguments of both sides carefully, and making his own deductions by comparing a severe case of his own in which recovery took place, in spite of practically no general and local treatment, with one of Strubell's, in which recovery followed energetic cauterisation and other local treatment, Schultze (*Deut. med. Woch.*, October 3rd, 1901) declares himself rather in favour of local treatment, but by no means wholly impressed by the necessity of it. He has seen a case in which the prognosis appeared to be very bad recover without much treatment, and on the other hand regards energetic local

interference as not altogether free from danger. On the whole, he advises early cauterisation of the pustule, and even destruction of the healthy surrounding tissue, whenever this is practicable.

**(404) Lactic Acid in Alopecia.**

Balzer (*Journ. des Pratic.*, August 24th, 1901) recommends the following treatment for alopecia. After cutting the hair short and washing with soap the following lotion is applied. Perchloride of mercury ½ part, acetic acid 1 part, alcohol 100 parts, ether and alcoholic solution of lavender of each 50 parts. After drying the head is rubbed with lactic acid, about 30 per cent.

## PATHOLOGY.

**(405) The Influence of High Temperatures on Tubercle Bacilli in Milk.**

Barthel and Stenström (*Centralbl. f. Bakt.*, October 8th, 1901), in reviewing recorded experiments on the sterilisation of tuberculous milk, remark on the very variable results obtained by different observers. Bang has stated that heating tuberculous milk to 80° C. is not sufficient to kill the bacilli, but that a temperature of 85° C. is sufficient for the purpose. Forster has found 70° C. for five to ten minutes capable of killing the organism; De Man, 70° for ten minutes and 80° for five minutes. Galtier has shown that milk submitted to 70°, 75°, 80°, and 85° for six minutes is still capable of conveying infection, and others have had similar results. Barthel and Stenström have conducted experiments which go to show that the chemical reaction of the milk has much to do with the facility with which it is sterilised. The material was obtained from a cow with an udder in an advanced state of tuberculosis. Guinea pigs were used to test the results, and the effects of 65°, 70°, 75°, and 80° were studied. The results were positive in all cases; that is to say, a temperature of 80° for ten minutes, a temperature of 75° for fifteen minutes, 70° for fifteen minutes, and 65° for twenty minutes were all incapable of sterilising the milk. These results the authors interpret as follows: Storch has shown that the chemical changes in milk are the more marked the more advanced the disease of the udder, and that the reaction becomes more and more markedly alkaline. On the other hand, it has long been known that it is more difficult to sterilise an alkaline than a neutral, and a neutral than an acid fluid. The specimen with which they worked was strongly alkaline, and to this they ascribe the difficulties in its sterilisation. Variations in chemical reaction explain, in their opinion, the variations in the results obtained by other investigators.

**(406) Spirochæta Bacillus.**

H. Solomon (*Deut. med. Woch.*, August 22nd, 1901) has investigated the subject of the throat affections due to the spirochæta bacillus. The material at his disposal consisted of 737 examinations of the faucial exudations from cases of suspected diphtheria. Diphtheria bacilli were found in about 30 per cent. of all the cases. In three cases bacilli spirochæta were found, and no diphtheria bacilli were present. Other methodical examinations of the exudation from the throat of a suspected case have given similar results. In no case has the combination of diphtheria bacillus and bacillus spirochæta been found, and therefore Solomon says that the presence of bacillus spirochæta in the exudation is almost conclusive evidence against diphtheria. Although the clinical conditions under which the bacillus is met are very like that of diphtheria, the most common pathological change noted when this organism is found is secondary syphilis. He gives the history of two cases. The first was that of a girl who was under treatment for ulceration of the tonsils, from the surface of which spirochæta bacilli were found. Later on the tonsillar condition took the form of mucous plaques, and suggested strongly that there was secondary syphilis. After the course of a few days a macular papular erythema appeared, which removed all doubt as to nature of the condition. The second case was that of a girl who was under treatment for a papular eruption of the vulva: she had been infected with syphilis a year and a-half previously. A short time after admission into hospital she complained of sore throat. The tonsils were ulcerated, and there was a profuse membranous exudation all over the fauces. Bacteriologically, spirochæta bacilli and fusiform bacilli were found, but no diphtheria bacilli. After five weeks the local condition changed, and typical mucous plaques were found. He relates that he has only observed two cases in which the bacilli were found in stomatitis, although Nielot and Marotte have observed this condition more frequently, and have recently described it. They failed to obtain pure cultures, but succeeded in collecting from the condensation water of certain media—mixed pure cultures of fusiform and spirochæta bacilli.

**(407) Balantidium Coli as a Cause of Chronic Diarrhœa.**

Solowjew (*Centralb. f. Bakt.*, June 13th and 24th, 1901) reports a fatal case of infection with this parasite. The case occurred at Tomsk. The patient was a man, aged 54, with symptoms of headache, loss of appetite, diarrhœa, and hæmorrhage. The parasite was discovered in the dejecta during life in large numbers. It is irregularly oval in shape, about 40μ by 65μ in size: the surface is covered by cilia, and in the centre are two large vacuoles and a nucleus. In the colon and rectum were large ulcers extending in many places through the mucosa and into the muscular coat. Micro-organisms of various kinds were found on the surfaces of the ulcers and in the more superficial layers, but the parasites alone in the deeper parts of the necrotic areas. The micro-organisms were evidently of secondary import. Authors have differed on the pathological significance of these parasites: some consider them harmless, others that they attach themselves only to previously diseased mucous membrane, and others again that they are directly responsible for catarrh, necrosis, and ulceration. The investigations of Solowjew prove that the last view is the correct one. The parasites make their way by active movements through the sound mucosa into the submucous and muscular strata, and there produce inflammatory lesions and necrosis, ulceration follows.

**(408) Observations on the Actinomyces.**

Mertens (*Centralbl. f. Bakt.*, May 15th, 1901) records certain observations on the morphology and the pathogenic action of actinomyces. Kruse and other writers have described two forms of this organism differing in their culture appearances, the one being described as an aërobe and possessed of no pathogenic activity, the other an anaërobe and capable of producing the characteristic lesions. Mertens shows the identity of these forms inasmuch as he has cultivated both types from one strain, the one series of cultures being kept under aërobic, the other under anaërobic conditions. Contrary to the accepted opinion, both types are capable of giving rise to typical growths in animals, but the anaërobic form is the more virulent.

**(409) Inoculation of Syphilis in Animals.**

Hugel and Holzhauser (*Archiv f. Derm. und Syph.*, February, 1901) have made experimental inoculations on pigs with the blood of a patient in the secondary stage of syphilis. Ten c.cm. of blood were injected subcutaneously. In six weeks a roseola appeared, and four months later a papular eruption. The authors are of opinion that syphilis is transmissible to the pig.

**(410) Pneumococcus Endocarditis.**

Henke (*Virch. Archiv*, Bd. clxiii, Hft. I) gives the histories of 3 cases of pneumococcus endocarditis, and describes the *post-mortem* appearances. Different bacteria have been found in endocarditis accompanying pneumonia, in addition to Fraenkel's pneumococcus, the pyogenic streptococci and staphylococci. Netter and Weichselbaum have described pneumococcus endocarditis as an anatomically distinct form with peculiar vegetations. The peculiarities have been described as follows: The vegetations stand midway between the ulcerating and the efflorescent forms, they are large with a narrow base, smooth and colourless surfaces, and a tendency to softening. Henke's cases do not, however, support the opinion that the endocarditis produced by the pneumococcus is distinguished by any particular characteristics. The course of the disease is rapid. In such cases there is a general infection with the organism of Fraenkel; it is closely related to the streptococci, and the number of different septic lesions with which it has been found associated is now large.

# AN EPITOME
OF
# CURRENT MEDICAL LITERATURE.

## MEDICINE.

**(411) Spinal Paralysis in Syphilitic Infants.** Peters, of St. Petersburg, (*Jahrb. f. Kinderheilk*, March, 1901) describes a new manifestation of hereditary syphilis in infants, namely, paralysis of the arms and legs from changes in the spinal cord. Though the brain has been long known to be liable to suffer, the cord has hitherto been considered to be not subject to any disease in syphilis in children. Peters's communication gives us a new classical symptom, as pathognomonic of lues as palmar psoriasis or condylomata, in his opinion. The most striking feature of the paralysis is the abnormal position in the hand and forearm called by him the "flipper position" from its close resemblance to the forelimb of a seal. It is due to paralysis of the radial nerve and muscles, that is, the extensors and supinators. The wrist drops, the forearm is fully pronated, and the knuckles are directed outwards, the fist closed. Peters is the first to describe this condition. Hochsinger in 1899 described a fist-spasm in infants suffering from syphilis and other toxic diseases; but that is a spasm allied to tetany, not a paralysis; the flexors being permanently over-excited, probably from changes in the anterior horns in the cord. Peters's disease begins about the third or fourth month, when suddenly it becomes apparent that the child cannot move one or both arms and sometimes a leg as well. The affected limb hangs down limp and is hyperæsthetic. The shoulder muscles sometimes suffer alone without the forearm being in the flipper position; then the upper part of the brachial plexus is out of action, or the whole arm may be powerless except for some power in the flexors and pronators sufficient to deform the attitude of the hand as described above; then both upper and lower parts of the plexus are affected. Or the shoulder may escape and the forearm suffer alone. Formerly a condition was described by the name of pseudo-paralysis in which, in syphilitic infants, an arm suddenly became powerless and tender. It was supposed that epiphysitis or arthritis prevented the child from using the limb, and that there was no real paralysis. The future must decide whether in the light of Peters's discovery the term pseudo-paralysis is to be retained. The tenderness is ascribed by Peters to involvement of the sensory root in the cord as well as the motor. To bring out the site and extent of the paralysis, first hold the child up in the air, its belly resting on the palm of your hand; paralysis of the shoulder muscles is then obvious, and the arm hangs down limp. Secondly, place it on the bed on its back, and tickle the arm, and see if voluntary movement of forearm or hand is retained. Notice the pupil, for if the first dorsal nerve is implicated (2 out of 11 cases) the sympathetic fibres to the eye are paralysed; the pupil is contracted, the eyeball sunken, and lids lie too close together over it (Klumpke-Déjerine phenomenon). The lumbar enlargement may suffer as well; then the knee-jerks are lost or some muscles are weak, and others, for example, the ileo-psoas, are contracted. The muscles of the neck are sometimes rigid from spinal irritation when the shoulder group are paralysed. The paretic muscles lose their electrical reactions more or less. It is a limp paralysis, and so differs from cerebral palsy, from the effects of pachymeningitis or syphilitic Pott's disease. The absence of fever or previous inflammatory diseases distinguishes it from infantile paralysis and from toxic neuritis. The limb must, of course, be examined for fracture or joint disease, if necessary with with the *x* rays or under chloroform. If it exists at birth, obstetrical palsies, like Erb-Duchenne's, from injury of the brachial plexus, must be excluded. The latter is seldom bilateral, and the first dorsal nerve always escapes; its subsequent course is quite different also. Peters locates the change to the spinal cord, not to the nerve roots. In 2 cases the knee-jerk was wanting, but the leg was not paralysed; the sensory and motor roots thus escaped, but the link between them was destroyed in the cord. Its position is too regular for it to be of a gummatous nature. It is probably syphilitic arteritis, producing patches of softening in the superficial part of the cord. The disease is rapidly cured by mercury and potassium iodide, and there have been no necropsies. In half of his 11 cases, other syphilitic manifestations coexisted or followed; in the rest the history was very suspicious. Peters is convinced that the flipper position or an isolated paralysis of the shoulder group, with perhaps the eye symptom, scattered paralyses, and neighbouring contractures, are quite sufficient by themselves to allow one to diagnose and treat the case for syphilis without error, and, indeed, with striking success.

**(412) Concealed Gastric Hæmorrhage.** T. Boas (*Deut. med. Woch.*, May 16th, 1901) considers that hæmorrhage is frequently overlooked in gastric diseases, since observers rely on macroscopical appearances. He has employed Weber's modification of the guaiacum test for blood, and finds that, if the contents of the stomach are obtained by a careful use of the stomach tube a very valuable diagnostic assistance can be gained. Vomited matter is not so reliable for the purpose, as it may contain, even in intimate mixture, blood which has issued from other parts than the gastric mucosa. His observations were extended to 83 cases, and include three classes. The first class is that in which no bleeding from the stomach takes place, and includes 12 cases of gastritis anacida. 1 case of gastritis subacida, 12 cases of hyperacidity, 3 of hypersecretion of the gastric juice, and 3 of benign ectasia ventriculi. The second class is that in which hæmorrhage sometimes occurs, and includes ulcer of the stomach (4 cases) and consecutive pyloric stenosis. The third class, in which hæmorrhage was a constant symptom, includes one case of hypertrophic pyloric stenosis, and 20 cases of carcinoma ventriculi. Seventeen cases of gastric neuroses belong to the first class, and 1 case of lues ventriculi, 1 of duodenal stenosis, and 1 of carcinoma of the large intestine, belong to the second class. The tests worked exactly in each case, and he points out that the only special condition to be observed is that the tincture of guaiacum must be freshly prepared. He deals in detail with his results in cancer of the stomach. In all of his cases he discovered blood in the gastric contents. Comparing this with macroscopical appearance of the vomit, he states that in about 100 cases of cancer, which he had observed, hæmaturia was only detected in 36 per cent. Brinton gives the frequency at 42 per cent., Rosenheim puts it down at nearly 50 per cent. and Lebert only recognises it in 12 per cent. Boas believe that, since blood can by his method be found in all cases the diagnosis must be rendered easier. He does not go so far as to consider a positive result pathogenic, but in conjunction with other signs it may clear up the diagnosis in doubtful cases and is especially valuable in the differential diagnosis between cancer and chronic gastritis or neuroses of the stomach. Turing to a side issue, he considers that the detection of these small hæmorrhages in so many cases points to an important factor in the history of the condition. The patient bleeds, drop by drop, and the continuous loss goes to build up the extreme cachexia (anæmia). In consideration of the discovery he thinks that our attention should be directed toward forms of treatment which will act directly on the bleeding mucous membrane.

## SURGERY.

**(413) Carcinoma of Male Breast.** Warfield (*Johns Hopkins Hosp. Bull.*, October, 1901) adds to the statistics of Schuchardt, who tabulated in 1900 a collection of 472 cases of cancer of the male breast. Warfield finds reports of 32 cases since that date, but can add 5 personal observations. Between 1891 and 1899 inclusive, 2 out of 287 cases of mammary cancer admitted into St. Thomas's Hospital, London, occurred in men. As to age, 13 in Warfield's 36 (excluding 1 where no age was given) occurred in the seventh decade, making the largest proportion later in life than it was in earlier statistics. In one case the tumours of the breast had been noticed for thirty-five years; the shortest time between its discovery and medical consultation was two weeks. In 18 cases the right, and in 18 the left, breast was the seat of disease; in one the side was not noted. In 25 there was no report about injury, in 4 no clinical history at all, but in 8 the

patient could definite'y attribute the disease to trauma. It is interesting and important to remember that in 2 cases the nipple had been irritated by the friction of braces; both patients were aged. In 1 case a heavy watch seems to have irritated the nipple in a similar manner. Pain was only complained of in 9 cases, ulceration was noted in 13. The nipple is often involved, probably because of the limited area of the glandular tissue: in 18 cases this condition was noted, in 12 the nipple was retracted, in 1 partially and in 1 totally destroyed. Discharge from the nipple was noted in 1 of the 37 only. In 20 out of 29 where the state of the axilla was noted, the glands were enlarged; 34 out of the 37 underwent operation, all recovering save 1, where death from pulmonary complications followed, the patient being aged. Recurrence seems to have occurred in most, but reports are irregular. In Warfield's 5 cases, 1 was lost sight of; 1 died one year and a-half and 1 died one year and five months after operation; 1 was alive eight months and 1 three and a-half months after the removal of the breast. In the first case of death from recurrence, intensely severe girdle pains and paraplegia set in. There were no metastases in the internal organs, but deposits were free in the sternum, ribs, and vertebræ. One growth in the vertebral canal pressed on the seventh dorsal centrum.

**(414) Punctured Wounds of the Diaphragm.**

C. Schlatter (*Münch. med. Woch.*, August 20th, 1901) has added two cases of punctured wounds of the diaphragm treated by suture to the literature of punctured wounds. The first was that of a man who was attacked by Italians, who, after dealing him a heavy blow on the head, stabbed him in the right side. He was temporarily attended to, and on the next morning was removed to the hospital. There had been some fresh hæmorrhage during the transport. On examination, Schlatter found the patient anæmic, with a quick small pulse, and rapid breathing. On the right side of the chest the breath sounds and movements were deficient, while there was dulness at the level of the seventh dorsal vertebra behind. Heart natural, abdomen flat; right rectus abdominalis rigid. Between the ninth and tenth ribs, in the mid-axillary line, there was a punctured wound of about 1 inch in length and ½ inch in width. The ninth rib with its artery was divided. The air whistled through the wound at each respiration. There was subcutaneous emphysema. Enlarging the wound to 4 inches, he found that the right lung was retracted. Coagulated blood kept on issuing from the wound. Further, he found a ¾ inch wound in the diaphragm. Passing his finger through this wound, he discovered two wounds in the capsule of the liver, one of which had pierced the organ. The larger wound bled very freely. On controlling this by pressure, he noted that there was hæmorrhage from another wound, which, on examination, proved to be in the right kidney. There was much fluid and clotted blood in the abdominal cavity. He carefully sutured the capsule of the kidney and that of the liver through the diaphragmatic opening; then, having swabbed the peritoneum dry, he sutured up the diaphragm, then the parietal pleura, and lastly the skin. The patient made a good recovery. The second case was that of the first patient's comrade. He had also received a stab in the right side. In the right nipple line, in the seventh intercostal space, was a small punctured wound. The wound led between the seventh and eighth ribs into the pleural cavity, and, as Schlatter found on enlarging the wound, there was a corresponding wound in the diaphragm. The peritoneal cavity was not opened. The diaphragmatic wound was closed, the pleural cavity cleared of blood clot and drained. The patient made a good recovery.

**(415) Epithelioma of the Gall Bladder.**

Deetz (*Virch. Archiv.* Bd. clxiv, p. 381) reports 4 cases of stratified epithelial cancer of the gall bladder; in 2 a second primary cancer was found, the one a cylindrical epithelial cancer of the rectum, the other an adeno-carcinoma of the ductus choledochus. The gall bladder growths showed in all the cases the typical structure of stratified epithelial cancer with cell nests, and in 3 prickle cells were found. In all the mucous membrane of the gall bladder was the original seat of the carcinoma. The occurrence of stratified epithelium in this situation is remarkable. Deetz considers the various possibilities of its appearance, and concludes that the only possible explanation is the direct transformation of cylindrical into stratified epithelium under the influence of abnormal chronic irritation. This must be a rare occurrence, since the author, in a careful examination of 300 gall bladders, never found stratified epithelium even in cases where gall stones were present.

**(416) Interilio-Abdominal Disarticulation.**

Gallet (*Journ. de Chir. et Ann. de la Soc. Belge de Chir.*, No. 7, 1901) reports two recent cases, both fatal, of removal of the lower limb together with the corresponding ilium. This operation, it is acknowledged, is one of extreme severity, and has speedily resulted in death in 8 out of 11 cases. The indications for such desperate surgical treatment have been osteo-sarcoma of the pelves or the upper extremity of the femur, and extensive tuberculous osteitis involving the pelvis. This operation might also be practical, it is thought, in cases of extensive injury of the ilium. In the author's two original cases it was performed for extensive caries of the pelvis and for osteo-sarcoma extending from the pelvic bones to the thigh. In both instances death resulted from shock immediately after the operation. With a view of preventing the formation of a clot extending into the aorta and threatening gangrene of the opposite limb, the author in his operations ligatured the external and iliac arteries supplying the condemned limb. The fatal result in the two cases reported in this paper could not be attributed, the author thinks, to loss of blood, nor to the removal of so large a portion of the body. Recovery, he states, has followed removal of large abdominal tumours necessitating resection of the ilium. In one of his cases the patient seemed to be in good general health, and capable of resisting the immediate results of so severe an operation. The mode of death resembled that observed in fatal cases of splenectomy. Probably, the author concludes, as in the latter operation, the prognosis has of late years been so much improved, so interilio-abdominal disarticulation may in future give more promising results. The history of many other severe operations suggests that surgeons should not take a hopeless view of this, but rather seek for precise indications and collect available information as to its results.

## MIDWIFERY AND DISEASES OF WOMEN.

**(417) Vaginal Treatment of Fibroids.**

Dartigues (*Rev. de Gyn. et de Chir. Abd.*, September-October, 1901) publishes an important memoir on vaginal enucleation, with or without *morcellement*, by free unilateral or bilateral cervico-vaginal hysterotomy. This operation, largely performed by Segond, is suitable for sessile, submucous, and interstitial fibroids. The dangers of hysterectomy for uterine fibroids have been greatly diminished by improved methods of operating and also by asepsis; still there remains some danger, and the operation mutilates the subject. When the growth is favourably situated, Segond removes it by Amussat's long-rejected method, perfected after modern principles. Thus a young woman may be relieved of a fibroid without the dangers of sudden suppression of menstruation, and possibly she may bear children after the operation, though this is not reported to have occurred after any case in Segond's practice. Abdominal enucleation shows better results in this respect, but even its advocates admit that there is always danger of infection. Dartigues analyses Segond's cases very minutely. The steps of the operation are free division of the cervical canal, on both sides, so as to expose the fibroid or allow as easy access to it as is possible, and then enucleation with *morcellement* if necessary. The smallest fibroid removed by Segond weighed under an ounce and was as big as a walnut; the largest was over 2½ lbs. in weight. All the 25 cases collected by Dartigues recovered.

**(418) Fatty Fibroid: Lipomyoma of Uterus.**

Knox (*Johns Hopkins Hosp. Bull.*, October, 1901) detected this condition in a woman aged 62, who had borne thirteen children and miscarried three times. The menopause occurred at 50. Three

years later serous vaginal discharge was noted and returned after an interval of eight years. It soon ceased, and recurred a year later, a few weeks before operation, when moderate but continuous bleeding had gone on for a fortnight. The discharge had never been fœtid. A large firm tumour was found connected with the uterus, filling the pelvis and extending almost to the umbilicus. Kelly removed the uterus and appendages by the supravaginal route. There were no firm adhesions, but hæmorrhage gave some trouble. The patient was in fair health eighteen months after the operation. The tumour was taken for an ordinary fibroid until in the routine examination of the specimen in the laboratory of the Johns Hopkins Hospital it was discovered to be made up of large fat cells enclosed in a supporting substance composed of smooth muscle and connective tissue in varying proportions. On section the tumour presented to the naked eye all the appearances of a common myoma; but on careful scrutiny yellow deposits could be detected, and on scraping oil globules could be brought away, a condition unknown in pure myoma. Cullen, in a discussion on Knox's specimen, stated that it was the sole example of lipoma detected in 600 fibroids systematically examined in the laboratory, where there were at least three specimens under examination in which sarcomatous tissue was detected in myomata. There is little information in medical literature about lipomyoma of the uterus. Seegar (1853) reported a fatty uterine polypus. Thomas Smith and Paget described in 1861 a fibroid uterine polypus which contained an adipose tumour of the size of a pigeon's egg enucleated from the rest of the growth. Schoinski of Chicago (1880) excised a small movable tumour from the anterior lip of the cervix, and on microscopical examination it proved to be a lipoma.

**(419) Tubal Abortion and Operation.**

SPINELLI (*Arch. Ital. di Ginec.*, June, 1901) refers to the low mortality following the removal of a gravid tube in early pregnancy, when there are symptoms of internal hæmorrhage. He admits, on the other hand, that a good number of diffuse intraperitoneal hæmorrhages do not kill, but end in the formation of a hæmatocele. Unfortunately prognosis is very uncertain, and any case may end fatally. Spinelli therefore advises an exploratory incision through the vagina, preparations being made in any case for abdominal section. The escape of blood clot and broken-down tissue when Douglas's pouch is opened will confirm the diagnosis of tubal abortion. Then the uterus and tubes can be explored by the finger. The condition of the Fallopian tubes will determine the course of the operator. Should the tube be found ruptured, abdominal section is required; should there be simple and complete tubal abortion—that is, expulsion of the ovum into the peritoneal cavity, with hæmatocele—Douglas's pouch should simply be drained. When the expulsion is incomplete, or there is a tubal mole, the ovum being retained in the tube, abdominal section and removal of the tube is necessary.

## THERAPEUTICS.

**(420) Silver Treatment of Anthrax.**

FISCHER (*Münch. med. Woch.*, November 19th, 1901) reports a case of malignant pustule, which he treated with "collargolum," a soluble silver salt, applied in the form of intravenous injections. The patient had assisted in removing a cow, moribund with anthrax, from her stall. In spite of his denial that he had a scratch or other wound, and of the fact that he took moderate precautions in washing and applying disinfectants, a red spot, of the size of a pea appeared on the right cheek, five days after. He sought medical advice fourteen days after infection, although rigors, sleeplessness, *malaise*, difficulty in swallowing, headache, and considerable swelling of the cheek had developed gradually since the fifth day. The general practitioner diagnosed anthrax from the clinical and microscopical appearances, and referred the case to hospital for surgical treatment. On admission the pustule was nearly ½ inch in diameter, and presented a typical picture. The surrounding tissue was hard and infiltrated, and the glands in the neck and at the clavicle were enlarged and painful. Temperature 101.8° F., pulse 90. The heart's action was good, and as the course of illness could be easily observed, Fischer determined to try the silver treatment, without any other form of treatment. Accordingly 5 c.cm. of a 1 per cent. solution of argent. colloidale was injected into his cephalic vein. During the course of the evening, he had a severe rigor, but the patient slept well after a free sweating, and he felt better in the morning. A second injection was employed on the following evening, the next day the progressive œdema had begun to recede, and after five days the pustule was practically healed. The patient left the hospital in good health, after a stay of three weeks and-a-half in hospital.

**(421) Poisoning with Oleander.**

THE plant oleander frequently adorns the corridors of houses in Bulgaria, chiefly on account of its evergreen foliage and beautiful red blossoms, and not unfrequently are the medicinal properties of the leaves made use of. It has been employed as an antimalarial agent, but its chief reputation rests on its supposed emmenagogue action. Since it is highly poisonous, and really possesses but little power as an emmenagogue, cases of poisoning occur frequently in parts of Bulgaria. S. Warteff (*Deut. med. Woch.*, November 14th, 1891) writes of a girl, aged 18, who was advised by a woman to taken an infusion of the leaves to cure a stomachache. She used about forty leaves of nerium oleander, infusing them in about 6 ounces of boiling water, and drinking more than half of the quantity at one sitting. She immediately noticed a very bitter taste in her mouth, began vomiting a greenish yellow substance, was seized with severe headache, and fell to the ground. Her face began to change soon after, she had pain in the throat, and a feeling of oppression in the chest. During the following hours everything was vomited, in spite of an energetic washing out of the stomach. The next day the conjunctiva and other visible mucous membranes were much reddened, the face was of a scarlet colour, and the tongue was the same. Some petechiæ were seen in the fauces. The heart was somewhat enlarged to the left, and the first sound at the apex was not clear (this appeared to be of long-standing). The pulse was slow (40), and the urine diminished in quantity. The abdomen was tender, but no enlargement of any organs could be felt. The stomach had again to be washed out before an aperient was retained, which soon acted copiously. The vomiting and abdominal pain disappeared gradually within a week, and in five days the urine became normal in quantity. On the third day menstruation set in (the patient denied that she was pregnant). The bradycardia gradually diminished, but the pulse-rate was still somewhat slow when she had recovered, not exceeding 65 beats per minute. The whole course of the recovery occupied more than three weeks. The treatment consisted in washing out the stomach and administering heart stimulants.

**(422) Serumtherapy of Whooping-Cough.**

T. SILVESTRI (*Gazz. degli Osped.*, September 22nd, 1901) says that of all the multitude of drugs recommended in whooping cough there is one which deserves to be widely used—carbolic acid. He believes that its effect is not merely local, but due to absorption, and therefore uses by the mouth (about three-quarters of a grain every two hours) as well as hypodermically (in one per cent. solution in purest glycerine, dose of 1 or 2 c.cm.) and has good results. He tried to obtain a therapeutic serum by inoculating dogs with nasal or bronchial mucous from cases of whooping-cough, but in vain. He then practised phlebotomy on two convalescent patients, taking from each about four fluid ounces of blood, mixing it with an equal amount of sterilised normal saline solution, and adding 1 per cent. of chloroform. After shaking well, it stood for twenty-four hours, and was then filtered through fine aseptic calico. Five cases were treated with this by the injection of from four to six drachms in the flank. Only in two severe cases was a second injection requisite after five days owing to recrudescence of symptoms. The general symptoms were immediately lessened and soon disappeared; the broncho-pneumonia foci steadily cleared up in a week to ten days, and the convalescence was rapid.

**(423) Quinic Acid and Gout.**

DE LA CAMP (*Münch. med. Woch.*, July 23rd, 1901) has studied the effects of chinotropine (a derivative of quinic acid

and urotropine) upon the elimination of uric acid in the gouty diathesis, in leukæmia, and in chlorosis. He has not found that it possesses any constant effect upon the elimination of uric acid if the patients are on a mixed diet, but that it causes a marked increase in the elimination of hippuric acid. A diminution in the uric acid was produced in those persons who at the same time consumed a large amount of uric acid-forming food, or in whom there was a formation of a large quantity of uric acid (for example, in leukæmia). Clinically quinic acid seems to be of some value in gout. It is harmless even in large doses: chinotropine is the best form for use, and it is especially to be recommended where there is a tendency to the formation of calculi.

#### (424) Treatment of Psoriasis.

In the external treatment of psoriasis Morgenstern (*Therap. d. Gegenwart.*, No. 6, 1901) gives balneo-therapeutic measures a prominent place. According to the strength and constitution of the patient, warm baths are ordered every day or on alternate days, the temperature and duration being gradually increased. A large quantity of soap is to be used, and the individual spots energetically rubbed with soap and brush or flannel. Immediately after the bath the spots are painted with a salicylic sulphur paste—ac. salicyl. 2, sulph. precip. 10, zinc. oxid. amyl. ana. 19, vaselin flav. 50. M. ft. pasta. Another application recommended by Morgenstern is dermophil rubbed in with the hand. More energetic than either of these is chrysarobin dispensed as follows: Chrysarobin, flor. zinc. amyli. ana. 5, lanolin, vaselin ana. 7.5. M.ft. pasta. In very rebellious cases with infiltrated plaques on the elbows and knees recourse should be had to a 10 to 20 per cent. salicylic plaster before the chrysarobin; for obstinate spots on the hands and face a preparation called hydracetin is recommended. Hydracetin, 1.5 to 3 hydr. precip. alb., bism. submitr. ana. 3, ung. lenient. s. lanolin. ad 30. M. Internally the writer gives arsenic in the form of Fowler's solution or "Asiatic pills"; also in some cases iodine in increasing doses. As far as possible he excludes the flesh of warm blooded animals from the diet, and recommends fish, eggs, milk, cheese, butter, and all vegetable foods.

## PATHOLOGY.

#### (425) The Comparative Virulence of the Bacillus of Human and Bovine Tuberculosis.

Ravenel (*Univ. of Penn. Med. Bulletin*, September, 1901) states that cultures on dogs' serum containing 5 per cent. of glycerine present certain fairly constant and persistent peculiarities by which the bacillus from bovine sources may be differentiated tentatively from that usually found in man. Morphologically the bovine bacillus is short, averaging less than 2 $\mu$ in length, thick, and straight, stains evenly and deeply with carbol fuchsin, and does not present a "beaded" appearance. The bacillus from human sources is usually initially longer, rapidly increases in length in subcultures, is more or less curved, stains with carbol fuchsin less deeply, and presents characteristic "beading." On glycerine-agar the bacilli from the two sources approach each other more closely in appearance and morphology. Human cultures grow more luxuriantly than bovine, in which the first colonies are often discrete, and may form a thin layer resembling ground glass over the surface of the medium for several generations. The human bacillus will usually grow on glycerine-agar in subcultures made from the original growth on blood serum, but the bovine organism invariably refuses. In two cultures isolated from children in whom the tuberculosis appeared to be primarily of intestinal origin, the bacilli were long and beaded, and altogether unlike the bovine type. The cultures of the bovine bacillus were very much more virulent for every species of animal tested (guinea-pigs, rabbits, dogs, horses, and goats), with the exception of swine, which proved highly susceptible to both. Puppies were readily infected through the alimentary tract when fed on milk containing tubercle bacilli, though the experiments did not show conclusively whether they were more susceptible to human or to bovine tuberculosis. Pigs fed on bacilli mixed with previously sterilised food developed extensive lesions of the mesenteric glands, the tonsils, and, in one case, of the intestinal mucosa, and invariably died. This shows the danger of feeding pigs on milk from tuberculous cattle. Cultures recovered from the inoculated animals closely resembled the original morphologically and in virulence, though the human bacillus recovered from hogs had strikingly increased in activity. One culture was recovered from a nodule on the hand of a pathologist who accidentally inoculated himself while performing a necropsy on a goat which had succumbed to the original culture: in virulence and morphology it did not differ from the original. The morphological distinction between the bacilli in cultures does not obtain in the case of the bacilli found in the sputum of tuberculous cattle, which may be long, thin, and beaded. Tuberculous material taken direct from cattle and man closely resembles cultures of the respective bacillus when used for inoculation, that is, the bovine source is the more fatal for all animals except pigs. Of four calves, each of which received an intraperitoneal injection of 10 c.cm. of human tuberculous sputum, one was entirely unaffected; of the other three, two had persistent pyrexia, and after being killed were found to be affected with more or less extensive tuberculous lesions. Attempts to infect other calves with intraperitoneal injections of cultures recovered from these animals failed completely, the greater virulence of human sputum as compared with cultures being probably due to its having produced a mixed infection. The attempt to infect calves with human sputum by the digestive tract failed also. These experiments, in which both the bovine and human bacillus were recovered in culture from horses, dogs, swine, calves, and goats—and in one instance the bovine organism was isolated from man—prove conclusively that in spite of cultural distinctions the two varieties are pathogenic in varying degrees for the same animals. Further, since the "bovine" organism is more virulent than the human for all animals except pigs, until the contrary is proved it must be considered to be at least equally virulent for man. The writer has met with 3 cases in which a localised infection in man was certainly of bovine origin, and has collected 5 others. Death occurred in 2 of these through general infection, though this is very rare in localised cutaneous infection with the human type of organism. From the clinical evidence the high pathogenic power of the bovine type of bacillus is probably manifested especially in childhood, and through the alimentary tract.

#### (426) The Bacillus of Dysentery.

Flexner (*Centralbl. f. Bakt.*, October 12th, 1901) has made a comparative study of strains of the bacillus dysenteriæ obtained from various sources, namely, from Germany (Kruse), Japan (Shiga), the Philippines (Strong), from Porto Rico, and from cases which have come under his observation in America. The comparative study was made upon culture media and reactions towards blood obtained from cases of dysentery and from immunised animals were also noted. The differences of growth on media were slight, and might be sufficiently accounted for by purely accidental circumstances; morphologically the different strains showed only such differences as are within the range of normal variation. Motility appears to vary, but this Flexner does not regard as important. Flagella were demonstrated on all the bacilli by Vedder and Duval of the Philadelphia Medical School. The serum reactions indicated a close relationship between the bacilli from Japan, Manila, Porto Rico, and Germany, and they further render probable the identity of the epidemic dysentery of America, the East, and Germany. With regard to Kruse's opinion, that the form of dysentery which is common in asylums has nothing to do with true dysentery, Flexner does not agree with him. One culture from a typical case of Philippine dysentery has been acknowledged by Kruse to be identical with the strains obtained by him from asylum cases, and he excludes this culture from being the true bacillus dysenteriæ, but the case was typical. Also Flexner has under study two asylum cases in whom the blood is positive for the typical bacilli.

# AN EPITOME

OF

# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (427) Malarial Nephritis.

Ewing describes a case of severe nephritis occurring in the course of malaria, in which careful examination was made of the renal tissue (*Amer. Jour. Amer. Sci.*, October, 1901). The occurrence of acute nephritis in malaria is of course well recognised, but there are many features in connection with its pathology which are not as yet sufficiently immediately familiar to the profession. The writer states that the acute nephritis of malaria is hardly ever immediately fatal, so that the chances of investigating the so-called cases of exudative nephritis are rare. In many cases there are considerable albumen casts and blood cells in the urine and less often œdema or signs of uræmia, so that it is quite probable that a true exudative nephritis is sometimes present. In cases of fatal pernicious malaria the conditions found in the kidney have been very uniform, consisting chiefly of severe acute degeneration of the cortical tubule cells, with moderate exudation of albumen into the tubules and glomeruli, the nephritis thus appearing to be toxic in origin. In very few cases have parasites been found in the kidney, though numerous in other organs. The writer states that the freedom of the kidney from parasites cannot be altogether due to the phagocytic powers of this organ, as these are but slight. The case under the author's own observation was that of a girl, aged 17, a Slav, who contracted severe malaria in September, 1900, in Long Island. There was slight œdema of the legs; urine high coloured, acid, 1018. urea 2½ gr. per oz., albumen 2 per cent., no sugar, epithelial cells and many blood cells. The case was considered to be one of typhoid fever with acute nephritis. Malaria was first suspected on account of the pigmentation of the kidney. The following summary presents the lesions observed in the kidneys: Extreme and peculiar degeneration of lining cells of all cortical tubules. Distention of capsules of glomeruli by granular albuminous coagulum. Occlusion of most cortical capillaries by the distended tubules. Large superficial red and white infarction from occlusion of vessels by thrombi of infected red cells. Numerous miliary hæmorrhages, from rupture of distended capillaries. Distention of nearly all capillaries in medulla and papillæ by infected red cells and parasites. Casts in discharging tubules consisting usually of coarsely granular material, but sometimes entangling infected red cells and pigmented leucocytes. The writer points out the importance of diagnosis during life of this type of malarial nephritis. The chief points are partial or complete suppression of urine; considerable admixture of intact red cells; the considerable proportion of albumen; the presence of many coarsely granular, epithelial cells, and some blood casts; the presence of infected red cells, both free and adherent to casts, and of pigmented leucocytes adherent to casts. The author's case demonstrates the existence of a specific type of malarial nephritis, but does not indicate why the æstivo-autumnal parasite selects certain viscera for its chief attack. The writer concludes by stating that the forms of nephritis met with in conjunction with malaria may be grouped under three headings: (1) Acute degeneration of toxic origin, often reaching a degree in which exudation of blood serum into the tubules is added. The lesion is responsible for the vast majority of cases of albuminuria in malaria. (2) An extreme form of acute degeneration, with focal necroses, numerous hæmorrhages, and exudation into the tubules of blood serum and blood pigments. This lesion is seen in cases of hæmoglobinuric malarial fever, and it has not yet been found associated with an excessive number of parasites in the capillary vessels. (3) Massing of parasites in the renal capillaries with extreme degeneration of parenchyma cells, multiple hæmorrhages, and exudation of blood serum into the tubules. It seems certain that this type of lesion can occur only in severe æstivo-autumnal infections.

### (428) Duhring's Dermatitis.

Carle and Montagard (*Lyon Méd.*, September 22nd, 1901) record a case of the erythemato-bullous or herpetiform dermatitis of Duhring. The patient, a man, 44 years of age, was admitted into hospital with a polymorphic eruption involving all parts of the skin except that of the face. When 10 years of age he first noticed the spontaneous and simultaneous appearance of a number of vesicles upon the legs. At one point a raised red patch had formed upon which vesicles and bullæ appeared two days later. At times the vesicles became purulent and were surrounded by large red areolæ. The eruption spread to the rest of the body, and persisted with varying intensity in different parts for fifteen years. For the following eighteen years there was no history of illness. In September, 1900, the eruption again appeared upon the thighs and spread to various parts, the face alone remaining free. The parts especially involved were the flexor surfaces of the arm and foream, the epigastric region, the median line of the back, and, above all, the anterior and internal surfaces of the thighs and the genito-crural folds. Where the eruption was most marked vesicles and bullæ predominated, but in other parts papules and ecchymoses were present, surrounded by areolæ of erythema. The eruption was confluent upon the thighs. There was some superficial irritation but no true pain. The temperature was normal and the appetite and general health were good. The condition of the skin improved rapidly under sedative lotions and powders, with arsenic given internally. The point of especial interest in the case is the result of the blood examination. Most French dermatologists regard Duhring's disease as a hæmato-dermatitis. The cutaneous lesions, according to this hypothesis, are secondary to modifications of the normal composition of the blood expressed chiefly by increase in the number of eosinophile cells. The normal proportion of eosinophile cells to the total number of leucocytes is 1 to 2 per cent. In Duhring's disease recent observers have found the proportion to be as high as 5 per cent. in the liquid obtained from the bullæ, and 30 per cent. in the blood. In the case recorded the proportion was 4 per cent. in the blood, 6 per cent. in the contents of the bullæ. This slight increase in a marked case of the disease has also been observed by Hallopeau and Lafitte, and by d'Audrey and Daunic in 1899.

### (429) Erb's Asthenic Bulbar Paralysis (Myasthenia Gravis).

Long and Wiki (*Rev. Méd. de la Suisse Rom.*, July 30th, 1901) report a case followed by necropsy. A man, aged 46, entered the hospital for bronchitis on April 12th, 1899. No tubercle bacilli were present, and no nervous symptoms were observed. Improvement resulted, and he returned to work as a tailor. In July, 1899, his arms became very weak, and he re-entered the hospital on August 5th. The muscular weakness was extreme, and efforts at movement caused exhaustion. The head could not be held upright for any time, but fell forwards and could be raised again with difficulty. There was pain in the cervical and cranial regions. The tongue moved normally, but the voice was nasal. The orbicularis oris was paralysed, and whistling was impossible. The pupils reacted sluggishly, but the extrinsic ocular muscles were unaffected. Mastication was performed feebly and painfully, deglutition was difficult, and swallowing solids impossible. There was paresis of both arms, and attempted movement produced tremors and exhaustion. Two hands were required to raise a wineglass to the mouth. To write more than eight lines at a time was impossible. The condition of the lower limbs varied, sometimes the patient could scarcely get out of bed, sometimes he could walk a few steps. The tendon reflexes were exaggerated. There were no sensory disturbances except vague pains. The muscles were not evidently atrophied, and the sphincters acted normally. On October 22nd great dyspnœa, cardiac oppression, and cyanosis appeared, and death followed within two hours. *Post mortem* the lungs were œdematous but no tubercle was present. Though the nervous system was by no means normal, it was impossible to draw a parallel between the symptoms observed and the lesions found. These were diffuse and affected chiefly the interstitial tissue, the ganglion cells of the motor nuclei in the medulla and

spinal cord being normal, except in the left anterior horn in the cervical region, and a few scattered cells in the nucleus of the twelfth cranial nerve in the medulla. There were some spinal meningitis in the lower part of the cord, some vascular changes, most marked in the vessels of the cervical enlargement, some scattered patches of sclerosis in the dorsal region, and a well-marked patch of sclerosis in the left lateral columns of the cervical cord just in front of the posterior horn. According to Jolly, this disease is a primary affection of the muscles, but his "myasthenic reaction" (exhaustion by repeated electrical stimuli) has been absent in some typical cases. The most probable theory appears to be that of intoxication or infection of an unknown origin. On this supposition the diffuse nervous lesions found in this and many other cases would be the expression of the secondary action of the poison on the nervous system. In the writer's case the original infection was possibly localised in the lungs.

## SURGERY.

**(430) Septic Poisoning with Otitis and Sinus Thrombosis.**

Schnelle (*Deut. med. Woch.*, July 4th, 1901) relates the case of a grenadier who was taken ill on May 23rd, 1900, with cellulitis of the left hand. He stated that he had never been ill previously. During observation he complained of pain and buzzing in the right ear and deafness. On incising the tympanum a considerable quantity of pus escaped. The pharynx was noticed to be red and swollen, and the left tonsil very much enlarged. The parts around the right ear were not tender or painful. The cellulitis cleared up rapidly and the otitis media was treated locally, and with rest in bed and sweats (jaborandi). On June 2nd the temperature rose and the left ankle and the right foot joints became swollen and painful. This condition was diagnosed as rheumatic and salicylates succeeded in removing the trouble by the 9th. The patient then complained of pain on both sides of the forehead and on the right mastoid process. The temperature kept up, and on the 10th a rigor occurred. The optic discs, etc., were natural. On the 11th there was some pain complained of on the left side of the chest. On examination some crepitations were heard in the left posterior axillary line in the tenth space. Over the right middle lobe some dulness was discovered. The temperature having reached 105° F., and the signs around the mastoid increasing, the operation of mastoidectomy was undertaken in spite of the condition of the lungs. The bone was exposed and was found to be entirely softened and to contain large masses of granulations. After scraping away all the softened bone an abscess was discovered which proved to be around the sigmoid sinus. The sinus itself was greenish, and had a jagged tear through its wall to the extent of about one-third of an inch. No blood issued from the sinus. Schnelle made a free communication with the middle ear, scraped away all softened tissue, and then cleared out three long clots from the thrombosed sinus. The wound was packed and bandaged firmly. Shortly after the operation the patient had a slight rigor. Some improvement was noted during the next day, but this was not maintained. In the evening he had diarrhœa and vomiting. On dressing the wound on the 13th the deeper parts of it were seen to be cleaner, but pressure on the jugular vein caused bloody pus to issue from the lower end of the opened sinus. On the 14th a periarticular abscess of the right elbow-joint was opened. On the 15th the jugular was tied, as the sinus was the only part in the mastoid wound from which pus oozed. The vein was found to be thickened and adherent to the surrounding tissues. The double ligature was applied and the vein was divided in between. It was found to be thrombosed. The upper part of the thrombus was beginning to break down. A swelling at the sterno-clavicular joint was incised, and a tablespoonful of pus was let out. On June 21st the sinus sigmoidus and transversus were exposed about 1 inch behind the posterior edge of the wound. The nearest part of the sinus to the older wound was greenish. On opening it some adherent clots were removed, until a few drops of fluid blood presented themselves. The wound was then packed. The lung signs showed consolidation of the right middle lobe and of the left lower lobe, and on the 23rd, with signs of œdema of the lungs, etc., the patient died. The *post-mortem* examination revealed inflammation and thrombosis of the sinus sigmoidus and transversus, congestion of the pia mater, purulent and breaking-down thrombus in the longitudinal sinus; abscesses in the right shoulder and sterno-clavicular joints: right fresh pleuritis, right, middle and lower, and left lower lobes of the lungs, atilectatic, bright red, small cavities; dilatation of the heart, myocardium soft, adherent blood clots on the aortic and mitral cusps; spleen much enlarged: a round worm (9½ inches in length) in the lower bowel. Schnelle dilates on the significance of the cellulitis and rheumatic affection in the pyæmic condition. He suggests that the diplococci and streptococci which were found in the pus may have been the organisms described as causal germs of rheumatism. He states that there was no proof to show if the sepsis was produced by the otitis or itself produced it.

**(431) Typhoid Cholecystitis.**

J. H. Pratt discusses the relations of the typhoid bacillus to cholecystitis and gall-stone formation (*Amer. Journ. Med. Sci.*, November, 1901). He emphasises the great frequency with which the typhoid bacillus is found in the gall bladder both in cases in which examination of the blood showed it to be present or absent. The presence of the typhoid bacillus in the gall bladder does not necessitate any cholecystitic change, so some factor other than the presence of the bacillus must be necessary to produce cholecystitis. The organism may remain in the gall bladder long after it has disappeared from other organs, and cases of its having been found after some years are referred to by the writer. It is possible that invasion occurs in two ways: one by an ascending infection by the biliary passages from the duodenum; secondly, by hæmatogenous infection. In typhoid the evidence seems to point to the latter mode, as the bacillus is nearly always found in pure culture. Were infection to take place from the biliary passages, we should expect it to be mixed, especially with the bacillus coli or streptococci. The previous infection of the gall bladder by typhoid bacillus might possibly give rise to the formation of gall stones. The writer quotes Dufourt as having observed 10 cases of gall stones, in which the first symptoms appeared after typhoid fever: in twelve instances within so short a time as six months. Other writers, such as Cushing and Richardson, have also observed a connection between typhoid fever and gall stones, the latter having noticed large clumps of bacilli suggesting a gigantic Widal reaction in the gall bladder. These clumps of agglutinated bacteria might quite well serve as the starting point of biliary calculi. The same writer has even produced a calculus 7 mm. in diameter by injecting a culture of agglutinated bacilli into the gall bladder of a rabbit.

**(432) Spontaneous Rupture of the Bladder.**

Havas (*Pest. med.-chir. Presse*, October 27th, 1901) reports a case illustrating the fact that a normal bladder may rupture under the stress of acute complete retention of urine. A previously healthy labourer, aged 55, had two rigors on February 13th, since which date he passed neither urine, nor fæces, nor flatus. Micturition had always been normal, and gonorrhœa was denied. On the 15th and 16th the patient himself applied hot fomentations to the abdomen; on the 16th also three surgeons attempted unsuccessfully to pass the catheter. On February 17th he was admitted to hospital with symptoms of peritonitis—vomiting, hiccough, meteorism, and collapse. There was a prominence in the region of the bladder, but tympanitic resonance over it, except for three fingerbreadths above the symphysis. A catheter was passed without difficulty, but no urine was obtained except what collected in the lumen. There were constant strangury and a sensation of distension. *Post mortem* urine was found in the peritoneal cavity. The renal pelves and the ureters were normal. On the posterior vesical wall there was a vertical laceration, over an inch in length, extending through the peritoneal coat. On the anterior wall of the prostate there was a gutter-like tear, covered with coagulum, which was directly continuous with a perforation of the membranous urethra, and was evidently a false passage made in the attempts at catheterism. The mucous membrane of

the urethra and bladder were normal. The prostate was hypertrophied, and was doubtless the cause of the retention. This may arise in any stage of prostatic enlargement from œdema of the prostatic plexus. The false passage was not connected with the rupture, since the symptoms of peritonitis preceded the catheterism.

## MIDWIFERY AND DISEASES OF WOMEN.

### (433) Malignant Chorio-epithelioma of the Vagina with Normal Uterus.

Schmit (*Wien. klin. Woch.*, October 31st, 1901), in 1900, reported a case of malignant chorio-epithelioma (syncytioma malignum) which affected the vagina alone, the uterus being healthy. The woman, aged 36, had a molar pregnancy, which ended in the spontaneous extrusion of the mole in November, 1899. Three months later two vaginal nodules appeared, which proved on microscopical examination to be typical chorio-epitheliomata. As the uterus was healthy, they were simply excised. Eighteen months later the woman was in perfect health, menstruated regularly, and never suffered from metrorrhagia. The writer now describes a second case. A woman, aged 41, aborted at about the seventh week of pregnancy on November 30th, 1900. There was copious hæmorrhage which was arrested by the removal of chorionic fragments with the curette. Up to January 19th, 1901, she was in good health, except for a slight blood-stained discharge. On that date there was a second violent hæmorrhage, and on January 24th a third, which was arrested only after plugging the vagina. It was then noticed that there was a nodule on the anterior vaginal wall. The uterus was retroverted, but otherwise normal. A fingerbreadth in front of the cervix was a hemispherical bluish tumour which was the size of a hazel nut and projected under the vaginal mucosa, which was absent at the greatest convexity; a small ulcer with sharply-cut edges resulted, through which there projected a dark-brown tenacious coagulum. The tumour was fairly soft, and was movable with the mucous membrane. The normal uterus and appendages, with the absence of hæmorrhage from the os, made it practically certain that the tumour was primary, and not a metastatic growth. It was, therefore, excised, the uterus being simply curetted. The shreds removed from the uterine cavity showed no evidence of malignancy. The extirpated vaginal tumour had a diameter of about four-fifths of an inch, consisted chiefly of coagulated blood, and had no definite capsule. Near its centre, but approaching the surface covered with perivaginal connective tissue was a whiter spot of loose fibroid tissue. Microscopically this consisted of well-preserved chorionic villi, some of which had undergone hydatidiform degeneration, and lay free in the thrombus. These villi were covered with actively proliferating epithelium, the cells of which belonged both to Langham's layer and to the syncytial masses, the two varieties being everywhere intermixed in various proportions. The stroma of the villi was unaltered. In the coagulated blood surrounding them were isolated masses of tumour cells. The coagulum was a small hæmatoma, and was not a thrombus contained in any vessel; on the contrary, it enfolded a small artery, into the wall of which some syncytial cells were penetrating. The whole coagulum was surrounded by a small-celled infiltration. The diagnosis of primary vaginal chorio-epithelioma was confirmed by the patient being in perfect health eight months after the operation. That the chorion had undergone malignant degeneration within the uterus but had been extruded without giving rise to a malignant tumour of the uterus is almost inconceivable. It is probable, therefore, that benign chorionic villi may become detached during pregnancy or labour, and be carried by the circulation into the vaginal vessels, where, if a suitable nidus is found, their epithelium may proliferate and form a malignant tumour. In the writer's second case it could not be ascertained whether the ovum had undergone hydatidiform degeneration, though the presence of hydatidiform villi in the vaginal tumour rendered a molar pregnancy probable. Hydatidiform degeneration, however, is not a necessary forerunner of chorio-epithelioma. Primary vaginal chorio-epitheliomata are exceedingly rare. Lindfors has recently reported a case in which there was a vaginal tumour and the uterus was healthy. The tumour was excised. Six months later the patient died. There was a large chorio-epithelioma of the left lung, with metastatic growths in the right lung, the spleen, liver, kidneys, brain, and intestine. The uterus, appendages, and vagina were healthy. It is probable that villi were transported from the placenta to the lung and vagina simultaneously. According to Kolisko these tumours were formerly known as thrombus or varix vaginæ. The blood in which they usually lie is not, however, due to thrombus of a varix but to extravasation from an arroded vessel.

### (434) Placenta Prævia and Cæsarean Section.

Zinke (*Amer. Gyn. and Obstet. Journ.*, October, 1901) has prepared some valuable tables of statistics bearing on the frequency and mortality of placenta prævia. The percentage of this complication in labour is about 1.5. The maternal mortality is 25 per cent., the fœtal 65 21 per cent. But the average mortality of modern Cæsarean section, collected from the cases and estimates of sixteen European and American authors, is 4.14 per cent. for the mother and 13 per cent. for the fœtus. The maternal mortality in Porro's operation is 37.89 per cent., the fœtal 22 22 per cent. Thus the fœtus is in less danger than in placenta prævia treated by purely obstetrical means; but the mother in a large number of these cases underwent Porro's operation for rupture of the uterus, cancer of the cervix, or other exhausting disease such as mollities, and were in a large majority of cases exhausted by lingering labour and unsuccessful attempts so turn and deliver by forceps. Eight Cæsarean and Porro operations for placenta prævia recorded since 1891 are tabulated by Zinke. In 5 both mother and child were saved. In 1 the child was saved, but the mother, very weak and exhausted before the operation, died in eleven hours. There remain 2 cases in which are chronologically the first and second, where mother and child were lost. But the conditions were exceedingly unfavourable in both cases, and in the second the fœtus had been dead for two days. Zinke admits that there are cases of partial placenta prævia that may be successfully treated in the old way. But he firmly believes that the Cæsarean and Porro operations are perfectly legitimate, and elective procedures in all cases of placenta prævia, central and complete, and especially so when the patient is a primipara, when the os is closed and the cervix unabridged, when hæmorrhage is profuse and cannot be controlled by tampons and separation of the placenta around the internal os is difficult or impossible.

### (435) Fibroid of the Vagina.

Gabszewicz (*Gazetta Lekarska*, No. 17, 1901) reports a case of fibroid or true fibromyoma in a woman aged 46. It had protruded at the vulva for some months when first examined. It filled up the vagina, and was hard and elastic; its exposed portion ulcerated. The urethra was compressed, causing dysuria, and there were hæmorrhages. Though the tumour adhered to the urethra it was removed with little difficulty. The tumour was made up of plain muscle cells crossing in all directions and a considerable amount of connective tissue. There were also many dilated blood vessels.

## THERAPEUTICS.

### (436) Tetanus Antitoxin.

In reporting 4 cases of tetanus treated by antitoxin, strictly according to the precepts of Behring, B. Möllers (*Deut. med. Woch.*, November 21st, 1901) points out that, although there is no unanimity of opinion with regard to the value of the serum treatment, there appears to be only a few cases reported which recovered in which the serum was injected within thirty hours of the initial symptoms, and in which at least 100 units were used, and it is not at all certain that the recovery in these cases was due to the antitoxin. Animal experiments show that when injected soon after the infection with twelve times the lethal dose the rabbit can be saved, but, if the space of time after infection is increased, larger quantities are required until six hours, when antitoxin injections are useless. It is therefore

not to be expected that in human beings, when the injection has occurred a considerable time before, antitoxin could be of any avail. However, in case any unbound toxin is still circulating, antitoxin should be injected as soon as possible, but the most important use of it rests in its application at once in cases of wounds soiled in such a way as to render it possible for tetanus to develop therefrom. The cases reported were severe ones, large quantities of antitoxin were injected very early, and yet death occurred in all cases without any benefit having been observed which could be ascribed to the treatment.

#### (437) Lecithine in Tuberculosis.

CLAUDE AND ZAKY (*Presse Méd.*, September 28th, 1901) have used lecithine in tuberculosis, and have found that it produces marked improvement in nutrition, the appetite increases, the spirits improve, and the whole bodily condition is ameliorated. Locally, the lesions are but slowly affected, but the general improvement is so great that the local condition must at least be held in check. Owing to its action in causing an immediate decrease in the excretion of the phosphates, and its effect on the nutrition, lecithine should prove a valuable addition to the means available for combating tuberculosis.

#### (438) Antityphoid Serums.

E. A. WALKER (*Journ. Path. and Bacter.*, June, 1901) reports a series of investigations on the value of antityphoid serum. It has been well shown by Ehrlich and others how a difference in species between the animal immunised and that to whom it is desired to administer the serum thus obtained is seriously prejudicial to the successful procuring of antimicrobic sera. The difficulties are not necessarily, however, due entirely to the difference in species. For instance, a failure to obtain a satisfactory serum through operating on an animal resistent to a certain organism has a fundamentally different reason other than that of mere difference in species. The writer has endeavoured to throw light on these variations in susceptibility. He points out the necessity of distinguishing clearly between an antimicrobic and an antitoxic serum; the first is bactericidal the latter is not. With regard to the antityphoid serums, the writer states that this can be obtained by immunising animals against the typhoid bacillus; that the process is shortened if the method of Bokenham is used in the initial stages; that a high degree of immunity must be obtained, and living cultures should be used during the later stages; that many different strains of typhoid bacillus should be used. The relative value of the serum produced may be estimated by determining its agglutinative power. Possibly the efficiency of the serum might be increased by immunising against the B. coli also, or by the addition of some anticolic to the antityphoid serum.



## PATHOLOGY.

#### (439) Cancer a Deux" and the Infectivity of Cancer.

R. BEHLA (*Deut. med. Woch.*, June 27th, 1901), deals with the material that he has collected and the deductions he has made from these, for the Committee of Investigators of Cancer. At the meeting held on June 18th, 1900, v. Leyden suggested that each member should prepare an essay on various questions referring to this diseases. Behla tells us that "cancer à deux" is a French phrase, which he prefers to use untranslated, implying the occurrence of cancer in two members of a household (not blood relations) who have come intimately in contact with each other. He quotes 14 cases of his own observation, and adds 5 others to the list, of such coincidences. In most cases the persons affected were man and wife, and the time which elapsed between the illness of the first and second of the persons varied between two months (1 case) and twenty-seven years. The majority (9 out of 14) of his cases showed a lapse of over five years. The distribution of the growths (the nature is unfortunately not given, all cases being referred to as cancer or occasionally carcinoma) was: Stomach nine times, the partner of the patient being attack by stomach cancer six times; rectal, uterine and œsophageal once each; liver three times, associated with liver, fauces, and kidney once each; rectum twice, with intestinal and face cancer once each; uterus twice, with kidney and stomach cancer once each; and the association of face with uterine, bladder with stomach, and œsophageal with nasal cancer once each. The situation mentioned first in the above list denotes that in which the first sufferer was attacked. He further finds other cases from the literature of other lands. He next turns to the question of "neighbouring houses" and "cancer houses," and quotes a few striking examples. Elsler reports a single incident of "cancer à trois," and Boas tells of a case where it would seem that the daughter inoculated herself with rectal cancer by using the same enema which her her mother had used during her illness, which was of the same nature. Others report single cases of carrying of infection by means of a pipe, washing, fingers, etc. Tross's case was important, he says. It deals with the occurrence of a carcinoma of the same structure histologically as that of cervical carcinoma, on the penis, apparently inoculated from the uterine cancer of the patient's wife. Answering the objection to this being probable, in that it should occur frequently, Czerny supposes that coitus is rarely carried out when the woman has cervical cancer. In all, over 30 cases of a similar or reversed nature have been reported. Ebert collected 23 cases of supposed "contact" cancer. Lip and lip, tongue and gum, etc., and a case of a woman who inoculated the corner of her eye from a cancer on the back of her hand also suggests this nature. Inquiring into the question whether surgeons inoculate themselves from cancer patients, he quotes the case of Alibert, and that of a surgeon of St. Thomas's Hospital, who acquired a cancer of the tongue from drinking "cancer milk." Budd also reports 5 cases of surgeons who died in the cancer hospital. Emson died 8 months after he had cut himself at a "cancer" operation, and Guermonprez relates of a gynæcologist on whose finger an acne pustule became malignant after examining a case of uterine cancer. He next inquires into the question of infectivity, and quotes numerous writings to show that the belief that cancer is infectious is a very old one, dating back to 1649 at least. With regard to transplantation experiments he has little to say, but recounts the injection of the juice of cancerous growths into the jugular veins of dogs being followed by growths of malignant disease in the liver. The possible source of error, however, follows, as Casper and Schutz find that carcinomatous nodules are common, especially in elderly dogs—and, indeed, 4 per cent. of all dogs' diseases are new growths, while 50 per cent. of these new growths are carcinomata. From this material he argues that cancer is due to a virus, and is infectious, although only to a slight degree. He urges as the best means of prophylaxis at present at our disposal, scrupulous cleanliness and asepsis with regard to the sick-room utensils, washing and bedclothes, specula, sounds, enemata, hands of the nurses and surgeons, etc. He laughs at the recent suggestion to vaporise or cauterise the uterine mucous membrane as a preventive against cancer, and states that it would be just as reasonable to remove the uterus and breasts of every woman of 40 years of age. "Perhaps even this," he says, "will become the proper thing" in operative gynæcology.

#### (440) Chorea and Micro-organisms.

FORNACA (*Rif. Med.*, No. 74, 1901) remarks that while the importance of the pyogenic micro-organisms in relation to chorea is generally recognised, recent bacteriological examination of the spinal fluid of choreic patients go to show that the relation is a closer one than is usually supposed. He has been able to demonstrate staphylococci in the cerebro-spinal fluid in two cases in the medical clinic at Turin. In a third case of erysipelas, which was followed by chorea of a severe type, not only had lumbar puncture a favourable therapeutic effect on the movements and the sleeplessness, but also streptococci were demonstrated in the fluid. Although their virulence was of a low order they must have been etiologically related to the chorea. In both the blood and urine of this case streptococci were also found. Fornaca quotes the statistics of Triboulet to show that a third of all chorea cases furnish a history of an antecedent febrile attack, of which the most common are scarlatina, measles, and erysipelas. In all cases of chorea the cerebro-spinal fluid should be examined.

# AN EPITOME
OF
# CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (441) Acute Bulbar Softening with Cerebellar Syndrome.

Leclerc (*Lyon Médical*, October 20th, 1901) records a case of bulbar softening, in which certain symptoms, usually attributed solely to cerebellar lesions, were well marked. His patient, a man 48 years of age, had no history of syphilis or alcoholism. Two or three years before his fatal illness he had an attack of sudden right hemiparesis, which disappeared in a few days. For a fortnight before admission into hospital the man had suffered from occipital headache, with evening exacerbations. Two days before admission he suddenly found that he could not walk straight. The following day the voice became raucous, and there was absolute intolerance of food. When first seen the patient was afflicted with constant hiccough; he could not swallow food or even saliva, but there was no slavering. Rhonchi and moist *râles* were heard over the chest. Muscular power was found intact. When the patient attempted to walk he staggered from side to side, and finally fell, usually to the left. There was also static ataxia. Over the right arm and leg the pain and temperature senses were much impaired. There was paralysis of the left vocal cord, but no deviation of the uvula. The patellar reflexes were present, the right being the more marked. Taste was impaired, smell intact. Hearing was dull on the left side. There was no ocular paralysis. The pupils were equal, and reacted normally. the radial pulses were sinuous and indurated, and the urine contained a trace of albumen. The patient died four days after admission with symptoms of asphyxia. At the necropsy the kidneys were found granular, the heart hypertrophied, the lungs congested, with patches of broncho-pneumonia. No lesion was found in the cerebellum or in the right cerebral hemisphere. Two small lacunar patches were found in the external part of the ventricular nucleus of the striate body on the left side, and were evidently the remains of the lesion which had caused the transitory hemiplegia of three years before. The left half of the medulla oblongata was larger and redder than the right. By means of stained sections the patch of softening was seen to extend from the olivary body to the nuclei of the floor of the fourth ventricle. The auditory, the hypoglossal, and the sensory nuclei of mixed nerves were not involved. The motor nuclei of the pneumogastric and glosso-pharyngeal were destroyed. The hemianæsthesia was probably due to destruction of fibres of Gowers's tract in the bulb. The vertigo, ataxia, and staggering gait must have been due to the bulbar lesion, and in all probability were caused by the involvement of the olivary body and the cerebello-olivary fibres. This case seems to show that not only the cerebellum but the nerve fibres running to and from it govern equilibration or the static sense.

### (442) Blastomycetic Dermatitis.

Hektoen (*Journ. of Exper. Med.*, vol. iii., p. 26) records a case of dermatitis caused by a blastomyces. The patient was a man aged 56, whose affection dated from four years previously, when a red spot appeared on his leg and gradually extended; this was removed by operation. A year before he was seen by Hektoen a warty growth appeared on the hand. Sections of the affected part showed blastomycetes; these were also grown in cultures forming mycelia. The described organisms differ in many points from those described by Gilchrist and Stokes (*Johns Hopkins Hospital Reports*, vol. i.), but the histological changes caused by them were similar. Rats and mice subcutaneously inoculated died in five days and the organisms were regained from the point of inoculation, but not from the internal organs; a dog experimentally used proved refractory to the organism.

### (443) Dermatomyositis.

In 1887 Hepp, Wagner, and Unverricht each recorded cases of a disease which presented certain resemblances to trichinosis. In 1891 Unverricht reported his second case, and called the disease dermatomyositis. Bonnet (*Lyon Médical*, July 7th, 1901) describes the first case which has been recognised in France. His patient, a joiner, aged 59, had suffered from slight headache for eight months. Three months before admission into hospital, there was œdema of the forehead and upper part of the face, lasting for a fortnight. About the same time severe lumbar pain was noticed, increased by movement, absent in the supine position. Six days before admission the patient found a small swelling on the middle of the right forearm, which spread so as to involve the rest of the forearm and back of the hand. On examination, an extensive shiny œdema of the forearm was seen, faintly red in colour, and only slightly pitting on pressure. The subjacent muscles could be felt to be swollen and indurated. There were no articular or nervous symptoms. The patient was pale and a little wasted, the temperature normal. The spleen was definitely enlarged and easily palpable. There was no leucocytosis, no urinary abnormality. Examination of the lumbar region showed that the pain proceeded from the muscular masses, not from the vertebral column. No local cause for the œdema could be detected, such as phlebitis or lymphangitis. This case presents the chief characters which have marked the cases hitherto recorded (fifteen in number). The onset with muscular pain and with œdema of the face and eyelids; the characters of the œdema, its firmness, its situation over involved muscles and away from the joints, and the enlargement of the spleen are features in Bonnet's opinion definite enough for classification of the described condition as true dermatomyositis. Many previous cases, however, have shown muscular pain without movement, and have been much more rapid in course, death occurring from aspiration pneumonia due to involvement of the muscles of the pharynx and larynx.

## SURGERY.

### (444) Tetanus after Laparotomy.

Coe (*Amer. Journ. Obstet.*, September, 1901) reports 2 cases of tetanus which occurred in the General Memorial Hospital, New York, at eighteen months interval; there was no assignable cause. The hospital was opened in 1887, and conditions are very aseptic: in both cases the operations were "clean," and both were in Coe's wards. The first operation was the removal of a double salpingitis with cystic ovaries. There were no complications at the operation: convalescence was without fever. Stiffness of the neck was felt on the twenty-first day, trismus next day. Death occurred on the thirty-sixth day: serum injections proved unavailing. The second patient underwent panhysterectomy for fibroid uterus and diseased tubes. She did well till the ninth day, when stiffness of the jaw set in; on the tenth day she could not swallow: 50 c.cm. of serum were injected into the veins: general convulsions occurred in the night afterwards: a second injection was made; death occurred on the eleventh day. Both patients were hysterical, so that diagnosis was obscure at first.

### (445) Gonorrhœal Exanthem in Infants.

J. Paulsen (*Münch. med. Woch.*, June 18th, 1901) describes an eruption due to the gonococcus, which he has observed, but of which he finds no account in literature of gonorrhœa. Case I: A male infant developed ophthalmo-blenorrhœa on the second day of life. On the ninth day the joints became swollen; the left knee joint suppurated, and had to be opened. A few sparse vesicles appeared on the face, and many papules and vesicles appeared on the legs. The contents of the vesicles was fluid with gonococci. Case II: A male infant, ten days old: left post-auricular gland enlarged and fluctuating; on incision pus was evacuated. A fine papulas and vesicular rash all over the body. Slight ophthalmia. Cases III and IV: Papular and vesicular rash all over the body: slight ophthalmia; gonococci in vesicular contents. In all four cases the mothers admitted to a vaginal discharge at the time of parturition. Case V: Vesicles on the head: later all over the body; contents serous and sero-purulent. Case VI: Vesicles on face; clinical ophthalmia; gonococci in conjunctival secretion. Case VII: Sparse vesicular eruption on head

and buttock; gonococci in conjunctival secretion. In cases V, VI, and VII there was a "slight discharge" from the mother. In Cases VIII, IX, and X the mothers denied the existence of a discharge. Case VIII: Profuse papular and vesicular eruption all over the body. Case IX: Moderately-sized vesicular eruption on the head; gonorrhœal abscess in mouth. Case X: Sparse vesicular eruption on head and face; gonococci in conjunctival secretion. Case XI: No discharge in the mother; vesicular eruption on face and buttock; gonococci in conjunctival secretion. Case XII: The same as Case XI. The diagnosis was made by the discovery of the gonococcus in the vesicular contents. He concludes his remarks by the following summary: (1) Gonorrhœal skin lesions are much more common in infants than in connection with genital gonorrhœa of adults. (2) They are caused by the gonococcus. (3) They are produced by secondary infection, from ophthalmia, or as primary infection of the skin. (4) In severe cases, boils and suppuration of glands may appear. (5) The lesions do not appear to produce any danger to the life of the infants: and (6) further observations of the appearances and prognosis of the lesion are desirable.

**(446) Idiopathic Detachment of the Retina.**

SINCLAIR (*Journ. of Pathology*, June, 1901) has studied by experiment the question of the etiology of detachment of the retina. In some cases he believes that the theory of Nordenson, that the detachment is caused by the traction of adhesions between vitreous and retina, is the correct explanation, but does not consider that it is applicable in the majority of instances. For the majority he believes the so-called theory of diffusion is correct. He experimentally caused detachment in rabbits' eyes by the post-retinal injection of salt solution and also of a highly albuminous fluid (blood plasma): in the latter case the detachment progressed after injection owing to continued accumulation of fluid diffused from the vitreous. The vitreous fluid is almost entirely composed of water (98 per cent.), while in inflammatory conditions post-retinal transudation of a highly albuminous fluid takes place. Looking at the retina as a dialysing membrane when there is an accumulation of inflammatory exudation behind the attachment of the retina, this will tend to increase by the process of diffusion of the vitreous fluid through the retina; cases where the extension of detachment occurs rapidly without increase of intraocular tension can be accounted for in no other way. The fact that changes in the vitreous often take place in eyes in which retinal detachment subsequently occurs cannot be taken as any proof that these changes cause detachment of the retina. The truth would appear to be that both conditions are brought about by uveal inflammation, and are therefore often found together.

## MIDWIFERY AND DISEASES OF WOMEN.

**(447) Osteomalacia combined with Multiple Sarcomata and Multiple Fractures.**

SCHÖNENBERGER (*Virchow's Archiv*, Band clxv, H. 3) describes the case of a woman, aged 33, who after a third normal pregnancy developed symptoms of osteomalacia accompanied by multiple fractures of the long bones and the growth of tumours widely distributed over the whole skeleton. The skeleton was exhaustively examined after death. On the one hand, there were diffuse osteomalacic changes throughout, with what has been described by Recklinghausen as osteitis fibrosa of the marrow and rarefying of the bone structure; on the other hand, multiple giant-celled sarcomata embedded in the fibrosed marrow. Schönenberger discusses the relations of the osteomalacia, the tumours, and the fractures to each other. The osteomalacia was general, and in parts of the skeleton entirely free from the growths. Three possible explanations of the relations of tumours to fractures are considered; on the one hand, Hirschberg in a similar case considered the sarcoma development was secondary to the fractures, and dependent thereon; here, however, sarcomata were found in places without any fractures. Recklinghausen considers the cause of such sarcoma development to be the strain on the bones by the continual dragging of the muscles. In Hirschberg's case fractures were found without sarcomata in the neighbourhood, but there were also bone cysts which may account for them. In Schönenberger'scase, wherever there were fractures, there was sarcomatous tissue, and, although fractures are not uncommon in osteomalacia, the great multiplicity in this case was in all probability largely due to the tumours aiding the osteomalacic process. Histologically the sarcomata were seen to have had origin in the tissue of the marrow. The topographical distribution of the tumours is considered by Schönenberger only explainable on the ground of their development at points where circulatory stasis was most prone to develop.

**(448) Twin Abortion: Fœtus Compressus.**

BOUCHACOURT AND AUDION (*Bull. de la Soc. d'Obstét. de Paris*, May, 1901) reports a case of premature labour in the middle of the fifth month. The patient, a primipara, was aged 20, and a cook; she was very hard worked. Labour was easy. When dilatation was complete two bags of membrane presented. They differed greatly in size and appearance. One lay higher than the other, and was dark and pedunculated, coming out of the uterus like a clapper in a bell; the other bulged and was translucent—normal, in fact. It was ruptured, and a live female fœtus, a little over 4 lbs. in weight, escaped. It died within a few hours. Ten minutes after its birth a sharp pain occurred, and the placenta was expelled with the second bag of waters intact. The placenta was single, weighing over ¾ lb. The bag formerly including the live fœtus was very much larger than its fellow, which contained a little blackish fluid, and a fœtus enveloped in amnion which had detached itself entirely from the chorion, the fœtus being attached by the funis alone to the placenta. This accounts for the pedunculated mass felt during exploration in labour. The fœtus measured over 5¾ ins. It was a female, and seemed to have passed the third month of development. It was mummified and extremely flattened, measuring no thicker than 3¼ ins. at the most. This fœtus represented the early stage of "fœtus papyraceus."

**(449) Drainage of the Bladder in Women.**

KELLY (*Amer. Journ. Obstet.*, July, 1901) says that in advanced cystitis it is best to begin by draining the bladder for some weeks, and to keep the patient for some hours daily in a bath at 100° F. The patient is put in the knee-chest position, the bladder filled with air through a catheter, the posterior vaginal wall drawn back with a speculum, the knife plunged through the wall ½ inch in front of the cervix, and then guided by the finger brought as far forward as desired. The bladder and vaginal linings are stitched together to prevent premature closing. General anæsthesia is not needed. Drainage for shorter periods is secured by a ½ inch hole, in which a mushroom catheter is kept for a week or ten days. The opening closes spontaneously when the catheter is removed. Kelly uses a special knife with the blade set at an angle on the handle, which is also curved.

**(450) The Corset for Movable Kidney.**

AT the end of a paper (*Amer. Journ. Obstet.*, July, 1901), in which he states that from 90 to 95 per cent. of cases of movable kidney producing symptoms can be relieved by a suitable corset, Gallant recommends a corset as long in front as can be worn, specially made or straight-front corsets being chosen. It must be at least 2 inches less than that formerly worn, and laced at the back from top and bottom as an open V. Having put the corset round the waist, the patient lies down, draws up the knees, pushes the kidney up, and then fastens the corset from below upwards, drawing the lax abdominal wall up at each step. Cases not so relieved require nephrorrhaphy.

**(451) Cerebral Hæmorrhage and Softening in Infants.**

PORAK AND KATZ (*Ann. de Gynéc. et d'Obstét.*, September, 1901) reported before the Paris Obstetrical and Gynæcological Society last spring the case of an infant born spontaneously; it was asphyxiated, but easily and rapidly revived. It weighed 5¾ lbs. As it would not take the breast it was fed artificially. On the fifth day the temperature fell to 95°, and there was deep general icterus. On the eighth facial convulsions set in; four days later there was contraction of the left lower extremity, the temperature was 93°, and the weight had fallen to 4¾ lbs. On the thirteenth day the

infant died. No lesion was detected beyond hæmorrhage, limited to the right lateral ventricle. In a second case the infant was a twin, born at the eighth month. On the second day it weighed over 4½ lbs.; its rectal temperature was only a little over 87° (31° C.). It was placed in a couveuse and fed by the breast. After the fourth day the temperature ranged between 96° and 98°. It died on the thirty-seventh day after a sudden increase of weight by 1⅝ oz. in twenty-four hours. Hæmorrhagic softening of the whole right cerebral hemisphere was detected.

**(452) Dystocia from Sacral Tumour.**

Popescul (*Centralbl. f. Gynäk.*, No. 39, 1901) relates a case of transverse presentation with prolapse of the right hand and impacted shoulder, admitted into the Czernowitz Maternity. On abdominal palpation there was doubt about defining the situation of the head, as there was a spherical body in both lateral limits of the uterus. Twin pregnancy was suspected. Turning failed, the neck could not be reached, so evisceration was performed; then Popescul pulled the prolapsed arm at each pain to favour expulsion. This manœuvre also failed, then decapitation was effected with ease, and the arm pulled as before. The trunk was then delivered as far as the lower end of the scapulæ, then it stuck fast, but both feet could be drawn out of the vulva. The true nature of the obstruction was now clear, and in passing the hand high up the pelvis was found filled with a large soft tumour connected with the fœtal buttocks by a broad insertion. Popescul thrust two fingers into the tumour, which was soft, and broke up much of its interior; then it was easily drawn out. The trunk and decapitated head, without the viscera already removed, weighed 7¾ lbs. From the sacral region sprang a tumour, quite double the size of the head; it measured over 15½ inches in circumference, and was covered by the gluteal muscles. Its consistence was like brain matter.

**(453) A Sequel of Hysterorrhaphy.**

Noble (*Amer. Journ. Obstet.*, September, 1901), was consulted by a nullipara, aged 44, for post-operative ventral hernia and discomfort. Four years previously she had undergone hysterorrhaphy, and abscesses developed afterwards, two discharging through the abdominal wound and one through the vagina. The uterus was found enlarged and fixed to the abdominal wall, it seemed to be cystic. At the operation Noble found a cystic structure between the bladder and the uterus. It was not thoroughly enucleable and was clearly of inflammatory origin, its walls being made up of the uterus behind, the bladder in front, and the vagina below. Noble packed the cyst cavity with gauze and sewed up a rent in its wall, apparently uterine tissue. The uterus was once more fixed, the ventral hernia repaired. Lastly, the anterior vaginal wall in front of the cervix was opened so that the gauze in the cyst cavity could be drawn partly down into the vagina. Convalescence was smooth, and the sac is probably undergoing obliteration through dependent drainage.

**(454) Vesico-vaginal Fistula: Total Extirpation of Bladder.**

Kümmell (*Monats. f. Geb. u. Gyn.*, September, 1901) writes of a bad case of vesico-vaginal fistula following labour. Three plastic vaginal operations failed, and two unsuccessful attempts were made to close the vagina and bladder by separating the latter from the former, the dissection being made through a suprapubic incision. Then the breaches in the vaginal and vesical walls were closed separately. But the fistula re-established itself. The sixth operation, therefore, consisted in dissecting away the bladder: the ureters were fixed obliquely in the rectal walls without much tension. The patient was discharged from hospital at the end of two months without any signs of pyelitis. The urine was emptied out of the rectum every four hours.

**(455) Missed Abortion.**

Zalidès (*Rev. Mens. de Gynéc., Obstét., et Pédiat. de Bordeaux*, July, 1901) publishes full clinical notes of missed abortion. The patient was a multipara aged 37. The fœtus died through some undiscovered cause during the third month of pregnancy; it mummified, remaining six months in the amniotic fluid. The uterus tolerated the dead fœtus, practically a foreign body, retaining it until exactly nine months after conception. Then flooding occurred, and a few days later delivery was effected artificially. The placenta had continued to develop after the death of the fœtus, whilst the cord atrophied, and was at delivery as thin as a knitting-needle. After extraction of the fœtus the placenta remained adherent for three days, notwithstanding various attempts to remove it. There was a slight flooding and then fever. Eight grains of quinine were given, and in a few hours the uterus expelled the placenta spontaneously. The patient did well afterwards. The placenta was as large as a man's hand, 5 inches in diameter, circular, not degenerate, but distinctly fœtid.

**(456) Giant Fœtus.**

Bruno Wolff (*Monats. f. Geburts. u. Gynäk.*, May, 1901) recently exhibited a gigantic male fœtus from a woman aged 43 who had borne fourteen children. It weighed 12 lbs., and measured 24½ inches in length. The circumference of the head was 15¼ inches.

**(457) Post-mortem Cæsarean Section: Child Saved.**

Lindqvist (*Monats. f. Geburts. u. Gynäk.*, September, 1901) reports a case where a primipara, aged 36, was seized with eclampsia in labour, and died at 6.45 A.M. during a seventh fit, with symptoms of œdema of the lung. The fœtal heart sounds were audible, but weak and slow. At 6.50 A.M. the uterus was opened and the child extracted in a state of asphyxia. It was revived after half an hour's efforts by the usual means. It weighed 7¾ lbs., and was reared.

## THERAPEUTICS.

**(458) Aristol Cure of Hay Fever.**

It is generally accepted that true hay fever is an incurable disease. E. Fink (*Deut. med. Woch.*, November 14th, 1901) however, tells us that it is not so. He discusses the pathology of the affection, after describing a typical case. Bosworth attempted to explain two classes of hydrorrhœa, under the names of coryza nervosa and C. vaso-motoria, but Fink shows that the latter cannot exist. He quotes many authors and uses many arguments to show that the primary lesion of hay fever cannot be in the nasal mucosa. Helmholtz, on the other hand, ascribed the origin of the secretion to vibrios, which affected the mucosa of the facial cavities near the nose. Fink blew an insoluble powder into the antrum of Highmore, and discovered it in the watery nasal secretion later on. Although he does not accept or refuse the vibrio theory, he claims that the origin of the affection is in the facial cavities. He therefore sought to treat hay fever by insufflation of aristol powder in the antrum of Highmore, and claims that one can always obtain a favourable result. Many of his cases were cured completely after applying the powder to both antra. He mentions, however, that when neurasthenic conditions are also present in the etiology of any given case this must be dealt with separately in the usual way.

**(459) Protargol in Gonorrhœa.**

The varied results published of the effect of protargol injections for gonorrhœa has led Jesinnek (*Münch. med. Woch.*, November 5th, 1901) to recount his experience. He states that he soon discovered that unsatisfactory and even bad results were due to changes in the solution, and since he adopted the following method of preparing the injections he obtained good results: The powder must be dissolved in *cold* water, an open vessel containing water is stood in a cool place, the powder is dusted on to the surface and allowed spontaneously to be dissolved, and subsequently sufficient cold water is added to dilute the solution to the required strength. For ordinary male urethritis anterior, ½ to 2 per cent. is sufficiently strong, but 10 per cent. solutions are advisable for cervical gonorrhœa. The solution should always be freshly made, for stock solutions tend to change colour, which, he says, is an indication of the splitting up of the organic silver compound. For posterior urethritis, he advises either a 10 per cent. ointment, made up with cacao butter, or ½ to 2 per cent. solution introduced in sufficient

quantity to distend the bladder through a small Nélaton's catheter. He tabulates the results of the treatment in 387 cases, and especially emphasises the time when the gonococci disappeared from the discharge. This period varied between two days and four weeks, and he points out that out of 287 cases which left the hospital cured, 140 showed no cocci after the third day. In spite of this he strongly recommends that the injections be continued, at first frequently, and later three times, twice, or once a day for three weeks. He strongly disapproves of the practice of adding glycerine to the solution, for he says that it can act as an irritant, and, further, that it is of no beneficial use.

**(460) Flechsig's Method in the Treatment of Idiopathic Facial Neuralgia.**

P. F. ARULLANI (*Gaz. Med. di Torin.*, September 19th, 1901), in view of the opinion held by many neuropathologists that this condition is a sensory homologue of epilepsy, determined to employ in it Flechsig's treatment for the latter disease. This consists of the administration of extract of opium in pills of $\frac{1}{8}$ gr., beginning with 5 a day, then 6 the following day, 7 the next, and so on till 20 per diem is reached. This is continued till two months in all have elapsed; the opium is then stopped right off and bromide of potassium given for two months, beginning with a dose of 105 grs. per diem, and coming down to 30 grs. Arullani modified this treatment, in that he used pills of $\frac{1}{3}$ gr. or $\frac{1}{2}$ gr. of extract of opium, and never exceeded a daily dose of 10 grs. only two-thirds of Flechsig's maximum amount. He reports 5 cases, all of long standing—from one year up to thirteen years—2 of them having undergone operations; 4 of the 5 cases were cured, and had remained so for periods varying from eighteen months to three years; the fifth case had had a relapse, cured by operation. Arullani concludes that this treatment should be used in all idiopathic facial neuralgias before having recourse to operation. It is necessary that the patient should be kept in bed, suitably dieted on milk, and should abstain from alcohol.

**(461) Ichthargan.**

BLOCK (*Deut. med. Woch.*, October 24th 1901) mentions that ichthargan, a silver compound of ichthyol is said to be of great value as an injection for gonorrhœa. It is used in 2 : 10,000—2 : 1000 strength of dilution.

## PATHOLOGY.

**(462) Acid-Resisting Bacilli in Gangrene.**

FOLLI (*Rif. Med.*, August 27th, 1901) has examined six cases of gangrene, and found an acid-resisting bacillus in three of them. The point of interest in these bacilli is their resemblance to tubercle bacilli. In one case the child presented many signs and symptoms of phthisis: for example, repeated bronchial attacks, suppurating cervical glands, corneal ulcers, almost constant diarrhœa, etc. On examining the sputa a bacillus strongly resembling the tubercle bacillus, and also resistant to acids, was discovered, whereas *post mortem* there was no tubercle, but gangrene of the lung. These pseudo-tuberculous bacilli may be differentiated from true tubercle bacilli by the fact that if tartaric acid (1 in 20) is used as the decolorising agent the pseudo-tubercle bacilli becomes decolorised in five minutes, whereas it takes twenty minutes or more to decolorise the true tubercle bacilli. Again, the pseudo-tubercle bacilli is more delicate, longer, straighter, and more pointed, and does not appear granular; the colour, too, of the pseudo-tubercle bacillus is a brighter, more transparent red, and the bacilli are seldom seen isolated, more often in clumps or chains. The author suggests that some of the so-called cures of phthisis where bacilli were found were possibly cases in which the pseudo-tubercle bacilli was wrongly mistaken for the true tubercle bacilli. Obviously it becomes important to know in what conditions this bacilli, so strongly resembling the true tubercle bacillus, is to be found, and with the object of helping our knowledge in the matter the author publishes the results of his examination of six cases of gangrene.

**(463) The Permeability of Granulation Tissue by Pathogenic Organisms.**

JÜRGELUNAS (*Ziegler Beiträge*, Bd. xxix, H. 1, 1901) gives the result of experiments on this question as follows: (1) Aseptic uninjured granulation tissue acts as a mechanical obstruction to the entrance of bacteria; (2) the cells of granulation tissue are bactericidal and phagocytic, and form a second line of defence; (3) bacteria which pass through the granulation tissue of susceptible animals undergo very little change in their passage, but in immune animals these changes are marked: in animals immunised anthrax bacilli die in the granulation tissue, and after six days have altogether disappeared; (4) animals who survive the passage of, for example, anthrax bacilli through granulating wounds do not thereby acquire immunity; the character of the wound dressing has no particular influence on the course of infection, but affects the healing process in the wounds: the porous dressing is preferable to the sealed; (6) the secretion of the granulations of immune animals has a bactericidal action of varying strength on the bacteria against which the animal is immunised.

**(464) The Genesis of Spina Bifida.**

RABAUD (*Arch. Gén. de Méd.*, March, 1901) endeavours to show, from observations on spina bifida in the chick, that between myelo-cystocele and myelo-meningocele there is no true anatomical distinction in respect of origin. Both classes are due, he believes, to abnormalities in the development of the medullary groove, in such a way that the nervous tissue, instead of differentiating itself over a limited area, and becoming enclosed in the depths of the dorsal structures, differentiates itself over a large area of the ectoderm, and remains spread out and superficial. The result is that, when the medullary groove becomes the neural canal, instead of slit-like cavity with thick sides, there develops at the site of the spina bifida a cavity, large in diameter, with the main mass of the nervous tissue accumulated ventrally, and the dorsal wall formed by an attenuated layer. He believes that the only distinction between the two forms of the malformation is that in the myelo-meningocele the dorsal neural layer becomes intimately fused with the cutaneous and other coverings, while in the myelo-cystocele the coverings are distinct from the neural tissue; in the latter case, the fact that the cavity of the tumour is continuous with the central canal is evident, Rabaud believes that he has shown that the cavity of the myelo-meningocele is also continuous with the central canal. On the ground of these conclusions, he considers that spina bifida does not lend itself to surgical procedures: that to open the cavity of a spina bifida amounts to opening the canal of the ependyma, and that to inject a caustic substance into such a cavity is to inject it into the central cavity of the nervous system.

**(465) Researches on Blood Platelets.**

DEETJEN (*Virchow's Archiv.*, Bd. clxiv, p. 239) describes a new method of examination for blood platelets. Up to the present the significance of this element of the blood is in dispute; some have considered them degeneration products of the red or white cells, others as metabolic products and not true cells *sui generis*. Deetjen's researches have shown him that they consist of nucleus and protoplasm and possess the power of amœboid movement. Examined in the ordinary way it is impossible to determine their characteristics, Deetjen found it necessary to examine them on agar, and especially agar containing certain salts. The method is as follows: To a 1 per cent. agar, 0·6 gram per cent. NaCl, 6 to 8 per cent. of a 10 per cent. solution of $NaPO_4$, and 5 per cent. of a 10 per cent. solution of $K_2H.PO_4$ are added. The phosphate salts are necessary if the platelets are to remain alive for examination. A little of the agar thus prepared is smeared on a slide and allowed to harden, a small strip about 2 mm. wide is cut out, blood is taken from the finger and placed therein, and covered with a cover slip; it is fixed with 1 per cent. osmic acid, introduced under the cover slip, and after a few minutes the latter is raised, washed, and stained. Specimens prepared by this method show that the blood platelets are true cells exhibiting characteristic movements: their significance and their relations to the white cells are uncertain.

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